KONICA MINOLTA

SERVICE MANUAL

bizhub 958/808/758

bizhub PRO 958

Function Version 3.0
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KONICA MINOLTA, INC.

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Revision List

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1	-	Issue of the first edition	-	-	2016/04/08

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No.	ID	Title	Ver.	Descriptions of revision	Date
1	D0001756114	I.2.11.20 Security Settings - Quick Security Setting - USB Enable Settings	1	The new function was added.	2016/06/06
2	D0001756115	I.5.14.8 Auto Initial Dial Setting	1	The new function was added.	2016/06/06
3	D0001756117	I.5.16.21 Purge Setting	1	The new function was added.	2016/06/06
4	D0001756119	I.5.30.12 Remote Service Setting	1	The new function was added.	2016/06/06
5	D0001756120	I.5.31.14 Machine Auto Update setting - Machine Import setting	1	The new function was added.	2016/06/06
6	D0001756150	I.7.3.12 Data Backup	1	The new function was added.	2016/06/06
7	D0001756151	I.7.3.14 Customer Type	1	The new function was added.	2016/06/06
8	D0001756152	I.9.3.6 Enable Core Dump	1	The new function was added.	2016/06/06
9	D0001603110	I.7.3.9 Engine FW DipSW	5	The item was added.	2016/07/15
10	D0001599457	C.1.6 Machine specifications	2	The explanation was modified.	2016/07/22
11	D0001599466	C.5. FS-537/FS-537SD	2	Error correction.	2016/07/22
12	D0001608228	F.10.1.3 Replacing the paddle (FS-537SD/FS-537)	2	The explanation was modified.	2016/07/22
13	D0001599565	F.14.1.3 Replacing the paddle (FS-536/FS-536SD)	2	The explanation was modified.	2016/07/22
14	D0001599513	F.6.8.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller	2	The explanation was modified.	2016/07/22
15	D0001599514	F.6.8.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller	2	The explanation was modified.	2016/07/22
16	D0001599515	F.6.8.3 Replacing the tray 3 feed roller and tray 3 pick-up roller	2	The explanation was modified.	2016/07/22
17	D0001599517	F.6.8.5 Replacing the tray 4 feed roller and tray 4 pick-up roller	2	The explanation was modified.	2016/07/22
18	D0001599636	G.5.4.9 MFP board (MFPB)	2	The explanation was modified.	2016/07/22
19	D0001599799	G.7.6.2 Saddle unit (FS-537SD saddle section)	2	Error correction.	2016/07/22
20	D0001600738	I.12.1.2 Adjusting front side skew feed on dual scan document feeder	2	The explanation was modified.	2016/07/22
21	D0001600739	I.12.1.3 Adjusting back side skew feed on dual scan document feeder	2	The explanation was modified.	2016/07/22
22	D0001602775	I.2.11.1 User Authentication/Account Track - Authentication Device Settings	5	The explanation was modified.	2016/07/22
23	D0001602787	I.2.11.13 Security Settings - Enhanced Security Mode	3	The explanation was modified.	2016/07/22
24	D0001756114	I.2.11.20 Security Settings - Quick Security Setting - USB Enable Settings	2	The new function was added.	2016/07/22
25	D0001602800	I.2.11.27 External Memory Backup - Import/Export	4	The explanation was modified.	2016/07/22
26	D0001602778	I.2.11.4 Network Settings - Wireless Network Setting	4	The explanation was modified.	2016/07/22
27	D0001602743	I.2.2.2 Custom Display Settings	4	The new function was added.	2016/07/22
28	D0001753701	I.2.2.5 Fax Settings	2	The new function was added.	2016/07/22
29	D0001602752	I.2.3.1 System Settings	4	The new function was added.	2016/07/22
30	D0001602755	I.2.3.4 User Authentication/Account Track	4	The new function was added.	2016/07/22
31	D0001602756	I.2.3.5 Network Settings	4	The new function was added.	2016/07/22

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32	D00016027 59	I.2.3.8 Fax Settings	4	The new function was added.	2016/07/22
33	D00016027 60	I.2.3.9 System Connection	4	The new function was added.	2016/07/22
34	D00016027 62	I.2.4.1 Security Settings	4	The new function was added.	2016/07/22
35	D00016028 16	I.4.2.13 Network Settings	4	The new function was added.	2016/07/22
36	D00016028 17	I.4.2.14 Machine Update Setting	4	The new function was added.	2016/07/22
37	D00016028 06	I.4.2.3 CS Remote Care	4	The new function was added.	2016/07/22
38	D00016028 08	I.4.2.5 System 2	4	The new function was added.	2016/07/22
39	D00016028 87	I.5.14.6 Product Auth. Settings	2	The explanation was modified.	2016/07/22
40	D00017561 15	I.5.14.8 Auto Initial Dial Setting	2	The new function was added.	2016/07/22
41	D00016029 06	I.5.16 System 2	4	The new function was added.	2016/07/22
42	D00016029 18	I.5.16.13 ADF Scan Glass Contamin. Set.	3	The explanation was modified.	2016/07/22
43	D00017561 17	I.5.16.21 Purge Setting	2	The new function was added.	2016/07/22
44	D00016029 27	I.5.16.22 Import Config. Data	3	The new function was added.	2016/07/22
45	D00016029 28	I.5.16.23 Install Data	4	The explanation was modified.	2016/07/22
46	D00017561 18	I.5.16.25 CIS Image Adjustment	2	The new function was added.	2016/07/22
47	D00016029 33	I.5.16.29 Driver Install	4	The explanation was modified.	2016/07/22
48	D00016029 35	I.5.16.31 Custom Pattern	3	The explanation was modified.	2016/07/22
49	D00016029 12	I.5.16.6 Software Switch Setting	5	The item was added.	2016/07/22
50	D00016029 59	I.5.17.18 Detail code history	2	The explanation was modified.	2016/07/22
51	D00016029 61	I.5.18.1 Batch list CSV output	3	The explanation was modified.	2016/07/22
52	D00016029 70	I.5.19.1 Sensor Check	4	Error correction.	2016/07/22
53	D00016029 79	I.5.19.10 Load Check	4	Error correction.	2016/07/22
54	D00016029 81	I.5.19.12 Self-diagnostic	4	The new function was added.	2016/07/22
55	D00016029 86	I.5.20.4 Lattice Pattern	4	The explanation was modified.	2016/07/22
56	D00016030 09	I.5.21.14 Skew Measurement	3	The explanation was modified.	2016/07/22
57	D00016081 42	I.5.21.15 ADF automatic Adjustment	2	The explanation was modified.	2016/07/22
58	D00016030 68	I.5.30 Network Settings	4	The new function was added.	2016/07/22
59	D00017561 19	I.5.30.12 Remote Service Setting	2	The new function was added.	2016/07/22
60	D00017561 20	I.5.31.14 Machine Auto Update setting - Machine Import setting	2	The explanation was modified.	2016/07/22
61	D00016030 94	I.5.31.15 Machine Auto Update setting - Machine Export setting	4	The explanation was modified.	2016/07/22
62	D00016030 87	I.5.31.7 Machine Auto Update setting - Auto Update setting	4	The new function was added.	2016/07/22
63	D00016028 46	I.5.6.7 Paper Separation Adjustment	4	The explanation was modified.	2016/07/22
64	D00016028 51	I.5.7 CS Remote Care (Outlines)	4	The new function was added.	2016/07/22

No.	ID	Title	Ver.	Descriptions of revision	Date
65	D0001602875	I.5.9.18 SW No. 21	2	Error correction.	2016/07/22
66	D0001603100	I.7.1 List of Enhanced Security	4	The new function was added.	2016/07/22
67	D0001756150	I.7.3.12 Data Backup	2	The new function was added.	2016/07/22
68	D0001756151	I.7.3.14 Customer Type	2	The new function was added.	2016/07/22
69	D0001603121	I.8.3.5 Management Function Choice - Management Device 2	3	The explanation was modified.	2016/07/22
70	D0001603123	I.8.3.7 Authentication Device 2	5	The explanation was modified.	2016/07/22
71	D0001603124	I.8.3.8 Setting items that automatically change the setting values	4	The new function was added.	2016/07/22
72	D0001603139	I.9.1 List of debug settings	4	The new function was added.	2016/07/22
73	D0001756152	I.9.3.6 Enable Core Dump	2	The new function was added.	2016/07/22
74	D0001600776	K.1.4 Initial check items	2	The explanation was modified.	2016/07/22
75	D0001608302	K.1.8.5 66-08	2	The explanation was modified.	2016/07/22
76	D0001601183	K.14.2.2 Self-diagnostic function	2	The explanation was modified.	2016/07/22
77	D0001601188	K.14.3.20 Skewed image	2	The explanation was modified.	2016/07/22
78	D0001601239	L.1.8 PK-523 (Option)	2	The explanation was modified.	2016/07/22
79	D0001601248	L.2.1.2 Dual scan document feeder	2	The explanation was modified.	2016/07/22
80	D0001601268	N.2. Dual scan document feeder	2	Error correction.	2016/07/22
81	D0001601275	N.3.4 PK-523	2	Error correction.	2016/07/22
82	-	Section S	1	Add to the section S (Layout drawings for related parts by each trouble code)	2016/07/22
83	D0001760401	K.3.15.17 CC301	2	The new function was added.	2016/07/25
84	D0001760402	K.3.15.18 CC302	2	The new function was added.	2016/07/25
85	D0001601023	K.3.17.1 CE001, CE003, CE004, CE005, CE006, CE007, CE009	2	The explanation was modified.	2016/07/25
86	D0001600856	K.3.4 List of the trouble code	2	The explanation was modified.	2016/07/25

A SAFETY AND IMPORTANT WARNING ITEMS

Read carefully the safety and important warning items described below to understand them before doing service work.

1. IMPORTANT NOTICE

- Because of possible hazards to an inexperienced person servicing this product as well as the risk of damage to the product, KONICA MINOLTA, INC. (hereafter called KM) strongly recommends that all servicing be performed only by KM-trained service technicians.
- Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KM does not warrant, either explicitly or implicitly, that the information contained in this service manual is complete and accurate.
- The user of this service manual must assume all risks of personal injury and/or damage to the product while servicing the product for which this service manual is intended. Therefore, this service manual must be carefully read before doing service work both in the course of technical training and even after that, for performing maintenance and control of the product properly.
- Keep this service manual also for future service.

2. DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

2.1 Description items in this Service Manual

In this Service Manual, each of three expressions "⚠DANGER", "⚠WARNING", and "⚠ CAUTION" are defined as follows.
When servicing the product, the relevant works (disassembling, reassembling, adjustment, repair, maintenance, etc.) need to be conducted with utmost care.

⚠ DANGER	: Action having a high possibility of suffering death or serious injury
⚠ WARNING	: Action having a possibility of suffering death or serious injury
⚠ CAUTION	: Action having a possibility of suffering a slight wound and property damage

2.2 Description items for safety and important warning items

Symbols used for safety and important warning items are defined as follows:

: Precaution when servicing the product.	General precaution	Electric hazard	High temperature
: Prohibition when servicing the product.	General prohibition	Do not touch with wet hand	Do not disassemble
: Direction when servicing the product.	General instruction	Unplug	Ground/Earth

Illustrations representing the power plug and wall outlet used in the following descriptions are only typical. Their shapes differ depending on the country or region.

3. SAFETY WARNINGS

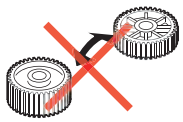
3.1 MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA, INC.

KONICA MINOLTA brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.
Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. the points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

3.1.1 Actions requiring special attention

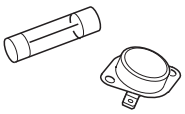
⚠WARNING

- Do not make any modifications to the product unless otherwise instructed by KM.
- Do not use any part not specified by KM.

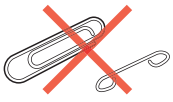


- Do not use any power cord or power plug not specified by KM.

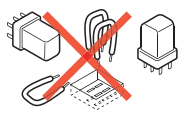
- Use only the protective fuses specified by KM.
  Use of any type of fuse or related part not specified by KM makes safety devices inoperative which may result in a fire from high heat.



- Do not disable fuse functions or use a wire, metal clip, solder, or other conductor in place of the fuse.
  Fire may result from high heat.

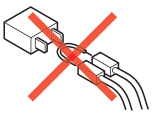


- Do not disable relay functions (for example, inserting a piece of paper between relay contacts to hamper circuit action.)
  Fire may result from high heat.



⚠WARNING

- Do not disable safety functions (for example, interlocks and safety circuits).
  Safety devices become inoperative, resulting in fire from high heat, electric shock, or injury.



3.2 POWER PLUG SELECTION

In some countries or areas, the power plug provided with the product may not fit the wall outlet used in the area. In that case, it is the obligation of the customer engineer (hereafter called the CE) to attach the appropriate power plug or power cord set in order to connect the product to the supply.

3.2.1 Power Cord Set or Power Plug

⚠WARNING

- Use a power supply cord set which meets the following criteria:
  - provided with a plug having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
  - the plug has pin/terminal(s) for grounding, and
  - provided with three-conductor cable having enough current capacity, and
  - the cord set meets regulatory requirements for the area.

  Use of inadequate cord set leads to fire or electric shock.

⚠WARNING

- Attach power plug which meets the following criteria:
  - having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
  - the plug has pin/terminal(s) for grounding, and
  - meets regulatory requirements for the area.

  Use of inadequate cord set leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.

- The wires in the power supply cord shall be connected to the terminals of the plug in accordance with the following:

Color of the wire		Terminal of the plug
Brown	Black	Marked with "L", "A" or "W" or colored RED
Light Blue	White	Marked with "N" or colored BLACK
Green-and-Yellow		Marked with "E", "PE" or " ⏚ " or colored GREEN or GREEN-AND-YELLOW

- Wrong connection may cancel safeguards within the product, and results in fire or electric shock.

3.3 CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

KONICA MINOLTA brand products are extensively tested before shipping, to ensure that all applicable safety standards are met, in order to protect the customer and customer engineer (hereafter called the CE) from the risk of injury. However, in daily use, any electrical equipment may be subject to parts wear and eventual failure. In order to maintain safety and reliability, the CE must perform regular safety checks.

3.3.1 Power Supply

(1) Connection to Power Supply

WARNING

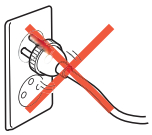
- The power outlet should have a capacity of at least the maximum power consumption and be dedicated only to the product.
  The current that can be passed through the outlet is limited and any current exceeding the limit could result in fire.

- If the wall outlet has two or more receptacles and the product and another electrical appliance are plugged into this wall outlet, make sure that the total load does not exceed the rating of the wall outlet. The current that can be passed through the outlet is limited and any current exceeding the limit could result in a fire.

- Do not use any conversion plug adapter even if the power plug shape does not match your wall outlet.
  The shapes of the power plug and the wall outlet are set according to the voltage and allowable current. Use of a conversion plug adapter could result in an abnormal voltage or insufficient current capacity, leading to a fire. It may also result in an electric shock due to a grounding failure.
  If the plug shape does not match the wall outlet, request the user to perform power source installation work.

⚠WARNING

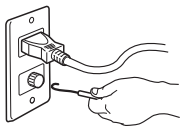
- Make sure the power cord is plugged into the wall outlet securely.
  If the power plug is left loose in the wall outlet, contact failure may occur, leading to abnormal heating of the power plug and a risk of fire.



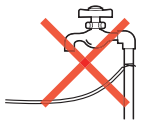
(2) Ground Connection

⚠WARNING

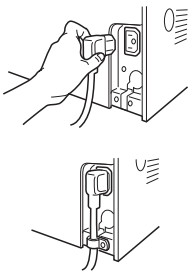
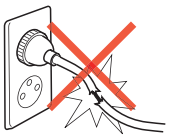
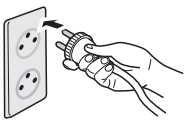
- Check whether the product is grounded properly.
  If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product.
  Connect power plug to grounded wall outlet.



- Make sure of correct ground connection.
  If the grounding wire is connected to an inappropriate part, there is a risk of explosion or electric shock. Do not connect the grounding wire to any of the following parts:
  a. Gas pipe: Gas explosion or fire may result.
  b. Lightning rod: Risk of electric shock or fire during lightning.
  c. Grounding wire for telephone line: Risk of electric shock or fire during lightning.
  d. Water pipe and faucet: These parts do not serve as a ground connection because of a plastic part that is very often installed midway within the water pipe.

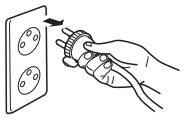


(3) Power Plug and Cord

WARNING	
• When using the power cord set (inlet type) that came with this product, make sure the connector is securely inserted in the inlet of the product. When a securing measure is provided, secure the cord with the fixture properly. If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.	
• Do not allow the power cord to be stepped on or pinched. Overheating may occur there, leading to a risk of fire.	
• Check whether the power cord is damaged. Check whether the sheath is damaged. If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by KM. Using the damaged power cord may result in fire or electric shock.	
• Do not bundle or tie the power cord. Overheating may occur there, leading to a risk of fire.	
• Check whether dust is collected around the power plug and wall outlet. Using the power plug and wall outlet without removing dust may result in fire.	
• Do not insert the power plug into the wall outlet with a wet hand. The risk of electric shock exists.	

⚠WARNING

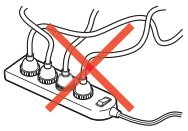
- When unplugging the power cord, grasp the plug, not the cable.
  The cable may be broken, leading to a risk of fire and electric shock.



(4) Wiring

⚠WARNING

- Never use multi-plug adapters to plug multiple power cords in the same outlet.
  If used, the risk of fire exists.



- When an extension cord is required, use one that meets the rated current, rated voltage, and the relevant safety standards of the country.
  Current that can be passed through the extension cable is limited and fire may result from the use of an inappropriate type of an extension cable.
  Do not use an extension cable reel with the cable taken up. Fire may result.

3.3.2 Installation Requirements

(1) Prohibited Installation Places

⚠WARNING

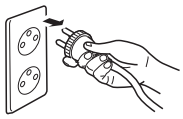
- Do not place the product near flammable materials or volatile materials that may catch fire.
  A risk of fire exists.

- Do not place the product in a place exposed to water such as rain.
  A risk of fire and electric shock exists.

(2) When not Using the Product for a long time

⚠WARNING

- When the product is not to be used for an extended period of time (for holidays, for example), instruct the user to turn OFF the power switch and unplug the power cord from the power outlet.
  Dust collected around the power plug and outlet may cause fire.



(3) Ventilation

⚠CAUTION

- The product generates ozone gas during operation.
  If the smell of ozone is present in the following cases, ventilate the room.
  a. When the product is used in a poorly ventilated room
  b. When making a lot of copies
  c. When using multiple products at the same time

(4) Stability

⚠ CAUTION

- Be sure to lock the caster stoppers.
  In the case of an earthquake, the product may slide, leading to an injury.

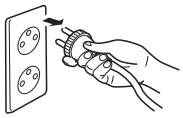
3.3.3 After Service

(1) Inspection before Servicing

⚠ WARNING

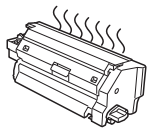
- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure using the recommended personal safety equipment and using only the prescribed tools.
  Do not make any adjustment not described in the documentation.
  If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

- Before conducting an inspection, be sure to disconnect the power plugs from the Main Body and Accessories (Options).
  When the power plug is inserted into the wall outlet, some units are still powered even if the POWER switch is turned OFF.
  A risk of electric shock exists.



⚠ CAUTION

- The area around the fixing unit is hot.
  You may get burned.



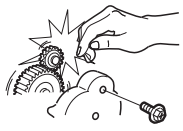
CAUTION

- Do not leave the machine unattended during transportation, installation, and/or inspection.
  If the machine is left unattended, face protrusions toward the wall or take other necessary precautions to prevent a user or other person in the area from stumbling over a protrusion of the machine or being caught by a cable, possibly causing a fall to the floor or other personal injury.

(2) Work Performed with the Product Powered On

WARNING

- Take every care when making adjustments or performing an operation check with the product powered.
  If you make adjustments or perform an operation check with the external cover detached, you may touch live or high-voltage parts or you may be caught in moving gears or the timing belt, leading to a risk of injury.



- Take every care when servicing with the external cover detached.
  High-voltage exists around the drum unit. A risk of electric shock exists.
- If it is absolutely necessary to service the machine with the door open or external covers removed, always be attentive to the motion of the internal parts.
  A normally protected part may cause unexpected hazards.

⚠CAUTION

- Do not keep gazing at a lamp light during the service procedure with the product powered ON.
  Eyestrain may result.

(3) Safety Checkpoints

⚠WARNING

- When a product fault is reported from a user, check parts and repair the fault appropriately with safety in mind.
  A damaged product, personal injury, or fire may result.

- Whenever mounting an option on the machine, be attentive to the motion of the other workers performing the task.
  Another worker may be injured by a pinch point between the machine and the option.

- When mounting an option on the machine, be careful about the clearance between the machine and the option.
  You may be injured with your finger or hand pinched between the machine and the option.

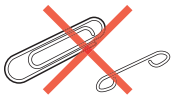
- When removing a part that secures a motor, gear, or other moving part, disassembling a unit, or reinstalling any of such parts and units, be careful about moving parts and use care not to drop any part or unit. During the service procedure, give sufficient support for any heavy unit.
  You may be injured by a falling part or unit.

WARNING

- Check the external covers and frame for possible sharp edges, burrs, and damage.
  They can be a cause of injury during use or servicing.

- When accessing a hard-to-view or narrow spot, be careful about sharp edges and burrs on the frame and parts.
  They may injure your hands or fingers.

- Do not allow any metal parts such as clips, staples, and screws to fall into the product.
  They can short internal circuits and cause electric shock or spark bursting into flame.



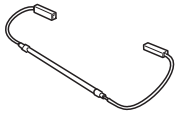
- Check wiring for pinched and any other damage.
  Current can leak, leading to a risk of electric shock or fire.

- Check high-voltage cables and sheaths for any damage.
  Damage may lead to product failure and/or the risk of fire.

- Do not disassemble or adjust the write unit (PH unit) incorporating a laser.
  The laser light can enter your eye, leading to a risk of loss of eyesight.

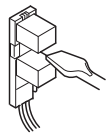
- Do not supply power with the write unit (PH unit) shifted from the specified mounting position.
  The laser light can enter your eye, leading to a risk of loss of eyesight.

- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.
  A risk of fire exists.



WARNING

- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.
  If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam).



- Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.
  Damage may lead to the risk of electric shock or fire.

- Make sure that all screws, components, wiring, connectors, etc. that were removed for safety check and maintenance have been reinstalled in the original location. (Pay special attention to forgotten connectors, pinched cables, forgotten screws, etc.)
  A risk of product trouble, personal injury, electric shock, and fire exists.

- Never use any flammable or combustible spray, fluid, gas, or similar substance in and around the product.
  Do not use any flammable or combustible dust spray, in particular, to clean the interior of the product.
  Fire or explosion may result.

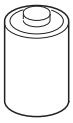
CAUTION

- Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit.
  Toner remnants and dust may lead to product failure and/or the risk of fire.

⚠CAUTION

- Check electrode units such as a charging corona unit for deterioration and signs of leakage.
  Damage may lead to product failure and/or the risk of fire.

- When replacing a battery, replace it with a new one as specified.
  Dispose of the used battery as instructed on its packaging or by local ordinance.
  There is a risk of explosion if the battery is replaced with an incorrect type.



(4) Handling of Consumables

⚠WARNING

- For handling of consumables (toner, developer, photoconductor, etc.) and their storage precautions, see MSDS.

(5) Handling of Service Materials

⚠ CAUTION

- Handle with care according to MSDS.
  Use of solvent may involve explosion, fire, or personal injury.

3.4 FUSE

CAUTION Double pole / neutral fusing
ATTENTION Double pôle / fusible sur le neutre.

3.5 Used Batteries Precautions

3.5.1 ALL Areas

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

3.5.2 Germany

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.
Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ.
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

3.5.3 France

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

3.5.4 Denmark

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

3.5.5 Finland, Sweden

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

3.5.6 Norway

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

3.6 Laser Safety

3.6.1 Laser Safety

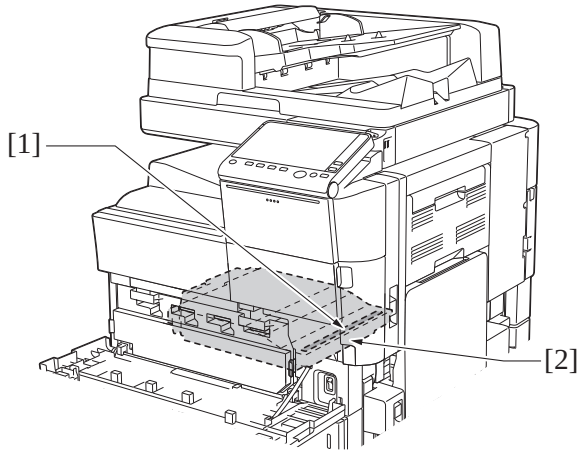
This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

3.6.2 Internal Laser Radiation

- This product employs a Class 3B laser diode that emits an invisible laser beam. The laser diode and the scanning polygon mirror are incorporated in the print head unit.
- The print head unit is NOT A FIELD SERVICEABLE ITEM. Therefore, the print head unit should not be opened under any circumstances.

semiconductor laser	
Maximum power of the laser diode	15 mW
Maximum average radiation power (*)	24.6 µW
Wavelength	775 to 800 nm

- * at laser aperture of the Print Head Unit



[1]	Laser Aperture of the Print Head Unit	[2]	Print Head Unit

(1) U.S.A., Canada (CDRH Regulation)

- This machine is certified as a Class 1 Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for Laser products marketed in the United States and is reported to the Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation.
- The label shown on "A.3.6.3 Laser Safety Label" indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

⚠CAUTION

Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser	
Maximum power of the laser diode	15 mW
Wavelength	775 to 800 nm

(2) All Areas

⚠ CAUTION

Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.

semiconductor laser	
Maximum power of the laser diode	15 mW
Wavelength	775 to 800 nm

(3) Denmark

⚠ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. Klasse 1 laser produkt der opfylder IEC60825-1 sikkerheds kravene.

halvlederlaser	
Laserdiodens højeste styrke	15 mW
bølgelængden	775 to 800 nm

(4) Finland, Sweden

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

⚠VAROITUS!

Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

puolijohdelaser	
Laserdiodin suurin teho	15 mW
aallonpituus	775 to 800 nm

⚠VARNING!
Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

halvledarlaser	
Den maximala effekten för laserdioden	15 mW
våglängden	775 to 800 nm

⚠VARO!
Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättomälle lasersäteilylle. Älä katso säteeseen.

⚠ VARNING!
Osynlig laserstråining när denna del är öppnad och spärren är urkopplad. Betrakta ej stråien.

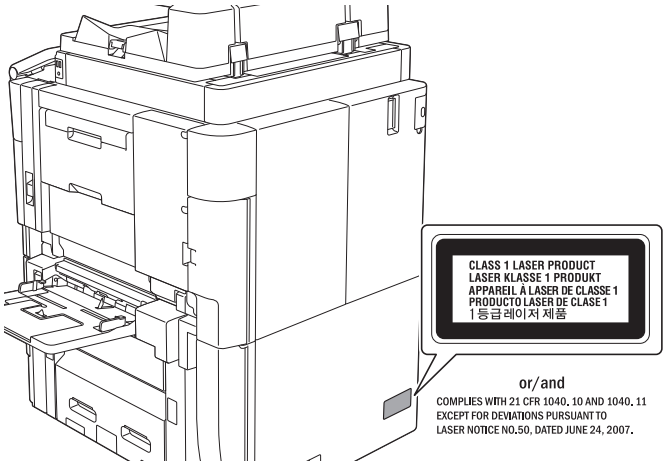
(5) Norway

⚠ ADVERSEL
Dersom apparatet brukes på annen måte enn spesifisert i denne bruksanvisning, kan brukeren utsettes for unsynlig laserstrålning, som overskrider grensen for laser klass 1.

halvleder laser	
Maksimal effekt till laserdiode	15 mW
bølgelengde	775 to 800 nm

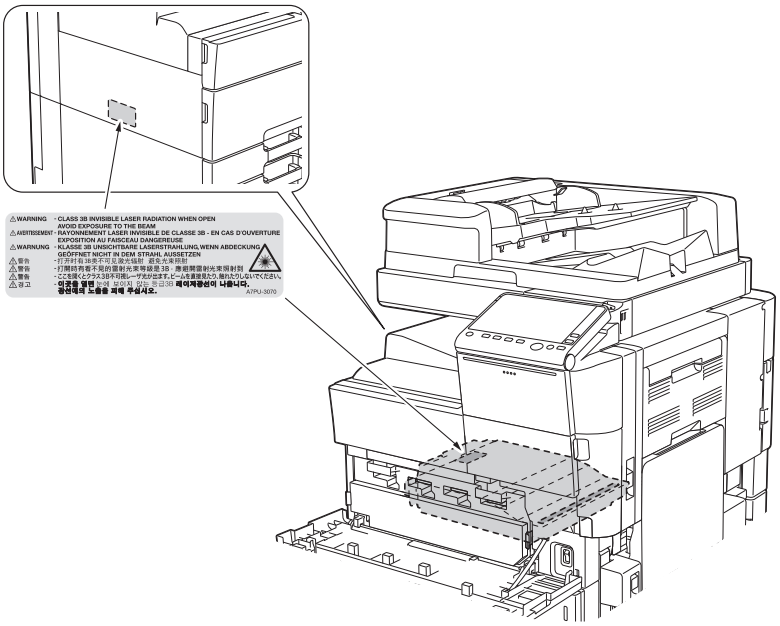
3.6.3 Laser Safety Label

A laser safety label is attached to the outside of the machine as shown below.



3.6.4 Laser Caution Label

A laser caution label is attached to the inside of the machine as shown below.



3.6.5 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

- When laser protective goggles are to be used, select ones with a lens conforming to the above specifications.
- When a disassembly job needs to be performed in the laser beam path, such as when working around the printerhead and PC drum, be sure first to turn the printer OFF.
- If the job requires that the printer be left ON, take off your watch and ring and wear laser protective goggles.
- A highly reflective tool can be dangerous if it is brought into the laser beam path. Use utmost care when handling tools on the user's premises.

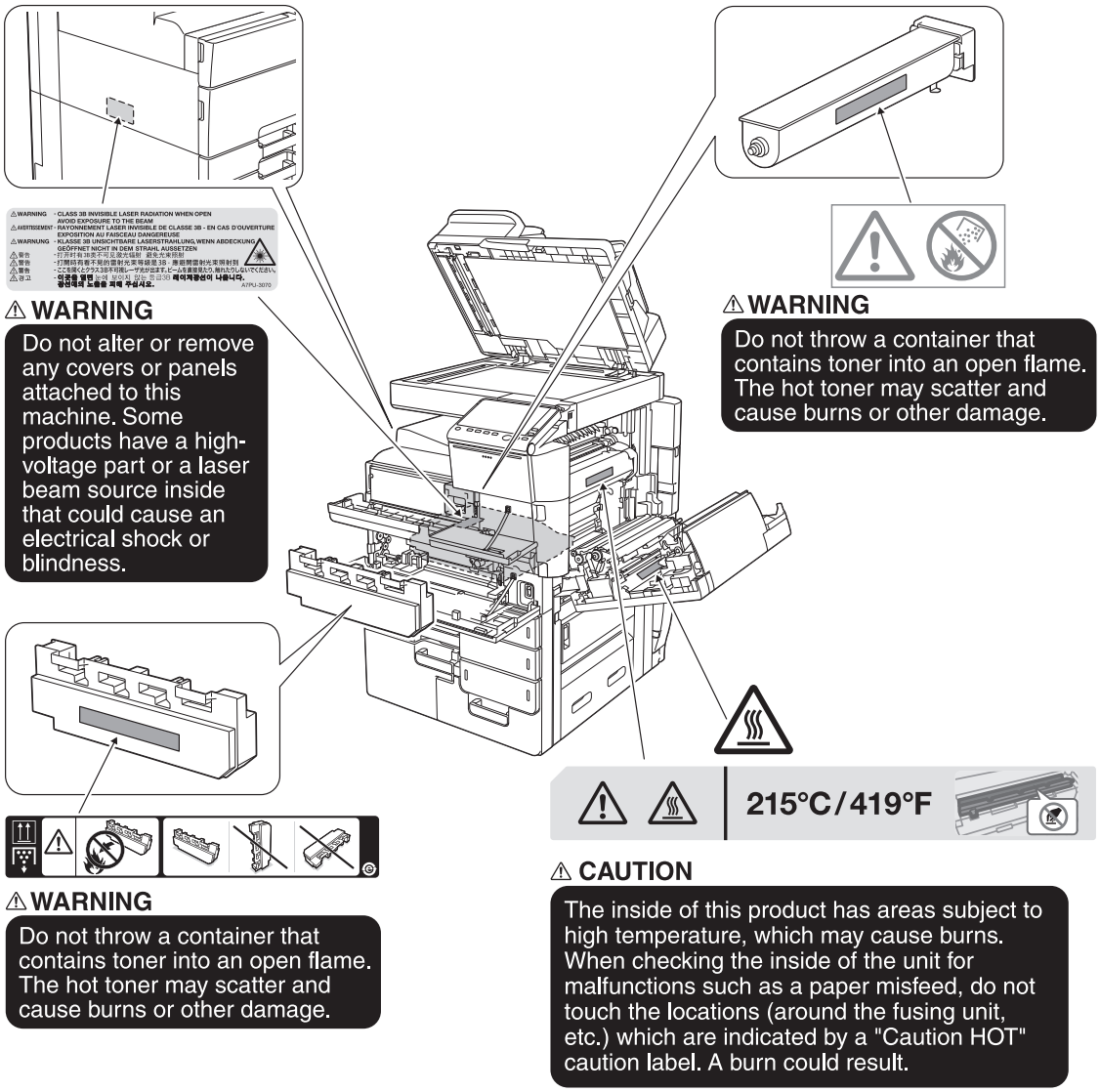
4. WARNING INDICATIONS ON THE MACHINE

⚠CAUTION

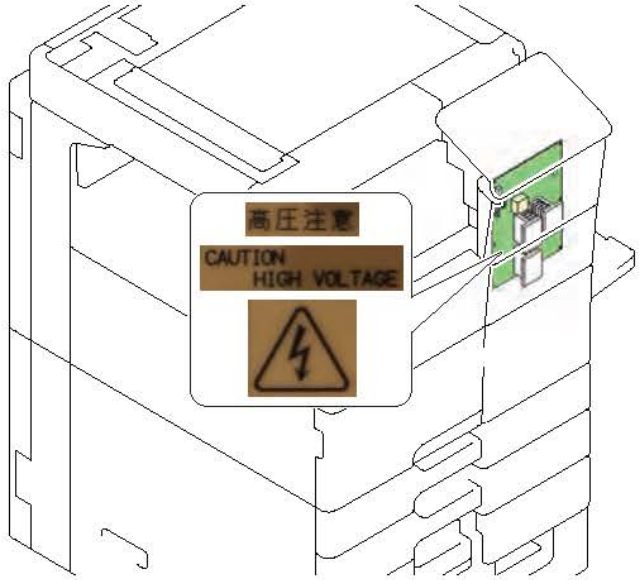
You may be burned or injured if you touch any area that you are advised not to touch by any caution label. Do not remove caution labels. If any caution label has come off or soiled and therefore the caution cannot be read, contact our service office.

Caution labels shown are attached in some areas on/in the machine.
When accessing these areas for maintenance, repair, or adjustment, special care should be taken to avoid burns and electric shock.

4.1 Warning indications inside the machine

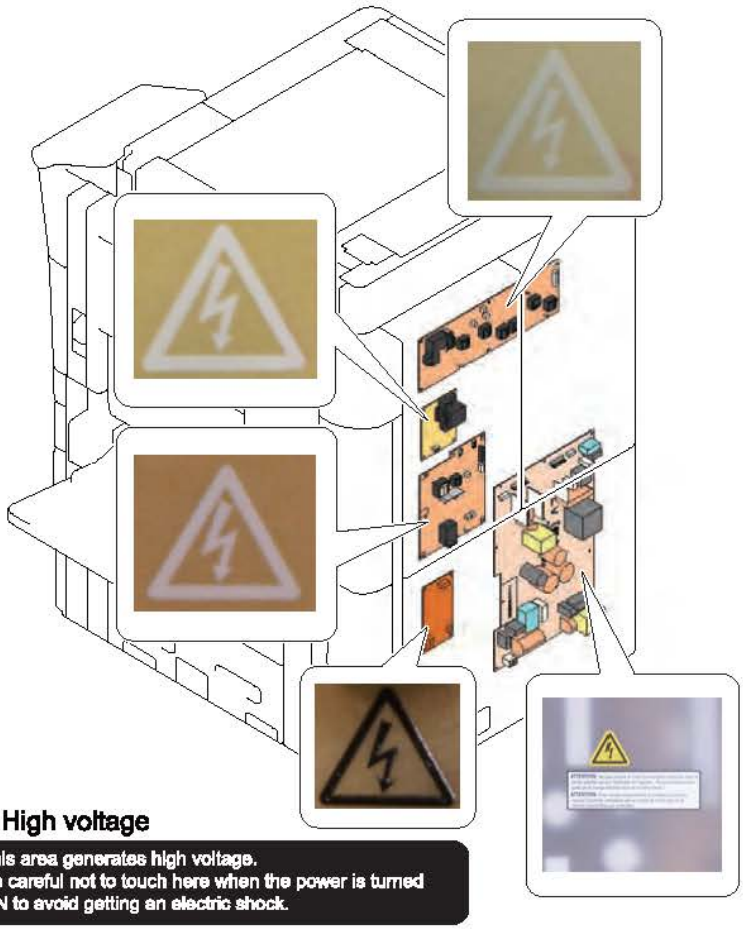


4.2 Warning indications on the boards



⚠High voltage

This area generates high voltage.
Be careful not to touch here when the power is turned ON to avoid getting an electric shock.



⚠High voltage

This area generates high voltage.
Be careful not to touch here when the power is turned ON to avoid getting an electric shock.

5. MEASURES TO TAKE IN CASE OF AN ACCIDENT

1. If an accident has occurred, the distributor who has been notified first must immediately take emergency measures to provide relief to affected persons and to prevent further damage.
2. If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and KM must be notified.
3. To determine the cause of the accident, conditions and materials must be recorded through direct on-site checks, in accordance with instructions issued by KM.
4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

B NOTATION OF THE CONTENTS

1. PRECAUTION ON HANDLING THIS MANUAL

CAUTION

- **Use of this manual should be strictly supervised to avoid disclosure of confidential information.**

2. PRODUCT NAME

In this manual, each of the products is described as follows:

1	bizhubPRO 958, bizhub 958/808/758: Main body	
2	FS-536 with SD-511: FS-536SD	
3	FS-537 with SD-512: FS-537SD	
4	Microsoft Windows Vista: Windows Vista	
5	Microsoft Windows 7: Windows 7	
6	Microsoft Windows 8.1: Windows 8.1	
7	Microsoft Windows 10: Windows 10	
8	When the description is made in combination of the OS's mentioned above:	Windows Vista/7/8.1/10

3. BRAND NAME

3.1 TRADEMARKS OF OTHER COMPANIES

- The company names and product names mentioned in this manual are the brand name or the registered trademark of each company.

3.2 OWN TRADEMARKS

- KONICA MINOLTA, KONICA MINOLTA logo, bizhub, and PageScope are the registered trademarks of KONICA MINOLTA, INC.
- © 2016 KONICA MINOLTA, INC.

4. FEEDING DIRECTION

- When the long side of the paper is parallel with the feeding direction, it is called short edge feeding. The feeding direction which is perpendicular to the short edge feeding is called the long edge feeding.
- Short edge feeding will be identified with [S (abbreviation for Short edge feeding)] on the paper size. No specific notation is added for the long edge feeding. When the size has only the short edge feeding with no long edge feeding, [S] will not be added to the paper size.

Sample notation

Paper size	Feeding direction	Notation
A4	Long edge feeding	A4
	Short edge feeding	A4S
A3	Short edge feeding	A3

C PRODUCT SPECIFICATIONS

1. bizhub 958/808/758, bizhub PRO 958

1.1 Type

Items	Specification value
Type	Combination scanner and printer console type
Copying system	Electrostatic dry-powdered image transfer to plain paper
Printing process	Laser electrostatic printing system
Photo conductor	OPC drum: KM-922 (OPC with high mold releasability)
Scanning resolution	Main scan direction: 600 dpi, Sub scan direction: 600 dpi
Exposure lamp	White LED
Original glass	Stationary (mirror scan)
Original scanning	• Mirror scanning CCD optical system • Sheet through system when DF is used
Registration	Rear left edge
Paper feeding separation system (Manual bypass)	Roller separation system with pick-up mechanism
Paper feeding separation system (Tray 1)	Roller separation system with pick-up mechanism
Paper feeding separation system (Tray 2)	Roller separation system with pick-up mechanism
Paper feeding separation system (Tray 3)	Roller separation system with pick-up mechanism
Paper feeding separation system (Tray 4)	Roller separation system with pick-up mechanism
Exposure system	1 polygon 2 beam * x 1 LD exposure and polygon mirror scan system
Copy resolution	Main scanning direction: equivalent to 1800 dpi, sub scanning direction: 600 dpi
Developing system	Dry 2 components developing method, HMT developing system
Charging system	DC comb electrode scorotron system with electrode cleaning function
Neutralizing system	Red LED system
Image transfer system	Belt transfer system (1st)/roller transfer system (2nd)
Paper separating system	Combination of curvature, separating claws, and AC bias system
Fusing system	Hard roller IH fusing system (Japan/Taiwan), Belt IH fusing system (Other areas except Japan/Taiwan)
Heating system	Heating: IH heating

• 1-beam exposing in 1200 dpi mode

1.2 Function

Items	Specification value	
Types of original	Sheets, Books, Three-dimensional objects	
Max. original size	A3 or 11 x 17	
Max. original weight	2 kg (4 7/16 lb)	
Multiple copies	1 to 9,999 sheets	
Warm-up time (at an ambient temperature of 23° C/73.4° F and rated source voltage)	bizhub 958 / bizhub PRO 958	55 sec. or less
	bizhub 808	99 sec. or less
	bizhub 758	30 sec. or less (Japan/Taiwan), 22 sec. or less (Other areas except Japan/Taiwan)
Processing speed (Plain paper)	bizhub 958 / bizhub PRO 958	502 mm/s
	bizhub 808	370 mm/s
	bizhub 758	325 mm/s
First copy time (Tray 1/2, A4 or 8 $^1/_2$ x11, full size)	bizhub 958 / bizhub PRO 958	3.2 sec. or less
	bizhub 808/758	3.6 sec. or less
Copying speed for multi-copy cycle (Tray 1/2, A4 or 8 $^1/_2$ x11, plain paper)	bizhub 958 / bizhub PRO 958	1-sided: 95 sheets/min., 2-sided: 95 sheets/min.
	bizhub 808	1-sided: 80 sheets/min., 2-sided: 80 sheets/min.
	bizhub 758	1-sided: 75 sheets/min., 2-sided: 75 sheets/min.
Image loss width	Copy	• Leading edge: 4.2 mm (3/16 inch) • Trailing edge: 3 mm (1/8 inch) • Rear edge: 3 mm (1/8 inch) • Front edge: 3 mm (1/8 inch)
	PC print	• Leading edge: 4.2 mm (3/16 inch) • Trailing edge: 4.2 mm (3/16 inch) • Rear edge: 4.2 mm (3/16 inch) • Front edge: 4.2 mm (3/16 inch)
Fixed zoom ratios	Full Size: ×1.000	

Items	Specification value	
	Reduction	×0.500, ×0.707, ×0.816, ×0.866 (Metric area) ×0.500, ×0.647, ×0.733, ×0.785 (Inch area)
	Enlargement	×1.154, ×1.224, ×1.414, ×2.000 (Metric area) ×1.214, ×1.294, ×1.545, ×2.000 (Inch area)
	Zoom ratios memory	3 memories
Variable zoom ratios	x0.250 to x4.000	in 0.001 increments
Paper size	Tray 1/Tray 2	A3, A4, A5S, B4, B5, SRA3, A3 wide, 8K, 16K, 12×18, Ledger, Legal, Letter, InvoiceS, FLS (8 to $8^1/_2$×13 to $13^1/_2$)
	Tray 3/Tray 4	A4, B5, A5, Postcard, 16K, Letter, Invoice
	Manual bypass tray	A3, A4, A5, A6S, B4, B5, B6S, Postcard, SRA3, A3 wide, 8K, 16K, 12×18, 4×6, Ledger, Legal, Letter, G Letter, Exective, Quart, Invoice, FLS Long size paper (210 mm × 457.3 mm to 297 mm × 1200 mm (8 1/4 inches × 18 inches to 11 11/16 inches × 47 1/4 inches)) *1
Copy exit tray capacity	Plain paper	250 sheets *2
	Thick paper	10 sheets
	OHP film	1 sheet
External memory function	Supported external memory devices	• USB flash memory compatible with the USB (1.1/2.0) interface • Formatted to the FAT32 file system • Not including security features (Possible to turn OFF security features) • Memory capacity of 1 GB to 2 GB recommended. *3 • A USB memory that is recognized by the computer as two or more drives cannot be used.
Memory capacity	Main memory	4 GB (Standard)
	HDD	250 GB

- *1: Only when the optional mount kit (long size paper) MK-715 is installed.
- *2: Only when the optional output tray OT-503 is installed.
- *3: Possible to be non-operational products.

1.3 Paper

Type		Paper source (maximum tray capacity)				
		Tray 1	Tray 2	Tray 3	Tray 4	Manual bypass tray
Paper type	Thin paper *1 (52 g/m^2 to 59 g/m^2 (13 13/16 lb to 15 11/16 lb))	○ (500 sheets)	○ (500 sheets)	○ (1,500 sheets)	○ (1,000 sheets)	○ (150 sheets)
	Plain paper *2 (60 g/m^2 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb))	○ (500 sheets)	○ (500 sheets)	○ (1,500 sheets)	○ (1,000 sheets)	○ (150 sheets)
	Translucent paper	—	—	—	—	—
	OHP film *3	—	—	—	—	○ (20 sheets)
	Thick 1 *2 (91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb))	○ (400 sheets)	○ (400 sheets)	○ (1,150 sheets)	○ (750 sheets)	○ (100 sheets)
	Thick 1+ *2 (121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb))	○ (280 sheets)	○ (280 sheets)	○ (800 sheets)	○ (500 sheets)	○ (80 sheets)
	Thick 2 *2 (158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb))	○ (250 sheets)	○ (250 sheets)	○ (700 sheets)	○ (450 sheets)	○ (70 sheets)
	Thick 3 *2,4 (210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/8 lb))	○ (200 sheets)	○ (200 sheets)	○ (600 sheets)	○ (400 sheets)	○ (60 sheets)
	Thick 4 *2,4 (257 g/m^2 to 300 g/m^2 (68 3/8 lb to 79/13/16 lb))	—	—	—	—	○ (50 sheets)
	Postcard	—	—	○ (200 sheets)	○ (200 sheets)	○ (50 sheets)
	Envelope	—	—	—	—	○ (10 sheets)
	Label sheet	—	—	—	—	○ (50 sheets)
	Long size paper	—	—	—	—	○ (10 sheets) *5
	Index paper	—	—	—	—	○ (70 sheets)
Paper dimension	Width	139.7 mm to 320 mm (5 1/2 inches to 12 5/8 inches)		• A4 • 8 1/2 × 11 • A5 • B5 • 5 1/2 × 8 1/2		90 mm to 320 mm (8 1/4 inches to 11 11/16 inches)

Type		Paper source (maximum tray capacity)				
		Tray 1	Tray 2	Tray 3	Tray 4	Manual bypass tray
	Length	182.0 mm to 457.2 mm (7 3/16 inches to 18 inches)		• Postcard S		139.7 mm to 1,200 mm (18 inches to 47 1/4 inches) *5
Long size paper *6	Width	—	—	—	—	210 mm to 297 mm (8 1/4 inches to 11 11/16 inches) *5
	Length	—	—	—	—	457 mm to 1,200 mm (18 inches to 47 1/4 inches) *5

- *1: Thin paper smaller than A5 size cannot be conveyed.
- *2: Excluding damp paper, curled paper, and recycled paper.
- *3: Can be conveyed by long edge feeding (LEF) only.
- *4: Image is not guaranteed when thick paper 3 or thick paper 4 is used.
- *5: Long size paper can be conveyed only when the optional mount kit (long size paper) MK-715 is installed. However, long size paper cannot be used in 1,200 dpi mode.
- *6: Basis weight of long size paper are 127 g/m^2 to 210 g/m^2 / 33 13/16 lb to 55 7/8 lb.

NOTE

- **In duplex printing mode, images on thin paper and thick 3 are not guaranteed. Paper conveyance is not guaranteed for thick 4, OHP film, envelope, label, long size paper, and index paper.**

1.4 Material

1.4.1 Life value

Part name	Product name	Number of prints (Field standard yield) *1	Name
Toner cartridge	bizhub 958 / bizhub PRO 958	40,800 sheet	TN912
	bizhub 808/758	40,800 sheets	TN812
Developing unit	bizhub 958/808/758, bizhub PRO 958	1,200,000 sheets	DV912
Drum unit	bizhub 958/808/758, bizhub PRO 958	400,000 sheets	DR912
Waste toner box	bizhub 958/808/758, bizhub PRO 958	160,000 sheets	WX-102

- *1: This machine has the field standard yield which indicates the available print numbers estimated by the quantities and usage of the unit in the market standard job mode. Number of field standard printed pages described as life value of each consumable in this manual. Yields for each preventative maintenance unit will differ depending on actual usage. For details of conditions of field standard yield, see "F.5.2 Specified conditions of field standard yield".

1.5 Print volume

1.5.1 bizhub 958/808/758, bizhub PRO 958

Items	Specification value
Average (pages/ month)	28,0000 (bizhub 758: Except Europe), 32,0000 (bizhub 808), 39,0000 (bizhub 758: Europe), 40,0000 (bizhub 985/bizhub PRO 985)
Maximum (pages/ month)	215,000 (bizhub 808/758), 300,000 (bizhub 958/bizhub PRO 958)

1.6 Machine specifications

Items	Specification value				
Power requirement	Model	bizhub 808/758			bizhub 958/bizhub PRO 958
	Voltage	AC 100 V	AC 110 V	AC 120 V	AC 208-240 V
	Current	15 A	15 A	16 A	10 A
	Frequency	50/60 Hz	60 Hz	60 Hz	50/60 Hz
Max. power consumption		1500 W	2100 W	2100 W	2100 W
Power consumption in each mode	Standby		255 W or less *7		
	Power save	Low power mode	100 W or less *7		
		Sleep mode (not reduce) *5	7 W *7		
		Sleep mode (reduce) *5	0.7 W *7		

		Sleep mode (reduce in high volume) *5	0.5 W *7
	Sub power OFF mode	Sleep mode (not reduce) *6	7 W *7
		Sleep mode (reduce) *6	0.7 W *7
		Sleep mode (reduce in high volume) *6	0.5 W *7
	ErP auto power off mode		0.5 W
Dimensions	670 mm (W) *1 x 820 mm (D) x 1,232 mm (H) *2 (26 3/8 inches (W) *1 x 32 5/16 inches (D) x 48 1/2 inches (H) *2)		
Space requirements	2,292 mm (W) x 1,419 mm (D) x 1,586 mm (H) *3 (90 1/4 inches (W) x 55 7/8 inches (D) x 62 7/16 inches (H) *3)		
Weight	Main body	Approx. 200 kg (440 15/16 lb) (without papers, including IU/TC/DF) *4	
	IU+TC	Approx. 4.7 kg (10 3/8 lb)	

- *1: Width when the manual bypass tray is closed
- *2: The height to the surface of original glass is 1,050 mm / 41 5/16 inch.
- *3: This shows the dimensions when the sub tray for the main tray of the finisher (FS-537) is pulled out and the large capacity unit (LU-205) is pulled out and automatic document feeder is opened.
- *4: Weight of automatic document feeder: 14.5 Kg / 31 15/16 lb
- *5: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Save Settings] -> [Power Consumption in Sleep Mode]
- *6: Even in sub power off mode, [Disable], [Enabled] and [High] are selectable in [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Save Settings] -> [Power Consumption in Sleep Mode].
- *7: The value is only provided for reference. It varies depending on different operating environments.

1.7 Operating environment

Temperature	10 to 30 ° C / 50 to 86 ° F (with a fluctuation of 10 ° C / 18 ° F or less per hour)
Humidity	15 to 85 % (Relative humidity with a fluctuation of 10 %/h)
Levelness	Difference between front and back, right and left should be 1 degree or under.

1.8 Print function

Items	Specification value	
First print time (Tray 1/2, A4 or 8 $^{1}/_{2}$x11, full size)	bizhub 985/bizhub PRO 985	3.2 sec. or less
	bizhub 808/785	3.6 sec. or less
Printing speed for multi-print cycle (Tray 1/2, A4 or 8 $^{1}/_{2}$x11, plain paper)	bizhub 985/bizhub PRO 985	1-sided: 95 sheets/min., 2-sided: 95 sheets/min.
	bizhub 808	1-sided: 80 sheets/min., 2-sided: 80 sheets/min.
	bizhub 785	1-sided: 75 sheets/min., 2-sided: 75 sheets/min.
Print resolution	• Multivalued: Equivalent to 1,800 dpi in main scanning direction x 600 dpi in sub scanning direction • Binary: Equivalent to 1,200 dpi in main scanning direction x 1,200 dpi in sub scanning direction (1,200 dpi mode)	
Printer language	• PCL5e/c Emulation • PCL 6 (XL ver.3.0) Emulation • PostScript 3 Emulation (3016) • XPS Ver.1.0	
Supported operating systems (server)	• Windows 2003 • Windows 2003 64bit • Windows 2008 • Windows 2008 64bit • Windows 2008 R2	
Supported operating systems (client)	• Windows Vista 32bit • Windows Vista 64bit • Windows 7 32bit • Windows 7 64bit • Windows 8.1 32bit • Windows 8.1 64bit • Mac OS9.2 • Mac OSX 10.2 • Mac OSX 10.3 • Mac OSX 10.4 • Mac OSX 10.5 • Mac OS X 10.4 Intel edition • Mac OS X 10.5 Intel edition • Mac OS X 10.6 Intel edition • Mac OS X 10.7 Intel edition • Mac OS X 10.8 Intel edition • Linux	

Items	Specification value
Printer driver (PCL6*1)	• Windows Vista • Windows 7 • Windows 8.1 • Windows Server 2003 • Windows Server 2003 R2 • Windows Server 2008 • Windows Vista 64bit • Windows 7 64bit • Windows 8.1 64bit • Windows Server 2003 64bit • Windows Server 2008 64bit • Windows Server 2008 R2 • Windows Server 2012 64bit
Printer driver (PostScript 3)	• Windows Vista • Windows 7 • Windows 8.1 • Windows Server 2003 • Windows Server 2003 R2 • Windows Server 2008 PS • Windows Vista 64bit • Windows 7 64bit • Windows 8.1 64bit • Windows Server 2003 64bit • Windows Server 2008 64bit • Windows Server 2008 R2 PS • Windows Server 2012 64bit • Macintosh OS 9.2 printer driver PPD file • Macintosh OS X 10.2 PPD+PDE printer driver • Macintosh OS X 10.3 PPD+PDE printer driver • Macintosh OS X 10.4 PPD+PDE printer driver • Macintosh OS X 10.5 PPD+PDE printer driver • Macintosh OS X 10.4 Intel edition PPD+PDE printer driver • Macintosh OS X 10.5 Intel edition PPD+PDE printer driver • Macintosh OS X 10.6 PPD+PDE printer driver • Macintosh OS X 10.7 PPD+PDE printer driver • Macintosh OS X 10.8 PPD+PDE printer driver • Linux printer driver PPD file
Printer driver (XPS)	• Windows Vista 32bit • Windows Vista 64bit • Windows Server 2008 32bit • Windows Server 2008 64bit • Windows 7 32bit • Windows 7 64bit • Windows 8.1 32bit • Windows 8.1 64bit • Windows Server 2008 R2 • Windows Server 2012 64bit
Work memory	4 GB (Standard)
Host interface	• Ethernet (1000Base-T/100Base-TX/10Base-T) • USB2.0/1.1 • USB_Host
Built-in fonts (PCL)	European 80 fonts
	Japanese *2 • HG Mincho L • HGP Mincho L • HG Gothic B • HGP Gothic B
Built-in fonts (PostScript 3 Emulation)	European 137 fonts
	Japanese • HG Mincho L • HG Gothic B

- *1: Including the FAX driver for the PC-FAX printing.
- *2: PCL5 does not support built-in Japanese fonts.

1.9 Scan function

Items	Specification value
Scanning resolution	• 600 dpi • 400 dpi • 300 dpi • 200 dpi
Scan speed	• 1-sided original mode: 120 pages/min. *1 • 2-sided original mode: 240 pages/min. *1

Items	Specification value
Scannable paper size	• Loading originals manually on the original glass: Maximum width: 297 mm (11 11/16 inches) x Maximum length: 431.8 mm (17 inches) • DF mode (400 dpi or less): Maximum width: 297 mm (11 11/16 inches) x Maximum length: 1,000 mm (39 3/8 inches) • DF mode (600 dpi): Maximum width: 297 (11 11/16 inches) mm x Maximum length: 432 mm (17 inches)
Communication protocol	• TCP/IP (FTP, SMB, SMTP) • TCP/IP (IPv4/IPv6)
Supported operating system	• Windows Vista 32bit • Windows Vista 64bit • Windows 7 32 bit • Windows 7 64bit • Windows 8.1 32 bit • Windows 8.1 64bit
Driver	• TWAIN Driver • HDD TWAIN Driver
Output file format	• TIFF*2 • PDF*3 • Compact PDF • PDF/A • Linearized PDF • JPEG • XPS • CompactXPS • OOXML (PPTx, xlsx, docx) • Searchable PDF *4
Scan function	• Scan to FTP • Scan to PC (SMB)*5 • Scan to E-Mail • Scan to BOX [HDD]*6 • Scan to BOX USB memory*6 • Scan server sending • Scan to WEBDAV • Scan to Me • Scan to Home • Scan to Web service (WSD scan) • Devices Profile for Web Services (DPWS)
Other function	• Universal send: Multi-Method Send • E-Mail authentication: SMTP authentication, POP before SMTP • Encrypted mail send using S/MIME • Filing number

- *1: When DF is used (A4 or 8 1/2 x 11, 400 dpi)
- *2: TIFF Technical Note #2 compatible
- *3: PDF V1.4 compatible
- *4: Page setting (Specify the number of split pages (Page Separation: 1 to 999 pages / Multi Page)
- *5: Browsing function (Maximum 128 computers within the same WorkGroup)
- *6: Network TWAIN (via Ethernet TCP/IP)

1.10 Note for the Specifications

- These specifications are subject to change without notice.

2. Dual scan document feeder

2.1 Type

Name	Dual scan document feeder	
Type	Paper feed section	Paper feed from top of stack
	Image reading section	• Sheet-through system • Back side: Reading by CIS
	Exit section	Straight exit system
Installation	Screw clamp to the main body	
Document alignment	Center	
Document loading	Face up	

2.2 Function

Mode	Standard mode, Mixed original (same width/different width) detection mode, Scan/FAX mode, Index paper mode

2.3 Type of document

Type	Standard mode/thin paper mode	1-sided mode: 35 g/m^2 to 210 g/m^2 (9 5/16 to 55 7/8 lb)
		2-sided mode: 50 g/m^2 to 210 g/m^2 (13 5/16 to 55 7/8 lb)
	Mixed original detection mode	1-sided / 2-sided mode: 50 g/m^2 to 128 g/m^2 (13 5/16 to 34 1/16 lb)
	Scan/FAX mode	1-sided mode: 35 g/m^2 to 210 g/m^2 (9 5/16 to 55 7/8 lb)
		2-sided mode: 50 g/m^2 to 210 g/m^2 (13 5/16 to 55 7/8 lb)
Detectable document size *1	Standard mode, Scan/FAX mode	PostcardS, B6S, B5/B5S, B4, A5/A5S, A4/A4S, A3
	Index paper mode	B5, A4, A4S, B4, A3
Capacity	300 sheets (64 g/m^2 (17 lb)) or stack of 19 mm (3/4 inches) and below (including paper curl)	

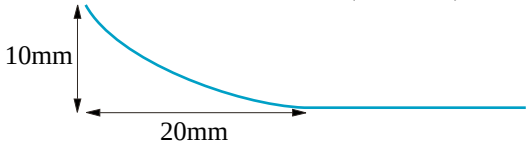
- *1: For the combined original detection mode, refer to the mixed original feed chart.

2.4 Particular original

- If fed, paper feed will be possible to some extent but trouble occurrence will be possible.

Type of original	Possible trouble
Sheets lightly curled (Curled amount: 10 to 15 mm (3/8 to 9/16 inches)) *1	Dog-eared, exit failure, transport failure
Thermal paper (Heat sensitive paper)	Edge folded, exit failure, transport failure
Paper immediately after paper exit from the main body	Paper feed failure, transport failure
Paper with many punched holes (e.g., loose leaf *2, CF paper *3)	Multi-page feed due to flashes from holes
Folded original (including half-folded and Z-folded originals) *4	Paper feed failure, transport failure, image distortion
Sheets with 2 to 4 holes	Transport failure
Coated paper (including inkjet paper)	Paper feed failure, transport failure

- *1: Limited to vertical feeding
  *2: No crease on perforation
  *3: Creases must be smoothed out. (amount of float: 15 mm (9/16 inches) or less)
  *4: Amount of curl: less than 10 mm (3/8 inches) in vertical and 20 mm (13/16 inches) in horizontal direction



2.5 Prohibited original

- Prohibited originals that cause trouble

Type of original
Sheets stapled or clipped together
Book original
Sheets with paper attached
Sheets clipped or notched
Torn paper
Original weighing less than 35 g/m^2 (9 5/16 lb) or 210 g/m^2 (55 7/8 lb) or more

Type of original
Significantly curled original (amount of curl exceeding 15 mm (9/16 inches))
OHP film
Label sheet
Offset master paper
Glossy photographic paper or glossy enamel paper

2.6 Mixed original feed chart

	Max. original size	297 mm		257 mm		210 mm		182 mm	148 mm	128 mm
Mixed original size adjustment		A3	A4	B4	B5	A4S	A5	B5S	A5S	B6S
297 mm	A3	◎	◎	—	—	—	—	—	—	—
	A4	◎	◎	—	—	—	—	—	—	—
257 mm	B4	○	○	◎	◎	—	—	—	—	—
	B5	○	○	◎	◎	—	—	—	—	—
210 mm	A4S	○	○	○	○	◎	◎	—	—	—
	A5	×	×	○	○	◎	◎	—	—	—
182 mm	B5S	×	×	○	○	○	○	◎	—	—
148 mm	A5S	×	×	×	×	×	×	○	◎	—
128 mm	B6S	×	×	×	×	×	×	×	○	◎

◎	Same size	Tilted with in 1.5 % or less
○	Mixed original feed available	No regulation of tilted degree
×	No. mixed original feed	
—	Can not set original	

2.7 Machine specification

Power requirement	Power supply	DC 24 V, DC 12 V (for CIS), DC 5 V (for recovering from the sleep mode)
	Supplying method	Supplied from the main body
Max. power consumption	104.5 W or less	
Dimension	Width	618 mm (24 5/16 inches)
	Depth	575 mm (22 5/8 inches)
	Height	166 mm (6 9/16 inches) (180 mm (7 1/16 inches): max. including projection)
Weight	Approx. 15.1 kg (33 5/16 lb)	

2.8 Operating environment

- Conforms to the operating environment of the main body.

2.9 Note for the Specifications

- These specifications are subject to change without notice.

3. LU-205

3.1 Type

Name	2,500 sheets Large Capacity Unit
Type	External option attached to the right side of the main body
Document alignment	Center

3.2 Paper

Type	Size	Basis weight	Capacity
Thin paper	A3, B4, A4/A4S, A3 Wide (12 x 18), SRA3, Ledger, Letter/LetterS, Legal	52 g/m^2 to 59 g/m^2 (13 13/16 lb to 15 11/16 lb)	2,500 sheets
Plain paper		60 g/m^2 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)	
Thick 1		91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb)	2,000 sheets *2
Thick 1+		121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb)	1,450 sheets *2
Thick 2		158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb)	1,250 sheets *2
Thick 3		210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/8 lb)	1,000 sheets *1 *2

- *1: Images are out of guarantee.
- *2: Excluding damp paper, curled paper, and recycled paper.

3.3 Machine specification

Power requirement	Supplied from the main body
Max. power consumption	40 W or less
Dimensions	629 mm (W) x 556 mm (D) x 405 mm (H) (24 3/4 inches (W) x 21 7/8 inches (D) x 15 15/16 inches (H))
Weight	Approx. 25.0 kg (55 1/8 lb)

3.4 Operating environment

- Conforms to the operating environment of the main body.

3.5 Note for the Specifications

- These specifications are subject to change without notice.

4. LU-303

4.1 Type

Name	3,000 sheets Large Capacity Unit
Type	External option attached to the right side of the main body
Document alignment	Center

4.2 Paper

Type	Size	Basis weight	Capacity
Thin paper	A4 /Letter	52 g/m^2 to 59 g/m^2 (13 13/16 lb to 15 11/16 lb)	3,000 prints/month
Plain paper		60 g/m^2 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)	
Thick 1		91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb)	2,500 sheets *2
Thick 1+		121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb)	1,750 sheets *2
Thick 2		158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb)	1,550 sheets *2
Thick 3		210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/8 lb)	1,300 sheets *1 *2

- *1: Images are out of guarantee.
- *2: Excluding damp paper, curled paper, and recycled paper.

4.3 Machine specification

Power requirement	Supplied from the main body
Max. power consumption	40 W or less
Dimensions	367 mm (W) x 528 mm (D) x 405 mm (H) (14 7/16 inches (W) x 20 13/16 inches (D) x 15 15/16 inches (H))
Weight	Approx. 18.0 kg (39 11/16 lb)

4.4 Operating environment

- Conforms to the operating environment of the main body.

4.5 Note for the Specifications

- These specifications are subject to change without notice.

5. FS-537/FS-537SD

5.1 Type

Name	Multi staple finisher (FS-537) Finisher-contained center-staple and tri-fold device (FS-537SD)
Type	Freestanding
Document alignment	Center
Stapling function	Center 2-point stapling method by fixed stapler (FS-537SD)
Consumable	Staples (5,000 staples / cartridge)

5.2 Function

Mode	• Non sort • Sort • Sort offset • Group offset • Sort staple • Center staple (SD is installed) • Center fold (SD is installed) • Tri-folding (SD is installed)

5.3 Staple

Exit tray	Main tray		
Supported paper sizes in stapling	A5, B5S/B5, B6S, A4S/A4, B4, A3 LetterS/Letter, Legal, Ledger, ExectiveS/Exective, 16KS/16K, 8K Custom size paper (Width: 182.0 mm to 304.8 mm (7 3/16 inches to 12 inches), Length: 148.5 mm to 457.2 mm (5 7/8 inches x 18 inches))		
Number of sheets stapled by paper type and size	Defined condition		No. of sheets to be stapled
	Paper type	Paper size	
	Plain paper / Thin paper / Recycled paper	A4, Legal	100 sheets
		B4, Ledger FD: 297 to 389 mm (11 11/16 to 15 5/16 inches)	65 sheets
		A3 wide, A3, B5, A5, Ledger, Exective FD: 150 mm to 390 mm (5 7/8 inches to 15 3/8 inches)	50 sheets
	81 to 90 g/m^2 (21 9/16 to 23 15/16 lb)	-	30 sheets
	Cover sheet mode (maximum)		98 sheets (75 g/m^2 (19 15/16 lb): Plain paper) + 2 sheets (163 g/m^2 (43 3/8 lb))
Staple positions	Front/back of the corner (45 degrees)	A4, A3, B4, B5, Letter, Ledger	
	Front/back of the corner (parallel)	A4S, B5S, A5, LetterS, Legal	
	Center staple two points	A4S/A4, A3, B5S/B5, B4, A5, LetterS/Letter, Legal, Ledger	

• *: Guaranteed in recommended paper

5.4 Capacity

Exit tray	Mode	Paper type		Paper size	Number of stacked sheets
Sub tray *1	Normal ejection	Plain paper, recycled paper, thin paper (52 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb))		-	200 sheets
		Special paper	Postcard		20 sheets
			Envelope		
			OHP film		
			Label sheet		
		Thick paper (91 to 300 g/m^2 (24 3/16 to 79 13/16 lb))			
Main tray *2	Sort, group	Plain paper, recycled paper, thin paper (52 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb))		A4S/LetterS or less *2 B5/B5S or greater	FS-537: 3000 sheets/ FS-537SD: 2500 sheets
				B4/Legal or greater	1500 sheets *3
				A5S/Invoice or less	500 sheets

		Thick paper (91 to 300 g/m^2 (24 3/16 to 79 13/16 lb))		-	20 sheets
	Sort offset, group offset	Plain paper, recycled paper, thin paper (52 to 90 g/m^2 (13 13/16 lb to 23 15/16 lb))		A/4A4S/B5/Letter/ LetterS	FS-537: 3000 sheets/ FS-537SD: 2500 sheets
				B4/B5S/ Legal or greater	1500 sheets *3
				less than B5	500 sheets
		Thick paper (91 to 300 g/m^2 (24 3/16 to 79 13/16 lb))		-	20 sheets
	Staple	Paper type	Number of sheets stapled	Paper size	Number of sets stacked
		Plain paper, Recycled paper (60 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)) Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb))	2 to 9 sheets	A4/B5/Letter	200 copies
				A4S/LetterS or less	100 copies
				B4/ Legal or greater	100 copies *3
			10 to 20 sheets	-	50 copies
			21 to 30 sheets		30 copies
			31 to 40 sheets		25 copies
			41 to 50 sheets		20 copies
			51 to 60 sheets		15 copies
			61 to 100 sheets		10 copies

- *1: 38 mm (1 1/2 inches) in stack height
- *2: 369 mm (14 1/2 inches) in stack height (A4S, LetterS, or smaller sizes)
- *3: Protection used depending on the stacked number for B4 or larger sizes

5.5 Center Fold

Supported paper in center folding	Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) Plain paper (60 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)) Thick 1 (91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)) *1 Thick 1+ (121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)) *1 Thick 2 (158 to 209 g/m^2 (42 to 55 5/8 lb)) *1	
Supported paper sizes	A4S, B4, A3, A3 wide (12 $^1/_4$ x 18), SRA3, LetterS, Legal, Ledger, 8K Custom size paper (Width: 210 mm to 320 mm (8 1/4 inches to 12 5/8 inches), Length: 279.4 mm to 457.2 mm (11 inches x 18 inches))	
Number of sets stacked on the exit tray by paper type and size	1 to 5 sheets folding *2	All sizes of supported paper: 35 copies (except thick paper)

- *1: Available only with 1 sheet
- *2: Up to 5 sheets in center folding

5.6 Tri-folding

Supported paper in tri-folding	Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)) Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb))	
Supported paper sizes	A4S, LetterS, 16KS	
Number of sets stacked on the exit tray by paper type and size *	1 sheet folding	50 copies
	2 sheets folding	40 copies
	3 sheets folding	30 copies

- *: Up to 3 sheets in tri-folding

5.7 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the main body)
	DC 5 V ± 3 %, 3.3 V ± 3 % (generated inside FS-537)
Power consumption	140 W or less (95 ppm), 110 W or less (75 ppm)
Dimension	FS-537: 622 mm / FS-537SD: 635 mm (W) x 692 mm (D) x 1,031 mm (H) (FS-537:24 1/2 inches / FS-537SD: 25 inches (W) x 27 1/4 inches (D) x 40 9/16 inches (H))
	FS-537: 753 mm / FS-537SD: 776 mm (W) x 692 mm (D) x 1,077mm (H) (FS-537: 29 5/8 inches / FS-537SD: 30 9/16 inches (W) x 27 1/4 inches (D) x 42 3/8 inches (H)) *
Weight	FS-537: 47 kg (103 5/8 lb)/FS-537SD: 73 kg (160 15/16 lb)

- *: Size when the paper output tray is pulled out

5.8 Operating environment

- Conforms to the operating environment of the main body.

5.9 Note for the Specifications

- These specifications are subject to change without notice.

6. PK-523

6.1 Type

Name	PK-523
Type	Finisher-contained hole punch device with auto paper alignment mechanism

6.2 Function

Punching method	Slide cam method by DC brushless motor
No. of holes	2-3 holes, 2-4 holes, 4 holes
Hole diameter	2 holes / φ 8.0 mm - 3 holes /φ 8.0 mm, 2 holes /φ 6.5 mm - 4 holes /φ 6.5 mm, 4 holes /φ 6.5 mm
Hole pitch	2 holes / 70 mm pitch - 3 holes / 108 mm pitch, 2 holes / 80 mm pitch - 4 holes / 80 mm pitch, 4 holes / 70 mm, 21 mm pitch
Supported mode	Punch mode, through mode
Applicable post processing mode	Sort, Group, Staple

6.3 Paper

Size	A5/A5S, B5/B5S, A4/A4S, B4, A3 Letter/LetterS, Legal, Ledger, Invoice/InvoiceS, Exective/ExectiveS, 16K/16KS, 8K, Foolscap, F4
Supported paper	Plain paper (60 to 90 g/m^2 (15 15/16 to 23 15/16 lb)), Thin paper (52 to 59 g/m^2 (13 13/16 to 15 11/16 lb)), Thick 1 (91 to 120 g/m^2 (24 3/16 to 31 15/16 lb)), Thick 1+ (121 to 157 g/m^2 (32 3/16 to 41 3/4 lb)), Thick 2 (158 to 209 g/m^2 (42 to 55 5/8 lb)), Thick 3 (210 to 256 g/m^2 (55 7/8 to 68 1/8 lb)), Thick 4 (257 to 300 g/m^2 (68 3/8 to 79 13/16 lb))
Basis weight	52 to 300 g/m^2 (13 13/16 to 79 13/16 lb)
Punch prohibited paper	Long size paper, post card (190 g/m^2 (50 9/16 lb)), envelope, OHP film, label sheet, letter head, index paper, and the other paper that may interfere with the operation of the punch unit or the punch blade

6.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the FS-537)
	DC 5.1 V ± 3 % (supplied from the FS-537)
Max. power consumption	17 W or less
Dimension	146.2 mm (W) x 639.2 mm (D) x 233.8 mm (H) (5 3/4 inch (W) x 25 3/16 inch (D) x 9 3/16 inch (H))
Weight	4.5 kg (9 15/16 lb)

6.5 Operating environment

- Conforms to the operating environment of the main body.

6.6 Note for the Specifications

- These specifications are subject to change without notice.

7. ZU-609

7.1 Type

Name	Z folding unit
Type	Finisher-contained
Document alignment	Center

7.2 Function

Mode	• Through (no folding) • Z-folding • Double-folding • Z-folding+punch (PK is installed) • Double-folding+punch (PK is installed)

7.3 Paper process ability

7.3.1 Paper size

Type	Size
Regular size paper	A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 wide, Postcard S Invoice, InvoiceS, Letter, LetterS, Legal, Ledger, Exective, ExectiveS, 16K, 16KS, 8K
Custom size paper	• Max.: Width 320 mm x Length 1200 mm (Width 12 5/8 inches x Length 47 1/4 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

7.3.2 Number of sets stacked of the Z-folding

Number of sheets being Z-folded per one job	Number of sheets without being Z-folded: Number of sets stacked in main tray *
1 sheet	1 to 40 sheets: 20 sets / 41 to 90 sheets: 10 sets
2 sheets	1 to 80 sheets: 10 sets
3 sheets	1 to 70 sheets: 4 sets
4 sheets	1 to 60 sheets: 3 sets
5 sheets	1 to 50 sheets: 2 sets
6 to 10 sheets	No dropping

- *: Paper size (52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)) B4, A3, Legal, Ledger, 8K

7.3.3 Number of stacked sheets of double-folding

Number of sheets being double-folded per one job	Number of sheets without being double-folded: Number of sets stacked in main tray *
1 sheet	1 to 40 sheets: 20 sets / 41 to 90 sheets:10 sets
2 sheets	1 to 80 sheets: 10 sets
3 sheets	1 to 70 sheets: 4 sets
4 sheets	1 to 60 sheets: 3 sets
5 sheets	1 to 50 sheets: 2 sets
6 to 10 sheets	No dropping

- *: Paper size (52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)) Legal

7.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the finisher)
Power consumption	Regulated on finisher system
Dimension	101 mm (W) x 506 mm (D) x 186 mm (H) (4 inches (W) x 19 15/16 inches (D) x 7 5/16 inches (H))
Weight	Approx. 4.5 kg (9 15/16 lb)

7.5 Operating environment

- Conforms to the operating environment of the main body.

7.6 Note for the Specifications

- **These specifications are subject to change without notice.**

8. JS-602

8.1 Type

Name	Job Separator
Type	Add-on finishing device externally mounted on top of finisher
Installation	Fixed to finisher
Document alignment	Center

8.2 Function

Mode	Group, Sort (during copy, print, or fax mode)

8.3 Paper

Type	Size	Basis weight	Maximum capacity	
Plain paper	A3, B4, A4/A4S, B5/B5S, A5S	60 to 90 g/m^2 (15 15/16 to 23 15/16 lb)	100 sheets	A4, 8 1/2 x 11 (80 g/m^2 (21 1/4 lb))
			50 sheets	Except A4, 8 1/2 x 11 (80 g/m^2 (21 1/4 lb)) (Height: up to 28 mm (1 1/8 inches))

8.4 Machine specification

Power requirement	DC 24 V (supplied from the finisher)
	DC 5 V (supplied from the finisher)
Dimension	341 mm (W) x 537 mm (D) x 149 mm (H) (13 7/16 inches (W) x 21 1/8 inches (D) x 5 7/8 inches (H))
Weight	1.75 kg (9 15/16 lb)

8.5 Operating environment

- Conforms to the operating environment of the main body.

8.6 Note for the Specifications

- These specifications are subject to change without notice.

9. PI-507

9.1 Type

Name	Post inserter unit
Type	External type finisher

9.2 Function

Auto sheet feeding (online operation)	Feeds the sheet to finisher automatically under the instruction from the main body.
Manual sheet feeding (offline operation)	Feeds the sheet to finisher under the instruction from the operation panel of PI.
	You can select the following processing modes.
	• Staple mode • Punch mode (when PK-523 is installed on finisher) • Center staple mode (FS-537SD) • Double-folding mode (FS-537SD)

9.3 Paper

Size	Tray /Up	• A4/A4S, B5/B5S, A5 • Incoice/InvoiceS, Lettter/LetterS, Exective/ Exective S, 16K/16KS • Custom paper (Max. 320 x 297 mm (12 5/8 x 11 11/16 inches), Min. 182 x 139 mm (7 3/16 x 5 1/2 inches))
	Tray /Lw	• A3, B4, A4/A4S, B5/B5S, A5, SRA3, A3 wide • Incoice/InvoiceS, Lettter/LetterS, Exective/Exective S, Legal, Leger, 16K/16KS, 8K • Custom paper (Max. 320 x 457.2 mm (12 5/8 x 18 inches), Min. 182 x 139 mm (7 3/16 x 5 1/2 inches))
Paper type	Plain paper, Thick paper (91 to 209 g/m^2 (24 3/16 to 55 9/16 lb)), label paper	
Basis weight	60 g/m^2 to 209 g/m^2 (15 15/16 lb to 55 9/16 lb)	
Capacity	Tray /Up	200 sheets (80 g/m^2 (12 1/4 lb)) or 30 mm (1 3/16 inches) or less in height
	Tray /Lw	200 sheets (80 g/m^2 (12 1/4 lb)) or 30 mm (1 3/16 inches) or less in height

9.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the finisher)
Max. power consumption	Regulated on finisher system
Dimension	513 mm (W) x 635 mm (D) x 222 mm (H) (20 3/16 inches (W) x 25 inches (D) x 8 3/4 inches (H))
Weight	Approx. 12 kg (26 7/16 lb)

9.5 Operating environment

- Conforms to the operating environment of the main body.

9.6 Note for the Specifications

- These specifications are subject to change without notice.

10. FS-536/FS-536SD

10.1 Type

Name	Multi staple finisher (FS-536) Finisher-contained center-staple and tri-fold device (FS-536SD)
Type	Freestanding
Document alignment	Center
Stapling function	Center 2-point stapling method by fixed stapler (FS-536SD)
Consumable	Staples (5,000 staples / cartridge)

10.2 Function

Mode	• Sort • Group • Sort offset • Group offset • Sort staple • Center staple (SD is installed) • Center fold (SD is installed) • Tri-folding (SD is installed)

10.3 Paper process ability

10.3.1 Non sort/sort/group

(1) Main tray

NOTE

- **If either the number or height of stacked sheets reaches the specified value, "Tray paper full" is determined.**

(a) Number of stacked sheets

Paper type	Basis weight	Maximum number of stacked sheets		
		A5/A5S/InvoiceS or less	B5/B5S or greater, A4S/ LetterS or less	B4/Legal or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	500 sheets	• 1,500 sheets (SD is not installed) • 2,000 sheets (SD is installed)	1,500 sheets
Plain paper				
Recycled paper				
Thick paper	91 to 300 g/m^2 (24 3/16 to 79 13/16 lb)	20 sheets		
Postcard	-			
Envelope	-			
OHP film	-			
Label sheet	-			
Letterhead	-			

(b) Height of stacked sheets

Paper length	Maximum height of stacked sheets
A4S/LetterS or less	375 mm (14 3/4 inches) (SD is installed), 250 mm (9 13/16 inches) (SD is not installed)
B4/Legal or greater	187.5 mm (7 3/8 inches)

(c) Paper size

Type	Size
Regular size paper	A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 wide, Postcard S Invoice, InvoiceS, Letter, LetterS, Legal, Ledger, Exective, ExectiveS, 16K, 16KS, 8K
Custom size paper	• Max.: Width 320 mm x Length 483 mm (Width 12 5/8 inches x Length 19 inches) • Min.: Width 130 mm x Length 139.7 mm (Width 5 1/8 inches x Length 5 1/2 inches)

(2) Sub tray

(a) Paper capacity

Paper type	Basis weight	Maximum capacity
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	200 sheets
Plain paper		
Recycled paper		
Thick paper	91 to 300 g/m^2 (24 3/16 to 79 13/16 lb)	20 sheets
Postcard	-	

Paper type	Basis weight	Maximum capacity
Envelope	-	
OHP film	-	
Label sheet	-	
Letterhead	-	
Tab paper	-	
Long size paper *	-	

- *: The number of stacked sheets is not regulated. Until it detects a paper full state when the stacked paper reaches 35 mm.

(b) Paper size

Type	Size
Regular size paper	A6S, A5S, A5, B5S, B5, B6S, A4S, A4, B4, A3, SRA3, A3 wide, Postcard S Invoice, InvoiceS, Letter, LetterS, Legal, Ledger, Exective, ExectiveS, 16K, 16KS, 8K
Custom size paper	• Max.: Width 320 mm x Length 1,200 mm (Width 12 5/8 inches x Length 47 1/4 inches) • Min.: Width 90 mm x Length 139.7 mm (Width 3 9/16 inches x Length 5 1/2 inches)

10.3.2 Sort offset/group offset

(1) Main tray

NOTE

- **If either the number or height of stacked sheets reaches the specified value, "Tray paper full" is determined.**

(a) Number of stacked sheets

Paper type	Basis weight	Maximum number of stacked sheets		
		less than B5	A4/A4S/Letter/LetterS/B5	B4/B5S/Legal or greater
Thin paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	500 sheets	• 3,000 sheets (SD is not installed) • 2,000 sheets (SD is installed)	1,500 sheets
Plain paper				
Recycled paper				
Thick paper	91 to 300 g/m^2 (24 3/16 to 79 13/16 lb)	20 sheets		

(b) Height of stacked sheets

Paper length	Maximum height of stacked sheets
A4S/LetterS or less	375 mm (14 3/4 inches) (SD is installed), 250 mm (9 13/16 inches) (SD is not installed)
B4/Legal or greater	187.5 mm (7 3/8 inches)

(c) Paper size

Type	Size
Regular size paper	A5, B5S, B5, A4S, A4, B4, A3, SRA3, A3 Wide Letter, LetterS, Legal, Ledger, Exective, ExecticeS, 16KS, 16K, 8K
Custom size paper	• Max.: Width 320 mm x Length 457.2 mm (Width 12 5/8 inches x Length 18 inches) • Min.: Width 182 mm x Length 148.5 mm (Width 7 3/16 inches x Length 5 7/8 inches)

10.3.3 Sort staple

(1) Main tray

(a) Paper capacity

Paper type	Basis weight	No. of sheets to be stapled	Max. capacity (Number of stacked sheets/Height of stacked sheets)		
			A4/B5/Letter	A4S/LetterS or less	B4/Legal or greater
• Thin paper • Plain paper • Recycled paper	52 to 90 g/m^2 (13 13/16 to 23 15/16 lb)	2 sheets to 9 sheets	200 copies *	100 copies	
		10 sheets to 20 sheets	50 copies		
		21 sheets to 30 sheets	30 copies		
		31 sheets to 40 sheets	25 copies		
		41 to 50 sheets	20 copies		

- *: 100 copies for thin paper or recycled paper

(b) Paper size

Type	Size
Regular size paper	A5, B5S, B5, A4S, A4, B4, A3 LetterS, Letter, Legal, Ledger, ExectiveS, Exective, 16KS, 16K, 8K
Custom size paper	• Max.: Width 297 mm x Length 431.8 mm (Width 11 11/16 inches x Length 17 inches) • Min.: Width 182 mm x Length 148.5 mm (Width 7 3/16 inches x Length 5 7/8 inches)

(c) No. of sheets to be stapled

Mode	Max. No. of sheets to be stapled
Normal mode*	Thin paper / Plain paper / Recycled paper: 50 sheets
	Thick paper (91 to 120g/m^2 (24 3/16 to 31 15/16 lb)): 30 sheets
	Thick paper (121 to 209 g/m^2 (32 3/16 to 55 5/8 lb)): 15 sheets
Cover sheet mode	48 sheets (75 g/m^2 (19 15/16 lb), 80 g/m^2 (21 1/4 lb), 90 g/m^2 (23 15/16 lb)) + 2 sheets (163 g/m^2 (43 3/8 lb), 200 g/m^2 (53 3/16 lb))

- *: Maximum stapling sheets/ copies for printing high image density is 20 x 20 copies.

(d) Stapling position

Stapling position	Paper size
Back/Front of the corner (45 degree)	A4, A3, B5, B4, Letter, Ledger
Back of the corner (Parallel)	A4, A3, Letter, Ledger
Back/Front of the corner (Parallel)	A4S, 5S, A5, LetterS, Legal
Side: Parallel 2 point	A4S, A4, A3, B5S, B5, B4, A5, LetterS, Letter, Legal, Ledger

10.3.4 Center staple/folding

Supported paper in center staple /folding	• Thin paper (52 g/m2 to 59 g/m2 (13 13/16 lb to 15 11/16 lb)) • Plain paper (60 g/m2 to 90 g/m2 (15 15/16 lb to 23 15/16 lb)) • Thick 1 (91 g/m2 to 120 g/m2 (24 3/16 lb to 31 15/16 lb)) *1, *2 • Thick 1+ (121 g/m2 to 157 g/m2 (32 3/16 lb to 41 3/4 lb)) *1, *2 • Thick 2 (158 g/m2 to 209 g/m2 (42 lb to 55 5/8 lb)) *1, *2	
Supported paper sizes	A4S, B4, A3, A3 wide, LetterS, Legal, Ledger, 8K, Custom size paper (Width: 210 mm to 320 mm (8 1/4 lb to 12 5/8 lb), length: 279.4 mm to 457.2 mm (11 lb to 18 lb))	
Supported mode and basis weight	Normal mode: 52 g/m2 to 90 g/m2 (13 13/16 lb to 23 15/16 lb)	
	Cover mode: 52 g/m2 to 209 g/m2 (13 13/16 lb to 55 5/8 lb) *3	
	Thick paper mode: 91 g/m2 to 209 g/m2 (24 3/16 lb to 55 5/8 lb)	
Number of sheets stacked on the saddle tray	1 sheet to 3 sheets: 20 copies	
	4 sheets to 10 sheets: 10 copies	
	11 sheets to 20 sheets: 5 copies	
Number of center staple sheets	Normal mode: 2 sheets to 20 sheets (maximum 80 pages)	
	Cover mode: 2 sheets to 20 sheets (maximum 80 pages) *4	
Number of folding sheets	Normal mode: 5 sheets	
	Thick paper mode: 1 sheet	

- *1: For center staple, available only with 1 cover sheet of cover mode
- *2: For folding, available only with 1 cover sheet
- *3: Use only 1 sheet as a cover sheet for cover mode
- *4: Cover sheet: 1 sheet (52 g/m2 to 209 g/m2 (13 13/16 lb to 55 5/8 lb)) + body page: 19 sheets (52 g/m2 to 90 g/m2 (13 13/16 lb to 23 15/16 lb))

10.3.5 Tri-folding

Supported paper in tri-folding	Thin paper (52 g/m2 to 59 g/m2 (13 13/16 lb to 15 11/16 lb)) Plain paper (60 g/m2 to 90 g/m2 (15 15/16 lb to 23 15/16 lb))	
Supported paper sizes	A4S, LetterS, 16KS	
Number of tri-folding sheets and copies *	1 sheet folding	30 copies
	2 sheets folding	10 copies
	3 sheets folding	

- *: Up to 3 sheets in tri-folding

10.4 Machine specification

Power requirement	DC 24 V ± 10 % (supplied from the main body)
Power consumption	105 W or less

Dimension	528 mm (W) x 641 mm (D) x 1,023 mm (H) (20 13/16 inches (W) x 25 1/4 inches (D) x 40 1/4 inches (H))
	658 mm (W) x 641 mm (D) x 1,065 mm (H) (25 7/8 inches (W) x 25 1/4 inches (D) x 41 15/16 inches (H)) *1
Weight	FS-536: 36 kg (79 3/8 lb)/FS-536SD: 60 kg (132 1/4 lb)

- *1: Size when the paper output tray is pulled out

10.5 Operating environment

- Conforms to the operating environment of the main body.

10.6 Note for the Specifications

NOTE

- **FS-536SD is such a product where SD-511 has been preinstalled on FS-536.**
- **These specifications are subject to change without notice.**

11. PK-520

11.1 Type

Name	Punch kit
Type	FS-integrated type punching operation device

11.2 Function

Punching method	Stops and punches every paper
No. of holes	2-3 holes, 2-4 holes, Sweden 4 holes
Hole diameter	2 holes / φ 8.0 mm - 3 holes /φ8.0 mm, 2 holes /φ6.5 mm - 4 holes /φ6.5 mm, Sweden 4 holes / φ6.5 mm
Hole pitch	2 holes / 70 mm pitch - 3 holes / 108 mm pitch, 2 holes / 80 mm pitch - 4 holes / 80 mm pitch, Sweden 4 holes / 70 mm, 21 mm pitch
Supported mode	Punch mode
Applicable post processing mode	• Sort • Group • Staple

11.3 Paper

Size	• A3 • B4 • A4 • A4S • B5 • B5S
Supported paper	Conforms to the operating environment of the main body. • Thin paper (52 g/m^2 to 59 g/m^2 (13 13/16 lb to 15 11/16 lb)) • Plain paper (60 g/m^2 to 90 g/m^2 (15 15/16 lb to 23 15/16 lb)) • Thick 1 (91 g/m^2 to 120 g/m^2 (24 3/16 lb to 31 15/16 lb)) • Thick 1+ (121 g/m^2 to 157 g/m^2 (32 3/16 lb to 41 3/4 lb)) • Thick 2 (158 g/m^2 to 209 g/m^2 (42 lb to 55 5/8 lb)) • Thick 3 (210 g/m^2 to 256 g/m^2 (55 7/8 lb to 68 1/8 lb)) • Thick 4 (257 g/m^2 to 300g/m^2 (68 3/8 lb to 79 13/16 lb))
Punch prohibited paper	• Label sheet • Tab paper • OHP film • Translucent paper • Holed paper • Other paper that may interfere with the operation of the punch kit or the punch blade

11.4 Machine specification

Power requirement	DC 24 V (supplied from the finisher)
	DC 5 V (supplied from the finisher)
Max. power consumption	Included in the max. power consumption of finisher
Dimension	61 mm (W) x 492 mm (D) x 142 mm (H) (2 3/8 inches (W) x 19 3/8 inches (D) x 5 9/16 inches (H))
Weight	Approx. 1.8 kg (3 15/16 lb)

11.5 Operating environment

- Conforms to the operating environment of the main body.

11.6 Note for the Specifications

- **These specifications are subject to change without notice.**

12. FK-515/FK-516

12.1 Basic specifications

12.1.1 General specifications

Applicable lines	PSTN, PBX	
Protocol	Group 3 (compliant to ITU-T T.30) • ECM • F-code communication • Konica Minolta non-standard protocol: No • Group 4: No	
Maximum data rate	33,600 bps	
Coding method	• MH • MR • MMR • JBIG	
Modulation method	• V.27ter • V.29 • (V.33): V.33 is for reception only. • V.17 • V.8 • V.34	
Communication resolution	Normal	8 x 3.85 lines / mm
	Fine	• 8 x 7.7 lines / mm • 200 x 200 pixels / inch
	Super fine	• 8 x 15.4 lines / mm (Reception only) • 16 x 15.4 lines / mm • 400 x 400 pixels / inch
	Ultra fine	600 x 600 pixels / inch
	• Fixed to mm at transmission (except 600 dpi) • mm and inch are available at reception. • Selection by using the [Resolution] key. • You can not change settings on every page.	
Fax memory size	• 128 GB (128 GB in the main body HDD 250 GB is used as a memory.) • 10000 pages can be stored including all Scan/Box/Printer/Fax documents.	
FAX memory backup	Image data is saved in HDD.	
Multiple line connection	Four lines can be connected by installing four fax kit. (FK-516 x 2units and MK-742 (FK-515 x 2units))	
Communication time	Level of 2 seconds (Konica Minolta standard A4 chart, 33,600 bps)	
Resolution conversion	At sending: • Scanner: inch • Density conversion: inch -> mm • Communication: mm / inch (600 dpi only)	
	At receiving (mm): • Density conversion: mm -> inch • Print: inch	
	At receiving (inch): • Density conversion: inch -> inch • Print: inch	

12.1.2 Scanning section

Scanning method	Platen documents	Impossible to scan book documents (book mode)
	DF book documents	• Scanning mode: 1-Sided, 2-Sided and cover + 2-Sided • Possible to scan the DF mixed size documents.
Scanning resolution	Normal	8 x 3.85 lines / mm
	Fine	8 x 7.7 lines / mm
	Super fine	16 x 15.4 lines / mm
	Ultra Super fine	600 x 600 dpi
	• Selection by using the [Resolution] key. • You can not change settings on each page.	
Mixed original	Possible to mix documents of different sizes. • After rotation of images, sizes are changed by EOM every time the length of the scan line is changed at sending. • Possible to mix sizes (A and B).	
Density selection	Selection by using the [Density] key. [Light] / [Standard] / [Dark] • You can not change settings on each page.	
Maximum scanning document width	297 mm (A3 width) both for DF and Platen	
Maximum scanning document length	Regular mode	• 431.8 mm

		• 17 inches
	Long original mode	• 1000 mm • Originals with unlimited length are not available.
Effective scanning range	When a document is smaller than the effective scanning area, the area outside the document is erased. • DF scanning: left, right, head and bottom mask of 3mm each (0 to 5mm) • Platen scanning: left, right and head mask of 2mm each (fixed)	
Automatic reduction at sending	A3 -> B4, A3 -> A4 and B4 -> A4 • Automatically reduced and sent in accordance with the recording paper size of remote station.	
Rotation transmission	A4 / Letter size only. LEF documents are rotated by 90 degrees at sending to send it in SEF direction.	
Page division at sending	No	
Halftone	256 level error diffusion • Users can change settings by using the [Text], [Text/Photo, Printed], [Text/Photo, PhotoPaper], [Photo, Printed], [Photo, PhotoPaper], [Dot Matrix Original] or [Copied Paper] key.	
Automatic background control (ABC)	Yes	
Finished stamp	Yes	
Scanning time	1-sided: 90 sheets/min, 2-sided: 180 sheets/min (A4, 400 dpi, monochrome)	

12.1.3 Recording section

Recording	Laser electrostatic printing system
Recording paper size	• All sizes except for B6 and Postcard (See the copier basic specifications.) • Auto recording paper selection • Note: A5 and B5 paper is used only for A5 and B5 reception respectively
Recording paper cassette	• Tray 1 to Tray 4 • Manual bypass tray • LCT
Staple	No
Recording speed	Compliant to the copier standards
Recording size	A3 size maximum • A3 fix as reception record ability declaration in protocol.
Maximum reception length	1000 mm • In case of being larger than the maximum reception length, a communication error occurs. • When the memory over occurs during reception, the received data is printed.
Reduction record	When the received image information is larger than the recording paper, it is automatically reduced to the recording paper size and recorded.
Page separation record	Yes
Offset output at each communication	Yes (Job unit reception only)
Rotation reception	Yes • Images are rotated by 90 degrees and recorded on the recording paper in LEF direction.
Two-sided reception	Yes (Utility Mode)
2-in-1 reception	No
Smoothing	Yes (at converting the resolution)
Print/Fax output settings	Yes
Bypass print	Possible to use as an active tray in auto selection mode.
Total page counter	Yes
Monitor print	No (copy at sending)

12.1.4 Line connecting section

NCU type	A-A~, line control by silicon DAA
Connecting terminal	RJ11
Modem	Matsushita MMD-5020
Modem sending level	-10 to -15 dBm (Country spec)
DTMF sending level	-10 to -15 dBm (Country spec)
Receiving sensitivity	• G3 reception: up to -48 dB • Tone reception: up to -52 dB
Dialing signal	DP (10pps) and DTMF

12.1.5 Control panel section

FAX / copy / scan / box	Mode switching	by panel key selection • Possible to change modes during an operation of each mode. • No mode return by the auto reset.
	Initial screen after power-on	Screen at power off or facsimile screen. (depending on parameter setting))

Interruption during scanning	When pressing the interrupt key while scanning documents to be transmitted, INTERRUPT LED blinks. Copy screen appears after scanning is completed.
Interruption during recording in the FAX mode screen	Operations by using the interrupt key are invalid.
FAX start	by using the start key.
Stop	by using the stop key. • Possible to appoint to stop from the job list so as to stop during operations of the multi jobs.
FAX free memory display	RDH memory • % indication on LCD during scanning, recording and stand-by. File memory (RAM disk/HDD) • Display in the JOB LIST screen
File existence indication	In the following cases, the data Indicator (LED) on the control panel lights up. • Upon reception of FAX • When a document is saved in the bulletin board box, polling TX box, and memory RX user box.
Display during the FAX communications	No display by LCD panel icon. Icons are displayed on the FAX waiting screen and the FAX operation screen.
Error display	Displayed by LCD panel
Time display	Date and time displayed. • Present time is displayed on the sub-area.
Remote station ID display	Yes • The TSI/CSI display during communications
Other operation keys	• [Application] key: Moves to the FAX application function setting screen. • Check Setting key: Valid • */# button: Yes • Help button: Yes

12.2 Functional specifications

12.2.1 Dial functions

Abbreviated dial	Yes • Possible to register 2000 stations. (1000 with no HDD installed) • 38 digits maximum • Possible to search the remote station list in the order of abbreviation numbers and Indexes. • The registration names must be 24 digits or less. • Registration name auto registration function: No • Second FAX No. registration function: No • Impossible to register the communication mode. • Possible to register Line Setting (Overseas TX, ECM Off, V.34 OFF, check destination, line selection (Only with four fax kit installed)). • There is no registration function provided of [Scan Setting], [Comm. Setting] except the line setting.
Program dial	400 dials (200 with no HDD installed)
Key pad dial	38 digits maximum
Group dial	Up to 100 groups. Possible to register group names. Up to 500 remote stations per each group by abbreviated numbers only.
Dialing of multiple remote stations	605 remote stations maximum (abbreviated 500 + key pad 100 + manual input e-mail destination 5)
Manual redial	Yes • Possible to select from five latest histories.
Automatic redial	Yes • Automatically redial when remote stations are busy or return no responses or transmission errors occur at the memory transmission • Possible to receive during redial waiting. • Another call is possible. (Not possible when there are two redial waiting jobs.)
JOB LIST redial	No
Pulse/tone switching	Possible to switch by using the [*] key on the key pad or [Tone] key on the Direct Input screen.
PBX mode setting	Yes • Possible to turn ON or OFF the PBX connection and to register the external access code. • There is the automatic removal function of external access code to registered abbreviated remote station No. Nothing is automatic addition function.
Pseudo off-hook	Yes • The manual start is possible by using the pseudo off-hook. • [Off-Hook] key on LCD
Call progress detection	DC loop (Depends on country spec). • Dial tone (Ditto) • Busy tone (Ditto) • Second dial tone (Ditto)
Dial parameters	Dialing signals DP (10 pps) and DTMF (Depends on country spec) • Pause between digits1 to 7 seconds (Users cannot set.) • Pause between digits 3 seconds (fixed)

Phone book dial (Abbr)	Yes • After appointing character to search, use up and down cursor keys.
External phone connection jack	Yes • Depends on specifications of each country.

12.2.2 Transmission

Timer transmission	24-hour (max.) timer setting is possible. (one station, sequential multi-stations transmission)		
Batch transmission	No		
Timer polling	24-hour (max.) timer setting is possible. (one remote station polling and sequential polling reception)		
No. of timers	21 transmissions and pollings in total. The number of sequential pollings is one.		
Memory transmission reservation	The memory transmission reservation is possible during communications. (memory registration of the DF memory transmission and platen memory transmission documents)		
DF transmission reservation	No		
Fold erase transmission	No		
Frame erase transmission	Yes • Platen documents and book documents • DF documents are possible as well. • The regular mode only		
Automatic layout transmission (Outside documents are erased.)	No		
Reverse-image transmission	No		
2in1 transmission	No		
Book transmission	No		
Scanning size appointment	Yes • Scans documents in the appointed size irrelevant to document sizes and sends them. Transmits documents in the appointed scanning width and length at the platen transmission and the DF transmission. • The effective image area is based on the center in the DF transmission. (Corner-base scanning in mixed-size document mode.)		
Document image quality appointment	Yes • Selected from [Text], [Text/Photo, Printed], [Text/Photo, PhotoPaper], [Photo, Printed], [Photo, PhotoPaper], [Dot Matrix Original] or [Copied Paper].		
Multi-stations	605 stations maximum (Abbr dial x 500 stations, keypad dial x 100 stations and E-Mail x 5) The timer appointment is possible.		
Memory transmission	The default is the memory transmission (△: Only the communication mode is possible)		
	Quick memory transmission	DF transmission	○
		Platen transmission	One page only
		Mixture of DF/platen documents	×
		Advanced communication function	△ Only the communication mode is possible
		Manual transmission	○
		Transmission when the printer is active	×
	Memory transmission	DF transmission	○
		Platen transmission	○ After the Separate Scan setting, the setting is read with the [Start] key and the communication is started up with the [Finish] key.
		Mixture of DF/platen documents	○ After the Separate Scan setting, the setting is read with the [Start] key and the communication is started up with the [Finish] key.
		Advanced communication function	○
		Manual transmission	×
		Transmission when the printer is active	○
Forwarding transmission	Yes • Automatic forward: Automatic forward of received documents to remote stations registered in advance. • Manual forward: No		
Interruption transmission	Single station transmission reservation automatically interrupts between stations of multiple station communications.		
International communication	Yes		

	• When the remote station is V17, communications start at TCM 7,200 bps. When the remote station is V34, they start at 28,800 bps.
V34-off transmission	Transmitted without V34 mode. The V34-off appointment can be registered in the abbreviated / program dials. This is used when the transmission error code related to V34 occurs frequently.
Long original transmission	Yes
DF irregular-size transmission	Possible to transmit irregular-size originals from DF. The main scanning is the max. document width set on DF, and the sub scanning depends on document length. • Width: 297 mm/11.69 inch at the maximum • Length: 1000 mm/39.37 inch at the maximum
Incomplete TX hold	Yes
Instant batch transmission (Bundled transmission)	No
Confidential transmission	Transmission to the confidential BOX of a remote station by using the F code (SUB/SID). Appoints the confidential BOX No. by using SUB. Set the communication password using SID as required.
Relay request	The relay request by using the F-code (SUB/SID). Appoints the relay BOX No. by using SUB.
Relay transmission	No
Transmission error prevention	• Check destination: When transmitting, compares the FAX No. specified with the FAX No. information (CSI) of the remote station and transmits only when both numbers are the same. • Destination check display function: When transmitting, displays the list of addresses to allow to check the address again and then transmit. • Restrict FAX broadcasting: Prohibits to specify multiple addresses for FAX transmission.
Confirm Address (at calling and registration)	During direct dialing, call is initiated only if the destination number inputted a first time matches with that inputted a second time.

12.2.3 Polling

Polled transmission	• There is one documents which allows the transmission setting. • Documents are deleted after transmission. • No additional scanning of documents. • No DF polled transmission reservation.
Polling reception	The sequential polling is possible. 600 stations maximum (abbreviated dial x 500 stations and key pad dialing x 100 stations)
Call turnaround polling	No
Called turnaround polling	Yes
Closed polling transmission	No
Selective polling	Transmission and reception. • The selective polling by using the F-code (SEP). • There is a bulletin board BOX polling reception. • No confidential BOX polling transmission.

12.2.4 Line seizure mode and telephone function

Line seizure mode switching	Possible to set the automatic reception and the manual reception. • When the memory is full and there are no polling transmission reservations, the automatic reception mode is cancelled. • No switching of the auto / manual mode by appointing data and time.
Ans. Machine mode	Yes • At the time of the CNG detection with the external phone off hook, a line is caught to start reception.
Automatic reception mode	Time and the number of rings. • No. of rings: 0 to 15 times (country spec) • Time: 0 to 15 secs (country spec)
Hold	No
Handset	No
One-piece phone	Country spec
Call to external telephone	No
Conversation reservation	No

12.2.5 Message reception and record

Confidential reception	Reception at the confidential BOX appointed at the F-code (SUB). When a transmission password (SID) has been set for the confidential box, the SID should be specified as the communication password. At the time of printing documents received at the confidential BOX, a password to access to the confidential BOX is required.
Closed reception	Closed reception by using the SID (PWD) (Junk FAX)

Adaptive (automatic) reduction	87 to 96 % in steps of 1 % Becomes the adaptive reduction when “Print Separate Fax Pages = OFF” is selected. In case of the adaptive reduction, if the reception image size is a little bigger than recording paper, the size is automatically reduced so that it becomes within the recording paper size and is recorded.
Fixed reduction	No
Page separation record	Yes. Does not overlap at the division.
Equal size recording	Records the received image at an equal size. When the reception size is larger than A3 form, excessive image is destructed.
Cassette selection	Appropriate paper size auto selection • When paper is running out, paper is provided from another cassette with the same size of paper. • Tray-fix mode available
2-in-1 reception	No

12.2.6 Memory function

Display of used memory space	Yes (Fax screen: RDH memory)
Memory RX	A password is required for printing received files. The password (up to 8 digits) is set when the memory RX mode is set in the utility mode. First page can be printed.
Memory substitute reception	Yes (when there is no paper / no toner)

12.2.7 Various communication function

Short protocol	No
ECM	Yes • Frame size: 64 byte / 256 byte
Communication timer	Yes • 24 hours maximum. 21 including one for sequential polling timer.
Redial waiting	Five redial timers maximum
Error page resending	No (becomes the error page redial.)
Error page redial	Effective to both quick memory transmission and memory transmission. Redial and retransmission in case of RTN or comm error. • Redial interval: follows the busy redial interval. • Num. of redials: 0 to 7 times (different counter from the busy redial)
Total page number print	Yes • Automatic print to the TTI in memory transmission. • Added when the number of document pages is appointed for quick memory transmission.
Header memo	No
TTI (Transmitting terminal ID)	Yes • 30 characters maximum • Added not to the original read image, but to the top of the transmission image while in the image rotation being specified. • The registration of up to 20 sender names is available. • It is possible to make a selection to decide whether or not the address is printed at the header position.
RTI (Receiving terminal ID)	Yes • After processing the enlargement and/or reduction operations, a record is made at the bottom position specified before conducting an image rotation. • Date, time and page no. are recorded.
Fax remote diagnosis	Yes
MH fix	Yes. Setting can be made from the service mode.
Document insertion after dialing	Yes • Document insertion is possible after dialing. Starts calling by using the [Start] button.
Communication history	Yes • The last 700 communication histories are recorded in the communication journal.
Electronic key counter	Yes • The number of transmitted pages to each user. Limit control is not done.
Key counter	Yes
Coin vendor	Yes (Support timing varies depending on models.) • It is possible to use with FAX.

12.2.8 User lists / reports

Activity report	• The total of 700 communications (sending and reception) can be recorded. • Automatic output: Daily / Every 100 Comm. / 100/ Daily • Manual output: Yes
Timer Reservation TX Report	Automatic output: Users can turn ON / OFF.
TX result report	• Automatic output (ON / If TX Fails / OFF) • Possible to output with images

Sync transmit reservation report	Automatic output: Users can turn ON / OFF.
Broadcast result report	
Polled Tx reserve report	
Polled Tx result report	
Polled Rx result report	
Sequential poll, Rx reservation report	
Sequential poll, Rx result report	
An address polling Rx reserved report	
Relay TX Result Report	
Relay Request Report	
PC-Fax TX Error Report	
Address Book List	Manual output (numeric order: output to be produced for each destination type)
Program List	Manual output
Group List	
Fax Setting List	
Bulletin TX Report	Automatic output: Users can turn ON / OFF.
Confidential RX Report	Auto output at the F code confidential reception. Automatic output: Users can turn ON / OFF.
Subject/Text list	Manual output

12.2.9 Other user functions

Fax ID	Number ID: 20 digits (max.)
Header note	No
Language Selection	Yes

12.3 Network fax specifications

12.3.1 Internet Fax

Image memory capacity	128 GB (128 GB of 250 GB of the hard disk is used as a memory.)	
Max. no. of stored pages	Approx. 10000 pages (numbers of pages in the case of storing standard A4-size pages containing approximately 700 characters at “fine” resolution)	
Scanning line density	Ultra fine	600 dpi x 600 dpi
	Super fine	400 dpi x 400 dpi
	Fine	200 dpi x 200 dpi
	Normal	200 dpi x 100 dpi
Transmission mode (File type)	monochrome (TIFF-FX)	
Transmission coding methods	• TIFF-S (MH) • TIFF-F (MR/MMR)	
Max. scanning size	• 420 mm x 297 mm (A3 size) • Width: 297 mm • Length: 1000 mm at the maximum	
Max. recording size	• 420 mm x 297 mm (A3 size) • Length: 1000 mm at the maximum • When receiving the data of an original that is longer than the paper sizes set in the paper trays, the data is printed according to the setting of [Print Separate Fax Pages].	
Treatment of transmission error	Mail transmitted again.	None
	Internet fax Rx error report	When documents cannot be sent to the SMTP server, transmission error report to be printed/not printed can be set.
		When MDN/DSN response is received, to be printed/not to be printed can be set.
		When MDN/DSN response is received, transmission result is indicated on the transmission control report.
		MDN/DSN response monitoring time can be set in the range from 0 to 99 hours.
Mail reception	Mail acquisition interval	Can be set to 1 to 60 minutes.
	Manual POP reception	Possible
	Reception by specifying a box	Not Available (except Memory RX)
	Received document size	width: A4 / B4 / A3
	Reception coding system	TIFF-S (MH), TIFF-F (MR/MMR)
List/report	Print DSN message	Output can be produced
	Print MDN message	Output can be produced
	Print receipt mail text	Output can be produced

	Network fax relay result report	Output can be produced
	Network fax activity report	• During automatic output: Shared with Fax Activity Report. Max. 100. • During manual output: Shared with Fax Activity Report. Max. 700.
	Network fax Rx error report	Output can be produced

12.3.2 IP Address Fax

Image memory capacity	128 GB (128 GB of 250 GB of the hard disk is used as a memory.)	
Max. no. of stored pages	Approx. 10000 pages (numbers of pages in the case of storing standard A4-size pages containing approximately 700 characters at “fine” resolution)	
Scanning line density	Ultra fine	600 dpi x 600 dpi
	Super fine	400 dpi x 400 dpi
	Fine	200 dpi x 200 dpi 300 dpi x 300 dpi (Color: Compact PDF only)
	Normal (Monochrome only)	200 dpi x 100 dpi
Transmission mode (File type)	• Color (PDF, Compact PDF, TIFF-C) / Monochrome (TIFF) • Capable of transmitting TIFF-C (JPEG) • Incapable of receiving TIFF-C (JPEG) (any receiving TIFF-C jobs are discarded)	
Coding method	MH/MR/MMR (applicable only to monochrome format)	
Max. scanning size	• 420 mm x 297 mm (A3 size) • Width: 297 mm • Length: 1000 mm at the maximum	
Max. recording size	• 420 mm x 297 mm (A3 size) • 1000 mm in the maximum recording size • Originals in excess of 1000 mm cannot be received. • In the color mode, the reception of an original in excess of 432 mm in length is unavailable. • When receiving the data of an original that is longer than the paper sizes set in the paper trays, the data is printed according to the setting of [Print Separate Fax Pages]. (Only available for monochrome reception)	
Treatment of transmission error	Retry	Retry when a transmission error occurs at SIP Direct SMTP transmission. Error codes subject to retry: N10, N12, N15 to 17 only
	TX error report	• TX error report printing ON/OFF can be set. • A TX error report is printed when a TX error occurs and the TX error is recorded in the activity.
Reception	Received document size	Max. document width to be received: A3
	Reception coding system	• TIFF-S (MH) • TIFF-F (MR/MMR) • PDF • Compact PDF • TIFF-C
	Received file size	• Unlimited (depends on the space available for use in the HDD) • The file is not received, if the space available for use in the HDD is 107 MB or less. • If the space available for use in the HDD runs out during reception, the session is abnormally terminated and the received file is deleted.
Report	Print receipt mail text	Possible
	IP address fax activity report	• During automatic output: Shared with Fax Activity Report. Max. 100. • During manual output: Shared with Fax Activity Report. Max. 700.
	IP address fax result report	In common use with fax reception result report
	IP Address Fax RX Error Report	Possible

13. i-Option 102 v3/104 v3/105 v4/106/107/108/110 v2/111/114/115 v2

13.1 Available function for i-Option

- The functions available for i-Option are as follows.

⚠CAUTION

- **Using the web browser function available with this machine, the contents on the Internet can be accessed from the control panel. Users are responsible for the contents that they access, download, or upload as well as the contents of other communication. Users shall follow the rules of their company and laws of their country. Konica Minolta, Inc. and its group companies accept no responsibility for the users' use of the Internet.**

13.1.1 List of advanced functions

Function	Overview
Web browser	You can access contents on the Internet or corporate networks through this machine connected to the network to enable page viewing or file printing. You can also access other MFP connected to the network to use a User Box in the MFP via Web Connection.
Voice guidance	This function also helps people who have difficulty viewing the screen to carry out operations more smoothly via voice guidance. It is available on the Enlarge Display screen, Guidance screen, or Accessibility Settings screen. English and Japanese are available.
PDF processing	Allows you to use features such as encryption of a PDF file, addition of an electronic signature, addition of file properties, creation of a PDF/A-based PDF file, and PDF linearization when sending a PDF file.
Encryption PDF (Digital ID)	Allows you to encrypt the PDF using a user digital signature when sending a PDF file.
Searchable PDF	Allows you to paste transparent text data into a PDF file when converting scanned original data into PDF files, and create a searchable PDF file. This function automatically creates text information from scanned images using OCR character recognition technology.
Searchable PDF (Fax RX Document)	Allows you to create a text searchable PDF file when converting a received fax into a PDF file using the Forward TX function or TSI Routing function and sending it to PC.
OOXML File Conversion	• Allows you to send or store the scanned original data by converting it into an OOXML (DOCX or XLSX) file. Also allows you to paste transparent text data and create a text searchable OOXML file. • This function automatically creates text information from scanned images using OCR character recognition technology.
Barcode font	Allows you to generate a bar code based on data sent to this machine from the ERP (Enterprise Resource Planning) system, and print it from this machine. You can directly print data without using the printer driver.
Unicode font	Allows you to print text information (unicode) of multiple languages sent to this machine from the ERP (Enterprise Resource Planning) system. You can directly print data without using the printer driver.
OCR font	OCR font can be used on this machine. *1
E-mail RX Print	Allows you to print the file attached to an E-mail from this machine when the E-mail has been sent to the address of this machine.
ThinPrint function	• Allows you to enable the ThinPrint function on this machine. • ThinPrint is such a function allows you to make a speedy print by compressing the data or controlling the marginal zone when sending a print job from ThinPrint Engine (.print Engine) to ThinPrint Client (.print Client). This machine operates as ThinPrint Client (.print Client).
Ubiquitous Printing	Ubiquitous printing is a function that executes print jobs, which are spooled in an MFP through the user's computer once, from any MFP in a ubiquitous group that consists of multiple MFPs.
TPM (Trusted Platform Module)	• TPM (Trusted Platform Module) is a hardware chip used for processing such as information encryption and decryption. Security enhancement is realized by encrypting confidential information such as certificates and passwords of this machine. • The TPM key used for encrypting confidential information on the machine is saved in a dedicated storage space mounted on the TPM chip. • No external devices can access the storage space and the confidential information can be kept in utmost security. • In addition, for future possible replacement of the TPM chip, information required for restoring the TPM key can be saved for backup in a USB memory device.
My Panel	Allows you to use the touch panel, which is customized only for you, through any MFP connected to the network. The touch panel customization settings are stored on the My Panel Manager server. If necessary, they can be changed on My Panel Manager.
My Address	Allows you to use a dedicated address book through any MFP connected to the network. The dedicated address book is stored on the My Panel Manager server. If necessary, it can be edited on My Panel Manager.

- *1: OCR font is standardized font that enables text to be appropriately recognized when the OCR (Optical Character Recognition) is used.

13.1.2 Types of advanced functions

(1) Table 1

Function	Kit name			
	i-Option			
	LK-101 v3	LK-102 v3	LK-104 v3	LK-105 v4
Web browser	○	-	-	-
PDF processing	-	○	-	-
Voice guidance *1	-	-	○	-
Searchable PDF	-	-	-	○

- *1: To use voice guidance, in addition to the LK-104 license activation, the optional local interface kit EK-610 or EK-611 must be installed.

(2) Table 2

Function	Kit name		
	i-Option		
	LK-106	LK-107	LK-108
Barcode font	○	-	-
Unicode font	-	○	-
OCR font	-	-	○

(3) Table 3

Function	Kit name			
	i-Option			
	LK-110	LK-111	LK-114	LK-115
PDF processing	○	-	-	-
Searchable PDF	○	-	-	-
Searchable PDF (Fax RX Document)	○	-	-	-
Encryption PDF (Digital ID)	○	-	-	-
OOXML File Conversion	○	-	-	-
E-mail RX Print	○	-	-	-
ThinPrint function	-	○	-	-
Ubiquitous Printing	-	-	○	-
TPM (Trusted Platform Module)	-	-	-	○

(4) Table 4

Function	Kit name	
	My Panel Manager	
	Application license	Device license
My Panel	○	○
My Address	○	○

13.1.3 Activation procedures of i-Option

For details of the activation procedures, refer to the followings.

- Activation via Administrator Settings: I.2.4.2 License Settings
- Activation via Service Mode: I.5.12 Calling the center from the administrator for CS Remote Care

13.2 Web browser function

- Main specifications of the web browser installed are as follows.

Browser engine	Webkit
Supported protocol	• HTTP (HTTP 0.9/1.0/1.1) • HTTPS • TCP/IP
Supported markup language	• HTML 4.01 • A part of HTML 5.0 • XHTML 1.1/Basic
Style sheet	• CSS1 • CSS2 • CSS3
Script language	• JavaSrcript 1.7 • ECMAScript 3rd Edition

	• Ajax*1
DOM	• Level 1 • Level 2
File type	• JPEG • BMP • PNG • GIF • Animation GIF • PDF • Flash 10 and earlier
Supported SSL/TLS version	• SSL3.0 • TLS1.0
Supported character code	• Japanese (Shift_JIS) • Japanese (ISO-2022-JP) • Japanese (EUC-JP) • Chinese Simplified (GB2312) • Chinese Traditional (Big5) • Western European (ISO-8859-1) • Unicode (UTF-8)
PDF viewer	Adobe® Reader® LE
Flash player	Adobe® Flash® Player 8

- *1: Limited to the JavaScript-supported range only.

NOTE

The Flash player installed on the MFP does not support the following:

- **The function to trigger an event caused by a key operation.**
- **The function to paste or acquire data such as character strings from the clipboard.**
- **The context menu.**
- **The Flash printing function.**
- **The function to execute JavaScript from Flash or to operate Flash by JavaScript.**
- **A screen that has no window (pop-up).**
- **The Flash bookmark function.**
- **The function to send/receive data in real time using the Flash Media Server.**
- **The function to communicate via the XMLSocket.**

NOTE

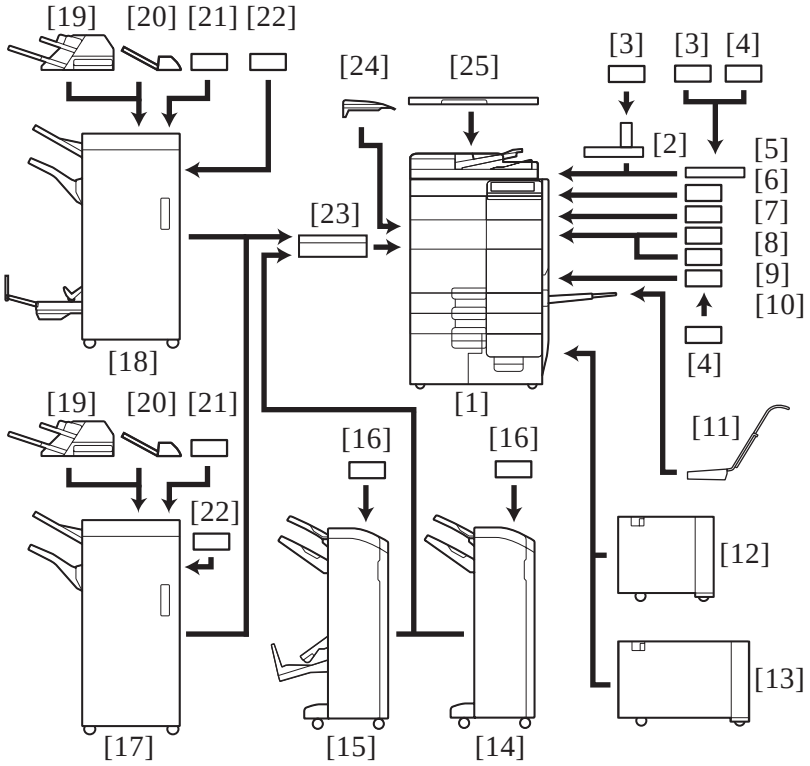
- **When using a web browser function, 26 dots from the perimeter of the touch panel area is not sensitive area.**
  It is possible to narrow the non-sensitive area by using [Software Switch Setting] in Service Mode as with followings. However, the touch panel cannot detect touch operation correctly.
  - **Switch No.143 [00000000] at Bit assignment/[00] at HEX assignment non-sensitive area: 26 dots from the perimeter of the touch panel**
  - **Switch No.143 [00000001] at Bit assignment/[01] at HEX assignment non-sensitive area: 16 dots from the perimeter of the touch panel**
  - **Switch No.143 [00000010] at Bit assignment/[02] at HEX assignment non-sensitive area: 9 dots from the perimeter of the touch panel**

D OVERALL COMPOSITION

1. SYSTEM CONFIGURATION

1.1 System configuration

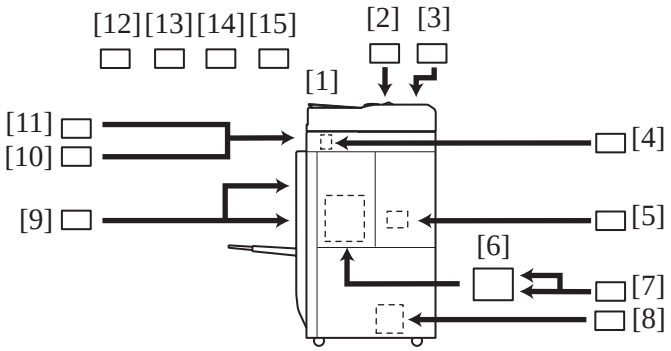
1.1.1 System front view



[1]	bizhub 958/808/758, bizhub PRO 958	[2]	Working Table (upright panel) WT-513
[3]	Authentication Unit: Biometric type AU-102	[4]	Authentication Unit: IC card type AU-201S
[5]	Working Table WT-506	[6]	Keypad KP-101
[7]	Keyboard Holder KH-102	[8]	Local Interface Kit EK-610
[9]	Local Interface Kit EK-611	[10]	Mount Kit (authentication unit) MK-735
[11]	Mount Kit (long size paper) MK-715	[12]	Large Capacity Unit LU-303
[13]	Large Capacity Unit LU-205	[14]	Finisher FS-536
[15]	Finisher FS-536 SD	[16]	Punch Kit PK-520
[17]	Finisher FS-537	[18]	Finisher FS-537SD
[19]	Post Inserter PI-507	[20]	Job Separator JS-602
[21]	Punch Kit PK-523	[22]	Z Folding Unit ZU-609
[23]	Relay Unit RU-515	[24]	Output tray OT-508
[25]	Original Cover OC-507 *1	-	Assist Handle AH-101 *2

- *1: Japan only
- *2: This option is not shown in the figure above.

1.1.2 System rear view



[1]	bizhub 958/808/758, bizhub PRO 958	[2]	Stamp Unit SP-501
[3]	Double feed detection Kit UK-501	[4]	Upgrade Kit UK-212
[5]	Hard Disk HD-524	[6]	Fax Mount Kit MK-742 *1
[7]	Fax Kit FK-515 (Line3 / Line4) *1	[8]	Heater HT-508 *2

[9]	Fax Kit FK-516 (Line1 / Line2)	[10]	Key Counter Mount Kit KIT-1
[11]	Key Counter Mount Kit KIT-CF *3	[12]	Security Kit SC-508
[13]	i-Option LK-102 v3/104 v3/105 v4/106/107/108/110 v2/111/114/115 v2	[14]	Copy vendor SV-2 *4
[15]	Integrated management device CU-1 *4	-	-

- *1: Japan and North America area only.
- *2: North America and Europe area only.
- *3: Japan and Europe area only.
- *4: Japan only

1.2 Optional configuration

1.2.1 Combination configuration of main body and document options

1	Main body	Dual scan document feeder	UK-501	SP-501	Spare TX Marker Stamp

1.2.2 Combination configuration of main body and paper feed options

1	Main body	LU-205
2	Main body	LU-303

1.2.3 Combination configuration of main body and post-processing options

1	Main body	OT-508				
2	Main body	RU-515	FS-536/536SD	PK-520	SK-602	

1	Main body	OT-508					
2	Main body	RU-515	FS-536/536SD	PK-520	SK-602		
3	Main body	RU-515	FS-537/537SD	ZU-609	PI-507	PK-523	SK-602
4	Main body	RU-515	FS-537/537SD	ZU-609	JS-602	PK-523	SK-602

1.2.4 Combination of main body and fax kit

(1) Japan, North America

1	Main body	FK-516 (main line)	FK-516 (line 2)	MK-742	FK-515 (line 3)	FK-515 (line 4)

(2) Europe

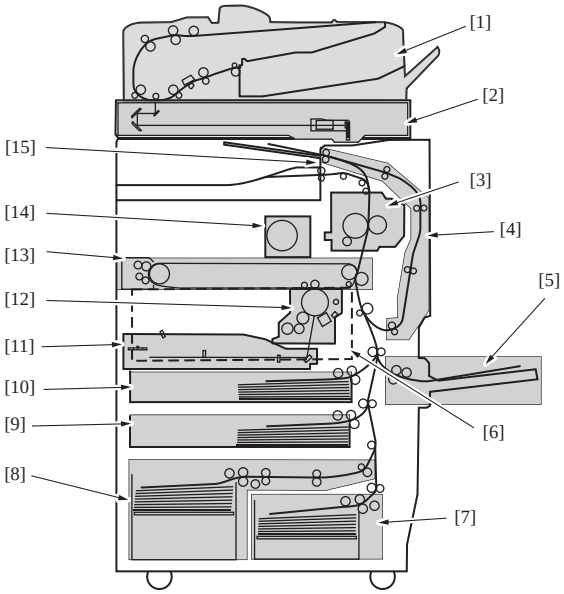
1	Main body	FK-516 (main line)	FK-516 (line 2)

1.2.5 Combination of main body and heater

North America and Europe only

1	Main body	HT-508

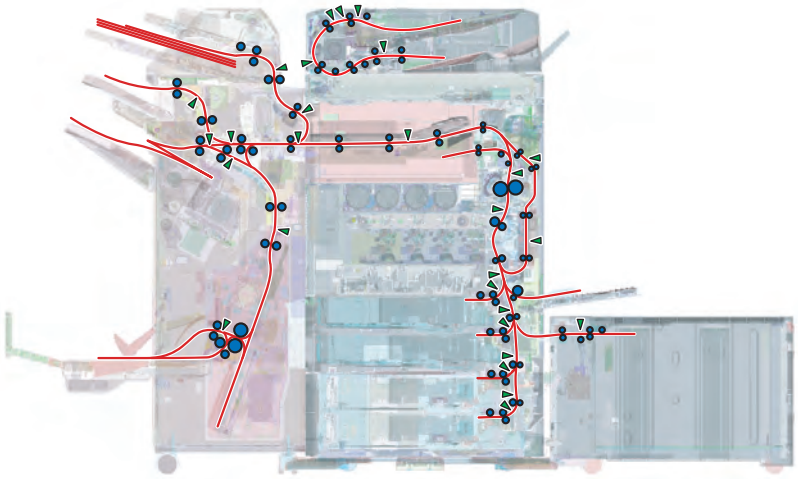
2. SECTION CONFIGURATION



[1]	Auto document feed section (standard)	[2]	Scanner section
[3]	Fusing section	[4]	Duplex section (standard)
[5]	Manual bypass tray	[6]	Toner collecting section in front door (dotted line section)
[7]	Tray 4 paper feed section	[8]	Tray 3 paper feed section
[9]	Tray 2 paper feed section	[10]	Tray 1 paper feed section
[11]	Write section (PH section)	[12]	Developing section/Photoconductor section
[13]	Transfer section	[14]	Toner supply section
[15]	Paper exit section	-	-

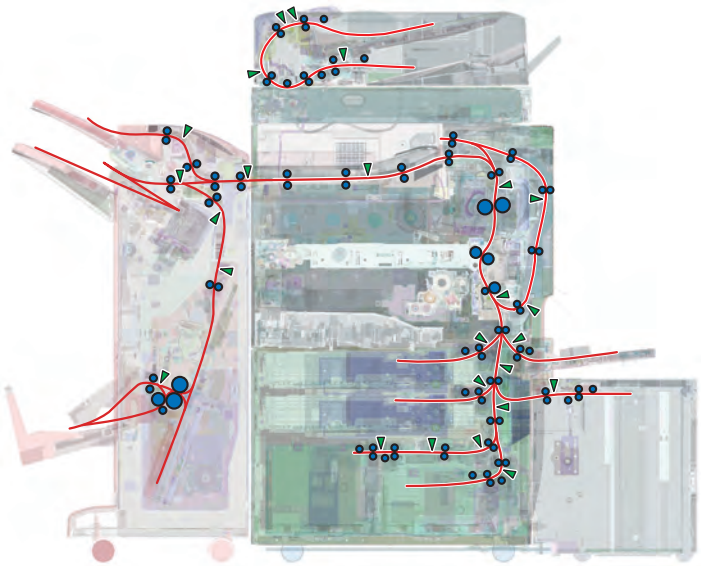
3. PAPER PATH

3.1 Main body + LU-303 + FS-537SD + PI-507



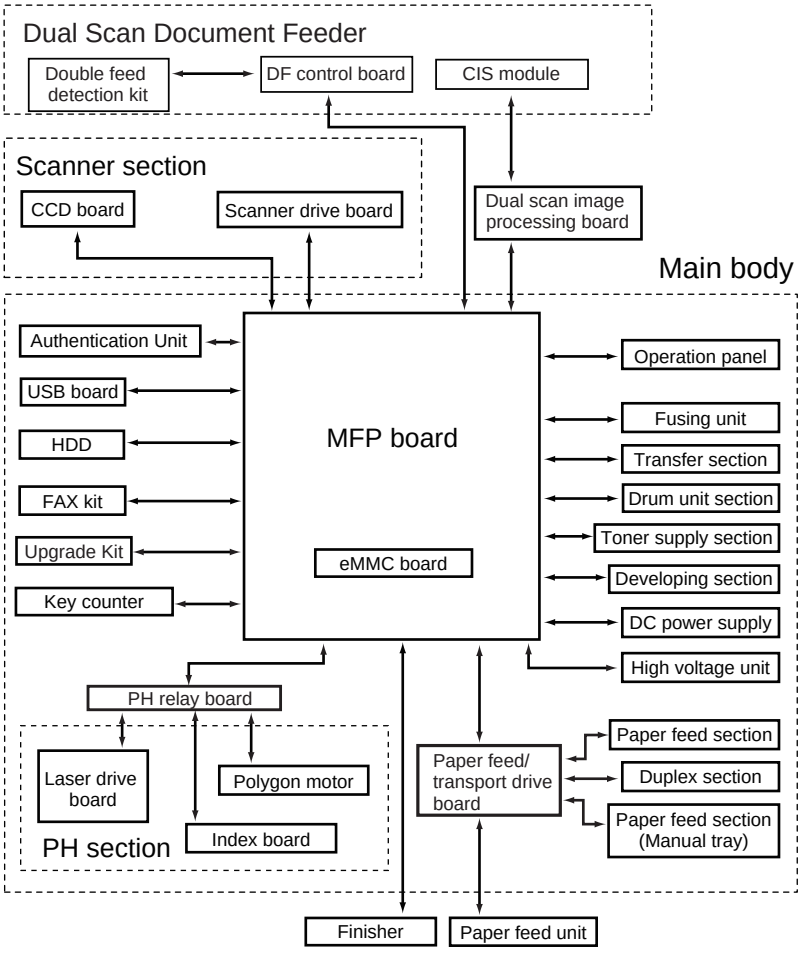
- List of drive rollers and sensors in the paper path: 537SD_RU-515_LU-303_PI-507_E.pdf

3.2 Main body + LU-303 + FS-536SD

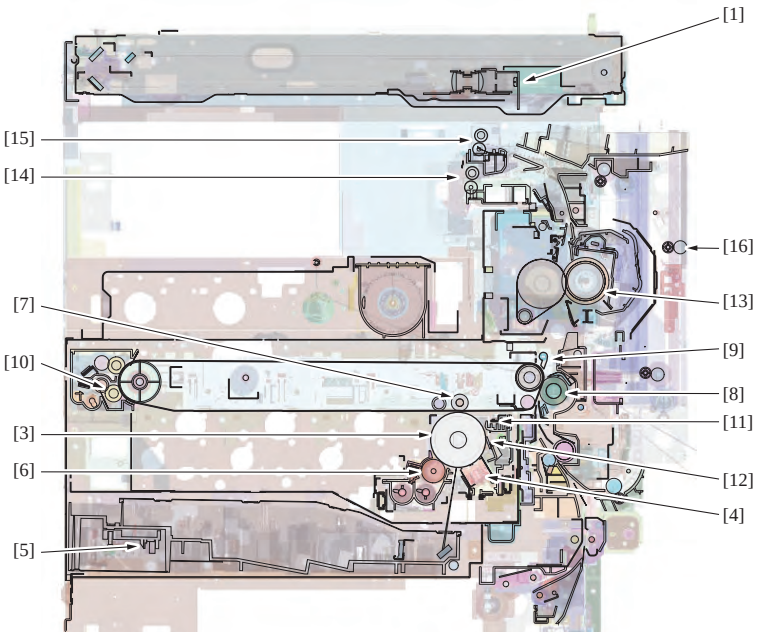


- List of drive rollers and sensors in the paper : FS-536_RU-515_LU-303_E.pdf

4. CONTROL BLOCK DIAGRAM



5. IMAGE CREATION PROCESS



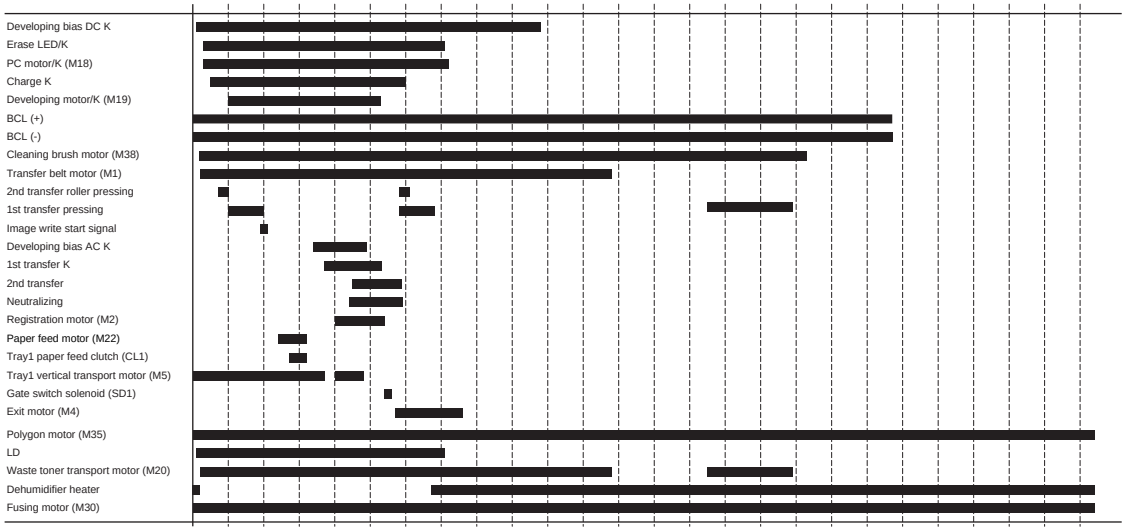
[1]	Photoelectric conversion	The light reflected off the surface of the original is separated into different colors using the color filters (R, G, and B); CCD then converts it into a corresponding electric signal and outputs the signal to the printer image processing section (MFP board).
[2]	Printer image processing (No illustration is provided)	• The electric signal is converted to 8-bit digital image signals. After going through some corrections, the digital image signals are converted to video signals (K). • D/A conversion will be performed after the VIDEO signals (K) are corrected. This data will control the emission of the laser diode.
[3]	Photo conductor	The image of the original projected onto the surface of the photo conductor is changed to a corresponding electrostatic latent image.
[4]	Photo conductor charging	Supply DC (-) charge on the photo conductor.
[5]	Laser exposure	Expose photo conductor to a laser beam to develop electrostatic latent image.
[6]	Developing	• The toner, agitated and negatively charged in the developer mixing chamber, is attracted onto the electrostatic latent image formed on the surface of the photo conductor. It is thereby changed to a visible, developed image. • AC and DC negative bias voltages are applied to the developing roller, thereby preventing toner from sticking to the background image portion.
[7]	1st transfer	A DC positive voltage is applied to the backside of the transfer belt, thereby allowing the visible, developed image on the surface of the photo conductor (K) to be transferred onto the transfer belt.
[8]	2nd transfer	A DC positive voltage is applied to the backside of the paper, thereby allowing the visible, developed image on the surface of the transfer belt to be transferred onto the paper.
[9]	Separation	The paper, which has undergone the 2nd transfer process, is neutralized so that it can be properly separated from the transfer belt by the paper separator claws.
[10]	Transfer belt cleaning	• Residual toner on the surface of the transfer belt is collected for cleaning by cleaning brush. • Applying DC voltage on the cleaning brush to generate static charge which collects the residual toner on the surface of the transfer belt.
[11]	Main erase	The surface of the photo conductor is irradiated with light, which neutralizes any surface potential remaining on the surface of the photo conductor.
[12]	Photo conductor cleaning	The residual toner left on the surface of the photo conductor is scraped off.
[13]	Fusing	The visible toner image transferred onto the surface of the paper is melted by the heat of the heating roller and fixed to the paper by the pressure of the pressure roller.
[14]	Paper exit	The paper after image fusing is fed out onto the paper exit tray.
[15]	Paper exit (two-sided print)	For two-sided printing, the 1-sided printed paper is turned over and transported onto the duplex section.
[16]	Duplex	The 1-sided printed paper, on which the image of the first page of the original is printed, is turned over and fed back into the main body for the print cycle of the second page of the original.

6. IMAGE FORMING CONTROL

6.1 Operating conditions

Paper size	A4 or 8 $^{1}/_{2}$ x 11
Paper port	Tray 1

6.2 Timing chart



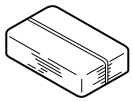
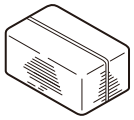
7 PROCESS SPEED

Paper Type/Mode	bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
• Plain paper	502 mm/s	370 mm/s	325 mm/s
• Thin paper	370 mm/s	370 mm/s	325 mm/s
• Thick 1 • Thick 1+ • Thick 2 • Thick 3 • Thick 4 • OHP film • Envelope • Postcard	185 mm/s	185 mm/s	162.5 mm/s
• 1200 dpi mode	123.3 mm/s	123.3 mm/s	108.3 mm/s
• Thick 4 (Japan/Taiwan)	-	-	108.3 mm/s

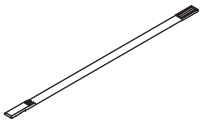
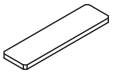
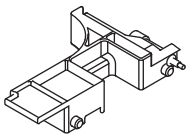
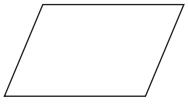
E SERVICE TOOL

1. bizhub 958/808/758, bizhubPRO 958

1.1 Service material list

Name	Shape	Parts No.	Remarks
Cleaning pad (10 pcs)		000V-18-1	10pcs/1pack
Cleaning pad (30 pcs)		000V-18-2	30pcs/1pack

1.2 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
Print head cleaning tool		1	A161 R704 ##	This part number include the cleaning pad.
Print head cleaning pad		1	A00J 1062 ##	
Transfer belt unit extension rail		1	A00J R728 ##	
Color chart		1	9J06 PJP1 ##	A3
			9J06 PJP2 ##	11 x 17
Monochrome chart		1	4040 PJP1 ##	A3
			4040 PJP2 ##	11 x 17

1.3 Utility tool

1.3.1 IC card information setting tool of AU-201S/OMNIKEY 5427CK (AU-205H)/SCL-010/YSoft card reader

(1) Outline

- Before connecting the AU-201S/OMNIKEY 5427CK (AU-205H)/SCL-010/YSoft card reader to the MFP, it is necessary to prepare an IC card information setting file with the loadable driver. To prepare this file, a tool is used for preparing the IC card information setting file for use in each card reader.

(2) IC card information setting file preparation tool

(a) Tool names

Tools for CE

- For AU-201S: Auth Device Tool Advanced for AU-201S
- For SCL-010: Auth Device Tool Advanced for SCL-010
- For OMNIKEY 5427CK (AU-205H): Auth Device Advanced for 5427CK (AU-205H)
- For the YSoft card reader: Auth Device Tool Advanced for YSoft CRv2

(b) System requirement of tools for CE

OS	• Windows Vista • Windows 7 • Windows 8.1 Support both 32-bit (x86) and 64-bit (x64) editions.
Library (Any of these needs to be installed)	• Microsoft .Net Framework2.0 SP2 • Microsoft .Net Framework3.0 SP2 • Microsoft .Net Framework3.5 SP1 • Microsoft .Net Framework3.5.1
Hard disk	3 MB or more free space is required
Display	800 x 600 pixels,16 bit full color

(3) IC card information setting procedures

(a) Preparations for the following (c), (e), (h), (i), or (k) procedures

- Using the PageScope Data Administrator, register the target MFP in advance.
- Set the MFP into a state in which it can communicate over the network.
- Accessing PageScope Web Connection -> [Administrator mode] -> [Security Settings], issue a self-signed certificate from [Device Certificate Setting] and install it.
- Accessing PageScope Web Connection -> [Administrator mode] -> [Network Settings], set use of [SSL/TLS] in [OpenAPI] to “SSL Only”.

NOTE

- **Only one loadable device driver must be stored in the USB memory, and please do not save any other data in the USB memory.**

(b) Auth Device Tool Advanced for AU-201S (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in AU-201S that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-201S.
3. Select [Import Loadable Driver] from [File] and select the loadable driver.
4. Select card type.
5. If the card is good for detailed settings, click [Detail Setting/Extra Data Setting].
6. Input the necessary extended data. (For details, ask the IC card administrator.)
7. Select Loadable Driver in [Export Format] and click [Export].
8. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
9. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
10. Call the Service Mode to the screen of the MFP.
11. Select [System 2] -> [Driver Install] -> [Install].
12. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
13. Select [Loadable driver] and touch the [Start] to install the loadable driver.
14. Remove the USB memory and, accessing [Billing Settings] -> [Management Function Choice] -> [Authentication Device 2], select [Card].
15. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
16. Set the authentication user.

(c) Auth Device Tool Advanced for AU-201S (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for use in AU-201S that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for AU-201S.
3. Select card type.
4. If the card is good for detailed settings, click [Detail Setting/Extra Data Setting].
5. Input the necessary extended data. (For details, ask the IC card administrator.)
6. Select IC card information setting file in [Export Format] and click [Export].
7. Set the encrypted password.
8. Save the file (iccConfig.bin).
9. Start the PageScope Data Administrator, and select the target MFP.
10. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
11. Using [Browse], select the file saved in step 8.
12. Click [Open] and type the encrypted password set in step 7.
13. Click [Next] and select the device to be imported.
14. Click [Start] and write the file in the MFP.
15. Check that “Normal” is shown in [Status].
16. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
17. Set the authentication user.

(d) Auth Device Tool Advanced for SCL-010 (Setting IC card information in the loadable driver in advance)

1. Obtain the loadable driver (ICC_LDR.tar) for use in SCL-010 that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for SCL-010.
3. Select card type.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.

NOTE
- **Please do not save any other data in the USB memory.**

7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Management Function Choice] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
13. Set the authentication user.

(e) Auth Device Tool Advanced for SCL-010 (Installing IC card information setting only in the MFP afterward)

1. Install the loadable driver for SCL-010 to the MFP.
2. Start the Auth Device Tool Advanced for SCL-010.
3. Select card type.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
15. Set the authentication user.

(f) Auth Device Tool Advanced for 5427CK (Setting IC card information in the loadable driver in advance: TypeA/ HID Prox/Multiple)

NOTE
- **Selecting [Multiple] makes cards of HID Prox, HID iCLASS and TypeA available at the same time.**

1. Obtain the loadable driver (ICC_LDR.tar) for use in OMNIKEY 5427CK (AU-205H) that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select card type. (Except for HID iCLASS)
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**

7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Management Function Choice] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
13. Set the authentication user.

(g) Auth Device Tool Advanced for 5427CK (Setting IC card information in the loadable driver in advance: HID iCLASS).

1. Obtain the loadable driver (ICC_LDR.tar) for use in OMNIKEY 5427CK (AU-205H) that is compatible with the type of card used.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select HID iCLASS.
4. Click [Detail Setting].
5. Set the card ID length.
6. Select Loadable Driver in [Export Format] and click [Export].
7. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
8. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**

9. Call the Service Mode to the screen of the MFP.
10. Select [System 2] -> [Driver Install] -> [Install].
11. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
12. Select [Loadable driver] and touch the [Start] to install the loadable driver.
13. Remove the USB memory and, accessing [Billing Settings] -> [Management Function Choice] -> [Authentication Device 2], select [Card].
14. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
15. Set the authentication user.

(h) Auth Device Tool Advanced for 5427CK (Installing IC card information setting only in the MFP afterward: TypeA/HID Prox/Multiple)

1. Install the [loadable driver] for the OMNIKEY 5427CK (AU-205H) on the MFP.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select card type. (Except for HID iCLASS)
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
15. Set the authentication user.

(i) Auth Device Tool Advanced for 5427CK (Installing IC card information setting only in the MFP afterward: HID iCLASS)

1. Install the [loadable driver] for the OMNIKEY 5427CK (AU-205H) on the MFP.
2. Start the Auth Device Tool Advanced for 5427CK (AU-205H).
3. Select HID iCLASS.
4. Click [Detail Setting].
5. Set the card ID length.
6. Select IC card information setting file in [Export Format] and click [Export].
7. Set the encrypted password.
8. Save the file (iccConfig.bin).
9. Start the PageScope Data Administrator, and select the target MFP.
10. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
11. Using [Browse], select the file saved in step 8.
12. Click [Open] and type the encrypted password set in step 7.
13. Click [Next] and select the device to be imported.
14. Click [Start] and write the file in the MFP.
15. Check that “Normal” is shown in [Status].
16. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
17. Set the authentication user.

(j) Auth Device Tool Advanced for YSoft CRv2 (Setting IC card information in the loadable driver in advance)

NOTE

- **If a YSoft card reader is used, when performing authentication, the default setting for the loadable driver makes the card to be informed as an HID Prox card regardless of which type you are using. To change the card type when performing authentication, using Auth Device Tool Advanced for YSoft CRv2 to choose a corresponding card type to be reported to the authentication program from the following list.**

Card Reader Name	Readable Card Type	IC Card Information Setting (card type to be reported)
KM USB Reader v2 MultiReader HF	Mifare	TypeA (1) *1
KM USB Reader v2 Legic Advant	LEGIC	TypeA (1) *1
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox (1)
KM USB Reader v2 HID iCLASS	HID iCLASS	HID iCLASS (1)

- ***1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201S.**

1. Obtain the loadable driver (ICC_LDR.tar) for the YSoft card reader.
2. Start the Auth Device Tool Advanced for YSoft CRv2.
3. Select card type.
4. Select Loadable Driver in [Export Format] and click [Export].
5. Select the loadable driver to be updated and the output location of the loadable driver and click [OK].
6. Copy the output loadable driver (ICC_LDR.tar) to the root directory of the USB memory.
   NOTE
   - **Please do not save any other data in the USB memory.**
7. Call the Service Mode to the screen of the MFP.
8. Select [System 2] -> [Driver Install] -> [Install].
9. Connect the USB memory in which the loadable driver has been saved to the USB port on the side of the control panel.
10. Select [Loadable driver] and touch the [Start] to install the loadable driver.
11. Remove the USB memory and, accessing [Billing Settings] -> [Management Function Choice] -> [Authentication Device 2], select [Card].
12. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
13. Set the authentication user.

(k) Auth Device Tool Advanced for YSoft CRv2 (Installing IC card information setting only in the MFP afterward)

NOTE

- **If a YSoft card reader is used, when performing authentication, the default setting for the loadable driver makes the card to be informed as an HID Prox card regardless of which type you are using. To change the card type when performing authentication, using Auth Device Tool Advanced for YSoft CRv2 to choose a corresponding card type to be reported to the authentication program from the following list.**

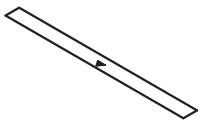
Card Reader Name	Readable Card Type	IC Card Information Setting (card type to be reported)
KM USB Reader v2 MultiReader HF	Mifare	TypeA (1) *1
KM USB Reader v2 Legic Advant	LEGIC	TypeA (1) *1
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox (1)
KM USB Reader v2 HID iCLASS	HID iCLASS	HID iCLASS (1)

- ***1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201S.**

1. Install the loadable driver for the YSoft card reader to the MFP.
2. Start the Auth Device Tool Advanced for YSoft CRv2.
3. Select card type.
4. Select IC card information setting file in [Export Format] and click [Export].
5. Set the encrypted password.
6. Save the file (iccConfig.bin).
7. Start the PageScope Data Administrator, and select the target MFP.
8. In the [Settings for multiple device] tab, click [Batch setting of IC Card Information].
9. Using [Browse], select the file saved in step 6.
10. Click [Open] and type the encrypted password set in step 5.
11. Click [Next] and select the device to be imported.
12. Click [Start] and write the file in the MFP.
13. Check that “Normal” is shown in [Status].
14. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
15. Set the authentication user.

2. Dual Scan Document Feeder

2.1 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
DF reading chart		1	9J06 PJG1 ##	
DF reading chart (for Duplex)		1	A782 9450 ##	
Adjustment sheet for Double Feed Detection Kit (UK-501)		1	A8WC 7071 ##	

F PERIODICAL MAINTENANCE

1. Concept of periodical maintenance

- Determine the cleaning/replacement cycle in the periodical maintenance item for main unit/option by total counter value, each life counter value or the Parts Counter (Fixed) value in [Service Mode] -> [Counter].

2. Periodical maintenance items

2.1 bizhub 958/808/758, bizhub PRO 958

2.1.1 bizhub 958, bizhub PRO 958

(1) Periodical maintenance 1 (total counter; every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Registration roller	-	●				
4		Paper dust remover	-	●				
5	Image transfer section	Around waste toner port	-	●				
6	Processing section	Print head window	-	●				
7								
8	Duplex section	Duplex transport roller	-	●				

(2) Periodical maintenance 2 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Manual bypass tray Tray 1 Tray 2 Tray 3 Tray 4	Pick-up roller	1				●	*
		Feed roller	1				●	
		Separation roller	1				●	

- *: Replace those three parts at the same time.

(3) Periodical maintenance 3 (Field yield; every 400,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Toner filter	1				●	*
2		Drum unit	1				●	
3		Ozone filter	1				●	*
4		Deodorant filter/2	1				●	

- *: Replace at the same time as the drum unit

(4) Periodical maintenance 4 (Field yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Transfer roller unit	1				●	

(5) Periodical maintenance 5 (Field yield; every 800,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	IH coil unit	1	●				

(6) Periodical maintenance 6 (Field yield; every 1,200,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit	1				●	
2	Image transfer section	Transfer belt unit	1				●	

(7) Periodical maintenance 7 (Field yield; every 1,600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Fusing section	Fusing unit	1				●	
2		IH coil unit	-	●				*

- *: Perform cleaning at the time of fusing unit replacement.

2.1.2 bizhub 808

(1) Periodical maintenance 1 (total counter; every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Registration roller	-	●				
4		Paper dust remover	-	●				
5	Image transfer section	Around waste toner port	-	●				
6	Processing section	Print head window	-	●				
7								
8	Duplex section	Duplex transport roller	-	●				

(2) Periodical maintenance 2 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Manual bypass tray Tray 1 Tray 2 Tray 3 Tray 4	Pick-up roller	1				●	*
		Feed roller	1				●	
		Separation roller	1				●	

- *: Replace those three parts at the same time.

(3) Periodical maintenance 3 (Field yield; every 400,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Toner filter	1				●	*
2		Drum unit	1				●	
3		Ozone filter	1				●	*
4		Deodorant filter/2	1				●	

- *: Replace at the same time as the drum unit

(4) Periodical maintenance 4 (Field yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Transfer roller unit	1				●	

(5) Periodical maintenance 5 (Field yield; every 1,200,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit	1				●	
2	Image transfer section	Transfer belt unit	1				●	
3	Fusing section	Fusing unit	1				●	
4		IH coil unit	1	●				*

- *: Perform cleaning at the time of fusing unit replacement.

2.1.3 bizhub 758

(1) Periodical maintenance 1 (total counter; every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Registration roller	-	●				
4		Paper dust remover	-	●				
5	Image transfer section	Around waste toner port	-	●				
6	Processing section	Print head window	-	●				
7								
8	Duplex section	Duplex transport roller	-	●				

(2) Periodical maintenance 2 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Manual bypass tray Tray 1 Tray 2 Tray 3 Tray 4	Pick-up roller	1				●	*
		Feed roller	1				●	
		Separation roller	1				●	

- *: Replace those three parts at the same time.

(3) Periodical maintenance 3 (Field yield; every 400,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Toner filter	1				●	*
2		Drum unit	1				●	
3		Ozone filter	1				●	*

- *: Replace at the same time as the drum unit

(4) Periodical maintenance 4 (Field yield; every 600,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Transfer roller unit	1				●	
2	Fusing section	Fusing unit (Japan only)	1				●	
3		IH coil unit (Japan only)	1	●				*

- *: Perform cleaning at the time of fusing unit replacement.

(5) Periodical maintenance 5 (Field yield; every 1,200,000 sheets)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Processing section	Developing unit	1				●	
2	Image transfer section	Transfer belt unit	1				●	
3	Fusing section	Fusing unit (other than Japan)	1				●	
4		IH coil unit (other than Japan)	1	●				*

- *: Perform cleaning at the time of fusing unit replacement.

2.1.4 Dual scan document feeder

(1) Periodical maintenance 1 (total counter; every 50,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
3	Paper feed section	Pick-up roller	-	●				
4		Feed roller	-	●				
5		Separation roller	-	●				
6	Conveyance section	Rollers and rolls	-	●				
7	Scanning section	Front side scanning guide	-	●				
8	Paper feed section	Reflective sensor section	-	●				

(2) Periodical maintenance 2 (life counter; every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	2				●	*
2		Feed roller	1				●	
3		Separation roller	1				●	
4		Torque limiter	-	●				

• *: Replace those three parts at the same time.

2.2 Option

2.2.1 LU-205/303

(1) Periodical maintenance 1 (life counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller	1				●	*
2		Feed roller	1				●	
3		Separation roller	1				●	

• *: Replace those three parts at the same time.

2.2.2 FS-537

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4		Paddle	6	●				
5	Sensor section	FNS entrance sensor (PS34)	1	●				
6		FNS middle sensor (PS36)	1	●				
7		Main tray exit sensor (PS37)	1	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Paddle	2				●	

2.2.3 FS-537SD

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section (Finisher)	Roller and rolls	-	●				
4		Paddle	6	●				

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
5	Conveyance section (Saddle unit)	Conveyance roller	-	●				
6		Upper paddle	4	●				
7		Lower paddle	8	●				
8	Sensor section (Finisher)	FNS entrance sensor (PS34)	1	●				
9		FNS middle sensor (PS36)	1	●				
10		Main tray exit sensor (PS37)	1	●				
11	Folding section (Saddle unit)	Folding roller	-	●				
12	Exit section (Saddle unit)	Exit tray conveyance belt	2	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section (Finisher)	Paddle	2				●	
2	Conveyance section (Saddle unit)	Upper paddle	1				●	
3		Lower paddle	4				●	

2.2.4 ZU-609

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2	Z folding section	Folding roller	-	●				
3		Folding guide	-	●				

2.2.5 JS-602

(1) Periodical maintenance (total counter; every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Conveyance roller	-	●				
4	Paper exit section	Paper exit roller	-	●				

2.2.6 PI-507

(1) Periodical maintenance 1 (total counter; every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Paper feed section	Feed roller	-	●				
4		Separation roller	-	●				
5		Pick-up roller	-	●				
6	Conveyance section	Paper exit roller	-	●				

(2) Periodical maintenance 2 (parts counter (fixed); every 100,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Feed roller/ Lw	1				●	

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
2		Separation roller/ Lw	1				●	

(3) Periodical maintenance 3 (parts counter (fixed); every 200,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Pick-up roller/ Lw	1				●	

(4) Periodical maintenance 4 (parts counter (fixed); every 600,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Paper feed section	Torque limiter/ Lw	1				●	

2.2.7 FS-536

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section	Roller and rolls	-	●				
4		Paddle	9	●				
5	Sensor section	FNS entrance sensor (PS4)	1	●				
6		Main tray exit sensor (PS16)	1	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section	Paddle	3				●	

2.2.8 FS-536SD

(1) Periodical maintenance 1 (total counter; every 300,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Overall	Paper feed and image conditions	-		●			
2		Appearance	-	●	●			
3	Conveyance section (Finisher)	Roller and rolls	-	●				
4		Paddle	9	●				
5	Conveyance section (Saddle unit)	Conveyance roller	-	●				
6		Upper paddle	4	●				
7		Lower paddle	8	●				
8	Sensor section (Finisher)	FNS entrance sensor (PS4)	1	●				
9		Main tray exit sensor (PS16)	1	●				
10	Folding section (Saddle unit)	Folding roller	-	●				

(2) Periodical maintenance 2 (life counter; every 2,000,000 counts)

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
1	Conveyance section (Finisher)	Paddle	3				●	
2	Conveyance section (Saddle unit)	Upper paddle	1				●	

No.	Section	Description/part name	Qt.	Clean	Check	Lubrication	Replace	Descriptions
3		Lower paddle	4				●	

3. Periodical replacement parts list

3.1 bizhub 958/808/758, bizhub PRO 958

3.1.1 Periodical replacement parts list

Classification	Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Dual scan document feeder	Pick-up roller	9J07 3301 ##	2	200,000	*2,*3	F.7.1.4 Replacing the pick-up roller/feed roller
	Feed roller	A00J 5636 ##	1	200,000		
	Separation roller	9J07 3409 ##	1	200,000		F.7.1.5 Replacing the separation roller
Tray 1	Feed roller	A00J 5636 ##	1	300,000	*2 ,*3	F.6.8.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller
	Pick-up roller	A5C1 5622 ##	1	300,000		
	Separation roller	A00J 5636 ##	1	300,000		
Tray 2	Feed roller	A00J 5636 ##	1	300,000	*2 ,*3	F.6.8.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller
	Pick-up roller	A5C1 5622 ##	1	300,000		
	Separation roller	A00J 5636 ##	1	300,000		
Tray 3	Feed roller	A00J 5636 ##	1	300,000	*2 ,*3	F.6.8.3 Replacing the tray 3 feed roller and tray 3 pick-up roller
	Separation roller	A00J 5636 ##	1	300,000		F.6.8.4 Replacing the tray 3 separation roller
	Pick-up roller	A5C1 5622 ##	1	300,000		F.6.8.3 Replacing the tray 3 feed roller and tray 3 pick-up roller
Tray 4	Feed roller	A00J 5636 ##	1	300,000	*2 ,*3	F.6.8.5 Replacing the tray 4 feed roller and tray 4 pick-up roller
	Separation roller	A00J 5636 ##	1	300,000		F.6.8.6 Replacing the tray 4 separation roller
	Pick-up roller	A5C1 5622 ##	1	300,000		F.6.8.5 Replacing the tray 4 feed roller and tray 4 pick-up roller
Manual bypass tray	Feed roller	A00J 5636 ##	1	300,000	*2 ,*3	F.6.8.7 Replacing the manual bypass tray feed roller and manual bypass tray pick-up roller
	Separation roller assy	A0P0 R741 ##	1	300,000		F.6.8.8 Replacing the manual bypass tray separation roller assy
	Pick-up roller	A5C1 5622 ##	1	300,000		F.6.8.7 Replacing the manual bypass tray feed roller and manual bypass tray pick-up roller
Conveyance section	Transfer roller unit	A795 R736 ##	1	600,000	*4	F.6.6.1 Replacing the transfer roller unit
Fusing section	Fusing unit	A796 R714 ## *6	1	1,600,000	*4	F.6.11.1 Replacing the fusing unit
		A795 R729 ## *7	1	1,200,000		
		A795 R730 ## *8	1	600,000		
Image transfer section	Transfer belt unit	A795 R714 ##	1	1,200,000	*4	F.6.5.1 Replacing the transfer belt unit
	Waste toner box	A2WY WY4 *9	1	160,000	*1,*4,*5	F.6.7.2 Replacing the waste toner box
		A2WY WY5 *10				

- *1: The parts can be replaced either by user or service engineer.
- *2: Replace these parts at the same time.
- *3: Life counter value
- *4: Field standard yield
- *5: A waste toner full condition is detected with detecting the actual waste toner emissions.
- *6: bizhub 958/ bizhub PRO 958
- *7: bizhub 808/758 (other than Japan and Taiwan)
- *8: bizhub 758 (Japan and Taiwan only)
- *9: Region other than North America and Europe
- *10: North America and Europe only

3.1.2 Consumables list

(1) bizhub 958/808/758, bizububPRO 958

Classification	Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Processing section	Drum unit	-	1	400,000	*2	F.6.2.1 Replacing the drum unit
	Developing unit	-	1	1,200,000	*2	F.6.3.1 Replacing the developing unit
	Ozone filter	-	1	400,000	*2, *3	F.6.1.1 Replacing ozone filter
	Toner cartridge	-	1	40,800	*1,*2	F.6.4.1 Replacing the toner cartridge
	Toner filter	-	1	400,000	*2, *3	F.6.1.2 Replacing the toner filter
Paper exit section	Deodorant filter/2	A796 1534 ##	1	400,000	*2, *4	F.6.1.3 Replacing the deodorant filter/2 (bizhub 958/808, bizhub PRO 958 only)

- *1: The parts can be replaced either by user or service engineer.
- *2: Field standard yield
- *3: Included with the drum unit, and it is replaced at the same time.
- *4: bizhub 958/808, bizububPRO 958

3.2 Option

3.2.1 LU-205

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1, *2	F.8.1.1 Replacing the pick-up roller (LU-205)
Feed roller	A00J 5636 ##	1	300,000		F.8.1.2 Replacing the feed roller (LU-205)
Separation roller	A00J 5636 ##	1	300,000		F.8.1.3 Replacing the separation roller (LU-205)

- *1: Actual durable cycle (life counter value)
  *2: Replace these parts at the same time.

3.2.2 LU-303

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Pick-up roller	A5C1 5622 ##	1	300,000	*1, *2	F.9.1.1 Replacing the pick-up roller (LU-303)
Feed roller	A00J 5636 ##	1	300,000		F.9.1.2 Replacing the feed roller (LU-303)
Separation roller	A00J 5636 ##	1	300,000		F.9.1.3 Replacing the separation roller (LU-303)

- *1: Actual durable cycle (life counter value)
  *2: Replace these parts at the same time.

3.2.3 FS-537

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle	A87H PPAA ##	2	2,000,000	*	F.10.1.3 Replacing the paddle (FS-537SD/ FS-537)

- *: Actual durable cycle (life counter value)

3.2.4 FS-537SD

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle (Finisher)	A87H PPAA ##	2	2,000,000	*	F.10.1.3 Replacing the paddle (FS-537SD/ FS-537)
Upper paddle (saddle unit)	A3ER PP38 ##	1	2,000,000	*	F.10.1.7 Replacing the upper paddle (FS-537SD)
Lower paddle (saddle unit)	A3ER PP7Y ##	4	2,000,000	*	F.10.1.8 Replacing the lower paddle (FS-537SD)

- *: Actual durable cycle (life counter value)

3.2.5 PI-507

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Feed roller/Lw	13QN R705 ##	1	100,000	*	F.13.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)
Separation roller/Lw	13QN R704 ##	1	100,000	*	F.13.1.2 Replacing separation roller/Lw / torque limiter/Lw (PI-507)
Pick-up roller/Lw	50BA R701 ##	1	200,000	*	F.13.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)
Torque limiter/Lw	13QN 4073 ##	1	600,000	*	F.13.1.2 Replacing separation roller/Lw / torque limiter/Lw (PI-507)

- *: Parts counter (Fixed) value

3.2.6 FS-536

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle	A87G PP0W ##	2	2,000,000	*	F.14.1.3 Replacing the paddle (FS-536/ FS-536SD)
	A87G PP0X ##	1	2,000,000		

- *: Actual durable cycle (life counter value)

3.2.7 FS-536SD

Parts name	Parts No.	Qt.	Replacing cycle	Descriptions	Ref. page
Paddle (Finisher)	A87G PP0W ##	2	2,000,000	*	F.14.1.3 Replacing the paddle (FS-536/ FS-536SD)
	A87G PP0X ##	1	2,000,000		
Upper paddle (Saddle unit)	A3ER PP38 ##	1	2,000,000	*	F.14.1.6 Replacing the upper paddle (FS-536SD)
Lower paddle (Saddle unit)	A3ER PP7Y ##	4	2,000,000	*	F.14.1.7 Replacing the lower paddle (FS-536SD)

- *: Actual durable cycle (life counter value)

4. Periodical cleaning parts list

- Determine the cleaning cycle according to the total counter value or each life counter value.

4.1 bizhub 958/808/758, bizhub PRO 958

Classification	Parts name	Actual cleaning cycle	Descriptions	Ref. page
Dual scan document feeder	Pick-up roller	50,000		F.7.1.1 Cleaning of the pick-up roller/feed roller
	Feed roller	50,000		
	Separation roller	50,000		F.7.1.2 Cleaning of the separation roller
	Torque limiter	200,000		F.7.1.3 Cleaning the torque limiter
	Rollers and rolls	50,000		F.7.2.1 Cleaning of the miscellaneous rolls F.7.2.2 Cleaning of the miscellaneous rollers
	Front side scanning guide	50,000		F.7.3.1 Cleaning of the front side scanning guide
	Reflective sensor section	50,000		F.7.3.2 Cleaning of the reflective sensor section
Conveyance section	Registration roller	100,000		F.6.10.1 Cleaning of the registration roller
	Paper dust remover	100,000		F.6.9.1 Cleaning of the paper dust remover
Duplex section	Duplex transport roller	100,000		F.6.12.1 Cleaning of the duplex transport roller
Image transfer section	Area around the waste toner collecting port	100,000		F.6.7.1 Cleaning of the area around the waste toner collecting port
Fusing section	IH coil unit	When fusing unit is replaced		F.6.11.2 Cleaning of the IH coil
		800,000	*	F.6.11.3 Cleaning the IH coil (bizhub 958, bizhub PRO 958 only)

- *: bizhub 958, bizhub PRO 958 only

4.2 Option

4.2.1 FS-537

Part name	Actual cleaning cycle	Note
Paddle	300,000	*
FNS entrance sensor (PS34)	300,000	*
FNS middle sensor (PS36)	300,000	*
Main tray exit sensor (PS37)	300,000	*

- *: Total counter value

4.2.2 FS-537SD

Parts name	Actual cleaning cycle	Note
Paddle (Finisher)	300,000	*
Conveyance roller (saddle unit)	300,000	*
Fold roller (saddle unit)	300,000	*
Upper paddle (saddle unit)	300,000	*
Lower paddle (saddle unit)	300,000	*
Exit tray conveyance belt (saddle unit)	300,000	*
FNS entrance sensor (PS34) (Finisher)	300,000	*
FNS middle sensor (PS36) (Finisher)	300,000	*
Main tray exit sensor (PS37) (Finisher)	300,000	*

- *: Total counter value

4.2.3 ZU-609

Parts name	Actual cleaning cycle	Note
Folding roller	300,000	*
Folding guide	300,000	*

- *: Total counter value

4.2.4 JS-602

Parts name	Actual cleaning cycle	Note
Conveyance roller	100,000	*
Paper exit roller	100,000	*

- *: Total counter value

4.2.5 PI-507

Parts name	Actual cleaning cycle	Note
Feed roller	100,000	*
Separation roller	100,000	*
Pick-up roller	100,000	*
Conveyance roller	100,000	*

- *: Total counter value

4.2.6 FS-536

Parts name	Actual cleaning cycle	Descriptions
Roller and rolls	300,000	*
Paddle	300,000	*
FNS entrance sensor (PS4)	300,000	*
Main tray exit sensor (PS16)	300,000	*

- *: Total counter value

4.2.7 FS-536SD

Parts name	Actual cleaning cycle	Descriptions
Roller and rolls (Finisher)	300,000	*
Paddle (Finisher)	300,000	*
Conveyance roller (Saddle unit)	300,000	*
Fold roller (Saddle unit)	300,000	*
Upper paddle (Saddle unit)	300,000	*
Lower paddle (Saddle unit)	300,000	*
FNS entrance sensor (PS4) (Finisher)	300,000	*
Main tray exit sensor (PS16) (Finisher)	300,000	*

- *: Total counter value

5. Concept of parts life

5.1 Life value of consumables and parts

- The life counter value of each consumable/part can be confirmed from [Service Mode] -> [Counter] -> [Life].
- Life specification value means an actual life terminated when prints are made under the conditions as defined in the next section, “Conditions for life specifications values.” The actual life may vary greatly depending on how the machine has been used and other factors.
- “M” refers to the rotation time of each unit.

Consumables/parts name	Target model	Field standard yield *	Near life	Life	Life stop
Toner cartridge	-	40,800 sheets	32,700 sheets	-	40,800 sheets
Drum unit/K Ozone filter	bizhub 958 bizhub PRO 958	400,000 sheets	-	6499M	6661M
	bizhub 808			8130M	8333M
	bizhub 758 (Japan)			8326M	8533M
	bizhub 758 (outside Japan)			8324M	8532M
Developing unit/K	-	1,200,000 sheets	-	1,231,500 counts	1,262,300 counts
Image transfer belt unit	bizhub 958 bizhub PRO 958	1,200,000 sheets	-	1,231,500 counts/26533M	1,262,300 counts/27200M
	bizhub 808			1,231,500 counts/36100M	1,262,300 counts/37008M
	bizhub 758			1,231,500 counts/41138M	1,262,300 counts/42171M
Transfer roller unit	-	600,000 sheets	-	615,750 sheets	631,140 sheets
Toner filter	-	400,000 sheets	-	400,000 sheets	420,000 sheets
Fusing unit	bizhub 958 bizhub PRO 958	1,600,000 sheets	-	1,642,000 counts	1,672,800 counts
	bizhub 808	1,200,000 sheets		1,231,500 counts	1,262,300 counts
	bizhub 758 (Japan)	600,000 sheets		615,800 counts	646,500 counts
	bizhub 758 (outside Japan)	1,200,000 sheets		1,231,500 counts	1,262,300 counts
Waste toner box	-	160,000 sheets	157,000 sheets	-	160,000 sheets
Deodorant filter/2	-	400,000 sheets	-	-	-

- *: For details of conditions of field standard yield, see “F.5.2 Specified conditions of field standard yield”.

5.2 Specified conditions of field standard yield

- This machine has the field standard yield which indicates the available print numbers estimated by the quantities and usage of the unit in the market standard job mode. Yields for each preventative maintenance unit will differ depending on actual usage.

5.2.1 Japan

Terms and conditions	bizhub 758
Printing	8P/J
Paper size ratio	A4S: 40 %
Coverage	6%
Average print volume (pages/ month)	28,000

5.2.2 North America

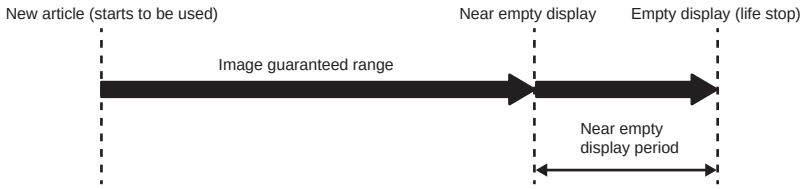
Terms and conditions	bizhub 958	bizhub 808
Printing	10P/J	8P/J
Paper size ratio	Letter S: 7%	
Coverage	6%	
Average print volume (pages/ month)	40,000	32,000

5.2.3 Europe

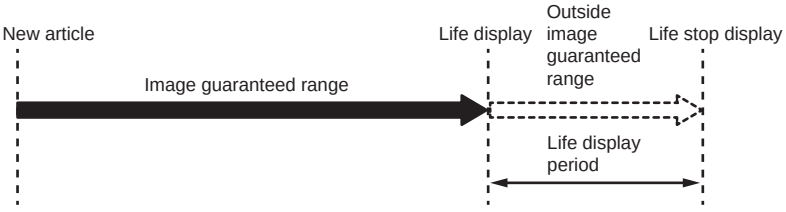
Terms and conditions	bizhub PRO 958	bizhub 758
Printing	10P/J	8P/J
Paper size ratio	A4S: 7%	
Coverage	6%	
Average print volume (pages/ month)	40,000	39,000

5.3 Details for life of consumables/periodical replacement parts

5.3.1 Toner cartridge

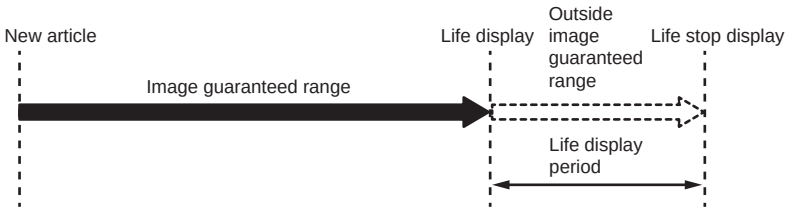
		Toner cartridge		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		40,800 sheets		
New article detection		Toner cartridge set board/K		
Toner cartridge mounting detection				
Counter life determination				
Near empty	Near empty detection	When the toner empty sensor/K inside the toner hopper detects that the toner is depleted, the toner cartridge Near empty display appears.		
	Near empty display	Display (default value)		
	Near empty display timing	Display setting present • By setting the toner near empty display timing, the toner near empty display can be displayed earlier than normal. Set using I.5.16.5.(3) Warning display - Near Empty Display Time. Configure the near empty display settings as necessary. • When the setting is [0] (default value), the near empty appears when the toner cartridge usage reaches approximately 95%. • Setting the near empty display timing to [+25] causes the near empty to appear when the toner cartridge usage reaches approximately 70%.		
Empty	Empty detection	When the toner empty sensor/K inside the toner hopper has detected several times (more than the specified number) that the toner is depleted, the toner cartridge empty display appears.		
	Empty display	• The screen mode to be displayed when a toner empty is detected can be selected by specifying the person who replaces the unit in the "System 2/ Unit Change" in the Service Mode. • When User is selected as the person, the message requesting toner cartridge replacement by user is displayed when a toner empty condition is detected. (The Toner Cartridge needs to be replaced. Follow the instruction to replace the Toner Cartridge and close the front door.) • When Service is selected as the person, the message prompting service engineer to replace the toner cartridge is displayed. (Out of toner. Contact your service representative.) 		
	Empty display setting	No display settings		

5.3.2 Drum unit

		Drum unit		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		400,000 sheets		
New article detection		DC set board/K		
Unit set detection				
Counter life determination				
Near life	Near life detection	No display function.		
	Near life display			

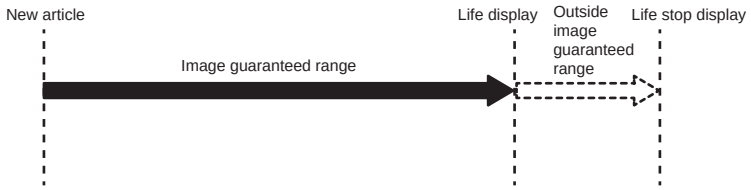
	Near life display timing	
Life	Life detection	The unit life (life display) has been reached when the drum rotation time counter has reached the life threshold value.
	Life display	Display (default value)
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings When Consumable Life Reminder setting is turned [Yes], a warning is displayed in full screen. When the setting is turned [No], only a message is displayed on the control panel. (Printing possible)
Life stop	Life stop detection	Life stop (life stop display) occurs when the drum rotation time counter has reached the life stop threshold value.
	Life stop	Setting available Life stop is turned [Off] (default value) However, the initial value may vary depending on the region. Configure the life stop settings as necessary. I.7.3.5.(1) Life stop Printing cannot be performed when life stop is turned [Enable].
	Life Cycle Display Warning	When the life stop setting is turned [Off] and Life Cycle Display Warning is turned [Enable] at the time that the unit has reached life stop, a warning will be displayed in full screen.
	NOTE	If life stop is turned [Off], the same message as life is displayed on the control panel.

5.3.3 Developing unit

		Developing unit		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		1,200,000 sheets		
New article detection		TCR sensor detection results		
Unit set detection				
Counter life determination				
Near life	Near life detection	No display function.		
	Near life display			
	Near life display timing			
Life	Life detection	The unit life (life display) has been reached when the print counter has reached the life threshold value.		
	Life display	Display (default value)		
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings When Consumable Life Reminder setting is turned [Yes], a warning is displayed in full screen. When the setting is turned [No], only a message is displayed on the control panel. (Printing possible)		
Life stop	Life stop detection	Life stop (life stop display) occurs when the print counter has reached the life stop threshold value.		
	Life stop	Setting available Life stop is turned [Off] (default value) However, the initial value may vary depending on the region. Configure the life stop settings as necessary. I.7.3.5.(1) Life stop Printing cannot be performed when life stop is turned [Enable].		
	Life Cycle Display Warning	When the life stop setting is turned [Off] and Life Cycle Display Warning is turned [Enable] at the time that the unit has reached life stop, a warning will be displayed in full screen.		
	NOTE	If life stop is turned [Off], the same message as life is displayed on the control panel.		

5.3.4 Image transfer belt unit

	Image transfer belt unit		
	bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield	1,200,000 sheets		
New article detection	No mechanism for detecting new articles. If the transfer belt is replaced with a new one, therefore, "New Release" must be performed through the "Counter/Data/Life" of the Service Mode. For detailed operating procedures, see “I.5.17.2.(3) New Release”.		

Unit set detection		No mechanism for unit detection. A trouble occurs when the roller is unmounted since a separation operation of the 1st transfer roller is performed during warmup of the main unit.
Counter life determination		
Near life	Near life detection	No display function.
	Near life display	
	Near life display timing	
Life	Life detection	The unit life (life display) has been reached when either the print counter or the transfer belt rotation time counter value has reached the life threshold value.
	Life display	Display (default value)
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings When Consumable Life Reminder setting is turned [Yes], a warning is displayed in full screen. When the setting is turned [No], only a message is displayed on the control panel. (Printing possible)
Life stop	Life stop detection	Life stop (life stop display) occurs when the print counter has reached the life stop threshold value.
	Life stop	Setting available Life stop is turned [Off] (default value) However, the initial value may vary depending on the region. Configure the life stop settings as necessary. I.7.3.5.(1) Life stop Printing cannot be performed when life stop is turned [Enable].
	Life Cycle Display Warning	When the life stop setting is turned [Off] and Life Cycle Display Warning is turned [Enable] at the time that the unit has reached life stop, a warning will be displayed in full screen.
	NOTE	If life stop is turned [Off], the same message as life is displayed on the control panel.

5.3.5 Transfer roller unit

		Transfer roller unit		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		600,000 sheets		
New article detection		No mechanism for detecting new articles. If the transfer roller unit is replaced with a new one, "Counter Reset" must be performed through the "Counter/Data/Life" of the Service Mode. For detailed operating procedures, see “I.5.17.2.(3) New Release”.		
Unit set detection		No mechanism for unit detection. In case copying and printing is possible but the transfer roller does not touch the paper, a blank paper will be printed out.		
Counter life determination				
Near life	Near life detection	No display function.		
	Near life display			
	Near life display timing			
Life	Life detection	The unit life (life display) has been reached when the print counter value has reached the life threshold value.		
	Life display	Display (default value)		
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings		
Life stop	Life stop detection	No display function.		
	Life stop			
	Life Cycle Display Warning			
	NOTE			

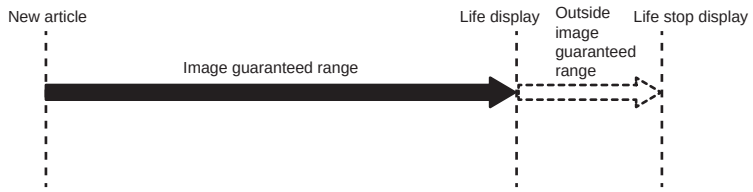
5.3.6 Ozone filter

		Ozone filter		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		400,000 sheets		
New article detection		No mechanism for detecting new articles. If the ozone filter is replaced with a new one, "Counter Reset" must be performed through the "Counter/Data/Life" of the Service Mode. For detailed operating procedures, see "I.5.17.2.(3) New Release".		
Unit set detection		No mechanism for unit detection.		
Counter life determination				
Near life	Near life detection	No display function.		
	Near life display			
	Near life display timing			
Life	Life detection	The unit life (life display) has been reached when the drum rotation time counter has reached the life threshold value.		
	Life display	Display (default value)		
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings		
Life stop	Life stop detection	No display function.		
	Life stop			
	Life Cycle Display Warning			
	NOTE			

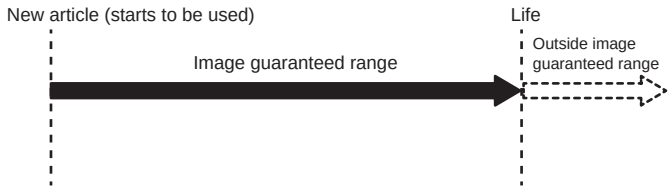
5.3.7 Toner Filter

		Toner Filter		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		400,000 sheets		
New article detection		No mechanism for detecting new articles. If the toner filter is replaced with a new one, "Counter Reset" must be performed through the "Counter/Data/Life" of the Service Mode. For detailed operating procedures, see "I.5.17.2.(3) New Release".		
Unit set detection		No mechanism for unit detection.		
Counter life determination				
Near life	Near life detection	No display function.		
	Near life display			
	Near life display timing			
Life	Life detection	The unit life (life display) has been reached when the print counter value has reached the life threshold value.		
	Life display	Display (default value)		
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings		
Life stop	Life stop detection	No display function.		
	Life stop			
	Life Cycle Display Warning			
	NOTE			

5.3.8 Fusing unit

		Fusing unit		
		bizhub 958 / bizhub PRO 958	bizhub 808	bizhub 758
Number of field standard yield		1,600,000 sheets	1,200,000 sheets	600,000 sheets (Japan and Taiwan only) 1,200,000 sheets (Other than Japan and Taiwan)
New article detection		No mechanism for detecting new articles. If the fusing is replaced with a new one, "New Release" must be performed through the "Counter/Data/Life" of the Service Mode. For detailed operating procedures, see "I.5.17.2.(3) New Release".		
Unit set detection		No mechanism for unit detection. If the fusing unit is not installed, the right door cannot be closed.		
Counter life determination				
Near life	Near life detection	No display function.		
	Near life display			
	Near life display timing			
Life	Life detection	The unit life (life display) has been reached when either the print counter or the fusing unit rotation time counter value has reached the life threshold value.		
	Life display	Display (default value)		
	Life display setting	Display setting present Configure the life display settings as necessary. I.5.16.5.(4) Warning display - Near Life Display Settings When Consumable Life Reminder setting is turned [Yes], a warning is displayed in full screen. When the setting is turned [No], only a message is displayed on the control panel. (Printing possible)		
Life stop	Life stop detection	Life stop (life stop display) occurs when either the print counter or the fusing unit rotation time counter value has reached the life stop threshold value.		
	Life stop	Setting available Life stop is turned [Off] (default value) However, the initial value may vary depending on the region. Configure the life stop settings as necessary. I.7.3.5.(1) Life stop Printing cannot be performed when life stop is turned [Enable].		
	Life Cycle Display Warning	When the life stop setting is turned [Off] and Life Cycle Display Warning is turned [Enable] at the time that the unit has reached life stop, a warning will be displayed in full screen.		
	NOTE	If life stop is turned [Off], the same message as life is displayed on the control panel.		

5.3.9 Deodorant filter/2

		Deodorant filter/2	
		bizhub 958 / bizhub PRO 958	bizhub 808
Number of field standard yield		400,000 sheets	
New article detection		No mechanism for detection	
Unit set detection		No mechanism for detection	
Counter life determination			
Near life	Near life detection	No display function.	
	Near life display		
	Near life display timing		
Life	Life detection	No display function.	
	Life display		
	Life display setting		
Life stop	Life stop detection	No stop function	
	Life stop		

Life Cycle Display Warning	
NOTE	

5.4 Control causing inhibited printing for one part when an inhibited-printing event occurs in another part

- In order to reduce the maintenance call times: when printing prohibiting is reached for any of the following parts, make printing prohibited also for other parts whose life value is reached, and replace those parts at the same time.

NOTE

- **This control can be disabled by changing the setting in switch No. 14 in [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW].**

5.4.1 Object parts

- Object parts are divided into two groups. Each group has its own control method.
  Two groups are listed below.

Group A	Fusing unit, image transfer belt unit, developing unit
Group B	Drum unit

5.4.2 Control method

When a part from group A or B is prohibited from printing:

- A part from group A which reached its life is considered to be “printing inhibited” only when the difference between the life counter value and the maximum life value is for 10,000 prints or under.
- A parts from group B which reached its life is considered to be “printing inhibited” regardless of the difference with maximum life value.

6. Periodical maintenance procedure bizhub 958/808/758, bizhub PRO 958

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

6.1 Housing section

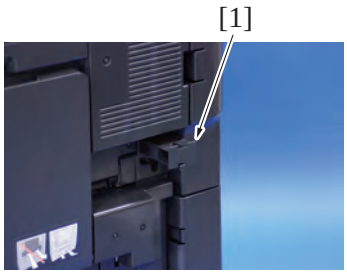
6.1.1 Replacing ozone filter

(1) Periodically replacing parts/cycle

- Ozone filter: Every 400,000 sheets

(2) Procedure

1. Remove the ozone filter [1] holding on the hook section.



2. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Ozone Filter].

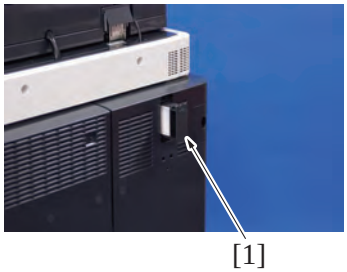
6.1.2 Replacing the toner filter

(1) Periodically replacing parts/cycle

- Toner filter: Every 400,000 sheets

(2) Procedure

1. Remove the toner filter [1] holding on the hook section.



2. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Toner Filter].

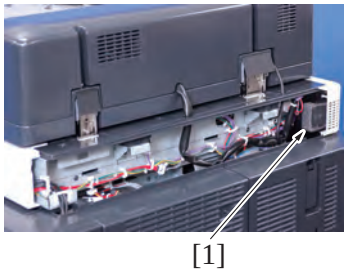
6.1.3 Replacing the deodorant filter/2 (bizhub 958/808, bizhub PRO 958 only)

(1) Periodically replacing parts/cycle

- Deodorant filter/2: Every 400,000 sheets

(2) Procedure

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the deodorant filter/2 [1].



3. To reinstall, reverse the order of removal.

6.2 Drum unit

6.2.1 Replacing the drum unit

(1) Periodically replacing parts/cycle

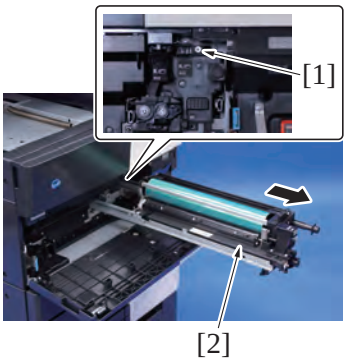
- Drum unit: Every 400,000 sheets

(2) Procedure

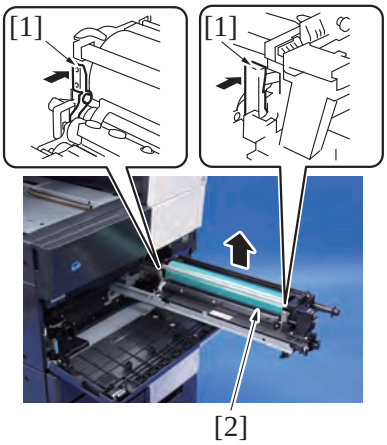
NOTE

- **In this procedure, the state in which the drum unit and the developing unit are assembled is called "imaging unit."**

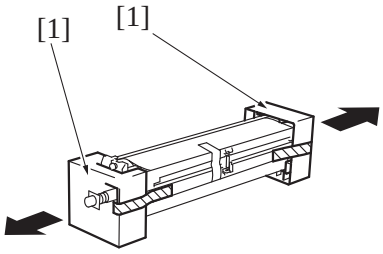
1. Open the lower front door.
2. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box



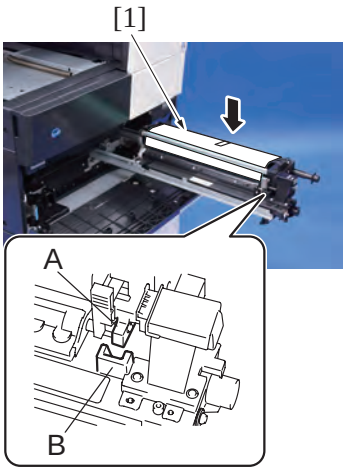
3. Loosen the shoulder screw [1], and pull out the imaging unit [2].



4. Remove the drum unit [2] holding 2 fixing levers [1] of the drum unit while unlocking.



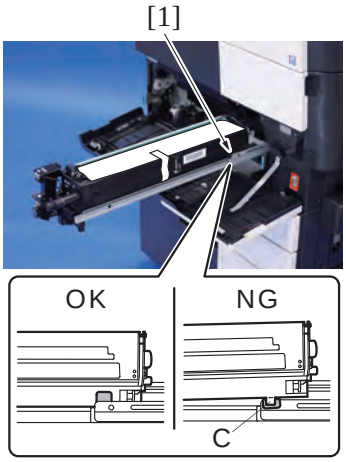
5. Take out the new drum unit from its package.
6. Remove the caps [1] at the front and rear of the drum unit.



7. Install the drum unit [1] to the developing unit.

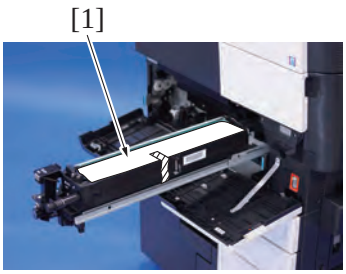
NOTE

- **Do not tilt the drum unit [1] when putting it on the developing unit. (Keep the drum unit level.)**
- **Position the drum unit [1] so that part A of the drum unit is inserted into part B of the developing unit.**

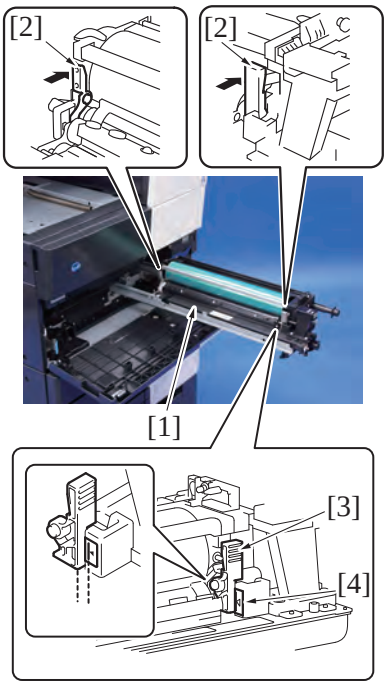


NOTE

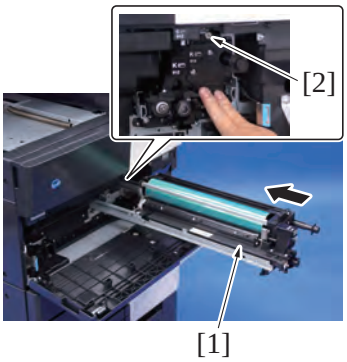
- **Position the drum unit so that part C of the drum unit is inside the film [1] located on the main body rail. (Check that Part C is not on the top of the rail.)**



8. Remove the protective sheet [1] for the PC drum.



9. Secure the drum unit [1] to the developing unit with the two levers [2].
NOTE
- **Push the front and back levers in the direction of the arrow at a time to secure the drum unit.**
- **Make sure the drum unit is securely fixed with two levers.**
- **Check that the front lever [3] of the drum unit is parallel to the vertical line marked on the label [4] on the developing unit.**



10. Insert the imaging unit [1] into the machine, and tighten the shoulder screw [2] to secure the drum unit.

11. Remount the waste toner box [1], and close the lower front door.
12. Replace the ozone filter furnished with the drum unit.
F.6.1.1 Replacing ozone filter
13. Replace the toner filter furnished with the drum unit.
F.6.1.2 Replacing the toner filter
14. Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and carry out gradation adjust.

6.3 Developing section

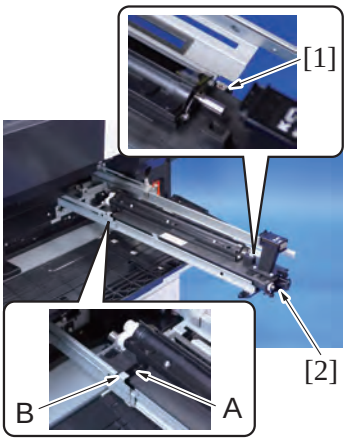
6.3.1 Replacing the developing unit

(1) Periodically replacing parts/cycle

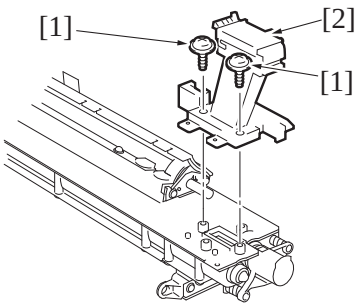
- Developing unit: Every 1,200,000 sheets

(2) Procedure

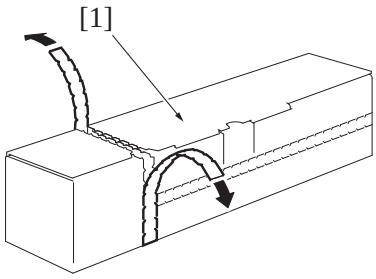
1. Remove the drum unit.
F.6.2.1 Replacing the drum unit



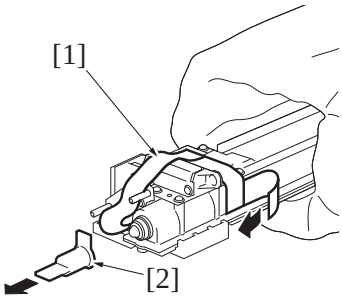
2. Remove the shoulder screw [1].
3. Set A of the developing unit to meet B of the rail to remove the developing unit [2].



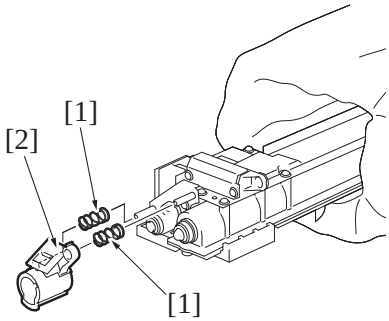
4. Remove two screws [1], and remove the toner supply duct [2].



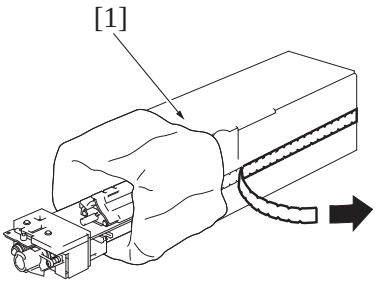
5. Open the area indicated in the figure of the packaging [1] of the new developing unit.



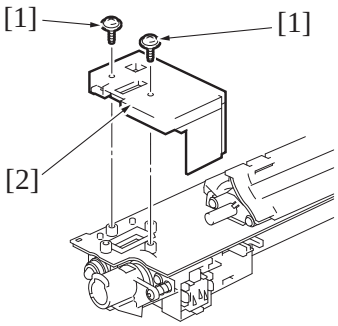
6. Place the new developing unit with the packaging upside down.
7. Remove the tape [1] and the mounting parts [2] of the new developing unit.



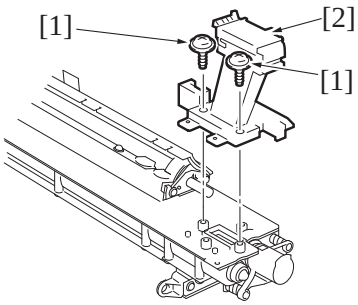
8. Attached the two springs [1] and the shutter [2] for the included mounting parts to the new developing unit.



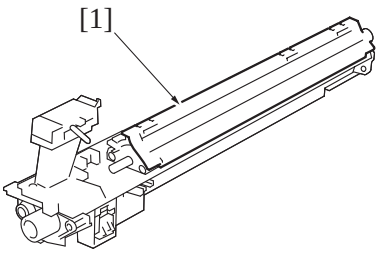
9. Place the new developing unit with the packaging upside down.
10. Open the area indicated in the figure of the packaging [1] of the new developing unit, and take out the developing unit.



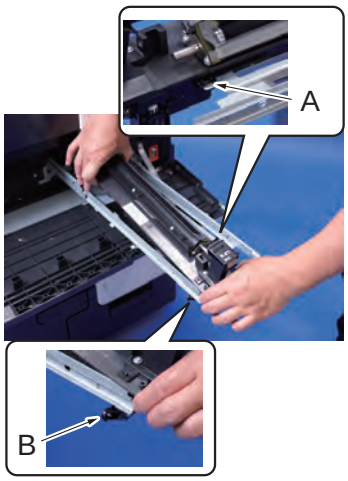
11. Remove two screws [1], and remove the cover [2].



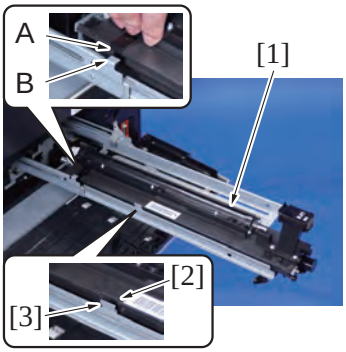
12. Mount the toner supply duct [2] removed in step 4, with two screws [1] to the new developing unit.



13. Remove the protective parts [1].

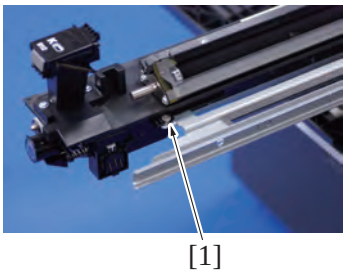


14. Align the position of the section A of the developing unit with the screw hole of the rail, and pass the section B of the developing unit under the rail.



15. Align the position of the section A of the developing unit and the section B of the rail, and place the developing unit [1] on the rail of the main unit.
NOTE
- **The rail positioning plate [3] should be set in the cutout section [2] of the developing unit.**

16. Fix the developing unit to the rail using the shoulder screw [1].



17. Remount the drum unit.
F.6.2.1 Replacing the drum unit
18. Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and carry out gradation adjust.

6.4 Toner supply section

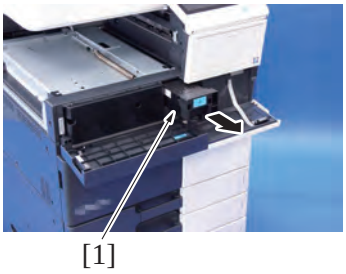
6.4.1 Replacing the toner cartridge

(1) Periodically replacing parts/cycle

- Toner cartridge: Every 40,800 sheets

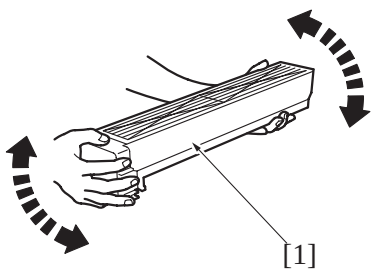
(2) Remove procedure

1. Open the upper front door.

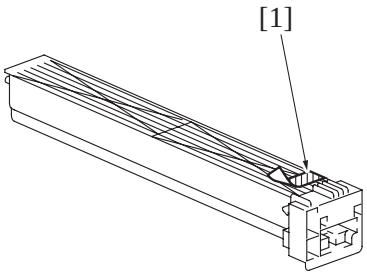


2. Remove the toner cartridge [1].

(3) Reinstall procedure

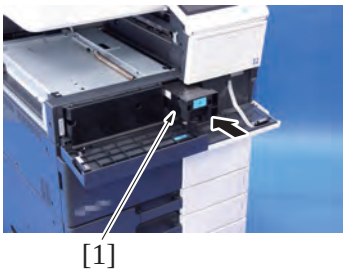


1. Remove the new toner cartridge [1] from the packaging, and the shake the cartridge up and down for 5 to 10 times.



2. Remove the protective tape [1].

3. Insert the toner cartridge [1] aligned to the groove on the main unit, and close the upper front door.



6.5 1st transfer section

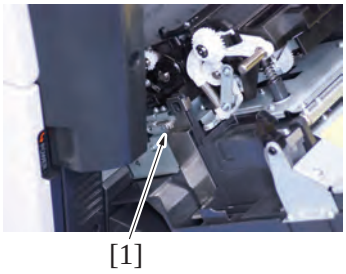
6.5.1 Replacing the transfer belt unit

(1) Periodically replacing parts/cycle

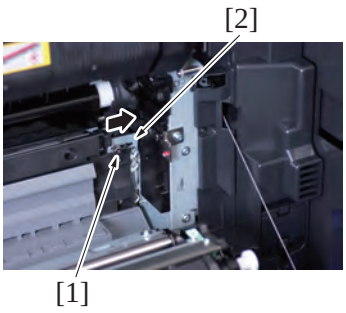
- Transfer belt unit: Every 1,200,000 sheets

(2) Procedure

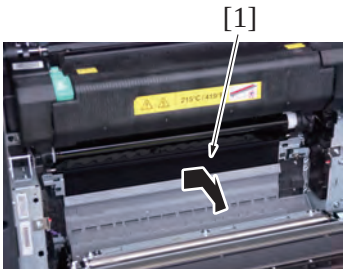
1. Open the upper right door.



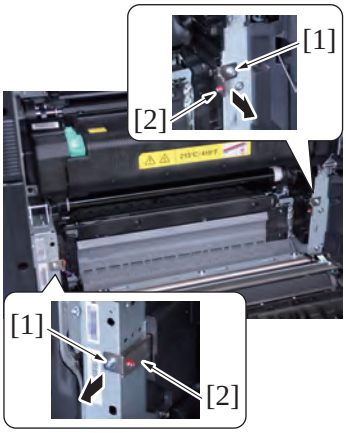
2. Remove the screw [1] and remove the stopper for the upper right door.



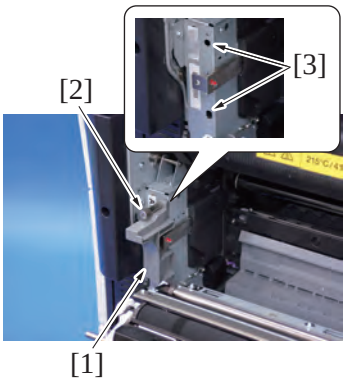
3. Loosen the shoulder screw [1] and slide the transfer front guide stopper [2] toward the rear of the main unit.



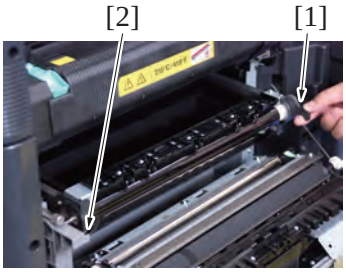
4. Remove the transfer front guide [1] by sliding it toward the rear of the main unit.
NOTE
- **Always remove the transfer front guide when removing the transfer belt unit. Trying to removing the transfer belt unit with the transfer front guide attached may damage the surface of the transfer belt.**



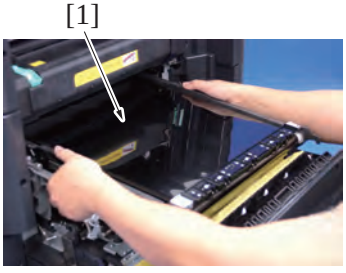
5. Remove the two screws [1] and unlock the two transfer belt locks [2] by pulling them toward the right of the main unit.
NOTE
- **Completely unlock the transfer belt lock by pulling all the way toward the right of the main unit.**
  Also, install the transfer belt unit while the lock is completely unlocked.



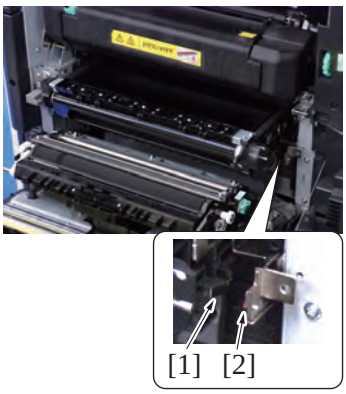
6. Attach the transfer belt supplement rail (jig) [1] to the main unit, and fix with the shoulder screw [2].
NOTE
- **Attach so the two protrusions of the transfer belt supplement rail fits into the two dowel holes on the main unit.**



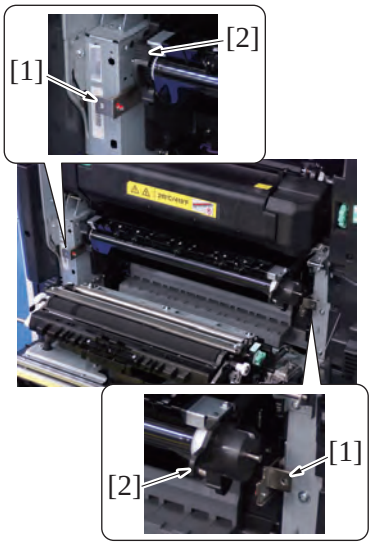
7. Hold the transfer belt unit in the position [1] indicated in the figure, and pull out until it strikes the stopper [2] of the transfer belt supplement rail.



8. Remove by change the holding of the transfer belt unit [1] as indicated in the figure.
NOTE
- **Do not touch the surface of the transfer belt unit.**
- **Cover the transfer belt unit with something such as shade cloth to protect its surface from dust or foreign matter.**



NOTE
- **Take care so the contact [1] does not contact with the screw [2] of the transfer belt unit lock when removing/ installing the transfer belt unit.**



9. To reinstall, reverse the order of removal.

NOTE
- **Insert the transfer belt unit with care not to allow its docking gear to be damaged by hitting it against the rail or associated part.**
- **Confirm that the two transfer belt unit locks [1] are securely unlocked, and securely insert while pressing the two press locations [2] indicated in the figure when installing the transfer belt unit.**

10. Select [Service Mode] -> [Counter] -> [Life] -> [New Release] and carry out new release for the transfer belt unit.
11. Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and carry out gradation adjust.

6.6 2nd transfer/separation section

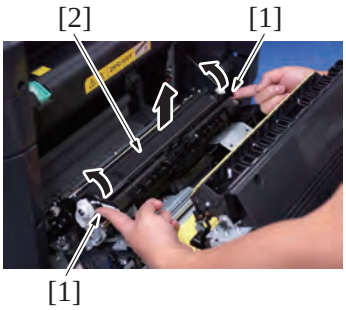
6.6.1 Replacing the transfer roller unit

(1) Periodically replacing parts/cycle

- Transfer roller unit: Every 600,000 sheets

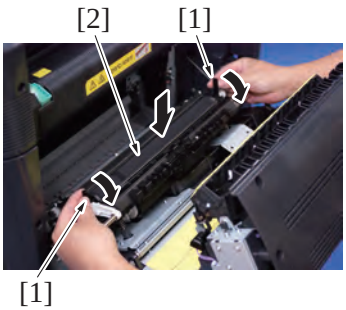
(2) Remove procedure

1. Open the upper right door.



2. Unlock the lock levers [1] (at two places).
3. Holding onto the lock levers [1] (at two places), remove the transfer roller unit [2].

(3) Reinstall procedure



1. Holding onto the lock levers [1] (at two places), mount the new transfer roller unit [2].
2. Lock the lock levers [1] (at two places) and close the upper right door.
   NOTE
   - **Make sure that the levers are locked in position both at front and rear.**
3. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Transfer Roller Unit].

6.7 Toner collection section

6.7.1 Cleaning of the area around the waste toner collecting port

(1) Periodically cleaning parts/cycle

- Surrounding of the waste toner collecting port: Every 100,000 counts

(2) Procedure

1. Open the lower front door.
2. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box

3. Wipe the areas around the waste toner collecting port clean of spilled toner and dirt using a cleaning pad with water or alcohol.

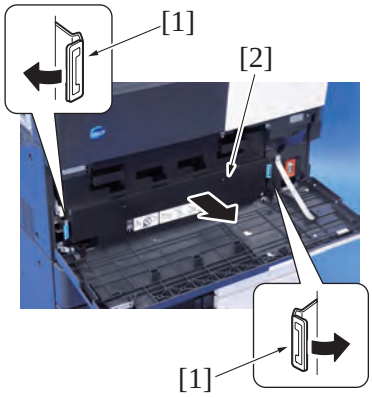
6.7.2 Replacing the waste toner box

(1) Periodically replacing parts/cycle

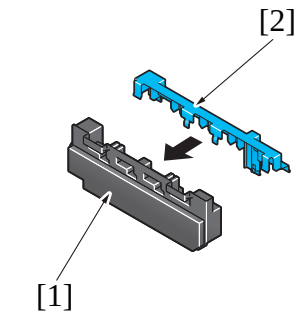
- Waste toner box: Every 160,000 counts

(2) Procedure

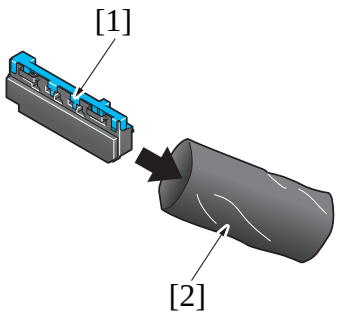
1. Open the lower front door.



2. Unhook the waste toner box fixing levers [1] and remove the waste toner box [2].



3. Attach the cap [2] included in the new waste toner box to the waste toner box [1] removed in step 2.



4. Place the waste toner box [1] with the cap attached into the collection plastic bag [2].

5. Clean the surface around the waste toner collecting port.
F.6.7.1 Cleaning of the area around the waste toner collecting port

6.8 Paper feed section

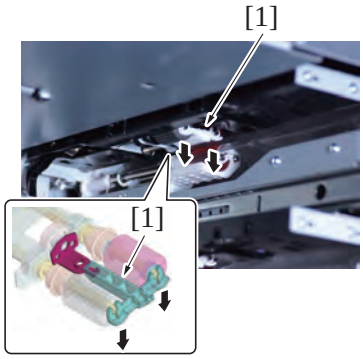
6.8.1 Replacing the tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller

(1) Periodically replacing parts/cycle

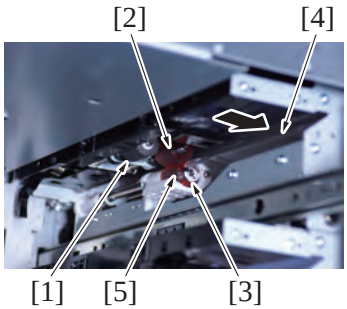
- Tray 1 feed roller: Every 300,000 sheets
- Tray 1 pick-up roller: Every 300,000 sheets
- Tray 1 separation roller: Every 300,000 sheets

(2) Procedure

1. Open the manual bypass tray door.
2. Remove the tray 1 and tray 2.
G.5.2.31 Tray 1, Tray 2



3. Unlock the paper guide [1] (Two places).



4. Remove the tray 1 pick-up roller [1] and tray 1 feed roller [2].
5. Remove the C-clip [3], and remove the separation roller [5] while pressing on the transport guide [4].

6. To reinstall, reverse the order of removal.
7. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [1st.].

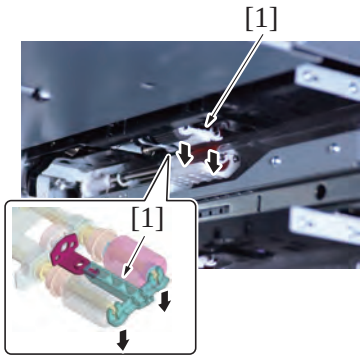
6.8.2 Replacing the tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller

(1) Periodically replacing parts/cycle

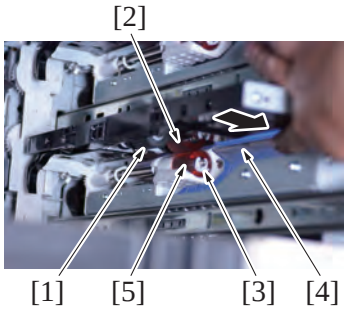
- Tray 2 feed roller: Every 300,000 sheets
- Tray 2 pick-up roller: Every 300,000 sheets
- Tray 2 separation roller: Every 300,000 sheets

(2) Procedure

1. Open the lower right door.
2. Remove the tray 1 and tray 2.
   G.5.2.31 Tray 1, Tray 2



3. Unlock the paper guide [1] (Two places).



4. Remove the tray 2 pick-up roller [1] and tray 2 feed roller [2].
5. Remove the C-clip [3], and remove the separation roller [5] while pressing on the transport guide [4].
6. To reinstall, reverse the order of removal.
7. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [2nd.].

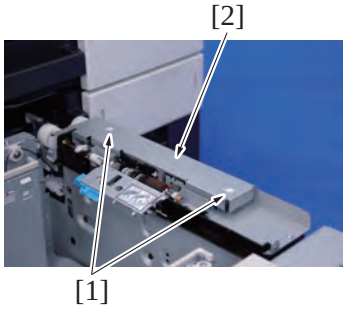
6.8.3 Replacing the tray 3 feed roller and tray 3 pick-up roller

(1) Periodically replacing parts/cycle

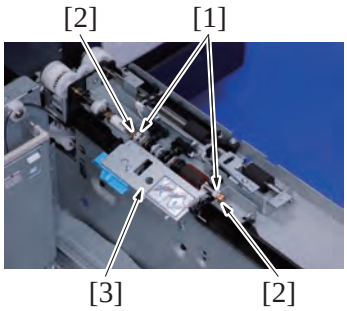
- Tray 3 feed roller: Every 300,000 sheets
- Tray 3 pick-up roller: Every 300,000 sheets

(2) Procedure

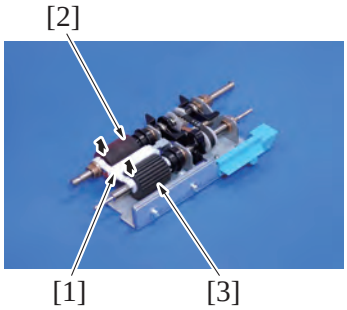
1. Slide out the tray 3.



2. Remove two screws [1], and remove the tray 3 paper feed cover [2].



3. Remove two C-clips [1] and two bushings [2], and remove the feed roller/pick-up roller assy [3].



4. Unlock the paper guide [1] (Two places).
5. Remove the tray 3 feed roller [2].
6. Remove the tray 3 pick-up roller [3].

7. To reinstall, reverse the order of removal.
8. Replace the tray 3 separation roller.
   F.6.8.4 Replacing the tray 3 separation roller
9. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [3rd.].

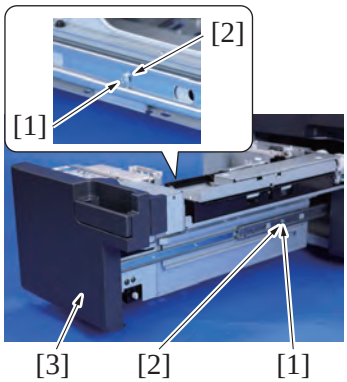
6.8.4 Replacing the tray 3 separation roller

(1) Periodically replacing parts/cycle

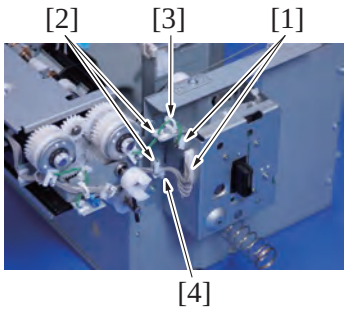
- Tray 3 separation roller: Every 300,000 sheets

(2) Procedure

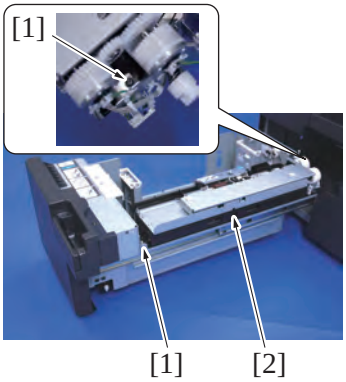
1. Slide out the tray 3.



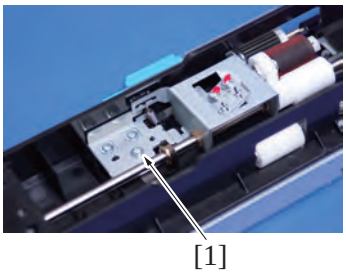
2. Remove two screws [1] and two washers [2], and slide out tray 3 [3] all the way.



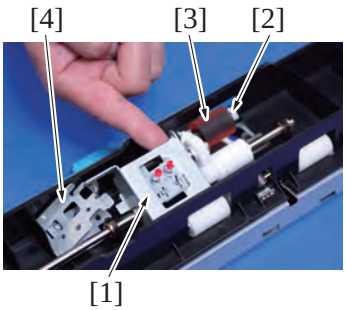
3. Disconnect two connectors [1], and remove the harness from two edge covers [2] and the wire saddle [3].
   NOTE
   - **When reinstalling the harness, route the harness so that the harness tie [4] is positioned as shown in the illustration.**



4. Remove two screws [1] and remove the tray 3 paper feed unit [2].



5. Remove the screw [1].



6. Lift the tray 3 separation roller unit [1].
7. Remove the C-clip [2], and remove the tray 3 separation roller [3].
   NOTE
   - **Make sure to confirm that the plate [4] is not fixed to the unit when replacing the roller.**

8. To reinstall, reverse the order of removal.

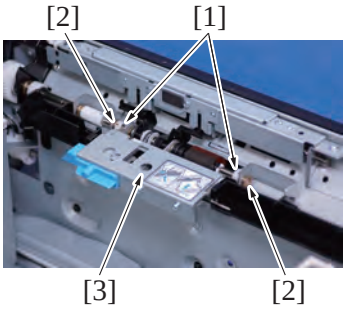
6.8.5 Replacing the tray 4 feed roller and tray 4 pick-up roller

(1) Periodically replacing parts/cycle

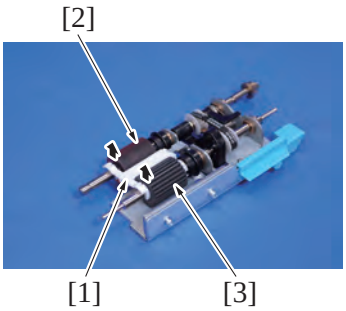
- Tray 4 feed roller: Every 300,000 sheets
- Tray 4 pick-up roller: Every 300,000 sheets

(2) Procedure

1. Slide out the tray 4.



2. Remove two C-clips [1] and two bushings [2], and remove the feed roller/pick-up roller assy [3].



3. Unlock the paper guide [1] (Two places).
4. Remove the tray 4 feed roller [2].
5. Remove the tray 4 pick-up roller [3].

6. To reinstall, reverse the order of removal.
7. Replace the tray 4 separation roller.
   F.6.8.6 Replacing the tray 4 separation roller
8. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [4th.].

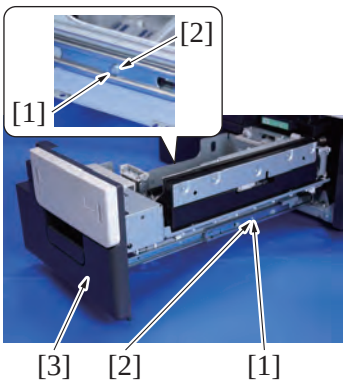
6.8.6 Replacing the tray 4 separation roller

(1) Periodically replacing parts/cycle

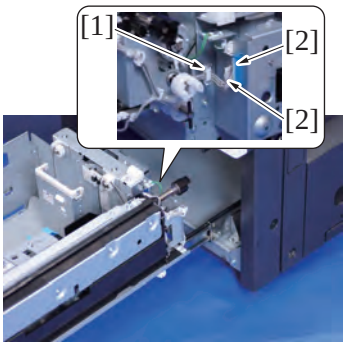
- Tray 4 separation roller: Every 300,000 sheets

(2) Procedure

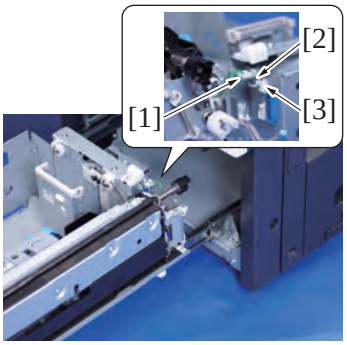
1. Slide out the tray 4.



2. Remove two screws [1] and two washers [2], and slide out tray 4 [3] all the way.

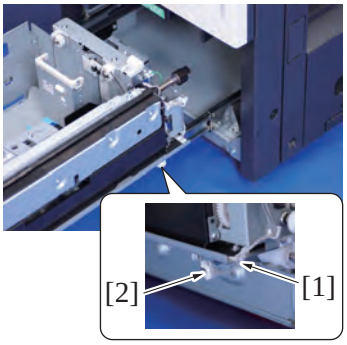


3. Remove the harness from the edge cover [1], and disconnect two connectors [2].

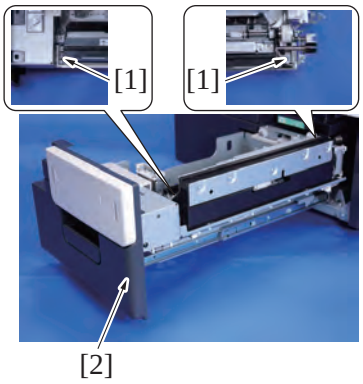


4. Remove the harness from the edge cover [1] and wire saddle [2], and disconnect the connector [3].

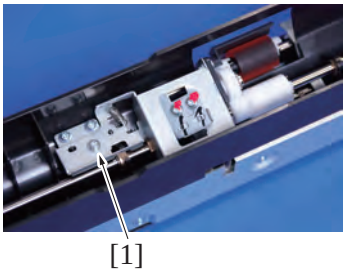
5. Remove the harness from the edge cover [1], and disconnect the connector [2].



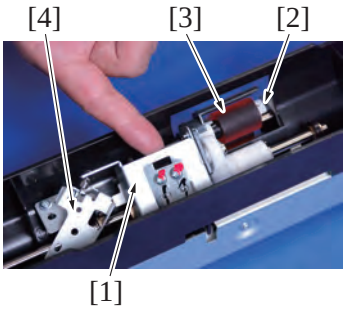
6. Remove two screws [1] and remove the tray 4 paper feed unit [2].



7. Remove the screw [1].



8. Lift the tray 4 separation roller unit [1].
9. Remove the C-clip [2], and remove the tray 4 separation roller [3].
NOTE
- **Make sure to confirm that the plate [4] is not fixed to the unit when replacing the roller.**



10. To reinstall, reverse the order of removal.

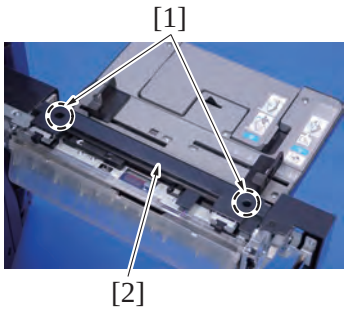
6.8.7 Replacing the manual bypass tray feed roller and manual bypass tray pick-up roller

(1) Periodically replacing parts/cycle

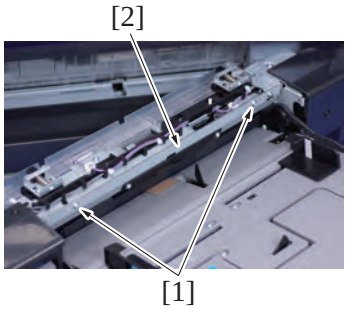
- Manual bypass tray feed roller: Every 300,000 sheets
- Manual bypass tray pick-up roller: Every 300,000 sheets

(2) Procedure

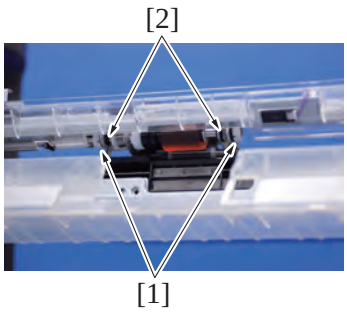
1. Remove the manual bypass tray separation roller assy.
F.6.8.8 Replacing the manual bypass tray separation roller assy



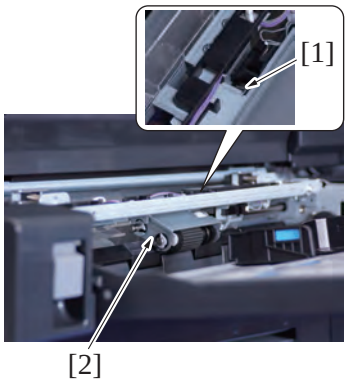
2. Remove two screws [1] and remove the manual bypass tray upper cover [2].



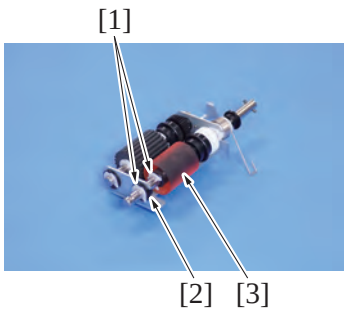
3. Remove two screws [1] and remove the manual bypass tray feed roller cover [2].



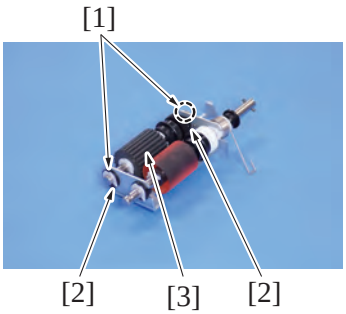
4. Remove two C-clips [1] and two bushings [2].



5. Remove the spring [1] and remove the feed roller/pick-up roller assy [2].



6. Remove two C-clips [1] and the bushing [2], and remove the manual bypass tray feed roller [3].



7. Remove two C-clips [1] and two bushings [2], and remove the manual bypass tray pick-up roller [3].

8. To reinstall, reverse the order of removal.
9. Replace the manual bypass tray separation roller.
   F.6.8.8 Replacing the manual bypass tray separation roller assy
10. Select [Service Mode] -> [Counter] -> [Life] and clear the count of [Manual Tray].

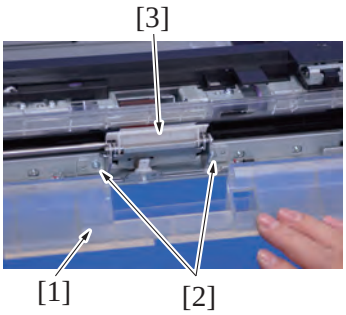
6.8.8 Replacing the manual bypass tray separation roller assy

(1) Periodically replacing parts/cycle

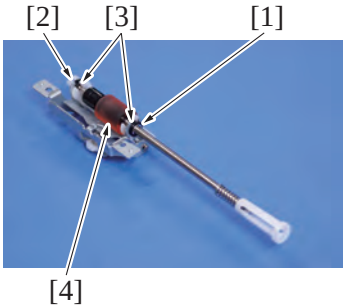
- Manual bypass tray separation roller assy: Every 300,000 sheets

(2) Procedure

1. Open the manual bypass tray door.



2. Remove two screws [2] while opening the jam clearing cover [1], and remove the manual bypass tray separation roller assy [3].



3. Remove the E-ring [1], the C-clip [2], and two bushings [3], and remove the manual bypass tray separation roller assy [4].

4. To reinstall, reverse the order of removal.

6.9 Vertical transport section

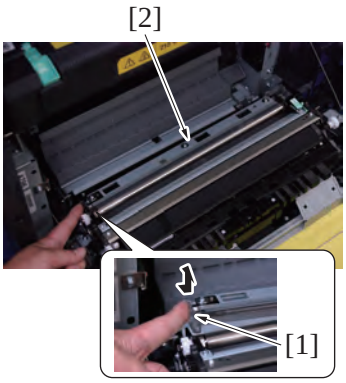
6.9.1 Cleaning of the paper dust remover

(1) Periodically cleaning parts/cycle

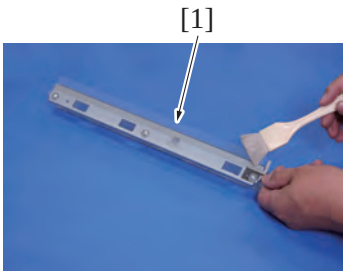
- Paper dust remover: Every 100,000 sheets

(2) Procedure

1. Open the upper right door.



2. Remove the paper dust remover [2] while pressing the hook section [1] inward.



3. Clean the paper dust remover [1] with a brush, etc.

6.10 Registration section

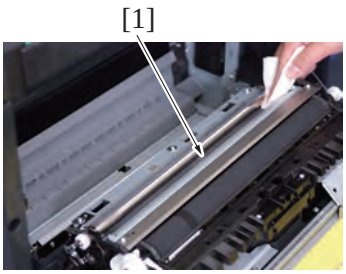
6.10.1 Cleaning of the registration roller

(1) Periodically cleaning parts/cycle

- Registration roller: Every 100,000 sheets

(2) Procedure

1. Open the upper right door.



2. Using a cleaning pad dampened with alcohol, wipe the registration roller [1] clean of dirt.

6.11 Fusing section

6.11.1 Replacing the fusing unit

⚠ CAUTION

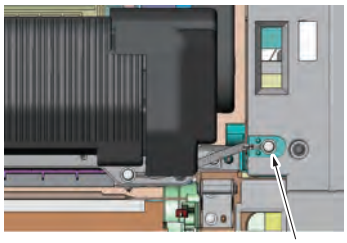
- **The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area.**
  Before replacement operations, make sure that more than 20 minutes have elapsed since the main power switch was turned off.

(1) Periodically replacing parts/cycle

- Fusing unit: Every 600,000 sheets (bizhub 758: Japan and Taiwan only)
- Fusing unit: Every 1,200,000 sheets (bizhub 808, bizhub 758: Other than Japan and Taiwan)
- Fusing unit: Every 1,600,000 sheets (bizhub 958, bizhub PRO 958)

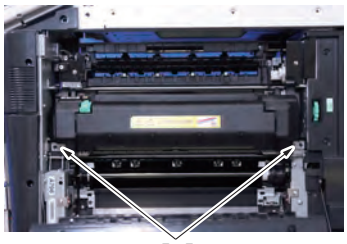
(2) Procedure

1. Open the upper right door.

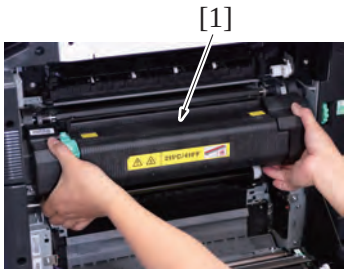


2. Remove the screw [1] securing the ground wire. (only for bizhub 958/bizhub PRO 958)

3. Loosen two screws [1].



4. Remove by holding the fusing unit [1] in the position indicated in the figure.



NOTE

- **Take caution not to drop by securely holding with both hands when removing.**
- **If the fusing unit is fixated and it is difficult to remove, it may have been caused by turning OFF the main power switch while the fusing pressure roller was in contact. In such case, to release the contact of the fusing pressure roller, turn ON the main power switch, and then turn OFF the main power switch again after Warmup.**

5. Clean the IH coil unit.
   F.6.11.2 Cleaning of the IH coil
6. To reinstall, reverse the order of removal.
   NOTE
   - **Once the fusing unit is installed, turn ON the main power switch, wait for one minute, and confirm that the trouble codes C-3922 and C-3926 are not displayed.**
7. Select [Service Mode] -> [Counter] -> [Life] -> [New Release] and carry out new release for the fusing unit.

6.11.2 Cleaning of the IH coil

(1) Periodically cleaning parts/cycle

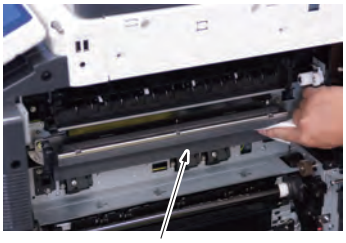
- IH coil: replace at the same time as the fusing unit

NOTE

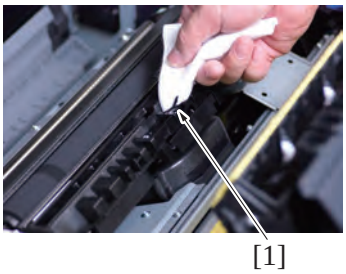
- **If a machine is used without cleaning the IH coil continually, image quality problem such as streaks and uneven glossiness in feeding direction may occur by coagulations of toners or paper dusts on the IH coil.**

(2) Procedure

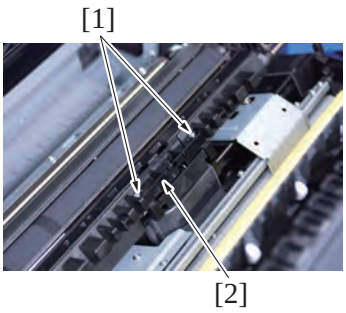
1. Remove the fusing unit.
   F.6.11.1 Replacing the fusing unit



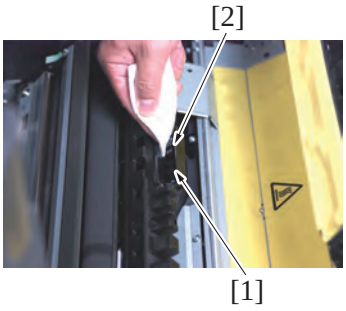
2. Using a cleaning pad dampened with alcohol, wipe the IH coil unit [1] clean of dirt.
NOTE
- **Take caution not to contact or dirt to affix on the heating roller temperature sensor/1 (bizhub 808/758) or the fusing belt temperature sensor/1 (bizhub 958, bizhub PRO 958) when cleaning the IH coil. The heating roller temperature cannot be correctly detected by the heating roller temperature sensor/1 or the fusing belt temperature sensor/1 when the mounting position of the heating roller temperature sensor/1 or the fusing belt temperature sensor/1 is shifted, or it is damaged, and Malfunction code: P-32 or trouble code may occur.**



3. Clean the actuator [1] with a cleaning pad dampened with alcohol.



4. Remove two screws [1], and remove the actuator assy [2].



5. Clean the fusing loop sensor/Fr [1] and the fusing loop sensor/Rr [2] with a cleaning pad dampened with alcohol.

6.11.3 Cleaning the IH coil (bizhub 958, bizhub PRO 958 only)

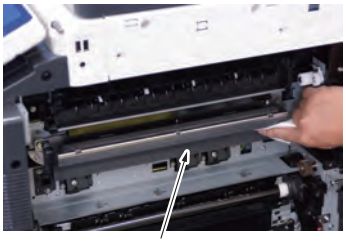
(1) Periodically cleaning parts/cycle

- IH coil: Every 800,000 sheets

NOTE
- **If a machine is used without cleaning the IH coil continually, image quality problem such as streaks and uneven glossiness in feeding direction may occur by coagulations of toners or paper dusts on the IH coil.**

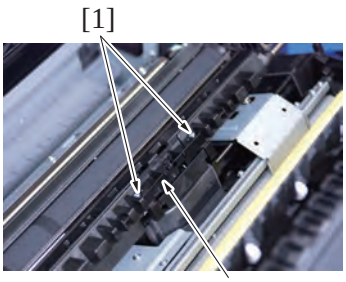
(2) Procedure

1. Remove the fusing unit.
F.6.11.1 Replacing the fusing unit

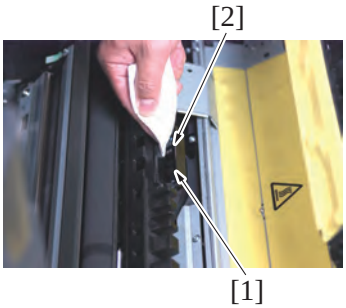


2. Using a cleaning pad dampened with alcohol, wipe the IH coil unit [1] clean of dirt.
NOTE
- **When cleaning the IH coil, be careful not to let it touch the fusing belt temperature sensor/1 and allow dirt to stick to it. If the mounting position of the fusing belt temperature sensor/1 has been displaced or damaged, and dirt has adhered to the coil, the fusing belt temperature sensor/1 may not accurately detect the heating roller temperature and cause Malfunction Code: P-32 and a trouble code.**

3. Clean the actuator [1] using a cleaning pad dampened with alcohol.



4. Remove the two screws [1] and remove the actuator assy [2].



5. Clean the fusing loop sensor/Fr [1] and the fusing loop sensor/Rr [2] with a cleaning pad dampened with alcohol.

6.12 Duplex section

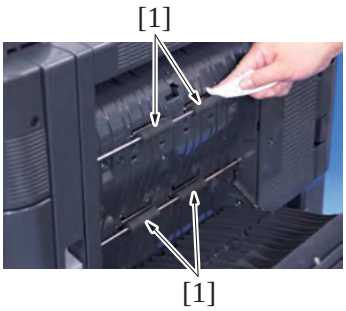
6.12.1 Cleaning of the duplex transport roller

(1) Periodically cleaning parts/cycle

- Duplex transport rollers: Every 100,000 sheets

(2) Procedure

1. Open the duplex door.



2. Using a cleaning pad with water or alcohol, wipe the duplex transport rollers [1] clean of dirt.

7. Periodical maintenance procedure dual scan document feeder

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

7.1 Take-up section

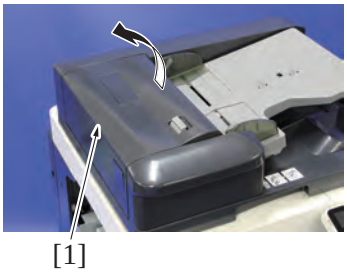
7.1.1 Cleaning of the pick-up roller/feed roller

(1) Periodically cleaning parts/cycle

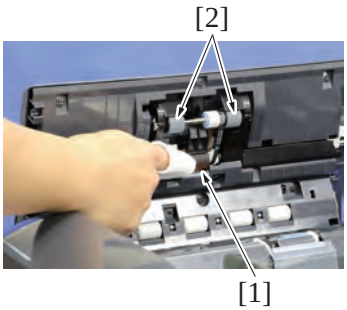
- Pick-up roller: Every 50,000 counts
- Feed roller: Every 50,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the pick-up roller [1]/feed roller [2] clean of dirt.



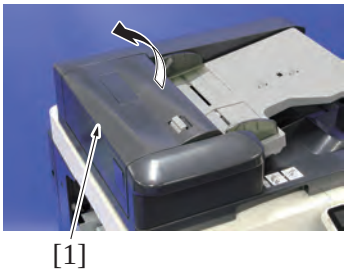
7.1.2 Cleaning of the separation roller

(1) Periodically cleaning parts/cycle

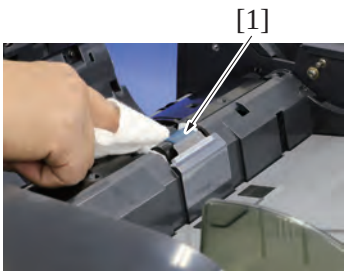
- Separation roller: Every 50,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the separation roller [1] clean of dirt.



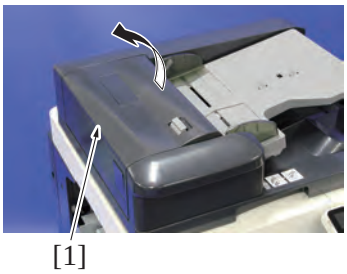
7.1.3 Cleaning the torque limiter

(1) Periodically cleaning parts/cycle

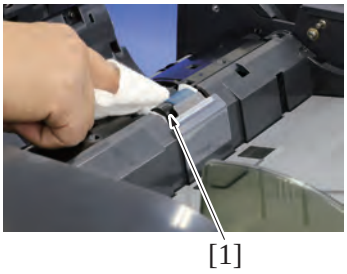
- Torque limiter: Every 200,000 counts

(2) Procedure

1. Open the left cover [1].



2. Using a cleaning pad with alcohol, wipe the torque limiter [1] clean of dirt.



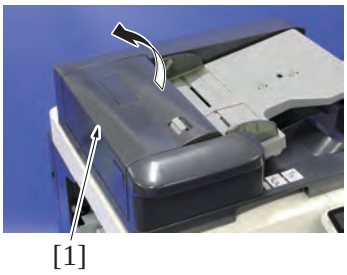
7.1.4 Replacing the pick-up roller/feed roller

(1) Periodically replacing parts/cycle

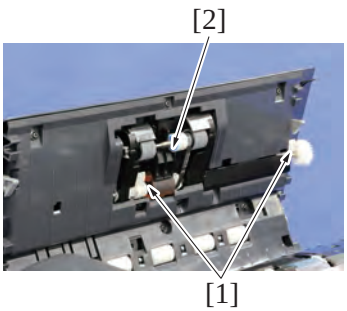
- Pick-up roller: Every 200,000 counts
- Feed roller: Every 200,000 counts

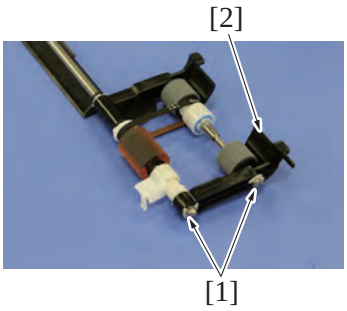
(2) Procedure

1. Open the left cover [1].

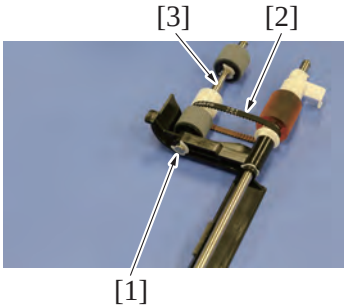


2. Release two locks [1], and remove the pick-up/feed roller assy [2].

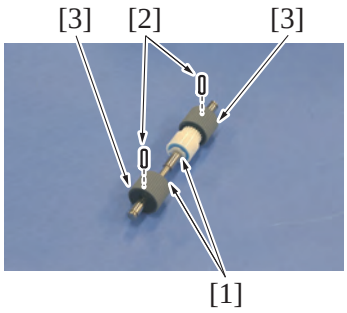




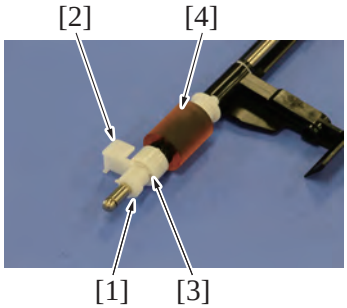
3. Remove two C-clips [1], and remove the arm [2].



4. Remove the C-clip [1] and the belt [2], and remove the pick-up roller assy [3].



5. Remove two C-clips [1] and two pins [2], and remove two pick-up rollers [3].



6. Remove the C-clip [1], and remove the arm [2].
7. Remove the C-clip [3], and remove the feed roller [4].

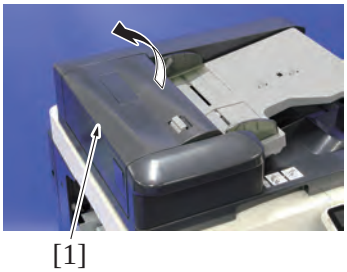
8. To reinstall, reverse the order of removal.

7.1.5 Replacing the separation roller

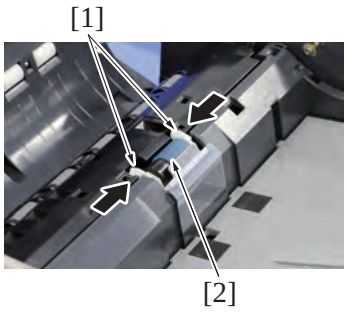
(1) Periodically replacing parts/cycle

- Separation roller: Every 200,000 counts

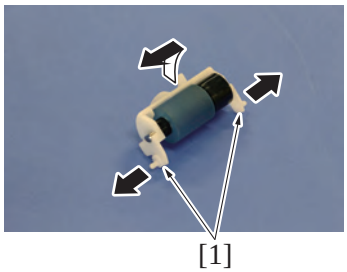
(2) Procedure



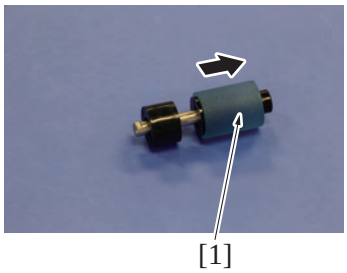
1. Open the left cover [1].



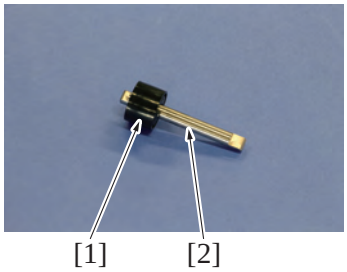
2. Grip both sides [1] of the holder and remove the separation roller assy [2].



3. While opening up the holder [1], remove the shaft.
NOTE
- **Opening the holder too much can break the holder.**



4. Remove the separation roller [1] from the shaft.
NOTE
- **Be careful not to lose the pin.**



5. Before attaching a new separation roller, wipe off the grease adhered to the torque limiter [1] and the shaft [2] using a dry cloth.
NOTE
- **Make sure not to use alcohol. Wipe with a dry cloth.**

6. To reinstall, reverse the order of removal.

7.2 Transport section

7.2.1 Cleaning of the miscellaneous rolls

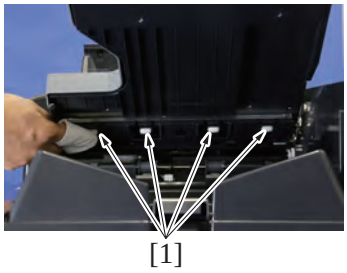
(1) Periodically cleaning parts/cycle

- Miscellaneous rolls: Every 50,000 counts

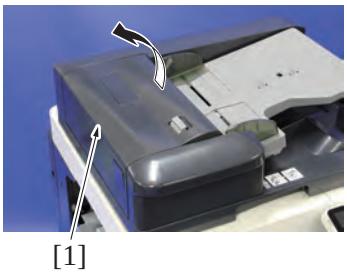
(2) Procedure

1. Lift up the document feed tray.

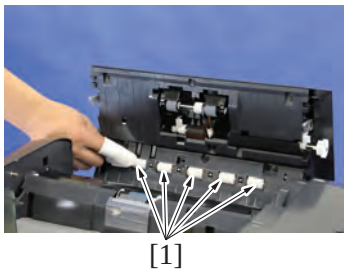
2. Using a cleaning pad dampened with alcohol, wipe the roll [1].



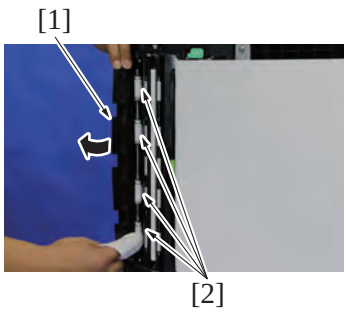
3. Open the left cover [1].



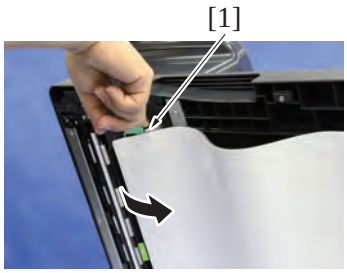
4. Using a cleaning pad dampened with alcohol, wipe the roll [1].

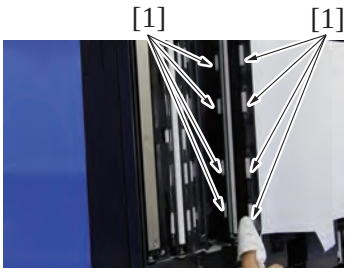


5. Open the dual scan document feeder.
6. Wipe the roll [2] with a cleaning pad dampened with alcohol while opening the pre-read sheet assy [1].



7. Open the opening and closing guide [1].





8. Using a cleaning pad dampened with alcohol, wipe the roll [1].

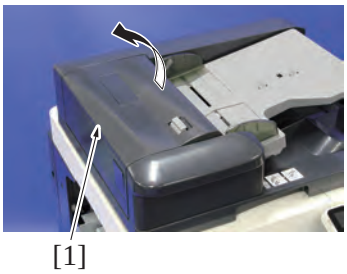
7.2.2 Cleaning of the miscellaneous rollers

(1) Periodically cleaning parts/cycle

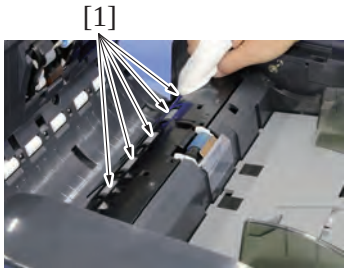
- Miscellaneous rollers: Every 50,000 counts

(2) Procedure

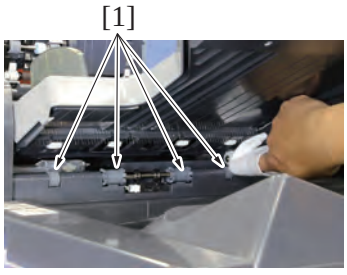
1. Open the left cover [1].



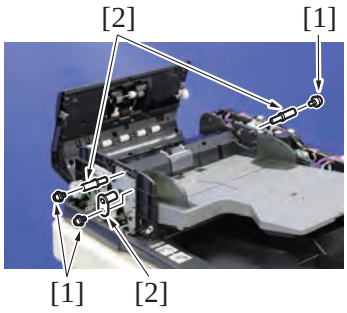
2. Using a cleaning pad dampened with alcohol, wipe the roller [1].



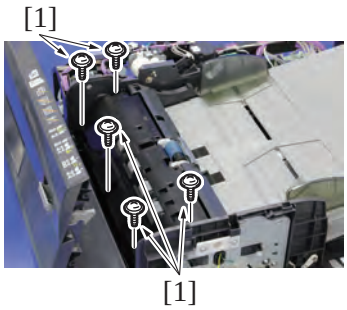
3. Lift up the document feed tray.
4. Using a cleaning pad dampened with alcohol, wipe the roller [1].



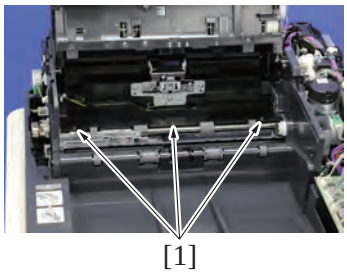
5. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
6. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



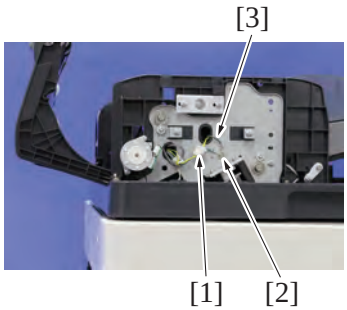
7. Remove three screws [1] and remove three pins [2].



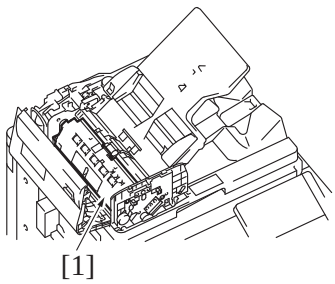
8. Remove five screws [1].



9. Open the document feed tray, and remove three screws [1].

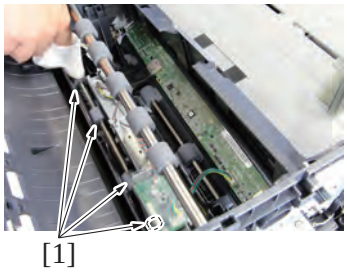


10. Disconnect the connector [1], remove the screw [2], and disconnect the ground wire [3].

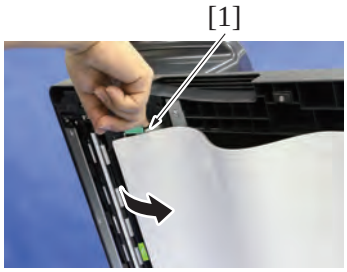


11. Remove the lower guide assy [1].

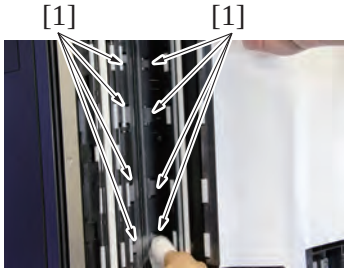
12. Using a cleaning pad dampened with alcohol, wipe the roller [1].



13. Open the opening and closing guide [1].



14. Using a cleaning pad dampened with alcohol, wipe the roller [1].



15. To reinstall, reverse the order of removal.

7.3 Scanning section

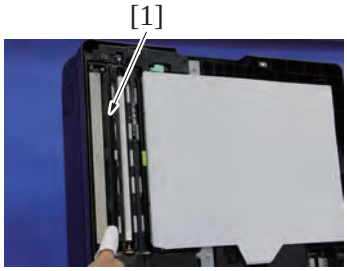
7.3.1 Cleaning of the front side scanning guide

(1) Periodically cleaning parts/cycle

- Front side scanning guide: Every 50,000 counts

(2) Procedure

1. Open the dual scan document feeder.



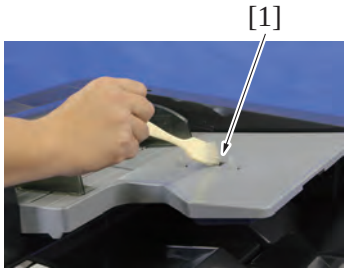
2. Using a cleaning pad dampened with alcohol, wipe the front side scanning guide [1] clean of dirt.
NOTE
- **Be careful not to damage the sheet.**

7.3.2 Cleaning of the reflective sensor section

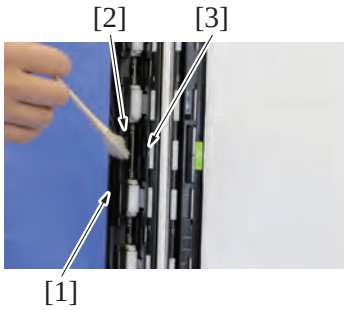
(1) Periodically cleaning parts/cycle

- Reflective sensor section: Every 50,000 counts

(2) Procedure



1. Clean the sensor [1] using a brush or other similar tools.



2. Open the dual scan document feeder.
3. Clean the reflective section [2] and sensor section [3] while opening the pre-read sheet assy [1].

8. Periodical maintenance procedure LU-205

8.1 Paper feed section

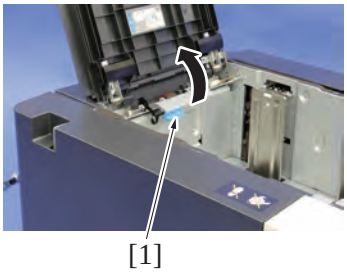
8.1.1 Replacing the pick-up roller (LU-205)

(1) Periodically replacing parts/cycle

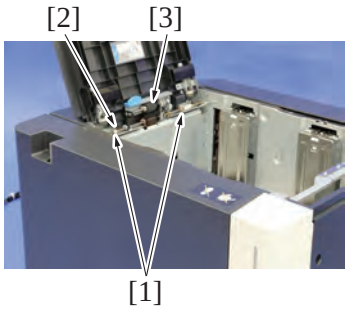
- Pick-up roller: Every 300,000 counts

(2) Procedure

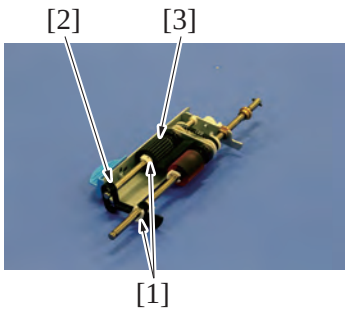
1. Open the upper door.
2. Move the feed roller [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove two C-clips [1], the actuator [2] and remove the pick-up roller [3].



5. To reinstall, reverse the order of removal.

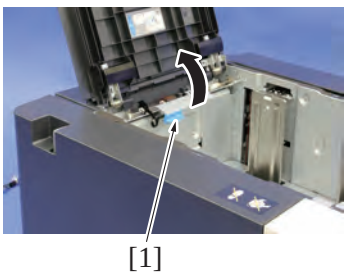
8.1.2 Replacing the feed roller (LU-205)

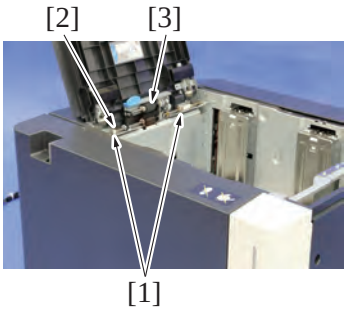
(1) Periodically replacing parts/cycle

- Feed roller: Every 300,000 counts

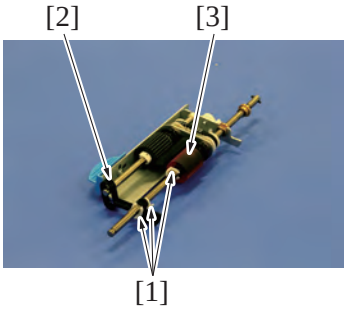
(2) Procedure

1. Open the upper door.
2. Move the feed roller [1] up.





3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove three C-clips [1], the actuator [2] and remove the feed roller [3].

5. To reinstall, reverse the order of removal.

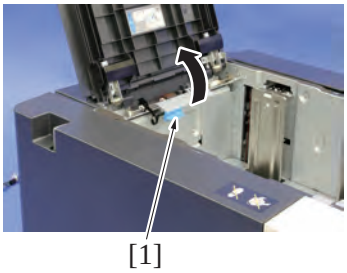
8.1.3 Replacing the separation roller (LU-205)

(1) Periodically replacing parts/cycle

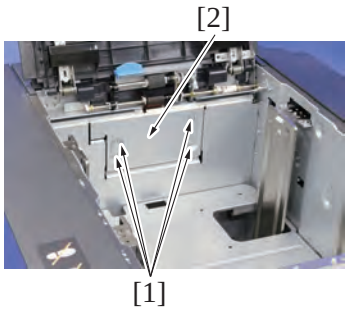
- Separation roller: Every 300,000 counts

(2) Procedure

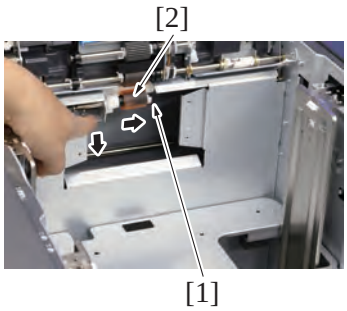
1. Open the upper door.



2. Move the feed roller [1] up.



3. Remove four screws [1], and remove the plate [2].



4. Remove the C-clip [1] while pressing the separation roller down to remove the separation roller [2].

5. To reinstall, reverse the order of removal.

9. Periodical maintenance procedure LU-303

9.1 Paper feed section

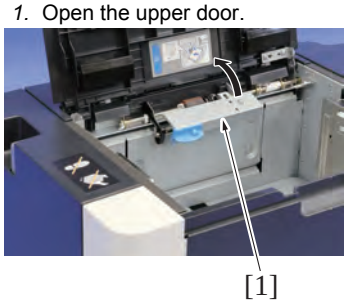
9.1.1 Replacing the pick-up roller (LU-303)

(1) Periodically replacing parts/cycle

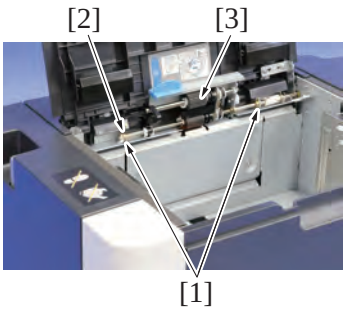
- Pick-up roller: Every 300,000 counts

(2) Procedure

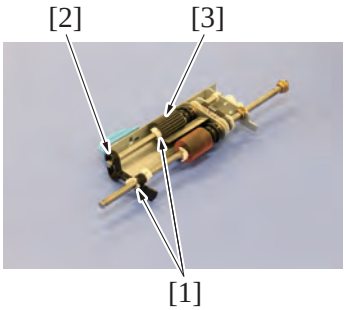
1. Open the upper door.



2. Move the feed roller [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove two C-clips [1], the actuator [2] and remove the pick-up roller [3].

5. To reinstall, reverse the order of removal.

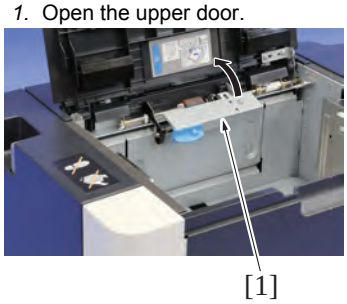
9.1.2 Replacing the feed roller (LU-303)

(1) Periodically replacing parts/cycle

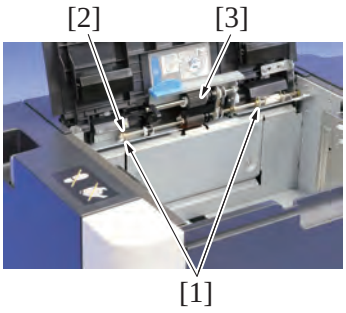
- Feed roller: Every 300,000 counts

(2) Procedure

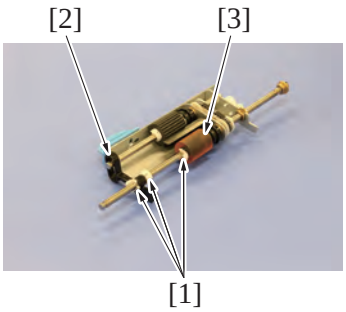
1. Open the upper door.



2. Move the feed roller [1] up.



3. Remove two C-clips [1], the bushing [2] and remove the feed roller assy [3].



4. Remove three C-clips [1], the actuator [2] and remove the feed roller [3].

5. To reinstall, reverse the order of removal.

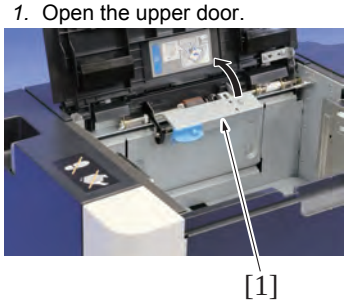
9.1.3 Replacing the separation roller (LU-303)

(1) Periodically replacing parts/cycle

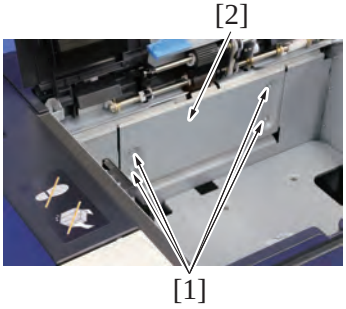
- Separation roller: Every 300,000 counts

(2) Procedure

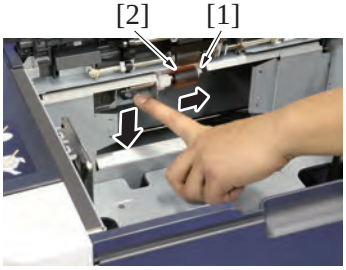
1. Open the upper door.



2. Move the feed roller [1] up.



3. Remove four screws [1], and remove the plate [2].



4. Remove the C-clip [1] while pressing the separation roller down to remove the separation roller [2].

5. To reinstall, reverse the order of removal.

10. Periodical maintenance procedure FS-537/FS-537SD

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

10.1 Paper exit section

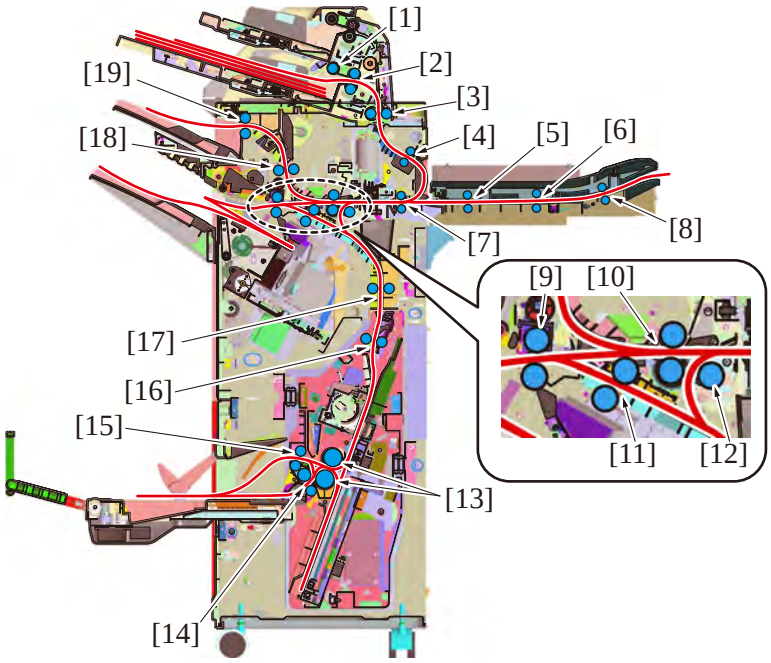
10.1.1 Cleaning procedure for each rollers/each rolls (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

- Cleaning each roller/roll: Every 300,000 prints

(2) Cleaning point

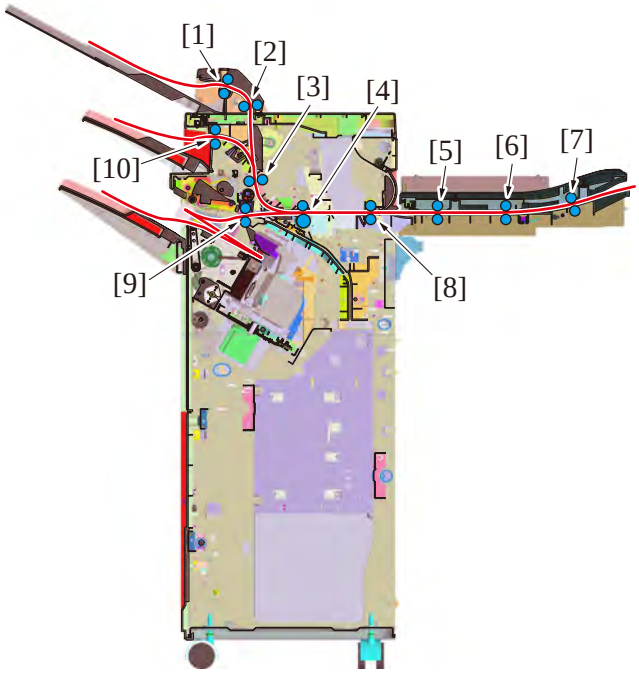
- FS-537SD (when PK-523/ZU-609/PI-507 is installed)



[1]	Pick-up roller/Lw (Post Inserter) *	[2]	Paper feed roller/Lw, Separation roller/Lw (Post Inserter) *
[3]	Transport roller, transport roll (Post Inserter) *	[4]	PI transport roller, PI transport roll
[5]	RU transport roller 3, transport roll 3 (Relay Unit) *	[6]	RU transport roller 2, transport roll 2 (Relay Unit) *
[7]	FNS entry roller, roll	[8]	RU transport roller 1, transport roll 1 (Relay Unit) *
[9]	Receiving roller, Receiving roll	[10]	Transport roller 1/transport roller 2
[11]	Saddle section exit roller 1, roll	[12]	Z-folding roller (Z Folding Unit)
[13]	Center folding roller	[14]	Tri-folding roller, roll
[15]	Sub tray exit roller, roll	[16]	Saddle section paper feed roller, roll
[17]	Saddle section exit roller 2, roll	[18]	Sub tray transport roller, roll
[19]	Sub tray exit roller, roll	-	-

- * : Option

- FS-537 (when JS-602 is installed)



[1]	Job separator exit roller, roll (Job Separator) *	[2]	Job separator transport roller, roll (Job Separator) *
[3]	Sub tray transport roller, roll	[4]	Transport roller 1/transport roller 2
[5]	RU transport roller 3, transport roll 3 (Relay Unit) *	[6]	RU transport roller 2, transport roll 2 (Relay Unit) *
[7]	RU transport roller 1, transport roll 1 (Relay Unit) *	[8]	FNS entry roller, roll
[9]	Receiving roller, Receiving roll	[10]	Sub tray exit roller, roll

- * : Option

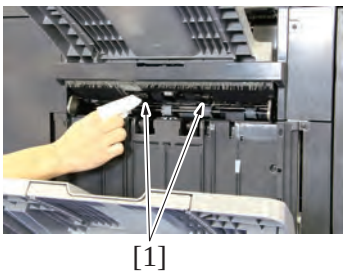
10.1.2 Cleaning the paddles (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

- Paddle: Every 300,000 prints

(2) Procedure

1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].



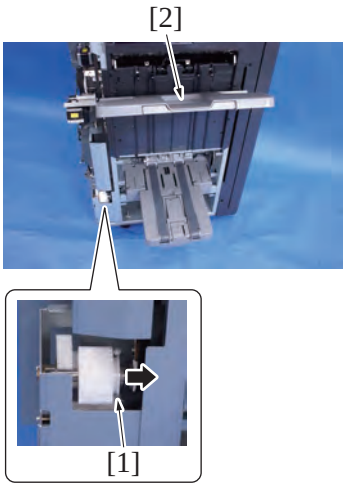
10.1.3 Replacing the paddle (FS-537SD/FS-537)

(1) Periodically replacing parts/cycle

- Paddle: Every 2,000,000 prints

(2) Procedure

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the main tray.
   G.7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



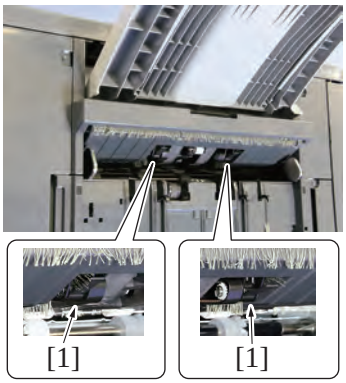
NOTE
- **Since the main tray [2] cannot be removed if it is positioned at the top, slide the gear coupling [1] to the right and lower the tray to the lowest level to remove it.**

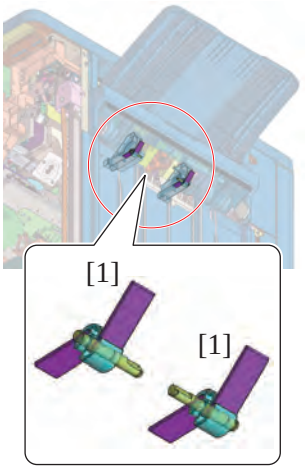
CAUTION

- **Always carry out this procedure while supporting the main tray with your hand since the main will strongly come down when you slide the coupling.**

3. Remove the paddles [1].

NOTE
- **Securely install the paddles [1] by aligning the direction of the paddle and the hole in the shaft.**





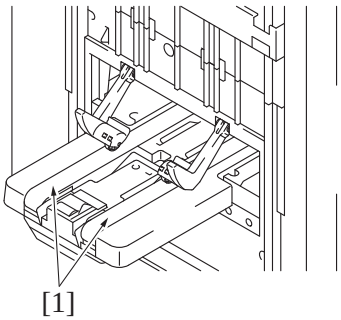
4. To reinstall, reverse the order of removal.

10.1.4 Cleaning the exit tray conveyance belt (FS-537SD)

(1) Periodically cleaning parts/cycle

- Exit tray transport belt: Every 300,000 counts

(2) Procedure



1. Clean the exit tray conveyance belt [1] with a cleaning pad dampened with alcohol.

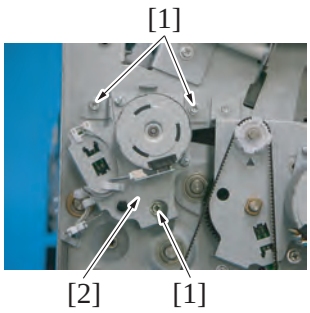
10.1.5 Cleaning the upper paddle (FS-537SD)

(1) Periodically cleaning parts/cycle

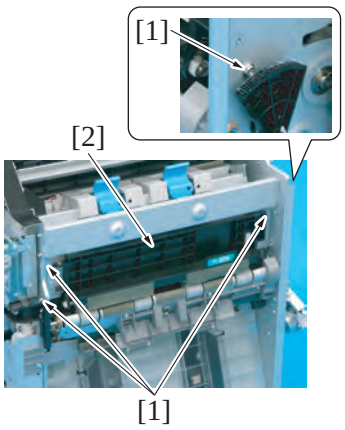
- Upper paddle: Every 300,000 counts

(2) Procedure

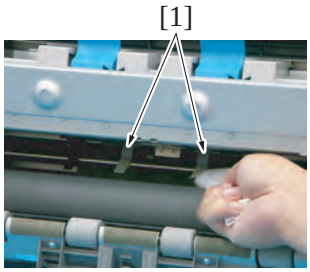
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



3. Remove three screws [1], and remove the tri-folding guide motor assy [2].



4. Remove four screws [1], and remove the conveyance assy [2].



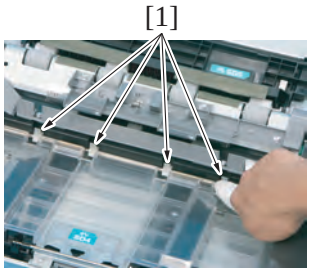
5. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

10.1.6 Cleaning the lower paddle (FS-537SD)

(1) Periodically cleaning parts/cycle

- Lower paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

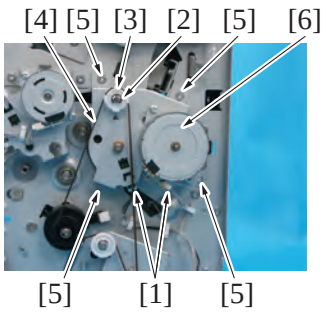
10.1.7 Replacing the upper paddle (FS-537SD)

(1) Periodically replacing parts/cycle

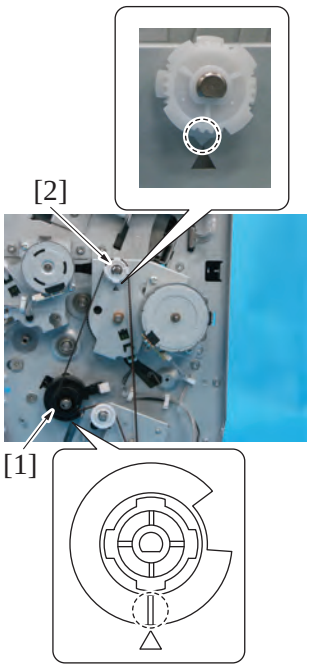
- Upper paddle: Every 2,000,000 counts

(2) Procedure

1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



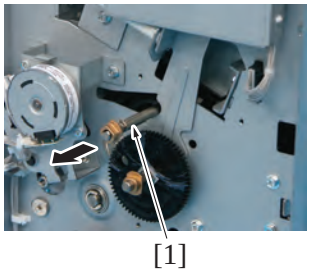
3. Disconnect two connectors [1].
4. Remove the E-ring [2].
5. Remove the gear [3] and the belt [4].
6. Remove four screws [5] and remove the center fold guide motor assy [6].

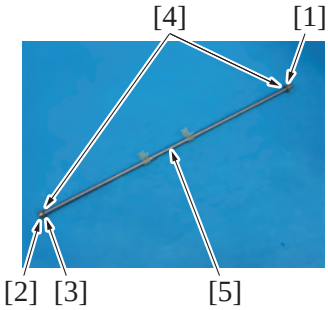


NOTE

- **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

7. Remove the upper paddle assy [1].





8. Remove the bushing [1].
9. Remove the E-ring [2], and remove the bushing [3].
10. Remove two E-rings [4].
11. Replace the upper paddle [5].

12. To reinstall, reverse the order of removal.

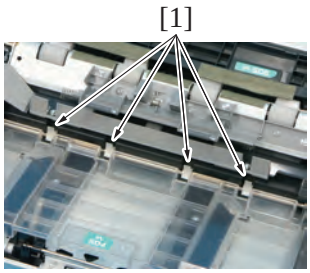
10.1.8 Replacing the lower paddle (FS-537SD)

(1) Periodically replacing parts/cycle

- Lower paddle: Every 2,000,000 counts

(2) Procedure

1. Remove the lower paddle [1].



10.2 Sensor section

10.2.1 FNS entrance sensor (PS34) (FS-537SD/FS-537)

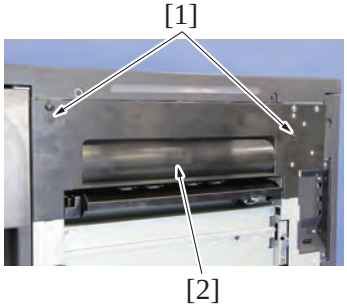
(1) Periodically cleaning parts/cycle

- FNS entrance sensor (PS34): Every 300,000 printouts

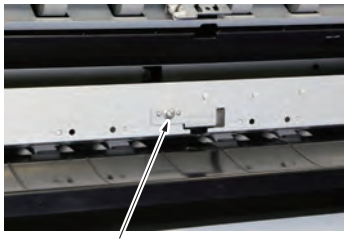
(2) Procedure

1. Remove the finisher from the main body.
G.7.5.12 Finisher (FS-537/FS-537SD)

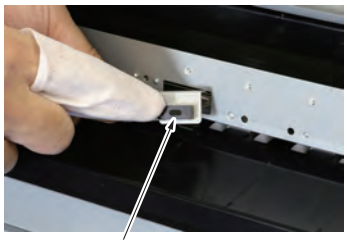
2. Remove two screws [1], and remove the cover [2].



3. Remove the screw [1].



4. Clean the FNS entrance sensor [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**



5. Reinstall the above parts following the removal steps in reverse.

10.2.2 FNS middle sensor (PS36) (FS-537SD/FS-537)

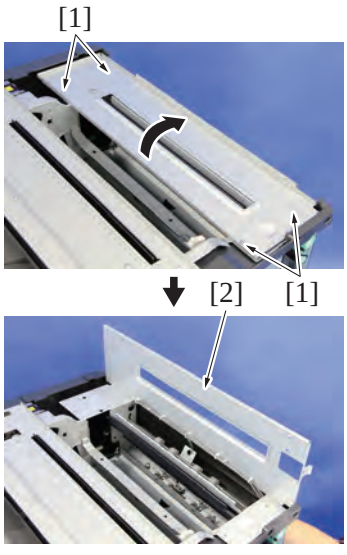
(1) Periodically cleaning parts/cycle

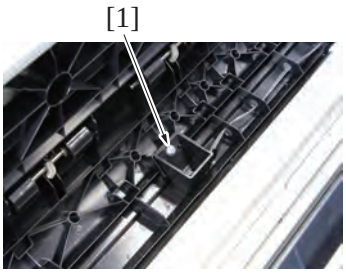
- FNS middle sensor (PS36): Every 300,000 printouts

(2) Procedure

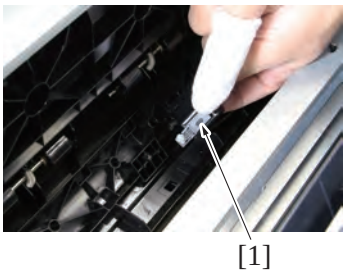
1. Remove the finisher from the main body.
   G.7.5.12 Finisher (FS-537/FS-537SD)
2. Remove the upper cover/1.
   G.7.5.1 Upper cover/1 (FS-537/FS-537SD)
3. Remove the upper cover/2.
   G.7.5.2 Upper cover/2 (FS-537/FS-537SD)
4. Remove the upper cover/3.
   G.7.5.3 Upper cover/3 (FS-537/FS-537SD)

5. Remove four screws [1] and raise the metal plate [2].





6. Remove the screw [1].



7. Clean the FNS middle sensor [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**

8. Reinstall the above parts following the removal steps in reverse.

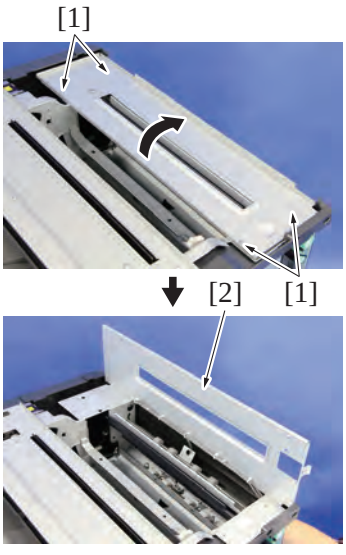
10.2.3 Main tray exit sensor (PS37) (FS-537SD/FS-537)

(1) Periodically cleaning parts/cycle

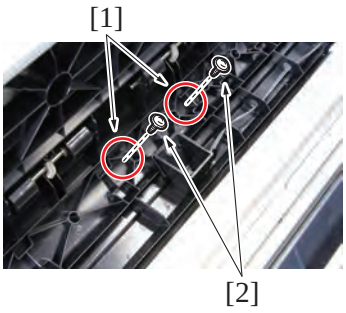
- Main tray exit sensor (PS37): Every 300,000 printouts

(2) Procedure

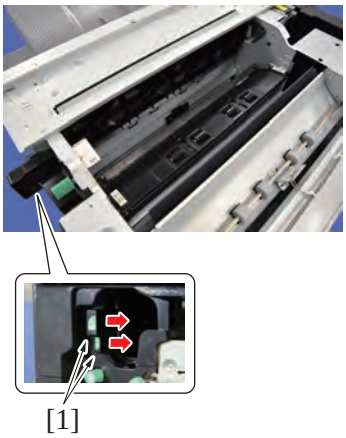
1. Remove the finisher from the main body.
   G.7.5.12 Finisher (FS-537/FS-537SD)
2. Remove the upper cover/1.
   G.7.5.1 Upper cover/1 (FS-537/FS-537SD)
3. Remove the upper cover/2.
   G.7.5.2 Upper cover/2 (FS-537/FS-537SD)
4. Remove the upper cover/3.
   G.7.5.3 Upper cover/3 (FS-537/FS-537SD)



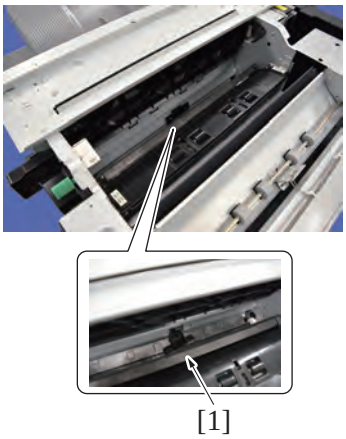
5. Remove four screws [1] and raise the metal plate [2].



6. Remove two screws [2] from the two guide holes [1].



7. Open the front door of the finisher, and open the guide lever (FS4/FS5) [1].



8. Pull out and clean the main tray exit sensor [1].
NOTE
- **Do not wipe out with any solvents or alcohols.**

9. Reinstall the above parts following the removal steps in reverse.

11. Periodical maintenance procedure ZU-609

11.1 Roller section

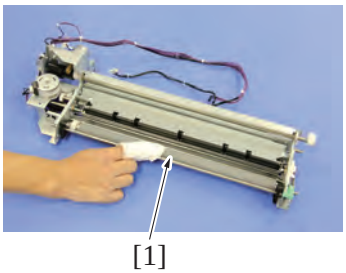
11.1.1 Cleaning of the Z fold roller (ZU-609)

(1) Periodically cleaning parts/cycle

- Z fold roller: Every 300,000 counts

(2) Procedure

1. Remove the Z folding unit.
   G.7.7.1 Z Folding Unit (ZU-609)



2. Using a cleaning pad dampened with alcohol, wipe the Z fold roller [1] clean of dirt.

3. Reinstall the above parts following the removal steps in reverse.

12. Periodical maintenance procedure JS-602

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

12.1 Paper exit section

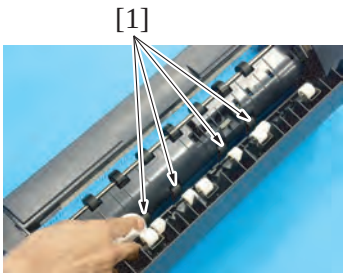
12.1.1 Cleaning conveyance roller/paper exit roller (JS-602)

(1) Periodically cleaning parts/cycle

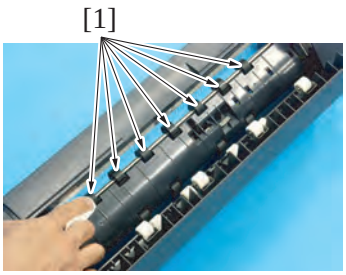
- Conveyance roller: Every 100,000 counts
- Paper exit roller: Every 100,000 counts

(2) Procedure

1. Open the cover.



2. Using a cleaning pad dampened with alcohol, wipe the conveyance roller [1].



3. Using a cleaning pad dampened with alcohol, wipe the paper exit roller [1].

13. Periodical maintenance procedure PI-507

13.1 Paper feed section

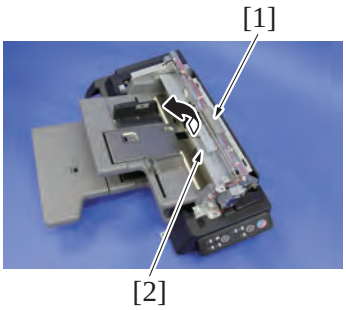
13.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)

(1) Periodically replacing parts/cycle

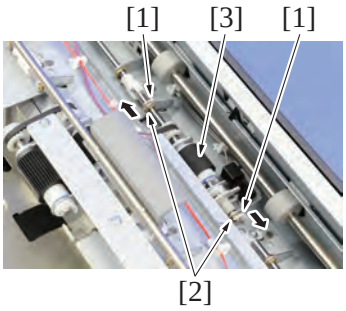
- Pick-up roller/Lw: Every 200,000 counts
- Feed roller/Lw: Every 100,000 counts

(2) Procedure

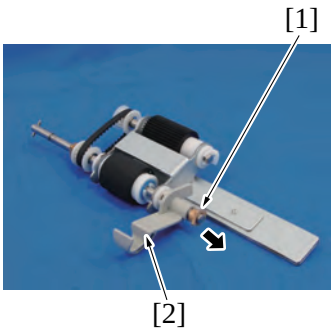
1. Remove the upper cover.
G.7.10.1 Upper cover (PI-507)



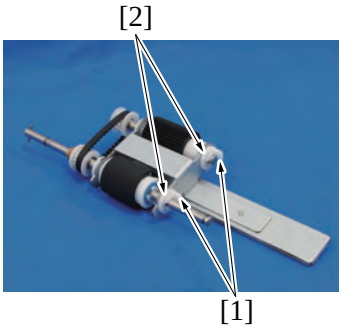
2. Pull the unlock lever [1] and open the upper door [2].



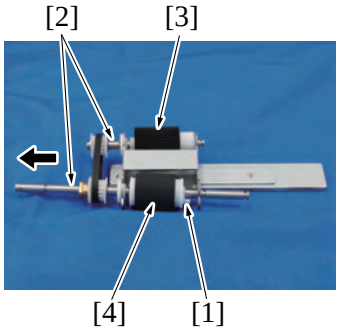
3. Remove two C-clips [1], shift the two bushings [2] at left and right side, and remove the feed roller assy/Lw [3].



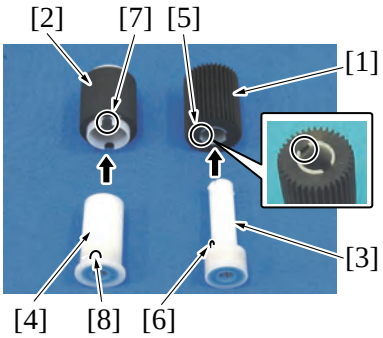
4. Remove the bushing [1] and remove the actuator [2].



5. Remove two C-clips [1] and the two bushings [2].



6. Remove the C-clip [1].
7. Slide the two roller shafts [2] toward the direction of the arrow and remove the pick-up roller/Lw [3] and the feed roller/Lw [4].
   NOTE
   - **Install with the blue side of the one-way clutch of the pick-up roller and the feed roller to face front when installing.**



8. Remove the pick-up roller [1] and the feed roller [2] from the one-way clutch [3] [4].
   NOTE
   - **Insert the pick-up roller [1] so the cut out [5] of the pick-up roller to align with the protrusion [6] of the one-way clutch when installing the pick-up roller.**
   - **Insert the feed roller [2] so the cut out [7] of the feed roller to align with the protrusion [8] of the one-way clutch when installing the feed roller.**

9. To reinstall, reverse the order of removal.

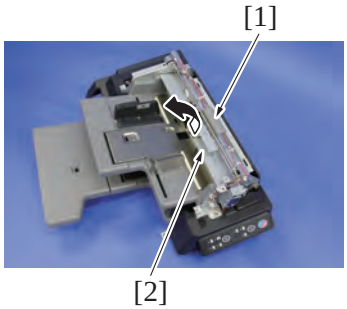
13.1.2 Replacing separation roller/Lw / torque limiter/Lw (PI-507)

(1) Periodically replacing parts/cycle

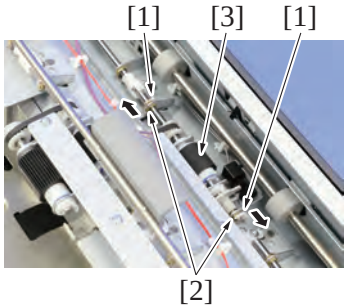
- Separation roller/Lw: Every 100,000 counts
- Torque limiter/Lw: Every 600,000 counts

(2) Procedure

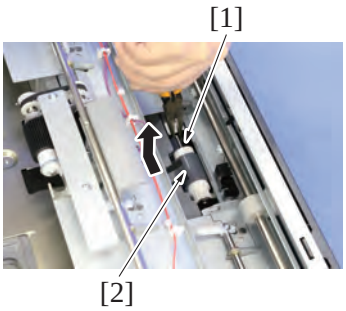
1. Remove the upper cover.
   G.7.10.1 Upper cover (PI-507)



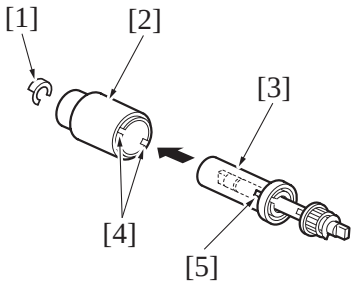
2. Pull the unlock lever [1] and open the upper door [2].



3. Remove two C-clips [1], shift the two bushings [2] at left and right side toward outside, and remove the feed roller assy/Lw [3].



4. Unlock the hook [1] and remove the separation roller assy/Lw [2] by moving it in a direction of the arrow.



5. Remove the C-clip [1] and remove the separation roller/Lw [2] and the torque limiter/Lw [3].
NOTE
- **Install the separation roller/Lw so the two cut outs [4] will be facing forward and aligned to the protrusion [5].**

6. To reinstall, reverse the order of removal.

14. Periodical maintenance procedure FS-536/FS-536SD

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

14.1 Paper exit section

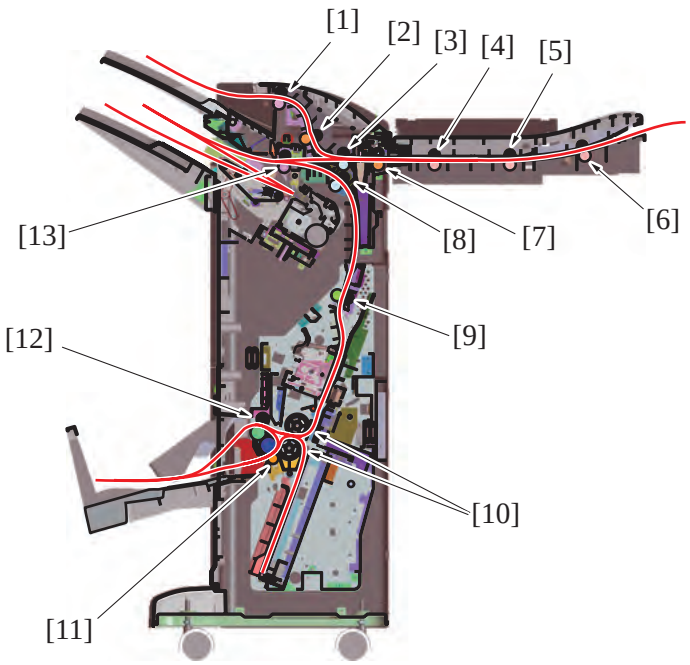
14.1.1 Cleaning procedure for each rollers/each rolls (FS-536/FS-536SD)

(1) Periodically cleaning parts/cycle

- Each rollers/Each rolls: Every 300,000 counts

(2) Cleaning point

FS-536/FS-536SD (when PK-520/RU-515 is installed)



[1]	Sub tray exit roller, roll	[2]	Sub tray transport roller, roll
[3]	Transport roller, roll	[4]	RU transport roller 3, transport roll 3 (RU-515) *
[5]	RU transport roller 2, transport roll 2 (RU-515) *	[6]	RU transport roller 1, transport roll 1 (RU-515) *
[7]	FNS entry roller, roll	[8]	Saddle section exit roller, roll
[9]	Saddle section paper feed roller, roll	[10]	Center folding roller
[11]	Tri-folding roller, roll	[12]	Sub tray exit roller, roll
[13]	Receiving roller, Receiving roll	-	-

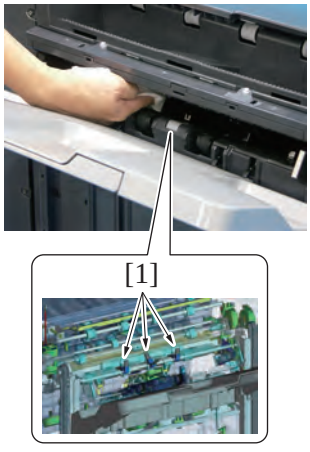
- *: Option

14.1.2 Cleaning the paddle (FS-536/FS-536SD)

(1) Periodically cleaning parts/cycle

- Paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

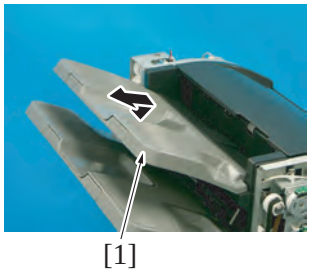
14.1.3 Replacing the paddle (FS-536/FS-536SD)

(1) Periodically replacing parts/cycle

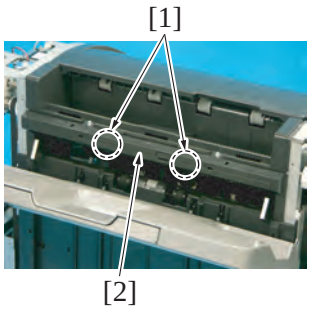
- Paddle: Every 2,000,000 counts

(2) Procedure

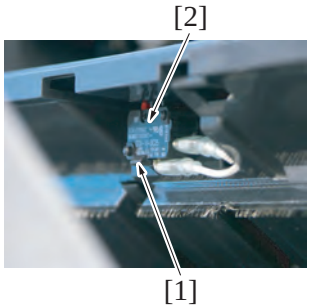
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover of the finisher.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)
4. Remove the rear cover of the finisher.
   G.7.11.1 Rear cover (FS-536/FS-536SD)
5. Remove the exit tray [1].



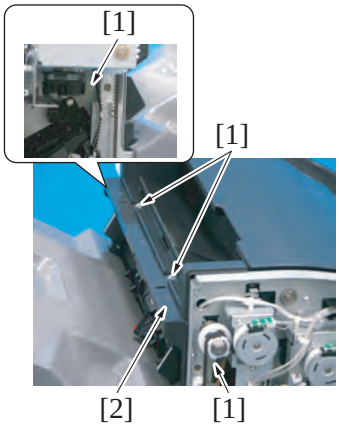
6. Remove two tabs [1], and remove the cover [2].

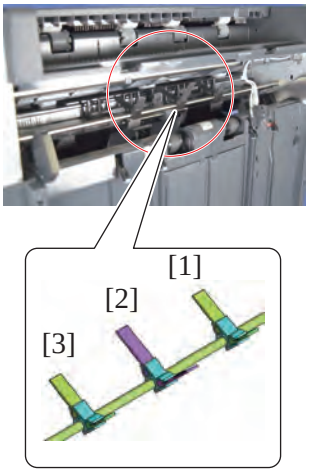


7. Release the tab [1], and remove the main tray upper position detect switch [2].



8. Remove four screws [1], and remove the cover [2].





10. To reinstall, reverse the order of removal.

14.1.4 Cleaning the upper paddle (FS-536SD)

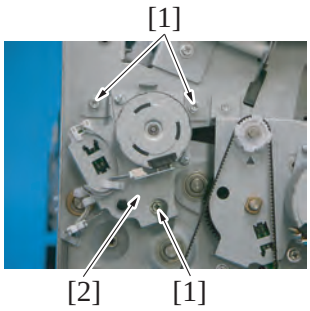
(1) Periodically cleaning parts/cycle

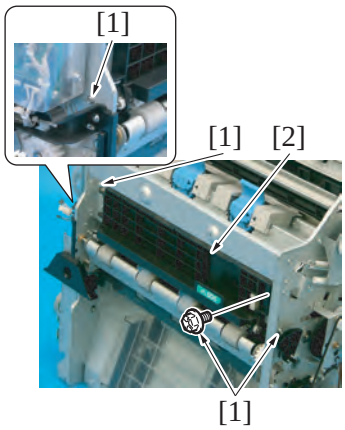
- Upper paddle: Every 300,000 counts

(2) Procedure

1. Remove the saddle unit.
G.7.12.2 Saddle unit (FS-536SD)

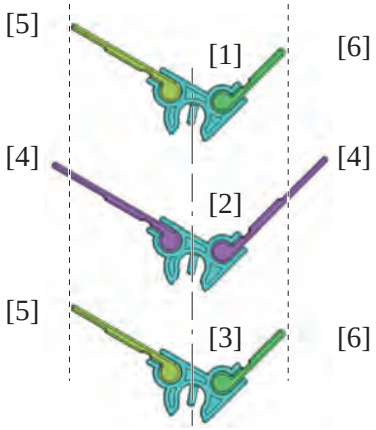
2. Remove the front cover.
G.7.12.1 Front cover (FS-536SD saddle section)





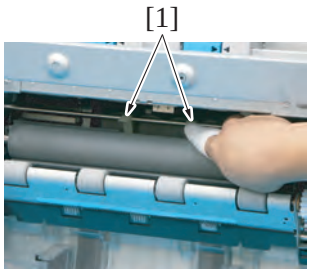
9. Remove the paddle assy. (Front) [1], the paddle assy. (Center) [2] and the paddle assy. (Rear) [3].
NOTE

- **When reinstalling the paddles, be careful not to attach them at an incorrect location or in an incorrect orientation.**
  - **[1]: Paddle Assy. (Front)**
  - **[2]: Paddle Assy. (Center)**
  - **[3]: Paddle Assy. (Rear)**
  - **[4]: Paddle (Long)**
  - **[5]: Paddle (Middle)**
  - **[6]: Paddle (Short)**



3. Remove three screws [1], and remove the tri-fold guide motor assy [2].

4. Remove four screws [1], and remove the conveyance assy [2].



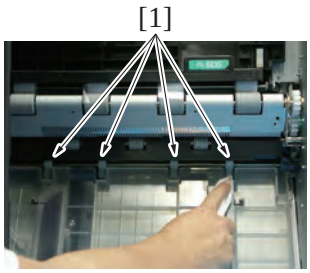
5. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

14.1.5 Cleaning the lower paddle (FS-536SD)

(1) Periodically cleaning parts/cycle

- Lower paddle: Every 300,000 counts

(2) Procedure



1. Using a cleaning pad dampened with alcohol, wipe the paddle [1].

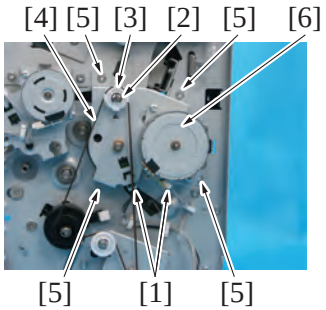
14.1.6 Replacing the upper paddle (FS-536SD)

(1) Periodically replacing parts/cycle

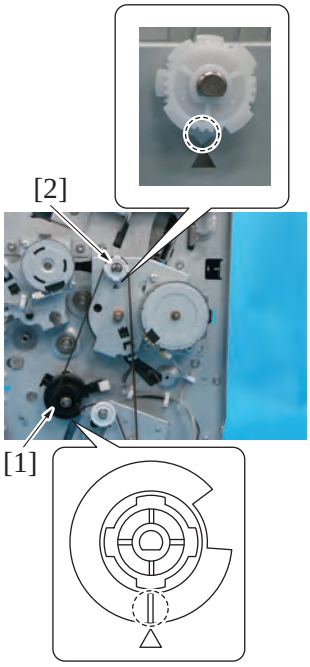
- Upper paddle: Every 2,000,000 counts

(2) Procedure

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



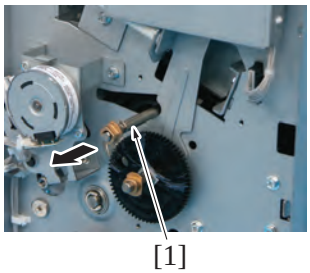
3. Disconnect two connectors [1].
4. Remove the E-ring [2].
5. Remove the gear [3] and the belt [4].
6. Remove four screws [5], and remove the center fold guide motor assy [6].



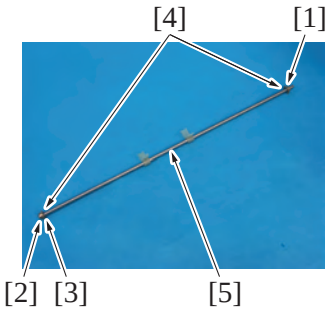
NOTE

- **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

7. Remove the upper paddle assy [1].



8. Remove the bushing [1].
9. Remove the E-ring [2], and remove the bushing [3].
10. Remove two E-rings [4].
11. Replace the upper paddle [5].



12. To reinstall, reverse the order of removal.

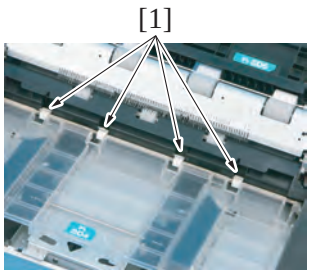
14.1.7 Replacing the lower paddle (FS-536SD)

(1) Periodically replacing parts/cycle

- Lower paddle: Every 2,000,000 counts

(2) Procedure

1. Remove four lower paddles [1].



14.2 Sensor section

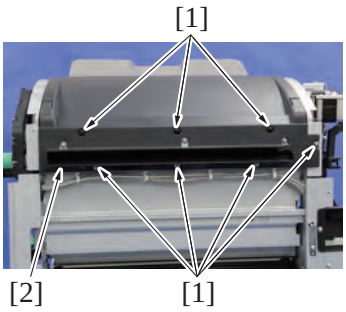
14.2.1 FNS entrance sensor (PS4) (FS-536SD/FS-536)

(1) Periodically cleaning parts/cycle

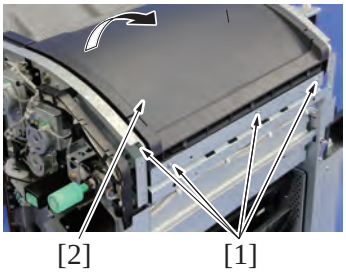
- FNS entrance sensor: Every 300,000 counts

(2) Procedure

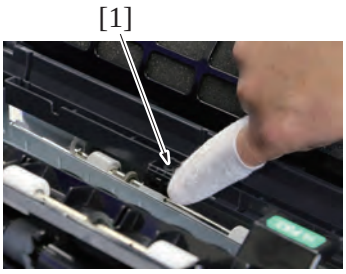
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover of the finisher.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)
4. Remove the rear cover of the finisher.
   G.7.11.1 Rear cover (FS-536/FS-536SD)



5. Remove seven screws [1], and remove the cover [7].



6. Remove four screws [1] and open the cover [2].



7. Using a cleaning pad dampened with alcohol, wipe the FNS entrance sensor [1] clean of dirt.

8. To reinstall, reverse the order of removal.

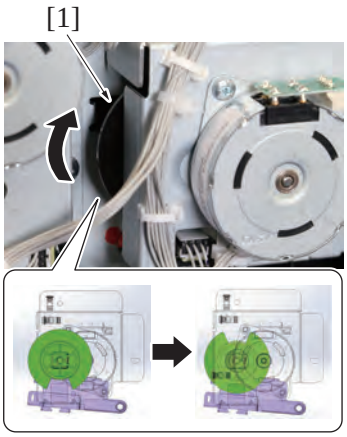
14.2.2 Main tray exit sensor (PS16) (FS-536SD/FS-536)

(1) Periodically cleaning parts/cycle

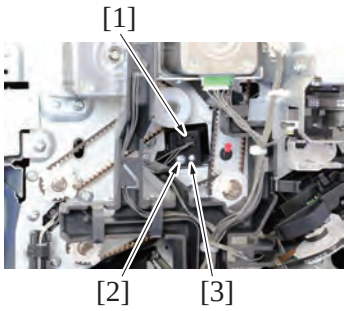
- Main tray exit sensor: Every 300,000 counts

(2) Procedure

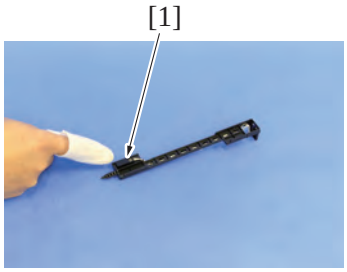
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover of the finisher.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)
4. Remove the rear cover of the finisher.
   G.7.11.1 Rear cover (FS-536/FS-536SD)



5. Rotate the douser [1] by 180 degrees.



6. Disconnect the connector [1], and remove the screw [2] and the guide [3].



7. Using a cleaning pad dampened with alcohol, clean the main tray exit sensor [1].

8. To reinstall, reverse the order of removal.

G DISASSEMBLY/REASSEMBLY

1. Disassembly/adjustment prohibited items

1.1 Paint-locked screws

NOTE

- **To prevent loose screws, a screw lock in blue or green series color is applied to the screws.**
- **The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.**
- **If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.**

1.2 Red-painted screws

NOTE

- **The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.**
- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

1.3 Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

1.4 Warnings for disassembly

⚠WARNING

- When accessing a hard-to-view or narrow spot, be careful about sharp edges and burrs on the frame and parts.
  They may injure your hands or fingers.
- If it is absolutely necessary to service the machine with the door open or external covers removed, always be attentive to the motion of the internal parts.
  A normally protected part may cause unexpected hazards.
- When removing a part that secures a motor, gear, or other moving part, disassembling a unit, or reinstalling any of such parts and units, be careful about moving parts and use care not to drop any part or unit. During the service procedure, give sufficient support for any heavy unit.
  You may be injured by a falling part or unit.

1.5 Warnings / Precautions during setup or transportation

⚠WARNING

- Whenever mounting an option on the machine, be attentive to the motion of the other workers performing the task.
  Another worker may be injured by a pinch point between the machine and the option.

⚠WARNING

- When mounting an option on the machine, be careful about the clearance between the machine and the option.
  You may be injured with your finger or hand pinched between the machine and the option.

⚠CAUTION

- Do not leave the machine unattended during transportation, installation, and/or inspection. If the machine is left unattended, face protrusions toward the wall or take other necessary precautions to prevent.
  A user or other person in the area from stumbling over a protrusion of the machine or being caught by a cable, possibly causing a fall to the floor or other personal injury.

2. Units from which removing is prohibited

2.1 CCD unit

2.1.1 Reason for prohibition

- Since the accuracy of the CCD unit is guaranteed as a unit, no accuracy is guaranteed if it is disassembled. Do no remove any screw which may disassemble the CCD unit.

2.2 PH unit

2.2.1 Reason for prohibition

- The laser runs inside the PH unit. Opening the cover may cause dust to enter and interrupt the laser. Do no remove any screw which may disassemble the PH unit.

2.3 Fusing unit

2.3.1 Reason for prohibition

- Inner part of the fusing unit and the position of the fusing belt are adjusted prior to shipping. Do not remove any screw which may disassemble the fusing unit.

NOTE

- **There is a possibility of replacing the pressure roller unit in the fusing unit for bizhub 808 or bizhub 758 (other than Japan andTaiwan), so the removal method of the pressure roller unit is described as an exception of the disassembly prohibition.**

3. Disassembly/assembly warning/caution items

3.1 Removal/installing of PWBs

⚠CAUTION

- When removing or installing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal or installing procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

4. Notes when transporting the machine

NOTE

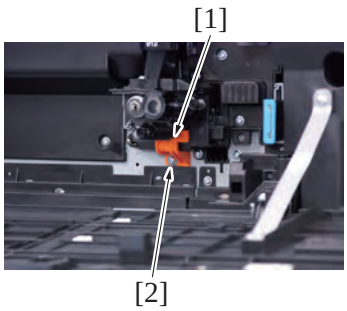
- **When transporting a machine to reinstall it in another location, attach the following protective materials to the machine in order to prevent the machine from being damaged or spilling out by vibration during transportation.**
- **The protective materials are removed when the machine is set up. However, be sure to keep the protective materials after finishing the set-up.**

4.1 Protective materials

4.1.1 Protective materials for the photo conductors

Reinstall procedure

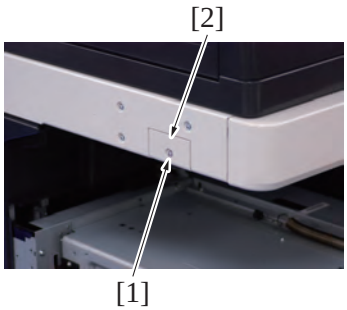
1. Open the lower front door.
2. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box



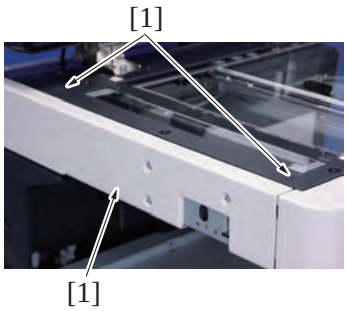
3. Attach the protective material [1] to the position shown in the illustration and secure it with a screw [2].

4.1.2 Scanner packing bracket

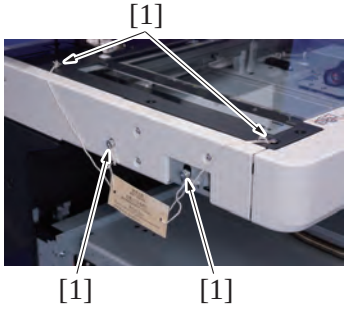
1. Check that the exposure unit is at the left side.



2. Remove the screw [1], and remove the cover [2].



3. Remove three caps [1].



4. Attach four scanner packing brackets [1] to secure the scanner.

5. bizhub 958/808/758, bizhub PRO 958

5.1 Disassembly/reassembly parts list

5.1.1 Exterior parts

No.	Part name	Ref. page
1	Upper front door	G.5.2.1 Upper front door
2	Lower front door	G.5.2.2 Lower front door
3	Control panel right cover	G.5.2.3 Control panel right cover
4	Control panel left cover	G.5.2.4 Control panel left cover
5	Control panel lower cover/1	G.5.2.5 Control panel lower cover/1
6	Control panel lower cover/2	G.5.2.6 Control panel lower cover/2
7	Control panel upper cover	G.5.2.7 Control panel upper cover
8	Control panel hinge cover	G.5.2.8 Control panel hinge cover
9	Control panel unit	G.5.2.9 Control panel unit
10	Right front cover/1	G.5.2.10 Right front cover/1
11	Right front cover/2	G.5.2.11 Right front cover/2
12	Upper left cover	G.5.2.12 Upper left cover
13	Lower left cover	G.5.2.13 Lower left cover
14	Paper exit rear cover	G.5.2.14 Paper exit rear cover
15	Scanner rear cover	G.5.2.15 Scanner rear cover
16	Scanner right cover	G.5.2.16 Scanner right cover
17	Scanner upper rear cover/1	G.5.2.17 Scanner upper rear cover/1
18	Scanner upper rear cover/2	G.5.2.18 Scanner upper rear cover/2
19	Scanner left cover	G.5.2.19 Scanner left cover
20	USB interface cover	G.5.2.20 USB interface cover
21	Original glass	G.5.2.21 Original glass
22	Interface cover/1	G.5.2.22 Interface cover/1
23	Interface cover/2	G.5.2.23 Interface cover/2
24	Rear right cover/1	G.5.2.24 Rear right cover/1
25	Rear right cover/2	G.5.2.25 Rear right cover/2
26	Manual bypass tray rear cover	G.5.2.26 Manual bypass tray rear cover
27	Upper rear cover /1	G.5.2.27 Upper rear cover /1
28	Upper rear cover /2	G.5.2.28 Upper rear cover /2
29	Lower rear cover	G.5.2.29 Lower rear cover
30	Duplex unit cover	G.5.2.30 Duplex unit cover
31	Tray 1, Tray 2	G.5.2.31 Tray 1, Tray 2
32	Tray 3, tray 4	G.5.2.32 Tray 3, Tray 4

5.1.2 Units

No.	Part name	Ref. page
1	PH unit	G.5.3.1 PH unit
2	Duplex unit	G.5.3.2 Duplex unit
3	Manual bypass tray unit	G.5.3.3 Manual bypass tray unit
4	Tray 1 paper feed unit	G.5.3.4 Tray 1 paper feed unit
5	Tray 2 paper feed unit	G.5.3.5 Tray 2 paper feed unit
6	CCD unit	G.5.3.6 CCD unit
7	LED exposure unit	G.5.3.7 LED exposure unit
8	Hard disk (A)	G.5.3.8 Hard disk (A) HDD(A)
9	IH coil (IHC)	G.5.3.9 IH coil (IHC)
10	Intermediate transport roller assy	G.5.3.10 Intermediate transport roller assy
11	Main drive unit	G.5.3.11 Main drive unit
12	LCC drive unit	G.5.3.12 LCC drive unit
13	Intermediate transport unit	G.5.3.13 Intermediate transport unit
14	Paper cooling fan assy	G.5.3.14 Paper cooling fan assy
15	IDC sensor unit	G.5.3.15 IDC sensor unit
16	Pressure roller assy	G.5.3.16 Pressure Roller Assy Replacement (bizhub 808/758 except for Taiwan only)

5.1.3 Boards

No.	Part name	Ref. page
1	Scanner drive board (SCDB)	G.5.4.1 Scanner drive board (SCDB)
2	PH relay board (PHRYB)	G.5.4.2 PH relay board (PHRYB)
3	Paper feed/transport drive board (PFTDB)	G.5.4.3 Paper feed/transport drive board (PFTDB)
4	DC power supply unit (DCPU)	G.5.4.4 DC power supply (DCPU)
5	Noise filter (NF1)	G.5.4.5 Noise filter (NF1)
6	Dehumidifier drive board (DEDB)	G.5.4.6 Dehumidifier drive board (DEDB)
7	Dual scan image processing board (DSIPB)	G.5.4.7 Dual scan image processing board (DSIPB)
8	eMMC board (eMMC)	G.5.4.8 eMMC board (eMMC)
9	MFP board (MFPB)	G.5.4.9 MFP board (MFPB)
10	Back up board/1 (ERB/1)	G.5.4.10 Back up board/1 (ERB/1)
11	Back up board/2 (ERB/2)	G.5.4.11 Back up board/2 (ERB/2)
12	How to open the PWB box	G.5.4.12 How to open the PWB box
13	High voltage unit/1 (HV1)	G.5.4.13 High voltage unit/1 (HV1)
14	High voltage unit/2 (HV2)	G.5.4.14 High voltage unit/2 (HV2)
15	High voltage unit/3 (HV3)	G.5.4.15 High voltage unit/3 (HV3)
16	IH power supply unit (IHPU)	G.5.4.16 IH power supply unit (IHPU)
17	IH magnetic erasing board (IHMEB)	G.5.4.17 IH magnetic erasing board (IHMEB)
18	Tray 1 FD paper size board (FDPSB/1)	G.5.4.18 Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)
19	Tray 2 FD paper size board (FDPSB/2)	
20	Tray 1 CD paper size board (CDPSB/1)	G.5.4.19 Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)
21	Tray 2 CD paper size board (CDPSB/2)	
22	Pressure roller power supply unit (PRPU) (only for bizhub 958/bizhub PRO 958)	G.5.4.20 Pressure roller power supply unit (PRPU) (only for bizhub 958/bizhub PRO 958)

5.1.4 Motors

No.	Part name	Ref. page
1	Transfer belt motor (M1)	G.5.5.1 Transfer belt motor (M1)
2	Registration motor (M2)	G.5.5.2 Registration motor (M2)
3	2nd transfer pressure motor (M3)	G.5.5.3 2nd transfer pressure motor (M3)
4	Exit motor (M4)	G.5.5.4 Exit motor (M4)
5	Tray 1 vertical transport motor (M5)	G.5.5.5 Tray 1 vertical transport motor (M5)
6	Tray 1 lift-up motor (M6)	G.5.5.6 Tray 1 lift-up motor (M6), tray 2 lift-up motor (M8)
7	Tray 2 vertical transport motor (M7)	G.5.5.7 Tray 2 vertical transport motor (M7)
8	Tray 2 lift-up motor (M8)	G.5.5.6 Tray 1 lift-up motor (M6), tray 2 lift-up motor (M8)
9	Toner supply motor/K (M12)	G.5.5.8 Toner supply motor/K (M12)
10	Toner cartridge motor/CK (M14)	G.5.5.9 Toner cartridge motor/CK (M14)
11	Charge cleaning motor/K (M15)	G.5.5.10 Charge cleaning motor/K (M15)
12	PC motor/K (M18)	G.5.5.11 PC motor/K (M18)
13	Developing motor/K (M19)	G.5.5.12 Developing motor/K (M19)
14	Waste toner transport motor (M20)	G.5.5.13 Waste toner transport motor (M20)
15	1st transfer pressure motor (M21)	G.5.5.14 1st transfer pressure motor (M21)
16	Paper feed motor (M22)	G.5.5.15 Paper feed motor (M22)
17	Tray 3 lift-up motor (M23)	G.5.5.16 Tray 3 lift-up motor (M23)
18	Tray 4 lift-up motor (M24)	G.5.5.17 Tray 4 lift-up motor (M24)
19	LCC transport motor (M25)	G.5.5.18 LCC transport motor (M25)
20	Bypass lift-up motor (M26)	G.5.5.19 Bypass lift-up motor (M26), bypass paper feed motor (M27)
21	Bypass paper feed motor (M27)	
22	LCC vertical transport motor (M28)	G.5.5.20 LCC vertical transport motor (M28)
23	Fusing motor (M30)	G.5.5.21 Fusing motor (M30)
24	ADU transport motor/1 (M31)	G.5.5.22 ADU transport motor/1 (M31)
25	ADU transport motor/2 (M32)	G.5.5.23 ADU transport motor/2 (M32)
26	Switchback motor (M33)	G.5.5.24 Switchback motor (M33)
27	Fusing pressure motor (M34)	G.5.5.25 Fusing pressure motor (M34)
28	Cleaning brush motor (M38)	G.5.5.26 Cleaning brush motor (M38)

No.	Part name	Ref. page
29	Scanner motor (M201)	G.5.5.27 Scanner motor (M201)

5.1.5 Clutches

No.	Part name	Ref. page
1	Tray 1 paper feed clutch (CL1)	G.5.6.1 Tray 1 paper feed clutch (CL1)
2	Tray 2 paper feed clutch (CL2)	G.5.6.2 Tray 2 paper feed clutch (CL2)
3	Horizontal transport clutch (CL3)	G.5.6.3 Horizontal transport clutch (CL3)
4	Tray 3 paper feed clutch (CL5)	G.5.6.4 Tray 3 paper feed clutch (CL5)
5	Tray 3 transport clutch (CL6)	G.5.6.5 Tray 3 transport clutch (CL6)
6	Tray4 paper feed clutch (CL7)	G.5.6.6 Tray4 paper feed clutch (CL7)

5.1.6 Fans

No.	Part name	Ref. page
1	Suction fan (FM1)	G.5.7.1 Suction fan (FM1)
2	Switchback paper cooling fan/1 (FM4)	G.5.7.2 Switchback paper cooling fan/1 (FM4), Switchback paper cooling fan/2 (FM5)
3	Switchback paper cooling fan/2 (FM5)	
4	Ozone ventilation fan (FM6)	G.5.7.3 Ozone ventilation fan (FM6)
5	Toner suction fan (FM7)	G.5.7.4 Toner suction fan (FM7)
6	Toner cartridge cooling fan (FM8)	G.5.7.5 Toner cartridge cooling fan (FM8)
7	DC power supply cooling fan (FM9)	G.5.7.6 DC power supply cooling fan (FM9)
8	IH power supply cooling fan (FM10)	G.5.7.7 IH power supply cooling fan (FM10)
9	IH coil cooling fan (FM11)	G.5.7.8 IH coil cooling fan (FM11)
10	Paper cooling fan/in (FM12)	G.5.7.9 Paper cooling fan/in (FM12)
11	Paper cooling fan/out (FM13)	G.5.7.10 Paper cooling fan/out (FM13)
12	PH cooling fan (FM14)	G.5.7.11 PH cooling fan (FM14)
13	IU cooling fan/out (FM15)	G.5.7.12 IU cooling fan/out (FM15)
14	IU cooling fan/in (FM16)	G.5.7.13 IU cooling fan/in (FM16)
15	MFP controller cooling fan (FM17)	G.5.7.14 MFP controller cooling fan (FM17)
16	Output tray exhaust fan (FM18) (bizhub 958/808, bizhub PRO 958 only)	G.5.7.15 Output tray exhaust fan (FM18) (bizhub 958/808, bizhub PRO 958 only)

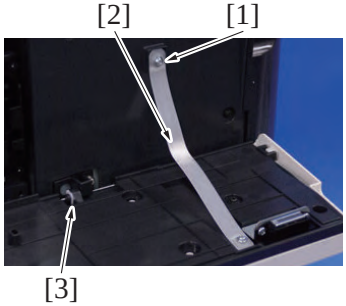
5.1.7 etc.

No.	Part name	Ref. page
1	IDC sensor/Fr (IDCS/Fr)	G.5.8.1 IDC sensor/Fr (IDCS/Fr)
2	Tray 3, tray 4 lift wire	G.5.8.2 Tray 3, tray 4 lift wire
3	Gate switch solenoid (SD1)	G.5.8.3 Gate switch solenoid (SD1)
4	IDC sensor shutter solenoid (SD2)	G.5.8.4 IDC sensor shutter solenoid (SD2)
5	Fax speaker (SP)	G.5.8.5 Fax speaker (SP)
6	Bypass paper CD size VR (VR1)	G.5.8.6 Bypass paper CD size VR (VR1)
7	UFP filter	G.5.8.7 UFP filter
8	Deodorant filter/1	G.5.8.8 Deodorant filter/1

5.2 Disassembly/reassembly procedure (Exterior parts)

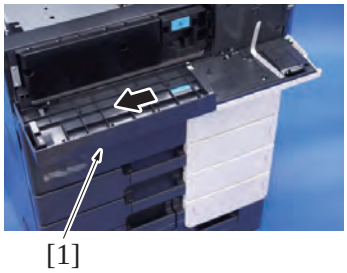
5.2.1 Upper front door

1. Open the upper front door.



2. Remove the screw [1], and remove the stopper [2].
3. Remove the C-clip [3].

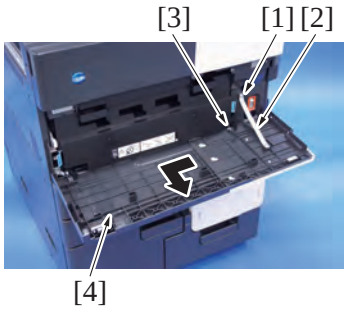
4. Remove the upper front door [1] by sliding it left.



5. To reinstall, reverse the order of removal.

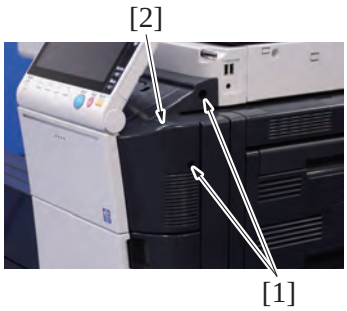
5.2.2 Lower front door

1. Open the lower front door.



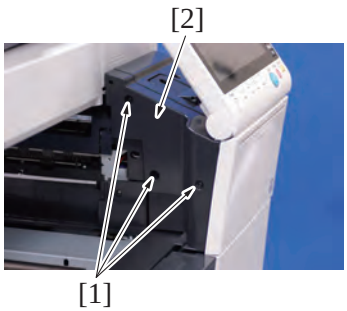
2. Remove the screw [1], and remove the stopper [2].
3. Remove the C-clip [3].
4. Remove the lower front door [4] by sliding it left.
5. To reinstall, reverse the order of removal.

5.2.3 Control panel right cover



1. Remove two screws [1], and remove the control panel right cover [2].
2. To reinstall, reverse the order of removal.

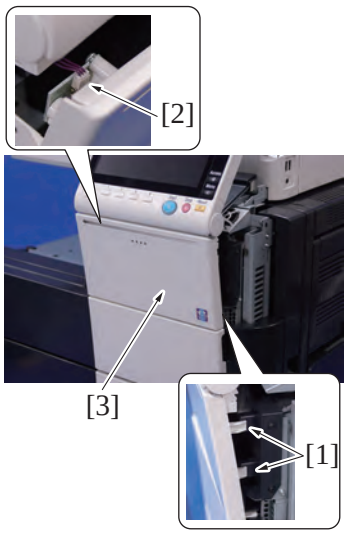
5.2.4 Control panel left cover



1. Remove three screws [1] and remove the control panel left cover [2].
2. To reinstall, reverse the order of removal.

5.2.5 Control panel lower cover/1

1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover

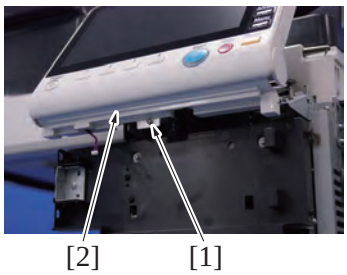


3. Remove two tabs [1] and the connector [2], and remove the control panel lower cover/1 [3].

4. To reinstall, reverse the order of removal.

5.2.6 Control panel lower cover/2

1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel lower cover/1.
   G.5.2.5 Control panel lower cover/1

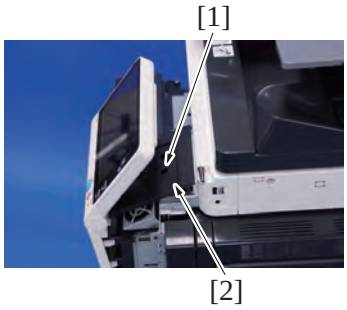


4. Remove the screw [1] and remove the control panel lower cover/2 [2].

5. To reinstall, reverse the order of removal.

5.2.7 Control panel upper cover

1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover

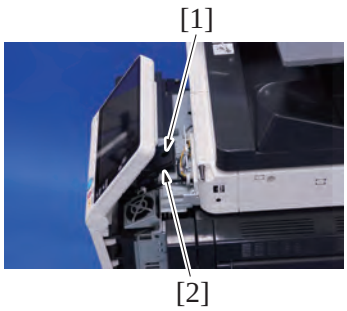


3. Remove the screw [1], and remove the control panel upper cover [2].

4. To reinstall, reverse the order of removal.

5.2.8 Control panel hinge cover

1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel upper cover.
   G.5.2.7 Control panel upper cover

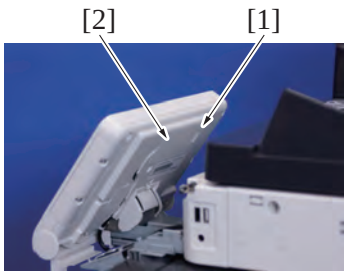


4. Remove the screw [1] and remove the control panel hinge cover [2].

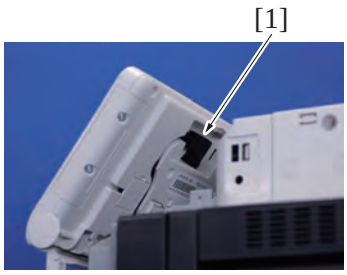
5. To reinstall, reverse the order of removal.

5.2.9 Control panel unit

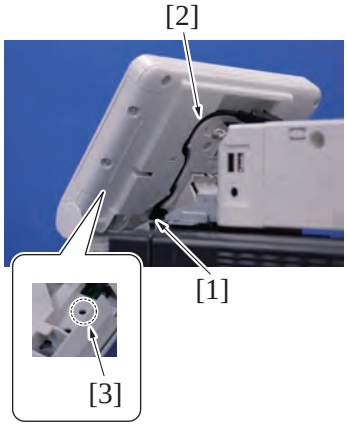
1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel upper cover.
   G.5.2.7 Control panel upper cover
4. Remove the control panel hinge cover.
   G.5.2.8 Control panel hinge cover
5. Remove the control panel lower cover/1.
   G.5.2.5 Control panel lower cover/1
6. Remove the right front cover/1.
   G.5.2.10 Right front cover/1



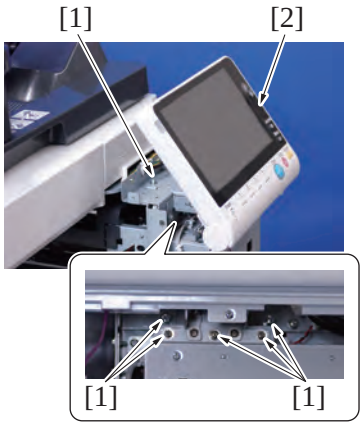
7. Remove the tab [1] and remove the connector cover [2].



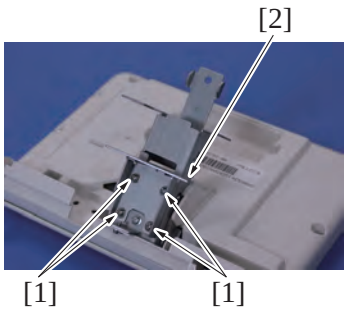
8. Disconnect the connector [1].



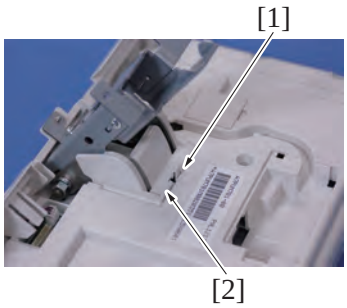
9. Remove the cable tie [1] from the control panel unit.
10. Remove the cable from the cable guide [2].
    NOTE
    - **At installation of the control panel unit, insert the cable tie [1] to the hole [3] shown in the illustration.**



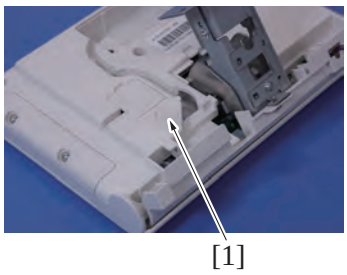
11. Remove six screws [1] and remove the control panel unit [2].
NOTE
- **Place the control panel section on a soft cloth, etc., with the touch panel side down, so the touch panel does not get damaged.**



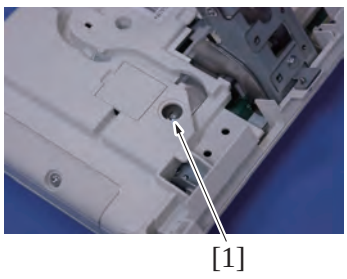
12. Remove four screws [1] and remove the plate [2].



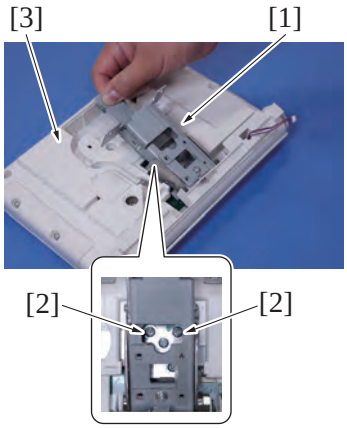
13. Unhook the tab [1] and remove the cover [2].



14. Remove the cap [1].



15. Remove the screw [1].



16. Press down the hinge [1] as shown in the figure and remove two screws [2].
17. Remove the hinge from the control panel unit [3].
18. To reinstall, reverse the order of removal.
19. Carry out the touch panel calibration.
    G.5.2.9.(1) Touch panel calibration

(1) Touch panel calibration

- After replacing the control panel unit, you must perform the touch panel calibration.
  Perform one of the calibration procedures described below.

(a) Panel Calibration by using USB memory

1. Connect the USB memory containing the MFP firmware data to the service port.
   For information on how to store the firmware data into a USB memory, refer to "J.2. USB memory".
2. While pressing the 'Reset' key, turn the main power switch ON.
3. As the calibration screen appears, press the Start key, perform calibration and wait for a while.
4. Confirm that the completion message. Touch [Close].
5. Turn OFF the main power switch, and remove the USB memory.

NOTE

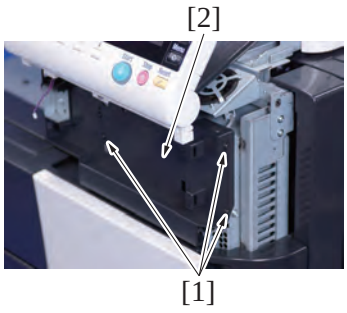
- **Once the panel calibration has been completed, panel screen transit to the firmware writing mode and start to update automatically after 30 seconds.**

(b) Panel Calibration by manual operation

1. Press [Menu] -> [Counter] -> [Display Keypad]
2. Press Stop -> Clear -> 1 -> 1 -> 6 -> 6 -> Start key, then calibration starts.
3. After 30 seconds, turn OFF the main power switch.

5.2.10 Right front cover/1

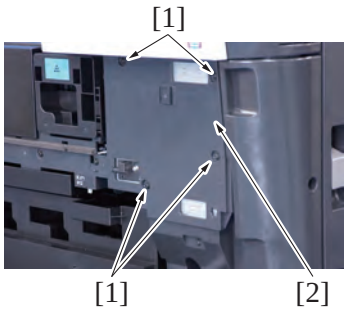
1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel lower cover/1.
   G.5.2.5 Control panel lower cover/1



4. Remove three screws [1] and remove the right front cover/1 [2].
5. To reinstall, reverse the order of removal.

5.2.11 Right front cover/2

1. Remove the upper front door.
   G.5.2.1 Upper front door
2. Open the lower front door.

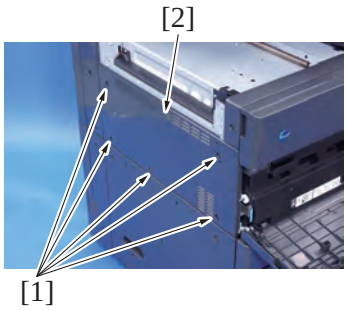


3. Remove four screws [1] and remove the right front cover/2 [2].

4. To reinstall, reverse the order of removal.

5.2.12 Upper left cover

1. Open the lower front door.

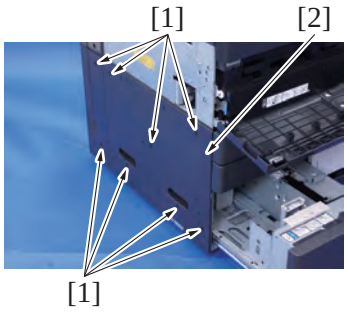


2. Remove five screws [1] and remove the upper left cover [2].

3. To reinstall, reverse the order of removal.

5.2.13 Lower left cover

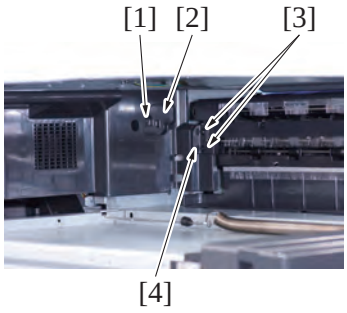
1. Slide out the tray 3.
2. Remove the upper left cover.
G.5.2.12 Upper left cover



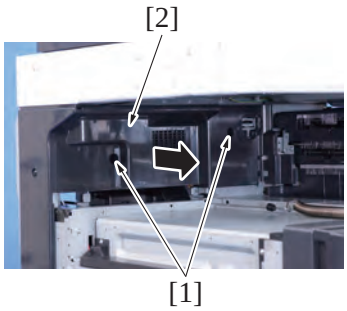
3. Remove eight screws [1] and remove the lower left cover [2].

4. To reinstall, reverse the order of removal.

5.2.14 Paper exit rear cover



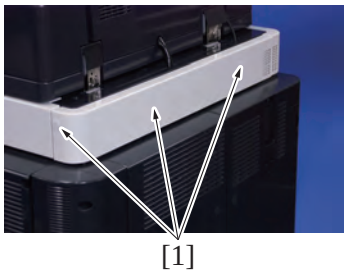
1. Remove the screw [1], and remove the cover [2].
2. Remove two screws [3], and remove the cover [4].



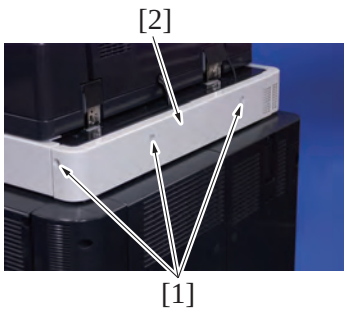
3. Remove two screws [1] and remove the paper exit rear cover [2].

4. To reinstall, reverse the order of removal.

5.2.15 Scanner rear cover



1. Remove three caps [1].

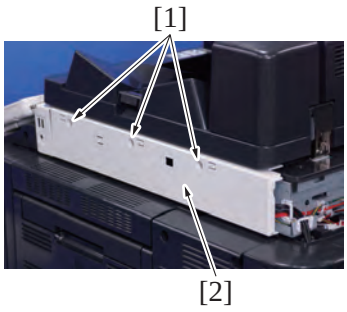


2. Remove three screws [1] and remove the scanner rear cover [2].

3. To reinstall, reverse the order of removal.

5.2.16 Scanner right cover

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover



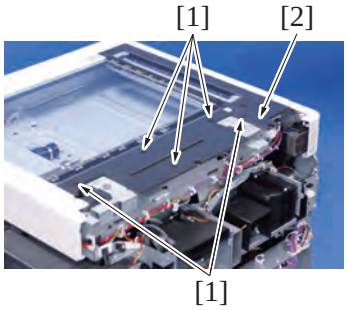
2. Remove three screws [1], and remove the scanner right cover [2].

3. To reinstall, reverse the order of removal.

5.2.17 Scanner upper rear cover/1

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner upper rear cover/2.
   G.5.2.18 Scanner upper rear cover/2
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
5. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2

6. Remove the dual scan document feeder.
G.6.2.3 Dual scan document feeder

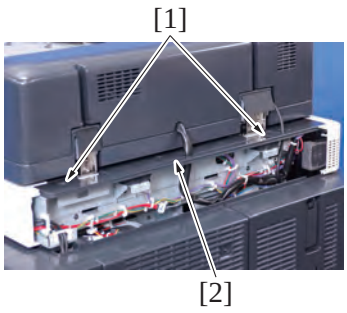


7. Remove five screws [1] and remove the scanner upper rear cover/1 [2].

8. To reinstall, reverse the order of removal.

5.2.18 Scanner upper rear cover/2

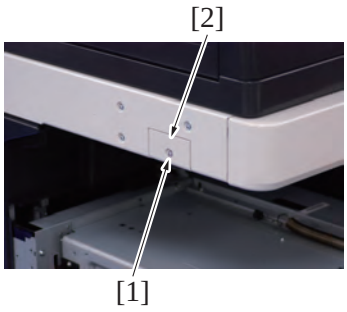
1. Remove the scanner rear cover.
G.5.2.15 Scanner rear cover



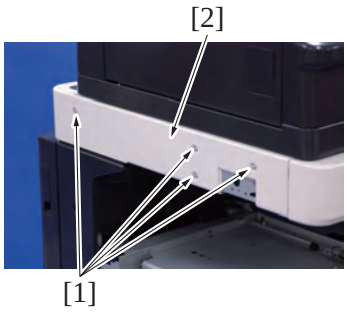
2. Remove two screws [1] and remove the scanner upper rear cover/2 [2].

3. To reinstall, reverse the order of removal.

5.2.19 Scanner left cover



1. Remove the screw [1], and remove the cover [2].



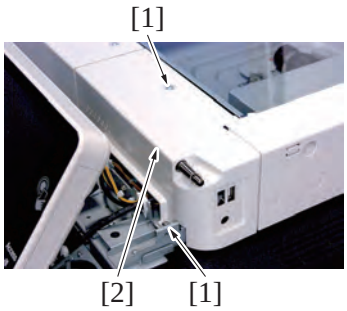
2. Remove four screws [1], and remove the scanner left cover [2].

3. To reinstall, reverse the order of removal.

5.2.20 USB interface cover

1. Remove the control panel right cover.
G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
G.5.2.4 Control panel left cover
3. Remove the control panel upper cover.
G.5.2.7 Control panel upper cover
4. Remove the scanner left cover.
G.5.2.19 Scanner left cover

5. Remove two screws [1], and remove the scanner front cover [2].

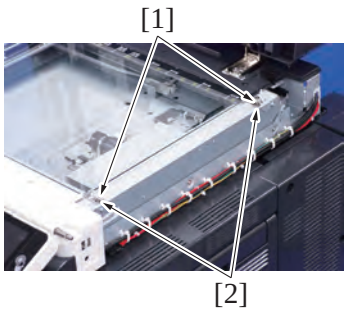


6. To reinstall, reverse the order of removal.

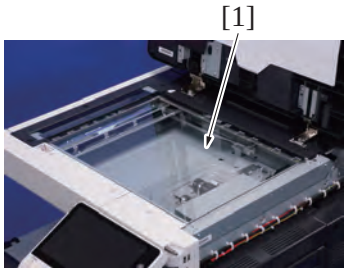
5.2.21 Original glass

1. Open the DF.
2. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
3. Remove the scanner right cover.
   G.5.2.16 Scanner right cover

4. Remove two screws [1] and remove two original glass fixing brackets [2].



5. Remove the original glass [1].

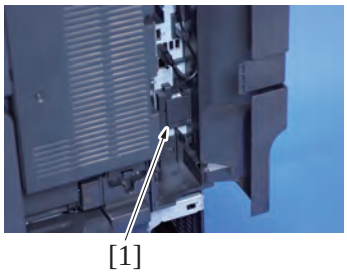


6. To reinstall, reverse the order of removal.

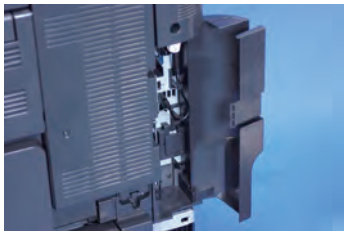
5.2.22 Interface cover/1

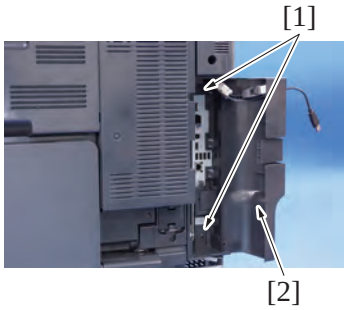
1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2

2. Remove the connector cover [1] when the optional fax kit is installed.



3. Disconnect all the cables connected to each port.

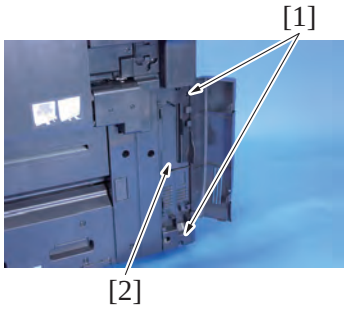




4. Remove two screws [1] and remove the interface cover/1 [2] while disconnecting the cable.

5. To reinstall, reverse the order of removal.

5.2.23 Interface cover/2

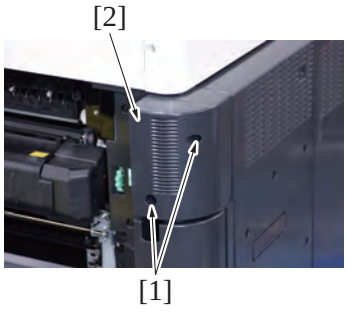


1. Remove two screws [1] and remove the interface cover/2 [2].

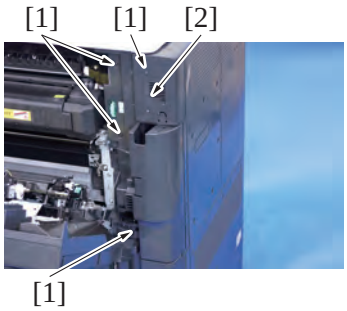
2. To reinstall, reverse the order of removal.

5.2.24 Rear right cover/1

1. Remove the ozone filter.
F.6.1.1 Replacing ozone filter
2. Open the upper right door.



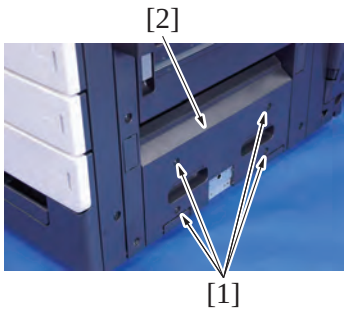
3. Remove two screws [1] and remove the cover [2].



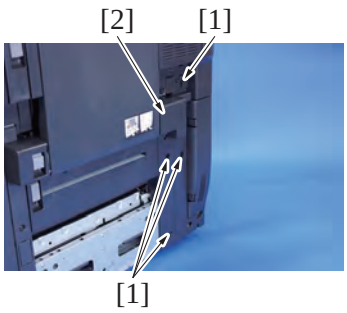
4. Remove four screws [1] and remove the rear right cover/1 [2].

5. To reinstall, reverse the order of removal.

5.2.25 Rear right cover/2



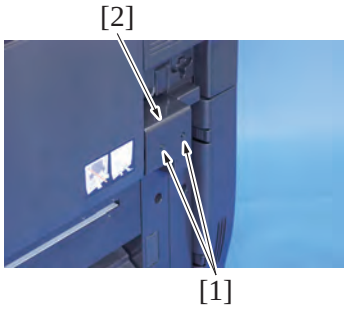
1. Remove four screws [1] and remove the right lower cover [2].



2. Remove four screws [1] and remove the rear right cover/2 [2].

3. To reinstall, reverse the order of removal.

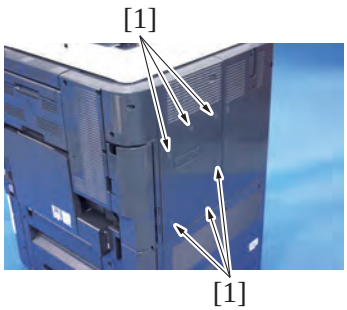
5.2.26 Manual bypass tray rear cover



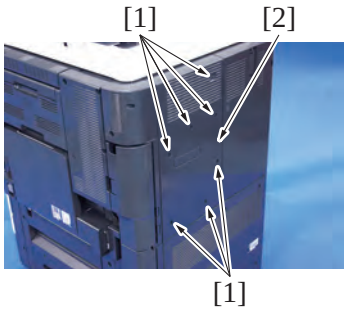
1. Remove two screws [1] and remove the manual bypass tray rear cover [2].

2. To reinstall, reverse the order of removal.

5.2.27 Upper rear cover /1



1. Remove six caps [1].

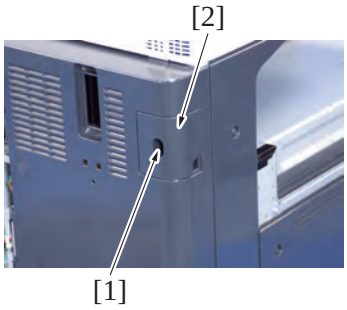


2. Remove seven screws [1] and remove the upper rear cover/1 [2].

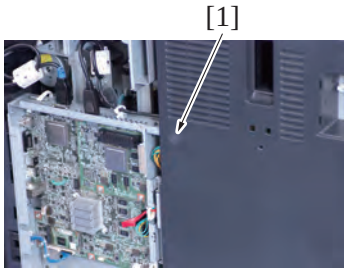
3. To reinstall, reverse the order of removal.

5.2.28 Upper rear cover /2

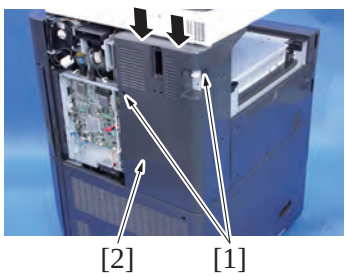
1. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
2. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1



3. Remove the screw [1], and remove the connector cover [2].



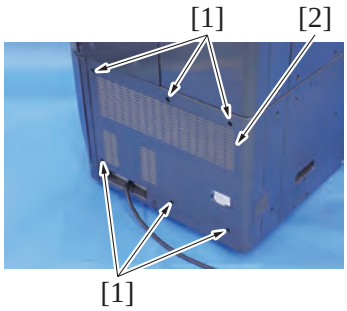
4. Remove the cap [1].



5. Remove two screws [1] and remove the upper rear cover/2 [2].

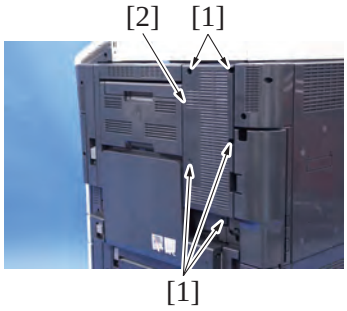
6. To reinstall, reverse the order of removal.

5.2.29 Lower rear cover



1. Remove six screws [1], and remove the lower rear cover [2].
2. To reinstall, reverse the order of removal.

5.2.30 Duplex unit cover



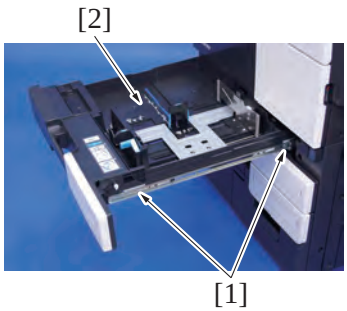
1. Remove five screws [1] and remove the duplex unit cover [2].
2. To reinstall, reverse the order of removal.

5.2.31 Tray 1, Tray 2

NOTE

- **The tray 1 and the tray 2 has same mechanism. This procedure shows the steps taken for the tray 1.**

1. Slide out the tray.



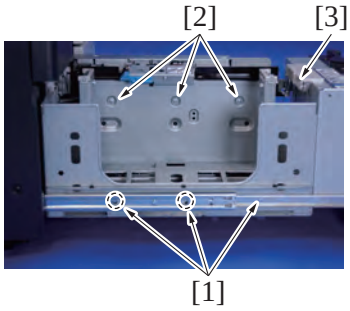
2. Remove two screws [1], and remove the tray [2].
3. To reinstall, reverse the order of removal.

5.2.32 Tray 3, Tray 4

NOTE

- **The tray 3 and the tray 4 has same mechanism. This procedure shows the steps taken for the tray 3.**

1. Slide out the tray.



2. Remove three screws [1] and three screws [2], and remove the tray [3].
3. To reinstall, reverse the order of removal.

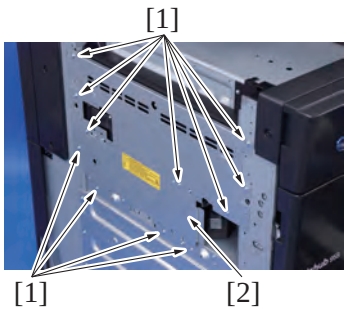
5.3 Disassembly/reassembly procedure (Units)

5.3.1 PH unit

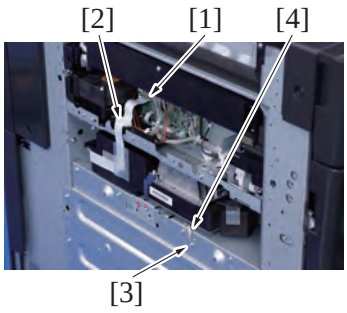
WARNING

- Do not supply power with the write unit (PH unit) shifted from the specified mounting position.
  The laser light can enter your eye, leading to a risk of loss of eyesight.
- Do not disassemble or adjust the write unit (PH unit) incorporating a laser.
  The laser light can enter your eye, leading to a risk of loss of eyesight.

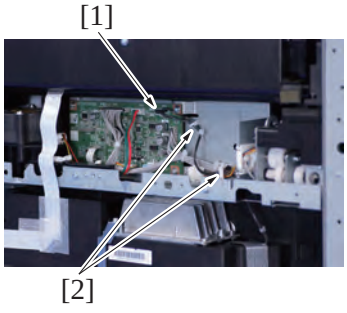
1. Open the lower front door.
2. Remove the upper left cover.
   G.5.2.12 Upper left cover
3. Remove the lower left cover.
   G.5.2.13 Lower left cover
4. Remove the PH cooling fan.
   G.5.7.11 PH cooling fan (FM14)



5. Remove the 11 screws [1] and remove the PH unit protective sheet [2].

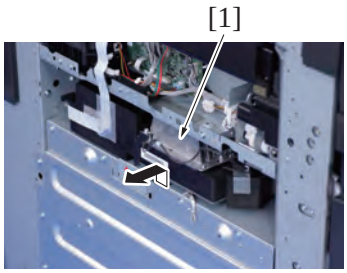


6. Disconnect the flat cable [1] and remove from the cable guide [2].
7. Remove the screw [3], and remove the ground terminal [4].
   NOTE
   - **Disconnect the flat cable with caution not to apply too much force. Also, disconnect straight out.**



8. Disconnect the connector [1], and remove the harness from two wire saddles [2].

9. Remove the PH unit [1] by pulling it forward while slightly raising it.

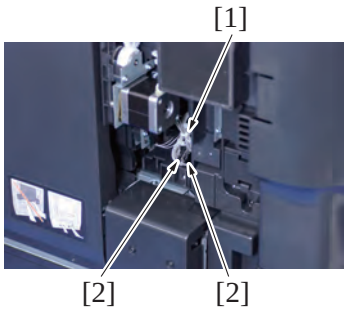


10. To reinstall, reverse the order of removal.
11. Execute [LD Timing Adj.] and [LD 1/2 Balance Adj.] in the [Service Mode] -> [Machine] -> [LD adjustment].

5.3.2 Duplex unit

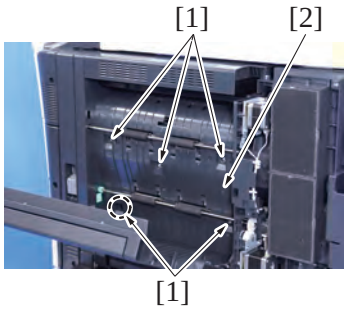
1. Remove the duplex unit cover.
   G.5.2.30 Duplex unit cover

2. Remove the harness from the wire saddle [1], and disconnect two connectors [2].



3. Open the duplex unit door.

4. Remove five screws [1] and remove the duplex unit [2].

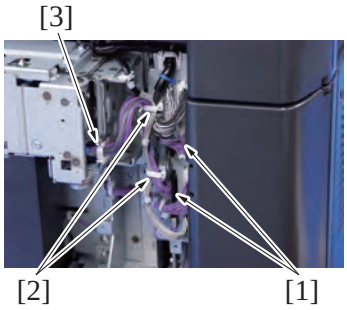


5. To reinstall, reverse the order of removal.

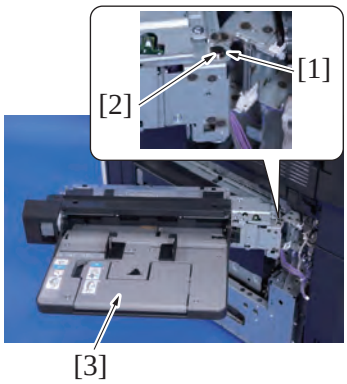
5.3.3 Manual bypass tray unit

1. Remove the manual bypass tray rear cover.
   G.5.2.26 Manual bypass tray rear cover
2. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2

3. Disconnect two connectors [1], and remove the harness from two wire saddles [2] and the edge cover [3].



4. Open the manual bypass tray.

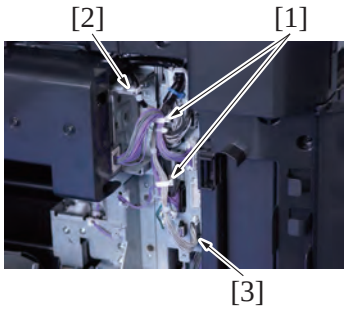


5. Remove the E-ring [1].
6. Remove the shaft [2] of the hinge section from bottom and remove the manual bypass tray unit [3].

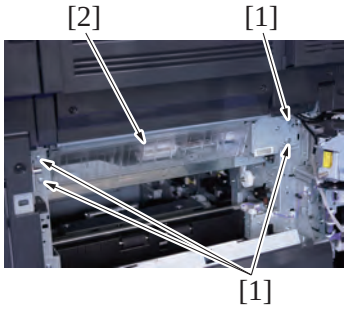
7. To reinstall, reverse the order of removal.

5.3.4 Tray 1 paper feed unit

1. Slide out the tray 1.
2. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
3. Remove the tray 2 paper feed unit.
   G.5.3.5 Tray 2 paper feed unit



4. Remove the harness from two wire saddles [1] and the edge cover [2], and disconnect the connector [3].

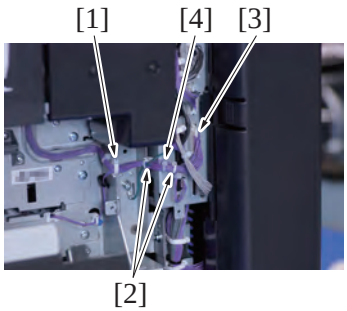


5. Remove four screws [1] and remove the tray 1 paper feed unit [2] while the right upper door is opened.

6. To reinstall, reverse the order of removal.

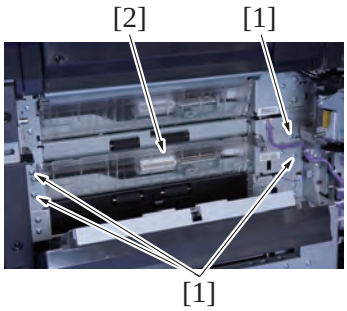
5.3.5 Tray 2 paper feed unit

1. Slide out the tray 2.
2. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
3. Open the lower right door.



4. Remove the harness from the edge cover [1] and two wire saddles [2], and disconnect the connector [3].
   NOTE
   - **Route the harness so the cable tie of the harness [4] will be in the position indicated in the figure when installing.**

5. Open the manual bypass tray door.



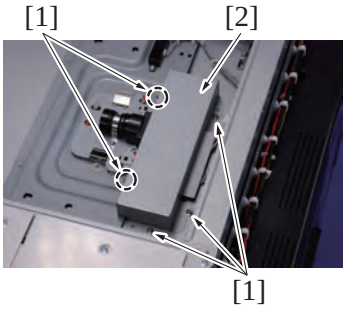
6. Remove four screws [1] and remove the tray 2 paper feed unit [2].

7. To reinstall, reverse the order of removal.

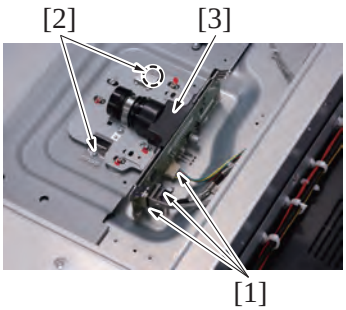
5.3.6 CCD unit

(1) Remove procedure

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner right cover.
   G.5.2.16 Scanner right cover
3. Remove the original glass.
   G.5.2.21 Original glass

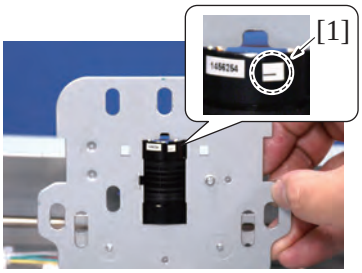


4. Remove five screws [1], and remove the CCD board protective shield [2].

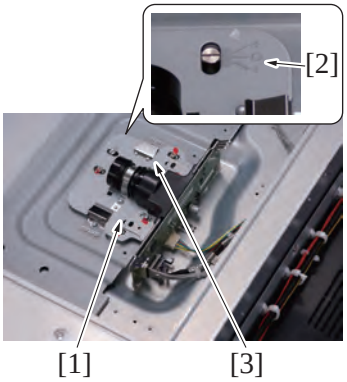


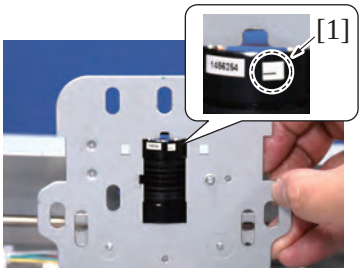
5. Disconnect three connectors [1].
6. Remove two screws [2] and remove the CCD unit [3].

(2) Reinstall procedure



1. Check the mark [1] on lens of the CCD unit.
   NOTE
   - **The mark is be "-", "0", or "+".**





2. Install the CCD unit [1] to the main body.
3. Set the scale [2] of the CCD unit to the same position as the mark checked on step 1, and secure it with two screws.
   NOTE
   - **When installing blade springs, be sure to install the blade spring [3] at first.**

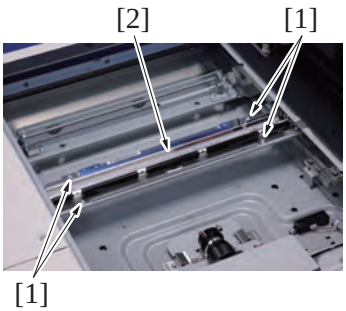
4. To reinstall, reverse the order of removal.
5. Turn ON the main power switch.
6. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.] adjustment, and if the result is out of specification, adjust by loosening the mounting screw of the CCD unit and moving the CCD unit toward the sub scanning direction.
   NOTE
   - **Hold the CCD unit by hand when moving it. NEVER use a screwdriver or similar tool to tap to move it, as a varied distance between the CCD sensor and lens results.**
   - **Turn OFF the setting of the [System 2] -> [CCD Calibration] and [Line Mag Setting] in the Service Mode when the CCD unit is replaced.**

7. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge]
8. Carry out the [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge]

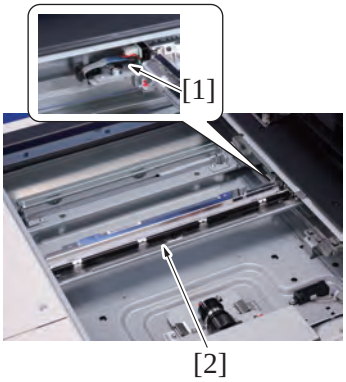
5.3.7 LED exposure unit

(1) Remove procedure

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner right cover.
   G.5.2.16 Scanner right cover
3. Remove the original glass.
   G.5.2.21 Original glass



4. Remove four screws [1] of the LED exposure unit [2].

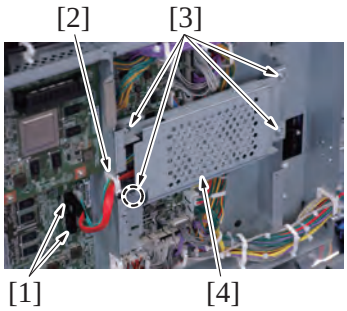


5. Disconnect the flat cable [1], and remove the LED exposure unit [2].

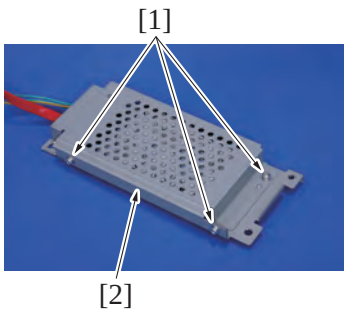
6. To reinstall, reverse the order of removal.

5.3.8 Hard disk (A) HDD(A)

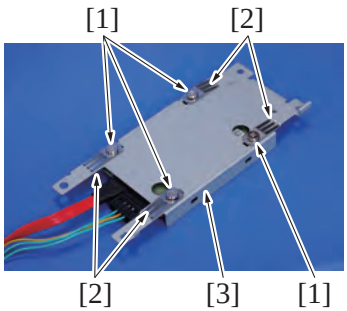
1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
3. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2



4. Disconnect two connectors [1].
5. Remove the harness from the edge cover [2].
6. Remove four screws [3] and remove the hard disk assy [4].

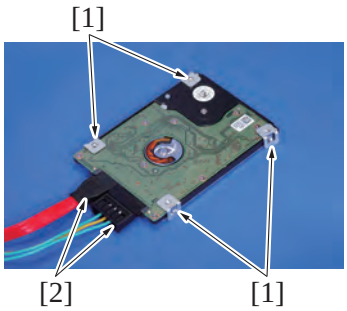


7. Remove three screws [1] and remove the plate [2].



8. Remove four screws [1] and four blade spring [2], and remove the plate [3].

9. Remove four plates [1] and disconnect two connectors [2].



10. To reinstall, reverse the order of removal.

NOTE

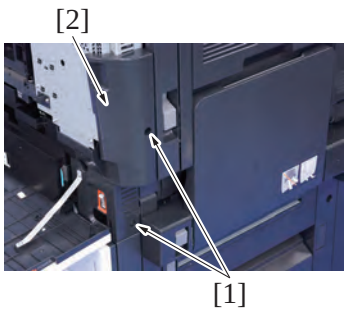
Perform following settings when the hard disc (A) is replaced.

1. **Perform the logical format of the hard disc with service mode.**
   [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format]
2. **If the HDD lock password function was used, perform the setting of the HDD lock password again with the administrator settings.**
   [Administrator Settings] -> [Security Settings] -> [Storage Management Settings] -> [HDD Lock Password]
3. **Installing the firmware.**
4. **Reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts with the install data function under the service mode.**
   [Service Mode] -> [System 2] -> [Install Data]

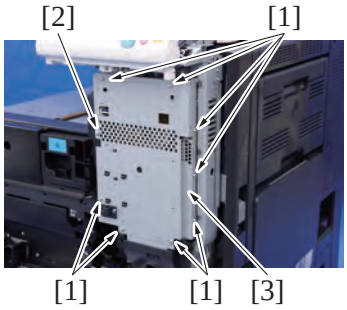
5.3.9 IH coil (IHC)

1. Remove the fusing unit.
   F.6.11.1 Replacing the fusing unit
2. Remove the right front cover/1.
   G.5.2.10 Right front cover/1
3. Remove the right front cover/2.
   G.5.2.11 Right front cover/2

4. Remove two screws [1] and remove the cover [2].

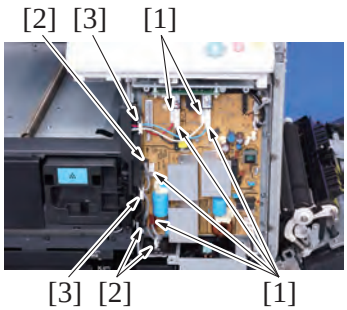


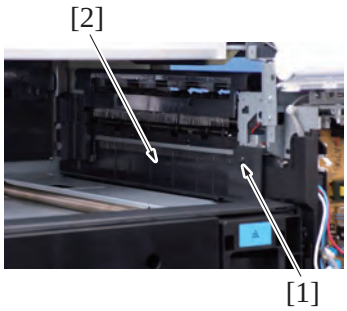
5. Remove eight screws [1] and the screw [2], and remove the IH power supply unit protective shield [3].



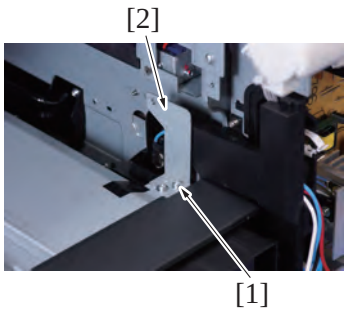
6. Disconnect six solderless terminals [1].
   NOTE
   - **Connect each terminal to the appropriate position following the instruction in the illustration described in the IH magnetic erasing board when installing.**

7. Remove the cable from three wire saddles [2] and two edge covers [3].

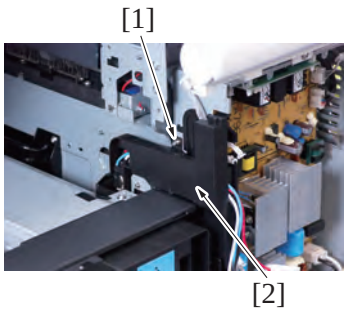




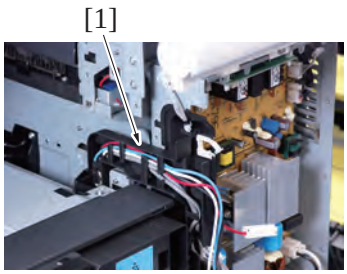
8. Remove the screw [1] and remove the paper exit right cover [2].



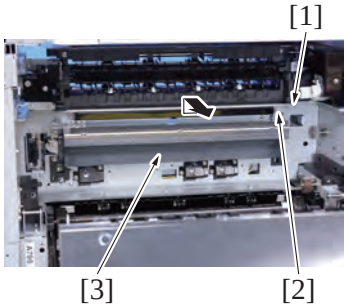
9. Remove the screw [1], and remove the plate [2].



10. Remove the screw [1], and remove the harness guide [2].



11. Evacuate the harness from the harness guide [1].

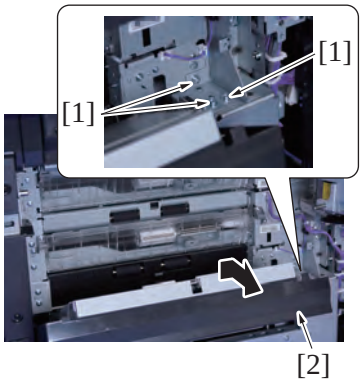


12. Remove the screw [1], and remove the ground terminal [2].
13. Unfix the IH coil [3] in the procedure described in the figure.
14. Remove the IH coil [3] while pulling on the harness.

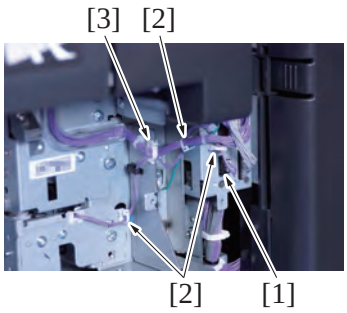
15. To reinstall, reverse the order of removal.

5.3.10 Intermediate transport roller assy

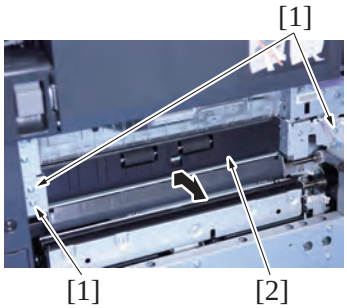
1. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
2. Open the lower right door.



3. Remove three screws [1] and remove the lower right door [2] by sliding it to the direction indicated in the figure.



4. Disconnect the connector [1] and remove the harness from three wire saddles [2] and the edge cover [3].



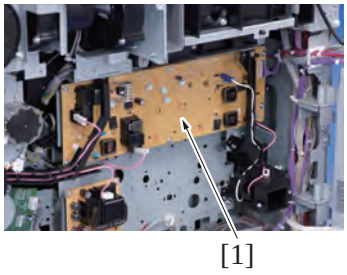
5. Remove three screws [1] and remove the intermediate transport roller assy [2] by sliding it to the direction indicated in the figure.

6. To reinstall, reverse the order of removal.

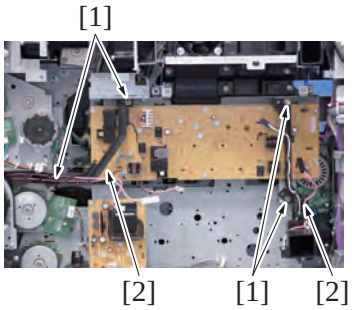
5.3.11 Main drive unit

1. Remove the paper exit option.
   G.7.5.13 Relay unit (FS-537/FS-537SD)
   G.7.11.7 Relay unit (FS-536/FS-536SD)
   G.7.18.1 Output tray (OT-508)
2. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
3. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
4. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
5. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
6. Open the PWB box.
   G.5.4.12 How to open the PWB box
7. Remove the transfer belt motor.
   G.5.5.1 Transfer belt motor (M1)
8. Remove the PC motor/K.
   G.5.5.11 PC motor/K (M18)
9. Remove the developing motor/K.
   G.5.5.12 Developing motor/K (M19)

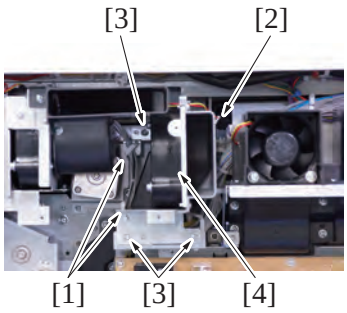
10. Disconnect all the connectors on the high voltage unit/2 [1].



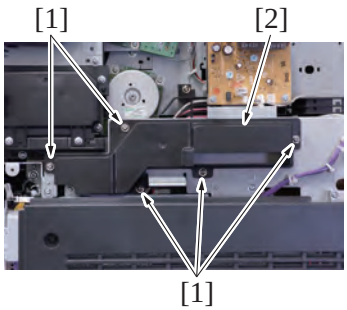
11. Remove four screws [1] and remove two harness guides [2].



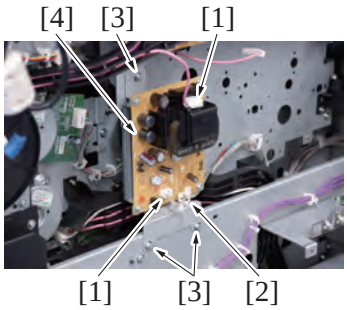
12. Remove the harness from two wire saddles [1].
13. Disconnect the connector [2], remove three screws [3], and remove the IH coil cooling fan assy [4].



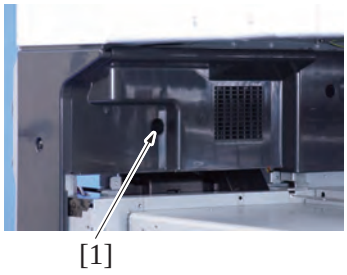
14. Remove five screws [1] and remove the cover [2].



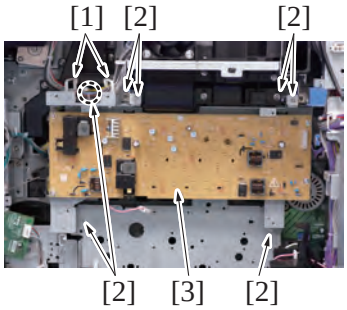
15. Disconnect two connectors [1] and remove the harness from the wire saddle [2].
16. Remove three screws [3] and remove the high voltage unit/3 assy [4].



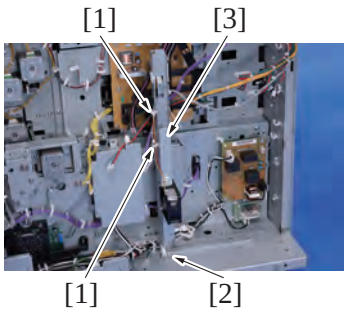
17. Remove the screw [1].



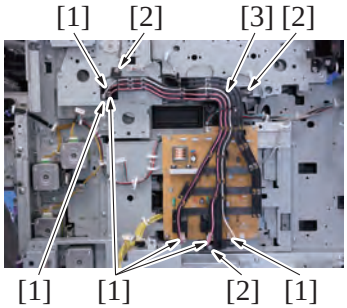
18. Remove the harness from two wire saddles [1].
19. Remove seven screws [2] and remove the high voltage unit/2 assy [3].



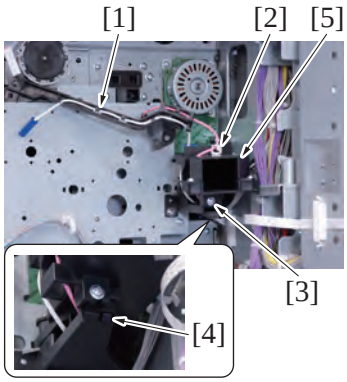
20. Remove the harness from two wire saddles [1].
21. Remove the screw [2] and remove the DC power supply cooling fan assy [3].



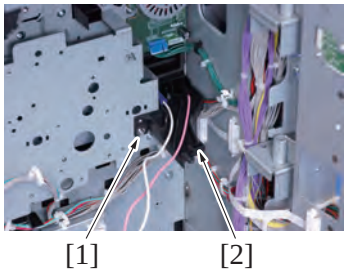
22. Disconnect six solderless terminals [1].
23. Remove three screws [2] and remove the harness guide [3].



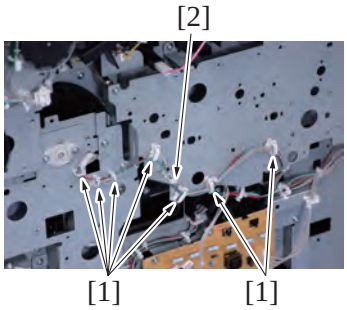
24. Remove the harness from the harness guide [1].
25. Remove the harness from the wire saddle [2].
26. Remove the screw [3].
27. Unhook the tab [4] and remove the duct [5].



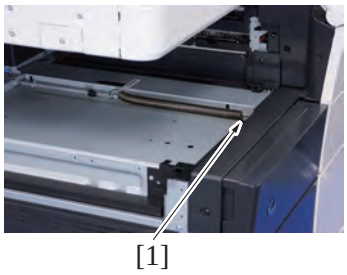
28. Remove the screw [1], and remove the harness guide [2].



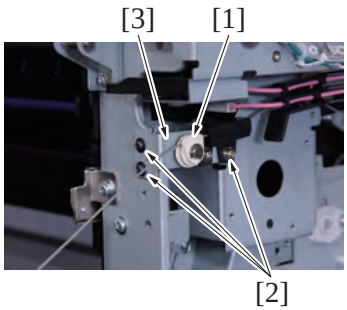
29. Remove the harness from seven wire saddles [1] and the edge cover [2].



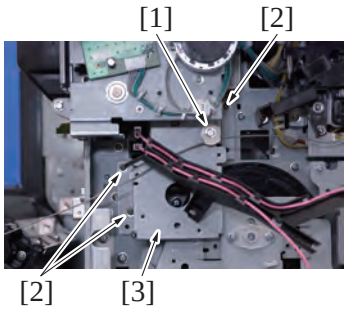
30. Remove the spring [1].

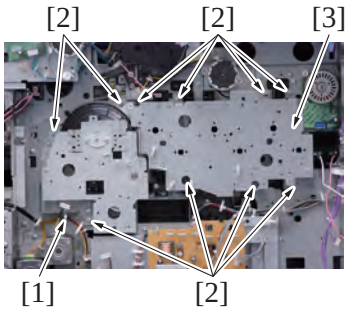


31. Remove the wire from the pulley [1].
32. Remove three screws [2] and remove the pulley assy [3].



33. Remove the wire from the pulley [1].
34. Remove three screws [2] and remove the gear assy [3].



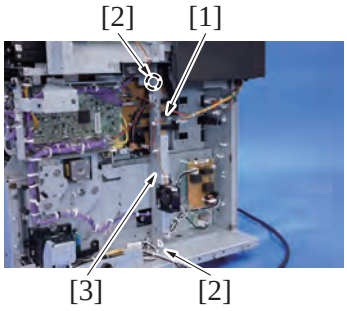


35. Remove the harness from the wire saddle [1].
36. Remove 10 screws [2] and remove the main drive unit [3].
NOTE
- **Install the main drive unit [3] while the imaging unit is slightly pulled out.**

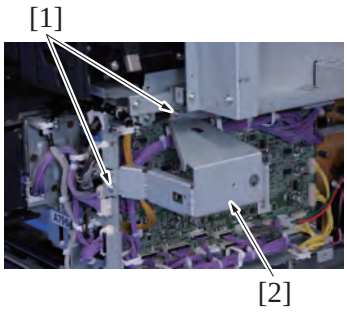
37. To reinstall, reverse the order of removal.

5.3.12 LCC drive unit

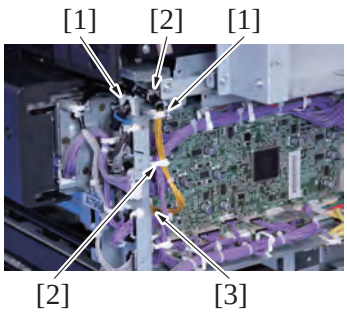
1. Remove the interface cover/2.
G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
4. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
5. Remove the intermediate transport roller assy.
G.5.3.10 Intermediate transport roller assy
6. Remove the lower rear cover.
G.5.2.29 Lower rear cover
7. Remove the upper left cover.
G.5.2.12 Upper left cover
8. Remove the lower left cover.
G.5.2.13 Lower left cover
9. Remove the DC power supply unit.
G.5.4.4 DC power supply (DCPU)
10. Slide out the tray 4.



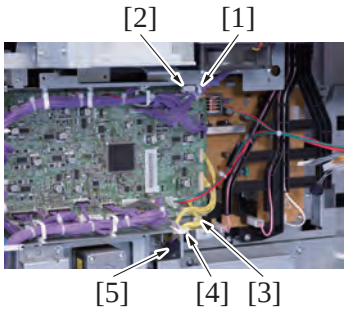
11. Disconnect the connector [1].
12. Remove two screws [2], and remove the DC power supply cooling fan assy [3].



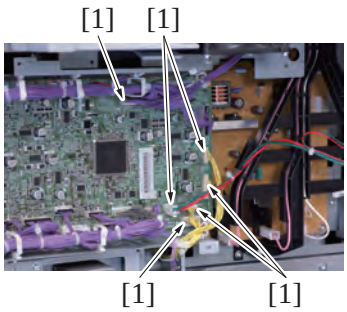
13. Remove two screws [1], and remove the plate [2].



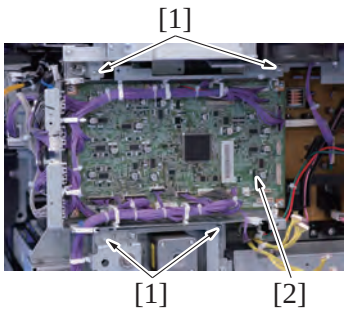
14. Remove the harness from two edge covers [1] and two wire saddles [2].
15. Disconnect the connector [3] (CN10).



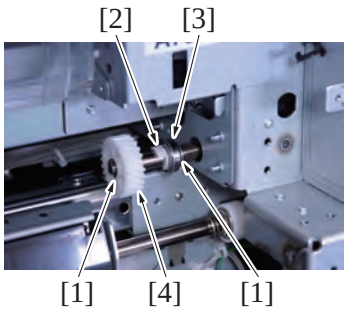
16. Remove the harness from the wire saddle [1], and disconnect the connector [2].
17. Remove the harness from wire saddle [3] and edge cover [4], and disconnect the connector [5].



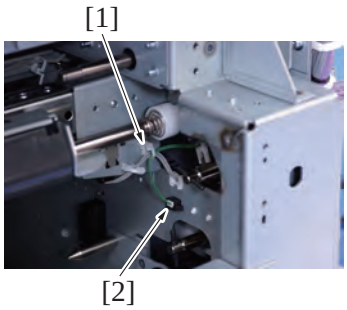
18. Disconnect six connectors [1]. (CN4, CN22, CN23, CN24, CN25, CN26)



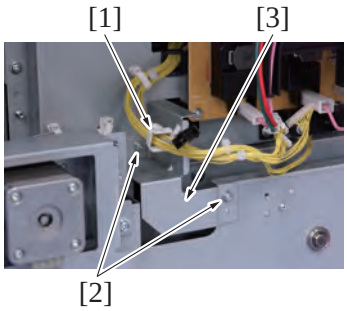
19. Remove four screws [1] and evacuate the paper feed/transport drive board assy [2].



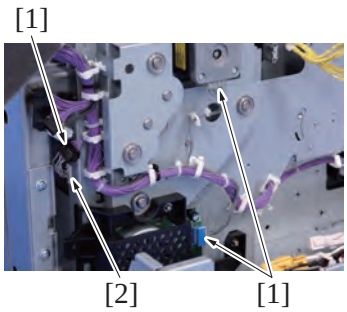
20. Remove two E-rings [1], the C-clip [2], the bearing [3], and the gear [4].



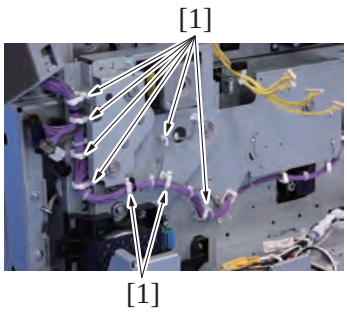
21. Remove the harness from the wire saddle [1], and disconnect the connector [2].



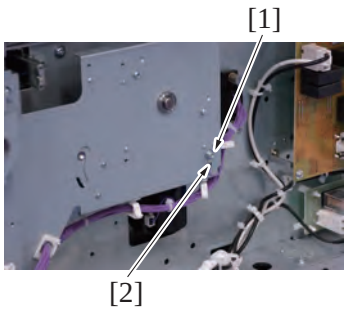
22. Remove the harness from the wire saddle [1].
23. Remove two screws [2] and remove the plate [3].



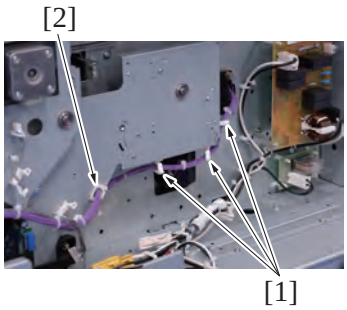
24. Disconnect three connectors [1].
25. Remove the harness from the edge cover [2].



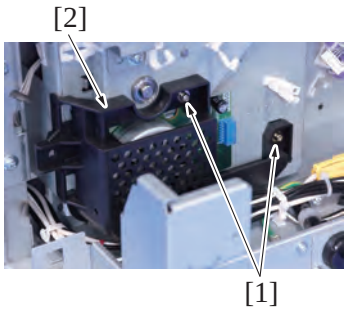
26. Remove the harness from eight wire saddles [1].



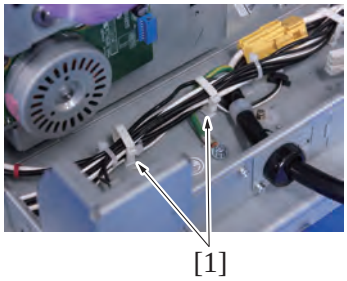
27. Remove the screw [1], and remove the ground terminal [2].



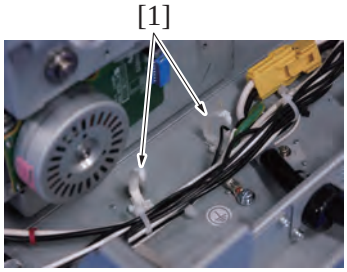
28. Remove the harness from three wire saddles [1] and the edge cover [2].



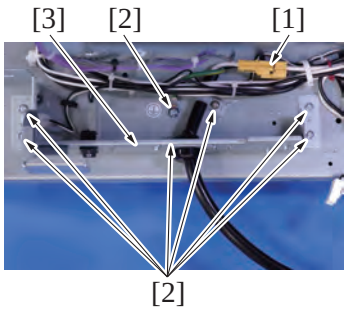
29. Remove two screws [1], and remove the cover [2].



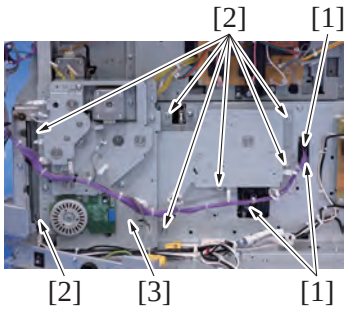
30. Remove the harness from two wire saddles [1].



31. Remove two wire saddles [1].



32. Disconnect the connector [1].
33. Remove seven screws [2] and remove the power code unit [3].
NOTE
- **The installation condition of the power cord, etc., may vary depending on the destination country of the main unit.**



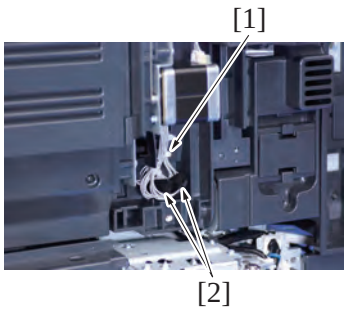
34. Disconnect three connectors [1].
35. Remove seven screws [2] of the LCC drive unit and remove the LCC drive unit [3] while evacuating the harness.

36. To reinstall, reverse the order of removal.

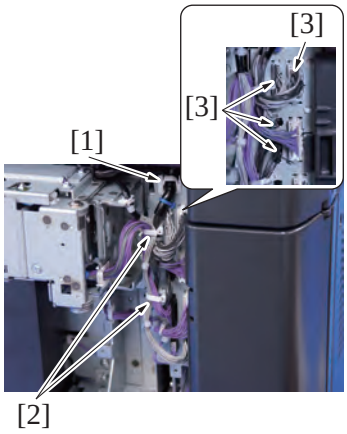
5.3.13 Intermediate transport unit

1. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
2. Remove the manual bypass tray rear cover.
G.5.2.26 Manual bypass tray rear cover
3. Remove the duplex unit cover.

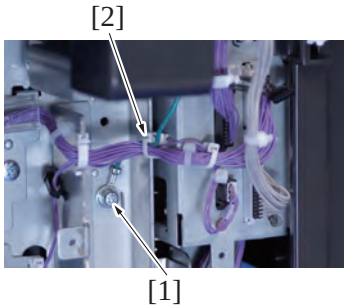
G.5.2.30 Duplex unit cover



4. Remove the harness from the wire saddle [1], and disconnect two connectors [2].

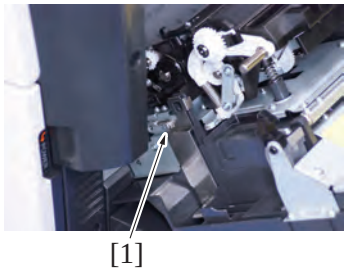


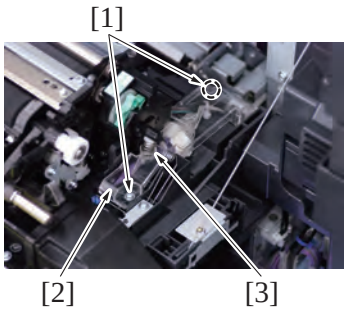
5. Remove the harness from the edge cover [1] and two wire saddles [2].
6. Disconnect four connectors [3].



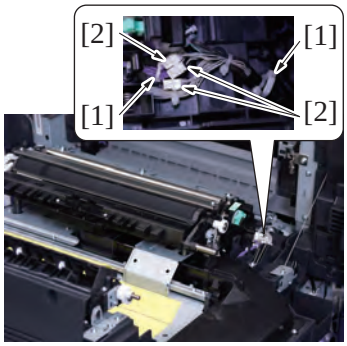
7. Remove the screw [1] and remove the ground wire from the wire saddle [2].

8. Remove the screw [1] and open the upper right door.

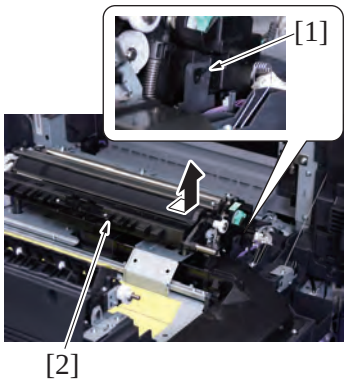




9. Remove two screws [1] and remove the cover [2] and spring assy [3].



10. Remove the harness from two wire saddles [1].
11. Disconnect three connectors [2].



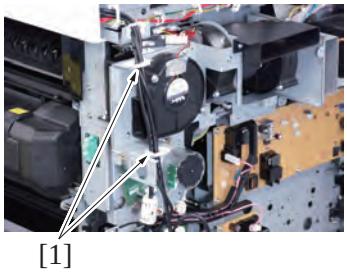
12. Unhook the tab [1] and remove the intermediate transport unit [2].

13. To reinstall, reverse the order of removal.

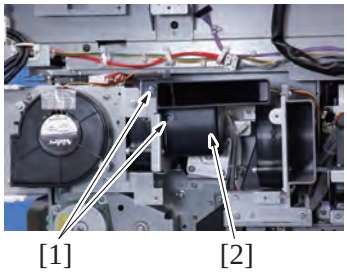
5.3.14 Paper cooling fan assy

1. Remove the ozone filter.
F.6.1.1 Replacing ozone filter
2. Remove the rear right cover/1.
G.5.2.24 Rear right cover/1
3. Remove the scanner rear cover.
G.5.2.15 Scanner rear cover
4. Remove the interface cover/2.
G.5.2.23 Interface cover/2
5. Remove the interface cover/1.
G.5.2.22 Interface cover/1
6. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
7. Remove the toner filter.
F.6.1.2 Replacing the toner filter
8. Remove the upper rear cover/2.
G.5.2.28 Upper rear cover /2
9. Open the PWB box.
G.5.4.12 How to open the PWB box

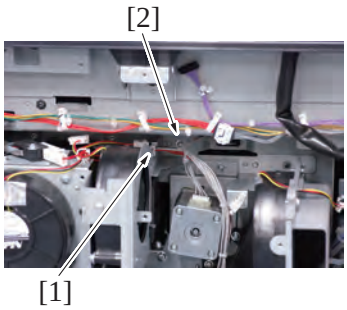
10. Remove the harness from two wire saddles [1].



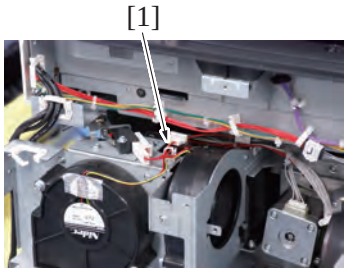
11. Remove two screws [1], and remove the duct [2].



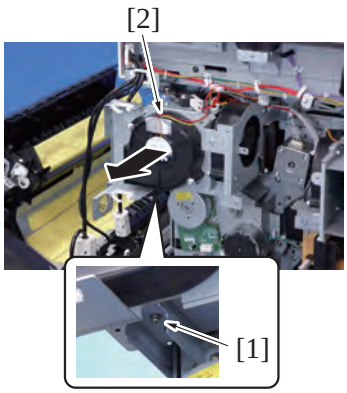
12. Remove the harness from the edge cover [1].
13. Remove the screw [2].



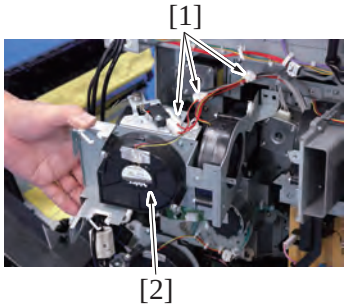
14. Remove the harness from the wire saddle [1].



15. Remove the screw [1] and pull out the paper cooling fan assy [2].



16. Disconnect three connectors [1] and remove the paper cooling fan assy [2].

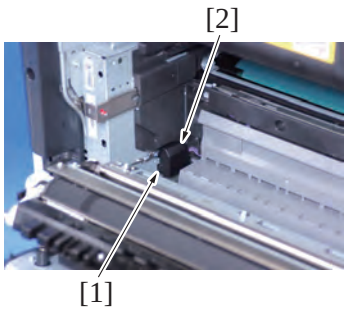


17. To reinstall, reverse the order of removal.

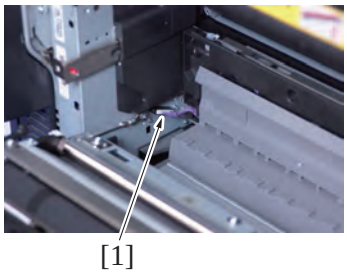
5.3.15 IDC sensor unit

1. Open the upper right door.
2. Remove the transfer belt unit.

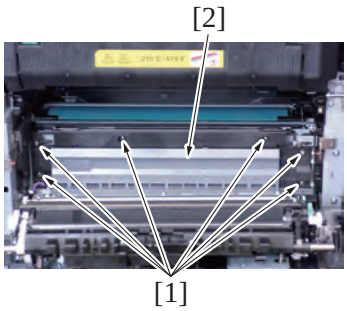
F.6.5.1 Replacing the transfer belt unit



3. Remove the tab [1] and remove the connector cover [2].



4. Disconnect the connector [1].



5. Remove six screws [1], and remove the sensor unit [2].

6. To reinstall, reverse the order of removal.

5.3.16 Pressure Roller Assy Replacement (bizhub 808/758 except for Taiwan only)

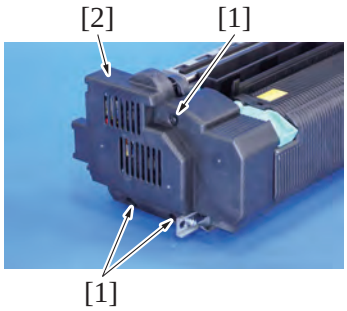
CAUTION

- **The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area.
  Before replacement operations, make sure that more than 20 minutes have elapsed since the main power switch was turned off.**
- **Never use procedures other than the ones described below to disassemble fusing unit parts.**

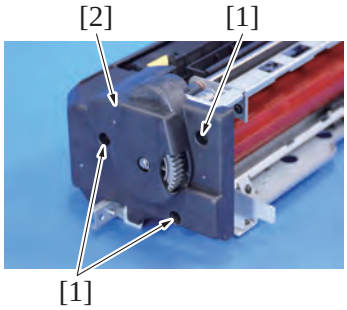
NOTE

- **Replace the pressure roller assy only when the pressure roller is causing an abnormal image.**
- **The pressure roller assy of bizhub PRO 958, bizhub 958, and bizhub 758 (for TAIWAN) cannot be replaced because they have a different mechanism (replacement not required). For details on the fusing mechanism, see "O.15.1 Configuration".**

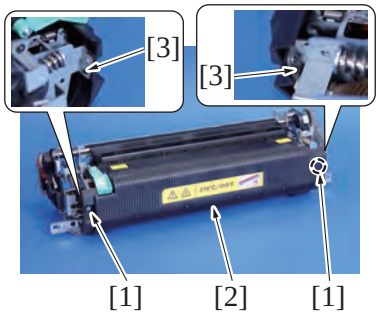
1. Remove the fusing unit.
   F.6.11.1 Replacing the fusing unit



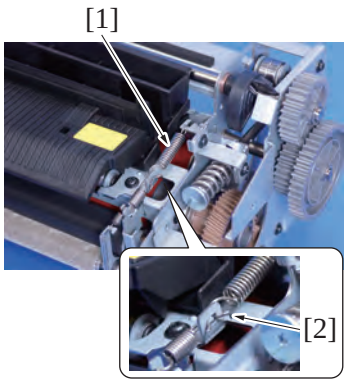
2. Remove three screws [1], and remove the cover [2].



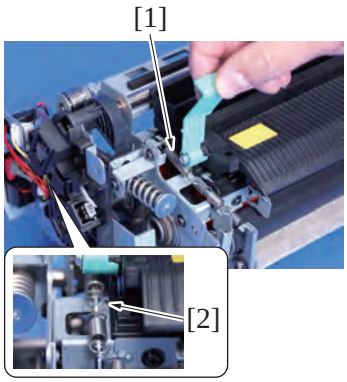
3. Remove three screws [1], and remove the cover [2].



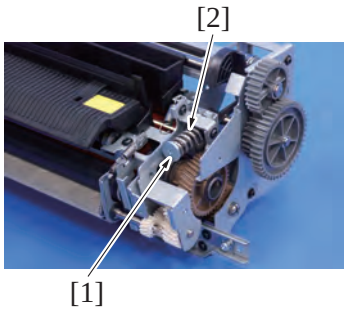
4. Remove two screws [1], and remove the pressure roller cover [2].
NOTE
- **When attaching the pressure roller cover [2], make sure that the boss [3] is inside the positioning hole.**



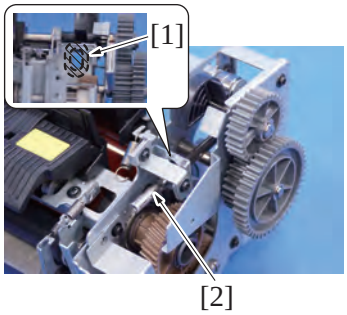
5. Remove the spring [1].
NOTE
- **Remove the removal prevention bend [2] on the heating roller assy side.**



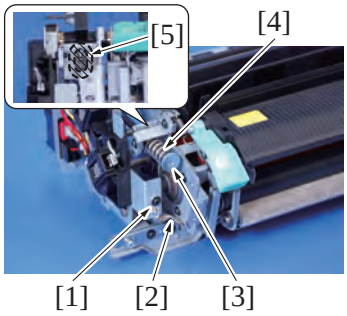
6. Remove the spring [1].
NOTE
- **Remove the removal prevention bend [2] on the heating roller assy side.**



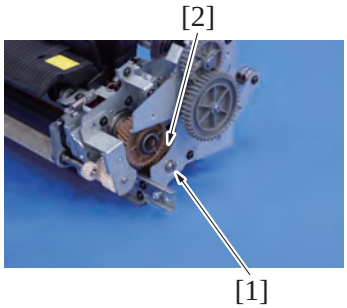
7. Remove the screw [1] and spring [2].



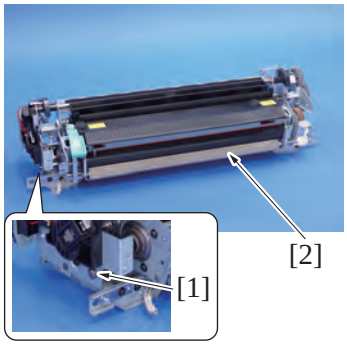
8. Pull out the shaft [2] from the long hole [1].
NOTE
- **Apply grease on the long hole [1] when replacing the pressure roller assy.**
- **Be careful not to apply too much grease. Also, be careful not to let grease stick to the drive gear, etc.**
- **If grease gets attached to the drive gear, wipe it off clean. (Grease that gets attached to the gear may cause the gear to get displaced.)**



9. Remove the screw [1], and remove the earth wire [2].
10. Remove the screw [3] and spring [4].
NOTE
- **Apply grease on the long hole [5] when replacing the pressure roller assy.**
- **Be careful not to apply too much grease. Also, be careful not to let grease stick to the drive gear, etc.**
- **If grease gets attached to the drive gear, wipe it off clean. (Grease that gets attached to the gear may cause the gear to get displaced.)**



11. Remove the shaft [1] and gear [2].



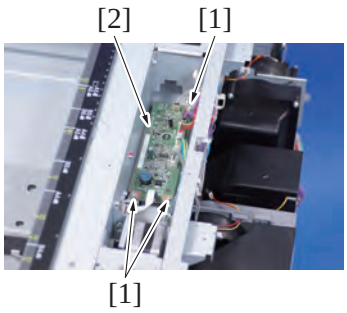
12. Remove the shaft [1], then remove the pressure roller assy [2].
NOTE
- **When installing the shaft [1], make sure that it is fully inserted.**

13. To reinstall, reverse the order of removal.
NOTE
- **Refer to the notes of each disassembly procedure for pointers during installation.**

5.4 Disassembly/reassembly procedure (Boards)

5.4.1 Scanner drive board (SCDB)

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner upper rear cover/2.
   G.5.2.18 Scanner upper rear cover/2
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
5. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
6. Remove the dual scan document feeder.
   G.6.2.3 Dual scan document feeder
7. Remove the scanner upper rear cover/1.
   G.5.2.17 Scanner upper rear cover/1

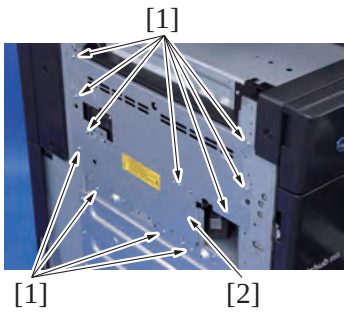


8. Disconnect all the connectors and the flat cables on the scanner drive board.
9. Remove three screws [1], and remove the scanner drive board [2].

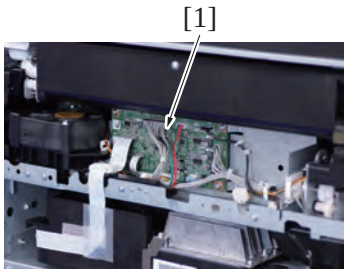
10. To reinstall, reverse the order of removal.

5.4.2 PH relay board (PHRYB)

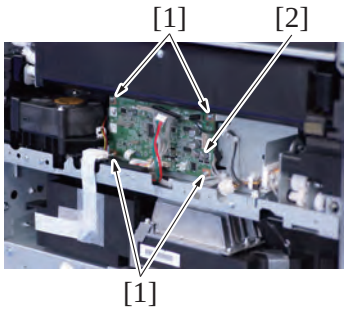
1. Remove the upper left cover.
   G.5.2.12 Upper left cover
2. Remove the lower left cover.
   G.5.2.13 Lower left cover
3. Remove the PH cooling fan.
   G.5.7.11 PH cooling fan (FM14)



4. Remove 11 screws [1] and remove the PH unit protective sheet [2].



5. Remove all the connectors and flat cables on the PH relay board [1].

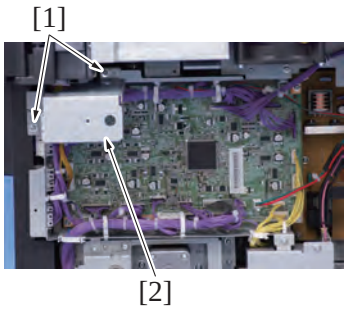


6. Remove four screws [1] and remove the PH relay board [2].

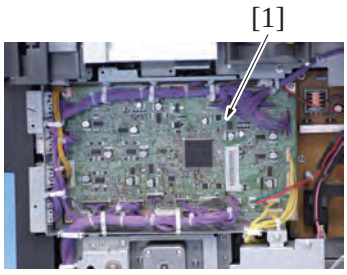
7. To reinstall, reverse the order of removal.

5.4.3 Paper feed/transport drive board (PFTDB)

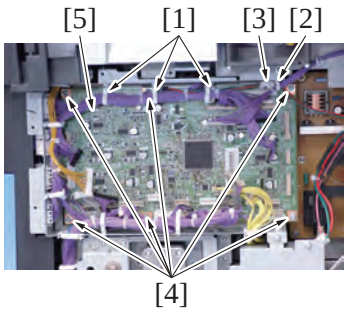
1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
3. Remove the interface cover/2.
   G.5.2.23 Interface cover/2



4. Remove two screws [1], and remove the plate [2].



5. Disconnect all the connectors on the paper feed/transport drive board [1].

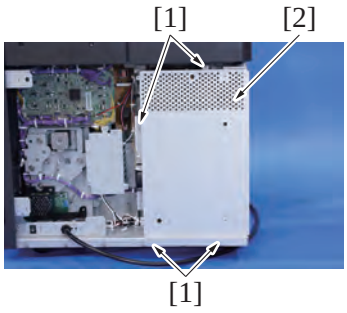


6. Remove three wire saddles [1].
7. Remove the harness from the wire saddle [2], and disconnect the connector [3].
8. Remove six screws [4] and remove the paper feed/transport drive board [5].

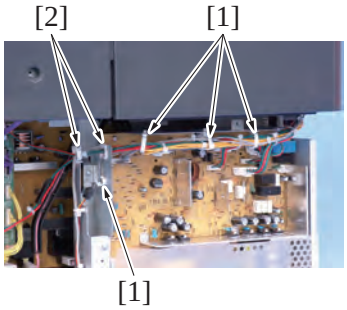
9. To reinstall, reverse the order of removal.

5.4.4 DC power supply (DCPU)

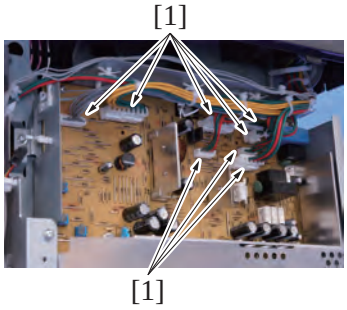
1. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
2. Remove the lower left cover.
   G.5.2.13 Lower left cover



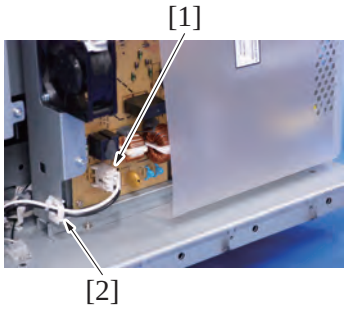
3. Remove four screws [1] and remove the DC power supply unit protective shield [2].



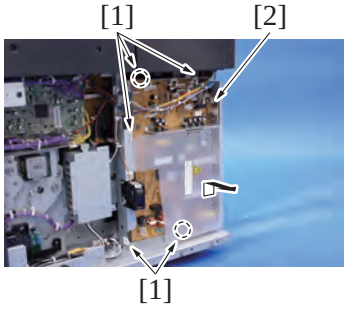
4. Remove the harness from four wire saddles [1] and two edge covers [2].



5. Disconnect eight connectors [1] and evacuate the harness.



6. Disconnect the connector [1], and remove the harness from the edge cover [2].



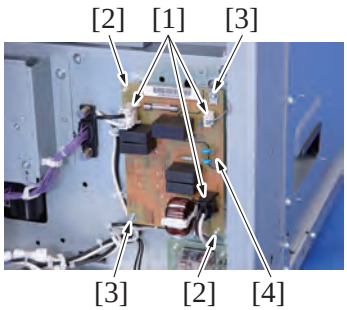
7. Remove five screws [1], evacuate the harness, and remove the DC power supply [2] while pulling it upward.

8. To reinstall, reverse the order of removal.

5.4.5 Noise filter (NF1)

1. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
2. Remove the lower left cover.
   G.5.2.13 Lower left cover
3. Remove the DC power supply unit.

G.5.4.4 DC power supply (DCPU)

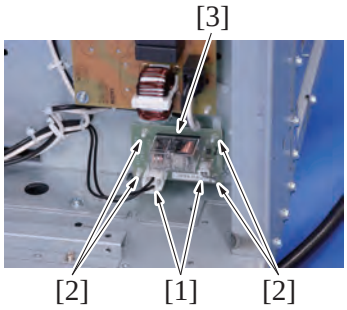


4. Disconnect three connectors [1].
5. Remove two board supports [2] and two screws [3], and remove the noise filter [4].

6. To reinstall, reverse the order of removal.

5.4.6 Dehumidifier drive board (DEDB)

1. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
2. Remove the lower left cover.
   G.5.2.13 Lower left cover
3. Remove the DC power supply unit.
   G.5.4.4 DC power supply (DCPU)

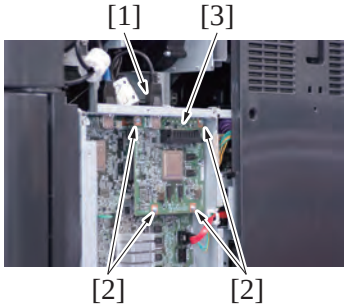


4. Disconnect two connectors [1].
5. Remove four board supports [2] and remove the dehumidifier drive board [3].

6. To reinstall, reverse the order of removal.

5.4.7 Dual scan image processing board (DSIPB)

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1



2. Disconnect the connector [1].
3. Remove four screws [2] and remove the dual scan image processing board [3].

4. To reinstall, reverse the order of removal.

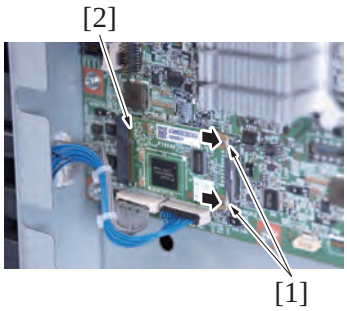
5.4.8 eMMC board (eMMC)

NOTE

- **Never use the combination of the used eMMC board removed from another machine and the original MFP board. This combination causes corruption of stored data. Note that the combination of the original eMMC board and the used MFP board removed from another machine also causes the same problem.**
- **Do not replace the eMMC board, the MFP board and the Back up board to new ones at the same time.**

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1

2. Release two tabs [1] and remove the eMMC board [2].



3. To reinstall, reverse the order of removal.

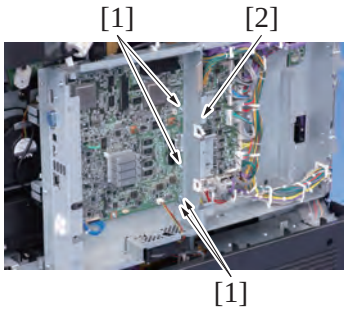
5.4.9 MFP board (MFPB)

NOTE

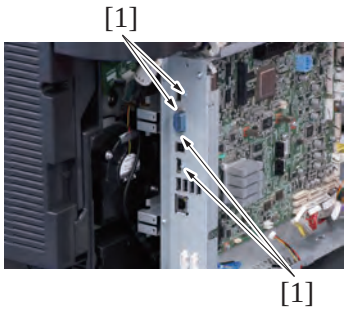
- **Never use the combination of the used MFP board removed from another machine and the original eMMC board. This combination causes corruption of stored data. Note that the combination of the original MFP board and the used eMMC board removed from another machine also causes the same problem.**
- **Do not replace the MFP board, the eMMC board and the Back up board with new ones at the same time.**

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Remove the hard disk assy.
   G.5.3.8 Hard disk (A) HDD(A)
6. Remove the eMMC board.
   G.5.4.8 eMMC board (eMMC)
7. Remove the DSC board/2.
   G.7.19.2 DSC board/2 (DSCB/2) (SC-508)
8. Remove the dual scan image processing board.
   G.5.4.7 Dual scan image processing board (DSIPB)
9. Remove the DSC board/1.
   G.7.19.1 DSC board/1 (DSCB/1) (SC-508)

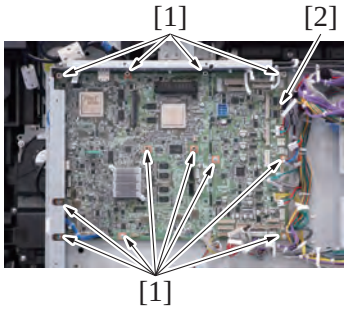
10. Remove four screws [1] and remove the plate [2].



11. Remove all connectors and flat cables on the MFP board.



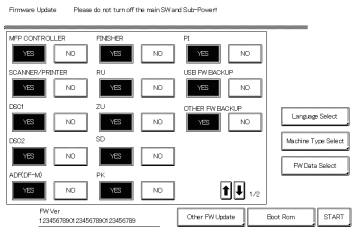
12. Remove four screws [1].



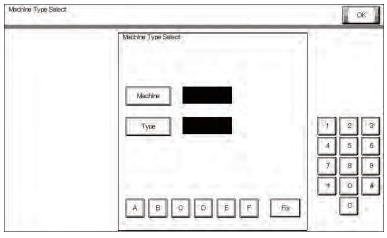
13. Remove 12 screws [1] and remove the MFP board [2].

14. To reinstall, reverse the order of removal.

15. Once the replacement is completed, insert the USB memory with the firmware into the service port, and turn ON the main power switch while pressing the [Stop] key.



16. The firmware update screen is displayed after approximately 2 minutes, so touch [Machine Type Select].



17. Set [Machine] and [Type], and press [Fix].

NOTE

- **Confirm the serial number of the product, and select [Machine] and [Type] matching the first four digits of the serial number.**

First four digits of the serial number	A796	A8KN	A795 (Except Taiwan)	A795 (For Taiwan)
[Machine]	8	8	8	8
[Type]	A	7	8	9

- **The trouble code C-C164 or the error message "Reset the HDD lock password." is displayed if it is not correctly set.**

18. Install the firmware.
19. Touch [END].
20. Turn OFF the main power switch and remove the USB memory.

21. Wait for 10 seconds, turn ON the main power switch, and wait two minutes for the machine to completely boot.

22. The board information recovery screen is displayed. (The board information recovery screen is normal operation when replacing the MFPB with a NEW MFPB.)
23. Touch [Recover Data] and touch [Yes].

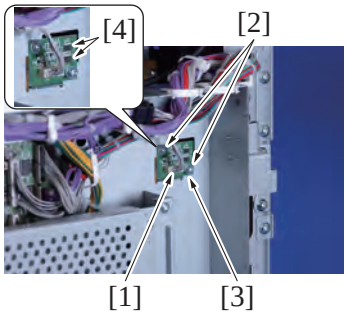
24. Turn OFF the main power switch, wait ten seconds, then turn ON the main power, after “Turn the main switch OFF and ON.” message is appeared.
25. Wait approximately two minutes for the main body to complete the boot.
26. Press the following keys in this order.
    - Stop -> 1 -> 1 -> 4 -> 4 -> Clear
27. Enter time zone year, month, day, hour, and minute, in that order, from 10-key pad.
28. Turn OFF the main power, and turn ON after ten seconds.

5.4.10 Back up board/1 (ERB/1)

NOTE

- **Never use the combination of the used Back up board removed from another machine and the original MFP board. This combination causes corruption of stored data. Note that the combination of the original Back up board and the used MFP board removed from another machine also causes the same problem.**
- **Do not replace the Back up board, the eMMC board and the MFP board to new ones at the same time.**

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2



3. Disconnect two connectors [1].
4. Remove two screws [2] and remove the Back up board/1 [3].
   NOTE
   - **Make sure not to mistake with the Back up board/2 when installing the Back up board/1.**
   - **The Back up board/1 has two chips [4] on it.**

   NOTE
   Since the adjustment value of the developing unit will be cleared when the Back up board/1 is replaced with a new one, be sure to replace the developing unit with a new one.
5. To reinstall, reverse the order of removal.

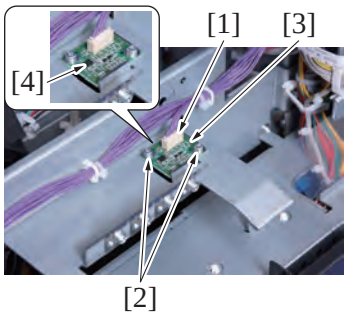
5.4.11 Back up board/2 (ERB/2)

NOTE

- **Never use the combination of the used Back up board removed from another machine and the original MFP board. This combination causes corruption of stored data. Note that the combination of the original Back up board and the used MFP board removed from another machine also causes the same problem.**
- **Do not replace the Back up board, the eMMC board and the MFP board to new ones at the same time.**

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the PWB box.

G.5.4.12 How to open the PWB box



6. Disconnect the connector [1].
7. Remove two screws [2] and remove the Back up board/2 [3].

NOTE
- **Make sure not to mistake with the Back up board/1 when installing the Back up board/2.**
- **The Back up board/2 has one chip [4] on it.**

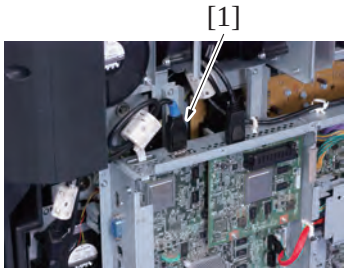
NOTE
Since the counter will be cleared when the Back up board/2 is replaced with a new one, replace the following parts with new ones.
When the transfer belt unit and the fusing unit have been replaced with new ones, perform [New Release] in the service mode. When the transfer roller has been replaced with a new one, perform [Counter clear].
- **Developing unit**
- **Drum unit**
- **Transfer belt unit**
- **Fusing unit**
- **Transfer roller**
- **Feed roller, pick-up roller, separation roller (including options)**
- **Ozone filter**
- **Toner Filter**

NOTE
- **When the new Back up board/2 is installed, the error message: "License management error occurred." is displayed. Conduct the i-Option recovery operation.**

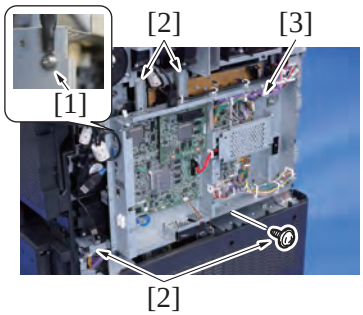
8. To reinstall, reverse the order of removal.

5.4.12 How to open the PWB box

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2



5. Disconnect the connector [1].



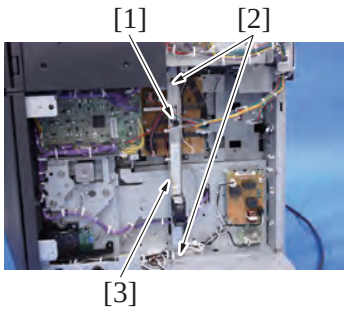
6. Remove the screw [1] and remove the ground wire.
7. Remove four screws [2] and open the board box [3].

8. To reinstall, reverse the order of removal.

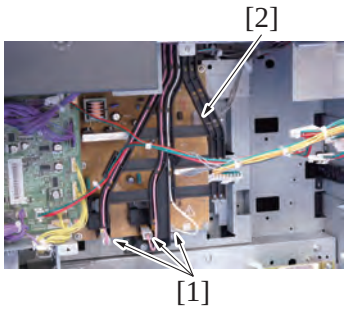
5.4.13 High voltage unit/1 (HV1)

1. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
2. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
3. Remove the lower left cover.
   G.5.2.13 Lower left cover
4. Remove the DC power supply unit.

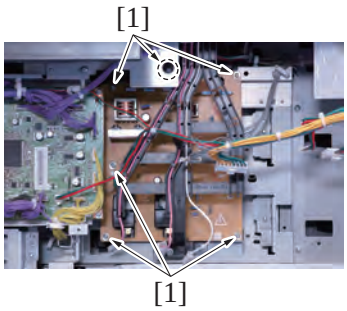
G.5.4.4 DC power supply (DCPU)



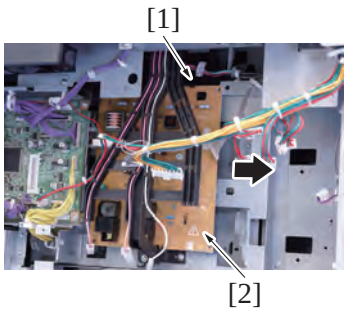
5. Disconnect the connector [1].
6. Remove two screws [2] and remove the DC power supply cooling fan assy [3].



7. Disconnect three solderless terminals [1] and the connector [2].



8. Remove six screws [1].



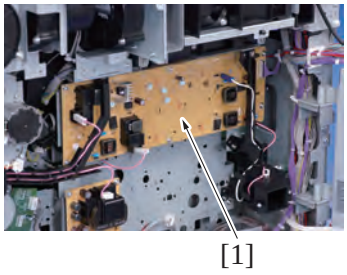
9. Unhook the tab [1], and remove the high voltage unit/1 [2].

10. To reinstall, reverse the order of removal.

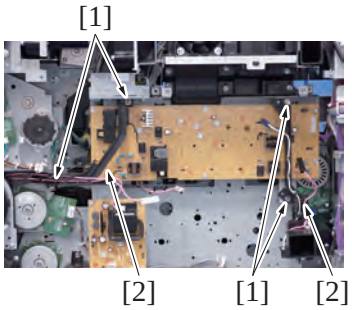
5.4.14 High voltage unit/2 (HV2)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box

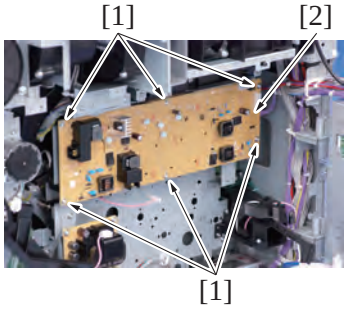
6. Disconnect all the connectors on the high voltage unit/2 [1].



7. Remove four screws [1] and remove two harness guides [2].



8. Remove six screws [1] and remove the high voltage unit/2 [2].

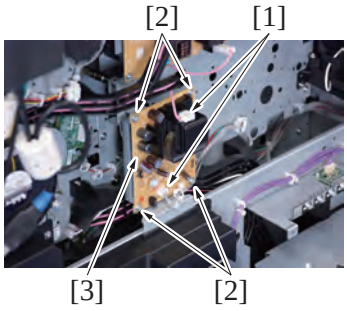


9. To reinstall, reverse the order of removal.

5.4.15 High voltage unit/3 (HV3)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box

6. Disconnect two connectors [1].
7. Remove four screws [2] and remove the high voltage unit/3 [3].

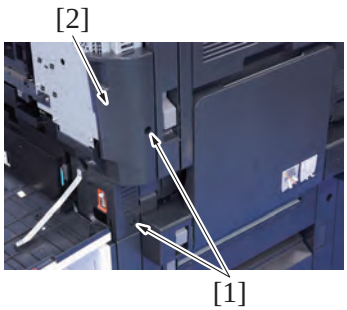


8. To reinstall, reverse the order of removal.

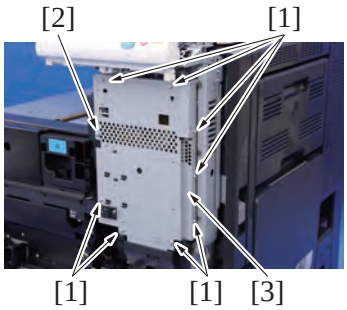
5.4.16 IH power supply unit (IHPU)

1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel lower cover/1.
   G.5.2.5 Control panel lower cover/1

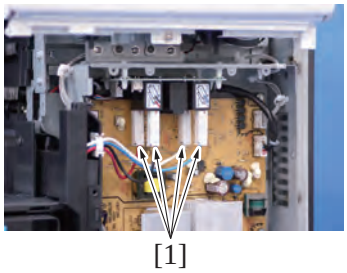
4. Remove the right front cover/1.
G.5.2.10 Right front cover/1
5. Remove the upper front door.
G.5.2.1 Upper front door
6. Remove the right front cover/2.
G.5.2.11 Right front cover/2



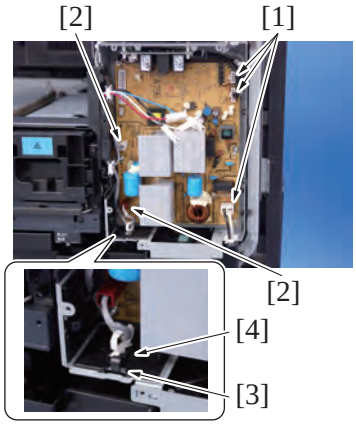
7. Remove two screws [1] and remove the cover [2].



8. Remove eight screws [1] and the screw [2], and remove the IH power supply unit protective shield [3].

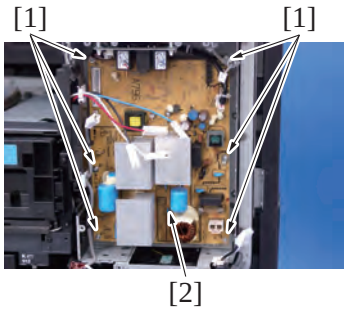


9. Disconnect four solderless terminals [1].



10. Disconnect three connectors [1] and two solderless terminals [2].
11. Disconnect the tab [3] and remove the wire saddle assy [4].

12. Remove six screws [1] and remove the IH power supply unit [2].

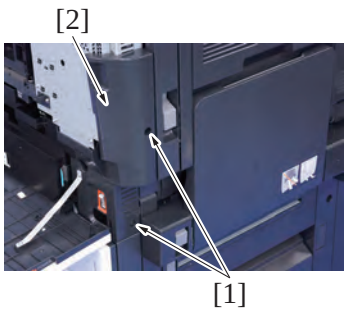


13. To reinstall, reverse the order of removal.
NOTE
- **Once the IH power supply unit is installed, turn ON the main power switch, wait for one minute, and confirm that a trouble code is not displayed.**

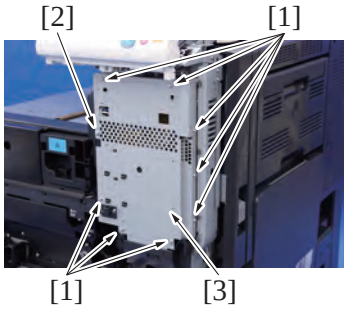
5.4.17 IH magnetic erasing board (IHMEB)

1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel lower cover/1.
   G.5.2.5 Control panel lower cover/1
4. Remove the right front cover/1.
   G.5.2.10 Right front cover/1
5. Remove the upper front door.
   G.5.2.1 Upper front door
6. Remove the right front cover/2.
   G.5.2.11 Right front cover/2

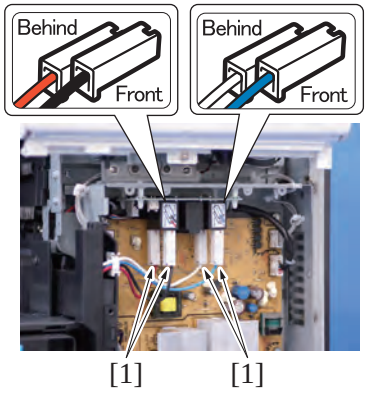
7. Remove two screws [1] and remove the cover [2].

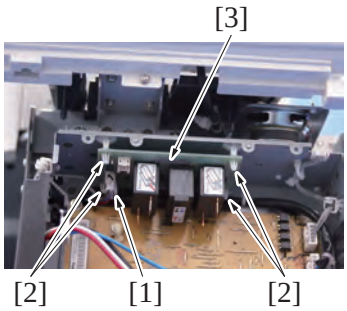


8. Remove eight screws [1] and the screw [2], and remove the IH power supply unit protective shield [3].



9. Disconnect four solderless terminals [1] on the IH magnetic erasing board.
NOTE
- **Connect each terminal to the appropriate position following the instruction in the illustration described in the IH magnetic erasing board when installing.**





10. Disconnect the connector [1].
11. Remove four board supports [2] and remove the IH magnetic erasing board [3].

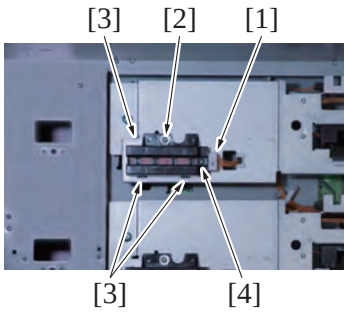
12. To reinstall, reverse the order of removal.

5.4.18 Tray 1 FD paper size board (FDPSB/1), tray 2 FD paper size board (FDPSB/2)

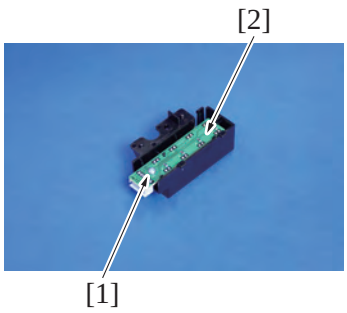
NOTE

- **The tray 1 FD paper size board and the tray 2 FD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 1 FD paper size board.**

1. Remove the tray 1 and tray 2.
G.5.2.31 Tray 1, Tray 2



2. Disconnect the connector [1].
3. Remove the screw [2] and three tabs [3], and remove the tray 1 FD paper size board assy [4].



4. Remove the screw [1] and remove the tray 1 FD paper size board [2].

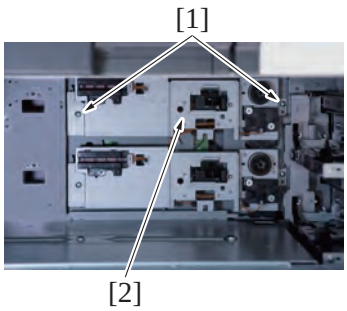
5. To reinstall, reverse the order of removal.

5.4.19 Tray 1 CD paper size board (CDPSB/1), tray 2 CD paper size board (CDPSB/2)

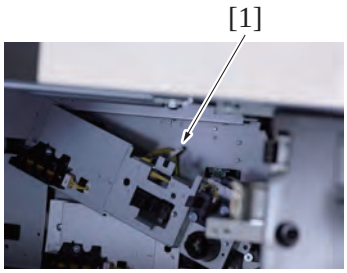
NOTE

- **The tray 1 CD paper size board and the tray 2 CD paper size board are of the same form and mechanism. This procedure shows the steps taken for the tray 1 CD paper size board.**

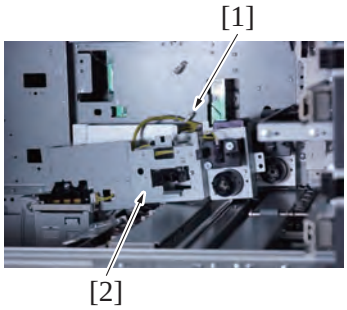
1. Remove the tray 1 and tray 2.
G.5.2.31 Tray 1, Tray 2



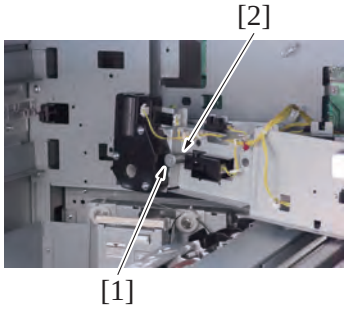
2. Remove two screws [1] and pull out the tray 1 lift-up motor assy [2].



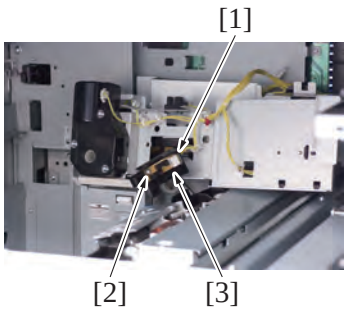
3. Remove the harness from the wire saddle [1].



4. Remove the harness from the wire saddle [1] and flip over the tray1 lift-up motor assy [2].



5. Remove the screw [1] and spring [2].

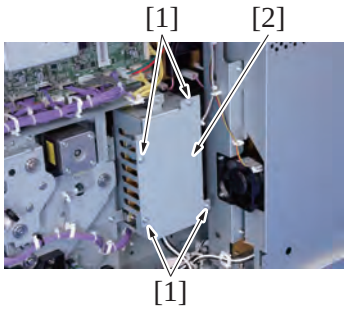


6. Disconnect the connector [1].
7. Remove the screw [2], and remove the tray 1 CD paper size board [3].

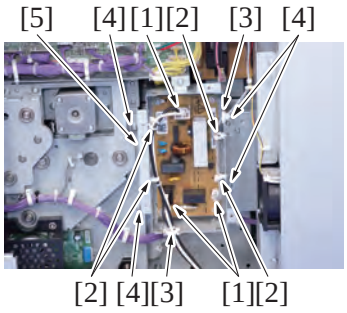
8. To reinstall, reverse the order of removal.

5.4.20 Pressure roller power supply unit (PRPU) (only for bizhub 958/bizhub PRO 958)

1. Remove the lower rear cover.
G.5.2.29 Lower rear cover



2. Remove four screws [1] and remove the metal plate [2].



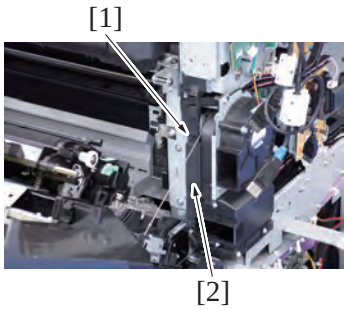
3. Disconnect three connectors [1].
4. Remove four wire saddles [2] and remove the harness from two edge covers [3].
5. Remove four screws [4] and remove the pressure roller power supply unit [5].

6. To reinstall, reverse the order of removal.

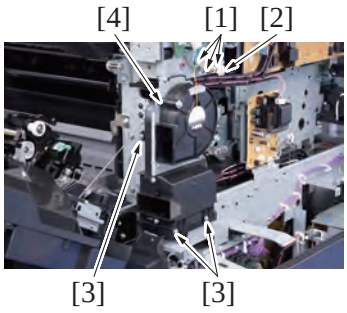
5.5 Disassembly/reassembly procedure (Motors)

5.5.1 Transfer belt motor (M1)

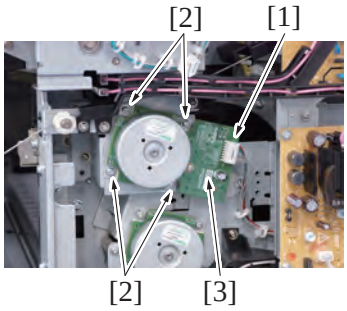
1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box
6. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1



7. Remove the screw [1], and remove the cover [2].



8. Remove the harness from three wire saddles [1], and disconnect the connector [2].
9. Remove three screws [3] and remove the ozone ventilation fan assy [4].



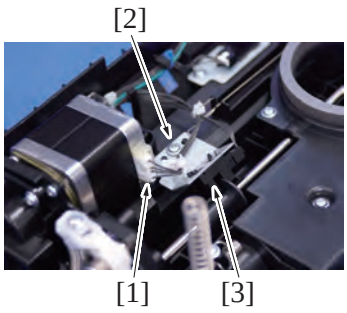
10. Disconnect the connector [1].
11. Remove four screws [2] and remove the transfer belt motor [3].

12. To reinstall, reverse the order of removal.

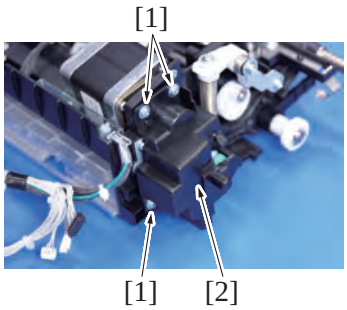
5.5.2 Registration motor (M2)

1. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2

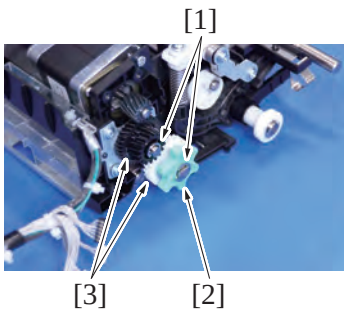
2. Remove the manual bypass tray rear cover.
   G.5.2.26 Manual bypass tray rear cover
3. Remove the duplex unit cover.
   G.5.2.30 Duplex unit cover
4. Remove the intermediate transport unit.
   G.5.3.13 Intermediate transport unit



5. Disconnect the connector [1].
6. Remove the screw [2] and remove the 2nd transfer pressure sensor assy [3].

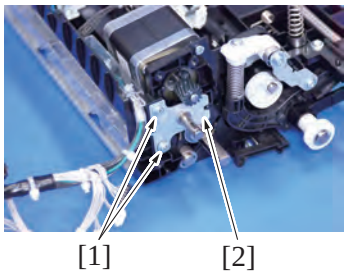


7. Remove three screws [1], and remove the gear cover [2].

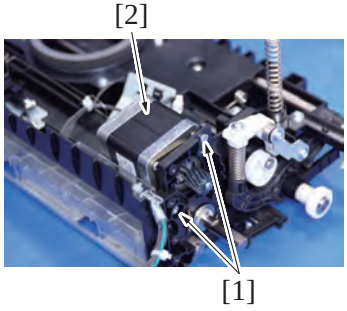


8. Remove two E-rings [1] and the turning knob [2], and remove two gears [3].

9. Remove two screws [1] and remove the shaft plate [2].



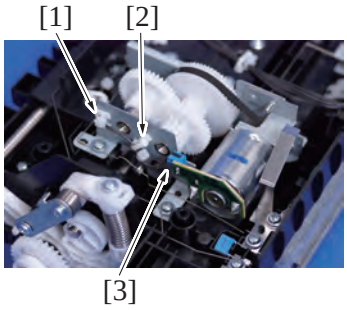
10. Remove two screws [1], and remove the registration motor [2].



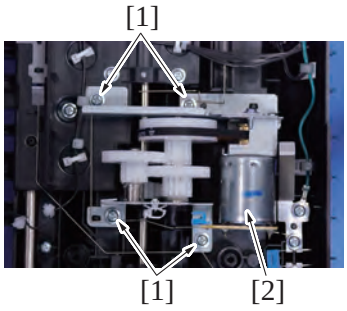
11. To reinstall, reverse the order of removal.

5.5.3 2nd transfer pressure motor (M3)

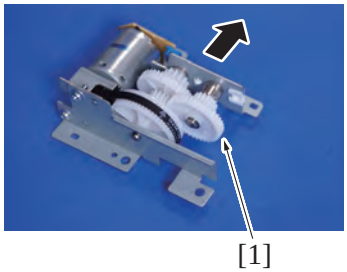
1. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
2. Remove the manual bypass tray rear cover.
   G.5.2.26 Manual bypass tray rear cover
3. Remove the duplex unit cover.
   G.5.2.30 Duplex unit cover
4. Remove the intermediate transport unit.
   G.5.3.13 Intermediate transport unit



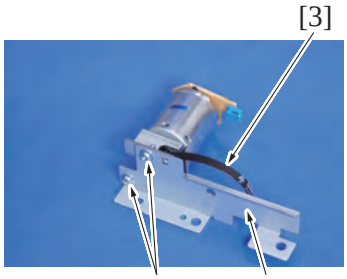
5. Remove the harness from the edge cover [1] and wire saddle [2], and disconnect the connector [3].



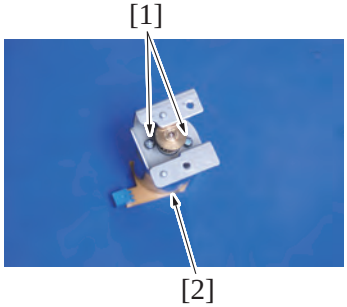
6. Remove four screws [1] and remove the 2nd transfer section pressure drive assy [2].



7. Remove the gear assy [1].



8. Remove two screws [1] and remove the stay [2].
9. Remove the belt [3].

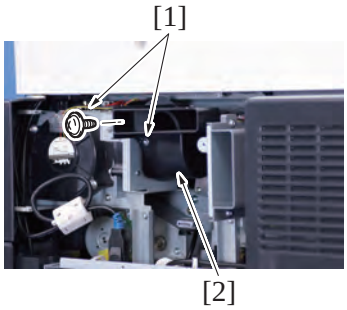


10. Remove two screws [1] and remove the 2nd transfer pressure motor [2].

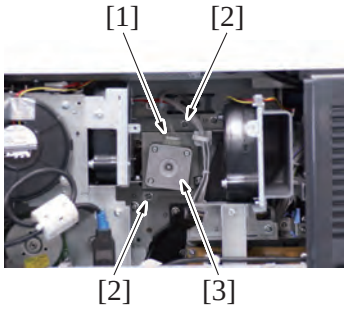
11. To reinstall, reverse the order of removal.

5.5.4 Exit motor (M4)

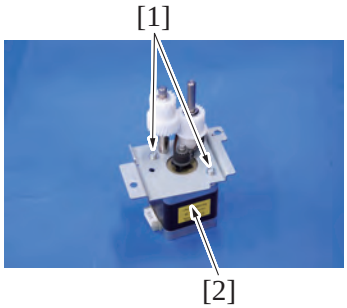
1. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1



2. Remove two screws [1] and remove the duct [2].



3. Disconnect the connector [1].
4. Remove two screws [2] and remove the exit motor assy [3].

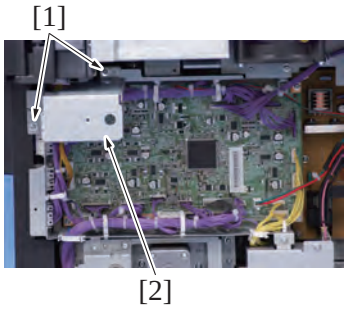


5. Remove two screws [1] and remove the exit motor [2].

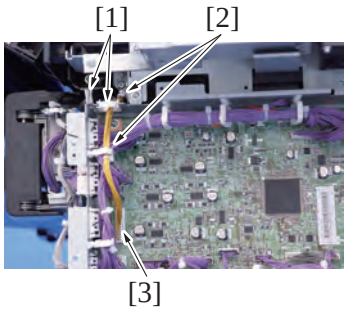
6. To reinstall, reverse the order of removal.

5.5.5 Tray 1 vertical transport motor (M5)

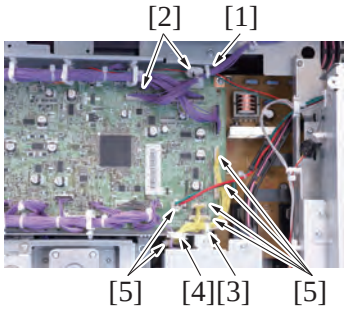
1. Remove the interface cover/2.
G.5.2.23 Interface cover/2
2. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
3. Remove the lower rear cover.
G.5.2.29 Lower rear cover



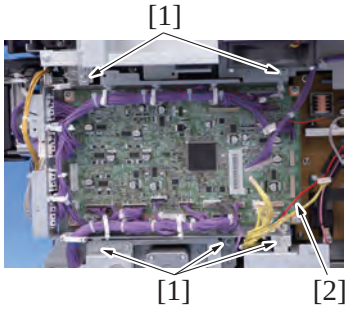
4. Remove two screws [1] and remove the plate [2].



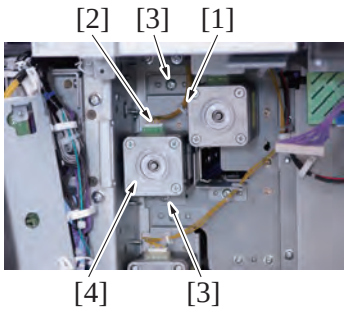
5. Remove the harness from two edge covers [1] and two wire saddles [2].
6. Disconnect the connector [3] (CN10).



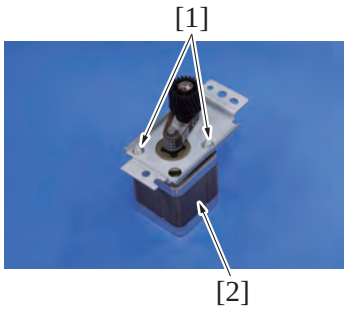
7. Remove the harness from the wire saddle [1], and disconnect two connectors [2].
8. Remove the harness from the wire saddle [3] and the edge cover [4], and disconnect six connectors [5]. (CN22/CN23/CN24/CN25/CN26)



9. Remove five screws [1] and evacuate the paper feed drive board assy [2].



10. Remove the harness from the wire saddle [1], and disconnect the connector [2].
11. Remove two screws [3] and remove the tray 1 vertical transport motor assy [4].



12. Remove two screws [1] and remove the tray 1 vertical transport motor [2].

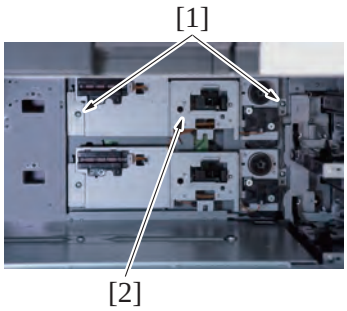
13. To reinstall, reverse the order of removal.

5.5.6 Tray 1 lift-up motor (M6), tray 2 lift-up motor (M8)

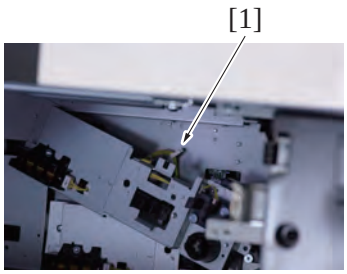
NOTE

- **The tray 1 lift-up motor and the tray 2 lift-up motor are of the same form and mechanism. This procedure is mainly showing the method to remove the tray 1 lift-up motor.**

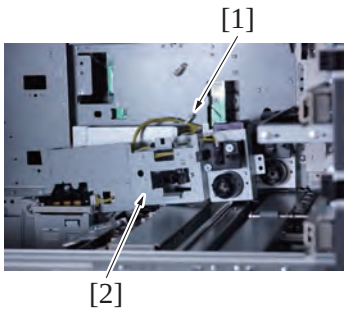
1. Remove the tray 1 and tray 2.
G.5.2.31 Tray 1, Tray 2



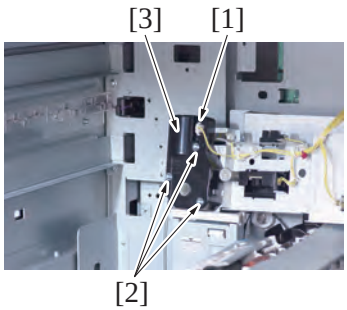
2. Remove two screws [1] and remove the tray 1 lift-up motor assy [2].



3. Remove the harness from the wire saddle [1].



4. Remove the harness from the wire saddle [1] and turn the tray 1 lift-up motor assy [2] upside down.



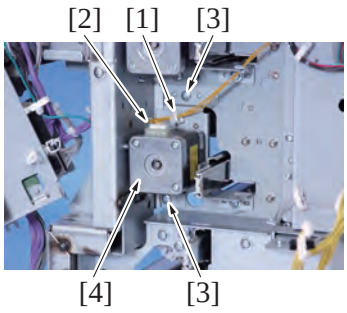
5. Disconnect the connector [1].
6. Remove three screws [2], and remove the tray 3 lift-up motor [3].

7. To reinstall, reverse the order of removal.

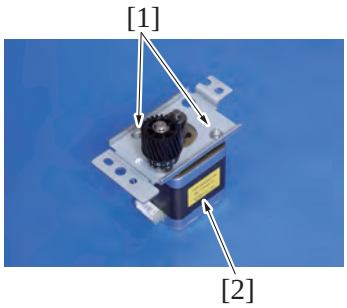
5.5.7 Tray 2 vertical transport motor (M7)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
5. Remove the intermediate transport roller assy.
   G.5.3.10 Intermediate transport roller assy
6. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
7. Remove the upper left cover.
   G.5.2.12 Upper left cover
8. Remove the lower left cover.
   G.5.2.13 Lower left cover
9. Remove the DC power supply unit.
   G.5.4.4 DC power supply (DCPU)
10. Remove the LCC drive unit.

G.5.3.12 LCC drive unit



11. Remove the harness from the wire saddle [1], and disconnect the connector [2].
12. Remove two screws [3] and remove the tray 2 vertical transport motor assy [4].

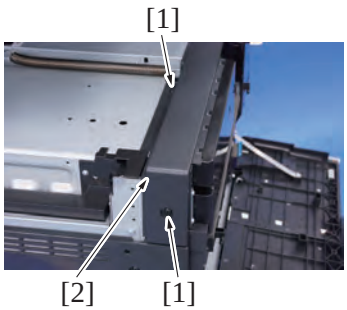


13. Remove two screws [1] and remove the tray 2 vertical transport motor [2].

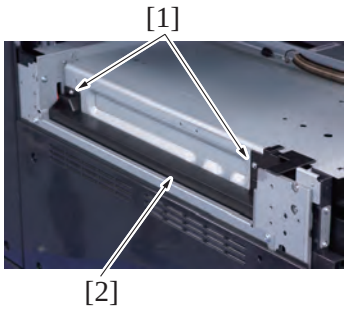
14. To reinstall, reverse the order of removal.

5.5.8 Toner supply motor/K (M12)

1. Remove the upper front door.
   G.5.2.1 Upper front door
2. Remove the toner cartridge.
   F.6.4.1 Replacing the toner cartridge
3. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box

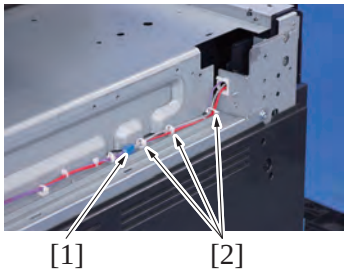


4. Remove two screws [1] and remove the paper exit front cover [2].

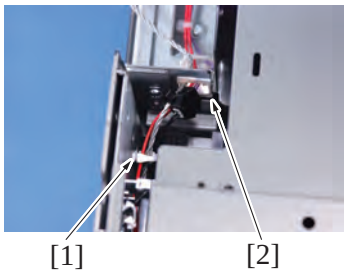


5. Remove two screws [1] and remove the connector cover [2].

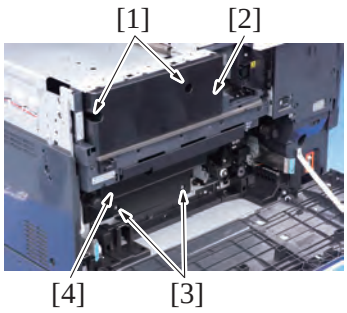
6. Disconnect the connector [1], and remove the harness from three wire saddles [2].



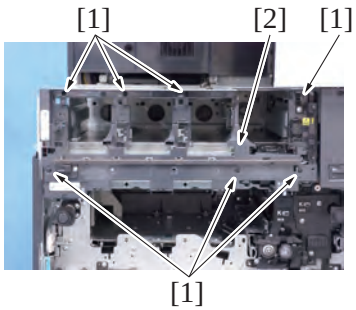
7. Remove the harness from the wire saddle [1] and the edge cover [2].



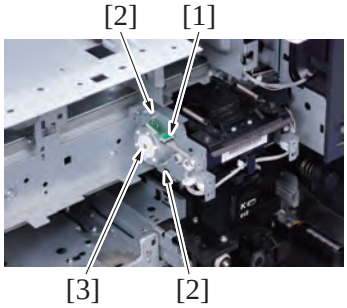
8. Remove two screws [1], and remove the cover [2].
9. Remove two screws [3], and remove the cover [4].



10. Remove seven screws [1] and remove the front cover [2] by pulling it out forward slowly.
NOTE
- **Take care not to use different type of screw.**



11. Disconnect the connector [1].
12. Remove two screws [2] and remove the toner supply motor/K [3].



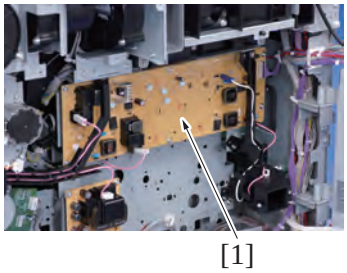
13. To reinstall, reverse the order of removal.

5.5.9 Toner cartridge motor/CK (M14)

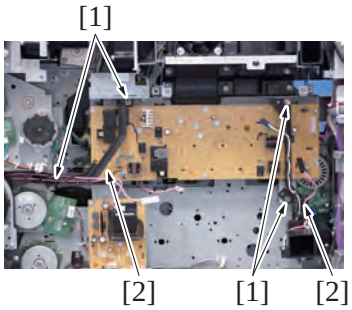
1. Remove the interface cover/2.
G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.

G.5.2.27 Upper rear cover /1

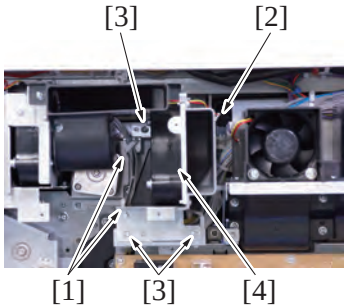
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box



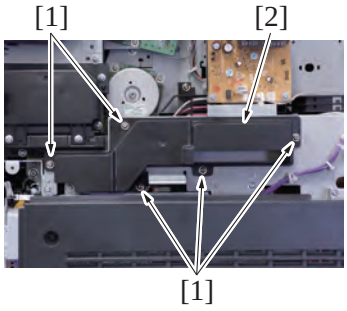
6. Disconnect all the connectors on the high voltage unit/2 [1].



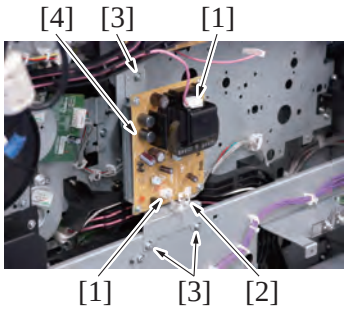
7. Remove four screws [1] and remove two harness guides [2].



8. Remove the harness from two wire saddles [1].
9. Disconnect the connector [2], remove three screws [3], and remove the IH coil cooling fan assy [4].

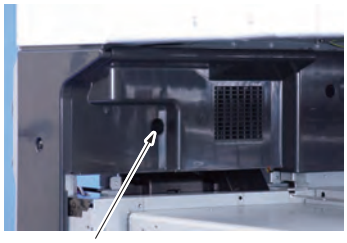


10. Remove five screws [1] and remove the cover [2].

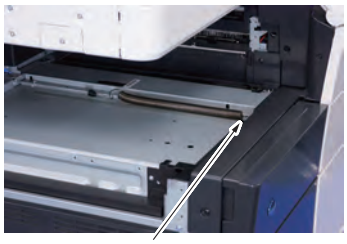


11. Disconnect two connectors [1] and remove the harness from the wire saddle [2].
12. Remove three screws [3] and remove the high voltage unit/3 assy [4].

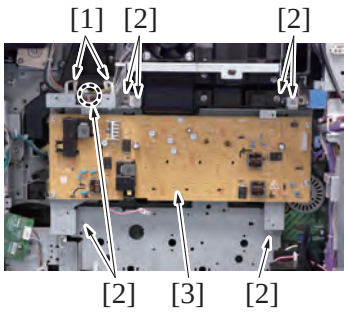
13. Remove the screw [1].



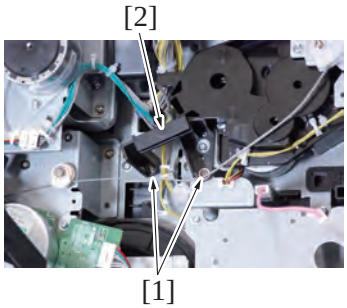
14. Remove the spring [1].



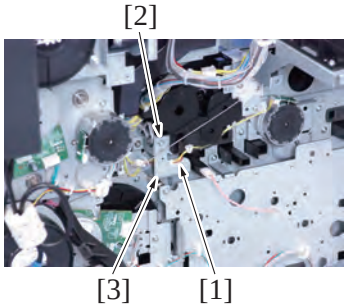
15. Remove the harness from two wire saddles [1].
16. Remove seven screws [2] and remove the high voltage unit/2 assy [3].

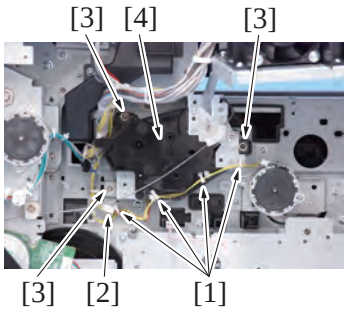


17. Remove two screws [1] and remove the cover [2].

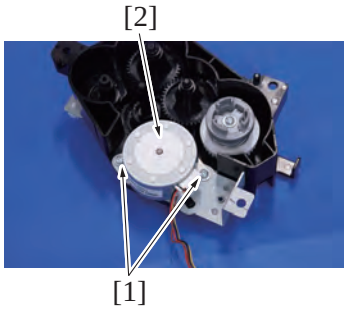


18. Remove the harness from the edge cover [1].
19. Remove the screw [2], and remove the plate [3].





20. Remove the harness from four wire saddles [1], and disconnect the connector [2].
21. Remove three screws [3] and remove the toner cartridge motor/CK assy [4].

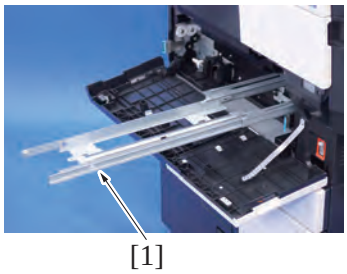


22. Remove two screws [1] and remove the toner cartridge motor/CK [2].

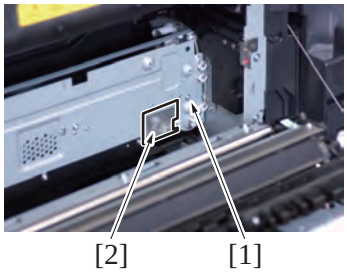
23. To reinstall, reverse the order of removal.

5.5.10 Charge cleaning motor/K (M15)

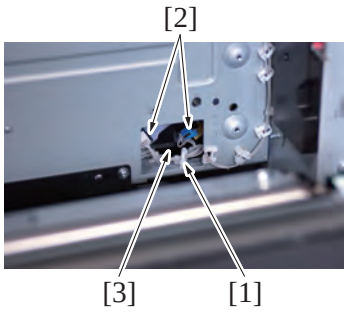
1. Remove the drum unit/K.
   F.6.2.1 Replacing the drum unit
2. Remove the developing unit/K.
   F.6.3.1 Replacing the developing unit
3. Remove the transfer belt unit.
   F.6.5.1 Replacing the transfer belt unit
4. Remove the IDC sensor unit.
   G.5.3.15 IDC sensor unit



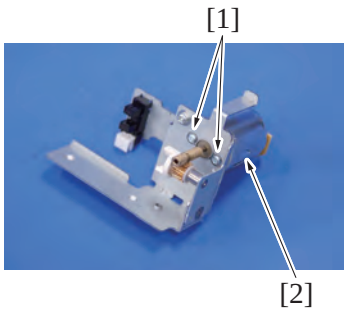
5. Slide the developing unit rail [1] forward.



6. Remove the screw [1] of the charge cleaning motor/K assy.
7. Remove the protective sheet [2].



8. Remove the harness from the wire saddle [1].
9. Disconnect two connectors [2] and remove the charge cleaning motor/K assy [3].

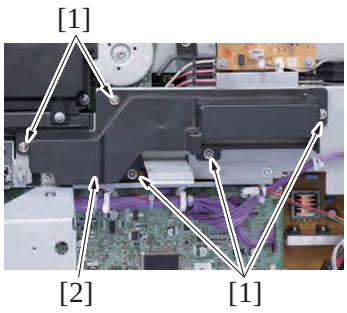


10. Remove two screws [1] and remove the charge cleaning motor/K [2].

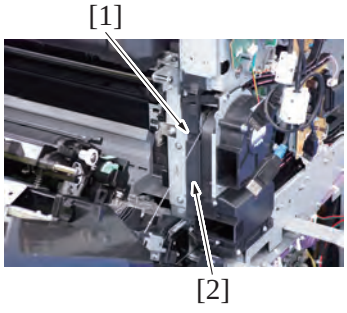
11. To reinstall, reverse the order of removal.

5.5.11 PC motor/K (M18)

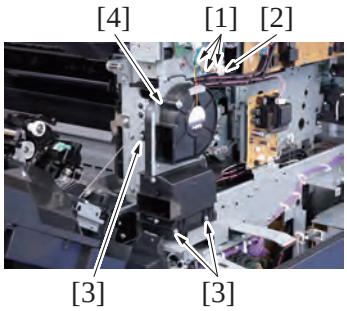
1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box
6. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1



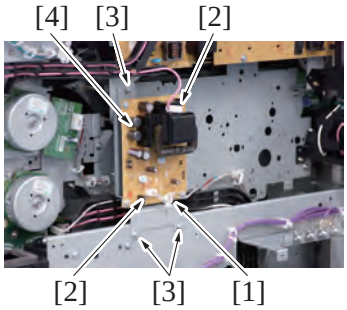
7. Remove five screws [1] and remove the cover [2].



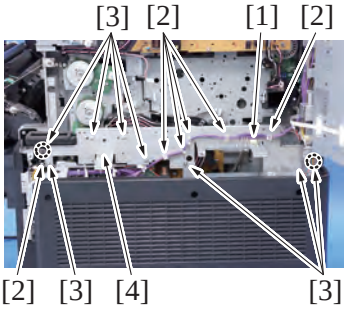
8. Remove the screw [1], and remove the cover [2].



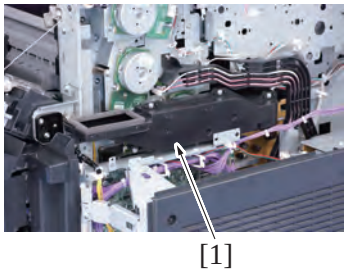
9. Remove the harness from three wire saddles [1], and disconnect the connector [2].
10. Remove three screws [3] and remove the ozone ventilation fan assy [4].



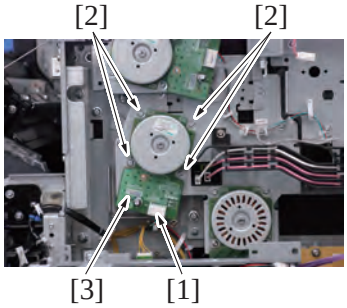
11. Remove the harness from the wire saddle [1], and disconnect two connectors [2].
12. Remove three screws [3] and remove the high voltage unit/3 assy [4].



13. Disconnect the connector [1].
14. Remove the harness from six wire saddles [2].
15. Remove eight screws [3] and remove the reinforcement plate [4].



16. Remove the duct [1].



17. Disconnect the connector [1].
18. Remove four screws [2] and remove the PC motor/K [3].

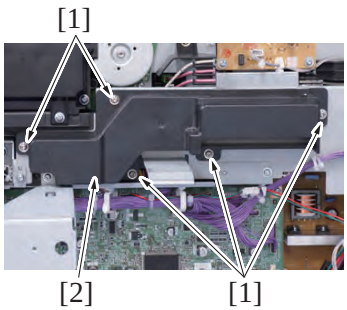
19. To reinstall, reverse the order of removal.

5.5.12 Developing motor/K (M19)

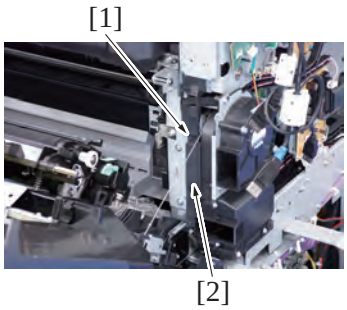
1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.

G.5.2.27 Upper rear cover /1

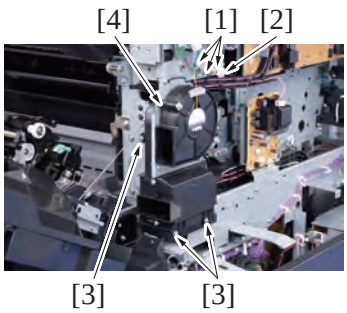
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box
6. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1
7. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
8. Remove the lower rear cover.
   G.5.2.29 Lower rear cover



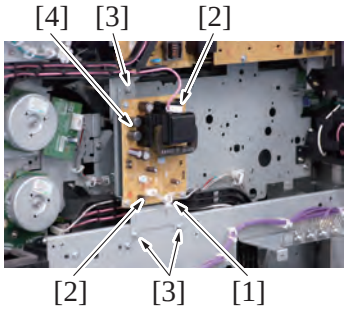
9. Remove five screws [1] and remove the cover [2].



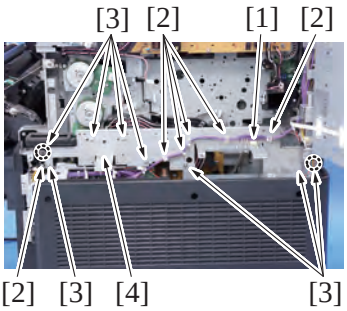
10. Remove the screw [1], and remove the cover [2].



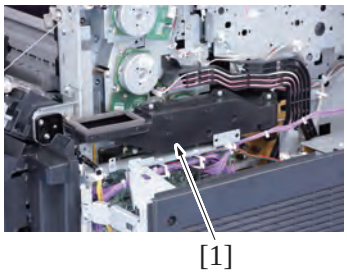
11. Remove the harness from three wire saddles [1], and disconnect the connector [2].
12. Remove three screws [3] and remove the ozone ventilation fan assy [4].



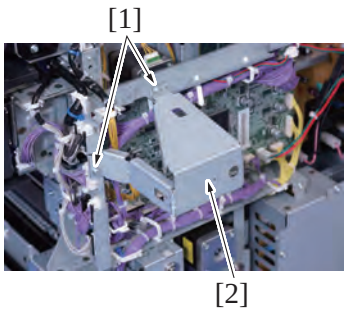
13. Remove the harness from the wire saddle [1], and disconnect two connectors [2].
14. Remove three screws [3] and remove the high voltage unit/3 assy [4].



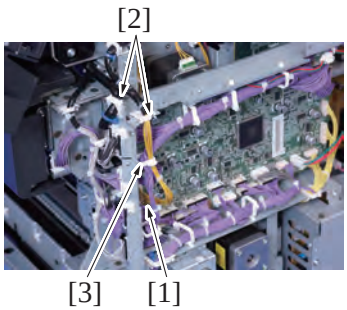
15. Disconnect the connector [1].
16. Remove the harness from six wire saddles [2].
17. Remove eight screws [3] and remove the reinforcement plate [4].



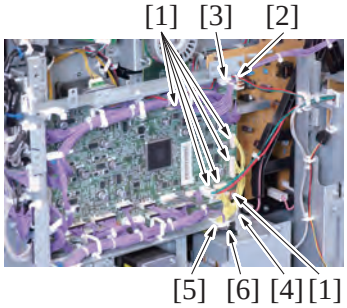
18. Remove the duct [1].



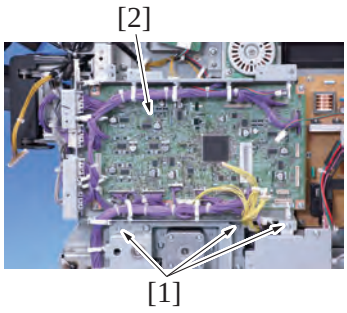
19. Remove two screws [1] and remove the plate [2].



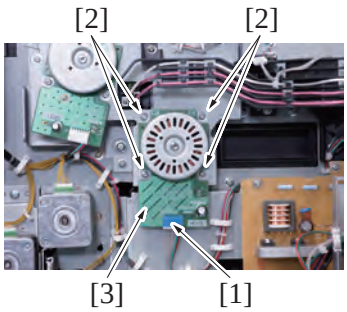
20. Disconnect the connector [1]. (CN10)
21. Remove the harness from two edge covers [2] and the wire saddle [3].



22. Disconnect six connectors [1]. (CN4, CN22, CN23, CN24, CN25, CN26)
23. Remove the harness from the wire saddle [2], and disconnect the connector [3].
24. Remove the harness from wire saddle [4] and edge cover [5], and disconnect the connector [6].



25. Remove three screws [1] and evacuate the paper feed/transport drive board assy [2].

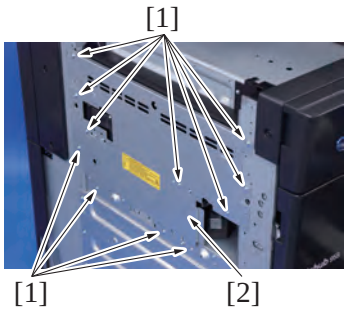


26. Disconnect the connector [1].
27. Remove four screws [2] and remove the developing motor/K [3].

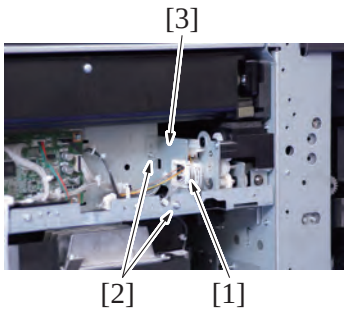
28. To reinstall, reverse the order of removal.

5.5.13 Waste toner transport motor (M20)

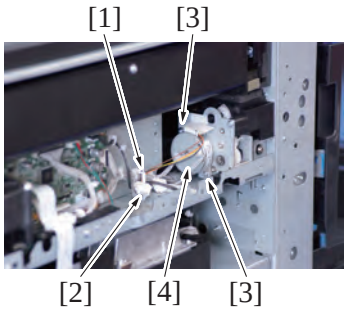
1. Remove the upper left cover.
   G.5.2.12 Upper left cover
2. Remove the lower left cover.
   G.5.2.13 Lower left cover
3. Remove the PH cooling fan.
   G.5.7.11 PH cooling fan (FM14)



4. Remove 11 screws [1] and remove the PH unit protective sheet [2].



5. Remove the harness from the edge cover [1].
6. Remove two screws [2] and remove the plate [3].

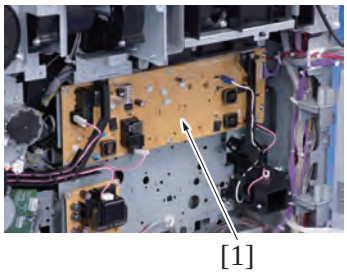


7. Remove the harness from the wire saddle [1], and disconnect the connector [2].
8. Remove two screws [3] and remove the waste toner transport motor [4].

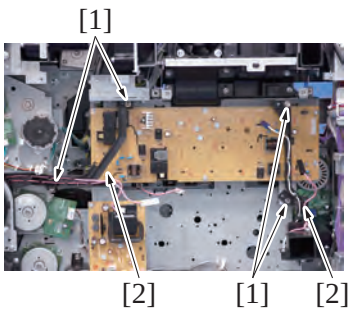
9. To reinstall, reverse the order of removal.

5.5.14 1st transfer pressure motor (M21)

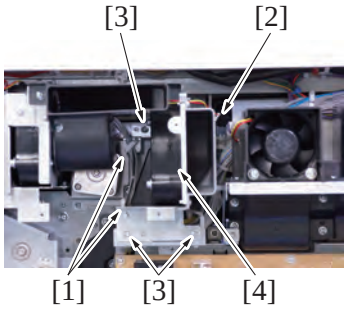
1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box



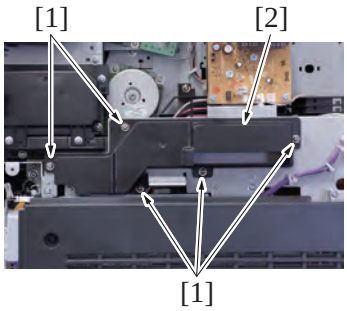
6. Disconnect all the connectors on the high voltage unit/2 [1].



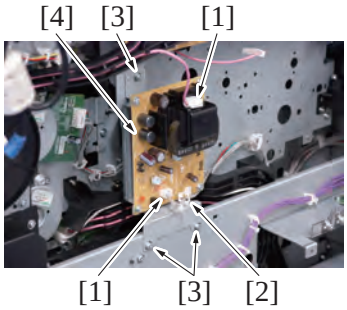
7. Remove four screws [1] and remove two harness guides [2].



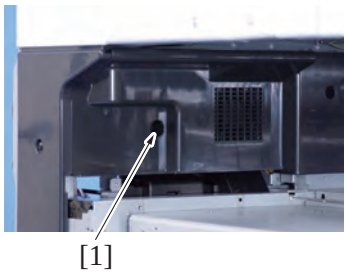
8. Remove the harness from two wire saddles [1].
9. Disconnect the connector [2], remove three screws [3], and remove the IH coil cooling fan assy [4].



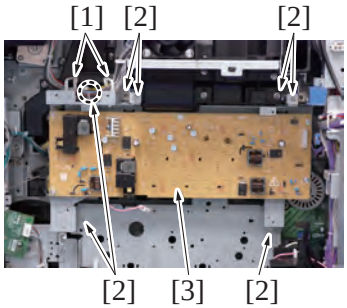
10. Remove five screws [1] and remove the cover [2].



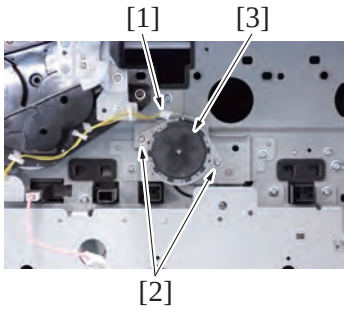
11. Disconnect two connectors [1] and remove the harness from the wire saddle [2].
12. Remove three screws [3] and remove the high voltage unit/3 assy [4].



13. Remove the screw [1].



14. Remove the harness from two wire saddles [1].
15. Remove seven screws [2] and remove the high voltage unit/2 assy [3].



16. Disconnect the connector [1].
17. Remove two screws [2] and remove the 1st transfer pressure motor [3].

18. To reinstall, reverse the order of removal.

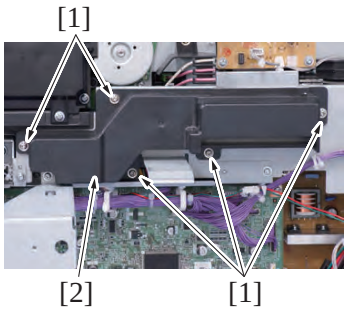
5.5.15 Paper feed motor (M22)

1. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
2. Remove the tray 1 paper feed unit.
G.5.3.4 Tray 1 paper feed unit
3. Remove the tray 2 paper feed unit.

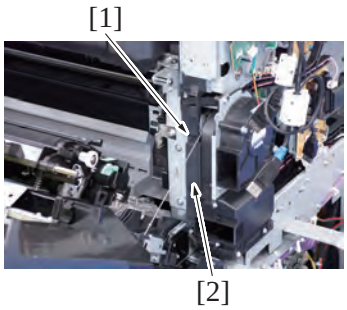
G.5.3.5 Tray 2 paper feed unit

4. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
5. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
6. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
7. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
8. Open the board box.
   G.5.4.12 How to open the PWB box
9. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1
10. Remove the lower rear cover.
    G.5.2.29 Lower rear cover

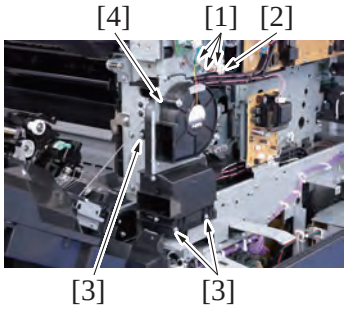
11. Remove five screws [1] and remove the cover [2].



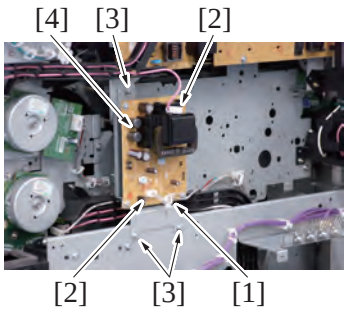
12. Remove two screws [1], and remove the cover [2].

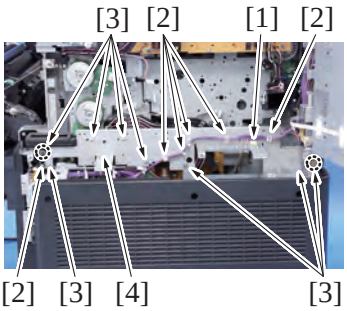


13. Remove the harness from three wire saddles [1], and disconnect the connector [2].
14. Remove three screws [3] and remove the ozone ventilation fan assy [4].

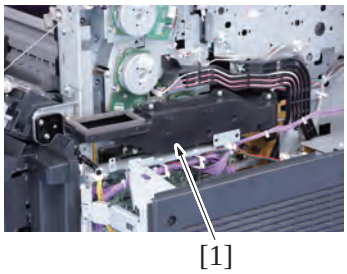


15. Remove the harness from the wire saddle [1], and disconnect two connectors [2].
16. Remove three screws [3] and remove the high voltage unit/3 assy [4].

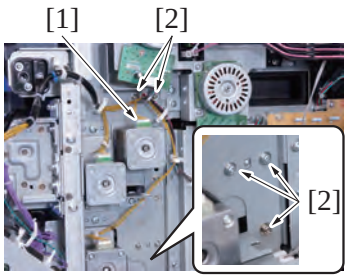




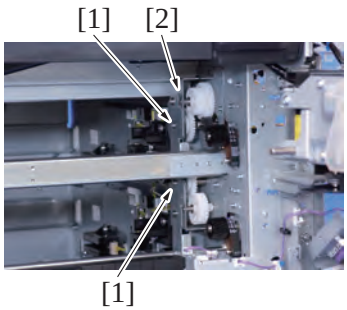
17. Disconnect the connector [1].
18. Remove the harness from six wire saddles [2].
19. Remove eight screws [3] and remove the reinforcement plate [4].



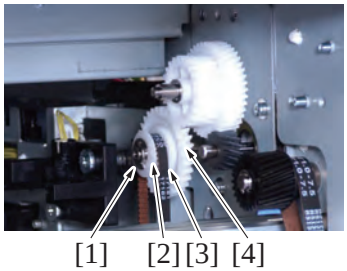
20. Remove the duct [1].



21. Disconnect the connector [1].
22. Remove five screws [2].

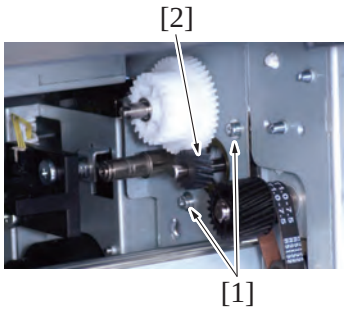


23. Remove two screws [1] and remove the plate [2].



24. Remove the E-ring [1], the collar [2], the belt [3], and the gear [4].

25. Remove two screws [1] and remove the paper feed motor [2].

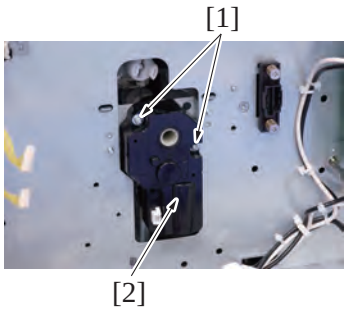


26. To reinstall, reverse the order of removal.

5.5.16 Tray 3 lift-up motor (M23)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
5. Remove the intermediate transport roller assy.
   G.5.3.10 Intermediate transport roller assy
6. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
7. Remove the upper left cover.
   G.5.2.12 Upper left cover
8. Remove the lower left cover.
   G.5.2.13 Lower left cover
9. Remove the DC power supply unit.
   G.5.4.4 DC power supply (DCPU)
10. Remove the LCC drive unit.
    G.5.3.12 LCC drive unit

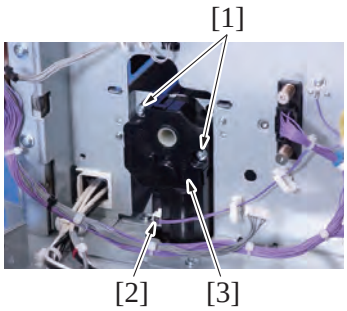
11. Remove two screws [1] and remove the tray 3 lift-up motor [2].



12. To reinstall, reverse the order of removal.

5.5.17 Tray 4 lift-up motor (M24)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
5. Remove the intermediate transport roller assy.
   G.5.3.10 Intermediate transport roller assy
6. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
7. Remove the upper left cover.
   G.5.2.12 Upper left cover
8. Remove the lower left cover.
   G.5.2.13 Lower left cover
9. Remove the DC power supply unit.
   G.5.4.4 DC power supply (DCPU)
10. Remove the LCC drive unit.
    G.5.3.12 LCC drive unit

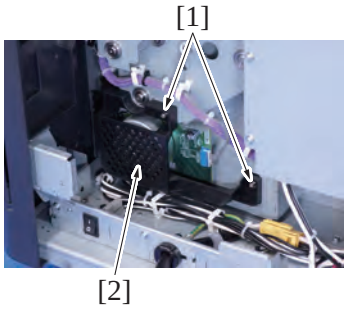


11. Remove two screws [1], disconnect the connector [2], and remove the tray 4 lift-up motor [3].

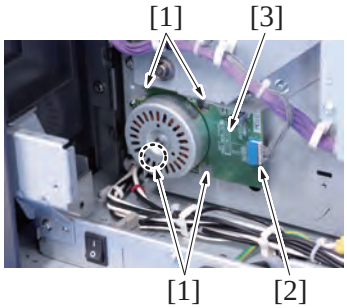
12. To reinstall, reverse the order of removal.

5.5.18 LCC transport motor (M25)

1. Remove the lower rear cover.
G.5.2.29 Lower rear cover



2. Remove two screws [1] and remove the LCC transport motor cover [2].

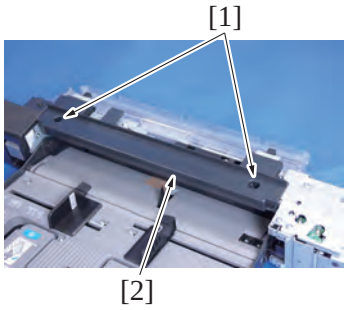


3. Remove four screws [1], disconnect the connector [2], and remove the LCC transport motor [3].

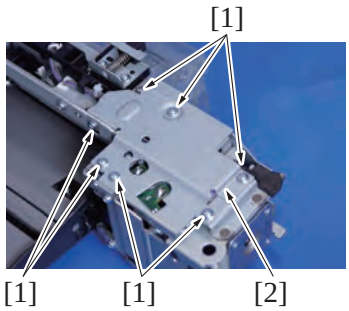
4. To reinstall, reverse the order of removal.

5.5.19 Bypass lift-up motor (M26), bypass paper feed motor (M27)

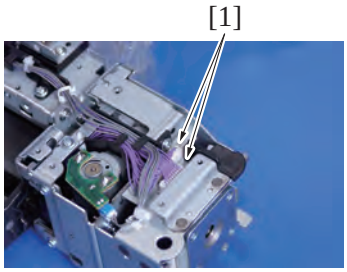
1. Remove the manual bypass tray rear cover.
G.5.2.26 Manual bypass tray rear cover
2. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
3. Remove the manual bypass tray unit.
G.5.3.3 Manual bypass tray unit



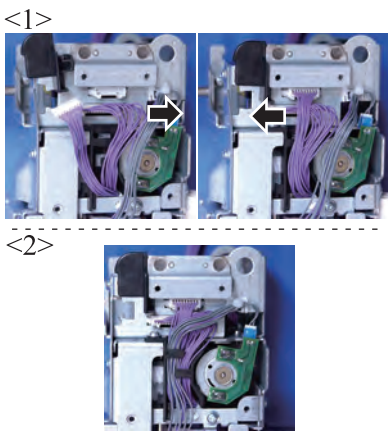
4. Remove two screws [1] and remove the manual bypass tray upper cover [2].



5. Remove seven screws [1], and remove the plate [2].



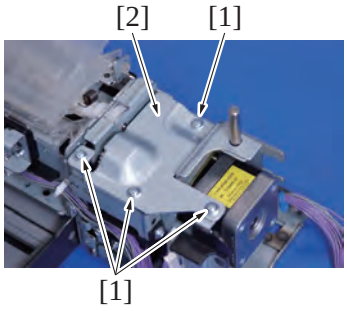
6. Disconnect two connectors [1].



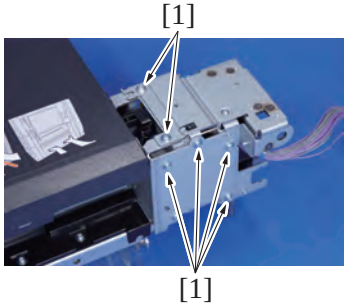
NOTE

- **Route the wire in the procedure described in the figure when installing the harness and connectors removed in step 4.**

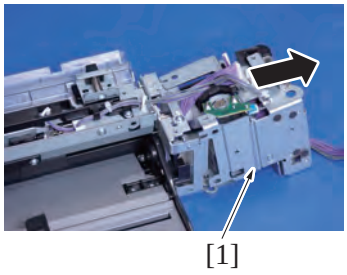
<1>	**Connect two connectors and route the harness as shown in the figure.**
<2>	**Store the harness in the harness guide.**



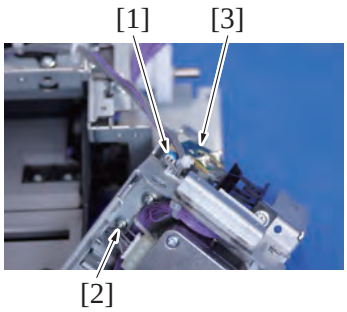
7. Remove four screws [1] and remove the plate [2].



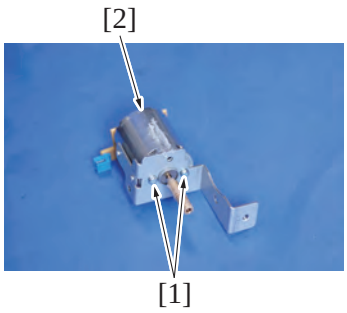
8. Remove six screws [1].



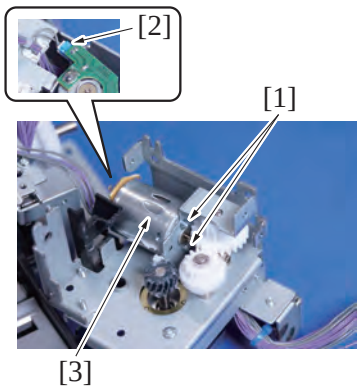
9. Remove the manual bypass tray drive assy [1] by pulling it in the direction described in the figure.
NOTE
- **Do not forcefully pull since the harness is routed.**



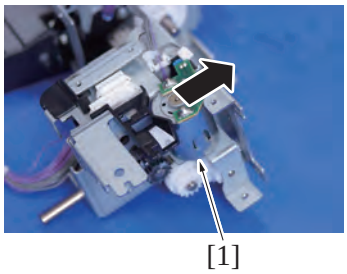
10. Disconnect the connector [1].
11. Remove the screw [2] and remove the bypass lift-up motor assy [3].



12. Remove two screws [1] and remove the bypass lift-up motor [2].



13. Remove two screws [1], disconnect the connector [2], and remove the bypass paper feed motor [3].

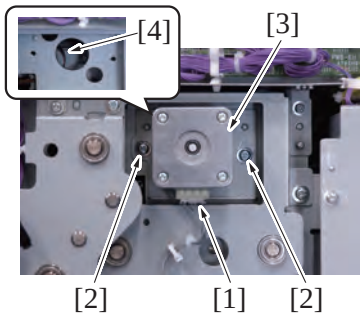


14. To reinstall, reverse the order of removal.
NOTE
- **Install the bypass lift-up motor assy [1] while pressing the bypass lift-up motor assy [1] against the direction of arrow indicated in the figure.**
- **The backlash of the gear will be insufficient when the pressing is not enough, which may cause paper feed trouble.**

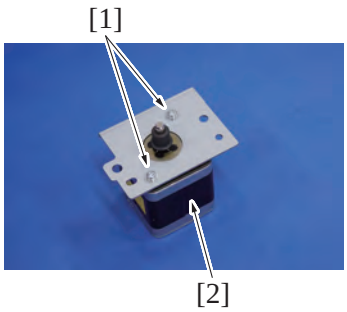
15. To reinstall, reverse the order of removal.

5.5.20 LCC vertical transport motor (M28)

1. Remove the lower rear cover.
G.5.2.29 Lower rear cover



2. Disconnect the connector [1].
3. Remove two screws [2] and remove the LCC vertical transport motor assy [3].
   NOTE
   - **Install the belt [4] to the gear when installing the LCC vertical transport motor assy.**

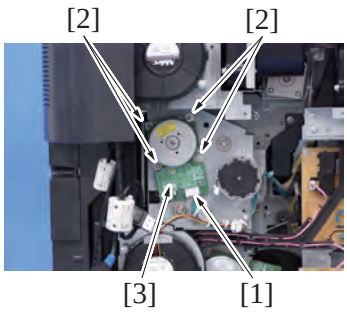


4. Remove two screws [1] and remove the LCC vertical transport motor [2].

5. To reinstall, reverse the order of removal.

5.5.21 Fusing motor (M30)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box

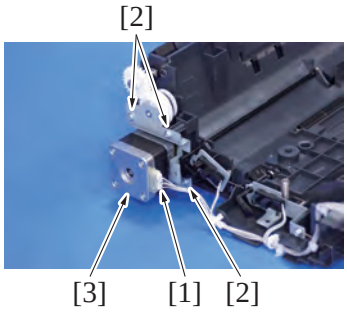


6. Disconnect the connector [1].
7. Remove four screws [2] and remove the fusing motor [3].

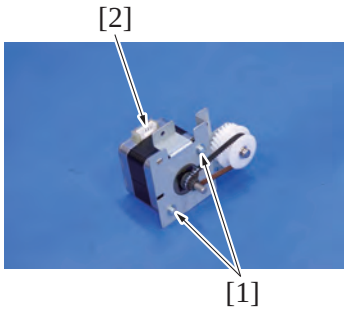
8. To reinstall, reverse the order of removal.

5.5.22 ADU transport motor/1 (M31)

1. Remove the duplex unit cover.
   G.5.2.30 Duplex unit cover
2. Remove the duplex unit.
   G.5.3.2 Duplex unit



3. Disconnect the connector [1].
4. Remove three screws [2] and remove the ADU transport motor assy/1 [3].

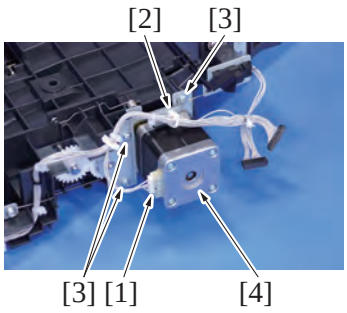


5. Remove two screws [1] and remove the ADU transport motor/1 [2].

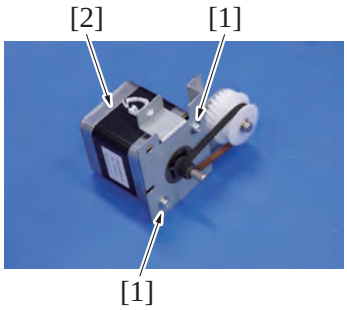
6. To reinstall, reverse the order of removal.

5.5.23 ADU transport motor/2 (M32)

1. Remove the duplex unit cover.
   G.5.2.30 Duplex unit cover
2. Remove the duplex unit.
   G.5.3.2 Duplex unit



3. Disconnect the connector [1], and remove the harness from the wire saddle [2].
4. Remove three screws [3] and remove the ADU transport motor assy/2 [4].

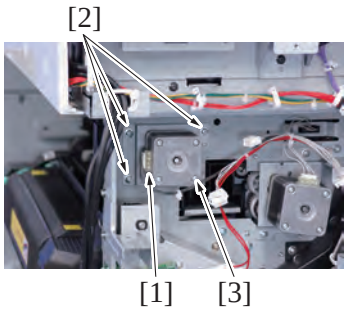


5. Remove two screws [1] and remove the ADU transport motor/2 [2].

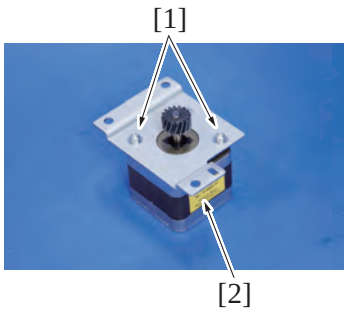
6. To reinstall, reverse the order of removal.

5.5.24 Switchback motor (M33)

1. Remove the ozone filter.
   F.6.1.1 Replacing ozone filter
2. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1
3. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
4. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
5. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
6. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
7. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
8. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
9. Open the board box.
   G.5.4.12 How to open the PWB box
10. Remove the paper cooling fan assy.
    G.5.3.14 Paper cooling fan assy



11. Disconnect the connector [1].
12. Remove three screws [2] and remove the switchback motor assy [3].

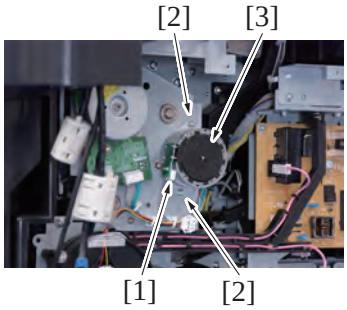


13. Remove two screws [1] and remove the switchback motor [2].

14. To reinstall, reverse the order of removal.

5.5.25 Fusing pressure motor (M34)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box



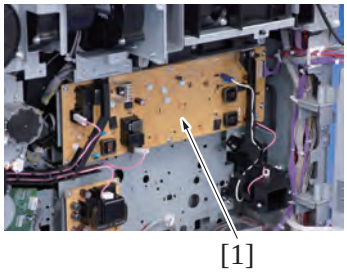
6. Disconnect the connector [1].
7. Remove two screws [2] and remove the fusing pressure motor [3].

8. To reinstall, reverse the order of removal.

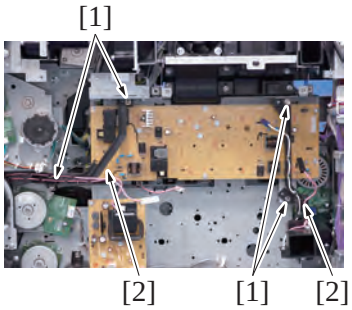
5.5.26 Cleaning brush motor (M38)

1. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
5. Open the board box.
   G.5.4.12 How to open the PWB box

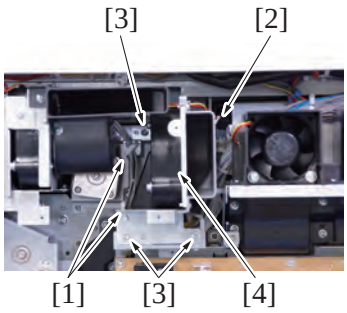
6. Disconnect all the connectors on the high voltage unit/2 [1].



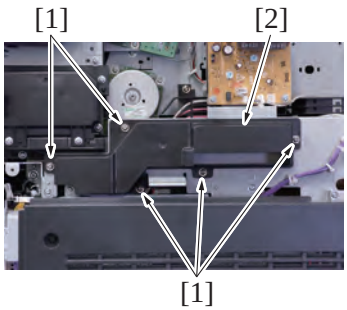
7. Remove four screws [1] and remove two harness guides [2].



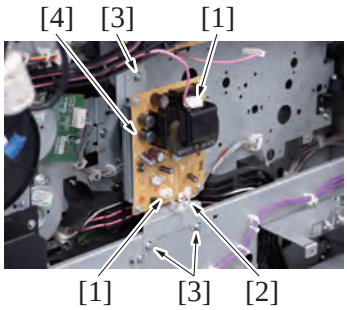
8. Remove the harness from two wire saddles [1].
9. Disconnect the connector [2], remove three screws [3], and remove the IH coil cooling fan assy [4].



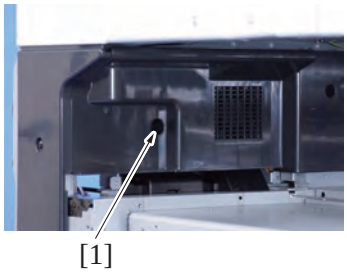
10. Remove five screws [1] and remove the cover [2].



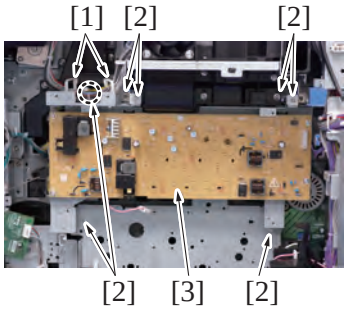
11. Disconnect two connectors [1] and remove the harness from the wire saddle [2].
12. Remove three screws [3] and remove the high voltage unit/3 assy [4].



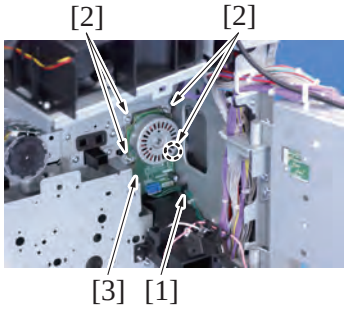
13. Remove the screw [1].



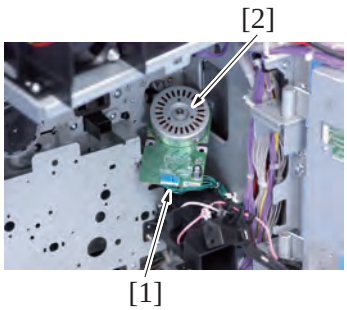
14. Remove the harness from two wire saddles [1].
15. Remove seven screws [2] and remove the high voltage unit/2 assy [3].



16. Remove the harness from the wire saddle [1].
17. Remove four screws [2] and pull out the cleaning brush motor [3].



18. Disconnect the connector [1] and remove the cleaning brush motor [2].

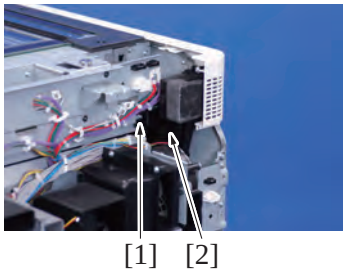


19. To reinstall, reverse the order of removal.

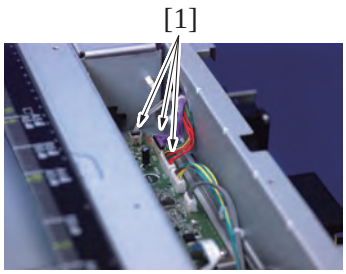
5.5.27 Scanner motor (M201)

(1) Remove procedure

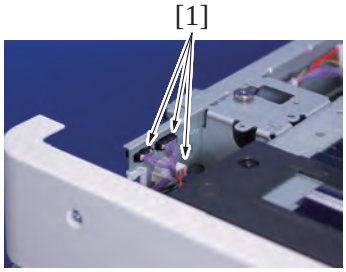
1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
3. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
4. Remove the scanner upper rear cover/2.
   G.5.2.18 Scanner upper rear cover/2
5. Remove the dual scan document feeder.
   G.6.2.3 Dual scan document feeder
6. Remove the scanner upper rear cover/1.
   G.5.2.17 Scanner upper rear cover/1



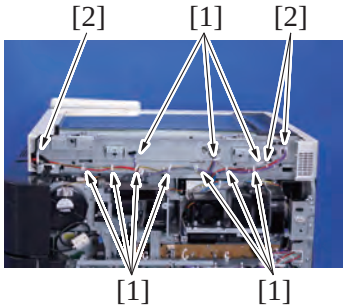
7. Remove the screw [1] and remove the duct [2].
NOTE
- **This step applies only to bizhub 958/808 and bizhub PRO 958.**



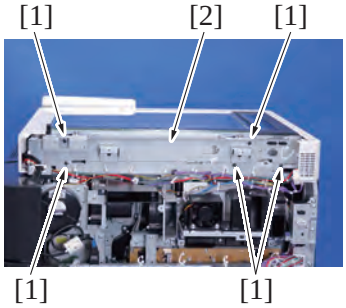
8. Disconnect three connectors [1]. (CN1/CN2/CN6)



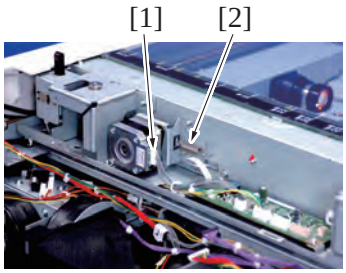
9. Disconnect three connectors [1].



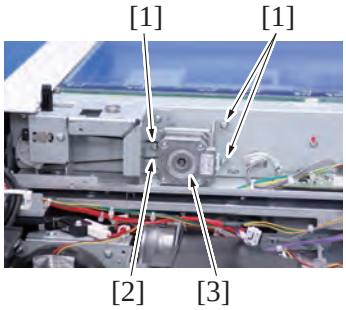
10. Remove the harness from 10 wire saddles [1] and three edge covers [2].



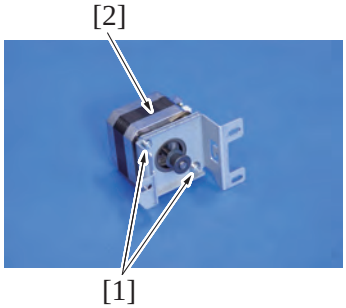
11. Remove five screws [1] and remove the metal plate [2].



12. Disconnect the connector [1].
13. Remove the spring [2].

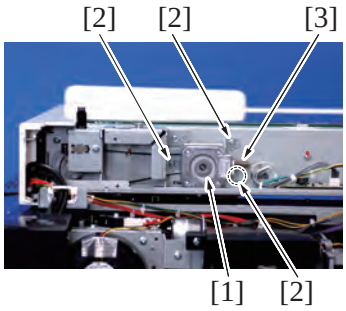


14. Remove three screws [1] and the belt [2], and remove the scanner motor assy [3].

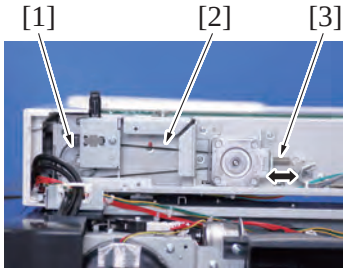


15. Remove two screws [1], and remove the scanner motor [2].

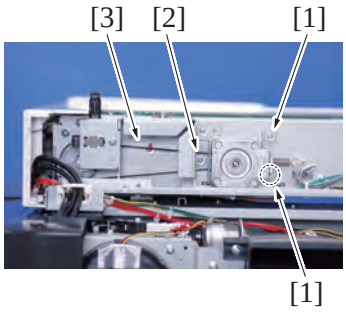
(2) Reinstall procedure



1. Attach the spring [3] to the scanner motor assy [1].
2. Temporarily secure the scanner motor assy [1] with three screws [2].
   NOTE
   - **The screws [2] should be temporarily tightened to a degree that the position of the motor can be adjusted by the spring force.**



3. Install the drive belt [2] to the pulley [1] and confirm that the drive belt is not too loose or too tight.
   NOTE
   - **Make sure that the drive belt [2] is properly kept tight by the spring [3] force.**
   - **If the deflection or tension of the drive belt [2] is excessive, the scanner unit does not work correctly. This may result in trouble.**
4. Turn the pulley and confirm that the belt is not sitting on top of the tooth of the pulley.

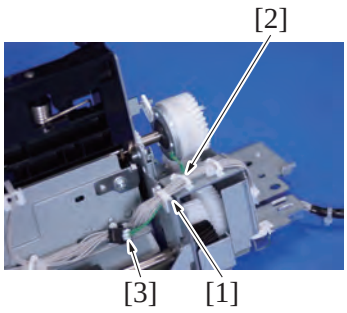


5. Tighten two screws [1] of the scanner motor assy.
6. Tighten the screw [2] of the scanner motor assy and fix the scanner motor assy.
   NOTE
   - **After securing the scanner motor assy, check again that the deflection and tension of the drive belt [3] are not excessive.**

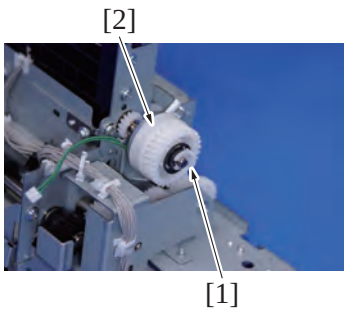
5.6 Disassembly/reassembly procedure (Clutches)

5.6.1 Tray 1 paper feed clutch (CL1)

1. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
2. Remove the tray 2 paper feed unit.
   G.5.3.5 Tray 2 paper feed unit
3. Remove the tray 1 paper feed unit.
   G.5.3.4 Tray 1 paper feed unit



4. Remove the harness from the edge cover [1] and wire saddle [2], and disconnect the connector [3].

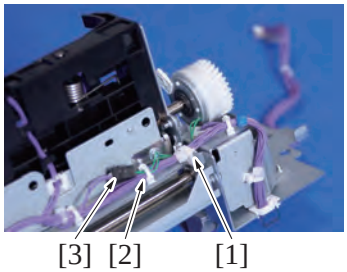


5. Remove the C-clip [1] and remove the tray 1 paper feed clutch [2].
   NOTE
   - **When mounting the tray 1 paper feed clutch [2], set the convex part of the stopper into the concave part of the tray 1 paper feed clutch.**

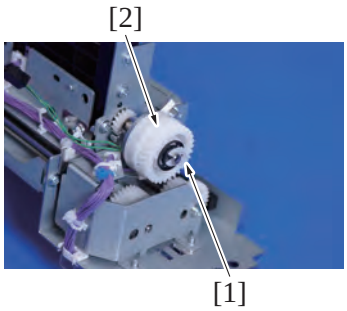
6. To reinstall, reverse the order of removal.

5.6.2 Tray 2 paper feed clutch (CL2)

1. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
2. Remove the tray 2 paper feed unit.
   G.5.3.5 Tray 2 paper feed unit



3. Remove the harness from the edge cover [1] and wire saddle [2], and disconnect the connector [3].

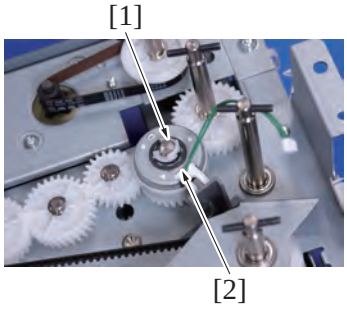


4. Remove the C-clip [1] and remove the tray 2 paper feed clutch [2].
NOTE
- **When mounting the tray 2 paper feed clutch [2], set the convex part of the stopper into the concave part of the tray 2 paper feed clutch.**

5. To reinstall, reverse the order of removal.

5.6.3 Horizontal transport clutch (CL3)

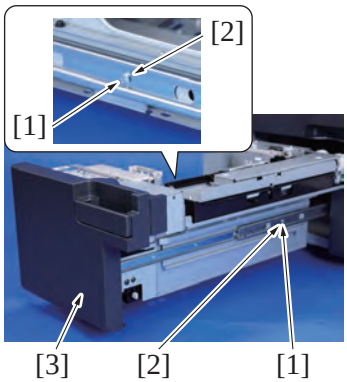
1. Remove the interface cover/2.
G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
4. Remove the rear right cover/2.
G.5.2.25 Rear right cover/2
5. Remove the intermediate transport roller assy.
G.5.3.10 Intermediate transport roller assy
6. Remove the lower rear cover.
G.5.2.29 Lower rear cover
7. Remove the upper left cover.
G.5.2.12 Upper left cover
8. Remove the lower left cover.
G.5.2.13 Lower left cover
9. Remove the DC power supply unit.
G.5.4.4 DC power supply (DCPU)
10. Remove the LCC drive unit.
G.5.3.12 LCC drive unit



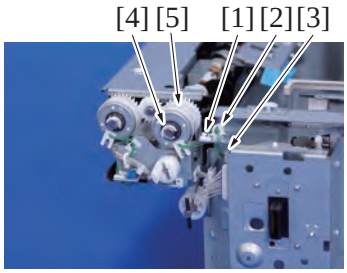
11. Remove the C-clip [1] and remove the horizontal transport clutch [2].
NOTE
- **Install the horizontal transport clutch so the protrusion of the stopper will fit into the concave part of the horizontal transport clutch [2].**

12. To reinstall, reverse the order of removal.

5.6.4 Tray 3 paper feed clutch (CL5)



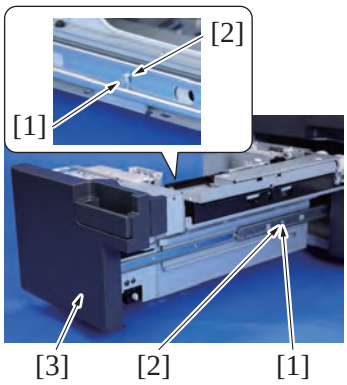
1. Remove two screws [1] and two washers [2], and slide out tray 3 [3] all the way.



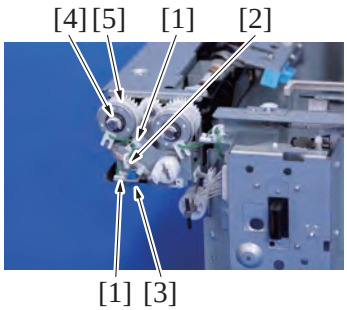
2. Remove the harness from the edge cover [1] and wire saddle [2], and disconnect the connector [3].
3. Remove the C-clip [4] and remove the tray 3 paper feed clutch [5].
NOTE
- **When mounting the tray 3 paper feed clutch [5], set the convex part of the stopper into the concave part of the tray 3 paper feed clutch.**

4. To reinstall, reverse the order of removal.

5.6.5 Tray 3 transport clutch (CL6)



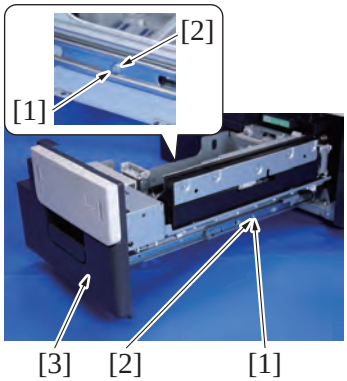
1. Remove two screws [1] and two washers [2], and pull out tray 3 all [3] the way out.



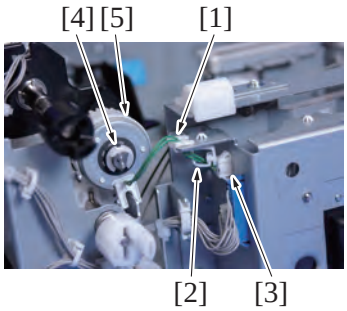
2. Remove two edge covers [1] and the harness from the wire saddle [2], and disconnect the connector [3].
3. Remove the C-clip [4] and remove the tray 3 transport clutch [5].
NOTE
- **When installing the tray 3 transport clutch [5], set the convex part of the stopper into the concave part of the tray 3 transport clutch.**

4. To reinstall, reverse the order of removal.

5.6.6 Tray4 paper feed clutch (CL7)



1. Remove two screws [1] and two washers [2], and slide out tray 4 [3] all the way.

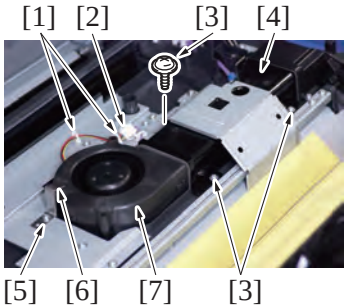


2. Remove the harness from the edge cover [1] and wire saddle [2], and disconnect the connector [3].
3. Remove the C-clip [4] and remove the tray 4 paper feed clutch [5].
   NOTE
   - **When mounting the tray 4 paper feed clutch [5], set the convex part of the stopper into the concave part of the tray 4 paper feed clutch.**
4. To reinstall, reverse the order of removal.

5.7 Disassembly/reassembly procedure (Fans)

5.7.1 Suction fan (FM1)

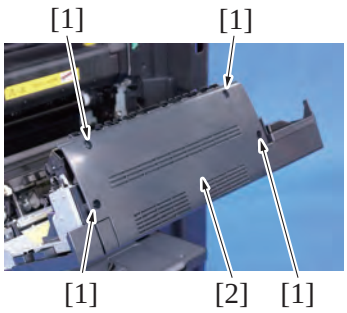
1. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
2. Remove the manual bypass tray rear cover.
   G.5.2.26 Manual bypass tray rear cover
3. Remove the duplex unit cover.
   G.5.2.30 Duplex unit cover
4. Remove the intermediate transport unit.
   G.5.3.13 Intermediate transport unit



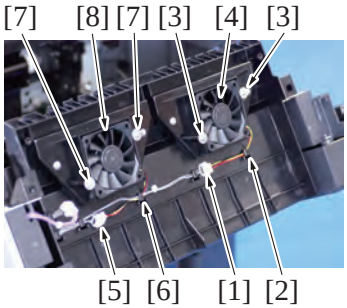
5. Remove the harness from two wire saddles [1], and disconnect the connector [2].
6. Remove three screws [3] and loosen the duct [4].
7. Remove the screw [5] and metal plate [6], the remove the suction fan [7].
8. To reinstall, reverse the order of removal.

5.7.2 Switchback paper cooling fan/1 (FM4), Switchback paper cooling fan/2 (FM5)

1. Open the upper right door.



2. Remove four screws [1] and remove the cover [2].

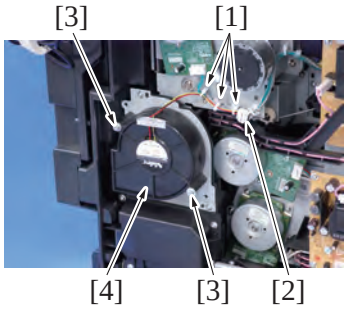


3. Disconnect the connector [1], and remove the harness from the harness guide [2].
4. Remove two screws [3] and remove the switchback paper cooling fan/1 [4].
5. Disconnect the connector [5], and remove the harness from the harness guide [6].
6. Remove two screws [7] and remove the switchback paper cooling fan/2 [8].
7. To reinstall, reverse the order of removal.

5.7.3 Ozone ventilation fan (FM6)

1. Remove the interface cover/2.

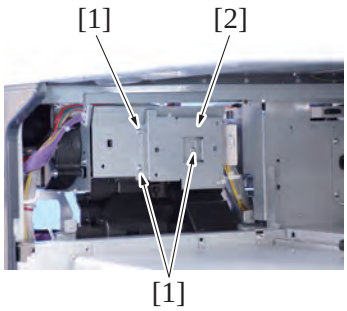
G.5.2.23 Interface cover/2
2. Remove the interface cover/1.
G.5.2.22 Interface cover/1
3. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
4. Remove the upper rear cover/2.
G.5.2.28 Upper rear cover /2
5. Open the board box.
G.5.4.12 How to open the PWB box



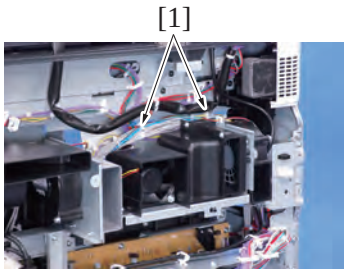
6. Remove the harness from three wire saddles [1], and disconnect the connector [2].
7. Remove two screws [3] and remove the ozone ventilation fan [4].
8. To reinstall, reverse the order of removal.

5.7.4 Toner suction fan (FM7)

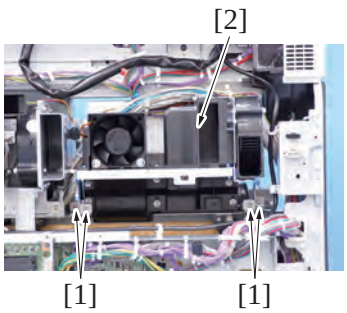
1. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
2. Remove the upper rear cover/2.
G.5.2.28 Upper rear cover /2
3. Remove the scanner rear cover.
G.5.2.15 Scanner rear cover
4. Remove the paper exit rear cover.
G.5.2.14 Paper exit rear cover
5. Remove the output tray exhaust fan.
G.5.7.15 Output tray exhaust fan (FM18) (bizhub 958/808, bizhub PRO 958 only)



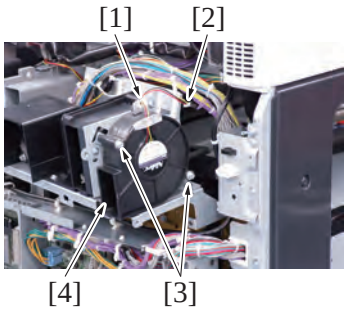
6. Remove three screws [1] and remove the metal plate [2].



7. Remove the harness from two wire saddles [1].



8. Remove four screws [1] and pull out the fan assy [2].

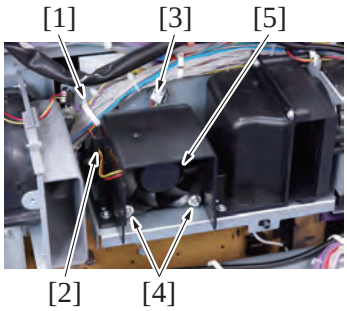


9. Remove the harness from the wire saddle [1], and disconnect the connector [2].
10. Remove two screws [3], and remove the toner suction fan [4].

11. To reinstall, reverse the order of removal.

5.7.5 Toner cartridge cooling fan (FM8)

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
3. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
4. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover

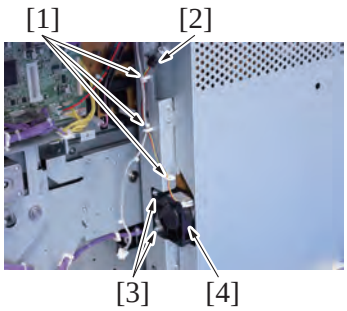


5. Remove the harness from the wire saddle [1] and the harness guide [2], and disconnect the connector [3].
6. Remove two screws [4] and remove the toner cartridge cooling fan [5].

7. To reinstall, reverse the order of removal.

5.7.6 DC power supply cooling fan (FM9)

1. Remove the lower rear cover.
   G.5.2.29 Lower rear cover
2. Remove the pressure roller power supply unit.
   G.5.4.20 Pressure roller power supply unit (PRPU) (only for bizhub 958/bizhub PRO 958)

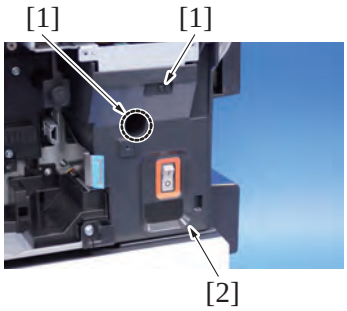


3. Remove the harness from three wire saddles [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the DC power supply cooling fan [4].

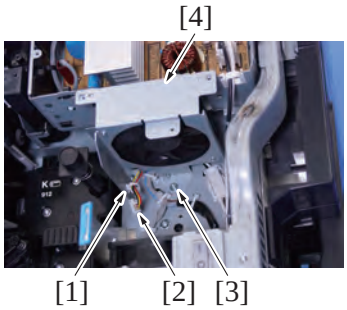
5. To reinstall, reverse the order of removal.

5.7.7 IH power supply cooling fan (FM10)

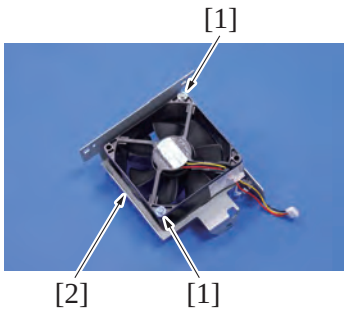
1. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box
2. Remove the lower front door.
   G.5.2.2 Lower front door
3. Remove the upper front door.
   G.5.2.1 Upper front door
4. Remove the right front cover/2.
   G.5.2.11 Right front cover/2



5. Remove two screws [1], and remove the cover [2].



6. Remove the harness from the wire saddle [1], and disconnect the connector [2].
7. Remove the screw [3] and remove the IH power supply cooling fan assy [4].

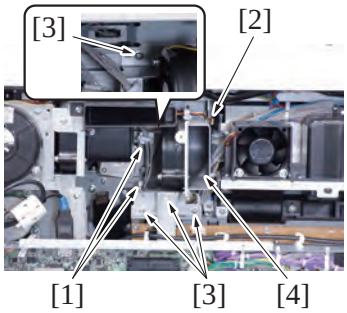


8. Remove two screws [1] and remove the IH power supply cooling fan [2].

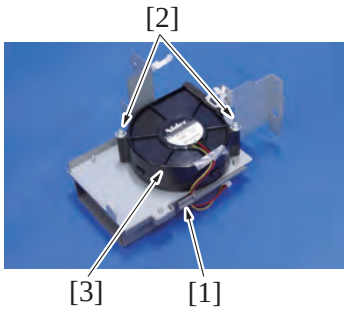
9. To reinstall, reverse the order of removal.

5.7.8 IH coil cooling fan (FM11)

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
3. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2



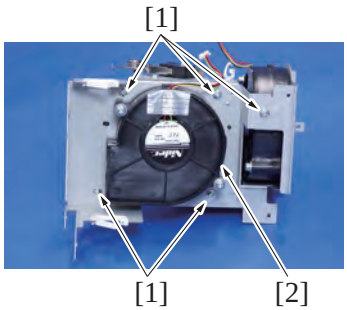
4. Remove the harness from two wire saddles [1].
5. Disconnect the connector [2], remove four screws [3], and remove the IH coil cooling fan assy [4].



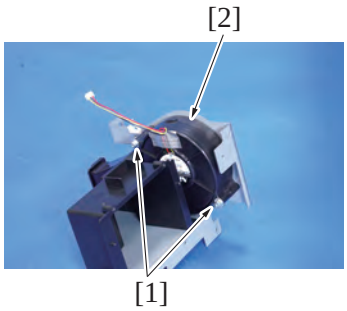
6. Remove the harness from the harness guide [1].
7. Remove two screws [2] and remove the IH coil cooling fan [3].
8. To reinstall, reverse the order of removal.

5.7.9 Paper cooling fan/in (FM12)

1. Remove the ozone filter.
   F.6.1.1 Replacing ozone filter
2. Open the upper right door.
3. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1
4. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
5. Remove the interface cover/2.
   G.5.2.23 Interface cover/2
6. Remove the interface cover/1.
   G.5.2.22 Interface cover/1
7. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
8. Remove the toner filter.
   F.6.1.2 Replacing the toner filter
9. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2
10. Open the PWB box.
    G.5.4.12 How to open the PWB box
11. Remove the paper cooling fan assy.
    G.5.3.14 Paper cooling fan assy



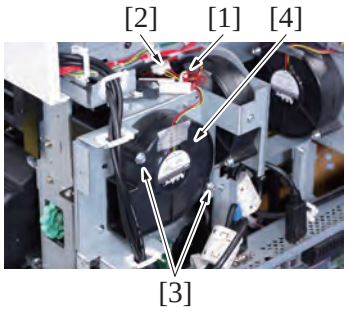
12. Remove five screws [1] and remove the paper cooling fan/out assy [2].



13. Remove two screws [1] and remove the paper cooling fan/in [2].
14. To reinstall, reverse the order of removal.

5.7.10 Paper cooling fan/out (FM13)

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
3. Remove the ozone filter.
   F.6.1.1 Replacing ozone filter
4. Remove the rear right cover/1.
   G.5.2.24 Rear right cover/1

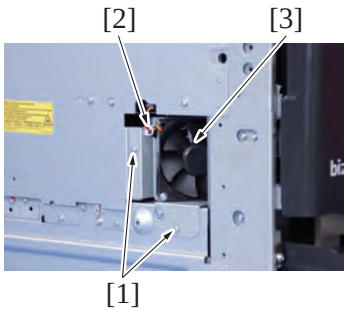


5. Remove the harness from the wire saddle [1], and disconnect the connector [2].
6. Remove two screws [3] and remove the paper cooling fan/out [2].

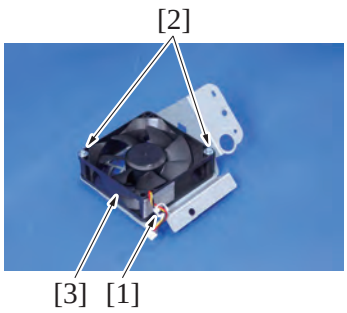
7. To reinstall, reverse the order of removal.

5.7.11 PH cooling fan (FM14)

1. Open the lower front door.
2. Remove the upper left cover.
   G.5.2.12 Upper left cover
3. Remove the lower left cover.
   G.5.2.13 Lower left cover



4. Remove two screws [1].
5. Disconnect the connector [2] and remove the PH cooling fan assy [3].

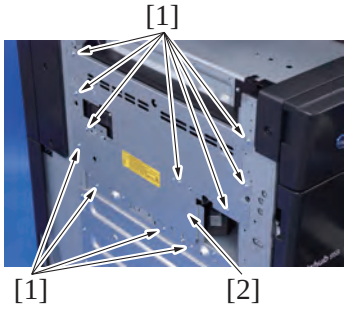


6. Remove the harness from the wire saddle [1].
7. Remove two screws [2] and remove the PH cooling fan [3].

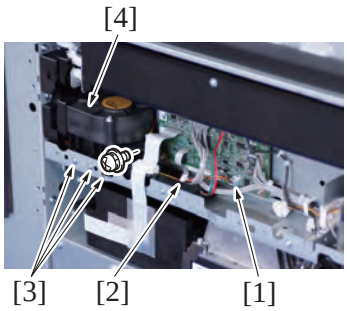
8. To reinstall, reverse the order of removal.

5.7.12 IU cooling fan/out (FM15)

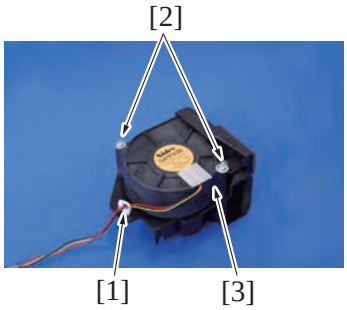
1. Open the lower front door.
2. Remove the upper left cover.
   G.5.2.12 Upper left cover
3. Remove the lower left cover.
   G.5.2.13 Lower left cover
4. Remove the PH cooling fan.
   G.5.7.11 PH cooling fan (FM14)



5. Remove 11 screws [1] and remove the PH unit protective sheet [2].



6. Disconnect the connector [1], and remove the harness from the wire saddle [2].
7. Remove three screws [3] and remove the IU cooling fan assy [4].

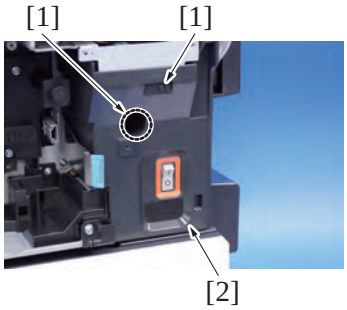


8. Remove the harness from the wire saddle [1].
9. Remove two screws [2] and remove the IU cooling fan/out [3].

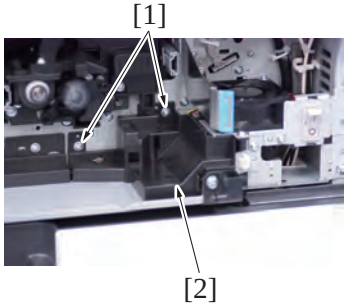
10. To reinstall, reverse the order of removal.

5.7.13 IU cooling fan/in (FM16)

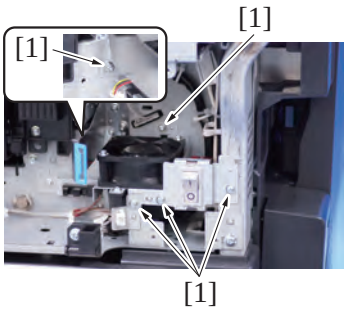
1. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box
2. Remove the lower front door.
   G.5.2.2 Lower front door
3. Remove the upper front door.
   G.5.2.1 Upper front door
4. Remove the right front cover/2.
   G.5.2.11 Right front cover/2



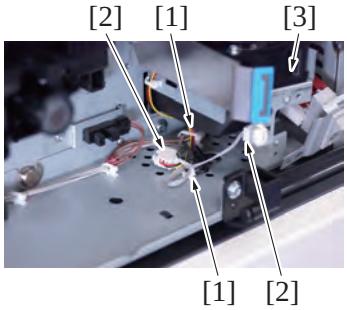
5. Remove two screws [1] and remove the cover [2].



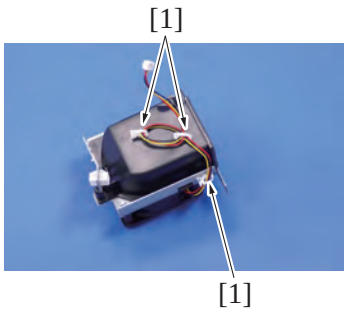
6. Remove two screws [1] and remove the cover [2].



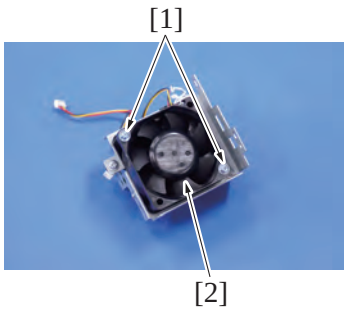
7. Remove five screws [1].



8. Remove the harness from two wire saddles [1], and disconnect two connectors [2].
9. Remove the IU cooling fan/in assy [3].



10. Remove the harness from three wire saddles [1].

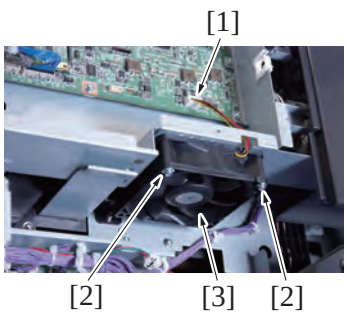


11. Remove two screws [1] and remove the IU cooling fan/in [2].

12. To reinstall, reverse the order of removal.

5.7.14 MFP controller cooling fan (FM17)

1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the lower rear cover.
   G.5.2.29 Lower rear cover

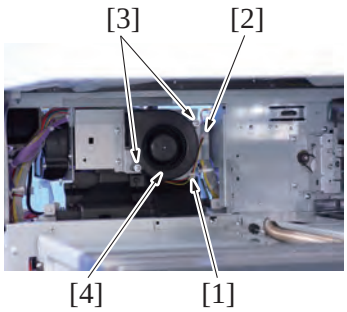


3. Disconnect the connector [1].
4. Remove two screws [2] and remove the MFP controller cooling fan [3].

5. To reinstall, reverse the order of removal.

5.7.15 Output tray exhaust fan (FM18) (bizhub 958/808, bizhub PRO 958 only)

1. Remove the paper exit rear cover.
   G.5.2.14 Paper exit rear cover

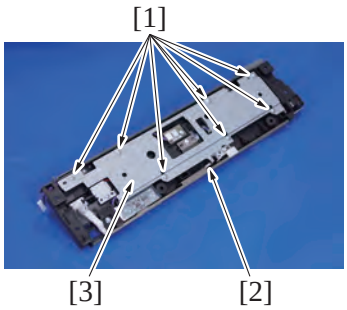


2. Remove the harness from the wire saddle [1], and disconnect the connector [2].
3. Remove two screws [3] and remove the output tray exhaust fan [4].
4. To reinstall, reverse the order of removal.

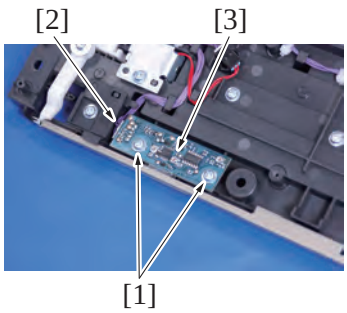
5.8 Disassembly/reassembly procedure (etc.)

5.8.1 IDC sensor/Fr (IDCS/Fr)

1. Open the upper right door.
2. Remove the transfer belt unit.
   F.6.5.1 Replacing the transfer belt unit
3. Remove the IDC sensor unit.
   G.5.3.15 IDC sensor unit



4. Remove seven screws [1] and the spring [2], and remove the sensor cover [3].



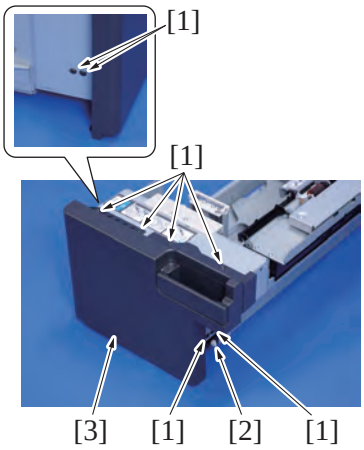
5. Remove two screws [1], disconnect the connector [2], and remove the IDC sensor/Fr [3].
6. To reinstall, reverse the order of removal.

5.8.2 Tray 3, tray 4 lift wire

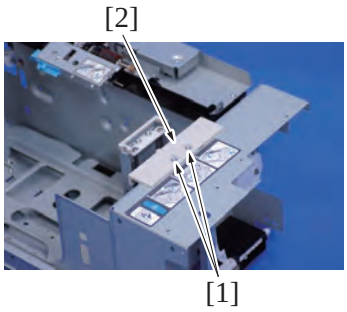
NOTE

- **The tray 3 and the tray 4 has same mechanism. This procedure shows the steps taken for the tray 3.**

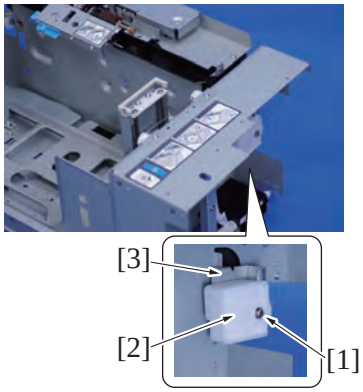
1. Remove the tray from the main body.
   G.5.2.32 Tray 3, Tray 4



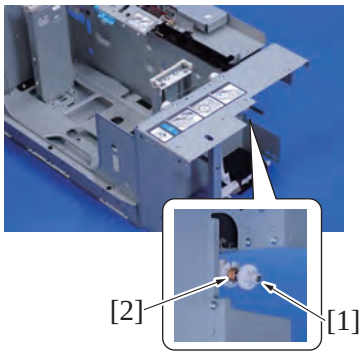
2. Remove eight screws [1].
3. Remove the tray 3 front cover [3] while pressing the lock section [2].



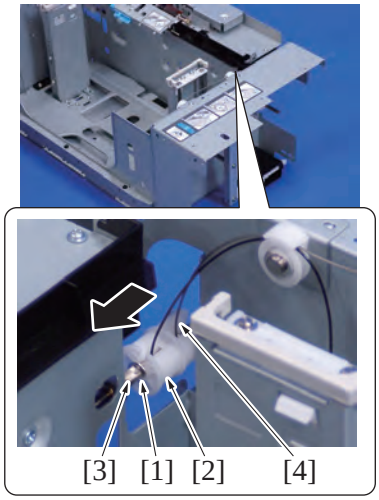
4. Remove two screws [1] and remove the wire cover/Fr [2].



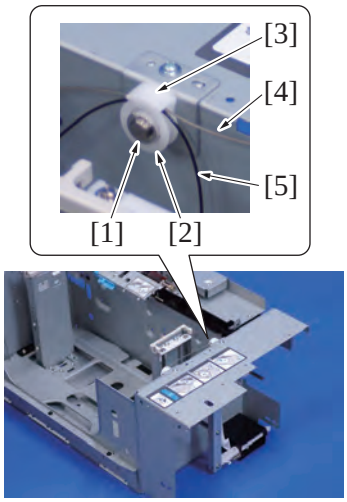
5. Remove the E-ring [1] and the gear cover [2], and remove the plate [3].



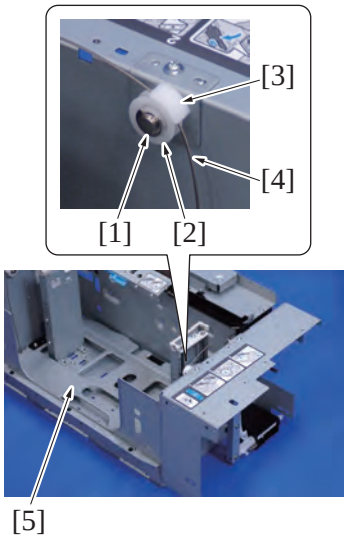
6. Remove the gear [1] and the bushing [2].



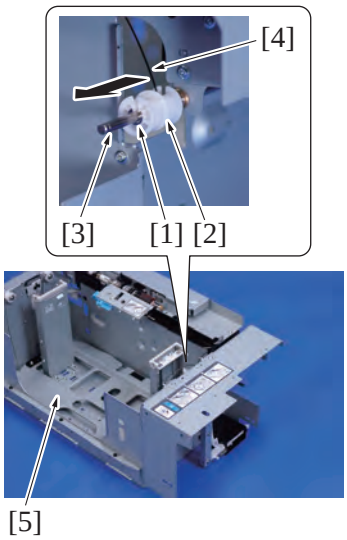
7. Remove the E-ring [1], slide the driving pulley [2] toward the direction of arrow, and remove the wire/2 (white) [4] from the shaft [3].



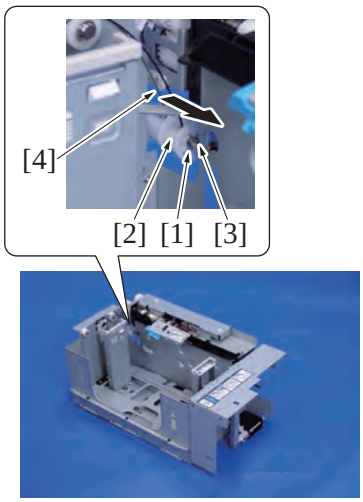
8. Remove the E-ring [1].
9. Remove the pulley [2] and the wire restriction cover [3], and remove the wire/2 (white) [4] and the wire/1 (black) [5].



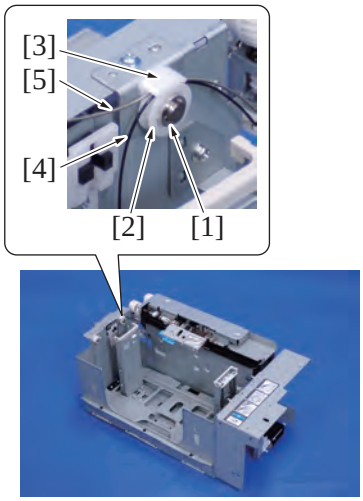
10. Remove the E-ring [1].
11. Remove the pulley [2] and the wire restriction cover [3], and remove the wire/2 (white) [4].
12. Remove the wire/2 (white) by pulling it from the rear side of the lift plate [5].



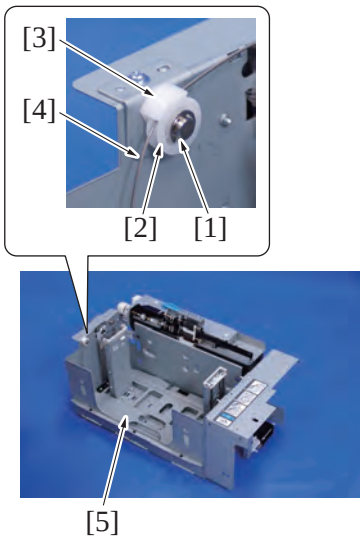
13. Remove the E-ring [1], slide the driving pulley [2] toward the direction of arrow, and remove the wire/1 (black) [4] from the shaft [3].
14. Remove the wire/1 (black) by pulling it from the rear side of the lift plate [5].



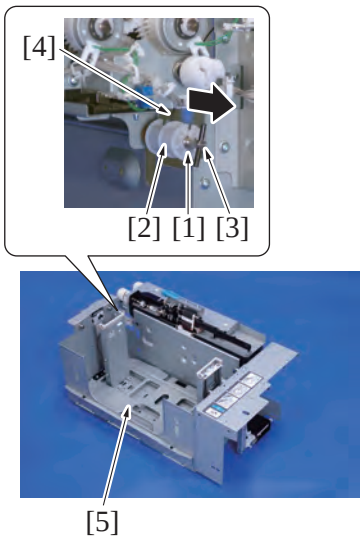
15. Remove the E-ring [1], slide the driving pulley [2] toward the direction of arrow, and remove the wire/4 (white) [4] from the shaft [3].



16. Remove the E-ring [1].
17. Remove the pulley [2] and the wire restriction cover [3], and remove the wire/3 (black) [4] and the wire/4 (white) [5].



18. Remove the E-ring [1].
19. Remove the pulley [2] and the wire restriction cover [3], and remove the wire/4 (white) [4].
20. Remove the wire/4 (white) by pulling it from the rear side of the lift plate [5].



21. Remove the E-ring [1], slide the driving pulley [2] toward the direction of arrow, and remove the wire/3 (black) [4] from the shaft [3].
22. Remove the wire/3 (black) by pulling it from the rear side of the lift plate [5].

23. To reinstall, reverse the order of removal.

NOTE

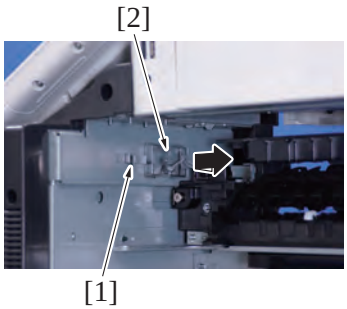
- **The wires in front and rear is using a common one for both white and black.**

5.8.3 Gate switch solenoid (SD1)

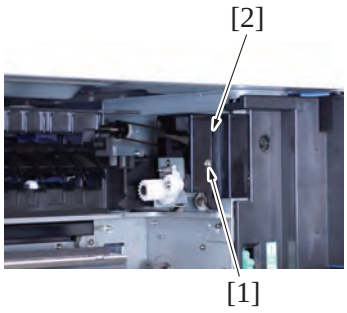
NOTE

- **The gate switch solenoid (SD1) cannot be adjusted in the field, so it is replaced together with the exit/reverse unit.**

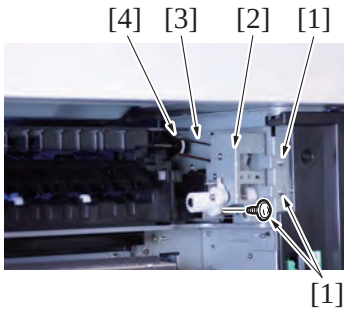
1. Remove the fusing unit.
F.6.11.1 Replacing the fusing unit



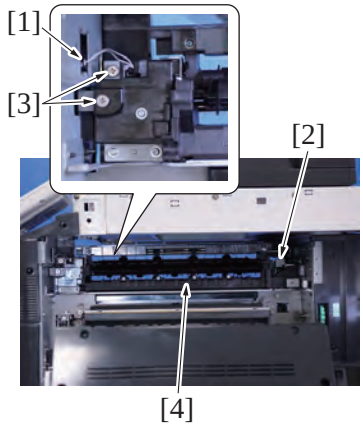
2. Unhook the tab [1] and remove the cover [2].



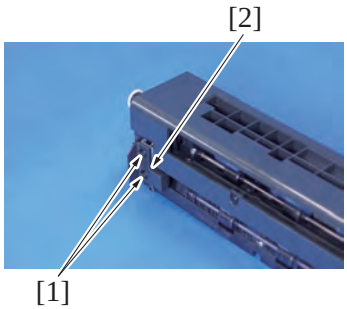
3. Remove the screw [1], and remove the cover [2].



4. Remove three screws [1] and remove the drive unit [2].
NOTE
- **Hand the belt [3] to the gear [4] when installing.**



5. Disconnect the connector [1].
6. Remove the screw [2].
7. Remove two screws [3] and remove the exit/reverse unit [4].

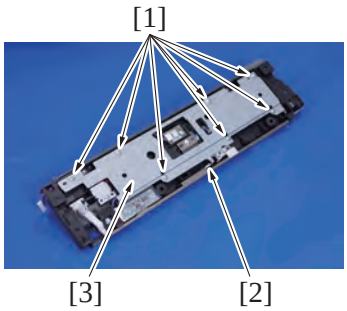


8. Remove two screws [1], and remove the cover [2].

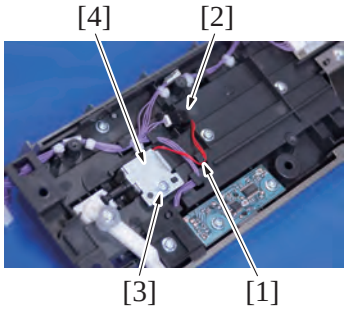
9. To reinstall, reverse the order of removal.

5.8.4 IDC sensor shutter solenoid (SD2)

1. Open the upper right door.
2. Remove the transfer belt unit.
F.6.5.1 Replacing the transfer belt unit
3. Remove the IDC sensor unit.
G.5.3.15 IDC sensor unit



4. Remove seven screws [1] and the spring [2], and remove the sensor cover [3].

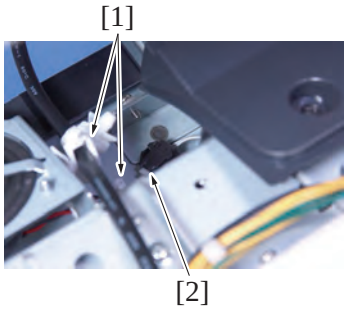


5. Remove the harness from the harness guide [1], and disconnect the connector [2].
6. Remove the screw [3] and remove the IDC sensor shutter solenoid [4].

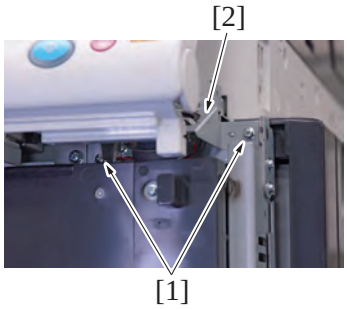
7. To reinstall, reverse the order of removal.

5.8.5 Fax speaker (SP)

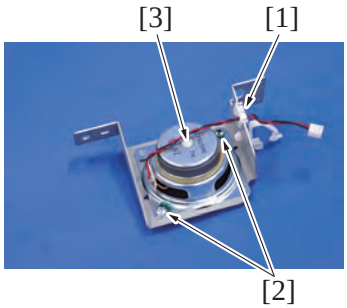
1. Remove the control panel right cover.
   G.5.2.3 Control panel right cover
2. Remove the control panel left cover.
   G.5.2.4 Control panel left cover
3. Remove the control panel upper cover.
   G.5.2.7 Control panel upper cover
4. Remove the control panel lower cover/1.
   G.5.2.5 Control panel lower cover/1



5. Remove the harness from two wire saddles [1], and disconnect the connector [2].



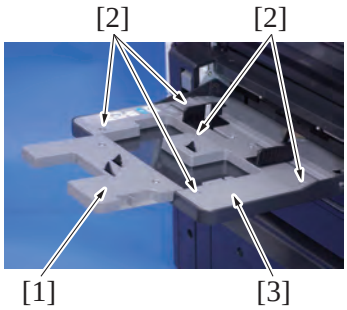
6. Remove two screws [1] and remove the fax speaker assy [2].



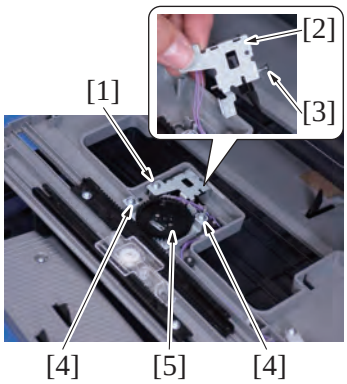
7. Remove the harness from the edge cover [1].
8. Remove two screws [2] and remove the fax speaker [3].
9. To reinstall, reverse the order of removal.

5.8.6 Bypass paper CD size VR (VR1)

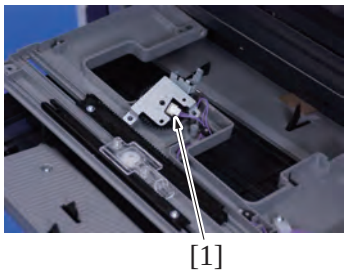
1. Open the manual bypass tray.



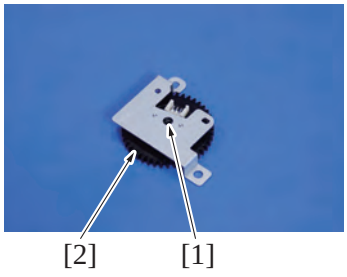
2. Open the expansion tray [1].
3. Remove five screws [2] and remove the cover [3].



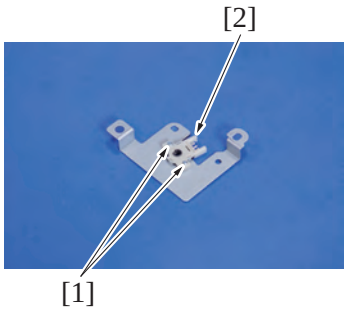
4. Remove the screw [1] and remove the actuator assy [2].
   NOTE
   - **Be careful not to lose the pin [3].**
5. Remove two screws [4] and remove the gear assy [5].



6. Disconnect the connector [1].



7. Remove the tab [1], and remove the gear [2].

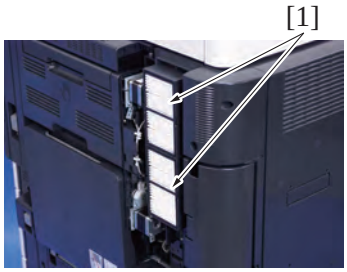


8. Remove two screws [1], and remove the bypass CD paper size VR [2].

9. To reinstall, reverse the order of removal.

5.8.7 UFP filter

1. Remove the duplex unit cover.
G.5.2.30 Duplex unit cover

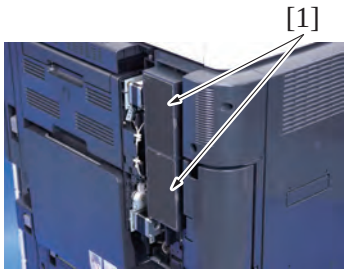


2. Remove two UFP filters [1].

3. To reinstall, reverse the order of removal.

5.8.8 Deodorant filter/1

1. Remove the duplex unit cover.
G.5.2.30 Duplex unit cover



2. Remove two deodorant filters [1].

3. To reinstall, reverse the order of removal.

6. Dual scan document feeder

6.1 Disassembly/reassembly parts list

6.1.1 Exterior parts

No.	Part name	Ref. page
1	Front cover	G.6.2.1 Front cover (dual scan document feeder)
2	Rear cover	G.6.2.2 Rear cover (dual scan document feeder)

6.1.2 Units

No.	Part name	Ref. page
1	Dual scan document feeder	G.6.2.3 Dual scan document feeder
2	Front side glass cleaning roller unit	G.6.2.4 Front side glass cleaning roller unit (dual scan document feeder)
3	Back side glass cleaning roller unit	G.6.2.5 Back side glass cleaning roller unit (dual scan document feeder)
4	CIS module (CIS)	G.6.2.6 CIS module (CIS) (dual scan document feeder)

6.1.3 Boards

No.	Part name	Ref. page
1	DF control board (DFCB)	G.6.2.7 DF control board (DFCB) (dual scan document feeder)
2	Restriction plate positional volume (VR1)	G.6.2.8 Restriction plate positional volume (VR1) (dual scan document feeder)
3	DF power supply (DFPU)	G.6.2.9 DF power supply (DFPU) (dual scan document feeder)
4	Sensor control board (SCB)	G.6.2.10 Sensor control board (SCB)
5	Multi feed detection board/1 (transmitter) (MFDB/1)	G.6.2.11 Multi feed detection board/1 (transmitter) (MFDB/1)
6	Multi feed detection board/2 (receiver) (MFDB/2)	G.6.2.12 Multi feed detection board/2 (receiver) (MFDB/2)

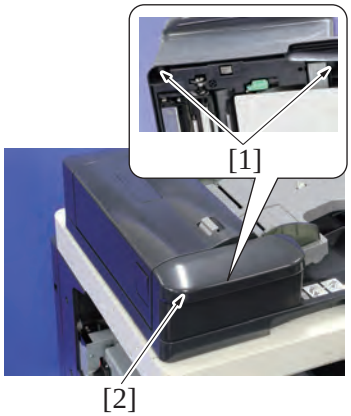
6.1.4 etc.

No.	Part name	Ref. page
1	Take-up motor (M1)	G.6.2.13 Take-up motor (M1) (dual scan document feeder)
2	Registration motor (M2)	G.6.2.14 Registration motor (M2) (dual scan document feeder)
3	Reading motor (M3)	G.6.2.15 Reading motor (M3) (dual scan document feeder)
4	Exit motor (M4)	G.6.2.16 Exit motor (M4) (dual scan document feeder)
5	Reading roller pressure/retraction motor (M6)	G.6.2.17 Reading roller pressure/retraction motor (M6) (dual scan document feeder)
6	Back side cleaning motor (M7)	G.6.2.18 Back side cleaning motor (M7) (dual scan document feeder)
7	Front side cleaning motor (M8)	G.6.2.19 Front side cleaning motor (M8) (dual scan document feeder)
8	Take-up clutch (CL1)	G.6.2.20 Take-up clutch (CL1) (dual scan document feeder)
9	Cooling fan motor (FM)	G.6.2.21 Cooling fan motor (FM) (dual scan document feeder)
10	Separation roller torque limiter	G.6.2.22 Replacing the separation roller torque limiter (dual scan document feeder)
11	Stamp unit	G.6.2.23 Stamp unit (SP-501)
12	Spare TX Marker Stamp 2	G.6.2.24 Stamp (SP-501)

6.2 Disassembly/reassembly procedure (dual scan document feeder/UK-501/SP-501)

6.2.1 Front cover (dual scan document feeder)

1. Open the dual scan document feeder.



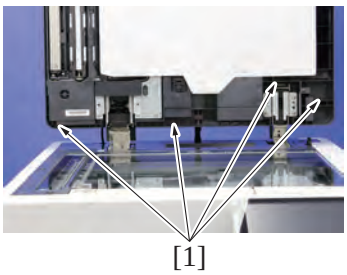
2. Remove two screws [1] and remove the front cover [2].

3. To reinstall, reverse the order of removal.

6.2.2 Rear cover (dual scan document feeder)

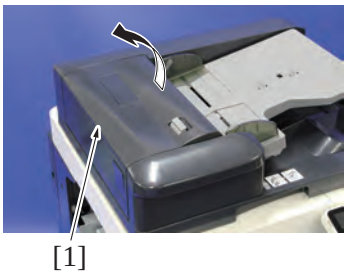
(1) Removal

1. Open the dual scan document feeder.

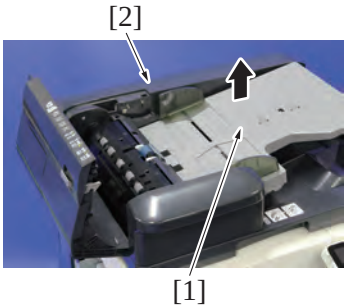


2. Remove four screws [1].
   NOTE
   - **If the dual scan document feeder is set to be lifted up at angles up to 60 degrees due to the set position of the stopper for the hinge, change the set position to the lower side so that the dual scan document feeder can be opened completely.**

3. Open the left cover [1].



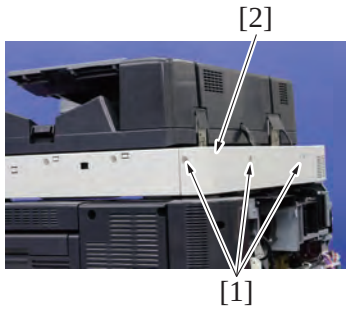
4. Slightly lift up the document feed tray [1].
5. Remove the rear cover [2].



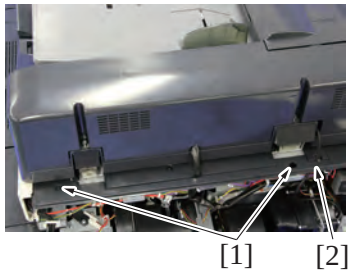
6. To reinstall, reverse the order of removal.

6.2.3 Dual scan document feeder

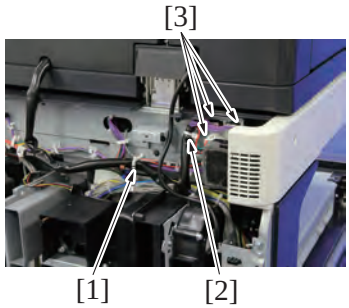
1. Remove the upper rear cover/1.
   G.5.2.27 Upper rear cover /1
2. Remove the upper rear cover/2.
   G.5.2.28 Upper rear cover /2



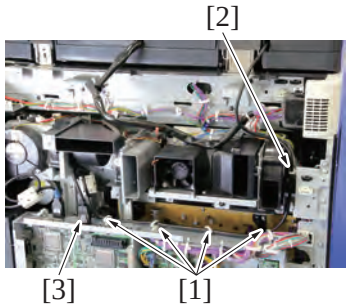
3. Remove three screws [1] and remove the scanner rear cover [2] of the main body.



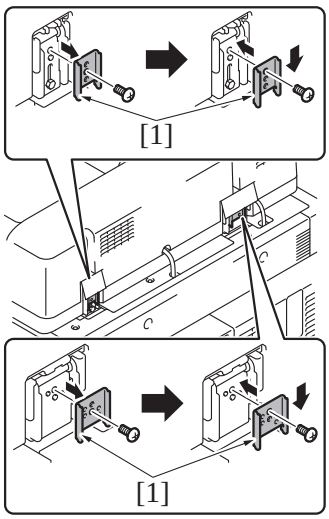
4. Remove two screws [1], and remove the cover [2].



5. Remove the harness from the wire saddle [1].
6. Remove the snap band [2] from the plate.
7. Disconnect three connectors [3].

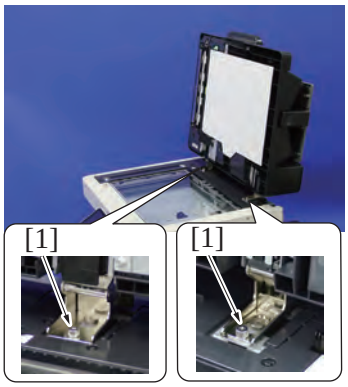


8. Remove the harness from four wire saddles [1].
9. Remove the snap band [2] from the plate.
10. Disconnect the connector [3].

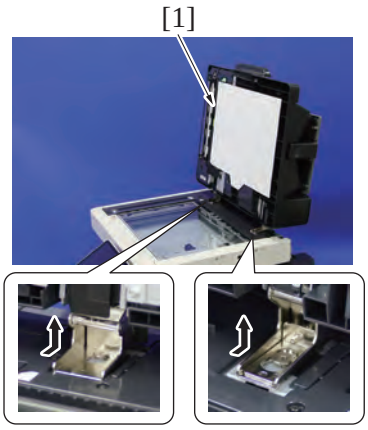


11. Change the set position of the stopper [1] to the lower side.
NOTE
- **After installing the dual scan document feeder, make sure to return the stopper [1] of the hinge to the upper side.**

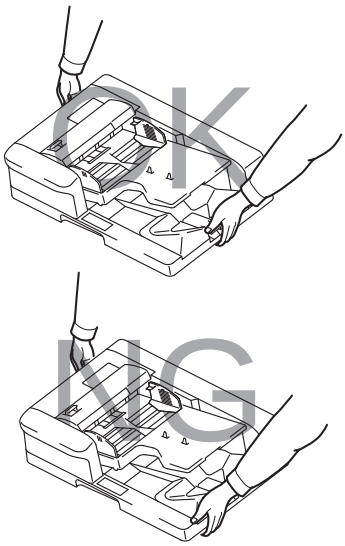
12. Open the dual scan document feeder at 90 degrees.
13. Remove two screws [1].

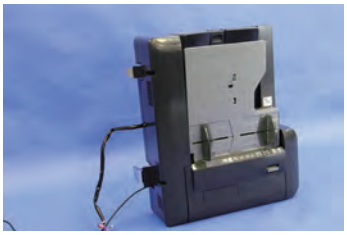


14. Remove the dual scan document feeder [1].



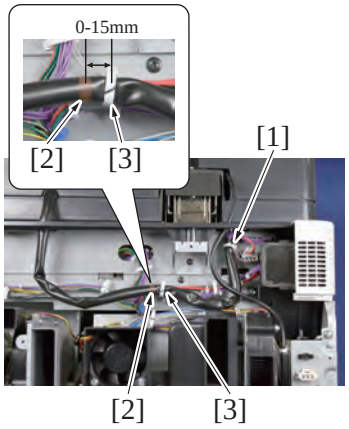
NOTE
- **When carrying the dual scan document feeder, be sure to hold onto the specified positions. The feeder main body can be distorted if held at inappropriate positions.**
- **After removing the dual scan document feeder from the main body, place it on the floor or the like as shown in the illustration.**





15. To reinstall, reverse the order of removal.

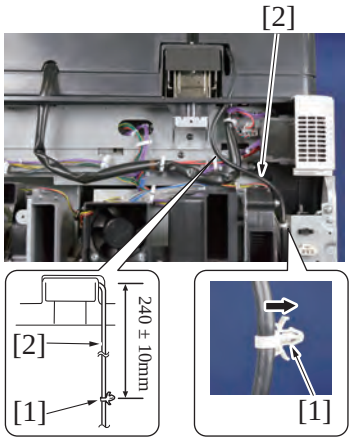
NOTE
- **When wiring the harness connecting the dual scan document feeder to the main body, perform the following procedures to secure the harness.**



1. **Attach the snap band [1] removed in step 9 to the plate.**
2. **Adjust the harness connecting to the main body to make the mark tape [2] within 15mm away from the wire saddle [3].**
3. **Secure the harness connecting to the main body with the wire saddle [3].**

NOTE

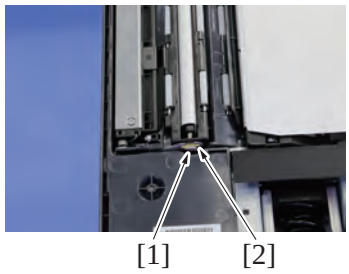
- **When replacing with a new dual scan document feeder, perform the following procedures to attach the snap band to the CIS cable, and then secure the cable.**



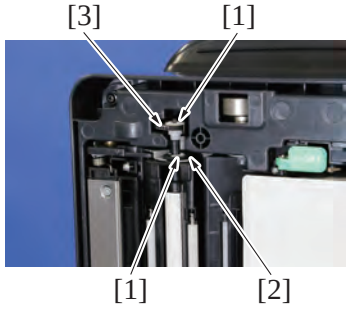
1. **Attach the snap band [V501010018] [1] to the CIS cable [2] at the position shown in the illustration in the orientation indicated with the arrow. (240mm±10mm away from the dual scan document feeder)**
2. **Mount the CIS cable [2] attached with the snap band [1] to the plate.**

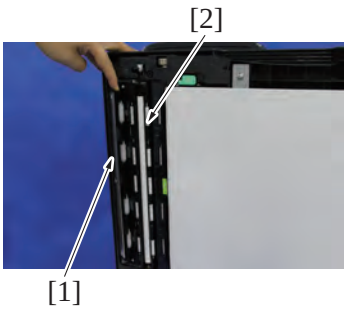
6.2.4 Front side glass cleaning roller unit (dual scan document feeder)

1. Open the dual scan document feeder.
2. Remove the C-clip [1] and the bushing [2].



3. Remove two C-clips [1] shift the bushing [2], and remove the belt [3].



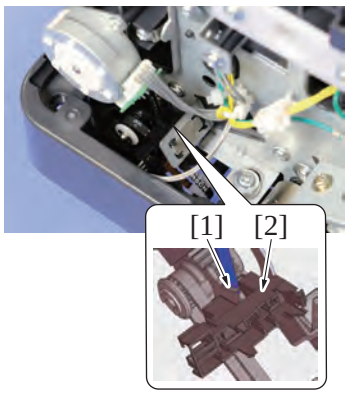


4. Remove the front side glass cleaning roller unit [2] while opening the pre-read sheet assy [1].

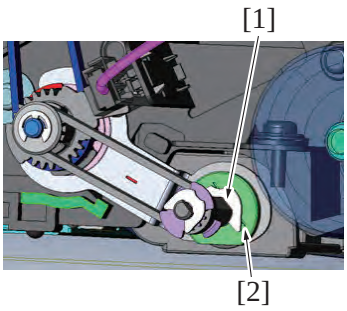
5. To reinstall, reverse the order of removal.

NOTE

- **When installing the front side glass cleaning roller unit, the following adjustment is necessary.**



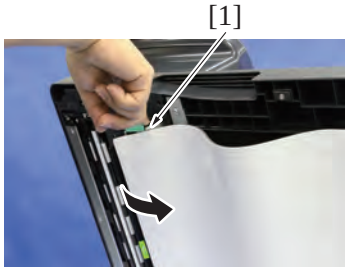
1. **Adjust the actuator [1] so that it is positioned where it blocks the light of the front side cleaning home sensor [2], and install the belt.**



2. **Align the D cut surface [1] of the shaft with the lines [2] marked on the bushing.**

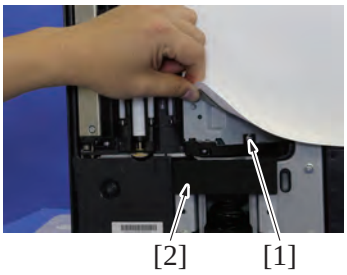
6.2.5 Back side glass cleaning roller unit (dual scan document feeder)

1. Open the dual scan document feeder.

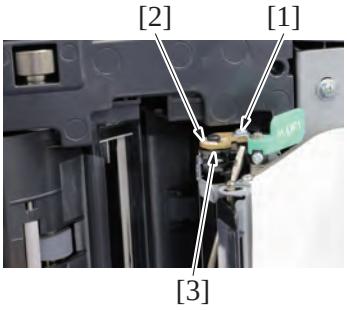


2. Open the opening and closing guide [1].

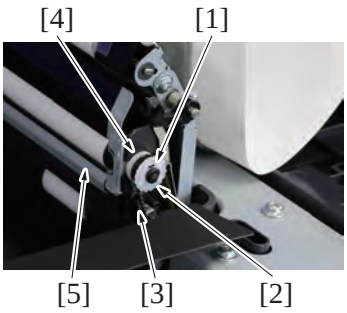
3. While peeling off the mat, remove the screw [1], and while opening the opening and closing guide, remove the cover [2].



4. Remove the screw [1] and the C-clip [2], and remove the bushing [3].



5. Remove the C-clip [1].
6. Remove the gear [2], and remove the belt [3].
7. Remove the bearing [4].
8. Remove the back side glass cleaning roller unit [5].

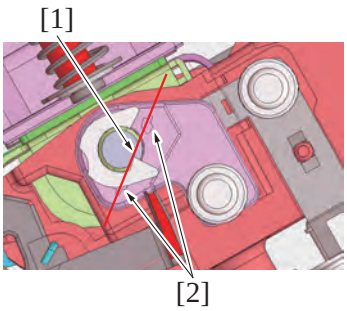


9. To reinstall, reverse the order of removal.

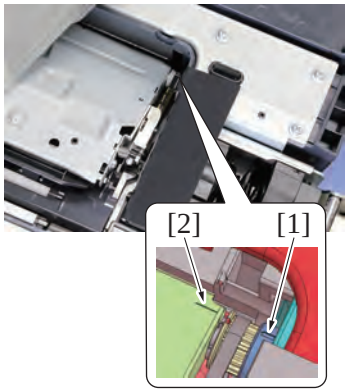
NOTE

- **When installing the back side glass cleaning roller unit, the following adjustment is necessary.**

1. **Align the D cut surface [1] of the shaft with the lines [2] marked on the bushing.**

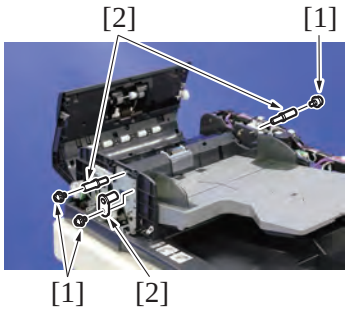


2. **When installing the belt, align the line [1] on the pulley and the line [2] on the transport guide.**

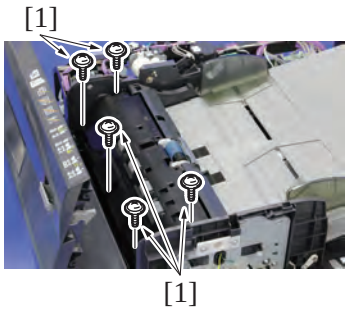


6.2.6 CIS module (CIS) (dual scan document feeder)

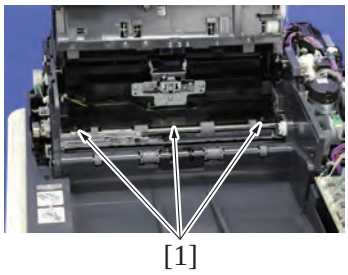
1. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



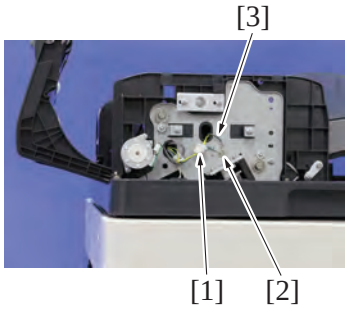
3. Remove three screws [1] and remove three pins [2].



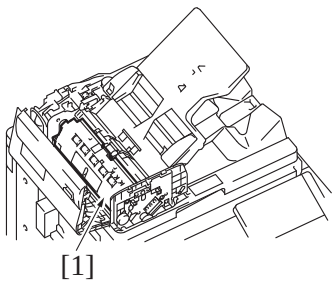
4. Remove five screws [1].



5. Open the document feed tray, and remove three screws [1].

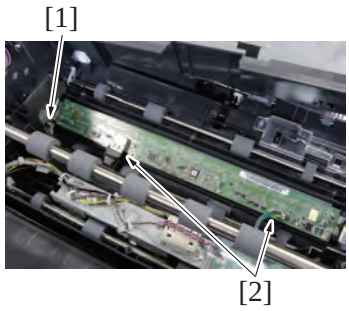


6. Disconnect the connector [1], remove the screw [2], and disconnect the ground wire [3].

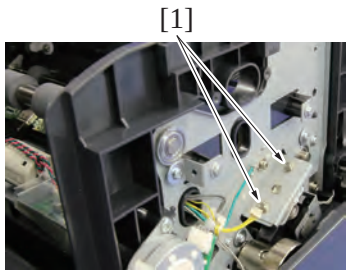


7. Remove the lower guide assy [1].

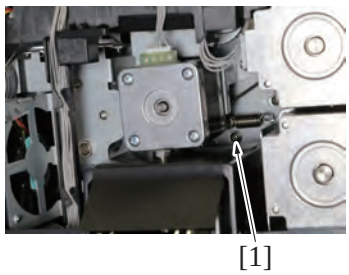
8. Remove the screw [1], and disconnect two connectors [1].



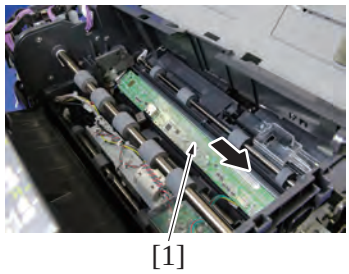
9. Remove two screws (front side) [1].



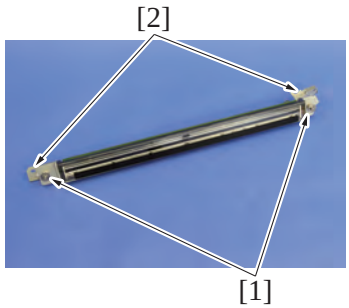
10. Remove the screw (rear side) [1].



11. Remove the CIS module [1] as shown in the illustration.



12. Remove the E-rings [1] on the right and left, and remove the plates [2].



13. To reinstall, reverse the order of removal.

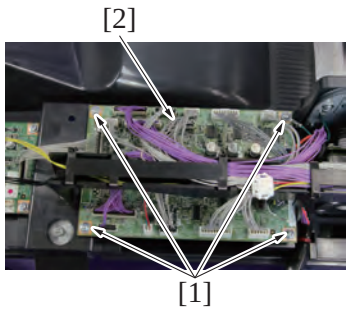
NOTE

- **Be sure to perform the following steps after the CIS module has been replaced with a new one.**
- **Adjust the back side skew feed on the dual scan document feeder.**
  I.12.1.3 Adjusting back side skew feed on dual scan document feeder
- **Execute [Service Mode] -> [System 2] -> [CCD Calibration].**
- **Execute [Service Mode] -> [System 2] -> [Line Mag Setting].**
- **Execute [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment].**
- **Execute [Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)].**

- **Execute [Service Mode] -> [ADF] -> [Main Scanning Direction Zoom].**

6.2.7 DF control board (DFCB) (dual scan document feeder)

1. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



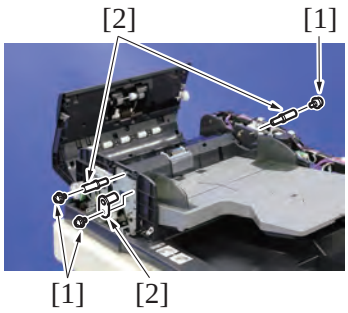
2. Disconnect all connectors from the FS control board.
3. Remove four screws [1], and remove the DF control board [2].
4. To reinstall, reverse the order of removal.

NOTE

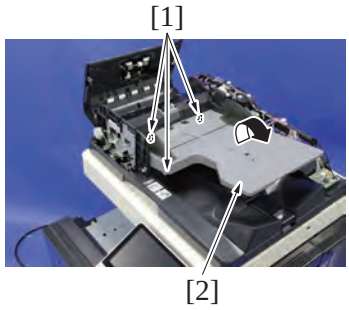
- **Install the firmware when the DF control board is replaced.**
- **Restore the data by executing [Service Mode] -> [Enhanced Security] -> [ADF Data Backup] -> [ADF Data Reflect Mode] when the DF control board is replaced.**

6.2.8 Restriction plate positional volume (VR1) (dual scan document feeder)

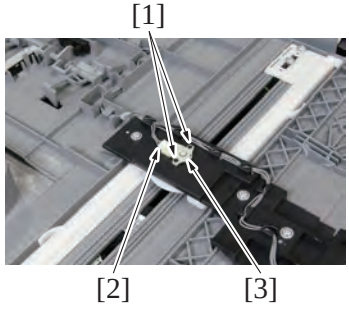
1. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



3. Remove three screws [1] and remove three pins [2].

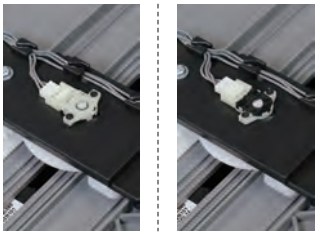


4. Remove three tabs [1].
5. Turning the document feed tray [2] and remove it.



6. Remove two screws [1] and disconnect the connector [2], and remove the restriction plate positional volume [3].

<OK> <NG>



NOTE
- **For mounting the restriction plate positional volume, mount it in the direction shown on the illustration.**

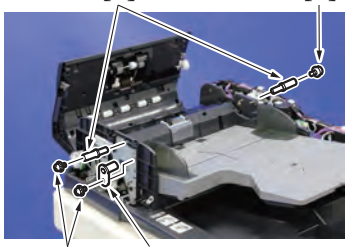
7. To reinstall, reverse the order of removal.

NOTE
- **Be sure to perform the following operation when the restriction plate positional volume is replaced.**
- **Execute [Service Mode] -> [ADF] -> [Original Tray Width].**
- **Turn OFF the main power switch and turn it ON again and check whether size detection operates normally.**

6.2.9 DF power supply (DFPU) (dual scan document feeder)

1. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)

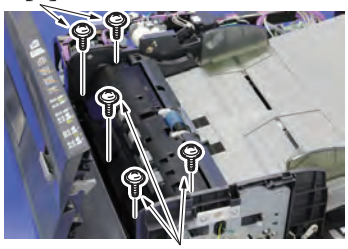
[2] [1]



[1] [2]

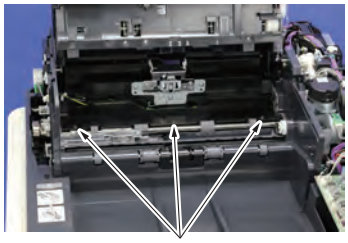
3. Remove three screws [1] and remove three pins [2].

[1]



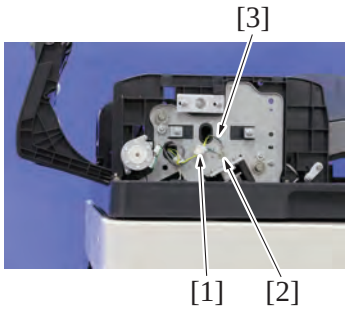
[1]

4. Remove five screws [1].

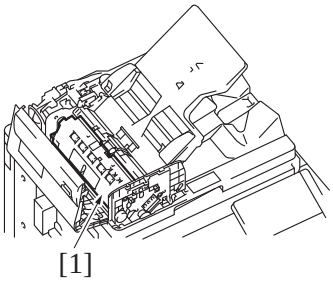


[1]

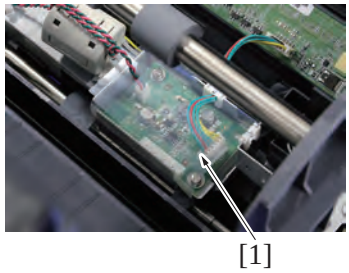
5. Open the document feed tray, and remove three screws [1].



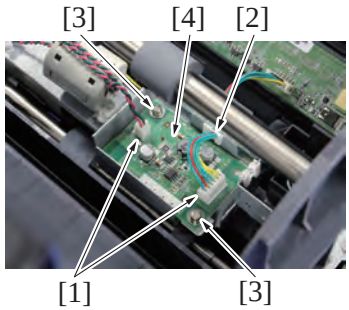
6. Disconnect the connector [1], remove the screw [2], and disconnect the ground wire [3].



7. Remove the lower guide assy [1].



8. Open the protective sheet [1].

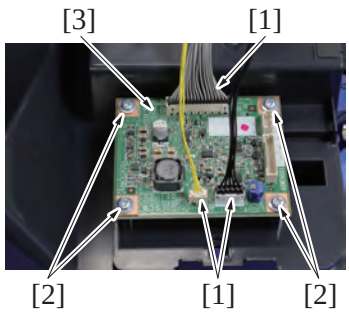


9. Disconnect two connectors [1].
10. Remove the harness from the edge cover [2].
11. Remove two screws [3] and remove the DF power supply [4].

12. To reinstall, reverse the order of removal.

6.2.10 Sensor control board (SCB)

1. Remove the rear cover.
G.6.2.2 Rear cover (dual scan document feeder)



2. Disconnect three connectors [1], remove four screws [2], and remove the sensor control board [3].

3. To reinstall, reverse the order of removal.

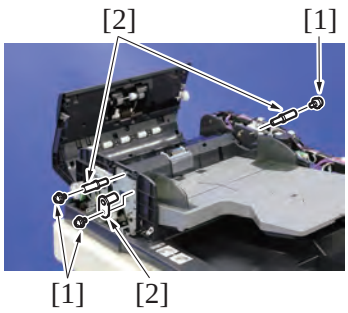
NOTE

- **Be sure to perform the following steps after the sensor control board has been replaced with a new one.**

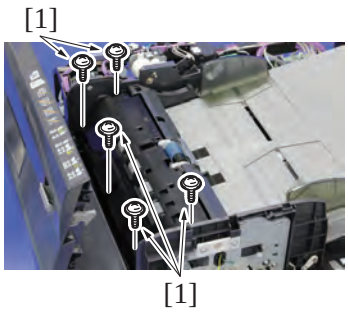
- **Execute [Service Mode] -> [ADF] -> [Multi-Feed DetectionAdj].**

6.2.11 Multi feed detection board/1 (transmitter) (MFDB/1)

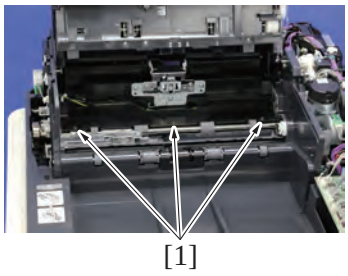
1. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



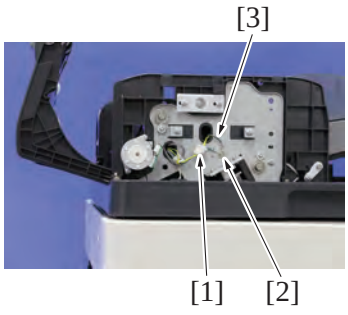
3. Remove three screws [1] and remove three pins [2].



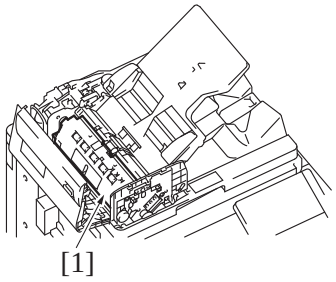
4. Remove five screws [1].



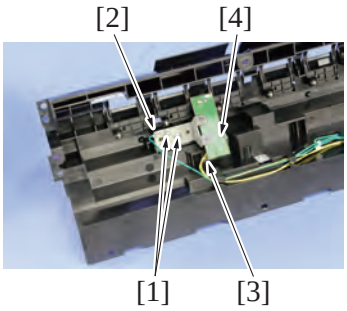
5. Open the document feed tray, and remove three screws [1].



6. Disconnect the connector [1], remove the screw [2], and disconnect the ground wire [3].

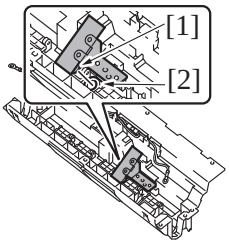


7. Remove the lower guide assy [1].



8. Remove two screws [1], and disconnect the ground wire [2].
9. Disconnect the connector [3] and remove the multi feed detection board/1 [4].

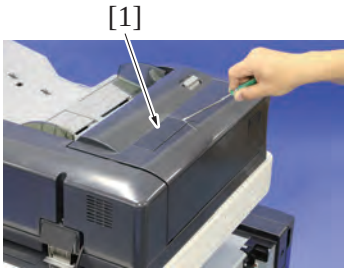
10. To reinstall, reverse the order of removal.



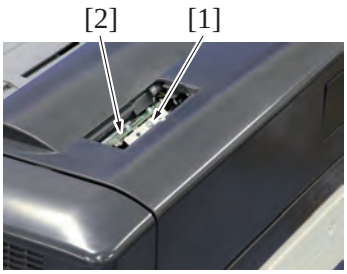
NOTE
- **Install the board so that the sensor [1] fits into the depression [2].**

NOTE
- **Be sure to perform the following steps after the multi feed detection board/1 (transmitter) has been replaced with a new one.**
- **Execute [Service Mode] -> [ADF] -> [Multi-Feed DetectionAdj].**

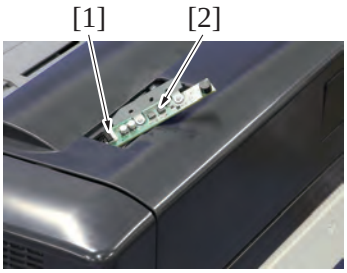
6.2.12 Multi feed detection board/2 (receiver) (MFDB/2)



1. Remove the cover from the dual scan document feeder [1].

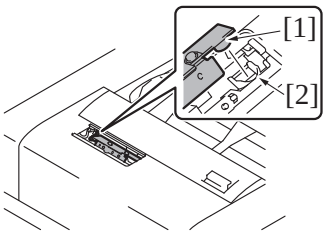


2. Remove the screw [1] and pull out the multi feed detection board/2 [2].



3. Disconnect the connector [1] and remove the multi feed detection board/2 [2].

4. To reinstall, reverse the order of removal.

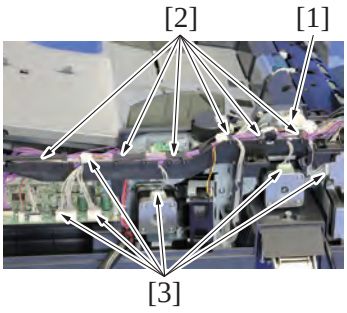


NOTE
- **Install the board so that the sensor [1] fits into the depression [2].**

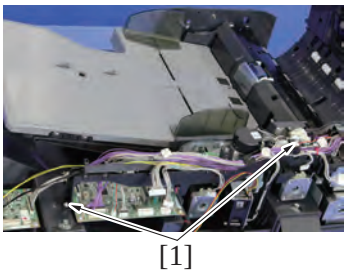
NOTE
- **Be sure to perform the following steps after the multi feed detection board/2 (receiver) has been replaced with a new one.**
- **Execute [Service Mode] -> [ADF] -> [Multi-Feed DetectionAdj].**

6.2.13 Take-up motor (M1) (dual scan document feeder)

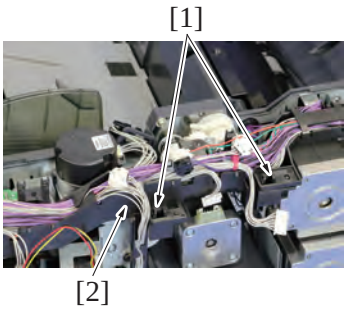
1. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



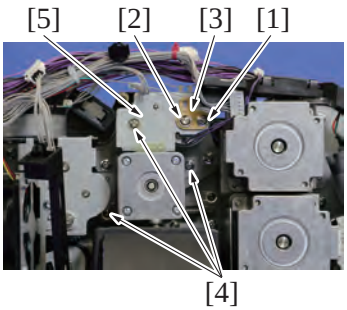
2. Remove the screw, and disconnect the ground wire [1].
3. Remove six wire saddles [2] and disconnect six connectors [3].



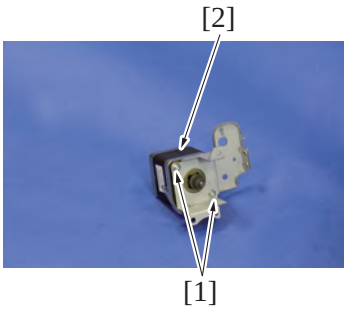
4. Remove two screws [1].



5. Unhook two hooks [1], remove the harness from the harness guide [2], and remove the harness guide [2].



6. Remove the screw [1], E-ring [2], and bushing [3].
7. Remove three screws [4] and remove the take-up motor assy [5].

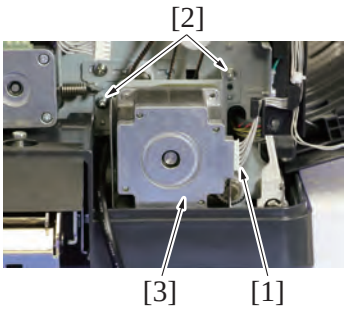


8. Remove the two screws [1] and remove the take-up motor [2].

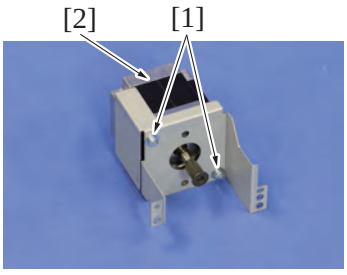
9. To reinstall, reverse the order of removal.

6.2.14 Registration motor (M2) (dual scan document feeder)

1. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)
2. Remove the roller pressure/retraction motor.
   G.6.2.17 Reading roller pressure/retraction motor (M6) (dual scan document feeder)
3. Remove the reading motor.
   G.6.2.15 Reading motor (M3) (dual scan document feeder)



4. Disconnect the connector [1].
5. Remove two screws [2] and remove the registration motor assy [3].



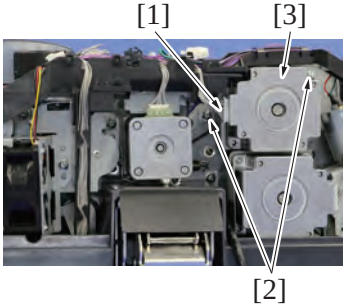
6. Remove two screws [1] and remove the registration motor [2].

7. To reinstall, reverse the order of removal.

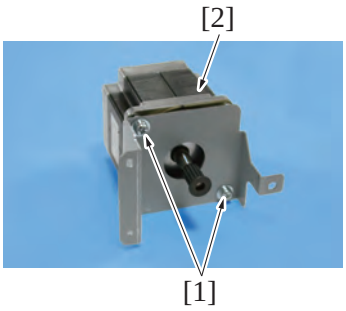
6.2.15 Reading motor (M3) (dual scan document feeder)

(1) Remove procedure

1. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)

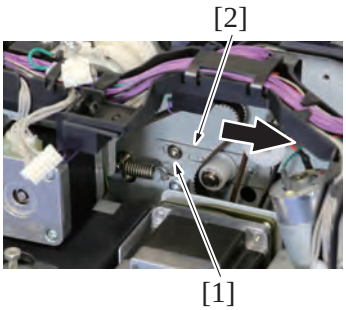


2. Disconnect the connector [1].
3. Remove two screws [2] and remove the reading motor assy [3].

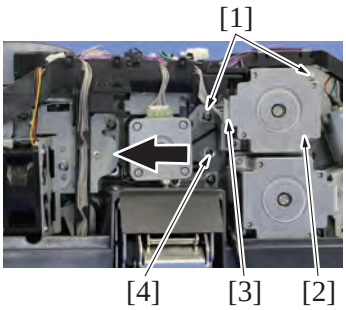


4. Remove two screws [1] and remove the reading motor [2].

(2) Reinstall procedure



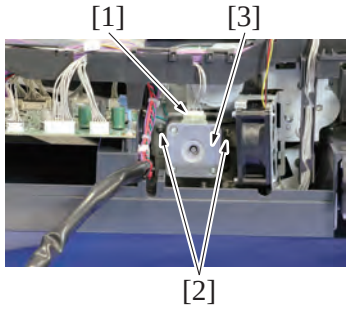
1. Loosen the screw [1] and move the tension plate [2] in the direction of the arrow to reduce the belt tension.
2. Tighten the screw [1].



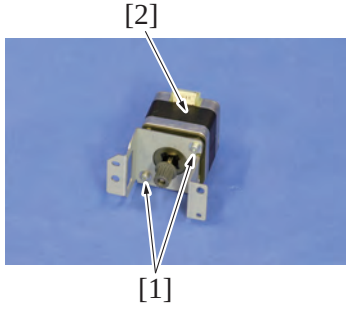
3. Install the reading motor assy [2] with two screws [1].
4. Connect the connector [3].
5. Loosen the screw [4] and apply tension to the belt.
6. Tighten the screw [4].

6.2.16 Exit motor (M4) (dual scan document feeder)

1. Remove the rear cover.
G.6.2.2 Rear cover (dual scan document feeder)



2. Disconnect the connector [1], remove two screws [2], and remove the exit motor assy [3].

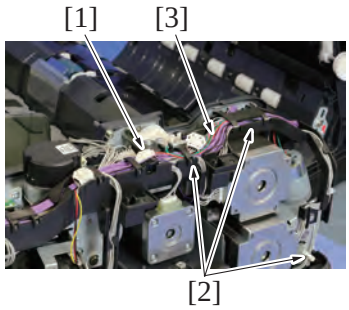


3. Remove two screws [1] and remove the exit motor [2].

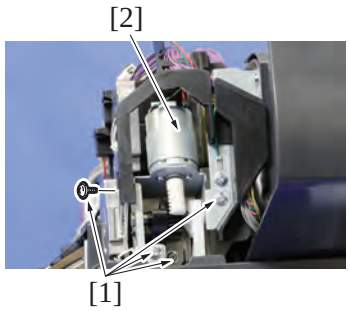
4. To reinstall, reverse the order of removal.

6.2.17 Reading roller pressure/retraction motor (M6) (dual scan document feeder)

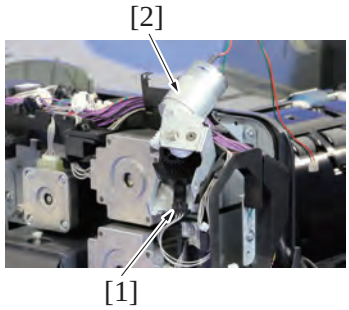
1. Remove the rear cover.
G.6.2.2 Rear cover (dual scan document feeder)



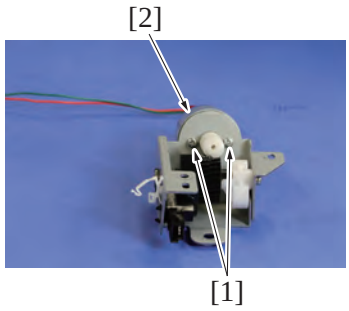
2. Disconnect the connector [1].
3. Remove the harness [3] from three wire saddles [2] and the harness guide.



4. Remove four screws [1] and remove the reading roller pressure/ retraction motor assy [2].



5. Disconnect the connector [1] and remove the reading roller pressure/retraction motor assy [2].

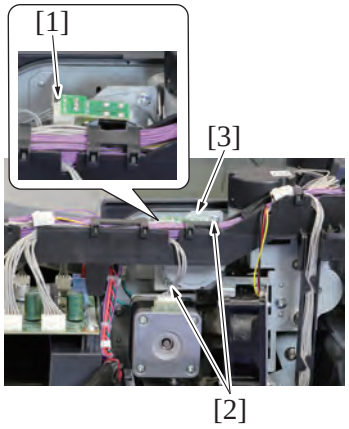


6. Remove two screws [1] and remove the reading roller pressure/ retraction motor [2].

7. To reinstall, reverse the order of removal.

6.2.18 Back side cleaning motor (M7) (dual scan document feeder)

1. Remove the rear cover.
G.6.2.2 Rear cover (dual scan document feeder)

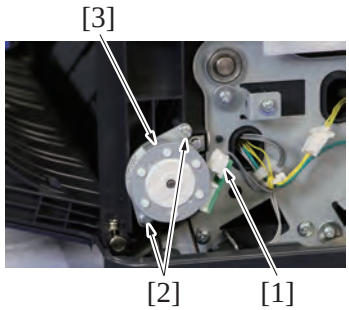


2. Disconnect the connector [1].
3. Remove two crews [2] and remove the back side cleaning motor [3].

4. To reinstall, reverse the order of removal.

6.2.19 Front side cleaning motor (M8) (dual scan document feeder)

1. Remove the front cover.
G.6.2.1 Front cover (dual scan document feeder)

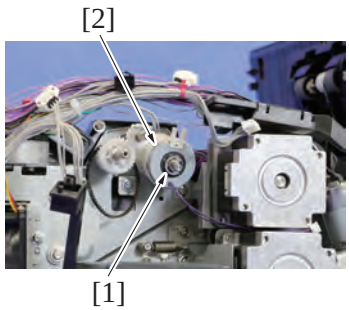


2. Disconnect the connector [1].
3. Remove two screws [2] and remove the front side cleaning motor [3].

4. To reinstall, reverse the order of removal.

6.2.20 Take-up clutch (CL1) (dual scan document feeder)

1. Remove the rear cover.
G.6.2.2 Rear cover (dual scan document feeder)
2. Remove the take-up motor assy.
G.6.2.13 Take-up motor (M1) (dual scan document feeder)

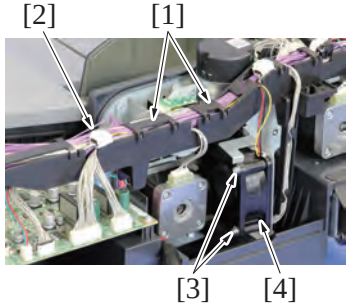


3. Remove the E-ring [1] and remove the take-up clutch [2].

4. To reinstall, reverse the order of removal.

6.2.21 Cooling fan motor (FM) (dual scan document feeder)

1. Remove the rear cover.
G.6.2.2 Rear cover (dual scan document feeder)



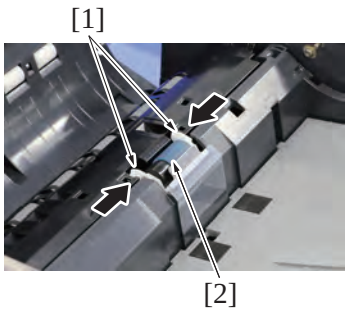
2. Remove two wire saddles [1], disconnect the connector [2], and remove the harness from the wire guide.
3. Remove two screws [3] and remove the cooling fan motor [4].

4. To reinstall, reverse the order of removal.

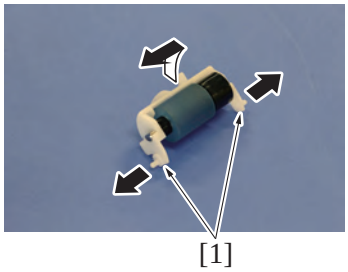
6.2.22 Replacing the separation roller torque limiter (dual scan document feeder)

1. Open the left cover [1].

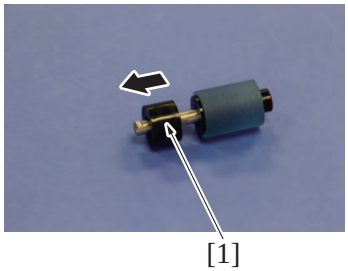
2. Grip both sides [1] of the holder and remove the separation roller assy [2].



3. While opening up the holder [1], remove the shaft.
   NOTE
   - **Opening the holder too much can break the holder.**



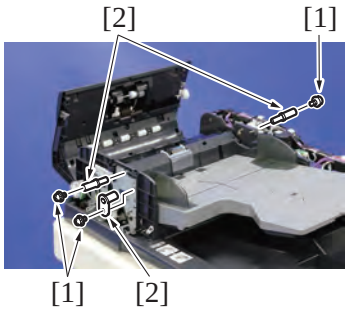
4. Remove the torque limiter [1] from the shaft.
   NOTE
   - **Be careful not to lose the pin.**



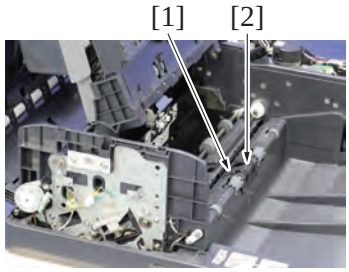
5. To reinstall, reverse the order of removal.

6.2.23 Stamp unit (SP-501)

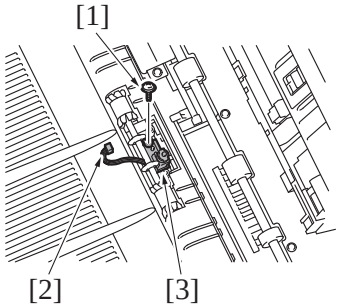
1. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



3. Remove three screws [1] and remove three pins [2].

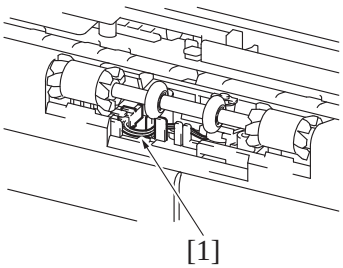


4. Lift up the document feed tray.
5. Remove the screw [1] and remove the stamp unit cover [2].



6. Remove the screw [1] and disconnect the ground wire.
7. Disconnect the connector [2] and remove the stamp unit [2].

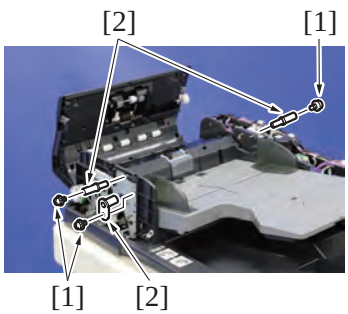
8. To reinstall, reverse the order of removal.



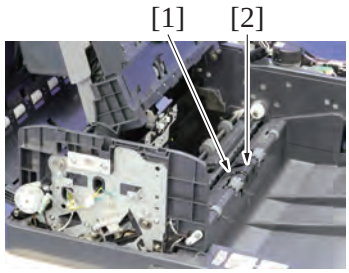
NOTE
- **When reinstalling the stamp unit, make sure that the harness does not interfere with the roller.**

6.2.24 Stamp (SP-501)

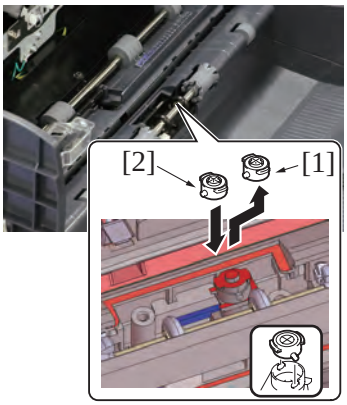
1. Remove the front cover.
   G.6.2.1 Front cover (dual scan document feeder)
2. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



3. Remove three screws [1] and remove three pins [2].



4. Lift up the document feed tray.
5. Remove the screw [1] and remove the stamp unit cover [2].



6. Remove the used stamp [1] and install the spare TX marker stamp [2].
NOTE
- **Align the round pin of the stamp to the groove in the stamp unit.**

7. Option

7.1 Disassembly/reassembly parts list

7.1.1 KP-101

Section	Part name	Ref. page
Units	Keypad	G.7.2.1 Keypad (KP-101)

7.1.2 LU-205

Section	Part name	Ref. page
Exterior parts	Right cover	G.7.3.1 Right cover (LU-205)
	Front cover	G.7.3.2 Front cover (LU-205)
	Rear cover	G.7.3.3 Rear cover (LU-205)
	Feed cover	G.7.3.4 Feed cover (LU-205)
Units	Large capacity unit	G.7.3.5 Large capacity unit (LU-205)
Boards	LU drive board (LUDB)	G.7.3.6 LU drive board (LUDB) (LU-205)
Electrical parts	LU Lift-up motor (M1)	G.7.3.7 LU lift-up motor (M1) (LU-205)
	LU Paper feed motor (M2)	G.7.3.8 LU paper feed motor (M2) (LU-205)
	LU Transport motor (M3)	G.7.3.9 LU transport motor (M3) (LU-205)
	Dehumidification heater (DH)	G.7.3.10 Dehumidification heater (DH) (LU-205)
Up/down section	Lift wire	G.7.3.11 Lift wire (LU-205)

7.1.3 LU-303

Section	Part name	Ref. page
Exterior parts	Right cover	G.7.4.1 Right cover (LU-303)
	Front cover	G.7.4.2 Front cover (LU-303)
	Rear cover	G.7.4.3 Rear cover (LU-303)
	Feed cover	G.7.4.4 Feed cover (LU-303)
Units	Large capacity unit	G.7.4.5 Large capacity unit (LU-303)
Boards	LU drive board (LUDB)	G.7.4.6 LU drive board (LUDB) (LU-303)
Electrical parts	LU Lift-up motor (M1)	G.7.4.7 LU lift-up motor (M1) (LU-303)
	LU Paper feed motor (M2)	G.7.4.8 LU paper feed motor (M2) (LU-303)
	LU Transport motor (M3)	G.7.4.9 LU transport motor (M3) (LU-303)
	Dehumidification heater (DH)	G.7.4.10 Dehumidification heater (DH) (LU-303)
Up/down section	Lift wire	G.7.4.11 Lift wire (LU-303)

7.1.4 FS-537/FS-537SD

Section	Part name	Ref. page
Exterior parts	Upper cover /1	G.7.5.1 Upper cover/1 (FS-537/FS-537SD)
	Upper cover /2	G.7.5.2 Upper cover/2 (FS-537/FS-537SD)
	Upper cover /3	G.7.5.3 Upper cover/3 (FS-537/FS-537SD)
	Rear cover	G.7.5.4 Rear cover (FS-537/FS-537SD)
	Front door	G.7.5.5 Front door (FS-537/FS-537SD)
	Front upper cover	G.7.5.6 Front upper cover (FS-537/FS-537SD)
	Front lower cover	G.7.5.7 Front lower cover (FS-537/FS-537SD)
	Main tray (Paper exit lower tray)	G.7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)
	Sub tray (Paper exit upper tray)	G.7.5.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)
	Left upper cover	G.7.5.10 Left upper cover (FS-537/FS-537SD)
	Left lower cover	G.7.5.11 Left lower cover (FS-537/FS-537SD)
Units	Finisher	G.7.5.12 Finisher (FS-537/FS-537SD)
	Relay unit	G.7.5.13 Relay unit (FS-537/FS-537SD)
	Stapler unit	G.7.5.14 Stapler unit (FS-537/FS-537SD)
Boards	FS control board (FSCB)	G.7.5.15 FS control board (FSCB) (FS-537/FS-537SD)
Electrical parts	Bundle eject motor (M1)	G.7.5.16 Bundle eject motor (M1) / Pre-eject drive motor (M2) / Stacker plate drive motor (M3) (FS-537/FS-537SD)
	Pre-eject drive motor (M2)	
	Stacker plate drive motor (M3)	
	Route change gate motor (M4)	G.7.5.17 Route change gate motor (M4) (FS-537/FS-537SD)

Section	Part name	Ref. page
	Main tray up/down motor (M6)	G.7.5.18 Main tray up/down motor (M6) (FS-537/ FS-537SD)
	Paddle up/down motor (M7)	G.7.5.19 Paddle up/down motor (M7) / Arm drive motor (M8) / FNS paddle motor (M9) (FS-537/FS-537SD)
	Arm drive motor (M8)	
	FNS paddle motor (M9)	
	Receiving roller retraction motor (M10)	G.7.5.20 Receiving roller retraction motor (M10) (FS-537/FS-537SD)
	Trail edge stopper motor/R (M11)	G.7.5.21 Trail edge stopper motor/R (M11) (FS-537/ FS-537SD)
	Trail edge stopper motor/F (M12)	G.7.5.22 Trail edge stopper motor/F (M12) (FS-537/ FS-537SD)
	Alignment motor/rear (M13)	G.7.5.23 Alignment motor/rear (M13) (FS-537/ FS-537SD)
	Alignment motor/front (M14)	G.7.5.24 Alignment motor/front (M14) (FS-537/ FS-537SD)
	Paper receiving control motor (M15)	G.7.5.25 Paper receiving control motor (M15) (FS-537/ FS-537SD)
	SD discharge motor (M16)	G.7.5.26 SD discharge motor (M16) (FS-537/ FS-537SD)
	FNS discharge motor (M17)	G.7.5.27 FNS discharge motor (M17) (FS-537/ FS-537SD)
	Sub tray discharge motor (M18)	G.7.5.28 Sub tray discharge motor (M18) (FS-537/ FS-537SD)
	Stapler movement motor (M19)	G.7.5.29 Stapler movement motor (M19) (FS-537/ FS-537SD)
	FNS entry transport motor (M20)	G.7.5.30 FNS entry transport motor (M20) (FS-537/ FS-537SD)
	ZU discharge motor (M21)	G.7.5.31 ZU Discharge Motor (M21) (FS-537/ FS-537SD)

7.1.5 FS-537SD saddle section

Section	Part name	Ref. page
Exterior parts	Front cover	G.7.6.1 Front cover (FS-537SD saddle section)
Units	Saddle unit	G.7.6.2 Saddle unit (FS-537SD saddle section)
	Exit tray	G.7.6.3 Exit tray (FS-537SD saddle section)
	Staple unit	G.7.6.4 Staple unit (FS-537SD saddle section)
Boards	SD control board (SDCB)	G.7.6.5 SD control board (SDCB) (FS-537SD saddle section)
Electrical parts	SD transport motor (M1)	G.7.6.6 SD transport motor (M1) (FS-537SD saddle section)
	Paper discharge control motor (M2)	G.7.6.7 Paper discharge control motor (M2) (FS-537SD saddle section)
	Alignment motor (M3)	G.7.6.8 Alignment motor (M3) (FS-537SD saddle section)
	Stopper drive motor (M4)	G.7.6.9 Stopper drive motor (M4) (FS-537SD saddle section)
	Center fold roller motor (M5)	G.7.6.10 Center fold roller motor (M5) (FS-537SD saddle section)
	Center fold guide motor (M6)	G.7.6.11 Center fold guide motor (M6) (FS-537SD saddle section)
	SD paddle motor (M7)	G.7.6.12 SD paddle motor (M7) (FS-537SD saddle section)
	Tri-folding guide motor (M8)	G.7.6.13 Tri-folding guide motor (M8) (FS-537SD saddle section)
	Center fold knife motor (M9)	G.7.6.14 Center fold knife motor (M9) (FS-537SD saddle section)
	Paper transport belt motor (M34)	G.7.6.15 Paper transport belt motor (M34) (FS-537SD saddle section)
	Stopper solenoid (SD1)	G.7.6.16 Stopper solenoid (SD1) (FS-537 saddle section)

7.1.6 ZU-609

Section	Part name	Ref. page
Units	Z folding unit	G.7.7.1 Z Folding Unit (ZU-609)

Section	Part name	Ref. page
Boards	ZU drive board (ZUDB)	G.7.7.2 ZU drive board (ZUDB) (ZU-609)
	ZU relay board (ZURB)	G.7.7.3 ZU relay board (ZURB) (ZU-609)
Electrical parts	ZU transport motor (M500)	G.7.7.4 ZU transport motor (M500) (ZU-609)
	Folding guide motor (M501)	G.7.7.5 Folding guide motor (M501) (ZU-609)
	Pressure motor (M502)	G.7.7.6 Pressure motor (M502) (ZU-609)

7.1.7 PK-523

Section	Part name	Ref. page
Units	Punch kit	G.7.8.1 Punch Kit (PK-523)
Boards	Punch control board (PKCB)	G.7.8.2 Punch control board (PKCB) (PK-523)
	Paper size detect board (PSDTB)	G.7.8.3 Paper size detect board (PSDTB) (PK-523)
Electrical parts	Punch oscillating motor (M302)	G.7.8.4 Punch oscillating motor (M302) (PK-523)

7.1.8 JS-602

Section	Part name	Ref. page
Exterior parts	Paper exit tray	G.7.9.1 Paper exit tray (JS-602)
	Front cover	G.7.9.2 Front cover (JS-602)
	Rear cover	G.7.9.3 Rear cover (JS-602)
Units	Job separator	G.7.9.4 Job separator (JS-602)
Electrical parts	Entrance switching solenoid (SD401)	G.7.9.5 Entrance switching solenoid (SD401) (JS-602)

7.1.9 PI-507

Section	Part name	Ref. page
Exterior parts	Upper cover	G.7.10.1 Upper cover (PI-507)
	Rear cover	G.7.10.2 Rear cover (PI-507)
	Operation panel cover assy	G.7.10.3 Operation panel cover assy (PI-507)
Units	Post inserter	G.7.10.4 Post Inserter (PI-507)
Boards	PI drive board	G.7.10.5 PI drive board (PIDB) (PI-507)
	PI operation board	G.7.10.6 PI operation board (PIOB) (PI-507)
	PI relay board	G.7.10.7 PI relay board (PIRB) (PI-507)
Electrical parts	Tray lift motor /Lw (M202)	G.7.10.8 Tray lift motor /Lw (M202) (PI-507)
	Transfer motor (M203)	G.7.10.9 Transfer motor (M203) (PI-507)
	Transport roller drive motor (M204)	G.7.10.10 Transport roller drive motor (M204) (PI-507)
	Folding guide motor (M501)	G.7.10.11 Folding guide motor (M501) (PI-507)
	Transfer clutch /Lw (CL202)	G.7.10.12 Transfer clutch /Lw (CL202) (PI-507)
	Registration clutch (CL203)	G.7.10.13 Registration clutch (CL203) (PI-507)
	Pick-up solenoid /Lw (SD202)	G.7.10.14 Pick-up solenoid /Lw (SD202) (PI-507)
	Paper size VR /Lw (VR202)	G.7.10.15 Paper size VR /Lw (VR202) (PI-507)

7.1.10 FS-536/FS-536SD

Section	Part name	Ref. page
Exterior parts	Rear cover	G.7.11.1 Rear cover (FS-536/FS-536SD)
	Front door	G.7.11.2 Front door (FS-536/FS-536SD)
	Front upper cover	G.7.11.3 Front upper cover (FS-536/FS-536SD)
	Left lower cover	G.7.11.4 Left lower cover (FS-536/FS-536SD)
	Front lower cover	G.7.11.5 Front lower cover (FS-536/FS-536SD)
Units	Finisher	G.7.11.6 Finisher (FS-536/FS-536SD)
	Relay unit	G.7.11.7 Relay unit (FS-536/FS-536SD)
	Stapler unit	G.7.11.8 Stapler unit (FS-536/FS-536SD)
Boards	FS control board (FSCB)	G.7.11.9 FS control board (FSCB) (FS-536/FS-536SD)
Electrical parts	RU transport motor (M35)	G.7.14.1 RU transport motor (M35) (FS-536/FS-536SD/ FS-537/FS-537SD)
	FNS entry transport motor (M2)	G.7.11.10 FNS entry transport motor (M2) (FS-536/ FS-536SD)
	FNS discharge motor (M3)	G.7.11.11 FNS discharge motor (M3) (FS-536/ FS-536SD)
	Receiving roller retraction motor (M4)	G.7.11.12 Receiving roller retraction motor (M4) (FS-536/FS-536SD)

Section	Part name	Ref. page
	FNS paddle motor (M5)	G.7.11.13 FNS paddle motor (M5) (FS-536/FS-536SD)
	Trailing edge stopper motor (M6)	G.7.11.14 Trailing edge stopper motor (M6) (FS-536/FS-536SD)
	Alignment motor/front (M7)	G.7.11.15 Alignment motor/front (M7) (FS-536/FS-536SD)
	Alignment motor/rear (M8)	G.7.11.16 Alignment motor/rear (M8) (FS-536/FS-536SD)
	Pre-eject drive motor (M9)	G.7.11.17 Pre-eject drive motor (M9) (FS-536/FS-536SD)
	Bundle eject motor (M10)	G.7.11.18 Bundle eject motor (M10) (FS-536/FS-536SD)
	Main tray up/down motor (M11)	G.7.11.19 Main tray up/down motor (M11) (FS-536/FS-536SD)
	Paper receiving control motor (M12)	G.7.11.20 Paper receiving control motor (M12) (FS-536/FS-536SD)
	Side stapler movement motor (M13)	G.7.11.21 Side stapler movement motor (M13) (FS-536/FS-536SD)

7.1.11 FS-536SD saddle section

Section	Part name	Ref. page
Exterior parts	Front cover	G.7.12.1 Front cover (FS-536SD saddle section)
Units	Saddle unit	G.7.12.2 Saddle unit (FS-536SD)
	Exit tray	G.7.12.3 Exit tray (FS-536SD saddle section)
	Staple unit	G.7.12.4 Staple unit (FS-536SD saddle section)
Boards	SD control board (SDCB)	G.7.12.5 SD control board (SDCB) (FS-536SD saddle section)
Electrical parts	SD transport motor (M1)	G.7.12.6 SD transport motor (M1) (FS-536SD saddle section)
	Paper discharge control motor (M2)	G.7.12.7 Paper discharge control motor (M2) (FS-536SD saddle section)
	Alignment motor (M3)	G.7.12.8 Alignment motor (M3) (FS-536SD saddle section)
	Stopper drive motor (M4)	G.7.12.9 Stopper drive motor (M4) (FS-536SD saddle section)
	Center fold roller motor (M5)	G.7.12.10 Center fold roller motor (M5) (FS-536SD saddle section)
	Center fold guide motor (M6)	G.7.12.11 Center fold guide motor (M6) (FS-536SD saddle section)
	SD paddle motor (M7)	G.7.12.12 SD paddle motor (M7) (FS-536SD saddle section)
	Tri-folding guide motor (M8)	G.7.12.13 Tri-folding guide motor (M8) (FS-536SD saddle section)
	Center fold knife motor (M9)	G.7.12.14 Center fold knife motor (M9) (FS-536SD saddle section)
	Stopper solenoid (SD1)	G.7.12.15 Stopper solenoid (SD1) (FS-536 saddle section)

7.1.12 PK-520

Section	Part name	Ref. page
Units	Punch kit	G.7.13.1 Punch kit (PK-520)

7.1.13 FK-515

Section	Part name	Ref. page
Boards	Fax board (line 3)	G.7.15.1 FAX board (line 3), FAX board (line 4) (FK-515)
	Fax board (line 4)	

7.1.14 FK-516

Section	Parts name	Ref. page
Boards	Fax kit (line 1)	G.7.16.1 Fax kit (line 1) (FK-516)
	Fax kit (line 2)	G.7.16.2 Fax kit (Line 2) (FK-516)

7.1.15 MK-742

Section	Part name	Ref. page
Units	Fax mount kit	G.7.17.1 Fax mount kit (MK-742)
Boards	FAX 3/4 relay board (FAXRYB)	G.7.17.2 FAX 3/4 relay board (FAXRYB) (MK-742)

7.1.16 OT-508

Section	Part name	Ref. page
Exterior parts	Output Tray	G.7.18.1 Output tray (OT-508)
Units	FAN unit	G.7.18.2 Fan unit (OT-508)
Electrical parts	Tucking fan/Md (FM101)	G.7.18.3 Tucking fan/Md (FM101), Tucking fan/Rr (FM102), Tucking fan/Fr (FM103)
	Tucking fan/Rr (FM102)	
	Tucking fan/Fr (FM103)	

7.1.17 SC-508

Section	Part name	Ref. page
Boards	DSC board/1	G.7.19.1 DSC board/1 (DSCB/1) (SC-508)
	DSC board/2	G.7.19.2 DSC board/2 (DSCB/2) (SC-508)

7.1.18 HD-524

Section	Part name	Ref. page
Units	Hard disk (B)	G.7.20.1 Hard disc (B) (HDD (B) (HD-524)

7.1.19 WT-513

Section	Part name	Ref. page
Units	Working table	G.7.21.1 Working table (WT-513)

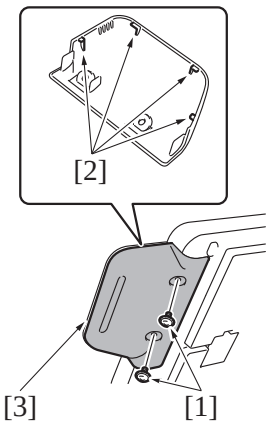
7.1.20 UK-212

Section	Part name	Ref. page
Units	Upgrade kit	G.7.22.1 Upgrade kit (UK-212)

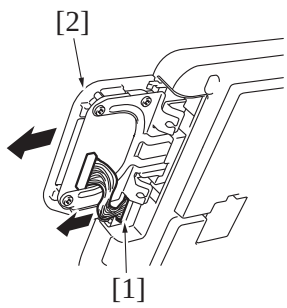
7.2 Disassembly/reassembly procedure (KP-101)

7.2.1 Keypad (KP-101)

1. Remove two screws [1], release four tabs [2], and remove the cover [3].



2. Disconnect the connector [1] and remove the keypad [2].

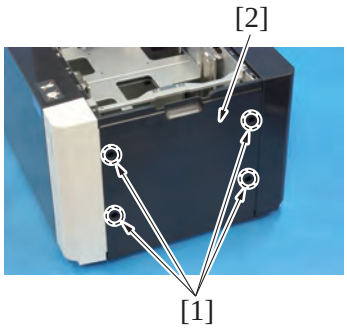


3. To reinstall, reverse the order of removal.

7.3 Disassembly/reassembly procedure (LU-205)

7.3.1 Right cover (LU-205)

1. Open the upper door.

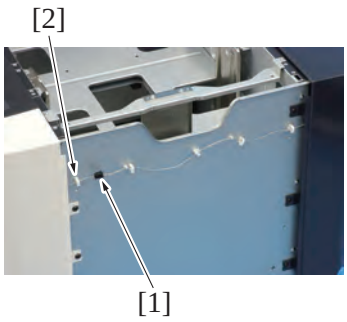


2. Remove four screws [1] and remove the right cover [2].

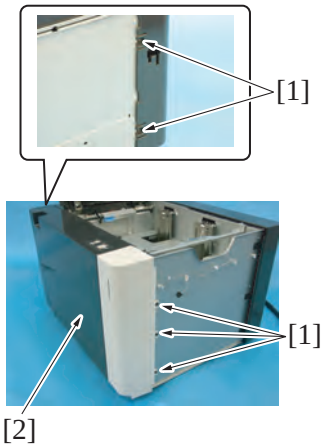
3. To reinstall, reverse the order of removal.

7.3.2 Front cover (LU-205)

1. Remove the right cover.
G.7.3.1 Right cover (LU-205)



2. Disconnect the connector [1], and remove the harness from the wire saddle [2].

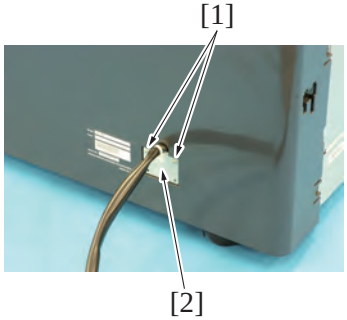


3. Loosen five screws [1] and remove the front cover [2].

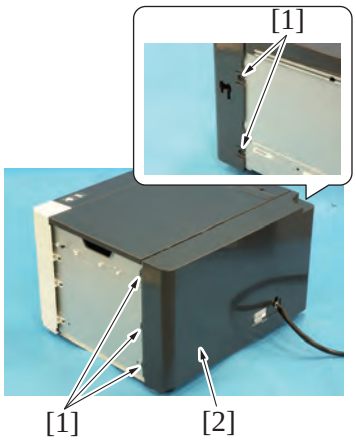
4. To reinstall, reverse the order of removal.

7.3.3 Rear cover (LU-205)

1. Remove the right cover.
G.7.3.1 Right cover (LU-205)



2. Remove two screws [1] and remove the plate [2].

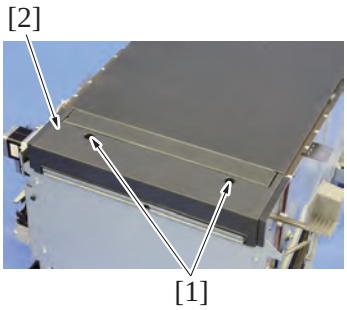


3. Loosen five screws [1] and remove the rear cover [2].

4. To reinstall, reverse the order of removal.

7.3.4 Feed cover (LU-205)

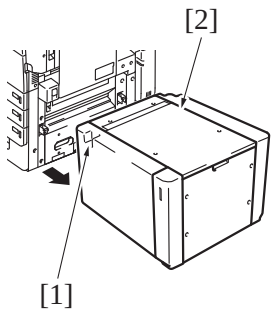
1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the front cover.
   G.7.3.2 Front cover (LU-205)
3. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)



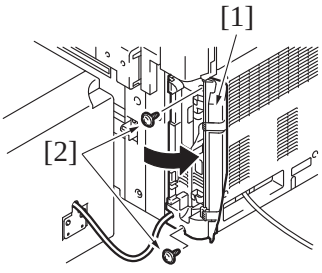
4. Remove two screws [1] and remove the feed cover [2].

5. To reinstall, reverse the order of removal.

7.3.5 Large capacity unit (LU-205)

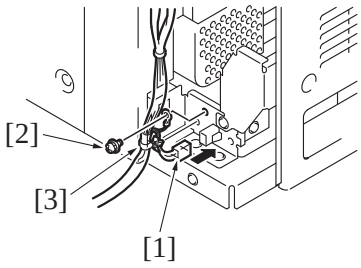


1. Slide the large capacity unit [2] while pressing on the lever [1], and remove from the main body.

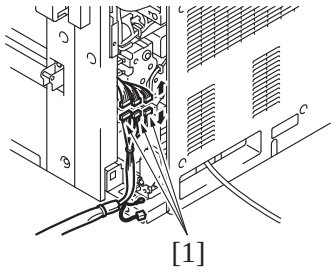


2. Open the interface cover/2 [1].
3. Remove two screws [2] and remove the interface cover/2 [1].

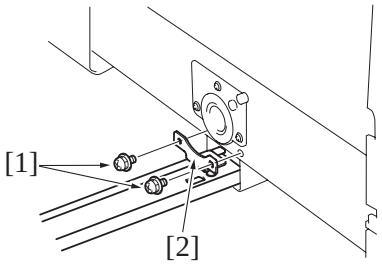
4. Disconnect the connector [1], the screw on the ground wire [2], and the cord clamp [3].



5. Disconnect three connectors [1].



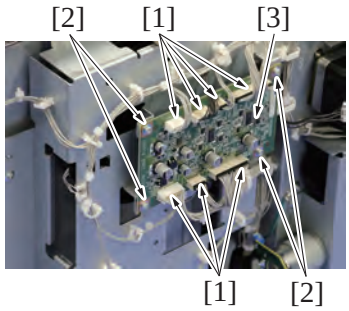
6. Remove two screws [1] and remove the mounting plate [2].



7. To reinstall, reverse the order of removal.

7.3.6 LU drive board (LUDB) (LU-205)

1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)

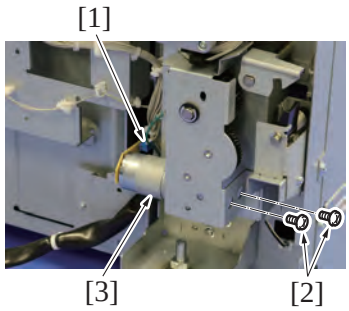


3. Disconnect seven connectors [1].
4. Remove four screws [2] and remove the LU drive board [3].

5. To reinstall, reverse the order of removal.

7.3.7 LU lift-up motor (M1) (LU-205)

1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)

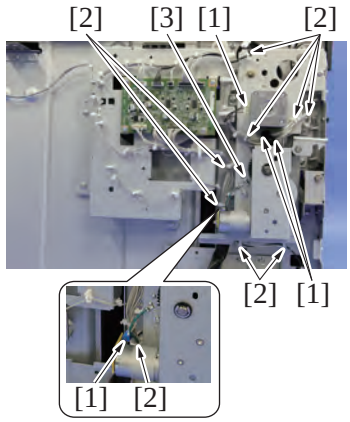


3. Disconnect the connector [1], remove two screws [2] and remove the LU lift-up motor [3].

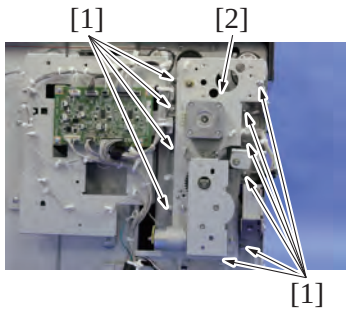
4. To reinstall, reverse the order of removal.

7.3.8 LU paper feed motor (M2) (LU-205)

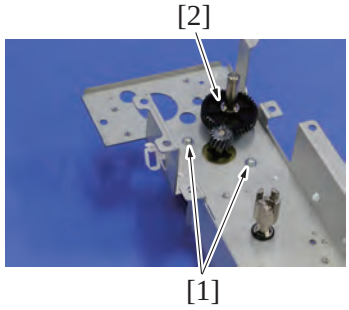
1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)
3. Remove the LU transport motor.
   G.7.3.9 LU transport motor (M3) (LU-205)



4. Disconnect four connectors [1].
5. Remove the harness from nine wire saddles [2].
6. Remove the screw [3] and disconnect the ground wire.



7. Remove 10 screws [1] and remove the drive assy [2].

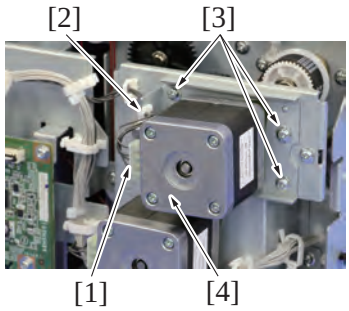


8. Remove two screws [1] and remove the LU paper feed motor [2].

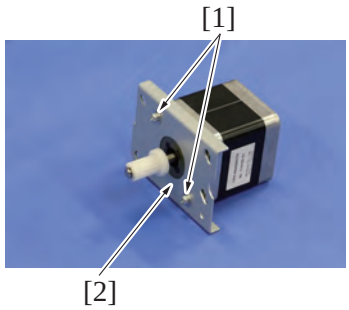
9. To reinstall, reverse the order of removal.

7.3.9 LU transport motor (M3) (LU-205)

1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)



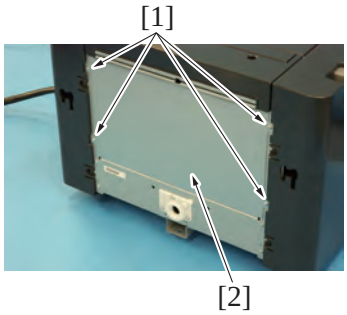
3. Disconnect the connector [1] and remove the harness from the edge cover [2].
4. Remove three screws [3] and remove the LU transport motor assy [4].



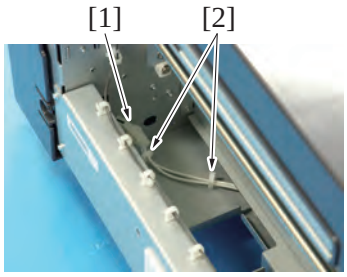
5. Remove two screws [1], and remove the LU transport motor [2].

6. To reinstall, reverse the order of removal.

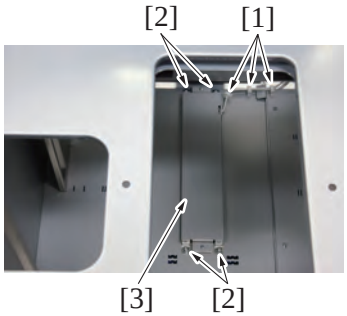
7.3.10 Dehumidification heater (DH) (LU-205)



1. Remove four screws [1] and remove the left cover [2].



2. Disconnect the connector [1].
3. Remove the harness from two wire saddles [2].



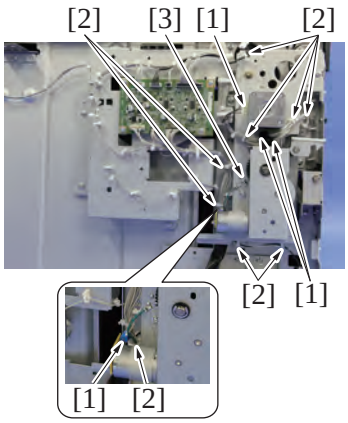
4. Remove the harness from three wire saddles [1].
5. Remove four screws [2] and remove the dehumidification heater [3].

6. To reinstall, reverse the order of removal.

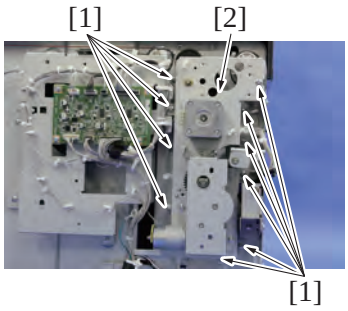
7.3.11 Lift wire (LU-205)

(1) Removal

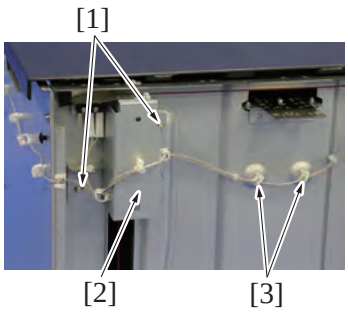
1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the front cover.
   G.7.3.2 Front cover (LU-205)
3. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)
4. Remove the LU transport motor.
   G.7.3.9 LU transport motor (M3) (LU-205)



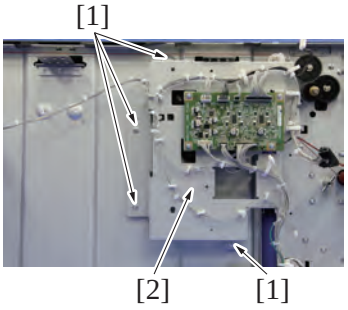
5. Disconnect four connectors [1].
6. Remove the harness from nine wire saddles [2].
7. Remove the screw [3] and disconnect the ground wire.



8. Remove 10 screws [1] and remove the drive assy [2].

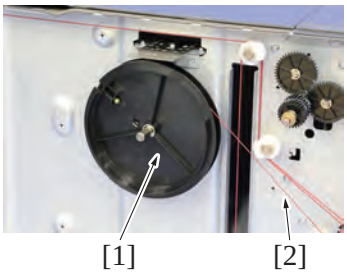


9. Remove two screws [1] and remove the plate [2].
10. Remove the harness from two wire saddles [3].

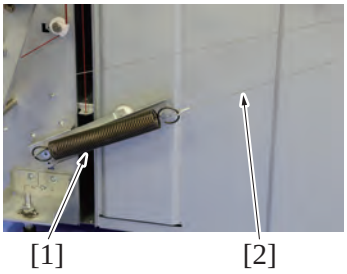


11. Remove four screws [1] and remove the LU drive board assy [2].

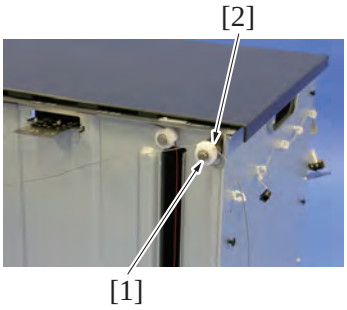
12. Remove the lift wire/L [2] from the rotation plate [1].



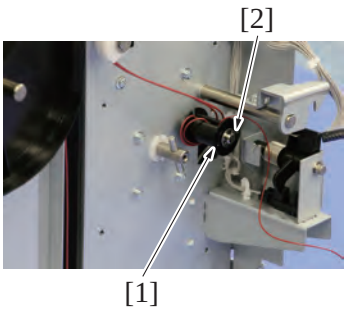
13. Remove the auxiliary wire [2] from the spring [1] on the front side.



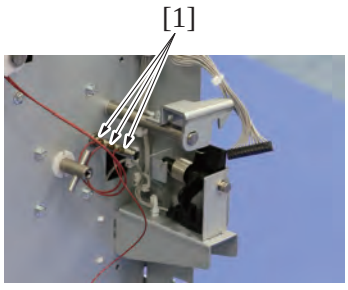
14. Remove the E-ring [1] on the front side to remove the wire holding jig [2].

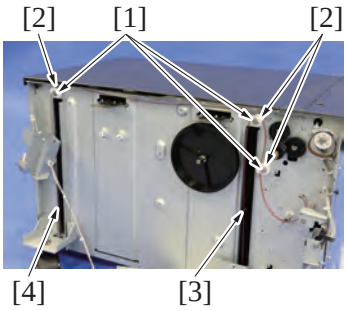


15. Remove the E-ring [2] on the rear side to remove the driving pulley [1].

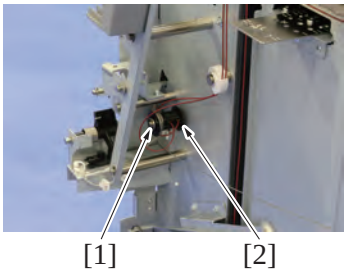


16. Pull out three lift wires [1].

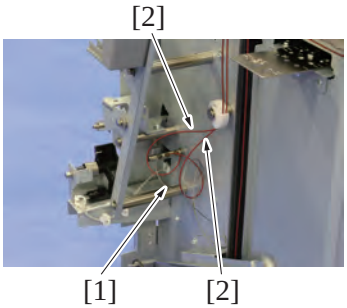




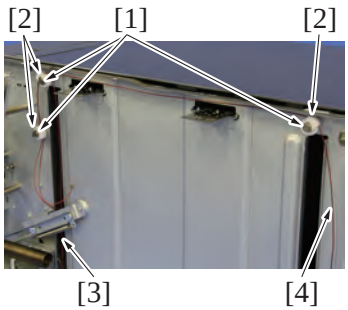
17. Remove three E-rings [1] and three wire pulleys [2], and remove the lift wire/S [3] and the lift wire/L [4].



18. Remove the E-ring [1] on the front side to remove the driving pulley [2].

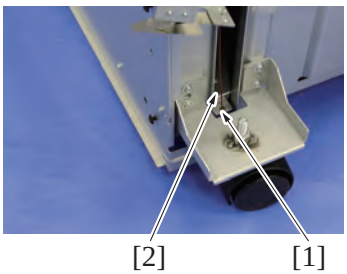


19. Pull out the auxiliary wire [1] and two lift wires [2].

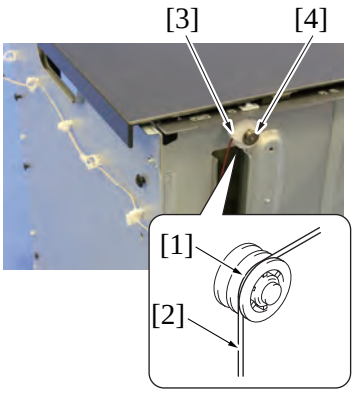


20. Remove three E-rings [1] and three wire pulleys [2], and remove the lift wire/S [3] and the lift wire/L [4].

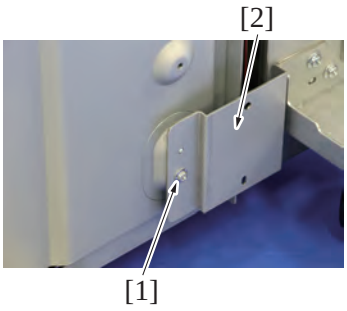
(2) Mounting



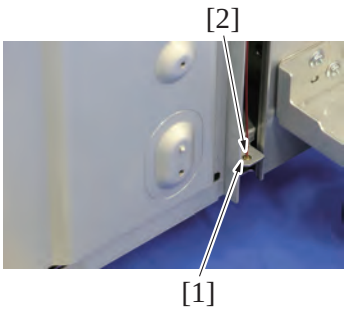
1. Insert the lift wire/L [2] to the left hole [1] on the rear face.



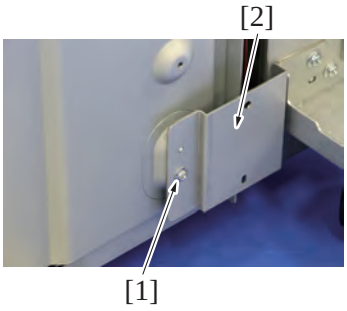
2. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and fix it with the wire holding jig [3] and the E-ring [4].



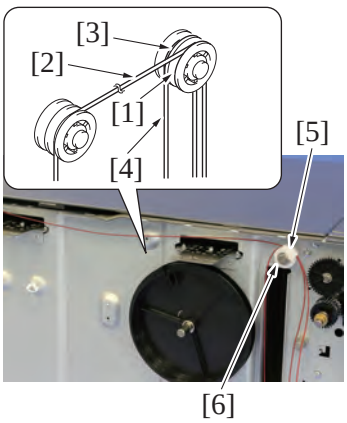
3. Remove the screw [1], and remove the plate [2].



4. Insert the lift wire/S [2] to the right hole [1] on the rear face.

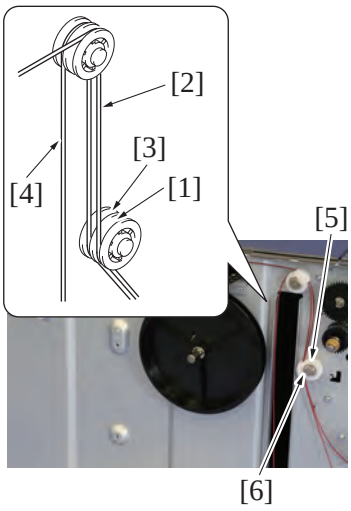


5. Install the plate [2] with the screw [1].

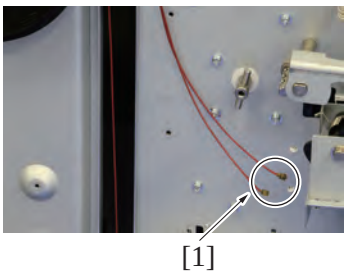


6. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].

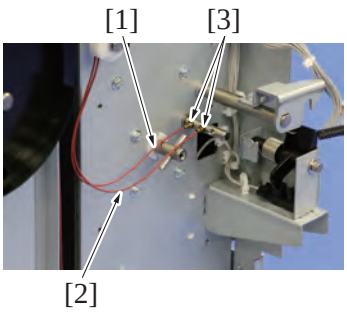
7. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].



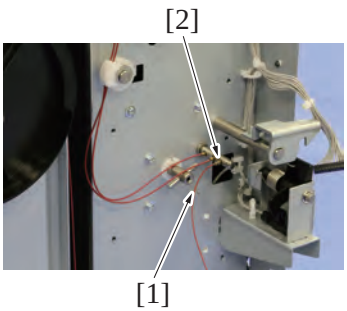
NOTE
- **It is correct when the tip of the wire [1] is the same length.**



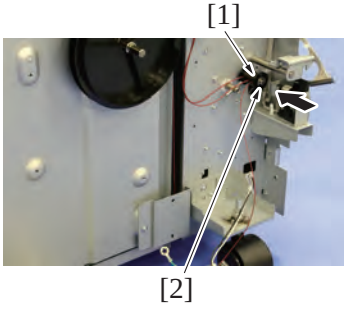
8. Take the edges of the lift wire/S [1] and the lift wire/L [2] to set them to the holes on the shaft [3].

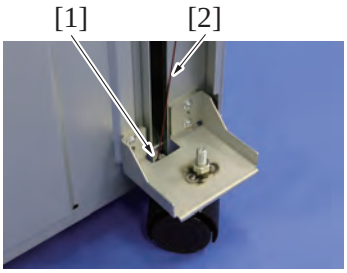


9. Lift the edge of the lift wire/L [1] and set it in the hole on the shaft [2].

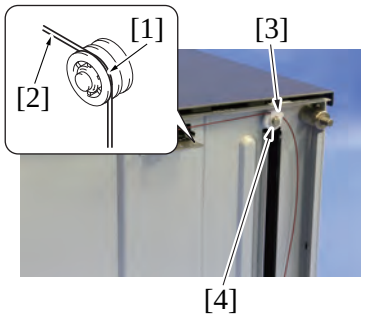


10. Mount the driving pulley [1] and secure it with the E-ring [2].

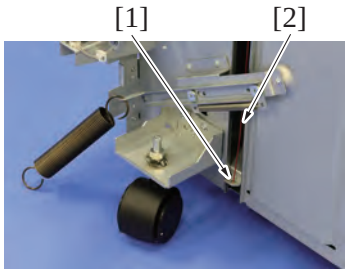




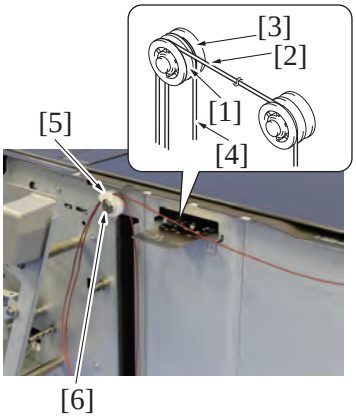
11. Insert the lift wire/L [2] to the right hole [1] on the front face.



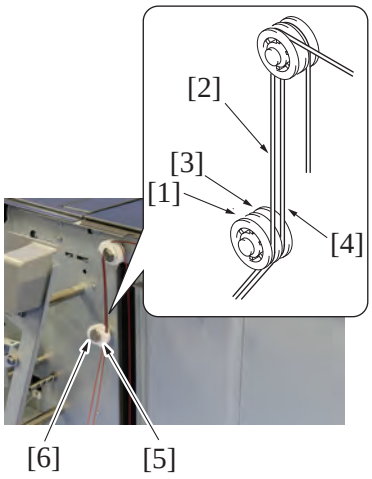
12. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and fix it with the wire holding jig [3] and the E-ring [4].



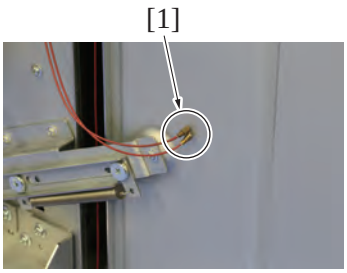
13. Insert the lift wire/S [2] to the left hole [1] on the front face.



14. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].

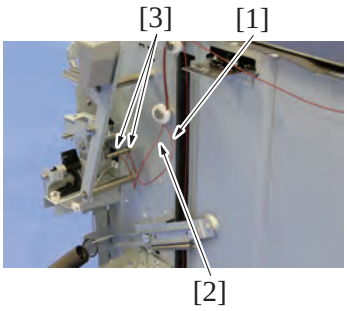


15. Set the lift wire/L [2] to the near side groove [1] of the wire pulley and the lift wire/S [4] to the far side groove [3], and fix it with the wire holding jig [5] and the E-ring [6].

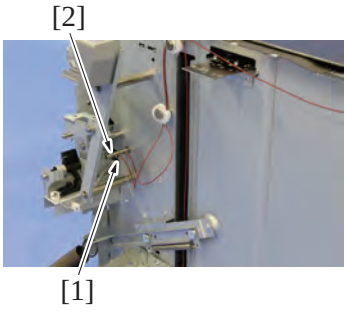


NOTE

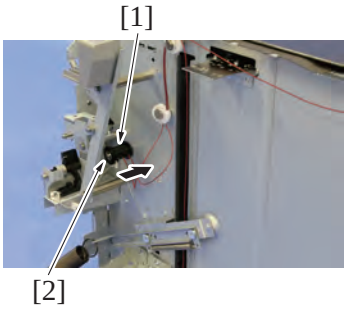
- **It is correct when the tip of the wire [1] is the same length.**



16. Take the edges of the lift wire/S [1] and the lift wire/L [2] to set them to the holes on the shaft [3].

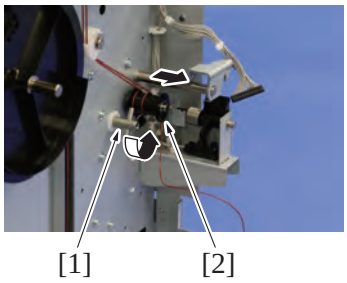


17. Take the edge of the auxiliary wire [1] and set it to the hole on the shaft [2].

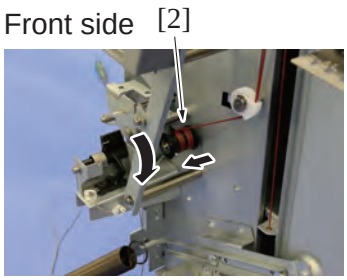


18. Mount the driving pulley [1] and secure it with the E-ring [2].

Rear side



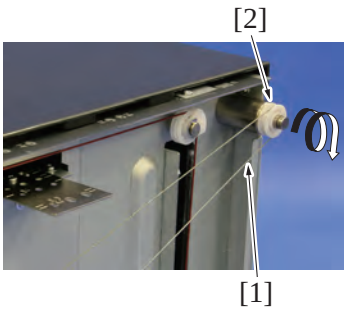
Front side



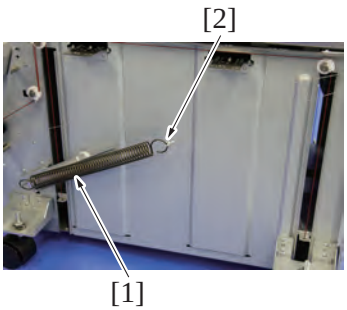
19. Wind the wire to the driving pulley [2] by rotating the lift up shaft [1] (counterclockwise when seen from rear) until the tray assy has risen to the upper end.

NOTE

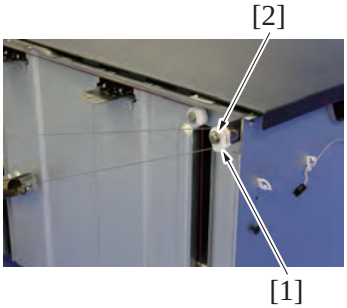
- **Wind the wire to the direction shown by the arrow.**



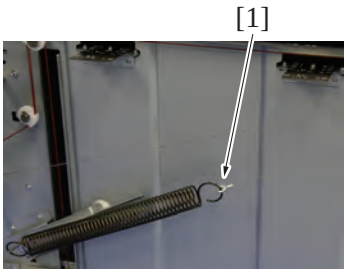
20. Once the wire is wound until the tray assy is at the upper end, wind the auxiliary wire [2] once in a clockwise direction to the wire pulley [1] in front.



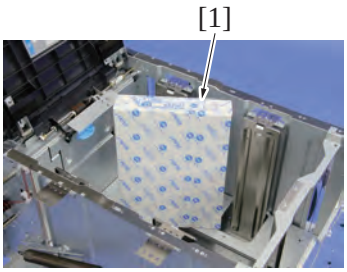
21. Set the auxiliary wire [1] in the front to the hook of the slide spring [2].



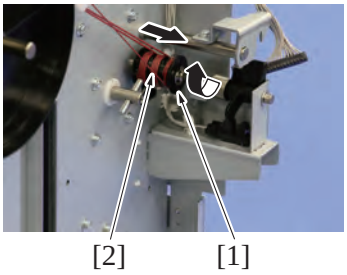
22. Mount the wire holding jig [1] and secure it with the E-ring [2].



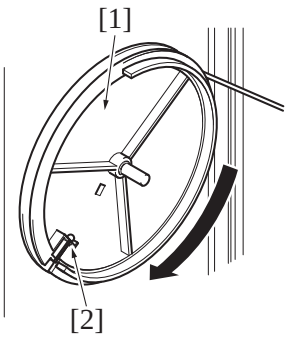
NOTE
- **Check to make sure that the wire hook [1] is at the position shown on the picture when the tray assy is at the lower end.**



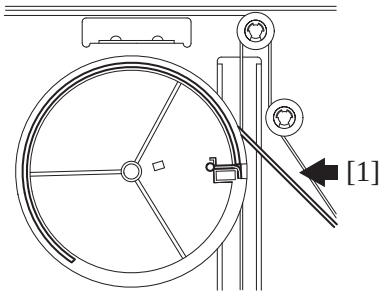
23. Place a weight such as a package of paper, etc. [1] to move the tray assy down to the lower end.



24. Wrap the lift wire/L [2] six times clockwise on the driving pulley [1] at the rear.



25. Turn the rotation plate [1] one and a half times clockwise from the position where the plate holds the tension, to set the lift wire/L [2].

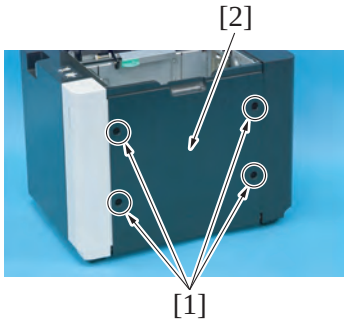


NOTE
- **Make sure that the tray assy is at the lower limit and the hire hook section of the rotation plate [1] is near the position indicated by the arrow in the figure.**

7.4 Disassembly/reassembly procedure (LU-303)

7.4.1 Right cover (LU-303)

1. Open the upper door.

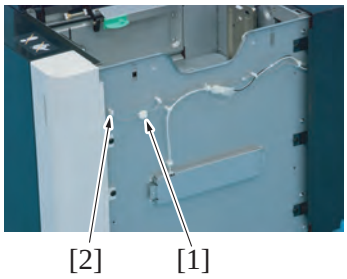


2. Remove four screws [1] and remove the right cover [2].

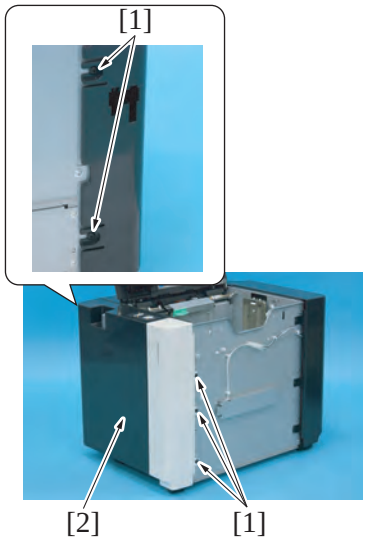
3. To reinstall, reverse the order of removal.

7.4.2 Front cover (LU-303)

1. Remove the right cover.
G.7.4.1 Right cover (LU-303)



2. Disconnect the connector [1], and remove the harness from the wire saddle [2].

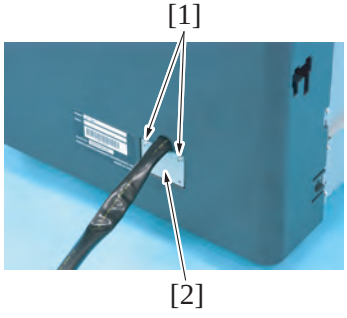


3. Loosen five screws [1] and remove the front cover [2].

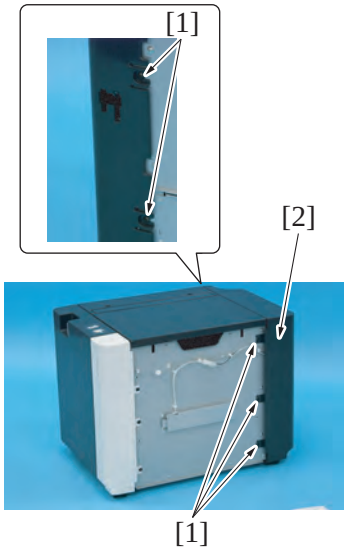
4. To reinstall, reverse the order of removal.

7.4.3 Rear cover (LU-303)

1. Remove the right cover.
G.7.4.1 Right cover (LU-303)



2. Remove two screws [1] and remove the plate [2].

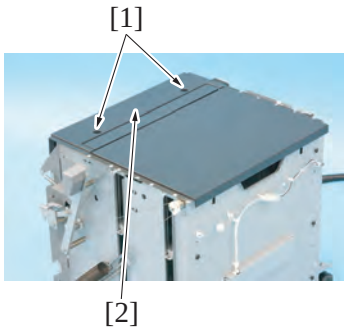


3. Loosen five screws [1] and remove the rear cover [2].

4. To reinstall, reverse the order of removal.

7.4.4 Feed cover (LU-303)

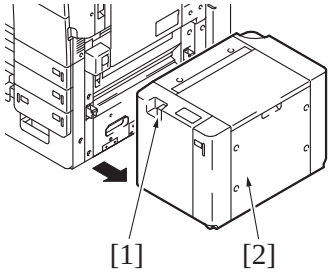
1. Remove the right cover.
   G.7.4.1 Right cover (LU-303)
2. Remove the front cover.
   G.7.4.2 Front cover (LU-303)
3. Remove the rear cover.
   G.7.4.3 Rear cover (LU-303)



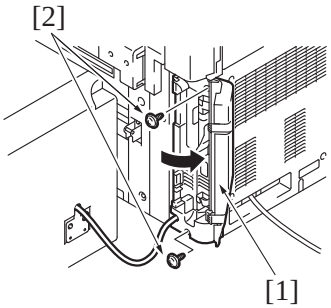
4. Remove two screws [1] and remove the feed cover [2].

5. To reinstall, reverse the order of removal.

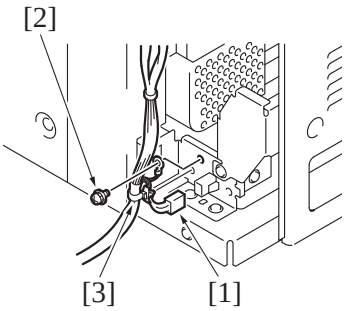
7.4.5 Large capacity unit (LU-303)



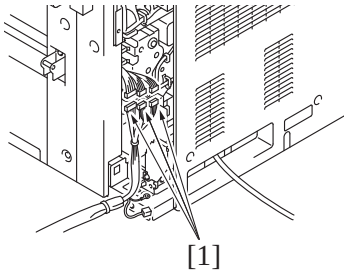
1. Slide the large capacity unit [2] while pressing on the lever [1], and remove from the main body.



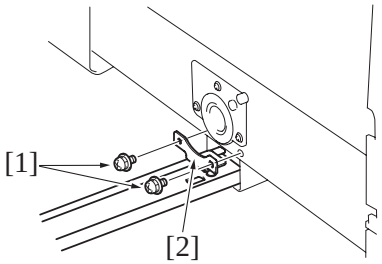
2. Open the interface cover/2 [1].
3. Remove two screws [2] and remove the interface cover/2 [1].



4. Disconnect the connector [1], the screw on the ground wire [2], and the cord clamp [3].



5. Disconnect three connectors [1].

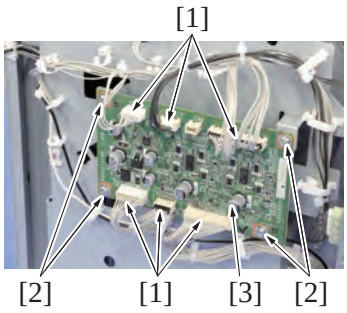


6. Remove two screws [1] and remove the mounting plate [2].

7. To reinstall, reverse the order of removal.

7.4.6 LU drive board (LUDB) (LU-303)

1. Remove the right cover.
   G.7.4.1 Right cover (LU-303)
2. Remove the rear cover.
   G.7.4.3 Rear cover (LU-303)

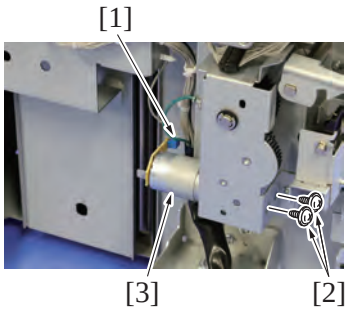


3. Disconnect six connectors [1], remove four screws [2], and remove the LU drive board [3].

4. To reinstall, reverse the order of removal.

7.4.7 LU lift-up motor (M1) (LU-303)

1. Remove the right cover.
   G.7.4.1 Right cover (LU-303)
2. Remove the rear cover.
   G.7.4.3 Rear cover (LU-303)

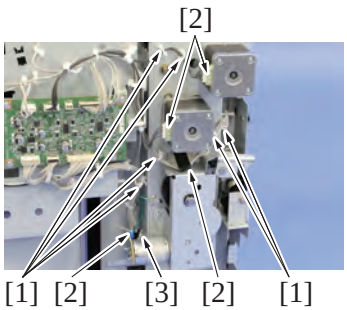


3. Disconnect the connector [1], remove two screws [2] and remove the LU lift-up motor [3].

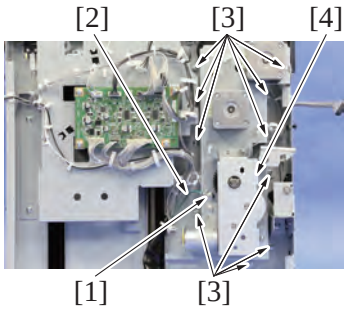
4. To reinstall, reverse the order of removal.

7.4.8 LU paper feed motor (M2) (LU-303)

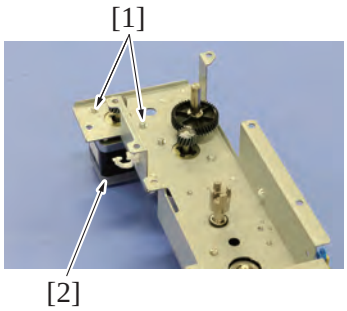
1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)



3. Remove six wire saddles [1], remove harness from the snap band [3], and disconnect four connectors [2].



4. Remove the screw [1], and remove the ground terminal [2].
5. Remove 10 screws [3], and remove the LU paper feed motor/LU transport motor assy [4].

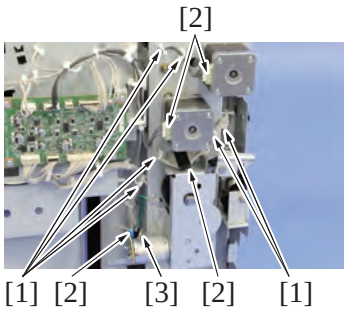


6. Remove two screws [1] and remove the LU paper feed motor [2].

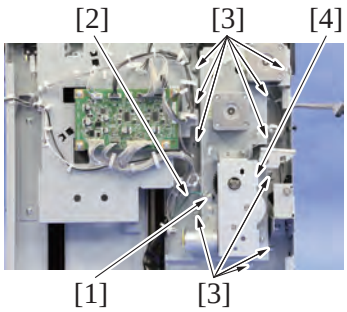
7. To reinstall, reverse the order of removal.

7.4.9 LU transport motor (M3) (LU-303)

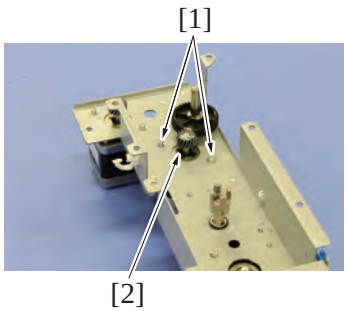
1. Remove the right cover.
   G.7.3.1 Right cover (LU-205)
2. Remove the rear cover.
   G.7.3.3 Rear cover (LU-205)



3. Remove six wire saddles [1], remove harness from the snap band [3], and disconnect four connectors [2].



4. Remove the screw [1], and remove the ground terminal [2].
5. Remove 10 screws [3], and remove the LU paper feed motor/LU transport motor assy [4].

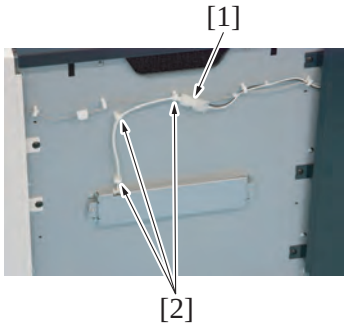


6. Remove two screws [1] and remove the LU transport motor [2].

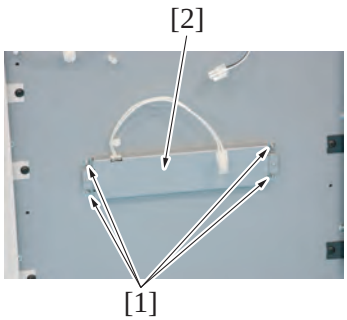
7. To reinstall, reverse the order of removal.

7.4.10 Dehumidification heater (DH) (LU-303)

1. Remove the right cover.
G.7.4.1 Right cover (LU-303)



2. Remove the harness from the connector [1] and three wire saddles [2].

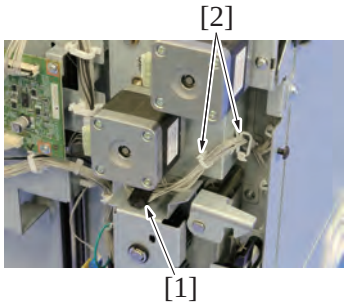


3. Remove four screws [1] and remove the dehumidification heater [2].

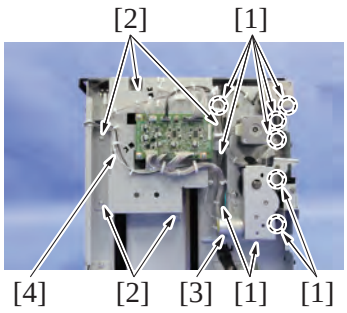
7.4.11 Lift wire (LU-303)

(1) Removal

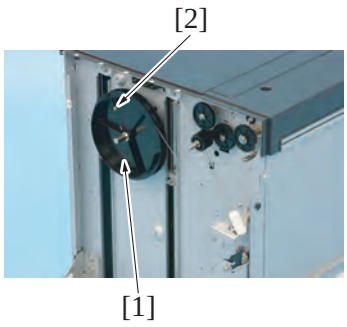
1. Remove the right cover.
   G.7.4.1 Right cover (LU-303)
2. Remove the front cover.
   G.7.4.2 Front cover (LU-303)
3. Remove the rear cover.
   G.7.4.3 Rear cover (LU-303)



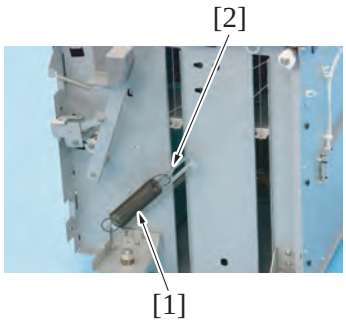
4. Disconnect the connector [1] at the rear, and remove the harness from two wire saddles [2].



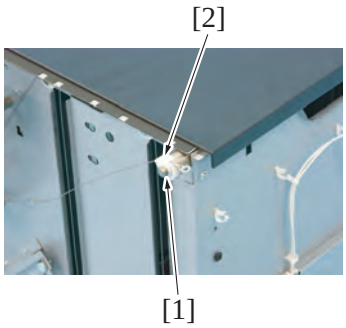
5. Remove nine screws [1] and five screws [2], and remove the LU paper feed motor/LU transport motor [3] and the drive board assy [4].



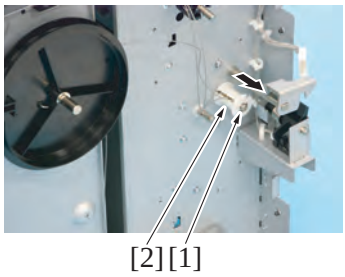
6. Remove the lift wire/L [2] from the rotation plate [1].



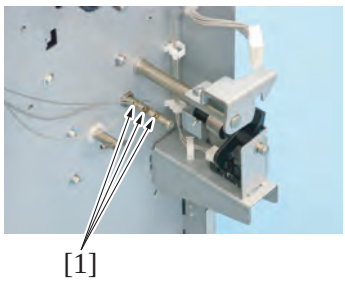
7. Remove the auxiliary wire [2] from the spring [1] on the front side.



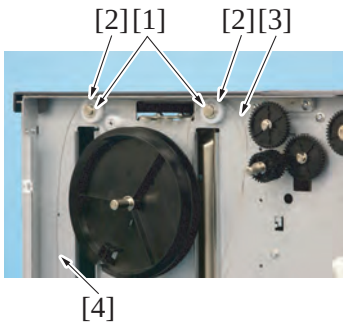
8. Remove the E-ring [1] on the front side to remove the wire holding jig [2].



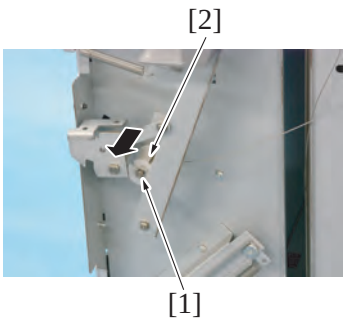
9. Remove the E-ring [1] on the rear side to remove the driving pulley [2].



10. Pull out three lift wires [1].

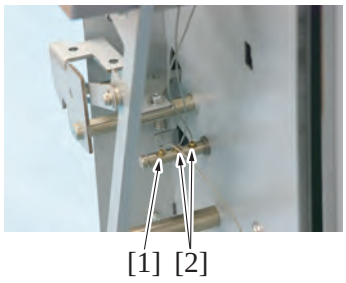


11. Remove two E-rings [1] and two wire pulleys [2] to remove the lift wire/S [3] and the lift wire/L [4].

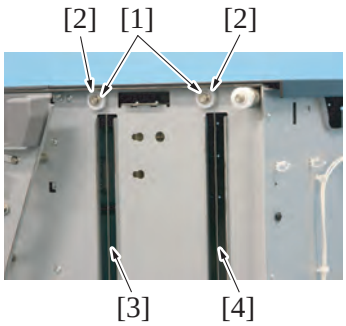


12. Remove the E-ring [1] on the front side to remove the driving pulley [2].

13. Pull out the auxiliary wire [1] and two lift wires [2].

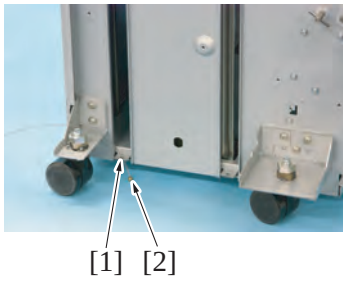


14. Remove two E-rings [1] and two wire pulleys [2] to remove the lift wire/S [3] and the lift wire/L [4].

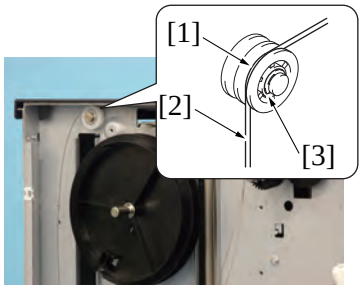


(2) Mounting

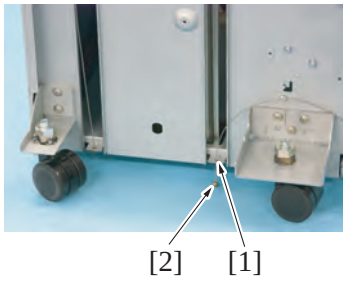
1. Insert the lift wire/L [2] to the left hole [1] on the rear face.

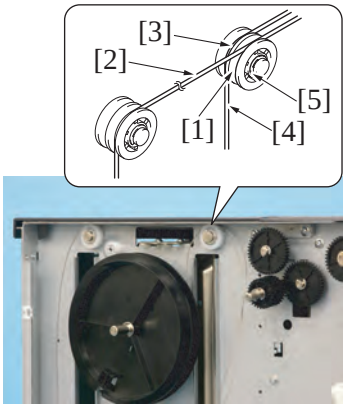


2. Set the lift wire/L [2] to the near side groove [1] on the wire pulley, and secure it with the E-ring [3].



3. Insert the lift wire/S [2] to the right hole [1] on the rear face.

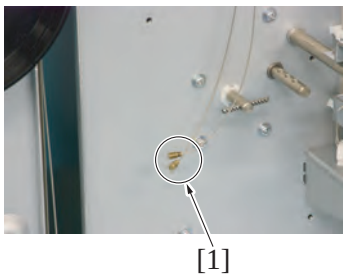


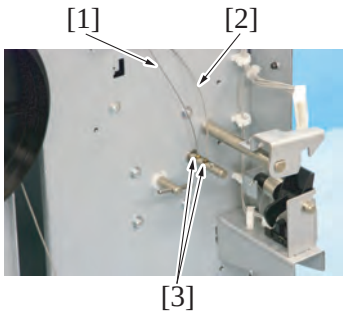


4. Set the lift wire/L [2] to the near side groove [1] on the wire pulley, and set the lift wire/S [4] to the far side groove [3] and secure them with the E-ring [5].

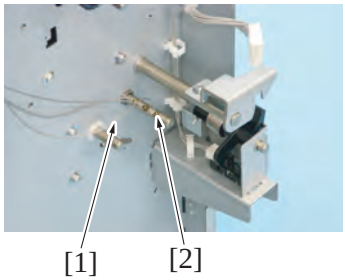
NOTE

- **It is correct when the tip of the wire [1] is the same length.**

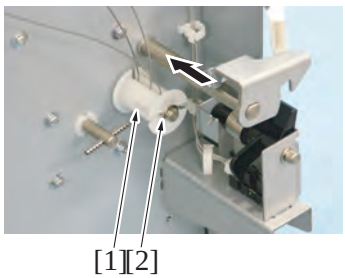




5. Take the edges of the lift wire/S [1] and the lift wire/L [2] and set them to the holes on the shaft [3].

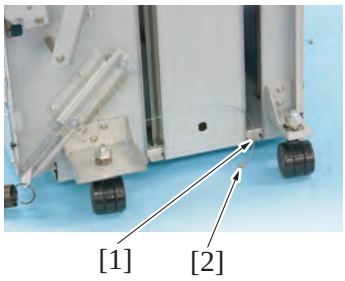


6. Take the edge of the lift wire/L [1] and set it to the hole [2] on the shaft.

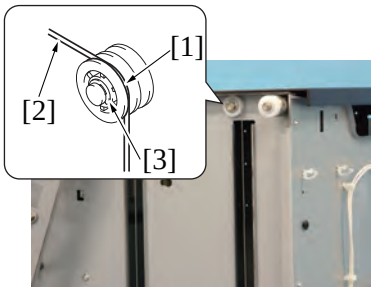


7. Mount the driving pulley [1] and secure it with the E-ring [2].

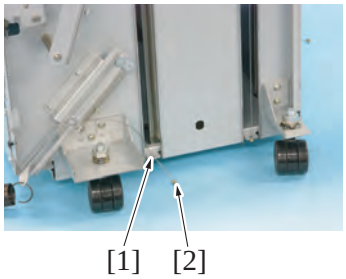
8. Insert the lift wire/L [2] to the right hole [1] on the front face.



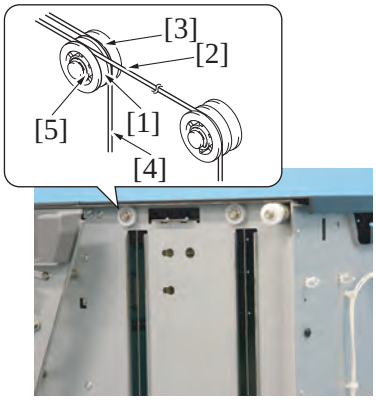
9. Set the lift wire/L [2] to the near side groove [1] on the wire pulley and secure it with the E-ring [3].



10. Insert the lift wire/S [2] to the left hole [1] on the front face.

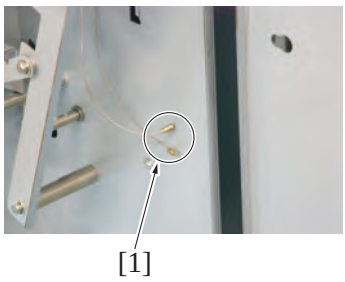


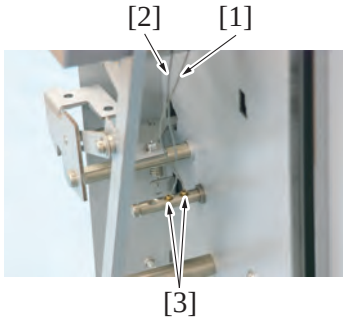
11. Set the lift wire/L [2] to the near side groove [1] on the wire pulley, and set the lift wire/S [4] to the far side groove [3] and secure them with the E-ring [5].



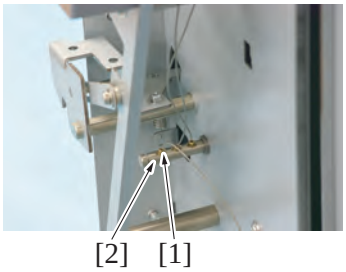
NOTE

- **It is correct when the tip of the wire [1] is the same length.**

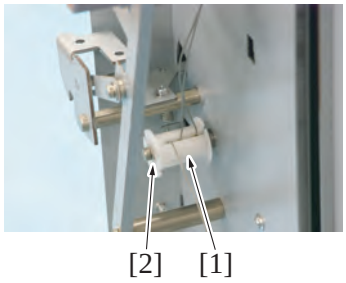




12. Take the edges of the lift wire/S [1] and the lift wire/L [2] to set them to the holes on the shaft [3].

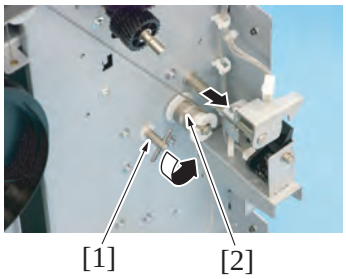


13. Take the edge of the auxiliary wire [1] and set it to the hole on the shaft [2].



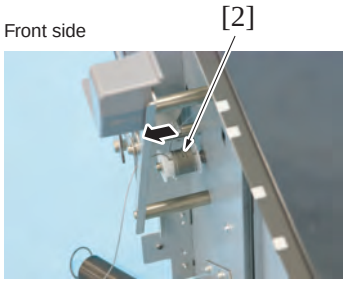
14. Mount the driving pulley [1] and secure it with the E-ring [2].

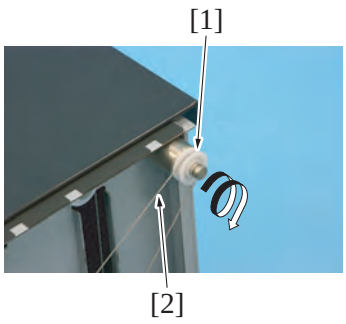
Rear side



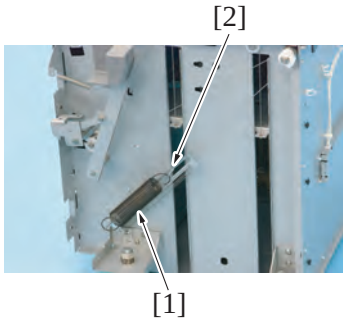
15. Wind the wire to the pulley [2] as rotating the lift up shaft [1] on the rear face counterclockwise and moving the tray assy to the upper end.
NOTE
- **Wind the wire to the direction shown by the arrow.**

Front side

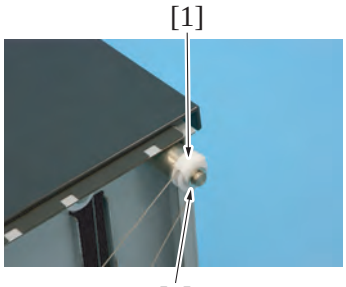




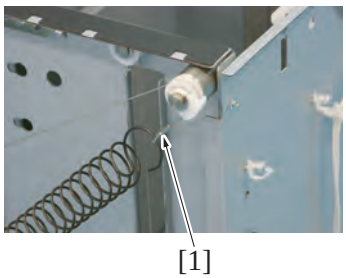
16. When the wire is wound with the tray assy being at the up end, wind the auxiliary wire [2] to the wire pulley [1] clockwise once.



17. Set the auxiliary wire [1] on the front face to the hook of the slide spring [2].

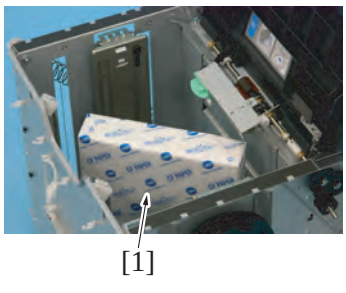


18. Mount the wire holding jig [1] and secure it with the E-ring [2].



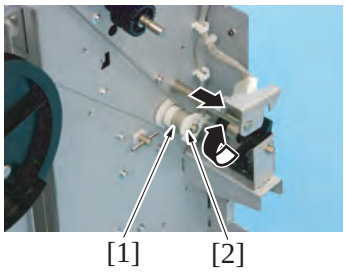
NOTE

- **Check to make sure that the wire hook [1] is at the position shown on the picture when the tray assy is at the lower end.**

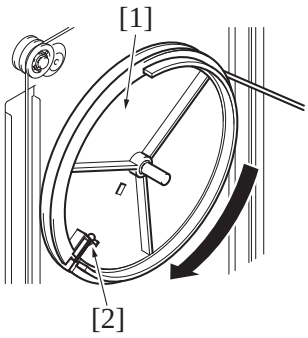


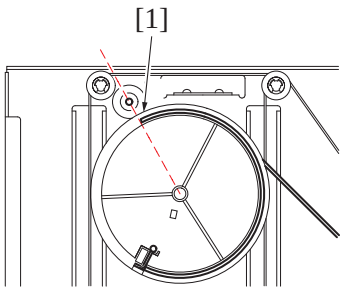
19. Place a weight such as a package of paper, etc. [1] to move the tray assy down to the lower end.

20. Wrap the lift wire/L [2] on the driving pulley [1] on the rear face clockwise seven times.



21. Turn the rotation plate [1] one and a half times clockwise from the position where the plate holds the tension, to set the lift wire/L [2].





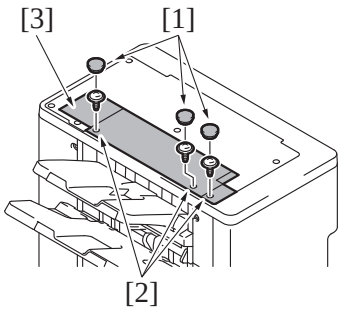
NOTE

- **The rib edge [1] of the rotation plate must be around the dotted lines as shown in the picture when the tray assy is at the lowest level.**

7.5 Disassembly/reassembly procedure (FS-537/FS-537SD)

7.5.1 Upper cover/1 (FS-537/FS-537SD)

1. Remove three caps [1] and three screws [2], then remove the upper cover/1 [3].

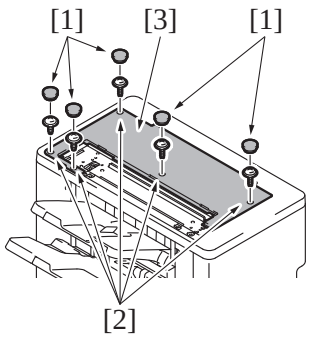


2. Reinstall the above parts following the removal steps in reverse.

7.5.2 Upper cover/2 (FS-537/FS-537SD)

1. Remove the upper cover/1.
G.7.5.1 Upper cover/1 (FS-537/FS-537SD)

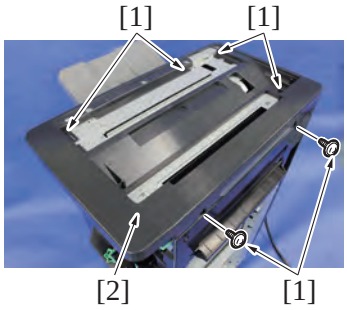
2. Remove five caps [1] and five screws [2], then remove the upper cover/2 [3].



3. Reinstall the above parts following the removal steps in reverse.

7.5.3 Upper cover/3 (FS-537/FS-537SD)

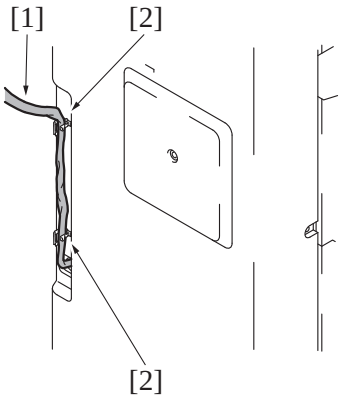
1. Remove the upper cover/1.
   G.7.5.1 Upper cover/1 (FS-537/FS-537SD)
2. Remove the upper cover/2.
   G.7.5.2 Upper cover/2 (FS-537/FS-537SD)
3. Remove six screws [1], and remove the upper cover/3 [2].



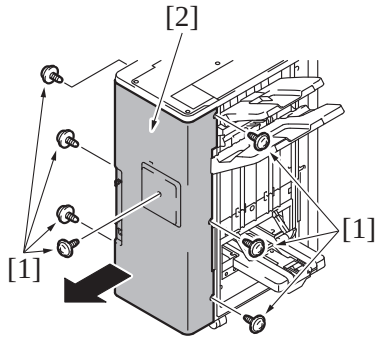
4. Reinstall the above parts following the removal steps in reverse.

7.5.4 Rear cover (FS-537/FS-537SD)

1. Remove the finisher from the main body.
   G.7.5.12 Finisher (FS-537/FS-537SD)
2. Remove the cable [1] at the back of the finisher from two wire saddles [2].

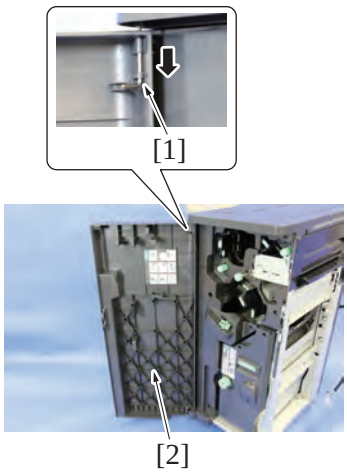


3. Remove seven screws [1], and remove the rear cover [2].



4. Reinstall the above parts following the removal steps in reverse.

7.5.5 Front door (FS-537/FS-537SD)

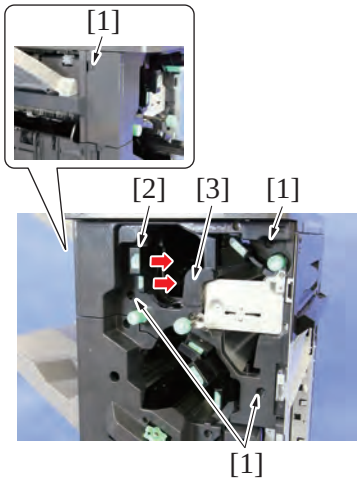


1. Remove the stopper [1] and remove the front door [2].

2. Reinstall the above parts following the removal steps in reverse.

7.5.6 Front upper cover (FS-537/FS-537SD)

1. Remove the front door.
G.7.5.5 Front door (FS-537/FS-537SD)

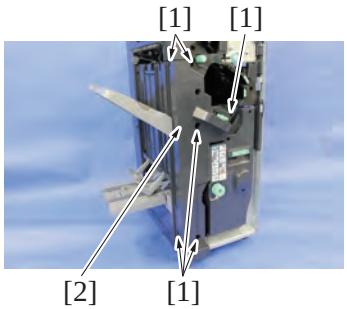


2. Remove four screws [1], then remove the front upper cover [3] while sliding the guide lever (FS4/FS5) [2].

3. Reinstall the above parts following the removal steps in reverse.

7.5.7 Front lower cover (FS-537/FS-537SD)

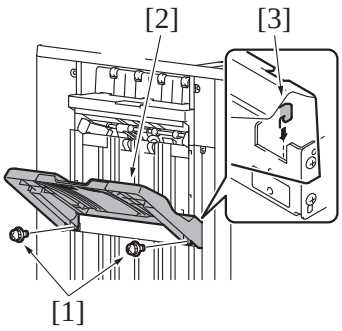
1. Remove the front door.
G.7.5.5 Front door (FS-537/FS-537SD)



2. Remove six screws [1], and remove the front lower cover [2].

3. Reinstall the above parts following the removal steps in reverse.

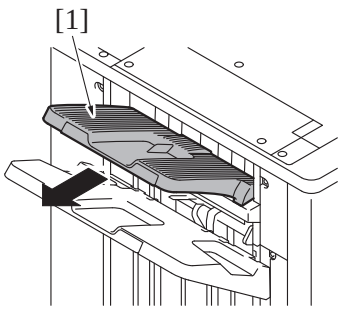
7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



1. Remove two screws [1] and remove the main tray [2].
NOTE
- **When installing the main tray, you must perform installation after mounting then main tray hooks [3] to the two depressions on the finisher.**

2. Reinstall the above parts following the removal steps in reverse.

7.5.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)

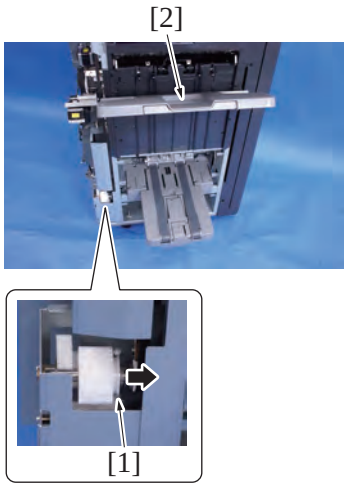


1. Remove the sub tray [1].

2. Reinstall the above parts following the removal steps in reverse.

7.5.10 Left upper cover (FS-537/FS-537SD)

1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the left lower cover.
G.7.5.11 Left lower cover (FS-537/FS-537SD)

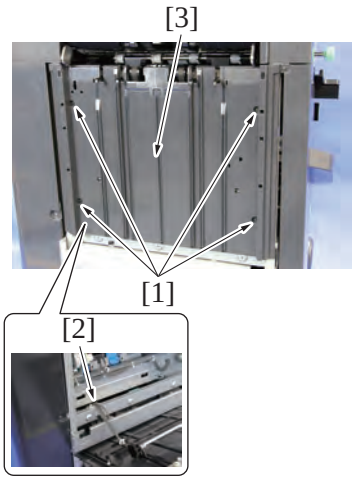


3. Slide the gear coupling [1] to the right and lower the main tray [2] to the lowest level.

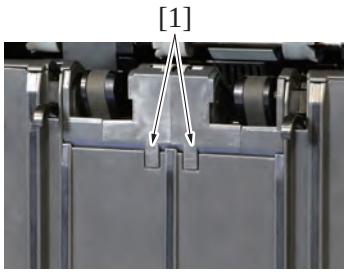
CAUTION

- Always carry out this procedure while supporting the main tray with your hand since the main will strongly come down when you slide the coupling.

4. Remove the main tray.
G.7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



5. Remove four screws [1], disconnect the connector [2], and remove the left upper cover [3].

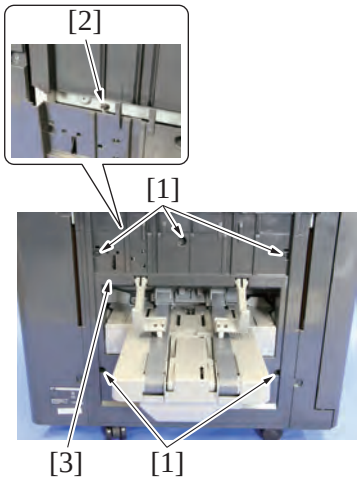


NOTE

- **Always perform the installation after mounting the top part of the left upper cover on the two inner tabs [1] of the finisher.**

6. Reinstall the above parts following the removal steps in reverse.

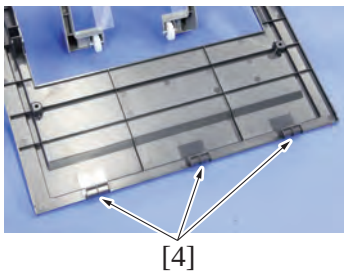
7.5.11 Left lower cover (FS-537/FS-537SD)



1. Remove five screws [1], disconnect the connector [2], and remove the left lower cover [3].

NOTE

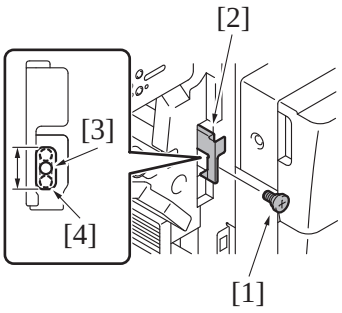
- **Always perform the installation after mounting three hooks [4] of the left lower cover on the finisher plate.**



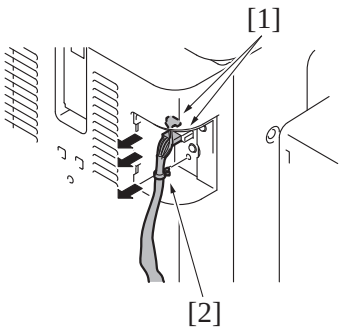
2. Reinstall the above parts following the removal steps in reverse.

7.5.12 Finisher (FS-537/FS-537SD)

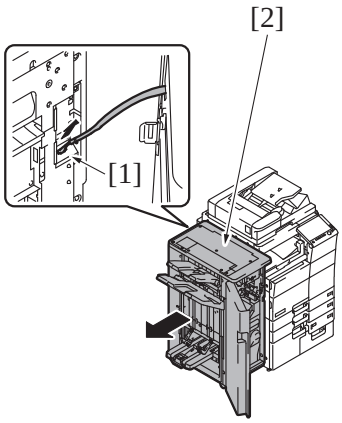
1. Open the front door of the finisher.



2. Remove the screw [1] and pull out the lever [2].
NOTE
- **During installation, when the pulled out lever is pushed down, the finisher screw [3] must be inside the range of the lever installation hole [4].**



3. Disconnect two connectors [1] and the cable tie insertion part [2].

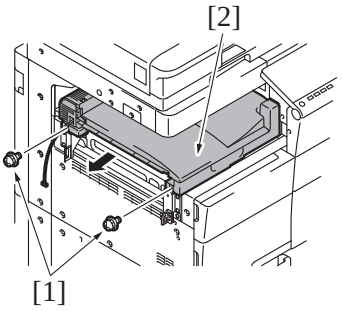


4. Remove the connector [1] and remove the finisher [2] from the main body.

5. Reinstall the above parts following the removal steps in reverse.

7.5.13 Relay unit (FS-537/FS-537SD)

1. Remove the finisher from the main body.
G.7.5.12 Finisher (FS-537/FS-537SD)

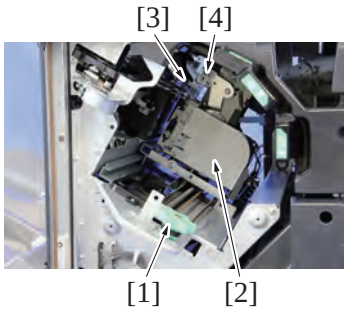


2. Remove two screws [1], and remove the relay unit [2].

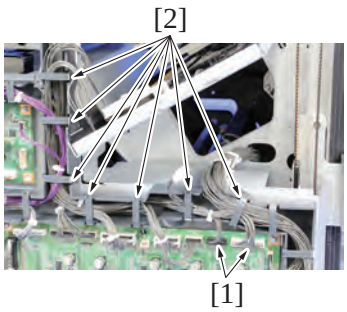
3. Reinstall the above parts following the removal steps in reverse.

7.5.14 Stapler unit (FS-537/FS-537SD)

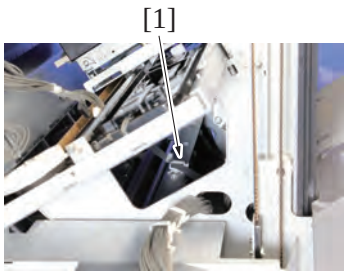
1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the front door.
G.7.5.5 Front door (FS-537/FS-537SD)
3. Remove the front lower cover.
G.7.5.7 Front lower cover (FS-537/FS-537SD)
4. Remove the stapler movement motor assy
G.7.5.29 Stapler movement motor (M19) (FS-537/FS-537SD)



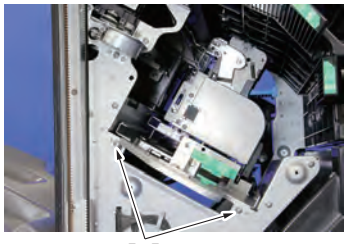
5. Rotate the stapler transfer dial [1] until the stapler [2] has been moved to the location shown in the figure (the location where the back-end stopper [3] does not interact with the clincher staple arm [4]).



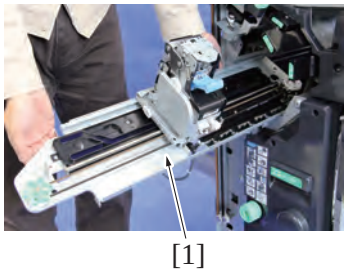
6. Disconnect two connectors [1] and remove the harness from seven wire saddles [2].



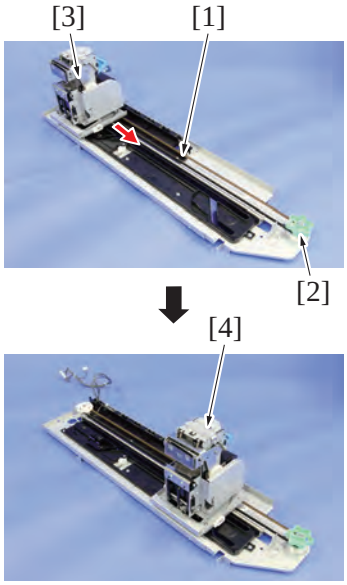
7. Remove the harness from the wire saddle [1].



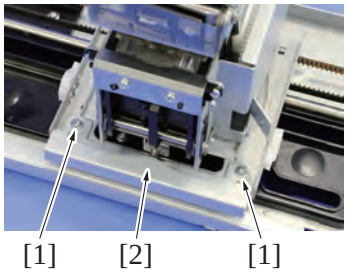
8. Remove two screws [1] from the front of the finisher and one screw [2] from the back of the finisher.



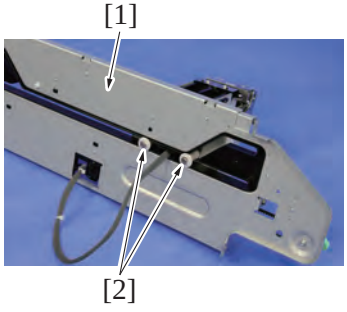
9. Remove the stapler assy [1] from the finisher.
NOTE
- **While removing the stapler assy [1], be careful not to hit the stapler against the finisher frame.**



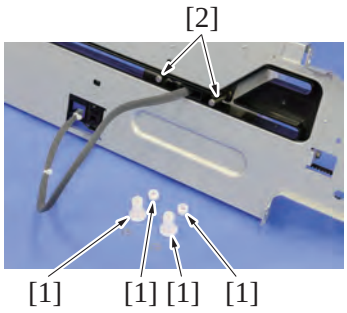
10. Put the stapler assy [1] on a stable workbench.
11. Rotate the stapler transfer dial [2] until the stapler unit [3] has been moved to the near side [4].



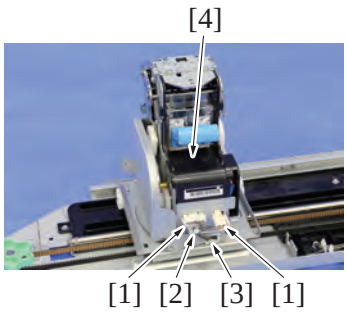
12. Remove two screws [1], and remove the plate [2].



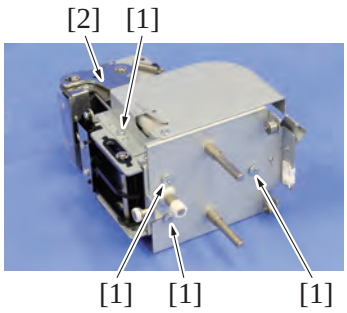
13. Flip the stapler assy [1] over.
14. Remove two E-rings [2] from the guide shafts.



15. Remove four white rollers [1] from the guide shaft [2].



16. Disconnect two connectors [1] and remove the harness from the wire saddle [2] and harness guide [3].
17. Remove the stapler assy [4].

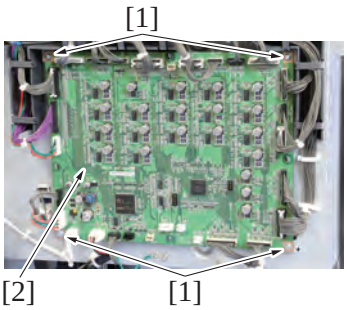


18. Remove four screws [1], and remove the stapler unit [2].

19. Reinstall the above parts following the removal steps in reverse.

7.5.15 FS control board (FSCB) (FS-537/FS-537SD)

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)

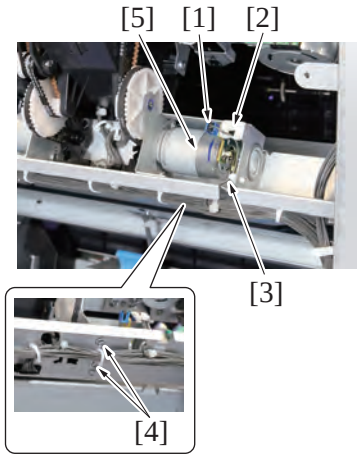


2. Disconnect all connectors on the FS control board.
3. Remove four screws [1], and remove the FS control board [2].

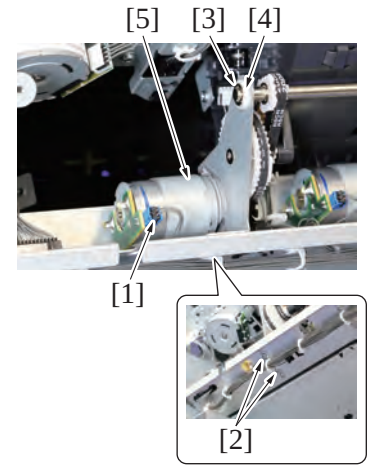
4. Reinstall the above parts following the removal steps in reverse.

7.5.16 Bundle eject motor (M1) / Pre-eject drive motor (M2) / Stacker plate drive motor (M3) (FS-537/FS-537SD)

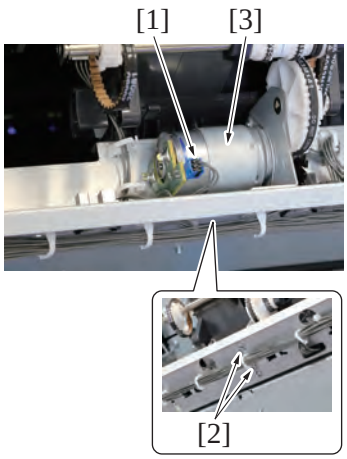
1. Remove the left upper cover.
   G.7.5.10 Left upper cover (FS-537/FS-537SD)
2. Remove the main tray (paper exit lower tray).
   G.7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



3. Disconnect the connector [1], and remove the harness from the edge cover [2] and the wire saddle [3].
4. Remove two screws [4], and remove the bundle eject motor [5].



5. Disconnect the connector [1].
6. Remove two screws [2], the E-ring [3], and the bushing [4], and remove the Pre-eject drive motor [5].

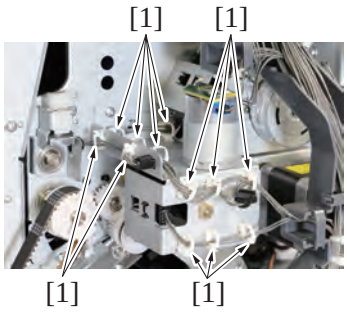


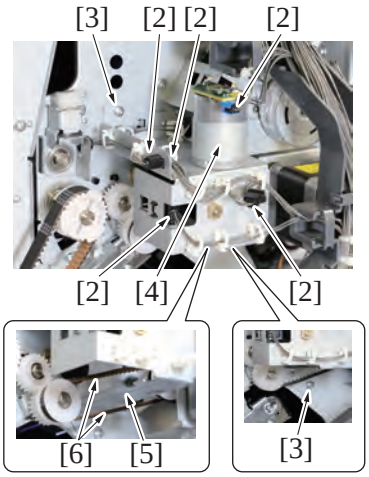
7. Disconnect the connector [1].
8. Remove two screws [2] and remove the stacker plate drive motor [3].

9. Reinstall the above parts following the removal steps in reverse.

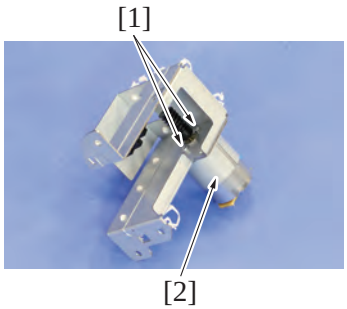
7.5.17 Route change gate motor (M4) (FS-537/FS-537SD)

1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)





2. Remove the harness from 12 wire saddles [1].
3. Disconnect five connectors [2].
4. Remove two screws [3] and remove the route change gate motor assy [4].
   NOTE
   - **During installation, you must pass the metal plate [5] between the belt [6].**

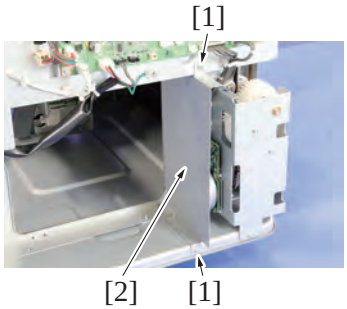


5. Remove two screws [1] and remove the route change gate motor [2].

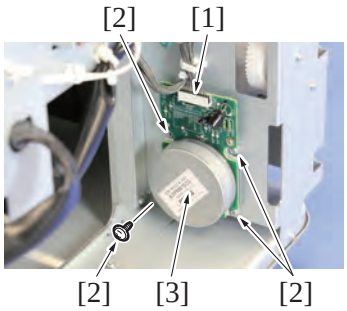
6. Reinstall the above parts following the removal steps in reverse.

7.5.18 Main tray up/down motor (M6) (FS-537/FS-537SD)

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)



2. When the saddle unit is attached, open the front door and pull out the saddle unit.
3. Remove two screws [1] and remove the metal plate [2].

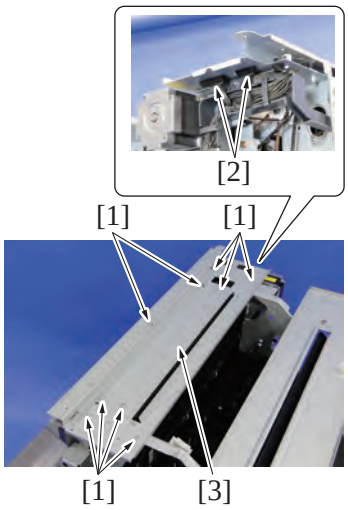


4. Disconnect the connector [1].
5. Remove four screws [2] and remove the main tray up/down motor [3].

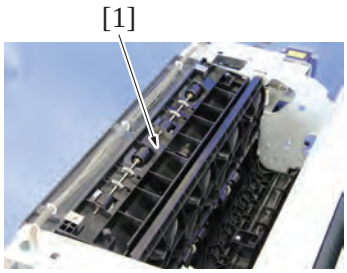
6. Reinstall the above parts following the removal steps in reverse.

7.5.19 Paddle up/down motor (M7) / Arm drive motor (M8) / FNS paddle motor (M9) (FS-537/FS-537SD)

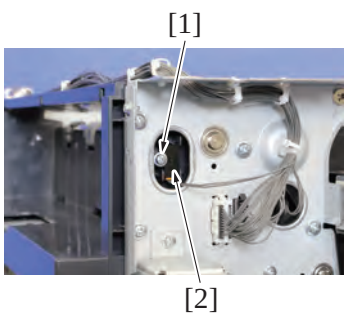
1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the upper cover/1.
   G.7.5.1 Upper cover/1 (FS-537/FS-537SD)
3. Remove the upper cover/2.
   G.7.5.2 Upper cover/2 (FS-537/FS-537SD)
4. Remove the upper cover/3.
   G.7.5.3 Upper cover/3 (FS-537/FS-537SD)
5. Remove the front upper cover.
   G.7.5.6 Front upper cover (FS-537/FS-537SD)
6. Remove the sub tray (paper exit upper tray).
   G.7.5.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)



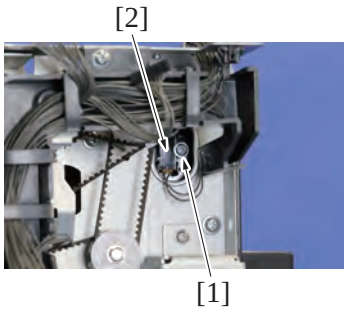
7. Remove nine screws [1], disconnect two connectors [2], and remove the metal plate [3].



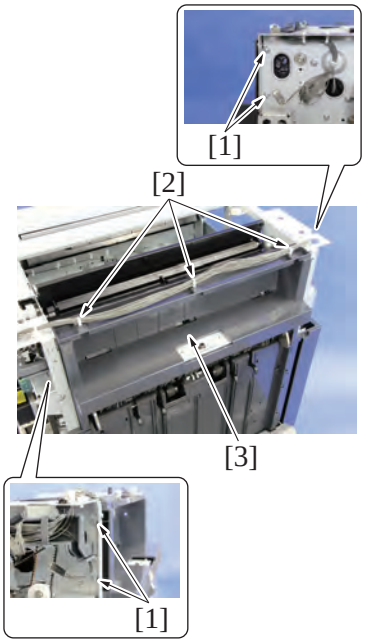
8. Remove the transfer roller unit [1].



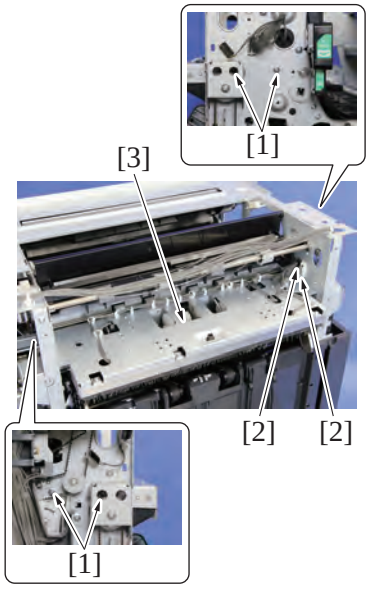
9. Remove the screw [1] and remove the sub tray full detection sensor/in (PS41) [2].



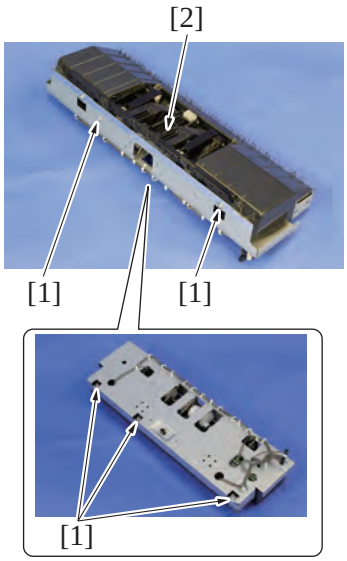
10. Remove the screw [1] and remove the sub tray full detection sensor/out (PS39) [2].



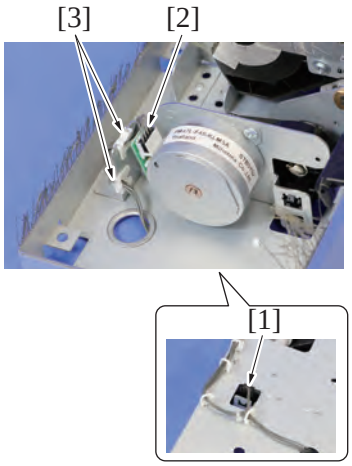
11. Remove four screws [1], remove the harness from three wire saddles [2], and remove the cover [3].



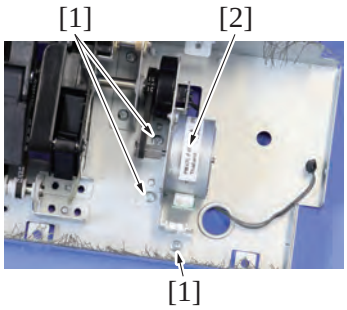
12. Remove four screws [1], disconnect two connectors [2], and remove the upper paddle unit [3].



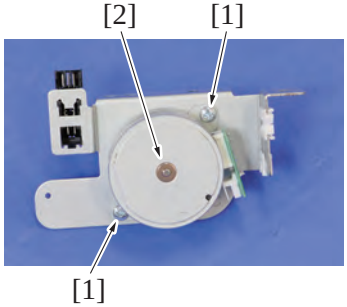
13. Remove five screws [1] and remove the cover [2].



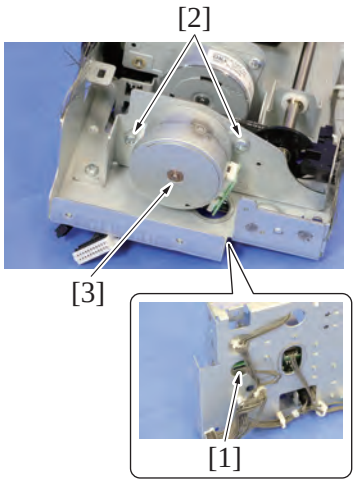
14. Disconnect the connector [1].
15. Disconnect the connector [2] and remove the harness from two edge covers [3].



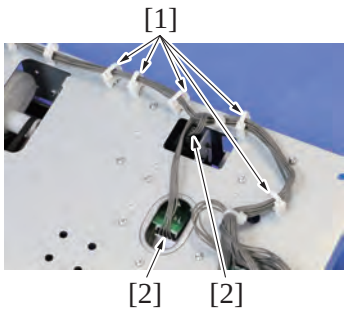
16. Remove three screws [1] and remove the paddle up/down motor assy [2].



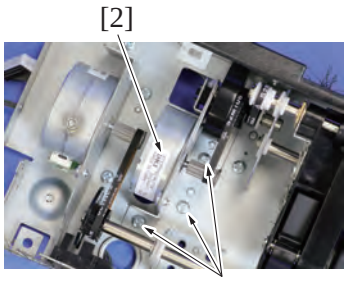
17. Remove two screws [1] and remove the paddle up/down motor [2].



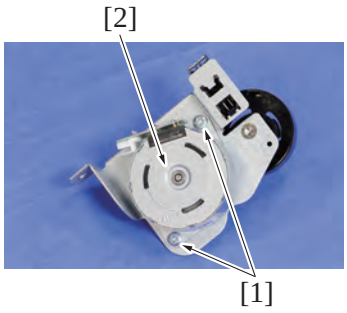
18. Disconnect the connector [1].
19. Remove two screws [2] and remove the arm drive motor [3].



20. Disconnect the harness from five wire saddles [1], loosen the harness, and disconnect two connectors [2].



21. Remove three screws [1] and remove the FNS paddle motor assy [2].

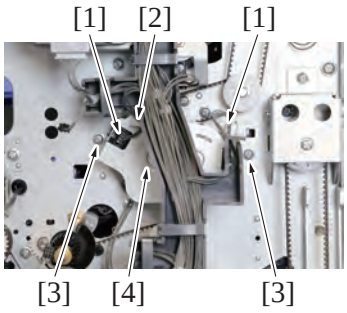


22. Remove two screws [1], and remove the FNS paddle motor [2].

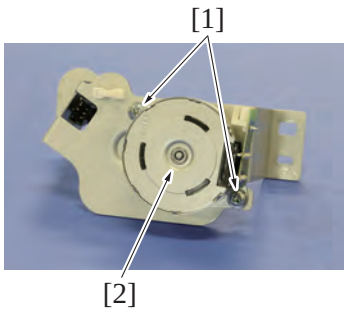
23. Reinstall the above parts following the removal steps in reverse.

7.5.20 Receiving roller retraction motor (M10) (FS-537/FS-537SD)

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the route change gate motor assy.
   G.7.5.17 Route change gate motor (M4) (FS-537/FS-537SD)
3. Remove the FNS discharge motor assy.
   G.7.5.27 FNS discharge motor (M17) (FS-537/FS-537SD)



4. Disconnect two connectors [1] and remove the harness from the wire saddle [2].
5. Remove two screws [3] and remove the receiving roller retraction motor assy [4].

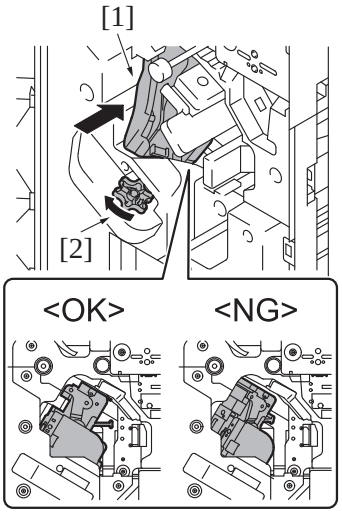


6. Remove two screws [1], and remove the receiving roller retraction motor [2].

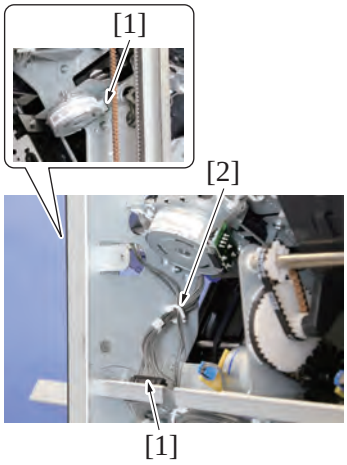
7. Reinstall the above parts following the removal steps in reverse.

7.5.21 Trail edge stopper motor/R (M11) (FS-537/FS-537SD)

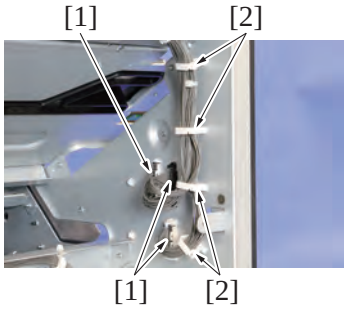
1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the front lower cover.
   G.7.5.7 Front lower cover (FS-537/FS-537SD)
3. Remove the left upper cover.
   G.7.5.10 Left upper cover (FS-537/FS-537SD)
4. Remove the main tray (paper exit lower tray).
   G.7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



5. Rotate the stapler transfer dial [2] to move the stapler [1] towards the rear until the dial stops.
   NOTE
   - **If the stapler rotated (tilted) at the rear of the finisher, move it forward until it becomes straight and again move it backward.**

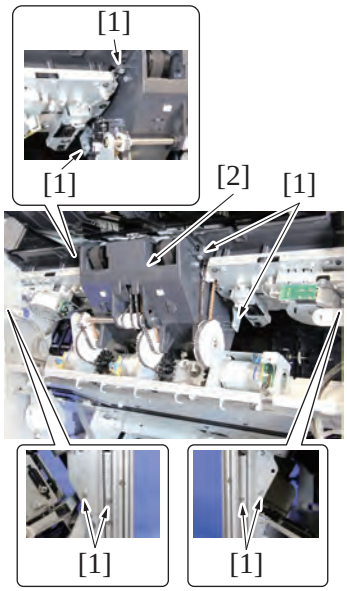


6. Disconnect two connectors [1] and remove the harness from the wire saddle [2].

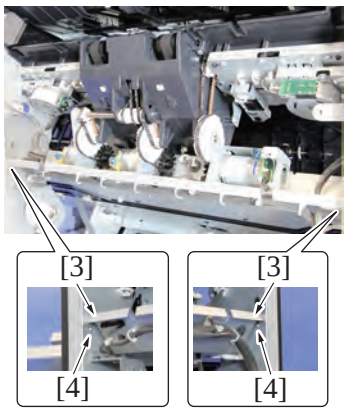


7. Disconnect three connectors [1] and remove the harness from four wire saddles [2].

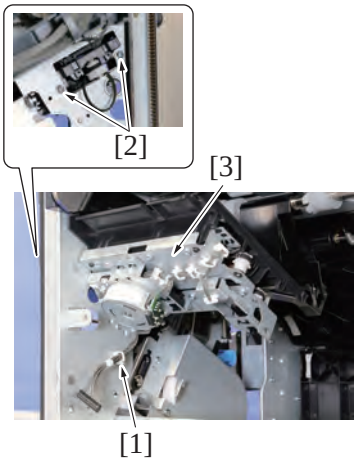
8. Remove eight screws [1] and remove the paper exit part [2].



NOTE
- **During installation, place the metal plate part [3] shown in the illustration on top of the dowel [4].**

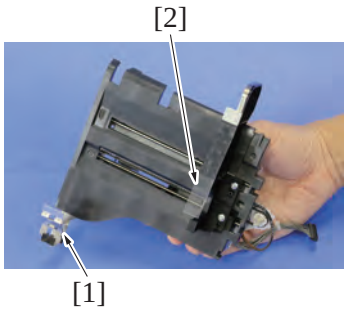


9. Remove the alignment motor/rear.
G.7.5.23 Alignment motor/rear (M13) (FS-537/FS-537SD)

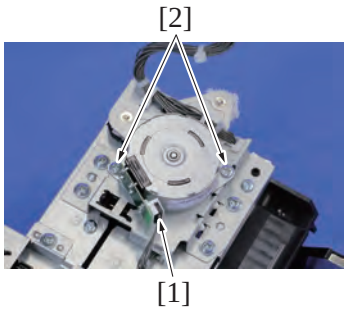


10. Remove the harness from the wire saddle [1].
11. Remove two screws [2] and remove the alignment plate [3].

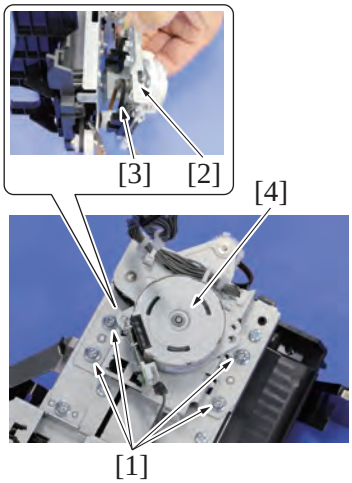
NOTE
- **When removing, be careful not to drop the alignment plate.**



NOTE
- **During the procedure, be careful not to bend the plate [1] and the mylar [2].**



12. Disconnect the connector [1] and remove two screws [2].

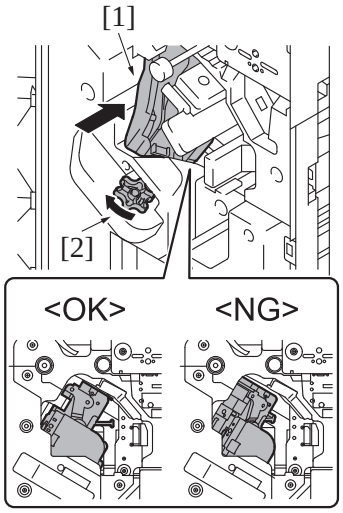


13. Remove four screws [1], remove the belt [3] while sliding the metal plate [2], then remove the trail edge stopper motor/R [4].
NOTE
- **Place the belt [3] on the gear during installation.**

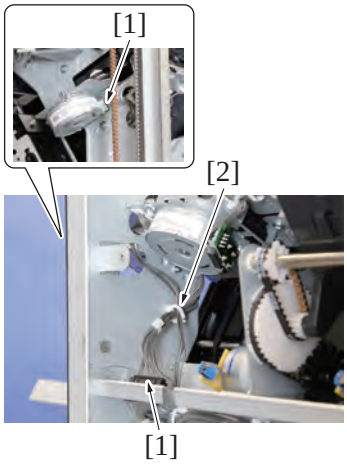
14. Reinstall the above parts following the removal steps in reverse.

7.5.22 Trail edge stopper motor/F (M12) (FS-537/FS-537SD)

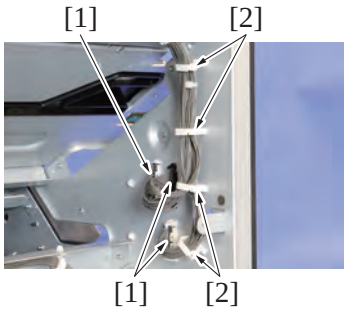
1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the front lower cover.
G.7.5.7 Front lower cover (FS-537/FS-537SD)
3. Remove the left upper cover.
G.7.5.10 Left upper cover (FS-537/FS-537SD)
4. Remove the main tray (paper exit lower tray).
G.7.5.8 Main tray (Paper exit lower tray) (FS-537/FS-537SD)



5. Rotate the stapler transfer dial [2] to move the stapler [1] towards the rear until the dial stops.
NOTE
- **If the stapler rotated (tilted) at the rear of the finisher, move it forward until it becomes straight and again move it backward.**

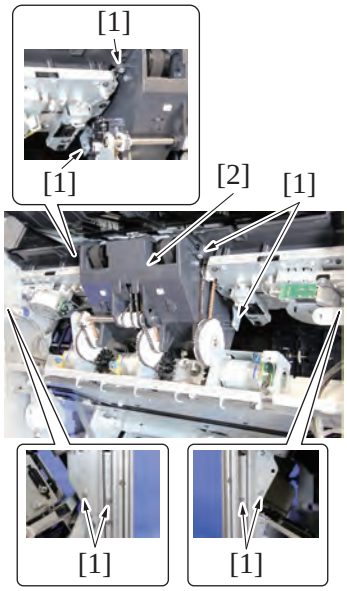


6. Disconnect two connectors [1] and remove the harness from the wire saddle [2].



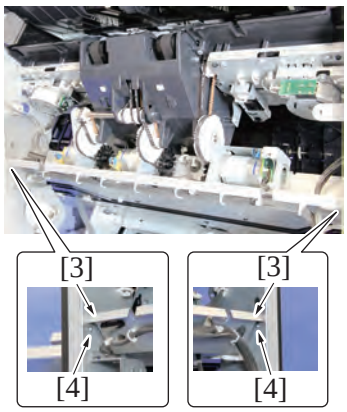
7. Disconnect three connectors [1] and remove the harness from four wire saddles [2].

8. Remove eight screws [1] and remove the paper exit part [2].

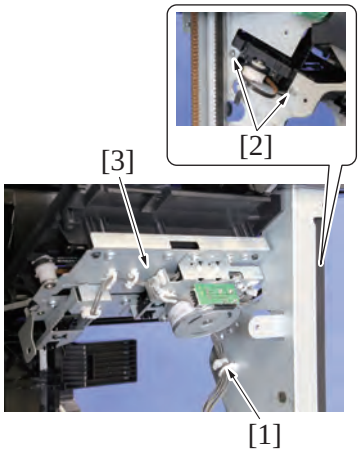


NOTE

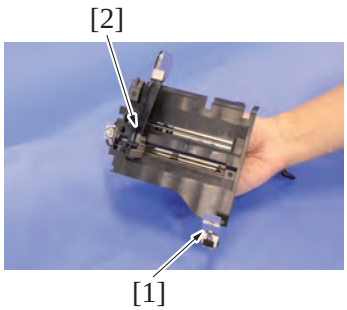
- **During installation, place the plate [3] part shown in the illustration on top of the dowel [4].**



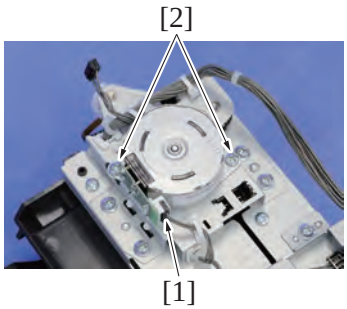
9. Remove the alignment motor/front.
G.7.5.24 Alignment motor/front (M14) (FS-537/FS-537SD)



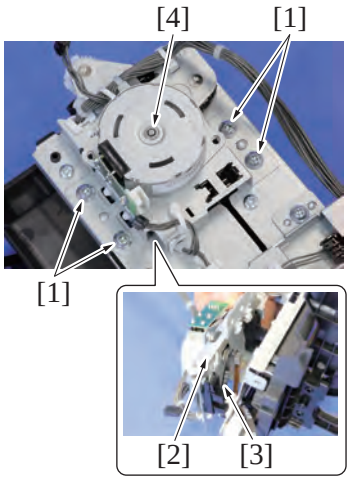
10. Remove the harness from the wire saddle [1].
11. Remove two screws [2] and remove the alignment plate [3].
NOTE
- **When removing, be careful not to drop the alignment plate.**



NOTE
- **During the procedure, be careful not to bend the plate [1] and the mylar [2].**



12. Disconnect the connector [1] and remove two screws [2].

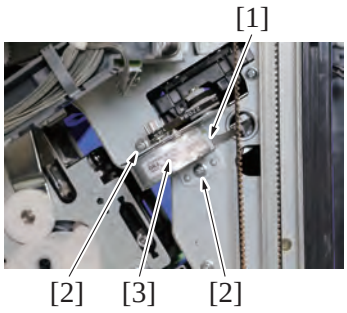


13. Remove four screws [1], remove the belt [3] while sliding the metal plate [2], then remove the trail edge stopper motor/F [4].
NOTE
- **Place the belt [3] on the gear during installation.**

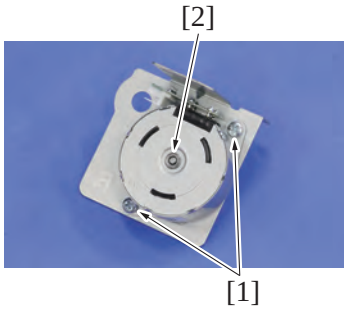
14. Reinstall the above parts following the removal steps in reverse.

7.5.23 Alignment motor/rear (M13) (FS-537/FS-537SD)

1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)



2. Disconnect the connector [1].
3. Remove two screws [2], and remove the alignment motor/rear assy [3].

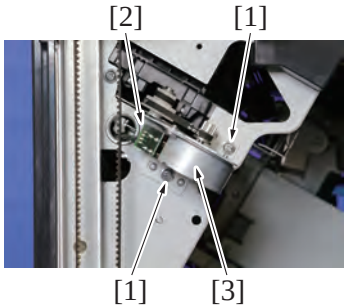


4. Remove two screws [1], and remove the alignment motor/rear [2].

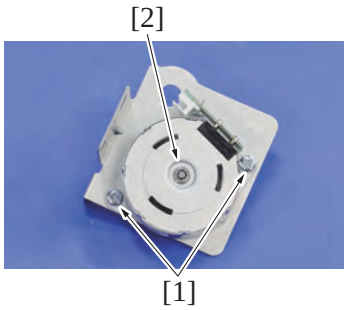
5. Reinstall the above parts following the removal steps in reverse.

7.5.24 Alignment motor/front (M14) (FS-537/FS-537SD)

1. Remove the front lower cover.
   G.7.5.7 Front lower cover (FS-537/FS-537SD)



2. Remove two screws [1] and the connector [2], then remove the alignment motor/front assy [3].

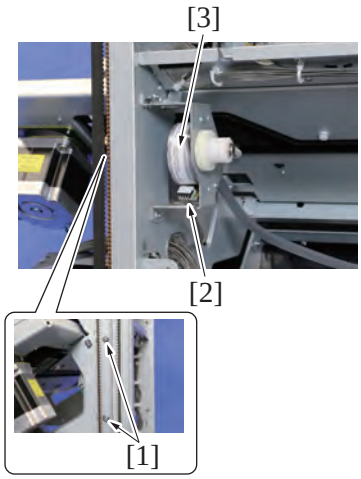


3. Remove two screws [1], and remove the alignment motor/front [2].

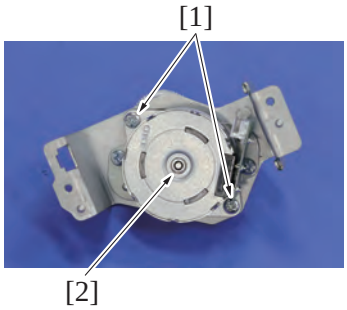
4. Reinstall the above parts following the removal steps in reverse.

7.5.25 Paper receiving control motor (M15) (FS-537/FS-537SD)

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the left upper cover.
   G.7.5.10 Left upper cover (FS-537/FS-537SD)



3. Remove two screws [1] and the connector [2], then remove the paper receiving control motor assy [3].

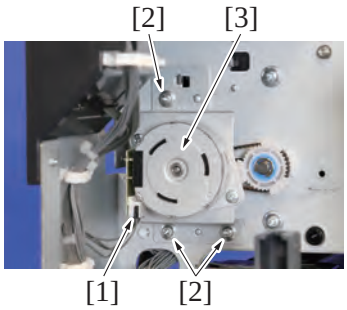


4. Remove two screws [1], and remove the paper receiving control motor [2].

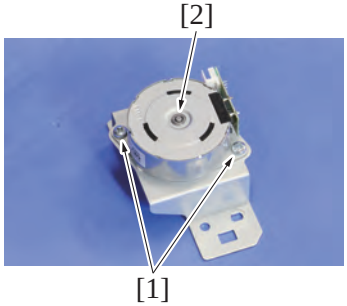
5. Reinstall the above parts following the removal steps in reverse.

7.5.26 SD discharge motor (M16) (FS-537/FS-537SD)

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the ZU discharge motor assy.
   G.7.5.31 ZU Discharge Motor (M21) (FS-537/FS-537SD)



3. Disconnect the connector [1].
4. Remove three screws [2], and remove the SD discharge motor assy [3].

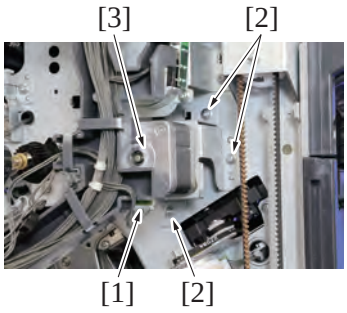


5. Remove two screws [1], and remove the SD discharge motor [2].

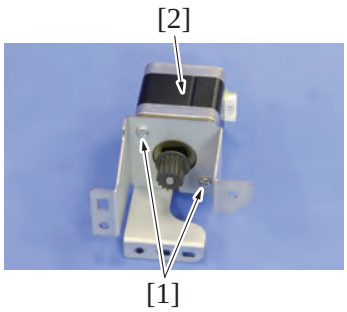
6. Reinstall the above parts following the removal steps in reverse.

7.5.27 FNS discharge motor (M17) (FS-537/FS-537SD)

1. Remove the rear cover.
   G.7.5.4 Rear cover (FS-537/FS-537SD)
2. Remove the route change gate motor assy.
   G.7.5.17 Route change gate motor (M4) (FS-537/FS-537SD)



3. Disconnect the connector [1].
4. Remove three screws [2], and remove the FNS discharge motor assy [3].

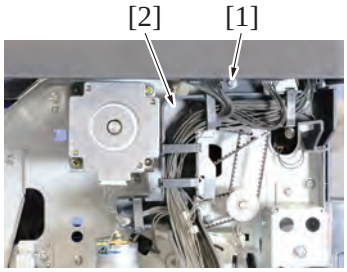


5. Remove two screws [1], and remove the FNS discharge motor [2].

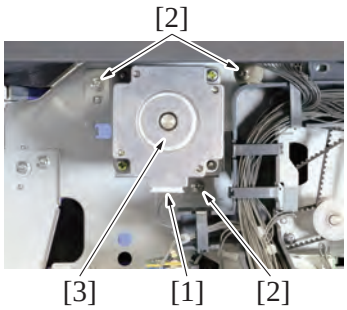
6. Reinstall the above parts following the removal steps in reverse.

7.5.28 Sub tray discharge motor (M18) (FS-537/FS-537SD)

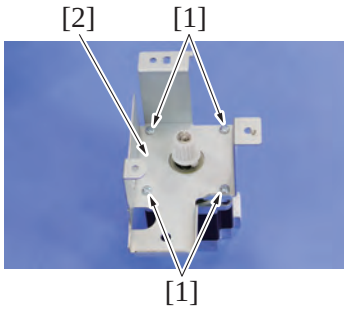
1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)



2. Remove the screw [1] and loosen the harness guide [2].

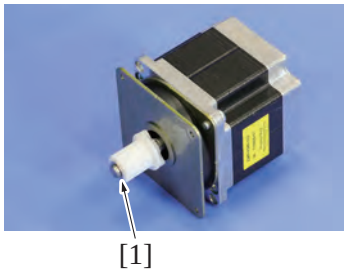


3. Disconnect the connector [1].
4. Remove three screws [2] and remove the sub tray discharge motor assy [3].

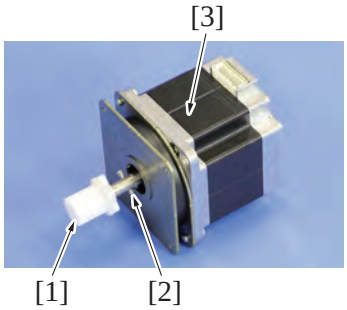


5. Remove four screws [1], and remove the plate [2].

6. Remove the E-ring [1].



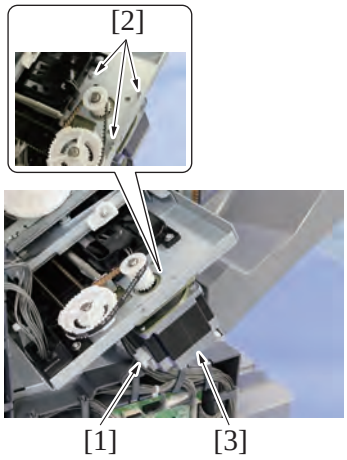
7. Remove the gear [1] and pin [2], and remove the sub tray discharge motor [3].



8. Reinstall the above parts following the removal steps in reverse.

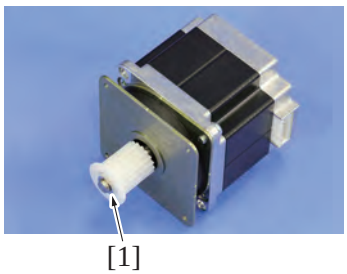
7.5.29 Stapler movement motor (M19) (FS-537/FS-537SD)

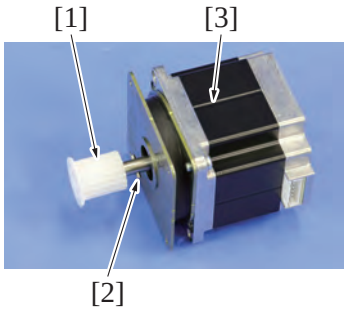
1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)



2. Disconnect the connector [1].
3. Remove three screws [2] and remove the stapler movement motor assy [3].

4. Remove the E-ring [1].



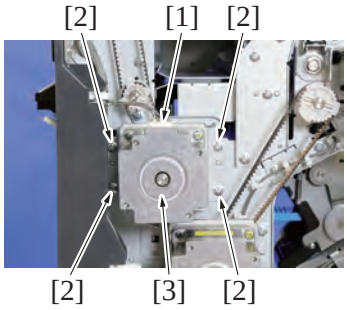


5. Remove the gear [1] and pin [2], then remove the stapler movement motor [3].

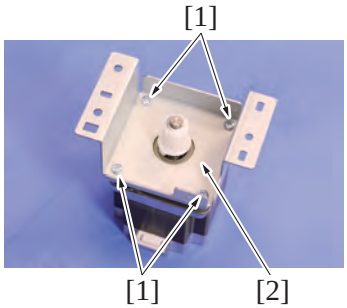
6. Reinstall the above parts following the removal steps in reverse.

7.5.30 FNS entry transport motor (M20) (FS-537/FS-537SD)

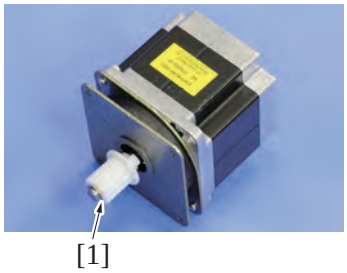
1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)



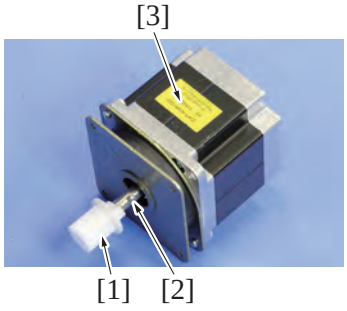
2. Disconnect the connector [1].
3. Remove four screws [2], and remove the FNS entry transport motor assy [3].



4. Remove four screws [1] and remove the metal plate [2].



5. Remove the E-ring [1].

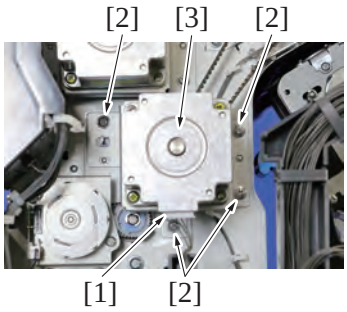


6. Remove the gear [1] and pin [2], and remove the FNS entry transport motor [3].

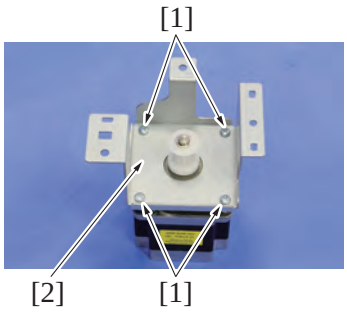
7. Reinstall the above parts following the removal steps in reverse.

7.5.31 ZU Discharge Motor (M21) (FS-537/FS-537SD)

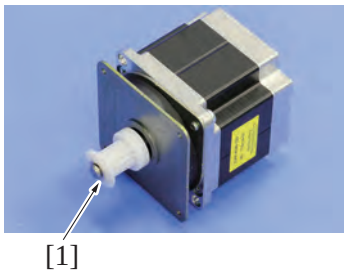
1. Remove the rear cover.
G.7.5.4 Rear cover (FS-537/FS-537SD)



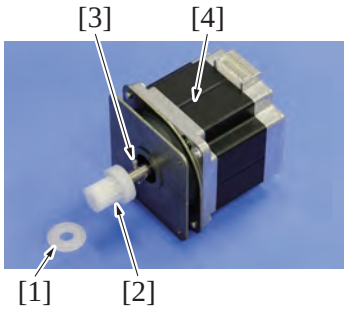
2. Disconnect the connector [1].
3. Remove four screws [2] and remove the ZU discharge motor assy [3].



4. Remove four screws [1] and remove the metal plate [2].



5. Remove the E-ring [1].

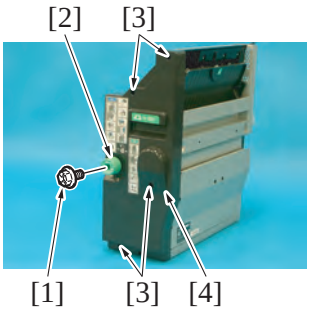


6. Remove the flange [1], gear [2], and pin [3], the remove the ZU discharge motor [4].

7. Reinstall the above parts following the removal steps in reverse.

7.6 Disassembly/reassembly procedure (FS-537SD saddle section)

7.6.1 Front cover (FS-537SD saddle section)



1. Remove the screw [1], and remove the jam clearing dial [2].
2. Remove four screws [3], and remove the front cover [4].

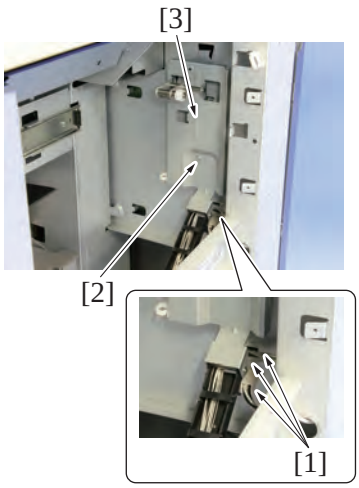
3. To reinstall, reverse the order of removal.

7.6.2 Saddle unit (FS-537SD saddle section)

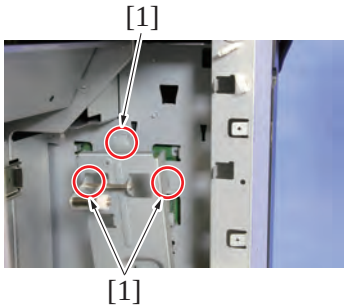
CAUTION

- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.
- Be careful not to jam your finger in the connecting section of the pantograph.

1. Remove the finisher from the main body.
   G.7.5.12 Finisher (FS-537/FS-537SD)
2. Remove the front door of the finisher.
   G.7.5.5 Front door (FS-537/FS-537SD)
3. Remove the finisher front lower cover.
   G.7.5.7 Front lower cover (FS-537/FS-537SD)



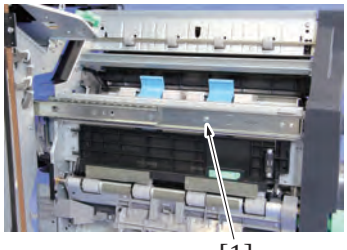
4. Disconnect three connectors [1] on the pantograph.
5. Remove the screw [2] and remove the pantograph [3].



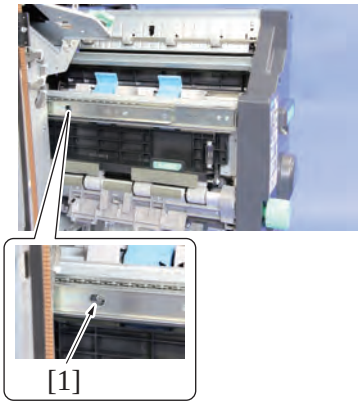
NOTE

- **For installation of the pantograph, insert three hooks [1] on the pantograph of the saddle unit into the back holes inside the finisher.**

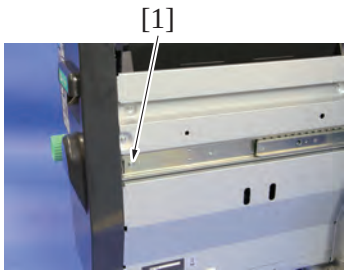
6. Remove the screw [1].



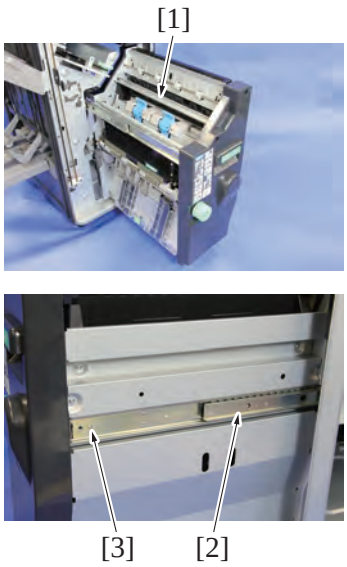
7. Push back the saddle unit into the position of the illustration, and then remove the screw [1].



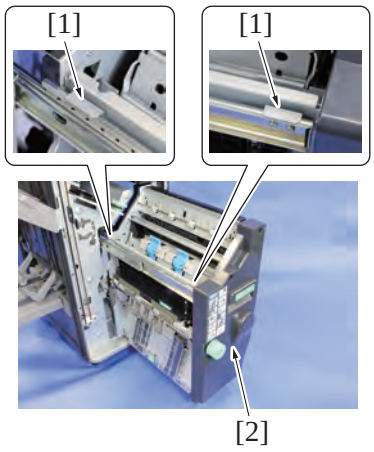
8. Pull out the saddle unit and remove the screw [1].



9. Place the right rail [2] to inside the finisher while holding the saddle unit in the section indicated in the figure [1] and raising it.
NOTE
- **Place the boss [3] of the saddle unit into the hole in the right rail when installing the saddle unit.**



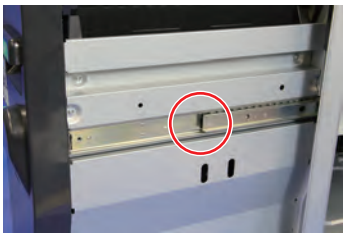
10. Remove the saddle unit [2] from two tabs [1].



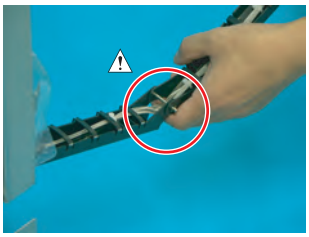
11. To reinstall, reverse the order of removal.

⚠CAUTION

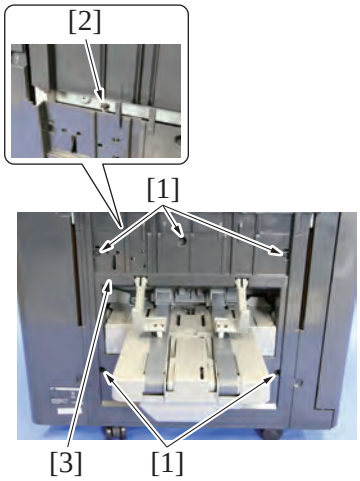
- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.



- Be careful not to jam your finger in the connecting section of the pantograph.

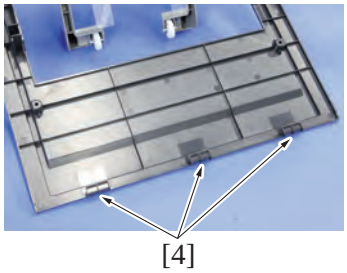


7.6.3 Exit tray (FS-537SD saddle section)

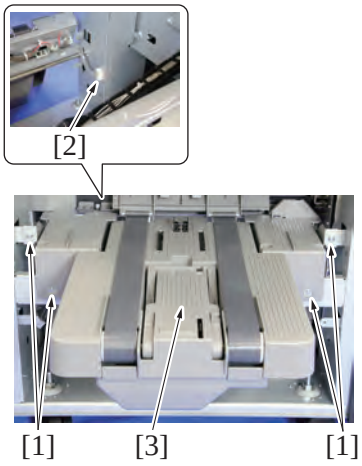


1. Remove five screws [1].
2. Disconnect the connector [2] and remove the left lower cover [3].

NOTE
- **Install after hooking three tabs [4] of the left lower cover when installing.**



3. Remove four screws [1].
4. Disconnect the connector [2] and remove the exit tray [3].

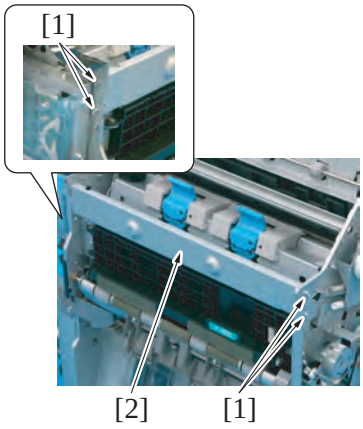


5. To reinstall, reverse the order of removal.

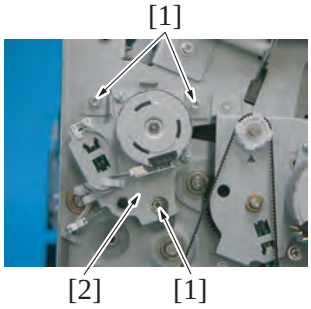
7.6.4 Staple unit (FS-537SD saddle section)

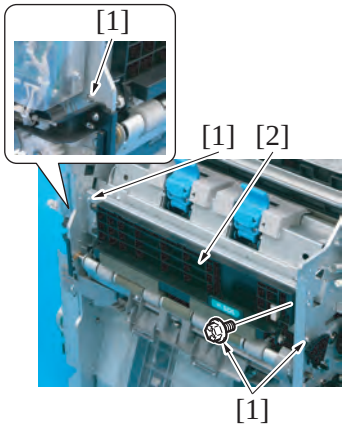
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)

3. Remove four screws [1], and remove the plate [2].

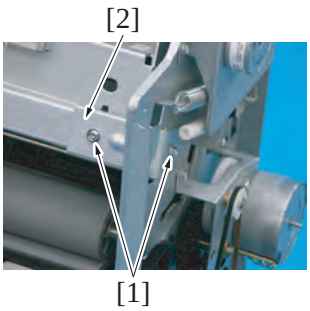


4. Remove three screws [1], and remove the tri-folding guide motor assy [2].

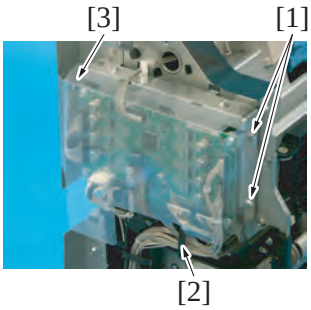




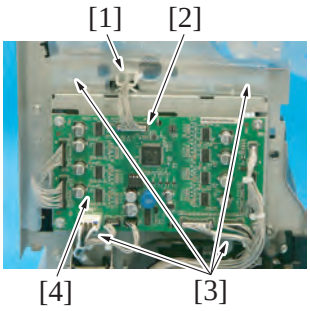
5. Remove four screws [1], and remove the conveyance assy [2].



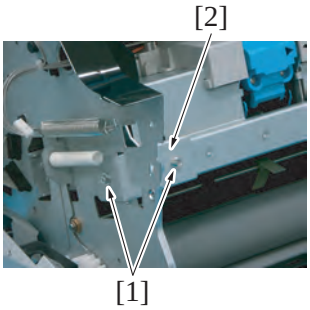
6. Remove two screws [1], and remove the plate [2].



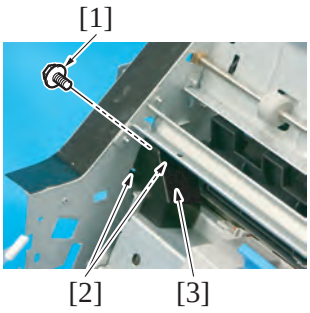
7. Remove two screws [1].
8. Detach the board support film [3] from the harness guide tabs [2].



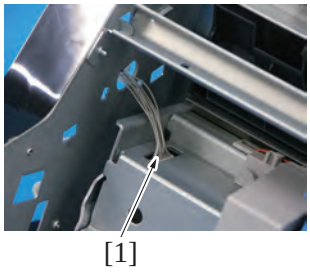
9. Remove the harness from the wire saddle [1].
10. Disconnect the connector [2].
11. Remove four screws [3] and remove the SD control board assy [4].



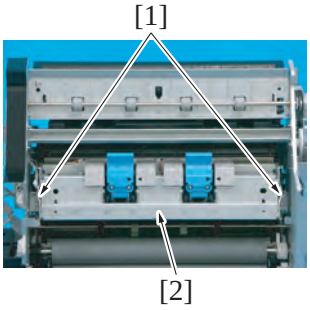
12. Remove two screws [1], and remove the plate [2].



13. Remove the screw [1].
14. Release two tabs [2], and remove the cover [3].



15. Disconnect the connector [1].

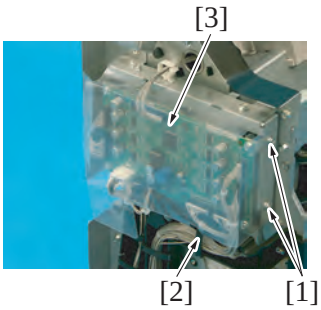


16. Remove two screws [1], and remove the staple unit [2].

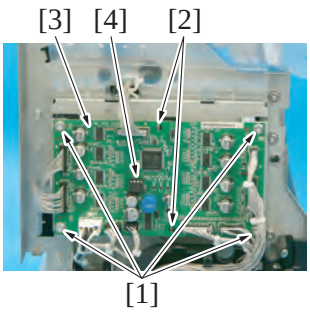
17. To reinstall, reverse the order of removal.

7.6.5 SD control board (SDCB) (FS-537SD saddle section)

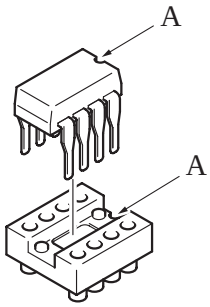
1. Remove the saddle unit.
G.7.6.2 Saddle unit (FS-537SD saddle section)



2. Remove two screws [1].
3. Remove the board support film [3] from the harness guide [2].



4. Disconnect all connectors on the SD control board.
5. Remove four screws [1].
6. Remove the SD control board [3] from the 2 tabs [2].
NOTE
- **Remount the EEPROM (U3) [4] when the SD control board (SDCB) is replaced.**
Install the EEPROM (U3) [4] from the old SD control board on to the new SD control board.



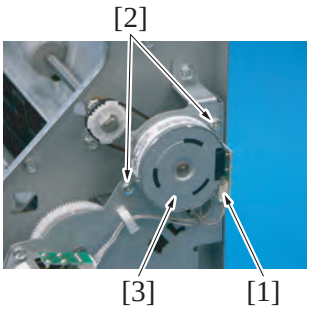
NOTE
- **When mounting EEPROM (U3), align the notches (indicated by "A" in the illustration).**

7. To reinstall, reverse the order of removal.

NOTE
- **After replacing the SD control board, be sure to install the latest firmware.**

7.6.6 SD transport motor (M1) (FS-537SD saddle section)

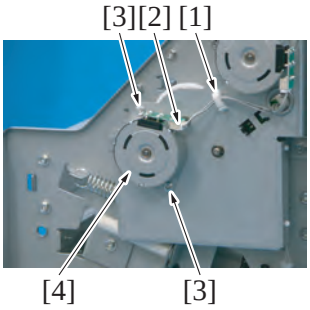
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD transport motor [3].
5. To reinstall, reverse the order of removal.

7.6.7 Paper discharge control motor (M2) (FS-537SD saddle section)

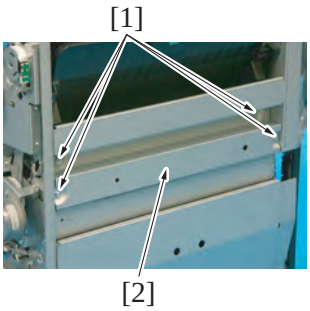
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



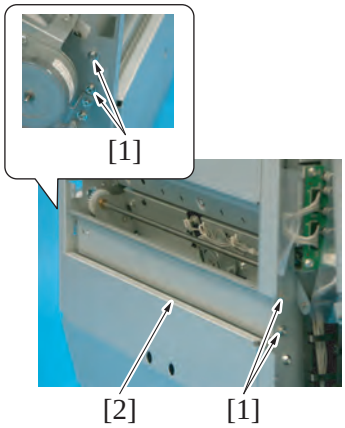
3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the paper discharge control motor [4].
5. To reinstall, reverse the order of removal.

7.6.8 Alignment motor (M3) (FS-537SD saddle section)

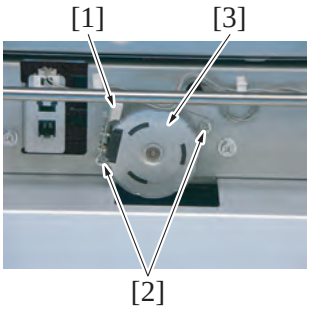
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



3. Remove four screws [1], and remove the plate [2].



4. Remove four screws [1], and remove the plate [2].

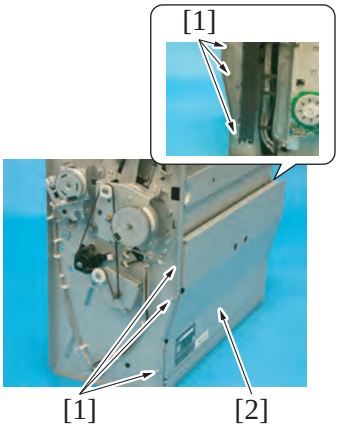


5. Disconnect the connector [1].
6. Remove two screws [2], and remove the alignment motor [3].

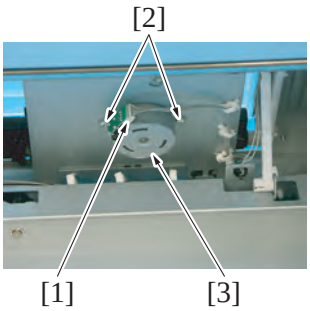
7. To reinstall, reverse the order of removal.

7.6.9 Stopper drive motor (M4) (FS-537SD saddle section)

1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



3. Remove six screws [1], and remove the plate [2].

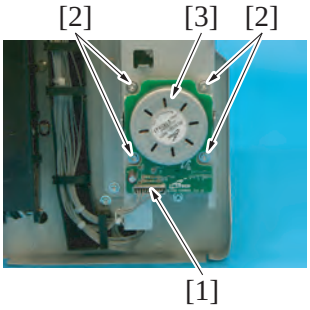


4. Disconnect the connector [1].
5. Remove two screws [2], and remove the stopper drive motor [3].

6. To reinstall, reverse the order of removal.

7.6.10 Center fold roller motor (M5) (FS-537SD saddle section)

1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)

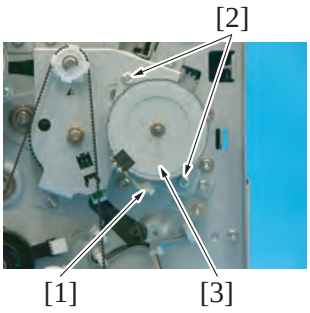


2. Disconnect the connector [1].
3. Remove four screws [2], and remove the center fold roller motor [3].

4. To reinstall, reverse the order of removal.

7.6.11 Center fold guide motor (M6) (FS-537SD saddle section)

1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)

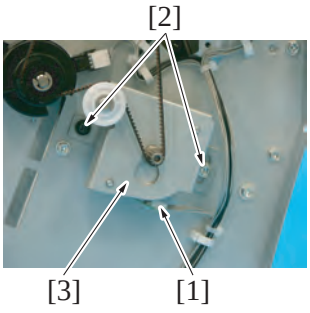


3. Disconnect the connector [1].
4. Remove two screws [2] and remove the center fold guide motor [3].

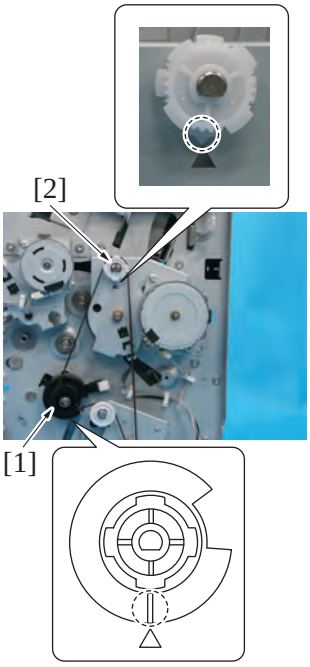
5. To reinstall, reverse the order of removal.

7.6.12 SD paddle motor (M7) (FS-537SD saddle section)

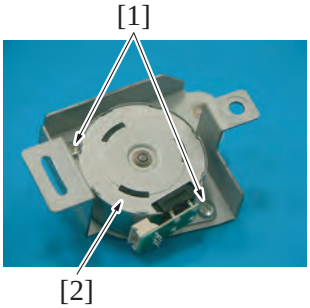
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD paddle motor assy [3].



NOTE
- **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

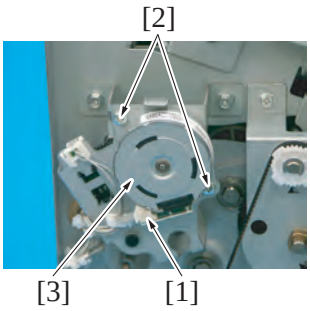


5. Remove two screws [1], and remove the SD paddle motor [2].

6. To reinstall, reverse the order of removal.

7.6.13 Tri-folding guide motor (M8) (FS-537SD saddle section)

1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)

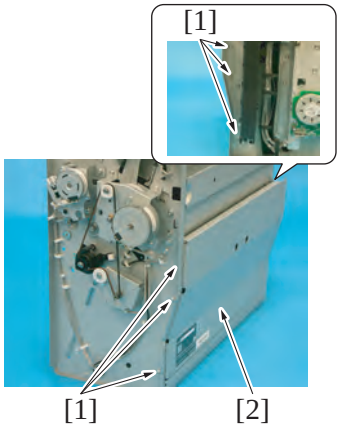


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the tri-folding guide motor [3].

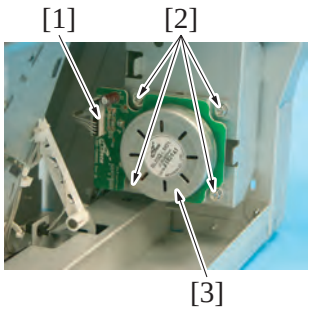
5. To reinstall, reverse the order of removal.

7.6.14 Center fold knife motor (M9) (FS-537SD saddle section)

1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



3. Remove six screws [1], and remove the plate [2].

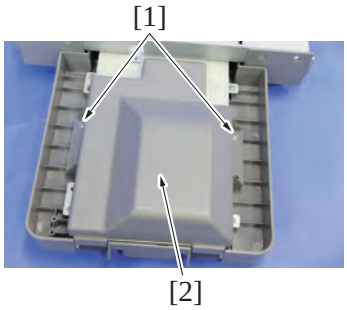


4. Disconnect the connector [1].
5. Remove four screws [2], and remove the center fold knife motor [3].

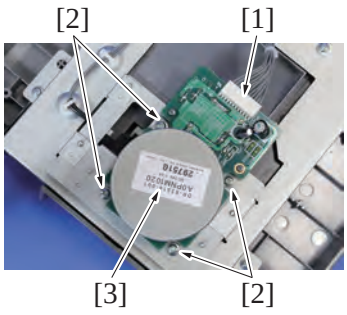
6. To reinstall, reverse the order of removal.

7.6.15 Paper transport belt motor (M34) (FS-537SD saddle section)

1. Remove the exit tray.
   G.7.6.3 Exit tray (FS-537SD saddle section)



2. Remove two screws [1], and remove the cover [2].

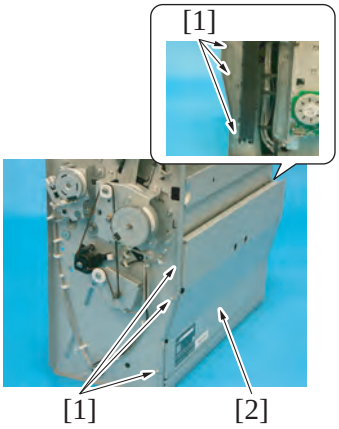


3. Disconnect the connector [1].
4. Remove four screws [2] and remove the paper transport belt motor [3].

5. To reinstall, reverse the order of removal.

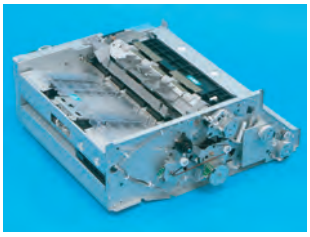
7.6.16 Stopper solenoid (SD1) (FS-537 saddle section)

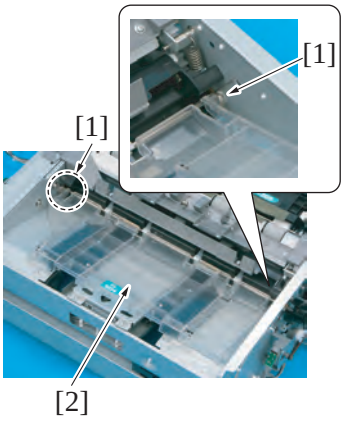
1. Remove the saddle unit.
   G.7.6.2 Saddle unit (FS-537SD saddle section)
2. Remove the front cover.
   G.7.6.1 Front cover (FS-537SD saddle section)



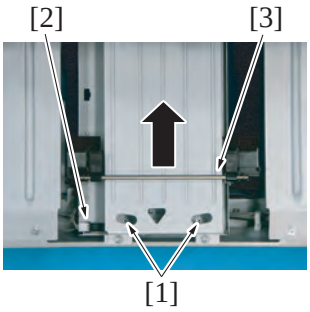
3. Remove six screws [1], and remove the plate [2].

4. Place the saddle unit as shown in the illustration.



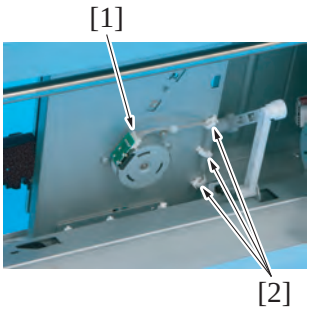


5. Remove two stoppers [1], and remove the guide plate [2].

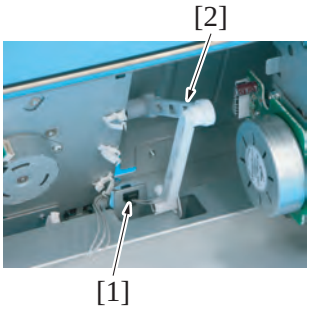


6. Slide the lever unit [3] upward.
7. Remove two screws [1] and disconnect the connector [2].

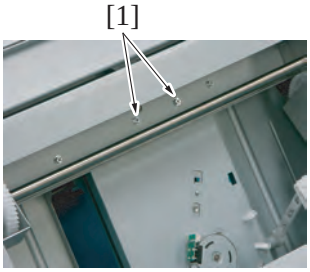
8. Raise the saddle unit.



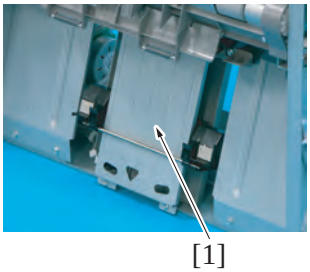
9. Disconnect the connector [1], and remove the harness from three wire saddles [2].



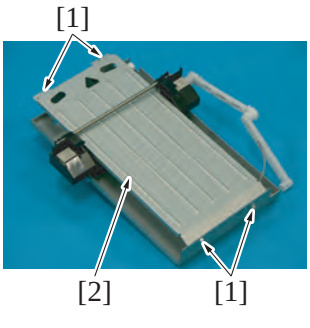
10. Disconnect the connector [1], and remove the drive lever [2].



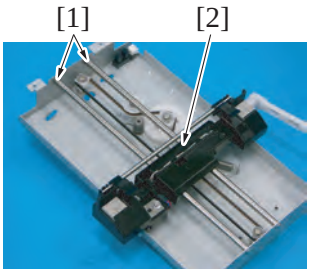
11. Remove two screws [1].



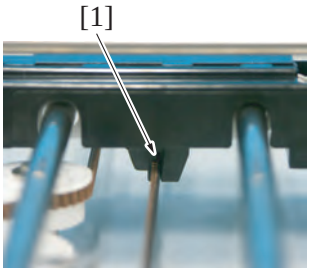
12. Remove the guide plate assy [1].
NOTE
- **When reinstalling the guide plate assy, perform mechanical adjustment.**
I.16.1.1 Half-fold skew adjustment



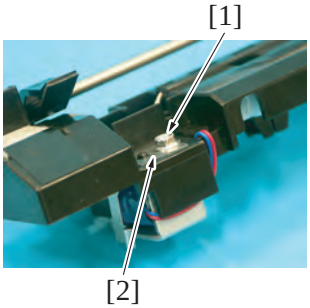
13. Remove four screws [1], and remove the plate [2].



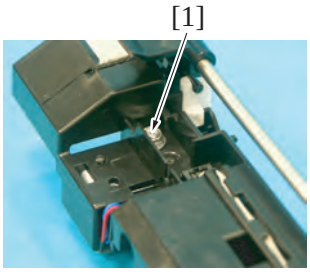
14. Remove two E-rings [1], and remove the stopper guide [2].



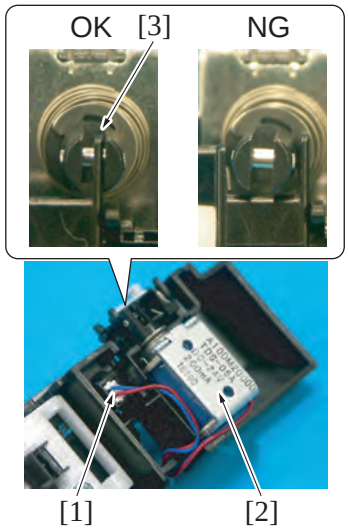
NOTE
- **When reinstalling the stopper guide, fit the belt into the stopper guide groove [1].**



15. Remove the screw [1], and remove the plate [2].



16. Remove the screw [1].



17. Disconnect the connector [1], and remove the stopper solenoid [2].

NOTE
- **When reinstalling the stopper solenoid, fit its tip into the place [3] shown in the illustration.**

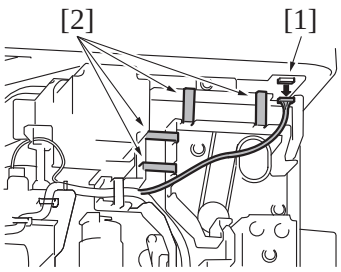
18. To reinstall, reverse the order of removal.

7.7 Disassembly/reassembly procedure (ZU-609)

7.7.1 Z Folding Unit (ZU-609)

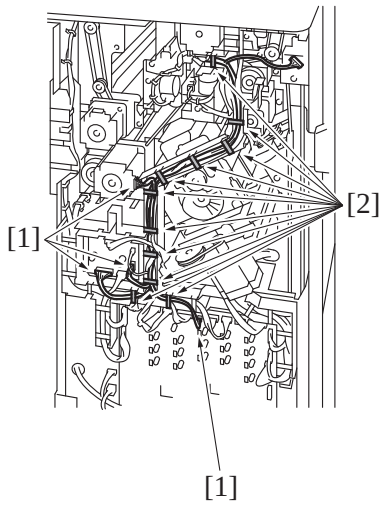
1. Remove the finisher from the main body.
G.7.5.12 Finisher (FS-537/FS-537SD)

2. Remove the rear cover of the finisher.
G.7.5.4 Rear cover (FS-537/FS-537SD)

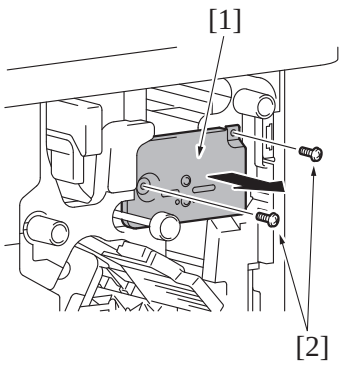


3. Disconnect the connector [1] and pull out the harness from the harness guide [2].

4. Disconnect four connectors [1] and remove the harness from the harness guide [2].

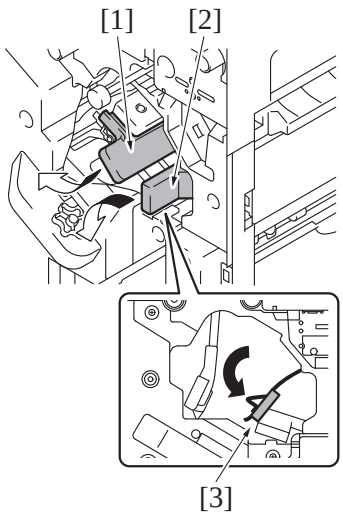


5. Open the front door of the finisher.

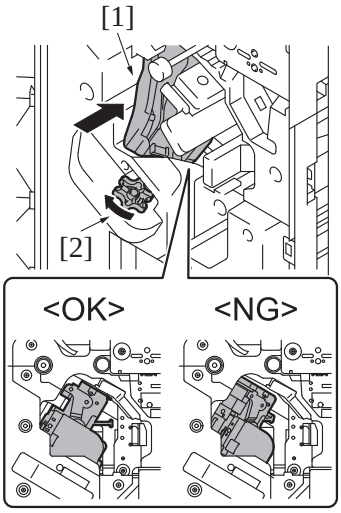


6. If the metal plate [1] is attached, remove two screws [2] to remove the metal plate [1].

7. Remove the Punch Kit if it is installed.
G.7.8.1 Punch Kit (PK-523)

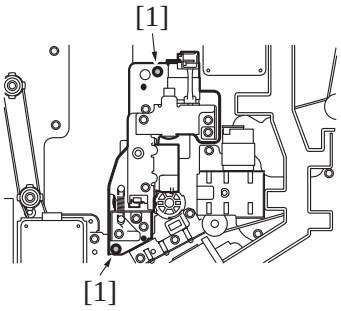


8. Open the three ([1]/[2]/[3]) jam removal levers.

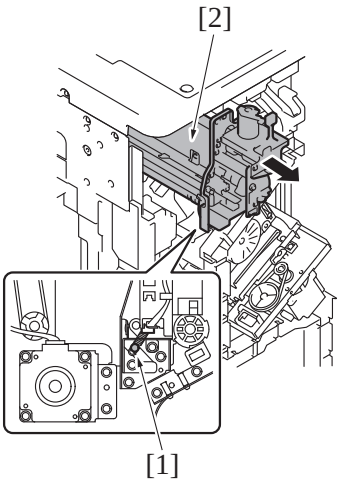


NOTE

- **If the lever does not open because the stapler [1] is being blocked, rotate the stapler transfer dial [2] and move the stapler [1] towards the rear until the dial stops.**
- **If the stapler rotated (tilted) at the rear of the finisher, move it forward until it becomes straight and again move it backward.**



9. Remove two screws [1].



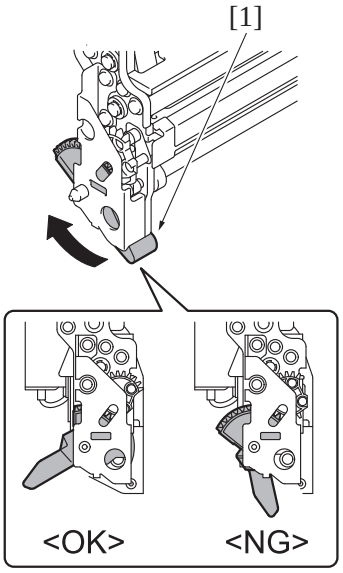
10. Remove the Z folding unit [2] from the finisher by lifting it a little with the shaft lever [1] of the lower part of the Z folding unit slided upper left.

11. To reinstall, follow the removal procedure backwards.

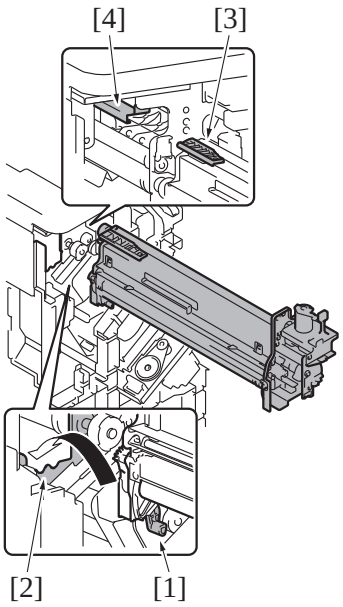
NOTE

Take note of the following when installing:

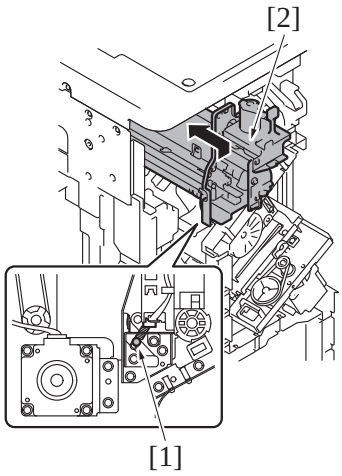
- **If the jam removal lever [1] of Z folding unit is not in the position shown in the illustration, pull the lever to set to the position shown in the illustration.**



- **Do not make the lever [1] caught on the lower frame [2] of the finisher opening.**
- **Put the upper resin part [3] of the Z folding unit on the rail [4] of the finisher opening.**



- **Hold up the Z folding unit [2] a little to insert further, with the shaft lever [1] on the lower part of the Z folding unit slided to the upper left.**

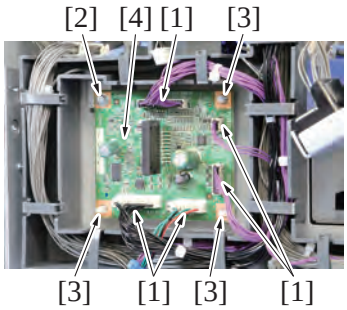


7.7.2 ZU drive board (ZUDB) (ZU-609)

1. Remove the finisher from the main body.

G.7.5.12 Finisher (FS-537/FS-537SD)

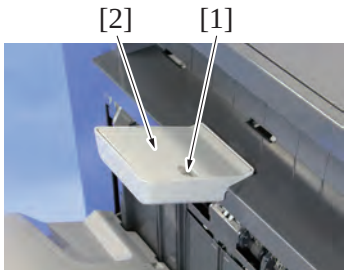
2. Remove the rear cover of the finisher.
G.7.5.4 Rear cover (FS-537/FS-537SD)



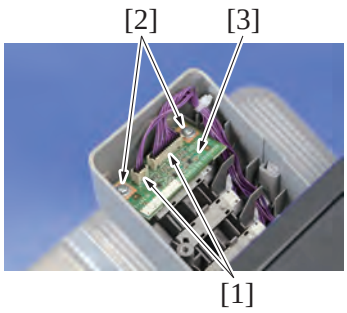
3. Disconnect five connectors [1] on the ZU drive board.
4. Remove the screw [2] and three board supports [3], then remove the ZU drive board [4].
5. Reinstall the above parts following the removal steps in reverse.

7.7.3 ZU relay board (ZURB) (ZU-609)

1. Remove the finisher sub tray (paper exit upper tray).
G.7.5.9 Sub tray (Paper exit upper tray) (FS-537/FS-537SD)



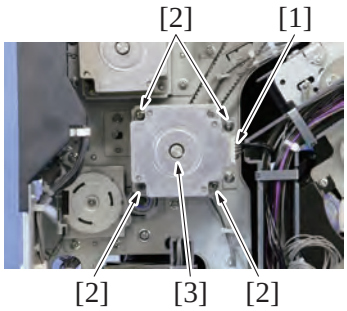
2. Remove the screw [1], and remove the cover [2].



3. Disconnect two connectors [1] on the ZU relay board.
4. Remove two screws [2], and remove the ZU relay board [3].
5. Reinstall the above parts following the removal steps in reverse.

7.7.4 ZU transport motor (M500) (ZU-609)

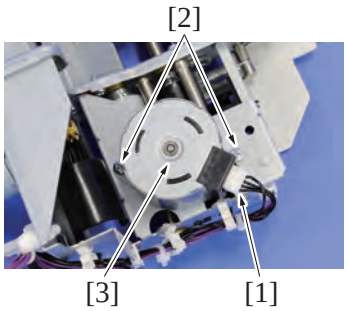
1. Remove the finisher from the main body.
G.7.5.12 Finisher (FS-537/FS-537SD)
2. Remove the rear cover of the finisher.
G.7.5.4 Rear cover (FS-537/FS-537SD)



3. Disconnect the connector [1].
4. Remove four screws [2] and remove the ZU transport motor [3].
5. Reinstall the above parts following the removal steps in reverse.

7.7.5 Folding guide motor (M501) (ZU-609)

1. Remove the Z folding unit.
G.7.7.1 Z Folding Unit (ZU-609)



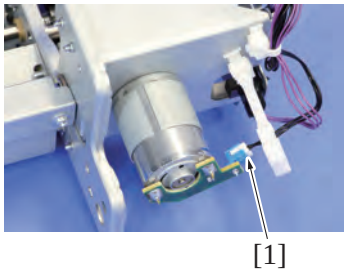
2. Disconnect the connector [1].
3. Remove two screws [2] and remove the folding guide motor [3].

4. To reinstall, follow the removal procedure backwards.

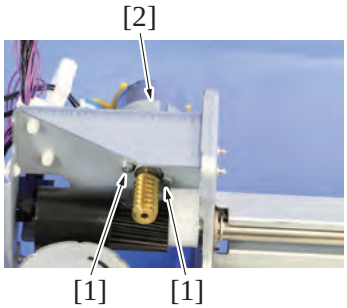
7.7.6 Pressure motor (M502) (ZU-609)

1. Remove the Z folding unit.
G.7.7.1 Z Folding Unit (ZU-609)

2. Disconnect the connector [1].



3. Remove two screws [1] and remove the pressure motor [2].



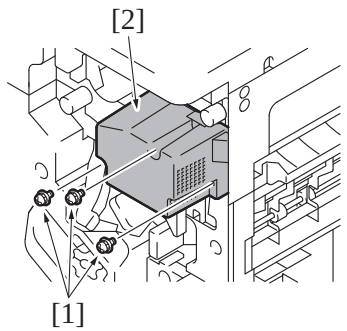
4. Reinstall the above parts following the removal steps in reverse.

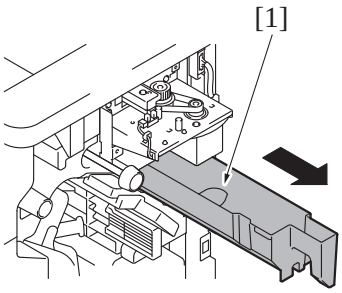
7.8 Disassembly/reassembly procedure (PK-523)

7.8.1 Punch Kit (PK-523)

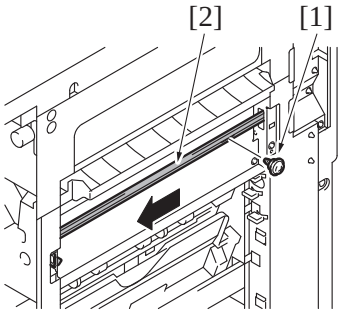
1. Remove the finisher from the main body.
G.7.5.12 Finisher (FS-537/FS-537SD)
2. Open the finisher front door.

3. Remove three screws [1] and remove the cover [2].

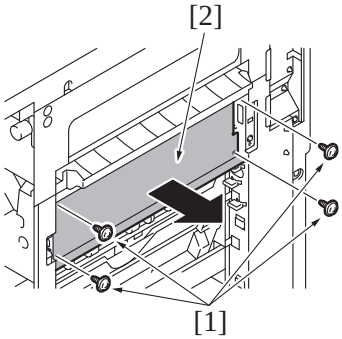




4. Remove the punch disposal box [1].

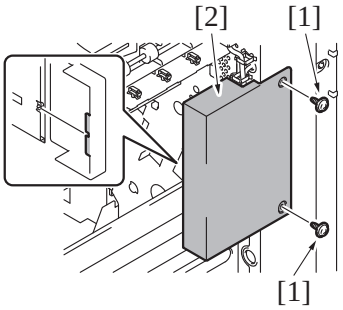


5. Remove the screw [1], and remove the plate [2].

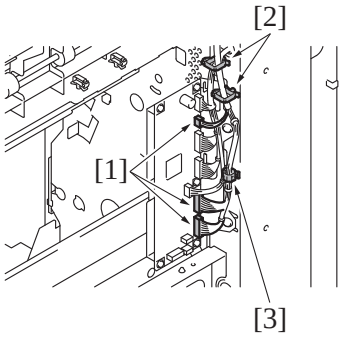


6. Remove four screws [1] and remove the plate [2].

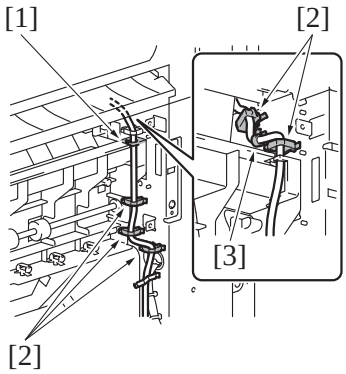
7. Remove the rear cover of the finisher.
G.7.5.4 Rear cover (FS-537/FS-537SD)



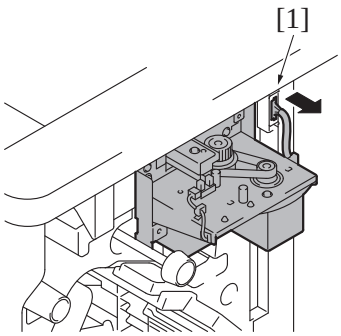
8. Remove two screws [1] and remove the board cover [2].



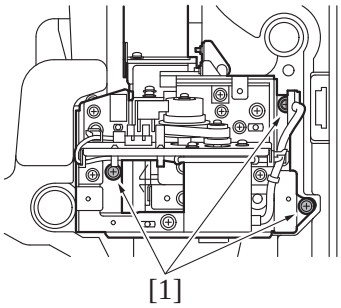
9. Disconnect three connectors [1].
10. Remove the harness from two wire saddles [2] and the clamp [3].



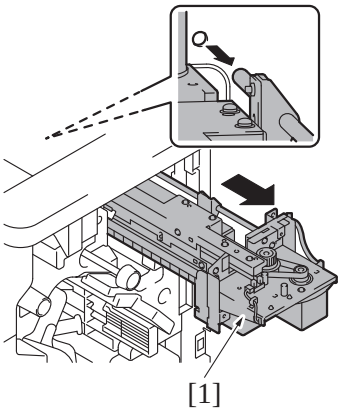
11. Remove the harness from harness guide [1].
12. Remove the harness from five wire saddles [2].
NOTE
- **Place the harness clamp [3] between the two top wire saddles when installing.**



13. Disconnect the connector [1].



14. Remove three screws [1].



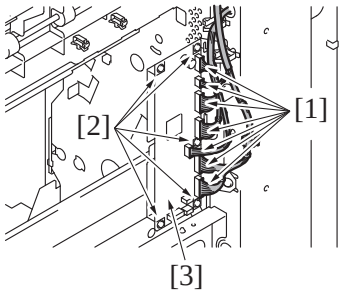
15. Remove the punch kit [1] by pulling it out from the finisher main unit.

16. To reinstall, reverse the order of removal.
NOTE
If the paper jam error around the punch unit is displayed on the control panel when turning on the machine after installing the finisher, check the following:
- **No paper pieces are left on the paper path.**
- **Execute the [Punch F. Sensor Intensity Adj.]. After the adjustment, open and close the front door of the finisher to confirm that the JAM displays disappear.**
- **Before turning OFF the main power switch, wait at least 10 seconds after the JAM displays disappear.**

7.8.2 Punch control board (PKCB) (PK-523)

1. Remove the finisher from the main body.
G.7.5.12 Finisher (FS-537/FS-537SD)

2. Disconnect seven connectors [1] on the punch control board.
3. Remove five screws [2], and remove the punch control board [3].

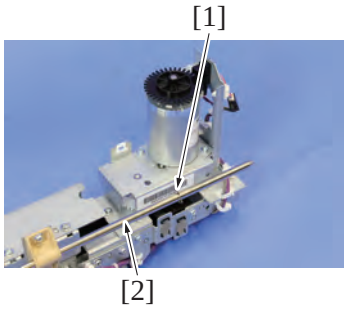


4. Reinstall the above parts following the removal steps in reverse.

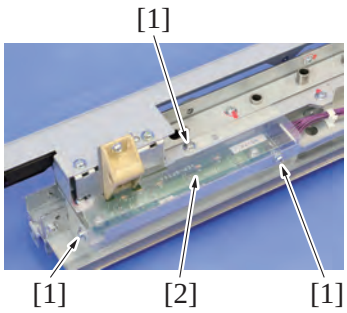
7.8.3 Paper size detect board (PSDTB) (PK-523)

1. Remove the punch kit.
G.7.8.1 Punch Kit (PK-523)

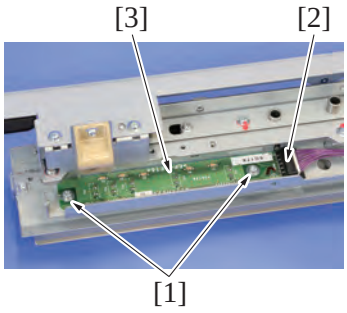
2. Remove the E-ring [1] and pull out the punch oscillating section [2].



3. Remove three screws [1] and remove the board protective shield [2].



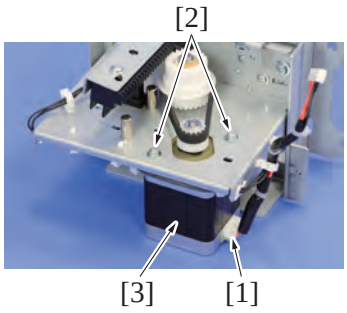
4. Remove two screws [1], disconnect the connector [2], and remove the paper size detect board [3].



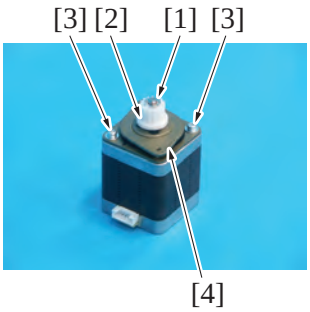
5. To reinstall, reverse the order of removal.
NOTE
If the paper jam error around the punch unit is displayed on the control panel when turning on the machine after installing the finisher, check the following:
- **No paper pieces are left on the paper path.**
- **Execute the [Punch F. Sensor Intensity Adj.]. After the adjustment, open and close the front door of the finisher to confirm that the JAM displays disappear.**
- **Before turning OFF the main power switch, wait at least 10 seconds after the JAM displays disappear.**

7.8.4 Punch oscillating motor (M302) (PK-523)

1. Remove the punch kit.
G.7.8.1 Punch Kit (PK-523)



2. Disconnect the connector [1].
3. Remove two screws [2] and remove the punch oscillating motor [3].



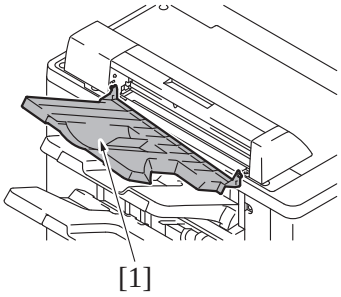
4. Remove the E-ring [1], and remove the gear [2].
   NOTE
   - **Take care not to lose the pin.**
5. Remove two screws [3] and remove the plate [4].

6. To reinstall, reverse the order of removal.
   NOTE
   If the paper jam error around the punch unit is displayed on the control panel when turning on the machine after installing the finisher, check the following:
   - **No paper pieces are left on the paper path.**
   - **Execute the [Punch F. Sensor Intensity Adj.]. After the adjustment, open and close the front door of the finisher to confirm that the JAM displays disappear.**
   - **Before turning OFF the main power switch, wait at least 10 seconds after the JAM displays disappear.**

7.9 Disassembly/reassembly procedure (JS-602)

7.9.1 Paper exit tray (JS-602)

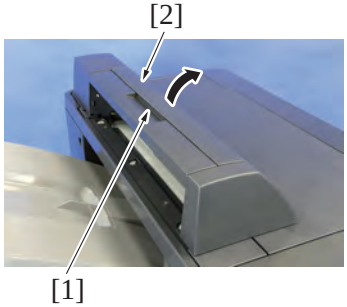
1. Remove the paper exit tray [1].



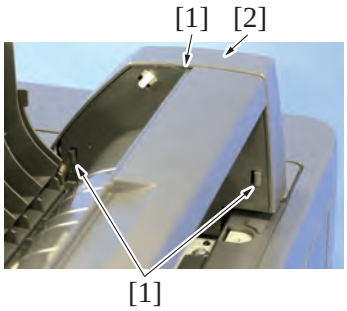
2. Reinstall the above parts following the removal steps in reverse.

7.9.2 Front cover (JS-602)

1. Remove the paper exit tray.
   G.7.9.1 Paper exit tray (JS-602)



2. Pull the unlock lever [1] and open the upper door [2].

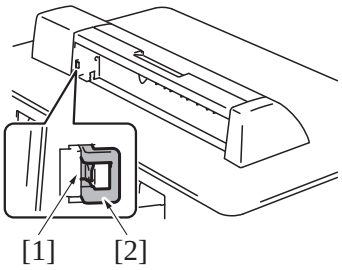


3. Remove three tabs [1] and remove the front cover [2].

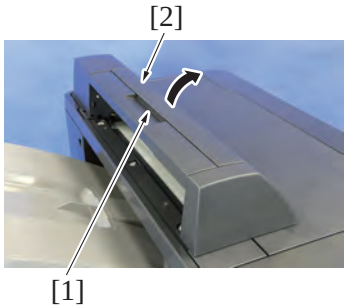
4. To reinstall, reverse the order of removal.

7.9.3 Rear cover (JS-602)

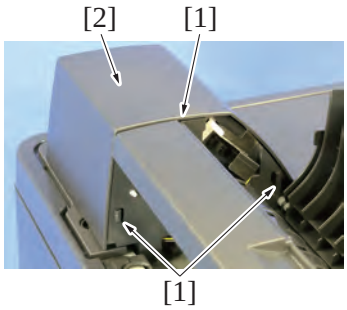
1. Remove the paper exit tray.
G.7.9.1 Paper exit tray (JS-602)



2. Remove the tab [1] and remove the spacer [2].



3. Pull the unlock lever [1] and open the upper door [2].

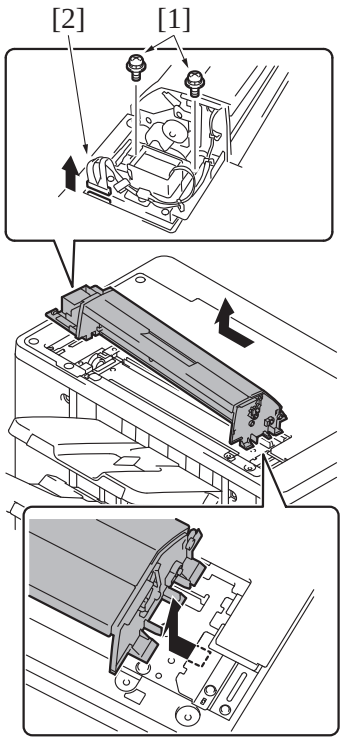


4. Remove three tabs [1] and remove the rear cover [2].

5. To reinstall, reverse the order of removal.

7.9.4 Job separator (JS-602)

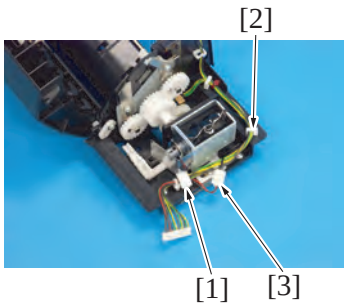
1. Remove the paper exit tray.
G.7.9.1 Paper exit tray (JS-602)
2. Remove the front cover.
G.7.9.2 Front cover (JS-602)
3. Remove the rear cover.
G.7.9.3 Rear cover (JS-602)



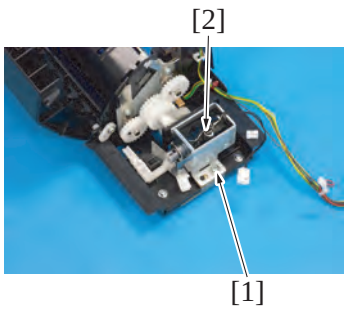
4. Remove two screws [1], disconnect the connector [2], and remove the job separator [3].

7.9.5 Entrance switching solenoid (SD401) (JS-602)

1. Remove the rear cover.
G.7.9.3 Rear cover (JS-602)



2. Remove the harness from the wire saddle [1] and the edge cover [2].
3. Disconnect the connector [3].

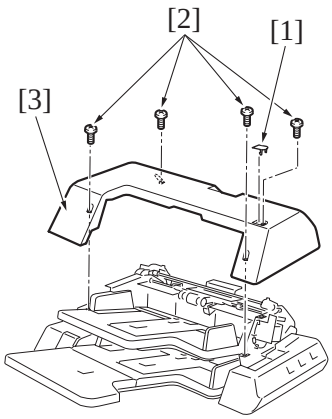


4. Remove the screw [1] and remove the entrance switching solenoid [2].

5. To reinstall, reverse the order of removal.

7.10 Disassembly/reassembly procedure (PI-507)

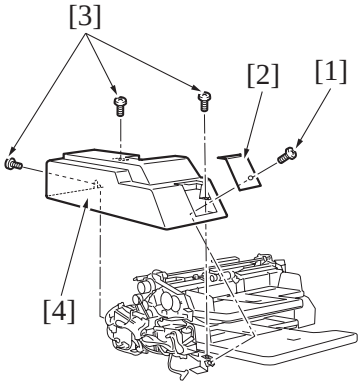
7.10.1 Upper cover (PI-507)



1. Remove the cap [1].
2. Remove four screws [2] and remove the upper cover [3].
3. To reinstall, reverse the order of removal.

7.10.2 Rear cover (PI-507)

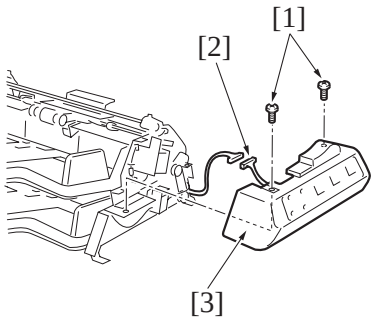
1. Remove the upper cover.
G.7.10.1 Upper cover (PI-507)



2. Remove the screw [1], and remove the connector cover [2].
3. Remove three screws [3], and remove the rear cover [4].
4. To reinstall, reverse the order of removal.

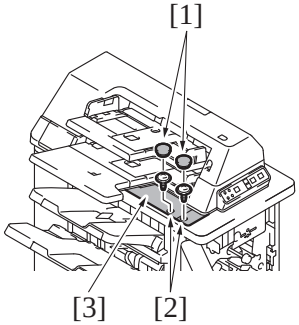
7.10.3 Operation panel cover assy (PI-507)

1. Remove the upper cover.
G.7.10.1 Upper cover (PI-507)

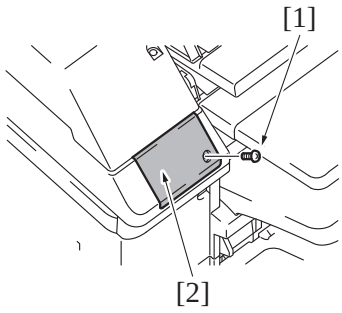


2. Remove two screws [1], disconnect the connector [2], and remove the operational panel cover assy [3].
3. To reinstall, reverse the order of removal.

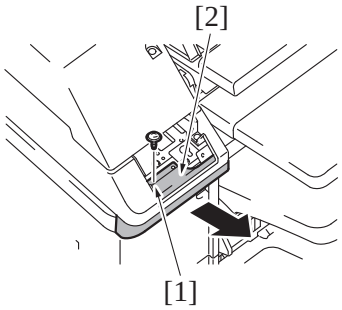
7.10.4 Post Inserter (PI-507)



1. Remove two caps [1] and two screws [2], and remove the finisher cover [3].

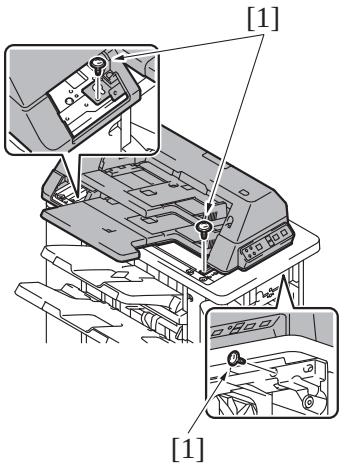


2. Remove the screw [1], and remove the connector cover [2].

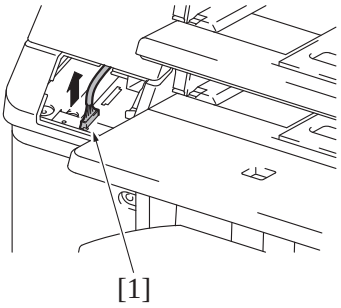


3. Remove the screw [1], and remove the cover [2].

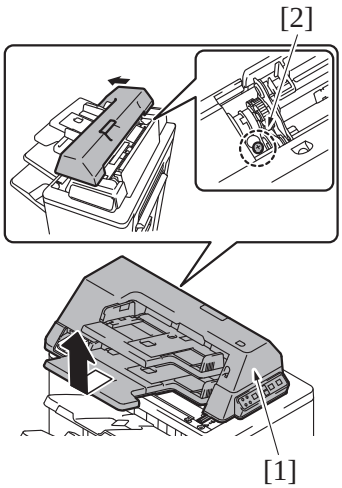
4. Open the finisher front door.



5. Remove three screws [1].



6. Disconnect the connector [1].

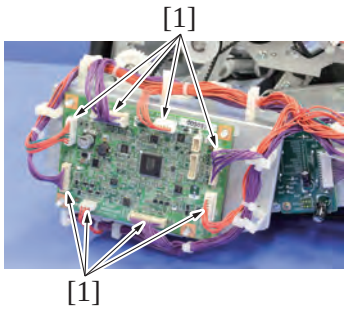


7. Remove the post inserter [1] by shifting it toward the direction of the arrow.
   NOTE
   - **Install the post inserter so it is hooked to the positioning screw [2] attached to the finisher.**

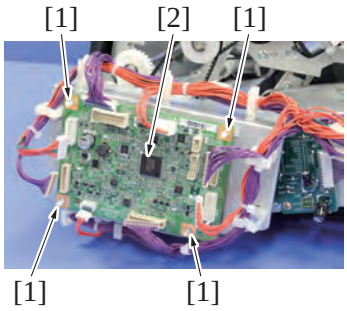
8. To reinstall, reverse the order of removal.

7.10.5 PI drive board (PIDB) (PI-507)

1. Remove the rear cover.
   G.7.10.2 Rear cover (PI-507)



2. Disconnect eight connectors [1] on the board.

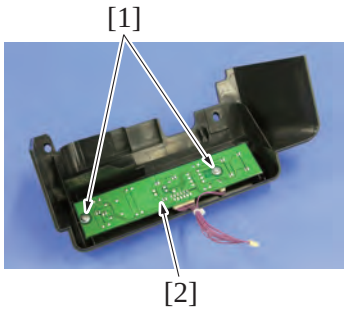


3. Remove four board supports [1] and remove the PI drive board [2].

4. To reinstall, reverse the order of removal.

7.10.6 PI operation board (PIOB) (PI-507)

1. Remove the operation panel cover assy.
   G.7.10.3 Operation panel cover assy (PI-507)



2. Remove two screws [1] and remove the PI operation board [2].

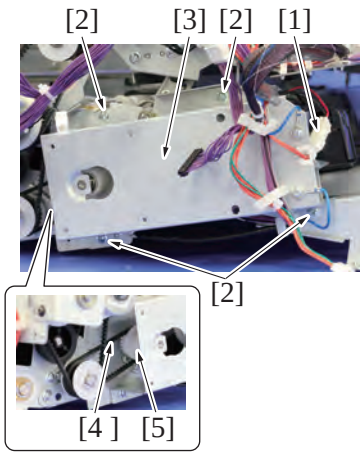
3. To reinstall, reverse the order of removal.

7.10.7 PI relay board (PIRB) (PI-507)

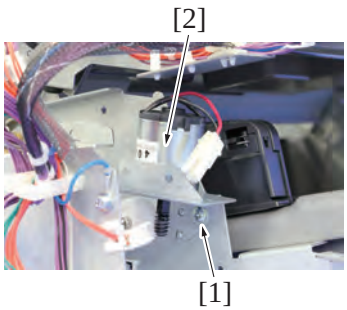
- The removal process of the PI relay board (PIRB) is the same as the removal process of the ZU drive board (ZUDB) of the Z fold unit ZU-609. Refer to the removal process of the ZU drive board (ZUDB)
G.7.7.2 ZU drive board (ZUDB) (ZU-609)

7.10.8 Tray lift motor /Lw (M202) (PI-507)

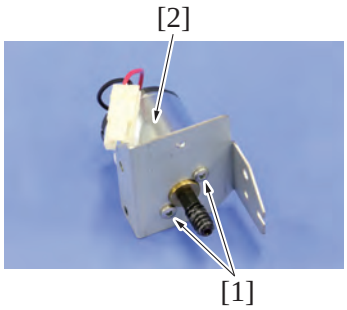
1. Remove the transfer motor (M203).
G.7.10.9 Transfer motor (M203) (PI-507)



2. Disconnect the connector [1].
3. Remove four screws [2] and slide the metal plate [3].
NOTE
- **Place the belt [4] on the gear [5] during installation.**



4. Remove the screw [1] and remove the tray lift motor /Lw assy [2].

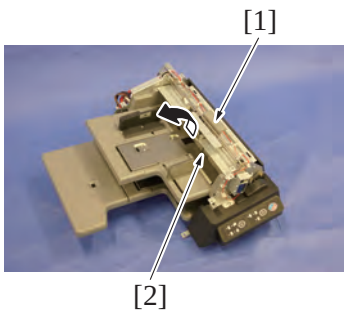


5. Remove two screws [1] and remove the tray lift motor /Lw [2].

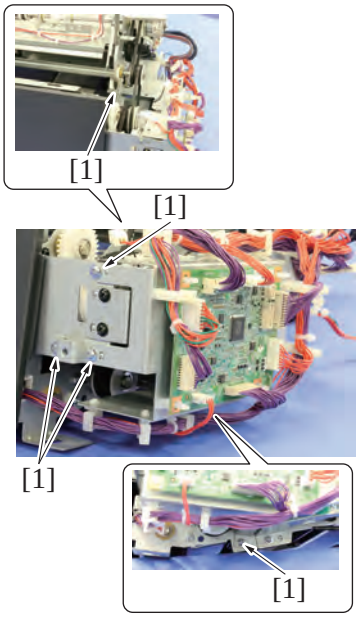
6. Reinstall the above parts following the removal steps in reverse.

7.10.9 Transfer motor (M203) (PI-507)

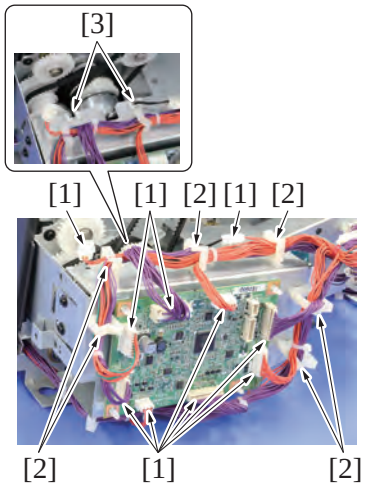
1. Remove the post-inserter.
G.7.10.4 Post Inserter (PI-507)
2. Remove the rear cover.
G.7.10.2 Rear cover (PI-507)



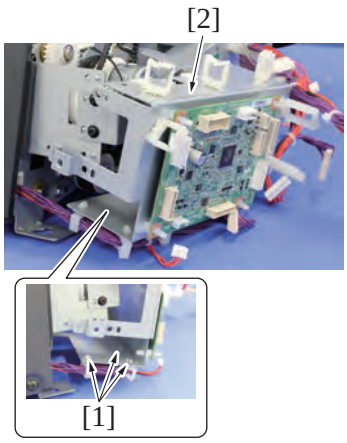
3. Pull the unlock lever [1] and open the upper door [2].



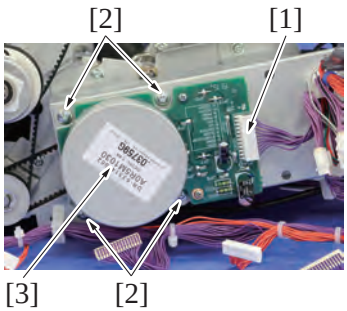
4. Remove five screws [1].



5. Disconnect 10 connectors [1].
6. Remove six wire saddles [2] and remove the harness from the two harness guides [3].



7. Unhook three wire saddle hooks [1] and remove the metal plate [2].



8. Disconnect the connector [1], remove four screws [2], and remove the transfer motor [3].

9. Reinstall the above parts following the removal steps in reverse.

7.10.10 Transport roller drive motor (M204) (PI-507)

- Removing the transport roller drive motor (M204) is the same as removing the ZU transport motor (M500) of the Z fold unit ZU-609. Refer to the method of removing the ZU transport motor (M500).
G.7.7.4 ZU transport motor (M500) (ZU-609)

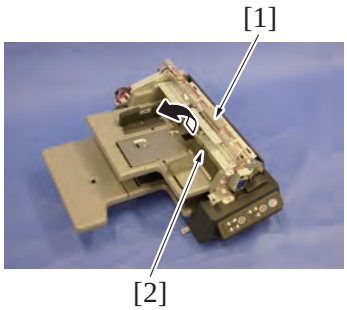
7.10.11 Folding guide motor (M501) (PI-507)

- Removing the folding guide motor (M501) is the same as removing the folding guide motor (M501) of the Z fold unit ZU-609. Refer to the method of removing the folding guide motor (M501).
G.7.7.5 Folding guide motor (M501) (ZU-609)

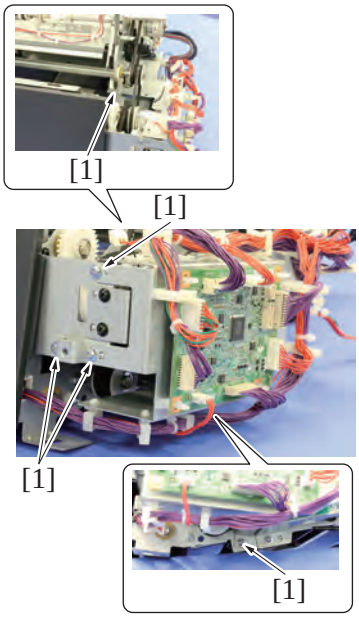
7.10.12 Transfer clutch /Lw (CL202) (PI-507)

1. Remove the post-inserter.
G.7.10.4 Post Inserter (PI-507)
2. Remove the rear cover.
G.7.10.2 Rear cover (PI-507)

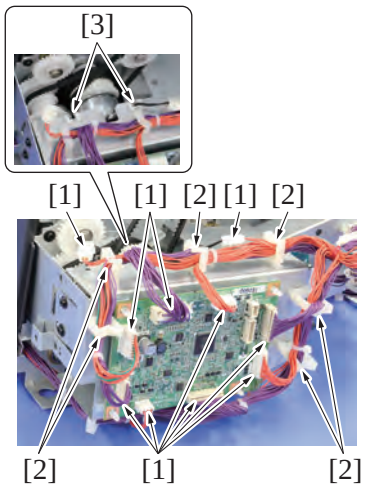
3. Pull the unlock lever [1] and open the upper door [2].

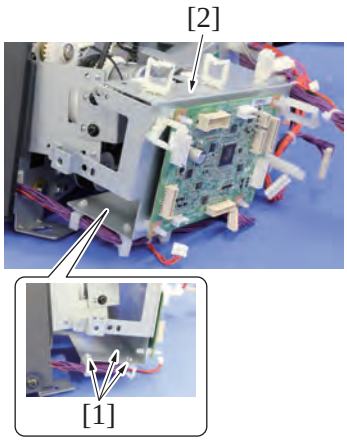


4. Remove five screws [1].

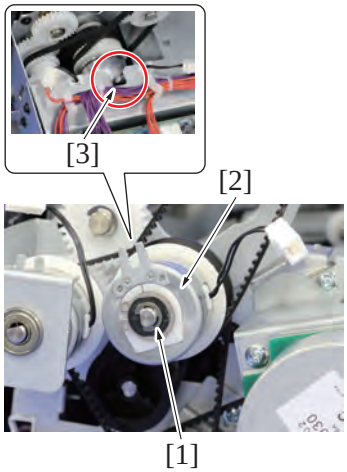


5. Disconnect 10 connectors [1].
6. Remove six wire saddles [2] and remove the harness from two harness guides [3].





7. Unhook three wire saddle hooks [1] and remove the metal plate [2].

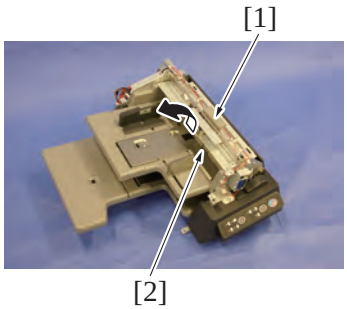


8. Remove the E-ring [1] and remove the transfer clutch /Lw [2].
NOTE
- **During installation, always fit the depressed part of the transfer clutch [3] into the groove of the metal plate.**

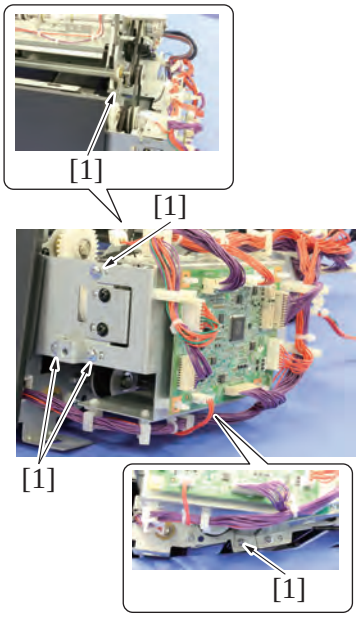
9. Reinstall the above parts following the removal steps in reverse.

7.10.13 Registration clutch (CL203) (PI-507)

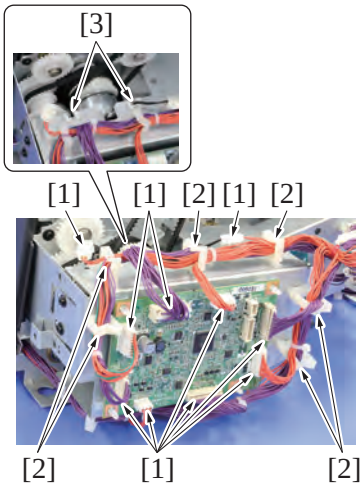
1. Remove the post-inserter.
G.7.10.4 Post Inserter (PI-507)
2. Remove the rear cover.
G.7.10.2 Rear cover (PI-507)



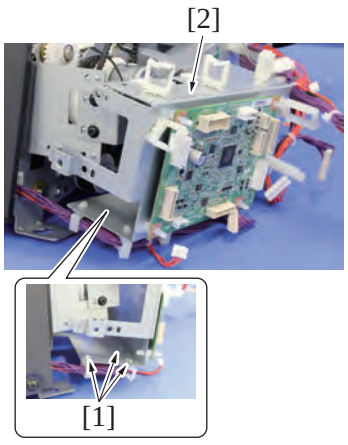
3. Pull the unlock lever [1] and open the upper door [2].



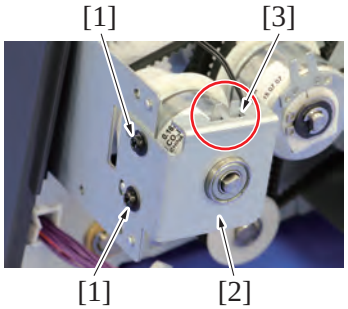
4. Remove five screws [1].



5. Disconnect 10 connectors [1].
6. Remove six wire saddles [2] and remove the harness from two harness guides [3].

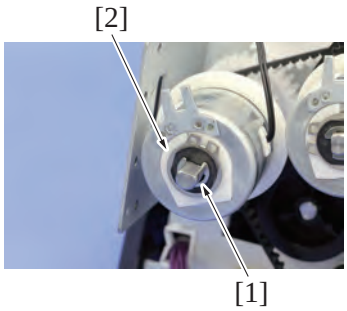


7. Unhook three wire saddle hooks [1] and remove the metal plate [2].



8. Remove two screws [1] and remove the metal plate [2].
   NOTE
   - **During installation, always fit the depressed part of the registration clutch [3] into the groove of the metal plate.**

9. Remove the E-ring [1], and remove the registration clutch [2].

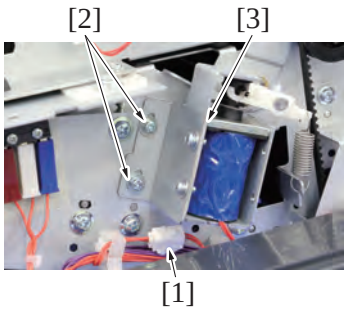


10. Reinstall the above parts following the removal steps in reverse.

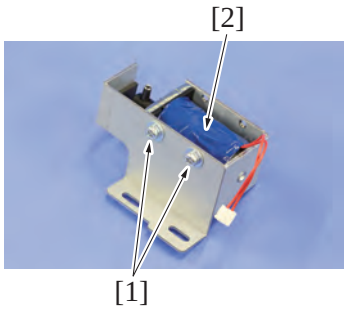
7.10.14 Pick-up solenoid /Lw (SD202) (PI-507)

1. Remove the post-inserter.
   G.7.10.4 Post Inserter (PI-507)
2. Remove the control panel cover assy.
   G.7.10.3 Operation panel cover assy (PI-507)

3. Disconnect the connector [1], remove two screws [2], and remove Pick-up solenoid /Lw assy [3].



4. Remove two screws [1] and remove the pick-up solenoid /Lw [2].

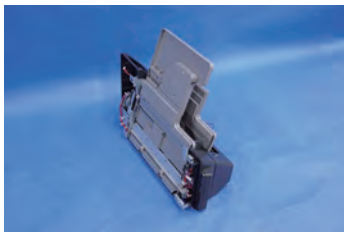


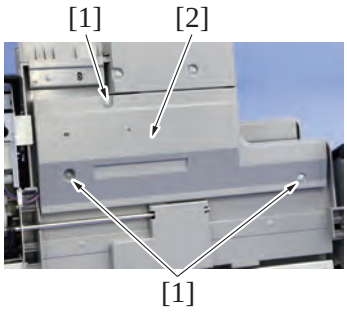
5. Reinstall the above parts following the removal steps in reverse.

7.10.15 Paper size VR /Lw (VR202) (PI-507)

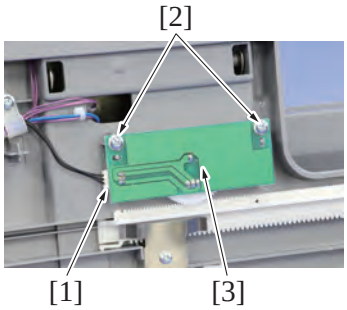
1. Remove the post-inserter.
   G.7.10.4 Post Inserter (PI-507)

2. Raise the post-inserter as shown in the illustration.





3. Remove three screws [1] and remove the cover [2].

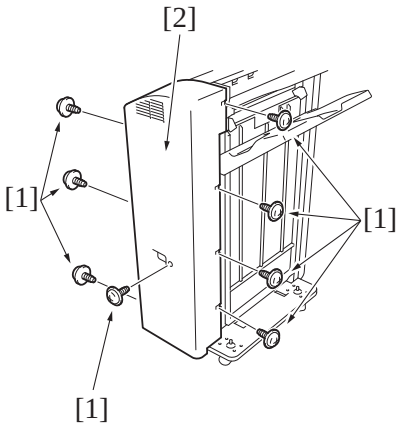


4. Disconnect the connector [1], remove two screws [2], and remove the paper size VR /Lw [3].

5. Reinstall the above parts following the removal steps in reverse.

7.11 Disassembly/reassembly procedure (FS-536/FS-536SD)

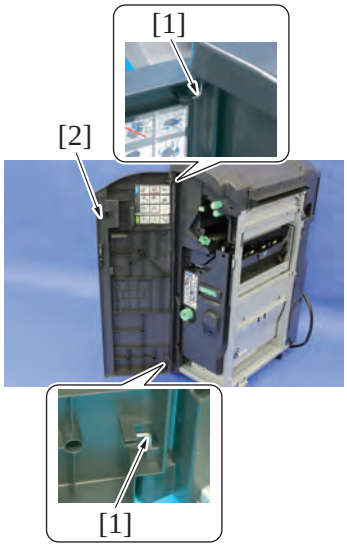
7.11.1 Rear cover (FS-536/FS-536SD)



1. Remove eight screws [1], and remove the rear cover [2].

2. To reinstall, reverse the order of removal.

7.11.2 Front door (FS-536/FS-536SD)

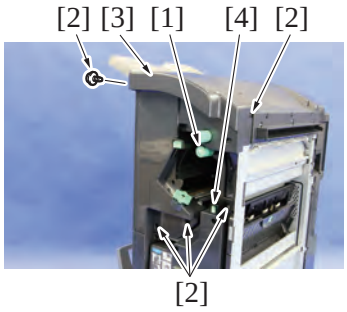


1. Remove the upper and lower stoppers [1], and remove the front door [2].

2. To reinstall, reverse the order of removal.

7.11.3 Front upper cover (FS-536/FS-536SD)

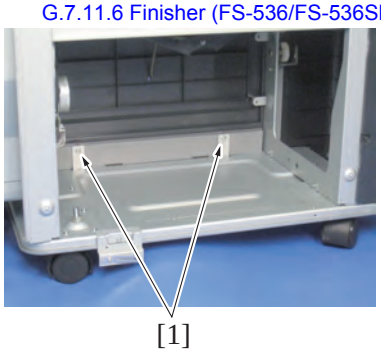
1. Remove the front door.
   G.7.11.2 Front door (FS-536/FS-536SD)



2. Remove the dial (FS5) [1].
3. Remove five screws [2], and remove the front upper cover [3].
   NOTE
   - **When the saddle unit is attached, move the guide plate [4] and then remove the front upper cover.**
4. To reinstall, reverse the order of removal.

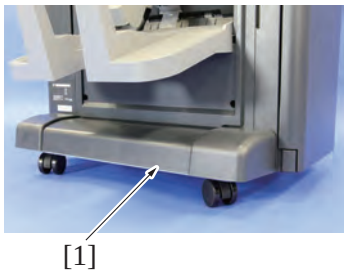
7.11.4 Left lower cover (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)



2. Remove two screws [1].
   NOTE
   - **If the saddle unit is installed, pull out the saddle unit, and then remove two screws [1].**

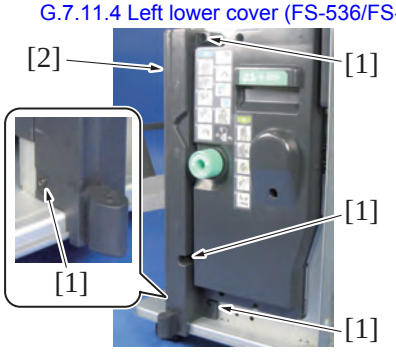
3. Remove the left lower cover [1].



4. To reinstall, reverse the order of removal.

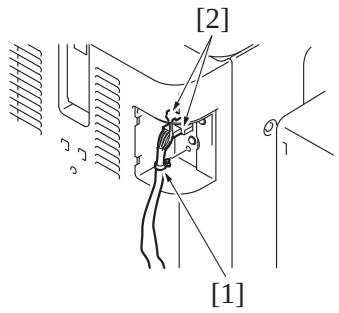
7.11.5 Front lower cover (FS-536/FS-536SD)

1. Remove the front door.
   G.7.11.2 Front door (FS-536/FS-536SD)
2. Remove the front upper cover.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)
3. Remove the left lower cover.
   G.7.11.4 Left lower cover (FS-536/FS-536SD)



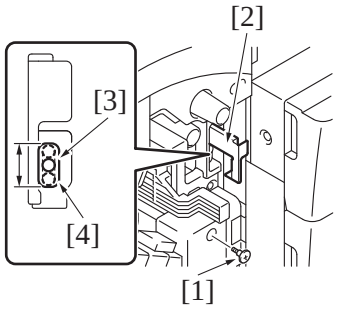
4. Remove four screws [1], and remove the front lower cover [2].
5. To reinstall, reverse the order of removal.

7.11.6 Finisher (FS-536/FS-536SD)

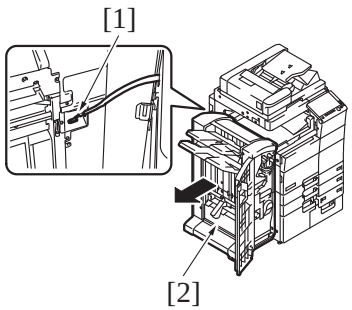


1. Remove the cable tie [1], and disconnect two connectors [2].

2. Open the front door.



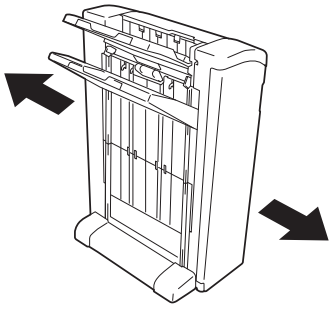
3. Remove the screw [1], and pull out the lever [2].
NOTE
- **At the time of the finisher installation, make sure that the screw hole [3] locates within the scope of the mounting hole of the lever [4].**



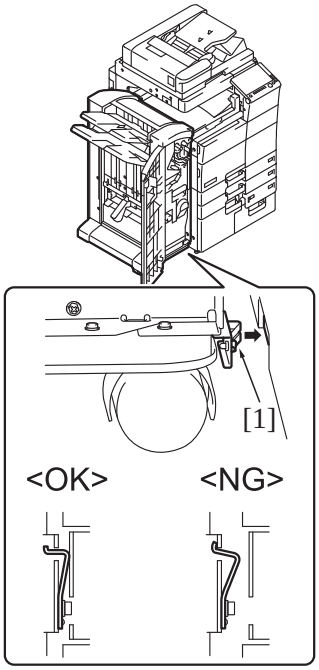
4. Disconnect the connector [1].
5. Remove the finisher [2] from the main body.

CAUTION

- When transporting the finisher, make sure to push it to the direction as shown in the illustration. (to prevent turnover during transportation)



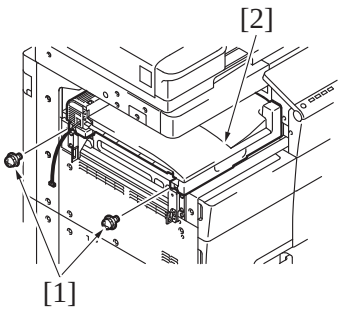
6. To reinstall, reverse the order of removal.



NOTE
- **The blade spring [1] of the installed plate should be in contact with the main body.**

7.11.7 Relay unit (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)

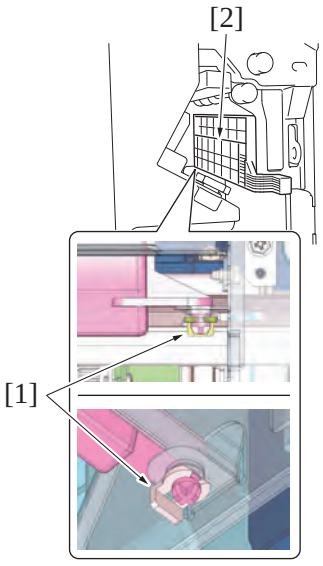


2. Remove two screws [1], and remove the relay unit [2].

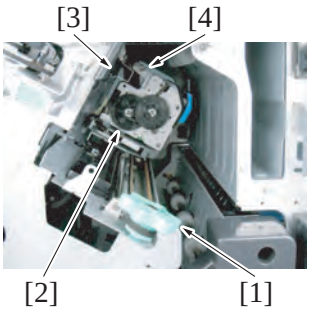
3. To reinstall, reverse the order of removal.

7.11.8 Stapler unit (FS-536/FS-536SD)

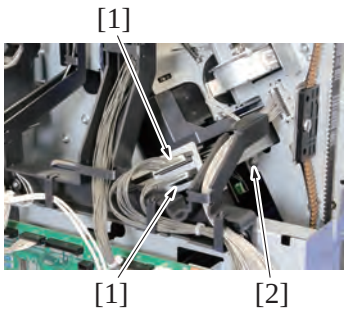
1. Open the front door.
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)



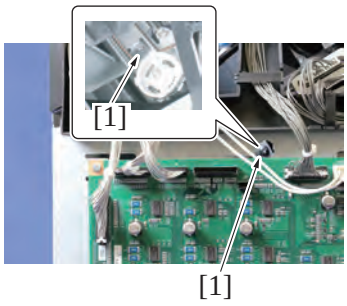
3. When the saddle unit is attached, remove the C-clip [1], and remove the guide plate [2].



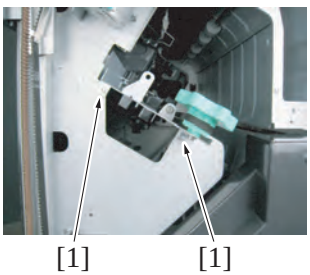
4. Turn the stapler transfer dial [1] to move the stapler [2] to the position shown in the figure (the position where the back-end stopper [3] does not interfere with the clincher staple arm [4]).



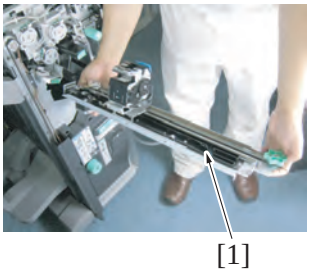
5. Disconnect two connectors [1] from the back of the finisher.
6. Remove the screw [2].



7. Remove the screw [1].

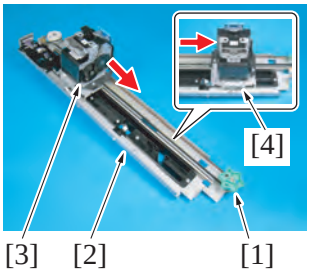


8. Remove two screws [1] from the front of the finisher.

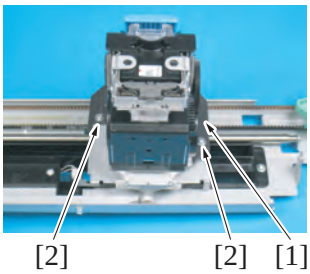


9. Remove the stapler assy [1] from the finisher.
NOTE
- **While removing the stapler assy [1], be careful not to hit the stapler against the finisher frame.**

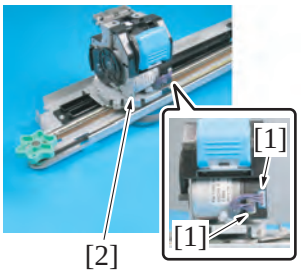
10. Put the stapler assy [2] on a stable workbench.
11. Rotate the stapler transfer dial [1] until the stapler unit [3] has been moved to the near side [4].



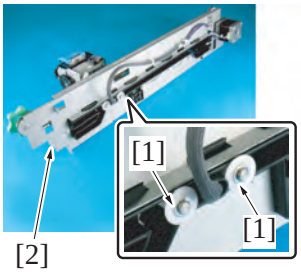
12. Remove two screws [2], and remove the cover [1].



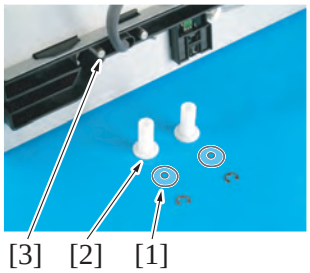
13. Disconnect two connectors [1] of the stapler unit [2].

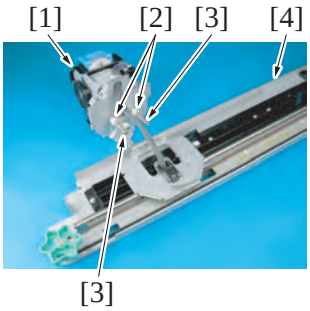


14. Flip the stapler assy [2] over.
15. Remove two E-rings [1] from the guide shafts.

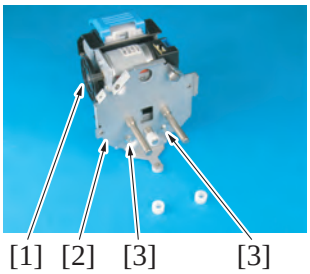


16. Remove the clear spacers [1] and white rolls [2] on both shafts [3].
NOTE
- **Be careful not to lose the clear spacers.**





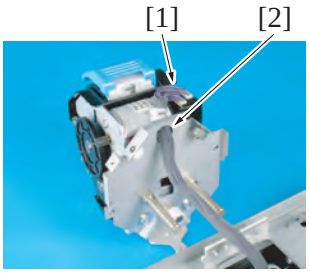
17. Slowly remove the stapler unit [1] from the stapler assy [4].
18. Remove the white rolls [2] on both shafts [3].
NOTE
- **Ensure that the harness does not get damaged in the process.**
- **Be careful not to lose the white rolls.**



19. Remove two screws [3] of the stapler unit and remove the base plate [2] of the stapler unit from the stapler unit [1].

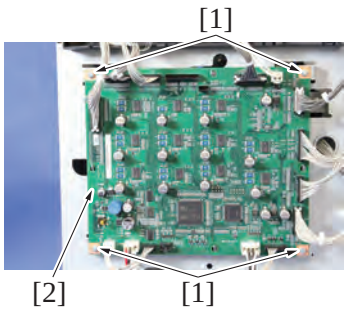
20. To reinstall, reverse the order of removal.

NOTE
- **When installing the stapler unit, ensure that two connectors [1] removed in the process 13 are put through the hole in the base plate [2] and connected to the stapler unit before attaching the base plate.**



7.11.9 FS control board (FSCB) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
G.7.11.1 Rear cover (FS-536/FS-536SD)

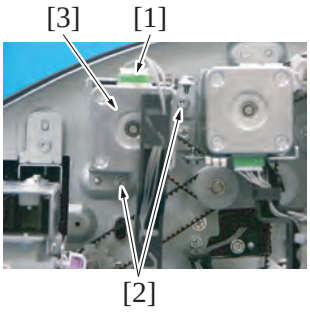


3. Disconnect all connectors from the FS control board.
4. Remove four screws [1], and remove the FS control board [2].

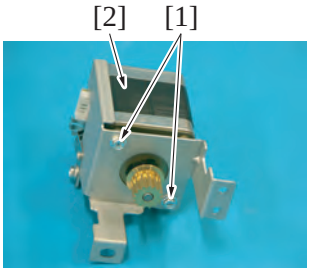
5. To reinstall, reverse the order of removal.

7.11.10 FNS entry transport motor (M2) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
G.7.11.1 Rear cover (FS-536/FS-536SD)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the FNS entry transport motor assy [3].

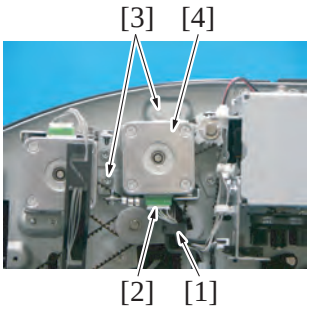


5. Remove two screws [1], and remove the FNS entry transport motor [2].

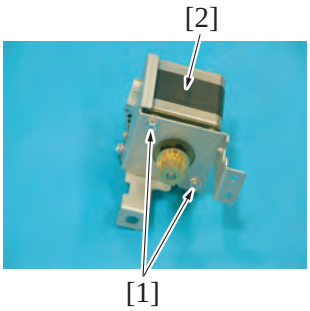
6. To reinstall, reverse the order of removal.

7.11.11 FNS discharge motor (M3) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)



3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the FNS discharge motor assy [4].

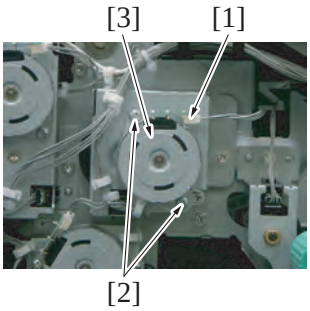


5. Remove two screws [1], and remove the FNS discharge motor [2].

6. To reinstall, reverse the order of removal.

7.11.12 Receiving roller retraction motor (M4) (FS-536/FS-536SD)

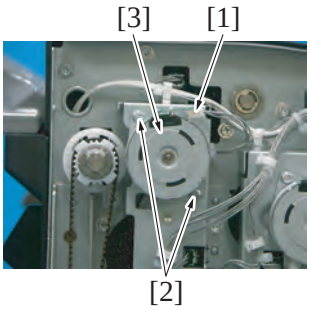
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)



4. Disconnect the connector [1].
5. Remove two screws [2], and remove the receiving roller retraction motor [3].
6. To reinstall, reverse the order of removal.

7.11.13 FNS paddle motor (M5) (FS-536/FS-536SD)

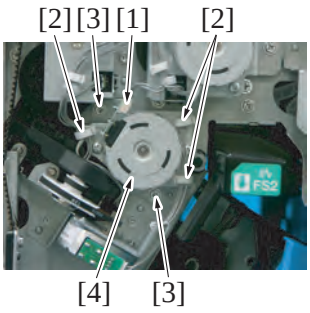
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)



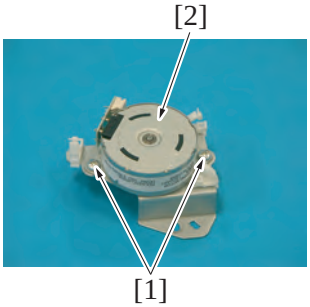
4. Disconnect the connector [1].
5. Remove two screws [2], and remove the FNS paddle motor [3].
6. To reinstall, reverse the order of removal.

7.11.14 Trailing edge stopper motor (M6) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)



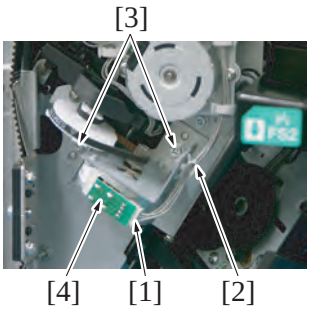
4. Disconnect the connector [1].
5. Remove the harness from three wire saddles [2].
6. Remove two screws [3], and remove the trailing edge stopper motor assy [4].



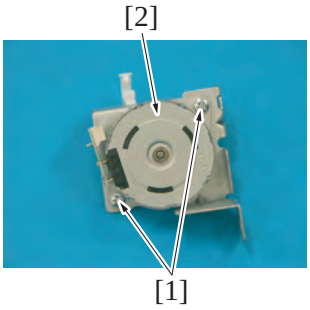
7. Remove two screws [1], and remove the trailing edge stopper motor [2].
8. To reinstall, reverse the order of removal.

7.11.15 Alignment motor/front (M7) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door.
   G.7.11.2 Front door (FS-536/FS-536SD)
3. Remove the front upper cover.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)



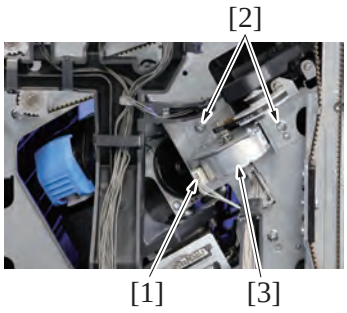
4. Disconnect the connector [1].
5. Remove the harness from the wire saddle [2].
6. Remove two screws [3] and remove the alignment motor/front assy [4].



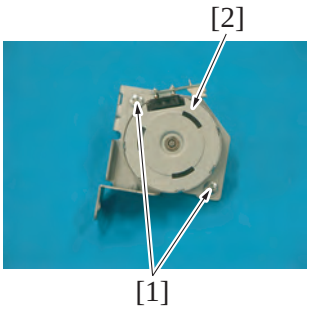
7. Remove two screws [1] and remove the alignment motor/front [2].
8. To reinstall, reverse the order of removal.

7.11.16 Alignment motor/rear (M8) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)



3. Disconnect the connector [1].
4. Remove two screws [2] and remove the alignment motor/rear assy [3].

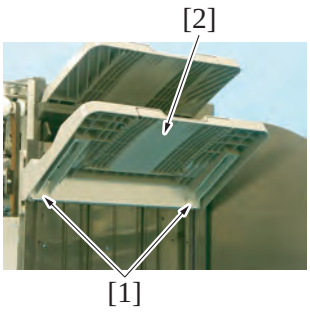


5. Remove two screws [1] and remove the alignment motor/rear [2].
6. To reinstall, reverse the order of removal.

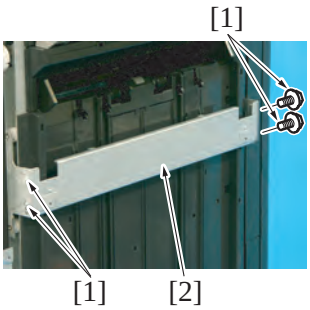
7.11.17 Pre-eject drive motor (M9) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)

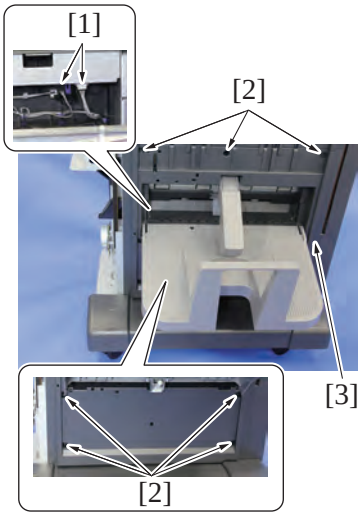
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



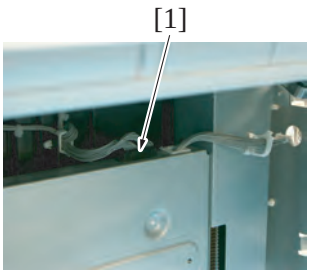
4. Remove two screws [1], and remove the exit tray [2].



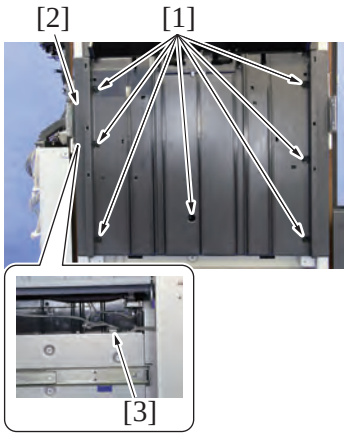
5. Remove four screws [1] and remove the plate [2].



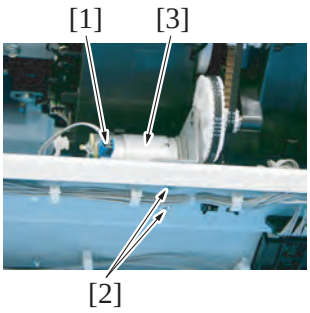
6. Disconnect two connectors [1].
7. Remove seven screws [2], and remove the left lower cover [3].
   NOTE
   - **Disconnect one connector when the saddle unit is not installed.**



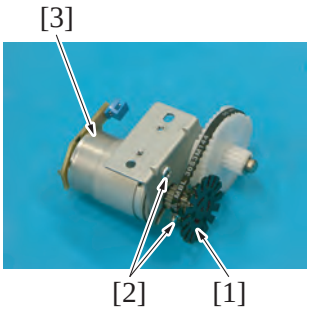
8. Disconnect the connector [1].



9. Remove seven screws [1], and remove the left upper cover [2].
10. Disconnect the connector [3].



11. Disconnect the connector [1].
12. Remove two screws [2], and remove the pre-eject drive motor assy [3].

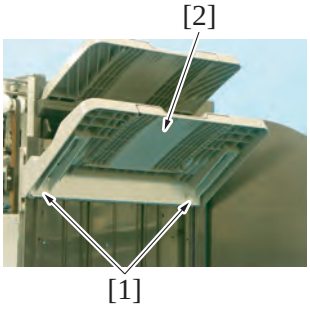


13. Remove the rotating disk [1].
14. Remove two screws [2], and remove the pre-eject drive motor [3].

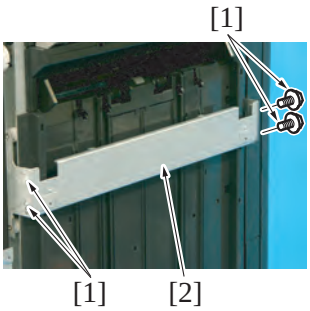
15. To reinstall, reverse the order of removal.

7.11.18 Bundle eject motor (M10) (FS-536/FS-536SD)

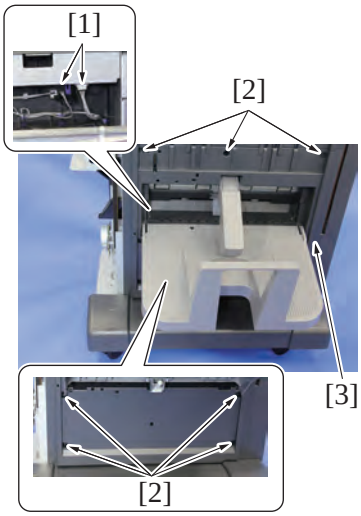
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



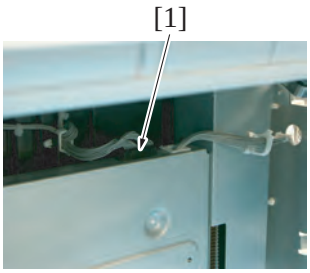
4. Remove two screws [1], and remove the exit tray [2].



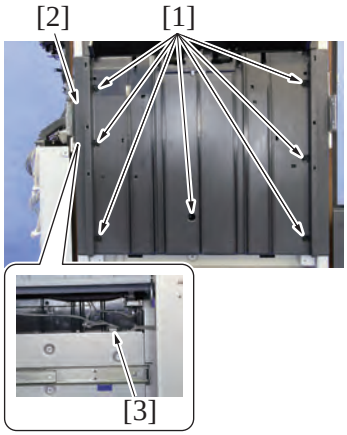
5. Remove four screws [1] and remove the plate [2].



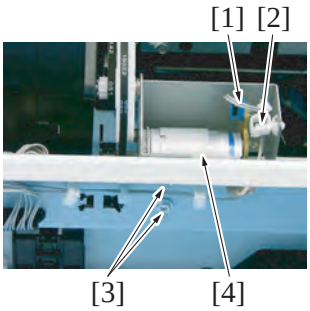
6. Disconnect two connectors [1].
7. Remove seven screws [2], and remove the left lower cover [3].
   NOTE
   - **Disconnect one connector when the saddle unit is not installed.**



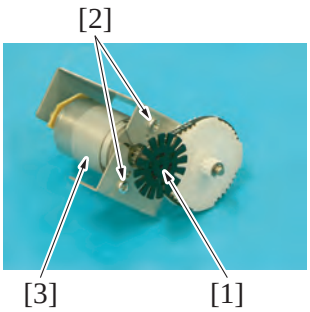
8. Disconnect the connector [1].



9. Remove seven screws [1], and remove the left upper cover [2].
10. Disconnect the connector [3].



11. Disconnect the connector [1], and remove the harness from the wire saddle [2].
12. Remove two screws [3], and remove the bundle eject motor assy [4].

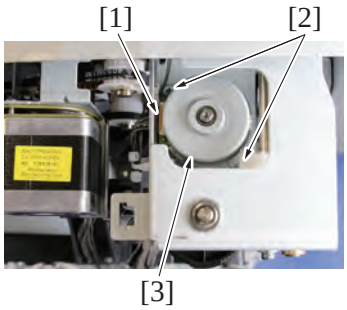


13. Remove the rotating disk [1].
14. Remove two screws [2], and remove the bundle eject motor [3].

15. To reinstall, reverse the order of removal.

7.11.19 Main tray up/down motor (M11) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)

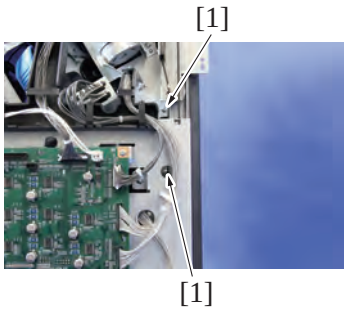


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the main tray up/down motor [3].

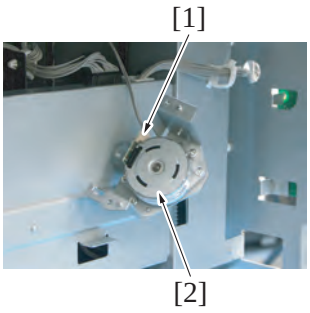
5. To reinstall, reverse the order of removal.

7.11.20 Paper receiving control motor (M12) (FS-536/FS-536SD)

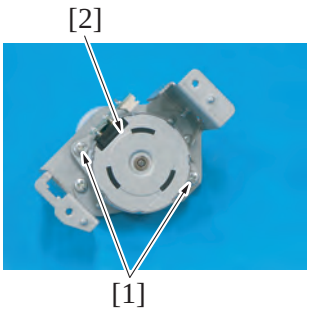
1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



4. Remove two screws [1].



5. Disconnect the connector [1], and remove the paper receiving control motor assy [2].

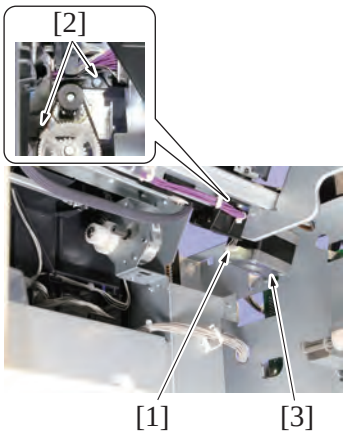


6. Remove two screws [1], and remove the paper receiving control motor [2].

7. To reinstall, reverse the order of removal.

7.11.21 Side stapler movement motor (M13) (FS-536/FS-536SD)

1. Remove the finisher from the main body.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the rear cover.
   G.7.11.1 Rear cover (FS-536/FS-536SD)
3. When the saddle unit is attached, open the front door and pull out the saddle unit.



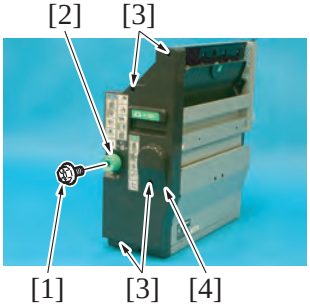
4. Disconnect the connector [1].
5. Remove two screws [2], and remove the side stapler movement motor [3].

6. To reinstall, reverse the order of removal.

7.12 Disassembly/reassembly procedure (FS-536SD saddle section)

7.12.1 Front cover (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)



2. Remove the screw [1], and remove the jam clearing dial [2].
3. Remove four screws [3], and remove the front cover [4].

4. To reinstall, reverse the order of removal.

7.12.2 Saddle unit (FS-536SD)

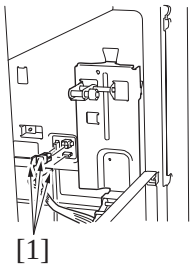
⚠CAUTION

- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.
- Be careful not to jam your finger in the connecting section of the pantograph.

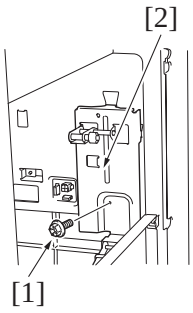
1. Remove the finisher.
   G.7.11.6 Finisher (FS-536/FS-536SD)
2. Remove the front door of the finisher.
   G.7.11.2 Front door (FS-536/FS-536SD)

3. Pull out the saddle unit [1].

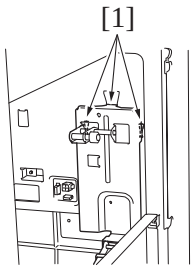
4. Remove the finisher left lower cover.
   G.7.11.4 Left lower cover (FS-536/FS-536SD)
5. Remove the finisher front upper cover.
   G.7.11.3 Front upper cover (FS-536/FS-536SD)
6. Remove the finisher front lower cover.
   G.7.11.5 Front lower cover (FS-536/FS-536SD)



7. Disconnect three connectors [1].

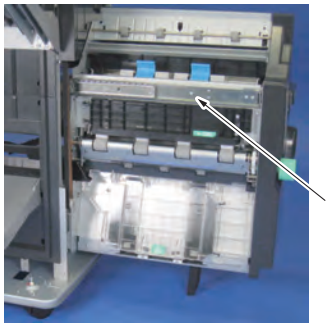


8. Remove the screw [1], and remove the pantograph [2].

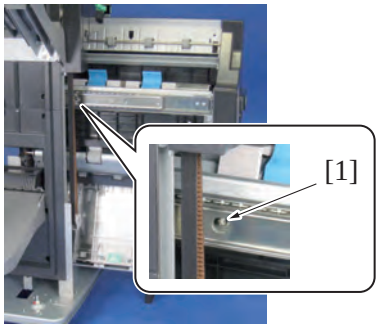


NOTE

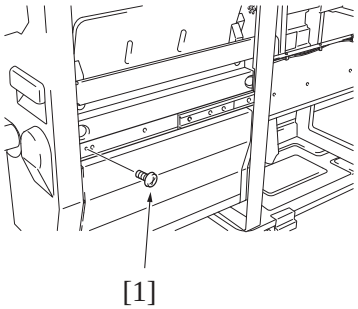
- **For installation of the pantograph, insert three hooks [1] on the pantograph of the saddle unit into the back holes inside the finisher.**



9. Remove the screw [1].

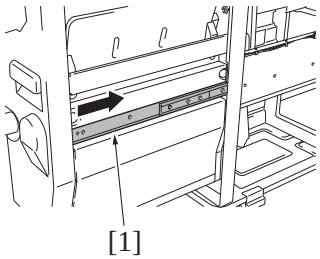


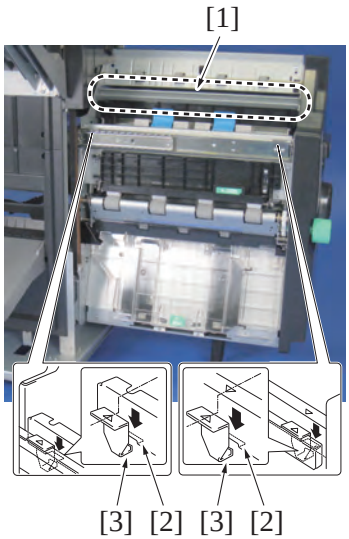
10. Push back the saddle unit into the position of the illustration, and then remove the screw [1].



11. Pull out the saddle unit, and then remove the screw [1].

12. Insert the rail [1] on the right side into the finisher.





14. To reinstall, reverse the order of removal.

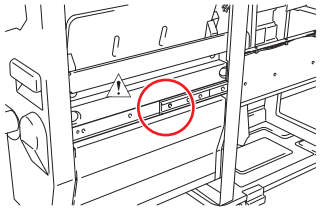
13. Grip the portion [1] as shown in the illustration to raise the saddle unit and take it out.

NOTE

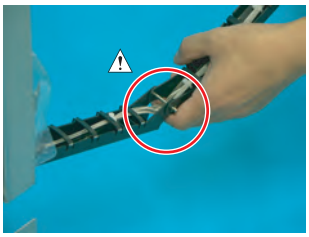
- **For installation of the saddle unit, insert two hooks [3] on the left rail into two holes [2] of the saddle unit.**

⚠CAUTION

- Be careful not to catch your finger in the edge of the rail when mounting the saddle unit on the right rail for the saddle unit installation.

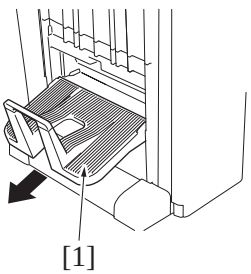


- Be careful not to jam your finger in the connecting section of the pantograph.



7.12.3 Exit tray (FS-536SD saddle section)

1. Remove the pin [1], and remove the exit lever [2].

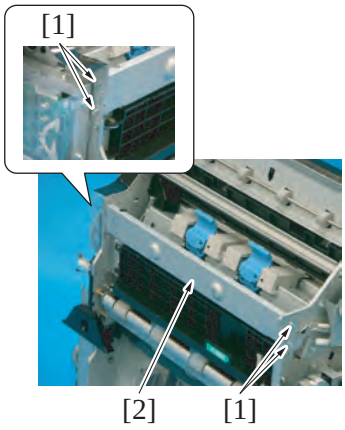


2. Remove the exit tray [1].

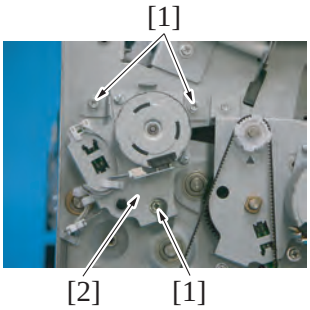
3. To reinstall, reverse the order of removal.

7.12.4 Staple unit (FS-536SD saddle section)

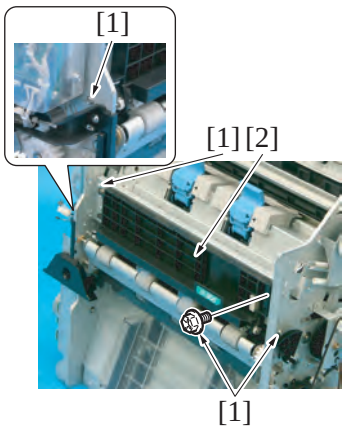
1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



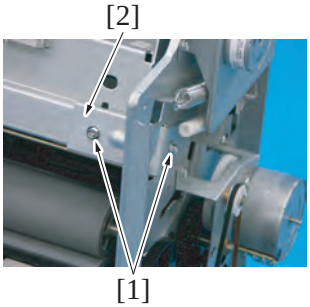
3. Remove four screws [1], and remove the plate [2].



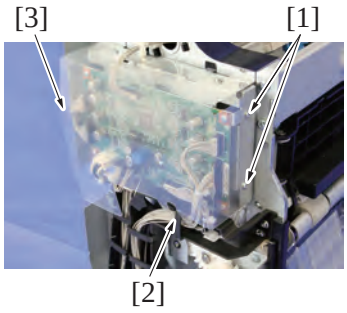
4. Remove three screws [1], and remove the tri-folding guide motor assy [2].



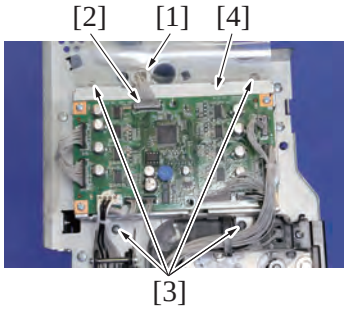
5. Remove four screws [1], and remove the conveyance assy [2].



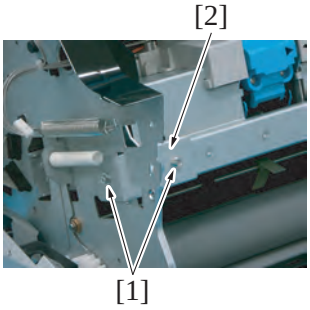
6. Remove two screws [1], and remove the plate [2].



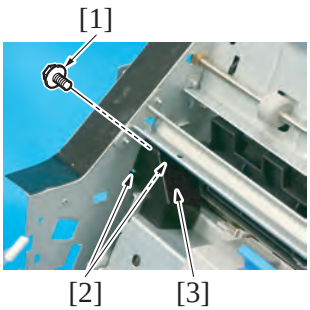
7. Remove two screws [1].
8. Detach the board support film [3] from the harness guide tabs [2].



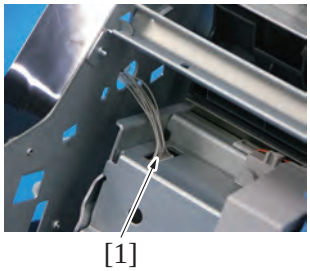
9. Remove the harness from the wire saddle [1].
10. Disconnect the connector [2].
11. Remove four screws [3], and remove the SD drive board assy [4].



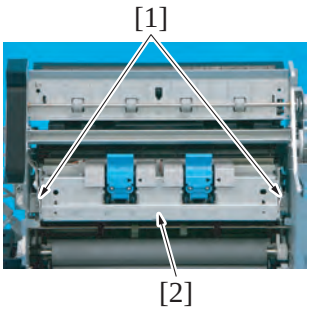
12. Remove two screws [1], and remove the plate [2].



13. Remove the screw [1].
14. Release two tabs [2], and remove the cover [3].



15. Disconnect the connector [1].

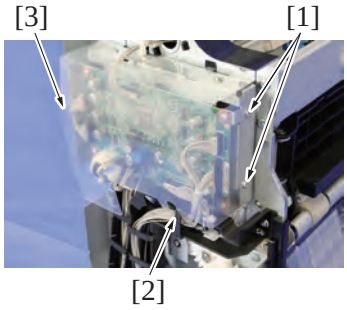


16. Remove two screws [1], and remove the staple unit [2].

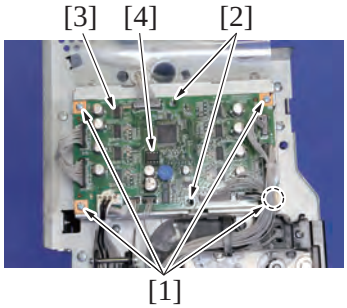
17. To reinstall, reverse the order of removal.

7.12.5 SD control board (SDCB) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)



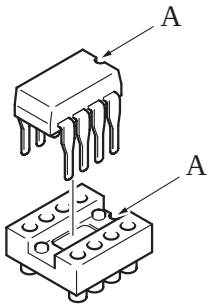
2. Remove two screws [1].
3. Remove the board support film [3] from the harness guide [2].



4. Disconnect all the connectors from the SD drive board.
5. Remove four screws [1].
6. Detach the SD control board [3] from two tabs [2].

NOTE

- **When the SD control board (SDCB) has been replaced, be sure to remount EEPROM (U3) [4].**
  Remove EEPROM (U3) [4] from the old SD control board and mount it on the new SD control board.



NOTE

- **When mounting EEPROM (U3), align the notches (indicated by “A” in the illustration).**

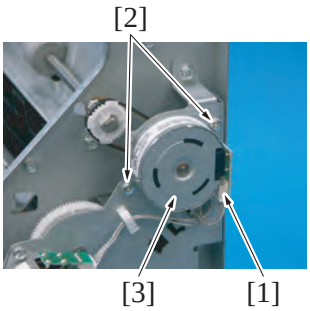
7. To reinstall, reverse the order of removal.

NOTE

- **After replacing the SD control board, be sure to install the latest firmware.**

7.12.6 SD transport motor (M1) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)

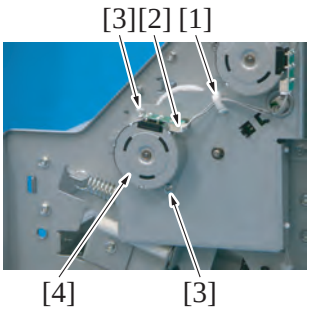


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD transport motor [3].

5. To reinstall, reverse the order of removal.

7.12.7 Paper discharge control motor (M2) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)

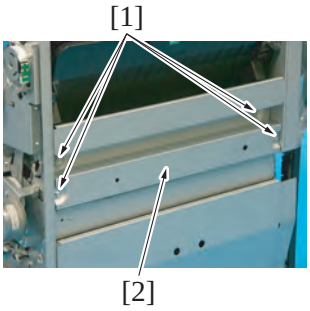


3. Remove the harness from the wire saddle [1], and disconnect the connector [2].
4. Remove two screws [3], and remove the paper discharge control motor [4].

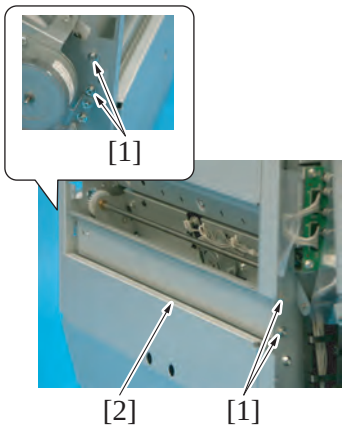
5. To reinstall, reverse the order of removal.

7.12.8 Alignment motor (M3) (FS-536SD saddle section)

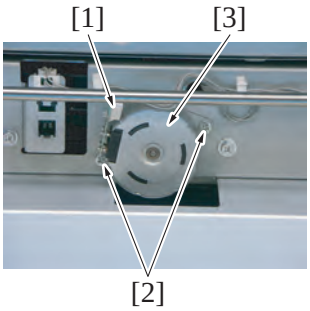
1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



3. Remove four screws [1], and remove the plate [2].



4. Remove four screws [1], and remove the plate [2].

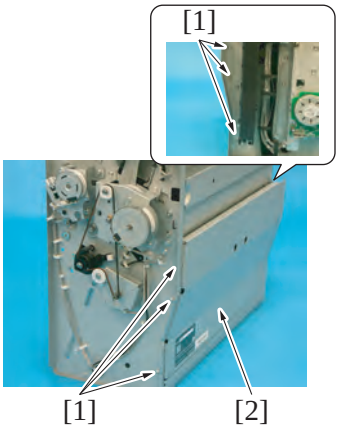


5. Disconnect the connector [1].
6. Remove two screws [2], and remove the alignment motor [3].

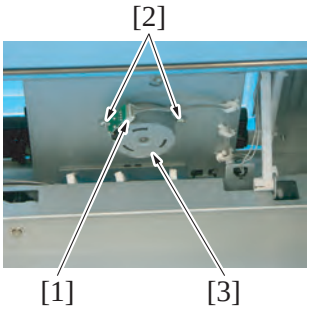
7. To reinstall, reverse the order of removal.

7.12.9 Stopper drive motor (M4) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



3. Remove six screws [1], and remove the plate [2].

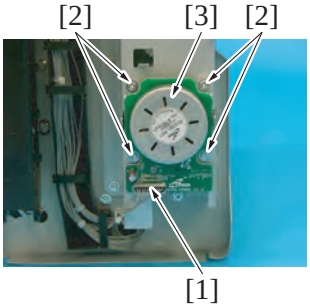


4. Disconnect the connector [1].
5. Remove two screws [2], and remove the stopper drive motor [3].

6. To reinstall, reverse the order of removal.

7.12.10 Center fold roller motor (M5) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)



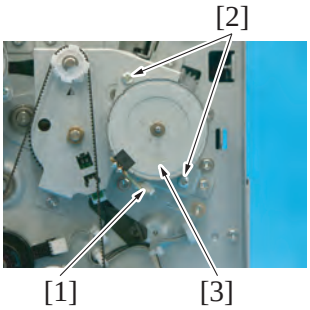
2. Disconnect the connector [1].
3. Remove four screws [2], and remove the center fold roller motor [3].

4. To reinstall, reverse the order of removal.

7.12.11 Center fold guide motor (M6) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)

2. Remove the front cover.
G.7.12.1 Front cover (FS-536SD saddle section)

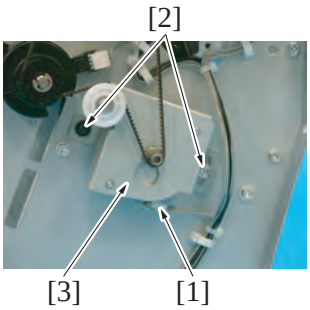


3. Disconnect the connector [1].
4. Remove two screws [2], and remove the center fold guide motor [3].

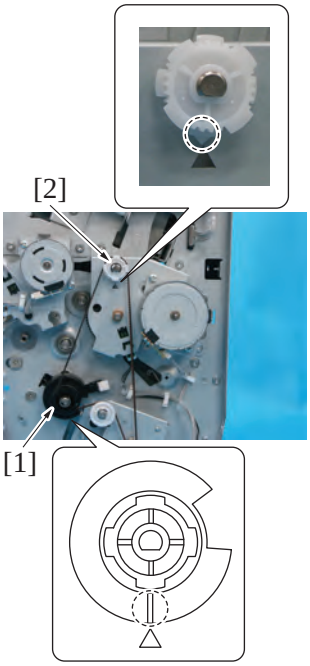
5. To reinstall, reverse the order of removal.

7.12.12 SD paddle motor (M7) (FS-536SD saddle section)

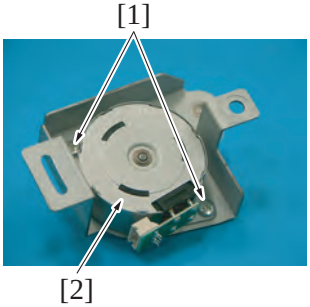
1. Remove the saddle unit.
G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
G.7.12.1 Front cover (FS-536SD saddle section)



3. Disconnect the connector [1].
4. Remove two screws [2], and remove the SD paddle motor assy [3].



NOTE
- **When reinstalling the belt, align the portions of the gear [1] and the gear [2] indicated in the illustration with the triangular marking on the metal plate. Then, install the belt.**

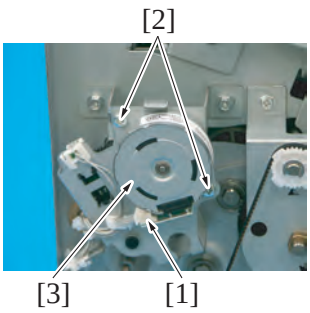


5. Remove two screws [1], and remove the SD paddle motor [2].

6. To reinstall, reverse the order of removal.

7.12.13 Tri-folding guide motor (M8) (FS-536SD saddle section)

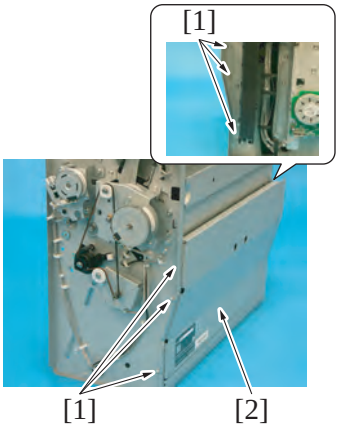
1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



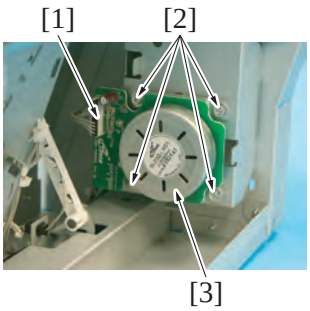
3. Disconnect the connector [1].
4. Remove two screws [2], and remove the tri-folding guide motor [3].
5. To reinstall, reverse the order of removal.

7.12.14 Center fold knife motor (M9) (FS-536SD saddle section)

1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



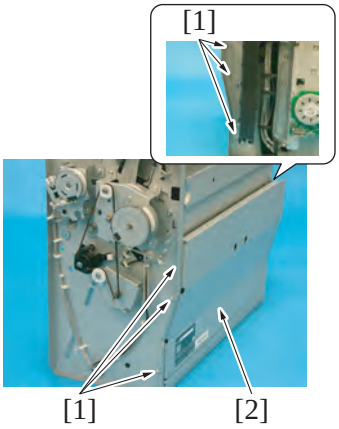
3. Remove six screws [1], and remove the plate [2].



4. Disconnect the connector [1].
5. Remove four screws [2], and remove the center fold knife motor [3].
6. To reinstall, reverse the order of removal.

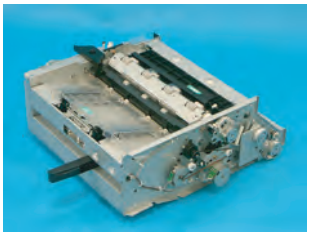
7.12.15 Stopper solenoid (SD1) (FS-536 saddle section)

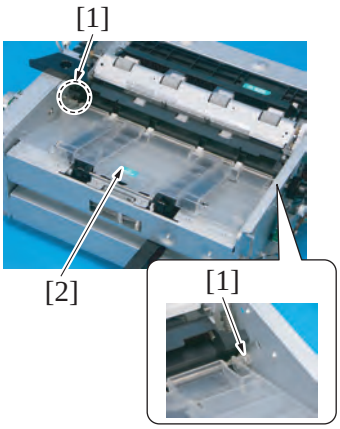
1. Remove the saddle unit.
   G.7.12.2 Saddle unit (FS-536SD)
2. Remove the front cover.
   G.7.12.1 Front cover (FS-536SD saddle section)



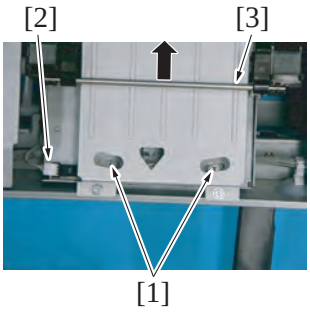
3. Remove six screws [1], and remove the plate [2].

4. Place the saddle unit as shown in the illustration.



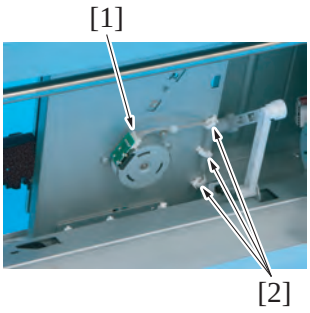


5. Remove two stoppers [1], and remove the guide plate [2].

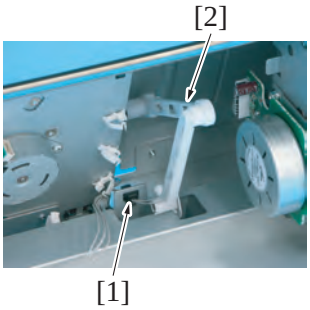


6. Slide the lever unit [3] upward.
7. Remove two screws [1] and disconnect the connector [2].

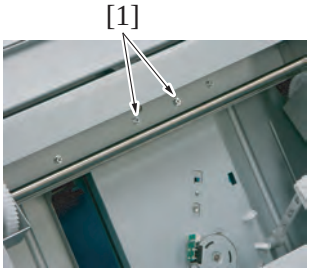
8. Raise the saddle unit.



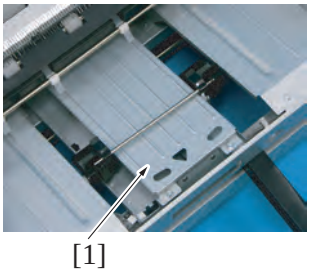
9. Disconnect the connector [1], and remove the harness from three wire saddles [2].



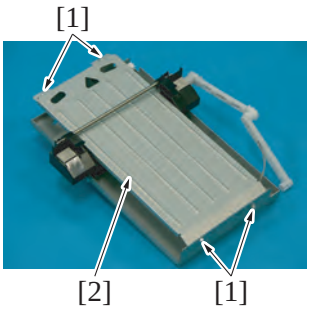
10. Disconnect the connector [1], and remove the drive lever [2].



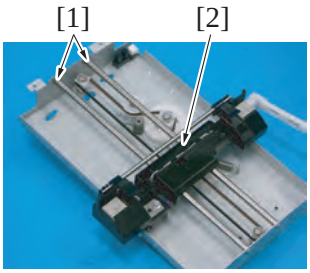
11. Remove two screws [1].



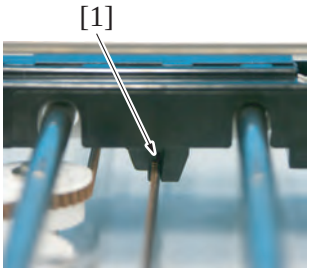
12. Remove the guide plate assy [1].
NOTE
- **When reinstalling the guide plate assy, perform mechanical adjustment.**
I.18.1.1 Half-fold skew adjustment



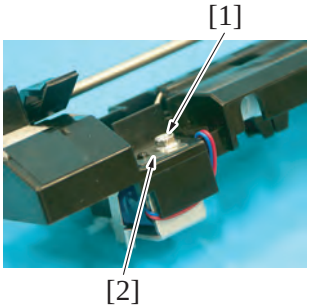
13. Remove four screws [1], and remove the plate [2].



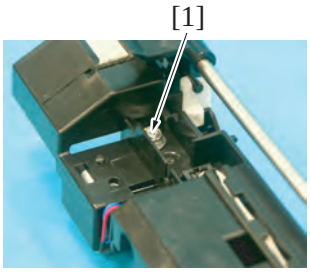
14. Remove two E-rings [1], and remove the stopper guide [2].



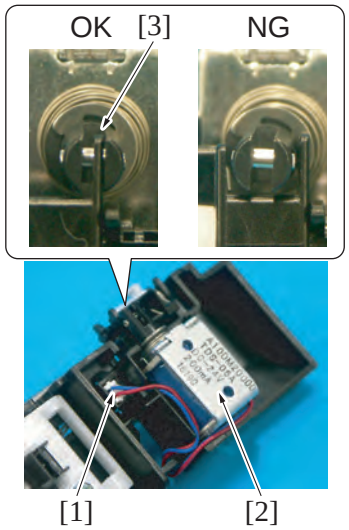
NOTE
- **When reinstalling the stopper guide, fit the belt into the stopper guide groove [1].**



15. Remove the screw [1], and remove the plate [2].



16. Remove the screw [1].



17. Disconnect the connector [1], and remove the stopper solenoid [2].

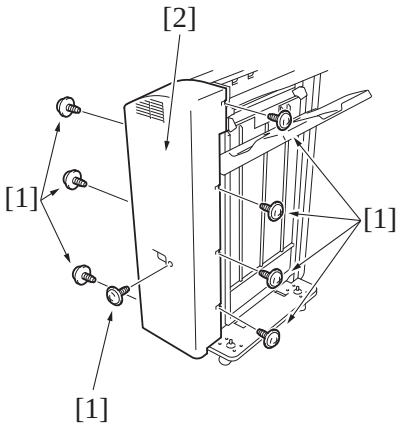
NOTE
- **When reinstalling the stopper solenoid, fit its tip into the place [3] shown in the illustration.**

18. To reinstall, reverse the order of removal.

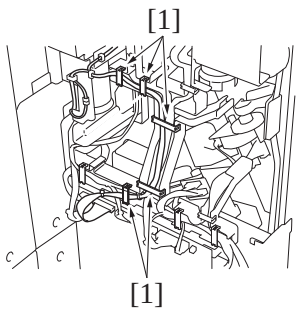
7.13 Disassembly/reassembly procedure (PK-520)

7.13.1 Punch kit (PK-520)

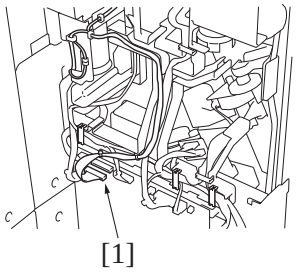
1. Remove the finisher from the main body.
G.7.11.6 Finisher (FS-536/FS-536SD)



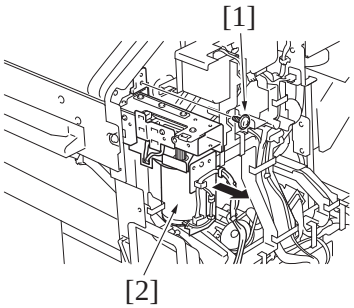
2. Remove eight screws [1] and remove the finisher rear cover [2]..



3. Remove the harness from five wire saddles [1].



4. Disconnect the connector [1].



5. Remove the screw [1], and remove the punch kit [2].

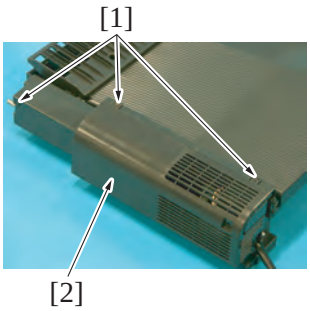
6. To reinstall, reverse the order of removal.

7.14 Disassembly/reassembly procedure (RU-515)

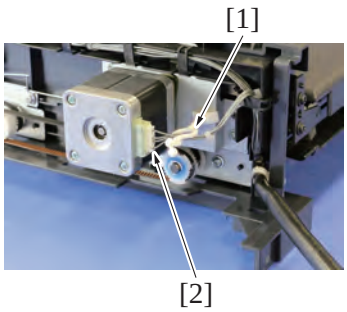
7.14.1 RU transport motor (M35) (FS-536/FS-536SD/FS-537/FS-537SD)

1. Remove the finisher from the main body.
G.7.11.6 Finisher (FS-536/FS-536SD)
G.7.5.12 Finisher (FS-537/FS-537SD)

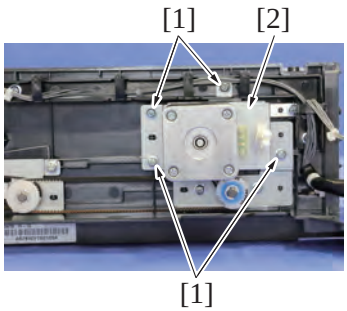
2. Remove the RU transport unit.
G.7.11.7 Relay unit (FS-536/FS-536SD)
G.7.5.13 Relay unit (FS-537/FS-537SD)



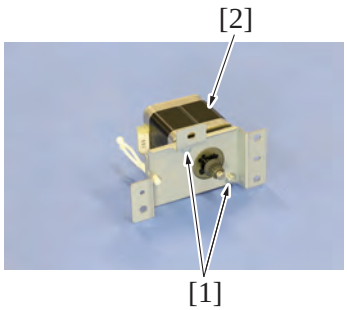
3. Remove three screws [1], and remove the rear cover [2] of the RU transport unit.



4. Remove the harness from the wire saddle [1].
5. Disconnect the connector [2].



6. Remove four screws [1], and remove the RU transport motor assy [2].

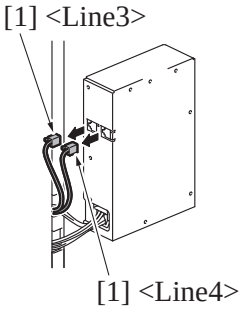


7. Remove two screws [1], and remove the RU transport motor [2].

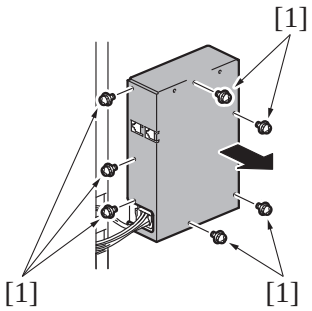
8. To reinstall, reverse the order of removal.

7.15 Disassembly/reassembly procedure (FK-515)

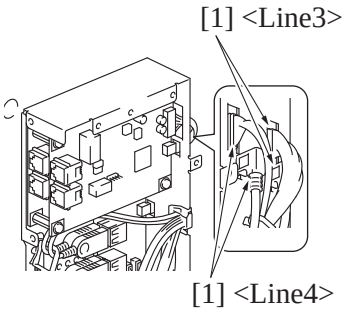
7.15.1 FAX board (line 3), FAX board (line 4) (FK-515)



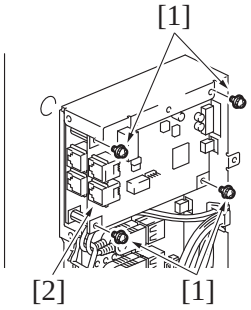
1. Disconnect the modular cable [1].



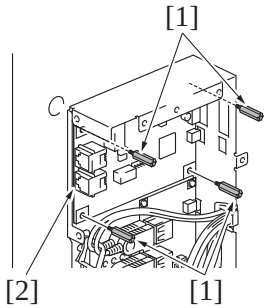
2. Remove seven screws [1], and remove the cover [2].



3. Disconnect four connectors [1].
NOTE
- **If the FAX board of Line 4 only is to be removed, there is no need to disconnect the Line 3 connector.**



4. Remove four screws [1], and remove the FAX board (Line4) [2].



5. Remove four screws [1], and remove the FAX board (Line3) [2].

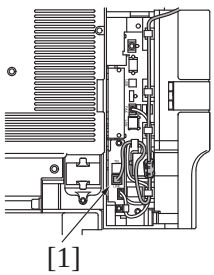
6. To reinstall, reverse the order of removal.

7.16 Disassembly/reassembly procedure (FK-516)

7.16.1 Fax kit (line 1) (FK-516)

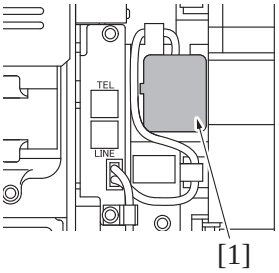
NOTE
- **When removing the FAX Kit, make sure of the correct line associated with the FAX Kit to be removed before removing the line.**

1. Open the right rear upper door.

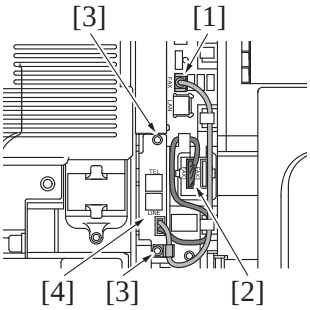


2. Disconnect the modular cable [1] and remove it from the guide.

3. Remove the cover [1].



4. Disconnect the USB cable [1] and the connector [2], and remove from the guide.
5. Remove two screws [3], and remove the Fax Kit [4].



6. To reinstall, reverse the order of removal.

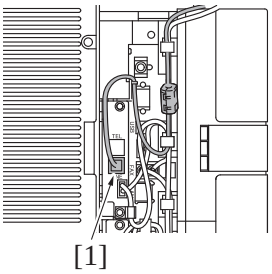
7.16.2 Fax kit (Line 2) (FK-516)

NOTE

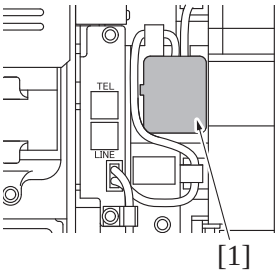
- **When removing the Fax Kit, make sure of the correct line associated with the Fax Kit to be removed before removing the line.**

1. Open the right rear upper door.

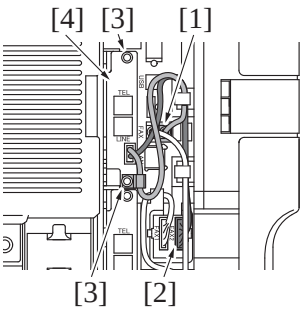
2. Disconnect the modular cable [1] and remove it from the guide.



3. Remove the cover [1].



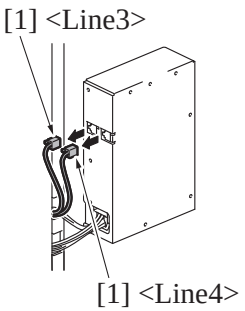
4. Disconnect the USB cable [1] and connector [2], then remove them from the guide.
5. Remove the two screws [3], and remove the Fax Kit [4].



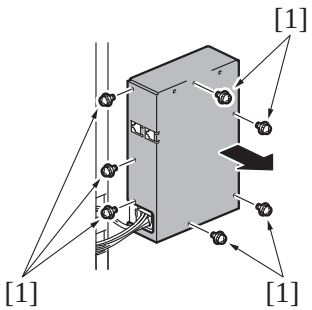
6. To reinstall, reverse the order of removal.

7.17 Disassembly/reassembly procedure (MK-742)

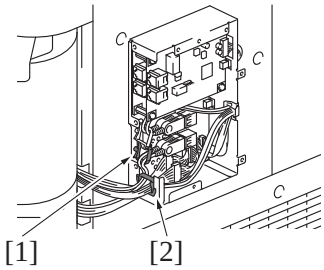
7.17.1 Fax mount kit (MK-742)



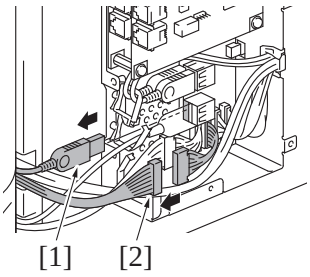
1. Disconnect the modular cable [1].



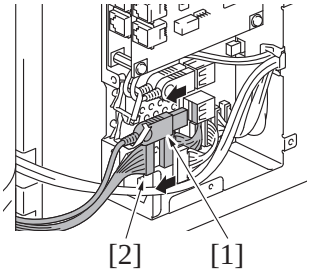
2. Remove seven screws [1], and remove the cover [2].



3. Remove the harness and the USB cable from the wire saddle [1] and the edge cover [2].

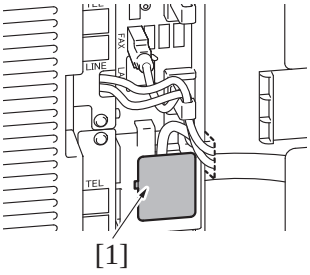


4. Disconnect the USB cable [1] and connector [2] for the line 2.

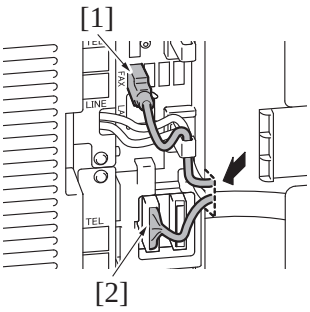


5. Disconnect the USB cable [1] and connector [1] for the line 1.

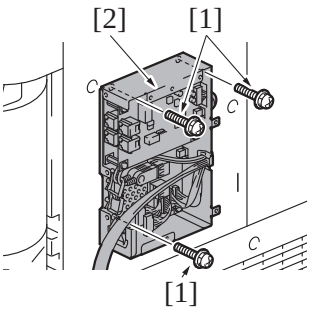
6. Remove the cover [1].



7. Disconnect the USB cable [1] and the connector [2], and remove from the cutout section of the cover.
NOTE
- **Connect to the port for Fax 1 when installing.**



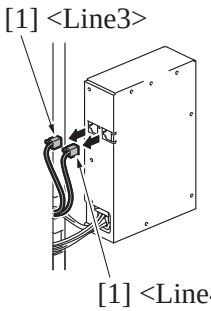
8. Remove three screws [1] and remove the Fax mounting kit [2].



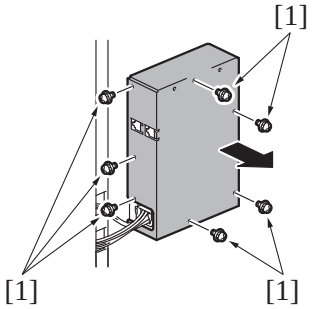
9. To reinstall, reverse the order of removal.

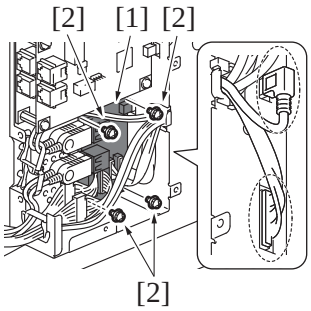
7.17.2 FAX 3/4 relay board (FAXRYB) (MK-742)

1. Disconnect the modular cable [1].



2. Remove seven screws [1], and remove the cover [2].



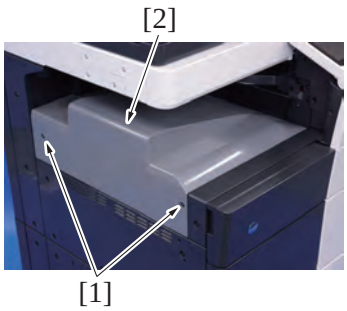


3. Remove all connectors from the FAX 3/4 relay board [1].
4. Remove four screws [2] and remove the FAX 3/4 relay board [1].

5. To reinstall, reverse the order of removal.

7.18 Disassembly/reassembly procedure (OT-508)

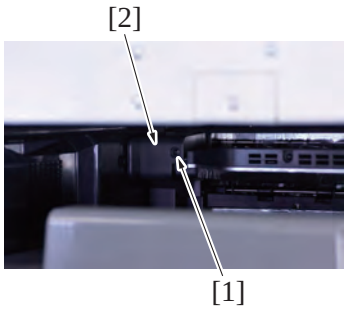
7.18.1 Output tray (OT-508)



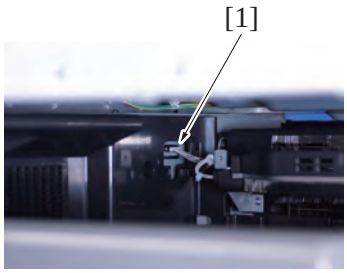
1. Remove two screws [1], and remove the output tray [2].

2. To reinstall, reverse the order of removal.

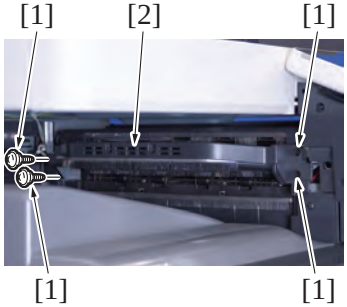
7.18.2 Fan unit (OT-508)



1. Remove the screw [1], and remove the cover [2].



2. Disconnect the connector [1].

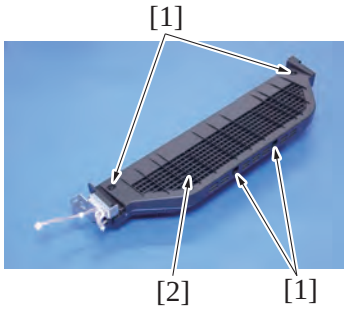


3. Remove four screws [1], and remove the fan unit [2].

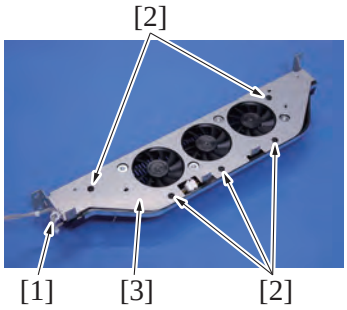
4. To reinstall, reverse the order of removal.

7.18.3 Tucking fan/Md (FM101), Tucking fan/Rr (FM102), Tucking fan/Fr (FM103)

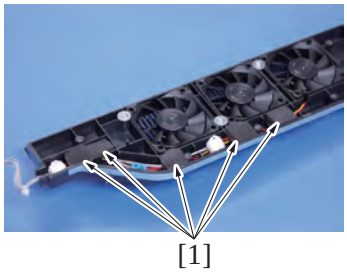
1. Remove the fan unit.
G.7.18.2 Fan unit (OT-508)



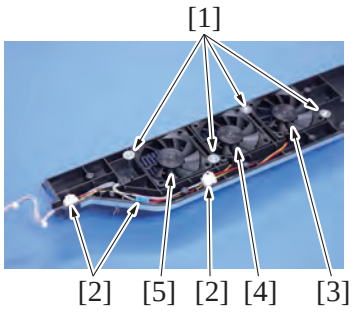
2. Remove four screws [1] and remove the cover [2].



3. Remove the harness from the wire saddle [1].
4. Remove five screws [2] and remove the metal plate [3].



5. Remove five sponges [1].



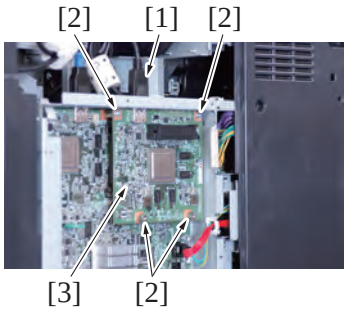
6. Remove four screws [1] and disconnect three connectors [2].
7. Remove the tucking fan/Fr [3].
8. Remove the tucking fan/Md [4].
9. Remove the tucking fan/Rr [5].

10. To reinstall, reverse the order of removal.

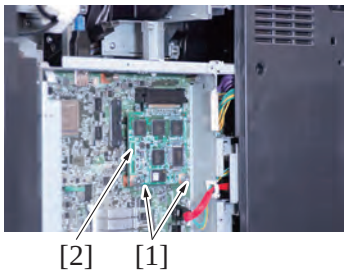
7.19 Disassembly/reassembly procedure (SC-508)

7.19.1 DSC board/1 (DSCB/1) (SC-508)

1. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
2. Remove the DSC board/2.
G.7.19.2 DSC board/2 (DSCB/2) (SC-508)



3. Disconnect the connector [1].
4. Remove four screws [2], and remove the dual scan image processing board [3].

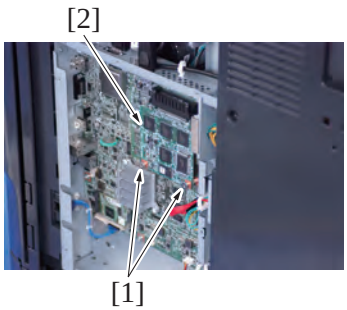


5. Remove two screws [1], and remove the DSC board/1 [2].

6. To reinstall, reverse the order of removal.

7.19.2 DSC board/2 (DSCB/2) (SC-508)

1. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1



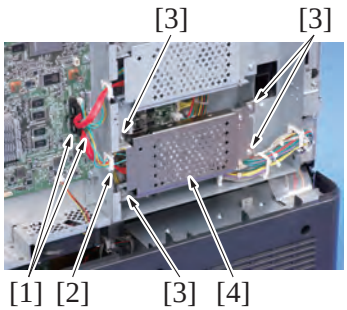
2. Remove two screws [1], and remove the DSC board/2 [2].

3. To reinstall, reverse the order of removal.

7.20 Disassembly/reassembly procedure (HD-524)

7.20.1 Hard disc (B) (HDD (B) (HD-524)

1. Remove the upper rear cover/1.
G.5.2.27 Upper rear cover /1
2. Remove the upper rear cover/2.
G.5.2.28 Upper rear cover /2

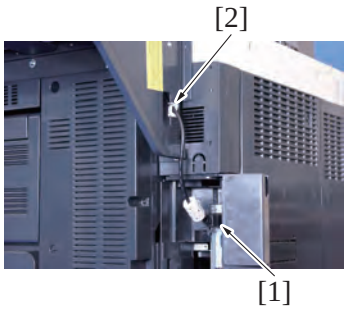


3. Disconnect two connectors [1] and remove the harness from the edge cover [2].
4. Remove four screws [3], and remove the hard disk (B) assy [4].

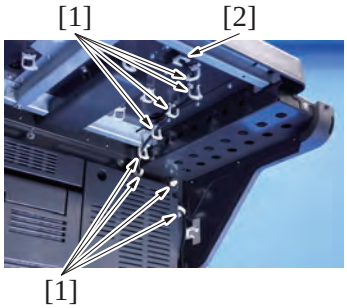
5. To reinstall, reverse the order of removal.

7.21 Disassembly/reassembly procedure (WT-513)

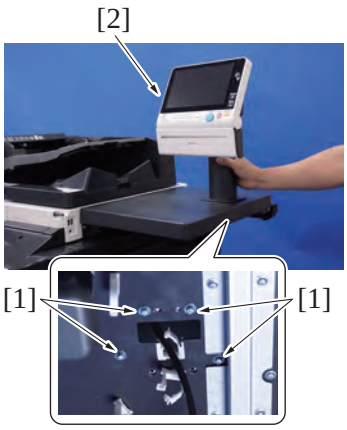
7.21.1 Working table (WT-513)



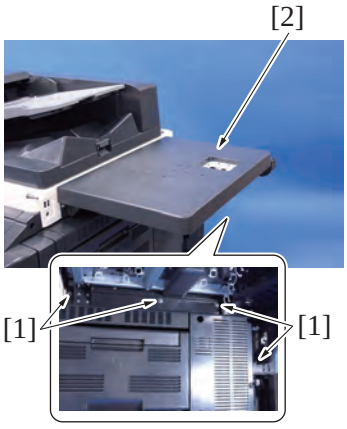
1. Disconnect the connector [1].
2. Remove the cable from the edge cover [2] and pull it out from the hole.



3. Remove eight wire saddles [1] and remove the cable from the edge cover [2].



4. Remove four screws [1] and remove the control panel unit [2].
   NOTE
   - **Remove the screws while supporting the control panel unit [2] so that it will not fall.**



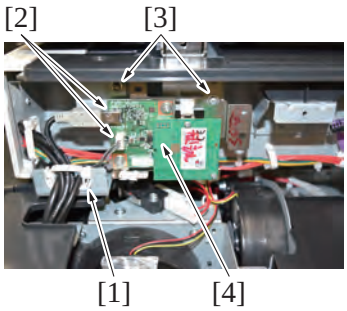
5. Remove four screws [1] and remove the working table [2].

6. To reinstall, reverse the order of removal.

7.22 Disassembly/reassembly procedure (UK-212)

7.22.1 Upgrade kit (UK-212)

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover

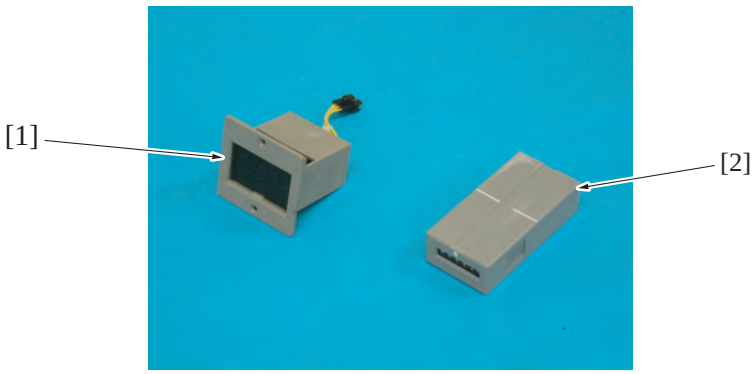


2. Remove the harness from the edge cover [1], and disconnect two connectors [2].
3. Remove two screws [3], and remove the upgrade kit [4].
4. To reinstall, reverse the order of removal.

8. COMMERCIALLY AVAILABLE PARTS

8.1 Installing the key counter

8.1.1 Configuration



[1]	Key counter socket	[2]	Key counter

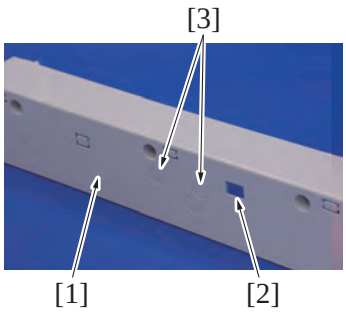
8.1.2 Procedure

NOTE

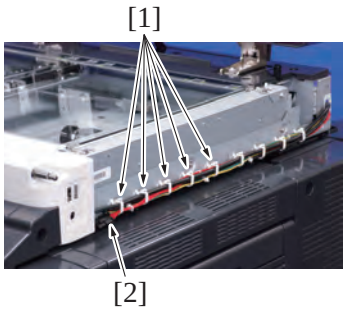
- **When mounting the key counter, the optional key counter kit KIT-1 (4623-472) or key counter kit KIT-CF (4623-481; only for Europe and Japan) is necessary.**
- **Procedure for directly mounting the key counter to the main unit is described below.**
- **For mounting the key counter to the optional working table WT-506, refer to WT-506 installation manual.**
- **For mounting the key counter to the optional working table WT-513, refer to WT-513 installation manual.**

(1) Key counter kit KIT-1 (4623-472)

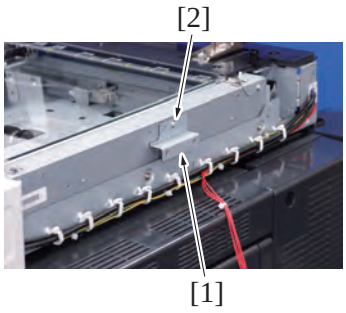
1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner right cover.
   G.5.2.16 Scanner right cover



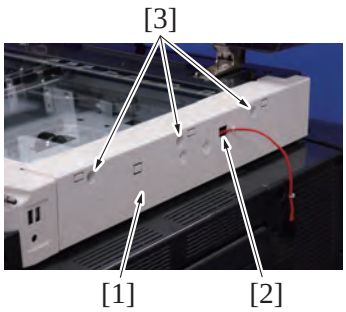
3. Remove the knockout [2] of the scanner right cover [1].
4. Remove two caps [3].



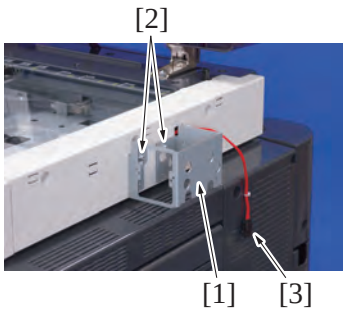
5. Remove the harness [2] for the key counter from five wire saddles [1].



6. Install the mounting plate (4623 1670 ##) [1] included in the key counter mounting kit with the screw [2].

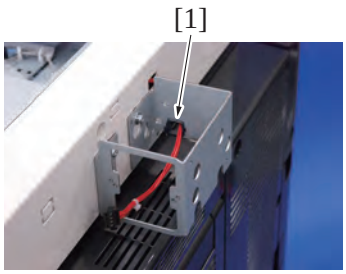


7. Mount the scanner right cover [1], and insert the harness for the key counter through the hole [2] knockouts were removed from.
8. Fix the scanner right cover [1] with three screws [3].

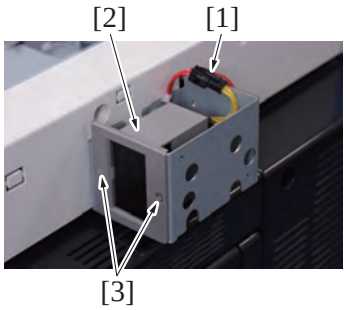


9. Using two screws [2], secure the counter mounting bracket [1].
NOTE
- **Use two long screws (9646 0418 14: M4×18) included for the screw to install the mounting plate.**

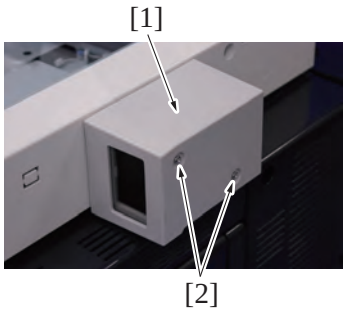
10. Remove the connector cover [3].



11. Mount the edge cover [1] to the counter mounting bracket and set the harness to the edge cover.



12. Connect the key counter socket connector [1].
13. Using two screws [3], secure the key counter socket [2].

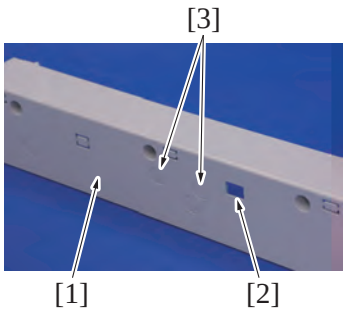


14. Using two screws [2], secure the key counter cover [1].

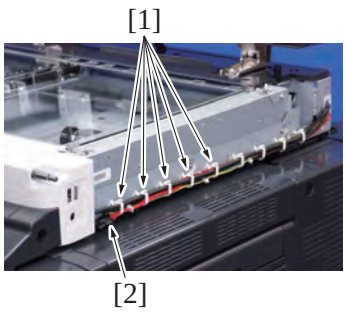
15. Set the related items when [Key Counter Only] or [Vendor 2] (when the key counter and the vendor 2 are used simultaneously) in [Service Mode] -> [Billing Setting] -> [Management Function Choice] is selected.

(2) Key counter kit KIT-CF (4623-481)

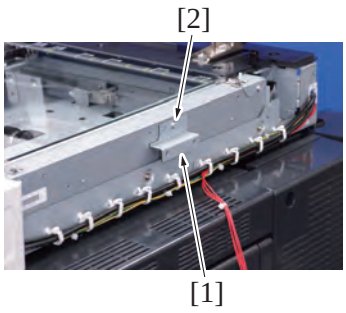
1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner right cover.
   G.5.2.16 Scanner right cover



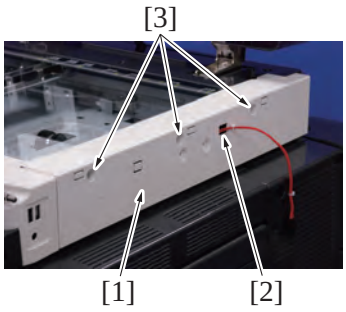
3. Remove the knockout [2] of the scanner right cover [1].
4. Remove two caps [3].



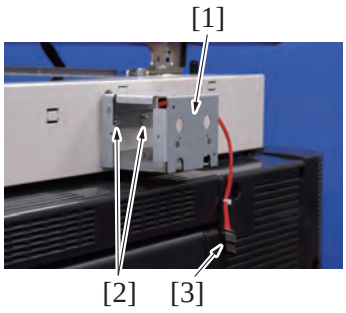
5. Remove the harness [2] for the key counter from five wire saddles [1].



6. Install the mounting plate (4623 1670 ##) [1] included in the key counter mounting kit with the screw [2].

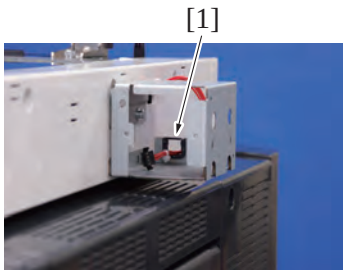


7. Mount the scanner right cover [1], and insert the harness for the key counter through the hole [2] knockouts were removed from.
8. Fix the scanner right cover [1] with three screws [3].

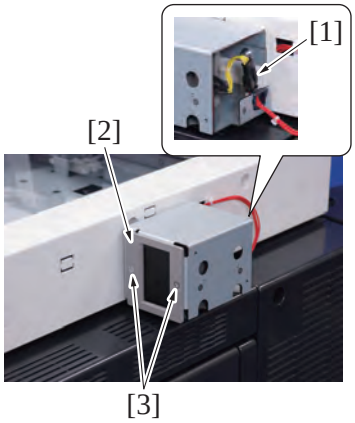


9. Using two screws [2], secure the counter mounting bracket [1].
NOTE
- **Use two long screws (9646 0418 14: M4×18) included for the screw to install the mounting plate.**

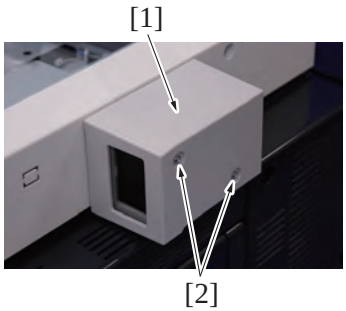
10. Remove the connector cover [3].



11. Mount the edge cover [1] to the counter mounting bracket and set the harness to the edge cover.



12. Connect the key counter socket connector [1].
13. Using two screws [3], secure the key counter socket [2].

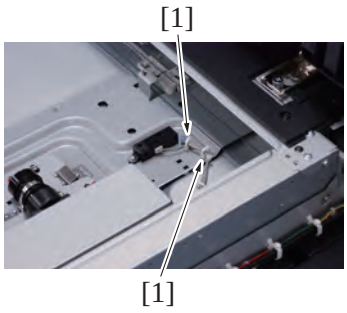


14. Using two screws [2], secure the key counter cover [1].

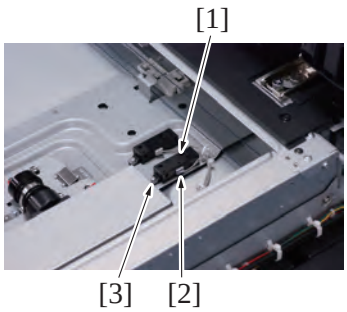
15. Set the related items when [Key Counter Only] or [Vendor 2] (when the key counter and the vendor 2 are used simultaneously) in [Service Mode] -> [Billing Setting] -> [Management Function Choice] is selected.

8.2 Installing the original size sensor/2 (Option)

1. Remove the scanner rear cover.
   G.5.2.15 Scanner rear cover
2. Remove the scanner right cover.
   G.5.2.16 Scanner right cover
3. Remove the original glass.
   G.5.2.21 Original glass

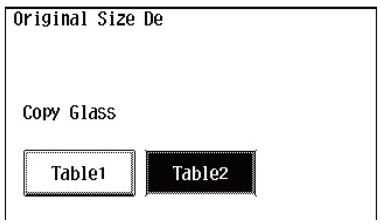


4. Remove the harness from two wire saddles [1].

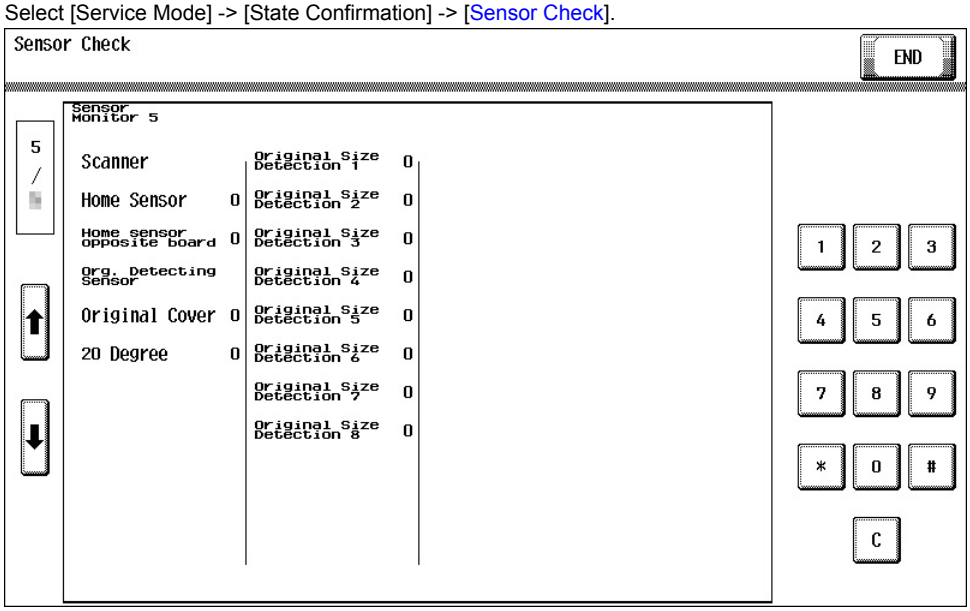


5. Connect the connector [2] to the original size sensor/2 [1].
6. Fix the original size sensor/2 (PS204) [1] with screw [3].
   NOTE
   - **Refer to the Parts Guide Manual for the part numbers of the wire saddle, screws, and original size sensor.**

7. Select [Service Mode] -> [System 1] -> [Original Size Detection], and set the original glass to [Table2].



8. Select [Service Mode] -> [State Confirmation] -> [Sensor Check].



9. Set the original on the original glass, and check that the data for “Original Size Detection 2” changes from “0” to “1” on the screen.

H CLEANING/LUBRICATION

1. bizhub 958/808/758, bizhub PRO 958

1.1 Cleaning parts list

No.	Section	Part name	Ref. page
1	Processing section	Transfer Belt Unit	H.1.2.1 Transfer Belt Unit
2		Print head window	H.1.2.2 Print head window
3		IDC sensor/Fr	H.1.2.3 IDC sensor/Fr
4	Tray 1	Tray 1 feed roller	H.1.2.4 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller
5		Tray 1 pick-up roller	
6		Tray 1 separation roller	
7		Tray 1 transport roller	H.1.2.5 Tray 1 transport roller
8	Tray 2	Tray 2 feed roller	H.1.2.6 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller
9		Tray 2 pick-up roller	
10		Tray 2 separation roller	
11		Tray 2 transport roller	H.1.2.7 Tray 2 transport roller
12	Tray 3	Tray 3 feed roller	H.1.2.8 Tray 3 feed roller, tray 3 pick-up roller
13		Tray 3 pick-up roller	
14		Tray 3 separation roller	H.1.2.9 Tray 3 separation roller
15		Tray 3 transport roller	H.1.2.10 Tray 3 transport roller
16	Tray 4	Tray 4 feed roller	H.1.2.11 Tray 4 feed roller, tray 4 pick-up roller
17		Tray 4 pick-up roller	
18		Tray 4 separation roller	H.1.2.12 Tray 4 separation roller
19		Tray 4 transport roller	H.1.2.13 Tray 4 transport roller
20	Manual	Manual bypass tray feed roller	H.1.2.14 Manual bypass tray feed roller
21		Manual bypass tray pick-up roller	H.1.2.15 Manual bypass tray pick-up roller
22		Manual bypass tray separation roller	H.1.2.16 Manual bypass tray separation roller
23	Transport section	Intermediate transport roller	H.1.2.17 Intermediate transport roller
24	Scanner	Original glass	H.1.2.18 Original glass
25		Scanner rails	H.1.2.19 Scanner rails
26		Mirrors	H.1.2.20 Mirrors
27		Lens	H.1.2.21 Lens
28		CCD sensor	H.1.2.22 CCD sensor
29	Fusing section	IH coil	H.1.2.23 IH coil

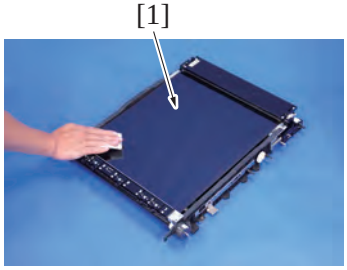
1.2 Cleaning procedure

NOTE

- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

1.2.1 Transfer Belt Unit

1. Remove the transfer belt unit.
   F.6.5.1 Replacing the transfer belt unit



2. Dry wipe the transfer belt [1] using a cleaning pad.

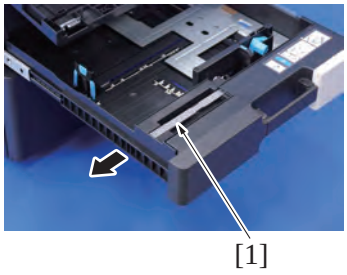
NOTE

- **Clean with a cleaning pad dampened with solvent if the dirt is not cleaned by dry wiping.**
- **Do not wipe out with water.**
- **Do not use solvent other than below when cleaning with solvent.**
  - **Isopropyl alcohol**
- **To remove the image noise, print 28 or more using blank A3 paper after cleaning with solvent.**

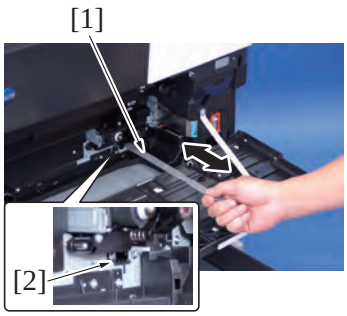
1.2.2 Print head window

1. Remove the waste toner box.
   F.6.7.2 Replacing the waste toner box

2. Pull out the tray 2 and remove the print head cleaning jig [1].



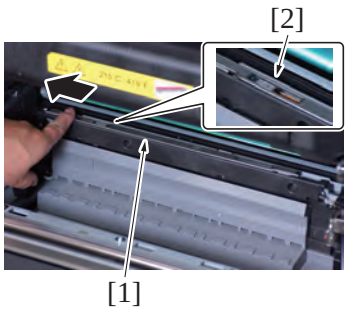
3. Insert the print head cleaning jig [1] into the cleaning port [2], and clean by moving it back and forth for 2 to 3 times.



1.2.3 IDC sensor/Fr

1. Open the upper right door.
2. Remove the transfer belt unit.
   F.6.5.1 Replacing the transfer belt unit

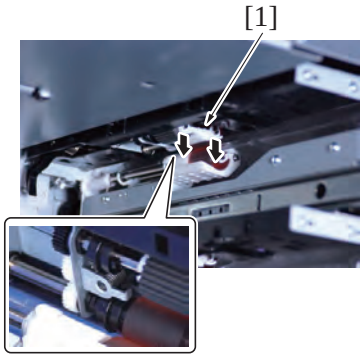
3. Shift the cover [1] to left.
4. Clean the IDC sensor/Fr [2] using a cotton swab, etc.
   NOTE
   - **Do not wipe out with any solvents or alcohols.**
   - **Cover the drum unit with a soft cloth, etc., during the work to protect from light to hit.**

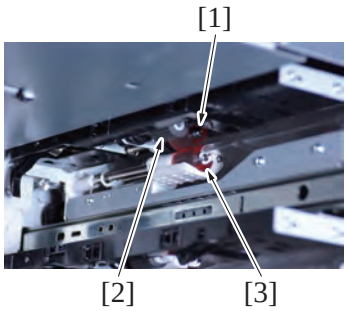


1.2.4 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller

1. Remove the tray 1 and tray 2.
   G.5.2.31 Tray 1, Tray 2

2. Remove the paper guide [1].

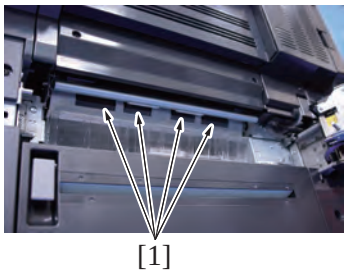




3. Using a cleaning pad dampened with alcohol, wipe the tray 1 feed roller [1], tray 1 pick-up roller [2], tray 1 separation roller [3] clean of dirt.

1.2.5 Tray 1 transport roller

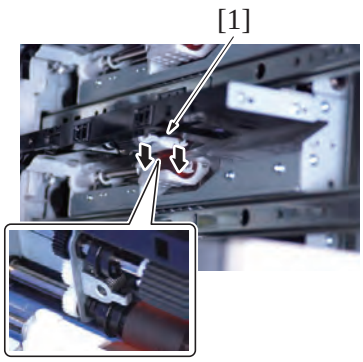
1. Open the manual bypass tray door.



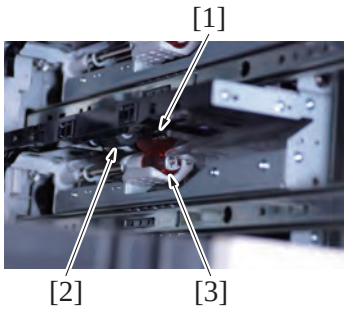
2. Using a cleaning pad dampened with alcohol, wipe the tray 1 transport rollers [1] clean of dirt.

1.2.6 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller

1. Remove the tray 1 and tray 2.
G.5.2.31 Tray 1, Tray 2



2. Remove the paper guide [1].

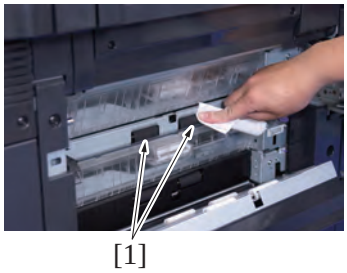


3. Using a cleaning pad dampened with alcohol, wipe the tray 2 feed roller [1], tray 2 pick-up roller [2], tray 2 separation roller [3] clean of dirt.

1.2.7 Tray 2 transport roller

1. Open the lower right door.
2. Open the manual bypass tray door.

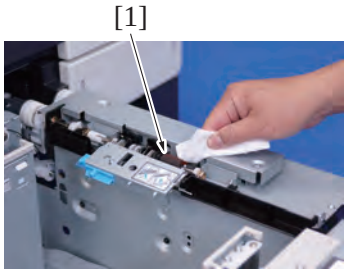
3. Using a cleaning pad dampened with alcohol, wipe the tray 2 transport rollers [1] clean of dirt.



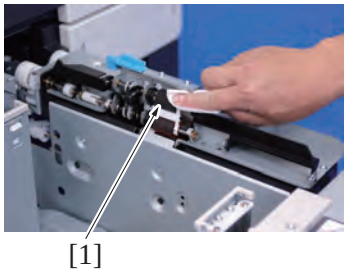
1.2.8 Tray 3 feed roller, tray 3 pick-up roller

1. Slide out the tray 3.

2. Clean the tray 3 feed rollers [1] with a cleaning pad dampened with alcohol.



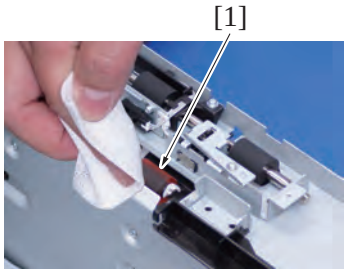
3. Clean the tray 3 pick-up roller [1] with a cleaning pad dampened with alcohol.



1.2.9 Tray 3 separation roller

1. Remove the feed roller/pick-up roller assy.
F.6.8.3 Replacing the tray 3 feed roller and tray 3 pick-up roller

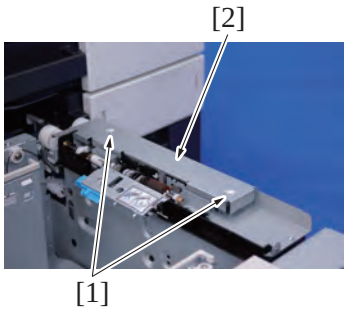
2. Clean the tray 3 separation roller [1] with a cleaning pad dampened with alcohol.



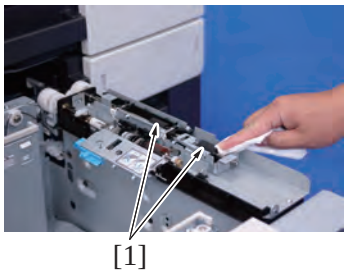
1.2.10 Tray 3 transport roller

1. Slide out the tray 3.

2. Remove two screws [1], and remove the tray 3 paper feed cover [2].



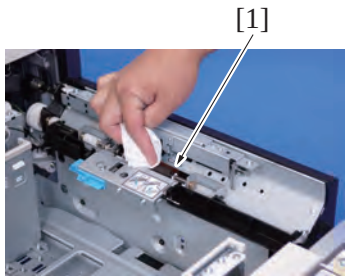
3. Using a cleaning pad dampened with alcohol, wipe the tray 3 transport rollers [1] clean of dirt.



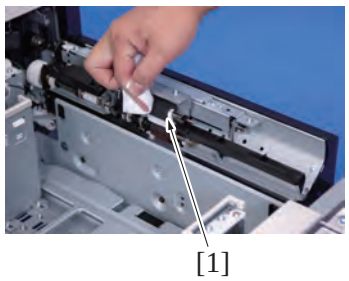
1.2.11 Tray 4 feed roller, tray 4 pick-up roller

1. Slide out the tray 4.

2. Clean the tray 4 feed rollers [1] with a cleaning pad dampened with alcohol.

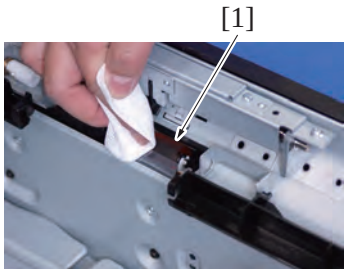


3. Clean the tray 4 pick-up roller [1] with a cleaning pad dampened with alcohol.



1.2.12 Tray 4 separation roller

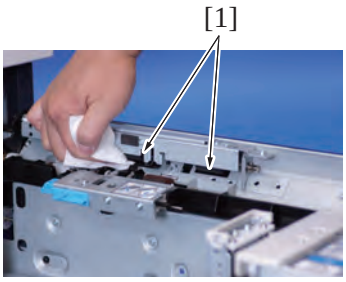
1. Remove the feed roller/pick-up roller assy.
F.6.8.5 Replacing the tray 4 feed roller and tray 4 pick-up roller



2. Clean the tray 4 separation roller [1] with a cleaning pad dampened with alcohol.

1.2.13 Tray 4 transport roller

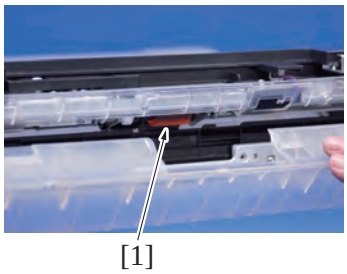
1. Slide out the tray 4.



2. Using a cleaning pad dampened with alcohol, wipe the tray 4 transport rollers [1] clean of dirt.

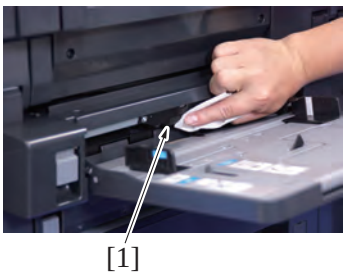
1.2.14 Manual bypass tray feed roller

1. Open the manual bypass tray door.
2. Remove the manual bypass tray separation roller assy.
   F.6.8.8 Replacing the manual bypass tray separation roller assy
3. Open the jam removal cover.



4. Using a cleaning pad dampened with alcohol, wipe the manual bypass tray feed roller [1] clean of dirt.

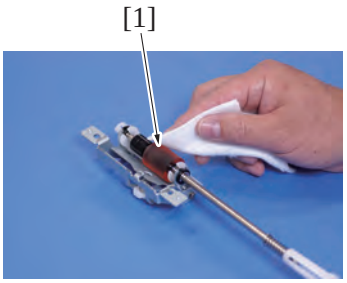
1.2.15 Manual bypass tray pick-up roller



1. Clean the manual bypass tray pick-up roller [1] with a cleaning pad dampened with alcohol.

1.2.16 Manual bypass tray separation roller

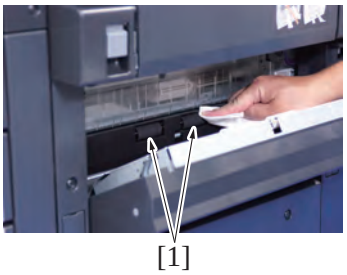
1. Remove the manual bypass tray separation roller assy.
   F.6.8.8 Replacing the manual bypass tray separation roller assy



2. Using a cleaning pad dampened with alcohol, wipe the manual bypass tray separation roller [1] clean of dirt.

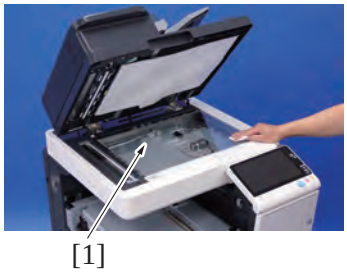
1.2.17 Intermediate transport roller

1. Open the right door.

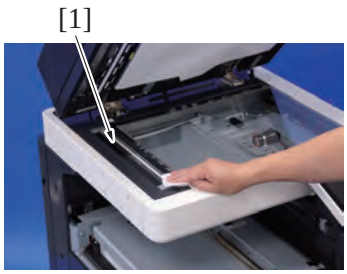


2. Clean the intermediate transport roller [1] with a cleaning pad dampened with alcohol.

1.2.18 Original glass



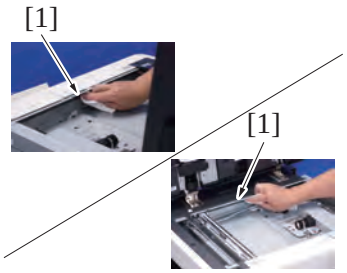
1. Using a cleaning pad dampened with alcohol, wipe the original glass [1] clean of dirt.



2. Using a cleaning pad dampened with alcohol, wipe the slit glass [1] clean of dirt.

1.2.19 Scanner rails

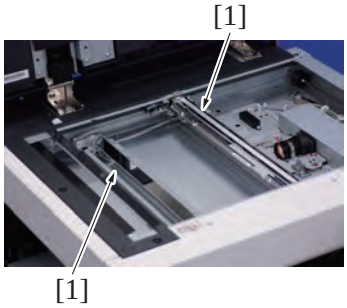
1. Remove the original glass.
G.5.2.21 Original glass



2. Using a cleaning pad dampened with alcohol, wipe the scanner rails [1] clean of dirt.
NOTE
- **Apply lubricant after cleaning.**

1.2.20 Mirrors

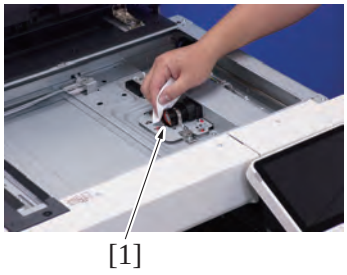
1. Remove the original glass.
G.5.2.21 Original glass



2. Using a cleaning pad dampened with alcohol, wipe the mirrors [1].

1.2.21 Lens

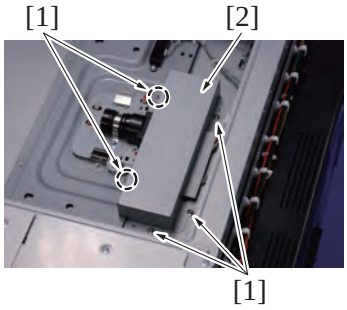
1. Remove the original glass.
G.5.2.21 Original glass



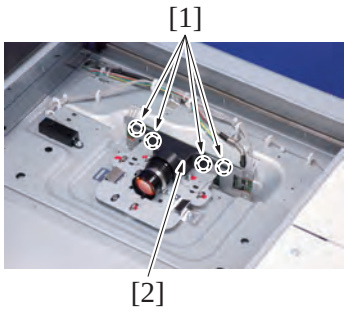
2. Clean the lens [1].

1.2.22 CCD sensor

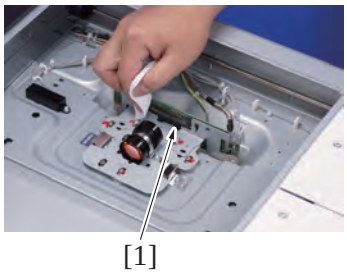
1. Remove the original glass.
G.5.2.21 Original glass



2. Remove five screws [1], and remove the CCD board protective shield [2].



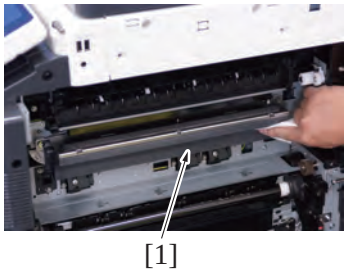
3. Remove four tabs [1] and remove the CCD sensor cover [2].



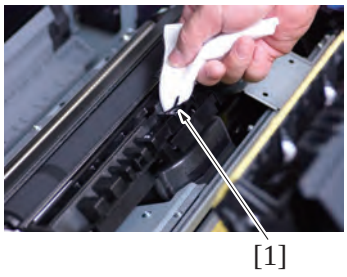
4. Clean the CCD sensor [1].

1.2.23 IH coil

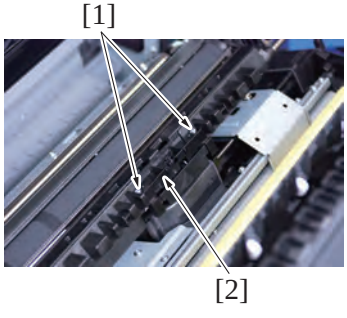
1. Remove the fusing unit.
   F.6.11.1 Replacing the fusing unit



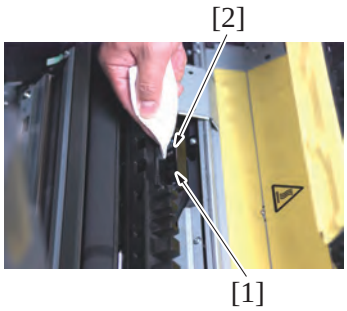
2. Using a cleaning pad dampened with alcohol, wipe the IH coil unit [1] clean of dirt.
   NOTE
   - **Take caution not to contact or dirt to affix on the heating roller temperature sensor/1 (bizhub 808/758) or the fusing belt temperature sensor/1 (bizhub 958, bizhub PRO 958) when cleaning the IH coil. The heating roller temperature cannot be correctly detected by the heating roller temperature sensor/1 or the fusing belt temperature sensor/1 when the mounting position of the heating roller temperature sensor/1 or the fusing belt temperature sensor/1 is shifted, or it is damaged, and Warning code: P-32 or trouble code may occur.**



3. Clean the actuator [1] using a cleaning pad dampened with alcohol.



4. Remove the two screws [1] and remove the actuator assy [2].



5. Clean the fusing loop sensor/Fr [1] and the fusing loop sensor/Rr [2] with a cleaning pad dampened with alcohol.

2. Dual scan document feeder

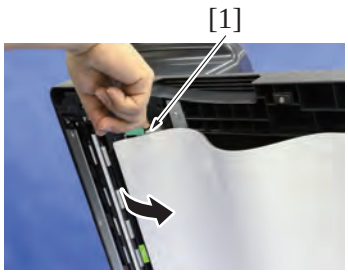
2.1 Cleaning parts list

No.	Section	Part name	Ref. page
1	Scanning section	Back side scanning glass	H.2.2.1 Back side scanning glass
		Back side scanning guide	H.2.2.2 Back side scanning guide/Back side scanning shading shaft
		Back side scanning shading shaft	

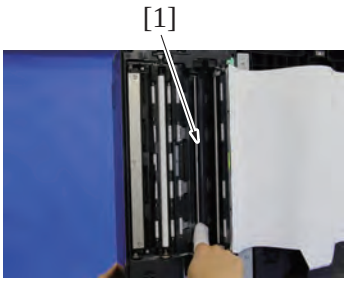
2.2 Cleaning procedure

2.2.1 Back side scanning glass

1. Open the dual scan document feeder.



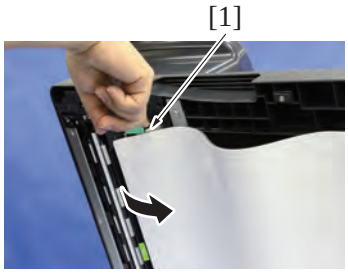
2. Open the opening and closing guide [1].



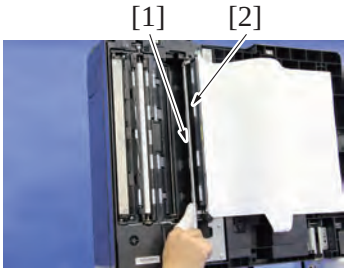
3. Using a cleaning pad, wipe the back side scanning glass [1].

2.2.2 Back side scanning guide/Back side scanning shading shaft

1. Open the dual scan document feeder.



2. Open the opening and closing guide [1].



3. Using a cleaning pad with alcohol, wipe the back side scanning guide [1] and back side scanning shading shaft [2] clean of dirt.

3. Option

3.1 Cleaning parts list

3.1.1 LU-205

No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller	H.3.2.1 Pick-up roller
		Feed roller	H.3.2.2 Feed roller
		Separation roller	H.3.2.3 Separation roller
2	Conveyance section	Conveyance roller	H.3.2.4 Conveyance roller

3.1.2 LU-303

No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller	H.3.3.1 Pick-up roller
		Feed roller	H.3.3.2 Feed roller
		Separation roller	H.3.3.3 Separation roller
2	Conveyance section	Conveyance roller	H.3.3.4 Conveyance roller

3.1.3 PI-507

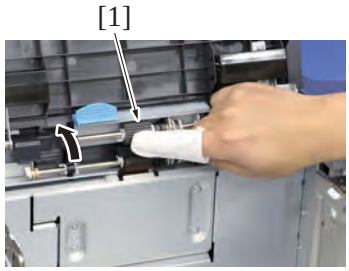
No.	Section	Part name	Ref. page
1	Paper feed section	Pick-up roller/Lw	H.3.4.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw
2		Feed roller/Lw	H.3.4.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw
3		Separation roller/Lw	H.3.4.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw
4	Conveyance section	Conveyance roller/Lw	H.3.4.2 Conveyance roller/Lw

3.2 Cleaning procedure (LU-205)

NOTE

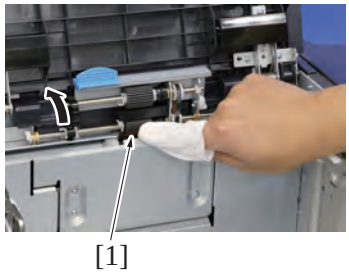
- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.2.1 Pick-up roller



1. Open the upper door.
2. Lift the pick-up roller.
3. Using a cleaning pad dampened with alcohol, wipe the pick-up roller [1] clean of dirt.

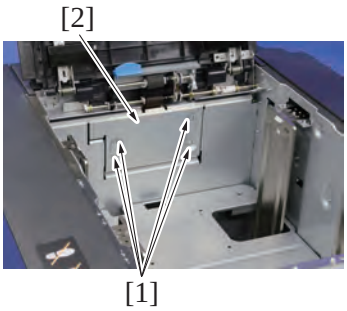
3.2.2 Feed roller



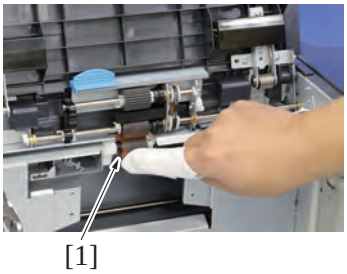
1. Open the upper door.
2. Lift the pick-up roller.
3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

3.2.3 Separation roller

1. Open the upper door.
2. Lift the pick-up roller.



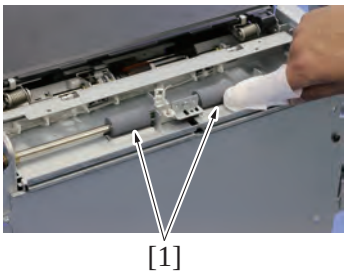
3. Remove four screws [1] and remove the plate [2].



4. Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.

3.2.4 Conveyance roller

1. Remove the paper feed cover.
G.7.3.4 Feed cover (LU-205)



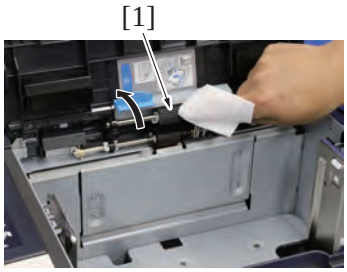
2. Using a cleaning pad dampened with alcohol, wipe the conveyance roller [1] clean of dirt.

3.3 Cleaning procedure (LU-303)

NOTE

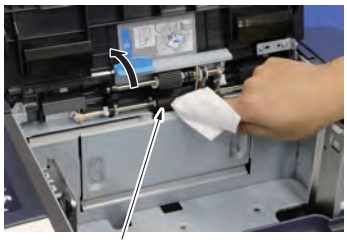
- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.3.1 Pick-up roller



1. Open the upper door.
2. Lift the pick-up roller.
3. Using a cleaning pad dampened with alcohol, wipe the pick-up roller [1] clean of dirt.

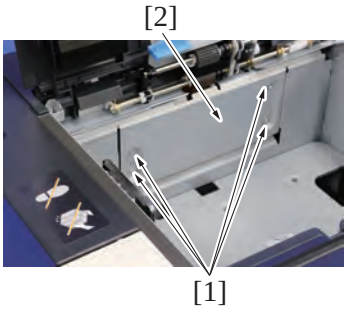
3.3.2 Feed roller



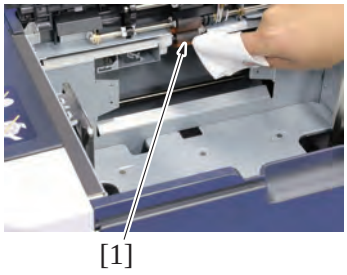
1. Open the upper door.
2. Lift the pick-up roller.
3. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

3.3.3 Separation roller

1. Open the upper door.
2. Lift the pick-up roller.



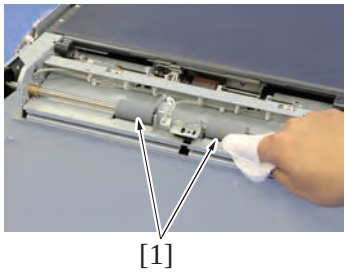
3. Remove four screws [1] and remove the plate [2].



4. Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.

3.3.4 Conveyance roller

1. Remove the paper feed cover.
   G.7.4.4 Feed cover (LU-303)



2. Using a cleaning pad dampened with alcohol, wipe the conveyance roller [1] clean of dirt.

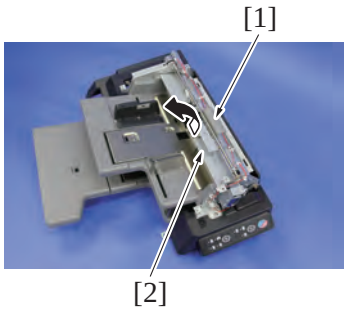
3.4 Cleaning procedure (PI-507)

NOTE

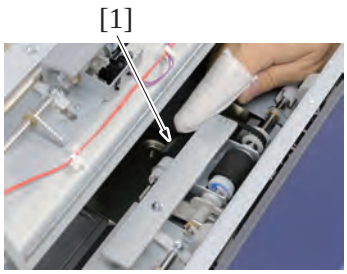
- **The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.**

3.4.1 Pick-up roller/Lw, feed roller/Lw, separation roller/Lw

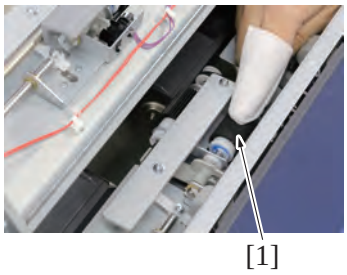
1. Remove the upper cover.
   G.7.10.1 Upper cover (PI-507)



2. Pull the unlock lever [1] and open the upper door [2].

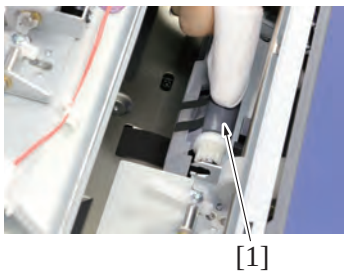


3. Clean the pick-up roller/Lw [1] with a cleaning pad dampened with alcohol.



4. Clean the feed roller/Lw [1] with a cleaning pad dampened with alcohol.

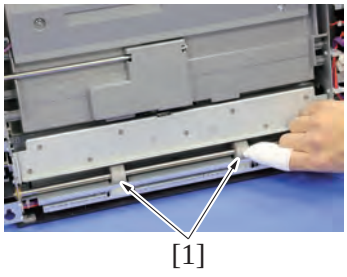
5. Remove the feed roller assy/Lw.
F.13.1.1 Replacing the pick-up roller/Lw / feed roller/Lw (PI-507)



6. Clean the separation roller/Lw [1] with a cleaning pad dampened with alcohol.

3.4.2 Conveyance roller/Lw

1. Remove the post inserter.
G.7.10.4 Post Inserter (PI-507)



2. Clean the conveyance roller/Lw [1] with a cleaning pad dampened with alcohol.

I ADJUSTMENT/SETTING

1. How To Use The Adjustment/Setting Section

1.1 How to use the adjustment/setting section

- “Adjustment/Setting” contains detailed information on the adjustment items and procedures for this machine.

1.2 Advance checks

Before attempting to work adjustments and settings, the following advance checks must be made. Check to see if:

- The power supply voltage meets the specifications.
- The power supply is properly grounded.
- The machine shares the power supply with any other machine that draws large current intermittently. (e.g., elevator and air conditioner that generate electric noise)
- The installation site is environmentally appropriate:
  - High temperature, high humidity, direct sunlight, ventilation, etc.
  - Levelness of the installation site

  NOTICE
  - A.3.3.2 Installation Requirements

- The original has a problem that may cause a defective image.
- The density is properly selected.
- The original glass, original reading glass, or related part is dirty.
- Correct paper is being used for printing.
- The units, parts, and supplies used for printing (developer, PC drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
- Toner is not running out.

⚠WARNING

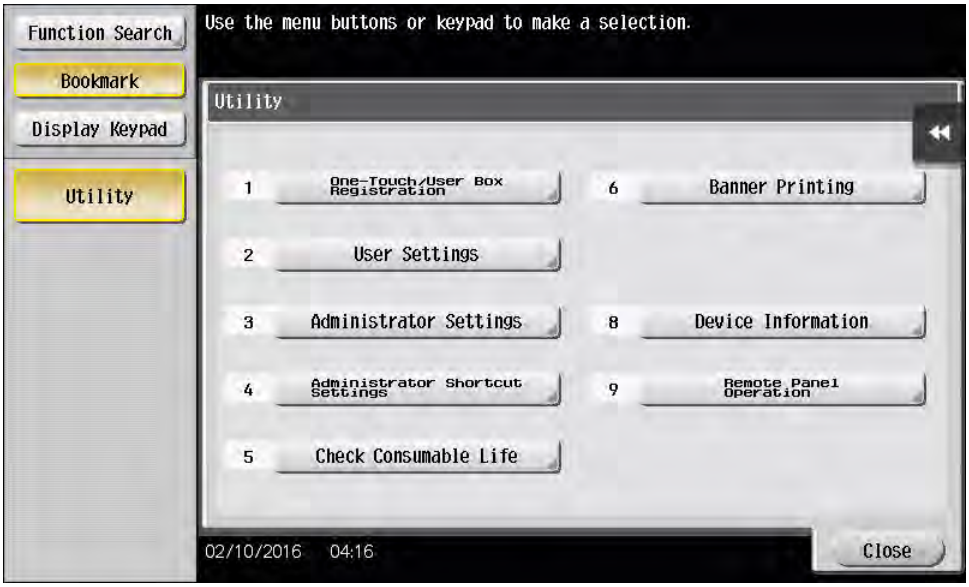
- To unplug the power cord of the machine before starting the service job procedures.
- If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the scanner cables or gears of the exposure unit.
- Special care should be used when handling the fusing unit which can be extremely hot.

⚠CAUTION

- The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
- Take care not to damage the PC drum with a tool or similar device.
- Do not touch IC pins with bare hands.

2. List of utility mode

List of utility mode (outline)



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**
- One-Touch/User Box Registration
  - Create One-Touch Destination
  - Create User Box
  - Limiting Access to Destinations
- User Settings
  - System Settings
  - Custom Display Settings
  - Copier Settings
  - Scan/Fax Settings
  - Fax Settings
  - Printer Settings
  - Change Password
  - Change E-Mail Address
  - Register Authentication Information
  - Synchronize User Auth. and Account Track
- Administrator Settings [1/2]
  - System Settings
  - Administrator/Machine Settings
  - One-Touch/User Box Registration
  - User Authentication/Account Track
  - Network Settings
  - Copier Settings
  - Printer Settings
  - Fax Settings
  - System Connection
- Administrator Settings [2/2]
  - Security Settings
  - License Settings
  - Authorization function Setting
  - Voice Guidance Settings
  - OpenAPI Certification Management Setting
  - External Memory Backup
  - Remote Access Setting
  - Eco Copier Settings
- Administrator Shortcut Settings
  - Register/Edit Shortcut
- Check Consumable Life
  - Print List
- Banner Printing
- My Panel Settings
- Device Information
- Remote Panel Operation

(1) Starting procedure

1. Touch Menu.
2. Touch [Utility].
3. The Utility Mode screen will appear.

(2) Exiting procedure

1. Touch the [Close] key.

2.1 One-Touch/User Box Registration

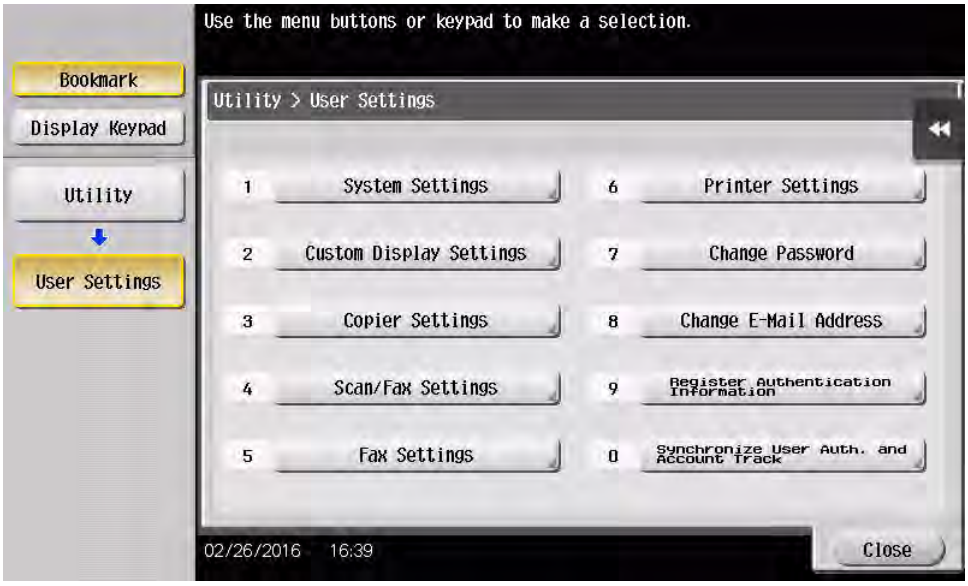
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**
- **In a machine where the user authentication function that uses an external server or MFP is set to ON, when you operate the machine without performing user authentication, this menu is not displayed.**
- **It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.**

Key name	Function/Precondition		
Create One-Touch Destination	Address Book (Public)/ (Personal)	E-Mail	-
		User Box	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.)
		Fax	-
		PC (SMB)	-
		FTP	-
		WebDAV	-
		IP Address Fax	Setting will be available when [IP Address Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
		Internet Fax	Setting will be available when [Internet Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
	Group		-
	E-Mail Settings	E-Mail Subject	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the management device 2 is mounted.
		E-mail Body	
Create User Box	Public/Personal User Box		• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.) • It will not be displayed due to functional restriction upon user authentication when [User Box] is set to “Restrict.” • It will not be displayed when [Administrator Settings] -> [System Settings] -> [User Box Settings] -> [Allow/ Restrict User Box] is set to “Prohibit.”

Key name	Function/Precondition		
	Bulletin Board User Box		• It will be displayed when the optional fax kit FK-516 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.) • It will not be displayed due to functional restriction upon user authentication when [User Box] is set to "Restrict." • It will not be displayed when [Administrator Settings] -> [System Settings] -> [User Box Settings] -> [Allow/Restrict User Box] is set to "Prohibit." • It will not be displayed due to functional restriction upon user authentication when [Fax] is set to "Restrict."
	Relay User Box		• It will be displayed when the optional fax kit FK-516 is mounted. • It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to "ON." • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.) • It will not be displayed due to functional restriction upon user authentication when [User Box] is set to "Restrict." • It will not be displayed when [Administrator Settings] -> [System Settings] -> [User Box Settings] -> [Allow/Restrict User Box] is set to "Prohibit."
Limiting Access to Destinations	Apply Levels/Groups to Destinations	Address Book	-
		Group	-
		Program	-

2.2 User Settings List

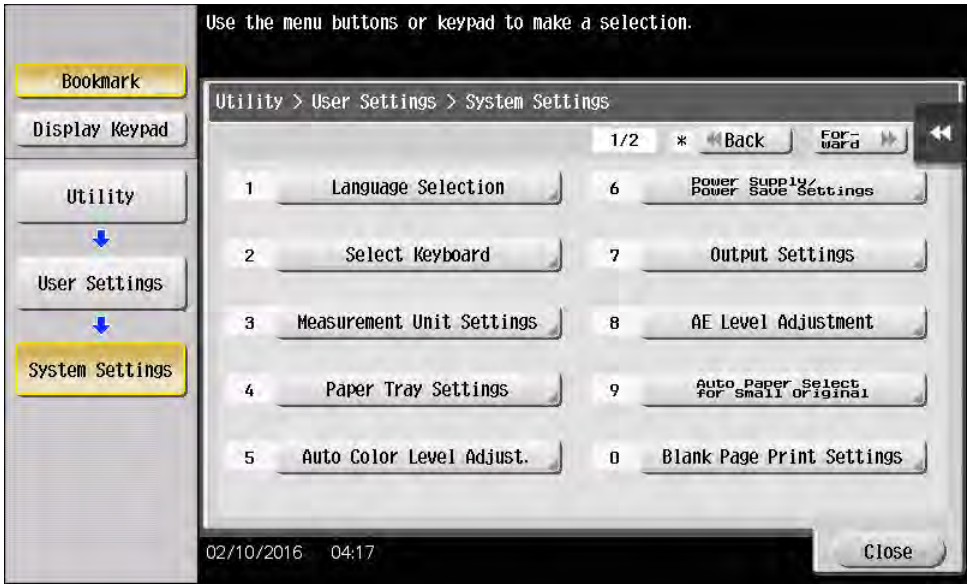


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**
- User Settings
  - System Settings
  - Custom Display Settings
  - Copier Settings
  - Scan/Fax Settings
  - Fax Settings
  - Printer Settings
  - Change Password
  - Change E-Mail Address
  - Register Authentication Information
  - Synchronize User Auth. and Account Track

2.2.1 System Settings

(1) User Settings > System Settings [1/2]



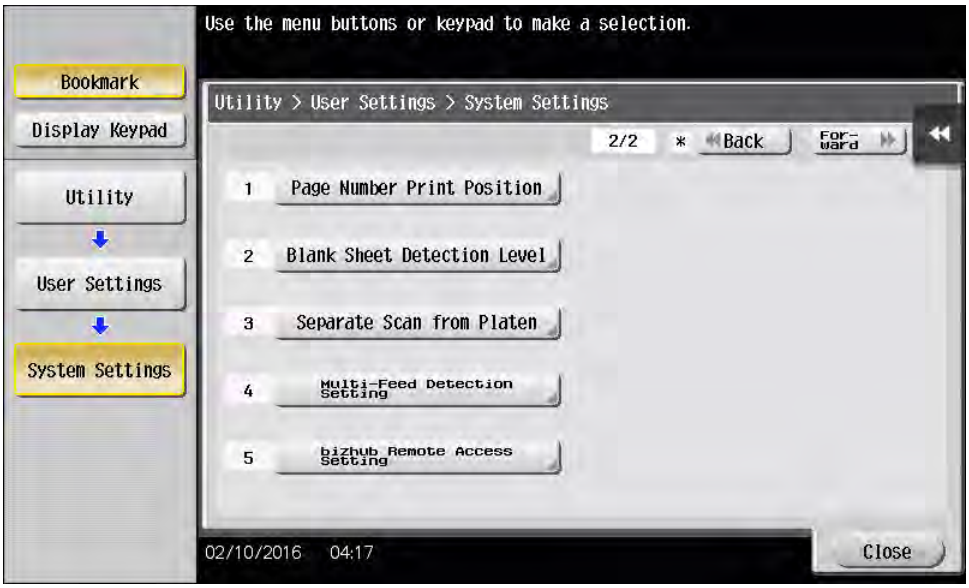
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Language Selection	The language as a default depend on the marketing area selected in [Marketing Area] available from [System 1] under Service Mode.	
Select Keyboard	The type of keyboard to be displayed when [Local Keyboard] is selected depends on the language selected in [User Settings] -> [System Settings] -> [Language Selection].	
Measurement Unit Settings	-	
Paper Tray Settings	Auto Tray Selection Settings	-
	Auto Tray Switch ON/OFF	-
	No Matching Paper in Tray Setting	-
	Print Lists	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.)
	Post Inserter Settings	It will be displayed when the optional Finisher FS-537 and Post Inserter PI-507 are mounted.
Auto Color Level Adjust.	-	
Power Supply/Power Save Settings	Low Power Mode Settings	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. • The upper limit can be set up to 240 min. only when the switch number “157” is specified to “02” at HEX assignment by setting [Service Mode] -> [System 2] -> [Software Switch Setting].
	Sleep Mode Settings	

Key name	Function/Precondition		
Output Settings	Print/Fax Output Settings	Print	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
		Fax	• It will be displayed when the optional fax kit FK-516 is mounted. • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
	Output Tray Settings		• It will be displayed when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted. • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
AE Level Adjustment	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.		
Auto Paper Select for Small Original	-		
Blank Page Print Settings	• It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.” • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.		

(2) User Settings > System Settings [2/2]



NOTE

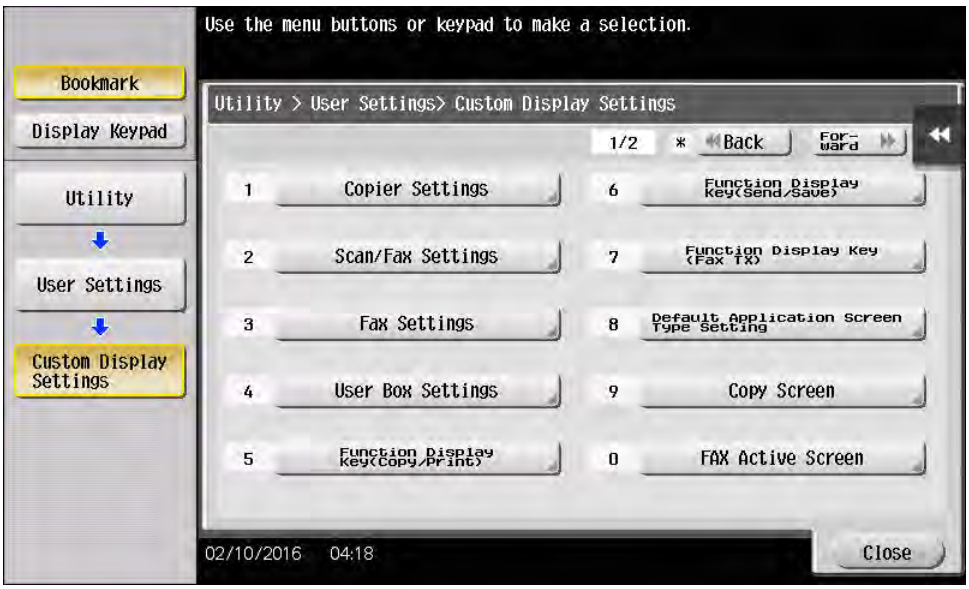
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Page Number Print Position	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.”
Blank Sheet Detection Level	-
Separate Scan from Platen	-
Multi-Feed Detection Setting	It will be displayed when the optional Double feed detection Kit UK-501 is mounted.

Key name	Function/Precondition
bizhub Remote Access Setting	This is displayed when an Android tablet terminal is connected.

2.2.2 Custom Display Settings

(1) User Settings > Custom Display Settings [1/2]



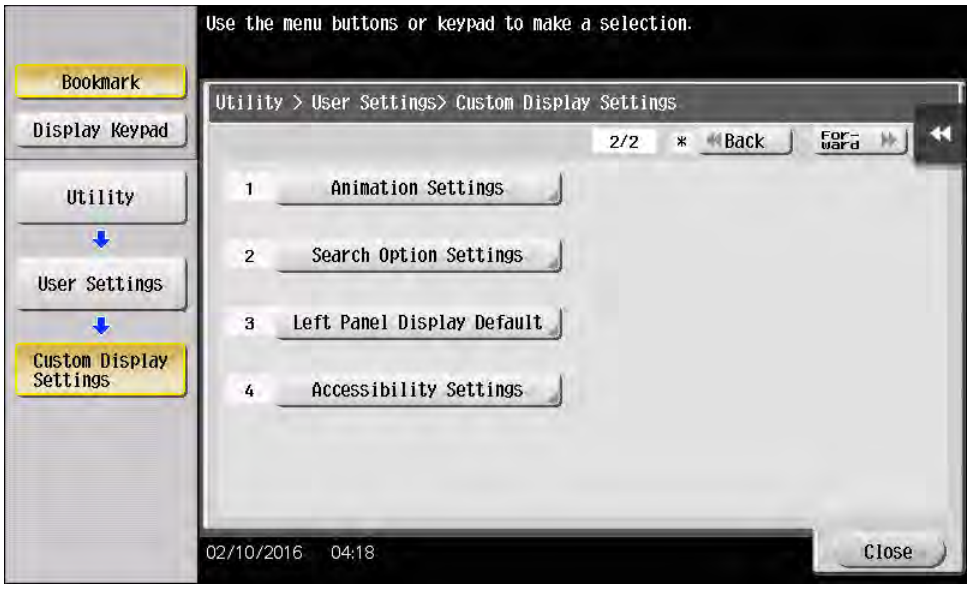
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Copier Settings	Default Tab	-
	Quick Settings 1	When this setting is set to ON, select the copy functions you wish to register.
	Quick Settings 2	
	Default Paper Type Display	This displays when a custom paper is registered.
Scan/Fax Settings	Default Tab	-
	Program Default	-
	Address Book Index Default	-
	Default Address Sort Method	-
	Default Address Display Method	-
	Address Button Size Setting	-
Fax Settings	Default Tab	-
	Program Default	-
	Address Book Index Default	-
	Default Address Sort Method	-
	Default Address Display Method	-
	Address Button Size Setting	-
User Box Settings	Default Tab	-
	Shortcut Key 1	When this setting is set to ON, select auxiliary functions to get their shortcut keys displayed on the screen.
	Shortcut Key 2	
Function Display Key (Copy/Print)	This is not displayed when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Function Display Key Permission Setting] -> [Copy/Print] is set to “Restrict.”	
Function Display Key (Send/Save)	This is not displayed when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Function Display Key Permission Setting] -> [Send/Save] is set to “Restrict.”	
Function Display Key (Fax TX)		

Key name	Function/Precondition	
Default Application Screen Type Setting	-	
Copy Screen	Copy Operating Screen	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted. However, this menu is available when the key counter is installed and [Service Mode] -> [Billing Setting] -> [Management Function Choice] -> [The next job reservation] is set to "License."
Fax Active Screen	TX Display	• It will be displayed when the optional fax kit FK-516 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.
	RX Display	

(2) User Settings > Custom Display Settings [2/2]



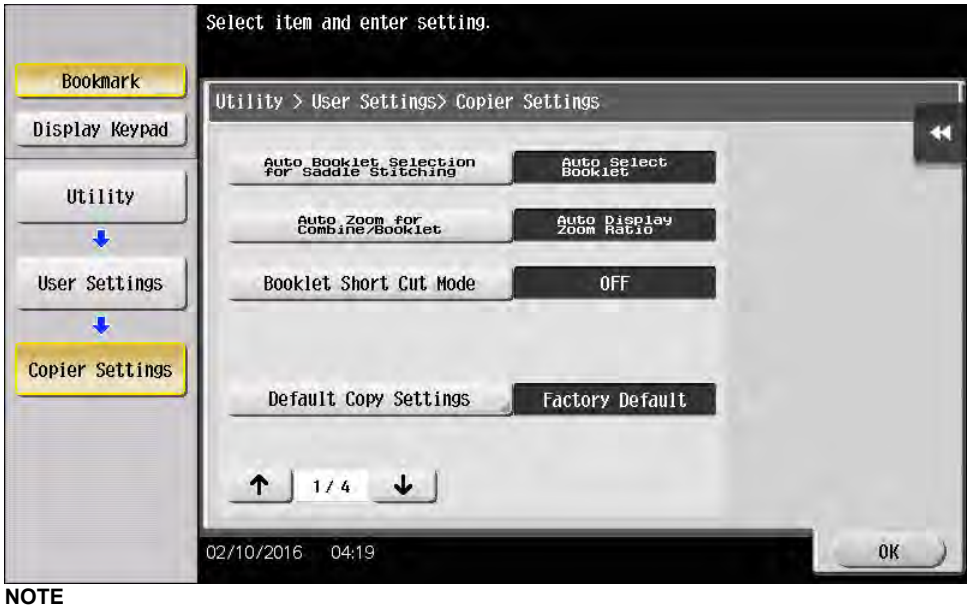
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Animation Settings	-
Search Option Settings	-
Left Panel Display Default	-
Accessibility Settings	-

2.2.3 Copier Settings

(1) User Settings > Copier Settings [1/4]

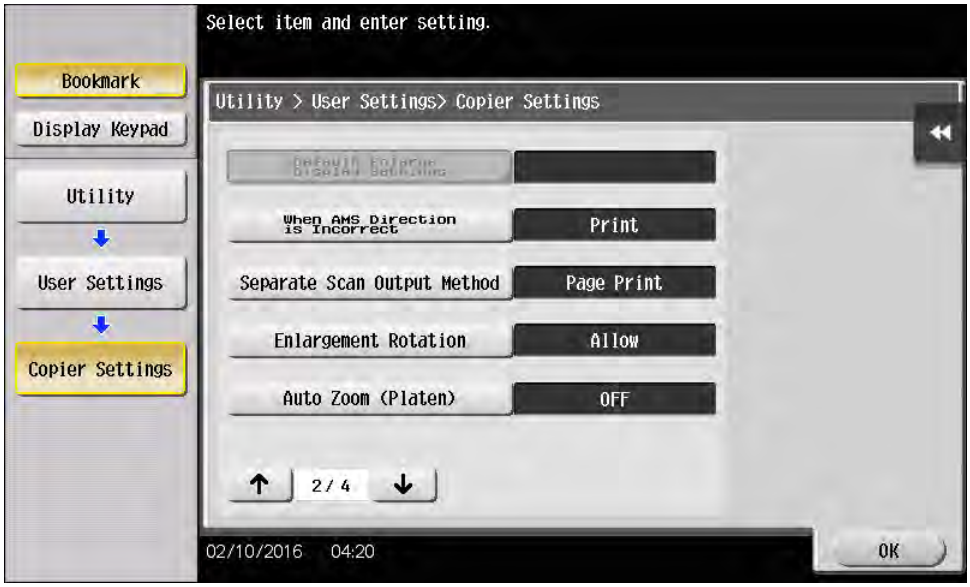


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Auto Booklet Selection for Saddle Stitching	It will be displayed when the optional finisher FS-536SD or FS-537SD is installed.
Auto Zoom for Combine/ Booklet	-
Booklet Short Cut Mode	-
Default Copy Settings	• This menu is unavailable if user authentication is not made while either of authentication device 2 is set to Set in the [Service Mode] -> [Billing Setting]. • This menu is not available when the key counter is set or when a warning appears to inform that the vendor's main power switch needs to be checked or coins (a card) are not inserted under the condition where the vendor 2 is set to Set in the [Service Mode] -> [Billing Setting] -> [Management Function Choice].

(2) User Settings > Copier Settings [2/4]

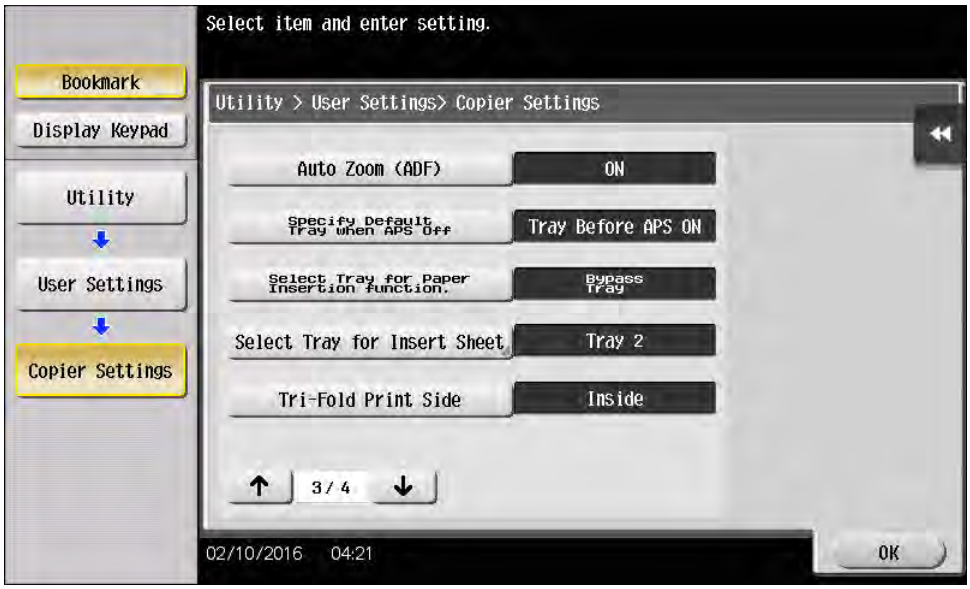


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Default Enlarge Display Settings	Displayed when you select [Utility] -> [User Settings] -> [Copier Settings] in the enlarge display mode.
When AMS Direction is Incorrect	-
Separate Scan Output Method	-
Enlargement Rotation	-
Auto Zoom (Platen)	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”

(3) User Settings > Copier Settings [3/4]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Auto Zoom (ADF)	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”
Specify Default Tray when APS Off	
Select Tray for Paper Insertion function	-
Select Tray for Insert Sheet	-
Tri-Fold Print Side	• It will be displayed when the optional finisher FS-536SD or FS-537SD is installed. • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”

(4) User Settings > Copier Settings [4/4]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Print Jobs During Copy Operation	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.”
Automatic Image Rotation	It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 1” or “Level 2.”
Finishing Program	• It will be displayed when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted. • When selecting “ON,” select the contents to be registered in the finishing program.

Key name	Function/Precondition	
Card Shot Settings	Layout	-
	Zoom	-
	Store Original Size	-

2.2.4 Scan/Fax Settings

(1) User Settings > Scan/Fax Settings [1/3]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
JPEG Compression Level	-
Black Compression Level	-
TWAIN Lock Time	-
Default Scan/Fax Settings	• This menu is unavailable if user authentication is not made while either of authentication device 2 is set to Set in the [Service Mode] -> [Billing Setting]. • This menu is not available when the key counter is set or when a warning appears to inform that the vendor's main power switch needs to be checked or coins (a card) are not inserted under the condition where the vendor 2 is set to Set in the [Service Mode] -> [Billing Setting] -> [Management Function Choice].
Default Enlarge Display Settings	Displayed when you select [Utility] -> [User Settings] -> [Scan/Fax Settings] in the enlarge display mode.

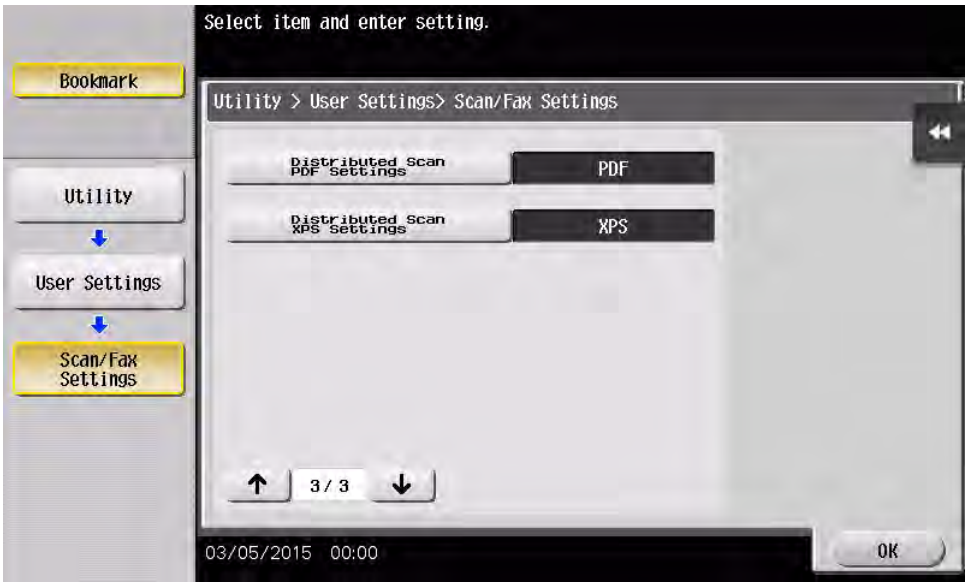
(2) User Settings > Scan/Fax Settings [2/3]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Compact PDF/XPS Compression Level	-
Color TIFF Type	-
OCR Operation Setting	• This is displayed when the optional i-Option LK-105 v4 or i-Option LK-110 v2 is enabled. • To specify the file type to DOCX or XLSX, the optional i-Option LK-110 v2 is required.
Graphic Outlining	-
Auto Rename Function	-

(3) User Settings > Scan/Fax Settings [3/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Distributed Scan PDF Settings	This displays when the following conditions are satisfied. • The authentication server type is set to Active Directory. • [Distributed Scan Settings] is set to [Use] in [Administrator Settings] -> [Network Settings]. • User allows scan operation.
Distributed Scan XPS Settings	

2.2.5 Fax Settings

User Settings > Fax Settings

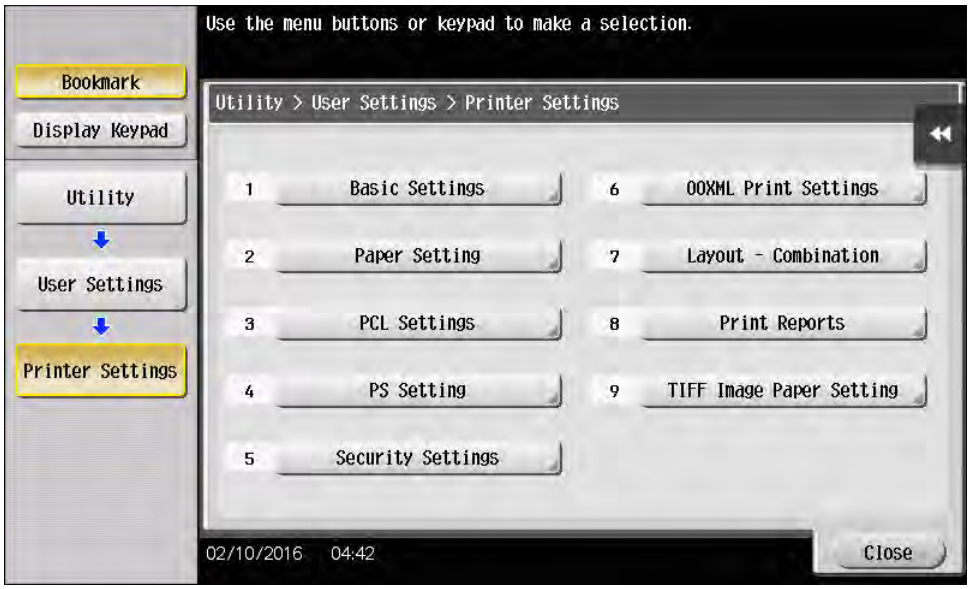
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Fax Default Settings	• This menu is unavailable if user authentication is not made while either of authentication device 2 is set to Set in the [Service Mode] -> [Billing Setting]. • This menu is not available when the key counter is set or when a warning appears to inform that the vendor's main power switch needs to be checked or coins (a card) are not inserted under the condition where the vendor 2 is set to Set in the [Service Mode] -> [Billing Setting] -> [Management Function Choice].

2.2.6 Printer Settings

User Settings > Printer Settings



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Basic Settings	PDL Setting	-
	Original Type	-
	Edge Enhancement	-
	Number of Copies	-
	Original Direction	-
	Toner Save	-
	Fold Type Settings	It will be displayed when the optional finisher FS-536SD or FS-537SD is installed.
	Half-Fold/Tri-Fold Specification Settings	
	Binding Direction Adjustment	-
	Spool Print Jobs in HDD before RIP	-
	A4/A3 <--> LTR/LGR Auto Switch	-
	Banner Sheet Setting	-
	Line Width Adjustment (600dpi)	-
	Line Width Adjustment (1200dpi)	-
	Gray Background Text Correction	-
	Minimal Print	-
	OOXML Print Mode	-
Paper Setting	Paper Tray	-
	Paper size	-
	Paper Type	-
	2-Sided Print	-
	Binding Position	-
	Staple	It will be displayed when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted.

Key name	Function/Precondition	
	Punch	• It will be displayed when the Punch Kit PK-520 is mounted on the optional Finisher FS-536 or FS-536SD, or Punch Kit PK-523 is mounted on the optional Finisher FS-537 or FS-537SD. • The number of punch holes being set is available from [Service Mode] -> [Finisher].
	Banner Paper Tray	-
PCL Settings	Font Settings	-
	Symbol Set	-
	Font Size	-
	Line/Page	Default setting value differs depending on the values by setting [Utility] -> [User Setting] -> [Printer Setting] -> [Basic Settings] -> [Original Direction] and setting [Utility] -> [User Setting] -> [Printer Setting] -> [Paper Setting] -> [Paper Size].
	Thin Line	-
	CR/LF Mapping	-
	Bar Code Font Settings	This is displayed when the optional i-Option LK-106 is enabled.
PS Setting	Print PS Errors	-
Security Settings	Verify XPS/OOXML Digital Signature	-
OOXML Print Settings	Print Sheet/Book	-
	Paper size	The paper size selected in [Foolscap Size Setting] in service mode is displayed.
	Paper Type	-
Layout - Combination	-	
Print Reports	Configuration Page	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the key counter is mounted.)
	Demo Page	
	PCL Font List	
	PS Font List	
	OOXML Font List	
TIFF Image Paper Setting	Paper Selection	When “Auto Paper Select” is selected and paper larger than the image size is not in the paper trays, paper size error occurs.

2.2.7 Change Password

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Change Password	• When conducting user authentication (MFP only), it will be displayed when the authentication is complete. • When conducting user authentication or account track input, it will be displayed when login is authenticated as user box administrator. • When [Password Rules] which can be displayed by [Utility] -> [Administrator Settings] -> [Security Settings] -> [Security Details] is set to "Enable", password using the single letter or the password same with the previous one, less than 8-digit will not be modified. • When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", entering the incorrect password three times will cause access lock.

2.2.8 Change E-Mail Address

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Change E-Mail Address	• When conducting user authentication (MFP only), it will be displayed when the authentication is complete. • It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Security Levels] is set to “Level 2.”

2.2.9 Register Authentication Information

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Register Authentication Information	It will be displayed when user authentication (MFP) is completed and the following is met; • [Biometric/IC Card Info. Registration] is set to “Allow” in [Administrator Settings] -> [System Settings] -> [Restrict User Access] -> [Restrict Access to Job Settings]. • [Biometric/IC Card Info. Registration] is set to “Allow” in [Administrator Settings] -> [User Authentication/ Account Track] -> [User Authentication Settings] -> [User Registration] -> [Edit] -> [Function Permission/ Authority] -> [Function Permission].

2.2.10 Synchronize User Auth. and Account Track

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

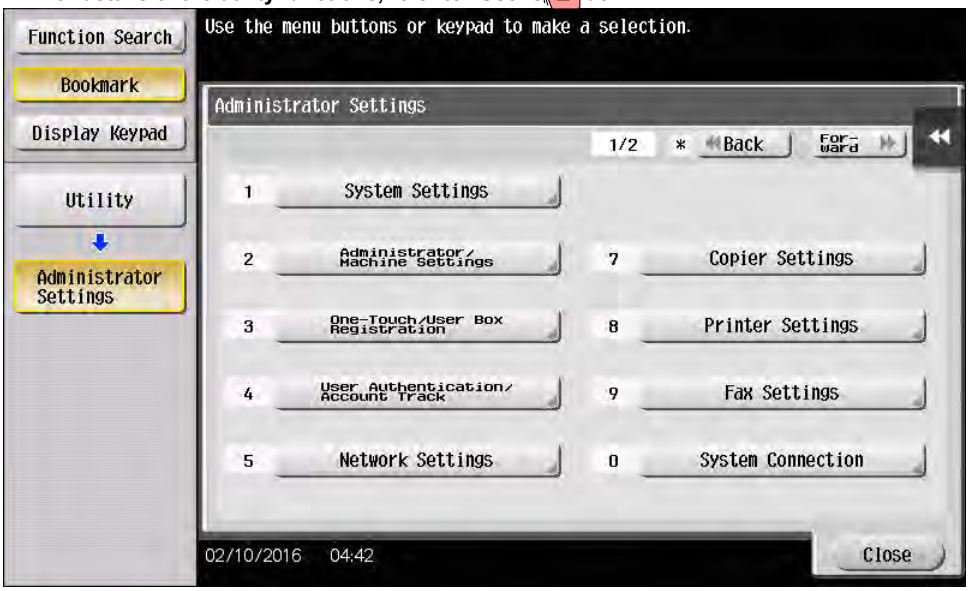
Key name	Function/Precondition
Synchronize User Auth. and Account Track	• When conducting user authentication (ON (MFP), External Server Authentication, or Main + External Server), it will be displayed only when the authentication is complete. • It will be displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is set to “Synchronize by User.”

2.3 Administrator Settings List [1/2]

Administrator settings outline 1/2

NOTE

- **The Administrator Settings will be available by entering the administrator password (16 digits) set by the Administrator Settings or Service Mode. (The administrator password is initially set to “1234567812345678.”)**
- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, entering the incorrect administrator password three times will cause access lock. The access lock is released after the lapse of a predetermined period of time (Default setting: 5 min.) after the main power switch is turned OFF and then ON more than 10 seconds later. The access lock can be released by [Service Mode] -> [Enhanced Security] -> [Administrator unlocking].**
- **For details of the utility functions, refer to "User's Guide."**



- Administrator Settings [1/2]
  - System Settings
  - Administrator/Machine Settings
  - One-Touch/User Box Registration
  - User Authentication/Account Track
  - Network Settings
  - Copier Settings
  - Printer Settings
  - Fax Settings
  - System Connection
- Administrator Settings [2/2]
  - Security Settings
  - License Settings
  - Authorization function Setting
  - Voice Guidance Settings
  - OpenAPI Certification Management Setting
  - External Memory Backup
  - Remote Access Setting
  - Eco Copier Settings

2.3.1 System Settings

NOTE

- **Keys displayed on screens are different depending on the setting.**

(1) Administrator Settings > System Settings [1/3]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

(a) Power Supply/Power Save Settings

Key name	Function/Precondition
Low Power Mode Settings	The upper limit can be set up to 240 min. only when the switch number “157” is specified to “02” at HEX assignment by setting [Service Mode] -> [System 2] -> [Software Switch Setting].
Sleep Mode Settings	• When [Service Mode] -> [System 1] -> [Sleep ON/OFF Choice Setting] is allowed, the setting to turn sleep on and off displays and becomes selectable. • The sleep mode will begin in 48 hours even if it sets it to “OFF.” • The upper limit can be set up to 240 min. only when the switch number “157” is specified to “02” at HEX assignment by setting [Service Mode] -> [System 2] -> [Software Switch Setting].
Power Key Setting	In ErP auto power OFF mode, this machine cannot receive data or faxes, and also it cannot scan or print an original.
Power Save Settings	-
Enter Power Save Mode	-
Power Consumption in Sleep Mode	-
Power Saving Fax/Scan	This function is available when the option other than “Copy” is selected in [Administrator Settings] -> [System Settings] -> [Reset Settings] -> [System Auto Reset] -> [Priority Mode].
Awake from Power Save Mode by Touching Control Panel	-

(b) Output Settings

Key name	Function/Precondition	
Print/Fax Output Settings	Print	-
	Fax	[Fax] will be displayed when the optional fax kit FK-516 is mounted.
Output Tray Settings	It will be displayed when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted.	
Shift Output Each Job	It will be displayed when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted.	

(c) Date/Time Setting

Key name	Function/Precondition
Date/Time Setting	When [Administrator Settings] -> [Network Settings] -> [Detail Settings] -> [Time Adjustment Setting] is set to “ON”, [Set Date] will be displayed. Touch [Set Date] and modify the time.

(d) Daylight Saving Time

Key name	Function/Precondition
Daylight Saving Time	When setting to “Yes”, set the time difference to move up. • Default setting: 60 min. • Setting range: 1 to 150

(e) Weekly Timer Settings

NOTE

- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.**

Key name	Function/Precondition
Weekly Timer ON/OFF Settings	-
Time Settings	-
Date Settings	-
Select Time for Power Save	When “Yes” is selected, using the 10-key pad, input the Power Save Start Time and Power Save End Time.
Password for Non-Business Hours	When setting to “Yes”, enter the password (eight digits).
Tracking Function Settings	-
Display ON/OFF Time	-

(f) Restrict User Access

Key name		Function/Precondition
Restrict Program Function Setting	-	
Copy Program Lock Settings	-	
Delete Saved Copy Program	-	
Restrict Access to Job Settings	Changing Job Priority	• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” for [Registering and Changing Addresses] cancels enhanced security mode. • The [Biometric/IC Card Info. Registration] key displays if authentication device 2 is mounted via [Service Mode] -> [Billing Setting], and [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to "ON (MFP)." • [Synchronize User Auth. and Account Track] does not display when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is set to “Synchronize by User.”
	Delete Other User Jobs	
	Registering and Changing Addresses	
	Changing Zoom Ratio	
	Changing the “From” Address	
	Change Registered Overlay	
	Biometric/IC Card Info. Registration	
	Synchronize User Authentication & Account Track	
Restrict Operation	Restrict Broadcasting	-

(g) Expert Adjustment

NOTE

- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the Key Counter is mounted when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.33 is set to [00000001] at Bit assignment/[01] at HEX assignment.)**

Key name		Function/Precondition
AE Level Adjustment	-	
Printer Adjustment	Leading Edge Adjustment	This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice].
	Centering	
	Leading Edge Adjustment (Duplex Side 2)	
	Centering (Duplex 2nd Side)	
	Erase Leading Edge	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • The adjusted values from [Erase Leading Edge] are also updated to the service mode as the "I.5.4.11 Lead Edge Erase Adjustment" function in service mode is opened to administrators.

Key name	Function/Precondition	
	Vertical Adjustment	• The adjusted values from [Vertical Adjustment] are also updated to the service mode as the "I.5.4.4.(5) Paper Feed Direction Adj." function in service mode is opened to administrators.
	Media Adjustment	This function is provided to open [2nd Transfer Adj] of Service Mode up to administrator and the fine-adjusted value is reflected in the Service Mode setting.
Finisher Adjustment	Center Staple Position	It will be displayed when the optional finisher FS-536SD or FS-537SD is mounted.
	Half-Fold Position	
	1st Tri-Fold Position Adjustment	
	2nd Tri-Fold Position Adjustment	
	Tri-Fold Output Setting	It will be displayed when the optional finisher FS-537SD is mounted.
	Punch Vertical Position Adjustment	It will be displayed when the Punch Kit PK-520 is mounted on the optional Finisher FS-536 or FS-536SD, or Punch Kit PK-523 is mounted on the optional Finisher FS-537 or FS-537SD.
	Punch Horizontal Position Adjustment	
	Punch Regist Loop Size Adjustment	• It will be displayed when the Punch Kit PK-520 is mounted on the optional Finisher FS-536 or FS-536SD, or Punch Kit PK-523 is mounted on the optional Finisher FS-537 or FS-537SD.
	Punch Edge Sensor Adjustment	It will be displayed when the Punch Kit PK-523 is mounted on the optional Finisher FS-537 or FS-537SD.
	Vertical Punch (Z-Fold) Position Adjustment	It will be displayed when the Punch Kit PK-523 and Z-Folding Unit ZU-609 are mounted on the optional Finisher FS-537 or FS-537SD.
	Horizontal Punch (Z-Fold) Position Adjustment	
	1st Z-Fold Position Adjustment	It will be displayed when the Z-Folding Unit ZU-609 is mounted on the optional Finisher FS-537 or FS-537SD.
	2nd Z-Fold Position Adjustment	
	Post Inserter Tray Size Adjustment	It will be displayed when the Post Inserter PI-507 is mounted on the optional Finisher FS-537 or FS-537SD.
Density Adjustment	Thick - Yellow	-
	Thick - Magenta	-
	Thick - Cyan	-
	Thick - Black	-
	Black Image Density	-
Image Stabilization	Image Stabilization Only	-
Paper Separation Adjustment	-	
Gradation Adjustment	Image Stabilization Only	• This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice]. • Before executing Gradation adjust, be sure to perform Stabilizer.
	Printer (600dpi)	
	Printer (1200dpi)	
	Copy	
Density Balance Adjust	-	
Scanner Area	Scanner Adjustment: Leading Edge	• It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • This menu is unavailable when the key counter is not inserted while only the key counter is set to Set by [Service Mode] -> [Billing Setting] -> [Management Function Choice]. • The adjusted values from [Scan Area] are also updated to the service mode as the "I.5.4.5 Scan Area" function in service mode is opened to administrators.
	Scanner Adjustment: Centering	
	Horizontal Adjustment	
	Vertical Adjustment	
ADF Adjustment	Centering	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.”
	Original Stop Position	
	Centering Auto Adjustment	• It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.” • When the adjustment result is [Unable], confirm the orientation of the original document and manually adjust the [Original Stop Position].
	Auto Adj. of Stop Position	
Line Detection	Prior Detection Setting	Be aware that selecting “No” and performing the pre-detection with [Service Mode] -> [Machine] -> [ADF Scan Glass Contamination] will display “NG.”
	Feed Cleaning Settings	-
Trail Edge Adjust	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.”	
User Paper Settings	• It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.”	

Key name	Function/Precondition	
	• The feature available from [Service Mode] -> [System 2] -> [User Paper Settings] is extended to Administrator. However, the fusing temperature setting is not possible in Administrator Settings.	
Erase Adjustment	Non-Image Area Erase Operation Settings	-
PS Designer Settings	-	

(h) List/Counter

Key name	Function/Precondition	
Management List	Job Settings List	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the Key Counter is mounted when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.33 is set to [00000001] at Bit assignment/ [01] at HEX assignment.)
Paper Size/Type Counter	-	
Meter Counter List	Setting will be available when [Service Mode] -> [Billing Setting] shows that management device 2 or vendor 2 is mounted.	
Check Consumables List		
Transmission Meter Count and Device Information	• The counter information is collected via CS Remote Care. • Though this setting is set to [Allow], the information is not sent if [Service Mode] -> [System 2] -> [Acquiring Settings] is set to “OFF.”	
TX Operation Log Output	This is displayed when [Administrator Settings] -> [Security Settings] -> [Security Details] -> [TX Operation Log] is set to “Save.”	

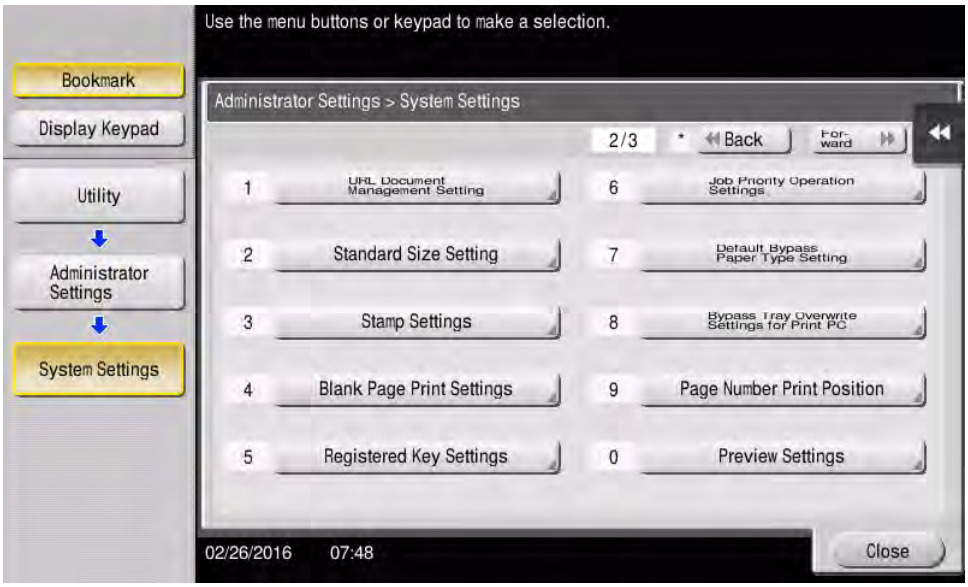
(i) Reset Settings

Key name	Function/Precondition		
System Auto Reset	The screen saver function displays when the screen saver application is registered.		
Auto Reset	-		
Job Reset	When Account is changed	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the authentication device 2 is mounted.	
	When original is set on ADF	-	
	Next Job	Staple Setting	-
		Original Set/Bind Direction	-
		Reset Data After Job	-
	Default Basic/Enlarge Display Common Setting	-	

(j) User Box Settings

Key name	Function/Precondition
Delete Unused User Box	-
Delete Secure Print Documents	-
Auto Delete Secure Document	-
Encrypted PDF Delete Time	-
ID & Print Delete Time	This is displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [User Authentication Settings] -> [Administrative Settings] -> [ID & Print Settings] is set to “ON.”
Document Hold Setting	-
External Memory Function Settings	-
Allow/Restrict User Box	-
ID & Print Delete after Print Setting	-
Document Delete Time Setting	-
Document in MFP Shared Folder Delete Time Setting	This is displayed when [Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [SMB Server Settings] -> [Share SMB File Setting] is set to “ON”.

(2) Administrator Settings > System Settings [2/3]

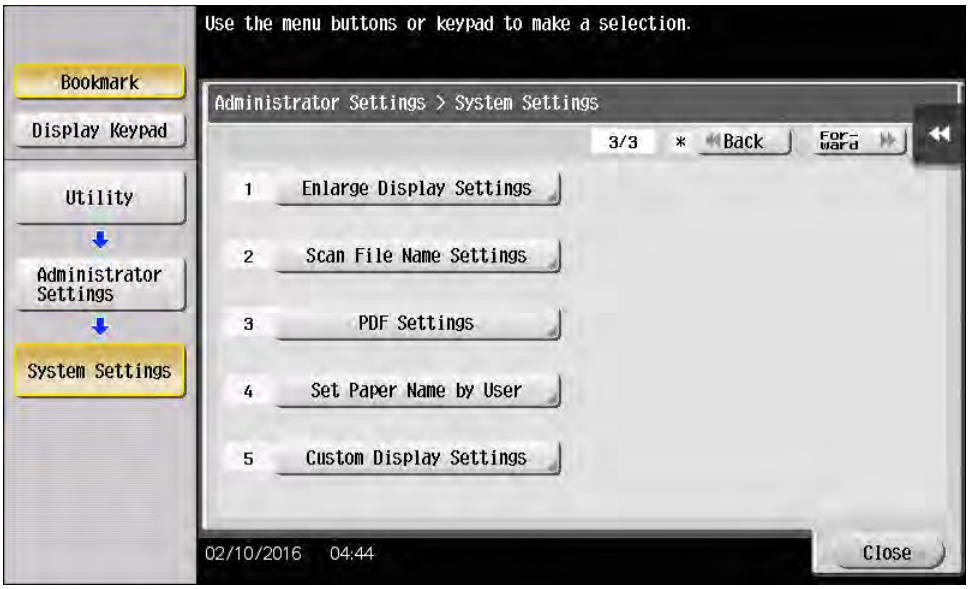


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
URL Document Management Setting	URL Delete Document	-
	URL Document Delete Time Setting	-
Standard Size Setting	Original Glass Original Size Detect	It will be displayed when [Service Mode] -> [Enhanced Security] -> [Administrator Feature Level] is set to “Level 2.”
	Foolscap Size Setting	
Stamp Settings	Header/Footer Settings	-
	Fax TX Settings	-
Blank Page Print Settings	-	
Registered Key Settings	Hard Key	-
	Softkey	-
Job Priority Operation Settings	Fax RX Job Priority	-
	Skip Job (Fax)	-
	Skip Job (Copy, Print)	-
Default Bypass Paper Type Setting	-	
Bypass Tray Overwrite Settings for Print PC	-	
Page Number Print Position	-	
Preview Settings	Original Direction Confirmation Screen	-
	Realtime Preview	-
	Set key Initial display	-
	Preview Display Conditions (Standard Application)	-
	Preview Display Conditions (Registered Application)	-

(3) Administrator Settings > System Settings [3/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
Enlarge Display Settings	Display Default Settings	-	
	Apply Basic Setting to Enlarge Display	-	
Scan File Name Settings	Function Mode Initial	-	
	Supplementary File Name	-	
PDF Settings	Compact PDF Settings	-	
	PDF/A Default Settings	• This is displayed when the optional i-Option LK-102 v3 or i-Option LK-110 v2 is enabled.	
	PDF Web Optimization Default Settings		
	Searchable PDF Settings	To use the searchable PDF function, the optional i-Option LK-105 v4 or i-Option LK-110 v2 is required.	
Set Paper Name by User	-		
Custom Display Settings	Main Menu Default Settings	-	
	Main Menu Display Settings	-	
	Custom Function Pattern Selection	When a custom function pattern is registered or imported in [Service Mode] -> [System 2] -> [Custom Pattern], the pattern ([Custom Pattern 1] to [Custom Pattern 3]) also can be selected.	
	User/Admin Function Permissions	Setting is disabled if user authentication or account track is not performed.	
	Function Display Key Permission Setting	Copy/Print	When selecting [Allow], [Function Display Key (Copy/Print)] is displayed in [User Settings] -> [Custom Display Settings] and you can configure the setting.
		Send/Save	• When selecting [Allow], [Function Display Key (Send/Save)] is displayed in [User Settings] -> [Custom Display Settings] and you can configure the setting. • When selecting [Allow], [Function Display Key (Fax TX)] is displayed in [User Settings] -> [Custom Display Settings] and you can configure the setting.
	Temporary Change Language Setting	The temporarily enabled language is returned to the language configured in [User Settings] after any of the following operations. • Main power switch OFF • Power key OFF • Sleep mode • Low power mode • System Auto Reset • Logout	
	Display 10 Keypad when entering Number of Sets	-	
	Widget Settings	-	
	Slide Menu Settings	-	

Key name	Function/Precondition
ADF Settings	This will be displayed when the ADF is mounted.

2.3.2 Administrator/Machine Settings

Administrator Settings > Administrator/Machine Settings

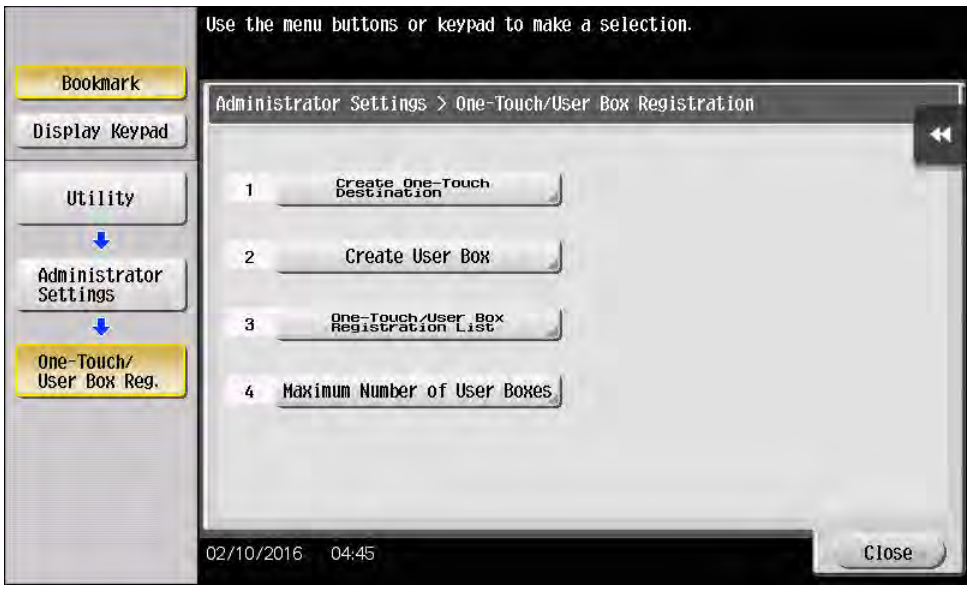
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Administrator Registration	-
Input Machine Address	-

2.3.3 One-Touch/User Box Registration

Administrator Settings > One-Touch/User Box Registration



NOTE

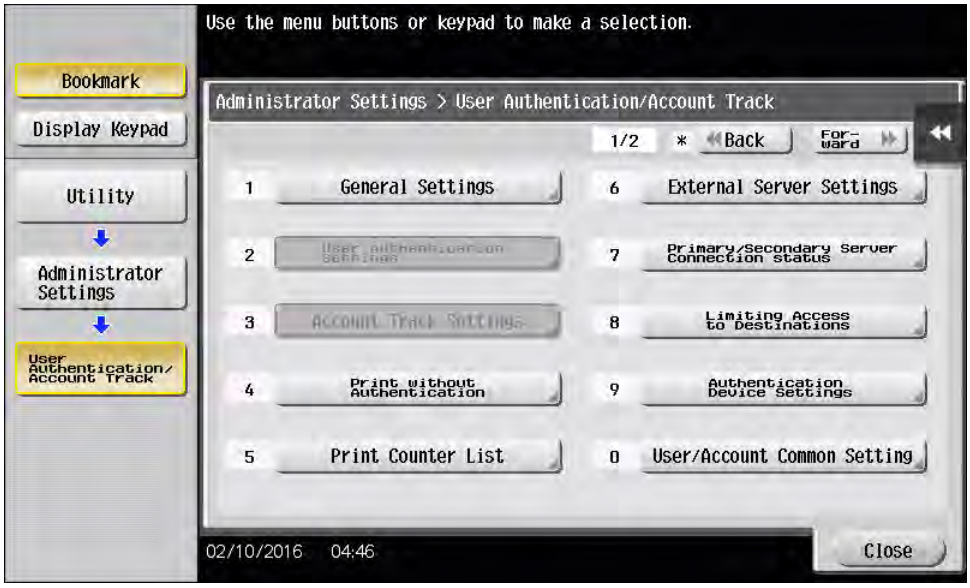
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
Create One-Touch Destination	Address Book (Public)/ (Personal)	E-Mail	-
		User Box	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.

Key name	Function/Precondition		
		Fax	It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that fax is set to “Set.”
		PC (SMB)	-
		FTP	-
		WebDAV	-
		IP Address Fax	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [IP Address Fax Function] is set to “ON.”
		Internet Fax	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “ON.”
	Group	-	
	E-Mail Settings	E-Mail Subject	-
		E-mail Body	-
Create User Box	Public/Personal User Box	-	
	Bulletin Board User Box	-	
	Relay User Box	-	
	Annotation User Box	-	
One-Touch/User Box Registration List	Address Book List	-	
	Group List	-	
	Program List	-	
	E-Mail Subject/Text List	-	
Maximum Number of User Boxes	• If the maximum number of user boxes is set to “0”, you cannot create new ones. • If the selected user has already created three user boxes, for example, you can set the maximum number of user boxes within the range of 3 to 1000.		

2.3.4 User Authentication/Account Track

(1) Administrator Settings > User Authentication/Account Track [1/2]



NOTE

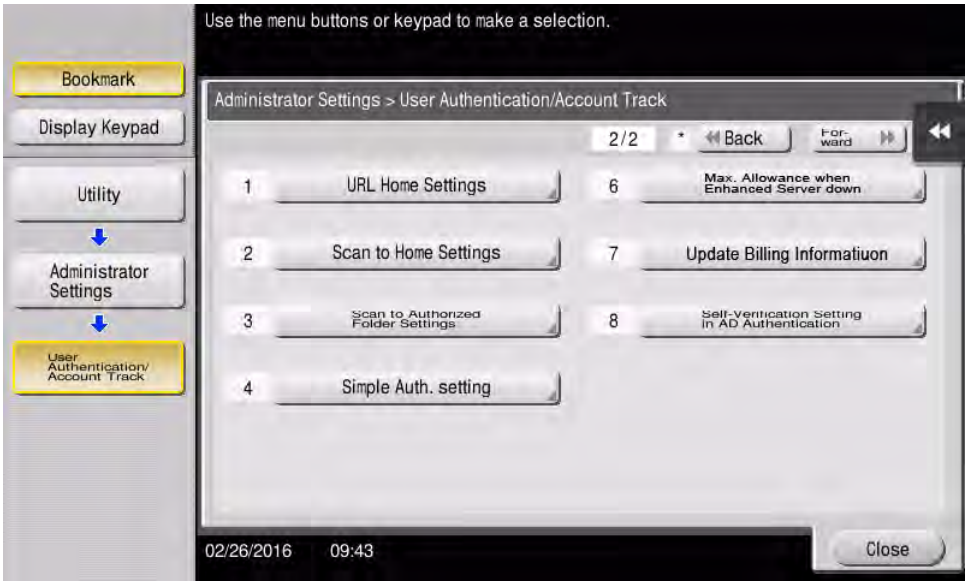
- **Keys displayed on screens are different depending on the setting.**
- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.**
- **Before registering a user, select an authentication method. If all management data is cleared after the authentication method was selected, the histories of the registered users, print, send, receive, and save jobs are deleted.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
General Settings	User Authentication	Authentication Method	• If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “OFF” in this setting cancels enhanced security mode.
		Default Authentication Method	• [External Server Authentication] cannot be selected when external servers are not registered in [Administrator Settings] -> [User Authentication/ Account Track] -> [External Server Settings]. • [External Server Authentication] cannot be selected when the presence of management device is set in [Service Mode] -> [Billing Setting] -> [Management Function Choice].
		Overwrite User Info	• When the external server authentication is used, authenticated user information is also managed on this machine. If the number of users who have executed the external server authentication reaches the maximum number of users this machine can manage, authentication of any new users will not be permitted. If you select [Allow], the oldest authenticated user information is erased and the new user is registered. • If [Enhanced Server Authentication] or [Main + Enhanced Server] is selected with [Authentication Method], [Allow] is specified forcibly.
		Temporarily Save Authentication Info.	-
	Public User Access	• This setting is not available without user authentication. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “ON” in this setting cancels enhanced security mode.	
	Prohibited Function Login Setting	-	
	Account Track	-	
	Account Track Input Method	• This setting is not available without the account track. • “Password Only” cannot be set when using both user authentication and account track.	
	Synchronize User Authentication & Account Track	The setting is available only when carrying out the user authentication and account track.	
	When # of Jobs Reach Maximum	-	
	Number of Counters Assigned	• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the management device 2 is mounted. • The setting is available only when carrying out the user authentication and account track.	
	Ticket Hold Time Setting	This setting takes effect only when the authentication server type is set to active directory.	
	LDAP-IC Card Authentication Setting	Setting Up LDAP	• It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • When [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to [External Server Authentication] or [Main + External Server], this function is available.
		LDAP Server Connection Settings	
		Secondary Auth. server setting	
		Card Information Registration Settings	
	Enable NFC	This setting is synchronized with [Administrator Settings] -> [System Connection] -> [Mobile Connection Settings] -> [Simple Connection Setting] -> [Enable NFC].	
	Enable Bluetooth LE	• It will be displayed when the optional local interface kit EK-611(voice guidance / Bluetooth LE compatible) is mounted. • This setting is synchronized with [Administrator Settings] -> [System Connection] -> [Mobile Connection Settings] -> [Simple Connection Setting] -> [Enable Bluetooth LE].	

Key name	Function/Precondition		
User Authentication Settings	Administrative Settings	User Name List	• This setting is not available without user authentication. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “ON” in this setting cancels enhanced security mode.
		Default Function Permission	This setting is not available without user authentication.
		ID & Print Settings	
		ID & Print Operation Settings	• This setting is not available without user authentication. • It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
		Default Operation Selection	-
		Auth. Operation Setting when print Documents are Stored	-
		Login Allowed with Administrative Rights	-
		Web Browser Default Settings	[Web Browser Default Settings] does not appear when "OFF" is selected in [Administrator Settings] -> [Network Settings] -> [Web Browser Setting] -> [Web Browser Usage Settings].
	User Registration	• It cannot be entered when conducting authentication by external server. • [Register Auth. Info.] does not appear when the presence of Authentication Device 2 is unset in [Service Mode] -> [Billing Setting]. • [Custom Pattern Function] does not appear when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [User/Admin Function Permissions] is unset to “Allow.” • [Synchronize Account Track] does not appear when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [Synchronize User Authentication & Account Track] is unset to “Synchronize by User.” • [Permission Setting] in [Function Permission/Authority] does not appear when [Administrator Settings] -> [User Authentication/Account Track] -> [User Authentication Settings] -> [Administrative Settings] -> [Login Allowed with Administrative Rights] is unset to “Allow.”	
	User Counter	-	
Account Track Settings	Account Track Registration	• When the “Password Only” is selected for [Account Track Input Method], [Account Name] does not appear. • When the “Account Name & Password” is selected for [Account Track Input Method], [Name] does not appear. • [Custom Pattern Function] does not appear when [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [User/Admin Function Permissions] is unset to “Allow.”	
	Account Track Counter	-	
Print without Authentication	If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” in this setting cancels enhanced security mode.		
Print Counter List	• The setting is available only when carrying out the user authentication or account track. • It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter, vendor 2, or management device 2 is mounted.		
External Server Settings	• Neither [NTLM v1] nor [NTLM v2] appear when “OFF” is selected in [Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [Client Settings] -> [User Authentication (NTLM)]. • [NDS over IPX] and [NDS over TCP/IP] do not appear when “OFF” is selected in [Administrator Settings] -> [Network Settings] -> [NetWare Settings] -> [User Authentication Setting (NDS)]. • [NDS over IPX] does not appear when "OFF" is selected in [Administrator Settings] -> [Network Settings] -> [NetWare Settings] -> [IPX Settings].		
Primary/Secondary Server Connection Status	-		
Limiting Access to Destinations	Create Group	-	
	Apply Levels/Groups to Destinations	-	
	Apply Levels/Groups to Users	-	

Key name	Function/Precondition	
Authentication Device Settings	General Settings	• It will be displayed when [Service Mode] -> [Billing Setting] shows that the [authentication device 2] is mounted. • It will be displayed when [Administrator Settings] -> [Network Settings] -> [IWS Settings] is set to “ON.” • For details of the functions, refer to "I.2.11.1 User Authentication/Account Track - Authentication Device Settings."
	Logoff Settings	
User/Account Common Setting	Logout Confirmation Screen Display Setting	-
	Counter Remote Control	-

(2) Administrator Settings > User Authentication/Account Track [2/2]



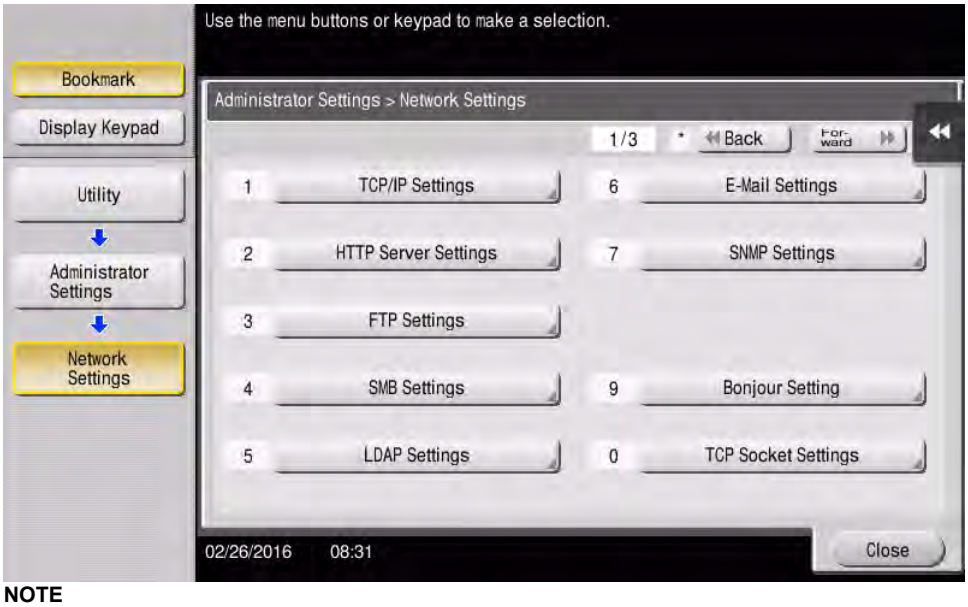
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.**
- **Before registering a user, select an authentication method. If all management data is cleared after the authentication method was selected, the histories of the registered users, print, send, receive, and save jobs are deleted.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
URL Home Settings	-	
Scan to Home Settings	-	
Scan to Authorized Folder Settings	-	
Simple Auth.	Authentication Setting	-
	Register Authentication Server	When [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to [External Server Authentication], this function is available.
	Secondary Auth. server setting	-
Max. Allowance when Enhanced Server down	It will be displayed when [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] -> [Temporarily Save Authentication Info.] is set to “Enable.”	
Update Billing Information	-	
Self-Verification Setting in AD Authentication	If you change [Host Name] or [Domain Name] while Active Directory's single sign-on is enabled on this machine, [Administrator Settings] -> [Network Settings] -> [Single Sign-On Setting] -> [Domain Login Setting] is changed to [OFF].	

2.3.5 Network Settings

(1) Administrator Settings > Network Settings [1/3]



NOTE

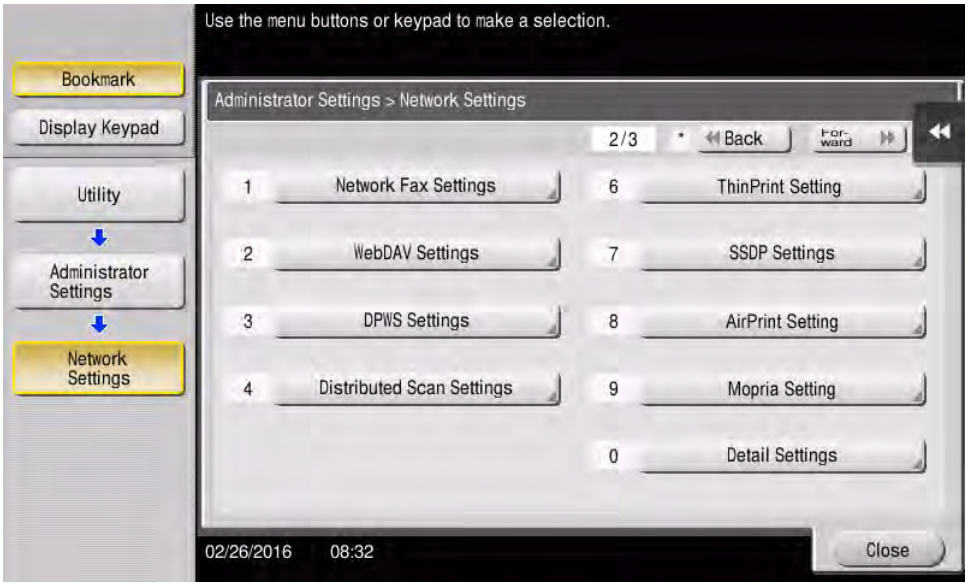
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
TCP/IP Settings TCP/IP Settings - Wired Setting *1	IPv4 Settings	-
	IPv6 Settings	-
	DNS Host	-
	DNS Domain	-
	DNS Server Settings (IPv4)	-
	DNS Server Settings (IPv6)	-
	IPsec Settings	-
	IPv4 Filtering (Permit Access)	Setting will be available when [Administrator Settings] -> [Network Settings] -> [TCP/IP Settings] -> [Quick IP Filtering] is set to “No Filtering”.
	IPv4 Filtering (Deny Access)	
	IPv6 Filtering (Permit Access)	
	IPv6 Filtering (Deny Access)	
	Quick IP Filtering	-
	RAW Port Number	-
	LLMNR Setting	-
TCP/IP Settings - Wireless Setting *1	IPv4 Settings	-
	IPv6 Settings	-
HTTP Server Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • To use the PageScope Web Connection, enable "JavaScript" and "Cookie" of the Web browser. If this machine is connected to the internet via a proxy server, register the Proxy Settings of the Web browser as "Exceptions". When the PageScope Web Connection is not displayed properly even if the above settings have been conducted, delete the cache of the Web browser.	
FTP Settings	FTP TX Settings	-
	FTP Server Settings	If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] or [Image Log Transfer Settings] is set to “ON”, selecting “ON” for the [FTP Server Settings] cancels enhanced security mode.
SMB Settings	Client Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • Select [ON] for [DFS Setting] when using SMB transmission under an environment that uses a distributed file system (DFS). DFS function is supported only in the environment that structured with the following Windows server operating systems. :Windows Server 2003 , Windows Server 2008, Windows Server 2008 R2, Windows Server 2012 , Windows Server 2012 R2

Key name	Function/Precondition	
	SMB Server Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
	WINS/NetBIOS Settings	
	Direct Hosting Setting	
	SMB Browsing setting	Setting will be available when [Client Settings] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [SMB Settings].
LDAP Settings	Enabling LDAP	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
	Setting Up LDAP	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • The [Check Connection] does not display when [Enabling LDAP] is set to “OFF.” • [Check Connection] does not display when [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Manual Destination Input] is set to “Restrict.” • [Login Name] and [Password] cannot be configured when authentication method is set to anonymous.
	Default LDAP Server Setting	-
	Default Search Result Display Setting	
E-Mail Settings	E-Mail TX (SMTP)	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • When [SMTP Authentication] is set to "ON", enter the [User ID], [Password], [Domain Name], [Authentication Setting], and [SMTP Authentication Method].
	E-Mail RX (POP)	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • [Check for New Messages] and [Polling Interval] do not display when [Administrator Settings] -> [Network Setting] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “OFF”.
	E-mail RX Print	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • This is displayed when the optional i-Option LK-110 v2 is enabled. • [E-Mail Body Print] displays only when Switch No. “152” is set to “01” in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
	S/MIME Communication Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
SNMP Settings	• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, enabling [SNMP v1/v2 Settings] cancels enhanced security mode. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, setting [Security Level] to [OFF] cancels enhanced security mode.	
AppleTalk Settings	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.	
Bonjour Setting	-	
TCP Socket Settings	TCP Socket	-
	TCP Socket (ASCII Mode)	-

• *1: It will be displayed when the optional upgrade kit UK-212 is mounted.

(2) Administrator Settings > Network Settings [2/3]

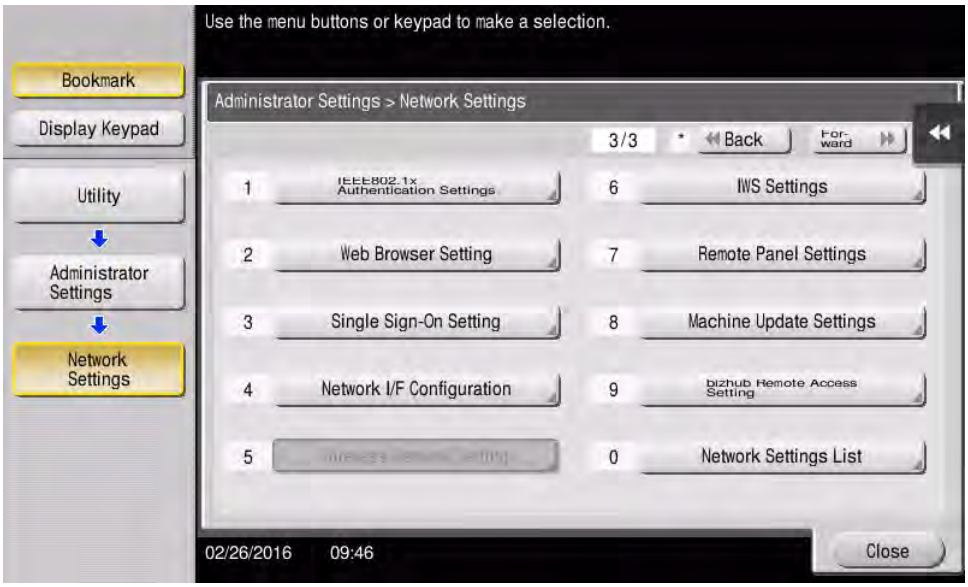


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
TCP Socket Settings	TCP Socket	-	
	TCP Socket (ASCII Mode)	-	
Network Fax Settings	Network Fax Function Settings	IP Address Fax Function	• This setting is available when [IP Address Fax] or [Internet Fax] is set to “ON” from [Service Mode] -> [System 2] -> [Network Fax Settings]. • For details of the functions, refer to I.2.11.2 Network Settings - Network Fax Settings.
		Internet Fax Function	
	SMTP TX Settings	-	
	SMTP RX Settings	-	
WebDAV Settings	WebDAV Client Settings	-	
	WebDAV Server Settings	• If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, setting [SSL Setting] to [SSL Only] cancels enhanced security mode. • Press [Initial Password] under [Password Setting] to initialize the password. (Default password: sysadm)	
	Proxy Setting for Remote Access	To configure the settings of the proxy server used when MFP accesses to KM license server via WebDAV connection from [Administrator Settings] -> [License Settings] -> [Install License] (WebDAV connection) or [Service Mode] -> [Billing Setting] to activate i-Option function.	
DPWS Settings	DPWS Common Settings	-	
	DPWS Extension Settings	-	
	Printer Settings	-	
	Scanner Settings	-	
Distributed Scan Settings	• It will be displayed when [Administrator Settings] -> [Network Settings] -> [DPWS Settings] -> [Scanner Settings] is set to “ON.” • It will be displayed when [Administrator Settings] -> [Network Settings] -> [DPWS Settings] -> [DPWS Common Settings] -> [Enable SSL] is set to “ON.”		
ThinPrint Setting	This is displayed only when the optional i-Option LK-111 is enabled.		
SSDP Settings	-		
AirPrint Setting	Print Settings	-	
	Scanner Setting	-	
Mopria Setting	-		
Detail Settings	Device Setting	-	
	Time Adjustment Setting	-	
	Status Notification Setting	Register Notification Address	It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
	Total Counter Notification Settings	-	
	PING Confirmation	-	
	SLP Setting	-	
	LPD Setting	-	
	Prefix/Suffix Setting	ON/OFF Setting	-
		Prefix/Suffix Setting	-
	Error Code Display Setting	-	

(3) Administrator Settings > Network Settings [3/3]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
IEEE802.1X Authentication Settings	IEEE802.1X authentication settings are made with PageScope Web Connection.		
IEEE802.1x Setting	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration] is set to “Wireless Only.”		
Web Browser Setting	Web Browser Usage Settings	To enable the Web browser function, this machine is automatically connected to the License Management Server (LMS) on the Internet in order to register the license. Check that this machine can be connected to the Internet before beginning this procedure.	
	File Operation Permission Setting		
Single Sign-On Setting	Domain Login Setting	When [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings] -> [User Authentication] is set to [External Server Authentication] or [Main + External Server], this function is available.	
	Applications and Settings		
	Auto Log Out Time		
Network I/F Configuration *1	For details of the functions, refer to I.2.11.3 Network Settings - Network I/F Configuration.		
Wireless Network Setting *1	For details of the functions, refer to I.2.11.4 Network Settings - Wireless Network Setting.		
IWS Settings	For details of the functions, refer to I.2.11.5 Network Settings - IWS Settings.		
Remote Panel Settings	For details of the functions, refer to "I.2.11.6 Network Settings - Remote Panel Settings (outline)", "I.2.11.7 Network Settings - Remote Panel Settings (Server Settings)", and "I.2.11.8 Network Settings - Remote Panel Settings (Client Settings)".		
Machine Update Settings	Internet ISW Settings	Update Firmware at Specified Time	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • For details of the functions, refer to I.2.11.9 Machine Update Settings - Internet ISW Settings.
		FTP Server Settings	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This is displayed when [FTP data acquisition setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [FTP Setting]. • For details of the functions, refer to I.2.11.9 Machine Update Settings - Internet ISW Settings.

Key name	Function/Precondition		
		Firmware Update Parameters	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • To download the firmware, in addition to the necessary proxy settings configured in [FTP Server Settings], you need to configure appropriate settings in [Service Mode] -> [Machine Update Setting] ->[Internet ISW] -> [HTTP Setting], [FTP Setting], and [Forwarding Access Setting]. • For details of the functions, refer to I.2.11.9 Machine Update Settings - Internet ISW Settings.
	Machine Auto Update setting	Auto Update Settings for This Machine	• This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set]. • This function is same (I.5.31.7 Machine Auto Update setting - Auto Update setting) as that of the service mode, but it will not be used together with the function of the service mode. • For details of the functions, refer to I.2.11.10 Machine Update Settings - Machine Auto Update setting.
		Relay Server Function Setting	
		Log TX setting	
		Log Confirmation	
		Immediate Update	
		Machine Update Password	
	HTTP Proxy Settings	For details of the functions, refer to I.2.11.11 Machine Update Settings - HTTP Proxy Settings.	
bizhub Remote Access Setting	• To remote-control the Control Panel of this machine using an Android/iOS device, you need to install Remote Access on the Android/iOS device. Also, [TCP Socket] must be set to [ON] for [Administrator Settings] -> [Network Settings] -> [TCP Socket Settings]. • To connect the device to this machine through bizhub Remote Access using NFC, configure a setting to enable NFC on this machine in advance. • To connect the device to this machine through bizhub Remote Access using Bluetooth LE, configure a setting to enable Bluetooth LE on this machine in advance.		
Network Settings List	-		

• *1: It will be displayed when the optional upgrade kit UK-212 is mounted.

2.3.6 Copier Settings

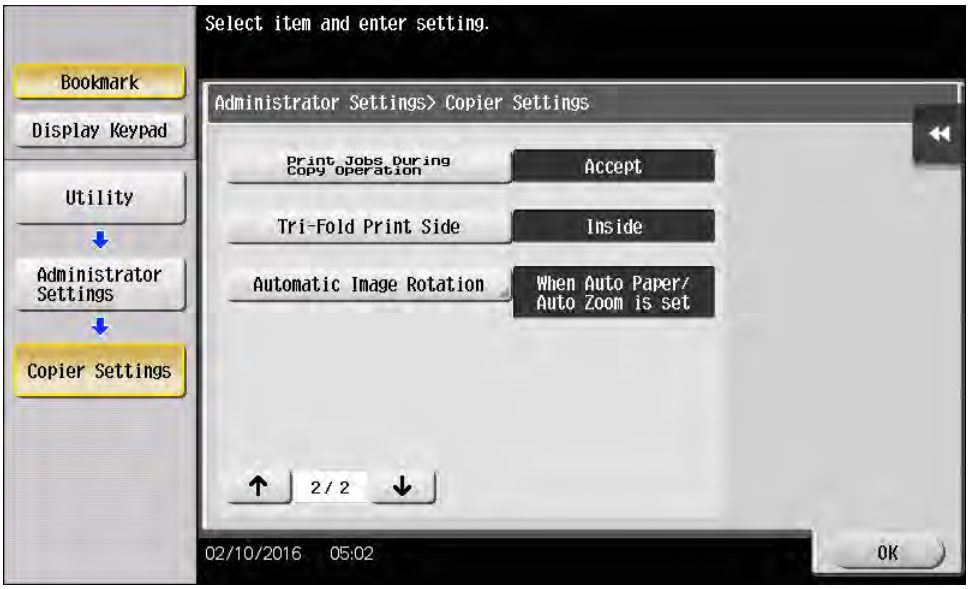
(1) Administrator Settings > Copier Settings [1/2]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Auto Zoom (Platen)	-
Auto Zoom (ADF)	-
Specify Default Tray when APS Off	-

(2) Administrator Settings > Copier Settings [2/2]



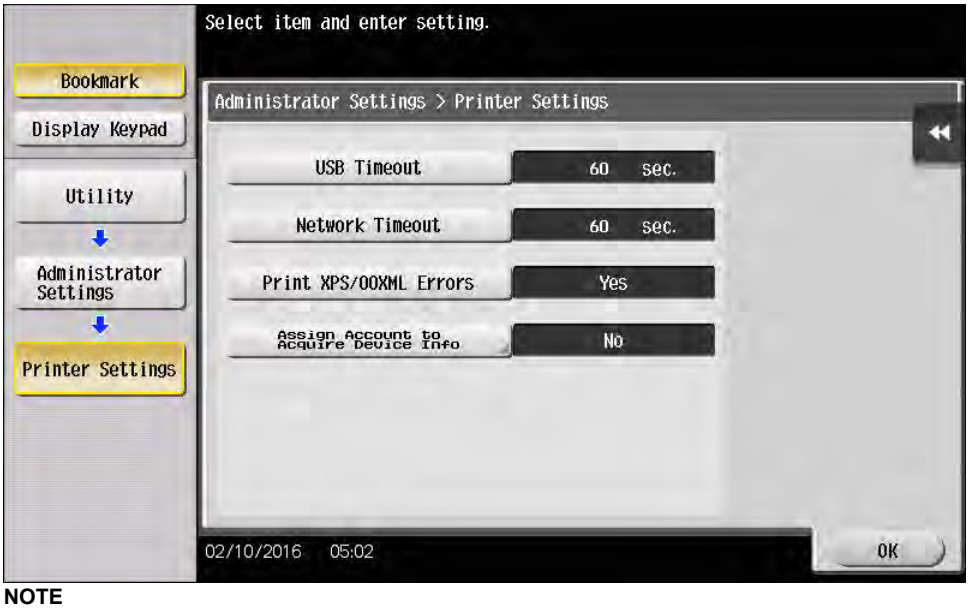
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Print Jobs During Copy Operation	-
Tri-Fold Print Side	It will be displayed when the optional finisher FS-536SD or FS-537SD is mounted.
Automatic Image Rotation	-

2.3.7 Printer Settings

Administrator Settings > Printer Settings



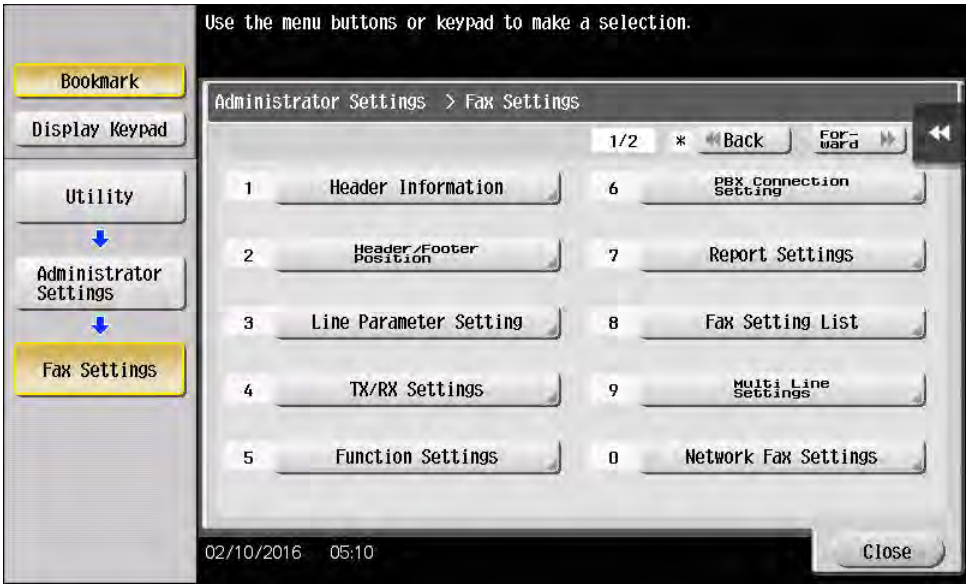
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
USB Timeout	-
Network Timeout	-
Print XPS/OOXML Errors	-
Assign Account to Acquire Device Info	-

2.3.8 Fax Settings

(1) Administrator Settings > Fax Settings [1/2]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **It will be displayed when the optional fax kit FK-516 is mounted.**
- **For details of the utility functions, refer to "User's Guide."**

(a) Header Information

Key name	Function/Precondition
Header Information	-

(b) Header/Footer Position

Key name	Function/Precondition
Header Position	[OFF] cannot be used on the USA and Hong Kong models.
TTI Print Position and Character Size	-
Print Receiver's Name	This setting is not available on the USA and Hong Kong models.
Footer Position	-

(c) Line Parameter Setting

Key name	Function/Precondition
Dialing Method	-
Receive Mode	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the management device 2 is mounted.
Number of RX Call Rings (Receive Time Interval Setting)	When [Service Mode] -> [FAX] -> [Network] -> [Network Setting 1] -> [Receive Signal Detection Mode] is set to "Time", [Receive Time Interval Setting] will be displayed.
Number of Redials	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
Redial Interval	
Line Monitor Sound	-
Line Monitor Sound Volume (Send)	-
Line Monitor Sound Volume (Receive)	-
Manual RX V34 Settings	-
Ring Detection Pattern	This setting is available only on the New Zealand model.

(d) TX/RX Settings

Key name	Function/Precondition
Duplex Print (RX)	It will not be displayed when [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings] -> [Print Separate Fax Pages] is set to "ON."
Letter/Ledger over A4/A3	-
Print Paper Selection	-

Key name	Function/Precondition
Print Paper Size	To make the setting of Print Paper Size enable, set [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings] -> [Paper Tray Settings] to “Auto.”
Incorrect User Box No. Entry	-
Paper Tray Settings	-
Min. Reduction for RX Print	-
Print Separate Fax Pages	It will not be displayed when [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings] -> [Duplex Print (RX)] is set to “ON.”
File After Polling TX	-
No. of Sets (RX)	-
Individual Receiving Line Setup	It will be displayed only when multiple lines are used and [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2 to 4] -> [Multi Line Settings] -> [Line 2 to 4 Setting] is set to “TX and RX” or “RX Only”.
Individual Sender Line Setup	It will be displayed only when multiple lines are used and [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2 to 4] -> [Multi Line Settings] -> [Line 2 to 4 Setting] is set to “TX and RX” or “TX Only”.
RX Document Print Settings	-

(e) Function Settings

<table>
<tr><th>Key name</th><th colspan="2">Function/Precondition</th></tr>
<tr><td rowspan="7">Function ON/OFF Setting</td><td>F-Code TX</td><td>When the setting is changed, turn off the main power switch and turn it on again more than 10 seconds after.</td></tr>
<tr><td>Relay RX</td><td rowspan="2">It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to “ON.”</td></tr>
<tr><td>Relay Printing</td></tr>
<tr><td>Destination Check Display Function</td><td>-</td></tr>
<tr><td>Confirm Address (TX)</td><td>-</td></tr>
<tr><td>Confirm Address (Register)</td><td>-</td></tr>
<tr><td>PIN Code Display Mask Function</td><td>-</td></tr>
<tr><td>Memory RX Setting</td><td colspan="2">• It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] - [Compulsory Memory RX] is set to “ON.”
• It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [PC-Fax RX Setting], [Forward TX Setting], or [TSI User Box Setting] is set to “ON.”</td></tr>
<tr><td rowspan="2">RX Data Deletion Restriction Settings</td><td>Password Deletion</td><td rowspan="2">• This setting is not available without user authentication.
• This setting is not available without the account track.
• This function cannot be set if the User Box Administrator has not been set.</td></tr>
<tr><td>Administrator User Box Deletion</td></tr>
<tr><td>Closed Network RX</td><td colspan="2">It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Closed area RX] is set to “ON.”</td></tr>
<tr><td>Forward TX Setting</td><td colspan="2">• It will not be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
• It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [PC-Fax RX Setting], [Memory RX Setting], or [TSI User Box Setting] is set to “ON.”
• A forwarding address except a case of the fax, specify [File Type] a fax can be converted into a file. The file types able to be specified are PDF, XPS, and TIFF. To specify other file types, set the switch No.124 to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].</td></tr>
<tr><td>Incomplete TX Hold</td><td colspan="2">• It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Re-Transmission] is set to “ON.”
• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.</td></tr>
<tr><td>PC-Fax Permission Setting</td><td colspan="2">-</td></tr>
<tr><td>PC-Fax RX Setting</td><td colspan="2">• It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Forward TX Setting], [Memory RX Setting], or [TSI User Box Setting] is set to “ON.”</td></tr>
<tr><td>TSI User Box Setting</td><td colspan="2">It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Forward TX Setting], [Memory RX Setting], or [PC-Fax RX Setting] is set to “ON.”</td></tr>
<tr><td>TSI All File Type Settings</td><td colspan="2">• It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that vendor 2 or key counter IF vendor is mounted.
• It will not be displayed when any one of [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Forward TX Setting], [Memory RX Setting], or [PC-Fax RX Setting] is set to “ON.”
• This is displayed when the optional i-Option LK-110 v2 is enabled.</td></tr>
</table>

Key name	Function/Precondition
TX-Line Auto Switch Setting	-

(f) PBX Connection Setting

Key name	Function/Precondition
PBX Connection Setting	-

(g) Report Settings

Key name	Function/Precondition
TX Result Report	-
TX Result Report Print Confirmation screen	-
Sequential TX Report	-
Broadcast Result Report	-
Bulletin TX Report	-
Relay TX Result Report	It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to “ON.”
TX Result Report Print Settings	• This function can be set if E-mail address has been set in [Administrator Settings] -> [Administrator/Machine Settings] -> [Administrator Registration]. • This function can be set if "ON" is set for [E-Mail TX (SMTP)] and "ON" is set for [Scan to E-mail] in [Administrator Settings] -> [Network Settings] -> [E-Mail Settings].
Activity Report	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.
Relay Request Report	It will be displayed when [Service Mode] -> [FAX] -> [System] -> [Display Setting] -> [Relay] is set to “ON.”
PC-Fax TX Error Report	-
Timer Reservation TX Report	-
Confidential RX Report	-
Network Fax RX Error Report	It will be displayed when either [IP Address Fax Function] or [Internet Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
Print Job Number	• It will not be displayed when the report addition information is set to “Diagnosis Code” or “Dial Number” by [Service Mode] -> [FAX] -> [List Output] -> [Report Addition]. • It will not be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.77 is set to [00000100] at Bit assignment/[04] at HEX assignment.
Legend display Settings	-
MDN Message	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “ON”.
DSN Message	
Print E-mail Message Body	

(h) Fax Setting List

Key name	Function/Precondition
Fax Setting List	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted. (It will be displayed when the Key Counter is mounted when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.33 is set to [00000001] at Bit assignment/[01] at HEX assignment.)

(i) Multi Line Settings

NOTE

- **It will be displayed each only when the optional fax kit FK-516 (line 2) or FK-515 (line 3 or line 4) is mounted.**

Key name	Function/Precondition
PC-FAX TX Line Setting	• It will be not displayed when [PC-Fax Permission Setting] is set to “Restrict” in [Administrator Settings] -> [Fax Settings] -> [Function Settings]. • Line 2 to 4 will be displayed when [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2 to 4] -> [Multi Line Settings] -> [Line 2 to 4 Setting] is set to “TX and RX” or “TX Only”.

Key name	Function/Precondition		
Fax Line 2 Fax Line 3 Fax Line 4	Line Parameter Setting	Dialing Method	-
		Number of RX Call Rings (Receive Time Interval Setting)	When [Service Mode] -> [FAX] -> [Line2 to 4] -> [Network] -> [Network Setting 1] -> [Receive Signal Detection Mode] is set to “Time”, [Receive Time Interval Setting] will be displayed.
		Line Monitor Sound	-
	Function Settings	-	
	Multi Line Settings	-	
	Sender Fax No.	-	

(j) Network Fax Settings

Key name	Function/Precondition
Black Compression Level	It will be displayed when either [IP Address Fax Function] or [Internet Fax Function] is set to “ON” in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].
Color/Grayscale Multi-Value Compression Method	
Internet Fax Self RX Ability	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [Internet Fax Function] is set to “ON”.
Internet Fax Advanced Settings	
IP Address Fax Operation Settings	It will be displayed when [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings] -> [IP Address Fax Function] is set to “ON”.

(2) Administrator Settings > Fax Settings [2/2]

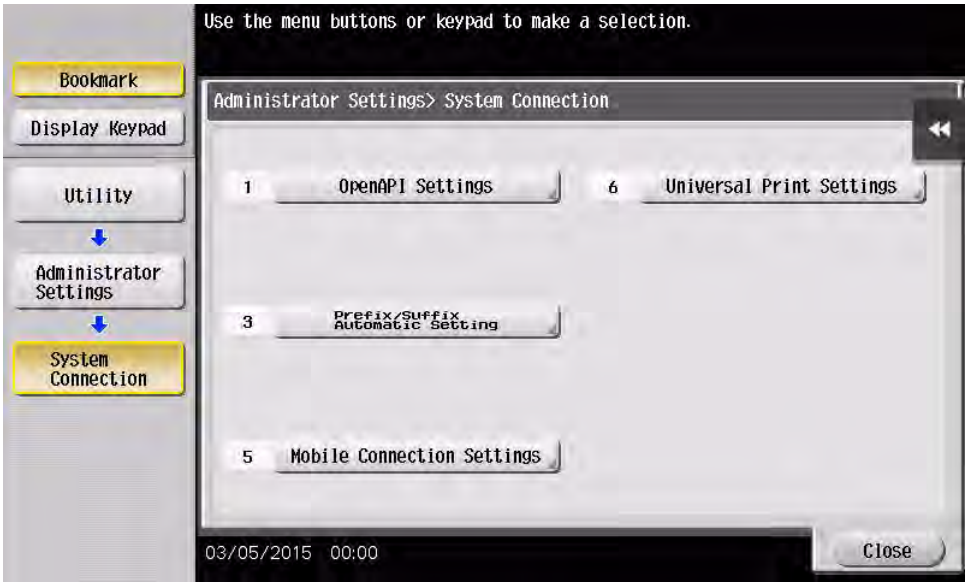
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **It will be displayed when the optional fax kit FK-516 is mounted.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Fax Print Quality Settings	-

2.3.9 System Connection

Administrator Settings > System Connection



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition		
OpenAPI Settings	Access Setting	-	
	SSL/Port Settings	-	
	Authentication	-	
	External Application Connection	-	
	Proxy Settings	-	
	Specified Application Start Setting	It will be displayed when [Service Mode] -> [System 2] -> [Application Change Setting] is set to “Permit.”	
	Single Sign-On Setting	This displays when an authentication application is registered.	
Call Remote Center	For details of the functions, refer to "I.5.7 CS Remote Care (Outlines)".		
Prefix/Suffix Automatic Setting	-		
Mobile Connection Settings	Simple Connection Setting	QR Code Display Setting	-
		Enable NFC	This setting is synchronized with [Administrator Settings] - [User Authentication/Account Track] -> [General Settings] -> [Enable NFC].
		Enable Bluetooth LE	• It will be displayed when the optional local interface kit (voice guidance / Bluetooth LE compatible) is mounted. • This setting is synchronized with [Administrator Settings] - [User Authentication/Account Track] -> [General Settings] -> [Enable Bluetooth LE].
	Wireless Connection Setting	• This setting is available when [Simple Connection Setting] -> [QR Code Display Setting] is set to “ON.” • When [Network Settings] -> [Network I/F Configuration] is set to [Wireless Only], a pairing is established by applying the wireless settings of this machine; therefore, this setting is not displayed.	
	Touch Conn. Link Appl. Settings	-	
Universal Print Settings *1	Store Print Documents Settings	This setting is disabled when the following settings are made in [Service Mode] -> [Network Settings] -> [2nd Network Setting] -> [Network Interface Settings]: • Wired + Wireless (Secondary Mode) • Wired + Wireless (Primary Mode) • Wired + Wireless (Wi-Fi Direct)	
	Client Function Setting	-	
	Universal Print Group Setting	-	
	IPP Authentication Settings	-	

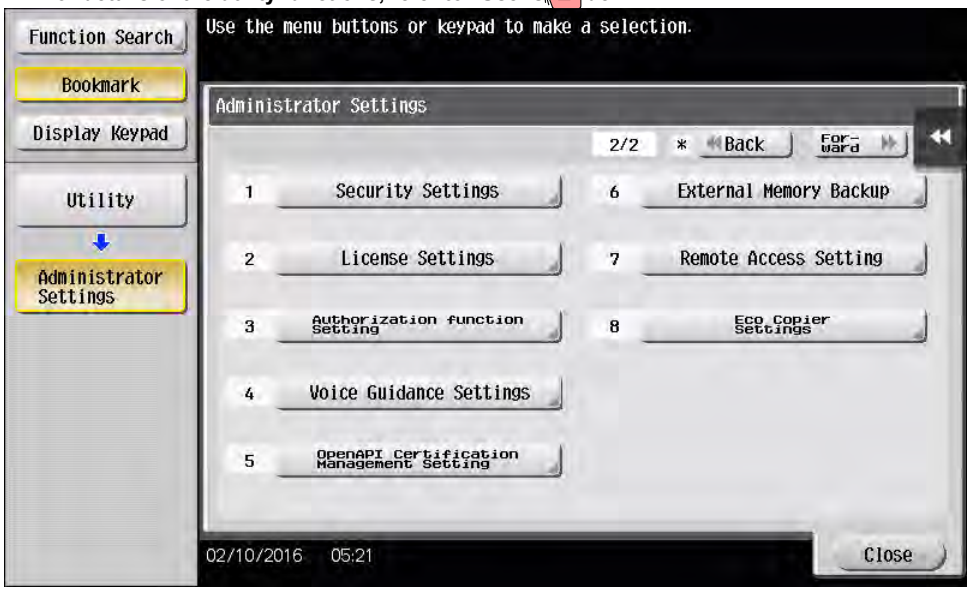
- *1: This setting will be available when the optional i-Option LK-114 is enabled.

2.4 Administrator Settings List [2/2]

Administrator settings outline 2/2

NOTE

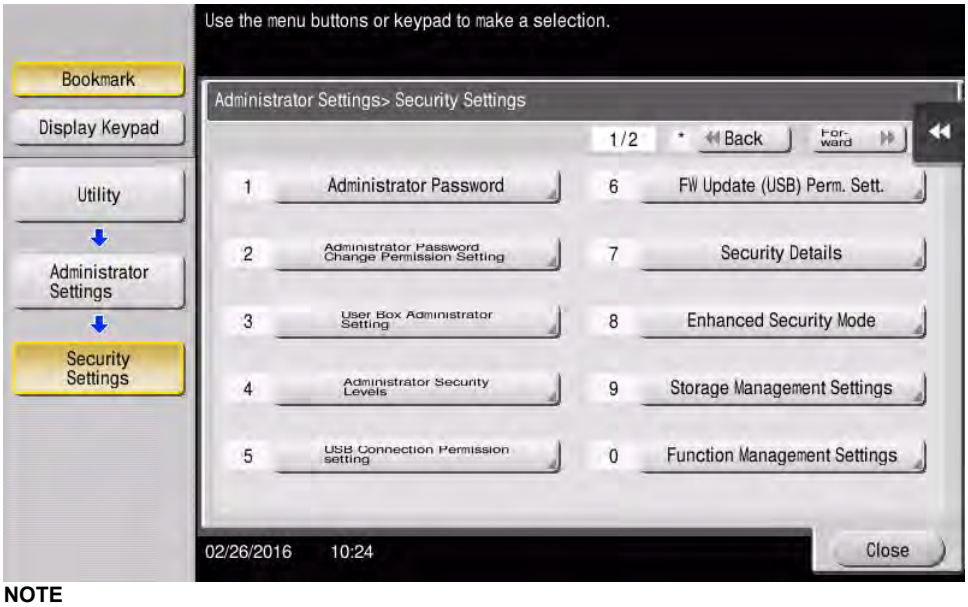
- **The Administrator Settings will be available by entering the administrator password (16 digits) set by the Administrator Settings or Service Mode. (The administrator password is initially set to "1234567812345678.")**
- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", entering the incorrect administrator password three times will cause access lock. The access lock is released after the lapse of a predetermined period of time (Default setting: 5 min.) after the main power switch is turned OFF and then ON more than 10 seconds later. The access lock can be released by [Service Mode] -> [Enhanced Security] -> [Administrator unlocking].**
- **For details of the utility functions, refer to "User's Guide."**



- Administrator Settings [1/2]
  - System Settings
  - Administrator/Machine Settings
  - One-Touch/User Box Registration
  - User Authentication/Account Track
  - Network Settings
  - Copier Settings
  - Printer Settings
  - Fax Settings
  - System Connection
- Administrator Settings [2/2]
  - Security Settings
  - License Settings
  - Authorization function Setting
  - Voice Guidance Settings
  - OpenAPI Certification Management Setting
  - External Memory Backup
  - Remote Access Setting
  - Eco Copier Settings

2.4.1 Security Settings

(1) Administrator Settings > Security Settings [1/2]



NOTE

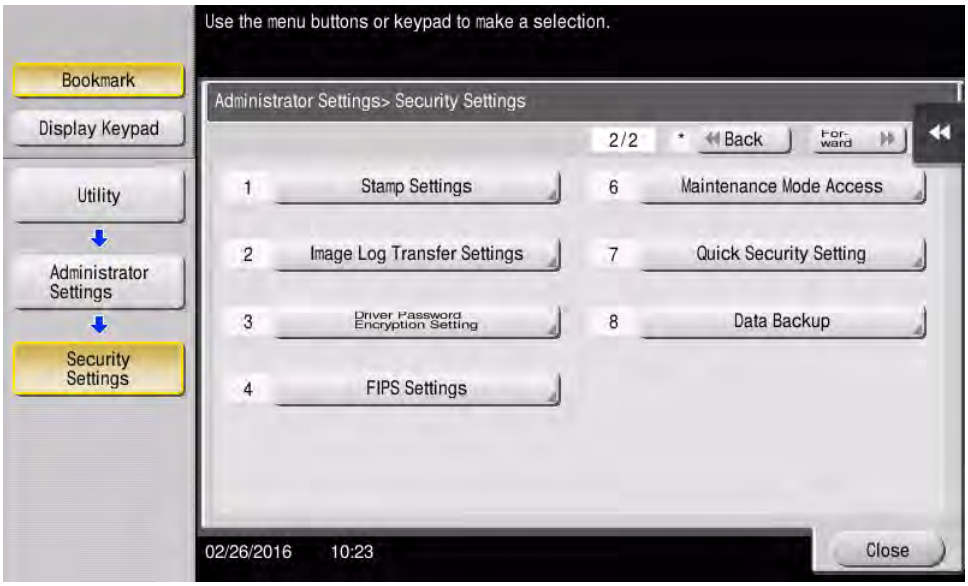
- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Administrator Password	When “Enable” is selected in [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules], the following passwords cannot be accepted: password of single repeated characters, password same as the one before being changed, and password where the number of characters is less than the minimum number specified in [Set Minimum Password Length].	
Administrator Password Change Permission Setting	-	
User Box Administrator Setting	• [Allow] cannot be selected when user authentication and account track are not conducted. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” in this setting cancels enhanced security mode. • When “Enable” is selected in [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules], the following passwords cannot be accepted: password of single repeated characters, password same as the one before being changed, and password where the number of characters is less than the minimum number specified in [Set Minimum Password Length].	
Administrator Security Levels	It will not be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that the vendor 2 is mounted.	
USB Connection Permission setting	• If [Restrict] is selected in [External Memory (Administrator)], [TPM Key Backup] is restricted in addition to the functions that can be set in [Individual Settings]. • Also, USB memory is not available for the following functions. • [TX Operation Log Output], [Main Menu Display Settings], [License Settings], [Authorization function Setting]	
FW Update (USB) Perm. Sett.	-	
Security Details	Password Rules	• [Enable] cannot be selected when [Service Mode] -> [Enhanced Security] -> [CE Authentication] is set to “OFF.” “OFF” setting of [CE Authentication] will not be displayed and cannot be set to “OFF” when [Password Rules] is set to “Enable.” • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Disable” in this setting cancels enhanced security mode. • When the password rule is set to [Enable], the password cannot be changed or registered unless it follows the above conditions.
	Prohibited Functions When Authentication Error	• If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Mode 1” in this setting cancels enhanced security mode. Only the number of times for trials up to the access lock can be changed. • For details of the functions, refer to "I.2.11.12 Security Settings - Prohibited Functions When Authentication Error."
	Confidential Document Access Method	It cannot be changed at the operator’s option since it will automatically be set according to the [Prohibited Functions When Authentication Error] setting. • It will be set to [Mode 1] when [Prohibited Functions When Authentication Error] is set to [Mode 1]. • It will be set to [Mode 2] when [Prohibited Functions When Authentication Error] is set to [Mode 2].
	Manual Destination Input	-
	Print Data Capture	• To be used when carrying out [Service Mode] -> [System 2] -> [Data Capture]. • If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “Allow” in this setting cancels enhanced security mode.

Key name	Function/Precondition	
	Job Log Settings	When “ON” is selected in [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode], this setting is automatically set to “Yes.”
	Restrict Fax TX	-
	Address Selection Confirmation Display	It will be displayed when [Administrator Settings] -> [System Settings] -> [Restrict User Access] -> [Restrict Operation] -> [Restrict Broadcasting] is set to “OFF.”
	Personal Data Security Settings	-
	Hide Personal Information (MIB)	If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, selecting “OFF” in this setting cancels enhanced security mode.
	Display Activity Log	-
	Initialize	-
	Secure Print Only	-
	Copy Guard	It is displayed when this machine is equipped with an optional Security Kit SC-508.
	Password Copy	
	Web browser contents access	• It will be displayed when an extended function of the web browser via OpenAPI application is enabled. • When using the application where server authentication is carried out by web browser extensions, [Allow] is automatically selected.
	Web browser setting change	-
	TX Operation Log	To print the saved sending operation logs or save them in USB memory, select [Utility] -> [Administrator Settings] -> [System Settings] -> [List/Counter] -> [TX Operation Log Output] on the Control Panel.
	Hardware Encryption	-
	Export Debug Log	• This is displayed when Switch No. “155” is set to “01” in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting]. • Use: To select whether or not allow CE to export debug information (logs) from the MFP to use the information to analyze problem in the MFP. • Default setting: Restrict
	Write the Configuration from USB	-
	Storage data backup	• To set whether to permit our service representative to back up or restore the storage on this machine. • For details of the functions, refer to [Service Mode] -> [Enhanced Security] -> [HDD Data Backup].
	Remote Service setting	When this setting is set to [Allow], [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Machine Auto Update Settings] -> [Machine Auto Update setting] -> [Auto Update Settings for This Machine] is not displayed.
Enhanced Security Mode	Enhanced Security Mode	For details of the functions, refer to "I.2.11.13 Security Settings - Enhanced Security Mode."
Storage Management Settings	Check Capacity	-
	Overwrite HDD Data	It is necessary to make HDD format when encryption priority/overwrite priority setting is changed. Make sure to configure the following settings after formatting the HDD. • Installing the firmware. • Reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts from [Service Mode] -> [System 2] -> [Install Data].
	Overwrite All Data	-
	Overwrite All Data-Report Settings	-
	HDD Lock Password	• Don't forget the password. • After setting a lock password, if you replace the HDD due to its breakage or other reasons and install a new HDD, an error message is displayed. In that case, clear the HDD lock password and set a new password using this function.
	Format	• It is subject to logical formatting here, therefore if starting with physical formatting, follow as [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format]. • Make sure to configure the following settings after formatting the HDD. Installing the firmware. Next, reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts from [Service Mode] -> [System 2] -> [Install Data]. • Make sure to install the firmware after the format of the hard disk. Otherwise a trouble code "C-D012 mount error due to unformatted HDD" will appear.
	HDD Encryption Setting	For details of the functions, refer to "I.2.11.14 Security Settings - HDD Encryption Setting."
	Debug Log Encryption Settings	• Use: To set a password used to encrypt debug data when storing it into the HDD. • Default setting: 01234567890123456789 • For details of the functions, refer to "I.2.11.15 Security Settings - Debug Log Encryption Settings."

Key name	Function/Precondition	
Function Management Settings	Usage Setting for Each Function	It will be displayed when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that vendor 2 or management device 2 is mounted.
	Maximum Job Allowance	
	Network Function Usage Settings	When the vendor or management device setting in the Service Mode is set, this setting is set to “OFF.” Exercise caution since it will stay in “OFF” setting even when “unset” is selected on vendor or management device setting in Service Mode later.

(2) Administrator Settings > Security Settings [2/2]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Stamp Settings	Apply Stamps	-
	Delete Registered Stamp	-
Image Log Transfer Settings	• This is displayed only when Switch No. “63” is set to [00000001] at Bit assignment/[01] at HEX assignment (Type 1) or [00000010] at Bit assignment/[02] at HEX assignment (Type 2) in [Service Mode] -> [System 2] -> [Software Switch Setting]. • For details of the functions, refer to "I.2.11.16 Security Settings - Image Log Transfer Settings (Type1)." For details of the functions, refer to "I.2.11.17 Security Settings - Image Log Transfer Settings (Type2)."	
Driver Password Encryption Setting	For details of the functions, refer to "I.2.11.18 Security Settings - Driver Password Encryption Setting."	
FIPS Settings	-	
Maintenance Mode Access	To enable Maintenance Mode Access, set [Maintenance Mode] of Service Mode to [Effective]. [Service Mode] -> [System 2] -> [Maintenance Mode]	
Quick Security Setting	For details of the functions, refer to Quick Security setting.	
Data Backup	Server Backup	-
	Restore from Server	-
	HDD Backup	-

2.4.2 License Settings

Administrator Settings > License Settings

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Get Request Code	-
Install License	• By making settings in [Service Mode] -> [Billing Setting], CE can also activate functions provided by i-Option. • When activating i-Option, MFP accesses to KM license server via WebDAV connection. Set the proxy server setting in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access] as occasion demands. • For accessing to KM license server, it is necessary to select “Fixed Address” in [Service Mode] -> [Billing Setting] -> [WebDAV Server Setting]. • For details of the functions, refer to I.2.11.25 License Settings.
List of Enabled Functions	-

2.4.3 Authorization function Setting

Administrator Settings > Authorization function Setting

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Authorization function Setting	Install License	-
	Install License from Ext. Memory	This appears when an external memory device (USB memory) that contains the license installation file is connected to the machine.
	List of Enabled Functions	This appears if there are activated functions.

2.4.4 Voice Guidance Settings

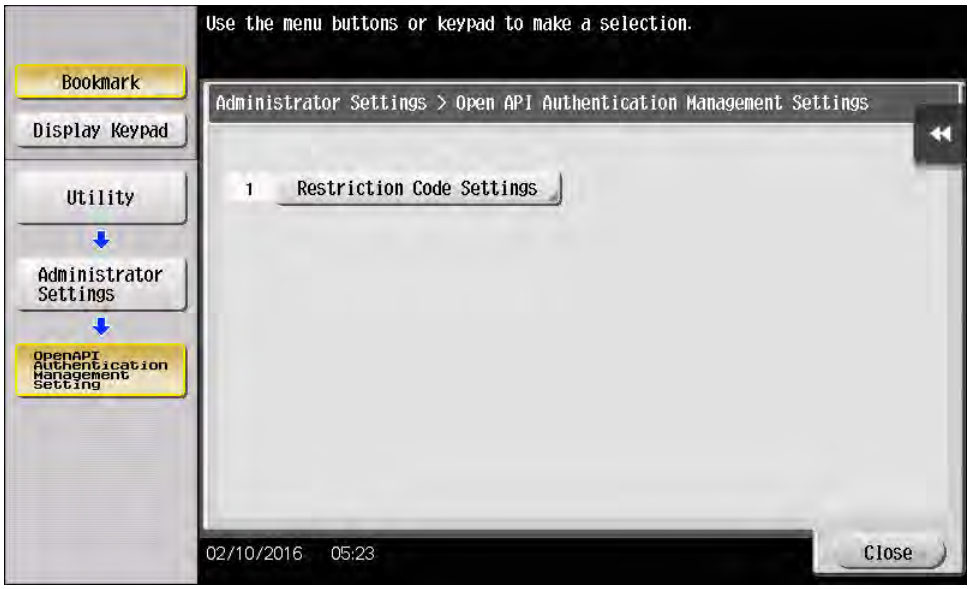
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Voice guidance	• To use voice guidance, the optional i-Option LK-104 v3 must be activated, and the optional local interface kit must be mounted. • For details of the functions, refer to I.2.11.26 Voice Guidance Settings - Voice Guidance.

2.4.5 OpenAPI Certification Management Setting

Administrator Settings > OpenAPI Certification Management Setting



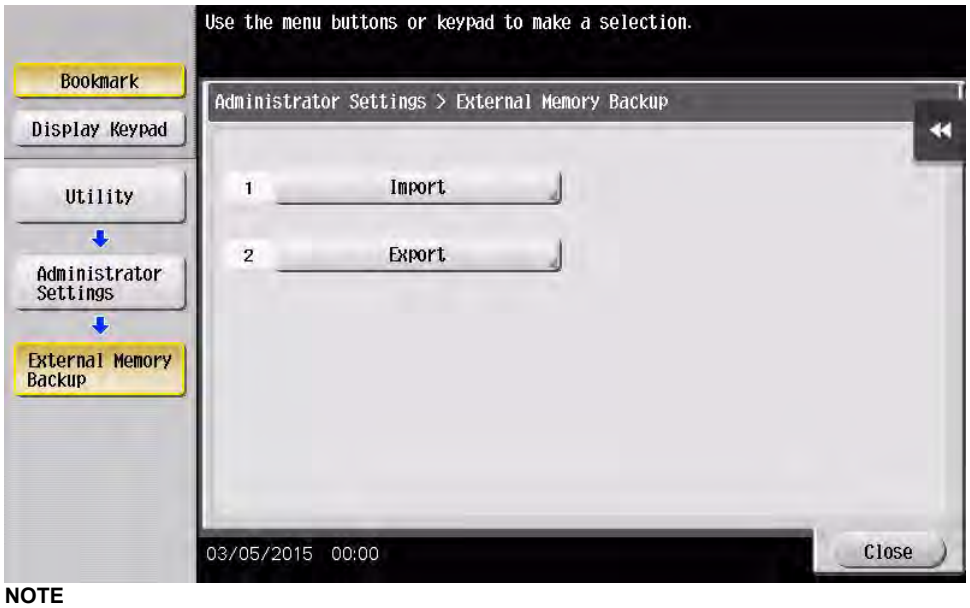
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Restriction Code Settings	These are communication settings for the application which is developed by the third vendor. Do not set or change these settings without vendor's instructions.

2.4.6 External Memory Backup

Administrator Settings > External Memory Backup



NOTE

- **Keys displayed on screens are different depending on the setting.**

Key name	Function/Precondition
Import	• It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.72 is set to [00000100] at Bit assignment/[04] at HEX assignment. • For details of the functions, refer to "I.2.11.27 External Memory Backup - Import/Export".
Export	

2.4.7 Remote Access Setting

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition	
Import/Export User Data	Allow	This displays when using the CS Remote Care system.
	Restrict	

2.4.8 Eco Copier Settings

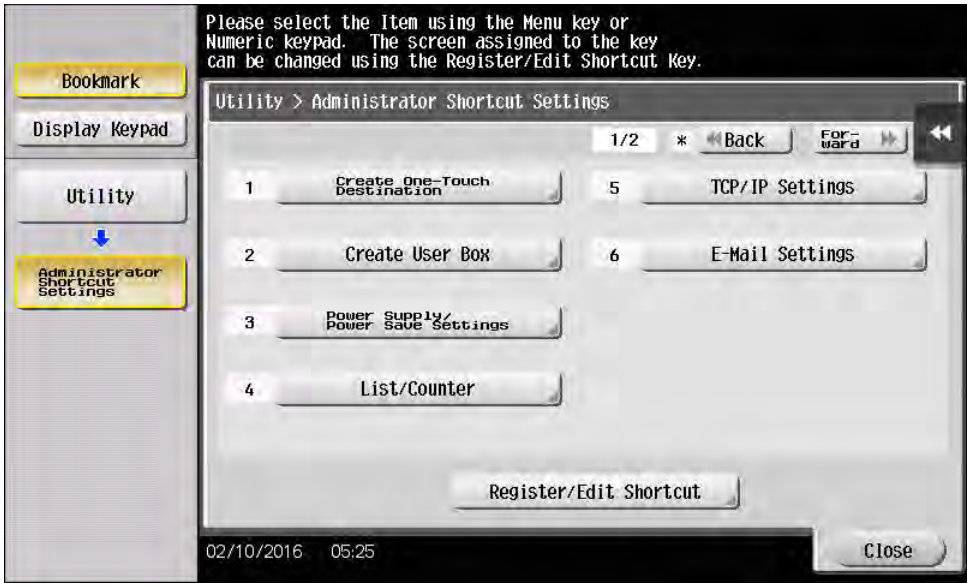
NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Eco Copier Settings	-

2.5 Administrator Shortcut Settings

2.5.1 Administrator Shortcut Settings [1/2]

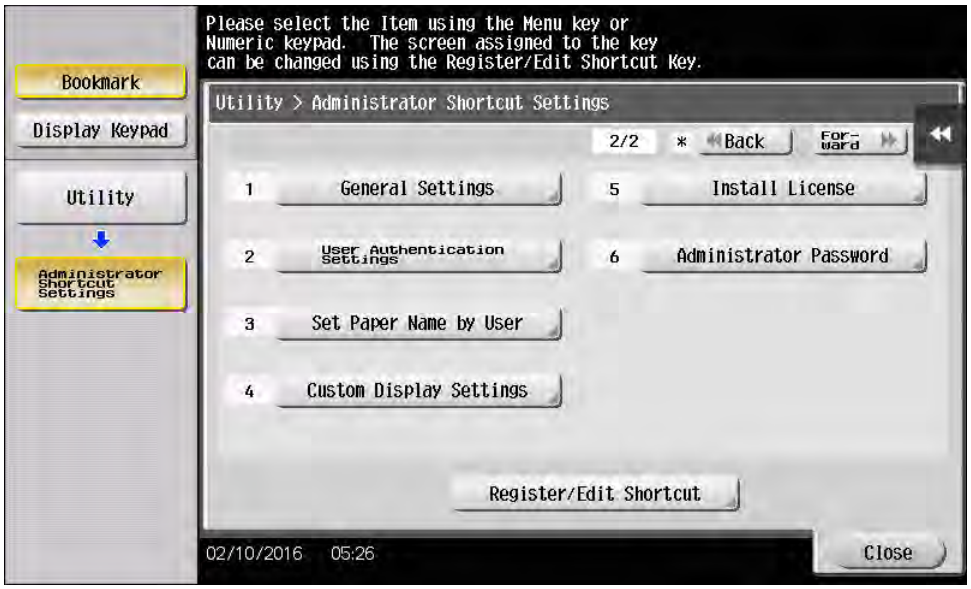


NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Create One-Touch Destination	The default setting for short cut keys 7/8 is "Do Not Use".
Create User Box	
Power Supply/Power Save Settings	
List/Counter	
TCP/IP Settings	
E-Mail Settings	

2.5.2 Administrator Shortcut Settings [2/2]



NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

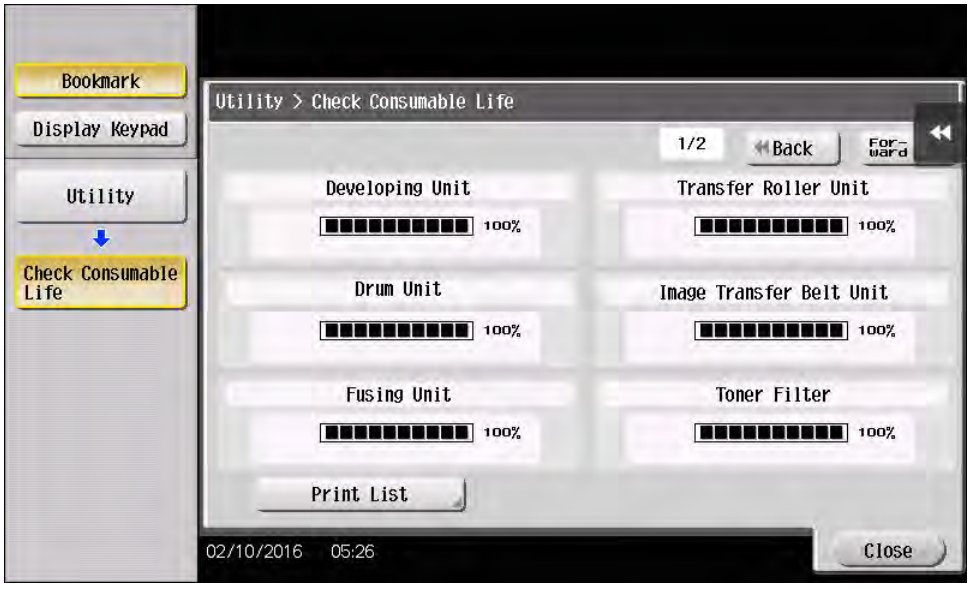
Key name	Function/Precondition
General Settings	The default setting for short cut keys 15/16 is "Do Not Use".
User Authentication Settings	
Set Paper Name by User	
Custom Display Settings	
Install License	
Administrator Password	

2.6 Check Consumables List

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

2.6.1 Check Consumable Life [1/2]



Unit Name
Developing Unit
Drum Unit
Fusing Unit
Transfer Roller Unit
Image Transfer Belt Unit

Unit Name
Toner Filter

2.6.2 Check Consumable Life [2/2]

Unit Name
Ozone Filter

2.7 Banner Printing

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Function Name	Function/Precondition
Allow	-
Restrict	-

2.8 My Panel Settings

NOTE

- **Keys displayed on screens are different depending on the setting.**

Function Name	Function/Precondition
Language Setting	• It is displayed when the PageScope My Panel Manager is installed. • This is displayed when a registered user is logging in after user authentication. However, this is not displayed when both management device 2 and user authentication are used. • Use : To make various settings about My Panel. To customize My Panel screen for individual registered users. • Registering, editing, and deleting My Panel settings are allowed when logging in as a registered user. • When My Panel is not customized, the settings for machine take effect in the three of the control panel settings, Language setting, Measurement unit setting, and Color selection setting. • Depending on the functions provided by each machine and the optional device configuration, not all My Panel settings may not take effect.
Measurement Unit Setting	
Copier Settings	
Scan/Fax Settings	
User Box Settings	
Function Display Key (Copy/Print)	
Function Display Key (Send/Save)	
Main Menu Settings	
Initial Screen Setting	

2.9 Device Information List

2.9.1 Device Information [1/2]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Function Name
Function Version
IPv4 Address
IPv6 Address
Serial Number
Contact Telephone Number
Auth. Function list display
QR Code Display

2.9.2 Device Information [2/2]

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Function Name
Contact Fax Number
Version Information

2.10 Remote Panel Operation List

NOTE

- **Keys displayed on screens are different depending on the setting.**
- **For details of the utility functions, refer to "User's Guide."**

Key name	Function/Precondition
Start	• It will be displayed when [Administrator Settings] -> [Network Settings] -> [Remote Panel Settings] -> [Client Settings] is set to “ON.” • To start remote operations of the control panel of the machine.

2.11 Supplementary explanation of utility mode

2.11.1 User Authentication/Account Track - Authentication Device Settings

- It will be displayed when [Service Mode] -> [Billing Setting] shows that the authentication device 2 is mounted.
- It will be displayed when [Administrator Settings] -> [Network Settings] -> [IWS Settings] is set to “ON.”

(1) General Settings

(a) Use

- Specifies a device used for user authentication.

Card Authentication	IC Card type setting	Select the type of the required IC card. • To use the FeliCa card, select [FeliCa], [SSFC], [FCF], [FCF (Campus)] or [FeliCa (Proprietary Card)]. When [SSFC] , is selected, detailed information such as the company code or company identification code is registered. • To use the Type A card, select [Type A]. • To use the FeliCa and Type A cards together, select [FeliCa+TypeA], [SSFC+TypeA], [FCF +Type A], [FCF(Campus)+Type A] or [FeliCa (Proprietary Card) +Type A]. When [SSFC +TypeA] is selected, detailed information such as the company code or company identification code is registered. • To use NFC, select [NFC(HCE)]. • To use the Type A card with NFC, select [TypeA+NFC(HCE)]. • To use the FeliCa card with NFC, select [FeliCa+NFC(HCE)], [SSFC+NFC(HCE)], [FCF +NFC(HCE)], [FCF(Campus)+NFC(HCE)], or [FCF(Proprietary Card)+NFC(HCE)]. When [SSFC+NFC(HCE)] is selected, detailed information such as the company code or company identification code is registered.	
		Card Detail Settings	The settings information of for the registered IC card loadable driver can be changed via the Web browser on the machine. This does not display if any of the following conditions are satisfied. • A driver other than the AU-201S loadable driver is installed.
	IC Card Type	The type of the IC card which has been set will be displayed. • This is displayed when the loadable driver used for the YSoft card reader has been installed.	
	Operation Settings	Set how to log in to this machine. • [Card Authentication]: Pass the IC card or NFC-compatible Android device over the authentication unit to log in. • [Card Authentication + Password]: Pass the IC card or NFC-compatible Android device over the authentication unit, and enter the password to log in. [Card Authentication] is specified by default.	
	Authentication Card ID Number	• Specify whether to notify the counter, which collects the use status of this machine, of the authentication card ID. • [Ignore] is specified by default.	
	USB Device identification information	Set the identification information of the connected USB keyboard emulation card reader. This is displayed when the loadable driver used for the USB keyboard emulation card reader has been installed. • [Vendor ID]: Set the vendor ID of the card reader. * • [Product ID]: Set the product ID of the card reader. *	
Bio Authentication	Beep Sound	• Set whether to give a "blip" sound when the finger vein pattern is scanned successfully. • [ON] is specified by default.	
	Operation Settings	Set how to log in to this machine. • [1-to-many authentication]: A user simply needs to place his or her finger to log in. • [1-to-1 authentication]: A user needs to enter the user name and place his or her finger to log in. [1-to-many authentication] is specified by default.	

- *: Vendor ID and Product ID are identification information to specify USB devices.

(b) Procedure

- Select either one of the authentication devices and press the corresponding key to go to the individual operation setting screen.
- The screen displays the authentication device that is selected in [Service Mode] -> [Billing Setting] -> [Authentication Device 2].
- If SSFC (Shared Security Formats Cooperation) is selected in Card Authentication, set [Company Code], [Company Identification Code], [Area No.], [Building No.], [Floor No.], [Room No.], and [Security Level].

(c) Setting items for SSFC card information

- When using SSFC card, acquire the following information from the administrator and convert the value to input using the control panel.

Information to be obtained from the administrator		
Items of FeliCa SSFC detail setting	Sample-data (decimal number)	Setting value (hexadecimal number)
Room number	37	00 25
Floor number	15	00 0F

Information to be obtained from the administrator		
Items of FeliCa SSFC detail setting	Sample-data (decimal number)	Setting value (hexadecimal number)
Building number	50	00 32
Area number	85	00 55
Security level	2	00 02
Company identification code (CL code) *1	06BGLQVX17 (ASCII code)	30 36 42 47 4C 51 56 58 31 37
Company code *2	CompanyA (ASCII code)	CompanyA

*1: The character length of the company code is 10 bytes.
*2: Use alphabetical upper case/lower case characters and numeric characters for Company code. When the company code is not set, this space will be left blank.

(2) Logoff Settings

(a) Use

- Select whether or not the user is logged off after a scan or fax is sent or after the copy document is scanned.

(b) Default setting

- Do not log off

(c) Setting item

- Do not log off
- Log off

2.11.2 Network Settings - Network Fax Settings

- It will not be displayed on the screen when all items are set to “OFF” in [Service Mode] -> [System 2] -> [Network Fax Settings].

(1) Network Fax Function Settings

(a) IP Address Fax Function

- Setting will be available when [IP Address Fax] is set to “ON” in [Service Mode] -> [System 2] -> [Network Fax Settings].

(a) Use

- To set whether or not to use IP address fax function.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(b) Internet Fax Function

- Setting will be available when [Internet Fax] is set to “ON” in [Service Mode] -> [System 2] -> [Network Fax Settings].

(a) Use

- To set whether or not to use Internet fax function.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(2) SMTP TX Settings

(a) Use

- To set SMTP TX when network fax function is being used.
- To set SMTP TX port number and connecting time out period when network fax function is being used.

(b) Port No.

(a) Procedure

1. Touch [Input].
2. Enter the port number between 1 and 65535 using the 10-key pad.

(c) Connection Timeout

(a) Procedure

1. Touch [Input].
2. Enter the connection timeout time between 5 and 1000 (sec.) using the 10-key pad.

(3) SMTP RX Settings

(a) Use

- To set SMTP RX when network fax function is being used.
- To set SMTP RX port number and connecting time out period when network fax function is being used.

(b) SMTP RX

(a) Default setting

- OFF

(b) Setting item

- ON
- OFF

(c) Port No.

(a) Procedure

1. Touch [Input].
2. Enter the port number between 1 and 65535 using the 10-key pad.

(d) Connection Timeout

(a) Procedure

1. Touch [Input].
2. Enter the connection timeout time between 5 and 1000 (sec.) using the 10-key pad.

2.11.3 Network Settings - Network I/F Configuration

- It will be displayed when the optional upgrade kit UK-212 is mounted.

(1) Use

- To add a network interface to this machine, set a network interface configuration.

Wired Only	Select this option to use this machine only in the wired LAN environment.
Wireless Only	Select this option to use this machine only in the wireless LAN environment. This machine runs as a wireless LAN adapter in the wireless LAN environment.
Wired + Wireless (Secondary Mode)	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a wireless LAN adapter in the wireless LAN environment.
Wired + Wireless (Primary Mode)	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a wireless LAN access point in the wireless LAN environment.
Wired + Wireless (Wi-Fi Direct)	Select this option to use this machine in both the wired LAN environment and wireless LAN environment. This machine runs as a group owner of Wireless LAN Direct in the wireless LAN environment.

(2) Default setting

- Wired Only

2.11.4 Network Settings - Wireless Network Setting

- Configure settings to use this machine as a wireless LAN access point or wireless LAN adapter.
- It will be displayed when the optional upgrade kit UK-212 is mounted.

(1) Use

(a) [Wireless Only] or [Wired + Wireless (Secondary Mode)]

- [Wireless Only] or [Wired + Wireless (Secondary Mode)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default.
Easy Setting (WPS)	Configure a setting to automatically obtain connection information from an access point. The access point must support the WPS function.

	• [Push Button Method]: Select [Push Button Method], and touch [Start Operation] to try a connection with an access point. If you press the WPS setting button at the access point, settings such as SSID and security required for a connection are configured automatically. • [PIN Method]: Select [PIN Method], and tap [Start Operation] to display the PIN code. If you enter the displayed PIN code at the access point, settings such as SSID and security required for a connection are configured automatically. This function requires a computer that contains Windows 7 or later as the operating system.
Manual Setting	Manually configure settings items such as SSID and the encryption scheme that are required for a connection. • [SSID]: Enter the SSID of the wireless LAN access point connected to the machine (using up to 32 characters). • [40 to 20 MHz Auto Switch]: Select [ON] to try a high-speed communication with 40MHz. [OFF] is specified by default. • [Authentication/Encryption Algorithm]: Select the algorithm used for authentication or encryption. If [WEP] is selected, specify [Key Input Method] and [WEP Key]. To specify multiple WEP keys, select the required WEP keys in [Use key settings]. If an algorithm other than WEP is selected, specify [Key Input Method] and [Passphrase].
	• [Access point list]: Click this to automatically search for an access point around this machine. Select an access point to be connected to this machine from the displayed list. You can take over the setting of the selected access point to continue settings.
Connection Status	Allows you to check the access point connected to this machine, the radio field intensity of the access point, and the current communication speed.
Device Setting	Allows you to check the MAC address of the wireless network adapter.

(b) [Wired + Wireless (Primary Mode)]

• [Wired + Wireless (Primary Mode)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default. Set [Awake with ARP + Unicast Communication] for this function.
AP Mode Setting	Manually configure settings to use this machine as a wireless LAN access point. • [SSID]: Enter the SSID of this machine (using up to 32 bytes). When [Wired + Wireless (Primary Mode)] is selected in [Network I/F Configuration], the SSID of the access point is used. When [Wired + Wireless (Wi-Fi Direct)] is selected in [Network I/F Configuration], the SSID for Wi-Fi Direct connection is used. The SSID specified here is displayed on the Wi-Fi Direct (setting) screen of the terminal compatible with Wi-Fi Direct. If you cannot connect to this machine by specifying the SSID on the Wi-Fi Direct (setting) screen, specify [Virtual SSID] on the Wi-Fi (setting) screen to make a connection. • [40 to 20 MHz Auto Switch]: Select [ON] to try a high-speed communication with 40 MHz. [OFF] is specified by default. • [Authentication/Encryption Algorithm]: Select the algorithm used for authentication or encryption. [No Authentication/Encryption] is specified by default. • Specify [Key Input Method] and [WEP Key] when [WEP] is selected in [Authentication/ Encryption Algorithm]. To specify multiple WEP keys, select the required WEP keys in [Use key settings]. When [Wired + Wireless (Wi-Fi Direct)] is selected in [Network I/F Configuration], [WEP] is not available. • When an algorithm other than [WEP] or [No Authentication/Encryption] is selected in [Authentication/ Encryption Algorithm], specify [Key Input Method] and [Passphrase]. If necessary, specify whether to automatically update the Encryption Key in [Passphrase Auto Update]. To automatically update the Encryption Key, enter its update interval in [Update Interval].
Wireless Channel	Set a wireless channel to be used by the access point. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default.
ANY connection	Select whether to allow ANY connection. If [Restrict] is selected, the SSID cannot be detected automatically as an access point in the wireless LAN adapter side. [Allow] is specified by default. This option is displayed only when [Wired + Wireless (Primary Mode)] is selected in [Network I/F Configuration].
MAC Address Filtering	Restricts wireless LAN adapters that can be connected to the access point using the MAC address. Enter the MAC addresses of wireless LAN adapters that can be connected to the access point. MAC addresses of up to 16 devices can be registered. This option is displayed only when [Wired + Wireless (Primary Mode)] is selected in [Network I/F Configuration].
DHCP Server Settings	Configure a setting to use the DHCP server function. • [Enable Settings]: Select whether to enable the DHCP server function. [Disabled] is specified by default.

	• [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function. • [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function. • [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.
No. of Concurrent Devices Allowed	Enter the number of devices that can be connected simultaneously to the access point. [5] devices is specified by default.
Signal Strength Setting	Select the radio field intensity of the access point from three levels (Low, Middle, and High). [High] is specified by default.
Device Setting	Allows you to check the MAC address of the wireless network adapter.
Display Connected Devices	Displays a list of names and MAC addresses of wireless LAN adapters that are connected to the access point.
Virtual SSID	Displays the automatically generated virtual SSID. This option is available when a terminal incompatible with Wi-Fi Direct is connected to this machine. A virtual SSID is displayed on the Wi-Fi (setting) screen of a terminal incompatible with Wi-Fi Direct. The virtual SSID is displayed with "DIRECT-XXXXXX" ("XXXXXX" indicates a combination of the random alphanumeric characters and the specified value of [SSID]). This option is displayed when [Wired + Wireless (Wi-Fi Direct)] is selected in [Network I/F Configuration].

(c) [Wired + Wireless (Wi-Fi Direct)]

• [Wired + Wireless (Wi-Fi Direct)] is selected in [Administrator Settings] -> [Network Settings] -> [Network I/F Configuration]

Awake from ErP	Select the method to return the machine from the ErP Auto Power Off mode. • [OFF]: The machine is not returned from the ErP Auto Power Off mode. • [Awake with Magic Packet]: The machine returns from the ErP Auto Power Off mode when receiving a magic packet. • [Awake with ARP + Unicast Communication]: The machine returns from the ErP Auto Power Off mode when receiving a unicast communication packet. [Awake with Magic Packet] is specified by default. Set [Awake with ARP + Unicast Communication] for this function.
AP Mode Setting	Manually configure a setting to operate this machine as a Wi-Fi Direct group owner. • [SSID]: Enter the SSID to use this machine as a Wi-Fi Direct group owner (using up to 32 bytes). This option is available when a device compatible with Wi-Fi Direct is connected to this machine. The SSID specified here is displayed on the Wi-Fi Direct (setting) screen of the device compatible with Wi-Fi Direct. If you cannot connect to this machine by specifying the SSID on the Wi-Fi Direct (setting) screen, specify [Virtual SSID] on the Wi-Fi (setting) screen to make a connection. • [40 to 20 MHz Auto Switch]: Select [ON] to try a high-speed communication with 40MHz. [OFF] is specified by default. • [Authentication/Encryption Algorithm]: The algorithm for authentication or encryption is fixed to [WPA2-PSK(AES)]. A passphrase is generated automatically. If necessary, specify whether to automatically update the Encryption Key in [Passphrase Auto Update]. To automatically update the Encryption Key, enter its update interval in [Update Interval].
Wireless Channel	Set a wireless channel to be used by the access point. Selecting [Auto] searches for a channel that is not being used for other access points, and automatically assigns it to the access point. [Auto] is specified by default.
DHCP Server Settings	Configure a setting to use the DHCP server function. • [Enable Settings]: Select whether to enable the DHCP server function. [Disabled] is specified by default. • [IPv4 lease address]: Specify the range of IPv4 addresses to be leased from the DHCP server when enabling the DHCP server function. • [Subnet Mask]: Specify the subnet mask of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function. • [Lease Period]: Specify the lease period of the IPv4 address to be leased from the DHCP server when enabling the DHCP server function.
No. of Concurrent Devices Allowed	Enter the number of devices that can be connected simultaneously to the access point. [5] devices is specified by default.
Signal Strength Setting	Select the radio field intensity of the access point from three levels (Low, Middle, and High). [High] is specified by default.
Device Setting	Allows you to check the MAC address of the wireless network adapter.
Display Connected Devices	Displays a list of names and MAC addresses of wireless LAN adapters that are connected to the access point.
Virtual SSID	Displays the automatically generated virtual SSID. This option is available when a device incompatible with Wi-Fi Direct is connected to this machine. A virtual SSID is displayed on the Wi-Fi (setting) screen of a device incompatible with Wi-Fi Direct. The virtual SSID is displayed with "DIRECT-XXXXXX" ("XXXXXX" indicates a combination of the random alphanumeric characters and the specified value of [SSID]).

2.11.5 Network Settings - IWS Settings

NOTE

- **It will be displayed when [Administrator Settings] -> [Security Settings] -> [FIPS Settings] is set to "Disable."**

(1) Use

- To configure the settings of the WebDAV server which is used to transfer data in the IWS (Internal Web Server) function.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- When selecting [ON], configure the following settings.

1. Set the port number in [Port Number] (Web Server/Application Installation) using the 10-key pad.
2. Set Allow/Restrict for the connection of application in [Connect IWS Apps to Network].
3. Select whether to allow an external application to operate the IWS application on this machine in [Permit Access for Communication between the applications].
4. Select whether to notify you of the user name and password of the user who is using this machine, when the IWS application on this machine operates that of a different device in [Login Information Notification Settings].
5. The following settings are available when the IWS application has been registered.
   - Print Data Conversion Setting: Select a print data conversion application.
   - Authentication Screen Setting: Select an authentication screen application.
   - Background Application Setting: Select a background application.
   - Application List: Display the list of the registered applications (up to 50 applications)
   - Administrator Password Change Setting: It will be displayed when [Administrator Settings] -> [Security Settings] -> [Administrator Password Change Permission Setting] -> [IWS Application] is set to "Allow." Specify whether to allow a change of the administrator password for each IWS application.

2.11.6 Network Settings - Remote Panel Settings (outline)

- It will not be displayed when [Service Mode] -> [Enhanced Security] -> [CE Authentication] is set to "OFF."
- Issue and install the self-signed certificate from Device Certificate Setting under Security Setting of PageScope Web Connection.
- Enable CE Password.
- The control panel of this machine can be operated remotely from a computer on the network.
- The following two methods are available for operating the control panel.
- During remote operations, display on the control panel can be masked to thereby lock the operation on the machine side (the machine control panel is forced into the locked state when the machine is set into the service mode through remote operation).
- The control panel can also be unlocked through remote operation. The machine control panel is enabled when unlocked remotely.
- Operations performed through the machine control panel while it is in the unlocked state can be reflected in the remote panel side.
- The remote operations are disabled under the following conditions:
  - Service mode operations are being performed on the machine.
  - Remote operations are already performed from another PC.

(1) Methods of the Remote panel

The following two methods are available for operating the control panel.

Using the dedicated software	• This method uses the dedicated software that collects screen information of the control panel of this machine periodically, and operates the control panel from a computer on the network. • You must prepare a dedicated remote control software program and server. Despite the burden, this method enables you to control the machine remotely even from a computer located outside the router network.
Accessing the machine directly	• This method accesses this machine directly from another computer on the network, and operates the control panel of the machine using a Web browser. • A dedicated remote control software program is not required, but the computer used for the remote control must be able to access this machine.

2.11.7 Network Settings - Remote Panel Settings (Server Settings)

(1) Use

- To access this machine directly and control the control panel of the machine remotely, select [ON].

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- If [ON] is selected, configure the following settings.

(a) <Server Settings - Password Authentication>

- Select whether to request password entry for connecting with this machine. To request for a password entry, select [Yes], and enter the password (using up to 64 characters).

(b) <Server Settings - IP Filtering (Permit Access)>

- Select [Enable] to specify IP addresses allowed to access. Also enter the range of IP addresses allowed to access.

(c) <Port Number>

- To set the port number.

NOTE
Starting the remote operations
Access the machine web server (URL: https://IP_address_of_MFP:Port_Number/panel/top.html) through the web browser.

- **If Password Authentication is set, enter the set password.**
- **If IP Filtering is enabled, connection can be established only through the authorized address.**

2.11.8 Network Settings - Remote Panel Settings (Client Settings)

(1) Use

- To control the control panel of this machine remotely using the dedicated software, select [ON].

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- If [ON] is selected, configure the following settings.

(a) <Port No.>

- To set the port number.

(b) <Connection Timeout>

- To set the time-out time. (60 Second is specified by default)

(c) <Server Address>

- Enter the address of the server where the dedicated software was installed.

(d) <Certificate Verification Level Settings>

- To verify the server certificate, configure settings to verify the certificate.

Expiration Date	Select whether to check that the server certificate is within the validity period.
Key Usage	Select whether to check that the server certificate is used according to the purpose approved by the issuer.
Chain	Select whether to check that the server certificate chain (certification path) is correct.
Expiration Date Confirmation	Select whether to check that the server certificate is within the validity period. The OCSP service and CRL (Certificate Revocation List) are checked in this order when the expiration date of the certificate is checked.
CN	Select whether to check that the CN of the server certificate matches the server address.

(e) <Synchronize WebDAV Client Setting>

- Select whether to use the proxy server for WebDAV transmission as a proxy server for the server where the dedicated software was installed.
- To use a different proxy server, select [Individual Settings] and enter the proxy server information.

(f) <Launch Remote Panel from vCare>

- To set whether or not to allow the remote panel to be started from the remote diagnosis system.

2.11.9 Machine Update Settings - Internet ISW Settings

- This is displayed when [Function Setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

(1) Update Firmware at Specified Time

- This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].

(a) Use

- To update the downloaded firmware at the specified time.

(b) Default setting

- No

(c) Setting item

- Yes
- No
- If [Yes] is selected, set the time to update the firmware.

(2) FTP Server Settings

- This is displayed when [FTP data acquisition setting] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [FTP Setting].

(a) Use

- To set whether to connect via a proxy server to access the FTP server.
- To configure the settings related to the server for connection via a proxy server.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

- If [ON] is selected, configure the following settings.

1. Touch [Host Address] in [Proxy Server Address] to set the host address of the proxy server.
2. Set the port number used to access the proxy server in [Proxy Server Port Number].

(3) Firmware Update Parameters

- This is displayed when [Open Mode Settings] is set to [Set] in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].
  This will be displayed when [URL] and [File Name] are set in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting].

(a) Use

- To download and update the firmware.
- When you wish to update the firmware at the specified time, after downloading it in the way described here, you can specify the time in [Update Firmware at Specified Time].

(b) Procedure

1. Touch [Download] in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Internet ISW Settings] -> [Firmware Update Parameters].
2. Select [Yes] in the confirmation screen and touch [OK].
3. The firmware download starts.
4. The message to show the status will be displayed on the screen while connecting and transferring data.
5. Select [Upgrade] or [Delete].
   - Touching [Upgrade] starts updating using the downloaded firmware data. Select [Yes] in the confirmation screen and touch [OK].
   - Touching [Delete] will delete the downloaded firmware data. Select [Yes] in the confirmation screen and touch [OK].
6. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

NOTE

- **To download the firmware, in addition to the necessary proxy settings configured in [FTP Server Settings], you need to configure appropriate settings in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [HTTP Setting], [FTP Setting], and [Forwarding Access Setting].**

2.11.10 Machine Update Settings - Machine Auto Update setting

- Obtain the update file for this machine from the file storage server to update the firmware or settings of the machine.
- This function is same as that of the service mode, but it will not be used together with the function of the service mode.
- Refer to "J.5.3 Procedures for rewriting the firmware by using the Auto Update function" for how to create an update file.

(1) Auto Update Settings for This Machine

(a) Use

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

If [ON] is selected, configure the following settings.

(1) When configuring the settings for SMB with the download protocol

NOTE

- **If the machine relay server is used as a server on the data providing side, the SMB protocol will not be used.**
- <Host Name>: Set the host name of the SMB server.
- <File Path>: Set the file path used in the SMB server communication.
  NOTE
  - **Specify the folder in which C_UpdateList.ini is stored. Refer to "J.5.3 Procedures for rewriting the firmware by using the Auto Update function" for details.**
- <User Name>: Set the user name used to access the SMB server.
- <Password>: Set the password used to access the SMB server.
- <Number of retries>: Set the number of times to retry when failed to obtain.
- <Update Time>: Touch Clear to set the time to update the machine.
- <Polling Interval>: Set the polling period for obtaining the update list.
- <Retry Interval>: Set the period for retrying when failed to obtain.

(2) When configuring the settings for HTTP with the download protocol

- <URL>: Set the address of the http server.
  NOTE
  - **Specify the folder in which C_UpdateList.ini is stored. Refer to "J.5.3 Procedures for rewriting the firmware by using the Auto Update function" for details.**
- <User Name>: Set the user name used to access the http server.
- <Password>: Set the password used to access the http server.
- <Proxy>: Select whether to use the proxy server.
  NOTE
  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**
- <Connection Timeout>: Set the timeout period for connecting to the server.
- <Update Time>: Touch Clear to set the time to update the machine.
- <Polling Interval>: Set the polling period for obtaining the update list.
- <Retry Interval>: Set the period for retrying when failed to obtain.

(2) Relay Server Function Setting

Obtain an update relay data, and configure settings for the relay server function which enables the file to be shared with the other machine.

(a) Update File Download

- Set a relay server to obtain the update relay data from file storage server.
- When [ON] is selected, configure the following settings.
- [OFF] is default.

(1) Procedure

- <URL>: Set the address of the file storage server.
  NOTE
  - **Specify the folder in which S_UpdateList.csv is stored. Refer to "J.6.3 Firmware relay procedures by using "relay server function"" for details.**
- <User Name>: Set the user name used to access the file storage server.
- <Password>: Set the password used to access the file storage server.
- <Proxy>: Select whether to use the proxy server.
  NOTE
  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**
- <Polling Interval>: Set the polling period for obtaining the update list.
- <Retry Interval>: Set the period for retrying when failed to obtain.

- <Connection Timeout> Set the timeout period for connecting to the server.

(b) Authentication Setting

- Configure the authentication settings of access management works as an update relay data sharing server.
- When [ON] is selected, configure the following settings.
- [OFF] is default.

(1) For SMB Setting

- DO NOT use the SMB setting

(2) For HTTP Setting

- <User Name>: Set the user name used to access the relay server by http protocol.
- <Password>: Set the password used to access the relay server.

NOTE

- **Once a password is set, be sure not to forget it. It is required for reset.**
- **Please refer to "J.6.3.3 Download the firmware opened from the relay server by using the Auto Update function on the other MFP" for the file path of relayed data.**

(3) Log TX setting

(a) Update File Download/Update Log

- Save the update file download log for auto update of the machine, and send it to the specified location.
- When [ON] is selected, configure the settings for transmission protocol.
- [OFF] is default.

(1) For PC (SMB)

- <Host Name>: Set the host name of the SMB server.
- <File Path>: Set the file path used for SMB server communication.
- <User Name>: Set the user name used to access the SMB server.
- <Password>: Set the password used to access the SMB server.

(2) For WebDAV

- <URL>: Set the address of the WebDAV server.
- <User Name>: Set the user name used to access the WebDAV server.
- <Password>: Set the password used to access the WebDAV server.
- <Proxy>: Select whether to use the proxy server.

  NOTE

  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(b) Relay Update File Download Log

- Save the log related to update relay data download for the relay server, and send it to the specified location.
- When [ON] is selected, configure the settings for transmission protocol.
- [OFF] is default.

(1) For PC (SMB)

- <Host Name>: Set the host name of the SMB server.
- <File Path>: Set the file path used for SMB server communication.
- <User Name>: Set the user name used to access the SMB server.
- <Password>: Set the password used to access the SMB server.

(2) For WebDAV

- <URL>: Set the address of the WebDAV server.
- <User Name>: Set the user name used to access the WebDAV server.
- <Password>: Set the password used to access the WebDAV server.
- <Proxy>: Select whether to use the proxy server.

  NOTE

  - **If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(4) Log Confirmation

- Check the log related to update file download for auto update of the machine or update relay data download for relay server.
- The latest five logs can be checked.

(5) Immediate Update

- This is displayed when [Auto Update Settings for This Machine] is set to [ON] in, [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Machine Auto Update setting] with the following condition.
- This is displayed when the update file for auto update settings has been downloaded in HDD.

(a) Use

- To conduct Machine Auto Update manually.

(b) Procedure

- Touch [Immediate Update] to start update.
- Touch [Yes] on the confirmation screen, and touch [OK].

NOTE

Do not set the power to OFF under the following state.

- **It takes about 45 seconds from touching [Immediate Update] -> [Start] to the next operation of the MFP (Auto Power OFF).**
- **About one minute after the download completed screen being displayed, the MFP will restart.**
- **When rewriting configuration files followed by the firmware, the MFP will restart again.**

(6) Machine Update Password

(a) Use

To set a password used to decrypt the configuration file(s) of the machine.

(b) Procedure

Enter the decryption password using the on-screen keyboard.

- <Current Password>: Enter the currently used decryption password (only when the decryption password has been set).
- <New Password>: Enter the new decryption password.
- <Password Confirmation>: Enter the new decryption password again.

NOTE

- **Once a password is set, be sure not to forget it. It is required for reset.**
- **Please refer to "J.5. Auto Update setting" for how to make the configuration file(s).**

2.11.11 Machine Update Settings - HTTP Proxy Settings

(1) Use

- To select whether to connect via a proxy server to access the http server.
- To configure the settings of the server related to connection via a proxy server.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- If [ON] is selected, configure the following settings.

1. Touch [Host Address] in [Proxy Server Address] to set the host address of the proxy server.
2. Set the port number used to access the proxy server in [Proxy Server Port Number].
3. Select whether to perform an authentication to access a proxy server. If [ON] is set, enter the user name and password.

2.11.12 Security Settings - Prohibited Functions When Authentication Error

(1) Use

- To set the function for prohibiting authentication operation in order to prevent the unauthorized access.
- To use when setting the system to prohibit authentication failure when conducting authentication by password, etc.
- Authentications which are subjected to this function: CE authentication, administrator authentication, user+ accounts authentication, SNMP authentication, secure print authentication, user box authentication.

(a) Mode

Mode 1	When failed to authenticate, authentication operation (entering the password) will be prohibited for a certain period of time.
Mode 2	• When failed to authenticate, authentication operation (entering the password) will be prohibited for a certain period of time. The number of times failure occurred will be counted, and when the number reaches to the specified time, authentication will be prohibited and the access will be locked. • When the machine goes into an access lock condition, release the lock in the following procedure.

(b) Authentications

User & Accounts authentication	• Touch keys in the following order. [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Prohibited Functions When Authentication Error]. Then touch [Release].
SNMP authentication	
Secure print authentication	
User Box authentication	
WebDAV Server authentication	
Remote Panel authentication	

Administrator authentication	• After the main power switch is turned OFF and ON, the access lock is released automatically after the lapse of a predetermined period of time.
	• [Service Mode] -> [Enhanced Security] -> [Administrator unlocking]
CE authentication	1. Main power switch is turned OFF and ON. 2. Touch Menu -> [Counter] -> [Print List]. 3. Touch [Display Keypad], displaying 10-key pad. 4. The lock release timer starts to operate by input the Stop -> 0 -> 9 -> 3 -> 1 -> 7 5. When the timer reaches the time specified in this setting, the access lock is released.

(2) Default setting

- Mode 1

(3) Setting item

- Mode 1
- Mode 2

NOTE

- **If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", selecting "Mode 1" in this setting cancels enhanced security mode.**
  Only the number of times for trials up to the access lock can be changed.
- **When [Mode 2] is selected, set the number of times where checks are made before access is locked.**

(4) Procedure

- Touch [Release Time Settings] and set a period of time that elapses before access lock is released.

2.11.13 Security Settings - Enhanced Security Mode

(1) Use

- To set whether or not to enhance security.
- To use when enhancing the security function at user's option.
- The following settings are necessary for setting the security enhancement "ON".

Administrator Password	Change it with the one which meets password rules.
User Authentication	Set to "ON (MFP)", "External Server Authentication", or "Main + External Server".
HDD encryption word	Set the encryption word with 20 characters.
SSL Certificate	Register self-certificate for SSL communication from the PSWC.
CE Password	Change it with the one which meets password rules.
CE Authentication	Set to [ON].
Image Controller Setting	Set to [Controller 0].
Management Function Choice	Set to "Unset."

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

NOTE

- **Note that setting Enhanced Security Mode to "ON" disables the following functions.**
  - **Print Data Capture (forcibly prohibited when Enhanced Security Mode is set to "ON")**
  - **In CS Remote Care, the following operation is prohibited.**
    - **Rewriting instructions of firmware, communication of the account track counter information, the setting renewal of the machine.**
    - **Firmware upgrading through Internet ISW (When the Enhanced Security Mode is set to ON, the setting of this function cannot be changed from "OFF.")**
- **Setting the Enhanced Security Mode "ON" will change the setting values for the following functions.**
- **In addition, the indicator of "not be changed" below indicates that the settings cannot be changed while Enhanced Security Mode is maintained "ON".**

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
Password Rules	**To apply the password rule to enhance security.**	**Disable**	**Enable (not to be changed)**
Prohibited Functions When Authentication Error	**To set the function for prohibiting Authentication operation in order to prevent the unauthorized access.**	**Mode 1**	**Mode 2 (not to be changed): Three times is set. * The number of times can be changed to once, twice, or three times. (It is twice, four or six times for WebDAV server password.)**
Confidential Document Access Method	**To display the status of the Authentication system on the control panel for the Confidential document access.**	**Mode 1**	**Mode 2 (not to be changed) * In association with Prohibited Functions When Authentication Error, the method is changed from authentication using Secure Document ID and password (Mode 1) to that using the password with**

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
			the Secure Document first narrowed down by Secure Document ID (Mode 2).
Public User Access	To permit use by a public user having no user registration if user authentication setting has been made.	Restrict	Restrict (not to be changed)
User Name List	To display the list key for User names on User Authentication screen.	OFF	OFF (not to be changed)
Print without Authentication	To allow or restrict printing which user and account are not specified.	Restrict	Restrict (not to be changed)
Counter Remote Control	To select whether or not to allow the Center to acquire counter information managed by the machine when CS Remote Care is used.	Restrict	Restrict (not to be changed)
URL Home Settings	To set whether to enable the Scan to URL function.	Enable	Disable (not to be changed)
Simple Auth. (Authentication Setting)	You can print from the printer driver using authentication that requires only your user name (without password).	Restrict	Restrict (not to be changed)
User Box Administrator Setting	To set whether to allow or restrict the Box Administrator to use the system.	Restrict	Restrict (not to be changed)
Use SSL/TLS	To set whether to encrypt access by SSL.	OFF	ON (not to be changed)
SSL Encryption Strength	To set the SSL encryption strength for the SSL encryption communication.	AES-256, 3DES-168, RC4-128	AES/3DES (not to be changed to one containing strength lower than AES/3DES)
Automatically Obtain Certificates of S/MIME	-	No	No (not to be changed)
S/MIME Encryption Method	-	3DES	3DES (not to be changed to DES or RC-2)
FTP Server Settings	To set whether to use FTP server or not.	ON	OFF (not to be changed)
Server Capacity Reduction Send Method	Select the sending method to reduce the load of the E-mail server (SMTP).	OFF	When [Stop URL when max. limit is exceeded] or [Always Send via URL] is selected, this option is set to [OFF].
SNMP v1/v2c Settings	To use when changing Write setting.	Read/Write enable	Invalid (not to be changed)
SNMP v3 Security Level and auth/priv-password	To set the security level for the Reading/Writing Authority User which is used for SNMP v3.	auth/priv-password	• The security level can be selected from among [auth-password] and [auth/priv-password]. • An 8-digit-or-more auth-password and priv-password can both be set.
Print Data Capture	To set whether to allow or restrict capturing the Print Job Data.	Allow	Restrict (not to be changed)
Network Setting Clear	To clear the network setting through PageScope Web Connection.	Enabled	Restrict
Release Time Settings	To set the period of time to be elapsed before the access lock state is released.	5 min.	The setting value should be 5 min. or more (no value less than 5 can be set)
Destination Registration Change by User (Address Book and Program destination)	-	Allow	Restrict (not to be changed)
Preview Secure Document User Box	-	Thumbnail View, Detail View, and Document Details are enabled	Only Detail View is enabled before password authentication (Mode 2)
Initialize (Network Settings)	To clear the network related settings.	Enabled	Restrict (not to be changed)
Image Log Transfer Settings	Specifies whether to transfer the input or output image data to the server using whenever	OFF	OFF (not to be changed)

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
	machine inputs or outputs image data.		
Machine Update Settings	To set firmware upgrading by Internet ISW, and enable or disable various settings.	No	No (not to be changed)
Operation Ban release time (CE Authentication)	To set the period of time to be elapsed before the access lock state is released in CE password authentication.	5 min.	The setting value should be 5 min. or more (no value less than 5 can be set)
E-mail RX Print	To print an E-mail attachment, send an E-mail to the E-mail address of this machine.	OFF	OFF (not to be changed)
IWS Settings	Set the operating environment of IWS (Internal Web Server) function.	OFF	OFF (not to be changed)
Report File Attachment	To set whether to convert a TX result report to a file and attach it to an E-mail.	With Attachment	Without Attachment (not to be changed)
Storage data backup	To set whether to permit our service representative to back up or restore the storage on this machine.	Restrict	Restrict (not to be changed)
CS Remote Care	CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone/fax line, network or E-mail in order to control the machine.	Usable	Remote device setting disabled
Maintenance Mode Permission	To set whether to permit your service representative to change [Administrator Settings] of a device without authentication.	Restrict	Restrict (not to be changed)
Simple Connection Setting	To set the pairing method to connect to an Android/iOS terminal.	• QR Code Display Setting: OFF • Enable NFC: OFF • Enable Bluetooth LE: OFF	• OFF (not to be changed) • OFF (not to be changed) • OFF (not to be changed)
SSL Setting (WebDAV Server Settings)	Specify whether to use the SSL for communication or not.	Non-SSL Only	SSL Only (not to be changed)
SSL Setting (OpenAPI Settings)	Specify whether to use the SSL for communication or not.	Non-SSL Only	SSL Only (not to be changed)
Web Browser Setting	Select whether to enable a Web Browser.	OFF	OFF
Remote Panel Settings	Configure settings for remotely controlling the Control Panel of this machine from another computer.	• Client Settings: OFF • Server Setting: OFF	• OFF • OFF
Hide Personal Information (MIB)	Specify whether or not to display the file name, destination, and User Box name and number of the MIB information.	ON	ON
Import/Export User Data	Specify whether to allow importing/exporting of the destinations registered on this machine (one-touch destinations, groups, and programs), authentication information from the remote diagnosis system.	Restrict	Restrict
Administrator Password Change Permission Setting	Specify whether to allow the administrator password to be changed via the IWS application.	Restrict	Restrict (not to be changed)

Function Name		Default Setting	When Enhanced Security mode is set to [ON]
USB Connection Permission setting	Specify whether to permit a function that requires the USB Port.	Detail Setting	Restrict (not to be changed)
External Memory Function Settings	Specify whether to allow users to print and read files from a USB memory device and to save files to a USB memory device.	Save Document: Restrict	Restrict (not to be changed)
		Print Document: Allow	
		External Memory Document Scan: Restrict	

2.11.14 Security Settings - HDD Encryption Setting

(1) Use

- To set the encrypting passphrase.
- To re-set encrypting passphrase due to exchange of eMMC board or etc.

NOTE

- **HDD formatting is required after this setting. Therefore it is necessary to retrieve certain data from HDD in advance.**
  The following data will be lost after HDD formatting.
  1. **Address data**
  2. **Authentication data: Authentication mode, user authentication setting, account track setting**
  3. **Box setting data: Box and text in the box, setting information of each box, box for fax**
  4. **Job history, fax transmission history**

  And after setting the HDD encryption key, the movie data, voice data, OCR dictionary data, PDF/A font, OCR font, and Unicode font need to be reinstalled as necessary since these data will be deleted by HDD format.
- **If you replace the HDD due to its breakage or other reasons, you can automatically reset the encryption passphrase by installing a new HDD and performing the logical format.**
- **Make sure to configure the following settings after formatting the HDD.**
  - **Installing the firmware.**
  - **Reinstall movie data, voice data, OCR dictionary data, and PDF/A fonts with the install data function under the service mode. [Service Mode] -> [System 2] -> [Install Data]**
- **Make sure to install the firmware after the format of the hard disk. Otherwise a trouble code "C-D012 mount error due to unformatted HDD" will appear.**

(2) Procedure

1. Press [HDD Encryption Setting].
2. Enter encryption passphrase (20 characters) with the keyboard on the operation panel and press [OK].
   NOTE
   - **Double-byte and identical characters are not acceptable.**
3. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
4. Open [Administrator Settings] and conduct HDD formatting according to the instruction appeared on the panel.
5. Turn OFF the main power switch and turn it ON again more than 10 seconds after.

2.11.15 Security Settings - Debug Log Encryption Settings

(1) Debug Log Encryption Settings

(a) Use

- To set a password used to encrypt debug data when storing it into the HDD.

(b) Default setting

- 01234567890123456789

(c) Procedure

- Enter an encryption passphrase from the on-screen keyboard.
  1. Enter the encryption passphrase currently in use.
  2. Encryption Passphrase: Enter a new encryption passphrase.
  3. Encryption Passphrase Confirmation: Re-enter the new encryption passphrase.

2.11.16 Security Settings - Image Log Transfer Settings (Type1)

NOTE

- **This is displayed only when Switch No. "63" is set to [00000001] at Bit assignment/[01] at HEX assignment (Type 1) or [00000010] at Bit assignment/[02] at HEX assignment (Type 2) in [Service Mode] -> [System 2] -> [Software Switch Setting].**

(1) Use

- Specifies whether to transfer the input or output image data to the server using whenever machine inputs or outputs image data. Makes the settings of the WebDAV Server, the FTP Server, or the SMB Server where image data are transferred.
- Use this settings to keep logs of input and output image data for security purpose.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- When selecting [ON], configure the following settings.

1. Select Forwarding Destination and configure the sever settings.

WebDAV Server setting	Host Name, File Path, User Name, Password, Port Number, Proxy, SSL Settings
FTP Server setting	Host Name, File Path, User Name, Password, Port Number, PASV, and Proxy
SMB Server setting	Host Name, File Path, User Name, Password

2. Specify Audit Item.

All Items	Applied to Fax TX, Fax RX, Scan, and Others.
Individual Item	Can be selected from Fax, Fax RX, and Scan.

2.11.17 Security Settings - Image Log Transfer Settings (Type2)

NOTE

- **This is displayed only when Switch No. "63" is set to [00000001] at Bit assignment/[01] at HEX assignment (Type 1) or [00000010] at Bit assignment/[02] at HEX assignment (Type 2) in [Service Mode] -> [System 2] -> [Software Switch Setting].**

(1) Use

- To select whether or not to transfer only input/output images in Fax TX/RX to the server when image data is input or output to or from the machine.

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

(4) Procedure

- When selecting [ON], configure the following settings.

1. Configure the file type and scan setting.
2. Select Forward or Do Not Forward for Fax TX/RX. To transfer data, select [Forwarding Dest.] and configure the server settings.

FTP Server setting	Host Name, File Path, User Name, Password, Port Number, PASV, and Proxy
SMB Server setting	Host Name, File Path, User Name, Password
WebDAV Server setting	Host Name, File Path, User Name, Password, Port Number, Proxy, SSL Settings

2.11.18 Security Settings - Driver Password Encryption Setting

(1) Use

- To set whether to use the factory default encryption word or user-defined one as a common key that encrypts a password used for a print job.

User-Defined	Sets an encryption word. Enter an encryption word of 20 letters.
Use Factory Default	Uses the factory default encryption word (undisclosed predefined encryption key).

NOTE

- **When selecting [User-Defined], set an encryption key being consisted of the same letters in the printer driver. If the encryption word set in the machine differs from the encryption key set in the printer driver, different encrypted passwords are created and printing cannot be made.**
- **The use of OpenAPI allows an encryption key to be obtained from the machine.**

(2) Default setting

- Use Factory Default

(3) Setting item

- User-Defined
- Use Factory Default

2.11.19 Security Settings - Quick Security Setting - Administrator Password

(1) Use

- To set/change the administrator password.

(2) Procedure

- Enter the administrator password on the on-screen keyboard.
  1. Enter the current administrator password
  2. Password: Enter the new administrator password to be used
  3. Password Confirmation: Re-enter the new administrator password

NOTE

- **When "Enable" is selected in [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Password Rules], the following passwords cannot be accepted: password of single repeated characters, password same as the one before being changed, and password where the number of characters is less than the minimum number specified in [Set Minimum Password Length].**

2.11.20 Security Settings - Quick Security Setting - USB Enable Settings

(1) Use

- To set whether to permit a function that requires the USB Port.

Save Document	Select whether to allow users to save files on a USB memory. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
Print Document	Select whether to allow users to print files from USB memory. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
External Memory Document Scan	Select whether to allow users to save files from a USB memory into a User Box. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [External Memory (User)].
Print PC	Select whether to enable to print files from a USB-connected computer. This function is available when [Individual Settings] is selected in [Security Settings] -> [USB Connection Permission setting] -> [Detail Setting] -> [PC Connection].

(2) Default setting

- Save Document: Restrict
- Print Document: Allow
- External Memory Document Scan: Restrict
- Print PC: Allow

2.11.21 Security Settings - Quick Security Setting - Password Rules

(1) Use

- To set whether to apply the password rules.
- To apply the password rule to enhance security.
- Passwords to be covered: CE password, administrator password, user password, account track password, public user box password, user box administrator password, passwords for confidential documents, WebDAV server password, SNMPv3 Write User password, remote panel server password, Encryption Passphrase
- Details of the password rules:
  - Minimum number of characters specified in [Set Minimum Password Length] (Default: 12 characters)
  - Upper- and lower-case letters are distinguished in alphabetical letters.
  - Only one-byte symbols can be used.
  - Password with only the same letter is prohibited.
  - Password same with the one prior to change is prohibited.

  NOTE

  - **When the password rule is set to [Enable], the password cannot be changed or registered unless it follows the above conditions.**

- When [Enable] is selected, it is possible to determine the minimum number of characters that a password can contain. (8 to 64 characters, Default: 12 characters)

(2) Default setting

- Disable

(3) Setting item

- Enable
- Disable

NOTE

- **If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", selecting "Disable" in this setting cancels enhanced security mode.**
- **[Enable] cannot be selected when [Service Mode] -> [Enhanced Security] -> [CE Authentication] is set to "OFF." "OFF" setting of [CE Authentication] will not be displayed and cannot be set to "OFF" when [Password Rules] is set to "Enable."**

2.11.22 Security Settings - Quick Security Setting - Quick IP Filtering

(1) Use

- A function that only allows access to the MFP from devices within the same IP group.
- Determine the receiving IP for the decided IP when setting the address to the MFP by DHCP or manually.

(2) Default setting

- Synchronize IP Address (Japan)
- No Filtering (except for Japan)

(3) Procedure

- Quick IP Filtering activates automatically.

(a) Synchronize IP Address

- IPv4 address: Only reception by an IP address with the upper 3 bites same as that of the IP address set in the MFP is allowed.
  NOTICE
  - If the MFP IP address is set to [192.168.0.134], the filtering range is as follows.
    192.168.0.0 to 192.168.0.255

- IPv6 address: Only Global Unicast Address (2000::/3) is available. Only reception by an IP address with the upper 64 bits same as that of the IP address set in the MFP is allowed.
  NOTICE
  - If the MFP IP address is set to “2345:1:2:3:4:5:6:7”, the filtering range is as follows.
    2345:1:2:3::0 to 2345:1:2:3:FFFF:FFFF:FFFF:FFFF

(b) Synchronize Subnet Musk

- IPv4 address: Use the IP address set in the MFP and the Subnet Mask to allow receptions by IP addresses within the range belongs to the same network.
  NOTICE
  - If the MFP IP address is set to [150.176.17.134] and the Subnet Mask is set to [255.255.252.0], the filtering range is as follows.
    150.16.16.*** to 150.16.19.****
  - If the Subnet Mask has not been set, or it has been set to [0.0.0.0], only accesses from the IP address with the end differs from that of the IP address set in the MFP are restricted. As a result, filtering runs in the same way as that it has been set in [Synchronize IP Address].
- IPv6 address: Only Global Unicast Address (2000::/3) is available. And use the Global IP address and Prefix to perform filtering.
  NOTICE
  - If the MFP IP address is set to [IP address=2345:1:2:3:4:5:6:7], and the Prefix is set to [/64], the filtering range is as follows.
    2345:1:2:3::0 to 2345:1:2:3:FFFF:FFFF:FFFF:FFFF
  - If the Prefix has not been set, filtering runs in the same way as that the Prefix is set to 64 bit.

(c) No Filtering

- For both IPv4 address and IPv6 address, no filtering is performed.

2.11.23 Security Settings - Quick Security setting - PSWC Setting

(1) Use

- To set whether to use the PageScope Web Connection.

NOTE

- **To use the PageScope Web Connection, enable "JavaScript" and "Cookie" of the Web browser.**
- **If this machine is connected to the internet via a proxy server, register the Proxy Settings of the Web browser as "Exceptions".**
- **When the PageScope Web Connection is not displayed properly even if the above settings have been conducted, delete the cache of the Web browser.**

(2) Default setting

- ON (Japan)
- OFF (except for Japan)

(3) Setting item

- ON
- OFF

2.11.24 Security Settings - Quick Security setting - Security Warning Display Setting

(1) Use

- To select whether or not to display the security warning screen if an administrator password is still remained as default setting or does not meet the password rules.

(2) Default setting

- ON (Japan)
- OFF (except for Japan)

(3) Setting item

- ON

- OFF

2.11.25 License Settings

(1) Get Request Code

(a) Use

- To display and print a request code and serial number used to activate i-Option.

(b) Procedure

1. Touch [Get Request Code], and [Yes].
2. A serial number and request code are issued.
3. By touching [Print], the serial number and request code are printable.

(2) Install License

(a) Use

- To allow administrator to activate functions provided by i-Option.
- The functions can be activated by entering Function/License Code or Token Code.
- By making settings in [Service Mode] -> [Billing Setting], CE can also activate functions provided by i-Option.

NOTE

- **When activating i-Option, MFP accesses to KM license server via WebDAV connection. Set the proxy server setting in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access] as occasion demands.**
- **For accessing to KM license server, it is necessary to select "Fixed Address" in [Service Mode] -> [Billing Setting] -> [WebDAV Server Setting].**
- **When the server connection error "MAE001" is displayed, check the network settings.**

(b) Procedure (Function/License Code)

1. Touch [Install License].
2. Touch [Function/License Code].
3. Touch [Function Code].
4. Enter the Function Code.
5. Touch [OK].
6. Touch [License Code].
7. Enter the license code that was issued in the license management server using the key board on the control panel, and touch [OK].
8. Touch [Install].
9. Confirm the message, select [Yes], and touch [OK].
10. Turn OFF and ON the main power switch.

(c) Procedure (Token Code)

1. Touch [Token Code].
2. Touch one of the Token Codes 1 to 10.
3. Enter the Token Code.
4. Touch [OK].
5. Touch [Install].
6. Confirm the message, select [Yes], and touch [OK].
7. Turn OFF and ON the main power switch.

(3) List of Enabled Functions

(a) Use

- To display currently activated functions.

2.11.26 Voice Guidance Settings - Voice Guidance

(1) Use

- To select whether or not to enable the voice guidance function.
- Selecting [ON] allows you to configure the settings on the voice guidance function in the [Accessibility] screen.

NOTE

- **To use voice guidance, the optional i-Option LK-104 v3 must be activated, and the optional local interface kit EK-610 or EK-611 must be mounted.**

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF

2.11.27 External Memory Backup - Import/Export

NOTE

- **It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.72 is set to [00000100] at Bit assignment/[04] at HEX assignment.**
- **In the following conditions, export of data to external memory is prohibited.**

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(1) Use

- To export various types of setting information to an external memory (USB memory).
- To import various types of setting information from other machine via the USB memory.
- Types of data that can be exported and imported: Address Book, Authentication Data, Network Settings, Remote Access Setting*1, User Setting, Administrator Setting, Didplay Custom settings, Cloud Connection, External Cert, Accessibility, Custom Auth. Setting*2.
  NOTE
  - ***1: Only importing Remote Access Setting is allowed; exporting it is not allowed.**
  - ***2.: The file size of the authentication customize data to be imported must be 1MB or less.**

(2) Procedure (Import)

1. Connect the external memory to the machine.
2. Touch [Import].
3. Touch [Password], enter the password previously set for the import data, and touch [OK].
4. Touch [Start].
5. Import results appear.

NOTE

- **If an error occurs in importing an external certificate, the certificate is returned to the state before it is imported.**
- **Import errors of external certificates are determined in following cases:**
  - **Importing a certificate fails.**
  - **The number of imported certificates exceeds the limit.**

(3) Procedure (Export)

1. Connect the external memory to the machine.
2. Touch [Export].
3. Select the item to be exported.
4. Touch [Password], enter the password of the export data, and touch [OK].
5. Touch [Start].
6. Export results appear.

2.11.28 Remote Access Setting - Import/Export User Data

(1) Use

- To set whether to remotely rewrite (import or export) user data such as address information using the CS Remote Care.

(2) Default setting

- Restrict

(3) Setting item

- Allow
- Restrict

3. ADJUSTMENT ITEM LIST

3.1 Replace feed roller, pick-up roller, separation roller (tray 1, tray 2)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace feed roller, pick-up roller, separation roller (tray 1, tray 2)	[Service Mode] / [Counter] / [Life] / [Counter Clear]	1

3.2 Replace feed roller, separation roller assy (manual bypass tray)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace feed roller, separation roller assy	[Service Mode] / [Counter] / [Life] / [Counter Clear]	1

3.3 Install LCT (Built-in)

Replacement part/Service job	Adjustment/setting items	Procedure
Install LCT (Built-in)	[Service Mode] / [System2] / [LCT (Built-in) Size Settings]	1
	[Service Mode] / [Machine] / [Printer Area] / [Printer Image Centering Side 1]	2
	[Service Mode] / [Machine] / [Printer Area] / [Prt. Image Center. Side 2 (Dup)]	3

3.4 Replace CCD unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace CCD unit	[Service Mode] / [System2] / [CCD Calibration]	1
	[Service Mode] / [System2] / [Line Mag Setting]	2
	[Service Mode] / [Machine] / [Printer Area] / [Paper Feed Direction Adj.]	3
	[Service Mode] / [Machine] / [Scan Area] / [Main Scan Zoon Adj.]	4
	[Service Mode] / [Machine] / [Scan Area] /[Scanner Image Side Edge]	5
	[Service Mode] / [Machine] / [Scan Area] / [Image Position: Leading Edge]	6

3.5 Replace developing unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace developing unit	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	1

3.6 Replace drum unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace drum unit	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	1

3.7 Replace transfer belt unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace transfer belt unit	[Service Mode] / [Counter] / [Life] / [New Release]	1
	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	2

3.8 Replace fusing unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace fusing unit	[Service Mode] / [Counter] / [Life] / [New Release]	1

3.9 Replace PH unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace PH unit	[Service Mode] / [Machine] / [Print Head Skew Adj.] / [Print Head Skew Reset]	1
	[Service Mode] / [Machine] / [Printer Area] / [Leading Edge Adjustment]	2
	[Service Mode] / [Machine] / [Printer Area] / [Printer Image Centering Side 1]	3

3.10 Replace original size detection sensor

Replacement part/Service job	Adjustment/setting items	Procedure
Replace original size detection sensor	Installation of original size sensor	1
	[Service Mode] / [State Confirmation] / [Table Number]	2

3.11 Replace scanner home sensor

Replacement part/Service job	Adjustment/setting items	Procedure
Replace scanner home sensor	[Service Mode] / [Machine] / [Scan Area] / [Image Position: Leading Edge]	1

3.12 Replace MFP board

Replacement part/Service job	Adjustment/setting items	Procedure
Replace MFP board	Entering the machine type information	1
	Installing the firmware	2
	Restore (backup) data	3
	[Service Mode] / [Imaging Process Adjustment] / [Gradation Adjust]	4

3.13 Replace eMMC board

Replacement part/Service job	Adjustment/setting items	Procedure
Replace eMMC board	Installing the firmware	1

NOTE

- **Contact Konica Minolta technical support if the eMMC board needs to be replaced.**

3.14 Replace hard disk

Replacement part/Service job	Adjustment/setting items	Procedure
Replace hard disk	[Service Mode] / [State Confirmation] / [Memory/Storage Adjustment] / [Format]	1
	[Service Mode] / [State Confirmation] / [Memory/Storage Adjustment] / [Storage R/W Check]	2
	[Service Mode] / [State Confirmation] / [Memory/Storage Adjustment] / [HDD Mirroring Rebuild]	3

3.15 Replace control panel unit

Replacement part/Service job	Adjustment/setting items	Procedure
Replace control panel unit	[Accessibility] / [Touch Panel Adjustment]	1

3.16 Replace DF control board

Replacement part/Service job	Adjustment/setting items	Procedure
Replace DF control board	Installing the firmware	1
	[Service Mode] / [ADF] / [Original Tray Width]	2
	[Service Mode] / [ADF] / [Mixed Original Size Adjustment]	3

3.17 Replace Multi feed detection board (installed with double feed detection Kit UK-501)

Replacement part/Service job	Adjustment/setting items	Procedure
Replace Multi feed detection board	[Service Mode] / [ADF] / [Multi-Feed DetectionAdj.]	1

3.18 Add key counter

Replacement part/Service job	Adjustment/setting items	Procedure
Add key counter	Re-entry of Enhanced Security settings	1

3.19 Execute initialize

Replacement part/Service job	Adjustment/setting items	Procedure
Execute initialize	[Service Mode] / [System 2] / [HDD Installed]	1
	Re-entry of Utility settings	2
	[Service Mode] / [System 1] / [Serial Number]	3
	[Service Mode] / [System 1/2] and re-entry of setting values	4
	Re-entry of Enhanced Security settings	5

3.20 Add an optional device

Replacement part/Service job	Adjustment/setting items	Procedure
Add an optional device	[Service Mode] / [Firmware Version]	1

3.21 Execute F/W update

Replacement part/Service job	Adjustment/setting items	Procedure
Execute F/W update	[Service Mode] / [Firmware Version]	1

3.22 Add fax board

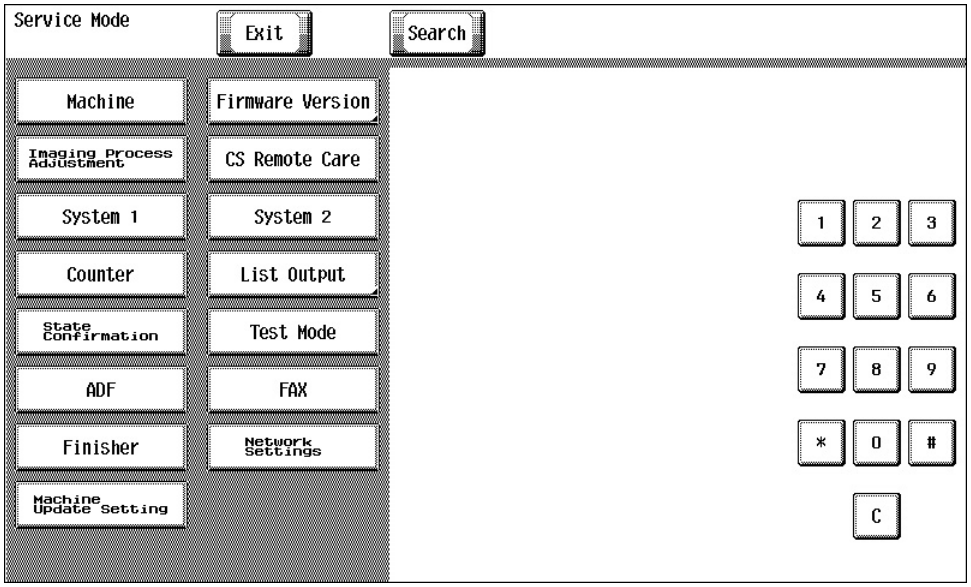
Replacement part/Service job	Adjustment/setting items	Procedure
Add fax board	[Service Mode] / [System2] / [Option Board Status]	1
	Installing the firmware	2
	[Service Mode] / [System1] / [Marketing Area] / [Fax Target]	3

3.23 Replace Dual scan document feeder

Replacement part/Service job	Adjustment/setting items	Procedure
Replace Dual scan document feeder	ADF adjusting the height	1
	[Service Mode] / [ADF] / [ADF automatic Adjustment] / [Skew Measurement]	2
	[Service Mode] / [ADF] / [ADF automatic Adjustment] / [Sub Scanning]	3
	[Service Mode] / [ADF] / [ADF automatic Adjustment] / [Main Scanning]	4
	[Service Mode] / [ADF] / [Read Pos Adj]	5
	[Service Mode] / [ADF] / [Feed Zoom]	6

4. LIST OF SERVICE MODE

4.1 List of service mode (outline)



NOTE

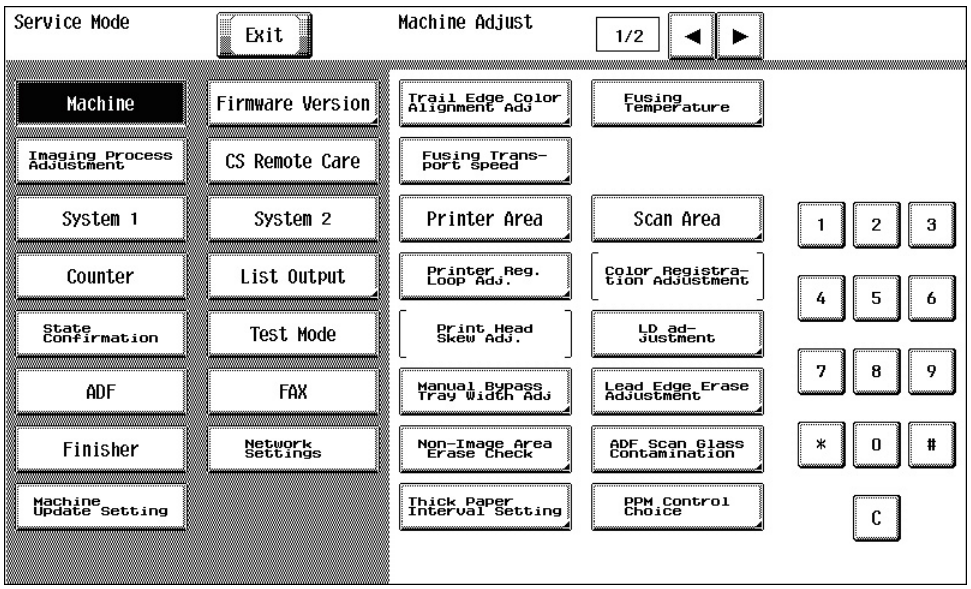
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

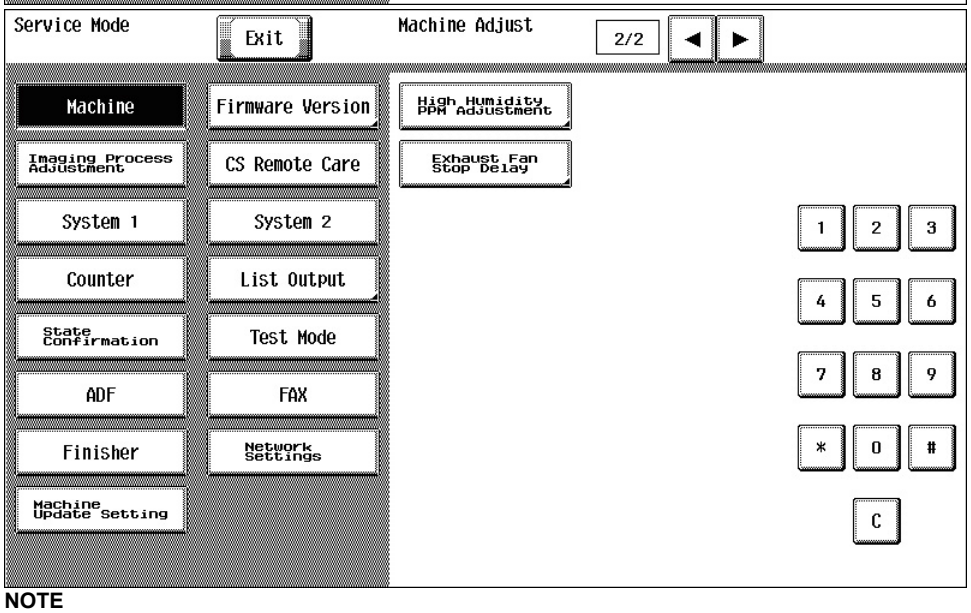
Service Mode	Search	I.5.3 Search
	Machine	I.4.2.1 Machine
	Firmware Version	I.5.5 Firmware Version
	Imaging Process Adjustment	I.4.2.2 Imaging Process Adjustment
	CS Remote Care	I.4.2.3 CS Remote Care
	System 1	I.4.2.4 System 1
	System 2	I.4.2.5 System 2
	Counter	I.4.2.6 Counter
	List Output	I.4.2.7 List Output
	State Confirmation	I.4.2.8 State Confirmation
	Test Mode	I.4.2.9 Test Mode
	ADF	I.4.2.10 ADF
	FAX *1	I.4.2.11 FAX
	Finisher *2	I.4.2.12 Finisher
	Network Settings	I.4.2.13 Network Settings
	Machine Update Setting	I.4.2.14 Machine Update Setting

- The function tree is shown to comply with the format displayed on the screen.
- *1: It will be displayed only when the optional fax kit FK-516 is mounted.
- *2: It will be displayed only when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted.

4.2 List of service mode (detail)

4.2.1 Machine





NOTE

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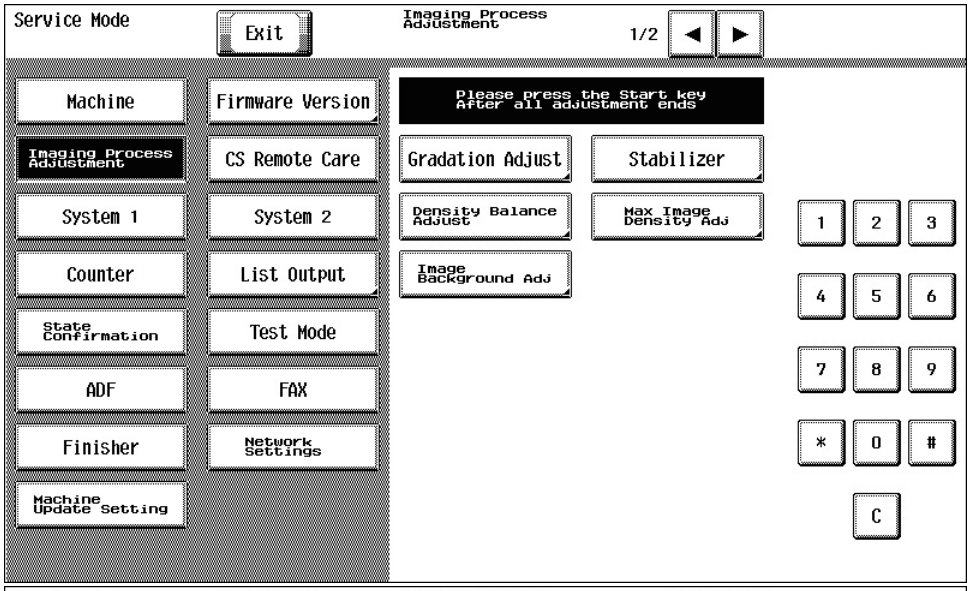
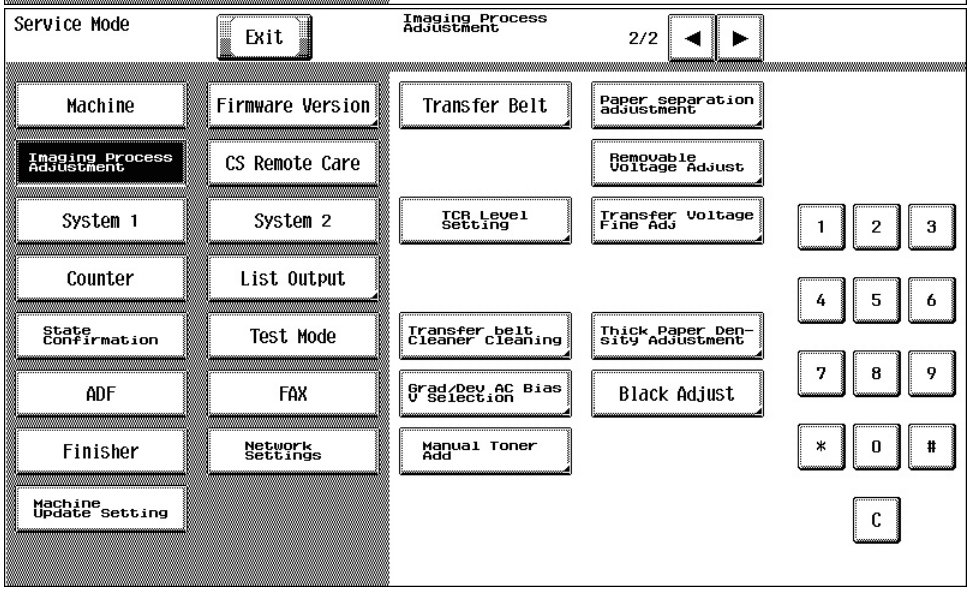
Machine		Ref. Page
Trail Edge Color Alignment Adj.		
Fusing Temperature		I.5.4.2 Fusing Temperature
Fusing Transport Speed		I.5.4.3 Fusing Transport Speed
Printer Area	Leading Edge Adjustment	I.5.4.4.(1) Leading Edge Adjustment
	Printer Image Centering Side 1	I.5.4.4.(2) Printer Image Centering Side 1
	Leading Edge Adj. Side 2 (Duplex)	I.5.4.4.(3) Leading Edge Adj. Side 2 (Duplex)
	Prt. Image Center. Side 2 (Dup)	I.5.4.4.(4) Prt. Image Center. Side 2 (Dup)
	Paper Feed Direction Adj.	I.5.4.4.(5) Paper Feed Direction Adj.
Scan Area	Image Position: Leading Edge	I.5.4.5.(1) Image Position: Leading Edge
	Scanner Image Side Edge	I.5.4.5.(2) Scanner Image Side Edge
	Main Scan Zoom Adj.	I.5.4.5.(3) Main Scan Zoom Adj.
	Sub Scan Zoom Adj.	I.5.4.5.(4) Sub Scan Zoom Adj.
Printer Reg. Loop Adj.		I.5.4.6 Printer Reg. Loop Adj.
Color Registration Adjustment		Not used
Print Head Skew Adj.		Not used
LD adjustment	LD Timing Adj.	I.5.4.9.(1) LD Timing Adj.
	LD 1/2 Balance Adj.	I.5.4.9.(2) LD 1/2 Balance Adj.
	LD Light Width Adjustment	I.5.4.9.(3) LD Light Width Adjustment
Manual Bypass Tray Width Adj		I.5.4.10 Manual Bypass Tray Width Adj

Lead Edge Erase Adjustment	I.5.4.11 Lead Edge Erase Adjustment
Non-Image Area Erase Check	I.5.4.12 Non-Image Area Erase Check
ADF Scan Glass Contamination	I.5.4.13 ADF Scan Glass Contamination
Thick Paper Interval Setting	I.5.4.14 Thick Paper Interval Setting
PPM Control Choice	I.5.4.15 PPM Control Choice
High Humidity PPM Adjustment	I.5.4.16 High Humidity PPM Adjustment
Exhaust Fan Stop Delay	I.5.4.17 Exhaust Fan Stop Delay

4.2.2 Imaging Process Adjustment





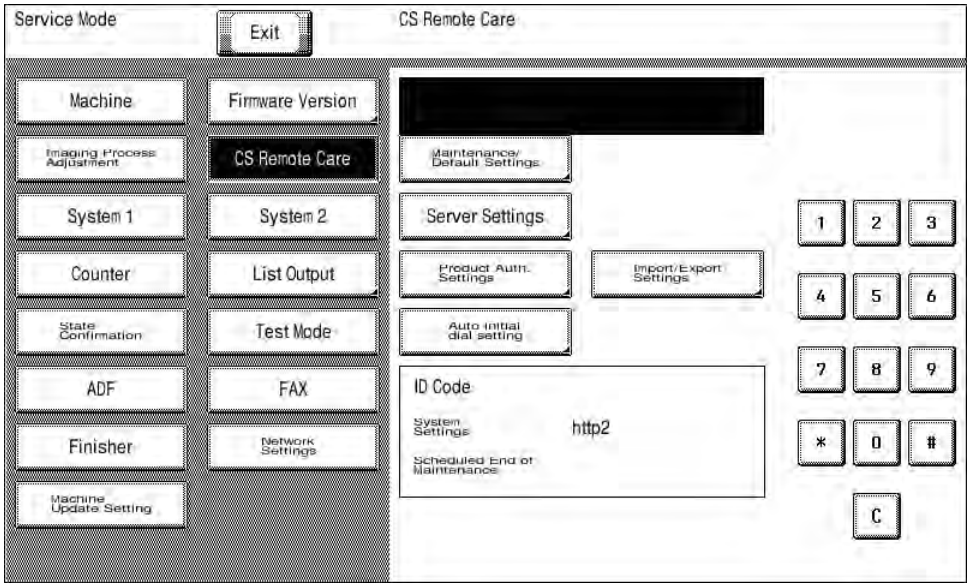
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Imaging Process Adjustment		Ref. Page
Gradation Adjust		I.5.6.1 Gradation Adjust
Stabilizer	Stabilization Only	I.5.6.2 Stabilizer
	Image Stabilization Only	
Density Balance Adjust		I.5.6.3 Density Balance Adjust
Max Image Density Adj	Copy	I.5.6.4 Max Image Density Adj
	Printer	
Image Background Adj		I.5.6.5 Image Background Adj
Transfer Belt	Cleaning Bias	I.5.6.6 Transfer Belt
	Auto Cleaning	
Paper Separation Adjustment		I.5.6.7 Paper Separation Adjustment
Removable Voltage Adjust		I.5.6.8 Removable Voltage Adjust
TCR Level Setting		I.5.6.9 TCR Level Setting

Imaging Process Adjustment		Ref. Page
Transfer Voltage Fine Adj	Primary transfer adj.	I.5.6.10 Transfer Voltage Fine Adj
	2nd Transfer Adj.	
Transfer belt Cleaner Cleaning		I.5.6.11 Transfer belt Cleaner Cleaning
Thick Paper Density Adjustment	Thick Type1	I.5.6.12 Thick Paper Density Adjustment
	Thick Type2	
Grad/Dev AC Bias V Selection		I.5.6.13 Grad/Dev AC Bias V Selection
Black Adjust		I.5.6.14 Black Adjust
Manual Toner Add	Manual Toner Add	I.5.6.15 Manual Toner Add
	Hopper Toner Filling	

4.2.3 CS Remote Care



NOTE

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CS Remote Care	Ref. Page
Maintenance / Default Settings	I.5.14.1 Maintenance/Default Settings - System Selection
Maintenance Start	-
Maintenance Complete	-
Server Settings	I.5.14.4 Maintenance/Default Settings - Server Setting (E-Mail1 or E-mail2 is selected.) I.5.14.5 Maintenance/Default Settings - Server Setting (http1 or http2 is selected)
Detail Setting	I.5.14.3 Maintenance/Default Settings - Detail Setting
Product Auth. Settings	I.5.14.6 Product Auth. Settings
Import/Export Settings	I.5.14.7 Import/Export Settings
Auto initial dial setting	I.5.14.8 Auto Initial Dial Setting

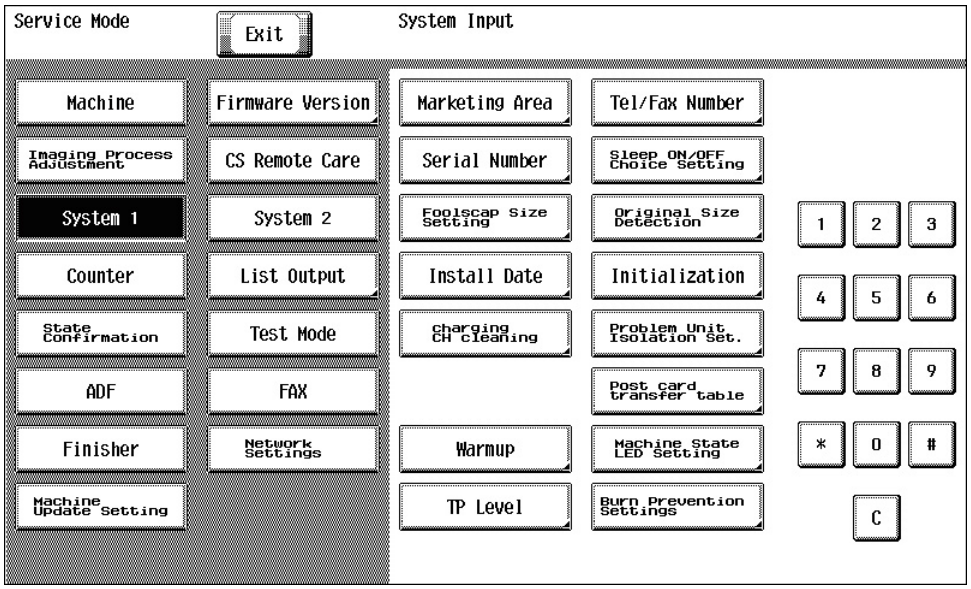
(1) Setting up the CS Remote Care

CS Remote Care		Ref. Page
Using the telephone line modem		I.5.8.1 Using the telephone line modem
Using the fax line modem		I.5.8.2 Using the Fax line modem
Using the E-mail		I.5.8.3 Using the E-mail
When using a WebDAV server in http communication	http (bilateral communication)	I.5.8.4.(1) Bilateral communication
	http (unilateral communication: Device to Center)	I.5.8.4.(2) Unilateral communication: Device to Center

(2) List of software SW for CS Remote Care

SW No.	Functions		Ref. page
01	Communication settings	Dial Mode	I.5.9.3 SW No. 01
		Line for send only	
		Baud rate	
02	Auto call	Emergency transmission	I.5.9.4 SW No. 02
		Date specified transmission	
		Call parts replace date	
		Call drum replace date	
		Call regular service date (PM)	
		Auto call on the developing unit Life	
		Auto call of the IR shortage	
		Auto call on the zero reset of the fixed parts replacement	
03	Trouble display setting	Trouble display setting	I.5.9.5 SW No. 03
		Auto call on the toner empty	
		Auto call on the waste toner box full	
04	CS Remote Care communication mode		I.5.9.6 SW No. 04
05	Modem redial interval		I.5.9.7 SW No. 05
06	Modem redial times		I.5.9.8 SW No. 06
07	Redial for response time out		I.5.9.9 SW No. 07
08	Retransmission interval on E-Mail/http delivery error		I.5.9.10 SW No. 08
09	Retransmission times on E-Mail/http delivery error		I.5.9.11 SW No. 09
10	Time zone settings		I.5.9.12 SW No. 10
11	Timer 1	RING reception -> CONNECT reception	I.5.9.13 SW No. 11
12	Timer 2	Dial request completed -> CONNECT reception	I.5.9.14 SW No. 12
13	Reservation		-
14	Timer 4	Line connection -> Start request telegram delivery	I.5.9.15 SW No. 14
15	Timer 5	Wait time for other side's response	I.5.9.16 SW No. 15
16	Reservation		-
17	Reservation		-
18	Attention display	To set whether to give the alarm display when using the modem but the power for the modem is OFF.	I.5.9.17 SW No. 18
19	Reservation		-
20	Reservation		-
21	Transmission of misfeed frequent occurrence warning	Transmission of paperbased misfeed frequent occurrence warning	I.5.9.18 SW No. 21
		Transmission of originalbased misfeed frequent occurrence warning	
		Automatic transmission of chronological misfeed data at the time of transmission of misfeed frequent occurrence warning	
22	Paper-based misfeed frequent occurrence threshold value		I.5.9.19 SW No. 22
23	Original-based misfeed frequent occurrence threshold value		I.5.9.20 SW No. 23
24 to 40	Reservation		-

4.2.4 System 1



NOTE

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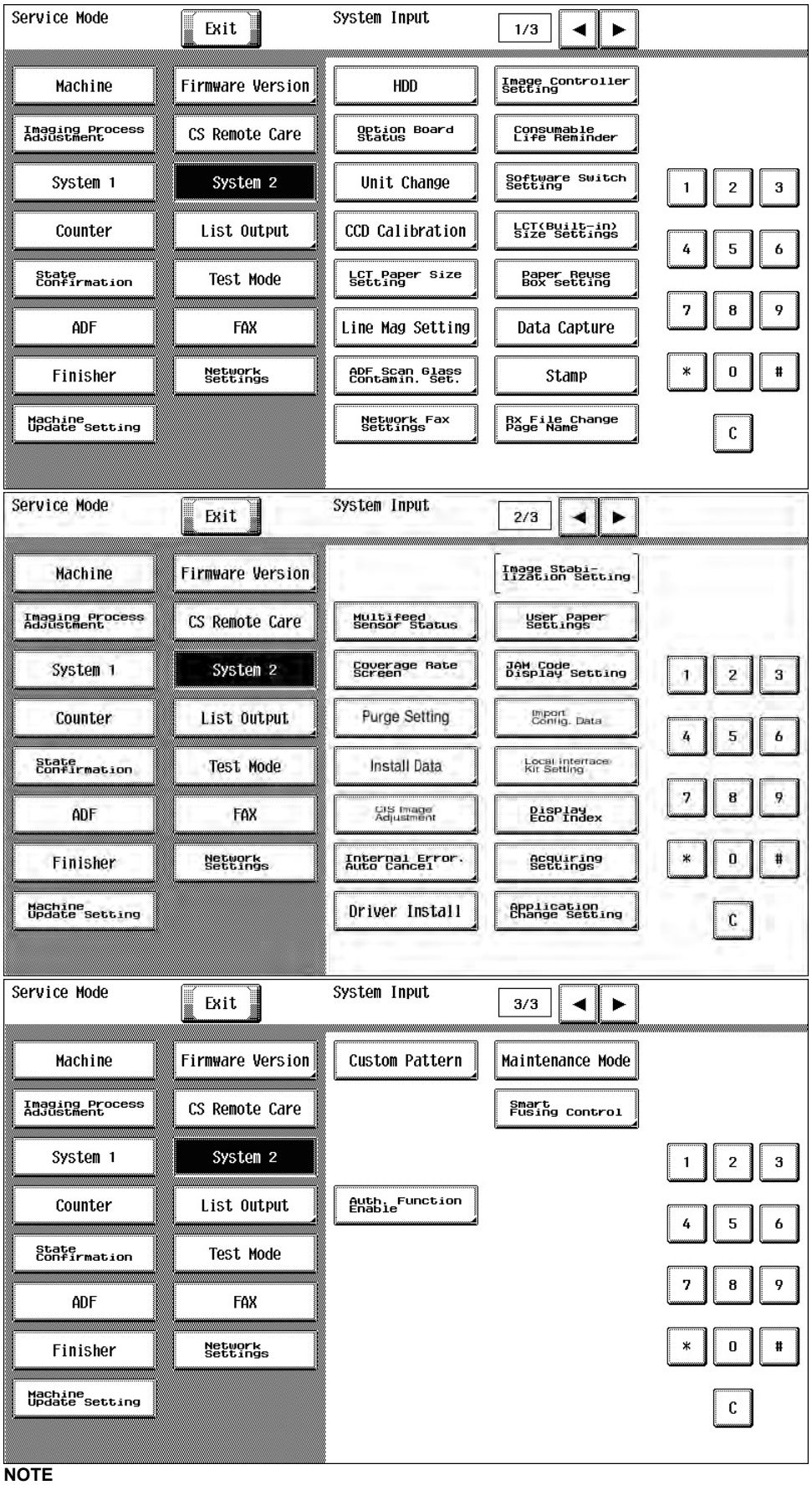
System 1			Ref. Page
Marketing Area			I.5.15.1 Marketing Area
Tel/Fax Number			I.5.15.2 Tel/Fax Number
Serial Number			I.5.15.3 Serial Number
Sleep ON/OFF Choice Setting			I.5.15.4 Sleep ON/OFF Choice Setting
Foolscap Size Setting			I.5.15.5 Foolscap Size Setting
Original Size Detection			I.5.15.6 Original Size Detection
Install Date			I.5.15.7 Install Date
Initialization	Clear All Data		I.5.15.8 Initialization-Clear All Data
	Clear Individual Data	Copy Program Data	I.5.15.9.(1) Copy Program Data
		Address Registration Data	I.5.15.9.(2) Address Registration Data
		Fax Setting Data	I.5.15.9.(3) Fax Setting Data
		All History Data	I.5.15.9.(4) All History Data
		Network Setting Data	I.5.15.9.(5) Network Setting Data
		Server Cache Data	I.5.15.9.(6) Server Cache Data
	System Error Clear		I.5.15.10 Initialization-System Error Clear
Charging CH cleaning	K Charge Manual Cleaning		I.5.15.11.(1) K Charge Manual Cleaning
	K Charge A/C ON/OFF Setting		I.5.15.11.(2) K Charge A/C ON/OFF Setting
Problem Unit Isolation Set.			I.5.15.12 Problem Unit Isolation Set.
Post card transfer table			I.5.15.13 Post card transfer table
Warm-up			I.5.15.14 Warm-up
Machine State LED Setting			I.5.15.15 Machine State LED Setting
TP Level			I.5.15.16 TP Level
Burn Prevention Settings			I.5.15.17 Burn Prevention Settings

4.2.5 System 2



NOTE

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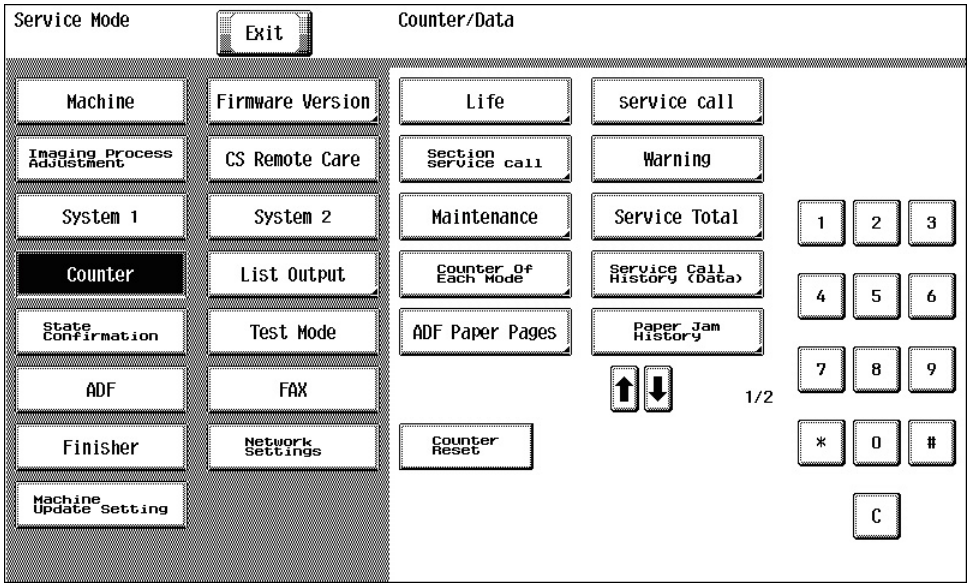
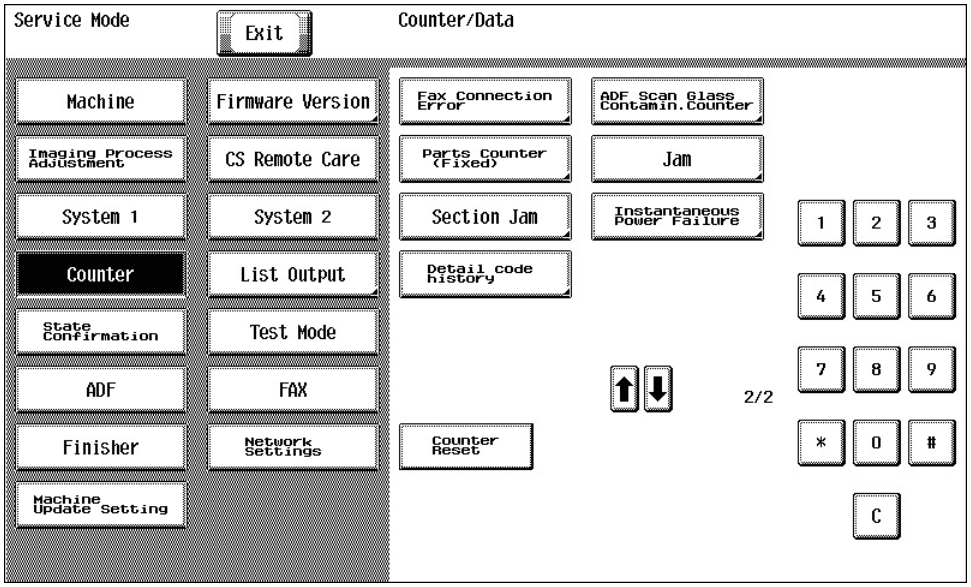
System 2	Ref. Page
HDD	I.5.16.1 HDD
Image Controller Setting	I.5.16.2 Image Controller Setting
Option Board Status	I.5.16.3 Option Board Status

System 2		Ref. Page
Consumable Life Reminder		I.5.16.4 Consumable Life Reminder
Unit Change		I.5.16.5 Unit Change
Software Switch Setting		I.5.16.6 Software Switch Setting
CCD Calibration		I.5.16.7 CCD Calibration
LCT (Built-in) Size Settings		I.5.16.8 LCT (Built-in) Size Settings
LCT Paper Size Setting	A4LCT	I.5.16.9 LCT Paper Size Setting
	A3LCT	I.5.16.9 LCT Paper Size Setting
Paper Reuse Box Setting		I.5.16.10 Paper Reuse Box Setting
Line Mag Setting		I.5.16.11 Line Mag Setting
Data Capture		I.5.16.12 Data Capture
ADF Scan Glass Contamin. Set.		I.5.16.13 ADF Scan Glass Contamin. Set.
Stamp		I.5.16.14 Stamp
Network Fax Settings		I.5.16.15 Network Fax Settings
RX File Change Page Name		I.5.16.16 RX File Change Page Name
Image Stabilization Setting		Not used
Multifeed Sensor Status		I.5.16.17 Multifeed Sensor Status
User Paper Settings		I.5.16.18 User Paper Settings
Coverage Rate Screen		I.5.16.19 Coverage Rate Screen
JAM Code Display Setting		I.5.16.20 JAM Code Display Setting
Purge Setting		I.5.16.21 Purge Setting
Import Config. Data	BootUp Screen	I.5.16.22.(1) BootUp Screen
	Machine Image	I.5.16.22.(2) Machine Image
	Custom Auth. Setting	I.5.16.22.(3) Custom Auth. Setting
Install Data		I.5.16.23 Install Data
Local Interface Kit Setting		I.5.16.24 Local Interface Kit Setting
Display Eco Index		I.5.16.26 Display Eco Index
CIS Image Adjustment		I.5.16.25 CIS Image Adjustment
Internal Error. Auto Cancel		I.5.16.27 Internal Error. Auto Cancel
Acquiring Settings		I.5.16.28 Acquiring Settings
Driver Install		I.5.16.29 Driver Install
Application Change Setting		I.5.16.30 Application Change Setting
Custom Pattern		I.5.16.31 Custom Pattern
Maintenance Mode		I.5.16.32 Maintenance Mode
Smart Fusing Control		I.5.16.33 Smart Fusing Control
Auth. Function Enable		I.5.16.34 Auth. Function Enable

4.2.6 Counter





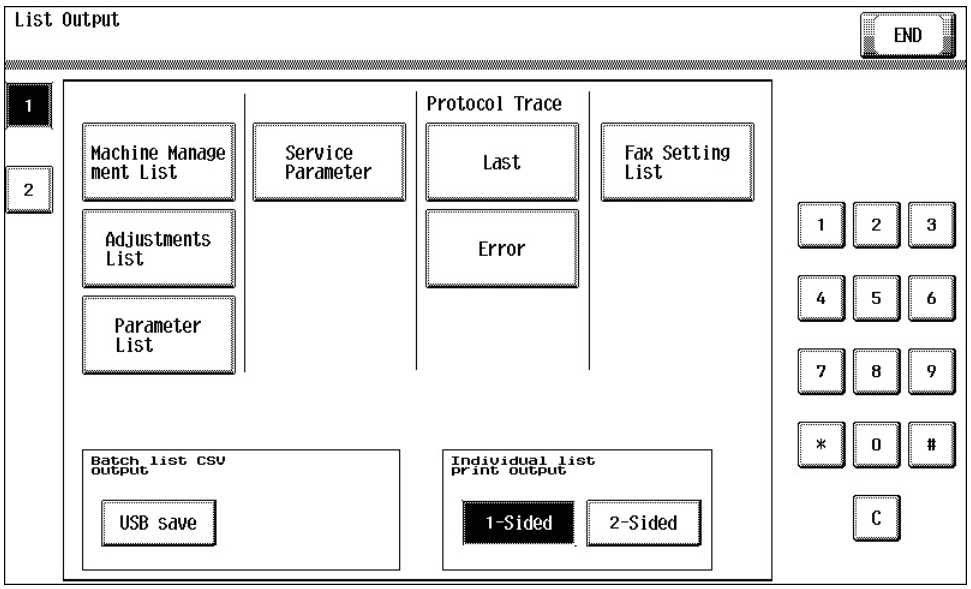
NOTE

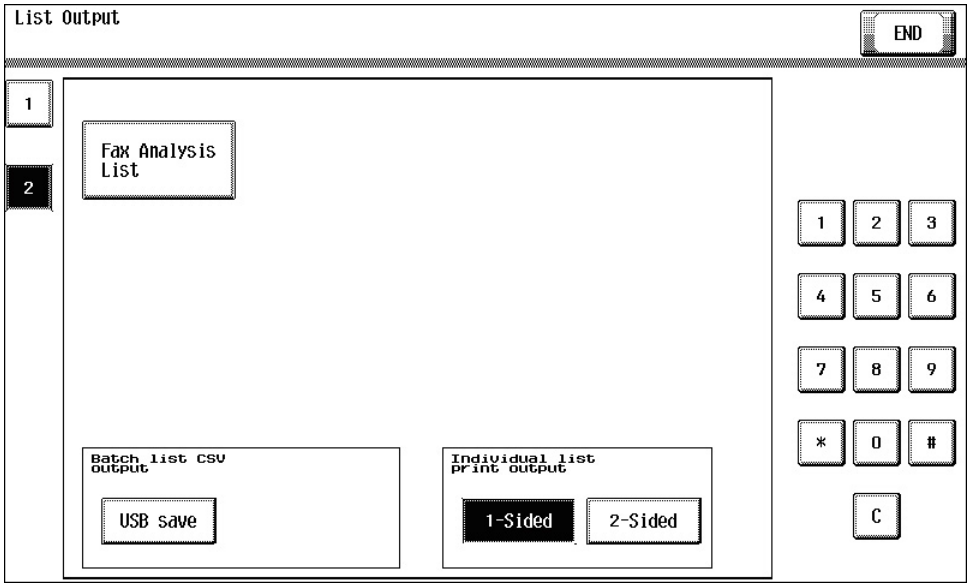
- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Counter	Ref. Page
Life	I.5.17.2 Life
Service Call	I.5.17.3 Service Call
Section Service Call	I.5.17.4 Section Service Call
Warning	I.5.17.5 Warning
Maintenance	I.5.17.6 Maintenance
Service Total	I.5.17.7 Service Total
Counter Of Each Mode	I.5.17.8 Counter of Each Mode
Service Call History (Data)	I.5.17.9 Service Call History (Data)
ADF Paper Pages	I.5.17.10 ADF Paper Pages
Paper Jam History	I.5.17.11 Paper Jam History
Fax Connection Error	I.5.17.12 Fax Connection Error
ADF Scan Glass Contamin. Counter	I.5.17.13 ADF Scan Glass Contamin. Counter
Parts Counter (Fixed) *1	I.5.17.14 Parts Counter (Fixed)
Jam	I.5.17.15 Jam
Section JAM	I.5.17.16 Section JAM
Instantaneous Power Failure	I.5.17.17 Instantaneous Power Failure
Detail code history	I.5.17.18 Detail code history
Counter Reset	-

*1: It will be displayed only when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted.

4.2.7 List Output



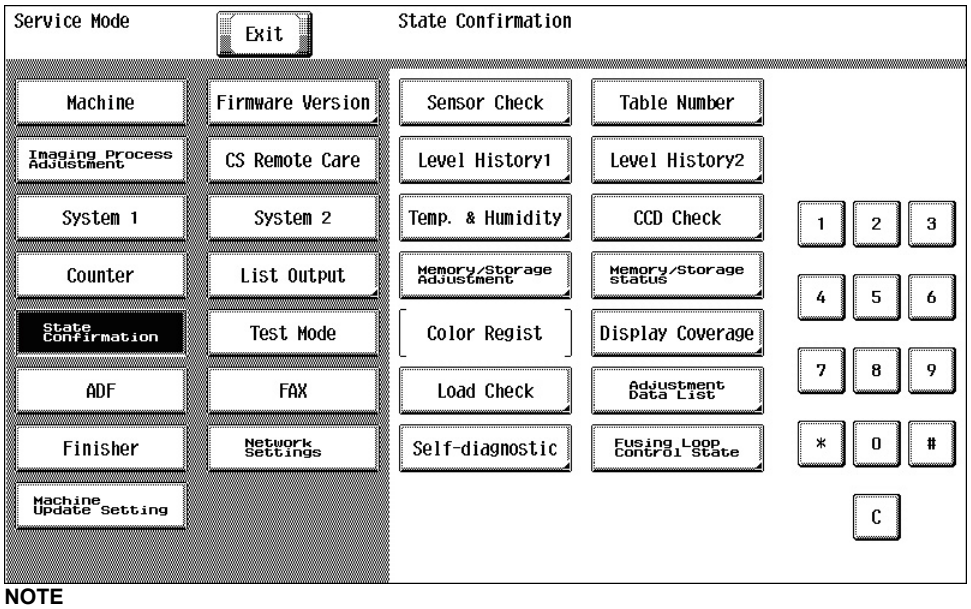


NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

List Output		Ref. Page
Batch list CSV output		I.5.18.1 Batch list CSV output
Individual list print output		-
Machine Management List		I.5.18.2 Machine Management List
Adjustments List		I.5.18.3 Adjustments List
Parameter List		I.5.18.4 Parameter List
Service Parameter		I.5.18.5 Service Parameter
Protocol Trace	Last	I.5.18.6 Protocol Trace
	Error	
Fax Setting List		I.5.18.7 Fax Setting List
Fax Analysis List		I.5.18.8 Fax Analysis List

4.2.8 State Confirmation



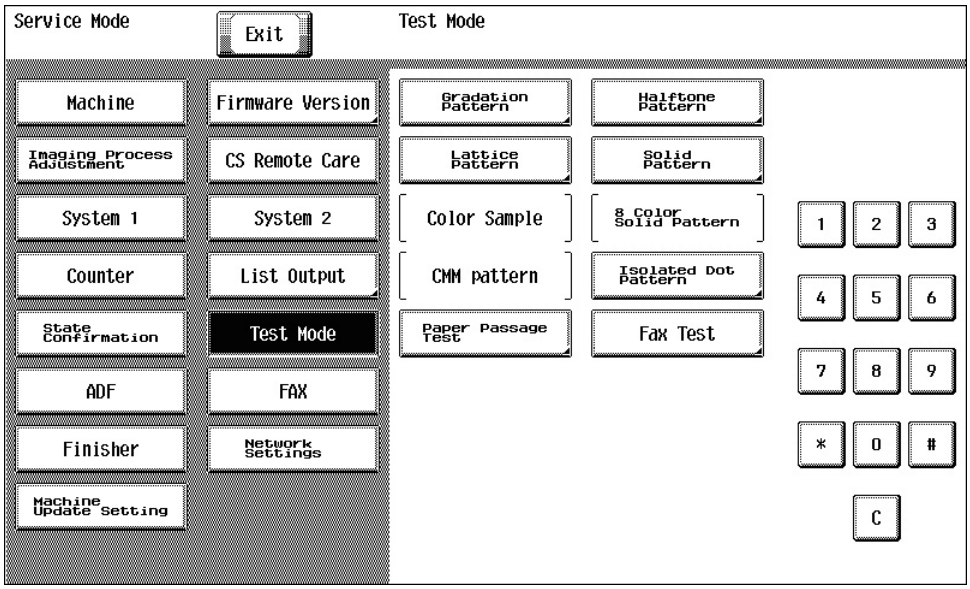
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

State Confirmation	Ref. Page
Sensor Check	I.5.19.1 Sensor Check
Table Number	I.5.19.2 Table Number
Level History1	I.5.19.3 Level History 1
Level History2	I.5.19.4 Level History 2
Temp. & Humidity	I.5.19.5 Temp. & Humidity

State Confirmation		Ref. Page
CCD Check		I.5.19.6 CCD Check
Memory/Storage Adjustment	Memory Check	I.5.19.7.(1) Memory Check
	Compress / Decompression Check	I.5.19.7.(2) Compress / Decompression Check
	JPEG Check	I.5.19.7.(3) JPEG check
	Memory Bus Check	I.5.19.7.(4) Memory Bus Check
	DSC Bus Check	I.5.19.7.(5) DSC Bus Check
	Storage R/W Check	I.5.19.7.(6) Storage R/W Check
	Format	I.5.19.7.(7) Format
	eMMC to HDD Data Copy	I.5.19.7.(8) eMMC to HDD Data Copy
	HDD Mirroring Rebuild	I.5.19.7.(9) HDD Mirroring Rebuild
Memory/Storage Status		I.5.19.8 Memory/Storage Status
Color Regist		Not used
Display Coverage		I.5.19.9 Display Coverage
Load Check		I.5.19.10 Load Check
Adjustment Data List		I.5.19.11 Adjustment Data List
Self-diagnostic		I.5.19.12 Self-diagnostic
Fusing Loop Control State		I.5.19.13 Fusing Loop Control State

4.2.9 Test Mode



NOTE

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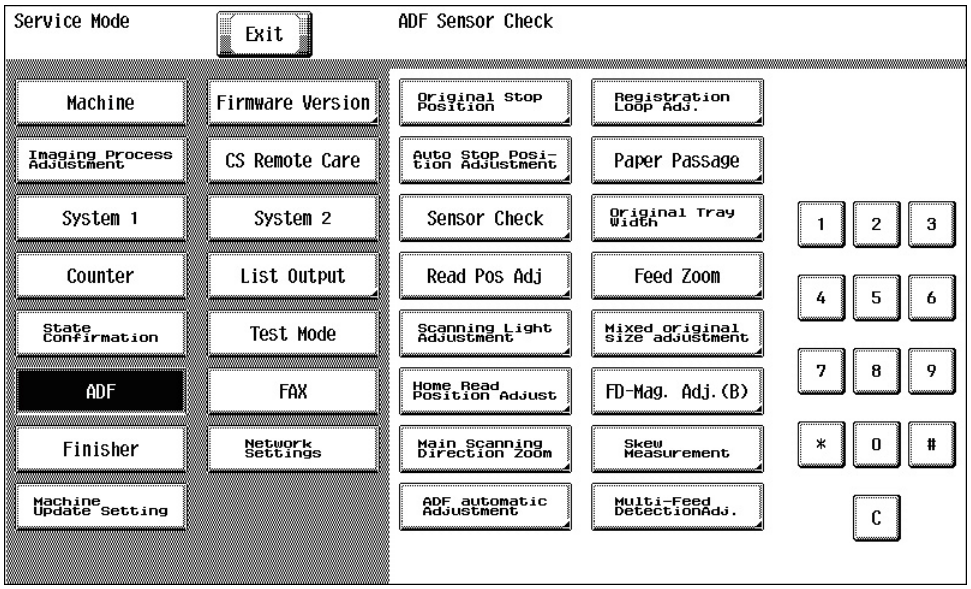
Test Mode	Ref. Page
Gradation Pattern	I.5.20.2 Gradation Pattern
Halftone Pattern	I.5.20.3 Halftone Pattern
Lattice Pattern	I.5.20.4 Lattice Pattern
Solid Pattern	I.5.20.5 Solid Pattern
Color Sample	Not used
8 Color Solid Pattern	Not used
CMM pattern	Not used
Isolated Dot Pattern	I.5.20.9 Isolated Dot Pattern
Paper Passage Test	I.5.20.10 Paper Passage Test
Fax Test *	I.5.20.11 Fax Test - Signal Send Test I.5.20.12 Fax Test - Signal Receive Test I.5.20.13 Fax Test - NCU TEST

*: It will be displayed only when the optional fax kit FK-516 is mounted.

4.2.10 ADF

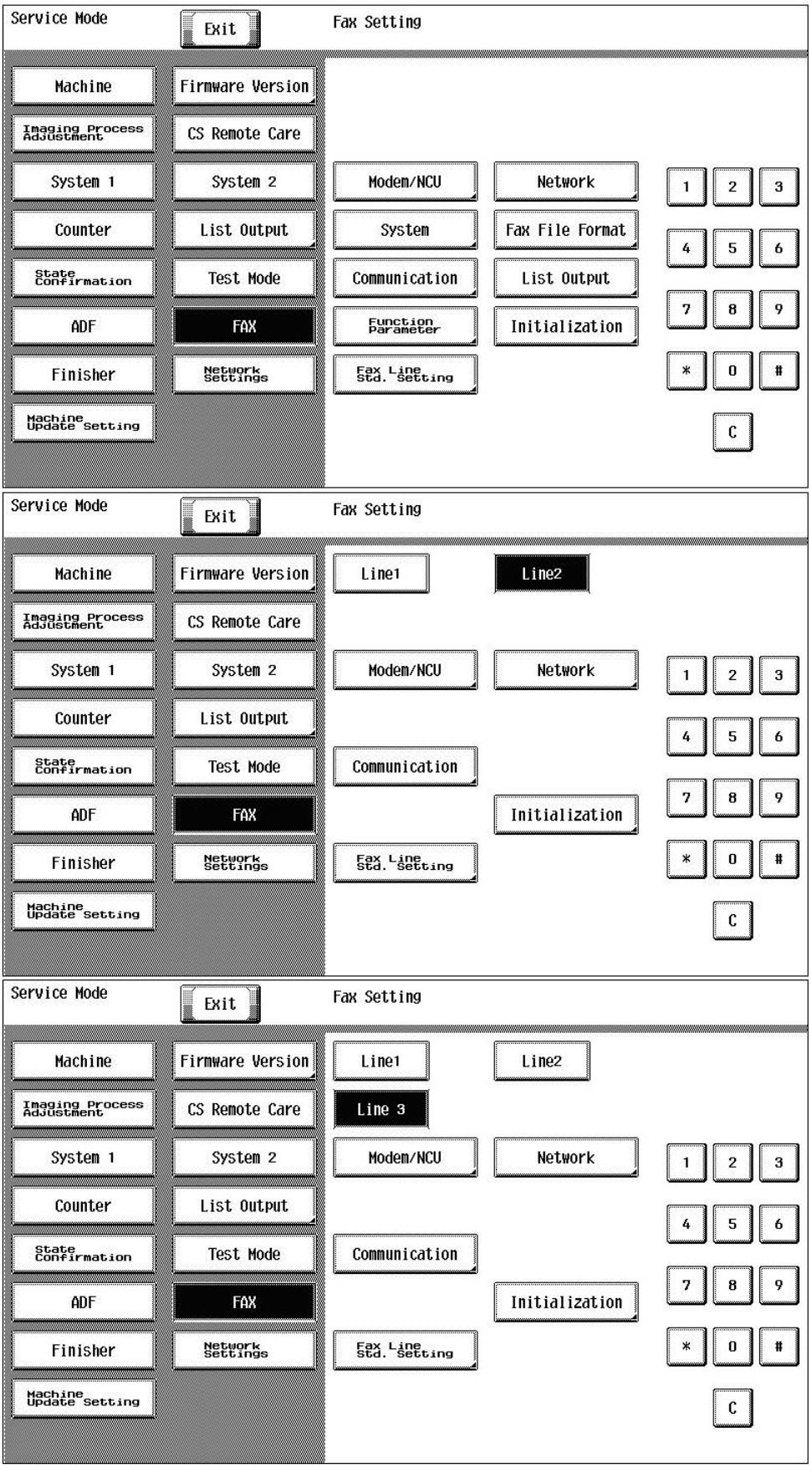


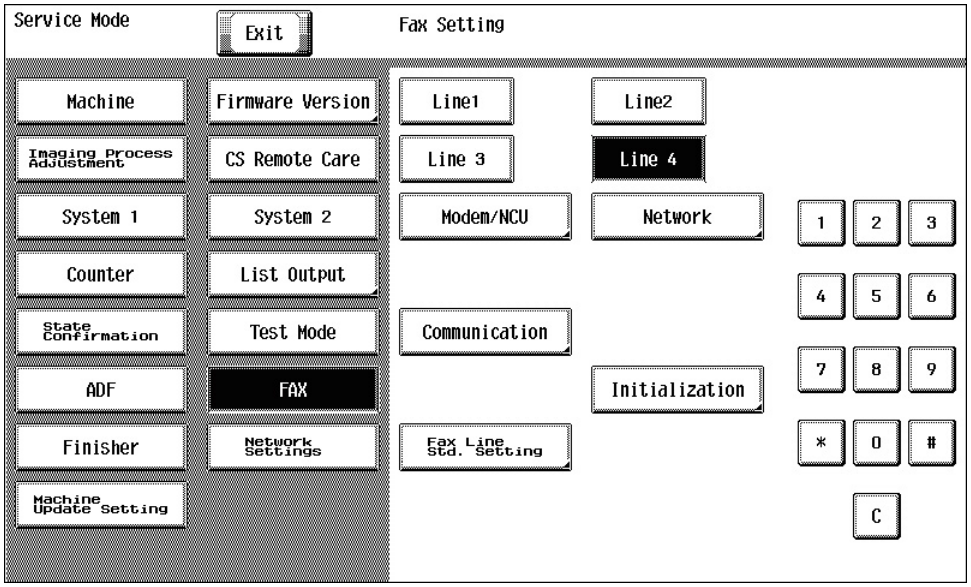
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

ADF Adjustment		Ref. Page
Original Stop Position		I.5.21.1 Original Stop Position
Registration Loop Adj.		I.5.21.2 Registration Loop Adj.
Auto Stop Position Adjustment		I.5.21.3 Auto Stop Position Adjustment
Paper Passage		I.5.21.4 Paper Passage
Sensor Check		I.5.21.5 Sensor Check
Original Tray Width		I.5.21.6 Original Tray Width
Read Pos Adj	Read Pos Adj	I.5.21.7 Read Pos Adj
	Auto Adjust	
Feed Zoom	Orig. Feed Zoom Ad	I.5.21.8 Feed Zoom
	Auto Adjust	
Scanning Light Adjustment		I.5.21.9 Scanning Light Adjustment
Mixed original size adjustment		I.5.21.10 Mixed original size adjustment
Home Read Position Adjust		I.5.21.11 Home Read Position Adjust
FD-Mag. Adj. (B)	Orig. Feed Zoom Ad	I.5.21.12 FD-Mag. Adj. (B)
	Auto Adjust	
Main Scanning Direction Zoom	Main scanning direction zoom adj	I.5.21.13 Main Scanning Direction Zoom
	Auto Adjust	
Skew Measurement	DFSkew (Front)	I.5.21.14 Skew Measurement
	DFSkew (Back)	
ADF automatic Adjustment	Skew Measurement	I.5.21.15 ADF automatic Adjustment
	Sub Scanning	
	Main Scanning	
Multi-Feed DetectionAdj.		I.5.21.16 Multi-Feed DetectionAdj

4.2.11 FAX


Service Mode
Exit
Fax Setting
Machine
Firmware Version
Imaging Process Adjustment
CS Remote Care
System 1
System 2
Counter
List Output
State Confirmation
Test Mode
ADF
FAX
Finisher
Network Settings
Machine Update Setting
Modem/NCU
Network
System
Fax File Format
Communication
List Output
Function Parameter
Initialization
Fax Line Std. Setting
1 2 3
4 5 6
7 8 9
* 0 #
C
Service Mode
Exit
Fax Setting
Machine
Firmware Version
Imaging Process Adjustment
CS Remote Care
System 1
System 2
Counter
List Output
State Confirmation
Test Mode
ADF
FAX
Finisher
Network Settings
Machine Update Setting
Line1
Line2
Modem/NCU
Network
Communication
Initialization
Fax Line Std. Setting
1 2 3
4 5 6
7 8 9
* 0 #
C
Service Mode
Exit
Fax Setting
Machine
Firmware Version
Imaging Process Adjustment
CS Remote Care
System 1
System 2
Counter
List Output
State Confirmation
Test Mode
ADF
FAX
Finisher
Network Settings
Machine Update Setting
Line1
Line2
Line 3
Modem/NCU
Network
Communication
Initialization
Fax Line Std. Setting
1 2 3
4 5 6
7 8 9
* 0 #
C



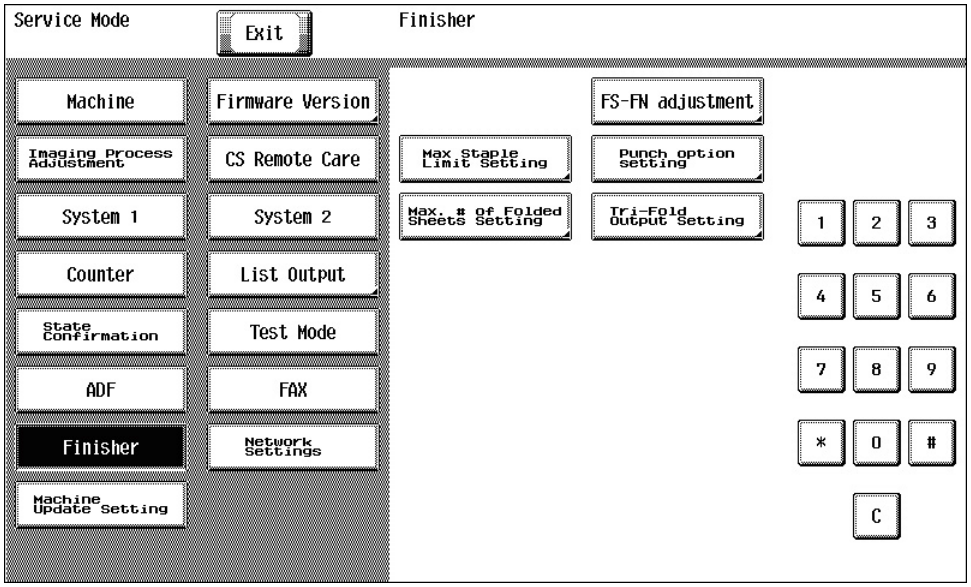
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

FAX *1		Ref. Page
Line 1 *1	Modem/NCU	I.5.22.1 Modem/NCU
	Network	I.5.22.2 Network
	System	I.5.22.3 System
	Fax File Format	I.5.22.4 Fax File Format
	Communication	I.5.22.5 Communication
	List Output *1	I.5.22.6 List Output
	Function Parameter	I.5.22.7 Function Parameter
	Initialization	I.5.22.8 Initialization
	FAX Line Std. Setting	I.5.22.9 FAX Line Std. Setting
Line 2 *2 Line 3 *3 Line 4 *4	Modem/NCU	I.5.23.1 Modem/NCU
	Network	I.5.23.2 Network
	Communication	I.5.23.3 Communication
	Initialization	I.5.23.4 Initialize
	FAX Line Std. Setting	I.5.23.5 FAX Line Std. Setting

*1: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 1) is set to “Set”.
*2: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 2) is set to “Set”.
*3: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 3) is set to “Set”.
*4: It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 4) is set to “Set”.

4.2.12 Finisher



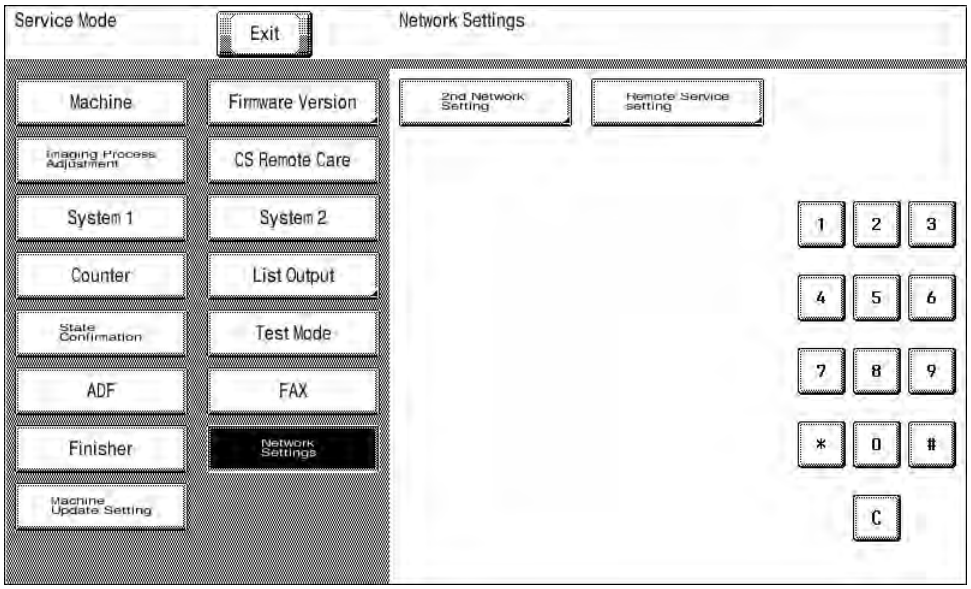
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Finisher *1		Ref. Page
FS-FN adjustment	Center Staple Position *2	I.5.29.1 FS-FN adjustment - Center Staple Position(FS-536SD/FS-537SD)
	Half-Fold Position *2	I.5.29.2 FS-FN adjustment - Half-Fold Position(FS-536SD/FS-537SD)
	Punch Centering Fine Adj *5	I.5.29.3 FS-FN adjustment - Punch Centering Fine Adj (PK-523)
	Punch Edge Adj *5 *6	I.5.29.4 FS-FN adjustment - Punch Edge Adj (PK-520/ PK-523)
	Punch F. Sensor Intensity Adj. *5	I.5.29.5 FS-FN adjustment - Punch F. Sensor Intensity Adj. (PK-523)
	Punch vertical position (Z-fold) *8	I.5.29.6 FS-FN adjustment - Punch vertical position (Z-fold) (ZU-609)
	Punch horizontal position (Z-fold) *8	I.5.29.7 FS-FN adjustment - Punch horizontal position (Z-fold) (ZU-609)
	Resist loop size (Z-fold) *4	I.5.29.8 FS-FN adjustment - Resist loop size (Z-fold) (ZU-609)
	Punch Registration Loop Adj *5	I.5.29.9 FS-FN adjustment - Punch Registration Loop Adj (PK-523)
	Punch Resist Loop Size (PI) *9	I.5.29.10 FS-FN adjustment - Punch Resist Loop Size (PI) (PI-507/PK-523)
	1st Z-Fold position *4	I.5.29.11 FS-FN adjustment - 1st Z-Fold Position/2nd Z-Fold Position (ZU-609)
	2nd Z-Fold position *4	
	1st Tri-Fold Adjustment *2	I.5.29.12 FS-FN adjustment - 1st Tri-Fold Adjustment/ 2nd Tri-Fold Adjustment (FS-536SD/FS-537SD)
	2nd Tri-Fold Adjustment *2	
	Punch Regist Loop Size *6	I.5.29.13 FS-FN adjustment - Punch Regist Loop Size (PK-520)
	PI Size Detection *3	I.5.29.14 FS-FN adjustment - PI Size Detection (PI-507)
	Post Inserter Adjustment *3	I.5.29.15 FS-FN adjustment - Post Inserter Adjustment (PI-507)
	Finisher Components Test Mode *1	I.5.29.16 FS-FN adjustment - Finisher Components Test Mode
	Paper Alignment Guides W. Adj. *1	I.5.29.17 FS-FN adjustment - Paper Alignment Guides W. Adj. (FS-536/FS-536SD/FS-537/FS-537SD)
	ZFold1st Fold Loop Size *4	I.5.29.18 FS-FN adjustment - ZFold1st Fold Loop Size (ZU-609)
	ZFold2nd Fold Loop Size *4	I.5.29.19 FS-FN adjustment - ZFold2nd Fold Loop Size (ZU-609)
	ZFold2nd Fold Speed *4	I.5.29.20 FS-FN adjustment - ZFold2nd Fold Speed (ZU-609)
	ZFold Adjust Custom *4	I.5.29.21 FS-FN adjustment - ZFold Adjust Custom (ZU-609)
Max Staple Limit Setting *2		I.5.29.22 Max Staple Limit Setting (FS-537/FS-537SD)
Punch option setting		I.5.29.23 Punch Option Setting
Max. # of Folded Sheets Setting		I.5.29.24 Max. # of Folded Sheets Setting
Tri-Fold Output Setting *10		I.5.29.25 Tri-Fold Output Setting (FS-537SD)

*1: It will be displayed only when the optional finisher FS-536, FS-536SD, FS-537 or FS-537SD is mounted.
*2 It will be displayed only when the optional finisher FS-536SD or FS-537SD is mounted.
*3: It will be displayed only when the optional Post Inserter PI-507 is mounted.
*4: It will be displayed only when the optional Z Folding Unit ZU-609 is mounted.
*5: It will be displayed only when the optional punch kit PK-523 is mounted.
*6: It will be displayed only when the optional punch kit PK-520 is mounted.
*7: It will be displayed only when the optional finisher FS-537 or FS-537SD is mounted.
*8: It will be displayed only when the optional Z Folding Unit ZU-609 and Punch Kit PK-523 are mounted.
*9: It will be displayed only when the optional Post Inserter PI-507 and Punch Kit PK-523 are mounted.
*10: It will be displayed only when the optional finisher FS-537SD is mounted.

4.2.13 Network Settings



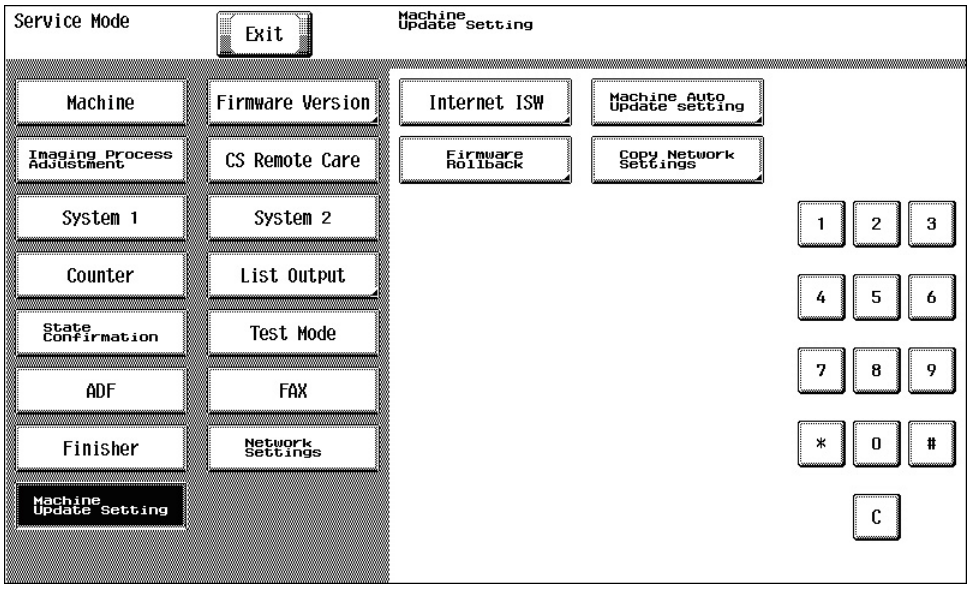
NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Network Settings	Ref. Page
2nd Network Setting *1	I.5.30.1 2nd Network Setting - 2nd network card settings
Remote Service setting	I.5.30.12 Remote Service Setting

*1: This is displayed only when the optional upgrade kit UK-212 is installed.

4.2.14 Machine Update Setting



NOTE

- **After exiting Service Mode, you must turn OFF the main power switch. Turning ON the main power switch again after waiting 10 seconds makes the changes to the Service Mode setting take effect.**

Machine Update Setting			Ref. Page
Internet ISW	Internet ISW Set	Function Setting	I.5.31.1 Internet ISW - Internet ISW Set
		Open Mode Settings	
	HTTP Setting *1		I.5.31.2 Internet ISW - HTTP Setting
	FTP Setting *1		I.5.31.3 Internet ISW - FTP Setting
	Forwarding Access Setting *1		I.5.31.4 Internet ISW - Forwarding Access Setting
	Download *1		I.5.31.5 Internet ISW - Download
	Update Start Time Settings *1		I.5.31.6 Internet ISW - Update Start Time Settings
Machine Auto Update setting	Auto Update setting		I.5.31.7 Machine Auto Update setting - Auto Update setting
	Relay server setting		I.5.31.8 Machine Auto Update setting - Relay server setting

Machine Update Setting		Ref. Page
	Transmission log Update	I.5.31.9 Machine Auto Update setting - Transmission log Update
	Transmission Server Log	I.5.31.10 Machine Auto Update setting - Transmission Server Log
	Update Log Display	I.5.31.11 Machine Auto Update setting - Update Log Display
	Relay Server Log Confirmation	I.5.31.12 Machine Auto Update setting - Relay Server Log Confirmation
	Manually Update	I.5.31.13 Machine Auto Update setting - Manual Update
	Machine Import setting	I.5.31.14 Machine Auto Update setting - Machine Import setting
	Machine Export setting	I.5.31.15 Machine Auto Update setting - Machine Export setting
	Machine Update Password	I.5.31.16 Machine Auto Update setting - Machine Update Password
Firmware Rollback	Firmware Rollback	I.5.31.17.(1) Firmware Rollback
	Open Mode Settings	I.5.31.17.(2) Open Mode Settings
Copy Network Settings		I.5.31.18 Copy Network Settings

*1: To be displayed only when the following setting is set to “ON”. [Machine Update Setting] -> [Internet ISW] -> [Internet ISW set] -> [Function Setting]

5. SERVICE MODE

5.1 Starting/Setting/Exiting

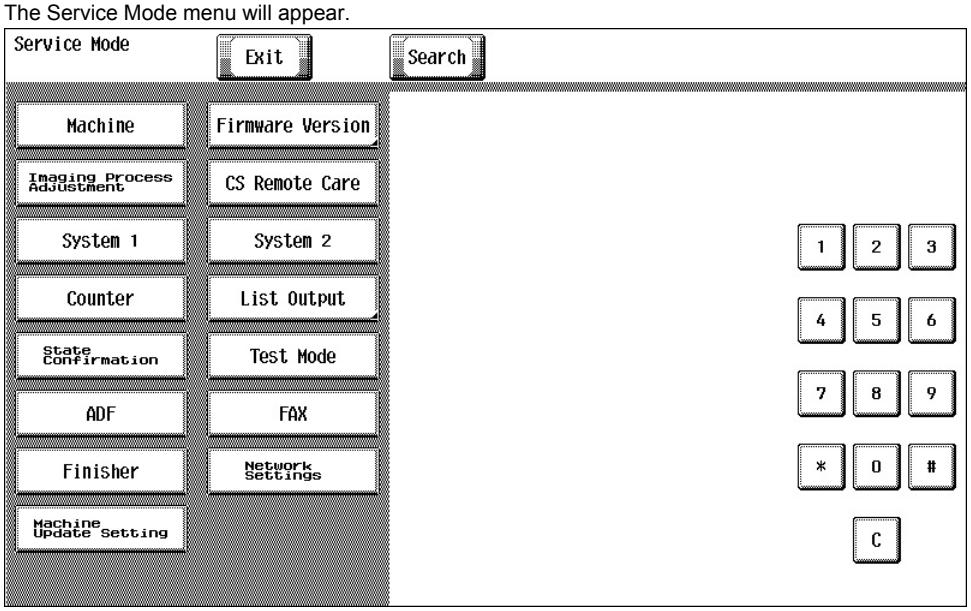
5.1.1 Starting procedure

NOTE

- **Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.**

(1) Procedure

1. Touch Menu.
2. Touch [Counter].
3. Touch [Display Keypad].
4. Press the following keys in this order.
   - Stop -> 0 -> 0 -> Stop -> 0 -> 1
5. Enter the CE password and touch [END].
   (The CE password is initially set to "9272927292729272.")
   NOTE
   - **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON", CE password authentication is necessary.**
   - **If a wrong CE password is entered, re-enter the right password.**
   - **The machine will not enter Service Mode unless the CE password is entered correctly. To return to the basic screen, turn OFF the main power switch and turn it ON again.**
   - **When [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Prohibited Functions When Authentication Error] is set to "Mode 2", operation will be prohibited since it indicates authentication failure by failing to enter the correct CE password within the specified number of times.**
   - **If the access lock is activated, the lock release timer starts to operate by input the Stop -> 0 -> 9 -> 3 -> 1 -> 7 in Menu -> [Counter] -> [Print List] -> [Display Keypad] after the main power switch is turned OFF and On. When the timer reaches the time specified in this setting, the access lock is released.**
   - **The service code entered is displayed as " * "**
6. The Service Mode menu will appear.



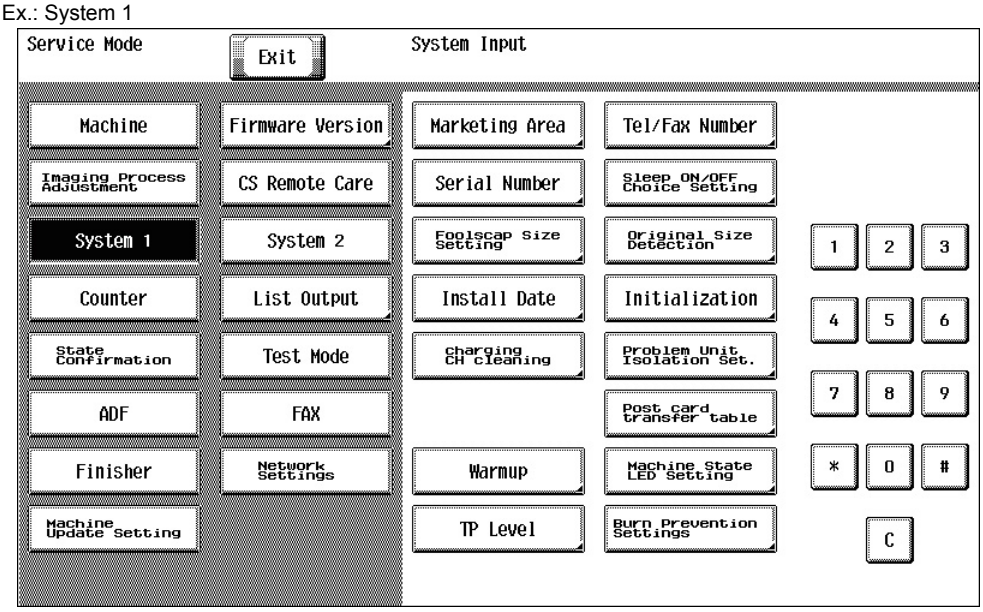
NOTE

- **Be sure to change the CE password from its default value.**
- **For the procedure to change the CE password, see the "I.7.3.1 CE Password."**
- **NEVER forget the CE password.**

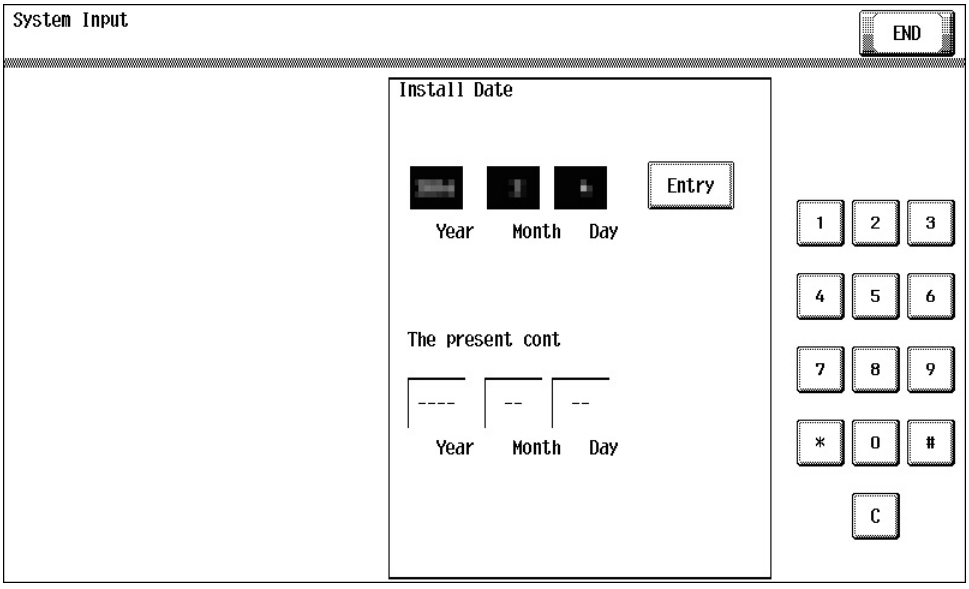
5.1.2 Setting procedure

1. Press the key corresponding to the function you would like to change the setting for. Keys or setting screens will appear for each function.

Ex.: System 1



2. Press the key for the item that you would like to change the setting for. Setting screens will appear for each item.
Ex.: Install Date



3. Press the key for the setting you would like to change. You can also input the numerical value using the 10-key pad. (the [+]/[-] keys can also be used for settings. Follow the directions on the screen to input numerical values.)
NOTE
- **For more details, see the description pages for each setting item.**
  I.4.1 List of service mode (outline)

4. Touch [END]. This closes the setting screen and returns to the Service Mode screen. (If deep within the hierarchy of the setting screen, it may be necessary to touch [END] several times)
5. Touch [Exit]. This will close the Service Mode screen and exit the Service Mode.
6. Turn OFF the main power switch. After waiting 10 seconds, turn ON the main power switch again. Turning the main power switch OFF and then ON again makes the changes to the Service Mode setting take effect.
NOTE
- **Simply exiting the Service Mode will not make the changed settings take effect. You must turn the main power switch OFF and then ON again.**

5.1.3 Exiting procedure

1. Touch [Exit] on the Service Mode screen.
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

5.2 Time Zone/Date & Time Input mode

5.2.1 Use

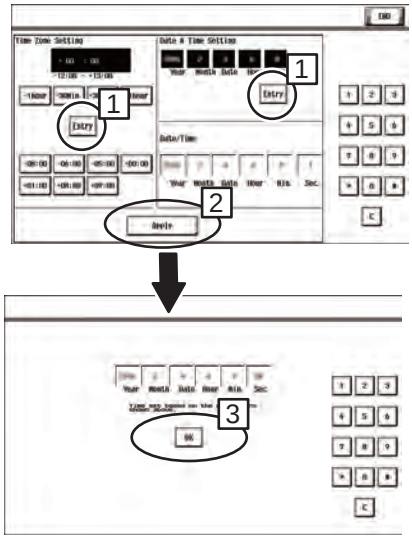
- This mode is used to set time-of-day and date.
- The set time zone/date & time are automatically reflected in the date and time setting of Administrator Settings.

Time Zone Setting	Set the time zone applicable to the area. After the setting, touch [Entry] and then [Apply] to validate the time.

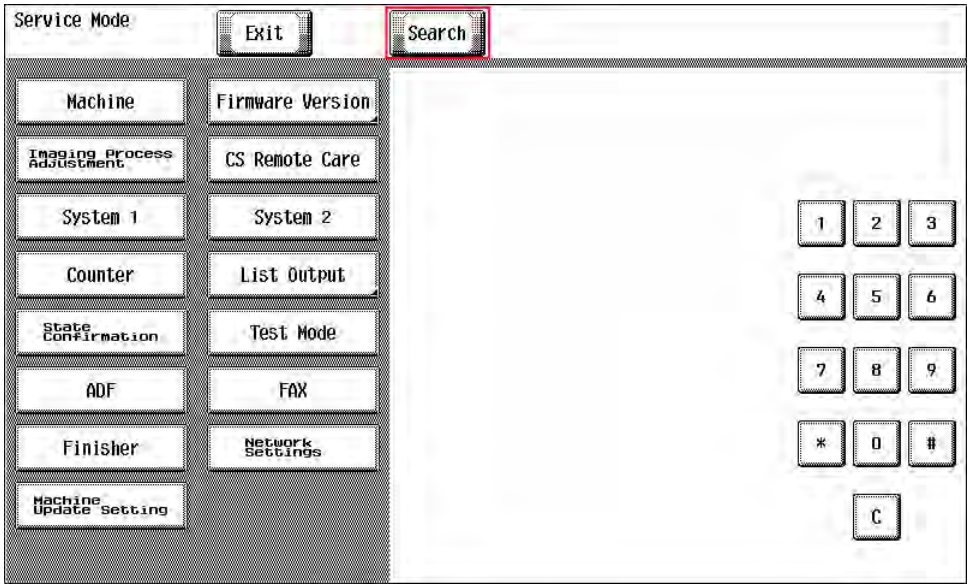
	The following lists settings of time zones of different areas. -08:00: U.S.: Pacific Standard Time -06:00: U.S.: Central Standard Time -05:00: U.S.: Eastern Standard Time -00:00: England: Greenwich mean time +01:00: Western European countries +08:00: China, Taiwan, western part of Australia +09:00: Japan, Korea
Date & Time Setting	Enter the time from the 10-key pad to set the time-of-day. Before making any entry, first press Clear. After the time has been set, touch [Entry] and then [Apply].

5.2.2 Procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 1 -> 1 -> 4 -> 4 -> Clear
3. Enter time zone year, month, day, hour, and minute, in that order, from 10-key pad.
   NOTE
   - **Before entering date and time, touch Clear to delete the present time from the place where data and time is entered.**
   - **When setting the month, day, hour, or minute, enter "0" first if the data one digit.**
4. Make sure that the correct value has been entered, then touch [Entry] and then [Apply].
5. After the confirmation screen appears, touch [OK].



5.3 Search



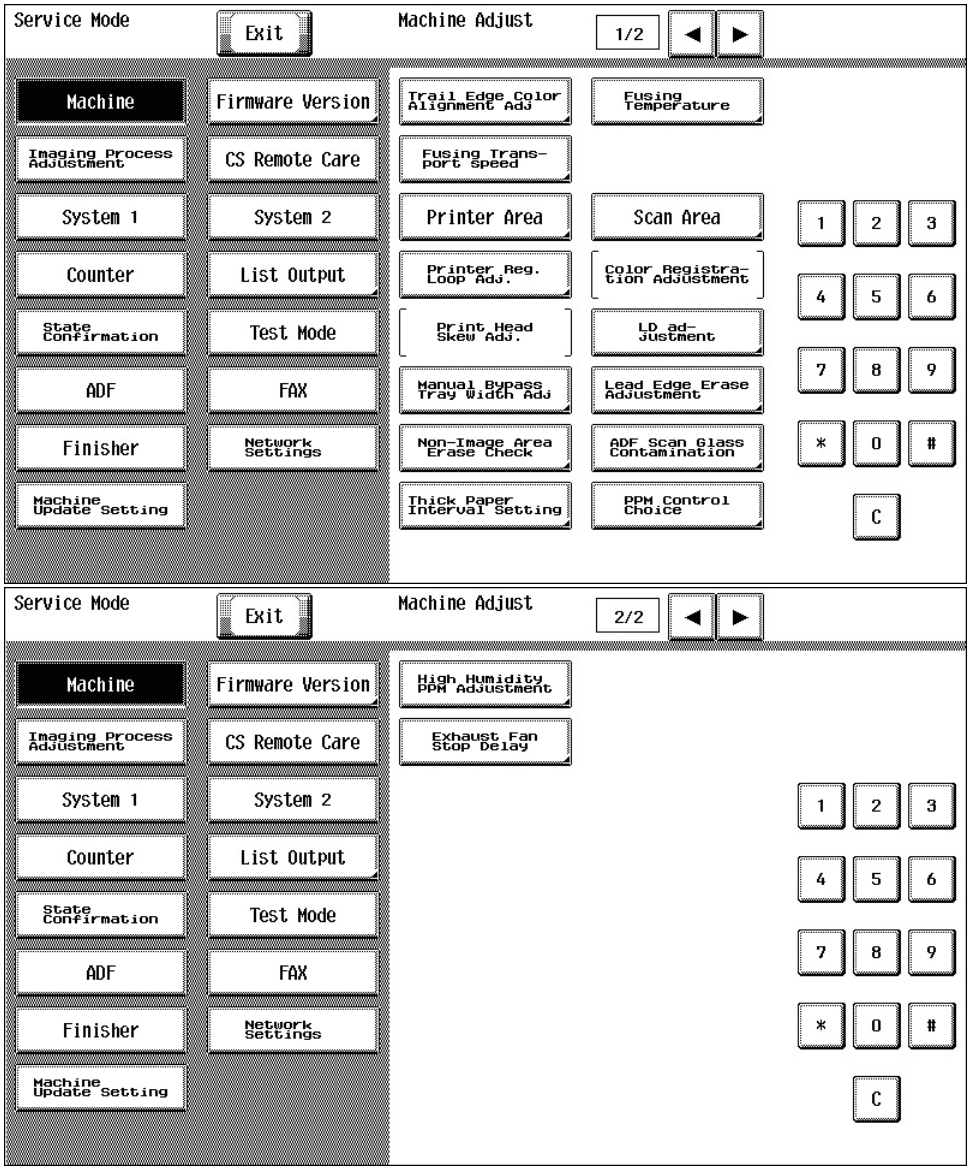
5.3.1 Use

- Searches parameters that include the entered keyword.
- You can display the function screen from the search results.

5.3.2 Procedure

1. Touch [Search] at the top of the service mode screen.
2. Enter the desired search keyword.
3. Touch [END].
4. Select the desired function from the displayed search results and touch [Start].
5. The screen for the selected function displays.

5.4 Machine



5.4.1 Trail Edge Color Alignment Adj

(1) Use

- To change the conveyance speed by the registration motor and executes fine-tune when an error in zoom ratio is detected at the rear edge of the print image on the each paper type.
- To use when an error in zoom ratio occurs at the image rear edge.
- Able to make a setting on a process speed basis independently for each paper type of the plain paper/ the thin paper, the thick 1/1+ and the thick 2/3/4.

(2) Default setting

- 0

(3) Setting range

- -5 to + 5 (Step: 1)

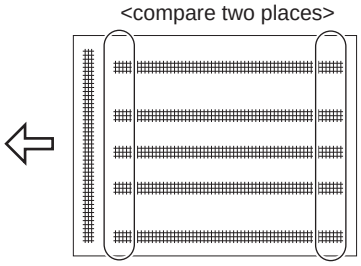
(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [Trail Edge Color Alignment Adj].
3. Load manual bypass tray with A3/11 x 17 or A4/8 $^{1}/_{2}$ x 11 plain paper.
4. Select the paper type to be adjusted.

NOTE
- **To adjust "Post.", load the manual bypass tray with A6 or Postcard.**

5. Press the Start key.
6. Compare the error in zoom ratio at the rear edge side of printed test paper to that at the leading edge side, and conduct the following adjustment if the error occurs at the rear edge side.
7. Using the [+] / [-] key, change the setting value as necessary.
   - Reduce the set value (to reduce the conveyance speed) if the zoom ratio at the rear edge side is larger.
8. Produce another test pattern and make sure that there is no deviation.

Check Procedure



5.4.2 Fusing Temperature

(1) Use

- To adjust individually the temperature of the roller (heating roller or pressure roller) for each type of paper, thereby coping with varying fusing performance under changing environmental conditions.

  NOTE
  - **Heating roller: bizhub 808, bizhub 758**
  - **Pressure roller: bizhub 958, bizhub PRO 958**

- When fusing performance is poor, or wax streak or offset occurs when the type of paper is changed or environmental conditions change.
- Use when the curling of the paper due to the paper type or environmental change occurred, or when the paper jam, as well as stapling or folding position error occurred due to the curling of the paper.
- By setting the temperature higher (+), gloss of print can be improved.
- By setting the temperature lower (-), exit roller mark can be reduced.

(2) Setting range

Paper type	Setting range	Step
Plain Paper	-20 °C to +10 °C	5 °C
Thin Paper		
OHP Film		
Thick 1		
Thick 1+		
Thick 2		
Thick 3		
Thick 4		
Post.		
Enve.		
Recycled		

(3) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [Fusing Temperature].
3. Select the item to be adjusted.
4. Enter the new setting from the [+] / [-] key.
   - If fusing performance is poor, increase the setting.
   - If wax streaks occur, decrease the setting.
   - If offset is poor, decrease the setting.
   - If curling of the paper occurs, decrease the setting.
5. Touch [END].
6. Return to the basic screen.
7. Output two or three test patterns and check to see whether the image has any problem.
8. Make the adjustment for each type of paper.

5.4.3 Fusing Transport Speed

(1) Use

- To adjust the paper loop formed between the fusing section and 2nd transfer section with the number of rotations of the fusing motor.

- To be used when brush effect or blurred image occurs.

(2) Setting range

Paper type	Setting range	Step
Thin Paper	-20 to +20	1
Plain Paper		
Thick 1/1+		
Thick 2/3		
Thick 4		
Post.		

(3) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [Fusing Transport Speed].
3. Select the paper type.
4. Enter the new setting from the 10-key pad.
   - If brush effect is evident, vary the setting value and check for image.
   - If a blurred image occurs, decrease the setting.
5. Touch [END].
6. Return to the basic screen.
7. Check the print image for any image problem.

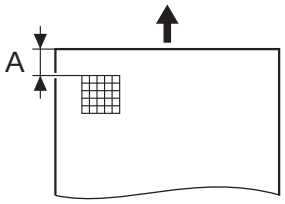
5.4.4 Printer Area

(1) Leading Edge Adjustment

(a) Use

- To vary the print start position in the sub scan direction for each of different paper types. (to adjust the timing where paper is sent out from the registration roller)
- Although the adjustment is made on the manual bypass tray, the adjusted values are reflected to each paper tray.
- The PH unit has been replaced.
- The paper type has been changed.
- The print image deviates in the sub scan direction.
- A faint image occurs on the leading edge of the image.
- This setting can be made independently for plain paper, thin paper, thick 1/1+ thick 2, thick 3, thick 4, OHP film, and envelopes.

(b) Setting range



- Width A on the test pattern produced should fall within the following target.

Target	4.2 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(c) Procedure

1. Load manual bypass tray with A3 or 11 x 17 plain paper.
2. Call the Service Mode to the screen.
3. Touch [Machine] -> [Printer Area] -> [Leading Edge Adjustment].
4. Select [Leading Edge Adjustment] or [Halftone pattern].
5. Select the [Plain Paper].
6. Press the Start key to let the machine produce a test pattern.
7. Check the dimension of width A on the test pattern.
8. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
9. Press the Start key to let the machine produce a test pattern.
10. Check the dimension of width A on the test pattern.
11. If width A is outside the target, change the setting again and make a check again.
12. If width A falls within the target, touch [END].
13. Following the same procedure, adjust for thick paper, OHP film, and envelope.

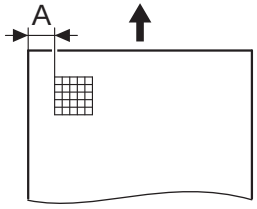
(2) Printer Image Centering Side 1

(a) Use

- To vary the print start position in the main scan direction for each paper source.
- The PH unit has been replaced.
- A paper feed unit has been added.

- The print image deviates in the main scan direction.

(b) Setting range



- Width A on the test pattern produced should fall within the following target.

Target	3.0 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(c) Procedure

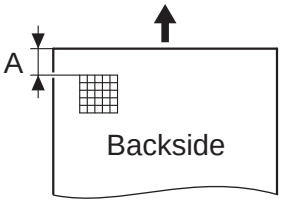
1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Area] -> [Printer Image Centering Side 1].
3. Select [Leading Edge Adjustment] or [Halftone pattern].
4. Select the paper source to be adjusted.
5. Press the Start key to let the machine produce a test pattern.
6. Check the dimension of width A on the test pattern.
7. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
8. Press the Start key to let the machine produce a test pattern.
9. Check the dimension of width A on the test pattern.
10. If width A is outside the target, change the setting again and make a check again.
11. If width A falls within the target, touch [END].
12. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 x 11 plain paper for the bypass. Use 8 1/2 x 11 when [US] is the [Marketing Area].)

(3) Leading Edge Adj. Side 2 (Duplex)

(a) Use

- For individual types of paper, this function allows the adjustment of the image write start position in the sub scan direction on the 2nd side of duplex printing. (to adjust the timing where paper is sent out from the registration roller)
- Although the adjustment is made on the manual bypass tray, the adjusted values are reflected to each paper tray.
- This adjustment is made when the image on the 2nd side of paper deviates from the original position in the sub scan direction.
- This adjustment can be made independently for each of plain paper, thick paper 1/1+, thick paper 2, and thick paper 3.

(b) Setting range



- Width A on the test pattern produced should fall within the following target.
- For measurement, use the image produced on the backside of the test pattern.

Target	4.2 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(c) Procedure

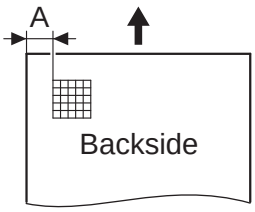
1. Load manual bypass tray with A3 or 11 x 17 plain paper.
2. Call the Service Mode to the screen.
3. Touch [Machine] -> [Printer Area] -> [Leading Edge Adj. Side 2 (Duplex)].
4. Select [Leading Edge Adjustment] or [Halftone pattern].
5. Select the [Plain Paper].
6. Press the Start key to let the machine produce a test pattern.
7. Check the dimension of width A on the test pattern.
8. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
9. Press the Start key to let the machine produce a test pattern.
10. Check the dimension of width A on the test pattern.
11. If width A is outside the target, change the setting again and make a check again.
12. If width A falls within the target, touch [END].
13. Following the same procedure, adjust for thin paper and thick paper.

(4) Prt. Image Center. Side 2 (Dup)

(a) Use

- To vary the print start position in the main scan direction for each paper source in the 2-Sided mode.
- The image on the backside of the 2-sided copy deviates in the main scan direction.

(b) Setting range



- Width A on the test pattern produced should fall within the following target.
- For measurement, use the image produced on the backside of the test pattern.

Target	3.0 ± 1.0 mm
Setting range	-3.0 mm to +3.0 mm (in 0.2 mm increments)

(c) Procedure

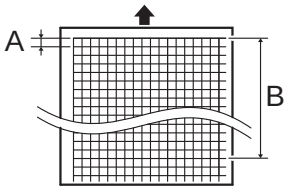
1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Area] -> [Prt. Image Center. Side 2 (Dup)].
3. Select [Leading Edge Adjustment] or [Halftone pattern].
4. Select the paper source to be adjusted.
5. Press the Start key to let the machine produce a test pattern.
6. Check the dimension of width A on the test pattern.
7. If width A falls outside the target, change the setting using the [+] / [-] key.
   - If width A is longer than the target, make the setting value smaller than the current one.
   - If width A is shorter than the target, make the setting value greater than the current one.
8. Press the Start key to let the machine produce a test pattern.
9. Check the dimension of width A on the test pattern.
10. If width A is outside the target, change the setting again and make a check again.
11. If width A falls within the target, touch [END].
12. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 x 11 plain paper for the bypass. Use 8 1/2 x 11 when [US] is the [Marketing Area].)

(5) Paper Feed Direction Adj.

(a) Use

- To synchronize the paper transport speed with the image writing speed.
- [Sub Scan Zoom Adj.] becomes necessary.
- The print image on the copy distorts (stretched, shrunk).
- When the print image on the copy is stretched in the sub scan direction.
- This adjustment can be made independently for each of Plain Paper-Black/Thin Paper-Black, thick paper 1/1+, thick paper 2, thick paper 3, and thick paper 4.

(b) Setting range



- Width A and width B on the test pattern produced should fall within the following target.
  NOTE
  - **Width A: equivalent to one grid**
  - **Width B: equivalent to 48 grids**

Target	A: 8.13 ±0.2 mm
	B: 390.14 mm ±2.0 mm
Setting range	A: -7 to +7
	B: -7 to +7

- Make adjustment in the same way after changing the paper to thick paper.

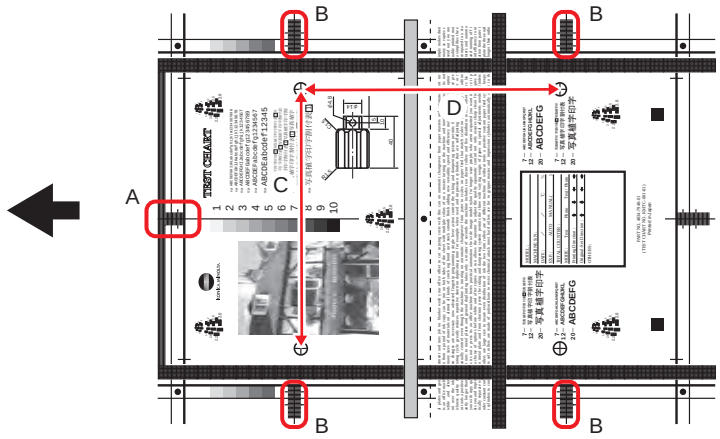
(c) Procedure

1. Load manual bypass tray with A3 or 11 x 17 plain paper.
2. Call the Service Mode to the screen.
3. Touch [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.].

4. Select [Lattice pattern] or [Halftone pattern].
5. Select the [Plain Paper-Black].
6. Press the Start key to let the machine produce a test pattern.
7. Check width A (equivalent to one grid) and width B (equivalent to 48 grids) on the test pattern.
8. Touch [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.].
9. If width of A or B falls outside the target, change the setting using the [+] / [-] keys.
   - If width A or B is longer than the target, make the setting value smaller than the current one.
   - If width A or B is shorter than the target, make the setting value greater than the current one.
10. Press the Start key to let the machine produce a test pattern again.
11. Check width A and width B on the test pattern.
12. If width A or B falls outside the target, change the setting value and make a check again.
13. If width A falls within the target, touch [END].
14. Following the same procedure, adjust for other paper.

5.4.5 Scan Area

- Use the following test chart for the adjustment of the scanner section.
- If the test chart is not available, a scale may be used instead.



Adjustment item	Reference
A: Image Position: Leading Edge	I.5.4.5.(1) Image Position: Leading Edge
B: Scanner Image Side Edge	I.5.4.5.(2) Scanner Image Side Edge
C: Main Scan Zoom Adj.	I.5.4.5.(3) Main Scan Zoom Adj.
D: Sub Scan Zoom Adj.	I.5.4.5.(4) Sub Scan Zoom Adj.

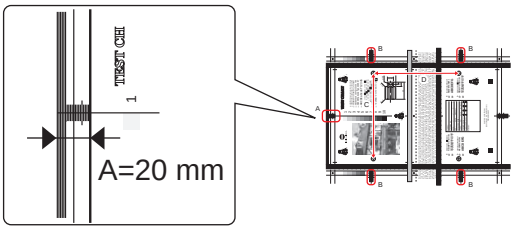
(1) Image Position: Leading Edge

(a) Use

- To adjust variations in mounting accuracy and sensitivity of the scanner home sensor and in mounting accuracy of the original width scale by varying the scan start position in the main scan direction.
- When the original glass is replaced.
- The scanner home sensor has been replaced.
- The CCD unit has been replaced.

(b) Setting range

Enlarged view of the test chart



- A width on the color chart and one on the test pattern are measured and adjusted so that the difference of A width satisfies the target shown below.
- An adjustment must have been completed correctly of [Leading Edge Adjustment] of the [Printer Area].

Target	A: ± 1.5 mm
Setting range	-3.0 mm to +3.0 mm (in 0.1 mm increments)

(c) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Image Position: Leading Edge].
3. Position the test chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a copy.
5. Check point A on the test pattern.

6. If width A on the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the copy image is less than the target, increase the setting value.
   - If the copy image exceeds the target, decrease the setting value.
7. Press the Start key to make another test pattern.
8. Check the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

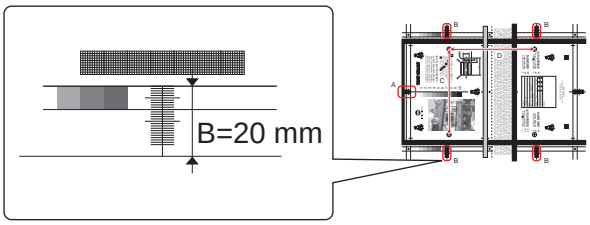
(2) Scanner Image Side Edge

(a) Use

- To adjust part-to-part variations in accuracy of scanner parts and their mounting accuracy by varying the scan start position in the main scan direction.
- When the CCD unit is replaced.
- When the original glass is replaced.

(b) Setting range

Enlarged view of the test chart



- B width on the test chart and one on the test pattern are measured and adjusted so that the difference of B width satisfies the target shown below.
- An adjustment must have been completed correctly of [Printer Image Centering Side 1] of [Printer Area].

Target	Width B: ± 1.5 mm
Setting range	-5.7 mm to +5.7 mm (in 0.1 mm increments)

(c) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Scanner Image Side Edge].
3. Position the test chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a copy.
5. Check point B on the image of the test pattern.
6. If the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the copy image is less than the target, increase the setting value.
   - If the copy image exceeds the target, decrease the setting value.
7. Press the Start key to make a test pattern.
8. Check point B of the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

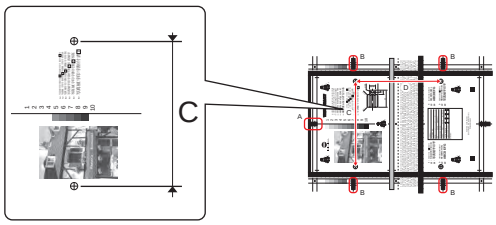
(3) Main Scan Zoom Adj.

(a) Use

- To adjust the zoom ratio in the main scan direction for the scanner section.
- When the CCD unit is replaced.

(b) Setting range

Enlarged view of the test chart



- Measure C width on the test chart and on the test pattern, and adjust the gap to be within the following target.
- An adjustment must have been completed correctly of [Paper Feed Direction Adj.] of [Printer Area].

Target	Width C: ± 1.0 mm
Setting range	0.990 to 1.010 (steps: 0.001)

* Standard size when using a scale: 200.0 mm

(c) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Main Scan Zoom Adj.].
3. Position the test chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a test pattern.
5. Check the C width on the image of the copy.

6. If the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the C width on the copy sample is less than one on test chart, increase the setting.
   - If the C width on the copy sample exceeds one on test chart, decrease the setting.
7. Press the Start key to make another test pattern.
8. Check the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

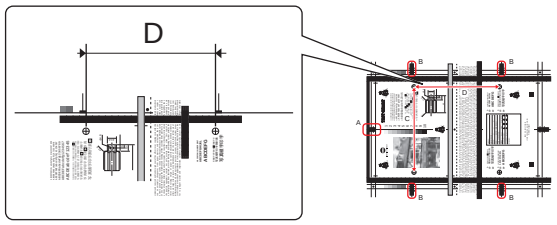
(4) Sub Scan Zoom Adj.

(a) Use

- To adjust the zoom ratio in the sub scan direction for the scanner section.
- The LED exposure unit or the scanner motor has been replaced.

(b) Setting range

Enlarged view of the test chart



- Measure D width on the test chart and on the test pattern, and adjust the gap to be within the following target.
- An adjustment must have been completed correctly of [Paper Feed Direction Adj.] of [Printer Area].

Target	Width D: ± 1.5 mm
Setting range	0.990 to 1.015 (steps: 0.001)

* Standard size when using a scale: 300.0 mm

(c) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Scan Area] -> [Sub Scan Zoom Adj.].
3. Position the test chart correctly so that the original reference point is aligned with the scale.
4. Press the Start key to make a test pattern.
5. Check the D width on the image of the test pattern.
6. If the test pattern falls outside the target, change the setting using the [+] / [-] key.
   - If the D width on the copy sample is less than one on test chart, increase the setting.
   - If the D width on the copy sample exceeds one on test chart, decrease the setting.
7. Press the Start key to make another test pattern.
8. Check the image on the test pattern to see if the specifications are met.
9. Make adjustments until the targets are met.

5.4.6 Printer Reg. Loop Adj.

(1) Use

- To set the correction value of the paper loop length for each process speed of tray 1, tray 2, tray 3-4, manual, Duplex, and LCT.
- To adjust the length of the loop formed in paper before the registration rollers.
- Use “Paper Passage” for paper passage check.
- When a paper skew occurs or paper misfeed occurs.

(2) Setting range

- The adjustable range is different depending on paper source and paper type.

	Tray 1	2nd.	Tray 3/4	manual	Duplex	LCT
Plain Paper	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6
Thin Paper	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6
Thick 1/1+	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6
Thick 2/3/4	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6	-6 to +6
Post.	-	-	-6 to +6	-6 to +6	-6 to +6	-

(3) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Printer Reg. Loop Adj.].
3. Select a paper source and a processing speed where the settings are made by touching the corresponding keys.
4. Enter the new setting from the [+] / [-] key.
   - To decrease the loop amount: Decrease the setting value.
   - To increase the loop amount: Increase the setting value.

5.4.7 Color Registration Adjustment

- Not used

5.4.8 Print Head Skew Adj.

- Not used

5.4.9 LD adjustment

(1) LD Timing Adj.

(a) Use

- It displays the emission delay value between two laser diode.
- This setting is made after the PH unit is replaced.
- This adjustment is made when the backup of information on position settings is lost.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [LD adjustment] -> [LD Timing Adj.].
3. Check the LD emission delay value.
4. Touch [OK].

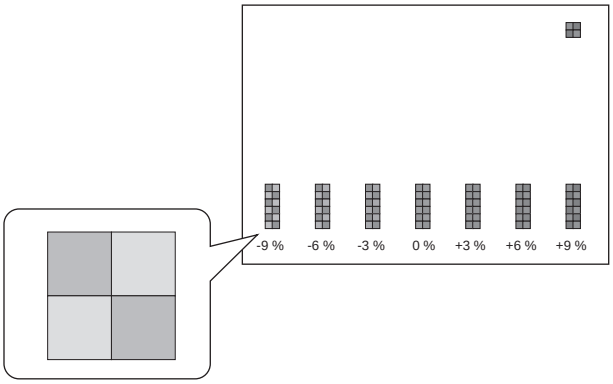
(2) LD 1/2 Balance Adj.

(a) Use

- This function adjusts the LD lightness balance between the two LDs to correct the difference of LD lightness between the LDs.
- This setting is made after the PH unit or eMMC board is replaced.
- This adjustment is made to prevent uneven density in highlighted halftone area processed with error diffusion being caused by inappropriate laser intensity.
- To eliminate the differences in light intensity between LD1 and LD2, adjust the light intensity of LD2 to that of LD1 (the light intensity of LD1 is fixed).

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.].
3. Select [For adjustment] and press Start key.
4. Patterns are output with LD2 light intensity changed on the basis of LD1.



5. Each pattern has four squares. The two small squares diagonal to each other are printed with the same LD. (The pair of small squares where image density change corresponds to LD2.)
6. From the test pattern, select the pattern where the least density difference appears between LD1 and LD2.
7. Enter the adjustment value corresponding to the pattern you selected (see the above illustration) or a value close to the adjustment value using the 10-key pad on the panel.
8. Select [For effect confirmat.] and press Start key.
9. Check that LD2 small squares have no image noise of woodgrain.
10. Touch [OK].

(3) LD Light Width Adjustment

(a) Use

- To fine-adjust the light-emitting time of the laser that is scanned by the polygon motor.
- Use when the reproducibility of thin line is reduced.

NOTE

- **Adjustment value of this setting will be reflected by the image stabilization control.**

(b) Default setting

- +3

(c) Setting range

- 0 to +6 (Step: 1)

(d) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [LD adjustment] -> [LD Light Width Adjustment].
3. Enter the new setting from the [+] / [-] key.
   - Increase the value: Light-emitting time will be lengthened.
   - Decrease the value: Light-emitting time will be shortened.

5.4.10 Manual Bypass Tray Width Adj

(1) Use

- To set the maximum width and the minimum width for the bypass paper width detection resistor of the manual bypass guide.
- Use when the bypass paper width detection resistor of the manual bypass guide has been changed.
- Use when a false paper size is displayed when the manual bypass is used.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Manual Bypass Tray Width Adj].
3. Touch [Max. Width].
4. Load the bypass tray with paper having a width of 297 mm.
5. Press the Start key and check that the results are [OK].
6. Touch [Min. Width.].
7. Load the bypass tray with paper having a width of 110 mm.
8. Press the Start key and check that the results are [OK].
   * Make the adjustment again if the results are [NG].

5.4.11 Lead Edge Erase Adjustment

(1) Use

- To set the leading edge erase amount of the paper.
- Upon user requests, it is possible to specify the void area where image is not printed along the leading edge.
- This adjustment can be made individually for First Side, Second Side, Thin Paper Front and Thin Paper Back.

(2) Default setting

- 4 mm

(3) Setting item

(a) First Side/Second Side

- 4 mm
- 5 mm
- 7 mm

NOTE

- **When "4 mm" is selected, 4.2 mm is the actual amount to be erased in print based on the control system of the machine.**

(b) Thin Paper Front / Thin Paper Back

- 4.0 mm to 10.0 mm (Step: 1.0 mm)

5.4.12 Non-Image Area Erase Check

(1) Use

- The non-image area erase function may not work properly under bright light source. Incoming light quantity is checked to verify that the non-image area erase function can work properly under the environment.
- Verification results are shown as follows:

OK	Works properly.
NG1	Works properly. However, data that may interfere with the non-image area erase function was found. This function may not work well with dark original.
NG2	Data that may interfere with the non-image area erase function was found.

- Use this feature when installing a new machine or reinstalling a machine in a new place.
- Use this feature when the non-image area erase function fails to work properly due to the changes of the surrounding environment at the installation site.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [Non-Image Area Erase Check].
3. Press the Start key to start a check.
   NOTE
   - **Before the check, make sure that the DF is completely opened. In addition, make sure that no scratch or stain exists on the original glass.**
4. Check the result is "OK."
   * If the check result is "NG1" or "NG2," reinstall the machine in another place or adjust the orientation of the machine to reduce light incidence on the machine. Then, perform the check again.

5.4.13 ADF Scan Glass Contamination

(1) Use

- To check the stain on the ADF scan glass and display the result.
  NOTE
  - **If the result is NG, “NG1” or “NG2” is displayed. NG1 corresponds to the detection of stain on the front side and NG2 corresponds to that on the back side.**
- To manually perform the pre-detection of the stain which is normally conducted when the main power switch is turned ON, recovering from the sleep/low power mode, etc.
- [ADF Scan Glass Contamination] will be conducted with the detection level set by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [ADF Scan Glass Contamin. Sensitivity]. When the above setting is set to “Not Set”, “NG1” or “NG2” will be displayed even though the pre-detection is conducted.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine] -> [ADF Scan Glass Contamination].
3. Press the start key to start the pre-detection.
4. Check to make sure that “OK” is displayed for the result.

- * When the result says “NG1” or “NG2”, clean the glass and check again.

5.4.14 Thick Paper Interval Setting

(1) Use

- For thick paper, the paper interval can be changed.
- To resolve image failure (black streaks) in the main scan direction due to the vibrations created when the trailing edge of the preceding paper is passing by the registration roller.
- To reduce the effect of vibrations on image quality by widening paper interval.

Image Quality	Operates with the paper interval longer than normal.
Productivity	Operates with the paper interval closer to the normal.

(2) Default setting

- Productivity

(3) Setting item

- Image Quality
- “Productivity”

5.4.15 PPM Control Choice

(1) Use

- To improve productivity when printing on thin paper.
- To give a higher priority to productivity than to fusing performance, change the setting to “N int.”

NOTE

- **When “N int.” is specified, paper conveyance reliability may drop, for example, an increase of curl may occur.**

(2) Default setting

- W int.

(3) Functions

- N int.
- W int.

5.4.16 High Humidity PPM Adjustment

(1) Use

- If a paper curl occurs in a high humidity environment, suppress the curl by making paper passing intervals wider.

(2) Default setting

- 0

(3) Setting range

Paper Type	Setting range	Step
Thin Paper	0 to +2	1
Normal		
Recycled Paper		

(4) Procedure

1. Touch these keys in this order: [Machine] -> [High Humidity PPM Adjustment].
2. Enter the new setting from [+] / [-].
   - 0: Productivity 100% - No change in PPM (equivalent to the standard speed/product speed)

- 1: Productivity 70% - The paper feeding interval becomes wide and PPM decreases.
- 2: Productivity 50% - The paper feeding interval becomes much wider and PPM decreases further.
- For a thin paper, follow the set value in this order: [Service Mode] -> [Machine] -> [PPM Control Choice].

3. Touch [END].
4. Check the print image for any image problem.

5.4.17 Exhaust Fan Stop Delay

(1) Use

- It sets the period of time till the exhaust fan (FM6) stops.
- When the ozone fan stops when it is rotating at the full speed such as when the jam/trouble occurred after printing/image stabilization is finished, the period of time until it stops is delayed to discharge ozone which is around photo conductor.
  (When shifting to the sleep mode immediately, ozone fan does not stop but carry out delay rotation.)

(2) Default setting

- 0

(3) Setting range

- 0 to 15 (minutes)

NOTE

- **When this setting is set to 0 (minute), the fan motor runs for 10 seconds before it stops.**
- **When Switch No. 39 of Engine FW DipSW is enabled, and the value other than "15" is set in this setting, the stop timing will delay for two minutes.**
  I.7.3.9.(3).(l) Choice of enabling exhaust fan rotation time setting

5.5 Firmware Version

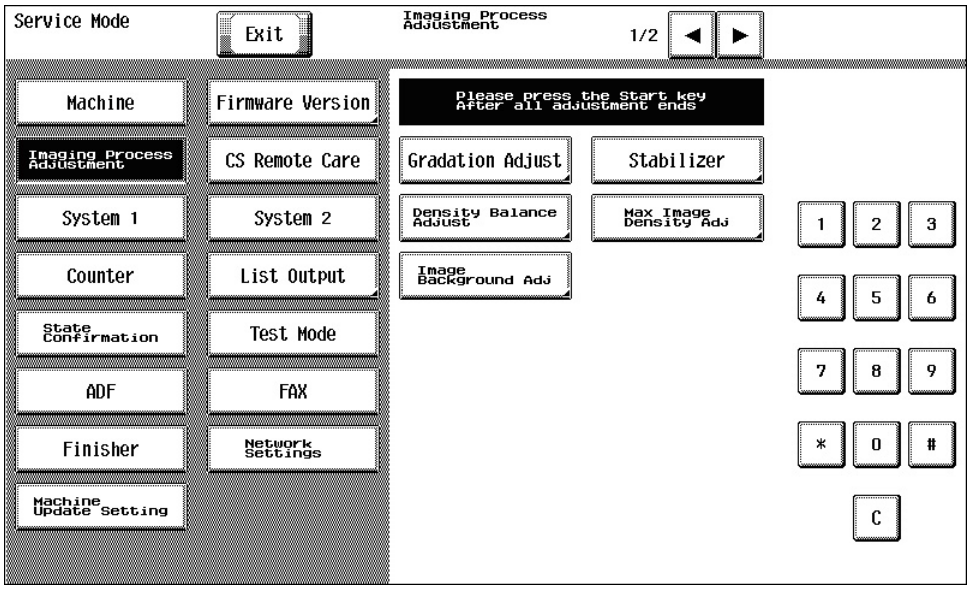
5.5.1 Use

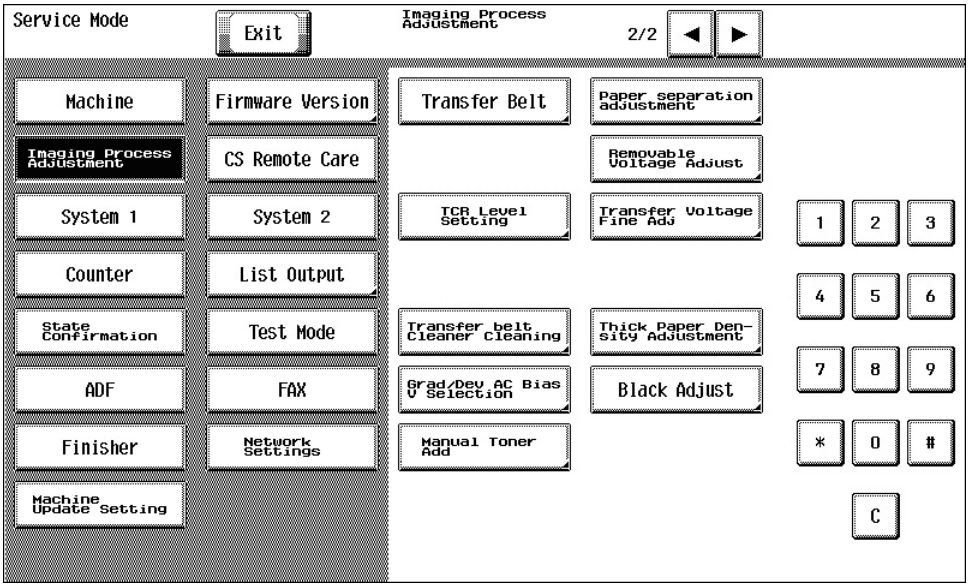
- To check the firmware version.
- Use when the firmware is upgraded.
- When the firmware is upgraded or PWB is replaced.

5.5.2 Procedure

1. Call the Service Mode to the screen.
2. Touch [Firmware Version].
3. Touch the [↑] / [↓] key to check the firmware version.

5.6 Imaging Process Adjustment





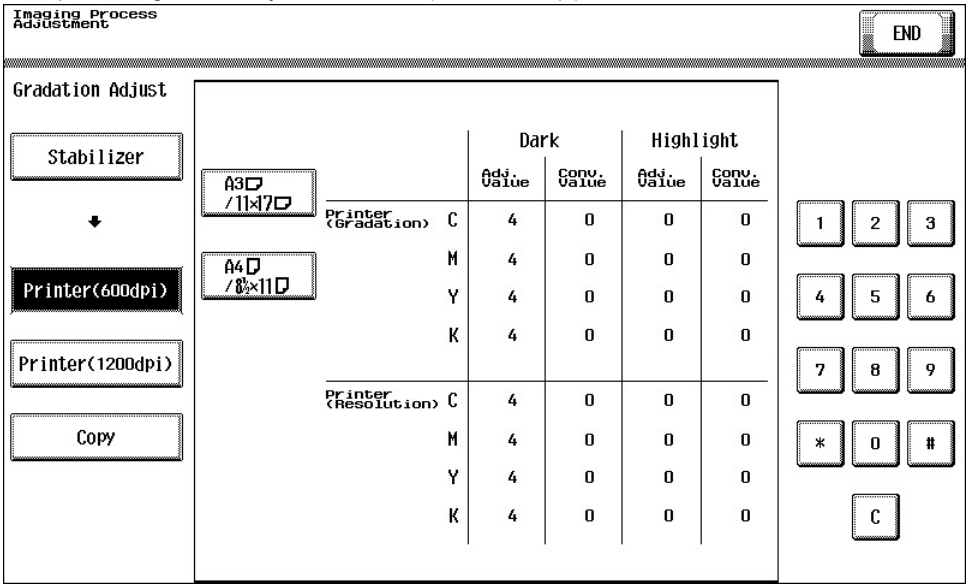
5.6.1 Gradation Adjust

(1) Use

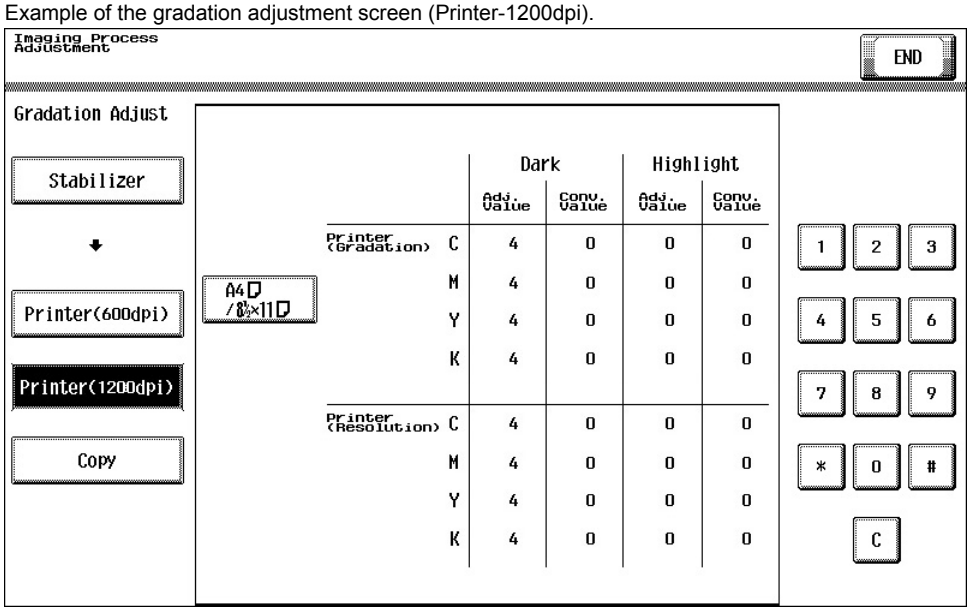
- To make an automatic adjustment of gradation based on the test pattern produced and the readings taken by the scanner.
- Color reproduction performance becomes poor.
- The drum unit, developing unit, or transfer belt unit has been replaced.
- * The Adj. Values of “Dark” and “Highlight” shown on the gradation adjust screen represent how much corrections are made to produce an ideal image output. Conv. Value shows the difference from the ideal image density.
- * The closer the Conv. Value to 0, the more ideal the image.

Mode key	Description
Stabilizer	• The image stabilization is performed. The controller reflects the image stabilization result in the gradation adjustment table to update the table. • After the image stabilization is performed, [Printer] / [Copy] key will become selectable.
Printer (600dpi)	Detect the gradation reproducibility of the gradation reproduction method (gradation screen, resolution screen) for 600dpi print mode, and correct the gradation adjustment table.
Printer (1200dpi)	Detect the gradation reproducibility of the gradation reproduction method (gradation screen, resolution screen) for 1200dpi print mode, and correct the gradation adjustment table.
Copy	Detect the gradation reproducibility of the following gradation reproduction methods, and correct the gradation adjustment table. • Copy screen (reduce the data volume by 1bit from 8bit of each color while maintaining above a certain quality of characters/images) • FFET (reproduce the character edges smoothly without using the screen)

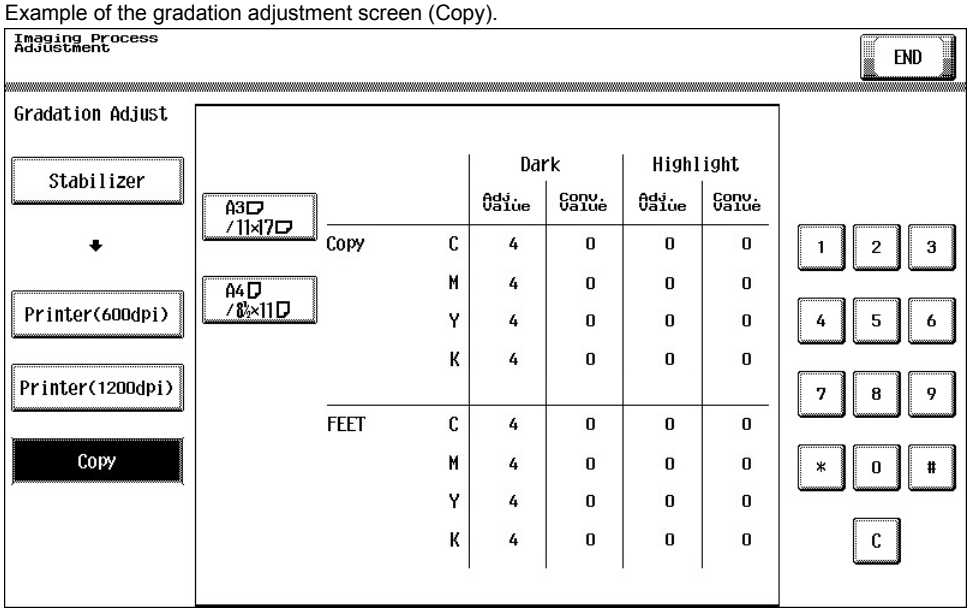
Example of the gradation adjustment screen (Printer -600dpi).



Example of the gradation adjustment screen (Printer-1200dpi).



Example of the gradation adjustment screen (Copy).



(2) Procedure

NOTE

- **When executing the gradation adjustment, make sure to use the white paper for color copy.**

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Image Process Adjustment] -> [Gradation Adjust].
3. Touch [Stabilizer] and the Start key to perform image stabilization.
   NOTE
   - **Before executing Gradation adjust, be sure to perform Stabilizer.**
4. Select Print or Copy and select the paper size on which test pattern is printed.
5. Press the Start key to let the machine produce a test pattern.
   NOTE
   - **When the image stabilization performed in step 3 is NG, the Start key stops functioning.**
   - **When one of the malfunction codes, P-5 and P-9 is on the screen and [Printer] is selected, the Start key stops functioning.**
6. Place the test pattern produced on the original glass.
   NOTE
   - **Depending on the size of the test pattern, it is set in a different position. Set the test pattern according to the instructions displayed on the control panel.**
7. Place ten blank sheets of paper on the test pattern and lower the original cover.
8. Press the Start key. (The machine will then start scanning the test pattern.)
9. Touch [OK] and repeat steps from 4 through 8 twice. (a total of three times)
10. Touch [Gradation Adjust] to display the Adj. Values and Conv. Values for Dark and Highlight.
11. Use the following procedures to check the Conv. Value.

NOTE

- **Dark: 0 ± 100 and Highlight: 0 ± 60: It completes the adjustment procedure.**
- **If neither Dark nor Highlight falls outside the ranges specified above: Perform steps from 4 to 8.**

- **If the convergence falls within the specified range after the second Gradation Adjustment, further adjustment may not be necessary.**
- If a fault is detected, “0” is displayed for all values. In that case, after turning off the main power switch, turn it on again more than 10 seconds after and then make the gradation adjustment again.
- If either dark or highlight still remains outside the specified ranges perform Max Image Density Adj.
- If a total of four sequences of gradation adjust do not bring the values into the specified range, check the image.
- If the image is faulty, perform the troubleshooting procedures for image problems.

5.6.2 Stabilizer

(1) Stabilization Only

(a) Use

- The image stabilization sequence is carried out without clearing the historical data of image stabilization control.
- Use if an image problem persists even after gradation adjustment has been executed.
- When [Max Image Density Adj] and [Image Background Adj] of Service Mode are changed.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Stabilization Only].
3. Touch [Stabilization Only].
4. Press the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence.
5. Stabilizer is completed when the Start key turns blue.

(2) Initialize+Image Stabilization

(a) Use

- To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized.
- Use if an image problem persists even after [Gradation Adjustment] has been executed.
- Use if tone reproduction and maximum density are faulty even after image stabilization has been executed.
- When color shift correction is needed again after the machine maintenance.
- After executing the print head skew reset.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Stabilizer].
3. Touch [Initialize+Image Stabilization].
4. Press the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence.
5. Stabilizer is completed when the Start key turns blue.

5.6.3 Density Balance Adjust

(1) Use

- To adjust the density balance of the main scanning direction by scanning the output test pattern.
- The correction value adjusted by this function is applied to the following:

Function	Menu	Correction value adjusted items
Copy function	[Original Type]	• [Photo-Printed] • [Photo-PhotoPaper]
Utility mode	[User Settings] -> [Printer Settings] -> [Basic Settings] -> [Original Type]	• [Document] • [Photo] • [DTP] • [Web]
Print function (printer driver settings)	[Printer Settings] -> [Quality] -> [Original Type]	

(2) Procedure

1. Call the Service Mode to the screen.
2. Select [Printer (resolution)] or [Printer (Gradation)].
3. Load one of Tray 1, Tray 2, Tray 3, and Tray4 with A4 paper. (Load one of them with Letter only if [Marketing Area] is [US].)
4. Press the Start key to let the machine produce a test pattern.
5. Place the test pattern produced on the original glass.
6. Press the Start key and scan the test pattern.
7. If the scanning finishes successfully, start the 2nd scanning following the instruction on the control panel.
8. Set the test pattern rotated by 180 degrees on the original glass.
9. Press the Start key and scan the test pattern.
10. If the scanning finishes successfully, press [Print Test Pattern] to output the adjusted test pattern.
11. Check the adjusted test pattern.
12. To apply the adjusted correction value, press [Reflect Adj Values], then [Reflect] and [OK].

NOTE

- **Select [Do Not Reflect] and press [OK] not to apply the adjusted correct value. In this case, the corrected value is not applied but stored.**
- **Touching [Initialization] clears a stored correction value.**

5.6.4 Max Image Density Adj

(1) Use

- To adjust gradation and image density to target reproduction levels by varying the maximum amount of toner sticking to paper through auxiliary manual fine-adjustment of gamma after gradation adjust.
- An image quality problem is not corrected even after gradation adjust has been run.

(2) Default setting

- 0

(3) Setting range

- -10 to +10 (step: 1 *)
  *: 1 step corresponds to 0.03 in density difference.

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Max Image Density Adj].
3. Select [Copy] or [Printer].
4. Enter the new setting from the 10-key pad and [+/-].
   - To increase the maximum amount of toner sticking, increase the setting value.
   - To decrease the maximum amount of toner sticking, decrease the setting value.
5. Touch [END] to return to the [Imaging Process Adjustment] menu screen.
6. Touch [Stabilizer].
7. Touch [Stabilization Only].
8. Press the Start key to validate the adjustment value.
9. Check the print image for any image problem.

NOTE

- **If the setting value has been changed, be sure to run an image stabilization sequence to make valid the new value.**

5.6.5 Image Background Adj

(1) Use

- To adjust the highlight portion (fog level) to the target reproduction level by making an auxiliary manual fine-adjustment of γ of each color after gradation adjust.
- Use when a foggy background occurs due to a printer problem.

(2) Default setting

- 0

(3) Setting range

- -5 to +5 (step: 1*)
  *: 1 step corresponds to 10 V.

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Image Background Adj].
3. Enter the new setting from the 10-key pad and [+/-] key.
   - To make the background level foggier, decrease the setting value.
   - To make the background level less foggy, increase the setting value.
4. Touch [END] to return to the [Imaging Process Adjustment] menu screen.
5. Touch [Stabilizer].
6. Touch [Stabilization Only].
7. Press the Start key to validate the adjustment value.
8. Check the print image for any image problem.

NOTE

- **If the setting value has been changed, be sure to run an image stabilization sequence to make valid the new value.**

5.6.6 Transfer Belt

(1) Cleaning Bias

(a) Use

- To set the level of transfer belt cleaning bias independently for each process speed.
- When the image pattern is not completely removed, it strengthen the transfer belt cleaning bias in order to make the cleaner more effective.
- For each processing speed, positive and negative output values can be set.

(b) Default setting

- 0

(c) Setting range

- -5 to +5 (step:1 *)
  *: One step corresponds to 5 µA.
- The processing speeds that correspond to Speed 1 to Speed 4 are shown below.

		bizhub 958/bizhub PRO 958	bizhub 808	bizhub 758
Speed 1	Plain paper	502 mm/s	370 mm/s	325 mm/s
Speed 2	Thin paper	370 mm/s	370 mm/s	325 mm/s
Speed 3	Thick paper	185 mm/s	185 mm/s	162.5 mm/s
Speed 4	1,200 dpi mode	123.3 mm/s	123.3 mm/s	108.3 mm/s

(2) Auto Cleaning

(a) Use

- To set whether to perform the long regular transfer belt cleaning operation (approx. 30 sec).
- The long cleaning operation (approx. 30 seconds) can be used to take more effective measures against toner filming on the surface of the transfer belt.

Enable	Performs the long cleaning operation (approx. 30 sec) after the normal regular cleaning operations (approx. 10 sec.) which are performed nine times.
Disable	Performs only the normal regular operations (approx. 10 sec) but not the long cleaning operation (approx. 30 sec.).

(b) Default setting

- Disable

(c) Setting item

- Enable
- Disable

5.6.7 Paper Separation Adjustment

(1) Use

- By changing the period between the activation of the registration roller and the 2nd image transfer output, the paper separation position can be adjusted for the 1st and 2nd sides of paper.
- To ensure proper balance between paper separating and image transferring performances by varying the paper separation position applied for duplex printing of thin paper (52 to 59 g/m^2) in hot and humid conditions.

(2) Default setting

- 0

(3) Setting range

- -10 mm to +10 mm (step: 0.1 mm)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Paper separation adjustment].
3. Select [First Side], [Second Side], [Thin Paper Front] or [Thin Paper Back].
4. Enter the new setting from the [+] / [-] key.
   - Priority on paper separation performance: Increase the setting value
   - Priority on image transfer performance: Decrease the setting value
5. Touch [END] to validate the setting value.
6. Check the print image for any image problem.

5.6.8 Removable Voltage Adjust

(1) Use

- To allow the basic charge neutralizing voltage to be adjusted.
- To prevent separation failure (jam, paper conveyance failure) that may occur when paper other than recommended one is used by adjusting the neutralization voltage to the one that suits the type of paper the user uses.

(2) Default setting

- Auto

(3) Setting range

- -3 to +3 (Step: 1*)
  *1: step is equivalent to 500 V.

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Imaging Process Adjustment] -> [Removable Voltage Adjust].
3. Select [First Side], [Second Side], [Thin Paper Front] or [Thin Paper Back].
4. Enter the new setting from the [+] / [-] keys.
   - To increase the neutralization voltage, increase the setting value.
   - To decrease the neutralization voltage, decrease the setting value.
5. Touch [END] to validate the setting value.

6. Check the print image for any image problem.

NOTE

- **Select [Auto] at each paper type to automatically control the neutralization voltage without using the neutralization voltage setting value.**

5.6.9 TCR Level Setting

(1) Use

- To adjust the T/C control level when an abnormal image density occurs as a result of a change in the amount of charge of toner and carrier due to an environmental change.
- Use when T/C changes due to changes in environmental conditions of the user site.

(2) Default setting

- 0

(3) Setting range

- -3 to +3 (1 step in positive (+) direction: 0.5 % increase, 1 step in negative (-) direction: 0.5 % decrease, Center value 0 corresponds to 6.5 % T/C ratio.)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [TCR Level Setting].
3. Enter the new setting from the 10-Key pad and [+/-] key.
   - To increase T/C, increase the setting value.
   - To decrease T/C, decrease the setting value.
4. Touch [END] to validate the adjustment value.
5. Check the print image for any image problem.

5.6.10 Transfer Voltage Fine Adj

(1) Primary transfer adj.

(a) Use

- Adjust the output value for the 1st image transfer voltage.
- To use when white spots appeared.

(b) Default setting

- 0

(c) Setting range

- -8 to +7 (step: 1 *)
  *: 1 step corresponds to 2μA.

(d) Procedure

1. Call the Service Mode to the screen.
2. Select [Test Mode] -> [Halftone Pattern] to output the test pattern.
3. When the test pattern image has white spots, adjust with the following procedure.
4. Touch [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj].
5. Select [Primary transfer adj.].
6. Enter the new setting from the [+] / [-] key.
   - Increase the output value for the 1st image transfer voltage: Increase the setting value. (white spots will decrease)
   - Decrease the output value for the 1st image transfer voltage: Decrease the setting value.
7. Touch [END] to validate the setting value.
8. Check whether there is a problem on printed image.

NOTE

- **Photo conductor memory may occur by increasing the 1st image transfer voltage.**
- **Check the image on the test pattern or the test chart when adjusting.**

(2) 2nd Transfer Adj.

(a) Use

- Adjust the 2nd image transfer output (ATVC) on the 1st page and the 2nd page for each paper type.
- Setting is possible for resolution 600dpi and 1200dpi, respectively.
- To use when the transfer failure occurs.
- Pressing the [AUTO] key down activates the 2nd image transfer amperage upper and lower limit control. In this case, the machine uses the voltage determined by the auto transfer voltage control and the 2nd image transfer voltage fine adj value does not take effect.

(b) Default setting

- Auto

(c) Setting item

600dpi - Front	Plain Paper - Black, Thin Paper – Black, Thick Paper 1+ - Black, Thick 2, Thick 3, Thick 4, Post., Envelope, OHP Film, Banner Thick1+, Banner Thick2, Banner Thick3

600dpi - Back	Plain Paper - Black, Thin Paper – Black, Thick1, Thick 1+, Thick 2, Thick 3, Thick 4, Post.
1200dpi - Front	Plain Paper - Black, Thin Paper - Black, Thick Paper1 - Black, Thick Paper1+ - Black, Thick2, Thick3, Thick4, Post., Envelope, OHP Film
1200dpi - Back	Plain Paper - Black, Thin Paper - Black, Thick Paper1 - Black, Thick Paper1+ - Black, Thick2, Thick3, Thick4, Post.

(d) Setting range

- -8 to +7 (step: 1 *)
  *: 1 step is equivalent to 100 V.

(e) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj].
3. Select [2nd Transfer Adj].
4. Select the image side (1st or 2nd side) where transfer failure occurs.
5. Select the paper type with the transfer failure.
6. Enter the new setting from the [+] / [-] keys.
   - To increase the ATVC value (in the direction of a foggier image), increase the setting value.
   - To decrease the ATVC value (in the direction of a less foggy image), decrease the setting value.
7. Touch [END] to validate the setting value.
8. Check the print image for any image problem.

NOTE

- **To automatically control the 2nd image transfer output without using the 2nd image transfer voltage fine adj value, press [Auto].**

5.6.11 Transfer belt Cleaner Cleaning

(1) Use

- To clean the toner collecting roller /1 of transfer belt.
- Used when not everything on the transfer belt can be wiped out due to paper dust clogged on the To clean the toner collecting roller /1.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Imaging Process Adjustment] -> [Transferbelt Cleaner Cleaning].
3. Press the Start key to start cleaning.
4. When cleaning is finished, the operation automatically stops.

5.6.12 Thick Paper Density Adjustment

(1) Use

- To fine-adjust density of printed images of each color for thick paper.
- To change the density of the printed image for each color with thick paper.

(2) Default setting

- 0

(3) Setting range

- -5 to +5 (step: 1)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [Imaging Process Adjustment] -> [Thick Paper Density Adjustment].
3. Select [Thick Type1] or [Thick Type2].
4. Touch the Lighter or Darker key to correct the image density.
   - Light color: Touch the Darker key.
   - Dark color: Touch the Lighter key.
5. Touch [END] to validate the setting value.

5.6.13 Grad/Dev AC Bias V Selection

(1) Use

- Changes the developing AC voltage setting.
- Turning ON this function lowers the developing AC voltage and prevents white spots from occurring due to voltage leakage.
- Used when fine white spots occur on the entire image in the environment of low atmospheric pressure, such as a highland.
- This setting is enabled after the machine is turned OFF and ON.

(2) Default setting

- OFF

(3) Setting item

- ON

- OFF

5.6.14 Black Adjust

(1) Use

- To adjust image quality by changing the frequency of black developing bias AC output.
- This setting is made when you wish to use a specific frequency.

K Priority	Frequency: High
Edge Reduction	Frequency: Low

(2) Default setting

- K Priority

(3) Setting item

- K Priority
- Edge Reduction

5.6.15 Manual Toner Add

(1) Manual Toner Add

(a) Use

- To adjust the set T/C level by replenishing an auxiliary supply of toner when a low ID occurs due to a lowered T/C after large numbers of prints have been made of originals having a high image density.
- When there is a drop in T/C ratio.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Manual Toner Add].
3. Touch [Black].
4. Pressing the Start key will let the machine detect the current toner density and; if the density is lower than a reference value, a toner replenishing sequence and then a developer agitation sequence are run. Then a developer agitation sequence are run.
5. These sequences are repeated up to a maximum of four times until the toner density reaches the reference value. When it is higher than the reference value, only the agitation is conducted.

(2) Hopper Toner Filling

(a) Use

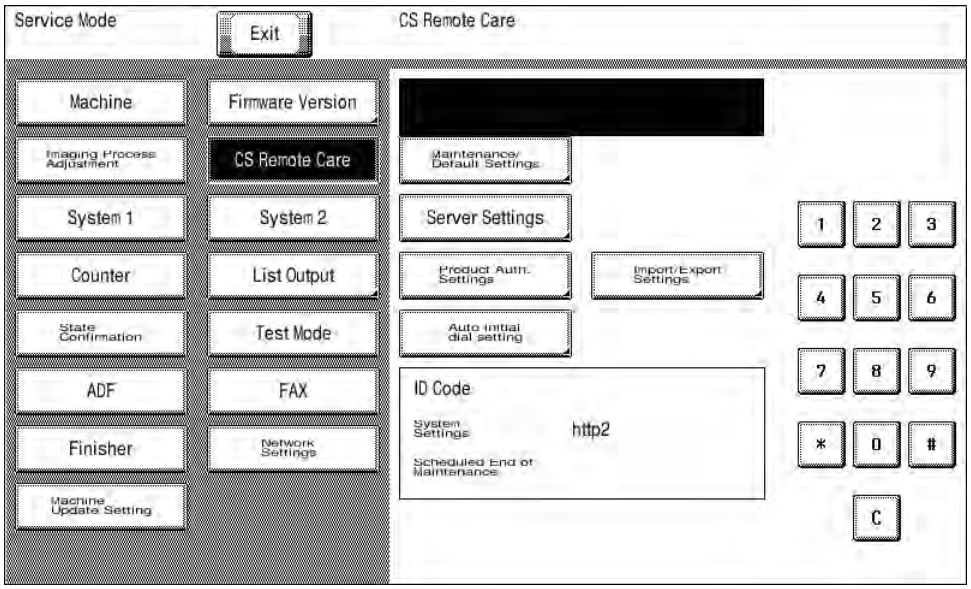
- To fill the sub hopper with toner and perform agitate in the developing unit.
- Used when toner is manually supplied to the toner hopper and agitate in the developing unit is performed.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [Imaging Process Adjustment] -> [Manual Toner Add] -> [Hopper Toner Filling].
3. Press the Start key to start filling and agitating operations.

5.7 CS Remote Care (Outlines)

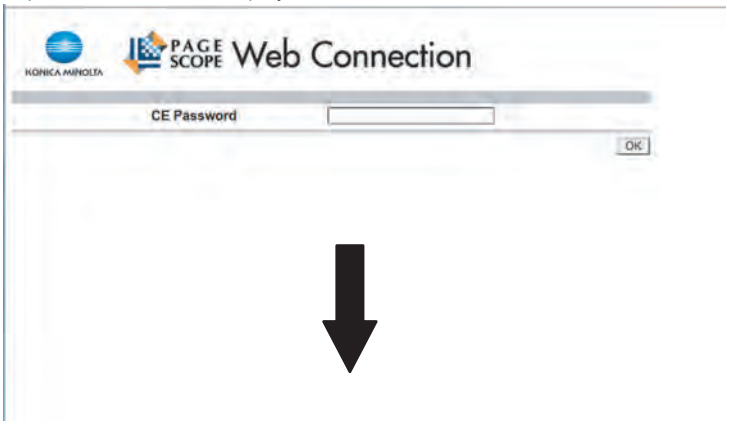
<Service Mode screen>

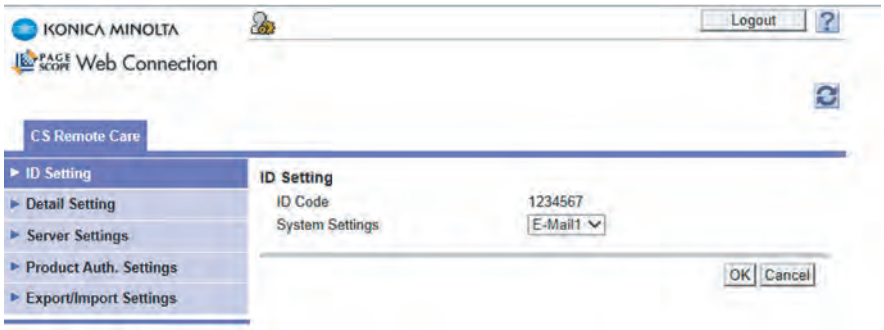


- CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone/fax line, network or E-mail in order to control the machine.
- CS Remote Care enables the machine to call the computer at the center when trouble occurs. It also enables the computer at the center to contact the machine for the necessary data.

- Data which CS Remote Care handles can be divided into the following groups.
  - Data which show the status of use of the machine such as total count, PM count.
  - Data which show the abnormal situation on the machine such as where and how often errors occur.
  - Data on adjustment
  - Data on setting

<PageScope Web Connection display>





- CS Remote Care can be set also from PageScope Web Connection. Enter the following address, then enter the CE password and touch [OK].
  - http://(IP address)/csrc_index.html
- For the setting procedure, see I.5.8 Setting up the CS Remote Care.

5.8 Setting up the CS Remote Care

NOTE

- **For resetting up the machine which CS Remote Care has already been set up, clear the RAM for CS Remote Care before resetting.**
- **When using a telephone line modem for connection, use the data modem which is based on the ITU-T recommendations V.34/V.32 bis/V.32 and AT command.**

5.8.1 Using the telephone line modem

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.
     NOTE
     - **The initial connection is not available unless the device ID is registered.**
2. Connecting the modem
   - Turn the power for the modem OFF. Connect the machine and the modem with a modem cable. Connect the modem and the wall jack with a modular cable.
     NOTE
     - **For connecting the modular cable, see the manual for the modem.**
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Selection], and touch [Modem].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care

1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
2. Touch [Date & Time Setting].
3. Input the date, time and the time zone using the 10-key pad, and touch [Set].

8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Device ID], and input Device ID (13 digits).
      NOTE
      - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Setting the telephone number of the Center
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Machine Setting] -> [Center Telephone Number].
    3. Input the telephone number of the center using the 10-key pad and [P], [T], [W], [-].
11. Inputting the device telephone number
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Device Telephone Number].
    3. Input the Device telephone number using the10-key pad and [P], [T], [W], [-].
12. Inputting the AT command for initializing the modem
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [AT Command].
    3. Input AT Command.
       NOTE
       - **Change this command only when it is necessary. (They do not need to be changed in normal condition.)**
       - **For details on AT command, see the manual for the modem.**
13. Setting the DIPSW for CS Remote Care
    NOTE
    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**

14. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Machine Setting] -> [Initial Transmission].
    3. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.
    4. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.
       NOTE
       - **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, the device ID, Telephone number of the center and the device telephone number have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

5.8.2 Using the Fax line modem

NOTE
- **Setting will be available only when the optional fax board is installed.**

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.
     NOTE
     - **The initial connection is not available unless the device ID is registered.**
2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when the fax line is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Selection], and touch [Fax].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Device ID], and input Device ID (13 digits).
      NOTE
      - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Setting the telephone number of the Center
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Machine Setting] -> [Center Telephone Number].
    3. Input the telephone number of the center using the 10-key pad and [P], [T], [W], [-].

11. Inputting the device telephone number
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Device Telephone Number].
    3. Input the Device telephone number using the10-key pad and [P], [T], [W], [-].
12. Setting the DIPSW for CS Remote Care

    NOTE
    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**

13. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Initial Transmission].
    3. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.
    4. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.

       NOTE
       - **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, the device ID, Telephone number of the center and the device telephone number have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

5.8.3 Using the E-mail

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.

     NOTE
     - **The initial connection is not available unless the device ID is registered.**
2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when e-mail is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Setting], and touch [E-Mail 1] or [E-Mail 2].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Device ID], and input Device ID (13 digits).

      NOTE
      - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Encryption setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] and select either Encryption or No Encryption.
11. Retransmission interval on e-mail delivery error
    - When selecting [E-mail 2], set the retransmission interval on e-mail delivery error in software SW setting.
12. Setting the Respond Timeout
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Respond Timeout] and enter the response timeout using the 10-key pad.

       NOTE
       - **Under normal conditions, there is no need to change the default setting.**
13. Setting the E-mail address
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Server Set].
    2. Touch [Server for RX], and set POP3 server address, POP3 login name, POP3 password and POP3 port number.
    3. Touch [Receive], and set the E-Mail address, Mail Check, Connection Time Out and APOP Authentication.
    4. Touch [Send], and set the SMTP server address, SMTP port number, Connection Time Out, and APOP Authentication.
    5. Touch [TX/RX Test], and press Start key to carry out a transmission/reception test. If it fails to exchange messages, see the error message to take necessary measure, and try again.
14. When selecting [E-Mail2]:
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Schedule] and set the schedule of periodic transmission.
    3. Touch [Center Notifi. Item] and set items that will be reported to the Center.
15. Receiving the initial connection E-mail message
    - Sending the initial connection E-mail message from the center to the address of the copier.

      NOTE
      - **When receiving the initial connection E-mail message from the center while CS Remote Care-related screen is being displayed, the current setting information will be deleted, and CS Remote Care setting will be displayed.**
      - **For sending the initial connection E-mail, see the manual for CS Remote Care center.**
      - **Messages can be exchanged only between the center with initial connection and the copier.**

- **The initial connection from the center will be carried out, and the E-mail address of the center will be stored in the copier.**
- **When the initial registration is complete, the E-mail address of the center will be displayed by selecting [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting] -> [Basic Setting] -> [E-Mail address].**

5.8.4 When using a WebDAV server in http communication

NOTE

- **When MFP is connected to the Internet via a proxy, the proxy server related settings are necessary in advance.**
- **The proxy settings used in the http communication for CS Remote Care is configured in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access].**

(1) Bilateral communication

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.
     NOTE
     - **The initial connection is not available unless the device ID is registered.**
2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when the http communication is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Selection], and touch [http1].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Device ID], and input Device ID (13 digits).
      NOTE
      - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Encryption setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Client Setting] and select either Encryption or No Encryption.
11. Heart Beat
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings]] -> [Detail Setting] -> [Basic Setting], and touch [Heart Beat].
    2. In [Communication], set whether or not to enable Heart Beat communication. (Default: No)
    3. Touch [Comm. Interval] and enter a Heart Beat transmission interval (1 to 256 minutes, Default: 30 minutes).
    4. In [Specified Transmission], set whether or not to enable Heart Beat transmission at a specified interval. (Default: Yes)
    5. Touch [Hour] and [Minute] and enter a time for specified transmission.
       NOTE
       - **Heart Beat is a feature that uploads a Heart Beat file to the registered web server at a specified interval to report that the device is operating. Heart Beat files include total counter and status information.**
12. Polling interval
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting].
    2. Touch [Polling Interval] and enter the polling interval (1 to 256 min., default: 5 min.).
13. Setting the http server
    1. Select [Service Mode] -> [CS Remote Care], and touch [Server Settings].
    2. Touch [HTTP Server Settings] and set a URL address, account, password, and port number.
    3. Touch [SSL Settings] and make SSL settings.
14. Setting the DIPSW for CS Remote Care
    NOTE
    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**
15. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.
       NOTE
       - **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, device ID and the URL address have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**
    3. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.
    - If communication error between the machine and Center occurs, check the error code that appears.

(2) Unilateral communication: Device to Center

1. Register the device ID
   - Register the device ID to the application at CS Remote Care center.

   NOTE
   - **The initial connection is not available unless the device ID is registered.**
2. Remove the telephone line modem
   - Be sure to remove the telephone line modem when the http communication is used.
3. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
4. Clearing the RAM
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [RAM Clear].
   3. Select [Set], and touch [OK].
5. Selecting the CS Remote Care function
   - Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [System Selection], and touch [http2].
6. Inputting the ID code
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [ID Code].
   2. Input the seven digits ID of the service person, and touch [ID Code] again.
7. Setting the date and time for CS Remote Care
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Date & Time Setting].
   3. Input the date, time and the time zone using the 10-key pad, and touch [Set].
8. Setting the Center ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Center ID], and input the Center ID (five digits).
9. Confirm the Device ID
   1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
   2. Touch [Machine Setting] -> [Device ID], and input Device ID (13 digits).

      NOTE
      - **[Device ID] displays the serial number that is entered in [Service Mode] -> [System 1] -> [Serial Number].**
10. Encryption setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [Basic Setting] -> [Client Setting] and select either Encryption or No Encryption.
11. Notification Setting
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting], and touch [Notification Setting].
    2. Touch [Schedule] and set the schedule of periodic transmission.
    3. Touch [Center Notifi. Item] and set items that will be reported to the Center.
12. Setting the http server
    1. Select [Service Mode] -> [CS Remote Care], and touch [Server Set].
    2. Touch [HTTP Server Settings] and set a URL address, account, password, and port number.
    3. Touch [SSL Settings] and make SSL settings.
13. Setting the DIPSW for CS Remote Care

    NOTE
    - **This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.**
14. Executing the initial transmission
    1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings], and touch [Detail Setting].
    2. Touch [initial transmission] key on the right bottom of the screen to start initial transmission.

       NOTE
       - **The initial transmission key at the right bottom of the screen will be displayed only when the center ID, device ID and the URL address have been input. However, if an invalid value is input as the device ID, the initial transmission key is not displayed.**

    3. When the machine is properly connected with the center, CS Remote Care setting screen will be displayed.
    - If communication error between the machine and Center occurs, check the error code that appears.

5.9 Software SW setting for CS Remote Care

List of software SW for CS Remote Care

NOTE
- **Software SW bits data are written into the memory region on the MFP board every time a change is made. In case you changed bit data by accident, be sure to restore the previous state.**
- **Do not change any bit not described on this table.**

5.9.1 Input procedure

1. Select [Service Mode] -> [CS Remote Care] -> [Maintenance/Default Settings] -> [Detail Setting], and touch [Software Switch Setting].
2. Touch [Switch No.], and input the switch number (two digits) using the 10-key pad.
3. Touch [Bit Assignment], and select switch bit number using the arrow keys, and input 0 or 1 using the 10-key pad. (For setting by hexadecimal numbers, touch [HEX Assignment] key, and input using the 10-key pad or A to F keys.)
4. Touch [Fix].

NOTE
- **About functions of each switch, see to "I.5.9.2 List of software SW for CS Remote Care."**

5.9.2 List of software SW for CS Remote Care

SW No.	Functions	Ref. page
01	• Dial Mode, Line for send only, Baud rate	"I.5.9.3 SW No. 01"
02	• Emergency transmission, Date specified transmission, Call parts replace date, Call drum replace date, Call regular service date (PM), Auto call on the developing unit Life, Auto call of the IR shortage, Auto call on the zero reset of the fixed parts replacement	"I.5.9.4 SW No. 02"
03	• Trouble display setting, Auto call on the toner empty, Auto call on the waste toner box full	"I.5.9.5 SW No. 03"
04	• CS Remote Care communication mode	"I.5.9.6 SW No. 04"
05	• Modem redial interval	"I.5.9.7 SW No. 05"
06	• Modem redial times	"I.5.9.8 SW No. 06"
07	• Redial for response time out	"I.5.9.9 SW No. 07"
08	• Retransmission interval on E-Mail/http delivery error	"I.5.9.10 SW No. 08"
09	• Retransmission times on E-Mail/http delivery error	"I.5.9.11 SW No. 09"
10	• Time zone settings	"I.5.9.12 SW No. 10"
11	• Timer 1 RING reception -> CONNECT reception	"I.5.9.13 SW No. 11"
12	• Timer 2 Dial request completed -> CONNECT reception	"I.5.9.14 SW No. 12"
13	• Reservation	-
14	• Timer 4 Line connection -> Start request telegram delivery	"I.5.9.15 SW No. 14"
15	• Timer 5 Wait time for other side's response	"I.5.9.16 SW No. 15"
16	• Reservation	-
17	• Reservation	-
18	• Attention display To set whether to give the alarm display when using the modem but the power for the modem is OFF.	"I.5.9.17 SW No. 18"
19	• Reservation	-
20	• Reservation	-
21	• Automatic transmission of chronological misfeed data at the time of transmission of misfeed frequent occurrence warning, transmission of paper-based misfeed frequent occurrence warning, transmission of original-based misfeed frequent occurrence warning	"I.5.9.18 SW No. 21"
22	• Paper-based misfeed frequent occurrence threshold value	"I.5.9.19 SW No. 22"
23	• Original-based misfeed frequent occurrence threshold value	"I.5.9.20 SW No. 23"
24 : 40	• Reservation	-

5.9.3 SW No. 01

(1) Default

Bit	7	6	5	4	3	2	1	0
	1	0	0	0	0	0	0	1
HEX	81							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Baud rate	0110		9600 bps
6		0111		19.2 Kbps
5		1000		38.4 Kbps
4		Other		Not available
3	Reservation			
2				
1	Line for send only	Disable	Enable	
0	Dial Mode	Pulse	Tone	

5.9.4 SW No. 02

(1) Default

Bit	7	6	5	4	3	2	1	0
	1	1	1	1	1	1	1	1

HEX	FF

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Auto call on the zero reset of the fixed parts replacement	Disable	Enable	
6	Auto call of the IR shortage	Disable	Enable	
5	Auto call on the developing unit Life	Disable	Enable	
4	Call regular service date (PM)	Disable	Enable	
3	Call drum replace date	Disable	Enable	
2	Call parts replace date	Disable	Enable	
1	Date specified transmission	Disable	Enable	
0	Emergency transmission	Disable	Enable	

5.9.5 SW No. 03

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	1	0	1	0
HEX	0A							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4				
3	Auto call on the waste toner box full	Disable	Enable	
2	Reservation			
1	Auto call on the toner empty	Disable	Enable	
0	Trouble Display setting	When the CSRC is not connected	When the CSRC is connected	Select the type of message to be displayed at the time of automatic trouble notification made when the CSRC is connected, either the message when the CSRC is connected or that when the CSRC is not connected. If "When the CSRC is not connected" is selected when the CSRC is connected, an automatic notification is made to the center when a trouble occurred. Only the display on the control panel shifts to the massage when the CSRC is not connected.

5.9.6 SW No. 04

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	1	0
HEX	02							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				

Bit	Functions	Logic		Description
		0	1	
5				
4				
3				
2				
1	CS Remote Care communication mode	00		DATA
0		01		FAX
		10		E-mail
		11		Not available

5.9.7 SW No. 05

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	1	1
HEX	03							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4	Modem redial interval	00001		1 minute
3		00010		2 minutes
2		00011		3 minutes
1		00100		4 minutes
0		00101		5 minutes
		00110		6 minutes
		00111		7 minutes
		01000		8 minutes
		01001		9 minutes
		01010		10 minutes
		Others		Not available

5.9.8 SW No. 06

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	1	0	1	0
HEX	0A							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Modem redial times	0000 0000		0 times
6		0000 0001		1 time
5		:		:
4		0000 1010		10 times
3		:		:
2		0110 0010		98 times
1		0110 0011		99 times
0		Others		Not available

5.9.9 SW No. 07

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	1

HEX	01

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Redial for response time out	0000 0000		0 times
6		0000 0001		1 time
5		Others		Not available
4				
3				
2				
1				
0				

5.9.10 SW No. 08

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	1	0
HEX	06							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Retransmission interval on E-mail/http delivery error	0000 0000		0 minutes
6		0000 0001		10 minutes
5		:		:
4		0000 0110		60 minutes
3		:		:
2		0000 1011		110 minutes
1		0000 1100		120 minutes
0		Others		Not available

5.9.11 SW No. 09

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	1	0	1	0
HEX	0A							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Retransmission times on E-mail/http delivery error	0000 0000		0 times
6		0000 0001		1 time
5		:		:
4		0000 1010		10 times
3		:		:
2		0110 0010		98 times
1		0110 0011		99 times
0		Others		Not available

5.9.12 SW No. 10

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	0
HEX	00							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Time zone settings	0000 0000		0
6		0000 0001		+1
5		:		:
4		0000 1100		+12
3		1111 0100		-12
2		:		:
1		1111 1111		-1
0		Others		Not available

5.9.13 SW No. 11

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	1	0	0	0	0	0
HEX	20							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 1 RING reception -> CONNECT reception	0000 0000		0 sec
6		0000 0001		1 sec
5		:		:
4		0010 0000		32 sec
3		:		:
2		1111 1110		254 sec
1		1111 1111		255 sec
0				

5.9.14 SW No. 12

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	1	0	0	0	0	0	0
HEX	40							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 2 Dial request completed -> CONNECT reception	0000 0000		0 sec
6		0000 0001		1 sec
5		:		:
4		0100 0000		64 sec
3		:		:
2		1111 1110		254 sec
1		1111 1111		255 sec
0				

5.9.15 SW No. 14

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	1	0	0	0	0	0
HEX	20							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 4	0000 0000		0 msec

Bit	Functions	Logic		Description
		0	1	
6	Line connection -> Start request telegram delivery	0000 0001		100 msec
5		:		:
4		0010 0000		3,200 msec
3		:		:
2		1111 1110		25,400 msec
1		1111 1111		25,500 msec
0				

5.9.16 SW No. 15

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	1	1	1	1	0
HEX	1E							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Timer 5 Wait time for other side's response	0000 0000		0 sec
6		0000 0001		1 sec
5		:		:
4		0001 1110		30 sec
3		:		:
2		1111 1110		254 sec
1		1111 1111		255 sec
0				

5.9.17 SW No. 18

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	0	0	1
HEX	01							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4				
3				
2				
1				
0	Attention display To set whether to give the alarm display when using the modem but the power for the modem is OFF.	OFF	ON	

5.9.18 SW No. 21

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	1	1
HEX	07							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Reservation			
6				
5				
4				
3				
2	Automatic transmission of chronological misfeed data at the time of transmission of misfeed frequent occurrence warning	OFF	ON	
1	Original-based misfeed frequent occurrence threshold value	OFF	ON	If the number of jams exceeds the threshold specified per day (0:00 to 23:59), Jam Frequent Occurrence Warning is sent. At 12 a.m. of the next day, the counter is reset.
0	Paper-based misfeed frequent occurrence threshold value	OFF	OFF	

5.9.19 SW No. 22

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	0	1
HEX	05							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Paper-based misfeed frequent occurrence threshold value	0000 0001		1
6		0000 0010		2
5		:		:
4		0000 0101		5
3		:		:
2		0000 1110		14
1		0000 1111		15
0		Others		Not available

5.9.20 SW No. 23

(1) Default

Bit	7	6	5	4	3	2	1	0
	0	0	0	0	0	1	0	1
HEX	05							

(2) Functions

Bit	Functions	Logic		Description
		0	1	
7	Original-based misfeed frequent occurrence threshold value	0000 0001		1
6		0000 0010		2
5		:		:
4		0000 0101		5
3		:		:
2		0000 1110		14
1		0000 1111		15
0		Others		Not available

5.10 Setup confirmation for CS Remote Care

5.10.1 Use

- Follow the steps below to make sure that CS Remote Care has been properly set up.

5.10.2 Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care].
3. Check to make sure that only selected item is displayed.

5.11 Calling the maintenance for CS Remote Care

- When CE starts maintenance, inputting the ID code of CE (seven digits: numbers which CE can identify. They are controlled by the distributor.) will transmit the information to the Center side and tells that the maintenance has started. When the maintenance is finished, touching [Maintenance Complete] key will transmit the information to the center and tells that it is finished.

NOTE

- **The MFP sends the maintenance start information to the Center. While the MFP is in maintenance mode, the communication between the MFP and the Center is unavailable. Therefore, CE must touch [Maintenance Complete] immediately after the completion of maintenance to end maintenance mode.**

5.11.1 When starting the maintenance

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care].
3. Touch [Maintenance Start].
4. Input the ID code using the 10-key pad.
5. Select estimated hours that elapse before the completion of the maintenance from the options of [2 hours], [4 hours], [6 hours], [8 hours], [10 hours], or [12 hours].
6. Touch [OK].

NOTE

- **The Start key blinks while maintenance mode is being carried out.**
- **You cannot extend the estimated hours while the maintenance is in progress.**
- **If you forget to touch [Maintenance Complete] after the completion of the maintenance, the maintenance completion information is automatically sent after the lapse of the selected estimated hours and the normal communication becomes available.**

5.11.2 When finishing the maintenance

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care].
3. Touch [Maintenance Complete].

5.12 Calling the center from the administrator for CS Remote Care

5.12.1 Use

- When the CS Remote Care setup is complete, the administrator can call the CS Remote Care center.

NOTE

- **When the setup is not complete or another transmission is being carried out, the Admin. transmission key will not be displayed, and the transmission is not available.**

5.12.2 Procedure

1. Touch [Utility] -> [Administrator Settings] -> [System Connection].
2. Touch [Admin. transmission].
3. Press the Start key.

NOTE

- **For transmitting data of the machine by calling the center on the specified date and time, refer to the manual for CS Remote Care center.**

5.13 Checking the transmission log for CS Remote Care

5.13.1 Use

- The transmission log list will be output to be checked.

5.13.2 Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remove Care] -> [Maintenance/Default Settings] -> [Detail Setting].
3. Touch [Communication Log Print].
4. Load tray 1 or bypass tray with A4S paper.
5. Press the Start key to output transmission log.

5.14 Detail on settings for CS Remote Care

5.14.1 Maintenance/Default Settings - System Selection

(1) Use

- To select the system type for remote diagnosis.
- Use to newly build or change the system.

(2) Setting range

- E-Mail1
- E-Mail2
- Modem
- Fax

- http1
- http2

(3) Procedure

- Select [E-Mail 1], [E-Mail 2], [http 1], [http 2], [Modem], or [Fax].
- Fax is available only when the optional fax kit is being installed.

5.14.2 Maintenance/Default Settings - ID Code

(1) Use

- To register the service ID.

(2) Procedure

1. Touch [ID code] and enter the service ID.
   - Enter a 7-digit code from the 10-key pad. (0000001 to 9999999)
2. Touch [ID code] to register the ID.
3. The [Detail Setting] will appear when the ID has been registered.

5.14.3 Maintenance/Default Settings - Detail Setting

(1) Basic Setting (E-Mail1, E-Mail2, Modem or Fax)

(a) Use

- Execute the primary setting.
- Use to register the machine to the CS Remote Care center.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touching the [Detail Setting] will display the primary setting.

<Center Setting>

- Set the center ID, Device ID, and the phone No.
- When e-mail is selected for system and all setup procedures are completed, e-mail address of the center is displayed.

NOTE

- **When entering the phone number, 10-key and keys on the screen have following meanings.**

[-] Pose	**Waits to start transmitting after dialing**
[W] Wait	**Detects the dial tone of the other end**
[T] Tone dial	**Carry out tone dialing**
[P] Pulse dial	**Carry out pulse dialing**
[*], [#]	**To be used as necessary**

<Schedule (Only when the [E-Mail2] is selected)>

- Set the schedule of notification to the center.
- Up to three different notification schedules can be registered.
- Select the notification cycle from [Day], [Week], or [Month].
  When selecting [Day] for the notification cycle, set the Day Frequency.
  When selecting [Week] for the notification cycle, set the Week Frequency and day of the week.
  When selecting [Month], set the Month Frequency and the date of the month.

<Center Notification (Only when the [E-Mail2] is selected)>

- Select the items of data that will be sent to the center in one-way transmission through E-Mail2.
- The following table shows each of the notification item keys and corresponding data.

[1]	Sales count data	[7]	EKC data
[2]	Error count data	[8]	Adjustment data
[3]	Service count data	[9]	Coverage data
[4]	Life count data Life cycle data	[10]	Not used
[5]	CSRC-System data Device config data	[11]	Not used
[6]	History data	[12]	Not used

NOTE

- **Multiple items of data can be selected and sent at one time. However, be sure that only EKC data cannot be sent together with other items of data.**

<Initial Transmission>

- Touching the Initial Transmission key will sent the information to the CS Remote Care center to register the machine.(Only when the modem or fax is selected on the system Input.)

(2) Basic Setting (http1 or http2)

(a) Use

- Execute the primary setting.
- Use to register the machine to the CS Remote Care center.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touching the [Detail Setting] will display the primary setting.

<Center Setting>
- Set the center ID.
- Display the device ID.

<Client Setting>
- To set whether or not to encrypt communication.

<Heart Beat>

NOTE
- **The heat beat function is only available to http1.**
- To make Heart Beat related settings.
- Heart Beat is a feature that uploads a Heart Beat file to the registered web server at a specified interval to report that the device is operating. Heart Beat files include total counter and status information.

<Polling Interval>

NOTE
- **The polling interval function is only available to http1.**
- To set the polling time in http communication.

<Initial Transmission>
- Touching the Initial Transmission key will sent the information to the CS Remote Care center to register the machine.

(3) Date & Time Setting

(a) Use

- To set the data and time-of-day.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touch [Detail Setting] to access Date & Time Setting.
4. Enter the date (month, day and year), time-of-day, and the time zone from the 10-key pad.
5. Touch [SET] to start the clock.

(4) RAM Clear

(a) Use

- To clear the following data at the center.
- Service ID, Basic setting, Date & time setting (time zone), Software SW setting, AT command.
- To be used for setting CS Remote Care.
- To be used for reset the every data of the center to default.

NOTE
- **If RAM clear is selected during transmission, RAM clear processing will be implemented at the time the transmission is completed regardless of whether it is done properly or not.**

(b) Default setting

- Unset

(c) Setting item

- Set
- Unset

(5) Communication Log Print

(a) Use

- To print out the communication log.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Maintenance/Default Settings].
3. Touch [Detail Setting] to access communication log print.
4. Load a paper tray with A4S/A4 or 81/2 x 11S/81/2 x 11 paper.
5. Select [1-Sided] or [2-Sided].
6. Press Start key to print out the communication log.

(6) Software Switch Setting

(a) Use

- To change the CS Remote Care settings.

(b) Procedure

- Refer to “I.5.9 List of software SW for CS Remote Care” for the setting.

(7) Response Time Out

(a) Use

- It sets the intervals for resending e-mails when transmission error occurred.
- It can be set only when [E-Mail] is selected in [System Setting].

(b) Default setting

- 60 minutes

(c) Setting range

- 10 to 1440

(8) AT Command

(a) Use

- To set the command to be issued at the time of modem initialization.
- This setting is available only when [Modem] is selected in [System Setting].

(b) Procedure

- Enter the command and touch [SET] to register.

(9) Notification Setting

(a) Use

- To make the settings of notification to the center that is performed under unilateral communication via http.
- This setting is available only when [http2] is selected in [System Setting].

(b) Procedure

<Schedule>

- Set the schedule of notification to the center.
- Up to three different notification schedules can be registered.
- Select the key of the registration number, and then touch [Enable].
- Select the notification cycle from [Day], [Week], or [Month].
  When selecting [Day] for the notification cycle, set the Day Frequency.
  When selecting [Week] for the notification cycle, set the Week Frequency and day of the week.
  When selecting [Month], set the Month Frequency and the date of the month.
- Touch [SET] to register the schedule.

<Center Notifi. Item>

- Select the notification item to the center.
- The following table shows each of the notification item keys and corresponding data.

[1]	Sales count data	[7]	EKC data
[2]	Error count data	[8]	Adjustment data
[3]	Service count data	[9]	Coverage data
[4]	Life count data Life cycle data	[10]	Not used
[5]	CSRC-System data Device config data	[11]	Not used
[6]	History data	[12]	Not used

NOTE

- **Multiple items of data can be selected and sent at one time. However, be sure that only EKC data cannot be sent together with other items of data.**

5.14.4 Maintenance/Default Settings - Server Setting (E-Mail1 or E-mail2 is selected.)

(1) Server for RX-POP3 server

(a) Use

- To set the POP3 server address used for the CS Remote Care.
- POP3 server address can be set with IP address or the domain name.

(b) Procedure

<Input IP Address>

- IP address version 4 format
- [0 to 255].[0 to 255].[0 to 255].[0 to 255]

<FQDN Input>

- Enter the domain name.

(2) Server for RX-POP3 login name

(a) Use

- To set the login name for the POP3 server used for the CS Remote Care.

(b) Procedure

- Up to 64 characters can be used. (alphanumeric characters and symbols)

(c) Default setting

- No

(3) Server for RX-POP3 password

(a) Use

- To set the logon password for the POP3 server used for the CS Remote Care.

(b) Procedure

- Up to 15 characters can be used. (alphanumeric characters and symbols)

(c) Default setting

- No

(4) Server for RX-POP3 port number

(a) Use

- To set the POP3 port number used for the CS Remote Care.

(b) Default setting

- 110

(c) Setting range

- 1 to 65535

(5) Receive-E-mail Address

(a) Use

- To set the e-mail address used for the CS Remote Care.

(b) Procedure

- Up to 129 characters can be used. (alphanumeric characters and symbols)

(c) Default setting

- No

(6) Receive-Mail Check

(a) Use

- To set whether or not to use mail check and the time interval for the POP server used for the CS Remote Care.

(b) Default setting

- No

(c) Setting item

- No
- 1 to 120 min.

(7) Receive-Connection Time-out

(a) Use

- To set the timeout period for connection during reception.

(b) Default setting

- 60 Sec

(c) Setting range

- 30 to 300 Sec

(8) Receive-APOP Authentication

(a) Use

- To set whether or not to authenticate the APOP during reception.

(b) Default setting

- No

(c) Setting item

- Yes
- No

(9) Send-SMTP server

(a) Use

- To set the SMTP sever address for transmission used for the CS Remote Care.
- SMTP server address can be set by the IP address or the domain name.

(b) Procedure

<Input IP Address>

- IP address version 4 format
  [0 to 255].[0 to 255].[0 to 255].[0 to 255]

<FQDN Input>

- Enter the domain name.

(10) Send-SMTP port number

(a) Use

- To set the SMTP port number for transmission used for the CS Remote Care.

(b) Default setting

- 25

(c) Setting range

- 1 to 65535

(11) Send-SMTP Connection Time-out

(a) Use

- To set the timeout period for transmission.

(b) Default setting

- 60 Sec

(c) Setting range

- 30 to 300 Sec

(12) Send-Authentication Setting

(a) Use

- To set whether or not to authenticate during transmission via SMTP server.
- To use when authenticating during transmission.
- Available authentication mode: POP Before SMTP, SMTP authentication

(b) Default setting

- OFF

(c) Setting item

- OFF
- POP Before SMTP
- SMTP Authentication

NOTE

- **Setting to "POP Before SMTP" will set the time for POP Before SMTP.**
  - **Default setting: 60 Sec**
  - **Setting range: 0 to "60 Sec"**
- When setting to SMTP authentication, touch the "Setting Check" key for authentication.

User ID	Enter the user ID for SMTP authentication.
Password	Enter the password for SMTP authentication.
Domain name	Enter the domain name for SMTP authentication.

(13) TX/RX Test

(a) Use

- To determine the correct transmission and reception using CS Remote Care.

(b) Procedure

1. Press the Start key to let the machine start the transmission and reception test.
2. The test procedure and result will be displayed on the screen.

(14) Data Initialization

(a) Use

- To initialize the contents for the sever setting.

(b) Default setting

- No

(c) Setting item

- Yes
- No

5.14.5 Maintenance/Default Settings - Server Setting (http1 or http2 is selected)

(1) HTTP Server Settings

(a) Use

- To set a http server at the other end that is used in CS Remote Care.

(b) Procedure

<URL>
- To set the address of the http server.

<Account>
- To set an account that is used to access the http server.

<Password>
- To set a password that is used to access the http server.

<Port Number>
- To set a port number that is used to access the http server.

(2) SSL Settings

(a) Use

- To make SSL settings of the http server at the other end that is used in CS Remote Care.

(b) Procedure

- To set whether or not to use SSL communication.

(3) Data Initialization

(a) Use

- To initialize values in the server settings.

5.14.6 Product Auth. Settings

(1) Product Authentication

(a) Use

- To set whether or not to enable product authentication.

NOTE

- **When changing this setting under the condition where http is used for CS Remote Care communication, you need to perform RAM Clear and then initial transmission again.**

(b) Default setting

- No

(c) Setting item

- Yes
- No

(2) WebDAV

(a) Use

- To set a WebDAV server for the product authentication.

(b) Procedure

<URL>
- To set the address of the WebDAV server.

<Account>
- To set an account that is used to access the WebDAV server.

<Password>
- To set a password that is used to access the WebDAV server.

<Port Number>
- To set a port number that is used to access the WebDAV server.

(3) Register Manually

(a) Use

- To install the certificate to be used in product authentication.

(b) Procedure (LMS)

1. Call the Service Mode to the screen.
2. Touch [CS Remote Care] -> [Product Auth. Settings].
3. Touch [Register Manually] -> [LMS].
4. Touch [Start] to communicate with LMS (License Management System) and install the certificate.
5. Check that the "Install OK" message appears.

(c) Procedure (USB)

NOTE

In the following conditions, installation of the certificate from a USB memory is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

1. Connect the USB flash drive where the certificate obtained from LMS (License Management System) is stored to the USB port of MFP.
2. Call the Service Mode to the screen.
3. Touch [CS Remote Care] -> [Product Auth. Settings].
4. Touch [Register Manually] -> [USB].
5. Touch [Start] to install the certificate.
6. Check that the "Install OK" message appears.

5.14.7 Import/Export Settings

(1) WebDAV Setting

(a) Use

- To configure WebDAV server settings used to remotely export or import MFP data (address book data, authentication setting data).

(b) Procedure

<URL>
- To set the address of the WebDAV server.

<Folder Name>
- To set a folder name of the WebDAV server that is used to transfer data.

<Account>
- To set an account that is used to access the WebDAV server.

<Password>
- To set a password that is used to access the WebDAV server.

(2) Port Number

(a) Use

- To set a port number that is used to access the WebDAV server.

(b) Procedure

- Set the port number of the WebDAV server using the 10-key pad.

(3) SSL Settings

(a) Use

- To configure the WebDAV server's SSL settings.

(b) Default setting

- No

(c) Setting item

- Yes
- No

(4) Data Initialization

(a) Use

- To initialize the settings on the server.

(b) Default setting

- No

(c) Setting item

- Yes

- No

5.14.8 Auto Initial Dial Setting

(1) Use

- To set whether to configure the Auto Initial Dial Setting for each CSRC communication method.
- Execute the CSRC Auto Initial Dial automatically at the first time of startup after importing [Remote Access Settings] from [Machine Import Setting].

NOTE

- **This function is enabled only when "Set" is selected and the following conditions are satisfied.**
  - **No registrations to the CSRC server have been made.**
  - **At the first time that the main power is turned ON (reboot) after importing the CSRC server information under [Service Mode] -> [Machine Update Settings] -> [Machine Auto Update Setting] -> [Machine Import Setting].**

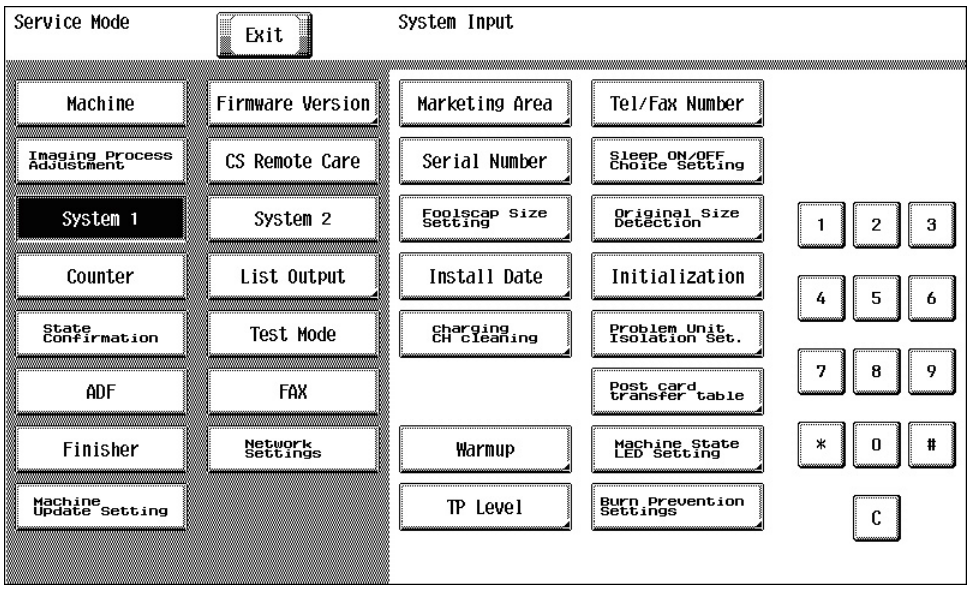
(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

5.15 System 1



5.15.1 Marketing Area

(1) Use

- To make the various settings (language, paper size, fixed zoom ratios, etc.) according to the applicable marketing area.
- Upon setup.

(2) Procedure

Marketing Area

- Select the applicable marketing area and touch [END] to set the marketing area.

Wireless LAN Destination (This is displayed only when the optional upgrade kit UK-212 is installed)

1. Touch the [Wireless LAN Destination].
2. Select the applicable marketing area using [+] and [-] keys, and touch [decision].
3. Turn OFF and ON the main power switch.

Fax Target

1. Touch the [Fax Target].
2. Select the applicable marketing area using [+] and [-] keys, and touch [END].

(3) Setting item

Marketing Area

- Japan
- US
- Europe
- Others1 to 5

Wireless LAN Destination

- OT, US, CA, JP, AU, NZ, EU, DE, GB, FR, CH, NL, BE, AT, NO, SE, FI, IE, DK, IT, ES, PT, PL, ZA, TW, SA, CN, MY, SG, KR, HK, AR, BR, VN, PH, RU

Fax Target

- JP, AU, NZ, EU, DE, GB, FR, CH, NL, BE, AT, NO, SE, FI, IE, DK, IT, ES, PT, PL, ZA, TW, SA, CN, MY, SG, KR, HK, AR, BR, VN, PH, RU, OT, US, CA

(a) List of functions affected by marketing area setting

- The listed are the functions of which setting is automatically changed depending on the selected marketing area.

Marketing area / Setting item		Japan	US	Europe	Others1	Others2	Others3	Others4	Others5
Language (Default value)		Japanese	English	English	English	English	Simplified Chinese	Traditional Chinese	English
Language Selection (Selectable language)		Japanese English French Italian German Spanish Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul	Simplified Chinese English French Italian German Spanish Japanese Traditional Chinese Hangul	Traditional Chinese English French Italian German Spanish Japanese Simplified Chinese Hangul	English French Italian German Spanish Japanese Simplified Chinese Traditional Chinese Hangul
Foolscap size		8 x 13	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13	8 x 13
LCT(Built-in) size		A4 LEF	Letter LEF	A4 LEF	A4 LEF	A4 LEF	A4 LEF	A4 LEF	A4 LEF
Unit		Metric	Inch	Metric	Metric	Metric	Metric	Metric	Metric
Registered Key Settings (default)	Registered Key 1	User Box	Scan/Fax	Scan/Fax	Scan/Fax	Scan/Fax	Scan/Fax	Scan/Fax	Scan/Fax
	Registered Key 2	Scan/Fax	Copy	Copy	Copy	Copy	Copy	Copy	Copy
	Registered Key 3	Copy	10 keypad	10 keypad	10 keypad	10 keypad	10 keypad	10 keypad	10 keypad
Total counter mode		Mode1	Mode2	Mode2	Mode2	Mode2	Mode2	Mode2	Mode2
Size counter		No count	A3, 11x17	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14	A3, B4, 11x17, 8 1/2x14
Unit Change		Japan	US	Europe	Europe	Europe	Europe	Europe	Europe

NOTE

- **The language used in the service mode depends on the Language Selection setting, and changes to the language as following table.**

Language Selection	Service Mode
Japanese	**Japanese**
Simplified Chinese	**Simplified Chinese**
Traditional Chinese	**Traditional Chinese**
Hangul	**Hangul**
Language other than listed above	**English**

5.15.2 Tel/Fax Number

(1) Use

- To enter the tel/fax number of the service contact that will appear on the control panel when a malfunction occurs in the machine.
- Upon setup.

(2) Procedure

- Enter the tel/fax number from the 10-key pad. (19 digits)
- Use Interrupt key to enter "-."

5.15.3 Serial Number

(1) Use

- To register the serial numbers of the machine and options.
- To display the serial number of the PH unit.
- The numbers will be printed on the list output.
- To use the serial number as device ID during CS Remote Care communication.
- Upon setup.

NOTE

- **When main power switch was turned ON while the serial No. was not entered, the message to require entering the serial No. will be displayed.**
- **Do not change the serial number registered in the machine. If memory data is lost and entering the serial number is required, enter the original correct serial number.**
- **Be careful to enter the correct serial number since characters other than alphanumeric can be also entered. CSRC communication is not available if a wrong serial number is entered.**

- **The serial number of "Printer" can be checked through the following: Menu -> [Counter].**

(2) Procedure

- Type the serial numbers.
  - Printer, Scanner, ADF, ZU, PK, PI, Output Option, Duplex, Vendor, RU, LCT, Fax1, Fax2, Fax3, Fax4

NOTE

- **The serial number of a PH unit can only be displayed but not be changed.**

5.15.4 Sleep ON/OFF Choice Setting

(1) Use

- To display the option of "No" for the sleep mode setting screen available from [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings].
- The sleep mode will begin in 48 hours even if it sets it to "OFF."

(2) Default setting

- Prohibit

(3) Setting item

- Permit
- Prohibit

5.15.5 Foolscap Size Setting

(1) Use

- To set the size for foolscap paper.
- Upon setup.

(2) Procedure

- Select the size from among the following six.

(3) Default setting

- 8 x 13

(4) Functions

- $8^1/_2$ x $13^1/_2$
- 220 x 330 mm
- $8^1/_2$ x 13
- $8^1/_4$ x 13
- $8^1/_8$ x $13^1/_4$
- 8 x 13

NOTE

- **"$8^1/_8$ x $13^1/_4$" and "220 x 330 mm" setting are corresponding to paper fed from the manual bypass tray only.**

5.15.6 Original Size Detection

(1) Copy Glass

(a) Use

- To change the size detection table for the document glass.

(b) Default setting

- Table1

(c) Setting item

- Table1
- Table2

NOTE

- **Table 2 can be set only when original size sensor 2 is being mounted.**

(2) $8^1/_2$ x 14/Foolscap Size Detection

(a) Use

- To set whether paper of $8^1/_2$ x $13^1/_2$ size is detected as $8^1/_2$ x 14 or foolscap in original glass or DF size detection.
- When Table 1 is selected in Copy Glass, paper of 81/2 x 131/2 size is detected as Foolscap despite of the setting of 81/2 x 14/Foolscap Size Detection.
- Not available for Japan models.

(b) Default setting

- 8 1/2x14

(c) Functions

- 8 1/2x14
- Foolscap

(3) ADF Size Detection

(a) Use

- To set whether or not to give a priority to the detection of 8K/16K size when DF is used.
- Not available for Japan models.

(b) Default setting

- K Size

(c) Functions

- K Size
- B series

5.15.7 Install Date

(1) Use

- To register the date the main body was installed.
- Upon setup.

NOTE

- **When using without setting the install date, the date/month/year at which the total counter reaches more than 100 sheets of paper will be set as an install date automatically.**

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Install Date].
3. Touch Clear.
4. Enter the date from the 10-key pad. (Year 4 digit -> Month 2 digit -> date 2 digit)
5. Touch [Entry] to set the date of installation.

5.15.8 Initialization-Clear All Data

(1) Use

- To initialize the setting data.
- For details on items to be cleared, see "I.10. CONTENTS TO BE CLEARED BY RESET FUNCTION."

NOTE

- **When removing or installing the hard disk after registering the data below, be sure to clear the data.**
  - **Referring data: One-touch registration, user authentication/account track.**

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Clear All Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

   NOTE

   - **The trouble code "CD272: i-Option activated and additional memory and HDD not installed" is displayed after turned on the main power switch.**

5. Call the Service Mode to the screen.
6. Touch [System 2] -> [HDD] -> [Installed].
7. Exit the Service Mode and then turn off the main power switch and turn it on again more than 10 seconds after.

5.15.9 Initialization-Clear Individual Data

- Clear Individual Data enables you to select and clear multiple items at a time.

(1) Copy Program Data

(a) Use

- To clear data registered as copy program.
- Use this feature to clear all copy program data at a time.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Copy Program Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(2) Address Registration Data

(a) Use

- To clear address registration data.
- Use this feature to initialize address registration data.
- The following are address registration data:
  Group address data, Program key data, One-touch destination data, Mail body data, Subject data, Prefix/suffix data

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Address Registration Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(3) Fax Setting Data

(a) Use

- To clear fax-related settings and parameters. However, address-related data is not cleared.
- Use this feature to clear fax-related settings and parameters at a time.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Fax Setting Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(4) All History Data

(a) Use

- To clear history data.
- The following are history data:
  Job history, Journal history, Receive reject history, Destination history, Job secure counter (Internal data for history management)

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [All History Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(5) Network Setting Data

(a) Use

- To clear the network-related settings.
- Use this feature to initialize and set network-related settings again when the machine does not work properly upon change of network-related settings.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Network Setting Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

(6) Server Cache Data

(a) Use

- To clear user information cached from the external authentication server.
- When [Administrator Settings] -> [User Authentication/Account Track] -> [External Server Settings] -> [Temporarily Save Authentication Info.] is set to "Enable," the corresponding user information is cached each time when authentication by the external server is successful. The information is used when MFP cannot be connected to the external server.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 1] -> [Initialization] -> [Server Cache Data].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

5.15.10 Initialization-System Error Clear

(1) Use

- To reset the trouble data.
- Use to clear the [Jam], [Trouble], [Error] displays, and other improper displays.
- For details on items to be cleared, see "I.10. CONTENTS TO BE CLEARED BY RESET FUNCTION."

(2) Procedure

1. Call the Service Mode to the screen.

2. Touch [System 1] -> [Initialization] -> [System Error Clear].
3. Press the Start key.
4. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after.

5.15.11 Charging CH cleaning

(1) K Charge Manual Cleaning

(a) Use

- Cleaning operation can be executed to the comb electrode.
- When image problems occur, you can execute the cleaning operation manually.

(b) Procedure

1. Call the Service Mode to the screen.
2. Select the key as follows.
   [System 1] -> [Charging CH cleaning] -> [K Charge Manual Cleaning].
3. Press the Start key.
4. When the Start key changes its lighting from orange to blue, you can confirm that the cleaning operation has been completed.

(2) K Charge A/C ON/OFF Setting

(a) Use

- This setting allows you to select the self cleaning of the comb electrode section.
- This setting can be used to temporarily stop the self cleaning operation in order to address problems.

ON	The self cleaning operation occurs every 6,800 sheets of print, synchronizing the transfer belt cleaning operation.
OFF	The machine does not perform the self cleaning operation.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

5.15.12 Problem Unit Isolation Set.

(1) Use

- Individual units and options have a set or unset setting for the problem unit isolation set. function.
- When a problem occurs, this function enables the continuous use of the units that are not affected by separately controlling them and isolating other units that have a problem.
- The machine isolates only units that have a “set” setting.
  NOTE
  - **The malfunction detection mechanism is not applied to units and options that are being isolated.**

- This function can be selected for the following units and options.
  - Tray 1, Tray 2, Tray 3, Tray 4, LCT, manual, Half-Fold/Tri-Fold Center Stapling, Post Inserter, Z Folding Unit, Punch, Staple, Scanner, ADF, Expansion Function (HDD)
  - Though Problem Unit Isolation Set. is not selected, if the specified malfunctions occur on the above listed units or options, an alert screen appears and asks users whether to isolate the units or options where malfunction occurs. See the “K.3.4 List of the trouble code” section for the corresponding trouble codes.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

NOTE

- **After changing the setting, touch [Apply] and turn the main power switch OFF and ON to make the new setting effective.**

5.15.13 Post card transfer table

(1) Use

- For the use of thick 3 postcards, you can select the transfer table suitable for postcards.
- This setting is used to improve transfer performance to postcards.

Post.	The postcard 2nd image transfer table is used when printing on thick3 postcards.
Thick 3	The normal thick3 2nd image transfer table is used when printing on thick 3 postcards.

(2) Default setting

- Post.

(3) Setting item

- Post.
- Thick 3

5.15.14 Warm-up

(1) Change Warm Up Time

(a) Use

- To change warm up completion time.

Mode 1	Performs the warm-up control where priority is given to warm-up time.
Mode 2	Performs the warm-up control where priority is given to fusing performance. Fusing performance improves, but the warm-up time in this mode is longer than that in mode 1.

(b) Default setting

- Mode 1

(c) Setting item

- Mode 1
- Mode 2

5.15.15 Machine State LED Setting

(1) Use

- To set how to display main body statuses on the machine state LED (state display lamp, paper empty lamp).

NOTE

- **Each of Type1 and Type2 has the following LED display forms.**

Machine State LED Setting		Type1	Type2
Warning Status	Attention • Toner supply door open • Toner cartridge install failure • Toner Empty	Blinking	Blinking
	• Near life • Toner Near Empty	Blinking	Unlit
	Malfunction code	Unlit	Unlit
	Problem Unit Isolation	Blinking	Blinking
	Fatal error • Trouble code • Jam • Door opened • Life stop • Toner Empty Stop	Lit	Lit
Paper Remainder (Tray 1/2 paper empty lamp)	100 % to near empty	Unlit	Unlit
	Near empty	Blinking	Unlit
	Empty	Lit	Lit
	Being lifted up Cassette Open	Unlit	Unlit
Paper Remainder (Tray 3/4 paper empty lamp)	100 % to near empty	Unlit	Unlit
	Near empty	Blinking	Unlit
	Empty	Lit	Lit
	Being lifted up Cassette Open	Unlit	Unlit

(2) Default setting

- Type 2

(3) Setting item

- Type 1
- Type2

5.15.16 TP Level

(1) Use

- To adjust the selectivity of the touch panel.

(2) Default setting

- 0

(3) Setting range

- -2 to +2 (step: 1*)
- To increase sensitivity of the touch panel, increase the setting value.
- To decrease sensitivity of the touch panel, decrease the setting value.

NOTE

- **When the setting has been changed, turn off the main power switch and turn it on again more than 10 seconds after.**

5.15.17 Burn Prevention Settings

(1) Use

- To prompt to prevent a burn injury by displaying a message indicating that the fusing unit is at a high temperature when the right door has to be opened in order to get rid of a paper jam.

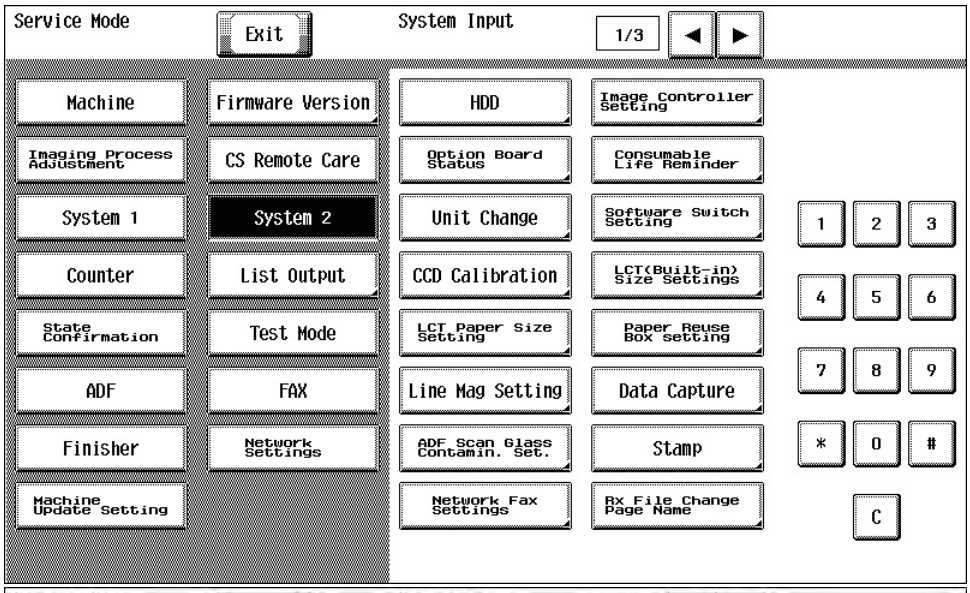
(2) Default setting

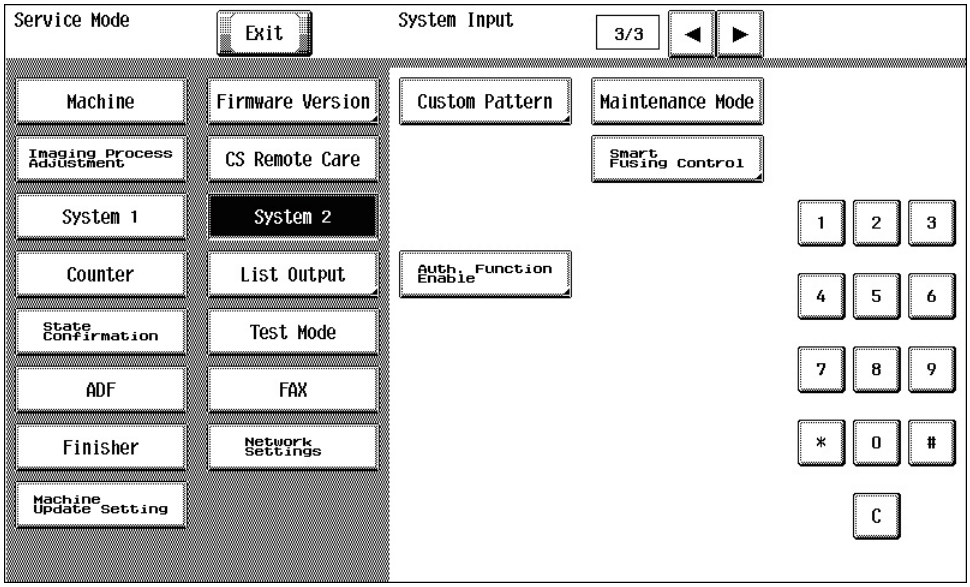
- Enable

(3) Setting item

- Enable
- Disable

5.16 System 2





5.16.1 HDD

- Setting change is unnecessary. (Select [Installed] at any time.)

NOTE

- **For putting the following order [System 1] -> [initialization] into practice, the set becomes [Not Installed], causing an error. Required to set [Installed] again.**

5.16.2 Image Controller Setting

(1) Image Controller Setting

- Setting change is unnecessary. (Select [Controller 0] at any time.)

(2) Peripheral Mode

- Setting change is unnecessary.

5.16.3 Option Board Status

(1) Use

- To be used for setup of the optional fax kit (FK-516*1, FK-515*2) or the security kit (SC-508).

NOTE

- ***1: FK-516 is used for FAX line 1/line 2.**
- ***2: FK-515 is used for FAX line 3/line 4. The Fax Mount kit (MK-742) is required when line 3/4 is installed.**

(2) Default setting

- Unset

(3) Setting item

FAX (circuit 1)
- Set
- Unset

FAX (circuit 2)
- Set
- Unset

FAX (circuit 3)
- Set
- Unset

FAX (circuit 4)
- Set
- Unset

DSC1
- Set
- Unset

DSC2
- Set
- Unset

NOTE

- **When the setting has been changed, turn off the main power switch and turn it on again more than 10 seconds after.**

5.16.4 Consumable Life Reminder

(1) Use

- To select whether or not to give the display of PM parts lifetime

PM parts lifetime display	An entire screen warning is given when the service life of a specific unit has been reached, prompting the user to replace the part.

- Applicable units: Transfer belt unit, fusing unit, developing unit, drum unit.
- Use to select not to give the display of PM parts lifetime.

Yes	When the service life has been reached, a malfunction code and an entire screen warning appear on the control panel.
No	When the service life has been reached, a malfunction code and a message appear in one line on the upper side of the screen.

(2) Default setting

- No

(3) Setting item

- Yes
- No

5.16.5 Unit Change

(1) Unit Change

(a) Use

- To select who is to replace a unit.
- When the unit life arrives, the warning display is intended for the specific person who is going to replace the unit.
  - When "User" is selected: Printing is inhibited.
  - When "Service" is selected: Life warning.
- Upon setup.

(b) Default setting

Units	Japan	US	Europe
Toner cartridge	User	User	User
Imaging unit	Not used		
Waste toner box	Service	User	User
Hole-Punch Scrape Box	User	User	User

(c) Setting item

- User
- Service

(2) Warning display - Toner Near Empty

(a) Use

- To set whether to display a toner near empty warning.
- To be used for setup.

(b) Default setting

- Yes

(c) Setting item

- Yes
- No

(3) Warning display - Near Empty Display Time

NOTE

- **The Near Empty Display time will be displayed when "Bit Assignment 00000010 / HEX Assignment 02" is set for the Switch No. "151" through the following settings. [SERVICE MODE] -> [System 2] -> [Software Switch Setting].**
- **A mechanism for detecting the residual toner inside the toner cartridge is not provided to the toner cartridge. So note that when the toner cartridge is replaced in the midway, the display timing that was set as a reference and the amount of the residual toner inside the toner cartridge may get mismatched.**

(a) Use

- To change the timing of toner cartridge near empty detection in order to optimize the timing of the toner cartridge replacement depending on individual use (PV).
- To specify the timing for displaying toner near empty warning at a percentage against 100% of a full toner cartridge state.

(b) Default setting

- K: 0

(c) Setting range

- 0 to +25 (steps: 1)

(4) Warning display - Near Life Display Settings

(a) Use

- To set whether or not to display the life warning of individual consumables.
- When [Do Not Display] is selected, a warning is not displayed at the time of life detection. However, in CS Remote Care, life warning is always sent to the Center regardless of this setting.
- Applicable consumables are as follows:
  - Drum Unit, Developing Unit, Fusing Unit, Ozone Filter, Transfer Roller Unit, Toner Filter, Image Transfer Belt Unit

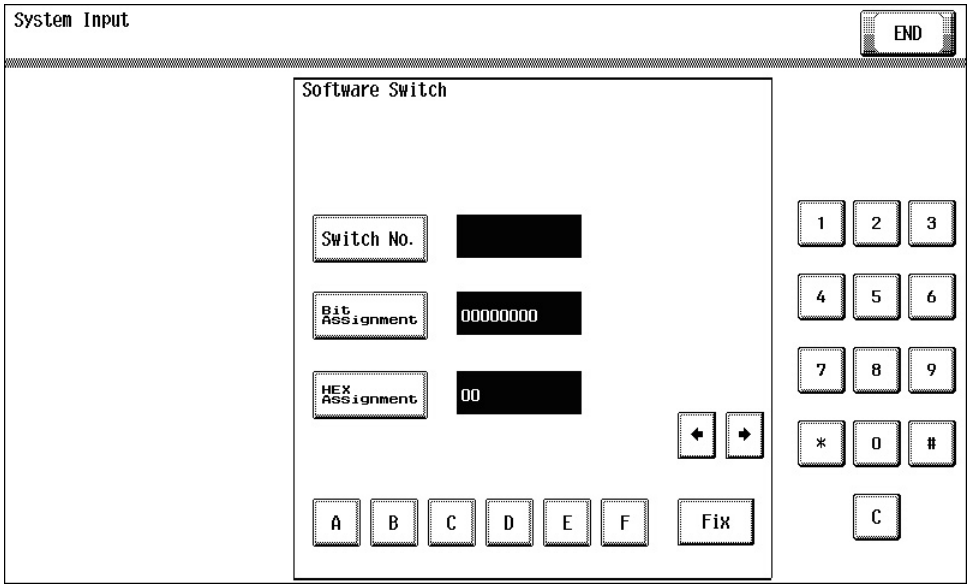
(b) Default setting

- Display

(c) Setting item

- Display
- Do Not Display

5.16.6 Software Switch Setting



(1) Use

- To set the operating characteristic of each function from software switch depending on what types of printing are normally made.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 2] > [Software Switch Setting].
3. Touch [Switch No.] and enter the intended switch number with the 10-key pad.
4. Touch [Bit Assignment].
5. Use [<-] or [->] to select a bit. To set the bit, enter 0 or 1 with the 10-key pad.
6. To set the bit in hex, touch [HEX Assignment] and use the 10-key pad and [A] to [F] keys to enter numbers and characters.
7. Touch [Fix].

(3) Details of the software switch settings

NOTE

- **For switches not mentioned in the list below, use them in the default value (Bit Assignment: 00000000 / HEX Assignment: 00) unless indicated otherwise.**

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
012	Addition of the authentication device	00000000	00	Standard	00000000 / 00	• I.8.3.7 Authentication Device 2
		00000010	02	[Card3] choice is added in Service Mode.		
025	FW function version setting	00110000	30	FW compatible with version 2.2	00110000 / 30	• I.2.9 Device Information List
		01000000	40	FW compatible with version 3.0		

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
033	Renders some functions, which were available when both administrator authentication and key counter were provided with when using the vendor, available only with administer authentication.	00000000	00	Available with the combination of administer authentication and key counter.	00000000 / 00	• I.2.3.1.(1).(g) Expert Adjustment • I.2.3.1.(1).(h) List/ Counter
		00000001	01	Available only with administrator authentication.		
049	The upper limit of copies that can be input through the control panel of this machine is set.	00000000	00	Unlimited	00000000 / 00	-
		00000001	01	1 copy		
		00000010	02	3 copies		
		00000011	03	5 copies		
		00000100	04	9 copies		
		00000101	05	10 copies		
		00000110	06	20 copies		
		00000111	07	30 copies		
		00001000	08	50 copies		
		00001001	09	99 copies		
		00001010	0A	250 copies		
	Scan setting only when Sort is selected for a copy cycle to be run with originals placed on the original glass.	00000000	00	"Change Setting" and "Finish" keys become available after the document has been scanned.	00000000 / 00	-
		10000000	80	Keys unavailable (copy cycle is started)		
051	Settings for the life warning/replace display of the units	00000000	00	Normal display	00000000 / 00	• F.5.3.2 Drum unit • F.5.3.3 Developing unit • F.5.3.4 Image transfer belt unit • F.5.3.8 Fusing unit • I.5.17.2.(3) New Release
		00010000	10	Does not show the life warning/replace display of the drum unit.		
		00100000	20	Does not show the life warning/replace display of the developing unit.		
		01000000	40	Does not show the life warning/replace display of the transfer belt unit.		
		10000000	80	Does not show the life warning/replace display of the fusing unit.		
063	Display setting of [Image Log Transfer Settings] on the control panel.	00000000	00	Not displayed.	00000000 / 00	• I.8.3.8 Setting items that automatically change the setting values • I.2.11.16 Security Settings - Image Log Transfer Settings (Type1) • I.2.11.17 Security Settings - Image Log Transfer Settings (Type2)
		00000001	01	Displayed (Type 1)		
		00000010	02	Displayed (Type 2: Only applicable to fax communication)		
		00000011	03	Not used		
069	When printing using the manual bypass tray in a custom size, allows for printing only with a printer driver settings.	00000000	00	After setting a paper in the manual bypass tray, touch [complete] key to start printing.	00000001 / 01	-
		00000001	01	Start printing with the paper settings specified by the printer driver as the manual bypass tray paper settings without giving a warning.		
070	Setting for alarm sound and screen display for communication errors occurring due to CSRC causes.	00000000	00	Communication error sound/ screen display enabled.	00000000 / 00	-
		00010000	10	Communication error sound/ screen display disabled.		
072	Import/export function of the address book	00000000	00	Import/export function is disabled.	00000000 / 00	• I.2.11.27 External Memory Backup - Import/Export

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
	through the USB memory	00000100	04	Import/export function is enabled.		
121	Operation when a double feed is detected, with ADF used.	00000000	00	Stops instantly	00000000 / 00	-
		00000010	02	Stops after outputting originals		
124	Function to restrict the file type of TX Fax	00000000	00	Restrict the file type.	00000000 / 00	• I.2.3.8.(1).(e) Function Settings
		00000001	01	Do not restrict the file type.		
135	Setting for ID length of the HID Prox card	00000000	00	Reports that the 1st byte shows the ID length of the card, the 2nd byte and after shows the card ID.	00000000 / 00	-
		00000001	01	Reports the card ID with the ID length including the 1st byte.		
143	Expansion setting of the touch panel sensitive area when the web browser function is used *1	00000000	00	• 26 dots : 26 dots from the perimeter of the touch panel is a nonsensitive area.	00000000 / 00	-
		00000001	01	• 16 dots : 16 dots from the perimeter of the touch panel is a nonsensitive area.		
		00000010	02	• 9 dots : 9 dots from the perimeter of the touch panel is a nonsensitive area.		
145	Switching to Auto detection for paper size in manual bypass tray	00000000	00	Enable	00000000 / 00	-
		00000001	01	Disable		
	Switching paper feed mode if the size of paper fed from the manual bypass tray is mismatched	00000000	00	Stop immediately	00000010 / 02	-
		00000010	02	Stop accordingly Stop immediately in the following cases as an exception. • "1" is set at bit4 for the Switch No.145 • For jobs where tri-folding and Z-folding are set with a finisher equipped		
	Displaying message when the paper size in manual bypass tray is mismatched with the paper size specified on the control panel	00000000	00	Enable	00000000 / 00	-
		00000100	04	Disable		
	When running a copy cycle with originals placed on the original glass, and [Auto] is displayed in "Group/Sort" of the finishing function, [Auto] will be set as default. ("Sort" and "Offset" will be executed when [Auto] is selected.)	00000000	00	Enable	00000000 / 00	-
		00001000	08	Disable		
	Switch-over settings of Duplex printing and Billing permission Setting for allowing/ prohibiting billing on exited paper when a paper size error occurred at the time of duplex printing	00000000	00	Allow (billing on one side of the paper)	00000000 / 00	-
		00010000	10	Prohibit		
146	Setting for enabling use of Non-Image Area Erase, Centering, and Original Size when the	00000000	00	Prohibits use of Non-Image Area Erase, Centering, and Original Size.	00000000 / 00	-

Switch No.	Function	Setting value			Default value (Bit/HEX)	Reference
		Bit Assignment	HEX Assignment	Details		
	book original is used in the fax/scanner mode	00000100	04	Enables use of Non-Image Area Erase, Centering, and Original Size.		
	Setting for selecting whether to stop paper transporting, or to discharge paper as normal output when a size error occurs on the paper fed from the cassette.	00000000	00	Stops paper transporting.	00010000 / 10	-
		00010000	10	Discharges paper.		
147	Image fusing blur control choice Setting for lowering the process speed to the half, and printing with the pressure roller released (slightly pressured) when “User Paper 1” or “User Paper 2” is selected for the paper type. Thus, the image fusing blur can be controlled.	00000000	00	Invalid	00000000 / 00	-
		00000100	04	Valid (The image fusing blur can be controlled, but the productivity may drop by lowering the process speed to the half.)		
151	Setting for displaying/ hiding the Near Empty Display Time	00000000	00	Hide	00000010 /02	• I.5.16.5.(3) Warning display - Near Empty Display Time
		00000010	02	Display		
152	The E-mail body print settings of E-Mail RX Print	00000000	00	Disables the E-mail body print settings	00000000 / 00	• This function supports the following languages. English, French, Italian, Germany, Spanish
		00000001	01	Allows the E-mail body print settings.		
155	Validation/invalidation of the debug setting of the log.	00000000	00	Debug setting is disabled.	00000000 / 00	• Debug Setting/I.9.2 Starting/Exiting • Debug Setting/I.9.4.1 Basic mode
		00000001	01	Debug setting is enabled.		
157	Change the upper limit of the time for switching to power save mode.	00000000	00	Do not change the upper limit.	00000000 / 00	• I.2.3.1.(1).(a) Power Supply/Power Save Settings
		00000010	02	Change the upper limit to 240 min.		
188	Operation setting for print status LED*2	00000001	01	Blink	00000001 / 01	-
		00000010	02	Light off		
192	Set whether to enable the Android and iOS function	00000000	00	Disable	00000001 / 01	-
		00000001	01	Enable		
203	Setting to automatically change log-in authorization to a second user when the second user attempts card authentication after a first user has been authenticated through card authentication.	00000000	00	Log-in authorized.	00000000 / 00	-
		00000100	04	Log-in not authorized.		
206	Setting whether to enable Coverage Counter	00000000	00	Disable	00000000 / 00	• I.8.3.19 Coverage Counter Setting • I.8.3.20 Print Counter Clear • I.8.3.21 Coverage Counter Detail
		00000001	01	Enable		

- *1: The sensitive area of the control panel can be expanded by selecting “16 dots” or “9 dots” on the software switch No.143. Note that the control panel’s sensitive area expanded in this manner may not detect touches properly.
  *2: To use the optional Working table WT-513 (upright panel), "02" must be selected.

(4) Software Switch Setting list

- The list of the setting values of Software Switch Setting can be print from [Service Mode] -> [List Output] -> [Machine Management List].

Sample

Machine Manage
ment List

P 9
03/09/2012 09:30
Serial No.
TC: 0

DipSW Setting

No.	Bit.	Hex	No.	Bit.	Hex	No.	Bit.	Hex	No.	Bit.	Hex	No.	Bit.	Hex
000	00000000	00	064	00000000	00	128	00000000	00	192	00000000	00	256	00000000	00
001	00000000	00	065	00000000	00	129	00000000	00	193	00000000	00	257	00000000	00
002	00000000	00	066	00000000	00	130	00000000	00	194	00000000	00	258	00000000	00
003	00000000	00	067	00000000	00	131	00000000	00	195	00000000	00	259	00000000	00
004	00000000	00	068	00000000	00	132	00000000	00	196	00000000	00	260	00000000	00
005	00000000	00	069	00000000	00	133	00000000	00	197	00000000	00	261	00000000	00
006	00000000	00	070	00000000	00	134	00000000	00	198	00000000	00	262	00000000	00
007	00000000	00	071	00000000	00	135	00000000	00	199	00000000	00	263	00000000	00
008	00000000	00	072	00000000	00	136	00000000	00	200	00000000	00	264	00000000	00
009	00000000	00	073	00000000	00	137	00000000	00	201	00000000	00	265	00000000	00
010	00000010	02	074	00000000	00	138	00000000	00	202	00000000	00	266	00000000	00
011	00000000	00	075	00000000	00	139	00000000	00	203	00000000	00	267	00000000	00
012	00000000	00	076	00000000	00	140	00000000	00	204	00000000	00	268	00000000	00
013	00000000	00	077	00000000	00	141	00000000	00	205	00000000	00	269	00000000	00
014	00000000	00	078	00000000	00	142	00000000	00	206	00000000	00	270	00000000	00
015	00000000	00	079	00000000	00	143	00000000	00	207	00000000	00	271	00000000	00
016	00000000	00	080	00000000	00	144	00000000	00	208	00000000	00	272	00000000	00
017	00000000	00	081	00000000	00	145	00000000	00	209	00000000	00	273	00000000	00
018	00000000	00	082	00000000	00	146	00000000	00	210	00000000	00	274	00000000	00
019	00000000	00	083	00000000	00	147	00000000	00	211	00000000	00	275	00000000	00
020	00000000	00	084	00000000	00	148	00000000	00	212	00000000	00	276	00000000	00
021	00000000	00	085	00000000	00	149	00000000	00	213	00000000	00	277	00000000	00
022	00000000	00	086	00000000	00	150	00000000	00	214	00000000	00	278	00000000	00
023	00000000	00	087	00000000	00	151	00000000	00	215	00000000	00	279	00000000	00
024	00000000	00	088	00000000	00	152	00000000	00	216	00000000	00	280	00000000	00
025	00000000	00	089	00000000	00	153	00000000	00	217	00000000	00	281	00000000	00
026	00000000	00	090	00000000	00	154	00000000	00	218	00000000	00	282	00000000	00
027	00000000	00	091	00000000	00	155	00000001	01	219	00000000	00	283	00000000	00
028	00000000	00	092	00000000	00	156	00000000	00	220	00000000	00	284	00000000	00
029	00000000	00	093	00000000	00	157	00000000	00	221	00000000	00	285	00000000	00
030	00000000	00	094	00000000	00	158	00000000	00	222	00000000	00	286	00000000	00
031	00000000	00	095	00000000	00	159	00000000	00	223	00000000	00	287	00000000	00
032	00000000	00	096	00000000	00	160	00000000	00	224	00000000	00	288	00000000	00
033	00000000	00	097	00000000	00	161	00000000	00	225	00000000	00	289	00000000	00
034	00000000	00	098	00000000	00	162	00000000	00	226	00000000	00	290	00000000	00
035	00000000	00	099	00000000	00	163	00000000	00	227	00000000	00	291	00000000	00
036	00000000	00	100	00000000	00	164	00000000	00	228	00000000	00	292	00000000	00
037	00000000	00	101	00000000	00	165	00000000	00	229	00000000	00	293	00000000	00
038	00000000	00	102	00000000	00	166	00000000	00	230	00000000	00	294	00000000	00
039	00000000	00	103	00000000	00	167	00000000	00	231	00000000	00	295	00000000	00
040	00000001	01	104	00000000	00	168	00000000	00	232	00000000	00	296	00000000	00
041	00000000	00	105	00000000	00	169	00000000	00	233	00000000	00	297	00000000	00
042	00000000	00	106	00000000	00	170	00000000	00	234	00000000	00	298	00000000	00
043	00000011	03	107	00000000	00	171	00000000	00	235	00000000	00	299	00000000	00
044	00000000	00	108	00000000	00	172	00000000	00	236	00000000	00			
045	00000000	00	109	00000000	00	173	00000000	00	237	00000000	00			
046	00000000	00	110	00000000	00	174	00000000	00	238	00000000	00			
047	00000000	00	111	00000000	00	175	00000000	00	239	00000000	00			
048	00000000	00	112	00000000	00	176	00000000	00	240	00000000	00			
049	00000000	00	113	00000000	00	177	00000000	00	241	00000000	00			
050	00000000	00	114	00000000	00	178	00000000	00	242	00000000	00			
051	00000000	00	115	00000000	00	179	00000000	00	243	00000000	00			
052	00000000	00	116	00000000	00	180	00000000	00	244	00000000	00			
053	00000000	00	117	00000000	00	181	00000000	00	245	00000000	00			
054	00000000	00	118	00000000	00	182	00000000	00	246	00000000	00			
055	00000000	00	119	00000000	00	183	00000000	00	247	00000000	00			
056	00000000	00	120	00000000	00	184	00000000	00	248	00000000	00			
057	00000000	00	121	00000000	00	185	00000000	00	249	00000000	00			
058	00000000	00	122	00000000	00	186	00000000	00	250	00000000	00			
059	00000000	00	123	00000000	00	187	00000000	00	251	00000000	00			
060	00000000	00	124	00000000	00	188	00000000	00	252	00000000	00			
061	00000000	00	125	00000000	00	189	00000000	00	253	00000000	00			
062	00000000	00	126	00000000	00	190	00000000	00	254	00000000	00			
063	00000000	00	127	00000000	00	191	00000000	00	255	00000000	00			

5.16.7 CCD Calibration

(1) Use

- To set whether to use the calibration adjustment value set prior to the shipping. To display the current calibration adjustment value.
- When the CCD unit (front side) or the CIS module (back side: only when dual scan document feeder is mounted) has been replaced, set to “OFF.” After replacing the CCD unit or CIS module, the default generic value needs to be set since the calibration value set for each unit changes to control the differences in reading performance on each scanner (CCD unit/CIS module).
- The original calibration adjustment value can be disabled to address image failure and other problems caused by individual CCD unit/CIS module performance difference.
- When dual scan document feeder is mounted, this setting can be made separately for [Front Side] and [Back Side].

(2) Default setting

- ON

(3) Setting item

- ON
- OFF

NOTE

- **When the setting is changed, the function becomes available by turning the main power switch OFF and ON again.**

5.16.8 LCT (Built-in) Size Settings

(1) Use

- To set the paper size for the built-in LCT (tray 3, tray 4).

(2) Default setting

- A4 (Except for North America)
- $8\frac{1}{2}$ x 11 (North America)

(3) Setting item

- A4
- B5
- $8\frac{1}{2}$ x 11
- 16K
- A5
- $5\frac{1}{2}$ x $8\frac{1}{2}$
- Post.

5.16.9 LCT Paper Size Setting

(1) Use

- To set an optional large capacity unit type (LU-303 or LU-205).
- To set the paper size for the optional large capacity unit LU-303 or LU-205.
- Use this feature upon the optional large capacity unit LU-303 or LU-205 set-up.

(2) Default setting

- A4LCT

(3) Setting item

- A4LCT
- A3LCT

* For a selected LCT type, set a paper size.

NOTE

- **When the LCT type setting is changed, the paper size setting in the LCT is returned to the default.**

(4) A4LCT

(a) Default setting

- A4 (Except for North America)
- 8 $\frac{1}{2}$ x 11 (North America)

(b) Setting item

- A4
- 8 $\frac{1}{2}$ x 11

(5) A3LCT

(a) Default setting

- A3 (Except for North America)
- 11 x 17 (North America)

(b) Setting item

- SRA3
- A3
- B4
- A4S
- A4
- 12 x 18
- 11 x 17
- 8 $\frac{1}{2}$ x 14
- 8 $\frac{1}{2}$ x 11
- 8 $\frac{1}{2}$ x 11S

5.16.10 Paper Reuse Box Setting

(1) Use

- This setting is to be configured when the optional Paper Reuse Box is used.
- Select the paper loading port (tray 1/tray 2) where a paper reuse box is installed.

(2) Default setting

- Do Not Use

(3) Setting item

1. Do Not Use
2. Tray 1
3. Tray 2

5.16.11 Line Mag Setting

(1) Use

- To set whether to use the offset value which has been set prior to the shipping. To display the current magnification offset value.
- When the CCD unit or the CIS module has been replaced, set to “OFF.”
- After replacing the CCD unit or the CIS module, the default generic value needs to be set since the magnification offset value between the lines set for each unit changes to control the differences in reading performance on each scanner (CCD unit/CIS module).
- The original offset value can be disabled to address image failure and other problems caused by individual CCD unit/CIS module performance difference.
- When dual scan document feeder is mounted, this setting can be made separately for [Front Side] and [Back Side].

(2) Default setting

- ON

(3) Setting item

- ON
- OFF

NOTE

- **When the setting is changed, the function becomes valid by turning the main power switch OFF and ON again.**

5.16.12 Data Capture

(1) Use

- When an error occurs, it acquires the print job data in order to analyze the cause of the error.
- When an error occurs, this will be used to analyze the cause of the error according to the print job data.

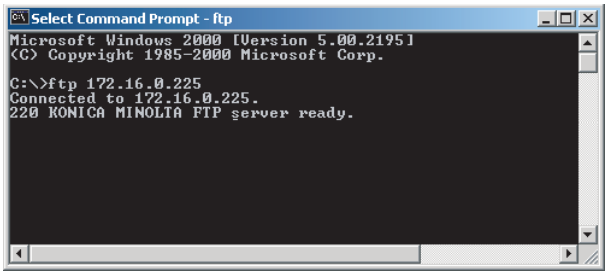
(2) Procedure

NOTE

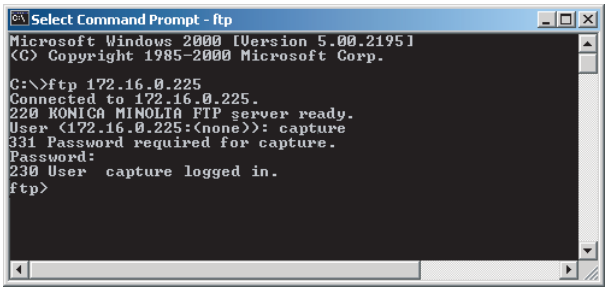
The following conditions are necessary for this function.

- **When selecting [Security Settings] -> [Security Details] -> [Print Data Capture] in Administrator Settings, [Allow] must be set.**
- **The hard disk must be mounted to the machine.**
- **[ON] must be set when selecting [Administrator Settings] -> [Network Settings] -> [FTP Settings] -> [FTP Server Settings].**
- **This function also allows print job data stored in the HDD to be obtained from [Debug Settings] -> [Debug Log Output]. For more details, see “I.9.3.1 Debug Log Output”.**

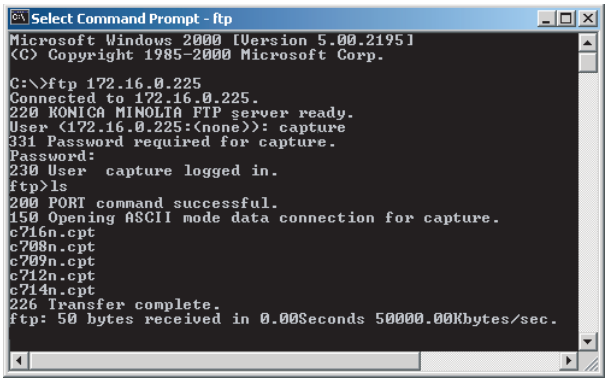
1. Select [Service Mode] -> [System 2], and touch [Data Capture]. Select [ON]. (While the Data Capture setting is [ON], the print job data from the PC will be stored in the hard disk.)
   NOTE
   - **Maximum 5 print job data can be stored. The data will be overwritten beginning with the chronologically oldest one.**
2. Check the IP address of the machine.
3. Connect the PC (Windows) and the machine with ethernet cable.
4. Start the DOS command prompt of the PC, and specify the IP address of the machine to start FTP.



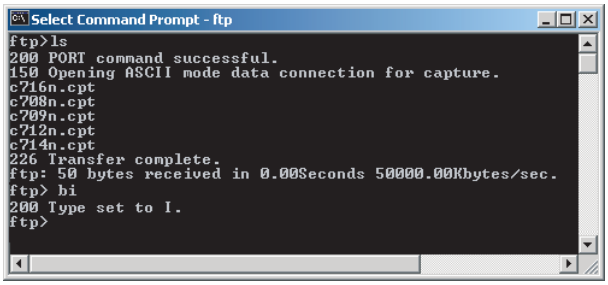
5. Input the user name and the password.
   - User name: capture
   - Password: sysadm



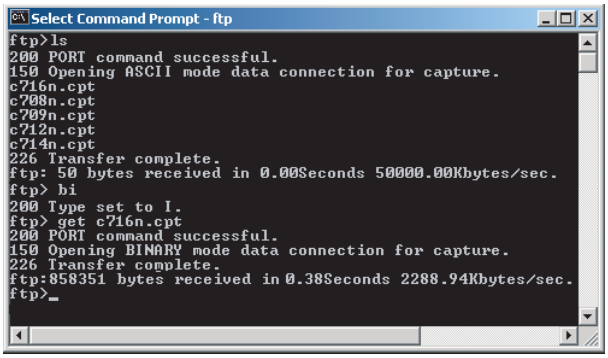
6. Using the “ls” command, display the list of the file available for capture.



7. Using the “binary” command, set the File transfer mode to the binary transfer.



8. Using the “get” command, transfer the data for capture to PC.



9. Finish the command prompt.
NOTE
- **After receiving capture data, select [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Print Data Capture], and select [Restrict] for the print data capture setting in order to delete the job data stored in the hard disk. When HDD Format or Overwrite Temporary Data is performed, job data is deleted.**

5.16.13 ADF Scan Glass Contamin. Set.

(1) ADF Scan Glass Contamin. Sensitivity

- To make each settings for contamination detection.
- When a dual scan document feeder is mounted, make the settings separately for the front side and the back side.

(a) Use

- To set the pre-detection level of stain on the ADF scan glass (or the CIS glass). In the back side pre-detection, stains of not only the CIS glass but also the back side glass cleaning roller are detected.
- Use when changing the setting for whether or not to detect the stain on the DF original glass when opening/closing DF as well as its detection level as the main power switch being ON, recovering from the sleep/low power mode, etc.

Not Set	No detection is made of stain on the glass.
Low	Stain on the glass will not be readily detected.
Normal	Normal detection level
High	Stain on the glass will be readily detected.

NOTE

- **Be aware that selecting "Not Set" and performing the pre-detection with [Service Mode] -> [Machine] -> [ADF Scan Glass Contamination] will display "NG."**
- **When "Not Set" is selected, the original glass cleaning operation after the job ends does not operate.**

(b) Default setting

- Normal

(c) Setting item

- Not Set
- Low
- Normal
- High

(2) ADF Scan Glass Contamin. Warn/Level

(a) Use

- To set the display mode for the warning screen during the detection of stain on the ADF scan glass (or the CIS glass).
- To change the display mode for the cleaning-prompting warning screen when the line prior detection function detects stain on the ADF scan glass (or the CIS glass).

0	Warning will not be displayed.
1	Warning will be displayed by the maintenance mark. (Malfunction code: D-1 /D-3)
2	Warning will be displayed on the message area on the basic screen.
3	Warning will be displayed on all screens.

NOTE

- **This setting is invalid when [ADF Scan Glass Contamin. Sensitivity] is set to "Not Set."**

(b) Default setting

- 1

(c) Setting item

- 0
- 1
- 2
- 3

(3) Feed Cleaning Settings

- Not used

5.16.14 Stamp

(1) Use

- To set the mounting status of the optional stamp unit SP-501.
- To use when setting up the stamp unit SP-501.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset

5.16.15 Network Fax Settings

(1) Use

- To set whether or not to use network fax function.
- To use network fax function (IP address fax, internet fax).
- Selection will be available when each network fax function is set to "ON" in [Administrator Settings] -> [Network Settings] -> [Network Fax Settings] -> [Network Fax Function Settings].

(2) Default setting

- OFF

(3) Setting item

IP Address Fax
- ON
- OFF

Internet Fax
- ON
- OFF

5.16.16 RX File Change Page Name

(1) Use

- To set whether to change the document file name to forward TX or take out a file from the Memory RX Box.

(2) Default setting

- Do Not Change

(3) Setting item

- Change
- Do Not Change

5.16.17 Multifeed Sensor Status

(1) Use

- To set the mounting status of the optional Double feed detection Kit UK-501.
- To use when setting up the Double feed detection Kit UK-501.

(2) Default setting

- UnSet

(3) Setting item

- Set
- UnSet

5.16.18 User Paper Settings

(1) Use

- To set and register individual user paper that includes a different basic weight, fusing temperature, 2nd image transfer fine adjustment value.
- User Paper Settings is also available from [Administrator Settings] -> [System Settings] -> [Expert Adjustment] -> [User Paper Settings].
- To register a paper type that is suitable for individual customer's intended use and use environment.
- The following shows user paper registration keys and corresponding paper types.

User Paper 1/2	Plain paper
User Paper 3	Thick 1
User Paper 4	Thick paper 1+
User Paper 5	Thick 2
User Paper 6	Thick 3

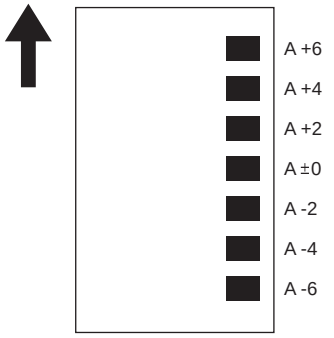
(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 2] -> [▶] -> [User Paper Settings].
3. Select the desired key from [User Paper 1] to [User Paper 6] to register user paper.
4. Select [Basic Weight] and enter a value with the [+] / [-] key.
5. Select [600dpi] or [1200dpi] and enter a fusing temperature with the [+] / [-] key.
   - The setting range is -20 °C to +10 °C. (1 step: 5 °C)
6. Select a target item of the [Secondary transfer adj.], and enter a 2nd image transfer fine adjustment value with the [+] / [-] key. (Only [1-Side]/[2-Side] can be selected for User Paper 5 and User Paper 6.)
   - The setting rage is -8 to +7. (1 step: 1 increment or decrement)
7. Load the manual bypass tray with paper.
   - Paper Size: A4S, B4S, A3S, 81/2×14S, 81/2×11S, 11×17S
8. Select [1Side] (only front side) or [Front side] (only back side) and press the Start key.
9. Check the image of the output test pattern.

- If the image is not acceptable, adjust the settings and output the test pattern again.

(a) Test Pattern in User Paper Settings

- The printable test pattern for user paper settings is provided to ease determining the most appropriate 2nd image transfer output value when customizing user paper.
- The test pattern outputs a pattern for Standard value A (2nd image transfer output control) according to the 2nd image transfer fine adjustment setting range. (Every two steps)
- Refer to the printed pattern, and select the 2nd image transfer fine adjustment setting.



A:	Standard voltage

5.16.19 Coverage Rate Screen

(1) Use

- To set whether or not to display a coverage rate on the sales counter screen and sales counter list.
- Coverage Counter instead of Coverage Rate is displayed when Switch No. 206 is set to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].

(2) Default setting

- Do Not Display

(3) Setting item

- Display
- Do Not Display

5.16.20 JAM Code Display Setting

(1) Use

- To set whether or not to add a jam code to a jam warning display on the control panel when a jam occurs.

(2) Default setting

- Do Not Display

(3) Setting item

- Do Not Display
- Display

5.16.21 Purge Setting

(1) Use

- When a finisher equipped with a horizontal transport unit is mounted, set whether to use the reverse roller to discharge paper remained in the machine when a paper jam occurs in the transport path downstream from the exit port (inside the finisher equipped with the horizontal transport unit).
- When “Yes” is selected, paper remained in the machine when a paper jam occurs will be discharged into the horizontal transport unit.

(2) Default setting

- Yes

(3) Setting item

- Yes
- No

5.16.22 Import Config. Data

(1) BootUp Screen

NOTE

In the following conditions, import of BootUp Screen data is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**

- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(a) Use

- To customize the BootUp Screen displayed upon machine start-up.
- Use this feature when changing the KonicaMinolta logo displayed on the control panel upon start-up to a client company logo or others for client's intended use of the machine.
- Register logo data in the machine's flash ROM via a USB memory device.
- The following are the logo data specifications that should be met.

Image format	PNG format
File extension	*. png
File name	BootupScreen.png
Image size	800 x 480 dots
Color	256 colors (Palette that the machine specifies is used.)

NOTE
- **When making the logo data, use the exclusive image making tool.**
- **If a USB memory is not connected or a nonconforming USB memory is connected, "USB NG" is displayed and logo data cannot be registered.**
- **If the file name of logo data does not conform to the above specifications, "File NG" message is displayed and logo data cannot be registered.**
- **Version information will be displayed as the version of BootUp Screen, when Version.txt is installed with the version information described in the Version.txt file and compressed with image data in one zip file. Usable character type is limited to ASCII (7-bit ASCII). Text strings of up to 21 characters can be used.**

(b) Procedure

1. Save logo data that conforms to the above specifications in the root directory of a USB memory device.
   NOTE
   - **Be sure to save data in the root directory as the machine cannot detect data saved in other directories.**
2. Connect the USB memory device to the machine USB port.
3. Touch [System 2] -> [▶] -> [Customize Screen] -> [BootUp Screen].
4. Touch [Set].
5. Check result "OK" is displayed and touch [END].
   NOTE
   - **If logo data is already registered, new logo data overwrites the existing logo data.**
   - **The color of logo data may look different between the machine control panel and some PC screens. After registering logo data, restart the machine and check the color of the logo data on the BootUp screen.**

* To delete registered data, touch [Delete] and check result "OK" is displayed.

(2) Machine Image

NOTE
In the following conditions, import of machine image data is prohibited.
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(a) Use

- To customize the exterior view of the machine displayed on the control panel.
- Use this function to change the exterior view of the machine displayed on the control panel to the exterior view of the customer business office according to the user's need.
- The exterior view data is registered in the SSD by way of a eMMC board.
- Check the version of the installed exterior view data. (When the USB memory is not connected)

(b) Procedure

1. Save the exterior view data in the root directory of the USB memory.
   NOTE
   - **Be careful that the MFP is unable to recognize data saved in any directories other than the root directory.**
2. Connect the USB memory to the USB port of the machine.
3. Touch [System 2] -> [▶] -> [Customize Screen] -> [Machine Image].
4. Touch [Set].
5. Check result "OK" is displayed.
6. Turn OFF and ON the main power switch.
   NOTE
   - **Any exterior view data that has previously been registered will be overwritten by subsequent new data as it is registered.**
   - **To delete registered data, touch [Delete] and make sure that "OK" appears.**

(3) Custom Auth. Setting

NOTE
Only when one of the following conditions is met, the authentication customize data can be imported.
- **A USB memory is inserted in the USB port.**

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] -> [Storage data backup] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] -> [FW Update] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [OFF].**

(a) Use

- To install the authentication customize data used to customize the authentication process.

(b) Procedure

1. Save the authentication customize data to the root directory of a USB memory.
   NOTE
   - **Be careful that the MFP is unable to recognize data saved in any directories other than the root directory.**
2. Connect the USB memory to the USB port of the machine.
3. Touch [System 2] -> [▶] -> [Import Config. Data] -> [Custom Auth. Setting].
4. Touch [Set].
5. Check result “OK” is displayed.
6. Turn OFF and ON the main power switch.
   NOTE
   - **The new data will overwrite any existing authentication customize data.**
   - **To delete registered data, touch [Delete] and make sure that "OK" appears.**

5.16.23 Install Data

NOTE
In the following conditions, installation of data is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(1) Use

- To install voice data, movie data, OCR dictionary data, or PDF/A font into HDD.
- To install panel sound data to FLASHROM inside the control panel unit.
- Selection of [OEM] makes customization of driver name, etc. possible by writing the OEM extended character string in the firmware package and downloading it.
- To use when the logical format of the hard disk is performed.

NOTE

- **The [Panel Sound Data] is displayed only when a sound IC chip has been installed.**
- **[Firmware Data] is not used.**

(2) Procedure

NOTE

- **To use voice guidance, the optional i-Option LK-104 v3 must be activated. The optional local interface kit EK-611 or EK-610 must be mounted.**
- **To use OCR function, the optional i-Option LK-105 v4 must be activated.**
- **To create PDF/A-compliant PDF files where PDF/A font is used, optional i-Option LK-102 v3 or i-Option LK-110 v2 must be enabled.**

1. Save data (*.tar) into the root directory of a USB memory device.
2. To install the voice guidance, check if [Administrator Settings] -> [Voice Guidance Settings] -> [Voice Guidance] is set to “Yes”.
3. Connect the USB memory device to the machine USB port.
4. Touch [System 2] -> [▶] -> [Install Data].
5. Touch [Movie Data], [Voice Data], [OCR Dictionary], [PDF/A Font], [Panel Sound Data], or [OEM]. You can select the above six types of data at a time and install them.
6. Touch [Set].
7. Press the Start key to install the data.
8. Check result “OK” is displayed and touch [END].
   NOTE
   - **If data is already installed, it is necessary to delete old data before installing new one.**

* To delete registered data, select the data to be deleted, and touch [Delete] -> [Fix]. Check result “OK” is displayed.

5.16.24 Local Interface Kit Setting

(1) Use

- To set whether to enable or disable the Bluetooth function.
- Use this setting upon set-up of the optional local interface kit EK-611.

(2) Default setting

- Unset

(3) Setting item

- Set

- Unset

5.16.25 CIS Image Adjustment

(1) Use

- To compensate colors so that the brightness, saturation, and hue of the back side image data (CIS image scanning quality) become consistent with those of the front side image data.
- It will be displayed only when dual scan document feeder is mounted.

Brightness	Increase in the positive (+) direction makes the data brighter (paler) and increase in the negative (-) direction makes the data darker (deeper).
Saturation	Increase in the positive (+) direction makes the data clearer and increase in the negative (-) direction makes the data more subdued.
Hue	Increase in the positive (+) direction processes and outputs the data in the way that corresponds to the clockwise rotation on the hue circle. Increase in the negative (-) direction processes and outputs the data in the way that corresponds to the counterclockwise rotation on the hue circle.

(2) Default setting

- 0

(3) Setting range

- -3 to +3 (step: 1)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [System 2] -> [▶]-> [CIS Image Adjustment].
3. Select [Brightness], [Saturation] or [Hue].
4. Use the [+] or [-] key to change the setting value.
5. Touch [OK].

5.16.26 Display Eco Index

(1) Use

- To set whether or not to display [Power Consumption] and [CO2 Emission] in Menu -> [Counter] -> [Eco Info].
- The amount of power consumption displayed on MFP is an estimated value calculated from the average amount of power consumption and the operating hours of MFP, so that is not an exact power consumption value. Therefore, explain this to users before selecting the option of displaying these items.
- To set an emission coefficient used to calculate the amount of CO2 emission.
- As the CO2 emission coefficient is different depending on the electric power provider with whom the user contracts and the user's MFP use environment, the coefficient needs to be set individually.

(2) Default setting

- Power Savings Display Level: OFF
- Output Coefficient Settings: 0.4166

(3) Procedure

1. Explain to users that [Power Consumption] and [CO2 Emission] displayed on MFP are estimated values, and obtain their consent.
2. Call the Service Mode to the screen.
3. Touch [System 2] -> [▶] -> [Display Eco Index].
4. Select [ON] in [Power Savings Display Level].
5. Depending on the user's MFP use environment, configure [Output Coefficient Settings] using the 10-key pad.
6. Touch [END].

5.16.27 Internal Error. Auto Cancel

(1) Use

- To set whether or not to automatically reset trouble when a trouble code classified as rank B or C occurs.

(2) Default setting

- Rank B: No
- Rank C: Yes

(3) Behavior

- When this setting is set to "Yes," MFP operates as follows:

1. When specified trouble occurs, the trouble warning screen displays for about 10 seconds the message that the trouble is automatically reset. Then automatic trouble reset is performed.
2. If the trouble reset is successful, MFP can be used.
   - If the trouble reset fails, retry is performed. (The number of retries is up to 2 times.)

5.16.28 Acquiring Settings

(1) Use

- To count frequency of use by each function and collect machine configuration information.

- This setting allows us to understand the trend in the market and the usage of MFP by collecting and counting frequency of use by each function.
- The collected information can be obtained only via CSRC and cannot be displayed on the control panel or printed.
- To send the collected information, [Administrator Settings] -> [System Settings] -> [List/Counter] -> [Fax Activity Summary Information] must be set to “Allow.”

(2) Default setting

- ON

(3) Setting item

- ON
- OFF

5.16.29 Driver Install

NOTE

Only when one of the following conditions is met, the driver can be installed/uninstalled.

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] -> [Storage data backup] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] -> [FW Update] is set to [Allow].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [OFF].**

(1) Use

- To install/uninstall the loadable device driver.
- Used when the authentication device that needs the loadable device driver (include AU-102 and AU-201S) is attached.

(2) Procedure (Install)

1. Prepare a USB memory where only the loadable device driver is stored in the ROOT directory. (Only one loadable device driver must be stored in the USB memory, and please do not save any other data in the USB memory.)
2. Connect the USB memory to the USB port of the MFP.
3. Call the Service Mode to the screen.
4. Touch [System 2] -> [▶] -> [Driver Install] -> [Install].
5. Touch [Loadable Driver] and touch [Start] to install the data.
6. Check that data is normally installed from the message that appears on the control panel.
7. Turn OFF the main power switch.
8. Remove the USB memory.

(3) Procedure (Uninstall)

1. Call the Service Mode to the screen.
2. Touch [System 2] -> [▶] -> [Driver Install] -> [Uninstall].
3. Select a driver to be uninstalled.
4. Touch [Start] to uninstall the data.
5. Check that data is normally uninstalled from the message that appears on the control panel.
6. Turn OFF and ON the main power switch.

5.16.30 Application Change Setting

(1) Use

- To set whether to allow a change of the settings for the specified application start.

(2) Default setting

- Permit

(3) Setting item

- Permit
- Prohibit
- If “Permit” is set, [Specified Application Start Setting] of the administrator settings can be configured.

5.16.31 Custom Pattern

NOTE

In the following conditions, installation of the custom pattern is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] [Enhanced Security Mode] is set to [ON].**

(1) Use

- To register or delete custom patterns.
- To customize the panel display by allowing MFP to read the setting file (CPD file) that defines whether or not to display the various setting keys that appear on the control panel.

- When making the setting file (CPD file), use the "Panel Customization Tool."

(2) Panel customization tool

(a) System requirement

PC	PC-AT compatible machine
CPU	Conforms to the specifications of the operating system
Memory (RAM)	Conforms to the specifications of the operating system
HDD	100 MB or more free space is required
Display	1280 x 800 pixels or more, 24bit full color
OS	Windows 7 Professional (SP1 or later)* * 32-bit (x86) and 64-bit (x64) editions of Windows are supported.

(b) Operation procedures

When creating a new display setting file (CPD file):

1. Start up the Panel Customization Tool.
2. Set a name for your customization in [Name]. (1 to 24 characters consisting of one-byte alphanumerics and symbols. Comma cannot be used.)
3. Select a model in [Model].
4. Select a preset pattern or marketing area in [Preset]. (The number of functions displayed in the Function list below decreases in the order of Full > Standard > Basic.)
5. Select whether items should be displayed (ticked) or hidden (unticked) in [Function]. (Make this setting both in the Copy tab and the Scan/Fax tab.)
6. Save the setting file (CPD file) with one-byte alphanumerics and symbols in [Save as…].

When editing an existing setting file (CPD file):

1. Start up the Panel Customization Tool.
2. Select a model in [Model].
3. Select an existing setting file (CPD file) in [File] -> [Open].
4. Select whether items should be displayed (ticked) or hidden (unticked) in [Function].
5. Save the setting file (CPD file) with one-byte alphanumerics and symbols in [Save as…].

(3) Procedure

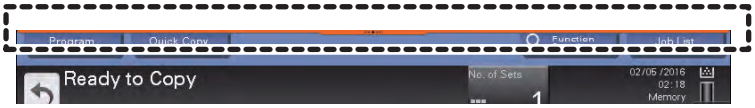
1. Copy the setting file (CPD file) to the root directory of a USB memory.
2. Connect the USB memory to the USB port of the MFP.
3. Call the Service Mode to the screen.
4. Touch [System 2] -> [▶] -> [▶] -> [Custom Pattern].
5. Select [Custom Pattern 1], [Custom Pattern 2] or [Custom Pattern 3].
6. Touch [Import] and press Start Key to import the data.
7. Select the registered custom pattern in [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Custom Function Pattern Selection].

*To delete registered data, make sure that the custom pattern is not selected in [Administrator Settings] -> [System Settings] -> [Custom Display Settings] -> [Custom Function Pattern Selection], and touch [Delete] -> [Fix] and check that the result "OK" appears.

5.16.32 Maintenance Mode

NOTE

- **To enable the maintenance mode, set [Maintenance Mode Access] in the administrator settings to [Allow]. [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access]**
- The authentication procedure to log on to Administrator Settings or Service Mode is canceled during setup or setup change to thereby achieve a shorter operating time.
- The following functions are enabled in the Maintenance Mode.
  - A bar appears in the upper row of the control panel.



- The Administrator password is skipped (there is no need to enter the password)
- The CE password is skipped. (there is no need to enter the CE password)
- Import/export setting can be displayed even without the setting made for switch number "72" of the software SW setting.

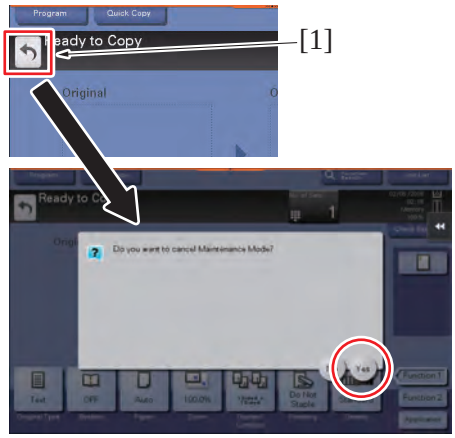
(1) Setting items

Maintenance Mode	Set whether to enable or disable the Maintenance Mode. The default setting is "Disabled".
Display language	Select the language to be displayed in the Maintenance Mode. When [Not Set] is selected, the displayed language is that valid before the machine enter the Maintenance Mode. The default setting is "Not Set".
Clearing job history upon exit	Set whether to erase the past job history and the job history during the Maintenance Mode.

	The default setting is "Set".

(2) Exiting the Maintenance Mode

- To exit the Maintenance Mode, select [Service Mode] -> [System 2] -> [Maintenance Mode] and touch [Invalid], or touch the arrow key on the control panel and select [Yes].



[1]	Arrow key	-	-

5.16.33 Smart Fusing Control

(1) Use

- Specifies whether or not to apply low power fusing control.
- For details of the low power fusing control, see "O.15.3.12 Smart Fusing Control".

[Permit]	Applies low power fusing control by lowering the target temperature as much as possible in response to the single sheet data. Cuts down electric power consumption (TEC value).
[Prohibit]	Controls the adjustment of the specified fusing temperature.

(2) Default setting

- Permit

(3) Setting item

- Permit
- Prohibit

5.16.34 Auth. Function Enable

(1) Activation

(a) Use

- Use to activate the advanced function after certification.

(b) Procedure(Entering function codes manually)

<Entering function codes manually>

1. Call the Service Mode to the screen.
2. Touch [System 2] -> [Auth. Function Enable] -> [Activation].
3. Confirm that [Function Code] is selected, and the press the [Function Code].
4. Enter the function code and press [OK].
5. Confirm the instructions on-screen and press [Confirm].

(c) Procedure(Importing function codes via a USB device)

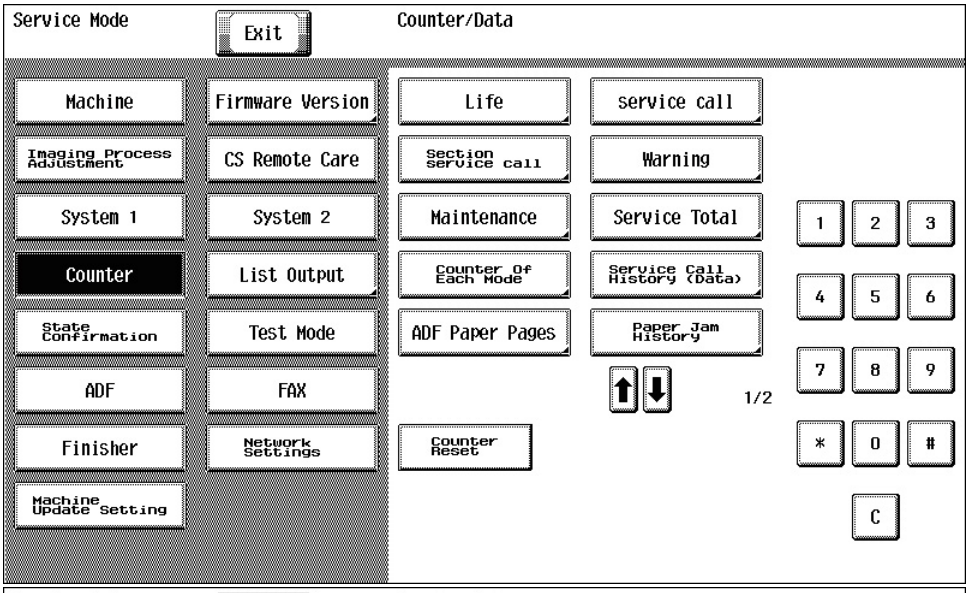
1. Connect the USB device that contains the functions codes to be activated.
2. Call the Service Mode to the screen.
3. Touch [System 2] -> [Auth. Function Enable] -> [Activation].
4. Confirm that [USB] is selected.
   NOTE
   - **[USB] is only displayed when a USB device that contains functions codes to be activated is connected.**
5. Confirm the instructions on-screen and press [Confirm].

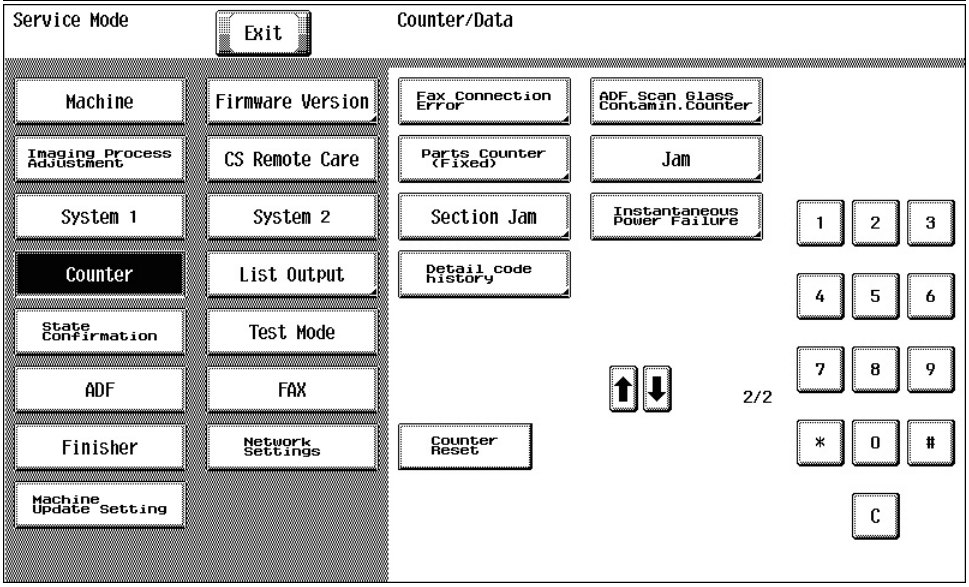
(2) List

(a) Use

- To display a list of currently activated functions.

5.17 Counter





- The counter displays the counts of various counters to allow the technical representative to check or set as necessary.

5.17.1 Common procedure

1. Call the Service Mode to the screen.
2. Touch [Counter] to show the counter menu.
3. Select the specific counter to be displayed.
4. To clear the counts of two or more counters within a group or across different groups at once, touch [Counter Reset], select the specific counters to be cleared, and touch [END]. Two or more counters can be selected. (However, the [Service Call], [Service Total], [Detail code history], and [JAM] counters cannot be selected.)

5.17.2 Life

(1) Use

- To check the number of hours or times each of the different maintenance parts has been used.
- To clear the count of each counter.
- To perform New Release in fusing unit and transfer belt unit.
- To check how many times maintenance parts have been used.
- When each of the maintenance parts is replaced.

(2) Procedure

(a) Counter clear

- To clear the count of a counter, select the specific part and touch Clear.
- It is not possible to clear the count of the counters for the fusing unit, transfer belt unit, imaging unit and TCR new article detection.
- For the count method of each counter, see the table “Count method of each life counter.”

<Count method of each life counter>

Counter item	Counting method
Fusing Unit Rotation Time	• Counts how many hours the fusing unit has turned.

Counter item	Counting method
Fusing Unit Page Count	• Counts how many sheets have been ejected. The counter increases by 1 per every 216 mm in the sub scan direction and shows the total count. For paper length less than 216 mm in the sub scan direction, the counter uses 216 mm as the paper length.
Transfer Belt Unit Rotation Time	• Counts how many hours the transfer belt unit has turned.
Transfer Belt Unit Page Count	• Counts how many sheets have been ejected. The counter increases by 1 per every 216 mm in the sub scan direction and shows the total count. For paper length less than 216 mm in the sub scan direction, the counter uses 216 mm as the paper length.
Transfer Roller Unit	• Counts how many sheets have been ejected. The counter increases by 1 per every 216 mm in the sub scan direction and shows the total count. For paper length less than 216 mm in the sub scan direction, the counter uses 216 mm as the paper length.
Toner Filter	• Counts how many sheets have been printed for printing. The counter increases by 1 per every 216 mm in the sub scan direction and shows the total count. For paper length less than 216 mm in the sub scan direction, the counter uses 216 mm as the paper length.
Ozone Filter	• Counts how many hours drum unit has turned.
1st.	• Number of sheets of paper fed from tray 1
2nd.	• Number of sheets of paper fed from tray 2
3rd.	• Number of sheets of paper fed from tray 3
4th.	• Number of sheets of paper fed from tray 4
Manual Tray	• Number of sheets of paper fed from the bypass
Imaging Unit (C) Rotation Time	• Not used
Imaging Unit (M) Rotation Time	
Imaging Unit (Y) Rotation Time	
Drum Unit (K) Rotation Time	• Counts how many hours Drum Unit has turned.
Imaging Unit (C) Page Count	• Not used
Imaging Unit (M) Page Count	
Imaging Unit (Y) Page Count	
Developing Unit (K) Print Count	• Counts how many sheets have been printed for printing. The counter increases by 1 per every 216 mm in the sub scan direction and shows the total count. For paper length less than 216 mm in the sub scan direction, the counter uses 216 mm as the paper length.
LCT Parts	• Number of sheets of paper fed from the LCT (LU-303 and LU-205)
ADF Feed	• Number of sheets of original fed through the take-up section of the DF
ADF Reverse	• Number of sheets of original fed through the turnover unit of the DF
Scan Count (Original Glass)	• Count the number of reads via the original glass.
TCR new article detection (C)	• Not used.
TCR new article detection (M)	
TCR new article detection (Y)	
TCR new article detection (K)	• Count the number of the replacement of the toner cartridge.

(3) New Release

- After replacing a fusing unit or transfer belt unit, perform New Release to clear its life counter.

1. Touch [Counter] -> [Life] -> [New Release].
2. Open the lower front door.
3. Select a unit where New Release is made.
4. Press the Start key and perform New Release.

(4) New Release Disable mode

- To enable a unit that is used temporarily for troubleshooting to be used again as a new unit in another machine, the New Release Disable mode is provided.
- Applicable units are the following units that have the new unit detection feature.
  Drum unit, Developing unit
- See the "I.7.3.9.(4) Notes when using the New Release Disable mode" for the method of enabling the New Release Disable mode.

5.17.3 Service Call

(1) Use

- To count and display how many times trouble has been detected on a trouble type basis.
- Use this feature to check how many times trouble has occurred.

NOTE

- **In the service call counter list, "Reboot" shows how many times abort code (C-FXXX) has occurred.**

5.17.4 Section Service Call

(1) Use

- To count and display how many times trouble has been detected during a certain period, i.e. an interval between service visits, on a trouble type basis.
- Use this feature to check how many times trouble has occurred in a certain period, i.e. an interval between service visits.

- By clearing the counter at the time of visit to your customer, i.e. service visit, you can check how many times trouble has occurred since the previous visit.
  To reset the counter, use [Counter Reset].

NOTE

- **In the zone service call list, "Reboot" shows how many times abort code (C-FXXX) has occurred.**

5.17.5 Warning

(1) Use

- To count and display how many times malfunction code has been detected on a malfunction code type basis.
- To clear of count value.
- To check the number of warning conditions detected according to the warming type.

(2) Procedure

- To clear the count of a counter, select the specific part and touch Clear.
- If a counter is cleared mistakenly, touch Interrupt which will undo the clearing operation.
- When a warning condition occurs, an oil mark appears at the upper right area of the basic screen.
  Touching the oil mark will display the malfunction code screen.

5.17.6 Maintenance

(1) Use

- To set a count value for maintenance of any given part.
- When any given part is replaced.

(2) Procedure

Maint.-Set

- Enter the maintenance counter value from the 10-key pad.

Maint.-Count

- The number of sheets that have been ejected is counted up. (1 sided: 1 count, 2 sided: 2 count)
- Touch Clear will clear the count.

5.17.7 Service Total

(1) Total

(a) Use

- To display the count value for the service total counter.
- Use to check the total No. of printed pages including the ones printed by the Service Mode.

(b) Procedure

- Service Total: No. of pages printed by user mode and Service Mode.
- Service Total (Duplex): No. of pages printed by user mode and Service Mode in duplex.

(2) Paper Size 1/Paper Size 2

(a) Use

- To display the count value for service total counter of each paper size.
- To check the total number of printed pages including the one at Service Mode according to each paper size.
- The count of Paper Size 1 and Paper Size 2 that contain the following paper sizes is provided respectively.

Paper Size 1	SRA3, A3, A4, A4S, A5, A6, B4, B5, B5S, B6, Post., 12 x 18, 11 x 17, 8 1/2 x 14, 8 1/2 x 11, 8 1/2 x 11S, 7 1/4 x 10 1/2, 5 1/2 x 8 1/2, 4 x 6, Foolscap
Paper Size 2	8K, 16K, Long Length, Others

5.17.8 Counter of Each Mode

(1) Use

- To display the printed pages in the following specified modes; copy, printer, scanner, and fax. It also displays the count value of using the specified mode.

Copy/Print/Scanner counter	Displays individual counts in copy, printer, and scan mode.
Fax-related counter	Displays individual counts in fax mode.
Counter by finishing option	Displays individual counts on a finishing option basis.
Stabilization counter	Displays individual counts on a basis of the factors that cause image stabilization. The counter helps to understand what causes image stabilization and how to improve image stabilization control.
PJ counter	Jobs that the machine has processed are divided according to the number of pages per job: 1P/J, 2P/J, ... 10P/J, or 11P/J and more. The total number of jobs in each group is counted and displayed separately based on whether job is processed. The counter is used to understand how the machine has been used in the field.

5.17.9 Service Call History (Data)

(1) Use

- To display the trouble history in chronological order.

5.17.10 ADF Paper Pages

(1) Use

- To display the No. of sheets and mixed originals fed to the ADF.

5.17.11 Paper Jam History

(1) Use

- To display the jam history in chronological order.

NOTE

- **[Code] displayed on the screen of JAM history indicates JAM code. For details of JAM code, see "K.1.1 List of the JAM code."**

5.17.12 Fax Connection Error

(1) Use

- To display the No. of fax transmission errors occurred.

5.17.13 ADF Scan Glass Contamin. Counter

(1) Use

- To display the average number of detected stain on the ADF scan glass at the pre-detection.
- Detection of CIS glass (back side) is available only when dual scan document feeder is mounted.

Pre-detection Small Size (Front Side)	Small-sized detected stain divided by the number of times pre-detection is practiced (average number of detected lines) will be displayed.
Pre-detection small size (Back Side)	Small-sized detected stain divided by the number of times pre-detection is practiced (average number of detected lines) will be displayed.
Cleaning Brush Rotation Count (Front Side)	Total rotation count is displayed by counting 1 per one rotation of cleaning brush.
Cleaning brush rotation count (Back Side)	Total rotation count is displayed by counting 1 per one rotation of cleaning brush.

(2) Procedure

- To clear each counter value, select the items to be cleared, and touch Clear.

5.17.14 Parts Counter (Fixed)

- It will be displayed only when the optional finisher is mounted.

(1) Use

- When the optional finisher is mounted, the parts counter screen displays the relevant parts and their counts.
- When the relevant parts are replaced, their counters need to be reset to update the service history.
- Service history can be maintained from this menu.

NOTE

- **See the table below for the relevant parts and count method.**

(2) Procedure

1. Touch in the order of [Service Mode] -> [Counter] -> [↑] -> [Parts Counter (Fixed)].
2. Check the parts counter or display the relevant part of which counter will be reset.
3. Check the part count.
   To reset the count value, touch the key of the part where the counter is reset. Touch the Clear key.

(3) Fixed parts to be counted

No.	CSRC parameter	Parts name	Parts number	Limit value	Count condition	FS-536/ FS-536SD	FS-537/ FS-537SD
001	22	FNS 2-Staple Stapler	9J085601	300,000	1 count for each sheet ejection in both	●	-
			A07P7901	500,000	1 staple and 2 staple mode.	-	●
002	23	FNS Center Staple & Fold Stapler	A10D9293	200,000	1 count for each sheet ejection in both 1 staple and 2 staple mode.	●	●
003	3A	Stacker Accessory Plate Movement Monitor	56AA8002	3,000,000	1 count for each sheet ejection in front 1 staple, rear 1 staple, 2 staples in sort staple mode as well as shift sort m	-	●

No.	CSRC parameter	Parts name		Parts number	Limit value	Count condition	FS-536/ FS-536SD	FS-537/ FS-537SD
004	26	FNS 1st Mid Fold Knife Motor		A3ERPP4S	2,000,000	1 count for each sheet ejection in half-fold, saddle stitch, and tri-fold mode	●	●
005	56	FNS 2nd Mid Fold Knife Motor		A3ERPP5R	2,000,000	1 count for each sheet ejection in tri-fold mode	●	●
006	34	FNS Output roller/A		122H4825	300,000	1 count for each sheet ejection to the FNS main tray. 1 count for each sheet ejection in staple mode	-	●
007	57	FNS FD Alignment Roller		A2YUPPG0/4	1,000,000	-	-	-
008	29	PI sheet paper feed clutch (Upper)		13QN8201	1,000,000	1 count for each sheet fed from the PI upper tray	-	●
009	2A	PI sending Roller Pair/A (Upper)		50BA-574	200,000		-	●
010	2B	PI sending Roller Pair/B (Upper)		50BA-575	100,000		-	●
011	2C	PI Reversal Rubber Pair (Upper)		13QN-443	100,000		-	●
012	2D	PI Torque Limiter (Upper)		13QN4073	600,000		-	●
013	3C	PI Tray Up/Down Motor (Up)		12GQ8002	1,000,000	1 count for each job where paper is fed from the PI upper tray	-	●
014	2E	PI sheet paper feed clutch (Lower)		13QN8201	1,000,000	1 count for each sheet fed from the PI lower tray	-	●
015	2F	PI sending Roller Pair/A (Lower)		50BA-574	200,000		-	●
016	30	PI sending Roller Pair/B (Lower)		50BA-575	100,000		-	●
017	31	PI Reversal Rubber Pair (Lower)		13QN-443	100,000		-	●
018	32	PI Torque Limiter (Lower)		13QN4073	600,000	1 count for each sheet fed from the PI lower tray	-	●
019	3D	PI Tray Up/Down Motor (Down)		12GQ8002	1,000,000	1 count for each job where paper is fed from the PI lower tray	-	●
020	33	PI Regist		13QN8201	1,000,000	1 count each time a sheet is ejected from PI.	-	●
021	3B	Punch Motor		A4JUM101	1,000,000	Number of sheets ejected in punch mode	●	●
022	37	PK Counter	2-Holes	A3EWPP36	1,000,000	Number of punch kit punching	●	-
				A4JUR7040			-	●
			2-Holes/3-Holes	A3EWPP37			●	-
				A4JUR7050			-	●
			2-Holes/4-Holes	A3EWPP39			●	-
				A4JUR7060			-	●
			SWE4 holes	A3EWPP38			●	-
				A4JUR7070			-	●
023	38	Punch scrap transportation motor pair		12GQ-417	1,000,000	-	-	-
024	39	Punch clutch		13NKK001	1,000,000	-	-	-

5.17.15 Jam

(1) Use

- To count and display how many times jam has been detected on a jam location basis.

5.17.16 Section JAM

- To count and display how many times jam has been detected in a certain period, i.e. an interval between service visits, on a jam location basis.
- Use this feature to check how many times jam has occurred in a certain period, i.e. an interval between service visits.
- By clearing the jam counter at the time of visit to your customer site, i.e. service visit, you can check how many times jam has occurred since the previous visit.

To reset the counter, use [Counter Reset].

5.17.17 Instantaneous Power Failure

(1) Use

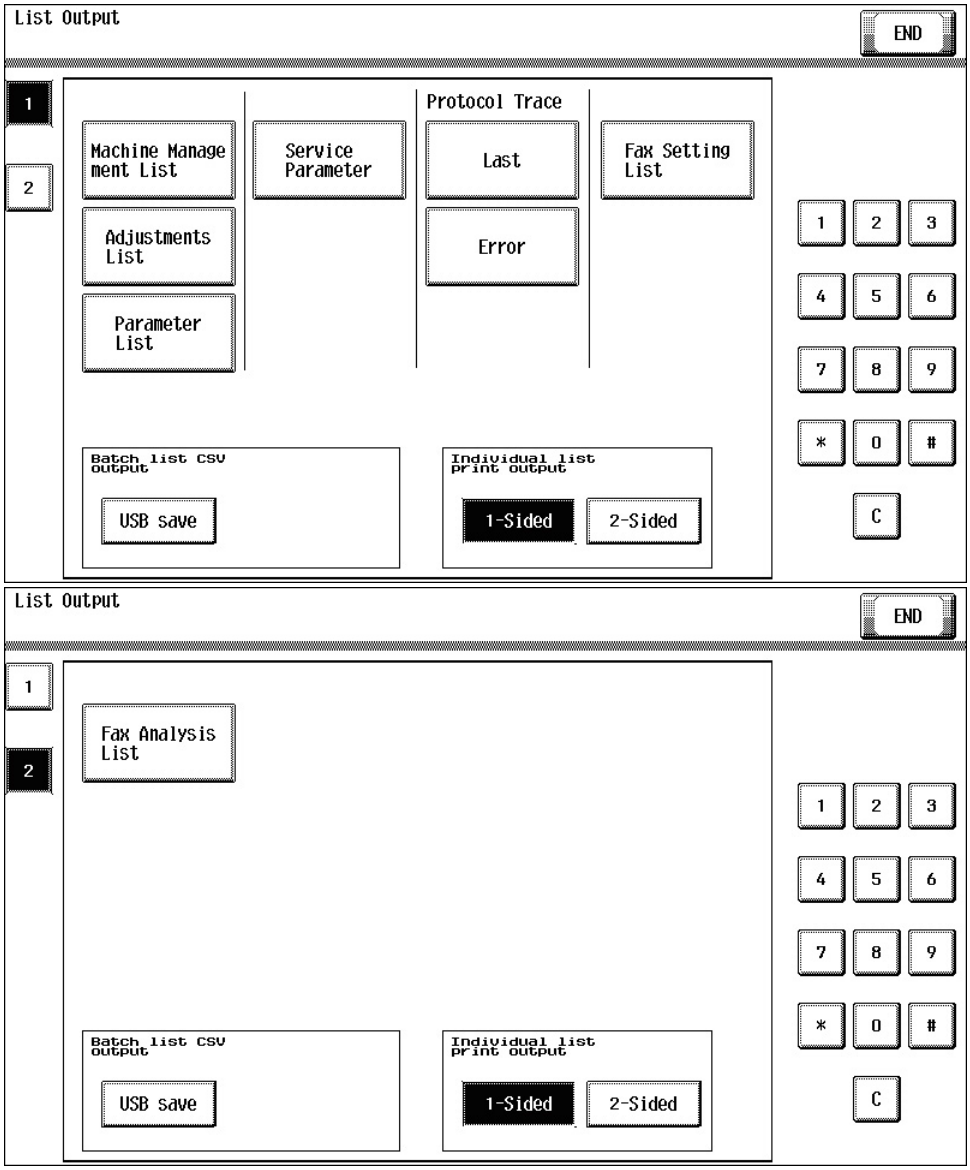
- To display the latest 10 power shutdown events during operation of this machine in time axis.
- To reset the counter, use [Counter Reset].

5.17.18 Detail code history

(1) Use

- To display up to 250 detailed codes of the trouble code FA14 (thread soft error) and E301 by “Time series order”, “Monthly occurrence” or “Detailed Code Differentiator”.

5.18 List Output



5.18.1 Batch list CSV output

NOTE

In the following conditions, export of batch list data is prohibited.

- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(1) Use

- To save various lists data into a USB memory device all together with the CSV format.
- Compared to output to paper, outputting various lists data to the USB memory device can save time, paper, and toner. With the output data, analyzing the machine statistically becomes easier.
- Lists data to be output are as follows:

Target list	Data symbol
Machine Management List	S1
Adjustments List	S2
Parameter List	S3
Service Parameter	S4
Protocol Trace List	S5
Fax Setting List	S6
Management List	A1
Paper Size/Type Counter	A2
Network Settings List	A3
Configuration Page	U1
PCL Font List	U2
PS Font List	U3
Meter Count	C1

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [List Output].
3. Insert the USB memory device to the USB port (for user).
4. Touch [USB save] displayed in the Batch List CSV Output.
5. Press the Start key.
   Then, List data are transferred to the USB memory device.
6. Confirm that “OK” is displayed as the result of data saving.

(a) File names of lists data

- Each list data has its file name in accordance with the following file name rule.
  [2-digit data symbol that corresponds to each list (see the above table)] + [_(underscore)] + [13-digit serial number] + [6-digit date (year, month, and day)] + [2-digit hour] + [2-digit minute].csv

5.18.2 Machine Management List

(1) Use

- To produce an output of a list of setting values, adjustment values, total counter values, and others.
- At the end of setup.
- At occurrence of a malfunction.
- To produce an output of a list of Software Switch Setting.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

NOTICE

- When performing list output, a detail code history list will be output.
- This [Detail code] is set to analyse the cause of the C-FA14 error or the C-E301 error.
- The refer, to send inquiries to KM, also send the “detail code history list”.

5.18.3 Adjustments List

(1) Use

- To output the adjustment list for machine adjustment, process adjustment, etc. in Service Mode.
- At the end of setup.
- At occurrence of a malfunction.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.4 Parameter List

(1) Use

- Output a nonvolatile parameter list.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.5 Service Parameter

(1) Use

- Output a FAX Service Mode set value list.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.6 Protocol Trace

(1) Use

- Protocol Trace List (Last): The facsimile protocol of the communication which was executed previously is output.
- Protocol Trace List (Error): Output the facsimile procedure for the last error communication.

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.7 Fax Setting List

(1) Use

- Output a FAX user set value list. (Items vary depending on models.)

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.18.8 Fax Analysis List

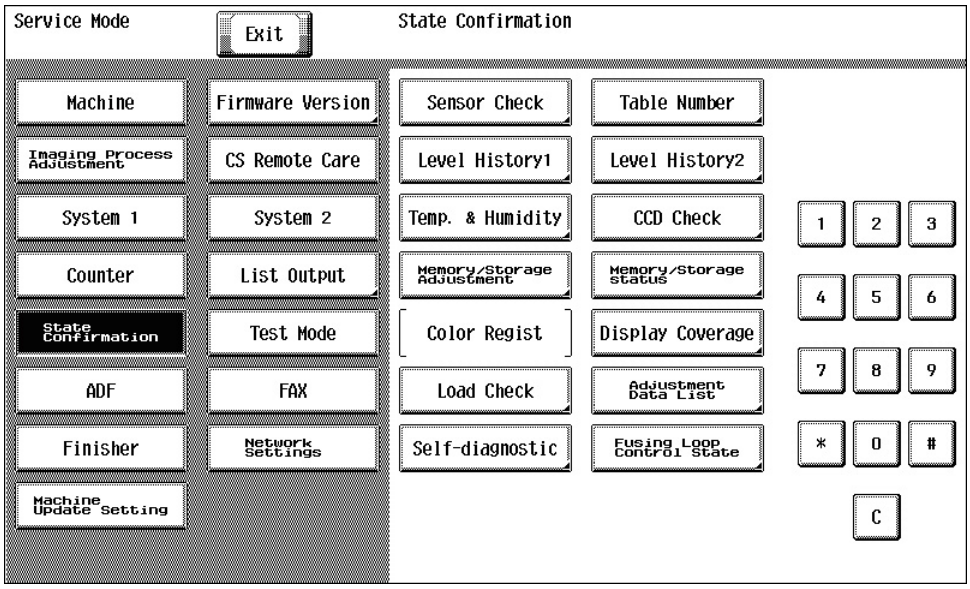
(1) Use

- Following list is output in the Fax Analysis List.
  - Parameter List
  - Machine Management List
  - Protocol Trace List (Error)
  - Fax Setting List
  - Communication Management List
  - Service Parameter List

(2) Procedure

- Load the A4S/A4 or 8 1/2 x 11S/8 1/2 x 11 plain paper to a paper source.
- Press the Start key, which will let the machine produce the list.
- The time-of-day and date will also be printed.

5.19 State Confirmation



5.19.1 Sensor Check

(1) Use

- To display the states of the input ports of sensors and switches when the machine remains stationary.
- Used for troubleshooting when a malfunction or a misfeed occurs.

(2) Procedure

- The operation of each of the switches and sensors can be checked on a real-time basis.
- It can be checked as long as the 5-V power line remains intact even when a door is open.

(a) Electrical components check procedure through input data check

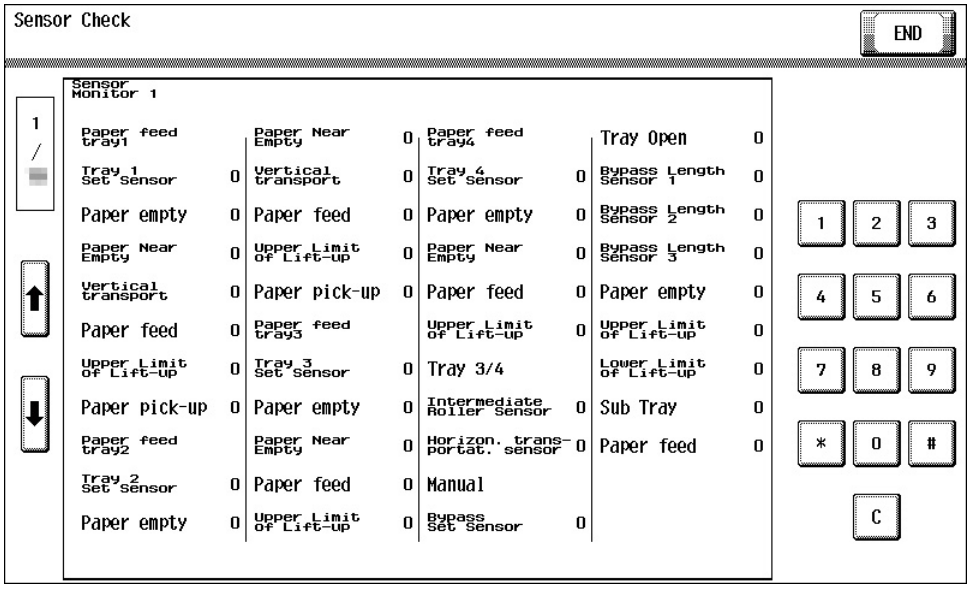
- When a paper misfeed occurs in the paper feed section of the machine, the tray 2 paper feed sensor is considered to be responsible for it.

1. Remove the sheet of paper misfed.
2. From the sensor check list that follows, check the panel display of the tray 2 paper feed sensor.
   - For the tray 2 paper feed sensor, you check the data of "Paper feed" of "Tray 2."
3. Call the Service Mode to the screen.
4. Select [State Confirmation] -> [Sensor Check] and then select the screen that contains “Paper feed” under “Tray 2.”
   - For "Paper feed" under "Tray 2," display the “Sensor monitor 1” screen.
5. Check that the data for “Paper feed” under “Tray 2” is “0” (sensor blocked).
6. Move the actuator to unblock the tray 2 paper feed sensor.
7. Check that the data for “Paper feed” under “Tray 2” changes from “0” to “1” on the screen.
8. If the input data is “0,” change the sensor.

(3) Sensor check screens

- These are only typical screens which may be different from what are shown on each individual machine.

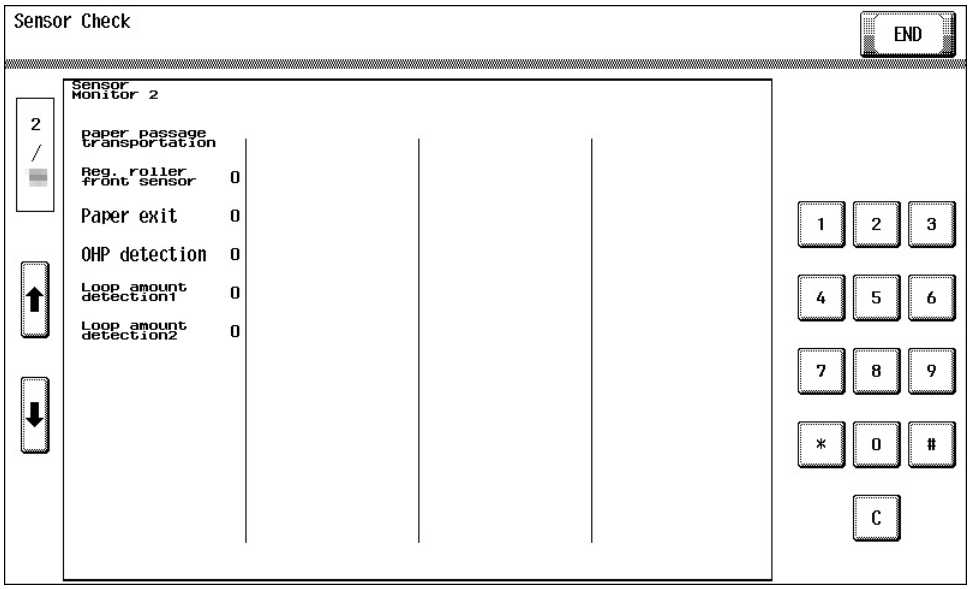
(a) Sensor monitor 1 (Main body)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Paper feed tray 1			
PS1	Tray 1 Set Sensor	Tray 1 set sensor	In position	Out of position
PS2	Paper empty	Tray 1 paper empty sensor	Paper not present	Paper present
PS3	Paper Near Empty	Tray 1 near empty sensor	Near empty	Except for near empty
PS4	Vertical transport	Tray 1 vertical transport sensor	Paper present	Paper not present
PS5	Paper feed	Tray 1 paper feed sensor	Paper present	Paper not present
PS6	Upper Limit of Lift-up	Tray 1 upper limit sensor	At raised position	Not at raised position
-	Paper pick-up	-	-	-
	Paper feed tray 2			
PS9	Tray 2 Set Sensor	Tray 2 set sensor	In position	Out of position
PS10	Paper empty	Tray 2 paper empty sensor	Paper not present	Paper present
PS11	Paper Near Empty	Tray 2 near empty sensor	Near empty	Except for near empty
PS12	Vertical transport	Tray 2 vertical transport sensor	Paper present	Paper not present
PS13	Paper feed	Tray 2 paper feed sensor	Paper present	Paper not present

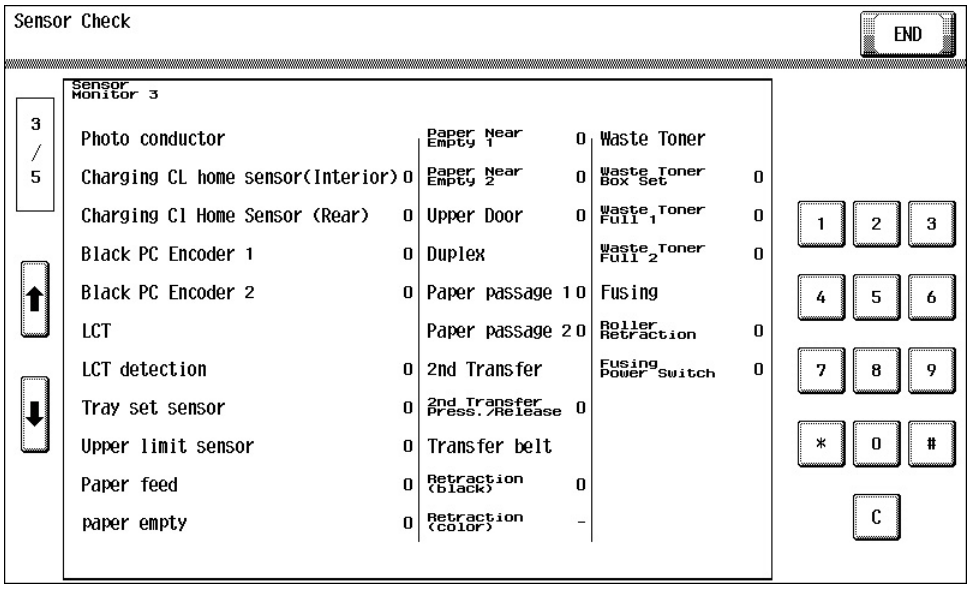
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS14	Upper Limit of Lift-up	Tray 2 upper limit sensor	At raised position	Not at raised position
-	Paper pick-up	-	-	-
	Paper feed tray 3			
-	Tray 3 Set Sensor	-	In position	Out of position
PS19	Paper empty	Tray 3 paper empty sensor	Paper not present	Paper present
PS20	Paper Near Empty	Tray 3 near empty sensor	Near empty	Except for near empty
PS21	Paper feed	Tray 3 paper feed sensor	Paper present	Paper not present
PS22	Upper Limit of Lift-up	Tray 3 upper limit sensor	At raised position	Not at raised position
	Paper feed tray 4			
-	Tray 4 Set Sensor	-	In position	Out of position
PS24	Paper empty	Tray 4 paper empty sensor	Paper not present	Paper present
PS25	Paper Near Empty	Tray 4 near empty sensor	Near empty	Except for near empty
PS26	Paper feed	Tray 4 paper feed sensor	Paper present	Paper not present
PS27	Upper Limit of Lift-up	Tray 4 upper limit sensor	At raised position	Not at raised position
	Tray 3/4			
PS28	Intermediate Roller Sensor	LCC vertical transport sensor	Paper present	Paper not present
PS29	Horizon. transportat. Sensor	Horizontal transport sensor	Paper present	Paper not present
	Manual			
PS30	Bypass Set Sensor	Bypass set sensor	In position	Out of position
PS60	Tray Open	Bypass open sensor	Open	Close
PS31	Bypass Length Sensor 1	Bypass FD size sensor/1	ON	OFF
PS32	Bypass Length Sensor 2	Bypass FD size sensor/2	ON	OFF
PS33	Bypass Length Sensor 3	Bypass FD size sensor/3	ON	OFF
PS34	Paper empty	Bypass empty sensor	Paper not present	Paper present
PS35	Upper Limit of Lift-up	Bypass upper limit sensor	At raised position	Not at raised position
PS36	Lower Limit of Lift-up	Bypass lower limit sensor	At lower limit position	Not at lower limit position
PS37	Sub Tray	Bypass sub tray set sensor	Close	Open
PS45	Paper feed	Bypass paper feed sensor	Paper present	Paper not present

(b) Sensor monitor 2 (Main body)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Paper passage transportation			
PS38	Reg. roller front sensor	Registration sensor	Paper present	Paper not present
PS39	Paper exit	Paper exit sensor	Paper present	Paper not present
PS40	OHP detection	OHP sensor	Not OHP	OHP
PS41	Loop amount detection 1	Fusing loop sensor/Fr	Loop present	Loop not present
PS42	Loop amount detection 2	Fusing loop sensor/Rr	Loop present	Loop not present

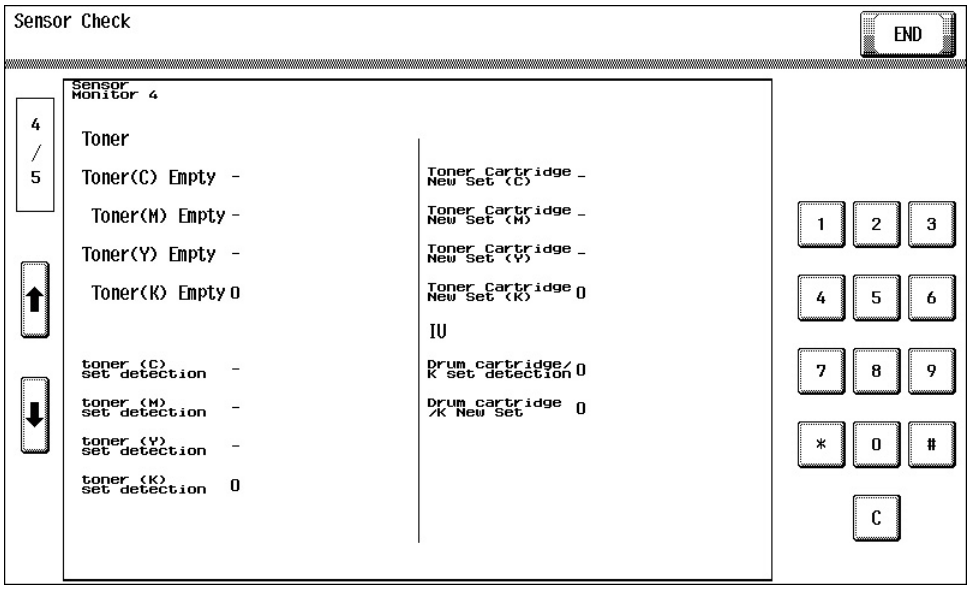
(c) Sensor monitor 3 (Main body)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Photo conductor			
PS43	Charging CL Home Sensor (Interior)	Charging cleaner home sensor	At home	Not at home
PS44	Charging CL home sensor (Rear)	Charging cleaner return sensor	At home	Not at home
-	Black PC Encoder 1	-	-	-
-	Black PC Encoder 2	-	-	-
	LCT			
-	LCT detection	-	-	-
PS1	Tray set sensor	LU-205: LU set sensor/Rr LU-303: LU set sensor	In position	Out of position
PS2	Upper limit sensor	LU upper limit sensor	At raised position (Blocked)	Not at raised position (Unblocked)
PS3	Paper feed	LU paper feed sensor	Paper present	Paper not present
PS4	Paper empty	LU paper empty sensor	Paper not present	Paper present
PS5	Paper Near empty 1	LU near empty sensor /1	Near empty	Unblocked
PS6	Paper Near empty 2	LU near empty sensor /2	Near empty	Unblocked
MS1	Upper Door	LU door switch	Closed	Open
	Duplex			
PS47	Paper passage1	ADU paper passage sensor/1	Paper present	Paper not present
PS48	Paper passage 2	ADU paper passage sensor/2	Paper present	Paper not present
	2nd Transfer			
PS50	2nd Transfer Press./ Release	2nd transfer pressure sensor	Not Retracted	Retracted
	Transfer belt			
PS51	Retraction (black)	1st transfer pressure sensor/K	Retracted	Not Retracted
-	Retraction (color)	-	-	-
	Waste toner			

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS53	Waste Toner Box Set	Waste toner box set sensor	In position	Out of position
PS54	Waste Toner Full 1	Waste toner full sensor	Full	Not full
-	Waste Toner Full 2	Not used.		
	Fusing			
-	Roller Retraction	Fusing roller pressed/released	Pressure	Release
-	Fusing Power Switch	-	-	-

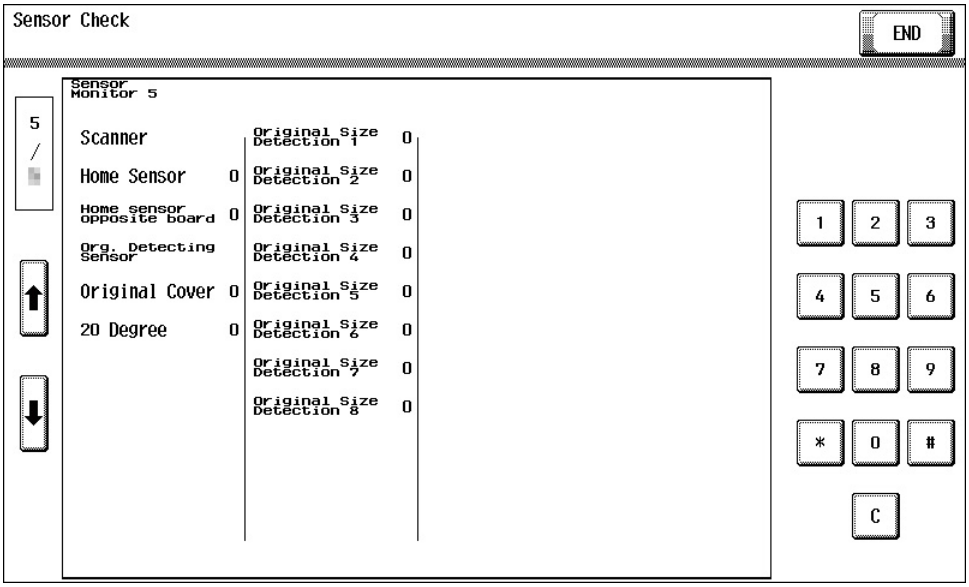
(d) Sensor monitor 4 (Main body)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Toner			
-	Toner (C) Empty	-	-	-
-	Toner (M) Empty	-	-	-
-	Toner (Y) Empty	-	-	-
PZS/K	Toner (K) Empty	Toner empty sensor/K	Toner not present	Toner present
-	toner (C) set detection	-	-	-
-	toner (M) set detection	-	-	-
-	toner (Y) set detection	-	-	-
TCB/K	toner (K) set detection	Toner cartridge set board/K	In position	Out of position
-	Toner Cartridge New Set (C)	-	-	-
-	Toner Cartridge New Set (M)	-	-	-
-	Toner Cartridge New Set (Y)	-	-	-
-	Toner Cartridge New Set (K)	-	New article	Not a new article
	IU			
DCSB/K	Drum cartridge/K set detection	DC set board/K	In position	Out of position
-	Drum cartridge/K New Set	-	New article	Not a new article

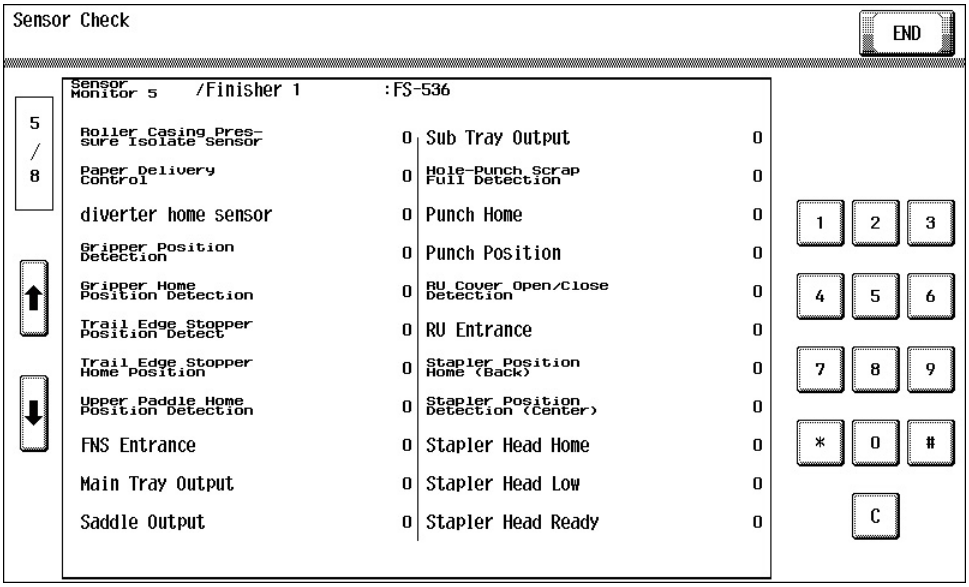
(e) Sensor monitor 5

- Main body (FS-536 or FS-536SD mounted: sensor monitor 8, FS-537 or FS-537SD mounted: Sensor monitor 10)



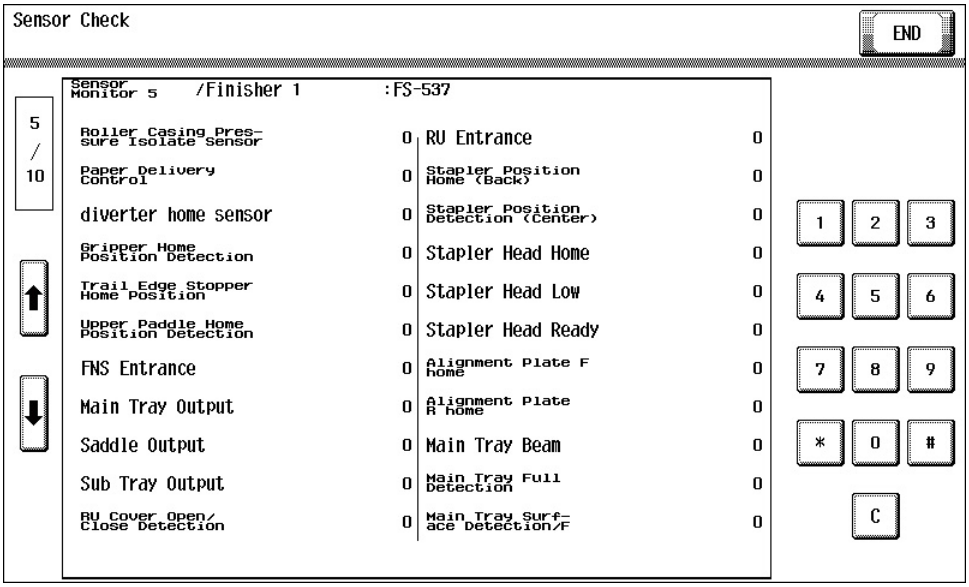
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Scanner			
PS201	Home Sensor	Scanner home sensor	At home	Out of home
-	Home sensor opposite board	-	-	-
	Org. Detecting Sensor			
RS201	Original Cover	Original cover sensor	Closed	Open
PS202	20 Degree	Angle sensor	Less than 15 degree	15 degree or more
PS203	Original Size Detection 1	Original size sensor/1	Original loaded Not mounted	Original not loaded
PS204	Original Size Detection 2	Original size sensor/2	Original loaded Not mounted	Original not loaded
-	Original Size Detection 3	Not used	-	-
-	Original Size Detection 4	Not used	-	-
-	Original Size Detection 5	Not used	-	-
-	Original Size Detection 6	Not used	-	-
-	Original Size Detection 7	Not used	-	-
-	Original Size Detection 8	Not used	-	-

- FS-356 or FS-536SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 1			
PS11	Roller Casing Pressure Isolate Sensor	Receiving roller retraction sensor	Not Retracted	Retracted
PS28	Paper Delivery Control	Paper delivery control sensor	At home	Not at home
PS30	diverter home sensor	Exchange folded paper output sensor	At home	Not at home
PS19	Gripper Position Detection	Gripper position detection sensor	Not at home	At home
PS18	Gripper Home Position Detection	Gripper home position sensor	At home	Not at home
PS22	Trail Edge Stopper Position Detect	Pre-eject away sensor	Not at home	At home
PS21	Trail Edge Stopper Home Position	Pre-eject home sensor	At home	Not at home
PS14	Upper Paddle Home Position Detection	Upper paddle home position detection sensor	At home	Not at home
PS4	FNS Entrance	FNS entrance sensor	Paper present	Paper not present
PS6/PS7	Main Tray Output	Main tray upper sensor (out/in)	Paper present	Paper not present
PS5	Saddle Output	Saddle exit sensor	Paper present	Paper not present
PS8	Sub Tray Output	Sub tray exit sensor	Paper present	Paper not present
PS4/PS5	Hole-Punch Scrap Full Detection	Punch dust full sensor	Full	Other than full
PS1	Punch Home	Punch home sensor	At home	Not at home
PS2	Punch Position	Punch position sensor	At home	Not at home
PS61	RU Cover Open/Close Detection	RU door open/close sensor	Open	Closed
PS60	RU Entrance	RU transport sensor	Paper present	Paper not present
PS23	Stapler Position Home (Back)	Stapler home position sensor (Rear)	At home	Not at home
PS24	Stapler Position Detection (Center)	Stapler position sensor (Center)	Detected	Not detected
-	Stapler Head Home	-	At home	Not at home
-	Stapler Head Low	Staple empty detect sensor	Staple present	Staple not present
-	Stapler Head Ready	-	Staple available	Staple unavailable

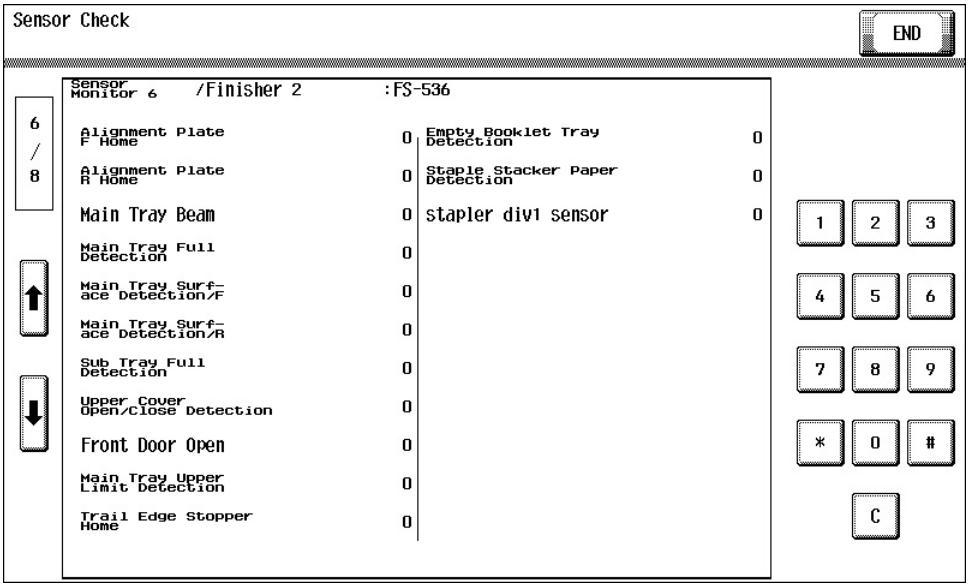
- FS-357 or FS-537SD



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 1			
PS22	Roller Casing Pressure Isolate Sensor	Receving roller retraction sensor	Pressure	Release
PS11	Paper Delivery Control	Paper delivery control sensor	At home	Not at home
PS21	diverter home sensor	Route change gate home sensor	Paper path: sub tray	Paper path: main tray
PS3	Gripper home Position Detection	Gripper home position sensor	At home	Not at home
PS31	Trail Edge Stopper Home Position	Trailing edge stopper home sensor	At home	Not at home
PS25	Upper Paddle Home Position Detection	Paddle home sensor	At home	Not at home
PS34	FNS Entrance	FNS entrance sensor	Paper present	Paper not present
PS37	Main Tray Output	Main tray exit sensor	Paper present	Paper not present
PS35	Saddle Output	SD discharge sensor	Paper present	Paper not present
PS24	Sub Tray Output	Sub tray exit sensor	Paper present	Paper not present
PS61	RU Cover Open/Close Detection	RU door open/close sensor	Open	Closed
PS60	RU Entrance	RU transport sensor	Paper present	Paper not present
PS19	Stapler Position Home (Back)	Stapler home position sensor (Rear)	At home	Not at home
PS20	Stapler Position Detection (Center)	Stapler position sensor (Center)	Detected	Not detected
-	Stapler Head Home	-	At home	Not at home
-	Stapler Head Low	Staple empty detect sensor	Staple present	Staple not present
-	Stapler Head Ready	-	Staple available	Staple unavailable
PS9	Alignment Plate F Home	Alignment plate/F home sensor	At home	Not at home
PS6	Alignment Plate R Home	Alignment plate/R home sensor	At home	Not at home
PS38/PS40	Main Tray Beam	Main tray upper sensor	Blocked	Unblocked
PS12	Main Tray Full Detection	Main tray full detection sensor	Full	Other than full
PS16	Main Tray Surface Detection/F	Main tray lift up detection sensor/F	Not at home	At home

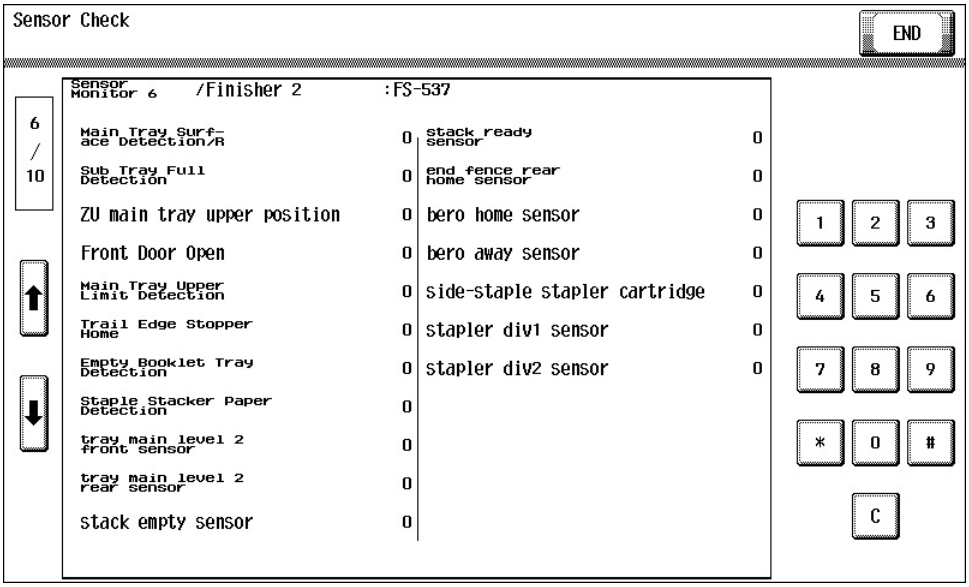
(f) Sensor monitor 6

- FS-536 or FS-536SD



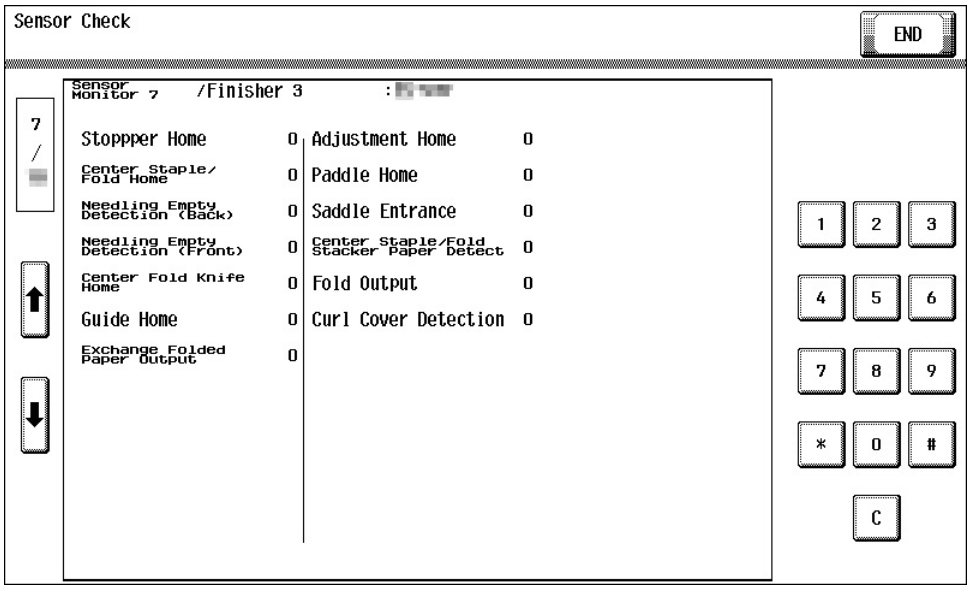
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 2			
PS12	Alignment Plate F Home	Alignment plate/F home sensor	At home	Not at home
PS13	Alignment Plate R Home	Alignment plate/R home sensor	At home	Not at home
-	Main Tray Beam	-	Blocked	Unblocked
PS29	Main Tray Full Detection	Main tray full detection sensor	Full	Other than full
PS27	Main Tray Surface Detection/F	Main tray upper position sensor/F	Upper position	Other than upper position
PS26	Main Tray Surface Detection/R	Main tray upper position sensor/R	Upper position	Other than upper position
PS9/PS10	Sub Tray Full Detection	Sub tray full detection sensor (out/in)	Full	Other than full
PS32	Upper Cover Open/ Close Detection	Upper door open/close detection sensor	Open	Closed
SW1	Front Door Open	Front door open detect switch	Open	Closed
SW2	Main Tray Upper Limit Detection	Main tray upper position detect switch	Upper position	Other than upper position
PS6	Trail Edge Stopper Home	Stopper Home sensor	At home	Not at home
PS13/PS14	Empty Booklet Tray Detection	Booklet tray empty detection sensor (in/out)	Paper present	Paper not present
PS31	Staple Stacker Paper Detection	Staple stacker paper detection sensor	Paper present	Paper not present
PS36	stapler div1 sensor	Wide Flat limit Senser	Side-staple staple position	Except for side-staple staple position

- FS-357/FS-537SD



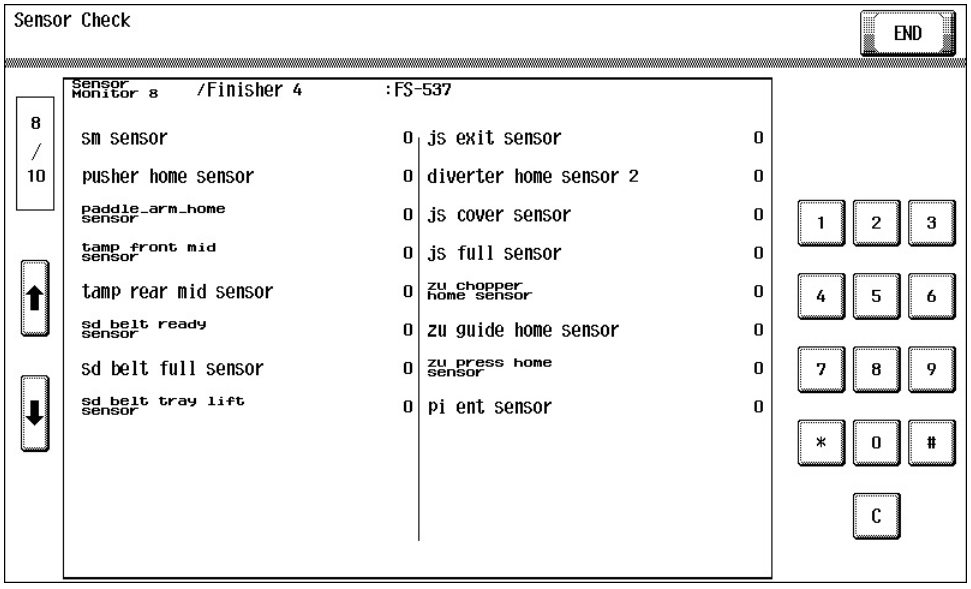
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 2			
PS17	Main Tray Surface Detection/R	Main tray lift up detection sensor/R	Not at home	At home
PS39/PS41	Sub Tray Full Detection	Sub tray full detection sensor	Full	Other than full
PS503 PS504 PS505 PS506	ZU main tray upper position	Upper limit sensor/1/2/3/4	Upper position	Other than upper position
SW1	Front Door Open	Front door open	Open	Closed
-	Main Tray Upper Limit Detection	-	At upper limit position	Not at upper limit position
PS10	Trail Edge Stopper Home	Trail edge stopper sensor/F	At home	Not at home
PS35	Empty Booklet Tray Detection	SD exit full sensor	Paper present	Paper not present
PS32	Staple Stacker Paper Detection	Alignment plate paper detection sensor	Paper present	Paper not present
PS14	tray main level 2 front sensor	Main tray lift down detection sensor/F	Not at home	At home
PS15	tray main level 2 rear sensor	Main tray lift down detection sensor /R	Not at home	At home
PS13	stack empty sensor	Main tray paper detection sensor	Paper present	Paper not present
PS13	stack ready sensor	Main tray paper detection sensor	Paper not present	Not at home
PS17		Main tray lift up detection sensor /R	At home	
PS16		Main tray lift up detection sensor/F	At home	
PS7	end fence rear home sensor	Trail edge stopper sensor/R	At home	Not at home
PS30	bero home sensor	Stacker plate home sensor	At home	Not at home
PS29	bero away sensor	Stacker plate position sensor	Not at home	At home
-	side-staple stapler cartridge	Stapleless detection sensor	Cartridge present	Cartridge not present
PS18	stapler div1 sensor	Stapler home position sensor (Corner)	Stapler side-staple corner position	Except for stapler side-staple corner position
PS18	stapler div2 sensor	Stapler home position sensor (Corner)	Stapler side-staple corner position	Except for stapler side-staple corner position

(g) Sensor monitor 7 (FS-536/FS-536SD/FS-537/FS-537SD)



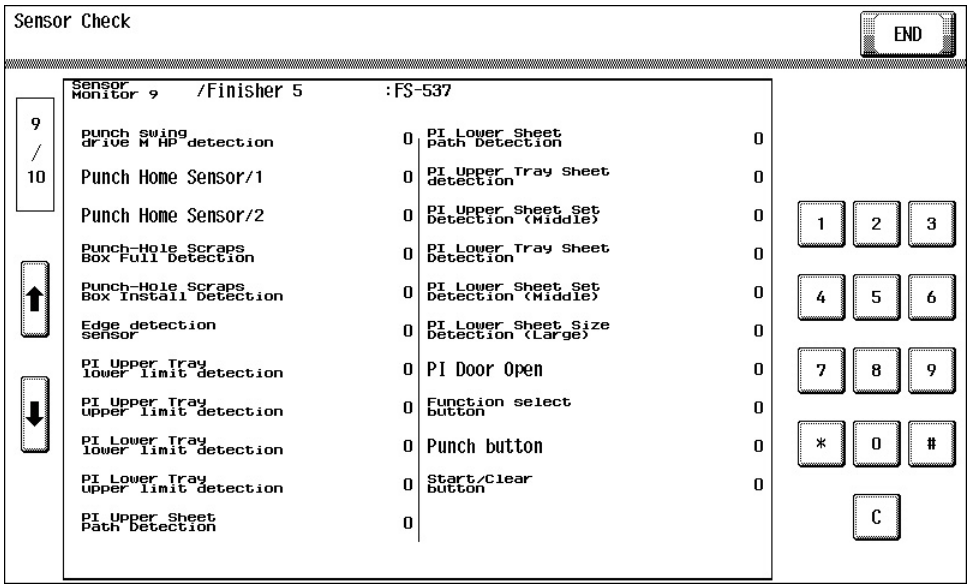
Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 3			
PS20	Stopper Home	Trailing edge stopper home position detection sensor	At home	Not at home
-	Center Staple/Fold Home	-	At home	Not at home
-	Needling Empty Detection (Back)	Staple switch	Staple present	Staple not present
-	Needling Empty Detection (Front)	Staple switch	Staple present	Staple not present
PS8	Center Fold Knife Home	Center fold knife home sensor	At home	Not at home
PS7	Guide Home	Guide home sensor	At home	Not at home
PS11	Exchange Folded Paper Output	Tri-folding gate home sensor	At home	Not at home
PS4	Adjustment Home	Alignment home sensor	At home	Not at home
PS5	Paddle Home	Paddle home sensor	At home	Not at home
PS1	Saddle Entrance	SD entrance sensor	Paper present	Paper not present
PS3	Center Staple/Fold Stacker Paper Detect	Center staple/fold stacker paper detect sensor	Paper present	Paper not present
PS12	Fold Output	Fold exit sensor	Paper present	Paper not present
PS2	Curl Cover Detection	Curl cover detection sensor	Not at home	At home

(h) Sensor monitor 8 (FS-537/FS-537SD)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 4			
PS36	sm sensor	FNS middle sensor	Paper present	Paper not present
PS26	pusher home sensor	Arm home position sensor	At home	Not at home
PS27	paddle_arm_home sensor	Paddle up/down home sensor	At home	Not at home
PS8	tamp front mid sensor	Alignment plate/F position sensor (Center)	Alignment plate/F center position	Except for alignment plate/F center position
PS5	tamp rear mid sensor	Alignment plate/R position sensor (Center)	Alignment plate/R center position	Except for alignment plate/R center position
PS12	sd belt ready sensor	Fold exit sensor	Paper present	Paper not present
PS35	sd belt full sensor	SD exit full sensor	Full	Other than full
PS43	sd belt tray lift sensor	SD exit tray lift sensor	Lift-up	Other than Lift-up
PS402	js exit sensor	Job tray paper exit sensor	Paper present	Paper not present
PS23	diverter home sensor 2	Sub tray/JS route change gate home sensor	At home	Not at home
PS401	js cover sensor	Job tray door sensor	Open	Closed
PS403	js full sensor	Job tray full sensor	Full	Other than full
PS501	zu chopper home sensor	Chopper home sensor	At home	Not at home
PS500	zu guide home sensor	Guide home sensor	At home	Not at home
PS502	zu press home sensor	Press home sensor	At home	Not at home
PS33	pi ent sensor	PI discharge sensor	Paper present	Paper not present

(i) Sensor monitor 9 (FS-537)



Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
	Finisher 5			
PS303	punch swing drive M HP detection	PK punch oscillating home sensor	At home	Not at home
PS307	Punch Home Sensor/1	PK punch home sensor/1	At home	Not at home
PS301	Punch Home Sensor/2	PK punch home sensor/2	At home	Not at home
PS302	Punch-Hole Scraps Box Full Detection	PK punch hole scraps box full sensor	Full	Other than full
PS28	Punch-Hole Scraps Box Install Detection	Punch scraps box set sensor	Set	Not set
PSDTB	Edge detection sensor	Paper size detect board	Paper end detected	Paper end not detected
PS205	PI Upper Tray lower limit detection	Tray lower limit sensor /Up	At lower limit position	Not at lower limit position
PS204	PI Upper Tray upper limit detection	Tray upper limit sensor /Up	At upper limit position	Not at upper limit position

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS210	PI Lower Tray lower limit detection	Tray lower limit sensor /Lw	At lower limit position	Not at lower limit position
PS209	PI Lower Tray upper limit detection	Tray upper limit sensor /Lw	At upper limit position	Not at upper limit position
PS201	PI Upper Sheet Path Detection	Paper entrance sensor /Up	Paper present	Paper not present
PS206	PI Lower Sheet path Detection	Paper entrance sensor /Lw	Paper present	Paper not present
PS202	PI Upper Tray Sheet detection	Paper empty sensor /Up	Paper present	Paper not present
PS203	PI Upper Sheet Set Detection (Middle)	Paper set sensor /Up	Paper present	Paper not present
PS207	PI Lower Tray Sheet Detection	Paper empty sensor /Lw	Paper present	Paper not present
PS208	PI Lower Sheet Set Detection (Middle)	Paper set sensor /Lw	Paper present	Paper not present
PS212	PI Lower Sheet Size Detection (Large)	L size sensor /Lw	Paper present	Paper not present
MS205	PI Door Open	Upper door open/close switch	Open	Closed
-	Function select button	Post inserter unit manual function selection button SW	ON	OFF
-	Punch button	Post inserter unit manual punch button SW	ON	OFF
-	Start/Clear button	Post inserter unit manual start/clear SW	ON	OFF

5.19.2 Table Number

(1) Vdc/ Vg

(a) Use

- When IDC is detected, for plain paper, Thick 1/1+, Thick 2/3/4, and Black, the machine independently displays each Vg/Vdc output value that is calculated based on the density (toner amount stuck on the belt) of the test pattern created on the transfer belt.
- Reference values: Vdc: around 400 V, Vg: around 500 V
- Used for troubleshooting of image problems.

(b) Procedure

- If the value is high, correct so that the image density becomes low.
- If the value is low, correct so that the image density becomes high.

(2) LD Light Value

(a) Use

- Shows the LD light value of each color of toner during print image formation.

5.19.3 Level History 1

(1) Use

- To display TCR (T/C ratio), IDC/registration sensor output values, and fusing temperature.
- Used for troubleshooting of image problems.

(2) Procedure

TCR/-K		Shows the T/C output reading taken last.
IDC1		Shows the latest IDC data.
Middle heat temperature	bizhub 958/ bizhub PRO 958	Displays the latest detected temperature of the fusing belt thermistor/1 (TH1)
	bizhub 808/758	Displays the latest detected temperature of the heating roller thermistor/1 (TH1)
Medium Heating Temperature	bizhub 958/ bizhub PRO 958	Displays the latest detected temperature of the fusing belt temperature sensor/2 (TEMS2)
	bizhub 808/758	Displays the latest detected temperature of the heating roller temperature sensor/2 (TEMS2)
Heat edge temperature	bizhub 958/ bizhub PRO 958	Displays the latest detected temperature of the fusing belt temperature sensor/3 (TEMS3)
	bizhub 808/758	Displays the latest detected temperature of the heating roller temperature sensor/3 (TEMS3)
Main Heating Temperature	bizhub 958/ bizhub PRO 958	Displays the latest detected temperature of the fusing belt temperature sensor/1 (TEMS1)

	bizhub 808/758	Displays the latest detected temperature of the heating roller temperature sensor/1 (TEMS1)

"Reading taken last" means
- Density of toner of the latest image.
- When a test pattern is produced by pressing the Start key while level history 1 is being displayed.

5.19.4 Level History 2

(1) Use

- IDC Sensor (Transfer belt bare surface level) as adjusted through the image stabilization sequence and ATVC value.
- Used for troubleshooting of image problems.

(2) Procedure

IDC Sensor Adjust 1	Shows the intensity adjustment value (0 to 255) of the IDC sensor. The normal value is 35 to 110, but the value increases depending on how long the machine has been used.
ATVC -K	Shows the first image transfer nearest output value. (10 to 150µA)
ATVC -2nd	Shows the second image transfer nearest output value. (300 to 8,000 V)

5.19.5 Temp. & Humidity

(1) Use

- Displays the temperature and humidity in the machine.
- Used as reference information when a malfunction occurs.

(2) Procedure

Temp-Inside	0 to 80 °C in 1 °C increments
Humidity	10 to 90 % in 1 % increments
Absolute Humidity	0 to 255 in 1 increments
Paper temperature	0 to 100 °C in 1 °C increments

5.19.6 CCD Check

(1) Use

- To display the D/A value of CCD clamp/gain for R, G, and B.
- To display the D/A value of CIS clamp/gain. (Only when dual scan document feeder is mounted)
- Used for troubleshooting for the CCD unit and the CIS module.

(2) Procedure

(a) CCD unit

- Use the following guidelines on the correct range of values.
- CLAMP: The maximum value and the minimum value of the output value should be within the range shown below.

Acceptable clamping rage	Minimum value	Maximum value
R	600	1500
G	600	1700
B	600	1600

- GAIN: The maximum value and the minimum value of the output value should be within the range shown below.

Acceptable gain range	Minimum value	Maximum value
R	20	238
G	10	222
B	70	247

(b) CIS module (Only when dual scan document feeder is mounted)

- CLAMP: -36 to +36 * Show the maximum value for controlling the black level of the CIS.
- GAIN: 70 to 255 * Show data themselves

5.19.7 Memory/Storage Adjustment

(1) Memory Check

(a) Use

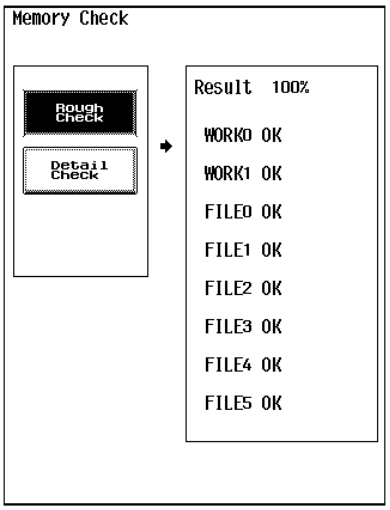
- If the copy image is faulty.
- To check correspondence of data written to and that read from memory through write/read check.
- The following shows the memory names that correspond to each memory where check is made.

WORK0	Work memory 0 (onboard)
WORK1	Work memory 1 (onboard)
FILE0	File memory0 (onboard)
FILE1	File memory1 (onboard)

FILE2, 3, 4, 5	Not used

<Rough Check>
- A check is made for each memory to see if the image data reading and writing are correctly made in a very limited area.
- The progress of the check sequence is displayed in percentage. (calculated based on all checks from WORK0 to FILE5 constituting 100%)
- When the rough checks of all memories are completed, results are displayed beside the memory display. (OK/NG)
- Rough check time: approx. 10 sec.

Typical rough check result display: Exemplary display when all memories have been checked okay



<Detail Check>
- A write check and a read check are repeated in all areas for each memory.
  NOTE
  - **For a write check, a specific write value is set and the specific value is written in all areas of the memory and the written data is thereafter read. This sequence is performed for all memories (from WORK0 to FILE5). (which forms one cycle of the check sequence)**
  - **When one cycle of the check sequence is completed, the write value is changed automatically and a new check cycle is performed. This sequence is repeated with the write value changed for each sequence.**
  - **Unlike the rough check, the detail check is not automatically terminated. The check cycle is repeated until the Stop key is pressed.**

- The progress of the check sequence is displayed in percentage. (calculated based on all checks from WORK0 to FILE5 constituting 100%)
  NOTE
  - **The check progress status display is 100% when one cycle of the check sequence is completed.**
  - **The check progress status display is automatically reset to 0% and restarted as soon as a new check sequence is started.**

- The detail check of all memories (one cycle) is completed in about 3 min.
- The press of the Stop key will terminate the detail check.
- If a write/read error is detected, NG appears beside the memory display and the check sequence is automatically terminated.

(b) Rough check procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check].
3. Touch [Rough Check].
4. Press the Start key to start the check procedure.
   NOTE
   - **The rough check procedure can be interrupted by pressing the Stop key.**
5. The procedure is automatically completed (in about 10 sec.) and the results are shown on the screen.
   - If the check results for WORK0 to 1 are NG, check the memory for connection or replace the memory with a new one.
   - If the check results for FILE0 to 1 are NG, replace the MFP board with a new one.

(c) Detail check procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Bus Check].
3. Touch [Detail Check].
4. Press the Start key to start the detail check procedure.
   - The check sequence is started and the current check progress status is displayed in percentage.
5. When the check progress status display is 100% after the start of the check sequence, the first check cycle is completed. (which takes about 3 min.)
   - The results are displayed on the screen. (The sequence has been checked okay, if NG does not appear.)
   - The current check progress status display is associated with the latest check sequence.

   NOTE
   - **If a write/read error is detected, NG appears beside the memory display and the check cycle is automatically terminated.**
6. Press the Stop key at any timing to terminate the detail check procedure.
   - If the check results for WORK0 to 1 are NG, check the memory for connection or replace the memory with a new one.

- If the check results for FILE0 to 1 are NG, replace the MFP board with a new one.

(2) Compress / Decompression Check

(a) Use

- To check whether compression and decompression are carried out properly.
- If the copy image is faulty.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Compress/Decompression Check].
3. Press the Start key to start the check procedure.
4. The check result will be displayed.

(3) JPEG check

(a) Use

- To check whether compression and decompression are carried out properly.
- If the copy image is faulty.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [State Confirmation] -> [Memory/Storage Adjustment] -> [JPEG check].
3. Pressing the Start key will automatically start to complete a compression/decompression check sequence.
4. The check result will be displayed.

(4) Memory Bus Check

(a) Use

- To check to see if image data is correctly transferred from scanner to memory, and from memory to printer.
- Bus check between scanner and memory has two steps; the scanner internal check step as internal processing and the check step between scanner and memory. If either of the two steps is NG, NG1 or NG2 is displayed respectively.
- If the copy image is faulty.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Bus Check].
3. Select either [Scanner -> Memory], [Memory -> PRT], or both.
4. Pressing the Start key will start the memory bus check and be terminated automatically.
5. The check result will be displayed, [OK] or [NG].

(5) DSC Bus Check

(a) Use

- To check the connection between the DSC board and the scanner section when the optional security kit SC-508 is installed.
- When an error is detected after checking, NG1 or NG2 is displayed depending on the location of the board where the defect is found.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [State Confirmation] -> [Memory/Storage Adjustment] -> [DSC Bus Check].
3. Select “Front side” or “Back side”, and touch [Scanner -> DSC].
4. Pressing the Start key will start the DSC bus check and be terminated automatically.
5. The check result will be displayed.

(6) Storage R/W Check

(a) Use

- To check to see if the hard disk is connected properly, and if read/write operation of the hard disk is correctly performed.
- When the hard disk is mounted.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the results are shown on the screen.

(7) Format

(a) Use

<Hard disk is mounted>

- To format the hard disk.
- The function proceeds in the order of physical format to logical format.
- If the hard disk is yet to be formatted, the malfunction code “C-D010” will appear. Ignore this code and continue with the formatting procedure.
- When the hard disk is replaced. (Logical format)

- When the hard disk is to be initialized. (Physical format to logical format)

<Hard disk is not mounted>

NOTE

- **Formatting the eMMC board erases the firmware data, counter, and settings data in the eMMC board.**
- **Deletes the data in the eMMC board.**
- **As formatting deletes movie data, still image data, voice data, OCR dictionary data, PDF/A fonts, OCR fonts, and Unicode fonts you need to reinstall this data as necessary after using this function.**
- **By using in conjunction with the security setting HDD Data Backup function, data can be restored to the HDD once it is formatted.**

(b) Procedure (Physical Format)

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
3. Touch [Physical Format].
4. Press the Start key to start the formatting sequence.
5. The sequence will be automatically terminated as it is completed.
6. Turn off the main power switch and turn it on again more than 10 seconds after.

NOTE

- **If [HDD Encryption Setting] is not set to "ON," when the physical format is completed and the main power switch is turned OFF/ON, a message that prompts you to set an encrypting word is displayed.**
- **If you perform [HDD Encryption Setting], after setting an encrypting word, perform the logical format.**

(c) Procedure (Logical Format (only when making initial set up))

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
3. Touch [Logical Format].
4. Press the Start key to start the formatting sequence.
5. The sequence will be automatically terminated as it is completed.
6. Turn off the main power switch and turn it on again more than 10 seconds after.

NOTE

- *** Formatting the hard disk will erase all data contained in it.**
- ***Data in the eMMC board is deleted when no hard disk is mounted. The following information is not deleted, however. Firmware area, NV backup area**

(8) eMMC to HDD Data Copy

- Use prohibited

NOTE

- **The use of this function is prohibited.**
- **Executing this function automatically formats the HDD, erasing all data recorded on the HDD.**

(9) HDD Mirroring Rebuild

(a) Use

- Displayed when the optional hard disk HD-524 is installed.
- Use when setting up the optional hard disk HD-524.
- Copy data from the standard equipped hard disk to the additionally installed hard disk.
- Use when replacing a failed hard disk.
- Copy data from a normally operating hard disk to a replacement hard disk.

NOTE

- **The HDD mirroring rebuilding process takes approx. 1 hour.**

(b) Procedure

1. Install the second hard disk.
2. Turn ON the main power switch.
3. Call the Service Mode to the screen.
4. Select [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild].
5. Press the Start key. Copy the entire data from the Master disk to the Slave disk.
   The Start key orange light turns ON, and the operation progress displays in the screen. (Processing time: approx. 1 hour)

   NOTE

   - **Never turn Off the main power supply or pull out the power plug during HDD mirroring rebuilding (below: rebuilding).**
   - **When rebuilding is executed, the process cannot be paused or forcibly quit until rebuilding is completed.**
   - **Jobs can still be executed even during rebuilding. However, it will take a longer time to complete the rebuilding.**
   - **To execute a job during rebuilding, touch the [OK] key twice, and exit Service Mode. Rebuilding will continue to run in the background.**
   - **Check the mirroring rebuilding progress by selecting [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment].**

6. When the data has finished copying, the screen displays 100%, and the Start key light changes color to blue.
7. Touch [OK] twice, and exit Service Mode
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.19.8 Memory/Storage Status

(1) Use

- To display the condition and amount of the memory and storage.

5.19.9 Display Coverage

(1) Use

- To display the average coverage.

5.19.10 Load Check

(1) Use

- To check each device (electric component) for proper condition by individually activating the load associated with the device.
- To identify faults at the time of troubleshooting.

NOTE

Take note of the following during the load check mode.

- **No malfunction is detected and no count is taken of consumables life and related items.**
- **Two or more devices (motors, clutches, solenoids, and fans) cannot be checked simultaneously.**
- **Detection of proper installation of various types of units and waste toner box does not function. During the check procedure, therefore, make sure that the unit in question is installed correctly or yet to be installed.**

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Load Check].
3. Open the lower front door or the right door.
4. Touch [Start Load Check].
5. Close the door opened on step3.
6. Referring to the load check list, enter a check code.
7. Referring to the load check list, enter a multi code.
8. Press the Start key.
   - When pressing the Start key, the specified load is activated. The Start key blinks in orange.
9. Check the load operation and output of signals.
10. Press the Stop key to stop the check operation and check the result.

    NOTE

    - **Depending on the type of load being activated, after the lapse of the specified time or after the transition to the specified state, the corresponding device automatically stops working.**
    - **When 'NG' is displayed, check the wiring and connectors.**

11. To check another load or signal output, repeat steps 6 to 10.
12. Turn OFF the main power switch and turn it ON again more than 10 seconds after.

NOTE

- **To exit from the load check mode, be sure to turn off and on the main power switch.**
  At the point when you display [Service Mode] -> [State Confirmation] -> [Load Check], MFP enters into load check mode.
- **Regardless of whether load check is actually performed or not, the main power switch must be turned off and on to exit from load check mode.**

(3) Load check list

Check code	Multi code	Symbol	Load name	Operation control	Note
8	2	EL/K	erase LED black low-light	Outputs erase LED. <At the time of start> Turns on erase LED/K low light intensity remote. Turns on erase LED/K. <At the time of stop> Turns off erase LED/K low light intensity remote. Turns off erase LED/K.	-
	3	EL/K	erase LED black high-light		-
20	1	CL1	Tray 1 paper feed clutch	Drives the specified clutch.	-
	2	CL2	Tray 2 paper feed clutch		-
	3	CL5	Tray 3 paper feed clutch		-
	4	CL7	Tray 4 paper feed clutch		-
21	1	CL6	Tray 3 transport clutch	Drives the specified clutch.	-
	2	CL3	Horizontal transport clutch		-
23	1	M26	Manual bypass tray paper lift-up plate up	Drives the bypass lift-up motor in the specified direction.	Stops at the time that the upper limit or lower limit has been detected.
	2	M26	Manual bypass tray paper lift-up plate down		
	4	M6	Tray 1 lift-up motor	Lifts up the tray 1.	
	5	M8	Tray 2 lift-up motor	Lifts up the tray 2.	
	6	M23	Tray 3 lift-up motor	Lifts up the tray 3.	

Check code	Multi code	Symbol	Load name	Operation control	Note
	7	M24	Tray 4 lift-up motor	Lifts up the tray 4.	
	8	M1	LU lift-up motor	-	• Only when LU-205 or LU-303 has been installed. • Stops at the time that the upper limit has been deleted.
24	1	M21	1st transfer pressure motor rotate continuously	Drives the 1st transfer pressure motor to achieve the specified state.	-
	2		1st transfer pressure motor pressuring		-
	3		1st transfer pressure motor retracting		-
	4	M3	2nd transfer pressure motor pressuring	Drives the 2nd transfer pressure motor to achieve the specified state.	-
	5		2nd transfer pressure motor retracting		-
26	1	M2	Registration motor high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	2		Registration motor middle speed		
	3		Registration motor low speed		
	4		Registration motor minimum speed		
27	1	M4	Exit motor high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	2		Exit motor middle speed		
	3		Exit motor low speed		
	4		Exit motor minimum speed		
28	1	M27	Bypass paper feed motor high speed	Drives the motor at the specified speed.	-
	2		Bypass paper feed motor middle speed		-
	3		Bypass paper feed motor low speed		-
	4		Bypass paper feed motor minimum speed		-
	5	M22	Paper feed motor high speed	Drives the motor at the specified speed.	-
	6		Paper feed motor middle speed		-
	7		Paper feed motor low speed		-
	8		Paper feed motor minimum speed		-
	9	M5	Tray1 vertical transport motor high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	10		Tray1 vertical transport motor middle speed		
	11		Tray1 vertical transport motor low speed		
	12		Tray1 vertical transport motor minimum speed		
	13	M7	Tray2 vertical transport motor high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	14		Tray2 vertical transport motor middle speed		
	15		Tray2 vertical transport motor low speed		
	16		Tray2 vertical transport motor minimum speed		
	17	M2	LU paper feed motor (LCT) high speed	Drives the motor at the specified speed.	No paper must exist in LCT tray.
	18		LU paper feed motor (LCT) middle speed		
	19		LU paper feed motor (LCT) low speed		
	20		LU paper feed motor (LCT) minimum speed		

Check code	Multi code	Symbol	Load name	Operation control	Note
	21	M3	LU transport motor (LCT) high speed	Drives the motor at the specified speed.	No paper must exist in LCT tray.
	22		LU transport motor (LCT) middle speed		
	23		LU transport motor (LCT) low speed		
	24		LU transport motor (LCT) minimum speed		
	25	M25	LCC transport motor high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	26		LCC transport motor middle speed		
	27		LCC transport motor low speed		
	28		LCC transport motor minimum speed		
	29	M28	LCC vertical transport motor high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	30		LCC vertical transport motor middle speed		
	31		LCC vertical transport motor low speed		
	32		LCC vertical transport motor minimum speed		
	101	-	Tray 1 feed roller drive high speed	Drives the roller at the specified speed.	The paper lifting plate must not be at upper limit position.
	102		Tray 1 feed roller drive middle speed		
	103		Tray 1 feed roller drive low speed		
	104		Tray 1 feed roller drive minimum speed		
	105	-	Tray 2 feed roller drive high speed	Drives the roller at the specified speed.	The paper lifting plate must not be at upper limit position.
	106		Tray 2 feed roller drive middle speed		
	107		Tray 2 feed roller drive low speed		
	108		Tray 2 feed roller drive minimum speed		
	109	-	Tray 3 feed roller drive high speed	Drives the roller at the specified speed.	The paper lifting plate must not be at upper limit position.
	110		Tray 3 feed roller drive middle speed		
	111		Tray 3 feed roller drive low speed		
	112		Tray 3 feed roller drive minimum speed		
	113	-	Tray 3 transport roller drive high speed	Drives the roller at the specified speed.	The paper lifting plate must not be at upper limit position.
	114		Tray 3 transport roller drive middle speed		
	115		Tray 3 transport roller drive low speed		
	116		Tray 3 transport roller drive minimum speed		
	117	-	Horizontal transport roller drive high speed	Drives the roller at the specified speed.	The paper lifting plate must not be at upper limit position.
	118		Horizontal transport roller drive middle speed		
	119		Horizontal transport roller drive low speed		
	120		Horizontal transport roller drive minimum speed		
	121	-	Tray 4 feed roller drive high speed	Drives the roller at the specified speed.	The paper lifting plate must not be at upper limit position.

Check code	Multi code	Symbol	Load name	Operation control	Note
	122		Tray 4 feed roller drive middle speed		
	123		Tray 4 feed roller drive low speed		
	124		Tray 4 feed roller drive minimum speed		
32	1	M35	Polygon motor high speed	Drives the motor at the specified speed.	The PH cooling fan is simultaneously rotated at full speed.
	2		Polygon motor middle speed		
	3		Polygon motor low speed		
41	5	M18	PC motor/K high speed	Drives the motor at the specified speed. **NOTE** **Perform the operation check after the developing unit/K, drum unit/K and the transfer belt unit have been removed. *1**	-
	6		PC motor/K middle speed		-
	7		PC motor/K low speed		-
	8		PC motor/K minimum speed		-
42	1	FM7	Toner suction fan	Drives the fan.	-
	2	FM1	Suction fan		-
	3	FM16	IU cooling fan/in		-
	4	FM15	IU cooling fan/out		-
	5	FM10	IH power supply cooling fan full speed	Drives the fan at the specified speed.	-
	6		IH power supply cooling fan half speed		-
	7	FM3	IH coil cooling fan full speed	Drives the fan at the specified speed.	-
	8		IH coil cooling fan half speed		-
	9	FM9	DC power supply cooling fan full speed	Drives the fan at the specified speed.	-
	10		DC power supply cooling fan half speed		-
	11	FM6	Ozone ventilation fan full speed	Drives the fan at the specified speed.	-
	12		Ozone ventilation fan half speed		-
	13	FM13	Paper cooling fan/out	Drives the fan.	-
	14	FM4	Switchback paper cooling fan/1 full speed	Drives the fan at the specified speed.	-
	15		Switchback paper cooling fan/1 half speed		-
	16	FM5	Switchback paper cooling fan/2 full speed		-
	17		Switchback paper cooling fan/2 half speed		-
	18	FM12	Paper cooling fan/in full speed	Drives the fan at the specified speed.	-
	19		Paper cooling fan/in half speed		-
	20	FM14	PH cooling fan full speed	Drives the fan at the specified speed.	-
	21		PH cooling fan half speed		-
	22	FM101	Tucking fan/Md	Drives the fan.	-
	23	FM102 FM103	Tucking fan/Rr Tucking fan/Fr	Drives the fan.	-
	24	FM8	Toner cartridge cooling fan	Drives the fan.	-
	25	FM18	Output tray exhaust fan	Drives the motor at the specified speed. (bizhub 958/808/bizhub PRO 958 only)	-
44	0	M20	Waste toner transport motor	Drives the motor at the specified speed.	-
45	1	M30	Fusing motor high speed	Drives the motor at the specified speed.	-
	2		Fusing motor middle speed		-
	3		Fusing motor low speed		-
	4		Fusing motor minimum speed		-
	5		Fusing motor warming up speed		-
	6		Fusing motor stand-by speed		-
	7	M34	Fusing pressure motor pressuring	Drives the fusing pressure motor to achieve the specified state.	-
	8		Fusing pressure motor retracting		-
46	1	M1	Transfer belt motor high speed	Drives the motor at the specified speed. **NOTE**	-
	2		Transfer belt motor middle speed		-

Check code	Multi code	Symbol	Load name	Operation control	Note
	3		Transfer belt motor low speed	**Perform the operation check after the developing unit/K, drum unit/K and the transfer belt unit have been removed. *1**	-
	4		Transfer belt motor minimum speed		-
47	1	M38	Cleaning brush motor high speed	Drives the motor at the specified speed. **NOTE** **Perform the operation check after the developing unit/K, drum unit/K and the transfer belt unit have been removed. *2**	-
	2		Cleaning brush motor middle speed		-
	3		Cleaning brush motor low speed		-
	4		Cleaning brush motor minimum speed		-
50	5	M19	Developing motor/K high speed	Drives the motor at the specified speed.	The toner suction fan is simultaneously rotated at full speed.
	6		Developing motor/K middle speed		
	7		Developing motor/K low speed		
	8		Developing motor/K minimum speed		
60	1	M1	Take-up motor: Speed 1/normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	Dual scan document feeder
	2		Take-up motor: Speed 2/normal rotation		
	3		Take-up motor: Speed 3/normal rotation		
	17	M2	Registration motor: Speed 1/ normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	
	18		Registration motor: Speed 2/ normal rotation		
	19		Registration motor: Speed 3/ normal rotation		
	20		Registration motor: Speed 4/ normal rotation		
	33	M3	Reading motor: Speed 1/normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	
	34		Reading motor: Speed 2/normal rotation		
	35		Reading motor: Speed 3/normal rotation		
	49	M4	Exit motor: Speed 1/normal rotation	• Drives the motor at the specified speed. • Stop rotating when pressing the Stop key.	
	50		Exit motor: Speed 2/normal rotation		
	51		Exit motor: Speed 3/normal rotation		
	52		Exit motor: Speed 4/normal rotation		
	65	M8	Normal rotation	Drives the front side cleaning motor.	
	66		Reverse rotation		
	67		High-speed sweeping		
	81	M6	Pressure	Pressure/release the reading roll.	
	82		Release		
	97	M5	Document feed tray up	Drives the lift-up motor in the specified direction.	
	98		Document feed tray down		
	113	FM	Cooling fan motor	Drives the fan.	
	129	SD1	Stamp solenoid	Turns ON the solenoid.	
	145	CL1	Take-up clutch	Turns ON the clutch.	
	161	MFDB/1	Multi feed detection board/1	Outputs the multi feed detection signal. (Only when connecting the multi feed detection board)	
		MFDB/2	Multi feed detection board/2		
83	0	SD1	Gate switch solenoid	Turns ON the solenoid.	The solenoid is turned off after the specified period of time.

Check code	Multi code	Symbol	Load name	Operation control	Note
84	1	M33	Switchback motor high speed (normal rotation)	Drives the motor at the specified speed and in the specified direction.	No paper must exist on the paper path.
	2		Switchback motor middle speed (normal rotation)		
	3		Switchback motor low speed (normal rotation)		
	4		Switchback motor minimum speed (normal rotation)		
	5		Switchback motor high speed (reverse rotation)		
	6		Switchback motor middle speed (reverse rotation)		
	7		Switchback motor low speed (reverse rotation)		
	8		Switchback motor minimum speed (reverse rotation)		
85	1	M31	ADU transport motor/1 high speed	Drives the motor at the specified speed.	No paper must exist on the paper path.
	2		ADU transport motor/1 middle speed		
	3		ADU transport motor/1 low speed		
	4		ADU transport motor/1 minimum speed		
	5	M32	ADU transport motor/2 high speed		
	6		ADU transport motor/2 middle speed		
	7		ADU transport motor/2 low speed		
	8		ADU transport motor/2 minimum speed		

NOTE
- ***1: If the PC motor is energized with the 1st transfer roller in its pressed position, the transfer belt and the photoconductor drum may be damaged.**
- ***2: If the cleaning brush motor is driven with no toner adhered, the transfer belt may be damaged.**

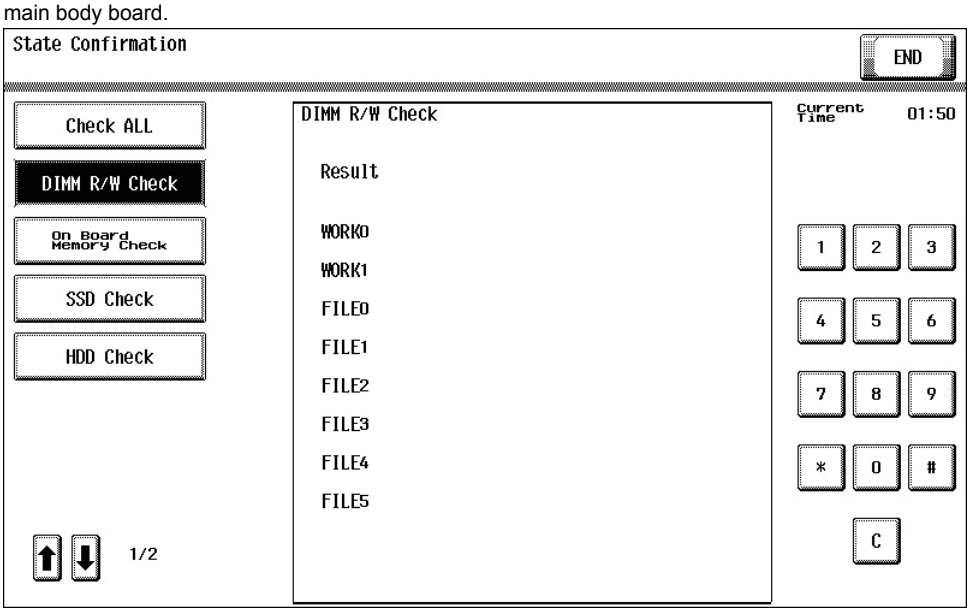
5.19.11 Adjustment Data List

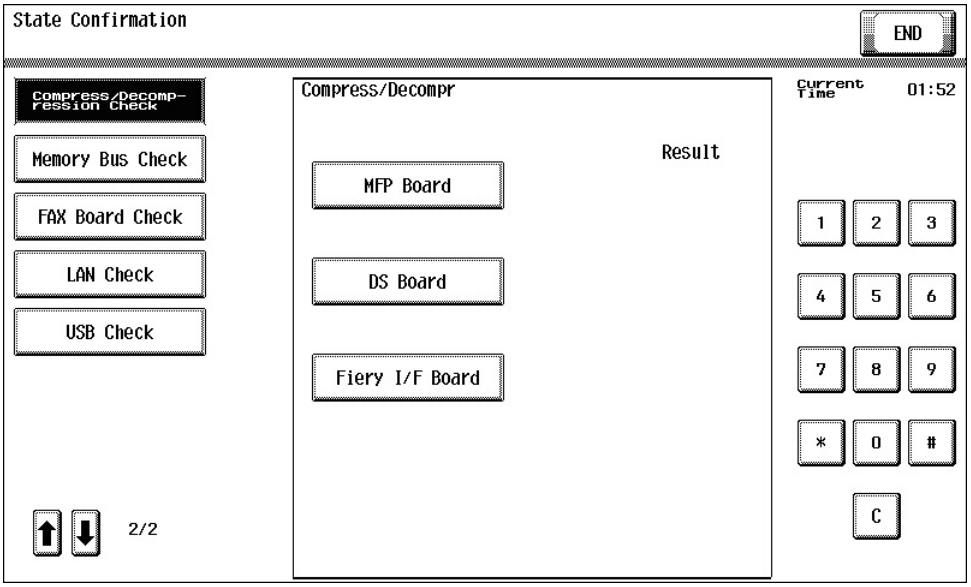
(1) Use

- To display the adjustment and setting value set in the main body.

5.19.12 Self-diagnostic

- Conducts diagnosis for the defective and replaced areas of memory and various boards in main body when a trouble code is output or a trouble such as main body activation failure occurs, and displays a suspected defective part or connection between the specific board and main body board.





(1) Check All

- Diagnoses DIMM R/W, On Board Memory, eMMC board, and HDD collectively, and specifies the cause of trouble.
- The following table shows the check method and countermeasures.

Check mode	Check details	Corruption details	Next Action
DIMM R/W Check	• Execute Read/Write Check for DIMM on the MFP board. • Execute the same check as [Rough Check] under [Memory/Storage Adjustment] -> [Memory Check].	• Corruption of On Board Memory (WORK0 or WORK1) on the MFP board • Corruption of CPU	Replace MFP board
On Board Memory Check			
R/W Check	Execute Read/Write Check for On Board Memory on the MFP board.	• Corruption of On Board Memory (SPI-Flash) on the MFP board • Corruption of battery	MFP board
Pattern Check	Execute Read Check for the pattern ready written in the area secured in On Board Memory on the MFP board for Read.	• The pattern data for test cannot be read because the pattern data for test has been rewritten, or a contact failure of the electrical parts occurred. • The correct information cannot be read because the data in the area for Read has been modified due to software failure, or a failure of the electrical parts occurred.	• Data in on board memory are exactly cleared (as a new one). • MFP board
SSD Check Note: The main unit is equipped with the eMMC board, not an SSD board.			
R/W Check	Execute Read/Write for the eMMC board	• Connection failure of the SATAI/F connector of the eMMC board • Corruption of the eMMC device • Corruption of MFP board	• Replace eMMC board • Replace MFP board
Pattern Check*1	Execute Read Check for the pattern ready written in the area secured in the eMMC.	• The pattern data for test cannot be read because the pattern data for test has been rewritten, or a contact failure of the electrical parts occurred. • The correct information cannot be read because the data in the area for Read has been modified due to software failure, or a failure of the electrical parts occurred.	• Replace eMMC board
HDD Check			
R/W Check	Execute Read/Write for HDD.	• HDD cable failure • HDD failure • MFP board failure	• Replace the HDD cable. • Replace HDD. • Replace MFP board
Self-diagnostic (I/F Check)	Check whether the communications between HDD and MFP are normal.	Evaluate OK if there is any response returned from HDD, and NG if there is no response.	Check the HDD cable connection.

Check mode	Check details	Corruption details	Next Action
Self-diagnostic (Memory Check)	Execute the buffer test and the media test. • Buffer test Execute Read/Write Test for the buffer memory of HDD. Transfer the data by DMA to check whether the buffer memory works normally. • Media test Execute Read/Write Test for the disks of HDD. Check whether the disks, motor, and head works normally. Use the reserved area for the test.	Retrieve the test log, and display existence of error.	Replace HDD.
Compress/Decompression Check			
MFP Board	Execute the compression/extension test for the MFP board.	Corruption of the compressed/ extended circuits or memory of MFP.	Replace MFP board
DS Board	Execute the compression/extension test for the DS board.	Corruption of the compressed/ extended circuits or memory of MFP board.	• Remove and insert the DS board. • Replace the DS board.
Fiery I/F Board	Not used	-	-
Memory Bus Check			
Output Image Bus Check	Execute the input image bus test for the MFP board.	Corruption of the input image circuit or image bus of MFP board.	Replace MFP board

NOTE

- **It takes approx. two minutes for check if all items are OK.**
- **When NG is detected, check operation may stop in the item detected NG. (Not allow moving to the following item)**
- **When the check operation is stopped five minutes or more in a specific item, certain trouble may occur in the item stopped. In this case, turn the main power switch OFF for stopping the self diagnosis. After that, investigate the items on which the check function is disabled and take countermeasures.**
- ***1 When the eMMC board is replaced even once, and the device conducts a self diagnosis, the pattern check may result in error, but this may be ignored.**

(a) Procedure (from SERVICE MODE menu)

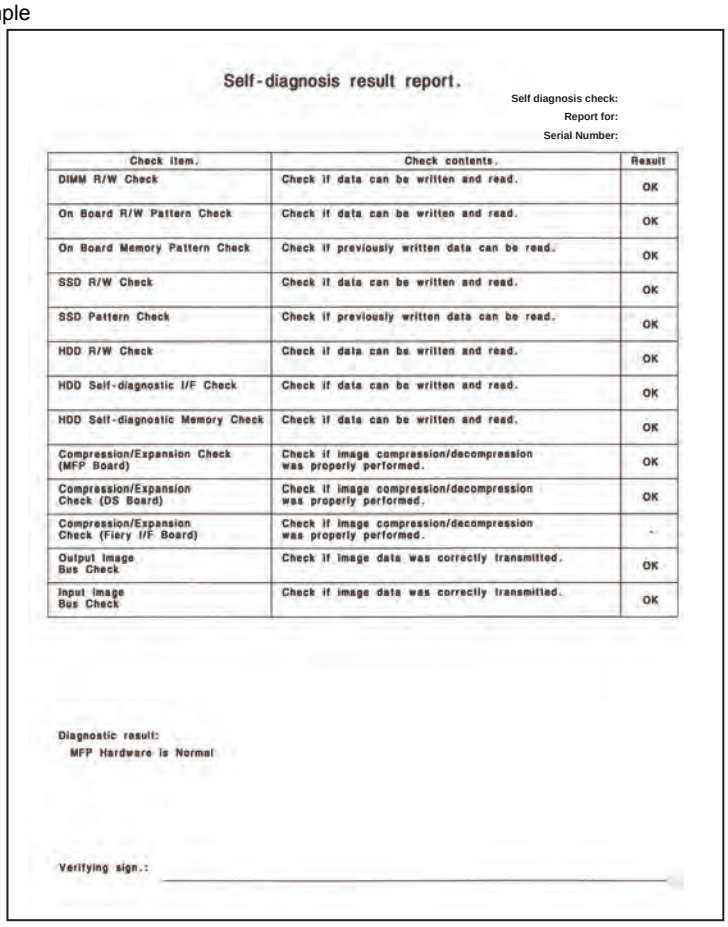
1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [Check All].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the results are shown on the screen.
   - If the check results are NG, take measures upon confirmation of the corruption details mentioned above and Next action.
   - * Press the Stop key to interrupt the check sequence.

(b) Procedure (from main power switch ON)

1. Open the lower front door.
2. Turn the main power switch on while pressing the power key.
   - After a short beep sound is made once, release the power key and close the lower front door.
   - Wait to display the self diagnosis (full check) screen.
3. After displaying the self diagnosis screen, press the start key.
   - The self diagnosis (full check) is started.
   - The result of the diagnosis is displayed for every item. (OK/NG)
4. After completing self diagnosis (full check), load A4/A4S or Letter/LetterS paper in the manual bypass tray, the [Printing] key will appear in the top area of the screen.
5. Tap the [Printing] key, “Self-diagnosis result report.” will be printed out.

   NOTE
   - **Execution of the self diagnosis (full check) allows “Self-diagnosis result report.” to be printed out. If the printout is not required, proceed with the next step.**
   - **If there is no paper loaded on the manual bypass tray, the [Printing] key will not appear. Also, if any paper with a size other than A4/A4S/Letter/LetterS is loaded, the [Printing] key will not appear.**

Example



Self-diagnosis result report.

Self diagnosis check:
Report for:
Serial Number:

Check item.	Check contents.	Result
DIMM R/W Check	Check if data can be written and read.	OK
On Board R/W Pattern Check	Check if data can be written and read.	OK
On Board Memory Pattern Check	Check if previously written data can be read.	OK
SSD R/W Check	Check if data can be written and read.	OK
SSD Pattern Check	Check if previously written data can be read.	OK
HDD R/W Check	Check if data can be written and read.	OK
HDD Self-diagnostic I/F Check	Check if data can be written and read.	OK
HDD Self-diagnostic Memory Check	Check if data can be written and read.	OK
Compression/Expansion Check (MFP Board)	Check if image compression/decompression was properly performed.	OK
Compression/Expansion Check (DS Board)	Check if image compression/decompression was properly performed.	OK
Compression/Expansion Check (Fiery I/F Board)	Check if image compression/decompression was properly performed.	-
Output Image Bus Check	Check if image data was correctly transmitted.	OK
Input Image Bus Check	Check if image data was correctly transmitted.	OK

Diagnostic result:
MFP Hardware is Normal

Verifying sign.:

6. After finished the diagnosis for all items, turn the main power switch off.
7. If there is an item displayed NG, investigate the NG item and take countermeasures.

(2) DIMM R/W Check

- Execute the following procedure for individual diagnosis. For details, see "I.12.18.12.(1) Check All".

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [DIMM R/W Check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the results are shown on the screen.

(3) On Board Memory Check

- Execute the following procedure for individual diagnosis. For details, see "I.12.18.12.(1) Check All".

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [On Board Memory Check].
3. Select the item you would like to check.
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the results are shown on the screen.

(4) SSD Check

- Execute the following procedure for individual diagnosis. For details, see "I.12.18.12.(1) Check All".

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [SSD Check].
3. Select the item you would like to check.
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the results are shown on the screen.

(5) HDD Check

- Execute the following procedure for individual diagnosis. For details, see "I.12.18.12.(1) Check All".

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [HDD Check].
3. Select the item you would like to check.

4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the results are shown on the screen.

(6) Compress/Decompression Check

- Execute the following procedure for individual diagnosis. For details, see "I.12.18.12.(1) Check All".

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [Compress/Decompression Check].
3. Select the item you would like to check.
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the results are shown on the screen.

(7) Memory Bus Check

- Execute the following procedure for individual diagnosis. For details, see "I.12.18.12.(1) Check All".

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [Memory Bus Check].
3. Select the item you would like to check.
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the results are shown on the screen.

(8) FAX Board Check

- If the FAX board is installed, execute the FAX board test and the data transmission sound test.
- The following table shows the check method and countermeasures.

Check details	Corruption details	Next Action
• Execute the FAX board test. • Execute the data transmission sound test.	• Connection failure of the cables connected to the FAX board • Failure of the FAX board	• Replace the FAX signal cable. • Replace the FAX power supply cable. • Replace the FAX board. • Replace the MFP board.

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [FAX Board Check].
3. Select the line to be checked between 1 to 4, and touch [Signal Send Test], [Signal Receive Test], or [NCU Test]. For the details of each item, refer to "Fax Test".
4. Select a test item.
5. Select the parameter you would like to test.
6. Press the Start key to start the check procedure.

(9) LAN check

- Execute the Ping test.

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [LAN Check].
3. Input IP address of destination with the numeric keypad.
4. Press the Start key to start the check procedure.
5. When the check procedure is completed, the results are shown on the screen.
6. In case of NG result
   - The network set defect -> Make sure the network of the unit.
   - Corruption of the LAN connector of the MFP board -> Replace the MFP board
   - Connection failure of the LAN cable due to breakage of the claw -> Replace the LAN cable.

(10) USB check

- Execute the test to check whether the USB board operates normally.

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [State Confirmation] -> [Self-diagnostic] -> [USB Check].
3. Press the Start key to start the check procedure.
4. When the check procedure is completed, the results are shown on the screen (NG is displayed if no USB device is installed).
5. In case of NG result
   - Connection failure of the USB connector of the MFP board -> Replace the MFP board.
   - Replace each USB device (authentication device, etc.).

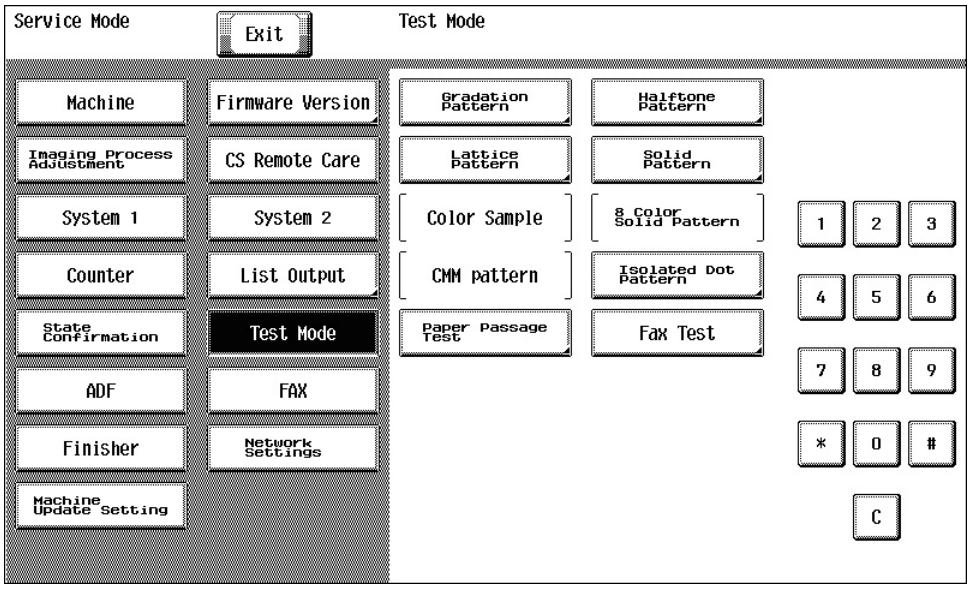
5.19.13 Fusing Loop Control State

(1) Use

- To display "paper loop amount" created between the fusing section and 2nd transfer section.

- “Paper loop amount”, the amount of paper loop created in the last paper feed, is displayed in the unit of %.
- If brush effect or blurred image occurs, adjust the paper loop amount in [Service Mode] -> [Machine] -> [Fusing Transport Speed].

5.20 Test Mode



- To check the image on the printer side by letting the machine produce various types of test pattern. It also tests the printing operation in paper passage test, as well as the fax transmission.
- The machine searches through the paper sources in the order of tray 2, tray 3, tray 4, and tray 1 for paper of the maximum size for printing.

5.20.1 Procedure for test pattern output

1. Touch [Test Mode] to display the test mode menu.
2. Touch the desired test pattern key.
3. Set up the desired functions and press the Start key.

5.20.2 Gradation Pattern

(1) Use

- To produce a gradation pattern.
- Used for checking gradation reproducibility.

(a) Test pattern

e.g.

- SINGLE
- HYPER
- Gradation
- Black (1PC)

(2) Procedure

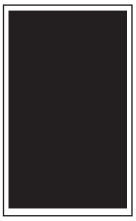
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side1: The same pattern is printed on both front and back sides.
  - 2-Side2: The front side is blank and the pattern is printed on the back side.
  - Select “600dpi” or 1200dpi.
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Select “12 Gradations”, 24 Gradations or 256 Gradations.

5.20.3 Halftone Pattern

(1) Use

- To produce a solid halftone pattern.
- Used for checking uneven density and pitch noise.

(a) Test pattern



e.g.
- SINGLE
- HYPER
- Gradation
- Black (1PC)
- Density: 255

(2) Procedure

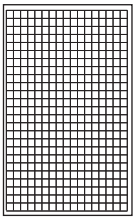
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side1: The same pattern is printed on both front and back sides.
  - 2-Side2: The front side is blank and the pattern is printed on the back side.
- Type the density level. (0 to “255”)

5.20.4 Lattice Pattern

(1) Use

- To produce a lattice pattern.
- Used for checking fine line reproducibility and uneven density.
- A reverse pattern is also used to check for fine line reproducibility of white letters on a solid background.

(a) Test pattern



e.g.
- SINGLE
- FEET
- Black (1PC)
- CD Width: 6
- FD Width: 6
- Density: 255
- Normal

(2) Procedure

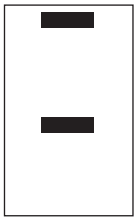
- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select “FEET” or HYPER.
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side1: The same pattern is printed on both front and back sides.
  - 2-Side2: The front side is blank and the pattern is printed on the back side.
- Select “600dpi” or 1200dpi.
- 600dpi: Enter CD width and FD width. (0 to 191 dots)
- 1200dpi: Enter [Horiz] width and [Vertical] width. (”0” to 383)
- Type the density level. (0 to “255”)
- Select “Normal” or Reverse.

5.20.5 Solid Pattern

(1) Use

- To produce each of the C, M, Y, and K solid patterns.
- Used for checking reproducibility of image density.

(a) Test pattern



e.g.
- SINGLE
- HYPER
- Gradation
- Density: 255

(2) Procedure

- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select FEET or “HYPER.”
- Select “Gradation”, Resolution or Error diffusion if HYPER has been selected.
- Type the density level. (0 to “255”)

5.20.6 Color Sample

- Not used

5.20.7 8 Color Solid Pattern

- Not used

5.20.8 CMM pattern

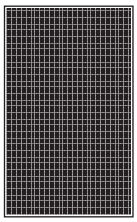
- Not used

5.20.9 Isolated Dot Pattern

(1) Use

- Output the test print of the isolated point pattern.

(a) Test pattern



e.g.
- SINGLE
- HYPER
- Gradation
- Pattern 1
- Dot: 10
- Density: 255

(2) Procedure

- Copies (“1” to 999)
- Select “SINGLE” (single copy) or MULTI (multi copy).
- Select “FEET” or HYPER.
- Select “Gradation”, Resolution, Error diffusion, or Hybrid Error Diffusion if HYPER has been selected.
- Select “1-Sided”, 2-Side1 or 2-Side2.
  - 2-Side 1: The same pattern is printed on both front and back sides.
  - 2-Side 2: The front side is blank and the pattern is printed on the back side.
- Select “Pattern 1” or Pattern2.
  - Pattern 1: Output the isolated points of whole area.
  - Pattern 2: Isolated point pattern with the predetermined intervals.
- Type the dot level (“1” to 10).
- Type the density level (0 to “255”).

5.20.10 Paper Passage Test

(1) Use

- To test the printing operation in paper passage test.

- Use to check the printing operation in paper passage test from each paper source.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Test Mode] -> [Paper Passage Test].
3. Select either [Yes] or [No] for the pattern print option.
4. Touch [Select Tray] and select the paper feed tray to be tested.
5. Touch [Paper Type] and select a paper type.
6. Press the Start key to start the paper passage test.
7. Pressing the Stop key will stop operation.

5.20.11 Fax Test - Signal Send Test

- It will be displayed only when the optional FAX kit FK-516 is mounted.

(1) Use

- Image information signals, control signals and DTMF can be individually output.
- Signal sounds are monitored by the monitor speaker.
- When the optional fax kit FK-516 (line 2) is mounted, Line 2 can be specified.
- When the optional fax kit FK-515 (line 3) is mounted, Line 3 can be specified.
- When the optional fax kit FK-515 (line 4) is mounted, Line 4 can be specified.

(2) Procedure

1. Select [Service Mode] -> [Test Mode] -> [FAX Test] -> [Fax Line Test].
2. Select the [Line1], [Line2], [Line3] or [Line4], and touch the [Signal Send Test].
3. Select a test item.
4. Select the parameter you would like to test.
5. Press the [Start] key. (In order to move to another test, select the next test item after pressing the [Stop] key.)

NOTICE

- Signal is output from pressing [Start] to pressing [Stop].
- To check Line 1, [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 2, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 3, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 3] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 4, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 4] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.

(a) V34 Main CH: Default setting

- 33600

(b) V34 Main CH: Setting range

- 2400 to 33600 (step: 2400)

(c) V8

- CM

(d) V17: Default setting

- 14400bps

(e) V17: Setting item

- 14400bps
- 12000bps
- 9600bps
- 7200bps

(f) V29: Default setting

- 9600bps

(g) V29: Setting item

- 9600bps
- 7200bps

(h) V27ter: Default setting

- 4800bps

(i) V27ter: Setting item

- 4800bps
- 2400bps

(j) V21
- No parameters

(k) PB: Default setting
- 0

(l) PB: Setting item
- 0 to 9, *, #, A, B, C, D

(m) DP: Default setting
- 0

(n) DP: Setting range
- 0 to 9

(o) Special Tone: Default setting
- 1100Hz

(p) Special Tone: Setting item
- 1100Hz
- 1300Hz
- 1650Hz
- 2100Hz

(q) Optional Tone: Default setting
- 200Hz

(r) Optional Tone: Setting range
- 200 to 4000Hz (step: 100Hz)

(s) PB Tone (High): Default setting
- 1209Hz

(t) PB Tone (High): Setting item
- 1209Hz
- 1336Hz
- 1477Hz
- 1633Hz

(u) PB Tone (Low): Default setting
- 697Hz

(v) PB Tone (Low): Setting item
- 697Hz
- 770Hz
- 852Hz
- 941Hz

(w) Pseudo Ring
- No parameters

5.20.12 Fax Test - Signal Receive Test
- It will be displayed only when the optional FAX kit FK-516 is mounted.

(1) Use
- Check a signaling tone by connecting the machine to the line to output a test signal of the fax board.
- Signal sounds are monitored by the monitor speaker.
- When the optional fax kit FK-516 (line 2) is mounted, Line 2 can be specified.
- When the optional fax kit FK-515 (line 3) is mounted, Line 3 can be specified.
- When the optional fax kit FK-515 (line 4) is mounted, Line 4 can be specified.

(2) Procedure
1. Select [Service Mode] -> [Test Mode] -> [FAX Test] -> [Fax Line Test] -> [Line 1] -> [Signal Receive Test].
2. Select the [Line1], [Line2], [Line3] or [Line4], and touch the [Signal Send Test].
3. Select a test item.
4. Select the parameter you would like to test.
5. Press the [Start] key. (In order to move to another test, select the next test item after pressing the [Stop] key.)

NOTICE
- Signal is output from pressing [Start] to pressing [Stop].
- For making a check, make sure that "ON" is set for [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] -> [Line Monitor Sound].
- To check Line 2, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 2] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 3, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 3] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- To check Line 4, [Administrator Settings] -> [Fax Settings] -> [Multi Line Settings] -> [Fax Line 4] -> [Line Parameter Setting] -> [Line Monitor Sound] should be set to “ON”.
- The status of testing or results of tests are shown in the title line as follows

RCV	Waiting signals
OK/NG	Results of signal reception

- The V.34 signal does not appear at the signal receive test.

(a) V17: Default setting
- 14400bps

(b) V17: Setting item
- 14400bps
- 12000bps
- 9600bps
- 7200bps

(c) V29: Default setting
- 9600bps

(d) V29: Setting item
- 9600bps
- 7200bps

(e) V27ter: Default setting
- 4800 bps

(f) V27ter: Setting item
- 4800bps
- 2400bps

(g) V21
- No parameters

(h) PB: Default setting
- 0

(i) PB: Default setting
- 0 to 9, *, #, A, B, C, D

(j) Special Tone: Default setting
- 1100Hz

(k) Special Tone: Setting item
- 1100Hz
- 1300Hz
- 2100Hz

5.20.13 Fax Test - NCU TEST
- It will be displayed only when the optional FAX kit FK-516 is mounted.

(1) Use
- To check the operation of NCU.
- When the optional fax kit FK-516 (line 2) is mounted, Line 2 can be specified.
- When the optional fax kit FK-515 (line 3) is mounted, Line 3 can be specified.
- When the optional fax kit FK-515 (line 4) is mounted, Line 4 can be specified.

(2) Procedure
1. Select [Service Mode] -> [Test Mode] -> [FAX Test] -> [Fax Line Test].
2. Select the [Line1], [Line2], [Line3] or [Line4], and touch the [Signal Send Test].

3. Select a test item.
4. Press the [Start] key. (In order to move to another test, select the next test item after pressing the [Stop] key.)

NOTE

- **When CML / CTL / TEL relay test is selected and the Start key is pressed, ON is displayed in the parameter and relay is turned to ON. When [Stop] is pressed, relay is turned OFF.**
- **When the DC-LOOP detection test is selected and Start key is pressed, DT=0001 is shown in the title row in case of detecting the DC-LOOP. If not detected, DT=0000 is displayed.**

Contents of test	Device to be tested
CML Relay	**IC201, IC202**
CTL Relay	**RL201**
TEL Relay	**RL501 ***
DC-LOOP Detect	
Speaker	
Outside Ring Send	
Audio Response Send	

- *** RL501 mounts only the Japanese.**

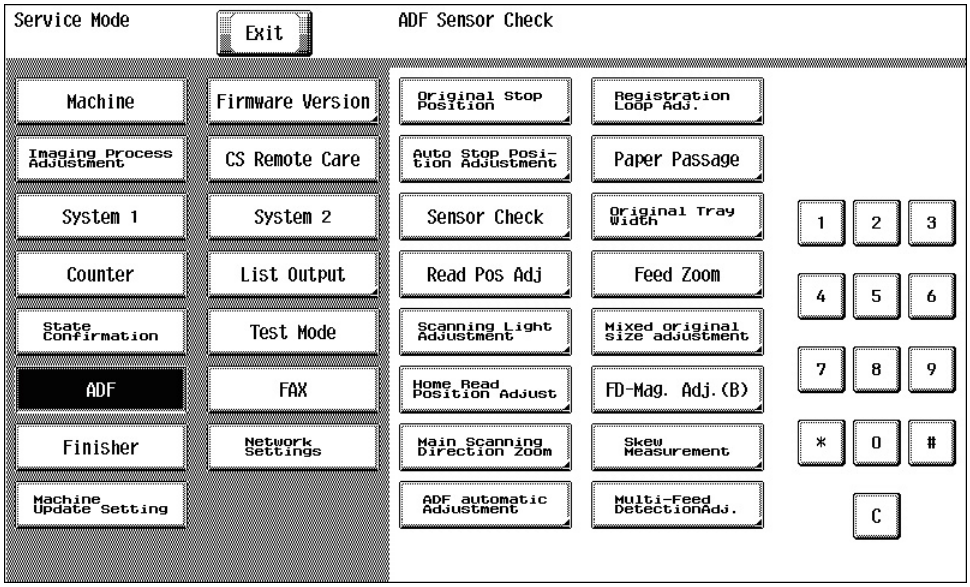
5.20.14 Fax Test - Dial Test

- Not used

5.20.15 Fax Test - Off-hook Test

- Not used

5.21 ADF



5.21.1 Original Stop Position

(1) Use

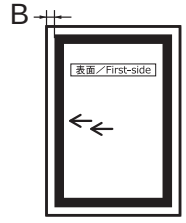
- To manually adjust the original stop position and the read position in each of the DF modes.
- When the result is Unable in the automatic adjustment of the original stop position.

(2) Procedure

(a) Sub Scanning Direction 1-Side

NOTE

- **Before performing this adjustment, the feed zoom adjustment needs to be complete.**
  I.5.21.8 Feed Zoom



- The difference in the widths of B between the chart and the copy sample should fall within the following target.

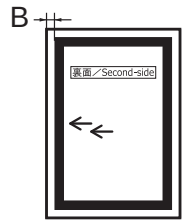
Target	0 ± 2.0 mm
Setting range	-4.0 mm to +4.0 mm (1 step: 0.1 mm)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. Check that the difference in the widths of B between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Sub Scanning Direction 1-Side].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of B is greater than the target, enter the [+] value.
   - If the difference in the widths of B is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Place the chart in the document feed tray.
11. Press the start key, and check the difference in the width B between the chart and the discharged copy sample.
12. Touch [END] twice.
13. Touch [Exit] on the Service Mode screen.
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Sub Scanning Direction 2-Side

NOTE

- **Before performing this adjustment, the "feed zoom" adjustment and the "FD-Mag. Adj. (B)" adjustment need to be complete.**
  I.5.21.8 Feed Zoom
  I.5.21.12 FD-Mag. Adj. (B)

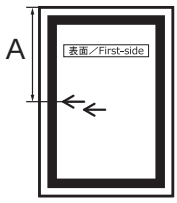


- The difference in the widths of B between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-4.0 mm to +4.0 mm (1 step: 0.1 mm)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. Check that the difference in the widths of B between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Sub Scanning Direction 2-Side].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of B is greater than the target, enter the [+] value.
   - If the difference in the widths of B is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Place the chart in the document feeding tray.
13. Press the start key, and check the difference in the width B between the chart and the discharged copy sample.
14. Touch [END] twice.
15. Touch [Exit] on the Service Mode screen.
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(c) Main Scanning (Front)



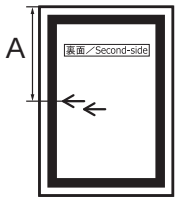
- The difference in the widths of A between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-4.4 mm to +4.4 mm (1 step: 0.1 mm)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. Check that the difference in the widths of A between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Main Scanning (Front)].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of A is greater than the target, enter the [+] value.
   - If the difference in the widths of A is smaller than the target, enter the [-] value.

8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Place the chart in the document feeding tray.
11. Press the start key, and check the difference in the width A between the chart and the discharged copy sample.
12. Touch [END] twice.
13. Touch [Exit] on the Service Mode screen.
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(d) Main Scanning (Back)



- The difference in the widths of A between the chart and the copy sample should fall within the following target.

Target	0 ± 2.0 mm
Setting range	-4.4 mm to +4.4 mm (1 step: 0.1 mm)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. Check that the difference in the widths of A between the chart and the copy sample falls within the target.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Original Stop Position].
6. Touch [Main Scanning (Back)].
7. Enter the value from the 10-key pad. (Press the [+/-] key to change the +/- code.)
   - If the difference in the widths of A is greater than the target, enter the [+] value.
   - If the difference in the widths of A is smaller than the target, enter the [-] value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Place the chart in the document feeding tray.
13. Press the start key, and check the difference in the width A between the chart and the discharged copy sample.
14. Touch [END] twice.
15. Touch [Exit] on the Service Mode screen.
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.2 Registration Loop Adj.

(1) Use

- To adjust the length of the loop to be formed in paper before the registration rollers.
- When an original misfeed or skew occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Registration Loop Adj].
3. Select either [1-Side] or [Second Side] for the adjustment.
4. Touch clear and change the setting value using the 10-key pad. (Press the [+/-] key to change the +/- code.)
   The amount of loop increases by the amount of positive (+) value and decreases by the amount of negative (-) value.
5. Touch [END].
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Default setting

- 0

(4) Setting range

- -5 mm to +5 mm (in 1 mm increments)

5.21.3 Auto Stop Position Adjustment

(1) Use

- To automatically adjust the read position for the Sub Scanning Direction.
- To check skew feed.
- When DF has been replaced.

NOTE

- **Before performing this adjustment, the “feed zoom” adjustment and the “FD-Mag. Adj. (B)” adjustment need to be complete.**
- **I.5.21.8 Feed Zoom**
- **I.5.21.12 FD-Mag. Adj. (B)**

(2) Procedure

(a) Sub Scanning Direction 1-Side

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Sub Scanning Direction 1-Side].
4. Place the chart in the document feed tray (with the side having an arrow facing up).
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  - **I.5.21.1 Original Stop Position**

(b) Sub Scanning Direction 2-Side

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Sub Scanning Direction 2-Side].
4. Place the chart in the document feed tray (with the first side facing up).
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  - **I.5.21.1 Original Stop Position**

(c) Main Scanning (Front)

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Main Scanning (Front)].
4. Place the chart in the document feed tray (with the first side facing up).
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  - **I.5.21.1 Original Stop Position**

(d) Main Scanning (Back)

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Auto Stop Position Adjustment].
3. Touch [Main Scanning (Back)].
4. Place the chart in the document feed tray (with the first side facing up).
5. Press the Start key.
6. Make sure that result is OK. Then, touch [SET].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is [Unable]:

- **Check and correct the skew of the document.**
- **Manually correct the value of [Original Stop Position].**
  - **I.5.21.1 Original Stop Position**

5.21.4 Paper Passage

(1) Use

- To check for paper passage through the DF in each of the DF modes.
- Used for checking the document path for any abnormal condition when a document misfeed occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Paper Passage].
3. Select a paper passage mode to be tested from [1-Sided No Detect], [1-Sided Mixed Org.] or [2-Sided].

4. Set the original in the feed tray.
5. The Start key changes from orange to blue.
6. Press the Start key. The operation starts.

NOTE

- **After starting the operation by pressing the Start key, if the Start key is pressed during the operation, the operation will be suspended.**
  - **Then, if the Start key is pressed again during the suspension, the operation will be resumed.**
- **If the Stop key is pressed during the test operation, the test will be forced to end.**
- **If there is no Original set in the feed tray, the Start key will not work.**
- **All Originals set in the feed tray are passed through. Upon the completion of all Originals passed through, the paper through test ends.**

5.21.5 Sensor Check

(1) Use

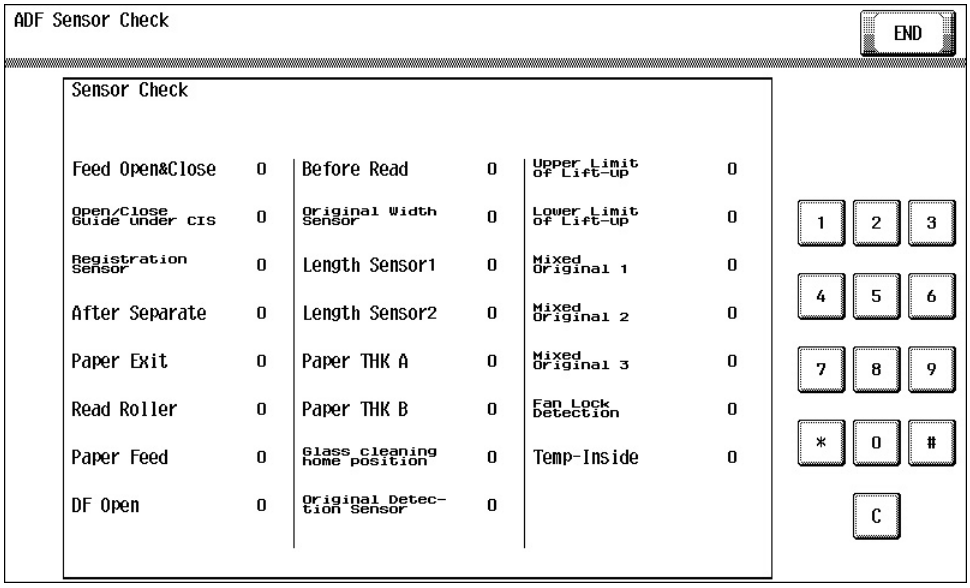
- To check sensors on the paper path.
- When a document misfeed occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Sensor Check].
3. Operate the sensor to check by using paper or the like, and check the screen display.
   (Paper detected: 1, No paper detected: 0)

(3) Sensor check screen

- This is only typical screen which may be different from what are shown on each individual main body.



(4) Sensor check list

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS16	Feed Open&Close	Read open/close sensor	Open	Close
PS20	Open/Close Guide under CIS	CIS under guide open/close sensor	Open	Close
PS5	Registration Sensor	Registration sensor	Paper present	Paper not present
PS4	After Separate	After separate sensor	Paper present	Paper not present
PS7	Paper Exit	Exit sensor	Paper present	Paper not present
PS8	Read Roller	Read roller home sensor	Retracted	Not Retracted
PS21	Paper Feed	Document feed sensor	Paper present	Paper not present
RS201	DF Open	Original cover sensor	Open	Close
PS6	Before Read	Before read sensor	Paper present	Paper not present
VR1	Original Width Sensor	Restriction plate positional volume	Analog value	
PS10	Length Sensor1	Length sensor/1	Paper present	Paper not present
PS11	Length Sensor2	Length sensor/2	Blocked	Unblocked
-	Paper THK A	-	-	-
-	Paper THK B	-	-	-
PS18	Glass cleaning home position	Front side cleaning home sensor	At home	Not at home
PS1	Original Detection Sensor	Empty sensor	Paper present	Paper not present

Symbol	Panel display	Part/signal name	Operation characteristics/panel display	
			1	0
PS2	Upper Limit of Lift-up	Lift up upper sensor	Upper limit	Not at upper limit
PS3	Lower Limit of Lift-up	Lift up lower sensor	Lower limit	Not at lower limit
PS13	Mixed Original 1	Consolidation sensor/1	Paper present	Paper not present
PS14	Mixed Original 2	Consolidation sensor/2	Paper present	Paper not present
PS15	Mixed Original 3	Consolidation sensor/3	Paper present	Paper not present
-	Fan Lock Detection	-	-	-
-	Temp-Inside	-	-	-

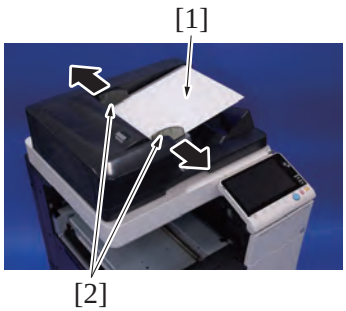
5.21.6 Original Tray Width

(1) Use

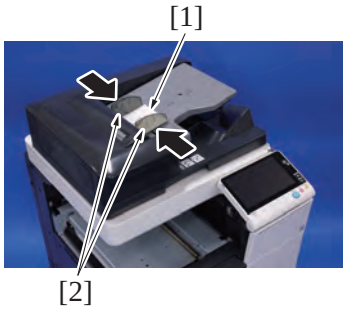
- To set the values of maximum (A3 position) and minimum (B6 position) widths on the restriction plate positional volume.
- When an original misfeed occurs.
- When an original size detection error occurs.
- When the DF control board has been replaced.
- When the restriction plate positional volume has been replaced.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Original Tray Width].



3. Set the A3 paper [1] on the original feed tray, and widen the width across the edge guides [2] by sliding them to the “A3” position.
4. Touch [Max. Width].
5. Press the Start key.
6. OK is displayed when the adjustment has been completed.



7. Set the B6 paper [1] on the original feed tray, and narrow the width across the edge guides [1] by sliding them to the “B6” position.
8. Touch [Min. Width].
9. Press the Start key.
10. OK is displayed when the adjustment has been completed.
11. Touch [END].
12. Touch [Exit] on the Service Mode screen.
13. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is NG:

- **Possible causes includes failure or wrong wiring of the restriction plate positional volume and failure of the DFCB.**

5.21.7 Read Pos Adj

(1) Use

- To adjust the original read position.
- When the scanner home sensor have been replaced.
- Used when the CCD unit has been replaced.
- Used when the original glass has been replaced.

(2) Read Pos Adj

(a) Procedure

1. Call the Service Mode to the screen.

2. Touch [ADF] -> [Read Pos Adj].
3. Touch [Read Pos Adj].
4. Touch [C].
5. Enter the value using the [+] / [-] keys.
   - Set the value to a positive number to move the stop position of the scan-IR unit to the right when viewed from the front.
   - Set the value to a negative number to move the stop position of the scan-IR unit to the left when viewed from the front.
6. Touch [END].
7. Touch [Exit] on the Service Mode screen.
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Default setting

- Intrinsic values (adjusted at the factory)

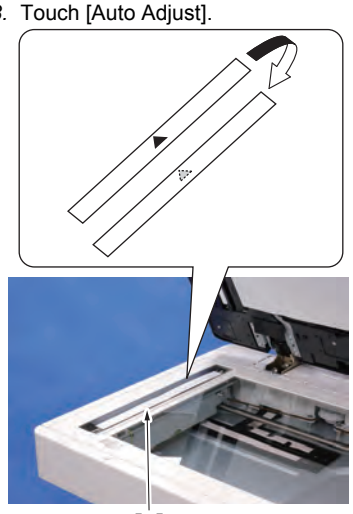
(c) Setting range

- -73 through +73

(3) Auto Adjust

(a) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Read Pos Adj].
3. Touch [Auto Adjust].



4. Open the DF.
5. Place the DF reading chart [1] so that a triangular mark may become the original glass side (downward) and the pointed tip of the triangle points toward the black sheet on the left side.
6. Press the Start key.

   NOTE
   - **Be sure that the DF reading chart is in position.**
   - **Keep the dual scan document feeder open while making the adjustment.**
   - **When the edge deviation at DF reading after carrying out this adjustment becomes larger, conduct the "I.5.21.1 Original Stop Position".**

7. Make sure that the result is OK.
8. Touch [END].
9. Touch [Exit] on the Service Mode screen.
10. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.8 Feed Zoom

(1) Use

- To adjust the feed zoom in the front side feeding direction on the DF.
- When DF has been replaced.

(2) Procedure

(a) Orig. Feed Zoom Ad

- The difference in the widths of C between the chart and the copy sample should fall within the following target.

Target	0 ± 0.5 mm
Setting range	-2.00% to +2.00% (1 step: 0.1%)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. C width on the chart and one on the copy sample are measured and adjusted so that the difference of C width satisfies the target shown below.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Feed Zoom].

6. Touch [Orig. Feed Zoom Ad].
7. Enter the value using the [+] / [-] keys.
   - If the difference in the widths of C is greater than the target, enter the - value.
   - If the difference in the widths of C is smaller than the target, enter the + value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Press the start key, and check the difference in the width C between the chart and the discharged copy sample.
11. Touch [END] twice.
12. Touch [Exit] on the Service Mode screen.
13. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Auto Adjust

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Feed Zoom].
3. Touch [Auto Adjust].
4. Place the chart in the document feed tray (with the first side facing up).
5. Press the Start key.
6. Make sure that result is OK.
7. Touch [SET] and then [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.9 Scanning Light Adjustment

(1) Use

- To adjust the scanning light of DF.
- Used for adjusting the difference in the scanning lights between scanning from the original glass and scanning from the DF original glass.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Scanning Light Adjustment].
3. Select a color by pressing [Red], [Green], or [Blue].
4. Press the value using the [+] / [-] key.
   NOTE
   - **It is recommended that the scanning light adjustment should be made by the same steps for all the three colors of red, green, and blue.**
5. Touch [END].
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Setting range

- -4 to +4 (Step: 1)

5.21.10 Mixed original size adjustment

(1) Use

- To adjust paper length detection accuracy used during paper feed in DF mixed original mode.
- To set the threshold for each size detection based on the length detected when feeding standard sizes (A4S).
- When the DF control board has been replaced.

(2) Procedure

NOTE

- **Before performing this adjustment, the feed zoom adjustment needs to be complete.**
  I.5.21.8 Feed Zoom

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Mixed original Size adjustment].
3. Place the chart in the document feed tray. (SEF direction)
4. Press the Start key.
5. Make sure that result is OK. Then, touch [SET].
6. Touch [END].
7. Touch [Exit] on the Service Mode screen.
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.11 Home Read Position Adjust

(1) Use

- When image failure occurs due to the dirty back side shading shaft on the DF, use this function to adjust the home position of the shading shaft and to change a shading reference plate.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Home Read Position Adjust].
3. Press the value using the [+] / [-] key.
4. Touch [END].

5. Touch [Exit] on the Service Mode screen.
6. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Default setting

- 0

(4) Setting range

- -4 to +4 (Step: 1)

5.21.12 FD-Mag. Adj. (B)

(1) Use

- To adjust the feed zoom in the back side feeding direction on the DF.
- When DF has been replaced.

(2) Procedure

NOTE

- **Before this adjustment, make sure that the "Feed Zoom" adjustment and the "Original Tray Width" adjustment have completed.**
  I.5.21.8 Feed Zoom
  I.5.21.6 Original Tray Width

(a) Orig. Feed Zoom Ad

- The difference in the widths of D between the chart and the copy sample should fall within the following target.

Target	0 ± 1.0 mm
Setting range	-2.00% to +2.00% (1 step: 0.1%)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. D width on the chart and one on the copy sample are measured and adjusted so that the difference of D width satisfies the target shown below.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [FD-Mag. Adj. (B)].
6. Touch [Orig. Feed Zoom Ad].
7. Enter the value using the [+] / [-] keys.
   - If the difference in the widths of D is greater than the target, enter the - value.
   - If the difference in the widths of D is smaller than the target, enter the + value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Press the start key, and check the difference in the width D between the chart and the discharged copy sample.
13. Touch [END] twice.
14. Touch [Exit] on the Service Mode screen.
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Auto Adjust

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [FD-Mag. Adj. (B)].
3. Touch [Auto Adjust].
4. Place the chart in the document feed tray (with the first side facing up).
5. Press the Start key.
6. Make sure that result is OK.
7. Touch [SET] and then [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

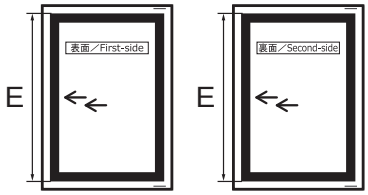
5.21.13 Main Scanning Direction Zoom

(1) Use

- To adjust the feed zoom in the back side main scanning direction on the DF.
- When DF and CIS has been replaced.

(2) Procedure

(a) Main scanning direction zoom adj



- The difference in the widths of E between the chart and the copy sample should fall within the following target.

Target	0 ± 0.7 mm
Setting range	-1.00% to +1.00% (1 step: 0.1%)

1. Place the chart in the document feed tray (with the first side facing up).
2. Make a full size copy of the chart.
3. E width on the chart and one on the copy sample are measured and adjusted so that the difference of E width satisfies the target shown below.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Main Scanning Direction Zoom].
6. Touch [Main scanning direction zoom adj].
7. Enter the value using the [+] / [-] keys.
   - If the difference in the widths of E is greater than the target, enter the - value.
   - If the difference in the widths of E is smaller than the target, enter the + value.
8. Touch [Test Copy].
9. Select the tray loading paper for the test copy.
10. Touch [2].
11. Touch [2-sided -> 2-sided].
12. Place the chart in the document feeding tray (with the first side facing up).
13. Press the start key, and check the difference in the width E between the chart and the discharged copy sample.
14. Touch [END] twice.
15. Touch [Exit] on the Service Mode screen.
16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(b) Auto Adjust

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Main Scanning Direction Zoom].
3. Touch [Auto Adjust].
4. Place the chart in the document feed tray (with the first side facing up).
5. Press the Start key.
6. Make sure that result is OK.
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.
9. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.21.14 Skew Measurement

(1) Use

- Measure the DF skew, adjust accordingly.

(2) Procedure

(a) DFSkew (Front)

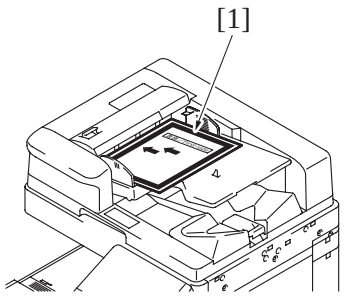
1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Skew Measurement] -> [DFSkew (Front)].
3. Place the chart in the document feeding tray.

NOTE

- **Set DF reading chart (for Duplex) [1] with its first-side facing up and the arrow facing the leading edge.**

DF reading chart (for Duplex): First-side

Chart setting direction



4. Press the Start key.
   - The measurement results are displayed on the panel.
5. Repeat procedures 3 to 4 five times.
6. Check the [Avg. Value] displayed on the panel is within the "specified range".
   - Specified range: +/- 0.5 %
7. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
   I.12.1.2 Adjusting front side skew feed on dual scan document feeder

(b) DFSkew (Back)

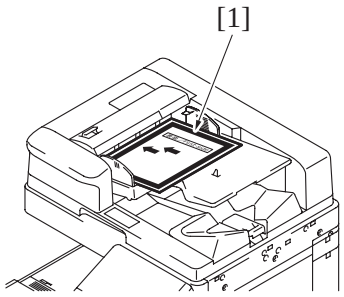
1. Call the Service Mode to the screen.
2. Touch [ADF] -> [Skew Measurement] -> [DFSkew (Back)].
3. Place the chart in the document feeding tray.

NOTE

- **Set DF reading chart (for Duplex) [1] with its first-side facing up and the arrow facing the leading edge.**

DF reading chart (for Duplex): First-side

Chart setting direction



4. Press the Start key.
   - The measurement results are displayed on the panel.
5. Repeat procedures 3 to 4 five times.
6. Check the [Avg. Value] displayed on the panel is within the "specified range".
   - Specified range: +/- 0.5 %
7. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
   I.12.1.3 Adjusting back side skew feed on dual scan document feeder

5.21.15 ADF automatic Adjustment

(1) Skew Measurement

(a) Use

- Measure the DF skew, adjust accordingly.

NOTE

- **This function is the same as the setting below.**
  - **[Service Mode] -> [ADF] -> [Skew Measurement]**
- **Be sure to perform [Sub Scanning] and then [Main Scanning] in this order if this is adjusted after [Skew Measurement].**

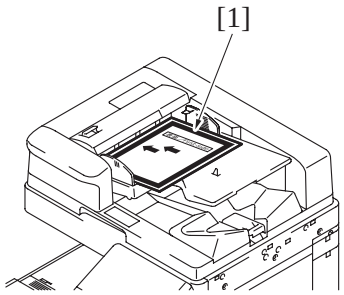
- **The adjustment of [Sub Scanning] and [Main Scanning] uses the result of [Skew Measurement].**

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [ADF] -> [ADF automatic Adjustment] -> [Skew Measurement].
3. Place the chart in the document feeding tray.
   NOTE
   - **Set DF reading chart (for Duplex) [1] with its first-side facing up and the arrow facing the leading edge.**

DF reading chart (for Duplex): First-side

Chart setting direction



4. Press the Start key.
   - The measurement results are displayed on the panel.
5. Repeat procedures 3 to 4 five times.
6. Check the [Avg. Value] displayed on the panel is within the "specified range".
   - Specified range: +/- 0.5 %
7. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.
   - I.12.1.2 Adjusting front side skew feed on dual scan document feeder
   - I.12.1.3 Adjusting back side skew feed on dual scan document feeder

(2) Sub Scanning

(a) Use

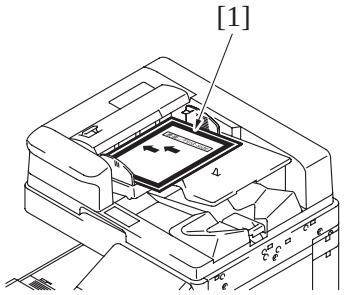
- This adjustment is the same as performing [Auto Stop Position Adjustment] of the ADF sub scanning (1-Side and 2-Side) and [Auto Adjust] of [Feed Zoom] (1-Side and 2-Side) at the same time.
  NOTE
  - **This function is the same as the setting below.**
    - **[Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Sub Scanning Direction 1-Side]**
    - **[Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Sub Scanning Direction 2-Side]**
    - **[Service Mode] -> [ADF] -> [Feed Zoom] -> [Auto Adjust]**
    - **[Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)] -> [Auto Adjust]**
  - **Be sure to perform [Sub Scanning] and then [Main Scanning] in this order if this is adjusted after [Skew Measurement].**
  - **The adjustment of [Sub Scanning] and [Main Scanning] uses the result of [Skew Measurement].**

(b) Procedure

1. After measuring skew in [ADF] -> [ADF automatic Adjustment] -> [Skew Measurement], touch [Sub Scanning].
2. Place the chart in the document feeding tray.
   NOTE
   - **Set DF reading chart (for Duplex) [1] with its first-side facing up and the arrow facing the leading edge.**

DF reading chart (for Duplex): First-side

Chart setting direction



3. Press the start key.
   - The measurement results are displayed on the panel.
4. Repeat procedures 2 to 3 five times.
5. Touch [Apply].
6. Exit the Service Mode.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Main Scanning

(a) Use

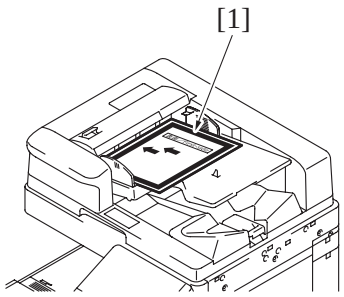
- This adjustment is the same as performing [Auto Stop Position Adjustment] of the ADF main scanning (1-Side and 2-Side) and [Auto Adjust] of [Main Scanning Direction Zoom] (1-Side and 2-Side) at the same time.
  NOTE
  - **This function is the same as the setting below.**
    - **[Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning Direction Front]**
    - **[Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning Direction Back]**
    - **[Service Mode] -> [ADF] -> [Main Scanning Direction Zoom] -> [Auto Adjust]**
  - **Be sure to perform [Sub Scanning] and then [Main Scanning] in this order if this is adjusted after [Skew Measurement].**
  - **The adjustment of [Sub Scanning] and [Main Scanning] uses the result of [Skew Measurement].**

(b) Procedure

1. After measuring skew in [ADF] -> [ADF automatic Adjustment] -> [Sub Scanning], touch [Main Scanning].
2. Place the chart in the document feeding tray.
   NOTE
   - **Set DF reading chart (for Duplex) [1] with its first-side facing up and the arrow facing the leading edge.**

DF reading chart (for Duplex): First-side

Chart setting direction



3. Press the start key.
   - The measurement results are displayed on the panel.
4. Repeat procedures 2 to 3 five times.
5. Touch [Apply].
6. Exit the Service Mode.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

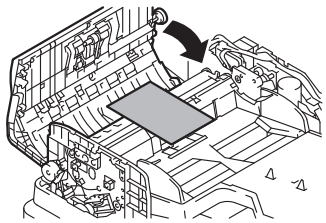
5.21.16 Multi-Feed DetectionAdj

(1) Use

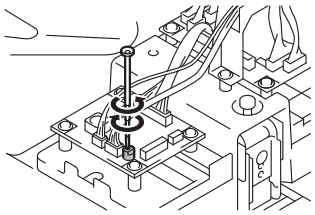
- To display the sensor value used for Multi feed detection sensor adjustment.
- Used after the optional Double feed detection Kit UK-501 is replaced.

(2) Procedure

1. Open the top door of the reverse dual scan document feeder.
2. Set the supplied adjustment sheet on the detection area of the multi feed detection sensor, then close the top door.



3. Press the Menu key to close the Paper Jam screen.
4. Touch [ADF] -> [Multi-Feed DetectionAdj.].
5. Press the start key.
   - The measurement results are displayed on the panel.
   - Check whether the Check Value falls between 3700 and 3800.
6. If the check result is out of the range, perform the following adjustment.
7. Remove the rear cover of DF.
   G.6.2.2 Rear cover (dual scan document feeder)

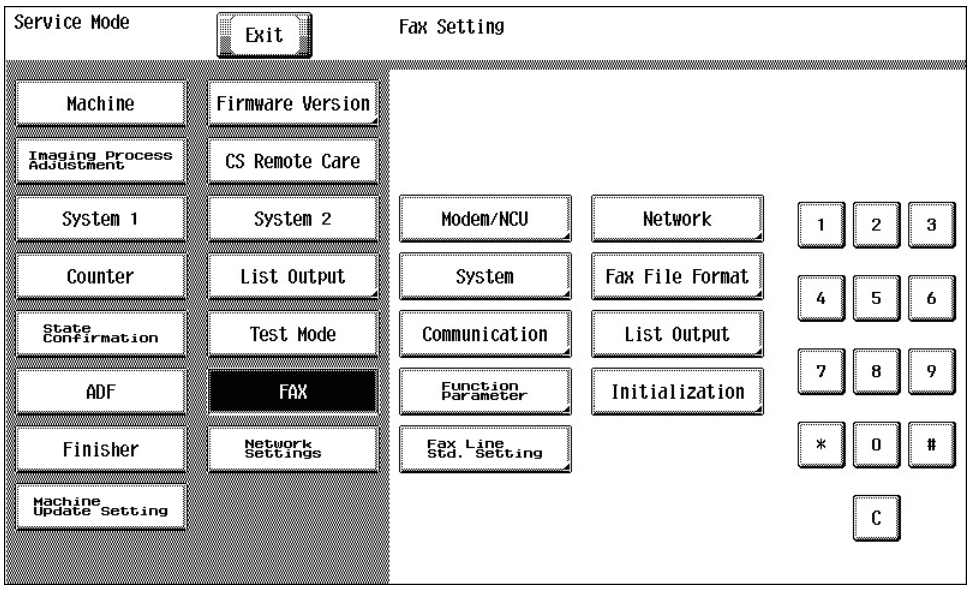


8. Adjust the Check Value by turning the adjustment screw on the sensor control board, so that the value falls within 3,700 to 3,800.
   - Clockwise: The value will decrease.
   - Counterclockwise: The value will increase.

   NOTE
   - **Be sure not to touch any elements other than the adjustment screw on the sensor control board.**

5.22 FAX (Line1)

Fax Settings



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 1) is set to “Set”.

5.22.1 Modem/NCU

(1) V34:1/2 : RX Max. Bit Speed

(a) Use

- To set the max. bit speed for reception in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2400 to 33600 bps (steps: 2400 bps)

(2) V34:1/2 : TX Max. Bit Speed

(a) Use

- To set the max. bit speed for transmission in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2,400 to 33,600 bps (steps: 2,400 bps)

(3) V34:1/2 : Control CH Speed

(a) Use

- A bit speed of the control channel.
- The negotiation of 2400/1200 is performed in the V.34 start-up procedure.

(b) Default setting

- 1200 bps

(c) Setting item

- 1200 bps
- 2400 bps

(4) V34:1/2 : Max. SYMB Speed

(a) Use

- Maximum modulation speed (baud rate) of V.34
  - 3429 SYMB: 3429 33.6 k to 4.8 k
  - 3200 SYMB: 3200 31.2 k to 2.4 k
  - 3000 SYMB: 3000 28.8 k to 2.4 k
  - 2800 SYMB: 2800
  - 2400 SYMB: 2400
- The modulation speed of both sending and receiving change by change of setting.

- The upper limit value of V.34 maximum bit speed is determined.
- Normally you do not need to change the value. In case that a V.34 error frequently occurs, you can attempt to set up 3000 SYMB and decrease the symbol rate, for instance.

(b) Default setting

- 3429 SYMB

(c) Setting item

- 2400 SYMB
- 2800 SYMB
- 3000 SYMB
- 3200 SYMB
- 3429 SYMB

(5) V34:2/2: V34 Points

(a) Use

- Select the optimal Eye Pattern in accordance with the line state obtained from V.34 transmission training.

(b) Default setting

- Auto

(c) Setting item

- 16-Point
- 4-Point

(6) V17 Send Max Speed: TX Max. Speed

(a) Use

- To set the max. speed for transmission.

(b) Default setting

- V17-14400bps

(c) Setting item

- V17-14400 bps
- V17-12000bps
- V17-9600bps
- V17-7200bps
- V29-9600bps
- V29-7200bps
- V27-4800bps
- V27-2400bps

(7) V17 Send Max Speed: RX Max. Speed

(a) Use

- To set the max. speed for reception.

(b) Default setting

- V17-14400bps

(c) Setting item

- V17-14400 bps
- V29-9600bps
- V27-4800bps

(8) TxATT: PIX TxATT

(a) Use

- To set the output level of PIX TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(9) TxATT: TONE/Procedure Signal TxATT

(a) Use

- To set the output level of TONE/Procedure Signal TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(10) TxATT: CED/ANSam TxATT

(a) Use

- To set the output level of CED/ANSam TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(11) TxATT: DTMF TxATT

(a) Use

- To set the output level of DTMF TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(12) Level: CD/SED ON Level

(a) Use

- To set reception signal sensitivity level.
- SED is not used.

(b) Default setting

- -48 dBm

(c) Setting range

- -48 to -33 dBm (steps: 5 dBm)

(13) Level: DTMF H-L Level Difference

(a) Use

- To set DTMF H-L level difference.

(b) Default setting

- 2.0 dB

(c) Setting range

- 1.0 to 4.0 dB (step: 0.5 dB)

(14) Cable EQL

(a) Use

- To correct the delay characteristics of the communication line.

(b) Default setting

- 0 Km

(c) Setting item

- 0 Km
- 1.8 Km
- 3.6 Km
- 7.2 Km

5.22.2 Network

(1) Network Setting 1: Receive Signal Detection Mode

(a) Use

- To set whether to detect the receive signal by the number of times or by time.
- Sets to “Time” when ringer can not be detected by the number.

(b) Default setting

- No. of Times

(c) Setting item

- No. of Times

- Time

(2) Network Setting 1: BUSY TONE Detection

(a) Use

- To set whether to use the Busy Tone detection or not.

(b) Default setting

- ON (Japan, US)
- OFF (EU)

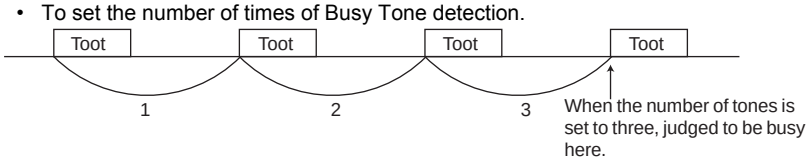
(c) Setting item

- ON
- OFF

(3) Network Setting 1: No. of Times of Busy Tone Detection

(a) Use

- To set the number of times of Busy Tone detection.



(b) Default setting

- 2 (Japan, US)
- 3 (EU)

(c) Setting range

- 0 to 15 count (step: 1 count)

NOTE

- **0 time shows no detection is done.**

(4) Network Setting 2: 1300 Hz Detection

(a) Use

- To set whether to use the 1300 Hz detection or not.
- Set this function to “ON” if the facsimile network (F-net) is to be used.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(5) Network Setting 2: Dial Tone Detection

(a) Use

- To set whether to use the Dial Tone detection or not.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(6) Network Setting 2: DC-LOOP Check

(a) Use

- Checks the DC loop current before dialing.
- When the current is zero, an error occurs. (T.80)
- You can change the setting to be compliant to standards in other countries. In Japan, set this parameter to OFF.

(b) Default setting

- OFF

(c) Setting item

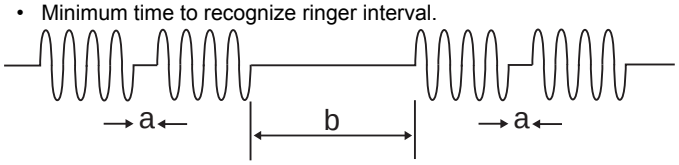
- ON

- OFF

(7) Network Setting 2: min. RING OFF Time

(a) Use

- Minimum time to recognize ringer interval.



a	To avoid judging “a” as a ring-off time.	b	Ring-off time

(b) Default setting

- 200 (Japan)
- 0 ms (US, EU)

(c) Setting range

- 0 to 1000 ms (step: 100 ms)

(8) Network Setting 2: Response Waiting Time

(a) Use

- To set the response waiting time.

Response waiting timer (55sec)	Calling	Starts after dialing. Until CED is received.

(b) Default setting

- 55 s

(c) Setting range

- 35 to 115 s (steps: 1 s)

(9) Network Setting 2: Pause Time

(a) Use

- The pause time for one pause key (pause between digits)

(b) Default setting

- 1 s

(c) Setting range

- 1 to 7 s (steps: 1 s)

5.22.3 System

(1) Display Setting: Closed area Rx

(a) Use

- To set whether or not to use the menu display for closed reception by using F-code for junk fax messages.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(2) Display Setting: Re-Transmission

(a) Use

- To set whether to use the re-transmission function or not.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

NOTE
- **This setting is "OFF" when [Service Mode] -> [Billing Setting] -> [Management Function Choice] shows that key counter or vendor 2 is mounted.**

(3) Display Setting: Compulsory Memory RX

(a) Use
- To set whether to use the compulsory memory reception function or not.

(b) Default setting
- ON

(c) Setting item
- ON
- OFF

NOTE
- **When turned "ON", the function permits selection of ON or OFF setting for the compulsory memory reception function that allows a document when received not to be printed automatically and, instead, to be printed through manual operation.**

(4) Display Setting: Reject Calls

(a) Use
- To set whether to use the reject calls function or not.

(b) Default setting
- ON (Japan)
- OFF (US, EU)

(c) Setting item
- ON
- OFF

NOTE
- **When turned "ON", the function displays the function that allows the user to set a remote machine to be rejected as a reject call number.**

(5) Display Setting: Relay

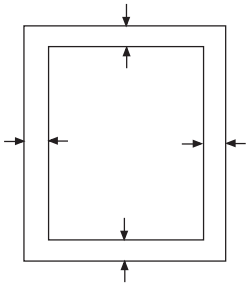
(a) Use
- To set whether to use the relay function or not.

(b) Default setting
- ON (Japan)
- OFF (US, EU)

(c) Setting item
- ON
- OFF

(6) Scan Setting: Frame Erasure HP

(a) Use
- To set the frame erasure size during reading.
- The four edges of the original are erased by the same width.



- Erases the outer lines to prevent black lines from appearing. Effective in the book transmission.

(b) Default setting
- 10 mm

(c) Setting item
- 5 mm
- 10 mm

- 15 mm

(7) System Function: Fax Board Watchdog

(a) Use

- To set whether to enable watchdog by the fax board CPU or not.

ON	Reset when hung up.
OFF	Keeps being hung up.

(b) Default setting

- ON

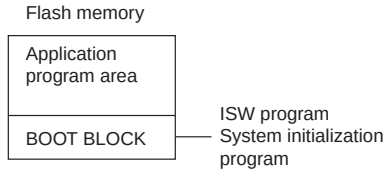
(c) Setting item

- ON
- OFF

(8) System Function: Fax BOOT Rewrite on ISW

(a) Use

- Required when a BOOT BLOCK program is upgraded or a hardware is changed.



(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(9) System Function: Error Code Display Time

(a) Use

- To set the communication error code display time.

(b) Default setting

- 20 s

(c) Setting item

- 10 to 250 s (step: 10 s)
- HOLD

(10) Communication Setting: Auto Rotation Send (LT)

(a) Use

- To set whether to rotate the Letter size original automatically or not for transmission.

ON	Transmits in the A4 width.
OFF	Transmits in the A3 width.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(11) Communication Setting: Auto Rotation Send (A4T)

(a) Use

- To set whether to rotate the A4 size original automatically or not for transmission.

ON	Transmits in the A4 width.
OFF	Transmits in the A3 width.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(12) Communication Setting: Error Page Resending

(a) Use

- To set whether to retransmit, after a communication error occurs, the document starting with the error page or all pages.

Error Page	Retransmit the document starting with the error page
All Page	Retransmit the document all pages

(b) Default setting

- Error Page

(c) Setting item

- Error Page
- All Page

(13) Communication Setting: Number of Redials (Error Page)

(a) Use

- To set the number of redials for the error page.
- Counted as a busy redial when the error page redial is busy.

(b) Default setting

- The default setting is different depending on the country.

(c) Setting range

- 0 to 7 (step: 1)

5.22.4 Fax File Format

(1) Use

The following data can be initialized.

- All of the scan/fax documents stored in the box are erased.
- All of the boxes produced automatically by the F code are erased.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [FAX].
3. Touch [Fax File Format].
4. Press the Start key.
5. The Fax File Format is executed.

5.22.5 Communication

(1) Protocol: V8 / V34 Protocol

(a) Use

- To set whether to use the V.8/V.34 protocol or not.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(2) Protocol: V17 EP TONE

(a) Use

- Whether the EP tone (Echo Protect: 2100Hz) is added to the top of the training signal.

(b) Default setting

- ON

(c) Setting item

- ON

- OFF

(3) Protocol: V29 EP TONE

(a) Use

- Whether the EP tone (Echo Protect: 2100Hz) is added to the top of the training signal.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(4) Protocol: V17 Selection Mode "-"

(a) Use

- V.34 is not used when a dash (-) is added at the top of dial number.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(5) Protocol: ANSam Send Time

(a) Use

- To set the transmission time for the V.8 protocol signal ANSam.
- Usually not need to be changed.

(b) Default setting

- 4.0 s

(c) Setting range

- 1.0 to 5.5 s (step: 0.5 s)

(6) Int'l Comm. Function: Foreign Communication Function

(a) Use

- To set whether or not to use the mode that employs the number of DIS waiting times.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(7) Int'l Comm. Function: No. of DIS Waiting Times at Foreign Communication

(a) Use

- To set the number of DIS waiting times.

(b) Default setting

- 1

(c) Setting item

- 1
- 2

(8) Int'l Comm. Function: V34 Speed

(a) Use

- To set the V.34 international communication mode speed.

(b) Default setting

- 28800 bps

(c) Setting range

- 16800 to 33600 bps (step: 2400 bps)

(9) Int'l Comm. Function: V17 Speed

(a) Use

- To set the V.17 international communication mode speed.

(b) Default setting

- 7200 bps

(c) Setting range

- 7200 to 14400 bps (step: 2400 bps)

(10) Int'l Comm. Function: V29 Speed

(a) Use

- To set the V.29 international communication mode speed.

(b) Default setting

- 4800 bps

(c) Setting range

- 2400 to 9600 bps (step: 2400 bps)

(11) TIMER 1: T1

(a) Use

T1 timer (T.30 standard)	Calling	Designate by the response waiting timer
	Called	Starts after DIS is output. The waiting time until DCS is received.
Response waiting timer (55sec)	Calling	Starts after dialing. Until CED is received.

(b) Default setting

- 35 s

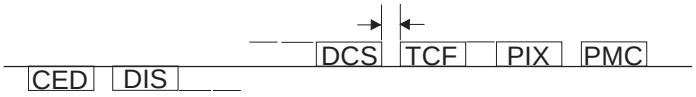
(c) Setting range

- 30 to 90 s (step: 5 s)

(12) TIMER 1: DCS-TCF DELAY

(a) Use

- To set the delay time between DCS and TCF.



PMC: Post Message Command

(b) Default setting

- 80 ms

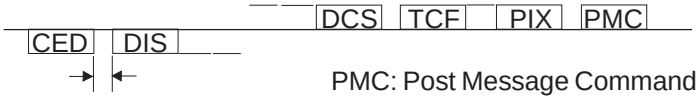
(c) Setting range

- 50 to 150 ms (step: 10 ms)

(13) TIMER 1: CED-DIS DELAY

(a) Use

- To set the delay time between CED and DIS.



PMC: Post Message Command

(b) Default setting

- 80 ms

(c) Setting range

- 50 to 150 ms (step: 10 ms)

(14) TIMER 1: PIX-PMC DELAY

(a) Use

- To set the delay time between PIX and PMC.

PMC: Post Message Command

(b) Default setting

- 80 ms

(c) Setting range

- 50 to 150 ms (step: 10 ms)

(15) TIMER 2: EOL-EOL

(a) Use

- To set the transmission time between EOLs.

(b) Default setting

- 13.0 s

(c) Setting range

- 4.0 to 25.5 s (step: 0.5 s)

(16) TIMER 2: CFR-PIXWAIT

(a) Use

- Sets the waiting time from CFR is sent to the image signals are received.
- Radio fax on boats occasionally requires more than 6 sec.

(b) Default setting

- 6.0 s

(c) Setting range

- 6.0 to 25.5 s (step: 0.5 s)

(17) TIMER 2: EOM-PIXWAIT

(a) Use

- Waiting time to receive PIX before sending DIS when EOM is used.
- Some fax machines sends PIX without returning to Phase B in spite of EDM.

(b) Default setting

- 5.5 s

(c) Setting range

- 5.5 to 25.5 s (step: 0.5 s)

(18) TIMER 2: JM WAIT

(a) Use

- Time to continue outputting CM until receiving JM.

(b) Default setting

- 9.0 s

(c) Setting range

- 6.0 to 25.5 s (step: 0.5 s)

(19) Others: ECM Function

(a) Use

- Set whether or not to cancel reception ECM (error correction mode).

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(20) Others: Frame Size at ECM TX

(a) Use

- To set the frame size at ECM transmission.

(b) Default setting

- 256

(c) Setting item

- 64
- 256

(21) Others: Coding Ability

(a) Use

- To set the coding ability.
- Effective to both sending and reception.

(b) Default setting

- MH/MR/MMR/JBIG

(c) Setting item

- MH
- MH/MR
- MH/MR/MMR
- MH/MR/MMR/JBIG

5.22.6 List Output

(1) Report Addition Information

(a) Use

- To set whether or not to add the diagnosis code or dial number to the communication journal.

Diagnosis Code	The diagnosis code is printed on the communication journal.
Dial Number	The dial number is printed on the communication journal.

(b) Default setting

- OFF

(c) Setting item

- Diagnosis Code
- Dial Number
- OFF

(2) TX Result Report

(a) Use

- To set whether or not to add image to the transmission result report.
- Even if set to "With image" images are not attached at the time of the quick memory transmission and the manual transmission.

(b) Default setting

- With image

(c) Setting item

- With image

- Without image

(3) Protocol Trace Auto Output

(a) Use

- To set the timing for the protocol trace auto output.

(b) Default setting

- OFF

(c) Setting item

- Always
- Error
- OFF

5.22.7 Function Parameter

(1) Use

- Function parameters can be set through addressing.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [FAX].
3. Touch [Function Parameter].
4. Select the [Address] and then, enter the address using [A] to [F] or keypad.
   - A Cursor is movable if ◀ or ▶ is pushed.
5. Next, select [Data] and enter a value using binary numbers with keypad.
6. When the address and the value are correct, touch [Apply].
7. After the settings have been completed, touch [END].

(3) Address parameter list

NOTE

- **When changing a value in this address parameter list, be sure to comply with the phone line standards of other countries.**
- **Depending on values that have been changed, compliance with the phone line standards of other countries may not be obtained.**
  - **FAX setting (Address parameter list: for line 1, line 2, line 3 and line 4)**
  - **FAX setting (Address parameter list: for line 1)**
  - **FAX setting (Address parameter list: for line 2)**
  - **FAX setting (Address parameter list: for line 3)**
  - **FAX setting (Address parameter list: for line 4)**

5.22.8 Initialization

(1) Use

- The following data can be initialized.

Fax Function Parameter	The function set condition is initialized into the Factory Default condition.
Communication Journal Data	All of the Communication Journal is erased.

NOTICE

- For the formats of the Abbreviated Registration Data, the Program Registration Data, The Group Registration Data, and the F-code Box Data, see "I.5.22.4 Fax File Format".

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [FAX].
3. Touch [Initialization].
4. Select data you want to initialize.
   - Supplement: Two or more selections are possible for data.
5. Touch [Yes].
6. When a verification message is displayed, touch [Yes].
7. The data selected is initialized.

5.22.9 FAX Line Std. Setting

(1) Use

- Used to confirm fax settings.

NOTE

- **If the following settings are changed, the settings from [Service Mode] -> [Fax Settings] -> [Line1] -> [Network] and [System] are also changed.**
  FAX Line Std. Setting 1: Receive Signal Detection Mode, BUSY TONE Detection, No. of Times of Busy Tone Detection
  FAX Line Std. Setting 2: Dial Tone Detection, Pause Time, Response Waiting Time
  FAX Line Std. Setting 3: Error Page Resending, Number of Redial
- **If the following settings are changed, the settings from [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] is also changed.**
  FAX Line Std. Setting 1:Number of RX Call Rings, Receive Time Interval Setting

FAX Line Std. Setting 4: Number of Redials, Redial Interval, Line Monitor Sound Volume (Send), Line Monitor Sound Volume (Receive)

(2) FAX Line Std. Setting-V17 RX Error

(a) Use

- This configures whether or not to lower the reception speed when reattempting to receive data after a receive error occurs.

(b) Procedure

1. Call the Service Mode to the screen.
2. Touch [FAX] -> [Line1] -> [FAX Line Std. Setting] -> [FAX Line Std. Setting 3].
3. Select either [ON] or [OFF] for [V17 RX Error].

NOTE

- **When this is set to [ON], the device will use V17 to receive data the next time after a receive error occurs.**

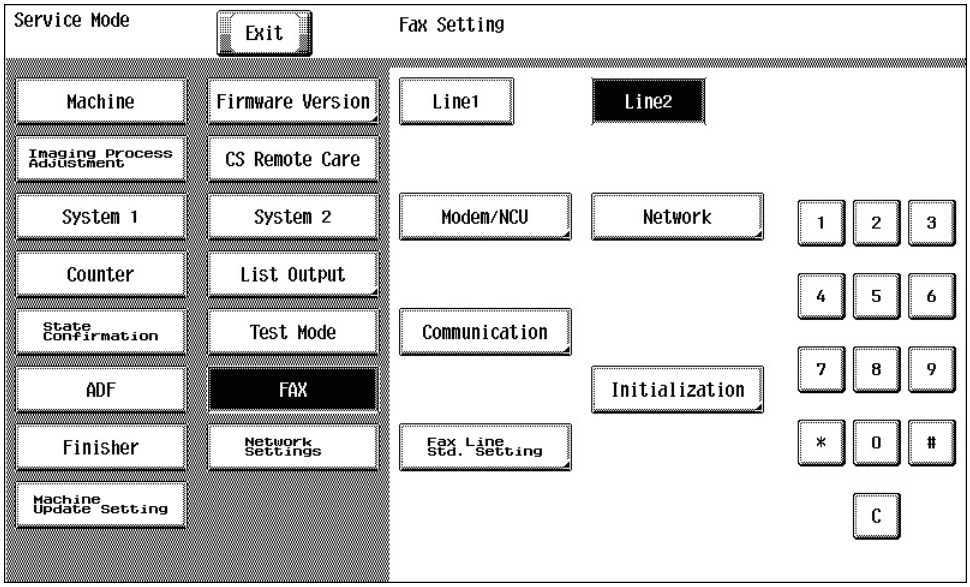
(c) Default setting

- ON

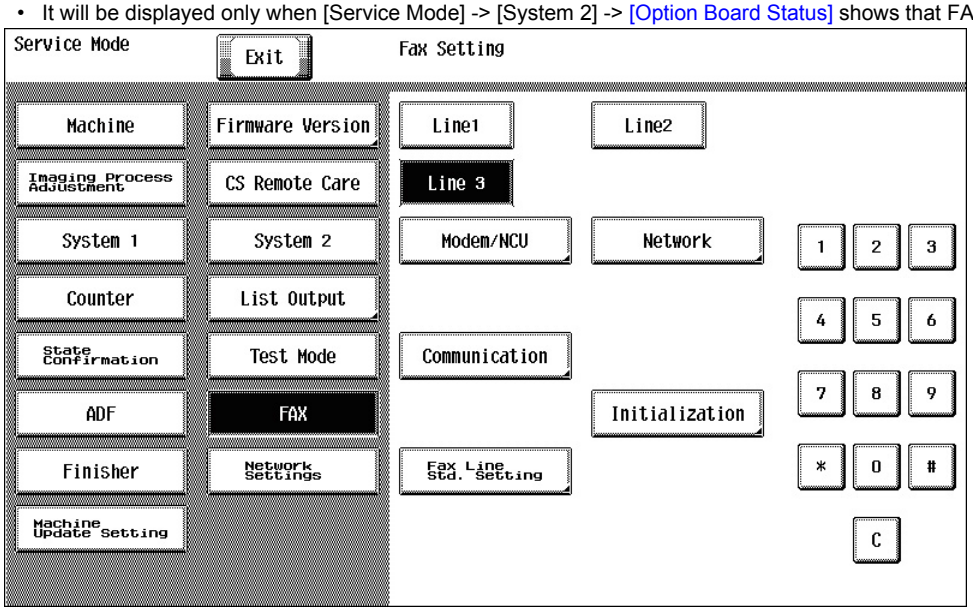
(d) Setting item

- ON
- OFF

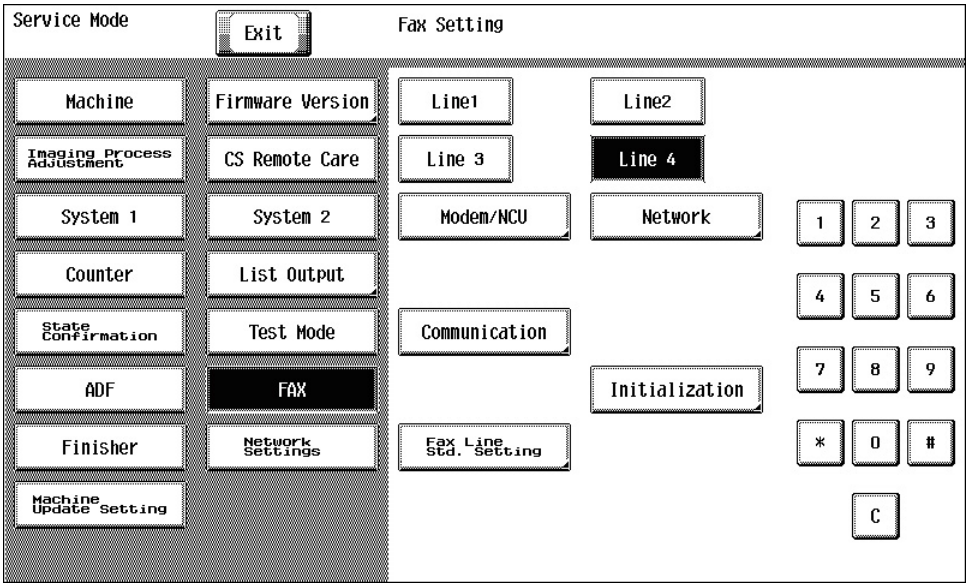
5.23 FAX setting (Line2, Line 3, Line 4)



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 2) is set to “Set”.



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 3) is set to “Set”.



- It will be displayed only when [Service Mode] -> [System 2] -> [Option Board Status] shows that FAX (circuit 4) is set to “Set”.

5.23.1 Modem/NCU

(1) V34:1/2 : RX Max. Bit Speed

(a) Use

- To set the max. bit speed for reception in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2,400 to 33,600 bps (steps: 2,400 bps)

(2) V34:1/2 : TX Max. Bit Speed

(a) Use

- To set the max. bit speed for transmission in V.34.

(b) Default setting

- 33600 bps

(c) Setting range

- 2,400 to 33,600 bps (steps: 2,400 bps)

(3) V34:1/2 : Control CH Speed

(a) Use

- A bit speed of the control channel.
- The negotiation of 2400/1200 is performed in the V.34 start-up procedure.

(b) Default setting

- 1200 bps

(c) Setting item

- 1200 bps
- 2400 bps

(4) V34:1/2 : Max. SYMB Speed

(a) Use

- Maximum modulation speed (baud rate) of V.34
  - 3429 SYMB: 3429 33.6 k to 4.8 k
  - 3200 SYMB: 3200 31.2 k to 2.4 k
  - 3000 SYMB: 3000 28.8 k to 2.4 k
  - 2800 SYMB: 2800
  - 2400 SYMB: 2400
- The modulation speed of both sending and receiving change by change of setting.
- The upper limit value of V.34 maximum bit speed is determined.

- Normally you do not need to change the value. In case that a V.34 error frequently occurs, you can attempt to set up 3000 SYMB and decrease the symbol rate, for instance.

(b) Default setting

- 3429 SYMB

(c) Setting item

- 2400 SYMB
- 2800 SYMB
- 3000 SYMB
- 3200 SYMB
- 3429 SYMB

(5) V34:2/2: V34 Points

(a) Use

- Select the optimal Eye Pattern in accordance with the line state obtained from V.34 transmission training.

(b) Default setting

- Auto

(c) Setting item

- 16-Point
- 4-Point

(6) V17 Send Max Speed: TX Max. Speed

(a) Use

- To set the max. speed for transmission.

(b) Default setting

- V17-14400bps

(c) Setting item

- V17-14400 bps
- V17-12000bps
- V17-9600bps
- V17-7200bps
- V29-9600bps
- V29-7200bps
- V27-4800bps
- V27-2400bps

(7) V17 Send Max Speed: RX Max. Speed

(a) Use

- To set the max. speed for reception.

(b) Default setting

- V17-14400bps

(c) Setting item

- V17-14400 bps
- V29-9600bps
- V27-4800bps

(8) TxATT: PIX TxATT

(a) Use

- To set the output level of PIX TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(9) TxATT: TONE/Procedure Signal TxATT

(a) Use

- To set the output level of TONE/Procedure Signal TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(10) TxATT: CED/ANSam TxATT

(a) Use

- To set the output level of CED/ANSam TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(11) TxATT: DTMF TxATT

(a) Use

- To set the output level of DTMF TxATT.
- Directly sets modem. There are no external attenuator.

(b) Procedure

- The setting value are different depending on the country.

(12) Level: CD/SED ON Level

(a) Use

- To set reception signal sensitivity level.
- SED is not used.

(b) Default setting

- -48 dBm

(c) Setting range

- -48 to -33 dBm (steps: 5 dBm)

(13) Level: DTMF H-L Level Difference

(a) Use

- To set DTMF H-L level difference.

(b) Default setting

- 2.0 dB

(c) Setting range

- 1.0 to 4.0 dB (step: 0.5 dB)

(14) Cable EQL

(a) Use

- To correct the delay characteristics of the communication line.

(b) Default setting

- 0 Km

(c) Setting item

- 0 Km
- 1.8 Km
- 3.6 Km
- 7.2 Km

5.23.2 Network

(1) Network Setting 1: Receive Signal Detection Mode

(a) Use

- To set whether to detect the receive signal by the number of times or by time.
- Sets to “Time” when ringer can not be detected by the number.

(b) Default setting

- No. of Times

(c) Setting item

- No. of Times

- Time

(2) Network Setting 1: BUSY TONE Detection

(a) Use

- To set whether to use the Busy Tone detection or not.

(b) Default setting

- OFF

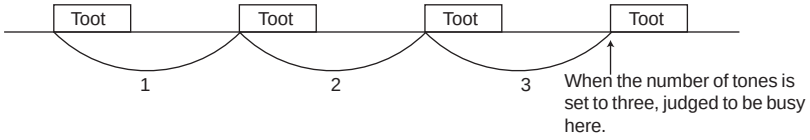
(c) Setting item

- ON
- OFF

(3) Network Setting 1: No. of Times of Busy Tone Detection

(a) Use

- To set the number of times of Busy Tone detection.



(b) Default setting

- 0 times

(c) Setting range

- 0 to 15 count (step: 1 count)

NOTE

- **0 time shows no detection is done.**

(4) Network Setting 2: 1300 Hz Detection

(a) Use

- To set whether to use the 1300 Hz detection or not.
- Set this function to “ON” if the facsimile network (F-net) is to be used.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(5) Network Setting 2: Dial Tone Detection

(a) Use

- To set whether to use the Dial Tone detection or not.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(6) Network Setting 2: DC-LOOP Check

(a) Use

- Checks the DC loop current before dialing.
- When the current is zero, an error occurs. (T.80)
- You can change the setting to be compliant to standards in other countries. In Japan, set this parameter to OFF.

(b) Default setting

- OFF

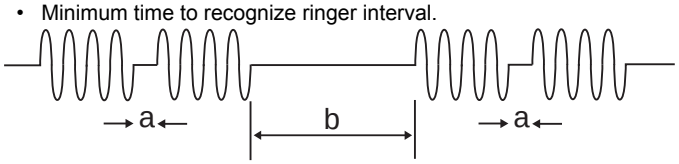
(c) Setting item

- ON
- OFF

(7) Network Setting 2: min. RING OFF Time

(a) Use

- Minimum time to recognize ringer interval.



a	To avoid judging “a” as a ring-off time.	b	Ring-off time

(b) Default setting

- 0 ms

(c) Setting range

- 0 to 1000 ms (step: 100 ms)

(8) Network Setting 2: Response Waiting Time

(a) Use

- To set the response waiting time.

Response waiting timer (55sec)	Calling	Starts after dialing. Until CED is received.

(b) Default setting

- 55 s

(c) Setting range

- 35 to 115 s (steps: 1 s)

(9) Network Setting 2: Pause Time

(a) Use

- The pause time for one pause key (pause between digits)

(b) Default setting

- 1 s

(c) Setting range

- 1 to 7 s (steps: 1 s)

5.23.3 Communication

(1) Protocol: V8 / V34 Protocol

(a) Use

- To set whether to use the V.8/V.34 protocol or not.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(2) Int’l Comm. Function: Foreign Communication Function

(a) Use

- To set whether or not to use the mode that employs the number of DIS waiting times.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(3) Int’l Comm. Function: No. of DIS Waiting Times at Foreign Communication

(a) Use

- To set the number of DIS waiting times.

(b) Default setting

- 1

(c) Setting item

- 1
- 2

(4) Int'l Comm. Function: V34 Speed

(a) Use

- To set the V.34 international communication mode speed.

(b) Default setting

- 28800 bps

(c) Setting range

- 16800 to 33600 bps (step: 2400 bps)

(5) Int'l Comm. Function: V17 Speed

(a) Use

- To set the V.17 international communication mode speed.

(b) Default setting

- 7200 bps

(c) Setting range

- 7200 to 14400 bps (step: 2400 bps)

(6) Int'l Comm. Function: V29 Speed

(a) Use

- To set the V.29 international communication mode speed.

(b) Default setting

- 4800 bps

(c) Setting range

- 2400 to 9600 bps (step: 2400 bps)

(7) Others: ECM Function

(a) Use

- Set whether or not to cancel reception ECM (error correction mode).

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(8) Others: Frame Size at ECM TX

(a) Use

- To set the frame size at ECM transmission.

(b) Default setting

- 256

(c) Setting item

- 64
- 256

(9) Others: Coding Ability

(a) Use

- To set the coding ability.
- Effective to both sending and reception.

(b) Default setting

- MH/MR/MMR/JBIG

(c) Setting item

- MH
- MH/MR
- MH/MR/MMR
- MH/MR/MMR/JBIG

5.23.4 Initialize

(1) Use

- The following data can be initialized.

Fax Function Parameter	The function set condition is initialized into the Factory Default condition.

NOTICE

- For the formats of the Abbreviated Registration Data, the Program Registration Data, The Group Registration Data, and the F-code Box Data, see "I.5.22.4 Fax File Format".

(2) Procedure

1. Turn the main power switch ON.
2. Wait until the warm-up cycle is completed.
   NOTE
   - **Wait until an alarm message, such as "Preparing fax/scan", disappears.**
   - **Execution of "Initialization" before the warm-up cycle is completed may not be successful.**
3. Call the Service Mode to the screen.
4. Touch [FAX].
5. Select a Line.
6. Touch [Initialization].
7. Touch [Fax Function Parameter].
8. Touch [Yes].
9. When a verification message is displayed, touch [Yes].
10. The data selected is initialized.

5.23.5 FAX Line Std. Setting

(1) Use

- Used to confirm fax settings.
  NOTE
  - **When the below settings are changed by this setting, the [Service Mode] -> [FAX] -> [Line 2, Line 3, Line 4] -> [Network] or [Service Mode] -> [FAX] -> [Line1] -> [System] settings are also changed.**
    FAX Line Std. Setting 1: Receive Signal Detection Mode, BUSY TONE Detection, No. of Times of Busy Tone Detection
    FAX Line Std. Setting 2: Dial Tone Detection, Pause Time, Response Waiting Time
    FAX Line Std. Setting 3: Error Page Resending, Number of Redial
  - **If the following settings are changed, the settings from [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] is also changed.**
    FAX Line Std. Setting 1:Number of RX Call Rings, Receive Time Interval Setting
    FAX Line Std. Setting 4: Number of Redials, Redial Interval, Line Monitor Sound Volume (Send), Line Monitor Sound Volume (Receive)

(2) FAX Line Std. Setting-V17 RX Error

(a) Use

- This configures whether or not to lower the reception speed when reattempting to receive data after a receive error occurs.

(b) Procedure

1. Call the Service Mode to the screen.
2. Select [FAX] -> [Line 2/ Line 3/ Line 4] -> [FAX Line Std. Setting] -> [FAX Line Std. Setting 3]
3. Select either [ON] or [OFF] for [V17 RX Error].
   NOTE
   - **When this is set to [ON], the device will use V17 to receive data the next time after a receive error occurs.**

(c) Default setting

- ON

(d) Setting item

- ON
- OFF

5.24 FAX setting (Address parameter list: for line 1, line 2, line 3 and line 4)

5.24.1 0b000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0000	Redial interval	7		Utility Mode (0-3)	0x03	0x03	0x03	X0	00
		6							
		5							
		4							
		3	Redial interval (min, HEX, 0 - 15)						
		2							
		1							
		0							
0b0001	No. of busy redials	7	Redial number of times at the time of T82 on US/CA standard 0: Once 1: Depending on bit3-0 (administrator menu)	Utility Mode (0-2)	0x03	0x03	0x03	X0	01
		6							
		5							
		4							
		3	No. of busy redials (No, HEX, 0 - 15)						
		2							
		1							
		0							
0b0002	No. of error redials	7		Utility Mode Special Setting (0-2)	0x03	0x03	0x03	X0	02
		6							
		5							
		4							
		3	No. of error redials (No, HEX, 0 - 15)						
		2							
		1							
		0							
0b0003	Setting related to FAX memory	7		Utility Mode (0-2) Utility Mode Special Setting (0-2, 4)	0x08	0x08	0x08	X0	03
		6	V34 mode at the time of error page redial 0: Inhibited 1: Enabled						
		5							
		4	Resend from the first page at the time of error page redial 0: Retransmitted from error page 1: Retransmitted from initial page						
		3	Call acceptance operation with toner empty 0: Refused 1: Permitted						
		2							
		1							
		0							
0b0004	FAX communication HP	7		Utility Mode (3-5) Utility Mode Special Setting (2, 6, 7)	0x05	0x05	0x05	X0	04
		6							
		5	Quick memory transmission 0: OFF 1: ON						
		4	File deleted after polled transmission 0: Yes 1: No						
		3	Reception mode 0: Auto 1: Manual						
		2	V.34 0: OFF 1: ON						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	International transmission 0: OFF 1: ON						
		0	ECM transmission 0: OFF 1: ON						
0b0005	Forward TX Setting	7		Utility Mode (0, 1, 6)	0x00	0x00	0x00	X0	05
		6	Two-sided recording of FAX 0: Possible 1: Impossible						
		5							
		4							
		3	Default transfer FAX setting 00: Not specified 01: Line 1 10: Line 2						
		2							
		1	Forward TX Setting 00: No forwarding 01: Forwarding + Always (print) 10: Forwarding + Only when not delivered (print)						
		0							
0b0006	FAX reception automatic output setting	7	Two-sided recording	Utility Mode (0, 1, 2, 4, 6, 7)	0x01	0x01	0x01	X0	06
		6							
		5	Inched recording paper selection						
		4	Fax Output Setting (only for color MFP) 0: Batch Print 1: Page Print NOTE In the case of B&W MFP, only “Batch Print” can be supported. Therefore, always set the value to “0”.						
		3	Face-up output						
		2	Page division recording						
		1	Output tray HP 00:Tray 1 01:Tray 2 10:Tray 3 11:Tray 4						
		0							
0b0007	FAX reception automatic output setting 2	7	STOP is effected for printing during reception	Utility Mode (2-5) Utility Mode Special Setting (6, 7)	0xd4	0xf4	0xd4	X0	07
		6	STOP is effected for printing after reception						
		5	Inched paper priority						
		4	Paper tray fixing 000:Tray 1 001:Tray 2 010:Tray 3 011:Tray 4 100: LCT 101: Auto						
		3							
		2							
		1	LG is used.						
		0	LT is used.						
0b0008	Setting of recording paper for reception	7	Selection without A5R 0: A4->B5 1: B5->A4 Only when all of the following conditions are met: A. Destination is “Japan” or “Europe”. B. Fax reception print is set as follows: [“Split print ON” or “Split print OFF”] and [Paper tray/paper size is auto] C. “Letter/Ledger over A4/A3 OFF”	Utility Mode (0, 1)	0x00	0x00	0x00	X0	08
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1	Paper select mode 00: APS 01: Recording paper designation mode 1 10: Recording paper designation mode 2						
		0							
0b0009	Setting of recording paper size for reception	7		Utility Mode	0x0f	0x1f	0x0f	X0	09
		6							
		5							
		4	01000: A3 01001: B4 01111: A4 10001: 8.5 x 14 11000: 11 x 17 11111: 8.5 x 11						
		3							
		2							
		1							
		0							
0b000a	Target reduction rate when A4/LTR is used	7	Target reduction rate when A4/LTR is used (HEX, %)	-	0x5a	0x5a	0x5a	X0	0A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b000b	Other target reduction rate	7	Other target reduction rate (HEX, %)	-	0x5d	0x5d	0x5d	X0	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b000c	BOOT rewrite on FAX ISW	7		Utility Mode Special Setting (0)	0x00	0x00	0x00	X0	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0	Boot area rewrite 0: No 1: Yes						
0b000d	Reduction rate used in APS	7	Received image reduction rate at APS (HEX, %)	-	0x5d	0x5d	0x5d	X0	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b000e	Minimum reduction rate	7	Received image reduction rate at APS (A3/B4 width) (HEX, %)	Utility Mode	0x60	0x60	0x60	X0	0E
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0b000f	Incomplete TX hold	7	Debug mode 0: OFF 1: ON (3min)	Utility Mode (0-3)	0x00	0x00	0x00	X0	0F
		6							
		5							
		4							
		3	File holding time 0000: 12 hours 0001: 24 hours 0010: 48 hours 0011: 72 hours						
		2							
		1							
		0							

5.24.2 0b001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0010	Inter-station timer	7	HEX (unit: second)(00 - ffh)(00 means 03)	-	0x03	0x03	0x03	X0	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b0012 - 0b0015	Reserved area	7		-	0xff	0xff	0xff	X0	12 - 15
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b0016	PC-FAX RX	7	TSI routing function 0: OFF 1: ON	Utility Mode (0-5)	0x10	0x10	0x10	X0	16
		6	At operation with PC-FAX Rx code unspecified 0: PC Reception 1: Print						
		5	PC-FAX Rx print 0: No 1: Yes						
		4							
		3	PC-FAX reception mode 000: OFF 001: ON + Received at fixed box 010: Dialin + Received at fixed box 011: ON + Received at specified box 100: Dialin + Reception at specified box						
		2							
		1							
		0	Password check 0: OFF 1: ON						
0b0017 - 0b001f	PC-FAX reception password	7	ASCII 20 digits	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X0	17 – 1F
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							

5.24.3 0b002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0020 - 0b002a	PC-FAX reception password	7	ASCII 20 digits	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X0	20 - 2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b002b	FAX reception automatic output setting 3	7		Utility Mode (0-3)	0x01	0x01	0x01	X0	2B
		6							
		5							
		4							
		3	Output No. of copies Setting range:0 - (15)						
		2							
		1							
		0							
0b002c	Setting for 2 lines	7	Line 2 transmission setting 00: Transmission/Reception 01: Reception only 10: Transmission only	Utility Mode (0)	0x00	0x00	0x00	X0	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0b002d	PC-FAX Setting	7		Utility Mode (0-1)	0x00	0x00	0x00	X0	2D
		6							
		5							
		4							
		3							
		2							
		1	PC-FAX transmission line specification 00: Not specified 01: Line 1 10: Line 2 11: Reserved						
		0							

5.24.4 0b003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0032	I-Fax encoding system capability (default for auto transmission capability)	7		Utility Mode (0)	0x04	0x04	0x04	X0	32
		6							
		5							
		4							
		3							
		2	000: (Setting prohibited) 001: MH 010: MR/MH 100: MMR/MR/MH						
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0039	Communication function	7	Interception of 1-address transmission in broadcasting transmission 0: Permitted 1: Prohibited	Utility Mode (0-3)	0x44	0x44	0x44	X0	39
		6	ITI printing, unit ID preference function 0: Not preferred 1: Preferred						
		5	Dial number duplication check during broadcasting transmission 0: Checked 1: Not checked						
		4	F code transmission function 0: No 1: Yes						
		3	Abandoning error pages during transmission 0: Not abandoned 1: Abandoned						
		2	Incomplete TX hold function 0: Yes 1: No						
		1	Relay reception function 0: Yes 1: No						
		0	Confidential reception function 0: Yes 1: No						
0b003a - 0b003f	Character ID [46]	7	ASCII [46] When ID is less than 46 digits, justify to the left and insert space at the top. (With NULL terminators)	Utility Mode Service Mode	ALL 0x00	ALL 0x00	ALL 0x00	X0	3A - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.5 0b004#, 0b005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0040 - 0b005f	Character ID [46]	7	ASCII [46] When ID is less than 46 digits, justify to the left and insert space at the top. (With NULL terminators)	Utility Mode Service Mode	ALL 0x00	ALL 0x00	ALL 0x00	X0	40 - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.6 0b006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0b0060 - 0b0067	Character ID [46]	7	ASCII [46] When ID is less than 46 digits, justify to the left and insert space at the top. (With NULL terminators)	Utility Mode Service Mode	ALL 0x00	ALL 0x00	ALL 0x00	X0	60 - 67
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0b0068	Reception refuse	7		Utility Mode (0)	0x00	0x00	0x00	X0	68
		6							
		5							
		4							
		3							
		2							
		1							
		0	Call acceptance rejected - Number display 0: Disconnected line 1: No response						
0b0069	Recording paper priority selection	7		Utility Mode				X0	69
		6							
		5							
		4							
		3							
		2							
		1	00: Automatic selection 01: Fixed size 10: Priority						
		0							
0b006a	Box number error operation	7		Utility Mode	0x00	0x00	0x00	X0	6A
		6							
		5							
		4	Print or not print the images received when the TSI transfer terminates normally. 0:OFF 1:ON						
		3	Operation with no routing registration or no registered BOX upon the TSI routing turned ON 0: Print output 1: Saved in forced memory reception BOX						
		2	Reception of unregistered box sub No. 00: Print 01: Main line 10: Sub line						
		1							
		0							
0b006c	Reserved area	7		Utility Mode	0x00	0x00	0x00	X0	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.7 0e000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0000	Error line processing/ judgment	7	RTP transmission	-	0x01	0x01	0x82	X1	00
		6							
		5	Error line recirculation						
		4	Addition of error sign						
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	Judgment of No. of sequential error lines						
		1	Error line rate judgment						
		0	Judgment of No. of error lines						
0e0001	No. of error lines-very good	7	No. of very good judgment lines (HEX) No. of error linesVeryGoodErrorNum, MCF is transmitted.	-	0x10	0x10	0x10	X1	01
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0002	No. of error lines-good	7	No. of good judgment error lines (HEX) VeryGoodErrorNum<No. of error linesGoodErrorNum, RTP is transmitted	-	0x40	0x40	0x80	X1	02
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0003	No. of error lines-bad	7	No. of bad judgment error lines (HEX) GoodErrorNum<No. of error lines BadErrorNum, RTN is transmitted. No. of error lines>BadErrorNum, it is considered to be error line over.	-	0x80	0x80	0xff	X1	03
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0004	Rate of error lines-very good	7	Rate of very good judgment error lines (HEX, %) Rate of error linesVeryGoodErrorPercent, MCF is transmitted.	-	0x05	0x05	0x05	X1	04
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0005	Rate of error lines-good	7	Rate of good judgment error lines (HEX, %) VeryGoodErrorPercent<Rate of error linesGoodErrorPercent, RTP is transmitted. Rate of error lines>GoodErrorPercent, RTN is transmitted.	-	0x0a	0x0a	0x0a	X1	05
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0006	No. of continuous error lines-bad	7	No. of bad judgment sequential error lines (HEX) Normal No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.	-	0x03	0x03	0x03	X1	06
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0007	No. of continuous error lines-bad	7	No. of bad judgment sequential error lines (HEX) Fine No. of sequential error linesErrorContNormal, MCF is transmitted.	-	0x06	0x06	0x06	X1	07
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3	No. of sequential error lines>ErrorContNormal, RTN is transmitted.						
		2							
		1							
		0							
0e0008	No. of continuous error lines-bad	7	No. of bad judgment sequential error lines (HEX) 300dpi No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.	-	0x09	0x09	0x09	X1	08
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0009	No. of continuous error lines-bad	7	No. of bad judgment sequential error lines (HEX) Super fine No. of sequential error linesErrorContNormal, MCF is transmitted. No. of sequential error lines>ErrorContNormal, RTN is transmitted.	-	0x0c	0x0c	0x0c	X1	09
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e000a	EP tone addition	7		Utility Mode Special Setting (0,2)	0x06	0x06	0x06	X1	0A
		6							
		5							
		4							
		3							
		2	V.17						
		1							
		0	V.29						
0e000b	CED detection transmission frequency	7		-	0x00	0x00	0x00	X1	0B
		6							
		5							
		4							
		3							
		2							
		1	CED detection 0: Detect 1: Not detect						
		0	CED transmission frequency 0: 2100Hz						
0e000c	TSI/CSI/CIG parameter	7	TSI transmission 0: No 1: Always	-	0xe0	0xe0	0xe0	X1	0C
		6	CSI transmission 0: No 1: Always						
		5	CIG transmission 0: No 1: Always						
		4							
		3							
		2							
		1							
		0	Character ID is put on CSI.						
0e000d	G3 Mode Error	7	Ph-C8 min. limit timer at Non-ECM 0: No 1: Yes	Utility Mode Special Setting (6)	0x00	0x00	0x44	X1	0D
		6	Selection of “-”at dial top 0: OFF 1: ON						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5	RTN reception 0: step down 1: Line disconnect						
		4	Remote reception 0: ID received 1: No limit						
		3	DIS retransmission interval in manual reception 0: 4.5 sec. 1: 3.0 sec.						
		2	DCN transmission at T200						
		1	DIS length at reception limited to 4byte 0: No limit 1: Limit						
		0	DCN transmitted at stop of ph.C						
0e000e	Step up/down	7	Strict TCF check 0: Normal 1: Strict check	-	0x00	0x00	0x00	X1	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0	The PC/BC of the PostMsg is checked while in the ECM reception. 0: Yes 1: No						
0e000f	Delay timer between DCS-TCF	7	DCS - TCF delay timer Unit: (10 ms, HEX)	Utility Mode Special Setting	0x08	0x08	0x08	X1	0F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.8 0e001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0010	Delay timer between PIXPMC	7	PIX - PMC delay timer (Unit: 10 ms, HEX)	Utility Mode Special Setting	0x08	0x08	0x08	X1	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0011	Delay timer between CED-DIS	7	CED - DIS delay timer Unit: (10 ms, HEX)	Utility Mode Special Setting	0x08	0x08	0x08	X1	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0012	T1 timer for calling	7	T1 timer for transmission (Unit: 1 sec, HEX)	Utility Mode	0x23	0x23	0x23	X1	12
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5		Special Setting					
		4							
		3							
		2							
		1							
		0							
0e0013	T1 timer for called	7	T1 timer for reception (Unit: 1 sec, HEX)	Utility Mode Special Setting	0x23	0x23	0x23	X1	13
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0014	ph.C reception limited time	7	Max. reception time per page (Unit: min, HEX) 1 to 255 min.	-	0x0f	0x0f	0x0f	X1	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0015	Timer between EOLs	7	EOL - EOL timer (Unit: 100 ms, HEX)	Utility Mode Special Setting	0x82	0x82	0x82	X1	15
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0016	Timer between frames	7	Timer between frames (Unit: 1 sec, HEX)	-	0x23	0x23	0x23	X1	16
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0017	ANSam signal transmission time	7	ANSam signal transmission time (Unit: 100 ms, HEX)	Utility Mode Special Setting	0x28	0x28	0x28	X1	17
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0018	Ci signal transmission time	7	Ci signal transmission time (Unit: 100 ms, HEX)	-	0x05	0x05	0x05	X1	18
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0019	High-speed signal transmission	7	High-speed signal transmission waiting delay timer (Unit: 10 ms,	-	0x37	0x37	0x37	X1	19
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
	waiting delay timer	5	HEX) (Between CFRPIX/MPS-PIX/ CTR-PIX)						
		4							
		3							
		2							
		1							
		0							
0e001a	ph.C top dummy data transmitting time	7	ph.C top dummy data transmission time (Unit: 100 ms, HEX) (Dummy data for non-ECM /Preamble at ECM)	-	0x04	0x04	0x04	X1	1A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e001b	RTC Counter	7		-	0x01	0x01	0x01	X1	1B
		6							
		5							
		4							
		3							
		2	The EOL counter judged to be RTC 000: EOL*2 001: EOL*3 010: EOL*4 011: EOL*5 100: EOL*6						
		1							
		0							
0e001c	Closed area communication	7		-	0x00	0x00	0x00	X1	1C
		6							
		5							
		4							
		3							
		2	Polling TX						
		1	Polling RX						
		0							
0e001d - 0e001f	Machine password [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X1	1D - 1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.9 0e002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0020 - 0e002f	Machine password [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	X1	20 - 2F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.10 0e003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0030	Machine password [20]	7 6 5 4 3 2 1 0	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	0x20	0x20	0x20	X1	30
0e0031 - 0e003f	CSRC password [20]	7 6 5 4 3 2 1 0	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminators)	-	ALL 0x20	ALL 0x20	ALL 0x20	X1	31 - 3F

5.24.11 0e004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0040 - 0e0044	CSRC password [20]	7 6 5 4 3 2 1 0	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminators)	-	ALL 0x20	ALL 0x20	ALL 0x20	X1	40 - 44
0e0045	Watch dog	7 6 5 4 3 2 1		Utility Mode Special Setting (0)	0x01	0x01	0x01	X1	45
		0	Watch dog 0: OFF 1: ON						
0e0046	T2 timer after CFR	7 6 5 4 3 2 1 0	T2 timer value after CFR x100 ms (HEX)	Utility Mode Special Setting	0x3c	0x3c	0x3c	X1	46
0e0047	T2 timer after EOM	7 6 5 4 3 2 1 0	T2 timer after EOM x100ms (HEX)	Utility Mode Special Setting	0x37	0x37	0x37	X1	47

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0048	JIM waiting timer	7	JM waiting timer value x100ms (HEX)	Utility Mode Special Setting	0x5a	0x5a	0x5a	X1	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0049	Destination	7	0: US 1: Canada 2: Japan 3: Australia 4: New Zealand 5: Europe 6: Germany 7: UK 8: France 9: Switzerland 0A: Netherlands 0B: Belgium 0C: Australia 0D: Norway 0E: Sweden 0F: Finland 10: Ireland 11: Denmark 12: Italy 13: Spain 14: Portugal 15: Poland 16: South Africa 17: Taiwan 18: Saudi Arabia 19: China 1A: Malaysia 1B: Singapore 1C: Korea 1D: Hong Kong 1E: Generic (OT) 1F: Argentina 20: Brazil 21: Vietnam 22: Philippines 23: Russia	Service Mode	0x02	0x00	0x05	X1	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e004a	Function when DIS signal is created	7		-	0x01	0x01	0x01	X1	4A
		6							
		5							
		4							
		3							
		2							
		1	Change-over of the silent interval between ANSam and DIS (For revision T.30) 0: Silent interval of 450 ms 1: 75 ms						
		0	V8 capability, if available, of DIS to transmit with V.21 0: V.8 bit ON 1: V.8 bit OFF						
0e004b	Signal check at the time of F code communication	7		-	0x00	0x00	0x00	X1	4B
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	Check of PWD and SID received signal in F code communication 0: Signal checked 1: PWD and SID not distinguished						
0e004c	No. of CI signal transmission in manual transmission	7 6 5 4 3 2 1 0	CI signal repetitive transmission frequency when no ANSam received after CI transmission (times, HEX)	-	0x03	0x03	0x03	X1	4C
0e004d	Tone detection time (PB)	7 6 5 4	PB OFF time integration 0 to 15 (x10ms) (50ms if 0)	-	0x55	0x55	0x55	X1	4D
		3 2 1 0	PB ON time integration 0 to 15 (x10ms) (50ms if 0)						
0e004e	Time for modem response waiting timeout	7 6 5 4 3 2 1 0	Waiting event from modem/ Response waiting timeout time (x10sec, HEX) (0 counted as 90 sec.)	-	0x00	0x00	0x00	X1	4E
0e004f	Continuous CRP reception frequency resulting in an error	7 6 5 4 3 2 1 0	Sequential CRP reception frequency resulting in error (x1 time, HEX) (0 counted as 3 times)	-	0x00	0x00	0x00	X1	4F

5.24.12 0e005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0050	1300Hz line seizure parameter detection time	7 6 5 4 3 2 1 0	1300Hz tone detection time for no-ringing reception (x100ms, HEX)	-	0x17	0x17	0x17	X1	50
0e0051	1300 Hz tone detection frequency pattern	7 6 5 4 3 2		-	0x00	0x00	0x00	X1	51
		1	1300 Hz tone detection frequency pattern 00: 1300 Hz ±30 Hz						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	01: 1300 Hz ±10Hz						
0e0052	German specifications	7	Custom Mode (clears the FP overwrite of the error line relationship for EU destinations)	-	0x00	0x00	0x0f	X1	52
		6							
		5							
		4							
		3	ERR transmission (DTS sequence)						
		2	DCN reception error ignored						
		1	Line disconnected within 6 sec. after CD OFF in ph.C						
		0	Line disconnected upon reception of DIS to DTC						
0e0053	Retransmission intervals of DIS (Auto reception)	7	DIS re-transmission interval in automatic reception (x0.1 sec.)	-	0x1e	0x1e	0x1e	X1	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0054	TTI for transmission	7		-	0x03	0x03	0x03	X1	54
		6							
		5							
		4							
		3							
		2							
		1	TTI in transmission TTI added						
		0	00: OFF 01: (OFF) 10: INSIDE 11: OUTSIDE						
0e0055	Image reduction parameter	7		-	0x00	0x00	0x00	X1	55
		6							
		5							
		4							
		3							
		2							
		1							
		0	Reduction parameter in main scanning direction 0: Thick line kept 1: Thick line not kept						
0e0056	Main body polling transmission command wait timer	7	Timer for waiting a transmission command (+FDT) from the main body during turnaround of polling transmission (x100ms, HEX) (0 is defaulted to 8 sec.)	-	0x08	0x08	0x08	X1	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0057	Guaranteed time to switch post message command receive modes	7	Guaranteed time to switch post message command receive modes (1-ms increments, HEX) *Translated to 50 ms when the value is "0".	-	0x00	0x00	0x00	X1	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0058	Reserved area	0		-	0x00	0x00	0x00	X1	58
		1							
		2							
		3							
		4							
		5							
		6							
		7							
0e0059	V.8 time out (transmission)	0	V.8 sequence timeout time (transmission)	-	0x00	0x00	0x00	X1	59
		1							
		2							
		3							
		4							
		5							
		6							
		7							
0e005A	V.8 time out (reception)	0	V.8 sequence timeout time (reception)	-	0x00	0x00	0x00	X1	5A
		1							
		2							
		3							
		4							
		5							
		6							
		7							
0e005B	Delay timer between TCF and CFR	0	Delay timer between TCF and CFR (unit: 10 ms, HEX)	-	0x00	0x00	0x00	X1	5B
		1							
		2							
		3							
		4							
		5							
		6							
		7							
0e005C	TCF instantaneous interruption allowable time	7	TCF instantaneous interruption allowable time (Disconnection confirmation time) (unit: 10 ms, HEX)	-	0x00	0x00	0x00	X1	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e005D	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X1	5D -
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.13 12000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
120000	TTI/RTI setting	7		Utility Mode (0, 1, 4)	0x03	0x03	0x03	X2	80

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6	SW for prohibiting the printing of the TTI address 0: Printing of the address allowed 1: Printing of the address not allowed						
		5	RTI addition 00:OFF 01: (OFF) 10: INSIDE 11: OUTSIDE						
		4							
		3	TTI denominator display 0: Total 1: Individual						
		2	Inhibition of TTI setting menu INSIDE display 0: No 1: Yes						
		1							
		0							
120001	Report setting 1	7		Utility Mode (2-5) Utility Mode Special Setting (6)	6c	6c	6c	X2	81
		6	Addition of image 0: No 1: Yes						
		5	Automatic output of reserved report 0: No 1: Yes						
		4	TX result report 00: Not output 01: Output only at errors 10: Always output 11: (Normal output)						
		3							
		2	Automatic output of sequential communication report 0: No 1: ON						
		1							
		0							
120002	Report setting 2	7	The FAX CSRC communication log is printed on the Activity Report 0: No 1: Yes	Utility Mode (0-2) Utility Mode Special Setting (0,1)	0x04	0x04	0x04	X2	82
		6							
		5							
		4							
		3	Automatic daily output of journal 0: No 1: Yes						
		2	Automatic output of journal 100 communication 0: No 1: Yes						
		1	Automatic output or error trace list 0: No 1: Yes						
		0	Automatic output of trace list 0: No 1: Yes						
120003	Output time of daily automatic output of journal (hour: grade of 10)	7	Designation of 24 hours ASCII four digit	-	0x30	0x30	0x30	X2	83
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
120004	Output time of daily automatic output of journal (hour: grade of 1)	7	Designation of 24 hours ASCII four digit	-	0x39	0x39	0x39	X2	84
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120005	Output time of daily automatic output of journal (minute: grade of 10)	7	Designation of 24 hours ASCII four digit	-	0x30	0x30	0x30	X2	85
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120006	Output time of daily automatic output of journal (minute: grade of 1)	7	Designation of 24 hours ASCII four digit	-	0x30	0x30	0x30	X2	86
		6							
		5							
		4							
		3							
		2							
		1							
		0							
120007	Output settings	7	Setting of daily difference for daily mode set for automatic output 0: Daily difference not limited 1: Daily difference limited	Utility Mode (3-5) Utility Mode Special Setting (0)	0x00	0x00	0x00	X2	87
		6							
		5	Transmission result report selection screen 0: Not displayed 1: Displayed						
		4	Broadcast result report output method 0: All destinations 1: 1Each destination						
		3							
		2	Output order of journal transmission result reservation report 0: From old one 1: From new one						
		1							
		0							
120008	Invisible mode	7		-	0x00	0x00	0x00	X2	88
		6							
		5							
		4							
		3							
		2	Display of PCFAX TX [PC] in Note of report 0: No 1: Yes						
		1							
		0	Details of remote station display during program direct registered calls and abbreviated dialing 0: Display of registered name 1: Display of number						
120009	Reserved area	7		-	0x00	0x00	0x00	X2	89
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
12000b	F code report setting	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	X2	8B
		6							
		5							
		4							
		3	Relay request report output 0: No 1: Yes						
		2	Relay TX result report output 0: No 1: Yes						
		1	Bulletin polling transmission report output 0: No 1: Yes						
		0	Confidential reception report output 0: No 1: Yes						
12000c	Internet Fax report Setting	7		Utility Mode	0x61	0x61	0x61	X2	8C
		6	Network Fax RX Error Report 0: OFF 1: ON						
		5	Internet Broadcast Fax Result Report 0: OFF 1: ON						
		4							
		3	E-Mail Message Body printing 0: ON 1: OFF						
		2	TX Error Report printing 0: ON 1: OFF						
		1	MDN Message printing 0: ON 1: OFF						
		0	DSN Message printing 0: ON 1: OFF						
12000d	FAX report setting	7		Utility Mode	0x00	0x00	0x00	X2	8D
		6							
		5							
		4							
		3							
		2							
		1	PC-Fax Error report output 0: No 1: Yes						
		0	Relay print 0: No 1: Yes						
12000e - 12000f	Reserved area	7		-	0x00	0x00	0x00	X2	8E - 8F
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							

5.24.14 13000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130000	Reserved area	7		-	-	-	-	XE	00
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130001	FAX scan HP2	7	Frame erasure HP 01: 5 mm 10: 10 mm 11: 15 mm	-	0x41	0x41	0x41	XE	01
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130002	FAX scan HP3	7		-	0x04	0x04	0x04	XE	02
		6							
		5							
		4							
		3							
		2	Original reading mode 00: Normal 01: Mixed size 10: DF irregular						
		1							
		0	Page transfer read mode 0: Scans from the left 1: Scans from the right						
130003	Reserved area	7		-	-	-	-	XE	03
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130004	Reserved area	7		-	-	-	-	XE	04
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130005	Reserved area	7		-	-	-	-	XE	05
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
130006	Reserved area	7		-	-	-	-	XE	06
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130007	HP for FAX main screen	7	FAX main screen selection 0000: Program 0001: Group 0010: Abbreviation 0011: Keypad 0100: i-Fax	-	0x09	0x09	0x09	XE	07
		6							
		5							
		4							
		3	Automatic screen switching at the time of reception 0: ON 1:OFF						
		2							
		1							
		0							
130008	Rotation setting HP	7		-	0x03	0x03	0x03	XE	08
		6							
		5							
		4							
		3							
		2							
		1	Letter 0: No 1: Yes						
		0	A4 0: No 1: Yes						
130009	Reserved area	7		-	-	-	-	XE	09
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000a	Not used	7		-	-	-	-	XE	0A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000b	Error display time	7	10 - 250 seconds 0: Error display HOLD	-	0x14	0x14	0x14	XE	0B
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
13000c	Reserved area	7		-	-	-	-	XE	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000d	Reserved area	7		-	-	-	-	XE	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13000e - 13000f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	0E - 0F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.15 13001#, 13002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130010 - 13002f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	10 - 2F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.16 13003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130030 - 130034	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	30 - 34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130035	Utility Mode display setting	7	Relay display 0: Yes 1: No	Utility Mode Special Setting	0x00	0x0b	0x0b	XE	35
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5	Incomplete TX hold display 0: Yes 1: No						
		4	Compulsory memory reception display 0: Yes 1: No						
		3	Caller No./Name display 0: Yes 1: No						
		2	Closed communication display 0: Yes 1: No						
		1	Remote reception display 0: Yes 1: No						
		0	DialIn display 0: Yes 1: No						
130036	Utility Mode display setting 2	7		-	0x05	0x0f	0x07	XE	36
		6							
		5							
		4							
		3	OFF display of Header Position 0: Yes 1: No						
		2							
		1	Receive reject display 0: Yes 1: No						
		0							
130037	Not used	7		-	-	-	-	XE	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130038	Destination default screen setting	7	0x00: Group 0x01: FAX 0x02: E-mail 0x03: BOX 0x04: I-Fax 0x05: IP address FAX 0x06: SMB 0x07: FTP 0x08: WebDAV	-	0x00	0x00	0x00	XE	38
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130039 - 13003f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	39 - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.17 13004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130040	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	40
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130041	Destination input error prevention setting	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	41
		6							
		5							
		4							
		3							
		2							
		1							
		0	Destination input error prevention display setting 0: OFF 1: ON						
130042-130044	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XE	42 - 44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130045 - 13004f	DialIn additional No. (FAX)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	45 - 4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.18 13005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130050	DialIn additional No. (FAX)	7	ASCII 11 digits + NULL	-	0x00	0x00	0x00	XE	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130051 - 13005c	DialIn additional No. (PC-FAX)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	51 - 5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
13005d - 13005f	DialIn additional No. (telephone)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	5D - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.19 13006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130060 - 130068	DialIn additional No. (telephone)	7	ASCII 11 digits + NULL	-	ALL 0x00	ALL 0x00	ALL 0x00	XE	60 - 68
		6							
		5							
		4							
		3							
		2							
		1							
		0							
130069	Upper limit for signal transmission level setting	7	(-dBm) Switched according to destination of FAX	-	0x0a	0x0a	0x08	XE	69
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006a	Lower limit for call termination frequency setting range	7	(No. of times) Switched according to destination of FAX	-	0x00	0x00	0x00	XE	6A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006b	Upper limit for call termination frequency setting range	7	(No. of times) Switched according to destination of FAX	-	0x0f	0x0f	0x0f	XE	6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006c	Dial method setting	7		-	0x00	0x22	0x11	XE	6C
		6							
		5							
		4							
		3							
		2							
		1	Dial method setting (Switched according to destination of FAX) 00: PB, 10pps, 20pps 01: PB 10: PB, 10pps 11: PB, 10pps, 16pps						
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
13006d	Upper limit for redial frequency setting range	7	(No. of times) Switched according to destination of FAX	-	0x07	0x01	0x07	XE	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006e	Upper limit for redial interval setting range	7	(Minutes) Switched according to destination of FAX	-	0x01	0x01	0x01	XE	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
13006f	Lower limit for redial interval setting range	7	(Minutes) Switched according to destination of FAX	-	0x0f	0x0f	0x0f	XE	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.24.20 13007#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130070	Telephone-related function setting menu display (1)	7		-	0x7f	0x00	0x00	XE	70
		6	Remote reception 0: OFF 1: ON						
		5	Dial-in 0: OFF 1: ON						
		4	Number display 0: OFF 1: ON						
		3	Pseudo RBT form 0: OFF 1: ON						
		2	Pseudo RBT transmission level 0: OFF 1: ON						
		1	Connection to answering machine 0: OFF 1: ON						
		0	TEL/FAX switching 0: OFF 1: ON						
130071	Number display related function setting	7		-	0x00	0x00	0x00	XE	71
		6							
		5							
		4							
		3	Name displayed Type of display at fax reception (Line2) 00: No display 01: Display of number 10: Display of name						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1 0	Name displayed Type of display at fax reception (Line1) 00: No display 01: Display of number 10: Display of name						
130072	Setting of lower limit for DTMF transmission level setting range	7 6 5 4 3 2 1 0	(-dBm) Switched according to destination of FAX	-	0x0e	0x0f	0x09	XE	72
130073	Setting of upper limit for DTMF transmission level setting range	7 6 5 4 3 2 1 0	(-dBm) Switched according to destination of FAX	-	0x0a	0x0a	0x05	XE	73
130074	Setting of lower limit for DTMF H-L level difference setting range	7 6 5 4 3 2 1 0	(dB) Switched according to destination of FAX	-	0x01	0x01	0x01	XE	74
130075	Setting of upper limit for DTMF H-L level difference setting range	7 6 5 4 3 2 1 0	(dB) Switched according to destination of FAX	-	0x04	0x04	0x04	XE	75
130076	For transmission	7 6 5 4 3		-	0x00	0x00	0x00	XE	76
		2	Restrict Plural Fax Destination 0: OFF 1: ON						
		1	Destination Check Display Function 0: OFF 1: ON						
		0	Screen display during transmission 0 :OFF 1: ON						
130077	Lower limit setting of the signal send-out level setting range	7 6 5 4 3 2 1 0	(-dBm) Switched according to destination of FAX	-	0x0f	0x0f	0x0f	XE	77

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130078 - 13007b	Character-to-search default for FAX main screen	7 6 5 4 3 2 1 0	bit0 :[Main] 0: OFF, 1: ON bit10 :[ABC] 0: OFF, 1: ON bit11 :[DEF] 0: OFF, 1: ON bit12 :[GHI] 0: OFF, 1: ON bit13 :[JKL] 0: OFF, 1: ON bit14 :[MNO] 0: OFF, 1: ON bit15 :[PQRS] 0: OFF, 1: ON bit16 :[TUV] 0: OFF, 1: ON bit17 :[WXYZ] 0: OFF, 1: ON bit18 :[etc] 0: OFF, 1: ON	-	0x01	0x01	0x01	XE	78 - 7B
13007c	Not used	7 6 5 4 3 2 1 0		-				XE	7C
13007d	Initial program display page	7 6 5 4 3 2 1 0	1 - 27 page (HEX: 0x01 - 0x1b), 0: Temporary distribution	-	0x01	0x01	0x01	XE	7D

5.24.21 13008#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
130080 - 130083	Destination type display setting	7 6 5 4 3 2 1 0	0: Do not display 1: Display	-	0x00 0x00 0x00 0x01	0x00 0x00 0x00 0x01	0x00 0x00 0x00 0x01	XE	80-83
130084	No. of destination display characters setting	7 6 5 4 3 2 1 0	0x0e: 14 characters 0x18: 24 characters	-	0x0e	0x0e	0x0e	XE	84

5.24.22 98000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
980000	Lower limit of receive time interval setting	7	(Seconds)	-	0x00	0x00	0x00	XE	-
		6							
		5							
		4							
		3							
		2							
		1							
		0							
980001	Upper limit of receive time interval setting	7	(Seconds)	-	0x2d	0x2d	0x2d	XE	-
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25 FAX setting (Address parameter list: for line 1)

5.25.1 0e009#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0090	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XB	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e0091	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XB	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e0092	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XB	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm] 00: -33 01: -38 10: -43 11: -48						
		0							
0e0093	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XB	03
		6							
		5	Cable EQL transmission selection 00: OFF 01: Send only 10: Receive only 11: Send and receive						
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1 0	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
0e0094	V34 Points	7 6 5 4 3 2		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XB	04
		1 0	V34 Point 00: Auto 01: 16-point 10: 4-point						
0e0095	TEL/FAX switching (For Japan models only)	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XB	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2 1 0							
0e0096	Ring Back Tone parameter (For Japan models only)	7 6 5	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XB	06
		4	CED transmitted upon TEL/FAX switching						
		3 2 1 0	RBT transmission level (HEX) 0 to -15 dBm						
0e0097	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XB	07
		6	Overseas communication 0: No 1: Yes						
		5 4 3 2 1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e0098	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XB	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e0099	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XB	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e009a	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XB	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e009b	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XB	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e009c	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XB	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e009d	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XB	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e009e	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XB	0E
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							

5.25.2 0e00a#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00a0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XB	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00a1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XB	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00a2	(Inhibit of) V34 off Rx-Function ON/OFF	7	V34 off function for manual reception 0: Enable 1: Disable	-	0x00	0x02	0x02	XB	12
		6							
		5							
		4							
		3							
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Disabled						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disabled						
0e00a3	JBIG parameter	7		-	0x01	0x01	0x01	XB	13
		6							
		5							
		4							
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e00a4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XB	14
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e00a8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7		-	0x00	0x00	0x00	XB	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0:OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e00a9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XB	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00aa	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XB	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e00ab	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XB	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00ac	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XB	1C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ad	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ae	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	1E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00af	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XB	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.3 0e00b#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00b0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XB	20
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XB	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz						
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e00b2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XB	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	24
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	25
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XB	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00b7	1st dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XB	27
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e00b8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XB	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e00b9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XB	29
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ba	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XB	2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bb	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XB	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bc	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XB	2C
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e00bd	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XB	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00be	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XB	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00bf	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XB	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3rd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							

5.25.4 0e00c#

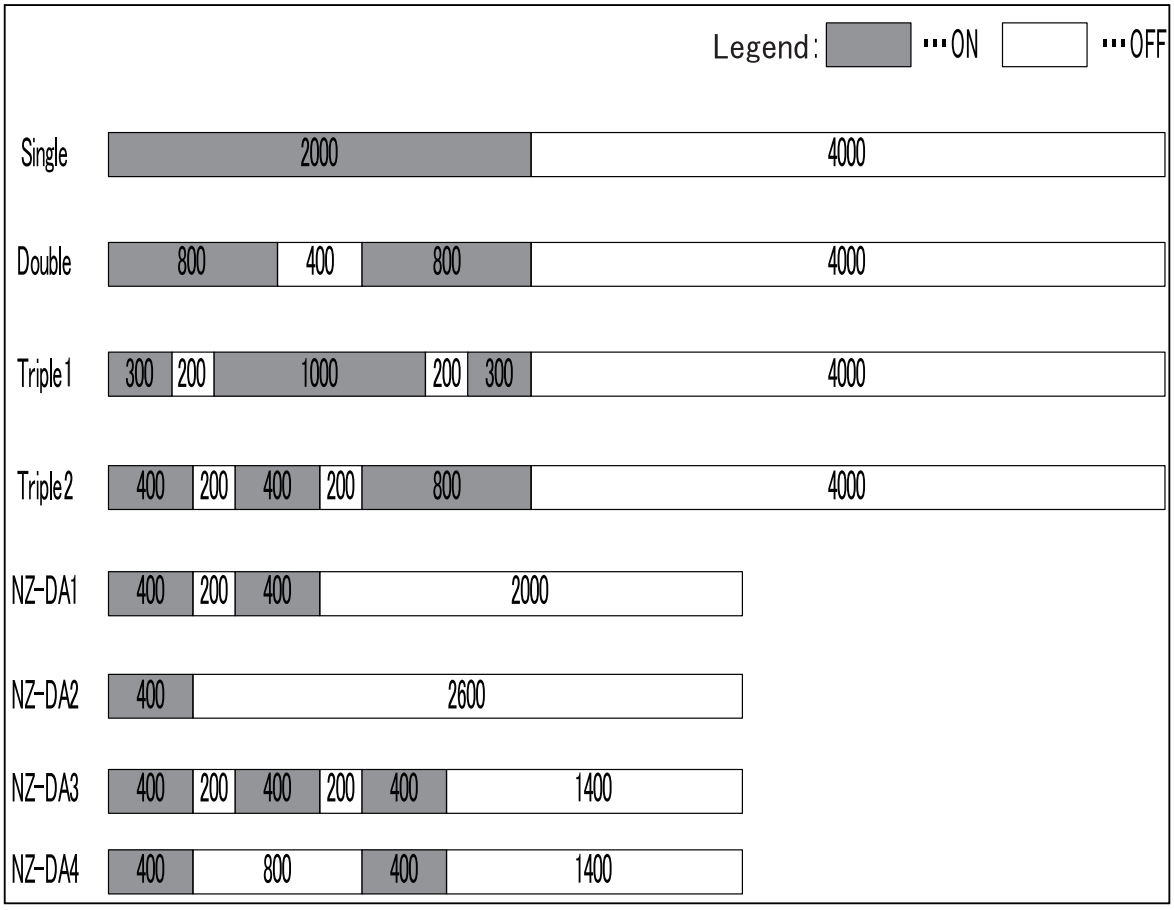
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00c0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XB	30
		6	Tone type 0: Single 1: Dual						
		5							
		4	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz						
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e00c1	Busy tone ON time max. value	7	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XB	31
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c2	Busy tone ON time min. value	7	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XB	32
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XB	33
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XB	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XB	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[].						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4	Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		3	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
		2							
		1							
		0							
0e00c6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XB	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XB	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XB	38
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00c9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XB	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ca	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XB	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cb	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode	0x02	0x00	0x00	XB	3B

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6		Special Setting					
		5							
		4							
		3							
		2							
		1							
		0							
0e00cc	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XB	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cd	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XB	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ce	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XB	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00cf	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XB	3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

- *1: DRPD standard time



5.25.5 0e00d#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00d0	DRPD max. adjustment value for max. OFF time	7 6 5 4 3 2 1 0	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XB	40
0e00d1	DRPD min. adjustment value for max. OFF time	7 6 5 4 3 2 1 0	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XB	41
0e00d2	DRPD single ring stop detection time	7 6 5 4 3 2 1 0	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	42
0e00d3	DRPD double ring stop detection time	7 6 5	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	43

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e00d4	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d5	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XB	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d6	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XB	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d7	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XB	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d8	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XB	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00d9	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XB	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00da	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4A
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e00db	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00dc	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00dd	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00de	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00df	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XB	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.6 0e00e#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00e0	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XB	50
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e00e1	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XB	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e2	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XB	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e3	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XB	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e4	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XB	54
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e5	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XB	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e6	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XB	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e7	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XB	57
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e00e8	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XB	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00e9	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XB	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ea	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XB	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00eb	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XB	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ec	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XB	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ed	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XB	5D
		6							
		5							
		4							
		3							
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e00ee	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XB	5E
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e00ef	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XB	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.7 0e00f#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e00f0	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XB	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f1	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XB	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00f2	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XB	62
		6							
		5	RING detection mode						
		4	01: No. of times 10: Time						
		3	Pulse format						
		2	00: General 01: SW 10: NO						
		1	Dialing method						
		0	00: PB 01: 10pps 10: 20pps 11: 16pps						
0e00f3	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XB	63
		6							
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							
		1							
		0	1st DT2 type						
0e00f4	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XB	64
		6							
		5	1300 Hz 0: No 1: Yes						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e00f5	No. of busy tone detection times	7 6 5 4 3 2 1 0	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XB	65
0e00f6	No. of RING detection times	7 6 5 4 3 2 1 0	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XB	66
0e00f7	RING detection time	7 6 5 4 3 2 1 0	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XB	67
0e00f8	Remote station response waiting time	7 6 5 4 3 2 1 0	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XB	68
0e00f9	Answering machine function	7 6 5	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XB	69
		4	Answer mode 0:OFF 1: ON						
		3 2 1 0	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
0e00fa-0e00fb	Remote reception password	7 6	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XB	6a-6B

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0e00fc	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XB	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00fd	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XB	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00fe	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XB	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e00ff	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XB	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.8 0e010#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0100	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XB	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0101	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XB	71
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e0102	Caller ID signal waiting time	7	ID waiting time after Caller ID/DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XB	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0103	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XB	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0104	Normal/number display automatic line distinction function	7	Automatic judgment function 0:OFF 1: ON	-	0x83	0x00	0x00	XB	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0105	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XB	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0106-0e010f	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XB	76
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.9 0e011#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0110-0e0119	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XB	80-89
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e011a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XB	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e011b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XB	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e011c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XB	8C
		6	Auto transmission not available 0: Enable 1: Disable Manual RX						
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Inhibit						
0e011d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XB	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e011e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XB	8E
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e011f	Limit of long size reception	7		-	0x00	0x00	0x00	XB	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.25.10 0e012#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0120	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.)	-	0x64	0x64	0x64	XB	90
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0121	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.)	-	0x64	0x64	0x64	XB	91
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0122	Voice response output level adjustment	7		-	0x62	0x62	0x62	XB	92
		6							
		5							
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							
		1							
		0							
0e0123	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XB	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0124-0e012C	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XB	94-12C
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e012D	Timer for adjusting PhaseB retransmission interval (V.17)	7	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s	-	0x00	0x00	0x00	XB	12D
		6							
		5	PhaseB re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		4							
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseB re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e012E	Timer for adjusting PhaseD retransmission interval (V.17)	7		-	0x00	0x00	0x00	XB	12E
		6							
		5							
		4							
		3	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseD re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e012F	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XB	12F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.11 0f000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0000	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	X2	00
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1	8 pels/mm						
		0							
0f0001	Reception main scan line resolution ability [1]	7		-	0x01	0x01	0x01	X2	01
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0002	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	X2	02
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
0f0003	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	X2	03
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0004	Reception coding method ability	7		-	0x1f	0x1f	0x1f	X2	04
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0005	Received document width ability	7		-	0x0e	0x0e	0x0e	X2	05
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0006	Received document length ability	7		-	0x46	0x46	0x46	X2	06
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0007	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	X2	07
		6							
		5							
		4	V.29-96						
		3	V.29-72						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1	V.27-48						
		0	V.27-24						
0f0008	Reception speed ability [1]	7	V.17-144	-	0xf0	0xf0	0xf0	X2	08
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0009	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	X2	09
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f000a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	X2	0A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f000b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f000e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	0E
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0f000f	Reception ECM ability	7		-	0x01	0x01	0x01	X2	0F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0:OFF 1: ON						

5.25.12 0f001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0010	Reception protocol ability	7		-	0x39	0x39	0x39	X2	10
		6							
		5	FAX-CSRC						
		4	V.8/V.34						
		3	DIAG						
		2							
		1							
		0	G3S						
0f0011	Reception option frame ability	7		-	0x07	0x07	0x07	X2	11
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0012 - 0f001f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	12 - 1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.25.13 10000#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100000	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	X2	40
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100001	Transmission main scan line	7		-	0x01	0x01	0x01	X2	41
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
	resolution instruction [1]	5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100002	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	X2	42
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
100003	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	X2	43
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100004	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	X2	44
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100005	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	X2	45
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100006	Transmission document length instruction	7		-	0x46	0x46	0x46	X2	46
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100007	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	X2	47
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100008	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	X2	48
		6	V.17-120						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100009	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	X2	49
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
10000a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	X2	4A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
10000b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10000f	Transmission ECM instruction	7		-	0x01	0x01	0x01	X2	4F
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.25.14 10001#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100010	Transmission protocol instruction	7		-	0x11	0x11	0x11	X2	50
		6							
		5	FAX-CSRC						
		4	V.8/V.34						
		3	DIAG						
		2							
		1							
		0	G3S						
100011	Transmission option frame instruction	7		-	0x00	0x00	0x00	X2	51
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100012 - 10001f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	52 - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26 FAX setting (Address parameter list: for line 2)

5.26.1 0e01a#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01a0	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XC	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e01a1	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XC	01
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e01a2	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XC	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm]						
		0	00: -33 01: -38 10: -43 11: -48						
0e01a3	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XC	03
		6							
		5	Cable EQL transmission selection						
		4	00: OFF 01: Send only 10: Receive only 11: Send and receive						
		3							
		2							
		1	Cable EQL parameter selection						
		0	00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
0e01a4	V34 Points	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XC	04
		6							
		5							
		4							
		3							
		2							
		1	V34 Point						
		0	00: Auto 01: 16-point 10: 4-point						
0e01a5	TEL/FAX switching (For Japan models only) *Use Line 1 only	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XC	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e01a6	Ring Back Tone parameter (For Japan models only) *Use Line 1 only	7	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XC	06
		6							
		5							
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX) 0 to -15 dBm						
		2							
		1							
		0							
0e01a7	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XC	07
		6	Overseas communication 0: No 1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e01a8	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XC	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e01a9	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XC	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e01aa	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XC	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e01ab	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XC	0B
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e01ac	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XC	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ad	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XC	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e01ae	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XC	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.2 0e01b#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01b0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XC	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01b1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XC	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01b2	(Inhibit of) V34 off Rx-Function ON/ OFF	7		-	0x00	0x02	0x02	XC	12
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Inhibit						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disable						
0e01b3	JBIG parameter	7		-	0x01	0x01	0x01	XC	13
		6							
		5							
		4							
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e01b4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XC	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01b8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7		-	0x00	0x00	0x00	XC	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0: OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e01b9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XC	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ba	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XC	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3 2 1 0	1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e01bb	PBX dial tone detection time	7 6 5 4 3 2 1 0	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XC	1B
0e01bc	PBX dial tone ON time min. value	7 6 5 4 3 2 1 0	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XC	1C
0e01bd	PBX dial tone OFF time max. value	7 6 5 4 3 2 1 0	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	1D
0e01be	PBX dial tone OFF time min. value	7 6 5 4 3 2 1 0	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	1E
0e01bf	PBX dial tone waiting time	7 6 5 4 3 2	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XC	1F

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							

5.26.3 0e01c#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01c0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XC	20
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XC	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e01c2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XC	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01c4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	24
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	25
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XC	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c7	1st dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XC	27
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01c8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XC	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01c9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XC	29
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ca	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XC	2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cb	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XC	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cc	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XC	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cd	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XC	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ce	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XC	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01cf	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XC	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz						
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1 0	4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						

5.26.4 0e01d#

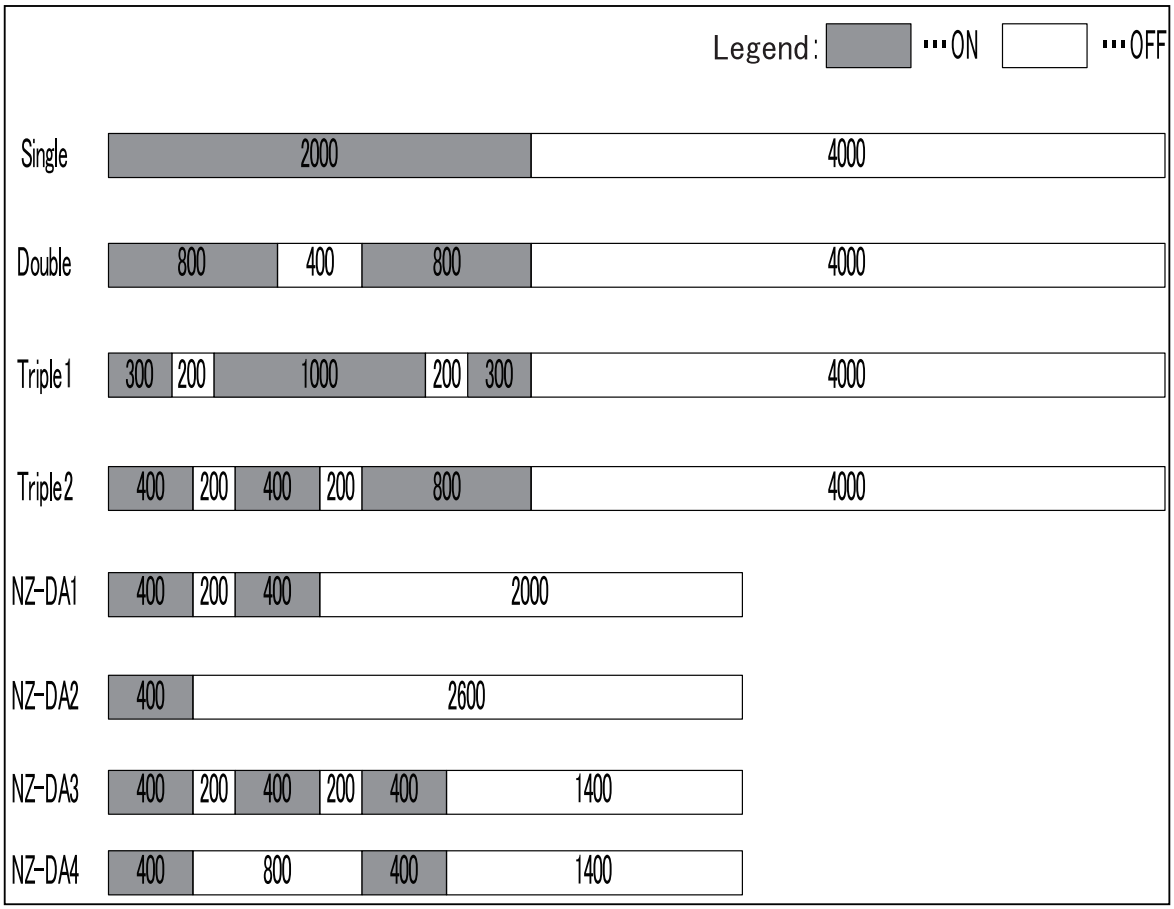
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01d0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XC	30
		6	Tone type 0: Single 1: Dual						
		5							
		4 3 2 1 0	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e01d1	Busy tone ON time max. value	7 6 5 4 3 2 1 0	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XC	31
0e01d2	Busy tone ON time min. value	7 6 5	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XC	32

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e01d3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XC	33
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XC	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XC	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		4							
		3	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
		2							
		1							
		0							
0e01d6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XC	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01d7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XC	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XC	38
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01d9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XC	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01da	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XC	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01db	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XC	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01dc	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XC	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01dd	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XC	3D
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e01de	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XC	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01df	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XC	3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

- *1: DRPD standard time



5.26.5 0e01e#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01e0	DRPD max. adjustment value for max. OFF time	7	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XC	40
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e01e1	DRPD min. adjustment value for max. OFF time	7	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XC	41
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e2	DRPD single ring stop detection time	7	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	42
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e3	DRPD double ring stop detection time	7	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	43
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e4	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e5	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XC	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e6	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XC	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e7	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XC	47
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e01e8	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XC	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01e9	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XC	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ea	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01eb	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ec	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ed	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ee	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4E
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e01ef	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XC	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.6 0e01f#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e01f0	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XC	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f1	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XC	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f2	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XC	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f3	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XC	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f4	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XC	54
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
0e01f5	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XC	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f6	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XC	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f7	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XC	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f8	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XC	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01f9	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XC	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01fa	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XC	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01fb	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XC	5B
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e01fc	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XC	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01fd	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XC	5D
		6							
		5							
		4							
		3							
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e01fe	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XC	5E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e01ff	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XC	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.7 0e020#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0200	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XC	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0201	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XC	61
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e0202	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XC	62
		6							
		5	RING detection mode 01: No. of times 10: Time						
		4							
		3	Pulse format 00: General 01: SW 10: NO						
		2							
		1	Dialing method 00: PB 01: 10pps 10: 20pps 11: 16pps						
		0							
0e0203	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XC	63
		6							
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							
		1							
		0	1st DT2 type						
0e0204	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XC	64
		6							
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e0205	No. of busy tone detection times	7	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XC	65
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0206	No. of RING detection times	7	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XC	66
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0207	RING detection time	7	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XC	67
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0208	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XC	68
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0209	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XC	69
		6							
		5							
		4	Answer mode 0: OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e020a-0e020b	Remote reception password *Line 1 only available	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XC	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e020c	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XC	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e020d	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XC	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e020e	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XC	6E
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e020f	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XC	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.8 0e021#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0210	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XC	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0211	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XC	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0212	Caller ID signal waiting time	7	ID waiting time after Caller ID/ DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XC	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0213	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XC	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0214	Normal/number display automatic line distinction function	7	Automatic judgment function 0: OFF 1: ON	-	0x83	0x00	0x00	XC	74
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0215	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XC	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0216 - 0e021f	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XC	76
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.9 0e022#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0220 - 0e0229	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XC	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e022a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XC	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e022b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XC	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e022c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XC	8C
		6							
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Disable						
0e022d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XC	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e022e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XC	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e022f	Limit of long size reception	7		-	0x00	0x00	0x00	XC	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.26.10 0e023#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0230	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XC	90
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0231	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XC	91
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0232	Voice response output level adjustment	7		-	0x62	0x62	0x62	XC	92
		6							
		5							
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							
		1							
		0							
0e0233	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XC	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0234 - 0e023C	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XC	94 – 12C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e023D	Timer for adjusting PhaseB retransmission interval (V.17)	7	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s	-	0x00	0x00	0x00	XC	12D
		6							
		5	PhaseB re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		4							
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	10 : 4.0s 11 : 4.5s						
		1 0	PhaseB re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
0e023E	Timer for adjusting PhaseD retransmission interval (V.17)	7 6 5 4		-	0x00	0x00	0x00	XC	12E
		3 2	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		1 0	PhaseD re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
0e023F	Reserved area	7 6 5 4 3 2 1 0		-	ALL 0x00	ALL 0x00	ALL 0x00	XC	12F

5.26.11 0f002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0020	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	X2	20
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
0f0021	Reception main scan line resolution ability [1]	7 6 5 4 3		-	0x01	0x01	0x01	X2	21
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0022	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	X2	22
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	7.7 l/mm						
		0	3.85 l/mm						
0f0023	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	X2	23
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0024	Reception coding method ability	7		-	0x1f	0x1f	0x1f	X2	24
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0025	Received document width ability	7		-	0x0e	0x0e	0x0e	X2	25
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0026	Received document length ability	7		-	0x46	0x46	0x46	X2	26
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0027	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	X2	27
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0028	Reception speed ability [1]	7	V.17-144	-	0xfc	0xfc	0xfc	X2	28
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0029	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	X2	29
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f002a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	X2	2A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f002b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f002f	Reception ECM ability	7		-	0x01	0x01	0x01	X2	2F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0: OFF 1: ON						

5.26.12 0f003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0030	Reception protocol ability	7		-	0x11	0x11	0x11	X2	30
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
0f0031	Reception option frame ability	7		-	0x07	0x07	0x07	X2	31
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0032 - 0f003f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	32 - 3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.26.13 10002#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100020	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	X2	60
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100021	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	X2	61
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100022	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	X2	62
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100023	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	X2	63
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100024	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	X2	64
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100025	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	X2	65
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100026	Transmission document length instruction	7		-	0x46	0x46	0x46	X2	66
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100027	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	X2	67
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100028	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	X2	68
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100029	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	X2	69
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	V.34-24						
10002a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	X2	6A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
10002b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	X2	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10002f	Transmission ECM instruction	7		-	0x01	0x01	0x01	X2	6F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.26.14 10003#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100030	Transmission protocol instruction	7		-	0x11	0x11	0x11	X2	70
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
100031	Transmission option frame instruction	7		-	0x00	0x00	0x00	X2	71
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100032 - 10003f	Reserved area 1	7		-	ALL 0x00	ALL 0x00	ALL 0x00	X2	72 - 7F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27 FAX setting (Address parameter list: for line 3)

5.27.1 0e02b#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02b0	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XF	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e02b1	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XF	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e02b2	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XF	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm] 00: -33						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	01: -38 10: -43 11: -48						
0e02b3	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XF	03
		6							
		5	Cable EQL transmission selection 00: OFF 01: Send only 10: Receive only 11: Send and receive						
		4							
		3							
		2							
		1	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
		0							
0e02b4	V34 Points	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XF	04
		6							
		5							
		4							
		3							
		2							
		1	V34 Point 00: Auto 01: 16-point 10: 4-point						
		0							
0e02b5	TEL/FAX switching (For Japan models only) *Use Line 1 only	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XF	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2							
		1							
		0							
0e02b6	Ring Back Tone parameter (For Japan models only) *Use Line 1 only	7	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XF	06
		6							
		5							
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX) 0 to -15 dBm						
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e02b7	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XF	07
		6	Overseas communication 0: No 1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e02b8	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XF	08
		6							
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e02b9	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XF	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e02ba	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XF	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e02bb	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XF	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02bc	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XF	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02bd	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XF	0D

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e02be	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XF	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.2 0e02c#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02c0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XF	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02c1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XF	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02c2	(Inhibit of) V34 off Rx-Function ON/ OFF	7		-	0x00	0x02	0x02	XF	12
		6							
		5							
		4							
		3							
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Disabled						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disabled						
0e02c3	JBIG parameter	7		-	0x01	0x01	0x01	XF	13
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e02c4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XF	14
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02c8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7		-	0x00	0x00	0x00	XF	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0: OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e02c9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XF	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ca	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XF	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz						
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e02cb	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XF	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02cc	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XF	1C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02cd	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ce	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	1E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02cf	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XF	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.3 0e02d#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02d0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XF	20
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e02d1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XF	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e02d2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XF	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	24
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	25
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e02d6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XF	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d7	1st dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XF	27
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02d8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XF	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e02d9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XF	29
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02da	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XF	2A
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e02db	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XF	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02dc	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XF	2C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02dc	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XF	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02de	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XF	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02df	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XF	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz						
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						

5.27.4 0e02e#

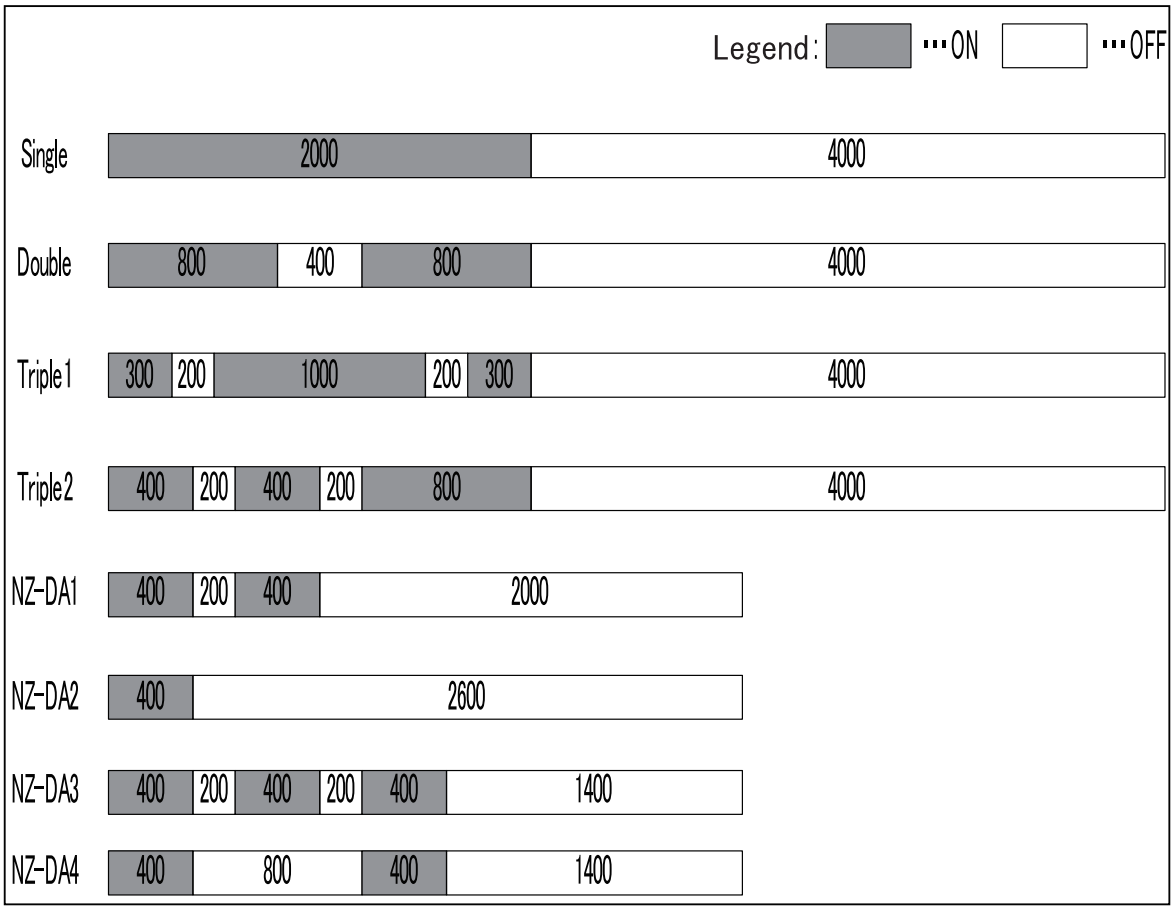
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02e0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XF	30
		6	Tone type 0: Single 1: Dual						
		5							
		4	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							
0e02e1	Busy tone ON time max. value	7	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XF	31
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e2	Busy tone ON time min. value	7	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XF	32
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e3	Busy tone OFF time max. value	7	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XF	33
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02e4	Busy tone OFF time min. value	7	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XF	34
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e5	Ringer detection pattern	7	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XF	35
		6							
		5	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		4							
		3	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
		2							
		1							
		0							
0e02e6	Ringer detection frequency upper limits	7	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XF	36
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e7	Ringer detection frequency lower limits	7	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XF	37
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02e8	Ringer ON time max. value	7	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XF	38
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e02e9	Ringer ON time min. value	7	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XF	39
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ea	Ringer OFF time max. value	7	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XF	3A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02eb	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XF	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ec	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XF	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ed	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XF	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ee	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XF	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ef	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XF	3F
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							

- *1: DRPD standard time



5.27.5 0e02f#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e02f0	DRPD max. adjustment value for max. OFF time	7	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XF	40
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f1	DRPD min. adjustment value for max. OFF time	7	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XF	41
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f2	DRPD single ring stop detection time	7	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	42
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e02f3	DRPD double ring stop detection time	7	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	43
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f4	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f5	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XF	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f6	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XF	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f7	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XF	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f8	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XF	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02f9	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XF	49
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0e02fa	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fb	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fc	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fd	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02fe	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e02ff	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XF	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.6 0e030#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0300	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XF	50
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0301	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XF	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0302	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XF	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0303	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XF	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0304	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XF	54
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0305	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XF	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0306	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XF	56
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0307	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XF	57
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0308	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XF	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0309	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XF	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030a	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XF	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030b	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XF	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030c	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XF	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030d	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XF	5D
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e030e	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XF	5E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e030f	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XF	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.7 0e031#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0310	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XF	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0311	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XF	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0312	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XF	62
		6							
		5	RING detection mode 01: No. of times 10: Time						
		4							
		3	Pulse format 00: General 01: SW 10: NO						
		2							
		1	Dialing method 00: PB 01: 10pps 10: 20pps 11: 16pps						
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0313	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XF	63
		6							
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							
		1							
		0	1st DT2 type						
0e0314	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XF	64
		6							
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e0315	No. of busy tone detection times	7	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XF	65
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0 e0316	No. of RING detection times	7	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XF	66
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0317	RING detection time	7	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XF	67
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0318	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XF	68
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0319	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XF	69
		6							
		5							
		4	Answer mode 0: OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e031a-0e031b	Remote reception password *Line 1 only available	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XF	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031c	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XF	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031d	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XF	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031e	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XF	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e031f	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XF	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.8 0e032#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0320	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XF	70
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0321	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XF	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0322	Caller ID signal waiting time	7	ID waiting time after Caller ID/ DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XF	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0323	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XF	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0324	Normal/number display automatic line distinction function	7	Automatic judgment function 0: OFF 1: ON	-	0x83	0x00	0x00	XF	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0325	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XF	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0326 - 0e032f	Numeric ID [20]	7	ASCII [20]	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XF	76

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6	When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)						
		5							
		4							
		3							
		2							
		1							
		0							

5.27.9 0e033#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0330 - 0e0339	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XF	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e033a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XF	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e033b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XF	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e033c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XF	8C
		6							
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						
		0	Dialin 0: Not inhibit 1: Disable						
0e033d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XF	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e033e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XF	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e033f	Limit of long size reception	7		-	0x00	0x00	0x00	XF	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.27.10 0e034#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0340	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XF	90
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0341	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XF	91
		6							
		5							
		4							
		3							
		2							
		1							
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0342	Voice response output level adjustment	7		-	0x62	0x62	0x62	XF	92
		6							
		5							
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							
		1							
		0							
0e0343	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XF	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0344 - 0e034C	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XF	94 – 12C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e034D	Timer for adjusting PhaseB retransmission interval (V.17)	7	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s	-	0x00	0x00	0x00	XF	12D
		6							
		5	PhaseB re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		4							
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseB re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e034E	Timer for adjusting PhaseD retransmission interval (V.17)	7		-	0x00	0x00	0x00	XF	12E
		6							
		5							
		4							
		3	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseD re-transmission interval at automatic sending 00 : 3.0s						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	01 : 3.5s 10 : 4.0s 11 : 4.5s						
0e034F	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XF	12F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.11 0f004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0040	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	XH	00
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
0f0041	Reception main scan line resolution ability [1]	7		-	0x01	0x01	0x01	XH	01
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0042	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	XH	02
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
0f0043	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	XH	03
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0044	Reception coding method ability	7		-	0x1f	0x1f	0x1f	XH	04
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	THRU						
0f0045	Received document width ability	7		-	0x0e	0x0e	0x0e	XH	05
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
0f0046	Received document length ability	7		-	0x46	0x46	0x46	XH	06
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0047	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	XH	07
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0048	Reception speed ability [1]	7	V.17-144	-	0xfc	0xfc	0xfc	XH	08
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0049	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	XH	09
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f004a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	XH	0A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f004b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0B
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0f004c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	0E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f004f	Reception ECM ability	7		-	0x01	0x01	0x01	XH	0F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0: OFF 1: ON						

5.27.12 0f005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0050	Reception protocol ability	7		-	0x11	0x11	0x11	XH	10
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
0f0051	Reception option frame ability	7		-	0x07	0x07	0x07	XH	11
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	(SEP)						
		0	SUB						
0f0052 - 0f005f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	12 - 1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.27.13 10004#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100040	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	XH	40
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100041	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	XH	41
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100042	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	XH	42
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
100043	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	XH	43
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100044	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	XH	44
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100045	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	XH	45
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						
		1	A4						
		0	(A5)						
100046	Transmission document length instruction	7		-	0x46	0x46	0x46	XH	46
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100047	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	XH	47
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100048	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	XH	48
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100049	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	XH	49
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
10004a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	XH	4A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
10004b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4B
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
10004c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10004d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10004e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10004f	Transmission ECM instruction	7		-	0x01	0x01	0x01	XH	4F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.27.14 10005#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100050	Transmission protocol instruction	7		-	0x11	0x11	0x11	XH	50
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
100051	Transmission option frame instruction	7		-	0x00	0x00	0x00	XH	51
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	(SEP)						
		0	SUB						
100052 - 10005f	Reserved area 1	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	52 - 5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28 FAX setting (Address parameter list: for line 4)

5.28.1 0e03c#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03c0	Transmission ATT	7	Tone signal/FSK transmission ATT (HEX) every 1 dBm (0 to -15dBm)	Utility Mode Special Setting	0xaa	0xaa	0xaa	XG	00
		6							
		5							
		4							
		3	High-speed signal transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e03c1	CED transmission ATT	7		Utility Mode Special Setting (0-3)	0x0a	0x0a	0x0a	XG	01
		6							
		5							
		4							
		3	CED/ANS transmission ATT (HEX) every 1 dBm (0 to -15dBm)						
		2							
		1							
		0							
0e03c2	CD/SED ON level	7		Utility Mode Special Setting (0,1)	0x03	0x03	0x03	XG	02
		6							
		5							
		4							
		3							
		2							
		1	CD/SED ON level [dBm] 00: -33 01: -38 10: -43 11: -48						
		0							
0e03c3	Cable equalizer	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XG	03
		6							
		5	Cable EQL transmission selection 00: OFF 01: Send only 10: Receive only 11: Send and receive						
		4							
		3							
		2							
		1	Cable EQL parameter selection 00: 1.8 km 01: 3.6km 10: 7.2km 11: NTT4						
		0							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03c4	V34 Points	7		Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XG	04
		6							
		5							
		4							
		3							
		2							
		1	V34 Point 00: Auto 01: 16-point 10: 4-point						
		0							
0e03c5	TEL/FAX switching (For Japan models only) *Use Line 1 only	7	Time from vocal response to RBT transmission (CNG detection waiting time 2) 0: 4 sec. 1: 2 sec.	Utility Mode Special Setting (4,5)	0x00	0x00	0x00	XG	05
		6	Time from reception to voice response transmission (CNG detection waiting time 1) 0: 2 sec. 1: 4 sec.						
		5	TEL/FAX switching mode 0: Disabled 1: Enabled						
		4	External telephone no ringing setting 0: Disabled 1: Enabled (disconnected)						
		3	TEL/FAX switching ON response details 0: Voice response + RBT transmission 1: RBT transmission only						
		2							
		1							
		0							
0e03c6	Ring Back Tone parameter (For Japan models only) *Use Line 1 only	7	RBT form 000: No 001: Japan 010: US 011: UK 100: Germany 101 to 111: Others	Utility Mode Special Setting (0-3,5-7)	0x2a	0x4a	0x68	XG	06
		6							
		5							
		4	CED transmitted upon TEL/FAX switching						
		3	RBT transmission level (HEX) 0 to -15 dBm						
		2							
		1							
		0							
0e03c7	International com mode operation	7	DIS waiting frequency 0: Always once 1: Twice in overseas communication	Utility Mode Special Setting (6,7)	0x40	0x40	0x40	XG	07
		6	Overseas communication 0: No 1: Yes						
		5							
		4							
		3							
		2							
		1							
		0							
0e03c8	Starting speed in international mode (V29 modem)	7		Utility Mode Special Setting (0,1,3,4)	0x02	0x02	0x02	XG	08
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4	9600 bps/V.29						
		3	7200 bps/V.29						
		2							
		1	4800 bps/V.27 ter						
		0	2400 bps/V.27 ter						
0e03c9	Starting speed in international mode (V17 or V33 modem)	7	14400 bps/V.17	Utility Mode Special Setting (4-7)	0x10	0x10	0x10	XG	09
		6	12000 bps/V.17						
		5	9600 bps/V.17						
		4	7200 bps/V.17						
		3							
		2							
		1							
		0							
0e03ca	Starting speed in international mode (V34)	7	33600 bps/V.34	Utility Mode Special Setting	0x20	0x20	0x20	XG	0A
		6	31200 bps/V.34						
		5	28800 bps/V.34						
		4	26400 bps/V.34						
		3	24000 bps/V.34						
		2	21600 bps/V.34						
		1	19200 bps/V.34						
		0	16800 bps/V.34						
0e03cb	CD OFF timer	7	CD OFF timer (Unit: 100 ms, HEX)	-	0x14	0x14	0x14	XG	0B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03cc	CD ON integration time	7	CD ON integration time (Unit: 100 ms. HEX)	-	0x06	0x06	0x06	XG	0C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03cd	Max. allowable symbol speed	7	V34 controll ch data rate 0: 1200 1: 2400	Utility Mode Special Setting (0-3,7)	0x05	0x05	0x05	XG	0D
		6							
		5							
		4							
		3	Max. allowable symbol speed 0000: 2400 0001: Reserved 0010: 2800 0011: 3000 0100: 3200 0101: 3429						
		2							
		1							
		0							
0e03ce	V34 primary channel fallback	7	No. of frame errors subjected to fallback (HEX)	-	0x03	0x03	0x03	XG	0E
		6							
		5							
		4							
		3							
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							

5.28.2 0e03d#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03d0	V34 off Rx-V34 off time after error	7	Timer value after V34 reception error used to reset V34 off reception (min, HEX) (Valid only when transmission side cannot be specified)	-	0x0a	0x0a	0x0a	XG	10
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03d1	V34 off Rx-V17 OK Rx times to reset V34 off Rx	7	No. of continuous success of V17 receptions used to reset V34 off reception after V34 reception error (times, HEX) (Valid only when transmission side can be specified with Caller ID)	-	0x0a	0x0a	0x0a	XG	11
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03d2	(Inhibit of) V34 off Rx-Function ON/ OFF	7		-	0x00	0x02	0x02	XG	12
		6							
		5							
		4							
		3							
		2							
		1	V.34 OFF reset mode = No. of successful consecutive V.17 reception times (ID specified) 0: Enabled 1: Inhibit						
		0	V.34 OFF reset mode = time (ID cannot be specified) 0: Enabled 1: Disable						
0e03d3	JBIG parameter	7		-	0x01	0x01	0x01	XG	13
		6							
		5							
		4							
		3							
		2							
		1	Use of following FP JBIG option LO size at reduction 0: No 1: Yes						
		0	JBIG optional L0 capacity 0: No 1: Yes						
0e03d4	JBIG LO size	7	JBIG optional LO size used for reduction (HEX) (setting range: 0x01to0xffffffff) [0] = HH, [1] = HL, [2] = LH, [3] = LL	-	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	0x00 0x00 0x00 0x80	XG	14
		6							
		5							
		4							
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0							
0e03d8	(Inhibit of) JBIG off Rx-Function ON/ OFF	7		-	0x00	0x00	0x00	XG	18
		6							
		5							
		4							
		3							
		2							
		1	JBIG off function at A3 high-definition reception (DIS retransmission) 0: OFF 1: ON						
		0	JBIG off function after JBIG reception error 0: Enable 1: Disable						
0e03d9	JBIG off Rx-JBIG off time after error	7	Timer value after JBIG reception error to reset JBIG off reception (min, HEX) (10 min. if 0)	-	0x0a	0x0a	0x0a	XG	19
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03da	PBX dial tone detection frequency pattern	7		-	0x08	0x00	0x00	XG	1A
		6	Tone type 0: Single 1: Dual						
		5							
		4	PBX dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz					
		3							
		2							
		1							
		0							
0e03db	PBX dial tone detection time	7	PBX dial tone detection time or max. ON time value (unit: 20 ms, HEX)	-	0x32	0x00	0x00	XG	1B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03dc	PBX dial tone ON time min. value	7	PBX dial tone ON time min. value (unit: 20ms, HEX)	-	0x00	0x00	0x00	XG	1C

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03dd	PBX dial tone OFF time max. value	7	PBX dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	1D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03de	PBX dial tone OFF time min. value	7	PBX dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	1E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03df	PBX dial tone waiting time	7	PBX dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XG	1F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.3 0e03e#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03e0	PBX dial tone instantaneous break detection time	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x00	XG	20
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e1	1st dial tone detection frequency pattern	7		-	0x08	0x55	0x13	XG	21
		6	Tone type 0: Single 1: Dual						
		5							
		4	1st dial tone detection frequency pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz						
		3							
		2							
		1							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e03e2	1st dial tone detection time	7	1st dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x32	0x32	0x1a	XG	22
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e3	1st dial tone ON time min. value	7	1st dial tone ON time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	23
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e4	1st dial tone OFF time max. value	7	1st dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	24
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e5	1st dial tone OFF time min. value	7	1st dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	25
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e6	1st dial tone waiting time	7	1st dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x04	XG	26
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03e7	1st dial tone instantaneous	7	Instantaneous shutdown time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x00	0x00	0x05	XG	27
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
	break detection time	5							
		4							
		3							
		2							
		1							
		0							
0e03e8	2nd dial tone detection pattern	7		-	0x08	0x00	0x00	XG	28
		6	Tone type 0: Single 1: Dual						
		5							
		4	2nd dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							
0e03e9	2nd dial tone detection time	7	2nd dial tone detection time or ON time max. value (unit: 20 ms, HEX)	-	0x08	0x00	0x00	XG	29
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ea	2nd dial tone ON time min. value	7	2nd dial tone ON time min. value (unit: 20 ms, HEX)	-	0x02	0x00	0x00	XG	2A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03eb	2nd dial tone OFF time max. value	7	2nd dial tone OFF time max. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XG	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ec	2nd dial tone OFF time min. value	7	2nd dial tone OFF time min. value (unit: 20 ms, HEX)	-	0x04	0x00	0x00	XG	2C
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0e03ed	2nd dial tone waiting time	7	2nd dial tone waiting time or pre-pause time (unit: 1 sec, HEX)	-	0x03	0x03	0x03	XG	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ee	2nd dial tone instantaneous break detection time	7	Instantaneous shutdown detection time (unit: 20 ms, HEX) or tone detection frequency (times, HEX)	-	0x03	0x00	0x00	XG	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ef	3rd dial tone detection pattern	7		-	0x00	0x00	0x00	XG	2F
		6	Tone type 0: Single 1: Dual						
		5							
		4	3 RD dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
		3							
		2							
		1							
		0							

5.28.4 0e03f#

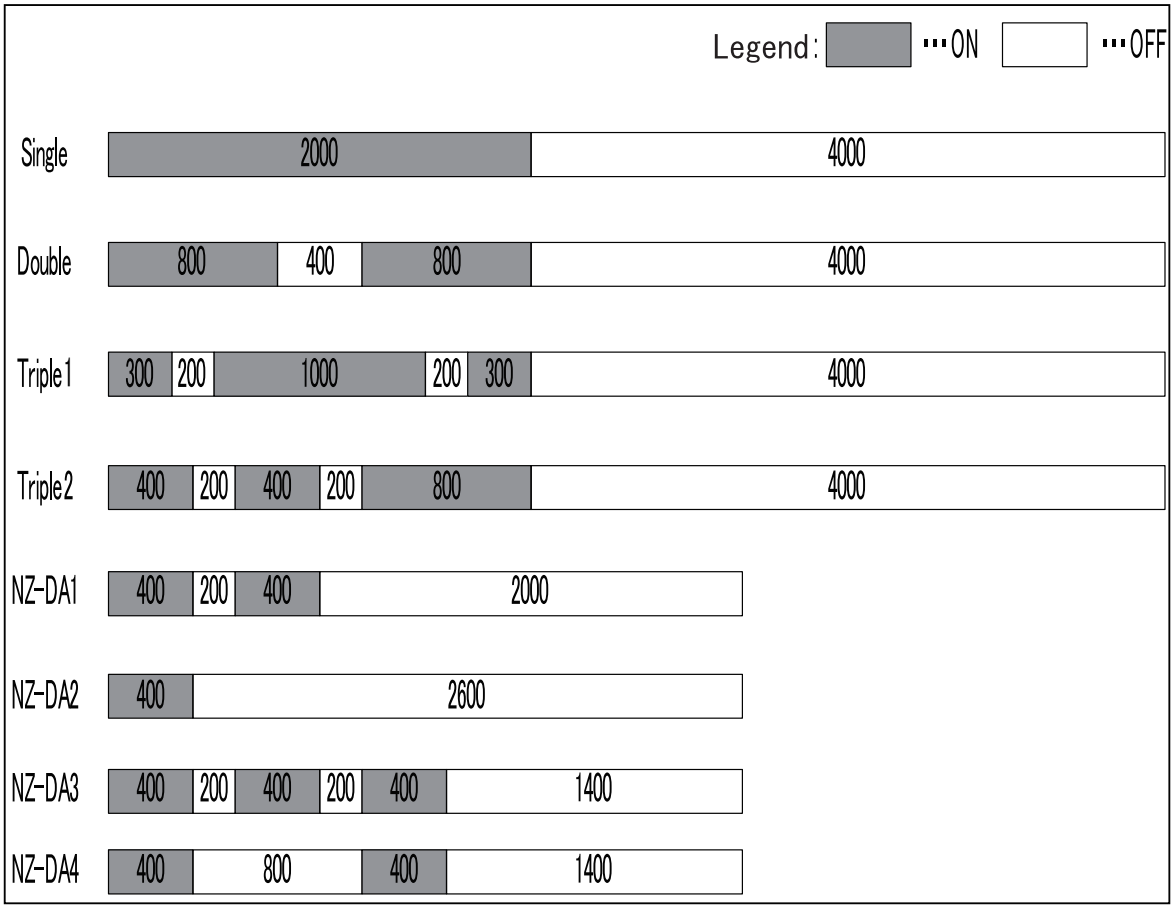
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e03f0	Busy dial tone detection pattern	7		-	0x08	0x55	0x09	XG	30
		6	Tone type 0: Single 1: Dual						
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4 3 2 1 0	Busy dial tone detection pattern 1:155±65Hz 2:1155±25Hz 3:375±75Hz 4:400±75Hz 5:425±75Hz 6:440±75Hz 7:375±100Hz 8:400±100Hz 9:425±100Hz 10:440±100Hz 11:375±125Hz 12:400±125Hz 13:425±125Hz 14:440±125Hz 15:375±150Hz 16:400±150Hz 17:425±150Hz 18:440±150Hz 19:465±205Hz 20:350±25Hz 21:620±25Hz 22:400±75Hz 23:550±100Hz						
0e03f1	Busy tone ON time max. value	7 6 5 4 3 2 1 0	Busy tone ON time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XG	31
0e03f2	Busy tone ON time min. value	7 6 5 4 3 2 1 0	Busy tone ON time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XG	32
0e03f3	Busy tone OFF time max. value	7 6 5 4 3 2 1 0	Busy tone OFF time max. value (unit: 20 ms, HEX)	-	0x1e	0x1e	0x00	XG	33
0e03f4	Busy tone OFF time min. value	7 6 5 4 3 2 1 0	Busy tone OFF time min. value (unit: 20 ms, HEX)	-	0x14	0x14	0x00	XG	34
0e03f5	Ringer detection pattern	7 6	Custom mode 0: OFF (in accordance with bits 3-0) 1: ON (in accordance with bits 5-4)	-	0x00	0x00	0x00	XG	35

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5 4	Custom mode ringer detection pattern 00: Single 01: Double 10: Triple *The standard time is configured with DRPD_Custom[]. Configure commonly with DRPD_1st[] through 3rd[] to adjust the detection time.						
		3 2 1 0	Ringer detection pattern 0000: Nomal 0001: DRPD_Single 0010: DRPD_Double 0011: DRPD_Triple1 0100: DRPD_Triple2 0101: DRPD_NZDA1 0110: DRPD_NZDA2 0111: DRPD_NZDA3 1000: DRPD_NZDA4 1001: DRPD_Duet *Normal conforms to Ringer[2] through [5] as usual. *For DRPD, configure the margin time (min, max) from the standard time*1.						
0e03f6	Ringer detection frequency upper limits	7 6 5 4 3 2 1 0	Ringer detection frequency upper limit (unit: 1 Hz, HEX)	-	0x46	0x46	0x46	XG	36
0e03f7	Ringer detection frequency lower limits	7 6 5 4 3 2 1 0	Ringer detection frequency lower limit (unit: 1 Hz, HEX)	-	0x0c	0x0c	0x0c	XG	37
0e03f8	Ringer ON time max. value	7 6 5 4 3 2 1 0	Ringer ON time max. value (unit: 20 ms, HEX)	-	0x00	0x00	0x00	XG	38
0e03f9	Ringer ON time min. value	7 6 5 4 3 2 1 0	Ringer ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x0a	0x08	XG	39
0e03fa	Ringer OFF time max. value	7 6 5	Ringer OFF time max. value (unit: 100 ms, HEX)	-	0x3c	0x3c	0x46	XG	3A

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e03fb	Ringer OFF time min. value	7	Ringer OFF time min. value (unit: 100 ms, HEX)	Utility Mode Special Setting	0x02	0x00	0x00	XG	3B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fc	DRPD Ringer ON time max. value	7	DRPD Ringer ON time max. value (unit: 20 ms, HEX)	-	0x09	0x09	0x09	XG	3C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fd	DRPD ringer ON time min. value	7	DRPD ringer ON time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XG	3D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03fe	DRPD ringer OFF time max. value	7	DRPD ringer OFF time max. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XG	3E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e03ff	DRPD ringer OFF time min. value	7	DRPD ringer OFF time min. value (in 20-ms increments, HEX)	-	0x09	0x09	0x09	XG	3F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

- *1: DRPD standard time



5.28.5 0e040#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0400	DRPD max. adjustment value for max. OFF time	7 6 5 4 3 2 1 0	DRPD max. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XG	40
0e0401	DRPD min. adjustment value for max. OFF time	7 6 5 4 3 2 1 0	DRPD ringer min. adjustment value for max. OFF time (100-ms increments, HEX)	-	0x05	0x05	0x05	XG	41
0e0402	DRPD single ring stop detection time	7 6 5 4 3 2 1 0	DRPD single ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	42
0e0403	DRPD double ring stop detection time	7 6 5	DRPD double ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	43

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e0404	DRPD Triple1 ring stop detection time	7	DRPD Triple1 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	44
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0405	DRPD Triple2 ring stop detection time	7	DRPD Triple2 ring stop detection time (100-ms increments, HEX)	-	0x50	0x50	0x50	XG	45
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0406	DRPD NZ-DA1 ring stop detection time	7	DRPD NZ-DA1 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XG	46
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0407	DRPD NZ-DA2 ring stop detection time	7	DRPD NZ-DA2 ring stop detection time (100-ms increments, HEX)	-	0x3C	0x3C	0x3C	XG	47
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0408	DRPD NZ-DA3 ring stop detection time	7	DRPD NZ-DA3 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XG	48
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0409	DRPD NZ-DA4 ring stop detection time	7	DRPD NZ-DA4 ring stop detection time (100-ms increments, HEX)	-	0x32	0x32	0x32	XG	49
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040a	Custom 1s ringer ON time specified value	7	Custom 1st ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4A
		6							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		5							
		4							
		3							
		2							
		1							
		0							
0e040b	Custom 1st ringer OFF time specified value	7	Custom 1st ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040c	Custom 2nd ringer ON time specified value	7	Custom 2nd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040d	Custom 2nd ringer OFF time specified value	7	Custom 2nd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040e	Custom 3rd ringer ON time specified value	7	Custom 3rd ringer ON time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e040f	Custom 3rd ringer OFF time specified value	7	Custom 3rd ringer OFF time specified value (100-ms increments, HEX)	-	0x00	0x00	0x00	XG	4F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.6 0e041#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0410	Custom Ring OFF detection time	7	Custom Ring OFF detection time (in 100-ms increments, HEX)	-	0x00	0x00	0x00	XG	50
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0e0411	PB dial signal transmission time	7	PB dial signal transmission time (unit: 5 ms, HEX)	-	0x15	0x19	0x15	XG	51
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0412	PB dial inter-digit pause	7	PB dial inter digit pause time (unit: 5 ms, HEX)	-	0x11	0x15	0x11	XG	52
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0413	10 pps pulse dial time	7	10 pps pulse dial time	-	0x0F	0x12	0x12	XG	53
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0414	10 pps pulse dial break time	7	10 pps pulse dial break time	-	0x1F	0x1C	0x1C	XG	54
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0415	10 pps pulse dial inter-digit pause	7	10 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x68	0x68	0x5e	XG	55
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0416	20 pps pulse dial time	7	20 pps pulse dial time	-	0x07	0x09	0x09	XG	56
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0417	20 pps pulse dial break time	7	20 pps pulse dial break time	-	0x10	0x0E	0x0E	XG	57
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e0418	20 pps pulse dial inter-digit pause	7	20 pps pulse dial inter digit pause (unit: 10 ms, HEX)	-	0x59	0x40	0x5c	XG	58
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0419	PB signal transmission level	7	PB signal transmission level (unit: 1 dBm, HEX)	Utility Mode Special Setting	0x0a	0x0a	0x06	XG	59
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041a	PB signal level difference (HL)	7	PB signal level difference (HL) (unit: 0.5 dBm, HEX)	Utility Mode Special Setting	0x04	0x04	0x04	XG	5A
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041b	DCLOOP integration time at CML OFF	7	DCLOOP integration time at CML relay OFF (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x50	0x50	0x50	XG	5B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041c	DCLOOP integration time at CML ON	7	DCLOOP integration time at CML relay ON (unit: 5 ms, HEX) (Lower limit 20 ms)	-	0x10	0x10	0x10	XG	5C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041d	Pause time	7		Utility Mode Special Setting (0-2)	0x01	0x01	0x01	XG	5D
		6							
		5							
		4							
		3							
		2	Pause time (unit:sec, HEX)						
		1							
		0							
0e041e	DC-LOOP check mode	7	DC-LOOP check 0: No 1: Always	Utility Mode Special Setting (6,7)	0x00	0x00	0x00	XG	5E

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e041f	DC-LOOP waiting time	7	DC-LOOP waiting time (unit: 100 ms, HEX)	-	0x00	0x00	0x00	XG	5F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.7 0e042#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0420	DC-LOOP instantaneous break allowable time (ph.A)	7	DC-LOOP instantaneous break allowable time (unit: 10 ms, HEX) (at the time of calling, CML ON to end of dialing)	-	0x00	0x00	0x00	XG	60
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0421	DC-LOOP instantaneous break allowable time (ph.B)	7	DC-LOOP instantaneous break allowable time (unit: 10ms, HEX) (after completion of dialing and after CML ON at the time of reception)	-	0x00	0x00	0x00	XG	61
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0422	Dial Mode RING DET mode	7		Utility Mode (0,1) Utility Mode Special Setting (4,5)	0x12	0x10	0x10	XG	62
		6							
		5	RING detection mode 01: No. of times 10: Time						
		4							
		3	Pulse format 00: General 01: SW 10: NO						
		2							
		1	Dialing method 00: PB 01: 10pps 10: 20pps 11: 16pps						
		0							
0e0423	1st/2nd DT detection parameter	7		-	0x00	0x00	0x00	XG	63
		6							
		5							
		4							
		3	At 2nd DT detection DP dialing only						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0	1st DT2 type						
0e0424	Tone detection	7		Utility Mode Special Setting (4,5)	0x11	0x11	0x01	XG	64
		6							
		5	1300 Hz 0: No 1: Yes						
		4	Busy Tone 0: No 1: Yes						
		3	PBX DT 0: No 1: Yes						
		2	3rd DT 0: No 1: Yes						
		1	2nd DT 0: No 1: Yes						
		0	1st DT 0: No 1: Yes						
0e0425	No. of busy tone detection times	7	No. of busy tone detection times (HEX)	Utility Mode Special Setting	0x02	0x02	0x00	XG	65
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0426	No. of RING detection times	7	No. of RING detection times (times, HEX)	Utility Mode	0x02	0x02	0x02	XG	66
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0427	RING detection time	7	Ring detection time (sec, HEX)	Utility Mode Special Setting	0x06	0x06	0x06	XG	67
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0428	Remote station response waiting time	7	Remote station response waiting time at calling (unit:sec, HEX)	Utility Mode Special Setting	0x37	0x37	0x37	XG	68
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0429	Answering machine function	7	Answering machine CNG detection time (unit: 10 sec, HEX) (1-7)	Utility Mode Special Setting (4)	0x64	0x64	0x64	XG	69
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4	Answer mode 0: OFF 1: ON						
		3	Answering machine DC-LOOP detection time (unit: 5 sec, HEX) (1-15)						
		2							
		1							
		0							
0e042a-0e042b	Remote reception password *Line 1 only available	7	ASCII [2]	Utility Mode	0x2a 0x20	0x2a 0x20	0x2a 0x20	XG	6a-6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042c	RBT transmission time	7	RingBackTone signal transmission time (unit: 1000 ms, HEX)	-	0x14	0x14	0x14	XG	6C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042d	CAR signal ON time max. value	7	CAR ON time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XG	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042e	CAR signal ON time min. value	7	CAR ON time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XG	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e042f	CAR signal OFF time max. value	7	CAR OFF time max. value (unit: 20 ms, HEX)	-	0x28	0x00	0x00	XG	6F
		6							
		5							
		4							
		3							
		2							
		1							
		0							

5.28.8 0e043#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0430	CAR signal OFF time min. value	7	CAR OFF time min. value (unit: 20 ms, HEX)	-	0x0a	0x00	0x00	XG	70
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							
0e0431	No. of CAR signal detection times	7	CAR (information receiving terminal start signal) detection frequency (times, HEX)	-	0x01	0x00	0x00	XG	71
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0432	Caller ID signal waiting time	7	ID waiting time after Caller ID/ DIAL IN primary response (unit 1000 ms, HEX)	-	0x05	0x00	0x00	XG	72
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0433	Remote reception password entry waiting time	7	Password signal (DTMF) detection waiting time (unit: 100 ms, HEX)	-	0x14	0x14	0x14	XG	73
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0434	Normal/number display automatic line distinction function	7	Automatic judgment function 0: OFF 1: ON	-	0x83	0x00	0x00	XG	74
		6							
		5							
		4							
		3	V23 signal detection waiting time when judged (x1 sec, HEX)						
		2							
		1							
		0							
0e0435	Monitor speaker (Transmission signal sound)	7	PB tone monitoring at the time of offhook	Utility Mode (0-6)	0x03	0x03	0x03	XG	75
		6	Monitor speaker in communication 00: OFF 01: Up to DIS 10: Up to DIS + RBT transmissions 11: ON						
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0436 - 0e043f	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XG	76
		6							
		5							
		4							
		3							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							

5.28.9 0e044#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0440 - 0e0449	Numeric ID [20]	7	ASCII [20] When ID is less than 20 digits, justify to the left and insert space at the top. (No NULL terminator)	Utility Mode	ALL 0x20	ALL 0x20	ALL 0x20	XG	80-89
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e044a	PBX connection mode	7		Utility Mode (0-3)	0x0f	0x0f	0x0f	XG	8A
		6							
		5							
		4							
		3	PBX call 0000 - 1001: keypad 1011: Reserved 1100: Reserved 1101: Reserved 1110: Reserved 1111: PBX unconnected						
		2							
		1							
		0							
0e044b	Protocol monitor	7		Utility Mode (5)	0x00	0x00	0x00	XG	8B
		6							
		5	TEL/FAX switching RBT monitor sound 0: OFF 1: ON						
		4	Inhibit the speaker to sound when off-hook key is pressed 1: Inhibit 0: Not inhibit						
		3							
		2							
		1							
		0							
0e044c	Reception function (disable)	7		Utility Mode (0-4)	0x3f	0x3f	0x3f	XG	8C
		6							
		5	Name display 0: Not inhibit 1: Inhibit						
		4	Compulsory Memory RX 0: Not inhibit 1: Inhibit						
		3	No. of caller / name display (number display / (display of subscribers for trace-back system)) 0: Not inhibit 1: Inhibit						
		2	Closed-area communication 0: Not inhibit 1: Inhibit						
		1	Remote RX 0: Not inhibit 1: Inhibit						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		0	Dialin 0: Not inhibit 1: Disable						
0e044d	PBX outside line access code 1 (BCD)	7	1st digit	Utility Mode	0xff	0xff	0xff	XG	8D
		6							
		5							
		4							
		3	2nd digit						
		2							
		1							
		0							
0e044e	PBX outside line access code 2 (BCD)	7	3rd digit	Utility Mode	0xff	0xff	0xff	XG	8E
		6							
		5							
		4							
		3	4th digit						
		2							
		1							
		0							
0e044f	Limit of long size reception	7		-	0x00	0x00	0x00	XG	8F
		6							
		5							
		4							
		3							
		2							
		1							
		0	Limit of long size reception 0: Limit 1: Unlimited						

5.28.10 0e045#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0e0450	Max. size of long original received (In the case of 400 dpi or less)	7	When the resolution for reception is 400 dpi or less, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.))	-	0x64	0x64	0x64	XG	90
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0 e0451	Max. size of long original received (In the case of 600 dpi)	7	When the resolution for reception is 600 dpi, the size of a long original received that is regarded as an error (The maximum length is a decimal value x 10 mm. 0 is regarded as 1000 mm.)	-	0x64	0x64	0x64	XG	91
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e0452	Voice response output level adjustment	7		-	0x62	0x62	0x62	XG	92
		6							
		5							
		4							
		3	Voice response volume (HEX) 0000: min - 1111: max						
		2							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1							
		0							
0e0453	Monitor speaker (Received signal sound)	7		Utility Mode (0-4)	0x04	0x04	0x04	XG	93
		6							
		5							
		4	Speaker volume (HEX) (0-8)						
		3							
		2							
		1							
		0							
0e0454 - 0e045C	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XG	94 – 12C
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0e045D	Timer for adjusting PhaseB retransmission interval (V.17)	7	PhaseB re-transmission interval at manual receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s	-	0x00	0x00	0x00	XG	12D
		6							
		5	PhaseB re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		4							
		3	PhaseB re-transmission interval at automatic receiving (available at polling transmission) 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseB re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e045E	Timer for adjusting PhaseD retransmission interval (V.17)	7		-	0x00	0x00	0x00	XG	12E
		6							
		5							
		4							
		3	PhaseD re-transmission interval at manual sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		2							
		1	PhaseD re-transmission interval at automatic sending 00 : 3.0s 01 : 3.5s 10 : 4.0s 11 : 4.5s						
		0							
0e045F	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XG	12F
		6							
		5							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		4							
		3							
		2							
		1							
		0							

5.28.11 0f006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0060	Reception main scan line resolution ability [0]	7	400 dpi	-	0xaa	0xaa	0xaa	XH	20
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
0f0061	Reception main scan line resolution ability [1]	7		-	0x01	0x01	0x01	XH	21
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0062	Reception sub scanning resolution ability [0]	7	400 dpi	-	0xbb	0xbb	0xbb	XH	22
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
0f0063	Reception sub scanning resolution ability [1]	7		-	0x01	0x01	0x01	XH	23
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
0f0064	Reception coding method ability	7		-	0x1f	0x1f	0x1f	XH	24
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
0f0065	Received document width ability	7		-	0x0e	0x0e	0x0e	XH	25
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2	B4						
		1	A4						
		0	(A5)						
0f0066	Received document length ability	7		-	0x46	0x46	0x46	XH	26
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
0f0067	Reception speed ability [0]	7		-	0x1b	0x1b	0x1b	XH	27
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
0f0068	Reception speed ability [1]	7	V.17-144	-	0xfc	0xfc	0xfc	XH	28
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
0f0069	Reception speed ability [2]	7	V.34-192	-	0xff	0xff	0xff	XH	29
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
0f006a	Reception speed ability [3]	7		-	0x3f	0x3f	0x3f	XH	2A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
0f006b	Reception MSLT ability	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f006c	Reception MSLT ability	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2C
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							
0f006d	Reception MSLT ability	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f006e	Reception MSLT ability	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	2E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
0f006f	Reception ECM ability	7		-	0x01	0x01	0x01	XH	2F
		6							
		5							
		4							
		3							
		2							
		1							
		0	ECM reception capability 0: OFF 1: ON						

5.28.12 0f007#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
0f0070	Reception protocol ability	7		-	0x11	0x11	0x11	XH	30
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
0f0071	Reception option frame ability	7		-	0x07	0x07	0x07	XH	31
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
0f0072 - 0f007f	Reserved area	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	32 - 3F
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							

5.28.13 10006#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100060	Transmission main scan line resolution instruction [0]	7	400 dpi	-	0x22	0x22	0x22	XH	60
		6	300 dpi						
		5	200 dpi						
		4							
		3	16 pels/mm						
		2							
		1	8 pels/mm						
		0							
100061	Transmission main scan line resolution instruction [1]	7		-	0x01	0x01	0x01	XH	61
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100062	Transmission sub scanning resolution instruction [0]	7	400 dpi	-	0x11	0x11	0x11	XH	62
		6	300 dpi						
		5	200 dpi						
		4	100 dpi						
		3	15.4 l/mm						
		2							
		1	7.7 l/mm						
		0	3.85 l/mm						
100063	Transmission sub scanning resolution instruction [1]	7		-	0x01	0x01	0x01	XH	63
		6							
		5							
		4							
		3							
		2	(1200 dpi)						
		1	800 dpi						
		0	600 dpi						
100064	Transmission coding method instruction	7		-	0x1f	0x1f	0x1f	XH	64
		6							
		5	(JPEG)						
		4	JBIG						
		3	MMR						
		2	MR						
		1	MH						
		0	THRU						
100065	Transmission document width instruction	7		-	0x0e	0x0e	0x0e	XH	65
		6							
		5	(Legal)						
		4	(Letter)						
		3	A3						
		2	B4						

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		1	A4						
		0	(A5)						
100066	Transmission document length instruction	7		-	0x46	0x46	0x46	XH	66
		6	Unlimited						
		5	(Legal)						
		4	(Letter)						
		3							
		2	B4						
		1	A4						
		0	(A5)						
100067	Transmission speed instruction [0]	7		-	0x1b	0x1b	0x1b	XH	67
		6							
		5							
		4	V.29-96						
		3	V.29-72						
		2							
		1	V.27-48						
		0	V.27-24						
100068	Transmission speed instruction [1]	7	V.17-144	-	0xf0	0xf0	0xf0	XH	68
		6	V.17-120						
		5	V.17-96						
		4	V.17-72						
		3	V.33-144						
		2	V.33-120						
		1	(TCM-96)						
		0	(TCM-72)						
100069	Transmission speed instruction [2]	7	V.34-192	-	0xff	0xff	0xff	XH	69
		6	V.34-168						
		5	V.34-144						
		4	V.34-120						
		3	V.34-96						
		2	V.34-72						
		1	V.34-48						
		0	V.34-24						
10006a	Transmission speed instruction [3]	7		-	0x3f	0x3f	0x3f	XH	6A
		6							
		5	V.34-336						
		4	V.34-312						
		3	V.34-288						
		2	V.34-264						
		1	V.34-240						
		0	V.34-216						
10006b	Transmission MSLT instruction	7	T3.85 or 200 x 100dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6B
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006c	Transmission MSLT instruction	7	T7.7 or 200 x 200dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6C
		6							
		5							
		4							
		3							

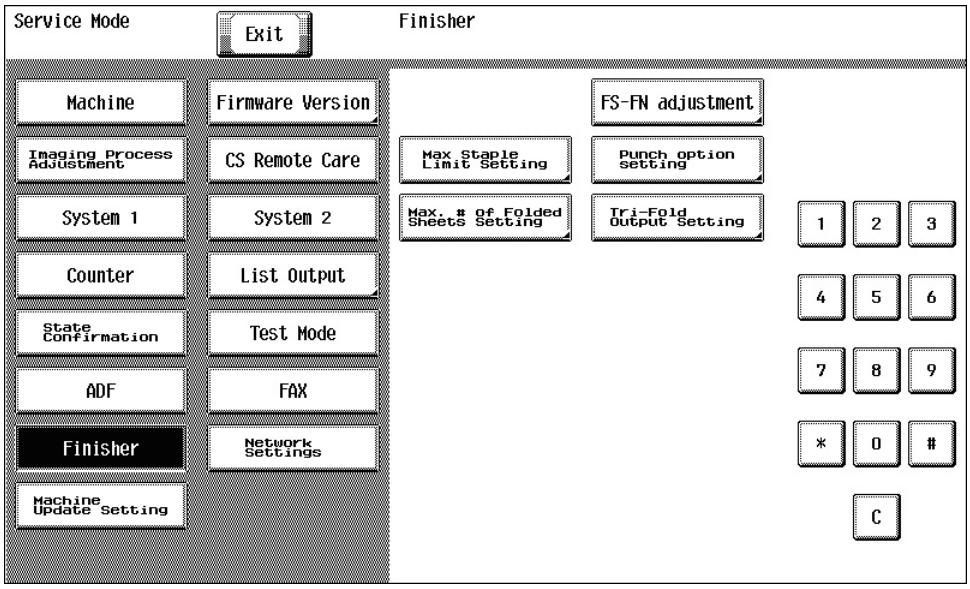
Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		2							
		1							
		0							
10006d	Transmission MSLT instruction	7	T11.55 or 300 x 300dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6D
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006e	Transmission MSLT instruction	7	T15.4 or 400 x 400dpi or 600 x 600dpi (0-40) ms unit	-	0x05	0x05	0x05	XH	6E
		6							
		5							
		4							
		3							
		2							
		1							
		0							
10006f	Transmission ECM instruction	7		-	0x01	0x01	0x01	XH	6F
		6							
		5							
		4							
		3							
		2							
		1	ECM transmission frame size 0: 256 1: 64						
		0	ECM transmission instruction 0: OFF 1: ON						

5.28.14 10007#

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
100070	Transmission protocol instruction	7		-	0x11	0x11	0x11	XH	70
		6							
		5							
		4	V.8/V.34						
		3							
		2							
		1							
		0	G3S						
100071	Transmission option frame instruction	7		-	0x00	0x00	0x00	XH	71
		6							
		5							
		4	(BFT)						
		3	(BTM)						
		2	PWD						
		1	(SEP)						
		0	SUB						
100072 - 10007f	Reserved area 1	7		-	ALL 0x00	ALL 0x00	ALL 0x00	XH	72 - 7F
		6							
		5							
		4							

Address	Items	Bit No	Contents	Setting	Default			CSRC	
					Japan	North America	Europe	Command	Parameter
		3							
		2							
		1							
		0							

5.29 Finisher

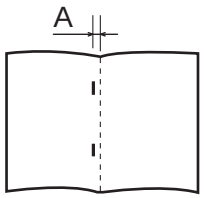


5.29.1 FS-FN adjustment - Center Staple Position(FS-536SD/FS-537SD)

(1) Use

- Adjust the stapling position for each paper size when printing with the center staple function.
- To adjust the center staple position by making the staple position match the folding position.

(2) Setting range



- Width A should fall within the following target.

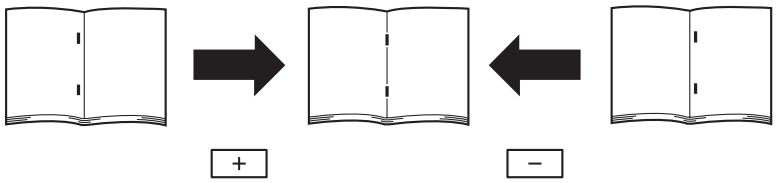
Target	0 ± 1.0 mm
Setting range	-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

NOTE

- **After [Half-Fold Position] adjustment, make this [Center Staple Position] adjustment.**

1. Place five sheets of originals on the DF.
2. Make a set of copy in the saddle stitching mode.
3. Check the amount of horizontal deviation (width A) between the staple and the half fold positions on the set of copy.
4. If width A is out of the target, make the following adjustment.
5. Call the Service Mode to the screen.
6. Touch [Finisher] -> [FS-FN adjustment] -> [Center Staple Position].
7. Touch the paper size where staple position is adjusted.
8. Look at the copy and adjust the staple position with the [+] / [-] key.



NOTE
- **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**

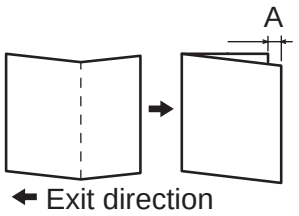
9. Touch [Test Copy].
10. Select the tray loading paper for the test copy.
11. Touch [3].
12. Touch [Fold & Staple], and press the start key.
13. Check the staple positions deviate.
14. Touch [END] to return to the adjustment screen.
15. Touch [OK] twice.
16. Touch [Exit] on the Service Mode screen.

5.29.2 FS-FN adjustment - Half-Fold Position(FS-536SD/FS-537SD)

(1) Use

- Use this adjustment to adjust the half-fold position in half-fold printing.

(2) Setting range

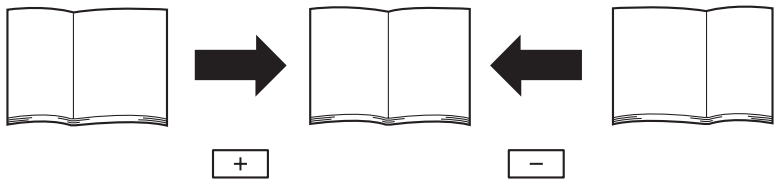


- Width A should fall within the following target.

Target	A = Less than 1.0 mm
Setting range	-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

1. Place two sheets of originals on the DF.
2. Make a copy in the folding mode.
3. Fold the copies along the crease.
4. Measure the amount of width A.
5. If width A is out of the target, make the following adjustment.
6. Call the Service Mode to the screen.
7. Touch [Finisher] -> [FS-FN adjustment] -> [Half-Fold Position].
8. Touch the paper size where half-fold position is adjusted.
9. Look at the copy and adjust the half-fold position with the [+] / [-] key.



NOTE
- **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**

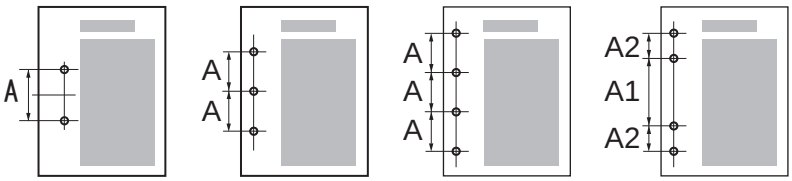
10. Touch [Test Copy].
11. Select the tray loading paper for the test copy.
12. Touch [3].
13. Touch [Half-Fold], and press the start key.
14. Check the crease positions deviate.
15. Touch [END] to return to the adjustment screen.
16. Touch [OK] twice.
17. Touch [Exit] on the Service Mode screen.

5.29.3 FS-FN adjustment - Punch Centering Fine Adj (PK-523)

(1) Use

- Adjusts the vertical position of the punch holes.

(2) Setting range



- The positions of the punch holes relative to the center in the paper feeding direction should fall within the following target.

Target	2-4 hole	• The distance A between holes: 80 mm * • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (2 hole)	• The distance A between holes: 70 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (3 hole)	• The distance A between holes:108 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	SWE4 hole	• The distance A1 between holes: 70 mm* • The distance A2 between holes: 21 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
Setting range	-5.0 mm to +5.0 mm (1 step: 0.1 mm)	

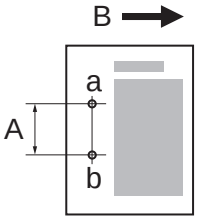
- *: It is not possible to adjust the A value of the distance between holes.

(3) Procedure

NOTE

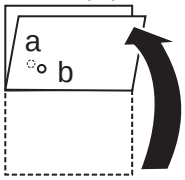
- **Following describe an exemplary case in which the number of punch holes is two. Perform the same adjustment procedure for other numbers of holes.**

1. Make a 1sided copy sample in the punch mode. Face the printed surface upward.

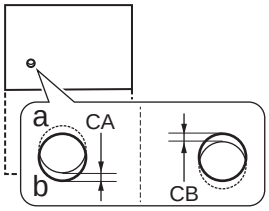


[A]	The distance between holes	[B]	Paper feeding direction
[a]	Upper punch hole	[b]	Lower punch hole

2. Fold the paper in half along the center in the paper feeding direction.



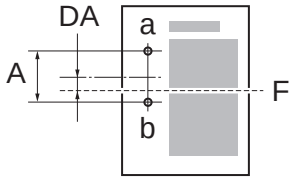
3. Measure the deviation amount [C] between punch holes [a] and [b].



4. If the deviation between the punch holes [a] and [b] is [CA], the punch holes deviate upward in the figure relative to the paper folding line [F] (center in the paper feeding direction).

- Ex.1: Punch hole deviation amount [DA] = Measured value [CA] 3 mm ÷ 2 = -1.5 mm (hole positions deviate upward)

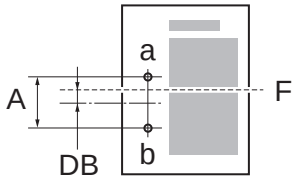
Ex.1



5. If the deviation between the punch holes [a] and [b] is [CB], the punch holes deviate downward in the figure relative to the paper folding line [F] (center in the paper feeding direction).

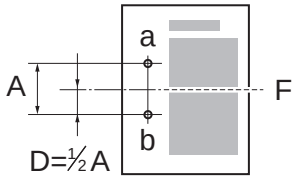
- Ex.2: Punch hole deviation amount [DB] = Measured value [CB] 3 mm ÷ 2 = +1.5 mm (hole positions deviate downward)

Ex.2

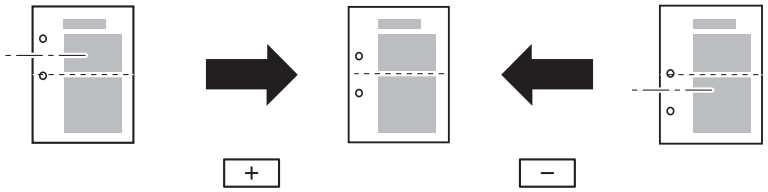


6. Complete the adjustment, if the deviation amount [D] between punch holes [a] and [b] falls within the target (±1.0 mm or less).
   - Ex.3: Punch hole deviation amount [D] = Measured value [C] 0 mm ÷ 2 = 0 mm (punch hole deviation amount falls within the target)

Ex.3



7. Call the Service Mode to the screen.
8. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Centering Fine Adj].
9. Touch the paper size where punch centering is adjusted.
10. Look at the copy and adjust the punch centering with the [+] / [-] key.
    - To move the hole position downward: Enter the value of [+]
    - To move the hole position upward: Enter the value of [-]



NOTE

- **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**

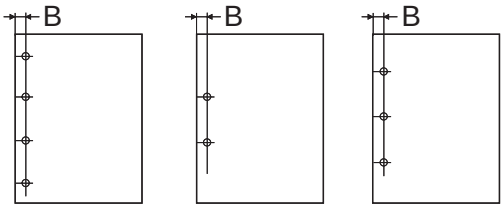
11. Touch [Test Copy].
12. Select the tray loading paper for the test copy.
13. Touch [3].
14. Select the number of punch holes in the “Punch” list, and then press the start key.
15. Check the punch hole positions.
16. Touch [END] to return to the adjustment screen.
17. Touch [OK] twice.
18. Touch [Exit] on the Service Mode screen.

5.29.4 FS-FN adjustment - Punch Edge Adj (PK-520/PK-523)

(1) Use

- To change the horizontal position of the punch holes.

(2) Setting range

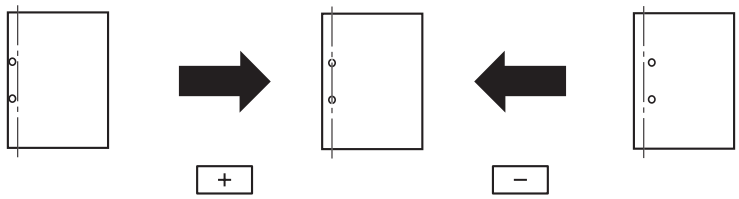


- Width B should fall within the following target.

Target	9.5 mm ± 1.0 mm (2-3 hole), 11.0 mm ± 1.0 mm (2-4 hole), 10.5 mm ± 1.0 mm (SWE4 hole)
Setting range	-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

1. Make a copy sample in the punch mode.
2. Make an adjustment so that the width B is within the target.
3. Call the Service Mode to the screen.
4. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Edge Adj].
5. Touch the paper type where punch horizontal position is adjusted.
6. Look at the copy and adjust the punch horizontal position with the [+] / [-] key.
   - To make width B greater: Enter the value of [+]
   - To make width B smaller: Enter the value of [-]



7. Touch [Test Copy].
8. Select the tray loading paper for the test copy.
9. Touch [3].
10. Select the number of punch holes in the “Punch” list, and then press the start key.
11. Check the punch hole positions.
12. Touch [END] to return to the adjustment screen.
13. Touch [OK] twice.
14. Touch [Exit] on the Service Mode screen.

5.29.5 FS-FN adjustment - Punch F. Sensor Intensity Adj. (PK-523)

(1) Use

- Adjusts the sensitivity (light intensity) of the PK punch front sensor of the punch kit.

(2) Procedure

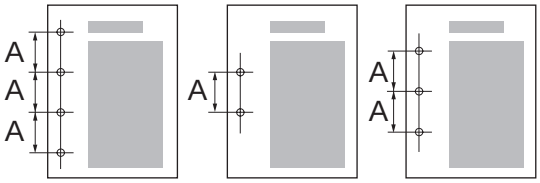
1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch F. Sensor Intensity Adj.].
3. Touch Start key.
4. Confirm that the result is OK.
   NOTE
   - **When NG appears, check whether the punch kit is properly installed.**
5. Touch [OK] twice.
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.29.6 FS-FN adjustment - Punch vertical position (Z-fold) (ZU-609)

(1) Use

- To adjust the position of the punch hole in the vertical direction when ZU-609 is in use.

(2) Setting range



- The positions of the punch holes relative to the center in the paper feeding direction should fall within the following target.

Target	2-4 hole	• The distance A between holes: 80 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (2 hole)	• The distance A between holes:70 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
	2-3 hole (3 hole)	• The distance A between holes:108 mm* • Deviation amount in the vertical direction relative to the center in the paper feeding direction: ± 1.0 mm
Setting range	-5.0 mm to +5.0 mm (1step: 0.1 mm)	

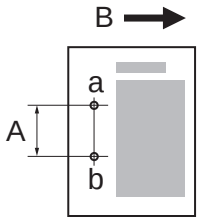
- * It is not possible to adjust the A value of the distance between holes.

(3) Procedure

NOTE

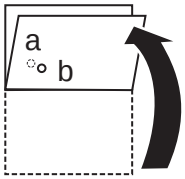
- **Following describe an exemplary case in which the number of punch holes is two. Perform the same adjustment procedure for other numbers of holes.**

1. Make a 1 sided copy sample in the punch mode (when PK-523 is mounted, select Z-fold + punch mode). Face the printed surface upward.

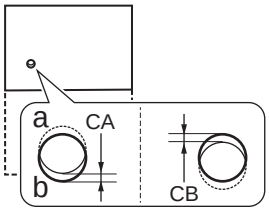


[A]	The distance between holes	[B]	Paper feeding direction
[a]	Upper punch hole	[b]	Lower punch hole

2. Fold the paper in half along the center in the paper feeding direction.

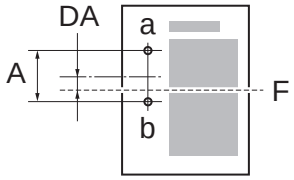


3. Measure the deviation amount [C] between punch holes [a] and [b].



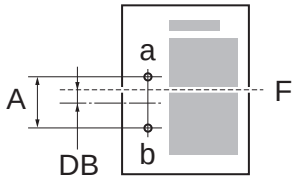
4. If the deviation between the punch holes [a] and [b] is [CA], the punch holes deviate upward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   - Ex.1: Punch hole deviation amount [DA] = Measured value [CA] 7 mm÷2 = - 3.5mm (hole positions deviate upward)

Ex.1



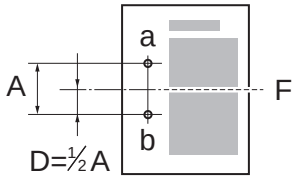
5. If the deviation between the punch holes [a] and [b] is [CB], the punch holes deviate downward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   - Ex.2: Punch hole deviation amount [DB] = Measured value [CB] 7 mm÷2 = +3.5mm (hole positions deviate downward)

Ex.2

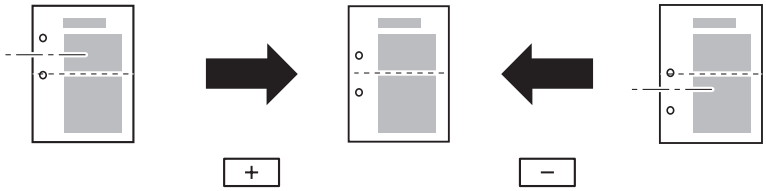


6. Complete the adjustment, if the deviation amount [D] between punch holes [a] and [b] falls within the target (±3.0 mm or less).
   - Ex.3: Punch hole deviation amount [D] = Measured value [C] 0mm÷2 = 0 (punch hole deviation amount falls within the target)

Ex.3



7. Call the Service Mode to the screen.
8. Touch [Finisher] -> [FS-FN adjustment] -> [Punch vertical position (Z-fold)].
9. Make the setting using [+] or [-].
   - To move the hole position downward: Enter the value of [+]
   - To move the hole position upward: Enter the value of [-]



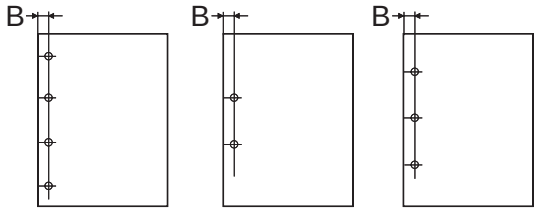
10. Touch [Test Copy].
11. Select the tray loading paper for the test copy.
12. Touch [3].
13. Touch [Z-Fold].
14. Select the number of punch holes in the “Punch” list, and then press the start key.
15. Check the punch hole positions.
16. Touch [END] to return to the adjustment screen.
17. Touch [OK] twice.
18. Touch [Exit] on the Service Mode screen.

5.29.7 FS-FN adjustment - Punch horizontal position (Z-fold) (ZU-609)

(1) Use

- To adjust the position of the punch hole in the horizontal direction when ZU-609 is in use.

(2) Setting range



- Width B should fall within the following target.

Target	2 - 4 hole	B = 11.0 mm ± 3.0 mm
	2 - 3 hole	B = 9.5 mm ± 3.0 mm
	4 hole	B = 10.5 mm ± 3.0 mm
Setting range	-5.0 mm to +5.0 mm (Step = 0.1 mm)	

(3) Procedure

1. Make a copy sample in the punch mode.
2. Check to see if the width from the paper end to the center of the punch hole in the copy sample falls within the target. Complete the adjustment, if the measured value falls within the target.
3. Call the Service Mode to the screen.
4. Touch [Finisher] -> [FS-FN adjustment] -> [Punch horizontal position (Z-fold)].
5. Make the setting using [+] or [-].
   - To make width B greater: Enter the value of [+]
   - To make width B smaller: Enter the value of [-]
6. Touch [Test Copy].
7. Select the tray loading paper for the test copy.
8. Touch [3].
9. Touch [Z-Fold].
10. Select the number of punch holes in the “Punch” list, and then press the start key.
11. Check the punch hole positions.
12. Touch [END] to return to the adjustment screen.
13. Touch [OK] twice.
14. Touch [Exit] on the Service Mode screen.
15. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

5.29.8 FS-FN adjustment - Resist loop size (Z-fold) (ZU-609)

(1) Use

- Adjust the size of the punch resist loop that is applied when ZU-609 operates.
- Used when tilted punched hole position or wrinkled paper occurs.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Resist loop size (Z-fold)].
3. Touch the paper type where resist loop size is adjusted.
4. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
5. Touch [Test Copy].
6. Select the tray loading paper for the test copy.
7. Touch [3].
8. Touch [Z-Fold].
9. Select the number of punch holes in the “Punch” list, and then press the start key.
10. Check the punch hole positions.
11. Touch [END] to return to the adjustment screen.
12. Touch [OK] twice.
13. Touch [Exit] on the Service Mode screen.
14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

15. Make copies in the punch mode again and check that the punch hole positions have been adjusted properly.

(3) Setting range

- -5.0 mm to +5.0 mm (Step = 0.1 mm)

5.29.9 FS-FN adjustment - Punch Registration Loop Adj (PK-523)

(1) Use

- To correct the tilt of paper (change the loop amount) before punching operation. (paper conveyed from MFP).
- To address problems such as misaligned punch holes, wrinkled paper, and jam at the punch registration section.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Registration Loop Adj].
3. Touch the paper type where punch regist loop size is adjusted.
4. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
5. Touch [OK] twice.
6. Touch [Exit] on the Service Mode screen.
7. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Setting range

- -5.0 mm to +5.0 mm (Step = 0.1 mm)

5.29.10 FS-FN adjustment - Punch Resist Loop Size (PI) (PI-507/PK-523)

(1) Use

- To correct the tilt of paper (change the loop amount) before punching operation. (paper conveyed from post inserter).
- To address problems such as misaligned punch holes, wrinkled paper, and jam at the punch registration section.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Regist Loop Size (PI)].
3. Touch [Upper] or [Lower].
4. Select a type of paper where adjustment is made.
5. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
6. Touch [OK] twice.
7. Touch [Exit] on the Service Mode screen.
8. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

(3) Setting range

- -5.0 mm to +5.0 mm (Step = 0.1 mm)

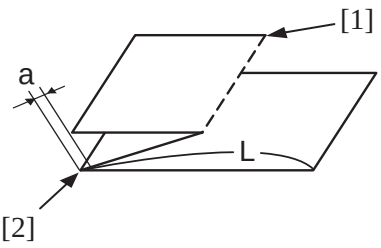
5.29.11 FS-FN adjustment - 1st Z-Fold Position/2nd Z-Fold Position (ZU-609)

(1) Use

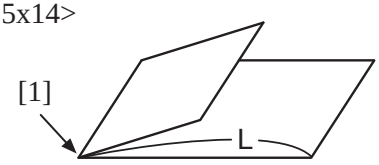
- To adjust the positions of the 1st Z-fold and 2nd Z-fold for the Z-fold mode.

(2) Setting range

<11x17, A3,B4,8K>



<8.5x14>



[1]	Position of the first fold	[2]	Position of the second fold

[L] Length of the first fold	[a] Length of the second fold

- Widths “a” and “L” should fall within the following target.

Target	11 x 17	• Length a: 4.0 mm ± 2.0 mm • Length L: 215 mm +0/-7.0 mm
	A3	• Length a: 4.0 mm ± 2.0 mm • Length L: 209 mm +0/-7.0 mm
	B4	• Length a: 4.0 mm ± 2.0 mm • Length L: 181 mm +0/-7.0 mm
	8.5 x 14*	• Length L: 278 mm +0/-7.0 mm
	8K	• Length a: 4.0 mm ± 2.0 mm • Length L: 194 mm +0/-7.0 mm
Setting range	-12.8 mm to +12.7 mm (Step = 0.1 mm)	

- *: 8.5 x 14 is available for only an half fold.

(3) Procedure

1. Make copies in the Z-fold mode.
2. Check whether the Z-fold widths "a" and “L” of ejected copy samples are within the target. Complete the adjustment, if the measured values fall within the target.
3. Call the Service Mode to the screen.
4. Touch [Finisher] -> [FS-FN adjustment] -> [1st Z-Fold Position] or [2nd Z-Fold Position].
5. Select [ALL] and make the setting using [+] or [-].
   - To increase the length of the 1st fold (L) or 2nd fold (a), enter a negative value with [+] key.
   - To decrease the length of the 1st fold (L) or 2nd fold (a), enter a positive value with [-] key.

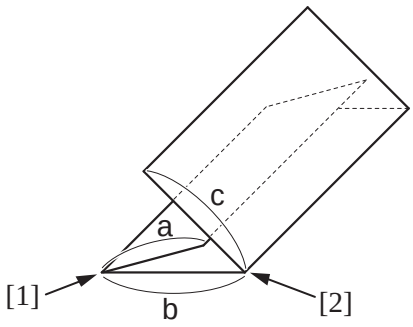
   NOTE
   - **The adjustment setting value used for each paper size is the value set with [ALL] plus the value set for each paper size.**
   - **Width “a” should not be 2 mm or less.**
6. Touch [Test Copy].
7. Select the tray loading paper for the test copy.
8. Touch [3].
9. Touch [Z-Fold], and press the start key.
10. Check the displacement of "width a" and "width L"on the fed out copies.
11. Touch [END] to return to the adjustment screen.
12. Touch [OK] twice.
13. Touch [Exit] on the Service Mode screen.

5.29.12 FS-FN adjustment - 1st Tri-Fold Adjustment/2nd Tri-Fold Adjustment (FS-536SD/FS-537SD)

(1) Use

- To adjust the positions of the 1st Tri-fold and 2nd Tri-fold for the Tri-fold printing.

(2) Setting range



[1] Position of the first tri-fold	[2] Position of the second tri-fold

- Check whether the tri-fold widths "a" and "b" of the ejected paper are within the target.

Target	A4S	Length a: 95 mm ± 2 mm Length b: 102 mm ± 2 mm
	8.5 x 11S	Length a: 89.4 mm ± 2 mm Length b: 96.0 mm ± 2 mm
	16KS	Length a: 88 mm ± 2 mm Length b: 92 mm ± 2 mm
Setting range		-10.0 mm to +10.0 mm (1 step: 0.1 mm)

(3) Procedure

- Make copies in the tri-fold mode.
- Check whether the tri-fold widths "a" and "b" of ejected copy samples are within the target. Complete the adjustment, if the measured values fall within the target.

(a) If the width "a" is out of the target:

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [1st Tri-Fold Adjustment].
3. Select a paper size where the tri-fold position needs adjustment.
4. While checking the copy samples, touch [+] or [-] to adjust the tri-fold position.
   - To increase the width a, enter a positive value with [+].
   - To decrease the width a, enter a negative value with [-].
5. Touch [Test Copy].
6. Select the tray loading paper for the test copy.
7. Touch [3].
8. Touch [Tri-Fold], and press the start key.
9. Check displacement of the fold position on the fed out copies.
10. Touch [END] to return to the adjustment screen.
11. Touch [OK] twice.
12. Touch [Exit] on the Service Mode screen.

(b) If the width "b" is out of the target:

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [2nd Tri-Fold Adjustment].
3. Select a paper size where the tri-fold position needs adjustment.
4. While checking the copy samples, touch [+] or [-] to adjust the tri-fold position.
   - To increase the width b, enter a positive value with [+].
   - To decrease the width b, enter a negative value with [-].
5. Touch [Test Copy].
6. Select the tray loading paper for the test copy.
7. Touch [3].
8. Touch [Tri-Fold], and press the start key.
9. Check displacement of the fold position on the fed out copies.
10. Touch [END] to return to the adjustment screen.
11. Touch [OK] twice.
12. Touch [Exit] on the Service Mode screen.

5.29.13 FS-FN adjustment - Punch Regist Loop Size (PK-520)

(1) Use

- Adjusts the punch loop size used for paper exited from the main body.
- Used when tilted punched hole position, wrinkled paper, or jam at punch registration section occurs.

(2) Setting range

- -4.0 to +4.0 mm

(3) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Punch Regist Loop Size].
3. Select a paper type where the punch hole position needs adjustment.
4. Set the target using the [+] / [-] keys.
   - Misaligned punched holes: Enter the value of [+]
   - Wrinkled paper: Enter the value of [-]
5. Touch [OK].
6. Touch [Exit] on the Service Mode screen.

5.29.14 FS-FN adjustment - PI Size Detection (PI-507)

(1) Use

- To specify paper sizes that the post inserter detects.
- To set a paper size with which size detection is made when a paper having a similar size is placed on the feeder.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [PI Size Detection].
3. Touch [Mode 1].
4. Select a desired paper size with which size detection is made.
5. Make the same setting in [Mode 2] to [Mode 6].
6. Touch [OK] twice.
7. Touch [Exit] on the Service Mode screen.

5.29.15 FS-FN adjustment - Post Inserter Adjustment (PI-507)

(1) Use

- To make automatic post inserter size detection adjustments separately in each of the upper and lower trays.
- Make this adjustment when the post inserter cannot make proper size detection.
- Make this adjustment after performing PI displacement adjustment.

(2) Procedure

1. Call the Service Mode to the screen.

2. Touch [Finisher] -> [FS-FN adjustment] -> [Post Inserter Adjustment].
3. Touch [Upper Tray].
4. Place A4S paper on the upper tray and touch [A4].
5. Touch Start key.
6. Confirm that the result is OK.
7. Touch [Lower Tray].
8. Place A4S paper on the lower tray and touch [A4].
9. Touch Start key.
10. Confirm that the result is OK.
11. Touch [OK] twice.
12. Touch [Exit] on the Service Mode screen.

5.29.16 FS-FN adjustment - Finisher Components Test Mode

(1) Use

- Use this adjustment to check finisher's operation.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Finisher Components Test Mode].
3. Select a mode.
4. Press the Start key to start finisher operation.
5. Press the Stop key to stop ongoing finisher operation.

(3) Finisher components list (FS-537/FS-537SD/PK-523/PI-507/ZU-609)

Mode	
Finisher Components Test Mode 1	Paper Transport Motor
	Paper Entrance Motor
	Paper Exit Motor
	Paper Alignment Plate Motor/F
	Main Tray Up/Down Motor
	Paper Alignment Plate Motor/R
	Side Stopper Guide Motor
	Paper Exit Belt Motor
	Exit Roller Retraction Motor
	Paper Discharge Control Motor
	Side Stapler Movement Motor
	Pre-Discharge Drive Motor
	Paddle Motor
	exit divert
Finisher Components Test Mode 2	FD Stopper Drive Motor
	paddle arm motor
	pusher motor
	sub tray exit motor
	bero motor
	ZU feed motor
	JS exit feed guide
	sd ent feed motor
	SD belt tray feed motor
	zu chopper
	ZU Guide Motor
	ZU Press Motor
	M302/Oscillating Drive M: HP Search
	M302/Oscillating Drive M: Edge Sensor Control
Finisher Components Test Mode 3	M301/Punch Drive M: HP Search
	M301/Punch Drive M: Execute Punch (2-Hole)
	M301/Punch Drive M: Execute Punch (3- or 4-Hole)
	M203 (PI divert M) Paper Line velocity
	MC201 (upper paper feed clutch) ON
	MC202 (lower paper feed clutch) ON
	M201 (Upper rise descent M) Down (HP Search)
	M201 (Upper rise descent M) Up
	M202 (Lower rise descent M) Down (HP Search)
	M202 (Lower rise descent M) Up

Mode	
	SD201 (upper row move solenoid) ON
	SD202 (the lower move solenoid) ON
	MC203 (registration transportation clutch) ON
	SD Paper Transport Motor
Finisher Components Test Mode 4	Folding Roller Motor
	Leading Edge Gripper Solenoid
	Leading Edge Stopper Motor
	CD Alignment Plate Motor
	Folding Knife Motor
	Chip Box Change Motor
	Tail Edge Holding Plate Motor
	SD Paddle Motor
	Tri-folding Knife Motor

(4) Finisher components list (FS-536/FS-536SD/PK-520)

Mode	
Finisher Components Test Mode 1	Paper Transport Motor
	Paper Entrance Motor
	Paper Exit Motor
	Paper Alignment Plate Motor/F
	Main Tray Up/Down Motor
	Paper Alignment Plate Motor/R
	Side Stopper Guide Motor
	Paper Exit Belt Motor
	Exit Roller Retraction Motor
	Tail Edge Holding Plate Motor
	Side Stapler Movement Motor
	Pre-Discharge Drive Motor
	Punch Drive Motor
	Paddle Motor
Finisher Components Test Mode 2	Switch Output Tray Motor
	SD Paper Transport Motor
	Folding Roller Motor
	Leading Edge Gripper Solenoid
	Leading Edge Stopper Motor
	CD Alignment Plate Motor
	Folding Knife Motor
	Chip Box Change Motor
	Paper Discharge Control Motor
	SD Paddle Motor
	Tri-folding Knife Motor

5.29.17 FS-FN adjustment - Paper Alignment Guides W. Adj. (FS-536/FS-536SD/FS-537/FS-537SD)

(1) Use

- To fine adjust the horizontal width of the aligning plate.
- Use this feature to fine adjust the aligning plate that aligns ejected paper.

(2) Default setting

- 0.0 mm

(3) Setting range

- -10.0 mm to +10.0 mm (1 step: 0.1 mm)

(4) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [FS-FN adjustment] -> [Paper Alignment Guides W. Adj.].
3. Select a mode you want to adjust.
4. Set and adjust a value with the [+] / [-] key.
5. Touch [OK].

6. Touch [Exit] on the Service Mode screen.

5.29.18 FS-FN adjustment - ZFold1st Fold Loop Size (ZU-609)

(1) Use

- To adjust the variation in the 1st fold position of Z-Fold.
- Forming a loop of stiff and slippery paper is difficult and a folding position on the paper may not be constant. This function adjusts loop amount to make the folding position constant.

Increase loop amount	increase the adjustment value
Decrease loop amount	decrease the adjustment value

5.29.19 FS-FN adjustment - ZFold2nd Fold Loop Size (ZU-609)

(1) Use

- To adjust the variation in the 2nd fold position of Z-Fold.
- Forming a loop of stiff and slippery paper is difficult and a folding position on the paper may not be constant. This function adjusts loop amount to make the folding position constant.

Increase loop amount	increase the adjustment value
Decrease loop amount	decrease the adjustment value

5.29.20 FS-FN adjustment - ZFold2nd Fold Speed (ZU-609)

- Not used

5.29.21 FS-FN adjustment - ZFold Adjust Custom (ZU-609)

- Not used

5.29.22 Max Staple Limit Setting (FS-537/FS-537SD)

(1) Use

- When FS-537or FS-537SD is installed, specify the maximum number of sheets that can be stapled together.
- To change the maximum that can be stapled together.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Max Staple Limit Setting].
3. Enter a desirable maximum number with the 10-key pad.
4. Touch [END].
5. Turn OFF the main power switch. Then, wait for 10 sec. or more and turn ON the main power switch.

NOTE

- **If mixed originals includes one or more large size ones (A3/11 x 17 or more), the maximum that can be stapled together is subject to the setting of large size staple limit restriction.**
- **If large size staple limit restriction is set to [-20 pieces] and the maximum number of sheets to be stapled together less 20 is 2 or less, then the restricted number of sheets as the maximum is 2.**
- **When FS-537or FS537SD is installed and the staples for 50 sheets are detected, 50 sheets becomes the upper limit even though the setting of the upper limit up to which sheets can be stapled exceeds 50 sheets.**

(3) Default setting

- Staple option setting: 100 Piece
- Large size staple limit restriction: Do not do.

(4) Setting range

- Staple option setting: 2 to 100
- Large size staple limit restriction: [-20 pieces] or [Do not do.]

5.29.23 Punch Option Setting

(1) Use

- Specifies punch settings depending on the optional punch kit attached to the finisher.
- An individual punch setting needs to be made according to the type of the punch option.
- This setting is required if ZU-609 is mounted.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Punch Option Setting].
3. Touch [ZU-609] if ZU-609 is mounted.
4. Select the type of punch kit.
5. Select the number of punch holes in accordance with the punch kit destination type.
6. Touch [decision].
7. Touch [END].
8. Touch [Exit] on the Service Mode screen.

(3) Default setting

- Non-installat.

5.29.24 Max. # of Folded Sheets Setting

(1) Use

- Imposes restriction on the number of sheets to be folded in each of different folding modes.
- To change the maximum number of sheets to be folded in each of different folding modes.

(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Finisher] -> [Max. # of Folded Sheets Setting].
3. Select a folding mode where the maximum is restricted and enter a desirable maximum number with the 10-key pad.
4. Touch [END].
5. Touch [Exit] on the Service Mode screen.

(3) Default setting

- Center Fold: 5 Piece
- Center Staple: 20 Piece
- Tri-Fold: 3 Piece
- Z fold/staple using together: 10 Piece
- Z fold: 50 pieces

(4) Setting range

Center Fold
- 1 to 5 Piece

Center Staple
- 2 to 20 Piece

Tri-Fold
- 1 to 3 Piece

Z fold/staple using together
- 2 to 10 Piece

Z fold
- 50 Piece/40 Piece/30 Piece/20 Piece

5.29.25 Tri-Fold Output Setting (FS-537SD)

(1) Use

- To set the position where paper is ejected when paper is conveyed to the saddle stitcher in tri-fold mode.

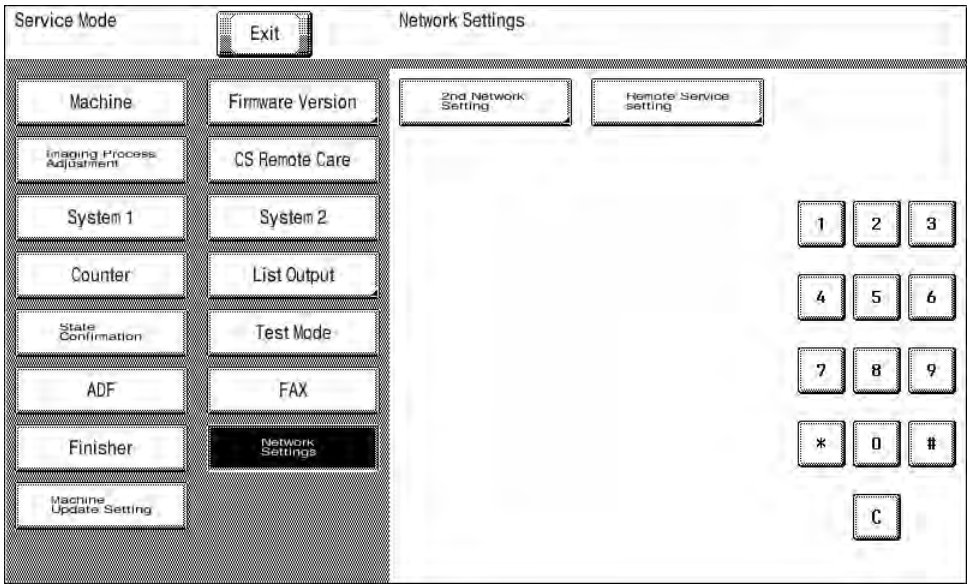
(2) Default setting

- Normal Output

(3) Setting item

- Normal Output
- Extend Output

5.30 Network Settings



- It is displayed when this machine is equipped with an optional upgrade kit UK-212.
- To perform a remote control from an Android tablet terminal or iOS terminal, bizhub Remote Access are required.

5.30.1 2nd Network Setting - 2nd network card settings

(1) Use

- To be configured when an optional Upgrade Kit UK-212 has been installed in this machine.

(2) Default setting

- Unset

(3) Setting item

- Set
- Unset
- When [Set] is selected, configure the following settings.

5.30.2 2nd Network Setting - Network Interface Settings

NOTE

- **Before making settings, note the network environment of the customer and make the settings to suit the environment.**

(1) Use

- To connect the MFP main unit as a wireless LAN adapter to a wireless LAN access point connected to the LAN environment. (when Wireless Only or Wired+Wireless (Secondary Mode) is selected)
- To perform direct communication between the MFP main unit and a mobile terminal. (when Wired+Wireless (Primary Mode) or Wired +Wireless (Wi-Fi Direct) is selected)

(2) Setting item

Network Interface Settings	Description
Wired Only	Use when the MFP main unit is connected only to a LAN environment.
Wireless Only	• Use when the MFP main unit is connected only to a wireless LAN environment. • A job is received from the client via the wireless LAN access point and executed.
Wired+Wireless (Secondary Mode)*1	• Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment. • A job is received from the client via the LAN and executed.
Wired+Wireless (Primary Mode)*1	• The MFP main unit is used as a wireless LAN access point (Primary Mode). • When starting up the MFP main unit, perform wireless LAN communication between the MFP main unit and the mobile terminal (Android terminal, iOS terminal, or devices supporting Wi-Fi) without via wireless LAN access point. • Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment.
Wired+Wireless (Wi-Fi Direct) *1	• Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment. • The MFP main unit is used as a wireless LAN access point. • With this mode, a mobile terminal (excluding iOS) can be connected to Wi-Fi Direct authentication devices easily.

- *1 When this setting is enabled, [Administrator Settings] -> [System Connection] -> [Universal Print Settings] -> [Store Print Documents Settings] is set to “Disable”.

5.30.3 2nd Network Setting - SSID

(1) Use

- To enter the SSID of the wireless LAN access point connected to the machine (using up to 32 characters).

5.30.4 2nd Network Setting - Authentication/Encryption Algorithm

(1) Use

- To set the algorithm used for authentication or encryption.

(2) Default setting

- No Authentication/Encryption

(3) Setting item

- No Authentication/Encryption
- WEP
- WPA-PSK (AES)
- WPA2-PSK (AES)

5.30.5 2nd Network Setting - WEP Key

(1) Use

- To be set when WEP is selected for authentication/encryption Algorithm.

(2) Procedure

1. Select an input method.

2. Touch [Edit], then enter a new WEP key.
3. Touch [OK].
4. Enter the WEP key again to make a check.
5. Touch [OK].

5.30.6 2nd Network Setting - Passphrase

(1) Use

- To be set when a method including WPA is selected for authentication/encryption Algorithm.

(2) Procedure

<Input method>
- Select an input method.

<Security key>
- Enter a value of the security key of passphrase.

<Passphrase Auto Update>
- Set ON/OFF for passphrase auto update. [Yes] is specified by default.

<Update Interval>
- Set the interval for updating passphrase. [60] minutes is specified by default.

<40 to 20 MHz Auto Switch>
- Set [ON] to try a high-speed communication with 40MHz. [OFF] is specified by default.

5.30.7 2nd Network Setting - Wireless Channel

(1) Use

- To set a wireless channel.

(2) Default setting

- Auto

(3) Setting item

- 1 to 13
- Auto

5.30.8 2nd Network Setting - ANY Connection

(1) Use

- To set whether or not to allow the ANY connection.

(2) Default setting

- Permit

(3) Setting item

- Permit
- Prohibit

5.30.9 2nd Network Setting - Connect permission extension address list

(1) Use

- To allow the connection through the only device with specified MAC address.

(2) Procedure

1. Touch [Edit], then enter the MAC address.

5.30.10 2nd Network Setting - DHCP Server Setting

(1) Use

- To set whether or not to enable the DHCP server.

(2) Default setting

- ON

(3) Setting item

- ON
- OFF
- If set to ON, set the IP leasing address, subnet mask and leasing period.

5.30.11 2nd Network Setting - TCP/IP Settings

(1) Use

- To set TCP/IP.

(2) Procedure

1. If [IPv4 Settings] is selected, select [Auto Input] or [Enter New Address].
   - If [Auto Input] is selected, configure DHCP settings.
   - If [Enter New Address] is selected, set [IP Address] and [Subnet Mask].
2. If [IPv6 Settings] is selected, the link-local address will be displayed as IPv6 type.

5.30.12 Remote Service Setting

(1) Function Setting

(a) Enable Settings

- Use
  - To set whether to use the remote service.

    NOTE
    - **When [ON] is selected, [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] will not be displayed.**
- Default setting
  - Disable
- Setting item
  - ON
  - Disable

(b) Server Settings

- Use
  - To set URL, ID and password of the server to be used on remote service communication.
- Setting item

URL	(Address*1 or host name*2): port number*3 *1: IPv4 or IPv6 address *2: Alphanumeric characters and symbols up to 253 characters
ID	Alphanumeric characters and symbols: 1-64 characters
Password	Alphanumeric characters and symbols: 0-64 characters

(2) Proxy Server Setting

(a) Enable Settings

- Use
  - To set whether to use the proxy server.
  - When [Enabled] is set, the [WebDAV Synchronize] and [Proxy Server] settings can be configured.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable

(b) WebDAV Synchronize

- Use
  - To set whether to synchronize with [WebDAV Client Settings] in Administrator settings.
  - When [Synchronize] is set, operation is performed in accordance with the configuration of the [WebDAV Client Settings] within the Administrator settings.

    NOTE
    - **The [Proxy Server] is no longer appears when [Synchronize] is set.**
- Default setting
  - Do not Synchronize
- Setting item
  - Synchronize
  - Do not Synchronize

(c) Proxy Server

- Use
  - To configure the proxy server settings.
- Setting item

Host Name	Address*1 or hostname*2 *1: IPv4 or IPv6 address *2: Alphanumeric characters and symbols up to 253 characters
User Name	Alphanumeric characters and symbols: NULL to 63 characters
Password	Alphanumeric characters and symbols: NULL to 63 characters
Port Number	1 to 65535

(3) Maintenance Setting

(a) Identification Code

- Use
  - To enter the identification code used to organize and manage multiple MFPs on a per-customer basis.

NOTE
- **Note the hierarchical order of the 8-digit identification codes: first 2 digits represent the region code and the last 6 digits represent the management code.**

- Setting range
  - 0 to 99999999 (Enter an 8-digit number.)

(b) Operator Name

- Use
  - To enter the keywords used by maintenance personnel to easily search for corresponding MFPs on the remote service server UI screen.
- Setting range
  - Up to 64 alphanumeric characters

(c) Setup

- Use
  - To connect to the remote service server manually.
  - Touch Start to send the identification code and operator name to the remote service server.

(4) XMPP Settings

(a) Function Setting

- Use
  - To set whether to use sessions when communicating with the XMPP server.

NOTE
- **When [Disable] is set, initial commands cannot be received from the remote service server via the XMPP server.**

- Default setting
  - Disable
- Setting item
  - ON
  - Disable

(b) Connection Setting - Repeat Interval

- Use
  - To set the repeat interval used when communication with the XMPP server fails.
- Default setting
  - 1 Minute
- Setting range
  - 1 to 5 Minutes

(c) Connection Setting - Connection Time-out

- Use
  - To set the timeout used for communication with the XMPP server.
- Default setting
  - 60 sec
- Setting range
  - 5 to 300 sec.

(d) Connection Setting - SSL

- Use
  - To set whether to use the SSL when communicating with the XMPP server.
- Default setting
  - ON
- Setting item
  - ON
  - OFF

(e) Connection Setting - BOSH

- Use
  - To set whether to use the BOSH connection when communicating with the XMPP server.
- Default setting
  - OFF
- Setting item
  - ON
  - OFF

(f) Connection server info

- Use
  - To confirm the URL, ID, domain name, port number and connection status.

(5) Always Connection Setting

(a) Maintenance Time

- Use
  - To select the maintenance time from [Use Power Save Settings], [Always Connection] or [Individual Settings].

- Default setting
  - Individual Settings
- Setting item

User Power Save Settings	Operates when maintenance can be performed in accordance with power save settings.
Always Connection	Maintenance can be performed at any time.
Individual Settings	Maintenance start and end times are configured individually.

(b) Existence Notice Interval

- Use
  - To set the time interval used to send existence notice packets for existence notice from the MFP to the XMPP server.
- Default setting
  - 300 sec.
- Setting range
  - 1 to 3600 sec.

(c) Learning Function

- Use
  - To set whether to enable "Learning function" used to change the packet transmission interval in accordance with the XMPP session state when sending existence notice.
  - When [Enable] is set, the adjust value and lower limit must be configured.
- Default setting
  - Disable
- Setting item
  - Enable
  - Disable

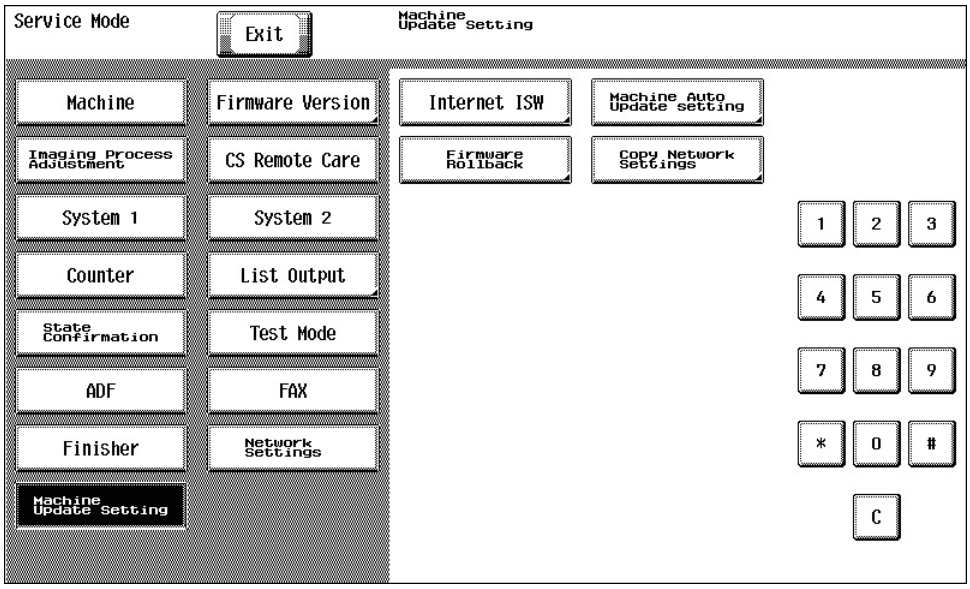
(d) Learning Function - Adjust Value

- Use
  - To lengthen the next packet transmission interval by the amount of the "adjust value" when a existence notice is sent successfully.
  - To shorten the next packet transmission interval by the amount of the "adjust value" when a existence notice is sent unsuccessfully.
- Default setting
  - 30 sec.
- Setting range
  - 1 to 3600 sec.

(e) Learning Function - Lower Limit

- Use
  - To make sure not to set the packet transmission interval shorter than the "lower limit".
- Default setting
  - 30 sec.
- Setting range
  - 1 to 3600 sec.

5.31 Machine Update Setting



- By using this setting, the firmware or update file stored in the server can be downloaded over internet for upgrading.
- For details for upgrading the firmware, refer to “REWRITING OF FIRMWARE.”

5.31.1 Internet ISW - Internet ISW Set

(1) Use

- To set whether or not to enable each setting for Internet ISW.

- To use when upgrading the firmware by Internet ISW.
- Each setting such as Server setting will be valid by setting this to “ON”.
  NOTE
  - **If [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, this setting will automatically be set to “OFF” and cannot be changed.**

(2) Default setting

- OFF

(3) Setting item

- ON
- OFF
- When this setting is set to "ON," [Open Mode Settings] can be configured. When [Open Mode Settings] is set to "Set," firmware download and update via Internet ISW are available in Administrator Settings.

5.31.2 Internet ISW - HTTP Setting

- It will be displayed only when [Internet ISW Set] is set to “ON”.

(1) HTTP data acquisition setting

(a) Use

- To set whether or not to enable downloading using the HTTP protocol.
- To use when accessing the server using the HTTP protocol.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(2) Connection Time-Out

(a) Use

- To set the time for the timeout for accessing the server.

(b) Default setting

- 60 sec

(c) Setting range

- 30 to 300 sec.

5.31.3 Internet ISW - FTP Setting

- It will be displayed only when [Internet ISW Set] is set to “ON”.

(1) FTP data acquisition setting

(a) Use

- To set whether or not to enable downloading using FTP protocol.
- To use when accessing the server with FTP protocol.

(b) Default setting

- ON

(c) Setting item

- ON
- OFF

(2) Connection Setting

(a) Use

- To set the port No. and the time for timeout when accessing the FTP server, and also to set whether or not to enable PASV mode.
- To use when connecting by the PASV (passive) mode (FTP server side will inform the connection port before connecting).

(b) Procedure (Port Number)

- Enter the port number using the 10-key pad within the range of 1 to 65535.

(c) Default setting (Port Number)

- 21

(d) Procedure (Connection Time Out)

- Enter the value between 1 and 60 (min.) using the 10-key pad.

(e) Default setting (Connection Time Out)

- 1 minute

(f) Default setting (PASV Mode)

- OFF

(g) Setting item (PASV Mode)

- ON
- OFF

5.31.4 Internet ISW - Forwarding Access Setting

(1) User ID

(a) Use

- To register the user ID for accessing the program server where firmware is to be stored.

(b) Procedure

1. Select [User ID].
2. Enter the user ID (up to 64 one-byte characters) on the on-screen keyboard.

(2) Password

(a) Use

- To register the password for accessing the program server where firmware is to be stored.

(b) Procedure

1. Select [Password].
2. Enter the password (up to 64 characters) on the on-screen keyboard.

(3) URL

(a) Use

- To register the address and directory of the program server where the firmware is to be stored in URL.

(b) Procedure

1. Select [URL].
2. Enter the URL (up to 256 one-byte characters) on the on-screen keyboard.
   NOTE
   - **Enter the URL which format suits the protocol to be used.**
     When connecting to http "http:// (Host name or IP address)/ directory name" or "https:// (Host name or IP address)/ directory name".
     When connecting to ftp "ftp:// (Host name or IP address) / directory name".

(4) FileName

(a) Use

- To register the file name of the firmware data to be downloaded.

(b) Procedure

1. Select [FileName].
2. Enter the file name (up to 63 one-byte characters) on the on-screen keyboard.

5.31.5 Internet ISW - Download

NOTE

- **To connect MFP to the Internet via a proxy, the proxy server related settings must be configured in addition to [Forwarding Access Setting].**
  The setting of the proxy used in the Internet ISW communication is configured in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Internet ISW Settings] -> [FTP Server Settings] or [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

(1) Download/Update

(a) Use

- Access the program server according to the Internet ISW setting, and download the firmware.
- To use when updating the firmware via network.
- The firmware is downloaded and updated successively. During the firmware download and update, MFP cannot be used.

(b) Procedure

1. Select [Download/Update].

2. Touch [Start] to start downloading the firmware.
3. The message to show the status will be displayed on the screen while connecting and transferring data.
   NOTE
   - **If connection to the program server or data download fails, an error code and a message are displayed. Identify the cause of the problem with the error code and reconfigure the settings following the message.**
     Refer to "K.5.1 Error code list for the Internet ISW" for the error codes.
4. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

(2) Download

(a) Use

- To access the program server and download the firmware in accordance with the settings configured in Internet ISW Settings.
- As the firmware is downloaded in the background, MFP can be used during download.
- If firmware data already downloaded exits in the HDD, the data is overwritten and replaced by the new data.

(b) Procedure

1. Select [Download].
2. Touch [Start] to start downloading the firmware.
3. The status message appears on the screen during connection and data transfer.
   In the middle of downloading, the task can be cancelled by touching [Cancel].
   NOTE
   - **If connection to the program server or data download fails, an error code and a message are displayed. Identify the cause of the problem with the error code and reconfigure the settings following the message.**
   - **For details on error codes refer to "K.5.1 Error code list for the Internet ISW".**
4. When the firmware download is successfully completed, the result "OK" appears.

(3) Update

(a) Use

- To update the firmware by using the firmware downloaded and saved in the HDD.
- During the firmware download and update, MFP cannot be used.
- This button is not appeared if there is no firmware in the HDD.

(b) Procedure

1. Touch [Update].
2. Check the firmware file version in HDD.
3. Press Start key to update the firmware.
4. When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

(4) Delete

(a) Use

- To delete the firmware file saved in the HDD.
- This button is not appeared if there is no firmware in the HDD.

(b) Procedure

1. Touch [Delete].
2. Press Start key to delete the firmware.

5.31.6 Internet ISW - Update Start Time Settings

(1) Use

- To set the start time in order to automatically update the downloaded firmware.

(2) Procedure

1. Select [Set] for [Update Firmware at Specified Time].
2. Touch [Hour] and [Min.] and set the firmware update start time.

NOTE

- **If updated firmware has not been downloaded by the specified time, firmware update is not performed.**
- **If the main power switch is turned OFF during a firmware update, the firmware is updated next time when the main power switch is turned ON.**
- **If a job is in process when the specified time comes, the firmware is updated after the completion of the job.**

5.31.7 Machine Auto Update setting - Auto Update setting

- Obtain the update file for the machine from the file storage server, and update the firmware or settings of the machine.
- This function is same as that of the [Administrator settings] -> [Network Setting], but it will not be used together with the function of the service mode.
- Refer to "J.5. Auto Update setting" for how to create an update file.

NOTE

- **When [Service Mode] -> [Network Settings] -> [Remote Service setting] -> [Function Setting] -> [Enable Settings] is set to "ON", this setting is not displayed. [Machine Auto Update setting] in Administrator settings is not applicable.**

(1) Server 1 Settings - Auto Update

(a) Use

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

- If [ON] is selected, configure the following settings.

When configuring the settings for SMB with the download protocol *1

Host Name	Set the host name for the SMB server.
File Path	Set the file path used in the SMB server communication. *2
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.
Number of retries	Set the number of times to retry when failed to obtain.

*1: If the MFP relay server is used as a server on the data providing side, the SMB protocol will not be used.
*2: Specify the folder in which C_UpdateList.ini is stored. Refer to "J.5. Auto Update setting" for details.

When HTTP is set for the download protocol

URL	Set the address of the http server. *1
User Name	Set the user name used to access the relay server by http protocol.
Password	Set a password used to access the http server.
Proxy	Select whether or not to use the proxy server. *2
Connection Time-out	Set the timeout period for connecting to the server.

*1: Specify the folder in which C_UpdateList.ini is stored. Refer to "J.5. Auto Update setting" for details.
*2: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

(2) Server 2- Settings - Auto update

(a) Use

- To obtain the update file from the specified location, and configure settings to update the machine at the specified time.

(b) Default setting

- OFF

(c) Setting item

- ON
- OFF

(d) Procedure

- If [ON] is selected, configure the following settings.

URL	Set the address of the http server. *1
User Name	Set the user name used to access the relay server by http protocol.
Password	Set a password used to access the http server.
Proxy	Select whether or not to use the proxy server. *2
Connection Timeout	Set the timeout period for connecting to the server.

*1: Specify the folder in which C_UpdateList.ini is stored. Refer to "J.5. Auto Update setting" for details.
*2: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

(3) Common Settings

- Configure the common settings for [Server 1 settings] and [Server 2 settings].

(a) Update Time

- Touch Clear to set the time to update the machine.

(b) Polling Settings

- Use
  - Set the polling period or day of the week and clock for obtaining the update list.
- Default setting
  - Select Day of the Week

- Setting item
  - Set Interval. (Can be set between 1 to 240 minute/ Default setting: 60 Minute)
  - Select Day of the Week (Day of the week and clock can be specified/ Default setting: Monday/0 o'clock 0 minute)

(c) Retry Interval

- Set the period for retrying when failed to obtain.

5.31.8 Machine Auto Update setting - Relay server setting

(1) Update File Download

- Configure settings to use the relay server to obtain the update relay data.
- This function is same as that of the Administrator settings > Network Setting, but it will not be used together with the function of the service mode.
- Refer to "J.6. Firmware Distribute Server function (Relay server)" for how to create an update file.

(a) Default setting

- OFF

(b) Setting item

- ON
- OFF

(c) Procedure

- If [ON] is selected, configure the following settings.

Obtain Setting File-URL	Set the address of the file storage server. *1
Obtain Setting File-User Name	Set the user name used to access the file storage server.
Obtain Setting File-Password	Set the password used to access the file storage server.
Obtain Setting File-Proxy	Set whether or not to use the proxy server. *2
Obtain Setting File-Connection Time-out	Set the time out period to connecting to the server.
Polling Interval	Set the polling period for obtaining the update list.
Repeat Interval	Set the period for retrying when failed to obtain.

*1: Specify the folder in which S_UpdateList.csv is stored. Refer to "J.6. Firmware Distribute Server function (Relay server)" for details.
*2: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].
The distribution server (SMB authentication) will not be used.
In case of the distribution server (HTTP)

User Name	Set the user name used to access the relay server by http protocol.
Password	Set the password that is used to access the http server.

NOTE

- **Be sure not to forget the password used to access the http server. It is required for reset.**

5.31.9 Machine Auto Update setting - Transmission log Update

- The log file saves up to 100 records.
- Save the log related to machine auto update, and send it to the specified location.
- Configure settings for the transmission protocol.

(1) Default setting

- OFF

(2) Setting item

- ON
- OFF

(3) Procedure

- If [ON] is selected, configure the following settings.

When SMB is set for the transmission protocol

Host Name	Set the host name for the SMB server.
File Path	Set the file path used for SMB server communication.
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.

When WebDAV is set for the transmission protocol

URL	Set the address of the WebDAV server.
User Name	Set the user name used to access the WebDAV server.

Password	Set the password used to access the WebDAV server.
Proxy	Set whether or not to use the proxy server. *1

*1: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

5.31.10 Machine Auto Update setting - Transmission Server Log

- The log file saves up to 100 records.
- Save the log related to the update relay data download at relay server, and send it to the specified location.
- Configure settings for the transmission protocol.

(1) Default setting

- OFF

(2) Setting item

- ON
- OFF

(3) Procedure

- If [ON] is selected, configure the following settings.

When SMB is set for the transmission protocol

Host Name	Set the host name for the SMB server.
File Path	Set the file path used for SMB server communication.
User Name	Set the user name used to access the SMB server.
Password	Set the password used to access the SMB server.

When WebDAV is set for the transmission protocol

URL	Set the address of the WebDAV server.
User Name	Set the user name used to access the WebDAV server.
Password	Set the password used to access the WebDAV server.
Proxy	Set whether or not to use the proxy server. *1

*1: If [ON] is selected, set the proxy with [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].

5.31.11 Machine Auto Update setting - Update Log Display

(1) Use

- To check the log related to the file download of the machine auto update.
- The latest five logs can be checked.

5.31.12 Machine Auto Update setting - Relay Server Log Confirmation

(1) Use

- To check the log related to the file download of the relay server.
- The latest five logs can be checked.

5.31.13 Machine Auto Update setting - Manual Update

- This is displayed when [Auto Update] is set to [ON] in [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting], and the update file has been downloaded in HDD.

(1) Use

- To execute update manually by using the downloaded file.

(2) Procedure

1. Touch [Manual Update] -> [Start] to start update.

NOTE

Do not set the power to OFF under the following state.

- **It takes about 45 seconds from touching [Manual Update] -> [Start] to the next operation of the MFP (Auto Power OFF).**
- **About one minute after the download completed screen being displayed, the MFP will restart.**
- **When rewriting configuration files followed by the firmware, the MFP will restart again.**

5.31.14 Machine Auto Update setting - Machine Import setting

- This is displayed only when Switch No. “72” is set to “04” in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].

NOTE

- **In the following conditions, import of machine setting data is prohibited.**
  - **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
  - **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
  - **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(1) Use

- To import all importable files that are saved in the root folder of the USB memory.

Importable setting file	File name
Remote Access Setting	UsbExportData_Csrc.dat
User Settings	UsbExportData_Utility.dat
Service Settings	UsbExportData_Service.dat
Authentication customize data *2	AuthCustomMaster_***.xml
Address Book *1	UsbExportData_Addr.dat
Authentication Data *1	UsbExportData_Auth.dat
Network Settings *1	UsbExportData_Net.dat
Administrator Settings *1	UsbExportData_Admin.dat
Display Custom Settings *1	UsbExportData_Topmenu.dat, TopMenuGadget.tar
External Cert *1	UsbExportData_ExtCertificates.tar
Box configuration information *1	UsbExportData_BackUpBoxConf***.dat
Accessibility setting *1	UsbExportData_Universal.dat
Custom Settings *1 *2	UsbExportData.dat

*1: This file can be imported when [Service Mode] -> [System 2] -> [▶] -> [▶] -> [Maintenance Mode] is set to [Effective], and [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access] is set to [Allow].
*2: This file can be imported without inputting password, because it is not encrypted.

(2) Procedure

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update Setting] -> [Machine Export Setting].
2. Insert the USB memory into the USB port.
3. Enter a password.
4. Touch [Start].
   NOTE
   - **"OK" appears on the item that is imported successfully.**
   - **"NG" appears on the item where the password is mismatched or an error occurred.**
   - **"-" appears when no importable file is saved in the USB memory.**
5. Follow the message appearing on the screen and turn OFF and ON the main power switch.
   NOTE
   - **If no "OK" appears in the import result, no message will be displayed.**

5.31.15 Machine Auto Update setting - Machine Export setting

NOTE
In the following conditions, export of machine setting data is prohibited.
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [USB Connection Permission settings] -> [Detail Setting] -> [External Memory (Service)] is set to [Restrict].**
- **[Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to [ON].**

(1) Use

- Output the main unit configuration in XML format to a USB memory device or the SMB folder in the main unit.

(a) Target items to be exported are as follows

- Remote Access Setting
- User Settings
- Service Settings (Excluding the setting of Software switch and Engine FW DipSW)
- Address Book*
- Authentication Data*
- Network Settings*
- Administrator Settings*
- Cloud connection*
- Custom Display Settings*
- Certificate (when certificate is already acquired)*
- Box configuration information*
- Accessibility setting*
- Authentication customize data

NOTE
- ***: It will be displayed when [Service Mode] -> [System 2] -> [▶] -> [▶] -> [Maintenance Mode] is set to [Effective] and [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access] is set to [Allow].**

(2) Procedure

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update Setting] -> [Machine Export Setting].
2. Select the item to be output.
3. Select either [USB] or [SMB] as the [Export Destination]. *1
   - If you select [USB], connect a USB memory device to a USB port.
4. Enter a password. *2
5. Touch [Start].
6. [Result: OK] will be displayed.
7. Complete the data export. *3

NOTE
- ***1: [SMB] displays if the following settings are made.**
  - **[Administrator Settings] -> [Network Settings] -> [SMB Settings] -> [SMB Server Settings] -> [Share SMB File Setting] -> [ON]**
  - **[Service Mode] -> [System 2] -> [HDD] ->[Installed]**
- ***2: If an XML file is to be used on the Auto Update function, register the same password beforehand to the MFP where a data is to be downloaded as [Machine Update Password].**
- ***3: When [SMB] is selected, the data is exported to the SMB folder of this machine.**
  Check of the SMB folder: \\(IP address)\FWData_out$
  If [ON] is selected for [CE Authentication], "User Name" and "CE Password" are required to access the folder.
  - **User Name: CE**
  - **Password: CE Password**

5.31.16 Machine Auto Update setting - Machine Update Password

(1) Use

- To set a password used to decrypt the update file of the machine.

(2) Procedure

- Enter the decryption password using the on-screen keyboard.

1. Current Password: Enter the currently used decryption password (only when the decryption password has been set).
2. New Password: Enter the new decryption password.
3. Re-enter New Password: Enter the new decryption password.

NOTE
- **Be sure not to forget the decryption password. It is required for reset.**

5.31.17 Firmware Rollback

NOTE
- **If there is no backed up firmware, the firmware version will not be displayed. For details, see "Creating back up files when updating firmware".**

(1) Firmware Rollback

(a) Use

- To be used when rewriting to the backed up firmware.
- To be used when error occurs at the time of firmware updating.

(b) Procedure

1. Check the version of the firmware to be rewritten.
2. Touch [Start].
3. A reboot is started.
4. Following the reboot, a firmware update screen appears. Then, check the version of each firmware.
5. Turn OFF and ON the main power switch.
6. Make sure that a message notifying the completion of the firmware rollback appears. Then, touch [OK].

(2) Open Mode Settings

(a) Use

- To set whether to display/hide [Firmware Rollback] when selecting [Administrator Settings] -> [Network Settings] -> [Machine Update Settings].
- Even an administrator can rewrite to the backed up firmware.

(b) Default Setting

- Set

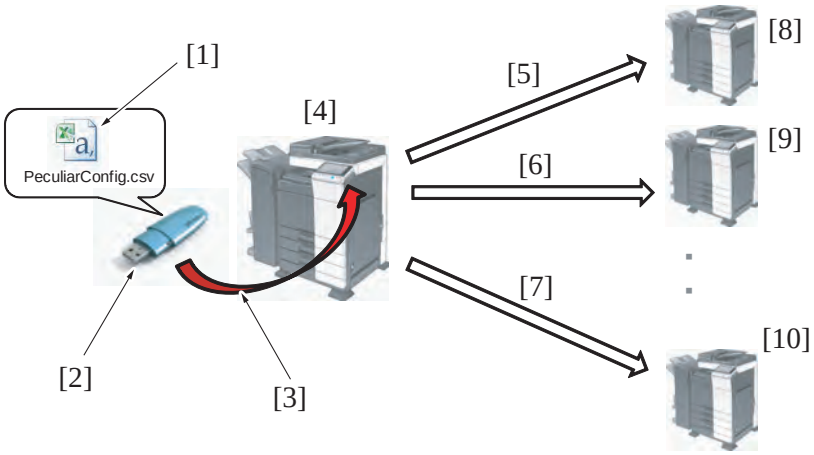
(c) Setting item

- Yes
- No

5.31.18 Copy Network Settings

(1) Use

- To deliver the network-related information saved in the USB memory to, and set it in, other MFPs.
- One MFP is an originating side that delivers the network connection setting values to other MFPs within the same network.
- Setting values described in the CSV file and associated with the serial number of the recipient MFP are delivered and set.



[1]	CSV file containing setting values for network connection	[2]	USB memory
[3]	Connection	[4]	Recipient MFP
[5]	Delivering and setting values of recipient MFP (serial No.1)	[6]	Delivering and setting values of recipient MFP (serial No.2)
[7]	Delivering and setting values of recipient MFP (serial No.X)	[8]	Recipient MFP (serial No.1)
[9]	Recipient MFP (serial No.2)	[10]	Recipient MFP (serial No.X)

(2) Environmental preparations

- It is necessary to set and prepare in advance the originating MFP, recipient MFPs, USB memory, and the CSV file that describes the network settings.
- Perform the preparation procedure by following the steps given below.

(a) Setting the originating MFP

- Check that the originating MFP and the recipient MFP are connected to the same network (segment).
- Set a fixed IP address in the originating MFP.
- Set [Administrator Settings] -> [System Connection] -> [OpenAPI Settings] -> [Access Setting] to “Allow”.
- Set [Administrator Settings] -> [System Connection] -> [OpenAPI Settings] -> [External Application Connection] to “Yes”.

(b) Setting the recipient MFP

- Check that the originating MFP and the recipient MFPs are connected to the same network (segment).
- Check that the TCP/IP setting of the recipient MFP is enabled to permit network communications.
- Check that a serial number is set in the MFP.
- Set all settings in [Administrator Settings] -> [System Connection] -> [OpenAPI Settings] to the default values.

(c) USB memory

The following shows the requirements for the USB memory to be used for copying in the network settings:

- USB flash memory compatible with the USB (1.1/2.0) interface
- The USB memory is formatted in FAT32 format.
- No security functions such as encryption and password lock have been added (or the USB memory allows its security functions to be turned OFF).
- A USB memory that is recognized by the computer as two or more drives cannot be used.
- Use any write-protected USB memory in the write-enabled condition.

(d) CSV file

- Appropriate the format of the CSV file, and prepare a CSV file where the recipient MFP and network setting value to be delivered and set have been input.
  Setting item: Corresponding to the “Column” of a CSV file format
  Setting value of recipient MFP: Corresponding to the “row” of a CSV file format
  NOTICE
  - CSV file format (PeculiarConfig.xls)

Procedure

1. Enter the serial number and the IP address v4 validation method.
2. Enter the other setting details in accordance with the CSV file format.
   For items that can be delivered and set and the detailed descriptions, see the CSV file format.
3. Enter the setting value of one recipient MFP against one row. And to set multiple MFPs, create setting value for each MFP while adding rows from top in order.

NOTE

- **The serial number and the IP address v4 validation method should invariably be entered.**
- **In any items left blank in the file, the items set in the MFP are automatically set.**
- **The file name should read “PeculiarConfig” with an extension of CSV.**
- **All MFPs having serial numbers contained in the CSV file will be the recipient MFPs. If any MFP that is to be excluded is included in the network, do not include the serial number of such an MFP in the file.**
- **Even when the serial number of the originating MFP is included in the CSV file, the originating MFP is not a recipient MFP.**

- **Up to 255 MFPs are recognized as the recipient MFP. Any serial numbers of the 256th MFP and onward contained in the CSV file will be excluded from the recipient MFPs.**

(3) Procedure

1. Prepare a CSV file (PeculiarConfig.csv) that describes the setting values to be delivered.
2. Store the CSV file immediately under the root directory of the USB memory and connect to the originating MFP.
3. Call the Service Mode to the screen.
4. Touch [Machine Update Setting] -> [Copy Network Settings] -> [Connection Timeout].
5. Set Connection Timeout and touch [OK].
   Default value: 30 Sec
   Setting range: 1 to 300 Sec
6. Touch [Machine Update Setting] -> [Copy Network Settings] -> [Copy Setting] -> [Check Connection] -> [Start].
7. Check the number of MFPs displayed at "Result" against the number of MFPs displayed "OK".
8. Touch [Copy] -> [Start]. This delivers the setting value information to the recipient MFPs one by one.
   NOTE
   - **Screen operations are displayed in the MFP in which the setting values are being rewritten.**
   - **Do not remove the USB memory until the procedure is completed.**

9. When the delivery of the setting values to all recipient MFPs and rewriting of the setting values in all recipient MFPs are completed, the recipient MFPs are restarted.
10. The CSV file (PeculiarConfig_Result.csv) that contains the delivery result is stored in the USB memory inserted in the originating MFP.
11. Check the delivery result file in the USB memory to thereby determine that the procedure has been normally terminated.
    NOTE
    - **When an error that disables continued delivery occurs, a corresponding error code appears on the control panel.**
    - **When a delivery error occurs in any of the recipient MFPs, a message appears that prompts a check of the delivery result file.**
    - **For details of the delivery error, check the specific details of the delivery result file.**

Error code	Description
N***	**Communication error**
E00001	**The USB memory is not connected to the originating MFP.**
E00002	**The CSV file in the USB memory cannot be read.**
E00003	**The delivery result file cannot be created in the USB memory connected to the originating MFP.**
E00004	**The CSV file format is illegal.**
E00005	**Communication is not successful with an MFP having a serial number contained in the CSV file.**
E00006 *	**"Restrict" is set in [OpenAPI Settings] -> [Access Setting].**
E00007 *	**"ON" is set in [OpenAPI Settings] -> [Authentication].**
E00008 *	**"SSL Only" or "SSL/Non-SSL" is set in [OpenAPI Settings] -> [SSL/Port Settings].**
E00009 *	**Any data other than "50001" is set in [OpenAPI Settings] -> [SSL/Port Settings].**
E00010 *	**"No" is set in [OpenAPI Settings] -> [External Application Connection].**
E00011	**No response is received from the recipient MFP even after the lapse of a predetermined period of time after the CSV file has been delivered. (timeout error)**
E00012	**The recipient MFP is not at timing at which it can accept the OpenAPI message.**
E00013	**The recipient MFP fails in updating.**
E00014	**"Cancel" is selected during delivery.**
E00015	**The USB memory is removed from the originating MFP during delivery.**
E00016	**A serial number in the CSV file is illegal.**
E00099	**A network system error. Any of the network settings is not the default value.**

- ***: Check the settings in the originating MFP when the error code appears on the control panel; check the settings in the recipient MFP when the error code is included in the delivery result file.**

6. SETUP WIZARD

6.1 Function outline

- Use of the Setup Wizard function allows those items that need to be set during the setup procedure to be extracted from the Service Mode and set.
- This enables efficient selection and setting of Service Mode functions during the setup procedure.

NOTE

- **The specific function may be set either via the "Service Mode" or the "Setup Wizard". The setting made last is the valid setting.**

6.1.1 Setup Wizard list

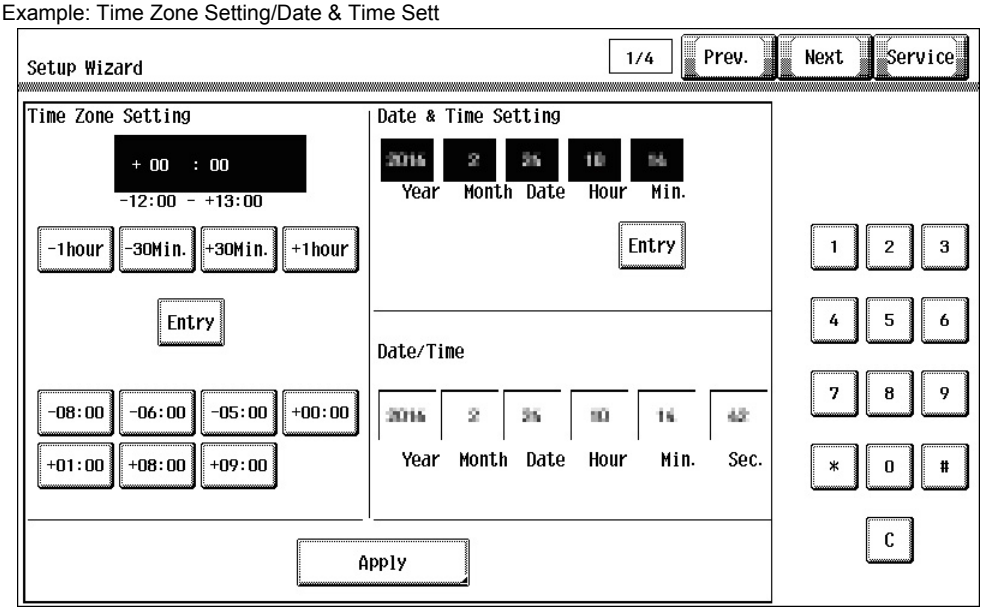
Setup Wizard	Ref. page
Time Zone Setting/Date & Time Setting	I.5.2 Time Zone/Date & Time Input mode
Serial Number	I.5.15.3 Serial Number
Unit Change/Warning display	I.5.16.5 Unit Change
List Output	I.5.18 List Output

6.2 Starting/Exiting

6.2.1 Starting procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 3
3. Touch the [Prev.] key or [Next] key to select the mode.

Example: Time Zone Setting/Date & Time Sett

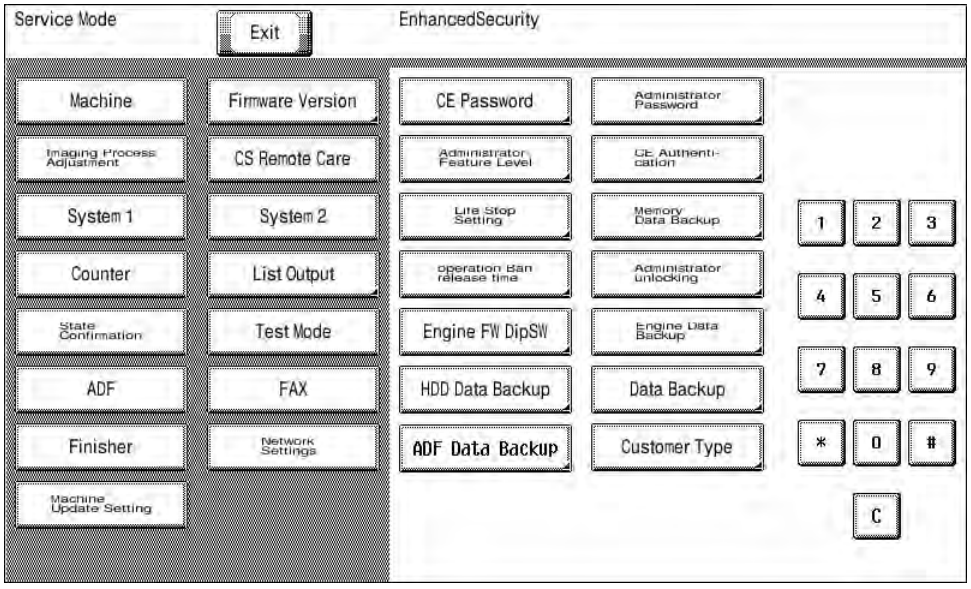


6.2.2 Exiting procedure

1. Touch [Service].
   The home Service Mode screen reappears.
2. Touch [Exit].
3. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

7. ENHANCED SECURITY

7.1 List of Enhanced Security

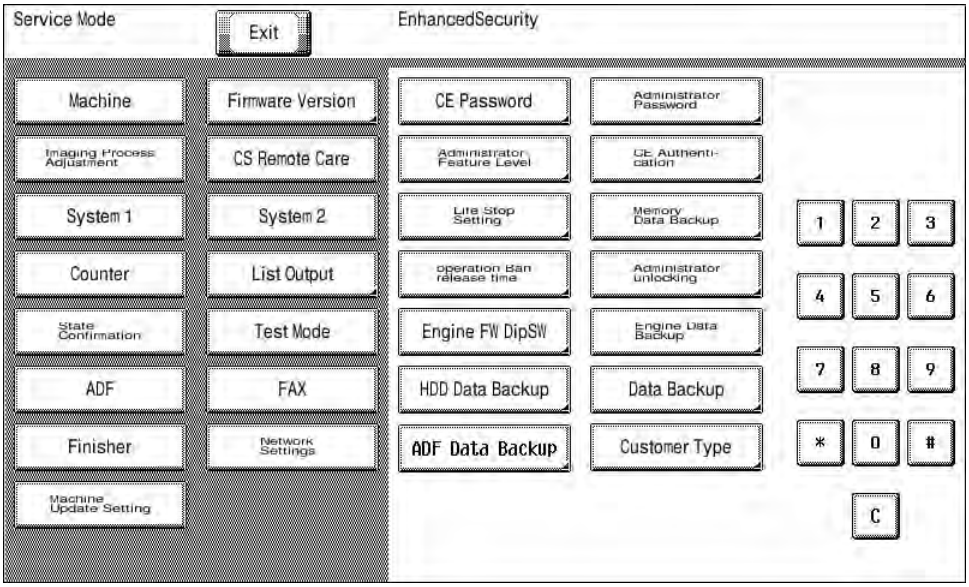


Enhanced Security	Ref. page
CE Password	I.7.3.1 CE Password
Administrator Password	I.7.3.2 Administrator Password
Administrator Feature Level	I.7.3.3 Administrator Feature Level
CE Authentication	I.7.3.4 CE Authentication
Life Stop Setting	I.7.3.5 Life Stop Setting
Memory Data Backup	I.7.3.6 Memory Data Backup
operation Ban release time	I.7.3.7 Operation Ban release time
Administrator unlocking	I.7.3.8 Administrator unlocking
Engine FW DipSW	I.7.3.9 Engine FW DipSW
Engine Data Backup	I.7.3.10 Engine Data Backup
HDD Data Backup	I.7.3.11 HDD Data Backup
Data Backup	I.7.3.12 Data Backup
ADF Data Backup	I.7.3.13 ADF Data Backup
Customer Type	I.7.3.14 Customer Type
TPM Setting	I.7.3.15 TPM Setting

7.2 Starting/Exiting

7.2.1 Starting procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 0 -> Clear
3. Select a mode.



7.2.2 Exiting procedure

1. Touch [Exit].
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

7.3 Enhanced Security

7.3.1 CE Password

(1) Use

- To set and change the CE password.
- The CE password needs to be 8 to 64 one-byte alphameric characters and symbols.

(2) Default setting

- 9272927292729272

(3) Procedure

- Enter the CE password (8 digits) on the on-screen keyboard.
  1. Current Password: Enter the currently using CE password.
  2. New Password: Enter the new CE password.
  3. Re-Input Password: Enter the new CE password again.

NOTE

- **When [Administrator Settings] -> [Security Settings] -> [Security Details] is set to [ON], new passwords cannot contain the same string of characters nor can be previous passwords be used.**
- **A new password is set when starts from the service mode after changing.**
- **NEVER forget the CE password. When forgetting the CE password, call responsible person of KM.**

7.3.2 Administrator Password

(1) Use

- To set and change the administrator password.
- Use this function when the administrator forget the administrator password because a new password can be set without entering the current administrator password with this.
- The administrator password needs to be 8 to 64 one-byte alphameric characters and symbols.

(2) Default setting

- 1234567812345678

(3) Procedure

- Enter the administrator password on the on-screen keyboard.
  1. New Password: Enter the new administrator password.
  2. Re-Input Password: Enter the new administrator password again.

NOTE

- **When [Administrator Settings] -> [Security Settings] -> [Security Details] is set to [ON], new passwords cannot contain the same string of characters nor can be previous passwords be used.**

7.3.3 Administrator Feature Level

(1) Use

- To set which modes to be allowed for the administrator to use in Service Mode.
- Use when allowing the administrator to use some modes in Service Mode.
- The modes allowed for the administrator to use in each setting are as follows.

Administrator settings function				Level 1	Level 2
System Settings	Expert Adjustment	Printer Adjustment	Erase Leading Edge	-	○
			Paper Feed Direction Adj.	-	○
		Scanner Area	Scanner Adjustment: Leading Edge	-	○
			Scanner Adjustment: Centering	-	○
			Horizontal Adjustment	-	○
			Vertical Adjustment	-	○
		ADF Adjustment	Centering	-	○
			Original Stop Position	-	○
			Centering Auto Adjustment	-	○
			Auto Adj. of Stop Position	-	○
		Trail Edge Adjust		-	○
		User Paper Settings		-	○
	Standard Size Setting	Original Glass Original Size Detect		-	○
		Foolscap Size Setting		-	○

(2) Default setting

- Prohibit

(3) Setting item

- Level 1
- Level 2
- Prohibit

7.3.4 CE Authentication

- If [Administrator Settings] -> [Security Settings] -> [Security Details] is enabled, this displays as "Disabled".
- It will be displayed when [Administrator Settings] -> [Network Settings] -> [Remote Panel Settings] -> [Client Settings] is set to “ON.”

(1) Use

- To determine whether or not to authenticate CE password as entering Service Mode.

NOTE

- **For setting the [Password Rules] to “ON”, set the CE Authentication to "ON". Change the initial CE password beforehand.**
- **Before setting the [Remote Panel Settings] to “ON”, set the CE Authentication to "ON".**

(2) Default setting

- ON

(3) Setting item

- ON
- OFF

7.3.5 Life Stop Setting

(1) Life stop

(a) Use

- To select whether or not to stop a print cycle when the drum unit, developing unit, transfer belt, and fusing unit reach its service life.

(b) Default setting

- off

NOTE

- **The default value varies depending on regions.**

(c) Setting item

- Enable
- off

(2) Life warning display

(a) Use

- Select whether to display or not display the pre-near life warning, near life warning, life warning, life stop warning, and L-call warning. Warning statuses are not displayed for units in which this setting is set to [Do not display] even if each warning status is enabled.
- Applicable units: drum unit, developing unit, transfer belt, and fusing unit

(b) Default setting

- off

(c) Setting item

- Enable
- off

7.3.6 Memory Data Backup

(1) Use

- To backup the data stored in the memory region on the MFP board to the flash memory.
- To backup current data in order to prevent data in the memory region on the MFP board from being erased unexpectedly.
- To backup data manually. It usually makes backup every hour automatically.
- Backup data can be restored by following the specified procedure when the trouble (CD3XX) occurred.
- Refer to TROUBLESHOOTING for details on restoration procedure.

(2) Procedure

1. Touch [Memory Data Backup].
2. Touch [Start] to start making a backup.
3. Check the message [Backup is completed.], and turn main power switch OFF. Wait for ten seconds or more and turn main power switch back ON.

7.3.7 Operation Ban release time

(1) Use

- To set the time that elapses before the machine releases an access lock that is activated after the CE password authentication.
- To set the period of time that elapses before the machine releases the access lock, which aims to prevent the unintentional release of the access lock.
- After the CE password authentication, if the access lock is activated, the lock release timer starts to operate the following procedures.
  1. Main power switch is turned OFF and ON.
  2. Menu -> [Counter] -> [Print List]
  3. Touch [Display Keypad], displaying 10-key pad.
  4. The lock release timer starts to operate by input the Stop -> 0 -> 9 -> 3 -> 1 -> 7.
  5. When the timer reaches the time specified in this setting, the access lock is released.

(2) Default setting

- 5 (minutes)

(3) Setting range

- 1 to 60 (minutes)

NOTE

- **When Enhanced Security Mode is set to ON in [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode], the period of time that can be set in this setting is 5 minutes or more.**

7.3.8 Administrator unlocking

(1) Use

- To release an access lock that is activated after an administrator password authentication.
- To release the access lock with service authority when an administrator password authentication fails and the access lock is activated.
- When the main power switch is turned OFF and ON or the period of time set in the Release Time Settings elapses, the machine releases the access lock that is activated after the administrator password authentication. In addition to these operations, this setting provides another way to release the access lock.

(2) Procedure

1. Touch [Administrator unlocking].
2. Touch [unlocking] to release an access lock.
3. When [OK] is displayed, touch [OK].

7.3.9 Engine FW DipSW

(1) Use

- To make printer engine settings.
- The following table shows DIP switches that can be set in this machine.

Switch No.	Function	Ref. page
1	Not used	-
2	Not used	-
3	New Release Disable mode	I.7.3.9.(3).(a) New Release Disable mode
4	Fusing unit alternative temperature control	I.7.3.9.(3).(b) Fusing unit alternative temperature control
5	Not used	-
6	Choice of changing standards of multi bypass tray size	I.7.3.9.(3).(c) Choice of changing standards of multi bypass tray size
7	Not used	-
8 : 9	Action against wrinkles in conveyed paper	I.7.3.9.(3).(d) Action against wrinkles in conveyed paper

Switch No.	Function	Ref. page
10 : 13	Not used	-
14	Choice of unit simultaneous replacement promotion	I.7.3.9.(3).(e) Choice of unit simultaneous replacement promotion
15	FS-536/PK-520 Punch operation noise suppression choice	I.7.3.9.(3).(f) FS-536/PK-520 Punch operation noise suppression choice
16	Not used	-
17	Choice of switching main tray full detection methods	I.7.3.9.(3).(g) Choice of switching main tray full detection methods
18	FS-536 main tray position lowering	I.7.3.9.(3).(h) Choice of FS-536 main tray position lowering
19 : 23	Not used	-
24	Choice of continuous temperature control after printing	I.7.3.9.(3).(i) Choice of continuous temperature control after printing
25 : 27	Not used	-
28	Choice of fusing mode for index paper	I.7.3.9.(3).(j) Choice of fusing mode for index paper
29 : 37	Not used	-
38	Choice of reducing polygon noise (only for bizhub 958 and bizhub PRO 958)	I.7.3.9.(3).(k) Choice of reducing polygon noise (only for bizhub 958 and bizhub PRO 958)
39	Choice of enabling exhaust fan rotation time setting	I.7.3.9.(3).(l) Choice of enabling exhaust fan rotation time setting
40 : 46	Not used	-
47	Intelligent Life Control of Developing unit	I.7.3.9.(3).(m) Intelligent Life Control of Developing unit
48	Intelligent Life Control of Transfer Roller Unit	I.7.3.9.(3).(n) Intelligent Life Control of Transfer Roller Unit
49	Not used	-
50	Not used	-
51	CSRC Extension Data Notification function	I.7.3.9.(3).(o) CSRC Extension Data Notification function
52 : 56	Not used	-

(2) Procedure

1. Touch [Engine FW DipSW].
2. Touch the key that corresponds to the switch No. of the function to be set and check the key is highlighted (ON state) in reverse video.
3. Touch [END].

(3) Details of Each Function

(a) New Release Disable mode

- To enable a unit that is temporarily used for troubleshooting or other purposes to be used again as a new unit in another machine, New Release Disable mode is provided.
- Applicable units are the following units that have the new unit detection feature.
  - Drum unit, Developing unit

Procedure

1. Open the lower front door.
2. Call the Service Mode to the screen.
3. Call the Enhanced Security to the screen.
4. Touch [Engine FW DipSW].
5. Touch [3] and check the key is highlighted (ON state) in reverse video.
6. Touch [END].
7. Close the lower front door. By closing the lower front door, the New Release Disable mode takes effect.

I.7.3.9.(4) Notes when using the New Release Disable mode

(b) Fusing unit alternative temperature control

- Condensation and dirt on the lens of the heating roller temperature sensor disable accurate temperature detection. To prevent this, this machine provides a control system that detects condensation on the heating roller temperature sensor.
- When condensation is detected on the heating roller temperature sensor, the heating roller temperature control depends on the temperature detected by the heating roller thermistor/1 instead of the heating roller temperature sensor. (Alternative temperature control)
- When a print job is sent during the alternative temperature control, temperature control depends on this setting.

OFF	Prohibits print during alternative temperature control (Default)
ON	Allows print during alternative temperature control

- During alternative temperature control, printing productivity is reduced by 50 %.

(a) Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [4] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(c) Choice of changing standards of multi bypass tray size

- To switch the unit (inch/metric) of the paper size detected in the default state on the multi by pass tray depending on destinations.

OFF(Default)	For North America	Notified with A and B series switched to inch series
	For regions other than North America	Notified with inch series switched to A and B series
ON	Notifies the paper size detected in the default state (A and B series and inch series are mixed.)	

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [6] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(d) Action against wrinkles in conveyed paper

- To prevent wrinkled paper caused by paper distort in the loop control before the registration roller when plain paper with its FD length of 298 mm or more is fed from tray 1 or tray 2.
- To adjust the loop amount by delaying the activation timing of the vertical transport roller.
- The combination of No. 8 and No. 9 of [Engine FW DipSW] is used to configure the setting.

[8]	[9]	Amount of delay 502 mm/s, 370 mm/s, 310 mm/s
OFF	OFF	0
ON	OFF	4
OFF	ON	8
ON	ON	12

(a) Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Referring to the table above, find a desired combination of choices for [8] and [9], and configure the settings.
5. Touch [END].

(e) Choice of unit simultaneous replacement promotion

- To set whether or not to enable the function to make a unit that is in nearly Life Stop shift to Life Stop if another unit in Life Stop already exists.

OFF	Enables “Control causing inhibited printing for one part when an inhibited-printing event occurs in another part.” (Default)
ON	Disables “Control causing inhibited printing for one part when an inhibited-printing event occurs in another part.”

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [14] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(f) FS-536/PK-520 Punch operation noise suppression choice

- The operating noise generated from the punch unit when punching holes is reduced.

OFF	• Full punching force (100%) of the punch motor is applied against the basic weight of all types of paper. (Default)
ON	• Control the punching force of the punch motor depending on the paper thickness (basic weight). For paper other than the thick paper, 60% force is applied for punching holes. • Control the operating noise generated when punching holes on the paper other than the thick paper.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [15] and check the key is highlighted (ON state) in reverse video.

5. Touch [END].

(g) Choice of switching main tray full detection methods

- It sets the main tray full detection method of FS-536 or FS-537.

OFF	Detect the main tray full status as usual without making an account of the total sheets of paper loaded in the main tray. (Default)
ON	Make an account of the total sheets of paper loaded in the main tray to detect the main tray full status.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [17] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(h) Choice of FS-536 main tray position lowering

- It sets the main tray is lowered after the print job ends to ease removing the exited paper from the tray when the FS-536 is installed.

OFF	Main Tray is lowered (about 50 mm) after the print job ends. (Default)
ON	Main Tray is not lowered after the print job ends.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [18] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(i) Choice of continuous temperature control after printing

- To select the fusing unit temperature adjustment control performed when a print job sent from PC is completed.
- When [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Enter Power Save Mode] is set to "Immediately", select whether or not to turn OFF the fusing heater immediately after a print job from PC is completed.

OFF	The fusing heater is turned OFF immediately after printing a job sent from PC. (Default)
ON	The temperature control continues until the next sleep request is sent from the controller.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [24] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(j) Choice of fusing mode for index paper

- To set fusing temperature when printing on the index paper.
- It controls the occurrence of paper curling when printing on a thin index paper.

OFF	Fusing temperature: High (priority on fusing ability: Default)
ON	Fusing temperature: Low (priority on controlling paper curling)

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [28] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(k) Choice of reducing polygon noise (only for bizhub 958 and bizhub PRO 958)

- To change polygon speed to noise reducing speed while the machine is idle.

OFF	Polygon speed is not changed to noise reducing speed. (Default)
ON	Polygon speed is changed to noise reducing speed.

Procedure

1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [38] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(l) Choice of enabling exhaust fan rotation time setting

- Extend the rotation time of the exhaust fan when the machine shifts from PC print to immediate sleep.

	Exhaust fan rotation time	
Exhaust Fan Stop Delay Setting	0 to 14 (min.)	15 (min.)
OFF (Default)	At least 10 seconds	At least 15 minutes
ON	At least two minutes	At least 15 minutes

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [39] and check the key is highlighted (ON state) in reverse video.
5. Touch [END].

(m) Intelligent Life Control of Developing unit

- To set an optimal timing for part replacement depending on the usage of each user.

OFF	Consumables/Parts Life Control
ON	Intelligent Life Control (Default)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [47] and check the key is changed (ON / OFF state).
5. Touch [END].

(n) Intelligent Life Control of Transfer Roller Unit

- To set an optimal timing for part replacement depending on the usage of each user.

OFF	Consumables/Parts Life Control
ON	Intelligent Life Control (Default)

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [48] and check the key is changed (ON / OFF state).
5. Touch [END].

(o) CSRC Extension Data Notification function

- To set the range of data notified to CSRC.

OFF	Notifies the normal data. (Default)
ON	Notifies the extension data.

Procedure
1. Call the Service Mode to the screen.
2. Call the Enhanced Security to the screen.
3. Touch [Engine FW DipSW].
4. Touch [51] and check the key is changed (ON / OFF state).
5. Touch [END].

(4) Notes when using the New Release Disable mode

(a) Before starting the mode

- Output the list in [Service Mode] -> [List Output] to check the information on the wear-out rate of each unit and keep the Dmax density adjustment value. Replace units that have reached their life or that are near life with new ones, and perform New Release.
- If the toner is empty, start this mode when the toner empty status is resolved by replacing the toner cartridge with a new one or charging the toner.

(b) During the New Release Disable mode

- The New Release Disable mode is subject to the condition that the New Release Disable mode should not be used for a long period, i.e. duration of printing only several tens of sheets. (Units used in the New Release Disable mode for a long time cannot be guaranteed as new ones.)
- In the New Release Disable mode, the drum unit/K life counter is not reset and it continues to count in a normal manner. If the counter reading becomes close to the value at which an accumulated rotation time excess warning is issued or becomes close to the end of life value, the accumulated rotation time excess warning or the end of life warning can be issued in the New Release Disable mode.
  (If the drum unit/K counter should reach the end of life value while temporarily using a new drum unit/K in the New Release Disable mode, turn OFF the New Release Disable mode, open and close the front door (or turn the main power switch OFF and ON), and perform New Release in a normal manner. In this case, the previous drum unit/K, which has been temporarily removed, cannot be used again.)
- After activating the New Release Disable mode in [Engine FW DipSW], do not turn OFF and ON the main power switch or do not let the machine go into the sleep mode until the work in the New Release mode is completed.
  (In case that the main power switch is turned OFF or the machine goes into the sleep mode, be sure to open the front door and turn the main power switch ON or activate the machine from the sleep mode. Then turn ON the New Release Disable mode and close the front door.)

(c) After finishing work in New Release Disable mode

- When continuing to use the new unit used in the New Release Disable mode in the same machine, turn OFF the new Release Disable mode and open and close the front door (or turn OFF and ON the main power switch) to perform New Release.
- To reinstall the previous unit used in the machine, open the front door, turn OFF the New Release Disable mode, replace the new unit with the previous unit, and close the front door (or turn the main power switch OFF and ON).

In this case, perform Initialize + Image Stabilization, Gradation Adjustment, and input of the previous Dmax density adjustment value in service mode. (If these adjustments are not performed, gradation reproducibility cannot be guaranteed.)

- After temporarily using a new drum unit/K in the New Release Disable mode, before reinstalling the previous drum unit/K, be sure to check the reading of the drum unit/K life counter in [Service Mode] -> [Counter] -> [Life] to learn that New Release is not performed on the new drum unit/K, i.e. the counter value have not decreased.
  (There is no way to determine whether New Release is performed on the new drum unit/K or not from the appearance of the unit. Checking the counter reading is necessary to avoid bringing back the drum unit/K on which New Release is performed, assuming that the drum unit/K remains new.)

7.3.10 Engine Data Backup

- Not used

7.3.11 HDD Data Backup

(1) Use

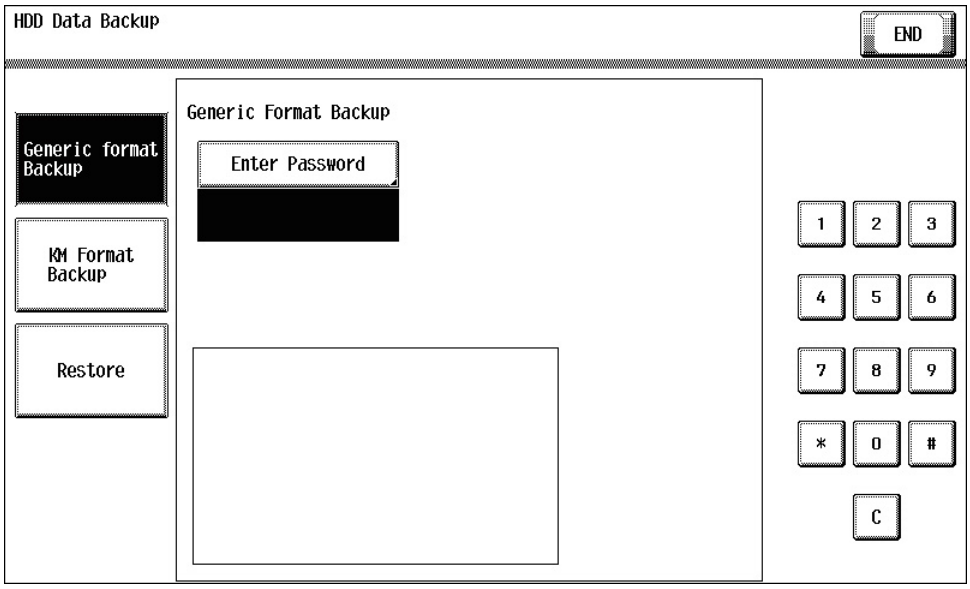
- To back up or restore the settings of the machine and the image data stored in the box.

Generic format Backup	• Store the setting data for this machine as an XML data and store the data saved in the box as a TIFF-C image to the HDD connected with a USB. However, a data that is saved at 1200dpi in the box cannot be backed up. • Since the free space in the HDD for backup cannot be checked beforehand, after starting the backup, it will be terminated as an error at the time that no space remained in the HDD.
KM Format Backup	• Save the settings of the machine as a XML data, and save the image data in the box in internal format (RAW data) to the HDD connected with a USB. • A backup starts after making a confirmation of if the storage is enough.

- Settings an image data in the box to be backed up and restored are as follows.
  - Setting data for MFP (User Settings, Administrator Settings, part of each settings in Service Mode)
  - User authentication, Account track settings information
  - One-touch Registration Address Information
  - Images saved in the box (User box (Public, Personal, Group, and Encrypted PDF box))
  - Information to compose a box (setting data exclusive for box)
- Conditions required to backup/restore are as follows.
  - To use a self-power external HDD (a type to supply power from outside)
  - A bus-power external HDD shall not be used.
  - After connecting an external HDD to the machine via a USB, the data is converted with ext3 format automatically.
  - The backup will be executed after the backup data which has already existed in the external HDD is deleted automatically.
  - Data of only one model can be saved in the external HDD.
  - Cancellation during a backup is allowed. However cancellation during formatting an external HDD is not allowed.
  - Operation of backup/restore is not allowed when a trouble or warning occurred.
  - Operation of backup/restore is not allowed when a timer job has been reserved.

(2) Setting item

- Generic format Backup
- KM Format Backup
- Restore
- Enter Password



(3) Procedure

NOTE

- **Set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Storage data backup (5/5)] to [Allow]. If [Restrict] is set, the machine cannot be used.**
- **Be sure to turn OFF and ON the main power switch of the machine after performing backup/restore.**

(a) Backup

1. Connect the USB cable of an external HDD to the USB port of an MFP. (USB NG will be displayed when the HDD is not recognized correctly.)
2. Call the Service Mode to the screen.
3. Call the Enhanced Security to the screen.
4. Touch [HDD Data Backup].
5. Select [Generic format Backup] or [KM Format Backup].
6. Touch [Enter Password], enter an encryption password using 1 to 32 characters, then touch [END].
7. Touch [Start]. (“Processing” will be displayed.)
   - Touch [Cancel] if you want to stop the backup.
8. After completing the backup, [Result OK] will be displayed.
9. Turn OFF and ON the main power switch.

(b) Restore

1. Connect the USB cable of an external HDD to the USB port of an MFP.
2. Call the Service Mode to the screen.
3. Call the Enhanced Security to the screen.
4. Touch [HDD Data Backup].
5. Select [Restore].
6. Touch [Enter Password], enter a decryption password using 1 to 32 characters, then touch [END].
7. Touch [Start]. (“Processing” will be displayed.)
   - Touch [Cancel] if you want to stop the restore.
8. After completing the restore, [Result OK] will be displayed.
9. Turn OFF and ON the main power switch.

7.3.12 Data Backup

(1) Use

- To be used for moving data at the time of MFP replacement.
- Back up data saved in an MFP to the WebDAV server or an HDD.

(2) Server Backup - Backup Settings

(a) Function Setting

- Use
  - To set whether to back up data to a server.
- Default setting
  - Disable
- Setting item
  - ON
  - Disable
    - When [ON] is selected, configure settings required for backup.

NOTE

- **This function cannot be enabled when Transmission protocol and SMB Setting, or HTTP Setting, Backup target and Encryption Password have not been set.**

(b) Transmission protocol

- Use
  - To select Transmission protocol.
- Default setting
  - HTTP
- Setting item
  - SMB
  - HTTP

(c) SMB Setting

- Use
  - To be set when “SMB” is selected for Transmission protocol.
  - Enter the Host Name, File Path, User Name and Password.

(d) HTTP Setting

- Use
  - To be set when “HTTP” is selected for Transmission protocol.
  - Enter the URL, User Name, Password and Proxy.

(e) Backup target

- Use
  - To select a target to back up.
- Setting item
  - Remote Access Setting
  - User Settings
  - Service Settings
  - Address Book *
  - Authentication Data *
  - Network Settings *

- Accessibility *
- Administrator Setting *
- Display Custom Settings *
- External Cert *

*: It is displayed only when [Enabled] is selected in [Service Mode] -> [System 2] -> [▶] -> [▶] -> [Maintenance Mode], and [Allow] is selected in [Administrator Settings] -> [Security Settings] -> [Maintenance Mode Access].

(f) Encryption Password

- Use
  - Enter the encryption password.

(3) Server Backup - Auto backup

(a) Use

- To set whether to execute auto backup.

NOTE

- **It is displayed when Backup Settings is enabled.**

(b) Default setting

- Unset

(c) Setting item

- Set
- Unset
  - When “Set” is selected, configure settings for Backup Period(Interval of Day(s) or Weekly Frequency) and Day Frequency, or Weekly Freqency and Backup Time.

(4) Server Backup - Immediate backup

(a) Use

- To be used for executing backup immediately.
- If “OK” appears when pressing “Start”, the backup is completed successfully.
- If “NG” appears, an error code will be displayed. Contact the KM representative as necessary.
  - S09401: The machine update password is mismatched.
  - N******: Error related to network.
  - S99999: Error other than that related to network.

(5) Server Backup - Backup result

(a) Use

- To make a confirmation of the date and time when the final backup is completed successfully.
- Up to 100 backup logs can be displayed in the order from the latest backup.

(6) Restore from Server - Restore Setting

(a) Use

- To specify a server for restore.
- Select a server and press “Start” to start restoring.

(7) Restore Settings - Server settings

(a) Use

- To specify a location from where restore data is to be downloaded.

(b) Default setting

- Acquire from Backup

(c) Setting item

- Acquire from Backup: Execute restore from the server specified in Backup Settings.
- Edit Restore path: Execute restore from a location other than the server specified in Backup Settings.
  - When Edit Restore path is selected, enter Download Protocol and SMB setting, or HTTP Setting and Encryption Password.

(8) Restore from Server - Restore result

(a) Use

- To display the final date of restore.

(9) HDD Backup - Backup Settings

(a) Function Setting

- Use
  - To set whether to execute backup to an HDD.
- Default setting
  - Disable
- Setting item

- ON
- Disable
  - When [ON] is selected, configure settings required for backup.

(10) HDD Backup - Auto backup

(a) Use

- To set whether to execute auto backup.

NOTE

- **It is displayed when Backup Settings is enabled.**

(b) Default setting

- Unset

(c) Setting item

- Set
- Unset

When “Set” is selected, configure settings for Backup Period (Interval of Day(s) or Weekly Frequency), Day Frequency or Weekly Frequency, and Backup Time.

(11) HDD Backup - Immediate backup

(a) Use

- To be used for executing backup immediately.
- Press “Start” to reboot the MFP, and then start backup to the HDD.

(12) HDD Backup - Backup result

(a) Use

- To make a confirmation of the date and time when the final backup is completed successfully.

(13) Restore from HDD - Restore

(a) Use

- To execute restore from an HDD.
- Press “Start” to start restoring.
- Follow the message appearing on the screen and turn OFF and ON the main power switch.

(14) Restore from HDD - Restore result

(a) Use

- To display the final date of restore.

7.3.13 ADF Data Backup

(1) Use

- To back up or restore settings configured for ADF.
- Used to save or restore settings when the DF control board is replaced.
- The backup data is stored in the eMMC board.

(2) Procedure

(a) ADF Data Save Mode (backup)

1. Touch [Service Mode] -> [Enhanced Security] -> [ADF Data Backup].
2. Select [ADF Data Save Mode], and touch [Start].
3. Check that the result "OK" appears.

(b) ADF Data Reflect Mode (restore)

NOTE

- **This function is available only when the data backed up in [ADF Data Save Mode] is stored in the eMMC board.**

1. Touch [Service Mode] -> [Enhanced Security] -> [ADF Data Backup].
2. Select [ADF Data Reflect Mode], and touch [Start].
3. Check that the result "OK" appears.
4. Turn OFF the main power switch and turn it ON again more than 10 seconds after.

7.3.14 Customer Type

(1) Function Settings

(a) Use

- To set whether to configure setting of customer type.

(b) Default setting

- No

(c) Setting item

- Yes
- No
  - When “Yes” is selected, configure setting of the business type and employee number.

7.3.15 TPM Setting

- It is displayed when the optional i-Option LK-115 v2 is enabled.

(1) Initialization

(a) Use

- To initialize the memory area installed on the TPM chip.

NOTE

- **Be sure to perform it if the i-Option LK-115 v2 is enabled.**

(b) Procedure

1. Touch [Initialization].
2. Press the Start key.

(2) Status report

(a) Use

- To notify an error which is detected by the TPM chip self diagnosis, and output the diagnosis result, or output a report file to a USB memory.
- The TPM chip self diagnosis is conducted when the machine starts to run.

(b) Procedure (List Output)

1. Touch [Status report].
2. Touch [List Output].
3. Press the Start key.
4. The status report is output.

(c) Procedure (USB save)

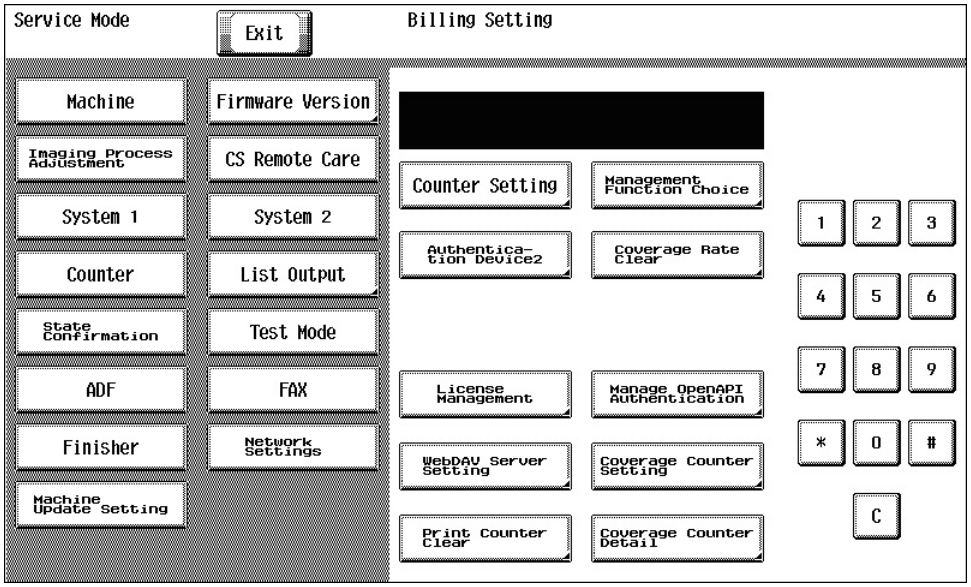
1. Connect a USB memory to the USB port.
2. Touch [Status report].
3. Touch [USB save].
4. Press the Start key.
5. The status report file is saved to the USB memory.

8. BILLING SETTING

Billing Setting

- When using the optional license kit LK-102 v3, LK-104 v3, LK-105 v4, LK-106, LK-107, LK-108, LK-110 v2, LK-111 , LK-114 or LK-115 v2 v2, license management is done with [Service Mode] -> [Billing Setting] -> [License Management].
- [License Management] can set Activation/Deactivation of each i-Option functions, Repair/Initialize of functions for troubleshooting, or etc.

8.1 List of billing setting



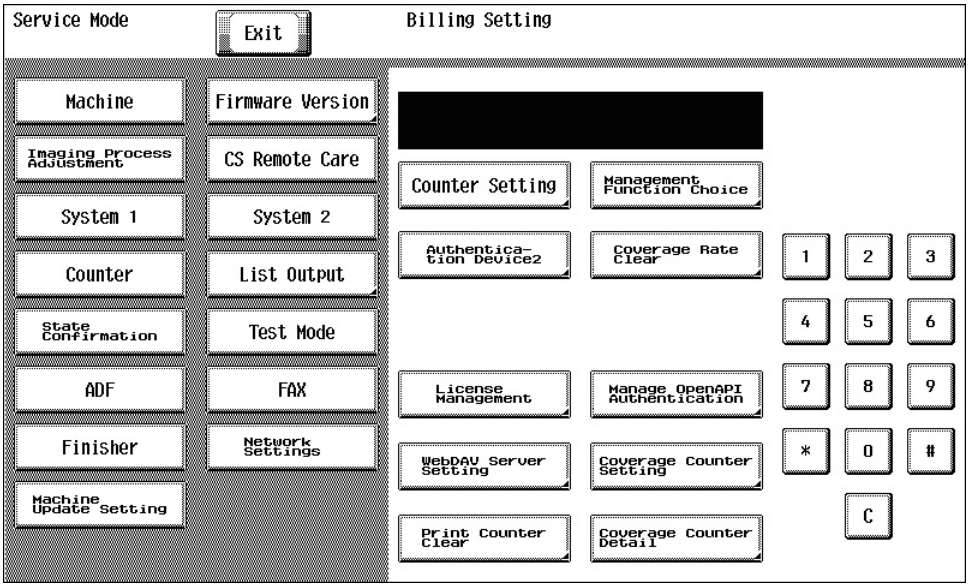
Billing Setting		Ref. page
Counter Setting		I.8.3.1 Counter Setting
Management Function Choice		I.8.3.2 Management Function Choice
Authentication Device 2		I.8.3.7 Authentication Device 2
Coverage Rate Clear		I.8.3.9 Coverage Rate Clear
License Management	Activation	I.8.3.10 License management - Activation
	Deactivation	I.8.3.11 License management - Deactivation
	Repair *1	I.8.3.12 License management - Repair
	Initialize	I.8.3.13 License management - Initialize
	Request Code	I.8.3.14 License management - Request Code
	List	I.8.3.15 License management - List
	Function List	I.8.3.16 License management - Function List
Manage OpenAPI Authentication	Restriction Code	I.8.3.17.(1) Restriction Code
	Region Code	I.8.3.17.(2) Region Code
WebDAV Server Setting		I.8.3.18 WebDAV Server Setting
Coverage Counter Setting		I.8.3.19 Coverage Counter Setting
Print Counter Clear		I.8.3.20 Print Counter Clear
Coverage Counter Detail		I.8.3.21 Coverage Counter Detail

*1: It is displayed only when “License management error” occurs.

8.2 Starting/Exiting

8.2.1 Starting procedure

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 9
3. Select a mode.



8.2.2 Exiting procedure

1. Touch [Exit].
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

8.3 Billing Setting

8.3.1 Counter Setting

(1) Use

- To set the counting method for the total counter, size counter and banner paper counter.
- To set the size regarded as the large size (2 counts.)
- Use to change the counting method for the counters.

(2) Default setting (Total Counter Mode)

- Japan: Mode 1
- US, Europe, Others 1, Others 2, Others 3, Others 4, Others 5: Mode 2

(3) Setting item (Total Counter Mode)

- Mode 1: 1 count per copy cycle
- Mode 2: Large size is double counts

NOTE

- **The content of this setting is reflected in the count method with the key counter.**

(4) Default setting (Large Size Counter Mode)

- US: A3 and 11 x 17
- Europe, Others 1, Others 2, Others 3, Others 4, Others 5: A3, B4, 11 x 17, and 8 1/2 x 14
- Japan: Not counted

(5) Setting item (Large Size Counter Mode)

A3/11 x 17	When it exceeds 279 mm in the main scan direction and 420 mm in the sub scan direction (exceeds 399 mm at fax scan), it is regarded as the large size.
A3/B4/11 x 17/8 $^1/_2$ x 14	When it exceeds 215 mm in the main scan direction and 355 mm in the sub scan direction (exceeds 337 mm at fax scan), it is regarded as the large size.
A3/11 x 17/B4/8 $^1/_2$ x 14/Foolscap	When it exceeds 203 mm in the main scan direction and 330 mm in the sub scan direction (exceeds 313 mm at fax scan), it is regarded as the large size. (However the size in the main scan direction changes according to the foolscap size setting.)

- Not counted
- A3/11 × 17
- A3/B4/11 × 17/8 $^1/_2$ × 14
- A3/11 × 17/B4/8 $^1/_2$ × 14/Foolscap

NOTE

- **When the "Large Size Counter Mode" is set to “Not count”, the machine operate with following conditions regardless of the each control panel settings.**
  - **Total Counter: Mode1**
  - **Banner Paper Count Mode: Mode1**
  - **Banner Counter Double Count Mode: OFF**

(6) Count-up table

Print mode	1-Sided				2-Sided			
Size	Sizes other than those specified		Specified sizes		Sizes other than those specified		Specified sizes	
Mode / Type	Mode		Mode		Mode		Mode	
	1	2	1	2	1	2	1	2
Total	1	1	1	2	2	2	2	4
Size	0	0	1	1	0	0	2	2
2-sided Total	0	0	0	0	1	1	1	1

- 0: No count
- 1: 1 count
- 2: 2 counts
- 3: 3 counts
- 4: 4 counts

(7) Default setting (Banner Paper Counter Mode)

- Mode 4

(8) Setting item (Banner Paper Counter Mode)

- When printing on the long paper (457.2 mm or over), the counting value will be the total of the value set by the total counter mode and the value by this setting.

Mode 1	0 count
Mode 2	1 count
Mode 3	+ 2 counts (457.2 to 915.0 mm will be + 1 count)
Mode 4	+ 3 counts (457.2 to 686.0 mm will be + 1 count, and 686.1 to 915.0 mm will be + 2 count)

(9) Default setting (Banner Counter Double Count Mode)

- OFF

(10) Setting item (Banner Counter Double Count Mode)

- ON
- OFF

NOTE

- **To set whether to use normal count or double count when printing long size paper.**
- **When "ON" is selected, double count is applied to only long size paper.**
- **The count method used when printing long size paper depends on the combination of the Counter Setting: Settings in Banner Paper Counter Mode and Banner Counter Double Count Mode. The following shows details on count methods that are the combination of each setting.**

Total Counter	Banner Paper Counter Mode	Banner Counter Double Count Mode	Paper size	Count
Mode 1	Mode 1	OFF	Normal size	1 count
			Long size	1 count
		ON	Normal size	1 count
			Long size	2 counts
	Mode 2	OFF	Normal size	1 count
			Long size	2 counts
		ON	Normal size	1 count
			Long size	4 counts
	Mode 3	OFF	Normal size	1 count
			Long size 457.3 to 915.0 mm	2 counts
			Long size 915.1 mm or more	3 counts
		ON	Normal size	1 count
			Long size 457.3 to 915.0 mm	4 counts
			Long size 915.1 mm or more	6 counts
	Mode 4	OFF	Normal size	1 count
			Long size 457.3 to 686.0 mm	2 counts
			Long size 686.1 to 915.0 mm	3 counts

			Long size 915.1 mm or more	4 counts
		ON	Normal size	1 count
			Long size 457.3 to 686.0 mm	4 counts
			Long size 686.1 to 915.0 mm	6 counts
			Long size 915.1 mm or more	8 counts
Mode 2	Mode 1	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size	2 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size	4 counts
	Mode 2	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size	3 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size	6 counts
	Mode 3	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 915.0 mm	3 counts
			Long size 915.1 mm or more	4 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 915.0 mm	6 counts
			Long size 915.1 mm or more	8 counts
	Mode 4	OFF	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 686.0 mm	3 counts
			Long size 686.1 to 915.0 mm	4 counts
			Long size 915.1 mm or more	5 counts
		ON	Small Size	1 count
			Specified sizes	2 counts
			Long size 457.3 to 686.0 mm	6 counts
			Long size 686.1 to 915.0 mm	8 counts
			Long size 915.1 mm or more	10 counts

NOTE

- **When the "Large Size Counter Mode" is set to “Not count”, the machine operate with following conditions regardless of the each control panel settings.**
  - **Total Counter: Mode1**
  - **Banner Paper Count Mode: Mode1**
  - **Banner Counter Double Count Mode: OFF**

8.3.2 Management Function Choice

- To set whether or not the Key Counter, Management Device (Data controller) or Vendor is to be mounted.

NOTE

- **This is not displayed when [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”.**
- **When the setting shows that [Management Device 2] or [Vendor 2] is mounted, the following applications will be invalid. Also, [Administrator Settings] -> [Security Settings] -> [Function Management Settings] -> [Network Function Usage Settings] will be set to "OFF".**
  - **PC FAX transmission / HDD TWAIN/PS Box Operator / PS Scan Direct / PS Job Spooler / Fiery: Scan to Box**

8.3.3 Management Function Choice - Key Counter IF Vendor

- Not used

8.3.4 Management Function Choice - Key Counter Only

(1) Use

- To set whether or not the key counter is installed.
- Set when the key counter is mounted.
- Select [Color Mode] and [Message] when the key counter is mounted.

(2) Color Mode

- Not used

(3) Message

(a) Procedure

- Select the message type when the administrative unit is mounted.

Type 1	Message for key counter
Type 2	Message for card scanning
Type 3	Message for ID management
Type 4	Message for remote SW

(b) Setting item

- Type 1
- Type 2
- Type 3
- Type 4

(4) Confirmation copy

(a) Procedure

- Set whether to allow a confirmation copy when a key counter is installed.

(b) Default setting

- Ban

(c) Setting item

- License
- Ban

(5) The next job reservation

(a) Use

- Set whether to allow the reservation of the next job when a key counter is installed.

(b) Default setting

- Ban

(c) Setting item

- License
- Ban

NOTE

- **The setting is available only when user authentication and account track are set "OFF" with [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings].**

(6) Count Setting

(a) Use

- To set the count timing used when the key counter is installed.

(b) Default setting

- Paper feed

(c) Setting item

- Paper feed
- Paper out

8.3.5 Management Function Choice - Management Device 2

(1) Management Device 2

(a) Use

- To set whether or not the management device 2 is installed.

Mode 1	Use contact type device. (Logout with ID key is not allowed)
Mode 2	Use non-contact type device. (Logout with ID key is allowed.)

(b) Setting item (Management Setting)

- Mode 1
- Mode 2

NOTE

- **The setting is not available when either "External Server Authentication" of user authentication, "Password Only" of account track, "Do Not Synchronize" of user authentication and account track or "ON" of public user access has been set with [Administrator Settings] -> [User Authentication/Account Track] -> [General Settings].**

(2) Billing Line

- To be displayed only when [Fax (Line 3)] and [Fax (Line 4)] are set to [Set] in [Service Mode] -> [System 2] -> [Option Board Status].

(a) Use

- To set which of Fax Line 1 or Fax Line 2 is used for billing Fax Line 3 and Fax Line 4.

(b) Default setting

- Line 3: Line1
- Line 4: Line2

(c) Setting item

- Line1
- Line2

8.3.6 Management Function Choice - Vendor 2

(1) Use

- To set whether or not the vendor 2 is installed.

  NOTE

  - **When using the vendor along with the key counter, inserting the key counter will set it to the "Key Counter Mode" and removing it will set it to the "Vendor Mode".**

(2) Procedure

- Select color mode and message of key counter. (Only for key counter, the type of the color mode and message are same after mounting.)

(3) Procedure (Confirmation copy)

(a) Use

- Set whether to allow a confirmation copy when a key counter is installed.

(b) Default setting

- Ban

(c) Setting item

- License
- Ban

(4) Procedure (The next job reservation)

(a) Use

- Set whether to allow the reservation of the next job when a key counter is installed.

(b) Default setting

- Ban

(c) Setting item

- License
- Ban

(5) Procedure (Count Setting)

(a) Use

- To set the count timing used when the key counter is installed.

(b) Default setting

- Paper feed

(c) Setting item

- Paper feed
- Paper out

(6) Procedure (Message)

(a) Use

- Select message of vendor.

Type 1	Message for key counter
Type 2	Message for card scanning
Type 3	Message for ID management

(b) Setting item

- Type 1
- Type 2
- Type 3

(7) Billing line

To be displayed only when [Fax (Line 3)] and [Fax (Line 4)] are set to [Set] in [Service Mode] -> [System 2] -> [Option Board Status].

(a) Use

- To set which of Fax Line 1 or Fax Line 2 is used for billing Fax Line 3 and Fax Line 4.

(b) Default setting

- Line 3: Line 1
- Line 4: Line 2

(c) Setting item

- Line 1
- Line 2

8.3.7 Authentication Device 2

(1) Use

- To set whether or not the authentication device 2 is installed.
- Set when the authentication unit (biometric type or card type) is mounted.

NOTE

- **When using the authentication device including AU-102 and AU-201S the loadable device driver needs to be installed.**
  I.5.16.29 Driver Install
  E.1.3.1 IC card information setting tool of AU-201S/OMNIKEY 5427CK (AU-205H)/SCL-010/YSoft card reader

Card	Uses IC card authentication system (AU-201S/SCL-010/YSoft card reader/OMNIKEY 5427CK (AU-205H)/USB keyboard emulation card readers).
Body	Uses biometrics (finger vein) authentication system (AU-102)
Card 3	Uses IC card authentication device for PKI card system

- When selecting [Body], set a film timeout interval, capture trial time and authentication trial time.
- When selecting [Card], a response timeout interval is displayed. (The interval is unchangeable.)
- [Card 3] will be displayed only when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No. 12 is set to [00000010]/[02] (bit value/HEX value).

(2) Setting item

Authentication Mode

- Card
- Body

(3) Installation procedures of authentication unit

(a) AU-102

1. Install the AU-102 loadable driver (BIO_LDR.tar) to the main unit. *1
2. Install the AU-102 to the main unit.
3. Select [Body] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
4. Turn off the main power switch and turn it on again more than 10 seconds after.
5. Register the authentication user data.

Note *1

- Use the loadable driver combined with the proper firmware version.

Authentication units	Compatible IC cards

AU-102	Biometric

(b) AU-201S

1. Install the loadable driver (ICC_LDR.tar) to the main unit. *1,*2,*3
2. Install the AU-201S to the main unit.
3. Select [Card] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
4. Turn off the main power switch and turn it on again more than 10 seconds after.
5. Register the authentication card data.

Note *1
- A combination of the loadable driver and the IC card information setting file will be supplied as a loadable driver by KM.

Note *2
- The loadable driver to be installed varied according to the type of the card. Identify the type of the card requiring authentication and install the correct loadable driver.
- Use the loadable driver in combination with the following firmware version.
  Use the loadable driver combined with the proper firmware version.

Authentication units	Loadable driver name (KM standard setting)	Compatible IC cards
AU-201S	AU-201S loadable driver	FeliCa IDm, FeliCa SSFC, FeliCa FCF, FeliCa FCF(Campus), TypeA, FeliCaPrivate

Note *3
- If FeliCa IDm, FeliCa SSFC, FeliCa Private, or related card requiring detailed settings is to be used, make the detailed settings by using either one of the following methods:
  1. Using the Auth Device Tool Advanced for AU-201S, prepare a combination of the loadable driver and the IC card information setting file and export it as a loadable driver.
     E.1.3.1.(3) IC card information setting procedures
  2. Using the Auth Device Tool Advanced for AU-201S, prepare the IC card information setting file only and install the loadable driver in the MFP. Then, using the PageScope Data Administrator, write the IC card information setting file in the MFP.
     E.1.3.1.(3) IC card information setting procedures

E.g.: Information setting sample when the FeliCa SSFC card is used

Information to be obtained from the administrator		
Items of FeliCa SSFC detail setting	Sample-data (decimal number)	Setting value (hexadecimal number)
Room number	37	00 25
Floor number	15	00 0F
Building number	50	00 32
Area number	85	00 55
Security level	2	00 02
Company identification code (CL code) *1	06BGLQVX17 (ASCII code)	30 36 42 47 4C 51 56 58 31 37
Company code *2	CompanyA (ASCII code)	CompanyA

*1: The character length of the company code is 10 bytes.
*2: Use alphabetical upper case/lower case characters and numeric characters for Company code. When the company code is not set, this space will be left blank.

(c) USB keyboard emulation card readers *1

1. Install the loadable driver (ICC_LDR.tar) to the main unit. *2
2. Select [Card] in [Service Mode] -> [Billing Settings] -> [Authentication Device 2].
3. Turn off the main power switch and turn it on again more than 10 seconds after.
4. Set Vendor ID and Product ID of the card reader in [Administrator Settings] -> [User Authentication/Account Track] -> [Authentication Device Settings] -> [General Settings] -> [Card Authentication] -> [USB Device identification information]. *3
5. Turn OFF the main power switch.
6. Install the USB keyboard emulation card readers to the main unit.
7. Turn ON the main power switch.
8. Register the authentication card data.

Note *1
- Use the card reader supporting US keyboards.
- The length of card ID is 1 to 512 bytes.
- Send data as card ID data received until the reception of the key code that has been set as a delimiter (Enter).

Note *2
- Use the loadable driver combined with the proper firmware version.

Authentication units	Loadable driver name (KM standard setting)	Compatible IC cards
USB keyboard emulation card readers	KeyboardEmu loadable driver	Depends on the card reader *

- *: The card type is reported to the authentication program as an extended card type.

Note *3
- Vendor ID and Product ID are identification information to specify USB devices.
- Check Vendor ID and Product ID of the USB device to be connected as follows:
  - Refer to the specification of the device or ask the vendor.
  - Connect the device to a Windows PC and check "Property" in "Device Manager."

(d) Miscellaneous card readers

- The same setting method as that for AU-201S applies for other card readers.
- The following loadable drivers are necessary.
- Use the loadable driver in combination with the following firmware version.
  Use the loadable driver combined with the proper firmware version.

Authentication units	Loadable driver name (KM standard setting)	Compatible IC cards
SCL-010	SCL-010 loadable driver (Default: TypeA) *1, *2	TypeA, FeliCa IDm, Mifare
OMNIKEY 5427CK (AU-205H)	5427CK (AU-205H) loadable driver*2	HID Prox, HID iCLASS, TypeA , FeliCa IDm *4
KM USB Reader v2 MultiReader HF	Loadable driver for YSoft card reader (Default: HID Prox) *3	Mifare
KM USB Reader v2 Legic Advant		LEGIC
KM USB Reader v2 ASK FSK 125kHz		EM4100, EM4102, RFID 125kHz
KM USB Reader v2 Mot/Ind W26		Indala
KM USB Reader v2 HID Prox		HID Prox
KM USB Reader v2 HID iCLASS		HID iCLASS

Note *1
- A combination of the loadable driver and the IC card information setting file will be supplied as a loadable driver by KM.

Note *2
- If cards of FeliCa IDm of SCL-010 or HID iClass of OMNIKEY 5427CK (AU-205H) that require detailed settings are to be used, make the detailed settings by using either one of the following methods:
  1. Using the Auth Device Tool Advanced for SCL-010 or Auth Device Tool Advanced for 5427CK (AU-205H), prepare a combination of the loadable driver and the IC card information setting file and export it as a loadable driver.
     E.1.3.1.(3) IC card information setting procedures
  2. Using the Auth Device Tool Advanced for SCL-010 or Auth Device Tool Advanced for 5427CK (AU-205H), prepare the IC card information setting file only and install the loadable driver in the MFP. Then, using the PageScope Data Administrator, write the IC card information setting file in the MFP.
     E.1.3.1.(3) IC card information setting procedures

Note *3
- If a YSoft card reader is used, all types of card will be reported as HID Prox card to the authentication program (Default).
- To report the card type other than HID Prox to the authentication program, choose the corresponding card type shown in the following list.

Card Reader Name	Readable Card Type	Card type to be reported to the authentication program (Default) *3-3, *3-5	IC Card Information Setting (card type to be reported) *3-4 E.1.3.1 IC card information setting tool of AU-201S/OMNIKEY 5427CK (AU-205H)/SCL-010/YSoft card reader
KM USB Reader v2 MultiReader HF	Mifare	HID Prox	TypeA (1) *3-1,*3-2
KM USB Reader v2 Legic Advant	LEGIC	HID Prox	TypeA (1) *3-1,*3-2
KM USB Reader v2 ASK FSK 125kHz	EM4100, EM4102, RFID 125kHz	HID Prox	EM4100/ EM4102/ RFID 125kHz
KM USB Reader v2 Mot/Ind W26	Indala	HID Prox	Indala
KM USB Reader v2 HID Prox	HID Prox	HID Prox	HID Prox (1) *3-2
KM USB Reader v2 HID iCLASS	HID iCLASS	HID Prox	HID iCLASS (1) *3-2

- *3-1 The content (ID) to be read from the type A card setting differs from which to be read by using AU-201S.
- *3-2 When the YSoft card reader is added to the authentication network composed of the present AU-201S, the ID may vary depending on the card reader. Therefore, it is required to set the card type to TypeA (1) and register the card again.
- *3-3 For the content to be read from the HID Prox card, since the ID length is fixed to 16 bytes, the unused part will be bridged with 0xFF.
- *3-4 If a card type other than HID Prox is selected, the card ID type will be set to up to 512 bytes, the card ID length will be reported together with the card ID.
- *3-5 If the card type is set to HID Prox by using the LDAP-IC card authentication, specify the card ID type to be sent to the LDAP server as shown below.
  1. Software switch No.135 Hex: 00 Reports that the 1st byte shows the ID length of the card, the 2nd byte and after shows the card ID. (Default)
  2. Software switch No.135 Hex: 01 Reports the card ID with the ID length including the 1st byte.

Note *4
- To use FeliCa, make either of the following settings.
  - Select [FeliCa] at [Administrator Settings] -> [User Authentication/Account Track] -> [Authentication Device Settings] -> [General Settings] -> [Card Authentication] -> [IC Card type setting].
  - Although [Use Card Reader Settings] is also selectable at [Administrator Settings] -> [User Authentication/Account Track] -> [Authentication Device Settings] -> [General Settings] -> [Card Authentication] -> [IC Card type setting], "FeliCa" is dedicated for the card reader (OMNIKEY5427CK) settings.

- Make card reader (OMNIKEY5427CK) settings with the tool that is exclusively used for PC settings and downloaded from the HID web page.

8.3.8 Setting items that automatically change the setting values

NOTE

- **Performing the setup for each unit to be mounted will internally change the setting values below. It needs resetting when cancelling the setting in order to set back to "not mounted" because the setting value will remain.**

(1) When the vendor2 is mounted

Setting Item		Vendor 2
Utility	Default Copy Settings	Factory Default
	Default Scan/Fax Settings	Factory Default
	Copy Operating Screen	[Yes]
	Fax Active Screen	Tx/Rx Display [Yes]
	Scan/Fax Settings -> Default Tab	Direct Input
	Custom Display Settings -> Left Panel Display Default	Change Left Panel Display Default to "Bookmark."
Administrator Settings	Usage Settings for Each Function	Copy, PC print, and Send Data will be set to "ON". Others Prints will be set to "OFF".
	Administrator Security Levels	Prohibit
	Restrict Access to Job Settings	Changing Job Priority, Delete Other User Jobs, Registering and Changing Addresses, Changing Zoom Ratio will be set to "Restrict".
	Job Priority Operation Settings	"Skip Job (Fax)" will be set to "Yes". "Skip Job (Copy, Print)" will be set to "Yes". Change "Fax RX Job priority" to "No."
	Forward TX Setting	No
	Fax Settings -> Memory RX Setting	Password for Memory RX Setting is set to the default value of the administrator password
	DPWS Settings -> Printer Settings/Scanner Settings	OFF
	Image Log Transfer Settings	OFF
Service Mode	Software Switch Setting	SW No. 63 will be set to [00000000] at Bit assignment/[00] at HEX assignment.
	FAX	[System] -> [Display Setting] -> [Re-Transmission] will be set to "OFF".

(2) When the key counter IF vendor is mounted

Setting Item		Key counter IF Vendor
Utility	Default Copy Settings	Factory Default
	Default Scan/Fax Settings	Factory Default
	Copy Operating Screen	[Yes]
	Fax Active Screen	Tx/Rx Display [Yes]
	Scan/Fax Settings -> Default Tab	Direct Input
	Custom Display Settings -> Left Panel Display Default	Change Left Panel Display Default to "Bookmark."
Administrator Settings	Usage Settings for Each Function	Copy, PC print will be set to "ON". Send Data, Others Prints will be set to "OFF".
	Administrator Security Levels	Prohibit
	Weekly Timer ON/OFF Settings	OFF
	Restrict Access to Job Settings	Changing Job Priority, Delete Other User Jobs, Registering and Changing Addresses, Changing Zoom Ratio will be set to "Restrict".
	Job Priority Operation Settings	Change "Fax RX Job priority" to "No."
	External Memory Function Settings	External Memory Document Scan will be set to "OFF". Save Document and Print Document will be set to "OFF".
	Fax Settings -> Memory RX Setting	Password for Memory RX Setting is set to the default value of the administrator password
	Forward TX Setting	No
	OpenAPI Settings	Access Setting will be set to "Restrict" and Authentication will be changed to "OFF" setting.
	Apply Stamps/Stamp	No
	Apply Stamps/Copy Protect	No
	Apply Stamps/Stamp Repeat	No
	Apply Stamps/Registered Overlay	No
	Apply Stamps/Header/Footer	No

Setting Item		Key counter IF Vendor
	Apply Stamps/Page Number/Text Color	Black
	Apply Stamps/Date/Time/Text Color	Black
	DPWS Settings -> Printer Settings/Scanner Settings	OFF
	Image Log Transfer Settings	OFF
Service Mode	Software Switch Setting	SW No. 63 will be set to [00000000] at Bit assignment/[00] at HEX assignment.
	FAX	[System] -> [Display Setting] -> [Re-Transmission] will be set to “OFF”.

(3) When the management device 2 is mounted

Setting Item		Management Device 2
Administrator Settings	Usage Settings for Each Function	Copy, PC print, Send Data, and Others Prints will be set to “ON”.
	Line Parameter Setting	Receive Mode will be changed to “Auto RX”.
	DPWS Settings->Printer Settings/ Scanner Settings	OFF

(4) When the authentication device 2 is mounted

Setting Item		Authentication Device 2(Card/Body)
Administrator Settings	User Authentication/Account Track -> General Settings -> User Authentication	This setting will be set to “ON(MFP)” if External Server Authentication has been set.
	Network settings-> HTTP Server Settings-> User Authentication Synchronization	Do Not Synchronize

8.3.9 Coverage Rate Clear

(1) Use

- To clear the coverage rate.

(2) Procedure

- Touching [END] key will clear the coverage rate.

(3) Default setting

- Unset

(4) Setting item

- Set
- Unset

8.3.10 License management - Activation

(1) Functions

- To activate i-Option functions.

(2) Use

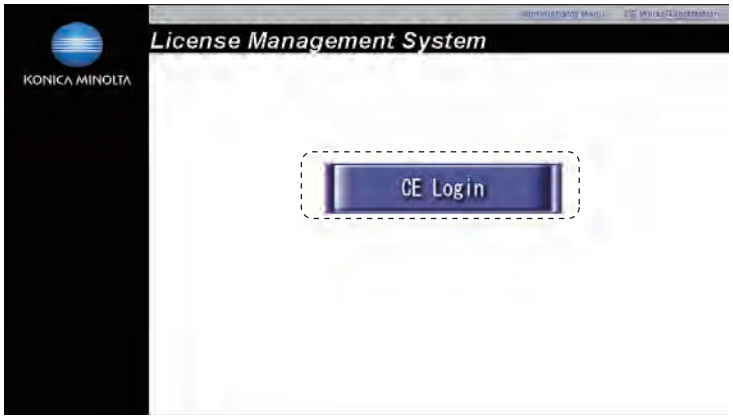
- To activate i-Option functions with CE.
- The functions can be activated by selecting the desired function and enter the appropriate license code and function code.
- Administrators also can carry out the procedure No.14 or later step to activate i-Option functions through Administrator Settings.

(3) Procedure

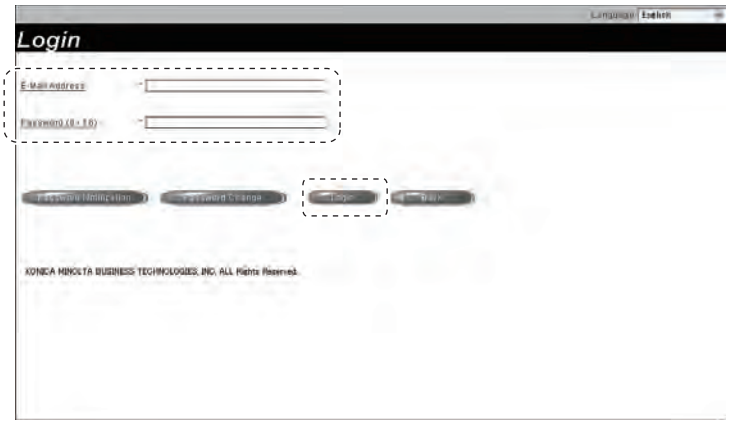
NOTE

- **You need to access License Management System (LMS) to implement each function setting.**
- **Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.**

1. Prepare “token certification.”
2. Access the following URL using the PC connected to the Internet.
   - https://lms.konicaminolta.com/license/KM/support.aspx
3. Click [CE Login].



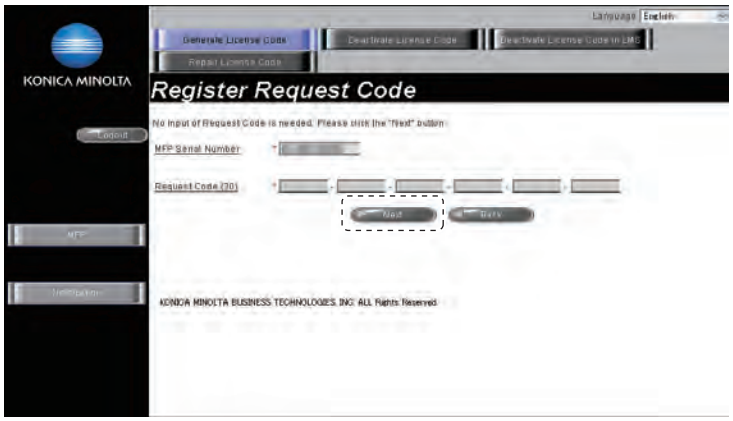
4. Enter [E-Mail Address] and [Password], and click [Login].



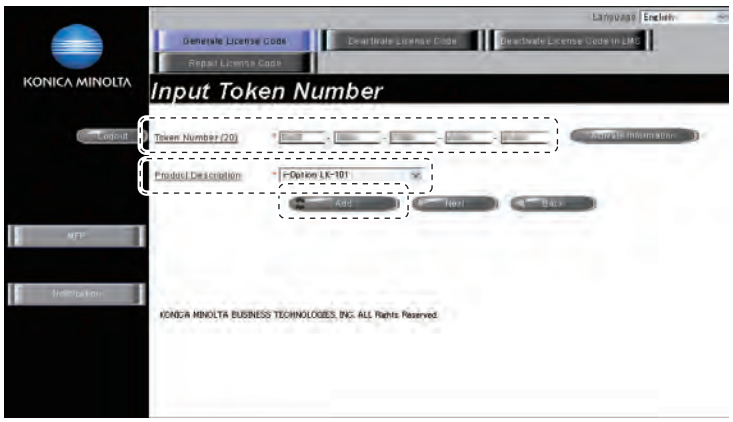
5. Click [Generate License Code].

6. Enter the serial number of the target MFP, and click [Next].
NOTE
- **Make sure to enter alphabet letters of the serial number in all capital letters.**

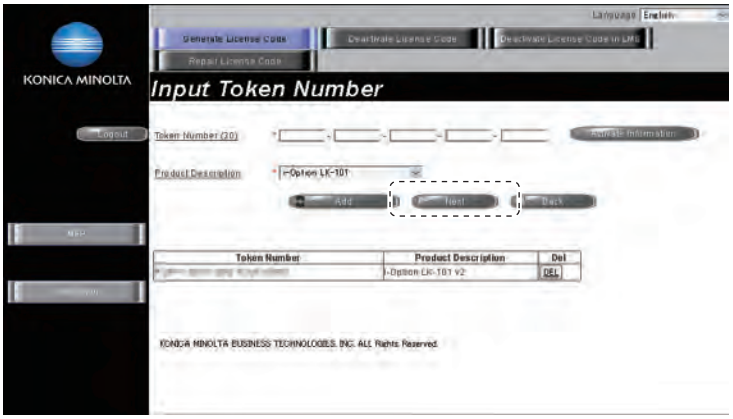
7. Click [Next].



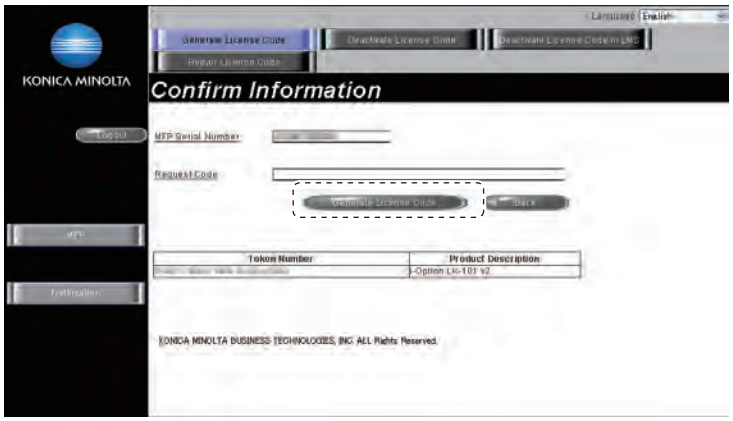
8. Enter the token number written in the token certification, and select the product description.
9. Click [Add].



10. Confirm the registered items, and click [Next].

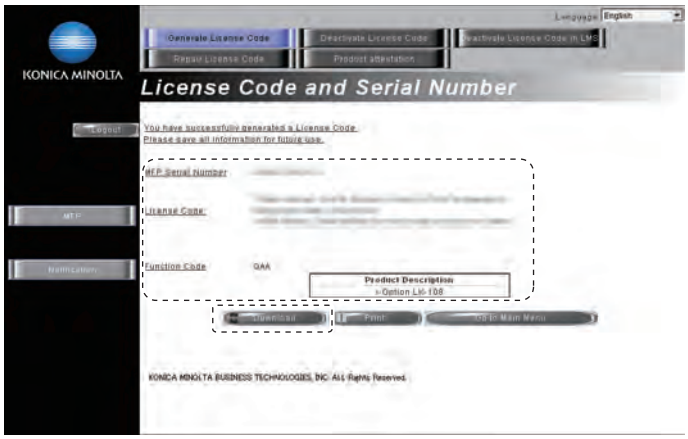


11. Click [Generate License Code].

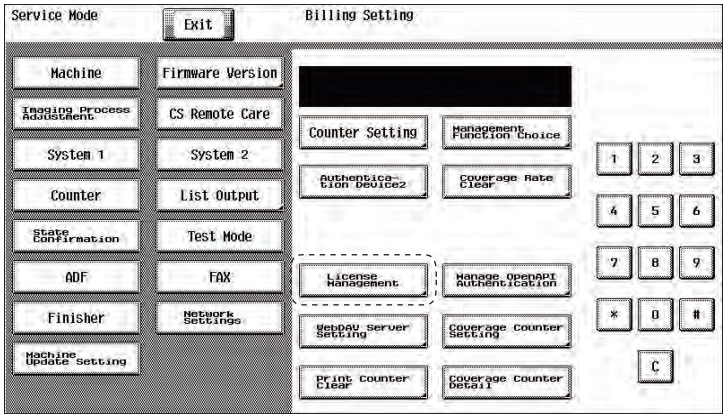


12. LMS issues license code and function code.
13. Write down the serial number, license code and function code.

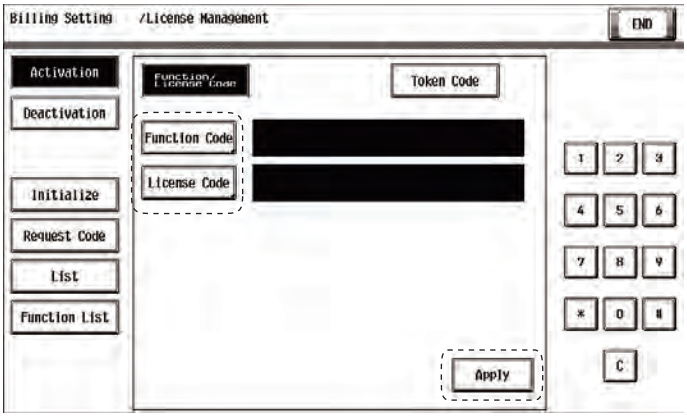
- <When activating with an USB memory>: Click [Download], and save a "***.fek" file to the root directory of the USB memory.



14. Select [Service Mode] -> [Billing Setting] -> [License Management].



15. Select [Activation] -> [Function Code] or [License Code], and enter the function code and the license code confirmed at Step13.
<When activating with an USB memory>
Connect the USB memory to the USB port on the side of the control panel, and select [Activation] -> [USB].
16. Touch [Apply].



17. Follow the massage appearing on the screen and turn OFF and ON the main power switch.
    - <When activating with an USB memory>: This step is unnecessary. Proceed to the next step.
18. Select [Service Mode] -> [Billing Setting] -> [License Management] -> [Function List], and confirm that the activated function is displayed at the list.

8.3.11 License management - Deactivation

(1) Functions

- To deactivate i-Option functions.

(2) Use

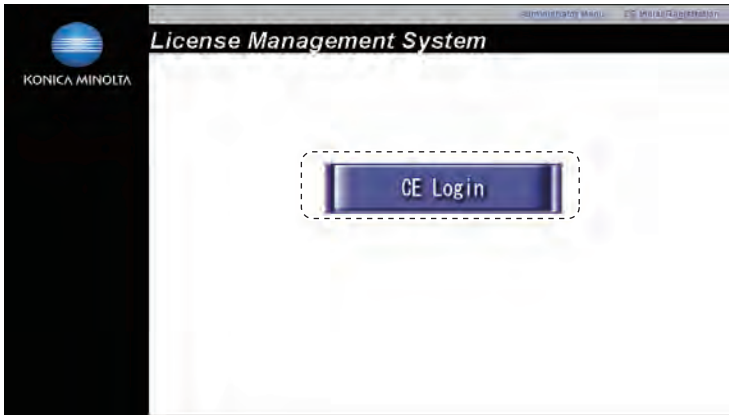
- To deactivate i-Option functions due to registration error, expiration of lease term, change to other MFP or etc.
- The functions can be deactivated by selecting the desired function and enter the appropriate deactivation code.

(3) Procedure

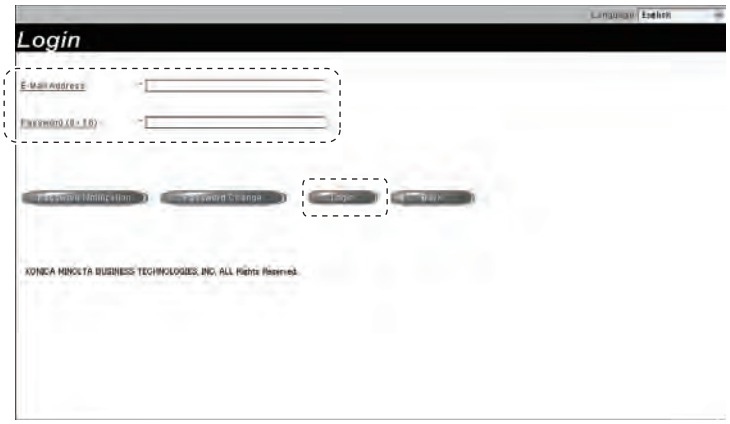
NOTE

- **You need to access License Management System (LMS) to implement each function setting.**
- **Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.**

1. Check the serial number of the target MFP.
2. Access the following URL using the PC connected to the Internet.
    - https://lms.konicaminolta.com/license/KM/support.aspx
3. Click [CE Login].

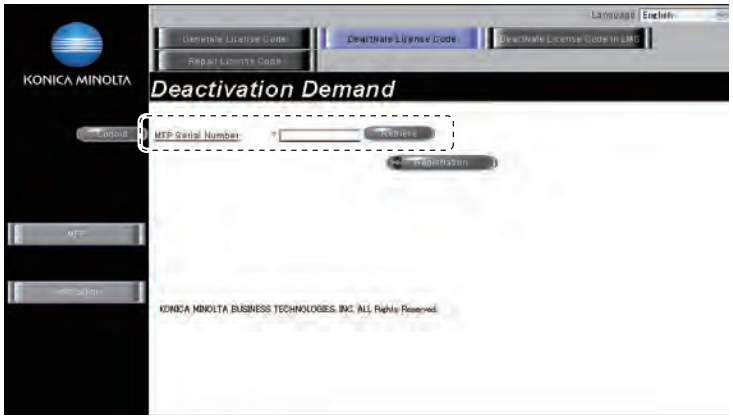


4. Enter [E-Mail Address] and [Password], and click [Login].

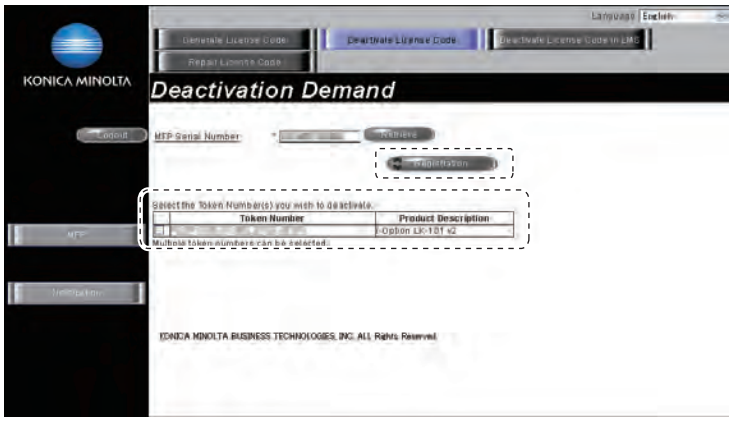


5. Click [Deactivate License Code].

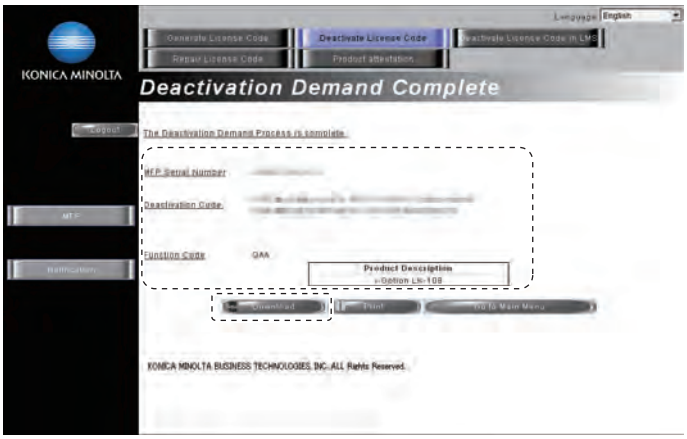
6. Enter the serial number of the target MFP, and click [Retrieve].
NOTE
- **Make sure to enter alphabet letters of the serial number in all capital letters.**



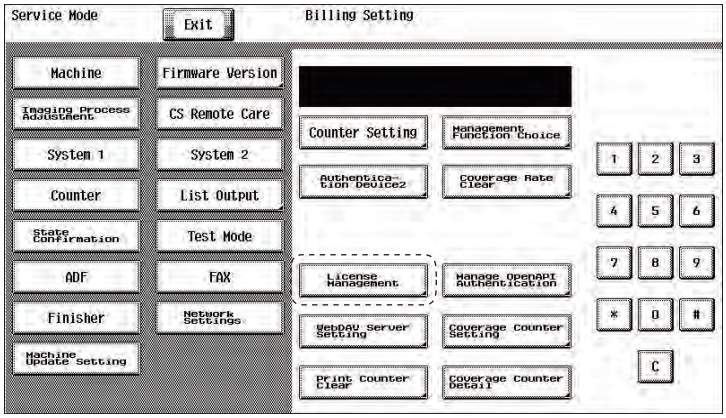
7. Select the token to be deactivated, and click [Registration].



8. LMS issues deactivation code and function code.
9. Write down the serial number, deactivation code and function code.
   - <When deactivating with an USB memory>: Click [Download], and save a "***.fek" file to the root directory of the USB memory.

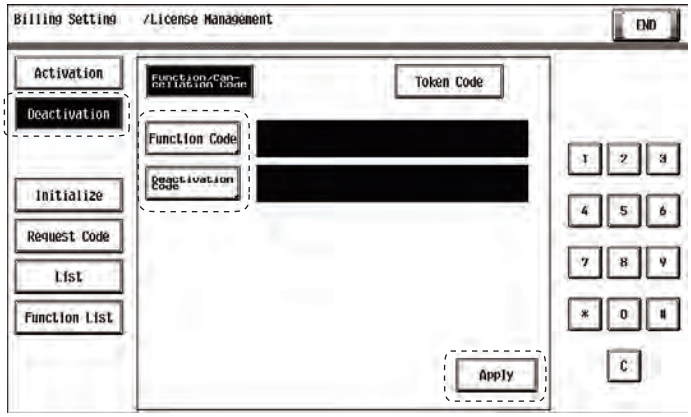


10. Select [Service Mode] -> [Billing Setting] -> [License Management].



11. Select [Deactivation] -> [Function Code] or [Deactivation Code], and enter the function code and the deactivation code confirmed at Step9.
- <When deactivating with an USB memory>: Connect the USB memory to the USB port on the side of the control panel, and select [Deactivation] -> [USB].

12. Touch [Apply].



13. Write down or print out the serial number and deactivation complete code.
- <When deactivating with an USB memory>: MFP will restart automatically. After MFP restarts, write down or print out the serial number and deactivation complete code.

NOTE
- **When A4S or 8 1/2 x 11S is set to the paper feed tray, the above-mentioned serial number and deactivation complete code can be printed out by pressing the start key.**
- **Serial number and deactivation complete code can be confirmed in [List] available from [License Management].**

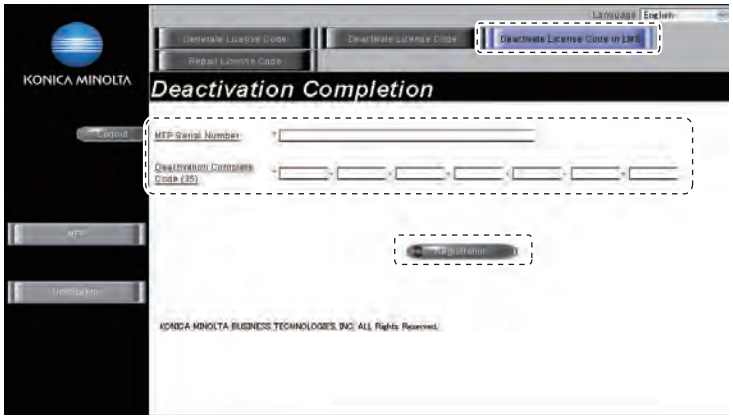
14. Touch [Restart].
- <When deactivating with an USB memory>: This step is unnecessary. Proceed to the next step.

15. Access to the LMS and login again.
For detail of the login method, refer to step 2 to step 4.

16. Click [Deactivate License Code in LMS].

17. Enter the serial number and the deactivation complete code confirmed at step13.

NOTE
- **Make sure to enter alphabet letters of the serial number in all capital letters.**



18. "Deactivation Complete" message will be displayed.
The license become invalid at both MFP and LMS, and deactivated token number can be used for another MFP.

8.3.12 License management - Repair

(1) Functions

- To repair license management information.

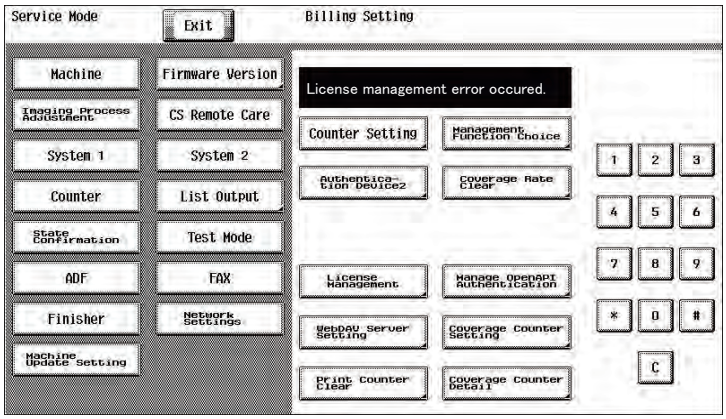
(2) Use

- To be used when license management information is lost due to replacement of MFP board or the eMMC board, or some other trouble.
- License management information can be repaired by acquiring repair code with repair request code, and entering the repair code.

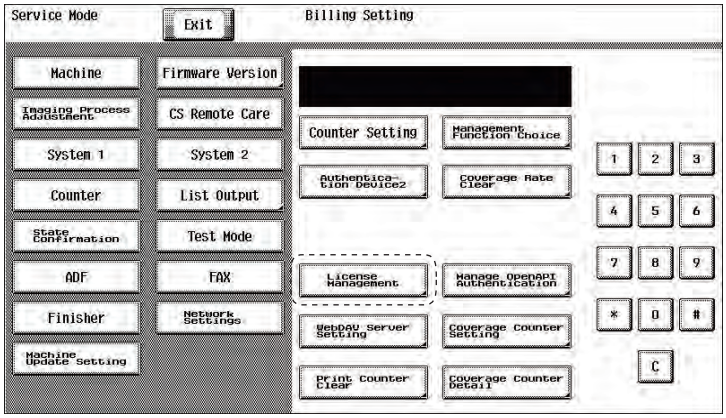
(3) Procedure

NOTE

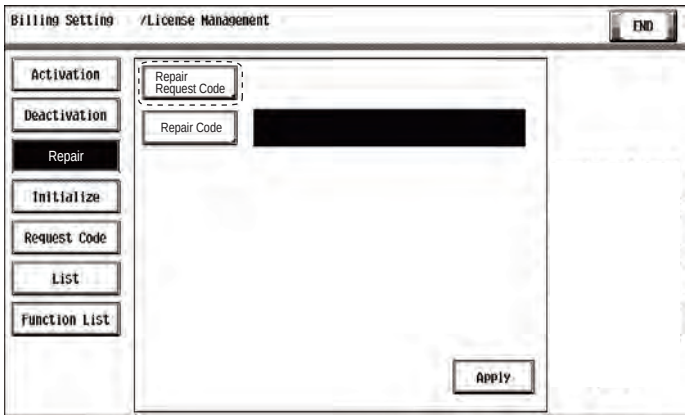
- **You need to access License Management System (LMS) to implement each function setting.**
- **Before accessing the LMS, CE are required to register the E-mail address and the password in the LMS. To register, click [CE Initial Registration] that is located in the upper right of CE Login screen.**
- When the message "License management error occurred." is displayed, carry out the repair operation with the following steps.



1. Select [Service Mode] -> [Billing Setting] -> [License Management].

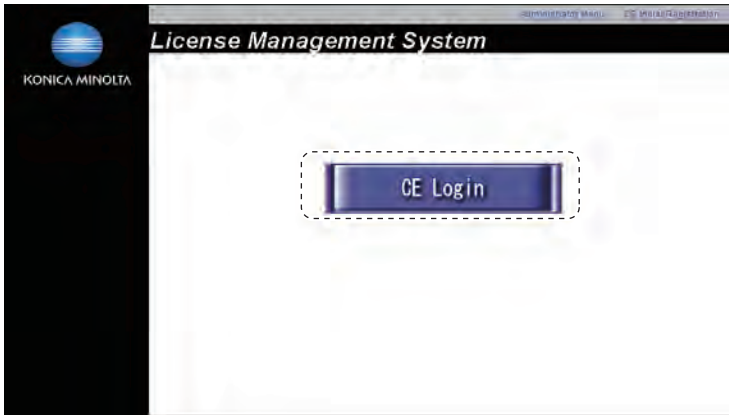


2. Select [Repair] -> [Repair Request Code].

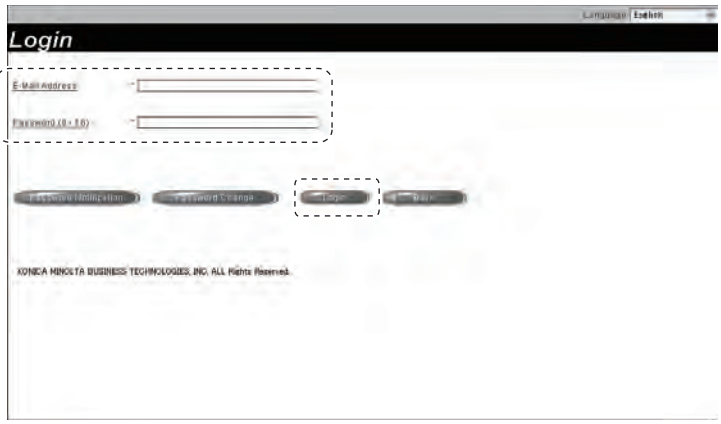


3. Write down or print out the serial number, repair request code and request code.
NOTE
- **When A4S or 8 1/2 x 11S is set to the paper feed tray, the above-mentioned serial number and repair request code can be printed out by pressing the start key.**

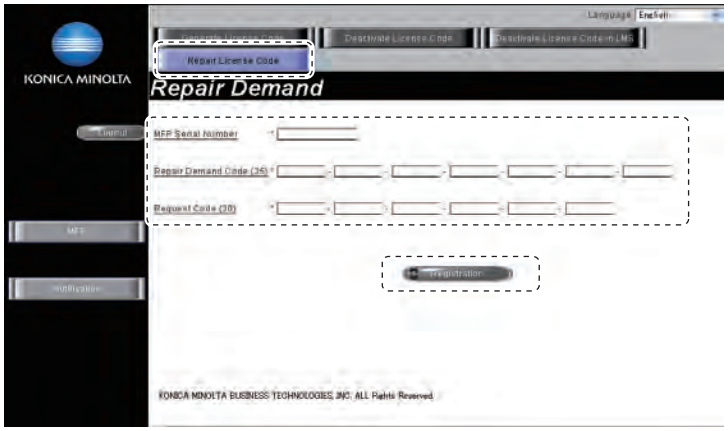
4. Access the following URL using the PC connected to the Internet.
   - https://lms.konicaminolta.com/license/KM/support.aspx
5. Click [CE Login].



6. Enter [E-Mail Address] and [Password], and click [Login].

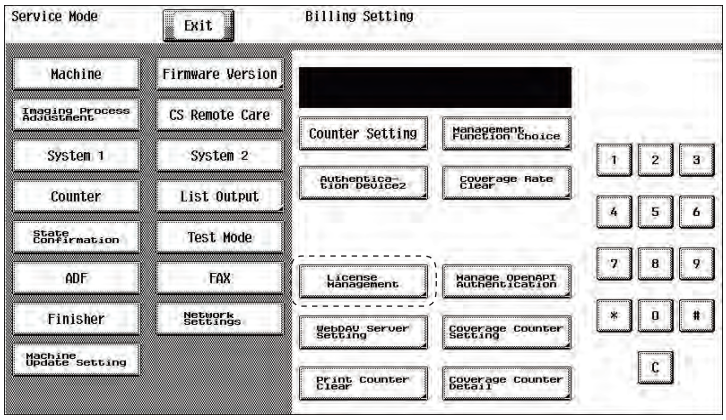


7. Click [Repair License Code].
8. Enter the serial number, repair request code and request code confirmed at step3, and click [Registration].
   NOTE
   - **Make sure to enter alphabet letters of the serial number in all capital letters.**

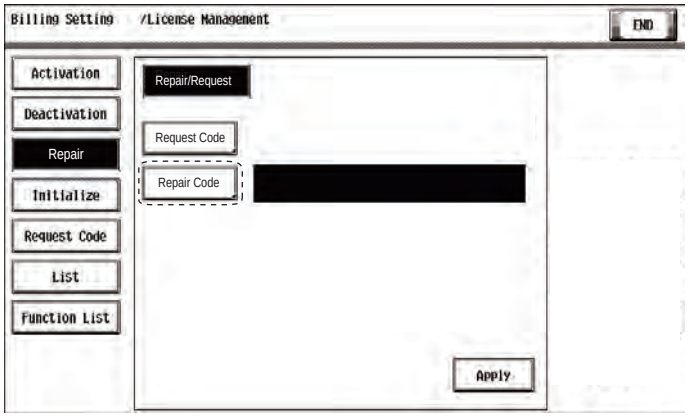


9. LMS issues repair permission code.
10. Write down the serial number and repair permission code.

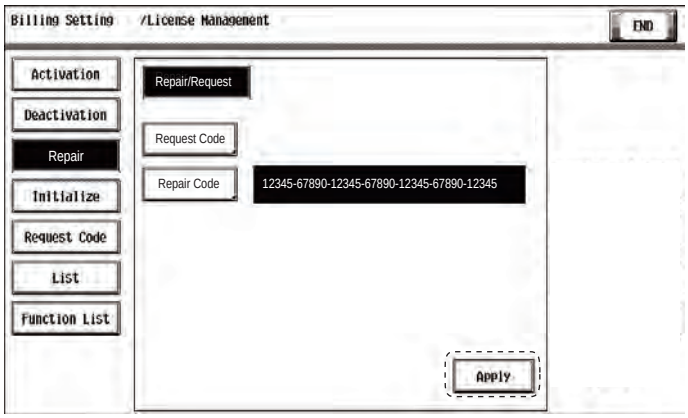
11. Select [Service Mode] -> [Billing Setting] -> [License Management].



12. Select [Repair] -> [Repair Code], and enter the repair code confirmed at step10.



13. Touch [Apply].



14. After repair is completed, the machine restarts automatically.

8.3.13 License management - Initialize

(1) Functions

- To initialize license management information.

(2) Use

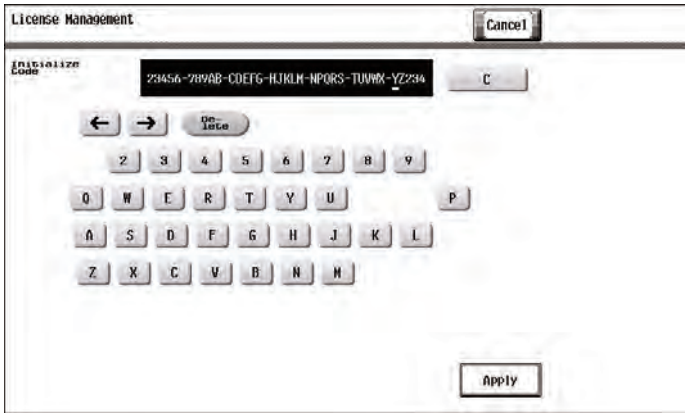
- To be used when license management information cannot be repaired.
- License management information should be initialized when the machine fails to generate request code or repair request code due to any trouble and the information cannot be repaired.

(3) Procedure

NOTE

- **You need to access License Management System (LMS) to implement each function setting.**
- When license management information cannot be repaired, initialize the information with the following procedure.

1. Contact the license management section of sales company to report the information necessary to issue the initialize code.
2. The license management section of sales company supplies the initialize code.
3. Call the Billing Setting to the screen.
4. Touch [License Management] -> [Initialize].
5. Enter the initialize code issued by call center using the keyboard on the screen, and touch [Apply].



6. After completing the initialization, follow the message appearing on the screen and turn OFF and ON the main power switch.

8.3.14 License management - Request Code

- When the license management error is occurred, it will not be displayed until the repair code is input.

(1) Functions

- To display and print request code and serial number.

(2) Use

- To check the request code and serial number.

(3) Procedure

- Set A4S or 8 1/2 x 11S paper to the tray, and press start key at request code screen to print.

8.3.15 License management - List

(1) Functions

- To display and print deactivation complete code and serial number.

(2) Use

- To display and print deactivation complete code and serial number.

(3) Procedure

- Set A4S or 8 1/2 x 11S paper to the tray, and press start key at deactivation complete code screen to print.

8.3.16 License management - Function List

(1) Functions

- To display currently activated functions.

(2) Use

- To display activated functions.

8.3.17 Manage OpenAPI Authentication

(1) Restriction Code

(a) Use

- These are communication settings for the application which is developed by the third vendor. Do not set or change these settings without vendor's instructions.

(2) Region Code

(a) Use

- These are communication settings for the application which is developed by the third vendor. Do not set or change these settings without vendor's instructions.

8.3.18 WebDAV Server Setting

(1) Select Address

(a) Use

- To select the address of the LMS server used to manage the license of i-Option.
- Used to change the LMS server address set at the time of shipment.

Fixed Address	Uses the LMS server address set at the time of shipment. The specified address cannot be changed.
Specify Address	Specifies a desired LMS server address. When selecting [Specify Address], [Server Setting] is displayed.

(b) Default setting

- Fixed Address

(c) Setting item

- Fixed Address
- Specify Address

(2) Server Setting

(a) Use

- To configure the settings on the WebDAV server that communicates with MFP when selecting [Specify Address] in [Select Address].

(b) Procedure

Host Name	Set the host name of the WebDAV server. (Up to 253 one-byte alphameric characters and symbols)
File Path	Set the file path used in the WebDAV server communication. (Up to 47 one-byte alphameric characters and symbols)
User name	Set the user name used to access the WebDAV server. (Up to 64 one-byte alphameric characters and symbols)
Password	Set the password that is used to access the WebDAV server. (Up to 64 one-byte alphameric characters and symbols)
Port Number	Set the port number that is used to access the WebDAV server. (Default: 80)

(3) Polling

(a) Use

- To set the number of times and interval at which MFP polls the WebDAV server.

(b) Procedure

Polling Count	Set the number of times that MFP polls the WebDAV server. (Default: 30 times.)
Polling Interval	Set the interval at which MFP polls the WebDAV server. (Default: 20 seconds.)

NOTE

- **When MFP accesses to WebDAV server via proxy server, set the proxy setting in [Administrator Settings] -> [Network Settings] -> [WebDAV Settings] -> [Proxy Setting for Remote Access].**

8.3.19 Coverage Counter Setting

- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.206 is set to [00000001] at Bit assignment/[01] at HEX assignment.

(1) Use

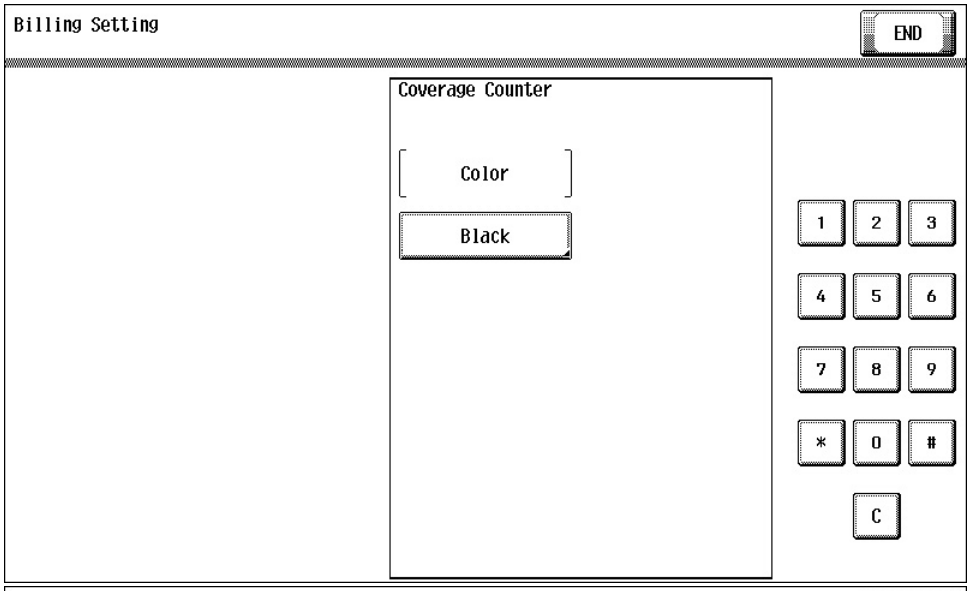
- To set the counting method according to the print paper size, the total coverage rate of each color, and the count-up coefficient.

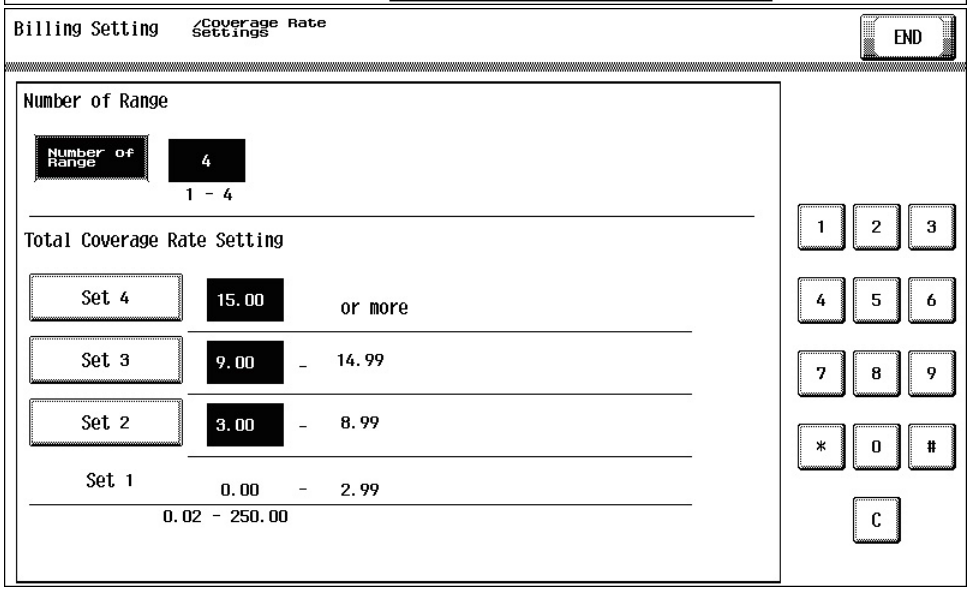
  NOTE

  - **The coverage rate refers to a ratio of the print area of each color relative to the print paper size.**

- The coverage rate and the coefficient can be set for each of the print modes and paper sizes listed in the following table.

Print mode	Paper size	Description
Black	Small Size	Set the counting method for data printed on paper having a size smaller than A4/Letter.
	A4	Set the counting method for data printed on paper having a size of A4/Letter.
	Large Size	Set the counting method for data printed on paper having a size larger than A4/Letter and equal to or smaller than A3.
	Banner	Set the counting method for data printed on paper having a size larger than A3.

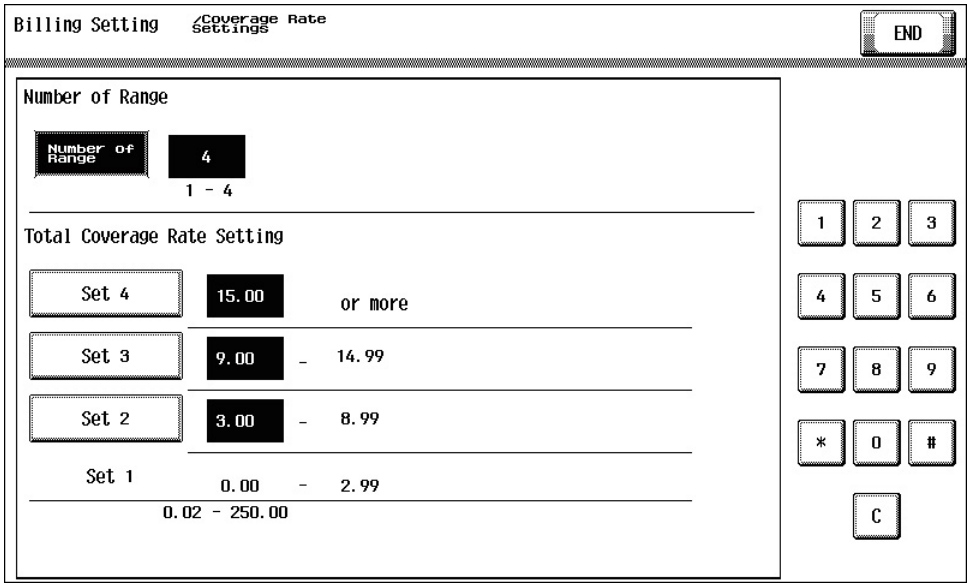




(2) Setting item (Coverage Rate Settings)

- Make settings relating to the total coverage rate.

Setting item	Description
Number of Range Settings	Set the number of ranges used for setting the total coverage rate. Default number of ranges: 4 Setting range: 1 to 4
Total Coverage Rate Setting	Set the threshold values of each of the sets of the total coverage rate. Default value: “Set 4” - 15.00 or more “Set 3” - 9.00 to 14.99 “Set 2” - 3.00 to 8.99 “Set 1” - 0.00 to 2.99 Setting range: 0.02 to 250.00 The setting values should satisfy the following relation: 0.02 ≦ setting values of set 2 < setting values of set 3 < setting values of set 4 ≦ 250.00



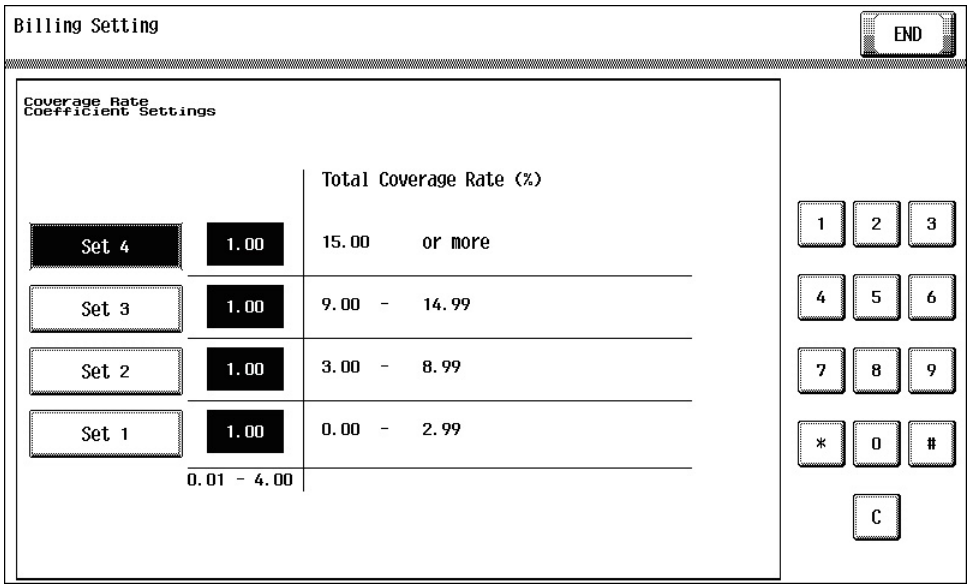
(3) Procedure (Coverage Rate Settings)

1. Touch the [Coverage Counter Setting].
2. Select the paper size.
3. Touch the [Coverage Rate Settings].
4. Enter [Number of Range] from the 10-key pad.
5. When [Number of Range] is entered, the corresponding number of sets are displayed.
6. Select a [Set] and enter the threshold values of the coverage to be set from the 10-key pad.
7. After the values are entered, touch [END].

(4) Setting item (Coverage Rate Settings)

- Set the coverage rate coefficient relative to the set made in Coverage Rate Settings.

Setting item	Description
Coverage Rate Coeff. Settings	Set the coefficient relative to the set total coverage rate set. Default value: 1.00 Setting range: 0.01 to 4.00



(5) Procedure (Coverage Rate Coeff. Settings)

1. Select the paper size.
2. Touch the [Coverage Rate Procedure Coeff. Settings].
3. Touch the [Set] set by [Coverage Rate Settings] and enter the coefficient from the 10-key pad.
4. After the coefficient has been entered, touch [END].

8.3.20 Print Counter Clear

- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.206 is set to [00000001] at Bit assignment/[01] at HEX assignment.

(1) Use

- To clear Print Counter and Subtotal values of Coverage Counter Detail.
- Clear Subtotal value in [Meter Count] -> [Coverage Counter].

(2) Procedure

- Select [Set] and touch [END].

(3) Default setting

- Unset

(4) Setting item

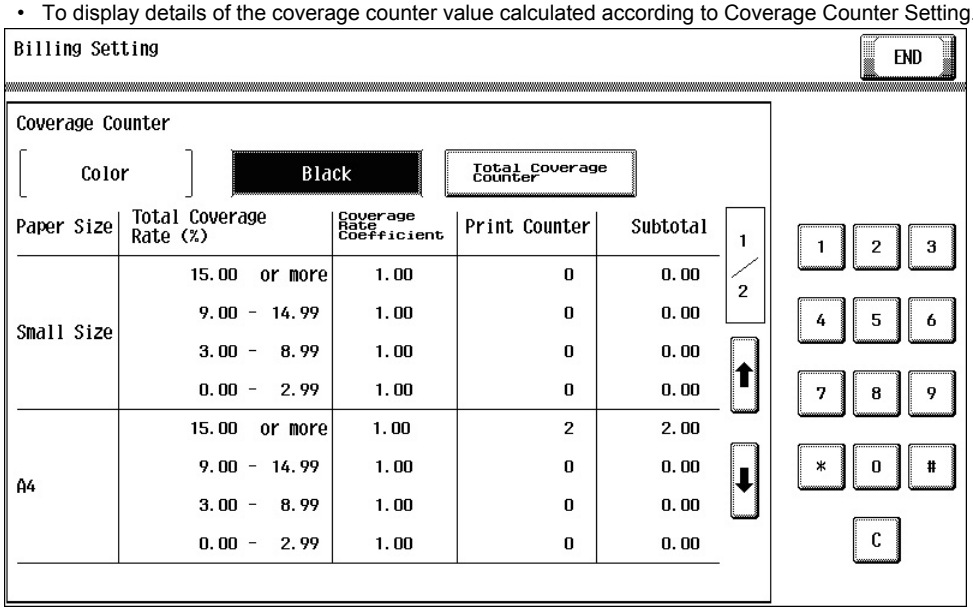
- Set
- Unset

8.3.21 Coverage Counter Detail

- It will be displayed when [Service Mode] -> [System 2] -> [Software Switch Setting] shows that switch No.206 is set to [00000001] at Bit assignment/[01] at HEX assignment.

(1) Use

- To display details of the coverage counter value calculated according to Coverage Counter Setting.



Indication	Description
Black	Displays the count value of monochrome printing.
Total Coverage Counter	Displays the total count. Displays the cumulative value of the coverage counter since the installation of the machine.
Total Coverage Rate (%) *1	Displays the set of the total coverage rate that serves as a basis for counting.
Coverage Rate Coefficient *1	Displays the coverage rate coefficient set for each set that serves as the basis for countering.
Print Counter	Displays the count value of the number of printed pages on which the print paper size satisfies the counting base.
Subtotal	Displays the counter value obtained through the following calculation involving the print counter and the coverage rate coefficient: Subtotal = print counter × coverage rate coefficient

- *1: What is displayed complies with the setting made in [Service Mode] -> [Billing Setting] -> [Coverage Counter Setting] .

NOTE

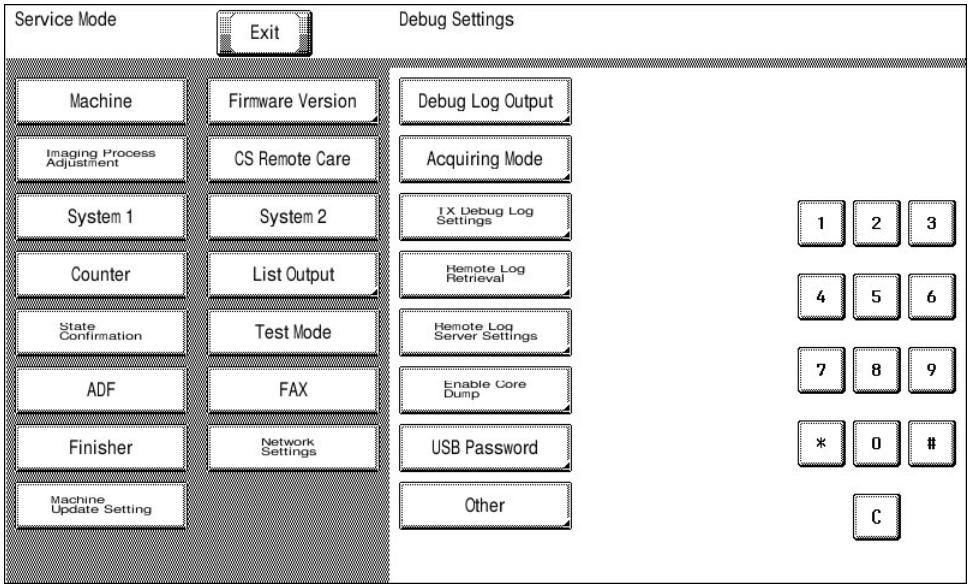
- **The total coverage counter has been activated upon the installation of the machine regardless of whether it is displayed on the screen. Thus, the counter default value during screen display setting is not necessarily "0".**
- **The total coverage counter value is the cumulative value since the installation of the machine, while the print counter value is the cumulative value since the last performance of print counter clear. Thus, the sum of the subtotal values does not necessarily coincide with the total coverage counter value.**

9. DEBUG SETTINGS

Debug Settings

- To configure the settings on log information acquisition performed to analyze the MFP controller's internal operation.

9.1 List of debug settings



Debug Settings		Ref. page
Debug Log Output		I.9.3.1 Debug Log Output
Acquiring Mode		I.9.3.2 Acquiring Mode
TX Debug Log Settings		I.9.3.3 TX Debug Log Settings
Remote Log Retrieval*	Remote Log settings	I.9.3.4.(1) Remote Log settings
	Time Setting	I.9.3.4.(2) Time Setting
	Polling	I.9.3.4.(3) Polling
	Retrieve Log Information	I.9.3.4.(4) Retrieve Log Information
Remote Log Server Settings		I.9.3.5 Remote Log Server Settings
Enable Core Dump		I.9.3.6 Enable Core Dump
USB Password		I.9.3.7 USB Password
Other		I.9.3.8 Other

- This is displayed only when [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] is set to “Allow.”

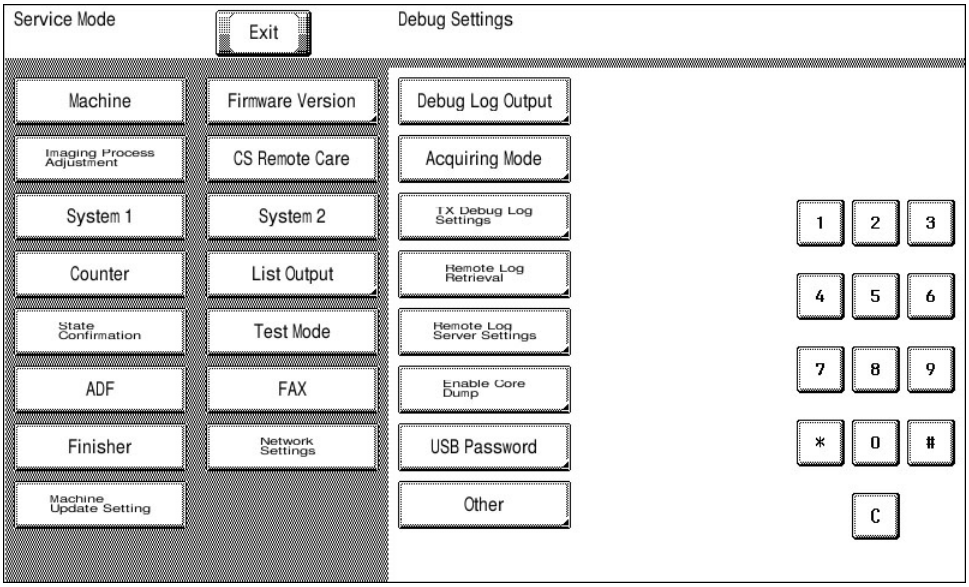
9.2 Starting/Exiting

9.2.1 Starting procedure

NOTE

- **Before the procedure, set the switch No. 155 to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].**

1. Call the Service Mode to the screen.
2. Press the following keys in this order.
   - Stop -> 6 -> 1 -> 8
3. Select a mode.



9.2.2 Exiting procedure

1. Touch [Exit] on the Service Mode screen.
2. Turn OFF the main power switch. Wait 10 seconds, then turn ON the main power switch again.

9.3 Debug Settings

9.3.1 Debug Log Output

(1) Use

- To select debug log data to be output and save it in a USB memory.

All	Outputs available all logs.
Select File	Specifies a desired file and outputs it. Capable of narrowing file types from [Normal], [Trouble], or [Print Data].
Select Time	Specifies a desired period and outputs corresponding data.
Shared Memory -> HDD	• Manually stores debug information written in the memory into the HDD. • After selecting [Save], saving is started by pressing the Start key.
HDD -> USB Memory	• Outputs debug information stored in the HDD into a USB flash drive. • After selecting [Output], saving is started by pressing the Start key.

Logs obtained under normal operation and logs obtained upon occurrence of trouble are separated and stored in different areas. Up to 20 logs can be stored.

- Logs obtained under normal operation: 10 logs
- Logs obtained upon occurrence of trouble: 10 logs

When the number of saved logs reaches the upper limit, files are overwritten starting from the oldest file.

(2) Setting item

- All
- Select File
- Select Time
- Shared Memory -> HDD
- HDD -> USB Memory

NOTE

- **If a USB memory is not connected to the USB port of MFP or [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] is set to [Restrict], output is unavailable.**

9.3.2 Acquiring Mode

(1) Use

- To select mode used to acquire debug logs.
- If the cause of a problem cannot be identified by the debug logs acquired in basic mode, obtain more detailed debug logs in Enhance mode and analyze them.

Basic	Normal mode Stores debug information saved in the memory into the HDD.
Enhance	Mode that enables you to obtain more detailed debug information than Basic mode. When a large amount of detailed information must be output, the CPU or other devices is heavily loaded and the performance of MFP is affected.

(2) Default setting

- Basic

(3) Setting item

- Basic
- Enhance

(4) Enhance mode

- When "Enhance" is selected, configure the following items.

(a) Network Packet

- If network packet information is necessary, select "ON."

(b) Acquisition function

- Select the functions to be covered when obtaining debug logs.
  Select All, Copy, Printer, Box, Net/Scan, PSWC, FAX, Net Fax, and Authentication
- This item will not be displayed when [Network Packet] is set to ”ON.”

(c) Network Packet Capture

- If [Network Packet] is set to "ON," configure [Capture Filter Settings] and [Capture Settings].
- This item will not be displayed when [Network Packet] is set to "OFF."

(d) By Job

- Set the number of jobs handled as a unit (the number of jobs by which debug information is acquired).

(e) Individual Command

- Register and execute individual debug commands.

(f) Command Set

- Install a command set and execute it.

(5) Timing of Saving Debug Information in Each Mode

(a) Basic mode

Debug information is stored in the HDD at the timings described below.

- When trouble occurs
- When there is no job
- During transition to energy save mode (sleep mode or low power mode)
- When authentication fails
- When [Debug Log Output] -> [Shared Memory -> HDD] is performed manually

(b) Enhance mode

- Save debug information to the USB memory or HDD as needed.

9.3.3 TX Debug Log Settings

- To configure settings used to send debug information via the network.
- To send the information via the network, SMB, FTP, or WebDAV transmission is selectable.
- This item will be displayed only when [Acquiring Mode] is set to “Basic.”

(1) Select TX Method

(a) Use

- To select a method used to send via the network.

(b) Default setting

- OFF

(c) Setting item

- OFF
- SMB
- FTP
- WebDAV

(2) SMB Setting

(a) Use

- To configure settings used in SMB transmission.

(b) Procedure

Host Name	Set the host name for the SMB server.
File Path	Set the file path used for SMB server communication.
User Name	Set the user name used to access the SMB server.

Password	Set the password used to access the SMB server.

(3) FTP Settings

(a) Use

- To configure settings used in FTP transmission.

(b) Procedure

Host Name	Set the host name of the FTP server.
File Path	Set the file path used in the FTP server communication.
User Name	Set the user name used to access the FTP server.
Password	Set the password used to access the FTP server.
Port Number	Set the port number that is used to access the FTP server.
PASV	Set PASV mode to ON or OFF
Proxy	Set whether or not to connect to a proxy server.

(4) WebDAV Setting

(a) Use

- To configure settings used in WebDAV transmission.

(b) Procedure

Host Name	Set the host name of the WebDAV server.
File Path	Set the file path used in the WebDAV server communication.
User Name	Set the user name used to access the WebDAV server.
Password	Set the password that is used to access the WebDAV server.
Port Number	Set the password that is used to access the WebDAV server.
Proxy	Set whether or not to connect to a proxy server.
SSL Settings	Select to use SSL communication.

9.3.4 Remote Log Retrieval

(1) Remote Log settings

(a) Use

- Use the WebDAV server to retrieve remote access logs.
- Downloads the command set from the server configured from [Remote Log Server Settings] -> [Command Set Acquisition pt.] at the timing configured from [Time Setting] and [Polling].
- If the command set successfully downloads, logs and settings data is retrieved in accordance with the command set, and the log files and settings data files are saved on the server configured from [Remote Log Server Settings] -> [Log Save Destination].

(b) Default Setting

- ON

(c) Setting item

- ON
- OFF

(2) Time Setting

(a) Use

- Downloads the command set at the specified time and retrieves/saves the logs and settings data.

(b) Default Setting

- ON

(c) Setting item

- ON
- OFF

(3) Polling

(a) Use

- Downloads the command set at each specified time and retrieves/saves the logs and settings data.

(b) Default Setting

- ON

(c) Setting item

- ON
- OFF

(4) Retrieve Log Information

(a) Use

- Immediately downloads the command set and retrieves/saves the logs and settings data.

9.3.5 Remote Log Server Settings

(1) Command Set Acquisition pt.

(a) Use

- Configures the server from which command sets as used for [Remote Log Retrieval] are retrieved.
- Touch [Copy Setting] after settings parameters are selected to copy the settings to the destination as configured from [Log Save Destination].

(2) Log Save Destination

(a) Use

- Configures the server for storing files used for [Remote Log Retrieval].
- Touch [Copy Setting] after settings parameters are selected to copy the settings to the destination as configured from [Command Set Acquisition pt.].

9.3.6 Enable Core Dump

(1) Use

- To set whether to acquire a log of Core Dump.

(2) Default setting

- Disable

(3) Setting item

- Enable (Select [USB Memory] or [Remote Log Server].)
- Disable

NOTE

- **When [Enable] is selected, select a saving location and press [Fix].**
- **When [Remote Log Server] is selected, be sure to complete setting of [Log Save Destination] in [Remote Log Server Settings].**

9.3.7 USB Password

(1) Use

- To set a password used to store debug information into a USB flash drive.
- CE informs the KM contact person of this password and the debug information data separately.

NOTE

- **NEVER forget the USB password.**

(2) Default setting

- 01234567890123456789

(3) Procedure

- Enter an USB password from the keyboard on the screen.
  1. Current Password: Enter the USB password currently in use.
  2. New Password: Enter a new USB password.
  3. Re-input Password: Re-enter the new USB password.

9.3.8 Other

(1) Screen Capture

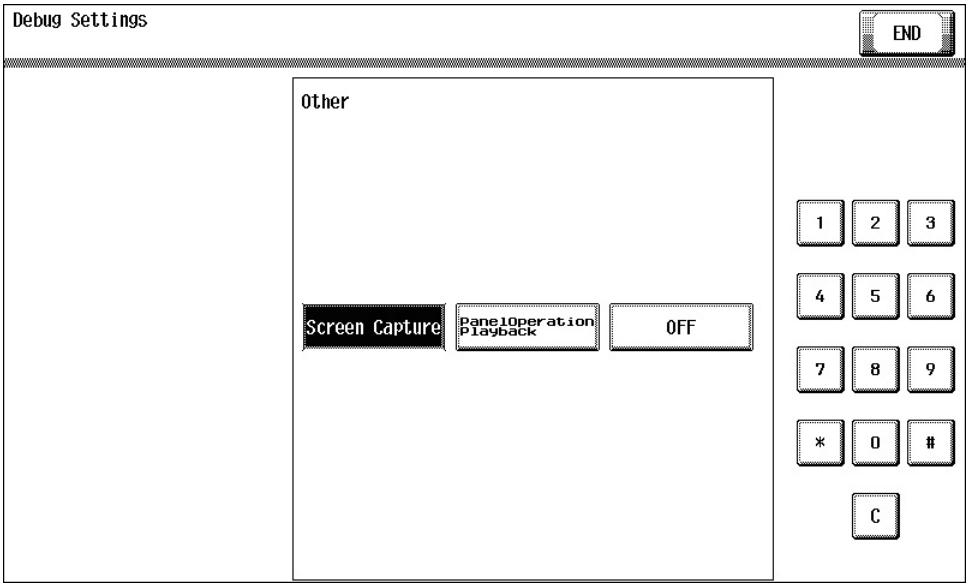
- The screen displayed on the control panel can be captured and saved in a USB memory as a file.

(a) Preparations

NOTE

- **Use a USB memory having no security functions.**

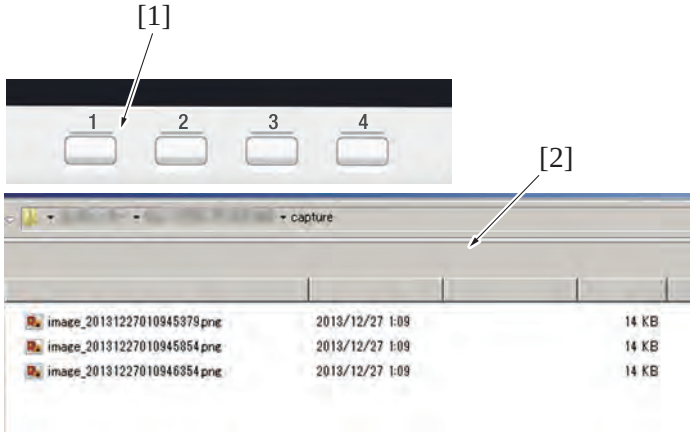
1. Touch [Other].
2. Touch [Screen Capture] and then [OK].



3. Insert the USB memory.

(b) Procedure

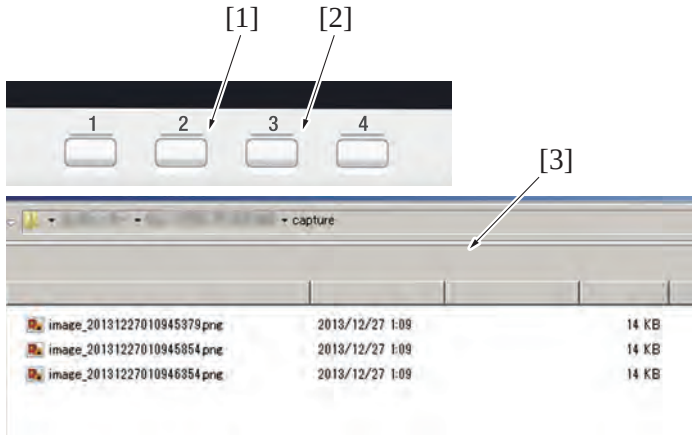
1. Call the screen to be captured to the control panel.
2. Touch [1] on the control panel. This saves the screen in memory.
   A "Capture" folder is automatically created and a file in the PNG format is saved in the folder.



[1]	[1] key	[2]	In USB memory

(c) Continuous capturing procedure

1. Call the screen to be captured to the control panel.
2. Touch [2] on the control panel.
3. Start the screen operations.
4. When the operations are completed, touch [10 keypad].
5. A "Capture" folder is automatically created and a file in the PNG format is saved in the folder.



[1]	[2] key	[2]	[10 keypad] key

[3]	In USB memory	- -

(2) Panel Operation Playback

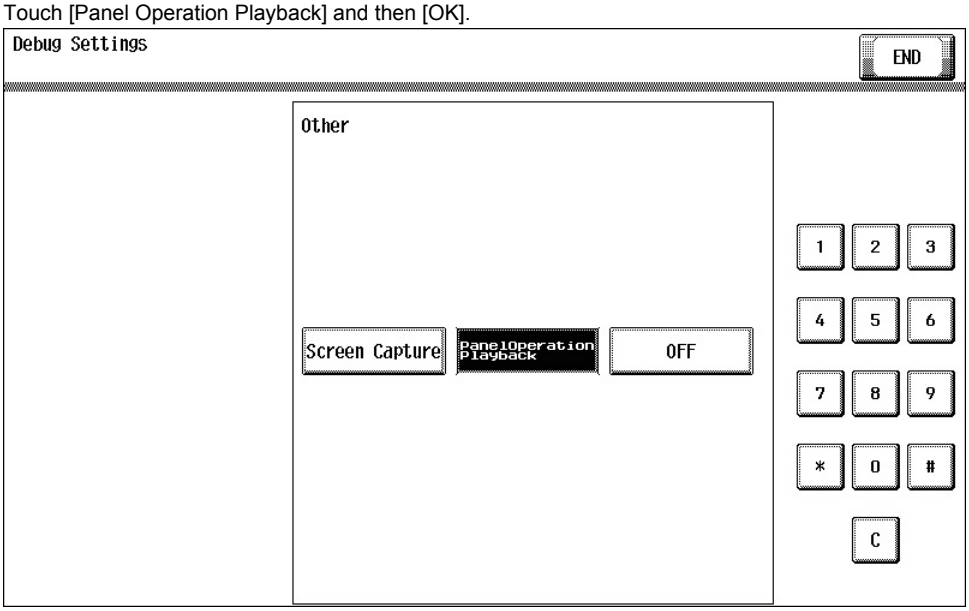
- A series of operations is stored in memory and automatically played back on the control panel.

NOTE

- **To perform the playback, be sure to go back to the first screen with which the capturing was started. A playback operation starting with any screen not stored in memory results in faulty playback.**

(a) Preparations

1. Touch [Other].
2. Touch [Panel Operation Playback] and then [OK].



(b) Procedure

1. Call the auto playback starting screen to the control panel.
2. Touch [1].
3. Start the screen operations to store a series of screens.
4. When the operations are completed, touch [2].
5. Go back to the first screen and touch [10 keypad].

9.4 Operation of the debug log function

9.4.1 Basic mode

(1) Intended purpose

- To retrieve the program sequence logs from the MFP; for analyzing field problems caused by MFP controller program malfunction which could be difficult to reproduce in KM.

NOTE

- **CE should get permission from CUSTOMER before retrieving the program sequence logs from the customer's MFP.**
- **A Key generate utility is required for creation of a key file.**
- **For how to obtain or how to use the Key generate utility, please conduct the KM support department.**

(2) Outline

1. Save the key file in the USB memory by using the Key generate utility on the PC.
2. Set the Debug Settings to “ON” in the Service Mode.
3. Sets an encryption word.
4. Try to reproduce the problem/malfunction on the MFP.
5. The problem/malfunction is reproduced.
6. Set the debug log acquisition to "Allow" in Administrator Settings.
7. Select the debug log(s) that corresponds to the problem. Select "USB Memory" as the output destination and acquire the log(s).
8. Send the log(s) and the USB password to the department of KM from which you receive instructions.

NOTE

- **Up to a total of 20 log files can be saved, including ten during normal operations and another ten when errors occur.**
- **When the number of log files saved exceeds the upper limit, the log files are overwritten in chronological order.**
- **Each log file is concerned with a single job.**
- **Priority is given to job processing. A log file may not therefore be saved if jobs are performed continuously or if power is turned OFF immediately after processing of a job has been completed.**

(3) Details of the procedure

(a) Advance preparation

- Save a key file into a USB memory.
  1. Set the USB Password on the Key generation utility.
  2. Generate the Key file by typing in the Serial number (capital letter) of the target MFP.

3. Copy the created "Debug Log" folder into the root directory of the USB memory.

- Make sure that [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to OFF.

(b) Settings for acquiring logs

1. Get permission from the CUSTOMER to retrieve the program sequence logs from the MFP at the customer's site.
   NOTE
   - **Logs include the MFP control program sequences only. They do not include the copy/scan/print/fax image data.**
2. Set the switch No.155 to [00000001] at Bit assignment/[01] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
3. Call the Debug Settings in Service Mode.
4. Select [Basic] in [Debug Settings] -> [Acquiring Mode].
5. Ask the administrator of the MFP to set a debug log encryption pass phrase in [Administrator Settings] -> [Security Settings] -> [HDD Settings] -> [Debug Log Encryption Settings]. (Default: 01234567890123456789)
   NOTE
   - **This setting is used to encrypt debug logs to be stored in the HDD.**
   - **Be sure to set the encryption password. Failure to set the encryption password may hamper correct analysis of the log.**
6. Try to reproduce the problem/malfunction on the MFP.
7. The problem/malfunction is reproduced.
8. Ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
9. Call the Debug Settings in Service Mode.
10. Set the USB password in [Debug Settings] -> [USB Password].
    NOTE
    - **The USB password set here must be same as the password set in the USB memory in advance preparation procedure.**
11. Display [Debug Settings] -> [Debug Log Output] on the screen.
12. Connect the USB memory prepared in advance preparation to the USB port located on the right-side of the MFP control panel.
13. Touch [Select File]. Select the intended file and touch [Output] in [HDD -> USB Memory].
14. Check that the Start key lights up in blue, and press the Start key.
    NOTE
    - **If the Start key lights up orange, the USB password and/or MFP serial number on for the MFP do not match the key file.**
15. [OK] will be displayed.
16. Touch [OK], and exit the Debug Settings.
17. Return the switch No. 155 to [00000000] at Bit assignment/[00] at HEX assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
18. Exit the Service Mode.
19. Remove the USB memory from the MFP and check that the USB memory contains the file of which name is "LOGSYS_xxxxxxxxxxx.log".
20. Send KM your request of analyzing the problem with the log file.
    NOTE
    - **Send the USB password and log file(s) to the recipient of your request SEPARATELY.**

9.4.2 Enhance mode

(1) Intended purpose

- To retrieve the program sequence logs from the MFP; for analyzing field problems caused by MFP controller program malfunction which could be difficult to reproduce in KM.

NOTE
- **CE should get permission from CUSTOMER before retrieving the program sequence logs from the customer's MFP.**
- **Please explain to the CUSTOMER that the MFP performance will be down during the procedure. The top priority of the MFP is to save the logs completely before starting the next job process; so the CUSTOMER will see a pause between jobs.**

(2) Outline

1. Save the key file in the USB memory by using the Key generate utility on the PC.
2. Set the Debug Settings to “ON” in the Service Mode.
3. Sets an encryption word.
4. Select the target device (USB memory or HDD) to save the log files.
   - When selecting USB memory as target, ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
   - Connect the USB memory into the USB port on the right-rear side of the MFP.
5. Try to reproduce the problem/malfunction on the MFP.
6. The problem/malfunction is reproduced.
7. Remove the USB memory if you select USB memory as a target device.
8. When selecting HDD as target, ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
   - Select the debug log(s) that corresponds to the problem, and select "USB Memory" as the output destination and acquire the log(s).
9. Send the log(s) and the USB password to the department of KM from which you receive instructions SEPARATELY.

(3) Details of the procedure

(a) Advance preparation

- Save a key file into a USB memory.
  1. Set the USB Password on the Key generation utility.
  2. Generate the Key file by typing in the Serial number (capital letter) of the target MFP.

3. Copy the created "Debug Log" folder into the root directory of the USB memory.

- Make sure that [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to OFF.

(b) Settings for acquiring logs (When selecting USB memory as a target device)

1. Get permission from the CUSTOMER to retrieve the program sequence logs from the MFP at the customer's site.
   NOTE
   - **They do not include the copy/scan/print/fax image data unless selecting printer. Logs include the MFP control program sequences only.**
   - **The top priority of the MFP is to save the logs completely before starting the next job process; so the CUSTOMER will see a pause between jobs. Please explain to the CUSTOMER that the MFP performance will be down during the procedure.**
2. Set the switch number "155" to "01" in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
3. Call the Debug Settings in Service Mode.
4. Select [Enhance] in [Debug Settings] -> [Acquiring Mode].
5. Select the target logs.
   NOTE
   - **DO NOT TOUCH the command settings (Individual Command and Command Set) without KM instructions.**
6. Set the USB password in [Debug Settings] -> [USB Password].
   NOTE
   - **The USB password set here must be same as the password set in the USB memory in advance preparation procedure.**
7. Exit the Service Mode.
8. Ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
9. Connect the USB memory into the USB port on the right-rear side of the MFP.
10. Try to reproduce the problem/malfunction on the MFP.
    Cautions when saving log files each time the problem/malfunction is reproduced
    - **Saved Logs will not be overwritten. USB memory should have enough capacity to save the all logs.**
    - **Debug log function will stop if USB memory is FULL.**
    - **While saving the log data, a specific ICON will appear on the control panel. DO NOT REMOVE the USB memory when the ICON is displayed.**
11. The problem/malfunction is reproduced.
12. Return the switch number "155" in HEX Assignment to "00" in [Service Mode] -> [System 2] -> [Software Switch Setting].
13. Exit the Service Mode.
14. Remove the USB memory from the MFP and check that the USB memory contains the file of which name is "LOGSYS_xxxxxxxxxxx.log".
15. Send KM your request of analyzing the problem with the log file.
    NOTE
    - **Send the USB password and log file(s) to the recipient of your request SEPARATELY.**

(c) Settings for acquiring logs (When selecting HDD as a target device)

1. Get permission from the CUSTOMER to retrieve the program sequence logs from the MFP at the customer's site.
   NOTE
   - **They do not include the copy/scan/print/fax image data unless selecting printer. Logs include the MFP control program sequences only.**
   - **The top priority of the MFP is to save the logs completely before starting the next job process; so the CUSTOMER will see a pause between jobs. Please explain to the CUSTOMER that the MFP performance will be down during the procedure.**
2. Set the switch number "155" to "01" in HEX Assignment in [Service Mode] -> [System 2] -> [Software Switch Setting].
3. Call the Debug Settings in Service Mode.
4. Select [Enhance] in [Debug Settings] -> [Acquiring Mode].
5. Select the target logs.
   NOTE
   - **DO NOT TOUCH the command settings (Individual Command and Command Set) without KM instructions.**
6. Set the USB password in [Debug Settings] -> [USB Password].
   NOTE
   - **The USB password set here must be same as the password set in the USB memory in advance preparation procedure.**
7. Exit the Service Mode.
8. Ask the administrator of the MFP to set a debug log encryption pass phrase in [Administrator Settings] -> [Security Settings] -> [HDD Settings] -> [Debug Log Encryption Settings]. (Default: 01234567890123456789)
   NOTE
   - **This setting is used to encrypt debug logs to be stored in the HDD.**
   - **Be sure to set the encryption password. Failure to set the encryption password may hamper correct analysis of the log.**
9. Try to reproduce the problem/malfunction on the MFP.
10. The problem/malfunction is reproduced.
11. Ask the administrator of the MFP to set [Administrator Settings] -> [Security Settings] -> [Security Details] -> [Export Debug Log] to [Allow].
12. Call [Debug Settings] -> [Debug Log Output] to the screen.
13. Connect the USB memory prepared in advance preparation to the USB port located on the right-side of the MFP control panel.
14. Touch [Select File]. Select the intended file and touch [Output] in [HDD -> USB Memory].
15. Check that the Start key lights up in blue, and press the Start key.

NOTE
- **If the Start key lights up orange, the USB password and/or MFP serial number on for the MFP do not match the key file.**

16. [OK] will be displayed.
17. Touch [OK], and exit the Debug Settings.
18. Return the switch number "155" in HEX Assignment to "00" in [Service Mode] -> [System 2] -> [Software Switch Setting].
19. Exit the Service Mode.
20. Remove the USB memory from the MFP and check that the USB memory contains the file of which name is "LOGSYS_xxxxxxxxxx.log".
21. Send KM your request of analyzing the problem with the log file.

NOTE
- **Send the USB password and log file(s) to the recipient of your request SEPARATELY.**

10. CONTENTS TO BE CLEARED BY RESET FUNCTION

Function for clearing / Contents to be cleared		Front door open/ close	Main power switch OFF/ON	Trouble reset	Initialize							
							Clear Individual Data					
					System Error Clear	Clear All Data	Copy Program Data	Address Registration Data	Fax Setting Data	All History Data	Network Setting Data	Server Cache Data
Jam display		○	-	-	○	○	-	-	-	-	-	-
Malfunction display	Rank A	-	-	○	○	○	-	-	-	-	-	-
	Rank B	○	-	○	○	○	-	-	-	-	-	-
	Rank C	-	○	○	○	○	-	-	-	-	-	-
Erratic operation / display		-	○	-	○	○	-	-	-	-	-	-
Utility Mode (Except items on engine adjustment)		-	-	-	-	○	-	-	-	-	-	-
Job memory setting data		-	-	-	-	○	○	-	-	-	-	-
Address registration data		-	-	-	-	○	-	○	-	-	-	-
Fax setting data (Excluding destination related data)		-	-	-	-	○	-	-	○	-	-	-
History data (Job history, Journal history, Receive reject history, Destination history, Job secure counter)		-	-	-	-	○	-	-	-	○	-	-
Network setting data (Excluding destination related data)		-	-	-	-	○	-	-	-	-	○	-
Cache data of external authentication server		-	-	-	-	○	-	-	-	-	-	○
Service Mode (System 1/2)		-	-	-	-	△*1	-	-	-	-	-	-
Billing Setting	Management Function Choice	-	-	-	-	○	-	-	-	-	-	-
Adjustment of the touch panel position		-	-	-	-	○	-	-	-	-	-	-
Trouble auto release retry count		-	-	-	○	○	-	-	-	-	-	-

○: Will be cleared (initialized)
- : Will not be cleared

△ *1: Items to be cleared	
System 1	Marketing Area (Fax Target only)
System 2	HDD

11. MECHANICAL ADJUSTMENT bizhub 958/808/758, bizhub PRO 958

11.1 Scanner section

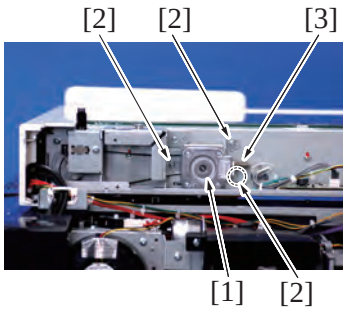
11.1.1 Adjustment of the scanner motor belt

(1) Purpose

This adjustment must be made in the following case:

- The scanner motor assy has been removed.

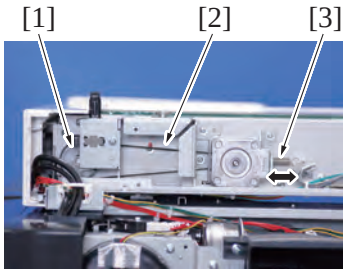
(2) Procedure



1. Attach the spring [3] to the scanner motor assy [1].
2. Temporarily secure the scanner motor assy [1] with three screws [2].

NOTE

- **The screws [2] should be temporarily tightened to a degree that the position of the motor can be adjusted by the spring force.**

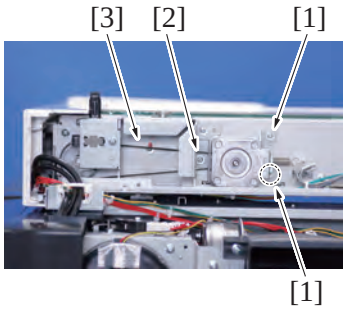


3. Attach the drive belt [2] to the pulley [1] and make sure that there is no bending or too much tension.

NOTE

- **Make sure that the drive belt [2] is properly kept tight by the spring [3] force.**
- **If the deflection or tension of the drive belt [2] is excessive, the scanner unit does not work correctly. This may result in trouble.**

4. Rotate the pulley and make sure that the belt is not obstructing the pulley teeth.



5. Tighten two screws [1] of the scanner motor assy.
6. Tighten the screw [2] of the scanner motor assy to fix it in place.

NOTE

- **After securing the scanner motor assy, check again that the deflection and tension of the drive belt [3] are not excessive.**

11.1.2 Skew Adj.

(1) Purpose

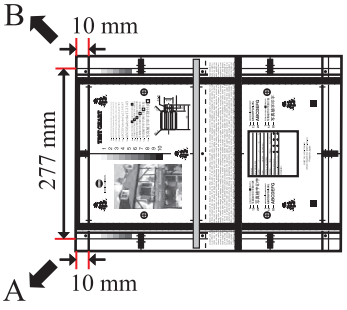
This adjustment must be made in the following case:

- Image skew occurs at copy or scan.

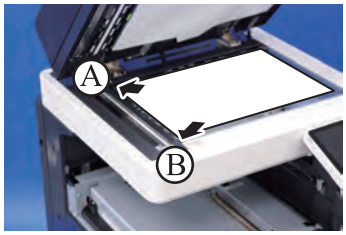
NOTE

- **Make a test print and check that no image skew occurs.**
- **If print image skew occur, make adjustment in [Service Mode] -> [Machine] -> [Printer Area].**
- **After making the scanner skew adjustment, check [Service Mode] -> [Machine] -> [Scan Area].**

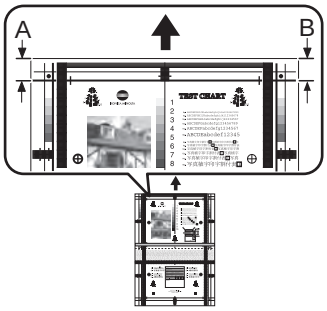
(2) Procedure



1. Prepare a chart which you can use to check for tilting.



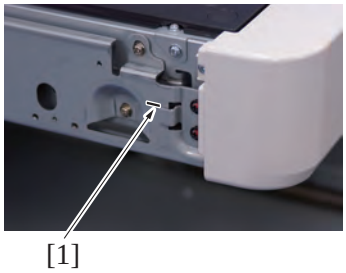
2. Set the test chart on the original glass.
   NOTE
   - **Fit the corner of the test chart to that of the original scale and be sure that the margin between the test chart and the original scale is within 0.3 mm.**
3. Close the original cover slowly.
4. Press the Start key to make a copy.



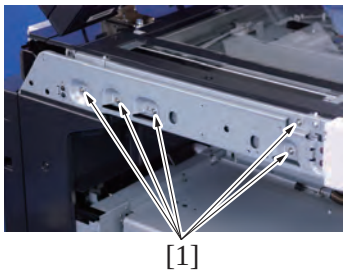
5. Check the image skew with the output copy.
6. Make the following adjustments when the amount of image skew (difference of width A and width B) is not within the standard range (± 1.4 mm).

(3) Adjustment procedure

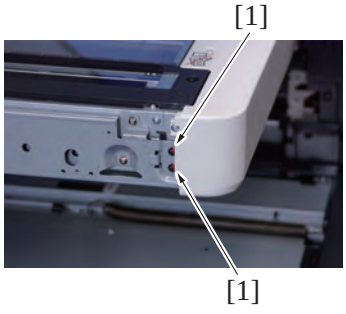
1. Remove the scanner left cover.
   G.5.2.19 Scanner left cover



2. Take note of the initial value [1] before starting the adjustments.

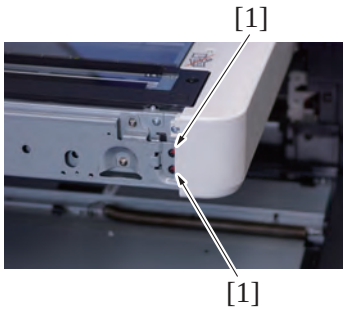


3. Loosen five screws [1].

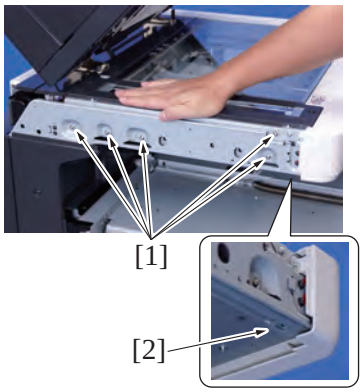


4. Loosen two screws [1] and adjust the scanner tilt.
   - Work out the difference by subtracting width B from width A, and then make two times of the difference as the scanner movement amount.

When the difference is a plus value	Ex.) When the difference is + 2, the scanner moves 4 mm (4 graduations) upward.
When the difference is a minus value	Ex.) When the difference is - 2, the scanner moves 4 mm (4 graduations) downward.



5. Tighten two screws [1].



6. Tighten five screws [1] while pushing down the scanner.
NOTE
- **Tighten the screws with the bottom of the scanner touching the metal plate [2].**
- **When pushing the scanner, pay attention not to bend the supporter. (Tightening screws with the supporter being bent will result in an image skew when releasing your hands from the scanner.)**

11.2 Paper feed section

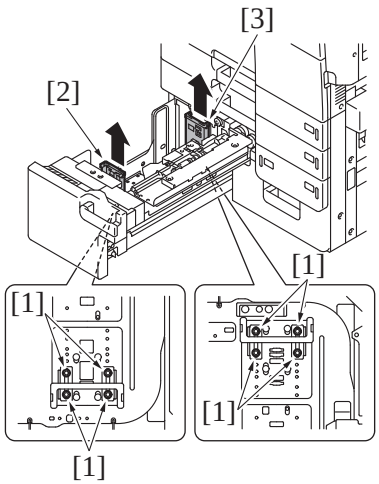
11.2.1 Tray3/4 paper size change

(1) Purpose

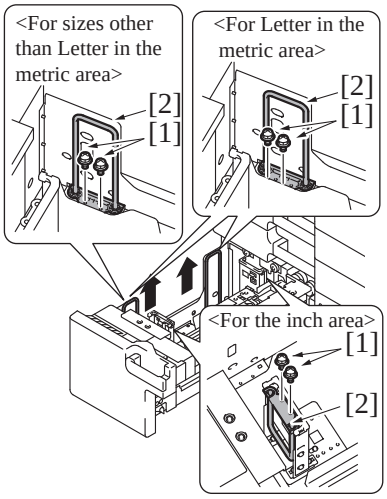
This adjustment must be made in the following case:
- The user wants to change the size of paper being fed from tray 3/4.

(2) Procedure

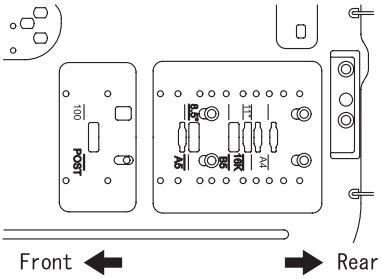
1. Pull out the tray where this adjustment is made.



2. Remove four screws [1] and remove the paper guide plates (front [2] / rear [3]).



3. Remove two screws [1] and remove the end guide plate [2].

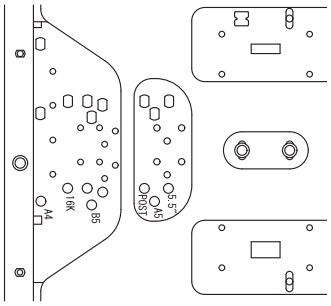


4. Secure the paper guide plate (rear) using four screws according to the marks on the bottom plate.
   When setting the paper size to B5/8.5/16K:
   - Insert the paper guide plate (rear) into the hole to secure it along the back side.

   When setting the paper size to A5/Postcard:
   - Insert the paper guide plate (rear) into the hole to secure it along the front side.

5. Place paper with the set paper size and set the paper guide plate (front) along the paper.
   NOTE
   - **Gap between the paper and the paper guide plate (front): 0 < up to 1 mm**

6. Secure the front side of the paper guide plate (front) with two screws. Take out the paper and attach two screws on the back side.



7. Secure the end guide plate according to the marks on the bottom plate.

8. From [Service Mode] -> [System Settings 2] -> [LCT (built-in) Size Setting], select the tray in which the paper size will be changed and change the paper size.
9. Perform a print test.

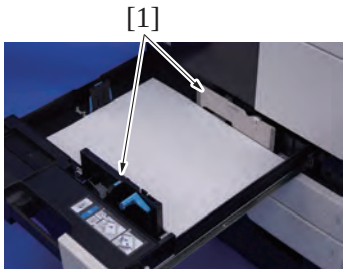
11.2.2 Skew adjustment of the tray 1/2

(1) Purpose

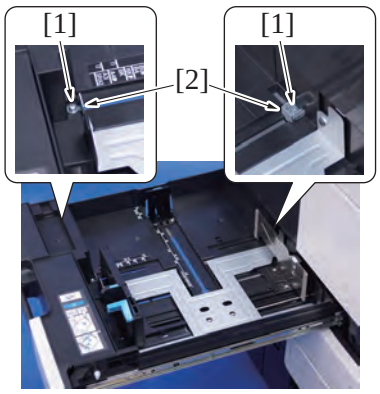
This adjustment must be made in the following case:
- When the user wants to reduce the paper skew in the corresponding tray within the specification that cannot be corrected by registration loop adjustment.

(2) Procedure

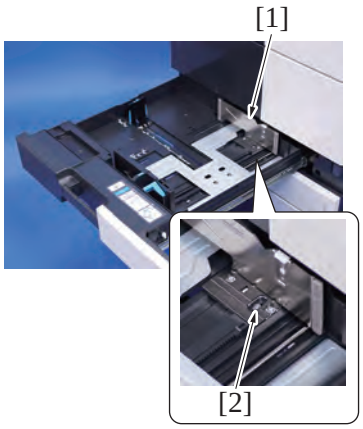
1. Pull out the tray where this adjustment is made.



2. Load the tray with paper.
3. Move the paper guide [1] up to the position where there cannot gaps in the paper.



4. Remove the loaded paper and loosen two screws [1].
5. Move the stopper [2] to the desired position where you want to fix the paper guide and secure it using each screw [1].



6. Secure the paper guide [1] to the tray using a screw [2] (M3 × 8 mm: V121 0308 04)

11.2.3 Centering adjustment of the tray 1/2

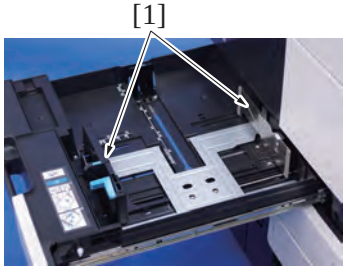
(1) Purpose

This adjustment must be made in the following case:

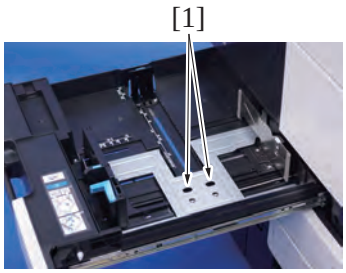
- When an image printed on a copy is displaced from the correct position with the use of the tray1/2.

(2) Procedure

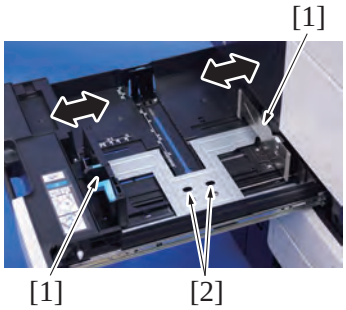
1. Make a test print and check the amount of misalignment.
2. Pull out the tray where this adjustment is made.



3. Stretch the paper guides [1] to the maximum size position.



4. Loosen two screws [1].



5. Move the paper guides [1] complete according to the amount of the mis-centering you checked in step 1 and adjust the center position of it.
6. Tighten two screws [2].

7. Make another test print and check the amount of misalignment.

11.2.4 Pick-up pressure adjustment of the tray 1/2

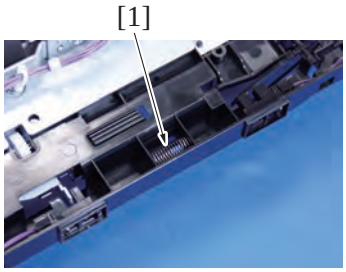
(1) Purpose

This adjustment must be made in the following case:

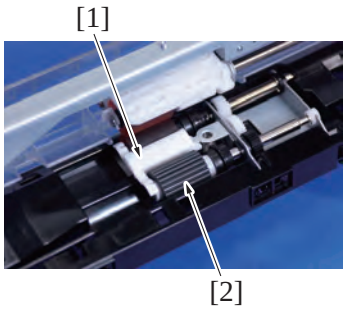
- When a paper jam occurs while thin paper (52-59 g/m^2) is fed.

(2) Procedure

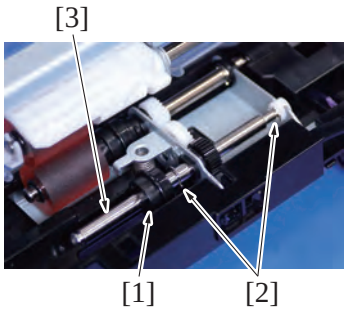
1. Remove the rear right cover/2.
   G.5.2.25 Rear right cover/2
2. Remove the tray 2 paper feed unit.
   G.5.3.5 Tray 2 paper feed unit



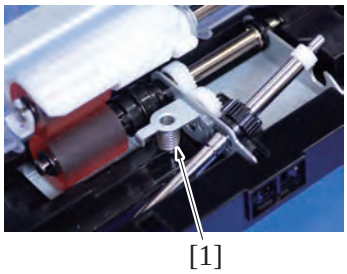
3. Remove the replacement spring [1] stored in the tray 2 paper feed unit.



4. Remove the paper guide [1].
5. Remove the tray 2 pick-up roller [2].



6. Remove the torque limiter [1] and two E-rings [2], then remove the pick-up roller shaft [3].



7. Remove the spring [1] and replace it with the replacement spring prepared in step 2.
NOTE
- **The pick-up pressure of the tray 1 can be adjusted by replacing the spring of the tray 1 paper feed unit with the replacement spring prepared in step 3.**

8. Reinstall the above parts following the removal steps in reverse.
9. Make a test print to check whether paper is fed properly.

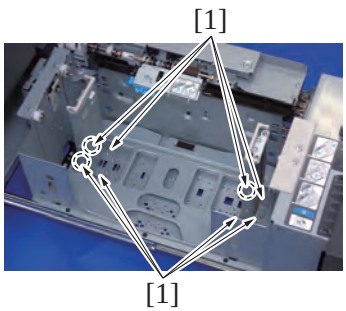
11.2.5 Centering adjustment of the tray 3/4

(1) Purpose

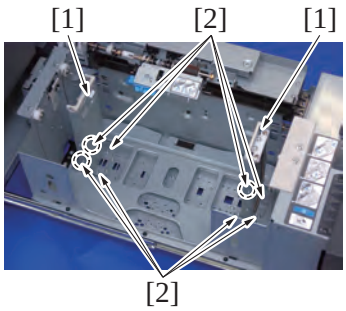
This adjustment must be made in the following case:
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

(2) Procedure

1. Make a test print and check the amount of misalignment.
2. Pull out the tray where this adjustment is made.



3. Loosen eight screws [1].



4. Move the paper guides [1] complete according to the amount of the mis-centering you checked in step 1 and adjust the center position of it.
5. Tighten eight screws [2].
6. Make another test print and check the amount of misalignment.

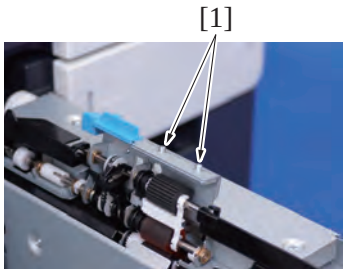
11.2.6 Pick-up roller load adjustment of the tray 3/4

(1) Purpose

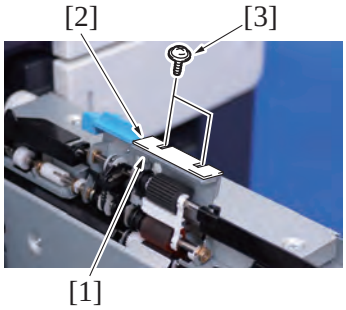
This adjustment must be made in the following case:
- In case a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure

1. Pull out the tray where this adjustment is made.



2. Remove two screws (M3 x 6 mm: V118 0306 03) [1].



3. Place the feed assist plate (A00J P001 ##) [2] on the feed assist plate holder [1] of the pick-up roller assy and secure it with two screws (M3 x 8 mm: V118 0308 03) [3].

4. Set the tray.
5. Perform a test print and confirm that a no feed or double feed occurs.

11.3 Manual bypass tray section

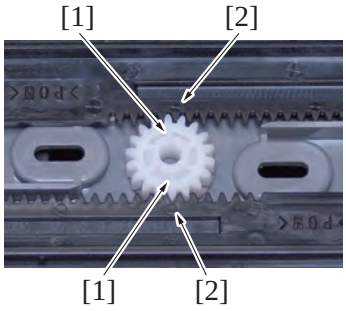
11.3.1 Bypass paper CD size VR adjustment

(1) Purpose

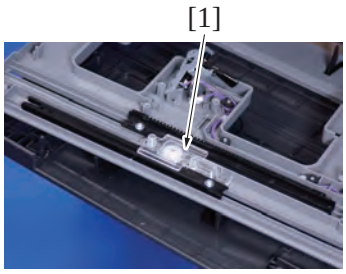
This adjustment must be made in the following case:

- The bypass paper CD size VR has been removed.

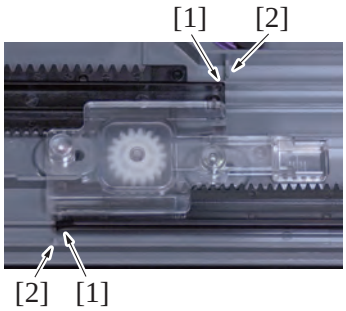
(2) Procedure



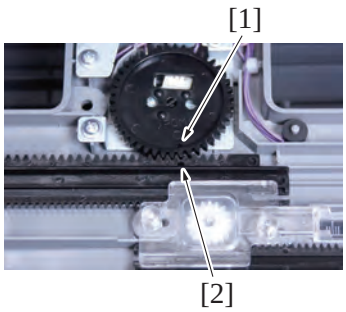
1. Perform installation so that a gear rib (either one of six) [1] and the alignment mark of the bypass guide rack gear make a straight line.



2. Install the holder [1] using two screws.



3. Perform installation so that the edge of the bypass paper CD size VR [1] and the protruding part of the bypass unit cover [2] make a straight line.



4. Mesh the gears by aligning the gear mark [1] and the rack gear mark [2].

5. After the bypass paper CD size VR base has been mounted, make sure that the gears are linked to the bypass guide and that the lever of the bypass paper CD size VR moves smoothly.
6. Call the Service Mode to the screen and select [Machine] -> [Manual Bypass Tray Width Adj]. Then, carry out manual bypass tray width adjustment.

11.3.2 Separator roller pressure adjustment of the bypass tray

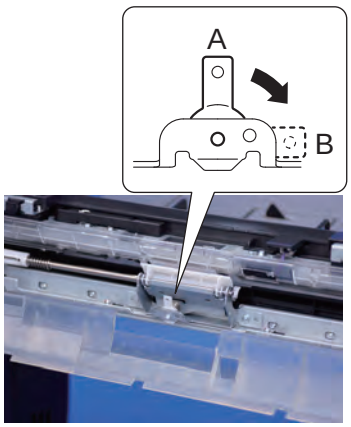
(1) Purpose

This adjustment must be made in the following case:

- When paper jam occurs with a specific type of thick paper (257-300 g/m^2) is fed.

(2) Procedure

1. Open the manual bypass tray door.



2. Open the jam removal cover and switch the separation pressure adjustment lever.
Position A: Separation pressure (normal)
Position B: Separation pressure (strong)

3. Make a test print to check whether paper is fed properly.

12. MECHANICAL ADJUSTMENT Dual scan document feeder

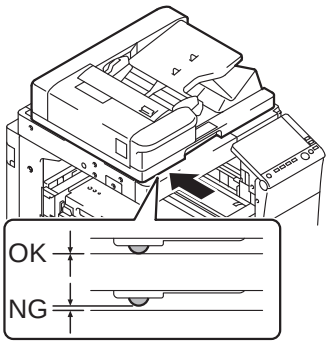
12.1 Original document feed section

12.1.1 Adjusting the height

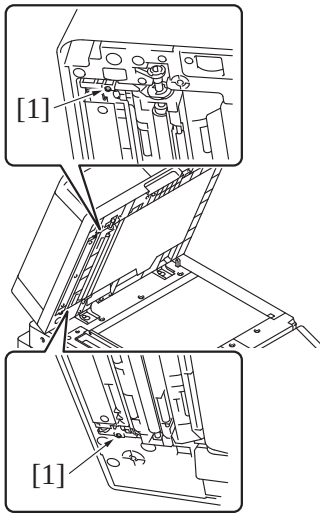
(1) Purpose

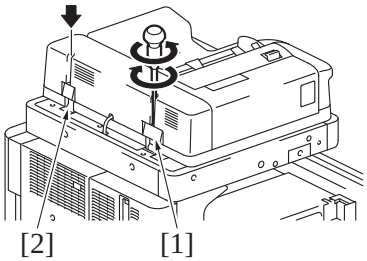
This adjustment must be made in the following case:
- When the dual scan document feeder has been reinstalled.

(2) Procedure



1. Check the clearance between the upper face of scanner and the protrusion [1] on the dual scan document feeder side (2 spots).
   NOTE
   - **There must be no clearance between the protrusion [1] on the dual scan document feeder and the upper face of scanner.**
2. If there is any clearance, the following adjustment is needed.





3. Remove the clearance by turning the adjusting screw [1].
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side
4. Use the adjusting screw [2] when further adjustment is needed.
   - Clockwise rotation: Lifting up the rear side
   - Counterclockwise rotation: Lowering the rear side

12.1.2 Adjusting front side skew feed on dual scan document feeder

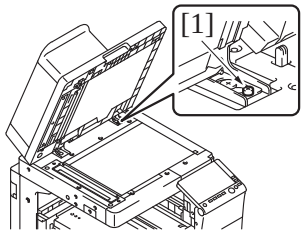
(1) Purpose

This adjustment must be made in the following case:
- When the dual scan document feeder has been reinstalled.

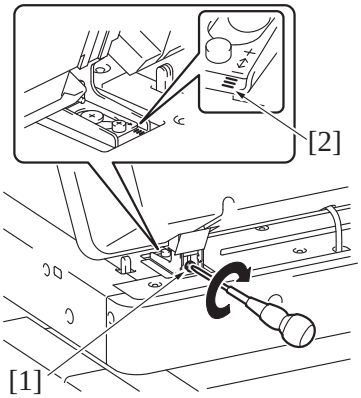
(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
   [ADF] -> [Skew Measurement] -> [DFSkew (Front)]
2. If the [Avg. Value] of measurement result does not fall within the "specified range", perform the following adjustment.

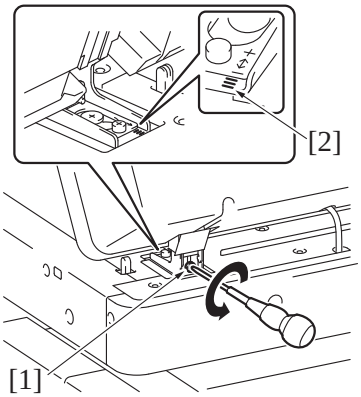
3. Loosen the mounting screw [1] on the right hinge viewed from the front.



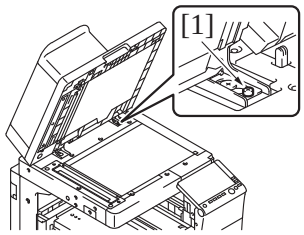
4. When the difference is a positive (+) value, turn the screw [1] clockwise.
NOTE
- **Look at the guide lines [2] when making the adjustment.**
- **Be sure not to turn the adjustment screw [1] when the dual scan document feeder is opened at 90 degrees to prevent the screw from being broken.**



5. When the difference is a negative (-) value, turn the screw [1] counterclockwise.
NOTE
- **Look at the guide lines [2] when making the adjustment.**
- **Be sure not to turn the adjustment screw [1] when the dual scan document feeder is opened at 90 degrees to prevent the screw from being broken.**



6. After the adjustment is completed, tighten the mounting screw [1] on right side hinge securely with screwdriver.
7. Re-scan the chart five times by selecting [ADF] -> [Skew Measurement] -> [DFSkew(Front)] and measure the average Skew value.
8. Check the [Avg. Value] is within the "specified range."
9. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.



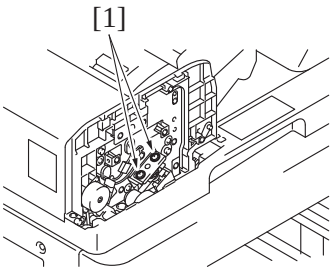
12.1.3 Adjusting back side skew feed on dual scan document feeder

(1) Purpose

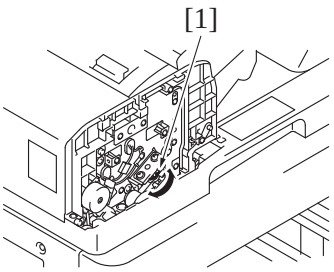
This adjustment must be made in the following case:
- When the dual scan document feeder has been reinstalled.
- When the CIS module has been reinstalled.

(2) Procedure

1. Call the Service Mode to the screen, and measure the DF skew.
[ADF] -> [Skew Measurement] -> [DFSkew (Back)]
2. If the [Avg. Value] of measurement result does not fall within the "specified range", perform the following adjustment.
3. Remove the front cover of the dual scan document feeder.
G.6.2.1 Front cover (dual scan document feeder)



4. Loosen two screws [1].



5. Depending on the difference of the Skew value, turn the adjustment dial [1] to make adjustments.
   - When the difference is a positive (+) value, turn the dial clockwise.
   - When the difference is a negative (-) value, turn the dial counterclockwise.

6. After completing the adjustment, tighten the screw loosened in step 8.
7. Install the front cover.
8. Re-scan the chart five times by selecting [ADF] -> [Skew Measurement] -> [DFSkew(Back)] and measure the average Skew value.
9. Check the [Avg. Value] is within the "specified range."
10. If the value of [Avg. Value] does not fall within the "specified range", repeat the adjustment.

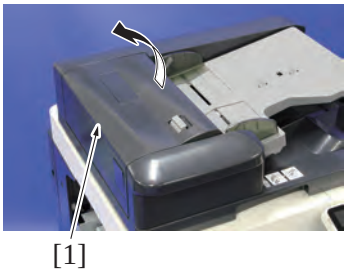
12.1.4 Adjusting the pressure of the separation roller

(1) Purpose

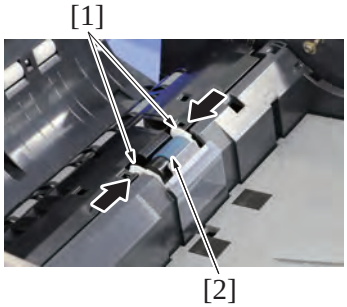
This adjustment must be made in the following case. The adjustment can also be performed in three levels.
- When document misfeed often occurs.

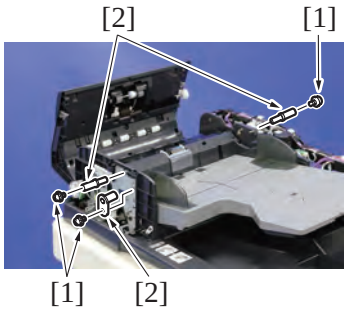
(2) Procedure

1. Open the left cover [1].

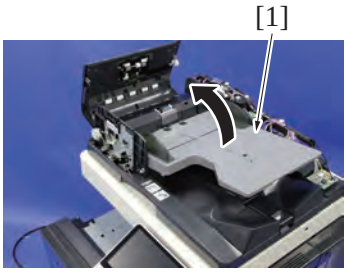


2. Pinch the section [1] and remove the separation roller assy [2].

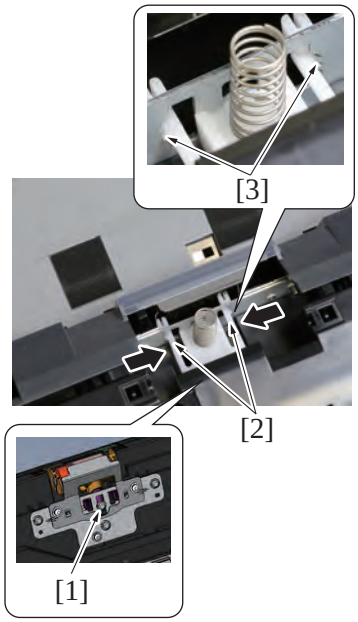




3. Remove three screws [1] and remove three pins [2].



4. Lift up the document feed tray [1].

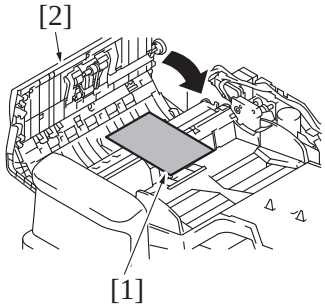


5. Remove the screw [1].
6. Grasp the parts [2] and make the adjustment to align with the metal plate groove [3].
   NOTE
   - **If you move it upwards, the force of the string becomes stronger.**
   - **If you move it downwards, the force of the string becomes weaker.**

7. To reinstall, reverse the order of removal.

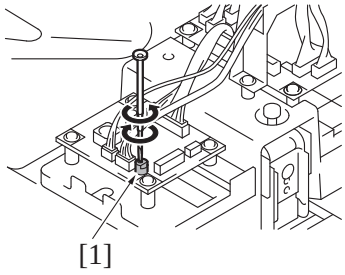
12.1.5 Adjusting multi-feed detection UK-501

1. Remove the rear cover.
   G.6.2.2 Rear cover (dual scan document feeder)



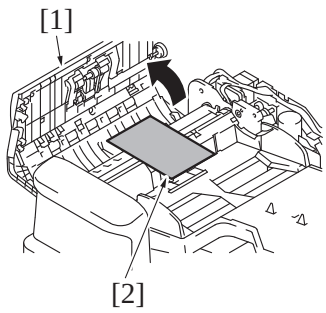
2. Set the supplied adjustment sheet [1] on the detection area of the multi feed detection sensor, as shown in the illustration, then close the left cover [2].

3. Press the Menu key to close the Paper Jam screen.
4. Call the Service Mode to the screen.
5. Touch [ADF] -> [Multi-Feed DetectionAdj].
6. Press the Start key.
   The Check Value is displayed.



7. Adjust the Check Value by turning the screw [1] on the sensor control board as shown in the illustration so that the value falls within 3,700 to 3,800.
   Clockwise: The value will decrease.
   Counterclockwise: The value will increase.
   Note:
   - **Be sure not to touch any portions other than the adjustment screw.**

8. Press the Stop key.
9. Touch [END] -> [Exit] on the Service Mode screen.



10. Open the left cover [1] and remove the adjustment sheet [2].
11. Close the left cover.

12. Turn OFF and ON the power switch.
    NOTE
    - **When displayed the Service Mode screen, be sure to turn off the power after exiting the Service Mode screen and wait for 10 seconds or more before turning on.**

13. MECHANICAL ADJUSTMENT LU-205

13.1 Paper feed section

13.1.1 Changing the paper size

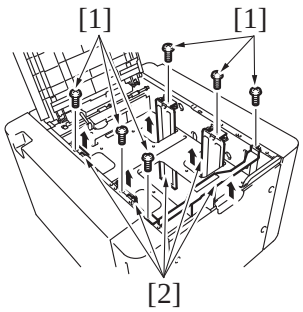
(1) Purpose

This adjustment must be made in the following case:

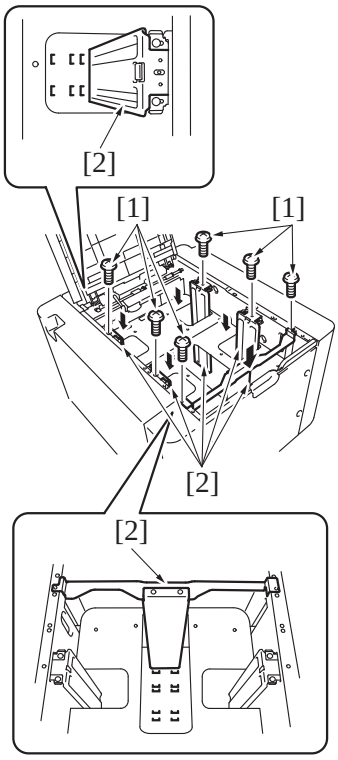
- The user wants to change the size of paper being fed.

(2) Procedure

1. Open the upper door of the paper feed unit.



2. Remove six screws [1] and remove the paper guide side plate [2].



3. Match the paper guide side plate [2] to the size of the loaded paper.
4. Reinstall six screws [1] to attach the paper guide side plate [2].
5. From [Service Mode] -> [System 2] -> [LCT Paper Size Setting], select the tray in which the paper size will be changed and change the paper size.

13.1.2 Centering adjustment of the LCT

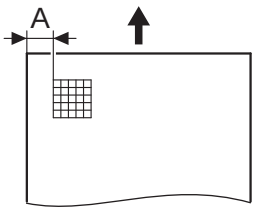
(1) Purpose

This adjustment must be made in the following case:

- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

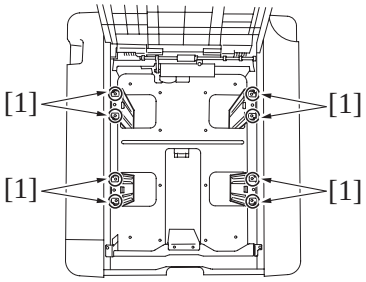
(2) Procedure

1. Call the Service Mode to the screen.
2. Touch [Machine].
3. Touch [Printer Area].
4. Touch [Printer Image Centering Side 1].
5. Touch [LCT].
6. Press the Start key to let the main body produce a test print.

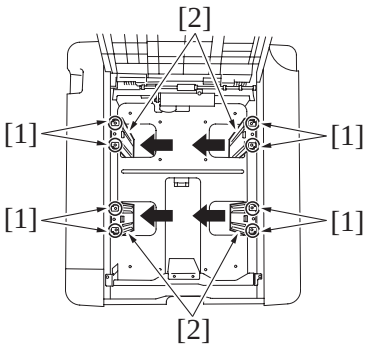


7. Measure the width of printed reference line A.
Target A: 3.0 mm ± 1.5 mm

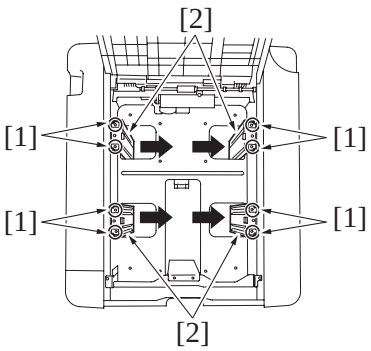
8. If the measured width A falls outside the target, enter the correction value using the [-] or [+] key.
9. Produce another test print and check to see if width A falls within the target.
10. If the use of the [-] or [+] key does not allow the measurement to fall within the target, perform the following steps.



11. Open the upper door of the LCT to loosen eight screws [1].
NOTE
- **During adjustment, in order to keep the same distance between the paper guide side plates, place a sheet of paper between the paper guide side plates with 1.0 mm apart from each of the plates.**



12. When width A is larger than the target.
Move the paper guide side plates [2] to the left and tighten eight loosened screws [1].



13. When the width A is smaller than the target.
Move the paper guide side plates [2] rightward and tighten eight loosened screws [1].

14. Load paper and let the main body produce another test print. Then, check width A.
15. Make the adjustment until width A falls within the target.

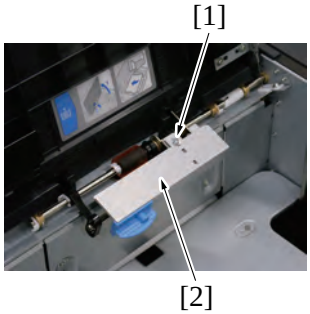
13.1.3 Pick-up roller load adjustment of the LCT

(1) Purpose

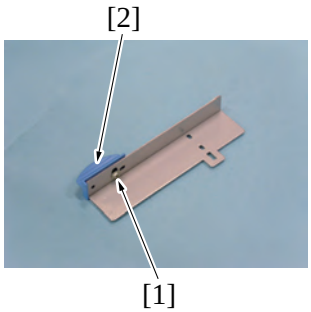
This adjustment must be made in the following case:
- Incase a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure

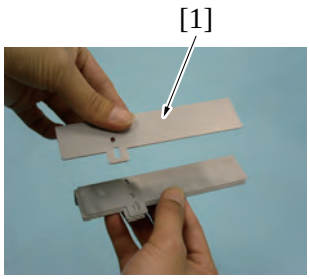
1. Open the upper door.



2. Remove the screw (M3 x 10 mm: V116 0310 03) [1] and remove the paper assist plate assy [2].



3. Remove the screw [1] and remove the assist handle [2].



4. Add one more paper assist plate (A03N 5604 ##) [1] to the original ones.
   NOTE
   - **Adding only one paper assist plate is allowed and the total needs to be up to four.**

5. Reinstall the assist handle that was removed in step 3, securing it with the screw.
6. Reinstall the paper assist plate assy with a new screw (M3 X 12 mm: V116 0312 03). The screw removed in step 2 (M3 X 10 mm: V116 0310 03) cannot be used to reinstall the assy.
7. Close the upper door.
8. Perform copying/printing to check whether the no feed or the double feed occurs or not.

14. MECHANICAL ADJUSTMENT LU-303

14.1 Paper feed section

14.1.1 Centering adjustment of the LCT

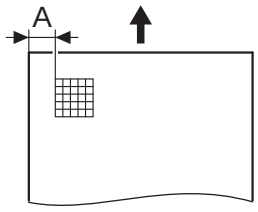
(1) Purpose

This adjustment must be made in the following case:

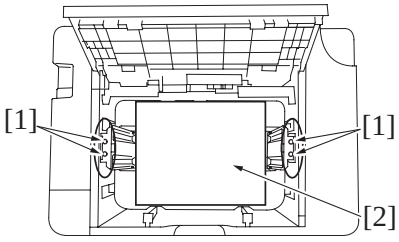
- When adjustment in [Service Mode] -> [Machine] -> [Printer Area] -> [Printer Image Centering Side 1] does not resolve a problem.

(2) Procedure

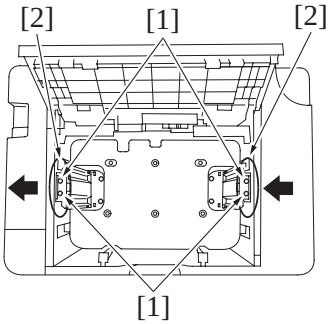
1. Call the Service Mode to the screen.
2. Touch [Machine].
3. Touch [Printer Area].
4. Touch [Printer Image Centering Side 1].
5. Touch [LCT].
6. Press the Start key to let the main body produce a test print.



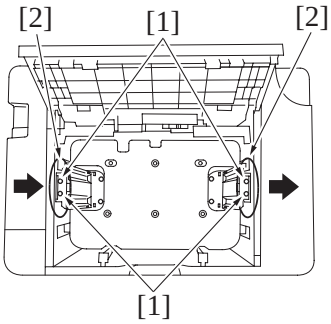
7. Measure the width of printed reference line A.
   Target A: 3.0 mm ± 1.5 mm
8. If the measured width A falls outside the target, enter the correction value using the [-] or [+] key.
9. Produce another test print and check to see if width A falls within the target.
10. If the use of the [-] or [+] key does not allow the measurement to fall within the target, perform the following steps.



11. Open the upper door on LCT to loosen four screws [1].
    NOTE
    - **During adjustment, in order to keep the same distance between the paper guide side plates, place a sheet of paper [2] between the paper guide side plates with 1.0 mm apart from each of the plates.**



12. When the width A is larger than the target.
    Move the paper guide side plates [2] leftward and tighten four loosened screws [1].



13. When the width A is smaller than the target.
    Move the paper guide side plates [2] rightward and tighten four loosened screws [1].
14. Load paper and let the main body produce another test print. Then, check width A.
15. Make the adjustment until width A falls within the target.

14.1.2 Pick-up roller load adjustment of the LCT

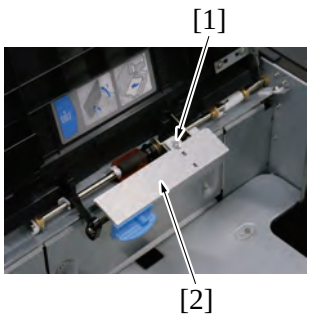
(1) Purpose

This adjustment must be made in the following case:

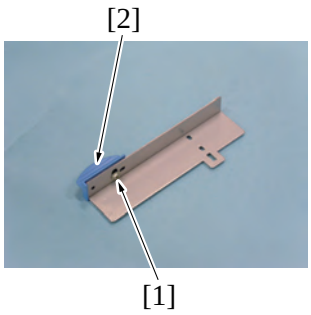
- Incase a no feed jam occurs frequently, perform the pick-up roller load adjustment.

(2) Procedure

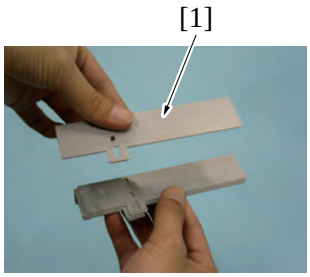
1. Open the upper door.



2. Remove the screw (M3 x 10 mm: V116 0310 03) [1] and remove the paper assist plate assy [2].



3. Remove the screw [1] and remove the assist handle [2].



4. Add one more paper assist plate (A03N 5604 ##) [1] to the original ones.
   NOTE
   - **Adding only one paper assist plate is allowed and the total needs to be up to four.**

5. Reinstall the assist handle that was removed in step 3, securing it with the screw.
6. Reinstall the paper assist plate assy with a new screw (M3 X 12 mm: V118 0312 03). The screw removed in step 2 (M3 X 10 mm: V116 0310 03) cannot be used to reinstall the assy.
7. Close the upper door.
8. Perform copying/printing to check whether the no feed or the double feed occurs or not.

15. MECHANICAL ADJUSTMENT PK-523

15.1 Punch section

15.1.1 Punch hole deviation correction

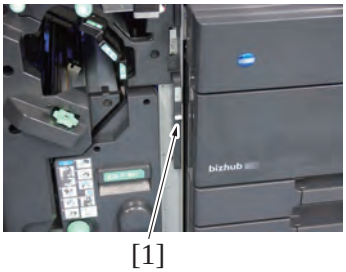
(1) Purpose

This adjustment must be made in the following case:

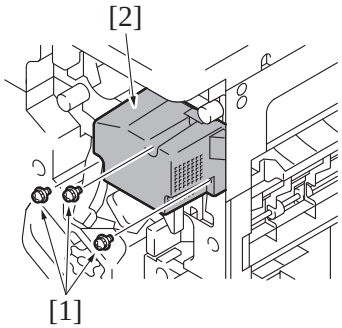
- The punch holes are on a slanted line.

(2) Procedure

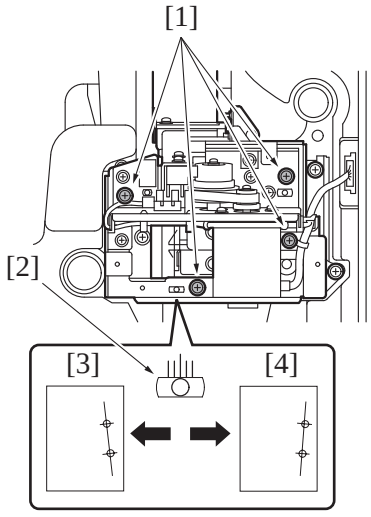
1. Insert a piece of paper [1] into the finisher's interlock to turn it ON.



2. Turn ON the Main power switch of the machine, and make sample copies for both the single-side and double-side with any tray in Punch mode.
3. Fold the output paper in half and check whether the punch holes are aligned. If the punch holes are misaligned, make the following adjustment.
4. Remove three screws [1], and remove the punch kit cover [2].



5. Loosen four screws [1] and move the punch kit to the left or right by the amount that needs to be corrected referring to the mark [2].
   - Wider at the rear [3]: Move the punch kit to the left.
   - Wider at the front [4]: Move the punch kit to the right.



6. Make copies in punch mode again and check that punch holes are not on the slanted line.

16. MECHANICAL ADJUSTMENT FS-537SD saddle secrtion

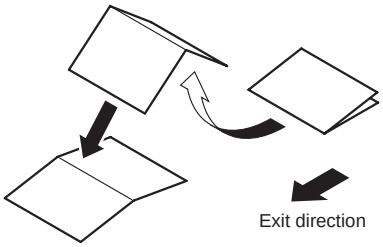
16.1 Paper exit section

16.1.1 Half-fold skew adjustment

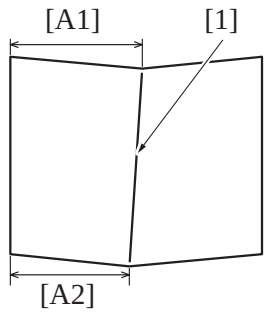
(1) Purpose

This adjustment must be made in the following case:
- Fold line goes off the tolerance in the half-fold mode.
- When reinstalling the guide plate assy, perform mechanical adjustment.

(2) Procedure

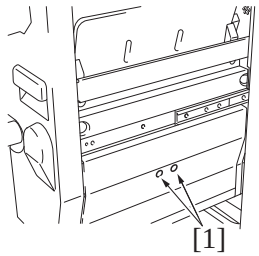


1. Make a copy in the half-fold mode.
2. Unfold the paper that exits the machine and lay the paper with the ridge facing up.

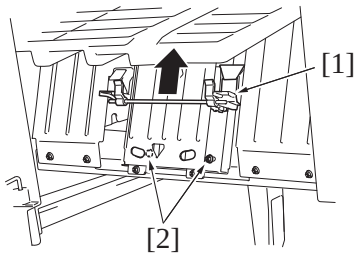


3. Confirm the skew of the fold line [1] of the output copy sample (Widths of A1 and A2)
   Target: A1-A2=±1.0 mm
4. In case the figure exceeds the above mentioned target, follow the adjustment procedures below.

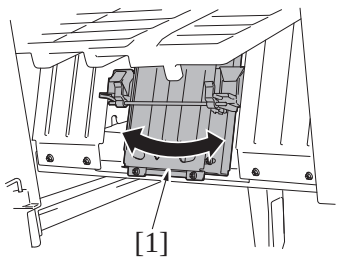
5. Open the front door of the finisher.
6. Pull the saddle unit.



7. Loosen two screws [1].

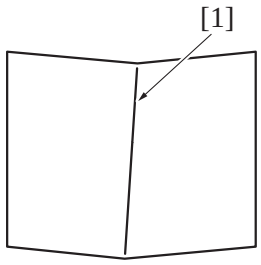


8. Slide the lever unit [1] upward.
9. Loosen two screws [2].



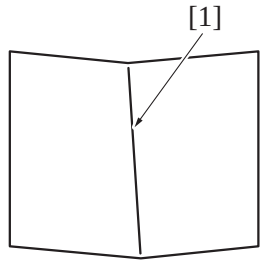
10. Incline the guide plate assy [1] forward or backward according to the deviation of the crease.

In case the cease [1] skews as the right side:



- In case the cease [1] skews as the right side:
  Incline the guide plate assy backward.
- In case the cease [1] skews as the left side:
  Incline the guide plate assy forward.

In case the cease [1] skews as the left side:



11. Make the copy sample again to confirm the cease skew.
12. Reinstall the above parts following the removal steps in reverse.

17. MECHANICAL ADJUSTMENT PK-520

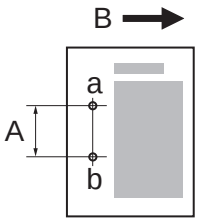
17.1 Punch section

17.1.1 Punch hole deviation correction

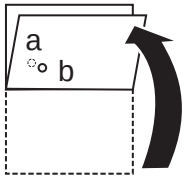
(1) Purpose

This adjustment must be made in the following case:
- The punch holes are on a slanted line.

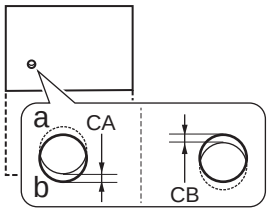
(2) Procedure



1. Make a 1sided copy sample in the punch mode. Face the printed surface upward.
   - [A]: The distance between holes
   - [B]: Paper feeding direction
   - [a]: Upper punch hole
   - [b]: Lower punch hole

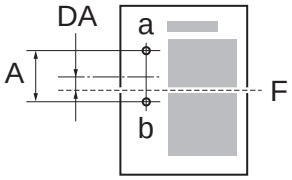


2. Fold the paper in half along the center in the paper feeding direction.



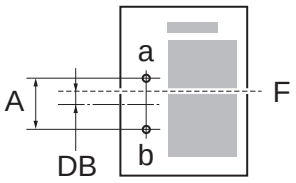
3. Measure the deviation amount [C] between punch holes [a] and [b].
   Target: D = 0 ± 1.0 mm

Ex.1



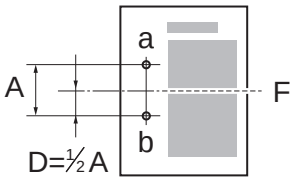
4. If the deviation between the punch holes [a] and [b] is [CA], the punch holes deviate upward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   Ex.1: Punch hole deviation amount [DA] = Measured value [CA] 3 mm ÷ 2 = -1.5 mm (hole positions deviate upward)

Ex.2

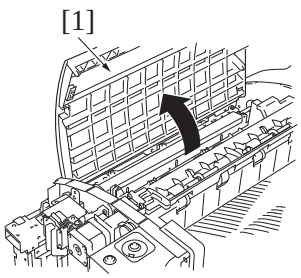


5. If the deviation between the punch holes [a] and [b] is [CB], the punch holes deviate downward in the figure relative to the paper folding line [F] (center in the paper feeding direction).
   Ex.2: Punch hole deviation amount [DB] = Measured value [CB] 3 mm ÷ 2 = +1.5 mm (hole positions deviate downward)

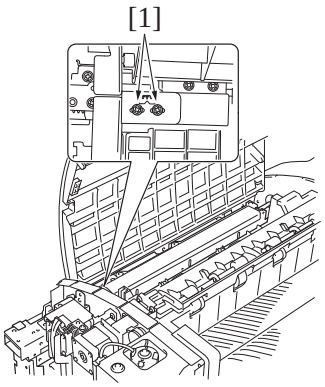
Ex.3



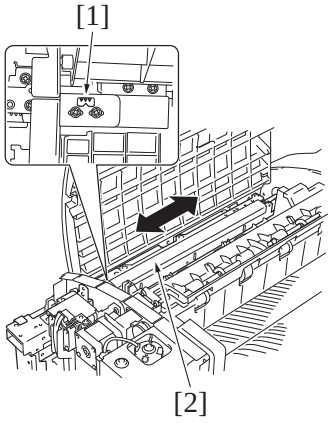
6. Complete the adjustment, if the deviation amount [D] between punch holes [a] and [b] falls within the target (±1.0 mm or less).
   Ex.3: Punch hole deviation amount [D] = Measured value [C] 0mm÷2 = 0 (punch hole deviation amount falls within the target)



7. In case the figure exceeds the above mentioned target, follow the procedures shown below.
8. Open the upper cover [1].



9. Loosen two screws [1].



10. Using the triangle marks [1] on the plate as a guide, move the punch unit [2] back and forth to adjust its position.

18. MECHANICAL ADJUSTMENT FD-536SD saddle section

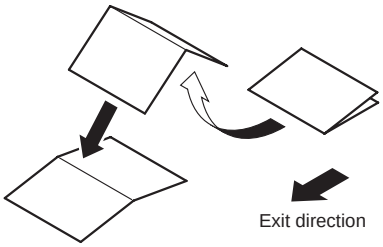
18.1 Paper exit section

18.1.1 Half-fold skew adjustment

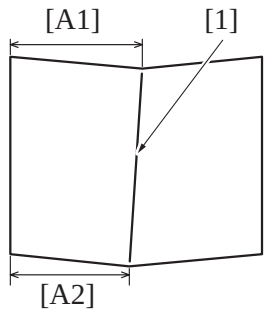
(1) Purpose

This adjustment must be made in the following case:
- Fold line goes off the tolerance in the half-fold mode.
- When reinstalling the guide plate assy, perform mechanical adjustment.

(2) Procedure

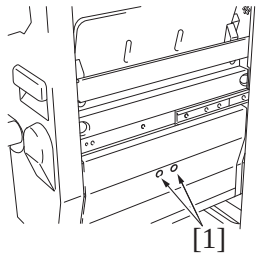


1. Make a copy in the half-fold mode.
2. Unfold the paper that exits the main body and lay the paper with the ridge facing up.

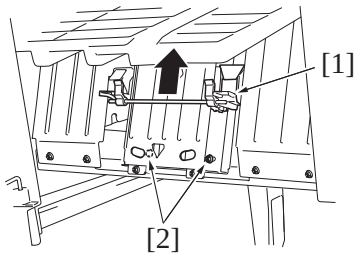


3. Confirm the skew of the fold line [1] of the output copy sample (Widths of A1 and A2)
   Target: A1-A2=±1.0 mm
4. In case the figure exceeds the above mentioned target, follow the adjustment procedures below.

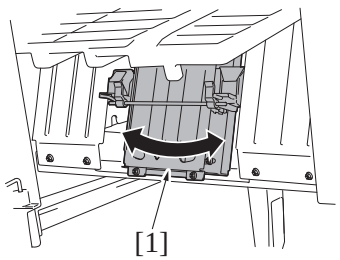
5. Open the front door of the finisher.
6. Pull the saddle unit.



7. Loosen two screws [1].

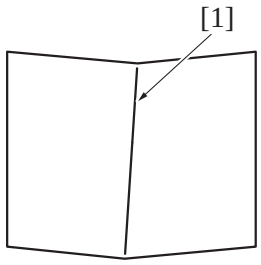


8. Slide the lever unit [1] upward.
9. Loosen two screws [2].



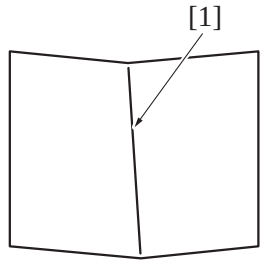
10. Incline the guide plate assy [1] forward or backward according to the deviation of the crease.

In case the cease [1] skews as the right side:



- In case the cease skews as the right side:
  Incline the guide plate assy backward.
- In case the cease skews as the left side:
  Incline the guide plate assy forward.

In case the cease [1] skews as the left side:



11. Make the copy sample again to confirm the cease skew.
12. Reinstall the above parts following the removal steps in reverse.

J REWRITING OF FIRMWARE

- There are two ways to update the firmware: One is by directly connecting with the main body using the USB memory device, and the other is by downloading over a network using the Internet ISW.

NOTE

- **The settings in the "Utility" mode and the "Service Mode" will not be changed, when the firmware is updated.**
- **Activate the loadable device driver and voice data as required in the order shown below in accordance with the rewriting firmware or user's environment.**

1. **[Service Mode] -> [System 2] -> [Install Data]**
2. **Turn OFF and ON the main power switch.**

1. Confirming the firmware version

1.1 Procedure

1. Call the Service Mode to the screen.
2. Select the [Firmware Version].
3. Check the current firmware version.

NOTE

- **After conducting firmware updating, check the firmware version No. and confirm that the firmware has been normally updated.**

2. USB memory

NOTE

- **USB memory must be connected with the main power switch off.**

2.1 Preparation

2.1.1 System preparation

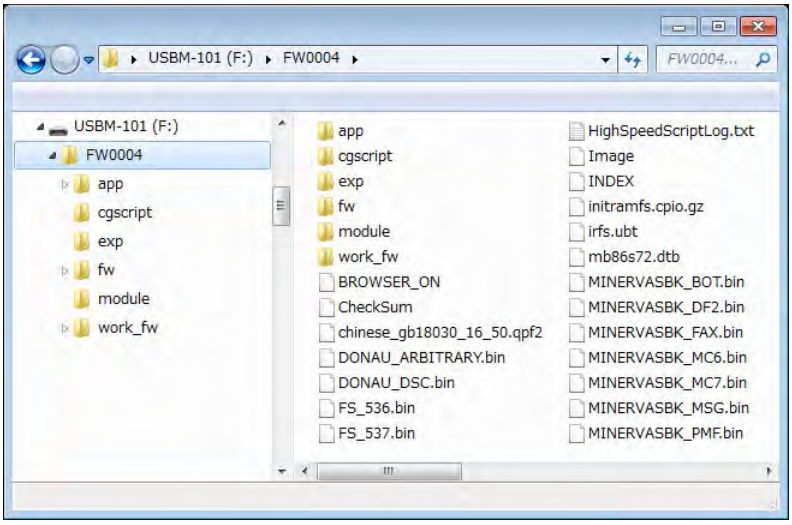
- PC with USB ports
- USB memory

  NOTE

  - **Possible to be non-operational products.**
  - USB flash memory compatible with the USB (1.1/2.0/3.0) interface. The speed is limited to USB2.0 specifications even if using a device that supports USB3.0.
  - The USB memory is formatted in FAT32 format.
  - No security functions such as encryption and password lock have been added (or the USB memory allows its security functions to be turned OFF).
  - A USB memory that is recognized by the computer as two or more drives cannot be used.
  - We recommend that you use a memory device with no more than 32 GB of capacity.

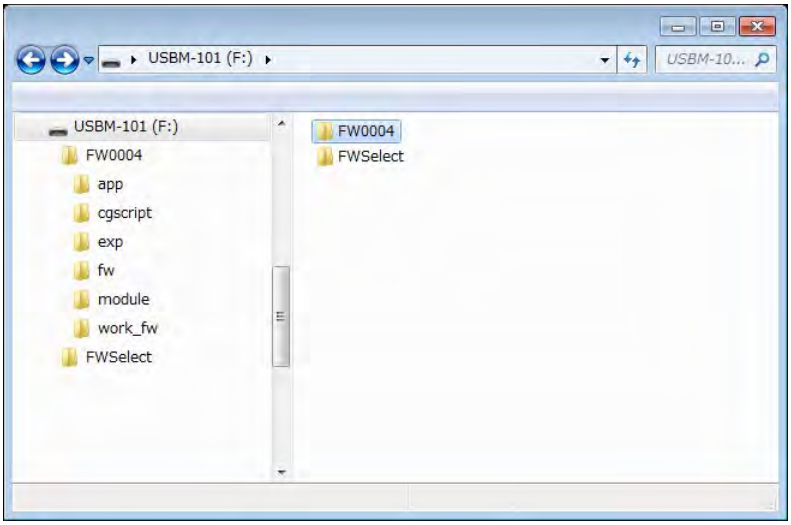
2.1.2 USB memory used to update firmware

1. Uncompress the firmware file.
2. Connect the USB memory to the PC, and copy the extracted data "FW0004" to the root directory of the USB memory.



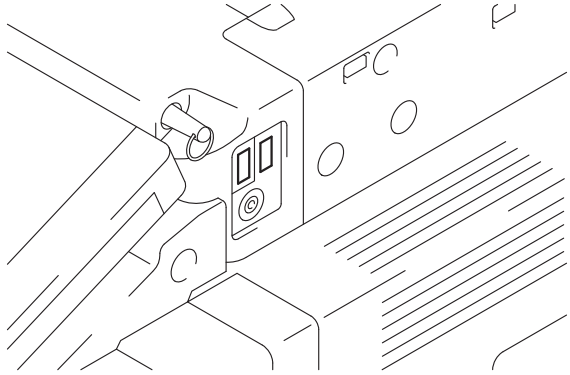
NOTE

- **More than one firmware data with a single model can be stored in the USB memory.**
- **In this case, copy the firmware data to the USB memory according to the following procedures.**
  1. **Make the folder named "FWSelect" (case-sensitive) to the root directory of the USB memory.**
  2. **Make a folder with any folder name (one byte alphameric characters, maximum 40 characters) under "FWSelect" folder, and store the firmware data to the folder.**



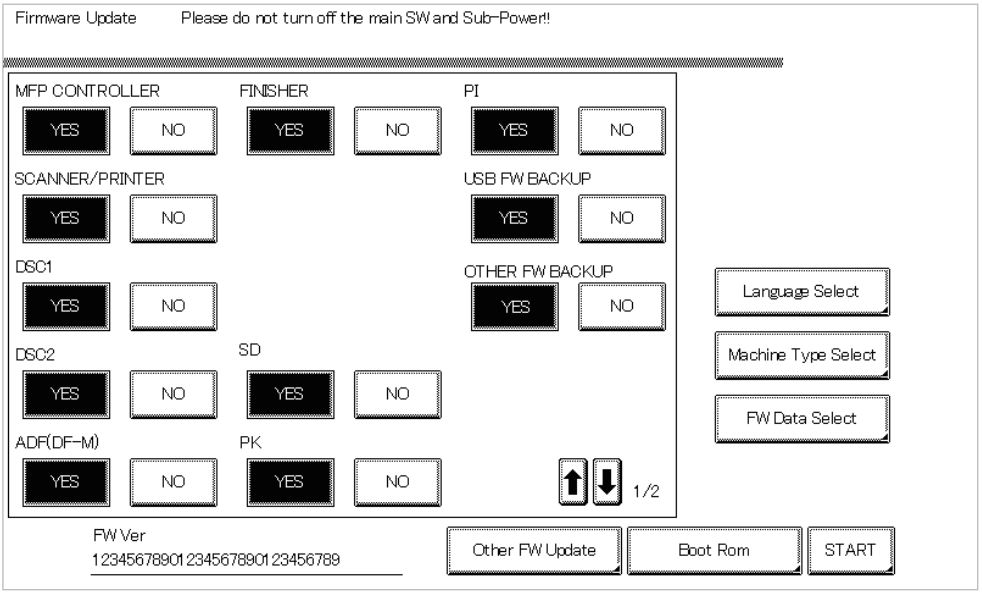
2.2 Procedure

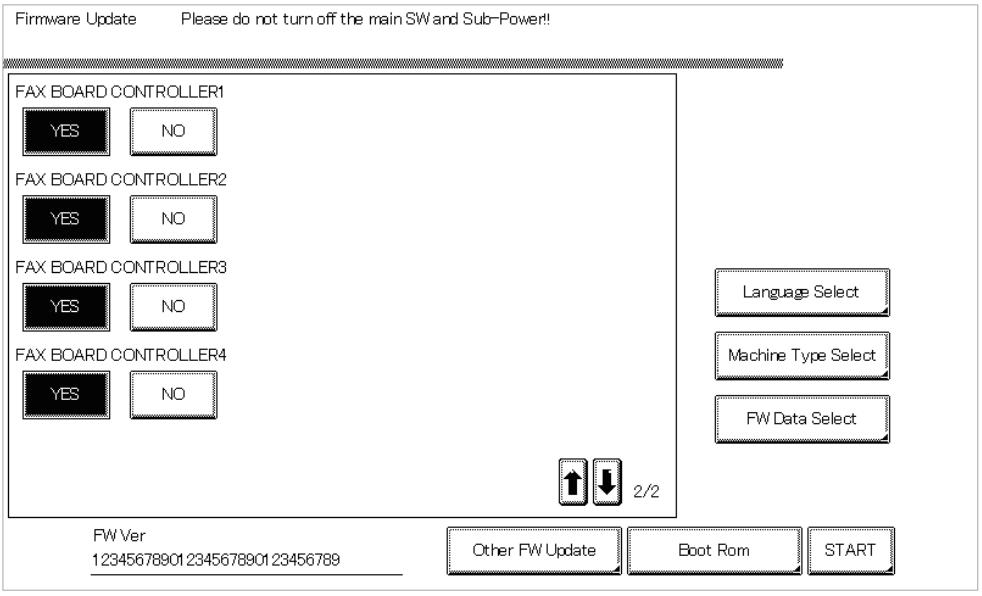
1. Turn OFF the main power switch.
2. Connect the USB memory containing the firmware into the USB port on the right side of the operation panel.



NOTE
- **USB memory must be connected with the main power switch off.**

3. Turn the main power switch ON while pressing the Stop key.
4. Control panel shows F/W items to be updated, and select the particular type of F/W to be updated. (Select [YES].)





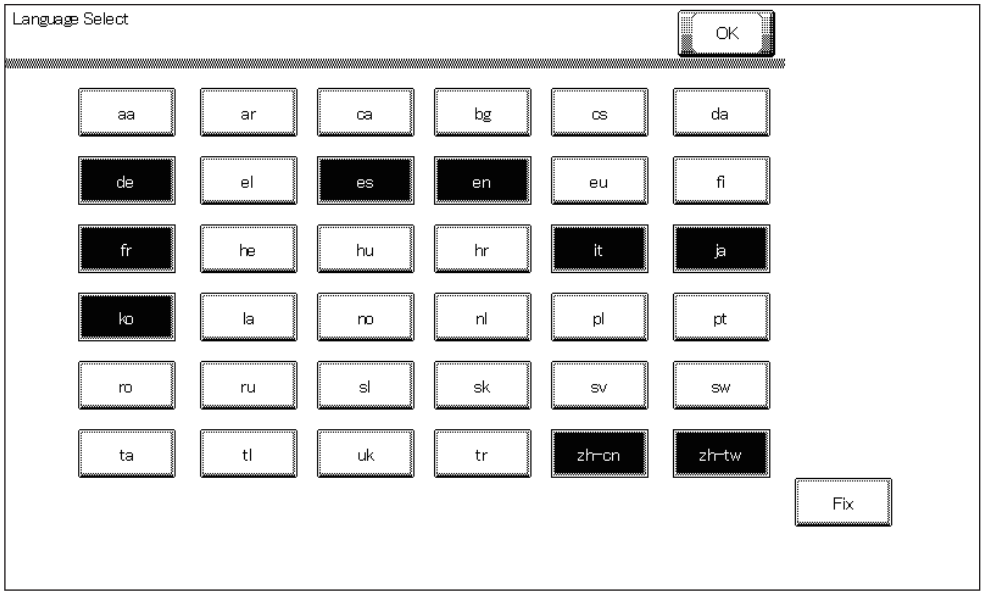
F/W to be updated	Appropriate board	Remark
MFP CONTROLLER	eMMC board (eMMC)	-
SCANNER/PRINTER	MFP board (MFPB)	-

F/W to be updated	Appropriate board	Remark
DSC1	DSC board/1 (DSCB/1)	Only when SC-508 is mounted
DSC2	DSC board/2 (DSCB/2)	Only when SC-508 is mounted
ADF (DF-M)	DF control board (DFCB)	-
FINISHER	FS control board (FSCB)	Only when FS-536/FS-536SD/FS-537/FS-537SD is mounted
SD	-	Only when FS-536SD/FS-537SD is mounted
PK	Punch control board (PKCB)	Only when PK-523 is mounted
PI	PI drive board (PIDB)	Only when PI-507 is mounted
FAX BOARD CONTROLLER1	Fax board/1 (FAXB/1)	Only when FK-516 is mounted
FAX BOARD CONTROLLER2	Fax board/2 (FAXB/2)	Only when FK-516 is mounted
FAX BOARD CONTROLLER3	Fax board/3 (FAXB/3)	Only when FK-515 is mounted
FAX BOARD CONTROLLER4	Fax board/4 (FAXB/4)	Only when FK-515 is mounted

NOTE

- **Unless one of the keys on the control panel is pressed, firmware is automatically updated after 30 seconds when the main power switch is turned on.**
- **When the Boot Rom file is in the firmware data, [Boot Rom] key is displayed. Pressing the key updates data.**
- **If either or both of the SCB file and power sub CPU file are contained within the firmware data, the [Other FW Update] key displays. Press the key to update.**
- **When more than one firmware are stored in step 1, pressing [FW Data Select] enables selection. (Data of other models cannot be selected.) (At this time, the data marked with an asterisk on the upper-left side of the data selection screen is the firmware data in the "FW0004" folder in the USB memory device.)**

5. Press the [Language Select].
6. On the Language Select screen, select a language to be displayed on the LCD area of the control panel, then touch [Fix].



NOTE

- **The language selected on this screen is displayed on the Language Selection screen of Utility.**
- **Up to 9 languages are selectable. However, Japanese and English are essential options.**

7. Touch [OK] to go back to the firmware update selection screen.
8. Press the [START]. (At this time, the Start key starts blinking red.)
9. Check that the control panel shows the message indicating that the data has been rewritten correctly ([Downloading Completed]). (The Start key lights blue.)
10. Turn OFF the main power switch.
11. Remove the USB memory.
12. Turn ON the main power switch.
13. Call the Service Mode to the screen.
14. Select the [Firmware Version].
15. Make sure if the version of firmware is updated.

2.3 Action when data transfer fails

- If “NG” appears on the control panel, indicating that rewriting has been unsuccessful (in which case the Start key lights up red), take the following steps.
  1. Perform the data rewriting procedure again.
  2. If the procedure is abnormally terminated, change the USB memory for a new one and try another rewriting sequence.
  3. If the procedure is still abnormally terminated, change the board that has caused “NG” and carry out data rewriting procedure.

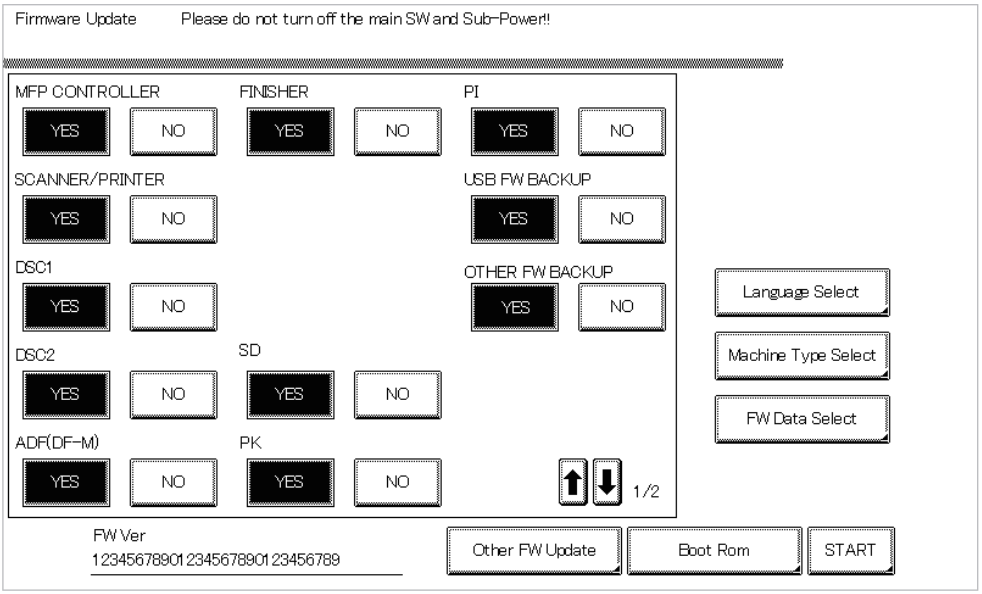
F/W to be updated	Appropriate board	Remark
MFP CONTROLLER	eMMC board (eMMC)	-
SCANNER/PRINTER	MFP board (MFPB)	-
DSC1	DSC board/1 (DSCB/1)	Only when SC-508 is mounted
DSC2	DSC board/2 (DSCB/2)	Only when SC-508 is mounted
ADF (DF-M)	DF control board (DFCB)	-
FINISHER	FS control board (FSCB)	Only when FS-536/FS-536SD/FS-537/FS-537SD is mounted
SD	-	Only when FS-536SD/FS-537SD is mounted
PK	Punch control board (PKCB)	Only when PK-523 is mounted
PI	PI drive board (PIDB)	Only when PI-507 is mounted
FAX BOARD CONTROLLER1	Fax board/1 (FAXB/1)	Only when FK-516 is mounted
FAX BOARD CONTROLLER2	Fax board/2 (FAXB/2)	Only when FK-516 is mounted
FAX BOARD CONTROLLER3	Fax board/3 (FAXB/3)	Only when FK-515 is mounted
FAX BOARD CONTROLLER4	Fax board/4 (FAXB/4)	Only when FK-515 is mounted

2.4 Entering the machine type information

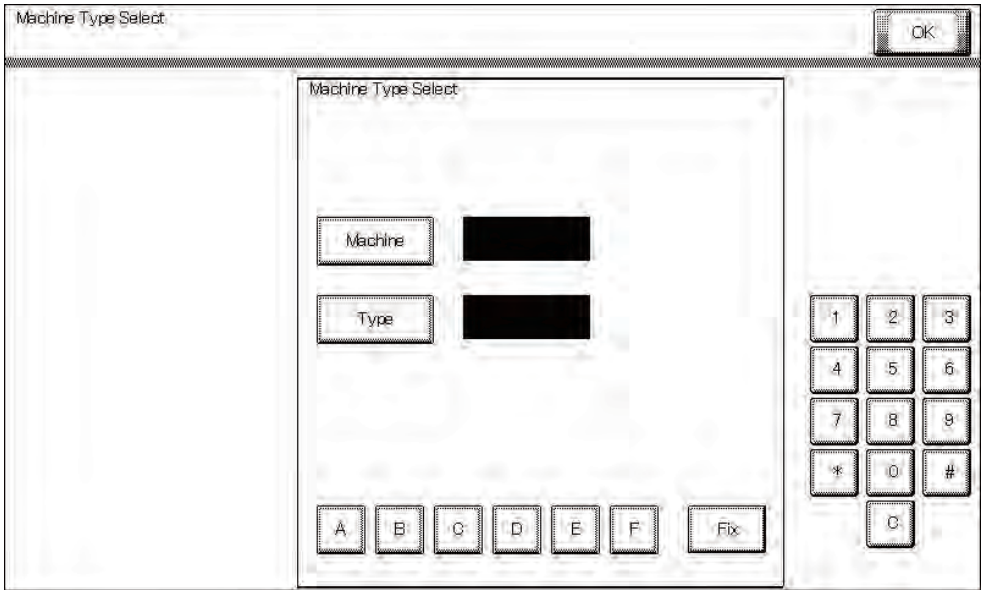
- When MFP board is replaced, it is necessary to enter the machine type information.
- Refer to the following procedures to enter the machine type information.

Procedure

1. Insert the USB memory to the USB port.
2. Turn the main power switch ON while pressing the Stop key.
3. Touch [Machine Type Select].



4. Enter [Machine] and [Type] information according to the following table. Then touch [Fix].



First four digits of the serial number	A796	A8KN (North America)	A795	A795 (Taiwan)
[Machine]	8	8	8	8
[Type]	A	7	8	9

5. Touch [OK], and turn OFF the main power switch.

3. Internet ISW

3.1 Preparations for firmware rewriting

3.1.1 Outline

- The "Internet ISW" is a system used by the main unit to retrieve firmware from a program server on the Internet and update the firmware.
- This executes when the command is received from the operation panel or CS Remote Care, or at a previously specified timing.

3.1.2 Service environment

The following conditions are necessary for using the Internet ISW function.

- The main body is connected to such a network environment that the firmware can be downloaded on the internet using the ftp or http protocol.

The “Internet ISW” will not operate under the following conditions.

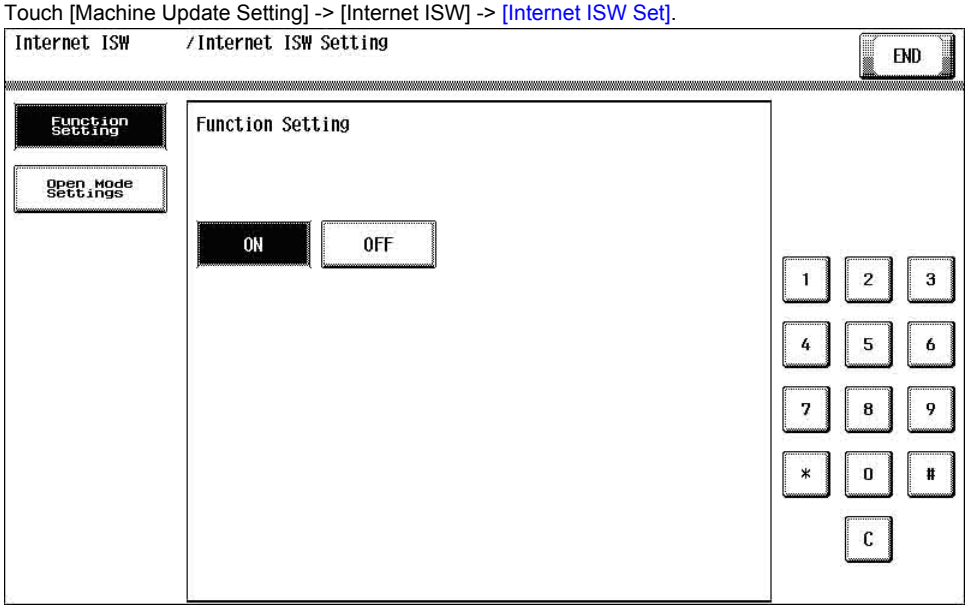
- Main power switch is set to OFF.
- Sub power auto power off mode enabled.
- When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”.
- Machine is operating, or there are jobs present (including appointed jobs).
- Machine is in idle with suspended job.
- Paper jam has occurred.
- Image file is in the memory.
- Model or the circuit board of the program does not match.

3.1.3 Preparations for firmware rewriting

- For using the Internet ISW, the network parameter, program server address as well as firewall address need to be set to the main body.
  I.5.31.1 Internet ISW - Internet ISW Set

(1) Internet ISW Set

1. Call the Service Mode to the screen.
2. Touch [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set].



3. Select [ON] in [Function Setting], and touch [END].

NOTE

- **Settings such as server setting, etc. will be available by selecting “ON” on this setting.**
- **When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”, “ON” cannot be selected on this setting.**
- **To allow the administrator to rewrite firmware, press [Open Mode Settings] and select [Set].**

(2) Protocol setting

- It performs the setting concerning the protocol (ftp or http) for connecting to the Internet ISW.

(a) Connecting by http

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Data input setting
   - Touch [HTTP Setting], and select [ON].
3. Connection Time-Out
   - Select [Connection Time-Out], and set the time for the connection time out between 30 and 300 seconds.

NOTE

- **To connect MFP to the Internet via a proxy, the proxy server related settings must be configured in addition to [Forwarding Access Setting]. The settings of the proxy used in Internet ISW communications is configured in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [HTTP Proxy Settings].**

(b) Connecting by ftp

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Data input setting
   - Touch [FTP Setting], and select [ON].
3. Connection Setting
   - Perform the setting for accessing FTP server.
     1. Select [Port Number], and set the port number for FTP server from 1 through 65535.
     2. Select [Connection Time Out], and set the time for the connection time out from 1 through 60.
     3. When connecting in PASV mode, select [PASV Mode], and select [ON].

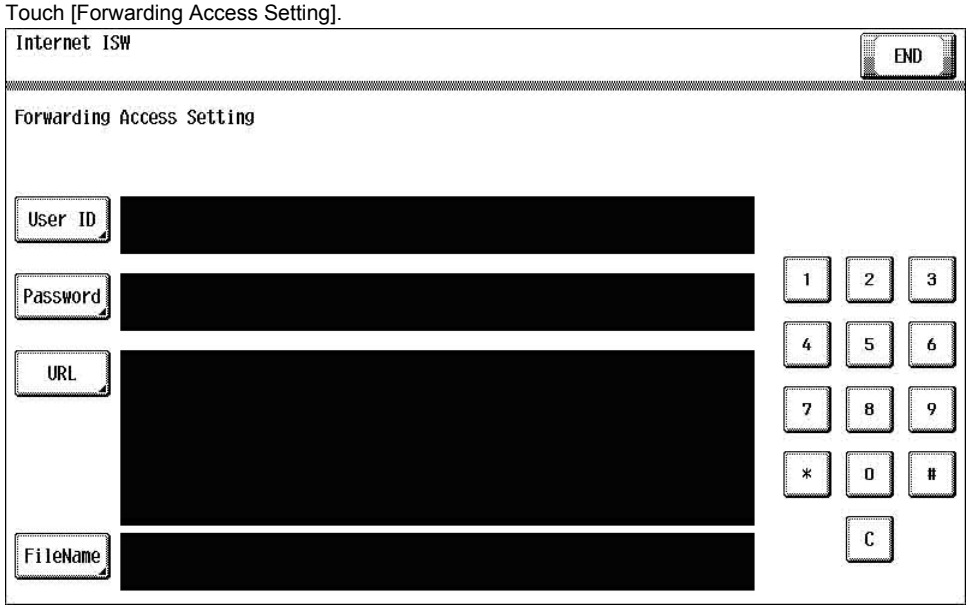
        NOTE
        - **PASV Mode:**
          This mode is for transferring the file with FTP under the condition where communication is restricted such as inside the firewall. Since with PASV mode, the client with restriction sets the port number, data transmission port can be secured to enable the file transmission.

NOTE

- **To connect MFP to the Internet via a proxy, the proxy server related settings must be configured in addition to [Forwarding Access Setting]. The settings of the proxy used in Internet ISW communications is configured in [Administrator Settings] -> [Network Settings] -> [Machine Update Settings] -> [Internet ISW Settings] -> [FTP Server Settings].**

(3) Forwarding Access Setting

- To make the access setting for the program server which stores the firmware data.
  1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
  2. Touch [Forwarding Access Setting].



  3. Select [User ID], and enter the user ID which is necessary for connecting to the program server on the on-screen keyboard, and touch [END].
  4. Select [Password], and enter the password which is necessary for connecting to the program server on the on-screen keyboard, and touch [END].
  5. Select [URL], and enter the directory which stores the program server address and the firmware on the on-screen keyboard by URL method, and touch [END].

     NOTE
     - **Enter the URL which matches to the protocol to be used.**

When connecting to http	**http://(host name or IP address)/directory name or https://(host name or IP address)/directory name**
When connecting to ftp	**ftp://(host name or IP address)/directory name**

  6. Select [File Name], and enter the file name of the firmware data to be downloaded on the on-screen keyboard, and touch [END].
  7. Touch [OK] to finish setting.

(4) Update Start Time Settings

Configure settings on the timing to update firmware.

1. Select [Service Mode] -> [Machine Update Setting] -> [Internet ISW].
2. Press [Update Start Time Settings].
3. Select either [Set] or [Unset].
4. If [Set] is selected, enter the time to update firmware on the ten-key.
5. Touch [END].

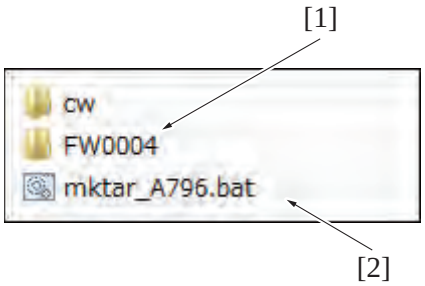
3.2 Making the firmware data

3.2.1 Outline

- It is necessary to convert the firmware data and save it in the target directory of the Internet ISW server for upgrading the firmware via Internet ISW.

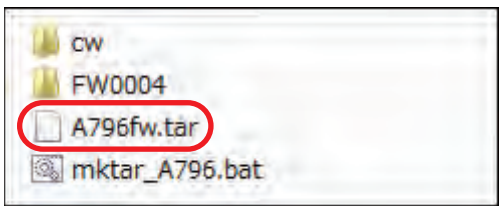
3.2.2 Procedure

1. Uncompress the firmware file.
2. Drag and Drop the firmware folder [1] which is in the uncompressed folder into the batch file [2] (mktar_A796.bat) which is in the same folder.



3. "making tar file (A796)" message appears in the command prompt window.

4. The command prompt window closed automatically.
5. "A796fw.tar" is created in the same directory.



6. Copy the "A796fw.tar" in the firmware data directory of Internet ISW server.

3.3 Firmware rewriting from the control panel

3.3.1 Firmware rewriting from the control panel

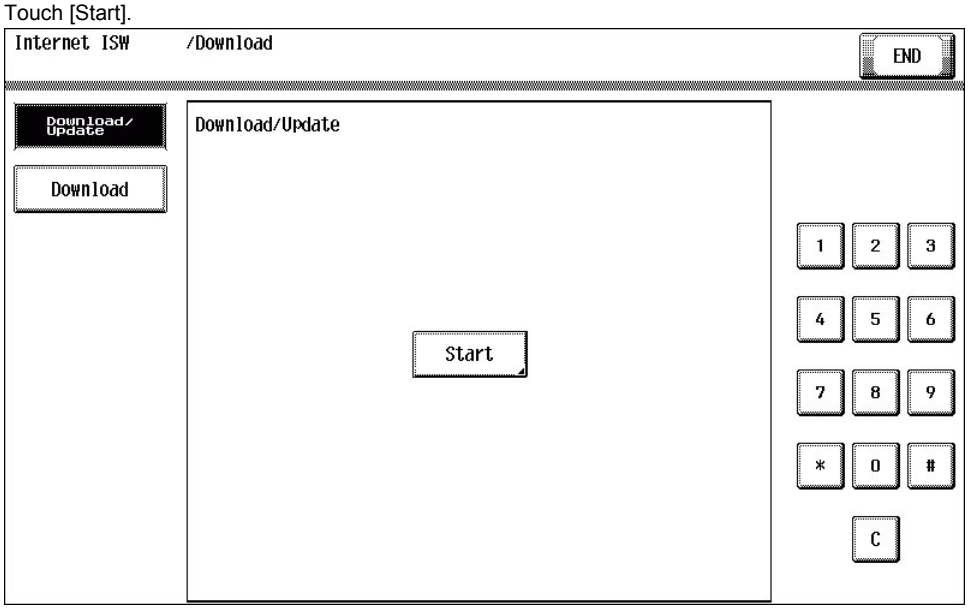
NOTE

- **When performing the Internet ISW, ask the administrator for permission beforehand.**
- **DO NOT turn OFF the main power switch while downloading.**
- **When IP address of MFP is assigned by DHCP, the firmware rewriting will be failed by using [Download/Update] button. Use [Download] button in such case.**

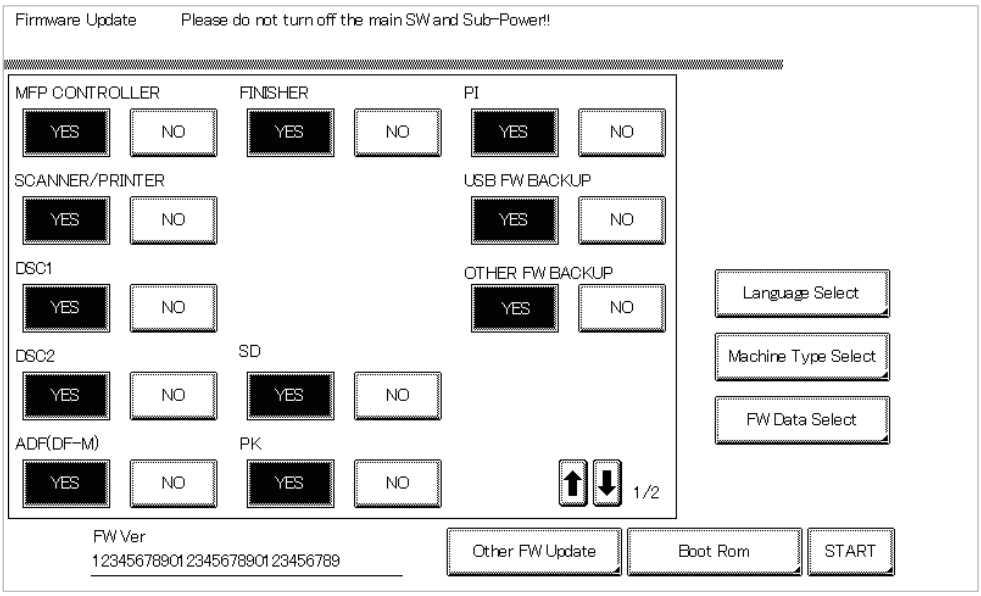
- **The Static IP address of MFP is necessary to execute the firmware rewriting by CS Remote Care or PageScope Enterprise Suite remotely.**
- **Updates cannot be performed via the [Download/Update] button when connected over Wi-Fi. Use the [Download] button in such cases.**

(1) Conducting commands from the control panel

1. Touch [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Download].
2. To download and update firmware data, select [Download/Update].
   To only download firmware data and update it later, select [Download].
3. Touch [Start].



4. Main body accesses the server and starts downloading the firmware data.
5. To download and update firmware data, select the types of firmware data to be written and replaced with a newer version in the Firmware Update screen and press [START].



F/W to be updated	Appropriate board	Remark
MFP CONTROLLER	eMMC board (eMMC)	-
SCANNER/PRINTER	MFP board (MFPB)	-
DSC1	DSC board/1 (DSCB/1)	Only when SC-508 is mounted
DSC2	DSC board/2 (DSCB/2)	Only when SC-508 is mounted
ADF (DF-M)	DF control board (DFCB)	-
FINISHER	FS control board (FSCB)	Only when FS-536/FS-536SD/FS-537/FS-537SD is mounted
SD	-	Only when FS-536SD/FS-537SD is mounted
PK	Punch control board (PKCB)	Only when PK-523 is mounted
PI	PI drive board (PIDB)	Only when PI-507 is mounted

F/W to be updated	Appropriate board	Remark
FAX BOARD CONTROLLER1	Fax board/1 (FAXB/1)	Only when FK-516 is mounted
FAX BOARD CONTROLLER2	Fax board/2 (FAXB/2)	Only when FK-516 is mounted
FAX BOARD CONTROLLER3	Fax board/3 (FAXB/3)	Only when FK-515 is mounted
FAX BOARD CONTROLLER4	Fax board/4 (FAXB/4)	Only when FK-515 is mounted

NOTE
- **Unless one of the keys on the control panel is pressed, firmware is updated after 30 seconds when the unit has restarted.**

(2) During firmware updating

1. After pressing [Start], the main unit connects to the server and starts the download.
2. The message to indicate the status will be displayed on the screen while connecting or transferring data.

(3) Completed or failed

(a) Firmware updated normally

1. When the Firmware is normally updated, restart the main body in auto or manual mode to display the outcome, and touch [OK] to return to the main screen.

(b) Failing to update the firmware due to the network trouble

1. When updating failed to complete due to the trouble on connecting to the network, an error code and the message will be displayed.
2. Restart the main body in auto or manual mode, and touch [OK]. It can be used with the firmware version before conducting updating.
3. Check the settings for the network by error codes, and try updating again.
   K.5.1 Error code list for the Internet ISW

(c) Failure to update firmware after starting the update process

1. Once firmware updating has started, the ROM in the main body will be deleted. When it failed right after updating has started, restart the main body, and shift to the standby screen to retry downloading.
2. When updating on the control panel, touch [settings] on the standby screen, and check the Network settings again. Touch [Download], and restart the Internet ISW.

NOTE
- **Return to the standby screen without fail after turning the main power switch OFF/ON if the firmware is not updated.**
- **Firmware can be updated with the USB memory.**

4. CS Remote Care

4.1 Firmware rewriting from the CS Remote Care

- For detailed error information relating to CS Remote Care, refer to "I.5.7 CS Remote Care (Outlines)"
- For the firmware update procedure using CS Remote Care, refer to CS Remote Care Center Manual.

5. Auto Update setting

5.1 Outline

- "Auto Update" is the function, which makes the main body access the program server periodically through the network to obtain a new firmware, then rewrites it automatically.

5.2 Service environment

- The following conditions are necessary for using the Auto Update function.
- The main body is connected to such a network environment that the firmware can be downloaded on the network using the SMB or http protocol.
- The Auto Update function will not operate when the main body is under the following conditions.
  - Main power switch is set to OFF.
  - Sub power OFF mode (power key is orange) or ErP auto power OFF mode (power key flashes orange) enabled
  - When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to "ON".
  - MFP is operating, or there are jobs present (including appointed jobs).
  - MFP is in idle with suspended job.
  - Trouble has occurred.
  - Image file is in the memory.
  - Model or the circuit board of the program does not match.

5.3 Procedures for rewriting the firmware by using the Auto Update function

5.3.1 Preparations

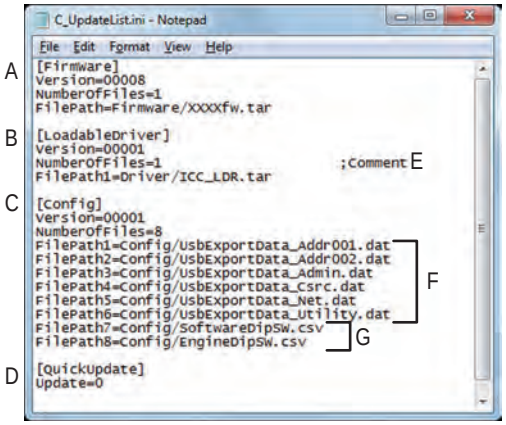
- For using this function effectively, before executing the following procedures contact with the administrator to obtain an agreement.
- For using the Auto Update function, the network parameter, program server address as well as firewall address need to be set to the main body.
- Create a firmware file used to the "Internet ISW" and store it in the program server.
- Create a program update information file (C_UpdateList.ini) and store a set of data (folder including the firmware file) for updating in the program server.

(1) Method for creating the program update information file (C_UpdateList.ini)

- Specify the firmware, loadable driver, configuration files, firmware rewriting method as shown below.

  NOTE
  - **[FirmWare], Version, FilePath, [LoadableDriver], NumberOfFiles, [Config], [QuickUpdate] and Update must be specified by using the capital letters and small letters properly.**
  - **The file path configured in FilePath describes the relative path from the program update information files.**

A sample of C_UpdateList.ini



(a) A: Firmware updating information

- [FirmWare], Version, NumberOfFiles, and FilePath are the necessary information.
- Change of version numbers (5-digit number) is to be recognized as that the file has been updated, and the file will be downloaded.
- Specify the number of files at NumberOfFiles. (If not to download, set "0")
- Enter the path and file name in FilePath to access the firmware file.

(b) B: Loadable driver updating information

- [LoadableDriver], Version, and NumberOfFiles are the necessary information.
- Change of version numbers (5-digit number) is to be recognized as that the file has been updated, and the file will be downloaded.
- Specify the number of files at NumberOfFiles. (If not to download, set "0")
- Enter the path and file name in FilePath to access the Loadable Driver file.

(c) C: Configuration files updating information

- [Config], Version, and NumberOfFiles are the necessary information.
- Change of version numbers (5-digit number) is to be recognized as that the file has been updated, and the file will be downloaded.
- Specify the number of files at NumberOfFiles. (If not to download, set "0")
- Enter the path and file name in FilePath to access the Configuration file(s).

- If multiple files exist, give a number to each of them as FilePath1, FilePath2 as shown in above illustration.

(d) D: Timing for updating data

- [QuickUpdate] and Update are the necessary information.
- If Update is set to "0", the downloaded firmware and each setting will be rewritten in accordance with the update time settings.
- If Update is set to "1", the firmware and each setting will be rewritten soon after downloading.

(e) E: Comment

- A comment can be inserted between "#" or ";" and the line break code.

(f) F: Create a configuration file

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Machine Export setting].
2. Insert a USB memory into the USB port.
3. Enter a password.
4. Select [START].
5. "Result OK" will be displayed.
6. Complete the data export.

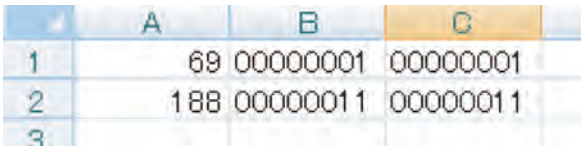
NOTE

- **On the MFP where a file is to be downloaded, the password specified at above step 3 must be set beforehand by selecting [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Machine Update Password].**

(g) G: Copy of Software switch setting and Engine FW DipSW setting

- Create CSV files for the data with the required switch number as SoftwareDipSW.csv and EngineDipSW.csv.

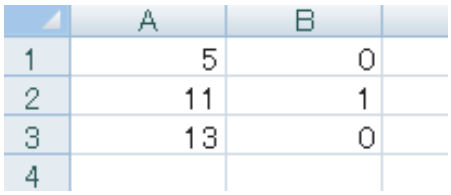
A sample of SoftwareDipSW.csv



	A	B	C
1	69	00000001	00000001
2	188	00000011	00000011
3			

A row	Software switch number
B row	Set 1 on the bit to be overwritten (bit7 to bit0 from left side)
C row	Set 1 or 0 for new setting at selected bit(s) on B row. (bit7 to bit0 from left side)

A sample of EngineDipSW.csv

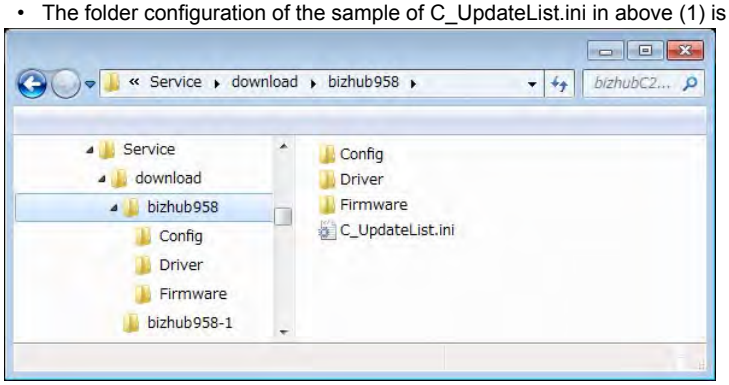


	A	B
1	5	0
2	11	1
3	13	0
4		

A row	Engine FW DipSW number
B row	0 (not select) or 1 (select)

(2) Configuration of files and folders

- The folder configuration of the sample of C_UpdateList.ini in above (1) is as shown below.



5.3.2 Download the firmware data automatically from the program server

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting].
2. Select either [Server 1 settings] or [Server 2 settings] as the connection to configure.
3. Touch [Auto Update], then select [ON].
4. Select [Download Protocol], then select [SMB] or [HTTP]. The HTTP protocol is the only available option for [Server 2 settings].

5. Enter the information for accessing the program server on the setting screen of the selected protocol. At this time, specify the folder in which C_UpdateList.ini is stored at where to be accessed.
6. Touch [END].
7. Touch [Common Settings].
8. Set [Update Time].
9. Set [Polling Interval].
10. Set [Repeat Interval].

- See items in I.11.28.7 Machine Auto Update setting - Auto Update setting for details of each setting.
- The MFP confirms the program update information file in the program server with an interval set at [Polling Interval].
- The MFP compares the program update information file in the program server with that in the MFP, and starts downloading the firmware with a changed Version number.
- The downloaded firmware is to be stored in a HDD.
- To use the relay server function of the MFP, select [HTTP].

(1) Firmware Update

- Methods for updating the firmware are shown below.

NOTE

- **The host name is specified with its IP address.**
- **When the SMB protocol is used, the MFP uses static IP addresses.**

(a) To update the downloaded firmware automatically.

- If the MFP power is set to ON at the time set with [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting] -> [Common Settings] -> [Update time] , the firmware will be rewritten automatically. If the power is set to OFF at that time, no rewriting will be executed.

(b) Update the downloaded firmware using the control panel.

- Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Manually Update] -> [Start], then execute rewriting.

NOTE

Do not set the power to OFF under the following state.

- **It takes about 45 seconds from touching [Manually Update] -> [Start] to the next operation of the MFP (Auto Power OFF).**
- **About one minute after the download completed screen being displayed, the MFP will restart.**
- **When rewriting configuration files followed by the firmware, the MFP will restart again.**

(2) Error code

- The error code can be displayed using [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Update Log Display], or viewed on the PC where the log which saves up to 100 records sent by using [Transmission log Update] is received.

When using the SMB protocol:

Error code	Cause of error	Countermeasure
N00107	• Cannot access the SMB server	• Set the IP address of the server or the server name correctly. • Confirm that if the server runs normally.
N04096		
N04097	• Authentication error	• Set the ID and the password correctly.
N04098		
N04105	• SMB connection error	• Check the SMB connection setting again.
N04106	• Cannot obtain C_UpdateList.ini • Cannot find the data described in C_UpdateList.ini	• Confirm that if C_UpdateList.ini is stored in the server, and set the file path for accessing C_UpdateList.ini correctly. • Set the folder name and the file path correctly.

When using the HTTP protocol:

Error code	Cause of error	Countermeasure
N00107	• Cannot access the HTTP server	• Set the IP address of the server or the server name correctly. • Confirm that if the server runs normally.
N00401	• Authentication error	• Set the ID and the password correctly.
N00404	• Cannot obtain C_UpdateList.ini • Cannot find the data described in C_UpdateList.ini	• Confirm that if C_UpdateList.ini is stored in the server, and set the file path for accessing C_UpdateList.ini correctly. • Set the folder name and the file path correctly.

Common in all cases

Error code	Cause of error	Countermeasure
C00000	• XML setting error	• Make sure that the settings in each configuration file are correct.
C00001	• Decryption error	• Set the decryption password for the configuration files correctly.
D00001	• Format related error (software SW)	• Check for errors in the SoftwareDipSW.csv file.
D00010	• DipSW number not defined (software SW)	
D10001	• Format related error (Engine DipSW)	• Check for errors in the EngineDipSW.csv file.
D10010	• DipSW number not defined (Engine DipSW)	
F00000	• Firmware update error	• Check to see if the file on the server is correct.
F10107	• The file is not the firmware file	• Check to see if the file on the server is correct.

F10109		
N00100	• Network communication error	• Check the connection to the network cable and communications settings.
N00110		
T10001	• The C_UpdateList. data has not been properly downloaded • The C_UpdateList. data is corrupted	• Download the file again. • Check to see if the file on the server is correct.
T10010	• Descriptions in C_UpdateList.ini are not correct	• Set the descriptions in C_UpdateList.ini correctly.
T10020		

6. Firmware Distribute Server function (Relay server)

6.1 Outline

- “Relay Server” is the function, which shares the firmware files (relay data) obtained from the network with the other MFP, and works as the program server of the firmware “Auto Update” function.

NOTE

- **This function is disabled when the Marketing Area of the service mode is set to US or Others5.**

6.2 Service environment

- The following conditions are necessary for using the relay server function.
- The main body is connected to such a network environment that the firmware can be downloaded on the network using the http protocol.
- The relay server function will not operate under the following conditions.
  - Main power switch is set to OFF.
  - Sub power auto OFF mode (power key is orange) or ErP auto power OFF mode (power key flashes orange) enabled
  - When [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode] is set to “ON”.

6.3 Firmware relay procedures by using “relay server function”

6.3.1 Preparations

- When using this function effectively, ask the administrator for permission beforehand.
- For using the Relay Server function, the network parameter, program server address as well as firewall address need to be set to the main body.
- Create a firmware file used to the "Internet ISW" and store it in the program server.
- Create one set of data used to the auto update function as the relay data, and store it in the program server. (Refer to J.5. Auto Update setting for more information.)
- Create a data update information file (S_UpdateList.csv) and store up to four folders (four types) of data set in the program server for managing the relay data saved on one relay server machine.

(1) Methods for creating the data update information file (S_UpdateList.csv)

- To create a CSV file by specifying the model name, data update date and time, and path for accessing the firmware folder used to the Auto Update function as shown below. The data with changed date and time will be downloaded. Specify up to four (four types) folders of relay data set.

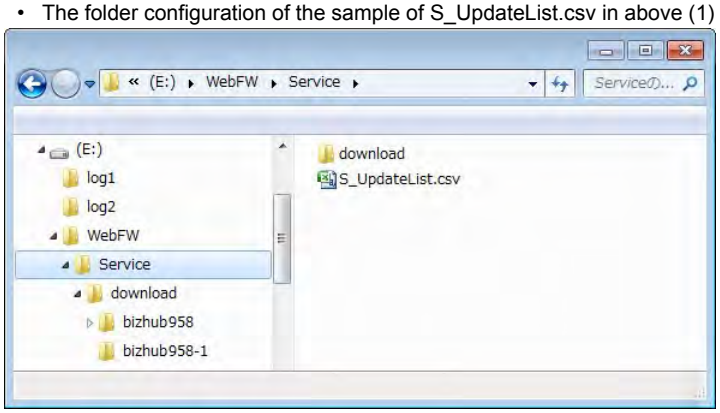
A sample of S_UpdateList.csv

	A	B	C
1	bizhub958 Standard	2015/12/8 00:13:00	download/bizhub958
2	bizhub958 Customer1	2015/12/8 00:13:00	download/bizhub958-1

A row	Model name (any character string)
B row	Data update date and time
C row	Path for accessing the firmware folder used to the Auto Update function

(2) Configuration of files and folders

- The folder configuration of the sample of S_UpdateList.csv in above (1) is as shown below.



6.3.2 Download and open the relay data automatically from the program server

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Relay server setting].
2. Touch [Update File Download], then select [ON].
3. Select [Obtain Setting File].
4. Enter the information to access the program server on the setting screen. At this time, specify the folder on URL, in which S_UpdateList.csv is stored.
5. Set [Polling Interval].
6. Set [Repeat Interval].
7. Select [Distribution Server (HTTP)], then select [ON].
8. Set the information for accessing the distribution server.

NOTE

- **Do not use [SMB Authentication].**
- **The MFP confirms the data update information file in the program server with an interval set at [Polling Interval].**
- **The MFP compares the data update information file in the program server with that in the MFP, and starts downloading the relay data with a changed update date and time.**
- **The downloaded relay data is to be stored in a HDD.**

(1) Error code

- The error code can be displayed using [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Relay Server Log Confirmation], or viewed on the PC where the log which saves up to 100 records sent by using [Transmission Server Log] is received.

Error code	Cause of error	Countermeasure
N00107	• Cannot access the HTTP server	• Set the IP address of the server or the server name correctly. • Confirm that if the server runs normally.
N00401	• Authentication error	• Set the ID and the password correctly.
N00404	• Cannot obtain S_UpdateList.csv • Cannot find the data described in S_UpdateList.csv	• Confirm that if S_UpdateList.csv is stored in the server, and set the file path for accessing S_UpdateList.csv correctly. • Set the folder name and the file path correctly.

6.3.3 Download the firmware opened from the relay server by using the Auto Update function on the other MFP

- The following settings is to be configured on the MFPs other than the relay server, and the models corresponding to the relayed data.

1. Select [Service Mode] -> [Machine Update Setting] -> [Machine Auto Update setting] -> [Auto Update setting].
2. Select either [Server 1 settings] or [Server 2 settings] as the connection to configure.
3. Touch [Auto Update], then select [ON].
4. Select [Download Protocol], then select [HTTP] according to the settings of [Distribution Server] for the relay server.
5. Enter the information for accessing the relay server on the setting screen of the HTTP setting.
   At this time, specify the folder*1 in which C_UpdateList.ini is stored at where to be accessed.
6. Touch [END].
7. Touch [Common Settings].
8. Set [Update Time].
9. Set [Polling Interval].
10. Set [Repeat Interval].

*1: The file path in which a file is stored shall be set as shown below.
In [URL], "http://IP address or host name of the MFP working as relay server/DAV/Service/download/bizhub958" (sample shown in 5.3.1.(1)). In the file path on [URL], the capital letters and small letters are distinguished, then enter the part from "/DAV/Service/" as described in the row C of S_UpdateList.csv.
If activate the relay server function in Administrator settings, the file path will be changed as "/DAV/Admin/".

7. How to install the i-Option data

7.1 Available function for i-Option

i-Option	Functions	Data location	How to recover when replacing or formatting HDD
LK-102 v3	PDF processing	In the Standard firmware	I.5.16.23 Install Data
LK-104 v3	Voice guidance	In the Standard firmware	
LK-105 v4	Searchable PDF	In the Standard firmware	
LK-106	Barcode font	In the Standard firmware	n/a
LK-107	Unicode font	In the Standard firmware	J.7.2 LK-107/LK-108 font data installation procedure
LK-108	OCR font	In the Standard firmware	
LK-110 v2	High functional Image Processing	In the Standard firmware	I.5.16.23 Install Data
LK-111	Enhancing external linkage (supported by ThinPrint)	In the Standard firmware	n/a
LK-114	Ubiquitous Printing	In the Standard firmware	
LK-115 v2	TPM (Trusted Platform Module)	In the Standard firmware	

7.2 LK-107/LK-108 font data installation procedure

1. Prepare an USB memory.
2. Copy the font data to the root directory of the USB memory.
   - OCR font: download_OCRA-0.pdf
   - Unicode font: download_Andale_J-0.pdf, download_Andale_K-0.pdf, download_Andale_S-0.pdf, download_Andale_T-0.pdf
3. Turn ON the main power switch, and connect the USB memory to the USB port on the side of the control panel.
4. The message “Print a document from External Memory” will be displayed on the control panel, and select it.
5. The font data in the USB memory will be displayed, and select these data to print out.
6. The message “Document Printing Failed” will be displayed, and touch [OK].
7. Print out a PCL font list, and confirm that the font data are registered as following names.
   - LK-107: Andale Mono WT J, Andale Mono WT K, Andale Mono WT S, Andale Mono WT T
   - LK-108: OCR-A

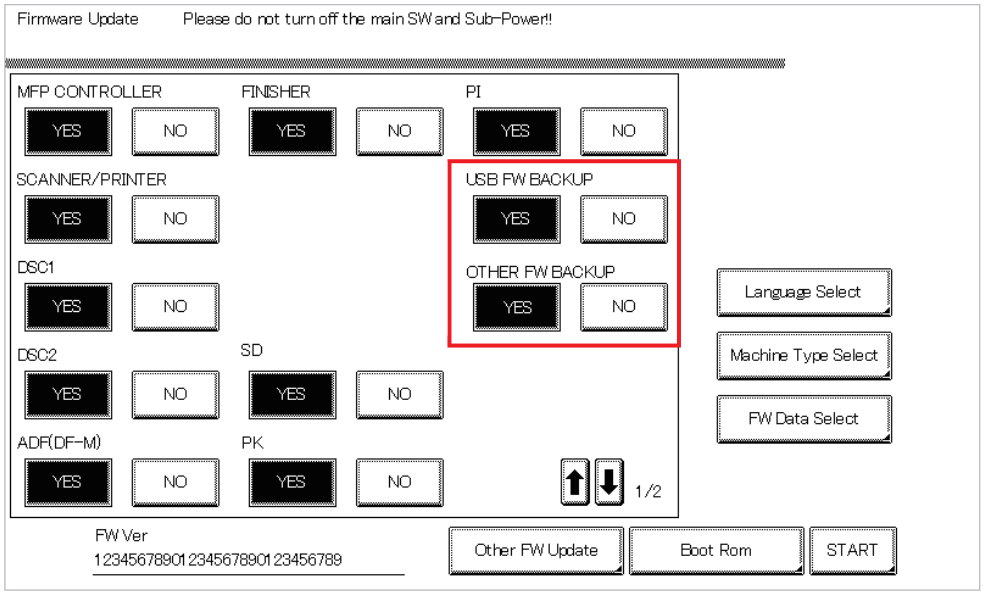
8. Creating back up files when updating firmware

NOTE

- **A hard disk must be installed to use this function.**
- Enable backup to backup the installed firmware before updating.
- This enables you to restore the backed up firmware (rollback) if an error occurs when updating the firmware.
- When updating to a newer version of firmware, the firmware before backing up can be stored on a HDD.
- If a backed up file already exists in the HDD, the older version will be deleted and the firmware before updating will be stored.
- To roll back the firmware, select [Service Mode] -> [Machine Update Settings] -> [Firmware Rollback].

8.1 Procedure

1. The firmware update screen is displayed when updating the firmware.
2. Select [USB FW BACKUP] and [OTHER FW BACKUP] in the firmware update selection screen.
   - [USB FW BACKUP] : Select to execute backup when updating the firmware on the USB flash memory.
   - [OTHER FW BACKUP]: Select to execute backup when updating the firmware by non-USB Internet ISW or automatic update feature.



3. Update the firmware.

NOTE

- **The update process takes a few more minutes when creating a backup than when not creating a backup.**

K TROUBLESHOOTING

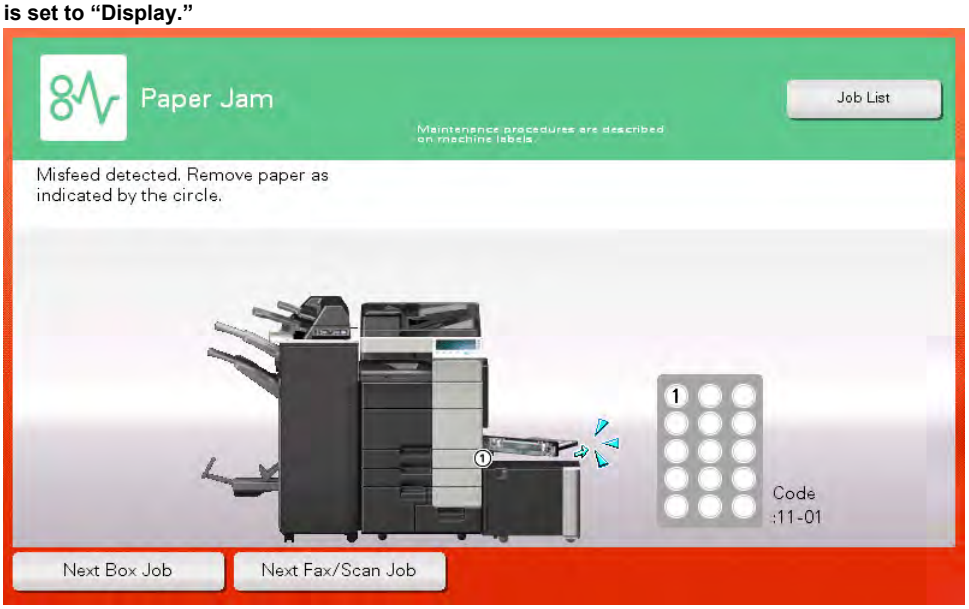
1. JAM CODE

(1) JAM display

- When the paper jam occurred, the message, the position jam occurred (number blinks), position of the remaining paper (number lights up), and the JAM code are displayed.

NOTE

- **JAM code is displayed on the jam warning screen only when [Service Mode] -> [System 2] -> [JAM Code Display Setting] is set to "Display."**



(2) Misfeed display resetting procedure

1. Open the corresponding door, clear the sheet of paper misfed, and close the door.
2. Touch "OK" displayed on the touch panel.

1.1 List of the JAM code

JAM code	JAM type
10-01	Misfeed at manual bypass feed section
10-02	
10-40	
11-01	Misfeed at tray 1 feed section
11-02	
11-40	
12-01	Misfeed at tray 2 feed section
12-40	
13-01	Misfeed at tray 3 feed section
13-40	
14-01	Misfeed at tray 4 feed section
14-40	
15-01	LCT feed section (When LU-205 or LU303 is installed)
15-40	
17-20	LCT transport section (When LU-205 or LU303 is installed)
17-30	Tray 3/4 horizontal transport section
17-31	
17-40	Tray 3/4 intermediate transport roller section
17-41	
20-01	Misfeed at vertical transport section
20-02	
20-03	
20-20	
30-03	Misfeed at 2nd transfer section
32-01	Misfeed at exit section
32-05	
32-30	

JAM code	JAM type
66-02	Misfeed at DF paper feed section
66-12	
66-03	Misfeed at DF transport section
66-13	
66-23	
66-33	
66-04	Misfeed at DF paper exit section
66-14	
66-05	Misfeed at DF image reading section
66-06	
66-08	Double feed detection jam
66-54	DF controller jam
72-11	Misfeed at FS transport section
72-14	
72-15	
72-16	
72-17	
72-18	
72-19	
72-21	
72-22	
72-23	
72-25	Misfeed at SD paper exit section
72-26	
72-31	Misfeed at JS exit section
72-34	
72-35	Misfeed at PI section
72-40	Misfeed at ZU section
72-41	
72-43	Misfeed at PK JAM
72-49	Misfeed at PI section
72-50	
72-51	
72-81	Misfeed at FS staple section
72-84	Misfeed at SD staple section
72-85	Misfeed at SD transport section
72-86	
72-87	
75-42	Misfeed at RU section
75-43	
92-01	Misfeed at duplex pre-registration section
92-02	
92-03	
92-40	
93-10	Misfeed at duplex transport section
99-01	Controller JAM (paper size error)
99-02	Controller JAM (controller forced stop command)
99-03	Controller JAM (image processing)
99-04	Controller JAM (a job reservation in the main body is not released)
99-05	Controller JAM (main body not starting a job)
99-06	Controller JAM (print control on the main body is not completed)
99-07	Controller JAM (main body not completing a job)
99-08	Controller JAM (finisher not starting a job)
99-09	Controller JAM (finisher not completing a job)

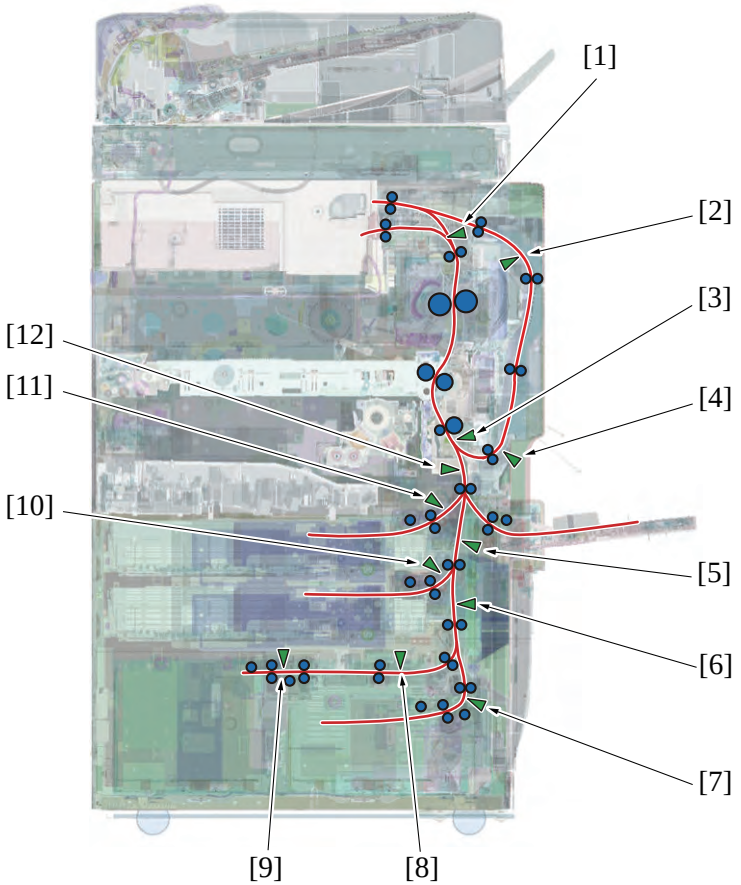
1.2 JAM that do not display the JAM code

JAM type	JAM detection timing	Ref. page
Misfeed at manual bypass tray paper feed section	Paper jam of a sheet of paper left at the duplex pre-registration section results, if the main power switch is turned ON, the tray 1 vertical transport sensor (PS4) is turned ON while the tray 1 paper feed sensor (PS5) is OFF.	K.1.5.1 10-01, 10-02, 10-40
Misfeed at tray 1 feed section	Paper jam of a sheet of paper left at the tray 1 feed section results, if the tray 1 vertical transport sensor (PS4) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.2 11-01, 11-02, 11-40
	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the tray 1 feed section results, if the tray 1 vertical transport sensor (PS4) is turned from OFF to ON while the tray 1 paper feed sensor (PS5) is OFF.	
Misfeed at tray 2 feed section	Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS12) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.3 12-01, 12-40
	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS12) is turned from OFF to ON.	
Misfeed at tray 3 feed section	Paper jam of a sheet of paper left at the tray 3 feed section results, if the tray 3 paper feed sensor (PS21) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.4 13-01, 13-40
Misfeed at tray 4 feed section	Paper jam of a sheet of paper left at the tray 4 feed section results, if the tray 4 paper feed sensor (PS26) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.5 14-01, 14-40
Misfeed at LCT transport section	Paper jam of a sheet of paper left at the LCT feed section results, if the LU paper feed sensor (PS3) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.7 17-20
Tray 3/4 horizontal transport section	Paper jam of a sheet of paper left at the tray 3/4 horizontal transport section results, if the horizontal transport sensor (PS29) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.8 17-30, 17-31
Tray 3/4 intermediate transport roller section	Paper jam of a sheet of paper left at the tray 3/4 intermediate transport roller section results, if the LCC vertical transport sensor (PS28) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.5.9 17-40, 17-41
Misfeed at 2nd transfer section	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS38) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.7.1 30-03
	Paper jam of a sheet of paper left at the 2nd transfer section results, if the OHP sensor (PS40) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS38) or paper exit sensor (PS39) is turned from OFF (unblocked) to ON (blocked).	
Misfeed at exit section	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS39) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.7.2 32-01, 32-05, 32-30
Misfeed at DF paper feed section	Paper jam of a sheet of paper left at the LCT feed section results, if the after separate sensor (PS4) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.1 66-02, 66-12
Misfeed at DF transport section	Paper jam of a sheet of paper left at the DF transfer section results, if the registration sensor (PS5) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.2 66-03, 66-13, 66-23, 66-33
Misfeed at DF paper exit section	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS7) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.3 66-04, 66-14
Misfeed at DF image reading section	Paper jam of a sheet of paper left at the DF image reading section results, if the before read sensor (PS6) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	K.1.8.4 66-05, 66-06
PK section residual paper jam (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	Paper jam of a sheet of paper left at the PK section results, when the main power switch is turned ON, and the paper is detected by the paper size detect board (PSDTB).	K.1.9.15 72-43
Misfeed at duplex transport section	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor/1 (PS47) is turned ON (unblocked) or the ADU paper passage sensor/2 (PS48) is turned ON (unblocked) when the main power	K.1.10.2 93-10

JAM type	JAM detection timing	Ref. page
	switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.	
	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor/1 (PS47) is turned from OFF (unblocked) to ON (blocked).	
	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the duplex transport section results, if the the ADU paper passage sensor/2 (PS48) is turned from OFF (unblocked) to ON (blocked).	

1.3 Sensor layout

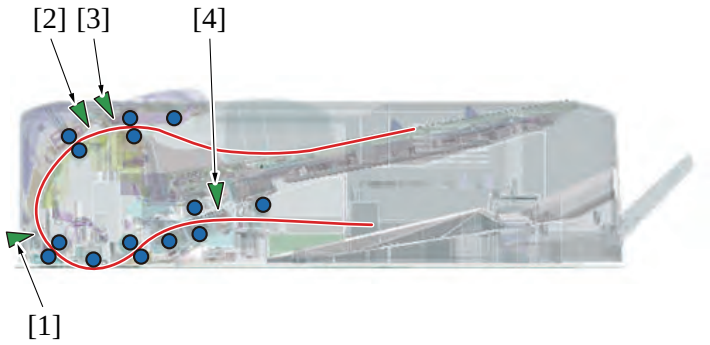
1.3.1 bizhub 958/808/758, bizhub PRO 958



[1]	Paper exit sensor (PS39)	[2]	ADU paper passage sensor/1 (PS47)
[3] *	Registration sensor (PS38)	[3] *	OHP sensor (PS40)
[4]	ADU paper passage sensor/2 (PS48)	[5]	Tray 2 vertical transport sensor (PS12)
[6]	LCC vertical transport sensor (PS28)	[7]	Tray 4 paper feed sensor (PS26)
[8]	Horizontal transport sensor (PS29)	[9]	Tray 3 paper feed sensor (PS21)
[10]	Tray 2 paper feed sensor (PS13)	[11]	Tray 1 paper feed sensor (PS5)
[12]	Tray 1 vertical transport sensor (PS4)	-	-

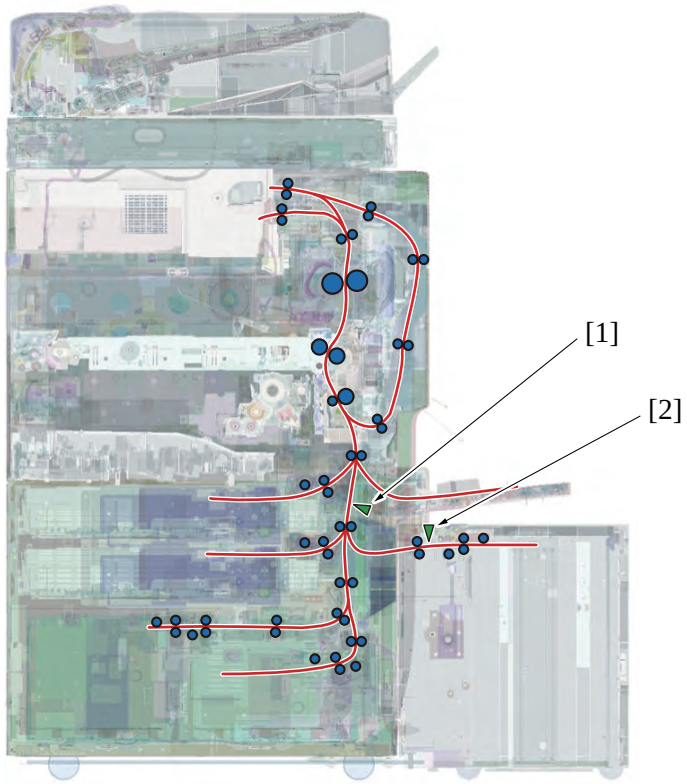
- *: Two different types of sensors are located in the area near [3].

1.3.2 Dual scan document feeder



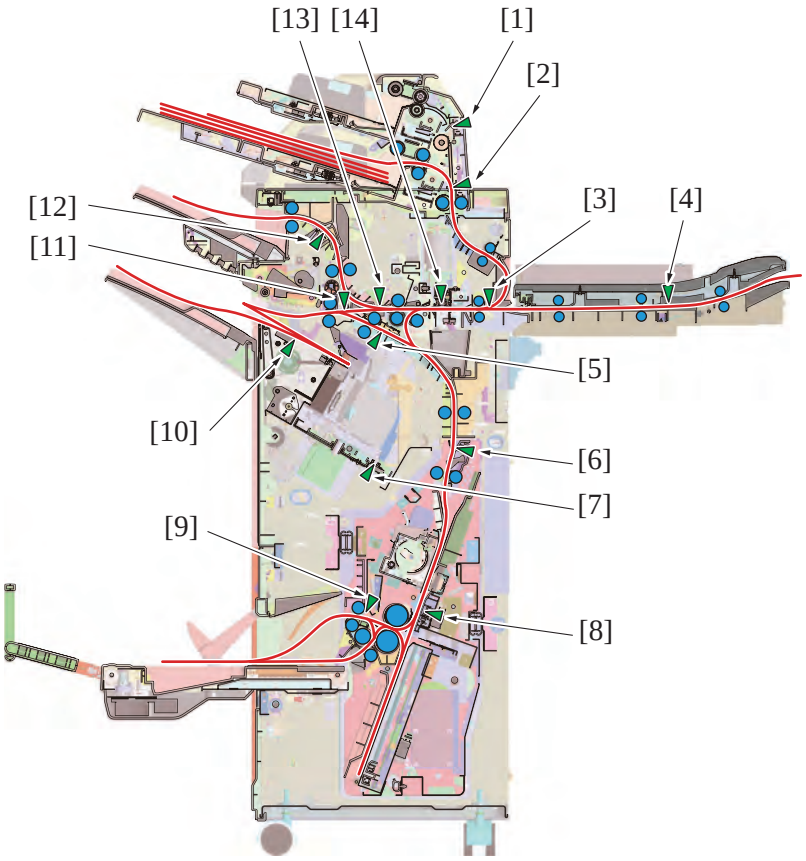
[1]	Before read sensor (PS6)	[2]	Registration sensor (PS5)
[3]	After separate sensor (PS4)	[4]	Exit sensor (PS7)

1.3.3 LU-205/LU-303



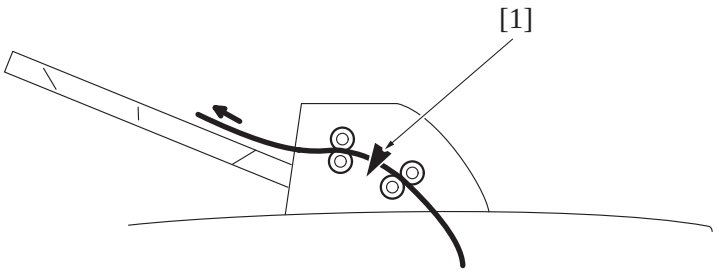
[1]	Tray 2 vertical transport sensor (PS12)	[2]	LU paper feed sensor (PS3)

1.3.4 FS-537/FS-537SD/PK-523/PI-507/ZU-609



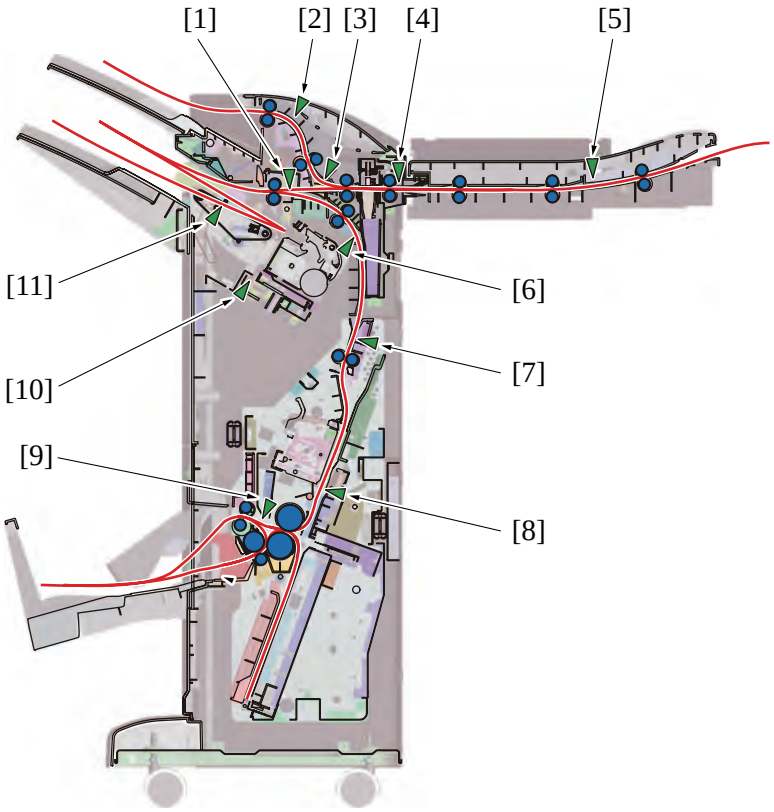
[1]	Paper entrance sensor /up (PS201)	[2]	Paper entrance sensor /lw (PS206)
[3]	FNS entrance sensor (PS34)	[4]	RU transport sensor (PS60)
[5]	SD discharge sensor (PS35)	[6]	SD entrance sensor (PS1)
[7]	Stapler position sensor (center) (PS20)	[8]	Center staple/fold stacker paper detect sensor (PS3)
[9]	Fold exit sensor (PS12)	[10]	Alignment plate paper detection sensor (PS32)
[11]	Main tray exit sensor (PS37)	[12]	Sub tray exit sensor (PS24)
[13]	FNS middle sensor (PS36)	[14]	PK punch home sensor/1 (PS301)

1.3.5 JS-602



[1]	Job tray paper exit sensor (PS402)	-	-

1.3.6 FS-536/FS-536SD/PK-520



[1]	Main tray exit sensor (PS16)	[2]	Sub tray exit sensor (PS8)
[3]	Punch position sensor (PS2)	[4]	FNS entrance sensor (PS4)
[5]	RU transport sensor (PS60)	[6]	Saddle exit sensor (PS5)
[7]	SD entrance sensor (PS1)	[8]	Center staple/fold stacker paper detect sensor (PS3)
[9]	Fold exit sensor (PS12)	[10]	Stapler position sensor (center) (PS24)
[11]	Staple stacker paper detection sensor (PS31)	-	-

1.4 Initial check items

- When a paper misfeed occurs, first perform the following initial check items.

Check item	Action
Does paper meet product specifications?	Replace paper.
Is the paper curled, wavy, or damp?	Replace paper. Instruct user on proper paper storage.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path or replace the part on the paper path if necessary.
Are rolls or rollers dirty, deformed, or worn?	Clean the defective roll or roller. Replace the defective roll or roller.
Are the paper size and the detected paper size by the edge guide are matching?	Adjust the edge guide to match the paper size.
Are the actuators operating correctly?	Correct the defective actuator. Replace the defective actuator.

1.4.1 Paper jam for thin paper

If paper jams occur while feeding thin paper (52 g/m^2 (13 $^{13}/_{16}$ lb)) from the tray 1 or the tray 2, adjust the paper pick-up pressure of the tray 1 or the tray 2 to apply the pick-up pressure for thin paper to the tray. However, if the pick-up pressure is changed to the one for thin paper, jam may occur especially when thick paper is used.

I.11.2.4 Pick-up pressure adjustment of the tray 1/2

1.4.2 Paper jam for thick paper

If paper jams occur while feeding thick paper from the manual bypass, adjust the separator roller pressure of the manual bypass to apply the separator roller pressure for thick paper to the tray. However, if the separator roller pressure is changed to the one for thick paper, jam may occur especially when thin paper is used.

I.11.3.2 Separator roller pressure adjustment of the bypass tray

1.4.3 Misfeed at the paper feed section

If paper misfeeds occur while feeding paper from the tray 3, the tray4 or the optional large capacity units, adjust the paper pick-up roller load adjustment of the trays.

I.11.2.6 Pick-up roller load adjustment of the tray 3/4

I.13.1.3 Pick-up roller load adjustment of the LCT
I.14.1.2 Pick-up roller load adjustment of the LCT

1.4.4 Misfeed at the DF paper feed section

If paper misfeeds occur while feeding paper from the reverse automatic document feeder, adjust the "adjusting the pressure of the separation roller".
I.12.1.4 Adjusting the pressure of the separation roller

1.5 1#-##

1.5.1 10-01, 10-02, 10-40

(1) Contents

JAM type	Misfeed at manual bypass feed section	
JAM code	10-01, 10-02, 10-40	
JAM detection timing	10-01	The leading edge of the paper does not turn ON the tray 1 vertical transport sensor (PS4) even after the lapse of a given period of time after the manual bypass tray starts to feed paper.
	10-02	For paper fed from the manual bypass tray, loop forming has not been complete before a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	10-40	For paper fed from the manual bypass tray, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the manual bypass feed section results, if the the tray 1 vertical transport sensor (PS4) is turned from OFF to ON while the tray 1 paper feed sensor (PS5) is OFF.
Misfeed processing location	Manual bypass tray door	
Relevant parts	• Bypass paper feed motor (M27) • Tray 1 vertical transport sensor (PS4) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	PFTDB CN14-8 (ON)	1-P
3	M27 operation check	PFTDB CN9-3 to 6	12-P
4	PFTDB F11 conduction check	-	-
5	Replace PFTDB.	-	-
6	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.2 11-01, 11-02, 11-40

(1) Contents

JAM type	Misfeed at tray 1 feed section	
JAM code	11-01, 11-02, 11-40	
JAM detection timing	11-01	The leading edge of the paper does not turn ON the tray 1 vertical transport sensor (PS4) even after the lapse of a given period of time after the tray 1 starts to feed paper.
	11-02	For paper fed from the tray 1, due to a delay in paper arrival, loop forming in front of the registration roller is not complete before the rise timing of the registration motor.
	11-40	For paper fed from the tray 1, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 1 feed section results, if the tray 1 vertical transport sensor (PS4) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the tray 1 feed section results, if the tray 1 vertical transport sensor (PS4) is turned from OFF to ON while the tray 1 paper feed sensor (PS5) is OFF.
Misfeed processing location	Manual bypass tray door	
Relevant parts	• Paper feed motor (M22) • Tray 1 paper feed clutch (CL1) • Tray 1 vertical transport sensor (PS4) • Tray 1 paper feed sensor (PS5) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	PFTDB CN14-8 (ON)	1-P
3	PS5 I/O check, sensor check	PFTDB CN14-5 (ON)	1-P
4	CL1 operation check	PFTDB CN14-14 (REM)	2-P
5	M22 operation check	PFTDB CN10-1 to 4	13-P
6	PFTDB F11 or F12 conduction check	-	-
7	Replace PFTDB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.3 12-01, 12-40

(1) Contents

JAM type	Misfeed at tray 2 feed section	
JAM code	12-01, 12-40	
JAM detection timing	12-01	The leading edge of the paper does not turn ON the tray 2 vertical transport sensor (PS12) even after the lapse of a given period of time after the tray 2 starts to feed paper.
	12-40	For paper fed from the tray 2, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS12) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the tray 2 feed section results, if the tray 2 vertical transport sensor (PS12) is turned from OFF to ON.
Misfeed processing location	Lower right door	
Relevant parts	• Paper feed motor (M22) • Tray 2 paper feed clutch (CL2) • Tray 2 vertical transport sensor (PS12) • Tray 2 paper feed sensor (PS13) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS12 I/O check, sensor check	PFTDB CN12-10 (ON)	3-P
3	PS13 I/O check, sensor check	PFTDB CN12-7 (ON)	3-P
4	CL2 operation check	PFTDB CN12-1 (REM)	2-P
5	M22 operation check	PFTDB CN10-1 to 4	13-P
6	PFTDB F11 or F12 conduction check	-	-
7	Replace PFTDB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.4 13-01, 13-40

(1) Contents

JAM type	Misfeed at tray 3 feed section	
JAM code	13-01, 13-40	
JAM detection timing	13-01	The leading edge of the paper does not turn ON (block) the tray 3 paper feed sensor (PS21) even after the lapse of a given period of time after the tray 3 starts to feed paper.
	13-40	For paper fed from the tray 3, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 3 feed section results, if the tray 3 paper feed sensor (PS21) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Tray 3/4 horizontal transport unit	
Relevant parts	• LCC transport motor (M25) • Tray 3 paper feed clutch (CL5) • Tray 3 paper feed sensor (PS21) • Paper feed/transport drive board (PFTDB)	

	• MFP board (MFPB)

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS21 I/O check, sensor check	PFTDB CN17-9 (ON)	6-X
3	CL5 operation check	PFTDB CN16-5 (REM)	5-X
4	M25 operation check	PFTDB CN13-1 to 7	11-X
5	PFTDB F12 or F15 conduction check	-	-
6	Replace PFTDB.	-	-
7	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.5 14-01, 14-40

(1) Contents

JAM type	Misfeed at tray 4 feed section	
JAM code	14-01, 14-40	
JAM detection timing	14-01	The leading edge of the paper does not turn ON (unblock) the tray 4 paper feed sensor (PS26) even after the lapse of a given period of time after the tray 4 starts to feed paper.
	14-40	For paper fed from the tray 4, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
	-	Paper jam of a sheet of paper left at the tray 4 feed section results, if the tray 4 paper feed sensor (PS26) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Lower right door	
Relevant parts	• LCC transport motor (M25) • Tray 4 paper feed clutch (CL7) • Tray 4 paper feed sensor (PS26) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS26 I/O check, sensor check	PFTDB CN19-3 (ON)	7-X
3	CL7 operation check	PFTDB CN18-2 (REM)	7-X
4	M25 operation check	PFTDB CN13-1 to 7	11-X
5	PFTDB F12 or F15 conduction check	-	-
6	Replace PFTDB.	-	-
7	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.6 15-01, 15-40

(1) Contents

JAM type	LCT feed section (When LU-205 or LU303 is installed)	
JAM code	15-01, 15-40	
JAM detection timing	15-01	The leading edge of the paper does not turn ON the LU paper feed sensor (PS3) even after the lapse of a given period of time after the LCT starts to feed paper.
	15-40	For paper fed from the LCT, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
Misfeed processing location	Lower right door	
Relevant parts	• LU paper feed motor (M2) • LU paper feed sensor (PS3) • LU drive board (LUDB) • Paper feed/transport drive board (PFTDB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	LUDB CN5-8 (ON)	LU-205/LU-303 4-G

Step	Action	Control signal	Location of electrical component
3	M2 operation check	LUDB CN4-5 to 8	LU-205/LU-303 3-G
4	Replace LUDB. (LU-205/LU-303)	-	-
5	PFTDB F1 or F4 conduction check	-	-
6	Replace PFTDB.	-	-

- Link to the wiring diagram (N.3.1 LU-205)
- Link to the wiring diagram (N.3.2 LU-303)

1.5.7 17-20

(1) Contents

JAM type	Misfeed at LCT transport section (When LU-205 or LU303 is installed)	
JAM code	17-20	
JAM detection timing	17-20	The tray 2 vertical transport sensor (PS12) is not turned ON even after the set period of time has elapsed after the LU paper feed sensor (PS3) turns ON by a paper.
	-	Paper jam of a sheet of paper left at the LCT transport section results, if the LU paper feed sensor (PS3) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Lower right door	
Relevant parts	• LU transport motor (M3) • LU paper feed sensor (PS3) • Tray 2 vertical transport sensor (PS12) • LU drive board (LUDB) • Paper feed/transport drive board (PFTDB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS3 I/O check, sensor check	LUDB CN5-8 (ON)	LU-205/LU-303 4-G
3	PS12 I/O check, sensor check	PFTDB CN12-10 (ON)	3-P
4	M3 operation check	LUDB CN4-1 to 4	LU-205/LU-303 3-G
5	Replace LUDB. (LU-205/LU-303)	-	-
6	PFTDB F1 or F4 conduction check	-	-
7	Replace PFTDB.	-	-

- Link to the wiring diagram (N.3.1 LU-205)
- Link to the wiring diagram (N.3.2 LU-303)
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.8 17-30, 17-31

(1) Contents

JAM type	Tray 3/4 horizontal transport section	
JAM code	17-30, 17-31	
JAM detection timing	17-30	The horizontal transport sensor (PS29) is not turned ON (blocked) even after the set period of time has elapsed after the tray 3 paper feed sensor (PS3) turns ON (block) by a paper.
	17-31	The LCC vertical transport sensor (PS28) is not turned ON even after the set period of time has elapsed after the horizontal transport sensor (PS29) turns ON (block) by a paper.
	-	Paper jam of a sheet of paper left at the tray 3/4 horizontal transport section results, if the horizontal transport sensor (PS29) is turned ON (blocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Tray 3/4 horizontal transport unit	
Relevant parts	• LCC transport motor (M25) • Tray 3 transport clutch (CL6) • Horizontal transport clutch (CL3) • Tray 3 paper feed sensor (PS21) • Horizontal transport sensor (PS29) • LCC vertical transport sensor (PS28) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS21 I/O check, sensor check	PFTDB CN17-9 (ON)	6-X

Step	Action	Control signal	Location of electrical component
3	PS28 I/O check, sensor check	PFTDB CN15-15 (ON)	10-X
4	PS29 I/O check, sensor check	PFTDB CN15-13 (ON)	10-X
5	CL3 operation check	PFTDB CN15-5 (REM)	9-X
6	CL6 operation check	PFTDB CN17-10 (REM)	6-X
7	M25 operation check	PFTDB CN13-1 to 7	11-X
8	PFTDB F12 or F15 conduction check	-	-
9	Replace PFTDB.	-	-
10	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.5.9 17-40, 17-41

(1) Contents

JAM type	Tray 3/4 intermediate transport roller section	
JAM code	17-40, 17-41	
JAM detection timing	17-40	The LCC vertical transport sensor (PS28) is not turned ON even after the set period of time has elapsed after the tray 4 paper feed sensor (PS26) turns ON (unblock) by a paper.
	17-41	The tray 2 vertical transport sensor (PS12) is not turned ON even after the set period of time has elapsed after the LCC vertical transport sensor (PS28) turns ON by a paper.
	-	Paper jam of a sheet of paper left at the tray 3/4 intermediate transport roller section results, if the LCC vertical transport sensor (PS28) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Lower right door • Tray 3/4 horizontal transport unit	
Relevant parts	• LCC transport motor (M25) • LCC vertical transport motor (M28) • Tray 2 vertical transport motor (M7) • Tay4 paper feed clutch (CL7) • Tray 2 vertical transport sensor (PS12) • Tray 4 paper feed sensor (PS26) • LCC vertical transport sensor (PS28) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS12 I/O check, sensor check	PFTDB CN12-10 (ON)	3-P
3	PS26 I/O check, sensor check	PFTDB CN19-3 (ON)	7-X
4	PS28 I/O check, sensor check	PFTDB CN15-15 (ON)	10-X
5	CL7 operation check	PFTDB CN18-2 (REM)	7-X
6	M25 operation check	PFTDB CN13-1 to 7	11-X
7	M28 operation check	PFTDB CN11-1 to 4	10-X
8	M7 operation check	PFTDB CN10-9 to 12	13-P
9	PFTDB F11, F12, F13, or F15 conduction check	-	-
10	Replace PFTDB.	-	-
11	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.6 2#-##

1.6.1 20-01, 20-02, 20-03, 20-20

(1) Contents

JAM type	Misfeed at vertical transport section	
JAM code	20-01, 20-02, 20-03, 20-20	
JAM detection timing	20-01	The registration sensor (PS38) is not turned ON (unblocked) even after the lapse of a given period of time after the tray 1 vertical transport sensor (PS4) turns ON by a paper.
	20-02	For paper fed from the tray 2, tray 3, tray 4 or LU-205/LU-303, loop forming has not been complete before a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	20-03	The registration sensor (PS40) is not turned ON even after the lapse of a given period of time after the tray 1 vertical transport sensor (PS4) turns ON by a paper.
	20-20	The tray 1 vertical transport sensor (PS4) is not turned ON even after the lapse of a given period of time after the tray 2 vertical transport sensor (PS12) turns ON by a paper.

Misfeed processing location	• Manual bypass tray door • Lower right door
Relevant parts	• Tray 1 vertical transport motor (M5) • Tray 2 vertical transport motor (M7) • Tray 1 vertical transport sensor (PS4) • Tray 2 vertical transport sensor (PS12) • Registration sensor (PS38) • OHP sensor (PS40) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	PFTDB CN14-8 (ON)	1-P
3	PS12 I/O check, sensor check	PFTDB CN12-10 (ON)	3-P
4	PS38 I/O check, sensor check	PFTDB CN2-6 (ON)	4-P
5	PS40 I/O check, sensor check	PFTDB CN2-3 (REM)	4-P
6	M5 operation check	PFTDB CN10-5 to 8	13-P
7	M7 operation check	PFTDB CN10-9 to 12	13-P
8	PFTDB F13 conduction check	-	-
9	Replace PFTDB.	-	-
10	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.7 3#-##

1.7.1 30-03

(1) Contents

JAM type	Misfeed at 2nd transfer section	
JAM code	30-03	
JAM detection timing	30-03	The paper exit sensor (PS39) is not turned ON (unblocked) even after the set period of time has elapsed after the registration sensor (PS38) turns ON (unblocked) by a paper.
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS38) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	Paper jam of a sheet of paper left at the 2nd transfer section results, if the OHP sensor (PS40) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the 2nd transfer section results, if the registration sensor (PS38) or paper exit sensor (PS39) is turned from OFF (unblocked) to ON (blocked).
Misfeed processing location	Upper right door	
Relevant parts	• Registration motor (M2) • Fusing motor (M30) • Registration sensor (PS38) • OHP sensor (PS40) • Paper exit sensor (PS39) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS38 I/O check, sensor check	PFTDB CN2-6 (ON)	4-P
3	PS40 I/O check, sensor check	PFTDB CN2-3 (REM)	4-P
4	PS39 I/O check, sensor check	PFTDB CN2-12 (ON)	5-P
5	M2 operation check	PFTDB CN7-1 to 4	8-P
6	M30 operation check	MFPB CN16-4 (REM) MFPB CN16-7 (LOCK)	10-K
7	PFTDB F16 conduction check	-	-
8	Replace PFTDB.	-	-
9	MFPB F14E conduction check	-	-
10	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.7.2 32-01, 32-05, 32-30

(1) Contents

JAM type	Misfeed at exit section	
JAM code	32-01, 32-05, 32-30	
JAM detection timing	32-01	The ADU paper passage sensor/1 (PS47) is not turned ON (blocked) even after the lapse of a given period of time after the reverse sequence is started.
	32-05	The paper exit sensor (PS39) is not turned OFF (blocked) even after the lapse of a given period of time after PS3 turns ON (unblock) by a paper.
	32-30	Heating roller assy had a trouble rotating while printing.
	-	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS39) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	Upper right door	
Relevant parts	• Exit motor (M4) • Fusing motor (M30) • ADU transport motor/1 (M31) • Switchback motor (M33) • Gate switch solenoid (SD1) • Paper exit sensor (PS39) • ADU paper passage sensor/1 (PS47) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS39 I/O check, sensor check	PFTDB CN2-12 (ON)	5-P
3	PS47 I/O check, sensor check	PFTDB CN28-3 (ON)	6-P
4	M4 operation check	MFPB CN12E-17 to 20	13-K
5	M30 operation check	MFPB CN16E-4 (REM) MFPB CN16E-7 (LOCK)	10-K
6	M31 operation check	PFTDB CN28-14 to 17	8-P
7	M33 operation check	MFPB CN12E-13 to 16	13-K
8	SD1 operation check	MFPB CN12E-11 (DRIVE)	13-K
9	PFTDB F10 conduction check	-	-
10	Replace PFTDB.	-	-
11	MFPB F13E or F14E conduction check	-	-
12	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.8 6#-##

1.8.1 66-02, 66-12

(1) Contents

JAM type	Misfeed at DF paper feed section	
JAM code	66-02, 66-12	
JAM detection timing	66-02	The after separate sensor (PS4) is not turned ON after a lapse of a given time after the take-up motor (M1) is turned ON.
	66-12	A StreetPass communication occurs between the DF and the controller.
	-	Paper jam of a sheet of paper left at the DF paper feed section results, if the after separate sensor (PS4) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Take-up motor (M1) • After separate sensor (PS4) • DF control board (DFCB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-

Step	Action	Control signal	Location of electrical component
2	PS4 I/O check, sensor check	DFCB CN6-5 (ON)	DF 7-J
3	M1 operation check	DFCB CN3-1 to 4	DF 12-C
4	DFCB ICP2 or ICP10 conduction check.	-	-
5	Replace DFCB.	-	-
6	Replace MFPB.	-	-

- Link to the wiring diagram (N.2. Dual scan document feeder)

1.8.2 66-03, 66-13, 66-23, 66-33

(1) Contents

JAM type	Misfeed at DF transport section	
JAM code	66-03, 66-13, 66-23, 66-33	
JAM detection timing	66-03	The after separate sensor (PS4) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
	66-13	The registration sensor (PS5) is not turned ON even after the lapse of a given period of time after the paper has turned ON the after separate sensor (PS4).
	66-23	The registration sensor (PS5) is not turned OFF even after the lapse of a given period of time after the paper has turned OFF the after separate sensor (PS4).
	66-33	The before read sensor (PS6) is not turned ON after a lapse of a given time after a loop is formed and the registration motor (M2) is activated.
	-	Paper jam of a sheet of paper left at the DF transfer section results, if the registration sensor (PS5) is turned ON when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Registration motor (M2) • Take-up motor (M1) • Registration sensor (PS5) • After separate sensor (PS4) • Before read sensor (PS6) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	DFCB CN6-17 (ON)	DF 9-J
3	PS4 I/O check, sensor check	DFCB CN6-5 (ON)	DF11-C
4	PS6 I/O check, sensor check	DFCB CN11-2 (ON)	DF 1-C
5	M1 operation check	DFCB CN3-1 to 4	DF 12-C
6	M2 operation check	DFCB CN3-5 to 8	DF 11-C
7	DFCB ICP3 or ICP15 conduction check.	-	-
8	Replace DFCB.	-	-

- Link to the wiring diagram (N.2. Dual scan document feeder)

1.8.3 66-04, 66-14

(1) Contents

JAM type	Misfeed at DF paper exit section	
JAM code	66-04, 66-14	
JAM detection timing	66-04	The paper exit sensor (PS7) is not turned ON (unblocked) even after the set period of time has elapsed after the before read sensor (PS6) is turned ON by the paper.
	66-14	The paper exit sensor (PS7) is not turned OFF even after the lapse of a given period of time after the paper has turned OFF the before read sensor (PS6).
	-	Paper jam of a sheet of paper left at the exit section results, if the paper exit sensor (PS7) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Paper feed motor (M4) • Before read sensor (PS6) • Paper exit sensor (PS7) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS6 I/O check, sensor check	DFCB CN11-3 (ON)	DF 1-C
3	PS7 I/O check, sensor check	DFCB CN13-3 (ON)	DF 7-C
4	M4 operation check	DFCB CN15-1 to 4	DF 11-C
5	DFCB ICP8 conduction check.	-	-
6	Replace DFCB.	-	-

- Link to the wiring diagram (N.2. Dual scan document feeder)

1.8.4 66-05, 66-06

(1) Contents

JAM type	Misfeed at DF image reading section	
JAM code	66-05, 66-06	
JAM detection timing	66-05	The after separate sensor (PS6) is not turned OFF even after the lapse of a given period of time after the paper has turned OFF the registration sensor (PS6).
	66-06	The before read sensor (PS6) is turned ON earlier than a given period of time after the paper has turned OFF the before read sensor (PS6) during original transportation.
	-	Paper jam of a sheet of paper left at the DF image reading section results, if the before read sensor (PS6) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Reading motor (M3) • Reading roller pressure/retraction motor (M6) • Registration sensor (PS5) • Before read sensor (PS6) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Make the adjustment of original stop position.	-	-
3	PS5 I/O check, sensor check	DFCB CN6-17 (ON)	DF 9-J
4	PS6 I/O check, sensor check	DFCB CN11-3 (ON)	DF 1-C
5	M3 operation check	DFCB CN2-1 to 6	DF 12-C
6	M6 operation check	DFCB CN4-1 to 2	DF 10-C
7	DFCB ICP1 or ICP16 conduction check.	-	-
8	Replace DFCB.	-	-

- Link to the wiring diagram (N.2. Dual scan document feeder)

1.8.5 66-08

(1) Contents

JAM type	Double feed detection jam	
JAM code	66-08	
JAM detection timing	66-08	Remained paper is found at the multi feed detection.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Multi feed detection board/1 (transmitter) (MFDB/1) • Multi feed detection board/2 (receiver) (MFDB/2) • Sensor control board (SCB) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Perform the Multi-Feed DetectionAdj.	-	-
3	Replace MFDB/1.	-	-
4	Replace MFDB/2.	-	-
5	Replace SCB.	-	-
6	DFCB ICP11 conduction check.	-	-
7	Replace DFCB.	-	-

- Link to the wiring diagram (N.2. Dual scan document feeder)

1.8.6 66-54

(1) Contents

JAM type	DF controller jam	
JAM code	66-54	
JAM detection timing	66-54	The lift up lower sensor (PS3) is not blocked after a lapse of a given time after the last sheet of original is fed out.
Misfeed processing location	• Transportation cover • Opening and closing guide	
Relevant parts	• Take-up motor (M1) • Registration motor (M2) • Reading motor (M3) • Paper feed motor (M4) • Reading roller pressure/retraction motor (M6) • After separate sensor (PS4) • Registration sensor (PS5) • Before read sensor (PS6) • Paper exit sensor (PS7) • DF control board (DFCB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	DFCB CN6-5 (ON)	DF 11-C
3	PS5 I/O check, sensor check	DFCB CN6-17 (ON)	DF 9-J
4	PS6 I/O check, sensor check	DFCB CN11-3 (ON)	DF 1-C
5	PS7 I/O check, sensor check	DFCB CN13-3 (ON)	DF 7-C
6	M1 operation check	DFCB CN3-1 to 4	DF 12-C
7	M2 operation check	DFCB CN3-5 to 8	DF 11-C
8	M3 operation check	DFCB CN2-1 to 6	DF12-C
9	M4 operation check	DFCB CN15-1 to 4	DF 11-C
10	M6 operation check	DFCB CN4-1 to 2	DF 10-C
11	Replace DFCB.	-	-

- Link to the wiring diagram (N.2. Dual scan document feeder)

1.9 7#-##

1.9.1 72-11

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-11		
JAM detection timing	72-11	<When FS-537 or FS-537SD is installed>	The FNS middle sensor (PS36) is not turned ON even after the set period of time has elapsed after the FNS entrance sensor (PS34) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-537 or FS-537SD is installed>		• FNS entrance sensor (PS34) • FNS middle sensor (PS36) • FS control board (FSCB)

(2) Procedure

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
3	PS36 I/O check, sensor check	FSCB J12<A>-10 (ON)	FS-537/FS-537SD 16-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.2 72-14

(1) Contents

JAM type	Misfeed at FS transport section
JAM code	72-14

JAM detection timing	72-14	<When FS-536 or FS-536SD is installed>	The saddle exit sensor (PS5) is not turned ON even after the set period of time has elapsed after the main tray exit sensor (PS16) is turned ON by the paper.
		<When FS-537 or FS-537SD is installed>	The SD discharge sensor (PS35) is not turned ON even after the set period of time has elapsed after the main tray exit sensor (PS37) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Saddle exit sensor (PS5) • Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• SD discharge sensor (PS35) • Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-536/FS-536SD 16-K
3	PS16 I/O check, sensor check	FSCB J9<B>-4 (ON)	FS-536/FS-536SD 11-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS35 I/O check, sensor check	FSCB J15-7 (ON)	FS-537/FS-537SD 15 to 16-K to L
3	PS37 I/O check, sensor check	FSCB J12<B>-14 (ON)	FS-537/FS-537SD 18-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.3 72-15

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-15		
JAM detection timing	72-15	<When FS-536 or FS-536SD is installed>	The saddle exit sensor (PS5) is not turned OFF even after the set period of time has elapsed after it is turned ON.
		<When FS-537 or FS-537SD is installed>	The SD discharge sensor (PS35) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Saddle exit sensor (PS5) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• SD discharge sensor (PS35) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-536/FS-536SD 16-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS35 I/O check, sensor check	FSCB J15-7 (ON)	FS-537/FS-537SD 15 to 16-K to L
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.4 72-16

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-16		
JAM detection timing	72-16	<When FS-536 or FS-536SD is installed>	The FNS entrance sensor (PS4) is not turned ON even after the set period of time has elapsed after the RU transport sensor (PS60) is turned ON (blocked) by the paper.
		<When FS-537 or FS-537SD is installed>	The FNS entrance sensor (PS34) is not turned ON even after the set period of time has elapsed after the RU transport sensor (PS60) is turned ON (blocked) by the paper.
Misfeed processing location	Horizontal conveyance cover		
Relevant parts	<When FS-536 or FS-536SD is installed>		• RU transport sensor (PS60) • FNS entrance sensor (PS4) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• RU transport sensor (PS60) • FNS entrance sensor (PS34) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS60 I/O check, sensor check	FSCB J6-7 (ON)	FS-536/FS-536SD 12-K
3	PS4 I/O check, sensor check	FSCB J4<B>-9 (ON)	FS-536/FS-536SD 15-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS60 I/O check, sensor check	FSCB J8<B>-11 (ON)	FS-536/FS-536SD 12-K
3	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-536/FS-536SD 15-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.5 72-17

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-17		
JAM detection timing	72-17	<When FS-536 or FS-536SD is installed>	The FNS entrance sensor (PS4) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
		<When FS-537 or FS-537SD is installed>	The FNS entrance sensor (PS34) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• FNS entrance sensor (PS4) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• FNS entrance sensor (PS34) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	FSCB J4<B>-9 (ON)	FS-536/FS-536SD 15-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.6 72-18

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-18		
JAM detection timing	72-18	<When FS-536 or FS-536SD is installed>	• The main tray exit sensor (PS16) is not turned ON even after the set period of time has elapsed after the FNS entrance sensor (PS4) is turned ON by the paper. • While the buffer is controlled, the main tray exit sensor (PS16) is not tuned ON even after the set period of time has elapsed after the reverse rotation drive is started.
		<When FS-537 or FS-537SD is installed>	The Main tray exit sensor (PS37) is not turned ON even after the set period of time has elapsed after the FNS middle sensor (PS36) is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• FNS entrance sensor (PS4) • Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• FNS middle sensor (PS36) • Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS4 I/O check, sensor check	FSCB J4<B>-9 (ON)	FS-536/FS-536SD 15-C
3	PS16 I/O check, sensor check	FSCB J9<B>-4 (ON)	FS-536/FS-536SD 11-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS36 I/O check, sensor check	FSCB J12<A>-10 (ON)	FS-537/FS-537SD 16-D
3	PS37 I/O check, sensor check	FSCB J12<B>-14 (ON)	FS-537/FS-537SD 18-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.7 72-19

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-19		
JAM detection timing	72-19	<When FS-536 or FS-536SD is installed>	The main tray exit sensor (PS16) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
		<When FS-537 or FS-537SD is installed>	The main tray exit sensor (PS37) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS16 I/O check, sensor check	FSCB J9<B>-4 (ON)	FS-536/FS-536SD 10-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS37 I/O check, sensor check	FSCB J12<B>-14 (ON)	FS-537/FS-537SD 18-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.8 72-21

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-21		
JAM detection timing	72-21	<When FS-536 or FS-536SD is installed>	The staple stacker paper detection sensor (PS31) is not turn OFF even after the set period of time has elapsed after the start of exiting paper.
		<When FS-537 or FS-537SD is installed>	The alignment plate paper detection sensor (PS32) is not turn OFF even after the set period of time has elapsed after the start of exiting paper.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Staple stacker paper detection sensor (PS31) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Alignment plate paper detection sensor (PS32) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS31 I/O check, sensor check	FSCB J12-11 (ON)	FS-536/FS-536SD 6-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS32 I/O check, sensor check	FSCB J21-12 (ON)	FS-537/FS-537SD 5-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.9 72-22

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-22		
JAM detection timing	72-22	<When FS-536 or FS-536SD is installed>	The sub tray exit sensor (PS8) is not turned ON (blocked) even after the set period of time has elapsed after the paper reaches the paper transport acceleration point.
		<When FS-537 or FS-537SD is installed>	The sub tray exit sensor (PS24) is not turned ON (blocked) even after the set period of time has elapsed after the paper reaches the paper transport acceleration point.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Sub tray exit sensor (PS8) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Sub tray exit sensor (PS24) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS8 I/O check, sensor check	FSCB J9<B>-8 (ON)	FS-536/FS-536SD 11-C
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS24 I/O check, sensor check	FSCB J15-3 (ON)	FS-537/FS-537SD 16-K to L
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.10 72-23

(1) Contents

JAM type	Misfeed at FS transport section		
JAM code	72-23		
JAM detection timing	72-23	<When FS-536 or FS-536SD is installed>	The sub tray exit sensor (PS8) is not turned OFF (unblocked) even after the set period of time has elapsed after PS8 turns ON (block).
		<When FS-537 or FS-537SD is installed>	The sub tray exit sensor (PS24) is not turned OFF (unblocked) even after the set period of time has elapsed after PS24 turns ON (block).
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Sub tray exit sensor (PS8) • FNS entrance sensor (PS4) • Main tray exit sensor (PS16) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Sub tray exit sensor (PS24) • FNS entrance sensor (PS34) • FNS middle sensor (PS36) • Main tray exit sensor (PS37) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Clean the sensor of paper path.	-	-
3	PS8 I/O check, sensor check	FSCB J9<B>-8 (ON)	FS-536/FS-536SD 11-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Clean the sensor of paper path.	-	-
3	PS24 I/O check, sensor check	FSCB J15-3 (ON)	FS-537/FS-537SD 16-K to L
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.11 72-25, 72-26

(1) Contents

JAM type	Misfeed at SD paper exit section		
JAM code	72-25, 72-26		
JAM detection timing	72-25	<When FS-536SD or FS-537SD is installed>	The fold exit sensor (PS12) is not turned ON by the paper even after the set period of time has elapsed after the half-fold exit operation started.
	72-26	<When FS-536SD or FS-537SD is installed>	The fold exit sensor (PS12) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• Fold exit sensor (PS12) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS12 I/O check, sensor check	SDCB J9-2 (ON)	FS-536/FS-536SD 5-P FS-537/FS-537SD 4-P

Step	Action	Control signal	Location of electrical component
3	Replace SDCB. (FS-536SD/FS-537SD)	-	-
4	Replace FSCB. (FS-536SD/FS-537SD)	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.12 72-31, 72-34

(1) Contents

JAM type	Misfeed at JS exit section		
JAM code	72-31, 72-34		
JAM detection timing	72-31	<When FS-537+JS-602 or FS-537SD+JS-602 is installed>	The job tray paper exit sensor (PS402) is not turned ON (unblocked) even after the set period of time has elapsed after the route change gate home sensor (PS21) turns OFF (unblock) by the paper.
	72-34	<When FS-537+JS-602 or FS-537SD+JS-602 is installed>	The job tray paper exit sensor (PS402) is not turned OFF (unblocked) even after the set period of time has elapsed after PS402 turns ON (block) by a paper.
Misfeed processing location	Separator cover		
Relevant parts	<When FS-537+JS-602 or FS-537SD +JS-602 is installed>		• Job tray paper exit sensor (PS402) • FS control board (FSCB)

(2) Procedure

<When FS-537+JS-602 or FS-537SD+JS-602 is installed>

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS402 I/O check, sensor check	FSCB J10-6 (ON)	FS-537/FS-537SD 9-M
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.13 72-35

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-35		
JAM detection timing	72-35	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	• When a paper is fed from the upper tray, the paper entrance sensor /Lw (PS206) is not turned ON (unblocked) even after the set period of time has elapsed after the transfer clutch /Up (CL201) turns ON by a paper. • When a paper is fed from the lower tray, The paper entrance sensor /Lw (PS206) is not turned ON (unblocked) even after the set period of time has elapsed after the transfer clutch /Lw (CL202) turns ON by a paper.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Transfer clutch /Up (CL201) • Transfer clutch /Lw (CL202) • Paper entrance sensor /Lw (PS206) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

<When FS-537+PI-507 or FS-537SD+PI-507 is installed>

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS206 I/O check, sensor check	PIDB CN53<A>-5 (ON)	PI-507 10-C
3	CL201 operation check	PIDB CN54-3 (ON)	PI-507 6-C
4	CL202 operation check	PIDB CN56-1 (ON)	PI-507 9-C
5	PIDB ICP4 conduction check.	-	-
6	Replace PIDB.	-	-
7	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.6 PI-507)

1.9.14 72-40, 72-41

(1) Contents

JAM type	Misfeed at ZU section

JAM code	72-40, 72-41		
JAM detection timing	72-40	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The FNS middle sensor (PS36) is not turned OFF even after the set period of time has elapsed after it is turned ON by the paper.
	71-41	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	When the second fold is started in Z-fold mode, the FNS middle sensor (PS36) is not switched from ON to OFF by the paper after the set period of time has elapsed.
Misfeed processing location	Front door		
Relevant parts	<When FS-537+ZU-609 or FS-537SD +ZU-609 is installed>		• ZU transport motor (M500) • Folding guide motor (M501) • FNS middle sensor (PS36) • ZU drive board (ZUDB) • FS control board (FSCB)

(2) Procedure

<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS36 I/O check, sensor check	FSCB J12<A>-10 (ON)	FS-537/FS-537SD 16-D
3	M500 operation check	ZUDB CN6-1 to 6	ZU-509 1 to 2-B
4	M501 operation check	ZUDB CN6-9 to 12	ZU-509 2-B
5	ZUDB ICP1 or ICP2 conduction check.	-	-
6	Replace ZUDB.	-	-
7	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.5 ZU-609)

1.9.15 72-43

(1) Contents

JAM type	Misfeed at PK JAM		
JAM code	72-43		
JAM detection timing	72-43	<When FS-536+PK-520 or FS-536SD+PK-520 is installed>	The punch position sensor (PS2) is not turned ON (unblocked) after a lapse of a given time after the punch drive motor (M1) starts rotating.
		<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The punch position sensor (PS301) is not turned ON (unblocked) after a lapse of a given time after the punch drive motor (M301) starts rotating.
	-	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	Paper jam of a sheet of paper left at the PK section results, when the main power switch is turned ON, and the paper is detected by the paper size detect board (PSDTB).
Misfeed processing location	Front door		
Relevant parts	<When FS-536+PK-520 or FS-536SD +PK-520 is installed>		• Punch drive motor (M1) • Punch position sensor (PS2) • FS control board (FSCB)
	<When FS-537+PK-523 or FS-537SD +PK-523 is installed>		• Punch drive motor (M301) • PK punch home sensor/1 (PS301) • Punch control board (PKCB) • FS control board (FSCB)
	Residual paper jam		• Paper size detect board (PSDTB) • FS control board (FSCB)

(2) Procedure

When FS-536+PK-520 or FS-536SD+PK-520 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS2 I/O check, sensor check	FSCB J7-2 (ON)	FS-536/FS-536SD (PK-520) 13-K
3	M1 operation check	FSCB J7-7 to 8	FS-536/FS-536SD (PK-520) 13-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537+PK-523 or FS-537SD+PK-523 is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS301 I/O check, sensor check	PKCB CN36-5 (ON)	PK-523 3-C

Step	Action	Control signal	Location of electrical component
3	M301 operation check	PKCB CN35-1 to 3	PK-523 2-C
4	Replace PKCB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.4 PK-523)

Residual paper jam (When FS-537+PK-523 or FS-537SD+PK-523 is installed)

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Adjust the sensitivity (light intensity) by selecting [Finisher] -> [FS-FN adjustment] -> [Punch F. Sensor Intensity Adj.]. After adjustment, open and then close the front door, and check if the residual paper jam indication disappears. To turn off the main power switch, wait for more than 10 seconds until the residual paper jam indication disappears.	-	-
3	Replace PSDTB.	-	-
4	Replace FSCB.	-	-

1.9.16 72-49

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-49		
JAM detection timing	72-49	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The paper entrance sensor /Up (PS201) is not turned ON (unblocked) after a lapse of a given time after the transfer clutch /Up is turned ON.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Transfer clutch /Up (CL201) • Paper entrance sensor /Up (PS201) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

<When FS-537+PI-507 or FS-537SD+PI-507 is installed>

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS201 I/O check, sensor check	PIDB CN53<A>-2 (ON)	PI-507 10-C
3	CL201 operation check	PIDB CN54-3 (ON)	PI-507 10-C
4	PIDB ICP4 conduction check.	-	-
5	Replace PIDB.	-	-
6	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.6 PI-507)

1.9.17 72-50

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-50		
JAM detection timing	72-50	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The FNS entrance sensor (PS34) is not turned ON even after the set period of time has elapsed after the paper entrance sensor /Up (PS201) turns ON (unblock) by a paper.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Paper entrance sensor /Up (PS201) • FNS entrance sensor (PS34) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

<When FS-537+PI-507 or FS-537SD+PI-507 is installed>

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS201 I/O check, sensor check	PIDB CN53<A>-2 (ON)	PI-507 10-C
3	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D

Step	Action	Control signal	Location of electrical component
4	PIDB ICP4 conduction check.	-	-
5	Replace PIDB.	-	-
6	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.6 PI-507)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.18 72-51

(1) Contents

JAM type	Misfeed at PI section		
JAM code	72-51		
JAM detection timing	72-51	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The FNS entrance sensor (PS34) is not turned ON even after the set period of time has elapsed after the paper entrance sensor /Lw (PS206) is turned ON by the paper.
Misfeed processing location	Upper door		
Relevant parts	<When FS-537+PI-507 or FS-537SD +PI-507 is installed>		• Paper entrance sensor /Lw (PS206) • FNS entrance sensor (PS34) • PI drive board (PIDB) • FS control board (FSCB)

(2) Procedure

<When FS-537+PI-507 or FS-537SD+PI-507 is installed>

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS206 I/O check, sensor check	PIDB CN53<A>-5 (ON)	PI-507 10-C
3	PS34 I/O check, sensor check	FSCB J8<A>-5 (ON)	FS-537/FS-537SD 7-D
4	PIDB ICP4 conduction check.	-	-
5	Replace PIDB.	-	-
6	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.6 PI-507)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.19 72-81

(1) Contents

JAM type	Misfeed at FS staple section		
JAM code	72-81		
JAM detection timing	72-81	<When FS-536 or FS-536SD is installed>	The stapler position sensor (center) (PS24) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the side stapler movement motor (M13) turned ON.
		<When FS-537 or FS-537SD is installed>	The stapler position sensor (center) (PS20) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the stapler movement motor (M19) turned ON.
Misfeed processing location	Front door		
Relevant parts	<When FS-536 or FS-536SD is installed>		• Side stapler movement motor (M13) • Stapler position sensor (center) (PS24) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>		• Stapler movement motor (M19) • Stapler position sensor (center) (PS20) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	M13 operation check	FSCB J11<A>-1 to 4	FS-536/FS-536SD 4-C
3	PS24 I/O check, sensor check	FSCB J11<B>-6 (ON)	FS-536/FS-536SD 5-C
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-

Step	Action	Control signal	Location of electrical component
2	M19 operation check	FSCB J17-10 to 13	FS-537/FS-537SD 14-D
3	PS20 I/O check, sensor check	FSCB J16-5 (ON)	FS-537/FS-537SD 15-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.20 72-84

(1) Contents

JAM type	Misfeed at SD staple section		
JAM code	72-84		
JAM detection timing	72-84	<When FS-536SD or FS-537SD is installed>	The stapler home position sensor/R does not turn ON even after the set period of time has elapsed after the staple operation started.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• Staple unit • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Replace the staple unit. (FS-536SD/FS-537SD)	-	-
3	Replace SDCB. (FS-536SD/FS-537SD)	-	-
4	Replace FSCB. (FS-536SD/FS-537SD)	-	-

1.9.21 72-85

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-85		
JAM detection timing	72-85	<When FS-536SD is installed>	The SD entrance sensor (PS1) is not turned ON (blocked) even after the set period of time has elapsed after the saddle exit sensor (PS5) is turned ON by the paper.
		<When FS-537SD is installed>	The SD entrance sensor (PS1) is not turned ON (blocked) even after the set period of time has elapsed after the SD discharge sensor (PS35) is turned ON by the paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD is installed>		• SD entrance sensor (PS1) • Saddle exit sensor (PS5) • SD control board (SDCB) • FS control board (FSCB)
	<When FS-537SD is installed>		• SD entrance sensor (PS1) • SD discharge sensor (PS35) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

When FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS5 I/O check, sensor check	FSCB J5-2 (ON)	FS-536/FS-536SD 16-K
3	PS1 I/O check, sensor check	SDCB J4-8 (ON)	FS-536/FS-536SD 5-L
4	Replace SDCB.	-	-
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS35 I/O check, sensor check	FSCB J15-7 (ON)	FS-537/FS-537SD 15 to 16-K to L
3	PS1 I/O check, sensor check	SDCB J4-8 (ON)	FS-537/FS-537SD 4-K
4	Replace SDCB.	-	-

Step	Action	Control signal	Location of electrical component
5	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.22 72-86

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-86		
JAM detection timing	72-86	<When FS-536SD or FS-537SD is installed>	The SD entrance sensor (PS1) is not turned OFF (unblocked) even after the set period of time has elapsed after PS1 turns ON (block).
Misfeed processing location	Front door		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• SD entrance sensor (PS1) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	SDCB J4-8 (ON)	FS-536/FS-536SD 5-L FS-537/FS-537SD 4-K
3	Replace SDCB. (FS-536SD/FS-537SD)	-	-
4	Replace FSCB. (FS-536SD/FS-537SD)	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.23 72-87

(1) Contents

JAM type	Misfeed at SD transport section		
JAM code	72-87		
JAM detection timing	72-87	<When FS-536SD or FS-537SD is installed>	The center staple/fold stacker paper detect sensor (PS3) is not turned ON even after the set period of time has elapsed after the SD entrance sensor (PS1) turns ON (block) by a paper.
Misfeed processing location	• Front door • Stacker unit		
Relevant parts	<When FS-536SD or FS-537SD is installed>		• SD entrance sensor (PS1) • Center staple/fold stacker paper detect sensor (PS3) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

When FS-536SD or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS1 I/O check, sensor check	SDCB J4-3 (ON)	FS-536/FS-536SD 4-K FS-537/FS-537SD 5-L
3	PS3 I/O check, sensor check	SDCB J9-2 (ON)	FS-536/FS-536SD 5-P FS-537/FS-537SD 5-P
4	Replace SDCB. (FS-536SD/FS-537SD)	-	-
5	Replace FSCB. (FS-536SD/FS-537SD)	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.24 75-42

(1) Contents

JAM type	Misfeed at RU section		
JAM code	75-42		
JAM detection timing	75-42	<When FS-536 or FS-536SD is installed> <When FS-537 or FS-537SD is installed>	The RU transport sensor (PS60) is not turned ON (blocked) even after the set period of time has elapsed after the main body's paper exit sensor (PS39) is turned ON (unblocked) by the paper.
Misfeed processing location	Horizontal transport cover		

Relevant parts	<When FS-536 or FS-536SD is installed> <When FS-537 or FS-537SD is installed>	• Paper exit sensor (PS39) • RU transport sensor (PS60) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS39 I/O check, sensor check	PFTDB CN2-12 (ON)	5-P
3	PS60 I/O check, sensor check	FSCB J6-7 (ON)	FS-536/FS-536SD 12-K
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS39 I/O check, sensor check	PFTDB CN2-12 (ON)	5-P
3	PS60 I/O check, sensor check	FSCB J8<B>-15 (ON)	FS-537/FS-537SD 9-D
4	Replace FSCB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.9.25 75-43

(1) Contents

JAM type	Misfeed at RU section		
JAM code	75-43		
JAM detection timing	75-43	<When FS-536, FS-536SD, FS-537, or FS-537SD is installed>	The RU transport sensor (PS60) is not turned OFF (unlocked) even after the set period of time has elapsed after it is turned ON (blocked).
Misfeed processing location	Horizontal transport cover		
Relevant parts	<When FS-536, FS-536SD, FS-537, or FS-537SD is installed>		• RU transport sensor (PS60) • FS control board (FSCB)

(2) Procedure

When FS-536 or FS-536SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS60 I/O check, sensor check	FSCB J6-7 (ON)	FS-536/FS-536SD 12-K
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

When FS-537 or FS-537SD is installed

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS60 I/O check, sensor check	FSCB J8<B>-15 (ON)	FS-537/FS-537SD 9-D
3	Replace FSCB.	-	-

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

1.10 9#-##

1.10.1 92-01, 92-02, 92-03, 92-40

(1) Contents

JAM type	Misfeed at duplex pre-registration section	
JAM code	92-01, 92-02, 92-03, 92-40	
JAM detection timing	92-01	The leading edge of the paper is not turn ON (unblock) the registration sensor (PS38) even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	92-02	For the second-side feed of paper in the duplex mode, loop forming has not been complete before the second side of a sheet enters the registration roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
	92-03	The leading edge of the paper does not turn ON the OHP sensor (PS40) even after the lapse of a given period of time after a duplex paper feed sequence has been started.

	92-40	For the second-side feed of paper in the duplex mode, the image write start signal permit continues to be disabled for a predetermined period of time after the timing of the image write start signal output.
Misfeed processing location	• Upper right door • Duplex door	
Relevant parts	• ADU transport motor/1 (M31) • ADU transport motor/2 (M32) • Registration sensor (PS38) • OHP sensor (PS40) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS38 I/O check, sensor check	PFTDB CN2-6 (ON)	4-P
3	PS40 I/O check, sensor check	PFTDB CN2-3 (REM)	4-P
4	M31 operation check	PFTDB CN28-14 to 17	8-P
5	M32 operation check	PFTDB CN28-10 to 13	7-P
6	PFTDB F10 conduction check	-	-
7	Replace PFTDB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.10.2 93-10

(1) Contents

JAM type	Misfeed at duplex transport section	
JAM code	93-10	
JAM detection timing	93-10	The ADU paper passage sensor/2 (PS48) is not turned ON (unblocked) even after the set period of time has elapsed after the ADU paper passage sensor/1 (PS47) turns ON (block) by the paper.
	-	Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor/1 (PS47) is turned ON (blocked) or the ADU paper passage sensor/2 (PS48) is turned ON (unblocked) when the main power switch is turned ON, a door is opened and closed, or a misfeed or malfunction is reset.
	-	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the duplex transport section results, if the the ADU paper passage sensor/1 (PS47) is turned from OFF (unblocked) to ON (blocked).
	-	When the main power switch is turned ON, residual paper detection starts between each sensor. Paper jam of a sheet of paper left at the duplex transport section results, if the ADU paper passage sensor/2 (PS48) is turned from OFF (blocked) to ON (unblocked).
Misfeed processing location	Duplex door	
Relevant parts	• ADU transport motor/1 (M31) • ADU transport motor/2 (M32) • ADU paper passage sensor/1 (PS47) • ADU paper passage sensor/2 (PS48) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	PS47 I/O check, sensor check	PFTDB CN28-3 (ON)	7-P
3	PS48 I/O check, sensor check	PFTDB CN28-6 (ON)	6-P
4	M31 operation check	PFTDB CN28-14 to 17	8-P
5	M32 operation check	PFTDB CN28-10 to 13	7-P
6	PFTDB F10 conduction check	-	-
7	Replace PFTDB.	-	-
8	Replace MFPB.	-	-

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

1.10.3 99-01

(1) Contents

JAM type	Controller JAM (paper size error)

JAM code	99-01	
JAM detection timing	99-01	• As a result of a paper size error, the controller transmits a forced stop command to the printer engine and the printer engine is internally processing the size error. • As a result of a paper size error, the controller transmits a forced stop command to the printer engine; but the paper causing the size error cannot be fed out.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.4 99-02

(1) Contents

JAM type	Controller JAM (controller forced stop command)	
JAM code	99-02	
JAM detection timing	99-02	The controller transmits a forced stop command under a condition other than a paper size error during a print cycle.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.5 99-03

(1) Contents

JAM type	Controller JAM (image processing)	
JAM code	99-03	
JAM detection timing	99-03	Image stabilization not completing a job.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.6 99-04

(1) Contents

JAM type	Controller JAM (a job reservation in the main body is not released)	
JAM code	99-04	
JAM detection timing	99-04	A job reservation is not released after a lapse of a given time after that a print start command has been received.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.7 99-05

(1) Contents

JAM type	Controller JAM (main body not starting a job)	
JAM code	99-05	
JAM detection timing	99-05	A waiting status is not released even with a print start command received.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.8 99-06

(1) Contents

JAM type	Controller JAM (print control on the main body is not completed)	
JAM code	99-06	
JAM detection timing	99-06	Print control is not completed even after a job has been completed.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.9 99-07

(1) Contents

JAM type	Controller JAM (main body not completing a job)	
JAM code	99-07	
JAM detection timing	99-07	The engine does not stop after a lapse of a given time after that a print has finished.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body.	-	-

1.10.10 99-08

(1) Contents

JAM type	Controller JAM (finisher not starting a job)	
JAM code	99-08	
JAM detection timing	99-08	The finisher does not accept a print start command.
Misfeed processing location	-	
Relevant parts	-	

(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body. Or, open and close the front door of the finisher.	-	-

1.10.11 99-09

(1) Contents

JAM type	Controller JAM (finisher not completing a job)	
JAM code	99-09	
JAM detection timing	99-09	• A paper exit or paper finishing process inside the finisher is not completed. • The finisher does not start during a reset procedure from the jam.
Misfeed processing location	-	
Relevant parts	-	

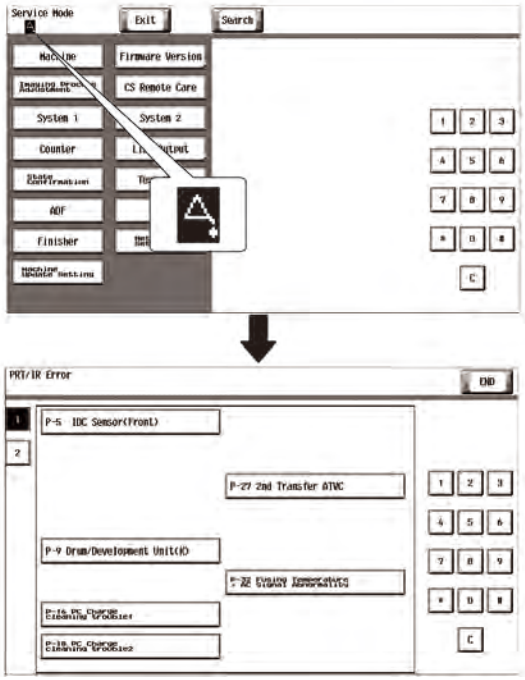
(2) Procedure

Step	Action	Control signal	Location of electrical component
1	Initial check items	-	-
2	Open and close the front door of the main body. Or, open and close the front door of the finisher.	-	-

2. MALFUNCTION CODE

2.1 Display procedure

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding warning code or maintenance call mark on the control panel.
- Touching the maintenance call mark will display the corresponding warning code on the state confirm screen.



2.2 List of the malfunction code

- If an image stabilization or scanner fault occurs, the corresponding warning code appears.

Code	Item
S-1	CCD gain adjustment failure
S-2	CIS gain adjustment failure
D-1	Split line detect (front side)
D-3	Split line detect (back side)
P-5	IDC sensor failure
P-9	Drum/Development unit failure
P-16	PC charge cleaning trouble 1
P-18	PC charge cleaning trouble 2
P-27	Secondary transfer ATVC failure
P-32	Heating roller temperature sensor/1 temperature detection failure (bizhub 808/758)
	Fusing belt temperature sensor/1 temperature detection failure (bizhub 958)

2.3 S-1

2.3.1 Contents

Malfunction type	CCD gain adjustment failure
Malfunction code	S-1
Malfunction detection timing	It is detected that the CCD clamp gain adjustment value is faulty.
Relevant parts	• LED exposure unit (LU201) • Scanner drive board (SCDB) • CCD board (CCDB) • MFP board (MFPB)

2.3.2 Procedure

1. Correct the harness connection between CCDB and MFPB if faulty.
2. Check for possible extraneous light and correct as necessary.
3. Clean the lens, mirrors, CCD surface, and shading sheet if dirty.
4. Correct reflective mirror of the scanner if faulty, or change scanner mirror.
5. Replace the CCD unit.
6. Replace SCDB.
7. Replace MFPB.

2.4 S-2

2.4.1 Contents

Malfunction type	CIS gain adjustment failure
Malfunction code	S-2
Malfunction detection timing	It is detected that the CIS clamp gain adjustment value is faulty.
Relevant parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

2.4.2 Procedure

1. Correct the harness connection between CIS and DSIPB if faulty.
2. Correct the harness connection between DSIPB and MFPB if faulty.
3. Check for possible extraneous light and correct as necessary.
4. Wipe clean the back side scanning glass surface and shading sheet.
5. Replace CIS.
6. Replace DSIPB.
7. Replace MFPB.

2.5 D-1

2.5.1 Contents

Malfunction type	Split line detect (front side)
Malfunction code	D-1
Malfunction detection timing	• While recovering from the power save mode or when the main power switch and power key are ON, it detects whether or not stain exist at the original reading glass when the DF is closed. This warning will be displayed if the original is set to DF when stain exist. • The thin line detection level and the warning display can be changed by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Front Side].
Relevant parts	• Front side cleaning motor (M8) • Front side cleaning home sensor (PS18) • DF control board (DFCB)

2.5.2 Procedure

1. Wipe clean the glass surface of the original reading glass.
2. Check the front side glass cleaning roller unit for proper installation and correct if necessary.
   Clean the front side glass cleaning roller unit if dirty.
3. Select [Service Mode] -> [System 2] ->[ADF Scan Glass Contamin. Set.] -> [Front Side], and change the setting.
4. Check the DFCB connector for proper connection and correct as necessary.
5. M8 operation check
6. Replace the front side glass cleaning roller unit.
7. Replace DFCB.

2.6 D-3

2.6.1 Contents

Malfunction type	Split line detect (back side)
Malfunction code	D-3
Malfunction detection timing	• While recovering from the power save mode or when the main power switch and power key are ON, it detects whether or not stain exist at the back side original scanning section (CIS) when the DF is closed. This warning will be displayed if the original is set to DF when stain exist. • The thin line detection level and the warning display can be changed by [Service Mode] -> [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side].
Relevant parts	• CIS module (CIS) • DF power supply (DFPU) • Dual scan image processing board (DSIPB)

2.6.2 Procedure

1. Wipe clean the CIS glass surface.
2. Check the back side glass cleaning roller unit for proper installation and correct if necessary. Clean the back side glass cleaning roller unit if dirty.
3. If there is a problem in the CIS module connection, correct the faulty connection.
4. Replace CIS.
5. Replace DFPU.
6. Replace DSIPB.

2.7 P-5

2.7.1 Contents

Malfunction type	IDC sensor failure

Malfunction code	P-5
Malfunction detection timing	• When adjusting the IDC sensor, output voltage detected for all eight sample patterns are above 4.9 V. • When adjustment is complete, sensor's output voltage with selected light intensity is under 1.0 V. • During image stabilization (gamma correction control), detected output value for IDC sensor did not go below threshold (half the value of what is detected by IDC sensor on the belt surface) for three consecutive times (position of the pattern end is not detected). • During image stabilization (gamma correction control), sensor's output value for hyper 0 gradation after the primary approximation is half the detection level on the belt surface or under.
Relevant parts	• IDC sensor/Fr (IDCS/Fr) • MFP board (MFPB) • High voltage unit/1 (HV1) • Transfer belt unit

2.7.2 Procedure

1. Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2. Replace the transfer belt unit if the transfer belt is damaged.
3. Reinstall or reconnect IDCS/Fr, sensor shutter or connector, if it is installed or connected improperly.
4. Clean IDCS/Fr if it is dirty.
5. Check the HV1 connector for proper connection and correct as necessary.
6. Open/close the front door, run an image stabilization sequence, and select [State Confirmation] -> [Level History 1] to check the IDC value. If the value is 1.0 V or less, replace IDCS/Fr.
   - IDC1: IDCS/Fr
7. MFPB F12E, F13E or IC80E conduction check
8. Replace MFPB.

2.8 P-9

2.8.1 Contents

Malfunction type	Drum/Development unit failure
Malfunction code	P-9
Malfunction detection timing	All density readings taken from the density pattern produced on the transfer belt are 1.0 g/m^2 (IDC sensor photo receiver output) or less during max. density adjustment (Vg/Vdc adjustment).
Relevant parts	• Drum unit • Developing unit • Transfer belt unit • High voltage unit/1 (HV1) • IDC sensor/Fr (IDCS/Fr) • MFP board (MFPB)

2.8.2 Procedure

1. Select [Imaging Process Adjustment] -> [Max Image Density Adj] and, if the setting value is negative, readjust.
2. Check the drive transmission portion of the drum unit and developing unit, and correct as necessary.
3. Clean the IDC sensor/Fr window if dirty.
4. Clean the contact of the drum unit connector and developing unit connector if dirty.
5. Check the HV1 connector for proper connection and correct as necessary.
6. Replace the drum unit.
7. Replace the developing unit.
8. Replace the transfer belt unit.
9. Replace HV1.
10. MFPB F12E or IC80E conduction check
11. Replace MFPB.

2.9 P-16, P-18

2.9.1 Contents

Malfunction type	• PC charge cleaning trouble 1 <P-16> • PC charge cleaning trouble 2 <P-18>	
Malfunction code	P-16, P-18	
Malfunction detection timing	<P-16>	Charging cleaner home sensor is not transmitted even after the specified time has passed while the charging cleaner material or serrate electrode material is moving forward.
	<P-18>	Charging cleaner return sensor is not interrupted even after the specified time has passed when the charging cleaner material or serrate electrode material is moving forward. * Under the situation above occurs, control will be switched to the return operation after the warning is given. When the charging cleaner home sensor is not interrupted after the specified time has passed during the return operation, trouble code C-2101 will be given.

Relevant parts	• Drum unit • Charge cleaning motor/K (M15) • Charging cleaner home sensor (PS43) • Charging cleaner return sensor (PS44) • PH relay board (PHRYB) • MFP board (MFPB)

2.9.2 Procedure

1. PS43 I/O check, sensor check
2. PS44 I/O check, sensor check
3. M15 operation check
4. Replace the drum unit.
5. Replace M15.
6. PHRYB F2 conduction check.
7. Replace PHRYB.
8. Replace MFPB.

2.10 P-27

2.10.1 Contents

Malfunction type	Secondary transfer ATVC failure
Malfunction code	P-27
Malfunction detection timing	An abnormal average value is detected during an adjustment of the second transfer ATVC value.
Relevant parts	• High voltage unit/2 (HV2) • MFP board (MFPB) • Image transfer entrance guide • 2nd transfer assy • Transfer belt unit

2.10.2 Procedure

1. Check the contact between the roller opposed to the 2nd transfer roller in the transfer belt unit and the grounding terminal. Clean the joint or correct if necessary.
2. Check the image transfer entrance guide for proper installation and correct if necessary.
3. Check that the spring does not come off during the pressure operation of the transfer roller and correct if necessary.
4. Check the contact at the joint of the 2nd transfer assy and HV2. Clean the joint or correct if necessary.
5. Replace the transfer belt unit.
6. Replace HV2.
7. MFPB F12E conduction check
8. Replace MFPB.

2.11 P-32

2.11.1 Contents

Malfunction type	Heating roller temperature sensor/1 temperature detection failure (bizhub 808/758)
	Fusing belt temperature sensor/1 temperature detection failure (bizhub 958, bizhub PRO 958)
Malfunction code	P-32
Malfunction detection timing	bizhub 958, bizhub PRO 958 • During warm up, the temperature detected by the fusing belt thermistor/1 exceeded the warm up complete temperature of the heating roller for over the predetermined value, and stayed for a predetermined period of time. • When the predetermined period of time had passed after the warm up became complete, detected temperature of the fusing belt thermistor/1 exceeded the temperature detected by the fusing belt temperature sensor/1 for over the predetermined value for more than the predetermined period of time. • While printing, temperature detected by the fusing belt thermistor/1 exceeded the temperature detected by the fusing belt temperature sensor/1 for more than the predetermined value for a predetermined period of time. • This warning indicates that condensation or dirt on the fusing belt temperature sensor/1 was detected, and the alternate temperature control is being conducted. With condensation, the warning is cleared when the condensation is detected to be removed. When the dirt on the sensor is detected, it is considered as a failure and the trouble code C-392A is issued.

	bizhub 808/758: • During warm up, the temperature detected by the heating roller thermistor/1 exceeded the warm up complete temperature of the heating roller for over the predetermined value, and stayed for a predetermined period of time. • When the predetermined period of time had passed after the warm up became complete, detected temperature of the heating roller thermistor/1 exceeded the temperature detected by the heating roller temperature sensor/1 for over the predetermined value for more than the predetermined period of time. • While printing, temperature detected by the heating roller thermistor/1 exceeded the temperature detected by the heating roller temperature sensor/1 for more than the predetermined value for a predetermined period of time. • This warning indicates that condensation or dirt on the heating roller temperature sensor/1 was detected, and the alternate temperature control is being conducted. With condensation, the warning is cleared when the condensation is detected to be removed. When the dirt on the sensor is detected, it is considered as a failure and the trouble code C-392A is issued.
Relevant parts	• Fusing unit • bizhub 808/758: Heating roller thermistor/1 (TH1) • bizhub 958, bizhub PRO 958: Fusing belt thermistor/1 (TH1) • bizhub 808/758: Heating roller temperature sensor/1 (TEMS1) • bizhub 958, bizhub PRO 958: Fusing belt temperature sensor/1 (TEMS1)

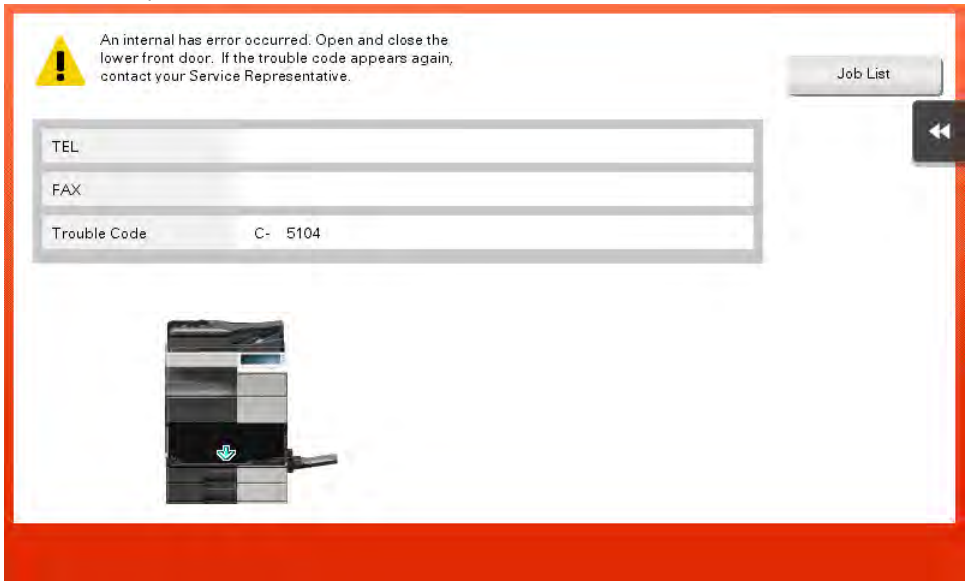
2.11.2 Procedure

1. Wipe the TEMS1 clean of dirt if any.
   <Cleaning procedure>
   - Clear away a dirt or a foreign object on the sensor with a cotton swab.
   - When a dirt is left even if you cleaned the sensor by above procedure, clear away a dirt or a foreign object on the sensor using a cotton swab dampened with the alcohol. And, wipe off the sensor with a dry cotton swab afterwards.
2. Check the connection of the fusing unit.
3. Replace the fusing unit.

3. TROUBLE CODE

3.1 Display procedure

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, indicates the corresponding malfunction code on the control panel.



3.2 Trouble resetting procedure

- Different malfunction resetting procedures apply depending on the rank of the trouble code.

* List of malfunction resetting procedures

Trouble code rank	Resetting procedures
Rank A	Trouble reset: Refer to the Trouble resetting procedure by Trouble Reset key.
Rank B	Opening/closing the lower front door Trouble reset: When the [internal error. auto cancel] for rank B is set to "Yes", after the set period of time, trouble is automatically cleared.
Rank C	Turning main power switch OFF/ON Trouble reset: When the [internal error. auto cancel] for rank C is set to "Yes", after the set period of time, trouble is restarted and cleared.

3.2.1 Trouble resetting procedure by Trouble Reset key

(1) Use

- If the all troubles occur and the status would not be cleared by turning main power switch OFF and ON again, or opening and closing the lower front door, clear the status of the machine.
- To be used when the status would not be cleared by turning main power switch OFF and ON again, or opening and closing the lower front door in case of a trouble.

(2) Procedure

1. Turn OFF the main power switch.
2. Turn main power switch ON while pressing the Reset key.
3. Touch [Trouble Reset].
4. Check to make sure that [OK] is displayed and it has been reset.
5. After turning off the main power switch, turn it on again more than 10 seconds after and check if the machine starts correctly.

3.2.2 Trouble resetting procedure by the auto cancel function

(1) Use

- When a rank B or C trouble occurs, main body automatically clears trouble and makes the main body ready for use. When the trouble auto cancel function is enabled, upon the occurrence of a trouble to be cleared automatically, the trouble detection message is displayed on the screen and the trouble is automatically cleared. If the trouble remains after performing the auto cancel operation for 3 times, the normal trouble code display screen appears.

(2) Procedure

1. Select [Yes] for the trouble rank to enable for which trouble auto cancel operation are applied in [Service Mode] -> [System 2] -> [▶] -> [Internal Error. Auto Cancel]. (The default setting for rank B and rank C are set to [Yes].)
2. Touch [OK], and turning main power switch OFF and ON again.

3.2.3 Trouble resetting procedure by remote operation

(1) Use

- Trouble codes can be cleared by remote operation using the applications or the CS Remote Care system.
- The combinations of the applications that can be used and the ranks of troubles that can be cleared are shown below.

Trouble code rank / Application	Rank A	Rank B	Rank C
PageScope Web Connection	Cannot be cleared	Can be cleared	Can be cleared
OpenAPI (PageScope Enterprise Suite)	Cannot be cleared	Can be cleared	Can be cleared
CS Remote Care (Excluding communications by fax modem)	Can be cleared	Can be cleared	Can be cleared

(2) Procedure

(a) PageScope Web Connection

1. Access the PageScope Web Connection of the MFP where trouble occurs.
2. The screen for logging into Administrator Mode appears.
3. Check the following message appears; “An error has occurred. Do you want to clear the error?” Click [Trouble Reset].
4. Click [Trouble Reset] again in the confirmation screen.
5. Check that the MFP starts normally.

(b) OpenAPI (PageScope Enterprise Suite)

1. Access PageScope Enterprise Suite.
2. Select [Device List] -> [Device Management] -> [Device List] -> [Device List] -> [Device].
3. For rank B trouble, click [Trouble Reset]. For rank C trouble, click [Reset].
4. For rank B trouble, click the [Execute] button. For rank C trouble, click the [Execute] button in [Device Reset].
5. Check that the MFP starts normally.

(c) CS Remote Care

- Refer to the CS Remote Care Center manual.

3.3 Trouble isolation function

- The trouble isolation function enables you to control MFP temporarily isolating faulty units, options, and functions where the trouble isolation function can be applied when trouble occurs. This allows you to continue using the other units or functions that are not affected and reduce down time that continues until CE resolves the problem.
- This function can be selected for the following units, options, and functions.
  - Tray 1
  - Tray 2
  - Tray 3
  - Tray 4
  - LCT
  - Manual
  - Center Stapling/Half-Fold/Tri-Fold
  - Punch
  - Post inserter
  - Z-folding
  - Staple
  - Scanner
  - DF
  - Functionality expansion (in HDD): OCR (character recognition) function
  - Functionality expansion (in HDD): Web browser function
- If a problem occurs with the units where the trouble isolation function can be applied, the control panel displays a trouble code and a key with which you decide whether to continue using the MFP. When you press down the key, the control panel displays the units that will be isolated as well as the next confirmation key with which you decide to continue.
- When you press down the confirmation key, the message on the control panel asks you to turn OFF and ON the main power switch. After turning OFF and ON the main power switch, the MFP starts operating, isolating the faulty units. The message on the control panel also tells that the MFP is working, isolating the faulty units.
- To temporarily isolate faulty units and continue using the MFP with the trouble isolation function, be sure to make the above mentioned control panel operation. The faulty units cannot be automatically isolated.

NOTE

- **The malfunction detection mechanism is not applied to units and options that are being isolated.**

3.4 List of the trouble code

Code	Item	Rank
C0002	Paper feed communication error	C
C0104	Tray 3/4 feeder transportation motor's failure to turn	B
C0105	Tray 3/4 feeder transportation motor's turning at abnormal timing	B
C0202	Tray 1 feeder up/down abnormality	B
C0204	Tray 2 feeder up/down abnormality	B
C0206	Tray 3 feeder up/down abnormality	B

Code	Item	Rank
C0208	Tray 4 feeder up/down abnormality	B
C0211	Manual feed up/down abnormality	B
C0216	LCT up/down abnormality (When LU-205 or LU-303 is installed)	B
C0301	Suction fan's failure to turn	B
C0351	Paper cooling fan/in's failure to turn	B
C1003	PK communication error (Finisher detection) (When FS-537+PK-523 or FS-537SD +PK-523 is installed)	C
C1004	Finisher communication error (Engine detection) (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	C
C1007	PI communication error (Finisher detection) (When FS-537+PI-507 or FS-537SD +PI-507 is installed)	C
C1013	PK communication error (PK detection) (When FS-537+PK-523 or FS-537SD +PK-523 is installed)	C
C1014	Finisher communication error (Finisher detection) (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	C
C1017	PI communication error (PI detection) (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	C
C1081	SD communication error (Finisher detection) (When FS-536SD or FS-537SD is installed)	C
C1082	SD communication error (SD detection) (When FS-536SD or FS-537SD is installed)	C
C1102	Main tray up/down motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1103	Alignment motor/Front's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1104	Stacker plate drive motor's malfunction (When FS-537 or FS-537SD is installed)	B
C1105	Bundle eject motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1106	Side stapler movement motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1109	Side stapler motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1112	Stapler motor's drive malfunction (When FS-536SD or FS-537SD is installed)	B
C1113	Stopper drive motor's malfunction (When FS-536SD or FS-537SD is installed)	B
C1114	Alignment motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1115	Center fold knife motor's malfunction (When FS-536SD or FS-537SD is installed)	B
C1124	Tray lift motor /Lw's drive malfunction (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	B
C1125	Tray lift motor /Up's drive malfunction (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	B
C1127	Punch oscillating motor's drive malfunction (When FS-537+PK-523 or FS-537SD +PK-523 is installed)	B
C1130	ZU transport motor's drive malfunction (When FS-537+ZU-609 or FS-537SD +ZU-609 is installed)	B
C1131	Folding guide motor's drive malfunction (When FS-537+ZU-609 or FS-537SD +ZU-609 is installed)	B
C1132	Punch oscillating motor drive malfunction (When FS-536+PK-520, FS-536SD +PK-520, FS-537+PK-523, or FS-537SD+PK-523 is installed)	B
C1133	Fusing pressure motor's drive malfunction (When FS-537+ZU-609 or FS-537SD +ZU-609 is installed)	B
C1140	Alignment motor/rear's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1141	FNS paddle motor's drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1142	Paddle up/down motor's drive malfunction (When FS-537 or FS-537SD is installed)	B
C1143	Arm drive motor's drive malfunction (When FS-536, FS-537, FS-537, or FS-537SD is installed)	B
C1144	Pre-eject drive motor drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1145	Trail edge stopper motor/F's drive malfunction (When FS-537 or FS-537SD is installed)	B
C1146	Trail edge stopper motor/R's drive malfunction (When FS-537 or FS-537SD is installed)	B
C1152	Paper transport belt motor's malfunction (When FS-537SD is installed)	B

Code	Item	Rank
C1156	SD paddle motor malfunction (When FS-536SD or FS-537SD is installed)	B
C1184	Paper discharge control motor drive malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C1195	Paper discharge control motor malfunction (When FS-536SD or FS-537SD is installed)	B
C1196	Center fold guide motor malfunction (When FS-536SD or FS-537SD is installed)	B
C1197	Tri-folding guide motor malfunction (When FS-536SD or FS-537SD is installed)	B
C11A2	Accommodation roller pressure/ retraction malfunction (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	B
C11C5	Paper size detect board malfunction (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	B
C11E1	Paper exit switching drive malfunction (When FS-536, FS-536SD, FS-537 or FS-537SD is installed)	B
C11E2	Paper exit switching (JS) drive malfunction (When FS-537 or FS-537SD is installed)	B
C1403	PK flash ROM error (When FS-537+PK-523 or FS-537SD+PK-523 is installed)	C
C1404	PI flash ROM error (When FS-537+PI-507 or FS-537SD+PI-507 is installed)	C
C2101	Charge cleaning motor/K malfunction	B
C2151	Transfer roller pressure welding alienation	B
C2152	Transfer belt fault at initial position return	B
C2153	Transfer belt spacing fault at K pressure switching	B
C2155	Transfer belt contact fault after K pressure established	B
C2157	Transfer belt contact fault at all retraction switching	B
C2163	PC charge malfunction	B
C2204	Waste toner transport motor's failure to turn	B
C2257	Cleaning brush motor's failure to turn	B
C2258	Cleaning brush motor's turning at abnormal timing	B
C2259	Developing motor/K's failure to turn	B
C225A	Developing motor/K's turning at abnormal timing	B
C225B	PC motor's failure to turn	B
C225C	PC motor/K's turning at abnormal timing	B
C2350	Toner suction fan failure to turn	B
C2353	IU cooling fan/out's failure to turn	B
C2356	IU cooling fan/in's failure to turn	B
C2414	Developing unit new article release	B
C2557	Abnormally low toner density detected black TCR sensor	B
C2558	Abnormally high toner density detected black TCR sensor	B
C255C	Black TCR sensor adjustment failure	B
C2564	Black TCR sensor failure	B
C2650	Main backup media access 1 error	C
C265A	Main backup media wrongly installation	C
C265B	Main backup media access 2 error	C
C2A14	Drum unit new release failure	B
C2A24	Toner cartridge new release failure	C
C3101	Pressure roller pressure failure	B
C3102	Heating roller failure to turn	A
C3103	Pressure roller release failure	B
C3201	Fusing motor failure to turn	B
C3202	Fusing motor turning at abnormal timing	B
C3303	Paper cooling fan/out's failure to turn	B
C3304	Switchback paper cooling fan/2's failure to turn	B
C3305	Switchback paper cooling fan/1's failure to turn	B
C3310	Output tray exhaust fan's failure to turn (bizhub 958/808, bizhub PRO 958 only)	B
C3423	Fusing warm-up trouble (Pressure) (bizhub 958, bizhub PRO 958 only)	A
C3425	Fusing warm-up trouble	A
C3722	Fusing abnormally high temperature detection (Edge of the heating roller)	A
C3723	Fusing abnormally high temperature detection (pressure) (bizhub 958, bizhub PRO 958 only)	A
C3725	Fusing abnormally high temperature detection (Middle of the heating roller)	A
C3726	Fusing abnormally high temperature detection (Center of the heating side)	A

Code	Item	Rank
C3731	Fusing abnormally high temperature (Hard protector)	A
C3732	Fusing abnormally high temperature detection hard protector (Edge of the heating roller)	A
C3733	Fusing abnormally high temperature detection hard protector (pressure) (bizhub 958, bizhub PRO 958 only)	A
C3736	Fusing abnormally high temperature detection hard protector (Middle of the heating roller)	A
C3737	Fusing abnormally high temperature detection hard protector (Center of the heating roller)	A
C3822	Fusing abnormally low temperature detection (Edge of the heating roller)	A
C3823	Fusing abnormally low temperature detection (pressure) (bizhub 958, bizhub PRO 958 only)	A
C3825	Fusing abnormally low temperature detection (Middle of the heating roller)	A
C3826	Fusing abnormally low temperature detection (Center of the heating roller)	A
C3903	Thermostat breaks detection	A
C3922	Fusing sensor wire breaks detection (Edge of the heating roller)	A
	Fusing unit for incorrect marketing area (The fusing unit for incorrect marketing area is installed)	
C3923	Fusing sensor wire breaks detection (pressure)	A
C3925	Fusing sensor wire breaks detection (Middle of the heating roller)	A
C3926	Fusing sensor wire breaks detection (Center of the heating roller)	A
	Fusing unit for incorrect marketing area (The fusing unit for incorrect marketing area is installed)	
C392A	Fusing belt temperature sensor/1 contamination (Middle of the heating roller) (bizhub 958)	A
	Heating roller temperature sensor contamination (Middle of the heating roller) (bizhub 808/758)	
C392B	Fusing disconnection error detection (difference of temperature)	A
C3B02	IH malfunction (CPU)	A
	IH power supply for incorrect marketing area (The IH power supply for incorrect marketing area is installed)	
C3B03	IH malfunction (monitor)	A
C3B07	IH input power error	A
	Fusing unit for incorrect marketing area (The fusing unit for incorrect marketing area is installed)	
	IH power supply for incorrect marketing area (The IH power supply for incorrect marketing area is installed)	
C3B08	IH input voltage error	B
C4002	PH communication error	C
C40A1	Mechanical controller sub-CPU communication error	C
C40A2	Mechanical controller PF communication data error	C
C40A3	Mechanical controller PF transmission timeout	C
C40A4	Mechanical controller PF communication pulse error	C
C40C3	CTL PDF send timeout 1	C
C40C5	CTL PDF send timeout 2	C
C4101	Polygon motor rotation trouble	B
	PH unit for incorrect marketing area	
C4301	PH cooling fan's failure to turn	B
C4501	Laser malfunction	B
C4810	Wrong paper feed/transport drive installed	C
C5104	Transfer belt motor's rotation trouble	B
C5105	Transfer belt motor's turning at abnormal timing	B
C5304	IH power supply cooling fan’s failure to turn	B
C5306	IH coil cooling fan's failure to turn	B
C5351	DC power supply cooling fan's failure to turn	B
C5354	Ozone ventilation fan's failure to turn	B
C5355	Toner cartridge cooling fan’s failure to turn	B
C5372	MFP control board CPU temperature failure	C
C5601	Engine control malfunction	C
C5605	Engine communication data error	C
C5606	Engine transmission timeout	C

Code	Item	Rank
C5610	PH LD drive communication error	C
C6001	DF related configuration error 1	C
C6002	DF related configuration error 2	C
C6102	Drive system home sensor malfunction	B
C6103	Slider over running	B
C6104	Back side cleaning home sensor abnormality (initial)	B
C6105	Back side cleaning home sensor abnormality (normal)	B
C6704	Image input time out	C
C6751	CCD gain adjustment failure	B
C6752	ASIC clock input error (front side)	C
C6753	ASIC clock input error (back side)	C
C6754	CIS clamp adjustment failure	B
C6755	CIS gain adjustment failure	B
C6756	CCD power-supply voltage malfunction	C
C6901	DSC board mount failure 1	C
C6902	DSC Bus check NG1-1	C
C6903	DSC Bus check NG1-2	C
C6911	DSC board mount failure 2	C
C6912	DSC Bus check NG2-1	C
C6913	DSC Bus check NG2-2	C
C6F01	Scanner sequence trouble 1	C
C8101	Before reading pressure welding alienation mechanism trouble	B
C8103	Lift up mechanism trouble (Upward movement)	B
C8106	Lift up mechanism failure (Downward movement)	B
C8107	Glass cleaning mechanism trouble	B
C8302	Cooling fan motor's failure	B
C8401	Nonvolatile memory error	C
C8402	Multi feed detection board failure (When UK-501 is installed)	C
C9401	Exposure LED lighting failure /ROM contents error (MSC)	A
C9402	Exposure LED lighting abnormally	A
C9403	CIS LED lighting failure	A
C9404	CIS LED lighting abnormally	A
CA051	Standard controller configuration failure	C
CA052	Controller hardware error	C
CA053	Controller start failure	C
CB001	FAX board error 1	C
CB002	FAX board error 2	C
CB003	FAX board error 3	C
CB004	FAX board error 4	C
CB005	FAX board error 5	C
CB006	FAX board error 6	C
CB051	FAX board mount failure line 1	C
CB052	FAX board installation error (Line 2).	C
CB110	Instance generation error or observer registration error	C
CB111	Configuration space initialization NG	C
CB112	Semaphore acquisition, release error	C
CB113	Sequence error among main body tasks	C
CB114	Message queue control error	C
CB115	Main body - sequence error among FAX boards	C
CB116	FAX board nonresponse (Nonresponse after initialization)	C
CB117	ACK waiting timeout error	C
CB118	Receiving undefined frame	C
CB119	DMA transfer error	C
CB120	JC soft error	C
CB122	Device error (modem-DAA initialization error)	C
CB123	Device error (modem-DAA power save recovery error)	C
CB125	ISW failure of Sub CPU	C
CB126	Timeout error due to nonresponse from DC during suspension process	C

Code	Item	Rank
CB127	Timeout error due to nonresponse from CC during suspension process	C
CB128	Timeout error due to nonresponse from LINE during suspension process	C
CB129	Timeout error due to nonresponse from SPI tasks during suspension process	C
CB130	Driver soft error	C
CB131	Reception frame length error from main	C
CB132	Reception frame header error from main	C
CB133	232C I/F sequence error	C
CB134	DPRAM I/F sequence error	C
CB135	DPRAM CTL/STL register error	C
CB136	ACK waiting timeout	C
CB137	DPRAM RESET reception	C
CB139	No modem response during execution of voice response	C
CB140	MSG I/F Error with JC	C
CB141	I/F error with driver	C
CB142	Undefined command reception	C
CB143	Command frame length error	C
CB144	Command parameter length error	C
CB145	Undefined parameter	C
CB146	Command/response sequence error	C
CB150	External class instance acquisition error	C
CB151	Job start error (Starting job parameter error/child job generation error)	C
CB152	Doc access error (Report buf access error)	C
CB153	Response wait timeout from external task	C
CB154	Internal que table control error (create/enque/deque)	C
CB160	Instance generation error	C
CB161	Timeout error	C
CB162	Interface error	C
CB163	Message que control error	C
CB164	Semaphore acquisition release error	C
CB165	Observer registration error	C
CB166	Reception resource check error	C
CB167	Deployment error of sending image information	C
CB168	Serialization error of receiving image	C
CB169	Access error to quick memory data	C
CB170	Internal que table control error (create/enque/deque)	C
CB171	Instance generation error	C
CB172	Timeout error	C
CB173	Interface error	C
CB174	Semaphore acquisition release error	C
CB175	Observer registration error	C
CB176	Unable to check TTI domain	C
CB177	Error return from TTI rasterizer	C
CB178	Receiving job generation error	C
CB179	Sequence control error	C
CB180	Access error to quick sending memory data	C
CB181	BlockBuff acquisition error	C
CB182	Sending block image error (Req, restore)	C
CB183	Receiving block image error (Req, store)	C
CB184	Storage error of receiving image information	C
CB185	Receiving data size logic error (Receiving data are not multiples of dotline)	C
CB186	Image buf acquisition (alloc) error	C
CB187	Error return from compressor	C
CB188	BandBuf control error (newInstance/get/free)	C
CB190	USB IF error (OS notifies an error during configuration setting after recovery from the sleep or attach.)	C
CB191	USB IF error (EndPoint1: Bulk Out (command, transmitted image data)) (error retry 1 min. timeout)	C
CB192	USB IF error (EndPoint2: Bulk In (response, received image data)) (error retry 5 sec. timeout)	C

Code	Item	Rank
CB193	USB IF error (EndPoint3: Interrupt In (fax board status)) (error retry 1 min. timeout)	C
CB194	USB IF error (EndPoint4: Bulk Out (main body status)) (error retry 3 sec. timeout)	C
CB195	USB IF error (Attach not detected for 1 min. after recovery from sleep)	C
CB196	USB IF error (Detach not detected for 1 min. after recovery from sleep)	C
CC140	Trouble related to security	C
CC151	ROM contents error upon startup (MSC)	C
CC152	ROM contents error upon startup (IR)	C
CC155	Finisher ROM error	C
CC156	DF ROM error	C
CC159	ROM contents error upon startup (DSC1)	C
CC15A	ROM contents error upon startup (DSC2)	C
CC15B	Flash ROM error (saddle)	C
CC163	ROM contents error (PRT)	C
CC164	ROM contents error (MSC)	C
CC170	Dynamic link error during starting (AP0)	C
CC171	Dynamic link error during starting (AP1)	C
CC172	Dynamic link error during starting (AP2)	C
CC173	Dynamic link error during starting (AP3)	C
CC174	Dynamic link error during starting (AP4)	C
CC180	Dynamic link error during starting (LDR)	C
CC181	Dynamic link error during starting (IBR)	C
CC182	Dynamic link error during starting (IID)	C
CC183	Dynamic link error during starting (IPF)	C
CC184	Dynamic link error during starting (IMY)	C
CC185	Dynamic link error during starting (SPF)	C
CC186	Dynamic link error during starting (OAP)	C
CC190	Outline font load error	C
CC191	Setting parameter load error (LDR)	C
CC211	Authentication device general error	C
CC212	User validation error	C
CC213	User registration error/Card information setting error	C
CC214	User information deletion error	C
CC216	Acquisition failure of the number of trials/Initialize error of number of authentication	C
CC301	Authentication customize data error	B
CC302	Authentication customize data version mismatch error	B
CD002	JOB RAM save error	C
CD004	Hard disk access error (connection failure)	C
CD00F	Hard disk data transfer error	C
CD010	Hard disk unformat	C
CD011	Hard disk out of specifications mounted	C
CD012	Mount error due to hard disk being unformatted	C
CD013	HDD mirroring error master	A
CD014	HDD mirroring error slave	A
CD015	HDD mirroring error master slave	A
CD016	HDD mirroring error master (rebuild)	A
CD017	HDD mirroring error slave (rebuild)	A
CD020	Hard disk verify error	C
CD030	Hard disk management information reading error	C
CD041	HDD command execution error	C
CD042		C
CD043		C
CD044		C
CD045		C
CD046		C
CD047	HDD SCSI library error	C
CD048		C
CD049		C
CD04A		C

Code	Item	Rank
CD04B		C
CD050	Hard disk recovery timeout	C
CD110	Wireless LAN destination initialization error	C
CD201	File memory mounting error	C
CD202	Memory capacity discrepancy	C
CD203	Memory capacity discrepancy 2	C
CD211	PCI-SDRAM DMA operation failure	C
CD212	Compression/extraction timeout detection	C
CD241	Encryption ASIC setting error	C
CD242	Encryption ASIC mounting error	C
CD261	USB hub board failure	C
CD271	The memory cannot be recognized with the i-Option activated	C
CD272	i-Option activated and HDD not installed	C
CD3A0	Counter error	C
CD3C0	New board detection	C
CD3##	Nonvolatile data error	C
CD401	NACK command incorrect	C
CD402	ACK command incorrect	C
CD403	Checksum error	C
CD404	Receiving packet incorrect	C
CD405	Receiving packet analysis error	C
CD406	ACK receiving timeout	C
CD407	Retransmission timeout	C
CD411	Touch panel board error	C
CD412	Touch panel type mismatch	C
CD413	Electrostatic touch panel operation mode error	C
CD601	Trouble related to security	-
CD602		
CD603		
CD701	Mechanical controller flash ROM writing error	C
CD702	Mechanical controller flash ROM device error	C
CD703	FW download communication fault	C
CD704	Finisher Flash ROM device error (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)	C
CD705	Mechanical controller sub-CPU flash ROM device error	C
CD706	Mechanical controller sub-CPU flash ROM error	C
CDC##	Trouble related to security	-
CDF50	ASIC image version failure	C
CDF51	ASIC image version failure (back side)	C
CDF70	ASIC image access failure	C
CDF71	ASIC image access failure (back side)	C
CDFA0	ASIC image error	C
CDFA1	ASIC image error (back side)	C
CE001	Abnormal message queue	C
CE002	Message and method parameter failure	C
CE003	Task error	C
CE004	Event error	C
CE005	Memory access error	C
CE006	Header access error	C
CE007	DIMM initialize error	C
CE009	Memory resource shortage error	C
CE101	Browser finish detected	C
CE201	Transmission operation log storage fault	C
CE301	Referring incorrect memory	C
CE302	Incorrect command	C
CE303	Finished due to error inside Qt library	C
CE304	Finished due to error outside Qt library	C
CE305	Program forced to stop	C

Code	Item	Rank
CED01	The authentication application information does not exist in the hard disk/eMMC board in the enhanced server authentication state.	C
CEEE1	MFP board (MSC) malfunction	C
CEEE2	Scanner section malfunction	A
CEEE3	MFP board (ENG) malfunction	C
CF###	Trouble code (CF###) is referred to as abort code. For details of abort code, refer to "ABORT CODE".	C

3.5 C0###

3.5.1 C0002

(1) Contents

Trouble type	C0002: Paper feed communication error
Rank	C
Trouble detection condition	When the paper feed/transport drive board (PFTDB) is receiving data, a communication error is detected.
Trouble isolation	-
Relevant electrical parts	• Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Correct the harness connection between MFPB CN7E-PFTDB CN4 if faulty.
3. Rewrite the firmware.
4. PFTDB F3 conduction check
5. Replace PFTDB.
6. MFPB F2E conduction check
7. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.1. C0002)

3.5.2 C0104, C0105

(1) Contents

Trouble type	• C0104: Tray 3/4 feeder transportation motor's failure to turn • C0105: Tray 3/4 feeder transportation motor's turning at abnormal timing
Rank	B
Trouble detection condition	C0104: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. C0105: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	Tray 3 /4
Relevant electrical parts	• LCC transport motor (M25) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M25-PFTDB CN13 for proper connection and correct as necessary.
2. Check the connector of M25 for proper drive coupling and correct as necessary.
3. M25 operation check
   - Control signal: PFTDB CN13-1 to 7
   - Location of electrical component: 11-X
4. Replace M25.
5. PFTDB F15 conduction check
6. Replace PFTDB.
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.2. C0104, C0105)

3.5.3 C0202

(1) Contents

Trouble type	C0202: Tray 1 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 1 upper limit sensor (PS6) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.

Trouble isolation	Tray 1
Relevant electrical parts	• Tray 1 upper limit sensor (PS6) • Tray 1 lift-up motor (M6) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M6-PFTDB CN25 for proper connection and correct as necessary.
3. Check the connector of M6 for proper drive coupling and correct as necessary.
4. Check the connector between PS6-relay CN145-PFTDB CN14 for proper connection and correct as necessary.
5. PS6 I/O check, sensor check
   - Control signal: PFTDB CN14-3 (ON)
   - Location of electrical component: 1-P
6. M6 operation check
   - Control signal: PFTDB CN25-10 to 11
   - Location of electrical component: 2-X
7. Replace M6.
8. PFTDB F10 conduction check
9. Replace PFTDB.
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.3. C0202)

3.5.4 C0204

(1) Contents

Trouble type	C0204: Tray 2 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 2 upper limit sensor (PS14) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 2
Relevant electrical parts	• Tray 2 upper limit sensor (PS14) • Tray 2 lift-up motor (M8) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M8-PFTDB CN24 for proper connection and correct as necessary.
3. Check the connector of M8 for proper drive coupling and correct as necessary.
4. Check the connector between PS14-relay CN155B-PFTDB CN12 for proper connection and correct as necessary.
5. PS14 I/O check, sensor check
   - Control signal: PFTDB CN12-17 (ON)
   - Location of electrical component: 4-P
6. M8 operation check
   - Control signal: PFTDB CN24-10 to 11
   - Location of electrical component: 4-X
7. Replace M8.
8. PFTDB F10 conduction check
9. Replace PFTDB.
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.4. C0204)

3.5.5 C0206

(1) Contents

Trouble type	C0206: Tray 3 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 3 upper limit sensor (PS22) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 3
Relevant electrical parts	• Tray 3 upper limit sensor (PS22) • Tray 3 lift-up motor (M23) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M23-PFTDB CN15 for proper connection and correct as necessary.
3. Check the connector of M23 for proper drive coupling and correct as necessary.
4. Check the connector between PS22-relay CN193-relay CN113B-PFTDB CN17 for proper connection and correct as necessary.
5. PS22 I/O check, sensor check
   - Control signal: PFTDB CN17-6 (ON)
   - Location of electrical component: 6-X
6. M23 operation check
   - Control signal: PFTDB CN15-3 to 4
   - Location of electrical component: 9-X
7. Replace M23.
8. PFTDB F12 conduction check
9. Replace PFTDB.
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.5. C0206)

3.5.6 C0208

(1) Contents

Trouble type	C0208: Tray 4 feeder up/down abnormality
Rank	B
Trouble detection condition	The tray 4 upper limit sensor (PS27) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	Tray 4
Relevant electrical parts	• Tray 4 upper limit sensor (PS27) • Tray 4 lift-up motor (M24) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Remove the tray and check to see if a piece of paper is not left inside the machine.
2. Check the connector between M24-PFTDB CN15 for proper connection and correct as necessary.
3. Check the connector of M24 for proper drive coupling and correct as necessary.
4. Check the connector between PS27-relay CN194-relay CN121B-PFTDB CN19 for proper connection and correct as necessary.
5. PS27 I/O check, sensor check
   - Control signal: PFTDB CN19-6 (ON)
   - Location of electrical component: 8-X
6. M24 operation check
   - Control signal: PFTDB CN15-1 to 2
   - Location of electrical component: 9-X
7. Replace M24.
8. PFTDB F12 conduction check
9. Replace PFTDB.
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.6. C0208)

3.5.7 C0211

(1) Contents

Trouble type	C0211: Manual feed up/down abnormality
Rank	B
Trouble detection condition	• The bypass upper limit sensor (PS35) is not turned ON (blocked) even after the bypass lift-up motor (M26) rotates for a given period of time after the position is switched from stand by position at lift-up plate to the feed position. • The bypass lower limit sensor (PS36) is not turned ON (blocked) even after the bypass lift-up motor (M26) rotates for a given period of time after the position is switched from stand by position at lift-up plate to the feed position.
Trouble isolation	Manual
Relevant electrical parts	• Bypass lift-up motor (M26) • Bypass upper limit sensor (PS35) • Bypass lower limit sensor (PS36) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M26-relay CN195B-PFTDB CN9 for proper connection and correct as necessary.
2. Check the connector of M26 for proper drive coupling and correct as necessary.
3. Check the connector between PS35-relay CN195B-PFTDB CN9 for proper connection and correct as necessary.

4. Check the connector between PS36-relay CN180-relay CN195A-PFTDB CN3 for proper connection and correct as necessary.
5. PS35 I/O check, sensor check
   - Control signal: PFTDB CN9-12 (ON)
   - Location of electrical component: 12-P
6. PS36 operation check
   - Control signal: PFTDB CN3-13 (ON)
   - Location of electrical component: 11-P
7. M26 operation check
   - Control signal: PFTDB CN9-1 to 2
   - Location of electrical component: 11 to 12-P
8. Replace M26.
9. PFTDB F17 conduction check
10. Replace PFTDB.
11. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.7. C0211)

3.5.8 C0216

(1) Contents

Trouble type	C0216: LCT up/down abnormality (When LU-205 or LU-303 is installed)
Rank	B
Trouble detection condition	The LU upper limit sensor (PS2) is not turned ON (blocked) even after the set period of time has elapsed after the paper lift-up operation for the drawer began.
Trouble isolation	LCT
Relevant electrical parts	• LU upper limit sensor (PS2) • LU lift-up motor (M1) • LU drive board (LUDB)

(2) Procedure

1. Check the connector between M1-LUDB CN3 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-relay CN406-LUDB CN5 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: LUDB CN5-3 (ON)
   - Location of electrical component: LU-205/LU-303 4-G
5. M1 operation check
   - Control signal: LUDB CN3-4 (ON)
   - Location of electrical component: LU-205/LU-303 3-G
6. Replace M1.
7. Replace LUDB. (LU-205/LU-303)

NOTICE
- Link to the wiring diagram (N.3.1 LU-205)
- Link to the wiring diagram (N.3.2 LU-303)
- Link to the layout drawings for related parts by each trouble code (S.8. C0216)

3.5.9 C0301

(1) Contents

Trouble type	C0301: Suction fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Suction fan (FM1) • Paper feed/transport drive board (PFTDB)

(2) Procedure

1. Check the connector between FM1-relay CN278-relay CN300-relay CN271B-PFTDB CN8 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM1 operation check
   - Control signal: PFTDB CN8-3 (REM), PFTDB CN8-5 (LOCK)
   - Location of electrical component: 6-P
4. Replace FM1.
5. PFTDB F2 conduction check
6. Replace PFTDB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.9. C0301)

3.5.10 C0351

(1) Contents

Trouble type	C0351: Paper cooling fan/in's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Paper cooling fan/in (FM12) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM12-relay CN325-MFPB CN27E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM12 operation check
   - Control signal: MFPB CN27E<B>-6 (LOCK)
   - Location of electrical component: 15-C
4. Replace FM12.
5. MFPB F6E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.10. C0351)

3.6 C1###

3.6.1 C1003, C1013

(1) Contents

Trouble type	• C1003: PK communication error (Finisher detection) • C1013: PK communication error (PK detection)	
Rank	C	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	When a communication error is detected between the FS control board (FSCB) and the punch control board (PKCB).
Trouble isolation	Punch	
Relevant electrical parts	• Punch control board (PKCB) • FS control board (FSCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PKCB.
4. Replace FSCB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.11. C1003, C1013)

3.6.2 C1004, C1014

(1) Contents

Trouble type	C1004: Finisher communication error (Engine detection) C1014: Finisher communication error (Finisher detection)	
Rank	C	
Trouble detection condition	<When FS-536, FS-536SD, FS-537, or FS-537SD is installed>	When a communication error is detected between the MFP board (MFPB) and the FS control board (FSCB).
Trouble isolation	-	
Relevant electrical parts	• FS control board (FSCB) • MFP board (MFPB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-536/FS-536SD/FS-537/FS-537SD)
4. PKCB ICP1 conduction check.
5. PIDB ICP1 conduction check.
6. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.12. C1004, C1014)

3.6.3 C1007, C1017

(1) Contents

Trouble type	• C1007: PI communication error (Finisher detection) • C1017: PI communication error (PI detection)	
Rank	C	
Trouble detection condition	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	When a communication error is detected between the FS control board (FSCB) and the PI drive board (PIDB).
Trouble isolation	-	
Relevant electrical parts	• PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PIDB.
4. Replace FSCB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.13. C1007, C1017)

3.6.4 C1081, C1082

(1) Contents

Trouble type	• C1081: SD communication error (Finisher detection) • C1082: SD communication error (SD detection)	
Rank	C	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	When a communication error is detected between the FS control board (FSCB) and the SD drive board (SDDB).
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	• SD control board (SDCB) • FS control board (FSCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace SDCB. (FS-536/FS-536SD/FS-537/FS-537SD)
4. Replace FSCB. (FS-536/FS-536SD/FS-537/FS-537SD)

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.14. C1081, C1082)

3.6.5 C1102

(1) Contents

Trouble type	C1102: Main tray up/down motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• While the exit tray is being lifted, the main tray upper position sensor (PS26/PS27) is not turned ON (blocked) and the main tray upper position detect switch (SW2) is not turned ON, even after the main tray up/down motor (M11) turns by the set number of times. • While the exit tray is being lowered, the main tray full detection sensor (PS29) is not turned ON (blocked) after the set period of time has elapsed after the main tray up/down motor (M11) is turned ON.
	<When FS-537 or FS-537SD is installed>	• The main tray lift up detection sensor (PS16/PS17) is not turned ON (blocked) after the set period of time has elapsed after the main tray up/down motor (M6) is turned ON. • The main tray full detection sensor (PS12) is not turned ON (blocked) after the set period of time has elapsed after the main tray up/down motor (M6) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Main tray up/down motor (M11) • Main tray upper position sensor/R (PS26) • Main tray upper position sensor/F (PS27) • Main tray full detection sensor (PS29) • Main tray upper position detect switch (SW2) • FS control board (FSCB)

	<When FS-537 or FS-537SD is installed>	• Main tray up/down motor (M6) • Main tray lift up detection sensor/F (PS16) • Main tray lift up detection sensor/R (PS17) • Main tray full detection sensor (PS12) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M11-FSCB J9 for proper connection and correct as necessary.
2. Check the connector of M11 for proper drive coupling, and correct as necessary.
3. Check the connector between PS26-relay CN1-FSCB J14 for proper connection and correct as necessary.
4. Check the connector between PS27-relay CN1-FSCB J14 for proper connection and correct as necessary.
5. Check the connector between PS29-relay CN2-FSCB J14 for proper connection and correct as necessary.
6. Check the connector between SW2-FSCB J10 for proper connection and correct as necessary.
7. PS26 I/O check, sensor check
   - Control signal: FSCB J14<A>-5 (ON)
   - Location of electrical component: FS-536/FS-536SD 2-C
8. PS27 I/O check, sensor check
   - Control signal: FSCB J14<B>-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 3-C
9. PS29 I/O check, sensor check
   - Control signal: FSCB J14<A>-8 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-C
10. SW2 operation check
    - Control signal: FSCB J10-1 to 2
    - Location of electrical component: FS-536/FS-536SD 15-K
11. M11 operation check
    - Control signal: FSCB J9<A>-9 to 10
    - Location of electrical component: FS-536/FS-536SD 12-C
12. Replace M11.
13. FSCB F2 conduction check
14. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.15.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M6-FSCB J23 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS16-relay CN10<B>-FSCB J20 for proper connection and correct as necessary.
4. Check the connector between PS17-relay CN10<B>-FSCB J20 for proper connection and correct as necessary.
5. Check the connector between PS12-relay CN9-FSCB J19 for proper connection and correct as necessary.
6. PS16 I/O check, sensor check
   - Control signal: FSCB J20<B>-4 (ON)
   - Location of electrical component: FS-537/FS-537SD 11 to 12-D
7. PS17 I/O check, sensor check
   - Control signal: FSCB J20<B>-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 12-D
8. PS12 I/O check, sensor check
   - Control signal: FSCB J19-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 10-D
9. M6 operation check
   - Control signal: FSCB J23-1 to 11
   - Location of electrical component: FS-537/FS-537SD 13-D
10. Replace M6.
11. FSCB F3 conduction check
12. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.15.2 FS-537/FS-537SD)

3.6.6 C1103

(1) Contents

Trouble type	C1103: Alignment motor/Front's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The alignment plate/F home sensor (PS12) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate/F home sensor (PS12) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/Front (M7) is turned ON to return the plate to the home position. • The alignment plate/F does not reach the specified position within the set period of time.

	<When FS-537 or FS-537SD is installed>	• The alignment plate/F home sensor (PS9) is not turned OFF (unblocked) after the set period of time has elapsed after the plate drive starts from the home position. • The alignment plate/F home sensor (PS9) is not turned ON (blocked) after the set period of time has elapsed after the alignment motor/Front (M14) is turned ON to return the plate to the home position. • The alignment plate/F does not reach the specified position within the set period of time.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Alignment motor/Front (M7) • Alignment plate/F home sensor (PS12) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Alignment motor/Front (M14) • Alignment plate/F home sensor (PS9) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M7-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS12-FSCB J4 for proper connection and correct as necessary.
4. PS12 I/O check, sensor check
   - Control signal: FSCB J4<B>-4 (ON)
   - Location of electrical component: FS-536/FS-536SD 15-C
5. M7 operation check
   - Control signal: FSCB J4<A>-5 to 8
   - Location of electrical component: FS-536/FS-536SD 14-C
6. Replace M7.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.16.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M14-relay CN5-FSCB J18 for proper connection and correct as necessary.
2. Check the connector of M14 for proper drive coupling and correct as necessary.
3. Check the connector between PS9-relay CN5-FSCB J18 for proper connection and correct as necessary.
4. PS9 I/O check, sensor check
   - Control signal: FSCB J18-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 6-D
5. M14 operation check
   - Control signal: FSCB J18-1 to 4
   - Location of electrical component: FS-537/FS-537SD 6-D
6. Replace M14.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.16.2 FS-537/FS-537SD)

3.6.7 C1104

(1) Contents

Trouble type	C1104: Stacker plate drive motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The stacker plate home sensor (PS30) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stacker plate drive motor (M3) is turned ON.
Trouble isolation	-	
Relevant electrical parts	• Stacker plate drive motor (M3) • Stacker plate home sensor (PS30) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M3-relay CN1<B>-FSCB J22 for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS30-relay CN2-relay CN1<B>-FSCB J22 for proper connection and correct as necessary.
4. PS30 I/O check, sensor check
   - Control signal: FSCB J22<B>-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 3-D
5. M3 operation check
   - Control signal: FSCB J22<B>1 to 2
   - Location of electrical component: FS-537/FS-537SD 2-D

6. Replace M3.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.17. C1104)

3.6.8 C1105

(1) Contents

Trouble type	C1105: Bundle eject motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The gripper home position sensor (PS18) is not turned ON (unblocked) even after the set period of time has elapsed after the gripper position detection sensor (PS19) turns OFF (block). • The gripper position detection sensor (PS19) is not turned OFF (blocked) even after the set period of time has elapsed after PS19 turns ON (unblock). • The gripper position detection sensor (PS19) is not turned ON (unblocked) even after the set period of time has elapsed after the gripper home position sensor (PS18) turns OFF (block). • The gripper home position sensor (PS18) is not turned OFF (blocked) even after the set period of time has elapsed after the bundle eject motor (M10) is energized. • The gripper home position sensor (PS18) and the gripper position detection sensor (PS19) is turned ON (unblocked) at the same time.
	<When FS-537 or FS-537SD is installed>	The gripper home position sensor (PS3) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed after the bundle eject motor (M1) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Bundle eject motor (M10) • Gripper home position sensor (PS18) • Gripper position detection sensor (PS19) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Bundle eject motor (M1) • Gripper home position sensor (PS3) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M10-relay CN7<A>-FSCB J13 for proper connection and correct as necessary.
2. Check the connector of M10 for proper drive coupling, and correct as necessary.
3. Check the connector between PS18-relay CN7<A>-FSCB J13 for proper connection and correct as necessary.
4. Check the connector between PS19-relay CN8<B>-FSCB J12 for proper connection and correct as necessary.
5. PS18 I/O check, sensor check
   - Control signal: FSCB J13-13 (ON)
   - Location of electrical component: FS-536/FS-536SD 8-C
6. PS19 I/O check, sensor check
   - Control signal: FSCB J12-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-C
7. M10 operation check
   - Control signal: FSCB J13-1 to 2
   - Location of electrical component: FS-536/FS-536SD 9-C
8. Replace M10.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.18.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M1-relay CN1<A>-FSCB J22 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS3-relay CN1<A>-FSCB J22 for proper connection and correct as necessary.
4. PS3 I/O check, sensor check
   - Control signal: FSCB J22<A>-13 (ON)
   - Location of electrical component: FS-537/FS-537SD 2-D
5. M1 operation check
   - Control signal: FSCB J22<A>-1 to 2
   - Location of electrical component: FS-537/FS-537SD 1-D
6. Replace M1.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.18.2 FS-537/FS-537SD)

3.6.9 C1106

(1) Contents

Trouble type	C1106: Stapler movement motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The stapler home position sensor (rear) (PS23) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the side stapler movement motor (M13) turned ON. • The stapler does not reach the specified position within the set period of time.
	<When FS-537 or FS-537SD is installed>	• The stapler home position sensor (PS18/PS19) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stapler movement motor (M19) turned ON. • The stapler does not reach the specified position within the set period of time.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Side stapler movement motor (M13) • Stapler home position sensor (rear) (PS23) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Stapler movement motor (M19) • Stapler home position sensor (corner) (PS18) • Stapler home position sensor (rear) (PS19) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M13-relay CN3-FSCB J11 for proper connection, and correct as necessary.
2. Check the connector of M13 for proper drive coupling and correct as necessary.
3. Check the connector between PS23-relay CN3-FSCB J11 for proper connection, and correct as necessary.
4. PS23 I/O check, sensor check
   - Control signal: FSCB J11<B>-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-C
5. M13 operation check
   - Control signal: FSCB J11<A>-1 to 4
   - Location of electrical component: FS-536/FS-536SD 4-C
6. Replace M13.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.19.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M19-FSCB J17 for proper connection and correct as necessary.
2. Check the connector of M19 for proper drive coupling and correct as necessary.
3. Check the connector between PS18-FSCB J16 for proper connection and correct as necessary.
4. Check the connector between PS19-FSCB J16 for proper connection and correct as necessary.
5. PS18 I/O check, sensor check
   - Control signal: FSCB J16-9 (ON)
   - Location of electrical component: FS-537/FS-537SD 15-D
6. PS19 I/O check, sensor check
   - Control signal: FSCB J16-6 (ON)
   - Location of electrical component: FS-537/FS-537SD 15-D
7. M19 operation check
   - Control signal: FSCB J17-10 to 13
   - Location of electrical component: FS-537/FS-537SD 14-D
8. Replace M19.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.19.2 FS-537/FS-537SD)

3.6.10 C1109

(1) Contents

Trouble type	C1109: Stapler motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The stapler home position sensor (rear) (PS23) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stapler motor (M14) turned ON. • The stapler position sensor (center) (PS24) is turned ON (blocked), when the stapler motor (M14) is running.

	<When FS-537 or FS-537SD is installed>	• The stapler home position sensor (PS18/PS19) is not turned (unblocked) or ON (blocked) even after the set period of time has elapsed after the stapler movement motor (M5) turned ON. • The stapler position sensor (center) (PS20) is turned ON (blocked), when the stapler motor (M5) is running.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Stapler unit • Stapler home position sensor (rear) (PS23) • Stapler position sensor (center) (PS24) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Stapler unit • Stapler home position sensor (corner) (PS18) • Stapler home position sensor (rear) (PS19) • Stapler position sensor (center) (PS20) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between the stapler unit-relay CN4-FSCB J11 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS23-relay CN3-FSCB J11 for proper connection, and correct as necessary.
4. Check the connector between PS24-relay CN3-FSCB J11 for proper connection and correct as necessary.
5. PS23 I/O check, sensor check
   - Control signal: FSCB J11<B>-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-C
6. PS24 I/O check, sensor check
   - Control signal: FSCB J11<B>-6
   - Location of electrical component: FS-536/FS-536SD 5-C
7. Replace the stapler unit.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.20.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between the stapler unit-FSCB J17 for proper connection and correct as necessary.
2. Check the connector of the stapler unit for proper drive coupling and correct as necessary.
3. Check the connector between PS18-FSCB J16 for proper connection and correct as necessary.
4. Check the connector between PS19-FSCB J16 for proper connection and correct as necessary.
5. Check the connector between PS20-FSCB J16 for proper connection and correct as necessary.
6. PS18 I/O check, sensor check
   - Control signal: FSCB J16-9
   - Location of electrical component: FS-537/FS-537SD 15-D
7. PS19 I/O check, sensor check
   - Control signal: FSCB J16-6
   - Location of electrical component: FS-537/FS-537SD 15-D
8. PS20 I/O check, sensor check
   - Control signal: FSCB J16-3
   - Location of electrical component: FS-537/FS-537SD 15-D
9. Replace the stapler unit.
10. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.20.2 FS-537/FS-537SD)

3.6.11 C1112

(1) Contents

Trouble type	C1112: Stapler motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	• The stapler home sensor is not turned ON even after the set period of time has elapsed while the stapler motor is energized. • The stapler home sensor is not turned OFF even after the set period of time has elapsed after the stapler home sensor is turned ON.
Trouble isolation	• Staple • Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Staple unit • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between the staple unit-SDCB J4 for proper connection and correct as necessary.

2. Check the connector of the staple unit for proper drive coupling and correct as necessary.
3. Replace the staple unit. (FS-536SD/FS-537SD)
4. Replace SDCB. (FS-536SD/FS-537SD)
5. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.21. C1112)

3.6.12 C1113

(1) Contents

Trouble type	C1113: Stopper drive motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The stopper home sensor (PS6) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the stopper drive motor (M4) is turned ON.
Trouble isolation	• Staple • Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Stopper drive motor (M4) • Stopper home sensor (PS6) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M4-SDCB J10 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-SDCB J10 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: SDCB J10-5 (ON)
   - Location of electrical component: FS-536/FS-536SD 2-P, FS-537/FS-537SD 2-P
5. M4 operation check
   - Control signal: SDCB J10-6 to 9
   - Location of electrical component: FS-536/FS-536SD 2-P, FS-537/FS-537SD 1-P
6. Replace M4. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.22. C1113)

3.6.13 C1114

(1) Contents

Trouble type	C1114: Alignment motor’s malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The alignment home sensor (PS4) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the alignment motor (M3) is turned ON.
Trouble isolation	Center Stapling, Half-Fold, Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Alignment motor (M3) • Alignment home sensor (PS4) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M3-relay CN26 (FS-536SD), CN29 (FS-537SD)-SDCB J7 for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS4-relay CN26 (FS-536SD), CN29 (FS-537SD)-SDCB J7 for proper connection and correct as necessary.
4. PS4 I/O check, sensor check
   - Control signal: SDCB J7-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 6-P, FS-537/FS-537SD 5-P
5. M3 operation check
   - Control signal: SDCB J7-7 to 10
   - Location of electrical component: FS-536/FS-536SD 6-P, FS-537/FS-537SD 5-P
6. Replace M3. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.23. C1114)

3.6.14 C1115

(1) Contents

Trouble type	C1115: Center fold knife motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The center fold knife home sensor (PS8) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the center fold knife motor (M9) is turned ON.
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Center fold knife motor (M9) • Center fold knife home sensor (PS8) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M9-SDCB J11 for proper connection and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS8-relay CN26 (FS-536SD), CN29 (FS-537SD)-SDCB J7 for proper connection and correct as necessary.
4. PS8 I/O check, sensor check
   - Control signal: SDCB J7-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-P, FS-537/FS-537SD 6-P
5. M9 operation check
   - Control signal: SDCB J11-11 to 20
   - Location of electrical component: FS-536/FS-536SD 2-L, FS-537/FS-537SD 1-K
6. Replace M9. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.24. C1115)

3.6.15 C1124

(1) Contents

Trouble type	C1124: Tray lift motor /Lw's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The tray upper limit sensor /Lw (PS209) or tray lower limit sensor /Lw (PS210) is not turned ON (blocked) after the set period of time has elapsed after the tray lift motor /Lw (M202) is turned ON.
Problem Unit Isolation Set.	Post inserter	
Relevant electrical parts	• Tray lift motor /Lw (M202) • Tray upper limit sensor /Lw (PS209) • Tray lower limit sensor /Lw (PS210) • PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M202-relay CN206-PIDB CN56 for proper connection and correct as necessary.
2. Check the connector of M202 for proper drive coupling and correct as necessary.
3. Check the connector between PS209-relay CN237-PIDB CN53 for proper connection and correct as necessary.
4. Check the connector between PS210-relay CN236-PIDB CN53 for proper connection and correct as necessary.
5. PS209 I/O check, sensor check
   - Control signal: PIDB CN53<A>-8 (ON)
   - Location of electrical component: PI-507 10-C
6. PS210 I/O check, sensor check
   - Control signal: PIDB CN53<A>-11 (ON)
   - Location of electrical component: PI-507 11-C
7. M202 operation check
   - Control signal: PIDB CN56-5 to 6
   - Location of electrical component: PI-507 9-C
8. Replace M202.
9. Replace PIDB.
10. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.6 PI-507)
- Link to the layout drawings for related parts by each trouble code (S.25. C1124)

3.6.16 C1125

(1) Contents

Trouble type	C1125: Tray lift motor /Up's drive malfunction

Rank	B	
Trouble detection condition	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	The tray upper limit sensor /Up (PS205) or tray lower limit sensor /Up (PS204) is not turned ON (blocked) after the set period of time has elapsed after the tray lift motor /Up (M201) is turned ON.
Problem Unit Isolation Set.	Post inserter	
Relevant electrical parts	• Tray lift motor /Up (M201) • Tray upper limit sensor /Up (PS204) • Tray lower limit sensor /Up (PS205) • PI drive board (PIDB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M201-relay CN203-PIDB CN54 for proper connection and correct as necessary.
2. Check the connector of M201 for proper drive coupling and correct as necessary.
3. Check the connector between PS204-relay CN235-PIDB CN55 for proper connection and correct as necessary.
4. Check the connector between PS205-relay CN235-PIDB CN55 for proper connection and correct as necessary.
5. PS204 I/O check, sensor check
   - Control signal: PIDB CN55-8 (ON)
   - Location of electrical component: PI-507 8-C
6. PS205 I/O check, sensor check
   - Control signal: PIDB CN55-7 (ON)
   - Location of electrical component: PI-507 8-C
7. M201 operation check
   - Control signal: PIDB CN54-7 to 8
   - Location of electrical component: PI-507 6 to 7-C
8. Replace M201.
9. Replace PIDB.
10. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.6 PI-507)
- Link to the layout drawings for related parts by each trouble code (S.26. C1125)

3.6.17 C1127

(1) Contents

Trouble type	C1127: Punch oscillating motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The PK punch oscillating home sensor (PS303) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed while the punch oscillating motor (M302) is energized.
Problem Unit Isolation Set.	Punch	
Relevant electrical parts	• Punch oscillating motor (M302) • PK punch oscillating home sensor (PS303) • Punch control board (PKCB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M302-relay CN342-relay CN341-PKCB CN1 for proper connection and correct as necessary.
2. Check the connector of M302 for proper drive coupling and correct as necessary.
3. Check the connector between PS303-relay CN342-relay CN341-PKCB CN37 for proper connection and correct as necessary.
4. PS303 I/O check, sensor check
   - Control signal: PKCB CN37-2 (ON)
   - Location of electrical component: PK-523 5-C
5. M302 operation check
   - Control signal: PKCB CN1-1 to 6
   - Location of electrical component: PK-523 5-C
6. Replace M302.
7. PKCB ICP2 conduction check.
8. Replace PKCB.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.4 PK-523)
- Link to the layout drawings for related parts by each trouble code (S.27. C1127)

3.6.18 C1130

(1) Contents

Trouble type	C1130: ZU transport motor's malfunction
Rank	B

Trouble detection condition	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The chopper home sensor (PS501) is not turned ON (blocked) even after the set period of time has elapsed after the ZU transport motor (M500) is turned ON.
Problem Unit Isolation Set.	Z-folding	
Relevant electrical parts	• ZU transport motor (M500) • Chopper home sensor (PS501) • ZU drive board (ZUDB)	

(2) Procedure

1. Check the connector between M500-ZUDB CN6 for proper connection and correct as necessary.
2. Check the connector of M500 for proper drive coupling and correct as necessary.
3. Check the connector between PS501-ZUDB CN5 for proper connection and correct as necessary.
4. PS501 I/O check, sensor check
   - Control signal: ZUDB CN5-9 (ON)
   - Location of electrical component: ZU-609 4-B
5. M500 operation check
   - Control signal: ZUDB CN6-1 to 6
   - Location of electrical component: ZU-609 1 to 2-B
6. Replace M500.
7. Replace ZUDB.

NOTICE
- Link to the wiring diagram (N.3.5 ZU-609)
- Link to the layout drawings for related parts by each trouble code (S.28. C1130)

3.6.19 C1131

(1) Contents

Trouble type	C1131: Folding guide motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The guide home sensor (PS500) is not turned ON (blocked) even after the set period of time has elapsed after the folding guide motor (M501) is turned ON.
Problem Unit Isolation Set.	Z-folding	
Relevant electrical parts	• Folding guide motor (M501) • Guide home sensor (PS500) • ZU drive board (ZUDB)	

(2) Procedure

1. Check the connector between M501-ZUDB CN6 for proper connection and correct as necessary.
2. Check the connector of M501 for proper drive coupling and correct as necessary.
3. Check the connector between PS500-ZUDB CN5 for proper connection and correct as necessary.
4. PS500 I/O check, sensor check
   - Control signal: ZUDB CN5-3 (ON)
   - Location of electrical component: ZU-609 3-B
5. M501 operation check
   - Control signal: ZUDB CN6-9 to 12
   - Location of electrical component: ZU-609 2-B
6. Replace M501.
7. Replace ZUDB.

NOTICE
- Link to the wiring diagram (N.3.5 ZU-609)
- Link to the layout drawings for related parts by each trouble code (S.29. C1131)

3.6.20 C1132

(1) Contents

Trouble type	C1132: Punch drive motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536+PK-520 or FS-536SD+PK-520 is installed>	The punch home sensor (PS1) is not turned ON (unblocked) or OFF (blocked) even after the set period of time has elapsed while the punch drive motor (M1) is energized.
	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The PK punch home sensor/2 (PS301) is not turned ON (unblocked) or OFF (blocked) even after the set period of time has elapsed while the punch drive motor (M301) is energized.
Trouble isolation	-	
Relevant electrical parts	<When FS-536+PK-520 or FS-536SD+PK-520 is installed>	• Punch drive motor (M1) • Punch home sensor (PS1) • FS control board (FSCB)

	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	• Punch drive motor (M301) • PK punch home sensor/2 (PS301) • Punch control board (PKCB) • FS control board (FSCB)

(2) Procedure

(a) When FS-536+PK-520 or FS-536SD+PK-520 is installed

1. Check the connector between M1-relay CN351-FSCB J7 for proper connection and correct as necessary.
2. Check the connector of M1 for proper drive coupling and correct as necessary.
3. Check the connector between PS1-FSCB J7 for proper connection and correct as necessary.
4. PS1 I/O check, sensor check
   - Control signal: FSCB J7-5 (ON)
   - Location of electrical component: FS-536/FS-536SD 13-K
5. M1 operation check
   - Control signal: FSCB J7-7 to 8
   - Location of electrical component: FS-536/FS-536SD 13-K
6. Replace M1.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.30.1 FS-536/FS-536SD)

(b) When FS-537+PK-523 or FS-537SD+PK-523 is installed

1. Check the connector between M301-relay CN351-PKCB CN35 for proper connection and correct as necessary.
2. Check the connector of M301 for proper drive coupling and correct as necessary.
3. Check the connector between PS301-PKCB CN36 for proper connection and correct as necessary.
4. PS301 I/O check, sensor check
   - Control signal: PKCB CN36-5 (ON)
   - Location of electrical component: PK-523 3-C
5. M301 operation check
   - Control signal: PKCB CN35-1 to 3
   - Location of electrical component: PK-523 2-C
6. Replace M301.
7. Replace PKCB.
8. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.4 PK-523)
- Link to the layout drawings for related parts by each trouble code (S.30.2 FS-537/FS-537SD)

3.6.21 C1133

(1) Contents

Trouble type	C1133: Pressure motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-537+ZU-609 or FS-537SD+ZU-609 is installed>	The press home sensor (PS502) is not turned ON (unblocked), or is not turned OFF (blocked) after it is turned ON (unblocked), even after the set period of time has elapsed after the pressure motor (M502) starts searching its home position
Problem Unit Isolation Set.	Z-folding	
Relevant electrical parts	• Pressure motor (M502) • Press home sensor (PS502) • ZU drive board (ZUDB)	

(2) Procedure

1. Check the connector between M502-ZUDB CN6 for proper connection and correct as necessary.
2. Check the connector of M502 for proper drive coupling and correct as necessary.
3. Check the connector between PS502-ZUDB CN5 for proper connection and correct as necessary.
4. PS502 I/O check, sensor check
   - Control signal: ZUDB CN5-6 (ON)
   - Location of electrical component: ZU-609 4-B
5. M502 operation check
   - Control signal: ZUDB CN6-7 (DRV)
   - Location of electrical component: ZU-609 2-B
6. Replace M502.
7. ZUDB ICP3 conduction check.
8. Replace ZUDB.

NOTICE
- Link to the wiring diagram (N.3.5 ZU-609)
- Link to the layout drawings for related parts by each trouble code (S.31. C1133)

3.6.22 C1140

(1) Contents

Trouble type	C1140: Alignment motor/rear's malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The alignment plate/R home sensor (PS13) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the alignment motor/rear (M8) is energized.
	<When FS-537 or FS-537SD is installed>	The alignment plate/R home sensor (PS6) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the alignment motor/rear (M13) is energized.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Alignment motor/rear (M8) • Alignment plate/R home sensor (PS13) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Alignment motor/rear (M13) • Alignment plate/R home sensor (PS6) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M8-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS13-FSCB J9 for proper connection and correct as necessary.
4. PS13 I/O check, sensor check
   - Control signal: FSCB J9<B>-11 (ON)
   - Location of electrical component: FS-536/FS-536SD 10-C
5. M8 operation check
   - Control signal: FSCB J12-13 to 16 (ON)
   - Location of electrical component: FS-536/FS-536SD 6-C
6. Replace M8.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.32.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M13-relay CN3-FSCB J21 for proper connection and correct as necessary.
2. Check the connector of M13 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-relay CN4-relay CN3-FSCB J21 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: FSCB J21-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 4-D
5. M13 operation check
   - Control signal: FSCB J21-1 to 4
   - Location of electrical component: FS-537/FS-537SD 4-D
6. Replace M13.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.32.2 FS-537/FS-537SD)

3.6.23 C1141

(1) Contents

Trouble type	C1141: FNS paddle motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The upper paddle home position detection sensor (PS14) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the FNS paddle motor (M5) is turning.
	<When FS-537 or FS-537SD is installed>	The paddle home sensor (PS25) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the FNS paddle motor (M9) is turning.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• FNS paddle motor (M5) • Upper paddle home position detection sensor (PS14) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• FNS paddle motor (M9) • Paddle home sensor (PS25) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M5-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS14-FSCB J4 for proper connection and correct as necessary.
4. PS14 I/O check, sensor check
   - Control signal: FSCB J4<B>-7 (ON)
   - Location of electrical component: FS-536/FS-536SD 15-C
5. M5 operation check
   - Control signal: FSCB J4<A>-9 to 12
   - Location of electrical component: FS-536/FS-536SD 14-C
6. Replace M5.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.33.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M9-relay CN13<B>-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS25-relay CN13<B>-FSCB J14 for proper connection and correct as necessary.
4. PS25 I/O check, sensor check
   - Control signal: FSCB J14<B>-10 (ON)
   - Location of electrical component: FS-537/FS-537SD 16-K to L
5. M9 operation check
   - Control signal: FSCB J14<B>-4 to 7
   - Location of electrical component: FS-537/FS-537SD 17- K to L
6. Replace M9.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.33.2 FS-537/FS-537SD)

3.6.24 C1142

(1) Contents

Trouble type	C1142: Paddle up/down motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The paddle up/down home sensor (PS27) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the paddle up/down motor (M7) is energized.
Trouble isolation	Staple	
Relevant electrical parts	• Paddle up/down motor (M7) • Paddle up/down home sensor (PS27) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M7-relay CN13<A>-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS27-relay CN13<A>-FSCB J14 for proper connection and correct as necessary.
4. PS27 I/O check, sensor check
   - Control signal: FSCB J14<A>-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 18-K to L
5. M7 operation check
   - Control signal: FSCB J14<A>-1 to 4
   - Location of electrical component: FS-537/FS-537SD 18-K to L
6. Replace M7.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.34. C1142)

3.6.25 C1143

(1) Contents

Trouble type	C1143: Arm drive motor’s drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The arm home position sensor (PS26) is not turned ON (unblocked) or OFF (blocked) even after the set period of time has elapsed while the arm drive motor (M8) is energized.
Trouble isolation	-	
Relevant electrical parts	• Arm drive motor (M8) • Arm home position sensor (PS26)	

	• FS control board (FSCB)

(2) Procedure

1. Check the connector between M8-relay CN13<A>-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS26-relay CN13<B>-FSCB J14 for proper connection and correct as necessary.
4. PS26 I/O check, sensor check
   - Control signal: FSCB J14<B>-3 (ON)
   - Location of electrical component: FS-537/FS-537SD 17-K to L
5. M8 operation check
   - Control signal: FSCB J14<A>-8 to 11
   - Location of electrical component: FS-537/FS-537SD 17-K to L
6. Replace M8.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.35. C1143)

3.6.26 C1144

(1) Contents

Trouble type	C1144: Pre-eject drive motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	• The pre-eject home sensor (PS21) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the pre-eject drive motor (M9) is turned ON. • The pre-eject away sensor (PS22) is not turned ON (blocked) or OFF (unblocked) even after the set period of time has elapsed after the pre-eject drive motor (M9) is turned ON.
	<When FS-537 or FS-537SD is installed>	The trail edge stopper home sensor (PS31) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the pre-eject drive motor (M2) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Pre-eject drive motor (M9) • Pre-eject home sensor (PS21) • Pre-eject away sensor (PS22) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Pre-eject drive motor (M2) • Trail edge stopper home sensor (PS31) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M9-relay CN7<A>-FSCB J13 for proper connection, and correct as necessary.
2. Check the connector of M9 for proper drive coupling and correct as necessary.
3. Check the connector between PS21-relay CN8-relay CN7<B>-FSCB J12 for proper connection, and correct as necessary.
4. Check the connector between PS22-relay CN8-relay CN7<B>-FSCB J12 for proper connection, and correct as necessary.
5. PS21 I/O check, sensor check
   - Control signal: FSCB J12-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-C
6. PS22 I/O check, sensor check
   - Control signal: FSCB J12-9 (ON)
   - Location of electrical component: FS-536/FS-536SD 7-C
7. M9 operation check
   - Control signal: FSCB J13-3 to 4
   - Location of electrical component: FS-536/FS-536SD 9-C
8. Replace M9.
9. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.36.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M2-relay CN1<A>-FSCB J22 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS31-relay CN2-relay CN1<B>-FSCB J22 for proper connection and correct as necessary.
4. PS31 I/O check, sensor check
   - Control signal: FSCB J22<B>-13
   - Location of electrical component: FS-537/FS-537SD 3-D
5. M2 operation check
   - Control signal: FSCB J22<A>-3 to 4
   - Location of electrical component: FS-537/FS-537SD 1-D
6. Replace M2.

7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.36.2 FS-537/FS-537SD)

3.6.27 C1145

(1) Contents

Trouble type	C1145: Trailing edge stopper motor malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The trailing edge stopper home position detection sensor (PS20) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the trailing edge stopper motor (M6) is turned ON.
	<When FS-537 or FS-537SD is installed>	The trailing edge stopper home position detection sensor/F (PS10) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the trailing edge stopper motor/F (M12) is turned ON.
Trouble isolation	Staple	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Trailing edge stopper motor (M6) • Trailing edge stopper home position detection sensor (PS20) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Trail edge stopper motor/F (M12) • Trail edge stopper sensor/F (PS10) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M6-FSCB J5 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS20-relay CN19-FSCB J5 for proper connection and correct as necessary.
4. PS20 I/O check, sensor check
   - Control signal: FSCB J5-9 (ON)
   - Location of electrical component: FS-536/FS-536SD 15-K
5. M6 operation check
   - Control signal: FSCB J5-13 to 16
   - Location of electrical component: FS-536/FS-536SD 15-K
6. Replace M6.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.37.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M12-relay CN5-FSCB J18 for proper connection and correct as necessary.
2. Check the connector of M12 for proper drive coupling and correct as necessary.
3. Check the connector between PS10-relay CN5-FSCB J18 for proper connection and correct as necessary.
4. PS10 I/O check, sensor check
   - Control signal: FSCB J18-13 (ON)
   - Location of electrical component: FS-537/FS-537SD 6 to 7-D
5. M12 operation check
   - Control signal: FSCB J18-14 to 17
   - Location of electrical component: FS-537/FS-537SD 7-D
6. Replace M12.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.37.2 FS-537/FS-537SD)

3.6.28 C1146

(1) Contents

Trouble type	C1146: Trailing edge stopper motor/R malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The trailing edge stopper home position detection sensor/R (PS7) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the trailing edge stopper motor/R (M11) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-537 or FS-537SD is installed>	• Trail edge stopper motor/R (M11) • Trail edge stopper sensor/R (PS7) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M11-relay CN4-relay CN3-FSCB J21 for proper connection and correct as necessary.
2. Check the connector of M11 for proper drive coupling, and correct as necessary.
3. Check the connector between PS7-relay CN4-relay CN3-FSCB J21 for proper connection and correct as necessary.
4. PS7 I/O check, sensor check
   - Control signal: FSCB J21-16 (ON)
   - Location of electrical component: FS-537/FS-537SD 5-D
5. M11 operation check
   - Control signal: FSCB J21-17 to 20
   - Location of electrical component: FS-537/FS-537SD 5-D
6. Replace M11.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.38. C1146)

3.6.29 C1152

(1) Contents

Trouble type	C1152: Paper transport belt motor's malfunction	
Rank	B	
Trouble detection condition	<When FS-537SD is installed>	Even after a predetermined period of time has elapsed since the paper transport belt motor (M34) starts operation, the lock signal is not set to L (turning).
Trouble isolation	Center Stapling/Half-Fold/Tri-Fold	
Relevant electrical parts	• Paper transport belt motor (M34) • SD control board (SDCB) • FS control board (FSCB)	

(2) Procedure

1. Check the connector between M34-relay CN21-FSCB J24 for proper connection and correct as necessary.
2. Check the connector of M34 for proper drive coupling and correct as necessary.
3. M34 operation check
   - Control signal: FSCB J24-1 to 11
   - Location of electrical component: FS-537/FS-537SD 7-M
4. Replace M34.
5. Replace SDCB.
6. FSCB F4 conduction check
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.39. C1152)

3.6.30 C1156

(1) Contents

Trouble type	C1156: SD paddle motor malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The paddle home sensor (PS5) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the SD paddle motor (M7) is turning.
Trouble isolation	Center Stapling, Half-Fold, Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• SD paddle motor (M7) • Paddle home sensor (PS5) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M7-SDCB J8 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS5-SDCB J8 for proper connection and correct as necessary.
4. PS5 I/O check, sensor check
   - Control signal: SDCB J8-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-P, FS-537/FS-537SD 3-P
5. M7 operation check
   - Control signal: SDCB J8-4 to 7
   - Location of electrical component: FS-536/FS-536SD 4-P, FS-537/FS-537SD 3-P
6. Replace M7. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

- Link to the layout drawings for related parts by each trouble code (S.40. C1156)

3.6.31 C1184

(1) Contents

Trouble type	C1184: Paper discharge control motor malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The paper delivery control sensor (PS28) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the paper receiving control motor (M12) is energized.
	<When FS-537 or FS-537SD is installed>	The paper delivery control sensor (PS11) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed while the paper receiving control motor (M15) is energized.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Paper receiving control motor (M12) • Paper delivery control sensor (PS28) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Paper receiving control motor (M15) • Paper delivery control sensor (PS11) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M12-relay CN1-FSCB J14 for proper connection and correct as necessary.
2. Check the connector of M12 for proper drive coupling and correct as necessary.
3. Check the connector between PS28-relay CN1-FSCB J14 for proper connection and correct as necessary.
4. PS28 I/O check, sensor check
   - Control signal: FSCB J14<B>-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 2 to 3-C
5. M12 operation check
   - Control signal: FSCB J14<A>-9 to 12
   - Location of electrical component: FS-536/FS-536SD 2-C
6. Replace M12.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.41.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M15-FSCB J19 for proper connection and correct as necessary.
2. Check the connector of M15 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-relay CN10<A>-FSCB J20 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: FSCB J20<A>-3 (ON)
   - Location of electrical component: FS-537/FS-537SD 10-D
5. M15 operation check
   - Control signal: FSCB J19-1 to 4
   - Location of electrical component: FS-537/FS-537SD 10-D
6. Replace M15.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.41.2 FS-537/FS-537SD)

3.6.32 C1195

(1) Contents

Trouble type	C1195: Paper discharge control motor malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The curl cover detection sensor (PS2) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the paper discharge control motor (M2) is turned ON.
Trouble isolation	Center Stapling, Half-Fold, Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Paper discharge control motor (M2) • Curl cover detection sensor (PS2) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M2-relay CN22 (FS-536SD), CN25 (FS-537SD)-relay CN21 (FS-536SD), CN26 (FS-537SD)-SDCB J5 for proper connection and correct as necessary.

2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-relay CN22 (FS-536SD), CN25 (FS-537SD)-relay CN21 (FS-536SD), CN26 (FS-537SD)-SDCB J5 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: SDCB J5-3 (ON)
   - Location of electrical component: FS-536/FS-536SD 4-L, FS-537/FS-537SD 3-K
5. M2 operation check
   - Control signal: SDCB J5-4 to 7
   - Location of electrical component: FS-536/FS-536SD 4-L, FS-537/FS-537SD 3-K
6. Replace M2. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.42.1 FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.42.2 FS-537SD)

3.6.33 C1196

(1) Contents

Trouble type	C1196: Center fold guide motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The guide home sensor (PS7) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the center fold roller motor (M6) is turned ON.
Trouble isolation	Center Stapling, Half-Fold, Tri-Fold	
Relevant electrical parts	<When FS-536SD is installed> <When FS-537SD is installed>	• Center fold guide motor (M6) • Guide home sensor (PS7) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M6-SDCB J9 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS7-SDCB J9 for proper connection and correct as necessary.
4. PS7 I/O check, sensor check
   - Control signal: SDCB J9-6 (ON)
   - Location of electrical component: FS-536/FS-536SD 5-P, FS-537/FS-537SD 4-P
5. M6 operation check
   - Control signal: SDCB J9-7 to 10
   - Location of electrical component: FS-536/FS-536SD 4-P, FS-537/FS-537SD 4-P
6. Replace M6. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.43.1 FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.43.2 FS-537SD)

3.6.34 C1197

(1) Contents

Trouble type	C1197: Tri-folding guide motor's drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	The tri-folding gate home sensor (PS11) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed while the tri-folding guide motor (M8) is energized.
Trouble isolation	Center Stapling, Half-Fold, Tri-Fold	
Relevant electrical parts	<When FS-536SD or FS-537SD is installed>	• Tri-folding guide motor (M8) • Tri-folding gate home sensor (PS11) • SD control board (SDCB) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M8-SDCB J8 for proper connection and correct as necessary.
2. Check the connector of M8 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-SDCB J8 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: SDCB J8-10 (ON)
   - Location of electrical component: FS-536/FS-536SD 3-P, FS-537/FS-537SD 3-P
5. M8 operation check

- Control signal: SDCB J8-11 to 14
- Location of electrical component: FS-536/FS-536SD 3-P, FS-537/FS-537SD 2-P

6. Replace M8. (FS-536SD/FS-537SD)
7. Replace SDCB. (FS-536SD/FS-537SD)
8. Replace FSCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.44.1 FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.44.2 FS-537SD)

3.6.35 C11A2

(1) Contents

Trouble type	C11A2: Accommodation roller pressure/ retraction malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The receiving roller retraction sensor (PS11) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed after the receiving roller retraction motor (M4) is turned ON.
	<When FS-537 or FS-537SD is installed>	The receiving roller retraction sensor (PS22) is not turned OFF (blocked) or ON (unblocked) even after the set period of time has elapsed after the receiving roller retraction motor (M10) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• Receiving roller retraction motor (M4) • Receiving roller retraction sensor (PS11) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Receiving roller retraction motor (M10) • Receiving roller retraction sensor (PS22) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M4-FSCB J4 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS11-FSCB J4 for proper connection and correct as necessary.
4. PS11 I/O check, sensor check
   - Control signal: FSCB J4<B>-16 (ON)
   - Location of electrical component: FS-536/FS-536SD 16-C
5. M4 operation check
   - Control signal: FSCB J4<A>-1 to 4
   - Location of electrical component: FS-536/FS-536SD 13-C
6. Replace M4.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.45.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M10-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M10 for proper drive coupling, and correct as necessary.
3. Check the connector between PS22-FSCB J12 for proper connection and correct as necessary.
4. PS22 I/O check, sensor check
   - Control signal: FSCB J12<B>-7 (ON)
   - Location of electrical component: FS-537/FS-537SD 17-D
5. M10 operation check
   - Control signal: FSCB J12<B>-1 to 4
   - Location of electrical component: FS-537/FS-537SD 17-D
6. Replace M10.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.45.2 FS-537/FS-537SD)

3.6.36 C11C5

(1) Contents

Trouble type	C11C5: Paper size detect board malfunction	
Rank	B	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	The size of a transported paper is not detected, causing no punch operation.
Trouble isolation	-	

Relevant electrical parts	Paper size detect board (PSDTB)

(2) Procedure

1. Check the sensor part of PSDTB, to clean if it is dirty.
2. Check the connector between PSDTB-PKCB CN38 for proper connection and correct as necessary.
3. Replace PSDTB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.46. C11C5)

3.6.37 C11E1

(1) Contents

Trouble type	C11E1: Paper exit switching drive malfunction	
Rank	B	
Trouble detection condition	<When FS-536 or FS-536SD is installed>	The exchange folded paper output sensor (PS30) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the FNS entry transport motor (M2) is turned ON.
	<When FS-537 or FS-537SD is installed>	The route change gate home sensor (PS21) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the route change gate motor (M4) is turned ON.
Trouble isolation	-	
Relevant electrical parts	<When FS-536 or FS-536SD is installed>	• FNS entry transport motor (M2) • Exchange folded paper output sensor (PS30) • FS control board (FSCB)
	<When FS-537 or FS-537SD is installed>	• Route change gate motor (M4) • Route change gate home sensor (PS21) • FS control board (FSCB)

(2) Procedure

(a) When FS-536 or FS-536SD is installed

1. Check the connector between M2-FSCB J9 for proper connection and correct as necessary.
2. Check the connector of M2 for proper drive coupling and correct as necessary.
3. Check the connector between PS30-FSCB J4 for proper connection and correct as necessary.
4. PS30 I/O check, sensor check
   - Control signal: FSCB J4<A>-15 (ON)
   - Location of electrical component: FS-536/FS-536SD 14-C
5. M2 operation check
   - Control signal: FSCB J9<A>-1 to 4
   - Location of electrical component: FS-536/FS-536SD 12-C
6. Replace M2.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.7 FS-536/FS-536SD)
- Link to the layout drawings for related parts by each trouble code (S.47.1 FS-536/FS-536SD)

(b) When FS-537 or FS-537SD is installed

1. Check the connector between M4-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M4 for proper drive coupling and correct as necessary.
3. Check the connector between PS21-FSCB J12 for proper connection and correct as necessary.
4. PS21 I/O check, sensor check
   - Control signal: FSCB J12<B>-12 (ON)
   - Location of electrical component: FS-537/FS-537SD 18-D
5. M4 operation check
   - Control signal: FSCB J21<B>-8 to 9
   - Location of electrical component: FS-537/FS-537SD 18-D
6. Replace M4.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.47.2 FS-537/FS-537SD)

3.6.38 C11E2

(1) Contents

Trouble type	C11E2: Paper exit switching (JS) drive malfunction	
Rank	B	
Trouble detection condition	<When FS-537 or FS-537SD is installed>	The sub tray/JS route change gate home sensor (PS23) is not turned OFF (unblocked) or ON (blocked) even after the set period of time has elapsed after the sub tray discharge motor (M18) is turned ON.
Trouble isolation	-	
Relevant electrical parts	• Sub tray discharge motor (M18)	

	• Sub tray/JS route change gate home sensor (PS23) • FS control board (FSCB)

(2) Procedure

1. Check the connector between M18-FSCB J12 for proper connection and correct as necessary.
2. Check the connector of M18 for proper drive coupling and correct as necessary.
3. Check the connector between PS23-FSCB J12 for proper connection and correct as necessary.
4. PS23 I/O check, sensor check
   - Control signal: FSCB J12<A>-16 (ON)
   - Location of electrical component: FS-537/FS-537SD 17-D
5. M18 operation check
   - Control signal: FSCB J12<A>-5 to 6
   - Location of electrical component: FS-537/FS-537SD 16-D
6. Replace M18.
7. Replace FSCB.

NOTICE
- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)
- Link to the layout drawings for related parts by each trouble code (S.48. C11E2)

3.6.39 C1403

(1) Contents

Trouble type	C1403: PK flash ROM error	
Rank	C	
Trouble detection condition	<When FS-537+PK-523 or FS-537SD+PK-523 is installed>	Data of flash ROM of the PK is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-	
Relevant electrical parts	Punch control board (PKCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PKCB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.49. C1403)

3.6.40 C1404

(1) Contents

Trouble type	C1404: PI flash ROM error	
Rank	C	
Trouble detection condition	<When FS-537+PI-507 or FS-537SD+PI-507 is installed>	Data of flash ROM of the PI is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-	
Relevant electrical parts	PI drive board (PIDB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace PIDB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.50. C1404)

3.7 C2###

3.7.1 C2101

(1) Contents

Trouble type	C2101: Charge cleaning motor/K malfunction
Rank	B
Trouble detection condition	During backward and return movement of the cleaner material, the charging cleaner home sensor (PS43) is not turned OFF (unblocked) after a predetermined period of time has elapsed.
Trouble isolation	-

Relevant electrical parts	• Drum unit • Charging cleaner home sensor (PS43) • Charging cleaner return sensor (PS44) • Charge cleaning motor/K (M15) • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Check the drum unit for proper connection and correct as necessary.
2. Check the connector between M15-PHRYB CN4 for proper connection and correct as necessary.
3. Check the connector of M15 for proper drive coupling and correct as necessary.
4. Check the connector between PS43-PHRYB CN6 for proper connection and correct as necessary.
5. Check the connector between PS44-PHRYB CN6 for proper connection and correct as necessary.
6. PS43 I/O check, sensor check
   - Control signal: PHRYB CN6-5 (ON)
   - Location of electrical component: 3-B
7. PS44 I/O check, sensor check
   - Control signal: PHRYB CN6-8 (ON)
   - Location of electrical component: 4-B
8. M15 operation check
   - Control signal: PHRYB CN4-1 to 2
   - Location of electrical component: 5-B, 6-B
9. Replace the drum unit.
10. Replace M15.
11. PHRYB F2 conduction check.
12. Replace PHRYB.
13. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.51. C2101)

3.7.2 C2151

(1) Contents

Trouble type	C2151: Transfer roller pressure welding alienation
Rank	B
Trouble detection condition	• The 2nd transfer pressure sensor (PS50) does not turn OFF (unblock) (retracting) even after the lapse of a given period of time after the 2nd transfer pressure motor (M3) has started rotating during the 2nd image transfer roller is retracting. • The 2nd transfer pressure sensor (PS50) does not ON (block) (pressuring) even after the lapse of a given period of time after the 2nd transfer pressure motor (M3) has started rotating during the 2nd image transfer roller is pressuring.
Trouble isolation	-
Relevant electrical parts	• 2nd transfer pressure motor (M3) • 2nd transfer pressure sensor (PS50) • Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M3-relay CN271B-PFTDB CN8 for proper connection and correct as necessary.
2. Check the connector of M3 for proper drive coupling and correct as necessary.
3. Check the connector between PS50-relay CN271A-PFTDB CN2 for proper connection and correct as necessary.
4. PS50 I/O check, sensor check
   - Control signal: PFTDB CN2-9 (ON)
   - Location of electrical component: 5-P
5. M3 operation check
   - Control signal: PFTDB CN8-1 (REM)
   - Location of electrical component: 6-P
6. Replace M3.
7. PFTDB F17 conduction check
8. Replace PFTDB.
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.52. C2151)

3.7.3 C2152, C2153, C2155, C2157

(1) Contents

Trouble type	• C2152: Transfer belt fault at initial position return • C2153: Transfer belt spacing fault at K pressure switching • C2155: Transfer belt contact fault after K pressure established • C2157: Transfer belt contact fault at all retraction switching
Rank	B

Trouble detection condition	• The 1st transfer pressure sensor/K (PS51) does not detect "switch from retraction to pressure" or "switch from pressure to retraction" within a given period of time during an initial position return. • The 1st transfer pressure sensor/K (PS51) does not detect “switch from retraction to pressure” within a given period of time after pressure operation has started. • The 1st transfer pressure sensor/K (PS51) is unblocked even after a given period time when pressure operation has finished. • The 1st transfer pressure sensor/K (PS51) does not detect “switch from pressure to retraction” within a given period of time after retraction operation has started; or the PS51 is blocked after a given period time when the retraction operation is finished.
Trouble isolation	-
Relevant electrical parts	• Transfer belt unit • 1st transfer pressure motor (M21) • 1st transfer pressure sensor/K (PS51) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M21-relay CN428-MFPB CN19E for proper connection and correct as necessary.
2. Check the connector of M21 for proper drive coupling and correct as necessary.
3. Check the transfer roller pressure gear of the transfer belt unit for proper engagement and the roller for rolling operation, and correct any faulty motion.
4. Check the connector between PS51-relay CN297-MFPB CN27E for proper connection and correct as necessary.
5. PS51 I/O check, sensor check
   - Control signal: MFPB CN27E<A>-1 (ON)
   - Location of electrical component: 16-C
6. M21 operation check
   - Control signal: MFPB CN19E-5 to 8
   - Location of electrical component: 2-K
7. Replace M21.
8. Replace the transfer belt unit.
9. MFPB F2E or F7E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.53. C2152, C2153, C2155, C2157)

3.7.4 C2163

(1) Contents

Trouble type	C2163: PC charge malfunction
Rank	B
Trouble detection condition	When electrostatic charge output is ON, electrostatic charge leak detection system continues to detect leaks for a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Drum unit • High voltage unit/1 (HV1) • MFP board (MFPB)

(2) Procedure

1. Check the drum unit for proper connection and correct as necessary.
2. Check the connector between HV1 CN1-MFPB CN9E for proper connection and correct as necessary.
3. Replace the drum unit.
4. Replace HV1.
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.54. C2163)

3.7.5 C2204

(1) Contents

Trouble type	C2204: Waste toner transport motor's failure to turn
Rank	B
Trouble detection condition	The waste toner lock sensor (PS23) continues to be turned ON (blocked) or OFF (unblocked) for a predetermined period of time when the motor is turning.
Trouble isolation	-
Relevant electrical parts	• Waste toner lock sensor (PS23) • Waste toner transport motor (M20) • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Clean the PS23 if it has toner or paper dust, etc.

2. Replacing the waste toner box.
3. Check the connector between M20-relay CN220 (bizhub C958/808 only)-relay CN219 (bizhub C958/808 only)-PHRYB CN4 for proper connection and correct as necessary.
4. Check the connector of M20 for proper drive coupling and correct as necessary.
5. Check the connector between PS23-MFPB CN27E for proper connection and correct as necessary.
6. PS23 I/O check, sensor check
   - Control signal: MFPB CN27E<A>-9 (ON)
   - Location of electrical component: 17-C
7. M20 operation check
   - Control signal: PHRYB CN4-3 to 6
   - Location of electrical component: 5-B, 6-B
8. Replace M20.
9. PHRYB F2 conduction check.
10. Replace PHRYB.
11. MFPB F2E conduction check
12. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.55. C2204)

3.7.6 C2257, C2258

(1) Contents

Trouble type	• C2257: Cleaning brush motor's failure to turn • C2258: Cleaning brush motor's turning at abnormal timing
Rank	B
Trouble detection condition	C2257: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. C2258: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Transfer belt unit (cleaner unit) • Cleaning brush motor (M38) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M38-MFPB CN21E for proper connection and correct as necessary.
2. Check the connector of M38 for proper drive coupling and correct as necessary.
3. Check the cleaner unit gear of the transfer belt unit for rotation and correct any faulty rotation.
4. M38 operation check
   - Control signal: MFPB CN21E-1 to 7
   - Location of electrical component: 11-K
5. Replace M38.
6. Replace the transfer belt unit.
7. MFPB F5E conduction check
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.56. C2257, C2258)

3.7.7 C2259, C225A

(1) Contents

Trouble type	• C2259: Developing motor/K failure to turn • C225A: Developing motor/K turning at abnormal timing
Rank	B
Trouble detection condition	C2259: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. C225A: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Developing unit • Developing motor/K (M19) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M19-MFPB CN10E for proper connection and correct as necessary.
2. Check the connector of M19 for proper drive coupling and correct as necessary.
3. M19 operation check
   - Control signal: MFPB CN10E-15 to 19
   - Location of electrical component: 5-K, 7-K
4. Replace M19.
5. Replace the developing unit.

6. MFPB F9E conduction check
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.57. C2259, C225A)

3.7.8 C225B, C225C

(1) Contents

Trouble type	C225B: PC motor/K failure to turn C225C: PC motor/K turning at abnormal timing
Rank	B
Trouble detection condition	C225B: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. C225C: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Drum unit • PC motor/K (M18) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M18-MFPB CN10E for proper connection and correct as necessary.
2. Check the connector of M18 for proper drive coupling and correct as necessary.
3. M18 operation check
   - Control signal: MFPB CN10E-10 (REM), MFPB CN10E-13 (LOCK)
   - Location of electrical component: 5-K, 7-K
4. Replace M18.
5. Replace the drum unit.
6. MFPB F2E or F9E conduction check
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.58. C225B, C225C)

3.7.9 C2350

(1) Contents

Trouble type	C2350: Toner suction fan failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Toner suction fan (FM7) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM7-relay CN326-MFPB CN24E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM7 operation check
   - Control signal: MFPB CN24E-7 (DRIVE), MFPB CN24E-9 (LOCK)
   - Location of electrical component: 1-K
4. Replace FM7.
5. MFPB F6E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.59. C2350)

3.7.10 C2353

(1) Contents

Trouble type	C2353: IU cooling fan/out's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• IU cooling fan /out (FM15) • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM15-PHRYB CN5 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM15 operation check
   - Control signal: PHRYB CN5-1 (DRIVE), PHRYB CN5-3 (LOCK)
   - Location of electrical component: 3-B
4. Replace FM15.
5. PHRYB F2 conduction check.
6. Replace PHRYB.
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.60. C2353)

3.7.11 C2356

(1) Contents

Trouble type	C2356: IU cooling fan/in's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• IU cooling fan /in (FM16) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM16-relay CN700-MFPB CN18E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM16 operation check
   - Control signal: MFPB CN18E-9 (DRIVE), MFPB CN18E-11 (LOCK)
   - Location of electrical component: 15 to 16-K
4. Replace FM16.
5. MFPB F7E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.61. C2356)

3.7.12 C2414

(1) Contents

Trouble type	C2414: Developing unit new article release
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new developing unit is set.
Trouble isolation	-
Relevant electrical parts	• Developing unit • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Replace the developing unit.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.7.13 C2557

(1) Contents

Trouble type	C2557: Abnormally low toner density detected black TCR sensor
Rank	B
Trouble detection condition	When sampling data is determined in TC ratio calculation control, TCR sensor output is higher than a predetermined value for a predetermined number of times in a row even though there is toner in the sub hopper.
Trouble isolation	-
Relevant electrical parts	• Developing unit • Toner cartridge • Toner empty sensor/K (PZS/K) • Toner supply motor/K (M12)

	• Toner cartridge motor/CK (M14) • MFP board (MFPB)

(2) Procedure

1. Perform image troubleshooting procedure if image density is low.
2. Check the connector between M12-relay CN258-MFPB CN18E for proper connection and correct as necessary.
3. Check the connector between M14-relay CN321-relay CN428-MFPB CN19E for proper connection and correct as necessary.
4. Check the connector of M12 and M14 for proper drive coupling and correct as necessary.
5. Check the connector between PZS/K-relay CN253-MFPB CN27E for proper connection and correct as necessary.
6. PZS/K I/O check, sensor check
   - Control signal: MFPB CN27E<A>-11 (ON)
   - Location of electrical component: 17-C
7. M12 operation check (At this time, developing/drum unit must be non-installation.)
   - Control signal: MFPB CN18E-15 to 18
   - Location of electrical component: 15-K
8. M14 operation check
   - Control signal: MFPB CN19E-1 to 4
   - Location of electrical component: 2-K
9. Replace M12.
10. Replace M14.
11. Reinstall developing unit.
12. Reinstall the toner cartridge.
13. If the toner empty sensor and its surroundings inside the sub hopper are dirtied with toner, clean them.
14. Replace the developing unit.
15. MFPB F7E or IC80E conduction check
16. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.63. C2557)

3.7.14 C2558

(1) Contents

Trouble type	C2558: Abnormally high toner density detected black TCR sensor
Rank	B
Trouble detection condition	The TC ratio of the toner determined by the toner replenishment control is detected to be the predetermined value or over for consecutive times.
Trouble isolation	-
Relevant electrical parts	• Developing unit • Toner cartridge • Sub hopper unit • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Reinstall the toner cartridge.
3. Replace the developing unit.
4. Replace MFPB.
5. Replace the sub hopper unit.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.7.15 C255C

(1) Contents

Trouble type	C255C: Black TCR sensor adjustment failure
Rank	B
Trouble detection condition	TCR sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.
Trouble isolation	-
Relevant electrical parts	• Developing unit • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Replace the developing unit.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.7.16 C2564

(1) Contents

Trouble type	C2564: Black TCR sensor failure
Rank	B
Trouble detection condition	• The TCR sensor input is 0. • This detection is used for detecting disconnection of TCR sensor connector.
Trouble isolation	-
Relevant electrical parts	• Developing unit • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Reinstall developing unit.
2. Check the connector between the developing unit-relay CN214-PHRYB CN6 for proper connection and correct as necessary.
3. Replace the developing unit.
4. PHRYB PS1 conduction check.
5. Replace PHRYB.
6. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.64. C2564)

3.7.17 C2650, C265B

(1) Contents

Trouble type	• C2650: Main backup media access 1 error • C265B: Main backup media access 2 error
Rank	C
Trouble detection condition	• The re-written data, which has been read out, checked and founded as error, is read out again and found as error. • The error was found when reading out the counter value. • The main body detects that the back up board is not mounted.
Trouble isolation	-
Relevant electrical parts	• C2650: Back up board/1 (ERB/1) • C265B: Back up board/2 (ERB/2) • MFP board (MFPB)

(2) Procedure

1. Check the connector between ERB-MFPB CN5E for proper connection and correct as necessary.
2. Replace MFPB.
3. Replace ERB. (ERB/1 / ERB/2)
4. If the above actions do not solve the problem, contact KM.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.65. C2650)
- Link to the layout drawings for related parts by each trouble code (S.67. C265B)

3.7.18 C265A

(1) Contents

Trouble type	C265A: Main backup media wrongly installation
Rank	C
Trouble detection condition	The ERB/1 and ERB/2 are mounted in a reverse direction.
Trouble isolation	-
Relevant electrical parts	• Back up board/1 (ERB/1) • Back up board/2 (ERB/2)

(2) Procedure

1. Check to see if the ERB/1 and ERB/2 are mounted in a reverse direction.
2. Check the type of the installed ERB and replace it if it is a wrong one.
3. Replace ERB. (ERB/1 / ERB/2)

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.66. C265A)

3.7.19 C2A14

(1) Contents

Trouble type	C2A14: Drum unit new release failure
Rank	B
Trouble detection condition	The status with the new unit is not cleared after the new drum unit is set.
Trouble isolation	-
Relevant electrical parts	• Drum unit • MFP board (MFPB)

(2) Procedure

1. Clean the connection between the drum unit and the developing unit if dirty.
2. Reinstall the drum unit.
3. Check the harness for proper connection and correct as necessary.
4. Replace the drum unit.
5. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.7.20 C2A24

(1) Contents

Trouble type	C2A24: Toner cartridge new release failure
Rank	C
Trouble detection condition	The status with the new unit is not cleared after the new toner cartridge is set.
Trouble isolation	-
Relevant electrical parts	• Toner cartridge • MFP board (MFPB)

(2) Procedure

1. Clean the connection between the toner cartridge and the machine if dirty.
2. Reinstall the toner cartridge.
3. Check the harness for proper connection and correct as necessary.
4. Replace the toner cartridge.
5. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.8 C3###

3.8.1 C3101, C3103

(1) Contents

Trouble type	• C3101: Pressure roller pressure failure • C3103: Pressure roller release failure
Rank	B
Trouble detection condition	C3101: • The fusing pressure home sensor (PS59) is not turned ON (pressed state) after the set period of time after the fusing pressure roller pressure operation is started. • The fusing pressure home sensor (PS59) is not ON (pressed state) when the fusing pressure roller pressure operation is completed.
	C3103: • The fusing pressure home sensor (PS59) is not turned OFF (retracted state) even after the set period of time after the fusing pressure roller retraction operation is started. • The fusing pressure home sensor (PS59) is not OFF (retracted state) when the fusing pressure roller retraction operation is completed.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing pressure home sensor (PS59) • Fusing pressure motor (M34) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M34-MFPB CN16E for proper connection and correct as necessary.
2. Check the connector of M34 for proper drive coupling and correct as necessary.

3. Check the fusing unit-relay CN260-MFPB CN30E for proper connection and correct or change as necessary.
4. PS59 I/O check, sensor check
   - Control signal: MFPB CN30E-11 (ON)
   - Location of electrical component: 9-C, 12-C
5. M34 operation check
   - Control signal: MFPB CN16E-8 to 11
   - Location of electrical component: 10-K
6. Replace M34.
7. Replace the fusing unit.
8. MFPB F2E or F14E conduction check
9. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.68. C3101, C3103)

3.8.2 C3102

(1) Contents

Trouble type	C3102: Heating roller failure to turn
Rank	A
Trouble detection condition	During any state other than printing operation, the hard latch signal from one or both of the heating roller rotation latch detection 1 and the heating roller rotation latch detection 2 is turned ON.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing belt rotation sensor (PS56) (bizhub 958, bizhub PRO 958) • Heating roller rotation sensor (PS56) (bizhub 808/758) • Fusing motor (M30) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for proper connection and correct as necessary.
2. Check the connector between M30-MFPB CN16E for proper connection and correct as necessary.
3. Check the connector of M30 for proper drive coupling and correct as necessary.
4. Check the fusing unit-relay CN260-MFPB CN30E for proper connection and correct or change as necessary.
5. PS56 I/O check, sensor check
   - Control signal: MFPB CN30E-14 (ON)
   - Location of electrical component: 9-C, 12-C
6. M30 operation check
   - Control signal: MFPB CN16E-4 (REM), MFPB CN16E-7 (LOCK)
   - Location of electrical component: 10-K
7. Replace M30.
8. Replace the fusing unit.
9. MFPB F2E or F14E conduction check
10. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.69. C3102)

3.8.3 C3201, C3202

(1) Contents

Trouble type	• C3201: Fusing motor failure to turn • C3202: Fusing motor turning at abnormal timing
Rank	B
Trouble detection condition	• C3201: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. • C3202: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Fusing motor (M30) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M30-MFPB CN16E for proper connection and correct as necessary.
2. Check the loading status of the fusing unit drive, and correct the error as necessary.
3. M30 operation check
   - Control signal: MFPB CN16E-4 (REM), MFPB CN16E-7 (LOCK)
   - Location of electrical component: 10-K
4. Replace M30.
5. MFPB F14E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

- Link to the layout drawings for related parts by each trouble code (S.70. C3201, C3202)

3.8.4 C3303

(1) Contents

Trouble type	C3303: Paper cooling fan/out's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Paper cooling fan/out (FM13) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM13-relay CN323-MFPB CN27E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM13 operation check
   - Control signal: MFPB CN27E<B>-10 (DRIVE), MFPB CN27E<B>-12 (LOCK)
   - Location of electrical component: 16-C
4. Replace FM13.
5. MFPB F6E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.71. C3303)

3.8.5 C3304

(1) Contents

Trouble type	C3304: Switchback paper cooling fan/2's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Switchback paper cooling fan/2 (FM5) • Paper feed/transport drive board (PFTDB)

(2) Procedure

1. Check the connector between FM5-relay CN282-relay CN280-relay CN279-relay CN271B-PFTDB CN2 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM5 operation check.
   - Control signal: PFTDB CN2-18 (LOCK)
   - Location of electrical component: 5-P
4. Replace FM5.
5. PFTDB F14 conduction check
6. Replace PFTDB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.72. C3304)

3.8.6 C3305

(1) Contents

Trouble type	C3305: Switchback paper cooling fan/1's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Switchback paper cooling fan/1 (FM4) • Paper feed/transport drive board (PFTDB)

(2) Procedure

1. Check the connector between FM4-relay CN283-relay CN280-relay CN279-relay CN271B-PFTDB CN2 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM4 operation check
   - Control signal: PFTDB CN2-15 (LOCK)
   - Location of electrical component: 5-P
4. Replace FM4.
5. PFTDB F14 conduction check

6. Replace PFTDB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.73. C3305)

3.8.7 C3310

(1) Contents

Trouble type	C3310: Output tray exhaust fan's failure to turn (bizhub 958/808, bizhub PRO 958 only)
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Output tray exhaust fan (FM18) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM18-relay CN701-MFPB CN18E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM18 operation check
   - Control signal: MFPB CN18E-8 (LOCK)
   - Location of electrical component: 16-K
4. Replace FM18.
5. MFPB F7E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.74. C3310)

3.8.8 C3423

(1) Contents

Trouble type	C3423: Fusing warm-up trouble (Pressure) (bizhub 958, bizhub PRO 958 only)
Rank	A
Trouble detection condition	After warm-up operation starts, the pressure roller thermistor/2 (TH3) does not detect a temperature as high as a predetermined one though a predetermined period of time has elapsed.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Pressure roller thermistor/2 (TH3) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
5. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
6. Replace the fusing unit.
7. Replace IHPU.
8. MFPB IC80E conduction check
9. Replace MFPB.
10. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.75. C3423)

3.8.9 C3425

(1) Contents

Trouble type	C3425: Fusing warm-up trouble
Rank	A
Trouble detection condition	bizhub 958, bizhub PRO 958: • After warm-up operation starts, the fusing belt temperature sensor/1 (TEMS1) does not detect a temperature increasing to a predetermined one though a predetermined period of time has elapsed. • From the start of warm-up operation, it does not terminate within a predetermined period of time.
	bizhub 808/758: • After warm-up operation starts, the heating roller temperature sensor/1 (TEMS1) does not detect a temperature increasing to a predetermined one though a predetermined period of time has elapsed. • From the start of warm-up operation, it does not terminate within a predetermined period of time.
Trouble isolation	-

Relevant electrical parts	• Fusing unit • Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS1-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
7. Replace the fusing unit.
8. Replace IHPU.
9. MFPB IC80E conduction check
10. Replace MFPB.
11. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.76. C3425, C3725, C3825, C3925, C392B)

3.8.10 C3722, C3725, C3726

(1) Contents

Trouble type	• C3722: Fusing abnormally high temperature detection (Edge of the heating roller) • C3725: Fusing abnormally high temperature detection (Middle of the heating roller) • C3726: Fusing abnormally high temperature detection (Center of the heating side)
Rank	A
Trouble detection condition	bizhub 958, bizhub PRO 958: • C3722: Detected temperature of the fusing belt temperature sensor/3 (TEMS3) goes beyond a given temperature for a given period of time consecutively. • C3725: Detected temperature of the fusing belt temperature sensor/1 (TEMS1) goes beyond a given temperature for a given period of time consecutively. • C3726: Detected temperature of the fusing belt temperature sensor/2 (TEMS2) goes beyond a given temperature for a given period of time consecutively.
	bizhub 808/758: • C3722: Detected temperature of the heating roller temperature sensor/3 (TEMS3) goes beyond a given temperature for a given period of time consecutively. • C3725: Detected temperature of the heating roller temperature sensor/1 (TEMS1) goes beyond a given temperature for a given period of time consecutively. • C3726: Detected temperature of the heating roller temperature sensor/2 (TEMS2) goes beyond a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3725: Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • C3725: Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • C3726: Fusing belt temperature sensor/2 (TEMS2) (bizhub 958, bizhub PRO 958) • C3726: Heating roller temperature sensor/2 (TEMS2) (bizhub 808/758) • C3722: Fusing belt temperature sensor/3 (TEMS3) (bizhub 958, bizhub PRO 958) • C3722: Heating roller temperature sensor/3 (TEMS3) (bizhub 808/758) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS1, TEMS2, TEMS3-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
7. Replace the fusing unit.
8. Replace IHPU.
9. Replace MFPB.
10. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.77. C3722, C3822, C3922)
- Link to the layout drawings for related parts by each trouble code (S.76. C3425, C3725, C3825, C3925, C392B)
- Link to the layout drawings for related parts by each trouble code (S.79. C3726, C3826, C3926)

3.8.11 C3723

(1) Contents

Trouble type	C3723: Fusing abnormally high temperature detection (pressure) (bizhub 958, bizhub PRO 958 only)
Rank	A
Trouble detection condition	Detected temperature of the pressure roller thermistor/2 (TH3) goes beyond a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Pressure roller thermistor/2 (TH3) • IH power supply unit (IHPU) • Noise filter (NF1) • Pressure roller power supply unit (PRPU) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
5. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
6. Replace the fusing unit.
7. Replace IHPU.
8. Replace PRPU.
9. Replace MFPB.
10. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.78. C3723)

3.8.12 C3731

(1) Contents

Trouble type	C3731: Fusing abnormally high temperature (Hard protector)
Rank	A
Trouble detection condition	An abnormally high temperature of the hard protector signal is detected.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • Fusing belt temperature sensor/2 (TEMS2) (bizhub 958, bizhub PRO 958) • Heating roller temperature sensor/2 (TEMS2) (bizhub 808/758) • Fusing belt temperature sensor/3 (TEMS3) (bizhub 958, bizhub PRO 958) • Heating roller temperature sensor/3 (TEMS3) (bizhub 808/758) • Pressure roller thermistor/2 (TH3) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS1, TEMS2, TEMS3-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Replace the fusing unit.
6. Replace TEMS1, TEMS2, TEMS3.
7. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.80. C3731)

3.8.13 C3732, C3736, C3737

(1) Contents

Trouble type	• C3732: Fusing abnormally high temperature detection hard protector (Edge of the heating roller) • C3736: Fusing abnormally high temperature detection hard protector (Middle of the heating roller) • C3737: Fusing abnormally high temperature detection hard protector (Center of the heating roller)
Rank	A
Trouble detection condition	• An abnormally high temperature is detected on the hard protector circuit (edge of the heating roller). • An abnormally high temperature is detected on the hard protector circuit (middle of the heating roller). • An abnormally high temperature is detected on the hard protector circuit (center of the heating roller).
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3737: Fusing belt thermostat (TS1) (bizhub 958, bizhub PRO 958) • C3737: Heating roller thermostat (TS1) (bizhub 808/758)

	• C3736: Fusing belt temperature sensor/2 (TEMS2) (bizhub 958, bizhub PRO 958) • C3736: Heating roller temperature sensor/2 (TEMS2) (bizhub 808/758) • C3732: Fusing belt temperature sensor/3 (TEMS3) (bizhub 958, bizhub PRO 958) • C3732: Heating roller temperature sensor/3 (TEMS3) (bizhub 808/758) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS2, TEMS3-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Replace the fusing unit.
6. Replace TEMS2, TEMS3.
7. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.81. C3732)
- Link to the layout drawings for related parts by each trouble code (S.83. C3736)
- Link to the layout drawings for related parts by each trouble code (S.84. C3737)

3.8.14 C3733

(1) Contents

Trouble type	C3733: Fusing abnormally high temperature detection hard protector (pressure) (bizhub 958, bizhub PRO 958 only)
Rank	A
Trouble detection condition	An abnormally high temperature is detected on the hard protector (pressure).
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Pressure roller thermistor/2 (TH3) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Replace the fusing unit.
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.82. C3733)

3.8.15 C3822, C3825, C3826

(1) Contents

Trouble type	• C3822: Fusing abnormally low temperature detection (Edge of the heating roller) • C3825: Fusing abnormally low temperature detection (Middle of the heating roller) • C3826: Fusing abnormally low temperature detection (Center of the heating roller)
Rank	A
Trouble detection condition	bizhub 958, bizhub PRO 958: • C3822: Detected temperature of the fusing belt temperature sensor/3 (TEMS3) goes below a given temperature for a given period of time consecutively. • C3825: Detected temperature of the fusing belt temperature sensor/1 (TEMS1) goes below a given temperature for a given period of time consecutively. • C3826: Detected temperature of the fusing belt temperature sensor/2 (TEMS2) goes below a given temperature for a given period of time consecutively.
	bizhub 808/758 • C3822: Detected temperature of the heating roller temperature sensor/3 (TEMS3) goes below a given temperature for a given period of time consecutively. • C3825: Detected temperature of the heating roller temperature sensor/1 (TEMS1) goes below a given temperature for a given period of time consecutively. • C3826: Detected temperature of the heating roller temperature sensor/2 (TEMS2) goes below a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3825: Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • C3825: Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • C3826: Fusing belt temperature sensor/2 (TEMS2) (bizhub 958, bizhub PRO 958) • C3826: Heating roller temperature sensor/2 (TEMS2) (bizhub 808/758) • C3822: Fusing belt temperature sensor/3 (TEMS3) (bizhub 958, bizhub PRO 958) • C3822: Heating roller temperature sensor/3 (TEMS3) (bizhub 808/758) • IH power supply unit (IHPU) • Noise filter (NF1)

	• MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS1, TEMS2, TEMS3-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
7. Replace the fusing unit.
8. Replace IHPU.
9. MFPB IC80E conduction check
10. Replace MFPB.
11. Replace NF1.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.77. C3722, C3822, C3922)
- Link to the layout drawings for related parts by each trouble code (S.76. C3425, C3725, C3825, C3925, C392B)
- Link to the layout drawings for related parts by each trouble code (S.79. C3726, C3826, C3926)

3.8.16 C3823

(1) Contents

Trouble type	C3823: Fusing abnormally low temperature detection (pressure)
Rank	A
Trouble detection condition	Detected temperature of the pressure roller thermistor/2 (TH3) goes beyond a given temperature for a given period of time consecutively.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Pressure roller thermistor/2 (TH3) • IH power supply unit (IHPU) • Noise filter (NF1) • Pressure roller power supply unit (PRPU) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
5. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
6. Replace the fusing unit.
7. Replace IHPU.
8. MFPB IC80E conduction check
9. Replace PRPU.
10. Replace MFPB.
11. Replace NF1.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.85. C3823)

3.8.17 C3903

(1) Contents

Trouble type	C3903: Thermostat breaks detection
Rank	A
Trouble detection condition	The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing belt thermostat (TS1) (bizhub 958, bizhub PRO 958) • Heating roller thermostat (TS1) (bizhub 808/758) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
5. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
6. Replace the fusing unit.
7. Replace IHPU.

8. MFPB F3E conduction check
9. Replace MFPB.
10. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.86. C3903, C3923)

3.8.18 C3922, C3925, C3926

(1) Contents

Trouble type	C3922: • Fusing sensor wire breaks detection (Edge of the heating roller) • Fusing unit for incorrect marketing area (The fusing unit for incorrect marketing area is installed)
	C3925: Fusing sensor wire breaks detection (Middle of the heating roller)
	C3926: • Fusing sensor wire breaks detection (Center of the heating roller) • Fusing unit for incorrect marketing area (The fusing unit for incorrect marketing area is installed)
Rank	A
Trouble detection condition	bizhub 958, bizhub PRO 958: • C3922: After a predetermined period of time after the warm-up stage is started, the fusing belt temperature sensor/3 (TEMS3) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time. • C3925: After a predetermined period of time after the warm-up stage is started, the fusing belt temperature sensor/1 (TEMS1) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time. • C3926: After a predetermined period of time after the warm-up stage is started, the fusing belt temperature sensor/2 (TEMS2) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time.
	bizhub 808/758: • C3922: After a predetermined period of time after the warm-up stage is started, the heating roller temperature sensor/3 (TEMS3) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time. • C3925: After a predetermined period of time after the warm-up stage is started, the heating roller temperature sensor/1 (TEMS1) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time. • C3926: After a predetermined period of time after the warm-up stage is started, the heating roller temperature sensor/2 (TEMS2) voltage does not decrease by predetermined steps (temperature rise) within a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • C3925: Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • C3925: Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • C3926: Fusing belt temperature sensor/2 (TEMS2) (bizhub 958, bizhub PRO 958) • C3926: Heating roller temperature sensor/2 (TEMS2) (bizhub 808/758) • C3922: Fusing belt temperature sensor/3 (TEMS3) (bizhub 958, bizhub PRO 958) • C3922: Heating roller temperature sensor/3 (TEMS3) (bizhub 808/758) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS1, TEMS2, TEMS3-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
7. Replace the fusing unit.
8. Replace IHPU.
9. MFPB IC80E conduction check
10. Replace MFPB.
11. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.77. C3722, C3822, C3922)
- Link to the layout drawings for related parts by each trouble code (S.76. C3425, C3725, C3825, C3925, C392B)
- Link to the layout drawings for related parts by each trouble code (S.79. C3726, C3826, C3926)

3.8.19 C3923

(1) Contents

Trouble type	C3923: Fusing sensor wire breaks detection (pressure)
Rank	A

Trouble detection condition	The maximum value and minimum value of detected temperature of the pressure roller thermistor/2 (TH3) is compared after a lapse of given time from starting of warm up and the gap between the value of maximum and minimum is below a given temperature.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Pressure roller thermistor/2 (TH3) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
5. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
6. Replace the fusing unit.
7. Replace IHPU.
8. Replace MFPB.
9. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.86. C3903, C3923)

3.8.20 C392A

(1) Contents

Trouble type	C392A: Fusing belt temperature sensor/1 contamination (Middle of the heating roller) (bizhub 958) Heating roller temperature sensor contamination (Middle of the heating roller) (bizhub 808/758)
Rank	A
Trouble detection condition	bizhub 958, bizhub PRO 958: During waiting after a predetermined period of time after the warm-up stage terminates, the temperature detected by the fusing belt thermistor/1 (TH1) exceeds that detected by the fusing belt temperature sensor/1 (TEMS1) above a predetermined temperature, and this state continues for a predetermined period of time.
	bizhub 808/758: During waiting after a predetermined period of time after the warm-up stage terminates, the temperature detected by the heating roller thermostat/1 (TH1) exceeds that detected by the heating roller temperature sensor/1 (TEMS1) above a predetermined temperature, and this state continues for a predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • Fusing belt thermistor/1 (TH1) (bizhub 958, bizhub PRO 958) • Heating roller thermostat/1 (TH1) (bizhub 808/758) • IH power supply unit (IHPU) • DC power supply unit (DCPU) • MFP board (MFPB)

(2) Procedure

1. Wipe the TEMS1 clean of dirt if any.
   - Clear away a dirt or a foreign object on the sensor with a cotton swab.
   - When a dirt is left even if you cleaned the sensor by above procedure, clear away a dirt or a foreign object on the sensor using a cotton swab dampened with the alcohol. And, wipe off the sensor with a dry cotton swab afterwards.
2. Check the TEMS1 for installed position and proper connector connection.
3. Check the TH1 for installed position and proper connector connection.
4. Check the connection of the fusing unit.
5. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
6. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
7. Check the connector between DCPU CN009-MFPB CN31E for proper connection and correct as necessary.
8. Replace the fusing unit.
9. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.87. C392A)

3.8.21 C392B

(1) Contents

Trouble type	C392B: Fusing disconnection error detection (difference of temperature)
Rank	A
Trouble detection condition	bizhub 958, bizhub PRO 958:

	The difference between the temperature corrected by the fusing belt thermistor/1 (TH1) and the temperature detected by the fusing belt temperature sensor/1 (TEMS1) exceeds a predetermined value after warm up.
	bizhub 808/758: The difference between the temperature corrected by the heating roller thermistor/1 (TH1) and the temperature detected by the heating roller temperature sensor/1 (TEMS1) exceeds a predetermined value after warm up.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • Fusing belt temperature sensor/1 (TEMS1) (bizhub 958, bizhub PRO 958) • Heating roller temperature sensor/1 (TEMS1) (bizhub 808/758) • Fusing belt thermistor/1 (TH1) (bizhub 958, bizhub PRO 958) • Heating roller thermostat/1 (TH1) (bizhub 808/758) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between TEMS1-relay CN512-MFPB CN29E for proper connection and correct as necessary.
5. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
6. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
7. Replace the fusing unit.
8. Replace IHPU.
9. Replace MFPB.
10. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.76. C3425, C3725, C3825, C3925, C392B)

3.8.22 C3B02, C3B03

(1) Contents

Trouble type	C3B02: • IH malfunction (CPU) • IH power supply for incorrect marketing area (The IH power supply for incorrect marketing area is installed)
	C3B03: IH malfunction (monitor)
Rank	A
Trouble detection condition	C3B02: A failure in communication with the fusing CPU continues for a predetermined period of time. C3B03: Though the IH heater is OFF, mechanically, the ON status is detected. (Malfunction of IH heater operation)
Trouble isolation	-
Relevant electrical parts	• Fusing unit • IH coil (IHC) • IH power supply unit (IHPU) • IH magnetic erasing board (IHMEB) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the open/close operation of the upper right door.
3. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
4. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
5. Check the connector between IHPU-IHC for proper connection and correct as necessary.
6. Check the connector between IHC-IHMEB for proper connection and correct as necessary.
7. Replace the fusing unit.
8. Replace IHC.
9. Replace IHPU.
10. Replace IHMEB.
11. MFPB F2E or F3E conduction check
12. Replace MFPB.
13. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.88. C3B02, C3B03)

3.8.23 C3B07, C3B08

(1) Contents

Trouble type	C3B07: • IH input power error • Fusing unit for incorrect marketing area (The fusing unit for incorrect marketing area is installed) • IH power supply for incorrect marketing area (The IH power supply for incorrect marketing area is installed)

	C3B08: IH input voltage error
Rank	C3B07: A C3B08: B
Trouble detection condition	C3B07: • While the IH heater was ON, input power stayed at the high voltage power detection value or over for more than the predetermined period of time. • While the IH heater was ON, input power was at the low power detection value or under for more than the predetermined period of time. • While the IH heater was ON, input power was at the high voltage detection value or over for more than the predetermined period of time. • While the IH heater was ON, input power was below the low voltage detection value or under for more than the predetermined period of time. • While the IH heater was ON, inverter power stayed at the upper limit value or over for more than the predetermined period of time. • While the IH heater was ON, output voltage halt was detected.
	C3B08: • While the IH heater was ON, input power was at the high voltage detection value or over for more than the predetermined period of time. • While the IH heater was ON, input voltage was at the low power detection value or under for more than the predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• Fusing unit • IH coil (IHC) • IH power supply unit (IHPU) • Noise filter (NF1) • MFP board (MFPB)

(2) Procedure

1. Check the fusing unit for correct installation (whether it is secured in position).
2. Check the fusing unit-MFPB CN30E for proper connection and correct or change as necessary.
3. Check the connector between NF1 CN2-IHPU CN1 for proper connection and correct as necessary.
4. Check the connector between IHPU CN8-MFPB CN18E for proper connection and correct as necessary.
5. Check the marketing area of the fusing unit. If the marketing area is incorrect, replace the fusing unit for proper marketing area.
6. Check the marketing area of IHPU. If the marketing area is incorrect, replace IHPU for proper marketing area.
7. Replace IHC.
8. Replace IHPU.
9. Replace MFPB.
10. Replace NF1.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.89. C3B07, C3B08)

3.9 C4###

3.9.1 C4002

(1) Contents

Trouble type	C4002: PH communication error
Rank	C
Trouble detection condition	When the PH relay board (PHRYB) is receiving data, a communication error is detected.
Trouble isolation	-
Relevant electrical parts	• PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. MFPB F2E conduction check
3. Replace MFPB.
4. PHRYB F1 conduction check.
5. Replace PHRYB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.90. C4002)

3.9.2 C40A1, C40A2, C40A3, C40A4, C40C3, C40C5

(1) Contents

Trouble type	• C40A1: Mechanical controller sub-CPU communication error • C40A2: Mechanical controller PF communication data error • C40A3: Mechanical controller PF transmission timeout • C40A4: Mechanical controller PF communication pulse error • C40C3: CTL PF transmission timeout 1 • C40C5: CTL PF transmission timeout 2

Rank	C
Trouble detection condition	A CPU communication error is detected.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. MFPB F2E conduction check
4. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.9.3 C4101

(1) Contents

Trouble type	C4101: • Polygon motor rotation trouble • PH unit for incorrect marketing area
Rank	B
Trouble detection condition	• The polygon motor fails to turn stably even after the lapse of a given period of time after activating the polygon motor. • Motor lock signal detects HIGH for a given period time consecutively during the polygon motor is rotating. • The PH unit for incorrect marketing area is installed.
Trouble isolation	-
Relevant electrical parts	• PH unit • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Check the type of the installed PH unit and replace it if it is a wrong one.
2. Check the connector between the PH unit-PHRYB CN3 for proper connection and correct as necessary.
3. Replace the PH unit.
4. PHRYB F3 conduction check.
5. Replace PHRYB.
6. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.91. C4101)

3.9.4 C4301

(1) Contents

Trouble type	C4301: PH cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• PH cooling fan (FM14) • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM14-relay CN202-PHRYB CN4 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM14 operation check
   - Control signal: PHRYB CN4-8 (DRIVE), PHRYB CN4-9 (LOCK)
   - Location of electrical component: 6-B, 7-B
4. Replace FM14.
5. PHRYB F2 conduction check.
6. Replace PHRYB.
7. Replace MFPB.

NOTICE

- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.92. C4301)

3.9.5 C4501

(1) Contents

Trouble type	C4501: Laser malfunction
Rank	B
Trouble detection condition	• SOS signal is not detected even after the lapse of a given period of time after starting the laser output. • SOS signal is not detected for a given period of time during printing or IDC sensor adjustment.
Trouble isolation	-
Relevant electrical parts	• PH unit • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Check the connector between the PH unit-PHRYB CN8 for proper connection and correct as necessary.
2. Replace the PH unit.
3. PHRYB IC5 conduction check.
4. Replace PHRYB.
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.93. C4501)

3.9.6 C4810

(1) Contents

Trouble type	C4810: Wrong paper feed/transport drive installed
Rank	C
Trouble detection condition	The destination of the main body and that of the paper feed/transport drive board are mismatched.
Trouble isolation	-
Relevant electrical parts	• Paper feed/transport drive board (PFTDB) • MFP board (MFPB)

(2) Procedure

1. Check the marketing area of PFTDB If the marketing area is incorrect, replace PFTDB for proper marketing area.
2. Replace PFTDB.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.94. C4810)

3.10 C5###

3.10.1 C5104, C5105

(1) Contents

Trouble type	• C5104: Transfer belt motor’s rotation trouble • C5105: Transfer belt motor's turning at abnormal timing
Rank	B
Trouble detection condition	C5104: The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. C5105: The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.
Trouble isolation	-
Relevant electrical parts	• Transfer belt unit • Transfer belt motor (M1) • MFP board (MFPB)

(2) Procedure

1. Check the connector between M1-MFPB CN10E for proper connection and correct as necessary.
2. Check the loading status of the transfer belt drive, and correct the error as necessary.
3. Check the drive gear of the transfer belt unit for rotation and correct any faulty rotation.
4. M1 operation check
   - Control signal: MFPB CN10E-3 (REM), MFPB CN10E-6 (LOCK)
   - Location of electrical component: 6-K, 8-K
5. Replace M1.
6. Replace the transfer belt unit.
7. MFPB F2E or F11E conduction check
8. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.95. C5104, C5105)

3.10.2 C5304

(1) Contents

Trouble type	C5304: IH power supply cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• IH power supply cooling fan (FM10) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM10-relay CN293-MFPB CN18E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM10 operation check
   - Control signal: MFPB CN18E-13 (DRIVE), MFPB CN18E-14 (LOCK)
   - Location of electrical component: 15-K
4. Replace FM10.
5. MFPB F7E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.96. C5304)

3.10.3 C5306

(1) Contents

Trouble type	C5306: IH coil cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• IH coil cooling fan (FM11) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM11-relay CN324-MFPB CN24E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM11 operation check
   - Control signal: MFPB CN24E-1 (DRIVE), MFPB CN24E-3 (LOCK)
   - Location of electrical component: 1-K
4. Replace FM11.
5. MFPB F6E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.97. C5306)

3.10.4 C5351

(1) Contents

Trouble type	C5351: DC power supply cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• DC power supply cooling fan (FM9) • DC power supply unit (DCPU) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM9-relay CN333-MFPB CN23E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM9 operation check
   - Control signal: MFPB CN23E-7 (DRIVE), MFPB CN23E-9 (LOCK)
   - Location of electrical component: 11-K
4. Replace FM9.
5. Replace DCPU.
6. MFPB F6E conduction check
7. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.98. C5351)

3.10.5 C5354

(1) Contents

Trouble type	C5354: Ozone ventilation fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Ozone ventilation fan (FM6) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM6-relay CN322-MFPB CN27E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM6 operation check
   - Control signal: MFPB CN27E<B>-7 (DRIVE), MFPB CN27E<B>-9 (LOCK)
   - Location of electrical component: 16-C
4. Replace M6.
5. MFPB F6E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.99. C5354)

3.10.6 C5355

(1) Contents

Trouble type	C5355: Toner cartridge cooling fan's failure to turn
Rank	B
Trouble detection condition	The fan lock signal remains HIGH for a predetermined continuous period of time while the fan is turning.
Trouble isolation	-
Relevant electrical parts	• Toner cartridge cooling fan (FM8) • MFP board (MFPB)

(2) Procedure

1. Check the connector between FM8-relay CN522-MFPB CN24E for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM8 operation check
   - Control signal: MFPB CN24E-4 (DRIVE), MFPB CN24E-6 (LOCK)
   - Location of electrical component: 1-K
4. Replace FM8.
5. MFPB F6E conduction check
6. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.100. C5355)

3.10.7 C5372

(1) Contents

Trouble type	C5372: MFP control board CPU temperature failure
Rank	C
Trouble detection condition	Temperature failure of CPU on the MFP board was detected.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check for clogging in the ventilation path between the MFPB and the power supply cooling fan, and correct as necessary.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.10.8 C5601

(1) Contents

Trouble type	C5601: Engine control malfunction
Rank	C
Trouble detection condition	Engine control malfunction is detected with port monitor control.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Rewrite the firmware.
3. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.10.9 C5605, C5606

(1) Contents

Trouble type	• C5605: Engine communication data error • C5606: Engine transmission timeout
Rank	C
Trouble detection condition	A communication error is detected between CPUs.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.10.10 C5610

(1) Contents

Trouble type	C5610: PH LD drive communication error
Rank	C
Trouble detection condition	LD drive write data and read data disagree with each other a predetermined number of consecutive times.
Trouble isolation	-
Relevant electrical parts	• PH unit • PH relay board (PHRYB) • MFP board (MFPB)

(2) Procedure

1. Reboot the machine.
2. Check the connector between the PH unit-PHRYB CN8 for proper connection and correct as necessary.
3. Check the connector between PHRYB CN1-MFPB CN6E for proper connection and correct as necessary.
4. Replace the PH unit.
5. Replace PHRYB.
6. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.101. C5610)

3.11 C6###

3.11.1 C6001

(1) Contents

Trouble type	C6001: DF related configuration error 1
Rank	C

Trouble detection condition	Inconsistency in the configuration with the installed DF is detected on the main body.
Trouble isolation	-
Relevant electrical parts	• DF control board (DFCB) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Check the type of the installed DF and replace it if it is a wrong one.
2. Correct the harness connection between DFCB CN12-relay CN47-MFPB CN1E if faulty.
3. Correct the harness connection between DSIPB CN1-MFPB CN24 if faulty.
4. Replace DFCB.
5. Replace DSIPB.
6. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.102. C6001)

3.11.2 C6002

(1) Contents

Trouble type	C6002: DF related configuration error 2
Rank	C
Trouble detection condition	Inconsistency in the configuration with the installed DF is detected on the DF.
Trouble isolation	-
Relevant electrical parts	• DF control board (DFCB) • Dual scan image processing board (DSIPB)

(2) Procedure

1. Check the type of the installed DF and replace it if it is a wrong one.
2. Correct the harness connection between DFCB CN12-relay CN47-MFPB CN1E if faulty.
3. Correct the harness connection between DSIPB CN1-MFPB CN24 if faulty.
4. Check the connectors of the dual scan image processing board (DSIPB) for proper connection, and correct as necessary. (Direction of the point of contact and connection state of the flat cable in particular)

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.103. C6002)

3.11.3 C6102, C6103

(1) Contents

Trouble type	• C6102: Drive system home sensor malfunction • C6103: Slider over running
Rank	B
Trouble detection condition	C6102: • The scanner home sensor is unable to detect the scanner located at its home position. • The scanner home sensor is unable to detect a scanner even when the scanner motor has been driven to move the scanner over the maximum travelling distance. • The scanner home sensor detects the scanner when the scanner has moved the maximum travelling distance from the position, at which it blocks the scanner home sensor.
	C6103: The scanner home sensor detects the scanner at its home position during a period of time that begins with the time when a prescan command and a scan preparation command are executed and ends when a home return command is executed.
Trouble isolation	Scanner
Relevant electrical parts	• Scanner home sensor (PS201) • Scanner motor (M201) • Scanner drive board (SCDB) • MFP board (MFPB)

(2) Procedure

1. Correct or change the scanner drive (pulley, gear, belt) if it is faulty.
2. Correct the scanner motor set screw if loose.
3. Adjust [Image Position: Leading Edge] and [Sub Scan Zoom Adj.].
4. Check the connector between PS201-SCDB CN6 for proper connection and correct as necessary.
5. Check the connector between M201-SCDB CN4 for proper connection and correct as necessary.
6. Check the connector between SCDB CN2-MFPB CN1E for proper connection and correct as necessary.
7. PS201 I/O check, sensor check
   - Control signal: SCDB CN6-3 (ON)
   - Location of electrical component: 17-U
8. M201 operation check
   - Control signal: SCDB CN4-1 to 4
   - Location of electrical component: 17-U

9. Replace SCDB
10. MFPB F3E conduction check
11. Replace MFPB.

NOTICE
- Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)
- Link to the layout drawings for related parts by each trouble code (S.104. C6102, C6103)

3.11.4 C6104, C6105

(1) Contents

Trouble type	• C6104: Back side cleaning home sensor abnormality (initial) • C6105: Back side cleaning home sensor abnormality (normal)
Rank	B
Trouble detection condition	C6104: • The back side cleaning home sensor (PS9) does not change from H to L even after the lapse of a given period of time after the home position detecting operation is started at the initial operation. • The back side cleaning home sensor (PS9) does not change from H to L even after the lapse of a given period of time after the home position detecting operation is started at the initial operation.
	C6105: At the time of operation other than the initial operation, the back side cleaning home sensor (PS9) error is detected.
Trouble isolation	Scanner
Relevant electrical parts	• Back side cleaning home sensor (PS9) • Back side cleaning motor (M7) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M7-DFCB CN14 for proper connection and correct as necessary.
2. Check the connector of M7 for proper drive coupling and correct as necessary.
3. Check the connector between PS9-relay CN121-DFCB CN18 for proper connection and correct as necessary.
4. PS9 I/O check, sensor check
   - Control signal: DFCB CN18-6 (ON)
   - Location of electrical component: DF 3 to 4-C
5. M7 operation check
   - Control signal: DFCB CN14-6 to 9
   - Location of electrical component: DF 6-C
6. Replace M7.
7. DFCB ICP4 or ICP8 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.105. C6104, C6105)

3.11.5 C6704

(1) Contents

Trouble type	C6704: Image input time out
Rank	C
Trouble detection condition	Image data is not input from the scanner to the MFP board (MFPB).
Trouble isolation	Scanner
Relevant electrical parts	• MFP board (MFPB) • CCD board (CCDB)

(2) Procedure

1. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Bus Check] -> [Scanner -> Memory], and conduct the memory bus function.
2. Correct the harness connection between scanner section and MFPB if faulty.
3. MFPB F3E conduction check
4. Replace MFPB.
5. Replace the CCD unit.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.106. C6704, C6752)

3.11.6 C6751

(1) Contents

Trouble type	C6751: CCD gain adjustment failure
Rank	B
Trouble detection condition	• The adjustment value is 0 or 255 during a CCD clamp adjustment. • The peak value of the output data is 64 or less during a CCD gain adjustment.
Trouble isolation	Scanner

Relevant electrical parts	• LED exposure unit • Scanner drive board (SCDB) • CCD board (CCDB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CCDB PJ3-MFPB CN9 if faulty.
2. Correct the harness connection between CCDB PJ5-SCDB CN5 if faulty.
3. Correct the harness connection between SCDB CN1-DCPU CN005 if faulty.
4. Check for possible extraneous light and correct as necessary.
5. Clean the lens, mirrors, CCD surface, and shading sheet if dirty.
6. Correct reflective mirror of the scanner if faulty, or change scanner mirror.
7. Replace SCDB
8. Replace the CCD unit.
9. MFPB F3E conduction check
10. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.107. C6751)

3.11.7 C6752

(1) Contents

Trouble type	C6752: ASIC clock input error (front side)
Rank	C
Trouble detection condition	When starting the machine, verification on reading and writing the predetermined value for image processing ASIC on CCD board (CCDB) was conducted, and verification failure was detected.
Trouble isolation	Scanner
Relevant electrical parts	• MFP board (MFPB) • CCD board (CCDB)

(2) Procedure

1. Correct the harness connection of CCDB if faulty.
2. Replace the CCD unit.
3. MFPB F3E conduction check
4. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.106. C6704, C6752)

3.11.8 C6753

(1) Contents

Trouble type	C6753: ASIC clock input error (back side)
Rank	C
Trouble detection condition	When starting the machine, verification on reading and writing the predetermined value for image processing ASIC on dual scan image processing board (DSIPB) was conducted, and verification failure was detected.
Trouble isolation	-
Relevant electrical parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS J101-DSIPB CN2 if faulty.
2. Correct the harness connection between DSIPB CN1-MFPB CN24 if faulty.
3. Replace CIS.
4. DFPU ICP1 conduction check.
5. Replace DSIPB.
6. MFPB F3E conduction check
7. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.108. C6753)

3.11.9 C6754, C6755

(1) Contents

Trouble type	• C6754: CIS clamp adjustment failure • C6755: CIS gain adjustment failure
Rank	B
Trouble detection condition	• C6754: After the gain adjustment is performed at the start-up, the CIS clamp adjustment value is too high or too low. • C6755: After the gain adjustment is performed at the start-up, the peak value of the output data is lower than a given value.

Trouble isolation	Scanner
Relevant electrical parts	• CIS module (CIS) • Dual scan image processing board (DSIPB) • DF power supply (DFPU) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS J101-DSIPB CN2 if faulty.
2. Correct the harness connection between CIS J102-DFPU CN2 if faulty.
3. Check for possible extraneous light and correct as necessary.
4. Clean the back side reading glass and the shading sheet if dirty.
5. Replace CIS.
6. Replace DSIPB.
7. DFPU ICP1 conduction check.
8. Replace DFPU.
9. MFPB F3E conduction check
10. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.109. C6754, C6755, C9403, C9404)

3.11.10 C6756

(1) Contents

Trouble type	C6756: CCD power-supply voltage malfunction
Rank	C
Trouble detection condition	Power is not supplied to CCD after the lapse of a given period of time after the main power switch is turned ON or the machine recovers from the sleep mode.
Trouble isolation	-
Relevant electrical parts	• CCD board (CCDB) • Scanner drive board (SCDB) • DC power supply unit (DCPU)

(2) Procedure

1. Correct the harness connection between CCDB PJ5-SCDB CN5 if faulty.
2. Correct the harness connection between SCDB CN1 and DCPU CN005 if faulty.
3. Replace the CCD unit.
4. Replace SCDB.
5. Replace DCPU.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.110. C6756)

3.11.11 C6901, C6902, C6903

(1) Contents

Trouble type	• C6901: DSC board mount failure 1 • C6902: DSC Bus check NG1-1 • C6903: DSC Bus check NG1-2
Rank	C
Trouble detection condition	• C6901: When MFP detects that DSC board/1 (front side) is not properly installed. • C6902, C6903: When DSC bus check (front side) detects an error.
Trouble isolation	-
Relevant electrical parts	• DSC board/1 (DSCB/1: SC-508) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection of DSCB/1 if faulty.
2. Replace DSCB/1.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.111. C6901, C6902, C6903)

3.11.12 C6911, C6912, C6913

(1) Contents

Trouble type	• C6911: DSC board mount failure 2 • C6912: DSC Bus check NG2-1 • C6913: DSC Bus check NG2-2
Rank	C
Trouble detection condition	• C6911: When MFP detects that DSC board/2 (back side) is not properly installed. • C6912, C6913: When DSC bus check (back side) detects an error.

Trouble isolation	-
Relevant electrical parts	• DSC board/2 (DSCB/2; SC-508) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection of DSCB/2 if faulty.
2. Correct the harness connection of DSIPB if faulty.
3. Replace DSCB/2.
4. Replace DSIPB.
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.112. C6911, C6912, C6913)

3.11.13 C6F01

(1) Contents

Trouble type	C6F01: Scanner sequence trouble 1
Rank	C
Trouble detection condition	The original transport interval becomes shorter than the predetermined value due to an original transport control error in original reading in DF.
Trouble isolation	Scanner
Relevant electrical parts	• MFP board (MFPB) • DF control board (DFCB)

(2) Procedure

1. Correct the harness connection between main body and DF if faulty.
2. Replace DFCB.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.113. C6F01)

3.12 C8###

3.12.1 C8101

(1) Contents

Trouble type	C8101: Before reading pressure welding alienation mechanism trouble
Rank	B
Trouble detection condition	• During a pressure motion being performed, the before read sensor (PS6) output does not change from H to L. • During a retraction motion being performed, the before read sensor (PS6) output does not change from L to H.
Trouble isolation	DF
Relevant electrical parts	• Reading roller pressure/retraction motor (M6) • Before read sensor (PS6) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M6-relay CN118-DFCB CN4 for proper connection and correct as necessary.
2. Check the connector of M6 for proper drive coupling and correct as necessary.
3. Check the connector between PS6-relay CN120-DFCB CN11 for proper connection and correct as necessary.
4. PS6 I/O check, sensor check
   - Control signal: DFCB CN11-2 (ON)
   - Location of electrical component: DF 1-C
5. M6 operation check
   - Control signal: DFCB CN4-1 to 2
   - Location of electrical component: DF 10-C
6. Replace M6.
7. DFCB ICP9 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.114. C8101)

3.12.2 C8103

(1) Contents

Trouble type	C8103: Lift up mechanism trouble (Upward movement)
Rank	B
Trouble detection condition	The lift up upper sensor (PS2) is not turned ON (unblocked) after a lapse of a given time after the lift-up motor (M5) moves up (is turned forward).

Trouble isolation	DF
Relevant electrical parts	• Lift-up motor (M5) • Lift up upper sensor (PS2) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M5-DFCB CN9 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS2-DFCB CN6 for proper connection and correct as necessary.
4. PS2 I/O check, sensor check
   - Control signal: DFCB CN6-3 (ON)
   - Location of electrical component: DF 7-I
5. M5 operation check
   - Control signal: DFCB CN9-1 to 5
   - Location of electrical component: DF 5-C
6. Replace M5.
7. DFCB ICP5 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.115. C8103)

3.12.3 C8106

(1) Contents

Trouble type	C8106: Lift up mechanism failure (Downward movement)
Rank	B
Trouble detection condition	The lift up lower sensor (PS3) is not turned ON (unblocked) after a lapse of a given time after the lift-up motor (M5) goes down (is turned backward).
Trouble isolation	DF
Relevant electrical parts	• Lift-up motor (M5) • Lift up lower sensor (PS3) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M5-DFCB CN9 for proper connection and correct as necessary.
2. Check the connector of M5 for proper drive coupling and correct as necessary.
3. Check the connector between PS3-DFCB CN10 for proper connection and correct as necessary.
4. PS3 I/O check, sensor check
   - Control signal: DFCB CN10-3 (ON)
   - Location of electrical component: DF 10-C
5. M5 operation check
   - Control signal: DFCB CN9-1 to 5
   - Location of electrical component: DF 5-C
6. Replace M5.
7. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.116. C8106)

3.12.4 C8107

(1) Contents

Trouble type	C8107: Glass cleaning mechanism trouble
Rank	B
Trouble detection condition	The front side cleaning home sensor (PS18) is not turned ON (unblocked) even after the set period of time has elapsed after the front side cleaning motor (M8) turned ON.
Trouble isolation	DF
Relevant electrical parts	• Front side cleaning motor (M8) • Front side cleaning home sensor (PS18) • DF control board (DFCB)

(2) Procedure

1. Check the connector between M8-DFCB CN14 for proper connection and correct as necessary.
2. Check the connector between PS18-DFCB CN18 for proper connection and correct as necessary.
3. Check the connector of M8 for proper drive coupling and correct as necessary.
4. PS18 I/O check, sensor check
   - Control signal: DFCB CN18-3 (ON)
   - Location of electrical component: DF 3-C
5. M8 operation check
   - Control signal: DFCB CN14-1 to 4

- Location of electrical component: DF 6-C

6. Replace M8.
7. DFCB ICP8 conduction check.
8. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.117. C8107)

3.12.5 C8302

(1) Contents

Trouble type	C8302: Cooling fan motor's failure
Rank	B
Trouble detection condition	The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning.
Trouble isolation	DF
Relevant electrical parts	• Cooling fan motor (FM) • DF control board (DFCB)

(2) Procedure

1. Check the connector between FM-relay CN115-DFCB CN19 for proper connection and correct as necessary.
2. Check the fan for possible overload and correct as necessary.
3. FM operation check
   - Control signal: DFCB CN19-3 (LOCK)
   - Location of electrical component: DF 4-C
4. Replace FM.
5. DFCB ICP10 conduction check.
6. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.118. C8302)

3.12.6 C8401

(1) Contents

Trouble type	C8401: Nonvolatile memory error
Rank	C
Trouble detection condition	The EEPROM writing is disabled.
Trouble isolation	DF
Relevant electrical parts	DF control board (DFCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Check the DFCB connector for proper connection and correct as necessary.
3. Rewrite the firmware.
4. Replace DFCB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.119. C8401, CC156)

3.12.7 C8402

(1) Contents

Trouble type	C8402: Multi feed detection board failure (When UK-501 is installed)
Rank	C
Trouble detection condition	• The AD value went below the predetermined the HI side threshold for two consecutive times. • The AD value went above the predetermined the LOW side threshold for two consecutive times.
Trouble isolation	DF
Relevant electrical parts	• Multi feed detection board/1 (transmitter) (MFDB/1) • Multi feed detection board/2 (receiver) (MFDB/2) • Sensor control board (SCB) • DF control board (DFCB)

(2) Procedure

1. Remove the film stuck on the window of the lower guide assembly.
2. Use the adjustment sheet for double feed detection kit (UK-501), and select [ADF] -> [Multi-Feed DetectionAdj.].
3. Use the misdetected paper, and select [ADF] -> [Multi-Feed DetectionAdj.].
4. Check the connector between MFDB/1-relay CN114-SCB CN104 for proper connection and correct as necessary.
5. Check the connector between MFDB/2-SCB CN103 for proper connection and correct as necessary.
6. Check the connector between SCB CN101-DFCB CN8 for proper connection and correct as necessary.

7. MFDB/1 operation check
   - Control signal: SCB CN104
   - Location of electrical component: DF 11-L
8. MFDB/2 operation check
   - Control signal: SCB CN103
   - Location of electrical component: DF 10-J
9. Replace SCB.
10. DFCB ICP11 conduction check
11. Replace DFCB.

NOTICE
- Link to the wiring diagram (N.2. Dual scan document feeder)
- Link to the layout drawings for related parts by each trouble code (S.120. C8402)

3.13 C9###

3.13.1 C9401, C9402

(1) Contents

Trouble type	• C9401: Exposure LED lighting failure/ROM contents error (MSC) • C9402: Exposure LED lighting abnormally
Rank	A
Trouble detection condition	C9401: • The output from the CCD sensor is a predetermined value or less during CCD sensor gain adjustment. • The wrong model of firmware is detected in the MFP board when the main power switch is turned ON. • The machine type information (Machine, Type) registered to the machine differs from the actual machine type.
	C9402: The average output value of the CCD sensor with the scanner at its standby position is a predetermined value or more at the end of a scan job.
Trouble isolation	Scanner
Relevant electrical parts	• LED exposure unit • Flat cable (LED exposure unit) • CCD board (CCDB) • Scanner drive board (SCDB) • MFP board (MFPB)

(2) Procedure

1. Check the machine type information registered and reenter as necessary. For details the machine information, see "J.2.4 Entering the machine type information".
2. Correct the harness connection between SCDB CN3-LU201 if faulty.
3. Correct the harness connection between SCDB CN2-MFPB CN1E if faulty.
4. Correct the harness connection between CCDB PJ3-MFPB CN9 if faulty.
5. Replace the LED exposure unit.
6. Replace the CCD unit.
7. Replace SCDB
8. MFPB F3E conduction check
9. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.121. C9401, C9402)

3.13.2 C9403, C9404

(1) Contents

Trouble type	• C9403: CIS LED lighting failure • C9404: CIS LED lighting abnormally
Rank	A
Trouble detection condition	• C9403: At the CIS gain adjustment, the machine detected that the output of the CIS LED is lower than the specified value. • C9404: After a scan job is completed, the machine detected that the average output of the CIS LED is greater than the specified value.
Trouble isolation	Scanner
Relevant electrical parts	• CIS module (CIS) • DF power supply (DFPU) • Dual scan image processing board (DSIPB) • MFP board (MFPB)

(2) Procedure

1. Correct the harness connection between CIS J101-DSIPB CN2 if faulty.
2. Correct the harness connection between CIS J102-DFPU CN2 if faulty.
3. Replace CIS.
4. DFPU ICP1 conduction check.
5. Replace DFPU.
6. Replace DSIPB.
7. MFPB F3E conduction check

8. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.109. C6754, C6755, C9403, C9404)

3.14 CA###

3.14.1 CA051, CA052, CA053

(1) Contents

Trouble type	• CA051: Standard controller configuration failure • CA052: Controller hardware error • CA053: Controller start failure
Rank	C
Trouble detection condition	• CA051: The controller of the MFP board (MFPB) is faulty. • CA052: A controller hardware error is detected in the network interface. • CA053: A controller start failure is detected in the controller interface.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check to see if [Service Mode] -> [System 2] -> [Image Controller Setting] has been set to “Controller 0.” If changing the setting, turn OFF the main power switch and turn it ON again after 10 seconds or more.
2. Check the connectors of the MFPB for proper connection and correct as necessary.
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15 CC###

3.15.1 CC140

(1) Contents

Trouble type	CC140: Trouble related to security
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

NOTE
- **Contact the responsible people of KM before taking some countermeasures.**

3.15.2 CC151, CC152

(1) Contents

Trouble type	• CC151: ROM contents error upon startup (MSC) • CC152: ROM contents error upon startup (IR)
Rank	C
Trouble detection condition	• CC151: A fault is detected in a sequence of ROM contents check of the MSC during starting. • CC152: A fault is detected in a sequence of ROM contents check of the IR during starting.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the ROM version.
2. Rewrite the firmware.
3. Replace MFPB.

3.15.3 CC155

(1) Contents

Trouble type	CC155: Finisher ROM error
Rank	C
Trouble detection condition	Data of flash ROM of the finishing options is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-

Relevant electrical parts	FS control board (FSCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-536/FS-536SD/FS-537/FS-537SD)

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.122. CC155, CD704)

3.15.4 CC156

(1) Contents

Trouble type	CC156: DF ROM error
Rank	C
Trouble detection condition	Data of flash ROM of the DF is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-
Relevant electrical parts	DF control board (DFCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace DFCB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.119. C8401, CC156)

3.15.5 CC159, CC15A

(1) Contents

Trouble type	CC159: ROM contents error upon startup (DSC1) CC15A: ROM contents error upon startup (DSC2)
Rank	C
Trouble detection condition	A fault is detected in a sequence of ROM contents check of the DSC board during starting.
Trouble isolation	-
Relevant electrical parts	• DSC board/1 (DSCB/1; SC-508) • DSC board/2 (DSCB/2; SC-508)

(2) Procedure

1. Check DSCB/1 or DSCB/2 connector for proper connection and correct as necessary.
2. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
3. Rewrite the firmware.
4. Replace DSCB/1 or DSCB/2.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.123. CC159, CC15A)

3.15.6 CC15B

(1) Contents

Trouble type	CC15B: Flash ROM error (saddle)	
Rank	C	
Trouble detection condition	<When FS-536SD or FS-537SD is installed>	Data of flash ROM of the saddle is determined to be faulty when the main power switch is turned ON.
Trouble isolation	-	
Relevant electrical parts	SD control board (SDCB)	

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace SDCB. (FS-536SD/FS-537SD)

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.124. CC15B)

3.15.7 CC163

(1) Contents

Trouble type	CC163: ROM contents error (PRT)
Rank	C
Trouble detection condition	The wrong model of firmware is detected in the engine during the initial connection to the engine is being checked.
Trouble isolation	-
Relevant electrical parts	• eMMC board (eMMC) • MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Check the version of the firmware with Firmware Version.
3. Rewrite the firmware.
4. Replace eMMC.
5. If the above actions do not solve the problem, contact KM.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.125. CC163, CC164, CD3A0)

3.15.8 CC164

(1) Contents

Trouble type	CC164: ROM contents error (MSC)
Rank	C
Trouble detection condition	• The wrong model of firmware is detected in the MFP board when the main power switch is turned ON. • The machine type information (Machine, Type) registered to the machine differs from the actual machine type.
Trouble isolation	-
Relevant electrical parts	• eMMC board (eMMC) • MFP board (MFPB)

(2) Procedure

1. Check the ROM version.
2. Check the machine type information registered and reenter as necessary. For details the machine information, see “J.2.4 Entering the machine type information”.
3. Rewrite the firmware.
4. Replace eMMC.
5. Replace MFPB.
6. If the above actions do not solve the problem, contact KM.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.125. CC163, CC164, CD3A0)

3.15.9 CC170, CC171, CC172, CC173, CC174, CC180, CC181, CC182, CC183, CC184, CC185, CC186

(1) Contents

Trouble type	• CC170: Dynamic link error during starting (AP0) • CC171: Dynamic link error during starting (AP1) • CC172: Dynamic link error during starting (AP2) • CC173: Dynamic link error during starting (AP3) • CC174: Dynamic link error during starting (AP4) • CC180: Dynamic link error during starting (LDR) • CC181: Dynamic link error during starting (IBR) • CC182: Dynamic link error during starting (IID) • CC183: Dynamic link error during starting (IPF) • CC184: Dynamic link error during starting (IMY) • CC185: Dynamic link error during starting (SPF) • CC186: Dynamic link error during starting (OAP)
Rank	C
Trouble detection condition	A dynamic link error occurs in the program on the MFP board due to an insufficient memory space available, a ROM fault, or other reason when the main power switch is turned ON.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. If the malfunction code "CC172" has occurred, access [Service Mode] -> [System 2] -> [Image Controller Setting] and check to see if "Controller 1," or "Others" is set for [Image Controller Setting]. If any of these is set, select “Controller 0”.
2. If the malfunction code "CC180" has occurred, check to install the appropriate loadable device driver for an authentication unit which is installed to the MFP. When the appropriate loadable device driver is not installed, reinstall the appropriate loadable device driver.
3. Replace MFPB.
4. If the above actions do not solve the problem, contact KM.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.10 CC190

(1) Contents

Trouble type	CC190: Outline font load error
Rank	C
Trouble detection condition	An error occurred while loading the outline font.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Format the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.126. CC190, CD002, CD004, CD00F, CD020, CD050)

3.15.11 CC191

(1) Contents

Trouble type	CC191: Setting parameter load error (LDR)	
Rank	C	
Trouble detection condition	Upon startup, the processing of the loadable device driver setting data file failed.	• RAM disk file creation failed. • Reading from the flash ROM failed. • An error occurred in API of the authentication module.
Trouble isolation	-	
Relevant electrical parts	MFP board (MFPB)	

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Reinstall the loadable device driver.
3. Rewrite the firmware.
4. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.12 CC211

(1) Contents

Trouble type	CC211: Authentication device general error
Rank	C
Trouble detection condition	When using the authentication device, authentication data is not to meet the specifications.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.13 CC212

(1) Contents

Trouble type	CC212: User validation error
Rank	C
Trouble detection condition	• An error occurred while validating the user authentication information. • The loadable device driver is not successfully installed.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. When this trouble code is generated after installing the loadable device driver, check to see if there is any file other than loadable device driver in USB memory used. If there is any file, reinstall the loadable device driver.
2. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
3. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
4. Re-register the user authentication information.
5. Replace authentication device.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.14 CC213

(1) Contents

Trouble type	CC213: User registration error/Card information setting error
Rank	C
Trouble detection condition	• IC card advanced settings data is not correct when starting-up the authentication device. • Authentication information data is not correct when starting-up the authentication device. • IC card advanced settings data is not correct when setting the IC card advanced settings. • Authentication information data is not correct when setting the IC card advanced settings. • IC card advanced settings data is not correct when registering the authentication information. • Authentication information data is not correct when registering the authentication information. • IC card advanced settings data is not correct when editing the authentication information. • Authentication information data is not correct when editing the authentication information.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
3. Reset the authentication settings. (card type, IC card advanced settings, and etc.)
4. Re-register the user authentication information.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.15 CC214

(1) Contents

Trouble type	CC214: User information deletion error
Rank	C
Trouble detection condition	The deletion of the user information is uncompleted.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.16 CC216

(1) Contents

Trouble type	CC216: Acquisition failure of the number of trials/Initialize error of number of authentication
Rank	C
Trouble detection condition	An error occurred during user authentication using optional authentication unit AU-102.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Authentication device

(2) Procedure

1. Check the USB cable for proper connection. Reconnect the USB cable as necessary.
2. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.
3. Reset the number of authentication trials.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.15.17 CC301

(1) Contents

Trouble type	CC301: Authentication customize data error
Rank	B
Trouble detection condition	• The master authentication customize data is corrupted upon startup. • Registration of authentication customize data in the main body has failed upon startup.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Reinstall the authentication customize data.
2. Rewrite the firmware.
3. Replace MFPB.

3.15.18 CC302

(1) Contents

Trouble type	CC302: Authentication customize data version mismatch error
Rank	B
Trouble detection condition	The authentication customize data version is later than the firmware version of the machine.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Rewrite the main body firmware with the latest one and reinstall the authentication customize data .
2. Replace MFPB.

3.16 CD###

3.16.1 CD002

(1) Contents

Trouble type	CD002: JOB RAM save error
Rank	C
Trouble detection condition	The error in save of job data to the memory/ hard disk and its read error are detected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Format the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.126. CC190, CD002, CD004, CD00F, CD020, CD050)

3.16.2 CD004, CD00F, CD020

(1) Contents

Trouble type	• CD004: Hard disk access error (connection failure) • CD00F: Hard disk data transfer error • CD020: Hard disk verify error
Rank	C
Trouble detection condition	• CD004: Unable to communicate between the hard disk and MFP board (MFPB). • CD00F: Data transfer from the hard disk is faulty. • CD020: The data abnormality is detected by the hard disk verify check.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Reinstall the hard disk.
4. Replace the hard disk. (HDD (A) / HDD (B))
5. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.126. CC190, CD002, CD004, CD00F, CD020, CD050)

3.16.3 CD010

(1) Contents

Trouble type	CD010: Hard disk unformat
Rank	C
Trouble detection condition	Unformatted hard disk is connected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Carry out the [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
2. Replace the hard disk. (HDD (A) / HDD (B))
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.127. CD010, CE002)

3.16.4 CD011

(1) Contents

Trouble type	CD011: Hard disk out of specifications mounted
Rank	C
Trouble detection condition	A hard disk that falls outside the specifications is connected.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the hard disk specifications.
2. Replace the hard disk. (HDD (A) / HDD (B))

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.5 CD012

(1) Contents

Trouble type	CD012: Mount error due to hard disk being unformatted
Rank	C

Trouble detection condition	• The hard disk is not logically formatted after the whole data in the hard disk has been deleted by overwriting. • The hard disk that has replaced an old one is not logically formatted.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Logically format the hard disk and then upgrade the firmware.
2. Replace the hard disk. (HDD (A) / HDD (B))

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.6 CD013, CD014

(1) Contents

Trouble type	CD013: HDD mirroring error master CD014: HDD mirroring error slave
Rank	A
Trouble detection condition	CD013: A R/W error occurs in the master drive during mirroring. CD014: A R/W error occurs in the slave drive during mirroring.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Status] and identify the specific hard disk that has developed the error. If an error occurs, "Error" appears in the status column.
3. Replace the hard disk that has developed the error with a new one. (HDD (A) / HDD (B))
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild] and perform the function.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.7 CD015

(1) Contents

Trouble type	CD015: HDD mirroring error master slave
Rank	A
Trouble detection condition	A R/W error occurs in both drives during mirroring.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
2. Replace both hard disk (A) and hard disk (B) with new ones. (HDD (A) / HDD (B))
3. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform physical format.
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform logical format.
5. If HDD Data Backup has previously been performed, select [Service Mode] -> [Enhanced Security] -> [HDD Data Backup] -> [Restore] and perform the function.
6. If HDD Data Backup has not been performed previously, install voice data, etc.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.8 CD016

(1) Contents

Trouble type	CD016: HDD mirroring error master (rebuild)
Rank	A
Trouble detection condition	A R/W error occurs in the master drive during HDD Mirroring Rebuild.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON. If no problems are encountered, HDD Mirroring Rebuild is automatically performed.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Status] and identify the specific hard disk that has developed the error. If an error occurs, "Error" appears in the status column.
3. Replace the hard disk that has developed the error with a new one. (HDD (A) / HDD (B))
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform physical format.
5. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Format] and perform logical format.
6. If HDD Data Backup has previously been performed, select [Service Mode] -> [Enhanced Security] -> [HDD Data Backup] -> [Restore] and perform the function.
7. If HDD Data Backup has not been performed previously, install voice data, etc.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.9 CD017

(1) Contents

Trouble type	CD017: HDD mirroring error slave (rebuild)
Rank	A
Trouble detection condition	A R/W error occurs in the slave drive during HDD Mirroring Rebuild.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON. If no problems are encountered, HDD Mirroring Rebuild is automatically performed.
2. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Status] and identify the specific hard disk that has developed the error. If an error occurs, "Error" appears in the status column.
3. Replace the hard disk that has developed the error with a new one. (HDD (A) / HDD (B))
4. Select [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild] and perform the function.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.10 CD030

(1) Contents

Trouble type	CD030: Hard disk management information reading error
Rank	C
Trouble detection condition	The machine fails to read administrative information data saved in the hard disk.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Logically format the hard disk.
4. Physically format the hard disk.
5. Replace the hard disk. (HDD (A) / HDD (B))

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.129. CD030)

3.16.11 CD041, CD042, CD043, CD044, CD045, CD046

(1) Contents

Trouble type	CD041, CD042, CD043, CD044, CD045, CD046: HDD command execution error
Rank	C
Trouble detection condition	The error occurred inside the hard disk.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the hard disk specifications.

2. Format the hard disk.
3. Replace the hard disk. (HDD (A) / HDD (B))

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.12 CD047, CD048, CD049, CD04A, CD04B

(1) Contents

Trouble type	CD047, CD048, CD049, CD04A, CD04B: HDD SCSI library error
Rank	C
Trouble detection condition	The error occurred inside the hard disk.
Trouble isolation	-
Relevant electrical parts	• Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the hard disk specifications.
2. Format the hard disk.
3. Replace the hard disk. (HDD (A) / HDD (B))

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B)

3.16.13 CD050

(1) Contents

Trouble type	CD050: Hard disk recovery timeout
Rank	C
Trouble detection condition	The hard disk fails to recover from the power save mode within the predetermined period of time.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Check the connector between hard disk (A)-MFPB CN8, CN10 for proper connection and correct as necessary.
2. Check the connector between hard disk (B)-MFPB CN7, CN11 for proper connection and correct as necessary.
3. Reinstall the hard disk.
4. Format the hard disk.
5. Replace the hard disk. (HDD (A) / HDD (B))

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.126. CC190, CD002, CD004, CD00F, CD020, CD050)

3.16.14 CD110

(1) Contents

Trouble type	CD110: Wireless LAN destination initialization error
Rank	C
Trouble detection condition	When an initialization error occurred on the settings of the wireless LAN in the upgrade kit (UK-212).
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Check the UK-212 connector for proper connection and correct as necessary.
2. Rewrite the firmware.
3. Reinstall the UK-212.

3.16.15 CD201, CD202, CD203

(1) Contents

Trouble type	• CD201: File memory mounting error • CD202: Memory capacity discrepancy • CD203: Memory capacity discrepancy 2
Rank	C
Trouble detection condition	CD201: • The file memory is not mounted.

	• The file has any abnormality.
	CD202: • File memory capacity on the MFP board (MFPB) is not enough. • File memory capacity necessary for duplex printing is not enough.
	CD203: File memory capacity on the MFP board (MFPB) is not enough.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.16 CD211, CD212

(1) Contents

Trouble type	• CD211: PCI-SDRAM DMA operation failure • CD212: Compression/extraction timeout detection
Trouble code	CD211
Rank	C
Trouble detection condition	• CD211: Hardware related to the transfer of memory image of the MFP board (MFPB) fails to respond. • CD212: Hardware related to the BTC compression function of the MFP board (MFPB) fails to respond.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.17 CD241, CD242

(1) Contents

Trouble type	• CD241: Encryption ASIC setting error • CD242: Encryption ASIC mounting error
Rank	C
Trouble detection condition	• CD241: Initialization error of the encrypted ASIC is detected during the machine is starting. • CD242: The faulty of the installation of encrypted ASIC is detected during the machine is starting.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the MFP board connector for proper connection and correct as necessary.
2. Replace MFPB

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.18 CD261

(1) Contents

Trouble type	CD261: USB hub board failure
Rank	C
Trouble detection condition	• When a failure is detected in USB hub board included in the local interface kit. • Non-standard USB device is connected.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • USB hub board (USBHB: EK-610/EK-611)

(2) Procedure

1. Check the operation with another USB device.
2. Check the USB hub board connector for proper connection and correct as necessary.
3. Replace the USB hub board.

4. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.130. CD261)

3.16.19 CD271

(1) Contents

Trouble type	CD271: The memory cannot be recognized with the i-Option activated
Rank	C
Trouble detection condition	While the i-Option is activated, the memory on an MFPB cannot be recognized.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check MFPB for proper connection and correct as necessary.
2. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.20 CD272

(1) Contents

Trouble type	CD272: i-Option activated and HDD not installed
Rank	C
Trouble detection condition	While the i-Option is activated, the hard disk is not installed.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A))

(2) Procedure

1. Access [Service Mode] -> [System 2] -> [HDD] and check to see if “Installed” is selected.
2. Replace the hard disk (A).
3. Replace MFPB.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.131. CD272)

3.16.21 CD3A0

(1) Contents

Trouble type	CD3A0: Counter error
Rank	C
Trouble detection condition	The total counter values provided by the MFP board and the eMMC board are different.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • eMMC board (eMMC)

(2) Procedure

1. If this error occurs temporarily due to the use of the board removed from another machine, reinstall the original board.
2. Replace the current MFPB with a new one.

NOTICE
- Link to the layout drawings for related parts by each trouble code (S.125. CC163, CC164, CD3A0)

3.16.22 CD3C0

(1) Contents

Trouble type	CD3C0: New board detection
Rank	C
Trouble detection condition	The board is replaced with a new one.
Trouble isolation	-
Relevant electrical parts	-

(2) Procedure

1. Wait until “Recover Data” appears. (MFP will reboot maximum 2 times by itself, it may take 5 minutes.) Touch the “Recover Data” button and follow the instructions that appear on the control panel to restore (backup) data.

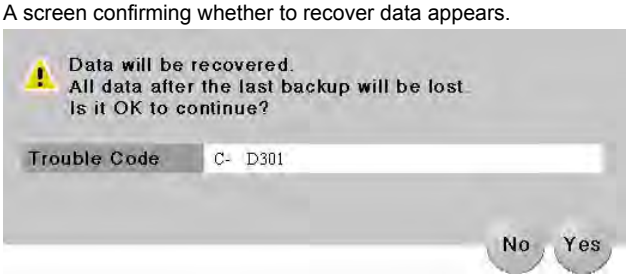
3.16.23 CD3##

(1) Contents

Trouble type	CD3##: Nonvolatile data error
Rank	C
Trouble detection condition	CD3##: Abnormality is detected by the abnormal check of each nonvolatile data.
Trouble isolation	-

(2) Action

1. A screen confirming whether to recover data appears.



2. Select [Yes].
3. The screen will be shifted to the data restoration screen to perform data restoration.
   NOTE
   - **When the restoration is performed in a short time, data restoration screen may not be displayed.**
4. Check the message which indicates that the data restoration was successfully conducted. Turn OFF the main power switch and turn it ON again more than 10 seconds after.
   NOTE
   - **In case it failed to restore data, return to the trouble code screen.**

NOTE

- **Nonvolatile data backup will be automatically performed every hour. Backup can also be performed manually with the following setting. [Service Mode] -> [Enhanced Security] -> [Memory Data Backup]**

3.16.24 CD401, CD402, CD403, CD404, CD405, CD406, CD407, CD411, CD412, CD413

(1) Contents

Trouble type	• CD401: NACK command incorrect • CD402: ACK command incorrect • CD403: Checksum error • CD404: Receiving packet incorrect • CD405: Receiving packet analysis error • CD406: ACK receiving timeout • CD407: Retransmission timeout • CD411: Touch panel board error • CD412: Touch panel type mismatch • CD413: Electrostatic touch panel operation mode error
Rank	C
Trouble detection condition	When abnormality is found in the communication of controller.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check whether there is a strong electromagnetic noise source near the main body.
2. Check the connectors on MFPB for proper connection and correct as necessary.
3. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.25 CD601, CD602, CD603

(1) Contents

Trouble type	CD601, CD602, CD603: Trouble related to security
Rank	-

Trouble detection condition	-
Trouble isolation	-

(2) Procedure

1. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch. If the above actions do not solve the problem, contact KM.

3.16.26 CD701, CD702, CD703

(1) Contents

Trouble type	• CD701: Mechanical controller flash ROM writing error • CD702: Mechanical controller flash ROM device error • CD703: FW download communication fault
Rank	C
Trouble detection condition	CD701: A mechanical controller flash ROM writing sequence is interrupted in its mid-operation due to, for example, power being shut off.
	CD702: An erase error or other device fault occurs during mechanical controller flash ROM writing.
	CD703: Irregular data is received during FW downloading. • Places are changed in the order of write completion pulses. • A write completion pulse is received for a memory for which binary writing is not permitted. • Final checksum mismatch in FW download • Two-minute timeout (no response from CTL, the number of transfer data items less than the specified)
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.27 CD704

(1) Contents

Trouble type	CD704: Finisher Flash ROM device error (When FS-536, FS-536SD, FS-537, or FS-537SD is installed)
Rank	C
Trouble detection condition	An erase error or other device fault occurs during the finisher flash ROM writing.
Trouble isolation	-
Relevant electrical parts	FS control board (FSCB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace FSCB. (FS-536/FS-536SD/FS-537/FS-537SD)

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.122. CC155, CD704)

3.16.28 CD705, CD706

(1) Contents

Trouble type	• CD705: Mechanical controller sub-CPU flash ROM device error • CD706: Mechanical controller sub-CPU flash ROM error
Rank	C
Trouble detection condition	• CD705: An erase error or other device fault occurs during mechanical controller sub-CPU flash ROM writing. • CD706: A data error is determined to exist in the mechanical controller sub-CPU flash ROM during starting.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Turn OFF the main power switch, disconnect and then connect the power cord. Wait for 10 sec. or more after connect the power cord, and turn ON the main power switch.
2. Rewrite the firmware.
3. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.16.29 CDC##

(1) Contents

Trouble type	CDC##: Trouble related to security
Rank	-
Trouble detection condition	-
Trouble isolation	-

(2) Procedure

NOTE

- **Contact the responsible people of KM before taking some countermeasures.**

3.16.30 CDF50, CDF70, CDFA0

(1) Contents

Trouble type	• CDF50: ASIC image version failure • CDF70: ASIC image access failure • CDFA0: ASIC image error
Rank	C
Trouble detection condition	Communication error is detected between the MFP board (MFPB) and the CCD board (CCDB).
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • CCD board (CCDB)

(2) Procedure

1. Check the connector between MFPB CN9-CCDB PJ3 for proper connection and correct as necessary.
2. Update the firmware.
3. Replace the CCD unit.
4. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.132. CDF50, CDF70, CDFA0)

3.16.31 CDF51, CDF71, CDFA1

(1) Contents

Trouble type	• CDF51: ASIC image version failure (back side) • CDF71: ASIC image access failure (back side) • CDFA1: ASIC image error (back side)
Rank	C
Trouble detection condition	Communication error is detected between the MFP board (MFPB) and the dual scan image processing board (DSIPB).
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Dual scan image processing board (DSIPB)

(2) Procedure

1. Check the connector between MFPB CN24-DSIPB CN1 for proper connection and correct as necessary.
2. Update the firmware.
3. Replace DSIPB.
4. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.132. CDF50, CDF70, CDFA0)

3.17 CE###

3.17.1 CE001, CE003, CE004, CE005, CE006, CE007, CE009

(1) Contents

Trouble type	• CE001: Abnormal message queue

	• CE003: Task error • CE004: Event error • CE005: Memory access error • CE006: Header access error • CE007: DIMM initialize error • CE009: Memory resource shortage error
Rank	C
Trouble detection condition	MFP board (MFPB) is faulty.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.17.2 CE002

(1) Contents

Trouble type	CE002: Message and method parameter failure
Rank	C
Trouble detection condition	MFP board (MFPB) is faulty.
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF the main power switch and turn it ON again, and conduct the following setting. [Service Mode] -> [System 1] -> [Initialization] -> [Clear All Data].
2. Format the hard disk.
3. Replace the hard disk. (HDD (A) / HDD (B))
4. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.127. CD010, CE002)

3.17.3 CE101

(1) Contents

Trouble type	CE101: Browser finish detected
Rank	C
Trouble detection condition	• The browser is automatically recovered (restarted) after the main body detected that the browser (separate process) has stopped with fault. • When the “Malfunction finish is detected over predetermined number of times” or “the browser task process is except in idle (printing, etc)”.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.17.4 CE201

(1) Contents

Trouble type	CE201: Transmission operation log storage fault
Rank	C
Trouble detection condition	When the transmission log storage failed, it repeats retrial until transmission operation log is stored. The trouble is detected when the retrial failed for predetermined number of times.
Trouble isolation	-

Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.17.5 CE301, CE302, CE303, CE304, CE305

(1) Contents

Trouble type	• CE301: Referring incorrect memory • CE302: Incorrect command • CE303: Finished due to error inside Qt library • CE304: Finished due to error outside Qt library • CE305: Program forced to stop
Rank	C
Trouble detection condition	Error occurred with the process inside the MFP controller.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB.
3. Acquire the debug logs in [Service Mode] -> [Debug Settings] and analyze them.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.17.6 CED01

(1) Contents

Trouble type	CED01: The authentication application information does not exist in the hard disk/eMMC board in the enhanced server authentication state.
Rank	C
Trouble detection condition	With “Enhanced Server Authentication” set, no authentication application registration information is found in the hard disk or the eMMC board (eMMC).
Trouble isolation	-
Relevant electrical parts	• eMMC board (eMMC) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

(2) Procedure

1. Turn OFF and ON the main power switch.
2. Check the connector between hard disk (A)-MFPB CN8, CN10 for proper connection and correct as necessary.
3. Check the connector between hard disk (B)-MFPB CN7, CN11 for proper connection and correct as necessary.
4. Check the connector from eMMC to MFPB for proper connection and correct as necessary.
5. Logically format the hard disk.
6. Replace the hard disk. (HDD (A) / HDD (B))
7. If the above actions do not solve the problem, contact KM.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.134. CED01)

3.17.7 CEEE1, CEEE3

(1) Contents

Trouble type	• CEEE1: MFP board (MSC) malfunction • CEEE3: MFP board (ENG) malfunction
Rank	C
Trouble detection condition	MFP board (MFPB) is faulty.
Trouble isolation	-
Relevant electrical parts	MFP board (MFPB)

(2) Procedure

1. Check the connectors on MFPB for proper connection and correct as necessary.
2. Replace MFPB.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3)

3.17.8 CEEE2

(1) Contents

Trouble type	CEEE2: Scanner section malfunction
Rank	A
Trouble detection condition	A scanner part is faulty.
Trouble isolation	-
Relevant electrical parts	• LED exposure unit • CCD board (CCDB) • Scanner drive board (SCDB)

(2) Procedure

1. Check the connectors on CCDB or MFPB for proper connection and correct as necessary.
2. Replace SCDB
3. Replace the CCD unit.

NOTICE

- Link to the layout drawings for related parts by each trouble code (S.135. CEEE2)

4. ABORT CODE

4.1 Troubleshooting of the abort code

- The machine displays an abort code (CF###) on the control panel as it becomes unable to process tasks properly through its software control.
- When the system program is aborted, check the electrical component, unit, option, and connection relating to the specific type of the abort condition.

4.1.1 Contents

Trouble type	Abort code
Trouble code	CF001 to CFFB5
Rank	C
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	• MFP board (MFPB) • Dual scan image processing board (DSIPB) • DSC board/1 (DSCB/1; SC-508) • DSC board/2 (DSCB/2; SC-508) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)

4.1.2 Procedure

- When an abort code occurs, take a check and action in the following procedure.

Step	Section	Check Item	Result	Action
1	Main power switch	Turn OFF and ON the main power switch, and check if the Abort code appears again.	NO	When not reappearing, continuous use is carried out, and it is checked whether an abort code occurs.
2	Connector connection	Make sure that no faulty conditions are noted in connector connection and board connection on the part. • MFP board (MFPB) • Dual scan image processing board (DSIPB: DF) • DSC board/1 (DSCB/1: SC-508) • DSC board/2 (DSCB/2: SC-508) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	NO	It will correct, if connector connection has abnormalities.
3	Firmware	Update the firmware to the latest version, and check if the Abort code appears again.	NO	Select [Service Mode] -> [Firmware Version] and make sure that the firmware has been updated to the correct version.
4	Memory Check	Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Memory Check] -> [Rough Check], and check that no abnormalities.	NO	When "NG" is displayed, replace the appropriate memory or PWB. • WORK0: Standard memory (MFPB) • WORK1: Expansion memory • FILE0,1: MFP board (MFPB) • FILE2,3: not used • FILE4,5: Dual scan image processing board (DSIPB: DF)
5	Storage R/W Check	Execute [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [Storage R/W Check], and check that no abnormalities.	NO	When "NG" is displayed, replace the hard disk (HDD).
6	MFP board	Replace the MFP board (MFPB), and then check the MFPB.	NO	Other electric parts indicated to Component of abort code list are replaced.

4.2 CF0##

Error code	Item		Component	Rank
CF001	CT_singleList table abnormal	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C
CF004	CT_queue full abnormal			
CF011	Array link abnormal			
CF012	FAT link abnormal			
CF013	File size abnormal			
CF021	setDelayMessage Table OverFlow			
CF023	MsgQue OverFlow			
CF033	setDivTbl() limitation over			
CF061	IdeCommand_Set() status Abnormal			

Error code	Item		Component	Rank
CF062	IdeCommand_Set() parameter Abnormal			

4.3 CF1##

Error code	Item		Component	Rank
CF112	Compress table OverFlow	Compression malfunctions	MFP board (MFPB)	C
CF113	Compress table check			
CF122	Expand Table OverFlow			

4.4 CF2##

Error code	Item		Component	Rank
CF211	setParameterBandColorPlane() Table OverFlow	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C

4.5 CF3##

Error code	Item		Component	Rank
CF300	IR Bus Check Timeout	Image transfer error on IR input bus	MFP board (MFPB)	C

4.6 CF4##

Error code	Item		Component	Rank
CF411	Parity error	Communication error (between IR-systems)	MFP board (MFPB)	C
CF412	Parity error			
CF421	Overrun error			
CF422	Overrun error			
CF431	Parity error + Overrun error			
CF432	Parity error + Overrun error			
CF441	Framing error			
CF442	Framing error			
CF451	Parity error + Framing error			
CF452	Parity error + Framing error			
CF461	Overrun error + Framing error			
CF462	Overrun error + Framing error			
CF471	Parity error + Overrun error + Framing error			
CF472	Parity error + Overrun error + Framing error			

4.7 CF5##

Error code	Item		Component	Rank
CF510	Parity error	Communication error (IR detected)	MFP board (MFPB)	C
CF520	Framing error			
CF530	Parity error + Framing error			
CF540	Overrun error			
CF550	Parity error + Overrun error			
CF560	Overrun error + Framing error			
CF570	Parity error + Overrun error + Framing error			
CF580	Frame distortion of DF			

4.8 CF6##

Error code	Item		Component	Rank
CF600	Report receiving of print start that is out of sequence	An exceptional instance occurred due to the unexpected parameter in the system F/W.	• MFP board (MFPB) • Engine	C
CF601	Report receiving of paper feeding that is out of sequence			
CF604	Outside IF/Command queue		MFP board (MFPB)	

Error code	Item		Component	Rank
CF614	“Output sequence” queue			
CF624	Panel LCD date queue			

4.9 CF7##

Error code	Item		Component	Rank
CF704	Common data “Delete-waiting HDD accumulated job ID” queue	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C
CF714	IRC/Command queue			
CF724	Engine/Command queue		• MFP board (MFPB) • Engine	
CF734	Panel/Command queue		• MFP board (MFPB) • Control panel	
CF744	File memory transfer start-waiting command queue		MFP board (MFPB)	
CF754	File memory compression requesting command queue			
CF764	Panel instruction delete job queue			
CF774	Warning delete job queue			
CF784	Application instruction delete job queue			
CF794	Output page information for duplex back side queue			
CF7A4	Paper feed completion output pate information queue			
CF7B4	Exposure compaction output page information queue			
CF7C4	Pre-discharge completion output page information queue			
CF7D4	Touch panel coordinate data queue			
CF7E4	Direct key data queue			
CF7F4	Scan sequence queue			

4.10 CF8##

Error code	Item	Component	Rank
CF802	SIO sending port...ENG	• MFP board (MFPB) • Engine	C
CF806	SIO sending port...IRC	MFP board (MFPB)	
CF807	SIO sending port...DF		
CF808	Transmission buffer overflow (DSC1)	DSC board/1 (DSCB/1: SC-508)	
CF809	Transmission buffer overflow (DSC2)	DSC board/2 (DSCB/2: SC-508)	
CF812	Unsupported option trouble	-	-
CF815	SIO sending port...PIC/PIC terminal	MFP board (MFPB)	C
CF8ED	SIO sending port...EPNet		

4.11 CF9##

Error code	Item	Component	Rank
CF902	SIO receiving port...ENG	• MFP board (MFPB) • Engine	C
CF906	SIO receiving port...IRC	MFP board (MFPB)	
CF907	SIO receiving port...DF		
CF908	Reception buffer overflow (DSC1)	DSC board/1 (DSCB/1: SC-508)	
CF909	Reception buffer overflow (DSC2)	DSC board/2 (DSCB/2: SC-508)	
CF912	Unsupported option trouble	-	-
CF915	SIO receiving port...PIC/PIC terminal	MFP board (MFPB)	C
CF9ED	SIO receiving port...EPNet		

4.12 CFA##

Error code	Item		Component	Rank
CFA01	getOneImgTransInfoFromTh ( ) (Thread ID and thread common parameters used) No applied thread	An exceptional instance occurred due to the unexpected parameter in the system F/W.	MFP board (MFPB)	C
CFA03	setTransBandAndRepeatNum() error			
CFA06	getOneImgIndexNumFromTh ( ) No applied thread			
CFA11	cancelTransExec ( ) No applied thread			
CFA12	ImgTransInfo No space			
CFA13	Clear Buffer Sequence error			
CFA14	Application error inside the MFP board		• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	
CFA15	Global semaphore time out (ten seconds)		• MFP board (MFPB) • Hard disk (A) (HDD (A)) • Hard disk (B) (HDD (B): HD-524)	
CFA16	Thread software error (upper parameter error)			
CFA17	Thread error caused by buffer sequence error			
CFA18	Thread error detected in the VD state at DMA00 startup.			
CFA50	IGC control error	DB error		
CFA51		IGC internal error		

4.13 CFB##

4.13.1 CFB0#

Error code	Item	Component	Rank
CFB00	ASIC777 DMA00	MFP board (MFPB)	C
CFB01	ASIC777 DMA01		
CFB02	ASIC777 DMA02		
CFB03	ASIC777 DMA03		
CFB04	ASIC777 DMA04		
CFB05	ASIC777 DMA05		
CFB06	ASIC777 DMA06		
CFB07	ASIC777 DMA07		
CFB08	ASIC777 DMA08		
CFB09	ASIC777 DMA09		
CFB0A	ASIC777 DMA10		
CFB0B	ASIC777 DMA11		
CFB0C	ASIC777 DMA12		
CFB0D	ASIC777 DMA13		
CFB0E	ASIC777 DMA14		
CFB0F	ASIC777 DMA15		

4.13.2 CFB1#

Error code	Item	Component	Rank
CFB10	ASIC777 DMA16	MFP board (MFPB)	C
CFB11	ASIC777 DMA17		
CFB12	ASIC777 DMA18		
CFB13	ASIC777 DMA19		
CFB14	ASIC777 DMA20		
CFB15	ASIC777 DMA21		
CFB16	ASIC777 DMA22		
CFB17	ASIC777 DMA23		
CFB18	ASIC777 DMA24		
CFB19	ASIC777 DMA25		
CFB1A	ASIC777 DMA26		
CFB1B	ASIC777 DMA27		
CFB1C	ASIC777 DMA28		

Error code	Item	Component	Rank
CFB1D	ASIC777 DMA29		
CFB1E	ASIC777 DMA30		
CFB1F	ASIC777 DMA31		

4.13.3 CFB2#

Error code	Item	Component	Rank
CFB20	ASIC777 DMA32	MFP board (MFPB)	C
CFB21	ASIC777 DMA33		
CFB22	ASIC777 DMA34		
CFB23	ASIC777 DMA35		
CFB24	ASIC777 DMA36		
CFB25	ASIC777 DMA37		
CFB26	ASIC777 DMA38		
CFB27	ASIC777 DMA39		
CFB28	ASIC777 DMA40		
CFB29	ASIC777 DMA41		
CFB2A	ASIC777 DMA42		
CFB2B	ASIC777 DMA43		
CFB2C	ASIC777 DMA44		
CFB2D	ASIC777 DMA45		
CFB2E	ASIC777 DMA46		
CFB2F	ASIC777 DMA47		

4.13.4 CFB3#

Error code	Item	Component	Rank
CFB30	ASIC777 DMA48	MFP board (MFPB)	C
CFB31	ASIC777 DMA49		
CFB32	ASIC777 DMA50		
CFB33	ASIC777 DMA51		
CFB34	ASIC777 DMA52		
CFB35	ASIC777 DMA53		
CFB36	ASIC777 DMA54		
CFB37	ASIC777 DMA55		

4.13.5 CFB6#

Error code	Item	Component	Rank
CFB68	Dual scan image processing board (Asic2014/Asic777) DMA00	Dual scan image processing board (DSIPB)	C
CFB69	Dual scan image processing board (Asic2014/Asic777) DMA01		
CFB6A	Dual scan image processing board (Asic2014/Asic777) DMA02		
CFB6B	Dual scan image processing board (Asic2014/Asic777) DMA03		
CFB6C	Dual scan image processing board (Asic2014/Asic777) DMA04		
CFB6D	Dual scan image processing board (Asic2014/Asic777) DMA05		
CFB6E	Dual scan image processing board (Asic2014/Asic777) DMA06		
CFB6F	Dual scan image processing board (Asic2014/Asic777) DMA07		

4.13.6 CFB7#

Error code	Item	Component	Rank
CFB70	Dual scan image processing board (Asic2014/Asic777) DMA08	Dual scan image processing board (DSIPB)	C
CFB71	Dual scan image processing board (Asic2014/Asic777) DMA09		
CFB72	Dual scan image processing board (Asic2014/Asic777) DMA10		
CFB73	Dual scan image processing board (Asic2014/Asic777) DMA11		
CFB74	Dual scan image processing board (Asic2014/Asic777) DMA12		
CFB75	Dual scan image processing board (Asic2014/Asic777) DMA13		
CFB76	Dual scan image processing board (Asic2014/Asic777) DMA14		
CFB77	Dual scan image processing board (Asic2014/Asic777) DMA15		
CFB78	Dual scan image processing board (Asic2014/Asic777) DMA16		
CFB79	Dual scan image processing board (Asic2014/Asic777) DMA17		

Error code	Item	Component	Rank
CFB7A	Dual scan image processing board (Asic2014/Asic777) DMA18		
CFB7B	Dual scan image processing board (Asic2014/Asic777) DMA19		
CFB7C	Dual scan image processing board (Asic2014/Asic777) DMA20		
CFB7D	Dual scan image processing board (Asic2014/Asic777) DMA21		
CFB7E	Dual scan image processing board (Asic2014/Asic777) DMA22		
CFB7F	Dual scan image processing board (Asic2014/Asic777) DMA23		

4.13.7 CFB8#

Error code	Item	Component	Rank
CFB80	Dual scan image processing board (Asic2014/Asic777) DMA24	Dual scan image processing board (DSIPB)	C
CFB81	Dual scan image processing board (Asic2014/Asic777) DMA25		
CFB82	Dual scan image processing board (Asic2014/Asic777) DMA26		
CFB83	Dual scan image processing board (Asic2014/Asic777) DMA27		
CFB84	Dual scan image processing board (Asic2014/Asic777) DMA28		
CFB85	Dual scan image processing board (Asic2014/Asic777) DMA29		
CFB86	Dual scan image processing board (Asic2014/Asic777) DMA30		
CFB87	Dual scan image processing board (Asic2014/Asic777) DMA31		
CFB88	Dual scan image processing board (Asic2014/Asic777) DMA32		
CFB89	Dual scan image processing board (Asic2014/Asic777) DMA33		
CFB8A	Dual scan image processing board (Asic2014/Asic777) DMA34		
CFB8B	Dual scan image processing board (Asic2014/Asic777) DMA35		
CFB8C	Dual scan image processing board (Asic2014/Asic777) DMA36		
CFB8D	Dual scan image processing board (Asic2014/Asic777) DMA37		
CFB8E	Dual scan image processing board (Asic2014/Asic777) DMA38		
CFB8F	Dual scan image processing board (Asic2014/Asic777) DMA39		

4.13.8 CFB9#

Error code	Item	Component	Rank
CFB90	Dual scan image processing board (Asic2014/Asic777) DMA40	Dual scan image processing board (DSIPB)	C
CFB91	Dual scan image processing board (Asic2014/Asic777) DMA41		
CFB92	Dual scan image processing board (Asic2014/Asic777) DMA42		
CFB93	Dual scan image processing board (Asic2014/Asic777) DMA43		
CFB94	Dual scan image processing board (Asic2014/Asic777) DMA44		
CFB95	Dual scan image processing board (Asic2014/Asic777) DMA45		
CFB96	Dual scan image processing board (Asic2014/Asic777) DMA46		
CFB97	Dual scan image processing board (Asic2014/Asic777) DMA47		

4.13.9 CFBA#

Error code	Item	Component	Rank
CFBA3	Asic (PMS) DMA03	MFP board (MFPB)	C
CFBA7	Asic (PMS) DMA07		

4.13.10 CFBB#

Error code	Item	Component	Rank
CFBB2	Asic (PMS) DMA18	MFP board (MFPB)	C
CFBB3	Asic (PMS) DMA19		
CFBB4	Asic (PMS) DMA32		
CFBB5	Asic (PMS) DMA33		
CFBB6	Asic (PMS) DMA34		
CFBB7	Asic (PMS) DMA35		
CFBB8	Asic (PMS) DMA36		
CFBB9	Asic (PMS) DMA37		
CFBBA	Asic (PMS) DMA38		
CFBBB	Asic (PMS) DMA39		
CFBBC	Asic (PMS) DMA40		
CFBBD	Asic (PMS) DMA41		
CFBBE	Asic (PMS) DMA42		

Error code	Item	Component	Rank
CFBBF	Asic (PMS) DMA43		

4.13.11 CFBC#

Error code	Item	Component	Rank
CFBC0	ASIC777 interruption	• MFP board (MFPB) • Dual scan image processing board (DSIPB)	C
CFBC2	Dual scan image processing board (Asic2014/Asic777) DMA17 interruption		
CFBC3	Asic (PMS) interruption		
CFBC4	ASIC777 common register setting		
CFBC6	Dual scan image processing board (Asic2014/Asic777) common register setting		
CFBC7	Asic (PMS) common register setting		
CFBC8	ASIC777 BTC compression/extension unit		
CFBCA	Dual scan image processing board (Asic2014/Asic777) BTC compression/extension unit		
CFBCB	Asic (PMS) BTC compression/extension unit		
CFBCC	ASIC777 DMA00 error interruption		
CFBCD	ASIC777 DMA01 error interruption		
CFBCE	ASIC777 DMA02 error interruption		
CFBCF	ASIC777 DMA03 error interruption		

4.13.12 CFBD#

Error code	Item	Component	Rank
CFBD0	ASIC777 DMA04 error interruption	MFP board (MFPB)	C
CFBD1	ASIC777 DMA05 error interruption		
CFBD2	ASIC777 DMA06 error interruption		
CFBD3	ASIC777 DMA07 error interruption		
CFBD4	ASIC777 DMA08 error interruption		
CFBD5	ASIC777 DMA09 error interruption		
CFBD6	ASIC777 DMA10 error interruption		
CFBD7	ASIC777 DMA11 error interruption		
CFBD8	ASIC777 DMA12 error interruption		
CFBD9	ASIC777 DMA13 error interruption		
CFBDA	ASIC777 DMA14 error interruption		
CFBDB	ASIC777 DMA15 error interruption		
CFBDC	ASIC777 DMA16 error interruption		
CFBDD	ASIC777 DMA17 error interruption		
CFBDE	ASIC777 DMA18 error interruption		
CFBDF	ASIC777 DMA19 error interruption		

4.13.13 CFBE#

Error code	Item	Component	Rank
CFBE0	ASIC777 DMA20 error interruption	MFP board (MFPB)	C
CFBE1	ASIC777 DMA21 error interruption		
CFBE2	ASIC777 DMA22 error interruption		
CFBE3	ASIC777 DMA23 error interruption		
CFBE4	ASIC777 DMA24 error interruption		
CFBE5	ASIC777 DMA25 error interruption		
CFBE6	ASIC777 DMA26 error interruption		
CFBE7	ASIC777 DMA27 error interruption		
CFBE8	ASIC777 DMA28 error interruption		
CFBE9	ASIC777 DMA29 error interruption		
CFBEA	ASIC777 DMA30 error interruption		
CFBEB	ASIC777 DMA31 error interruption		
CFBEC	ASIC777 DMA32 error interruption		
CFBED	ASIC777 DMA33 error interruption		
CFBEE	ASIC777 DMA34 error interruption		

Error code	Item	Component	Rank
CFBEF	ASIC777 DMA35 error interruption		

4.13.14 CFBF#

Error code	Item	Component	Rank
CFBF0	ASIC777 DMA36 error interruption	MFP board (MFPB)	C
CFBF1	ASIC777 DMA37 error interruption		
CFBF2	ASIC777 DMA38 error interruption		
CFBF3	ASIC777 DMA39 error interruption		
CFBF4	ASIC777 DMA40 error interruption		
CFBF5	ASIC777 DMA41 error interruption		
CFBF6	ASIC777 DMA42 error interruption		
CFBF7	ASIC777 DMA43 error interruption		
CFBF8	ASIC777 DMA44 error interruption		
CFBF9	ASIC777 DMA45 error interruption		
CFBFA	ASIC777 DMA46 error interruption		
CFBFB	ASIC777 DMA47 error interruption		
CFBFC	ASIC777 DMA48 error interruption		
CFBFD	ASIC777 DMA49 error interruption		
CFBFE	ASIC777 DMA50 error interruption		
CFBFF	ASIC777 DMA51 error interruption		

4.14 CFC##

4.14.1 CFC0#

Error code	Item	Component	Rank
CFC00	ASIC777 DMA52 error interruption	MFP board (MFPB)	C
CFC01	ASIC777 DMA53 error interruption		
CFC02	ASIC777 DMA54 error interruption		
CFC03	ASIC777 DMA55 error interruption		
CFC04	ASIC777 watchdog timer error interruption		
CFC05	ASIC777 image output interface had underrun		
CFC06	ASIC777 image input interface had overflow		
CFC07	ASIC777 LCC output interface had underrun		
CFC08	ASIC777 JBIG core detected unknown marker		
CFC09	ASIC777 JBIG core detected SC count overflow		
CFC0A	SDTMDT is accessed during ASIC777 soft reset active		
CFC0B	DMA04 (table) is accessed during ASIC777 soft reset active		
CFC0C	DMA06 (FAX debug) is accessed during ASIC777 soft reset active		
CFC0D	ASIC777 SDTMDT had a timeout error		
CFC0E	ASIC777 SDTAAA had a timeout error		
CFC0F	ASIC777 SDTAAA had an access lock error		

4.14.2 CFC1#

Error code	Item	Component	Rank
CFC10	An error to access to the invalid area of sub-CPU via ASIC777 SDTAAA	MFP board (MFPB)	C
CFC11	An overflow detected in ASIC777 DMA14 mdt_ctr_14o		
CFC12	Compression data size over detected during ASIC777 DMA14 JPEG compression		
CFC13	ASIC777 DMA14 EOI yet to be detected		
CFC14	A "1" is set when access is made to the CMM table of DMA14 while the ASIC777 soft reset is being active		
CFC15	A "1" is set when access is made to the JPEG core slave space of DMA14 while the ASIC777 soft reset is being active		
CFC16	A "1" is set when access is made to the comment table of DMA14 while the ASIC777 soft reset is being active		
CFC17	An overflow detected in ASIC777 DMA15 mdt_ctr_15o		
CFC18	Compression data size over detected during ASIC777 DMA15 JPEG compression		
CFC19	ASIC777 DMA15 EOI yet to be detected		

Error code	Item	Component	Rank
CFC1A	A "1" is set when access is made to the CMM table of DMA15 while the ASIC777 soft reset is being active		
CFC1B	A "1" is set when access is made to the JPEG core slave space of DMA15 while the ASIC777 soft reset is being active		
CFC1C	A "1" is set when access is made to the comment table of DMA15 while the ASIC777 soft reset is being active		
CFC1D	Completer Abort exists in ASIC777 memory master access		
CFC1E	Unsupported Request exists in ASIC777 memory master access		
CFC1F	Completion Timeout exists in ASIC777 memory master access		

4.14.3 CFC2#

Error code	Item	Component	Rank
CFC20	Poisoned TLP exists in ASIC777 memory master access	MFP board (MFPB)	C
CFC21	Unsupported Request exists in ASIC777 memory target access		
CFC22	Poisoned TLP exists in ASIC777 memory target access		
CFC23	Unsupported Request TLP exists in ASIC777 config target access		
CFC24	Poisoned TLP exists in ASIC777 config target access		
CFC25	A "1" is set when a rising edge is detected of VD output from the ASIC777 CPS		
CFC26	A "1" is set when a falling edge is detected of VD output from the ASIC777 CPS		
CFC27	A "1" is set when a rising edge is detected of VD output from the ASIC777 DMA03		
CFC28	A "1" is set when a falling edge is detected of VD output from the ASIC777 DMA03		
CFC29	A "1" is set when a falling edge is detected of VSYNC input to the ASIC777 DMA03		
CFC2A	ASIC777 Emepror-IP error		
CFC2B	ASIC777 external bus error		
CFC2C	ASIC777 PC delay interrupt (INT_PCD0)		
CFC2D	ASIC777 PC delay interrupt (INT_PCD1)		
CFC2E	ASIC777 PC delay interrupt (INT_PCD2)		

4.14.4 CFCA#

Error code	Item	Component	Rank
CFCA6	Dual scan image processing board (Asic2014/Asic777) DMA00 error interruption	Dual scan image processing board (DSIPB)	C
CFCA7	Dual scan image processing board (Asic2014/Asic777) DMA01 error interruption		
CFCA8	Dual scan image processing board (Asic2014/Asic777) DMA02 error interruption		
CFCA9	Dual scan image processing board (Asic2014/Asic777) DMA03 error interruption		
CFCAA	Dual scan image processing board (Asic2014/Asic777) DMA04 error interruption		
CFCAB	Dual scan image processing board (Asic2014/Asic777) DMA05 error interruption		
CFCAC	Dual scan image processing board (Asic2014/Asic777) DMA06 error interruption		
CFCAD	Dual scan image processing board (Asic2014/Asic777) DMA07 error interruption		
CFCAE	Dual scan image processing board (Asic2014/Asic777) DMA08 error interruption		
CFCAF	Dual scan image processing board (Asic2014/Asic777) DMA09 error interruption		

4.14.5 CFCB#

Error code	Item	Component	Rank
CFCB0	Dual scan image processing board (Asic2014/Asic777) DMA10 error interruption	Dual scan image processing board (DSIPB)	C
CFCB1	Dual scan image processing board (Asic2014/Asic777) DMA11 error interruption		

Error code	Item	Component	Rank
CFCB2	Dual scan image processing board (Asic2014/Asic777) DMA12 error interruption		
CFCB3	Dual scan image processing board (Asic2014/Asic777) DMA13 error interruption		
CFCB4	Dual scan image processing board (Asic2014/Asic777) DMA14 error interruption		
CFCB5	Dual scan image processing board (Asic2014/Asic777) DMA15 error interruption		
CFCB6	Dual scan image processing board (Asic2014/Asic777) DMA16 error interruption		
CFCB7	Dual scan image processing board (Asic2014/Asic777) DMA17 error interruption		
CFCB8	Dual scan image processing board (Asic2014/Asic777) DMA18 error interruption		
CFCB9	Dual scan image processing board (Asic2014/Asic777) DMA19 error interruption		
CFCBA	Dual scan image processing board (Asic2014/Asic777) DMA20 error interruption		
CFCBB	Dual scan image processing board (Asic2014/Asic777) DMA21 error interruption		
CFCBC	Dual scan image processing board (Asic2014/Asic777) DMA22 error interruption		
CFCBD	Dual scan image processing board (Asic2014/Asic777) DMA23 error interruption		
CFCBE	Dual scan image processing board (Asic2014/Asic777) DMA24 error interruption		
CFCBF	Dual scan image processing board (Asic2014/Asic777) DMA25 error interruption		

4.14.6 CFCC#

Error code	Item	Component	Rank
CFCC0	Dual scan image processing board (Asic2014/Asic777) DMA26 error interruption	Dual scan image processing board (DSIPB)	C
CFCC1	Dual scan image processing board (Asic2014/Asic777) DMA27 error interruption		
CFCC2	Dual scan image processing board (Asic2014/Asic777) DMA28 error interruption		
CFCC3	Dual scan image processing board (Asic2014/Asic777) DMA29 error interruption		
CFCC4	Dual scan image processing board (Asic2014/Asic777) DMA30 error interruption		
CFCC5	Dual scan image processing board (Asic2014/Asic777) DMA31 error interruption		
CFCC6	Dual scan image processing board (Asic2014/Asic777) DMA32 error interruption		
CFCC7	Dual scan image processing board (Asic2014/Asic777) DMA33 error interruption		
CFCC8	Dual scan image processing board (Asic2014/Asic777) DMA34 error interruption		
CFCC9	Dual scan image processing board (Asic2014/Asic777) DMA35 error interruption		
CFCCA	Dual scan image processing board (Asic2014/Asic777) DMA36 error interruption		
CFCCB	Dual scan image processing board (Asic2014/Asic777) DMA37 error interruption		
CFCCC	Dual scan image processing board (Asic2014/Asic777) DMA38 error interruption		
CFCCD	Dual scan image processing board (Asic2014/Asic777) DMA39 error interruption		
CFCCE	Dual scan image processing board (Asic2014/Asic777) DMA40 error interruption		
CFCCF	Dual scan image processing board (Asic2014/Asic777) DMA41 error interruption		

4.14.7 CFCD#

Error code	Item	Component	Rank
CFCD0	Dual scan image processing board (Asic2014/Asic777) DMA42 error interruption	Dual scan image processing board (DSIPB)	C
CFCD1	Dual scan image processing board (Asic2014/Asic777) DMA43 error interruption		
CFCD2	Dual scan image processing board (Asic2014/Asic777) DMA44 error interruption		
CFCD3	Dual scan image processing board (Asic2014/Asic777) DMA45 error interruption		
CFCD4	Dual scan image processing board (Asic2014/Asic777) DMA46 error interruption		
CFCD5	Dual scan image processing board (Asic2014/Asic777) DMA47 error interruption		
CFCDE	Dual scan image processing board (Asic2014/Asic777) watchdog timer error interruption		

4.15 CFD##

4.15.1 CFD0#

Error code	Item	Component	Rank
CFD09	Dual scan image processing board (Asic2014) image output interface (DMA03) had underrun	Dual scan image processing board (DSIPB)	C
CFD0A	Dual scan image processing board (Asic2014) image input interface (DMA00) had overflow		
CFD0B	Dual scan image processing board (Asic2014) LCC output interface had underrun		
CFD0C	Dual scan image processing board (Asic2014) JBIG core detected unknown marker		
CFD0D	Dual scan image processing board (Asic2014) JBIG core detected SC count overflow		
CFD0E	Dual scan image processing board (Asic2014) image output interface (DMA23) had underrun		
CFD0F	Dual scan image processing board (Asic2014) image input interface (DMA16) had overflow		

4.15.2 CFD1#

Error code	Item	Component	Rank
CFD10	SDTMDT is accessed during dual scan image processing board (Asic2014) soft reset active	Dual scan image processing board (DSIPB)	C
CFD11	DMA04 (table) is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD12	DMA13 (FAX debug) is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD13	SDTAAA is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD14	A time out error is received on the dual scan image processing board (Asic2014) SDTMDT.		
CFD15	A time out error is received on the dual scan image processing board (Asic2014) SDTAAA.		
CFD16	An access lock error is received on the dual scan image processing board (Asic2014) SDTAAA.		
CFD17	An failed access to the invalid field of the sub CPU is received via the dual scan image processing board (Asic2014) SDTAAA.		
CFD18	An overflow detected in dual scan image processing board (Asic2014) DMA14 mdt_ctr_14o		
CFD19	Compression data size over detected during dual scan image processing board (Asic2014) DMA14 JPEG compression		
CFD1A	Dual scan image processing board (Asic2014) DMA14 EOI yet to be detected		
CFD1B	The CMM table of DMA14 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD1C	The JPEG core slave space of DMA14 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD1D	The comment table of DMA14 is accessed during dual scan image processing board (Asic2014) soft reset active		

Error code	Item	Component	Rank
CFD1E	An overflow detected in dual scan image processing board (Asic2014) DMA15 mdt_ctr_14o		
CFD1F	Compression data size over detected during dual scan image processing board (Asic2014) DMA15 JPEG compression		

4.15.3 CFD2#

Error code	Item	Component	Rank
CFD20	Dual scan image processing board (Asic2014) DMA15 EOI yet to be detected	Dual scan image processing board (DSIPB)	C
CFD21	The CMM table of DMA15 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD22	The JPEG core slave space of DMA15 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD23	The comment table of DMA15 is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD24	Completer Abort exists in dual scan image processing board (Asic2014) memory master access		
CFD25	Unsupported Request exists in dual scan image processing board (Asic2014) memory master access		
CFD26	Completer Timeout exists in dual scan image processing board (Asic2014) memory master access		
CFD27	Poisoned TLP exists in dual scan image processing board (Asic2014) memory master access		
CFD28	Unsupported Request exists in dual scan image processing board (Asic2014) memory target access		
CFD29	Poisoned TLP exists in dual scan image processing board (Asic2014) memory target access		
CFD2A	Unsupported Request TLP exists in dual scan image processing board (Asic2014) config target access		
CFD2B	Poisoned TLP exists in dual scan image processing board (Asic2014) config target access		
CFD2C	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) CPS		
CFD2D	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) CPS		
CFD2E	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) DMA03		
CFD2F	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) DMA03		

4.15.4 CFD3#

Error code	Item	Component	Rank
CFD30	A falling edge is detected of VSYNC input to the dual scan image processing board (Asic2014) DMA03	Dual scan image processing board (DSIPB)	C
CFD31	The PP image processing control section register field is accessed during soft reset active of the PP image processing control section of the dual scan image processing board (Asic2014).		
CFD32	The input image processing control section register field is accessed during soft reset active of the input image processing control section of the dual scan image processing board (Asic2014).		
CFD33	The output image processing control section register field is accessed during soft reset active of the output image processing control section of the dual scan image processing board (Asic2014).		
CFD34	The UART register in the controller IO control section is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD35	The UART00 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD36	The UART01 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD37	The UART02 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		
CFD38	The UART03 register is accessed during clock gating of the dual scan image processing board (Asic2014) UART.		

Error code	Item	Component	Rank
CFD39	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) FieryIF		
CFD3A	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) FieryIF		
CFD3B	A rising edge is detected of VD input to the dual scan image processing board (Asic2014) DMA23		
CFD3C	A falling edge is detected of VD input to the dual scan image processing board (Asic2014) DMA23		
CFD3D	A falling edge is detected of VSYNC input to the dual scan image processing board (Asic2014) DMA03		
CFD3E	EmperorIP is accessed during dual scan image processing board (Asic2014) soft reset active		
CFD3F	Dual scan image processing board (Asic2014) Emepror-IP error		

4.15.5 CFD4#

Error code	Item	Component	Rank
CFD40	Dual scan image processing board (Asic2014) external bus error	• MFP board (MFPB) • Dual scan image processing board (DSIPB)	C
CFD41	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption during internal processing at DMA14		
CFD42	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption during internal processing at DMA15		
CFD43	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption with multiple statuses during internal processing at DMA14		
CFD44	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption with multiple statuses during internal processing at DMA15		
CFD45	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption at DMA14		
CFD46	Dual scan image processing board (Asic2014) JPEG, JPEG related interruption at DMA15		
CFD4A	Asic (PMS) DMA03 error interruption		
CFD4E	Asic (PMS) DMA07 error interruption		

4.15.6 CFD5#

Error code	Item	Component	Rank
CFD59	Asic (PMS) DMA18 error interruption	MFP board (MFPB)	C
CFD5A	Asic (PMS) DMA19 error interruption		
CFD5B	Asic (PMS) DMA32 error interruption		
CFD5C	Asic (PMS) DMA33 error interruption		
CFD5D	Asic (PMS) DMA34 error interruption		
CFD5E	Asic (PMS) DMA35 error interruption		
CFD5F	Asic (PMS) DMA36 error interruption		

4.15.7 CFD6#

Error code	Item	Component	Rank
CFD60	Asic (PMS) DMA37 error interruption	MFP board (MFPB)	C
CFD61	Asic (PMS) DMA38 error interruption		
CFD62	Asic (PMS) DMA39 error interruption		
CFD63	Asic (PMS) DMA40 error interruption		
CFD64	Asic (PMS) DMA41 error interruption		
CFD65	Asic (PMS) DMA42 error interruption		
CFD66	Asic (PMS) DMA43 error interruption		
CFD67	Asic (PMS) watchdog timer error interruption		
CFD68	Asic (PMS) image output interface had underrun		
CFD69	Asic (PMS) JBIG core detected unknown marker		
CFD6A	Asic (PMS) JBIG core detected SC count overflow		
CFD6B	SDTMDT is accessed during Asic (PMS) soft reset active		
CFD6C	Asic (PMS) SDTMDT had a timeout error		
CFD6D	Completer Abort exists in Asic (PMS) memory master access		
CFD6E	Unsupported Request exists in Asic (PMS) memory master access		

Error code	Item	Component	Rank
CFD6F	Completion Timeout exists in Asic (PMS) memory master access		

4.15.8 CFD7#

Error code	Item	Component	Rank
CFD70	Poisoned TLP exists in Asic (PMS) memory master access	MFP board (MFPB)	C
CFD71	Unsupported Request exists in Asic (PMS) memory target access		
CFD72	Poisoned TLP exists in Asic (PMS) memory target access		
CFD73	Unsupported Request TLP exists in Asic (PMS) config target access		
CFD74	Unsupported Poisoned TLP exists in Asic (PMS) config target access		
CFD75	Asic (PMS) external bus error		
CFD76	ASIC777 DMA00 time out		
CFD77	ASIC777 DMA01 time out		
CFD78	ASIC777 DMA02 time out		
CFD79	ASIC777 DMA03 time out		
CFD7A	ASIC777 DMA04 time out		
CFD7B	ASIC777 DMA05 time out		
CFD7C	ASIC777 DMA06 time out		
CFD7D	ASIC777 DMA07 time out		
CFD7E	ASIC777 DMA08 time out		
CFD7F	ASIC777 DMA09 time out		

4.15.9 CFD8#

Error code	Item	Component	Rank
CFD80	ASIC777 DMA10 time out	MFP board (MFPB)	C
CFD81	ASIC777 DMA11 time out		
CFD82	ASIC777 DMA12 time out		
CFD83	ASIC777 DMA13 time out		
CFD84	ASIC777 DMA14 time out		
CFD85	ASIC777 DMA15 time out		
CFD86	ASIC777 DMA16 time out		
CFD87	ASIC777 DMA17 time out		
CFD88	ASIC777 DMA18 time out		
CFD89	ASIC777 DMA19 time out		
CFD8A	ASIC777 DMA20 time out		
CFD8B	ASIC777 DMA21 time out		
CFD8C	ASIC777 DMA22 time out		
CFD8D	ASIC777 DMA23 time out		
CFD8E	ASIC777 DMA24 time out		
CFD8F	ASIC777 DMA25 time out		

4.15.10 CFD9#

Error code	Item	Component	Rank
CFD90	ASIC777 DMA26 time out	MFP board (MFPB)	C
CFD91	ASIC777 DMA27 time out		
CFD92	ASIC777 DMA28 time out		
CFD93	ASIC777 DMA29 time out		
CFD94	ASIC777 DMA30 time out		
CFD95	ASIC777 DMA31 time out		
CFD96	ASIC777 DMA32 time out		
CFD97	ASIC777 DMA33 time out		
CFD98	ASIC777 DMA34 time out		
CFD99	ASIC777 DMA35 time out		
CFD9A	ASIC777 DMA36 time out		
CFD9B	ASIC777 DMA37 time out		
CFD9C	ASIC777 DMA38 time out		
CFD9D	ASIC777 DMA39 time out		
CFD9E	ASIC777 DMA40 time out		

Error code	Item	Component	Rank
CFD9F	ASIC777 DMA41 time out		

4.15.11 CFDA#

Error code	Item	Component	Rank
CFDA0	ASIC777 DMA42 time out	MFP board (MFPB)	C
CFDA1	ASIC777 DMA43 time out		
CFDA2	ASIC777 DMA44 time out		
CFDA3	ASIC777 DMA45 time out		
CFDA4	ASIC777 DMA46 time out		
CFDA5	ASIC777 DMA47 time out		
CFDA6	ASIC777 DMA48 time out		
CFDA7	ASIC777 DMA49 time out		
CFDA8	ASIC777 DMA50 time out		
CFDA9	ASIC777 DMA51 time out		
CFDAA	ASIC777 DMA52 time out		
CFDAB	ASIC777 DMA53 time out		
CFDAC	ASIC777 DMA54 time out		
CFDAD	ASIC777 DMA55 time out		

4.15.12 CFDD#

Error code	Item	Component	Rank
CFDDE	Dual scan image processing board (Asic2014/Asic777) DMA00 time out	Dual scan image processing board (DSIPB)	C
CFDDF	Dual scan image processing board (Asic2014/Asic777) DMA01 time out		

4.15.13 CFDE#

Error code	Item	Component	Rank
CFDE0	Dual scan image processing board (Asic2014/Asic777) DMA02 time out	Dual scan image processing board (DSIPB)	C
CFDE1	Dual scan image processing board (Asic2014/Asic777) DMA03 time out		
CFDE2	Dual scan image processing board (Asic2014/Asic777) DMA04 time out		
CFDE3	Dual scan image processing board (Asic2014/Asic777) DMA05 time out		
CFDE4	Dual scan image processing board (Asic2014/Asic777) DMA06 time out		
CFDE5	Dual scan image processing board (Asic2014/Asic777) DMA07 time out		
CFDE6	Dual scan image processing board (Asic2014/Asic777) DMA08 time out		
CFDE7	Dual scan image processing board (Asic2014/Asic777) DMA09 time out		
CFDE8	Dual scan image processing board (Asic2014/Asic777) DMA10 time out		
CFDE9	Dual scan image processing board (Asic2014/Asic777) DMA11 time out		
CFDEA	Dual scan image processing board (Asic2014/Asic777) DMA12 time out		
CFDEB	Dual scan image processing board (Asic2014/Asic777) DMA13 time out		
CFDEC	Dual scan image processing board (Asic2014/Asic777) DMA14 time out		
CFDED	Dual scan image processing board (Asic2014/Asic777) DMA15 time out		
CFDEE	Dual scan image processing board (Asic2014/Asic777) DMA16 time out		
CFDEF	Dual scan image processing board (Asic2014/Asic777) DMA17 time out		

4.15.14 CFDF#

Error code	Item	Component	Rank
CFDF0	Dual scan image processing board (Asic2014/Asic777) DMA18 time out	Dual scan image processing board (DSIPB)	C
CFDF1	Dual scan image processing board (Asic2014/Asic777) DMA19 time out		
CFDF2	Dual scan image processing board (Asic2014/Asic777) DMA20 time out		
CFDF3	Dual scan image processing board (Asic2014/Asic777) DMA21 time out		
CFDF4	Dual scan image processing board (Asic2014/Asic777) DMA22 time out		
CFDF5	Dual scan image processing board (Asic2014/Asic777) DMA23 time out		
CFDF6	Dual scan image processing board (Asic2014/Asic777) DMA24 time out		
CFDF7	Dual scan image processing board (Asic2014/Asic777) DMA25 time out		
CFDF8	Dual scan image processing board (Asic2014/Asic777) DMA26 time out		
CFDF9	Dual scan image processing board (Asic2014/Asic777) DMA27 time out		
CFDFA	Dual scan image processing board (Asic2014/Asic777) DMA28 time out		
CFDFB	Dual scan image processing board (Asic2014/Asic777) DMA29 time out		
CFDFC	Dual scan image processing board (Asic2014/Asic777) DMA30 time out		
CFDFD	Dual scan image processing board (Asic2014/Asic777) DMA31 time out		
CFDFE	Dual scan image processing board (Asic2014/Asic777) DMA32 time out		
CFDFF	Dual scan image processing board (Asic2014/Asic777) DMA33 time out		

4.16 CFE##

4.16.1 CFE0#

Error code	Item	Component	Rank
CFE00	Dual scan image processing board (Asic2014/Asic777) DMA34 time out	Dual scan image processing board (DSIPB)	C
CFE01	Dual scan image processing board (Asic2014/Asic777) DMA35 time out		
CFE02	Dual scan image processing board (Asic2014/Asic777) DMA36 time out		
CFE03	Dual scan image processing board (Asic2014/Asic777) DMA37 time out		
CFE04	Dual scan image processing board (Asic2014/Asic777) DMA38 time out		
CFE05	Dual scan image processing board (Asic2014/Asic777) DMA39 time out		
CFE06	Dual scan image processing board (Asic2014/Asic777) DMA40 time out		
CFE07	Dual scan image processing board (Asic2014/Asic777) DMA41 time out		
CFE08	Dual scan image processing board (Asic2014/Asic777) DMA42 time out		
CFE09	Dual scan image processing board (Asic2014/Asic777) DMA43 time out		
CFE0A	Dual scan image processing board (Asic2014/Asic777) DMA44 time out		
CFE0B	Dual scan image processing board (Asic2014/Asic777) DMA45 time out		
CFE0C	Dual scan image processing board (Asic2014/Asic777) DMA46 time out		

Error code	Item	Component	Rank
CFE0D	Dual scan image processing board (Asic2014/Asic777) DMA47 time out		

4.16.2 CFE1#

Error code	Item	Component	Rank
CFE19	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFE1D	Asic (PMS) DMA07 time out		

4.16.3 CFE2#

Error code	Item	Component	Rank
CFE28	Asic (PMS) DMA18 time out	MFP board (MFPB)	C
CFE29	Asic (PMS) DMA19 time out		
CFE2A	Asic (PMS) DMA32 time out		
CFE2B	Asic (PMS) DMA33 time out		
CFE2C	Asic (PMS) DMA34 time out		
CFE2D	Asic (PMS) DMA35 time out		
CFE2E	Asic (PMS) DMA36 time out		
CFE2F	Asic (PMS) DMA37 time out		

4.16.4 CFE3#

Error code	Item	Component	Rank
CFE30	Asic (PMS) DMA38 time out	MFP board (MFPB)	C
CFE31	Asic (PMS) DMA39 time out		
CFE32	Asic (PMS) DMA40 time out		
CFE33	Asic (PMS) DMA41 time out		
CFE34	Asic (PMS) DMA42 time out		
CFE35	Asic (PMS) DMA43 time out		
CFE36	ASIC777 DMA00 time out		
CFE37	ASIC777 DMA01 time out		
CFE38	ASIC777 DMA02 time out		
CFE39	ASIC777 DMA03 time out		
CFE3A	ASIC777 DMA04 time out		
CFE3B	ASIC777 DMA05 time out		
CFE3C	ASIC777 DMA06 time out		
CFE3D	ASIC777 DMA07 time out		
CFE3E	ASIC777 DMA08 time out		
CFE3F	ASIC777 DMA09 time out		

4.16.5 CFE4#

Error code	Item	Component	Rank
CFE40	ASIC777 DMA10 time out	MFP board (MFPB)	C
CFE41	ASIC777 DMA11 time out		
CFE42	ASIC777 DMA12 time out		
CFE43	ASIC777 DMA13 time out		
CFE44	ASIC777 DMA14 time out		
CFE45	ASIC777 DMA15 time out		
CFE46	ASIC777 DMA16 time out		
CFE47	ASIC777 DMA17 time out		
CFE48	ASIC777 DMA18 time out		
CFE49	ASIC777 DMA19 time out		
CFE4A	ASIC777 DMA20 time out		
CFE4B	ASIC777 DMA21 time out		
CFE4C	ASIC777 DMA22 time out		
CFE4D	ASIC777 DMA23 time out		
CFE4E	ASIC777 DMA24 time out		
CFE4F	ASIC777 DMA25 time out		

4.16.6 CFE5#

Error code	Item	Component	Rank
CFE50	ASIC777 DMA26 time out	MFP board (MFPB)	C
CFE51	ASIC777 DMA27 time out		
CFE52	ASIC777 DMA28 time out		
CFE53	ASIC777 DMA29 time out		
CFE54	ASIC777 DMA30 time out		
CFE55	ASIC777 DMA31 time out		
CFE56	ASIC777 DMA32 time out		
CFE57	ASIC777 DMA33 time out		
CFE58	ASIC777 DMA34 time out		
CFE59	ASIC777 DMA35 time out		
CFE5A	ASIC777 DMA36 time out		
CFE5B	ASIC777 DMA37 time out		
CFE5C	ASIC777 DMA38 time out		
CFE5D	ASIC777 DMA39 time out		
CFE5E	ASIC777 DMA40 time out		
CFE5F	ASIC777 DMA41 time out		

4.16.7 CFE6#

Error code	Item	Component	Rank
CFE60	ASIC777 DMA42 time out	MFP board (MFPB)	C
CFE61	ASIC777 DMA43 time out		
CFE62	ASIC777 DMA44 time out		
CFE63	ASIC777 DMA45 time out		
CFE64	ASIC777 DMA46 time out		
CFE65	ASIC777 DMA47 time out		
CFE66	ASIC777 DMA48 time out		
CFE67	ASIC777 DMA49 time out		
CFE68	ASIC777 DMA50 time out		
CFE69	ASIC777 DMA51 time out		
CFE6A	ASIC777 DMA52 time out		
CFE6B	ASIC777 DMA53 time out		
CFE6C	ASIC777 DMA54 time out		
CFE6D	ASIC777 DMA55 time out		

4.16.8 CFE9#

Error code	Item	Component	Rank
CFE9E	Dual scan image processing board (Asic2014/Asic777) DMA00 time out	Dual scan image processing board (DSIPB)	C
CFE9F	Dual scan image processing board (Asic2014/Asic777) DMA01 time out		

4.16.9 CFEA#

Error code	Item	Component	Rank
CFEA0	Dual scan image processing board (Asic2014/Asic777) DMA02 time out	Dual scan image processing board (DSIPB)	C
CFEA1	Dual scan image processing board (Asic2014/Asic777) DMA03 time out		
CFEA2	Dual scan image processing board (Asic2014/Asic777) DMA04 time out		
CFEA3	Dual scan image processing board (Asic2014/Asic777) DMA05 time out		
CFEA4	Dual scan image processing board (Asic2014/Asic777) DMA06 time out		
CFEA5	Dual scan image processing board (Asic2014/Asic777) DMA07 time out		
CFEA6	Dual scan image processing board (Asic2014/Asic777) DMA08 time out		
CFEA7	Dual scan image processing board (Asic2014/Asic777) DMA09 time out		

Error code	Item	Component	Rank
CFEA8	Dual scan image processing board (Asic2014/Asic777) DMA10 time out		
CFEA9	Dual scan image processing board (Asic2014/Asic777) DMA11 time out		
CFEAA	Dual scan image processing board (Asic2014/Asic777) DMA12 time out		
CFEAB	Dual scan image processing board (Asic2014/Asic777) DMA13 time out		
CFEAC	Dual scan image processing board (Asic2014/Asic777) DMA14 time out		
CFEAD	Dual scan image processing board (Asic2014/Asic777) DMA15 time out		
CFEAE	Dual scan image processing board (Asic2014/Asic777) DMA16 time out		
CFEAF	Dual scan image processing board (Asic2014/Asic777) DMA17 time out		

4.16.10 CFEB#

Error code	Item	Component	Rank
CFEB0	Dual scan image processing board (Asic2014/Asic777) DMA18 time out	Dual scan image processing board (DSIPB)	C
CFEB1	Dual scan image processing board (Asic2014/Asic777) DMA19 time out		
CFEB2	Dual scan image processing board (Asic2014/Asic777) DMA20 time out		
CFEB3	Dual scan image processing board (Asic2014/Asic777) DMA21 time out		
CFEB4	Dual scan image processing board (Asic2014/Asic777) DMA22 time out		
CFEB5	Dual scan image processing board (Asic2014/Asic777) DMA23 time out		
CFEB6	Dual scan image processing board (Asic2014/Asic777) DMA24 time out		
CFEB7	Dual scan image processing board (Asic2014/Asic777) DMA25 time out		
CFEB8	Dual scan image processing board (Asic2014/Asic777) DMA26 time out		
CFEB9	Dual scan image processing board (Asic2014/Asic777) DMA27 time out		
CFEBA	Dual scan image processing board (Asic2014/Asic777) DMA28 time out		
CFEBB	Dual scan image processing board (Asic2014/Asic777) DMA29 time out		
CFEBC	Dual scan image processing board (Asic2014/Asic777) DMA30 time out		
CFEBD	Dual scan image processing board (Asic2014/Asic777) DMA31 time out		
CFEBE	Dual scan image processing board (Asic2014/Asic777) DMA32 time out		
CFEBF	Dual scan image processing board (Asic2014/Asic777) DMA33 time out		

4.16.11 CFEC#

Error code	Item	Component	Rank
CFEC0	Dual scan image processing board (Asic2014/Asic777) DMA34 time out	Dual scan image processing board (DSIPB)	C
CFEC1	Dual scan image processing board (Asic2014/Asic777) DMA35 time out		
CFEC2	Dual scan image processing board (Asic2014/Asic777) DMA36 time out		
CFEC3	Dual scan image processing board (Asic2014/Asic777) DMA37 time out		
CFEC4	Dual scan image processing board (Asic2014/Asic777) DMA38 time out		

Error code	Item	Component	Rank
CFEC5	Dual scan image processing board (Asic2014/Asic777) DMA39 time out		
CFEC6	Dual scan image processing board (Asic2014/Asic777) DMA40 time out		
CFEC7	Dual scan image processing board (Asic2014/Asic777) DMA41 time out		
CFEC8	Dual scan image processing board (Asic2014/Asic777) DMA42 time out		
CFEC9	Dual scan image processing board (Asic2014/Asic777) DMA43 time out		
CFECA	Dual scan image processing board (Asic2014/Asic777) DMA44 time out		
CFECB	Dual scan image processing board (Asic2014/Asic777) DMA45 time out		
CFECC	Dual scan image processing board (Asic2014/Asic777) DMA46 time out		
CFECD	Dual scan image processing board (Asic2014/Asic777) DMA47 time out		

4.16.12 CFED#

Error code	Item	Component	Rank
CFED9	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFEDD	Asic (PMS) DMA07 time out		

4.16.13 CFEE#

Error code	Item	Component	Rank
CFEE8	Asic (PMS) DMA18 time out	MFP board (MFPB)	C
CFEE9	Asic (PMS) DMA19 time out		
CFEEA	Asic (PMS) DMA32 time out		
CFEEB	Asic (PMS) DMA33 time out		
CFEEC	Asic (PMS) DMA34 time out		
CFEED	Asic (PMS) DMA35 time out		
CFEEE	Asic (PMS) DMA36 time out		
CFEEF	Asic (PMS) DMA37 time out		

4.16.14 CFEF#

Error code	Item	Component	Rank
CFEF0	Asic (PMS) DMA38 time out	MFP board (MFPB)	C
CFEF1	Asic (PMS) DMA39 time out		
CFEF2	Asic (PMS) DMA40 time out		
CFEF3	Asic (PMS) DMA41 time out		
CFEF4	Asic (PMS) DMA42 time out		
CFEF5	Asic (PMS) DMA43 time out		
CFEF6	ASIC777 DMA00 time out		
CFEF7	ASIC777 DMA01 time out		
CFEF8	ASIC777 DMA02 time out		
CFEF9	ASIC777 DMA03 time out		
CFEFA	ASIC777 DMA04 time out		
CFEFB	ASIC777 DMA05 time out		
CFEFC	ASIC777 DMA06 time out		
CFEFD	ASIC777 DMA07 time out		
CFEFE	ASIC777 DMA08 time out		
CFEFF	ASIC777 DMA09 time out		

4.17 CFF##

4.17.1 CFF0#

Error code	Item	Component	Rank
CFF00	ASIC777 DMA10 time out	MFP board (MFPB)	C
CFF01	ASIC777 DMA11 time out		

Error code	Item	Component	Rank
CFF02	ASIC777 DMA12 time out		
CFF03	ASIC777 DMA13 time out		
CFF04	ASIC777 DMA14 time out		
CFF05	ASIC777 DMA15 time out		
CFF06	ASIC777 DMA16 time out		
CFF07	ASIC777 DMA17 time out		
CFF08	ASIC777 DMA18 time out		
CFF09	ASIC777 DMA19 time out		
CFF0A	ASIC777 DMA20 time out		
CFF0B	ASIC777 DMA21 time out		
CFF0C	ASIC777 DMA22 time out		
CFF0D	ASIC777 DMA23 time out		
CFF0E	ASIC777 DMA24 time out		
CFF0F	ASIC777 DMA25 time out		

4.17.2 CFF1#

Error code	Item	Component	Rank
CFF10	ASIC777 DMA26 time out	MFP board (MFPB)	C
CFF11	ASIC777 DMA27 time out		
CFF12	ASIC777 DMA28 time out		
CFF13	ASIC777 DMA29 time out		
CFF14	ASIC777 DMA30 time out		
CFF15	ASIC777 DMA31 time out		
CFF16	ASIC777 DMA32 time out		
CFF17	ASIC777 DMA33 time out		
CFF18	ASIC777 DMA34 time out		
CFF19	ASIC777 DMA35 time out		
CFF1A	ASIC777 DMA36 time out		
CFF1B	ASIC777 DMA37 time out		
CFF1C	ASIC777 DMA38 time out		
CFF1D	ASIC777 DMA39 time out		
CFF1E	ASIC777 DMA40 time out		
CFF1F	ASIC777 DMA41 time out		

4.17.3 CFF2#

Error code	Item	Component	Rank
CFF20	ASIC777 DMA42 time out	MFP board (MFPB)	C
CFF21	ASIC777 DMA43 time out		
CFF22	ASIC777 DMA44 time out		
CFF23	ASIC777 DMA45 time out		
CFF24	ASIC777 DMA46 time out		
CFF25	ASIC777 DMA47 time out		
CFF26	ASIC777 DMA48 time out		
CFF27	ASIC777 DMA49 time out		
CFF28	ASIC777 DMA50 time out		
CFF29	ASIC777 DMA51 time out		
CFF2A	ASIC777 DMA52 time out		
CFF2B	ASIC777 DMA53 time out		
CFF2C	ASIC777 DMA54 time out		
CFF2D	ASIC777 DMA55 time out		

4.17.4 CFF5#

Error code	Item	Component	Rank
CFF5E	Dual scan image processing board (Asic2014/Asic777) DMA00 time out	Dual scan image processing board (DSIPB)	C
CFF5F	Dual scan image processing board (Asic2014/Asic777) DMA01 time out		

4.17.5 CFF6#

Error code	Item	Component	Rank
CFF60	Dual scan image processing board (Asic2014/Asic777) DMA02 time out	Dual scan image processing board (DSIPB)	C
CFF61	Dual scan image processing board (Asic2014/Asic777) DMA03 time out		
CFF62	Dual scan image processing board (Asic2014/Asic777) DMA04 time out		
CFF63	Dual scan image processing board (Asic2014/Asic777) DMA05 time out		
CFF64	Dual scan image processing board (Asic2014/Asic777) DMA06 time out		
CFF65	Dual scan image processing board (Asic2014/Asic777) DMA07 time out		
CFF66	Dual scan image processing board (Asic2014/Asic777) DMA08 time out		
CFF67	Dual scan image processing board (Asic2014/Asic777) DMA09 time out		
CFF68	Dual scan image processing board (Asic2014/Asic777) DMA10 time out		
CFF69	Dual scan image processing board (Asic2014/Asic777) DMA11 time out		
CFF6A	Dual scan image processing board (Asic2014/Asic777) DMA12 time out		
CFF6B	Dual scan image processing board (Asic2014/Asic777) DMA13 time out		
CFF6C	Dual scan image processing board (Asic2014/Asic777) DMA14 time out		
CFF6D	Dual scan image processing board (Asic2014/Asic777) DMA15 time out		
CFF6E	Dual scan image processing board (Asic2014/Asic777) DMA16 time out		
CFF6F	Dual scan image processing board (Asic2014/Asic777) DMA17 time out		

4.17.6 CFF7#

Error code	Item	Component	Rank
CFF70	Dual scan image processing board (Asic2014/Asic777) DMA18 time out	Dual scan image processing board (DSIPB)	C
CFF71	Dual scan image processing board (Asic2014/Asic777) DMA19 time out		
CFF72	Dual scan image processing board (Asic2014/Asic777) DMA20 time out		
CFF73	Dual scan image processing board (Asic2014/Asic777) DMA21 time out		
CFF74	Dual scan image processing board (Asic2014/Asic777) DMA22 time out		
CFF75	Dual scan image processing board (Asic2014/Asic777) DMA23 time out		
CFF76	Dual scan image processing board (Asic2014/Asic777) DMA24 time out		
CFF77	Dual scan image processing board (Asic2014/Asic777) DMA25 time out		
CFF78	Dual scan image processing board (Asic2014/Asic777) DMA26 time out		
CFF79	Dual scan image processing board (Asic2014/Asic777) DMA27 time out		
CFF7A	Dual scan image processing board (Asic2014/Asic777) DMA28 time out		
CFF7B	Dual scan image processing board (Asic2014/Asic777) DMA29 time out		
CFF7C	Dual scan image processing board (Asic2014/Asic777) DMA30 time out		
CFF7D	Dual scan image processing board (Asic2014/Asic777) DMA31 time out		

Error code	Item	Component	Rank
CFF7E	Dual scan image processing board (Asic2014/Asic777) DMA32 time out		
CFF7F	Dual scan image processing board (Asic2014/Asic777) DMA33 time out		

4.17.7 CFF8#

Error code	Item	Component	Rank
CFF80	Dual scan image processing board (Asic2014/Asic777) DMA34 time out	Dual scan image processing board (DSIPB)	C
CFF81	Dual scan image processing board (Asic2014/Asic777) DMA35 time out		
CFF82	Dual scan image processing board (Asic2014/Asic777) DMA36 time out		
CFF83	Dual scan image processing board (Asic2014/Asic777) DMA37 time out		
CFF84	Dual scan image processing board (Asic2014/Asic777) DMA38 time out		
CFF85	Dual scan image processing board (Asic2014/Asic777) DMA39 time out		
CFF86	Dual scan image processing board (Asic2014/Asic777) DMA40 time out		
CFF87	Dual scan image processing board (Asic2014/Asic777) DMA41 time out		
CFF88	Dual scan image processing board (Asic2014/Asic777) DMA42 time out		
CFF89	Dual scan image processing board (Asic2014/Asic777) DMA43 time out		
CFF8A	Dual scan image processing board (Asic2014/Asic777) DMA44 time out		
CFF8B	Dual scan image processing board (Asic2014/Asic777) DMA45 time out		
CFF8C	Dual scan image processing board (Asic2014/Asic777) DMA46 time out		
CFF8D	Dual scan image processing board (Asic2014/Asic777) DMA47 time out		

4.17.8 CFF9#

Error code	Item	Component	Rank
CFF99	Asic (PMS) DMA03 time out	MFP board (MFPB)	C
CFF9D	Asic (PMS) DMA07 time out		

4.17.9 CFFA#

Error code	Item	Component	Rank
CFFA8	Asic (PMS) DMA18 time out	MFP board (MFPB)	C
CFFA9	Asic (PMS) DMA19 time out		
CFFAA	Asic (PMS) DMA32 time out		
CFFAB	Asic (PMS) DMA33 time out		
CFFAC	Asic (PMS) DMA34 time out		
CFFAD	Asic (PMS) DMA35 time out		
CFFAE	Asic (PMS) DMA36 time out		
CFFAF	Asic (PMS) DMA37 time out		

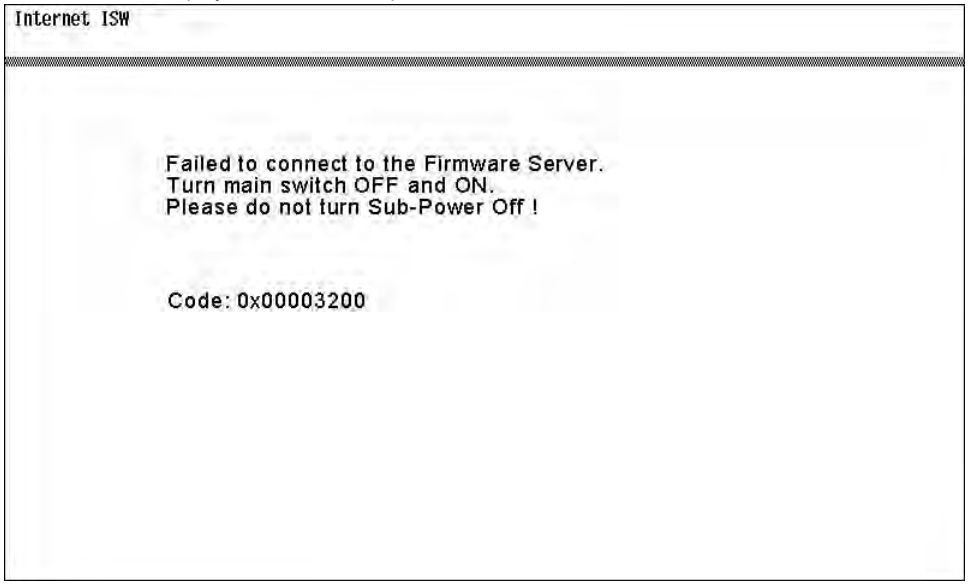
4.17.10 CFFB#

Error code	Item	Component	Rank
CFFB0	Asic (PMS) DMA38 time out	MFP board (MFPB)	C
CFFB1	Asic (PMS) DMA39 time out		
CFFB2	Asic (PMS) DMA40 time out		
CFFB3	Asic (PMS) DMA41 time out		
CFFB4	Asic (PMS) DMA42 time out		
CFFB5	Asic (PMS) DMA43 time out		

5. ERROR CODE FOR THE INTERNET ISW

5.1 Error code list for the Internet ISW

- When a trouble occurred while conducting the Internet ISW and it was not normally connected, the message on the status and the error code will be displayed on the control panel.



NOTE

- **When a code other than the error code list is displayed, contact and inform the error code.**

5.2 0x0#

Error code	Description	Action
0x00000001	Illegal error on the control	• Check if [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set] is set to “ON”. • Check the status of [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting]. • If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x00000010	Parameter error	• Check if [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set] is set to “ON”. • If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x00111000	Error concerning the network • Connection has been completed.	• Check the User’s network environment. (LAN cable’s connection) • Check the status of [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting]. • Check to see if the FTP server operates normally.
0x00111001	Error concerning the network • It cannot be connected to the server.	• Check the User’s network environment. • Check to see if the FTP server operates normally. • Check whether the URL of the data transfer server includes http://, ftp://, or the like to specify a protocol in [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Forwarding Access Setting].
0x00111100	Error concerning the network • Communication timeout.	
0x00111101	Error concerning the network • Disconnection occurred.	• Check the User’s network environment. • Check to see if the FTP server operates normally.
0x00111110	Error concerning the network • The network is not connected.	
0x00110010	Error concerning the network • etc.	
0x00001###	FTP error • Reply code when it failed to be connected.	• Check to see if the FTP server operates normally. • Check the IP address, user’s name, etc.
0x00002###	FTP error • Error reply code for the user command or pass command.	Check to see if the FTP server operates normally.
0x00003###	FTP error • Error reply code for the CWD command.	
0x00004###	FTP error • Error reply code for the TYPE command.	Check to see if the FTP server operates normally.
0x00005###	FTP error • Error reply code for the PORT command.	

Error code	Description	Action
0x00006###	FTP error • Error reply code for the PASV command.	• Check to see if the FTP server operates normally. • Set the PASV mode to “OFF”, and try it again.
0x00007###	FTP error • Error reply code for the RETR command.	• Check to see if the FTP server operates normally. • Wait for about 30 minutes and try it again.

5.3 0x1#

Error code	Description	Action
0x10000100	• It cannot be accepted because of the job currently being executed. • ISW being executed by other method.	Wait for the current job to be completed and try it again.
0x10000101	It cannot be accepted because the power key is OFF.	Turn power key ON and try it again.
0x10000102	The Internet ISW is already being executed.	Wait for the current Internet ISW to be completed.
0x10000103	It failed to prohibit the job. (It failed to lock the operation.) -> It failed to lock the job because the operation is already locked with PSWC, etc.	• Check if [Service Mode] -> [Machine Update Setting] -> [Internet ISW] -> [Internet ISW Set] is set to “ON”. • If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x10000104	There is no space for firmware data to be downloaded.	
0x10000106	Checksum error	
0x10000107	File access error • The file downloaded has an error. • The header of the file which has been read has an error. • The size of the file to be downloaded is too large. • When it is identified to be the different type of firmware.	Check to see if the downloaded firmware is of the correct type.
0x10000108	The area firmware is stored is destroyed, and another ISW is necessary.	Wait until ISW is automatically executed on MFP side.

5.4 0x2#

Error code	Description	Action
0x20000000	The temporary error when running the subset • When starting the Internet ISW in a normal program, the rebooting will start and the Internet ISW will be executed with the subset program. During the process by the subset program, it has to be in the “Failed” status unless the Internet ISW is successfully conducted. This code is used temporarily to make it in error status.	Wait until ISW is automatically executed on MFP side.

6. CS Remote Care ERROR CODE

6.1 Troubleshooting for CS Remote Care

If communication is not done properly, check the condition by following the procedures shown below.

1. Shift the screen in the order of [Service Mode] -> [CS Remote Care] -> [Detail Setting]. At this time, in the cases of initial transmitting / administrator transmitting / maintenance start transmitting / maintenance finish transmitting, the communication result will be displayed at the top of the screen.

NOTE

- **For the communication result, the following message will be displayed based on its success or failure.**

Display of communication result	Cause	Solution
Communicating	-	-
Communication trouble with the center	Although the machine tries to communicate with the center, there is any trouble and the communication completes unsuccessfully.	See the list of error message and confirm the corresponding point.
Complete successfully	-	-
Modem trouble	Although the machine tries to communicate with the center, there is any trouble in the modem.	• Check if the power of modem in ON. • Check if there is any problem in connection between the modem and the main body.
Busy line	Although the machine tries to communicate with the center, the line to the center is busy.	Communicate with the center again.
No response	Although the machine tries to communicate with the center, there is no response from the center.	• Communicate with the center again. • Check the communication environment of the center side.

6.2 CS Remote Care Operation under Enhanced Security Mode

CS Remote Care can be used even when “ON” is selected in [Administrator Settings] -> [Security Settings] -> [Enhanced Security Mode]. However, to keep the enhanced security level, the following restrictions are accompanied.

- Only SSL communication is available.
- Error occurs if the Center tries to send the following commands.
  - Firmware update command
  - Command of reading and updating account track information
  - Machine settings update command
  - Command of reading and updating Internet ISW setting information

6.3 List of the CS Remote Care error code

6.3.1 When connecting by modem

NOTE

- **When a code other than the ones listed below is displayed, contact KM and inform the error code.**

Error code	Contents	Solution
0001	The line is busy • Busy detection	Transmit again manually.
0002	Failure of the Modem default setting at transmitting • When the transmission completes with modem initial setting failed	• Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0003	Timeout of CONNECT at transmitting • No response to ATD	• Transmit again manually. • Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0005	Timeout of CONNECT at receiving • No response to ATA	• Check if the power of the modem is ON. • Check the connecting condition between the modem and the main body.
0006	Shut down of the data modem line (Host) • Carrier OFF is detected	No solution, because the line is shut down at the host side.
0008	Timeout of start request telegram delivery • Start request telegram is not delivered after line connection	Transmit again manually.
0009	Timeout of finish request telegram delivery • Finish request telegram is not delivered (Start of shut down)	Transmit again manually.
000A	Receiving rejection • Receiving is made when the main body is set to reject receiving.	• Check the setting condition of the host side. • Check the setting condition of the main body side.
000B	RS232C driver over run • When the modem detects over run.	If the same error is detected several times, turn the modem power OFF and ON.
000C	Framing error • When the modem detects framing error.	If the same error is detected several times, turn the modem power OFF and ON.
000D	Break Interrupt (BI) indicator • When the modem detects Break Interrupt (BI) indicator.	If the same error is detected several times, turn the modem power OFF and ON.
0011	Baud rate ERROR	Check the baud rate of the software DipSW.

Error code	Contents	Solution
	• When selected baud rate is out of the specification (9600 bps to 38400 bps).	
0016	Status error (upon data arrival)	Transmit again manually.
0018	Machine ID has already been registered • Request telegram 2 (SET-UP) comes from the main body that has already registered machine ID.	Set the initial registrations again for all including the host side.
0019	Center ID error • Center ID of the host is not identical with the one of start request telegram.	• Check center ID setting of the main body side. • Check the setting condition of the host side.
001A	Device ID inconsistency • Device ID of the host is not identical with the one of start request telegram.	• Check device ID setting of the main body side. • Check the setting condition of the host side.
001B	Device ID unregistered • Request telegram 2 (Constant data transmitting, emergency call) comes from the main body that has not registered device ID yet.	• Check device ID setting of the main body side. • Check the setting condition of the host side.
001C	Grammar error • The specified format is not used in the received reply telegram.	Check the settings for CSRC application.
001D	Change unavailable (Item where change is prohibited) • Host inquires change of the setting of the item not allowed to be changed.	Check the settings for CSRC application.
001E	Impossible to change (during printing) • Setting cannot be changed because the setting change is made during the machine is printing or starts printing.	Try again when the machine is not printing.
001F	Change unavailable (Item where change is prohibited) • Host attempts to write data to the item of which current value has not been read.	Check the settings for CSRC application.
0020	Timeout of telegram delivery • At waiting mode of telegram delivery the machine fails to receive the telegram in a given time.	Try communication again.
0021	Telegram longer than the specified length. • A telegram longer than the specified length is received.	Check the settings for CSRC application.
0027	Transmission / receiving collision • Receiving is detecting during transmitting processing	Try communication again.

6.3.2 When connecting by e-mails

NOTE

- **When a code other than the ones listed below is displayed, contact KM and inform the error code.**

(1) 0###

Error code	Contents	Solution
0###	Transmission error ###: SMTP responding code (hexadecimal) For SMTP responding code, see RFC issued by IETF after converting hexadecimal number into decimal one.	Check the SMTP server on User side.

(2) 1###

Error code	Contents	Solution
1030	Machine ID mismatching • Received an e-mail which tells that machine ID mismatches.	• Check the machine ID setting. • Check the machine ID setting on host side.
1050	Grammar error • Received mail did not define the CS Remote Care command (2 digits). • The Type of Subject and the command of attached file are not consistent.	Check mail content.
1061	Modifying not allowed • The host sent a command mail that asked modifying data of item where setting change is not allowed.	Ask the host to send another instruction mail for modifying.
1062	Modifying not available due to the copy job currently performing • When informing the host that it cannot be modified due to the copy job currently performing.	Ask the host to send another instruction mail for modifying.
1080	Data length problem • LEN value of TEXT data and actual data length are not consistent.	Ask the host to send another instruction mail for modifying.
1081	Frame No. error • The last frame has not been received. • There are missing frame No.	Check the status of the machine registration on host side.
1082	Subject Type problem • Received code did not define the Type of Subject.	Ask the host to send another instruction mail for modifying.

Error code	Contents	Solution
1084	Date expired • Expiration date for data modification command has passed.	Ask the host to send another instruction mail for modifying.
1091	Oversized command • Received attached file exceeds the machine's receive buffer size.	Ask the host to send another instruction mail for modifying.
1092	Received an error mail when center setup is not complete	Check the status of the machine registration on host side.
1199	Illegal request • Status not predicted in design is detected.	Contact KM and inform the error code.

(3) 2###

Error code	Contents	Solution
2039	Socket is not connected • LAN cable on the copier side is detached.	Check the SMTP server and POP3 server on user side.
203C	Connection timeout	Check timeout setting.
203E	Network is down • LAN cable on main body side is detached.	• Check the connection between main body on the user's side and the network connector. • Check the network environment on the user's side.

(4) 3###

Error code	Contents	Solution
3001	POP3_AUTHORIZATION_ERR	Check the POP3 server environment on user's side.
3002	POP3_TRANSACTION_ERR	Check the POP3 server environment on user's side.
3003	POP3_CONNECT_ERR	Check the POP3 server environment on user's side.
3004	POP3_TIMEOUT_ERR	Check the POP3 server environment on user's side.
3005	POP3_FORMAT_ERR	Check the POP3 server environment on user's side.
3006	POP3_MEMORY_ERR	Check the POP3 server environment on user's side.
3007	POP3_JOBID_ERR	Check the POP3 server environment on user's side.
3008	POP3_NO_DATA_ERR	Check the POP3 server environment on user's side.
3009	POP3_DELETE_FAIL_ERR	Check the POP3 server environment on user's side.
3010	POP3_MAILBOX_FULL	Check the POP3 server environment on user's side.

(5) 4###

Error code	Contents	Solution
4103	During polling from main body, MIO is not active and MFP cannot start communication.	Wait for a while and try transmitting again.
4104	During e-mail transmission from main body to the center, the SMTP channel is not in the "Ready" status and main body cannot send e-mail.	Wait for a while and try transmitting again.
4105	During polling from main body, the POP3 channel is not in the "Ready" status and main body cannot receive e-mail.	Wait for a while and try transmitting again.
4106	During e-mail transmission from main body to the center, MIO is not active and MFP cannot start communication.	Wait for a while and try transmitting again.
41F9	Control error • In the CS Remote Care's internal sequence, message transfer failed.	Turn the main power switch OFF and then ON.
41FA	Control error • MIO response timed out.	Turn the main power switch OFF and then ON.
41FB	Control error • As the file descriptor of the e-mail that MFP receives from MIO is invalid, MFP cannot receive the e-mail.	Turn the main power switch OFF and then ON.
41FC	Control error • During the creation of data to be sent by e-mail, the CS Remote Care's internal status error occurs or the data that need to be sent has not been created.	Turn the main power switch OFF and then ON.
41FD	Control error • During e-mail reception, the parameter sent from MIO to the CS Remote Care is invalid and MFP cannot receive the e-mail.	Turn the main power switch OFF and then ON.
41FE	Control error • After the completion of e-mail transmission, MFP received the transmission completion message from MIO. However, the CS Remote Care's internal status was not the status of transmission completion.	Turn the main power switch OFF and then ON.
41FF	Control error	Turn the main power switch OFF and then ON.

Error code	Contents	Solution
	• During e-mail reception, MIO became inactive.	
4210	Control error • E-mail sent from MIO could not be properly handled in the CS Remote Care.	Turn the main power switch OFF and then ON.

(6) 5###

Error code	Contents	Solution
5###	MIO detects error when sending an attached file.	Check the SMTP server and POP3 server on user side.

(7) 6###

Error code	Contents	Solution
6###	MIO detects error during a sending sequence.	Check the SMTP server and POP3 server on user side.

6.3.3 When connecting by http

NOTE

- **When a code other than the ones listed below is displayed, contact KM and inform the error code.**

(1) 0###

Error code	Contents	Solution
0###	Transmission error ###: http responding code (hexadecimal) For http responding code, see RFC issued by IETF after converting hexadecimal number into decimal one.	Check the http server.

(2) 1###

Error code	Contents	Solution
1030	Machine ID mismatching • Received file which tells that machine ID mismatches.	• Check the machine ID setting. • Check the machine ID setting on host side.
1050	Grammar error • Received file did not define the CS Remote Care command (2 digits). • The Type of Subject and the command of file are not consistent.	Check file content.
1061	Modifying not allowed • The host sent a command file that asked modifying data of item where setting change is not allowed.	Ask the host to send another instruction file for modifying.
1062	Modifying not available due to the copy job currently performing • When informing the host that it cannot be modified due to the copy job currently performing.	Ask the host to send another instruction file for modifying.
1080	Data length problem • LEN value of TEXT data and actual data length are not consistent.	Ask the host to send another instruction file for modifying.
1081	Frame No. error • The last frame has not been received. • There are missing frame No.	Check the status of the machine registration on host side.
1082	Subject Type problem • Received code did not define the Type of Subject.	Ask the host to send another instruction file for modifying.
1084	Date expired • Expiration date for data modification command has passed.	Ask the host to send another instruction file for modifying.
1091	Oversized command • Received file exceeds the machine's receive buffer size.	Ask the host to send another instruction file for modifying.
1099	Illegal request • Status not predicted in design is detected.	Contact KM and inform the error code.

(3) 2###

Error code	Contents	Solution
2001	http request result problem • Internal status error	• Check the network environment on the user's side. • Check http server environment.
2002	http request result problem • File list acquisition result problem	
2003	http request result problem • Request header transmission failure	
2004	http request result problem • Request body transmission failure	

Error code	Contents	Solution
2005	http request result problem • Response header receive response failure	
2006	http request result problem • Response body receive response failure	
2007	http request result problem • Session ID inconsistent	

(4) 3###

Error code	Contents	Solution
3002	http request result problem • Unopened client ID was specified	• Check the network environment on the user's side. • Check http server environment.
3003	http request result problem • Receive time out occurred	
3004	http request result problem • Receive error occurred. Or wrong request URL was specified.	
3005	http request result problem • Content-Length or receive size exceeded the specified max. transfer size. Message body size was too large.	
3006	http request result problem • Due to reset, process was stopped. Or message body size exceeded the specified max. transfer size.	
3007	http request result problem • Internal error occurred. Or due to internal reset, process was stopped.	
3008	http request result problem • Connection to WebDAV server failed.	
3009	http request result problem • Error occurred during transmission to the WebDAV server.	
3010	http request result problem • Time out occurred during transmission to the WebDav server.	
3011	http request result problem • Connection to the proxy server failed.	
3012	http request result problem • The proxy server refused CONNECT request.	
3013	http request result problem • The proxy server was set to enabled, but the proxy server host was not set.	
3014	http request result problem • Proxy server authentication failed.	
3015	http request result problem • Other errors were sent from the proxy server.	
3016	http request result problem • Internal error occurred.	
3017	http request result problem • As the device application specified MIO_REQBODY_ERROR, process was stopped.	

(5) 4###

Error code	Contents	Solution
4103	After the main power switch is switched ON, HTTP communication is attempted under the condition where HTTP communication is not ready.	Wait for a while and try transmitting again.
4106	When data is uploaded from main body to the web server, the network connection is not enabled and main body cannot start communication.	Wait for a while and try transmitting again.
41FA	Control error • MIO response timed out.	Turn the main power switch OFF and then ON.

(6) 5###

Error code	Contents	Solution
5###	MIO detects error at file sending.	Check the http server environment.

(7) 6###

Error code	Contents	Solution
6###	MIO detects error during a sending sequence.	Check the http server environment.

(8) 7###

Error code	Contents	Solution
7000	Failure occurs when a certificate for product authentication is acquired from a USB flash drive.	Acquire a new certificate (within 6 days after the issue).

6.3.4 When connecting by Fax modem

Error code	Contents	Solution
T50	Host terminal ID not correct	Check the telephone number set for host.
R80	Serial number received from the host not correct.	Check the status of the machine registration on host side.
R81	Disconnection of writing instruction from host during machine is running.	Wait for a while and try transmitting again.
R82	Disconnection of FAX-CSRC instruction when FAX-CSRC is not allowed.	Check the status of the machine registration on host side.
R83	Host command error.	Contact KM and inform the error code.
R84	NVRAM writing error.	Contact KM and inform the error code.

7. FAX TROUBLE CODE

The error in the transmission/reception system

- The error in the Txx/Rxx system may be caused under the effect of line noise, etc. even in usual operating condition.
- If the error arises often, output the activity report, fax setting list, protocol trace list, parameter list, address book list, group address list and program list and obtain detailed information on the error status, conditions which may cause the error, etc. from the user and contact KM.

7.1 B0##

Error code	Category	Contents of error	How to correct
B001	FAX board error	FAX board error 1 (FAX ROM check sum error)	• Pull out and insert the connector of FAX board to check its installation. • If the trouble is not yet corrected, hardware of the FAX board may be defective. Replace the FAX board in such a case.
B002		FAX board error 2 (DPRAM check error)	
B003		FAX board error 3 (FAX initialization NG)	
B051		FAX board installation error (Line 1).	• Pull out and insert the connector of FAX board to check its installation. • If the trouble is not yet corrected, check if the fax (circuit 1) is set to [Unset] on the [Service Mode] -> [System 2] -> [Option board Status]. • If it is set to [Unset], set to [Set].
B052		FAX board installation error (Line 2).	• Pull out and insert the connector of FAX board to check its installation. • If the trouble is not yet corrected, check if the fax (line 2) is set to [Unset] on the [Service Mode] -> [System 2] -> [Option board Status]. • If it is set to [Unset], set to [Set].

7.2 B11#

Error code	Category	Contents of error	How to correct
B110	FAX driver error	Instance generation error or observer registration error	Turn OFF and ON the main power switch.
B111		Configuration space initialization NG	
B112		Semaphore acquisition, release error	
B113		Sequence error among main body tasks	
B114		Message queue control error	
B115		Main body - sequence error among FAX boards	Pull out and insert the connector of FAX board to check its installation.
B116		FAX board nonresponse (Nonresponse after initialization)	
B117		ACK waiting timeout error	
B118		Receiving undefined frame	
B119		DMA transfer error	

7.3 B12#

Error code	Category	Contents of error	How to correct
B120	JC	Soft error (FAX board side)	Turn OFF and ON the main power switch.
B122	SPI	Device error (modem-DAA initialization error)	• Turn OFF and ON the main power switch. • If the trouble is not yet corrected, hardware of the FAX board may be defective. Replace the FAX board in such a case.
B123		Device error (modem-DAA power save recovery error)	
B125	JC	ISW failure of Sub CPU	Turn OFF and ON the main power switch.
B126		Timeout error due to nonresponse from codec control during suspension process	
B127		Timeout error due to nonresponse from communication control during suspension process	
B128		Timeout error due to nonresponse from LINE control during suspension process	
B129		Timeout error due to nonresponse from SPI tasks during suspension process	

7.4 B13#

Error code	Category	Contents of error	How to correct
B130	Driver error (FAX board side)	Driver soft error	Turn OFF and ON the main power switch.
B131		Reception frame length error from main	
B132		Reception frame header error from main	
B133		232C I/F sequence error	
B134		DPRAM I/F sequence error	
B135		DPRAM CTL/STS register error	
B136		ACK waiting timeout	
B137		DPRAM RESET reception	
B139	CC	No modem response during execution of voice response	

7.5 B14#

Error code	Category	Contents of error	How to correct
B140	Soft error (FAX board side)	MSG I/F error with job control	Turn OFF and ON the main power switch.
B141	Soft error	I/F error with driver	
B142	I/F error with main	Undefined command reception	
B143		Command frame length error	
B144		Command parameter length error	
B145		Undefined parameter	
B146		Command/response sequence error	

7.6 B15#

Error code	Category	Contents of error	How to correct
B150	Line control	External class instance acquisition error	Turn OFF and ON the main power switch.
B151		Job start error (starting job parameter error/child job generation error)	
B152		Doc access error (report buf access error)	
B153		Response wait timeout from external task	
B154		Internal que table control error (create/ enque/deque)	

7.7 B16#

Error code	Category	Contents of error	How to correct
B160	1 destination control	Instance generation error	Turn OFF and ON the main power switch.
B161		Timeout error	
B162		Interface error	
B163		Message que control error	
B164		Semaphore acquisition release error	
B165		Observer registration error	
B166		Reception resource check error	
B167		Deployment error of sending image information	
B168		Serialization error of receiving image	
B169		Access error to quick memory data	

7.8 B17#

Error code	Category	Contents of error	How to correct
B170	Page control	Internal que table control error (create/ enque/deque)	Turn OFF and ON the main power switch.
B171		Instance generation error	
B172		Timeout error	
B173		Interface error	
B174		Semaphore acquisition release error	
B175		Observer registration error	
B176		Unable to secure TTI domain	

Error code	Category	Contents of error	How to correct
B177		Error return from TTI rasterizer	
B178		Receiving job generation error	
B179		Sequence control error (line specification fault, status mismatch, event mismatch)	

7.9 B18#

Error code	Category	Contents of error	How to correct
B180	Page control	Access error to quick sending memory data	Turn OFF and ON the main power switch.
B181		BlockBuff acquisition error	
B182		Sending block image error (Req, restore)	
B183		Receiving block image error (Req, store)	
B184		Storage error of receiving image information	
B185		Receiving data size logic error (Receiving data are not multiples of dotline)	
B186		Image buf acquisition (alloc) error	
B187		Error return from compressor	
B188		BandBuf control error (newInstance/get/free)	

7.10 B19#

Error code	Category	Contents of error	How to correct
B190	USB	USB IF error (OS notifies an error during configuration setting after recovery from the sleep or attach.)	Turn OFF the main power switch, then check the connection of USB, turn ON the main power switch.
B191		USB IF error (EndPoint1: Bulk Out (command, transmitted image data)) (error retry 1 min. timeout)	
B192		USB IF error (EndPoint2: Bulk In (response, received image data)) (error retry 5 sec. timeout)	
B193		USB IF error (EndPoint3: Interrupt In (fax board status)) (error retry 1 min. timeout)	
B194		USB IF error (EndPoint4: Bulk Out (main body status)) (error retry 3 sec. timeout)	
B195		USB IF error (Attach not detected for 1 min. after recovery from sleep)	
B196		USB IF error (Detach not detected for 1 min. after recovery from sleep)	

7.11 T0#

Error code	Category	Contents of error	How to correct
T00	Sending	T1 timeout. No response obtained from the machine on the other end of the line. (35 second)	Check that the address number is correct.
T01		T1 over after the mode has been changed (35 seconds)	-
T02		DCN reception in DIS waiting	The remote station may not receive the data due to paper shortage, full memory, etc.
T03		Unexpected command reception in DIS waiting	-
T04	Not used		
T05	Sending	FIF not matching with the remote station (remote station without the function).	-
T06		DCN reception in CFR/FTT waiting	-
T07	Not used		
T08	Sending	Training failure at 2400 bps	The line may be in trouble. Check the line noise.
T09		No response to DCS	The line may be disabled because the user on the remote station disconnected it.

7.12 T1#

Error code	Category	Contents of error	How to correct
T10	Not used		
T11	Sending	DCN reception while waiting for post message responses	The remote station may not receive the data due to paper shortage, full memory, etc.
T12		Unexpected command reception while waiting for post message responses	-
T13		No response while waiting for post message responses	The remote station may not receive the data due to paper shortage, full memory, etc.
T14	Not used		
T15	Not used		
T16	Not used		
T17	Not used		
T18	Sending	No reception ability in a remote station	The remote station may not receive the data due to paper shortage, full memory, etc.
T19	Not used		

7.13 T2#

Error code	Category	Contents of error	How to correct
T20	Not used		
T21	Not used		
T22	Not used		
T23	Not used		
T24	Not used		
T25	Not used		
T26	Not used		
T27	Not used		
T28	ECM sending	Timeout by RR/RNR (60 seconds)	-
T29	Not used		

7.14 T3#

Error code	Category	Contents of error	How to correct
T30	Not used		
T31	Not used		
T32	ECM sending	Fall back over by CTC	The line may be in trouble. Check the line noise.
T33	Not used		
T34	Not used		
T35	ECM transmission	No responses to RR	-
T36		DCN reception to RR	-
T37	Not used		
T38	F code polling TX	SID is received when SEP is received	-
T39	Not used		

7.15 T4#

Error code	Category	Contents of error	How to correct
T40	Calling	Software error at calling	-
T41	Not used		
T42	Sending	RTN/PIN reception	-
T43		Three continuous CRP signal reception	-
T44		Time error between frames at transmission	-
T45	Not used		
T46	Not used		
T47	Not used		
T48	Check destination	Line disconnected due to no match as a result of CSI check.	Telephone number may not be set on the remote station. Check the CSI signal of the remote station in the protocol trace list.

Error code	Category	Contents of error	How to correct
T49	Not used		

7.16 T5#

Error code	Category	Contents of error	How to correct
T50	FAX-CSRC	Host terminal ID inconsistency	-
T51	Sending	The FAX board does not respond during transmission	The line may be in trouble. Check the line noise.
T52	Not used		
T53	Not used		
T54	Not used		
T55	Not used		
T56	Not used		
T57	Not used		
T58	Polling reception	Calling by polling reception, but a remote station does not have polling transmission documents	Polling original may not be set on the remote station.
T59	Not used		

7.17 T6#

Error code	Category	Contents of error	How to correct
T60	Polling transmission	Received the polling transmission request (DTC), but there are no polling transmission documents	Polling original may not be set on your machine. Polling TX is enabled only when the polling transmission original is registered.
T61	F-code polling transmission	Unsatisfactory conditions for receive polling TX request.	Bulletin board original may not be set. Bulletin board TX is enabled only when the bulletin board transmission original is registered.
T62	F-code polling transmission	Box number specified by SEP is not valid.	Bulletin board box number from the remote station may be incorrect.
T63	Not used		
T64	Not used		
T65	Not used		
T66	Not used		
T67	Not used		
T68	Not used		
T69	Not used		

7.18 T7#

Error code	Category	Contents of error	How to correct
T70	Not used		
T71	Not used		
T72	Not used		
T73	Transmission	Modem response waiting T.0 (60 seconds)	-
T74	V34	No changes in the V34 modem status	-
T75		V34 signal sending error	-
T76		CS2 is not turned to ON.	-
T77	Not used		
T78	Transmission	Codec control soft ware error	-
T79		Job control soft error at transmission	-

7.19 T8#

Error code	Category	Contents of error	How to correct
T80	Call control	LOOP current detection NG when CML is turned ON at calling	• The line may not be connected. • Check the line connection status.
			• The line may be connected to where other than analog line (Group 4 line/key telephone system). • Check the line connection to analog line (Group 3 line).
T81		Dial Tone detection NG when CML is turned ON at calling	• The line may not be connected. • Check the line connection status.

Error code	Category	Contents of error	How to correct
T82		Answer tone (CED/DIS) waiting timeout after dialing at calling	-
T83		Busy tone detection at calling	-
T84		Line control dial error	-
T85		Short disconnection was detected after LOOP current detection at calling	-
T86	Not used		
T87	Not used		
T88	Not used		
T89	Control unit	When the control unit is connected, a communication error is caused due to capacity shortage and communication is finished.	-

7.20 T9#

Error code	Category	Contents of error	How to correct
T90	Multiple lines Line auto switch	TX line undetermined	Data may have been transmitted with no line specified when "No" is selected for TX-Line Auto Switch Setting. Specify the line to be used to send.
T91	Multiple lines Line auto switch	TX line undetermined	Data may have been transmitted with an illegal line specified. Specify a different line and transmit the data.
T92	Not used		
T93	Not used		
T94	Not used		
T95	Call control	When called, short disconnection of LOOP current was detected during a call	-
T96	Not used		
T97	Transfer	Transmission request was received with no FAX board installed. *	-
T98		Transmission request of images that cannot be transmitted were received. (Color images) *	-
T99	Call control	Remote stations number is deleted while waiting for abbreviated or one-touch redialing (redial / transmission / polling reception) *	-

*: The corresponding error code is not displayed on the control panel even if the error occurs.

7.21 R0#

Error code	Category	Contents of error	How to correct
R00	Reception	DCS was not received within 35 seconds (T1 over)	The dialed telephone number may be incorrect.
R01		T1 timeout after EOM sending	-
R02		DCN reception in DCS waiting	The line may be disabled because the user on the remote station disconnected it.
R03		Unexpected command reception in DCS waiting	-
R04		FIF error of DCS	-
R05	Not used		
R06	Not used		
R07	Reception	Image information does not come in image information waiting	The line may be disabled because the user on the remote station disconnected it.
R08		CD OFF while receiving image information	
R09		DCN reception in post message waiting	

7.22 R1#

Error code	Category	Contents of error	How to correct
R10	Reception	Unexpected command reception in post message waiting	-

Error code	Category	Contents of error	How to correct
R11		Command was not received which waiting for post message	The line may be disabled because the user on the remote station disconnected it.
R12		Timeout during EOL-EOL	-
R13	Not used		
R14	Not used		
R15	Not used		
R16	Not used		
R17	Not used		
R18	Reception	Resource check error (line disconnected due to ongoing communication)	Space in the hard disk may become short. Unnecessary data should be deleted to secure the space in the hard disk.
R19	Not used		

7.23 R2#

Error code	Category	Contents of error	How to correct
R20	Reception	Line disconnection by receive reject function	Call was received from a user who is in the register of addresses to be rejected.
R21	CUG reception	No match of password in the closed network RX setting	Check the password.
R22		No password received in the closed network RX setting	Check the setting of closed network RX.
R23	Not used		
R24	ECM reception	RR-RNR repeats for 2 minutes	-
R25		Command was not received while waiting for responses to RNR	-
R26		Unexpected command was received while waiting for responses to RNR	-
R27		DCN reception while waiting for responses to RNR	-
R28		The counter is abnormal of the post messages received (PC/BC).	-
R29		Timeout (35 seconds) between frames occurred	-

7.24 R3#

Error code	Category	Contents of error	How to correct
R30	Not used		
R31	Not used		
R32	Reception	Line disconnected because there is no appropriate confidential user box while automatic user box generation is inhibited.	Confidential box No. received from the remote station may be incorrect.
R33		DIS reception to DTC (German specifications only)	-
R34	F code confidential reception	PWD was received when SUB was received.	-
R35	Not used		
R36	Not used		
R37	V34	CS2 is not turned to ON.	-
R38		No change in V34 modem and status	-
R39	Not used		

7.25 R4#

Error code	Category	Contents of error	How to correct
R40	When called	Soft error when called	-
R41	Not used		
R42	Not used		
R43	Not used		
R44	Not used		
R45	Reception	Phase C timeout (NonECM reception only)	-

Error code	Category	Contents of error	How to correct
R46	Not used		
R47	Not used		
R48	Not used		
R49	Reception	DCN reception while waiting for image information	The line may be disabled because the user on the remote station disconnected it.

7.26 R5#

Error code	Category	Contents of error	How to correct
R50	Reception	No. of error lines exceeds.	The line may be in trouble. Check the line noise.
R51	Reception	The FAX board does not respond during reception	The line may be in trouble. Check the line noise.
R52	Not used		
R53	Not used		
R54	Not used		
R55	Not used		
R56	Not used		
R57	Not used		
R58	Not used		
R59	Not used		

7.27 R6#

Error code	Category	Contents of error	How to correct
R60	Reception	Reception image error (RTN/PIN sending)	The line may be in trouble. Check the line noise.
R61	Not used		
R62	Not used		
R63	Reception	Three continuous CRP signal reception	-
R64	Not used		
R65	Not used		
R66	SEP polling	SEP polling transmission request was received without SEP polling transmission ability	-
R67	SUB reception	SUB was directed without SUB reception ability	-
R68	Not used		
R69	ECM reception	Communications are cut when EOR is received.	The line may be in trouble. Check the line noise.

7.28 R7#

Error code	Category	Contents of error	How to correct
R70	ECM reception	Decode error occurred in ECM	-
R71	Reception	RTC detection error (No. of EOL is smaller than FP.)	-
R72		Long original larger than the allowable value is received.	Longer original than specified is received from the remote station.
R73		Modem response waiting T.0 (60 seconds)	-
R74		Reception byte size error	-
R75	V34	V34 signal sending error	-
R76		Unexpected command was received in V34 mode phase C reception	-
R77	Reception	Codec control middle ware error	-
R78		Codec control software error	-
R79		Job control soft error during reception	-

7.29 R8#

Error code	Category	Contents of error	How to correct
R80	Not used		
R81	Not used		

Error code	Category	Contents of error	How to correct
R82	Not used		
R83	Not used		
R84	Not used		
R85	-	R-ISW request received when a machine is running in case of either reserved job exists, image exists in memory, or jam happened.	-
R86	Not used		
R87	Not used		
R88	Not used		
R89	Not used		

7.30 R9#

Error code	Category	Contents of error	How to correct
R90	Not used		
R91	Not used		
R92	Turnaround	When the turnaround function is not provided, the line is disconnected if a turnaround order (DTC) is received.	-
R93	F-code reception	Unsatisfactory conditions for confidential RX request	Check the Confidential password.
R94		Unsatisfactory conditions for relay request	Check the Relay password.
R95		Unsatisfactory conditions for forwarding request	-
R96		Confidential box number specified by SUB is not valid.	Confidential box No. received from the remote station may be incorrect.
R97		Unsatisfactory conditions for PC-FAX RX request (Function, PW unmatching)	-
R98	Not used		
R99	Others	Reception command was received from the whole control side before reception signals were detected.	-

7.31 Other

Error code	Category	Contents of error	How to correct
-	Others	Despite the FAX board is installed in line 2, FAX (line 2) of [Service Mode] -> [System 2] -> [Option Board Status] is "Unset", if it is set to When the main body is in the sleep mode, line 1 can not receive faxes.	• When using the line 2, make sure that the FAX (system) for line 2 is set up correctly. • When not using the line 2, remove all wirings of the FAX board for line 2.
-		When the main body recovers from the sleep mode while receiving a fax, the ring tone is generated more than the set number of times. (2 to 3 times)	This error is avoidable with any one of the following settings. • Set [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Consumption in Sleep Mode] to “Disabled”. • Set [Administrator Settings] -> [Fax Settings] -> [Line Parameter Setting] -> [Number of RX Call Rings] to “0 x”.

8. DIAGNOSTIC CODES

8.1 Outline

- The diagnostic code is a 22-digit hexadecimal code indicating a communication conditions and status.
- The diagnostic code is printed on the activity report.
- The purpose of the diagnostic code is to obtain detailed information of communication results and conditions so as to analyze communication troubles.

8.2 Explanation

8.2.1 The diagnostic code

XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)

8.2.2 Information of communication results and conditions

Items	Description							
	bit7	bit6	bit5	bit4	bit3	bit2	bit1	bit0
(1) Types of call out / called	F network (Japan)	PSTN	Dial-in (Japan)	Telephone	Group	One-touch dialing	Abbreviated dialing	Key pad dialing
(2) Communication mode	Sending	Error page resending	Forwarding transmission	Polled transmission	Receiving	Recovery transmission	Called turnaround	Polling RX
(3) Applied function specification	Mixed size transmission All pages/ cover	Frame erasure transmission	Book mode transmission	2in1 transmission	Original size appointing TX	Upside down	Special scanning non standard/ Zfold/Long	(Not used)
(4) One-time communication parameter specification	Timer TX	(Not used)	CSRC	PC-Fax transmission (RX/V2)	V.34 appoint transmission	F-code transmission	ECM specification TX	International mode transmission
(5) Communication type	Relay	Confidential	Manual transmission	Bulletin	Line used (line 1 to 4)			
(6) H_RES specification 1 (HR)	400 dpi	300 dpi	200 dpi	(Not used)	16 pels/mm	(Not used)	8 pels/mm	(Not used)
(7) H_RES specification 2 (HR)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	600 dpi
(8) V_RES specification 1	400 dpi	300 dpi	200 dpi	100 dpi	15.4 l/mm	(Not used)	7.7 l/mm	3.85 l/mm
(9) V_RES specification 2	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	600 dpi
(10) Coding specification	(Not used)	(Not used)	(JPEG)	(JBIG)	MMR	MR	MH	THRU
(11) Original length specification	(Not used)	(Not used)	(Legal)	(Letter)	A3	B4	A4	(Not used)
(12) Original length specification	(Not used)	No limits	(Legal)	(Letter)	(Not used)	B4	A4	(Not used)
(13) Speed specification 0	(Not used)	(Not used)	(Not used)	V.29-96	V.29-72	(Not used)	V.27-48	V.27-24
(14) Speed specification 1	V.17-144	V.17-120	V.17-96	V.17-72	(V.33-144)	(V.33-120)	(V.33-96)	(V.33-72)
(15) Speed specification 2	V.34-192	V.34-168	V.34-144	V.34-120	V.34-96	V.34-72	V.34-48	V.34-24
(16) Speed specification 3	(Not used)	(Not used)	V.34-336	V.34-312	V.34-288	V.34-264	V.34-240	V.34-216
(17) MSLT specification	(Not used)	(Not used)	(Not used)	(Not used)	(Not used)	MSLT of resolution shown as vertical RES		
(18) Communication parameter specification	ECM frame size 0: 256 / 1: 64	ECM	DIAG (CSRC)	(BFT)	(BTM)	PWD	SEP	SUB
(19) Remote station coding specification	(Not used)	(Not used)	(JPEG)	(JBIG)	MMR	MR	MH	THRU
(20) Remote station length specification	(Not used)	(Not used)	(Legal)	(Letter)	A3	B4	A4	(Not used)
(21) Remote station length specification	(Not used)	No limits	(Legal)	(Letter)	(Not used)	B4	A4	(Not used)
(22) Remote station communication	(Not used)	ECM	DIAG (CSRC)	(BFT)	(BTM)	PWD	SEP	SUB

- (Not used): bit is set to 0.

9. NETWORK FAX ERROR CODE

- When there occurs any trouble with this machine, the error screen is displayed. And on this error screen, the following error message is shown. Take a necessary step referring to the table given below.

9.1 Error code list of the transmission system

Error code	Category	Contents of error	Redial	Corrective action
N10	Connection error	Server connection error	No	• Check the condition of the other party machine. • Check the network setting of local machine. • Ask the network administrator if the network is operating normally.
N11	Connection error	Connection declined by the other party machine	No	Reception is declined. Check the condition of the other party machine.
N12	Connection error	Disconnection of the line	Yes	Check to see if there occurs any abnormal condition with the network, such as the disconnection of a cable.
N13	Connection error	No response received from the network	No	• Check the condition of the other party machine. • Check the network setting of local machine. • Ask the network administrator if the network is operating normally.
N14	Connection error	Mail delivery error	No	Check the condition of the other party machine. Send it again after waiting for a while.
N15	Remote reset	Connection reset by the other party machine	Yes	Check the condition of the other party machine. Send it again after waiting for a while.
N16	Remote busy	Remote machine is busy	Yes	Check the condition of the other party machine. Send it again after waiting for a while.
N17	LAN access	Communication time out	Yes	Check the condition of the other party machine. Send it again after waiting for a while.
N18	Network error	Network error	No	• Check the each settings. • Check to see if there occurs any abnormal condition with the network, such as the disconnection of a cable. • After turning off and on the main power switch, send it again.
N20	Memory error	Memory overflow	No	• The memory is full. • Check to see if there is any other job being handled. • With the number of transmission sheets reduced or the resolution for read reduced, send it again.
N21	HDD error	HDD error	No	• HDD is full. • Delete unnecessary files. • With the number of transmission sheets reduced or the resolution for read reduced, send it again.
N22	Conversion error	Conversion error	No	After turning off and on the main power switch, send it again.
N25	Memory overflow	Memory overflow	No	• The memory is full. • Check to see if there is any other job being handled. • With the number of transmission sheets reduced or the resolution for read reduced, send it again.
N35	Forward TX	A request for transmission has been received with the NetFAX with the Function Settings OFF. (A request for transfer of the IP address FAX while the IP Address FAX function is being OFF in the service mode.)	No	-
N36		A request has been received for transmission of images that cannot be sent.	No	-

9.2 Error code list of the reception system

Error code	Category	Contents of error	Corrective action
N50	SMTP reception	SMTP reception error	When the SMTP reception does not start in 60 minutes after connection for an incoming call, this error may be resulted. Ask the sender to send it again.
N51	Decode	In excess of the length specified for reception	Ask the sender to send it again after the length of the text being reduced.
N52	Decode	In excess of the number of pages specified for reception	Ask the sender to send it again after the number of text sheets being reduced.

Error code	Category	Contents of error	Corrective action
N53	Decode	File error	Ask the sender to send it again in a correct file format as shown below. • Internet Fax: TIFF • IP Address Fax: PDF or TIFF
N54	Decode	Decode error	The data has been received in an incorrect format. Ask the sender to send it again in a correct format.

10. Open API RELATED TROUBLE

10.1 Outline

- Through the Certification Management System provided by OpenAPI, if error is found in communication between the machine and interacting applications developed by company other than KM, an error message is displayed.

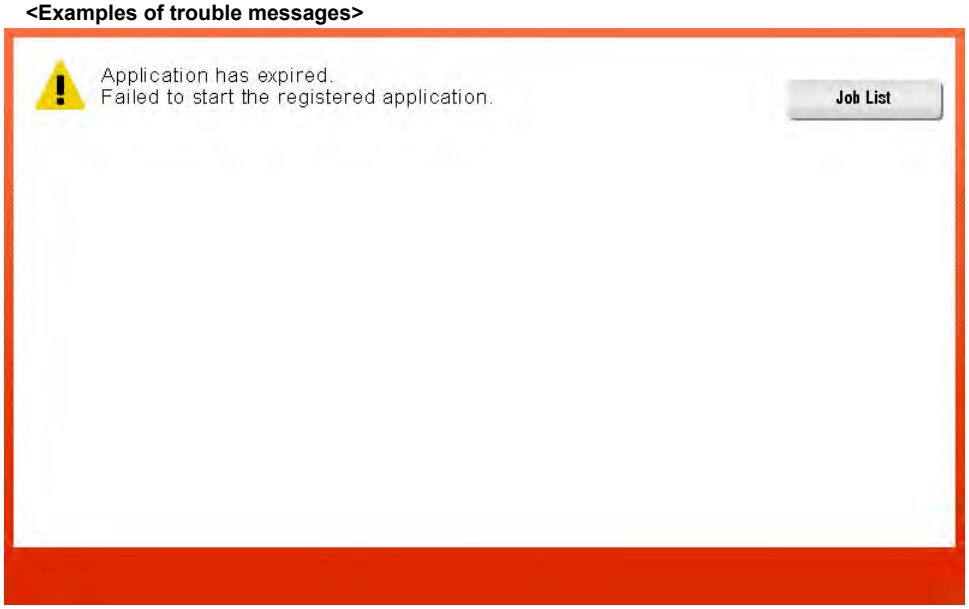
10.2 Types of Trouble

- The Certification Management System provided by OpenAPI certificates and manages communication between main body and non-KM applications that run on the computer connected to the machine. If trouble is detected, the trouble message is displayed on the control panel of the machine or the screen of the computer on which the applications run. Trouble messages displayed on the control panel of the main body and actions are described below.

NOTE

- **A message that appears on the computer screen may be different depending on the application being used for communication. The corresponding action may be different, so contact the application vendor for an appropriate action.**

<Examples of trouble messages>



10.3 Solution

- The below describes the OpenAPI certification related trouble messages displayed on the control panel of the main body and actions, dividing them by possible situation.

10.3.1 When using an application

No.	Symptom and message	Action
1	When starting an application, the following message is displayed: Application has expired. Failed to start the registered application.	1. In [Administrator Settings] -> [System Settings] -> [Date/ Time Settings], check that the date and time that is set is same as the actual date and time. If a wrong date and time is set, correct it. 2. Contact the application vendor and obtain a new Solution Key (or the application software itself). Using it, perform the steps below. 1) Delete the application. 2) Using the Solution Key (or the application software itself), register the application again.
	When starting the machine, the following message is displayed: The Enhanced Server Authentication application has expired. Change the User Authentication method to one other than Enhanced Server Authentication.	
2	When starting an application, the following message is displayed: Failed to start the registered application. Please contact your service representative.	In [Service Mode] -> [System1] -> [Marketing Area], change the marketing area of the machine to the one that was selected when the application was registered.
	When starting the machine, the following message is displayed: The enhanced server authentication application cannot be used. Please contact your service representative.	

No.	Symptom and message	Action
3	In the screen saver application, after a time set, the screen saver does not work.	1. In [Administrator Settings] -> [System Settings] -> [Date/ Time Settings], check that the date and time that is set is same as the actual date and time. If a wrong date and time is set, correct it. 2. Contact the application vendor and obtain a new Solution Key (or the application software itself). Using it, perform the steps below. 1) Delete the application. 2) Using the Solution Key (or the application software itself), register the application again. 3. In [Service Mode] -> [System1] -> [Marketing Area], change the marketing area of the machine to the one that was selected when the application was registered.

10.3.2 After rewriting the firmware of the machine

No.	Symptom and message	Action
1	When starting an application, the following message is displayed: Failed to start the registered application. Please contact your service representative.	After deleting the application in question, register the application again.
	When starting the machine, the following message is displayed: The enhanced server authentication application cannot be used. Please contact your service representative.	
	In the screen saver application, after a time set, the screen saver does not work.	

11. TROUBLES THAT DO NOT DISPLAY THE TROUBLE CODE

11.1 Machine is not energized at all (DCPU operation check)

11.1.1 Contents

Trouble type	Machine is not energized at all
Rank	-
Trouble detection condition	-
Trouble isolation	-
Relevant electrical parts	• Main power switch (SW1) • MFP board (MFPB) • DC power supply unit (DCPU)

11.1.2 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is a power voltage supplied across CN001-1 and 2 on DCPU?	26-K to L	NO	Check the WIRING from the wall outlet to SW1 to CN1.
2	Are the fuses on DCPU conducting?	-	NO	Replace DCPU
3	Is DC5 V being output to CN006-5 to 8 on DCPU?	26-I to J	NO	Replace DCPU
4	Is DC24 V being output to CN007-3 on DCPU?	26-I to J	NO	• Check the WIRING from the wall MFPB to DCPU. • Replace DCPU • Replace MFPB
5	The LED5 on MFPB is blinking?	-	NO	Replace MFPB
6	Is DC24 V being output to CN007-1 on DCPU?	26-I to J	NO	Replace DCPU

• Link to the wiring diagram (N.1. bizhub 958/808/758, bizhub PRO 958)

11.2 Power is not supplied to DF

11.2.1 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being output from CN1 on DF?	27-M	YES	Malfunction in DF
2	Is DC24 V being output to CN004-1 on DCPU?	27-K to L	NO	Check wiring from DCPU to DF.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in DF

• Link to the wiring diagram (N.2. Dual scan document feeder)

11.3 Power is not supplied to LU-205/LU-303

11.3.1 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being applied to relay connector CN425?	11-W	NO	Malfunction in LU-205/LU-303.
2	Is DC24 V being output from CN20 on PFTDB?	11-U	NO	Check wiring from PFTDB CN20 to LU-205/LU-303.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in LU-205/LU-303.

• Link to the wiring diagram (N.3.1 LU-205)
• Link to the wiring diagram (N.3.2 LU-303)

11.4 Power is not supplied to FS-536/FS-536SD/FS-537/FS-537SD

11.4.1 Procedure

Step	Check item	Location of electrical component	Result	Action
1	Is DC24 V being applied to CN1-3?	27-K to L	NO	Malfunction in finisher.
2	Is DC24 V being output to CN004-5 on DCPU?	27-M	NO	Check wiring from DCPU to finisher.
3	Is the fuse on DCPU conducting?	-	YES	Replace DCPU.
			NO	Malfunction in finisher.

• Link to the wiring diagram (N.3.7 FS-536/FS-536SD)

- Link to the wiring diagram (N.3.3 FS-537/FS-537SD)

11.5 MFP does not start

11.5.1 Procedure

Step	Check item	Result	Action
1	Check whether trouble occurs and the message saying that MFP attempts to restore backup data appears.	YES	Attempt to restore backup data.
2	Rewrite the firmware and check whether that works.	NO	Replace the MFP board.
3	Check whether replacing the MFP board works.	NO	Contact the responsible people of KM before taking some countermeasures.

12. OTHER TROUBLE

12.1 Firmware error warning

- Warning message: A firmware error occurred.
- While the enhanced security mode is enabled, if MFP is restarted by turning the main power switch OFF and ON or other operations, selftesting is performed internally. If the self-testing detects firmware error, this warning appears.

12.1.1 Action

1. Set Enhanced Security Mode to “OFF” in Administrator Settings and touch “OK.”
2. Turn OFF and ON the main power switch.
3. Check that the warning screen is not displayed.
4. Rewrite the firmware.
5. Set the Enhanced Security Mode.

12.2 HDD lock password error warning

12.2.1 Detection timing

- Warning message: Reset HDD Lock Password.
- There is a mismatch between the password registered in the HDD and that registered in the main body.
- Wrong machine type information is input.

12.2.2 Action

(1) Checking the machine type information

NOTE

- **Perform the following steps, if this malfunction occurs when the MFP board is replaced with a new one.**
- **Prepare a USB flash drive in which firmware data is recorded.**

1. Call the firmware update selection screen to the display.
   NOTICE
   - J.2. USB memory
2. Touch [Machine Type Select].
3. Check the setting values of [Machine] and [Type] and enter the correct setting values. For details, see “J.2.4 Entering the machine type information”.
4. Turn OFF and ON the main power switch. If a USB flash drive has been used, first remove the USB flash drive and then turn ON the main power switch.

(2) Re-registering the correct HDD Lock Password

1. Touch Menu.
2. Touch [Utility].
3. Touch [Administrator Settings].
4. Enter the administrator password and touch [OK].
5. Enter the currently set HDD Lock Password twice.
6. Touch [OK].
7. When the screen that indicates the completion of setting of the HDD Lock Password appears, turn OFF and ON the main power switch.

(3) Performing HDD Physical Format

1. Call the Service Mode to the screen.
2. Touch these keys in this order: [State Confirmation] -> [Memory/Storage Adjustment] -> [Format].
3. Touch [Physical Format].
4. Press the Start key.
5. When Physical Format is completed, turn OFF and ON the main power switch.

13. TROUBLESHOOTING OF i-Option

13.1 Structure of license management

- The functions available with i-Option can be activated by entering “License code” to the main body.
- License code is issued and controlled by License Management System (LMS). To prevent unauthorized use of the license code, each main body is identified individually so that the license code cannot be activated unless it matches with the authorized the main body.

13.2 License management information

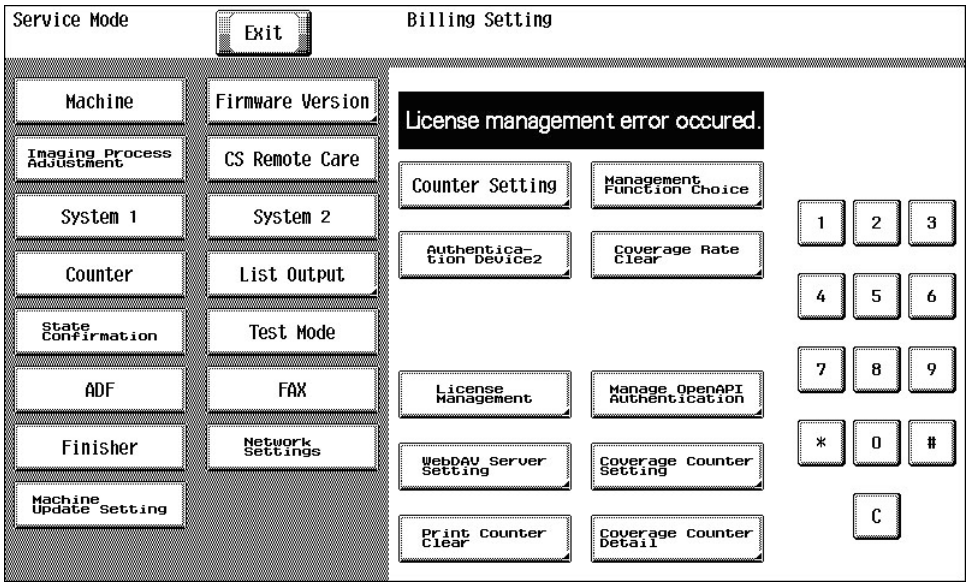
- Since license code needs to identify each main body, it is issued using the serial number of main body and “unique value” that is generated inside the main body.
- The “unique value” is stored to the memory region on the MFP board and at the same time some parts of it are memorized by eMMC board. The activated function cannot be used unless the both figures conform. Since these figures are out of target of [Memory Data Backup], when any trouble occurs at either nonvolatile memory, “License Management Error” is generated due to discordance of the figures.

13.3 Error message

13.3.1 License management error

- When abnormal value is detected in the license management information that is stored to the MFP board or eMMC board, or some values are detected cleared, warning is issued to let the user know the abnormality.
- The abnormality is detected at the timing of start-up or restart due to any condition.
- When the abnormality is detected, the corresponding i-Option function cannot be used, other ordinal functions, however, such as copy, scanning, print or etc, can be used without interruption. (Error message is displayed on the Service Mode screen.)

(1) Example of error message



(2) Main reasons of trouble

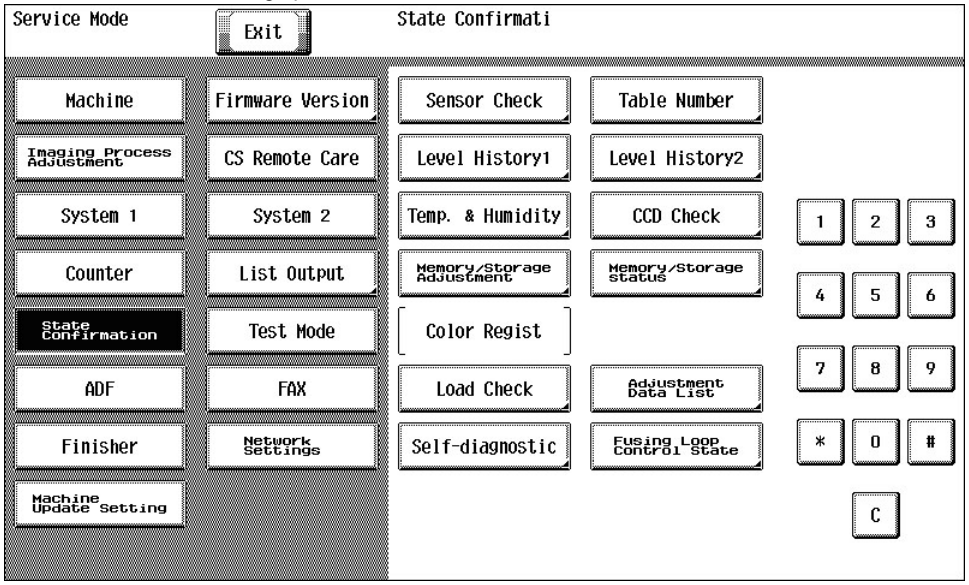
- The following shows the possible trouble factors and their countermeasure.

Board replacement	Action
When MFP board and eMMC board are replaced with the new ones at the same time.	Install firmware, follow the setup procedure.
When mounting the MFP board of the machine whose function(s) have already been activated and a new eMMC board.	Install firmware, then restore the data using restore procedure.

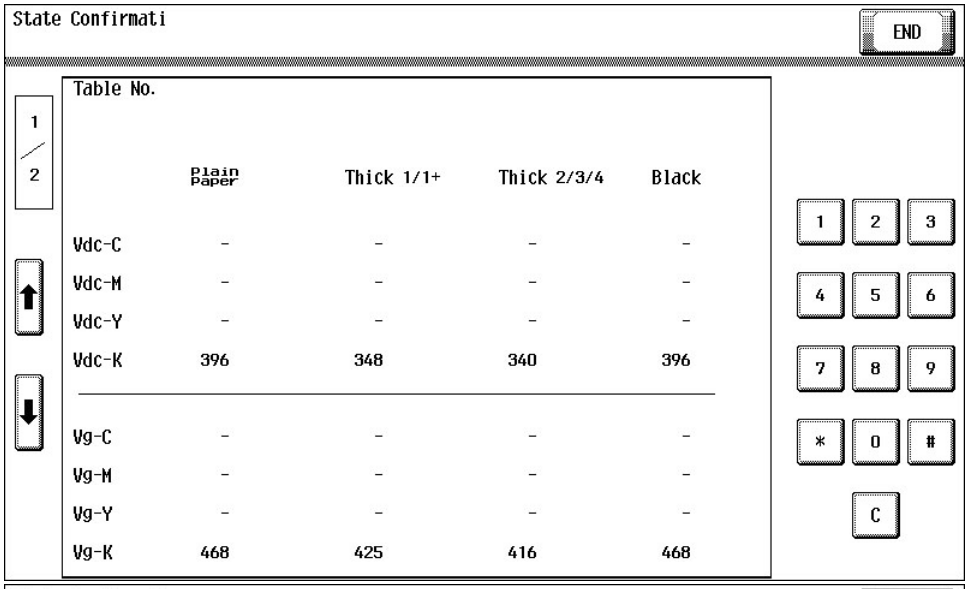
14. IMAGE QUALITY PROBLEM

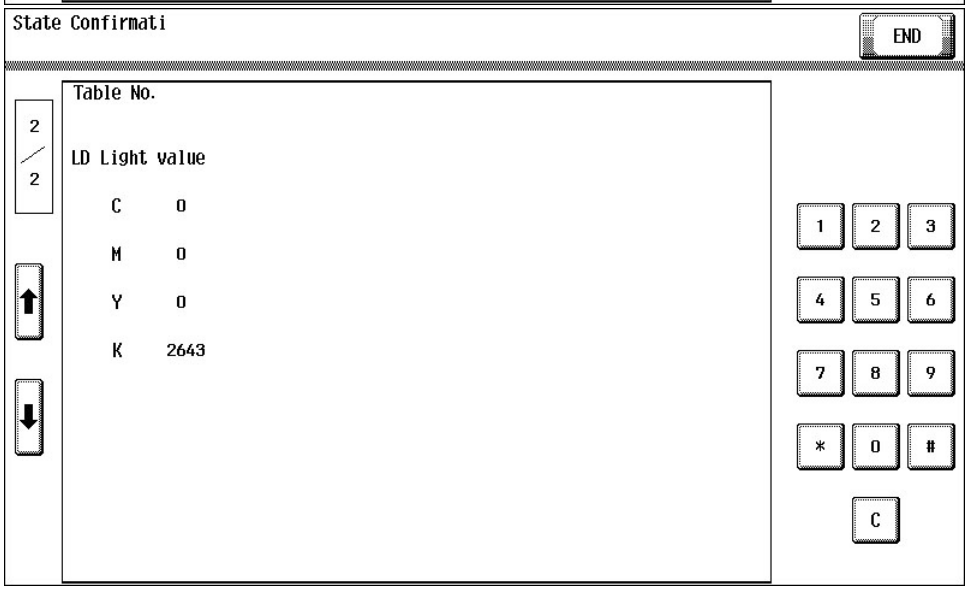
14.1 How to read element data

- As part of troubleshooting procedures, the numeric values set for “State Confirmation” available from “Service Mode” can be used to isolate the cause of the image problem.



14.1.1 Table Number

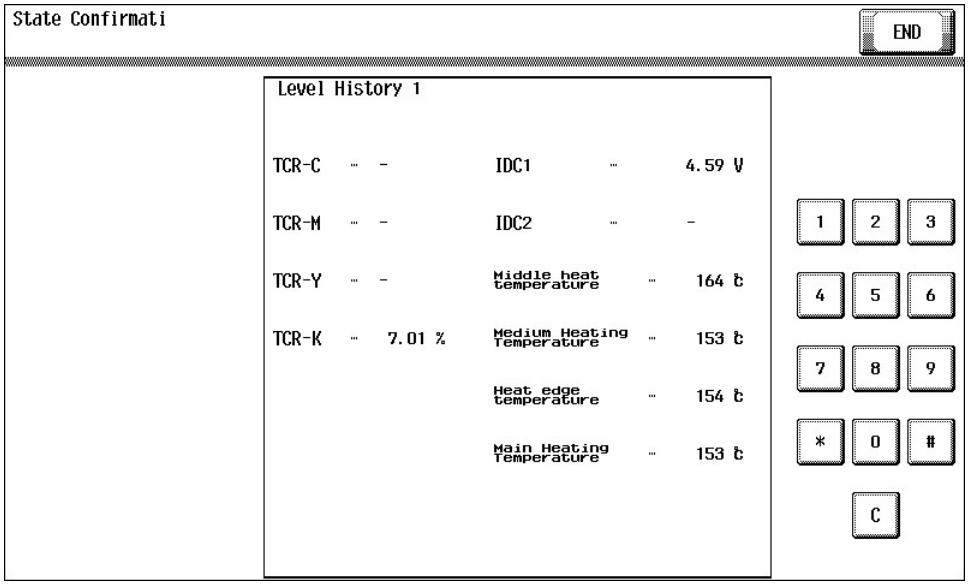




Vdc-C (Not used)	• Shows the developing bias value of toner when an image is produced.

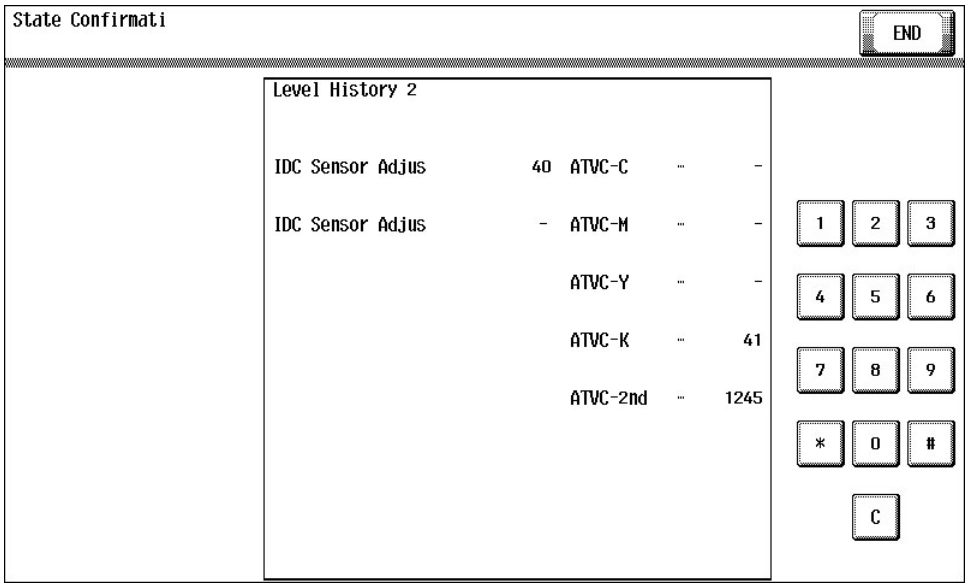
Vdc-M (Not used) Vdc-Y (Not used) Vdc-K	• Standard values: around 400 V (100 V to 800 V) • The specific numeric values vary with different developing units. (The values incorporate corrections to match the proper density after image stabilization.) * As a guide, the image density tends to be higher with large numeric values and lower with small numeric values. • Relevant components: Developing unit, drum unit, high voltage unit/1 (HV/1)
Vg-C (Not used) Vg-M (Not used) Vg-Y (Not used) Vg-K	• Shows the grid voltage value of color of toner when an image is produced. • Standard values: around 500 V (200 V to 1200 V) • The specific numeric values vary with different developing units. (The values incorporate corrections to match the proper density after image stabilization.) * As a guide, the image density tends to be higher with large numeric values and lower with small numeric values. • Relevant components: Developing unit, drum unit, high voltage unit/1 (HV/1)
LD Light Value (C, M, Y) (Not used) LD Light Value (K)	• Shows the LD light value of color of toner during print image formation. • Standard values: around 2775 (1850 to 3700) • For your information, photoconductor durability tends to be aggravated and fine line width tends to be broader at higher values and characters tend to be faint at lower values. • Relevant components: PH unit, drum unit

14.1.2 Level History 1



TCR-C (Not used) TCR-M (Not used) TCR-Y (Not used) TCR-K	• Shows the T/C ratio. (in 0.01 % increments) • Standard value: 5.5 to 8.5 % • Relevant components: TCR sensor
IDC1 IDC2 (Not used)	• Shows the IDC bare surface output value. (in 0.01 V increments) • It should normally be around 4.5 V. • The output range is 0 V to 5 V. • Relevant components: IDC sensor, transfer belt unit
Middle heat temperature Medium Heating Temperature Heat edge temperature Main Heating Temperature	• Shows the temperature of the fusing unit. (in 1 °C increments) • Relevant components: Fusing unit

14.1.3 Level History 2



IDC Sensor Adjust 1 IDC Sensor Adjust 2 (Not used)	• Shows the IDC intensity adjustment value. • It should normally be around 40. • The range is 0 to 255. • The value becomes greater as the transfer belt unit has been used more. • Relevant components: IDC sensor, transfer belt unit
ATVC -C (Not used) ATVC -M (Not used) ATVC -Y (Not used) ATVC -K ATVC-2nd	• Shows the latest ATVC level (which varies according to the paper type). • 10 µA to 150 µA (ATVC- K) • 300 V to 8000 V (ATVC-2nd) • Relevant components: Transfer belt unit, High voltage unit/2 (HV/2), transfer roller

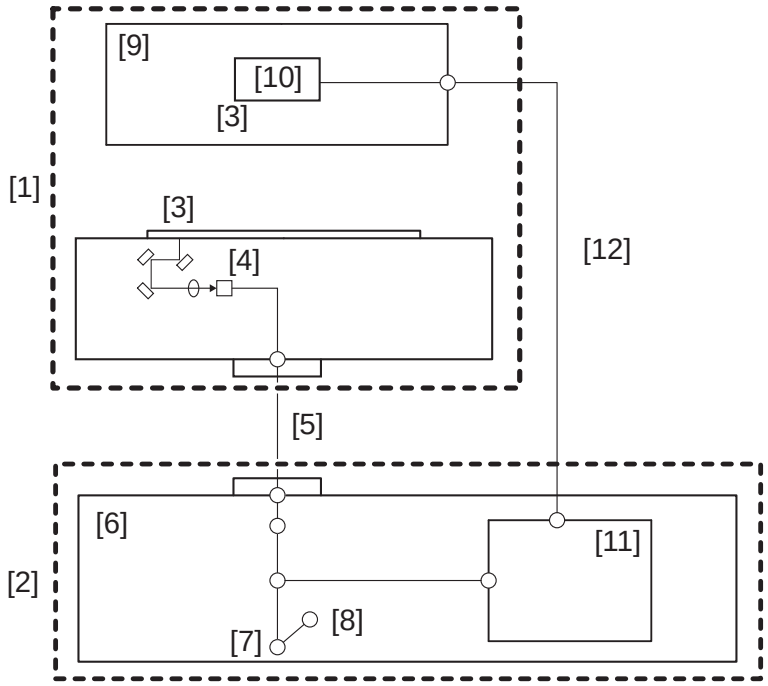
14.2 Troubleshooting procedure overview

14.2.1 Test pattern printing

- Following give an overview of a procedure to isolate a faulty spot of an image trouble using a test pattern.
- A faulty spot that is responsible for the image trouble is isolated by printing a test pattern to determine whether an image trouble is evident has the trouble.

(1) Procedure to isolate a faulty spot of an image trouble

- If an image trouble occurs during a copy cycle, use the image trouble that may be evident on the test pattern printed to determine whether the trouble is attributable to the scanner or the printer system.
- If no image trouble occurs on a test pattern produced following a print cycle, the image trouble is determined to be attributable to the scanner system.

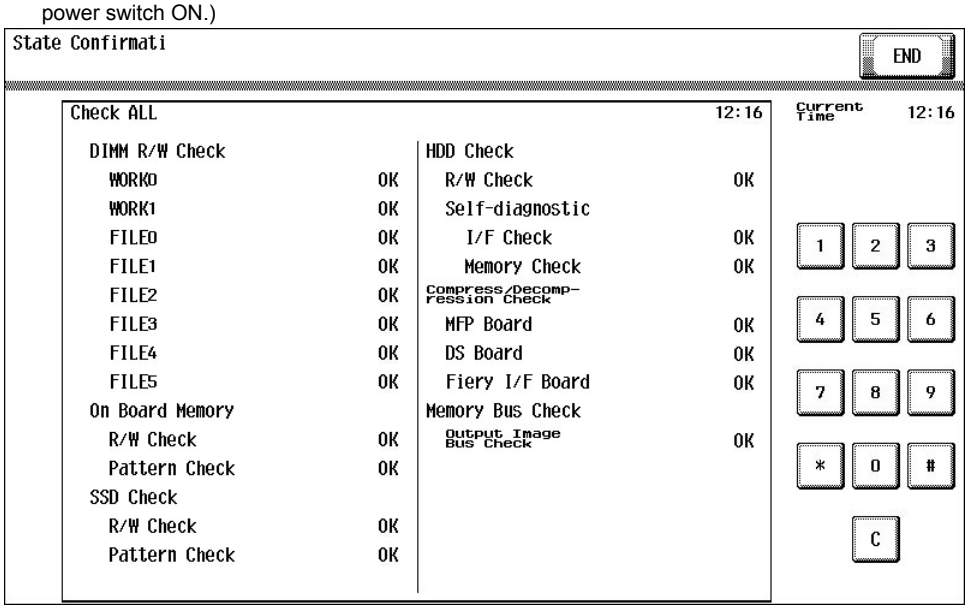


[1]	Scanner system	[2]	Printer system
[3]	Document scan	[4]	CCD board (CCDB)
[5]	I/F cable	[6]	MFP board (MFPB)
[7]	PH relay board (PHRYB)	[8]	Print output
[9]	DF	[10]	CIS module (CIS)
[11]	Dual scan image processing board (DSIPB)	[12]	I/F cable

14.2.2 Self-diagnostic function

Following give an overview of the self-diagnostic function.

- The self-diagnostic function makes a self-diagnosis of the printed-wiring boards and electrical parts to determine whether they are fully operational.
- Two methods are provided to activate the self-diagnostic function. The details are shown as follows: [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All].
  - I.5.19.12.(1).(a) Procedure (from SERVICE MODE menu)
  - I.5.19.12.(1).(b) Procedure (from main power switch ON)
- When the self-diagnostic procedure is completed, "OK" or "NG" appears on the display. If "NG" appears, check the corresponding printed-wiring board for proper connector connection or replace a faulty board with a good one.
- After completing the self-diagnostic, "Self-diagnosis result report" can be printed out. (Only when starting the self-diagnostic from main power switch ON.)



(1) Causes and countermeasures

Check name	Cause of "NG" display	Corrective action

DIMM R/W Check	Faulty memory of MFP board, faulty CPU of MFP board	Replace the MFP board
On Board Memory Check	Faulty MFP board, run-down battery	Replace the MFP board
SSD Check	eMMC board improperly installed, faulty eMMC board, faulty MFP board	Reinstall the eMMC board, replace the eMMC board, replace the MFP board
HDD Check	Broken HDD cable, damaged HDD, faulty MFP board	Replace the HDD cable, replace the HDD, replace the MFP board
Compress/Decompression Check	Faulty MFP board, improperly connected dual scan image processing board	Reinstall the dual scan image processing board, replace the dual scan image processing board, replace the MFP board
Memory Bus Check: Output image	Improperly connected MFP board, faulty MFP board	Replace the MFP board

14.3 Corrective action procedure

14.3.1 Image trouble sample illustrations

NOTE

- **Sample illustrations schematically show exemplary image troubles that occur when the images are printed on A3-size paper.**
- **The arrow in the exemplary image troubles indicates the paper feeding direction.**

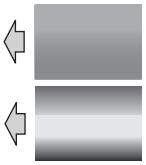
White line 1, White band 1

Black line 1, Black band 1

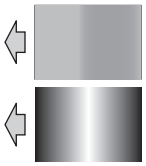
White line 2, White band 2

Black line 2, Black band 2

Uneven density 1

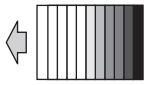


Uneven density 2

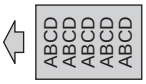


Faint image, Low image density

Gradation reproduction failure



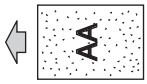
Foggy background



Void area

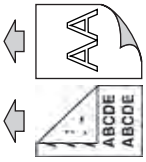
White spot

Black spots



Blurred image

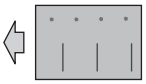
Back marking



Blank copy

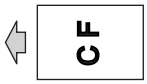
Black copy

Uneven pitch



Uneven gloss, Rough gloss

Poor fusing performance



Offset

Brush effect

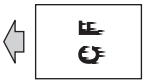
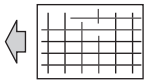
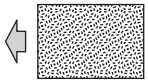


Image bleeding

Blurred fine lines



Moire

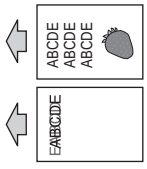


Skewed image

Distorted image

ACS malfunction

Abnormal image

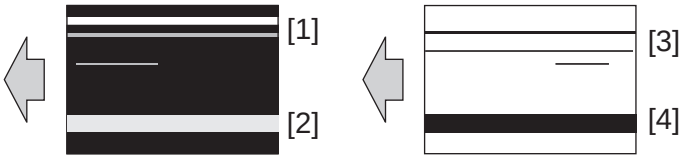


Small print image (reduced)

14.3.2 White line 1, White band 1, Black line 1, Black band 1

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	White line	[2]	White band
[3]	Black line	[4]	Black band

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Service Mode -> Table Number	Select [Service Mode] -> [State Confirmation] -> [Table Number]. The measured value is close to the standard value. • Developing bias: Vdc-K: close to the standard value of 400V (100 V to 800V) • Grid voltage: Vg-K: close to the standard value of 500V (200 V to 1200V)	NO	• Check the high voltage unit/1, developing unit, and the drum unit for wiring and connection. • Replace the high voltage unit/1.
2	Write section	Sharp white line or black line is blurry.	YES	Clean the print head window.
3	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
6	Photo conductor section	Dirt or line on photo conductor.	YES	• Clean. • Replace the drum unit.
7	Photo conductor section	Toner dirt on photo conductor. (improper cleaning)	YES	Replace the drum unit.
8	Photo conductor section	Faint lines evident on the entire surface as if the surface were brushed off.	YES	Replace the drum unit.
9	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit.
10	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
11	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
12	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
13	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
14	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection	NO	Clean or correct the terminal.

Step	Section	Check item	Result	Action
		terminals (T2, E) and ground terminal of the high voltage unit.		
15	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
16	Fusing unit	Dirt or foreign matter in the pressure roller.	YES	Clean.
			NO	Replace the pressure roller assy. (bizhub 808/758 except TAIWAN)
17	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit.
			NO	• Replace the PH unit. • Replace the high voltage unit/1. • Replace the high voltage unit/2. • Replace the MFP board.

(4) Scanner troubleshooting procedure

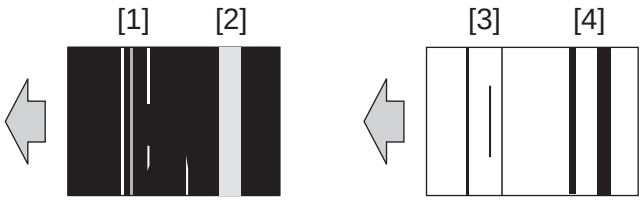
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	When original glass is being used	A fault occurs in the image read through the original glass.	YES	Go to step 5.
3	When DF is being used: 1st side	A fault occurs in the image read from the 1st side while DF is being used.	YES	Go to step 11.
4	When DF is being used: 2nd side	A fault occurs in the image read from the 2nd side while DF is being used.	YES	Go to step 18.
Main body side_original glass				
5	DF side_ Original pad	Original pad of DF is dirty.	YES	Clean.
6	Original glass	Original glass is dirty.	YES	Clean.
7	Shading sheet	Shading sheet is dirty.	YES	Clean.
8	End face of original is reproduced as a line	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Scanner Image Side Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
9	Line occurring due to faulty shading	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
10	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
Main body side_DF original reading section				
11	Main body side_reading section	Original reading glass of main body is dirty.	YES	Clean.
12	DF side_ original reading glass cleaning brush	Original reading glass cleaning brush of DF is dirty.	YES	Clean.
13	Main body side_shading sheet	Shading sheet of main body is dirty.	YES	Clean.
14	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Original Stop Position] -> [Sub Scanning Direction 1-Side] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
15	Service Mode -> Read Pos Adj	Select [Service Mode] -> [ADF] -> [Read Pos Adj] -> [Auto Adjust] and the image trouble is eliminated.	NO	Go to the next step.
16	Line occurring due to faulty shading	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
17	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
DF side_original reading section				
18	CIS glass cleaning	CIS glass is dirty.	YES	Clean.
19	CIS reading section	CIS reading section is dirty.	YES	Clean.
20	CIS cleaning brush	CIS cleaning brush is dirty.	YES	Clean.
21	Shading sheet	Shading sheet is dirty.	YES	Clean.

Step	Section	Check item	Result	Action
22	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Original Stop Position] -> [Sub Scanning Direction 2-Side] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
23	When DF is being used: 2nd side: Home Read Position	Select [Service Mode] -> [ADF] -> [Home Read Position Adjust] and the image trouble is eliminated.	NO	Go to the next step.
24	Scanning section	CIS reading section is dirty.	YES	Clean.
			NO	Replace the CIS module.

14.3.3 White line 2, White band 2, Black line 2, Black band 2

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	White line	[2]	White band
[3]	Black line	[4]	Black band

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Service Mode -> Table Number	Select [Service Mode] -> [State Confirmation] -> [Table Number]. The measured value is close to the standard value. • Developing bias: Vdc-K: close to the standard value of 400V (100 V to 800V) • Grid voltage: Vg-K: close to the standard value of 500V (200 V to 1200V)	NO	• Check the high voltage unit/1, developing unit, and the drum unit for wiring and connection. • Replace the high voltage unit/1.
2	Write section	Sharp white line or black line is blurry.	YES	Clean the print head window.
3	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
6	Photo conductor section	Dirt or line on photo conductor.	YES	• Clean. • Replace the drum unit.
7	Photo conductor section	Toner dirt on photo conductor. (improper cleaning)	YES	Replace the drum unit.

Step	Section	Check item	Result	Action
8	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit.
9	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
10	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
11	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
12	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
13	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
14	Fusing unit	Dirt or foreign matter on paper path or separation claw of the fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
15	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit.
			NO	• Replace the PH unit. • Replace the high voltage unit/2. • Replace the high voltage unit/3. • Replace the transfer belt unit. • Replace the MFP board.

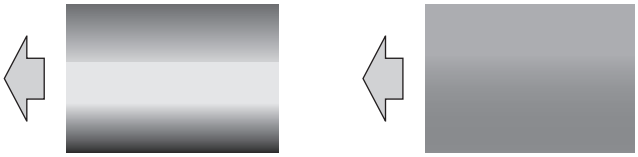
(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used: Service Mode -> Scan Area	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Image Position: Leading Edge] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
4	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
			NO	Replace the CCD unit.
5	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning (Front)] and the image trouble is eliminated.	NO	Go to the next step.
6	When DF is being used: 2nd side: End face of original is reproduced as a line	Select [Service Mode] -> [ADF] -> [Auto Stop Position Adjustment] -> [Main Scanning (Back)] and the image trouble is eliminated.	NO	Go to the next step.
7	When DF is being used: 1st side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	Replace the CCD unit.
8	When DF is being used: 2nd side	CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module.

14.3.4 Uneven density 1

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

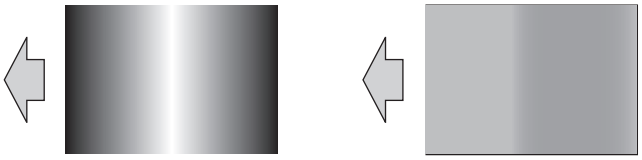
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Density Balance Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Density Balance Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
7	High image density original	Uneven density in sub scan direction occurs at a pitch of 30 mm when a multi-copy cycle is run using an original with high image density (50 % or more).	YES	Feed 10 to 20 blank sheets of paper with no originals placed, as the developing unit fails to keep up with a high demand for toner.
8	Service Mode -> LD 1/2 Balance Adj.	Select [Service Mode] -> [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.] and the image trouble is eliminated.	NO	Go to the next step.
9	Service Mode -> TCR Level Setting	Select [Service Mode] -> [Imaging Process Adjustment] - > [TCR Level Setting] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
10	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
11	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
12	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
13	Developing section	Toper hopper operates improperly or contains foreign matter.	YES	• Correct or remove. • Replace the toner hopper.
14	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit.
15	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
16	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
17	Transfer belt unit	Faulty pressure/retraction operation of the 1st transfer roller.	YES	• Correct or replace the drive system. • Replace the transfer belt unit.
18	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
19	Transfer belt unit	Transfer belt rotates faultily.	YES	Replace the transfer belt unit.
20	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
21	2nd transfer section	Faulty pressure/retraction operation of the transfer roller.	YES	• Correct. • Replace the transfer roller unit.
22	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
23	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
24	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.

Step	Section	Check item	Result	Action
			NO	• Replace the PH unit. • Replace the fusing unit. • Replace the high voltage unit/ 1. • Replace the high voltage unit/ 2. • Replace the high voltage unit/ 3. • Replace the MFP board.

14.3.5 Uneven density 2

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

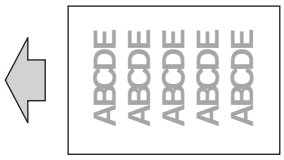
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
6	Service Mode -> LD 1/2 Balance Adj.	Select [Service Mode] -> [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.] and the image trouble is eliminated.	YES	Readjust.
7	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
8	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
9	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
10	Photo conductor section	Photo conductor drives faultily.	YES	• Correct. • Replace the drum unit.
11	Developing section	Toner bristles not even on the developing roller, resulting in a line or band.	YES	Replace the developing unit.
12	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
13	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
14	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
15	Transfer belt unit	Transfer belt rotates faultily.	YES	• Correct. • Replace the transfer belt unit.
16	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.

Step	Section	Check item	Result	Action
17	2nd transfer section	Faulty pressure/retraction operation of the transfer roller.	YES	• Correct. • Replace the transfer roller unit.
18	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
19	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
20	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the PH unit. • Replace the fusing unit. • Replace the high voltage unit/ 1. • Replace the high voltage unit/ 2. • Replace the high voltage unit/ 3. • Replace the MFP board.

14.3.6 Faint image, low image density (ID lowering)

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
4	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
5	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
6	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
7	Image check	• Select [Service Mode] -> [Test Mode] -> [Gradation Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black(1PC)", "Full Bleed", and "12 gradations", and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
2	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.

Step	Section	Check item	Result	Action
3	Service Mode -> Table Number	Select [Service Mode] -> [State Confirmation] -> [Table Number]. The measured value is close to the standard value. • Developing bias: Vdc-K: close to the standard value of 400V (100 V to 800V) • Grid voltage: Vg-K: close to the standard value of 500V (200 V to 1200V)	NO	• Check the high voltage unit/1, developing unit, and the drum unit for wiring and connection. • Replace the high voltage unit/1.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
6	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
7	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
8	Hopper drive unit section	Faulty connector connection between the toner supply motor/K (M12) and MFP board (CN18).	YES	Reconnect the connector.
9	Hopper drive unit section	Faulty in the drive of sub hopper.	YES	• Correct. • Replace the hopper drive unit.
10	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
11	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
12	Service Mode -> TCR data	Select [Service Mode] -> [State Confirmation] -> [Level History 1] and the measured value is correct. TCR-K: normal value 5.5 to 8.5 %	NO	Select [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add] and perform the function.
13	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
14	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. • Replace the developing unit. • Replace the PH unit. • Replace the transfer belt unit. • Replace the high voltage unit/1. • Replace the high voltage unit/2. • Replace the MFP board.

(4) Scanner troubleshooting procedure

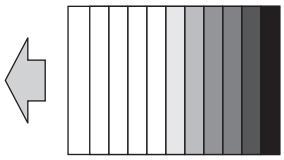
Step	Section	Check item	Result	Action
1	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
2	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
3	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
4	Main body side_shading sheet	Shading sheet of main body is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
5	When DF is being used 1st side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
6	When DF is being used: 2nd side	• Shading correction surface of DF is dirty. • CIS glass or CIS cleaning brush is dirty.	YES	Clean.

Step	Section	Check item	Result	Action
			NO	Replace the CIS module.

14.3.7 Gradation reproduction failure

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



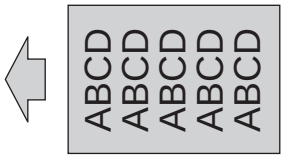
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Image check	• Select [Service Mode] -> [Test Mode] -> [Gradation Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black(1PC)", "Full Bleed", and "12 gradations", and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	-	Go to the next step.
4	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
5	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
6	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
7	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
8	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
9	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
10	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. • Replace the developing unit. • Replace the PH unit. • Replace the high voltage unit/2. • Replace the MFP board.

14.3.8 Foggy background

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Malfunction code	The maintenance call mark is displayed on the panel.	YES	Perform the relevant troubleshooting procedure corresponding to the malfunction code.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
4	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
5	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
6	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
7	Service Mode -> Image Background Adj	Select [Service Mode] -> [Imaging Process Adjustment] -> [Image Background Adj] and [Stabilizer] and the image trouble is eliminated.	NO	Go to the next step.
8	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "HYPER", "1-Sided", "Black(1PC)", "600dpi", and "Normal", enter "20" for CD width, "20" for FD width, and "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
2	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
3	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
4	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
5	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
6	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
7	Service Mode -> TCR data	Select [Service Mode] -> [State Confirmation] -> [Level History 1] and the measured value is correct. TCR-K: normal value 5.5 to 8.5 %	NO	Select [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add] and perform the function.
8	Service Mode -> Max Image Density Adj	Select [Service Mode] -> [Imaging Process Adjustment] - > [Max Image Density Adj] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
9	Connector connection	Faulty connector connection the high voltage unit/1 (CN1), high voltage unit/2 (CN1), high voltage unit/3 (CN1), MFP board (CN2, CN9E, CN11E) and PH relay board (CN7, CN8).	YES	Reconnect the connector.
10	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.

Step	Section	Check item	Result	Action
			NO	• Replace the drum unit. • Replace the PH unit. • Replace the transfer belt unit. • Replace the high voltage unit/1. • Replace the high voltage unit/2. • Replace the high voltage unit/3. • Replace the MFP board.

(4) Scanner troubleshooting procedure

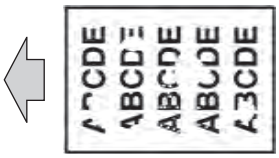
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.
3	Basic -> Density	Change the density setting, and the image trouble is eliminated.	NO	Go to the next step.
4	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. • Replace DF if it is deformed or hinges are broken.
5	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
6	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
7	Main body side_shading sheet	Shading sheet of main body is dirty.	YES	Clean.
8	When DF is being used 1st side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
9	When DF is being used: 2nd side	• Shading correction surface of DF is dirty. • CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module.

14.3.9 Void areas, White spots

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.

[1]



[2]

[1] Void areas	[2] White spots

(2) Troubleshooting procedure

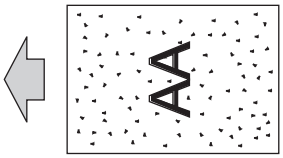
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Use in areas with low atmospheric pressure	Select [Service Mode] -> [Imaging Process Adjustment] -> [Grad/Dev AC Bias V Selection] and change the setting to [ON]. This eliminates the trouble. Turn OFF and ON the main power switch.	NO	Change the setting to [OFF] and go to the next step.
3	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.

Step	Section	Check item	Result	Action
6	Service Mode -> Primary transfer adj.	Select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [Primary transfer adj.] and the image trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
7	Service Mode -> 2nd transfer adj.	Select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [2nd Transfer Adj.] and the image trouble is eliminated. * Increase or decrease the setting value to find a specific value at which the trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
8	Service Mode -> TCR Level Setting	Select [Service Mode] -> [Imaging Process Adjustment] -> [TCR level] and set the adjustment value to "+3". Next, select [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add], select [Manual Toner Add], and press the start key. (This starts a toner replenishing sequence.) Then, select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and perform the function. Then, select [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj.] -> [2nd Transfer Adj., perform the function, and the image trouble is eliminated. * Increase or decrease the setting value to find a specific value at which the trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
9	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • If the abnormal image does not recur, change Density to "255" and make a print check. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
10	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
11	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
12	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
13	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
14	Developing section	Toner bristles not even on the developing roller, resulting in a void area.	YES	Replace the developing unit.
15	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
16	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
17	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
18	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
19	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
20	Connector connection	Faulty connector connection the high voltage unit/1 (CN1), high voltage unit/2 (CN1), MFP board (CN2, CN9E, CN11E) and PH relay board (CN7, CN8).	YES	Reconnect the connector.
21	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. • Replace the PH unit. • Replace the high voltage unit/1. • Replace the high voltage unit/2.

14.3.10 Black spots

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	IDC sensor	• IDC sensor is dirty. • IDC sensor shutter does not operate properly.	YES	• Clean. • Clean or correct the IDC sensor shutter.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Solid Pattern]. Select "SINGLE", "HYPER", "Gradation", and "1-Sided", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
2	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
3	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
6	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
7	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
8	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
9	Connector connection	Faulty connector connection the high voltage unit/1 (CN1), high voltage unit/2 (CN1), high voltage unit/3 (CN1), MFP board (CN2, CN9E, CN11E) and PH relay board (CN7, CN8).	YES	Reconnect the connector.
10	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the drum unit. • Replace the PH unit. • Replace the high voltage unit/1. • Replace the high voltage unit/2. • Replace the high voltage unit/3.

(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass or original pad is dirty.	YES	Clean.
			NO	Replace the CCD unit.
4	When DF is being used 1st side	Original reading glass or original reading glass cleaning brush is dirty.	YES	Clean.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
5	When DF is being used 2nd side	CIS glass or CIS cleaning brush is dirty.	YES	Clean.
			NO	Replace the CIS module.

14.3.11 Blurred image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "HYPER", "1-Sided", "Black(1PC)", "600dpi", and "Normal", enter "10" for CD width, "10" for FD width, and "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
2	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
3	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
			NO	Replace the PH unit.

(4) Scanner troubleshooting procedure

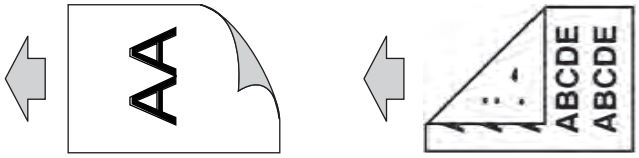
Step	Section	Check item	Result	Action
1	Original	Original is folded, bent, or raised.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass tilts.	YES	Corrected to the correct position.

Step	Section	Check item	Result	Action
4	Parts along scanning path	Mirror, lens, light guide or reflectors is dirty.	YES	Clean.
5	Parts along scanning path	Mirror, lens, light guide or reflectors is tilted.	YES	Corrected to the correct position.
			NO	Replace the CCD unit.
6	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. • Replace DF if it is deformed or hinges are broken.
7	When DF is being used: 1st side	Document reading glass tilts.	YES	Corrected to the correct position.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
8	When DF is being used: 2nd side	CIS glass or CIS cleaning brush is tilted.	YES	Corrected to the correct position.
			NO	Replace the CIS module.

14.3.12 Back marking

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



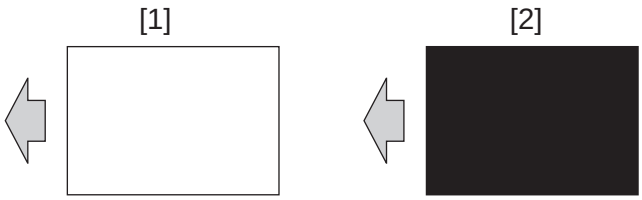
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
3	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
4	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
5	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit.
			NO	• Replace the high voltage unit/2. • Replace the high voltage unit/3.

14.3.13 Blank copy, Black copy

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Blank copy	[2]	Black copy

(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
2	Image check	• Select [Service Mode] -> [Test Mode] -> [Solid Pattern]. Select "SINGLE", "HYPER", "Gradation", and "1-Sided", enter "120" for Density, and load tray	YES	Go to engine troubleshooting procedure.

Step	Section	Check item	Result	Action
		2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.
2	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
3	Photo conductor section	The drum unit is installed properly.	NO	Reinstall.
4	Photo conductor section	There is a positive contact between the electrostatic charger application terminals and the high voltage unit connection terminals (C4-1, C4-2).	NO	Clean or correct the terminal.
5	Developing section	There is a positive contact between the developing bias application terminals and the high voltage unit connection terminals.	NO	Clean or correct the terminal.
6	Connector connection	Faulty connector connection the high voltage unit/1 (CN1), high voltage unit/2 (CN1), high voltage unit/3 (CN1) and MFP board (CN9E, CN11E).	YES	Reconnect the connector.
7	Write section	Faulty connector connection the MFP board (CN2) and PH relay board (CN7, CN8).	YES	Reconnect the connector.
8	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the high voltage unit/1. • Replace the high voltage unit/2. • Replace the high voltage unit/3. • Replace the MFP board. • Replace the PH unit.

(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Black copy: Scanner section	Foreign matter on scanner rails. Faulty the drive shaft and pulley shaft.	YES	Clean and apply lubricant. *1 *2
2		Scanner drive cable kinks or is damaged.	YES	Correct or change.
3		Scanner moves smoothly.	NO	• Adjust the scanner motor drive belt. • Replace the scanner motor. • Replace the scanner drive board.
4	• When original glass is being used • When DF is being used: 1st side	None of the terminal pins of the connection cable between the CCD board (PJ3) and the MFP board (CN9) is bent and a positive connection is made.	NO	Reconnect the connector.
5	• When original glass is being used • When DF is being used: 1st side	Replace the connection cable between the machine and the DF. This eliminates the trouble.	YES	Replace the connection cable.
6	• When original glass is being used • When DF is being used: 1st side	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the CCD unit. • Replace the MFP board.
7	When DF is being used: 2nd side	Faulty connector connection the DF power supply (CN1), relay connector (CN117), main body connection section (CN46) and DC power supply unit (CN002).	YES	Reconnect the connector.
8	When DF is being used: 2nd side	Faulty connector connection the CIS module (J101), dual scan image processing board (CN1) and MFP board (CN24).	YES	Reconnect the connector.

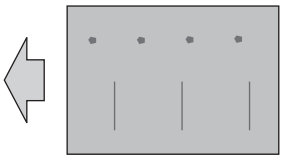
Step	Section	Check item	Result	Action
9	When DF is being used: 2nd side	Replace the connection cable between the CIS module and the MFP board. This eliminates the trouble.	YES	Replace the connection cable.
10	Parts along scanning path	Mirror, lens, light guide or reflectors is tilted.	YES	Corrected to the correct position.
11	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the CIS module. • Replace the dual scan image processing board. • Replace the MFP board.

*1: Apply DURASURF KD-453S to the shaft. DURASURF is a product manufactured by Harves Co., Ltd. (http://www.harves.co.jp).
*2: Apply FLOIL No. 947P or Launa 40 oil to the scanner rails. FLOIL is a product manufactured by KANTO KASEI LTD. (http://www.kanto-kasei.co.jp/).

14.3.14 Uneven pitch

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
4	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
5	Uneven pitch at 188 mm interval	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
6	Uneven pitch at 35 mm (bizhub 758), 40 mm (bizhub 808/958, bizhub PRO 958)	Dirt, scratches, or foreign matter on the developing roller.	YES	• Clean. • Replace the developing unit.
7	Uneven pitch at 57 mm interval	Dirt, scratches, or foreign matter on the 1st transfer roller.	YES	Replace the transfer belt unit.
8	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
9	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
10	Uneven pitch	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.
11	Uneven pitch at 94 mm interval	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
12	Uneven pitch at 188 mm interval (bizhub 958, bizhub PRO 958) Uneven pitch at 126 mm interval (bizhub 808/758)	Dirt, scratches, or foreign matter on the fusing belt.	YES	• Clean. • Replace the fusing unit.

Step	Section	Check item	Result	Action
13	Uneven pitch at 157 mm interval (bizhub 958, bizhub PRO 958) Uneven pitch at 126 mm interval (bizhub 808/758)	Dirt, scratches, or foreign matter on the fusing pressure roller.	YES	• Clean. • Replace the fusing unit.
14	Paper path	There is dirty or foreign matter on paper path.	YES	Check and clean the paper path including the duplex section.
15	Connector connection	Faulty connector connection the high voltage unit/1 (CN1), high voltage unit/2 (CN1) and MFP board (CN9E, CN11E).	YES	Reconnect the connector.
			NO	• Replace the transfer belt unit. • Replace the high voltage unit/1. • Replace the high voltage unit/2. • Replace the MFP board.

14.3.15 Uneven gloss, Rough gloss

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.

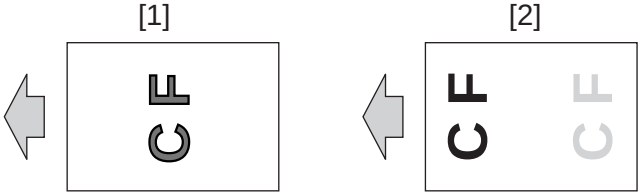
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident. (rough gloss)	YES	Go to the next step.
3	Service Mode-> Fusing Temperature	Select [Service Mode] -> [Machine] -> [Fusing Temperature] and lower the fusing temperature, and the image trouble is eliminated.	NO	Return the fusing temperature to the original one and go to the next step.
4	Exit tray front roller, Exit roller	Faulty pressure operation of the exit tray front roller or exit roller.	YES	Correct.
5	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
6	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit.
			NO	Replace the power supply of fusing.

14.3.16 Poor fusing performance, Offset

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Poor fusing performance	[2]	Offset

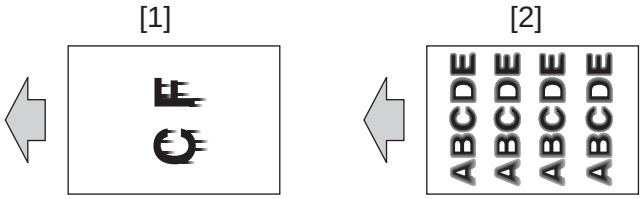
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Image check: Poor fusing performance	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
3	Image check: Poor fusing performance	• Select [Service Mode] -> [System 2] -> [Smart Fusing Control] and select [Prohibit]. • Check the image after printing and the abnormal image is evident.	YES	Return the setting to the original one and go to the next step.
4	Image check: Offset	• Select [Service Mode] -> [Test Mode] -> [Gradation Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black(1PC)", "Front Half", and "12 gradations", and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
5	Service Mode -> Fusing Temperature	Select [Service Mode] -> [Machine] -> [Fusing Temperature] and make the necessary adjustment, and the image trouble is eliminated. * Poor fusing performance: Decrease the setting value * Offset: Increase the setting value	NO	Return the setting value to the original one and go to the next step.
6	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
7	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit.
			NO	Replace the power supply of fusing.

14.3.17 Brush effect, Image bleeding

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1] Brush effect	[2] Image bleeding

(2) Initial troubleshooting procedure

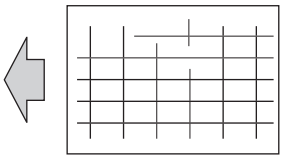
Step	Section	Check item	Result	Action
1	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
2	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
3	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
4	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
5	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "HYPER", "1-Sided", "Black(1PC)", "600dpi", and "Normal", enter "10" for CD width, "10" for FD width, and "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to the next step.
6	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean.

Step	Section	Check item	Result	Action
				• Replace the transfer belt unit.
7	2nd transfer section	Dirt or foreign matter on the transfer roller.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
8	2nd transfer section	Dirt or foreign matter on the charge eliminating needle.	YES	• Remove the foreign matter. • Replace the transfer roller unit.
9	Service Mode -> Fusing Temperature	Select [Service Mode] -> [Machine] -> [Fusing Temperature] and make the necessary adjustment, and the image trouble is eliminated. * Increase or decrease the setting value	NO	Return the setting value to the original one and go to the next step.
10	Service Mode -> Fusing Transport Speed	Select [Service Mode] -> [Machine] -> [Fusing Transport Speed] and make the necessary adjustment, and the image trouble is eliminated. * Brush effect: Increase or decrease the setting value * Image bleeding: Decrease the setting value	NO	Return the setting value to the original one and go to the next step.
11	Fusing unit	There is dirty or foreign matter on paper path of fusing unit.	YES	Clean. (Disassembling the fusing unit is prohibited.)
12	Fusing unit	Scratches on belt and roller in fusing unit.	YES	Replace the fusing unit.
			NO	Replace the power supply of fusing.

14.3.18 Blurred fine lines

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Damp paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
3	Unclear thin line in main scan direction	Select [Service Mode] -> [Machine] -> [LD adjustment] -> [LD Light Width Adjustment] and the image trouble is eliminated.	NO	Return the setting value to the original one and go to the next step.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "FEET", "1-Sided", "Black(1PC)", "600dpi", and "Normal", enter "3" for CD width, "3" for FD width, and "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Dirt or foreign matter on the dust-proof glass of the PH.	YES	Clean the print head window.
2	Charging section	There is dirty or foreign matter on charge corona.	YES	• Clean the comb electrode. • Clean the charge corona control plate.
3	Photo conductor section	Dirt, scratches, or foreign matter on the photo conductor.	YES	• Clean. • Replace the drum unit.
4	Transfer belt unit	Dirt, scratches, or foreign matter on the transfer belt.	YES	• Clean. • Replace the transfer belt unit.

Step	Section	Check item	Result	Action
			NO	Replace the PH unit.
5	Transfer belt unit	There is a positive contact between the transfer belt application terminals and the high voltage unit connection terminals (BC).	NO	Clean or correct the terminal.
6	2nd transfer section	There is a positive contact between the application terminals of the 2nd transfer and the connection terminals (T2, E) and ground terminal of the high voltage unit.	NO	Clean or correct the terminal.

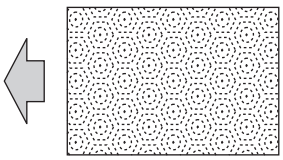
(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is folded, bent, or raised.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass tilts.	YES	Corrected to the correct position.
4	Parts along scanning path	Mirror, lens, light guide or reflectors is tilted.	YES	Corrected to the correct position.
			NO	Replace the CCD unit.
5	When DF is being used	DF does not lie flat.	YES	• Adjust the DF height. • Replace DF if it is deformed or hinges are broken.
6	When DF is being used: 1st side	Document reading glass tilts.	YES	Corrected to the correct position.
			NO	• Replace the LED exposure unit. • Replace the CCD unit.
7	When DF is being used: 2nd side	CIS glass or CIS cleaning brush is tilted.	YES	Corrected to the correct position.
			NO	Replace the CIS module.

14.3.19 Moire

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change the original.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	NO	Go to the next step.
3	Original direction	Change the direction in which the original is placed. This eliminates moire.	YES	Change the original direction.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Image check	• Select [Service Mode] -> [Test Mode] -> [Halftone Pattern]. Select "SINGLE", "HYPER", "Gradation", "1-Sided", "Black (1PC)", and "Full Bleed", enter "64" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Service Mode -> Paper Feed Direction Adj.	Select [Service Mode] -> [Machine] -> [Printer Area] -> [Paper Feed Direction Adj.] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
2	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	• Replace the PH unit. • Replace the MFP board.

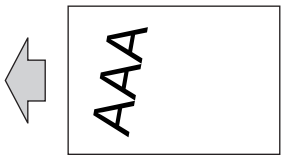
(4) Scanner troubleshooting procedure

Step	Section	Check item	Result	Action
1	When original glass is being used: Sub Scan Zoom Adj.	Select [Service Mode] -> [Machine] -> [Scan Area] -> [Sub Scan Zoom Adj.] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CCD unit.
2	When DF is being used: 1st side: Feed Zoom	Select [Service Mode] -> [ADF] -> [Feed Zoom] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CCD unit.
3	When D is being used: 2nd side: FD-Mag. Adj. (B)	Select [Service Mode] -> [ADF] -> [FD-Mag. Adj. (B)] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
4	When DF is being used: 2nd side: Main Scanning Direction Zoom	Select [Service Mode] -> [ADF] -> [Main Scanning Direction Zoom] and make the necessary adjustment, and the image trouble is eliminated.	YES	Readjust.
			NO	Replace the CIS module.

14.3.20 Skewed image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Initial troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original	Original is skew.	YES	• Reposition original. • Use an original that is not skew.
2	Original direction	Change the direction in which the original is placed. This eliminates the trouble.	YES	Change the original direction.
3	Paper Setting	The paper to be used for printing does not match the paper type and size of paper setting selected on the machine.	YES	Make the paper setting again on the machine.
4	Service Mode -> Stabilizer	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Stabilization Only] and the image trouble is eliminated.	NO	Go to the next step.
5	Service Mode -> Gradation Adjust	Select [Service Mode] -> [Imaging Process Adjustment] -> [Gradation Adjust] and the image trouble is eliminated.	NO	Go to the next step.
6	Image check	• Select [Service Mode] -> [Test Mode] -> [Lattice Pattern]. Select "SINGLE", "FEET", "1-Sided", "Black(1PC)", "600dpi", and "Normal", enter "5" for CD width, "5" for FD width, and "255" for Density, and load tray 2 with A3 paper. Press the start key. This runs a print cycle. • Check the image after printing and the abnormal image is evident.	YES	Go to engine troubleshooting procedure.
			NO	Go to scanner troubleshooting procedure.

(3) Engine troubleshooting procedure

Step	Section	Check item	Result	Action
1	Paper path	There is dirty or foreign matter on registration roller or paper path.	YES	Clean paper path.

Step	Section	Check item	Result	Action
2	Service Mode -> Printer Reg. Loop Adj.	Select [Service Mode] -> [Machine] -> [Printer Reg. Loop Adj.] and make the necessary adjustment, and the image trouble is eliminated.	NO	Go to the next step.
3	Service Mode -> Initialize + Image Stabilization	Select [Service Mode] -> [Imaging Process Adjustment] -> [Stabilizer] -> [Initialize + Image Stabilization] and [Gradation Adjust], and the image trouble is eliminated.	YES	Readjust.
			NO	Check the registration roller.

(4) Scanner troubleshooting procedure

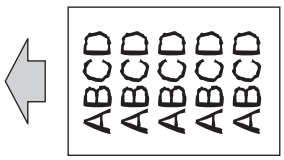
Perform the scanner troubleshooting procedure after having made sure that the same image trouble does not occur in the printer system.

Step	Section	Check item	Result	Action
1	Parts along scanning path	Mirror, lens, light guide or reflectors is tilted.	YES	Corrected to the correct position.
2	When original glass is being used	Perform [Skew Adj.] of mechanical adjustment. This eliminates the problem of skew image.	YES	• Readjust.
		Original glass not installed properly.	YES	• Reinstall Original glass. • Check the original set position.
			NO	Replace the CCD unit.
3	When DF is being used: skew image on both sides	Select [Service Mode] -> [ADF] -> [Registration Loop Adj.] and make the adjustment. This eliminates the problem of skew image.	YES	Readjust.
4	While DF is being used: skew image on front side only	Perform [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew (Front)], and check that [Avg. Value] is out of “specified range.”	YES	Go to the next step.
		Perform [Adjusting front side skew feed on ADF] of mechanical adjustment. This eliminates the problem of skew image.	YES	Readjust.
			NO	Replace the CCD unit.
5	While DF is being used: skew image on back side only	Perform [Service Mode] -> [ADF] -> [Skew Measurement] -> [DFSkew (Back)], and check that [Avg. Value] is out of “specified range.”	YES	Go to the next step.
		Perform [Adjusting back side skew feed on ADF] of mechanical adjustment. This eliminates the problem of skew image.	YES	Readjust.
			NO	Replace the CIS module.

14.3.21 Distorted image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



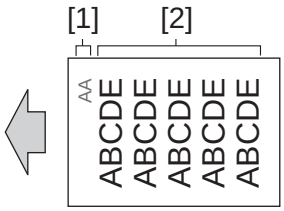
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Installation state	Machine not installed on a flat site.	YES	Install the machine horizontally.
2	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
3	When original glass is being used	Original glass not installed properly.	YES	Corrected to the correct position.
			NO	Replace the CCD unit.
4	Parts along scanning path	Mirror, lens, light guide, or reflectors are not installed properly.	YES	Corrected to the correct position.
5	When DF is being used: Distortion on 1st side	CCD board not installed properly.	YES	Corrected to the correct position.
			NO	Replace the CCD unit.
6	When DF is being used: Distortion on 2nd side	CIS module not installed properly.	YES	Corrected to the correct position.
			NO	Replace the CIS module.

14.3.22 ACS malfunction

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Color original section	[2]	Black and white original section

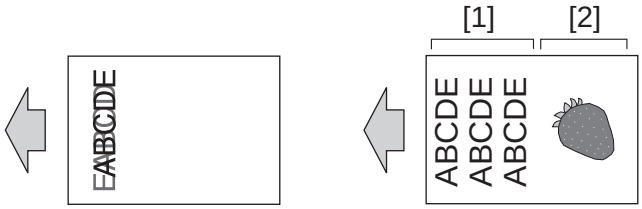
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Original Type	Select [Copy setting] -> [Original Type] and change the setting, and the image trouble is eliminated.	YES	Correct the setting.
2	Original direction	Change the direction in which the original is placed. This eliminates the trouble.	YES	Change the original direction.
3	User Settings -> Auto Color Level Adjust.	Select [Utility] -> [User Settings] -> [System Settings] -> [Auto Color Level Adjust.] and the image trouble is eliminated.	YES	Readjust.
			NO	• Change the original direction. • Make the setting according to the type of original. (If the original contains a colored area at its corner, colored area detection NG may result.)

14.3.23 Abnormal image

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



[1]	Data on the previous page	[2]	Data on the next page

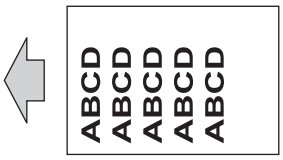
(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	When original glass is being used When DF is being used: 1st side	None of the terminal pins of the connection cable between the CCD board (PJ3) and the MFP board (CN9) is bent and a positive connection is made.	NO	Reconnect the connector.
2	When original glass is being used When DF is being used: 1st side	Replace the connection cable between the CCD board and the MFP board. This eliminates the trouble.	YES	Replace the connection cable.
			NO	• Replace the CCD unit. • Replace the MFP board.
3	When DF is being used: 2nd side	Faulty connector connection the DF power supply (CN1), relay connector (CN117), main body connection section (CN46) and DC power supply unit (CN002).	YES	Reconnect the connector.
4	When DF is being used: 2nd side	Faulty connector connection the CIS module (J101), dual scan image processing board (CN1) and MFP board (CN24).	YES	Reconnect the connector.
5	When DF is being used: 2nd side	Replace the connection cable between the CIS module and the dual scan image processing board. This eliminates the trouble.	YES	Replace the connection cable.
6	Service Mode -> Self-diagnostic	Select [Service Mode] -> [State Confirmation] -> [Self-diagnostic] -> [Check All] and perform the function. Then, "NG" appears.	YES	Take relevant action corresponding to the check item in which "NG" has appeared.
			NO	• Replace the CIS module. • Replace the dual scan image processing board. • Replace the MFP board.

14.3.24 Small print image (reduced)

(1) Typical faulty images

The arrow in the exemplary image troubles indicates the paper feeding direction.



(2) Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Write section	Check if the PH unit for bizhub 958/808 is wrongly installed in bizhub 758.	YES	Check if the PH unit for bizhub 958/808 is wrongly installed in bizhub 758.

15. IC PROTECTOR

15.1 Outline

- To increase product safety, this MFP has an IC protector (ICP) installed in each board. ICP is a component that protects IC. If the amount of the current supplied to the electrical parts such as motor exceeds the set level, ICP trips to protect IC from over current. The following list contains ICP installed in each board, related devices, and symptoms that occur when ICP trips.

15.2 IC protector list

15.2.1 bizhub 958/808/758, bizhub PRO 958

(1) MFP board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1E	-	USB hub board	Unable to be detected	-
F2E	-	DC to DC converter for 5V power supply	Mechanical controller sub-CPU communication error	C40A1
	PFTDB	Paper feed/transport drive board	Paper feed communication error	C0002
	LUDB	LU drive board		
	PHRYB	PH relay board	PH communication error	C4002
	M1	Transfer belt motor	Transfer belt motor's rotation trouble	C5104
	M18	PC motor/K	PC motor's failure to turn	C225B
	IHPU	IH power supply unit	IH malfunction (CPU)	C3B02
			IH malfunction (monitor)	C3B03
	PS53	Waste toner box set sensor	Waste toner box set sensor detection failure	-
	PS59	Fusing pressure home sensor	Pressure roller pressure failure	C3101
	PS56	Fusing belt rotation sensor (bizhub 958, bizhub PRO 958) Fusing belt rotation sensor (bizhub 808/758)	Heating roller failure to turn	C3102
	PS23	Waste toner lock sensor	Waste toner transport motor's failure to turn	C2204
	PS51	1st transfer pressure sensor/K	Transfer belt fault at initial position return	C2152
			Transfer belt spacing fault at K pressure switching	C2153
			Transfer belt contact fault after K pressure established	C2155
			Transfer belt contact fault at all retraction switching	C2157
	PS54	Waste toner full sensor	Waste toner full sensor detection failure "Waste Toner Box Full" display	-
	TEM/HUMS	Temperature/humidity sensor	Faulty image	-
	PEIB/1	Tray 1 paper empty indicator board	The paper empty indicator LED does not light up.	-
	PEIB/2	Tray 2 paper empty indicator board		
	TCB/K	Toner cartridge set board/K	New toner bottle detection signal or installation detection signal is not detected "Install toner cartridge." display	-
F3E	-	IR	Unable to be detected	C61XX/C67XX/ C9XXX etc.
	-	DF	Unable to recover from the sleep mode/Original set detection failure due to DF	-
	-	LV	Unable to output from the 24V system	-
	MS3	Front bottom door switch	"Front bottom door is open." Ensure that it is properly closed." display	-
	TS1	Fusing belt thermostat (bizhub 958) Heating roller thermostat (bizhub 808/758)	Thermostat breaks detection	C3903
	NF1	Noise filter	IH malfunction (CPU)	C3B02
			IH malfunction (monitor)	C3B03
	-	IC80E power supply load	The phenomenon similar to IC80E occurs	-
IC80E	PZS/K	Toner empty sensor/K	Abnormally low toner density detected black TCR sensor	C2557
	TEMS3	Fusing belt temperature sensor/3 (bizhub 958, bizhub PRO 958) Heating roller temperature sensor/3 (bizhub 808/758)	Fusing abnormally low temperature detection (Edge of the heating roller)	C3822
			Fusing sensor wire breaks detection (Edge of the heating roller)	C3922

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
	TEMS1	Fusing belt temperature sensor/1 (bizhub 958, bizhub PRO 958) Heating roller temperature sensor/1 (bizhub 808/758)	Fusing abnormally low temperature detection (Middle of the heating roller)	C3825
			Fusing sensor wire breaks detection (Middle of the heating roller)	C3925
			Fusing warm-up trouble	C3425
	TEMS2	Fusing belt temperature sensor/2 (bizhub 958, bizhub PRO 958) Heating roller temperature sensor/2 (bizhub 808/758)	Fusing abnormally low temperature detection (Center of the heating roller)	C3826
			Fusing sensor wire breaks detection (Center of the heating roller)	C3926
	TH3	Pressure roller thermistor/2 (bizhub 958, bizhub PRO 958)	Fusing abnormally low temperature detection (pressure)	C3823
			Fusing warm-up trouble (Pressure) (bizhub 958 only)	C3423
	IDCS/Fr	IDC sensor/Fr	Occurrence of warning code	P-5/P-9
F5E	M38	Cleaning brush motor	Cleaning brush motor's failure to turn	C2257
F6E	FM101	Tucking fan/Md	Tucking fan/Md's failure to turn	-
	FM102	Tucking fan/Rr		
	FM103	Tucking fan/Fr		
	FM13	Paper cooling fan/out	Paper cooling fan/out's failure to turn	C3303
	FM8	Toner cartridge cooling fan	Toner cartridge cooling fan failure to turn	C5355
	FM7	Toner suction fan	Toner suction fan failure to turn	C2350
	FM6	Ozone ventilation fan	Ozone ventilation fan's failure to turn	C5354
	FM12	Paper cooling fan/in	Paper cooling fan/in's failure to turn	C0351
	FM11	IH coil cooling fan	IH coil cooling fan's failure to turn	C5306
	FM9	DC power supply cooling fan	DC power supply cooling fan's failure to turn	C5351
	TCT *	Total counter	Unable to make a copy (LED of Start Key blinks in red.)	-
	KCT	Key counter	Unable to make a copy	-
	IHMEB	IH magnetic erasing board	Dehumidification heater does not turn ON.	-
F7E	M12	Toner supply motor/K	Abnormally low toner density detected black TCR sensor	C2557
	M14	Toner cartridge motor/CK	Abnormally low toner density detected black TCR sensor	C2557
	M21	1st transfer pressure motor	Transfer belt fault at initial position return	C2152
			Transfer belt spacing fault at K pressure switching	C2153
			Transfer belt contact fault after K pressure established	C2155
			Transfer belt contact fault at all retraction switching	C2157
	FM10	IH power supply cooling fan	IH power supply cooling fan's failure to turn	C5304
	FM16	IU cooling fan /in	IU cooling fan/in's failure to turn	C2356
	FM18	Output tray exhaust fan	Output tray exhaust fan's failure to turn (bizhub 958/808, bizhub PRO 958 only)	C3310
F9E	M19	Developing motor/K	Developing motor/K's failure to turn	C2259
	M18	PC motor/K	PC motor's failure to turn	C225B
F11E	M1	Transfer belt motor	Transfer belt motor’s rotation trouble	C5104
F12E	HV1	High voltage unit/1	Faulty image (No images are printed on a paper)	-
			Occurrence of warning code	P-5/P-9
	HV2	High voltage unit/2	Faulty image (low image density)	-
			Occurrence of warning code	P-5/P-9/P-27
	HV3	High voltage unit/3	2nd transfer section jam	-
F13E	M4	Paper exit motor	Paper exit section jam	-
	M33	Reverse motor	Paper exit section jam	-
	SD1	Gate switch solenoid	Paper exit section jam	-
	SD2	IDC sensor shutter solenoid	Occurrence of warning code	P-5/P-27
F14E	M30	Fusing motor	Fusing motor failure to turn	C3201
	M34	Fusing pressure motor	Pressure roller release failure	C3103

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
PS1E	TCB/K	Toner cartridge set board/K	Detection failure of new toner bottle detection signal and installation detection signal "Install toner cartridge." display	-

- * Japan only

(2) Paper feed/transport drive board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	LU board power system power supply	Paper feed jam at LU	-
F2	FM1	Suction fan	Suction fan's failure to turn	C0301
F3	PFTDB	Paper feed/transport drive board	Paper feed communication error	C0002
	-	Individual sensors (all sensors within the paper feed/transport drive board)	-	-
F4	LUDB	LU drive board	LU paper transfer jam	-
F10	M31	ADU transport motor/1	Misfeed at paper transport section	-
	M32	ADU transport motor/2	Misfeed at paper transport section	-
	M6	Tray 1 lift-up motor	Tray 1 feeder up/down abnormality	C0202
	M8	Tray 2 lift-up motor	Tray 2 feeder up/down abnormality	C0204
F11	M22	Paper feed motor	Misfeed at feed section	-
	M28	LCC vertical transport motor	Misfeed at paper transport section	-
	M27	Bypass paper feed motor	Misfeed at manual bypass tray paper feed section	-
F12	M23	Tray 3 lift-up motor	Tray 3 lift-up failure	C0206
	M24	Tray 4 lift-up motor	Tray 4 lift-up failure	C0208
	CL1	Tray 1 paper feed clutch	Misfeed at feed section	-
	CL2	Tray 2 paper feed clutch	Misfeed at feed section	-
	CL6	Tray 3 vertical transport clutch	Misfeed at feed section	-
	CL5	Tray 3 paper feed clutch	Misfeed at feed section	-
	CL3	Horizontal transport clutch	Horizontal transport section jam	-
	CL7	Tray 4 paper feed clutch	Misfeed at feed section	-
F13	M5	Tray 1 vertical transport motor	Misfeed at feed section	-
	M7	Tray 2 vertical transport motor	Misfeed at feed section	-
F14	FM4	Switchback paper cooling fan/1	Switchback paper cooling fan/1's failure to turn	C3305
	FM5	Switchback paper cooling fan/2	Switchback paper cooling fan/2's failure to turn	C3304
F15	M25	LCC vertical transport motor	Tray 3/4 feeder transportation motor's failure to turn	C0104
F16	M2	Registration motor	Misfeed at paper feed section or misfeed at transport section	-
F17	M26	Bypass lift-up motor	Manual feed up/down abnormality	C0211
	M3	2nd transfer pressure motor	Transfer roller pressure welding alienation	C2151
F19	-	Reverse voltage discharging circuit	Reverse voltage discharging circuit does not work	-

(3) PH relay board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	PHRYB	PH relay board	PH communication error	C4002
F2	FM15	IU cooling fan /out	IU cooling fan/out's failure to turn	C2353
	FM14	PH cooling fan	PH cooling fan's failure to turn	C4301
	M15	Charge cleaning motor/K	Charge cleaning motor/K malfunction	C2101
	M20	Waste toner transport motor	Waste toner transport motor's failure to turn	C2204
F3	M34	Polygon motor	Polygon motor rotation trouble	C4101
F4	EL/K	Erase LED /K	Faulty image (uneven density)	-
IC5	PHRYB	PH relay board	The output of LDPC signal does not change	C4501
	-	PH unit	SOS signal is not detected	
	LDDB/K	Laser drive board/K	Laser malfunction	

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
PS1	TCRS/K	TCR sensor/K	Black TCR sensor failure	C2564
			Developing unit installation error	-
	-	Drum unit new detection board/K	Drum unit installation error	-

15.2.2 Dual scan document feeder

(1) DF control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	M1	Reading motor	DF image reading section JAM	-
ICP2	M3	Paper feed motor	Misfeed at feed section	-
ICP3	M2	Registration motor	Misfeed at transport section	-
ICP4	-	Circuit that produces DC5V	Unable to produce DC5V in DF and MFP unable to detect DF	C6104
ICP5	M5	Lift-up motor	Lift up mechanism trouble (Upward movement)	C8103
ICP6	SD1	Stamp solenoid	Unable to place a stamp	-
ICP7	PS1	Empty sensor	Not recovered from the sleep mode	-
ICP8	M8	Front side cleaning motor	Glass cleaning mechanism trouble	C8107
	M7	Back side cleaning motor	Back side cleaning home sensor abnormality (normal)	C6105
	M4	Paper exit motor	Paper exit section jam	-
ICP9	M6	Reading roller pressure/retraction motor	Before reading pressure welding alienation mechanism trouble	C8101
ICP10	FM	Cooling fan motor	Cooling fan motor's failure	C8302
	CL1	Take-up clutch	Misfeed at feed section	-
ICP11	SCB	Sensor control board	Multi feed detection jam	-
	MFDB/1	Multi feed detection board/1 (transmitter)	Multi feed detection board failure	C8402
	MFDB/2	Multi feed detection board/2 (receiver)		
ICP15	PS4	After separate sensor	Misfeed at transport section	-
	PS5	Registration sensor	Misfeed at transport section	-
ICP16	PS6	Before read sensor	DF image reading section JAM	-
	PS11	Length Sensor2	Wrong original size detection	-

(2) DF power supply

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	CIS unit	CIS LED does not light up.	C6753
				C6754
				C6755
				C9403

15.2.3 LU-205/LU-303

(1) LU drive board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	Reverse voltage discharging circuit	Reverse voltage discharging circuit does not work	-

15.2.4 FS-536/FS-536SD

(1) FS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected	-

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F2	M11	Main tray up/down motor	Main tray up/down motor's drive malfunction	C1102

(2) SD control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected Unable to be detected "There is an open component." display	-

15.2.5 FS-537/FS-537SD

(1) FS control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected	-
F2	ZUDTB	ZU relay board	The paper tray is lowered and becomes full	-
F3	M6	Main tray up/down motor	Main tray up/down motor's drive malfunction	C1102
F4	M34	Paper transport belt motor	Paper transport belt motor's malfunction	C1152

(2) SD control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
F1	-	24V to 5V DC to DC converter	Unable to be detected Unable to be detected "There is an open component." display	-

15.2.6 PK-523

(1) Punch control board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	DC5V sensor and others in the board	Finisher communication error (Finisher detection)	C1014
ICP2	M302	Punch oscillating motor	Punch oscillating motor's drive malfunction	C1127

15.2.7 PI-507

(1) PI drive board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	-	DC5V sensor and others in the board	Finisher communication error (Finisher detection)	C1014
ICP3	M203	Transport motor	Misfeed at paper feed section	-
ICP4	CL201	Transfer clutch /Up	Misfeed at paper feed section	-
	CL202	Transfer clutch /Lw		-
	CL203	Registration clutch		-
	SD201	Pick-up solenoid /Up		-
	SD202	Pick-up solenoid /Lw		-

15.2.8 ZU-609

(1) ZU drive board

ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP1	M501	Center fold guide motor	Misfeed at fold section	-
ICP2	M501	Center fold guide motor		

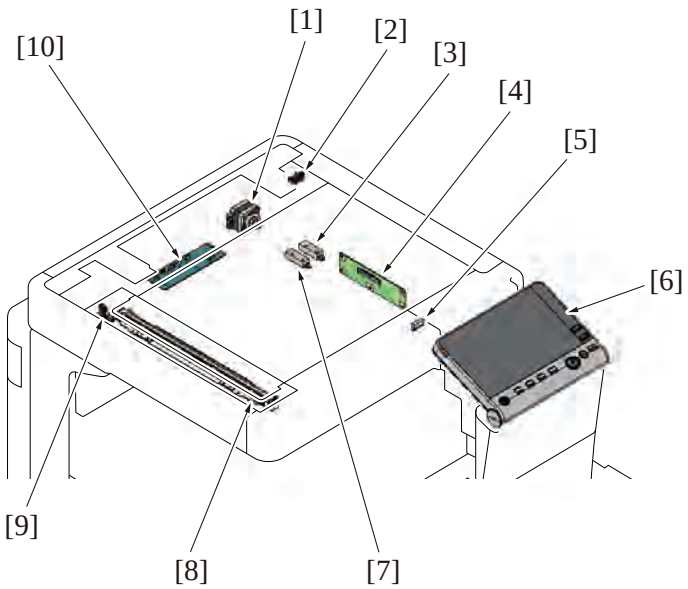
ICP No.	Symbol	Target part name	When ICP trips	
			Symptom in each load	Trouble code and others
ICP3	M502	Pressure motor	Pressure motor’s malfunction	C1133

L PARTS/CONNECTOR LAYOUT DRAWING

1. PARTS LAYOUT DRAWING

1.1 bizhub 958/808/758, bizhub PRO 958

1.1.1 Scanner section

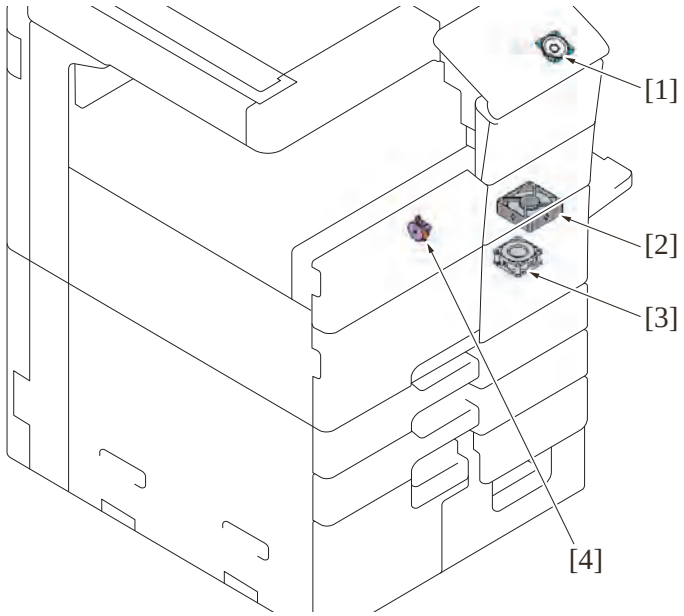


[1]	Scanner motor (M201)	[2]	Angle sensor (PS202)
[3]	Original size sensor/2 (PS204) *1	[4]	CCD board (CCDB)
[5]	Original cover sensor (RS201)	[6]	Operation panel unit
[7]	Original size sensor/1 (PS203)	[8]	LED exposure unit (LU201)
[9]	Scanner home sensor (PS201)	[10]	Scanner drive board (SCDB)

- *1: Option for overseas model

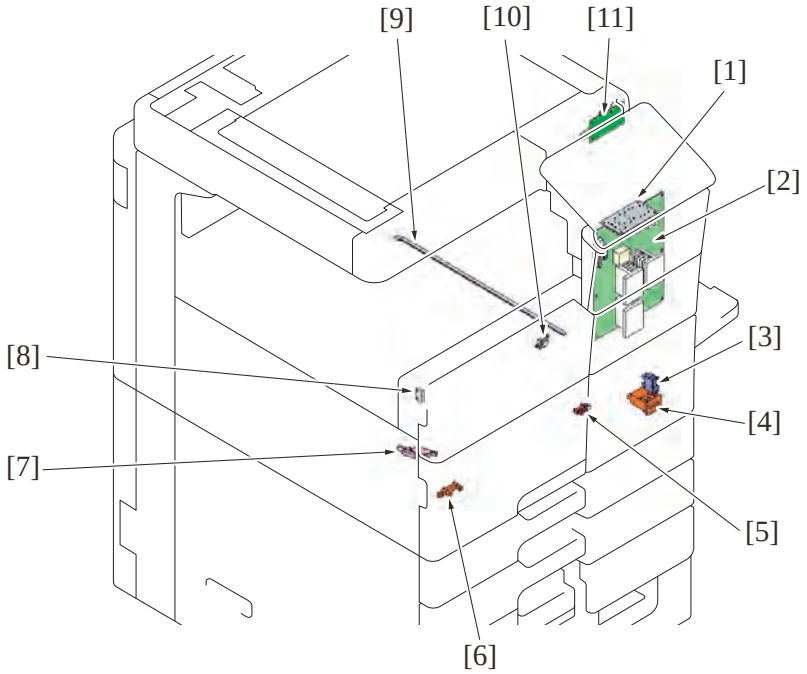
1.1.2 Front side

(1) Load



[1]	Fax speaker (SP)	[2]	IH power supply cooling fan (FM10)
[3]	IU cooling fan/in (FM16)	[4]	Toner supply motor/K (M12)

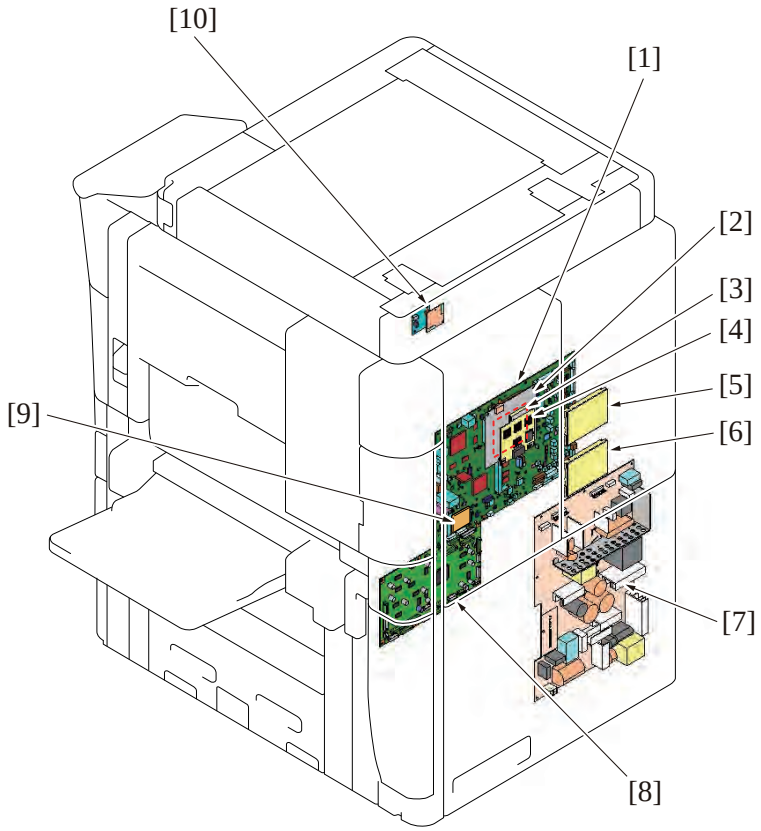
(2) Boards/switches/sensors/others



[1]	IH magnetic erasing board (IHMEB)	[2]	IH power supply unit (IHPU)
[3]	Main power switch (SW1)	[4]	Total counter (TCT)
[5]	Waste toner box set sensor (PS53)	[6]	Waste toner full sensor (PS54)
[7]	Front bottom door switch (MS3)	[8]	Front upper door switch (RS1)
[9]	Erase LED/K (EL/K)	[10]	Toner empty sensor/K (PZS/K)
[11]	USB hub board (USBHB) (optional)	-	-

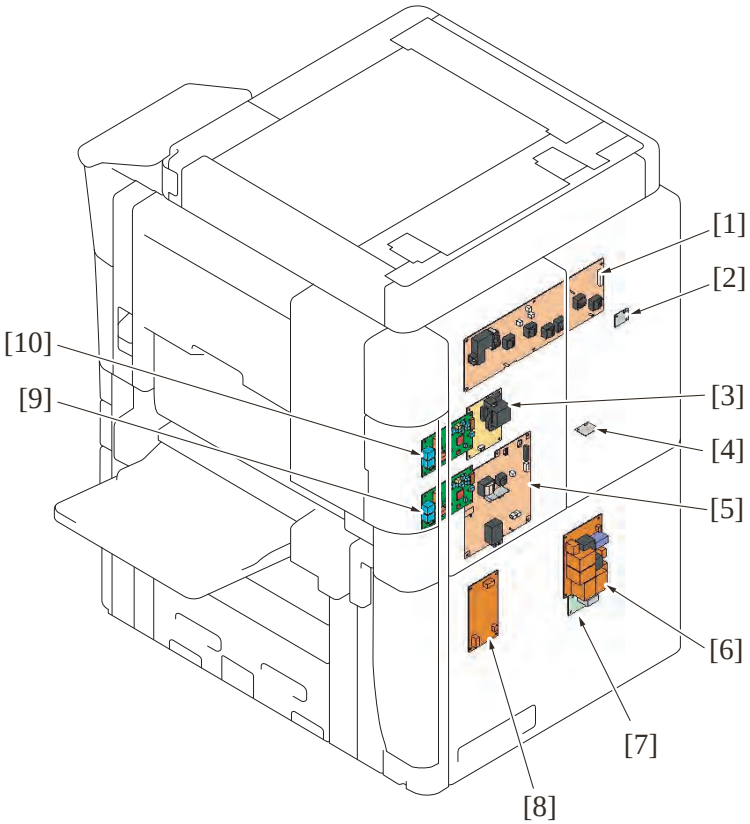
1.1.3 Back side

(1) Board



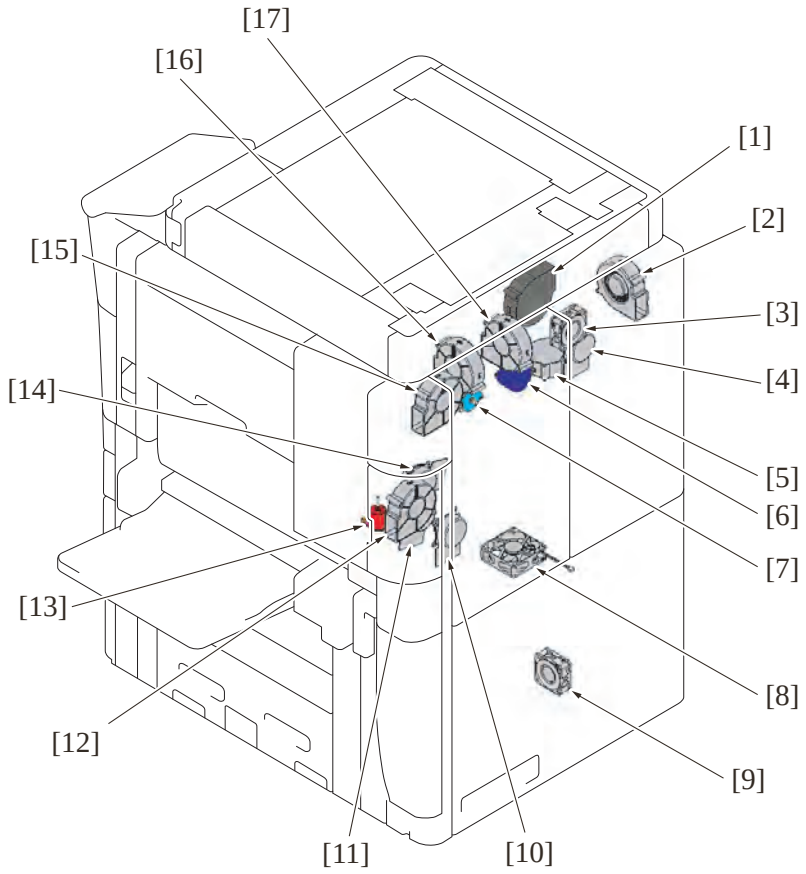
[1]	MFP board (MFPB)	[2]	Dual scan image processing board (DSIPB)

[3]	DSC board/1 (DSCB/1) (optional)	[4]	DSC board/2 (DSCB/2) (optional)
[5]	Hard disk (A) (HDD (A))	[6]	Hard disc (B) (HDD (B)) (optional)
[7]	DC power supply unit (DCPU)	[8]	Paper feed/transport drive board (PFTDB)
[9]	eMMC board (eMMC)	[10]	Upgrade Kit UK-212 (optional)



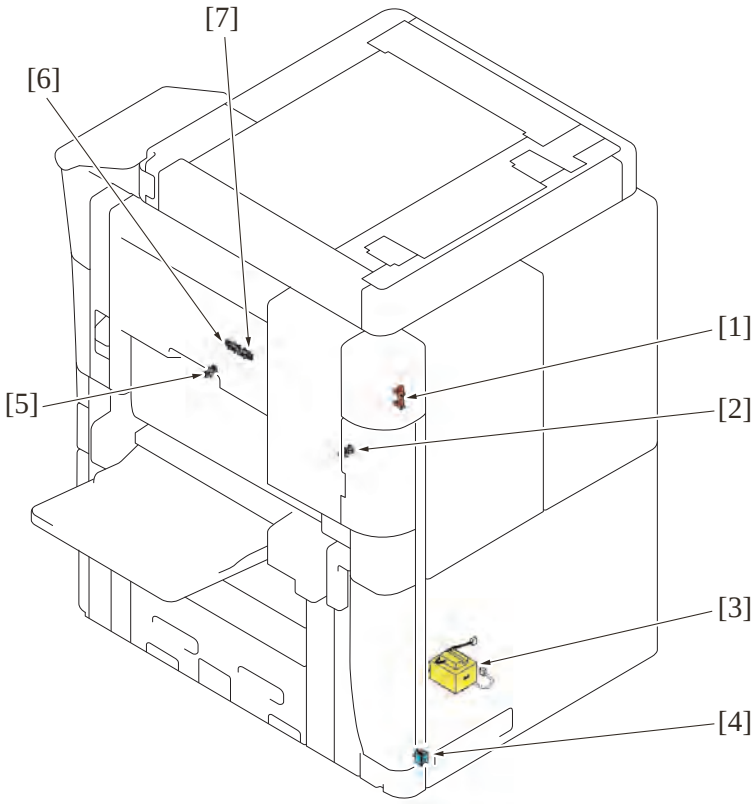
[1]	High voltage unit/2 (HV2)	[2]	Back up board/1 (ERB/1)
[3]	High voltage unit/3 (HV3)	[4]	Back up board/2 (ERB/2)
[5]	High voltage unit/1 (HV1)	[6]	Noise filter (NF1)
[7]	Dehumidifier drive board (DEDB)	[8]	Pressure roller power supply unit (PRPU) (bizhub 958/ bizhub PRO 958 only)
[9]	Fax board/1 (FAX/1) (optional)	[10]	Fax board/2 (FAX/2) (optional)

(2) Load



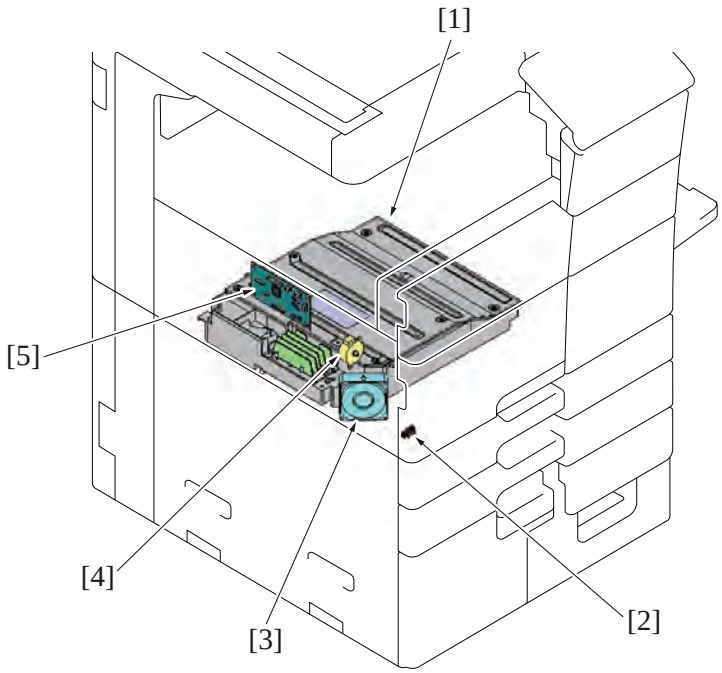
[1]	Output tray exhaust fan (FM18) (bizhub 958/808, bizhub PRO 958 only)	[2]	Toner suction fan (FM7)
[3]	Toner cartridge cooling fan (FM8)	[4]	Cleaning brush motor (M38)
[5]	IU cooling fan/out (FM15)	[6]	1st transfer pressure motor (M21)
[7]	Toner cartridge motor/CK (M14)	[8]	MFP control board cooling fan (FM17)
[9]	DC power supply cooling fan (FM9)	[10]	Developing motor/K (M19)
[11]	PC motor/K (M18)	[12]	Ozone ventilation fan (FM6)
[13]	Charge cleaning motor/K (M15)	[14]	Transfer belt motor (M1)
[15]	Paper cooling fan/out (FM13)	[16]	Paper cooling fan/in (FM12)
[17]	IH coil cooling fan (FM11)	-	-

(3) Switch/sensor/others



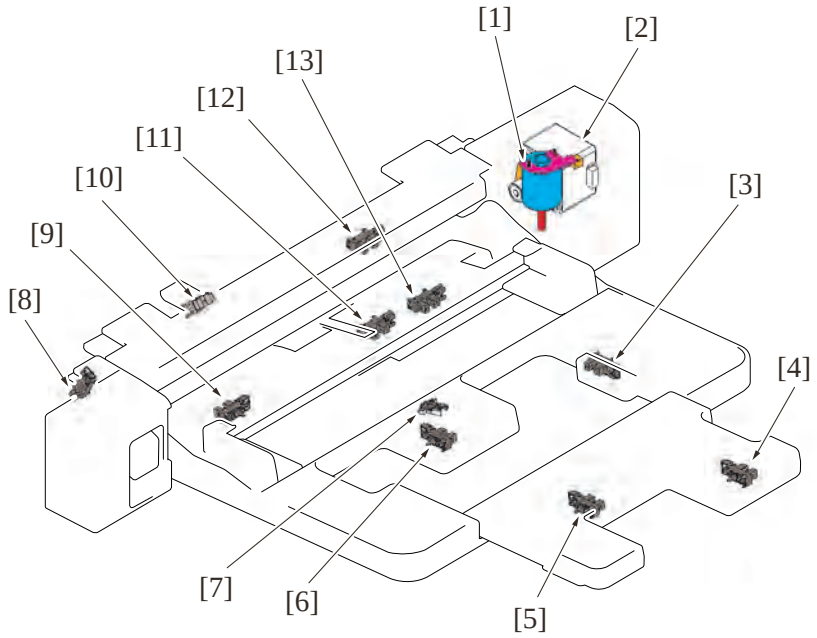
[1]	1st transfer pressure sensor/K (PS51)	[2]	Charging cleaner home sensor (PS43)
[3]	Dehumidifier heater transformer (T1) (optional)	[4]	Dehumidification heater switch (SW2)
[5]	Charging cleaner return sensor (PS44)	[6]	Fusing loop sensor/Fr (PS41)
[7]	Fusing loop sensor/Rr (PS42)	-	-

1.1.4 Around the write section



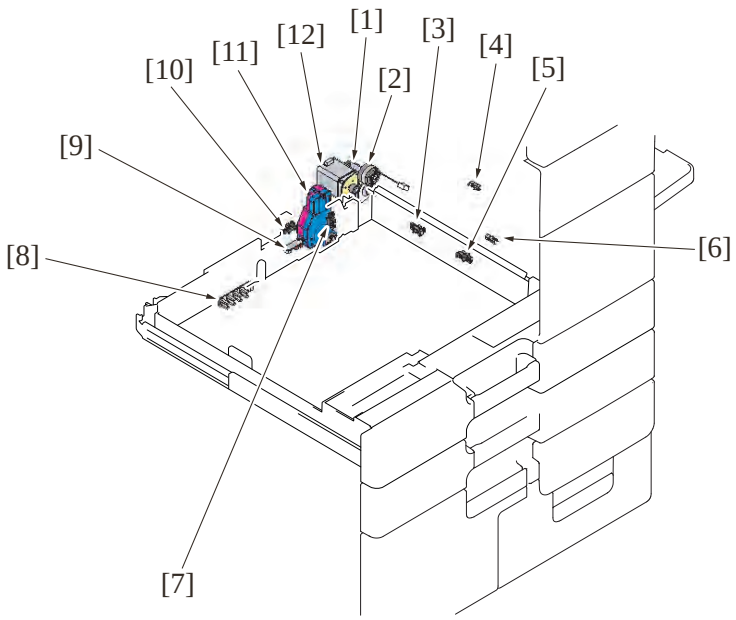
[1]	PH unit	[2]	Waste toner lock sensor (PS23)
[3]	PH cooling fan (FM14)	[4]	Waste toner transport motor (M20)
[5]	PH relay board (PHRYB)	-	-

1.1.5 Manual bypass tray



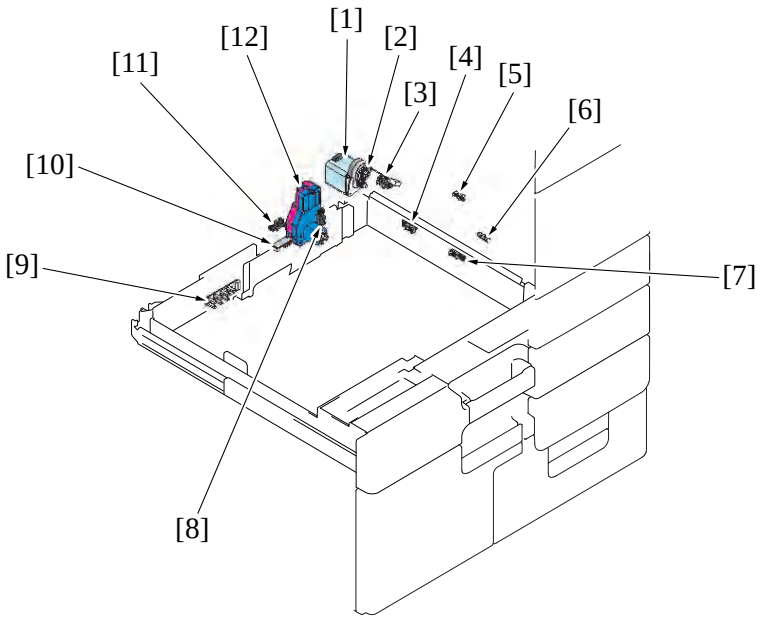
[1]	Bypass lift-up motor (M26)	[2]	Bypass paper feed motor (M27)
[3]	Bypass sub tray set sensor (PS37)	[4]	Bypass FD size sensor/3 (PS33)
[5]	Bypass FD size sensor/2 (PS32)	[6]	Bypass FD size sensor/1 (PS31)
[7]	Bypass paper CD size VR (VR1)	[8]	Bypass set sensor (PS30)
[9]	Bypass open sensor (PS60)	[10]	Bypass paper feed sensor (PS45)
[11]	Bypass empty sensor (PS34)	[12]	Bypass upper limit sensor (PS35)
[13]	Bypass lower limit sensor (PS36)	-	-

1.1.6 Tray 1



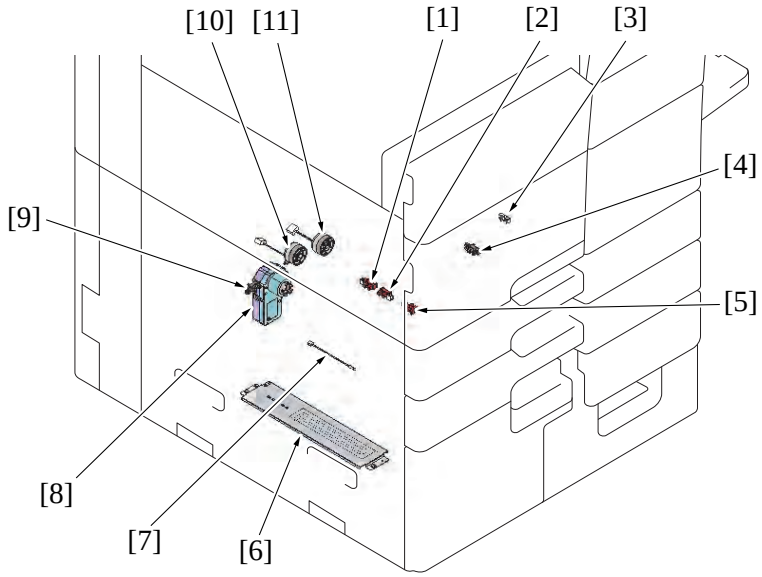
[1]	Tray 1 vertical transport motor (M5)	[2]	Tray 1 paper feed clutch (CL1)
[3]	Tray 1 upper limit sensor (PS6)	[4]	Tray 1 vertical transport sensor (PS4)
[5]	Tray 1 paper feed sensor (PS5)	[6]	Tray 1 paper empty sensor (PS2)
[7]	Tray 1 near empty sensor (PS3)	[8]	Tray 1 FD paper size board (FDPSB/1)
[9]	Tray 1 CD paper size board (CDPSB/1)	[10]	Tray 1 set sensor (PS1)
[11]	Tray 1 lift-up motor (M6)	[12]	Paper feed motor (M22)

1.1.7 Tray 2



[1]	Tray 2 vertical transport motor (M7)	[2]	Tray 2 paper feed clutch (CL2)
[3]	Right bottom door sensor (PS17)	[4]	Tray 2 upper limit sensor (PS14)
[5]	Tray 2 vertical transport sensor (PS12)	[6]	Tray 2 paper feed sensor (PS13)
[7]	Tray 2 paper empty sensor (PS10)	[8]	Tray 2 near empty sensor (PS11)
[9]	Tray 2 FD paper size board (FDPSB/2)	[10]	Tray 2 CD paper size board (CDPSB/2)
[11]	Tray 2 set sensor (PS9)	[12]	Tray 2 lift-up motor (M8)

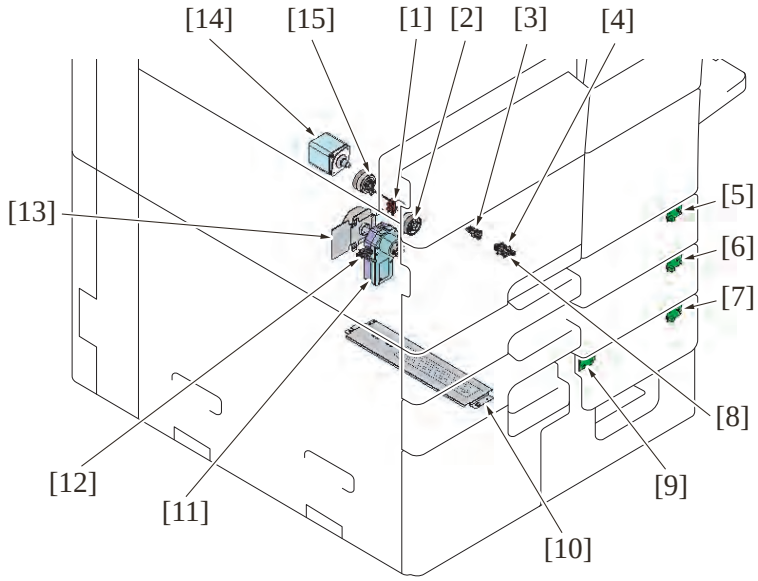
1.1.8 Tray 3



[1]	Tray 3 upper limit sensor (PS22)	[2]	Tray 3 paper empty sensor (PS19)
[3]	LCC vertical transport sensor (PS28)	[4]	Horizontal transport sensor (PS29)
[5]	Tray 3 paper feed sensor (PS21)	[6]	Tray 3 dehumidifier heater (DH1) *1
[7]	Paper temperature sensor (TH8)	[8]	Tray 3 lift-up motor (M23)
[9]	Tray 3 near empty sensor (PS20)	[10]	Tray 3 paper feed clutch (CL5)
[11]	Tray 3 transport clutch (CL6)	-	-

- 1: Standard feature. Optional setting only for North America and Europe (HT-508).

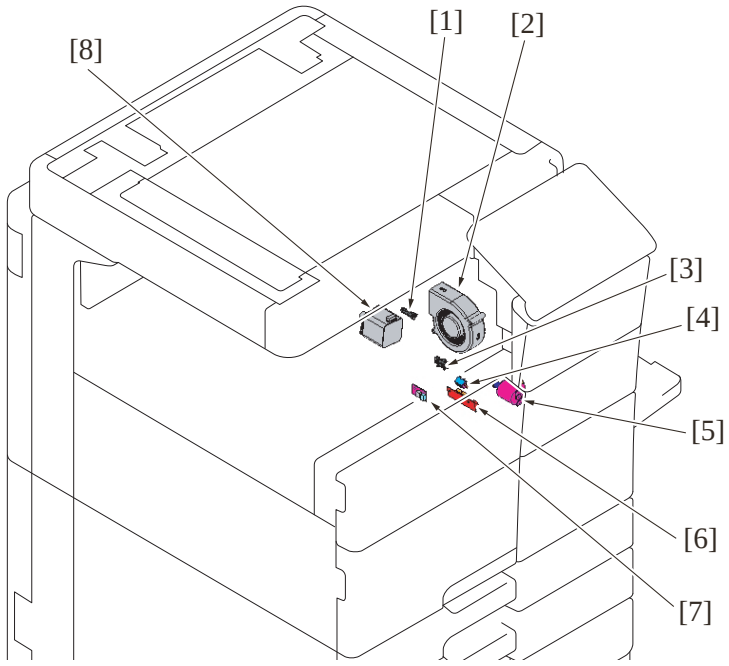
1.1.9 Tray 4



[1]	Horizontal transport set sensor (PS58)	[2]	Tray 4 paper feed clutch (CL7)
[3]	Tray 4 upper limit sensor (PS27)	[4]	Tray 4 paper empty sensor (PS24)
[5]	Tray 4 paper feed sensor (PS26)	[6]	Tray 1 paper empty indicator board (PEIB/1)
[7]	Tray 2 paper empty indicator board (PEIB/2)	[8]	Tray 4 paper empty indicator board (PEIB/4)
[9]	Tray 3 paper empty indicator board (PEIB/3)	[10]	Tray 4 dehumidifier heater (DH2) *1
[11]	Tray 4 lift-up motor (M24)	[12]	Tray 4 near empty sensor (PS25)
[13]	LCC transport motor (M25)	[14]	LCC vertical transport motor (M28)
[15]	Horizontal transport clutch (CL3)	-	-

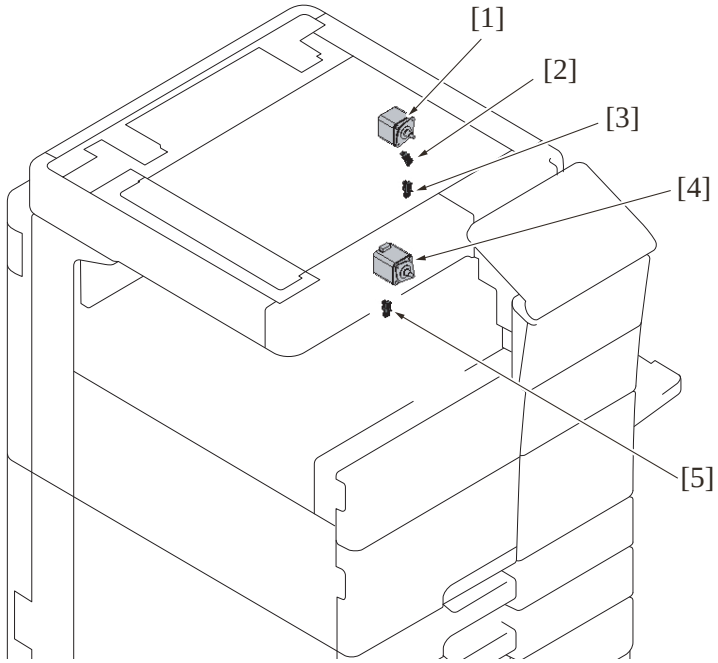
- 1: Standard feature. Optional setting only for North America and Europe (HT-508).

1.1.10 2nd transfer section



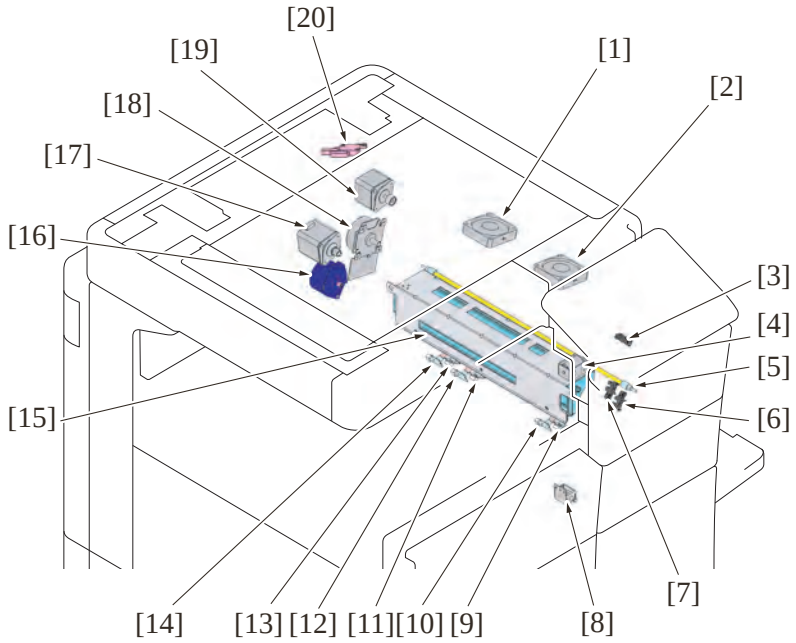
[1]	2nd transfer pressure sensor (PS50)	[2]	Suction fan (FM1)
[3]	Registration sensor (PS38)	[4]	OHP sensor (PS40)
[5]	2nd transfer pressure motor (M3)	[6]	IDC sensor/Fr (IDCS/Fr)
[7]	Temperature/humidity sensor (TEM/HUMS)	[8]	Registration motor (M2)

1.1.11 Duplex section



[1]	ADU transport motor/1 (M31)	[2]	ADU paper passage sensor/1 (PS47)
[3]	ADU door sensor (PS49)	[4]	ADU transport motor/2 (M32)
[5]	ADU paper passage sensor/2 (PS48)	-	-

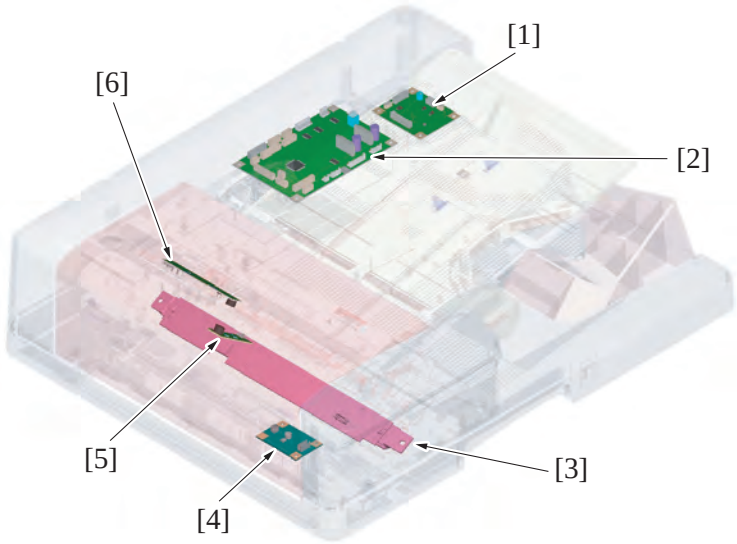
1.1.12 Fusing/paper exit section



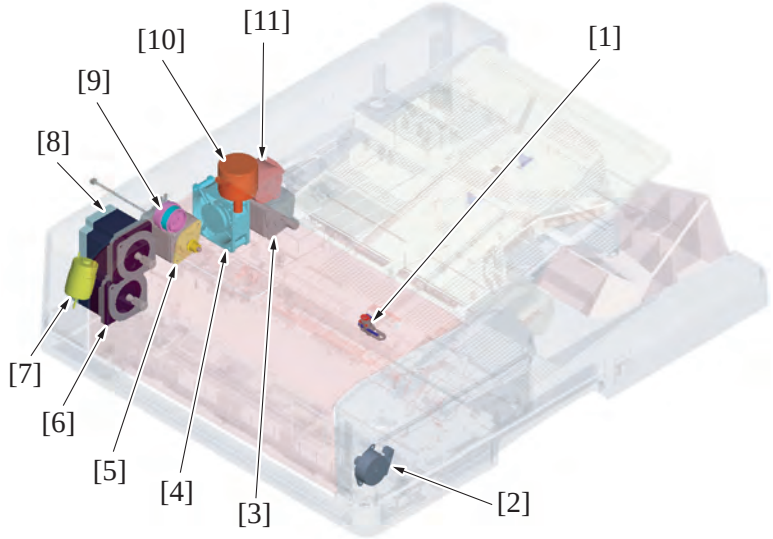
[1]	Switchback paper cooling fan/1 (FM4)	[2]	Switchback paper cooling fan/2 (FM5)
[3]	Paper exit sensor (PS39)	[4]	Gate switch solenoid (SD1)
[5]	Pressure roller heater (FH) *1	[6]	bizhub 958/bizhub PRO 958: Fusing belt rotation sensor (PS56) bizhub 808/bizhub 758: Heating roller rotation sensor (PS56)
[7]	Fusing pressure home sensor (PS59)	[8]	IDC sensor shutter solenoid (SD2)
[9]	Heating roller temperature sensor/3 (TEMS3) *2	[10]	Fusing belt temperature sensor/3 (TEMS3) *1
[11]	Heating roller temperature sensor/1 (TEMS1) *2	[12]	Fusing belt temperature sensor/1 (TEMS1) *1
[13]	Heating roller temperature sensor/2 (TEMS2) *2	[14]	Fusing belt temperature sensor/2 (TEMS2) *1
[15]	IH coil (IHC)	[16]	Fusing pressure motor (M34)
[17]	Exit motor (M4)	[18]	Fusing motor (M30)
[19]	Switchback motor (M33)	[20]	Right upper door switch (MS2)

- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

1.2 Dual scan document feeder

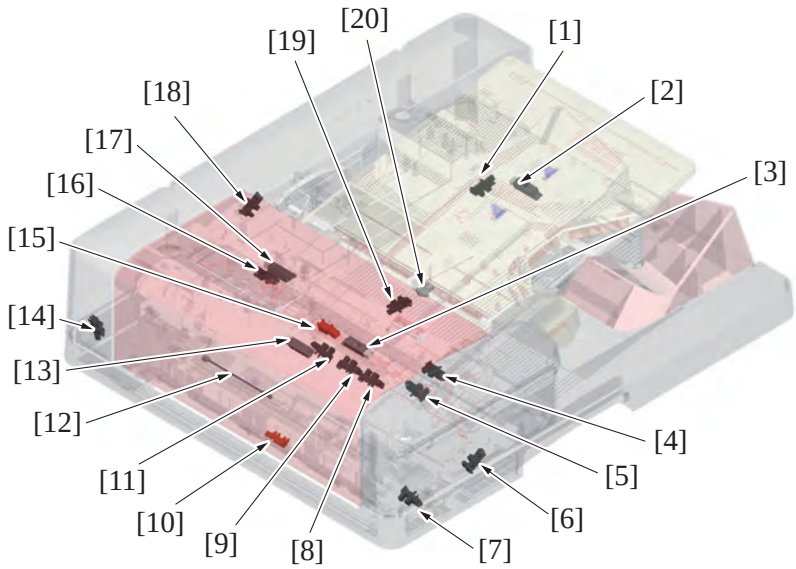


[1]	Sensor control board (SCB)	[2]	DF control board (DFCB)
[3]	CIS module (CIS)	[4]	DF power supply (DFPU)
[5]	Multi feed detection board/1 (transmitter) (MFDB/1)	[6]	Multi feed detection board/2 (receiver) (MFDB/2)



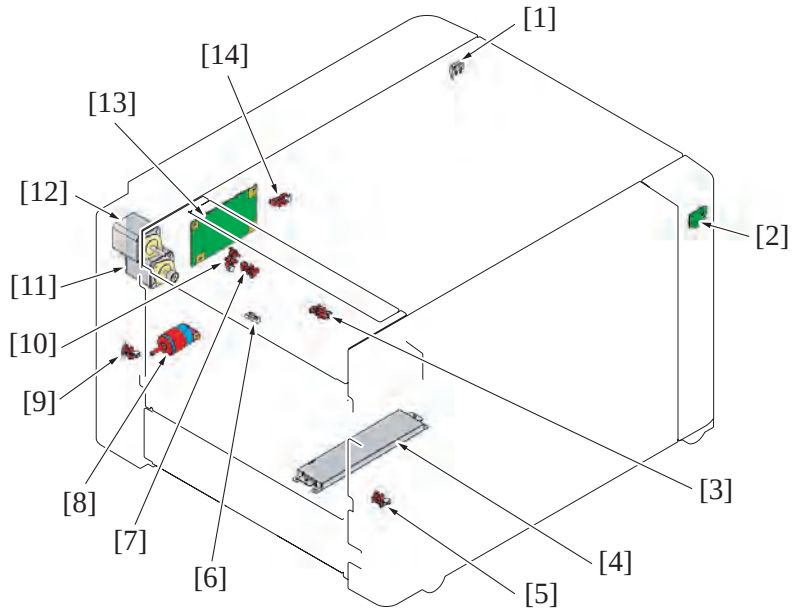
[1]	Stamp solenoid (SD1)*	[2]	Front side cleaning motor (M8)
[3]	Exit motor (M4)	[4]	Cooling fan motor (FM)
[5]	Take-up motor (M1)	[6]	Registration motor (M2)
[7]	Reading roller pressure/retraction motor (M6)	[8]	Reading motor (M3)
[9]	Take-up clutch (CL1)	[10]	Lift-up motor (M5)
[11]	Back side cleaning motor (M7)	-	-

- * : Option



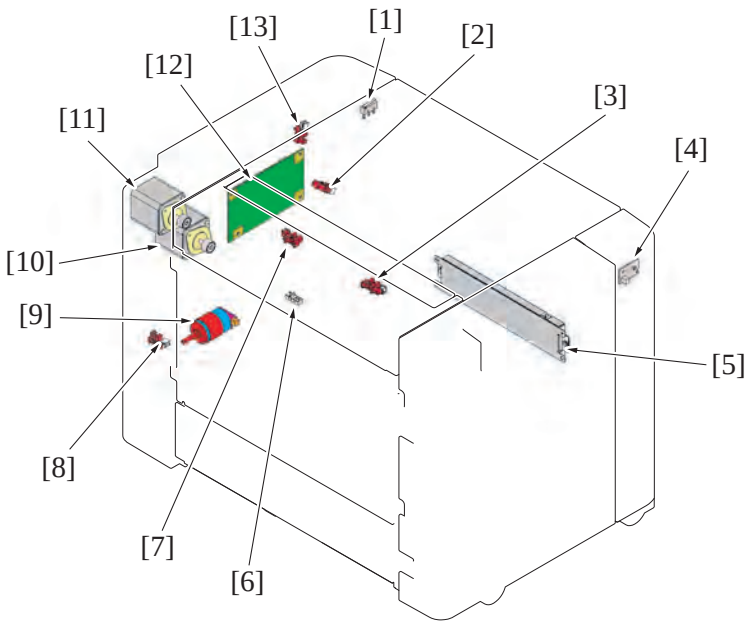
[1]	Length sensor/1 (PS10)	[2]	Length sensor/2 (PS11)
[3]	Empty sensor (PS1)	[4]	Exit sensor (PS7)
[5]	Lift up lower sensor (PS3)	[6]	CIS under guide open/close sensor (PS20)
[7]	Front side cleaning home sensor (PS18)	[8]	Consolidation sensor/3 (PS15)
[9]	Consolidation sensor/2 (PS14)	[10]	Before read sensor (PS6)
[11]	Consolidation sensor/1 (PS13)	[12]	DF temperature sensor (TH)
[13]	Registration sensor (PS5)	[14]	Read roller home sensor (PS8)
[15]	After separate sensor (PS4)	[16]	Back side cleaning home sensor (PS9)
[17]	Document feed sensor (PS21)	[18]	Read open/close sensor (PS16)
[19]	Lift up upper sensor (PS2)	[20]	Restriction plate positional volume (VR1)

1.3 LU-205 (Option)



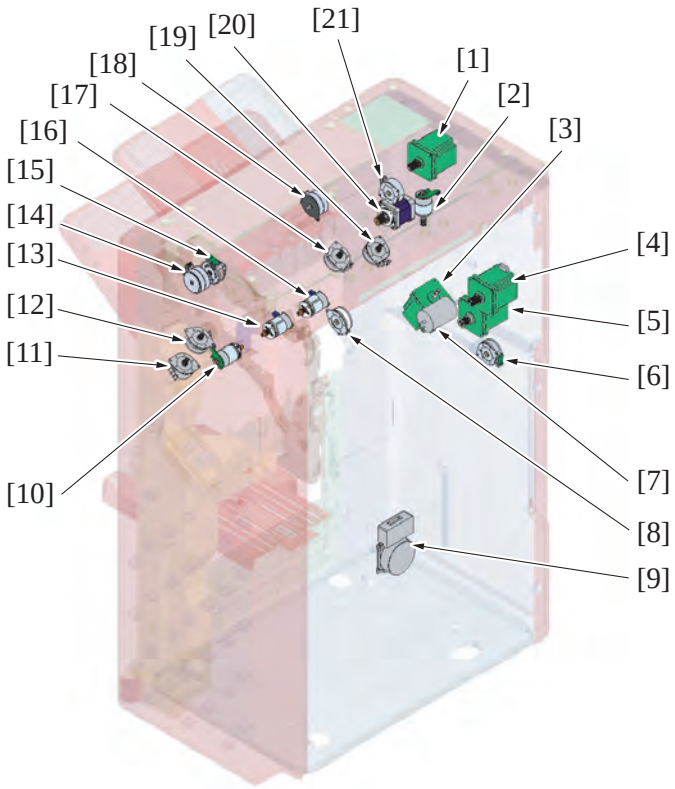
[1]	LU door switch (MS1)	[2]	LU paper empty indicator board (PEIB/LU)
[3]	LU paper empty sensor (PS4)	[4]	Dehumidification heater (DH)
[5]	LU set sensor/Fr (PS7)	[6]	LU paper feed sensor (PS3)
[7]	LU upper limit sensor (PS2)	[8]	LU lift-up motor (M1)
[9]	LU set sensor/Rr (PS1)	[10]	LU near empty sensor/2 (PS6)
[11]	LU paper feed motor (M2)	[12]	LU transport motor (M3)
[13]	LU drive board (LUDB)	[14]	LU near empty sensor/1 (PS5)

1.4 LU-303 (Option)



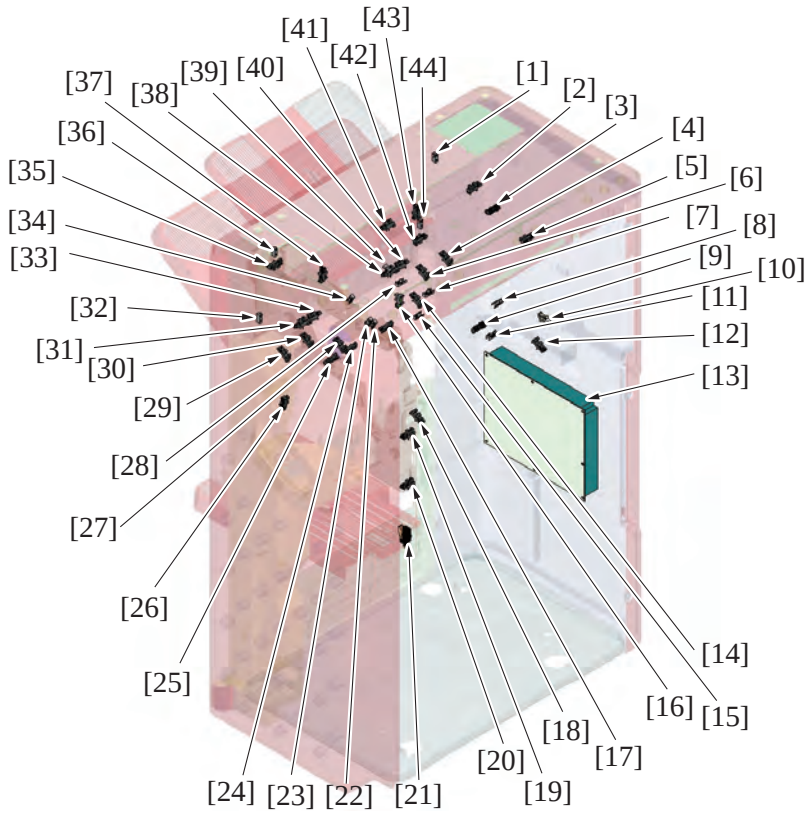
[1]	LU door switch (MS1)	[2]	LU near empty sensor/2 (PS6)
[3]	LU paper empty sensor (PS4)	[4]	LU paper empty indicator board (PEIB/LU)
[5]	Dehumidification heater (DH)	[6]	LU paper feed sensor (PS3)
[7]	LU upper limit sensor (PS2)	[8]	LU set sensor (PS1)
[9]	LU lift-up motor (M1)	[10]	LU paper feed motor (M2)
[11]	LU transport motor (M3)	[12]	LU drive board (LUDB)
[13]	LU near empty sensor/1 (PS5)	-	-

1.5 FS-537/FS-537SD (Option)



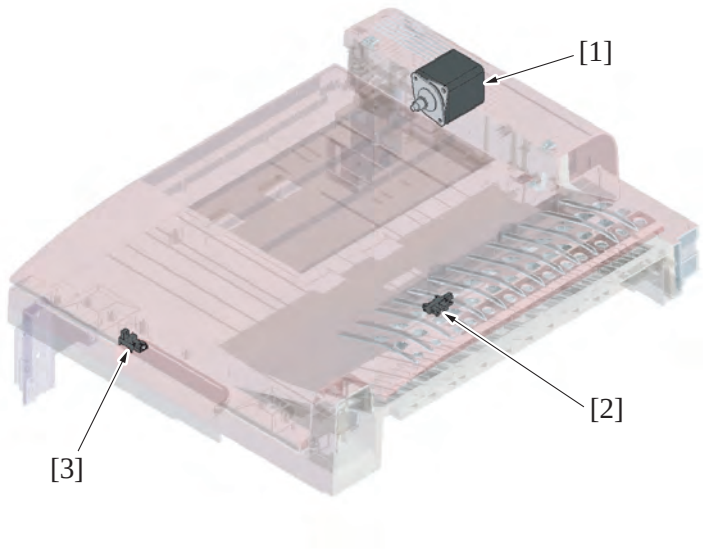
[1]	Sub tray discharge motor (M18)	[2]	Route change gate motor (M4)
[3]	Stapler movement motor (M19)	[4]	FNS entry transport motor (M20)
[5]	ZU discharge motor (M21)	[6]	SD discharge motor (M16)
[7]	Stapler motor (M5)	[8]	Paper receiving control motor (M15)

[9]	Main tray up/down motor (M6)	[10]	Bundle eject motor (M1)
[11]	Alignment motor/front (M14)	[12]	Trail edge stopper motor/F (M12)
[13]	Stacker plate drive motor (M3)	[14]	Arm drive motor (M8)
[15]	FNS paddle motor (M9)	[16]	Pre-eject drive motor (M2)
[17]	Trail edge stopper motor/R (M11)	[18]	Paddle up/down motor (M7)
[19]	Alignment motor/rear (M13)	[20]	FNS discharge motor (M17)
[21]	Receiving roller retraction motor (M10)	-	-



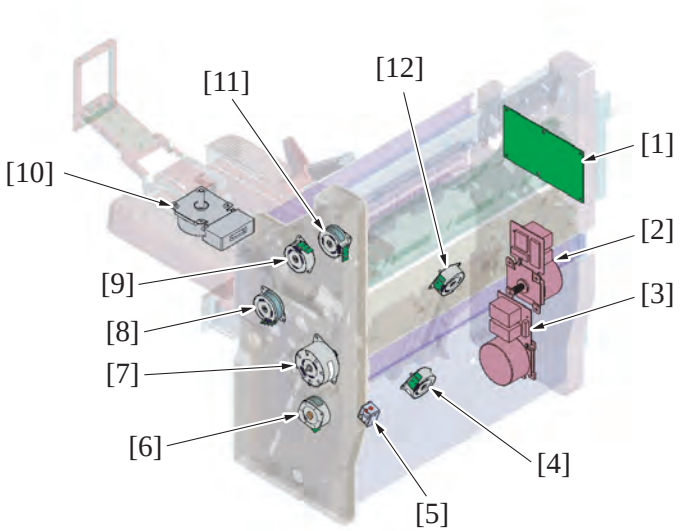
[1]	Sub tray full detection sensor/out (PS39)	[2]	Sub tray/JS route change gate home sensor (PS23)
[3]	Receiving roller retraction sensor (PS22)	[4]	Alignment plate/R home sensor (PS6)
[5]	Route change gate home sensor (PS21)	[6]	Alignment plate/R position sensor (center) (PS5)
[7]	FNS middle sensor (PS36)	[8]	PI discharge sensor (PS33)
[9]	Stapler home position sensor (corner) (PS18)	[10]	Punch scraps box set sensor (PS28)
[11]	FNS entrance sensor (PS34)	[12]	Stapler home position sensor (rear) (PS19)
[13]	FS control board (FSCB)	[14]	Trail edge stopper sensor/R (PS7)
[15]	SD discharge sensor (PS35)	[16]	Gripper home position sensor (PS3)
[17]	Pre-eject encoder sensor (PS2)	[18]	Stapler position sensor (center) (PS20)
[19]	Main tray full detection sensor (FS-537SD) (PS12)	[20]	Main tray full detection sensor (FS-537) (PS12)
[21]	Front door open (SW1)	[22]	Trail edge stopper home sensor (PS31)
[23]	Stacker plate home sensor (PS30)	[24]	Stacker plate encoder sensor (PS4)
[25]	Gripper motor sensor (PS1)	[26]	Paper delivery control sensor (PS11)
[27]	Trail edge stopper sensor/F (PS10)	[28]	Main tray exit sensor (PS37)
[29]	Alignment plate/F home sensor (PS9)	[30]	Alignment plate/F position sensor (center) (PS8)
[31]	Main tray lift up detection sensor/F (PS16)	[32]	Main tray upper sensor/out (PS38) *1
[33]	Main tray lift down detection sensor/F (PS14)	[34]	Stacker plate position sensor (PS29)
[35]	Arm home position sensor (PS26)	[36]	Sub tray full detection sensor/in (PS41)
[37]	Paddle home sensor (PS25)	[38]	Alignment plate paper detection sensor (PS32)
[39]	Main tray lift down detection sensor /R (PS15)	[40]	Main tray lift up detection sensor /R (PS17)
[41]	Sub tray exit sensor (PS24)	[42]	Main tray paper detection sensor (PS13)
[43]	Paddle up/down home sensor (PS27)	[44]	Main tray upper sensor (PS40) *1

- *1: Not used

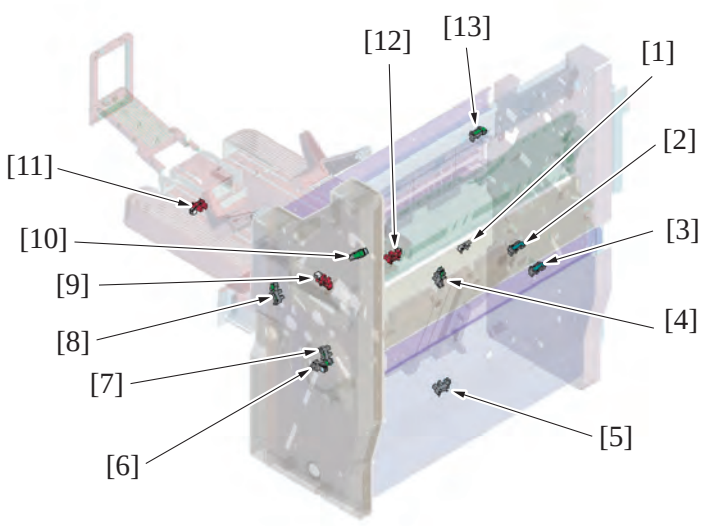


[1]	RU transport motor (M35)	[2]	RU transport sensor (PS60)
[3]	RU door open/close sensor (PS61)	-	-

1.6 FS-537SD saddle section

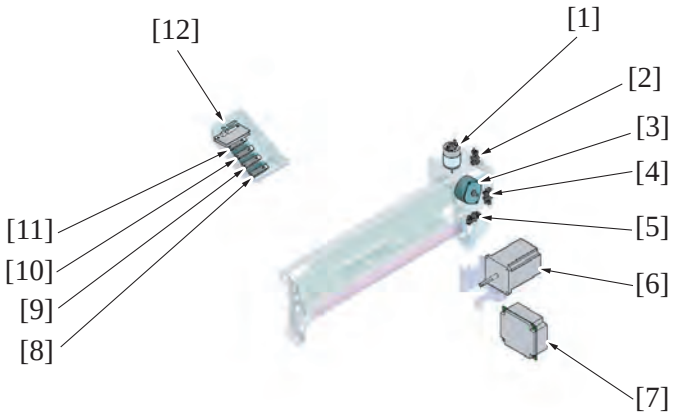


[1]	SD control board (SDCB)	[2]	Center fold roller motor (M5)
[3]	Center fold knife motor (M9)	[4]	Stopper drive motor (M4)
[5]	Stopper solenoid (SD1)	[6]	SD paddle motor (M7)
[7]	Center fold guide motor (M6)	[8]	Tri-folding guide motor (M8)
[9]	Paper discharge control motor (M2)	[10]	Paper transport belt motor (M34)
[11]	SD transport motor (M1)	[12]	Alignment motor (M3)



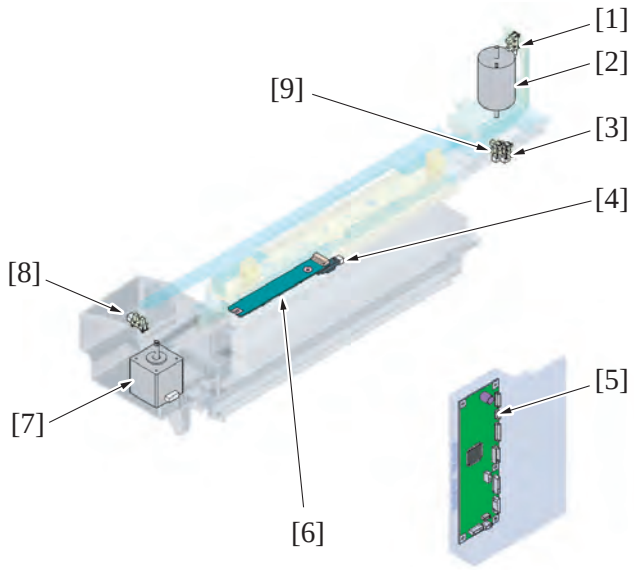
[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Fold exit sensor (PS12)
[3]	Center fold knife home sensor (PS8)	[4]	Alignment home sensor (PS4)
[5]	Stopper home sensor (PS6)	[6]	Paddle home sensor (PS5)
[7]	Guide home sensor (PS7)	[8]	Tri-folding gate home sensor (PS11)
[9]	SD exit full sensor (PS35)	[10]	Curl cover detection sensor (PS2)
[11]	SD exit tray limit sensor (PS41)	[12]	SD exit tray lift sensor (PS43)
[13]	SD entrance sensor (PS1)	-	-

1.7 ZU-609 (Option)



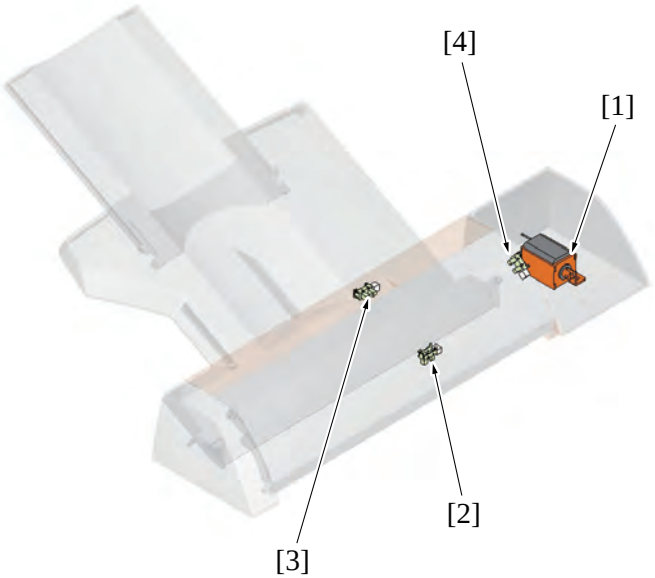
[1]	Pressure motor (M502)	[2]	Press home sensor (PS502)
[3]	Folding guide motor (M501)	[4]	Guide home sensor (PS500)
[5]	Chopper home sensor (PS501)	[6]	ZU transport motor (M500)
[7]	ZU drive board (ZUDB)	[8]	Upper limit sensor4 (PS506)
[9]	Upper limit sensor3 (PS505)	[10]	Upper limit sensor2 (PS504)
[11]	Upper limit sensor1 (PS503)	[12]	ZU relay board (ZURB)

1.8 PK-523 (Option)



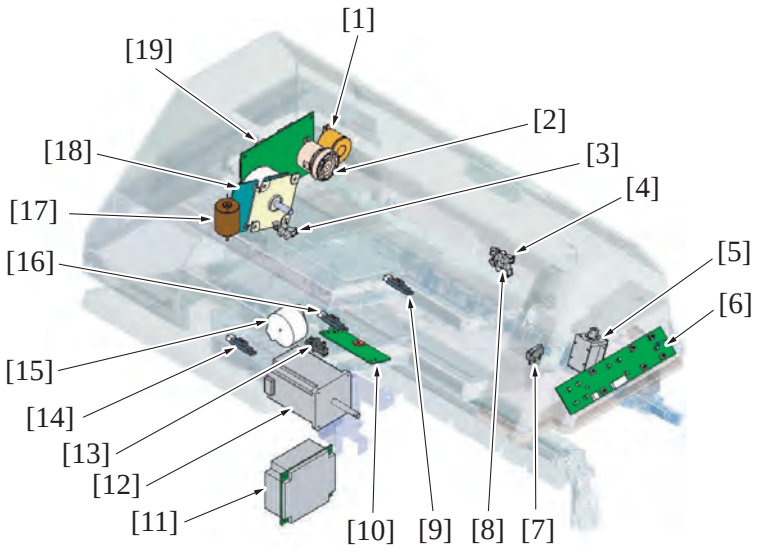
[1]	Punch motor pulse sensor (PS306)	[2]	Punch drive motor (M301)
[3]	PK punch home sensor/1 (PS307)	[4]	PK punch hole scraps box full sensor (PS302)
[5]	Punch control board (PKCB)	[6]	Paper size detect board (PSDTB)
[7]	Punch oscillating motor (M302)	[8]	PK punch oscillating home sensor (PS303)
[9]	PK punch home sensor/2 (PS301)	-	-

1.9 JS-602 (Option)



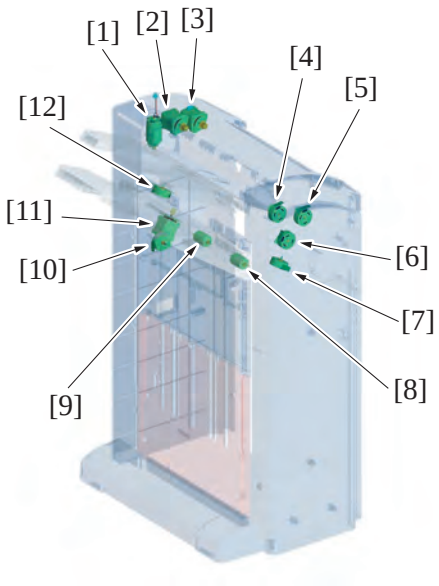
[1]	Entrance switching solenoid (SD401)	[2]	Job tray paper exit sensor (PS402)
[3]	Job tray full sensor (PS403)	[4]	Job tray door sensor (PS401)

1.10 PI-507 (Option)

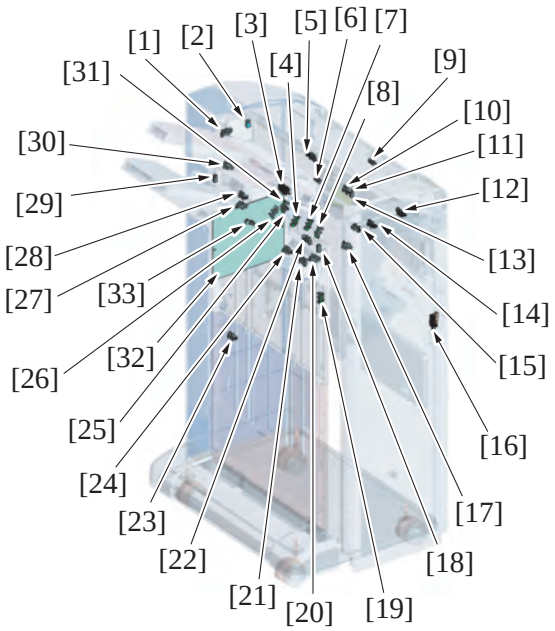


[1]	Registration clutch (CL203)	[2]	Transfer clutch /Lw (CL202)
[3]	Tray lower limit sensor /Lw (PS210)	[4]	Tray upper limit sensor /Lw (PS209)
[5]	Pick-up solenoid /Lw (SD202)	[6]	PI operation board (PIOB)
[7]	Upper door open/close switch (MS205)	[8]	Paper entrance sensor /Lw (PS206)
[9]	Paper empty sensor /Lw (PS207)	[10]	Paper size VR /Lw (VR202)
[11]	PI relay board (PIRB)	[12]	Transport roller drive motor (M204)
[13]	Chopper home sensor (PS501)	[14]	L size sensor /Lw (PS212)
[15]	Folding guide motor (M501)	[16]	Paper set sensor /Lw (PS208)
[17]	Tray lift motor /Lw (M202)	[18]	Transfer motor (M203)
[19]	PI drive board (PIDB)	-	-

1.11 FS-536 (Option)

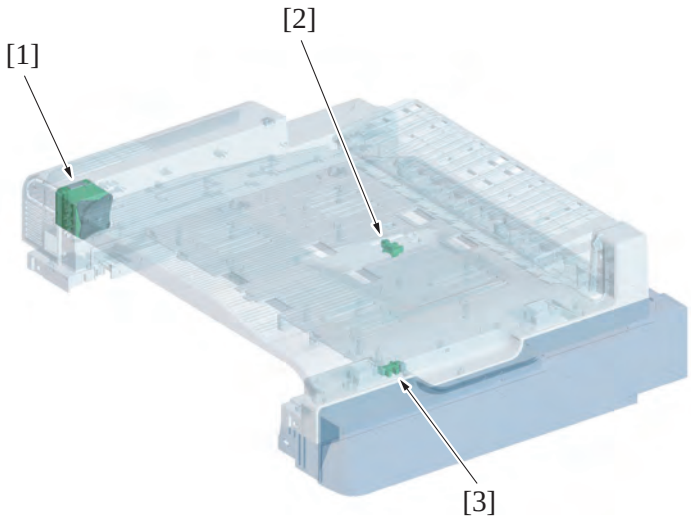


[1]	Main tray up/down motor (M11)	[2]	FNS discharge motor (M3)
[3]	FNS entry transport motor (M2)	[4]	FNS paddle motor (M5)
[5]	Receiving roller retraction motor (M4)	[6]	Trailing edge stopper motor (M6)
[7]	Alignment motor/front (M7)	[8]	Bundle eject motor (M10)
[9]	Pre-eject drive motor (M9)	[10]	Paper receiving control motor (M12)
[11]	Side stapler movement motor (M13)	[12]	Alignment motor/rear (M8)



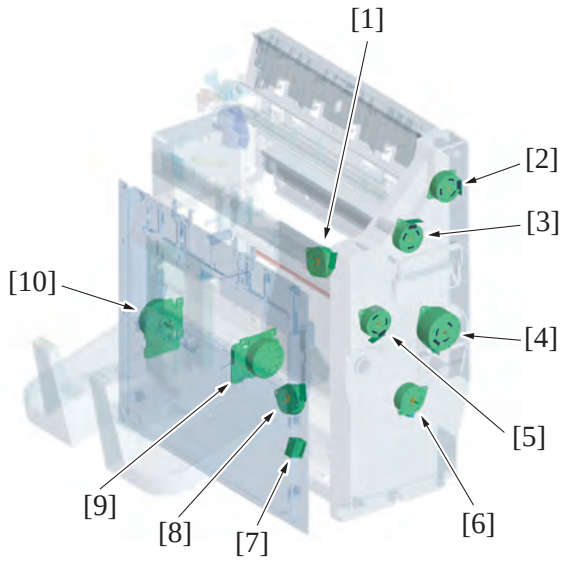
[1]	Stacker motor sensor (PS25)	[2]	Sub tray full detection sensor/out (PS9)
[3]	Main tray upper position detect switch (SW2)	[4]	Pre-eject away sensor (PS22)
[5]	Sub tray exit sensor (PS8)	[6]	Main tray exit sensor (PS16)
[7]	Pre-eject home sensor (PS21)	[8]	Trailing edge stopper home position detection sensor (PS20)
[9]	FNS entrance sensor (PS4)	[10]	Upper door open/close detection sensor (PS32)
[11]	Sub tray full detection sensor/in (PS10)	[12]	Exchange folded paper output sensor (PS30)
[13]	Saddle exit sensor (PS5)	[14]	Receiving roller retraction sensor (PS11)
[15]	Upper paddle home position detection sensor (PS14)	[16]	Front door open detect switch (SW1)
[17]	Alignment plate/F home sensor (PS12)	[18]	Main tray upper sensor/in (PS7) *1
[19]	Paper delivery control sensor (PS28)	[20]	Stapler position sensor (center) (PS24)
[21]	Gripper motor sensor (PS17)	[22]	Main tray upper position sensor/F (PS27)
[23]	Main tray full detection sensor (PS29)	[24]	Pre-eject encoder sensor (PS15)
[25]	Staple stacker paper detection sensor (PS31)	[26]	Gripper position detection sensor (PS19)
[27]	Stapler home position sensor (rear) (PS23)	[28]	Main tray upper position sensor/R (PS26)
[29]	Main tray upper sensor/out (PS6) *1	[30]	Alignment plate/R home sensor (PS13)
[31]	Gripper home position sensor (PS18)	[32]	FS control board (FSCB)
[33]	Wide Flat limit Sensor (PS36)	-	-

- *1: Not used

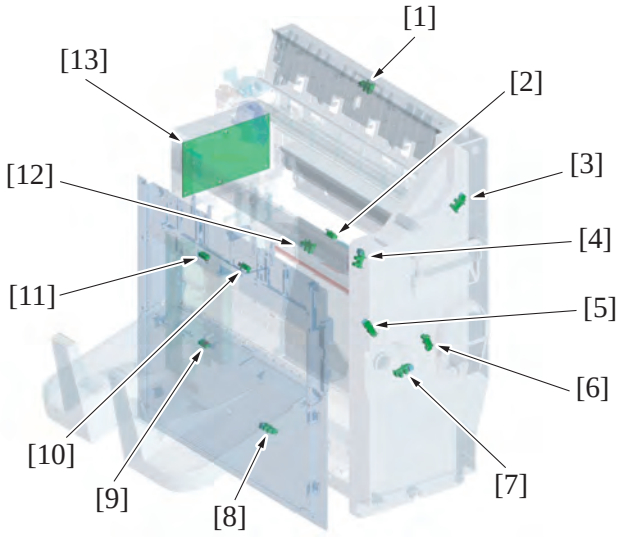


[1]	RU transport motor (M35)	[2]	RU transport motor (PS60)
[3]	RU door open/close sensor (PS61)	-	-

1.12 FS-536SD saddle section

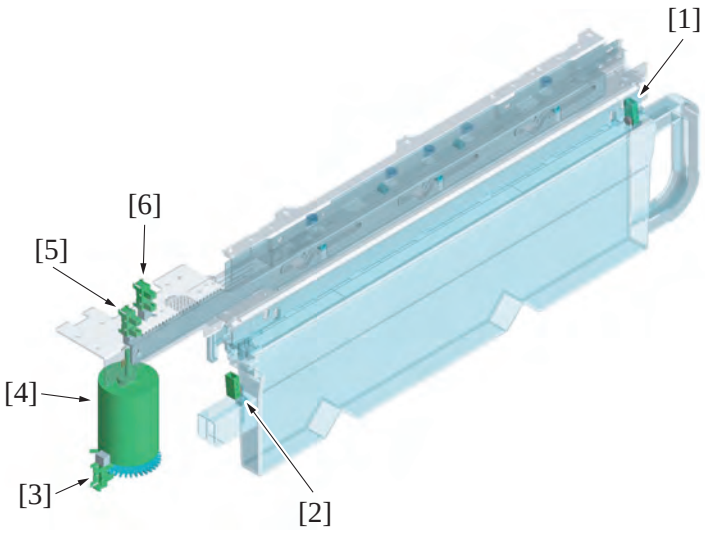


[1]	Alignment motor (M3)	[2]	SD transport motor (M1)
[3]	Paper discharge control motor (M2)	[4]	Center fold guide motor (M6)
[5]	Tri-folding guide motor (M8)	[6]	SD paddle motor (M7)
[7]	Stopper solenoid (SD1)	[8]	Stopper drive motor (M4)
[9]	Center fold knife motor (M9)	[10]	Center fold roller motor (M5)



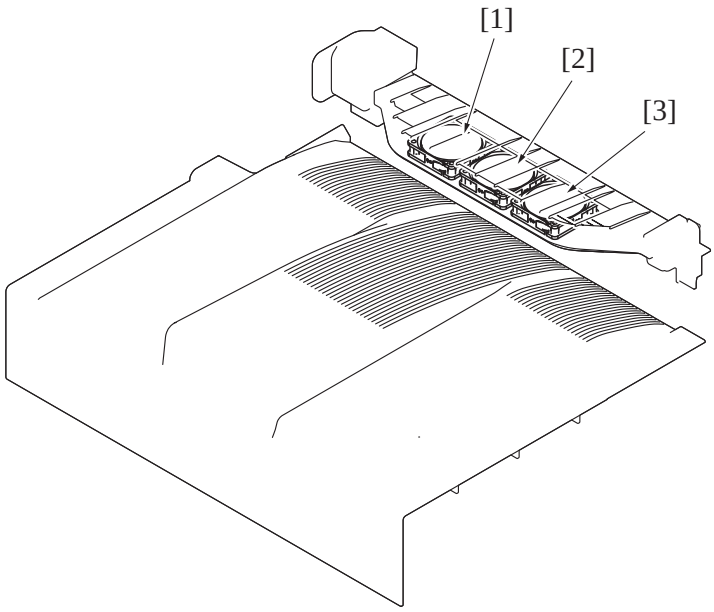
[1]	SD entrance sensor (PS1)	[2]	Center staple/fold stacker paper detect sensor (PS3)
[3]	Curl cover detection sensor (PS2)	[4]	Alignment home sensor (PS4)
[5]	Tri-folding gate home sensor (PS11)	[6]	Guide home sensor (PS7)
[7]	Paddle home sensor (PS5)	[8]	Stopper home sensor (PS6)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Fold exit sensor (PS12)
[11]	Booklet tray empty detection sensor/in (PS13)	[12]	Center fold knife home sensor (PS8)
[13]	SD control board (SDCB)	-	-

1.13 PK-520 (Option)



[1]	Punch dust full sensor/out (PS4)	[2]	Punch dust full sensor/in (PS5)
[3]	Punch motor sensor (PS3)	[4]	Punch drive motor (M1)
[5]	Punch position sensor (PS2)	[6]	Punch home sensor (PS1)

1.14 OT-508 (Option)



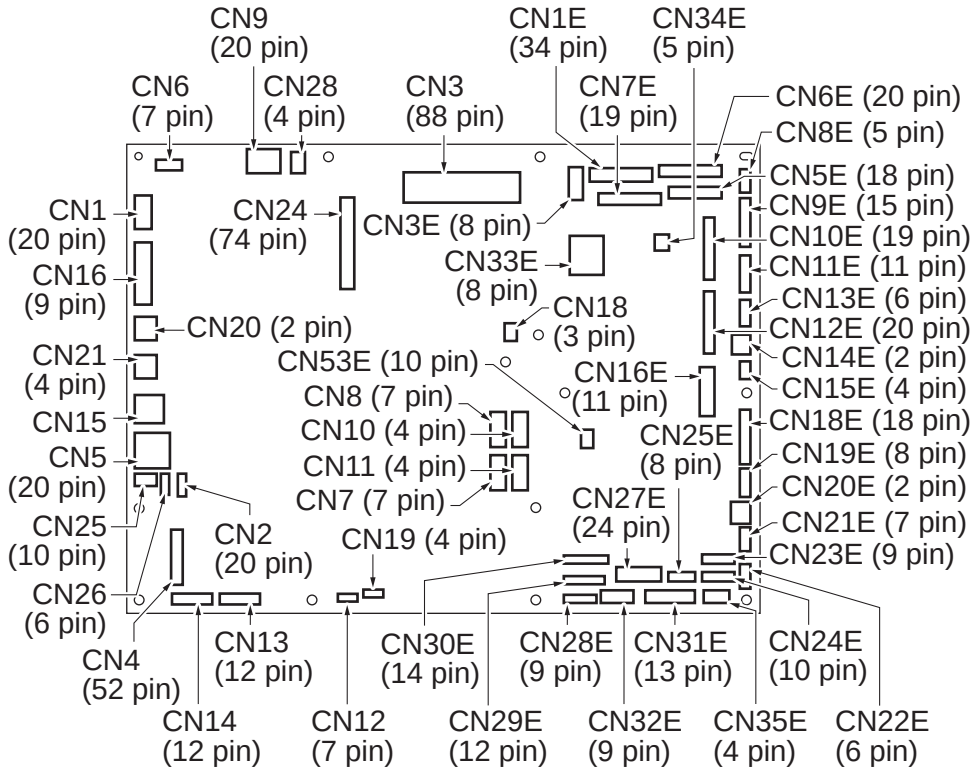
[1]	Tucking fan/Rr (FM102)	[2]	Tucking fan/Md (FM101)
[3]	Tucking fan/fr (FM103)	-	-

2. CONNECTOR LAYOUT DRAWING

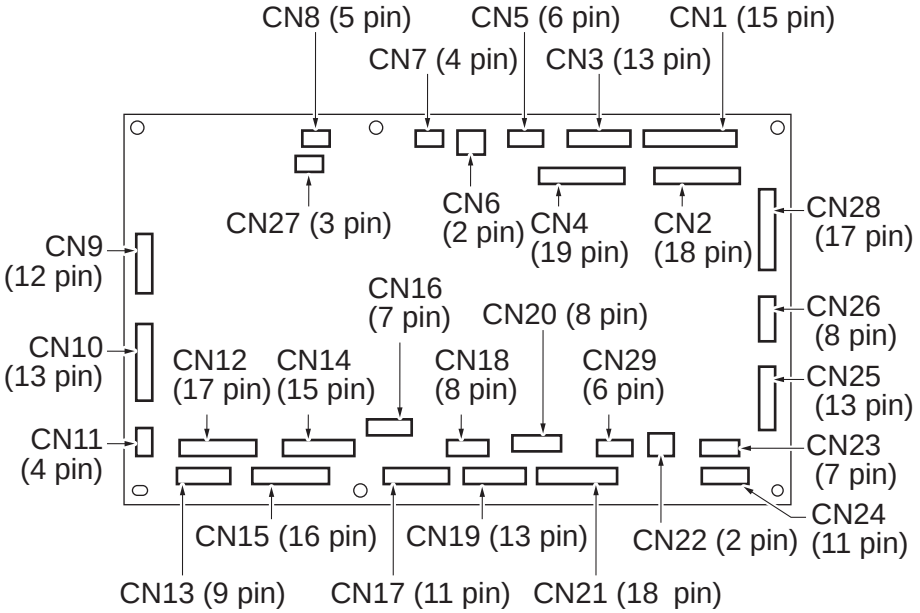
2.1 BOARD CONNECTOR LAYOUT DRAWING

2.1.1 bizhub 958/808/758, bizhub PRO 958

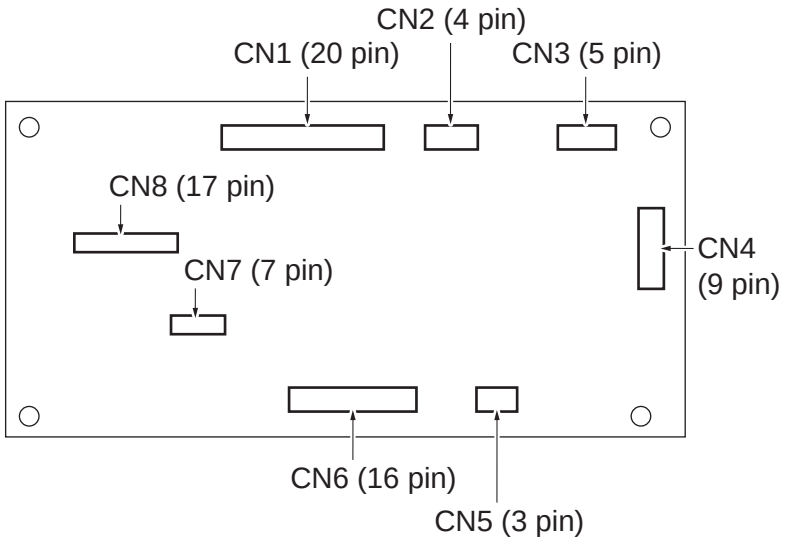
(1) MFP board (MFPB)



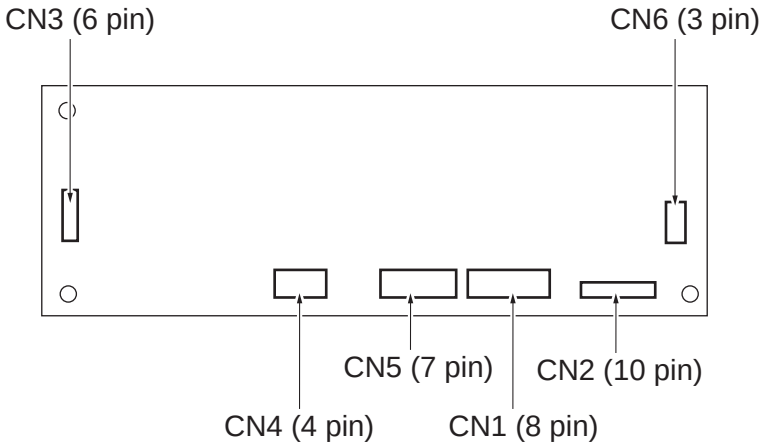
(2) Paper feed/transport drive board (PFTDB)



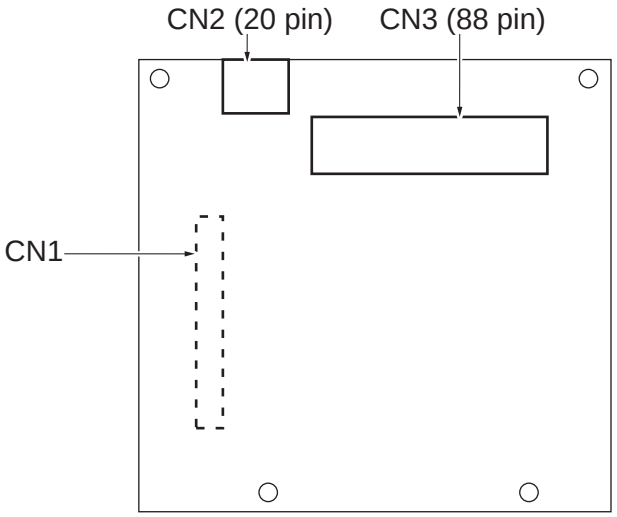
(3) PH relay board (PHRYB)



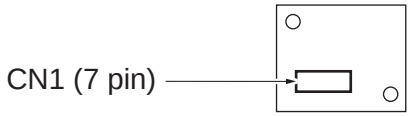
(4) Scanner drive board (SCDB)



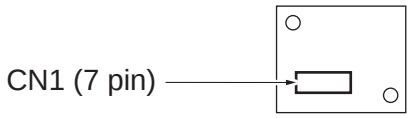
(5) Dual scan image processing board (DSIPB)



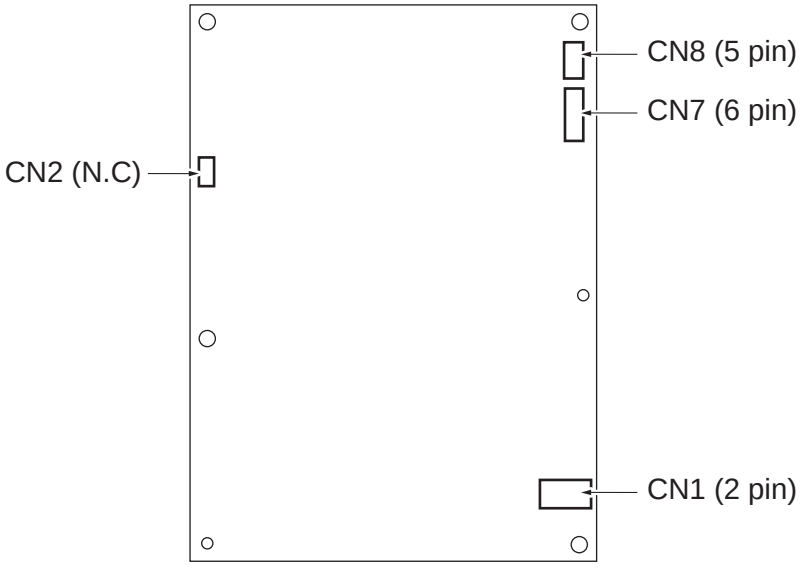
(6) Back up board/1 (ERB/1)



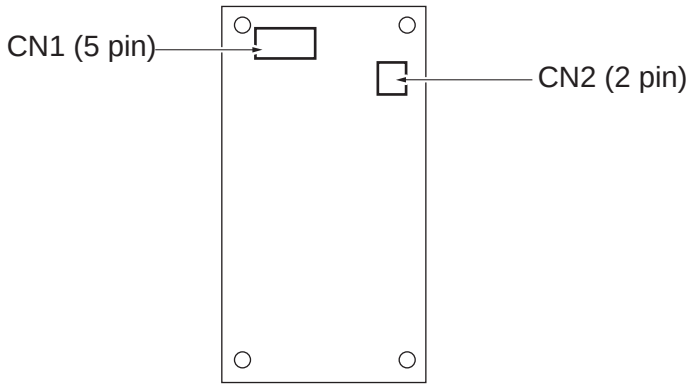
(7) Back up board/2 (ERB/2)



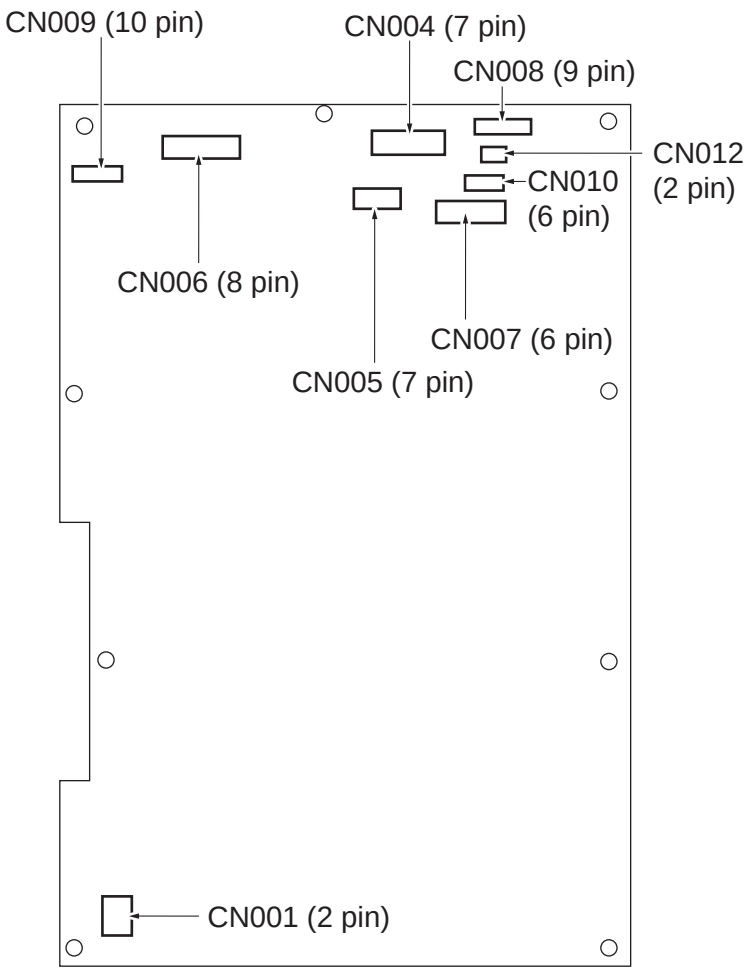
(8) IH power supply unit (IHPU)



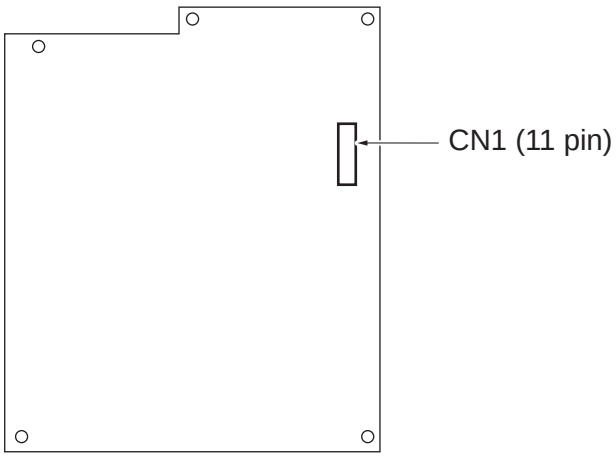
(9) IH magnetic erasing board (IHMEB)



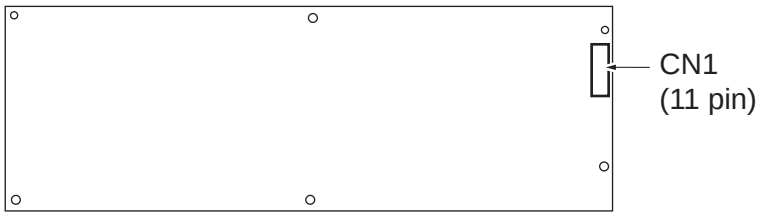
(10) DC power supply (DCPU)



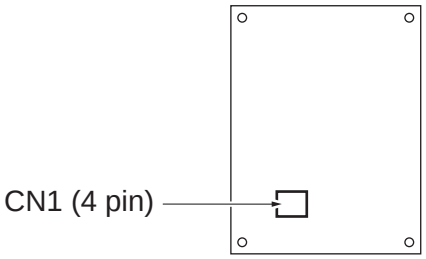
(11) High voltage unit/1 (HV1)



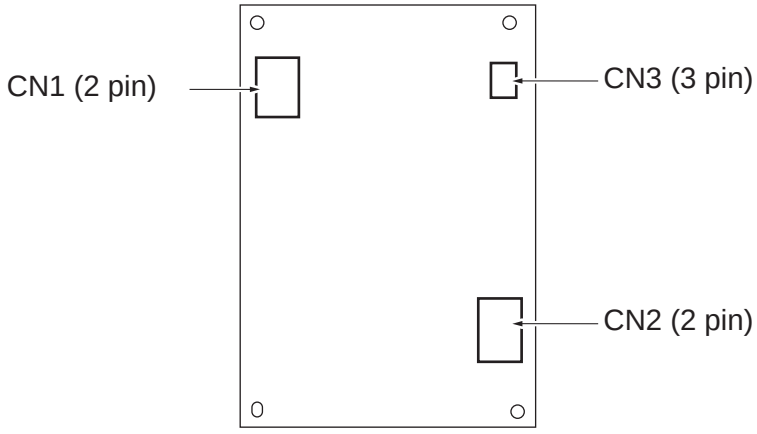
(12) High voltage unit/2 (HV2)



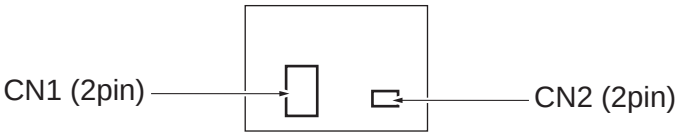
(13) High voltage unit/3 (HV3)



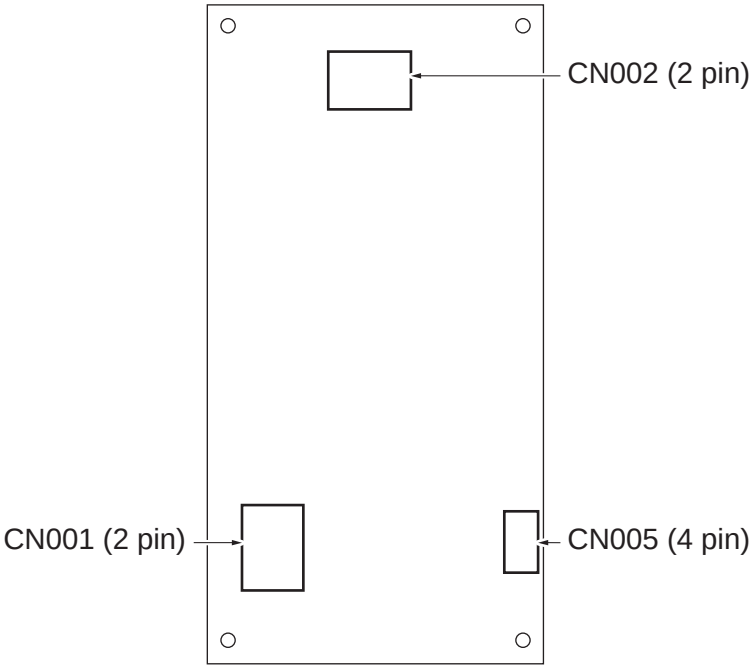
(14) Noise filter (NF1)



(15) Dehumidifier drive board (DEDB)

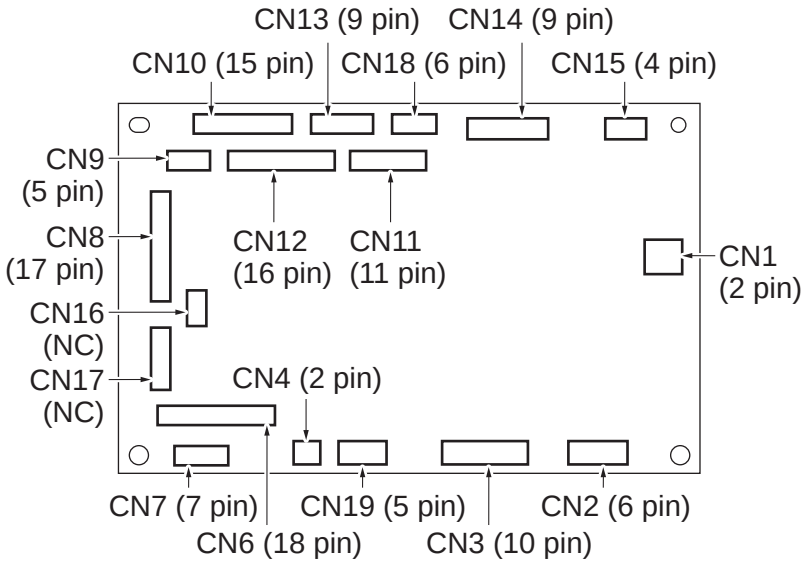


(16) Pressure roller power supply unit (PRPU)

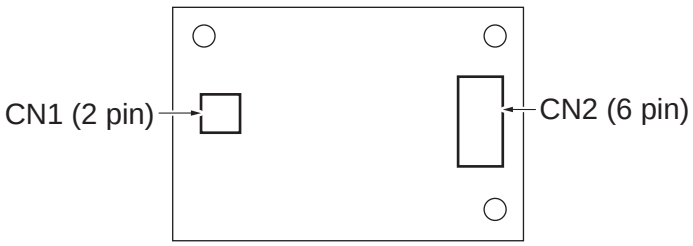


2.1.2 Dual scan document feeder

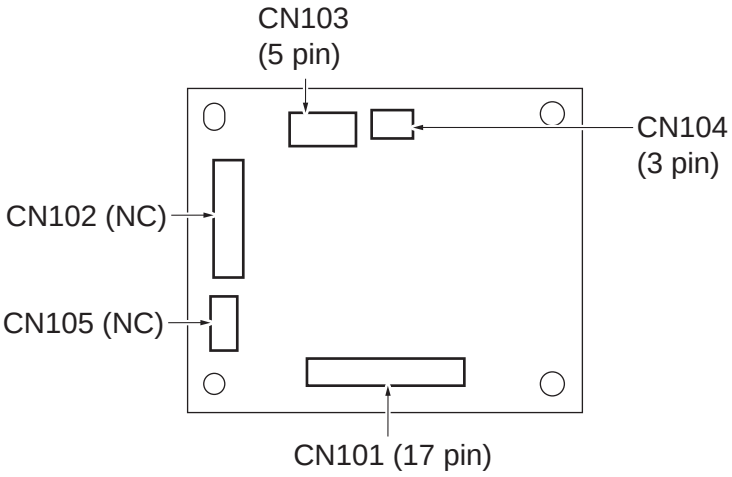
(1) DF control board (DFCB)



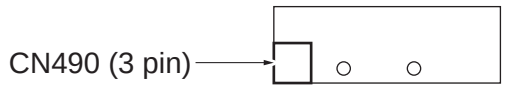
(2) DF power supply (DFPU)



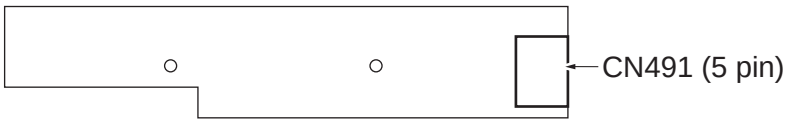
(3) Sensor control board (SCB)



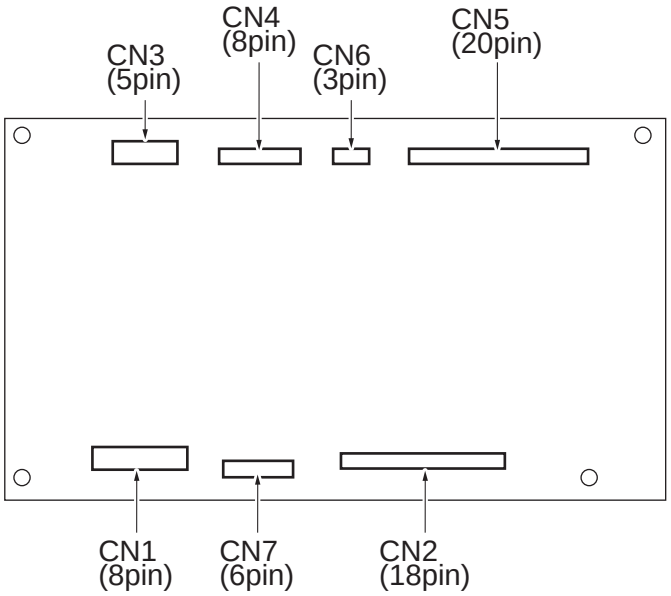
(4) Multi feed detection board/1 (transmitter) (MFDB/1)



(5) Multi feed detection board/2 (receiver) (MFDB/2)

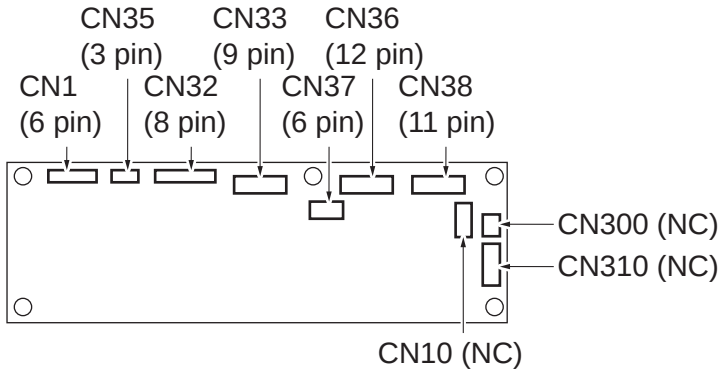


2.1.3 LU drive board (LUDB)

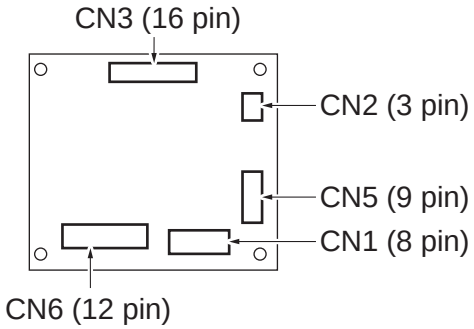


2.1.4 Punch control board (PKCB)

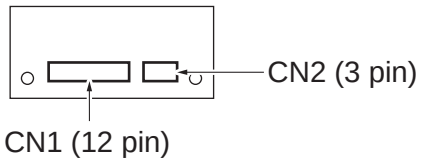
(1) PK-523



2.1.5 ZU drive board (ZUDB)

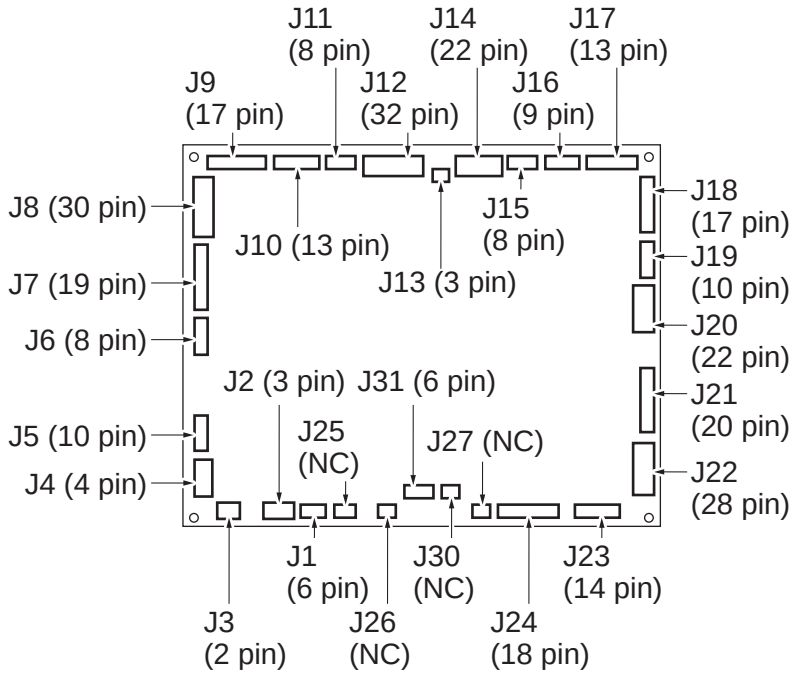


2.1.6 ZU relay board (ZURB)

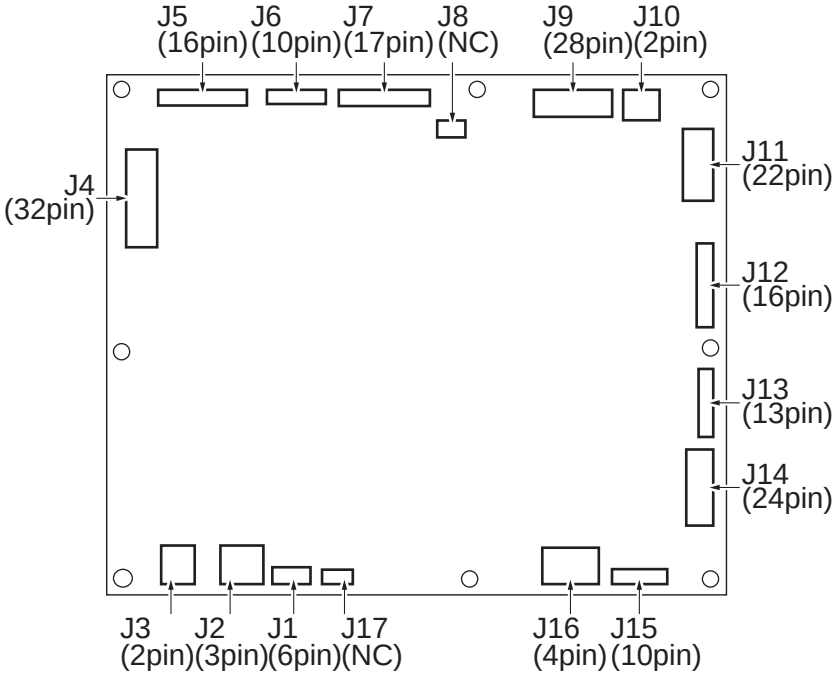


2.1.7 FS control board (FSCB)

(1) FS-537/FS-537SD

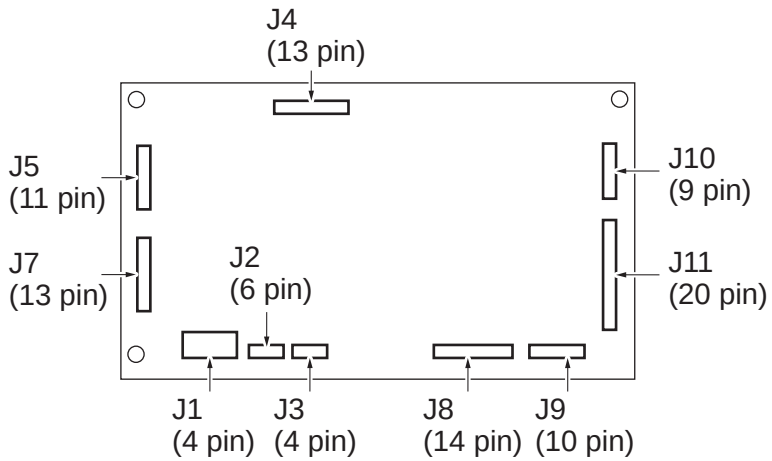


(2) FS-536/FS-536SD

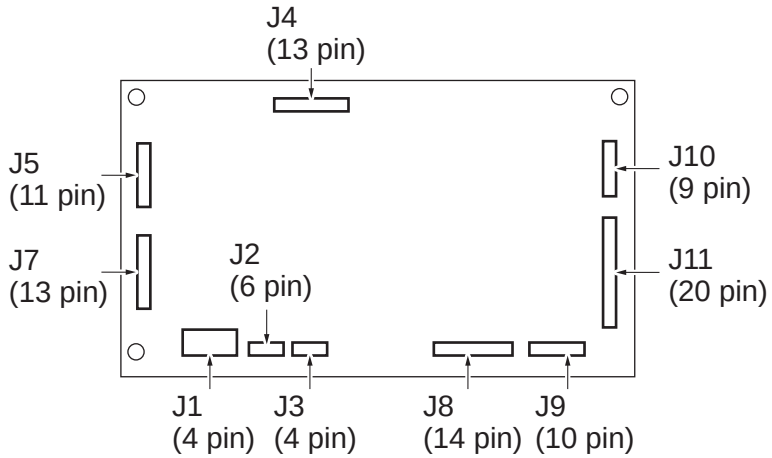


2.1.8 SD control board (SDCB)

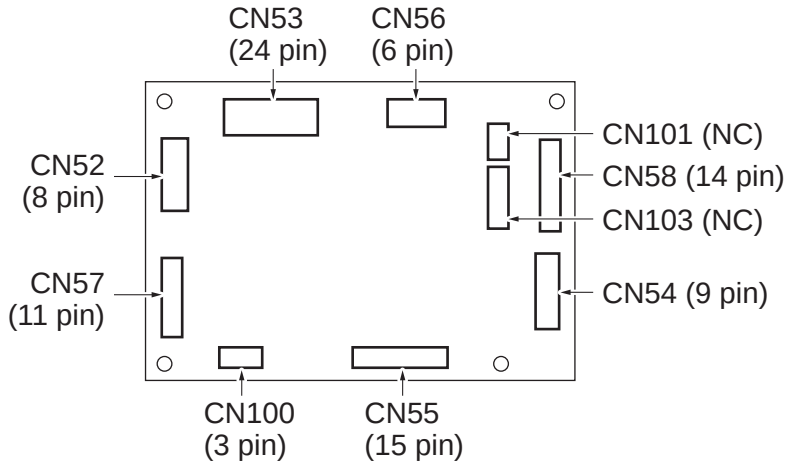
(1) FS-536SD saddle section



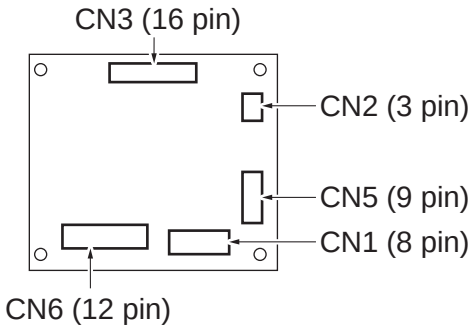
(2) FS-537SD saddle section



2.1.9 PI drive board (PIDB)



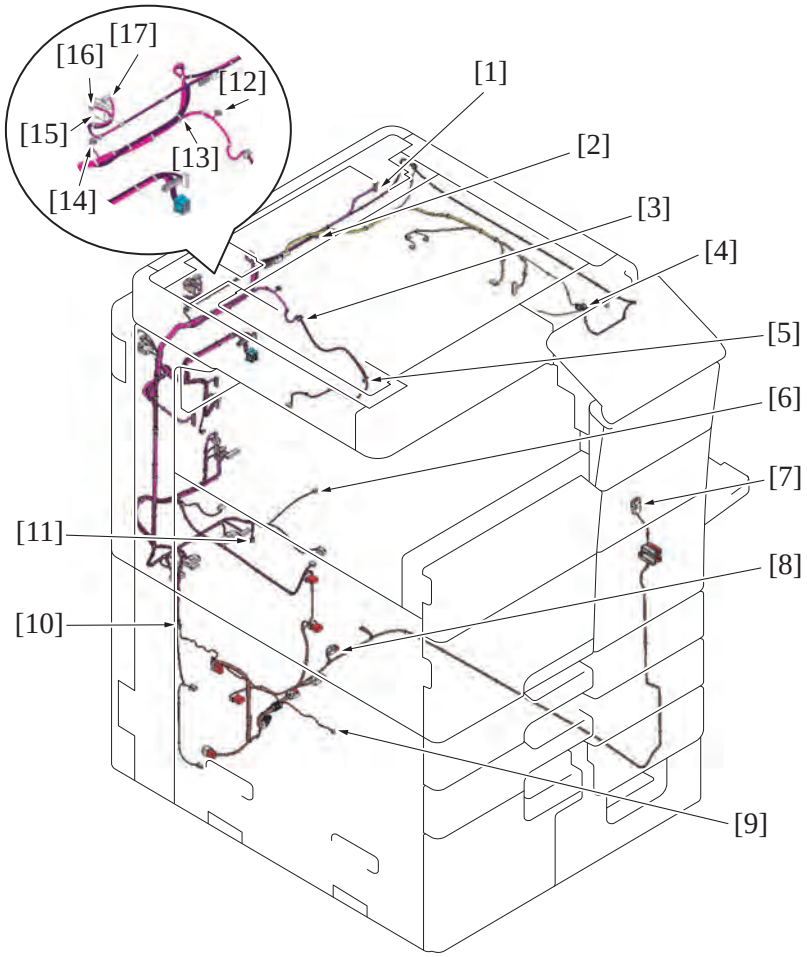
2.1.10 PI relay board (PIRB)



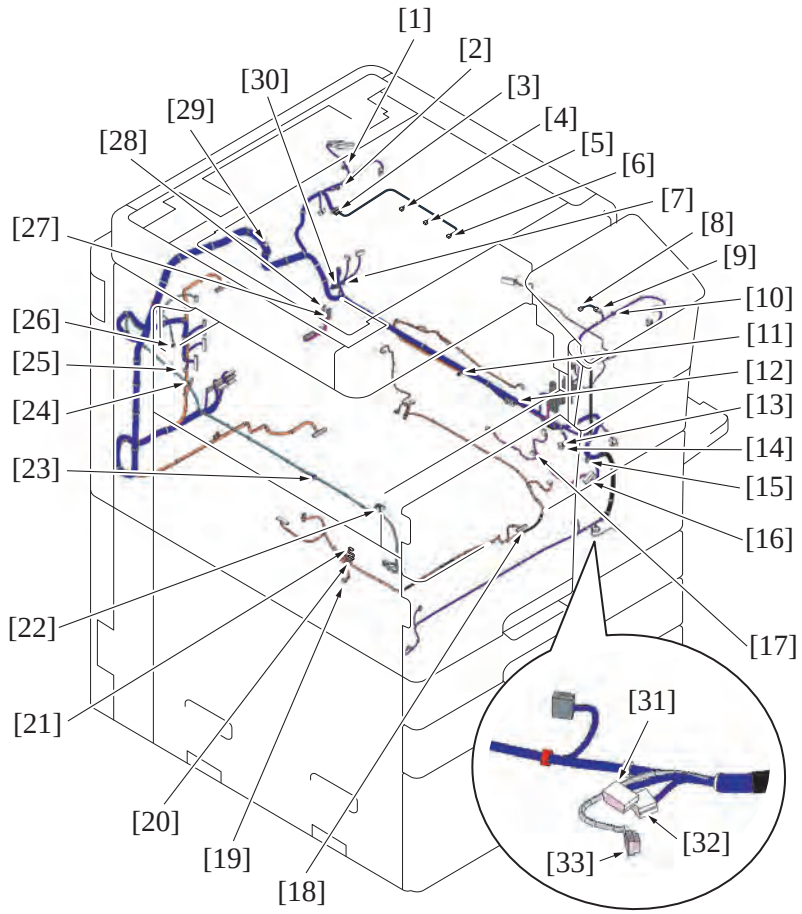
2.2 RELAY CONNECTOR LAYOUT DRAWING

2.2.1 bizhub 958/808/758, bizhub PRO 958

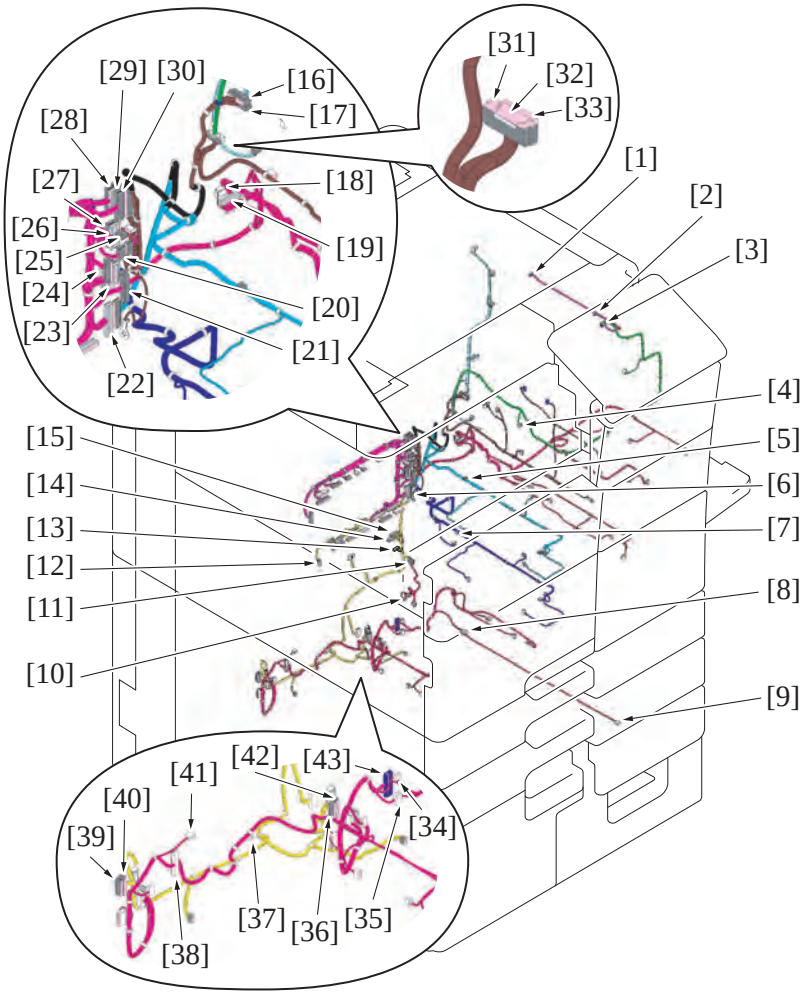
(1) Main body



No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN2FN	6 Pin	20-D	[2]	CN615	4 Pin	10-I
[3]	CN428	8 Pin	2-I	[4]	CN603	2 Pin	16-V
[5]	CN321	4 Pin	2-J	[6]	CN427	2 Pin	14-R
[7]	CN3PUL	2 Pin	15-N	[8]	CN1AC	2 Pin	19-Y, 23-X
[9]	CN706	2 Pin	28-J	[10]	CN267	2 Pin	28-J
[11]	CN333	3 Pin	11-J	[12]	CN324	3 Pin	1-J
[13]	CN522	3 Pin	1-J	[14]	CN326	3 Pin	1-J
[15]	CN46	4 Pin	16-O	[16]	CN48	7 Pin	17-O
[17]	CN47	9 Pin	17-O	-	-	-	-



No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN323	4 Pin	16-E	[2]	CN325	3 Pin	15-E
[3]	CN334	9 Pin	9-I	[4]	CN335	3 Pin	9-J
[5]	CN337	3 Pin	9-J	[6]	CN336	3 Pin	9-J
[7]	CN322	3 Pin	16-E	[8]	CN166	2 Pin	13-J
[9]	CN165	3 Pin	13-J	[10]	CN612	2 Pin	18-J
[11]	CN512	12 Pin	13-E	[12]	CN259P	2 Pin	9-E, 11-E
[13]	CN258	4 Pin	15-J	[14]	CN253	3 Pin	17-E
[15]	CN293	3 Pin	15-J	[16]	CN228	14 Pin	14-J
[17]	CN551	2 Pin	14-J	[18]	CN214	14 Pin	4-B
[19]	CN202	3 Pin	6-C, 7-C	[20]	CN219	4 Pin	5-C
[21]	CN220	4 Pin	5-C	[22]	CN242	2 Pin	8-E
[23]	CN504	3 Pin	7-E	[24]	CN6	7 Pin	19-J, 21-P, 23-P
[25]	CN611	2 Pin	18-J	[26]	CN235	2 Pin	8-E, 11-E
[27]	CN154	12 Pin	23-A, 23-I, 23-J,	[28]	CN155	12 Pin	24-I
[29]	CN701	4 Pin	16-J	[30]	CN297	3 Pin	16-E
[31]	CN378	4 Pin	12-I	[32]	CN700	3 Pin	15-J
[33]	CN702	2 Pin	15-E	-	-	-	-



No.	CN No.	Pin	Location	No.	CN No.	Pin	Location
[1]	CN282	3 Pin	5-Q	[2]	CN283	3 Pin	5-Q
[3]	CN280	6 Pin	5-Q	[4]	CN278	3 Pin	6-Q
[5]	CN151	2 Pin	2-Q	[6]	CN137	3 Pin	10-W
[7]	CN156	2 Pin	2-Q	[8]	CN129	4 Pin	7-W
[9]	CN134	4 Pin	7-W	[10]	CN131	2 Pin	9-W
[11]	CN143	5 Pin	9-W	[12]	CN179	4 Pin	10-W
[13]	CN29	6 Pin	13-W	[14]	CN426	18 Pin	12-W
[15]	CN198	8 Pin	7-Q	[16]	CN199	8 Pin	7-Q
[17]	CN425	9 Pin	11-W	[18]	CN180	9 Pin	10-Q
[19]	CN174	15 Pin	9-R	[20]	CN172	15 Pin	9-R
[21]	CN172	15 Pin	9-R	[22]	CN145	14 Pin	1-R
[23]	CN155B	11 Pin	3-R	[24]	CN155A	11 Pin	2-R
[25]	CN142	4 Pin	7-R	[26]	CN195B	13 Pin	12-R
[27]	CN195A	13 Pin	11-R	[28]	CN271A	12 Pin	5-R
[29]	CN271B	12 Pin	5-R	[30]	CN166	17 Pin	7-R
[31]	CN279	6 Pin	5-Q	[32]	CN275	3 Pin	5-Q
[33]	CN300	4 Pin	6-Q	[34]	CN123	2 Pin	7-W
[35]	CN122	4 Pin	7-W	[36]	CN121A	10 Pin	7-V
[37]	CN119	2 Pin	6-W	[38]	CN193	11 Pin	6-W
[39]	CN113A	10 Pin	5-V	[40]	CN113B	12 Pin	6-V
[41]	CN118	2 Pin	5-W	[42]	CN121B	12 Pin	8-V
[43]	CN194	11 Pin	9-V	-	-	-	-

M TIMING CHART

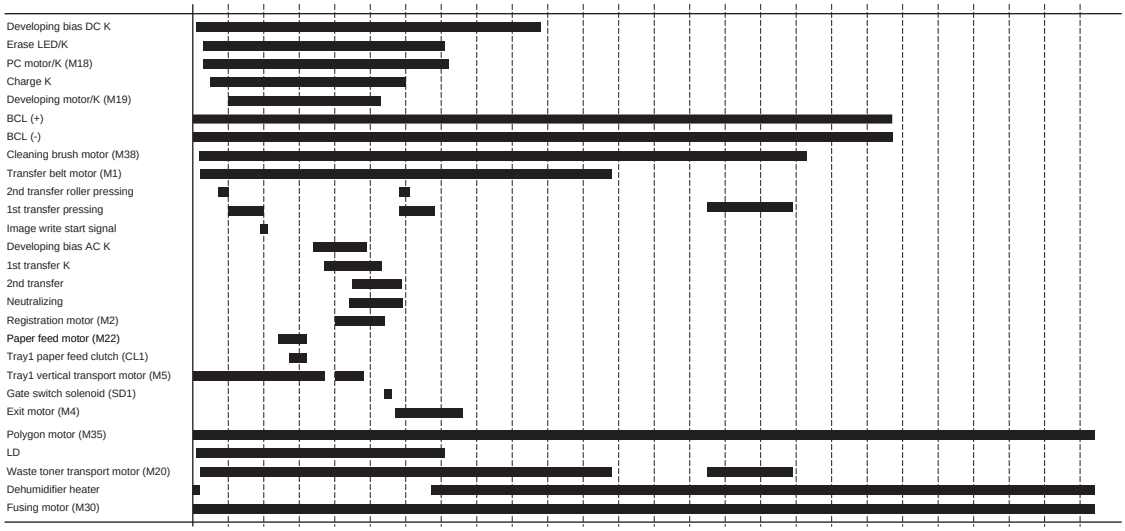
1. bizhub 958/808/758, bizhub PRO 958

1.1 Timing chart in print mode

1.1.1 Operating conditions

Paper size	A4 or 8 $^{1}/_{2}$ x 11
Paper port	Tray 1

1.1.2 Timing chart

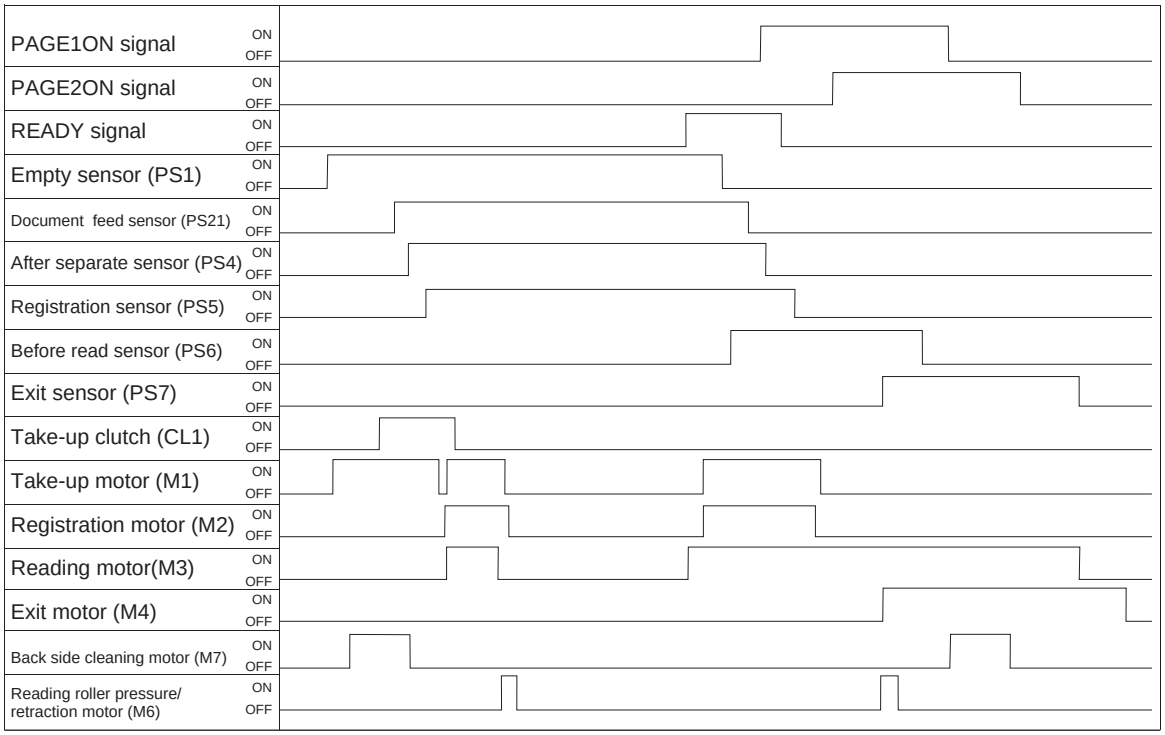


2. Dual Scan Document Feeder

2.1 Operating conditions

Paper size	A4 or 8 $^{1}/_{2}$ x 11
Zoom ratio	Full size
Sheet of original	1 originals
Original mode	2 sided original mode
Scaning resolution	600 dpi

2.2 Timing chart

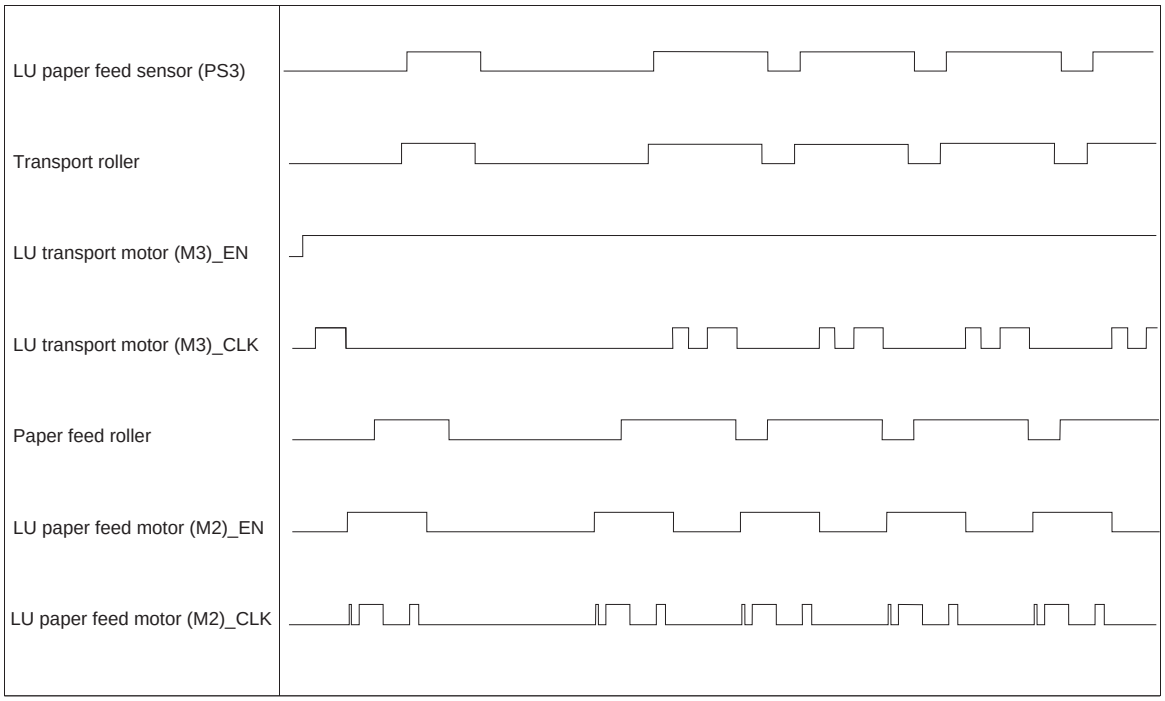


3. LU-205/LU-303

3.1 Operating conditions

MFP main body	bizhub 958/808/758, bizhub PRO 958
Paper type	Plain paper
Paper size	A4(LEF) or 8 $^{1}/_{2}$ x 11(LEF)
Paper feeding mode	Multi feed print

3.2 Timing chart



4. FS-536/FS-536SD

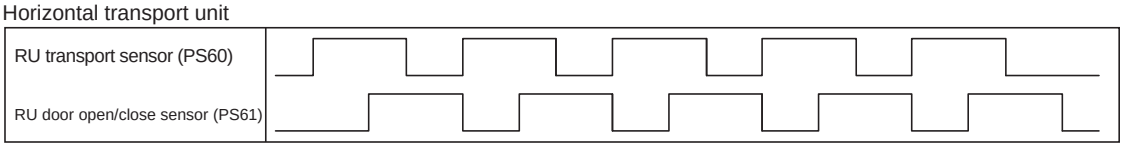
4.1 Shift mode

4.1.1 Operating conditions

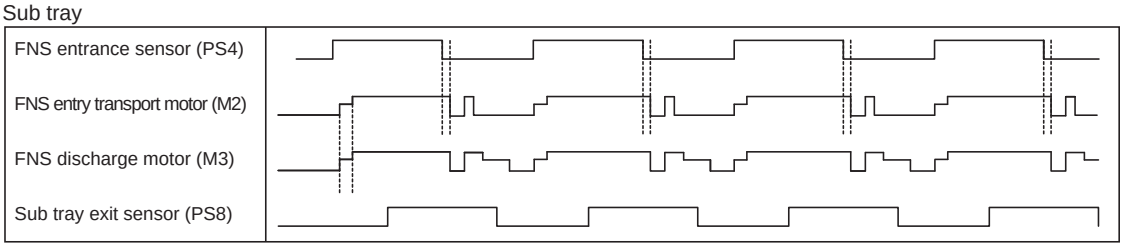
Paper size	A4 or 8 1/2 x 11
Sheet of original	2 originals
Type of original	1-side
Copies	2 sets

4.1.2 Timing chart

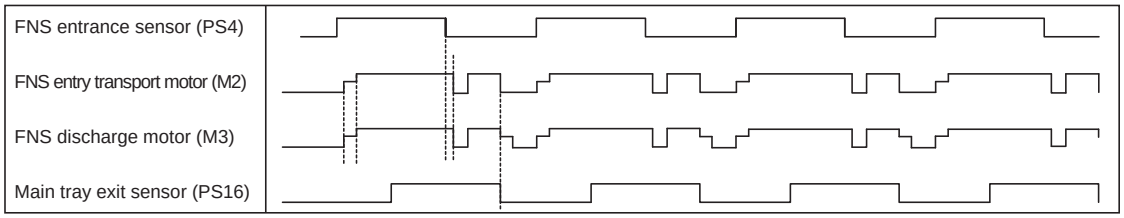
Horizontal transport unit



Sub tray



Main tray/Saddle tray

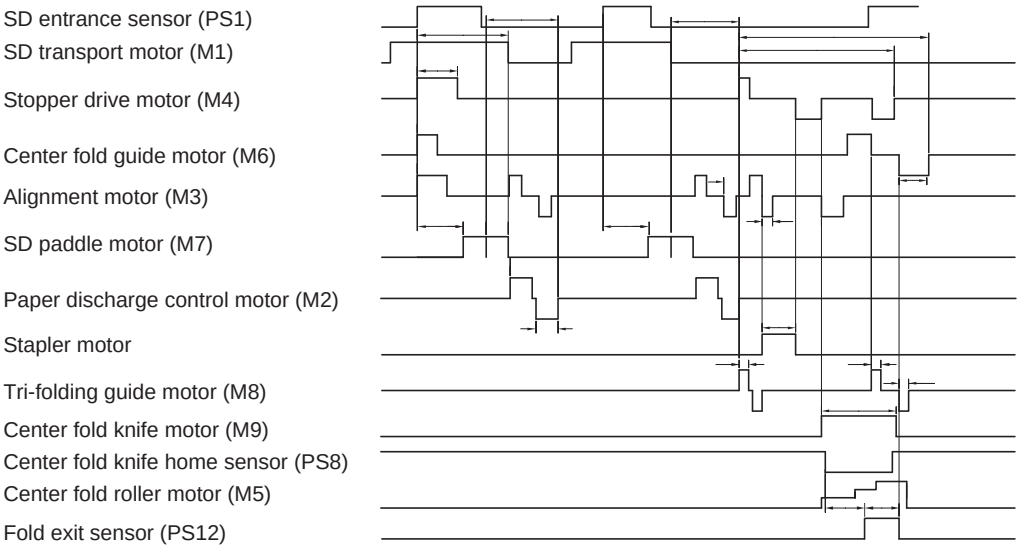


4.2 Center staples mode

4.2.1 Operating conditions

Paper size	A4S or 8 1/2 x 11S
Sheet of original	2 originals
Type of original	1-side
Copies	1 set

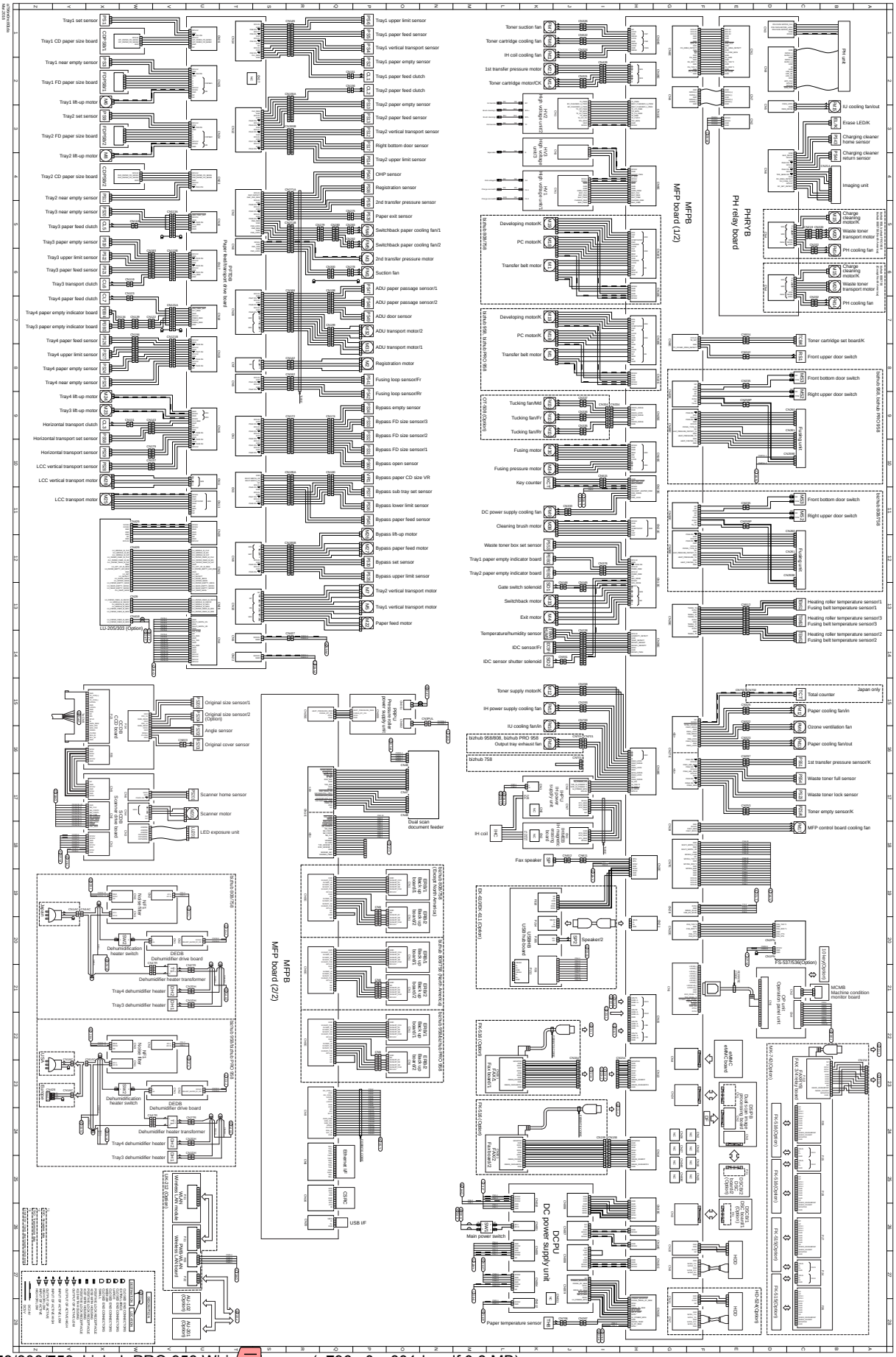
4.2.2 Timing chart



N WIRING DIAGRAM

1. bizhub 958/808/758, bizhub PRO 958

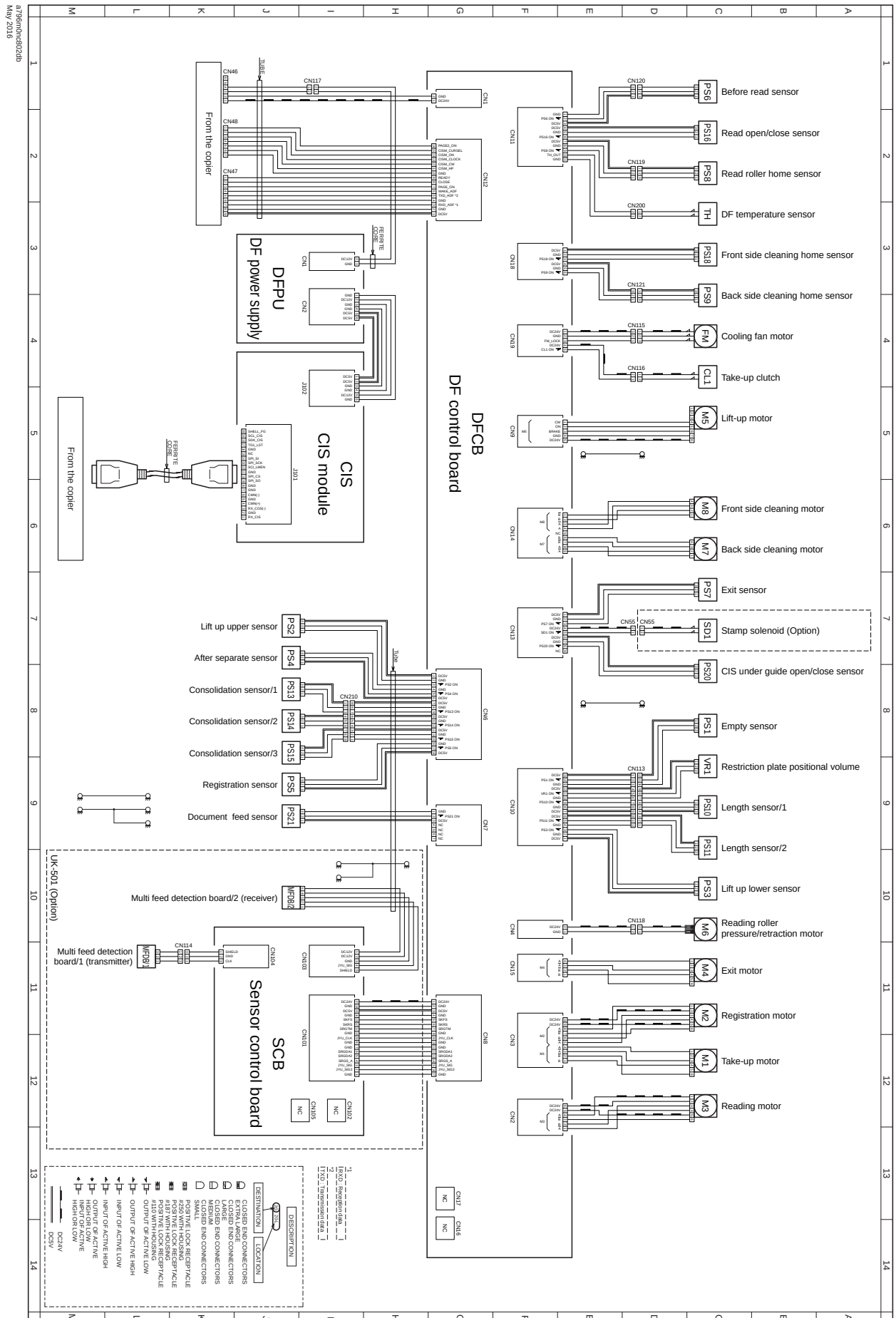
1.1 Main body



- bizhub 958/808/758, bizhub PRO 958 Wiring Diagram (a796m0nc801da.pdf 0.8 MB)

- bizhub 958/808/758, bizhub PRO 958 Wiring diagram A3 size (1/4) (a796m0nc814da.pdf 1.3 MB)
- bizhub 958/808/758, bizhub PRO 958 Wiring diagram A3 size (2/4) (a796m0nc824da.pdf 1.0 MB)
- bizhub 958/808/758, bizhub PRO 958 Wiring diagram A3 size (3/4) (a796m0nc834da.pdf 1.4 MB)
- bizhub 958/808/758, bizhub PRO 958 Wiring diagram A3 size (4/4) (a796m0nc844da.pdf 1.3 MB)

2. Dual scan document feeder

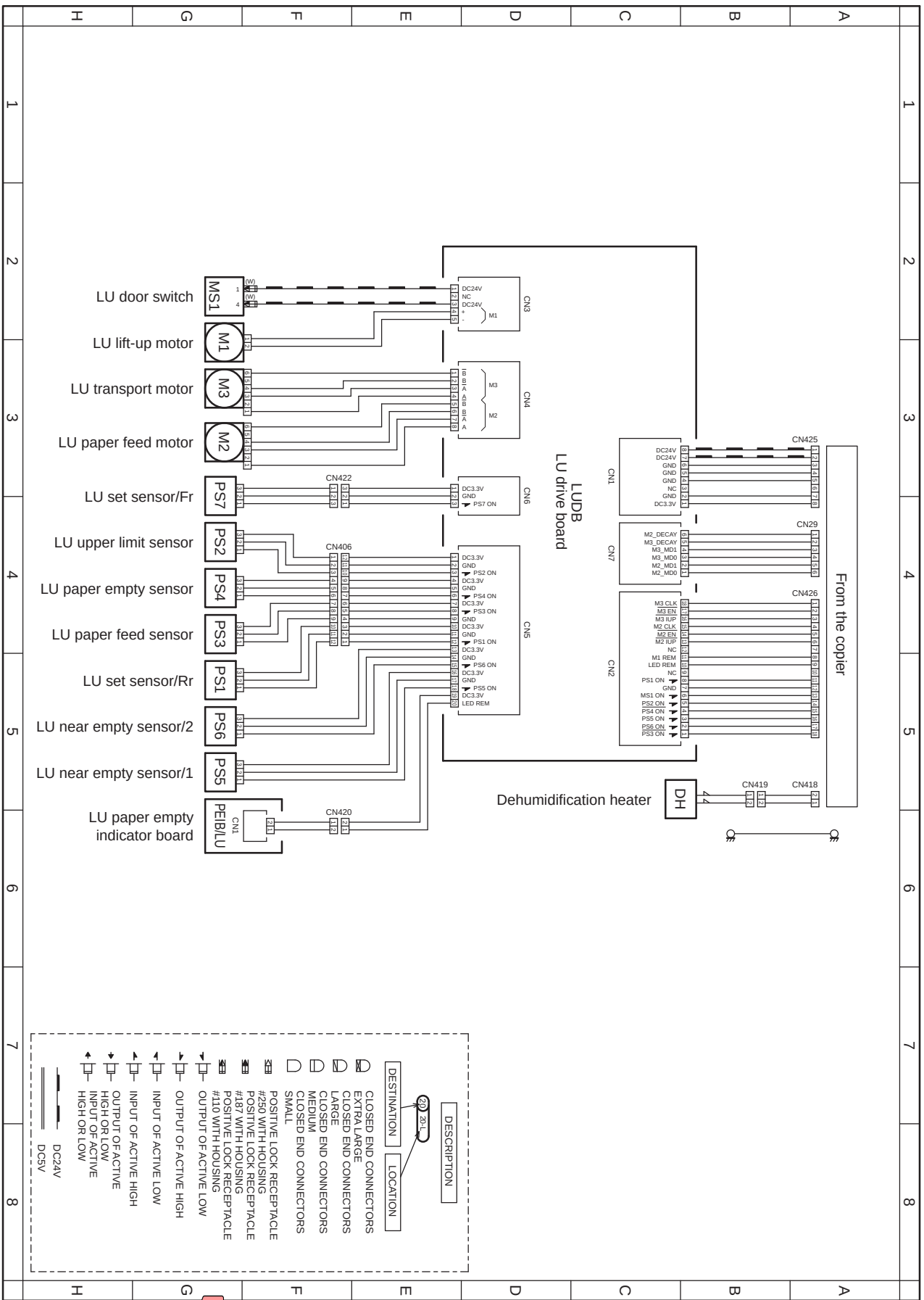


- Dual scan document feeder Wiring diagram (a796m0nc802db.pdf 0.5 MB)

3. Option

3.1 LU-205

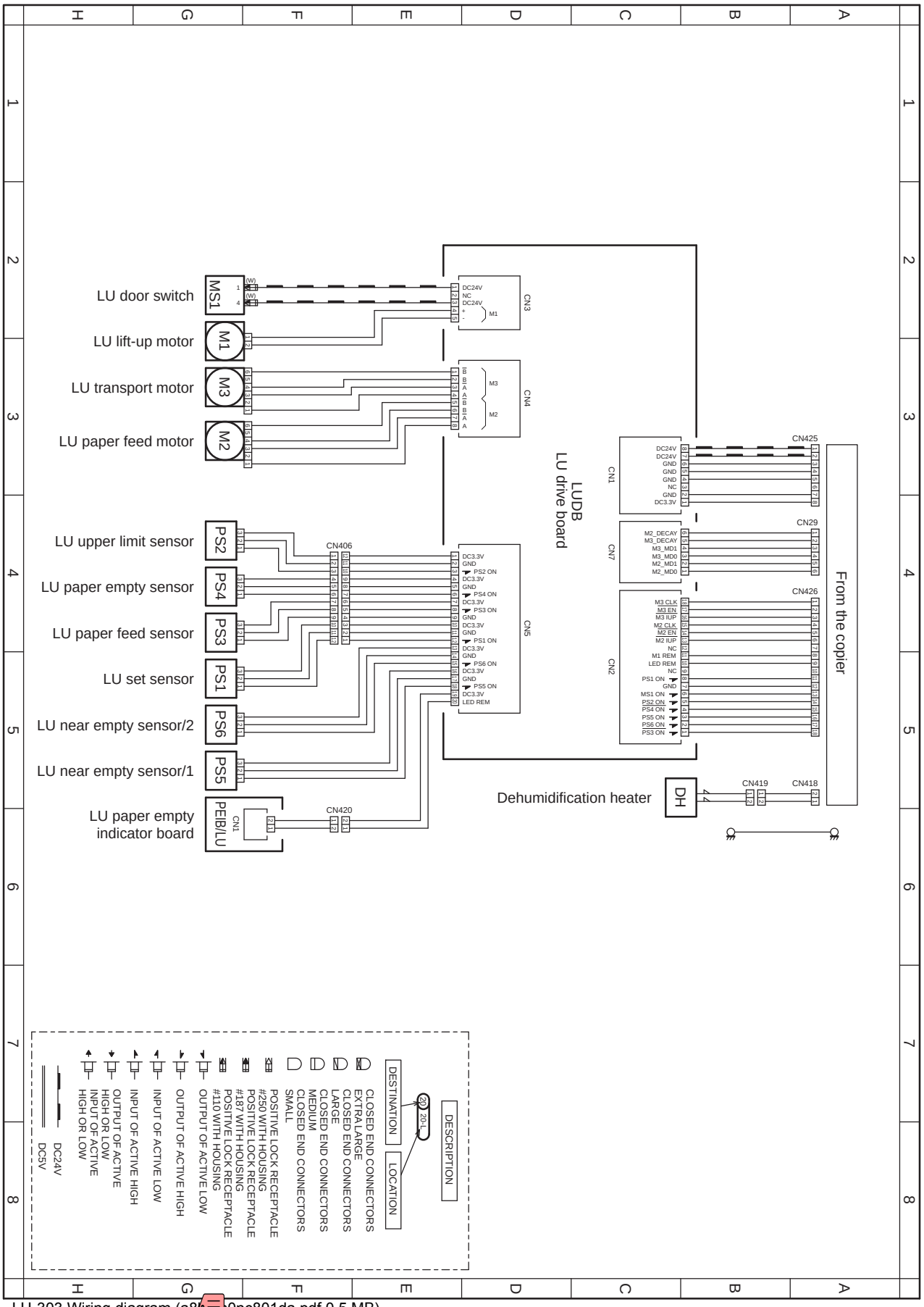
a8h7m0nc801da
Mar.2016



- LU-205 Wiring diagram (a8h7m0nc801da.pdf 0.5 MB)

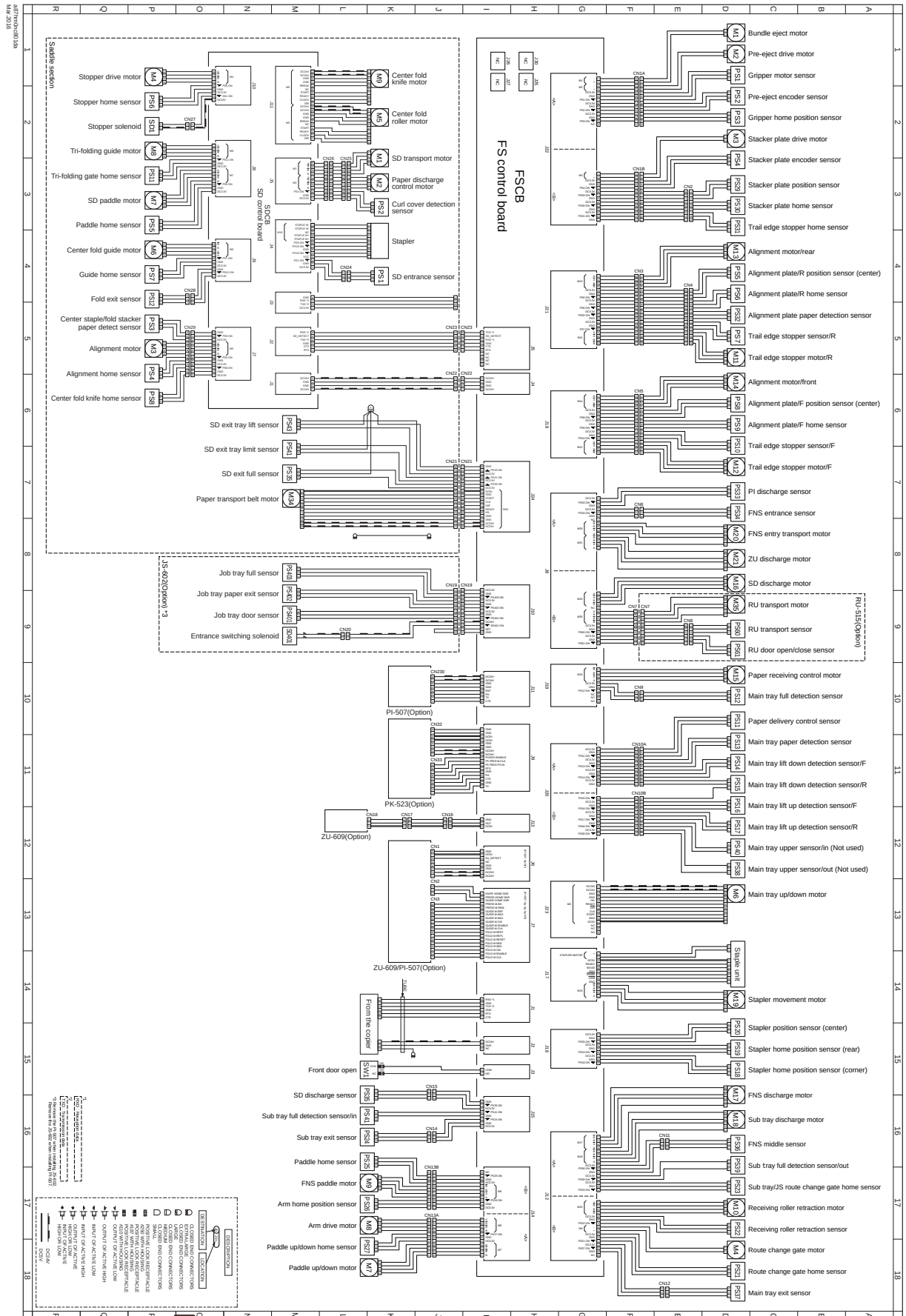
3.2 LU-303

a8h6m0nc801da
Mar.2016



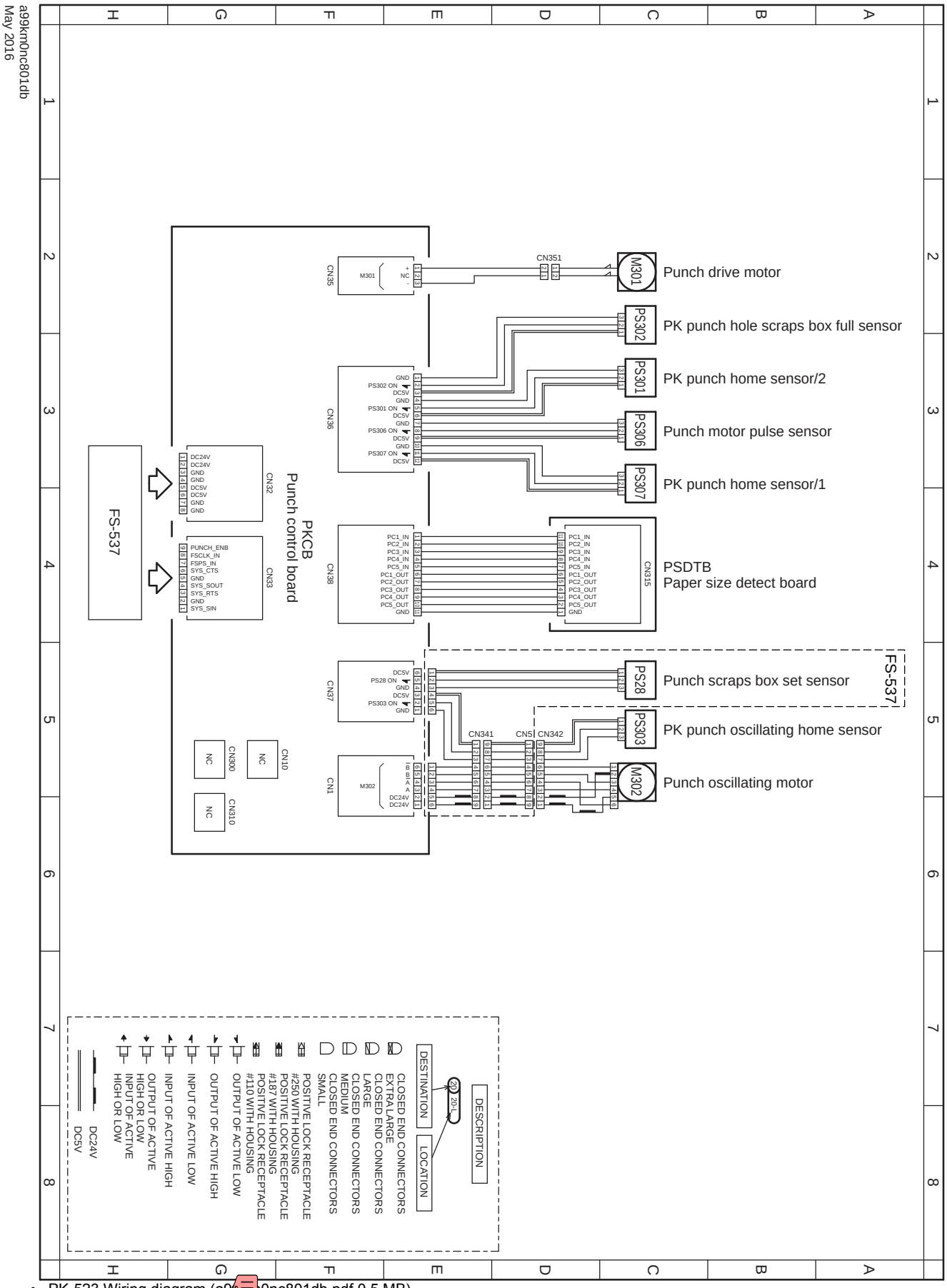
- LU-303 Wiring diagram (a8[illegible]0nc801da.pdf 0.5 MB)

3.3 FS-537/FS-537SD



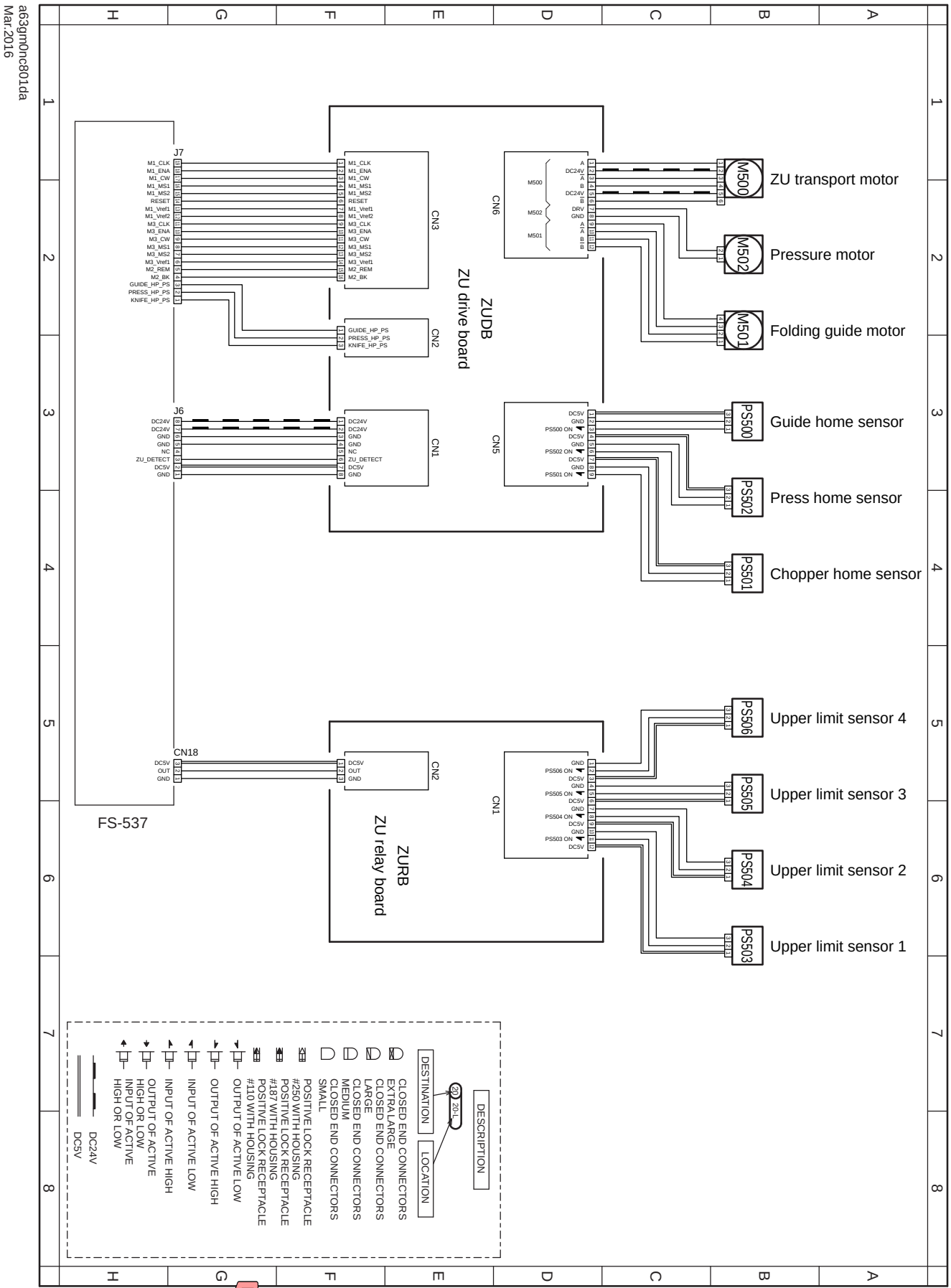
- FS-537/FS-537SD Wiring diagram (a87hm0nc801da.pdf 1.7 MB)
- FS-537/FS-537SD Wiring diagram A3 size (1/2) (a87hm0nc812da.pdf 0.6 MB)
- FS-537/FS-537SD Wiring diagram A3 size (2/2) (a87hm0nc822da.pdf 0.9 MB)

3.4 PK-523



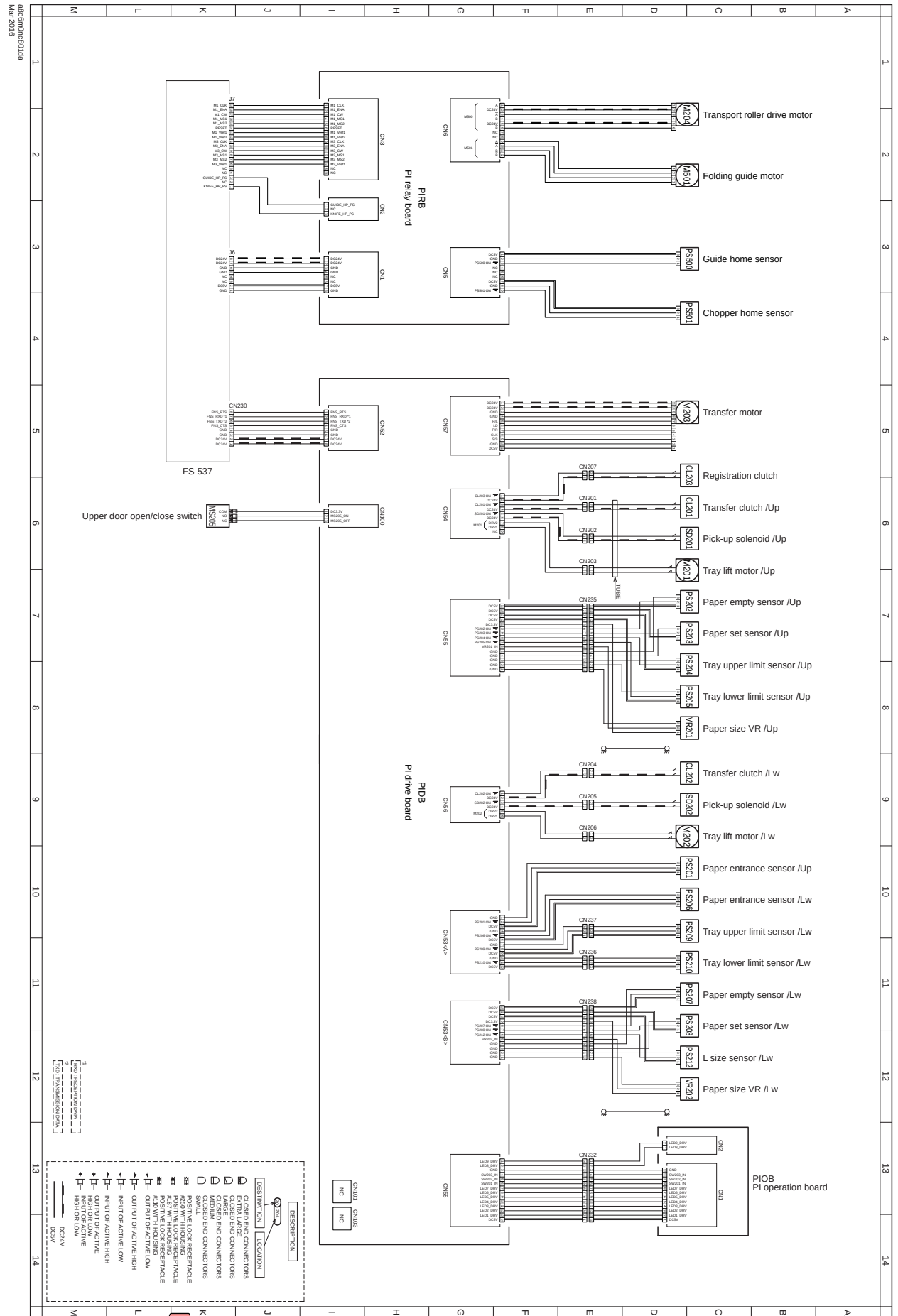
- PK-523 Wiring diagram (a9[illegible]0nc801db.pdf 0.5 MB)

3.5 ZU-609



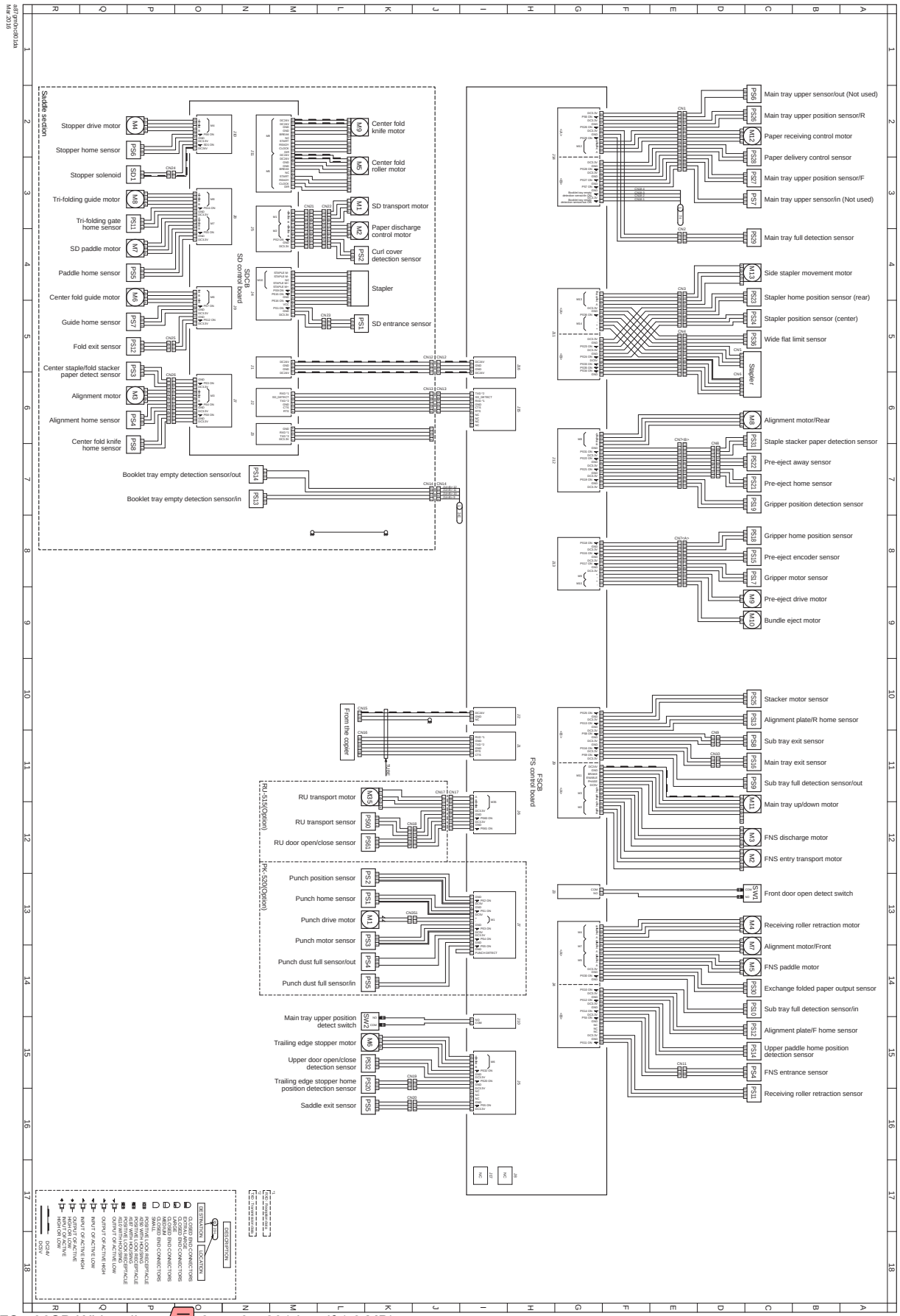
- ZU-609 Wiring diagram (a63gm0nc801da.pdf 0.5 MB)

3.6 PI-507



- PI-507 Wiring diagram (a8c6m0nc801da.pdf 0.5 MB)

3.7 FS-536/FS-536SD



- FS-536/FS-536SD Wiring diagram (a87gm0nc801da.pdf 1.3 MB)
- FS-536/FS-536SD Wiring diagram A3 size (1/2) (a87gm0nc812da.pdf 0.9 MB)
- FS-536/FS-536SD Wiring diagram A3 size (2/2) (a87gm0nc822da.pdf 0.7 MB)

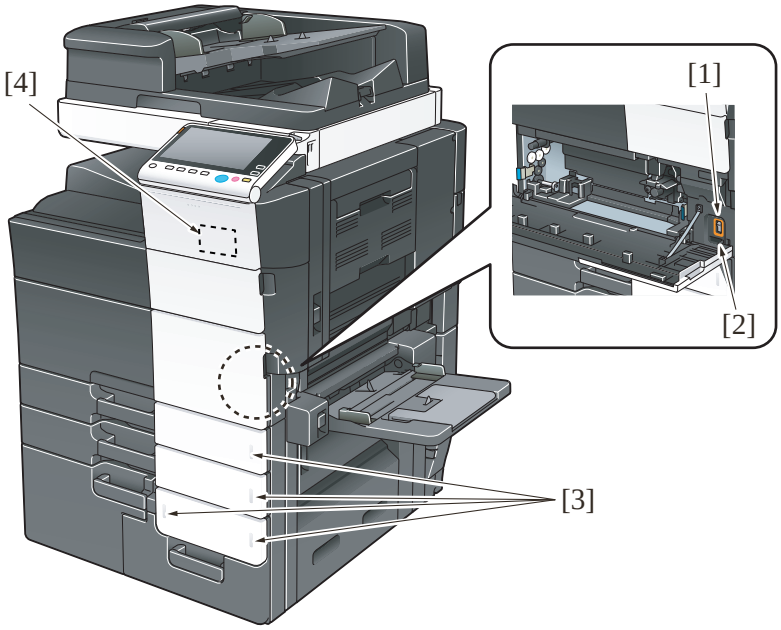
O THEORY OF OPERATION bizhub 958/808/758, bizhub PRO 958

1. INTERFACE SECTION

1.1 Configuration

1.1.1 Front side

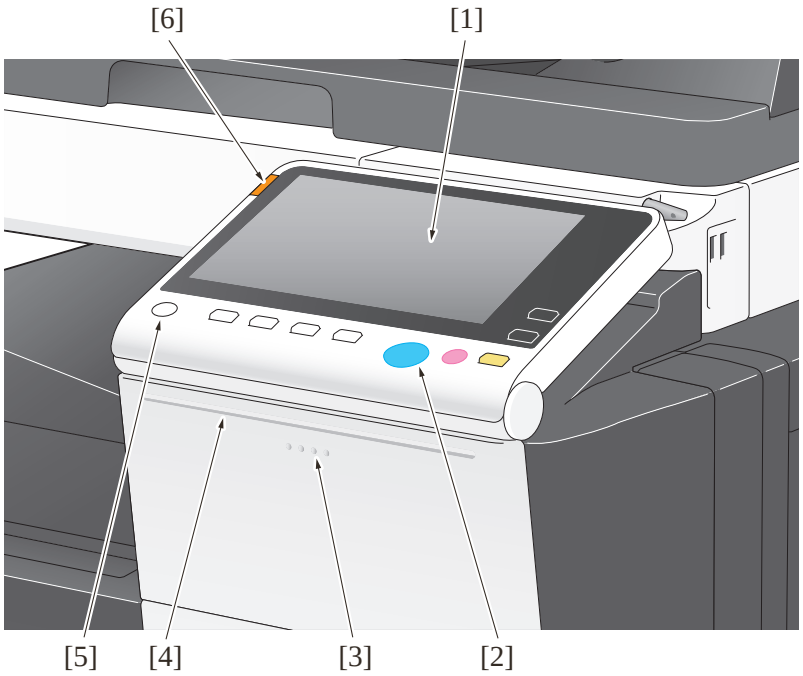
(1) Front side



[1]	Main power switch (SW1)	[2]	Total counter *1
[3]	Remaining paper level display (Lit up: empty) *2	[4]	IC card reading position *3

- *1: Japan only
- *2: "Machine State LED Setting" of the service mode may be used to cause this display to flash off and on at a near-empty condition.
- *3: When a MFP main body is equipped with an optional authentication unit AU-201S and mount kit MK-735.

(2) Control panel



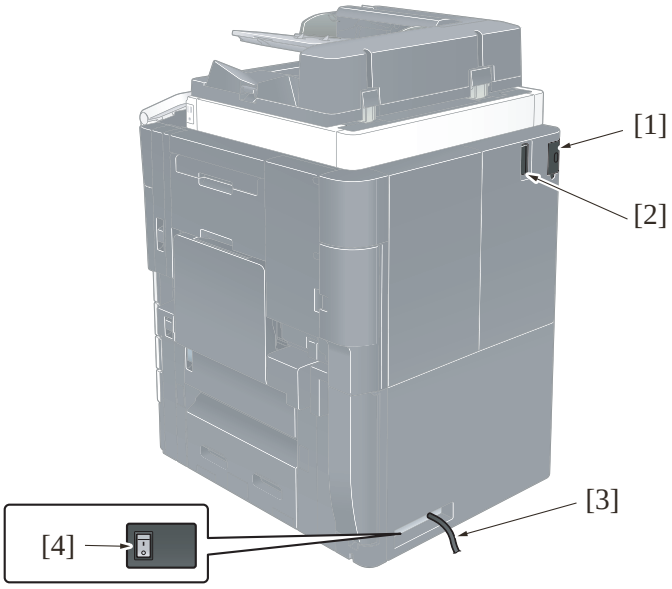
[1]	Touch panel (9-inch TFT color LCD WVGA, Electrostatic touch panel type)	[2]	Start key • Lit up blue: Copy is possible • Lit up orange: Copy is impossible
[3]	Data indicator • Blinking: Receiving a job • Lit up: Job is currently	[4]	Status indicator: Printing • Blinking: During printing
[5]	Power key • Lit up blue: Standby • Blinking in blue: Low power/Sleep mode • Lit up orange: Sub power off mode • Blinking in orange: ErP auto power off mode	[6]	Status indicator: Warning/Stop • Blinking: Warning occurs • Lit up: Irregular stop

- Refer to O.22.2.3 Status in each mode for more information about the power key.

1.1.2 Rear side

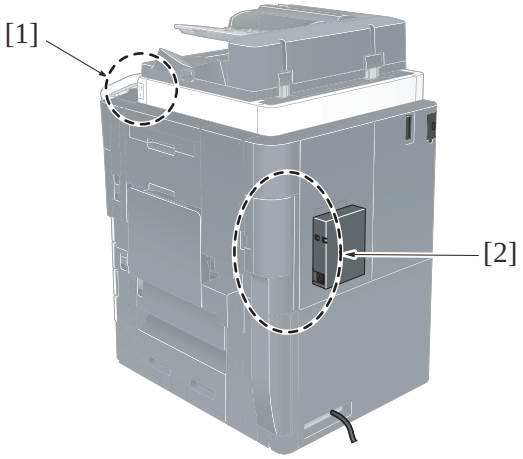
NOTE

- **For details of dehumidification heater, see "O.11.3.10 Dehumidification heater control".**



[1]	Finisher connection connector	[2]	Toner filter
[4]	Power cable	[3]	Dehumidification heater switch (SW2)

1.1.3 Right side

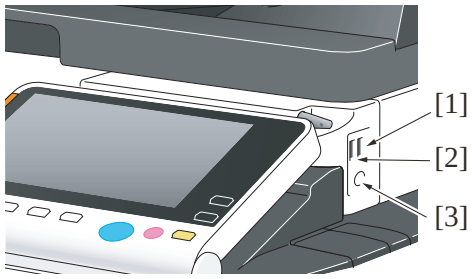


[1]	Front side	[2]	Rear side

(1) Front side

NOTE

- **Use utmost care when unplugging or plugging the cable. If the USB cable extended from the rear side USB port is unplugged, the front side USB port is no longer operational.**

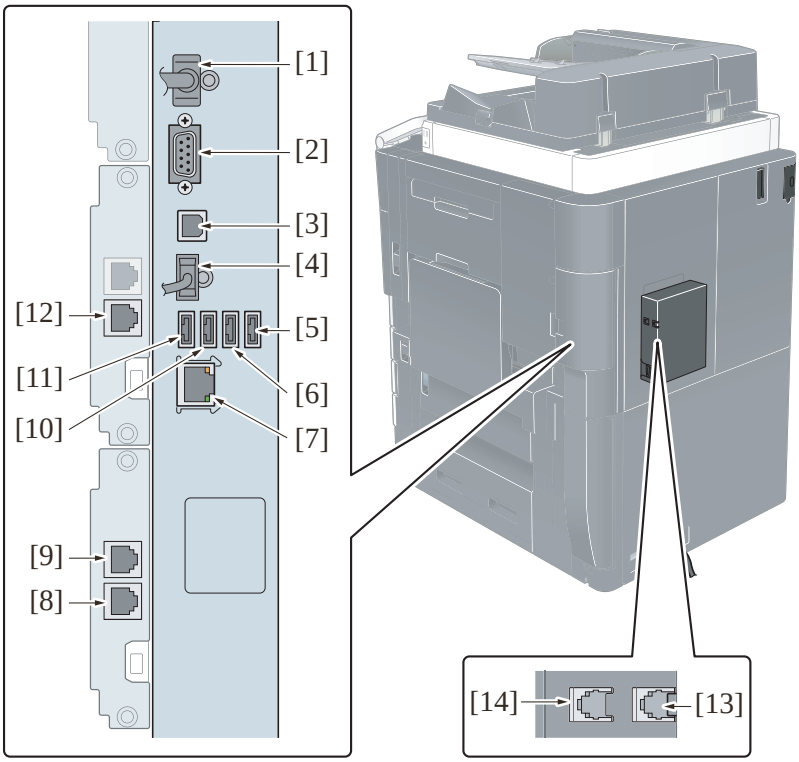


[1]	USB port (Type-A, standard)	[2]	USB port (Type-A, optional EK-610 or EK-611)
[3]	Audio output terminal (Type-A, optional EK-610 or EK-611)	-	-

(2) Rear side

NOTICE

- For details of “firmware upgrading”, see “J REWRITING OF FIRMWARE”.

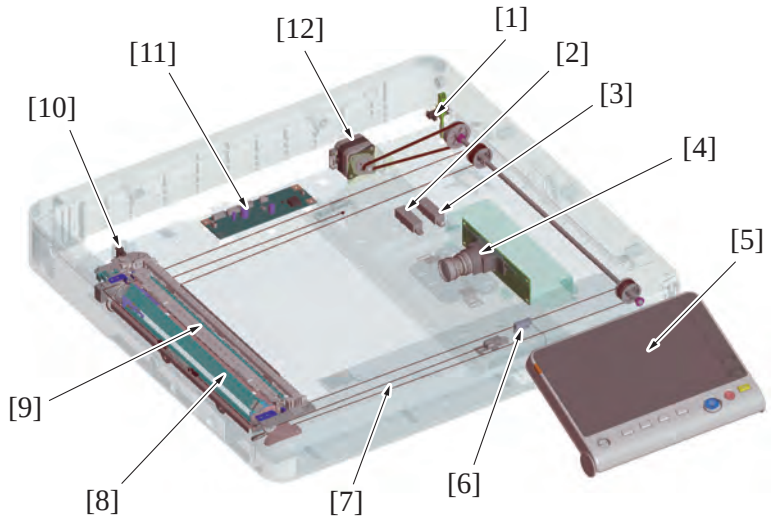


[1]	Control panel connection connector	[2]	Serial port (for CS remote care modem connection)
[3]	USB port (Type B) USB2.0/1.1	[4]	USB extension port (USB extension cable to the USB port at the front side)
[5]	USB port (Type A, Authentication Unit) USB2.0/1.1	[6]	USB port (Type A, Authentication Unit) USB2.0/1.1
[7]	Network port (1000Base-T/100Base-TX/10Base-T)	[8]	LINE port (for telephone main line *1)
[9]	TEL port 1 (for external telephone main line *1)	[10]	USB port (Type A, FK-516: Fax2)
[11]	USB port (Type A, FK-516: Fax1 *1, FK-515: Fax3/4 *3, 4)	[12]	LINE port 2 (for telephone line 2 *2)
[13]	LINE port 3 (for telephone line 3 *3)	[14]	LINE port 4 (for telephone line 4 *4)

- *1: When only one optional FK-516 unit is mounted
- *2: When two optional FK-516 units are mounted
- *3: When one optional FK-515 unit is mounted
- *4: When two optional FK-515 units are mounted

2. SCANNER SECTION

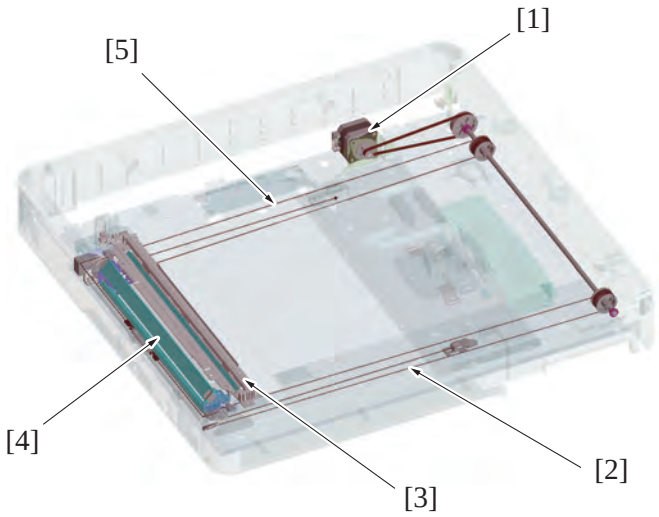
2.1 Configuration



[1]	Angle sensor (PS202)	[2]	Original size sensor/1 (PS203)
[3]	Original size sensor/2 (PS204)*	[4]	CCD unit
[5]	Control panel	[6]	Original cover sensor (RS201)
[7]	Scanner cable	[8]	Mirror unit
[9]	LED exposure unit (LU201)	[10]	Scanner home sensor (PS201)
[11]	Scanner drive board (SCDB)	[12]	Scanner motor (M201)

- *: Not used in models for Japan. Option in models for destination other than Japan.

2.2 Drive

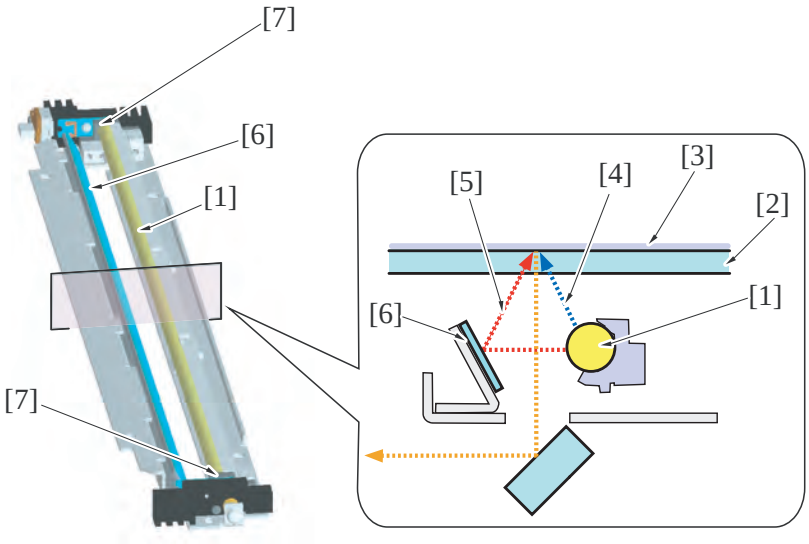


[1]	Scanner motor (M201)	[2]	Scanner drive cable/Fr
[3]	LED exposure unit (LU201)	[4]	Mirror unit
[5]	Scanner drive cable/Rr	-	-

2.3 Operation

2.3.1 LED exposure unit

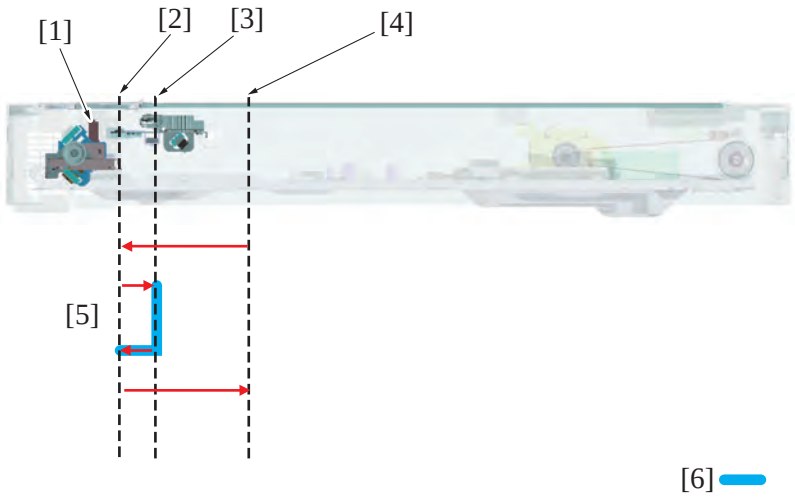
- LEDs (Light Emitting Diodes) are used for the light source of the scanner section for power saving.
- Each LED board on either side has one LED, so that two LEDs illuminate.
- Light emitted from the LED travels along the light guide.
- The original is irradiated with direct light that has traveled along the light guide and indirect light reflected from the reflector, which ensures that the original is exposed to steady, uniform light.



[1]	Light guide	[2]	Original glass
[3]	Original	[4]	Direct light
[5]	Indirect light	[6]	Reflector
[7]	LED board	-	-

2.3.2 When the power turns ON

1. When the power is turned ON, the LED exposure unit moves to the home position.
2. With the LED exposure unit located at the home position, the LEDs are turned ON and then the exposure unit moves to the shading position (under the shading correction sheet).
3. The gain value of the CCD sensor output voltage to R, G, and B is adjusted.
4. After adjusting the gain value, a shading correction is performed.
5. The LED exposure unit moves in the return direction and stops at the home position.
6. When the DF is raised for placement of the original, the LED exposure unit moves to the original size detection position.



[1]	Scanner home sensor (PS201)	[2]	Home position
[3]	Shading position	[4]	Original size detection position
[5]	Shading correction	[6]	The LED turns ON

2.3.3 Control when the Start key is pressed

(1) Original scanning mode

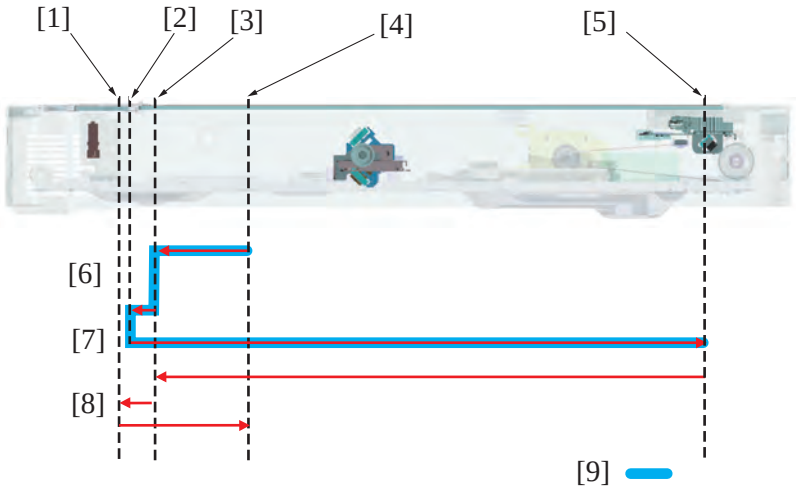
- Original scanning mode has two types: Original cover mode and DF mode.

(a) Original cover mode

1. Turning the Start key ON will turn the LED ON.
2. The LED exposure unit moves in the return direction and stops at the shading position. At the shading position, the gain adjustment is made.
3. The LED exposure unit moves in the return direction and stops at the scan start position.
4. To start a scan, the LED exposure unit moves from the scan start position to the leading edge of an original while performing shading correction.
   The LED exposure unit will start reading the original image from the leading edge.

The unit will finish reading the image at the trailing edge of the original.

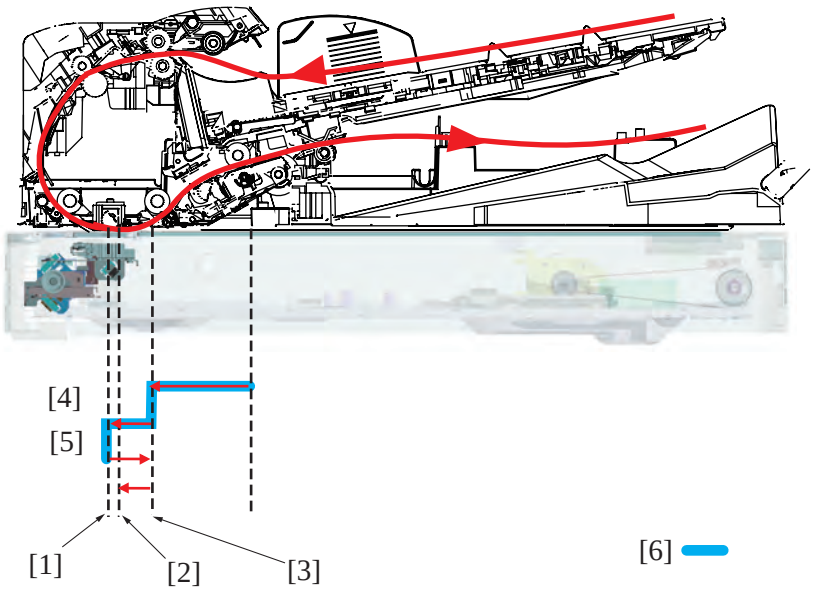
5. The LED will turn OFF when the reading is complete.
6. The LED exposure unit returns from the position of the trailing edge of the original. At the shading position, it is determined that the LED is turned OFF.
   Then the LED exposure unit moves in the scan direction and stops at the original size detection position.
   It scans only once even for the color-scans, since R, G, and B data will all be memorized in one scanning.



[1]	Home position	[2]	Scan start position
[3]	Shading position	[4]	Original size detection position
[5]	Trailing edge of the image	[6]	Gain adjustment
[7]	Read original	[8]	Return
[9]	The LED turns ON	-	-

(b) DF mode

- The original fed by the dual scan document feeder will be read at the DF original glass for. The LED exposure unit will move to the reading position and stops. The original will be read as the paper is transferred.



[1]	Original reading position	[2]	Home position
[3]	Shading position	[4]	Shading correction
[5]	Read original	[6]	The LED turns ON

(2) Original scanning control

- The light reflected off the exposed original reaches the CCD sensor via the lens.
- The CCD sensor outputs an electric signal (analog) that varies according to the intensity of the light.
- One CCD sensor has a photo receiver that individually responds to each of the three primary colors of R, G, and B.
- The electric signal is converted to digital data for each of R, G, and B by the board (CCDB), becoming individual digital signals.

- Analog-to-digital conversion is made according to an instruction given by the MFP board (MFPB).

(a) Calibration

The following adjustment and correction (calibration) are made before the original is scanned, so that the image of the original can be adequately read. For details, see "O.2.3.6 Scanner section image processing block diagram".

- Gain adjustment
- Shading correction

2.3.4 Original scanning area

- Original scanning areas vary depending on a scanning mode.

(1) Original cover mode

- Main scanning direction: Max. 297.0 mm (11 11/16 inches)
- Sub scanning direction: Max. 431.8 mm (17 inches)

(2) DF mode

(a) Scanning at 400 dpi or less

- Main scanning direction: Max. 297.0 mm (11 11/16 inches)
- Sub scanning direction: Max. 1,000.0 mm (39 3/8 inches) (FAX mode only)

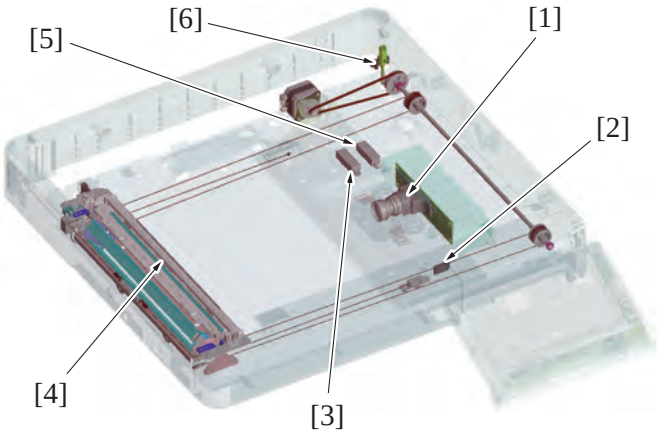
(b) Scanning at 600 dpi

- Main scanning direction: Max. 297.0 mm (11 11/16 inches)
- Sub scanning direction: Max. 432.0 mm (17 inches)

2.3.5 Original size detection control

(1) Detection method

- For the length direction, the fixed reflective original size sensor is used.
- For the original width direction, the CCD is used.
- A standard original size is determined depending on the detection state of the original size sensor and the width that the CCD detects.
- For a custom size, the control sets a smallest possible standard size that is larger than the custom size in question to thereby prevent void image.



[1]	CCD unit	[2]	Original cover sensor (RS201)
[3]	Original size sensor/1 (PS203)	[4]	LED exposure unit (LU201)
[5]	Original size sensor/2 (PS204)*	[6]	Angle sensor (PS202)

- *: Not used in models for Japan. Option in models for destination other than Japan.

(2) Detection timing

- Detections of the original in length direction are determined depending on state of the original size sensor when the angle sensor detects ON state.
- Detection is made twice for the original width direction: when the angle sensor is activated, and when the original cover sensor is activated.
- The original size is reset when the original cover sensor is deactivated from activated state as a result of the DF being raised.

(3) Original size judgment

NOTE

- **Table 1 or 2 can be selected in the service mode.**

(a) Criterion (for Japan)

Table1

Original size sensor/1	Main scanning width (mm)					
	0 to 130.0	Up to 153.0	Up to 187.0	Up to 215.0	Up to 262.0	262.1 or over

OFF	No original	A5S	B5S	A4S	B5	A4
ON	A3	B4	B4	B4	B4	A3

Table2

Original size sensor /1	Main scanning width (mm)								
	0 to 130.0	Up to 143.9	Up to 153.0	Up to 187.0	Up to 213.0	Up to 220.9	Up to 262.0	Up to 284.4	284.5 or over
OFF	No original	5 1/2×8 1/2S	A5S	B5S	A4S	8 1/2×11S	B5	8 1/2×11	A4
ON	A3	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	B4S	11×17S	A3

(b) Criterion (for China and countries using the metric)

Table1

Original size sensor		Main scanning width (mm)								
/1	/2	0 to 130.0	Up to 153.0	Up to 187.0	Up to 200.0	Up to 215.0	Up to 225.0	Up to 261.5	Up to 275.0	Up to 275.1
OFF	-	No original	A5S	B5S	16K S	A4S	B5	B5	16K	A4
ON	-	A3	FLS	FLS	FLS	FLS	FLS	B4	8K	A3

Table2

Original size sensor		Main scanning width (mm)											
/1	/2	0 to 130.0	Up to 143.9	Up to 153.0	Up to 187.0	Up to 200.0	Up to 213.0	Up to 220.9	Up to 225.0	Up to 261.5	Up to 274.7	Up to 284.4	Up to 284.5
OFF	OFF	No original	5 1/2×8 1/2S	A5S	B5S	16K S	A4S	8 1/2×11S	B5	B5	16K	8 1/2×11	A4
ON	OFF	A3	FLS	FLS	FLS	FLS	FLS	FLS	FLS	B4	8K	11×17	A3
OFF	ON	A3	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	B4	B4	8K	11×17	A3
ON	ON	A3	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	B4	B4	8K	11×17	A3

(c) Criterion (for countries using inch)

Table1

Original size sensor		Main scanning width (mm)			
/1	/2	0 to 130.0	Up to 144.7	Up to 220.9	Up to 221.0
OFF	-	No original	5 1/2×8 1/2S	8 1/2×11S	8 1/2×11
ON	-	11×17	8 1/2×14	8 1/2×14	11×17

Table2

Original size sensor		Main scanning width (mm)									
/1	/2	0 to 130.0	Up to 143.9	Up to 153.0	Up to 187.0	Up to 213.0	Up to 220.9	Up to 225.0	Up to 262.0	Up to 284.4	Up to 284.5
OFF	OFF	No original	5 1/2×8 1/2S	A5S	B5S	A4S	8 1/2×11S	B5	B5	8 1/2×11	A4
ON	OFF	A3	FLS	FLS	FLS	FLS	FLS	FLS	B4	11×17	A3
OFF	ON	A3	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	B4	B4	11×17	A3
ON	ON	A3	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	8 1/2×14	B4	B4	11×17	A3

2.3.6 Image processing

The image processing has following items. For details, see “O.20.1 Scanner section image processing block diagram”.

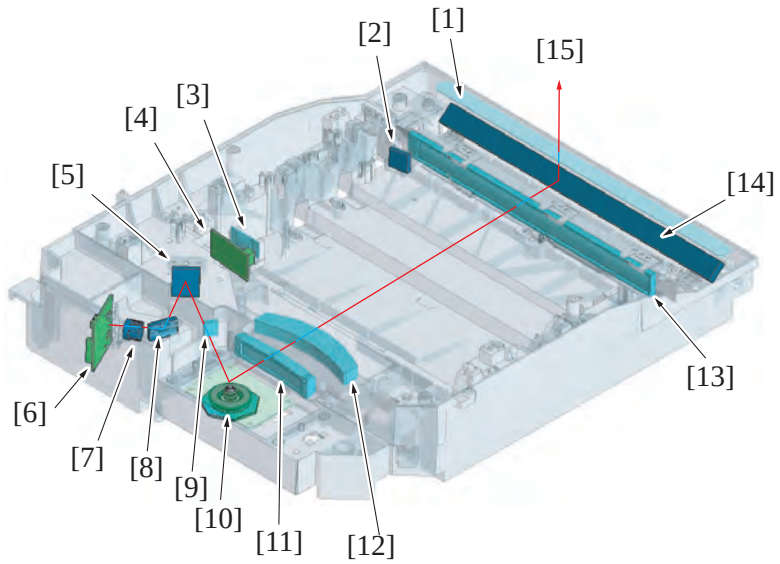
Scanner section image processing block diagram

- Photoelectric conversion

- Analog-to-digital conversion

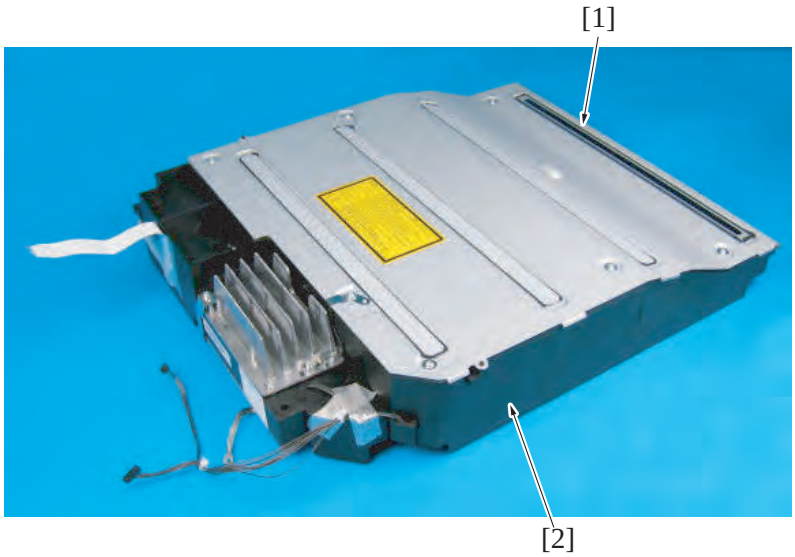
3. WRITE SECTION (PH SECTION)

3.1 Configuration



[1]	Laser aperture of the PH unit	[2]	Index mirror
[3]	Index lens	[4]	Index board (INDEXB)
[5]	Return mirror/2	[6]	Laser drive board/K (LDDB/K)
[7]	Collimator	[8]	Return mirror/1
[9]	Cylindrical lens	[10]	Polygon mirror
[11]	G1 lens	[12]	G2 lens
[13]	G3 lens	[14]	Return mirror/3
[15]	Laser beam	-	-

3.1.1 PH unit external view



[1]	Laser aperture of the PH unit	[2]	PH unit

3.2 Operation

3.2.1 Outline

- The surface of the photoconductor is irradiated with a laser light and an electrostatic latent image is thereby formed.

(1) PH unit overview

- Two semiconductor lasers are provided. A single polygon motor is used to make scans. (2 lines, one scan)
- In response to increased speeds, a 7-sided polygon mirror and a 2-beam array LD are used to reduce high rotation speeds.

(2) Write mode

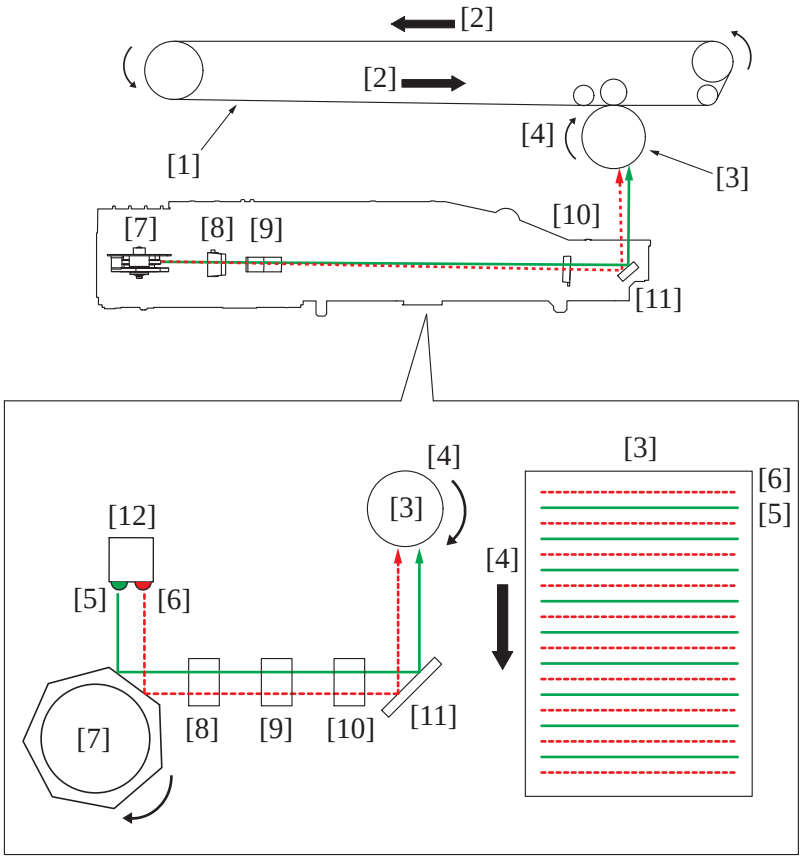
- A 600 dpi and a 1,200 dpi laser writing modes are available.

(a) 600 dpi mode

- Standard mode (default value)
- In 600 dpi mode, two lines are scanned simultaneously by reflecting two lasers off of one polygon mirror side. The laser light is emitted from the two LD elements (LD1 and LD2) arranged vertically.

NOTE

- **Differences in light intensity from the 2-beam array LD cause grain-like noise in printed images. LD light intensity correction can be configured from the following: [Service Mode] -> [Machine] -> [LD adjustment] -> [LD 1/2 Balance Adj.].**



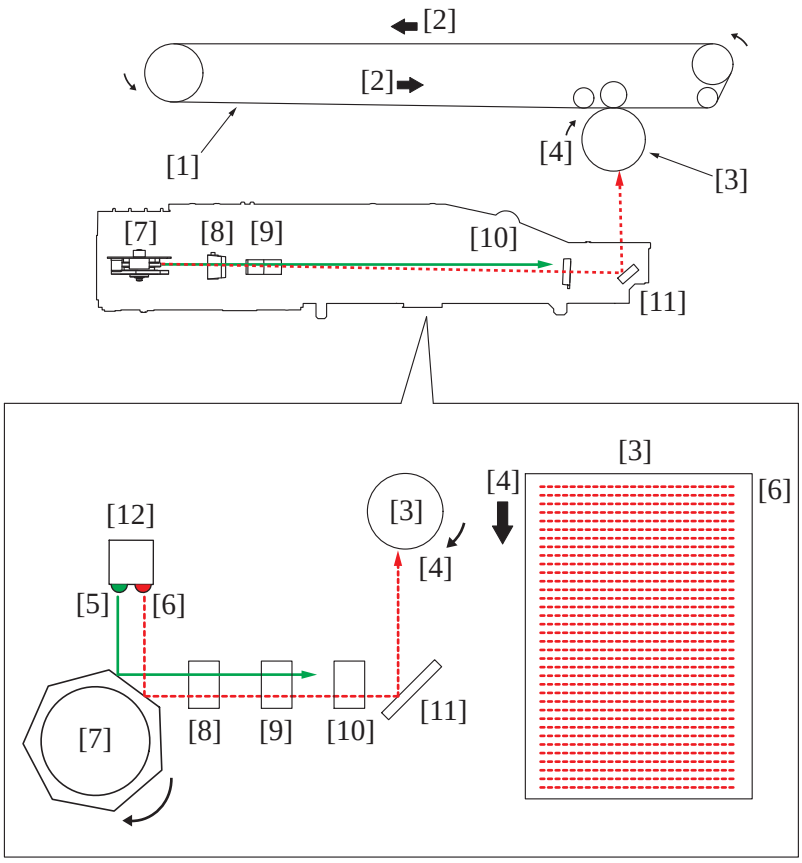
[1]	Transfer belt	[2]	Transfer belt rotation direction
[3]	Photoconductor	[4]	Photoconductor rotation direction (sub scanning direction)
[5]	LD2 beam	[6]	LD1 beam
[7]	Polygon mirror	[8]	G1 lens
[9]	G2 lens	[10]	G3 lens
[11]	Return mirror/3	[12]	Laser diode

(b) 1,200dpi mode

- This mode is executed only when the resolution is configured to 1,200 dpi in the printer driver. (This option is only available for PC printing but cannot be used for making copies or other operations.)
- In 1,200 dpi mode, process speed (rotational speed of the transfer belt and photoconductor) is reduced and one line per scanning is performed with LD1. LD2 is used to control the index signal.
- By reducing the light emission interval for LD1, the write density in the main scanning direction is increased.
- By reducing process speed, the rotation speed of the photoconductor and transfer belt is reduced to increase the write density in the sub scanning direction.

NOTE

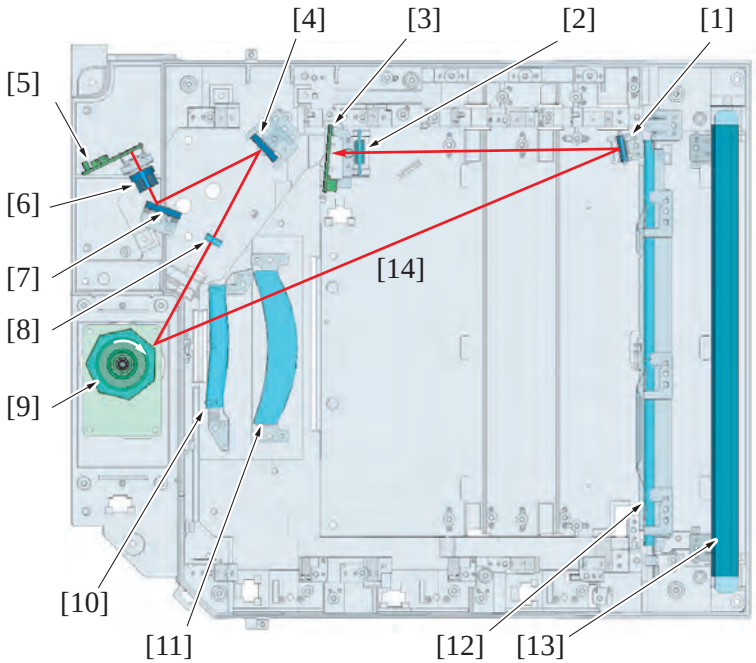
- **The intervals between LD elements interval for the 2-beam array LD are arranged for 600 dpi operation. For this reason, the two beams cannot be used together for 1,200 dpi write operations.**



[1]	Transfer belt	[2]	Transfer belt rotation direction
[3]	Photoconductor	[4]	Photoconductor rotation direction (sub scanning direction)
[5]	LD2 beam (reflected by the index mirror and reaches the index board)	[6]	LD1 beam (irradiated to the photoconductor)
[7]	Polygon mirror	[8]	G1 lens
[9]	G2 lens	[10]	G3 lens
[11]	Return mirror/3	[12]	Laser diode

3.2.2 Index signal control

- The index signal is generated for each main scanning line.
- The index signal is used to ensure consistent timing of laser beam emissions.



[1]	Index mirror	[2]	Index lens
[3]	Index board (INDEXB)	[4]	Return mirror/2
[5]	Laser drive board/K (LDDB/K)	[6]	Collimator
[7]	Return mirror/1	[8]	Cylindrical lens
[9]	Polygon mirror	[10]	G1 lens
[11]	G2 lens	[12]	G3 lens
[13]	Return mirror/3	[14]	Laser beam

(1) Index signal generation process

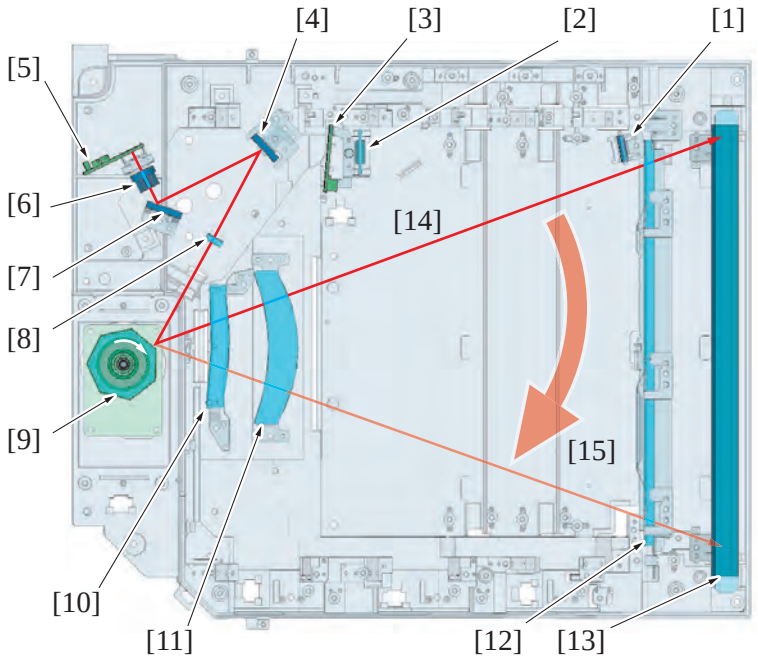
1. After a print cycle has been started, when the stable rotation signals of photoconductor and polygon motor are detected, a laser ON signal is output from the MFP board.
2. The laser ON signal causes each laser diode *1 to turn ON and emit a laser beam.
3. After passing through the return mirror/2, cylindrical lens, polygon mirror, G1 lens, G2 lens, index mirror, and index lens, the laser light is applied to the index board. This generates an index signal. *2
   The laser beam emission timing is uniformed for each main scanning line (600 dpi: two lines each for writing / 1200 dpi: each one line for writing) by this index signal.
4. The laser diode is turned off when the index signal is generated.

NOTE

- ***1: In 600 dpi mode, LD1 and LD2 emit beams. In 1200 dpi mode, LD2 emits a beam.**
- ***2: If the index signal is not detected within a predetermined period of time, the machine determines that it is a laser emission fault, displaying "trouble code: C4501 laser malfunction". The index signal is monitored continuously. If the index signal cannot be detected at regular intervals, the machine determines that it is a laser emission fault, displaying "trouble code: C4501 laser malfunction".**

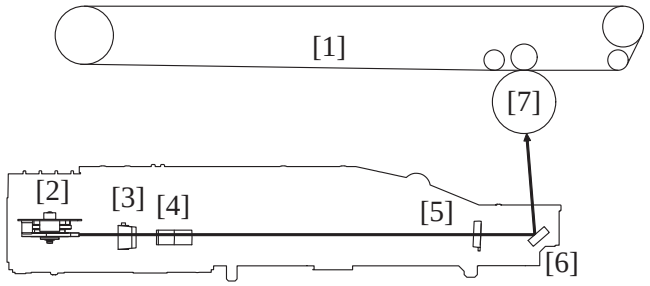
3.2.3 Laser exposure control

- The laser beam is emitted after the index signal is generated.
- The polygon mirror rotates to scan the laser beams in the main scanning direction.



[1]	Index mirror	[2]	Index lens
[3]	Index board (INDEXB)	[4]	Return mirror/2
[5]	Laser drive board/K (LDDB/K)	[6]	Collimator
[7]	Return mirror/1	[8]	Cylindrical lens
[9]	Polygon mirror	[10]	G1 lens
[11]	G2 lens	[12]	G3 lens
[13]	Return mirror/3	[14]	Laser beam
[15]	Laser beam main scanning direction	-	-

(1) Laser exposure process



[1]	Transfer belt	[2]	Polygon mirror
[3]	G1 lens	[4]	G2 lens
[5]	G3 lens	[6]	Return mirror/3
[7]	Photoconductor	-	-

1. The laser beam *1 enters the cylindrical lens via the return mirror/2.
2. The laser beam is condensed at the vicinity of the polygon mirror by the cylindrical lens.
3. Laser beams are reflected with the polygon mirror. *2
4. The condensing angle of the reflected laser beam is corrected by the G1, G2 and G3 lenses and then reaches the return mirror/3.
5. The laser beam is condensed on the photoconductor surface via the return mirror/3.

NOTE

- ***1: In 600 dpi mode, two laser beams from LD1/LD2 enter. In 1200 dpi mode, only a laser beam from LD1 enters.**
- ***2: The polygon mirror rotates to change the angle of reflected laser beams in the main scanning direction. One side of the polygon mirror is used to perform scanning each scan.**

(2) Laser emission area

- The print start position is determined with the main scanning print start signal (/HSYNC), image write signal (/TOD) and the paper size.

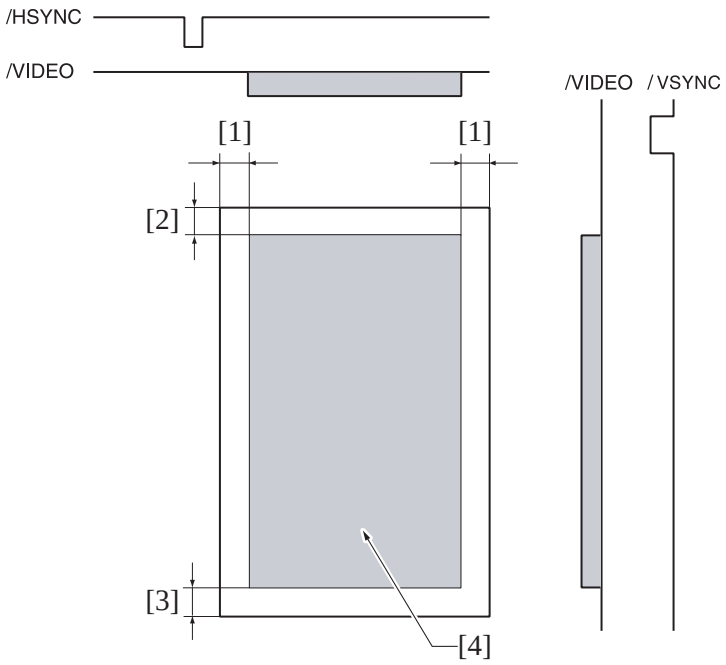
(a) Main scanning direction

- The print start position in the main scanning direction is determined by the main scanning print start signal (/HSYNC) that is output from the MFP board and the width of the paper.
- The laser emission area is determined by the paper size.

(b) Sub scanning direction

- The print start position in the sub scanning direction is determined with the image write signal (/TOD) that is output from the MFP board. Also, it is determined with the system speed.
- The laser emission area is determined by the paper size.

Mode	Void image area	
	Main scanning direction	Sub scanning direction
Copy	3 mm (1/8 inches) from the edge of the paper	4.2 mm (3/16 inches) from the leading edge of the paper
	3 mm (1/8 inches) from the edge of the paper	3 mm (1/8 inches) from the trailing edge of the paper
PC print	4.2 mm (3/16 inches) from the edge of the paper	4.2 mm (3/16 inches) from the leading edge of the paper
	4.2 mm (3/16 inches) from the edge of the paper	4.2 mm (3/16 inches) from the trailing edge of the paper



[1]	Void image area at edge of paper	[2]	Void image area at leading edge of paper
[3]	Void image area at trailing edge of paper	[4]	Laser emission area

(3) Laser emission stop

Emission of the laser beam is stopped if any of the following conditions is encountered during printing:

- End of a print job
- The front door or any other door is opened.
- A misfeed occurs.
- A malfunction occurs.

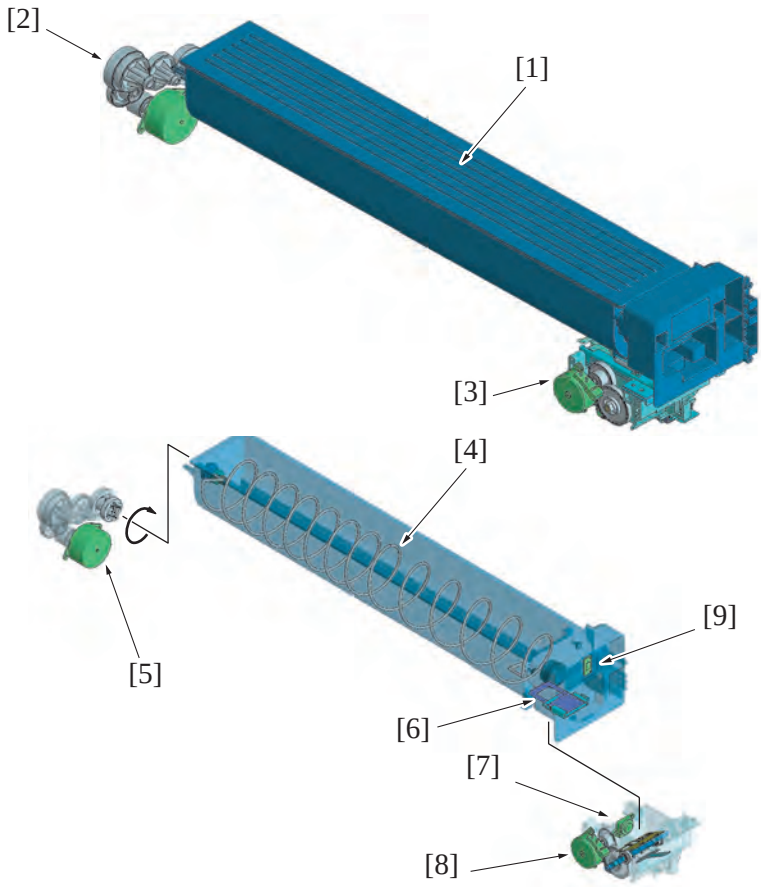
3.2.4 Image processing

For details of image processing, see “O.20.3 Write section image processing block diagram”.

4. TONER SUPPLY SECTION

4.1 Configuration

- The toner supply section is composed of the toner cartridge drive section, toner cartridge and toner hopper section.



[1]	Toner cartridge	[2]	Toner cartridge drive section
[3]	Toner hopper	[4]	Spiral spring
[5]	Toner cartridge motor/CK (M14)	[6]	Toner supply port
[7]	Toner empty sensor/K (PZS/K)	[8]	Toner supply motor/K (M12)
[9]	Toner cartridge set board/K (TCB/K)	-	-

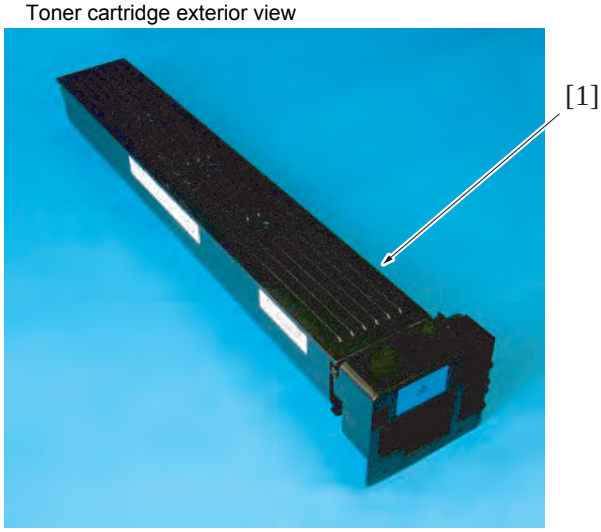
4.1.1 Cartridge compatibility

- Toner cartridges specific to each model are available. Cartridges for other models cannot be used.

NOTE

- **For the name of toner cartridges, refer to "C.1.4 Material".**

Toner cartridge exterior view



4.1.2 Toner, Carrier, and Developer

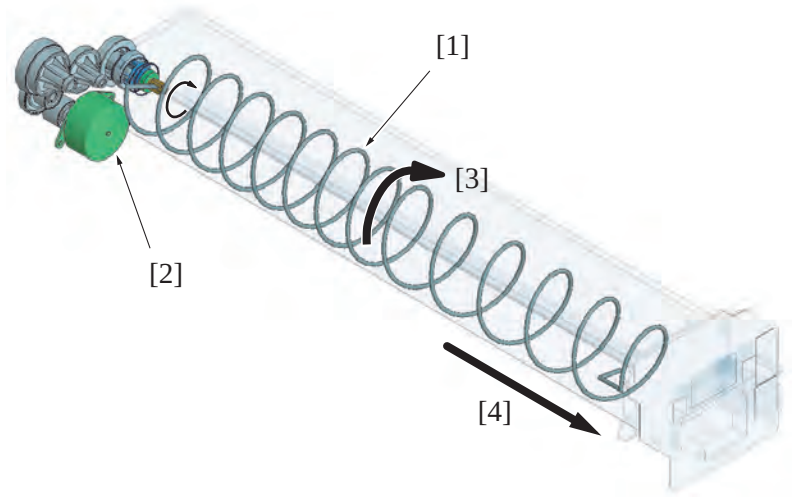
- The toner cartridge/K is packed with the toner and carrier. Therefore, the new carrier is supplied together with the toner supply to the developing unit/K. For details, see auto refining developing system.

NOTE
- **"Toner and carrier" packed in the toner cartridge is called "Toner" instead of "Developer" throughout the service manual.**
- **"Developer", if clearly specified, refers to the "developer" that is mixed in the developing unit to offer a specified TC.**

4.2 Drive

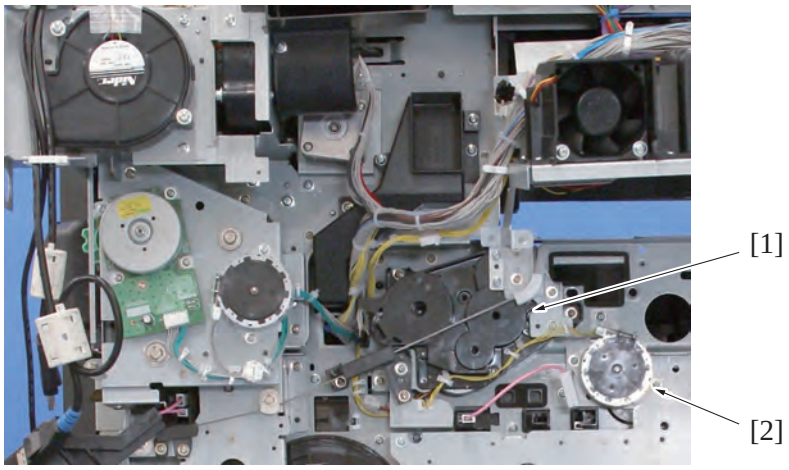
- The drive mechanism in the toner supply section is composed of the toner cartridge drive mechanism and the toner hopper drive mechanism.

4.2.1 Toner cartridge drive



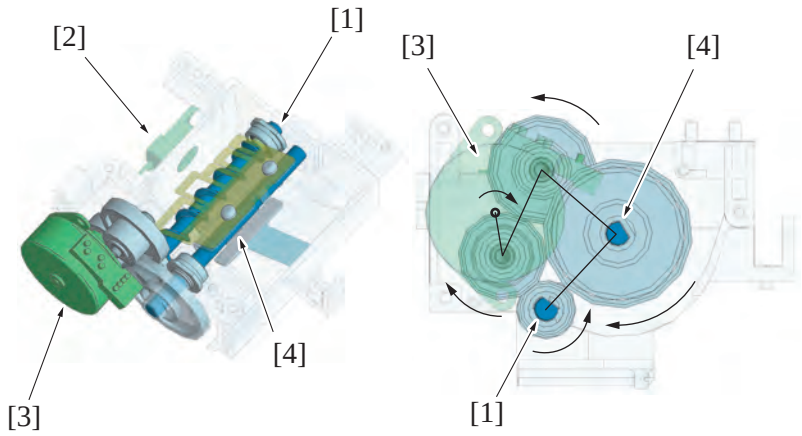
[1]	Spiral spring	[2]	Toner cartridge motor/CK (M14)
[3]	Spiral spring rotation direction	[4]	Toner transport direction

(1) Toner cartridge motor/CK exterior view (main body rear view)



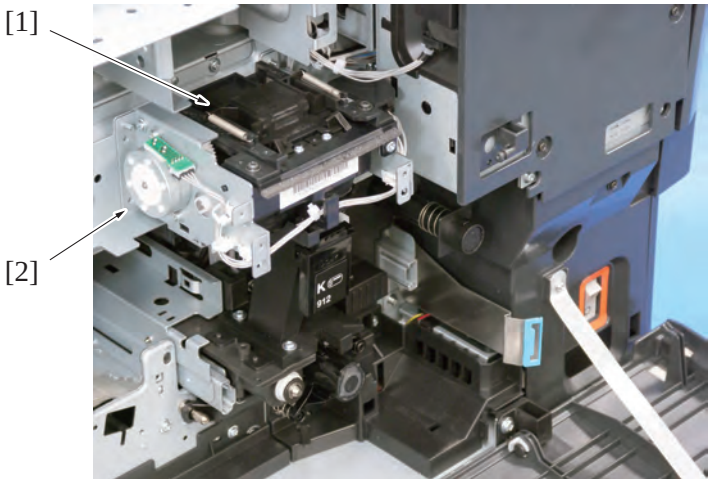
[1]	Toner cartridge motor/CK (M14)	[2]	1st transfer pressure motor (M21)

4.2.2 Toner hopper drive



[1]	Toner supply screw	[2]	Toner empty sensor/K (PZS/K)
[3]	Toner supply motor/K (M12)	[4]	Toner agitating blade

(1) Toner hopper exterior view (main body front door internal view)

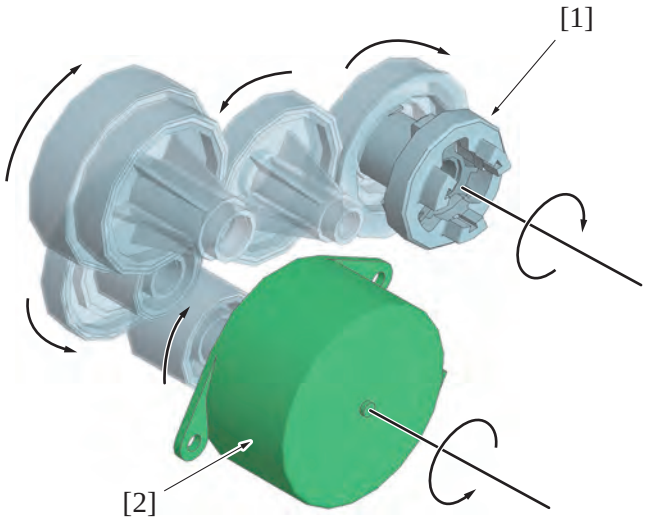


[1]	Toner hopper	[2]	Toner supply motor/K (M12)

4.3 Operation

4.3.1 Toner supply to the toner hopper

- Rotation of the toner cartridge motor/CK supplies toner from the toner cartridge to the toner hopper.



[1]	Toner cartridge coupling portion *1	[2]	Toner cartridge motor/CK (M14)

- *1: The shape varies depending on the model.

(1) Toner supply control

- When the toner cartridge motor/CK rotates, the spiral spring provided in the toner cartridge rotates. Thus toner in the toner cartridge is conveyed to front side of the machine and toner is supplied to the toner hopper.
- The toner empty sensor/K located in the toner hopper detects the remaining toner amount and controls toner supply from the toner cartridge to the toner hopper.

(2) Toner cartridge motor rotation speed selection control

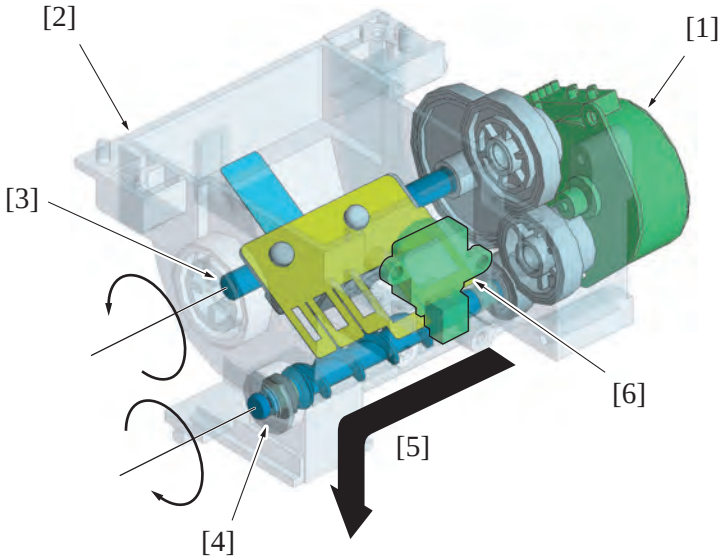
- The toner cartridge motor selects a rotation speed of either low or high.
- When toner left in the toner cartridge is equal to, or more than, a specified value, the toner cartridge motor rotates at the low speed to supply a specified amount of toner to the toner hopper.
- When toner left in the toner cartridge decreases, the toner empty sensor/K in the toner hopper detects a toner cartridge near empty.
- When toner left in the toner cartridge decreases, the toner efficiency decreases. (When the toner cartridge motor rotates at the low speed, a specified amount of toner cannot be supplied to the toner hopper.) Speed of the toner cartridge motor is therefore changed from the low speed to the high speed.
- The increased speed of the toner cartridge motor boosts up toner supply efficiency that has been degraded. As a result, a specified amount of toner can be supplied from the toner cartridge to the toner hopper.

(3) Compulsory toner supply to toner hopper

- The operation of forced toner supply to the toner hopper can be executed from the following menus: [Service Mode] -> [Image Process Adjustment]-> [Manual Toner Add] -> [Hopper Toner Filling]
- Used for manual toner filling to the toner hopper, and agitation of the developing unit.

4.3.2 Toner supply to the developing unit

- By rotation of the toner supply motor/K, the toner is supplied from the toner hopper to the developing unit.



[1]	Toner supply motor/K (M12)	[2]	Toner hopper (back view)
[3]	Toner agitating blade	[4]	Toner conveying screw
[5]	Toner flow	[6]	Toner empty sensor/K (PZS/K)

(1) Toner supply control

- The toner supply motor/K rotates to transport the toner in the hopper that is supplied from the toner cartridge, into the developing unit.
- The TCR sensor in the developing unit/K measures the TC ratio when the developing motor/K is energized.
- Toner cartridge control calculates toner supply time (supply amount) based on TC ratio that the TCR sensor detected and toner consumption that the dot counter calculated.

NOTE

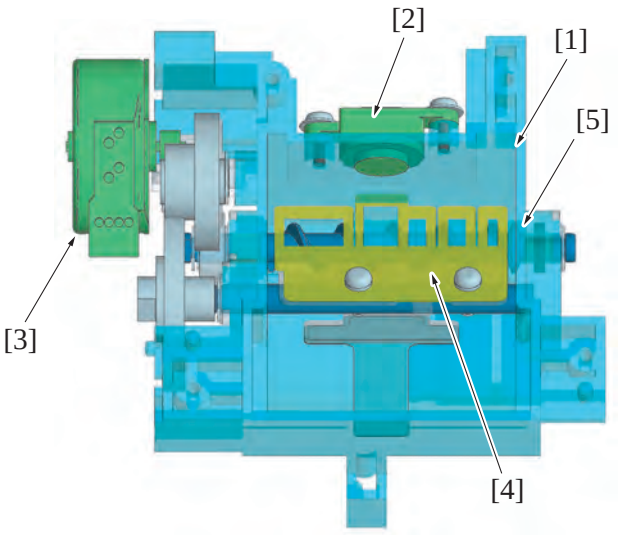
- **This machine may not be able to supply enough toner during one toner supply operation when dense images have been printed.**
- **In such cases, the amount of deficiency for the previous toner supply operation is calculated and supplied in the following toner supply operation.**

(2) Compulsory toner supply to the developing unit

- The operation of forced toner supply to the developing unit can be executed from the following settings: [Service Mode] -> [Imaging Process Adjustment] -> [Manual Toner Add]
- Use this function when print image density (ID) decreased due to reduction in toner density (TC ratio) after multiple pages of dense originals have been printed. When the toner is supplied while a job in process, the TC ratio in the developing unit can be adjusted to the configured level.

4.3.3 Remaining toner detection control

- The toner empty sensor/K detects the toner in the toner hopper to determine the remaining amount of toner.



[1]	Toner hopper (top view)	[2]	Toner empty sensor/K (PZS/K)
[3]	Toner supply motor/K (M12)	[4]	Toner agitating blade
[5]	Toner supply screw	-	-

(1) Toner empty sensor/K

- A piezo sensor is used as the toner empty sensor/K.
- The state of the toner empty sensor/K is monitored while the toner supply motor/K is operating. The operation to supply toner to the hopper is performed as necessary.

(2) Remaining toner determination control

- The amount of toner remaining in the cartridge is displayed as the four states, “normal”, “toner cartridge near empty”, “toner cartridge empty”, and “toner hopper empty”.

Remaining toner amount	Description
Normal	Enough toner remains in the toner cartridge and the toner hopper. (Low speed supply)
Toner cartridge near empty	Low speed supply cannot supply the required amount of toner to the toner hopper within a certain time. (Switch to the high speed supply)
Toner cartridge empty	Even high speed supply cannot supply the required amount of toner to the toner hopper within a certain time.
Toner hopper empty	Toner inside the toner hopper is running out, thus toner cannot be supplied to the developing unit. A printing cannot be continued.

NOTE

- **For the life of the toner cartridge, refer to “F.5.1 Life value of consumables and parts”.**

(a) Toner cartridge near empty detection control

- A toner cartridge near empty warning is displayed, if the toner empty sensor/K of the toner hopper detects no toner while the toner cartridge motor runs at low speed.

(b) Toner cartridge empty control

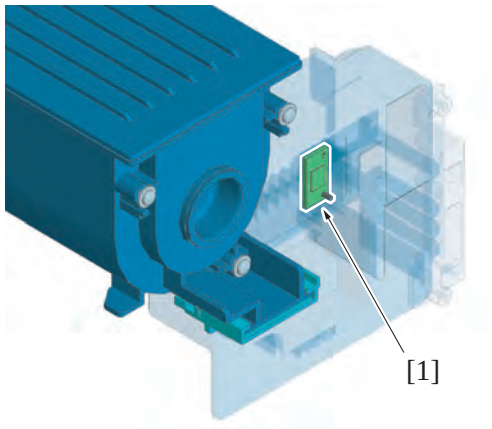
- Toner cartridge empty is displayed when the toner empty sensor/K in the toner hopper detects Toner Empty more than specified times after toner cartridge near empty is detected.

(c) Toner hopper empty detection

- Toner amount more than the given level is supplied to the developing unit after detecting a toner cartridge empty, toner hopper empty warning is displayed.

4.3.4 Toner cartridge detection

- Toner cartridges contain the toner cartridge set board/K to detect new toner cartridges.

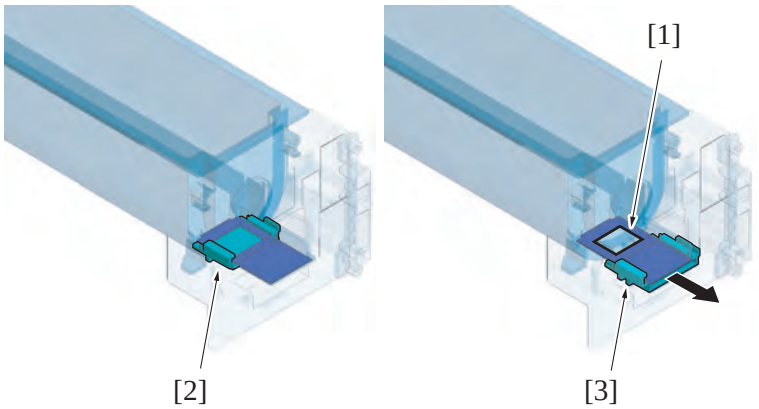


[1]	Toner cartridge set board/K (TCB/K)	-	-

NOTE
- **For details of the toner cartridge life, see "F.6.1 Life value of consumables and parts".**

(1) Description
- The toner cartridge detection is controlled by means of accessing the toner cartridge set board/K when the upper front door is closed or the sub power switch is turned ON to determine whether the toner cartridge is loaded or not.
- After detecting the presence of the cartridge, the machine determines whether the cartridge is new or not.

4.3.5 Toner spillage prevention shutter
- A shutter mechanism is provided to prevent toner from spilling when the toner cartridges are removed and installed.



[1]	Toner supply port	[2]	Shutter closed (before toner cartridge installation)
[3]	Shutter open (after toner cartridge installation)	-	-

(1) Description
- The shutter opens after the toner cartridges are installed into the main body.
- The shutter closes when the toner cartridges are removed from the main body.

NOTE
- **Do not open the shutter with the toner supply port facing down. Doing so may cause toner to spill and stain inside of the machine and the floor.**

4.3.6 Front doors mechanism
- The upper front door and lower front door are equipped on the front side of the MFP
- The main power switch, total counter, toner collecting box and imaging unit is equipped inside the lower front door.
- Toner cartridge is equipped inside the upper front door.

(1) Front doors locking mechanism
- The upper/lower front door is provided with a locking mechanism.

(a) Unlocking the front door
- Pull of the upper/lower front door to the front will release the door lock magnets (two each) provided at the upper portion of the front doors.

(b) Locking the front doors

- Close the upper/lower front door. When the upper/lower front door is closed in its correct position, the door lock magnets (two each) provided at the upper portion of the front doors lock the front doors.

(2) Lower front door open/close detection mechanism

- The lower front door switch detects that the front door is opened or closed.
- When the lower front door is closed, the open/close detection protrusion which is provided at the upper portion on the left side of the lower front door presses the actuator of the front door switch. This step turns ON the front door switch and the machine determines that the lower front door is closed.
- When the lower front door is opened, the front door switch actuator is released, which turns OFF the front door switch. The machine then determines that the lower front door is open and shows a message that prompts the operator to close the lower front door.
- When it is determined that the lower front door is open, use of all jobs but the fax reception job is prohibited. In addition, a paper misfeed results if the lower front door is opened during a print job.

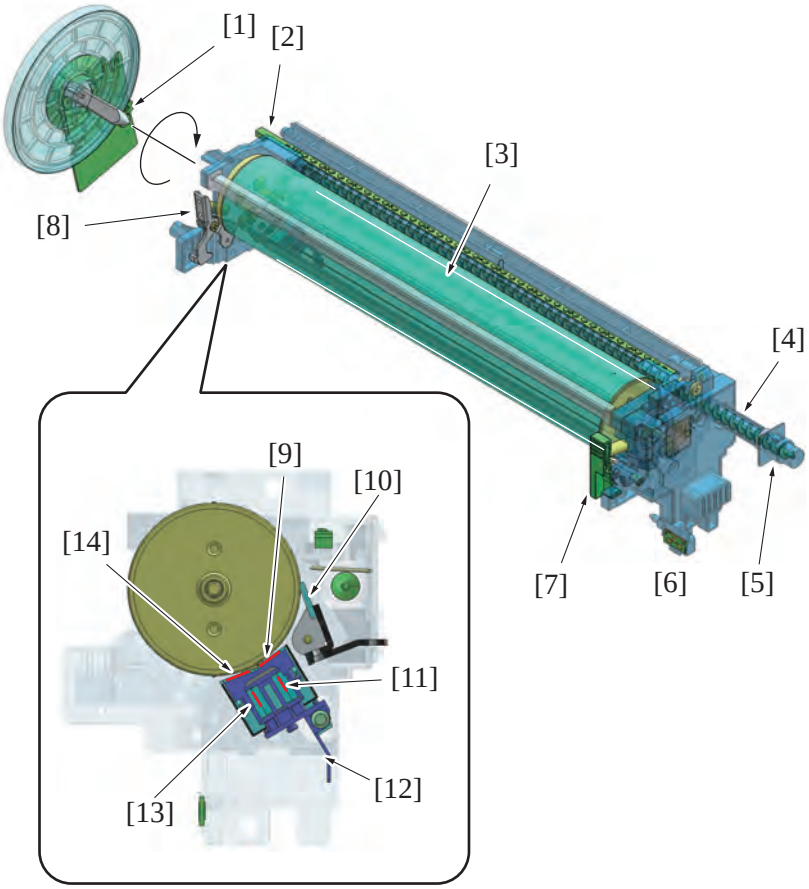
(3) Upper front door open/close detection mechanism

- The upper front door is not provided with an open/close detection mechanism. Therefore, a job does not stop even if the upper front door is opened during a print job.
- Replacement of the toner cartridge is possible during a print job because the upper front door can be opened or closed during consecutive jobs.

5. DRUM UNIT

5.1 Configuration

- The drum unit includes a photoconductor section, charging section and cleaner section.
- The charging mechanism include two groups of a comb electrode and a charge control plate.



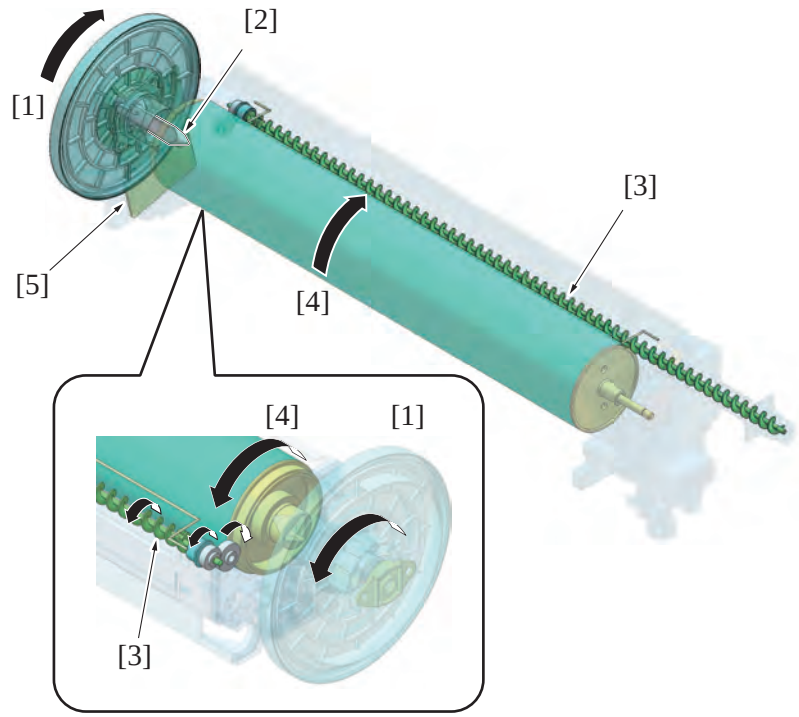
[1]	PC motor/K (M18)	[2]	Erase LED/K (EL/K)
[3]	Photoconductor	[4]	Toner collecting screw
[5]	Toner collecting port	[6]	DU set board/K (DUSB/K)
[7]	Drum unit release lever (front)	[8]	Drum unit release lever (rear)
[9]	Charging control plate /1 (grid mesh /1)	[10]	Cleaning blade
[11]	Comb electrode /1	[12]	Charge corona cleaner
[13]	Comb electrode /2	[14]	Charging control plate /2 (grid mesh /2)

5.2 Drive

- The drive mechanism in the drum unit includes a photoconductor drive mechanism and a charge corona cleaner drive mechanism.

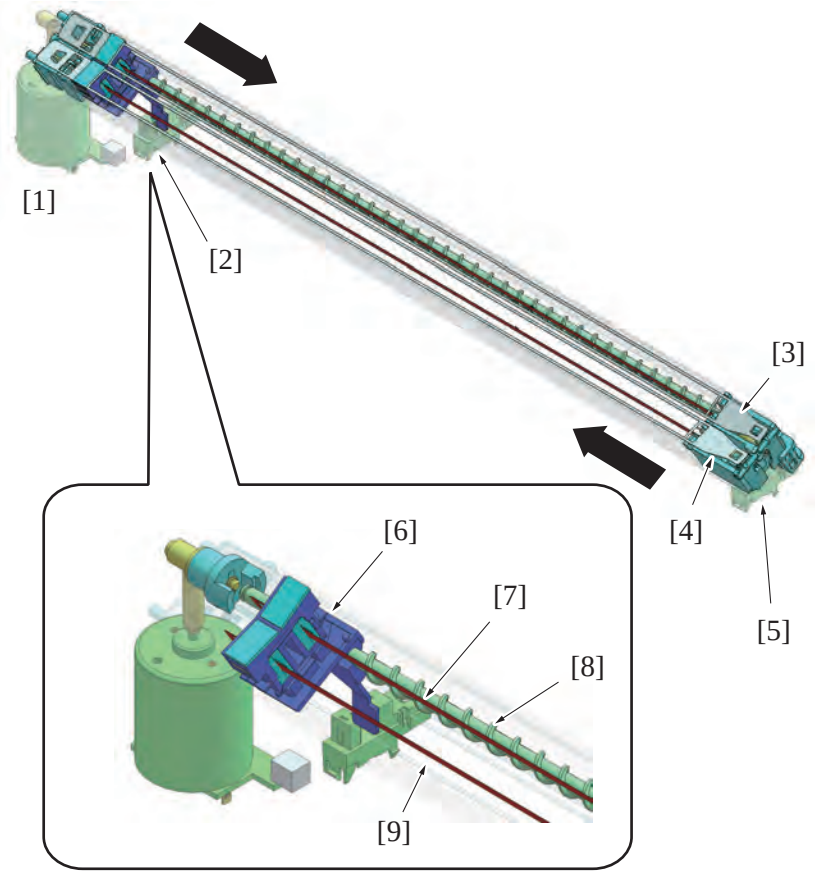
5.2.1 Photoconductor drive

- The PC motor/K drives the photoconductor via the photoconductor drive gear.



[1]	Photoconductor drive gear	[2]	Coupling
[3]	Toner collecting screw	[4]	Photoconductor
[5]	PC motor/K (M18)	-	-

5.2.2 Charge corona cleaner drive

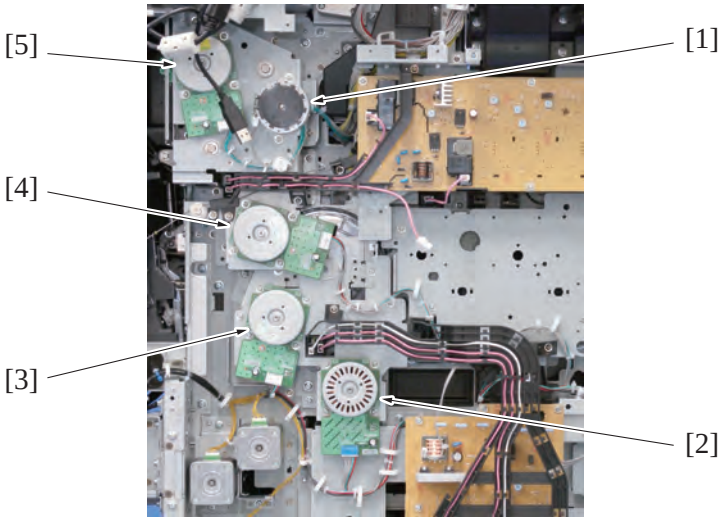


[1]	Charge cleaning motor/K (M15)*1	[2]	Charging cleaner home sensor (PS43)
[3]	Charging control plate /1 (grid mesh /1)	[4]	Charging control plate /2 (grid mesh /2)
[5]	Charging cleaner return sensor (PS44)	[6]	Charging cleaner

[7]	Comb electrode /1	[8]	Cleaner drive screw
[9]	Comb electrode /2	-	-

- *1: Installed in the main body frame

5.2.3 Rear side of the main body - Motor layout view (around the photoconductor drive unit)

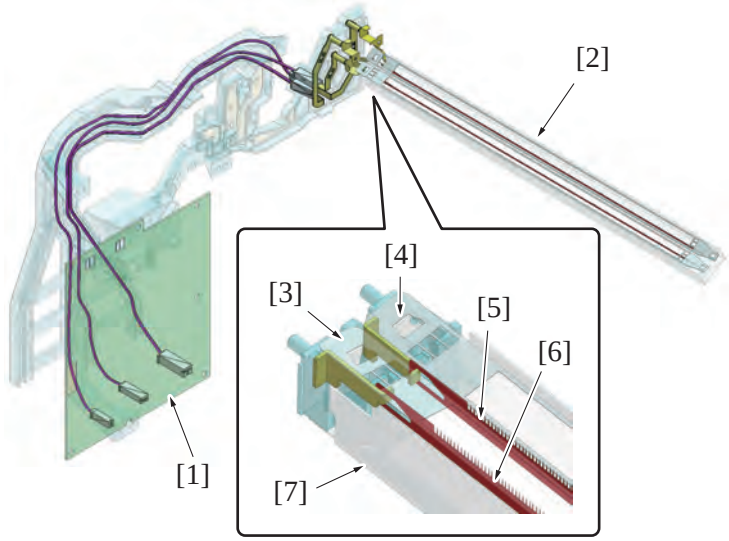


[1]	Fusing pressure motor (M34)	[2]	Developing motor/K (M19)
[3]	PC motor/K (M18)	[4]	Transfer belt motor (M1)
[5]	Fusing motor (M30)	-	-

5.3 Operation

5.3.1 Charge control

- The charge corona charges the photoconductor.
- Two groups of electrodes are provided due to increased print speeds.

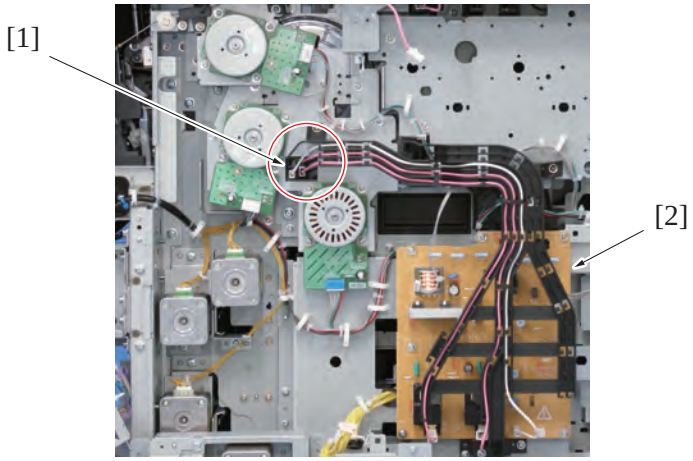


[1]	High voltage unit/1 (HV1)	[2]	Charge corona
[3]	Charging control plate /1 (grid mesh /1)	[4]	Charging control plate /2 (grid mesh /2)
[5]	Comb electrode /1	[6]	Comb electrode /2
[7]	Stabilization plate	-	-

(1) Description

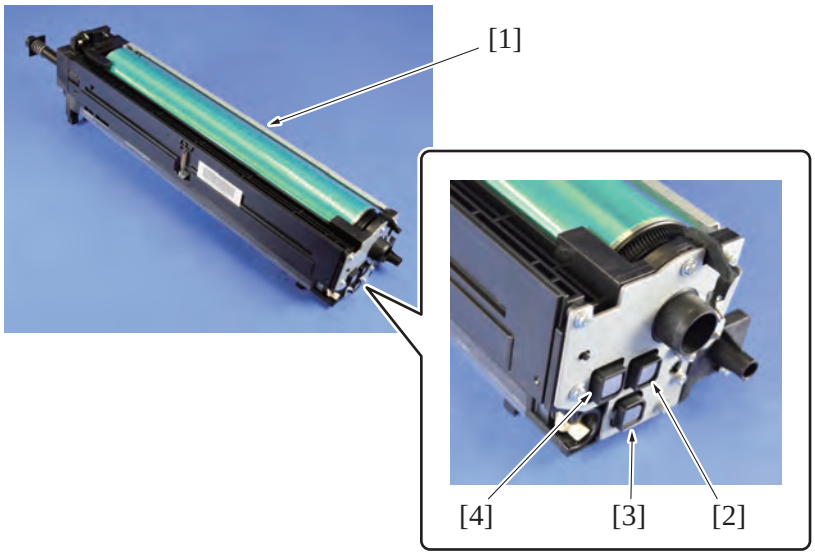
- The photoconductor opposed to the charge control plate is charged by applying the charge voltage (grid voltage: Vg) to the comb electrode, charge control plate (grid mesh), and stabilization plate.
- The charge voltage is supplied from the high voltage unit/1.
- The charge voltage depends on the image stabilization control.

(a) Main body rear side internal



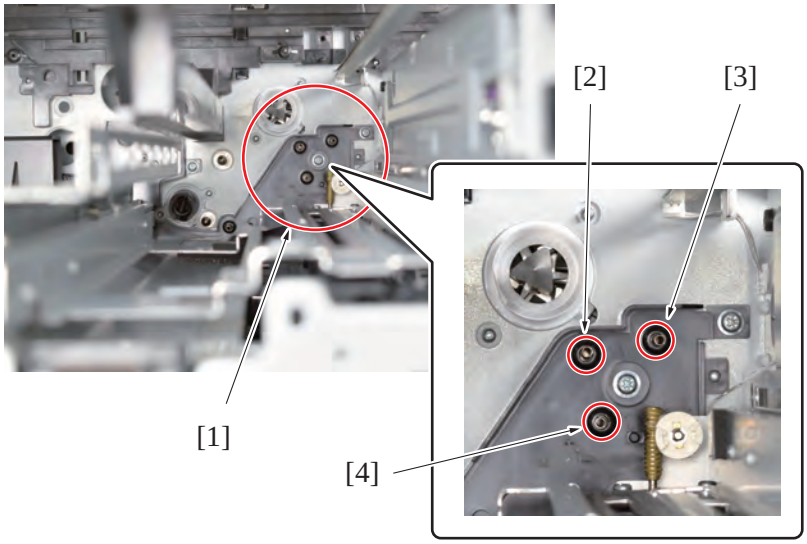
[1]	Applying the charge voltage to the charge corona	[2]	High voltage unit/1 (HV1)

(b) Drum unit rear side



[1]	Drum unit/K	[2]	Charge voltage application terminal (Comb electrode/2 side)
[3]	Charge voltage application terminal (Charge control plate (grid mesh/stabilization plate side))	[4]	Charge voltage application terminal (Comb electrode/1 side)

(c) Main body internal voltage application section



[1]	Internal voltage application section	[2]	Charge voltage application terminal (Comb electrode/2 side)

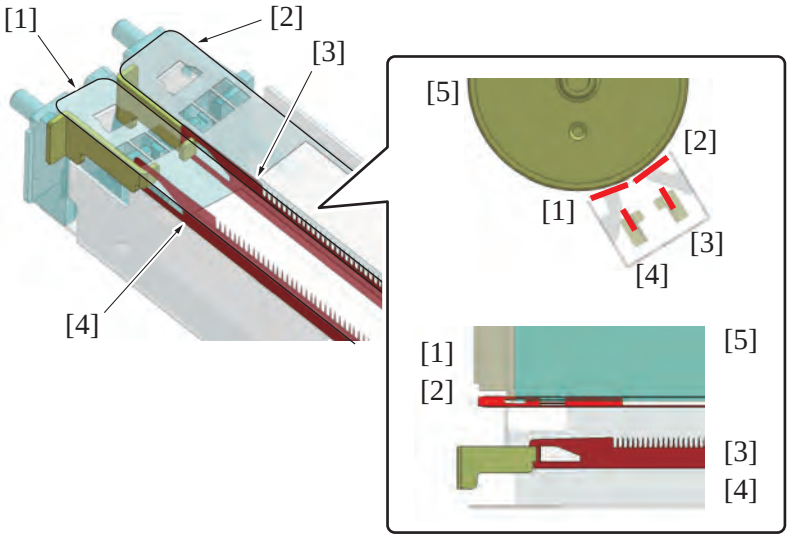
[3]	Charge voltage application terminal (Comb electrode/1 side)	[4]	Charge voltage application terminal (Charge control plate (grid mesh/stabilization plate side))

NOTE

- **When stain adheres on the contact point of the charge voltage applying terminal, the voltage may not be applied properly resulting in a image failure.**

(2) Comb electrode

- Two groups of a comb electrode and charge corona control plate are used to apply charges to maintain charge ability due to increased print speeds.
- The charge corona incorporates a comb electrode, capable of conducting charging operation centrally on the charge control plate (grid mesh), which enables to reduce the amount of ozone produced.



[1]	Charging control plate /1 (grid mesh /1)	[2]	Charging control plate /2 (grid mesh /2)
[3]	Comb electrode /1	[4]	Comb electrode /2
[5]	Photoconductor	-	-

(3) Charge control plate

- Discharge occurs via the charge control plate (grid mesh), so that the photoconductor surface can be uniformly charged.

(4) Max image density adjustment

- The maximum amount of toner adhesion on the paper is adjustable and settable.
- When "Max Image Density Adj" adjustment is executed, the charge voltage corresponding to the set maximum toner adhesion amount.
- An image quality problem is not corrected even after the gradation adjustment has been run.
- Max image density adjustment is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Max Image Density Adj.].

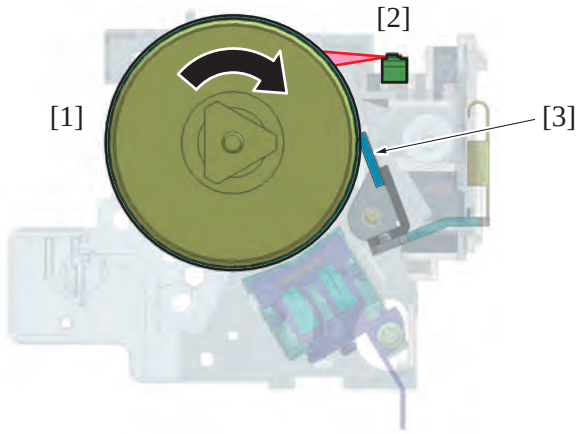
(5) Image background adjustment

NOTE

- **The image background adjustment is the setting value used for calculation of the charge voltage.**
- When a foggy background appears in the print image, the foggy background may be improved by adjusting the image background adjustment.
- Adjust the setting value of the image background in a secondary manner after gradation adjustment.
- Use when a foggy background occurs due to a printer problem.
- The image background adjustment is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Image Background Adj.]

5.3.2 Erase LED control

- The erase LED/K radiation onto the surface of the photoconductor removes electric charge remaining on the surface.



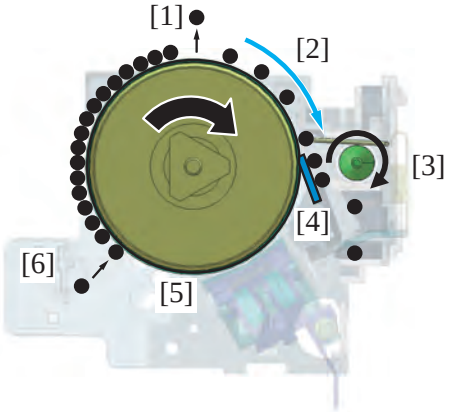
[1]	Photoconductor	[2]	Erase LED/K (EL/K)
[3]	Cleaning blade	-	-

(1) Description

- The main erase lamp/K is located upstream of the cleaning blade in the direction of the photoconductor rotation.
- When the surface of the photoconductor is irradiated with the erase LED/K, any electric charge remaining on the surface will be removed. This process removes static charge that is accumulated together with toner on the photoconductor surface.
- When static charge is removed from the toner, the cleanability of the photoconductor surface will be improved.

5.3.3 Photoconductor cleaning

- The cleaning blade collects the toner that is remained on the photoconductor.
- A cleaning blade with optimal materials is provided to maintain cleanability due to increased print speeds.



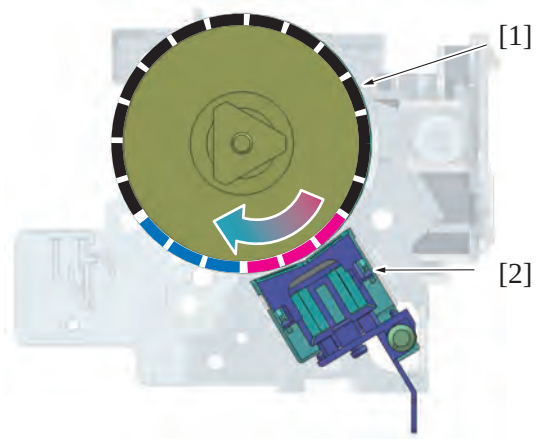
[1]	1st transfer	[2]	Collected toner flow
[3]	Toner collecting screw	[4]	Cleaning blade
[5]	Photoconductor	[6]	Developing

(1) Description

- The cleaning blade pushes against the photoconductor to scrape off residual toner from the surface.
- Toner, which has been scraped off the surface of the photoconductor, is conveyed to the front side of the main body by the toner collecting screw. It is collected into the waste toner box.

5.3.4 Photoconductor small amount rotation control

- To prevent occurrence of the image failures, such as the black bands or white bands, the photoconductor is rotated a small amount.



[1]	Photoconductor	[2]	Charge corona

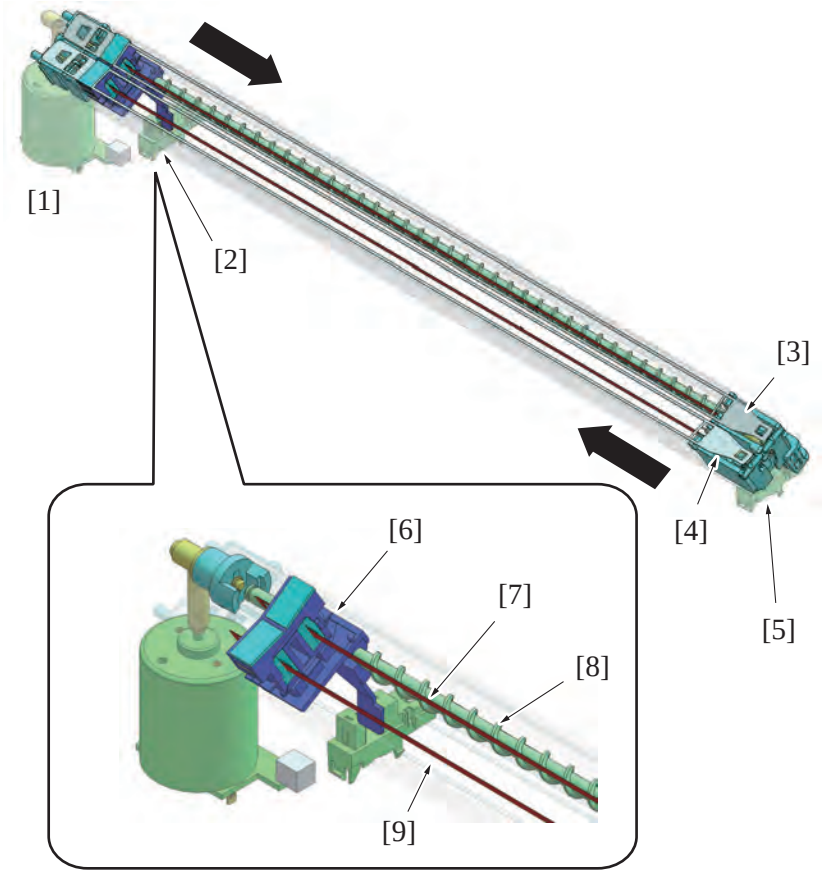
(1) Description

- Humidity around the IU can produce a difference in sensitivity among different photoconductors. This could lead to drum memory, allowing black bands to occur in the image.
- Ozone stagnant in areas near the photoconductor charge corona reduces sensitivity of the photoconductors, causing white bands to occur in the image.
- To prevent these image failures, the photoconductor rotates not to keep facing the same surface toward to the charge corona for a long time.
- The time interval of this control is set different depending on how long the photoconductor has been used and what the humidity and the temperature are inside the machine.
- If the below conditions are detected, the photoconductor is rotated a small amount during the standby after the completion of the job.

Job	Control execution conditions
Consecutive print	Rotate the photoconductor consecutively for more than a predetermined period of time.
Intermittent printing	The next job is started with a time interval of less than 10 min. after the completion of the preceding job, and the cumulative time of rotation of the photoconductor between the preceding and current jobs exceeds a predetermined period of time.

5.3.5 Charge corona cleaning

- The charge corona is equipped with an automatic cleaning mechanism to prevent occurrence of image failures such as bands.
- In addition to the automatic cleaning process, manual cleaning can also be performed whenever desired.



[1]	Charge cleaning motor/K (M15)	[2]	Charging cleaner home sensor (PS43)
[3]	Charging control plate /1 (grid mesh /1)	[4]	Charging control plate /2 (grid mesh /2)
[5]	Charging cleaner return sensor (PS44)	[6]	Charging cleaner
[7]	Comb electrode /1	[8]	Cleaner drive screw
[9]	Comb electrode /2	-	-

(1) Description

- If the comb electrode of the charge corona gets dirt, the voltage applied to the surface of the photoconductor become nonuniform, thus image failures (bands) may occur.
- To prevent these problems, the charge corona has a cleaning mechanism that periodically cleans the comb electrode and the charge control plate (grid mesh).
- The charging cleaner is driven by the charge cleaning motor/K. The cleaning pad that is attached to the charging cleaner simultaneously cleans the surfaces of comb electrode/1, 2 and charge corona control plate/1, 2.
- The charging cleaner home sensor detects the position (rear side) of the charging cleaner. The charging cleaner return sensor (front side) detects the return position.
- Cleaning operation time: Approx. 20 sec (maximum of 50 sec.)

(a) Charge corona cleaning operation

1. The charge cleaning motor/K is rotated to bring the charging cleaner from the home position to the return position.
2. The charge cleaning motor/K is rotated in reverse to return the charging cleaner to the home position.

(b) Charging cleaner home position detection control

- If doors are opened after some trouble occurs during the charge cleaning operation, the charging cleaner may not stop at the home position.
- Control is executed to detect the charging cleaner home position when the power is turned on and the lower front door is opened and closed.
- If the charging cleaner is not waiting in the home position, the charge cleaning motor/K is rotated to return the charging cleaner to the home position.

(c) Conditions for executing automatic charge cleaning

- The cleaning operation is executed when the counter from the start of the previous charge corona cleaning operation has exceeded 2,700 after a print job completes.
- If the counter exceeds 2,700 during the current print job while at least 50 pages are remained, printing will be interrupted to execute the cleaning operation.

(d) Method for counting pages that are printed during automatic cleaning operation

- Paper in lengths (sub scanning direction) equivalent to the A4 size are counted as one print.

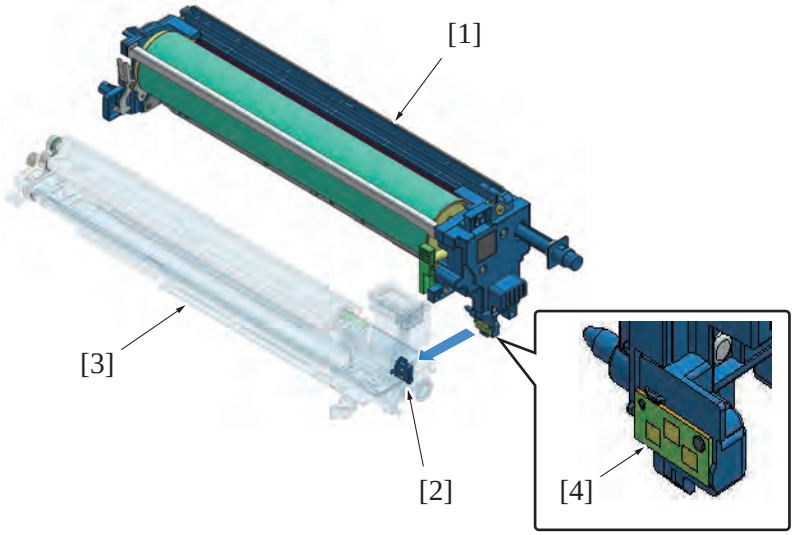
Paper length in the sub scanning direction	Count
216 mm or less	1
Above 216 mm - 432 mm or less	2
Above 432 mm - 648 mm or less	3
Above 648 mm - 864 mm or less	4
Above 864 mm - 1080 mm or less	5
Above 1080 mm	6

(e) Charge corona cleaning settings

- From Service Mode, select [System 1] -> [Charging CH cleaning] to perform manual cleaning and to configure automatic cleaning settings.
- "ON" is specified by default to execute automatic cleaning.

5.3.6 Drum unit/K detection

- The drum unit/K is equipped with a DC set board/K to detect new articles.



[1]	Drum unit/K	[2]	Drum unit connection terminal
[3]	Developing unit/K	[4]	DC set board/K (DCSB/K)

NOTE
- **For details of the unit life, refer to "F.5.1 Life value of consumables and parts".**

(1) Description
- The DC set board/K is connected to the developing unit while the drum unit has been installed in the developing unit.
- The DC set board/K is connected to the main body via the developing unit.

(2) New article detection mechanism
- The drum unit/K is equipped with a DC set board/K.
- New article is detected depending on the status of the DC set board/K.
- Access the DC set board/K when the lower front door is closed or the power is turned on, the installation state of the drum unit/K is determined.
- After a detection is made that the drum unit/K is installed, the unit determines if it is new.

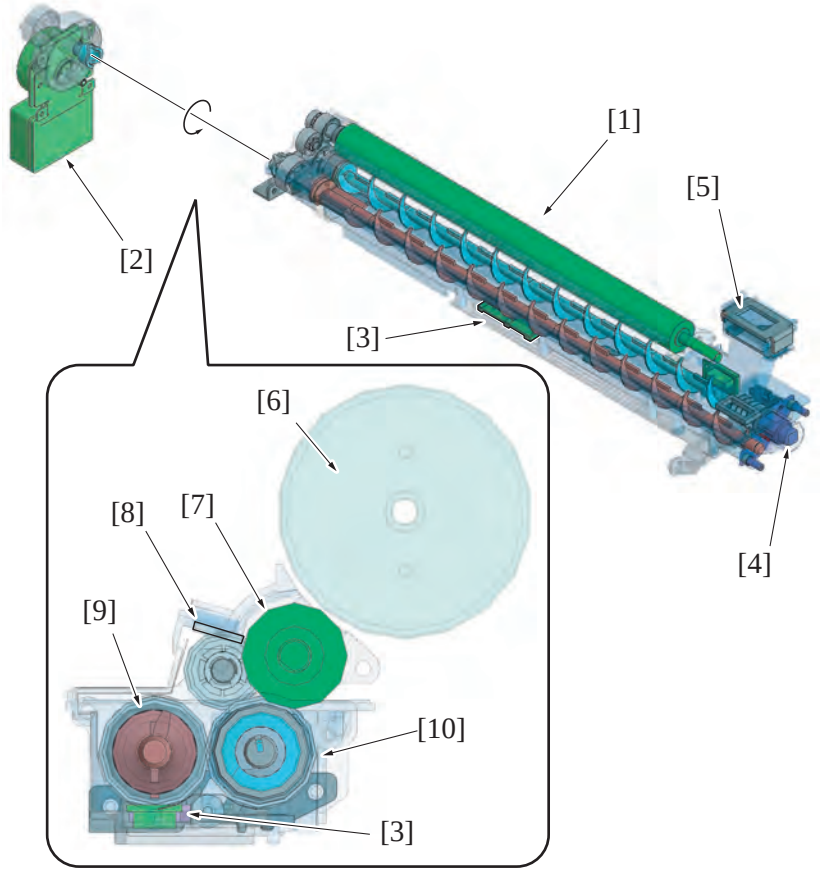
(3) New article detection disabled mode
- To enable a unit that is used temporarily for troubleshooting to be used again as a new unit in another machine, the new release disable mode is provided.
- The new article detection disabled mode can be configured with [Switch No. 3] from [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW].
  NOTE
  - **The Engine FW DipSW key appears only when [Switch No. 59] is configured to [HEX assignment: 01] under [Service Mode] -> [System 2] -> [Software Switch Setting].**

5.3.7 Image stabilization control
- An image stabilization control is automatically performed when a new, developing unit/K or drum unit/K is detected.
- For details, see "O.20. IMAGE STABILIZATION CONTROL".

6. DEVELOPING SECTION

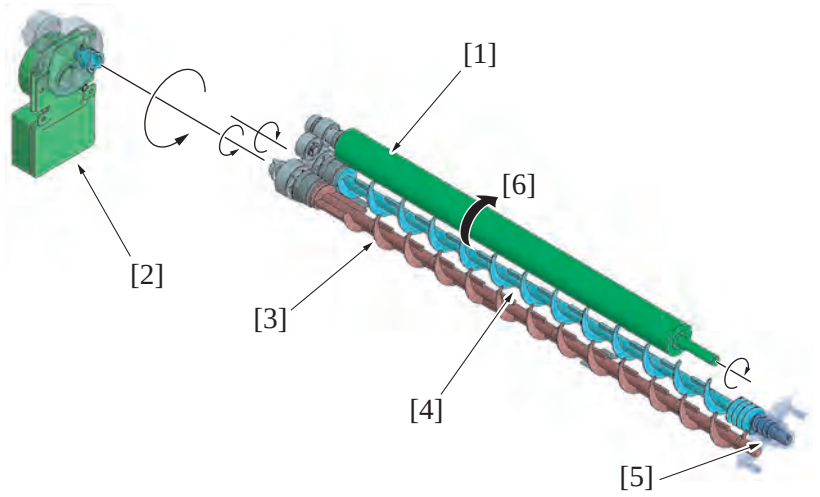
6.1 Configuration

- The developing unit/K is configured with the toner supply section, developing section, and developer exhaust section.



[1]	Developing unit	[2]	Developing motor/K (M19)
[3]	TCR sensor/K (TCRS/K)	[4]	Developer exhaust section
[5]	Toner supply section	[6]	Photoconductor (Drum unit)
[7]	Developing roller	[8]	Doctor blade
[9]	Agitating screw	[10]	Supply screw

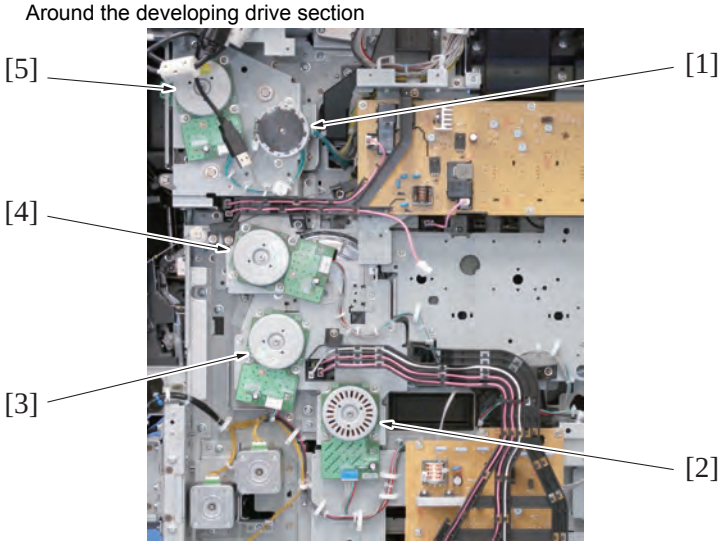
6.2 Drive



[1]	Developing roller	[2]	Developing motor/K (M19)
[3]	Agitating screw	[4]	Supply screw
[5]	Developer exhaust port	[6]	Developing roller rotation direction

6.2.1 Main body rear side - Motor layout view

Around the developing drive section

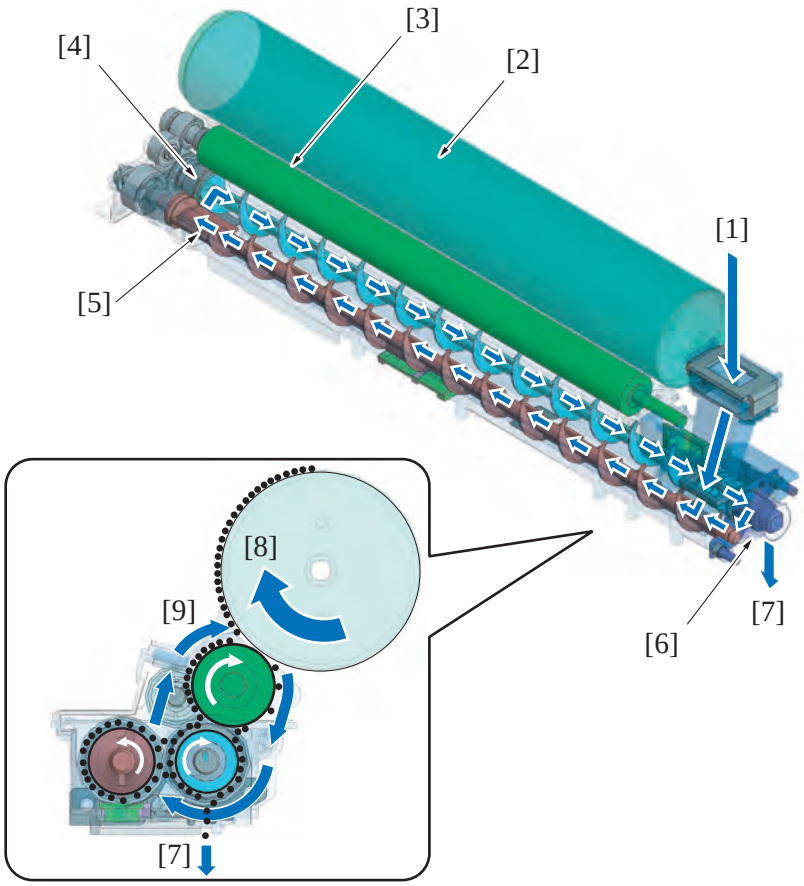


[1]	Fusing pressure motor (M34)	[2]	Developing motor/K (M19)
[3]	PC motor/K (M18)	[4]	Transfer belt motor (M1)
[5]	Fusing motor (M30)	-	-

6.3 Operation

6.3.1 Developer flow

- Toner that is supplied from the toner supply port is conveyed to the supply screw via the agitating screw.
- Post-development toner is returned to the agitating screw via the supply screw and circulates inside the developing chamber. At this time, some of the toner and carrier are discharged to the waste toner box.



[1]	Toner supply from the toner hopper	[2]	Photoconductor
[3]	Developing roller	[4]	Supply screw
[5]	Agitating screw	[6]	Developer exhaust port
[7]	Exhausting developer to the waste toner box	[8]	Photoconductor rotation direction
[9]	Toner flow inside the developing unit	-	-

(1) Toner, Carrier and Developer

- The toner cartridge/K is packed with the toner and carrier. Therefore, the fresh carrier is supplied together with the toner to the developing unit/K. For details, see Auto refining developing system.

NOTE

- **"Toner and carrier" packed in the toner cartridge is called "Toner" instead of "Developer" throughout the service manual.**
- **If "Developer" is clearly specified, it refers to the "developer" that is mixed in the developing unit to offer a specified TC.**

(2) Details on developer flow

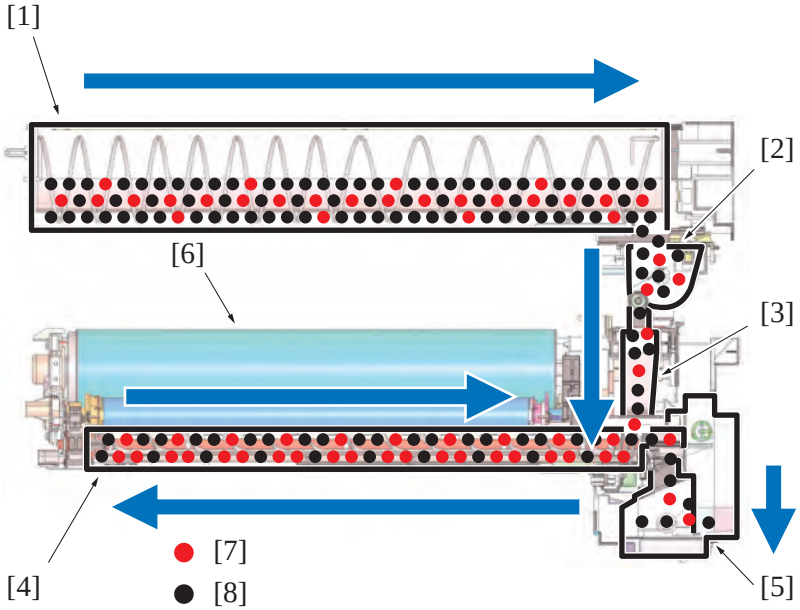
1. The agitating screw agitates the toner that is supplied from the front side, and the toner is conveyed to the rear side while being charged.
2. At that time, the TCR sensor under the developing unit detects the mixture ratio of the toner and carrier (TC ratio) during this time.
3. The developer, fed to the rear side of the developing unit, is conveyed further onto the right side of the supply screw.
4. At this time, with the magnetic mechanism in the developing roller, the developer is conveyed to the top of the developing roller. The doctor blade regulates the amount of the developer.
5. The toner adheres to the latent image section of the photoconductor. With the magnetic mechanism in the developing roller, the remained developer on the developing roller is returned to the supply screw. This developer is then conveyed to the front side.
6. The developer is returned to the agitating screw from the supply screw.
7. This operation continues to repeat to circulate developer in the developing unit.
8. From the developer exhaust port in the front side of the supply screw, some of the circulating developer is collected into the waste toner box.

(3) Developer exhaust port mechanism

- The developer exhaust port is provided with a shutter mechanism.
- When the waste toner box is mounted, the shutter at the developer exhaust port is then pushed to open the developer exhaust port.
- When the waste toner box is removed, the shutter is closed to prevent the developer from spilling from the developer exhaust port.

6.3.2 Auto refining developing system

- Replacement of the developer maintains the stabilized image quality for a long period of time.



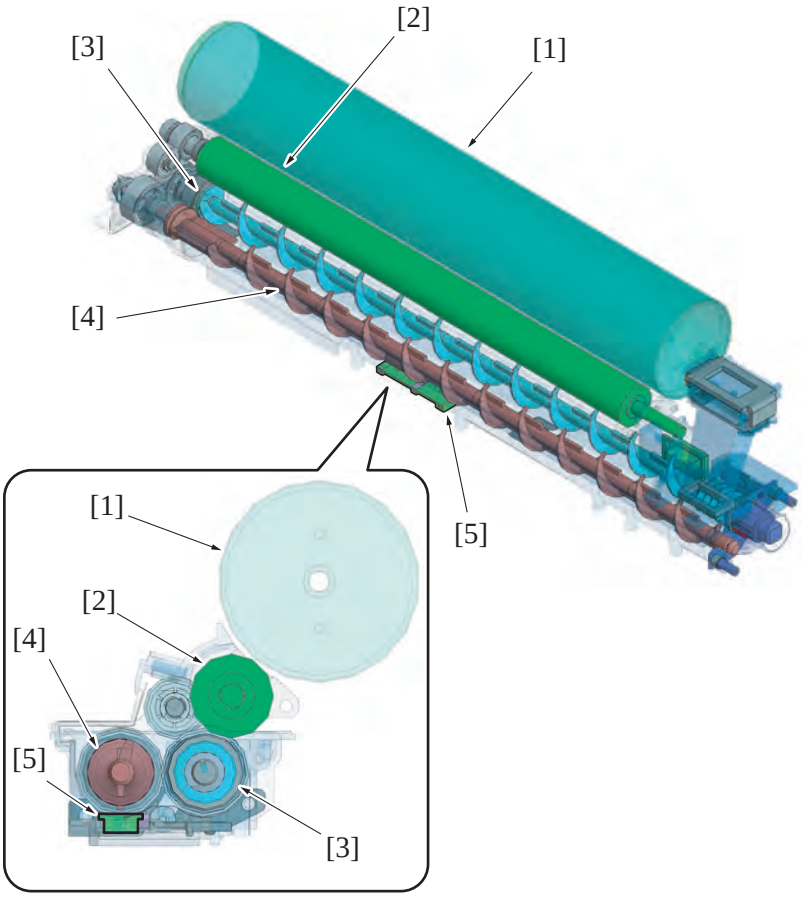
[1]	Toner cartridge/K (Toner + New carrier)	[2]	Toner hopper
[3]	Toner supplying duct	[4]	Developing chamber (circulates and agitates developer)
[5]	Waste toner box (discharging the developer)	[6]	Photoconductor
[7]	Carrier	[8]	Toner

(1) Description

- The toner cartridge is filled with the toner and a small percentage of carrier.
- The fresh carrier is supplied together with the toner to the developing unit.
- When the developer (toner + carrier) circulates in the developing chamber, excessive developer in the developing unit is discharged to the waste toner box.
- Replacement of the developer prevents degradation of developer and maintains stabilized image quality for a long period of time.

6.3.3 Toner supply quantity control

- The TCR sensor detects the TC ratio inside the developing unit.



[1]	Photoconductor (drum unit)	[2]	Developing roller
[3]	Supply screw	[4]	Agitating screw
[5]	TCR sensor/K (TCRS/K)	-	-

(1) TC ratio detection mechanism

- A magnetic TCR sensor is installed under the supply screw in the developing unit. (Non-contact type)
- This TCR sensor detects toner-to-carrier ratio (TC ratio) of the developer. The value is used for determining the amount of toner supplied.
- The target TC ratio is 7%.

(2) Automatic adjustment of the sensitivity of the TCR sensor

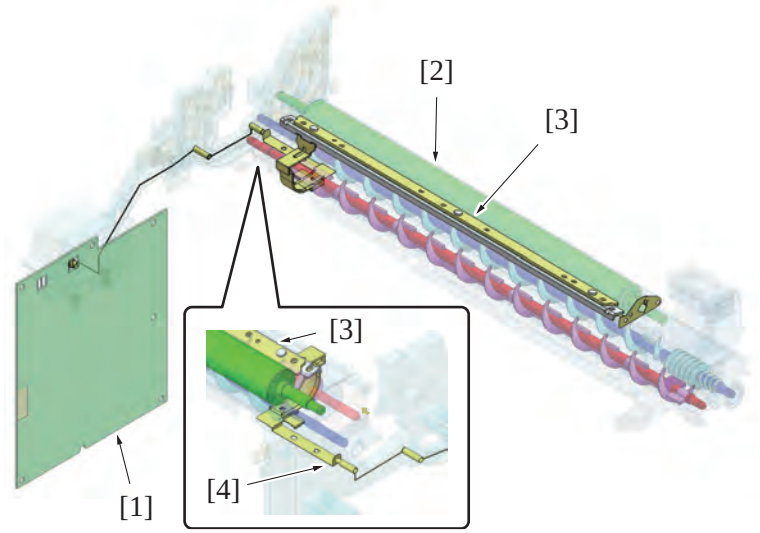
- When a new developing unit/K is mounted in the main body, the sensitivity of the TCR sensor/K is automatically adjusted.
  NOTE
  - **Sensitivity auto adjustment cannot be reperformed through the service mode or other means.**

(3) Adjustment of the TCR level

- The setting will be enabled after the TCR sensor/K automatic adjustment.
- To adjust the TC control level when an abnormal image density occurs as a result of a change in the amount of charge of toner and carrier due to an environmental change.
- Use when TC changes due to changes in environmental conditions of the user site.
- The TCR sensor detection level is configured with [TCR Level Setting] under [Service Mode] -> [Imaging Process Adjustment].

6.3.4 Developing bias

- The developing bias voltage is applied to the developing roller to control the adequate toner adhesion amount onto the surface of the photoconductor.

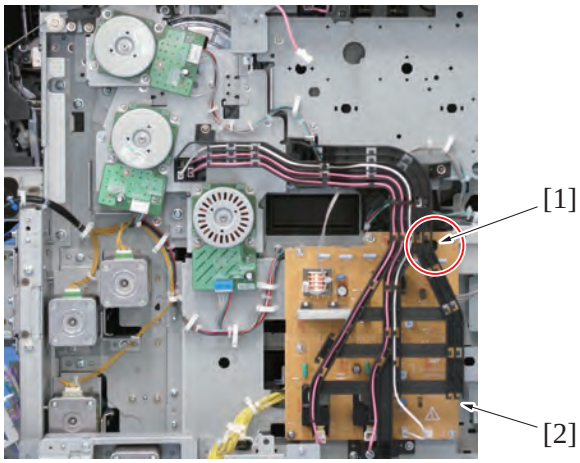


[1]	High voltage unit/1 (HV1)	[2]	Developing roller
[3]	Doctor blade	[4]	Developing bias application terminal

(1) Description

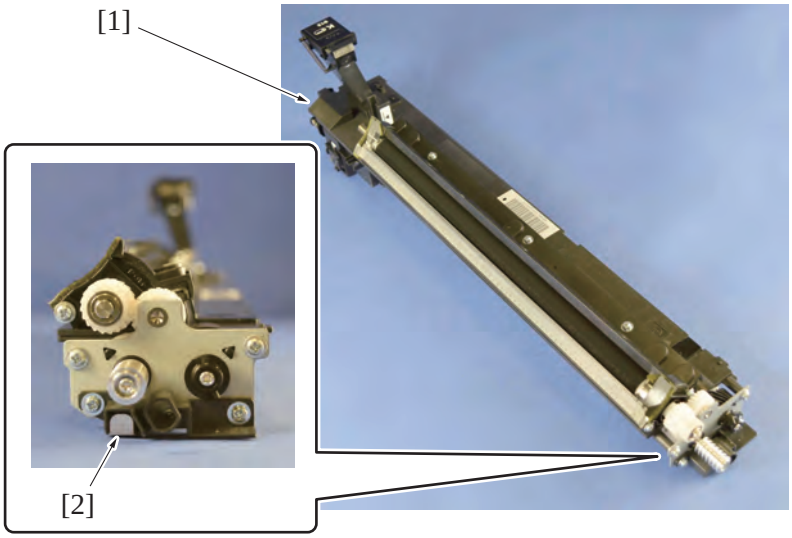
- The developing bias voltage (Vdc) is applied to the developing roller so that an adequate amount of toner is attracted onto the surface of the photoconductor can be controlled.
- To help toner to be attracted more easily to the surface of the photoconductor, the developing bias voltage of DC+AC is applied during development.
- AC component is applied only while development is taking place. At any other timing, only Vdc is applied.
- The developing bias voltage is supplied from high voltage unit /1.

(a) Main body rear side internal



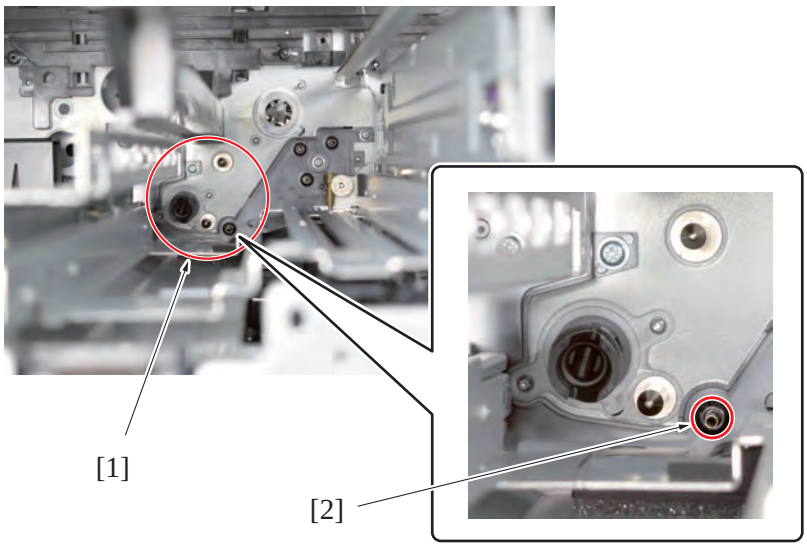
[1]	Applying developing bias voltage to the developing roller	[2]	High voltage unit/1 (HV1)

(b) Developing unit rear side



[1]	Developing unit/K	[2]	Applying terminal of the developing bias voltage

(c) Main body internal voltage application section



[1]	Internal voltage application section	[2]	Developing bias application terminal

NOTE

- **When stain adheres on the contact point of the developing bias voltage applying terminal, the voltage may not be applied properly resulting in a image failure.**

(2) Grad/Dev AC Bias V Selection

- When white spots occurred on the printed image, configuring setting of Grad/Dev AC Bias V Selection can mend the white spots.
- Setting Grad/Dev AC Bias V Selection to ON decreases the developing AC voltage and prevents a leakage of the developing bias voltage.

  NOTE

  - **White spots may occur on the printed image due to a voltage leakage.**

- Use when patches of white occur in the image in an ambience of low atmospheric pressure, such as in high altitudes.
- The developing AC bias V selection is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Grad/Dev AC Bias V Selection].

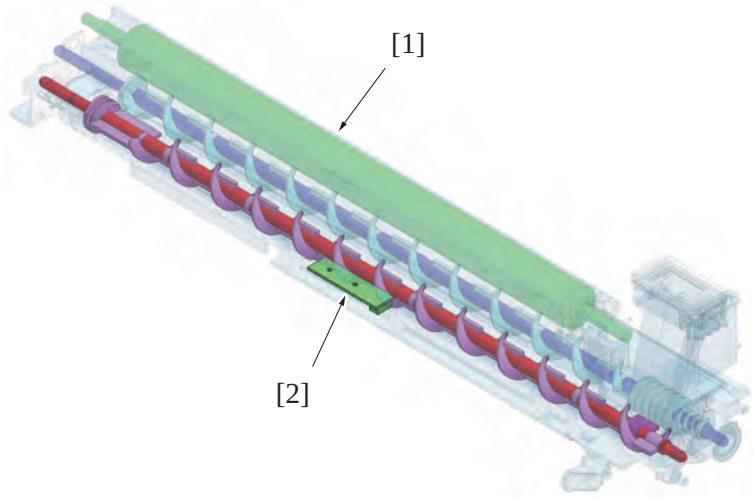
(3) Black adjustment

- By changing the frequency of AC component of the developing bias voltage, the black image quality can be selected as needed.
- The black adjustment is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Black Adjust].

K Priority	Frequency: High
Edge reduction	Frequency: Low

6.3.5 Developing unit/K detection

- New articles are detected depending on TCR sensor detection results.



[1]	Developing unit	[2]	TCR sensor/K (TCRS/K)

NOTE

- **For the life of a unit, refer to "F.5.1 Life value of consumables and parts".**

(1) New article detection mechanism

- A magnetic TCR sensor is installed under the supply screw in the developing unit. (Non-contact type)
- Determinations are made using TCR sensor detection results.
- Detection starts when the main power is turned OFF and ON, or the lower front door is opened and closed.
- When a determination has been made that a new unit has been installed, the life counter is automatically reset. The TCR sensor sensitivity auto adjustment is also performed.

(2) New article detection disabled mode

- To enable a unit that is used temporarily for troubleshooting to be used again as a new unit in another machine, the new release disable mode is provided.
- The new part detection disabled mode can be configured with [Switch No. 3] from [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW].

  NOTE

  - **The Engine FW DipSW key appears only when [Switch No. 59] is configured to [HEX Assignment: 01]. Switch number 59 is found under [Service Mode] -> [System 2] -> [Software Switch Setting].**

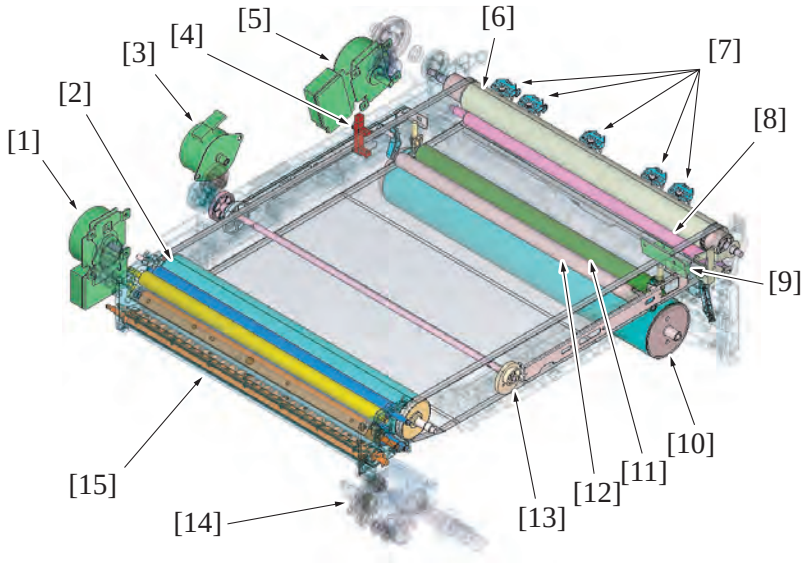
6.3.6 Image stabilization control

- An image stabilization control is automatically performed when a new developing unit/K or drum unit/K is detected.
- For details, see "O.20. IMAGE STABILIZATION CONTROL".

7. 1ST TRANSFER SECTION

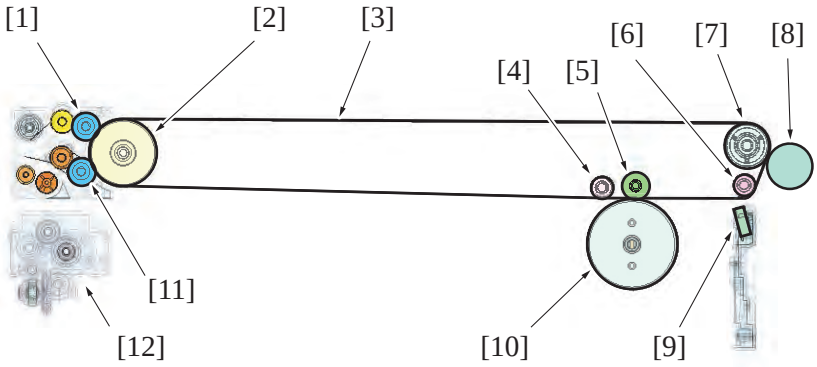
7.1 Configuration

- The 1st transfer section is configured with transfer belt section, transfer belt cleaning section, and paper separation section.



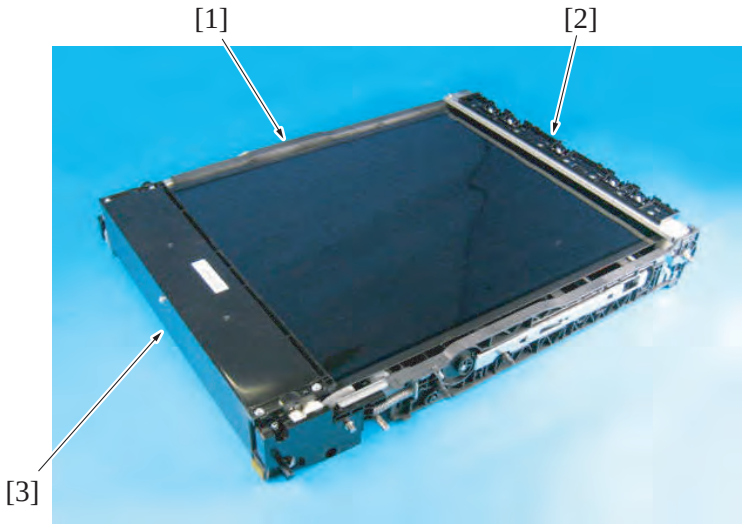
[1]	Cleaning brush motor (M38)	[2]	Transfer belt driven roller /1
[3]	1st transfer pressure motor (M21)	[4]	1st transfer pressure sensor/K (PS51): The sensor is installed into the main body frame.
[5]	Transfer belt motor (M1)	[6]	Transfer belt drive roller
[7]	Separation claw	[8]	Transfer belt driven roller/2
[9]	IDC sensor/Fr (IDCS/Fr): 2nd transfer section / Sensor unit	[10]	Photoconductor: drum unit section
[11]	1st transfer roller/K	[12]	Retraction roller
[13]	Pressure cam	[14]	Waste toner conveying relay section: toner collecting section
[15]	Transfer belt cleaning section	-	-

7.1.1 Cross-section of the 1st transfer section



[1]	Cleaning brush /1	[2]	Transfer belt driven roller /1
[3]	Transfer belt	[4]	Retraction roller
[5]	1st transfer roller/K	[6]	Transfer belt driven roller/2
[7]	Transfer belt drive roller	[8]	2nd transfer roller: 2nd transfer section
[9]	IDC sensor/Fr (IDCS/Fr): 2nd transfer section / Sensor unit	[10]	Photoconductor: drum unit section
[11]	Cleaning brush /2	[12]	Waste toner conveying relay section: toner collecting section

7.1.2 Transfer belt unit external view



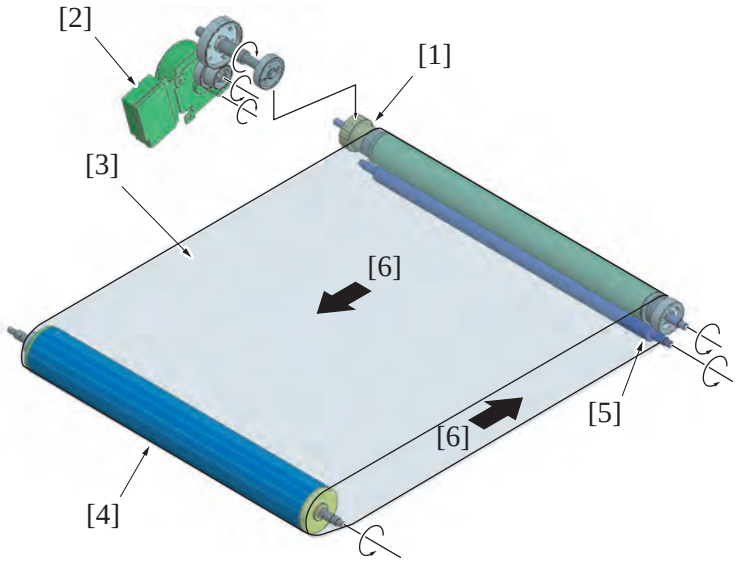
[1]	Transfer belt	[2]	Paper separation section
[3]	Transfer belt cleaner section	-	-

7.2 Drive

1st transfer section drive mechanism

- The drive mechanism in the 1st transfer section is composed of the transfer belt drive mechanism, transfer belt cleaning section drive mechanism, toner collecting screw drive mechanism, and 1st transfer roller drive mechanism.

7.2.1 Transfer belt drive



[1]	Transfer belt drive roller	[2]	Transfer belt motor (M1)
[3]	Transfer belt	[4]	Transfer belt driven roller /1
[5]	Transfer belt driven roller/2	[6]	Transfer belt rotation direction

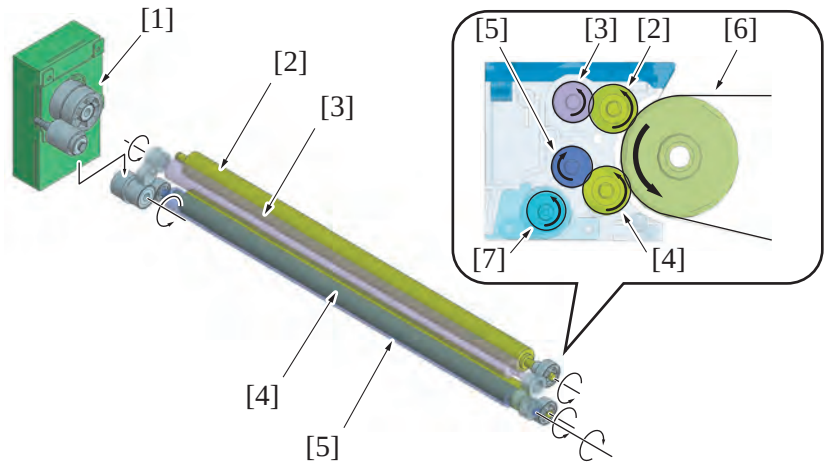
(1) Description

- The transfer belt motor drives the transfer belt.
- The transfer belt drives the transfer belt driven roller/1 and 2.
- The transfer belt driven roller/1 transfers drive power to the toner collecting screw.

7.2.2 Transfer belt cleaning section drive

- The 1st transfer section drive mechanism includes a drive mechanism for a cleaning brush and toner collecting roller and that for a toner collecting screw.

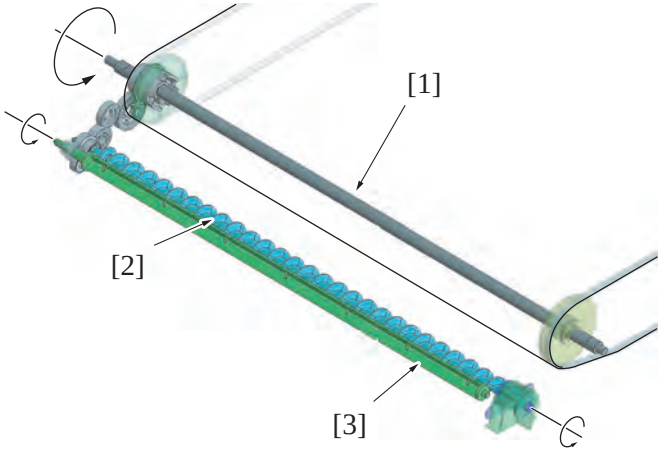
(1) Cleaning brush and toner collecting roller drive



[1]	Cleaning brush motor (M38)	[2]	Cleaning brush /1
[3]	Toner collecting roller /1	[4]	Cleaning brush /2
[5]	Toner collecting roller /2	[6]	Transfer belt
[7]	Toner collecting screw	-	-

(2) Toner collecting screw drive

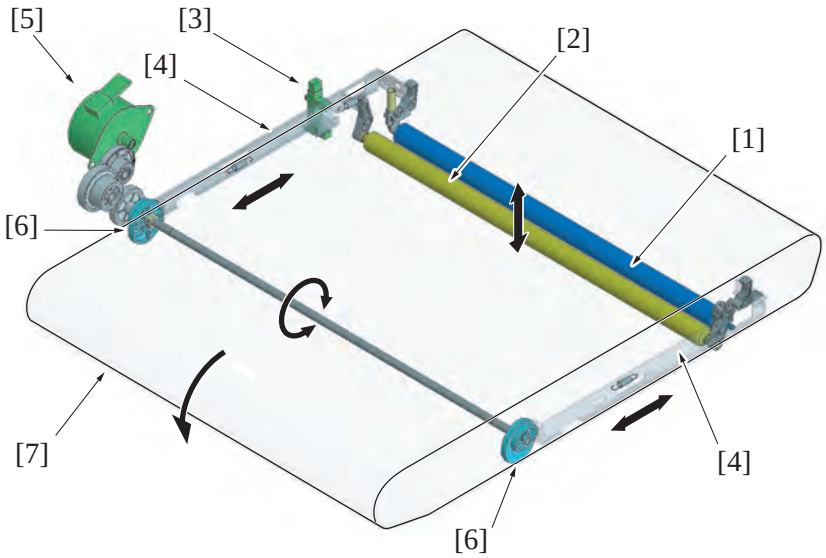
- The transfer belt drives the transfer belt driven roller/1.
- The transfer belt driven roller/1 drives the toner collecting screw.



[1]	Transfer belt driven roller/1 drive shaft	[2]	Toner collecting screw
[3]	Toner agitating paddle -		-

7.2.3 1st transfer roller drive

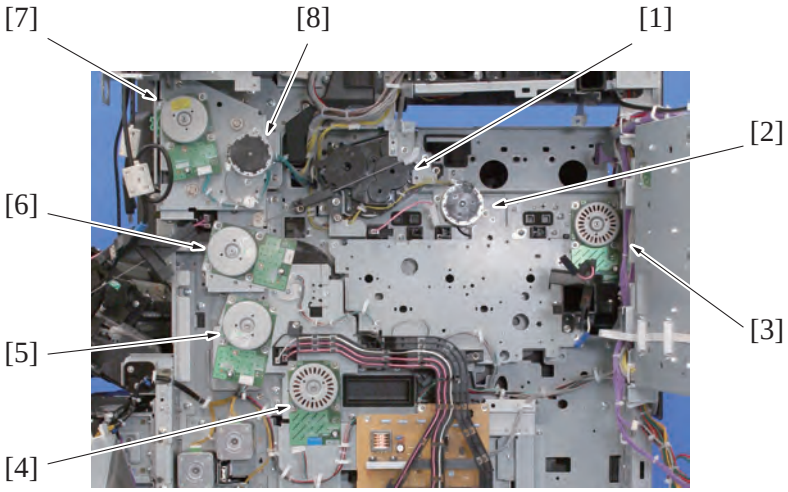
- The 1st transfer pressure motor pressed the 1st transfer roller/K and retraction roller against the transfer belt roller.
- The transfer belt is pressed against the photoconductor.



[1]	1st transfer roller/K	[2]	Retraction roller
[3]	1st transfer pressure sensor/K (PS51)	[4]	Slide plate
[5]	1st transfer pressure motor (M21)	[6]	Cam
[7]	Transfer belt	-	-

7.2.4 Motor layout around the transfer drive unit

System rear view

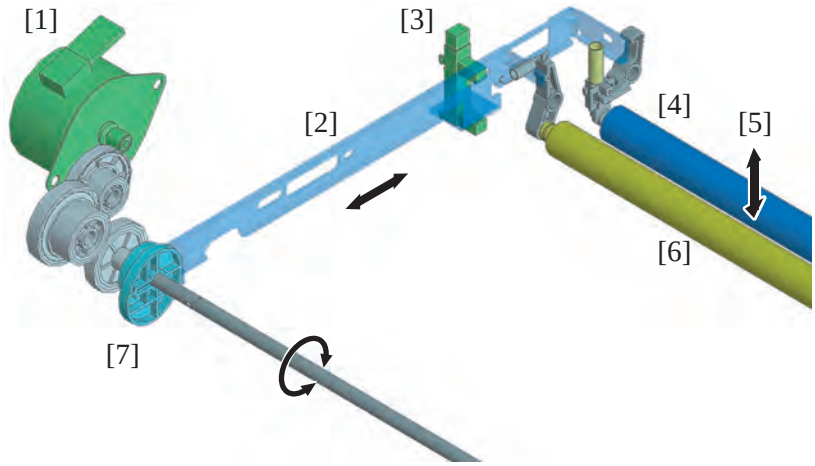


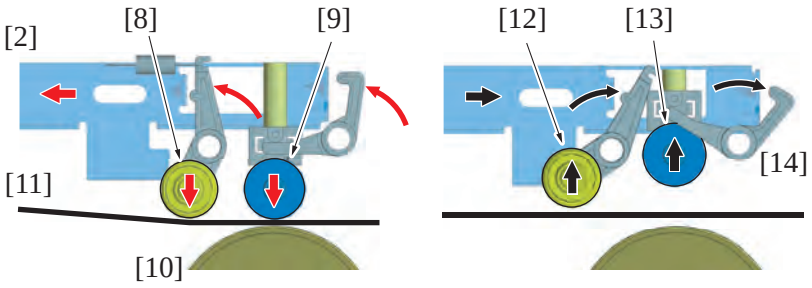
[1]	Toner cartridge motor /CK (M14)	[2]	1st transfer pressure motor (M21)
[3]	Cleaning brush motor (M38)	[4]	Developing motor/K (M19)
[5]	PC motor/K (M18)	[6]	Transfer belt motor (M1)
[7]	Fusing motor (M30)	[8]	Fusing pressure motor (M34)

7.3 Operation

7.3.1 1st transfer roller pressure control

- The 1st transfer roller/K and the retraction roller are equipped with a pressure release mechanism.
- The transfer belt is pressed against the photoconductor during printing.





[1]	1st transfer pressure motor (M21)	[2]	Slide plate
[3]	1st transfer pressure sensor/K (PS51)	[4]	1st transfer roller/K
[5]	Roller pressure/retraction	[6]	Retraction roller
[7]	Cam	[8]	Retraction roller (when pressed)
[9]	1st transfer roller/K (when pressed)	[10]	Photoconductor (drum unit)
[11]	Transfer belt	[12]	Retraction roller (when released)
[13]	1st transfer roller/K (when released)	[14]	Retraction lever

(1) Description

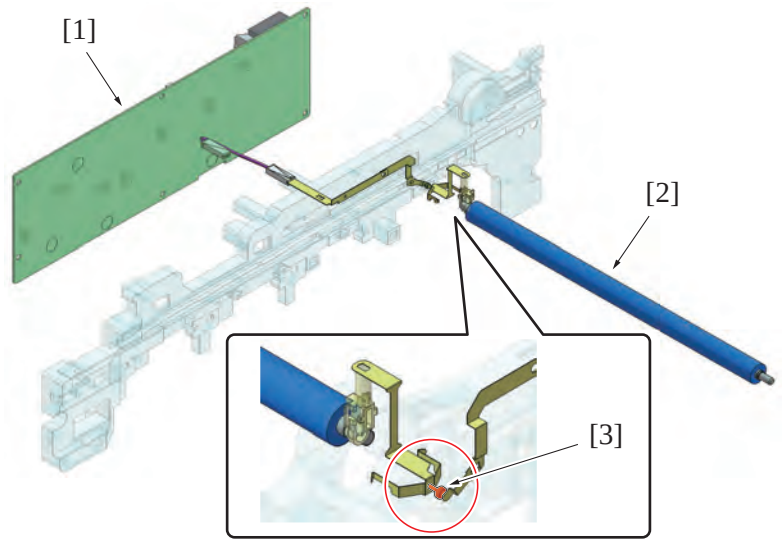
- The 1st transfer pressure motor drives the 1st transfer roller/K and retraction roller.
- The 1st transfer roller/K and the retraction roller press the transfer belt against the photoconductor during the 1st transferring. Pressure on the transfer belt is released after the print job completes.
- The 1st transfer voltage is applied to the 1st transfer roller/K to transfer the toner image on the photoconductor surface to the transfer belt.
- The retraction roller presses the transfer belt so the transfer belt and surface of the photoconductor are at the optimal position for image transfer.

(a) Pressure process

1. The 1st transfer pressure motor rotates the cam. The amount of cam rotation is controlled with the 1st transfer pressure motor pulses.
2. The 1st transfer pressure motor rotates for a specified amount and then stops.
3. The cam moves the slide plate to the pressure position. The slide plate moves the 1st transfer roller/K and retraction roller down to the pressure position.
4. The 1st transfer roller/K and the retraction roller press the transfer belt against the photoconductor.
5. The 1st transfer pressure sensor/K detects the state of the slide plate.
6. The cam rotates again after the print job completes to release the transfer belt pressure.

7.3.2 1st transfer control

- 1st transfer voltage is supplied to transfer the toner image that is formed on the photoconductor to the transfer belt.

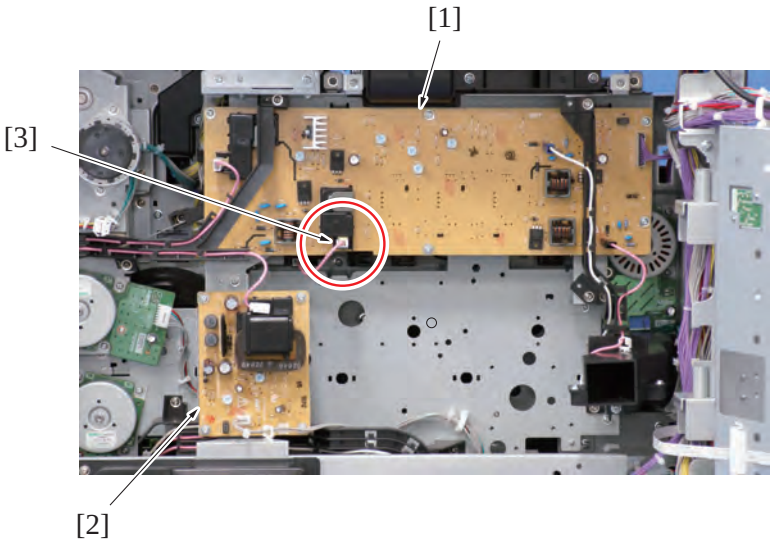


[1]	High voltage unit/2 (HV2)	[2]	1st transfer roller
[3]	1st transfer voltage application terminal	-	-

(1) Description

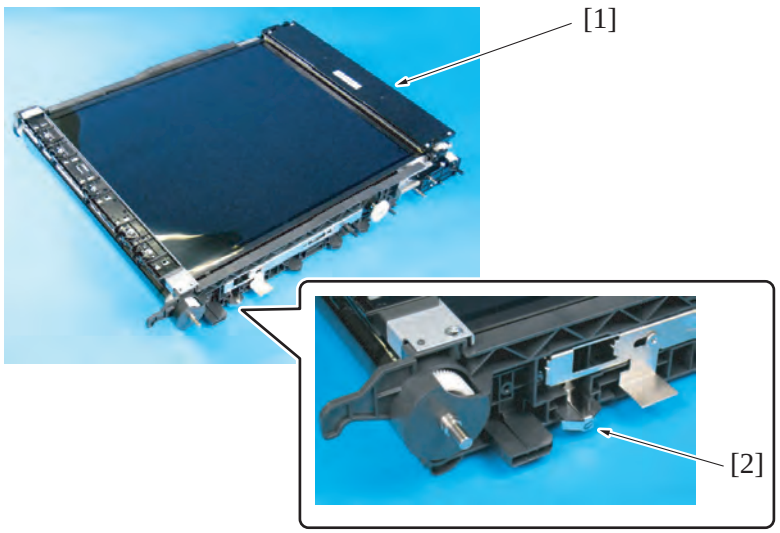
- For transferring a toner image formed on the photoconductor to the transfer belt, 1st transfer voltage supplied from high voltage unit/2 is applied on the 1st transfer roller/K.
- Optimum 1st transfer voltage is applied in concert with the paper type or environmental conditions.

(2) Main body rear side internal



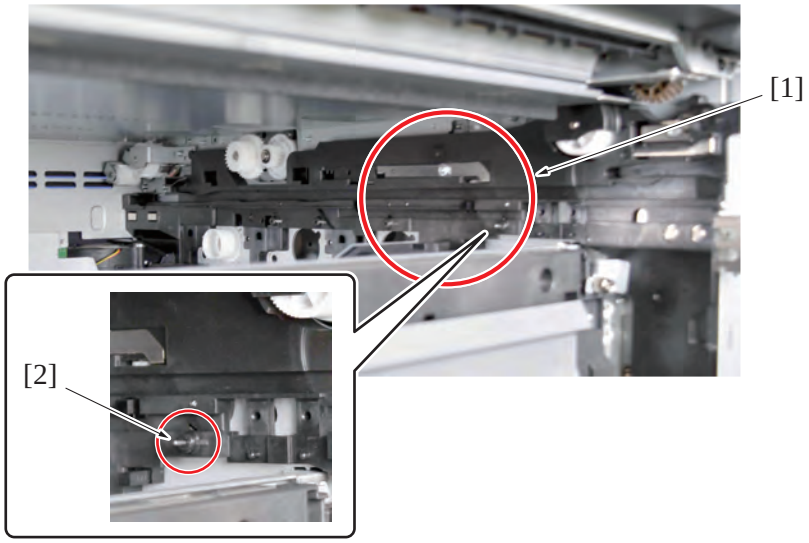
[1]	High voltage unit/2 (HV2)	[2]	High voltage unit/3 (HV3)
[3]	1st transfer voltage is applied on the 1st transfer roller	-	-

(3) Transfer unit rear view



[1]	Transfer belt unit (rear view)	[2]	1st transfer voltage application terminal

(4) Main body internal voltage application section



[1]	Transfer belt unit install section in the machine (View from the right side of the main body)	[2]	1st transfer voltage application terminal

NOTE

- **When stain adheres on the contact point of the 1st transfer voltage applying terminal, the voltage may not be applied properly resulting in a image failure.**

(5) 1st transfer fine adjustment

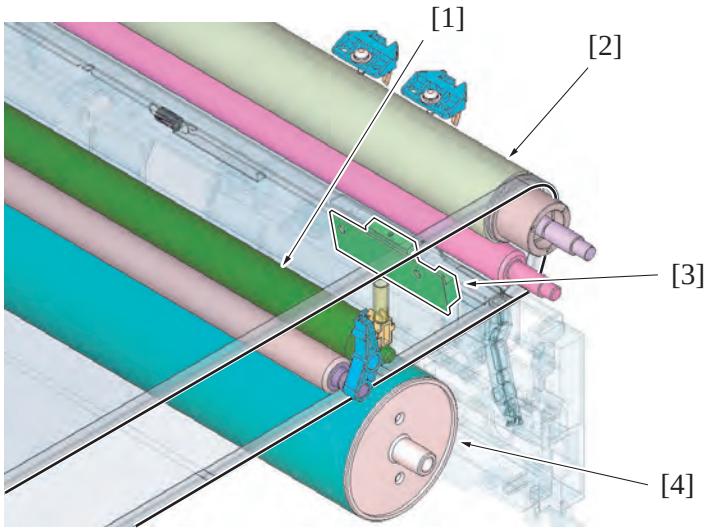
- When 1st transfer fine adjustment is performed, the output value of the 1st transfer voltage is changed.
- When white spot is generated on the print image, performing the 1st transfer fine adjustment may improve the white spot appearance.
- 1st transfer fine adjustment is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [Primary transfer adj.].

NOTE

- **Memory may generate on the photoconductor as an adverse effect of the countermeasure against white spot generation by the + fine adjustment of the 1st transfer voltage.**
- **Check the image on the test pattern or the color chart when adjusting.**

7.3.3 Toner level detection control and print position detection control

- The IDC sensor/Fr detects the toner image density and the print position on the transfer belt.



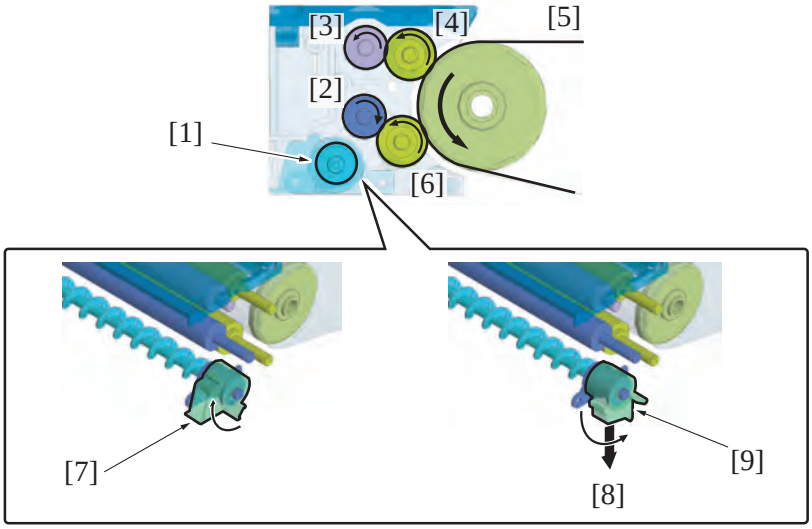
[1]	1st transfer roller/K	[2]	Transfer belt
[3]	IDC sensor/Fr (IDCS/Fr)	[4]	Photoconductor (Drum unit/K)

(1) Description

- Test pattern is formed on the transfer belt and the toner level and the print position of the pattern is detected by the IDC sensor/Fr.
- Result of the detection is reflected on the image stabilization control.
- IDC sensor/Fr attached lower portion of the transfer belt may be stained by toner. There is a shutter mechanism provided for the sensor to prevent it from being contaminated. For details of the shutter mechanism, refer to “Sensor protection”.

7.3.4 Transfer belt cleaning control

- The cleaning brush removes the residual toner on the transfer belt.
- A cleaning bias voltage is applied to the cleaning brush. The combination of the electric field and the brush collects the residual toner.



[1]	Transfer belt collecting screw	[2]	Toner collecting roller /2
[3]	Toner collecting roller /1	[4]	Cleaning brush /1
[5]	Transfer belt	[6]	Cleaning brush /2
[7]	Shutter (Closed)	[8]	Shutter (Opened)
[9]	Waste toner flow	-	-

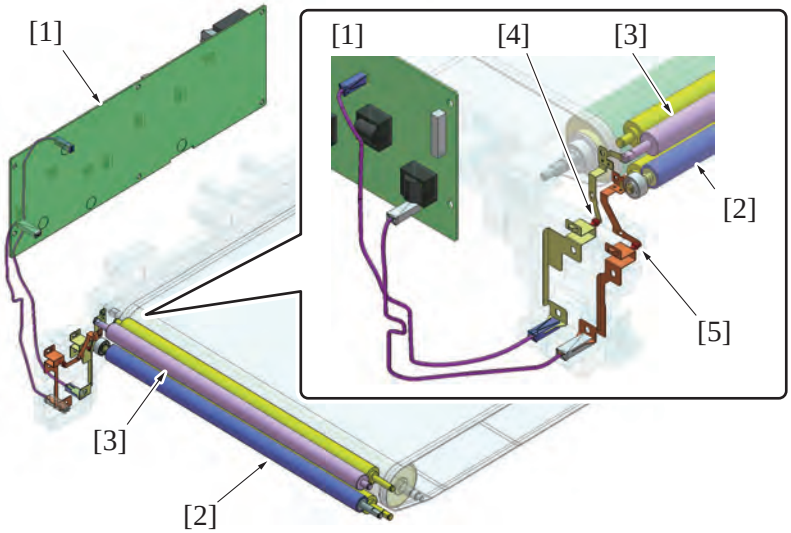
(1) Description

- To scrape residual toner off the surface of the transfer belt, the transfer belt is provided with cleaning brush 1 and 2.
- Cleaning brush 1 and 2 are a rotary brush. To enhance its ability to scrape residual toner off the surface of the transfer belt, the brush is turned in a direction opposite to that of the transfer belt. The cleaner motor provides the drive for this system.
- During a print cycle, an image stabilization operation, the 2nd transfer roller cleaning, and other states whenever the transfer belt operates.
- The waste toner conveyance screw conveys waste toner collected by the cleaning brush 1 and 2 to the front side of the machine.
- Waste toner is conveyed to the waste toner conveying relay section from the toner collecting port located in the front side of the waste toner conveyance screw. Then it is collected into the waste toner box.

- The toner collecting port located in the front side of the waste toner conveyance screw of the transfer belt unit is provided with a shutter mechanism. Mounting the transfer belt unit pushes the shutter at the toner collecting port, opening the toner collecting port. Removing the transfer belt unit, on the other hand, closes the shutter and toner is thereby prevented from spilling from the toner collecting port.

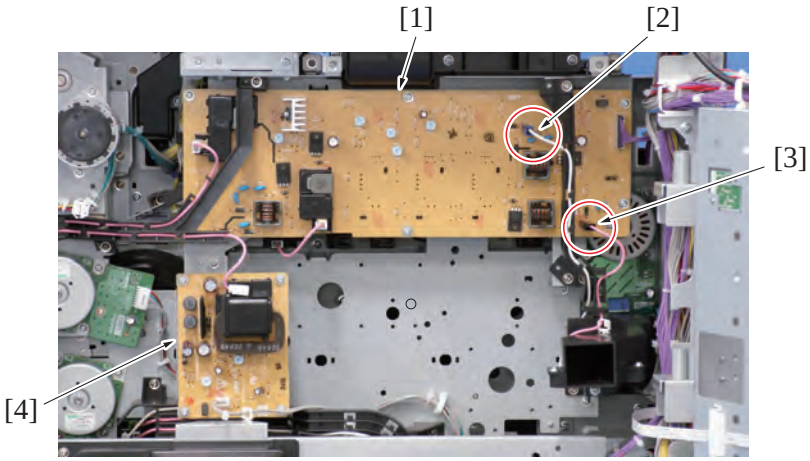
(2) Cleaning bias mechanism

- The cleaning brush 1 is applied cleaning bias voltage (negative charge). Toner charged positive charge on the transfer belt is collected by using negative electric field and the brush.
- The cleaning brush 2 is applied cleaning bias voltage (positive charge). A negative electric field and blush collect the residual toner that the cleaning brush 1 could not collect.



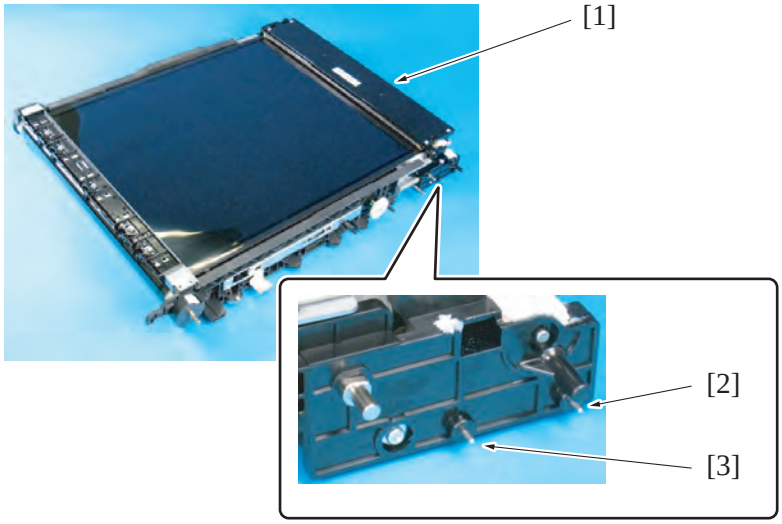
[1]	High voltage unit/2 (HV2)	[2]	Toner collecting roller/2
[3]	Toner collecting roller /1	[4]	Toner collecting roller/1 cleaning bias voltage apply terminal
[5]	Toner collecting roller/2 cleaning bias voltage apply terminal	-	-

(a) Main body rear side internal



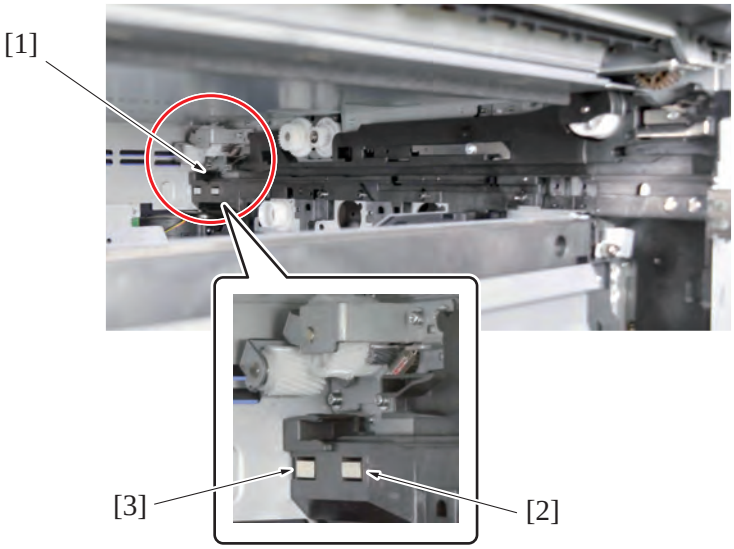
[1]	High voltage unit/2 (HV2)	[2]	Toner collecting roller/1 cleaning bias voltage apply terminal
[3]	Toner collecting roller/2 cleaning bias voltage apply terminal	[4]	High voltage unit/3 (HV3)

(b) Transfer belt unit rear side



[1]	Transfer belt unit (rear view)	[2]	Toner collecting roller/2 cleaning bias voltage apply terminal
[3]	Toner collecting roller/1 cleaning bias voltage apply terminal	-	-

(c) Main body internal voltage application section



[1]	Transfer belt unit install section in the machine (View from the right side of the main body)	[2]	Toner collecting roller/1 cleaning bias voltage apply terminal
[3]	Toner collecting roller/2 cleaning bias voltage apply terminal	-	-

NOTE

- **When stain adheres on the contact point of the cleaning bias voltage applying terminal, the voltage may not be applied properly resulting in a image failure.**

(3) Cleaning bias adjustment

- From [Cleaning Bias] under Service Mode [Imaging Process Adjustment] -> [Transfer Belt], the intensity of the transfer belt cleaning bias can be configured for each process speed.
- When the image pattern is not completely removed, it strengthen the transfer belt cleaning bias in order to make the cleaner more effective.
- For each processing speed, positive and negative output values can be set.

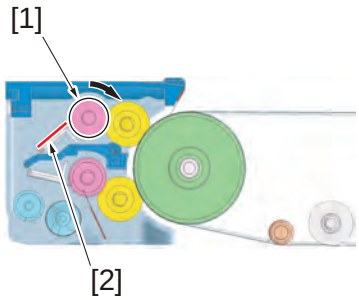
(4) Auto cleaning setting

- From [Auto Cleaning] under Service Mode [Imaging Process Adjustment] -> [Transfer Belt], the transfer belt long cleaning operation that is performed at regular intervals can be configured.
- The long cleaning operation (approx. 30 sec.) can be used to take more effective measures against toner filming on the surface of the transfer belt.

Enable	Performs the long cleaning operation (approx. 30 sec.) after the normal regular cleaning operations (approx. 10 sec.) which are performed nine times.
Disable	Performs only the normal regular operations (approx. 10 sec.) but not the long cleaning operation (approx. 30 sec.).

7.3.5 Toner collecting roller reverse control

- The toner collecting roller/1 is rotated in reverse to remove paper dust between the toner collecting roller/1 and the scraper.



[1]	Toner collecting roller/1	[2]	Scraper

(1) Description

- This control is implemented to remove foreign matter such as paper dust that has accumulated on the toner collecting roller/1. This process maintains cleanability of the transfer belt to help ensure long service life of the transfer belt unit.
- Accumulation of paper dust and other foreign matter between the toner collecting roller/1 and scraper may result in improper cleaning of the transfer belt. The toner collecting roller/1 is rotated in reverse to remove this paper dust.
- Reverse rotation of the toner collecting roller/1 returns paper dust to the toner collecting roller/1, so that accumulated paper dust can be removed. Subsequent forward rotation of the toner collecting roller/1 conveys paper dust and waste toner to the waste toner box.
- The cleaning brush motor is rotated for five 0.5-second intervals in reverse to rotate the toner collecting roller/1 in reverse.
  NOTE
  - **The cleaning brush motor drives other rollers such as the cleaning brush/1, cleaning brush/2 and toner collecting roller/2. However, the drive gear is designed to not rotate other rollers during rotating the toner collecting roller/1 in reverse.**

(a) Timing to rotate the toner collecting roller in reverse

- Print job completes and no subsequent print jobs have been queued.
- When the cleaning brush reverse operation time interval counter reaches 300, the toner collecting roller reverse control is executed.

Paper length in the sub scanning direction	Count value
216 mm or less	1 count
More than 216 mm	2 counts

(2) Transfer belt cleaning

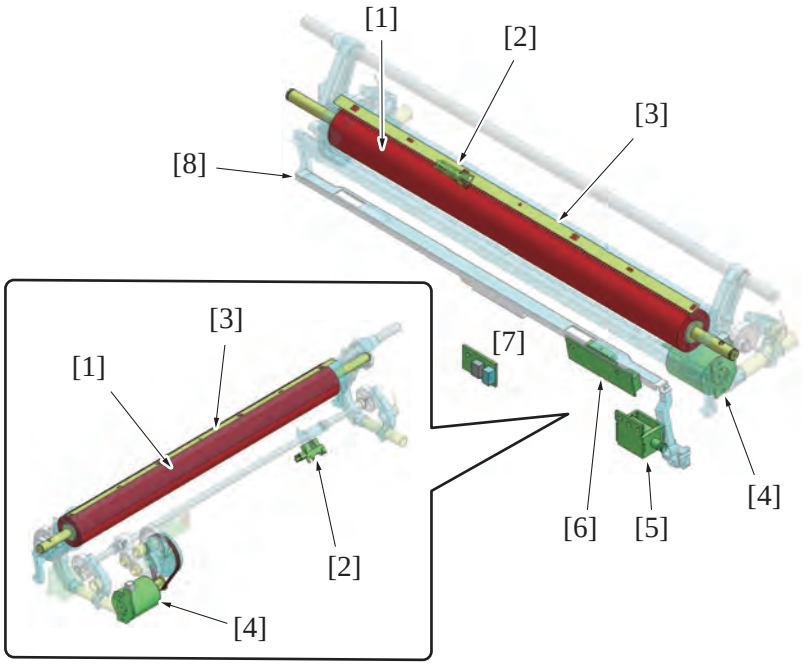
- The toner collecting roller can be manually cleaned with [Imaging Process Adjustment] -> [Clean Transfer Belt] under Service Mode.
- Use this feature when paper dust accumulated on cleaning brush and toner collecting roller due to foreign matter that remains on the transfer belt.

7.3.6 Image stabilization control

- An image stabilization control sequence is automatically performed when a new transfer belt unit is mounted in the main body and the retraction of new transfer belt unit is carried out from the service mode.
- For detail, see “O.20. IMAGE STABILIZATION CONTROL”.

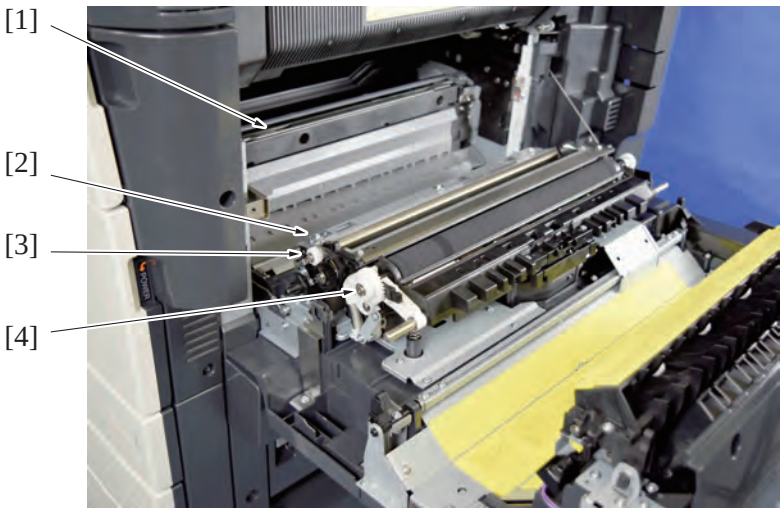
8. 2ND TRANSFER SECTION

8.1 Configuration



[1]	Transfer roller	[2]	2nd transfer pressure sensor (PS50)
[3]	Charge neutralizing needle	[4]	2nd transfer pressure motor (M3)
[5]	IDC sensor shutter solenoid (SD2)	[6]	IDC sensor/Fr (IDCS/Fr)
[7]	Temperature/humidity sensor (TEM/HUMS)	[8]	Shutter

8.1.1 2nd transfer section exterior view



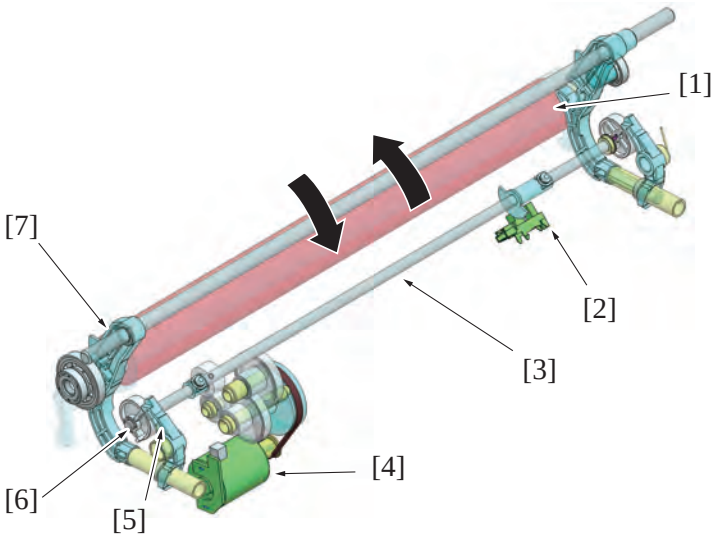
[1]	IDC sensor/Fr (IDCS/Fr)	[2]	Paper dust remover: Registration section
[3]	Registration roller: Registration section	[4]	Transfer roller unit

8.2 Drive

- The 2nd transfer section drive mechanism includes a pressure drive mechanism and drive mechanism for transfer roller, and a drive mechanism for IDC sensor shutter.

8.2.1 Transfer roller pressure drive mechanism

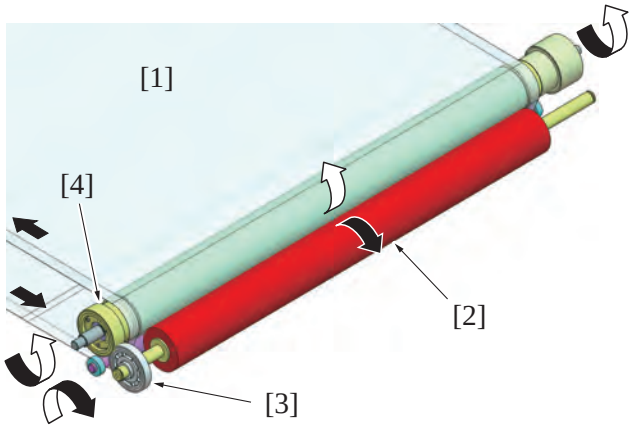
- The 2nd transfer pressure motor presses the transfer roller against the transfer belt.



[1]	Transfer roller	[2]	2nd transfer pressure sensor (PS50)
[3]	Cam drive shaft	[4]	2nd transfer pressure motor (M3)
[5]	Pressure lever 1	[6]	Cam
[7]	Pressure lever 2	-	-

8.2.2 2nd transfer roller drive mechanism

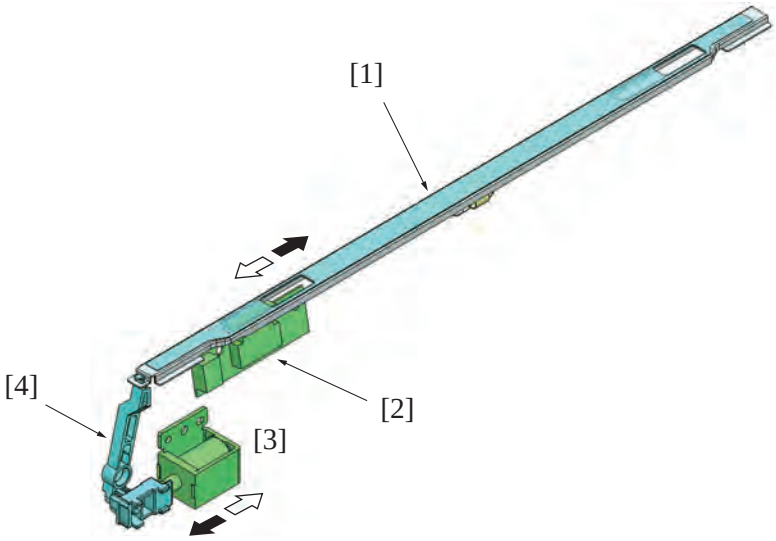
- The transfer belt motor drives the transfer roller via the transfer belt drive roller.



[1]	Transfer belt (1st transfer section)	[2]	Transfer roller
[3]	Transfer roller drive gear	[4]	Transfer belt drive roller

8.2.3 IDC sensor shutter drive mechanism

- The IDC sensor shutter solenoid opens and closes the shutter.



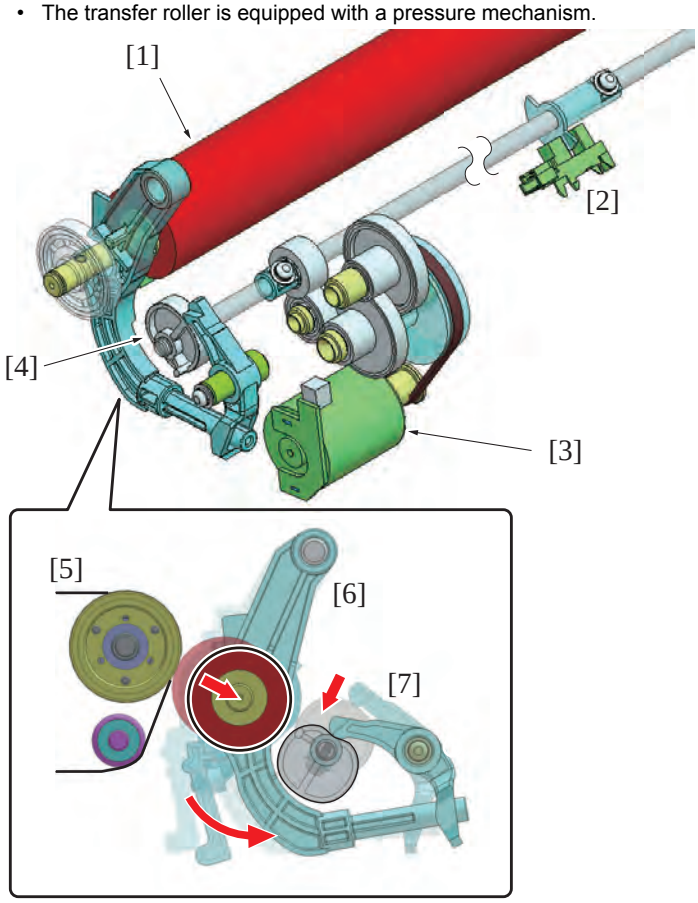
[1]	Shutter	[2]	IDC sensor/Fr (IDCS/Fr)

[3]	IDC sensor shutter solenoid (SD2)	[4]	Open and close lever

8.3 Operation

8.3.1 Transfer roller pressure control

- A transfer roller having a diameter larger than rollers used in conventional models is provided to maintain transferability due to increased print speeds.
- The transfer roller is equipped with a pressure mechanism.



[1]	Transfer roller	[2]	2nd transfer pressure motor (M3)
[3]	Cam (pressure position)	[4]	2nd transfer pressure sensor (PS50) (pressure detection state)
[5]	Transfer belt unit	[6]	Pressure lever 2
[7]	Pressure lever 1	-	-

(1) Description

- The transfer roller has a pressure mechanism which presses to and retracts from the transfer belt so the patterns made on the transfer belt except by printing, such as detection pattern creation during image stabilization operation, will not affect the transfer roller.
- When a print job starts, the transfer roller is pressed against the transfer belt. The transfer roller is released after the print job completes.

(a) Pressure operation

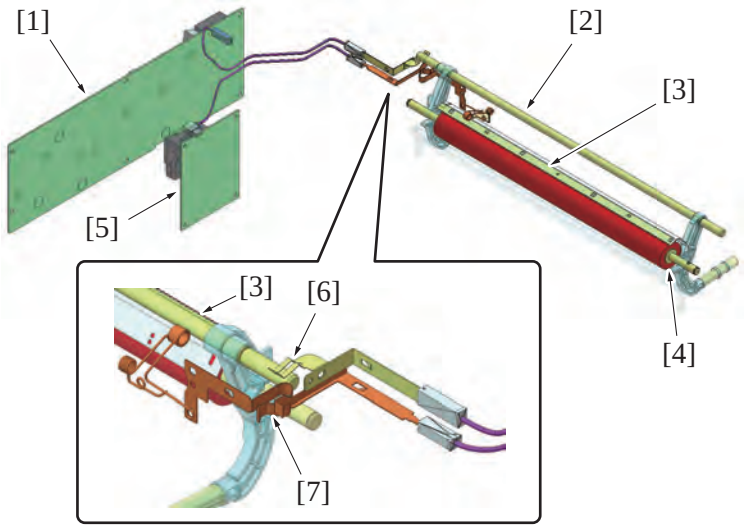
1. Drive from the 2nd transfer pressure motor is transmitted to the drive belt.
2. The cam rotates by rotation of the drive belt. This rotation presses the pressure lever 1 upward to move the pressure lever 2 to the pressure position.
3. The transfer roller that is attached to the pressure lever 2 is pressed against the transfer belt.
4. At this time, the 2nd transfer pressure sensor detects that the transfer roller reaches the pressure position. The 2nd transfer pressure motor is stopped.

(b) Retraction operation

1. Drive from the 2nd transfer pressure motor is transmitted to the drive belt.
2. The cam rotates by rotation of the drive belt. This rotation presses down the pressure lever 1 to move the pressure lever 2 to the release position.
3. The transfer roller attached to the pressure lever 2 is released from the transfer belt.
4. At this time, the 2nd transfer pressure sensor detects that the transfer roller reaches the retraction position. The 2nd transfer pressure motor is stopped.

8.3.2 2nd transfer control

- 2nd transfer voltage supplied from the high voltage unit/2 is applied on the transfer roller unit.

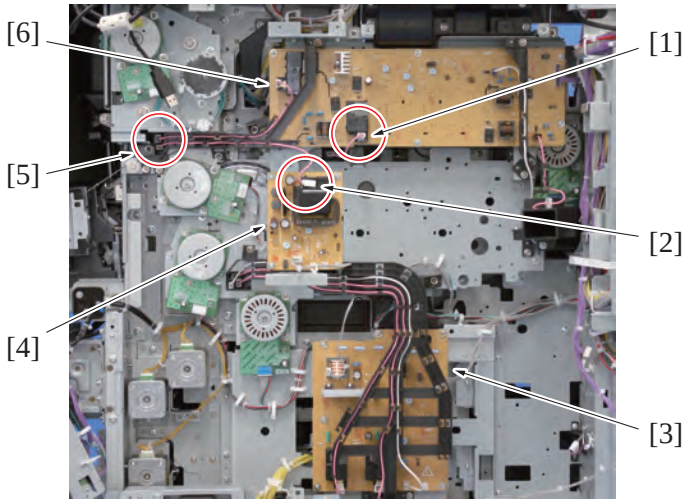


[1]	High voltage unit/2 (HV2)	[2]	2nd transfer section
[3]	Charge neutralizing needle	[4]	Transfer roller
[5]	High voltage unit/3 (HV3)	[6]	2nd transfer voltage apply terminal (apply from HV2)
[7]	Charge neutralizing bias voltage apply terminal (apply from HV3)	-	-

(1) Description

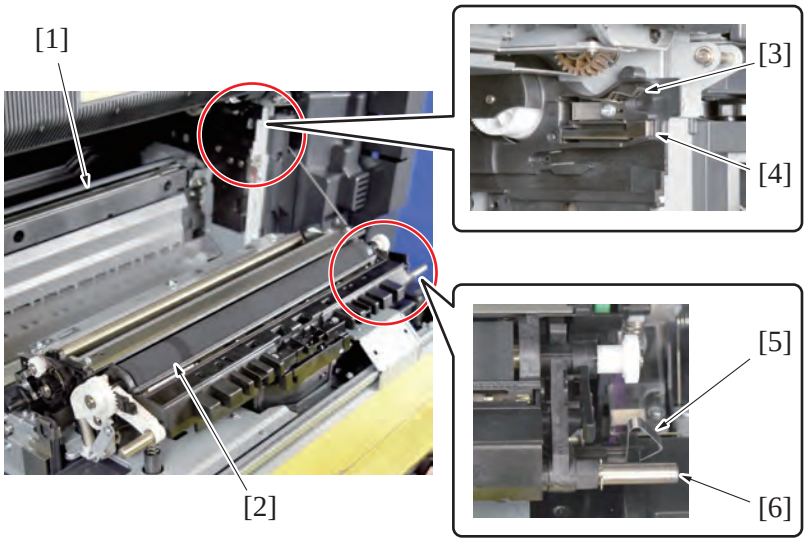
- For transferring the toner image formed on the transfer belt to the paper, 2nd transfer voltage supplied from the high voltage unit/2 is applied on the transfer roller unit.
- The toner on the transfer belt is transferred onto the paper when the paper is transported between the transfer belt and the transfer roller.

(a) Main body rear side internal



[1]	2nd transfer voltage is applied from HV2 to the transfer roller unit.	[2]	Charge neutralizing bias voltage is applied from HV3 to the charge neutralizing needle.
[3]	High voltage unit/1 (HV1)	[4]	High voltage unit/3 (HV3)
[5]	To 2nd transfer section	[6]	High voltage unit/2 (HV2)

(b) Main body internal voltage application section



[1]	2nd transfer section in the machine (main body side)	[2]	Transfer roller
[3]	2nd transfer voltage apply terminal (main body side)	[4]	Charge neutralizing bias voltage apply terminal (main body side)
[5]	Charge neutralizing bias voltage apply terminal (transfer roller side)	[5]	2nd transfer voltage apply terminal (transfer roller side)

NOTE

- **When stain adheres on the contact point of the 2nd transfer voltage applying terminal and the separation bias voltage applying terminal, the voltage may not be applied properly resulting in a image failure and a paper jam.**

(c) 2nd transfer voltage auto adjustment control (ATVC)

- To adjust the 2nd transfer output to the correct voltage, ATVC system is installed. A constant current is output to the transfer roller unit to measure voltage. The measured voltage is corrected to be used for automatic adjustment of the transfer voltage.
- The ATVC operation is performed after the power switch is turned ON. (Mainly just before image stabilization operation) Or, it is performed before the machine starts a print cycle for the first time after the temperature change inside the machine went over the threshold.

(d) 2nd transfer fine adjustment

- When “2nd transfer adj.” is performed, the output value of the 2nd transfer voltage is changed.
- Output of the 2nd transfer voltage can be adjusted on the 1st page and the 2nd page for each paper type.
- Output of the 2nd transfer voltage also can be adjusted for both 600 dpi and 1,200 dpi.
- When transfer failure (image noise) is generated on the print image, performing the “2nd transfer adj.” may improve the image noise appearance.
- 2nd transfer fine adjustment is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Transfer Voltage Fine Adj] -> [2nd Transfer Adj.].

NOTE

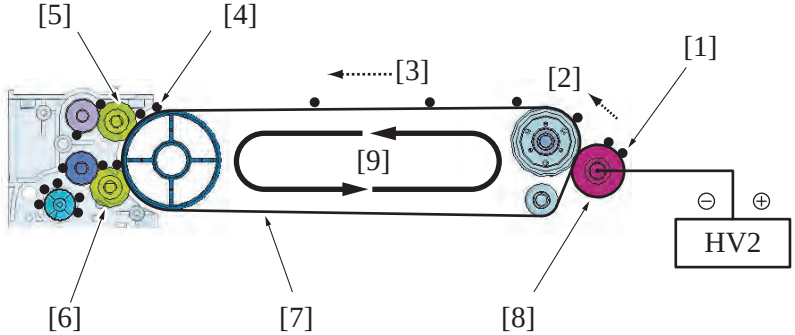
- **For the envelope and the OHP, only “600dpi-Front” or “1200dpi-Front” can be select.**
- **the long and thick paper, only “600dpi-Front” can be select.**

(e) User Paper Settings

- To set and register individual user paper that includes a different basic weight, fusing temperature, 2nd transfer fine adjustment value.
- User Paper Settings is also available from [Administrator Settings] -> [System Settings] -> [Expert Adjustment] -> [User Paper Settings].
- To register a paper type that is suitable for individual customer’s intended use and use environment.
- User paper setting can be set by following procedure: [Service Mode] -> [System 2] -> [User Paper Settings].

8.3.3 2nd transfer cleaning control

- The cleaning brush on the transfer belt collects residual toner on the transfer roller unit.



[1]	Residual toner	[2]	The residual toner is transferred to the transfer belt

[3]	The residual toner is conveyed	[4]	The residual toner is collected
[5]	Cleaning brush /1	[6]	Cleaning brush /2
[7]	Transfer belt	[8]	Transfer roller unit
[9]	Transfer belt rotation direction	-	-

(1) Description

- To remove residual toner off the surface of the transfer roller, a +/- DC bias is applied alternately to the transfer roller unit, thereby moving the residual toner to the surface of the transfer belt.
- The cleaning brush then scrapes off the toner on the surface of the transfer belt.

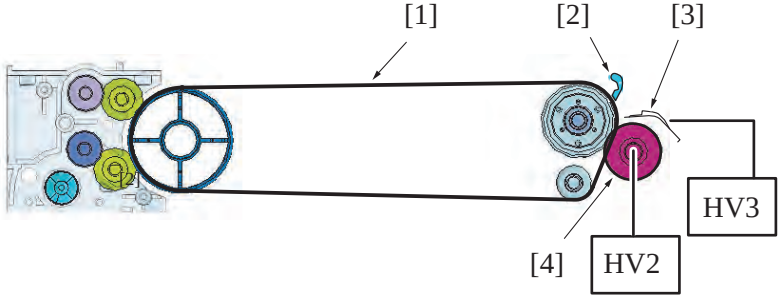
(a) Cleaning operation timing

- The sequence is carried when the power switch are turned ON or each door is opened and closed when a print cycle has been abnormally terminated due to a misfeed or an occurrence of the trouble.
- The sequence is carried out at the end of a print cycle, if the cumulative count since the preceding 2nd transfer cleaning sequence exceeds 300 during the print cycle.
- If the cumulative count since the preceding 2nd transfer cleaning sequence exceeds 3,000 during a print cycle, the print cycle is interrupted and the cleaning sequence is carried out. The print cycle is resumed as soon as the cleaning sequence is completed.

Paper length in the sub scanning direction	Count
216 mm or less	1
More than 216 mm	2

8.3.4 Paper separation control

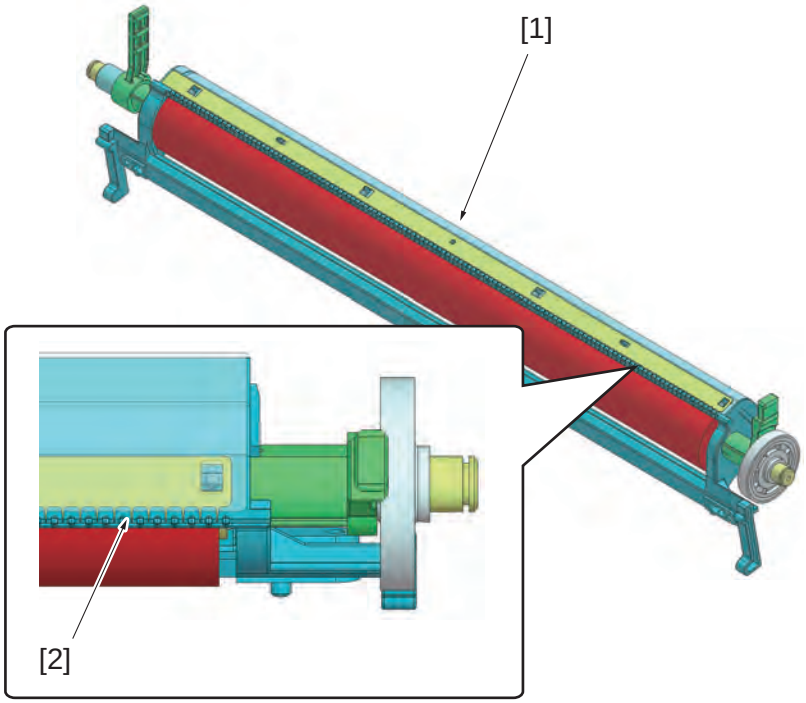
- The charge neutralizing needle is used to remove charge potential in paper where the 2nd transfer processing has completed.
- After this paper charge has been neutralized, paper is separated from the transfer belt with the separation claw.



[1]	Transfer belt	[2]	Separation claw
[3]	Charge neutralizing needle	[4]	Transfer roller

(1) Charge neutralizing mechanism

- To neutralize any charge potential left in the paper which has undergone the 2nd transfer stage, the charge neutralize voltage supplied from the high voltage unit/3 is applied on the charge neutralizing needle.
- Charge neutralizing voltage value is switched automatically according to the paper type, the environmental conditions, and whether the print cycle is for printing the 1st side or 2nd.



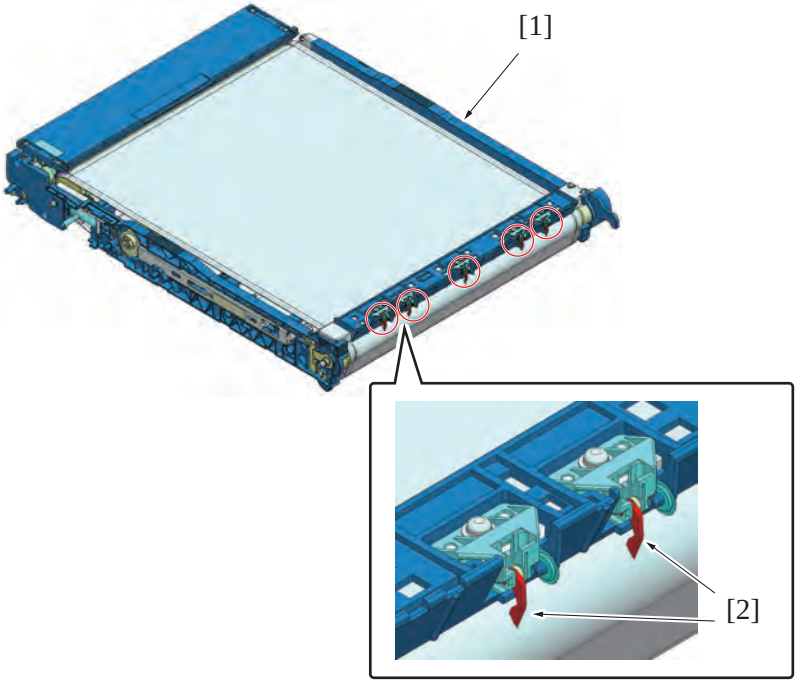
[1]	Transfer roller unit	[2]	Charge neutralizing needle

(a) Removable voltage adjustment

- To allow the basic charge neutralizing voltage to be adjusted.
- To prevent separation failure (jam, paper conveyance failure) that may occur when paper other than recommended one is used by adjusting the neutralization voltage to the one that suits the type of paper the user uses.
- The removable voltage adjustment is configured with following procedure: [Service Mode] -> [Imaging Process Adjustment] -> [Removable Voltage Adjust].

(2) Separation mechanism

- In order to separate thin paper or curled paper caused by 2-sided printing from the transfer belt without fail after the 2nd transfer, transfer belt separator claws are mounted at 5 places.



[1]	Transfer belt unit	[2]	Separation claw

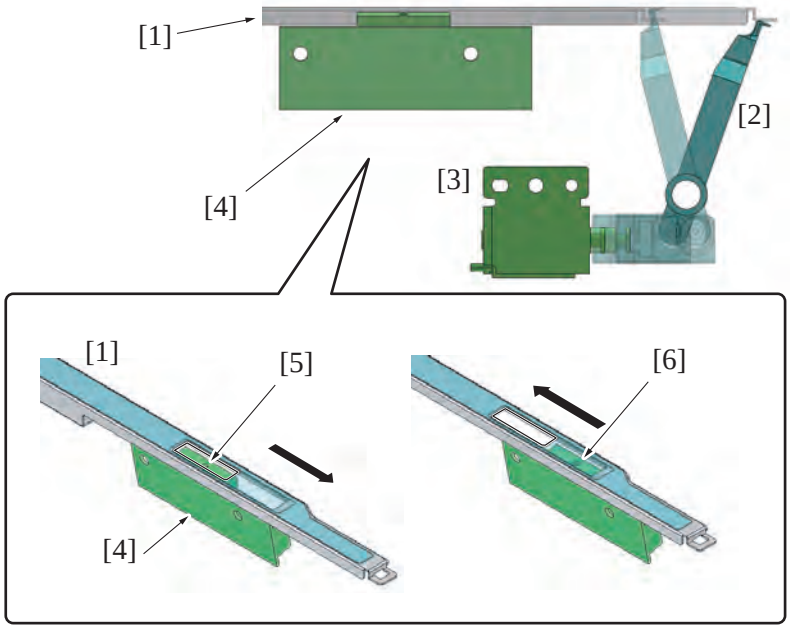
(a) Paper Separation Adjustment

- By changing the period between the activation of the registration roller and the 2nd transfer output, the paper separation position can be adjusted for the 1st and 2nd sides of paper.

- To ensure proper balance between paper separating and image transferring performances by varying the paper separation position applied for duplex printing of thin paper (52 to 59 g/m^2) in hot and humid conditions.
- Paper separation position adjustment can be configured from the following: [Service Mode] -> [Imaging Process Adjustment] -> [Paper Separation Adjustment].

8.3.5 Sensor protection

- The IDC sensor/Fr is equipped with a shutter mechanism to prevent contamination.



[1]	Shutter	[2]	Open/close lever
[3]	IDC sensor shutter solenoid (SD2)	[4]	IDC sensor/Fr (IDCS/Fr)
[5]	Shutter (Opened)	[6]	Shutter (Closed)

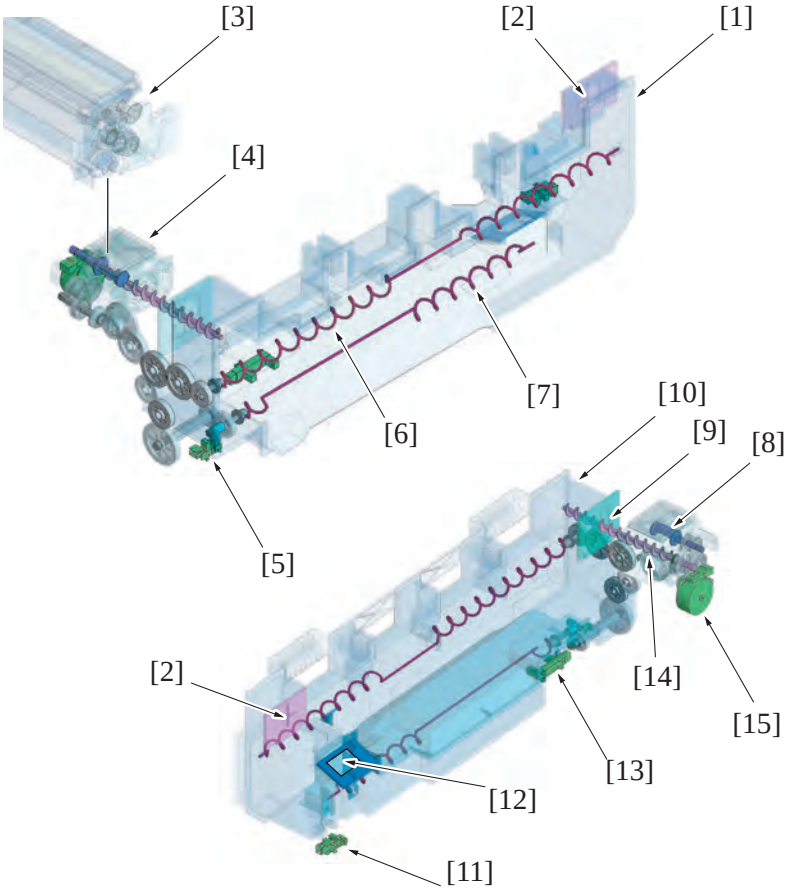
(1) Description

- The IDC sensor/Fr can be contaminated with toner since it is located under the transfer belt unit. There is a shutter mechanism provided for the sensor to prevent it from being contaminated.
- The IDC sensor shutter solenoid opens and closes the shutter.

9. TONER COLLECTING SECTION

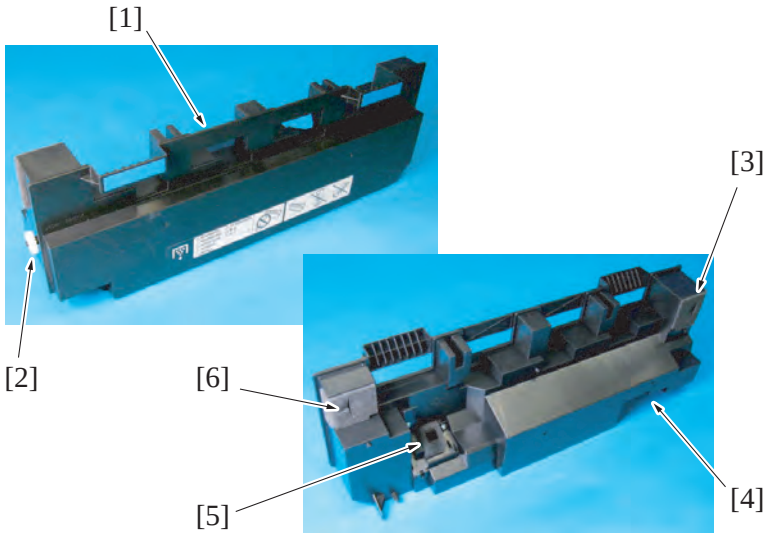
9.1 Configuration

- The toner collecting section is composed of the waste toner box and waste toner conveying relay section.



[1]	Waste toner box (front view)	[2]	Waste toner collecting port (Drum unit/K)
[3]	Transfer belt cleaning section	[4]	Waste toner conveying relay section
[5]	Waste toner lock sensor (PS23)	[6]	Agitating screw/1
[7]	Agitating screw/2	[8]	Paddle
[9]	Waste toner collecting port (Transfer belt unit: cleaning section)	[10]	Waste toner box (rear view)
[11]	Waste toner box set sensor (PS53)	[12]	Waste developer discharge port (Developing unit/K)
[13]	Waste toner full sensor (PS54)	[14]	Waste toner relay screw
[15]	Waste toner transport motor (M20)	-	-

9.1.1 Waste toner box exterior view

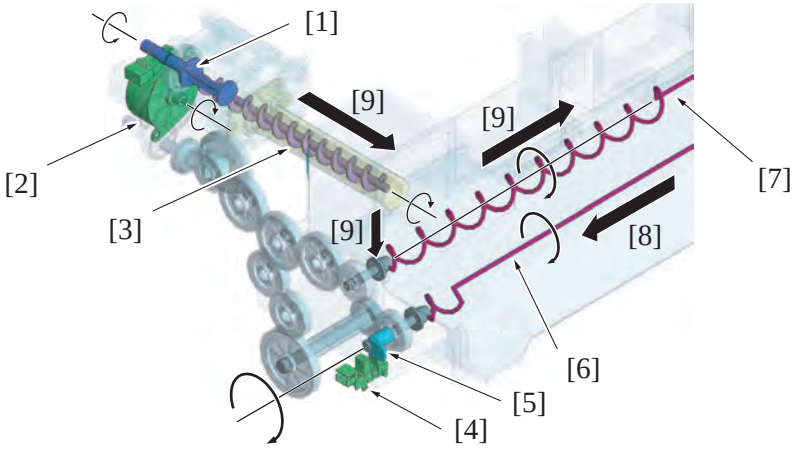


[1]	Waste toner box	[2]	Waste toner box drive gear

[3]	Waste toner collecting port (Transfer belt unit: cleaning section)	[4]	Waste toner box near-full detection window
[5]	Waste toner collecting port (Developing unit/K)	[6]	Waste toner collecting port (Drum unit/K)

9.2 Drive

- The waste toner transport motor drives the agitating coil in the waste toner box.

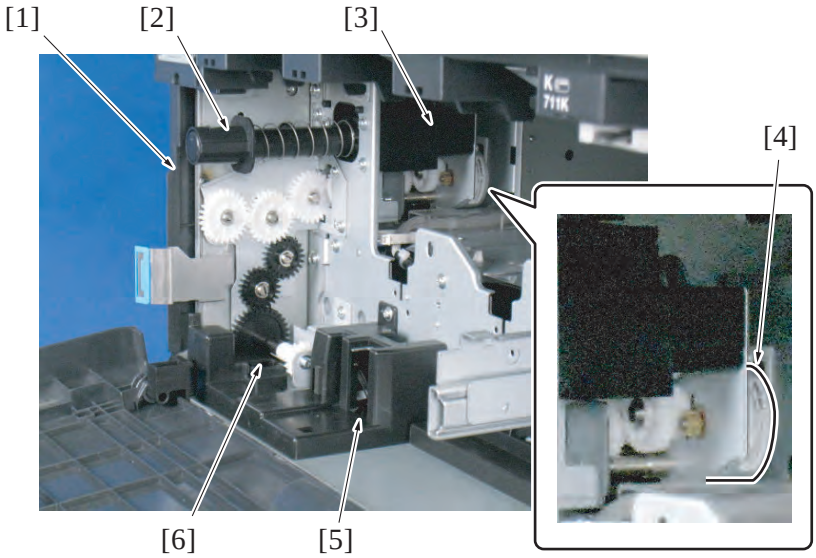


[1]	Paddle	[2]	Waste toner transport motor (M20)
[3]	Waste toner relay screw	[4]	Waste toner lock sensor (PS23)
[5]	Actuator	[6]	Agitating screw/2
[7]	Agitating screw/1	[8]	Waste developer flow from developing unit
[9]	Waste toner flow from waste toner conveying relay section	-	-

9.2.1 Description

- The agitating paddle and waste toner relay screw in the waste toner conveying relay section are driven and rotated by the waste toner transport motor.
- The agitating screw 1/2 in the waste toner box is driven and rotated by the waste toner transport motor.
- The waste toner lock sensor monitors the condition of the waste toner transport motor rotation.

(1) Front internal view - Waste toner box drive section

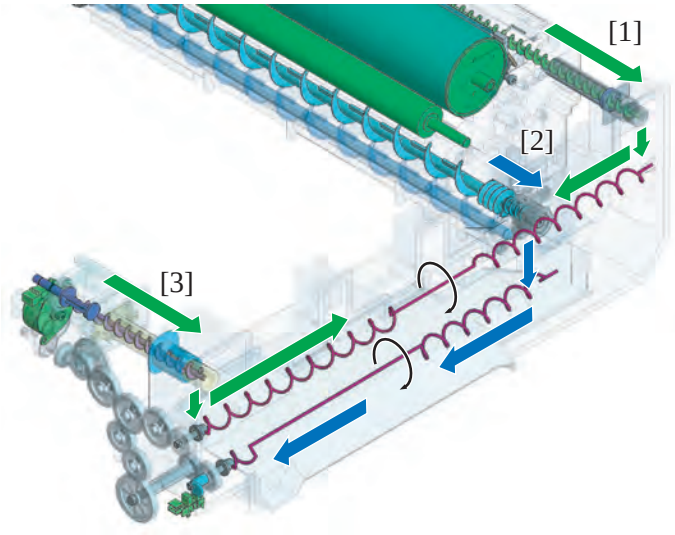


[1]	Waste toner box mounting section (inside the front lower door of the main body)	[2]	Waste toner exit section (transfer belt: cleaner section)
[3]	Waste toner conveying relay section	[4]	Waste toner transport motor (M20)
[5]	Waste toner box full detection section	[6]	Waste toner box drive gear

9.3 Operation

9.3.1 Waste toner collecting path to the waste toner box

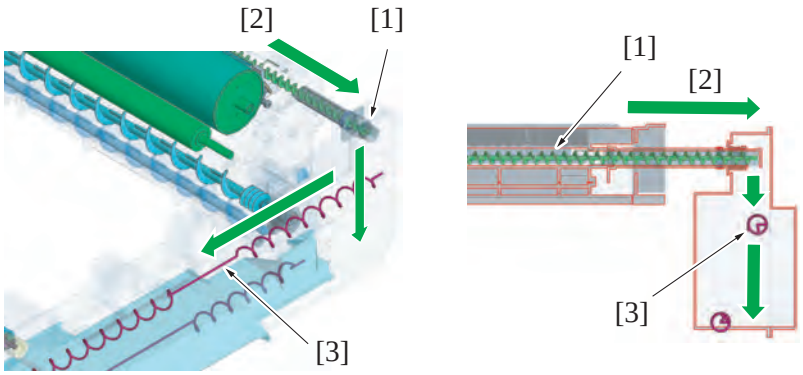
- The waste toner collecting path is consist of the three following path.



[1]	Collecting path from the drum unit	[2]	Collecting path from the developing unit
[3]	Collecting path from the transfer belt	-	-

(1) Waste toner collecting path from the drum unit

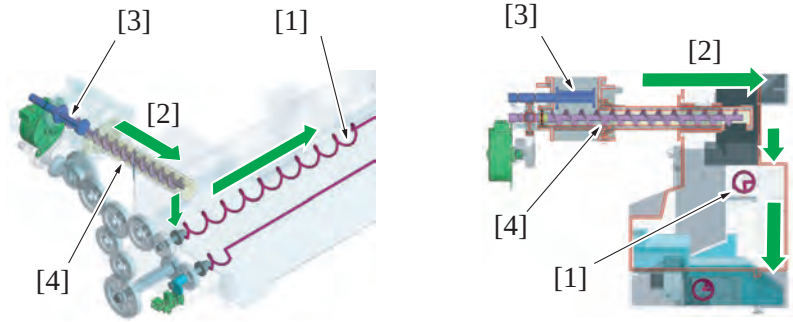
- The waste toner that is collected from the drum unit is conveyed to the waste toner box via the toner collecting screw.



[1]	Toner collecting screw (Drum unit)	[2]	Waste toner flow
[3]	Agitating screw/1	-	-

(2) Waste toner collecting path from the transfer belt unit

- The waste toner that is collected from the transfer belt is conveyed to the waste toner box via the waste toner conveying relay section.



[1]	Agitating screw/1	[2]	Waste toner flow
[3]	Paddle	[4]	Waste toner relay screw

(a) Waste toner conveying process

1. Waste toner conveyed by the waste toner collecting screw of the transfer belt is conveyed to the waste toner conveying relay section.
2. Waste toner conveyed to the waste toner conveying relay section is conveyed to the front side of the main body by the waste toner relay screw.

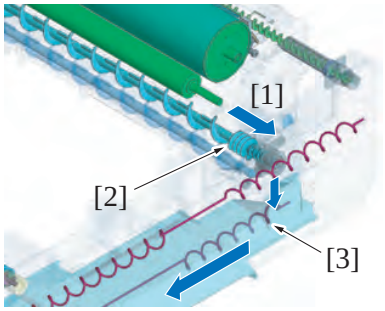
3. Waste toner is collected in the waste toner box through the toner collecting port located at the front side of the waste toner relay screw.

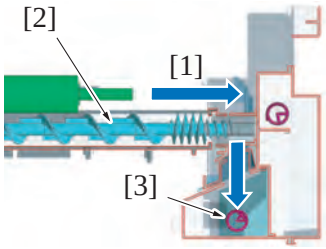
NOTE

- **The toner collecting port is provided with a shutter mechanism. Mounting the waste toner box pushes the shutter at the toner collecting port, opening the toner collecting port.**
- **Removing the waste toner box, on the other hand, closes the shutter and toner is thereby prevented from spilling from the toner collecting port.**

(3) Waste developer collecting path from the developing unit

- The conveying screw (supply screw) convey waste developer collected from the developing unit to the waste toner box. (For details, see “Auto refining developing system”.)

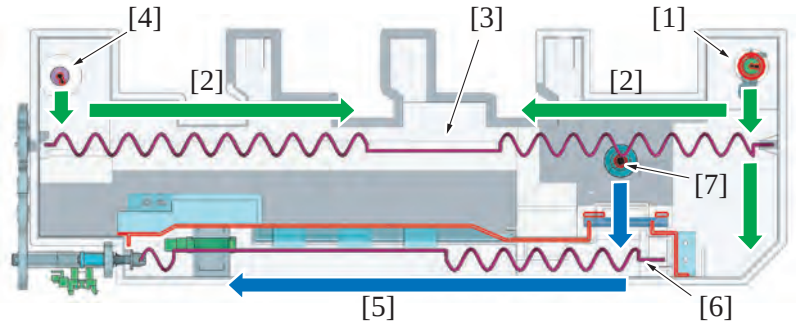




[1]	Waste developer flow	[2]	Conveying screw (supply screw) (Developing unit)
[3]	Agitating screw/2	-	-

9.3.2 Toner path in the waste toner box

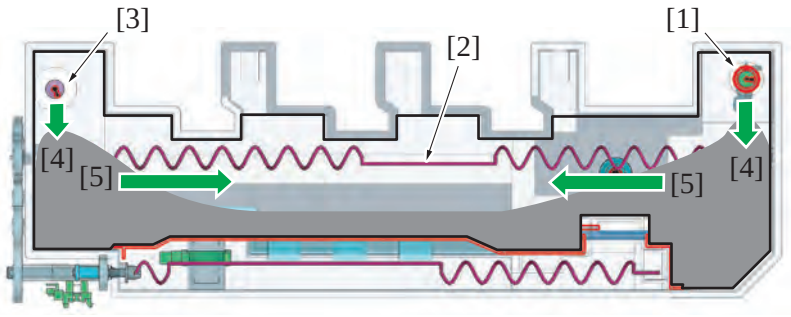
- The waste toner box consists of the waste toner collecting section and the waste developer collecting section.
- The waste toner collecting section and the waste developer collecting section are arranged independently of each other, each storing waste toner and waste developer, respectively.



[1]	Waste toner collecting port (Drum unit)	[2]	Waste toner flow
[3]	Agitating screw/1	[4]	Waste toner collecting port (Transfer belt unit)
[5]	Waste developer flow	[6]	Agitating screw/2
[7]	Waste developer discharge port (Developing unit)	-	-

(1) Waste toner collecting section

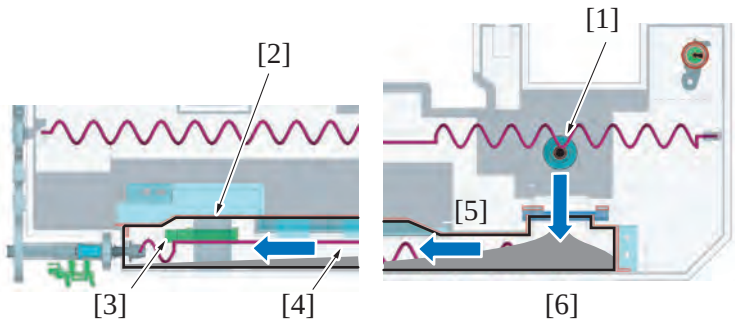
- Waste toner conveyed from the waste toner conveying relay section collecting port (transfer belt unit) and the drum unit collecting port is stored in the waste toner collecting section. When the waste toner stored reaches agitating screw/1, it is conveyed by agitating screw/1 to the center in the waste toner box to thereby even out waste toner in the waste toner collecting section.
- The waste toner agitating motor operates when the “TCR sensor performs an automatic adjustment”, “toner is forcefully replenished” or “transfer belt is driven”, and the agitating coil is rotated.
- The amount of waste toner accumulated in the waste toner collecting section is not monitored. (The near-full/full detection inside the toner collecting section is not performed.)



[1]	Waste toner collecting port (Drum unit)	[2]	Agitating screw/1
[3]	Waste toner collecting port (Transfer belt unit)	[4]	Waste toner collected
[5]	Waste toner flow	-	-

(2) Waste developer collecting section

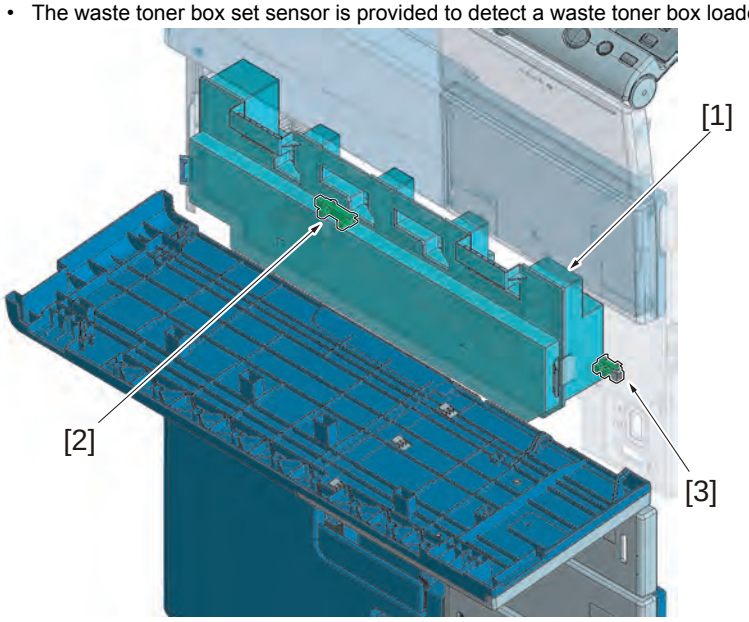
- Waste developer conveyed from the developing unit collecting port is stored in the waste developer collecting section. The waste developer is conveyed by agitating screw/2 to the left in the waste toner box to thereby even out waste developer in the waste developer collecting section.
- There is the waste toner box near-full detection window provided at the left portion of the waste toner box to monitor the amount of developer accumulated in the developer collecting section.
- The waste toner operates when the “TCR sensor performs an automatic adjustment”, “Toner is forcefully replenished” or "Transfer belt is driven”, and the agitating coil is rotated.



[1]	Waste developer discharge port (Developing unit)	[2]	Waste toner near-full detection window
[3]	Waste toner full sensor (PS54)	[4]	Agitating screw/2
[5]	Waste developer flow	[6]	Waste developer collected

9.3.3 Waste toner box-in-position detection

- The waste toner box set sensor is provided to detect a waste toner box loaded in position.

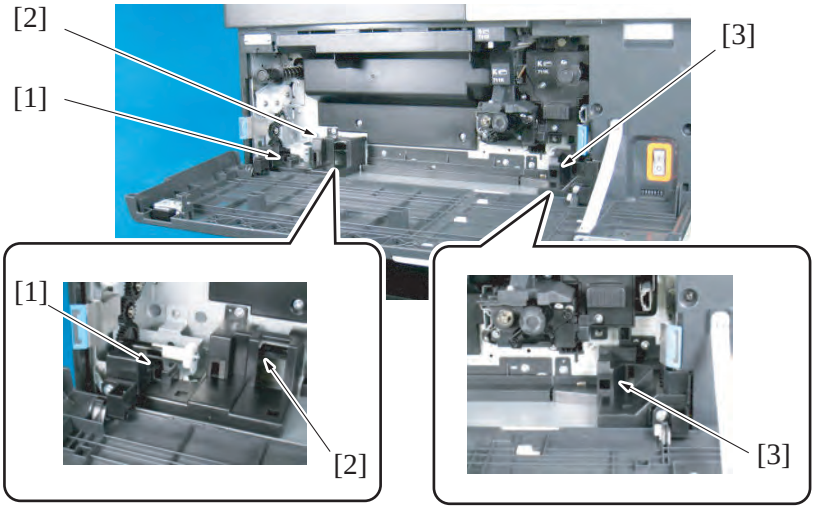


[1]	Waste toner box	[2]	Waste toner full sensor (PS54)
[3]	Waste toner box set sensor (PS53)	-	-

(1) Description

- Timing for this detection is when the power switch is turned ON, and the front lower door is closed.
- If the waste toner box is found to be out of position, the main body inhibits the initiation of a new print cycle.

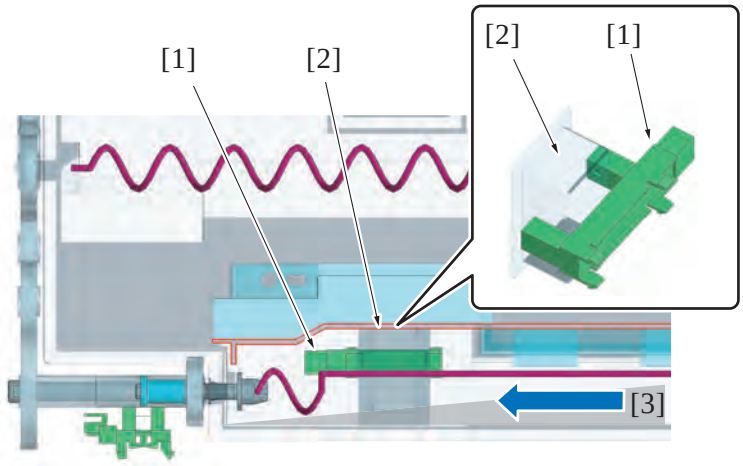
(a) Waste toner box set section



[1]	Waste toner lock sensor (PS23)	[2]	Waste toner full sensor (PS54)
[3]	Waste toner box set sensor (PS53)	-	-

9.3.4 Waste toner box full detection

- The waste toner full sensor monitors toner visible from the waste toner box near-full detection window. The waste toner box near-full detection window is arranged in the waste developer recovery section in the waste toner box.
- After waste toner box near-full detection is made, a waste toner box full determination is made when the count value reaches a specified value.



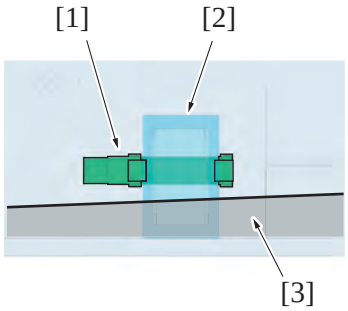
[1]	Waste toner full sensor (PS54)	[2]	Waste toner near-full detection window
[3]	Waste developer	-	-

(1) Description

- The waste toner box full detection is performed with a transmitting photosensor.
- Waste toner box near-full detection is made when the waste toner box near-full detection window blocks the waste toner full sensor longer than a specified time. The waste toner box near-full detection window is arranged in the waste developer recovery section in the waste toner box.
- After a waste toner box near-full detection is made, a waster toner box full detection is made after a predetermined number of sheets have been printed.
- The internal waste toner box counter starts simultaneously with the waste toner box near-full detection. A waste toner box full determination is made when the life threshold is reached. No further printing can be performed at this time. (Current print jobs will also be stopped.)
- The volume of the waste toner box is equivalent to 160,000 sheets of A4 size paper that is printed at an image density of 6% (1-sided printing). (The number of printable sheets varies depending on the image density used.)

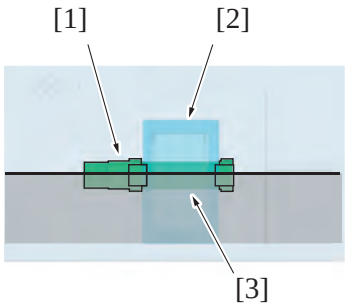
(a) Waste toner box near-full detection mechanism

Accumulated waste developer: Low



[1]	Waste toner full sensor (PS54)	[2]	Waste toner near-full detection window
[3]	Waste developer (low)	-	-

Accumulated waste developer: Near-full



[1]	Waste toner full sensor (PS54)	[2]	Waste toner near-full detection window
[3]	Waste developer (high)	-	-

(b) Counting method

- The count value is increased for each image density and added to the image density information (dot count) sent from the MFP board. (Dot count + added count)
- The calculation is made assuming a 100% ratio of A4 size, solid images. (Example: Equivalent to a 200% ratio of A3-size, solid images)
- This value is equivalent to approximately 3,000 sheets of A4 size paper that is printed at an image density of 6% (1-sided printing). (The number of printable sheets varies depending on the image density used.)

(c) Resetting the waste toner box full display

- When the waste toner box is replaced and the waste toner full sensor is unblocked for a predetermined amount of time, printing is re-enabled and the waste toner counter is automatically cleared.

9.3.5 Front doors mechanism

- The upper front door and lower front door are equipped on the front side of the MFP
- The main power switch, total counter, toner collecting box and imaging unit is equipped inside the lower front door.
- Toner cartridge is equipped inside the upper front door.

(1) Front doors locking mechanism

- The upper/lower front door is provided with a locking mechanism.

(a) Unlocking the front door

- Pull of the upper/lower front door to the front will release the door lock magnets (two each) provided at the upper portion of the front doors.

(b) Locking the front doors

- Close the upper/lower front door. When the upper/lower front door is closed in its correct position, the door lock magnets (two each) provided at the upper portion of the front doors lock the front doors.

(2) Lower front door open/close detection mechanism

- The lower front door switch detects that the front door is opened or closed.
- When the lower front door is closed, the open/close detection protrusion which is provided at the upper portion on the left side of the lower front door presses the actuator of the front door switch. This step turns ON the front door switch and the machine determines that the lower front door is closed.
- When the lower front door is opened, the front door switch actuator is released, which turns OFF the front door switch. The machine then determines that the lower front door is open and shows a message that prompts the operator to close the lower front door.
- When it is determined that the lower front door is open, use of all jobs but the fax reception job is prohibited. In addition, a paper misfeed results if the lower front door is opened during a print job.

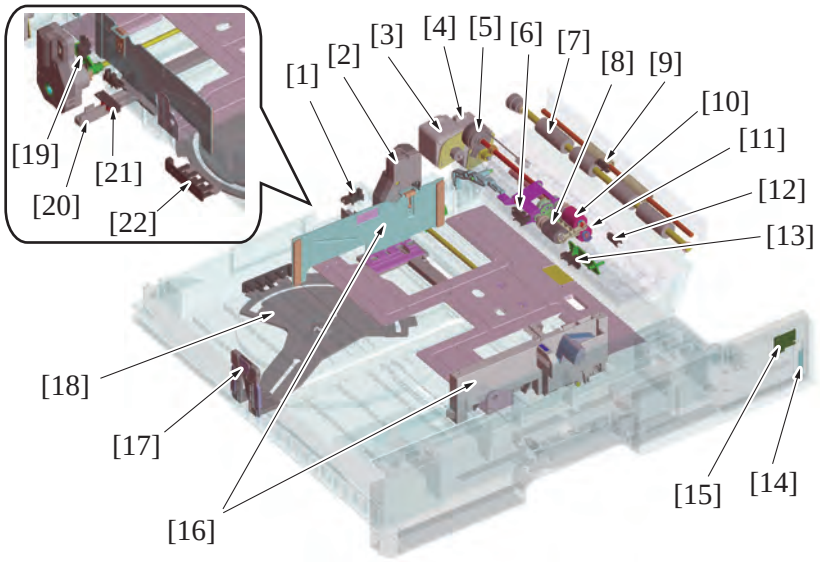
(3) Upper front door open/close detection mechanism

- The upper front door is not provided with an open/close detection mechanism. Therefore, a job does not stop even if the upper front door is opened during a print job.
- Replacement of the toner cartridge is possible during a print job because the upper front door can be opened or closed during consecutive jobs.

10. PAPER FEED SECTION (TRAY 1, TRAY 2)

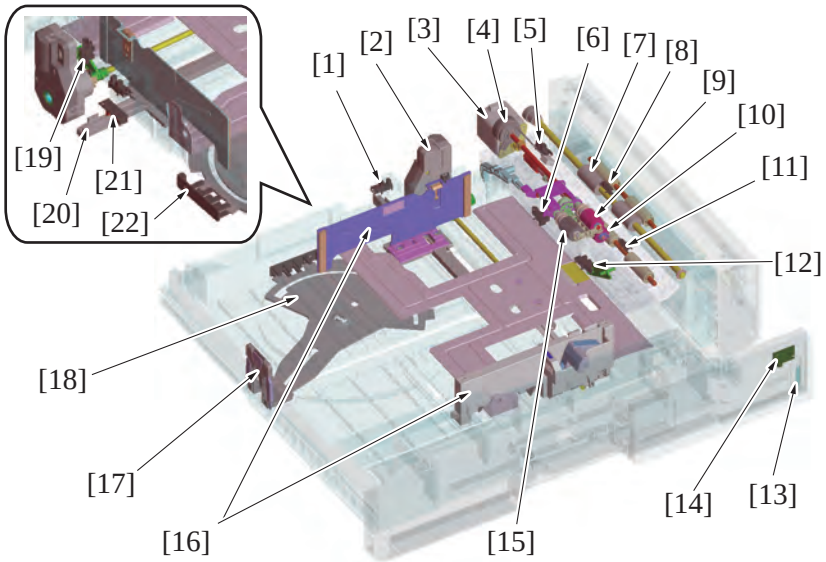
10.1 Configuration

10.1.1 Tray 1



[1]	Tray 1 set sensor (PS1)	[2]	Tray 1 lift-up motor (M6)
[3]	Paper feed motor (M22)	[4]	Tray 1 vertical transport motor (M5)
[5]	Tray 1 paper feed clutch (CL1)	[6]	Tray 1 upper limit sensor (PS6)
[7]	Tray 1 vertical transport roller	[8]	Tray 1 pick-up roller
[9]	Tray 1 vertical transport sensor (PS4)	[10]	Tray 1 feed roller
[11]	Tray 1 separation roller	[12]	Tray 1 paper feed sensor (PS5)
[13]	Tray 1 paper empty sensor (PS2)	[14]	Machine condition monitor window
[15]	Tray 1 empty indicator board (PEIB/1)	[16]	Paper width guide
[17]	Paper length guide	[18]	Paper length detection plate
[19]	Tray 1 paper near empty sensor (PS3)	[20]	Paper width detection plate
[21]	Tray 1 CD paper size board (CDPSB/1)	[22]	Tray 1 FD paper size board (FDPSB/1)

10.1.2 Tray 2



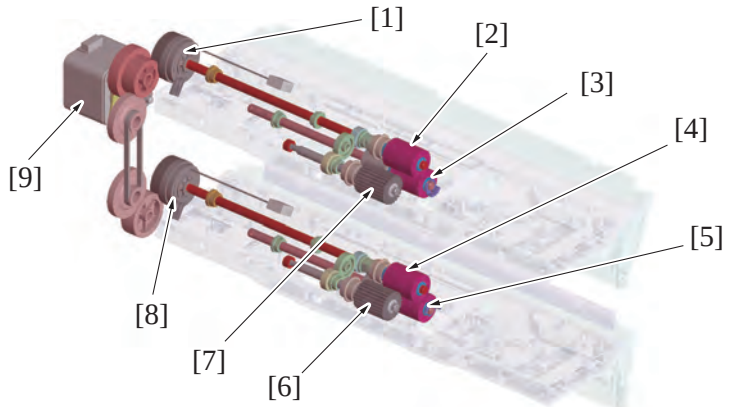
[1]	Tray 2 set sensor (PS9)	[2]	Tray 2 lift-up motor (M8)
[3]	Tray 2 vertical transport motor (M7)	[4]	Tray 2 paper feed clutch (CL2)
[5]	Right bottom door sensor (PS17)	[6]	Tray 2 upper limit sensor (PS14)
[7]	Tray 2 vertical transport roller	[8]	Tray 2 vertical transport sensor (PS12)
[9]	Tray 2 feed roller	[10]	Tray 2 separation roller
[11]	Tray 2 paper feed sensor (PS13)	[12]	Tray 2 paper empty sensor (PS10)
[13]	Machine condition monitor window	[14]	Tray 2 empty indicator board (PEIB/2)
[15]	Tray 2 pick-up roller	[16]	Paper width guide

[17]	Paper length guide	[18]	Paper length detection plate
[19]	Tray 2 near empty sensor (PS11)	[20]	Paper width detection plate
[21]	Tray 2 CD paper size board (CDPSB/2)	[22]	Tray 2 FD paper size board (FDPSB/2)

10.2 Drive

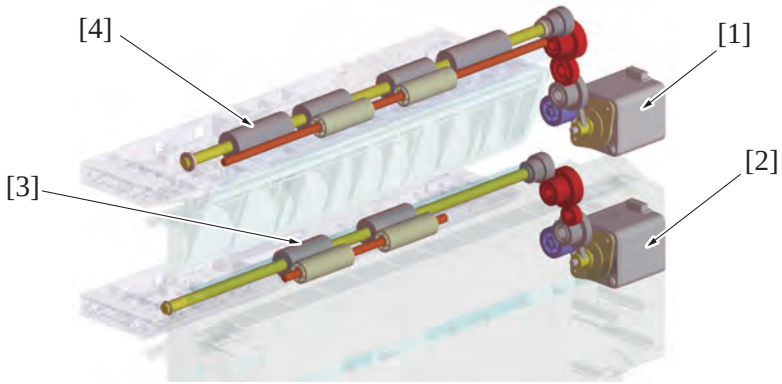
- Drive parts are arranged in the same way in tray 1 and tray 2.
- Paper feed motor drives the tray 1 and tray 2 feed rollers.
- Each feed roller has a clutch that is turned ON when it needs to be driven.

Paper feed drive



[1]	Tray 1 paper feed clutch (CL1)	[2]	Tray 1 feed roller
[3]	Tray 1 separation roller	[4]	Tray 2 feed roller
[5]	Tray 2 separation roller	[6]	Tray 2 pick-up roller
[7]	Tray 1 pick-up roller	[8]	Tray 2 paper feed clutch (CL2)
[9]	Paper feed motor (M22)	-	-

Conveyance Drive



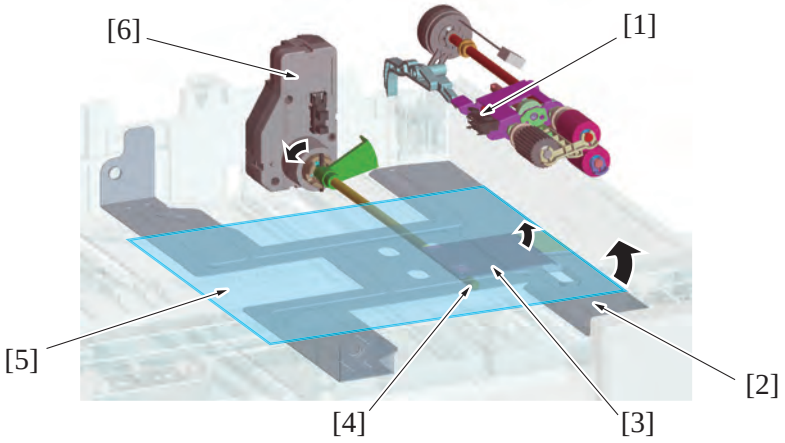
[1]	Tray 1 vertical transport motor (M5)	[2]	Tray 2 vertical transport motor (M7)
[3]	Tray 2 vertical transport roller	[4]	Tray 1 vertical transport roller

10.3 Operation

10.3.1 Up and down control

(1) Up operation

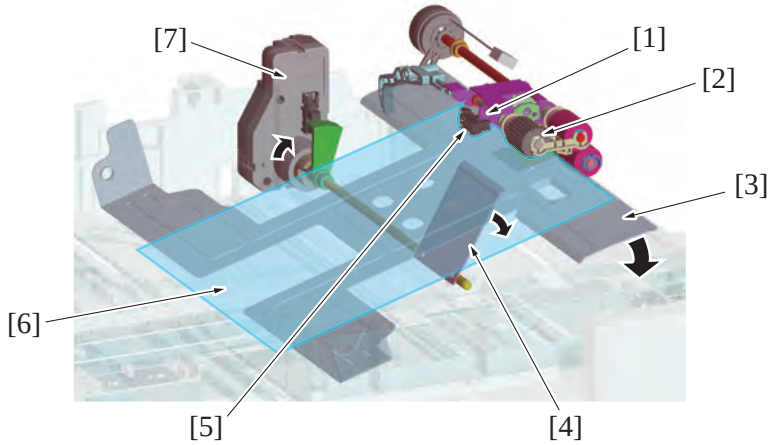
- The paper lift-up plate B is located under the paper lift-up plate A.
- The paper lift-up plate drive shaft of the tray 1 or tray 2 lift-up motor is connected to paper lift-up plate B.
- When the drive shaft of the tray 1 or tray 2 lift-up motor rotates, paper lift-up plate B raises paper lift-up plate A.



[1]	Tray 1 upper limit sensor (PS6) /Tray 2 upper limit sensor (PS14)	[2]	Paper lift-up plate A
[3]	Paper lift-up plate B	[4]	Lift-up plate drive shaft
[5]	Paper	[6]	Tray 1 lift-up motor (M6) /Tray 2 lift-up motor (M8)

(2) Down operation

- When the paper feed tray is slid out of the machine, the coupling and the lift-up plate drive shaft of the tray 1 or tray 2 lift-up motor are disconnected from each other.
- When the driving force of the tray 1 or tray 2 lift-up motor is released from the lift-up plate drive shaft, the paper lift-up plate starts lowering by its own weight.



[1]	Light blocking plate of upper limit sensor	[2]	Pick-up roller
[3]	Paper lift-up plate A	[4]	Paper lift-up plate B
[5]	Tray 1 upper limit sensor (PS6) /Tray 2 upper limit sensor (PS14)	[6]	Paper
[7]	Tray 1 lift-up motor (M6) /Tray 2 lift-up motor (M8)	-	-

(3) Operation timing

(a) When the paper feed tray is slid in

- When the tray is slid into the machine, the tray 1 or tray 2 set sensor is blocked. The machine then determines that the tray is slid into position.
- The paper lift-up plate is lowering when the tray is slid out, so that the tray 1 or tray 2 upper limit sensor is unblocked.
- Determining that the tray 1 or tray 2 upper limit sensor is unblocked, the machine lets the tray 1 or tray 2 lift-up motor rotate to start the up operation of the paper lift-up plate.
- Determining that the tray 1 or tray 2 upper limit sensor is blocked, the machine stops the lift-up motor to complete the up operation of the paper lift-up plate.
- Control is provided to make sure that only one tray performs the up operation at one time.
- If the tray is slid out during the up operation of the paper lift-up plate and accordingly the tray 1 or tray 2 set sensor is unblocked, the up operation of the paper lift-up plate is terminated.

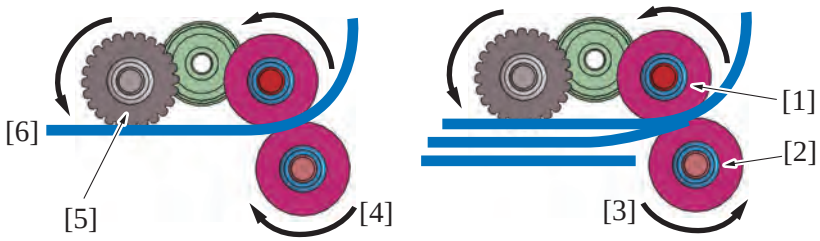
(b) During printing

- When the amount of paper decreases as the unit keeps printing, the pick-up roller will gradually come down to unblock the tray 1 or tray 2 upper limit sensor.
- When the tray 1 or tray 2 upper limit sensor is unblocked, the machine lets the tray 1 or tray 2 lift-up motor rotate to start the up operation of the paper lift-up plate.
- When the tray 1 or tray 2 upper limit sensor is blocked, the tray 1 or tray 2 lift-up motor will stop to stop lifting the paper lift-up plate.

- Repeat above operations, the pressure (paper feed pressure) between the pick-up roller and the paper stack is kept constant regardless of the amount of remaining paper.

10.3.2 Paper feed control

- Tray 1 and tray 2 are controlled in the same control procedure.
- The pick-up roller and feed roller rotate to feed the paper in the tray into the machine.
- Reverse rotation of the separation roller prevents two or more sheets of paper from being fed out from the tray.
- The paper feed motor and paper feed clutch control the tray paper feed operation.



[1]	Feed roller	[2]	Separation roller
[3]	Reverse rotation	[4]	Forward rotation
[5]	Pick-up roller	[6]	Paper

(1) Pick-up control

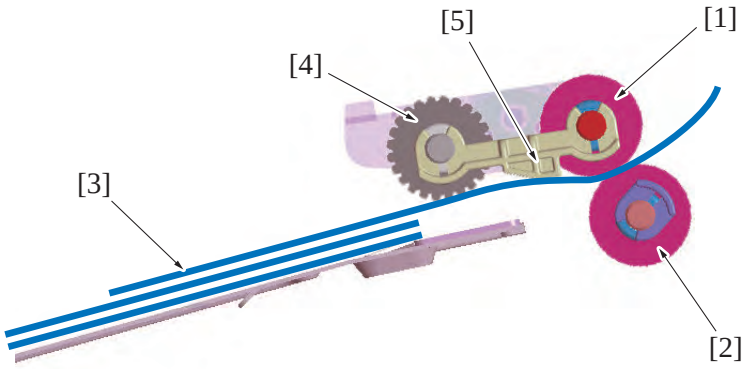
- The paper feed motor is energized. The tray 1 or tray 2 paper feed clutch is energized after the lapse of a predetermined period of time after the print start signal.
- As the tray 1 or tray 2 paper feed clutch is energized, the driving force of the paper feed motor is transmitted to the pick-up roller and the feed roller. As a result, the pick-up roller picks up a sheet of paper and feeds it.
- The feed roller transports the paper onto the tray 1 or tray 2 vertical transport roller.
- The paper feed motor and the tray 1 or tray 2 paper feed clutch are deenergized when the tray 1 or tray 2 vertical transport sensor located downstream of the tray 1 or tray 2 vertical transport roller along the paper path detects the leading edge of the paper fed off from the tray 1 or tray 2 vertical transport roller.
- The pick-up roller and feed roller follow the movement of the paper, continuing rotating.
- The pick-up roller and feed roller stop rotating as soon as the paper moves past them.

(2) Separation control

- The separation roller is driven via a torque limiter in the direction opposite the paper transport direction.
- The separation roller is pressed up against the feed roller by the pressure of a spring and an acting pressure generated from torque of the torque limiter.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If there are two or more sheets of paper between the separation roller and feed roller, the limit torque is greater than the friction force of the paper, so that the separation roller rotates in reverse.
- The reverse rotation of the separation roller allows the lower sheet of paper in contact with the separation roller to be returned back into the tray. This properly separates the sheets of paper.

(3) Paper feed front guide mechanism

- A paper feed front guide is installed between the pick-up roller and feed roller.
- The paper feed front guide guides paper to the feed path and prevents paper folds and jams due to collisions with the feed roller.
- The paper feed front guide also functions as a securing member for the pick-up roller and feed roller.

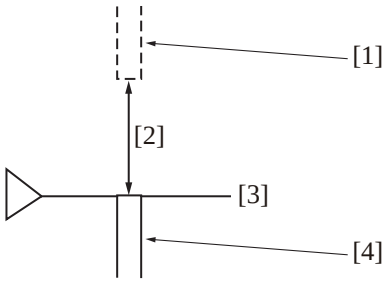


[1]	Feed roller	[2]	Separation roller
[3]	Paper	[4]	Pick-up roller

[5]	Paper feed front guide	-	-

10.3.3 Feed roller speed reduction control

- The time from the start of paper feeding to the paper feed sensor turning on is measured. If the time is shorter than a predetermined amount of time, the speed of the feed roller will be reduced.
- Reduce the feed roller speed for a predetermined amount of time. So that, the transport variance can be corrected and the appropriate intervals between sheets of paper can be ensured.
- The feed roller speed reduction control is performed during paper feed from tray 1 and tray 2.



[1]	Preceding sheet	[2]	Paper intervals
[3]	Sensor	[4]	Sheet of paper being controlled

10.3.4 Paper feed retry control

- A paper misfeed is detected when the sensor cannot detect the paper at the paper feed port after a predetermined amount of time has elapsed from the start of paper feeding.
- The feed roller stops when a paper misfeeding is detected. Afterwards, the paper feed operation starts again.
- A paper jam in the paper feed section is detected when the corresponding sensor does not detect paper after the paper feed operation starts again.
- The paper feed retry is performed only once.

Paper port	Paper feed retry control	Corresponding sensor name
Manual bypass tray	Execute	Tray 1 vertical transport sensor
Tray 1	Not execute	-
Tray 2	Execute	Tray 2 vertical transport sensor
Tray 3	Execute	Tray 3 paper feed sensor
Tray 4	Execute	Tray 4 paper feed sensor
LCT (Option: LU-303/LU-205)	Execute	LU paper feed sensor

10.3.5 Paper transport control

- The tray 1 or tray 2 vertical transport motor is energized after the lapse of a predetermined period of time after the print start signal.
- The driving force of the tray 1 or tray 2 vertical transport motor is transmitted to the tray 1 or tray 2 vertical transport roller. Rotation of the tray 1 or tray 2 vertical transport roller transports the paper onto the registration roller.
- The tray 1 or tray 2 vertical transport sensor located downstream of the tray 1 or tray 2 vertical transport roller along the paper path detects the leading edge of the paper fed off from the tray 1 or tray 2 vertical transport roller.
- If the tray 1 or tray 2 vertical transport sensor is unable to detect the leading edge of the paper even after the lapse of a predetermined period of time, the machine determines that a paper misfeed occurs at the vertical transport section or paper feed section.

10.3.6 Vertical transport roller speed reduction control

- The time from the start of paper feeding to the vertical transport sensor turning on is measured. If the time is shorter than a predetermined amount of time, the speed of the vertical transport roller will be reduced.
- Reduce the vertical transport roller speed for a predetermined amount of time. So that, the time that paper arrives to the registration roller can be corrected.

10.3.7 Downstream exit control during multi-print cycle

- When a paper jam in the paper feed section is detected, the print operation does not stop immediately. Paper that has been printed completely and paper that can be printed completely is discharged outside of the device after being printed.
- Completely discharge printed paper to make jam removal easily and reduce paper consumption.

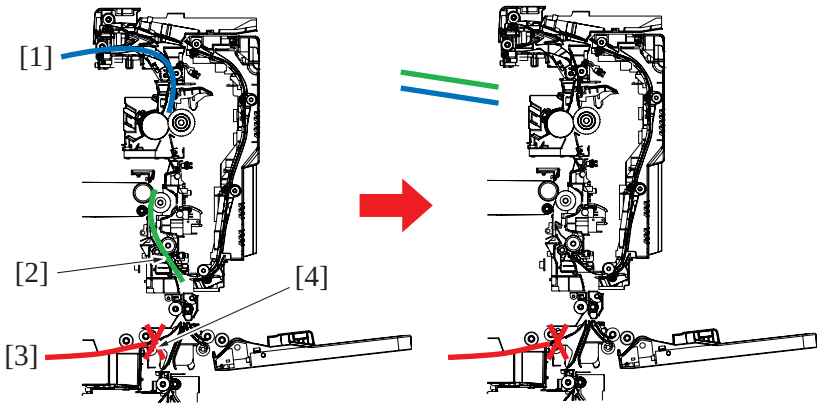
(1) Downstream exit control jams

Misfeed at tray 1 feed section	Misfeed at tray 2 feed section
Misfeed at tray 3 feed section	Misfeed at tray 4 feed section
Misfeed at manual bypass tray feed section	Misfeed at LCT paper feed section
Misfeed at vertical transport section	-

(2) 1-sided printing

1. Stops the feeding of paper [3] where the jam occurred and the transport operation.

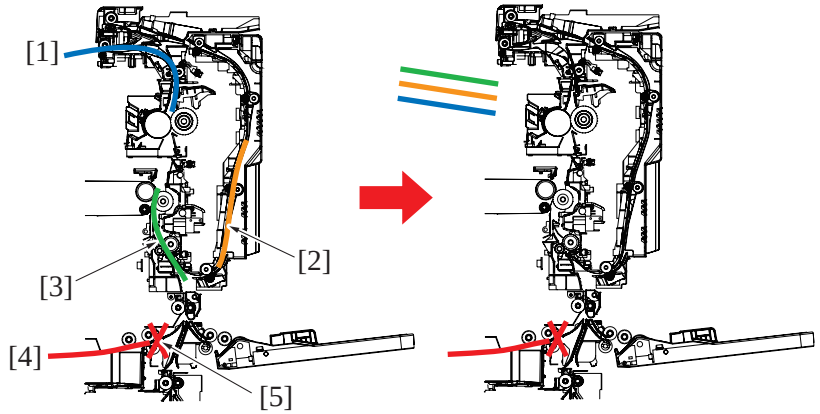
2. Exit paper [1].
3. Transfers, fuses image onto, and then discharges paper [2].



[1]	Sheet after a 1-sided image transfer	[2]	Sheet before a 1-sided image transfer
[3]	Jamming paper	[4]	Jamming

(3) 2-sided printing

1. Stops the feeding of paper [4] where the jam occurred and the transport operation.
2. Exit paper [1].
3. Transfers, fuses image onto, and then discharges paper [2] in the 2-sided section.
4. Performs 2-sided printing and discharges paper [3] in the pre-image transfer process.



[1]	Sheet after a 2-sided image transfer	[2]	Sheet after a 1-sided image transfer
[3]	Sheet before a 1-sided image transfer	[4]	Jamming paper
[5]	Jamming	-	-

10.3.8 Feed roller pressure changing mechanism

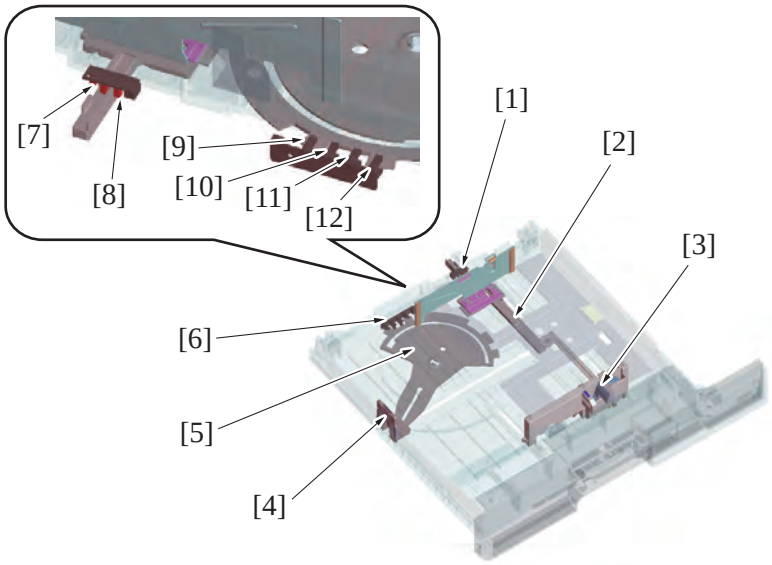
- A paper misfeed may infrequently occur, if lightweight 52 g/m^2 recycled paper, or the like, is used under high temperature, high humidity environment. Replacement with the weak springs in the second-drawer paper feed unit can reduce feed errors.
- Since the spring is available to the recommended thin paper (CS520), replacement is not required.
- For details, see "I.11.2.4 Pick-up pressure adjustment of the tray 1/2".

NOTE

- **At using plain paper under high-temperature, high-humidity environment or feeding thick paper after replacement of the spring, a paper misfeed may occur.**
- **Trays where the spring was replaced must be exclusively used for thin paper.**

10.3.9 Paper size detection control

- Tray 1 and tray 2 are controlled in the same control procedure.
- The 2 CD paper size sensors detect the paper width, and the 4 FD paper size sensors detect the paper length. Paper size is determined with the combination of the detected paper width and paper length.



[1]	Tray 1 CD paper size board (CDPSB/1) /Tray 2 CD paper size board (CDPSB/2)	[2]	Paper width detection plate
[3]	Paper width guide	[4]	Paper length guide
[5]	Paper length detection plate	[6]	Tray 1 FD paper size board (FDPSB/1) /Tray 2 FD paper size board (FDPSB/2)
[7]	CD paper size sensor/2	[8]	CD paper size sensor/1
[9]	FD paper size sensor/1	[10]	FD paper size sensor/2
[11]	FD paper size sensor/3	[12]	FD paper size sensor/4

(1) Paper width direction

- The paper width is detected based on the combination of activated or deactivated state of photosensor type CD paper size sensors 1 and 2 mounted on the tray 1 or tray 2 CD paper size board.
- State of tray 1 or tray 2 CD paper size sensor/1 and tray 1 or tray 2 CD paper size sensor/2 are changed by the paper width detection plate provided in the paper width guide.

(2) Paper feeding direction

- The paper length is detected based on the combination of activated or deactivated state of photosensor type sensors 1 to 4 mounted on the tray 1 or tray 2 FD paper size board.
- State of FD paper size sensors 1 to 4 is changed by the paper length detection plate connected to the paper length guide.

(3) Paper size determination

Paper size	FD paper size board				CD paper size board	
	Sensor 4	Sensor 3	Sensor 2	Sensor 1	Sensor 2	Sensor 1
SRA3	H	L	L	H	H	H
A3	L	L	H	L	L	H
B4	L	H	H	H	L	H
A4S	H	H	L	L	L	L
A4	H	L	H	L	L	H
B5S	L	H	H	L	L	L
B5	L	H	L	L	L	H
A5S, InvoiceS (*1)	H	L	H	L	L	L
12×18	H	L	L	H	L	H
Ledger (11×17)	L	L	H	L	H	H
Legal (8 1/2x14)	L	H	H	H	L	L
8 1/2×11S (LetterS)	L	L	L	H	L	L
Letter (8 1/2x11)	H	L	H	L	H	H
FLS S (*2)	H	H	H	H	L	L
8K S (270 mm x 390 mm)	L	H	L	H	H	H
16K (270 mm × 195 mm)	L	H	H	L	H	H

*1: Detected is Invoice S for the destination of North America and A5S for other destinations.
*2: One of the following paper sizes can be selected to be set for FLS.
8 1/2×13 1/2, 8×13, 8 1/4×13, 8 1/2×13

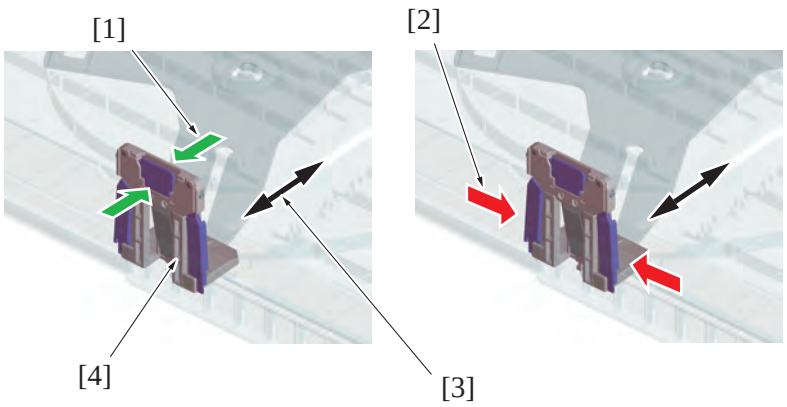
Sensor states

Sensor	Physical state	
	HIGH signal	LOW signal
Tray 1 or tray 2 FD paper size board: Sensors 1 to 4	Blocked	Unblocked
Tray 1 or tray 2 CD paper size board: Sensors 1, 2		

10.3.10 Paper length guide operation mechanism

Two methods are provided to operate the paper length guide.

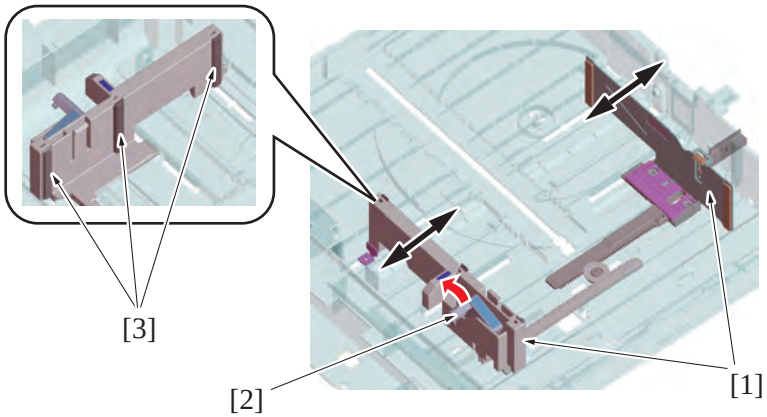
- Squeeze the paper length guide to operate it in the direction orthogonal to the direction of movement.
- Squeeze the paper length guide to operate it in the same direction as the direction of movement.



[1]	Squeeze in the same direction as the direction of movement	[2]	Squeeze in the direction orthogonal to the direction of movement
[3]	Movement direction of paper length guide	[4]	Paper length guide

10.3.11 Paper width guide

- A latching positioning method is used to prevent paper width guide misalignment due to shock that is generated during insertion of trays.
- Operating the lock lever releases the lock that is installed to the front side of the paper width guide. The paper width guide can then be moved.
- The front side paper width guide is equipped with a support guide. The support guide presses paper in the tray with spring force to reduce paper skew.

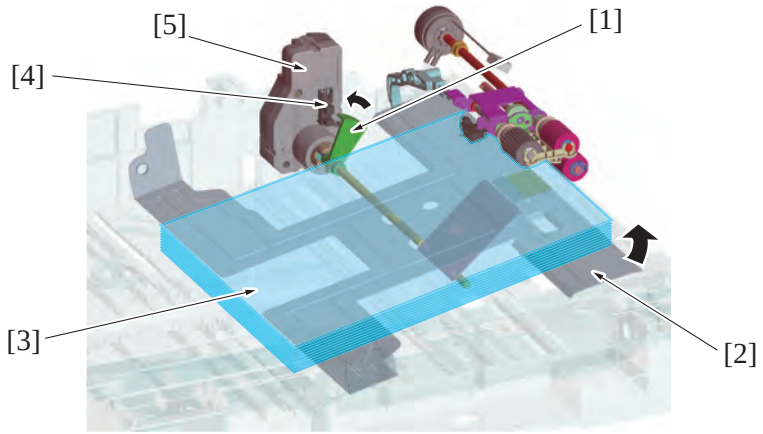


[1]	Paper width guide	[2]	Lock lever
[3]	Support guide	-	-

10.3.12 Remaining paper detection control

(1) Paper near-empty detection

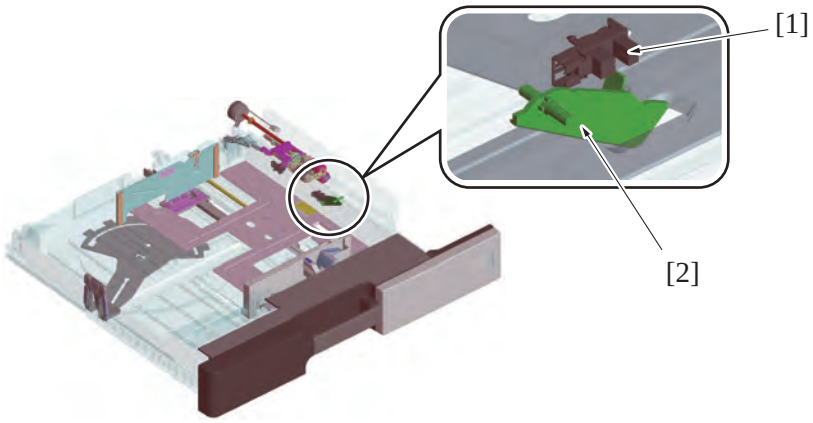
- The tray 1 or tray 2 near empty sensor detects a paper near-empty condition of the tray.
- As paper is consumed, the position of the near empty detection actuator provided at the lift-up plate drive shaft of the tray 1 or tray 2 lift-up motor is raised.
- When the near empty detection actuator is raised to a position at which the tray 1 or tray 2 near empty sensor is blocked, the machine detects a near-empty condition.



[1]	Actuator	[2]	Paper lift-up plate A
[3]	Paper	[4]	Tray 1 near empty sensor (PS3) Tray 2 near empty sensor (PS11)
[5]	Tray 1 lift-up motor (M6) Tray 2 lift-up motor (M8)	-	-

(2) Paper empty detection

- The tray 1 or tray 2 paper empty sensor detects a paper empty condition of the tray.
- When paper runs out, the empty detection actuator lowers to a position at which the tray 1 or tray 2 paper empty sensor is unblocked, at which timing, the machine detects a paper empty condition.



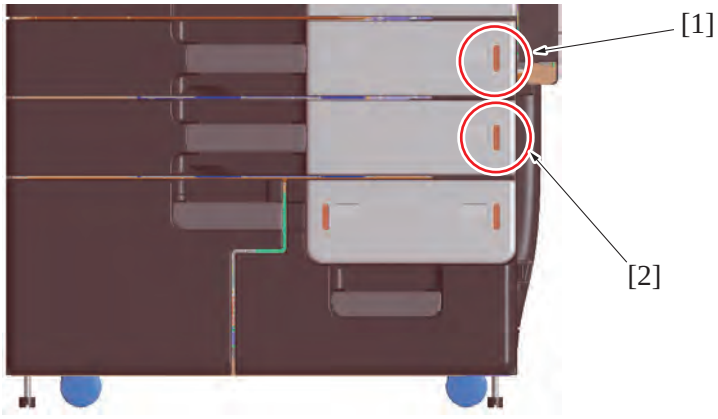
[1]	Tray 1 paper empty sensor (PS2) Tray 2 paper empty sensor (PS10)	[2]	Actuator

(3) Remaining paper level display

- The amount of remaining paper is indicated by the LED on the right side of each tray and by the screen of the control panel.
- The following table shows display statuses.

Tray status	Empty	Near empty	Other statuses (Including during lift-up and no tray conditions)
LED	ON	OFF (default) or Blinking *1	OFF

- *1: The LED flashes when Paper Remainder is specified to "Type 1", which is found under [Service Mode] -> [System 1] -> [Machine State LED Setting] -> [Paper Remainder].



[1]	Tray 1 paper empty indicator board (PEIB/1)	[2]	Tray 2 paper empty indicator board (PEIB/2)

10.3.13 Paper feed tray locking mechanism

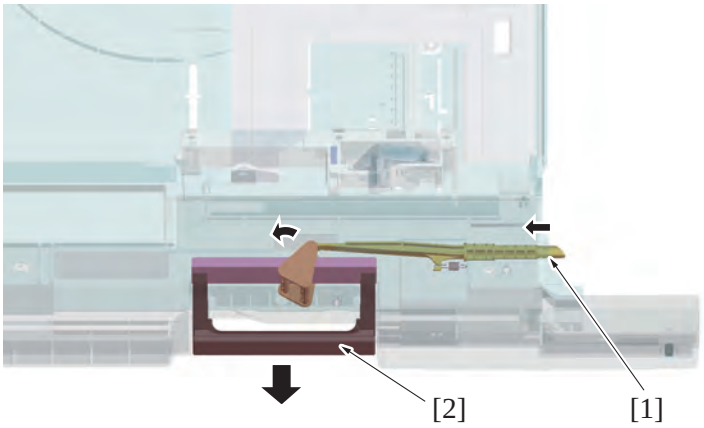
- The paper feed tray is provided with a locking mechanism.

(1) Unlocking the paper feed tray

- With drawing the lever of the paper feed tray to the front will disengage the tray lock pawl provided on the right side of the paper feed tray.
- The paper feed tray can be pulled out of the machine by continuing pulling the lever with the tray lock pawl disengaged.
- Rollers are provided for the right and left tray rails. They reduce the operating force required for sliding in/out the paper feed tray.

(2) Locking the paper feed tray

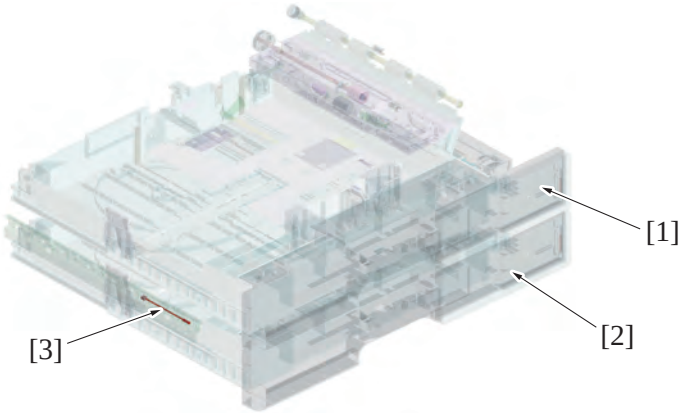
- Pushing the lever of the paper feed tray all the way toward the rear will allow the paper feed tray to be slid into the machine.
- When the paper feed tray is inserted all the way in place, the tray lock pawl provided on the right side of the paper feed tray locks the tray in place.
- To prevent false detection, the paper feed tray is equipped with a spring in the rear that pushes the tray back out if the tray is not inserted all the way in place.



[1]	Lock pawl	[2]	Lever of the paper feed tray

10.3.14 Temperature detection

- Paper temperature is detected as the machine interior temperature detected at the paper feed section by the paper temperature sensor located in the paper feed section.
- The machine interior temperature at the paper feed section is used as data for controlling the fusing temperature during printing. For “temperature control during printing”, see “O.16.3.8.(5) Temperature control during the print cycle”.

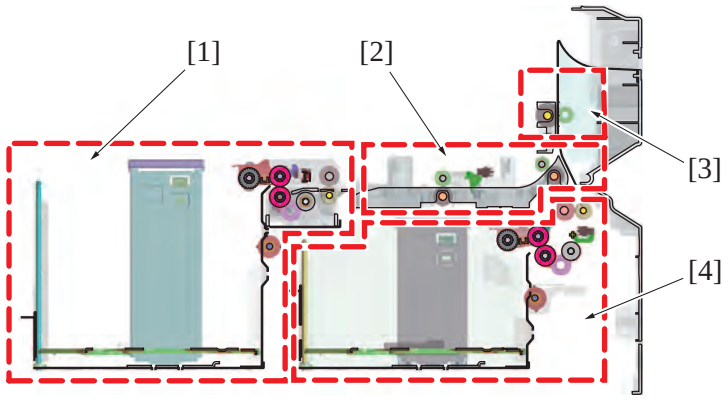


[1]	Tray 1	[2]	Tray 2
[3]	Paper temperature sensor (TH8)	-	-

11. PAPER FEED SECTION (TRAY 3, TRAY 4)

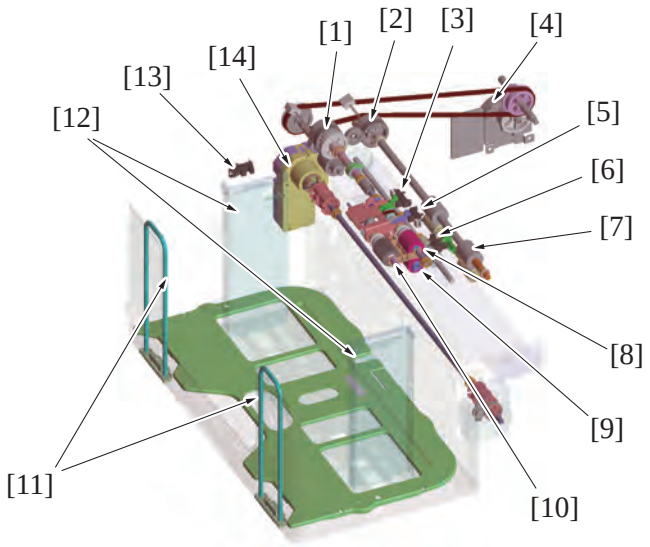
11.1 Configuration

11.1.1 Section configuration



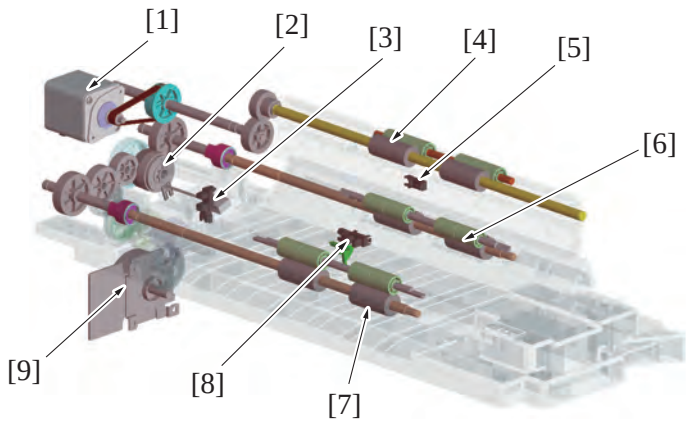
[1]	Tray 3	[2]	Horizontal transport section
[3]	Vertical transport section	[4]	Tray 4

11.1.2 Tray 3



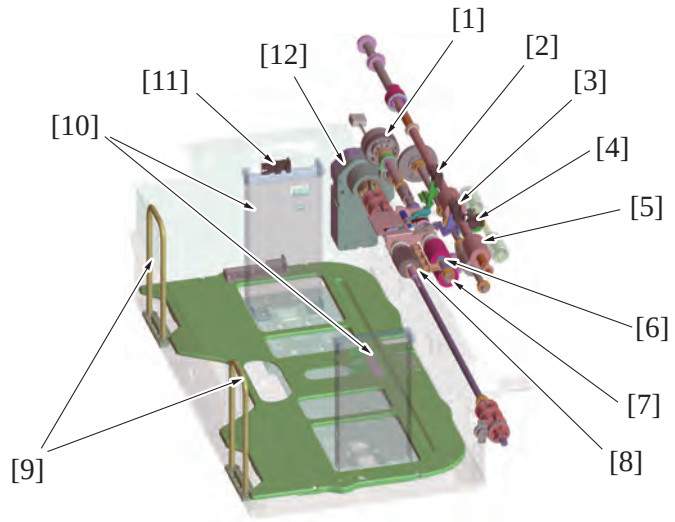
[1]	Tray 3 paper feed clutch (CL5)	[2]	Tray 3 transport clutch (CL6)
[3]	Tray 3 upper limit sensor (PS22)	[4]	LCC transport motor (M25)
[5]	Tray 3 paper empty sensor (PS19)	[6]	Tray 3 paper feed sensor (PS21)
[7]	Tray 3 transport roller	[8]	Tray 3 feed roller
[9]	Tray 3 separation roller	[10]	Tray 3 pick-up roller
[11]	Paper length guide	[12]	Paper width guide
[13]	Tray 3 near empty sensor (PS20)	[14]	Tray 3 lift-up motor (M23)

11.1.3 Horizontal transport/Vertical transport



[1]	LCC vertical transport motor (M28)	[2]	Horizontal transport clutch (CL3)
[3]	Horizontal transport set sensor (PS58)	[4]	LCC vertical transport roller
[5]	LCC vertical transport sensor (PS28)	[6]	Horizontal transport roller 2
[7]	Horizontal transport roller 1	[8]	Horizontal transport sensor (PS29)
[9]	LCC transport motor (M25)	-	-

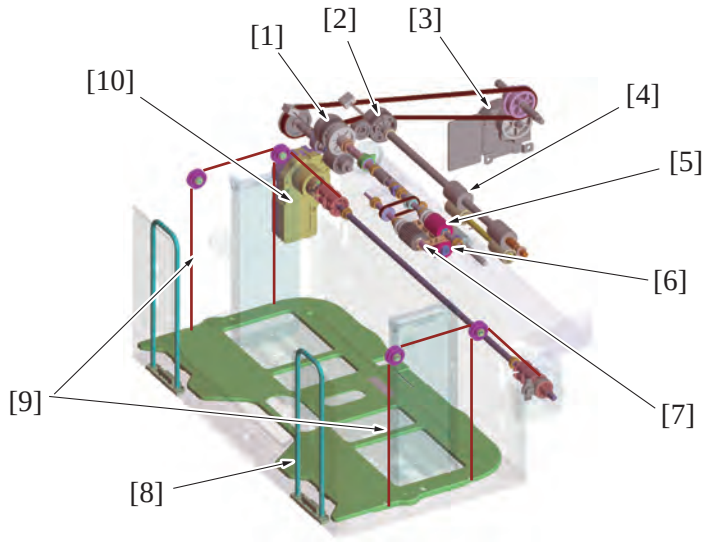
11.1.4 Tray 4



[1]	Tray 4 paper feed clutch (CL7)	[2]	Tray 4 upper limit sensor (PS27)
[3]	Tray 4 paper empty sensor (PS24)	[4]	Tray 4 paper feed sensor (PS26)
[5]	Tray 4 vertical transport roller	[6]	Tray 4 feed roller
[7]	Tray 4 separation roller	[8]	Tray 4 pick-up roller
[9]	Paper length guide	[10]	Paper width guide
[11]	Tray 4 near empty sensor (PS25)	[12]	Tray 4 lift-up motor (M24)

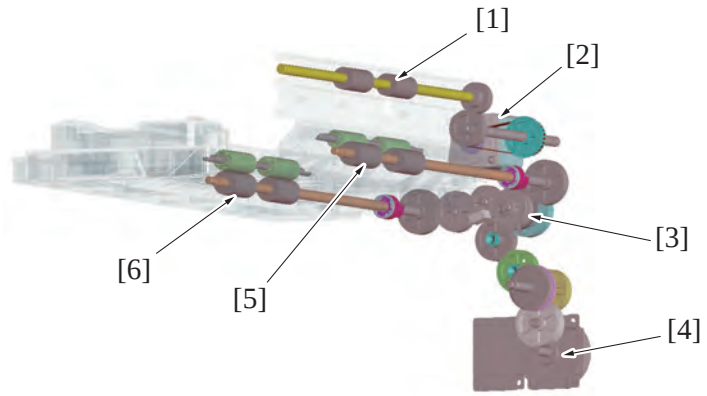
11.2 Drive

11.2.1 Tray 3



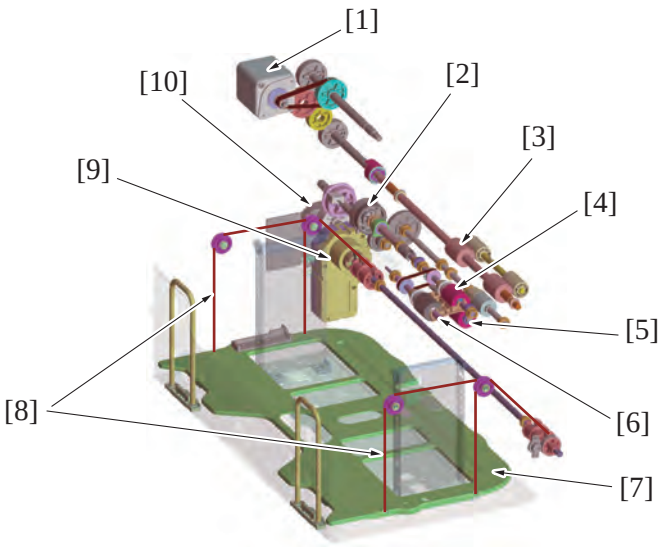
[1]	Tray 3 paper feed clutch (CL5)	[2]	Tray 3 transport clutch (CL6)
[3]	LCC transport motor (M25)	[4]	Tray 3 transport roller
[5]	Tray 3 feed roller	[6]	Tray 3 separation roller
[7]	Tray 3 pick-up roller	[8]	Paper lift-up plate
[9]	Lift wire	[10]	Tray 3 lift-up motor (M23)

11.2.2 Horizontal transport/Vertical transport



[1]	Vertical transport roller	[2]	LCC vertical transport motor (M28)
[3]	Horizontal transport clutch (CL3)	[4]	LCC transport motor (M25)
[5]	Horizontal transport roller 2	[6]	Horizontal transport roller 1

11.2.3 Tray 4



[1]	LCC vertical transport motor (M28)	[2]	Tray 4 paper feed clutch (CL7)
[3]	Tray 4 vertical transport roller	[4]	Tray 4 feed roller
[5]	Tray 4 separation roller	[6]	Tray 4 pick-up roller
[7]	Paper lift-up plate	[8]	Lift wire
[9]	Tray 4 lift-up motor (M24)	[10]	LCC transport motor (M25)

11.3 Operation

11.3.1 Up and down control

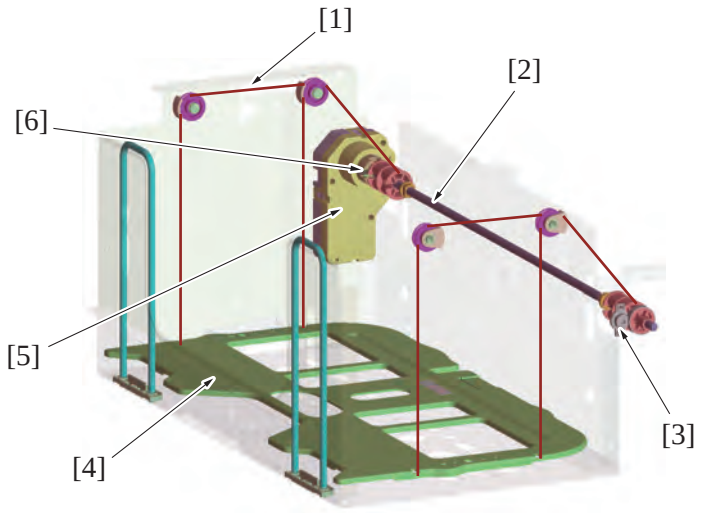
- Tray 3 and tray 4 are controlled in the same control procedure.

(1) Up operation

- A lift wire is connected to the paper lift-up plate and the paper lift-up plate is held in the horizontal position.
- When the tray 3 or tray 4 lift-up motor is energized, the take-up axis takes up the wire to thereby raise the paper lift-up plate.

(2) Down operation

- When the paper feed tray is slid out of the machine, the coupling and the lift-up plate drive shaft of the tray 3 or tray 4 lift-up motor are disconnected from each other.
- When the driving force of the tray 3 or tray 4 lift-up motor is released from the take-up axis, the paper lift-up plate starts lowering by its own weight.
- At this time, an effect of the damper that is connected to the gear prevents it from lowering swiftly and ensures a slow descent motion.

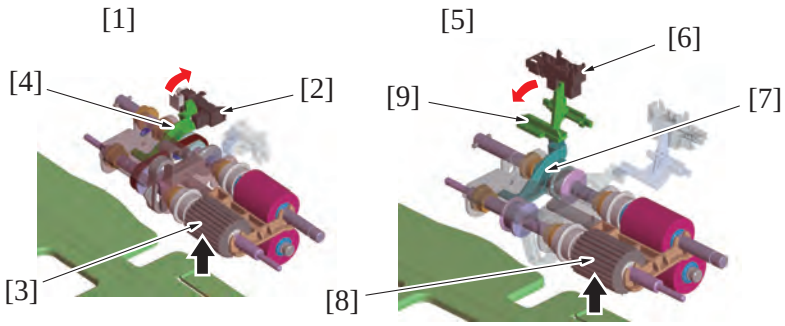


[1]	Lift wire	[2]	Take-up axis
[3]	Damper	[4]	Paper lift-up plate
[5]	Tray 3 lift-up motor (M23) Tray 4 lift-up motor (M24)	[6]	Coupling

(3) Operation timing

(a) When the paper feed tray is slid in

- When the tray is slid in, the drawer connector of tray 3 or tray 4 is connected. The machine then determines that the tray is slid in position.
- The paper lift-up plate is lowering when the tray is slid out, so that the tray 3 or tray 4 upper limit sensor is unblocked.
- Determining that the tray 3 or tray 4 upper limit sensor is unblocked, the machine lets the tray 3 or tray 4 lift-up motor rotate to start the up operation of the paper lift-up plate.
- Determining that the tray 3 or tray 4 upper limit sensor is blocked, the machine stops the tray 3 or tray 4 lift-up motor to complete the up operation of the paper lift-up plate.
- Control is provided to make sure that all tray performs the up operation at the same time.
- If the tray is slid out during the up operation of the paper lift-up plate and accordingly the tray 3 or tray 4 drawer connector is disconnected, the machine determines that the tray has been slid out and terminates the up operation of the paper lift-up plate.



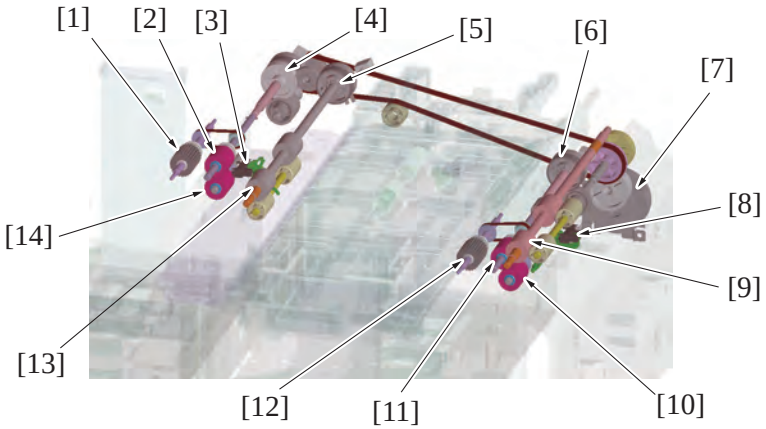
[1]	Tray 3	[2]	Tray 3 upper limit sensor (PS22)
[3]	Tray 3 pick-up roller	[4]	Actuator
[5]	Tray 4	[6]	Tray 4 upper limit sensor (PS27)
[7]	Actuator 2	[8]	Tray 4 pick-up roller
[9]	Actuator 1	-	-

(b) During printing

- As paper is consumed, the pick-up roller gradually lowers and the tray 3 or tray 4 upper limit sensor is unblocked.
- Determining that the tray 3 or tray 4 upper limit sensor is unblocked, the machine lets the tray 3 or tray 4 lift-up motor rotate to start the up operation of the paper lift-up plate.
- Determining that the tray 3 or tray 4 upper limit sensor is blocked, the machine stops the tray 3 or tray 4 lift-up motor to complete the up operation of the paper lift-up plate.
- Repeat above operations, the pressure (paper feed pressure) between the pick-up roller and the paper stack is kept constant regardless of the amount of remaining paper.

11.3.2 Paper feed control

- The pick-up roller and feed roller rotate to feed the paper in the tray into the machine.
- Reverse rotation of the separation roller prevents two or more sheets of paper from being fed out from the tray.
- The LCC transfer motor and paper feed clutch control the tray paper feed operation.



[1]	Tray 3 pick-up roller	[2]	Tray 3 feed roller
[3]	Tray 3 paper feed sensor (PS21)	[4]	Tray 3 paper feed clutch (CL5)
[5]	Tray 3 transport clutch (CL6)	[6]	Tray 4 paper feed clutch (CL7)
[7]	LCC transport motor (M25)	[8]	Tray 4 paper feed sensor (PS26)
[9]	Tray 4 vertical transport roller	[10]	Tray 4 separation roller
[11]	Tray 4 feed roller	[12]	Tray 4 pick-up roller
[13]	Tray 3 transport roller	[14]	Tray 3 separation roller

(1) Pick-up control (tray 3)

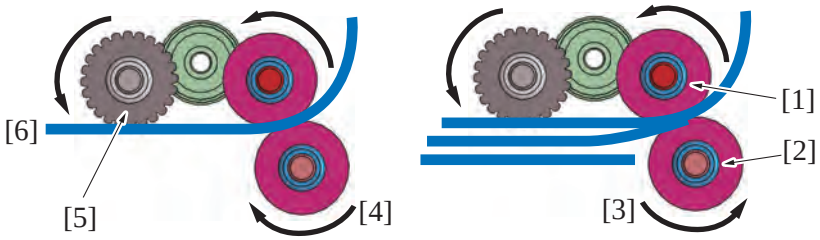
- The LCC transport motor is energized by the print start signal.
- The tray 3 paper feed clutch is energized after the lapse of a predetermined period of time after the print start signal.
- As the tray 3 paper feed clutch is energized, the driving force of the LCC transport motor is transmitted to the pick-up roller and the feed roller. As a result, the pick-up roller picks up a sheet of paper and transports it onto the feed roller.
- The feed roller transports the paper onto the tray 3 transport roller.
- The tray 3 transport clutch is energized after the lapse of a predetermined period of time after sending out the print start signal.
- As the tray 3 transport clutch is energized, the driving force of the LCC transport motor is transmitted to the tray 3 transport roller. As a result, the tray 3 transport roller transports a sheet of paper onto the horizontal transport roller 1.
- The tray 3 paper feed clutch and tray 3 transport clutch is deenergized after the lapse of a predetermined period of time after the tray 3 paper feed sensor detects the leading edge of the paper.
- The pick-up roller, the feed roller, and the tray 3 transport roller are driven by the moving paper, continuing to rotate.
- The pick-up roller and feed roller stop rotating as soon as the paper moves past them.

(2) Pick-up control (tray 4)

- The LCC transport motor is energized by the print start signal.
- The tray 4 paper feed clutch is energized after the lapse of a predetermined period of time after the print start signal.
- As the tray 4 paper feed clutch is energized, the driving force of the LCC transport motor is transmitted to the pick-up roller and the feed roller. As a result, the pick-up roller picks up a sheet of paper and transports it onto the feed roller.
- The feed roller transports the paper onto the tray 4 vertical transport roller.
- The tray 4 paper feed clutch is deenergized after the lapse of a predetermined period of time after the tray 4 paper feed sensor detects the leading edge of the paper.
- The pick-up roller and feed roller follow the movement of the paper, continuing rotating.
- The pick-up roller and feed roller stop rotating as soon as the paper moves past them.

(3) Separation control

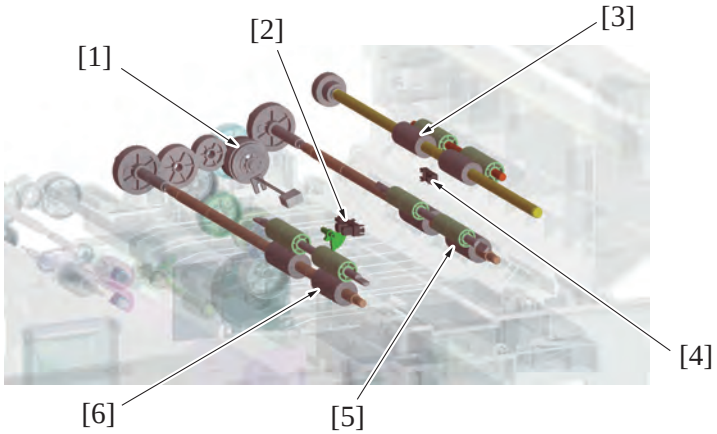
- The separation roller is driven via a torque limiter in the direction opposite the paper transport direction.
- The separation roller is pressed up against the feed roller by the pressure of a spring and an acting pressure generated from torque of the torque limiter.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If there are two or more sheets of paper between the separation roller and feed roller, the limit torque is greater than the friction force of the paper, so that the separation roller rotates reverse.
- The reverse rotation of the separation roller allows the lower sheet of paper in contact with the separation roller to be returned back into the tray. This properly separates the sheets of paper.



[1]	Feed roller	[2]	Separation roller
[3]	Reverse rotation	[4]	Forward rotation
[5]	Pick-up roller	[6]	Paper

11.3.3 Horizontal transport control (tray 3)

- Paper that is fed from tray 3 is transported to the device by the horizontal transport section.
- The transfer motor and the horizontal transport clutch control the horizontal transport operation.



[1]	Horizontal transport clutch (CL3)	[2]	Horizontal transport sensor (PS29)
[3]	LCC vertical transport roller	[4]	LCC vertical transport sensor (PS28)
[5]	Horizontal transport roller 2	[6]	Horizontal transport roller 1

(1) Horizontal transport operation

- The LCC transport motor is energized after the lapse of a predetermined period of time after the print start signal.
- The horizontal transport clutch is energized after the lapse of a predetermined period of time after the LCC transport motor has been energized.
- When the horizontal transport clutch is energized, the driving force of the LCC transport motor is transmitted to horizontal transport roller 1 and horizontal transport roller 2. The horizontal transport rollers 1 and 2 rotate to transport the paper onto the LCC vertical transport roller.
- The horizontal transport sensor located downstream of the horizontal transport roller 1 along the paper path detects the leading edge of the paper fed off from the tray 3 transport roller.
- The LCC vertical transport sensor located downstream of the horizontal transport roller 2 along the paper path detects the leading edge of the paper fed off from horizontal transport roller 2.
- The horizontal transport clutch is deenergized after the lapse of a predetermined period of time after the LCC vertical transport sensor has detected the leading edge of the paper.
- If the horizontal transport sensor is unable to detect the leading edge of the paper even after the lapse of a predetermined period of time, the machine determines that a paper misfeed occurs at the horizontal transport section.
- If the LCC vertical transport sensor is unable to detect the leading edge of the paper even after the lapse of a predetermined period of time, the machine determines that a paper misfeed occurs at the tray 3 or tray 4 intermediate transport roller section.

11.3.4 Paper feed retry control

- A paper misfeed is detected when the sensor cannot detect the paper at the paper feed port after a predetermined amount of time has elapsed from the start of paper feeding.
- The feed roller stops when a paper misfeeding is detected. Afterwards, the paper feed operation starts again.
- A paper jam in the paper feed section is detected when the corresponding sensor does not detect paper after the paper feed operation starts again.
- The paper feed retry is performed only once.

Paper port	Paper feed retry control	Corresponding sensor name
Tray 3	Execute	Tray 3 paper feed sensor
Tray 4	Execute	Tray 4 paper feed sensor

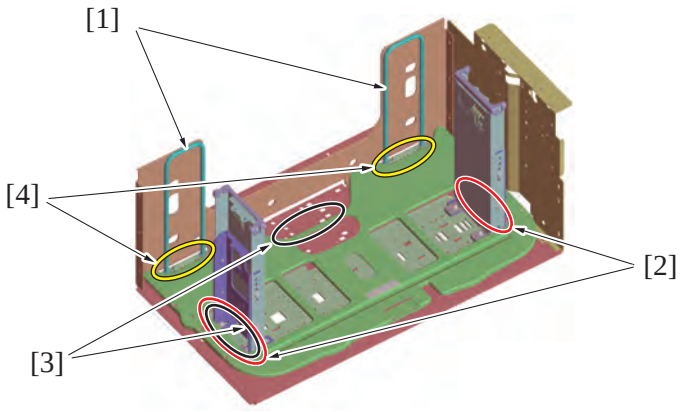
11.3.5 Paper feed temporary stop control

- If the spacing with the preceding sheet of paper that is fed from the tray 3 is small, the tray 3 transport clutch is temporarily de-energized. So that, an adequate spacing between the two sheets of paper can be achieved.
- If the preceding sheet of paper is exists, when the current one reaches the LCC vertical transport roller, the LCC vertical transport motor is temporarily deenergized to achieve an adequate spacing between the two sheets of paper.

11.3.6 Paper size detection control

(1) Paper guide position regulation

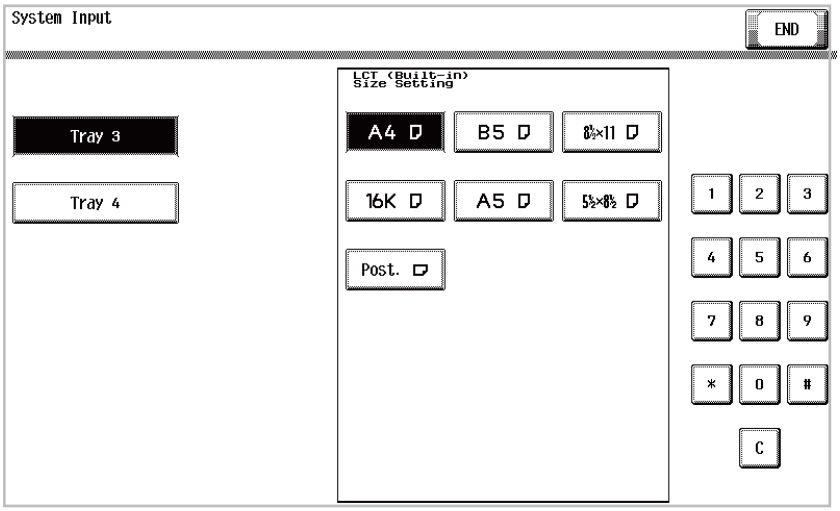
- The paper length guides and front and rear paper width guides regulate the position at which paper is loaded
- The paper is loaded (center alignment), and the guides are secured with screws.
- To change the paper size, change the position of the guides in accordance with the size of the paper.
- To load A4-size paper in the tray, move the paper length guides to paper regulation position 1.
- To load paper smaller than the A4 size in the tray, move the paper length guides to paper regulation position 2.
- To load Letter-size paper in the tray, move the paper length guides to paper regulation position 3.



[1]	Paper length guide	[2]	Paper regulation position 3
[3]	Paper regulation position 2	[4]	Paper regulation position 1

(2) Paper Size Settings

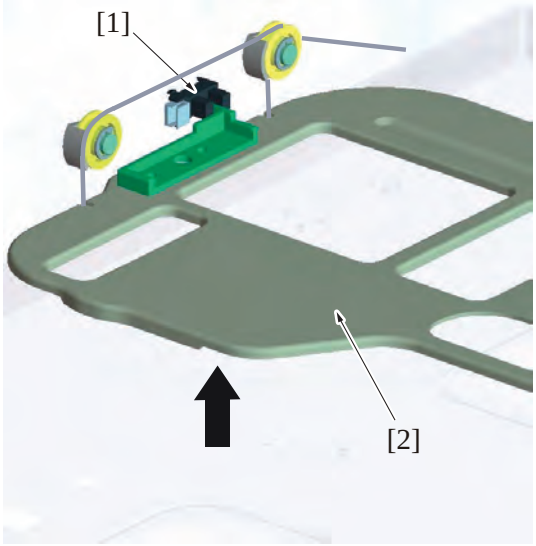
- Trays 3 and 4 do not have the functionality to detect paper sizes.
- To change the paper size, specify the paper size from [Service Mode] -> [System 2] -> [LCT (Built-in) Size Settings].



11.3.7 Remaining paper detection control

(1) Paper near-empty detection

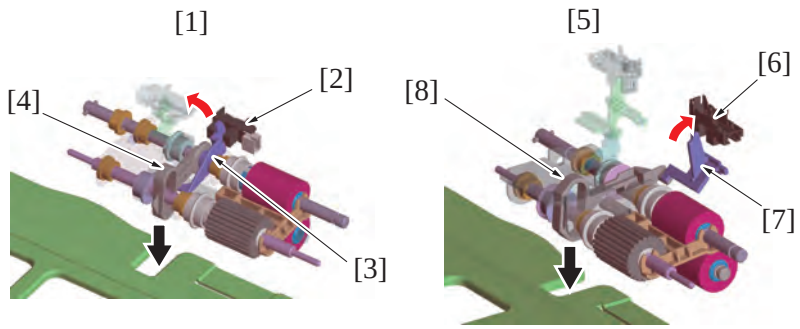
- The tray 3 or tray 4 near empty sensor detects a paper near-empty condition of the tray.
- As the amount of paper becomes small during printing, the paper lift-up plate is raised.
- As the paper lift-up plate is raised, the position of the near empty detection actuator provided at the paper lift-up plate is raised.
- When the near empty detection actuator is raised to a position at which it blocks the tray 3 or tray 4 near empty sensor, the machine detects a near-empty condition.



[1]	Tray 3 near empty sensor (PS20) Tray 4 near empty sensor (PS25)	[2]	Paper lift-up plate

(2) Paper empty detection

- The paper empty sensor detects a paper empty condition of the tray.
- Once all paper in the tray has been fed, the actuator falls and activates the empty detection actuator.
- The empty detection actuator changes the state of the empty sensor.
- Tray 3 empty states are detected when the tray 3 paper empty sensor is unblocked.
- Tray 4 empty states are detected when the tray 4 paper empty sensor is blocked.



[1]	Tray 3	[2]	Tray 3 paper empty sensor (PS19)

[3]	Empty detection actuator	[4]	Actuator
[5]	Tray 4	[6]	Tray 4 paper empty sensor (PS24)
[7]	Empty detection actuator	[8]	Actuator

(3) Remaining paper level detection

- Paper supply level is detected by calculation of the paper remaining level based on the time when the tray is lifted.
- Plain paper is used as the reference of the calculation for the paper supply level. When the thick paper is set, off set value is used to calculate the paper supply level.
  Ex: When thick paper 2 is set, paper supply level is calculated as a half of the plain paper level.
- Lifting time is measured when the power is turned ON, low power mode is released and a tray is inserted.

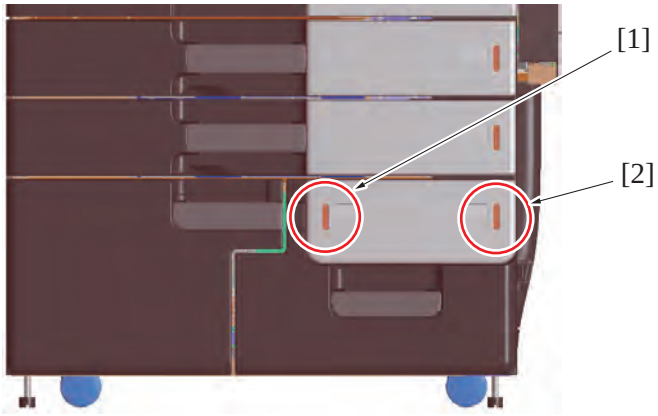
Reference value: Plain paper	Paper full	Paper near full	Paper present
Paper supply level	100 to 66 %	65 to 33 %	33% to 51 sheets remaining
Tray 3 paper supply level	1500 to 1000 sheets	999 to 501 sheets	500 to 51 sheets
Tray 4 paper supply level	1000 to 666 sheets	665 to 334 sheets	333 to 51 sheets

(4) Remaining paper level display

- The amount of remaining paper is indicated by the LED on the right side of each tray and by the screen of the control panel.
- The following table shows display statuses.

Tray status	Empty	Near empty	Other statuses (Including during lift-up and no tray conditions)
LED	ON	OFF (default)/Blinking *1	OFF

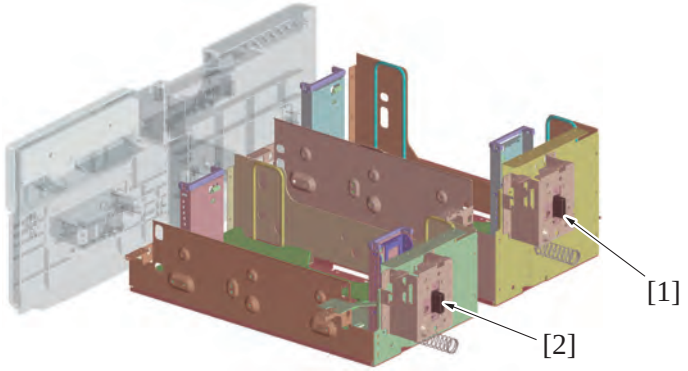
- *1: The LED flashes when Paper Remainder is specified to "Type 1", which is found under [Service Mode] -> [System 1] -> [Machine State LED Setting] -> [Paper Remainder].



[1]	Tray 3 paper empty indicator board (PEIB/3)	[2]	Tray 4 paper empty indicator board (PEIB/4)

11.3.8 Detection of tray 3 or tray 4 slid out/in

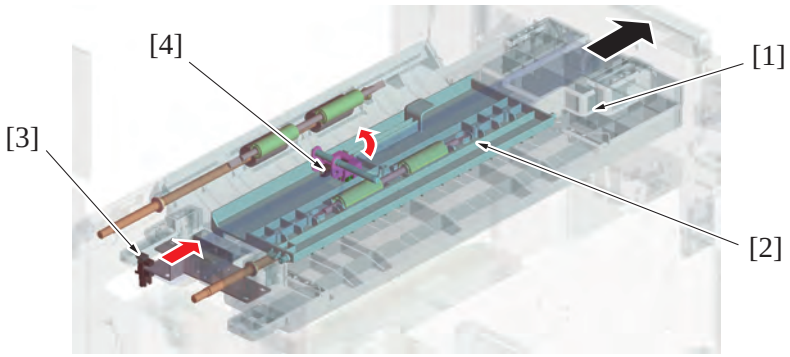
- The connection state of the drawer connection located in the rear of the tray determines whether the tray 3 or tray 4 is slid out or in.
- When the tray 3 or tray 4 is slid in, the tray 3 or tray 4 drawer connector is connected and the machine determines that the tray 3 or tray 4 is slid in position.
- When the tray 3 or tray 4 is slid out, the tray 3 or tray 4 drawer connector is disconnected and the machine determines that the tray 3 or tray 4 is slid out.



[1]	Tray 3 drawer connector	[2]	Tray 4 drawer connector

11.3.9 Open/close detections of the horizontal transport unit

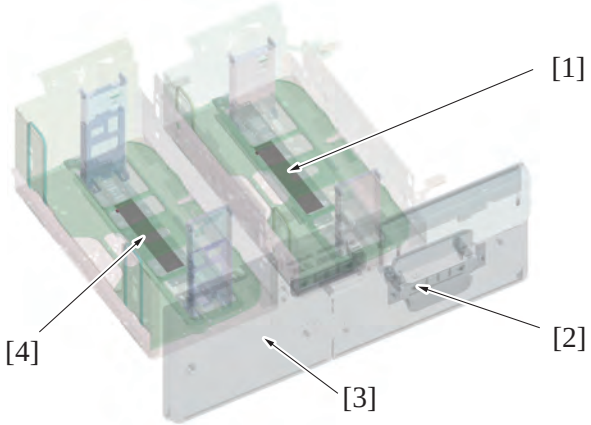
- The horizontal transport unit can be pulled out when tray 4 is pulled out.
- The horizontal transport set sensor detects open and close states of the horizontal transport unit.
- When the horizontal transport unit is pulled out, the horizontal transport guide can be opened to remove paper jam in the horizontal transport section.
- When the horizontal transport unit is pulled out, the horizontal transport sensor retracts upward and remains in the machine.
- When the horizontal transport unit is closed, the open and close detection blocking plate blocks the horizontal transport set sensor. The horizontal transport set sensor then detects that the horizontal transport unit is closed.



[1]	Horizontal transport unit	[2]	Horizontal transport guide
[3]	Horizontal transport set sensor (PS58)	[4]	Horizontal transport sensor (PS29)

11.3.10 Dehumidification heater control

- This machine is equipped with a standard dehumidification heater.
- This heater prevents paper in tray 3 and tray 4 from absorbing the moisture.



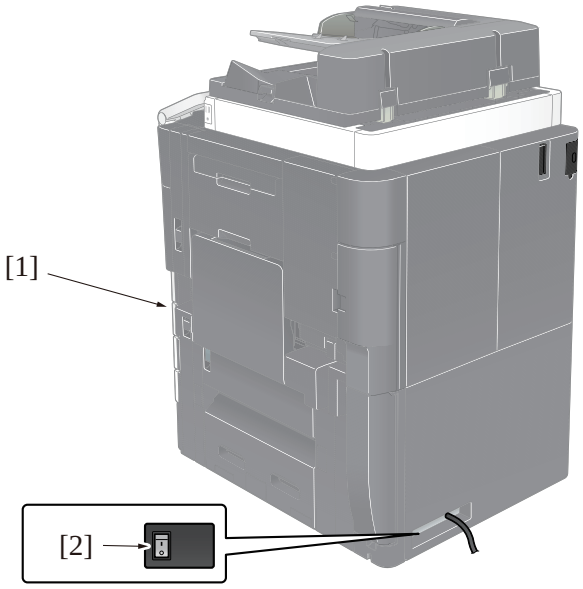
[1]	Tray 4 dehumidifier heater (DH2)	[2]	Tray 4
[3]	Tray 3	[4]	Tray 3 dehumidifier heater (DH1)

(1) Function

- The dehumidification heater generates heat when it is energized, which prevents the paper in the tray from absorbing the damp.
- It prevents paper curling, paper misfeeding, paper jams, and abnormal images that occur when paper absorbs the moisture.

(2) Control

- When the dehumidification heater switch that is installed at the rear of the main body is turned on, the dehumidification control is enabled.
- Turn off the dehumidifier heater switch to stop the humidity control.



[1]	Main body	[2]	Dehumidification heater switch (SW2)

(a) Operation timing

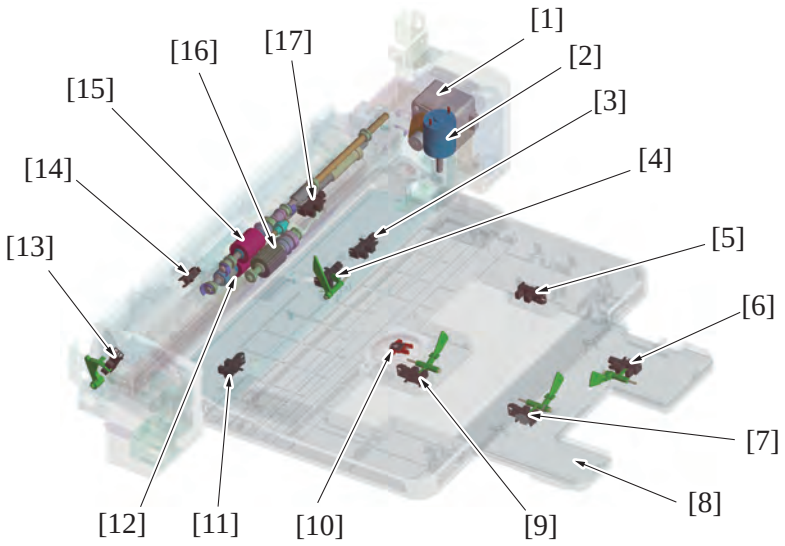
- If the main body is stopped*, the dehumidification heater is energized and generates heat.
- When the main body starts normally, it stops energizing the dehumidification heater.

NOTE

- ***: When the covers are opened, a problem or paper jam occurs, or in power-saving mode.**

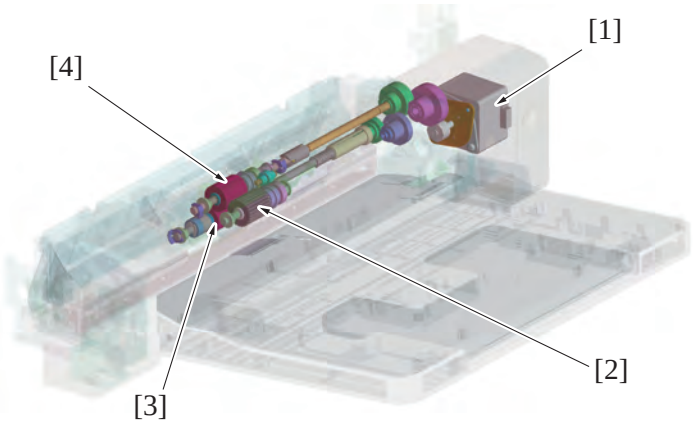
12. PAPER FEED SECTION (MANUAL BYPASS TRAY)

12.1 Configuration

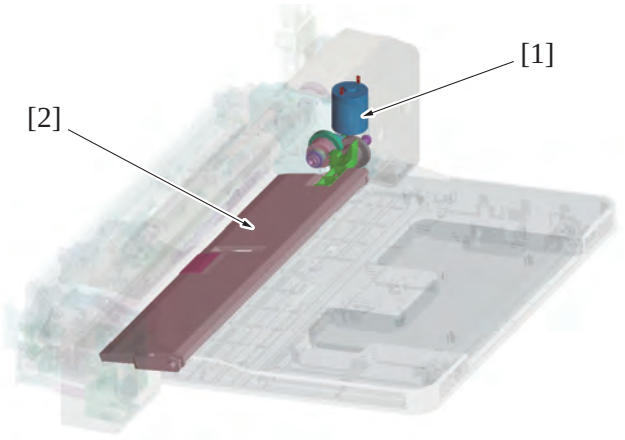


[1]	Bypass paper feed motor (M27)	[2]	Bypass lift-up motor (M26)
[3]	Bypass lower limit sensor (PS36)	[4]	Bypass empty sensor (PS34)
[5]	Bypass sub tray set sensor (PS37)	[6]	Bypass FD size sensor/3 (PS33)
[7]	Bypass FD size sensor/2 (PS32)	[8]	Manual bypass sub tray
[9]	Bypass FD size sensor/1 (PS31)	[10]	Bypass paper CD size VR (VR1)
[11]	Bypass open sensor (PS60)	[12]	Manual bypass tray separation roller
[13]	Bypass set sensor (PS30)	[14]	Bypass paper feed sensor (PS45)
[15]	Manual bypass tray feed roller	[16]	Manual bypass pick-up roller
[17]	Bypass upper limit sensor (PS35)	-	-

12.2 Drive



[1]	Bypass paper feed motor (M27)	[2]	Manual bypass tray pick-up roller
[3]	Manual bypass tray separation roller	[4]	Manual bypass tray feed roller

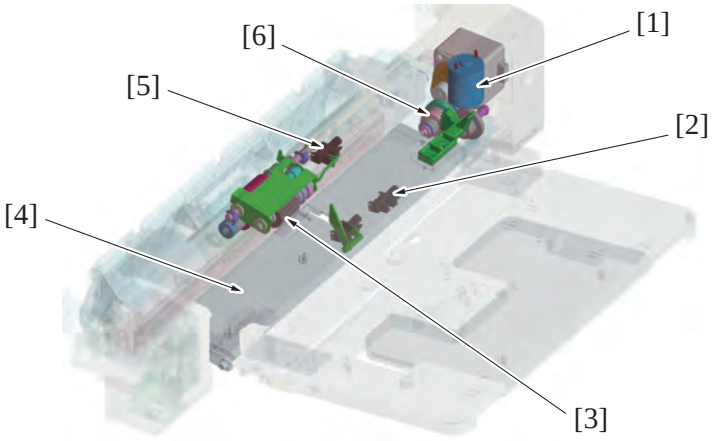


[1]	Bypass lift-up motor (M26)	[2]	Paper lift-up plate

12.3 Operation

12.3.1 Up and down control

- Forward and reverse rotations of the bypass lift-up motor control the up and down operation of the paper lift-up plate.



[1]	Bypass lift-up motor (M26)	[2]	Bypass lower limit sensor (PS36)
[3]	Manual bypass pick-up roller	[4]	Paper lift-up plate
[5]	Bypass upper limit sensor (PS35)	[6]	Lift gear

(1) Move to paper feed position (up)

(a) Up operation

- Forward rotation of the bypass lift-up motor drives the lift gear, which raises the paper lift-up plate.
- When the bypass upper limit sensor turns on, the bypass lift-up motor stops, and the paper lift-up plate stops at the paper feed position.

(b) Up operation timing

- At the start of a manual bypass paper feed sequence, the paper lift-up plate is raised to the paper feed position.
- When paper amount decreased during a paper feed operation, the pick-up roller gradually lowers the bypass upper limit sensor turns off. The bypass lift-up motor is rotated forward to raise the paper lift-up plate.
- When the bypass upper limit sensor turns on, the bypass lift-up motor stops, and the paper lift-up plate stops at the paper feed position.
- This operation keeps the pressure (paper feed pressure) between the pick-up roller and the paper stack constant regardless of the amount of remaining paper.

(2) Move to standby position (down)

(a) Down operation

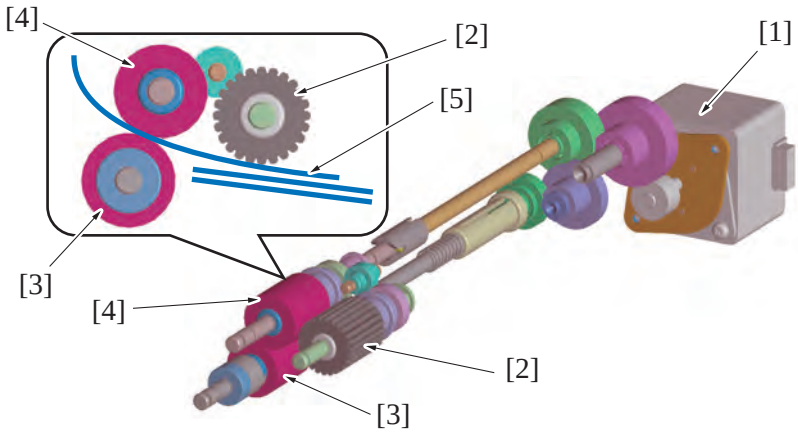
- Reverse rotation of the bypass lift-up motor drives the lift gear, which lowers the paper lift-up plate.
- When the bypass lower limit sensor turns on, the bypass lift-up motor stops, and the paper lift-up plate stops at the standby position.

(b) Down operation timing

- The paper lift-up plate goes down when no print instructions are received from the manual bypass tray or when the last sheet of paper from the manual bypass tray turns off the exit sensor.
- The paper lift-up plate is lowered if the above conditions are met even during execution of another job.
- If a bypass paper empty condition is detected at the paper feed position, the paper lift-up plate is moved to the standby position.
- If a paper jam occurs, the paper lift-up plate stops at the paper feed position and moves to the standby position after the jam is cleared.

12.3.2 Paper feed control

- Rotations of the pick-up roller and feed roller transport the paper that is loaded in the manual bypass tray into the machine.
- Reverse rotation of the separation roller prevents two or more sheets of paper from being transported from the manual bypass tray.
- The bypass paper feed motor controls the manual bypass tray paper feed operation.



[1]	Bypass paper feed motor (M27)	[2]	Manual bypass tray pick-up roller
[3]	Manual bypass tray separation roller	[4]	Manual bypass tray feed roller
[5]	Paper	-	-

(1) Pick-up control

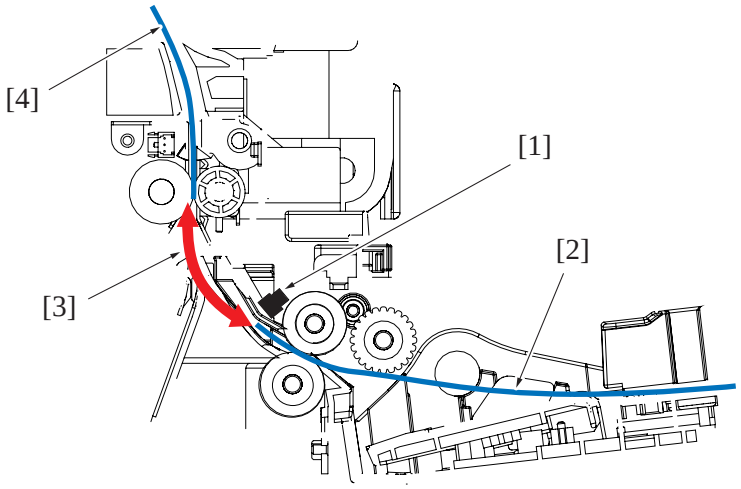
- The bypass lift-up motor is energized by the print start signal to raise the paper to the paper feed position.
- The bypass paper feed motor is energized after the paper has been raised to the paper feed position.
- As the bypass paper feed motor is energized, the driving force of the bypass paper feed motor is transmitted to the pick-up roller and the feed roller.
- As a result, the pick-up roller picks up a sheet of paper and transports it onto the feed roller.
- The feed roller transports the paper onto the tray 1 vertical transport roller.
- The bypass paper feed motor is deenergized when the leading edge of the paper fed from the manual bypass tray activates the tray 1 vertical transport sensor.
- The bypass lift-up motor is energized to lower the paper down to the standby position.

(2) Separation control

- The separation roller is pressed up against the feed roller by the pressure of a spring and an acting pressure generated from torque of the torque limiter.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If there are two or more sheets of paper between the separation roller and feed roller, the limit torque is greater than the friction force of the paper, so that the separation roller rotates in reverse.
- The reverse rotation of the separation roller allows the lower sheet of paper in contact with the separation roller to be returned back into the tray. This properly separates the sheets of paper.

12.3.3 Feed roller speed reduction control

- The time from the start of paper feeding to the bypass paper feed sensor turning on is measured. If the time is shorter than a predetermined amount of time, the speed of the manual bypass tray feed roller will be reduced.
- Reduce the manual bypass tray feed roller speed for a predetermined amount of time. So that, the transport variance can be corrected and the appropriate intervals between sheets of paper can be ensured.



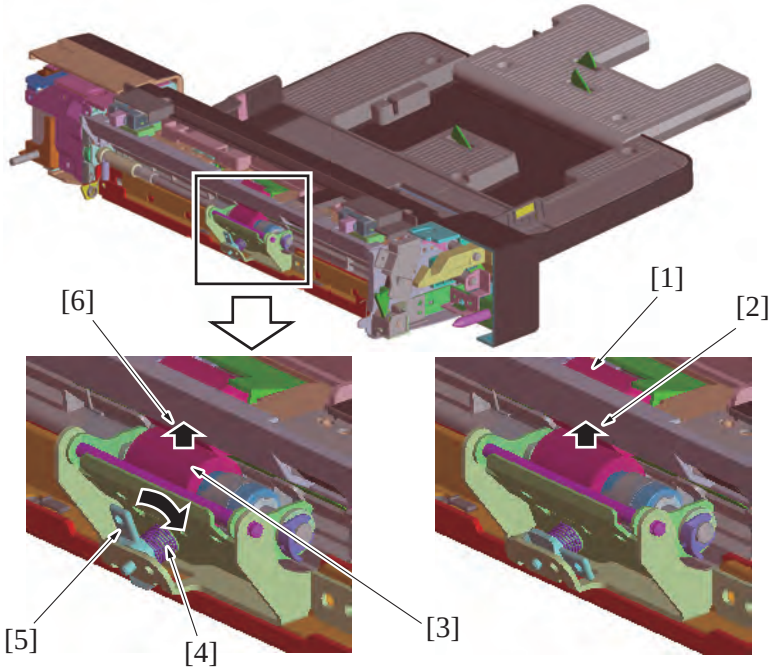
[1]	Bypass paper feed sensor (PS45)	[2]	Sheet of paper being controlled
[3]	Paper intervals	[4]	Preceding sheet

12.3.4 Separation roller pressure changing mechanism

- Turning the separating pressure changing lever 90 degrees clockwise increases the tension of the spring under the paper separation roller, so that the pressure between the paper separation roller and the feed roller is increased.
- This procedure is to be performed during a service procedure to be performed when a paper misfeed occurs with a specific type of thick paper (300 g/m^2 (79 13/16 lb) paper).

NOTE

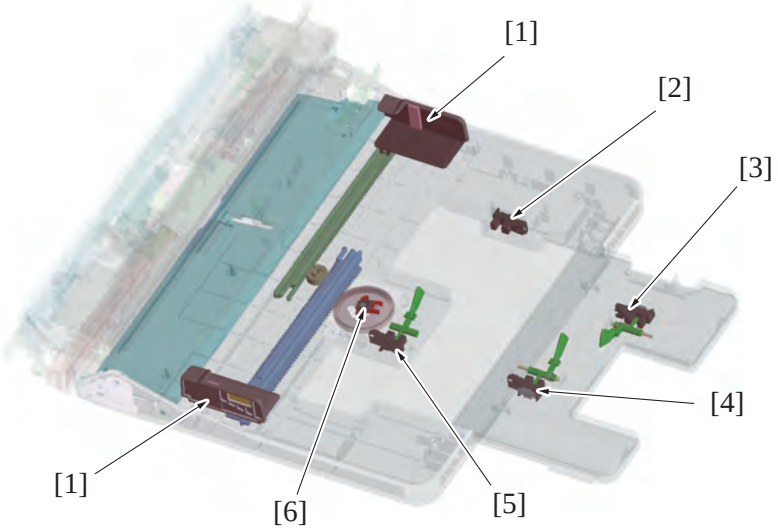
- **Sufficient care should be used before the pressure is to be changed. Double feed or misfeed could result, if thin paper is used with the lever turned 90 degrees clockwise.**



[1]	Manual bypass tray feed roller	[2]	Separating pressure (strong)
[3]	Manual bypass tray separation roller	[4]	Spring
[5]	Separating pressure changing lever	[6]	Separating pressure (normal)

12.3.5 Paper size detection control

- The bypass paper CD size VR detects the size in paper width direction.
- Three bypass FD size sensors detect the size in paper feeding direction.
- The size of paper that is loaded in the manual bypass tray is determined depending on the combination of the detected paper width and paper length.



[1]	Paper width guide	[2]	Bypass sub tray set sensor (PS37)
[3]	Bypass FD size sensor/3 (PS33)	[4]	Bypass FD size sensor/2 (PS32)

[5] Bypass FD size sensor/1 (PS31)	[6] Bypass paper CD size VR (VR1)

(1) Paper width direction

- Rotation of the gear provided for the paper width guide and the detection gear mounted on the rotary shaft of the bypass paper CD size VR results in the resistance of the bypass paper CD size VR being varied.
- The paper width is detected based on the value that is acquired with the rotation of the bypass paper CD size VR.

(2) Paper feeding direction

- The paper length is detected based on the combination of activated or deactivated state of photosensor type bypass FD size sensors 1 to 3.

(3) Paper size determination

Japan and European models

Bypass FD size sensor/1	Bypass FD size sensor/2	Bypass FD size sensor/3	Bypass paper CD size VR Width (mm)	Paper size detected
OFF	OFF	OFF	80 to less than 115	A6S
			115 to 144 inclusive	B6S
			196 to 225 inclusive	A5
			242 to 268 inclusive	B5
ON	OFF	OFF	133 to 164 inclusive	A5S
			169 to less than 196	B5S
			196 to 225 inclusive	A4S
			255 to less than 288	11×8 1/2, A4 (*1)
			288 to 330 inclusive	A4
ON	ON	OFF	188 to 235 inclusive	FLS (*2)
ON	ON	ON	201 to 231 inclusive	8 1/2×14, A4S (*1)
			242 to less than 268	B4
			268 to less than 288	11×17, A3 (*1)
			288 to less than 301	A3
			301 to less than 312	12×18
			312 to 340 inclusive	SRA3

- *1: The size in inches is detected when the change bypass size standard option is turned on. This AB size is detected when the bypass manual size standard option is turned off. Refer to I.7.3.9 Engine FW DipSW for more information on the change bypass size standard option.
- *2: One of the following paper sizes can be selected to configure FLS. 220×330 mm, 8×13, 8 1/8×13 1/4, 8 1/4×13, 8 1/2×13

For North America models

Bypass FD size sensor/1	Bypass FD size sensor/2	Bypass FD size sensor/3	Bypass paper CD size VR Width (mm)	Paper size detected
OFF	OFF	OFF	80 to less than 115	5 1/2×8 1/2S, A6S (*1)
			115 to 144 inclusive	5 1/2×8 1/2S, B6S (*1)
			201 to 231 inclusive	5 1/2×8 1/2
			242 to 282 inclusive	7 1/4×10 1/2
ON	OFF	OFF	125 to 155 inclusive	5 1/2×8 1/2S
			169 to less than 201	7 1/4×10 1/2S
			201 to 231 inclusive	11×8 1/2S
			255 to less than 288	11×8 1/2
			288 to 330 inclusive	11×8 1/2, A4 (*1)
ON	ON	OFF	188 to 235 inclusive	FLS (*2)
ON	ON	ON	201 to 231 inclusive	8 1/2×14
			242 to less than 268	8 1/2×14, B4S (*1)
			268 to less than 288	11×17
			288 to less than 301	11×17, A3 (*1)
			301 to less than 312	12×18
			312 to 340 inclusive	SRA3

- *1: The AB size is detected when the change manual size bypass standard option is turned on. This size in inches is detected when the change bypass size standard option is turned off. Refer to I.7.3.9 Engine FW DipSW for more information on the change bypass size standard option.

- *2: One of the following paper sizes can be selected to configure FLS. 220×330 mm, 8×13, 8 1/8×13 1/4, 8 1/4×13, 8 1/2×13

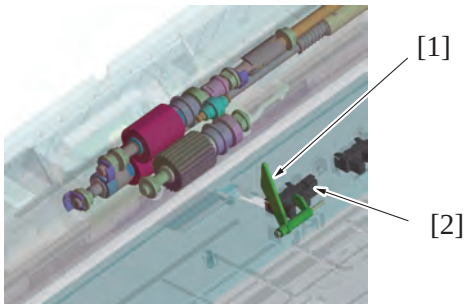
12.3.6 Remaining paper detection control

(1) Paper near-empty control

- The manual bypass tray is not mounted with any near-empty detection mechanism.

(2) Paper empty control

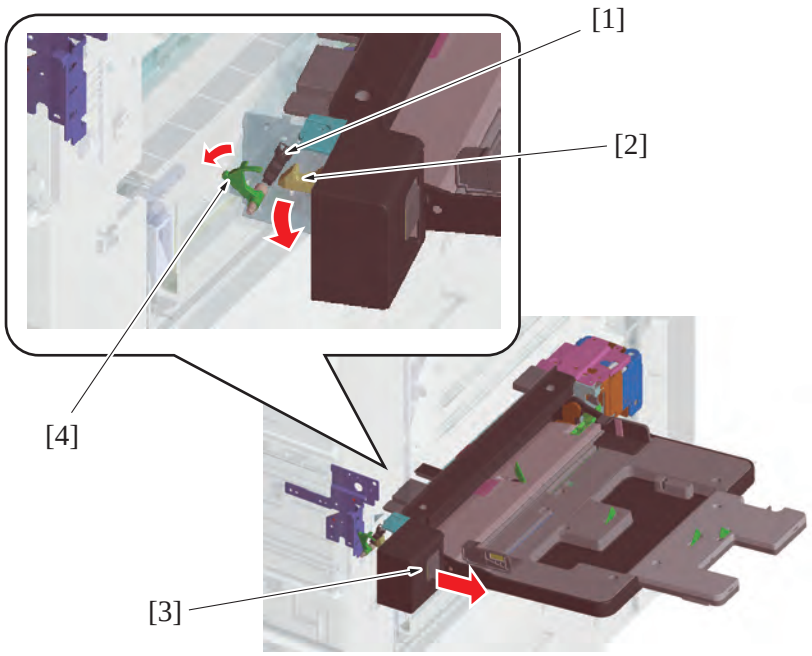
- The bypass paper empty sensor detects a paper empty condition in the manual bypass tray.
- When paper on the tray runs out and the paper empty detection actuator is raised to a position at which it unblocks the bypass empty sensor, the machine detects a paper empty condition in the manual bypass tray.
- Paper empty is detected both at the standby and the paper feed positions.



[1]	Actuator	[2]	Bypass empty sensor (PS34)

12.3.7 Open and close detection of the manual bypass unit

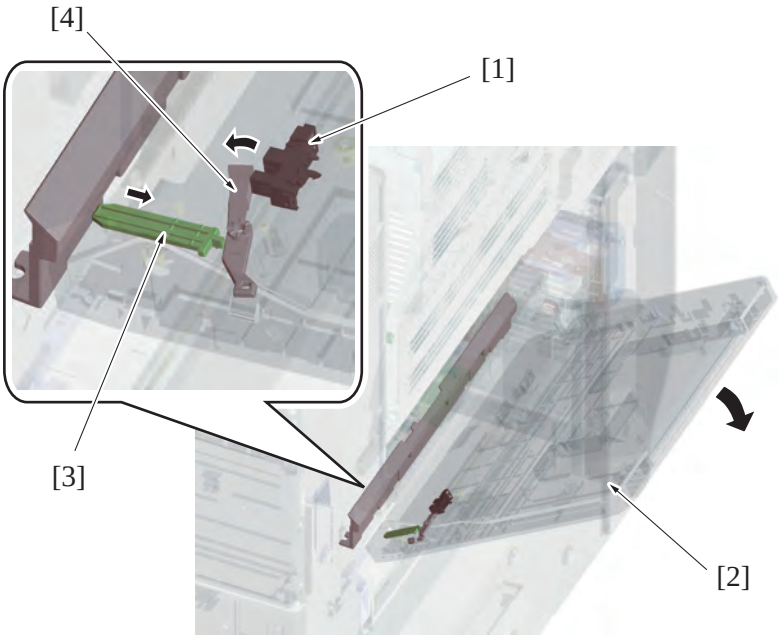
- The manual bypass unit is equipped with an open and close mechanism so the tray 1 paper feed section can be easily accessed when a paper jam occurs.
- The bypass set sensor detects the open and close state of the manual bypass unit.
- When the manual bypass unit release lever is pulled to open the manual bypass unit, the open and close detection actuator that is installed in the manual bypass unit operates.
- The open and close detection actuator detects that the manual bypass unit has been opened when the actuator moves to the position the bypass set sensor is unblocked.



[1]	Bypass set sensor (PS30)	[2]	Lock claw
[3]	Release lever	[4]	Open and close detection actuator

12.3.8 Manual bypass tray open and close detection mechanism

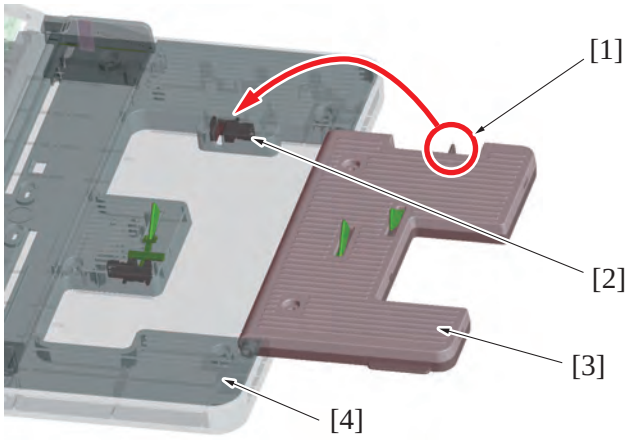
- The bypass open sensor detects the open and close states of the manual bypass tray.
- Open the manual bypass tray, the lever will be pressed, and the actuator will be activated.
- An open manual bypass tray is detected when the actuator moves to a position at which the bypass open sensor is unblocked.



[1]	Bypass open sensor (PS60)	[2]	Manual bypass tray
[3]	Lever	[4]	Actuator

12.3.9 Manual sub bypass tray open and close detection

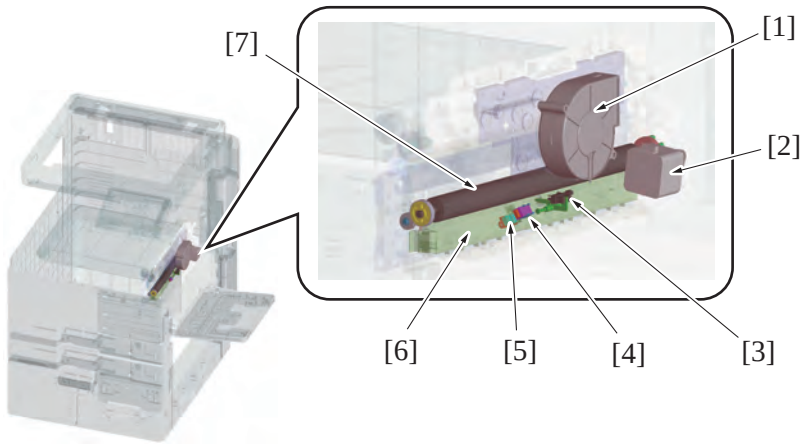
- The bypass sub tray set sensor is provided to prevent false detections by the bypass FD size sensors 2 and 3 when the manual bypass sub tray is closed.
- The bypass sub tray set sensor detects the open and close state of the manual bypass sub tray.
- Detection is that the manual bypass sub tray is closed when the actuator installed in the manual bypass sub tray is opened to the position which the bypass sub tray set sensor is unblocked.
- When the manual bypass sub tray is closed, the bypass FD size sensors 2 and 3 are in the off state.



[1]	Actuator	[2]	Bypass sub tray set sensor (PS37)
[3]	Manual bypass sub tray	[4]	Manual bypass main tray

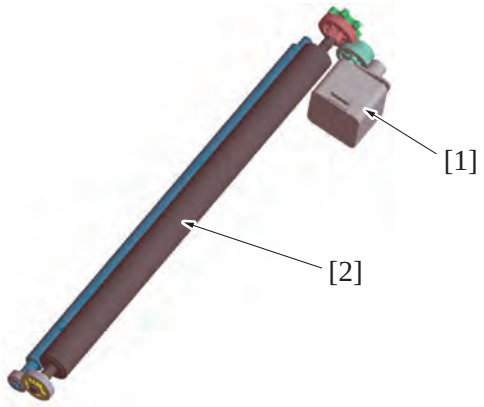
13. REGISTRATION SECTION

13.1 Configuration



[1]	Suction fan (FM1)	[2]	Registration motor (M2)
[3]	Registration sensor (PS38)	[4]	OHP sensor (PS40)
[5]	OHP sensor (PS40) (Reflection unit)	[6]	Paper dust remover
[7]	Registration roller	-	-

13.2 Drive



[1]	Registration motor (M2)	[2]	Registration roller

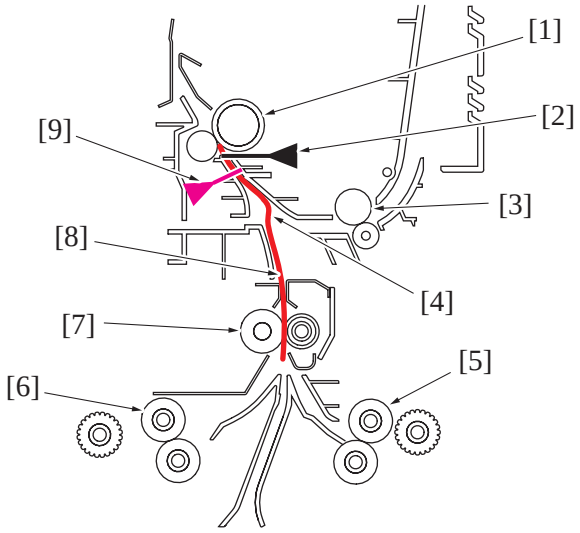
13.3 Operation

13.3.1 Registration control

- The registration motor is connected to the registration roller. When the registration motor is energized, therefore, the registration roller is rotated.
- The paper will create a loop between the tray 1 vertical transport roller (or ADU transport roller 4) and the registration roller when the paper is being conveyed in order to correct the skew.
- Registration roller is controlled in order to synchronize the timing the unit starts writing the image and conveying paper.
- The amount of the loop of the paper can be adjusted in the [Service Mode] -> [Machine] -> [Printer Reg. Loop Adj.]. Changing the adjustment value will change the amount of loop in the paper.

(1) Operation

1. The paper is transported while the registration roller is stationary.
2. The registration sensor detects the leading edge of the paper, which is interpreted to mean that the paper has reached the registration roller.
   NOTE
   - **Applicable for heavy stock, OHP film, envelope and postcard. For thin paper and plain paper, the OHP sensor detects when the front edge of the paper reaches the specified position.**
3. A paper loop is formed thus skew in the paper is corrected.
4. The registration roller rotates to transport the paper.

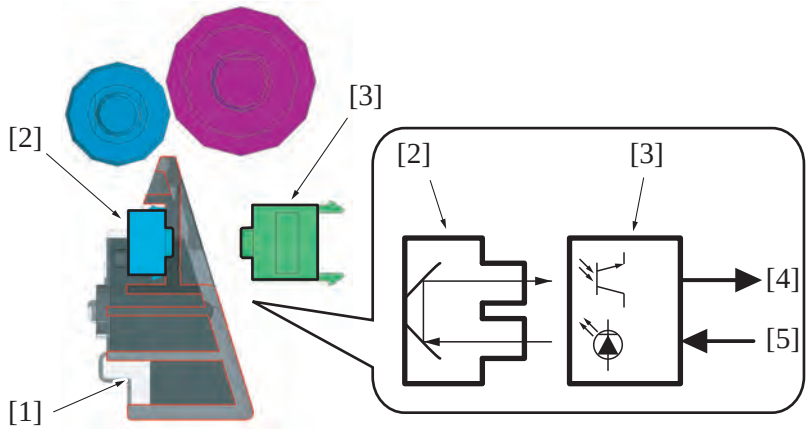


[1]	Registration roller	[2]	Registration sensor (PS38)
[3]	ADU transport roller 4	[4]	Loop formation
[5]	Manual bypass tray feed roller	[6]	Tray 1 feed roller
[7]	Tray 1 vertical transport roller	[8]	Paper
[9]	OHP sensor (PS40)	-	-

13.3.2 OHP film detection

- OHP sensor checks to prevent printing on the paper other than OHP film.
- OHP film detection will be performed after paper made the loop at the registration roller. When the OHP film detection shows the different result from the setting on the control panel, printing will stop to display “Error.”

Paper type set from control panel	Results of OHP sensor detection	Operation
OHP film	Other than OHP film	Stops printing promptly based on the detection of paper type inconsistency
Other than OHP film	OHP film	



[1]	Paper dust remover	[2]	OHP sensor (PS40) (Reflection unit)
[3]	OHP sensor (PS40)	[4]	Sensor output
[5]	LED remote	-	-

13.3.3 Paper dust removal mechanism

- The registration roller section is equipped with a paper dust remover to remove paper dust due to paper feeding to prevent images and machine being contaminated.
- The registration roller and paper dust remover are the parts that need to be cleaned periodically. It requires to clean and remove accumulated dust from the dust remover periodically or whenever a customer visit are made.
  - Refer to "F.6.10.1 Cleaning of the registration roller" and "F.6.9.1 Cleaning of the paper dust remover" for more information on the cleaning method.

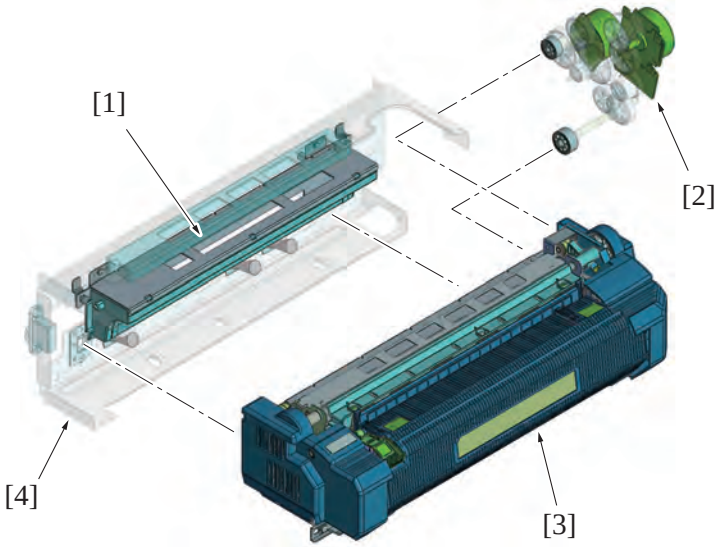
Paper dust remover

14. FUSING SECTION (bizhub 958/bizhub PRO 958)

14.1 Configuration

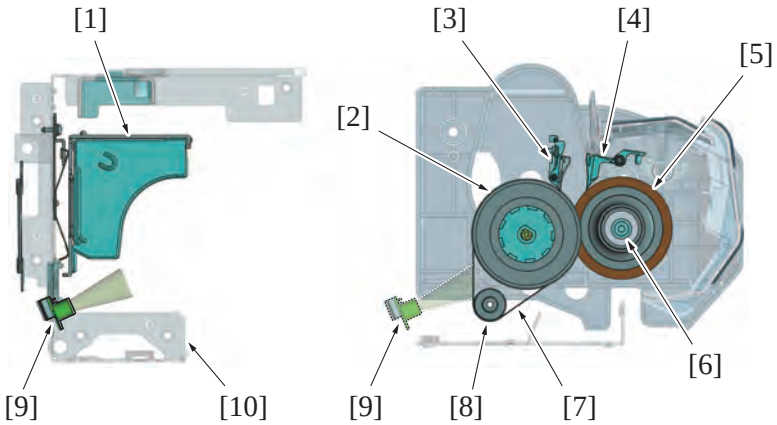
NOTE

- **Only the bizhub PRO 958/ bizhub 958 have a fusing section mechanism different from that on bizhub 808/758. The fusing unit mechanism on bizhub 808/758, see "O.15.1 Configuration" or "O.16.1 Configuration".**



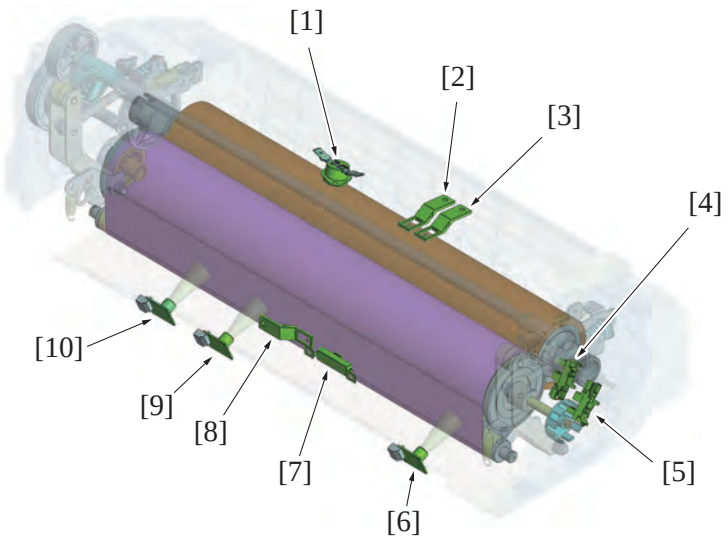
[1]	IH coil unit (IHC, Fixed at the main body frame side)	[2]	Fusing section drive unit
[3]	Fusing unit	[4]	Main body frame (Fusing unit frame)

14.1.1 Fusing section cross section view



[1]	IH coil unit (IHC, Fixed at the main body frame side)	[2]	Fusing roller
[3]	Fusing belt separation claw	[4]	Pressure roller separation claw
[5]	Pressure roller	[6]	Pressure roller heater (FH)
[7]	Fusing belt	[8]	Fusing belt tension roller
[9]	Fusing belt temperature sensor (Fixed at the main body frame side)	[10]	Main body frame (Fusing unit frame)

14.1.2 Sensor configuration of the fusing unit



[1]	Pressure roller thermostat (TS2)	[2]	Pressure roller thermistor/1 (TH2)
[3]	Pressure roller thermistor/2 (TH3)	[4]	Fusing pressure home sensor (PS59)
[5]	Fusing belt rotation sensor (PS56)	[6]	Fusing belt temperature sensor/3 (TEMS3) (Fixed at the main body frame side)
[7]	Fusing belt thermostat (TS1)	[8]	Fusing belt thermistor/1 (TH1)
[9]	Fusing belt temperature sensor/1 (TEMS1) (Fixed at the main body frame side)	[10]	Fusing belt temperature sensor/2 (TEMS2) (Fixed at the main body frame side)

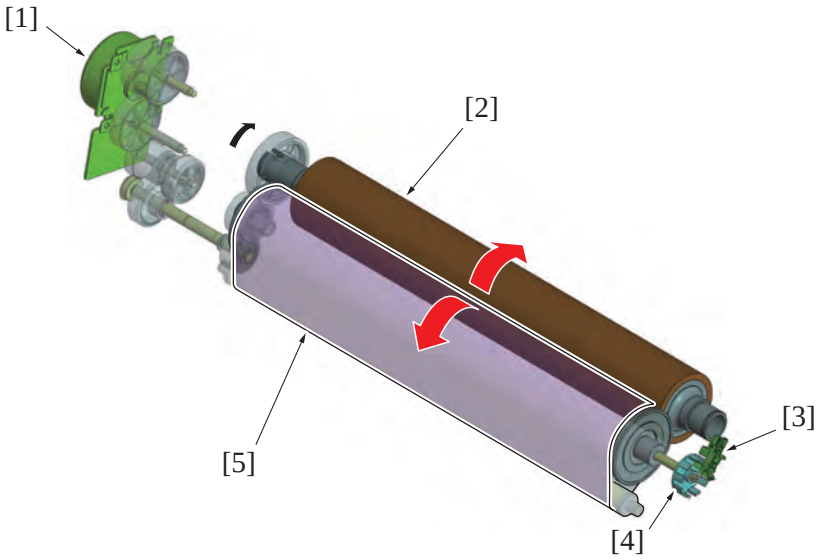
14.1.3 Fusing unit exterior view

14.2 Drive

- The fusing section drive mechanism includes a drive mechanism for the fusing roller and pressure roller and a pressure drive mechanism for the pressure roller.

14.2.1 Pressure roller and the fusing belt drive

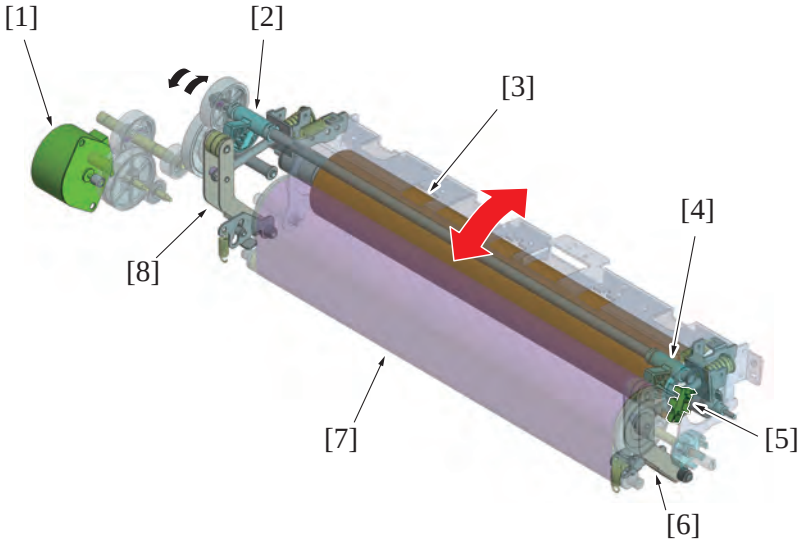
- The fusing motor drives the pressure roller via the drive gear.
- The fusing belt rotates via the pressure roller. (The fusing belt follows the pressure roller.)



[1]	Fusing motor (M30)	[2]	Pressure roller
[3]	Fusing belt rotation sensor (PS56)	[4]	Cylinder actuator
[5]	Fusing belt	-	-

14.2.2 Pressure drive of pressure roller

- The fusing pressure motor drives the pressure roller via the drive gear.
- The pressure cam is connected to the pressure lever. Rotation of the pressure cam changes the pressure roller force that is applied to the fusing belt.



[1]	Fusing pressure motor (M34)	[2]	Pressure cam (rear side)
[3]	Heating roller	[4]	Pressure cam (front side)
[5]	Fusing pressure home sensor (PS59)	[6]	Pressure lever (front side)
[7]	Fusing belt	[8]	Pressure lever (rear side)

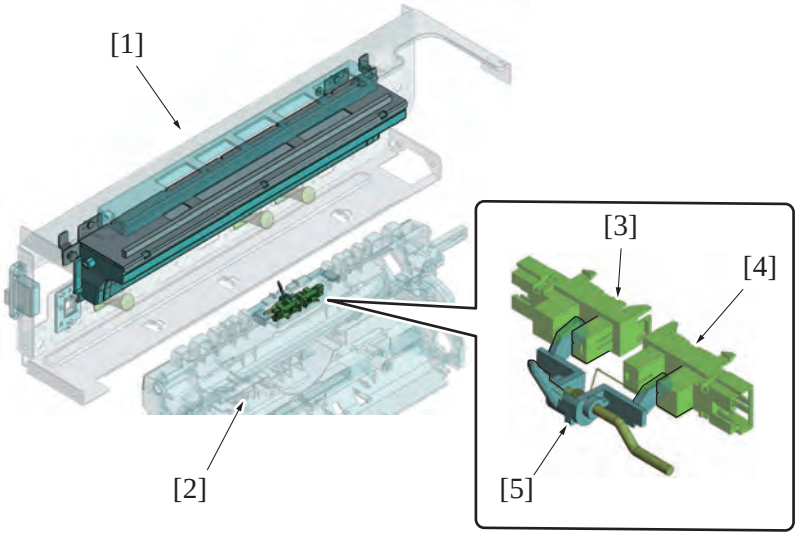
14.2.3 Rear side of the main body - Motor layout view (From fusing to paper exit/Around reverse section)

[1]	Exit motor (M4)	[2]	Fusing pressure motor (M34)
[3]	Transfer belt motor (M1)	[4]	PC motor/K (M18)
[5]	Fusing motor (M30)	[6]	Switchback motor (M33)

14.3 Operation

14.3.1 Adjustment of paper loop amount

- By creating a paper loop, the speed difference between the fusing and paper conveyance at 2nd transfer section will be adjusted. It prevents the double transferred image or brush effect.



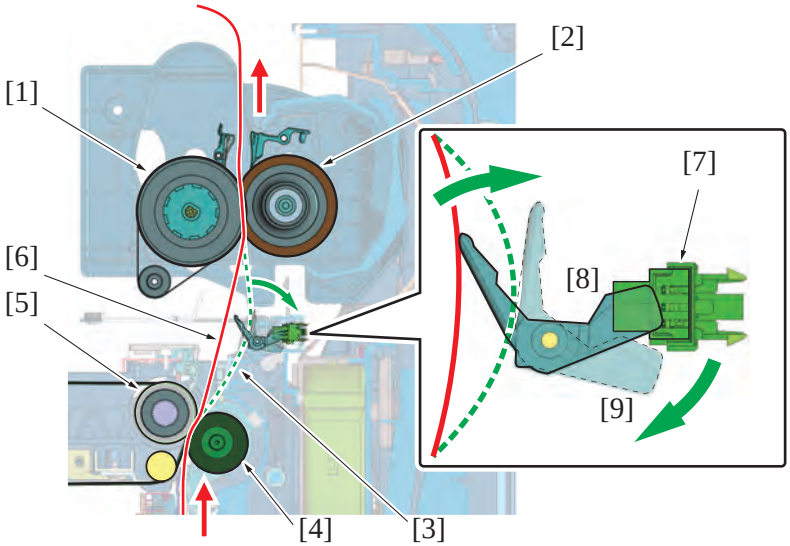
[1]	Fusing unit mounting section (Main body frame)	[2]	Second transfer section (Right door unit)
[3]	Fusing loop sensor/Fr (PS41)	[4]	Fusing loop sensor/Rr (PS42)
[5]	Fusing loop sensor actuator	-	-

NOTE

- **The configuration of fusing unit rollers and the shape of IH coils varies depending on the model. However, the paper loop amount control mechanism is the same. The illustration shows the bizhub 958 model.**

(1) Paper loop amount determination method

- The fusing loop sensor/Fr, /Rr turns ON in different timing according to the loop amount so that the loop amount can be detected in three stages.



[1]	Fusing roller	[2]	Pressure roller
[3]	Loop amount: large	[4]	Transfer roller
[5]	Transfer belt drive roller	[6]	Loop amount: small
[7]	Fusing loop sensor	[8]	Fusing loop sensor actuator (Loop amount: Large)
[9]	Fusing loop sensor actuator (Loop amount: Small)	-	-

NOTE

- **The configuration of fusing unit rollers and the shape of IH coils varies depending on the model. However, the paper loop amount control mechanism is the same. The illustration shows the bizhub 958 model.**

Fusing loop sensor /Fr (PS41)	Fusing loop sensor /Rr (PS42)	Loop amount	Fusing speed
Unblocking	Unblocking	large	Speed-up (High speed)
Unblocking	Blocking	average	Speed-up (Low speed)
Blocking	Blocking	small	Slowdown

(2) Operation timing

- It starts controlling when the front-edge of the paper reaches to the predetermined position before the fusing pressure roller.
- If the loop amount is “large” or “average”, the fusing speed is increased to reduce the paper loop amount to an appropriate value.
- If the loop amount is “small”, the fusing speed is decreased to increase the paper loop amount to an appropriate value.
- The control will finish when the tail-edge of the paper passes the predetermined position on the transfer roller unit.

14.3.2 PPM control

- PPM control, which allows for given paper transport intervals to reduce the number of printed pages produced per minute, is performed to prevent fusing failure, faulty image, or other related malfunctions from occurring due to decreased temperature at the center of the heating roller and pressure roller or increased temperature at edges of these rollers.

(1) Detail

- The PPM control can reduce productivity to about 40 to 90% against the ordinary 100%.
- The productivity for the PPM control is determined by the main scanning direction width of the printing paper or the temperatures * which is detected by the temperature sensor or thermistor.
  - *: Fusing belt temperature sensor/1 to 3, fusing belt thermistor/1

(a) High humidity PPM control

- When paper curling issues occur in high-humidity environments, the intervals to transport paper is lengthened to reduce curling. (Reference: [Service Mode] -> [Machine] -> [High Humidity PPM Adjustment])

(b) Thin paper PPM control

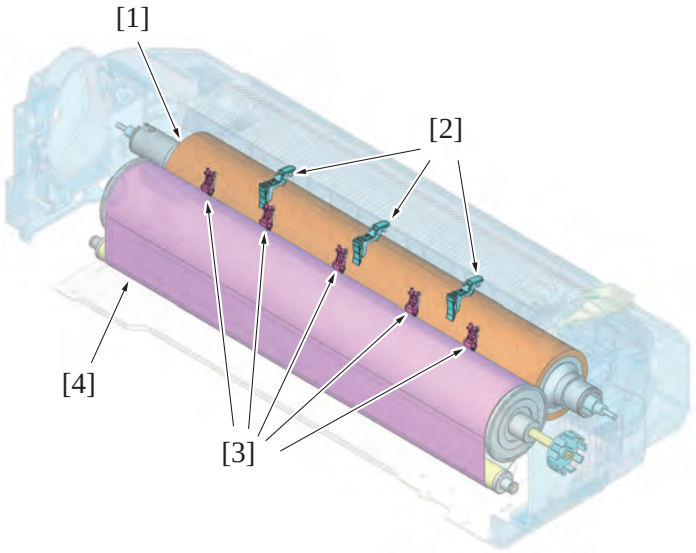
- To enhance productivity during printing on thin paper, “PPM Control” of the Service Mode can be used to change productivity to 100% (N int.). (Default: W int.) (Reference: [Service Mode] -> [Machine] -> [PPM Control Choice])

NOTE

- **If "N int." is selected, a decreased reliability of the paper transporting such as increasing a curled paper may occur.**

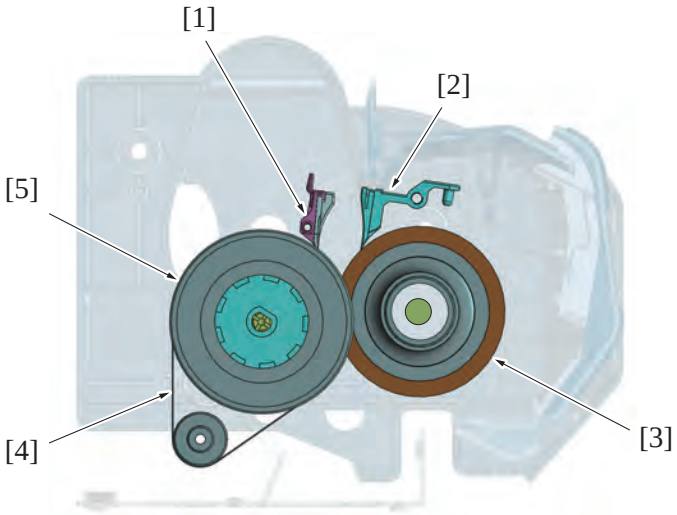
14.3.3 Paper separation mechanism

- The fusing belt and the pressure roller cause toner transferred onto the paper to be fused in the paper. Separation claws are disposed downstream in the paper feeding direction of each of the fusing belt and the pressure roller. The separation claws prevent the paper that has moved past each of the heating roller and the pressure roller from being wound around it.



[1]	Pressure roller	[2]	Pressure roller separation claw (3 pieces)
[3]	Fusing belt separation claw (5 pieces)	[4]	Fusing belt

(1) Fusing section cross section view



[1]	Fusing roller separation claw (5 pieces)	[2]	Pressure separation claw (3 pieces)
[3]	Pressure roller	[4]	Fusing belt
[5]	Fusing roller	-	-

(2) Separation claw

(a) Fusing belt separation claw

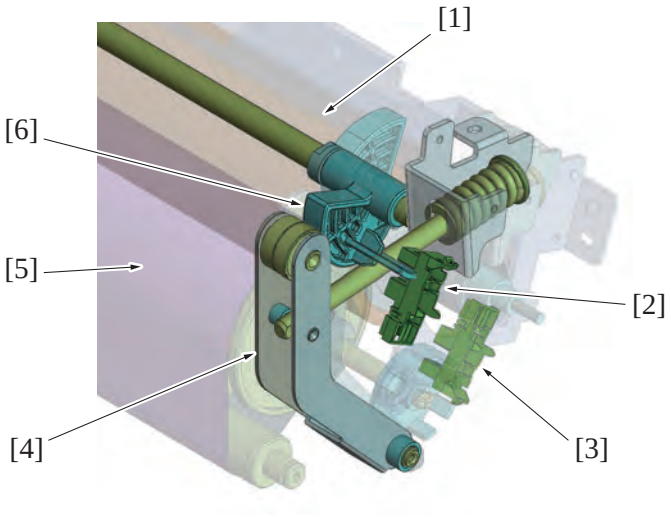
- The fusing belt is provided with five fixed separation claws. The separation claws are provided in positions away from the fusing belt in order to prevent toner from sticking to the leading ends of the separation claws.
- Separation claws are not equipped with a release mechanism.

(b) Pressure roller separation claw

- The pressure roller is provided with three fixed separation claws. The paper separation claws are arranged in positions that make contact with the pressure roller to ensure the paper separability.
- Separation claws are not equipped with a release mechanism.

14.3.4 Fusing pressure/retraction control

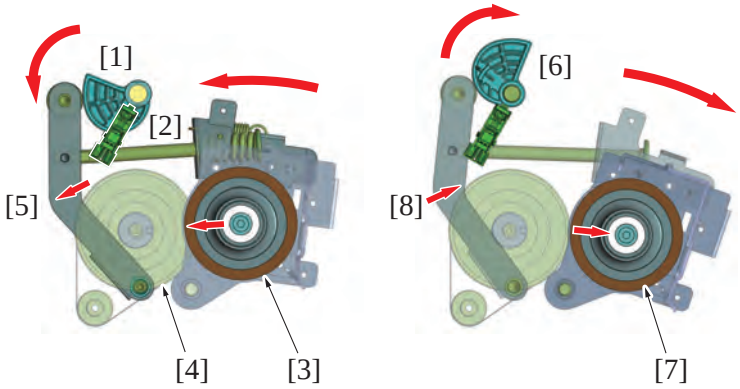
- To ensure prolonged durability of the heating roller assy, the fusing belt and pressure roller is retracted *1 from the fusing belt during any time other than printing. (The roller is, however, retracted *1 during printing using envelopes.)
  - *1: The pressure roller does not completely retract but is slightly pressed to the fusing belt.



[1]	Pressure roller	[2]	Fusing pressure home sensor (PS59)
[3]	Fusing belt rotation sensor (PS56)	[4]	Pressure lever (front side)
[5]	Fusing belt	[6]	Cam (Front side)

(1) Pressure/retraction mechanism

- The fusing pressure motor is turned forward or backward to press the pressure roller up against, and retract it from, the fusing belt. When the motor rotates, the cam will rotate to move the pressure roller.
- Pressed position of the pressure roller is detected by the fusing pressure home sensor. The pressure release position is controlled using the rotation number of the fusing pressure motor.
- When there is no change in output of the fusing pressure home sensor even if the given time has passed after the fusing pressure motor started its rotation, it is judged as abnormal spacing and Trouble code C3101: Fusing pressure roller separation failure" message appears.



[1]	Cam (pressure position)	[2]	Fusing pressure home sensor (PS59)
[3]	Pressure roller (pressure position)	[4]	Fusing belt
[5]	Pressure lever (pressure position)	[6]	Cam (retraction position)
[7]	Pressure roller (retraction position)	[8]	Pressure lever (retraction position)

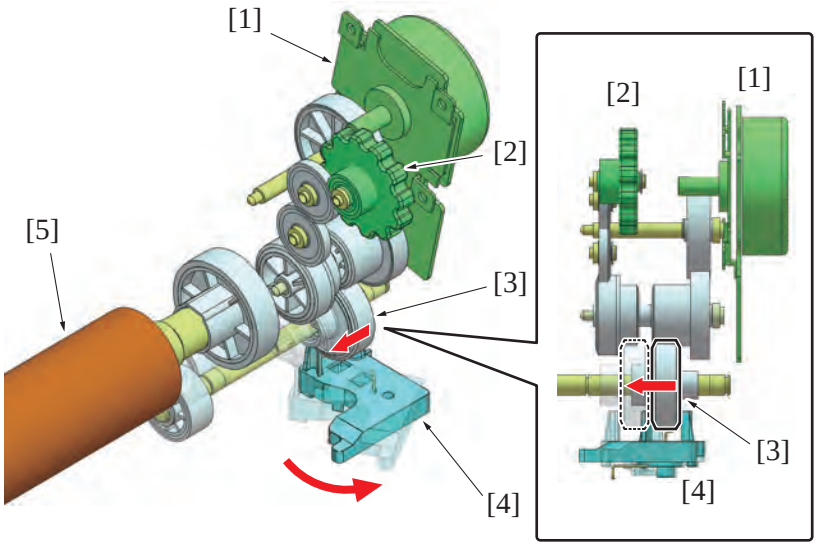
(2) Pressure/retraction timing

Conditions		Pressure/retraction operation
Warm-up	The pressure roller is retracted from the fusing belt until the fusing belt reaches the predetermined temperature.	Retraction
	The pressure roller is pressed against the fusing belt when the fusing belt reaches the predetermined temperature.	Pressure
Standby	Normal	Retraction
Printing	Paper type: • Thin paper (Paper temperature: High) • Thick paper 4 • Envelopes	Retraction

Conditions		Pressure/retraction operation
	Paper type: • Plain paper • Thin paper (Paper temperature: Low) • Thick paper 1 • Thick paper 2 • Thick paper 3 • Postcards • Index paper • OHP film	Pressure
Low power mode	-	Retraction
Sleep mode	-	Retraction

14.3.5 Fusing drive switch mechanism

- The fusing motor is rotated reversely when jams or other troubles occur. Open the right door to switch the pressure roller drive to the jam removal dial.



[1]	Fusing motor (M30)	[2]	JAM removal dial
[3]	Oscillation gear	[4]	Drive link lever
[5]	Pressure roller	-	-

(1) Description

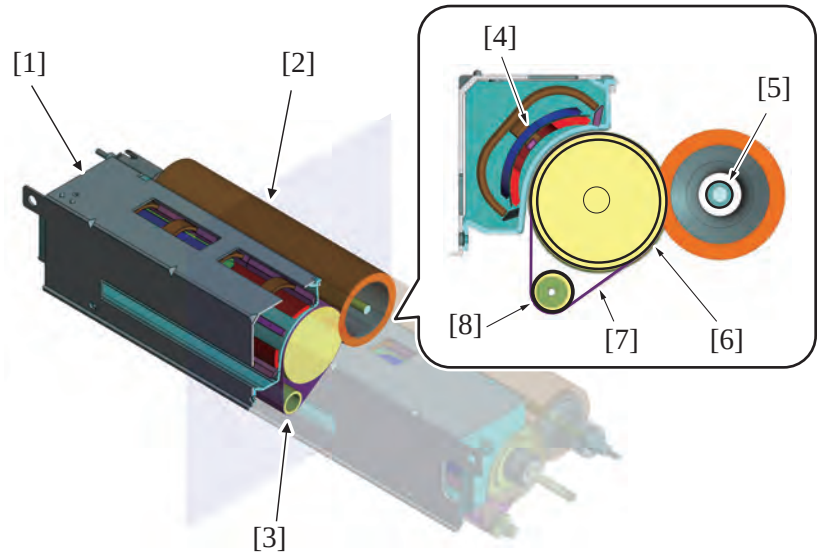
- Reverse rotation of the fusing motor releases the drive force to the oscillation gear in the fusing section drive mechanism.
- When the right door is closed, the drive link release lever links the oscillation gear to the fusing motor drive system.
- When the right door is opened, the drive link release lever links the oscillation gear to the jam removal dial drive system.
- Rotation of the jam removal dial enables the pressure roller to be manually rotated. (Reverse rotation is also enabled)
- Rotation of the jam removal dial makes it easy to remove any paper in the main body.
- When the right door is closed after jams are removed, the drive link release lever links the oscillation gear to the fusing motor drive system.

(2) Fusing motor reverse operation control process

1. Jams or other troubles occur.
2. The fusing motor is stopped.
3. The fusing motor operates in reverse when a specified period time elapses after the fusing motor stops.
4. The fusing motor stops when a specified period time elapses after reverse rotation of fusing motor starts.
5. The fusing pressure motor is rotated, and the pressure roller pressure releases.
6. It completes the reverse operation control of the fusing motor. (The pressure roller remains in the released state.)

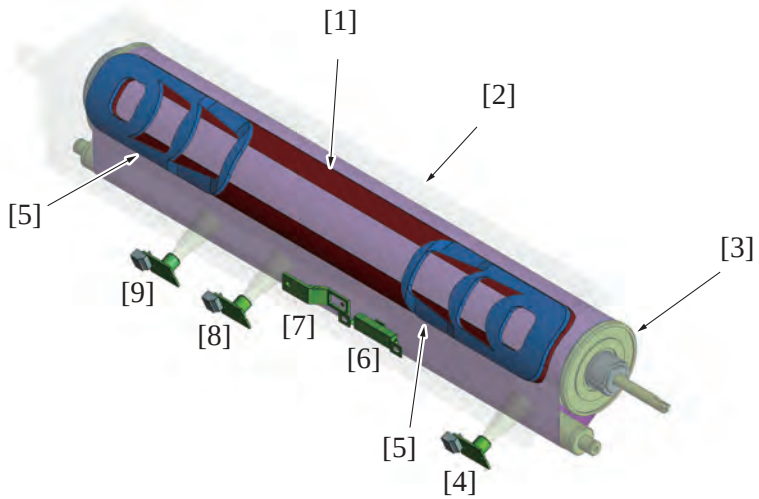
14.3.6 Heating control

- bizhub 958/bizhub PRO 958 models have a fusing roller with larger diameter than the fusing roller in bizhub 808/758 models to ensure fusing capacity due to increased print speeds. A dual-axis system is used to improve the uniformity of fusing temperature.
- The fusing roller is heated with the IH coils. The pressure roller is heated with the halogen lamps.
- The fusing roller is a soft type of roller.



[1]	IH coil (IHC)	[2]	Pressure roller
[3]	Fusing belt assembly	[4]	IH Coils
[5]	Pressure roller heater (FH)	[6]	Fusing roller
[7]	Fusing belt	[8]	Tension roller

(1) Fusing belt heating mechanism



[1]	Main coil	[2]	IH coil unit
[3]	Fusing belt	[4]	Fusing belt temperature sensor/3 (TEMS3)
[5]	Demagnetization coil	[6]	Fusing belt thermostat (TS1)
[7]	Fusing belt thermistor/1 (TH1)	[8]	Fusing belt temperature sensor/1 (TEMS1)
[9]	Fusing belt temperature sensor/2 (TEMS2)	-	-

(a) Fusing belt heating control

- The fusing belt is formed with Ni and Cu.
- The IH coil unit located beside the fusing belt radiates magnetic flux to the fusing belt when energized.
- The IH coil unit consists of two different types of coil: main coil and demagnetization coil.
- The fusing belt is heated by the main coil. The demagnetization coil controls the heating zone.
- The fusing belt generates overcurrent when the magnetic flux is received. The overcurrent from the conductive layer generates Joule heating to heat the fusing belt.
- The main coil is provided only on one side of the fusing belt, so that the fusing belt generates heat from a local surface of the fusing belt close to the main coil. The fusing belt is therefore rotated to ensure that the entire periphery of the belt is heated to an adequate temperature.
- The fusing roller temperature sensors and the heating roller thermistor measure the temperature of the fusing belt.
- The fusing belt thermostat is used to protect against abnormal temperature and to provide overheat protection. For details, refer to "Protection against abnormal temperature".

(b) Whole area fusing belt control

- During printing, the whole area of the fusing belt is heated by the main coil.

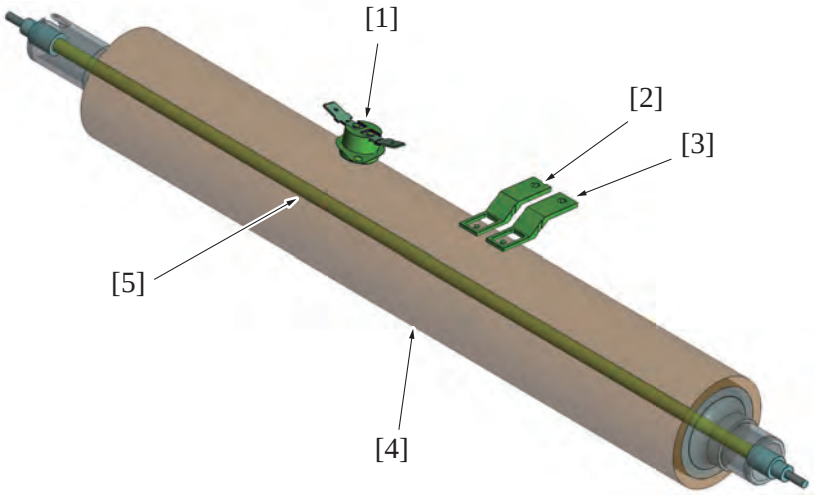
- While the fusing belt is being heated, it is rotated at the same time to ensure that the entire periphery of the belt is heated properly to the required temperature. For details of the fusing belt rotation detection mechanism, see “Fusing belt rotate detection control”.

(c) Control to switch to central heating of the fusing belt

- The temperature on ends of the fusing belt is measured with the fusing belt sensor/2 and /3.
- When the temperature of ends of the fusing belt exceeds a predetermined value during printing using paper of a small size or in the standby state, the demagnetization coil comes into play in inhibiting heating of belt ends and only the center portion of the belt is heated.
- When the demagnetization coil is energized, the demagnetization coil radiates magnetic flux so as to cancel the magnetic flux radiated from the main coil. Canceling the magnetic flux on the ends of the belt results in generation of heat on the belt ends being inhibited.
- The IH coil unit is provided with three different types of demagnetization coils, offering a high demagnetization effect.
- Each of the demagnetization coils is turned ON or OFF as necessary according to the paper width (CD: main scanning length), temperature at ends of the fusing belt, and the type of paper used.

(2) Pressure roller heating mechanism

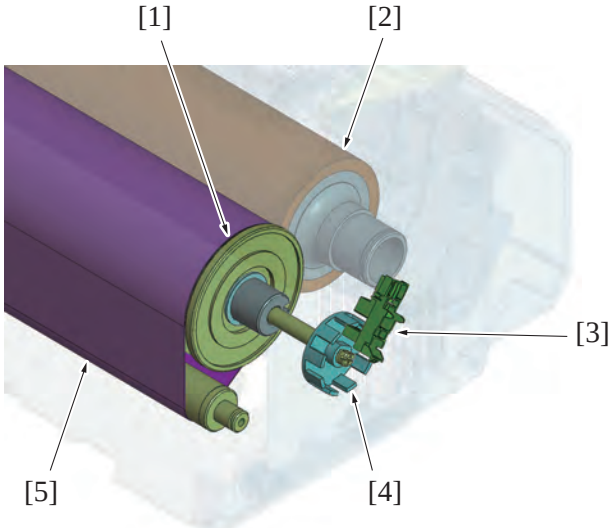
- The pressure roller heater heats the entire pressure roller. The pressure roller is not equipped with a mechanism to switch to central heating of the pressure roller.
- The dedicated pressure roller power supply unit provides power to the pressure roller heater.
- A pressure roller rotation detection mechanism is not included. This functionality is included with the fusing belt rotation detection mechanism.
- The pressure roller thermistors measure the temperature of the pressure roller. The pressure roller thermistor/1 measures temperature to adjust the fusing temperature during normal operation. The pressure roller thermistor/2 measures temperature when issues are detected.
- The pressure roller thermostat is used to protect against abnormal temperature and to provide overheat protection. For details, refer to [Protection against abnormal temperature].



[1]	Pressure roller thermostat (TS2)	[2]	Pressure roller thermistor/1 (TH2)
[3]	Pressure roller thermistor/2 (TH3)	[4]	Pressure roller
[5]	Pressure roller heater (FH)	-	-

14.3.7 Fusing belt rotate detection control

- If the fusing belt is not rotating when the IH coil is energized, the fusing belt may be damaged. The state of rotation for the fusing belt is monitored to prevent fusing belt damage.



[1]	Fusing roller	[2]	Pressure roller

[3]	Fusing belt rotation sensor (PS56)	[4]	Cylinder actuator
[5]	Fusing belt	-	-

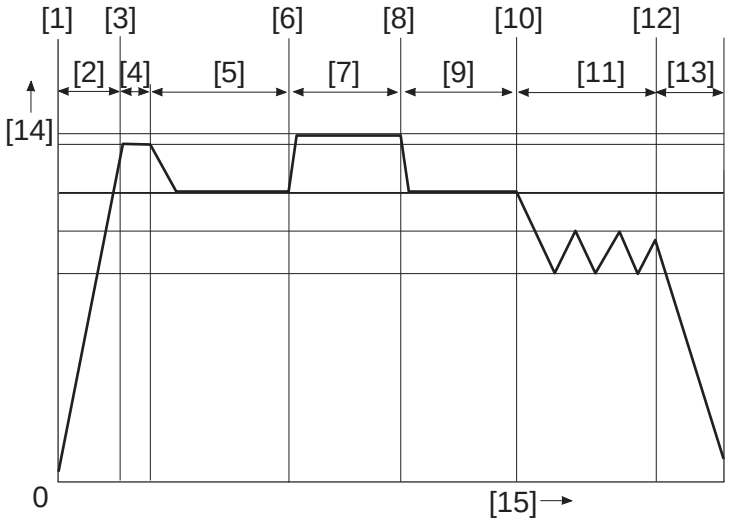
(1) Description

- Rotate the fusing belt during the heating process, so that the entire of fusing belt can be heated uniformly to a suitable temperature.
- The fusing belt and fusing roller rotate by following the pressure roller. (The fusing belt does not have a mechanism that enables independent rotation. The pressure roller is rotated for this purpose.)
- The cylindrical actuator rotates when the fusing roller is rotated.
- The rotational state of the fusing roller (and fusing belt and pressure roller) is detected by repeatedly blocking and unblocking the fusing roller rotation sensor for specific intervals of time.
- When the fusing roller is not rotating while the IH coil (main coil) is energized, the temperature of the entire fusing belt cannot be measured. As a result, the proper temperature control cannot be performed. As only part of the fusing belt is heated, the fusing belt could be damaged if the main coil is on for an extended period of time while the fusing roller does not rotate.
- When the fusing belt rotation sensor is blocked or unblocked for the specified period of time during printing, an exit section jam will be determined. Notification of this error appears on the control panel.
- During the warm-up, standby or states other than printing, if the fusing belt rotation sensor is blocked or unblocked for the specified period of time, a fusing belt/heating roller rotation error will be determined. The corresponding trouble code "C3102 Heating Roller Rotational Failure" appears on the control panel.

14.3.8 Fusing temperature control

- The surface temperature of the fusing belt is detected to control the amount of the heat of the IH coil and the pressure roller heater in order to maintain the appropriate fusing temperature.

Fusing belt temperature control chart



[1]	Main power ON	[2]	Warm-up
[3]	Print is available	[4]	Pre-standby (3sec.)
[5]	Standby (normal operation)	[6]	Start key ON
[7]	Printing	[8]	End of print
[9]	Standby (normal operation)	[10]	Start of low power mode
[11]	Low power mode	[12]	Start of sleep mode
[13]	Sleep mode	[14]	Temperature
[15]	Time	-	-

(1) IH coil and Pressure roller heater control

- Electric energy of the IH coil and pressure roller heater are controlled so that the temperature of the fusing belt and the pressure roller falls within a predetermined temperature range.
- The temperature of the fusing belt is measured with the fusing belt temperature sensor/1 to thereby determine a possible change in the temperature (increase or decrease).
- The temperature of the pressure roller is measured with the pressure roller thermistor/1 to thereby determine a possible change in the temperature (increase or decrease).

(2) Temperature control during warm-up

- The warm-up control is started as soon as the main power switch power be turned ON.
- If the pressure roller presses the fusing belt assy, the fusing pressure motor is energized to let the pressure roller retract from the fusing belt assy.
- The fusing motor is energized and, using the driving force of the fusing motor, the pressure roller, the fusing belt and the fusing roller are rotated.
- The main coil is energized to heat the fusing belt to the specified temperature value. In the same way, the pressure roller heater is energized to heat the pressure roller to the specified temperature value.

- When the temperature of the fusing roller reaches the predetermined value, the fusing pressure motor is energized to let the pressure roller press the fusing belt.
- When the temperatures of fusing belt exceed the predetermined value, the print cycle can now be started.
- A print cycle is started if so requested. If there is no print request, the machine enters the “temperature control under pre-standby”.

(3) Temperature control in standby state

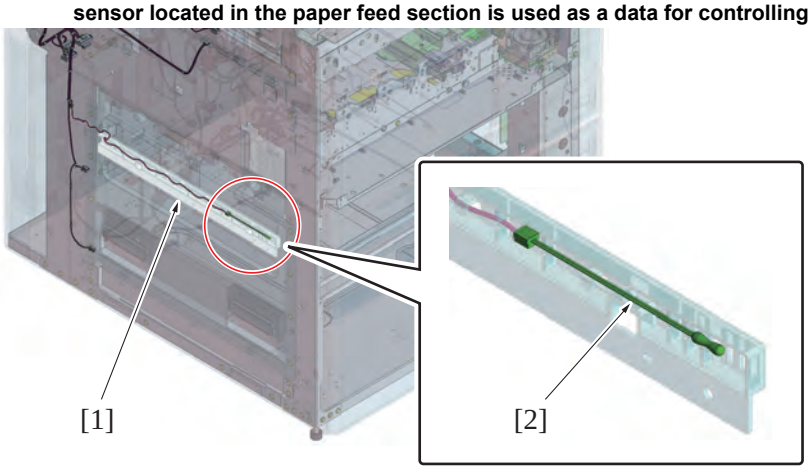
- The machine enters the pre-standby temperature control if no print requests are received after the warm-up.
- The temperature is controlled by normal mode, after predetermined time from pre-standby control start.
- For a predetermined period of time after the machine has started to enter the standby temperature control, control is provided with the target temperature of each of low temperature, normal, and high humidity modes.
- The standby temperature control ensures that the temperature of heating roller in the standby state is not decreased.

NOTE

- **Counted period for standby control includes the printing time.**

(4) Temperature control during printing

- Temperature control is provided in order to keep optimum fusing performance with various factors, such as the type of paper, print mode, paper temperature*1, use of paper of small size, decreased temperature during paper passage, and warm-up carried out with a cool fusing unit.
  - ***1: For paper temperature, “the machine interior temperature at the paper feed section” detected by the paper temperature sensor located in the paper feed section is used as a data for controlling a fusing temperature.**



[1]	Machine interior temperature at the paper feed section	[2]	Paper temperature sensor (TH8)

(5) Temperature control under low power mode

- The temperature of the fusing belt is decreased to thereby reduce power consumption during the low power mode.
- If the pressure roller is in a pressed condition, the fusing pressure motor is energized to release the pressure.
- The fusing belt is rotated by the fusing motor at the same time that the IH coil is energized and stopped when the IH coil is deenergized. The speed of the fusing belt assy at this time is lower than that during a print cycle.
- When the temperature of the fusing belt is decreased to the starting temperature of the low power mode temperature control, the IH coil, the pressure roller heater and the fusing motor are energized; when the temperature exceeds the ending temperature, the IH coil, the pressure roller heater and the fusing motor are deenergized.
- During the low power mode, ON/OFF control is repeated between the starting and ending temperatures of the low power consumption control.

(6) Temperature control in sleep mode

- The main coil and demagnetization coil, the pressure roller heater are deenergized to stop heating the fusing belt, thereby reducing power consumption in the sleep mode.
- The fusing motor is also deenergized to keep all rollers and fusing belt stationary.
- In the sleep mode, two different types of control are performed: engine ON sleep and engine OFF sleep. Either one of these is selected depending on the elapsed time after the print cycle.
- The machine enters the engine ON sleep mode, if a sleep mode start command is received during a period of less than 15 min. after the end of the print cycle.

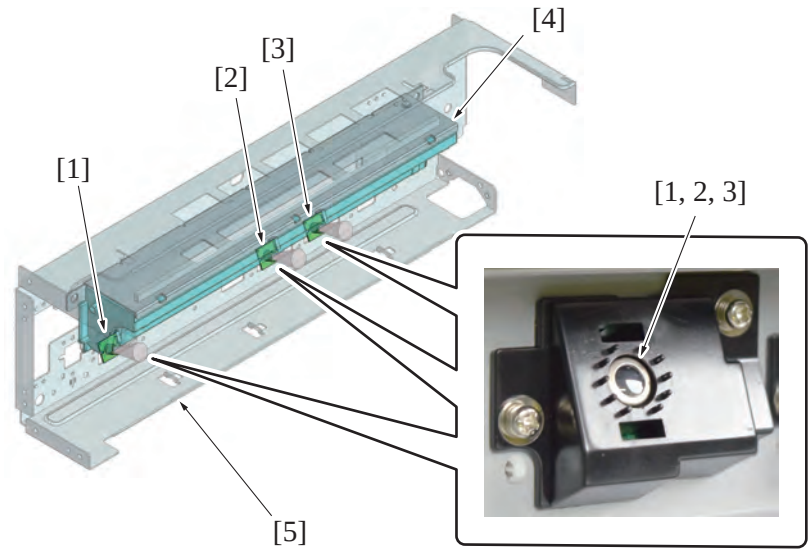
  NOTE

  - **The fusing temperature control is stopped, though a rotating fan, if any, is kept driven.**

- The machine enters the engine OFF sleep mode, if a sleep mode start command is received after the lapse of a period of 15 min. or more after the end of the print cycle.
- In the sleep mode, the fusing belt temperature and pressure roller temperature may be decreased down to room temperature because the fusing belt and pressure roller are not heated. A maximum time equivalent to the warm-up time may be required before the fusing belt temperature, and pressure roller temperature are increased to the print enable temperature from the room temperature.

14.3.9 Fusing belt temperature sensors

- The non-contact type thermopile sensors are used for fusing belt temperature sensor/1 to 3 (hereinafter referred to as “temperature sensors”).
- The temperature sensors detects the temperature of the fusing belt through infrared rays and controls the surface temperature.



[1]	Fusing belt temperature sensor/ 3 (TEMS3)	[2]	Fusing belt temperature sensor/1 (TEMS1)
[3]	Fusing belt temperature sensor/2 (TEMS2)	[4]	IH coil unit (IHC)
[5]	Main body frame (Fusing unit frame: Inside the right door)	-	-

(1) Temperature sensor features

- In comparison to non-contact type thermistors, temperature sensors have excellent temperature detection accuracy. Furthermore, sensors are installed to the frame to achieve a high maintainability.
- The temperature sensor is provided with a lens. For its structural reason, therefore, the temperature sensor can be dirtied by dew condensation formed or foreign matter deposited on the lens.
- The temperature sensor, if contaminated with dew drops or dirt on the lens, becomes unable to detect the temperature accurately, since the contaminants blocks the infrared rays that are otherwise detected by the sensor.
- If temperature control is provided under such conditions, the temperature sensor detects a temperature that is lower than the actual temperature of the fusing belt. Then, the fusing belt temperature is controlled based on a temperature higher than the target one.
- For preventing the improper temperature control caused by the falsely detect, “Heating roller temperature sensor condensation detection”, “Heating roller temperature sensor contamination detection control” and “Heating roller alternative temperature control” are performed.

(2) Fusing belt temperature sensor condensation detection

- The control of detection of condensation on the fusing belt temperature sensor/1 is to determine degradation of detection accuracy of the temperature sensor caused by condensation or dirt.
- When condensation on the temperature sensor is detected and the control is switched to “alternative temperature control”, the machine displays the corresponding P code “K.2.11 P-32” on the control panel.

(a) Condensation detection conditions

- When any of the following conditions is detected, the machine determines that the fusing belt temperature sensor/1 lens has condensation on it and starts the fusing belt alternative temperature control. (For details, see “Fusing belt alternative temperature control”.)

Conditions	Description
During warm-up	The difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
In standby state	Within 180 sec. after the completion of the warm-up, the difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
During printing	During printing, the difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.

(3) Fusing belt temperature sensor contamination detection control

- The control of detection of contamination on the fusing belt temperature sensor (here in after referred to as “contamination detection control”) is to determine degradation of detection accuracy of the fusing belt temperature sensor/1 caused by contamination.
- The contamination detection control is performed only in the standby state. No control is provided during the alternative temperature control initiated by condensation of the temperature sensor.
- If contamination of the lens of the fusing belt temperature sensor/1 is detected, the machine displays the corresponding malfunction code “K.3.8.20 C392A” on the control panel. It then shuts down the circuit to the main coil and terminates fusing unit temperature control.

(a) Contamination detection conditions

Conditions	Description
Control start conditions	• The contamination detection control is started if, at any timing 180 sec. or more after the completion of the warm-up, the difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.

Conditions	Description
Control termination conditions	• The contamination detection control is terminated if, at any timing within 10 min. after the contamination detection control has been started, the difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 is equal to, or less than, a specified value. • The contamination detection control is terminated if the machine enters any mode other than the current one, including the warm-up or the low power mode as initiated by the start of a print cycle or restart.
Criteria for contaminati on	• If, after the start of the contamination detection control, the difference in temperature between that detected by fusing belt thermistor/1 and that detected by heating roller temperature sensor is equal to, or more than, a specified value and that condition lasts for 10 min. or more, the machine determines that the fusing belt temperature sensor/1 lens is contaminated and displays the corresponding malfunction code.

(4) Fusing belt alternative temperature control

(a) Control start conditions

- Temperature control for the heating roller is provided based on the temperature detected by the fusing belt temperature sensor/1.
- If condensation on the fusing belt temperature sensor/1 is detected, the heating roller temperature control is provided based on the temperature detected by the fusing belt thermistor/1, instead of that detected by the fusing belt temperature sensor/1. This control is referred to as the fusing belt alternative temperature control.
- When the control is switched to the alternative temperature control, the machine displays the corresponding P code "K.2.11 P-32" on the control panel.

(b) Control termination conditions

- If the difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 becomes less than a specified value during the alternative temperature control, the machine determines that condensation on the fusing belt temperature sensor/1 has been eliminated and resumes the temperature control based on the temperature detected by the fusing belt temperature sensor/1.
- If the difference in temperature between that detected by fusing belt thermistor/1 and that detected by fusing belt temperature sensor/1 is not improved even after the lapse of 10 min. after the alternative temperature control has been initiated, the machine determines that the cause is not condensation, but contamination, on the lens and terminates the fusing belt alternative temperature control.

(c) Print job during the alternative temperature control

- If a print job is received during the heating roller alternative temperature control, control is performed according to the settings made in "Enhanced Security" of "Service Mode". Reference: [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW] -> Switch No. 4/ Fusing unit alternative temperature control
- If "OFF" is selected, the machine disables any print job during the alternative temperature control.
- If "ON" is selected, the machine enables a print job during the alternative temperature control.
- The print job during the alternative temperature control is processed at 50% productivity.
- The default setting is "OFF".

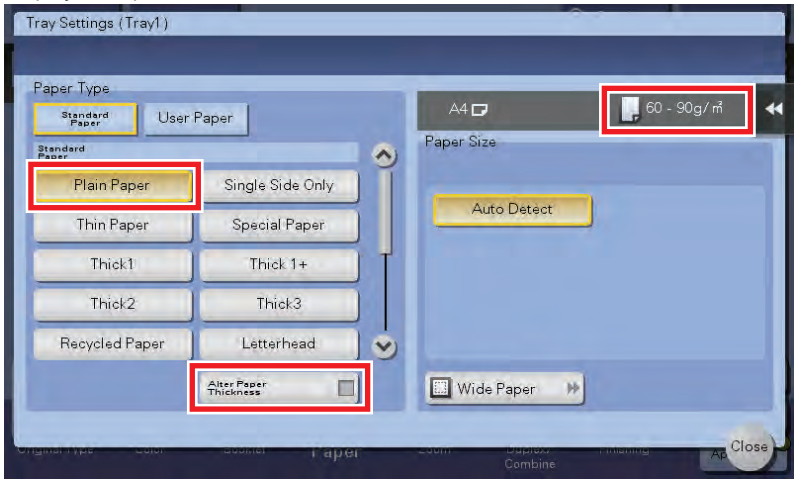
14.3.10 Plain paper fusing temperature control

- Two different target temperatures control the printing on plain paper.

Basis weight	Specific controls
Plain paper (60g/m^2 - 70g/ m^2)	The base weight is limited to 60g/m^2 - 70g/m^2. Power consumption (TEC value) is controlled through lowering the target temperature to lower than the normal fusing temperature.
Plain paper (60g/m^2 - 90g/ m^2)	The normal target temperature controls the fusing temperature control of plain paper.

(1) Setting procedure

Display example



1. Select [Paper] on the basic screen.
2. Select your desired paper feed port and tap [Change Tray Setting].
3. Select [Plain Paper] and tap [Alter Paper Thickness] to select "Plain Paper (60g/m2 - 70g/m2)".
   A "check mark" will be displayed in the check box of the [Alter Paper Thickness] key.

4. Tap the [Alter Paper Thickness] key again to select "Plain Paper (60g/m2 - 90g/m2)".
The "check mark" in the check box of the [Alter Paper Thickness] key will disappear.

NOTE
- **"Plain Paper (60g/m2 to 70g/m2)" is specified by default only for Japan.**
- **You can only use the [Alter paper thickness] key for plain paper.**

14.3.11 Smart fusing control

- Lower the target temperature as much as possible according to the information of each sheet of paper to control the fusing temperature adjustment. In this way, the power consumption (TEC value) is controlled.
- Smart fusing control is only performed when the execution conditions below are met.
- If these execution conditions are not met, the normal fusing temperature control is performed.
- Smart fusing control can also prohibit control execution from [Service Mode / System 2 / Smart Fusing Control].
For details on how to configure the settings, see "I.5.16.33 Smart Fusing Control".

(1) Smart fusing control execution conditions

Function		Execution conditions
Temp-Inside		10 °C and above
Print mode		Only for PC printing, BOX printing, and direct printing (USB)*1
Basic Settings	Print zoom	Only 100%
	Paper type	Plain paper only
Layout	Combination	1 in 1 only
	Image shift	No
Cover sheet insertion	Cover sheet	No
	Back cover	No
	Inter sheet	No
	OHP interleave	No
	Booklet	No
Image quality	Select color	Black mode only
	Gloss mode	No
	Toner save (density 50%)	No
	Edge enhancement	No
	Negative-positive reversal	No
	Maximum black density	80% or more to 90% or less
	Line width	1.5pt or less
	Character decoration	Normal characters only*2
	Character size	16pt or less
	Image object	No
Stamp/page printing	No watermarks	No
	No overlay	No
	No copy security	No
	No header/footer	No
	No management number	No

- *1: Copies are not included in the control
- *2: Bold characters are not included in the control

14.3.12 Protection against abnormal temperatures

- This machine is equipped with a 3-stage protection mechanism to prevent damage due to abnormally high temperatures in the fusing section.
  - Soft protection
  - Hard protection
  - Excessive rise protection

(1) Soft Protection

- A high temperature abnormality is detected when the fusing belt or pressure roller temperature exceeds the control range.
- Current that is supplied to the IH coil and pressure roller heater is cut and a trouble code appears.

Name	Sensor name	Trouble code
Fusing belt	Fusing belt temperature sensor/1 TEMS1	C3725 Fusing abnormally high temperature detection (Center of the heating roller)
	Fusing belt temperature sensor/2 TEMS2	C3726 Fusing abnormally high temperature detection (Middle of the heating roller)
	Fusing belt temperature sensor/3 TEMS3	C3722 Fusing abnormally high temperature detection (Edge of the heating roller)

Name	Sensor name	Trouble code
Pressure roller	Pressure roller thermistor TH2	C3723 Fusing abnormally high temperature detection (pressure)

(2) Hard protection

- Monitoring is performed using three different methods.

(a) Hard protection circuit monitoring

- The hard protection circuit in the MFP board detects abnormally high temperatures when soft protection cannot be detected due to malfunction of main CPU.
- An abnormally high temperature is detected when the fusing belt or pressure roller temperature exceeds the control range, which causes a detection of the temperature sensor or thermistor hard protection signal.
- Current that is supplied to the IH coil and pressure roller heater is cut and a trouble code appears.

Name	Sensor name	Trouble code
Fusing belt	Fusing belt temperature sensor/1 TEMS1	C3737 Fusing abnormally high temp. (Center of the heating roller)
	Fusing belt temperature sensor/2 TEMS2	C3736 Fusing abnormally high temp. (Middle of the heating roller)
	Fusing belt temperature sensor/3 TEMS3	C3732 Fusing abnormally high temp. (Edge of the heating roller)
Pressure roller	Pressure roller thermistor TH2	C3733 Fusing abnormally high temp. (pressure)

(b) Sub CPU monitoring

- The sub CPU detects an abnormally high temperature when soft protection cannot be detected due to overload of main CPU.
- A high temperature abnormality is detected when the fusing belt or pressure roller temperature exceeds the control range.
- Current that is supplied to the IH coil and pressure roller heater is cut and a trouble code appears.

Name	Sensor name	Trouble code
Fusing belt	Fusing belt thermistor/1 TH1	C3737 Fusing abnormally high temp. (Center of the heating roller)
	Fusing belt temperature sensor/2 TEMS2	C3726 Fusing abnormally high temperature detection (Middle of the heating roller)
	Fusing belt temperature sensor/3 TEMS3	C3722 Fusing abnormally high temperature detection (Edge of the heating roller)
Pressure roller	Pressure roller thermistor TH2	C3723 Fusing abnormally high temperature detection (pressure)

(c) Monitoring via Inter-CPU Communication

- The sub CPU detects an abnormally high temperature when soft protection cannot be detected due to overload of the main CPU.
- When communication between the main CPU and sub CPU fails for a time longer than the specified time, supply current to the IH coil and pressure roller heater is cut to stop the heating process.

(3) Excessive rise protection

- The thermostat activates when soft and hard protection cannot detect an abnormally high temperature due to overload of CPU, temperature sensor, and thermistor.
- The fusing belt thermostat cuts supply current to the IH coil when the fusing belt or pressure roller temperature exceeds the control range. Similarly, the heating roller thermostat cuts supply current to the pressure roller heater.

14.3.13 Sensor disconnection detection control

- States of temperature sensors, thermistor and thermostat are monitored to detect the temperature of the fusing section.

(1) Temperature sensor and Thermistor

- If the temperature of the temperature sensor or thermistor fails to reach the specified temperature in the given period after the warm-up started, the sensor is judged to have disconnection, and the trouble code will appear.

(a) Trouble code list

Name	Sensor name: code	Trouble code	
Fusing belt	Fusing belt thermistor/1: TH1	C3925	Fusing sensor wire breaks detection (Middle of the fusing belt)
	Fusing belt temperature sensor/2: TEMS2	C3926	Fusing sensor wire breaks detection (Center of the fusing belt)
	Fusing belt temperature sensor/3: TEMS3	C3922	Fusing sensor wire breaks detection (Edge of the fusing belt)
Pressure roller	Pressure roller thermistor/1: TH2	C3923	Fusing sensor wire breaks detection (pressure)

(2) Thermostat

- If the thermostat broken detection signal is detected for at least a specified period of time after warm-up starts, a broken thermostat will be determined. A corresponding trouble code appears.

(a) Trouble code list

Name	Sensor name: code	Trouble code	
Fusing belt	Fusing belt thermostat: TS1	C3903	Thermostat breaks detection
Pressure roller	Pressure roller thermostat: TS2	-	-

14.3.14 IH power supply control

- The IH power supply unit performs IH power supply abnormal temperature detection and abnormal power supply input detection to prevent high-temperature abnormality and fusing defect.

(1) IH power supply abnormal temperature detection

- The IH power supply is equipped with a thermal fuse that prevents an IH power supply malfunction from occurring due to increased temperature inside the IH power supply.
- The IH power supply is equipped with a thermistor that monitors temperature inside the IH power supply. If the temperature inside the power unit increases, control is performed to bring down the temperature.
- Specific controls performed upon detection of high temperatures

Fault name	Detected temperature	Mode	Specific controls	Trouble code	
High temperature 1	92 °C detected for 10 sec. or more	During print cycle	Decrease productivity down from 100 % to 50 %.	Not detected.	
			Return productivity back to 100 % when 90 °C is detected for 30 sec. or more.		
		Standby	Increase the speed of the IH power supply cooling fan from 50 % to 100 %.		
			Return the speed back to 50 % when 90 °C is detected for 30 sec. or more.		
High temperature 2	97 °C detected for 10 sec. or more	All mode	Trouble code is displayed.	C3B02	IH malfunction (CPU)

(2) Abnormal power supply input detection

- If the voltage applied to the IH power supply is decreased, the IH power supply reduces the amount of electricity supplied to the IH coil. Since good fusing performance cannot be maintained because of the reduced amount of electricity supplied to the IH coil, PPM control is performed in which print productivity is decreased from 100 % down to 40 % in a stepwise fashion.
- The IH power supply displays a trouble code when the electricity or voltage input is abnormal.

Fault name	Detection method	Specific controls	Trouble code	
Faulty input electricity	The current or electricity to be input exceeds an upper limit value.	Trouble code is displayed.	C3B07	IH input power error
	The current or electricity to be input falls below a lower limit value.			
Faulty input voltage	The voltage to be input exceeds an upper limit value.	Trouble code is displayed.	C3B08	IH input voltage error
	The voltage to be input falls below a lower limit value.			

14.3.15 Detection of fusing unit

- The fusing unit is not provided with any new article detection mechanism.
- When the fusing unit is replaced with a new one, "New Release" must be selected from [Service Mode] -> [Counter] -> [Life].

NOTE

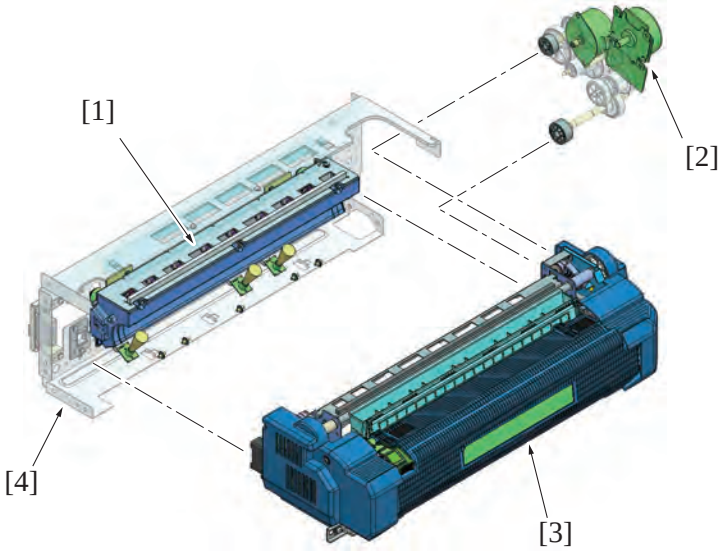
- **For details of the unit life, refer to "F.5.1 Life value of consumables and parts".**

15. FUSING SECTION (bizhub 808/758 except Taiwan)

15.1 Configuration

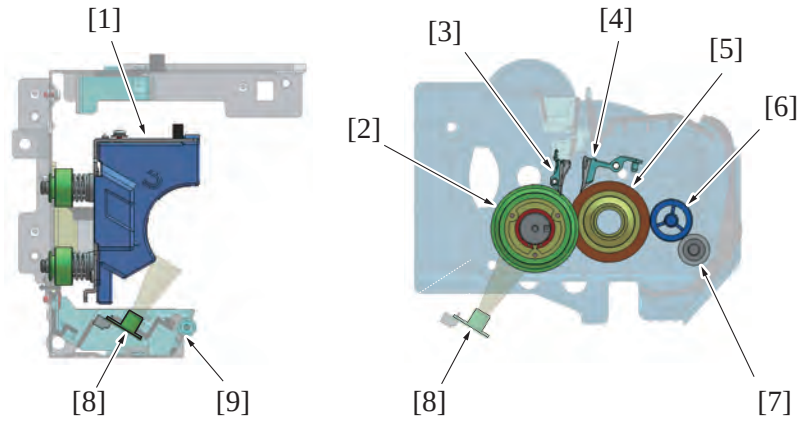
NOTE

- **Only the bizhub 758 for Taiwan have a fusing section mechanism different from that on bizhub 808/758 for other marketing areas. The fusing unit mechanism on bizhub 758 for Taiwan, see "O.16.1 Configuration".**



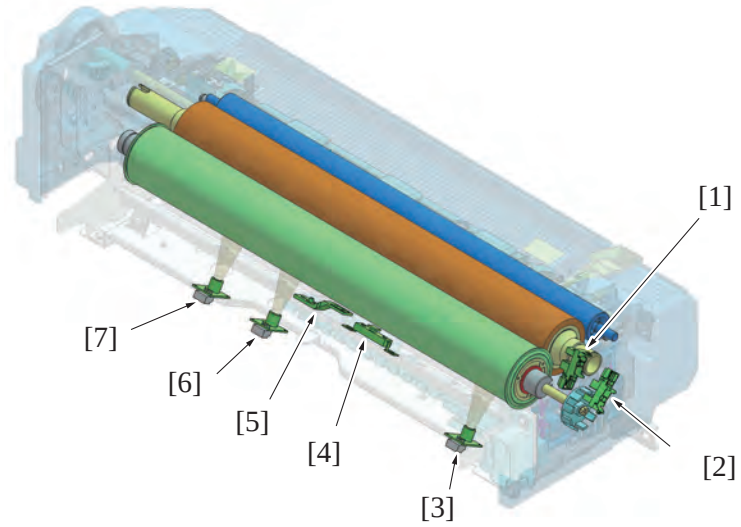
[1]	IH coil unit (IHC, Fixed at the main body frame side)	[2]	Fusing section drive unit
[3]	Fusing unit	[4]	Main body frame (Fusing unit frame)

15.1.1 Fusing section cross section view



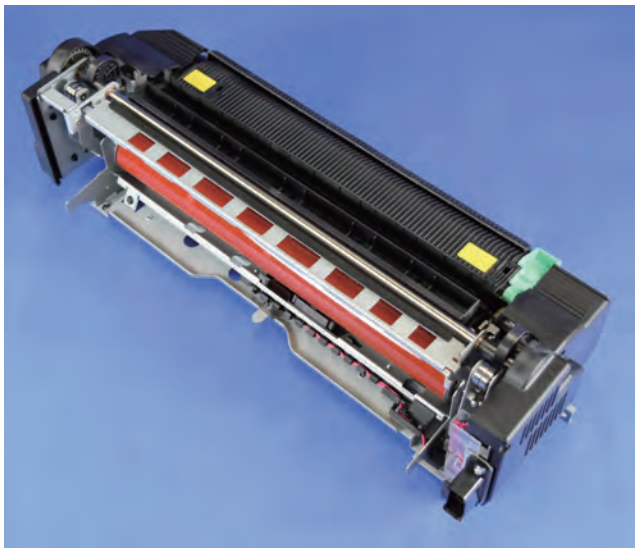
[1]	IH coil unit (IHC, Fixed at the main unit side)	[2]	Heating roller
[3]	Heating roller separation claw	[4]	Fusing loop sensor/Fr (PS41, Fixed at the main unit side) Pressure roller separation claw
[5]	Pressure roller	[6]	Soaking roller
[7]	Brush roller	[8]	Heating roller temperature sensor (Fixed at the main body frame side)
[9]	Main body frame (Fusing unit frame)	-	-

15.1.2 Configuration of the temperature detector element of fusing unit



[1]	Fusing pressure home sensor (PS59)	[2]	Heating roller rotation sensor (PS56)
[3]	Heating roller temperature sensor/3 (TEMS3) (Fixed at the main body frame side)	[4]	Heating roller thermostat (TS1)
[5]	Heating roller thermistor/1 (TH1)	[6]	Heating roller temperature sensor/1 (TEMS1) (Fixed at the main body frame side)
[7]	Heating roller temperature sensor/2 (TEMS2) (Fixed at the main body frame side)	-	-

15.1.3 Fusing unit exterior view

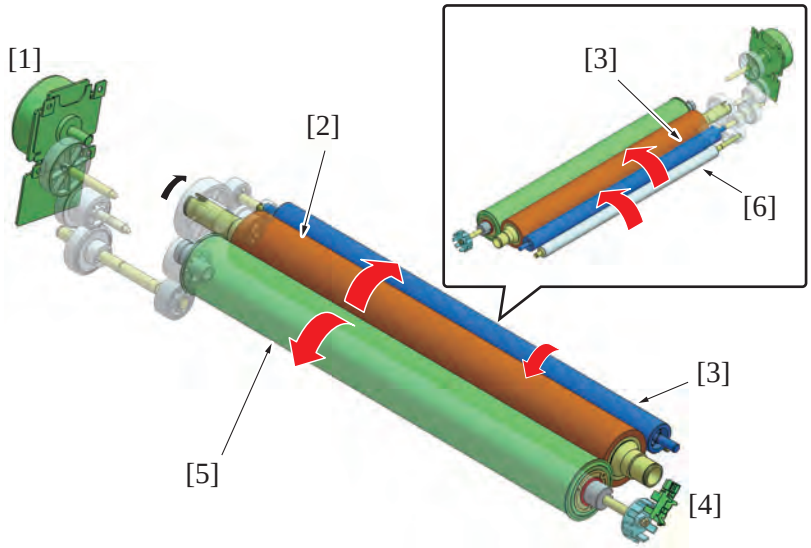


15.2 Drive

- The fusing section drive mechanism includes a drive mechanism for the heating roller and pressure roller and a pressure drive mechanism for the pressure roller.

15.2.1 Pressure roller and the heating roller drive

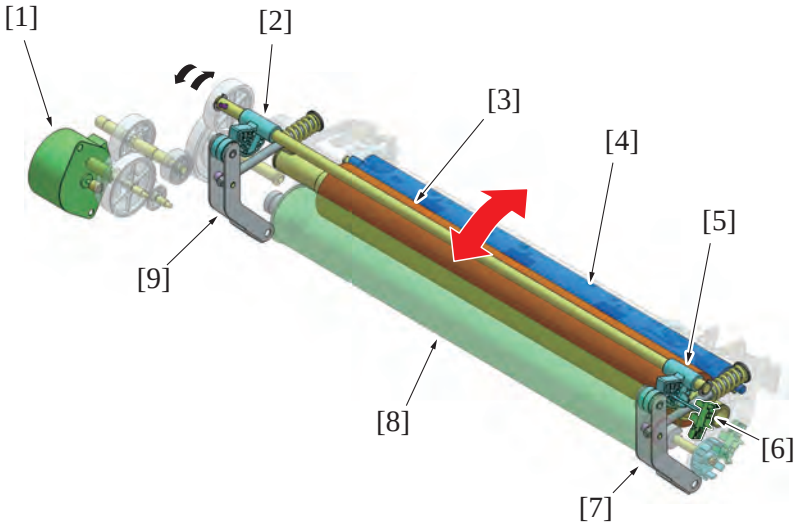
- The fusing motor drives the pressure roller via the drive gear.
- The heating roller rotates via the pressure roller. (The heating roller follows the pressure roller.)
- The soaking roller rotates via the pressure roller. (The soaking roller follows the pressure roller.)
- The fusing motor drives the brush roller via the drive gear. (The brush roller and soaking roller rotate in the same direction.)



[1]	Fusing motor (M30)	[2]	Pressure roller
[3]	Soaking roller	[4]	Heating roller rotation sensor (PS56)
[5]	Heating roller	[6]	Brush roller

15.2.2 Pressure drive of the pressure roller

- The fusing pressure motor drives the pressure roller, soaking roller, and brush roller via the drive gear.
- The pressure cam is connected to the pressure lever. Pressure roller force that is applied to the heating roller is changed when the pressure cam is rotated.
- The soaking roller and brush roller are linked to the pressure roller. (The positional relationship between the pressure roller, soaking roller, and brush roller does not change.)



[1]	Fusing pressure motor (M34)	[2]	Pressure cam (rear side)
[3]	Pressure roller	[4]	Soaking roller
[5]	Pressure cam (front side)	[6]	Fusing pressure home sensor (PS59)
[7]	Pressure lever (front side)	[8]	Heating roller
[9]	Pressure lever (rear side)	-	-

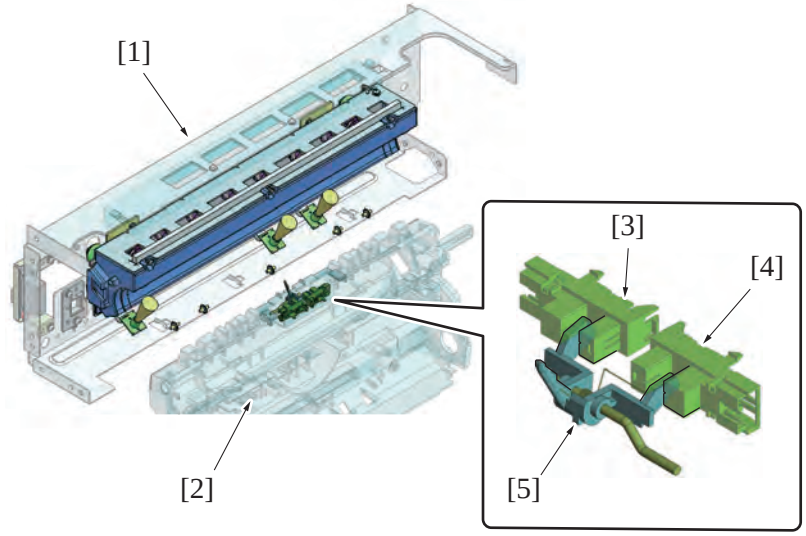
15.2.3 Rear side of the main body - Motor layout view (From fusing to paper exit/Around reverse section)

[1]	Exit motor (M4)	[2]	Fusing pressure motor (M34)
[3]	Transfer belt motor (M1)	[4]	PC motor/K (M18)
[5]	Fusing motor (M30)	[6]	Switchback motor (M33)

15.3 Operation

15.3.1 Adjustment of paper loop amount

- By creating a paper loop, the speed difference between the fusing and paper conveyance at 2nd transfer section will be adjusted. It prevents the double transferred image or brush effect.



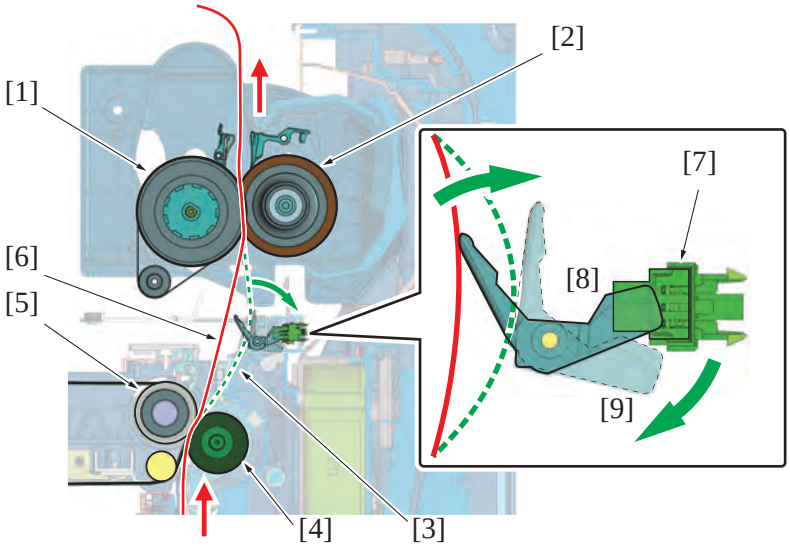
[1]	Fusing unit mounting section (Main body frame)	[2]	Second transfer section (Right door unit)
[3]	Fusing loop sensor/Fr (PS41)	[4]	Fusing loop sensor/Rr (PS42)
[5]	Fusing loop sensor actuator	-	-

NOTE

- **The configuration of fusing unit rollers and the shape of IH coils varies depending on the model. However, the paper loop amount control mechanism is the same. The illustration shows the bizhub 958 model.**

(1) Paper loop amount determination method

- The fusing loop sensor/Fr, /Rr turns ON in different timing according to the loop amount so that the loop amount can be detected in three stages.



[1]	Fusing roller	[2]	Pressure roller
[3]	Loop amount: large	[4]	Transfer roller
[5]	Transfer belt drive roller	[6]	Loop amount: small
[7]	Fusing loop sensor	[8]	Fusing loop sensor actuator (Loop amount: Large)
[9]	Fusing loop sensor actuator (Loop amount: Small)	-	-

NOTE

- **The configuration of fusing unit rollers and the shape of IH coils varies depending on the model. However, the paper loop amount control mechanism is the same. The illustration shows the bizhub 958 model.**

Fusing loop sensor /Fr (PS41)	Fusing loop sensor /Rr (PS42)	Loop amount	Fusing speed
Unblocking	Unblocking	large	Speed-up (High speed)
Unblocking	Blocking	average	Speed-up (Low speed)
Blocking	Blocking	small	Slowdown

(2) Operation timing

- It starts controlling when the front-edge of the paper reaches to the predetermined position before the pressure roller.
- If the loop amount is “large” or “average”, the fusing speed is increased to reduce the paper loop amount to an appropriate value.
- If the loop amount is “small”, the fusing speed is decreased to increase the paper loop amount to an appropriate value.
- The control will finish when the tail-edge of the paper passes the predetermined position on the transfer roller unit.

15.3.2 PPM control

- PPM control, which allows for given paper transport intervals to reduce the number of printed pages produced per minute, is performed to prevent fusing failure, faulty image, or other related malfunctions from occurring due to decreased temperature at the center of the heating roller and pressure roller or increased temperature at edges of these rollers.

(1) Detail

- The PPM control can reduce productivity to about 40 to 90% against the ordinary 100%.
- The productivity for the PPM control is determined by the main scanning direction width of the printing paper or the temperatures * which is detected by the temperature sensor or thermistor.
  - *: Fusing belt temperature sensor/1 to 3, fusing belt thermistor/1

(a) High humidity PPM control

- When paper curling issues occur in high-humidity environments, the intervals to transport paper is lengthened to reduce curling. (Reference: [Service Mode] -> [Machine] -> [High Humidity PPM Adjustment])

(b) Thin paper PPM control

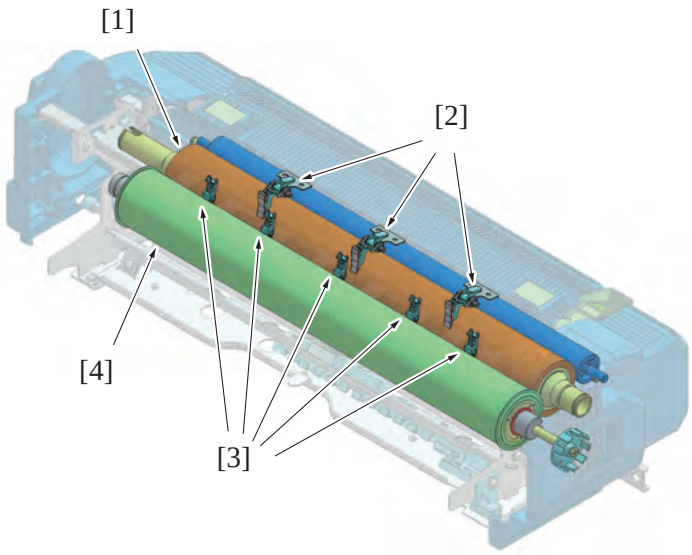
- To enhance productivity during printing on thin paper, “PPM Control” of the Service Mode can be used to change productivity to 100% (N int.). (Default: W int.) (Reference: [Service Mode] -> [Machine] -> [PPM Control Choice])

NOTE

- **If "N int." is selected, a decreased reliability of the paper transporting such as increasing a curled paper may occur.**

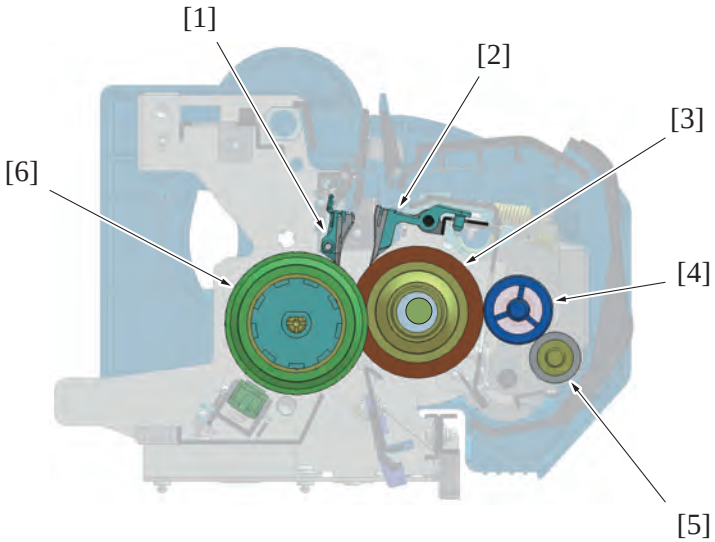
15.3.3 Paper separation mechanism

- The heating roller and the pressure roller cause toner transferred onto the paper to be fused in the paper. Separation claws are disposed downstream in the paper feeding direction of each of the heating roller and the pressure roller. The separation claws prevent the paper that has moved past each of the heating roller and the pressure roller from being wound around it.



[1]	Pressure roller	[2]	Pressure roller separation claw (3 pieces)
[3]	Heating roller separation claw (5 pieces)	[4]	Heating roller

(1) Fusing section cross section view



[1]	Heating roller separation claw (5 pieces)	[2]	Pressure roller separation claw (3 pieces)
[3]	Pressure roller	[4]	Soaking roller
[5]	Brush roller	[6]	Heating roller

(2) Separation claw

(a) Heating roller separation claw

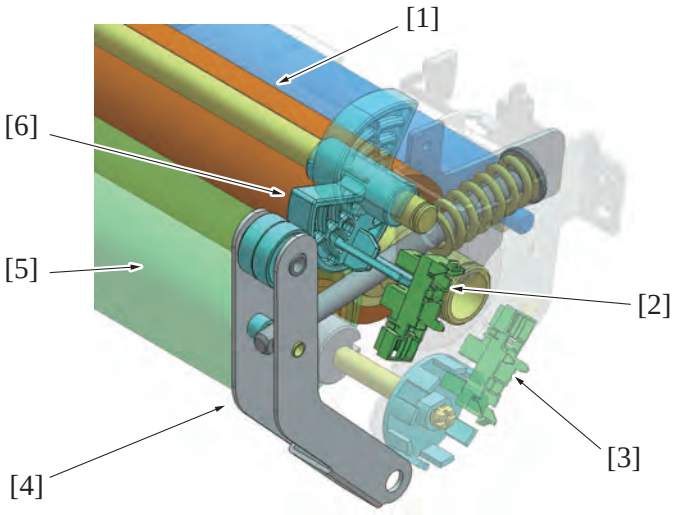
- The heating roller is provided with five fixed separation claws. The separation claws are provided in positions away from the heating roller in order to prevent toner from sticking to the leading ends of the separation claws.
- Separation claws are not equipped with a release mechanism.

(b) Pressure roller separation claw

- The pressure roller is provided with three fixed separation claws. The paper separation claws are arranged in positions that make contact with the heating roller to ensure the paper separability.
- Separation claws are not equipped with a release mechanism.

15.3.4 Fusing pressure/retraction control

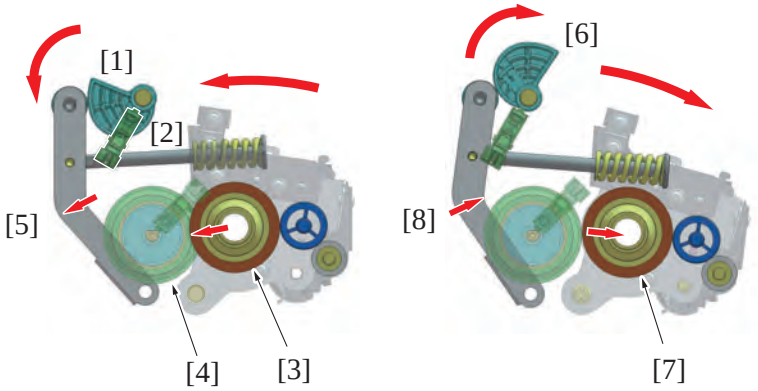
- To ensure prolonged durability of the heating roller assy, the heating roller and pressure roller is retracted *1 from the heating roller during any time other than printing. (The roller is, however, retracted *1 during printing using envelopes.)
  - *1: The pressure roller does not completely retract but is slightly pressed to the heating roller.



[1]	Pressure roller	[2]	Fusing pressure home sensor (PS59)
[3]	Heating roller rotation sensor (PS56)	[4]	Pressure lever (front side)
[5]	Heating roller	[6]	Cam (front side)

(1) Pressure/retraction mechanism

- The fusing pressure motor is turned forward or backward to press the pressure roller up against, and retract it from, the heating roller. When the motor rotates, the cam will rotate to move the pressure roller.
- Pressed position of the pressure roller is detected by the fusing pressure home sensor. The pressure release position is controlled using the rotation number of the fusing pressure motor.
- When there is no change in output of the fusing pressure home sensor even if the given time has passed after the fusing pressure motor started its rotation, it is judged as abnormal spacing and "Trouble code C3101: Fusing pressure roller separation failure" message appears.



[1]	Cam (pressure position)	[2]	Fusing pressure home sensor (PS59)
[3]	Pressure roller (pressure position)	[4]	Heating roller
[5]	Pressure lever (pressure position)	[6]	Cam (retraction position)
[7]	Pressure roller (retraction position)	[8]	Pressure lever (retraction position)

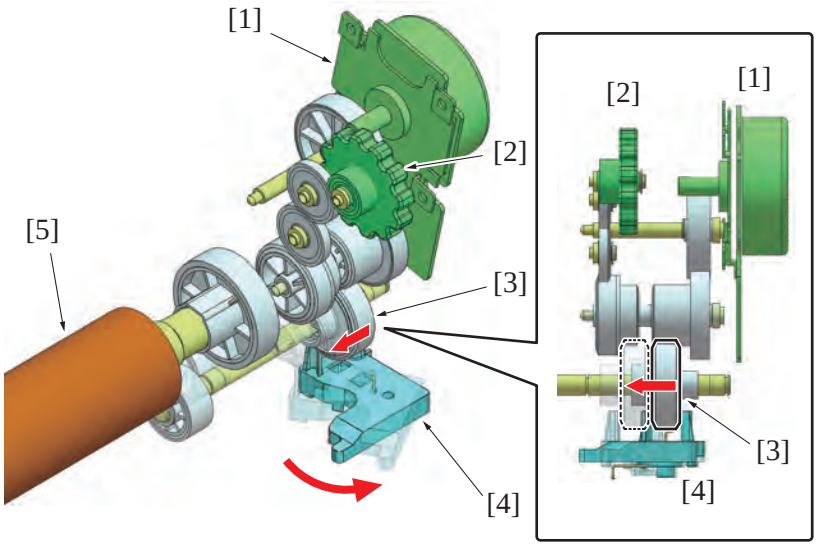
(2) Pressure/retraction timing

Conditions		Pressure/retraction operation
Warm-up	The pressure roller is retracted from the heating roller until the heating roller reaches the predetermined temperature.	Retraction
	The pressure roller is pressed against the heating roller when the heating roller reaches the predetermined temperature.	Pressure
Standby	Normal	Retraction
Printing	Paper type: • Thin paper (Paper temperature: High) • Thick paper 4 • Envelopes	Retraction

Conditions		Pressure/retraction operation
	Paper type: • Plain paper • Thin paper (Paper temperature: Low) • Thick paper 1 • Thick paper 2 • Thick paper 3 • Postcards • Index paper • OHP film	Pressure
Low power mode	-	Retraction
Sleep mode	-	Retraction

15.3.5 Fusing drive switch mechanism

- The fusing motor is rotated reversely when jams or other troubles occur. Open the right door to switch the pressure roller drive to the jam removal dial.



[1]	Fusing motor (M30)	[2]	JAM removal dial
[3]	Oscillation gear	[4]	Drive link lever
[5]	Pressure roller	-	-

(1) Description

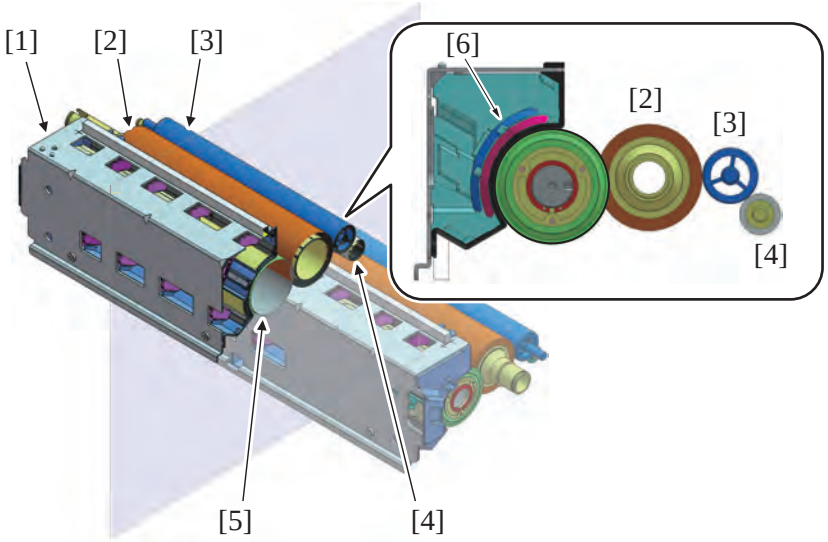
- Reverse rotation of the fusing motor releases the drive force to the oscillation gear in the fusing section drive mechanism.
- When the right door is closed, the drive link release lever links the oscillation gear to the fusing motor drive system.
- When the right door is opened, the drive link release lever links the oscillation gear to the jam removal dial drive system.
- Rotation of the jam removal dial enables the pressure roller to be manually rotated. (Reverse rotation is also enabled)
- Rotation of the jam removal dial makes it easy to remove any paper in the main body.
- When the right door is closed after jams are removed, the drive link release lever links the oscillation gear to the fusing motor drive system.

(2) Fusing motor reverse operation control process

1. Jams or other troubles occur.
2. The fusing motor is stopped.
3. The fusing motor rotates in reverse when a specified period time elapses after the fusing motor stops.
4. The fusing motor stops when a specified period time elapses after reverse rotation of fusing motor starts.
5. The fusing pressure motor is rotated, and the pressure roller pressure releases.
6. It completes the reverse operation control of the fusing motor. (The pressure roller remains in the released state.)

15.3.6 Heating roller heating control

- The fusing roller in the bizhub 808/758 has the same diameter as the fusing roller in conventional models.
- The heating roller is heated with IH coils. The pressure roller, soaking roller, and brush roller are not equipped with a heating mechanism.
- The heating roller is a soft type of roller.



[1]	IH coil (IHC)	[2]	Pressure roller
[3]	Soaking roller	[4]	Brush roller
[5]	Heating roller	[6]	IH coils

(1) Heating control

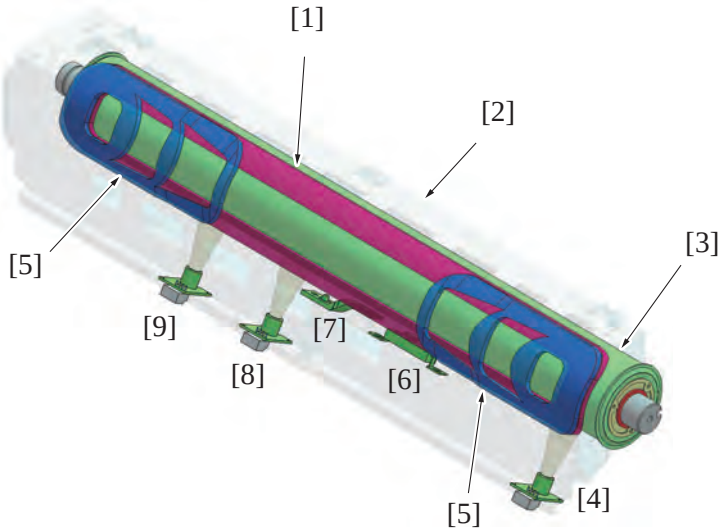
- The heating roller assy consists of the fusing belt (cylindrical shape) into which the fusing roller is inserted.
- The inside surface of the fusing belt is formed with Ni layer and Cu layer.
- The IH coil unit located beside the heating roller radiates magnetic flux to the heating roller when energized.
- The IH coil unit consists of two different types of coil: main coil and demagnetization coil.
- The heating roller is heated by the main coil. The demagnetization coil controls the heating zone.
- Ni layer and Cu layer of the fusing belt is the conducting layer in which eddy current is generated with magnetic flux. The eddy current generated in the conducting layer produces Joule heat to heat the heating roller.
- The main coil is provided only on one side of the heating roller, so that the heating roller generates heat from a local surface of the fusing belt close to the main coil. The heating roller is therefore rotated to ensure that the entire periphery of the roller is heated to an adequate temperature.
- The heating roller temperature sensor/1, to /3 and heating roller thermistor/1 measure the temperature of the fusing belt.
- The heating roller thermostat is used to protect against abnormal temperature and to provide overheat protection. For details, refer to [Protection against abnormal temperature].

(2) Whole area heating roller control

- During printing, the whole area of the heating roller is heated by the main coil.

(3) Center heating roller switch control

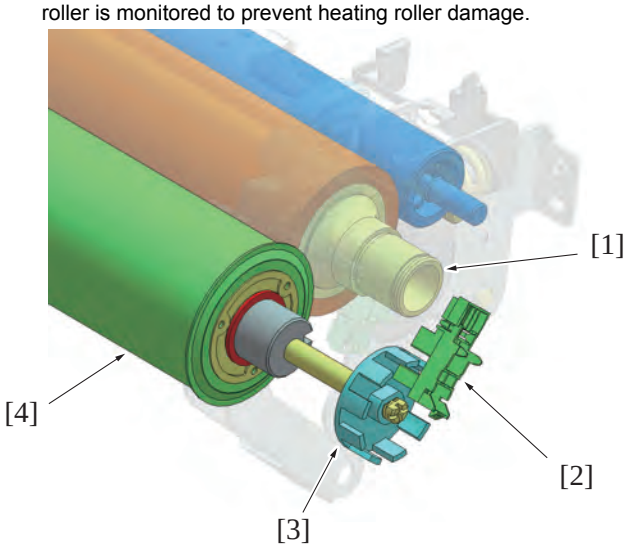
- The temperature on ends of the heating roller is measured with the heating roller sensor/2 and /3.
- When the temperature of ends of the heating roller exceeds a predetermined value during printing using paper of a small size or in the standby state, the demagnetization coil comes into play in inhibiting heating of roller ends and only the center portion of the roller is heated.
- When the demagnetization coil is energized, the demagnetization coil radiates magnetic flux so as to cancel the magnetic flux radiated from the main coil. Canceling the magnetic flux on the ends of the roller results in generation of heat on the roller ends being inhibited.
- The IH coil unit is provided with three different types of demagnetization coils, offering a high demagnetization effect.
- Each of the demagnetization coils is turned ON or OFF as necessary according to the paper width (CD: main scanning length), temperature at ends of the fusing belt, and the type of paper used.



[1]	1st demagnetization coil Main coil	[2]	IH coil unit
[3]	3rd demagnetization coil Heating roller	[4]	Heating roller temperature sensor/3 (TEMS3)
[5]	Demagnetization coil	[6]	Heating roller thermostat (TS1)
[7]	Heating roller thermistor/1 (TH1)	[8]	Heating roller temperature sensor/1 (TEMS1)
[9]	Heating roller temperature sensor/2 (TEMS2)	-	-

15.3.7 Heating roller rotate detection control

- If the heating roller is not rotating when the IH coil is energized, the heating roller may be damaged. The state of rotation for the heating roller is monitored to prevent heating roller damage.



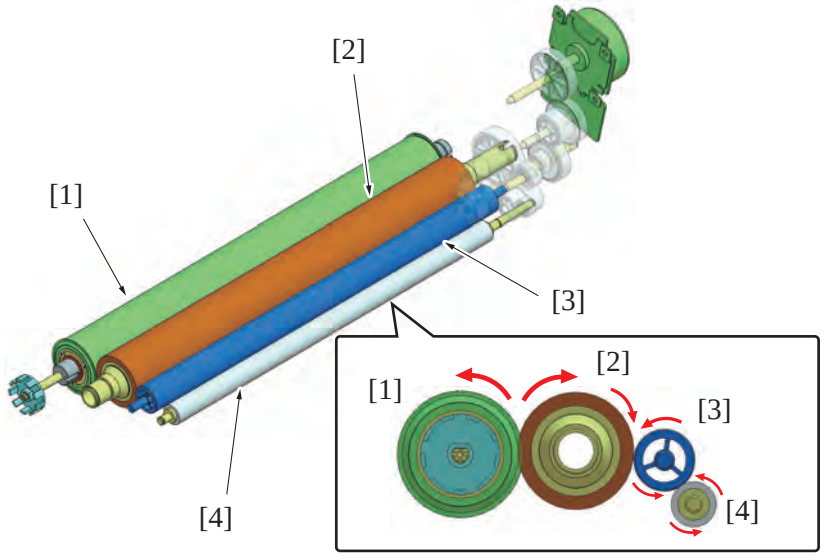
[1]	Pressure roller	[2]	Heating roller rotation sensor (PS56)
[3]	Cylindrical actuator	[4]	Heating roller

(1) Description

- The heating roller is rotated while it is being heated to ensure that the entire periphery of the heating roller reaches an adequate temperature.
- Rotation of the heating roller results in the cylinder actuator being rotated.
- As the heating roller rotation sensor alternates between unblocked and blocked states at regular intervals, the machine determines that the heating roller assy is rotating.
- If the heating roller does not rotate while the IH coil unit (main coil) is energized, the temperature of the entire periphery of the fusing belt cannot be measured and thus proper temperature control cannot be provided. At this time, only the half surface of the fusing belt is heated. If the main coil is energized with the heating roller assy remaining stationary, the roller can be damaged.
- If the heating roller rotation sensor remains unblocked or blocked for a predetermined period of time during printing, the machine determines that a paper misfeed occurs at the exit, displaying a corresponding message on the control panel.
- If the heating roller rotation sensor remains unblocked or blocked for a predetermined period of time during a warm-up cycle, standby state, or any other timing than a print cycle, the machine displays the malfunction code “C3102: Heating roller’s failure to turn” on the control panel.

15.3.8 Pressure roller/Soaking roller cleaning mechanism

- bizhub 808/758 models are equipped with a soaking roller to improve uniformity of heat distribution in the heating roller.
- The soaking roller is also equipped with a brush roller to remove dust and dirt that has adhered to the soaking roller.
- bizhub PRO 958, bizhub 958, and bizhub 758 models for Taiwan are not equipped with the soaking roller and brush roller because of the different fusing method.



[1]	Heating roller	[2]	Pressure roller
[3]	Soaking roller	[4]	Brush roller

(1) Description

- The fusing motor drives the pressure roller via the drive gear. The heating roller and soaking roller follow the rotation of the pressure roller.
- The fusing motor drives the brush roller via the drive gear. The brush roller rotates in reverse rotation direction of the soaking roller. The brush roller scrapes dust and dirt from the soaking roller where the two rollers make contact. This collected dust and dirt are stored in the cleaning roller.
- The soaking roller is connected to the main body frame to prevent tribo electrification between rollers. This configuration prevents dirt and other foreign matter that the soaking roller and cleaning roller collect from transferring back to the pressure roller.

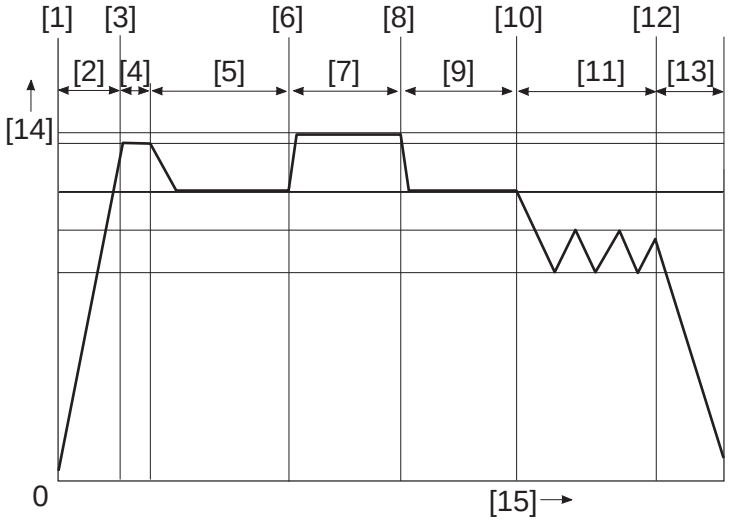
NOTE

- **If the brush roller is not capable of removing all dust and dirt, this dust and dirt will return back to the pressure roller. This dust and dirt may cause image failures such as streaks on back-side images. The pressure roller is not designated as a part that needs a periodic replacement. However, the bizhub 758 model is designed so that the pressure roller assy can be replaced. Replacement of the pressure roller assy can sometimes resolve image failures due to brush roller dust and dirt.**
- **The pressure roller assy cannot be replaced in bizhub PRO 958, bizhub 958, and bizhub 758 models for Taiwan due to different fusing methods. (Issues of dust and dirt on the pressure roller due to dirty brush rollers are not applicable for these models.)**

15.3.9 Fusing temperature control

- The surface temperature of the heating roller is detected to control the amount of the heat of the IH coil in order to maintain the appropriate fusing temperature.

Temperature control chart



[1]	Main power ON	[2]	Warm-up
[3]	Print is available	[4]	Pre-standby (3sec.)
[5]	Standby (normal operation)	[6]	Start key ON
[7]	Printing	[8]	End of print
[9]	Standby (normal operation)	[10]	Start of low power mode
[11]	Low power mode	[12]	Start of sleep mode

[13]	Sleep mode	[14]	Temperature
[15]	Time	-	-

(1) IH coil control

- Electric energy of the IH coil is controlled so that the temperature of the heating roller falls within a predetermined temperature range.
- The temperature of the heating roller is measured with the heating roller temperature sensor to thereby determine a possible change in the temperature (increase or decrease).

(2) Temperature control during warm-up

- The warm-up control is started as soon as the main power switch power be turned ON.
- If the pressure roller presses the heating roller assy, the fusing pressure motor is energized to let the pressure roller retract from the heating roller assy.
- The fusing motor is energized and, using the driving force of the fusing motor, the heating roller, pressure roller, and the soaking roller are rotated.
- The main coil is energized to heat the heating roller to the specified temperature value.
- When the temperature of the heating roller reaches the predetermined value, the fusing pressure motor is energized to let the pressure roller press the heating roller.
- When the temperatures of heating roller exceed the predetermined value, the print cycle can now be started.
- A print cycle is started if so requested. If there is no print request, the machine enters the “temperature control under pre-standby”.

(3) Temperature control in standby state

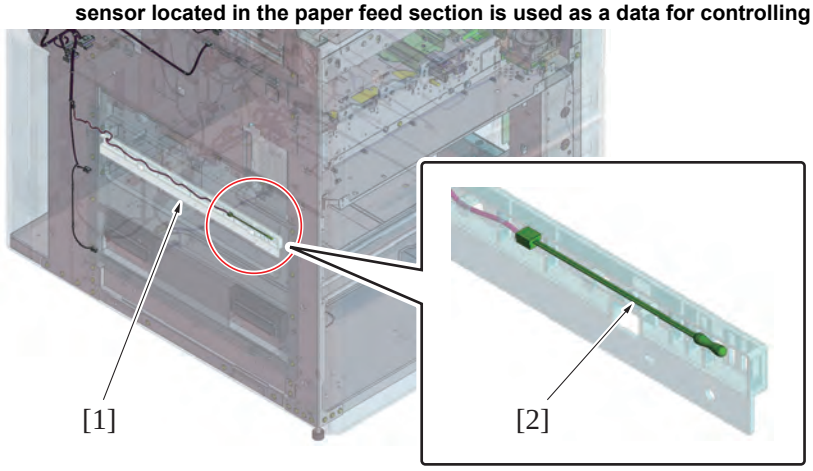
- The machine enters the pre-standby temperature control if no print requests are received after the warm-up.
- The temperature is controlled by normal mode, after predetermined time from pre-standby control start.
- For a predetermined period of time after the machine has started to enter the standby temperature control, control is provided with the target temperature of each of low temperature, normal, and high humidity modes.
- The standby temperature control ensures that the temperature of heating roller in the standby state is not decreased.

NOTE

- **Counted period for standby control includes the printing time.**

(4) Temperature control during printing

- Temperature control is provided in order to keep optimum fusing performance with various factors, such as the type of paper, print mode, paper temperature*1, use of paper of small size, decreased temperature during paper passage, and warm-up carried out with a cool fusing unit.
  - ***1: For paper temperature, “the machine interior temperature at the paper feed section” detected by the paper temperature sensor located in the paper feed section is used as a data for controlling a fusing temperature.**



[1]	Paper temperature sensor (TH8)	-	-

(5) Temperature control under low power mode

- The temperature of the heating roller is decreased to thereby reduce power consumption during the low power mode.
- If the pressure roller is in a pressed condition, the fusing pressure motor is energized to release the pressure.
- The heating roller is rotated by the fusing motor at the same time that the IH coil is energized and stopped when the IH coil is deenergized. The speed of the heating roller assy at this time is lower than that during a print cycle.
- When the temperature of the heating roller is decreased to the starting temperature of the low power mode temperature control, the IH coil and the fusing motor are energized; when the temperature exceeds the ending temperature, the IH coil and the fusing motor are deenergized.
- During the low power mode, ON/OFF control is repeated between the starting and ending temperatures of the low power consumption control.

(6) Temperature control in sleep mode

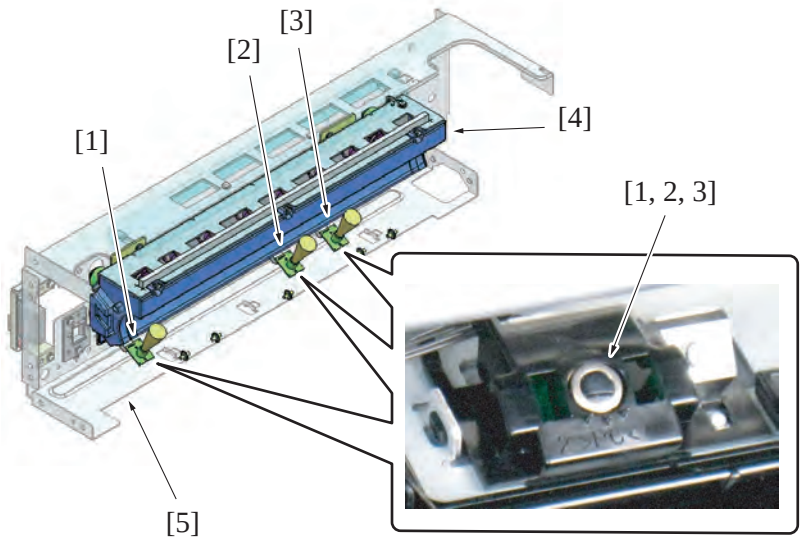
- The main coil and demagnetization coil are deenergized to stop heating the heating roller, thereby reducing power consumption in the sleep mode.
- The fusing motor is also deenergized to keep all rollers stationary.
- In the sleep mode, two different types of control are performed: engine ON sleep and engine OFF sleep. Either one of these is selected depending on the elapsed time after the print cycle.

- The machine enters the engine ON sleep mode, if a sleep mode start command is received during a period of less than 15 min. after the end of the print cycle.
  NOTE
  - **The fusing temperature control is stopped, though a rotating fan, if any, is kept driven.**

- The machine enters the engine OFF sleep mode, if a sleep mode start command is received after the lapse of a period of 15 min. or more after the end of the print cycle.
- In the sleep mode, the heating roller temperature may be decreased down to room temperature because the heating roller is not heated. A maximum time equivalent to the warm-up time may be required before the heating roller temperature is increased to the print enable temperature from the room temperature.

15.3.10 Heating roller temperature sensors

- The non-contact type thermopile sensors are used for heating roller temperature sensor/1 to 3 (hereinafter referred to as “temperature sensors”).
- The temperature sensors detects the temperature of the heating roller through infrared rays and controls the surface temperature.



[1]	Heating roller temperature sensor/ 3 (TEMS3)	[2]	Heating roller temperature sensor/1 (TEMS1)
[3]	Heating roller temperature sensor/2 (TEMS2)	[4]	IH coil unit (IHC)
[5]	Main body frame (Fusing unit frame: Inside the right door)	-	-

(1) Temperature sensor features

- In comparison to non-contact type thermistors, temperature sensors have excellent temperature detection accuracy. Furthermore, sensors are installed to the frame to achieve a high maintainability.
- The temperature sensor is provided with a lens. For its structural reason, therefore, the temperature sensor can be dirtied by dew condensation formed or foreign matter deposited on the lens.
- The temperature sensor, if contaminated with dew drops or dirt on the lens, becomes unable to detect the temperature accurately, since the contaminants blocks the infrared rays that are otherwise detected by the sensor.
- If temperature control is provided under such conditions, the temperature sensor detects a temperature that is lower than the actual temperature of the fusing belt. Then, the fusing belt temperature is controlled based on a temperature higher than the target one.
- For preventing the improper temperature control caused by the falsely detect, “Heating roller temperature sensor condensation detection”, “Heating roller temperature sensor contamination detection control” and “Heating roller alternative temperature control” are performed.

(2) Heating roller temperature sensor condensation detection

- The control of detection of condensation on the heating roller temperature sensor/1 is to determine degradation of detection accuracy of the temperature sensor caused by condensation or dirt.
- When condensation on the temperature sensor is detected and the control is switched to “alternative temperature control”, the machine displays the corresponding P code “K.2.11 P-32” on the control panel.

(a) Condensation detection conditions

- When any of the following conditions is detected, the machine determines that the heating roller temperature sensor/1 lens has condensation on it and starts the heating roller alternative temperature control. (For details, see “Heating roller alternative temperature control”.)

Conditions	Description
During warm-up	The difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
In standby state	Within 180 sec. after the completion of the warm-up, the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
During printing	During printing, the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.

(3) Heating roller temperature sensor contamination detection control

- The control of detection of contamination on the heating roller temperature sensor (here in after referred to as “contamination detection control”) is to determine degradation of detection accuracy of the heating roller temperature sensor/1 caused by contamination.
- The contamination detection control is performed only in the standby state. No control is provided during the alternative temperature control initiated by condensation of the temperature sensor.
- If contamination of the lens of the heating roller temperature sensor/1 is detected, the machine displays the corresponding malfunction code “K.3.8.20 C392A” on the control panel. It then shuts down the circuit to the main coil and terminates fusing unit temperature control.

(a) Contamination detection conditions

Conditions	Description
Control start conditions	• The contamination detection control is started if, at any timing 180 sec. or more after the completion of the warm-up, the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
Control termination conditions	• The contamination detection control is terminated if, at any timing within 10 min. after the contamination detection control has been started, the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 is equal to, or less than, a specified value. • The contamination detection control is terminated if the machine enters any mode other than the current one, including the warm-up or the low power mode as initiated by the start of a print cycle or restart.
Criteria for contaminati on	• If, after the start of the contamination detection control, the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor is equal to, or more than, a specified value and that condition lasts for 10 min. or more, the machine determines that the heating roller temperature sensor/1 lens is contaminated and displays the corresponding malfunction code.

(4) Heating roller alternative temperature control

(a) Control start conditions

- Temperature control for the heating roller is provided based on the temperature detected by the heating roller temperature sensor/1.
- If condensation on the heating roller temperature sensor/1 is detected, the heating roller temperature control is provided based on the temperature detected by the heating roller thermistor/1, instead of that detected by the fusing belt temperature sensor/1. This control is referred to as the heating roller alternative temperature control.
- When the control is switched to the alternative temperature control, the machine displays the corresponding P code “K.2.11 P-32” on the control panel.

(b) Control termination conditions

- If the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 becomes less than a specified value during the alternative temperature control, the machine determines that condensation on the heating roller temperature sensor/1 has been eliminated and resumes the temperature control based on the temperature detected by the heating roller temperature sensor/1.
- If the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 is not improved even after the lapse of 10 min. after the alternative temperature control has been initiated, the machine determines that the cause is not condensation, but contamination, on the lens and terminates the heating roller alternative temperature control.

(c) Print job during the alternative temperature control

- If a print job is received during the heating roller alternative temperature control, control is performed according to the settings made in “Enhanced Security” of “Service Mode”. Reference: [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW] -> Switch No. 4/ Fusing unit alternative temperature control
- If “OFF” is selected, the machine disables any print job during the alternative temperature control.
- If “ON” is selected, the machine enables a print job during the alternative temperature control.
- The print job during the alternative temperature control is processed at 50% productivity.
- The default setting is “OFF”.

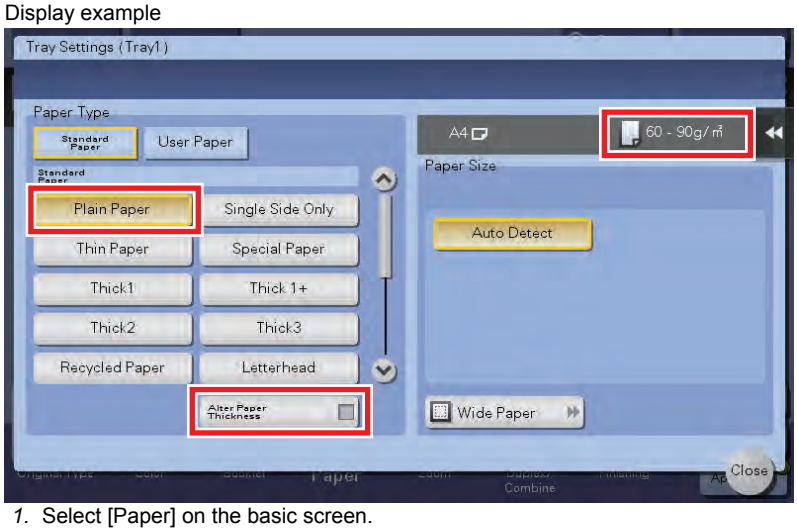
15.3.11 Plain paper fusing temperature control

- Two different target temperatures control the printing on plain paper.

Basis weight	Specific controls
Plain paper (60g/m^2 - 70g/m^2)	The base weight is limited to 60g/m^2 - 70g/m^2. Power consumption (TEC value) is controlled through lowering the target temperature to lower than the normal fusing temperature.
Plain paper (60g/m^2 - 90g/m^2)	The normal target temperature controls the fusing temperature control of plain paper.

(1) Setting procedure

Display example



1. Select [Paper] on the basic screen.
2. Select your desired paper feed port and tap [Change Tray Setting].
3. Select [Plain Paper] and tap [Alter Paper Thickness] to select "Plain Paper (60g/m2 - 70g/m2)".
   A "check mark" will be displayed in the check box of the [Alter Paper Thickness] key.
4. Tap the [Alter Paper Thickness] key again to select "Plain Paper (60g/m2 - 90g/m2)".
   The "check mark" in the check box of the [Alter Paper Thickness] key will disappear.

NOTE

- **"Plain Paper (60g/m2 to 70g/m2)" is specified by default only for Japan.**
- **You can only use the [Alter paper thickness] key for plain paper.**

15.3.12 Smart Fusing Control

- Lower the target temperature as much as possible according to the information of each sheet of paper to control the fusing temperature adjustment. In this way, the power consumption (TEC value) is controlled.
- Smart fusing control is only performed when the execution conditions below are met.
- If these execution conditions are not met, the normal fusing temperature control is performed.
- Smart fusing control can also prohibit control execution from [Service Mode / System 2 / Smart Fusing Control].
  For details on how to configure the settings, see “I.5.16.33 Smart Fusing Control”.

(1) Smart fusing control execution conditions

Function		Execution conditions
Temp-Inside		10 °C and above
Print mode		Only for PC printing, BOX printing, and direct printing (USB)*1
Basic Settings	Print zoom	Only 100%
	Paper type	Plain paper only
Layout	Combination	1 in 1 only
	Image shift	No
Cover sheet insertion	Cover sheet	No
	Back cover	No
	Inter sheet	No
	OHP interleave	No
	Booklet	No
Image quality	Select color	Black mode only
	Gloss mode	No
	Toner save (density 50%)	No
	Edge enhancement	No
	Negative-positive reversal	No
	Maximum black density	80% or more to 90% or less
	Line width	1.5pt or less
	Character decoration	Normal characters only*2
	Character size	16pt or less
	Image object	No
Stamp/page printing	No watermarks	No
	No overlay	No
	No copy security	No
	No header/footer	No
	No management number	No

- *1: Copies are not included in the control

- *2: Bold characters are not included in the control

15.3.13 Protection against abnormal temperatures

- This machine is equipped with a 3-stage protection mechanism to prevent damage due to abnormally high temperatures in the fusing section.
  - Soft protection
  - Hard protection
  - Excessive rise protection

(1) Soft protection

- A high temperature abnormality is detected when the heating roller temperature exceeds the control range.
- Current that is supplied to the IH coil is cut and a trouble code appears.

Name	Sensor name	Trouble code
Heating roller	Heating roller temperature sensor/1 TEMS1	C3725 Fusing abnormally high temperature detection (Center of the heating roller)
	Heating roller temperature sensor/2 TEMS2	C3726 Fusing abnormally high temperature detection (Middle of the heating roller)
	Heating roller temperature sensor/3 TEMS3	C3722 Fusing abnormally high temperature detection (Edge of the heating roller)

(2) Hard protection

- Monitoring is performed using two different methods.

(a) Hard protection circuit monitoring

- The hard protection circuit in the MFP board detects an abnormally high temperature when soft protection cannot be detected due to overload of main CPU.
- An abnormally high temperature is detected when the heating roller temperature exceeds the control range, which causes a detection of the temperature sensor hard protection signal.
- Current that is supplied to the IH coil is cut and a trouble code appears.

Name	Sensor name	Trouble code
Heating roller	Heating roller temperature sensor/1 TEMS1	C3737 Fusing abnormally high temp. (Center of the heating roller)
	Heating roller temperature sensor/2 TEMS2	C3736 Fusing abnormally high temp. (Middle of the heating roller)
	Heating roller temperature sensor/3 TEMS3	C3732 Fusing abnormally high temp. (Edge of the heating roller)

(b) Sub CPU monitoring

- The sub CPU detects an abnormally high temperature when soft protection cannot be detected due to overload of main CPU.
- A high temperature abnormality is detected when the heating roller temperature exceeds the control range.
- Current that is supplied to the IH coil is cut and a trouble code appears.

Name	Sensor name	Trouble code
Heating roller	Heating roller thermistor/1 TH1	C3737 Fusing abnormally high temp. (Center of the heating roller)
	Heating roller temperature sensor/2 TEMS2	C3726 Fusing abnormally high temperature detection (Middle of the heating roller)
	Heating roller temperature sensor/3 TEMS3	C3722 Fusing abnormally high temperature detection (Edge of the heating roller)

(c) Monitoring via Inter-CPU communication

- The sub CPU detects an abnormally high temperature when soft protection cannot be detected due to overload of the main CPU.
- When communication between the main CPU and sub CPU fails for a time longer than the specified time, current that is supplied to the IH coil and pressure roller is cut to stop the heating process.

(3) Excessive rise protection

- The thermostat activates when soft and hard protection cannot detect an abnormally high temperature due to overload of CPU, temperature sensor, and thermistor.
- The heating roller thermostat cuts current that is supplied to the IH coil when the heating roller temperature exceeds the control range.

15.3.14 Sensor disconnection detection control

- The states of temperature sensors and thermostat are monitored to detect the temperature of the fusing section.

(1) Temperature sensor

- If the temperature of the temperature sensor fails to reach the specified temperature in the given period after the warm-up started, the sensor is judged to have disconnection, and the trouble code will appear.

(a) Trouble code list

Roller name	Sensor name: code	Trouble code	
Heating roller	Heating roller temperature sensor 1: TEMS1	C3925	Fusing sensor wire breaks detection (Middle of the heating roller)
	Heating roller temperature sensor 2: TEMS2	C3926	Fusing sensor wire breaks detection (Center of the heating roller)
	Heating roller temperature sensor/3: TEMS3	C3922	Fusing sensor wire breaks detection (Edge of the heating roller)

(2) Thermostat

- If the thermostat broken detection signal is detected for at least a specified period of time after warm-up starts, a broken thermostat will be determined. A corresponding trouble code appears.

(a) Trouble code list

Roller name	Sensor name: code	Trouble code	
Heating roller	Heating roller thermostat: TS1	C3903	Thermostat breaks detection

15.3.15 IH power supply control

- The IH power supply unit performs IH power supply abnormal temperature detection and abnormal power supply input detection to prevent high-temperature abnormality and fusing defect.

(1) IH power supply abnormal temperature detection

- The IH power supply is equipped with a thermal fuse that prevents an IH power supply malfunction from occurring due to increased temperature inside the IH power supply.
- The IH power supply is equipped with a thermistor that monitors temperature inside the IH power supply. If the temperature inside the power unit increases, control is performed to bring down the temperature.
- Specific controls performed upon detection of high temperatures

Fault name	Detected temperature	Mode	Specific controls	Trouble code	
High temperature 1	92 °C detected for 10 sec. or more	During print cycle	Decrease productivity down from 100 % to 50 %.	Not detected.	
			Return productivity back to 100 % when 90 °C is detected for 30 sec. or more.		
		Standby	Increase the speed of the IH power supply cooling fan from 50 % to 100 %.		
			Return the speed back to 50 % when 90 °C is detected for 30 sec. or more.		
High temperature 2	97 °C detected for 10 sec. or more	All mode	Trouble code is displayed.	C3B02	IH malfunction (CPU)

(2) Abnormal power supply input detection

- If the voltage applied to the IH power supply is decreased, the IH power supply reduces the amount of electricity supplied to the IH coil. Since good fusing performance cannot be maintained because of the reduced amount of electricity supplied to the IH coil, PPM control is performed in which print productivity is decreased from 100 % down to 40 % in a stepwise fashion.
- The IH power supply displays a trouble code when the electricity or voltage input is abnormal.

Fault name	Detection method	Specific controls	Trouble code	
Faulty input electricity	The current or electricity to be input exceeds an upper limit value.	Trouble code is displayed.	C3B07	IH input power error
	The current or electricity to be input falls below a lower limit value.			
Faulty input voltage	The voltage to be input exceeds an upper limit value.	Trouble code is displayed.	C3B08	IH input voltage error
	The voltage to be input falls below a lower limit value.			

15.3.16 Detection of fusing unit

- The fusing unit is not provided with any new article detection mechanism.
- When the fusing unit is replaced with a new one, "New Release" must be selected from [Service Mode] -> [Counter] -> [Life].

NOTE

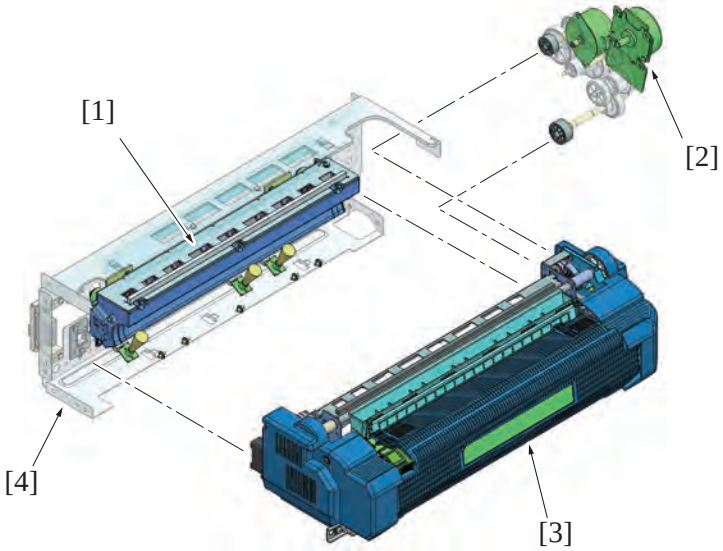
- **For details of the unit life, refer to "F.5.1 Life value of consumables and parts".**

16. FUSING SECTION (bizhub 758 for Taiwan)

16.1 Configuration

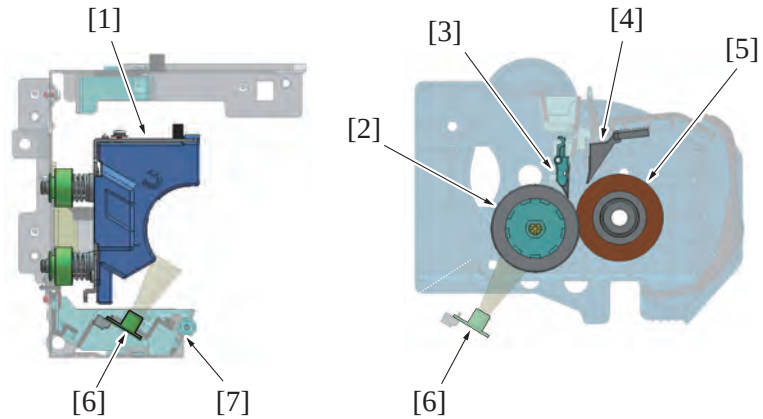
NOTE

- **Only the bizhub 758 for Taiwan have a fusing section mechanism different from that on bizhub 808/758 for other marketing areas. The fusing section mechanism on bizhub 808/758 for marketing areas other than Taiwan, see "O.15.1 Configuration".**



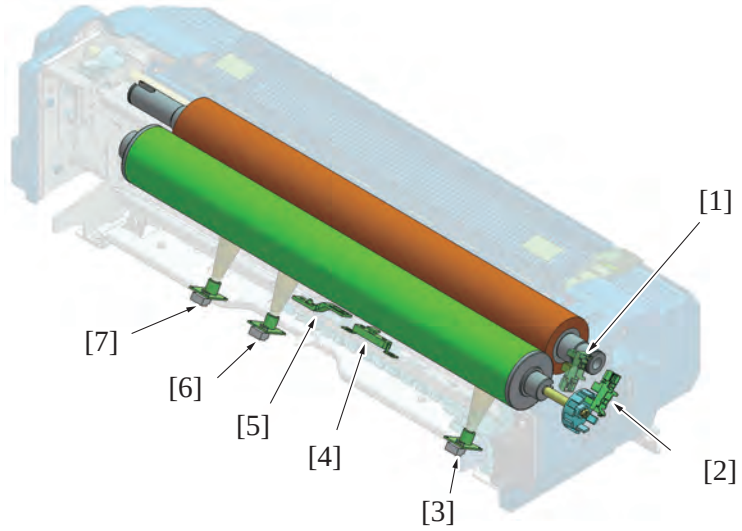
[1]	IH coil (IHC, Fixed at the main body frame side)	[2]	Fusing drive section
[3]	Fusing unit	[4]	Main body frame (Fusing unit flame)

16.1.1 Fusing section cross section view



[1]	IH coil (IHC)	[2]	Heating roller
[3]	Heating roller separation claw	[4]	Pressure roller separation claw
[5]	Pressure roller	[6]	Heating roller temperature sensor (Fixed at the main body frame side)
[7]	Main body frame (Fusing unit flame)	-	-

16.1.2 Sensor configuration of the fusing unit



[1]	Fusing pressure home sensor (PS59)	[2]	Heating roller rotation sensor (PS56)
[3]	Heating roller temperature sensor/3 (TEMS3) (Fixed at the main body frame side)	[4]	Heating roller thermostat (TS1)
[5]	Heating roller thermistor/1 (TH1)	[6]	Heating roller temperature sensor/1 (TEMS1) (Fixed at the main body frame side)
[7]	Heating roller temperature sensor/2 (TEMS2) (Fixed at the main body frame side)	-	-

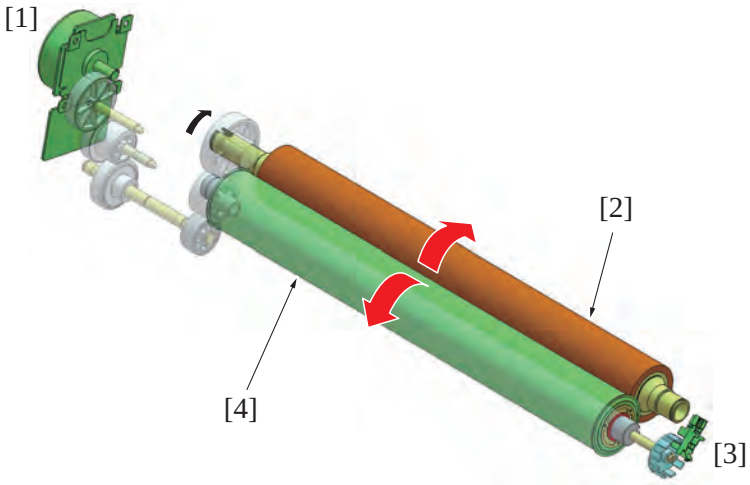
16.1.3 Fusing unit exterior view

16.2 Drive

- The fusing section drive mechanism includes a drive mechanism for the heating roller and pressure roller and a pressure drive mechanism for the pressure roller.

16.2.1 Drive for heating roller and pressure roller

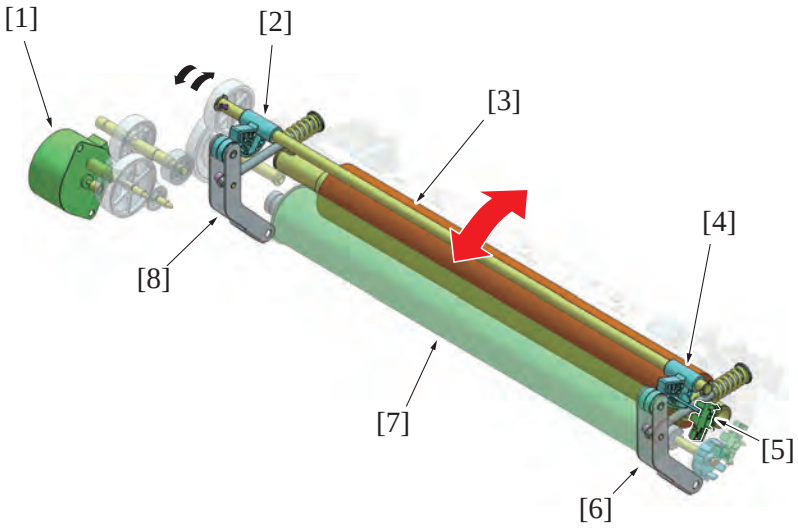
- The pressure roller is driven by the fusing motor via the drive gear.
- The heating roller is rotated by, or driven to follow the rotation of, the pressure roller.



[1]	Fusing motor (M30)	[2]	Pressure roller
[3]	Heating roller rotation sensor (PS56)	[4]	Heating roller

16.2.2 Pressure roller pressure drive

- The fusing pressure motor drives the pressure roller via the drive gear.
- The pressure cam is connected to the pressure lever. The pressure cam rotates to change pressure roller force that is applied to the heating roller.



[1]	Fusing pressure motor (M34)	[2]	Pressure cam (rear side)
[3]	Pressure roller	[4]	Pressure cam (front side)
[5]	Fusing pressure home sensor (PS59)	[6]	Pressure lever (front side)
[7]	Heating roller	[8]	Pressure lever (rear side)

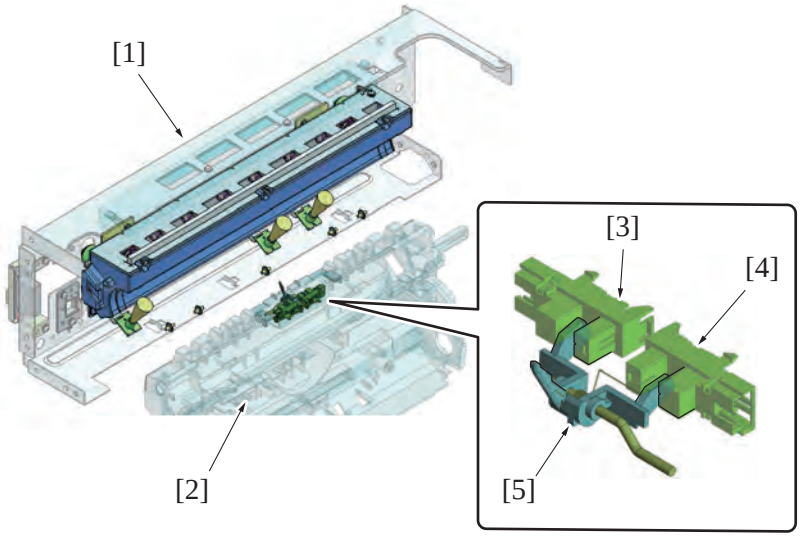
16.2.3 Rear side of the main body - Motor layout view (around the fusing section)

[1]	Exit motor (M4)	[2]	Fusing pressure motor (M34)
[3]	Transfer belt motor (M1)	[4]	PC motor/K (M18)
[5]	Fusing motor (M30)	[6]	Switchback motor (M33)

16.3 Operation

16.3.1 Adjustment of paper loop amount

- By creating a paper loop, the speed difference between the fusing and paper conveyance at 2nd transfer section will be adjusted. It prevents the double transferred image or brush effect.



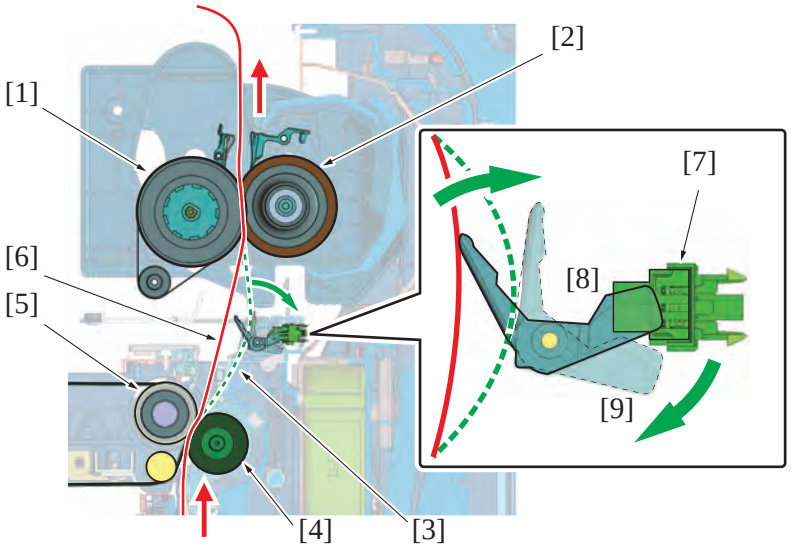
[1]	Fusing unit mounting section (Main body frame)	[2]	Second transfer section (Right door unit)
[3]	Fusing loop sensor/Fr (PS41)	[4]	Fusing loop sensor/Rr (PS42)
[5]	Fusing loop sensor actuator	-	-

NOTE

- **The configuration of fusing unit rollers and the shape of IH coils varies depending on the model. However, the paper loop amount control mechanism is the same. The illustration shows the bizhub 958 model.**

(1) Paper loop amount determination method

- The fusing loop sensor/Fr, /Rr turns ON in different timing according to the loop amount so that the loop amount can be detected in three stages.



[1]	Fusing roller	[2]	Pressure roller
[3]	Loop amount: large	[4]	Transfer roller
[5]	Transfer belt drive roller	[6]	Loop amount: small
[7]	Fusing loop sensor	[8]	Fusing loop sensor actuator (Loop amount: Large)
[9]	Fusing loop sensor actuator (Loop amount: Small)	-	-

NOTE

- **The configuration of fusing unit rollers and the shape of IH coils varies depending on the model. However, the paper loop amount control mechanism is the same. The illustration shows the bizhub 958 model.**

Fusing loop sensor /Fr (PS41)	Fusing loop sensor /Rr (PS42)	Loop amount	Fusing speed
Unblocking	Unblocking	large	Speed-up (High speed)

Fusing loop sensor /Fr (PS41)	Fusing loop sensor /Rr (PS42)	Loop amount	Fusing speed
Unblocking	Blocking	average	Speed-up (Low speed)
Blocking	Blocking	small	Slowdown

(2) Operation timing

- It starts controlling when the front-edge of the paper reaches to the predetermined position before the fusing pressure roller.
- If the loop amount is “large” or “average”, the fusing speed is increased to reduce the paper loop amount to an appropriate value.
- If the loop amount is “small”, the fusing speed is decreased to increase the paper loop amount to an appropriate value.
- The control will finish when the tail-edge of the paper passes the predetermined position on the transfer roller unit.

16.3.2 PPM control

- PPM control, which allows for given paper transport intervals to reduce the number of printed pages produced per minute, is performed to prevent fusing failure, faulty image, or other related malfunctions from occurring due to decreased temperature at the center of the heating roller and pressure roller or increased temperature at edges of these rollers.

(1) Detail

- The PPM control can reduce productivity to about 40 to 90% against the ordinary 100%.
- The productivity for the PPM control is determined by the main scanning direction width of the printing paper or the temperatures * which is detected by the temperature sensor or thermistor.
  - *: Fusing belt temperature sensor/1 to 3, fusing belt thermistor/1

(a) Thin paper PPM control

- To enhance productivity during printing on thin paper, “PPM Control” of the Service Mode can be used to change productivity to 100% (N int.). (Default: W int.) (Reference: [Service Mode] -> [Machine] -> [PPM Control Choice])

NOTE

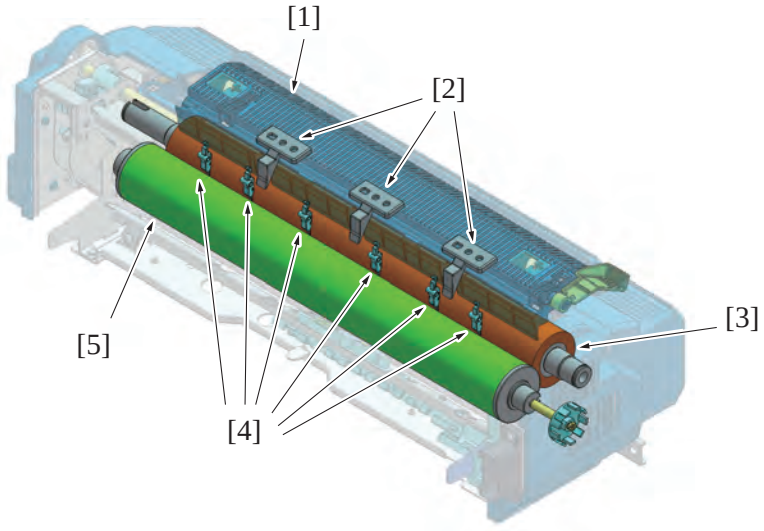
- **If "N int." is selected, a decreased reliability of the paper transporting such as increasing a curled paper may occur.**

(b) High humidity PPM control

- When paper curling issues occur in high-humidity environments, the intervals to transport paper is lengthened to reduce curling. (Reference: [Service Mode] -> [Machine] -> [High Humidity PPM Adjustment])

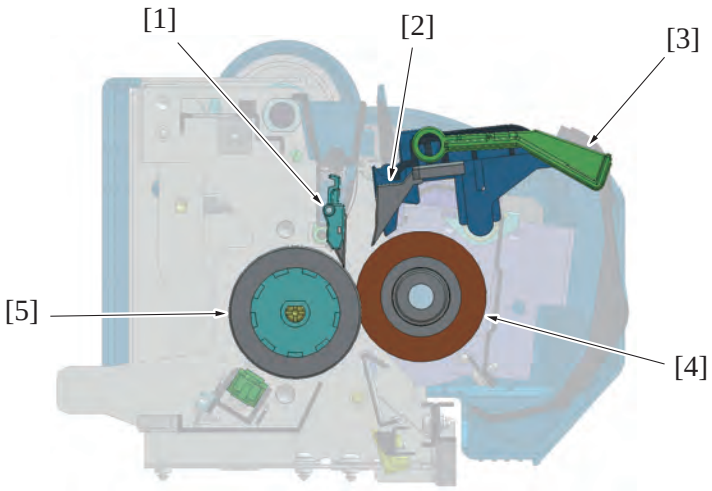
16.3.3 Paper separation mechanism

- The heating roller and the pressure roller cause toner transferred onto the paper to be fused in the paper. Separation claws are disposed downstream in the paper feeding direction of each of the heating roller and the pressure roller. The separation claws prevent the paper that has moved past each of the heating roller and the pressure roller from being wound around it.



[1]	Jam removal guide	[2]	Pressure separation claw (3 pieces)
[3]	Pressure roller	[4]	Heating roller separation claw (6 pieces)
[5]	Heating roller	-	-

(1) Fusing section cross section view

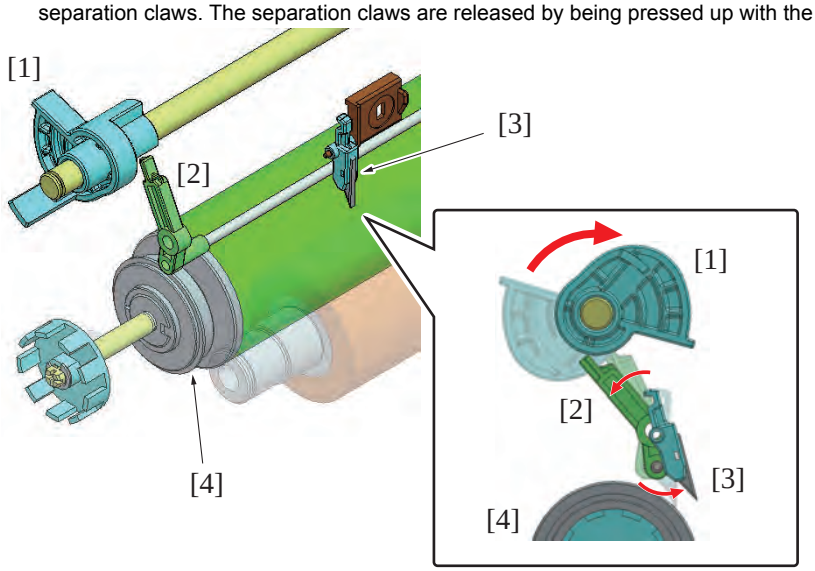


[1]	Heating roller separation claw (6 pieces)	[2]	Pressure separation claw (3 pieces)
[3]	Jam removal guide	[4]	Pressure roller
[5]	Heating roller	-	-

(2) Separation claw

(a) Heating roller separation claw

- The heating roller is equipped with 6 paper separation claws that include a release mechanism.
- The heating roller is a hard type of roller. In comparison to soft rollers, hard rollers have excellent characteristics regarding rises in heat but have poor characteristics regarding the separation of paper. For this reason, the paper separation claws are arranged in positions that make contact with the heating roller to improve the capability of separating paper.
- Release the separation claws from the heating roller during standby to prevent the friction on the heating roller surface due to the separation claws. The separation claws are released by being pressed up with the clip retraction lever.



[1]	Pressure cam	[2]	Claw retraction lever
[3]	Separation claw	[4]	Heating roller

(b) Pressure roller separation claw

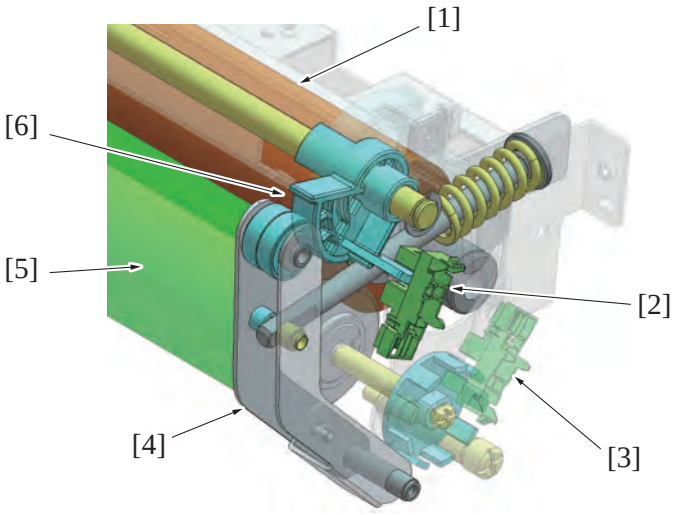
- The pressure roller is provided with three fixed separation claws. The separation claws are provided in positions away from the heating roller in order to prevent toner from sticking to the leading ends of the separation claws.
- Separation claws are not equipped with a release mechanism. Separation claws are secured to the jam removal guide and released from the heating roller when the jam removal guide is opened.

16.3.4 Pressure roller pressure/release control

- The fusing pressure roller is equipped with a pressure release mechanism to improve heating roller durability.

NOTE

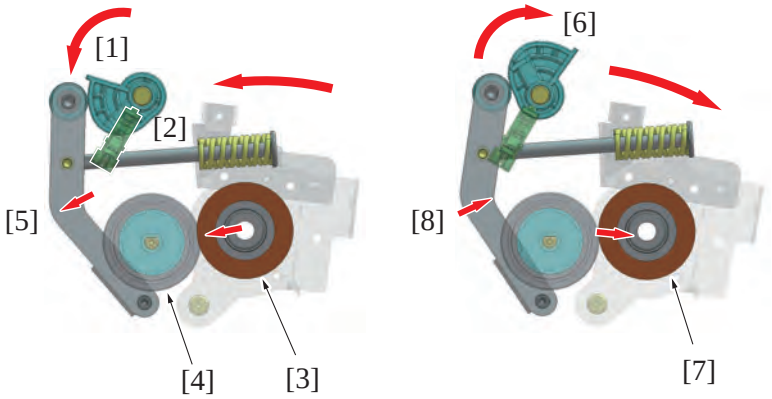
- **"Pressure roller release" does not mean that the pressure roller is separated completely from the heating roller. The pressure roller presses against the heating roller slightly. The state of slight pressurization is referred to as "Pressure roller release" for illustrative purposes.**



[1]	Pressure roller	[2]	Fusing pressure home sensor (PS59)
[3]	Fusing belt rotation sensor (PS56)	[4]	Pressure lever (front side)
[5]	Heating roller	[6]	Pressure cam (front side)

(1) Pressure release mechanism

- The forward and reverse rotation of the fusing pressure motor controls the pressure/release operation between the heating roller and pressure roller. Motor rotation rotates the pressure cam and the pressure lever. This operation changes the position of the pressure roller.
- The fusing pressure home sensor detects the pressure roller at its pressure position. The pressure release position is controlled depending on the rotation speed of the fusing pressure motor.
- When there is no change in the output of the fusing pressure home sensor after a predetermined period of time has elapsed after the fusing pressure motor has started rotating, a pressure/retraction fault is determined. A corresponding "Trouble code C3101 Fusing pressure roller separation failure" message appears.



[1]	Pressure cam (pressure position)	[2]	Fusing pressure home sensor (PS59)
[3]	Pressure roller (pressure position)	[4]	Heating roller
[5]	Pressure lever (pressure position)	[6]	Pressure cam (release position)
[7]	Pressure roller (release position)	[8]	Pressure lever (release position)

(2) Operation timing

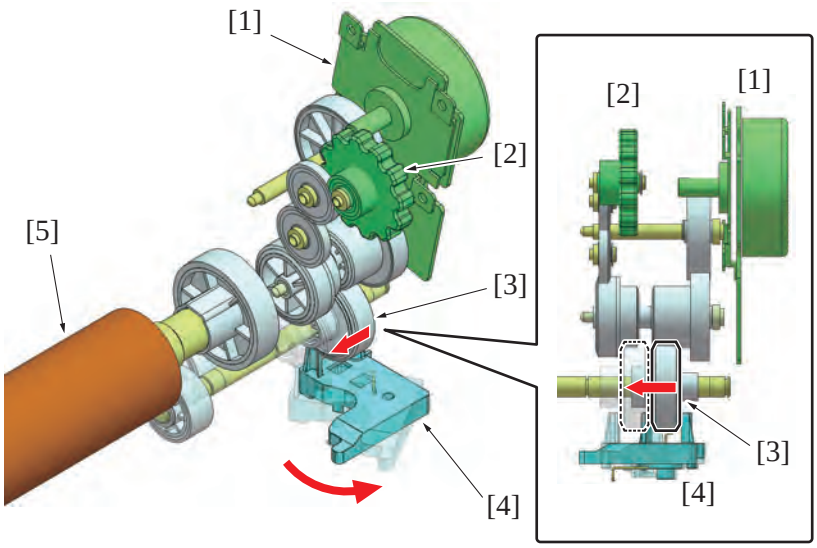
Status		Pressure roller pressurization status
Warm-up	The pressure roller is released from the heating roller until the heating roller has reached the specified temperature.	Retraction
	Once the heating roller has reached the specified temperature, the pressure roller is pressed against the heating roller to heat the pressure roller.	Pressure
Standby	Normal	Retraction

Printing	Paper type: • Thin paper (Paper temperature: High)* • Thick 4 • Envelope	Retraction
	Paper type: • Plain paper • Recycled paper • Thin paper (Paper temperature: Low)* • Thick 1 • Thick 2 • Thick 3 • Postcard • Index paper • OHP film	Pressure
Low power mode	-	Retraction
Sleep mode	-	Retraction

- *: When "ON" is selected for the Thin Paper Fusing Mode Priority function, the pressure roller is pressurized regardless of the paper temperature.

16.3.5 Fusing drive switch mechanism

- The fusing motor is rotated reversely when jams or other troubles occur. Open the right door to switch the pressure roller drive to the jam removal dial.



[1]	Fusing motor (M30)	[2]	JAM removal dial
[3]	Oscillation gear	[4]	Drive link lever
[5]	Pressure roller	-	-

(1) Description

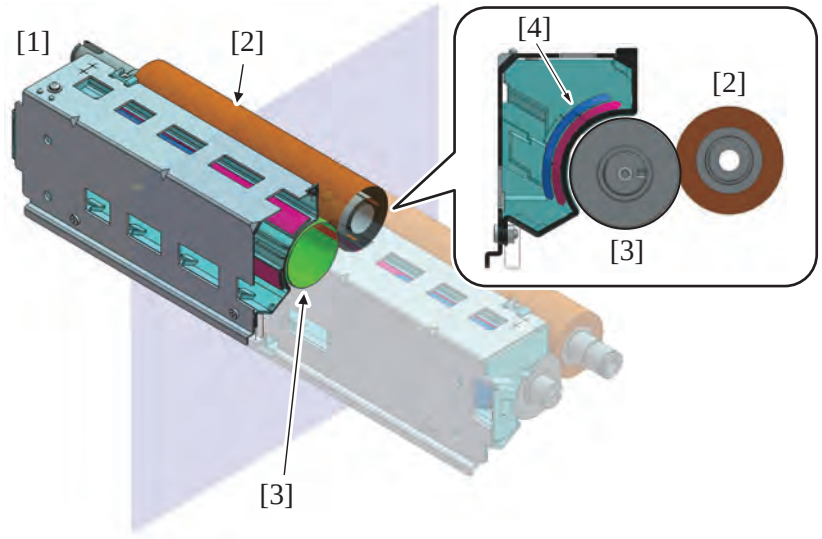
- Reverse rotation of the fusing motor releases the drive force to the oscillation gear in the fusing section drive mechanism.
- When the right door is closed, the drive link release lever links the oscillation gear to the fusing motor drive system.
- When the right door is opened, the drive link release lever links the oscillation gear to the jam removal dial drive system.
- Rotation of the jam removal dial enables the pressure roller to be manually rotated. (Reverse rotation is also enabled)
- Rotation of the jam removal dial makes it easy to remove any paper in the machine.
- When the right door is closed after jams are removed, the drive link release lever links the oscillation gear to the fusing motor drive system.

(2) Fusing motor reverse operation control process

1. Jams or other troubles occur.
2. The fusing motor is stopped.
3. The fusing motor rotates in reverse when a specified period time elapses after the fusing motor stops.
4. The fusing motor stops when a specified period time elapses after reverse rotation of fusing motor starts.
5. The fusing pressure motor is rotated, and the pressure roller pressure releases.
6. It completes the reverse operation control of the fusing motor. (The pressure roller remains in the released state.)

16.3.6 Heating roller heat control

- The fusing roller in the bizhub 758 has the same diameter as the fusing roller in conventional models.
- The fusing belt is heated using IH coils. The pressure roller is not equipped with a heating mechanism.
- The heating roller is a hard type of roller.



[1]	IH coil unit (IHC)	[2]	Pressure roller
[3]	Heating roller	[4]	IH coil

(1) Heat control

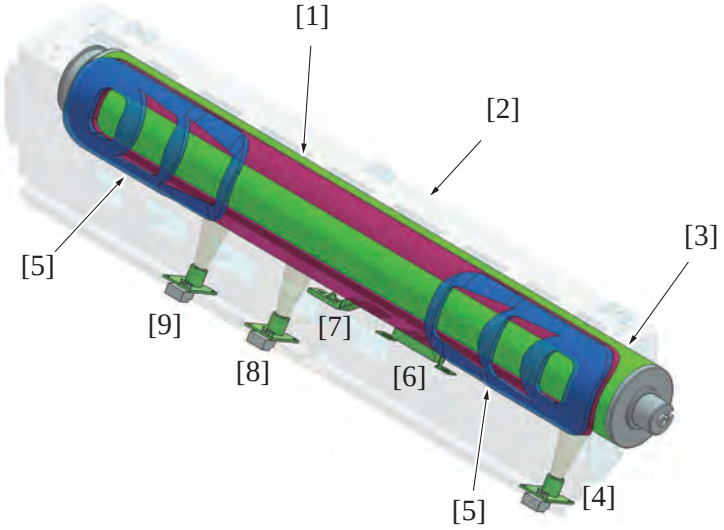
- When the IH coil that is arranged next to the heating roller is energized, it irradiates magnetic flux to the heating roller.
- The IH coil is configured with a main coil and a degaussing coil.
- The main coil heats the heating roller. The degaussing coil controls the heating area.
- The conductive layer of the heating roller generates overcurrent when the magnetic flux is received. The overcurrent that is generated from the conductive layer generates Joule heat to heat the heating roller.
- The main coil is only arranged at one side of the heating roller so only the side near the heating roller main coil is heated. For this reason, the heating roller is rotated so that the entire roller is heated to a suitable temperature.
- The heating roller temperature sensor/1 to 3 and the heating roller thermistor/1 measures the heating roller temperature.
- The heating roller thermostat is used in the "control to protect against abnormal temperatures". For details, refer to "Protection Against Abnormal Temperatures".

(2) Control to uniformly heat the heating roller

- The main coil heats the entire heating roller during printing.
- Rotate the heating roller during the heating process to heat it uniformly to a suitable temperature.
  For details, refer to the rotating detection mechanism for the heating roller.

(3) Control to switch to central heating of the heating roller

- The heating roller temperature sensors 2 and 3 measures the temperature at the ends of the heating roller.
- When temperature at the ends of the heating roller exceeds specifications for small-size printing or during standby, the degaussing coil controls heating of the roller ends. So that, only the center of the roller is heated.
- When the degaussing coil is turned on, it irradiates magnetic flux to cancel the magnetic flux that is irradiated from the main coil. When the magnetic flux at the ends of the roller is canceled, heating of the ends of the roller can be controlled.
- The degaussing coil ON/OFF control is performed depending on the paper width, the temperature of the heating roller ends and the type of the feeding paper.

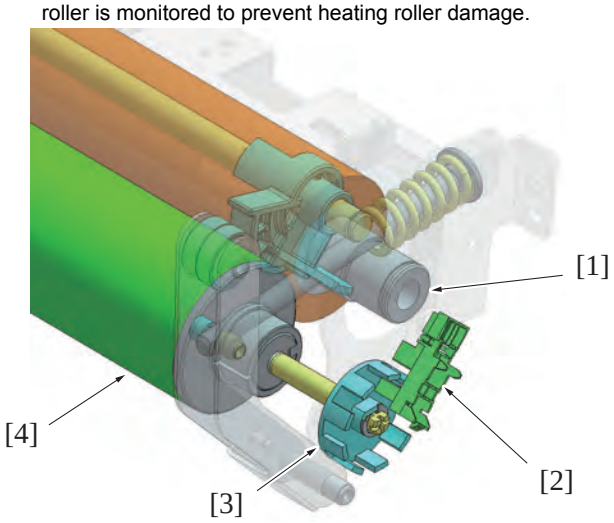


[1]	Main coil	[2]	IH coil unit (IHC)
[3]	Degaussing coil (front side) - Heating roller	[4]	Heating roller temperature sensor/3 (TEMS3)
[5]	Degaussing coil	[6]	Heating roller thermostat (TS1)

[7]	Heating roller thermistor (TH1)	[8]	Heating roller temperature sensor/1 (TEMS1)
[9]	Heating roller temperature sensor/2 (TEMS2)	-	-

16.3.7 Heating roller rotation detection mechanism

- If the heating roller is not rotating when the IH coil is energized, the heating roller may be damaged. The state of rotation for the heating roller is monitored to prevent heating roller damage.



[1]	Pressure roller	[2]	Heating roller rotation sensor (PS56)
[3]	Cylindrical actuator	[4]	Heating roller

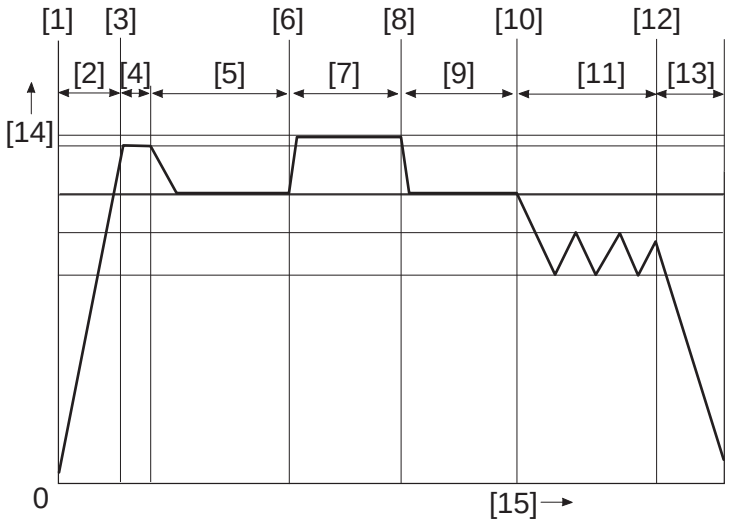
(1) Description

- Rotate the heating roller during the heating process to heat it uniformly to a suitable temperature.
- The cylindrical actuator rotates when the heating roller is rotated.
- The rotational state of the heating roller is detected when the heating roller rotation sensor is repeatedly blocked and unblocked for specific intervals of time.
- When the heating roller is not rotating while the IH coil (main coil) is energized, the temperature of the entire roller cannot be measured. As a result, the temperature control cannot be performed properly. As only half of the heating roller surface is heated, which may damage the roller if the main coil remains ON for a long time without rotating the heating roller.
- When the heating roller rotation sensor remains in the blocked or unblocked state for more than the specified time during printing, Exit section jam.
- When the heating roller rotation sensor remains in the blocked or unblocked state for more than the specified time during warm-up or standby except of printing, a trouble code "C3102: Heating roller rotational failure" will appear on the control panel.

16.3.8 Fusing temperature control

- The fusing temperature control detects the temperature of the heating roller surface and controls the power to the IH coil to maintain a suitable temperature.

(1) Fusing temperature concept diagram



[1]	Main power switch ON	[2]	Warm-up
[3]	Print is available	[4]	Pre-standby (3 seconds)
[5]	Standby	[6]	Start key ON

[7]	Printing	[8]	End of print
[9]	Standby	[10]	Start of low power mode
[11]	Low power mode	[12]	Start of sleep mode
[13]	Sleep mode	[14]	Temperature
[15]	Time	-	-

(2) IH coil control

- Power to the IH coil is controlled to restrict the heating roller temperature within a specific temperature range.
- The heating roller temperature sensor/1 measures the temperature of the heating roller and determines temperature changes.

(3) Temperature control during warm-up

- Warm-up control starts when the main power switch is turned on.
- If the pressure roller is pressed, the fusing pressure motor turns on to release the pressure roller.
- The fusing motor turns on and rotates the heating roller and pressure roller.
- The main coil is energized to heat the heating roller to the specified temperature.
- When the heating roller reaches a predetermined temperature, the fusing pressure motor turns on to press the pressing roller.
- Printing can be performed once the heating roller temperature exceeds the specified temperature.
- Printing then starts if there is a print request. The system transitions to the pre-standby temperature control if there is no print request.

(4) Temperature control during stand-by

- If no print requests are present after warm-up, the system transitions to pre-standby temperature control.
- When a predetermined amount of time elapses after the pre-standby control starts, temperature control is performed through standby control.
- Within a specified time after standby temperature control starts, the target temperature is maintained for each mode in low-temperature, normal, and high-humid state.
- Standby temperature control prevents the heating roller temperature from falling.

NOTE

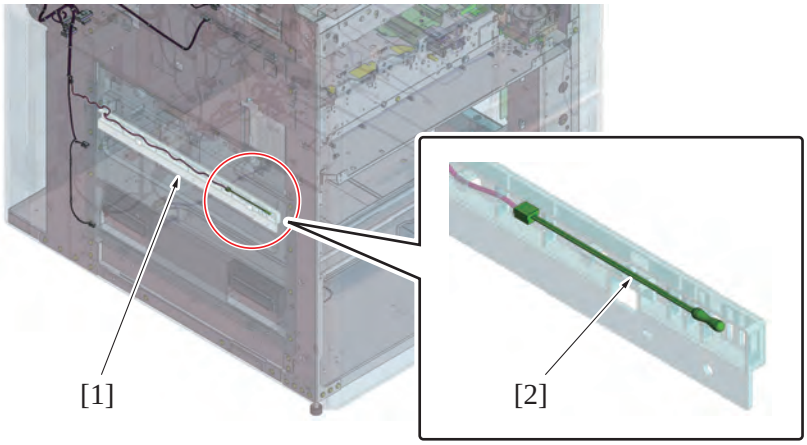
- **The measurement of standby control time includes the time of print operations.**

(5) Temperature control during the print cycle

- Temperature is controlled to maintain optimal fusing performance regarding the following causes of warm-up procedures. Such as the paper type, print mode, paper temperature*1, small-size paper feeding, low temperature during paper feeding, or when the fusing unit has cooled.

  NOTE

  - ***1: The paper temperature is used as data to control the fusing temperature. The paper temperature sensor that is installed in the paper feed section measures this temperature as the "Internal paper feed section temperature".**



[1]	Paper feed section	[2]	Paper temperature sensor (TH8)

(6) Low power mode temperature control

- Control is performed to lower the temperature of the heating roller to reduce power consumption for low power mode.
- When the pressure roller is in the pressed state, the fusing pressure motor turns ON to release the pressure.
- The fusing motor rotates the heating roller when the IH coil is ON. This rotation stops when the IH coil is OFF. The rotation speed at this time is lower than the rotation speed used for printing.
- If the temperature of the heating roller lowers to the temperature when low power mode control started, IH coil and fusing motor turn on. The IH coil and fusing motor turn off again once the final temperature has been exceeded.
- This ON/OFF control repeats in accordance with the start temperature and final temperature for low power control while this mode is active.

(7) Sleep mode temperature control

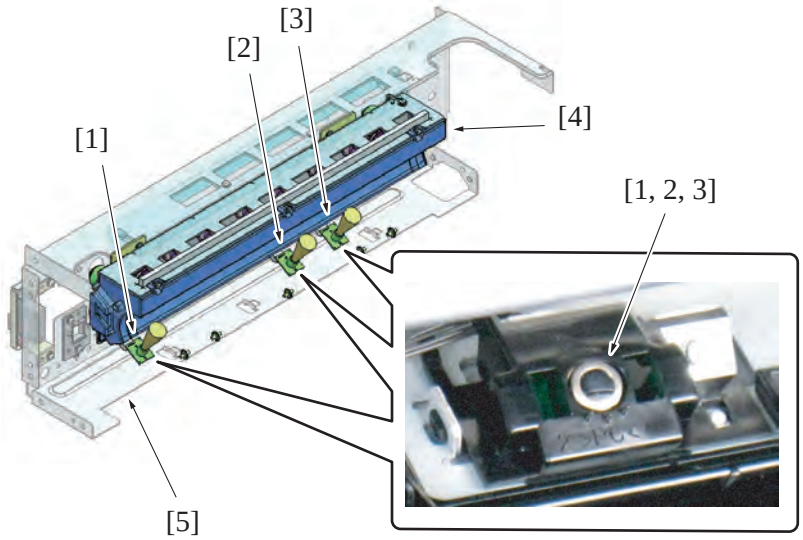
- The main coil and the degaussing coil are de-energized to stop the heating of the heating roller. This control is performed to reduce power consumption during sleep mode.
- When the fusing motor stops running, all rollers will stop rotating.
- Sleep mode includes two types of control, which is determined depending on the time that has elapsed since printing has completed. This control includes the engine ON sleep and the engine OFF sleep control.

- Engine ON sleep control is used when a sleep mode start instruction is received less than 15 minutes after a printing has completed.
  NOTE
  - **Any running fans continue driving, but fusing temperature control is stopped.**

- Engine OFF sleep control is used when a sleep mode start instruction is received 15 minutes or more after a printing has completed.
- The IH coil is not energized during sleep mode, and so the heating roller temperature may fall to room temperature. The time to restore from room temperature until the temperature at which printing can be performed may be as long as the warm-up time.

16.3.9 Heating roller temperature sensor

- A non-contact type thermopile sensor is used for heating roller temperature sensor/1, /2, and /3 (hereinafter referred to as “temperature sensor”).
- The temperature sensor detects the temperature of the heating roller through infrared rays and controls the surface temperature.



[1]	Heating roller temperature sensor/3 (TEMS3)	[2]	Heating roller temperature sensor/1 (TEMS1)
[3]	Heating roller temperature sensor/2 (TEMS2)	[4]	Main body frame (Fusing unit frame)

(1) Temperature sensor features

- In comparison to non-contact type thermistors, temperature sensors have excellent temperature detection accuracy. Furthermore, sensors are installed to the frame to achieve a high maintainability.
- The temperature sensor is provided with a lens. For its structural reason, therefore, the temperature sensor can be dirtied by dew condensation formed or foreign matter deposited on the lens.
- The temperature sensor, if contaminated with dew drops or dirt on the lens, becomes unable to detect the temperature accurately, since the contaminants blocks the infrared rays that are otherwise detected by the sensor.
- If temperature control is provided under such conditions, the temperature sensor detects a temperature that is lower than the actual temperature of the heating roller. Then, the heating roller temperature is controlled based on a temperature higher than the target one.
- To prevent an improper temperature control due to the falsely detect, “Heating roller temperature sensor condensation detection”, “Heating roller temperature sensor contamination detection control” and “Heating roller alternative temperature control” are performed.

(2) Detection of condensation on the heating roller temperature sensor

- The purpose of the heating roller temperature sensor condensation detection control is to detect possible degraded detection accuracy of the heating roller temperature sensor/1 as a result of condensation or contamination.
- When condensation on the temperature sensor is detected and the control is switched to “alternative temperature control”, the machine displays the corresponding P code “P-32 Heating roller temperature sensor temperature detection failure” on the control panel.

(a) Condensation detection conditions

When any of the following conditions is detected, the machine determines that the temperature sensor/1 lens has condensation on it and starts the heating roller alternative temperature control.

Conditions	Description
During warm-up	The difference in temperature between that detected by heating roller thermistor/1 and that detected by temperature sensor is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
In standby state	Within 180 sec. after the completion of the warm-up, the difference in temperature between that detected by thermistor/1 and that detected by temperature sensor is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
During printing	During printing, the difference in temperature between that detected by thermistor/1 and that detected by sensor is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.

(3) Detection of contamination on the heating roller temperature sensor

- The control of detection of contamination on the heating roller temperature sensor (here in after referred to as “contamination detection control”) is to determine degradation of detection accuracy of the heating roller temperature sensor/1 caused by contamination.
- The contamination detection control is performed only in the standby state. No control is provided during the alternative temperature control initiated by condensation of the temperature sensor/1.

- If contamination of the lens of the temperature sensor/1 is detected, the machine displays the corresponding malfunction code "C-392A heating roller temperature sensor contamination" on the control panel. It then shuts down the circuit to the main coil and terminates fusing unit temperature control.

(a) Contamination detection conditions

Conditions	Description
Control start conditions	The contamination detection control is started if, at any timing 180 sec. or more after the completion of the warm-up, the difference in temperature between that detected by heating roller thermistor/1 and that detected by temperature sensor is equal to, or more than, a specified value and that condition lasts for 4.2 sec. or more.
Control termination conditions	The contamination detection control is terminated if, at any timing within 10 min. after the contamination detection control has been started, the difference in temperature between that detected by thermistor/1 and that detected by temperature sensor/1 is equal to, or less than, a specified value.
Criteria for contamination	If, after the start of the contamination detection control, the difference in temperature between that detected by thermistor/1 and that detected by temperature sensor/1 is equal to, or more than, a specified value and that condition lasts for 10 min. or more, the machine determines that the temperature/1 sensor lens is contaminated and displays the corresponding malfunction code.

(4) Heating roller alternative temperature control

(a) Control start conditions

- Temperature control for the heating roller is provided based on the temperature detected by the heating roller temperature sensor/1.
- If condensation on the lens of the temperature sensor/1 is detected, the heating roller temperature control is provided based on the temperature detected by the heating roller thermistor/1, instead of that detected by the heating roller temperature sensor/1. This control is referred to as the heating roller alternative temperature control.
- When the control is switched to the alternative temperature control, the machine displays the corresponding P code "P-32 Heating roller temperature sensor temperature detection failure" on the control panel.

(b) Control termination conditions

- If the difference in temperature between that detected by heating roller thermistor/1 and that detected by heating roller temperature sensor/1 becomes less than a specified value during the alternative temperature control, the machine determines that condensation on the heating roller temperature sensor/1 has been eliminated and resumes the temperature control based on the temperature detected by the heating roller temperature sensor/1.
- If the difference in temperature between that detected by thermistor/1 and that detected by temperature sensor/1 is not improved even after the lapse of 10 min. after the alternative temperature control has been initiated, the machine determines that the cause is not condensation, but contamination, on the lens the temperature sensor/1 and terminates the heating roller alternative temperature control.

(c) Print job during the alternative temperature control

- If a print job is received during the heating roller alternative temperature control, control is performed according to the settings made in "Enhanced Security" of "Service Mode". (Reference: [Service Mode] -> [Enhanced Security] -> [Engine FW DipSW] -> [Switch No. 4: Fusing unit alternative temperature control])
- If "OFF" is selected, the machine disables any print job during the alternative temperature control.
- If "ON" is selected, the machine enables a print job during the alternative temperature control.
- The print job during the alternative temperature control is processed at 50% productivity.
- The default setting is "OFF".

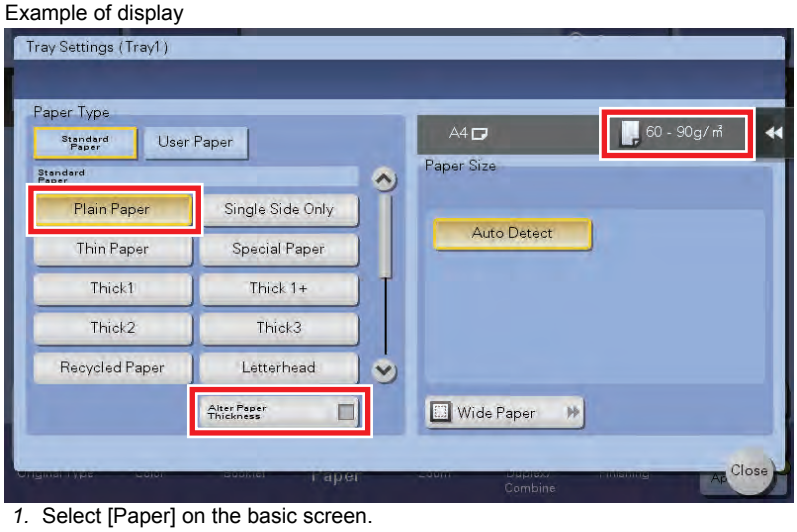
16.3.10 Plain paper fusing temperature control

- Two different target temperatures control the printing on plain paper.

Basis weight	Specific controls
Plain paper (60g/m^2 - 70g/m^2)	The base weight is limited to 60g/m^2 - 70g/m^2. Power consumption (TEC value) is controlled through lowering the target temperature to lower than the normal fusing temperature.
Plain paper (60g/m^2 - 90g/m^2)	The normal target temperature controls the fusing temperature control of plain paper.

(1) Setting procedure

Example of display



1. Select [Paper] on the basic screen.
2. Select your desired paper feed port and tap [Change Tray Setting].
3. Select [Plain Paper] and tap [Alter Paper Thickness] to select "Plain Paper (60g/m2 - 70g/m2)".
   A "check mark" will be displayed in the check box of the [Alter Paper Thickness] key.
4. Tap the [Alter Paper Thickness] key again to select "Plain Paper (60g/m2 - 90g/m2)".
   The "check mark" in the check box of the [Alter Paper Thickness] key will disappear.

NOTE

- **"Plain Paper (60g/m2 to 70g/m2)" is specified by default only for Japan.**
- **You can only use the [Alter Paper Thickness] key for plain paper.**

16.3.11 Smart fusing control

- Lower the target temperature as much as possible according to the information of each sheet of paper to control the fusing temperature adjustment. Cuts down electric power consumption (TEC value).
- Smart fusing control is only performed when the execution conditions below are met.
- If these execution conditions are not met, the normal fusing temperature control is performed.
- Smart fusing control can also prohibit control execution from [Service Mode] -> [System 2] -> [Smart Fusing Control].

(1) Smart fusing control execution conditions

Function		Execution conditions
Temp-Inside		10 °C and above
Print mode		Only for PC printing, BOX printing, and direct printing (USB)*1
Basic Settings	Print zoom	Only 100%
	Paper type	Plain paper only
Layout	Combination	1 in 1 only
	Image shift	No
Cover sheet insertion	Cover sheet	No
	Back cover	No
	Inter sheet	No
	OHP interleave	No
	Booklet	No
Image quality	Select color	Black mode only
	Gloss mode	No
	Toner save (density 50%)	No
	Edge enhancement	No
	Negative-positive reversal	No
	Maximum black density	80% or more to 90% or less
	Line width	1.5pt or less
	Character decoration	Normal characters only *2
	Character size	16pt or less
	Image object	No
Stamp/page printing	No watermarks	No
	No overlay	No
	No copy security	No
	No header/footer	No
	No management number	No

- *1: Copies are not included in the control

- *2: Bold characters are not included in the control

16.3.12 Protection from abnormal temperatures

- This machine is equipped with a 3-stage protection mechanism to prevent damage due to abnormally high temperatures in the fusing section.
  - Soft protection
  - Hard protection
  - Excessive rise protection

(1) Soft protection

- A high temperature abnormality is detected when the heating roller temperature exceeds the control range.
- Current that is supplied to the IH coil is cut and a trouble code appears.

Name	Sensor name	Trouble code
Heating roller	Heating roller temperature sensor/1 TEMS1	C3725 Fusing abnormally high temperature detection (Center of the heating roller)
	Heating roller temperature sensor/2 TEMS2	C3726 Fusing abnormally high temperature detection (Middle of the heating roller)
	Heating roller temperature sensor/3 TEMS3	C3722 Fusing abnormally high temperature detection (Edge of the heating roller)

(2) Hard protection

- Monitoring is performed using three different methods.

(a) Hard protection circuit monitoring

- The hard protection circuit in the MFP board detects an abnormally high temperature when soft protection cannot be detected due to overload of main CPU.
- An abnormally high temperature is detected when the heating roller temperature exceeds the control range, which causes a detection of the temperature sensor hard protection signal.
- Current that is supplied to the IH coil is cut and a trouble code appears.

Name	Sensor name	Trouble code
Heating roller	Heating roller temperature sensor/1 TEMS1	C3737 Fusing abnormally high temp. (Center of the heating roller)
	Heating roller temperature sensor/2 TEMS2	C3736 Fusing abnormally high temp. (Middle of the heating roller)
	Heating roller temperature sensor/3 TEMS3	C3732 Fusing abnormally high temp. (Edge of the heating roller)

(b) Sub CPU monitoring

- The sub CPU detects an abnormally high temperature when soft protection cannot be detected due to overload of main CPU.
- A high temperature abnormality is detected when the heating roller temperature exceeds the control range.
- Current that is supplied to the IH coil is cut and a trouble code appears.

Name	Sensor name	Trouble code
Heating roller	Heating roller thermistor/1 TH1	C3737 Fusing abnormally high temp. (Center of the heating roller)
	Heating roller temperature sensor/2 TEMS2	C3726 Fusing abnormally high temperature detection (Middle of the heating roller)
	Heating roller temperature sensor/3 TEMS3	C3722 Fusing abnormally high temperature detection (Edge of the heating roller)

(c) Monitoring via Inter-CPU communication

- The sub CPU detects an abnormally high temperature when soft protection cannot be detected due to overload of the main CPU.
- An abnormally high temperature is detected when the communication between the main CPU and the sub CPU is disconnected exceeding the specified time.
- The power supply to the IH coil is cut and the heating is stopped.

(3) Excessive rise protection

- The thermostat activates when soft and hard protection cannot detect an abnormally high temperature due to overload of CPU, temperature sensor, and thermistor.
- The heating roller thermostat cuts current that is supplied to the IH coil when the heating roller temperature exceeds the control range.

16.3.13 Sensor disconnection detection control

- Temperature sensors and thermostat states are monitored to detect the temperature of the fusing section.

(1) Temperature sensor

- If the temperature of the temperature sensor fails to reach the specified temperature in the given period after the warm-up started, the sensor is judged to have disconnection, and the trouble code will appear.

Roller name	Sensor name: code	Trouble code	
Heating roller	Heating roller temperature sensor/1 TEMS1	C3925	Fusing sensor wire breaks detection (Center of the heating roller)
	Heating roller temperature sensor//2 TEMS2	C3926	Fusing sensor wire breaks detection (Middle of the heating roller)
	Heating roller temperature sensor//3 TEMS3	C3922	Fusing sensor wire breaks detection (Edge of the heating roller)

(2) Thermostat

- If the thermostat broken detection signal is detected for at least a specified period of time after warm-up starts, a broken thermostat will be determined. A corresponding trouble code appears.

Roller name	Sensor name: code	Trouble code	
Heating roller	Heating roller thermostat TS1	C3903	Thermostat breaks detection

16.3.14 IH power supply control

- "IH power supply unit abnormal temperature detection" and "Power input abnormality detection" are performed on IH power supply unit to prevent high-temperature abnormality and fusing capacity defect.

(1) IH power supply abnormal temperature detection

- The IH power supply unit includes a temperature fuse. This fuse prevents IH power supply troubles due to increased unit internal temperature.
- The IH power supply unit includes a thermistor for monitoring the unit internal temperature. Control starts to lower the temperature when the unit internal temperature has increased.
- Details of high temperature detection control

Fault name	Detected temperature	Mode	Specific controls	Trouble code	
High temperature 1	92°C for 10 seconds or more	Printing	Productivity decreases from 100% to 50%.	Not detected.	
			Productivity returns to 100% when a temperature of 90 degree is detected for at least 30 seconds.		
		Standby	The rotation speed of the IH power supply cooling fan is increased from 50% to 100%.		
			The speed returns to 50% when a temperature of 90 degree is detected for at least 30 seconds.		
High temperature 2	97°C for 10 seconds or more	All modes	A trouble code appears.	C3B02	IH malfunction (CPU)

(2) Abnormal power supply input detection

- The IH power supply unit reduces power to the IH coil when the voltage input into the IH power supply has decreased. When capacity of fusing cannot be maintained due to reduced IH coil power, PPM control is implemented to reduce print productivity from 100% to 40% in stages.
- The IH power supply unit displays a trouble code when the input power or voltage values are abnormal.

Fault name	Detection method	Specific controls	Trouble code	
Input power abnormal	Input current or power has exceeded the upper limit value.	A trouble code appears.	C3B07	IH input power error
	Input current or power has fallen below the lower limit value.			
Input voltage abnormal	The input voltage has exceeded the upper limit value.	A trouble code appears.	C3B08	IH input voltage error
	The input voltage has fallen below the lower limit value.			

16.3.15 Detection of fusing unit

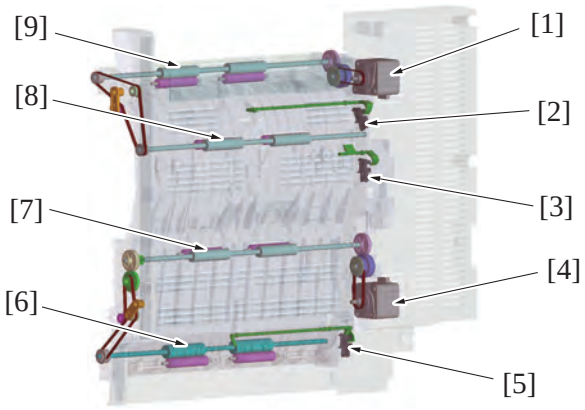
- The fusing unit is not provided with any new article detection mechanism.
- When the fusing unit is replaced with a new one, the counter must be reset to zero using the function of “New Release” of the Service Mode.

NOTE

- **For details of the unit life, refer to “I.5.17.2 Life”.**

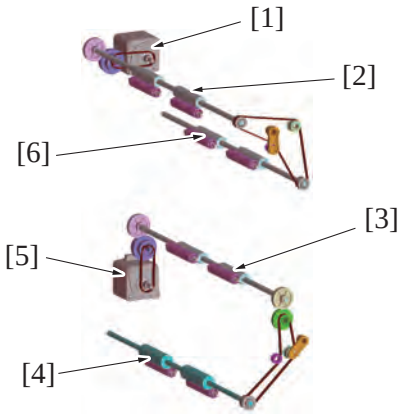
17. DUPLEX SECTION

17.1 Configuration



[1]	ADU transport motor/1 (M31)	[2]	ADU paper passage sensor/1 (PS47)
[3]	ADU door sensor (PS49)	[4]	ADU transport motor/2 (M32)
[5]	ADU paper passage sensor/2 (PS48)	[6]	ADU transport roller 4
[7]	ADU transport roller 3	[8]	ADU transport roller 2
[9]	ADU transport roller 1	-	-

17.2 Drive

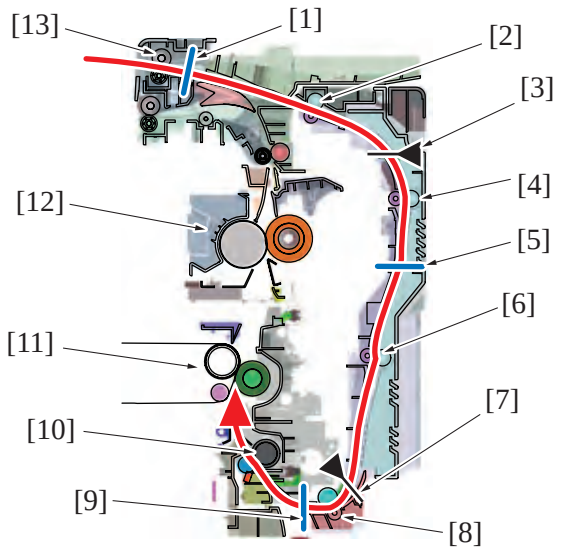


[1]	ADU transport motor/1 (M31)	[2]	ADU transport roller 1
[3]	ADU transport roller 3	[4]	ADU transport roller 4
[5]	ADU transport motor/2 (M32)	[6]	ADU transport roller 2

17.3 Operation

17.3.1 Paper transport control

- Paper transported from the paper exit section is transported to the internal duplex section by the ADU transport roller 1 and ADU transport roller 2.
- Paper is conveyed to the vertical transport section by the ADU transport roller 3 and ADU transport roller 4 to re-transport the paper.



[1]	Stop position 1	[2]	ADU transport roller 1
[3]	ADU paper passage sensor/1 (PS47)	[4]	ADU transport roller 2
[5]	Stop position 2	[6]	ADU transport roller 3
[7]	ADU paper passage sensor/2 (PS48)	[8]	ADU transport roller 4
[9]	Stop position 3	[10]	Registration roller
[11]	Transfer section	[12]	Fusing section
[13]	Switchback roller	-	-

(1) Transport roller control

- The ADU transport motor/1 drives the ADU transport roller 1 and ADU transport roller 2 to transport paper.
- The ADU transport motor/2 drives the ADU transport roller 3 and ADU transport roller 4 to transport paper.

(2) Paper entrance control

- The switchback motor at the paper exit section is deenergized to stop transport of the paper temporarily (stop position 1). The switchback motor thereafter rotates in reverse to transport the paper into the duplex section.
- When the switchback motor starts reverse rotation, ADU transport motor/1 is energized and ADU transport roller 1 and ADU transport roller 2 transports the paper.
- ADU paper passage sensor/1 located downstream of ADU transport roller 1 along the paper path detects the leading edge of the paper.
- If there is, before the current sheet of paper has a length of less than 216 mm in the sub scanning direction, another sheet of paper being transported through the duplex part and if that particular sheet of paper is yet to reach the specified position after the registration roller, ADU transport motor/1 is deenergized to stop the sheet of paper temporarily (stop position 2).
- When the advanced sheet of paper moves past the specified position, ADU transport motor/1 is energized to resume the transport of paper.
- If ADU paper passage sensor/2 is unable to detect the leading edge of the paper even after the lapse of a predetermined period of time after ADU paper passage sensor/1 has detected the leading edge of the paper, the machine determines that a paper misfeed occurs at the duplex transport part.
- When the leading edge of the paper reaches the specified position, ADU transport motor/2 is energized and ADU transport roller 3 and ADU transport roller 4 transports paper.
- ADU paper passage sensor/2 detects the leading edge of the paper.
- When the paper moves past ADU transport roller 4 and reaches the specified position, ADU transport motor/2 is deenergized to stop the transport of the paper temporarily (stop position 3). If, in this case, the paper has a length of more than 216 mm in the sub scanning direction, ADU transport motor/1 is also deenergized.

(3) Duplex paper feed control

- At predetermined paper feed timing, ADU transport motor/2 is energized to resume the transport of the paper. ADU transport motor/1 is also energized if it has been deenergized.
- The paper is fed from ADU transport roller 4 onto the registration roller at the vertical transport part.

17.3.2 Duplex circulation control

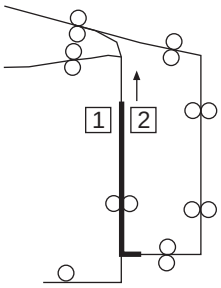
- The duplex circulation control is performed differently according to the length of the paper path direction.

Paper length	One-sheet circulation operation	Two-sheet circulation operation	Three-sheet circulation operation
148 mm to 216 mm	Allow	Allow	Allow
217 mm to 297 mm	Allow	Allow	Restrict
298 mm to 381 mm	Allow	Allow	Restrict
382 mm to 432 mm	Allow	Allow	Restrict
432 mm to 457.2 mm	Allow	Restrict	Restrict
Less than 148 mm	Can not print 2-sided		

Paper length	One-sheet circulation operation	Two-sheet circulation operation	Three-sheet circulation operation
More than 457.2 mm			

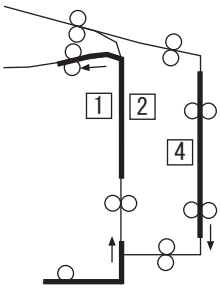
(1) One-sheet circulation operation

- The 2-sided printing method operates as follows. After the second side is printed for each sheet, the paper is transported to the feed section again. After the first side is printed, the paper is then discharged outside of the device.



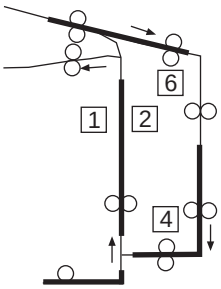
(2) Two-sheet circulation operation

- The 2-sided printing method operates as follows. The sheet having the first side being printed and the sheet having the second side being printed are transported alternately.



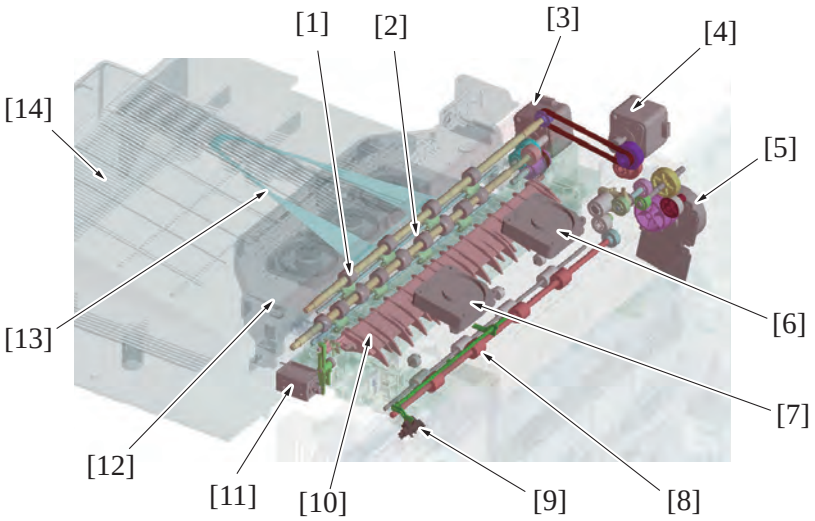
(3) Three-sheet circulation operation

- The 2-sided printing method operates as follows. The sheet having the first side being printed and the sheet having the second side being printed are transported alternately. A third sheet is stored in the device during printing the other sheets.



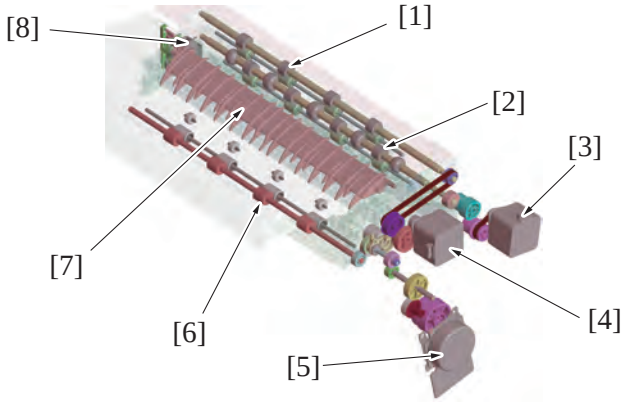
18. PAPER EXIT/REVERSE SECTION

18.1 Configuration



[1]	Switchback roller	[2]	Paper exit roller
[3]	Exit motor (M4)	[4]	Switchback motor (M33)
[5]	Fusing motor (M30)	[6]	Switchback paper cooling fan/2 (FM5)
[7]	Switchback paper cooling fan/1 (FM4)	[8]	Exit tray front roller
[9]	Paper exit sensor (PS39)	[10]	Paper exit switch gate
[11]	Gate switch solenoid (SD1)	[12]	Fan unit (OT-508)
[13]	Switchback paper guide	[14]	Output tray (OT-508)

18.2 Drive



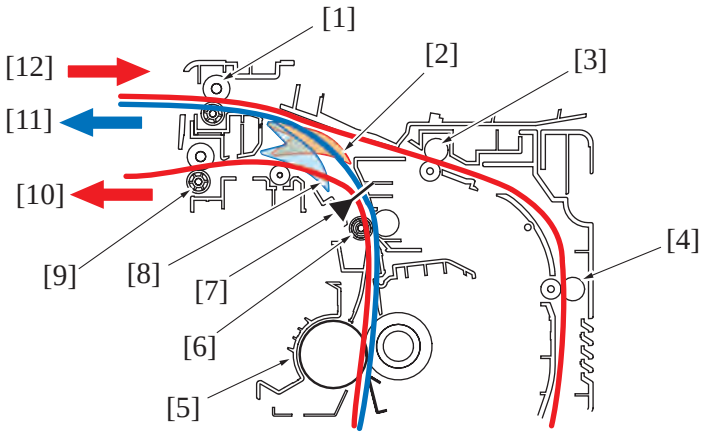
[1]	Switchback roller	[2]	Paper exit roller
[3]	Exit motor (M4)	[4]	Switchback motor (M33)
[5]	Fusing motor (M30)	[6]	Exit tray front roller
[7]	Paper exit switch gate	[8]	Gate switch solenoid (SD1)

18.3 Operation

18.3.1 Paper transport control

- Paper exit section uses the exit tray front roller and paper exit roller to discharge paper from fusing section to the output tray outside the machine.
- In 2-sided printing mode, the paper path is switched and paper is transported to the switchback roller.
- The transport direction is changed so that paper is sent to the 2-sided section.
- After the 2-sided printing completes, paper is transported again from the fusing section. The exit tray front roller and a paper exit roller discharge this paper to the output tray outside the machine.

(1) Transport Path



[1]	Switchback roller	[2]	Paper exit switch gate (1-sided printing/second side of 2-sided printing)
[3]	ADU transport roller 1	[4]	ADU transport roller 2
[5]	Fusing section	[6]	Exit tray front roller
[7]	Paper exit sensor (PS39)	[8]	Paper exit switch gate (first side of 2-sided printing)
[9]	Paper exit roller	[10]	Paper transport path for 1-sided printing Paper transport path for 2-sided printing (second side exit transport)
[11]	Paper transport path for 2-sided printing (first side exit transport)	[12]	Paper transport path for 2-sided printing (first side reverse transport)

(2) Transport path switch control

- The paper exit switch gate switches the transport path between the paper exit section and reverse section.
- The gate switching is performed at either the inter-sheet switch timing or the advanced switch timing depending on system speed.
- Inter-sheet switching switches the paper exit switch gate between transporting sheets of paper. Specifically, this time refers to when paper is not making contact with the paper exit switch gate.
- Advanced switching switches the paper exit gate when the paper is being transported through the paper exit switch gate. This operation is performed when the interval between sheets of paper is short.

(3) Paper exit control

- The exit tray front roller is linked with the fusing motor. The fusing roller starts rotating when the fusing motor turns on.
- The paper exit roller is linked with the exit motor. The paper exit roller starts rotating when the exit motor turns on.
- The exit motor turns on and the paper exit roller starts rotating when paper is transported from the fusing section reaches a specified position.
- The exit tray front roller transports paper to the paper exit switch gate.
- A paper exit sensor is located downstream from the exit tray front roller along the transport path. It detects the top edge of the paper passing through the exit tray front roller.
- Paper is guided to the paper exit roller via the paper exit switch gate. (The initial position of the paper exit switch gate is the top position.)
- The paper exit roller discharges paper to the output tray outside the machine.
- The paper exit sensor detects bottom edge of paper that has passed through the exit tray front roller.
- If the paper exit sensor cannot detect bottom edge of paper during a predetermined time, an exit section jam will be determined.

(4) Switchback control

- When paper reaches a specified position, the switchback motor rotates forward to start rotating the switchback roller forward.
- When paper reaches a specified position, the gate switch solenoid turns on. The paper exit switch gate moves to the bottom position (reverse section patch position).
- Paper is guided to the switchback roller via the paper exit switch gate that has moved to the bottom position.
- The paper exit sensor detects bottom edge of paper that has passed through the exit tray front roller.
- If the paper exit sensor cannot detect bottom edge of paper during a predetermined time, an exit section jam will be determined.
- When bottom edge of paper reaches a specified position, the gate switch solenoid turns off. The paper exit switch gate moves to the top position.
- When paper reaches a specified position, the switchback motor stops and then starts rotating reversely.
- When the switchback roller starts reverse rotation, paper is transported to the 2-sided section.

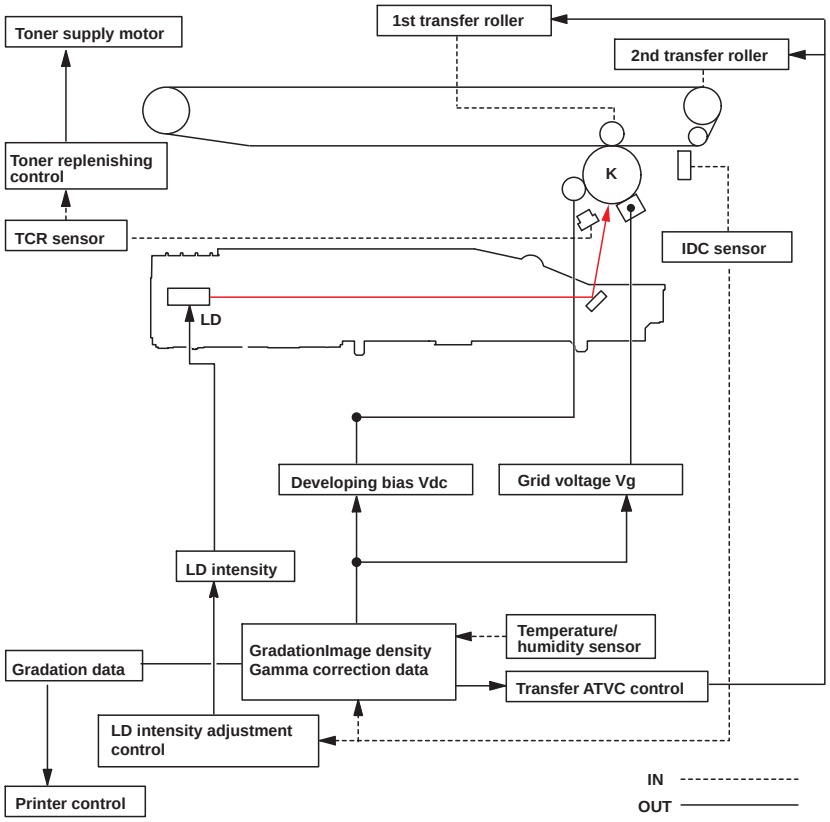
19. IMAGE STABILIZATION CONTROL

19.1 Outline

- The machine provides the following image stabilization control to ensure stabilized print image.

Purpose	Control	Control means
To stabilize image density	• IDC sensor adjustment control • Max image density adjustment control • LD intensity adjustment control • Gamma correction control	• IDC sensor • Temperature/humidity sensor
To stabilize gradation		
To stabilize toner density	Toner supply control (K)	TCR sensor
To stabilize image transfer	• 1st transfer output control • 2nd transfer output control • 2nd transfer ATVC	Temperature/humidity sensor

Input/output diagram



19.2 Description of control

19.2.1 IDC sensor adjustment control

- Controls changes in characteristics due to change with time and contamination of the transfer belt and IDC sensor, part-to-part variations in the sensors, and change of environment.
- The intensity (current value) of the IDC sensor is adjusted on the surface of the transfer belt, on which no toner sticks (background level).

19.2.2 Max image density adjustment control

- The developing bias (Vdc) is adjusted to control changes in the solid density resulting from variations in developing characteristics and IDC sensor intensity, variations in sensitivity of the photoconductor, and changes in the environment, durability, and the amount of charge in toner.
- Patterns are produced on the surface of the transfer belt and the IDC sensor detects the amount of toner sticking to them.
- Referring to the detected data and the environment data taken by the temperature/ humidity sensors, the developing bias value that results in the appropriate maximum density is calculated and stored in memory.
- Thereafter, the grid voltage (Vg) value, including the background margin adjustment value, is calculated and stored in memory.

19.2.3 LD intensity adjustment control

- It adjusts the variation in reproducibility of the thin line and the reverse outline, which is resulting from the variations in electrostatic characteristics of the photoconductor, developing characteristics and transfer characteristics in terms of individual difference, environment and durability, to make it the target level.
- It produces detection patterns on the surface of the transfer belt with the given level of LD intensity and detects the output value of IDC sensor.
- LD intensity is calculated from the detected IDC sensor data.

19.2.4 Gamma correction control

- The intensity of LD in all gradation levels is adjusted to correct changes in gradation characteristics to a linear one. The changes in gradation characteristics are caused by variations in the photoconductor sensitivity and developing characteristics and changes with time and in environment.
- It produces gradation patterns on the transfer belt and calculates gradation characteristics output by the current engine with the IDC sensor.
- The gamma correction data is calculated using the density measurements of different gradation levels. The optimum LD intensity is set for each of the different gradation levels.

19.3 Control contents

19.3.1 Image stabilization type (mode)

- Three different modes of image stabilization are available.
- A specific mode is selected according to the environmental conditions and print requirements, thereby achieving stabilized image at all times.

Stabilization type	Contents
Mode 1 (initialization and image stabilization)	Executed when “Initialize + Image Stabilization” is selected from the control panel.
Mode 1 (long image stabilization)	Executed mainly when there is a change in environmental condition.
Mode 2 (monochrome, long image stabilization)	Dedicated to monochrome and executed when there is a change in environmental condition.
Mode 3 (monochrome, short image stabilization)	Dedicated to monochrome and executed when the number of printed pages during a print cycle reaches 2000 or there is a change in machine interior temperature

19.3.2 Control sequence by mode

- A different control sequence applies according to the mode of image stabilization.
- Control is performed in the specified sequence for each mode.

Sequence	Mode 1 *1	Mode 2	Mode 3
1	IDC sensor adjustment	IDC sensor adjustment	IDC sensor adjustment
2	Dmax density adjustment 1	Dmax density adjustment 2	Gamma correction
3	LD light intensity adjustment 1	Gamma correction	-
4	Dmax density adjustment 2	-	-
5	LD light intensity adjustment 2	-	-
6	Gamma correction	-	-

- *1: New Stabilization is to perform stabilization using the default value for a newly installed unit. For any units other than new ones, stabilization is performed using the adjustment value instead of the default value. Initialized Stabilization is to perform stabilization using the default value for all units.
- Max image density adjustment control 1: Use default for characteristic tilted value and Vdc value.
- Max image density adjustment control 2: Use previous setting value for characteristic tilted value and Vdc value.
- LD (laser diode) intensity adjustment control 1: Use default for LD intensity for adjustment pattern.
- LD (laser diode) intensity adjustment control 2: Use previous setting value for LD intensity for adjustment pattern.

19.4 Operation timing

19.4.1 Predrive operation

Operating conditions	Operation timing	Stabilization mode
• A new transfer belt is detected. • A new Imaging unit (drum unit/K or developing unit/K) is detected • Imaging unit is removed and installed. • A change in environment is detected (the threshold value in changes in absolute humidity is exceeded relative to the absolute humidity during the last stabilization sequence). • When the warning code (P-5, P-9) is displayed.	Immediately performed	Mode 1
• Initialization and image stabilization (Service mode)	When performed	
• When it has passed beyond predetermined time since the last photoconductor stop. • Information is provided indicating that the last stabilization control was discontinued.	Immediately performed	Mode 2
• Image stabilization (Service mode).	When performed	

19.4.2 During a print cycle

Stabilization execution condition *1	Print count after gamma correction	Previous stabilization result *2	Dmax adjustment request based on last gamma correction result	The number of pages yet to be printed of the current print job	Stabilization (mode)	Operation timing during print
Any of the conditions is met	-	-	-	50 pages or more	Mode 1	Executed by interrupting the print cycle

				Less than 50 pages		Executed after a print cycle
None of the conditions is met	2000 or more	Any of the conditions is met	-	50 pages or more		Executed by interrupting the print cycle
				Less than 50 pages		Executed after a print cycle
		None of the conditions is met	Yes	50 pages or more	Mode 2	Executed by interrupting the print cycle
				Less than 50 pages		Executed after a print cycle
			No	50 pages or more	Mode 3	Executed by interrupting the print cycle
				Less than 50 pages		Executed after a print cycle
	2000 or less			-	Not implemented	

- *1: Stabilization execution condition:
  - A change in environment is detected. (a change in environment exceeding the threshold value is detected since the last image stabilization sequence)
  - The count of the number of printed pages is 10,000 as counted from the last LD light intensity adjustment.
- *2: Previous stabilization result
  - In the last image stabilization, the value of IDC sensor detection was out of the specified range.
  - The last warning code occurs.

19.4.3 Service Mode

- Image Stabilization within the Service Mode

Service Mode - Imaging Process Adjustment - Image Stabilization menu	
Mode 1	Initialize+Image Stabilization
Mode 2	Stabilization Only

Service Mode - Imaging Process Adjustment - Gradation Adjustment Menu	
Mode 2	Image Stabilization

19.4.4 Expert Adjustment

- Image Stabilization within the Expert Adjustment

Utility - Administrator Settings - System Settings - Expert Adjustment - Image Stabilization - Image Stabilization Only menu	
Mode 1	Initialize+Image Stabilization
Mode 2	Stabilization Only

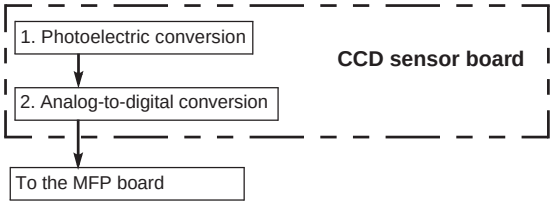
Utility - Counter - Administrator Settings - System Settings - Expert Adjustment - Gradation Adjustment menu	
Mode 2	Stabilization Only

19.4.5 Stabilization time

Type	Time
Mode 1 (Initialize + Image Stabilization)	Approx. 20 sec.

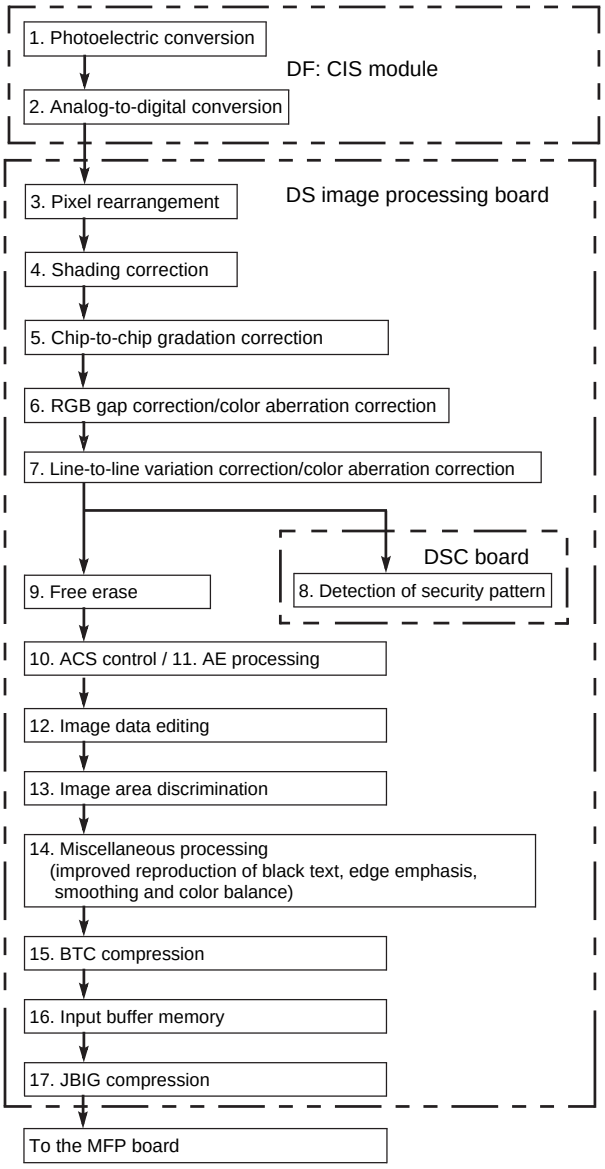
20. IMAGE PROCESSING

20.1 Scanner section image processing block diagram



- The following detail the image processing operations performed by the scanner section.
  1. A reduction type CCD sensor is used to read the light reflected off the original and convert the optical data to a corresponding electric signal. To make data processing faster, data transfer and output are done through two channels, one for even-numbered pixels and the other for odd-numbered pixels.
  2. The odd and even analog signals output from the CCD sensor chips are synthesized to form a single string of signal data which is in turn converted to 10-bit digital signals (1024 gradation levels).
- The image data is transmitted to MFP board on the write section through the interface cable.

20.2 CIS section image processing block diagram



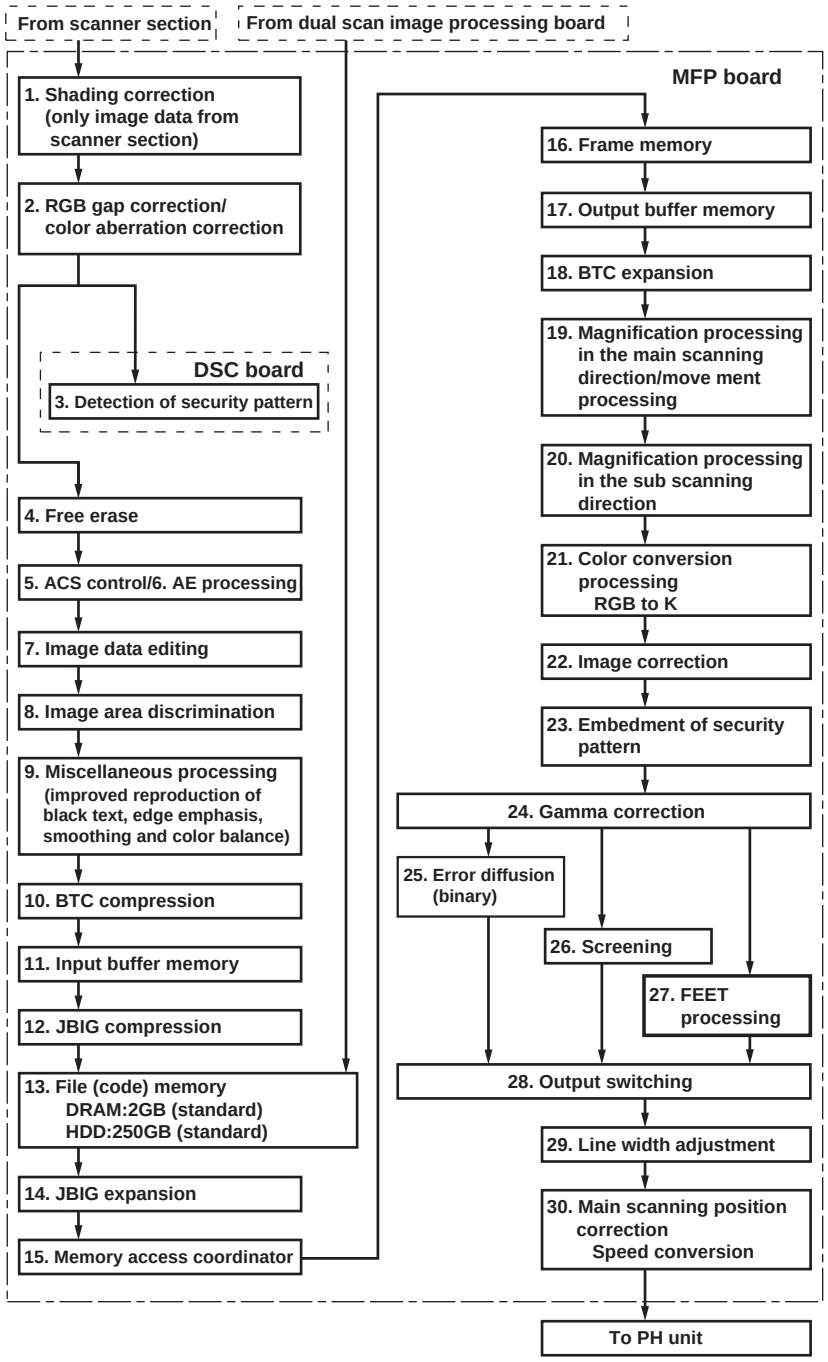
- The following detail the image processing operations (back side) performed by the CIS section (DF).
  1. A 24-chip contact type CIS sensor is used to read the light reflected off the original and convert the optical data to a corresponding electric signal.
  2. The analog signals outputted from the 24 CIS sensor chips are converted to 10-bit digital signals (1024 gradation levels).
  3. All 24 chips output digital signals simultaneously for each pixel, starting with the first pixel. The pixels are therefore rearranged in correct order.
  4. A correction is made of reading errors that occur due to variations in sensitivity of each CIS sensor chip and pixel, and the light distribution varying along the length of the exposure LED. The shading correction is made to prevent adverse effects on the image due

to dust on the white reference portion as follows. That is, at two places in the white reference portion, readings of two or more lines are averaged for each of the two places and the maximum value at the two places is found for each pixel.

5. The difference in gradation characteristics among the different chips of the CIS sensor is corrected.
6. Because of one pixel missing between chips of the CIS sensor, an interpolating pixel is created based on information on the surrounding pixels.
7. R, G, and B data are then converted to value and color component data for adjustments of saturation, lightness, and hue. Also correct color aberration of the lens.
8. The security pattern created during printing on this machine is detected and copying is enabled or disabled through a password. (when the security kit SC-508 is mounted)
9. If outer document elimination is selected from the control panel, document area determination processing is performed for each line within the document area data acquired during prescan. Then, the START and END positions of the document area in the main scanning direction are detected and the area outside the START and END positions is erased as the outside-the-document area.
10. The scanning area is divided into multiple blocks. The ratio of color or monochrome is calculated for each of these blocks. The machine then determines whether the entire original is colored or monochrome.
11. A histogram of lightness for AE processing is generated. The AE level of the document is determined based on this histogram and AE processing is performed.
12. R, G, and B data are then converted to value and color component data for adjustments of saturation, lightness, and hue.
13. Each image area, whether it is a color edge area, black edge area, dot area, or a continuous gradation area, is discriminated.
14. Other types of processing performed are the improved reproduction of black text, edge emphasis, smoothing and color balance.
15. Each image data of R, G, and B is compressed to reduce the consumption of data capacity.
16. Temporarily stores the BTC-compressed image data.
17. The stored image data is compressed in the JBIG (Joint bi-level image experts group) format.

- The image data is transmitted to MFP board on the write section.

20.3 Write section image processing block diagram

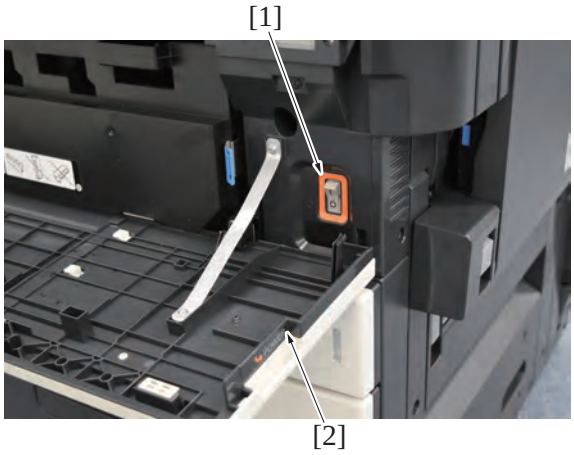


- The following detail the image processing operations performed by MFP board on the Write section.
  1. Correct variations in reading caused by pixel-to-pixel variations in sensitivity of the CCD sensor and uneven light distribution by the exposure LED. A peak-hold-type shading correction is performed, in which the maximum value of two or more readings of two or more lines is taken to prevent effect due to dust or dirt on the shading sheet. (only image data from scanner section)
  2. To correct differences in the position of each chip of CCD sensors R, G, and B, FIFO memory is adopted to match the output timing. Also correct color aberration of the lens.
  3. The security pattern created during printing on this machine is detected and copying is enabled or disabled through a password. (when the security kit SC-508 is mounted)
  4. If outer document elimination is selected from the control panel, document area determination processing is performed for each line within the document area data acquired during prescan. Then, the START and END positions of the document area in the main scanning direction are detected and the area outside the START and END positions is erased as the outside-the-document area.
  5. The scanning area is divided into multiple blocks. The ratio of color or monochrome is calculated for each of these blocks. The machine then determines whether the entire original is colored or monochrome.
  6. A histogram of lightness for AE processing is generated. The AE level of the document is determined based on this histogram and AE processing is performed.
  7. R, G, and B data are then converted to value and color component data for adjustments of saturation, lightness, and hue.
  8. Each image area, whether it is a color edge area, black edge area, dot area, or a continuous gradation area, is discriminated.
  9. Other types of processing performed are the improved reproduction of black text, edge emphasis, smoothing and color balance.
  10. Each image data of R, G, and B is compressed to reduce the consumption of data capacity.
  11. Temporarily stores the BTC-compressed image data.
  12. The stored image data is compressed in the JBIG (Joint bi-level image experts group) format.
  13. Each image data of R, G, and B in the copy, print, scan, and fax mode is stored. In PS printing, multi-valued data of K is stored. The image data from the CIS section is stored in file memory from the dual scan image processing board.

14. The image data read from the file memory is uncompressed through a method in a reverse way of JBIG compression. At this time, image rotating or sorting processing is conducted.
15. JBIG image data are expanded in the frame memory.
16. Each image data of R, G, and B is stored in frame memory.
17. Temporarily stores the image data output from the frame memory.
18. The image data is expanded through a method opposite to that used in the BTC compression.
19. FIFO memory is used to enlarge or reduce images in the main scanning direction. The image is enlarged by increasing the number of data readings and reduced by decreasing the number of data readings.
20. Reduction processing is conducted in sub scanning direction. No processing is done at same size or zoom, but at reduction, the lines are thinned out.
21. The R, G, and B data is converted to the density data.
22. Correction such as edge enhancement and smoothing are performed depending on the attribute of [Text], [Edge], or [Photo].
23. The security pattern is embedded in the image data. Either enabling copying through a password or unconditionally prohibiting copying can be selected from the control panel for the security pattern to be embedded. (when the security kit SC-508 is mounted)
24. Makes the necessary corrections so that the printed gradations have linear characteristics, since the image density of the input image data is not directly proportional to that of the printed image because of the changing developing and photoconductor characteristics.
25. In photo mode during copying and PC print, the image is processed as multi-valued data (8-bit data). In any mode other than photo, the error diffusion method is employed to process the image as binary (1-bit) data.
26. Creates the density distribution of a predetermined pattern to enable outstanding gradation reproduction.
27. Edge of letter and lineal drawing gets area discrimination and FEET processing is conducted according to the discrimination result.
28. Correction of screen processing, FEET processing, error diffusion processing is performed depending on the original mode and attribute.
29. Adjusts the text line width.
30. Correct the shear in printing start position in the main scanning direction, which occurs when PH unit is exposed on the photoconductor. Adjust the processing speed in the board (main scanning) to conform to the input processing speed.

21. POWER SUPPLY SECTION

21.1 Main power switch



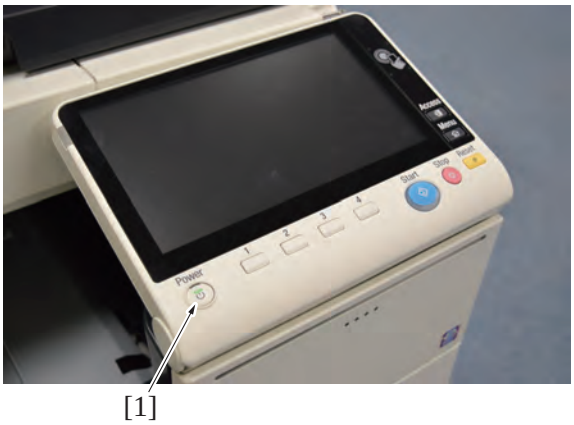
[1]	Main power switch	[2]	Lower front door (open position)

NOTE

- **To turn OFF and ON the main power switch, first turn OFF the main power switch and wait for 10 sec. or more before turning it ON again. If a setting value or values in the service mode are changed, it takes 10 sec. or more to incorporate the setting changes properly in the machine.**

21.2 Power key

21.2.1 Configuration



[1]	Power key	-	-

21.2.2 Operation

(1) Power key functions

- The power key offers two functions, serving as the power save button and the sub-power switch found in conventional models, depending on how long it is held down.
- In the default setting, holding down the power key for a short time sets the machine into the power save mode (low power mode) and holding it down for a long time sets the machine into the sub power OFF mode.
- The mode can be changed from the following: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Supply/Power Save Settings].

How long the power key is held down	Default setting	Settings changed by Administrator Settings
Short time	Low power mode *2	Sleep mode *2
		Sub power OFF mode *1
Long time	Sub power OFF mode	ErP auto power off mode *1

- *1: [Utility] -> [Administrator settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Key Setting]
- *2: [Utility] -> [Administrator settings] -> [System Settings] -> [Power Supply/Power Save Settings] -> [Power Save Settings]

(2) Status in each mode

Mode		Status	Power key LED	
Standby		All functions are ready to accept and ready to perform jobs.	Lit up blue	
Power save mode	Low power mode	• Power consumption is limited to a level lower than the standby state with the fusing temperature control minimized. • Reset when a job is received or the machine is operated.	Blinking in blue	
	Sleep mode *2 (Not reduce)	• Power consumption is reduced in low power mode. • Sensors that are used internally are operating.	Blinking in blue	
	Sleep mode *2 (Reduce)	• Power is supplied only to a portion of the MFP board required for receiving a job. • When an original is placed on the scanner, a job is received, or the machine is operated, the system wakes up.		
	Sleep mode *2 (High)	• Power is supplied only to a portion of the MFP board required for receiving a job. • Reset when a job is received or the machine is operated.		
Sub power OFF mode	Sleep mode *3 (Not reduce)	• Power consumption is reduced in low power mode. • Sensors used internally are operating. • Wake-up time is shorter than when "Enabled or High" is selected. • The system wakes up when the sub power is turned on.	Lit up orange	
	Sleep mode *3 (Reduce)	• Power is supplied only to a portion of the MFP board required for receiving a job. • A job can be received, but printing is performed when power is turned ON. • Wake-up time is longer than when "Disabled" is selected.		
	Sleep mode *3 (High)	• Power is supplied only to the MFP board. • A job can be received, but printing is performed when power is turned ON. • Wake-up time is longer than when "Disabled" is selected. • Power is reduced when "Enabled" is selected.		
ErP auto power off mode		• Power consumption to the lowest level. • Reset only by the power key or the weekly timer setting. • No jobs can be received. *1 • The system can also wake up when this machine is equipped with the optional upgrade kit UK-212.	Blinking in orange	

- *1: In ErP auto power OFF mode, this machine cannot receive data or faxes, and also it cannot scan or print an original.
- *2: The [Disabled], [Enabled], and [High] options are available from [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Save Settings] -> [Power Consumption in Sleep Mode].
- *3: The [Disabled], [Enabled], and [High] options are available in sub power OFF mode from [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Save Settings] -> [Power Consumption in Sleep Mode].
- *4: Refer to C.1.6 Machine specifications for more information on power consumption in each mode.

(3) Power supply

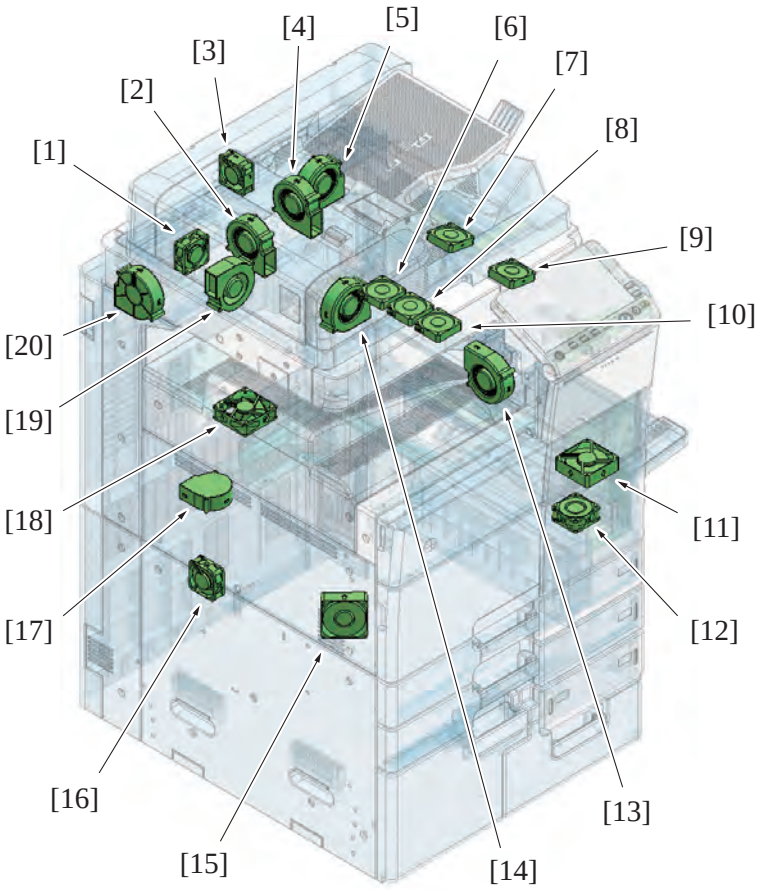
Power is supplied only to the following portions in the sleep mode and the sub power OFF mode.

5.1V	• MFP controller • FAX CPU • HDD *2 • USB board
	• Angle sensor *1 • Original cover sensor *1 • Control panel key

- *1: No power is supplied when the following is selected: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Consumption in Sleep Mode] -> [High].
- *2: No power is supplied when either [Enabled] or [High] is selected from: [Utility] -> [Administrator Settings] -> [System Settings] -> [Power Consumption in Sleep Mode].

22. FAN CONTROL

22.1 Configuration



[1]	Toner cartridge cooling fan (FM8)	[2]	IH coil cooling fan (FM11)
[3]	Cooling fan motor (FM) *1	[4]	Paper cooling fan/in (FM12)
[5]	Paper cooling fan/out (FM13)	[6]	Tucking fan/Rr (FM102) *2
[7]	Switchback paper cooling fan/2 (FM5)	[8]	Tucking fan/Md (FM101) *2
[9]	Switchback paper cooling fan/1 (FM4)	[10]	Tucking fan/Fr (FM103) *2
[11]	IH power supply cooling fan (FM10)	[12]	IU cooling fan /in (FM16)
[13]	Suction fan (FM1)	[14]	Ozone ventilation fan (FM6)
[15]	PH cooling fan (FM14)	[16]	DC power supply cooling fan (FM9)
[17]	IU cooling fan /out (FM15)	[18]	MFP controller cooling fan (FM17)
[19]	Output tray exhaust fan (FM18) *3	[20]	Toner suction fan (FM7)

- *1: Document feeder drive section
- *2: Optional OT-508 is installed
- *3: Only for bizhub 958/808, bizhub PRO 958.

22.2 Control

- Fans include functionality to prevent internal temperatures from increasing and to remove toner dust, ozone, UFP*1 and odor*1 during air exhausting.

Fan name	Function
Suction fan (FM1)	• Draws in the paper passes through the transport section. As a result, the transport of paper passing through the 2nd transfer section and fusing section is stabilized. This process also eases the transference of paper to the fusing roller. • The filter collects UFP that has accumulated in the paper transport section and fusing section. *1 • The filter removes odor that has accumulated in the paper transport section and fusing section. *1
Switchback paper cooling fan/1 (FM4)	• Cools the area inside of the machine around the fusing section. • Cools paper. • This process prevents toner on exited paper from sticking.
Switchback paper cooling fan/2 (FM5)	
Ozone ventilation fan (FM6)	• The ozone filter removes ozone that has accumulated around the charge corona. • Ozone causes a loss in photoconductor sensitivity and may cause white bands to appear in images. This process prevents such image failures.
Toner suction fan (FM7)	• Lets the filter trap toner particles leaked into the machine inside.
Toner cartridge cooling fan (FM8)	• Draws in external air to cool the toner supply section.

Fan name	Function
DC power supply cooling fan (FM9)	• Discharges heat that has accumulated around the power supply section to provide cooling.
IH power supply cooling fan (FM10)	• Discharges hot air that has accumulated around the IH power supply section to provide cooling.
IH coil cooling fan (FM11)	• Blows air onto the IH coil to provide cooling. Hot air remaining after the IH coil is cooled, is sent to the paper exit section. • The air curtain helps prevent the temperature around the toner supply section from increasing.
Paper cooling fan/in (FM12)	• External air is blown onto exiting paper to provide cooling. • This process prevents toner on paper that has exited from sticking.
Paper cooling fan/out (FM13)	• Discharges heat that has accumulated around the paper exit section outside of the machine to provide cooling.
PH cooling fan (FM14)	• Blows external air onto the PH unit to provide cooling. Hot air remaining after the PH unit is cooled, circulates inside the machine. • External air is blown into the area around the imaging unit to provide cooling. Hot air remaining after the PH unit is cooled, circulates inside the machine.
IU cooling fan /out (FM15)	• Heat that has accumulated around the imaging unit is circulated inside the machine to provide cooling.
IU cooling fan /in (FM16)	• Blows external air into the imaging unit to provide cooling.
MFP controller cooling fan (FM17)	• Blows air onto the MFP board to provide cooling. Hot air remaining after the MFP board is cooled, is discharged outside of the machine.
Output tray exhaust fan (FM18) *2	• The filter absorbs and removes odor that has accumulated in the output tray. *3
Cooling fan motor (FM)	• Discharges heat that has accumulated around the document feeder drive section outside of the machine to provide cooling. *4
Tucking fan/Md (FM101)	• External air is blown onto paper being discharged into the exit tray to provide cooling. *5 • This process prevents toner on paper that has exited from sticking. • When the paper exit option is installed, the transport path lengthens and paper is cooled during transport. For this reason, it does not require the tucking fans to cool paper.
Tucking fan/Rr (Fm102)	
Tucking fan/Fr (FM103)	

- *1: Refer to O.22.3.1 Transport section - Suction mechanism, UFP removal mechanism, and odor prevention mechanism for details on filters.
- *2: Only for bizhub 958/808, bizhub PRO 958.
- Refer to O.22.3.11 Paper exit tray - odor removal mechanism for details on filters.
- *4: Refer to PA.8. FAN CONTROL for details on drive section cooling fans.
- *5: Applicable only when the optional output tray OT-508 is installed. The OT-508 must be installed if no paper exit options are not installed.

22.2.1 Control conditions

Fan name	Status	Control conditions
Suction fan (FM1)	• Full speed	• Printing • During image stabilization performed during print cycle • During transfer belt cleaning performed during print cycle • Function for putting through papers is diagnosed as adjustment
	• Stop	• Other than the above
• Switchback paper cooling fan/1 (FM4) • Switchback paper cooling fan/2 (FM5)	• Full speed	• Printing • During transfer belt cleaning performed during print cycle • Function for putting through papers is diagnosed as adjustment • For 30 sec. after the completion of above operations
	• Half speed	• Standby • During image stabilization
	• Stop	• During initial operation • During warm-up
Ozone ventilation fan (FM6)	• Full speed	• Printing • During image stabilization • During TCR automatic adjustment • During auxiliary toner supply • For 30 sec. after the stop of the photoconductor (For 10 sec. after the stop of the photoconductor during ozone fan short time mode)*1
	• Half speed	• Half speed rotation for a predetermined period of time following full speed rotation for 30 sec. after stop of the photoconductor (Half speed rotation for predetermined period of time following a 10 sec. full speed rotation after stop of the photoconductor during ozone fan short time mode)*1
	• Stop	• Other than the above
Toner suction fan (FM7)	• Full speed	• When the developing motor/K is energized
	• Stop	• When the developing motor/K is deenergized
Toner cartridge cooling fan (FM8)	• Full speed	• During printing with the finisher being installed • During diagnosis of function adjustment for paper feeding with the finisher being installed
	• Stop	• Other than the above • The upper-front door is opened while the toner cartridge is not installed. • Normally stopped when the finisher is not installed

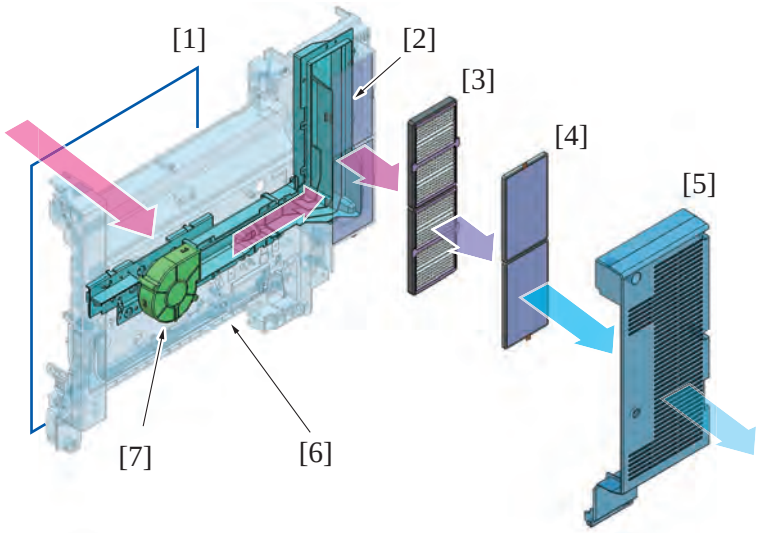
Fan name	Status	Control conditions
DC power supply cooling fan (FM9)	• Full speed	• Printing • Function for putting through papers is diagnosed as adjustment • During image stabilization
	• Half speed	• Other than the above
	• Stop	• In power OFF
IH power supply cooling fan (FM10)	• Full speed	• Printing • Function for putting through papers is diagnosed as adjustment • During fusing warm-up • During abnormality detection of the IH power supply board
	• Half speed	• For 30 sec. after the completion of the function adjustment diagnostics requiring printing or paper feeding • For 5 min. after the completion of fusing warm-up • The "OFF (by default)" is selected for Utility/Thin paper fusing priority mode, and the paper temperature is at least the specified temperature.*2
	• Stop	• Other than the above
IH coil cooling fan (FM11)	• Full speed	• Printing • Function for putting through papers is diagnosed as adjustment
	• Half speed	• The warm-up process continues for over 60 sec. after warmup starts and during the warmup when the fuser was cooled completely.
	• Stop	• Other than the above
Paper cooling fan/in (FM12)	• Full speed	• Printing • Function for putting through papers is diagnosed as adjustment • For 10 sec. after the end of above operation
	• Half speed	• For 110 sec. after the completion of paper exit
	• Stop	• Other than the above
Paper cooling fan/out (FM13)	• Full speed	• Printing • Function for putting through papers is diagnosed as adjustment
	• Stop	• Other than the above
PH cooling fan (FM14)	• Full speed	• Printing • During image stabilization • For 10 sec. after the end of above operation
	• Half speed	• Specific condition in the above full speed condition • Standby
	• Stop	• Other than the above
• IU cooling fan /out (FM15) • IU cooling fan /in (FM16)	• Full speed	• When the PC motor/K is energized
	• Stop	• Other than the above
MFP controller cooling fan (FM17)	• Full speed	• In sleep state, when power key is turned OFF
	• Stop	• Other than the above
Output tray exhaust fan (FM18) *3	• Full speed	• Printing • Function for putting through papers is diagnosed as adjustment
	• Stop	• Other than the above
Cooling fan motor (FM)	• Full speed	• During document scanning • During diagnosis of function adjustment to necessary for original document transport
	• Stop	• Other than the above
Tucking fan/Md (FM101)	• Full speed	• While paper is being fed out after printing • For 30 sec. after paper exit
	• Stop	• Other than the above
• Tucking fan/Rr (Fm102) • Tucking fan/Fr (FM103)	• Full speed	• While paper bigger than B5 is being fed out after printing • For 30 sec. after paper exit
	• Stop	• Other than the above

- *1: Transfers to ozone fan short time mode if all conditions shown below are met.
  - The main switch is ON and during sleep mode
  - The exhaust fan rotation time setting (Engine FW DipSW SW No. 39.) is selected as OFF.
  - After PC print is completed
  - Room temperature: 18°C to 28°C
  - Humidity: 10% to 80%
- *2: Only for Taiwan and Japan.
- *3 Only for bizhub 958/808, bizhub PRO 958.

22.3 Operation

22.3.1 Transport section - Suction mechanism, UFP removal mechanism, and odor prevention mechanism

- A suction fan is provided to stabilize paper passing through the transport section.
- A filter*1 is provided to remove ultrafine particles (UFP) and odor from exhaust air.



[1]	Paper passing through the transport section	[2]	Duct
[3]	UFP filter	[4]	Deodorant filter/1
[5]	Filter cover	[6]	Transport section
[7]	Suction fan (FM1)	-	-

NOTE

- ***1: The combination of filters varies depending on the model. The illustration shows the bizhub 958 model.**

Filter types		Model		
		bizhub 958/ bizhub PRO 958	bizhub 808	bizhub 758
UFP filter	Thick type	-	-	○
	Thin type	○	○	-
Deodorant filter/1		○	○	-

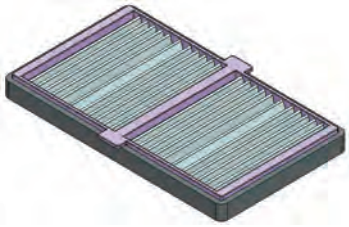
(1) Suction function

- The suction fan draws in paper as it passes through the transport section.
- As a result, the transport of paper passing through the 2nd transfer section and fusing section is stabilized. This process also eases the transference of paper to the fusing section.

(2) UFP removal function

- The suction fan draws in air inside the paper transport section.
- The UFP filter in the right door removes UFP in exhaust air and then discharges outside of the machine.
- The thickness of the UFP filter varies depending on the model.

UFP filter (thin type)

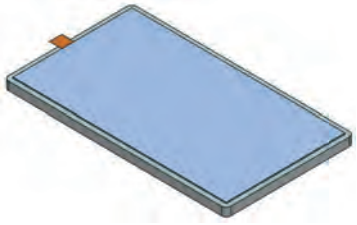


NOTE

- **The UFP filter does not require a periodic replacement.**

(3) Deodorization function

- The suction fan draws in air inside the paper transport section.
- The deodorant filter in the right door removes odor in exhaust air and then discharges it outside of the machine.
- The deodorant filter is installed only in the bizhub 958/808 and bizhub PRO 958 models.

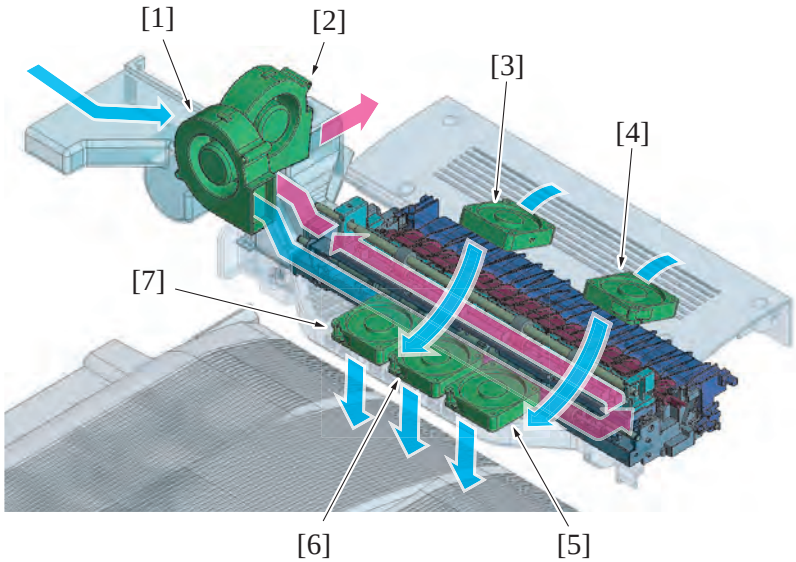


NOTE

- **The deodorant filter does not requires a periodical replacement.**

22.3.2 Cooling mechanism for the paper exit section and reverse section

- A fan is provided to cool the exit/reverse unit and to cool paper after the image fusing process.



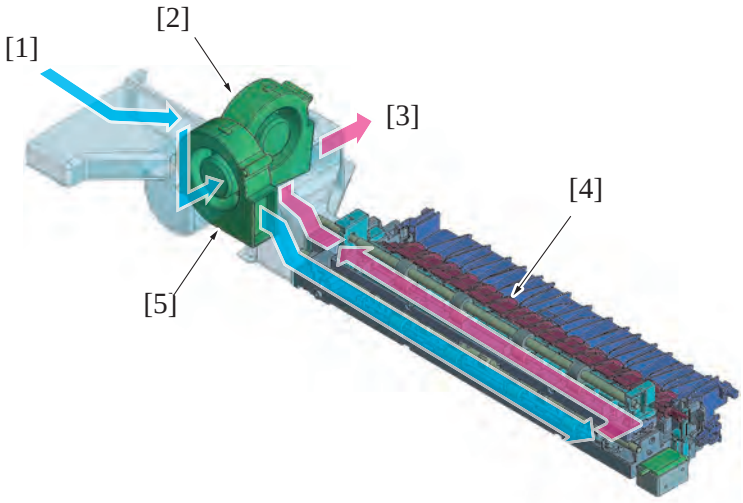
[1]	Paper cooling fan/in (FM12)	[2]	Paper cooling fan/out (FM13)
[3]	Switchback paper cooling fan/2 (FM5)	[4]	Switchback paper cooling fan/1 (FM4)
[5]	Tucking fan/Fr (FM103): Output tray OT-508 (option)	[6]	Tucking fan/Md (FM101): Output tray OT-508 (option)
[7]	Tucking fan/Rr (FM102): Output tray OT-508 (option)	-	-

NOTE

- **When the optional finisher is not installed, the optional output tray OT-508 can be installed in the exit section to cool paper.**

(1) Cooling exit/reverse paths

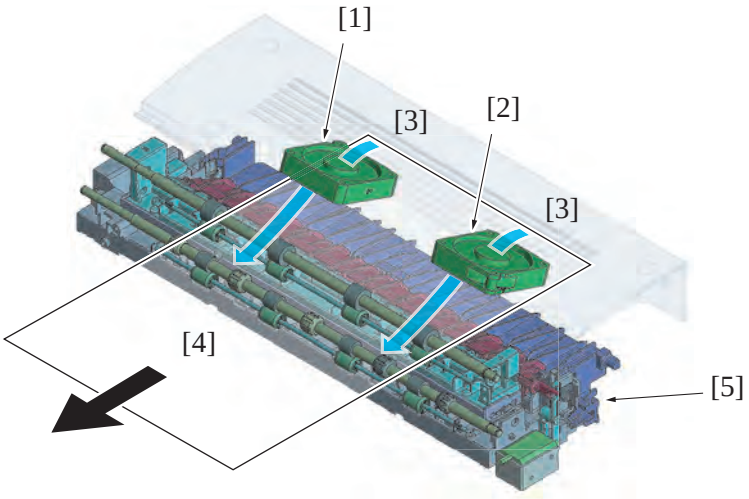
- The paper cooling fan/in and paper cooling fan/out are provided to cool exit/reverse paths, paper after the image fusing process, and areas around the fusing unit.
- External air is drawn in from the rear side of the machine using the paper cooling fan/in. This air passes through the air duct via the reverse path and exits from the right side of the main body.



[1]	Drawing in external air	[2]	Paper cooling fan/out (FM13)
[3]	Discharging exhaust air out of the machine	[4]	Paper exit/reverse section
[5]	Paper cooling fan/in (FM12)	-	-

(2) Cooling paper after image fusing 1

- The reverse paper cooling fan/1 and reverse paper cooling fan/2 are provided to cool paper after the image fusing process and internal machine around fusing section.
- External air is drawn in from the top of the exit section in the main body. This air is blown onto and cools paper that is passing through the paper exit/reverse unit. Paper exit/reverse unit and areas around the fusing section are also cooled.
- Hot air is discharged outside the machine from the exit section paper exit port.



[1]	Switchback paper cooling fan/2 (FM5)	[2]	Switchback paper cooling fan/1 (FM4)
[3]	Drawing in external air	[4]	Cooling passing paper
[5]	Paper exit/reverse section	-	-

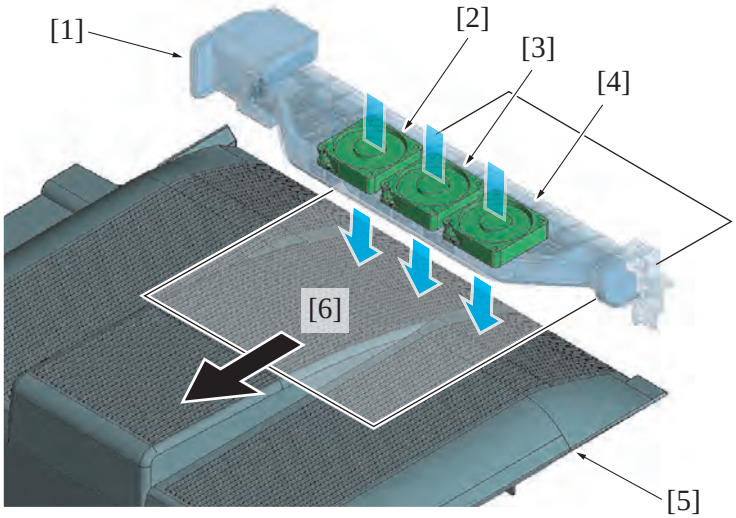
(3) Cooling paper after image fusing 2 (optional finisher not installed)

NOTE

- **When the optional finisher is not installed, the optional output tray OT-508 must be installed in the exit section to cool paper.**
- The tucking fan/Fr, tucking fan/Md, and tucking fan/Rr are provided to cool paper after image fusing process.
- External air that is drawn in from the top of the fan unit. This air is blown onto and cools paper that has exited from the exit section.
- This cooling prevents paper that has exited into the output tray from sticking. (Toner on different sheets of paper may stick if the output tray also contains a mixture of paper that has not been cooled.)

  NOTE

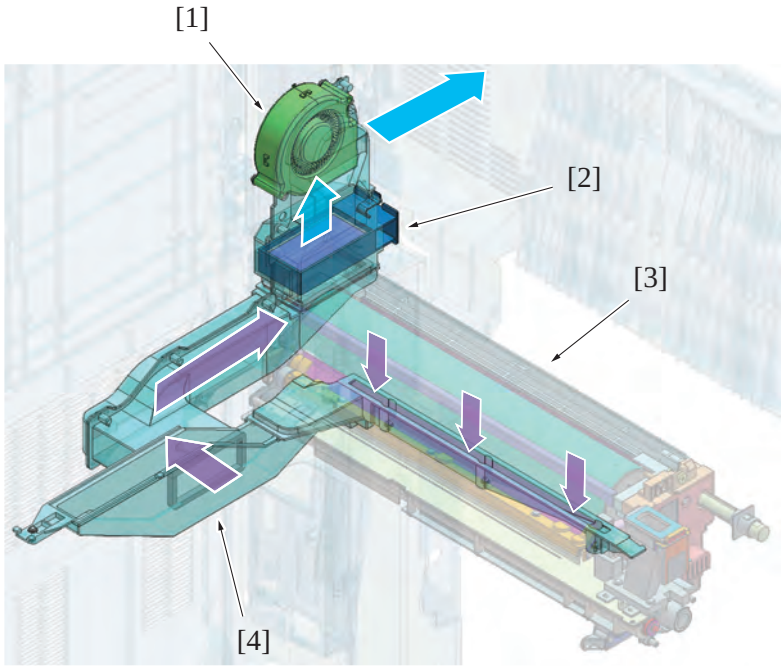
  - **When the optional finisher is installed, paper is cooled until being collected in the finisher output tray. Thus, it does not require to cool it by the tucking fans.**



[1]	Fan unit: Output tray OT-508 (option)	[2]	Tucking fan/Rr (FM102)
[3]	Tucking fan/Md (FM101)	[4]	Tucking fan/Fr (FM103)
[5]	Output tray: Output tray OT-508 (option)	[6]	Cooling exiting paper

22.3.3 Ozone removal mechanism

- An ozone ventilation fan and ozone filter are provided to remove ozone that is generated from the charge corona.

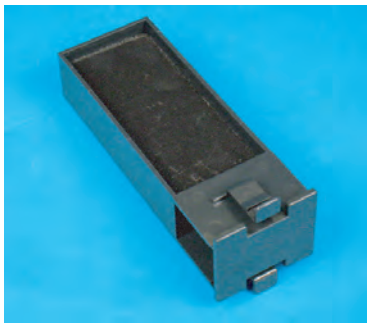


[1]	Ozone ventilation fan (FM6)	[2]	Ozone filter
[3]	Imaging unit/K	[4]	Duct

(1) Ozone filter

- The charge corona discharges to charge the photoconductor. Ozone is generated during this process.
- Ozone causes a loss in photoconductor sensitivity and may cause white bands to appear in images. The ozone filter removes ozone to prevent such image failures.

Ozone filter



(a) Ozone removal function

- The ozone ventilation fan collects ozone that has accumulated near the charge corona.
- Air that includes ozone flows inside the exhaust duct. The ozone filter that is attached to the end of the exhaust duct breaks down the ozone in the exhaust into oxygen.
- Air is then discharged outside of the machine after the ozone has been removed.

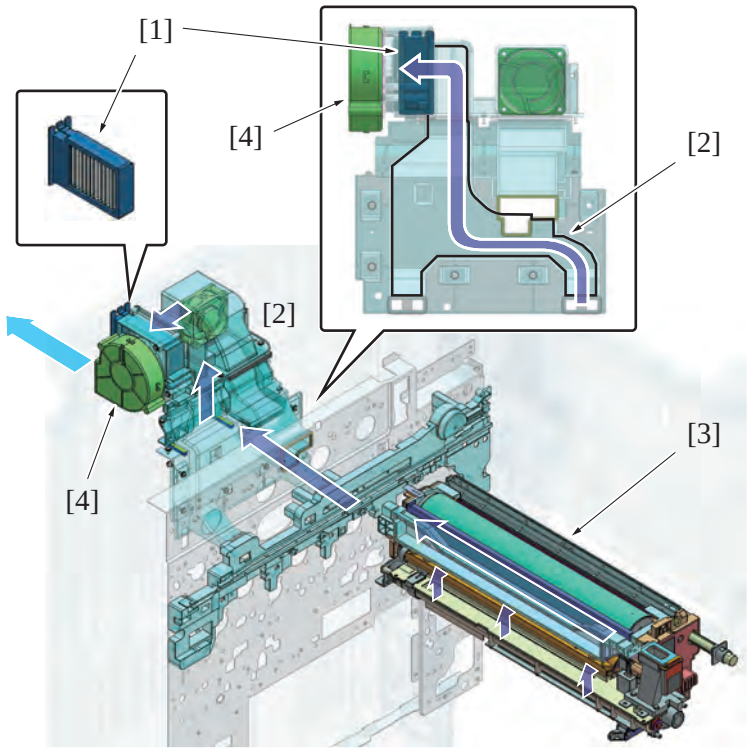
(b) New article detection

NOTE

- **The ozone filter is packaged with the repair drum unit/K. Replace the ozone filter whenever the drum unit/K is replaced.**
- The ozone filter does not contain a new article detection mechanism. For this reason, when the ozone filter is replaced with a new filter, reset the "Ozone Filter" counter from [Service Mode] -> [Counter] -> [Life].

22.3.4 Toner scattering prevention mechanism

- A toner suction fan and toner filter are provided to remove toner dust that has accumulated in the developing section.

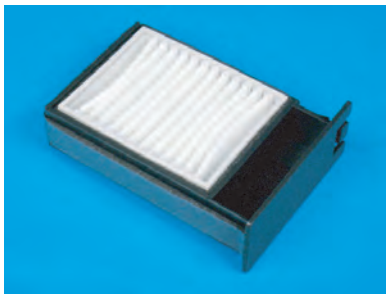


[1]	Toner filter	[2]	Duct
[3]	Imaging unit/K	[4]	Toner suction fan (FM7)

(1) Toner filter

- Toner dust accumulates when toner is supplied to the photoconductor from the developing roller. Toner dust also accumulates during the agitation process in the developing unit.
- Toner dust that adheres to the paper feed section in the machine may cause image failures such as black dots and black streaks. The toner filter removes the toner to prevent such image failures.

Toner filter



(a) Toner dust removal function

- The toner suction fan collects the toner dust that has accumulated around the developing unit.
- Air that includes toner flows inside the duct. The toner filter that is attached to the end of the duct removes the toner.
- Air is then discharged outside of the device after the toner has been removed.

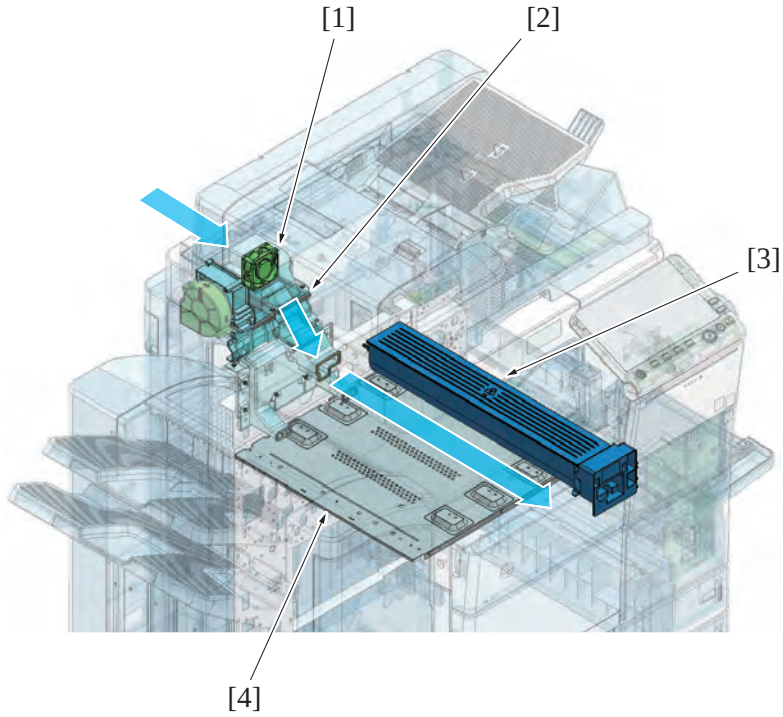
(b) New article detection

NOTE

- **The toner filter is packaged with replacement drum units/K. Replace the toner filter whenever the drum unit/K is replaced.**
- The toner filter does not contain a new article detection mechanism. For this reason, when the toner filter is replaced with a new filter, reset the [Toner Filter] counter from [Service Mode] -> [Counter] -> [Life].

22.3.5 Toner cartridge cooling mechanism

- A toner cartridge cooling fan is provided to prevent temperature in the toner supply section and toner cartridges from rising.



[1]	Toner cartridge cooling fan (FM8)	[2]	Duct
[3]	Toner cartridge/K	[4]	Toner supply section

NOTE

- **Only the toner supply section is cooled when the finisher is installed.**

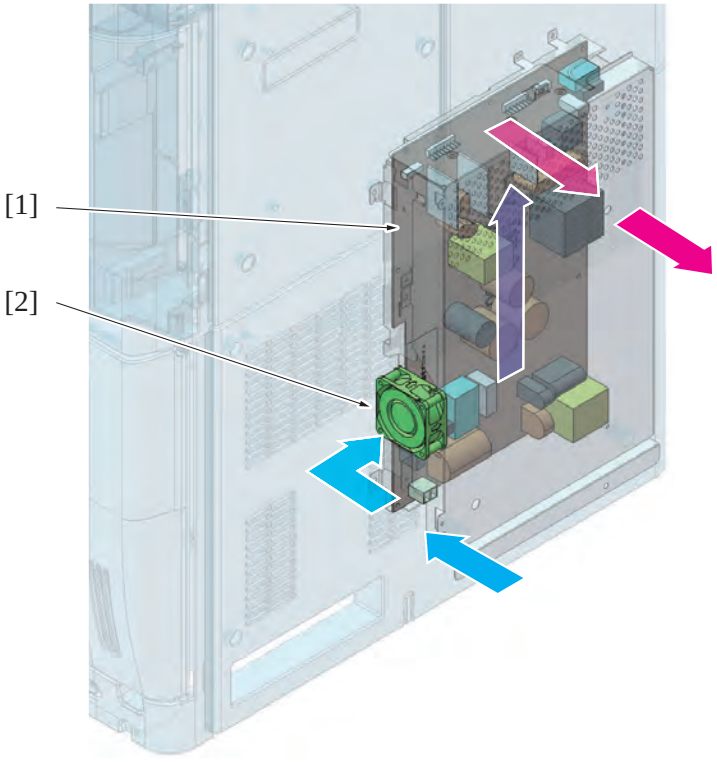
(1) Description

- When the finisher is installed, it covers the paper exit tray section and left side of the main body. Thus, temperatures in the machine and toner supply section can easily rise. Temperatures in the toner supply section can easily rise as the toner cartridge/K is near the fusing section. For this reason, the toner cartridge cooling fan draws in external air from the main body rear side to provide cooling.
- When the finisher is not installed, temperatures in the toner supply section do not exceed specified values. Thus, the toner cartridge cooling fan does not operate to draw external air in.
- Hot air that has passed through the toner supply section circulates outside of the machine, and discharged by other fans.

22.3.6 Power supply cooling mechanism

- A DC power supply cooling fan is provided to cool the DC power supply unit providing power to the main body.

System rear view



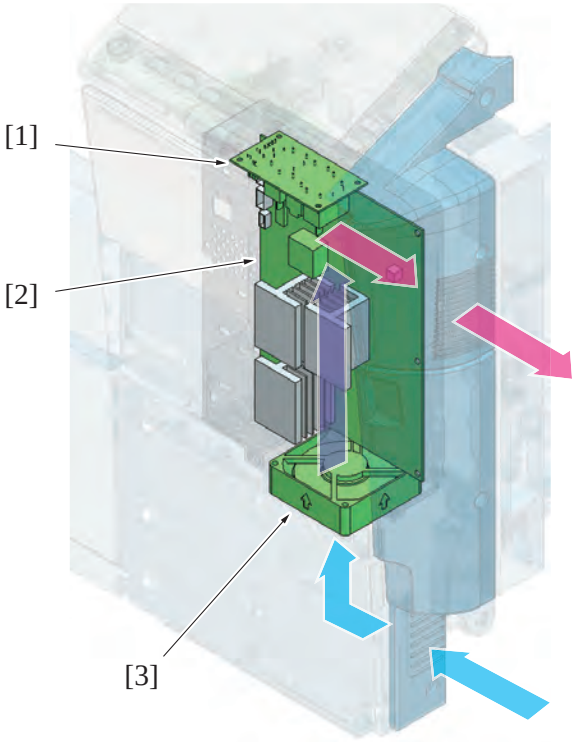
[1]	DC power supply unit (DCPU)	[2]	DC power supply cooling fan (FM9)

(1) Description

- Draws in external air from the rear side of the main body. This air is blown onto the DC power supply unit to provide cooling.
- Hot air that has passed through the DC power supply unit is discharged via the rear side of the main body.

22.3.7 IH power supply cooling mechanism

- IH power supply cooling fan is provided to cool the IH power supply unit controlling the IH coil and to cool the IH degaussing board.



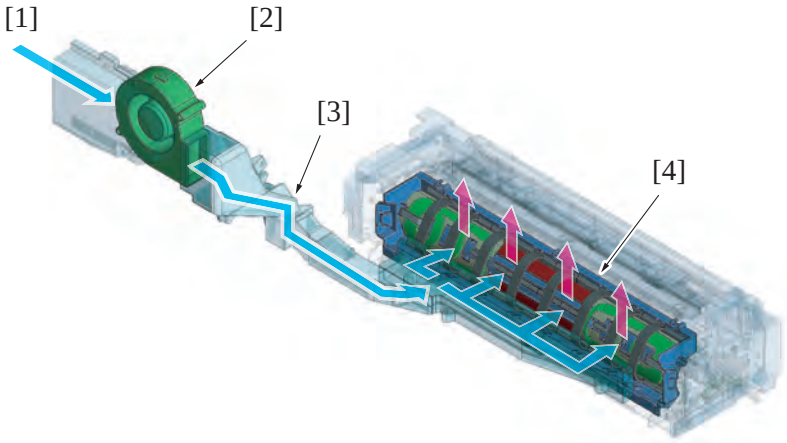
[1]	IH magnetic erasing board (IHMEB)	[2]	IH power supply unit (IHPU)
[3]	IH power supply cooling fan (FM10)	-	-

(1) Description

- External air is drawn in from the right side of the main body. This air is blown onto the IH power supply unit and IH degaussing board to provide cooling.
- Hot air passing through the IH power supply unit is discharged via the right side of the main body.

22.3.8 IH coil cooling mechanism

- An IH coil cooling fan is provided to cool the IH coil that heats the fusing section.
- This cooling fan also cools hot air that has accumulated around the toner cartridge/K.



[1]	Draws in external air	[2]	IH coil cooling fan (FM11)
[3]	Air duct	[4]	IH coil (IHC)

NOTE

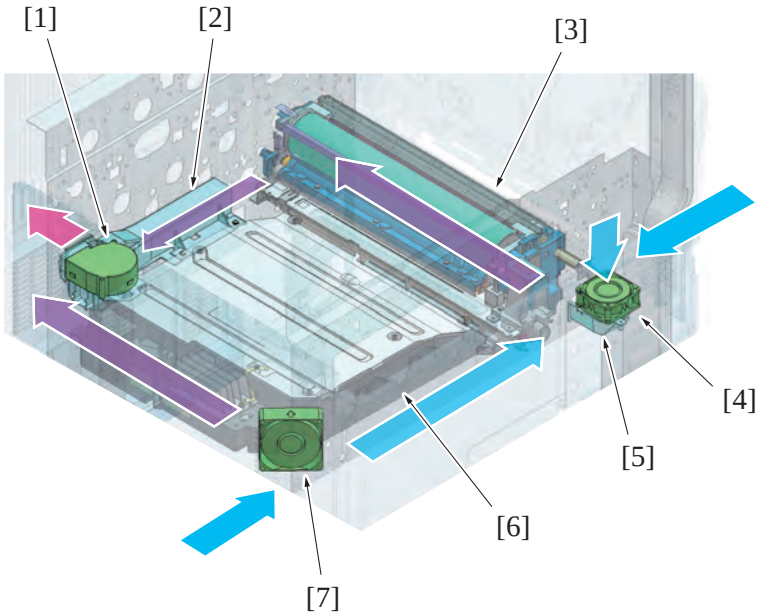
- **The shape of IH coils varies depending on the model. However, the main cooling mechanism is the same. The illustration shows the bizhub 758 model.**

(1) Description

- External air is drawn in from the rear side of the main body. This air passes through the air duct and is blown onto the IH coil to provide cooling. The area around the toner cartridge/K is also cooled as the air passes through the air duct.
- Hot air that passes over the IH coil exhausts from a slit on the IH coil top surface. This hot air is discharged outside of the machine via the paper exit section.

22.3.9 Cooling mechanism for the PH unit and imaging unit

- The cooling fan is provided to prevent the temperature of the PH unit, imaging unit/K and the surrounding from increasing.



[1]	IU cooling fan/out (FM15)	[2]	IU cooling duct (in)
[3]	Imaging unit/K	[4]	IU cooling fan/in (FM16)
[5]	IU cooling duct (out)	[6]	PH unit
[7]	PH cooling fan (FM14)	-	-

(1) Print head unit cooling mechanism

- The PH cooling fan blows external air onto the PH unit to cool it. Via the power supply unit section, the heat after the PH unit has been cooled is discharged from the rear side of the main body.
- Furthermore, the external air is blew onto the imaging unit to cool inside of the machine. Via the IU cooling fan/out, the heat after the imaging unit has been cooled is discharged from the rear side of the main body.

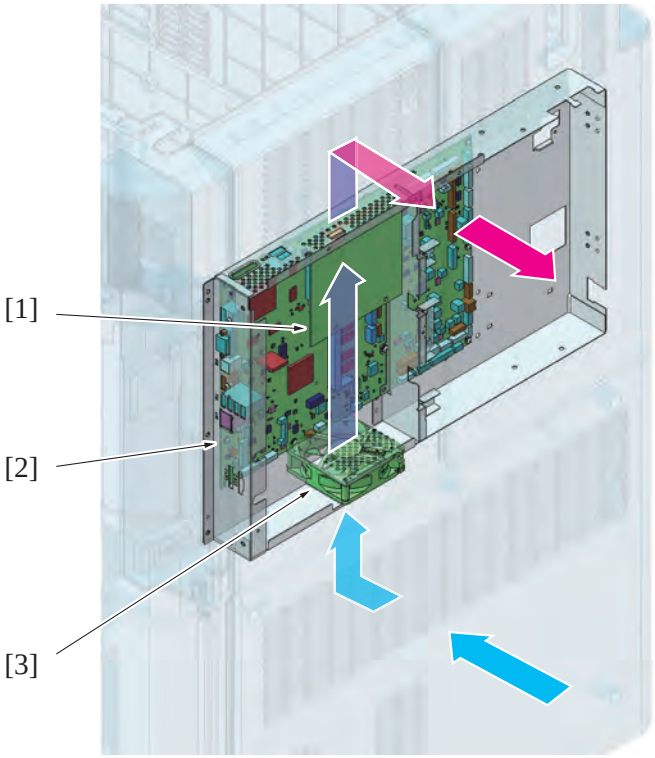
(2) Imaging unit cooling mechanism

- The IU cooling fan/in and PH cooling fan suck in and blow the external air onto the imaging unit to cool inside of the machine.
- To cool inside of the machine, the IU cooling fan/out exhausts the accumulated heat around the imaging unit from the rear side of the machine. Heat is discharged from the rear side of the device through the power supply unit section.

22.3.10 MFP board cooling mechanism

- The MFP controller cooling fan is provided to cool the MFP board controlling the main body and to cool the dual scan image processing board.

System rear view



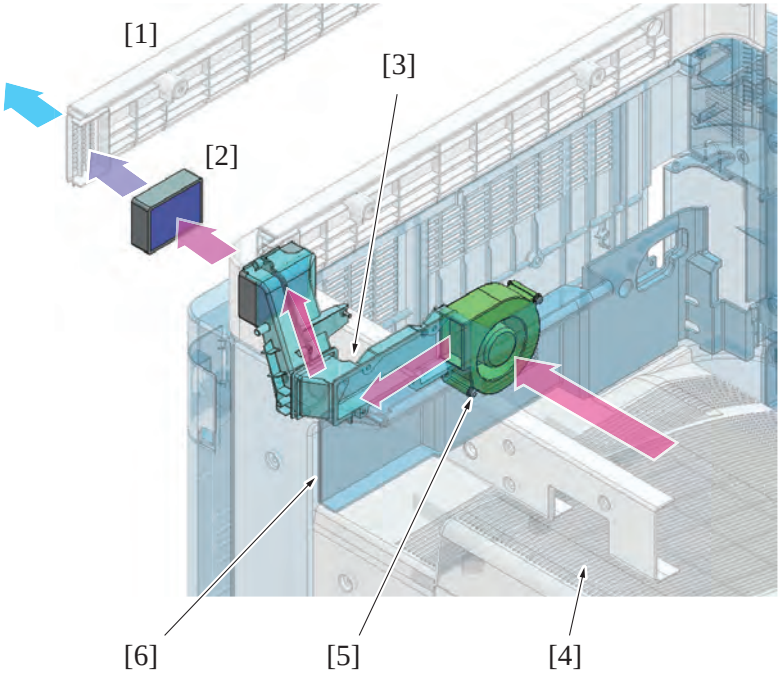
[1]	Dual scan image processing board (DSIPB)	[2]	MFP board (MFPB)
[3]	MFP controller cooling fan (FM17)	-	-

(1) Description

- Draws in external air from the bottom of the main body rear side. This air is blown onto the MFP board and dual scan image processing board to provide cooling.
- Hot air that has passed through the PBW box is discharged via the top of the rear side of the main body.

22.3.11 Paper exit tray - odor removal mechanism

- An output tray exhaust fan and deodorant filter are provided to remove odor that is generated from the fusing section.



[1]	Scanner rear cover	[2]	Deodorant filter/2
[3]	Duct	[4]	Output tray section
[5]	Output tray exhaust fan (FM18)	[6]	Output rear cover

NOTE

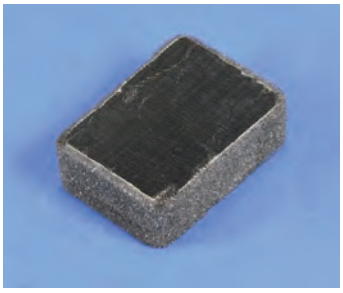
- **The availability of the output tray exhaust fan and deodorant filter varies depending on the model. The illustration shows the bizhub 958 model.**

Filter types	Model		
	bizhub 958/ bizhub PRO 958	bizhub 808	bizhub 758
Output tray exhaust fan	○	○	-
Deodorant filter			

(1) Deodorization function

- The output tray exhaust fan draws in odor that is generated from the fusing section and remains in the paper exit tray section.
- The deodorant filter in the rear of the scanner removes odor and discharges the filtered air.

Deodorant filter



(a) New article detection

- The deodorant filter is not provided with any new article detection mechanism.

NOTE

- **Refer to "F.5.1 Life value of consumables and parts" for details on the service life of deodorant filters.**

23. INDICATOR FUNCTION

23.1 Configuration

23.1.1 Control panel section

[1]	Start key indicator section	[2]	Power key indicator section
[3]	Warning status indicator section	-	-

23.1.2 Front side section

[1]	Operation status indicator section	[2]	Data indicator section
[3]	Remaining paper level display section	-	-

23.2 Control

- The lighting control for the LED on each indicator section is described below.

23.2.1 Power key and Start key indicator section

Status	LED indicator	
During warm-up	Lit up blue	Lit up orange
During stand-by	Lit up blue	Lit up blue
During copying or printing	Lit up blue	Lit up blue or orange
Paper misfeed or trouble	Lit up blue	Lit up orange
Low power mode Sleep mode	Blinking in blue	Unlit
ErP auto power OFF mode	Blinking in orange	Unlit
Sub power OFF mode	Lit up orange	Unlit

23.2.2 Warning status indicator section

Status	LED indicator
When machine stops	Lit up orange
When warning occurs	Blinking in orange
Other status	Unlit

23.2.3 Operation status indicator section

Status	LED indicator
During copying or printing	Steady light and blinking light are repeated
Other than the above	Unlit

23.2.4 Data indicator section

Status	LED indicator
Job is currently	Lit up blue
Receiving a job	Blinking in blue

Status	LED indicator
Other status	Unlit

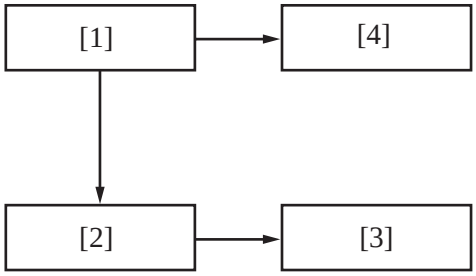
23.2.5 Remaining paper level display section

Status	LED indicator
Paper empty	Lit up orange
Paper Near Empty	Blinking in orange or unlit *
Other status (During lifting-up and with tray not being set included)	Unlit

- *: The lighting status varies depending on the following settings. [Service Mode] -> [System 1] -> [Machine State LED Setting]. Type 1: Blinks in orange, Type 2: Unlit

24. COUNTER CONTROL

24.1 Configuration



[1]	MFP board (mechanical control area) (MFPB)	[2]	MFP board (controller area) (MFPB)
[3]	Electronic counter	[4]	Key counter (option)

24.2 Operation

Name	Function/system
Electronic counter	• Number of total in copy, print, and scan/fax mode will be displayed on the screen. • Total counter, large size counter, total (copy + print), scans counter, fax TX counter, fax RX counter, originals counter, paper counter, total duplex counter, No. of total pages output • Counts one when an exit signal is applied to it
Key counter (option)	• When charging prints by using the key counter, copies cannot be made without the key counter. However PC prints and fax TX/RX service are available without the key counter. • Displays the cumulative number of copies while the key counter is being mounted. • A mechanical counter driven by an electric signal • Counts one when a paper feed start signal or image forming start signal, whichever occurs earlier, is applied to it

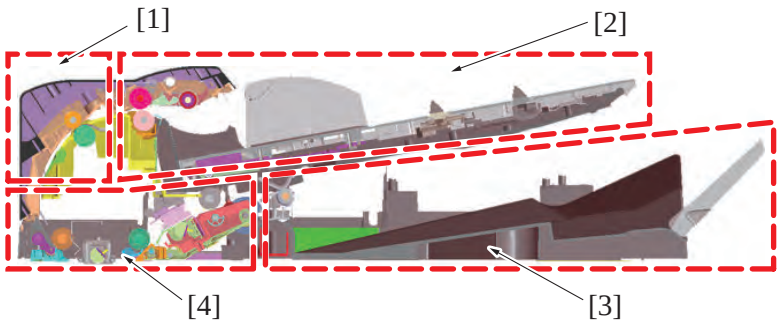
NOTE

- **The counting modes can be selected at [Billing Setting] of Service Mode. For details, see "I.8.3.1 Counter Setting".**

PA THEORY OF OPERATION REVERSE AUTOMATIC DOCUMENT FEEDER/SP-501/UK-501

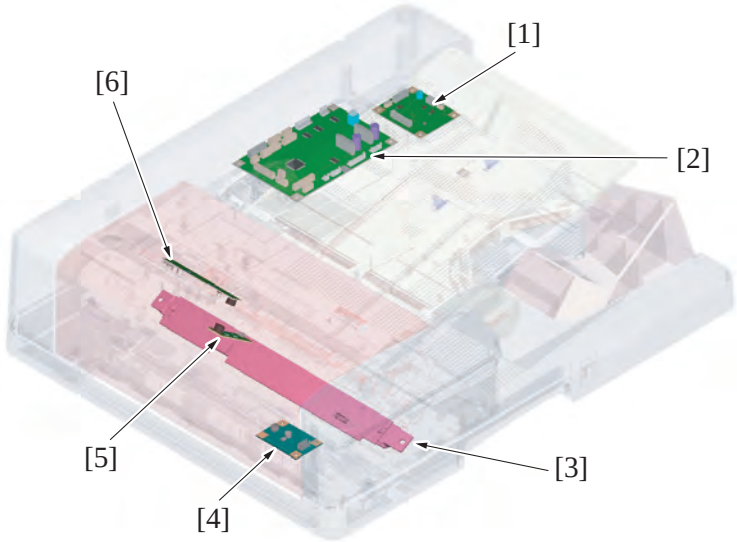
1. CONFIGURATION

1.1 Section configuration

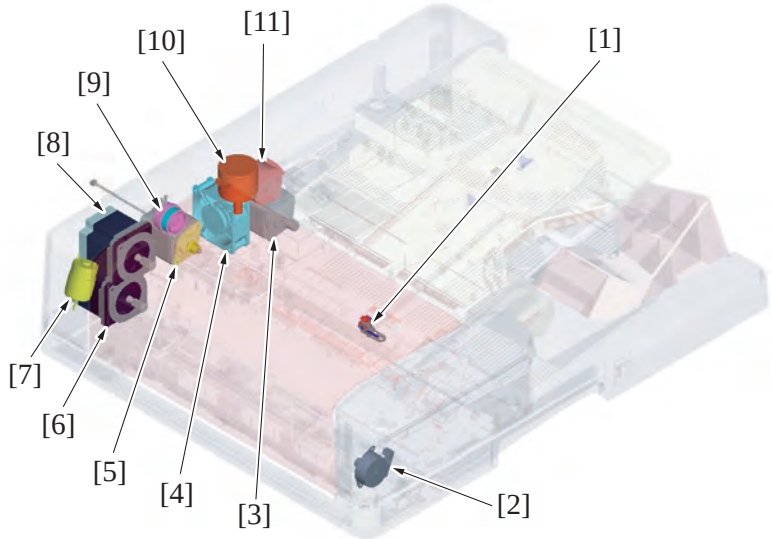


[1]	Registration section	[2]	Paper feed section
[3]	Paper exit section	[4]	Read section

1.2 Main parts configuration



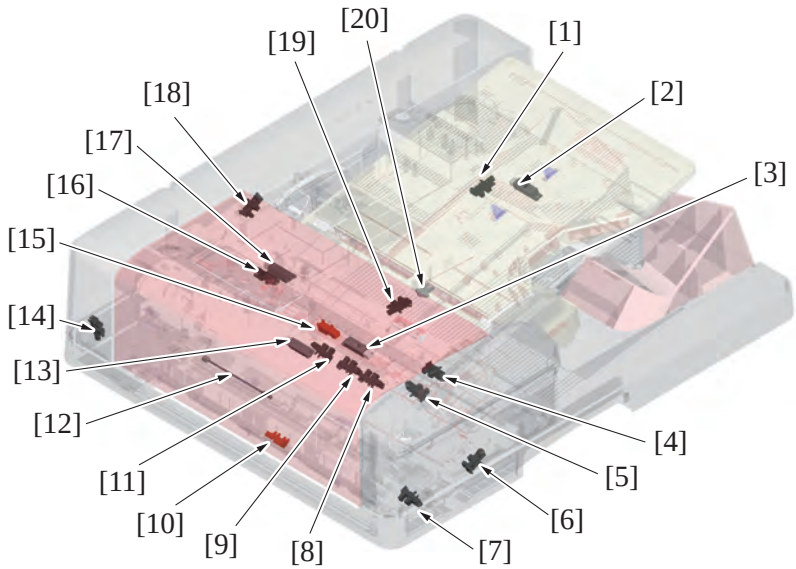
[1]	Sensor control board (SCB)	[2]	DF control board (DFCB)
[3]	CIS module (CIS)	[4]	DF power supply (DFPU)
[5]	Multi feed detection board/1 (transmitter) (MFDB/1)	[6]	Multi feed detection board/2 (receiver) (MFDB/2)



[1]	Stamp solenoid (SD1)*	[2]	Front side cleaning motor (M8)

[3]	Exit motor (M4)	[4]	Cooling fan motor (FM)
[5]	Take-up motor (M1)	[6]	Registration motor (M2)
[7]	Reading roller pressure/retraction motor (M6)	[8]	Reading motor (M3)
[9]	Take-up clutch (CL1)	[10]	Lift-up motor (M5)
[11]	Back side cleaning motor (M7)	-	-

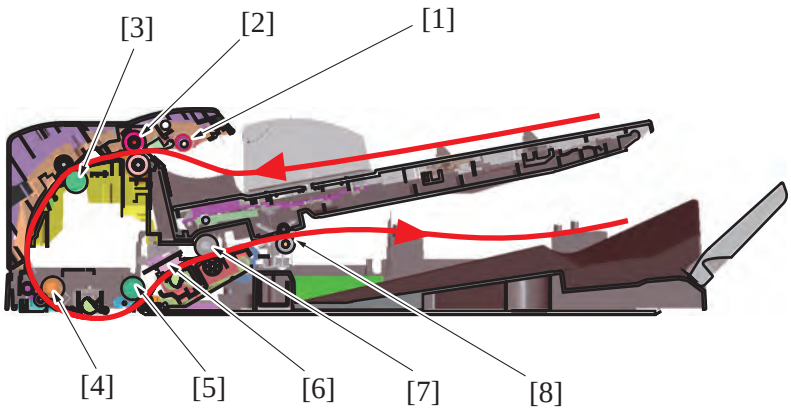
- * : Option



[1]	Length sensor/1 (PS10)	[2]	Length sensor/2 (PS11)
[3]	Empty sensor (PS1)	[4]	Exit sensor (PS7)
[5]	Lift up lower sensor (PS3)	[6]	CIS under guide open/close sensor (PS20)
[7]	Front side cleaning home sensor (PS18)	[8]	Consolidation sensor/3 (PS15)
[9]	Consolidation sensor/2 (PS14)	[10]	Before read sensor (PS6)
[11]	Consolidation sensor/1 (PS13)	[12]	DF temperature sensor (TH)
[13]	Registration sensor (PS5)	[14]	Read roller home sensor (PS8)
[15]	After separate sensor (PS4)	[16]	Back side cleaning home sensor (PS9)
[17]	Document feed sensor (PS21)	[18]	Read open/close sensor (PS16)
[19]	Lift up upper sensor (PS2)	[20]	Restriction plate positional volume (VR1)

2. PAPER PATH

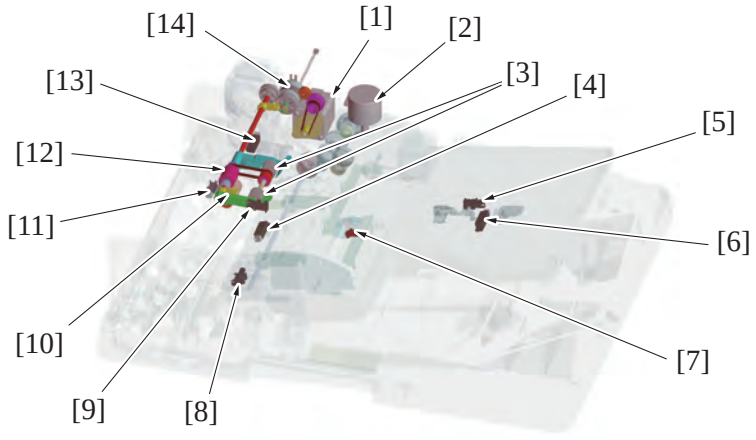
2.1 Paper path



[1]	Pick-up roller	[2]	Feed roller
[3]	Registration roller	[4]	Reading roller 1
[5]	Reading roller 2	[6]	CIS module (CIS)
[7]	Reading roller 3	[8]	Exit roller

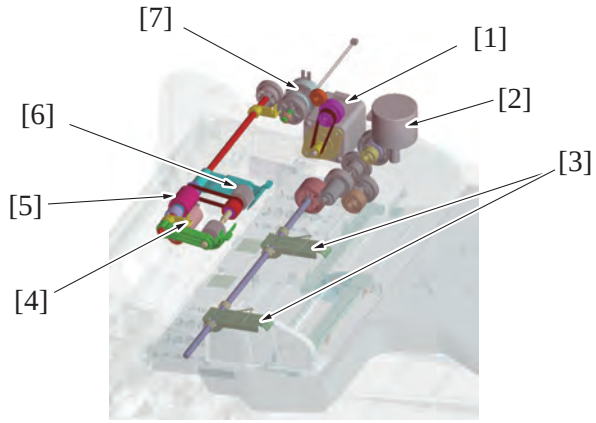
3. PAPER FEED SECTION

3.1 Configuration



[1]	Take-up motor (M1)	[2]	Lift-up motor (M5)
[3]	Pick-up roller	[4]	Empty sensor (PS1)
[5]	Length sensor/1 (PS10)	[6]	Length sensor/2 (PS11)
[7]	Restriction plate positional volume (VR1)	[8]	Lift up lower sensor (PS3)
[9]	Lift up upper sensor (PS2)	[10]	Separation roller
[11]	After separate sensor (PS4)	[12]	Feed roller
[13]	Document feed sensor (PS21)	[14]	Take-up clutch (CL1)

3.2 Drive

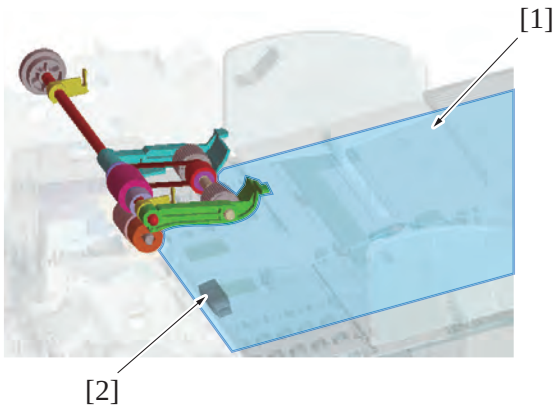


[1]	Take-up motor (M1)	[2]	Lift-up motor (M5)
[3]	Lift-up lever	[4]	Separation roller
[5]	Feed roller	[6]	Pick-up roller
[7]	Take-up clutch (CL1)	-	-

3.3 Operation

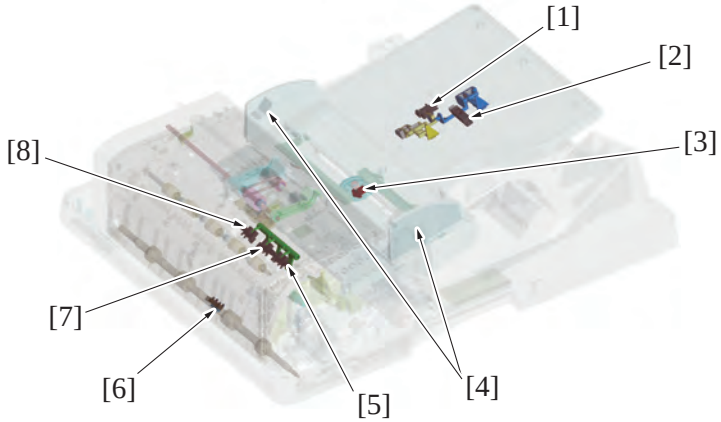
3.3.1 Original set/empty detection

- When an original is loaded on the document feed tray, the empty sensor detects that the presence of the original document.
- When all pages of the original have been fed, the empty sensor detects that there are no more originals.



[1]	Original	[2]	Empty sensor (PS1)

3.3.2 Original size detection mechanism



[1]	Length sensor/1 (PS10)	[2]	Length sensor/2 (PS11)
[3]	Restriction plate positional volume (VR1)	[4]	Original width guide plate
[5]	Consolidation sensor/3 (PS15)	[6]	Before read sensor (PS6)
[7]	Consolidation sensor/2 (PS14)	[8]	Consolidation sensor/1 (PS13)

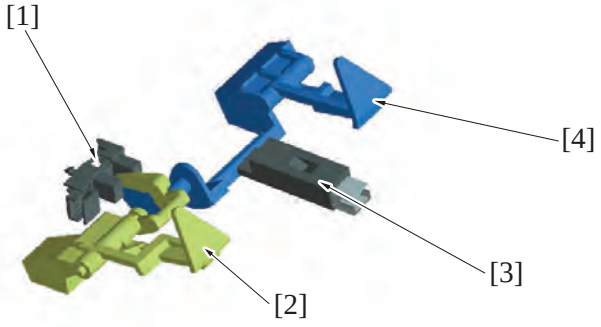
(1) Size detection in standard mode

(a) Detecting the width of the original

- The original is to be loaded in the document feed tray by aligning it with reference to the center of the document feed tray in the standard mode.
- The width of the original is loaded on the document feed tray will be detected with the restriction plate positional volume.
- The restriction plate positional volume includes a variable resistor. The resistor values change in accordance with movement of the original width guide plate.

(b) Detecting the length of the original

- The length of the original is loaded on the document feed tray will be detected by the length sensors/1 and /2.
- The length sensor/1 is a transmission type, while length sensor/2 is a reflection type. The length sensor/1 is detected by two actuators, that is, actuator 1 and actuator 2.
- When the document feed tray is not loaded with any originals, length sensor/1 is blocked. When an original is loaded and only actuator 1 is pressed, document length sensor/1 is unblocked. When both actuator 1 and actuator 2 are pressed, a blocked document length sensor/1 is detected by actuator 2.



[1]	Length sensor/1 (PS10)	[2]	Actuator 1
[3]	Length sensor/2 (PS11)	[4]	Actuator 2

(2) Size detection in mixed original / AMS mode

(a) Detecting the width of the original

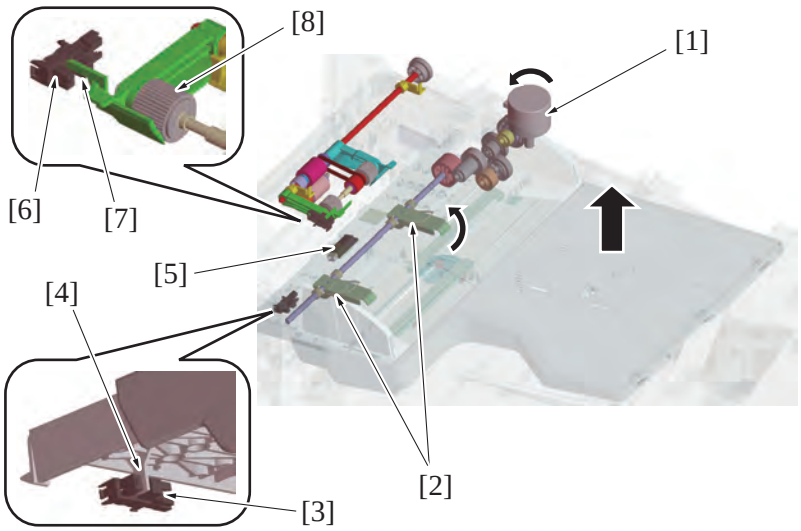
- In the mixed original mode, the original is aligned to the rear side of the document width guide plate.
- In the mixed original / AMS mode, no width is determined on the document feed tray; rather, the width is detected while the originals are being fed.
- Three consolidation sensors are disposed at positions immediately after the paper feed section, functioning to detect the width of the original.

(b) Detecting the length of the original

- In the mixed original/AMS mode, the length of the original is not determined on the document feed tray. But the length is calculated and determined based on the period of time during which the before read sensor remains activated.

3.3.3 Up/down control for the document feed tray

- The document feed tray rises to feed originals.
- The lift-up motor performs the up/down control of the document feed tray.
- The document feed tray is lowered due to completion of a job, paper jam, or paper misloading.



[1]	Lift-up motor (M5)	[2]	Lift-up lever
[3]	Lift up lower sensor (PS3)	[4]	Lower limit detection actuator
[5]	Empty sensor (PS1)	[6]	Lift up upper sensor (PS2)
[7]	Upper limit detection actuator	[8]	Pick-up roller

(1) Preliminary up operation

- The document feed tray stops in the lower limit position during standby.
- When a job starts with the document feed tray at the lower limit position, the tray will take longer to rise until paper is fed.
- To shorten the time from the job start to end, lift the document feed tray to the document feed tray standby position in advance.
- The document feed tray standby position can be adjusted through [Administrator Settings] -> [System Settings] -> [ADF Settings]. Preliminary lift is not performed and stands by at the lower limit position if OFF is selected.

(2) Up operation

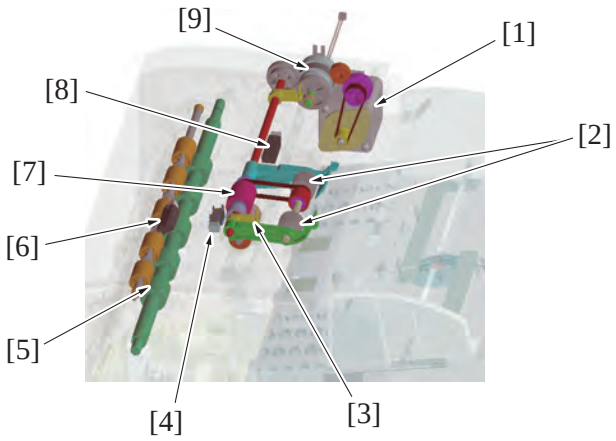
- The document feed tray stops in the lower limit position during standby.
- When an original is loaded into the tray, the empty sensor detects the original. The lift-up motor turns on when the control panel is pressed.
- The lift-up lever moves via lift-up motor drive to lift the document feed tray to the document feed tray standby position.
- The lift-up motor is driven to lift the document feed tray to the document feed position when the Start key is pressed.
- The top surface of the original pushes up the pick-up roller. The lift operation stops at the timing when the lift up upper sensor is unblocked.
- The number of originals decrease as each document is fed. The lift operation is performed again once the lift up upper sensor is blocked to maintain an optimal paper feed position.

(3) Down operation

- Once all originals have been fed and the empty sensor detects the empty state, the lift-up motor operates in reverse.
- The lift-up lever moves via lift-up motor drive to lower the document feed tray.
- The operation to lower the document feed tray stops when the lift up lower sensor is blocked.
- The document feed tray is lowered in an original empty state when a job completes or originals have been pulled out.
- The document feed tray is lowered due to paper jam, paper misloading, or a state that the DF is raised.

3.3.4 Original take-up control

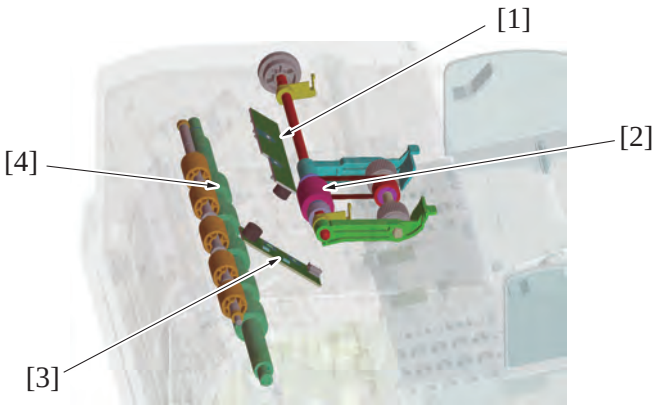
- The take-up motor provides the drive for original take-up operations.
- The drive from the take-up motor is transmitted to the pick-up roller and feed roller when the take-up clutch is energized. The original is picked up and fed in by the rotation of the rollers.
- The original picked up and fed in is transported onto the registration roller.



[1]	Take-up motor (M1)	[2]	Pick-up roller
[3]	Separation roller	[4]	After separate sensor (PS4)
[5]	Registration roller	[6]	Registration sensor (PS5)
[7]	Feed roller	[8]	Document feed sensor (PS21)
[9]	Take-up clutch (CL1)	-	-

3.3.5 Double feed detection (UK-501)

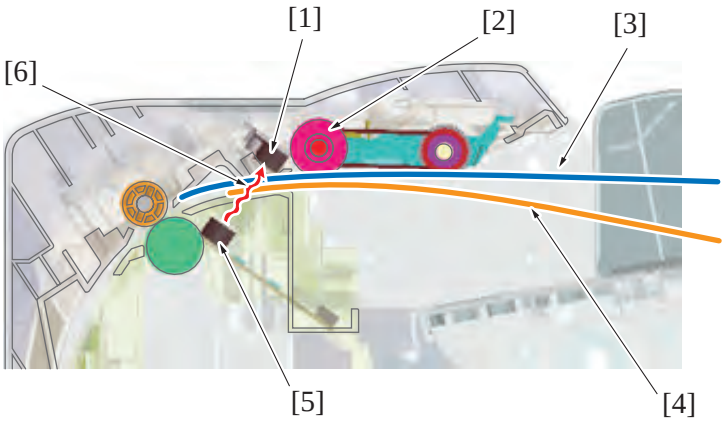
- With the optional UK-501 being installed, it is possible to detect originals double feed.
- At double feed detection, the passing originals come in contact with ultrasonic waves. Depending on the amount of unblocked ultrasonic waves, it can be determined whether originals are double feed.
- Double feed detection uses a detection board that is configured with one pair of a receiver and a transmitter.



[1]	Multi feed detection board/2 (receiver) (MFDB/2)	[2]	Feed roller
[3]	Multi feed detection board/1 (transmitter) (MFDB/1)	[4]	Registration roller

(1) Double feed detection control

- Originals come into contact with ultrasonic waves that are transmitted from the multi feed detection board/1 (transmitter). The ultrasonic waves are received on the multi feed detection board/2 (receiver).
- The ultrasonic waves attenuate due to the air layer between originals when originals are double feed.
- The voltage at the receiver is checked. A determination of original double feed is made if the voltage is the same as or less than a predetermined value.
- The following lists the type of originals that can be detected for double feed.
  - Originals with weight of 35 to 210 g/m^2 (9 5/16 to 55 7/8 lb). Other types of originals may not be detected properly when double feed occurs.



[1]	Multi feed detection board/2 (receiver) (MFDB/2)	[2]	Feed roller
[3]	Scanned original	[4]	Double feed original
[5]	Multi feed detection board/1 (transmitter) (MFDB/1)	[6]	Ultrasonic waves

(2) Operation after double feed detection

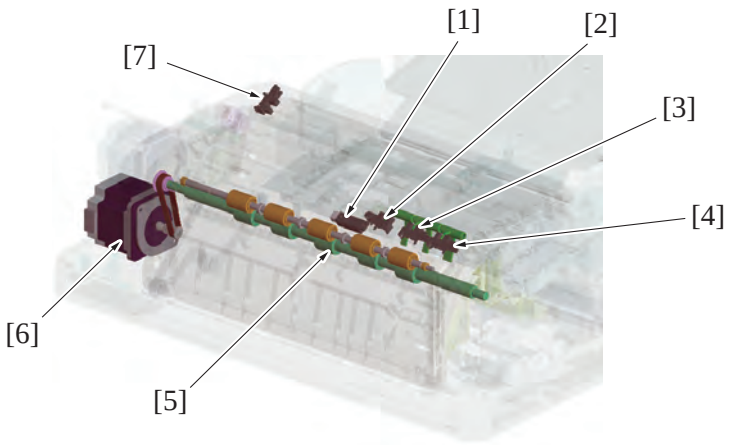
- The following two operations are available when double feeds are detected.
  The desired operation can be selected from [Switch No. 121] in [Service Mode] -> [System 2] -> [Software Switch Setting].
  - Stop transporting the double feed originals at the time that the double feed is detected.
    The software switch settings value is "Bit assignment 00000000 / HEX assignment 00".
  - Discharge the fed originals after a double feed is detected and then stop feeding paper.
    The software switch settings value is "Bit assignment 00000010 / HEX assignment 02".

(3) Double feed detection adjustment

- Sensitivity adjustment of the multi feed detection sensor is performed at the time of installing or replacing the double feed detection kit.
- Sensitivity adjustment of the multi feed detection sensor is performed from [Service Mode] -> [ADF] -> [Multi Feed DetectionAdj.].
- Tuck in the double feed detection kit (UK-501) adjustment sheet between the multi feed detection board/1 (transmitter) and the multi feed detection board/2 (receiver), and output ultrasonic waves.
- Adjust the value that is received at the multi feed detection board/2 (receiver) within the specified range.

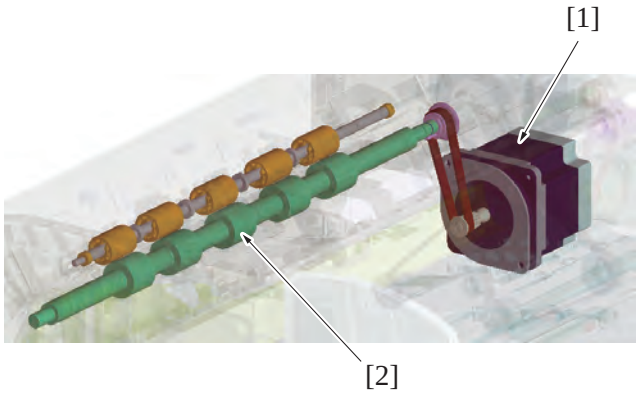
4. REGISTRATION SECTION

4.1 Configuration



[1]	Registration sensor (PS5)	[2]	Consolidation sensor/1 (PS13)
[3]	Consolidation sensor/2 (PS14)	[4]	Consolidation sensor/3 (PS15)
[5]	Registration roller	[6]	Registration motor (M2)
[7]	Read open/close sensor (PS16)	-	-

4.2 Drive

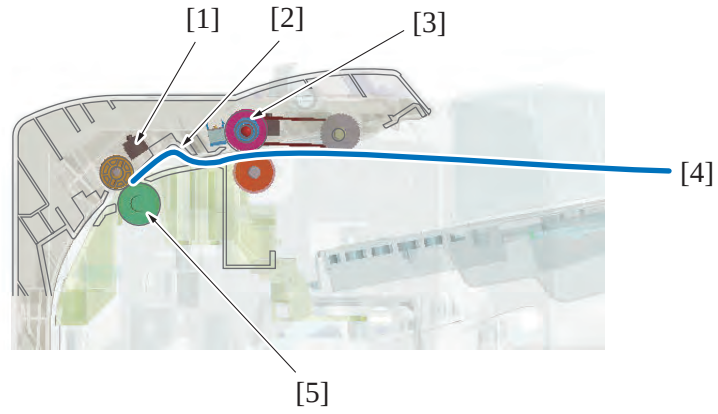


[1]	Registration motor (M2)	[2]	Registration roller

4.3 Operation

4.3.1 Registration control

- The registration roller is driven by the registration motor.
- While the original is being transported, a loop is formed in the original between the tack-up roller and registration roller to thereby correct any skew in the original.
- The registration sensor detects original and the timing at which to de-energize the registration motor is controlled.

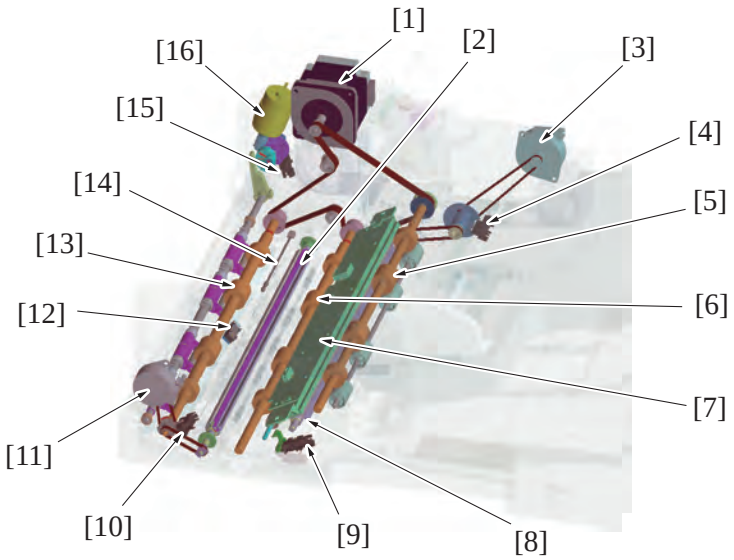


[1]	Registration sensor (PS5)	[2]	Loop formation

[3]	Feed roller	[4]	Original
[5]	Registration roller	-	-

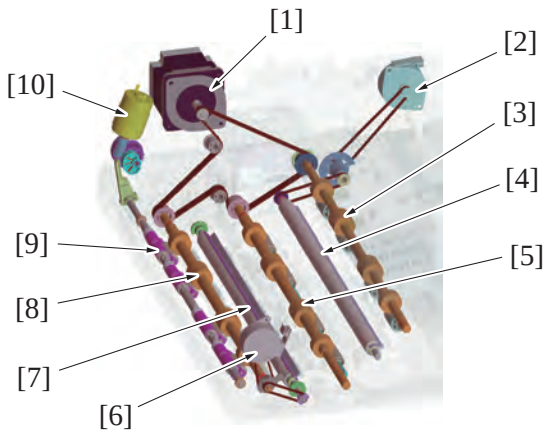
5. READ SECTION

5.1 Configuration



[1]	Reading motor (M3)	[2]	DF original glass cleaning brush
[3]	Back side cleaning motor (M7)	[4]	Back side cleaning home sensor (PS9)
[5]	Reading roller 3	[6]	Reading roller 2
[7]	CIS module (CIS)	[8]	CIS glass cleaning brush
[9]	CIS under guide open/close sensor (PS20)	[10]	Front side cleaning home sensor (PS18)
[11]	Front side cleaning motor (M8)	[12]	Before read sensor (PS6)
[13]	Reading roller 1	[14]	DF temperature sensor (TH)
[15]	Read roller home sensor (PS8)	[16]	Reading roller pressure/retraction motor (M6)

5.2 Drive

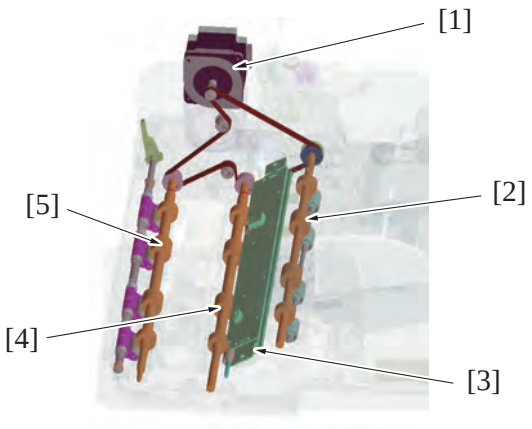


[1]	Reading motor (M3)	[2]	Back side cleaning motor (M7)
[3]	Reading roller 3	[4]	CIS glass cleaning brush
[5]	Reading roller 2	[6]	Front side cleaning motor (M8)
[7]	DF original glass cleaning brush	[8]	Reading roller 1
[9]	Reading roll	[10]	Reading roller pressure/retraction motor (M6)

5.3 Operation

5.3.1 Reading transport control

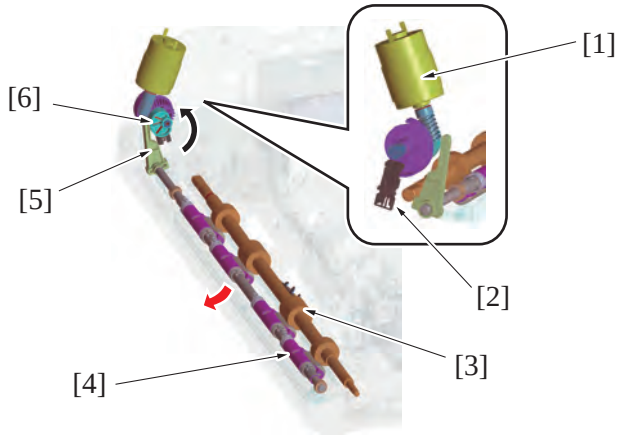
- The reading roller 1, 2, and 3 are driven by the reading motor.
- When reading a 2-sided original, the 2-sided original (the front side and back side) is read at once in one pass of the original.
- The front side of the 2-sided original is read by the scanner unit section of the main body after the leading edge of the original has moved past reading roller 1. The back side of the 2-sided original is read by the CIS after the leading edge of the original has moved past reading roller 2.



[1]	Reading motor (M3)	[2]	Reading roller 3
[3]	CIS module (CIS)	[4]	Reading roller 2
[5]	Reading roller 1	-	-

5.3.2 Reading roller pressure/retraction control

- Original speed fluctuates as the trailing edge of the original moves past reading roller 1. To inhibit these speed fluctuations, the reading roller pressure/retraction motor is employed to retract reading roller 1.
- The rotation of the cam is driven by the reading roller pressure/retraction motor via the gear.
- Due to the rotation of the cam, the lever is put back and the reading roll being pressed against the reading roller 1 is pushed down.

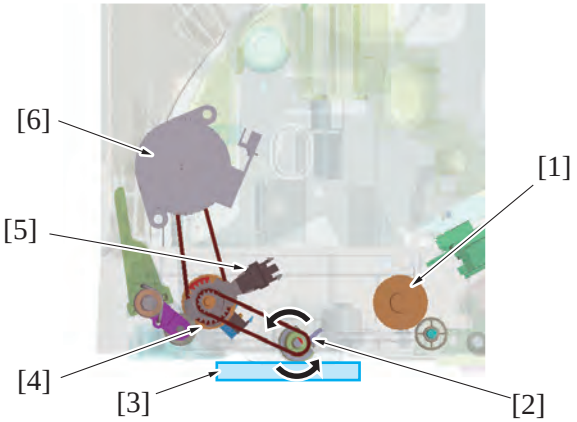


[1]	Reading roller pressure/retraction motor (M6)	[2]	Read roller home sensor (PS8)
[3]	Reading roller 1	[4]	Reading roll
[5]	Lever	[6]	Cam

5.3.3 DF original glass contamination prevention control

(1) DF original glass cleaning

- A reading line can occur if the DF original glass is contaminated with dust or dirt. The DF original glass cleaning mechanism prevents this fault from occurring.
- The cleaning brush rotates to remove dust sticking to the DF original glass.
- The cleaning brush is rotated by the front side cleaning motor.
- The front side cleaning home sensor detects the cleaning brush at its home position.



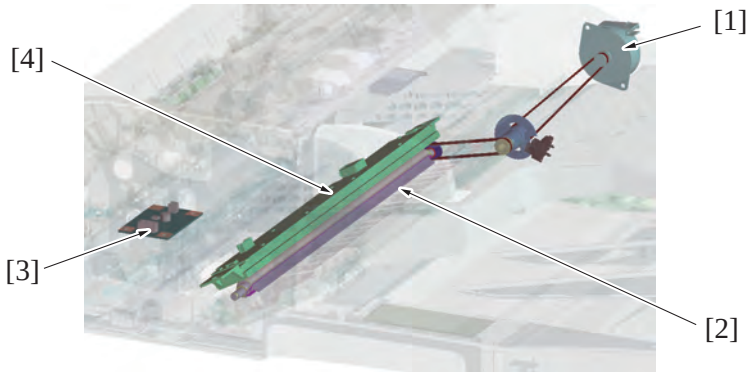
[1]	Reading roller 2	[2]	Cleaning brush
[3]	DF original glass	[4]	Reading roller 1
[5]	Front side cleaning home sensor (PS18)	[6]	Front side cleaning motor (M8)

(2) Details of DF original glass cleaning

Condition		Cleaning operation
Predrive	Power ON	Rotates the cleaning brush one complete turn to check for its correct operation.
	Existing from sleep	
Start key ON	Before starting reading	Rotates the cleaning brush one complete turn to perform cleaning.
	During reading (not performed in black mode)	Rotates the cleaning brush one complete turn to perform cleaning for every two originals during continuous reading of originals.
		Rotates the cleaning brush three complete turns to perform cleaning for each original during continuous reading of originals, if the despeckle mode is selected.
	After completing reading last original	The cleaning brush tends to curl if repeatedly operated in one direction only, resulting in poor cleaning performance. To straighten the brush, it is rotated one complete turn in the backward direction when reading of the last original is completed.

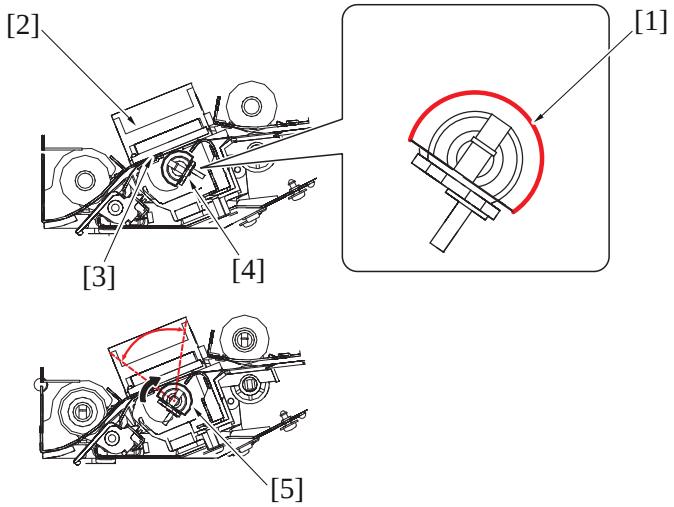
5.3.4 CIS original reading control

- The back side of the original is read by the CIS (contact image sensor) module. The image data read by the CIS is transferred to the dual scan image processing board.
- The CIS original reading section consists of the CIS module, DF power supply and the back side cleaning mechanism.
- The CIS module has two LEDs.



[1]	Back side cleaning motor (M7)	[2]	Cleaning brush
[3]	DF power supply (DFPU)	[4]	CIS module (CIS)

- A cleaning brush to which a white plate is affixed is disposed on the side opposite the CIS module. Use of a specific position of the cleaning brush through rotation of the cleaning brush allows the following operations to be performed: “gain adjustment/shading correction”, “ADF Scan Glass Contamin. Sensitivity”, and “CIS glass cleaning by the brush”.
- “Document passage” is performed at the home position.
- “Shading correction”, “gain adjustment”, and “ADF Scan Glass Contamin. Sensitivity” are made using the shading surface.



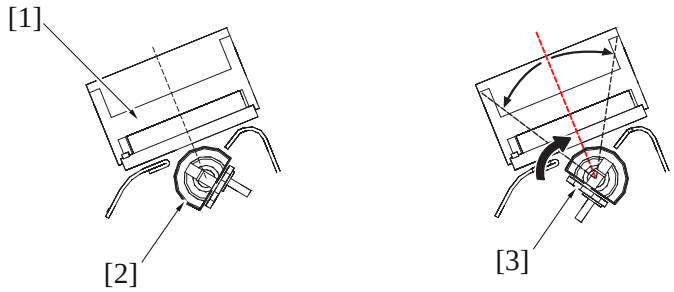
[1]	White plate affixed	[2]	CIS module (CIS)
[3]	CIS glass	[4]	Cleaning brush (Home position)

[5]	Cleaning brush (Shading correction surface)	-	-

5.3.5 CIS control when power is turned ON

1. The LEDs of CIS module are turned ON.
2. The cleaning brush is detected at its home position.
3. The cleaning brush is rotated and brought to a stop at the gain adjustment position.
   The gain adjustment is made twice with the cleaning brush at that position.
   The gain adjustment is performed near the center of the shading correction surface.
4. After the adjustments, the LEDs are turned OFF.
5. The cleaning brush is rotated and brought to a stop at the home position.

* The same control is performed when the main body exits from the sleep mode.



[1]	CIS module (CIS)	[2]	Cleaning brush (Home position)
[3]	Cleaning brush (Gain adjustment position)	-	-

5.3.6 CIS control when the document is loaded

1. The cleaning brush is detected at its home position.
2. The LEDs of CIS module are turned ON.
3. The cleaning brush is rotated four complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
   The cleaning brush uses the shading correction surface to perform “ADF Scan Glass Contamin. Sensitivity” during its fourth turn.
4. The LEDs are turned OFF.
5. The cleaning brush is rotated and brought to a stop at the home position.

NOTE

- **No operation is performed when the document is loaded if the following function is selected using the service mode: [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side] -> [ADF Scan Glass Contamin. Sensitivity] -> [Not Set].**

5.3.7 CIS control when the start key is pressed

- This control is performed only in the 2-sided original reading mode.

(1) Before a print cycle (back side reading)

1. The cleaning brush is detected at its home position.
2. The LEDs of CIS module are turned ON.
3. The cleaning brush is rotated three complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn.
4. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).
5. The back side of the original is read as the original moves over the CIS.

(2) During a print cycle (operation between originals after reading)

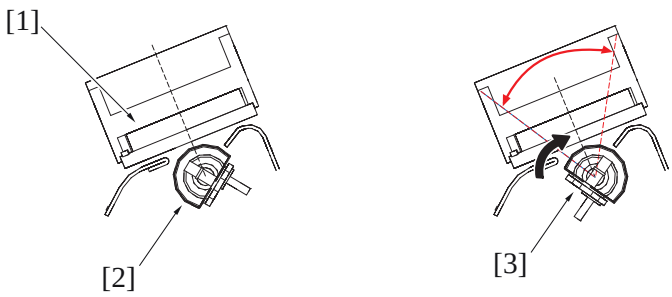
The brush cleaning operation is normally performed each time the original is read.
If a print cycle produces a large number of printed pages continuously, however, either the cleaning operation or the shading correction operation is performed.
The shading correction operation is performed at predetermined intervals during a multiprint cycle in order to maintain an appropriate shading correction value.

(a) Cleaning operation

1. The cleaning brush is rotated one complete turn.
   (The cleaning brush normally makes one turn, but makes three turns in the despeckle mode.)
2. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).

(b) Shading correction operation

1. The cleaning brush is rotated three complete turns.
   The cleaning brush cleans the CIS glass during its first turn.
   The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
2. With the LEDs ON, the cleaning brush is brought to a stop at its home position (waiting for the original).



[1]	CIS module (CIS)	[2]	Cleaning brush (Home position)
[3]	Cleaning brush (Shading correction surface)	-	-

(c) After the print cycle

1. After the reading sequence, the LEDs are turned OFF.
2. The cleaning brush is turned backward (to tame the brush).
3. The cleaning brush is brought to a stop when its home position is detected.
4. The cleaning brush perform “ADF Scan Glass Contamin. Sensitivity”.
   - The LEDs are turned ON. The cleaning brush is rotated four complete turns.
   - The cleaning brush cleans the CIS glass during its first turn.
   - The cleaning brush uses the shading correction surface to perform the shading correction during its second and third turn. The shading correction is performed (a total of twice).
   - The cleaning brush uses the shading correction surface to perform “ADF Scan Glass Contamin. Sensitivity” during its fourth turn.
   - The cleaning brush is brought to a stop at its home position.
   - The LEDs are turned OFF.

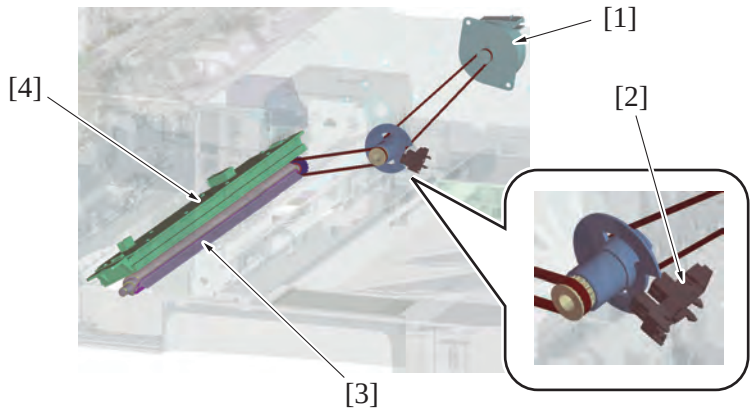
NOTE

- **Steps of 4 is not performed if the following function is selected using the service mode: [System 2] -> [ADF Scan Glass Contamin. Set.] -> [Back Side] -> [ADF Scan Glass Contamin. Sensitivity] -> [Not Set].**

5.3.8 CIS glass contamination prevention control

(1) CIS glass cleaning

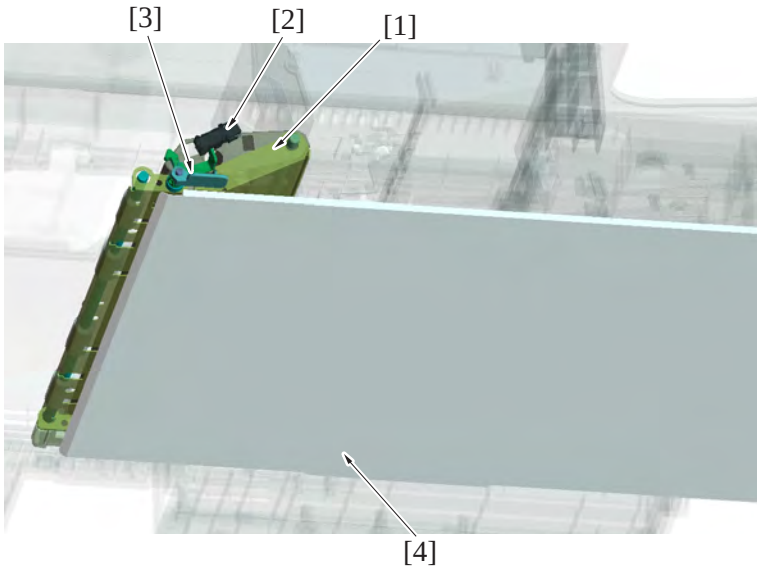
- The CIS glass is cleaned only when two sides of the original are to be read.
- When the back side cleaning motor is energized, the cleaning brush is rotated to remove dust and dirt from the surface of the CIS glass.
- Cleaning of the DF original glass (front side) takes place at timing different from that of cleaning of the CIS glass (back side) and the cleaning of the back side sources its power drive differently from the front side.
- The cleaning brush at its home position is detected by the back side cleaning home sensor.
- For details, see “PA.5.3.7 CIS control when the start key is pressed”.



[1]	Back side cleaning motor (M7)	[2]	Back side cleaning home sensor (PS9)
[3]	Cleaning brush	[4]	CIS module (CIS)

5.3.9 Opening and closing guide set detection

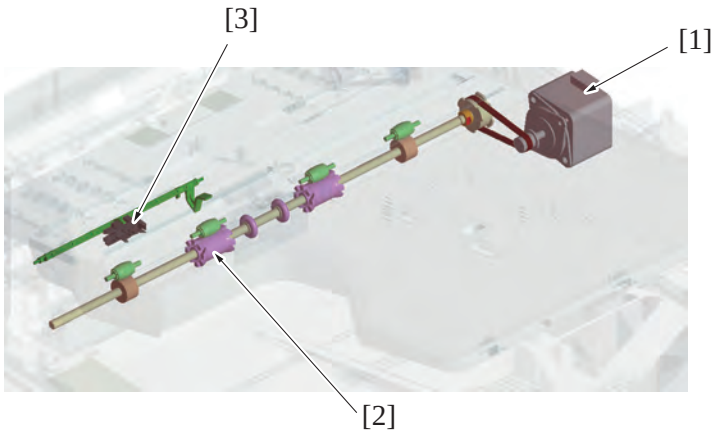
- The opening and closing guide is provided to facilitate misfeed clearing procedures performed near the back side reading position.
- The CIS under guide open/close sensor detects the opening and closing guide in the closed position.



[1]	Opening and closing guide	[2]	CIS under guide open/close sensor (PS20)
[3]	Lever	[4]	Original pad

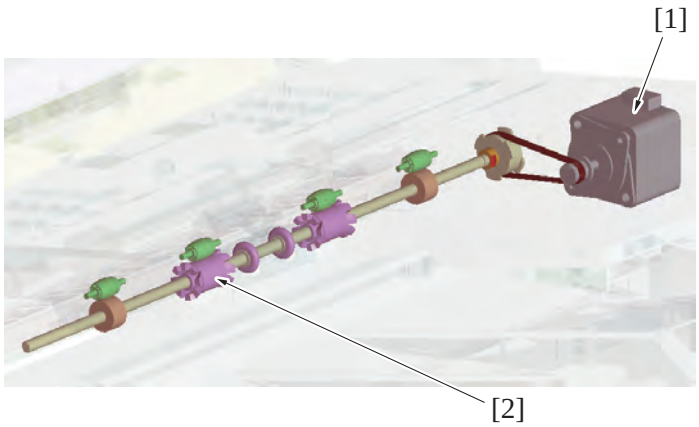
6. PAPER EXIT SECTION

6.1 Configuration



[1]	Exit motor (M4)	[2]	Exit roller
[3]	Exit sensor (PS7)	-	-

6.2 Drive

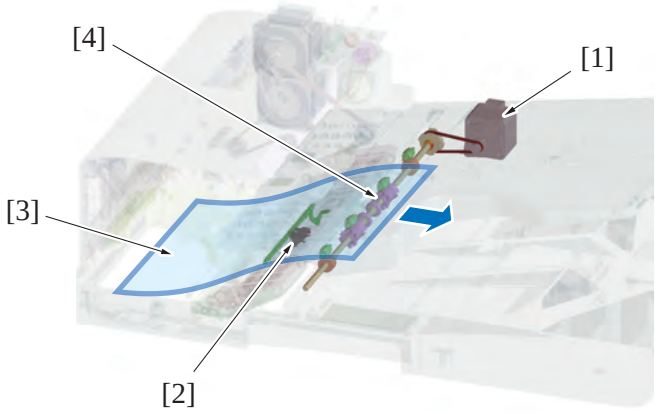


[1]	Exit motor (M4)	[2]	Exit roller

6.3 Operation

6.3.1 Document exit mechanism

- The paper exit section includes the exit roller that feeds the original transported from the read section out onto the exit tray.
- The exit roller is driven by the exit motor.

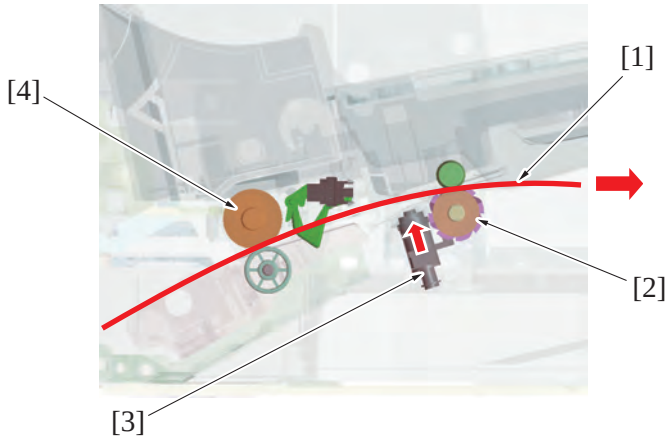


[1]	Exit motor (M4)	[2]	Exit sensor (PS7)
[3]	Original	[4]	Exit roller

6.3.2 Faxed original stamp function SP-501

- Mounting the optional “Stamp unit SP-501” allows a stamp to be placed on a faxed original.

- The stamp solenoid located upstream of the original exit roller is energized when the original is about to be fed out and the stamp mounted on the solenoid plunger is pressed against the surface of the original. This places a faxed mark (+) on the surface of the original.
- This function is enabled when [Service Mode] -> [System 2] -> [Stamp] -> [Set] (default setting: Unset) is configured and the user selects [Application] -> [Stamp/Composition] -> [TX Stamp] (default setting: OFF)" on the "Scan/Fax" screen.
- This function is not used for "Copy" or "Scan".



[1]	Original	[2]	Exit roller
[3]	Stamp unit (SP-501)	[4]	Reading roller 3

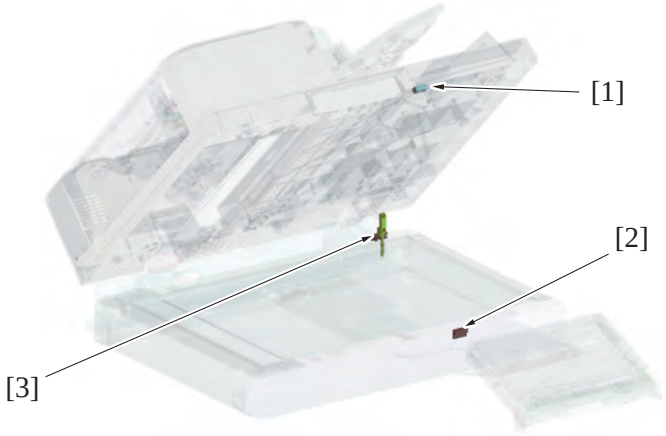
7. OPEN AND CLOSE DETECTION SECTION

7.1 DF angle open and close detection

- The lever actuator is provided to detect the original size when using the auto document feeder as the original cover.
- When the dual scan document feeder is lowered under predetermined angle, the lever actuator presses the original cover angle detection lever of the MFP main body to turn ON the angle sensor.

7.2 DF open and close detection

- The magnet is installed to detect the open and close of the dual scan document feeder on the main body side.
- The original cover sensor on the main body will turn ON by the magnet when lowering the DF.

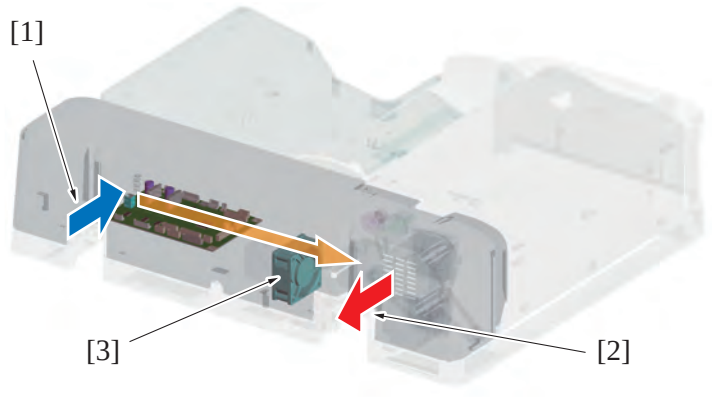


[1]	Magnet	[2]	Original cover sensor (RS201) (Main body scanner section)
[3]	Angle sensor (PS202) (Main body scanner section)	-	-

8. FAN CONTROL

8.1 Function

- The cooling fan motor drives during original scanning to prevent the temperature of the drive motor from increasing.



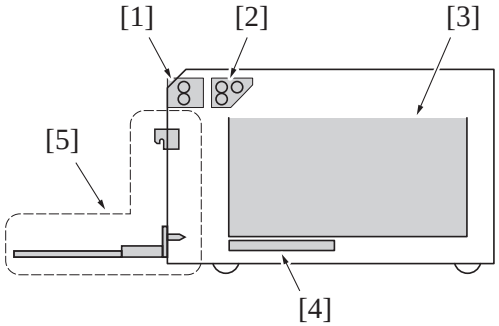
[1]	Drawing in external air	[2]	Discharging air outside of the machine
[3]	Cooling fan motor (FM)	-	-

8.2 Control condition

Motor name	Control	Control conditions
Cooling fan motor (FM)	Stop	Standby state
	Full speed	Original document feeding

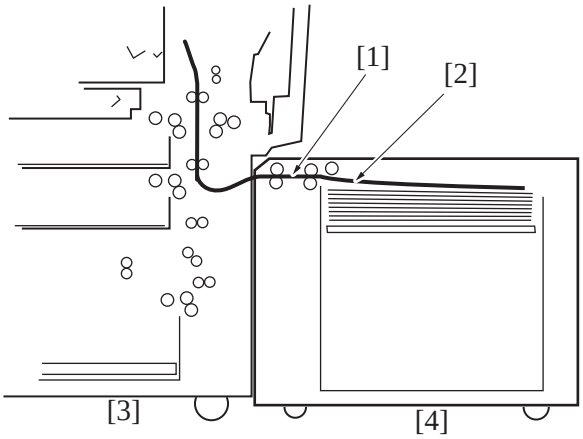
PB THEORY OF OPERATION LU-205

1. SECTION CONFIGURATION



[1]	Paper transport section	[2]	Paper feed section
[3]	Paper storage section	[4]	Dehumidification heater
[5]	Unit open/close section	-	-

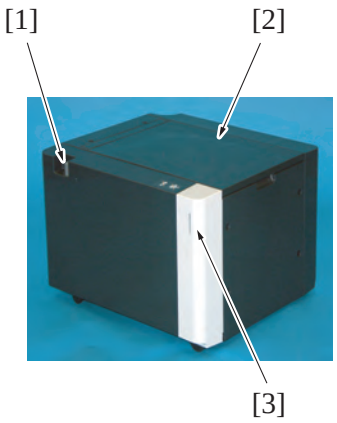
2. PAPER PATH



[1]	Transportation to main body	[2]	Paper feed from the tray
[3]	Main body	[4]	LU-205

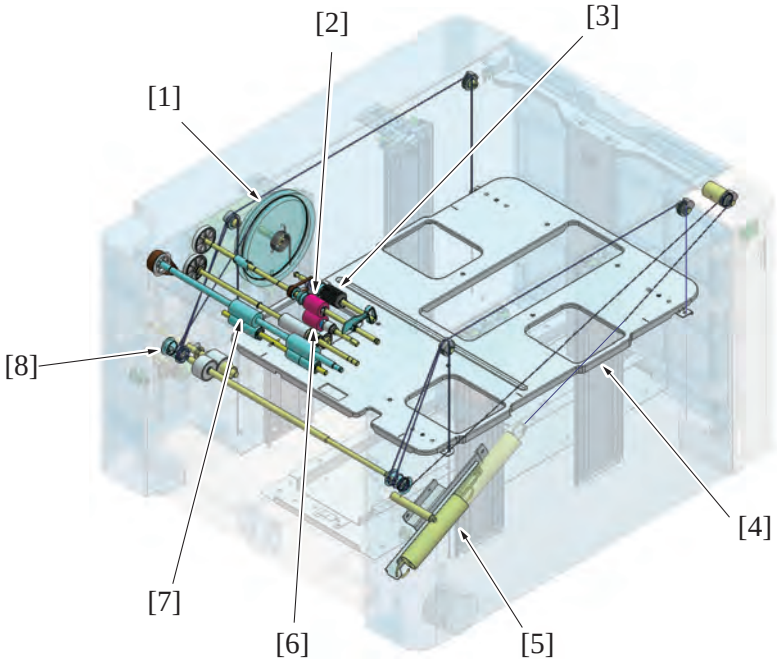
3. CONFIGURATION

3.1 Exterior view



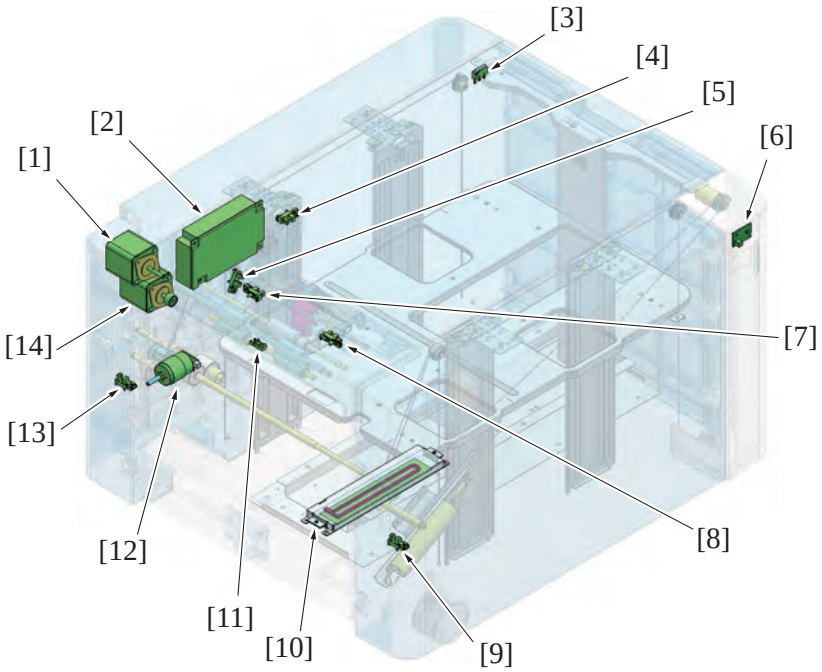
[1]	Unit release lever	[2]	LU door
[3]	Tray LED	-	-

3.2 Main part



[1]	Remaining paper detection plate	[2]	Feed roller
[3]	Pick-up roller	[4]	Paper tray
[5]	Drive assist spring	[6]	Separation roller
[7]	Transport roller	[8]	Lift-up axis

3.3 Electrical part

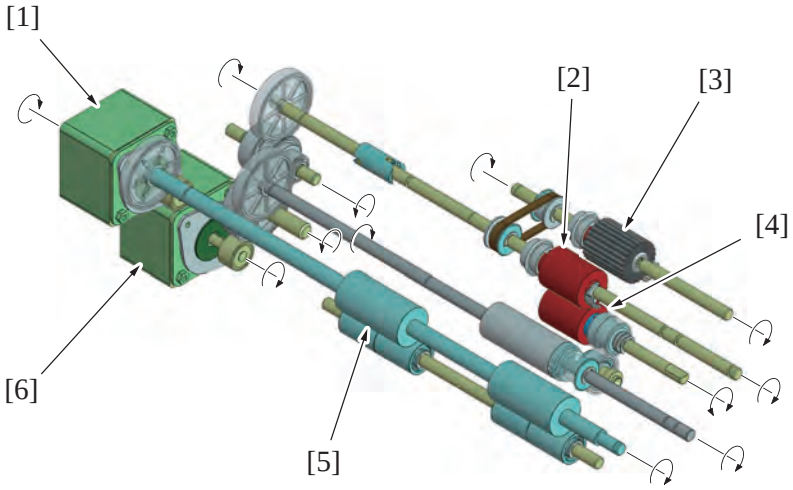


[1]	LU transport motor (M3)	[2]	LU drive board (LUDB)
[3]	LU door switch (MS1)	[4]	LU near empty sensor /1 (PS5)
[5]	LU near empty sensor /2 (PS6)	[6]	Tray LED (LED)
[7]	LU upper limit sensor (PS2)	[8]	LU paper empty sensor (PS4)
[9]	LU set sensor/Fr (PS7)	[10]	Dehumidification heater (DH)
[11]	LU paper feed sensor (PS3)	[12]	LU lift-up motor (M1)
[13]	LU set sensor/Rr (PS1)	[14]	LU paper feed motor (M2)

4. DRIVE

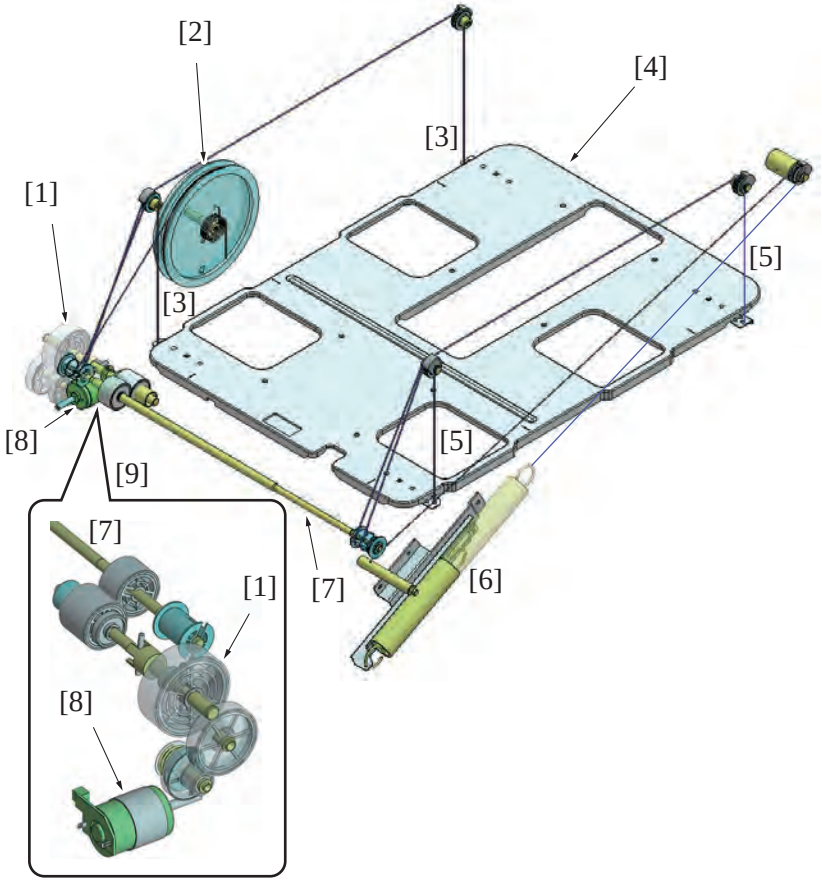
- The drive mechanism is equipped with a paper feed transport drive mechanism and a paper lift-up drive mechanism.

4.1 Paper feed transport drive



[1]	LU transport motor (M3)	[2]	Feed roller
[3]	Pick-up roller	[4]	Separation roller
[5]	Transport roller	[6]	LU paper feed motor (M2)

4.2 Paper lift-up drive



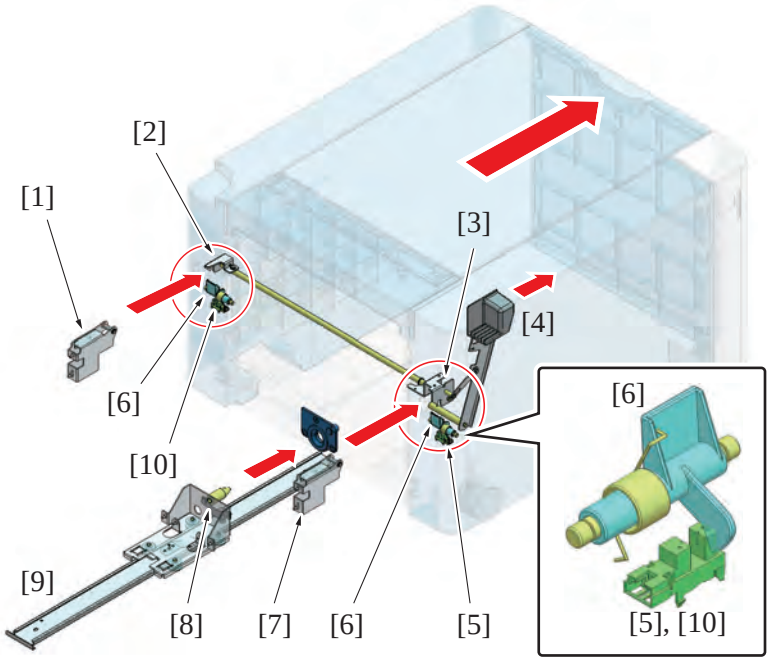
[1]	Lift-up drive section	[2]	Remaining paper detection plate
[3]	Wire (rear side)	[4]	Paper tray
[5]	Wire (front side)	[6]	Drive assist spring
[7]	Lift-up axis	[8]	LU lift-up motor (M1)
[9]	Lift-up motor around (rear view)	-	-

5. OPERATION

5.1 Unit open/close section

5.1.1 Unit lock mechanism

- The link between the large capacity unit and main body can be released.
- If the LU set sensor determines that the large capacity unit is released, printing from the large capacity unit is prohibited.



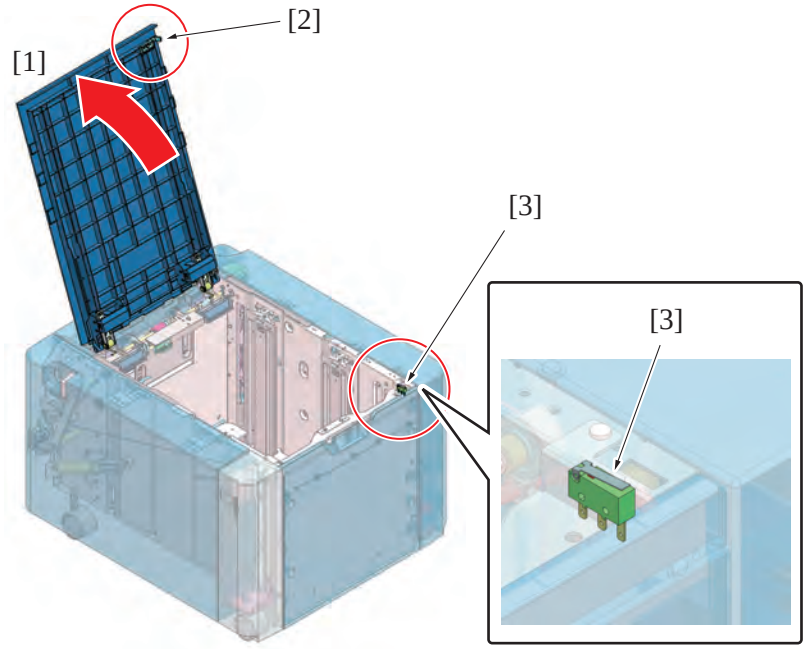
[1]	Mounting plate (rear): On the main body	[2]	Lock (rear)
[3]	Lock (front)	[4]	Unit release lever
[5]	LU set sensor/Fr (PS7)	[6]	Actuator
[7]	Mounting plate (front): On the main body	[8]	Lock pin (on the main body)
[9]	Coupling rail	[10]	LU set sensor/Rr (PS1)

(1) Description

- Operate the unit release lever in the front side of the large capacity unit, the locks (on both sides of front and back) attached to the left side of the large capacity unit will be released. It releases the link between the large capacity unit and the main body, which makes it possible to slide the large capacity unit to the right.
- The large capacity unit is connected to the main body via the coupling rail. The unit slides to the right side along the rail.
- When the large capacity unit link is released, the LU set sensor/Fr and the LU set sensor/Rr will be unblocked. As a result, the sensor determines that large capacity unit has been released.
- The LU set sensor is installed in the front and rear sides. These sensors are used to prevent the large capacity unit from being linked to the main body at an angle.
- If the LU set sensor determines that the large capacity unit is released, printing from the large capacity unit is prohibited. (printing from other paper feed ports is still possible).
- The large capacity unit is linked to the main body through sliding the unit to the left. The home position when the large capacity unit is linked is fixed with the lock pin on the main body.
- Link the large capacity unit, printing from the large capacity unit will be enabled.

5.1.2 LU door open/close detection mechanism

- The LU door is equipped with a door switch.
- Open the LU door, the paper tray lift-up drive section link will be released.



[1]	LU door	[2]	LU door open/close detection lever
[3]	LU door switch (MS1)	-	-

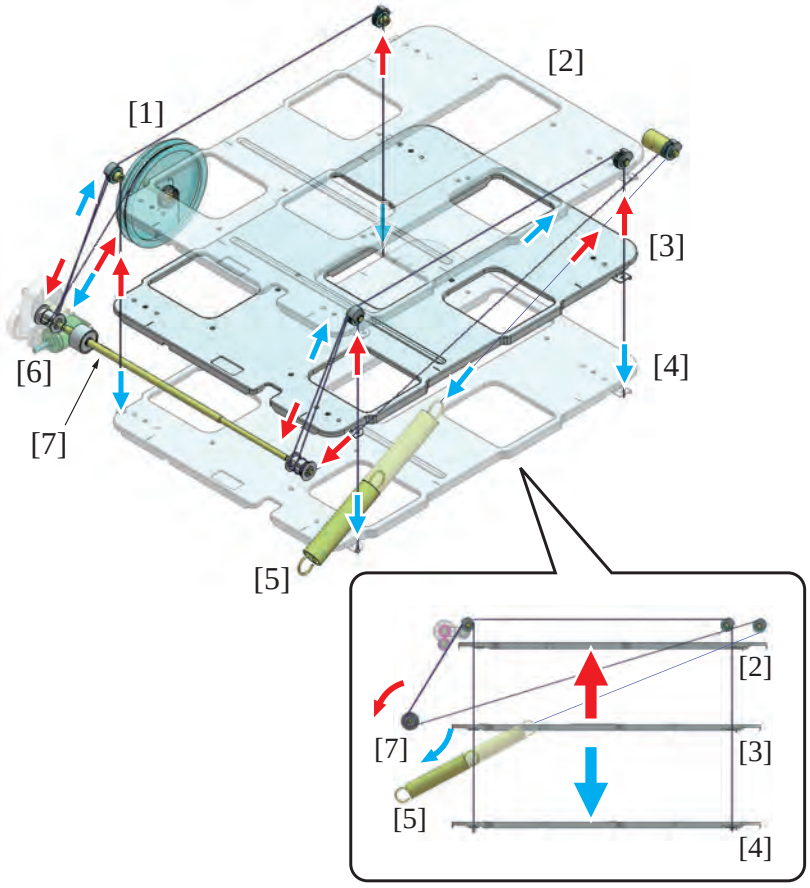
(1) Description

- An LU door switch is provided at the top-right-rear side of the large capacity unit and detects the opening and closing of the LU door.
- When the LU door is closed, the open/close detection lever on the LU door pushes down the LU door switch. (ON)
- If the LU door switch determines that the LU door is open, printing from the large capacity unit is prohibited. (printing from other paper feed ports is still possible).
- Open the LU door, the paper tray lift-up drive section link will be released. For details, see "Paper tray lift-up drive release mechanism".
- Close the LU door, the paper tray lift-up drive section will be connected and printing from the large capacity unit will be enabled.

5.2 Paper storage section

5.2.1 Paper tray lifting mechanism

- When the LU door is closed, the wire is wound around the lift-up axis, which raises the paper tray.
- Detection of the upper limit of paper stops the wire winding process to complete the paper tray lifting operation.



[1]	Remaining paper detection plate	[2]	Paper tray (upper limit position)
[3]	Paper tray (home position)	[4]	Paper tray (lower limit position)
[5]	Drive assist spring	[6]	LU lift-up motor (M1)
[7]	Lift-up axis	-	-

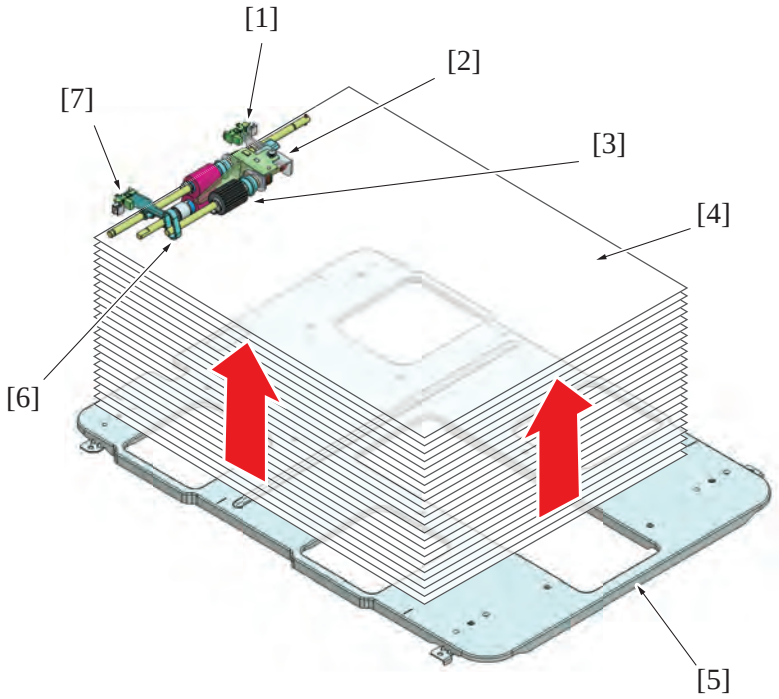
(1) Description

- Four wires are connected to the paper tray which lifts up the tray into its home position.
- Each wire is wound around the lift-up axis. Roll up a lift-up axis, the paper tray will be lifted up.
- The wire in the lift-up axis which is connected to the drive assist spring is also wound in the same direction. By the force of the drive assist spring, the unloaded paper tray (with no paper placed) is lifted up into the home position. (It does not go down to the lowest position)
- With the weight of the paper that is placed on the paper tray, the paper tray will be lowered down. The amount of lowering of the paper tray varies by paper weight. (Maximum load capacity: 3,000 sheets of plain paper)
- When the paper tray is lowered from the home position, upward force is applied to the paper tray by the drive assist spring. It decreases the load on the lift-up axis when paper is lifted up.
- This unit does not have a mechanism to detect the home position and lower limit position of the paper tray.
- Close the LU door, so that the LU lift-up motor and paper tray lifting mechanism are linked together.
- The LU lift-up motor rotates to wind the wires around the lift-up axis and lift up the paper tray. Thus, the surface of the paper is pressed against the pick-up roller.
- Open the LU door, the coupling of the LU lift-up motor and paper tray lifting mechanism will be disconnected. Thus, the paper tray will fall down with its own weight, which releases the pressure between the pick-up roller and the paper. For details on the linking/release mechanism, see "Paper tray lift-up drive release mechanism".
- The remaining paper detection plate also rotates together with the vertical movement of the paper tray. (The wire in the lift-up axis which is connected to the remaining paper detection plate is wound in the opposite direction) For details on the remaining paper detection mechanism, see "Remaining paper detection".

(2) Operation timing

(a) When paper is placed

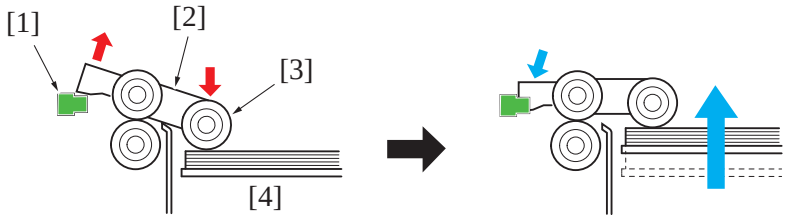
1. The LU door is opened and paper is placed. (The LU door switch detects whether the LU door is closed or not)
2. With the LU door closed, the LU upper limit sensor signal is checked. When the paper tray is being lowered (LU upper limit sensor is unblocked), the LU lift-up motor is rotated and the paper tray lift-up is started.
3. The pick-up roller is pushed up by paper surface that was lifted up. The pick-up roller holder blocks the LU upper limit sensor, which detects the paper raising up to the upper limit position.
4. If the LU upper limit sensor detects the paper raising up to the upper limit position, the LU lift-up motor stops to end the lift-up operation of the paper tray.
5. The paper tray is lifted up to the upper limit. However, if the LU paper empty sensor cannot detect the presence of paper, it determines that the tray is empty. The paper tray remains on standby at the upper limit position. (Lowering operation is not performed. The tray is returned to the home position when the LU door is opened.) Refer to "Paper empty detection" for details on the paper-empty detection mechanism.



[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper
[5]	Paper tray	[6]	LU paper empty sensor actuator
[7]	LU paper empty sensor (PS4)	-	-

(b) During a print cycle

1. When the amount of paper decreases during a print cycle, the pick-up roller will gradually come down. Thus, the LU upper limit sensor that was blocked by the pick-up roller holder becomes unblocked.
2. The LU lift-up motor will rotate again to start lifting up the paper tray.
3. The pick-up roller is pushed up by paper surface that was lifted up. Thus, the pick-up roller holder will block the LU upper limit sensor.
4. If the LU upper limit sensor gets blocked, the LU lift-up motor stops to end the lift-up operation of the paper tray.
5. Repeat above operations, the pressure (paper feed pressure) between the pick-up roller and the paper stack is kept constant regardless of the amount of remaining paper.

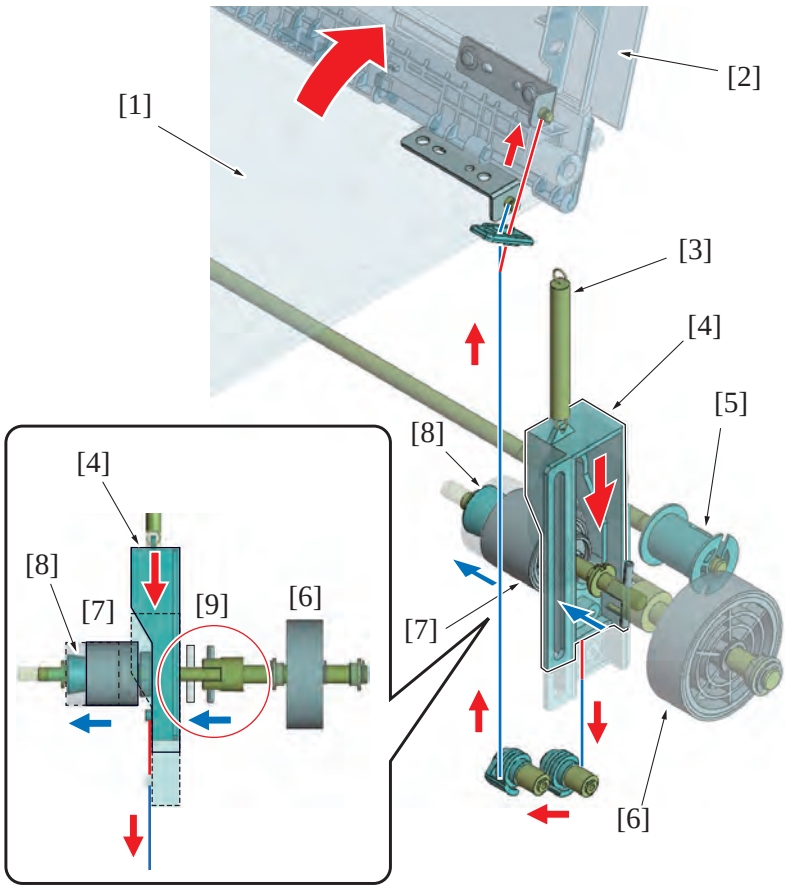


[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper tray

5.2.2 Paper tray lift-up drive release mechanism

- The paper tray lift-up drive section is equipped with a drive release mechanism.
- Release the drive, the paper tray will come down.
- The contact of the pick-up roller on the paper is released when the paper tray comes down.

Rear view



[1]	LU door (close)	[2]	LU door (open)
[3]	Link release plate spring	[4]	Link release plate
[5]	Lift-up axis	[6]	Drive gear
[7]	Connecting gear	[8]	Spring
[9]	Coupling	-	-

(1) Drive release operation

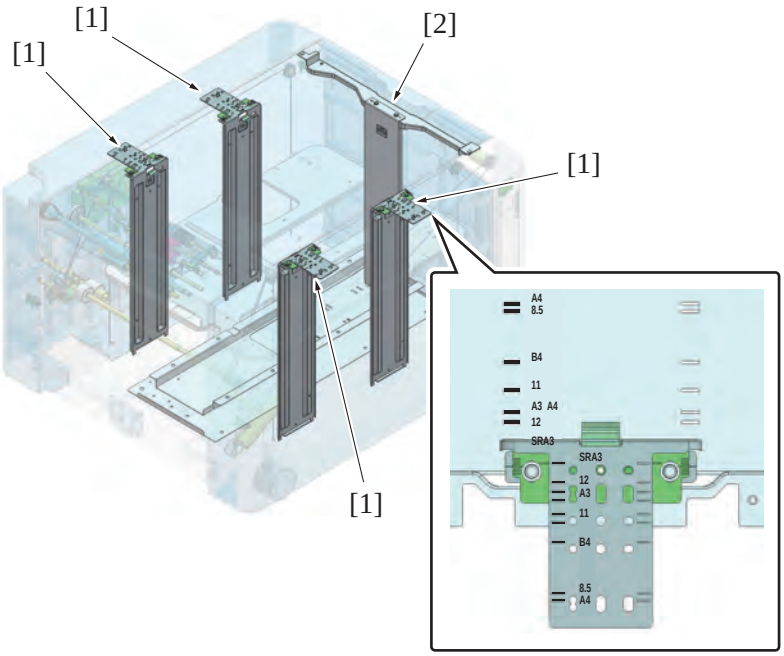
1. The wire linked to the LU door pulls down the link release plate when the door is opened.
2. The link release plate pushes out the link gear towards the front of the main body. It releases the link to the drive gear coupling.
3. Release the LU lift-up motor driving force, the weight of the load on the paper tray will pull out the wire wound in the lift-up axis. (The lift-up axis rotates on the opposite direction). This movement lowers the paper tray.

(2) Drive link operation

1. Close the LU door, the spring that is linked to the link release plate will pull up the link release plate.
2. The link gear pushes it back inside the machine through the spring force. It completes the link to the drive gear coupling.
3. For details on the operation after drive link operation, see "Paper tray lifting mechanism".

5.2.3 Paper guide plate

- Change of the installation position of the paper guide plate allows the size of actual paper to be changed.
- The large capacity unit is not equipped with a mechanism to automatically detect paper size.



[1]	Paper guide plate (width)	[2]	Paper guide plate (length)

(1) Description

- Change of the installation position of the paper guide plate allows the size of actual paper to be changed.
- If the installation position of the paper guide plate has been changed, configure the paper size from [Service Mode] -> [System 2] -> [LCT Paper Size Setting].
- Available paper sizes: A3, B4, A4/A4S, A3 Wide (12 1/4 x 18), SRA3, Ledger, Letter/LetterS, Legal

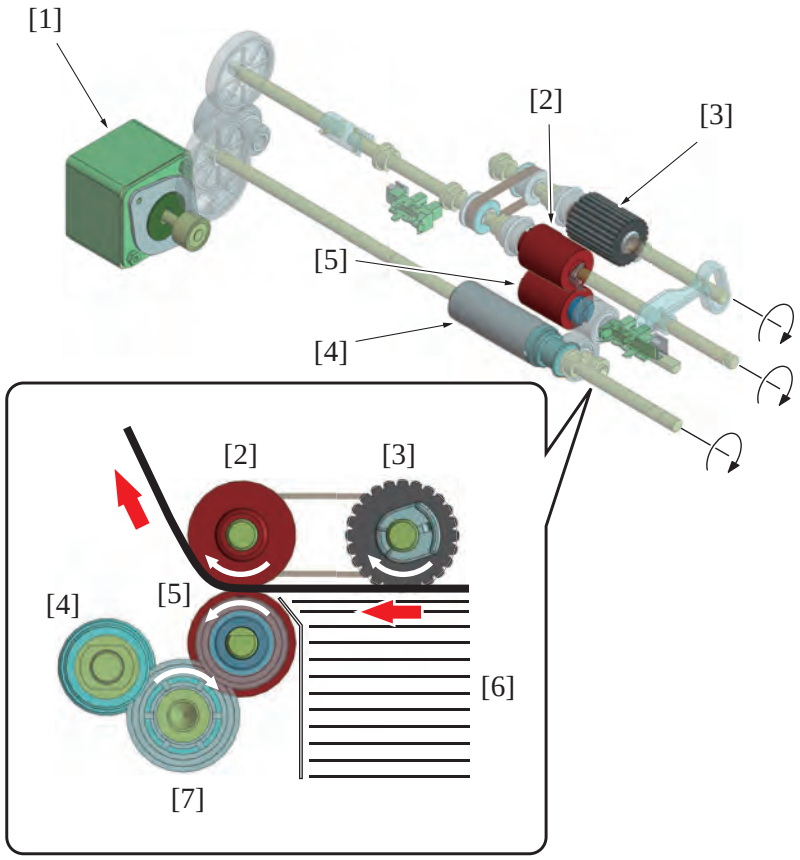
NOTE

- **If the LCT installation change settings under [Service Mode] -> [System 2] is changed, the LCT size is restored to the default value.**
- **If the LCT installation change settings are changed, you should confirm the paper size settings from [Service Mode] -> [System 2] -> [LCT Paper Size Setting].**
- **Change the settings when the paper size settings are different from the size of the actual paper.**

5.3 Paper feed/transport section

5.3.1 Paper feed control

- The LU paper feed motor drives the rollers to feed paper.

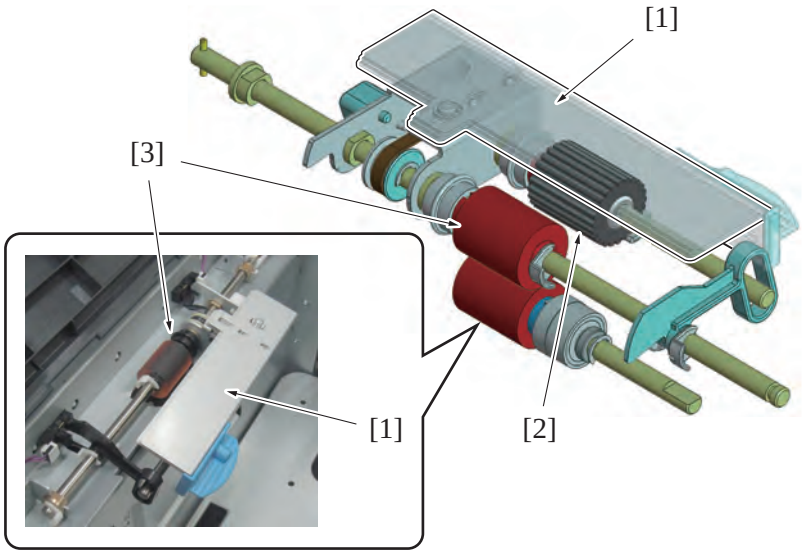


[1]	LU paper feed motor (M2)	[2]	Feed roller
[3]	Pick-up roller	[4]	Torque limiter
[5]	Separation roller (Only one sheet of paper in the sample illustration so it is in driven rotation)	[6]	Paper
[7]	Drive relay gear	-	-

(1) Description

- The LU paper feed motor drives the pick-up roller, feed roller and separation roller to take up and feed a sheet of paper into the main body.
- The weight is applied to the pick-up roller holder. The pick-up roller is pressed against the paper by the weight.
- Sheets of paper are separated and fed individually into the main body by the feed roller and separation roller.
- A torque limiter is connected to the separation roller which controls the driving force of the LU paper feed motor.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If multiple sheets of paper are fed between the separation roller and feed roller, the limit torque gets greater than the frictional force of the paper. Thus, the separation roller rotates reversely. The lower sheets of paper which are in contact with the separation roller are pushed back to the paper tray and separated.

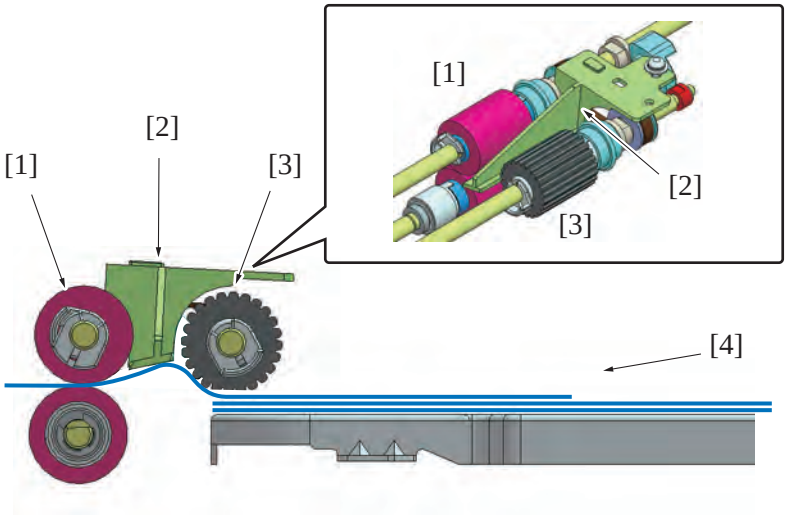
(a) Feed roller pressure mechanism



[1]	Weight	[2]	Pick-up roller
[3]	Feed roller	-	-

(b) Paper feed front guide mechanism

- A paper feed front guide is installed between the pick-up roller and feed roller.
- The paper feed front guide guides paper to the feed path and prevents paper folds and jams due to collisions with the feed roller.

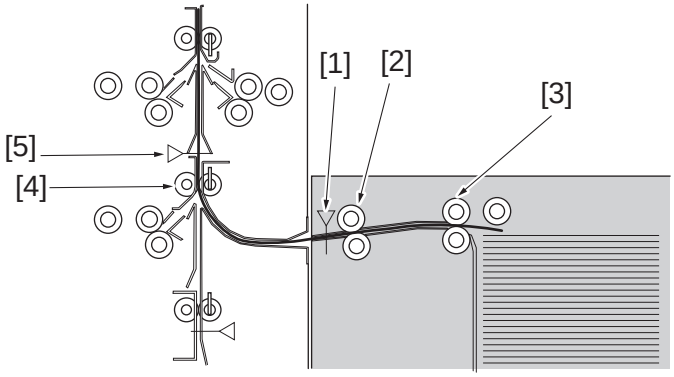


[1]	Feed roller	[2]	Paper feed front guide
[3]	Pick-up roller	[4]	Paper

5.3.2 Paper transport control

- The transport roller is driven following the rotation of the LU transport motor to transport paper to the paper feed section of the main body.

Layout of sensors and rollers



[1]	LU paper feed sensor (PS3)	[2]	Transport roller
[3]	Feed roller	[4]	Tray 2 vertical transport roller
[5]	Tray 2 vertical transport sensor	-	-

(1) Description

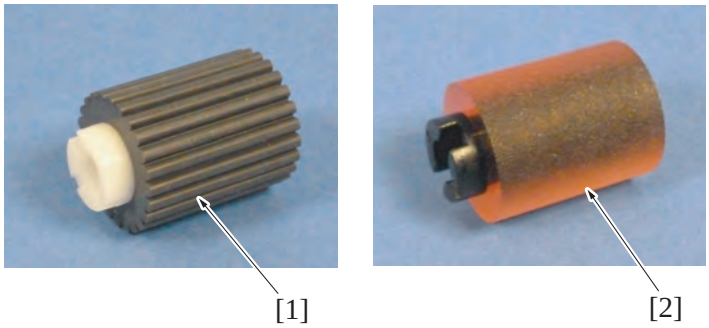
- In consecutive print, when the interval between the preceding and following sheets is below the specified value, the LCT transport rollers temporarily stop to ensure a predetermined interval.
- The paper transport speed is faster than the system speed.

5.3.3 Periodical replacement parts

- The pick-up roller, feed roller, and separation roller are periodical replacement parts.

NOTE

- **These three rollers must be replaced with new ones at the same time.**



[1]	Pick-up roller	[2]	Feed roller and separation roller

(1) Description

- None of the pick-up roller, feed roller, and separation roller is provided with a new article detection mechanism. When the three rollers are replaced with new ones, the [LCT Parts] counter must be reset from [Service Mode] -> [Counter] -> [Life].
- The number of times the large capacity unit has been subjected to paper feed operations can be checked with the “LCT Parts” counter of the Service Mode.

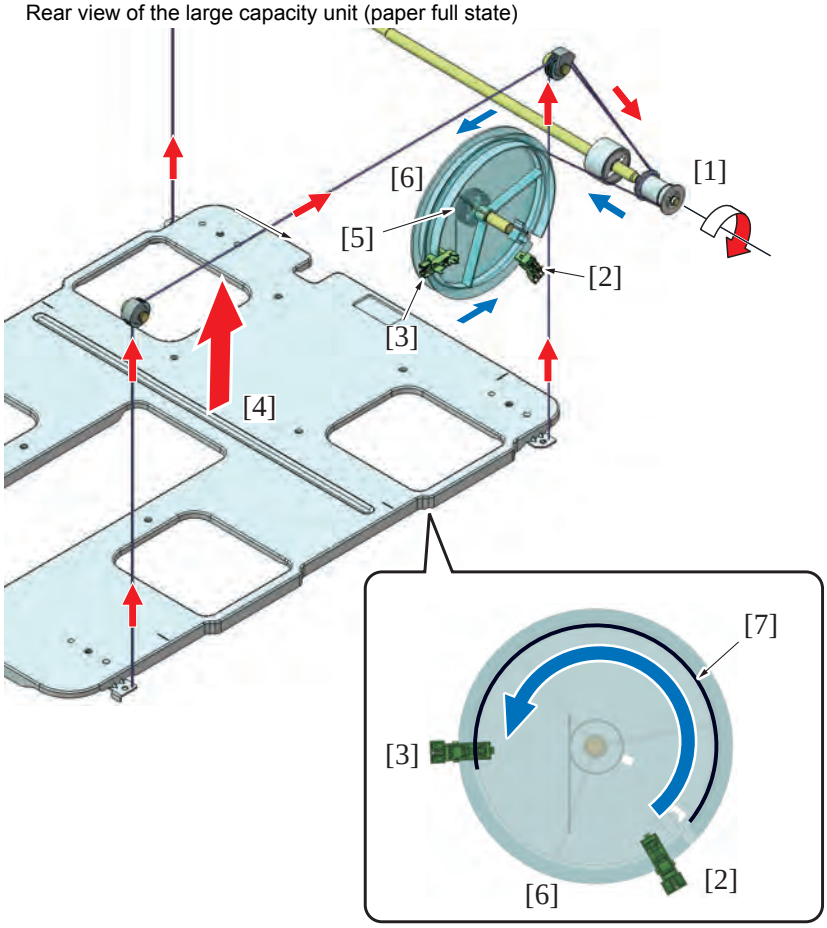
NOTE

- **Refer to "F.3.2 Option" for details on roller replacement cycles.**

5.3.4 Remaining paper level detection

- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

Rear view of the large capacity unit (paper full state)



[1]	Lift-up axis	[2]	LU near empty sensor /2 (PS6)
[3]	LU near empty sensor /1 (PS5)	[4]	Paper tray
[5]	Spring	[6]	Remaining paper detection plate
[7]	Sensor blocking plate	-	-

(1) Description

- The paper tray is equipped with a mechanism which detects the amount of remaining paper.
- The wire in the lift-up axis which is connected to the remaining paper detection plate is wound reversely against the paper tray wire. (If the paper tray wire is wound up the lift-up axis, the same amount of wire is pulled out.)
- A spring is attached to the rotation axis of the remaining paper detection plate. Rotational force is applied in the direction of winding of the wire into the remaining paper detection plate.

- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

(2) Remaining paper detection operation

1. If paper on the paper tray is consumed, the lift-up axis is rotated and the paper tray is lifted up. For details on the paper tray lift-up control when you are printing, refer to the section describing the paper tray lifting mechanism.
2. If the lift-up axis is rotated in the lift direction of the paper tray, the wire that is connected to the remaining paper detection plate is pulled out from the lift-up axis.
3. The remaining paper detection plate rotates for an amount that the wire is pulled out, and winds up the wire.
4. The remaining paper detection plate is equipped with a blocking plate. The position of the blocking plate changes depending on the rotation amount of the remaining paper detection plate.
5. The amount of remaining paper is determined depending on the detection status of LU near empty sensors/1 and 2.
   For details on the remaining paper amount display, see "PB.5.3.4 Remaining paper display".

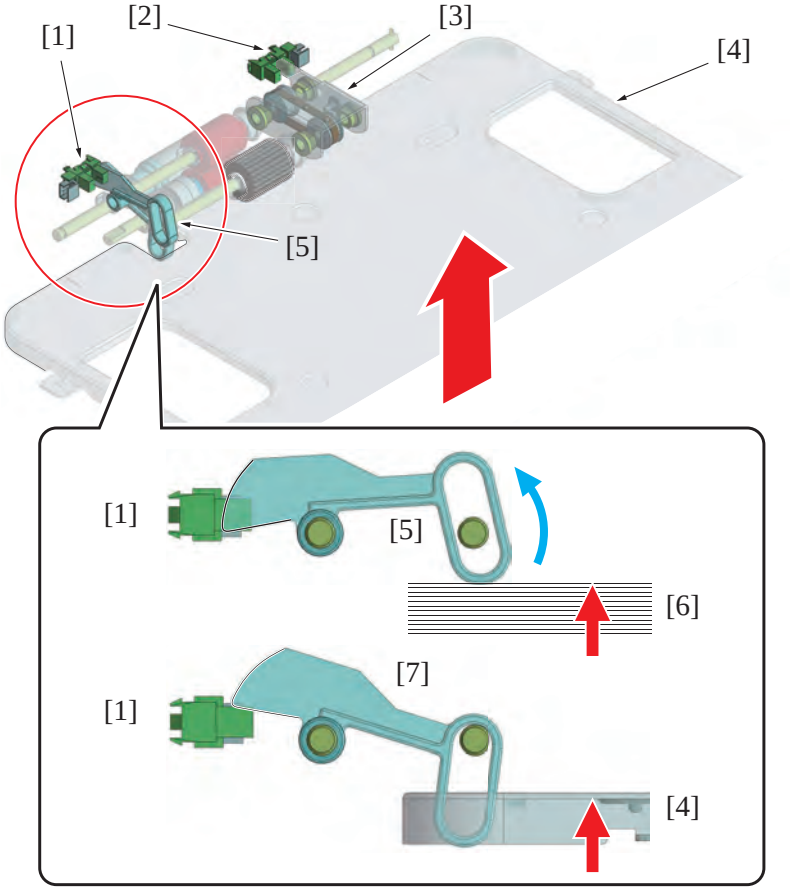
(3) Criteria for determining the amount of remaining paper

Condition	Paper full	Paper near full	Paper present	Paper near-empty
Remaining paper level *1	3000 to 2000 sheets	2000 to 1000 sheets	1000 to 51 sheets	50 to 1 sheets *2
LU near empty sensor /1 (PS5)	Blocked	Blocked	Unblocked	Unblocked
LU near empty sensor /2 (PS6)	Unblocked	Blocked	Blocked	Unblocked

- *1: Reference value when plain paper is placed
- *2: The accuracy of the determination of the near empty number is 50 sheets ± 20 sheets.

5.3.5 Paper empty detection

- The LU paper empty sensor detects the paper empty states.



[1]	LU paper empty sensor (PS4)	[2]	LU upper limit sensor (PS2)
[3]	Pick-up roller holder	[4]	Paper tray
[5]	Actuator (paper present)	[6]	Paper
[7]	Actuator (paper tray empty)	-	-

(1) Description

- The LU paper empty sensor detects the paper empty states.
- The absence of paper is determined when the paper tray is raised up to the upper limit position. (The LU upper limit sensor detects the upper limit position of the paper tray.) For details on the paper tray upper limit position, see "Paper tray lifting mechanism".

(a) When paper is left on the paper tray

1. If the paper tray is raised up to the upper limit position, the actuator is pushed up by the top of the paper.

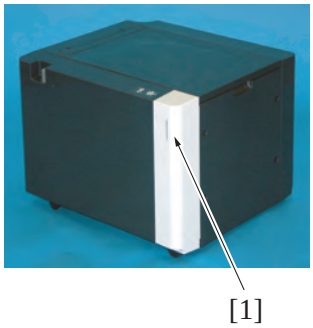
2. If the actuator blocks the LU paper empty sensor, the sensor determines that paper is remaining on the tray.

(b) When no paper is left on the paper tray

1. Since the paper tray has a notch, the actuator does not move from the paper empty position even if the paper tray is raised up to the upper limit position.
2. If the LU paper empty sensor remains unblocked, it determines that there is no paper left (paper empty).
3. When paper empty is detected, the paper tray stays at the upper limit position. (The tray does not fall down. Open the LU door, the tray will fall down automatically to the home position under its own weight.)

5.3.6 Remaining paper display

- An LED on the front right side displays the amount of remaining paper.



[1]	Tray LED display	-	-

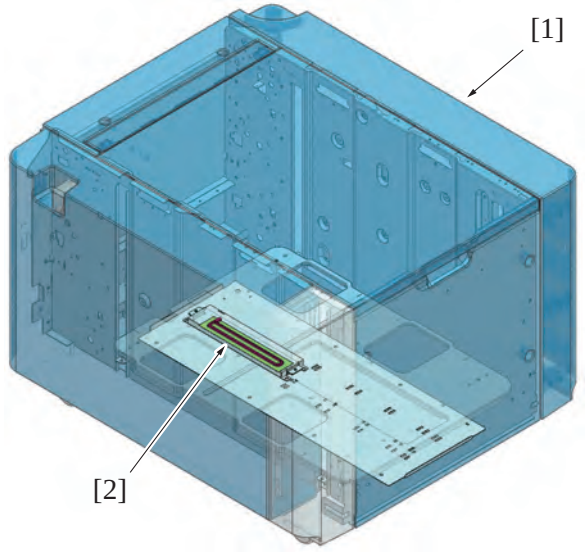
(1) Status indicator list

Paper feed port status	LED status
• Empty	Lit
• Near empty	Blinking
• Paper present • Other than near empty • Being lifted up	Unlit

5.4 Dehumidification heater section

5.4.1 Dehumidification heater mechanism

- The large capacity unit is equipped with a standard dehumidification heater.
- The dehumidification heater prevents paper in the large capacity unit from absorbing moisture.



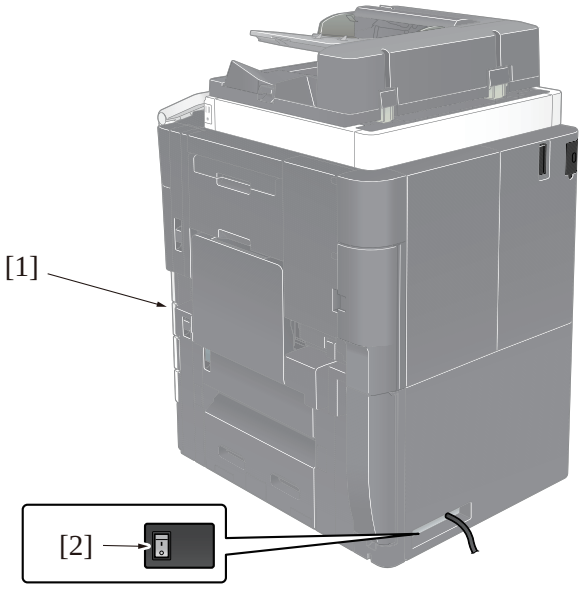
[1]	Large Capacity Unit LU-205	[2]	Dehumidification heater (DH)

(1) Function

- The dehumidification heater generates heat when it is energized, which prevents the paper in the large capacity paper from absorbing the moisture. It prevents paper curling, paper misfeeds, paper jams, and abnormal images that occur when paper absorbs the moisture.

(2) Control

- When the dehumidification heater switch that is installed at the rear of the main body is turned on, the dehumidification control is enabled.
- Turn off the dehumidifier heater switch to stop the humidity control.



[1]	Main body	[2]	Dehumidification heater switch (SW2)

(a) Operation timing

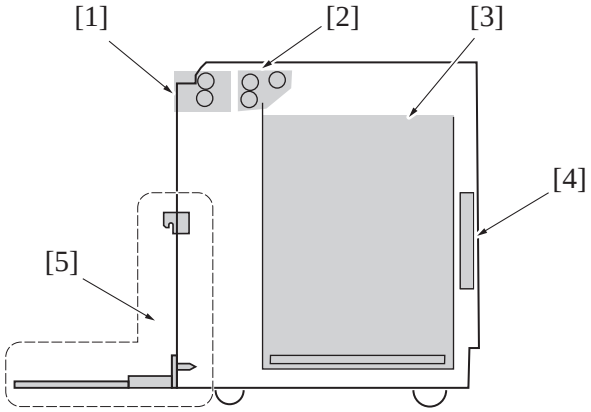
- If the main body is stopped*, the dehumidification heater is energized and generates heat.
- When the main body starts normally, it stops energizing the dehumidification heater.

NOTE

- ***: When the covers are opened, a problem or paper jam occurs, or in power-saving mode.**

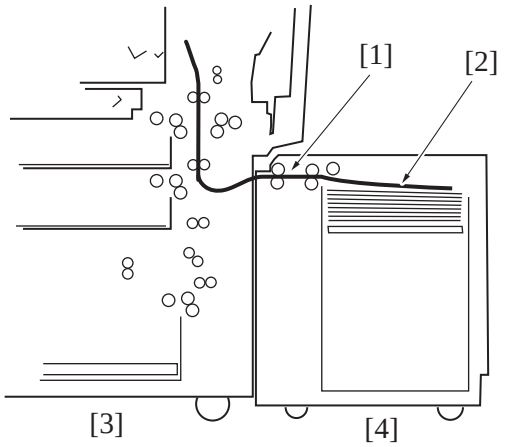
PC THEORY OF OPERATION LU-303

1. SECTION CONFIGURATION



[1]	Paper transport section	[2]	Paper feed section
[3]	Paper storage section	[4]	Dehumidification heater
[5]	Unit open/close section	-	-

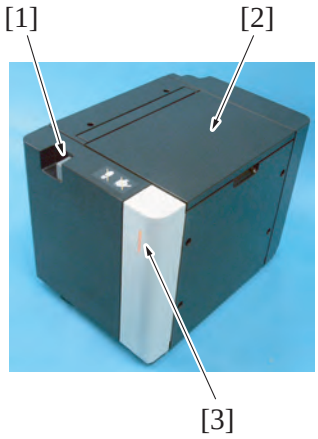
2. PAPER PATH



[1]	Transportation to main body	[2]	Paper feed from the tray
[3]	Main body	[4]	LU-303

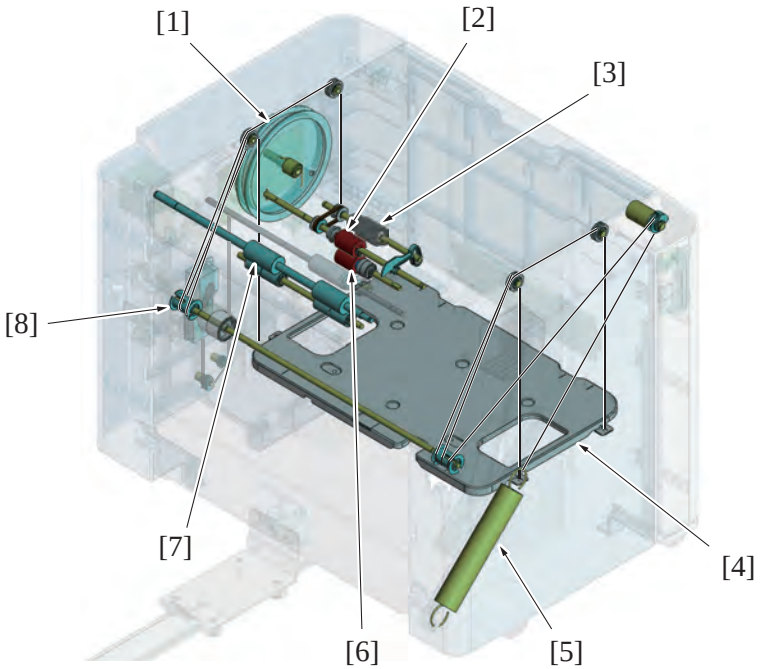
3. CONFIGURATION

3.1 Exterior view



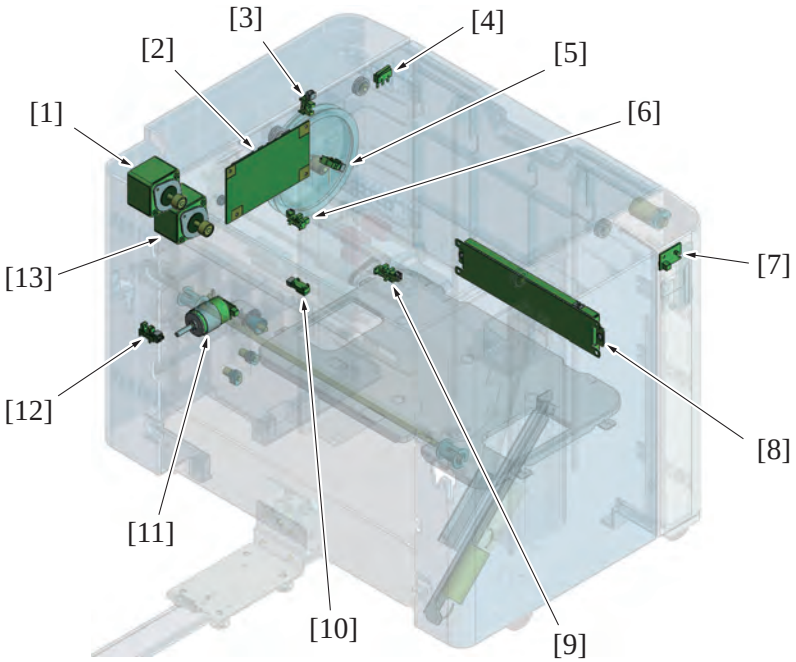
[1]	Unit release lever	[2]	LU door
[3]	Tray LED	-	-

3.2 Main part



[1]	Remaining paper detection plate	[2]	Feed roller
[3]	Pick-up roller	[4]	Paper tray
[5]	Drive assist spring	[6]	Separation roller
[7]	Transport roller	[8]	Lift-up axis

3.3 Electrical part

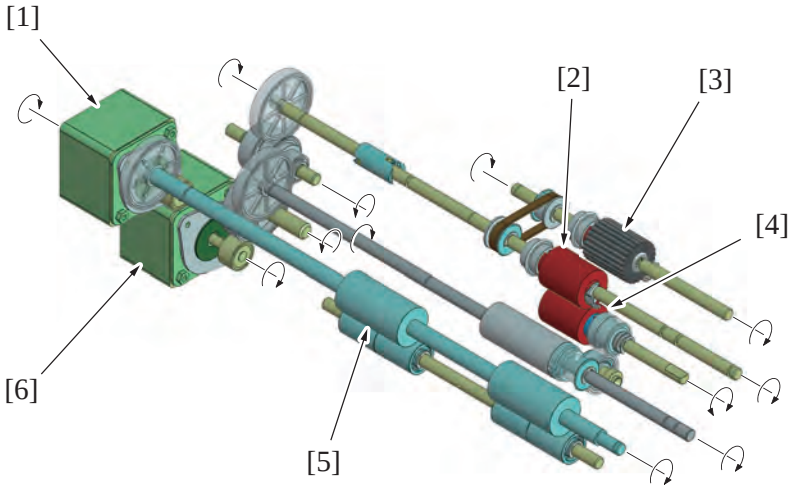


[1]	LU transport motor (M3)	[2]	LU drive board (LUDB)
[3]	LU near empty sensor /1 (PS5)	[4]	LU door switch (MS1)
[5]	LU near empty sensor /2 (PS6)	[6]	LU upper limit sensor (PS2)
[7]	Tray LED (LED)	[8]	Dehumidification heater (DH)
[9]	LU paper empty sensor (PS4)	[10]	LU paper feed sensor (PS3)
[11]	LU lift-up motor (M1)	[12]	LU set sensor (PS1)
[13]	LU paper feed motor (M2)	-	-

4. DRIVE

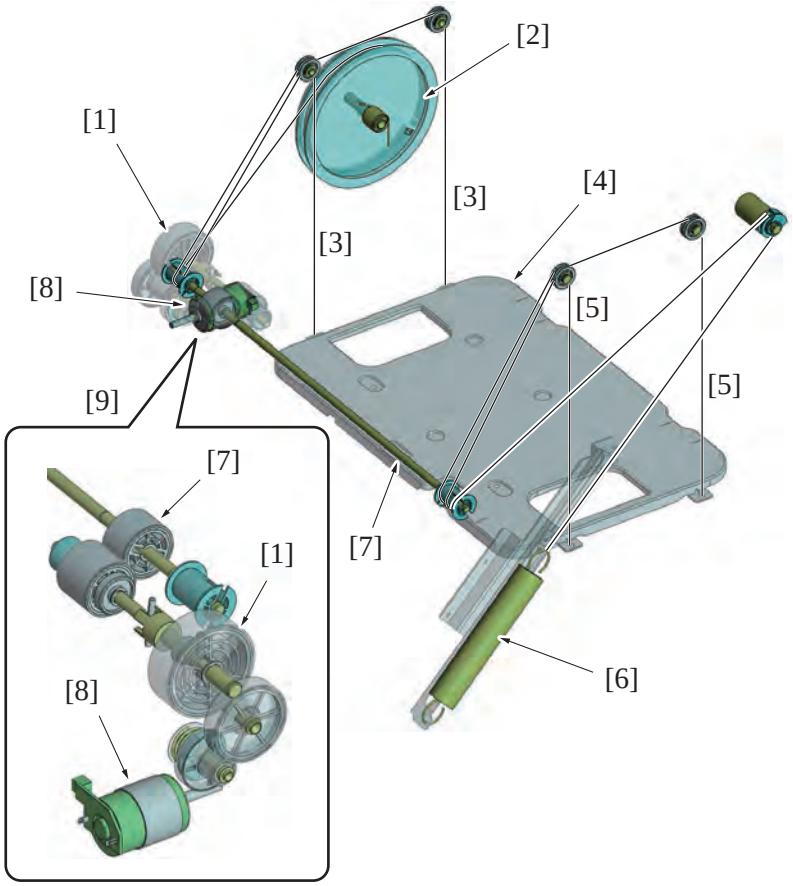
- The drive mechanism is equipped with a paper feed transport drive mechanism and a paper lift-up drive mechanism.

4.1 Paper feed transport drive



[1]	LU transport motor (M3)	[2]	Feed roller
[3]	Pick-up roller	[4]	Separation roller
[5]	Transport roller	[6]	LU paper feed motor (M2)

4.2 Paper lift-up drive



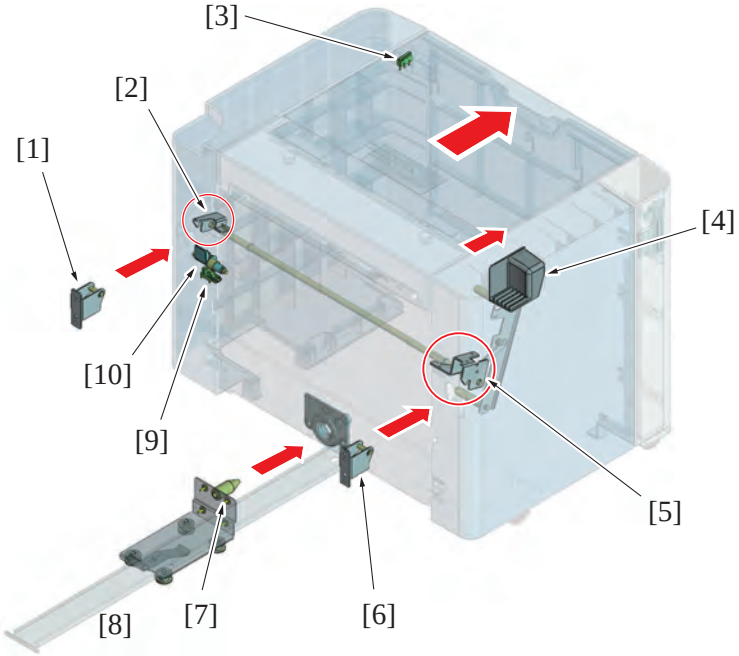
[1]	Lift-up drive section	[2]	Remaining paper detection plate
[3]	Wire (rear side)	[4]	Paper tray
[5]	Wire (front side)	[6]	Drive assist spring
[7]	Lift-up axis	[8]	LU lift-up motor (M1)
[9]	Lift-up motor around (rear view)	-	-

5. OPERATION

5.1 Unit open/close section

5.1.1 Unit lock mechanism

- The link between the large capacity unit and main body can be released.
- If the LU set sensor determines that the large capacity unit is released, printing from the large capacity unit is prohibited.



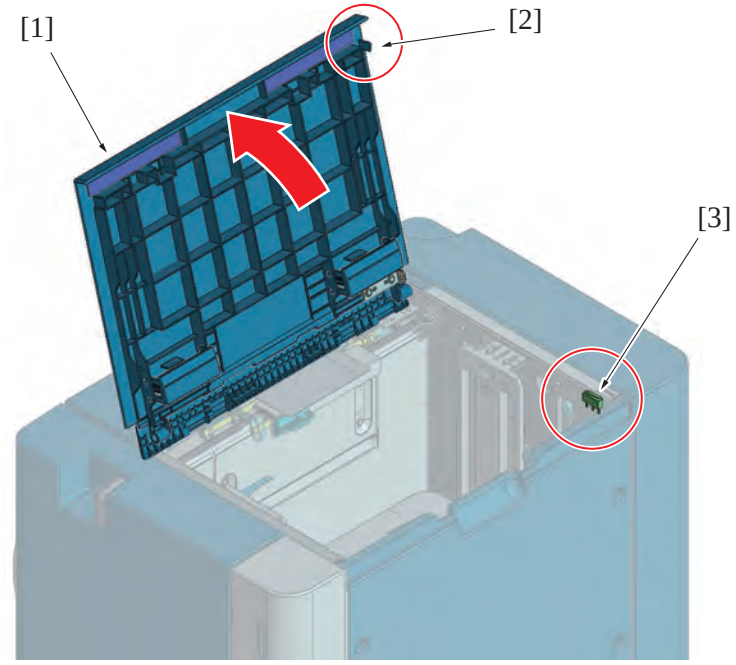
[1]	Mounting plate (rear): On the main body	[2]	Lock (rear)
[3]	LU door switch (MS1)	[4]	Unit release lever
[5]	Lock (front)	[6]	Mounting plate (front): On the main body
[7]	Lock pin (on the main body)	[8]	Coupling rail
[9]	LU set sensor (PS1)	[10]	Actuator

(1) Description

- Operate the unit release lever in the front side of the large capacity unit the locks (on both sides of front and back) attached to the left side of the large capacity unit will be released. It releases the link between the large capacity unit and the main body, which makes it possible to slide the large capacity unit to the right.
- The large capacity unit is connected to the main body via the coupling rail. The unit slides to the right side along the rail.
- Release the large capacity unit link, the LU set sensor gets unblocked and the sensor determines that the large capacity unit is released.
- If the LU set sensor determines that the large capacity unit is released, printing from the large capacity unit is prohibited. (printing from other paper feed ports is still possible).
- The large capacity unit is linked to the main body through sliding the unit to the left. The home position when the large capacity unit is linked is fixed with the lock pin on the main body.
- Link the large capacity unit, printing from the large capacity unit will be enabled.

5.1.2 LU door open/close detection mechanism

- The LU door is equipped with a door switch.
- Open the LU door, the paper tray lift-up drive section link will be released.



[1]	LU door	[2]	LU door open/close detection lever
[3]	LU door switch (MS1)	-	-

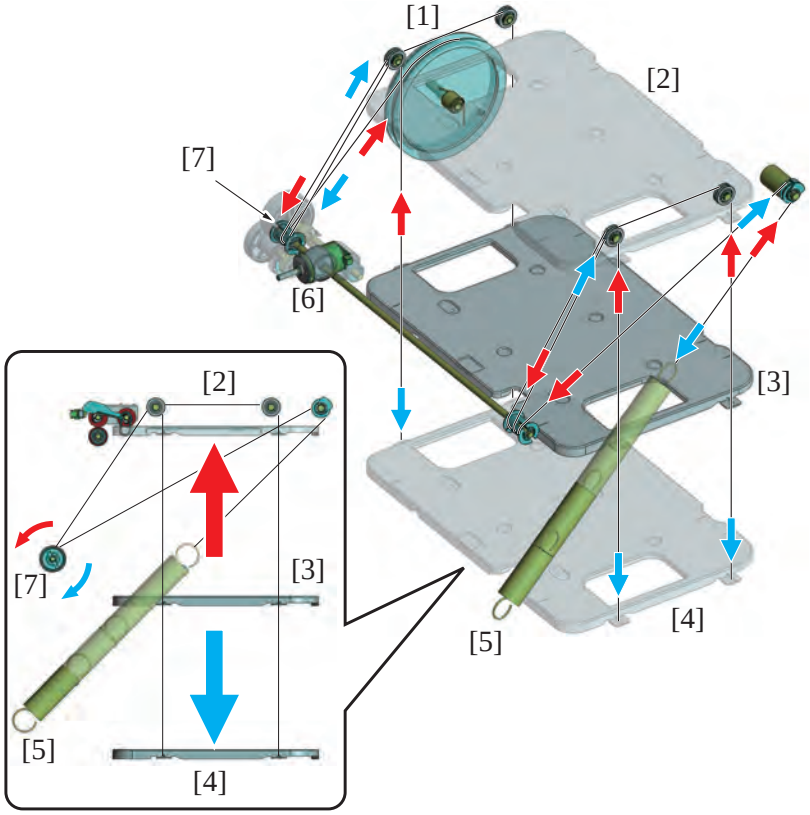
(1) Description

- An LU door switch is provided at the top-right-rear side of the large capacity unit and detects the opening and closing of the LU door.
- When the LU door is closed, the open/close detection lever on the LU door pushes down the LU door switch. (ON)
- If the LU door switch determines that the LU door is open, printing from the large capacity unit is prohibited. (printing from other paper feed ports is still possible).
- Open the LU door, the paper tray lift-up drive section link will be released. For details, see "Paper tray lift-up drive release mechanism".
- Close the LU door, the paper tray lift-up drive section will be connected and printing from the large capacity unit will be enabled.

5.2 Paper storage section

5.2.1 Paper tray lifting mechanism

- When the LU door is closed, the wire is wound around the lift-up axis, which raises the paper tray.
- Detection of the upper limit of paper stops the wire winding process to complete the paper tray lifting operation.



[1]	Remaining paper detection plate	[2]	Paper tray (upper limit position)

[3]	Paper tray (home position)	[4]	Paper tray (lower limit position)
[5]	Drive assist spring	[6]	LU lift-up motor (M1)
[7]	Lift-up axis	-	-

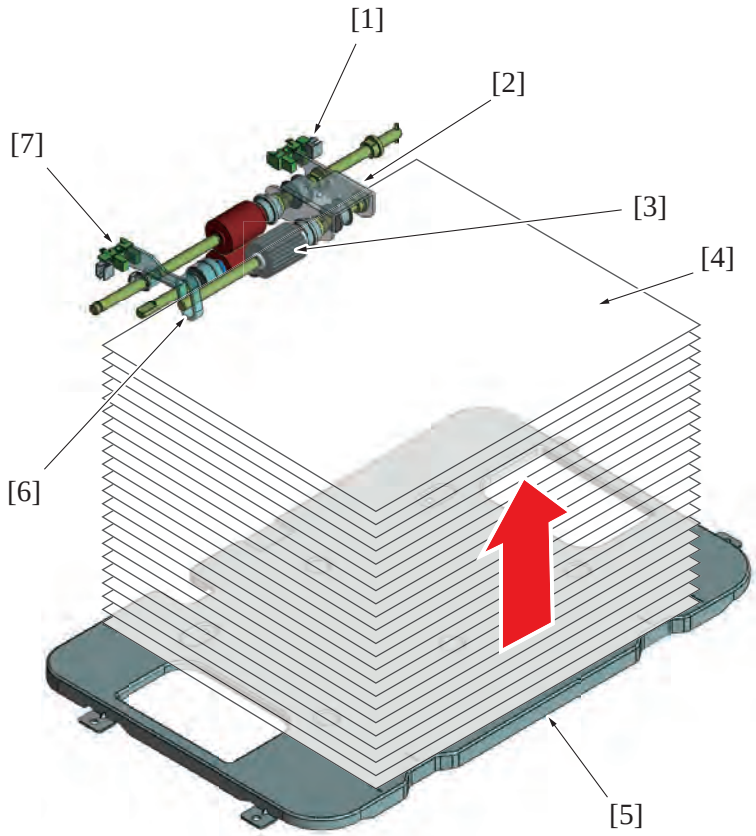
(1) Description

- Four wires are connected to the paper tray which lifts up the tray into its home position.
- Each wire is wound around the lift-up axis. Roll up a lift-up axis, the paper tray will be lifted up.
- The wire in the lift-up axis which is connected to the drive assist spring is also wound in the same direction. By the force of the drive assist spring, the unloaded paper tray (with no paper placed) is lifted up into the home position. (It does not go down to the lowest position)
- With the weight of the paper that is placed on the paper tray, the paper tray will be lowered down. The amount of lowering of the paper tray varies by paper weight. (Maximum load capacity: 3,000 sheets of plain paper)
- When the paper tray is lowered from the home position, upward force is applied to the paper tray by the drive assist spring. It decreases the load on the lift-up axis when paper is lifted up.
- This unit does not have a mechanism to detect the home position and lower limit position of the paper tray.
- Close the LU door, so that the LU lift-up motor and paper tray lifting mechanism are linked together.
- The LU lift-up motor rotates to wind the wires around the lift-up axis and lift up the paper tray. Thus, the surface of the paper is pressed against the pick-up roller.
- Open the LU door, the coupling of the LU lift-up motor and paper tray lifting mechanism will be disconnected. Thus, the paper tray will fall down with its own weight, which releases the pressure between the pick-up roller and the paper. For details on the linking/release mechanism, see "Paper tray lift-up drive release mechanism".
- The remaining paper detection plate also rotates together with the vertical movement of the paper tray. (The wire in the lift-up axis which is connected to the remaining paper detection plate is wound in the opposite direction) For details on the remaining paper detection mechanism, see "Remaining paper detection".

(2) Operation timing

(a) When paper is placed

1. The LU door is opened and paper is placed. (The LU door switch detects whether the LU door is closed or not)
2. With the LU door closed, the LU upper limit sensor signal is checked. When the paper tray is being lowered (LU upper limit sensor is unblocked), the LU lift-up motor is rotated and the paper tray lift-up is started.
3. The pick-up roller is pushed up by paper surface that was lifted up. The pick-up roller holder blocks the LU upper limit sensor, which detects the paper raising up to the upper limit position.
4. If the LU upper limit sensor detects the paper raising up to the upper limit position, the LU lift-up motor stops to end the lift-up operation of the paper tray.
5. The paper tray is lifted up to the upper limit. However, if the LU paper empty sensor cannot detect the presence of paper, it determines that the tray is empty. The paper tray remains on standby at the upper limit position. (Lowering operation is not performed. The tray is returned to the home position when the LU door is opened.) Refer to "Paper empty detection" for details on the paper-empty detection mechanism.

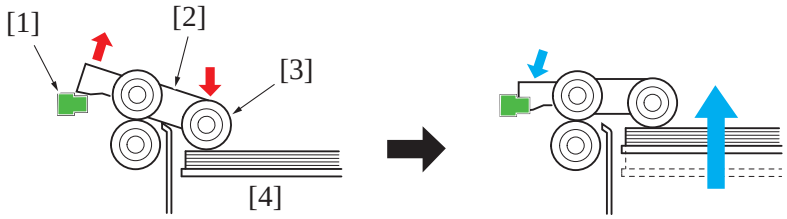


[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper
[5]	Paper tray	[6]	LU paper empty sensor actuator

[7]	LU paper empty sensor (PS4)	-	-

(b) During a print cycle

1. When the amount of paper decreases during a print cycle, the pick-up roller will gradually come down. Thus, the LU upper limit sensor that was blocked by the pick-up roller holder becomes unblocked.
2. The LU lift-up motor will rotate again to start lifting up the paper tray.
3. The pick-up roller is pushed up by paper surface that was lifted up. Thus, the pick-up roller holder will block the LU upper limit sensor.
4. If the LU upper limit sensor gets blocked, the LU lift-up motor stops to end the lift-up operation of the paper tray.
5. Repeat above operations, the pressure (paper feed pressure) between the pick-up roller and the paper stack is kept constant regardless of the amount of remaining paper.

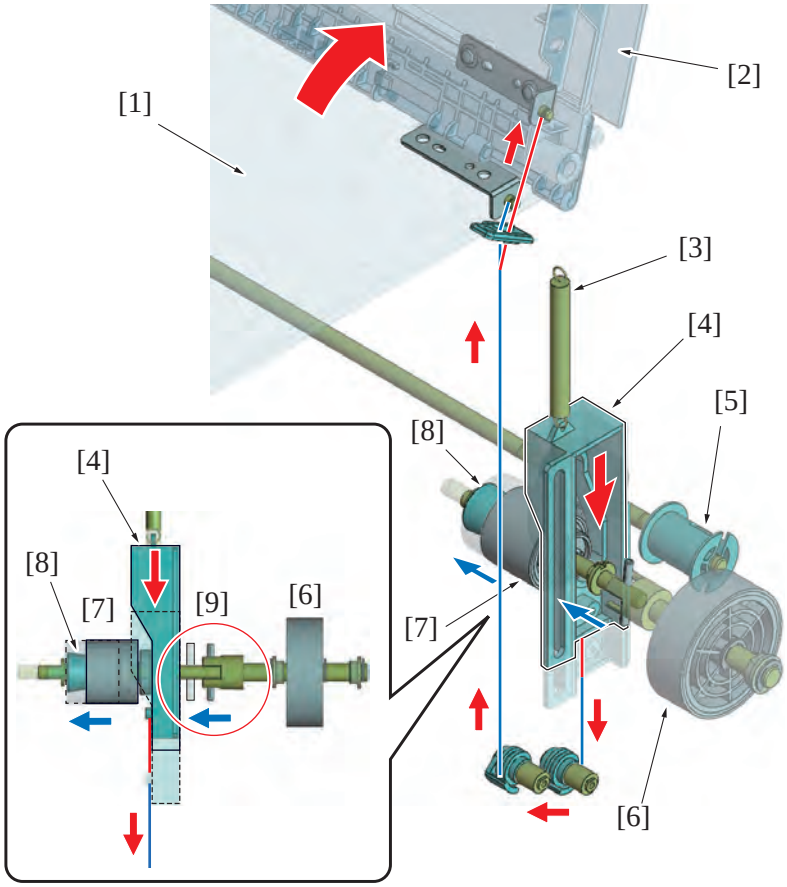


[1]	LU upper limit sensor (PS2)	[2]	Pick-up roller holder
[3]	Pick-up roller	[4]	Paper tray

5.2.2 Paper tray lift-up drive release mechanism

- The paper tray lift-up drive section is equipped with a drive release mechanism.
- Release the drive, the paper tray will come down.
- The contact of the pick-up roller on the paper is released when the paper tray comes down.

Rear view



[1]	LU door (close)	[2]	LU door (open)
[3]	Link release plate spring	[4]	Link release plate
[5]	Lift-up axis	[6]	Drive gear
[7]	Connecting gear	[8]	Spring
[9]	Coupling	-	-

(1) Drive release operation

1. The wire linked to the LU door pulls down the link release plate when the door is opened.
2. The link release plate pushes out the link gear towards the front of the main body. It releases the link to the drive gear coupling.

3. Release the LU lift-up motor driving force, the weight of the load on the paper tray will pull out the wire wound in the lift-up axis. (The lift-up axis rotates on the opposite direction). This movement lowers the paper tray.

(2) Drive link operation

1. Close the LU door, the spring that is linked to the link release plate will pull up the link release plate.
2. The link gear pushes it back inside the machine through the spring force. It completes the link to the drive gear coupling.
3. For details on the operation after drive link operation, see "Paper tray lifting mechanism".

5.2.3 Paper size detection mechanism

- The large capacity unit is not equipped with a mechanism to automatically detect paper size.

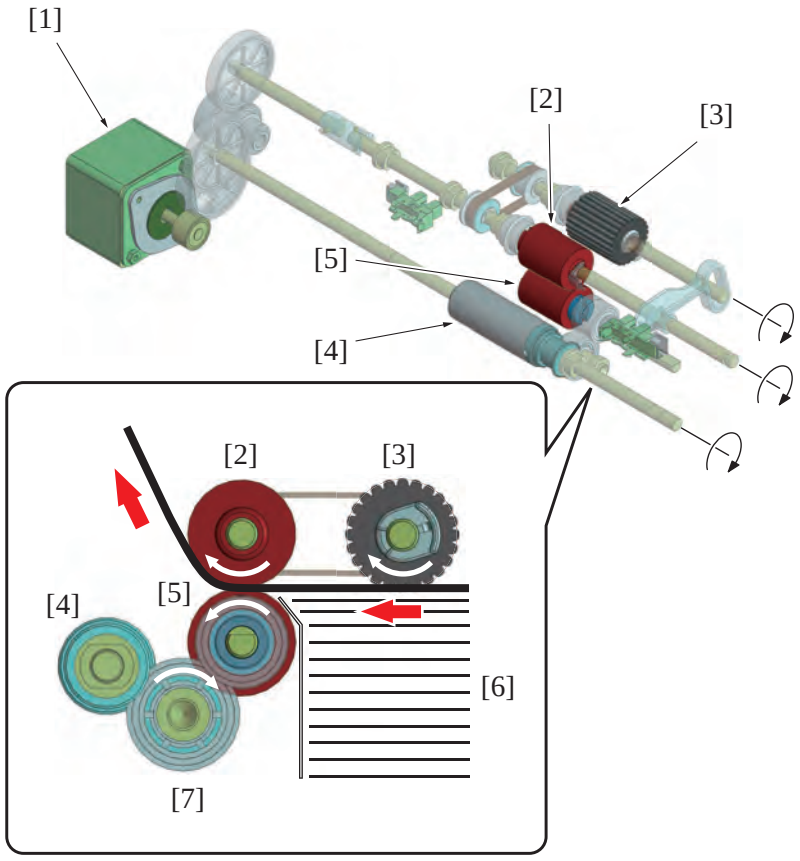
NOTE

- **If the LCT installation change settings under [Service Mode] -> [System 2] is changed, the LCT size is restored to the default value.**
- **If the LCT installation change settings are changed, you should confirm the paper size settings from [Service Mode] -> [System 2] -> [LCT Paper Size Setting].**
- **Modify the settings when the paper size settings are different from the size of the paper used.**

5.3 Paper feed/transport section

5.3.1 Paper feed control

- The LU paper feed motor drives the rollers to feed paper.

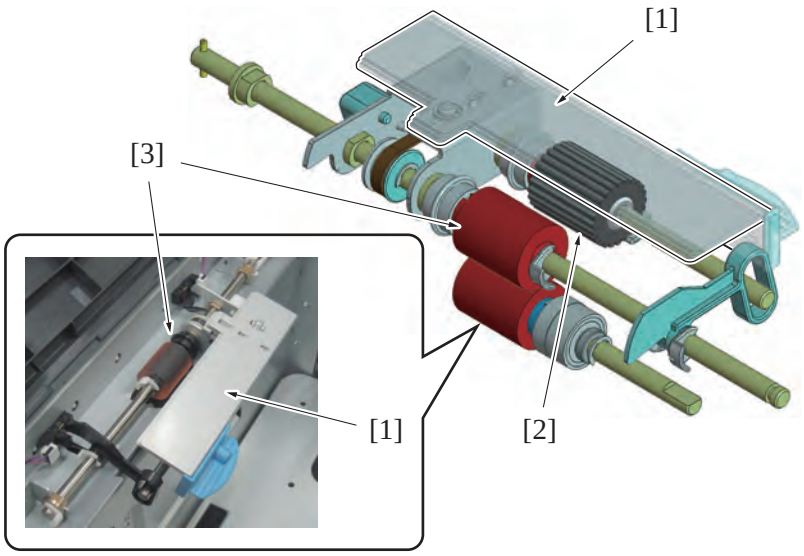


[1]	LU paper feed motor (M2)	[2]	Feed roller
[3]	Pick-up roller	[4]	Torque limiter
[5]	Separation roller (Only one sheet of paper in the sample illustration so it is in driven rotation)	[6]	Paper
[7]	Drive relay gear	-	-

(1) Description

- The LU paper feed motor drives the pick-up roller, feed roller and separation roller to take up and feed a sheet of paper into the main body.
- The weight is applied to the pick-up roller holder. The pick-up roller is pressed against the paper by the weight.
- Sheets of paper are separated and fed individually into the main body by the feed roller and separation roller.
- A torque limiter is connected to the separation roller which controls the driving force of the LU paper feed motor.
- When there is no sheet of paper or only one sheet of paper between the separation roller and feed roller, the limit torque is exceeded and the separation roller follows the rotation of the feed roller.
- If multiple sheets of paper are fed between the separation roller and feed roller, the limit torque gets greater than the frictional force of the paper. Thus, the separation roller rotates reversely. The lower sheets of paper which are in contact with the separation roller are pushed back to the paper tray and separated.

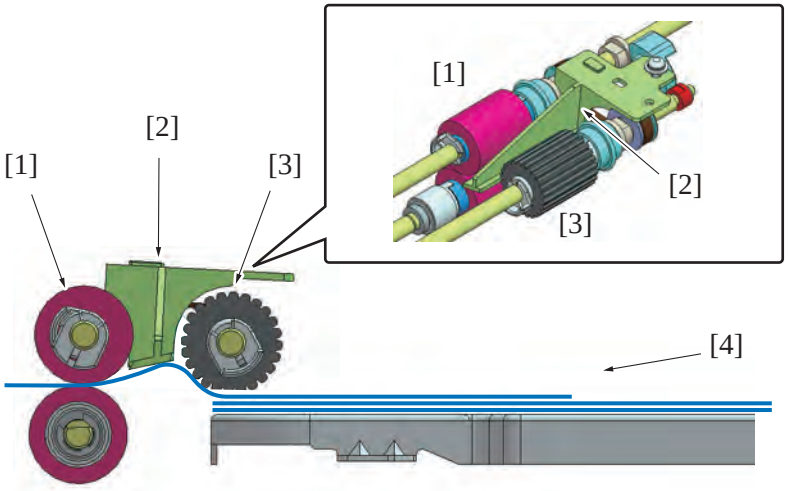
(a) Feed roller pressure mechanism



[1]	Weight	[2]	Pick-up roller
[3]	Feed roller	-	-

(b) Paper feed front guide mechanism

- A paper feed front guide is installed between the pick-up roller and feed roller.
- The paper feed front guide guides paper to the feed path and prevents paper folds and jams due to collisions with the feed roller.

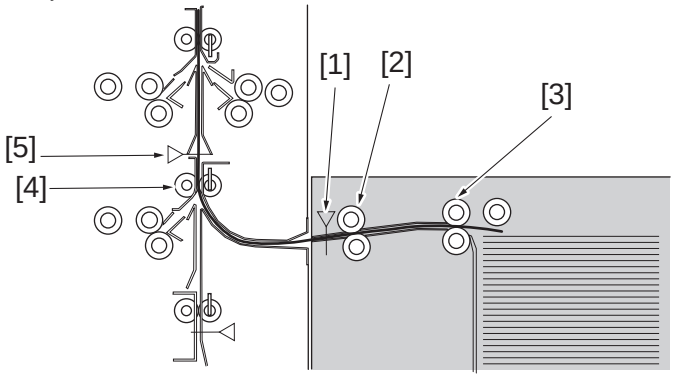


[1]	Feed roller	[2]	Paper feed front guide
[3]	Pick-up roller	[4]	Paper

5.3.2 Paper transport control

- The transport roller is driven following the rotation of the LU transport motor to transport paper to the paper feed section of the main body.

Layout of sensors and rollers



[1]	LU paper feed sensor (PS3)	[2]	Transport roller
[3]	Feed roller	[4]	Tray 2 vertical transport roller

[5]	Tray 2 vertical transport sensor	-	-

(1) Description

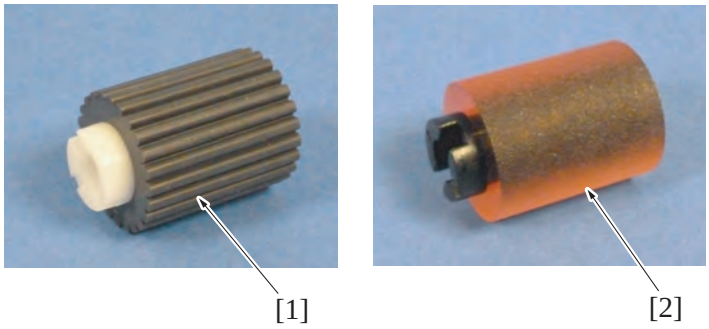
- In consecutive print, when the interval between the preceding and following sheets is below the specified value, the LCT transport rollers temporarily stop to ensure a predetermined interval.
- The paper transport speed is faster than the system speed.

5.3.3 Periodical replacement parts

- The pick-up roller, feed roller, and separation roller are periodical replacement parts.

NOTE

- **These three rollers must be replaced with new ones at the same time.**



[1]	Pick-up roller	[2]	Feed roller and separation roller

(1) Description

- None of the pick-up roller, feed roller, and separation roller is provided with a new article detection mechanism. When the three rollers are replaced with new ones, the [LCT Parts] counter must be reset from [Service Mode] -> [Counter] -> [Life].
- The number of times the large capacity unit has been subjected to paper feed operations can be checked with the “LCT Parts” counter of the Service Mode.

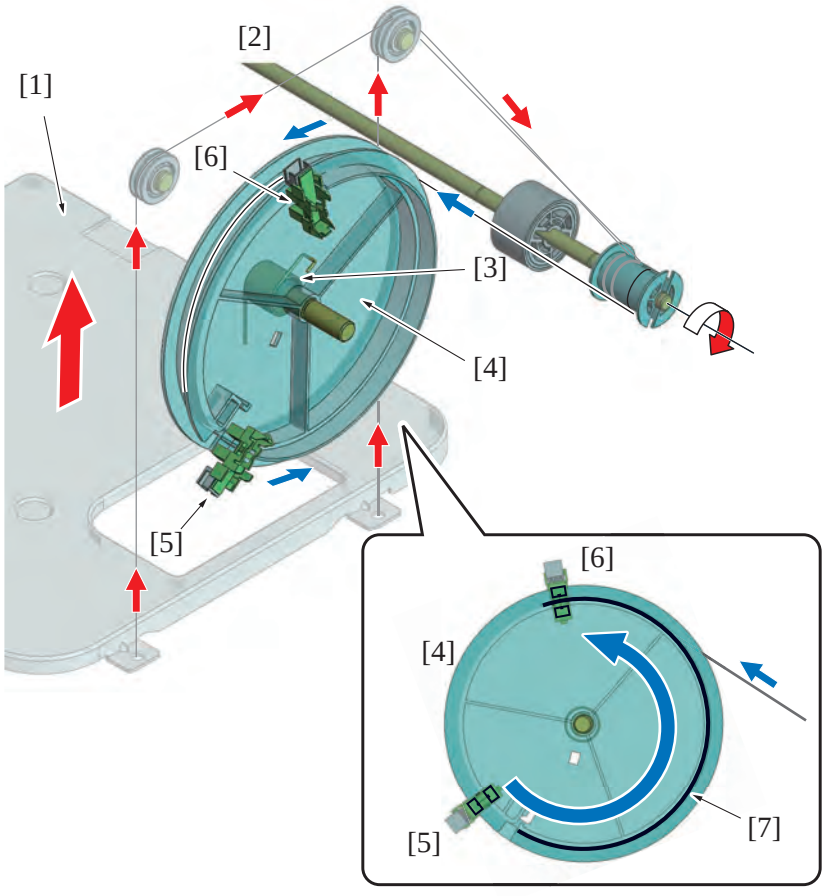
NOTE

- **Refer to "F.3.2 Option" for details on roller replacement cycles.**

5.3.4 Remaining paper level detection

- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

Back view of the large capacity unit (paper full state)



[1]	Paper tray	[2]	Lift-up axis
[3]	Spring	[4]	Remaining paper detection plate
[5]	LU near empty sensor /2 (PS6)	[6]	LU near empty sensor /1 (PS5)
[7]	Sensor blocking plate	-	-

(1) Description

- The paper tray is equipped with a mechanism which detects the amount of remaining paper.
- The wire in the lift-up axis which is connected to the remaining paper detection plate is wound reversely against the paper tray wire. (If the paper tray wire is wound up the lift-up axis, the same amount of wire is pulled out.)
- A spring is attached to the rotation axis of the remaining paper detection plate. Rotational force is applied in the direction of winding of the wire into the remaining paper detection plate.
- Detection of remaining paper is determined depending on the status of LU near empty sensors/1 and 2.

(2) Remaining paper detection operation

1. If paper on the paper tray is consumed, the lift-up axis is rotated and the paper tray is lifted up. For details on the paper tray lift-up control when you are printing, refer to the section describing the paper tray lifting mechanism.
2. If the lift-up axis is rotated in the lift direction of the paper tray, the wire that is connected to the remaining paper detection plate is pulled out from the lift-up axis.
3. The remaining paper detection plate rotates for an amount that the wire is pulled out, and winds up the wire.
4. The remaining paper detection plate is equipped with a blocking plate. The position of the blocking plate changes depending on the rotation amount of the remaining paper detection plate.
5. The amount of remaining paper is determined depending on the detection status of LU near empty sensors/1 and 2.
   For details on the remaining paper amount display, see "PC.5.3.6 Remaining paper display".

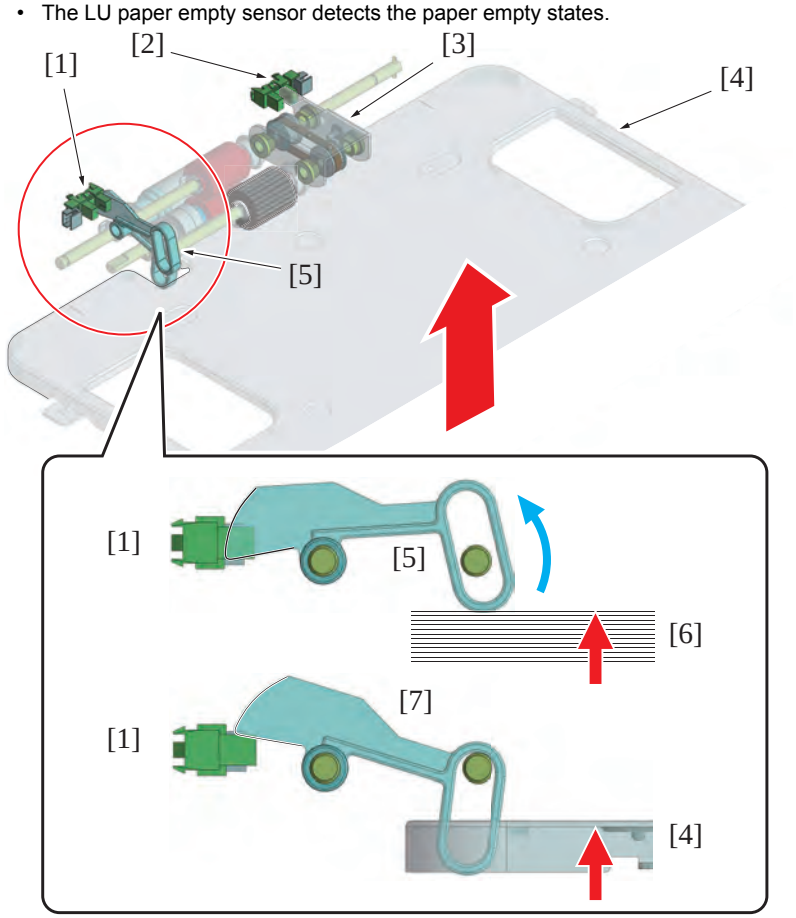
(3) Criteria for determining the amount of remaining paper

Condition	Paper full	Paper near full	Paper present	Paper near-empty
Remaining paper level *1	3000 to 2000 sheets	2000 to 1000 sheets	1000 to 51 sheets	50 to 1 sheets *2
LU near empty sensor /1 (PS5)	Blocked	Blocked	Unblocked	Unblocked
LU near empty sensor /2 (PS6)	Unblocked	Blocked	Blocked	Unblocked

- *1: Reference value when plain paper is placed
- *2: The accuracy of the determination of the near empty number is 50 sheets ± 20 sheets.

5.3.5 Paper empty detection

- The LU paper empty sensor detects the paper empty states.



[1]	LU paper empty sensor (PS4)	[2]	LU upper limit sensor (PS2)
[3]	Pick-up roller holder	[4]	Paper tray

[5]	Actuator (paper present)	[6]	Paper
[7]	Actuator (paper tray empty)	-	-

(1) Description

- The LU paper empty sensor detects the paper empty states.
- The absence of paper is determined when the paper tray is raised up to the upper limit position. (The LU upper limit sensor detects the upper limit position of the paper tray.) For details on the paper tray upper limit position, see "Paper tray lifting mechanism".

(a) When paper is left on the paper tray

1. If the paper tray is raised up to the upper limit position, the actuator is pushed up by the top of the paper.
2. If the actuator blocks the LU paper empty sensor, the sensor determines that paper is remaining on the tray.

(b) When no paper is left on the paper tray

1. Since the paper tray has a notch, the actuator does not move from the paper empty position even if the paper tray is raised up to the upper limit position.
2. If the LU paper empty sensor remains unblocked, it determines that there is no paper left (paper empty).
3. When paper empty is detected, the paper tray stays at the upper limit position. (The tray does not fall down. Open the LU door, the tray will fall down automatically to the home position under its own weight.)

5.3.6 Remaining paper display

- An LED on the front right side displays the amount of remaining paper.

[1]	Tray LED display	-	-

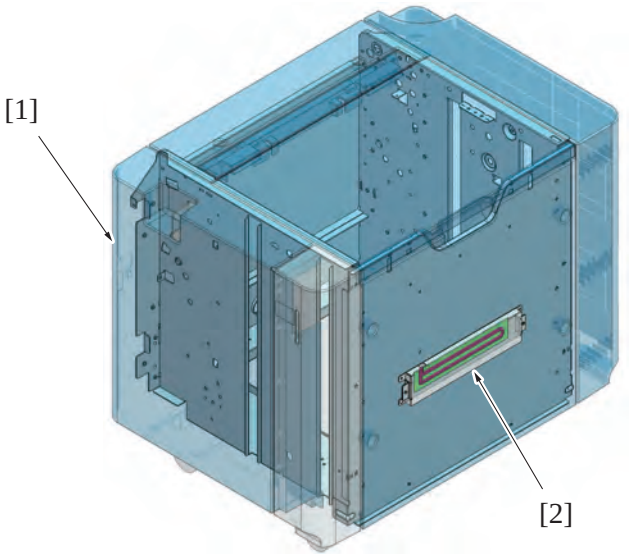
(1) Status indicator list

Paper feed port status	LED status
• Empty	Lit
• Near empty	Blinking
• Paper present • Other than near empty • Being lifted up	Unlit

5.4 Dehumidification heater section

5.4.1 Dehumidification heater mechanism

- The large capacity unit is equipped with a standard dehumidification heater.
- The dehumidification heater prevents paper in the large capacity unit from absorbing moisture.



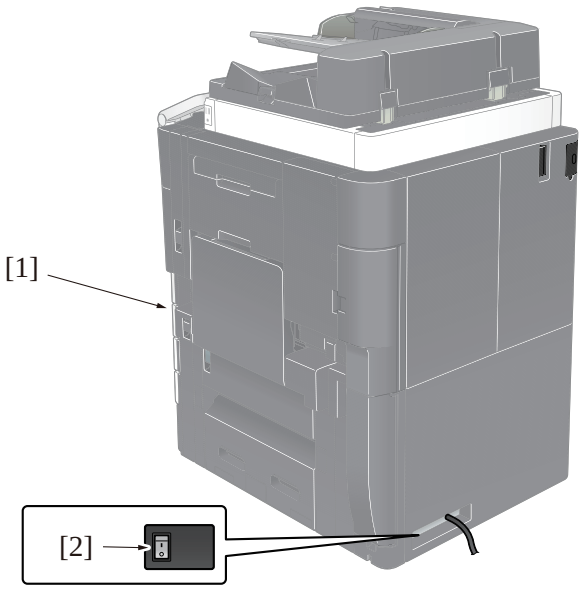
[1]	Large Capacity Unit LU-303	[2]	Dehumidification heater (DH)

(1) Function

- The dehumidification heater generates heat when it is energized, which prevents the paper in the large capacity unit from absorbing the moisture. It prevents paper curling, paper misfeeds, paper jams, and abnormal images that occur when paper absorbs the moisture.

(2) Control

- When the dehumidification heater switch that is installed at the rear of the main body is turned on, the dehumidification control is enabled.
- Turn off the dehumidifier heater switch to stop the humidity control.



[1]	Main body	[2]	Dehumidification heater switch (SW2)

(a) Operation timing

- If the main body is stopped*, the dehumidification heater is energized and generates heat.
- When the main body starts normally, it stops energizing the dehumidification heater.

NOTE

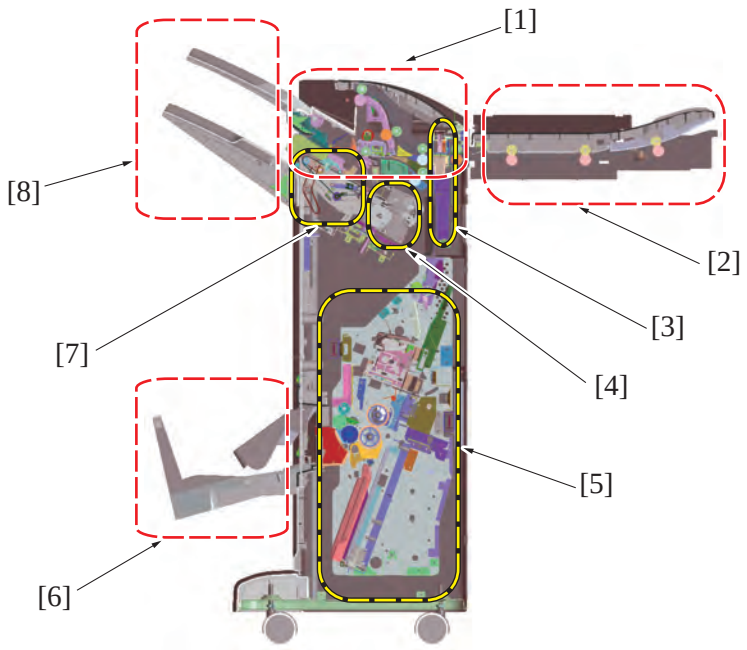
- ***: When the covers are opened, a problem or paper jam occurs, or in power-saving mode.**

PD THEORY OF OPERATION FS-536/FS-536SD/PK-520/RU-515

1. CONFIGURATION

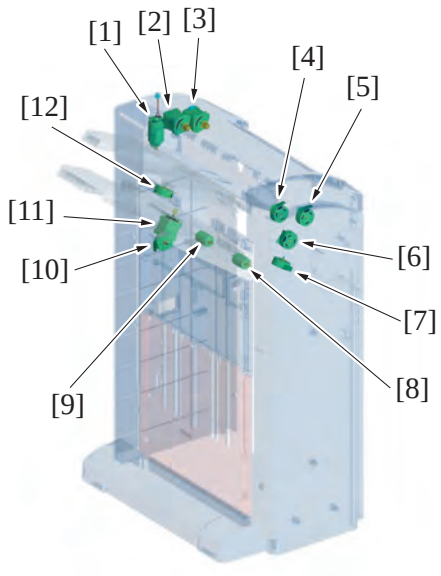
1.1 Section configuration

- FS-536 is composed of the horizontal transport section, transport section, alignment section, output tray section and stapler section.
- The FS-536SD is the model of a finisher that the saddle section is added to FS-536.
- Installation of the optional PK-520 enables you to add punch function.

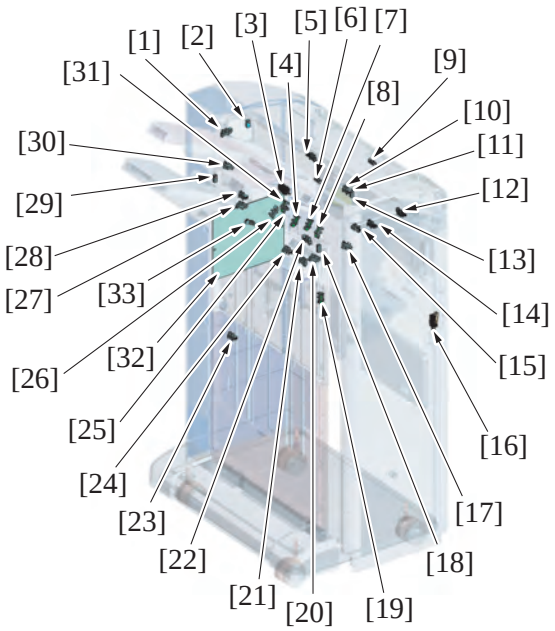


[1]	Transport section	[2]	Horizontal transport section (RU-515)
[3]	Punch section (When PK-520 is installed)	[4]	Stapler section
[5]	Saddle section (FS-536SD only)	[6]	Saddle tray section (FS-536SD only)
[7]	Alignment section	[8]	Output tray section

1.2 Main parts configuration

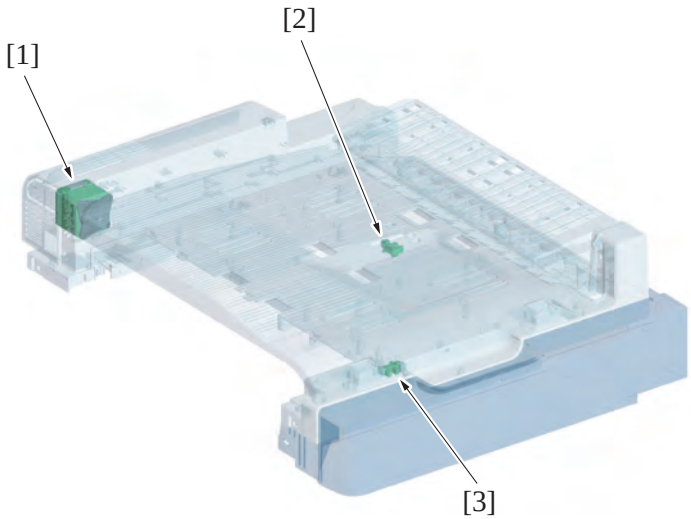


[1]	Main tray up/down motor (M11)	[2]	FNS discharge motor (M3)
[3]	FNS entry transport motor (M2)	[4]	FNS paddle motor (M5)
[5]	Receiving roller retraction motor (M4)	[6]	Trailing edge stopper motor (M6)
[7]	Alignment motor/front (M7)	[8]	Bundle eject motor (M10)
[9]	Pre-eject drive motor (M9)	[10]	Paper receiving control motor (M12)
[11]	Side stapler movement motor (M13)	[12]	Alignment motor/rear (M8)



[1]	Stacker motor sensor (PS25)	[2]	Sub tray full detection sensor/out (PS9)
[3]	Main tray upper position detect switch (SW2)	[4]	Pre-eject away sensor (PS22)
[5]	Sub tray exit sensor (PS8)	[6]	Main tray exit sensor (PS16)
[7]	Pre-eject home sensor (PS21)	[8]	Trailing edge stopper home position detection sensor (PS20)
[9]	FNS entrance sensor (PS4)	[10]	Upper door open/close detection sensor (PS32)
[11]	Sub tray full detection sensor/in (PS10)	[12]	Exchange folded paper output sensor (PS30)
[13]	Saddle exit sensor (PS5)	[14]	Receiving roller retraction sensor (PS11)
[15]	Upper paddle home position detection sensor (PS14)	[16]	Front door open detect switch (SW1)
[17]	Alignment plate/F home sensor (PS12)	[18]	Main tray upper sensor/in (PS7) *1
[19]	Paper delivery control sensor (PS28)	[20]	Stapler position sensor (center) (PS24)
[21]	Gripper motor sensor (PS17)	[22]	Main tray upper position sensor/F (PS27)
[23]	Main tray full detection sensor (PS29)	[24]	Pre-eject encoder sensor (PS15)
[25]	Staple stacker paper detection sensor (PS31)	[26]	Gripper position detection sensor (PS19)
[27]	Stapler home position sensor (rear) (PS23)	[28]	Main tray upper position sensor/R (PS26)
[29]	Main tray upper sensor/out (PS6) *1	[30]	Alignment plate/R home sensor (PS13)
[31]	Gripper home position sensor (PS18)	[32]	FS control board (FSCB)
[33]	Wide Flat limit Sensor (PS36)	-	-

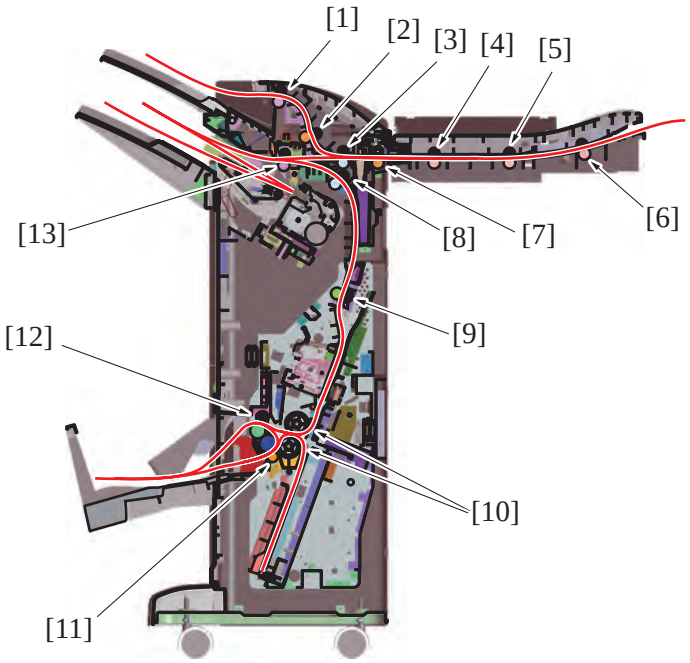
- *1: Not used



[1]	RU transport motor (M35)	[2]	RU transport motor (PS60)
[3]	RU door open/close sensor (PS61)	-	-

2. PAPER PATH

2.1 Paper path (FS-536SD/PK-520/RU-515)

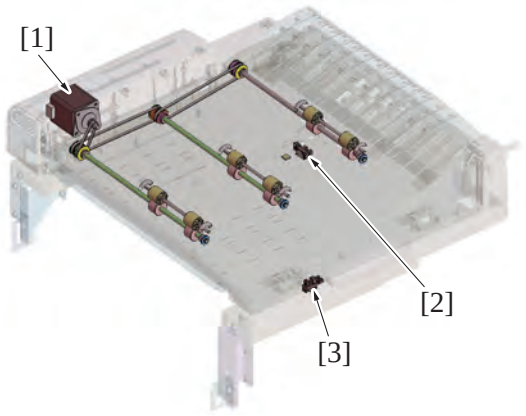


[1]	Sub tray exit roller, roll	[2]	Sub tray transport roller, roll
[3]	Transport roller, roll	[4]	RU transport roller 3, transport roll 3 (RU-515) *
[5]	RU transport roller 2, transport roll 2 (RU-515) *	[6]	RU transport roller 1, transport roll 1 (RU-515) *
[7]	FNS entry roller, roll	[8]	Saddle section exit roller, roll
[9]	Saddle section paper feed roller, roll	[10]	Center folding roller
[11]	Tri-folding roller, roll	[12]	Sub tray exit roller, roll
[13]	Receiving roller, Receiving roll	-	-

- *: Option

3. RU-515

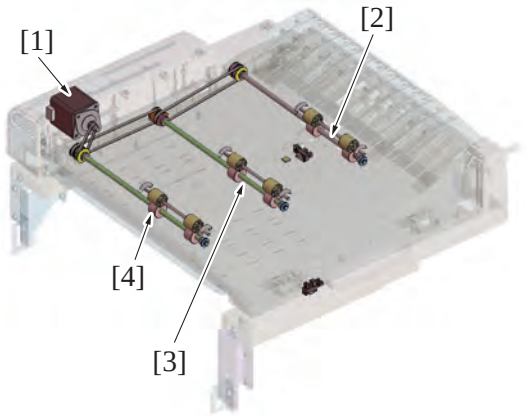
3.1 Configuration



[1]	RU transport motor (M35)	[2]	RU transport sensor (PS60)
[3]	RU door open/close sensor (PS61)	-	-

3.2 Drive

- The RU transport motor drives the drive of the RU transport roller 1, 2, 3.

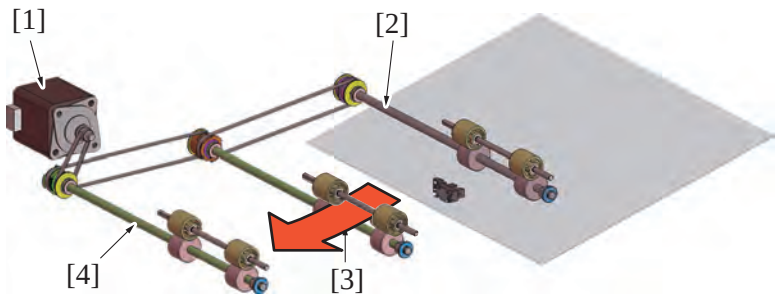


[1]	RU transport motor (M35)	[2]	RU transport roller 1
[3]	RU transport roller 2	[4]	RU transport roller 3

3.3 Operation

3.3.1 Paper horizontal transport operation

- The horizontal transport section transfers paper fed out from the main body to the finisher.
- The RU transport motor provides drive for the RU transport rollers.
- On the finisher side, drive from the RU transport motor transfers the paper into the finisher.

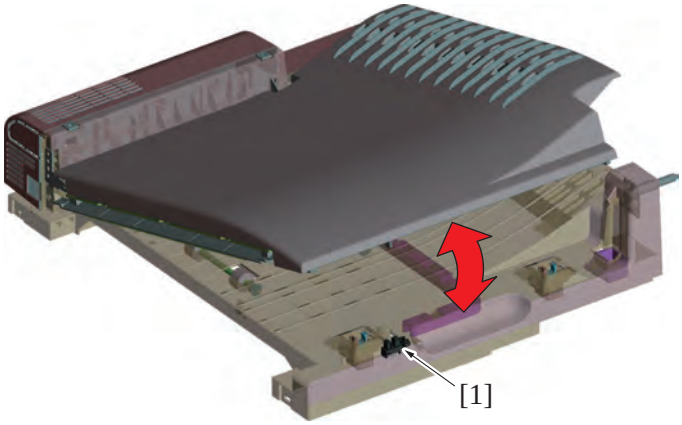


[1]	RU transport motor (M35)	[2]	RU transport roller 1
[3]	RU transport roller 2	[4]	RU transport roller 3

3.3.2 Door open/close detection mechanism

- The RU door open/close sensor installed at the front left of the RU section, detects open/close of the RU door.

- Opening the RU door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



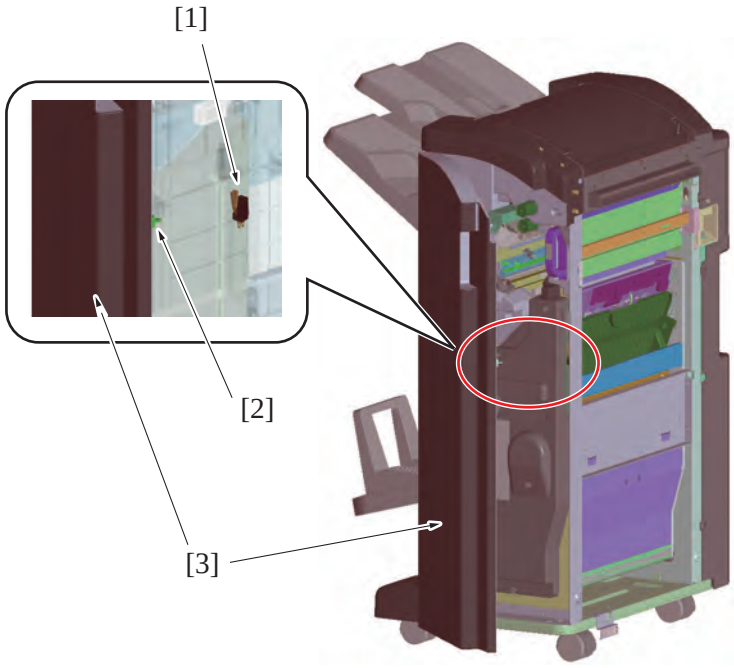
[1]	RU door open/close sensor (PS61)	-	-

4. FINISHER SECTION

4.1 Door open/close detection mechanism

4.1.1 Front door open/close detection mechanism

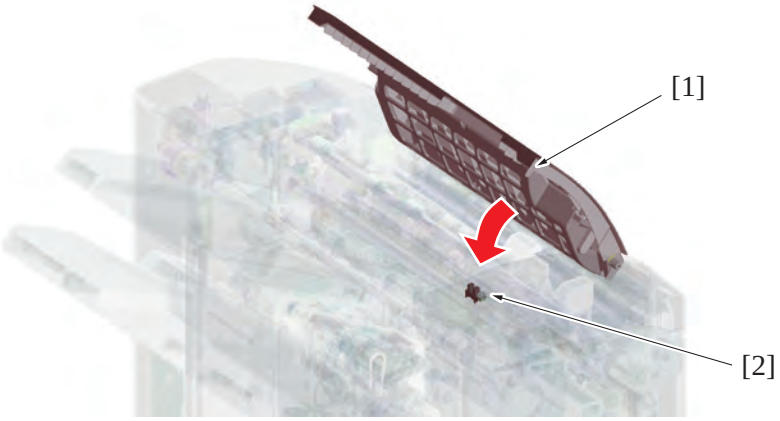
- The front door open detect switch installed at the front right of the FNS section detects open/close of the finisher's front door.
- Open the front door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Front door open detect switch (SW1)	[2]	Lever
[3]	Front door	-	-

4.1.2 Upper door open/close detection mechanism

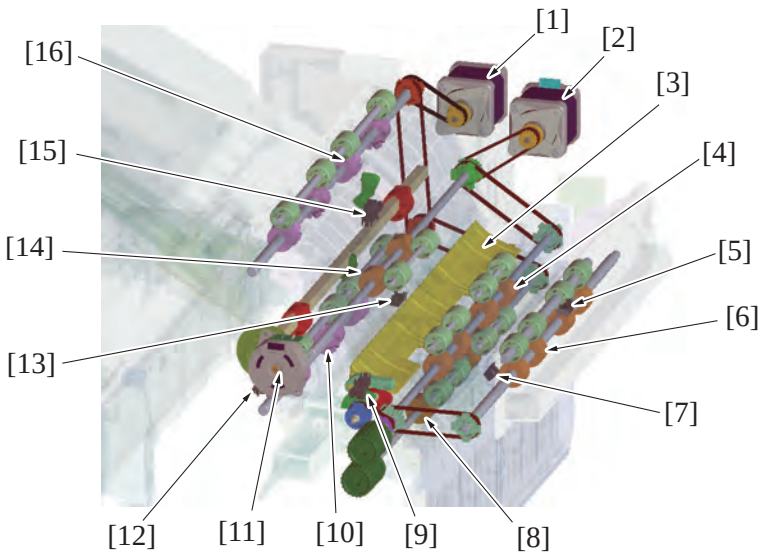
- The upper door open/close detection sensor is installed at the front left of the FNS section to detect open/close of the finisher upper door.
- Open the upper door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Upper door open/close detection lever	[2]	Upper door open/close detection sensor (PS32)

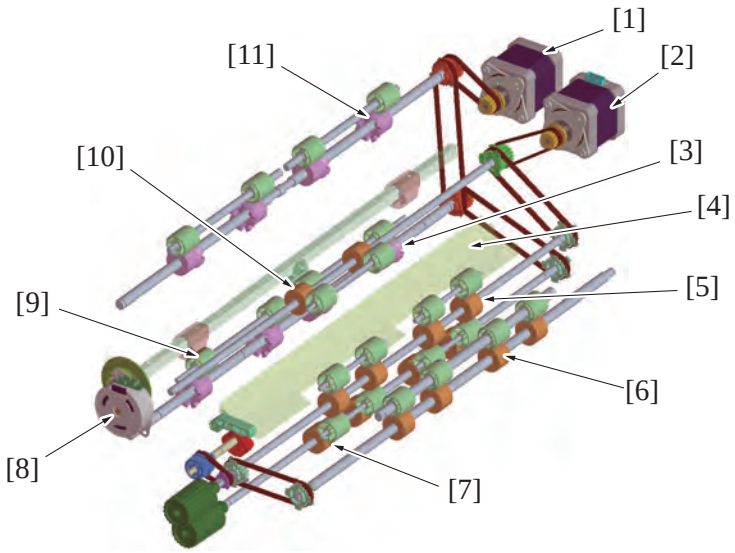
5. TRANSPORT SECTION

5.1 Configuration



[1]	FNS discharge motor (M3)	[2]	FNS entry transport motor (M2)
[3]	Paper path switching gate	[4]	Transport roller
[5]	FNS entrance sensor (PS4)	[6]	FNS entrance roller
[7]	Saddle exit sensor (PS5)	[8]	Saddle section exit roller
[9]	Exchange folded paper output sensor (PS30)	[10]	Receiving roller
[11]	Receiving roller retraction motor (M4)	[12]	Receiving roller retraction sensor (PS11)
[13]	Main tray exit sensor (PS16)	[14]	Sub tray transport roller
[15]	Sub tray exit sensor (PS8)	[16]	Sub tray exit roller

5.2 Drive

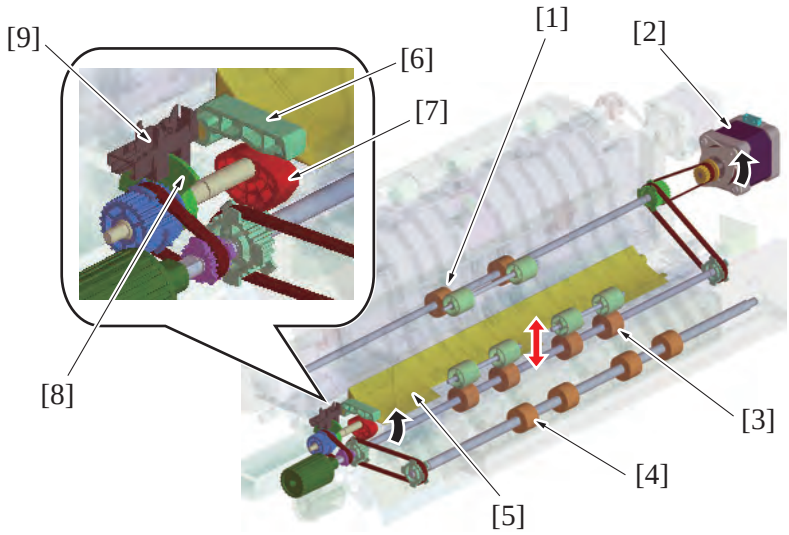


[1]	FNS discharge motor (M3)	[2]	FNS entry transport motor (M2)
[3]	Receiving roller	[4]	Paper path switching gate
[5]	Transport roller	[6]	FNS entrance roller
[7]	Saddle section exit roller	[8]	Receiving roller retraction motor (M4)
[9]	Receiving roll	[10]	Sub tray transport roller
[11]	Sub tray exit roller	-	-

5.3 Operation

5.3.1 Paper path switching mechanism

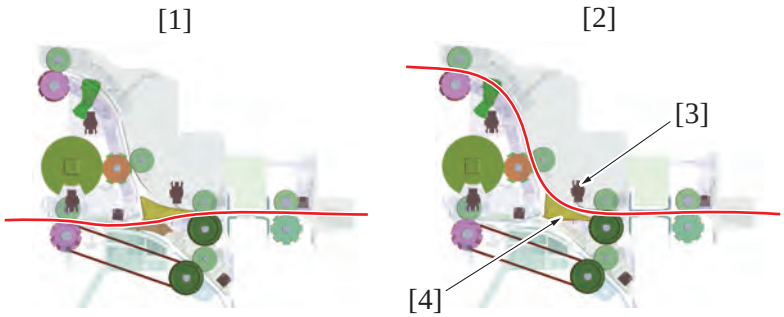
- Paper path is switched by the up/down operations of the paper path switching gate to transport paper to each tray or the saddle section.
- The up/down operations of the paper path switching gate is driven by the FNS entry transport motor.
- The position of the paper path switching gate is detected by the exchange folded paper output sensor.



[1]	Sub tray transport roller	[2]	FNS entry transport motor (M2)
[3]	Transport roller	[4]	FNS entrance roller
[5]	Paper path switching gate	[6]	Lever
[7]	Cam	[8]	Detection plate
[9]	Exchange folded paper output sensor (PS30)	-	-

(1) Paper path switching gate up/down operation

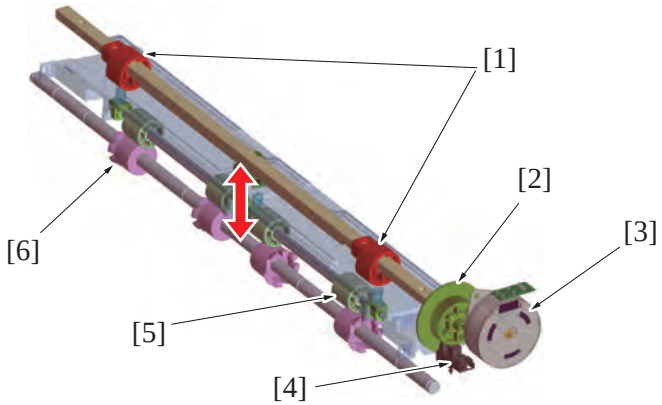
- Rotation of the cam raises or lowers the lever to change the position of the paper path switching gate.
- When the paper path switching gate is in the bottom position, paper is transported to the sub tray. When the gate is in the top position, paper is transported to the main tray.
- The detection board that is installed on the same shaft as the cam rotates, which changes the state of the exchange folded paper output sensor. Thus, the position of the paper path switching gate can be determined.
- The paper path switching gate is determined to be in the bottom position when the exchange folded paper output sensor is unblocked. The paper path switching gate is determined to be in the top position when the sensor is blocked.



[1]	Paper exit to the main tray	[2]	Paper exit to the sub tray
[3]	Exchange folded paper output sensor (PS30)	[4]	Paper path switching gate

5.3.2 Receiving roller section up/down function

- The up/down movement of the receiving roll, switches the timing of transporting the paper to the alignment section.
- The up/down operations of the receiving roll are driven by the receiving roller retraction motor.
- The position of the receiving roll is detected by the receiving roller retraction sensor.



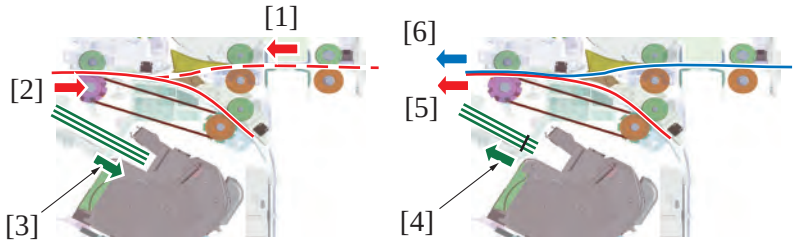
[1]	Cam	[2]	Detection plate
[3]	Receiving roller retraction motor (M4)	[4]	Receiving roller retraction sensor (PS11)
[5]	Receiving roll	[6]	Receiving roller

(1) Receiving roller pressure and release

- Rotation of the cam raises or lowers the receiving roll to pressure and release the receiving roller.
- When the receiving roll is pressed against the receiving roller, paper is transported to the alignment section by the receiving roller.
- When the receiving roll is released from the receiving roller, paper is in a standby state along the transport path.
- The detection board that is installed on the same shaft as the cam rotates, which changes the state of the receiving roller retraction sensor. Thus, the position of the receiving roll can be determined.
- The receiving roll is determined to be pressing against the receiving roller when the receiving roller retraction sensor is unblocked. The receiving roll is determined to be in the release state when the sensor is blocked.

5.3.3 Buffer control

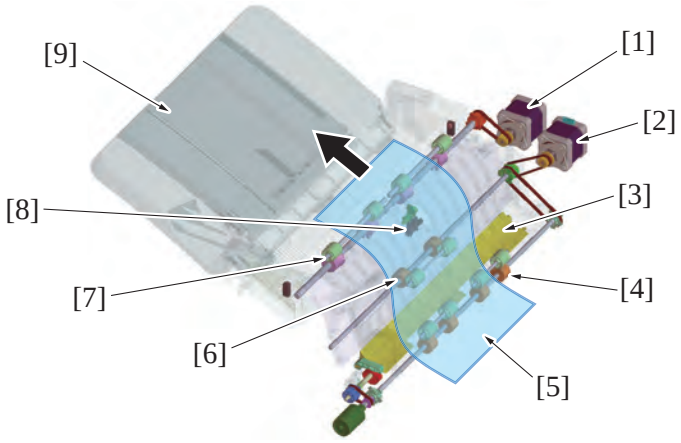
- The receiving roller section up/down mechanism is provided to achieve high productivity, by eliminating the time loss for the next sheet of paper during the offset and staple operations.
- This allows handling a print job without reducing the paper transport speed even under the condition where the preceding sets of sheets are being aligned and stapled.
- The first sheet of paper that is transported during the paper sheets alignment is switched back toward the saddle exit direction temporarily.
- After paper sheets are aligned and discharged, the first sheet of paper is transported together with the arrived second sheet to the alignment section.



[1]	First sheet	[2]	First sheet (switchback)
[3]	Sheets (transported to the alignment section)	[4]	Sheets after alignment
[5]	First sheet	[6]	Second sheet

5.3.4 Sub tray exit mechanism

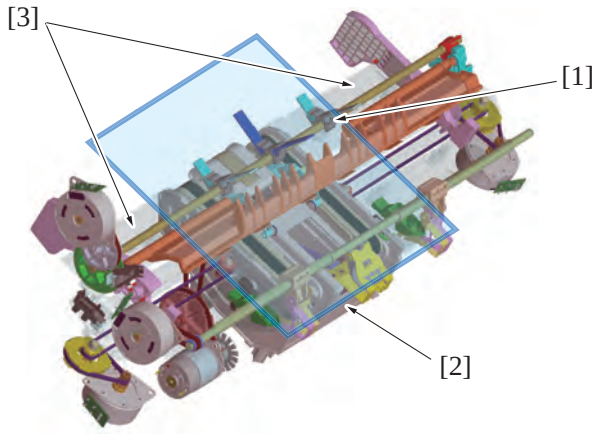
- The sub tray exit roller discharges paper from the horizontal transport section to the sub tray passing through the FNS entry roller, transport roller and sub tray transport roller.
- To transport paper to the sub tray, the paper path switching gate also operates.
- The sub tray exit roller is driven by the FNS discharge motor.



[1]	FNS discharge motor (M3)	[2]	FNS entry transport motor (M2)
[3]	Paper path switching gate	[4]	Transport roller
[5]	Paper	[6]	Sub tray transport roller
[7]	Sub tray exit roller	[8]	Sub tray exit sensor (PS8)
[9]	Sub tray	-	-

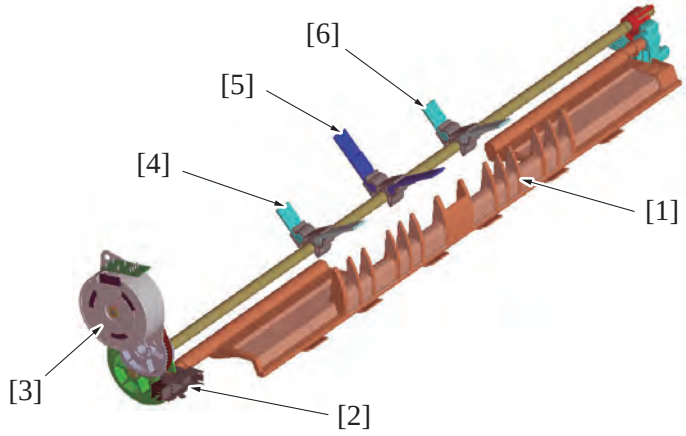
6. ALIGNMENT SECTION

6.1 Configuration



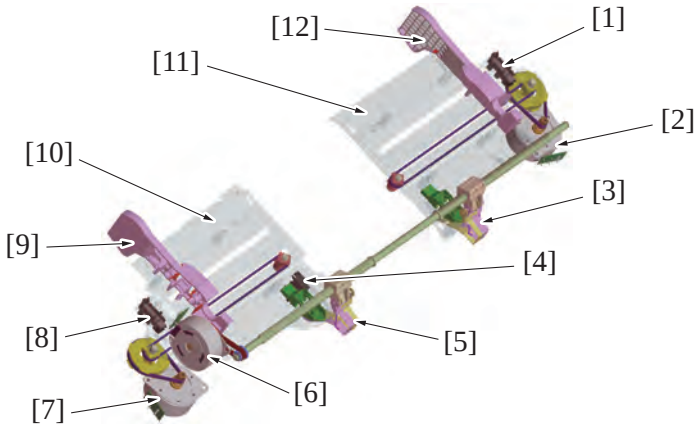
[1]	Upper paddle section	[2]	Exit section
[3]	Alignment tray section	-	-

6.1.1 Upper paddle section



[1]	Paper guide	[2]	Upper paddle home position detection sensor (PS14)
[3]	FNS paddle motor (M5)	[4]	Upper paddle (front)
[5]	Upper paddle (center)	[6]	Upper paddle (rear)

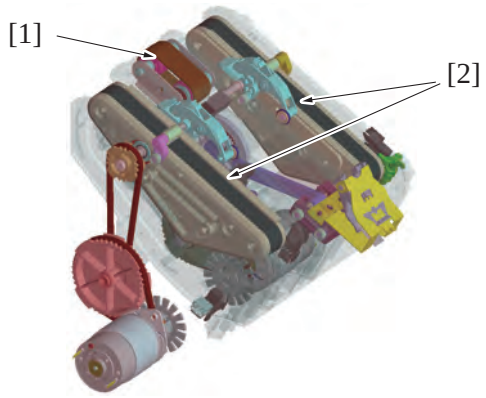
6.1.2 Alignment tray section



[1]	Alignment plate/R home sensor (PS13)	[2]	Alignment motor/rear (M8)
[3]	Trailing edge stopper /R	[4]	Trailing edge stopper home position detection sensor (PS20)
[5]	Trailing edge stopper/F	[6]	Trailing edge stopper motor (M6)
[7]	Alignment motor/front (M7)	[8]	Alignment plate/F home sensor (PS12)
[9]	Alignment plate/F	[10]	Alignment tray (front)

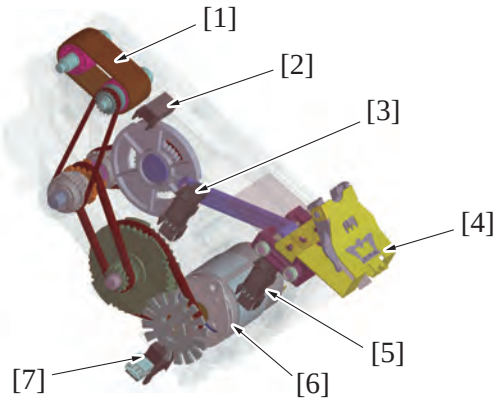
[11]	Alignment tray (rear)	[12]	Alignment plate/R

6.1.3 Exit section



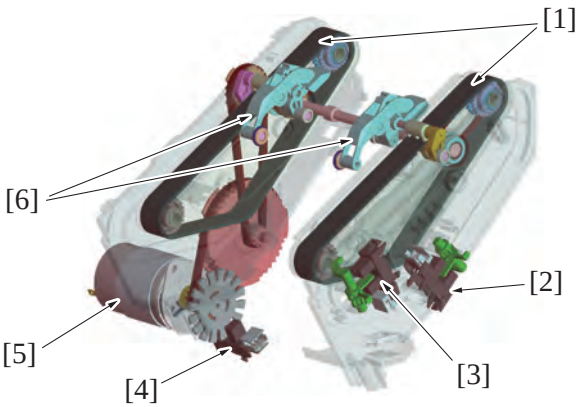
[1]	Lower paddle section	[2]	Gripper section

(1) Lower paddle section



[1]	Lower paddle	[2]	Staple stacker paper detection sensor (PS31)
[3]	Pre-eject away sensor (PS22)	[4]	Trailing edge stopper/C
[5]	Pre-eject home sensor (PS21)	[6]	Pre-eject drive motor (M9)
[7]	Pre-eject encoder sensor (PS15)	-	-

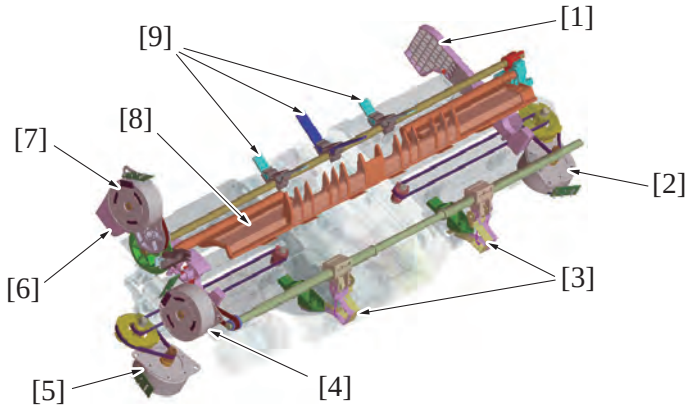
(2) Gripper section



[1]	Paper transport belt	[2]	Gripper home position sensor (PS18)
[3]	Gripper position detection sensor (PS19)	[4]	Gripper motor sensor (PS17)
[5]	Bundle eject motor (M10)	[6]	Gripper

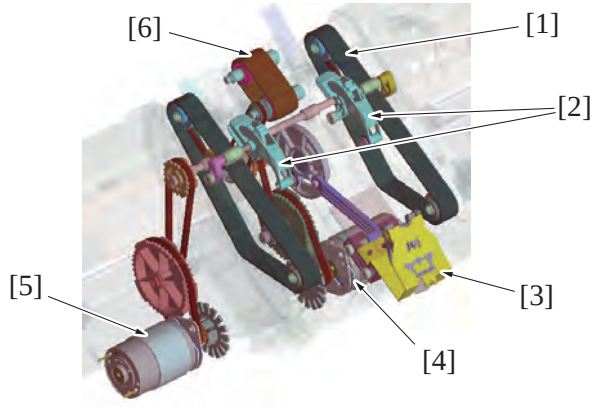
6.2 Drive

6.2.1 Upper paddle section/Alignment tray section



[1]	Alignment plate/R	[2]	Alignment motor/rear (M8)
[3]	Trailing edge stopper	[4]	Trailing edge stopper motor (M6)
[5]	Alignment motor/front (M7)	[6]	Alignment plate/F
[7]	FNS paddle motor (M5)	[8]	Paper guide
[9]	Upper paddle	-	-

6.2.2 Exit section

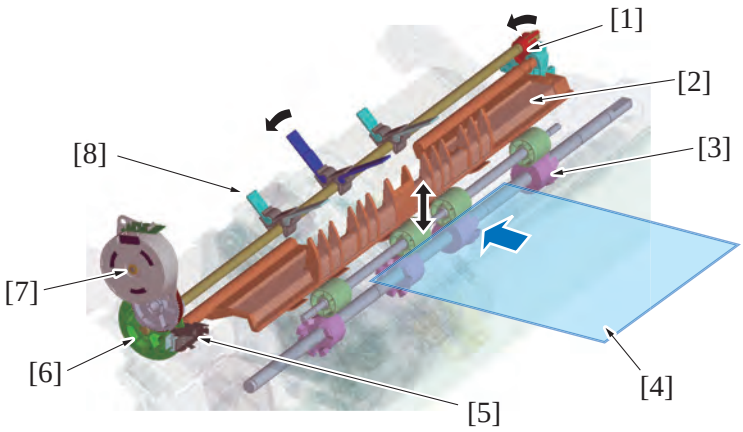


[1]	Paper transport belt	[2]	Gripper
[3]	Trailing edge stopper/C	[4]	Pre-eject drive motor (M9)
[5]	Bundle eject motor (M10)	[6]	Lower paddle

6.3 Operation

6.3.1 Paper transport control to alignment section

- When the FNS paddle motor rotates, the upper paddles (3 pieces) located on the upper paddle shaft, rotates to draw and drop the paper to the alignment tray.
- The upper paddle returns to standby at the home position (upper position) after one rotation.
- The cam located on the upper paddle shaft rotates to move the paper guide up and down.
- The lowering of the paper guide ensures that paper is transported to the alignment tray.

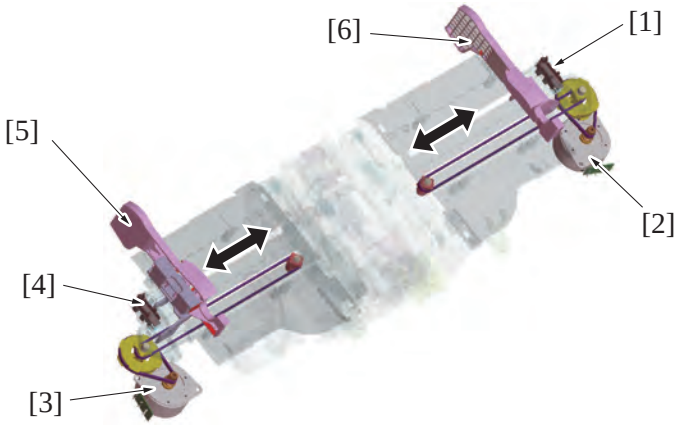


[1]	Cam	[2]	Paper guide
[3]	Receiving roller	[4]	Paper
[5]	Upper paddle home position detection sensor (PS14)	[6]	Detection plate
[7]	FNS paddle motor (M5)	[8]	Upper paddle

6.3.2 Paper alignment control

(1) Alignment plate

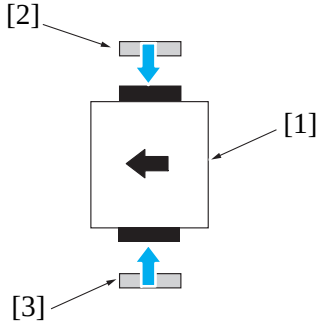
- The alignment plate/F and alignment plate/R align the paper in the width orientation and shift paper sheets.
- The alignment motor and drive belt drives the alignment plates.
- The alignment plates move forward and backward by the forward and reverse rotation of the alignment motor.
- Alignment plate/F and alignment plate//R are each equipped with a drive motor, which allows them to operate independently.



[1]	Alignment plate/R home sensor (PS13)	[2]	Alignment motor/rear (M8)
[3]	Alignment motor/front (M7)	[4]	Alignment plate/F home sensor (PS12)
[5]	Alignment plate /F: home position	[6]	Alignment plate /R: home position

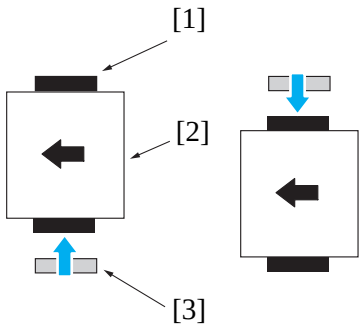
(a) Alignment operation

- The alignment motor/front rotates to move the alignment plate/F via the alignment plate/F drive belt.
- The alignment plate/F home sensor detects the home position of the alignment plate/F.
- The alignment motor/rear rotates to move the alignment plate/R via the alignment plate/R drive belt.
- The alignment plate/R home sensor detects the home position of the alignment plate/R.
- The sheets are placed between the alignment plates/F and /R corresponding to the paper width so that their both ends are aligned.



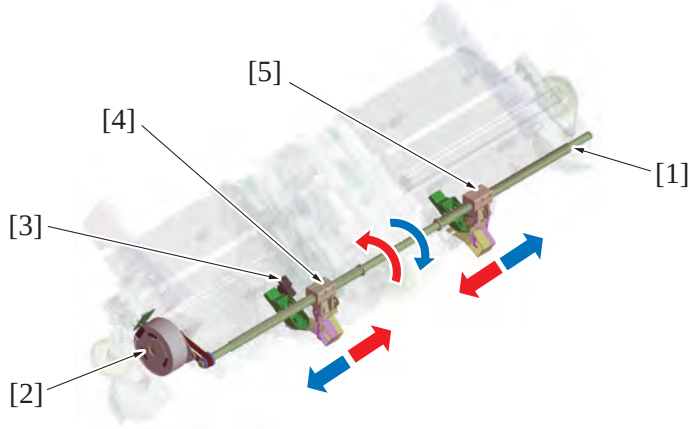
(b) Shift operation

- When offset is selected as finishing option, the alignment plates are moved to shift the sets of paper. Paper is discharged to the center of the main tray at normal printing and stapling.
- Depending on the width of paper, the alignment plate F (alignment plate R) pushes the sets of paper to the rear side (front side) from one side so that the sets of the paper are shifted.
- The sheets are shifted by alternatively repeating the above operation.



(2) Trailing edge stopper

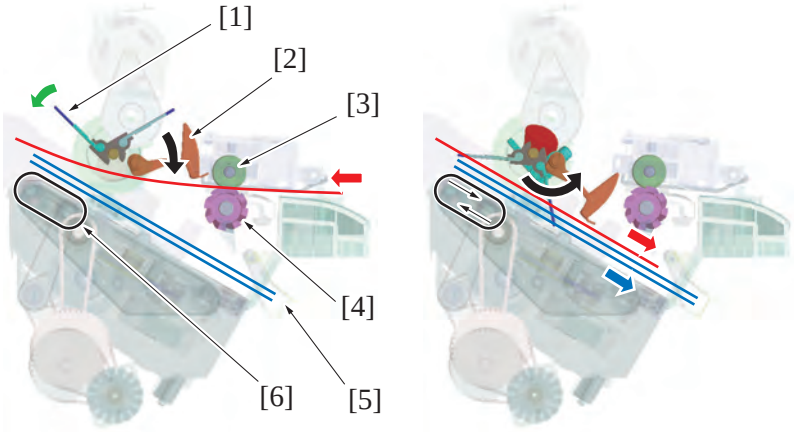
- The trailing edge stopper/F and trailing edge stopper/R align paper in the feed orientation.
- The trailing edge stopper motor drives the trailing edge stoppers.



[1]	Stopper moving shaft	[2]	Trailing edge stopper motor (M6)
[3]	Trailing edge stopper home position detection sensor (PS20)	[4]	Trailing edge stopper/F: home position
[5]	Trailing edge stopper/R: home position	-	-

(a) Alignment operation

- The shaft for stopper movement has a different spiral between the front and rear sides.
- The trailing edge stopper/F to move forward and the trailing edge stopper/R to move backward when the trailing edge stopper motor rotates in the normal direction.
- Trailing edge stopper/F and the trailing edge stopper/R shift according to the paper width before starting a job, to hold the trailing edge of the paper.
- Paper is sandwiched between the upper paddle and lower paddle, and pressed against the trailing edge stoppers.
- The trailing edge stoppers hold the trailing edge of the paper, to align the trailing edge of paper in the feed orientation.
- For 2-point staple jobs, the trailing edge stoppers/F and /R are retracted to the position where they do not interfere with the stapler.
- After the job is completed, the trailing edge stopper motor reverses the rotation to return the trailing edge stopper to the home position.

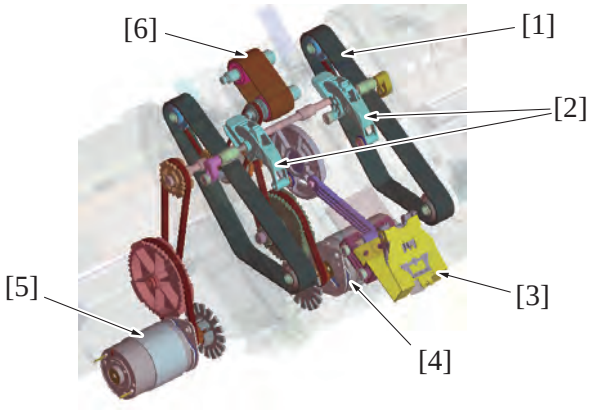


[1]	Upper paddle	[2]	Paper guide

[3]	Receiving roll	[4]	Receiving roller
[5]	Trailing edge stopper	[6]	Lower paddle

6.3.3 Paper exit control

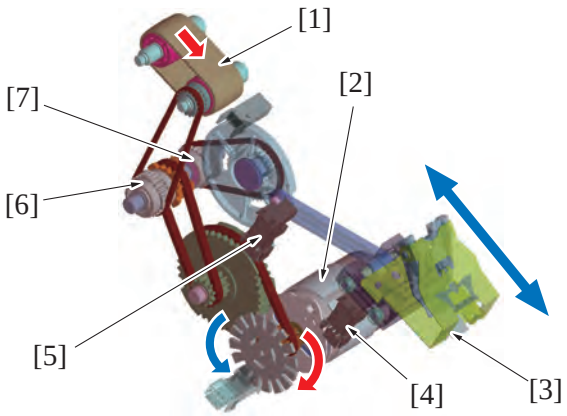
- When the pre-eject drive motor rotates counterclockwise, the bottom edge stopper/C pushes paper to the position at which it can be gripped by the gripper.
- The gripper grips the trailing edges of the sets of paper in the alignment tray and transports them to the paper exit position.
- The gripper releases the sets of paper to discharge them to the main tray. The gripper is moved to the home position and brought into a standby state.



[1]	Paper transport belt	[2]	Gripper
[3]	Trailing edge stopper/C	[4]	Pre-eject drive motor (M9)
[5]	Bundle eject motor (M10)	[6]	Lower paddle

(1) Lower paddle operation

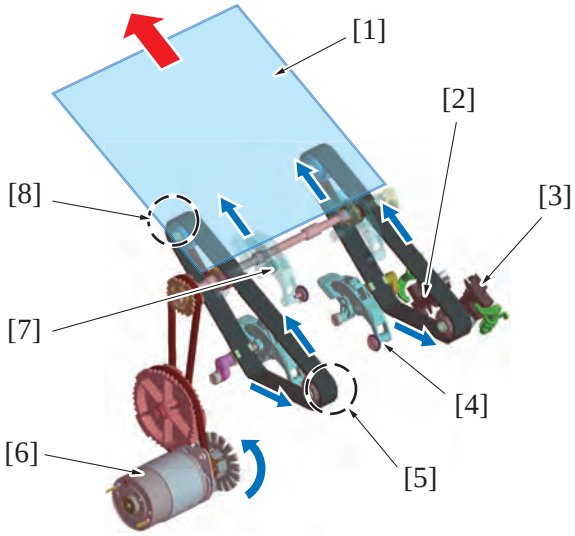
- When the pre-eject drive motor rotates clockwise, the lower paddle rotates to press the paper against the trailing edge stopper.
- When the pre-eject drive motor rotates counterclockwise, the trailing edge stopper moves from the home position to the paper exit position to discharge paper to the main tray.
- When the drive gear makes a turn, the stopper moves from the paper exit position to the home position and is brought into a standby state.



[1]	Lower paddle	[2]	Pre-eject drive motor (M9)
[3]	Trailing edge stopper/C	[4]	Pre-eject home sensor (PS21)
[5]	Pre-eject away sensor (PS22)	[6]	One-way clutch (for lower paddle driving)
[7]	One-way clutch (for trailing edge stopper/C driving)	-	-

(2) Gripper operation

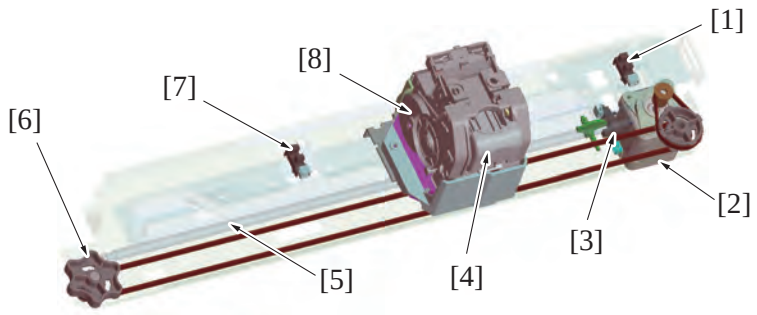
- The bundle eject motor rotates to turn the paper transport belt. This causes the gripper, fixed to the paper transport belt, to rotate.
- The gripper stays at the home position (inside the exit section) and rotates at the position [5] shown in the illustration to grip the trailing edge of paper. Paper is transported with the gripper griping the trailing edge of the paper. The gripper releases the paper when it rotates at the position [8] shown in the illustration. After the paper transport belt makes one turn, the gripper returns to the home position and is brought into the standby state.



[1]	Paper	[2]	Gripper home position sensor (PS18)
[3]	Gripper position detection sensor (PS19)	[4]	Gripper (home position)
[5]	Gripper position (gripping the paper)	[6]	Bundle eject motor (M10)
[7]	Gripper position (transporting the paper)	[8]	Gripper position (release the paper)

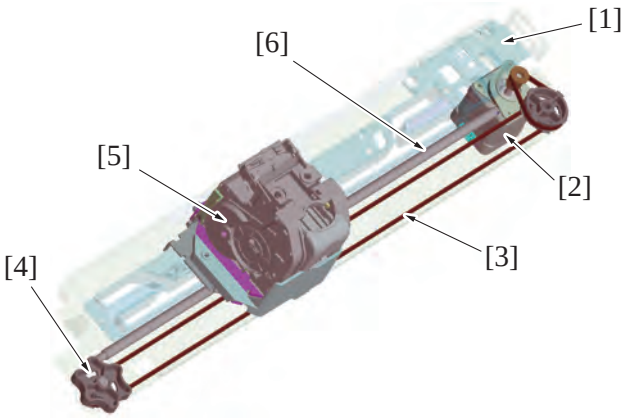
7. STAPLER SECTION

7.1 Configuration



[1]	Stapler home position sensor (rear) (PS23)	[2]	Side stapler movement motor (M13)
[3]	Wide flat limit sensor (PS36)	[4]	Staple cartridge
[5]	Shaft	[6]	Stapler move dial
[7]	Stapler position sensor (center) (PS24)	[8]	Stapler unit

7.2 Drive



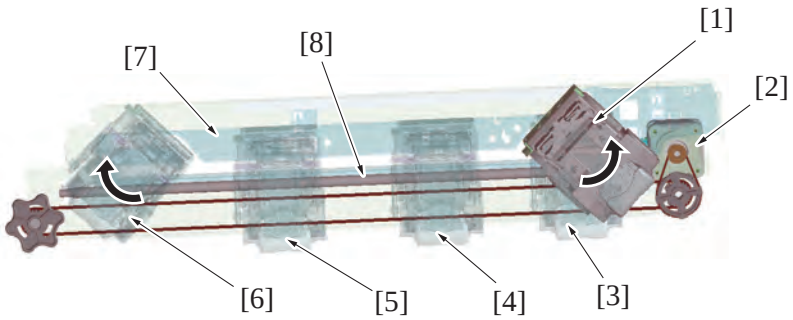
[1]	Slide guide plate	[2]	Side stapler movement motor (M13)
[3]	Drive belt	[4]	Stapler move dial
[5]	Stapler unit	[6]	Shaft

7.3 Operation

7.3.1 Stapler movement control

(1) Stapler Movement

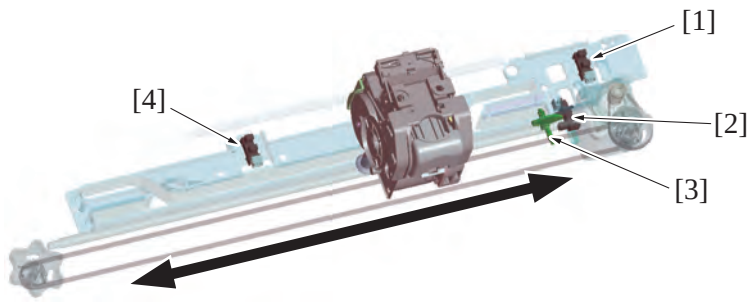
- When the side stapler movement motor rotates, the belt is driven. So, the stapler holder that is attached to the belt moves back and forth along the shaft.
- When the staple unit moves to stapler home position or staple cartridge replacement position, the slide guide plate shape causes the staple unit to rotate.



[1]	Stapler unit (home position)	[2]	Side stapler movement motor (M13)
[3]	Stapler unit (corner staple (parallel) position)	[4]	Stapler unit (2-staple position)
[5]	Stapler unit (2-staple position)	[6]	Stapler unit (staple cartridge replacement position)
[7]	Slide guide plate	[8]	Shaft

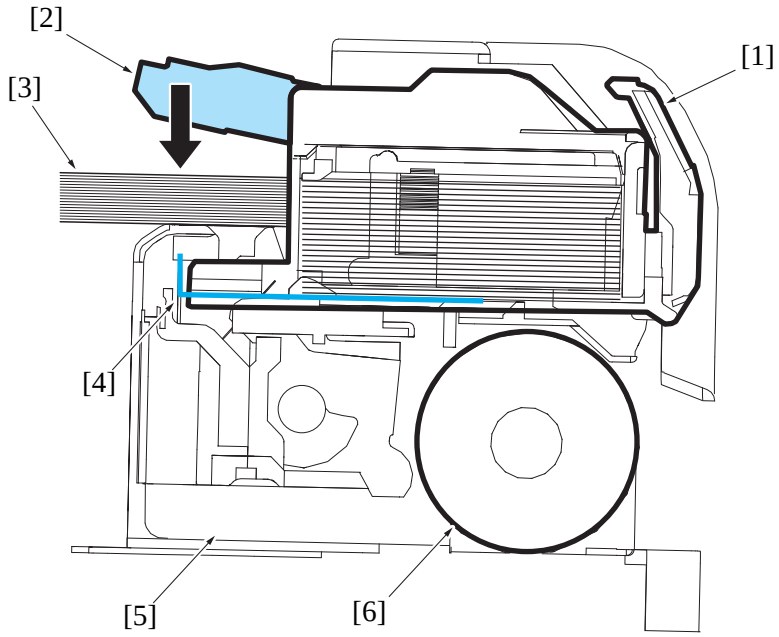
(2) Stapler position detection

- The stapler home position sensor (rear) detects the home position of the stapler.
- The stapler staple position is detected depending on the motor rotation amount that is based on the stapler home position sensor (rear) and stapler position sensor (center).
- The wide flat limit sensor detects the corner staple (parallel) position of the stapler.
- The staple cartridge replacement position is detected depending on the amount of side stapler movement motor rotation that is based on the stapler position sensor (center).



[1]	Stapler home position sensor (rear) (PS23)	[2]	Wide flat limit sensor (PS36)
[3]	Actuator	[4]	Stapler position sensor (center) (PS24)

7.3.2 Staple control



[1]	Staple cartridge	[2]	Clincher staple arm
[3]	Paper bunch	[4]	Staple sheet (staple)
[5]	Stapler	[6]	Stapler motor

(1) Stapling operation

- The stapling operation is driven by the stapler motor.
- The clincher staple arm is lowered by the stapler motor. The clincher staple arm presses the sheets.
- Afterwards, a staple is pushed up the staple arm from the staple side. The staple is pressed through the sheets and bent from the clincher staple arm to fasten the sheets together.
- The staple operation completes when the staple arm returns to the home position.

(2) Clogged staple detection

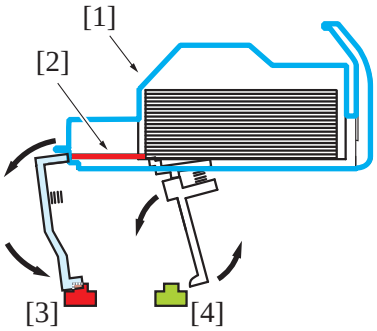
- The staple arm position is detected by the stapler home sensor located in the stapler.
- The stapler home sensor is off during the staple operation.
- A staple jam is determined when the stapler home sensor does not turn on again after a specified amount of time elapses since it turned off.

7.3.3 Staple empty detection control

(1) Staple empty detection

- The stapler includes the self-priming sensor and staple empty sensor to detect the status of the staple cartridge and staples.

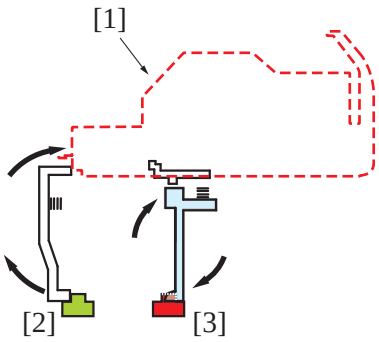
- If the trailing edge of the last staple sheet in the cartridge passes the actuator of the staple empty sensor, the staple empty sensor is blocked and machine determines that the cartridge is empty.
- Even when staple empty is detected, printing is not disabled. Paper is delivered without being stapled.
- If staple empty occurs, the stapler stays at the staple cartridge replacement position.



[1]	Staple cartridge	[2]	Staple sheet
[3]	Self-priming sensor	[4]	Staple empty sensor

(2) Cartridge installation detection

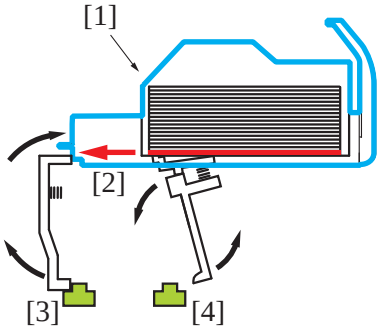
- When a cartridge is not installed, the staple empty sensor is blocked and the self-priming sensor is unblocked.
- The control panel displays to warn of the staple empty message.



[1]	Staple cartridge (not mounted)	[2]	Self-priming sensor (unblocked)
[3]	Staple empty sensor (blocked)	-	-

(3) Staple sheet setting errors

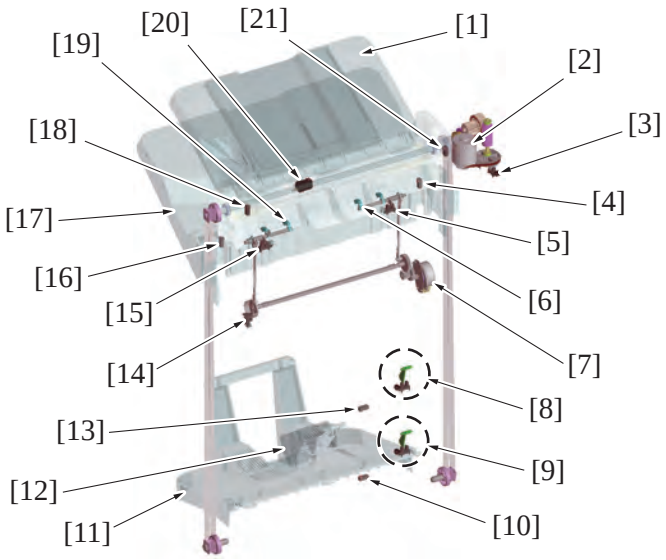
- When a staple sheet is placed, the staple empty sensor is unblocked, and the empty-staple status clears.
- When the staple empty sensor is detecting (unblocked), but the self-priming sensor (unblocked) cannot detect the edge of the staple sheet, the clinch operation is performed.
- If the self-priming sensor cannot detect the leading edge of the staple sheet after clinch operations, machine determines that the staple sheet is not properly fed and the control panel displays the staple empty message.



[1]	Staple cartridge (loaded with staple sheets)	[2]	Staple sheet is fed by clinch operation
[3]	Self-priming sensor (unblocked)	[4]	Staple empty sensor (unblocked)

8. OUTPUT TRAY SECTION

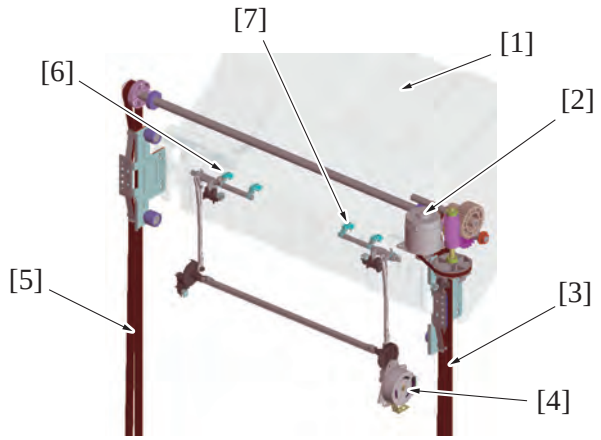
8.1 Configuration



[1]	Sub tray	[2]	Main tray up/down motor (M11)
[3]	Stacker motor sensor (PS25)	[4]	Main tray upper sensor/out (PS6) (Not used)
[5]	Main tray upper position sensor/R (PS26)	[6]	Paper detection lever/R
[7]	Paper receiving control motor (M12)	[8]	Main tray full detection sensor (PS29) *1 *3
[9]	Main tray full detection sensor (PS29) *2	[10]	Booklet tray empty detection sensor/out (PS14) *3
[11]	Saddle tray *3	[12]	Paper press *3
[13]	Booklet tray empty detection sensor/in (PS13) *3	[14]	Paper delivery control sensor (PS28)
[15]	Main tray upper position sensor/F (PS27)	[16]	Main tray upper sensor/in (PS7) (Not used)
[17]	Main tray	[18]	Sub tray full detection sensor/in (PS10)
[19]	Paper detection lever/F	[20]	Main tray upper position detect switch (SW2)
[21]	Sub tray full detection sensor/out (PS9)	-	-

- *1: Installation position for the FS-536SD sensor
- *2: Installation position for the FS-536 sensor
- *3: FS-536SD only

8.2 Drive

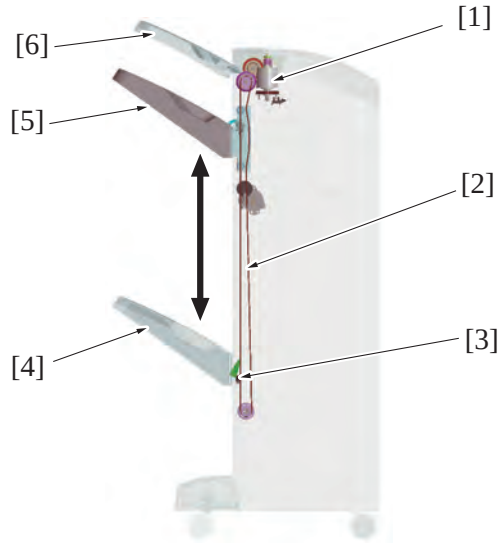


[1]	Main tray	[2]	Main tray up/down motor (M11)
[3]	Main tray drive belt/R	[4]	Paper receiving control motor (M12)
[5]	Main tray drive belt/F	[6]	Paper detection lever/F
[7]	Paper detection lever/R	-	-

8.3 Operation

8.3.1 Main tray up/down mechanism

- Rotation of the main tray up/down motor drives the main tray drive belt to lift and lower the main tray.



[1]	Main tray up/down motor (M11)	[2]	Main tray drive belt
[3]	Main tray full detection sensor (PS29)	[4]	Main tray (main tray full position)
[5]	Main tray (home position)	[6]	Sub tray

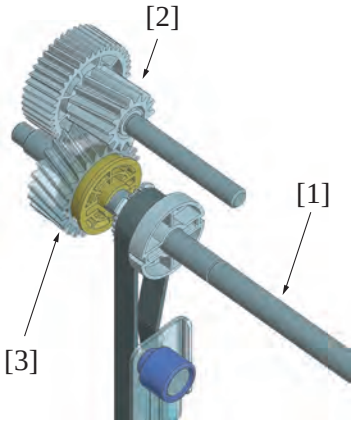
(1) Mechanism for protecting main tray drive section

⚠CAUTION

- When the drive connection in the torque limiter is released, the main tray moves down under its own weight.
- To avoid finisher breakage and your injury, before releasing the drive connection in the torque limiter, be sure to support the main tray with your hand.

- The drive connection section of the main tray up/down drive mechanism has a torque limiter to prevent breakage.
- There may be an obstacle below the main tray during its downward movement. If the tray touches the obstacle and the force required to stop the lowering operation exceeds the specified value, the teeth of the drive gear rotates in the reverse direction and the driving force cannot be transmitted to the main tray. The torque limiter is used to prevent this situation from causing the breakage of the main tray drive mechanism and the main tray up/down motor.
- The main tray can be moved only upward with your hands. By manually pushing it upward with the force exceeding the specified value, the main tray can be raised. In contrast, as the torque limiter is not provided for the downward movement, the main tray cannot be lowered by pushing it down. If the tray is forcibly pushed downward, the main tray drive mechanism can be damaged.
- If the main tray needs to be manually lowered for maintenance and repair, the tray can be lowered by releasing the drive connection in the torque limiter.

Front perspective view



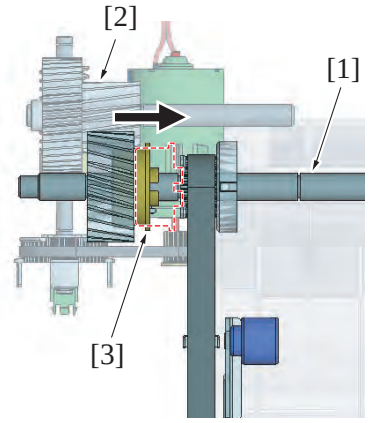
[1]	Main tray driving shaft	[2]	Main tray up/down motor drive connecting gear
[3]	Torque limiter	-	-

Method for releasing the drive connection

1. Remove the rear cover.

2. Support the main tray with your hand so that it does not fall down.
3. Slide the area of the torque limiter, located on the main tray driving shaft, as shown to the front side of the main body. The connection of the drive gears is released and the main tray is lowered.

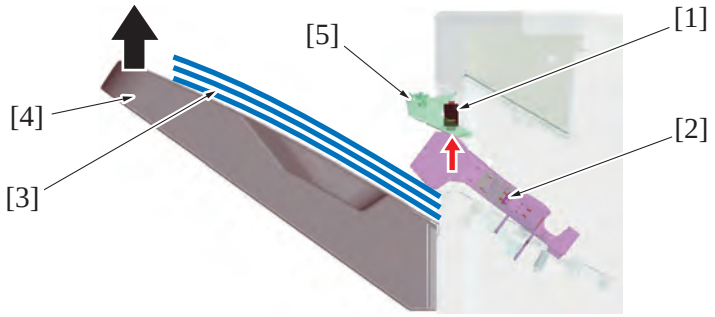
Side view



[1]	Main tray driving shaft	[2]	Main tray up/down motor drive connecting gear
[3]	Torque limiter	-	-

8.3.2 Main tray upper detection mechanism

- Upper limit detection mechanism is provided to prevent main tray up/down mechanism malfunction and damage due to lifting the main tray above the specified position.
- When the top surface of paper pushes up the alignment plate during main tray rising, the main tray upper position detect switch cover is pressed. So, the main tray upper position detect switch is pressed.
- It detects that the main tray has reached the upper limit position when the main tray upper position detect switch is pressed.
- When the main tray reaches the upper limit position, main tray up/down motor stops rotating to stop lifting the main tray.



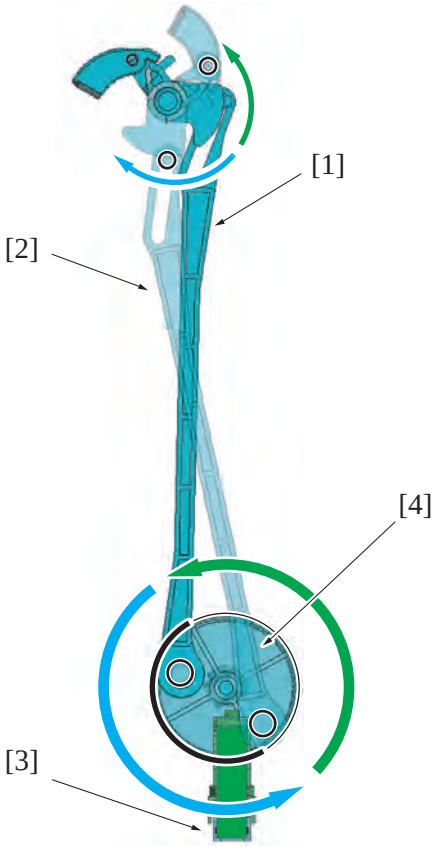
[1]	Main tray upper position detect switch (SW2)	[2]	Alignment plate
[3]	Paper	[4]	Main tray
[5]	Main tray upper switch cover	-	-

8.3.3 Main tray paper level detection control

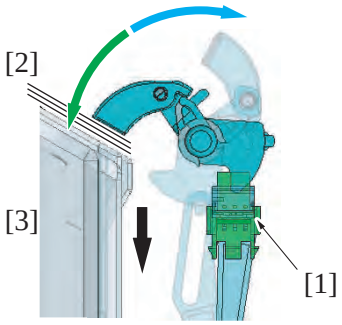
- To eliminate irregularity of the discharged paper, distance between the top surface of the discharged paper and the exit port is controlled to be consistent.
- The main tray upper position sensor detects the level of the discharged paper in the main tray.
- The top surface of the discharged paper is controlled to be at specified position by raising/lowering the main tray depending on the detected paper level.
- The paper level is detected every time that the paper is discharged to check the paper height.

(1) Main tray upper position sensor control

- The paper level detect lever is installed on the main tray and operates with the paper receiving control motor and paper level detect lever drive gear.
- The leading of the paper level detect lever will rise when the paper level detect lever drive gear is rotated half turn. If the paper level detect lever drive gear rotates another half turn, the paper level detect lever will be lowered. This operation will hold down the top surface at the trailing edge of the paper in the main tray.
- The paper delivery control sensor detects the position of the paper level detect lever drive gear. The paper receiving control motor stops when the paper level detect lever drive gear is rotated one turn.
- The main tray upper position sensor detects the position of the leading of the paper level detect lever.
- The position of the main tray upper position sensor changes depending on the paper level detect lever position. Position of the paper level detect lever changes depending on the height of the output tray.
- When the main tray upper position sensor is blocked, the main tray top surface of the paper sheets is determined as exceeding the specified height.
- The main tray up/down motor is rotated and the main tray is lowered until the main tray upper position sensor is unblocked.



[1]	Paper detection lever (home position)	[2]	Paper detection lever (upper position)
[3]	Paper delivery control sensor (PS28)	[4]	Paper detection lever drive gear

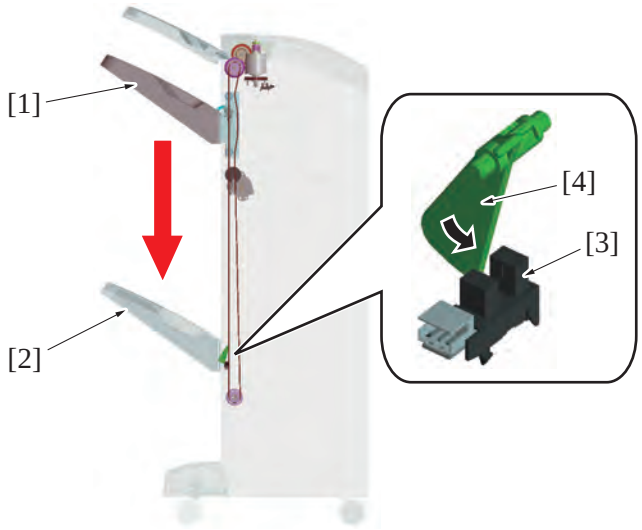


[1]	Main tray upper position sensor/F (PS27) Main tray upper position sensor/R (PS26)	[2]	Paper
[3]	Main tray	-	-

8.3.4 Tray full detection mechanism

(1) Main tray

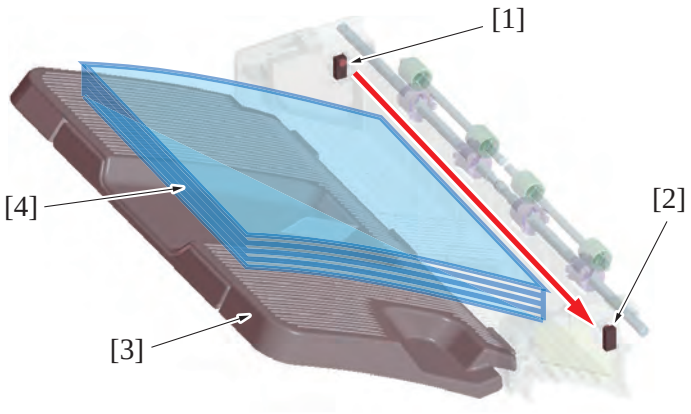
- The main tray is lowered to maintain the paper top surface to specified position when the paper is discharged to the main tray.
- Once the main tray is lowered to the specified position, the actuator is activated to block the main tray full detection sensor.
- When the main tray full detection sensor is blocked, main tray is determined as full and the warning screen is displayed.
- When the main tray full is detected, all configurations and jobs that use the main tray cannot be performed.
- By removing the paper from the main tray, the paper detection lever is lowered. This causes machine to determine that the paper is removed and the “main tray full” message disappears.



[1]	Main tray (home position)	[2]	Main tray (main tray full position)
[3]	Main tray full detection sensor (PS29)	[4]	Actuator

(2) Sub tray

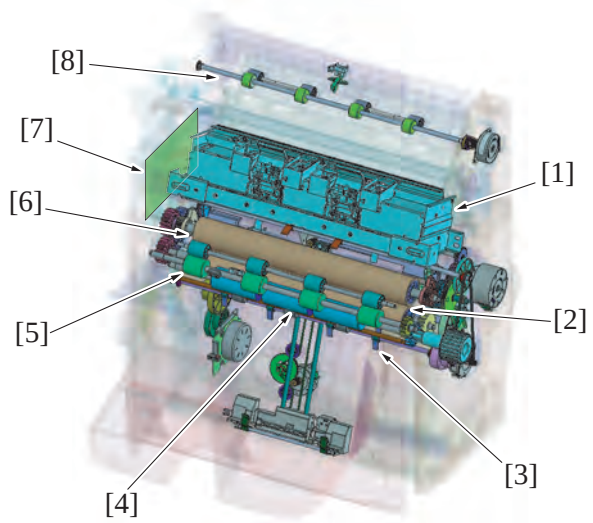
- When paper is discharged into the sub tray, the stacked paper blocks the sub tray full detection sensor. This blocked state is interpreted as a detection of a full output tray.
- When the sub tray full is detected, the warning message appears on the control panel.
- In this state, any saddle unit configurations and jobs that use the saddle unit cannot be performed.



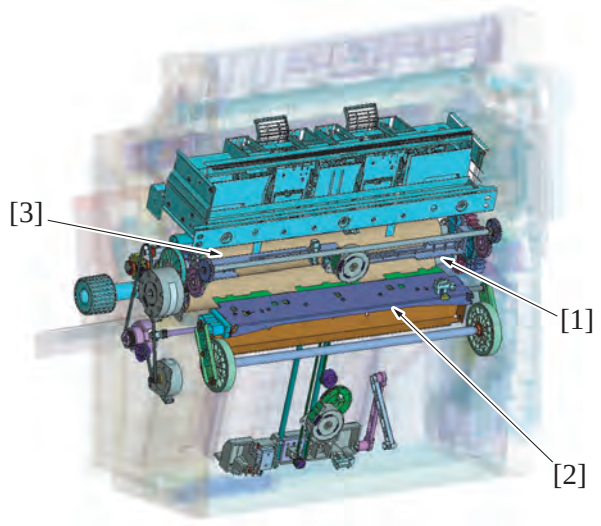
[1]	Sub tray full detection sensor/out (PS9)	[2]	Sub tray full detection sensor/in (PS10)
[3]	Sub tray	[4]	Paper

9. SADDLE SECTION (FS-536SD)

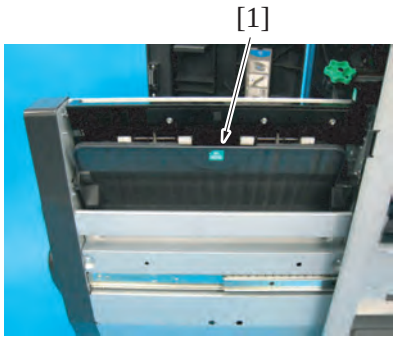
9.1 Configuration



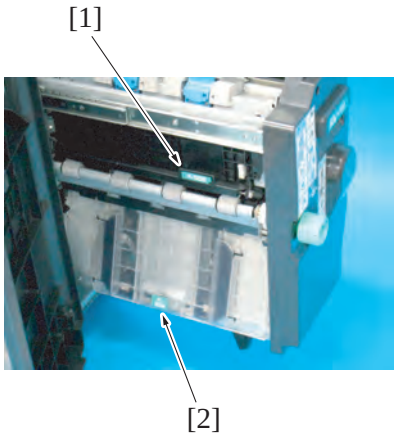
[1]	Staple unit	[2]	Center folding roller 2
[3]	Center fold section lower paddle	[4]	Tri-folding roller
[5]	Saddle tray exit roller	[6]	Center folding roller 1
[7]	SD control board (SDCB)	[8]	Saddle section paper feed roller



[1]	Center staple alignment plate drive gear/R	[2]	Center fold knife
[3]	Center staple alignment plate drive gear/F	-	-



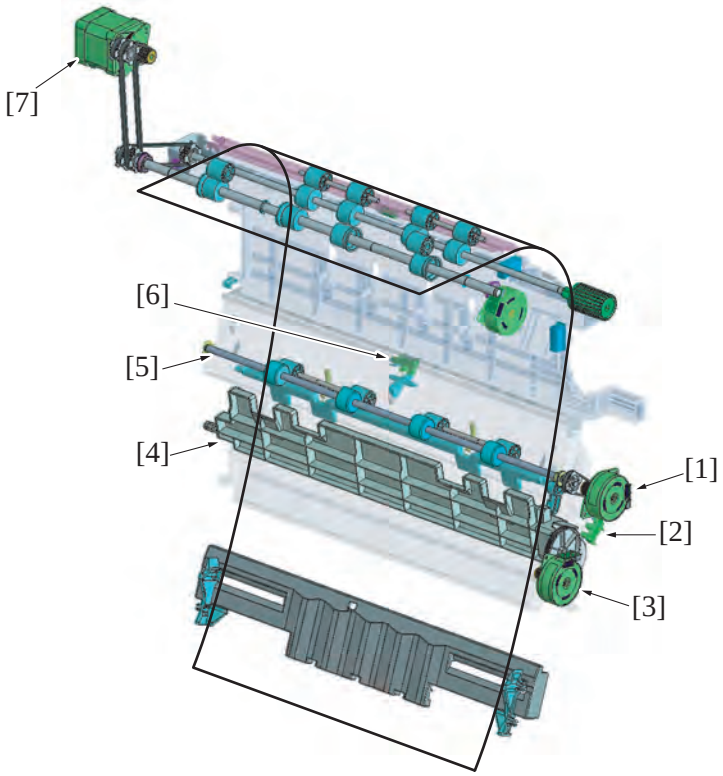
[1]	Jam removal cover (transport section)	-	-



[1]	Jam removal cover (exit section)	[2]	Jam removal cover (alignment section)

9.2 Transport section

9.2.1 Drive



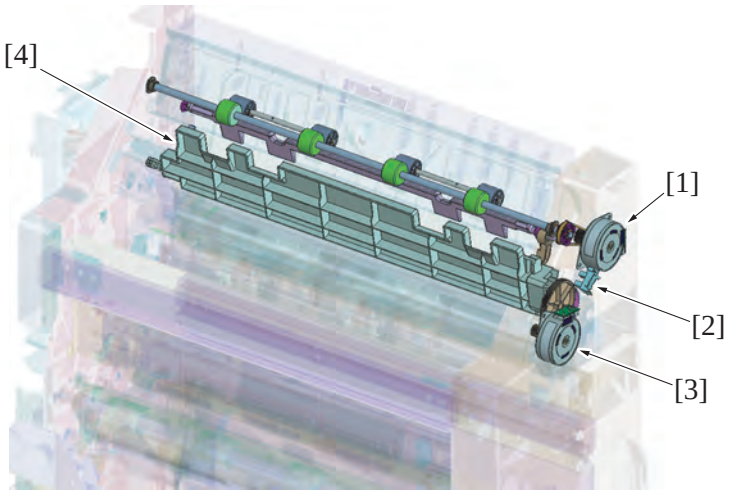
[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover
[5]	SD transport roller	[6]	SD entrance sensor (PS1)
[7]	FNS discharge motor (M3) (finisher section)	-	-

9.2.2 Paper transport

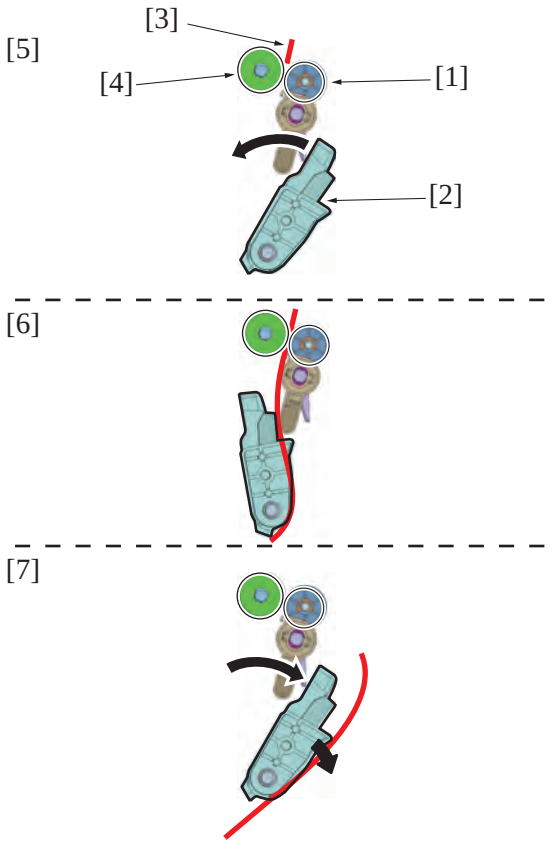
- The FNS discharger motor rotates in reverse direction, and the paper is transported from the transport section of the finisher to the saddle stitcher.
- The paper then is transported to the alignment section by SD transport roller.
- The SD transport roller rotates when the SD transport motor is driven.

9.2.3 Curl cover

- The paper is transported to the alignment section one–by-one. A paper which is curled may cause paper misfeed at the entrance of the saddle stitcher.
- In order to prevent this paper misfeed, the curl cover is installed so that each paper is transported to the alignment section without fail.
- The curl cover is operated by the paper discharge control motor. Paper receiving opens/closes the feeding port inside the saddle unit entrance when the paper discharge control motor rotates in forward/reverse direction.



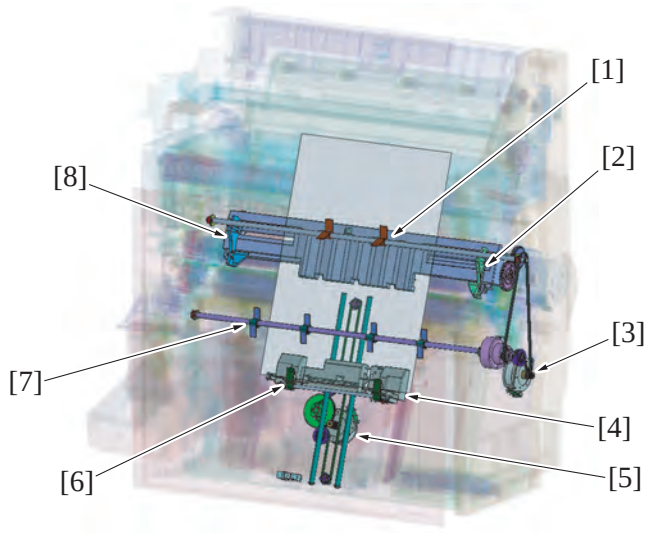
[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover



[1]	SD transport roll	[2]	Curl cover
[3]	Paper	[4]	SD transport roller
[5]	Paper transportation from within the finisher	[6]	Curl cover operation
[7]	Next paper standby (moves curl cover to the home position)	-	-

9.3 Alignment section

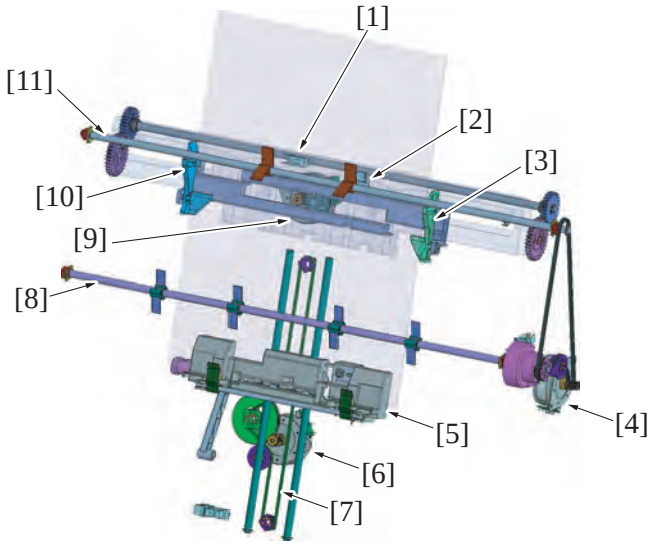
9.3.1 Drive



[1]	Center folding section upper paddle	[2]	Alignment plate/F
[3]	SD paddle motor (M7)	[4]	Stopper guide
[5]	Stopper drive motor (M4)	[6]	Paper grip
[7]	Center folding section lower paddle	[8]	Alignment plate/R

9.3.2 Alignment

- It aligns the paper transported to the alignment section.
- The paper CD alignment is conducted by the alignment plate/F and the alignment plate/R.
- The paper FD alignment is conducted by the stopper guide, center folding section upper paddle and center folding section lower paddle.



[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Alignment home sensor (PS4)
[3]	Alignment plate/F	[4]	SD paddle motor (M7)
[5]	Stopper guide	[6]	Stopper drive motor (M4)
[7]	Stopper guide drive belt	[8]	Center folding section lower paddle
[9]	Alignment motor (M3)	[10]	Alignment plate/R
[11]	Center folding section upper paddle	-	-

(1) Alignment plate operation

- Alignment plates follow the forward and reverse rotation of alignment motor.
- When the saddle exit sensor of the finisher detects the leading edge of the paper, the alignment motor starts rotating in the direction to close the alignment plate, and the alignment plate/F and the alignment plate/R stop at the position where it is slightly wider than the paper width.
- When the specified period of time has passed after the SD entrance sensor detects the trailing edge of the paper, the alignment motor rotates in forward/reverse direction to do oscillation of the alignment plate to align paper.
- The oscillation of the alignment plate is conducted each time a sheet of paper is transported, and the alignment plate is shifted to the standby position after the alignment operation is finished.

- The home position of the alignment plate is detected by the alignment home sensor.

(2) Stopper guide operation

- The stopper drive motor rotates in forward/reverse direction to operate the stopper guide drive belt, and moves the stopper guide up/down.
- The stopper guide moves up after the leading edge of the paper passes the main tray exit sensor.
- The stopper guide stops at a position where the length of paper that has been transported.
- The stopper guide stops the paper to align paper edges.

(3) Paddle operation

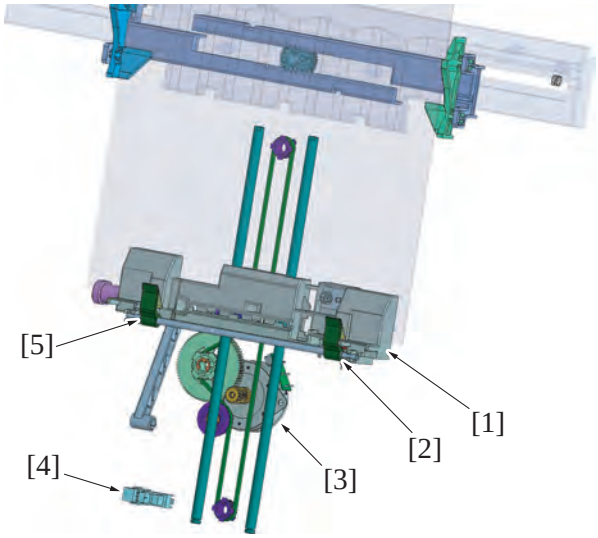
- The center folding section upper paddle and the center folding section lower paddle are installed in order to receive the transported paper to the alignment section without fail.
- The up/down paddle is driven by the SD paddle motor. The up/down paddle is driven when the specified period of time has passed after the leading edge of the paper passed the saddle exit sensor of the finisher.
- The up/down paddle stops after the paper trailing edge passes the finisher's main tray exit sensor and the paddle rotates for the specified number of times.

9.3.3 Stopper guide

- At the stopper guide, paper is aligned in the FD direction. Paper conveyed to the aligning section is conveyed to the specified position.
- The exit grip holds the paper when shifting it to the specified position and when stapling papers.
- The alignment section, staple position and other positions (center folding, center staple, tri-folding) have their own up/down stop positions. They are controlled by the pulse number of the stopper drive motor.

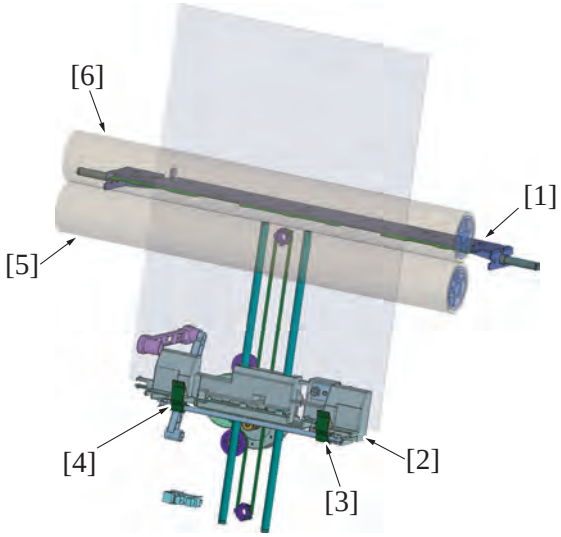
(1) Stopper operation

- The stopper drive motor moves the stopper guide up and down in accordance with the paper size.
- The stopper home sensor detects the home position of stopper guide.



[1]	Stopper guide	[2]	Exit grip/F
[3]	Stopper drive motor (M4)	[4]	Stopper home sensor (PS6)
[5]	Exit grip/R	-	-

(2) Stopper control



[1]	Center folding knife assy	[2]	Stopper guide
[3]	Exit grip/F	[4]	Exit grip/R
[5]	Center folding roller 2	[6]	Center folding roller 1

(a) Center folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the folding position.

(b) Center staple mode

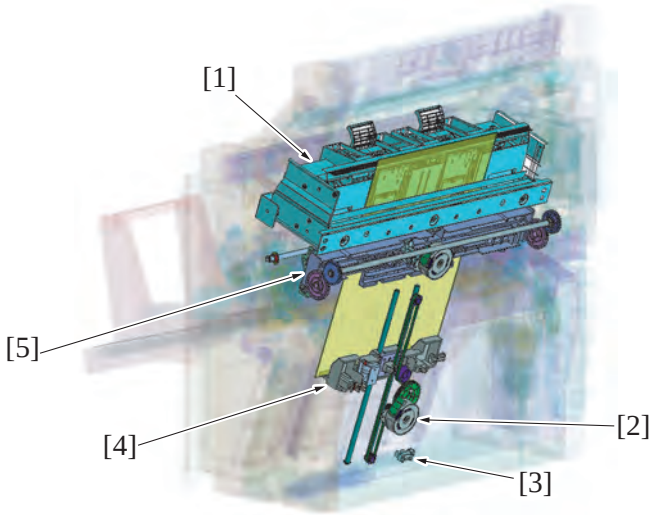
- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the center staple position.
- After a specified period of time since stapling operation was completed, the alignment motor opens the alignment plates and the stopper drive motor starts rotating to move the stopper guide further down and lower the paper to the folding position.

(c) Tri-folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the 1st folding position in the tri-folding.

9.4 Stapler

9.4.1 Drive



[1]	Stapler unit	[2]	Stopper drive motor (M4)

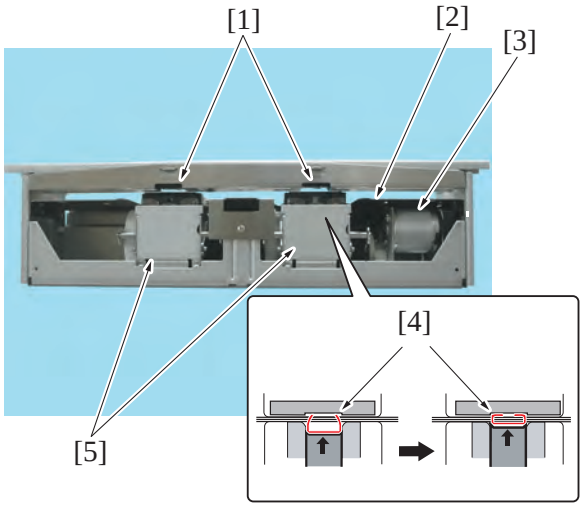
[3]	Stopper home sensor (PS6)	[4]	Stopper guide
[5]	Alignment tray	-	-

9.4.2 Operation

- The stapling operation is performed by the stapler motor.

(1) Stapling operation

- The stapling operation is performed by the staple motor in the stapler.
- The drive gear pushes out the pressed portion of the paper toward the clincher to hold the paper, and then the pin will be pushed out.
- When the pin penetrates the paper batch, the pin will be bent to staple the paper batch at the clincher section.



[1]	Clincher	[2]	Drive gear
[3]	Stapler motor	[4]	Staple
[5]	Stapler	-	-

(2) Staple control

(a) Staple

- After completing the alignment operation of the alignment plate, the staple motor performs the stapling operation.
- The stapling operation is completed when the stapler home position sensor (rear) detects the home position and turn ON.

(b) Clogged staple detection

- When the stapler home position sensor (rear) does not turn ON after the specified period of time after it turned OFF during stapling, it is determined that the staple motor has the trouble, and stops the stapler motor.

(c) Cartridge detection

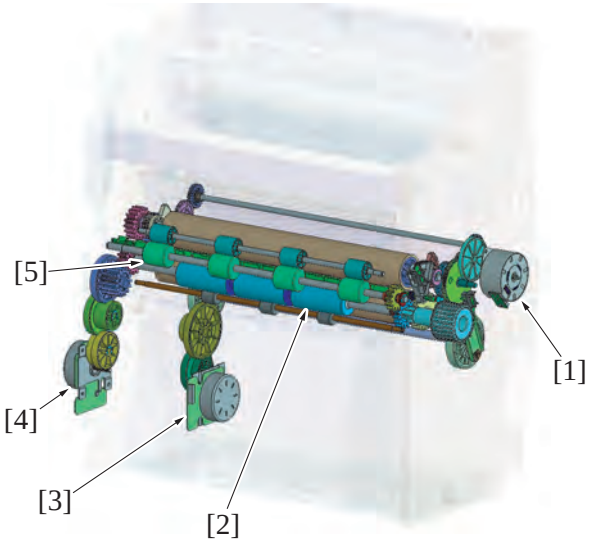
- The cartridge set switch detects the presence of a cartridge or the incorrect setting of a cartridge.
- When no cartridge is set or it is set incorrectly, the main body displays the error message on its display panel.

(d) Staple detection control

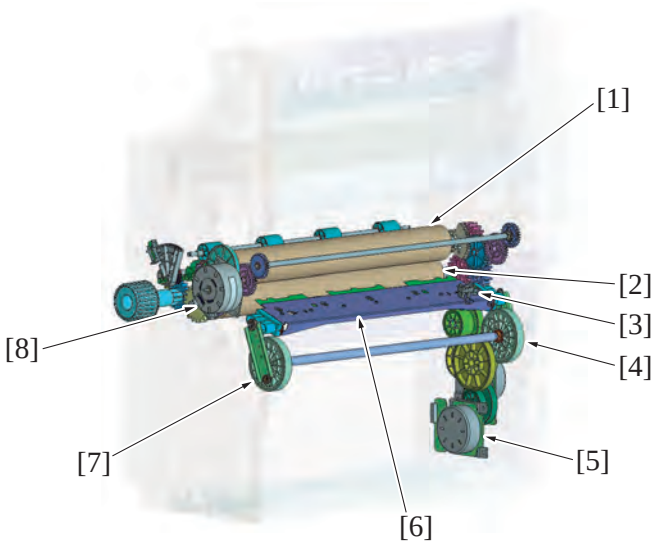
- When the staples run out, the staple empty switch turns ON and the main body displays the error message on its display panel.

9.5 Center folding/Center staple

9.5.1 Drive



[1]	Center fold guide motor (M6)	[2]	Tri-folding roller
[3]	Center fold knife motor (M9)	[4]	Center fold roller motor (M5)
[5]	Saddle tray exit roller	-	-



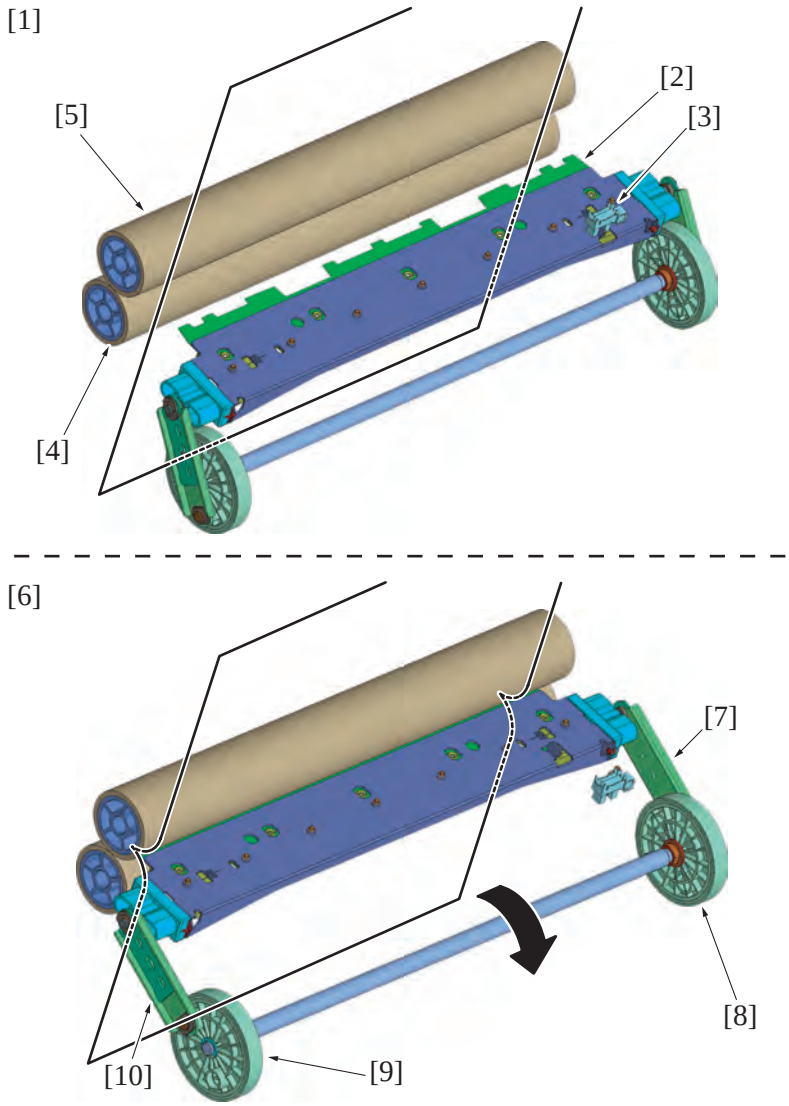
[1]	Center folding roller 1	[2]	Center folding roller 2
[3]	Center fold knife home sensor (PS8)	[4]	Fold drive gear/R
[5]	Center fold knife motor (M9)	[6]	Center folding knife assy
[7]	Fold drive gear/F	[8]	Center fold guide motor (M6)

9.5.2 Folding knife

- The center fold knife motor drives the folding knife.
- The folding knife is used in the center folding/center staple/tri-folding mode.
- In the tri-folding mode, it is used at the 1st folding.

(1) Folding knife operation

- The center fold knife motor rotates the crank shaft a half turn via the gear, and pushes the paper to the nip section with the folding knife.
- The folding rollers draw and fold the paper.
- The position of the stopper guide controls the folding position.



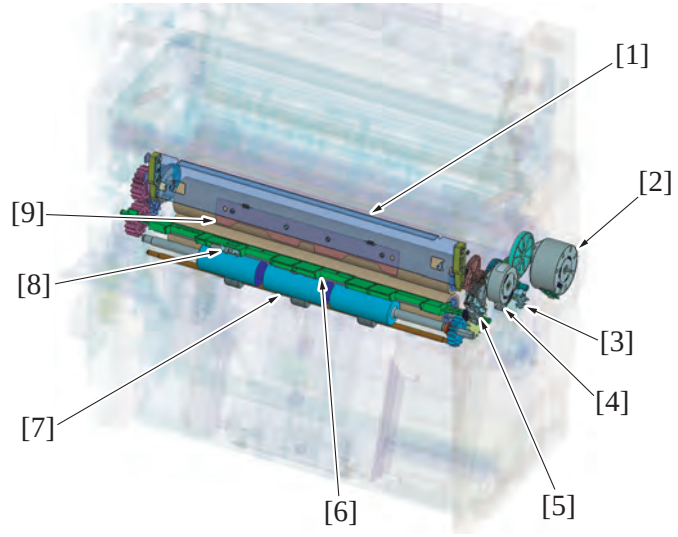
[1]	Before folding	[2]	Folding knife
[3]	Center fold knife home sensor (PS8)	[4]	Center folding roller 2
[5]	Center folding roller 1	[6]	Folding operation
[7]	Crank shaft/R	[8]	Fold knife assy drive gear/R
[9]	Fold knife assy drive gear/F	[10]	Crank shaft/F

(2) Folding knife control

- The center fold knife motor turns ON and sticks out the folding knife to the paper after a specified period of time since the stopper guide stops at the folding position.
- The center fold knife motor stops when the folding knife reciprocates after fold operation is completed and the center fold knife home sensor turns OFF.

9.6 Tri-folding

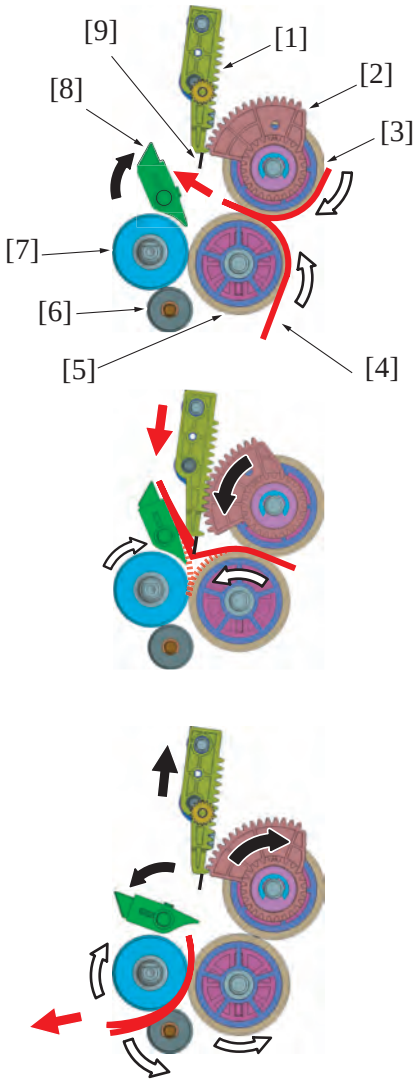
9.6.1 Drive



[1]	Tri-folding knife assy	[2]	Center fold roller motor (M6)
[3]	Guide home sensor (PS7)	[4]	Tri-folding guide motor (M8)
[5]	Tri-folding gate home sensor (PS11)	[6]	Tri-folding gate
[7]	Tri-folding roller	[8]	Fold exit sensor (PS12)
[9]	Tri-folding knife	-	-

9.6.2 Tri-folding operation

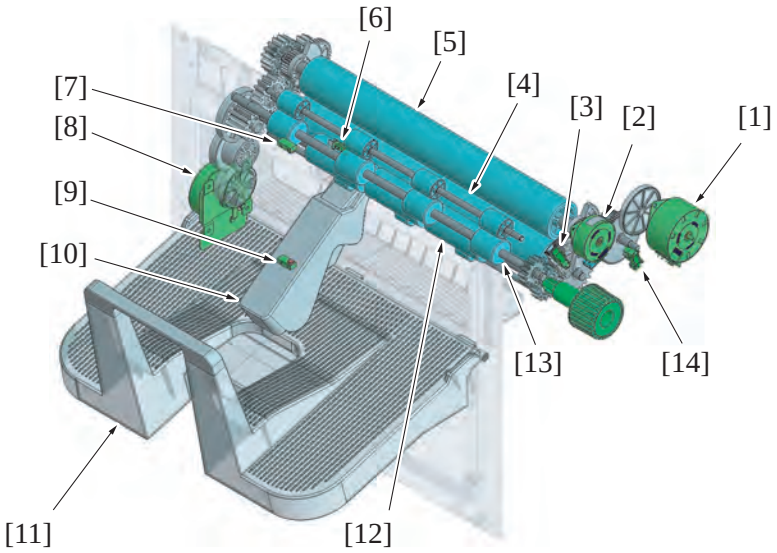
1. When the center fold guide motor drives, the tri-folding gate rotates. The leading edge of the paper to which the first fold was applied at the center folding section, will be transported to the tri-folding path.
2. When the tri-folding guide motor drives, the tri-folding knife assy drive gear rotates to move down the tri-folding knife assy. The paper to which the first fold is applied at the center folding section will be pushed out to the tri-folding roller.
3. The paper is pulled into the tri-folding roller to tri-fold the paper.
4. When tri-folding is finished, the tri-folding gate will return to the home position. The home position of the tri-folding gate is detected by the tri-folding gate home sensor.



[1]	Tri-folding knife assy	[2]	Tri-folding knife assy drive gear
[3]	Center folding roller 1	[4]	Paper
[5]	Center folding roller 2	[6]	Tri-folding roll
[7]	Tri-folding roller	[8]	Tri-folding gate
[9]	Tri-folding knife	-	-

9.7 Paper exit section

9.7.1 Drive



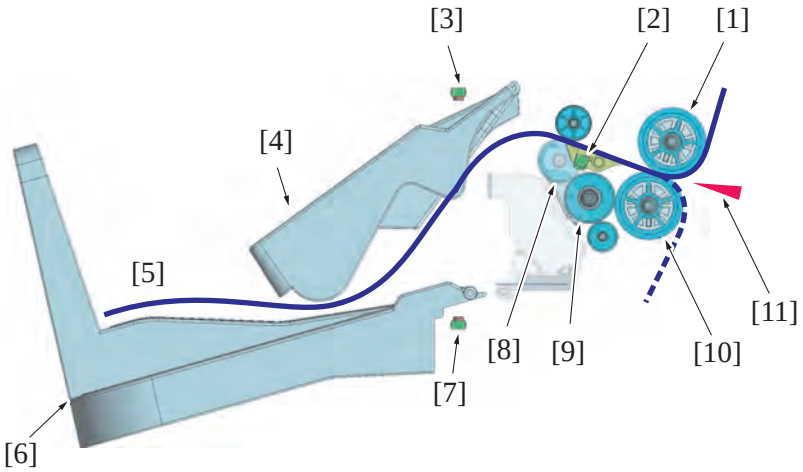
[1]	Center fold roller motor (M6)	[2]	Tri-folding guide motor (M8)
[3]	Tri-folding gate home sensor (PS11)	[4]	Center folding roller 2
[5]	Center folding roller 1	[6]	Fold exit sensor (PS12)
[7]	Booklet tray empty detection sensor/in (PS13)	[8]	Center fold roller motor (M5)
[9]	Booklet tray empty detection sensor/out (PS14)	[10]	Paper press
[11]	Saddle tray	[12]	Tri-folding roller
[13]	Saddle tray exit roller	[14]	Guide home sensor (PS7)

9.7.2 Paper exit

- Center folded, center stapled, or tri-folded paper is discharged to the saddle tray.
- The paper that is center folded and center stapled is sent though the upper route, and the tri-folded paper is sent through the lower route to be discharged.
- The paper is discharged by driving the saddle tray exit roller and the tri-fold roller. Both rollers are driven by the center fold roller motor.

(1) Paper exit for center folding / center staple

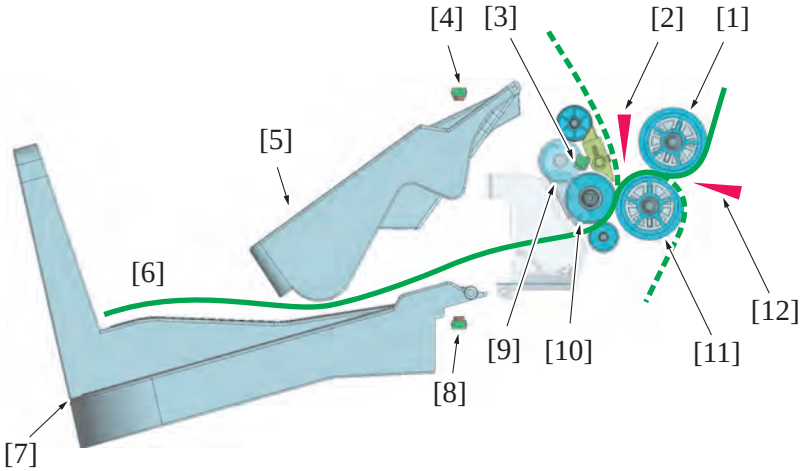
- The center fold roller motor is driven after the center folding or the center staple, and discharges the paper to the saddle tray by the paper exit roller.



[1]	Center folding roller 1	[2]	Fold exit sensor (PS12)
[3]	Booklet tray empty detection sensor/in (PS13)	[4]	Paper press
[5]	Paper transport route	[6]	Saddle tray
[7]	Booklet tray empty detection sensor/out (PS14)	[8]	Saddle tray section exit roller
[9]	Tri-folding roller	[10]	Center folding roller 2
[11]	Folding knife	-	-

(2) Paper exit for tri-folding

- Since the paper is tri-folded by the tri-folding roller, the paper is transported through the lower route.



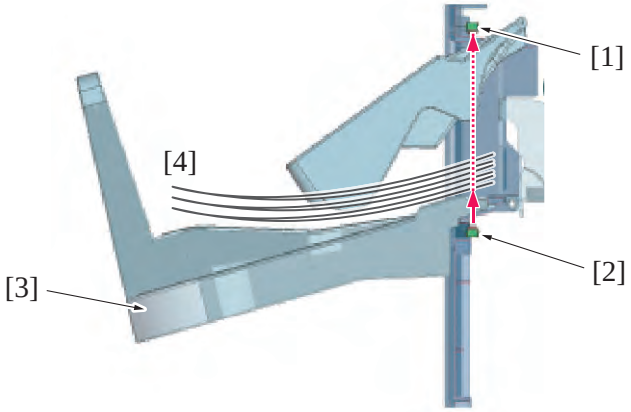
[1]	Center folding roller 1	[2]	Tri-folding knife
[3]	Fold exit sensor (PS12)	[4]	Booklet tray empty detection sensor/in (PS13)
[5]	Paper press	[6]	Paper transport route
[7]	Saddle tray	[8]	Booklet tray empty detection sensor/out (PS14)
[9]	Saddle tray section exit roller	[10]	Tri-folding roller

[11]	Center folding roller 2	[12]	Folding knife

9.7.3 Tray full detection mechanism

- When paper sheets are discharged to the saddle tray, the light from the saddle tray no paper detection sensor is blocked. When the stacked sheets are removed, the sensor light is unblocked.
- When a predetermined amount of paper is discharged into the saddle tray, the stacked paper blocks the saddle tray no paper detection sensor. The blocked state is determined as a detection of a full saddle tray.
  NOTE
  - **For a tri-fold job, if paper is present in the saddle tray when the job is started, the saddle tray full is detected. (A tray full detection is made even when only one group of sheets remains.)**

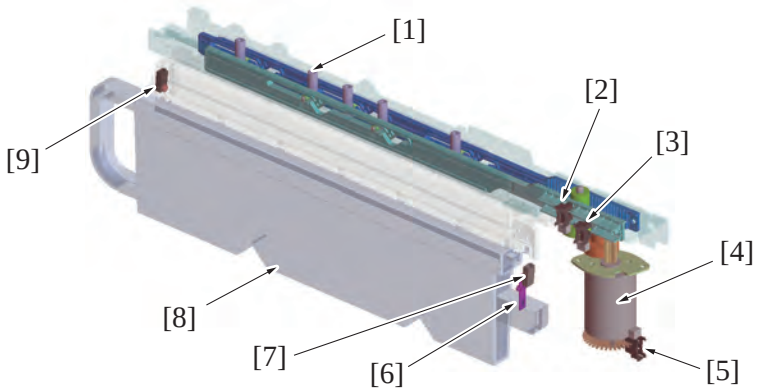
- When the saddle tray full is detected, the warning message appears on the control panel.
- In this state, any saddle unit related configurations and jobs that use the saddle unit cannot be performed.



[1]	Booklet tray empty detection sensor/in (PS13)	[2]	Booklet tray empty detection sensor/out (PS14)
[3]	Saddle tray	[4]	Paper

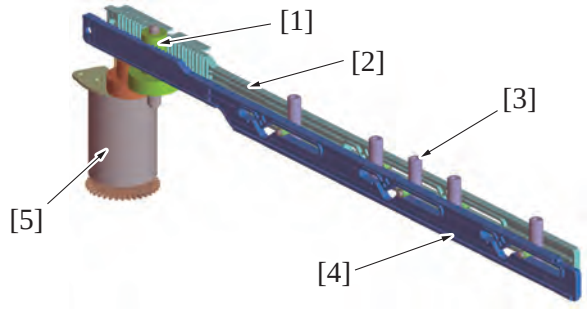
10. PK-520

10.1 Configuration



[1]	Puncher	[2]	Punch home sensor (PS1)
[3]	Punch position sensor (PS2)	[4]	Punch drive motor (M1)
[5]	Punch motor sensor (PS3)	[6]	Actuator
[7]	Punch dust full sensor/in (PS5)	[8]	Punch dust box
[9]	Punch dust full sensor/out (PS4)	-	-

10.2 Drive

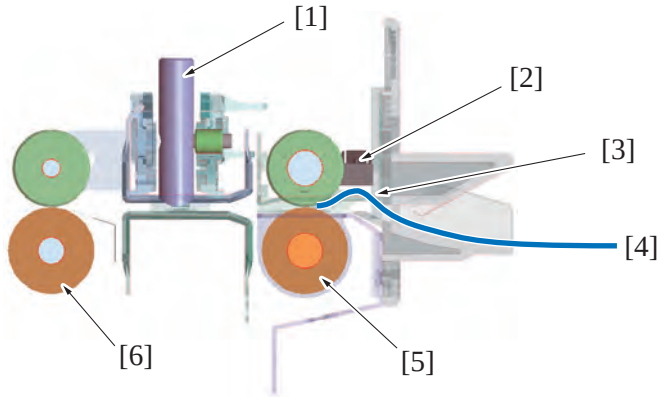


[1]	Puncher drive gear	[2]	Puncher frame 1
[3]	Puncher	[4]	Puncher frame 2
[5]	Punch drive motor (M1)	-	-

10.3 Operation

10.3.1 Skew correction control

- Skew in paper is corrected to reduce skew in punch holes when the punch operation is performed.
- A loop at the end of paper is created before the FNS entry roller during transporting paper, by which the paper skew is corrected.



[1]	Puncher	[2]	FNS entrance sensor (PS4) (finisher section)
[3]	Creating loop	[4]	Paper

[5]	FNS entry roller (finisher section)	[6]	Transport roller (finisher section)

(1) Skew correction process

1. The FNS entrance sensor detects that paper has reached the FNS entry roller.
2. The stopped FNS entry roller presses the paper, by which a loop is created at the end of paper.
3. Rotation of the FNS entry roller and transport roller starts when a predetermined amount of time elapses after the FNS entrance sensor detects paper. The paper that has been corrected for skew is then transported.
4. The holes are punched by the puncher.

(2) Punch Regist Loop Size Adjustment function

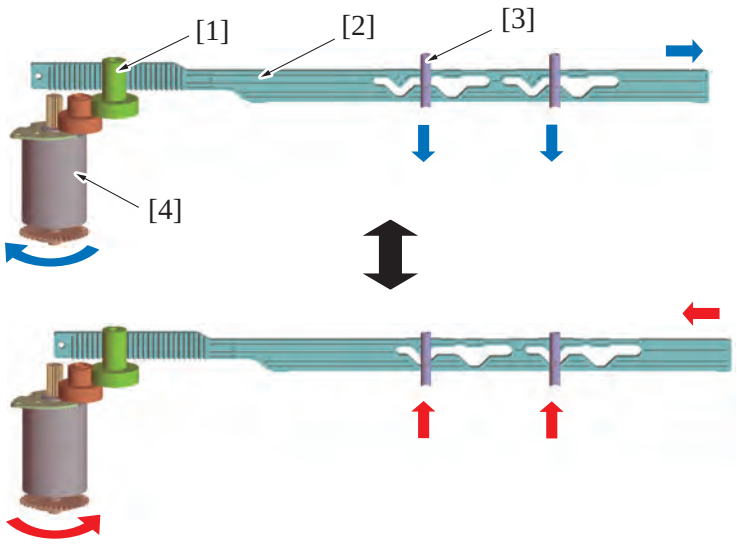
- Punch resists values that are accessed in Service Mode can be adjusted to adjust the punch holes if the punch holes are tilted.
- Punch resists values (resist loop value) are changed when the timing at which the FNS entry roller starts rotating is changed.

10.3.2 Punch control

- At the punch section, the holes are punched at the trailing edge of the paper transported from the horizontal transport section when the paper is fed into the finisher section. Punching is conducted paper by paper.
- The punch drive motor drives to move the puncher up and down, thus to make punch holes in the paper.
- Punch dust generated by punching is received in the punch dust box.
- The punch kits for 2/3 holes or 2/4 holes areas have the configuration to switch the number of punch holes.

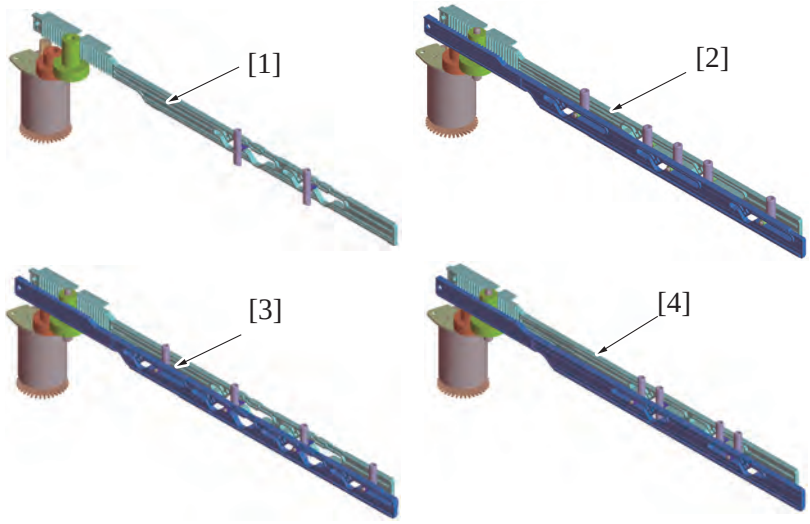
(1) Punching operation

- The paper is transported to the finisher section by the RU transport motor driving the RU section horizontal transport roller/3.
- The paper which skew is removed is transported to the punch section by the FNS entrance roller, and then stop the specified position.
- The drive source for the punch section is the punch drive motor.
- The puncher frame is driven in forward/reverse direction by rotating the punch drive motor in forward/reverse direction.
- When the puncher frame moves in forward or reverse, the puncher moves vertically in accordance with the shape of the puncher frame cam to punch the holes in paper.
- The transport roller in the finisher section transports the punched paper from the punch section to the finisher transport section.



[1]	Puncher drive gear	[2]	Puncher frame
[3]	Puncher	[4]	Punch drive motor (M1)

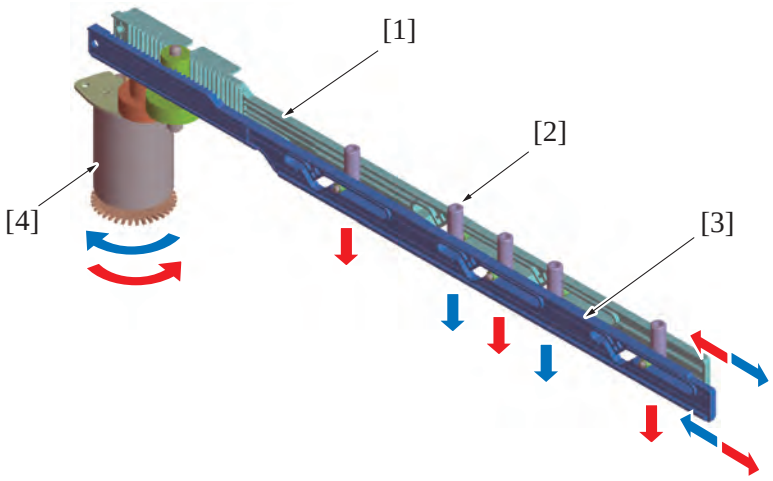
(2) Punch kit type



[1]	2 holes punch kit	[2]	2 holes/3 holes punch kit (Switchable the hole number)
[3]	2 holes/4 holes punch kit (Switchable the hole number)	[4]	4 holes punch kit

(3) Changing the number of punch holes

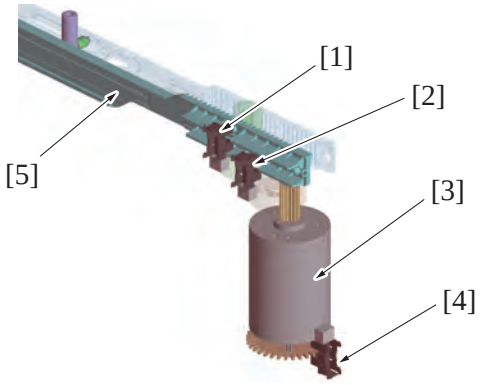
- Puncher frame 1 and the puncher frame 2 have cams with different shapes.
- When the puncher drive gear rotates clockwise, the puncher frame 1 shifts to the front side, and the puncher frame 2 shifts to the back side.
- When the puncher drive gear rotates counter-clockwise, the puncher frame 1 shifts to the back side, and the puncher frame 2 shifts to the front side.
- The puncher connected to the puncher frame then moves up/down with the cam.
- Switching the forward and reverse direction of the punch drive motor switches the number of punch holes.



[1]	Puncher frame 1	[2]	Puncher
[3]	Puncher frame 2	[4]	Punch drive motor (M1)

10.3.3 Puncher up/down status detection configuration

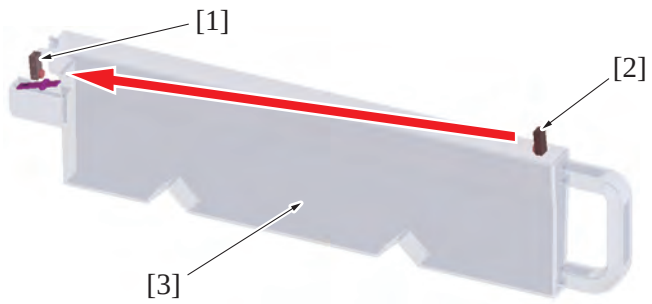
- The puncher frame 1 has two light-blocking plates to detect the position of the puncher frame.
- The punch drive motor has a round light-blocking plate and the puncher motor sensor on the same shaft to detect the rotation value (pulse) of the punch drive motor.
- The up/down status of the puncher is detected by the coordination input from the puncher position sensor, punch home sensor, and the punch motor sensor.



[1]	Punch home sensor (PS1)	[2]	Punch position sensor (PS2)
[3]	Punch drive motor (M1)	[4]	Punch motor sensor (PS3)
[5]	Puncher frame 1	-	-

10.3.4 Punch dust box full detection mechanism

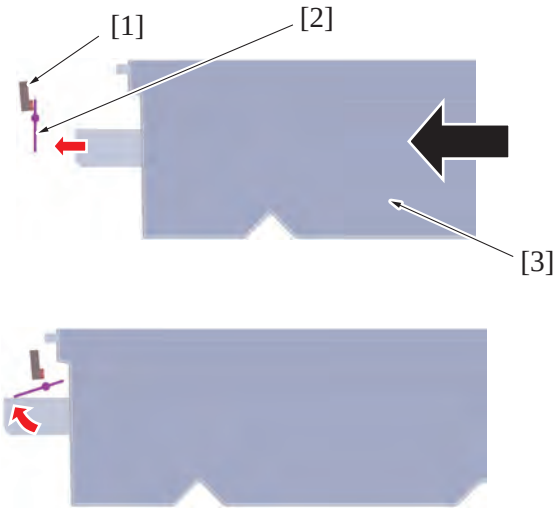
- The punch unit has the sensor to detect the punch dust full at the front side (emission) and the back side (receiving). The sensor detects the status of the punch dust.
- A state that the punch dust box is full is determined when enough punch dust accumulates in the punch dust box to block the sensor light.
- A message is displayed on the control panel to indicate a "punch dust full" condition when a punch dust box full is detected.



[1]	Punch dust full sensor/in (PS5)	[2]	Punch dust full sensor/out (PS4)
[3]	Punch dust box	-	-

10.3.5 Punch dust box installation detection mechanism

- The actuator blocks the sensor light on the punch dust full sensor/in side when the punch dust box is not installed.
- The "Punch dust box full" warning appears on the control panel when the punch function is configured while the punch dust box is not installed.
- With the punch dust box being installed, the actuator is pressed and moved to a position where the sensor light is not blocked.
- This operation is used to determine the installation state of the punch dust box.



[1]	Punch dust full sensor/in (PS5)	[2]	Actuator

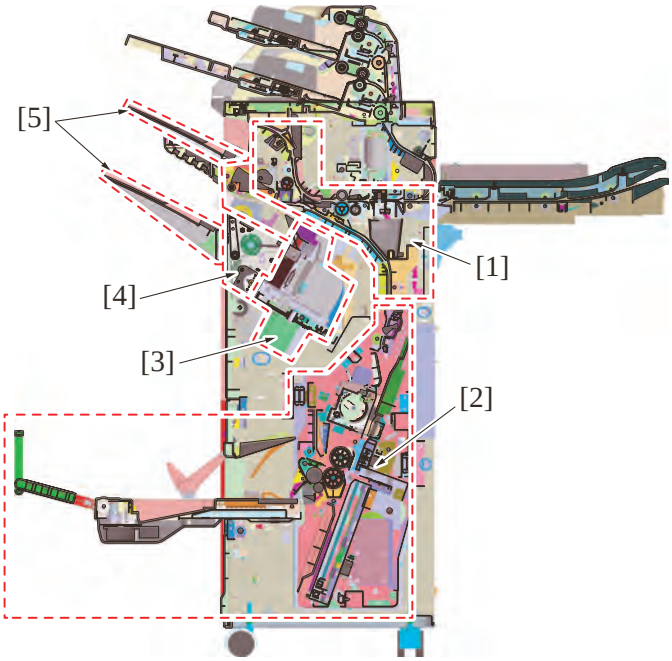
[3]	Punch dust box	-	-

PE THEORY OF OPERATION FS-537/FS-537SD/PK-523/JS-602/PI-507/ZU-609

1. CONFIGURATION

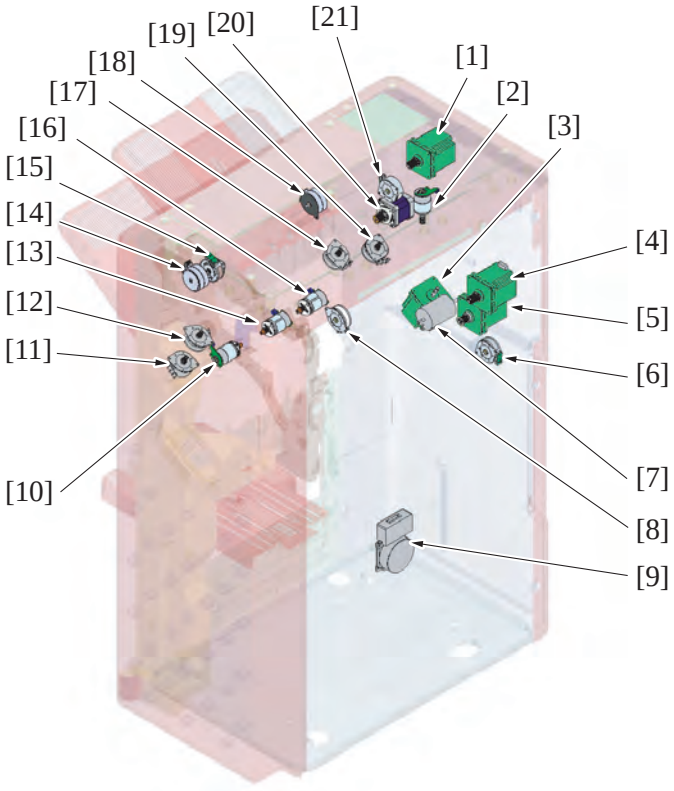
1.1 Section configuration

- For the FS-537 model, the horizontal transport section, transport section, alignment section, output tray (main tray/sub tray), and stapler section are all integrated.
- The FS-537SD is the model of a finisher that the saddle section is added to FS-537.



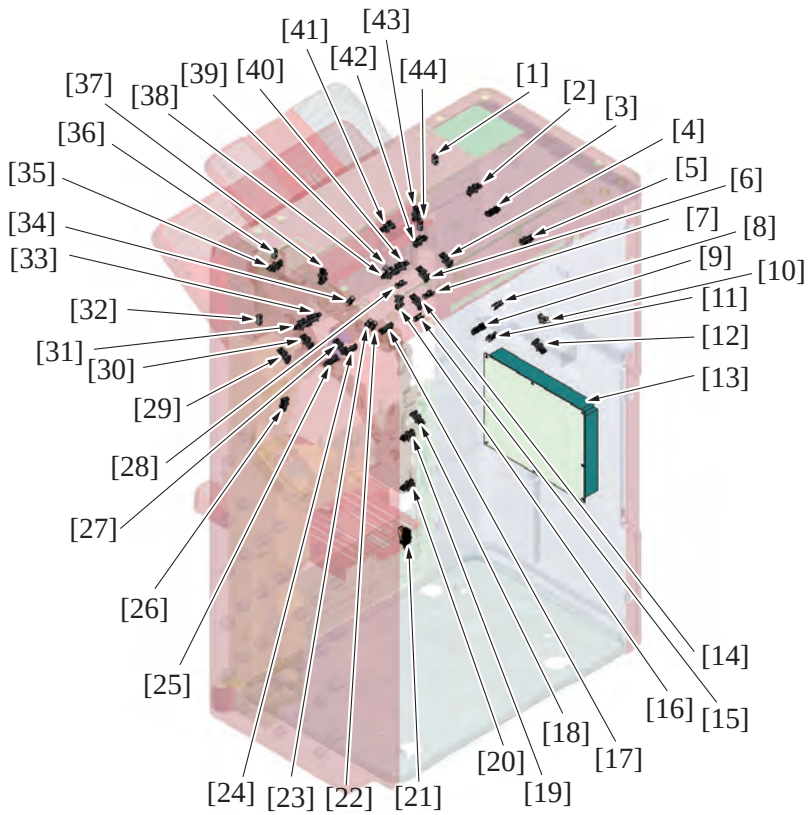
[1]	Transport section	[2]	Saddle section
[3]	Stapler section	[4]	Alignment section
[5]	Exit tray	-	-

1.2 Main parts configuration



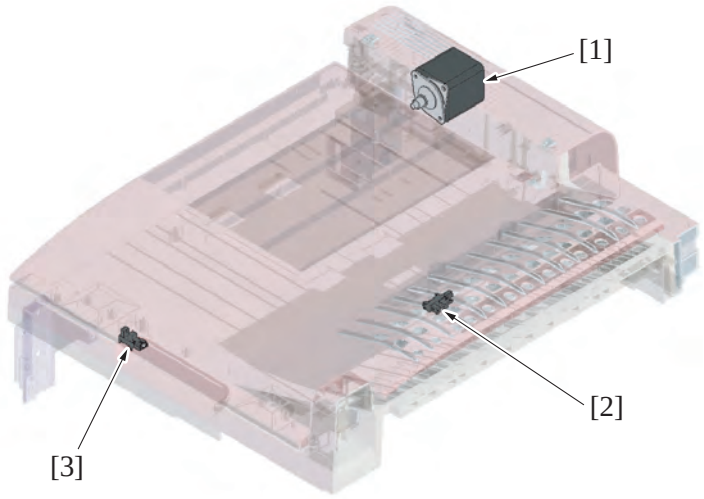
[1]	Sub tray discharge motor (M18)	[2]	Route change gate motor (M4)
[3]	Stapler movement motor (M19)	[4]	FNS entry transport motor (M20)
[5]	ZU discharge motor (M21)	[6]	SD discharge motor (M16)

[7]	Stapler motor (M5)	[8]	Paper receiving control motor (M15)
[9]	Main tray up/down motor (M6)	[10]	Bundle eject motor (M1)
[11]	Alignment motor/front (M14)	[12]	Trail edge stopper motor/F (M12)
[13]	Stacker plate drive motor (M3)	[14]	Arm drive motor (M8)
[15]	FNS paddle motor (M9)	[16]	Pre-eject drive motor (M2)
[17]	Trail edge stopper motor/R (M11)	[18]	Paddle up/down motor (M7)
[19]	Alignment motor/rear (M13)	[20]	FNS discharge motor (M17)
[21]	Receiving roller retraction motor (M10)	-	-



[1]	Sub tray full detection sensor/out (PS39)	[2]	Sub tray/JS route change gate home sensor (PS23)
[3]	Receiving roller retraction sensor (PS22)	[4]	Alignment plate/R home sensor (PS6)
[5]	Route change gate home sensor (PS21)	[6]	Alignment plate/R position sensor (center) (PS5)
[7]	FNS middle sensor (PS36)	[8]	PI discharge sensor (PS33)
[9]	Stapler home position sensor (corner) (PS18)	[10]	Punch scraps box set sensor (PS28)
[11]	FNS entrance sensor (PS34)	[12]	Stapler home position sensor (rear) (PS19)
[13]	FS control board (FSCB)	[14]	Trail edge stopper sensor/R (PS7)
[15]	SD discharge sensor (PS35)	[16]	Gripper home position sensor (PS3)
[17]	Pre-eject encoder sensor (PS2)	[18]	Stapler position sensor (center) (PS20)
[19]	Main tray full detection sensor (FS-537SD) (PS12)	[20]	Main tray full detection sensor (FS-537) (PS12)
[21]	Front door open (SW1)	[22]	Trail edge stopper home sensor (PS31)
[23]	Stacker plate home sensor (PS30)	[24]	Stacker plate encoder sensor (PS4)
[25]	Gripper motor sensor (PS1)	[26]	Paper delivery control sensor (PS11)
[27]	Trail edge stopper sensor/F (PS10)	[28]	Main tray exit sensor (PS37)
[29]	Alignment plate/F home sensor (PS9)	[30]	Alignment plate/F position sensor (center) (PS8)
[31]	Main tray lift up detection sensor/F (PS16)	[32]	Main tray upper sensor/out (PS38) *1
[33]	Main tray lift down detection sensor/F (PS14)	[34]	Stacker plate position sensor (PS29)
[35]	Arm home position sensor (PS26)	[36]	Sub tray full detection sensor/in (PS41)
[37]	Paddle home sensor (PS25)	[38]	Alignment plate paper detection sensor (PS32)
[39]	Main tray lift down detection sensor /R (PS15)	[40]	Main tray lift up detection sensor /R (PS17)
[41]	Sub tray exit sensor (PS24)	[42]	Main tray paper detection sensor (PS13)
[43]	Paddle up/down home sensor (PS27)	[44]	Main tray upper sensor (PS40) *1

- *1: Not used

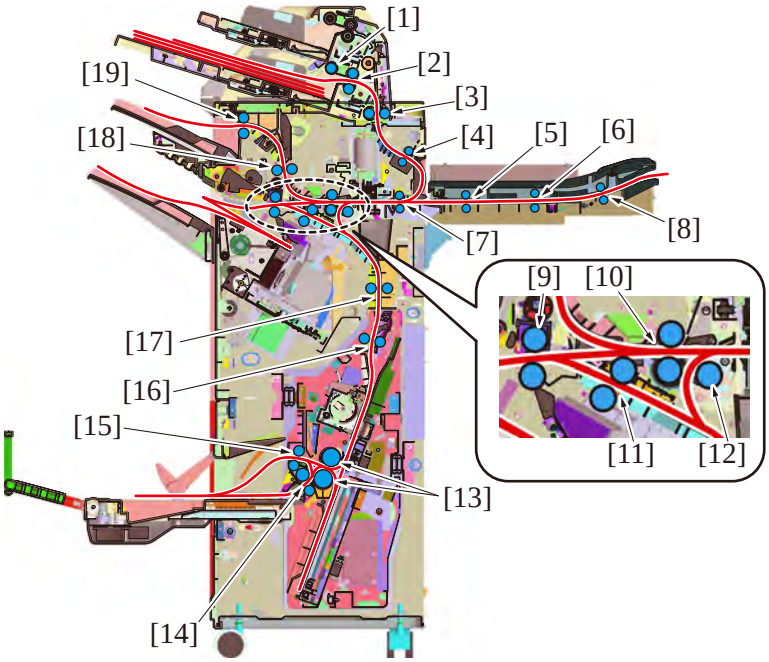


[1]	RU transport motor (M35)	[2]	RU transport sensor (PS60)
[3]	RU door open/close sensor (PS61)	-	-

2. PAPER PATH

2.1 Paper path (FS-537SD/PK-523/ZU-609/PI-507)

FS-537SD/PK-523/ZU-609/PI-507 is installed

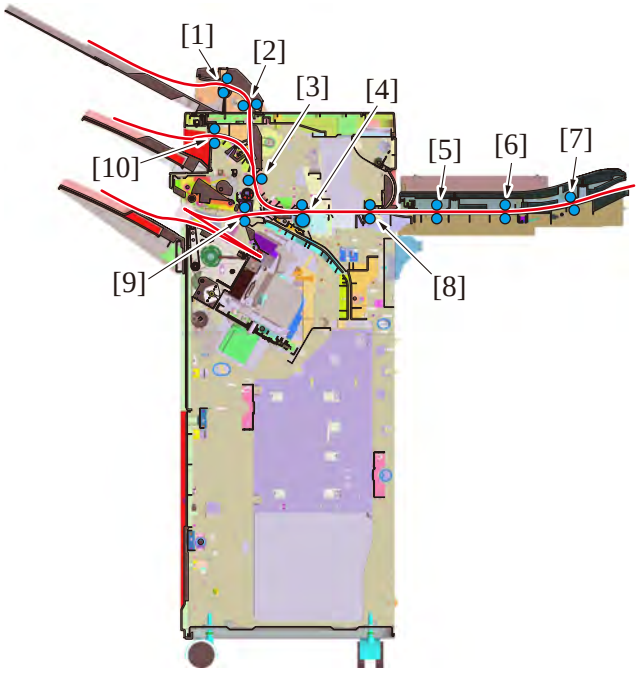


[1]	Pick-up roller/Lw (post inserter) *	[2]	Paper feed roller/Lw, separation roller/Lw (post inserter) *
[3]	Transport roller, transport roll (post inserter) *	[4]	PI transport roller, PI transport roll
[5]	RU transport roller 3, transport roll 3 (relay unit) *	[6]	RU transport roller 2, transport roll 2 (relay unit) *
[7]	FNS entry roller, roll	[8]	RU transport roller 1, transport roll 1 (relay unit) *
[9]	Receiving roller, Receiving roll	[10]	Transport roller 1/transport roller 2
[11]	Saddle section exit roller 1, roll	[12]	Z-fold roller (Z folding unit)
[13]	Center folding roller	[14]	Tri-folding roller, roll
[15]	Saddle tray exit roller, roll	[16]	Saddle section paper feed roller, roll
[17]	Saddle section exit roller 2, roll	[18]	Sub tray transport roller, roll
[19]	Sub tray exit roller, roll	-	-

- * : Option

2.2 Paper path (FS-537/JS-602)

FS-537/JS-602 is installed



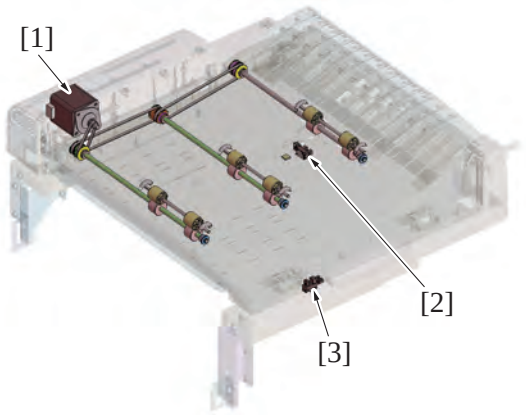
[1]	Job separator exit roller, roll (job separator) *	[2]	Job separator transport roller, roll (job separator) *

[3]	Sub tray transport roller, roll	[4]	Transport roller 1/transport roller 2
[5]	RU transport roller 3, transport roll 3 (relay unit) *	[6]	RU transport roller 2, transport roll 2 (relay unit) *
[7]	RU transport roller 1, transport roll 1 (relay unit) *	[8]	FNS entry roller, roll
[9]	Receiving roller, Receiving roll	[10]	Sub tray exit roller, roll

- * : Option

3. RU-515

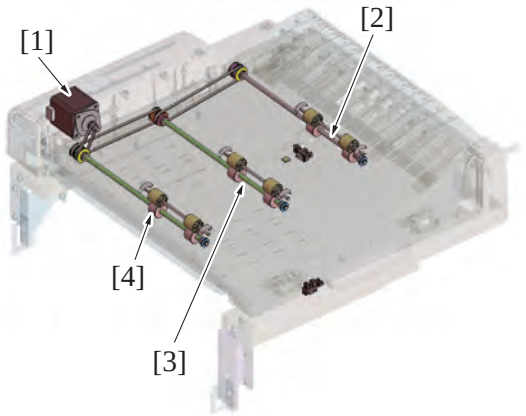
3.1 Configuration



[1]	RU transport motor (M35)	[2]	RU transport sensor (PS60)
[3]	RU door open/close sensor (PS61)	-	-

3.2 Drive

- The RU transport motor drives the drive of the RU transport roller 1, 2, 3.

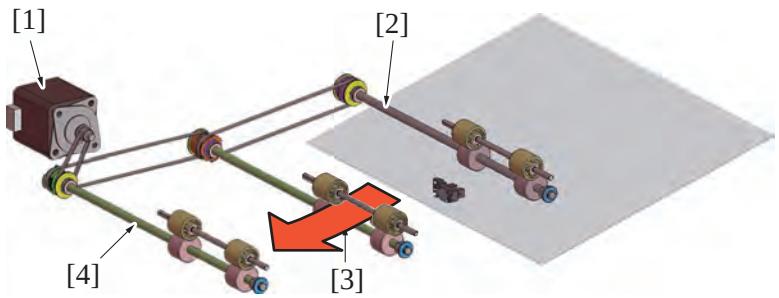


[1]	RU transport motor (M35)	[2]	RU transport roller 1
[3]	RU transport roller 2	[4]	RU transport roller 3

3.3 Operation

3.3.1 Paper horizontal transport operation

- The horizontal transport section transfers paper fed out from the main body to the finisher.
- The RU transport motor provides drive for the RU transport rollers.
- On the finisher side, drive from the RU transport motor transfers the paper into the finisher.

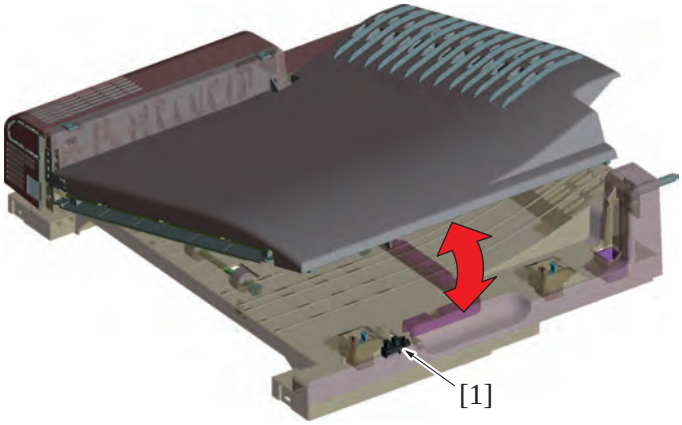


[1]	RU transport motor (M35)	[2]	RU transport roller 1
[3]	RU transport roller 2	[4]	RU transport roller 3

3.3.2 Door open/close detection mechanism

- The RU door open/close sensor installed at the front left of the relay unit section, detects open/close of the relay unit door.

- Open the door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



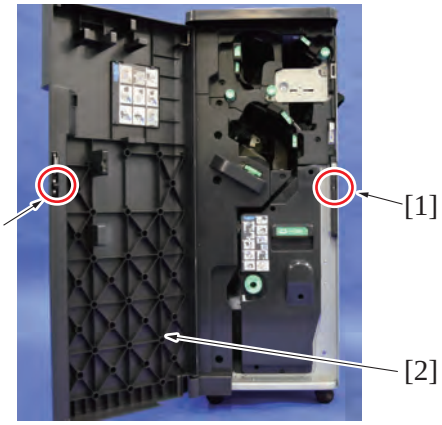
[1]	RU door open/close sensor (PS61)	-	-

4. FINISHER SECTION

4.1 Door open/close detection mechanism

4.1.1 Front door open/close detection mechanism

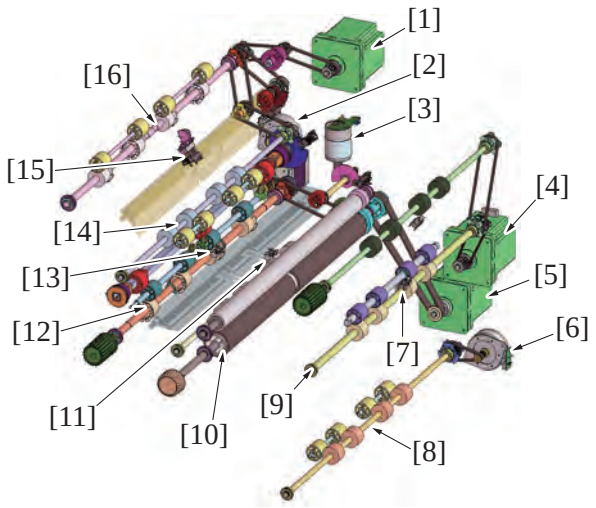
- The front door open detect switch installed at the front right of the FNS section detects open/close of the finisher's front door.
- Open the front door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes a paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Front door open detect switch (SW1)	[2]	Front door
[3]	Front door open/close detection lever	-	-

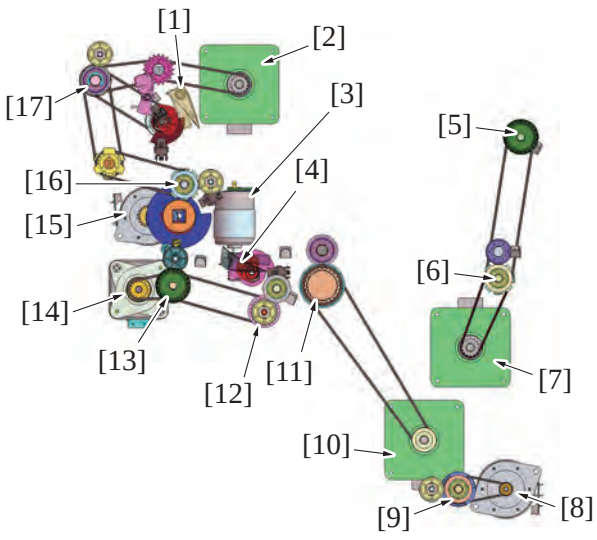
5. TRANSPORT SECTION

5.1 Configuration



[1]	Sub tray discharge motor (M18)	[2]	Receiving roller retraction motor (M10)
[3]	Route change gate motor (M4)	[4]	FNS entry transport motor (M20)
[5]	ZU discharge motor (M21)	[6]	SD discharge motor (M16)
[7]	FNS entrance sensor (PS34)	[8]	Saddle section exit roller 2
[9]	FNS entrance roller	[10]	Transport roller 2
[11]	FNS middle sensor (PS36)	[12]	Receiving roller
[13]	Main tray exit sensor (PS37)	[14]	Saddle section exit roller 1
[15]	Sub tray exit sensor (PS24)	[16]	Sub tray exit roller

5.2 Drive

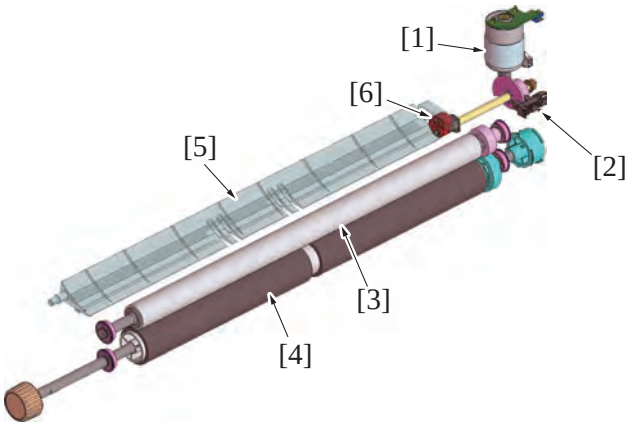


[1]	Sub tray/JS route change gate	[2]	Sub tray discharge motor (M18)
[3]	Route change gate motor (M4)	[4]	Route change gate
[5]	PI transport roller	[6]	FNS entrance roller
[7]	FNS entry transport motor (M20)	[8]	SD discharge motor (M16)
[9]	Saddle section exit roller 2	[10]	ZU discharge motor (M21)
[11]	Transport roller 2	[12]	Saddle section exit roller 1
[13]	Receiving roller	[14]	FNS discharge motor (M17)
[15]	Receiving roller retraction motor (M10)	[16]	Sub tray transport roller
[17]	Sub tray exit roller	-	-

5.3 Operation

5.3.1 Route change gate

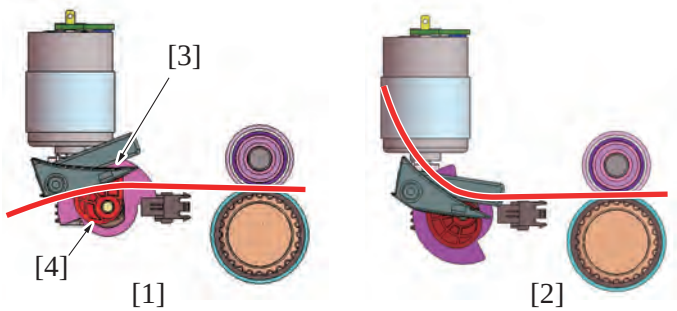
- The route change gate switches the paper transport path between the main tray and the sub tray.
- The route change gate motor drives to move the route change gate vertically to switch between the paper paths.
- The route change gate home sensor detects the vertical position of the route change gate.



[1]	Route change gate motor (M4)	[2]	Route change gate home sensor (PS21)
[3]	Transport roller 1	[4]	Transport roller 2
[5]	Route change gate	[6]	Cam

(1) Route change gate operation

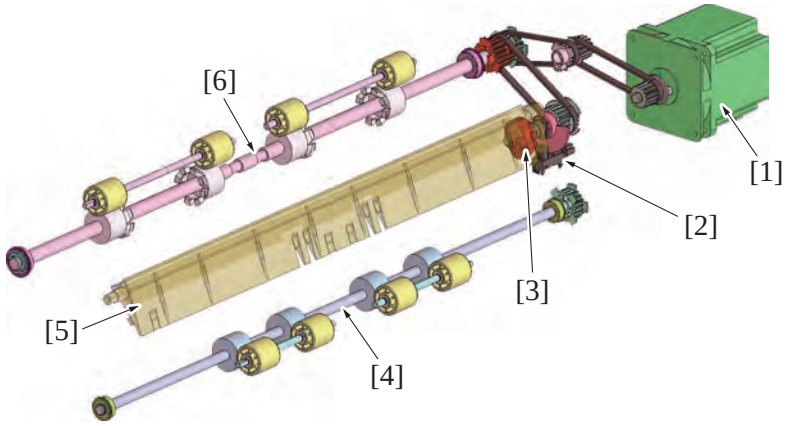
- The cam rotates when the route change gate motor is driving.
- Rotation of the cam moves the route change gate vertically to switch the paper path between the main tray and sub tray.



[1]	Main tray output	[2]	Sub tray output
[3]	Route change gate	[4]	Cam

5.3.2 Sub tray/JS route change gate

- The sub tray/JS route change gate switches the path for transporting paper to either the sub tray or the optional job separator (JS-602).
- The sub tray discharge motor drives to move the sub tray/JS route change gate horizontally to switch between the paper paths.
- The sub tray/JS route change gate home sensor detects the horizontal position of the sub tray/JS route change gate.

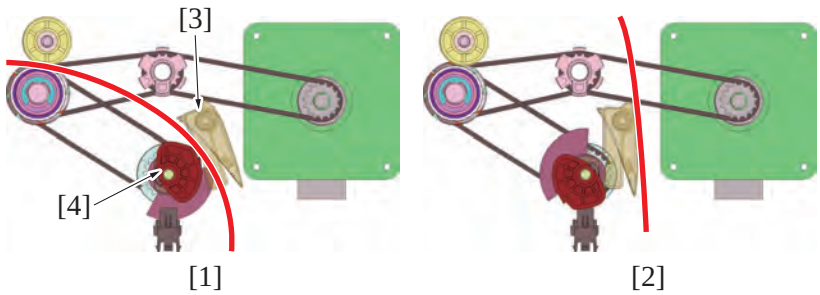


[1]	Sub tray discharge motor (M18)	[2]	Sub tray/JS route change gate home sensor (PS23)
[3]	Cam	[4]	Sub tray transport roller

[5]	Sub tray/JS route change gate	[6]	Sub tray section exit roller

(1) Sub tray/JS route change gate operation

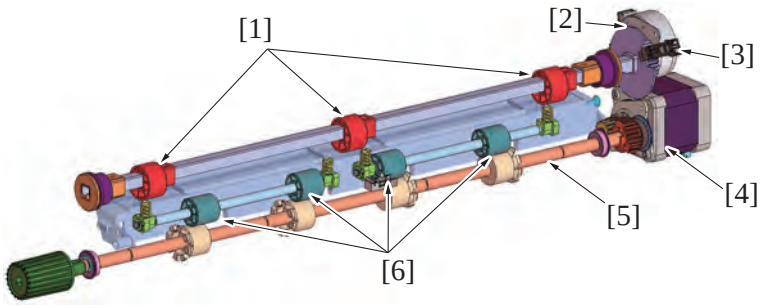
- The cam rotates when the sub tray discharge motor is driving.
- The cam rotates to move the sub tray/JS route change gate horizontally to switch the paper paths between the sub tray and the job separator.
- The sub tray discharge motor drives the sub tray section exit roller. The forward and reverse rotation of the sub tray discharge motor switches between discharging to the sub tray and driving the sub tray/JS route changing gate.



[1]	Sub tray output	[2]	Job separator output
[3]	Sub tray/JS route change gate	[4]	Cam

5.3.3 Receiving roller section up/down function

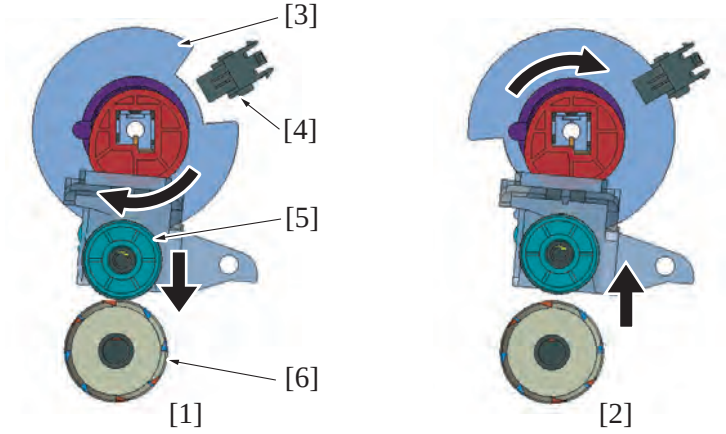
- The up/down movement of the receiving cam switches the timing of transporting the paper to the alignment section.
- The up/down operations of the receiving cam are driven by the receiving roller retraction motor.
- The position of the receiving cam is detected by the receiving roller retraction sensor.
- The cam rotates to raise or lower the receiving roll to pressure and release the receiving roller.



[1]	Receiving com	[2]	Receiving roller retraction motor (M10)
[3]	Receiving roller retraction sensor (PS22)	[4]	FNS discharge motor (M17)
[5]	Receiving roller	[6]	Receiving roll

(1) Receiving roller pressure and release

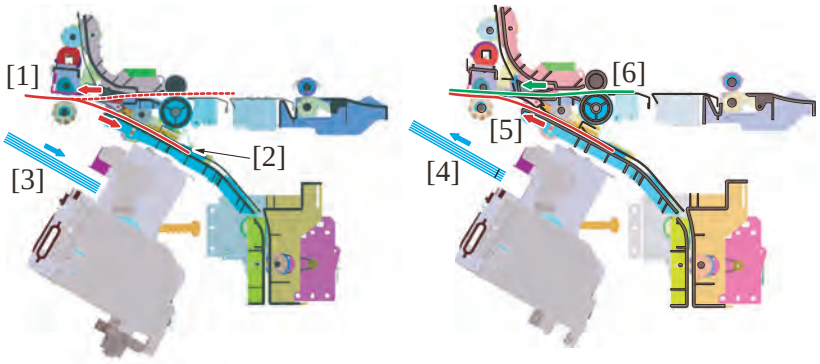
- When the receiving roll is pressed against the receiving roller, paper is transported to the alignment section by the receiving roller.
- When the receiving roll is released from the receiving roller, paper is in a standby state along the transport path.
- The detection board that is installed on the same shaft as the cam rotates, which changes the state of the receiving roller retraction sensor. Thus, the position of the receiving roll can be determined.
- The receiving roll is determined to be pressing against the receiving roller when the receiving roller retraction sensor is unblocked. The receiving roll is determined to be in the release state when the sensor is blocked.



[1]	Receiving roller pressure	[2]	Receiving roller release
[3]	Cam (detection plate)	[4]	Receiving roller retraction sensor (PS22)
[5]	Receiving roll	[6]	Receiving roller

5.3.4 Buffer control

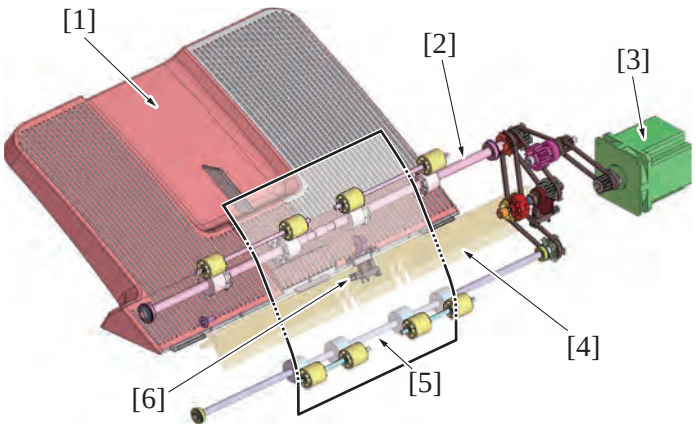
- The receiving roller section up/down mechanism is provided to achieve high productivity, by eliminating the time loss for the next sheet of paper during the offset and staple operations.
- This allows handling a print job without reducing the paper transport speed even under the condition where the preceding sets of sheets are being aligned and stapled.
- The first sheet of paper that is transported during the paper sheets alignment is switched back toward the saddle exit direction temporarily.
- After paper sheets are aligned and discharged, the first sheet of paper is transported together with the arrived second sheet to the alignment section.



[1]	First sheet	[2]	First sheet (switchback)
[3]	Sheets (transported to the alignment section)	[4]	Aligned paper sheets
[5]	First sheet	[6]	Second sheet

5.3.5 Sub tray output

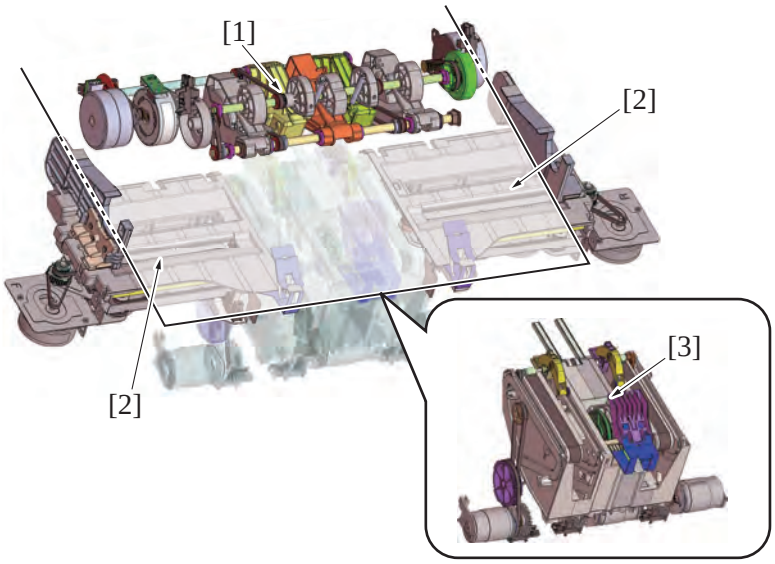
- The sub tray by the sub tray section exit roller and sub tray transport roller drive to discharge paper that is transported with the sub tray/JS route changing gate to the sub tray.
- The sub tray discharge motor drives the sub tray section roller and sub tray transport roller.



[1]	Sub tray	[2]	Sub tray exit roller
[3]	Sub tray discharge motor (M18)	[4]	Sub tray/JS route change gate
[5]	Sub tray transport roller	[6]	Sub tray exit sensor (PS24)

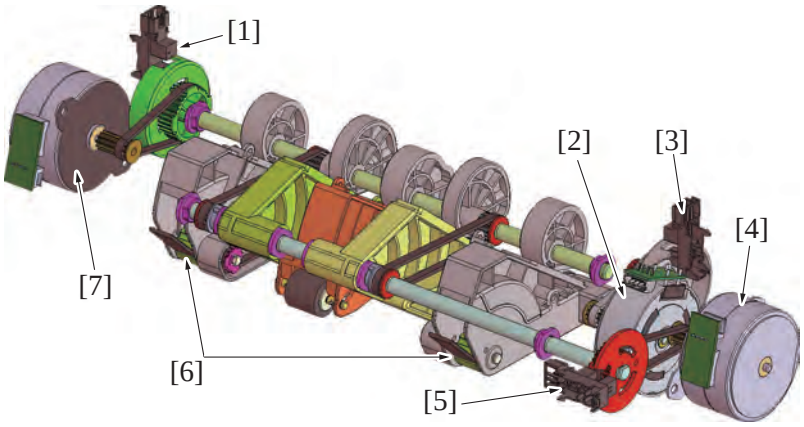
6. ALIGNMENT SECTION

6.1 Configuration



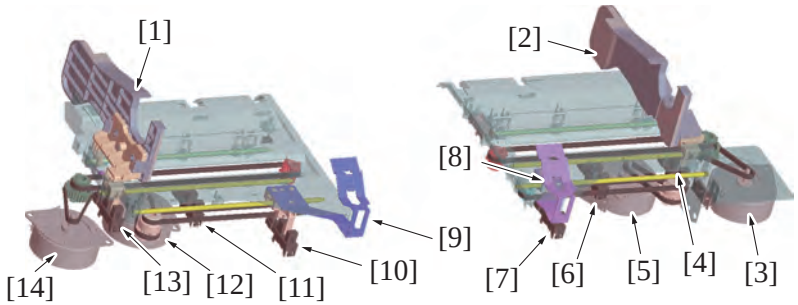
[1]	Upper paddle section	[2]	Alignment plate
[3]	Exit section	-	-

6.1.1 Upper paddle section



[1]	Paddle up/down home sensor (PS27)	[2]	FNS paddle motor (M9)
[3]	Paddle home sensor (PS25)	[4]	Arm drive motor (M8)
[5]	Arm home position sensor (PS26)	[6]	Upper paddle
[7]	Paddle up/down motor (M7)	-	-

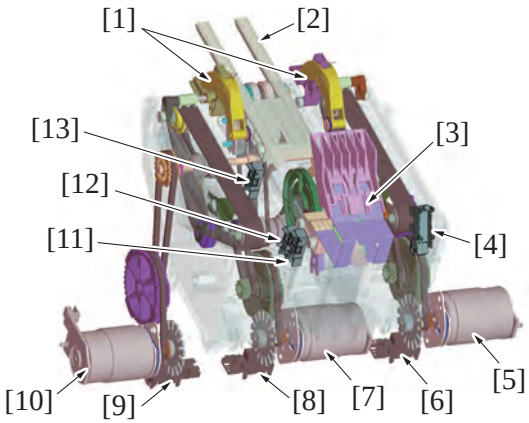
6.1.2 Alignment plate



[1]	Alignment plate/F	[2]	Alignment plate/R
[3]	Alignment motor/rear (M13)	[4]	Alignment plate/R home sensor (PS6)
[5]	Trail edge stopper motor/R (M11)	[6]	Alignment plate/R position sensor (center) (PS5)
[7]	Trail edge stopper sensor/R (PS7)	[8]	Trailing edge stopper /R
[9]	Trailing edge stopper /F	[10]	Trail edge stopper sensor/F (PS10)

[11]	Alignment plate/F position sensor (center) (PS8)	[12]	Trail edge stopper motor/F (M12)
[13]	Alignment plate/F home sensor (PS9)	[14]	Alignment motor/front (M14)

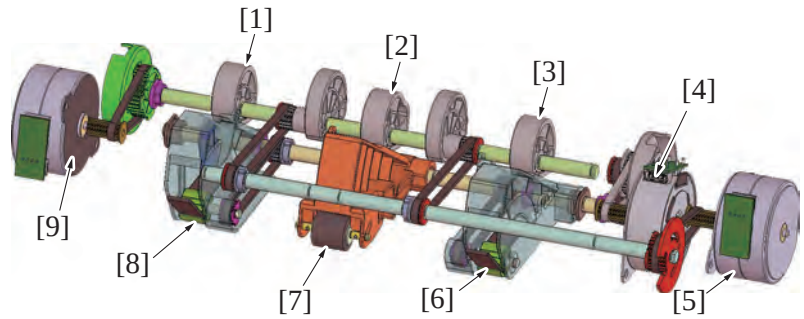
6.1.3 Exit section



[1]	Gripper	[2]	Stack support plate
[3]	Trailing edge stopper/C	[4]	Gripper home position sensor (PS3)
[5]	Pre-eject drive motor (M2)	[6]	Pre-eject encoder sensor (PS2)
[7]	Stacker plate drive motor (M3)	[8]	Stacker plate encoder sensor (PS4)
[9]	Gripper motor sensor (PS1)	[10]	Bundle eject motor (M1)
[11]	Trail edge stopper home sensor (PS31)	[12]	Stacker plate home sensor (PS30)
[13]	Stacker plate position sensor (PS29)	-	-

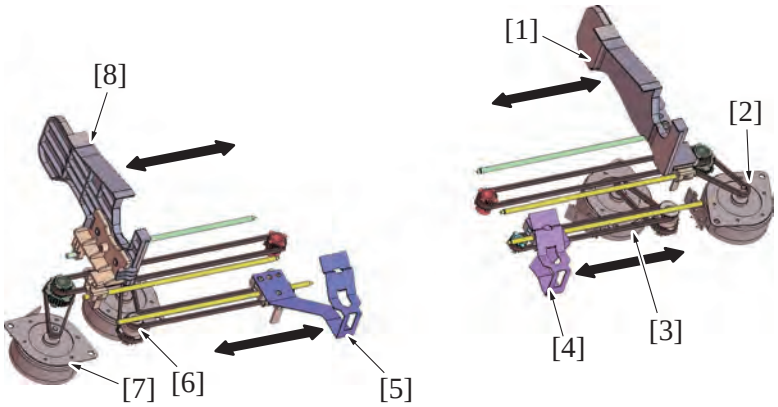
6.2 Drive

6.2.1 Upper paddle



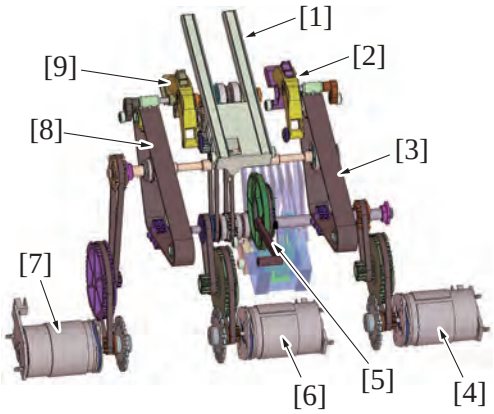
[1]	Paddle press cam	[2]	Paper press cam
[3]	Paddle press cam	[4]	FNS paddle motor (M9)
[5]	Arm drive motor (M8)	[6]	Upper paddle
[7]	Paper press roll	[8]	Upper paddle
[9]	Paddle up/down motor (M7)	-	-

6.2.2 Alignment plate



[1]	Alignment plate/R	[2]	Alignment motor/rear (M13)
[3]	Trail edge stopper motor/R (M11)	[4]	Trailing edge stopper /R
[5]	Trailing edge stopper/F	[6]	Trail edge stopper motor/F (M12)
[7]	Alignment motor/front (M14)	[8]	Alignment plate/F

6.2.3 Exit section



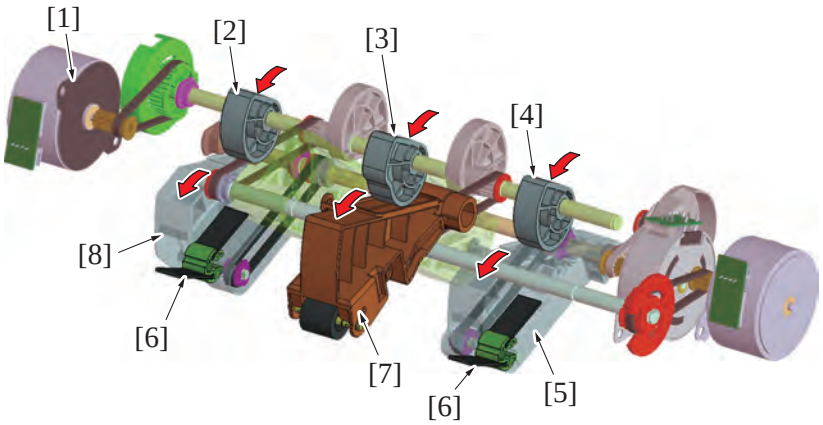
[1]	Stack support plate	[2]	Gripper
[3]	Gripper drive belt	[4]	Pre-eject drive motor (M2)
[5]	Trailing edge stopper/C drive arm	[6]	Stacker plate drive motor (M3)
[7]	Bundle eject motor (M1)	[8]	Gripper drive belt
[9]	Gripper	-	-

6.3 Operation

6.3.1 Upper paddle

(1) Upper paddle control

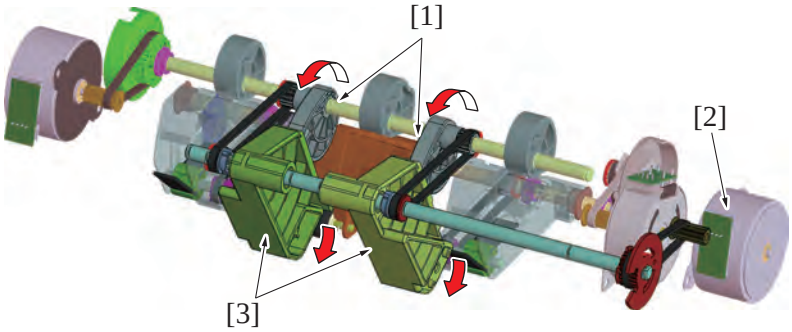
- Paper that has been transported from the finisher is transported to the alignment section.
- Transported paper is temporarily stored in the alignment section due to gravity-induced dropping. However, the paper press guide and upper paddle are driven to reliably transport paper to the alignment section.
- Paddle up/down motor drive rotates the paper press cam and paddle press cam to lower the paper press guide and the upper paddle assy.
- After the upper paddle assy is lowered, the FNS paddle motor is driven to rotate the upper paddle.
- The vertical motion is repeated for each sheet of paper to transport paper to the alignment section.



[1]	Paddle up/down motor (M7)	[2]	Paddle press cam
[3]	Paper press cam	[4]	Paddle press cam
[5]	Upper paddle assy	[6]	Upper paddle
[7]	Paper press guide	[8]	Upper paddle assy

(2) Trailing edge paper press control

- A trailing edge paper press guide is also provided in addition to the paper press guide and the upper paddle assy.
- This component is used to reliably lower the trailing edge of transported paper to the alignment section.
- The arm drive motor drives to rotate the belt and the trailing edge paper press cam.
- Cam rotation lowers the trailing edge paper press guide.

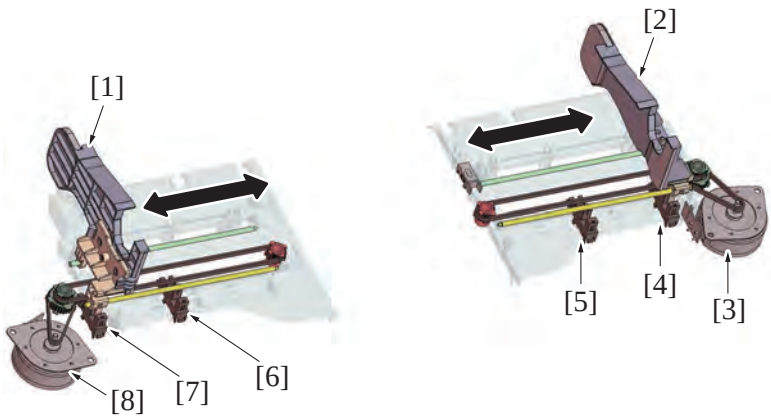


[1]	Trailing edge paper press cam	[2]	Arm drive motor (M8)
[3]	Trailing edge paper press guide	-	-

6.3.2 Alignment plate

(1) Alignment plate

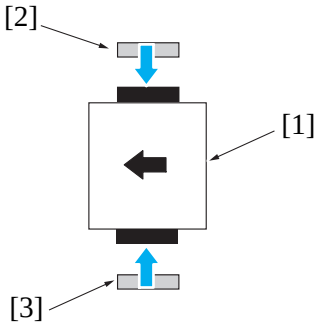
- The alignment plate/F and alignment plate/R align the paper in the width orientation and shift paper sheets.
- The alignment motor and drive belt drives the alignment plates.
- The alignment plates operate by the forward and reverse rotation of the alignment motor.
- Alignment plate/F and alignment plate/R are each equipped with a drive motor, which allows them to operate independently.



[1]	Alignment plate/F	[2]	Alignment plate/R
[3]	Alignment motor/rear (M13)	[4]	Alignment plate/R home sensor (PS6)
[5]	Alignment plate/R position sensor (center) (PS5)	[6]	Alignment plate/F position sensor (center) (PS8)
[7]	Alignment plate/F home sensor (PS9)	[8]	Alignment motor/front (M14)

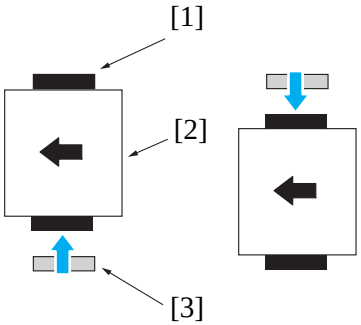
(a) Alignment operation

- The alignment motor/front rotates to move the alignment plate/F via the alignment plate/F drive belt.
- The alignment plate/F home sensor detects the home position of the alignment plate/F.
- The alignment motor/rear rotates to move the alignment plate/R via the alignment plate/R drive belt.
- The alignment plate/R home sensor detects the home position of the alignment plate/R.
- The sheets are placed between the alignment plates/F and /R corresponding to the paper width so that their both ends are aligned.



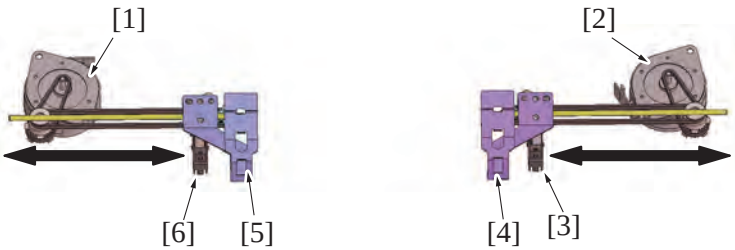
(b) Shift operation

- When offset is selected as finishing option, the alignment plates are moved to shift the sets of paper. Paper is discharged to the center of the main tray at normal printing and stapling.
- Depending on the width of paper, the alignment plate/F (alignment plate/R) pushes the sets of paper to the rear side (front side) from one side so that the sets of the paper are shifted.
- The sheets are shifted by alternatively repeating the above operation.



(2) Trailing edge stopper

- The trailing edge stopper/F and trailing edge stopper/R align paper in the feed orientation.
- The trailing edge stopper motor drives the trailing edge stoppers.
- Trailing edge stopper/F and the trailing edge stopper/R shift according to the paper width before starting a job, to hold the trailing edge of the paper.
- For 2-point staple jobs, the trailing edge stoppers/F and /R are retracted to the position where they do not interfere with the stapler.
- After the job is completed, the trailing edge stopper motor reverses the rotation to return the trailing edge stopper to the home position.

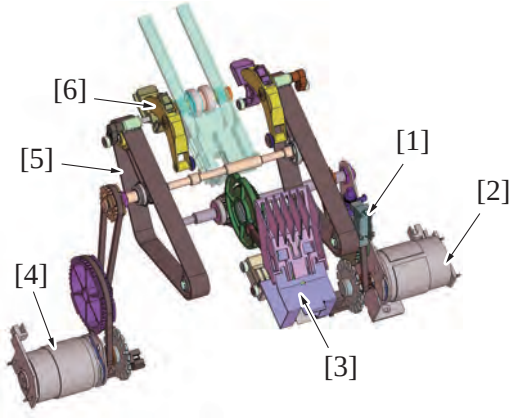


[1]	Trail edge stopper motor/F (M12)	[2]	Trail edge stopper motor/R (M11)
[3]	Trail edge stopper sensor/R (PS7)	[4]	Trailing edge stopper /R
[5]	Trailing edge stopper/F	[6]	Trail edge stopper sensor/F (PS10)

6.3.3 Exit section

- The trailing edge stopper/C and gripper discharge paper that is processed with the alignment plates, to the output tray.
- The gripper grips the trailing edges of the paper sheets in the alignment tray and transports them to the paper exit position.

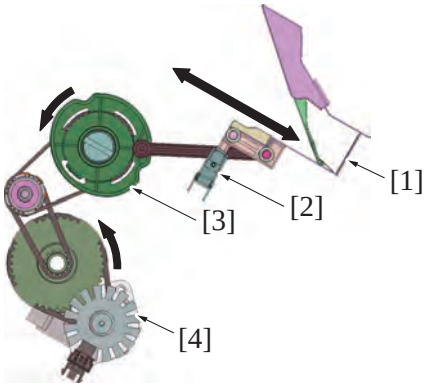
- The gripper releases the sets of paper to discharge them to the main tray. The gripper is moved to the home position and brought into a standby state.
- At the same time, the trailing edge stopper/C presses the trailing edge of paper in the alignment tray.



[1]	Gripper home position sensor (PS3)	[2]	Pre-eject drive motor (M2)
[3]	Trailing edge stopper/C	[4]	Bundle eject motor (M1)
[5]	Paper transport belt	[6]	Gripper

(1) Trailing edge stopper/C operation

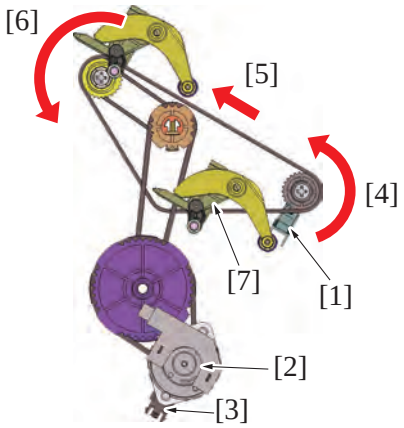
- When the pre-eject drive motor rotates, the trailing edge stopper moves from the home position to the paper exit position to discharge paper to the main tray.
- When the drive gear makes a turn, the stopper moves from the paper exit position to the home position and is brought into a standby state.
- The trailing edge home position detection sensor detects the home position.



[1]	Trailing edge stopper/C	[2]	Trail edge stopper home sensor (PS31)
[3]	Drive gear	[4]	Pre-eject drive motor (M2)

(2) Gripper operation

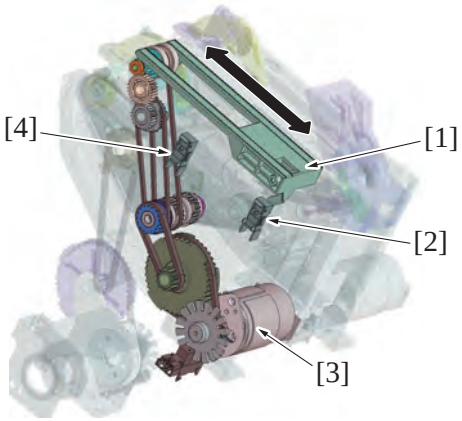
- The bundle eject motor rotates to turn the paper transport belt. It rotates the gripper that has been fixed to the paper transport belt.
- The gripper home position sensor detects the home position of the gripper.
- The gripper stays at the home position. It rotates at the position [4] shown in the illustration to grip the trailing edge of paper and transport the paper while keeping the state [5]. The gripper rotates at the position [6] in the illustration to release the paper. When the paper transport belt makes a turn, the gripper returns to the home position [7] and is brought into a standby state.



[1]	Gripper home position sensor (PS3)	[2]	Bundle eject motor (M1)
[3]	Gripper motor sensor (PS1)	[4]	Gripper position (gripping the paper)
[5]	Gripper position (transporting the paper)	[6]	Gripper position (release the paper)
[7]	Gripper home position	-	-

6.3.4 Stack support plate control

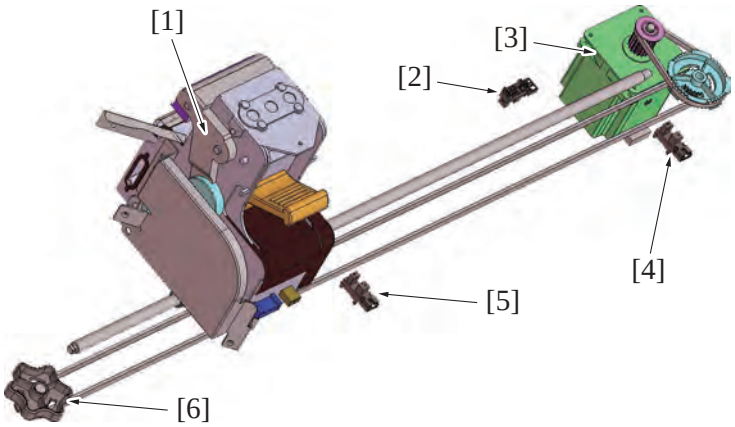
- When the paper is transported to the alignment section, the paper may go off the alignment tray depending on the paper size or the printing direction which may cause the paper to be misaligned.
- In order to prevent the paper from being off the alignment tray, the stack support plate is installed.
- The stacker plate drive motor drives to protract the stacker plate via a gear.
- When the specified period of time has passed after the process above is finished, the stacker plate drive motor is driven to retract the stack support plate.
- The stacker plate home sensor detects the home position of the stacker support plate. The stacker plate position sensor detects the upper limit position of the stacker support plate.



[1]	Stack support plate	[2]	Stacker plate home sensor (PS30)
[3]	Stacker plate drive motor (M3)	[4]	Stacker plate position sensor (PS29)

7. STAPLER SECTION

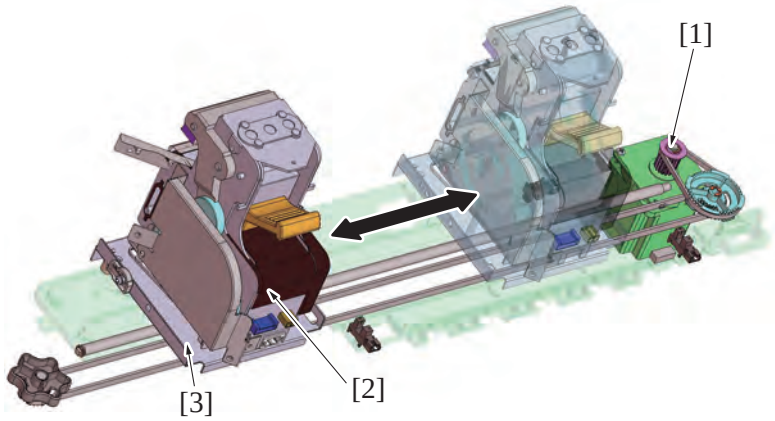
7.1 Configuration



[1]	Stapler unit	[2]	Stapler home position sensor (corner) (PS18)
[3]	Stapler movement motor (M19)	[4]	Stapler home position sensor (rear) (PS19)
[5]	Stapler position sensor (center) (PS20)	[6]	Stapler move dial

7.2 Drive

- Rotation of the stapler movement motor drives the belt, and moves the stapler holder that is attached to the belt back and forth along the shaft.
- The staple unit moves to the stapler home position, the staple cartridge replacement, or the corner staple position.

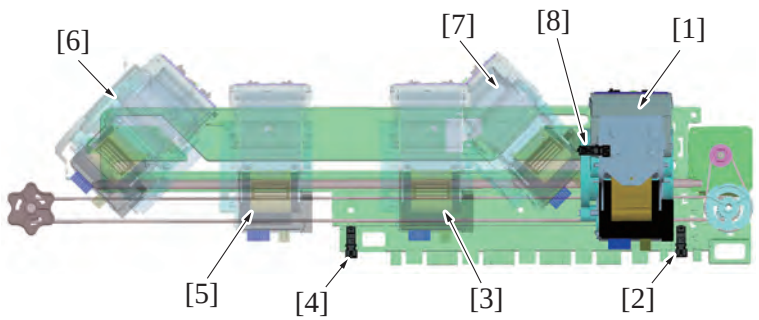


[1]	Stapler movement motor (M19)	[2]	Stapler unit
[3]	Stapler holder	-	-

7.3 Operation

7.3.1 Stapler position detection

- The home position of the stapler is detected by the stapler home position sensor (rear).
- The stapler's staple position is detected by the amount of motor rotation provided by the stapler home position sensor (rear) and stapler position sensor (center).
- The staple cartridge replacement position is detected depending on the amount of stapler movement motor rotation that is based on the stapler position sensor (center).

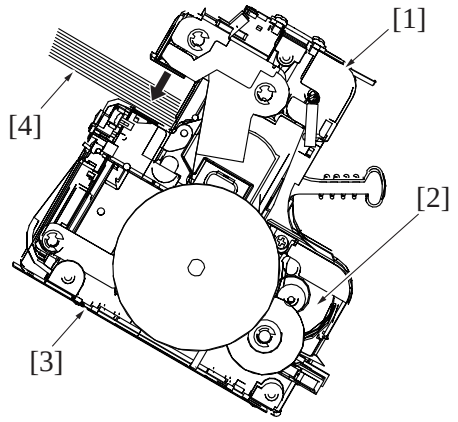


[1]	Stapler unit (home position)	[2]	Stapler home position sensor (rear) (PS19)
[3]	Stapler unit (2-staple position)	[4]	Stapler position sensor (center) (PS20)

[5]	Stapler unit (2-staple position)	[6]	Stapler unit (staple cartridge replacement position)
[7]	Stapler unit (diagonal binding position)	[8]	Stapler home position sensor (corner) (PS18)

7.3.2 Staple control

- The stapling operation is performed by the stapler motor.
- In the stapling operation, the stapler motor drives the clincher side to press the paper. Then, the staple is pushed out from the stapler side and bent at the clincher side.



[1]	Stapler (clincher side)	[2]	Stapler motor (M5)
[3]	Stapler (stapler side)	[4]	Paper

(1) Stapling operation

- After completing the alignment operation of the alignment plate, the stapler motor performs the stapling operation.
- The stapling operation is completed when the stapler position sensor in the stapler detects the home position and turn ON.

(2) Clogged staple detection

- During stapling operation, staple clogging is determined if the stapler position sensor does not turn ON after a specified period of time since it turns OFF. Thus, the stapler motor stops.

(3) Cartridge detection

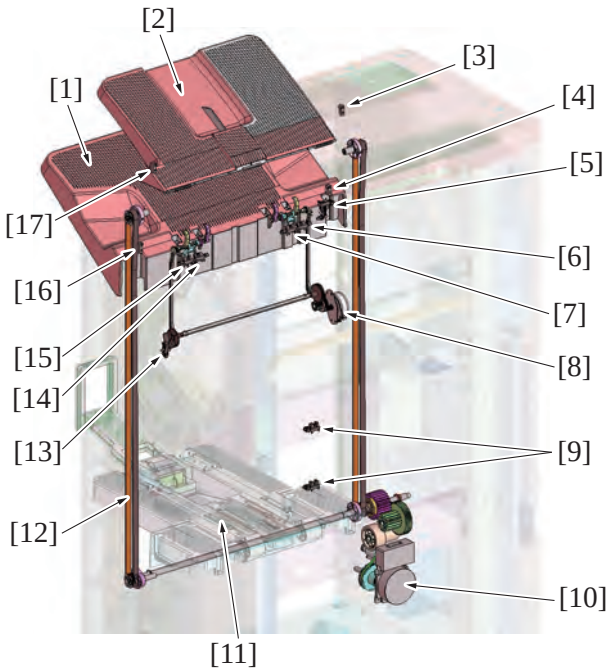
- The staple empty detect sensor in the staple detects the presence of a cartridge or the incorrect setting of a cartridge.
- When no cartridge is set or it is set incorrectly, the main body displays the error message on its display panel.

(4) Staple detection control

- When the staples run out, the self-priming sensor turns ON and the main body displays the error message on its display panel.

8. OUTPUT TRAY SECTION

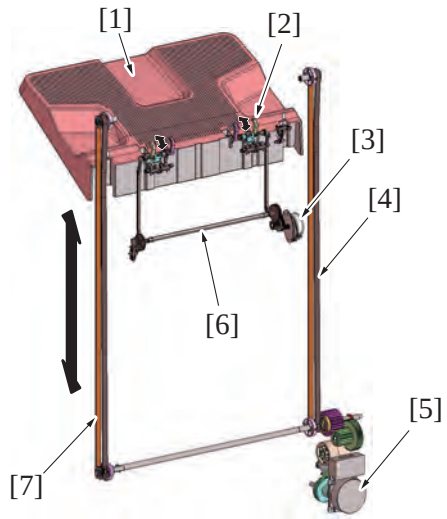
8.1 Configuration



[1]	Main tray	[2]	Sub tray
[3]	Sub tray full detection sensor/out (PS39)	[4]	Main tray upper sensor/in (PS40) (Not used)
[5]	Main tray paper detection sensor (PS13)	[6]	Main tray lift up detection sensor/R (PS17)
[7]	Main tray lift down detection sensor/R (PS15)	[8]	Paper receiving control motor (M15)
[9]	Main tray full detection sensor (PS12) *	[10]	Main tray up/down motor (M6)
[11]	Saddle tray	[12]	Main tray drive belt
[13]	Paper delivery control sensor (PS11)	[14]	Main tray lift down detection sensor/F (PS14)
[15]	Main tray lift up detection sensor/F (PS16)	[16]	Main tray upper sensor/out (PS38) (Not used)
[17]	Sub tray full detection sensor/in (PS41)	-	-

- *: The installation position of the sensor is different between the FS-537 and FS-537SD models.

8.2 Drive

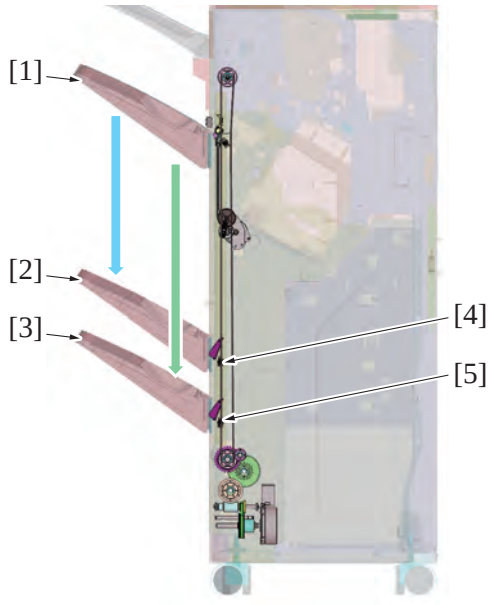


[1]	Main tray	[2]	Paper detection lever
[3]	Paper receiving control motor (M15)	[4]	Main tray drive belt/R
[5]	Main tray up/down motor (M6)	[6]	Paper detection lever drive shaft
[7]	Main tray drive belt/F	-	-

8.3 Operation

8.3.1 Main tray up/down mechanism

- Rotation of the main tray up/down motor drives the main tray drive belt to lift and lower the main tray.
- The lower limit position of the main tray (full detection position) is different between the FS-537 and FS-537SD models.

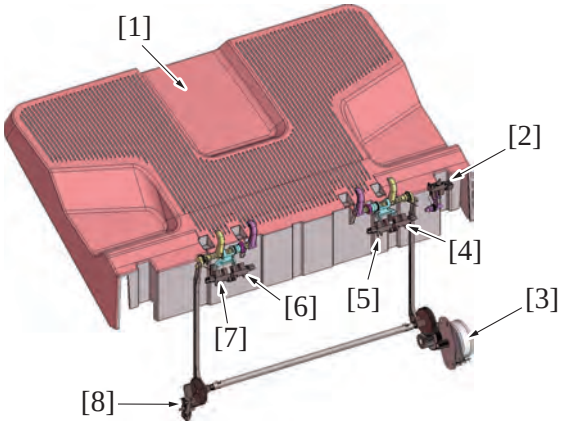


[1]	Main tray (home position)	[2]	Main tray (main tray full position) *1
[3]	Main tray (main tray full position) *2	[4]	Main tray full detection sensor (PS12) *1
[5]	Main tray full detection sensor (PS12) *2	-	-

- *1: FS-537SD
- *2: FS-537

8.3.2 Main tray paper detection

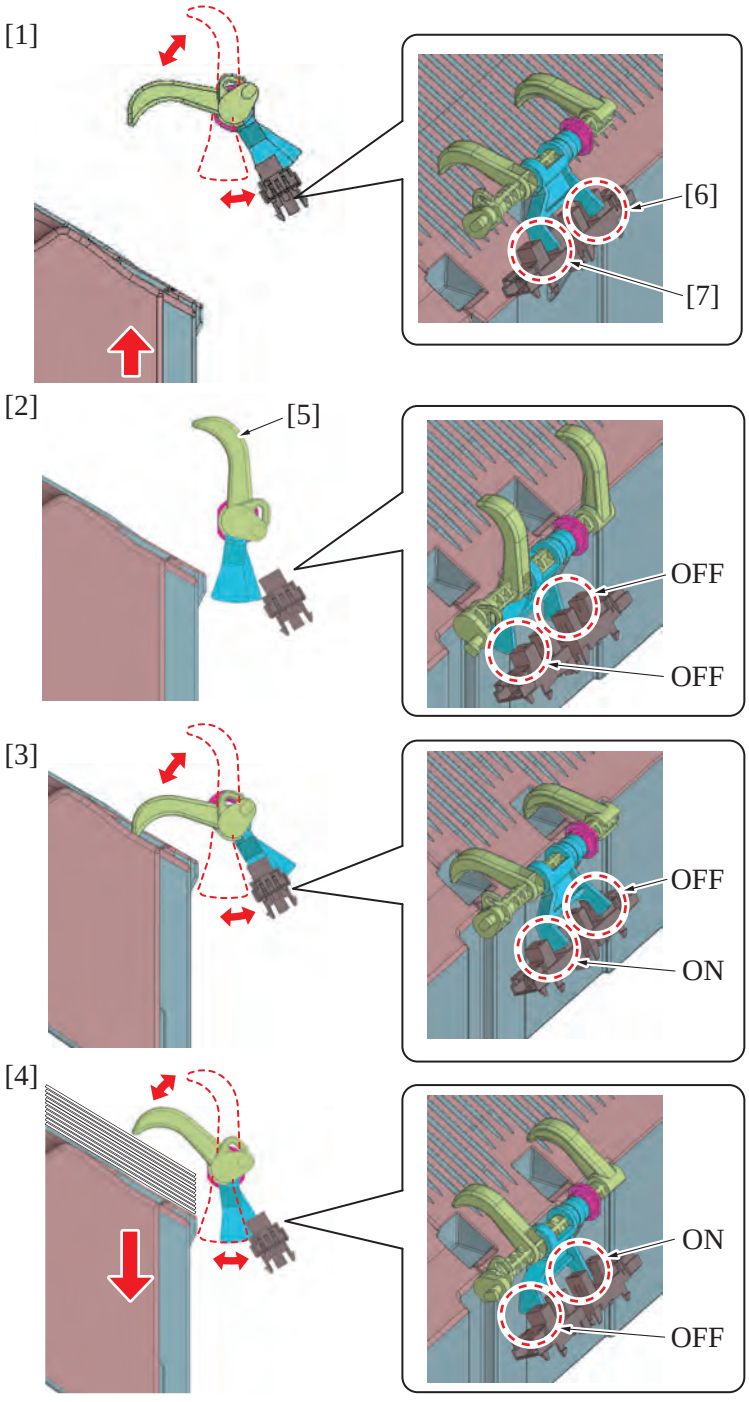
- The main tray paper detection sensor, the main tray lift up detection sensor and the main tray lift down detection sensor keep the specified distance between the upper surface of the paper exited to the main tray and the paper exit opening to eliminate the misalignment of the exited paper.
- The main tray paper detection sensor detects the upper limit position of the main tray.
- The main tray lift up detection sensors (F and R) indicate the lifting of the main tray.
- The main tray lift down detection sensors (F and R) indicate the lowering of the main tray.
- By operation of the paper detection lever, the on/off states of the main tray lift up detection sensors and the main tray lift down detection sensors are detected.
- The paper receiving control motor drives the paper detection lever. The paper delivery control sensor detects the home position of the paper detection lever.
- The paper detection lever is operated each time a sheet of paper is discharged. This operation is used to confirm the alignment of discharged paper and the discharge state of the main tray.



[1]	Main tray	[2]	Main tray paper detection sensor (PS13)
[3]	Paper receiving control motor (M15)	[4]	Main tray lift up detection sensor/R (PS17)
[5]	Main tray lift down detection sensor/R (PS15)	[6]	Main tray lift down detection sensor/F (PS14)
[7]	Main tray lift up detection sensor/F (PS16)	[8]	Paper delivery control sensor (PS11)

(1) Main tray operation

- The paper detection lever and main tray paper detection sensor confirm the paper load status of the main tray and main tray position (height) when the printing starts.
- The paper detection lever is operated to confirm the state of the main tray lift detection sensor.
- When the main tray lift up detection sensor is on and the main tray paper detection sensor is off, the main tray is lifted until the main tray paper detection sensor turns on.
- The paper detection lever returns to the home position. The system waits for the discharged paper.
- After the paper is discharged into the main tray, the paper detection lever is operated to confirm the load status of the main tray. At this time, if the main tray lift down detection sensor is on, the main tray is lowered to a predetermined height. If this sensor is off, the lower operation is not performed.
- This paper detection lever is driven for each sheet of discharged paper to confirm the load status of the main tray.
- After the printing completes the paper detection lever returns to the home position.
- The main tray operation (lifting) is not performed as long as there is a subsequent print instruction even if the discharged paper is removed.



[1]	Main tray lift up state	[2]	Finisher stop state
[3]	Main tray paper load status (no discharged paper)	[4]	Main tray paper load status (with discharged paper)
[5]	Paper detection lever (home position)	[6]	Main tray lift down detection sensor/F (OFF)
[7]	Main tray lift up detection sensor/F (ON)	-	-

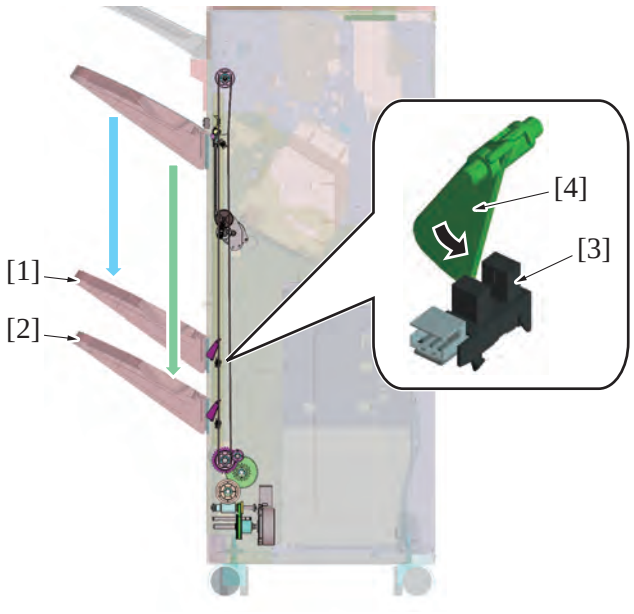
8.3.3 Tray full detection mechanism

(1) Main tray

- The main tray has the paper full detection mechanism.
- When paper full is detected, the warning message appears on the control panel.
- In this state, any main tray related configurations and jobs that use the main tray cannot be performed.

(a) Paper full detection mechanism 1

- When machine determines that the amount of paper stacked on the main tray exceeds the specified height, the paper detection lever causes the main tray up/down motor to rotate to lower the main tray to the specified position.
- When the main tray is lowered to the position of the main tray full detection sensor, the main tray full is determined.

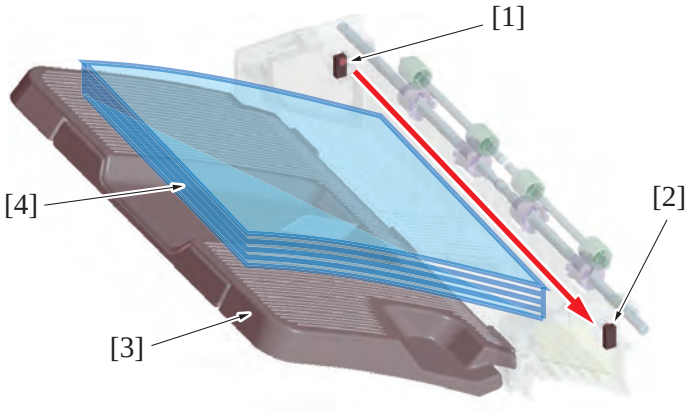


[1]	Main tray (main tray full position) *1	[2]	Main tray (main tray full position) *2
[3]	Main tray full detection sensor (PS12)	[4]	Actuator

- *1: FS-537SD
- *2: FS-537

(2) Sub tray

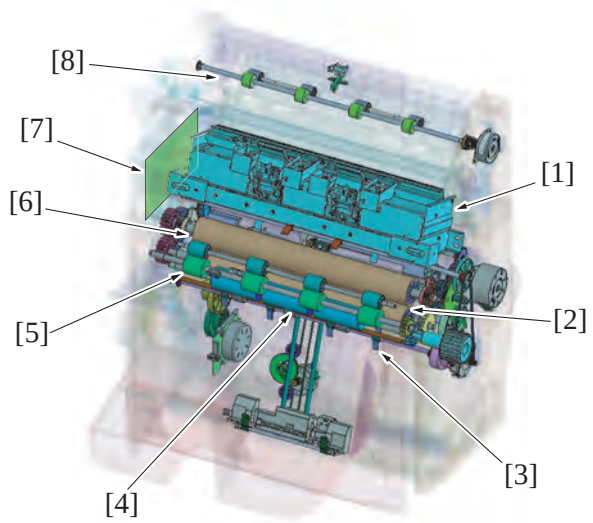
- When paper is discharged into the sub tray, the stacked paper blocks the sub tray full detection sensor. This blocked state is interpreted as a detection of a full exit tray.
- When the sub tray full is detected, the warning message appears on the control panel.
- In this state, any sub tray configurations and jobs that use the sub tray cannot be performed.



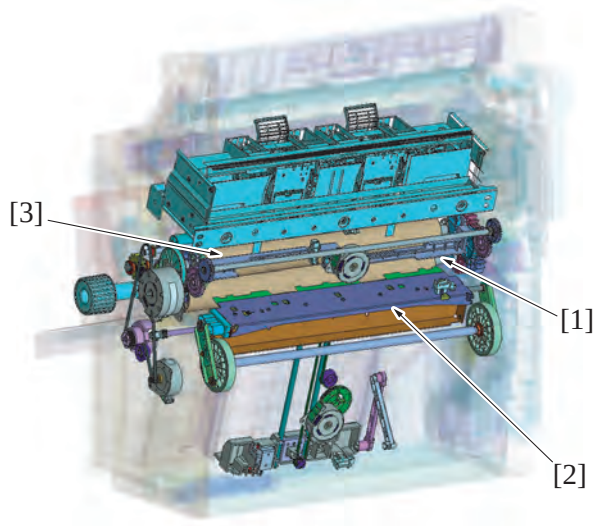
[1]	Sub tray full detection sensor/out (PS39)	[2]	Sub tray full detection sensor/in (PS41)
[3]	Sub tray	[4]	Paper

9. SADDLE SECTION FS-537SD

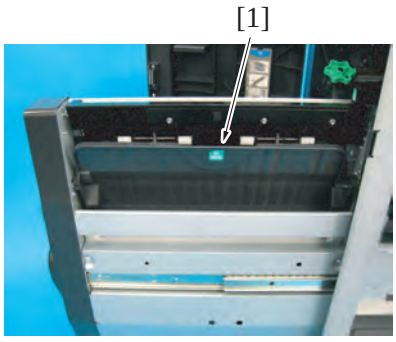
9.1 Configuration



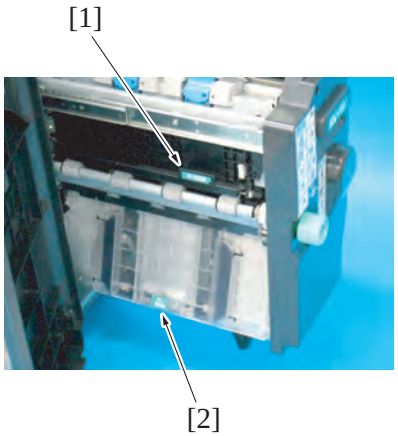
[1]	Staple unit	[2]	Center folding roller 2
[3]	Center fold section lower paddle	[4]	Tri-folding roller
[5]	Saddle tray exit roller	[6]	Center folding roller 1
[7]	SD control board (SDCB)	[8]	Saddle section paper feed roller



[1]	Center staple alignment plate drive gear/R	[2]	Center fold knife
[3]	Center staple alignment plate drive gear/F	-	-



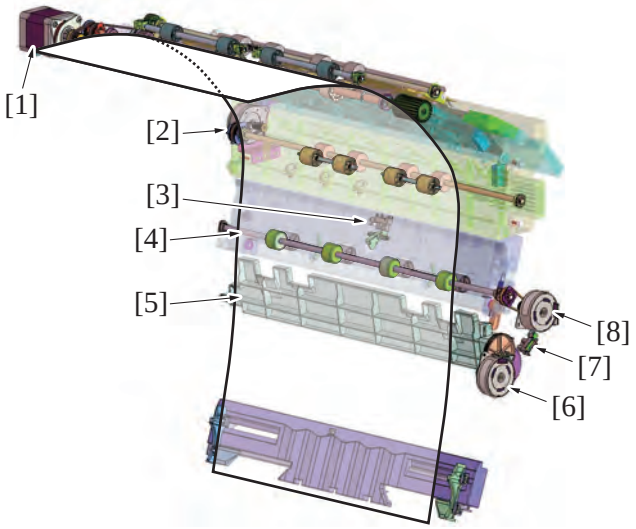
[1]	Jam removal cover (transport section)	-	-



[1]	Jam removal cover (exit section)	[2]	Jam removal cover (alignment section)

9.2 Transport section

9.2.1 Drive



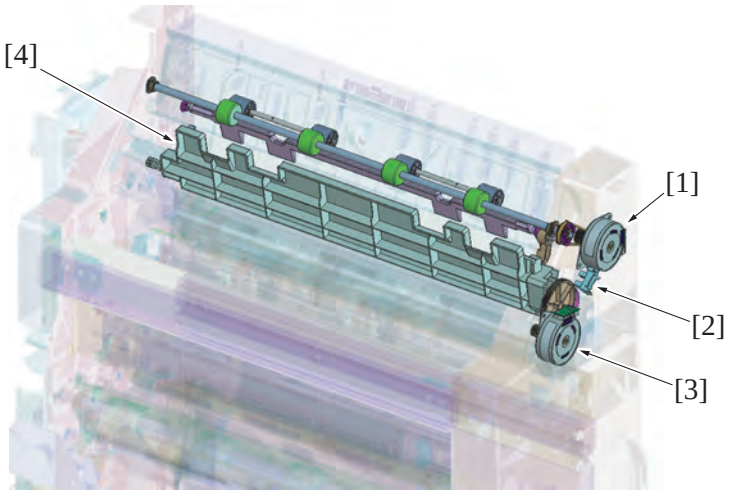
[1]	FNS discharge motor (M17) (Finisher)	[2]	SD discharge motor (M16) (Finisher)
[3]	SD entrance sensor (PS1)	[4]	SD transport roller
[5]	Curl cover	[6]	Paper discharge control motor (M2)
[7]	Curl cover detection sensor (PS2)	[8]	SD transport motor (M1)

9.2.2 Paper transport

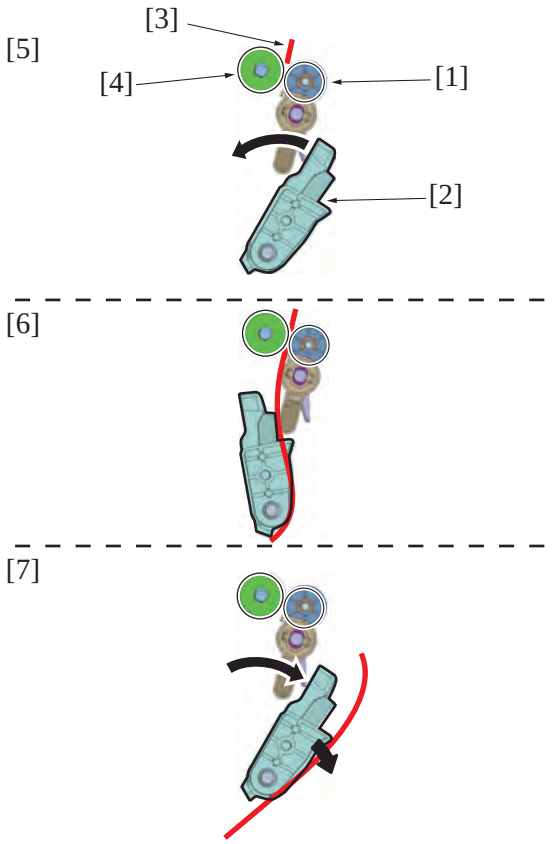
- The FNS discharge motor is operated in reverse, and the SD discharge motor is driven to transport paper to the saddle unit.
- The paper then is transported to the alignment section by SD transport roller.
- The SD transport roller rotates when the SD transport motor is driven.

9.2.3 Curl cover

- The paper is transported to the alignment section one–by-one. A paper which is curled may cause paper misfeed at the entrance of the saddle stitcher.
- In order to prevent this paper misfeed, the curl cover is installed so that each paper is transported to the alignment section without fail.
- The curl cover is operated by the paper discharge control motor. Paper receiving opens/closes the feeding port inside the saddle unit entrance when the paper discharge control motor rotates in forward/reverse direction.



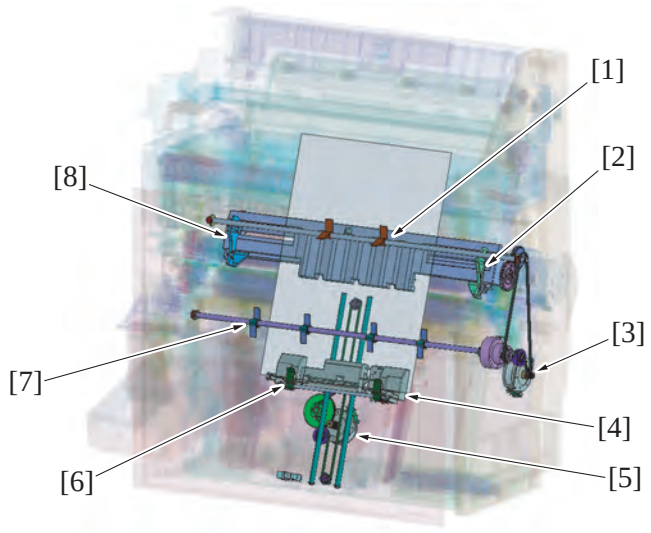
[1]	SD transport motor (M1)	[2]	Curl cover detection sensor (PS2)
[3]	Paper discharge control motor (M2)	[4]	Curl cover



[1]	SD transport roll	[2]	Curl cover
[3]	Paper	[4]	SD transport roller
[5]	Paper transportation from within the finisher	[6]	Curl cover operation
[7]	Next paper standby (moves curl cover to the home position)	-	-

9.3 Alignment section

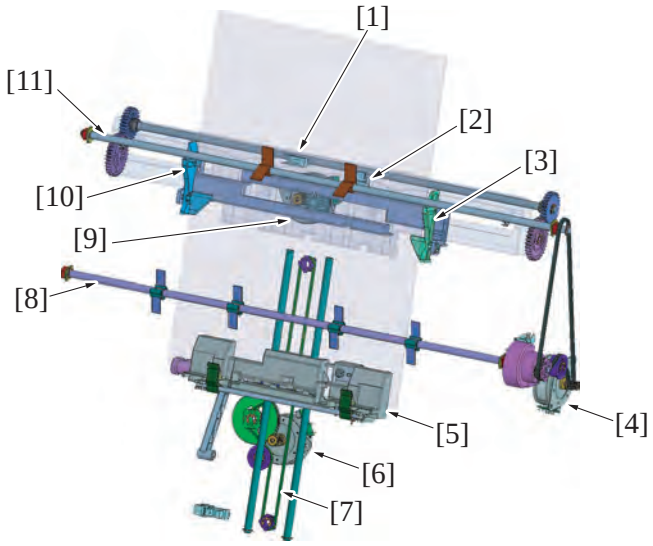
9.3.1 Drive



[1]	Center folding section upper paddle	[2]	Alignment plate/F
[3]	SD paddle motor (M7)	[4]	Stopper guide
[5]	Stopper drive motor (M4)	[6]	Paper grip
[7]	Center folding section lower paddle	[8]	Alignment plate/R

9.3.2 Alignment

- It aligns the paper transported to the alignment section.
- The paper CD alignment is conducted by the alignment plate/F and the alignment plate/R.
- The paper FD alignment is conducted by the stopper guide, center folding section upper paddle and center folding section lower paddle.



[1]	Center staple/fold stacker paper detect sensor (PS3)	[2]	Alignment home sensor (PS4)
[3]	Alignment plate/F	[4]	SD paddle motor (M7)
[5]	Stopper guide	[6]	Stopper drive motor (M4)
[7]	Stopper guide drive belt	[8]	Center folding section lower paddle
[9]	Alignment motor (M3)	[10]	Alignment plate/R
[11]	Center folding section upper paddle	-	-

(1) Alignment plate operation

- Alignment plates follow the forward and reverse rotation of alignment motor.
- When the saddle exit sensor of the finisher detects the leading edge of the paper, the alignment motor starts rotating in the direction to close the alignment plate, and the alignment plate/F and the alignment plate/R stop at the position where it is slightly wider than the paper width.
- When the specified period of time has passed after the SD entrance sensor detects the trailing edge of the paper, the alignment motor rotates in forward/reverse direction to do oscillation of the alignment plate to align paper.
- The oscillation of the alignment plate is conducted each time a sheet of paper is transported, and the alignment plate is shifted to the standby position after the alignment operation is finished.

- The home position of the alignment plate is detected by the alignment home sensor.

(2) Stopper guide operation

- The stopper drive motor rotates in forward/reverse direction to operate the stopper guide drive belt, and moves the stopper guide up/down.
- The stopper guide moves up after the leading edge of the paper passes the main tray exit sensor.
- The stopper guide stops at a position where the length of paper that has been transported.
- The stopper guide stops the paper to align paper edges.

(3) Paddle operation

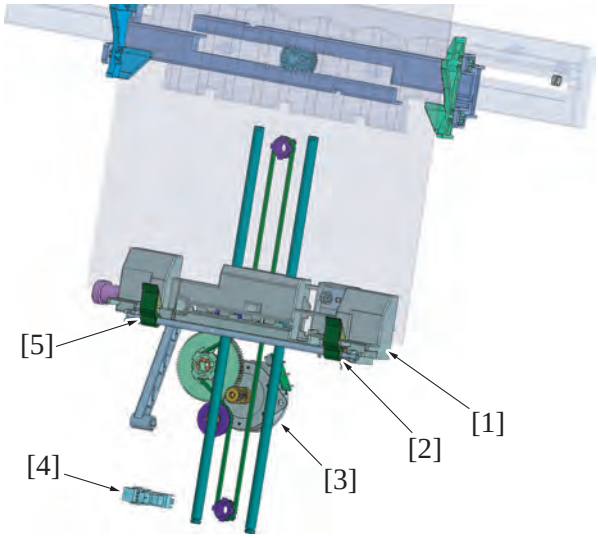
- The center folding section upper paddle and the center folding section lower paddle are installed in order to receive the transported paper to the alignment section without fail.
- The up/down paddle is driven by the SD paddle motor. The up/down paddle is driven when the specified period of time has passed after the leading edge of the paper passed the saddle exit sensor of the finisher.
- The up/down paddle stops after the paper trailing edge passes the finisher's main tray exit sensor and the paddle rotates for the specified number of times.

9.3.3 Stopper guide

- At the stopper guide, paper is aligned in the FD direction. Paper conveyed to the aligning section is conveyed to the specified position.
- The exit grip holds the paper when shifting it to the specified position and when stapling papers.
- The alignment section, staple position and other positions (center folding, center staple, tri-folding) have their own up/down stop positions. They are controlled by the pulse number of the stopper drive motor.

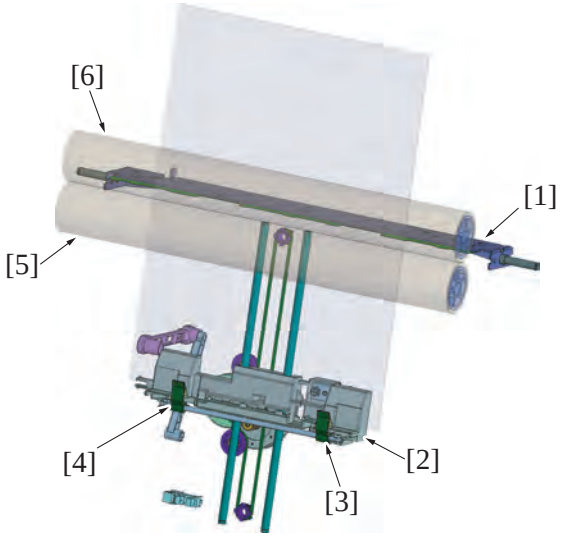
(1) Stopper operation

- The stopper drive motor moves the stopper guide up and down in accordance with the paper size.
- The stopper home sensor detects the home position of stopper guide.



[1]	Stopper guide	[2]	Exit grip/F
[3]	Stopper drive motor (M4)	[4]	Stopper home sensor (PS6)
[5]	Exit grip/R	-	-

(2) Stopper control



[1]	Center folding knife assy	[2]	Stopper guide
[3]	Exit grip/F	[4]	Exit grip/R
[5]	Center folding roller 2	[6]	Center folding roller 1

(a) Center folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the folding position.

(b) Center staple mode

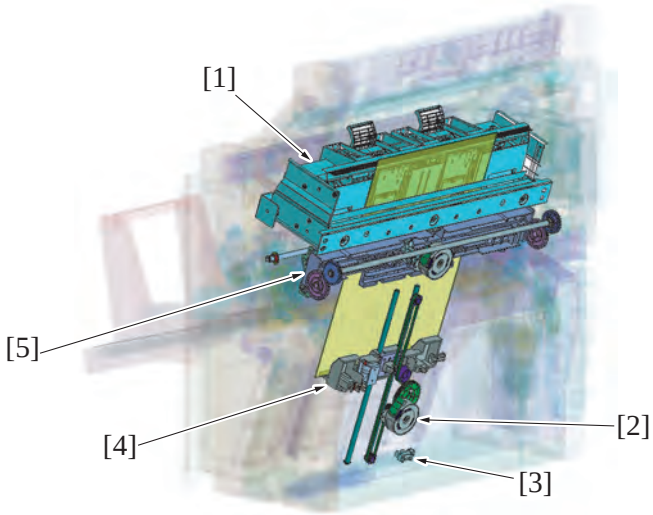
- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the center staple position.
- After a specified period of time since stapling operation was completed, the alignment motor opens the alignment plates and the stopper drive motor starts rotating to move the stopper guide further down and lower the paper to the folding position.

(c) Tri-folding mode

- After a specified period of time since the last sheet of paper was aligned, the stopper solenoid is turned ON and the sheets of paper are held in place.
- After the sheets are held in place, the stopper drive motor rotates to move the stopper guide down and lower the sheets to the 1st folding position in the tri-folding.

9.4 Stapler

9.4.1 Drive



[1]	Stapler unit	[2]	Stopper drive motor (M4)

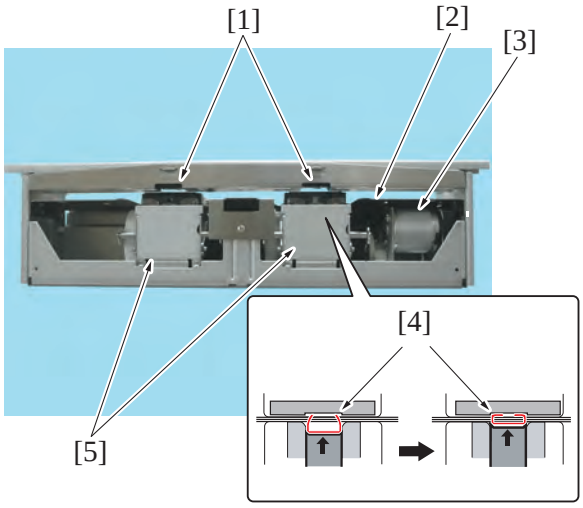
[3]	Stopper home sensor (PS6)	[4]	Stopper guide
[5]	Alignment tray	-	-

9.4.2 Operation

- The stapling operation is performed by the stapler motor.

(1) Stapling operation

- The stapling operation is performed by the staple motor in the stapler.
- The drive gear pushes out the pressed portion of the paper toward the clincher to hold the paper, and then the pin will be pushed out.
- When the pin penetrates the paper batch, the pin will be bent to staple the paper batch at the clincher section.



[1]	Clincher	[2]	Drive gear
[3]	Stapler motor	[4]	Staple
[5]	Stapler	-	-

(2) Staple control

(a) Staple

- After completing the alignment operation of the alignment plate, the staple motor performs the stapling operation.
- The stapling operation is completed when the stapler home position sensor (rear) detects the home position and turn ON.

(b) Clogged staple detection

- When the stapler home position sensor (rear) does not turn ON after the specified period of time after it turned OFF during stapling, it is determined that the staple motor has the trouble, and stops the stapler motor.

(c) Cartridge detection

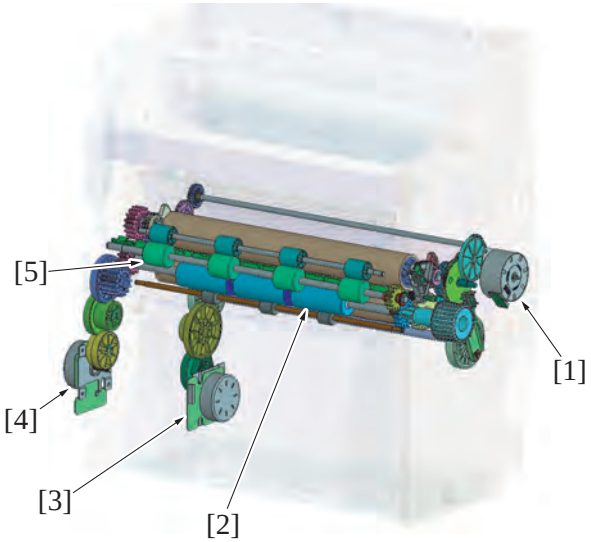
- The cartridge set switch detects the presence of a cartridge or the incorrect setting of a cartridge.
- When no cartridge is set or it is set incorrectly, the main body displays the error message on its display panel.

(d) Staple detection control

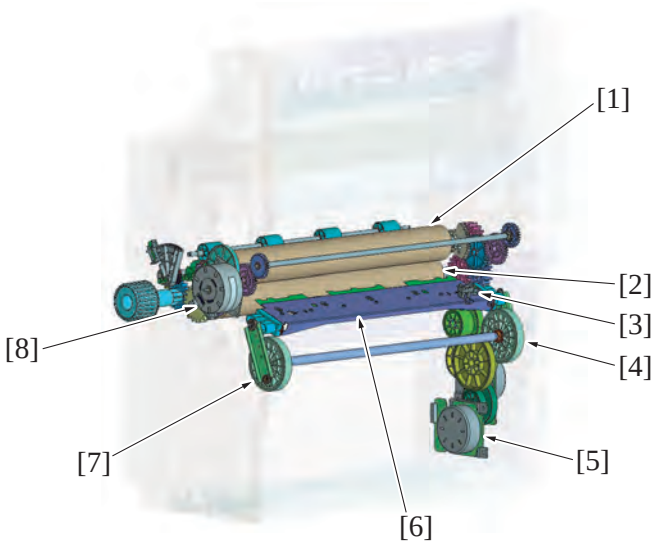
- When the staples run out, the staple empty switch turns ON and the main body displays the error message on its display panel.

9.5 Center folding/Center staple

9.5.1 Drive



[1]	Center fold guide motor (M6)	[2]	Tri-folding roller
[3]	Center fold knife motor (M9)	[4]	Center fold roller motor (M5)
[5]	Saddle tray exit roller	-	-



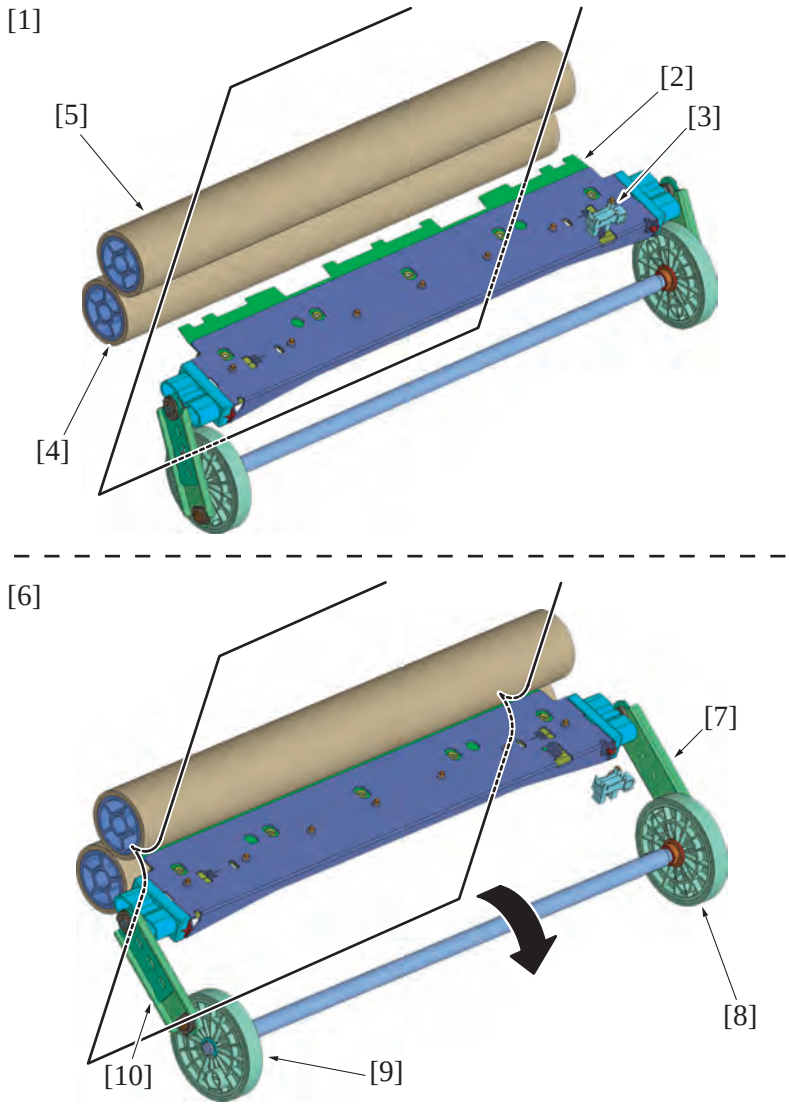
[1]	Center folding roller 1	[2]	Center folding roller 2
[3]	Center fold knife home sensor (PS8)	[4]	Fold drive gear/R
[5]	Center fold knife motor (M9)	[6]	Center folding knife assy
[7]	Fold drive gear/F	[8]	Center fold guide motor (M6)

9.5.2 Folding knife

- The center fold knife motor drives the folding knife.
- The folding knife is used in the center folding/center staple/tri-folding mode.
- In the tri-folding mode, it is used at the 1st folding.

(1) Folding knife operation

- The center fold knife motor rotates the crank shaft a half turn via the gear, and pushes the paper to the nip section with the folding knife.
- The folding rollers draw and fold the paper.
- The position of the stopper guide controls the folding position.



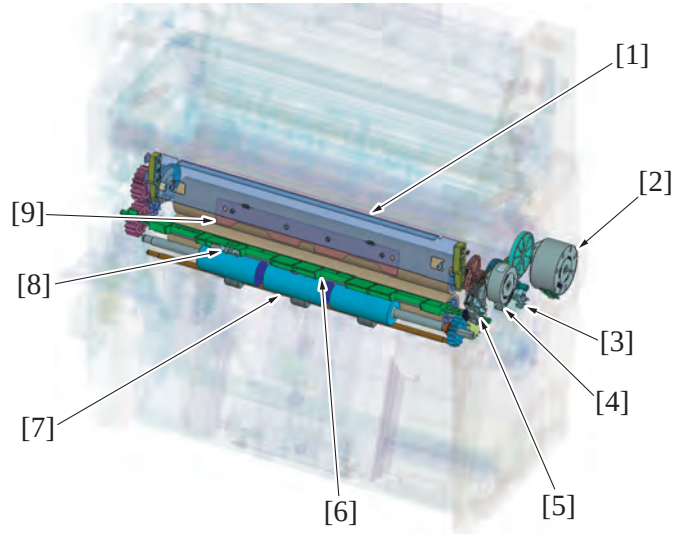
[1]	Before folding	[2]	Folding knife
[3]	Center fold knife home sensor (PS8)	[4]	Center folding roller 2
[5]	Center folding roller 1	[6]	Folding operation
[7]	Crank shaft/R	[8]	Fold knife assy drive gear/R
[9]	Fold knife assy drive gear/F	[10]	Crank shaft/F

(2) Folding knife control

- The center fold knife motor turns ON and sticks out the folding knife to the paper after a specified period of time since the stopper guide stops at the folding position.
- The center fold knife motor stops when the folding knife reciprocates after fold operation is completed and the center fold knife home sensor turns OFF.

9.6 Tri-folding

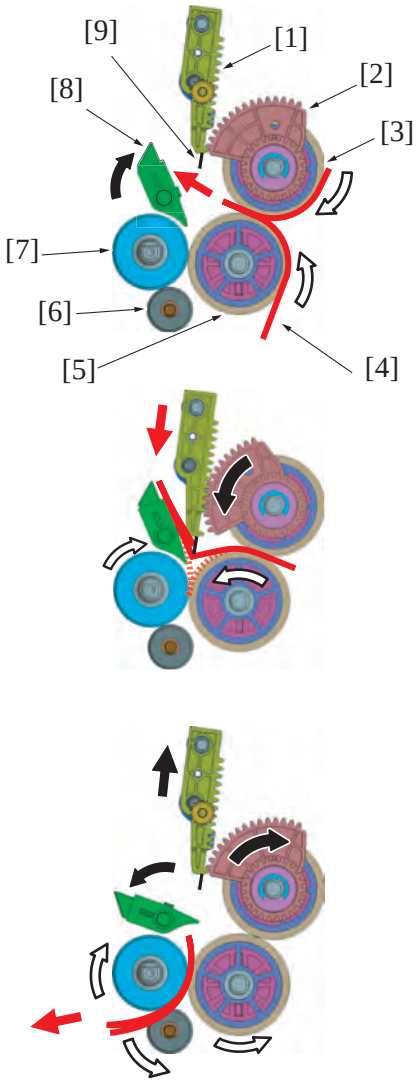
9.6.1 Drive



[1]	Tri-folding knife assy	[2]	Center fold guide motor (M6)
[3]	Guide home sensor (PS7)	[4]	Tri-folding guide motor (M8)
[5]	Tri-folding gate home sensor (PS11)	[6]	Tri-folding gate
[7]	Tri-folding roller	[8]	Fold exit sensor (PS12)
[9]	Tri-folding knife	-	-

9.6.2 Tri-folding operation

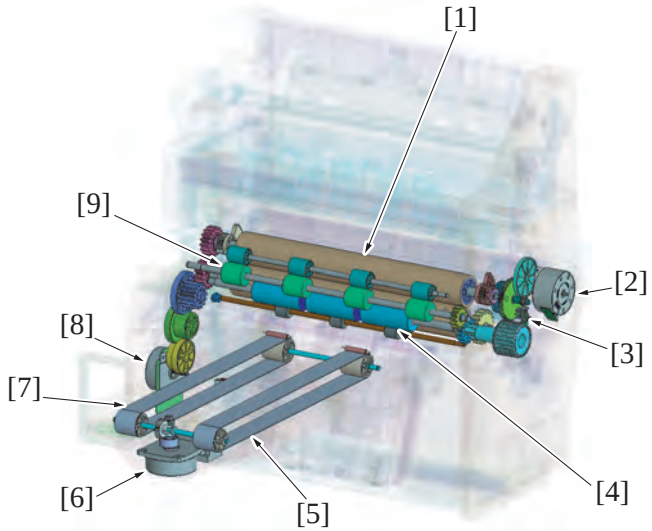
1. When the center fold guide motor drives, the tri-folding gate rotates. The leading edge of the paper to which the first fold was applied at the center folding section, will be transported to the tri-folding path.
2. When the tri-folding guide motor drives, the tri-folding knife assy drive gear rotates to move down the tri-folding knife assy. The paper to which the first fold is applied at the center folding section will be pushed out to the tri-folding roller.
3. The paper is pulled into the tri-folding roller to tri-fold the paper.
4. When tri-folding is finished, the tri-folding gate will return to the home position. The home position of the tri-folding gate is detected by the tri-folding gate home sensor.



[1]	Tri-folding knife assy	[2]	Tri-folding knife assy drive gear
[3]	Center folding roller 1	[4]	Paper
[5]	Center folding roller 2	[6]	Tri-folding roll
[7]	Tri-folding roller	[8]	Tri-folding gate
[9]	Tri-folding knife	-	-

9.7 Paper exit section

9.7.1 Drive



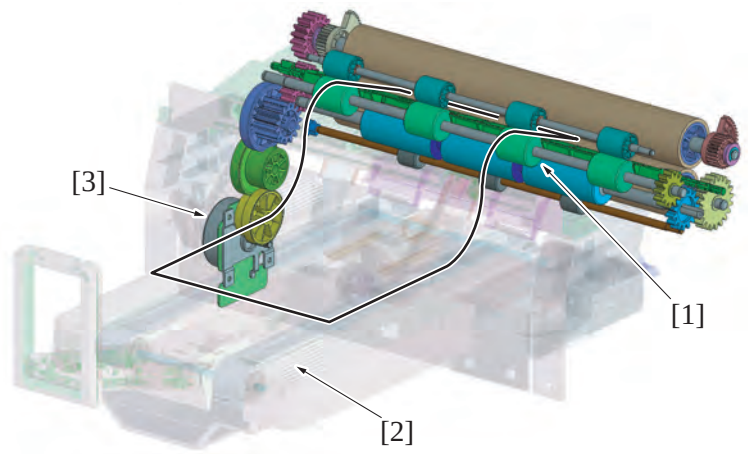
[1]	Center folding roller 1	[2]	Center fold guide motor (M8)
[3]	Tri-folding gate home sensor (PS11)	[4]	Tri-folding roller
[5]	Paper transport belt/F	[6]	Paper transport belt motor (M34)
[7]	Paper transport belt/R	[8]	Center fold roller motor (M5)
[9]	Sub tray exit roller	-	-

9.7.2 Paper exit

- Center folded, center stapled, or tri-folded paper is discharged to the saddle tray.
- The paper that is center folded and center stapled is sent though the upper route, and the tri-folded paper is sent through the lower route to be discharged.
- The paper is discharged by driving the exit roller and the tri-fold roller. Both rollers are driven by the center fold roller motor.

(1) Paper exit for center folding/center staple

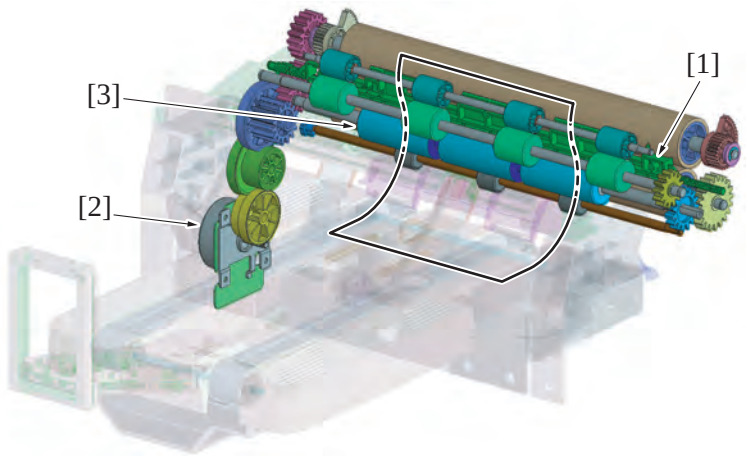
- The center fold roller motor is driven after the center folding or the center staple, and discharges the paper to the saddle tray by the paper exit roller.



[1]	Saddle tray exit roller	[2]	Saddle exit tray
[3]	Center fold roller motor (M5)	-	-

(2) Paper exit for tri-folding

- Since the paper is tri-folded by the tri-folding roller, the paper is transported through the lower route.



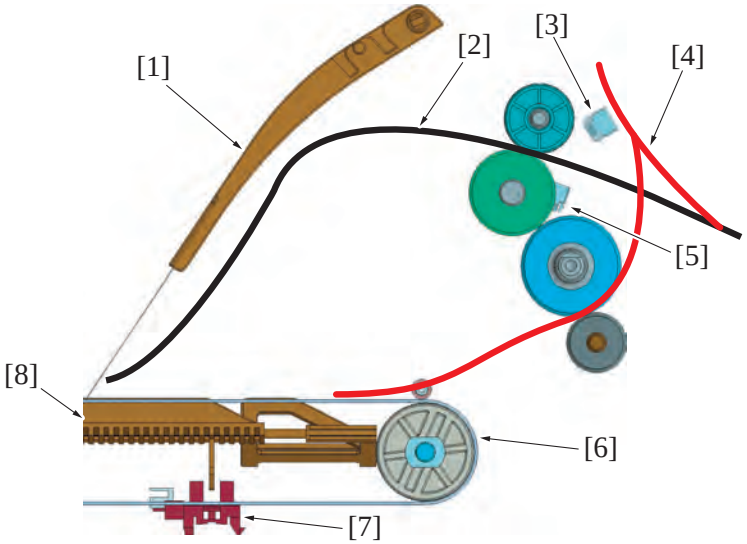
[1]	Tri-folding gate	[2]	Center fold roller motor (M5)
[3]	Tri-folding roller	-	-

9.7.3 Paper transport belt

- The paper transport belt transports the processed paper to the leading edge of the tray. Besides, the paper transport belt drives to prevent paper jams at the trailing edge of the tray.

(1) Transport operation

- After the leading edge of paper passes the fold exit sensor (PS12) for a predetermined amount of time, the paper transport belt motor rotates to drive the paper transport drive belt. As the exit path is different for center folding and tri-folding, the start and stop timings of the belt differ.
- The exit tray is equipped with an SD exit full sensor to detect paper at the exit port. When there is no paper at the exit port, the belt is driven until the leading edge of paper reaches the exit port. When there is paper at the exit port, the belt is driven after the leading edge of paper reaches the port.



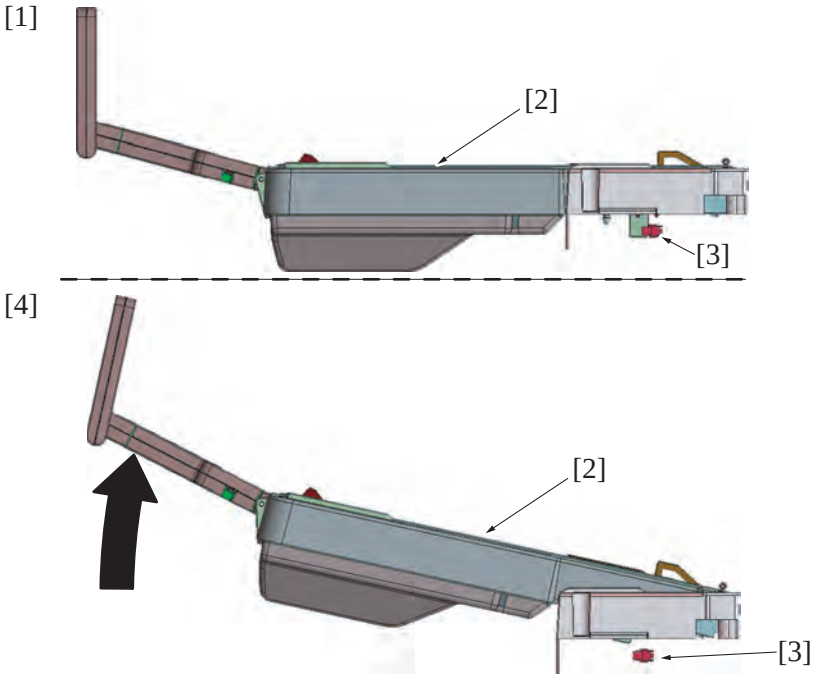
[1]	Paper press	[2]	Paper path for center folding and center staple
[3]	Fold exit sensor (position for center folding and center staple)	[4]	Paper path for tri-folding
[5]	Fold exit sensor (position for tri-folding)	[6]	Paper transport drive belt
[7]	SD exit full sensor (PS35)	[8]	Exit tray full detection actuator

(2) Exit tray upper limit detection

- The exit tray is equipped with an SD exit tray limit sensor to detect the load of paper in the exit tray.
- The counter starts after the SD exit tray limit sensor turns on. The finisher is stopped after the counter reaches a predetermined number, which functions as the exit tray upper limit.
- When the printing in different modes continues for some time, the mode that produces the smallest load amount is used to detect the upper limit.

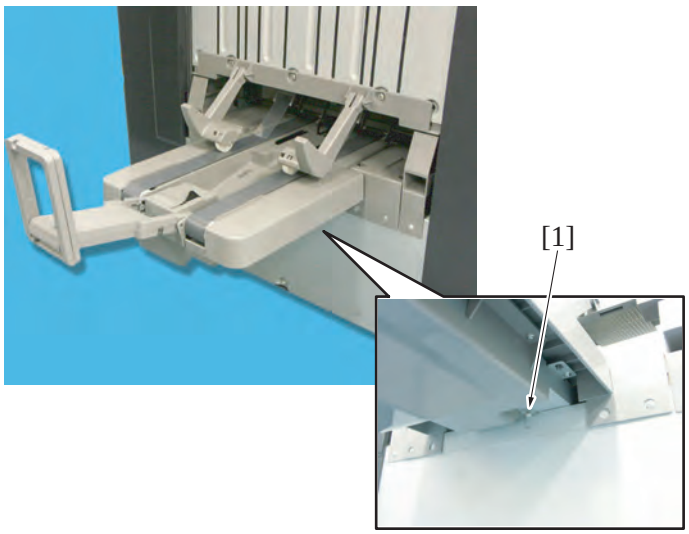
(3) Paper transport belt forced drive mechanism

- Lift the leading edge of the exit tray, and thus the paper transport drive belt can be manually driven. This operation will cause paper in the exit port to move to the leading edge of the exit tray.
- The normal exit tray is secured with screws. Remove the single exit tray lock screw at the rear of the exit tray to lift this exit tray.



[1]	Exit tray normal position	[2]	Exit tray

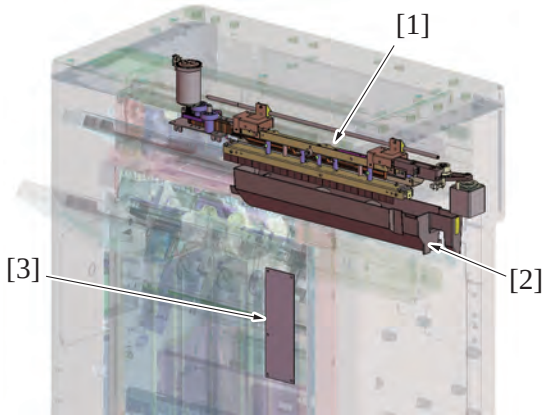
[3]	SD exit tray lift sensor (PS43)	[4]	Exit tray lifting state



[1]	Exit tray lock screw	-	-

10. PK-523

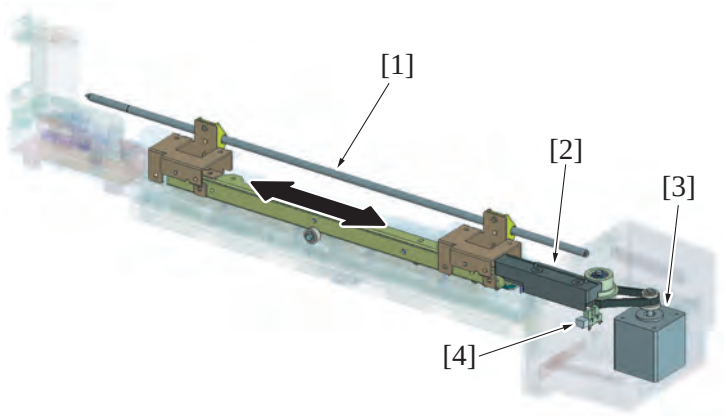
10.1 Configuration



[1]	Punch unit	[2]	Punch scraps box
[3]	Punch control board (PKCB)	-	-

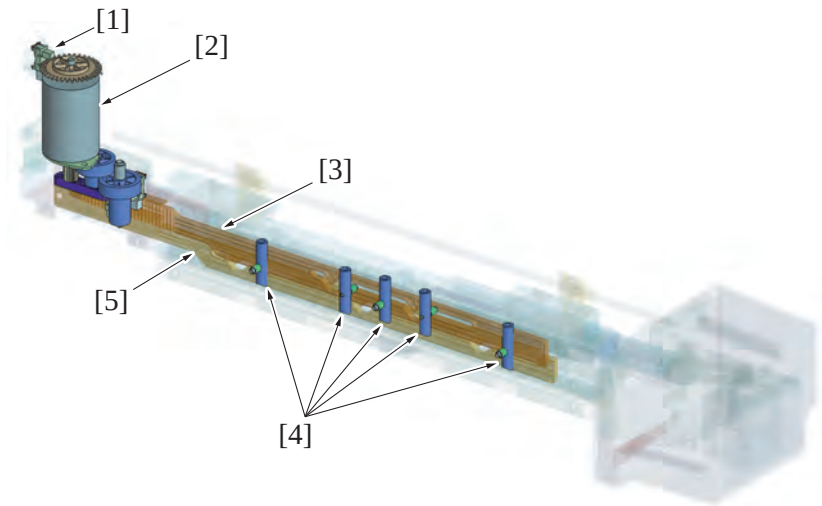
10.2 Drive

10.2.1 Punch shift section



[1]	Punch oscillating assy shift	[2]	Punch oscillating assy gear
[3]	Punch oscillating motor (M302)	[4]	PK punch home sensor/2 (PS303)

10.2.2 Punch section



[1]	Punch motor pulse sensor (PS306)	[2]	Punch drive motor (M301)
[3]	Punch blade drive guide/R	[4]	Punch blade

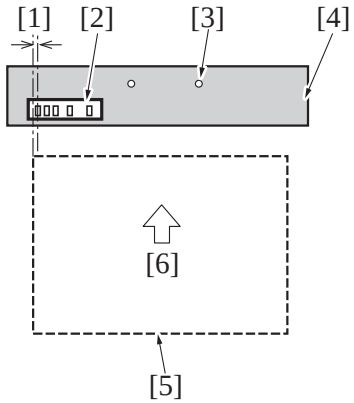
[5]	Punch blade drive guide/L	-	-

10.3 Operation

10.3.1 Punch standby position movement control

- Once the power is turned on, the punch oscillating motor rotates until the PK punch oscillation home sensor turns on to move the punch unit to the home position.
- When punch mode is selected, one of the five sensors corresponding to the paper size detects paper and moves the punch unit. After the job completes, the punch unit returns to the home position.
- When punch mode is not uses, the punch oscillation section is driven and moved to a predetermined position that will not cause feed jams.

<Example.: A4 size>



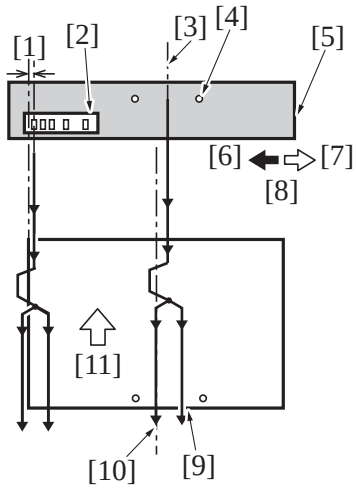
[1]	Distance of movement from the paper edge	[2]	Paper size detect board (PSDTB)
[3]	Punch blade	[4]	Punch unit
[5]	Paper	[6]	Paper transfer direction

10.3.2 Punch position correction control

The following procedure is used to correct the position of the punch unit that is positioned internally from the side edge of paper. So that, the center of paper can be punched at any time. By oscillation of the punch unit back and forth while paper is transported, so the punch position correction is performed.

- After the punch operation starts, or the paper size detection or punch operation completes, the punch unit is moved forward once until the paper size detect board detects the side edge of paper. The punch unit is then moved backward until the paper size detect board detects the side edge of paper again. (Position detection based on side edges)
- When the side edge positions are detected, the punch unit is again moved and positioned so that the center of the punch blade aligns with the center of the paper. The amount of distance and travel direction varies depending on the paper size.

<Example.: A4 size>

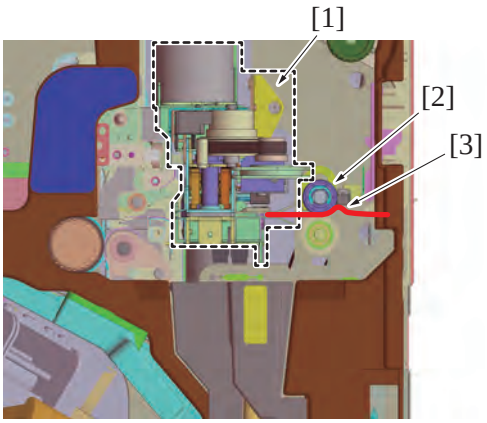


[1]	Side edge position	[2]	Paper size detect board (PSDTB)
[3]	Punch blade center	[4]	Punch blade
[5]	Punch unit	[6]	Front side
[7]	Rear side	[8]	Direction of punch unit movement
[9]	Paper	[10]	Center of paper
[11]	Paper transfer direction	-	-

10.3.3 Punch control

(1) Registration loop control

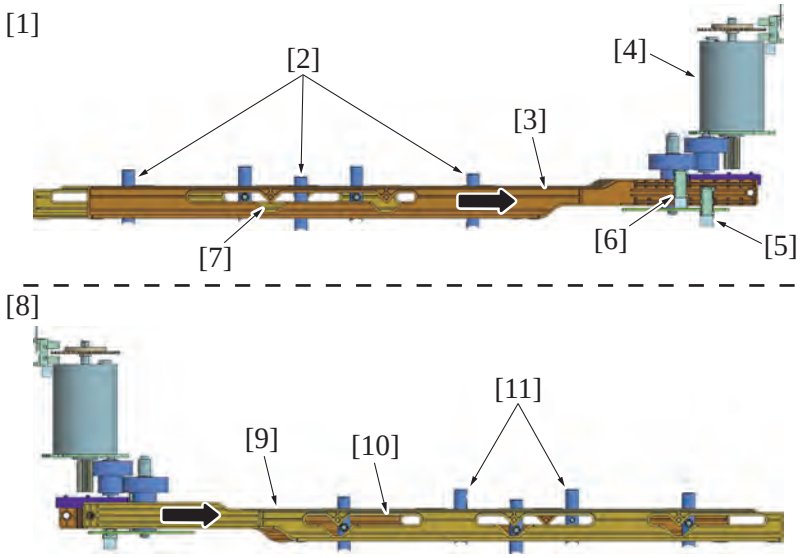
The FNS entry transport motor (finisher section) turns OFF temporarily to stop conveyance of paper when the specified time has passed since paper exit sensor detected the leading edge of the paper. Thus the paper is pressed against the entrance roller forming a loop to correct the bend. When the specified time has passed, the FNS entry transport motor (finisher section) turns ON to restart conveying the paper.



[1]	Punch kit	[2]	FNS entry roller (finisher section)
[3]	Loop formation	-	-

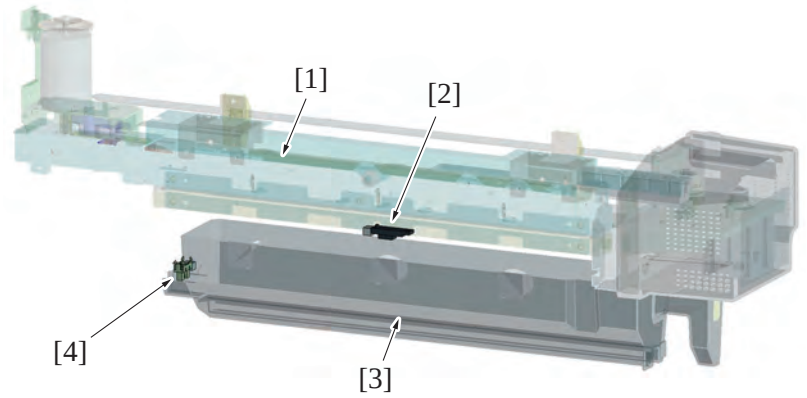
(2) Punch control

Transmitting the start signal from the main body, the FNS entry transport motor (finisher section) rotates.
In the punch mode, the FNS entry transport motor (finisher section) stops temporarily a specified period of time after the FNS entrance sensor detects the trailing edge of the paper.
At the same time, the punch drive motor is driven to move the punch blade drive guide/L/R horizontally. The punch blade drive guide has slots to shift punch blades up and down. Punch blades moving downward conduct the punch operation. punch drive motor stops and the punch operation is completed when the PK punch hole position sensor turns ON.
The FNS entry transport motor (finisher section) rotates again to convey the paper a specified period of time after it stops temporarily.



[1]	Right side view	[2]	Punch blade (for 3 holes)
[3]	Punch blade drive guide/R	[4]	Punch drive motor (M301)
[5]	PK punch hole position sensor (PS307)	[6]	PK punch home sensor/1 (PS301)
[7]	Punch drive plate (for 2 holes)	[8]	Left side view
[9]	Punch blade drive guide/L	[10]	Punch drive plate (for 3 holes)
[11]	Punch blade (for 2 holes)	-	-

10.3.4 Punch scraps box control



[1]	Punch kit	[2]	PK punch hole scraps box full sensor (PS302)
[3]	Punch scraps box	[4]	Punch scraps box set sensor (PS28: finisher section)

(1) Punch scraps box full sensor

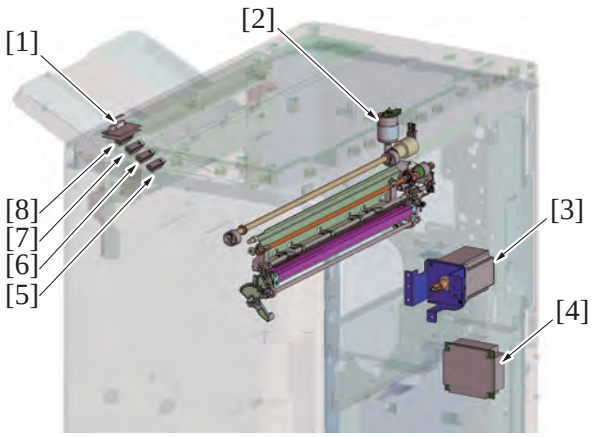
Punch scraps produced by the punch operation drops into the punch scraps box. When the punch scraps box becomes full of punch scraps, the PK punch hole scraps box full sensor turns on. So, the punch scraps box full information is sent to the main body.

(2) Punch scraps box detection

The punch scraps box set sensor detects the punch scraps box set state. When the punch scraps box is not located, the punch scraps box set sensor turns on and sends the no punch scraps box information to the main body.

11. ZU-609

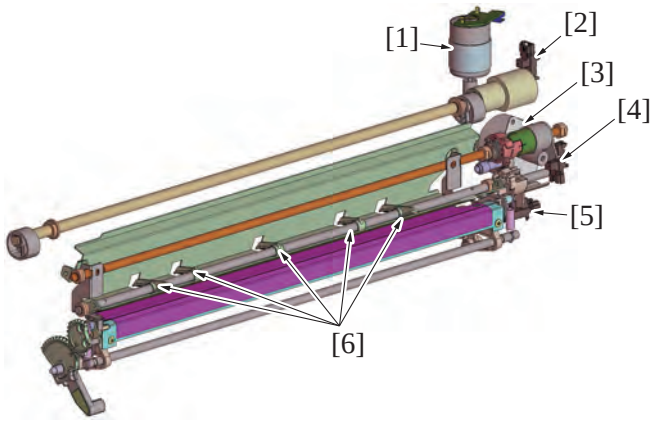
11.1 Configuration



[1]	ZU relay board (ZURB)	[2]	Pressure motor (M502)
[3]	ZU transport motor (M500)	[4]	ZU drive board (ZUDB)
[5]	Upper limit sensor4 (PS506)	[6]	Upper limit sensor3 (PS505)
[7]	Upper limit sensor2 (PS504)	[8]	Upper limit sensor1 (PS503)

11.2 Drive

11.2.1 1st folding

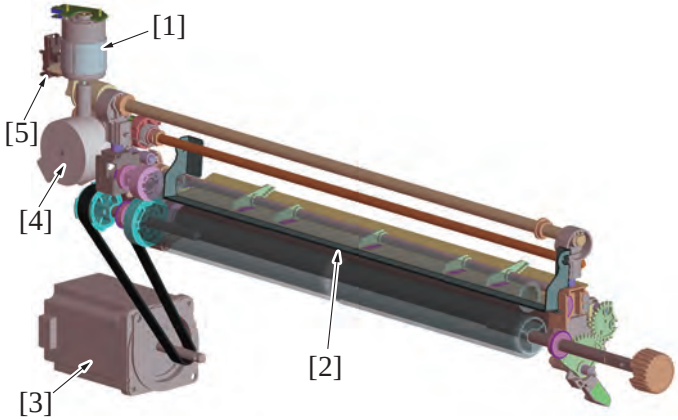


[1]	Pressure motor (M502)	[2]	Press home sensor (PS502)
[3]	Folding guide motor (M501)	[4]	Guide home sensor (PS500)
[5]	Chopper home sensor (PS501)	[6]	Folding claw

11.2.2 2nd folding/transport

NOTE

- **The dedicated the ZU transport motor (M500) is required for the finisher when the Z-folding unit is installed.**
- **At time of set-up, make sure to replace the ZU transport motor (M21) that is attached to the finisher with the supplied the ZU transport motor(M500). However, it is not necessary to install the ZU transport motor(M500) if the post inserter is already installed.**



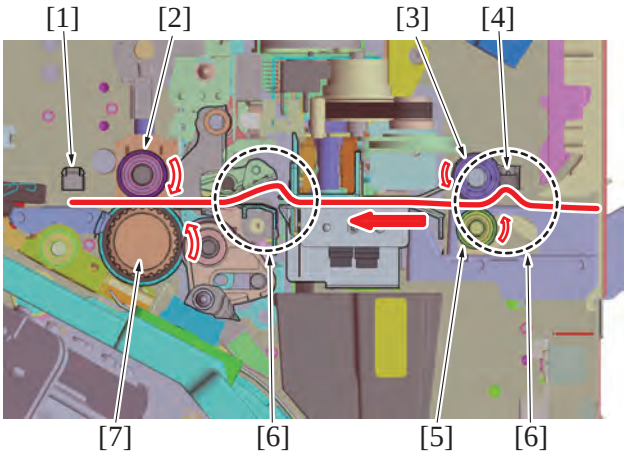
[1]	Pressure motor (M502)	[2]	Folding guide
[3]	ZU transport motor (M500)	[4]	Folding guide motor (M501)
[5]	Press home sensor (PS502)	-	-

11.3 Operation

11.3.1 1st folding mechanism

(1) FNS middle sensor downstream from paper transport

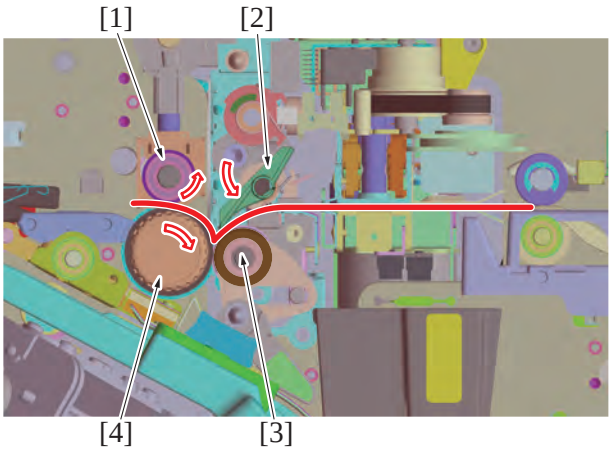
- To correct the skew of the transported paper, a loop is formed at the FNS entry roller and front of the transport roller. When a predetermined amount of time elapses after the paper passes the FNS entrance sensor, the transport roller is driven to transport paper until it reaches the paper exit sensor.
- Paper that is transported to the finisher passes through the transport roller in the finisher and is transported until it reaches the FNS middle sensor.
- The transport roller is temporarily stopped after the transport roller is rotated for specified times.



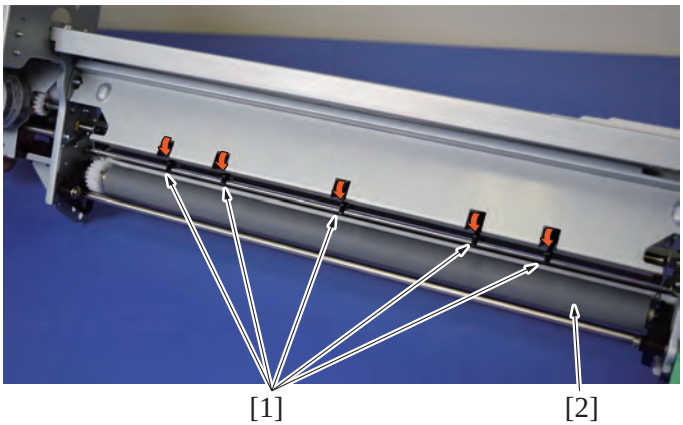
[1]	FNS middle sensor (PS36: finisher section)	[2]	Transport roller 1 (finisher section)
[3]	FNS entry roller 1 (finisher section)	[4]	FNS entrance sensor (PS34: finisher section)
[5]	FNS entry roller 2 (finisher section)	[6]	Location of loop creation
[7]	Transport roller 2 (finisher section)	-	-

(2) 1st folding downstream from the FNS middle sensor

- The folding guide motor drives to lower the folding clip and transport the paper downward.
- At the same time, the transport roller rotates in reverse to transport paper downward.
- The transport roller 2 and the Z-fold roller drive to fold paper that has been transported downward.



[1]	Transport roller 1 (finisher section)	[2]	Folding claw
[3]	Z-fold roller	[4]	Transport roller 2 (finisher section)

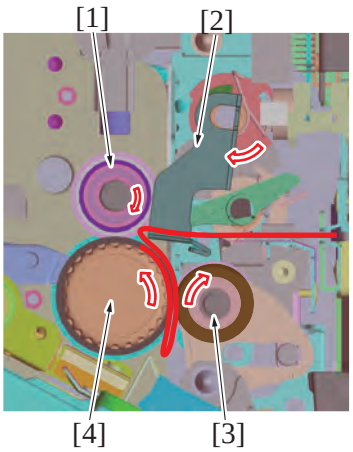


[1]	Folding claw	[2]	Z-fold roller

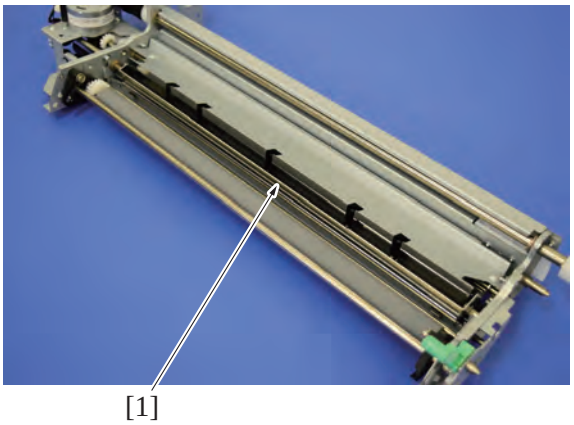
11.3.2 2nd folding mechanism

(1) 2nd folding

- 2nd folds are performed with the transport roller and folding guide.
- The folding guide drives to support the 2nd folding process. The 2nd folding is performed with the transport roller.
- The transport roller rotates counterclockwise, and the Z-fold roller rotates clockwise.



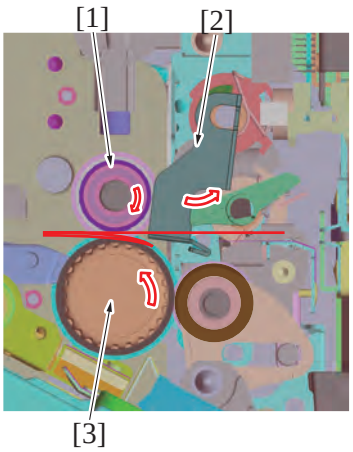
[1]	Transport roller 1 (finisher section)	[2]	Folding guide
[3]	Z-fold roller	[4]	Transport roller 2 (finisher section)



[1]	Folding guide	-	-

(2) Transport

- The Z-folded paper is transported to the finisher.
- When the Z-folded paper is transported, the folding guide returns to the home position at the same time.



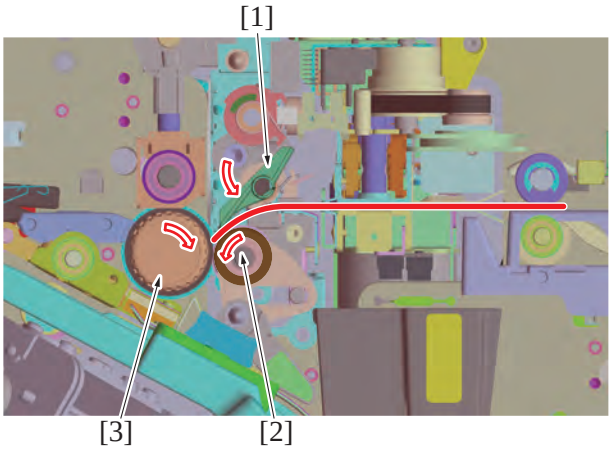
[1]	Transport roller 1 (finisher section)	[2]	Folding guide
[3]	Transport roller 2 (finisher section)	-	-

11.3.3 Double-folding mechanism

- A mechanism to double-fold paper for which a Z-fold cannot be performed is provided.
- When the paper has a size of 8-1/2 x 14, selecting Z-fold on the control panel will result in paper being double-folded instead of Z-folded.

(1) Transport roller downstream from the paper transport (Z-fold roller)

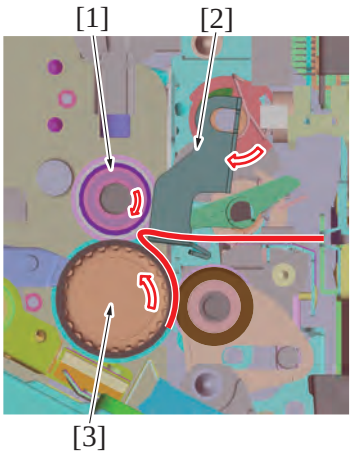
- When the double-fold operation starts, the folding guide motor is driven to lower the folding claw.
- Paper that is transported to the finisher is transported to the transport roller and Z-fold roller by the lowered folding claw.



[1]	Folding claw	[2]	Z-fold roller
[3]	Transport roller 2 (finisher section)	-	-

(2) Paper transport downstream from the double-fold section

- 2nd folding is performed with the transport roller and folding guide.
- The folding guide drives to support the 2nd folding process. The 2nd folding is performed with the transport roller.
- Control equivalent to that for the 2nd folding mechanism is performed.

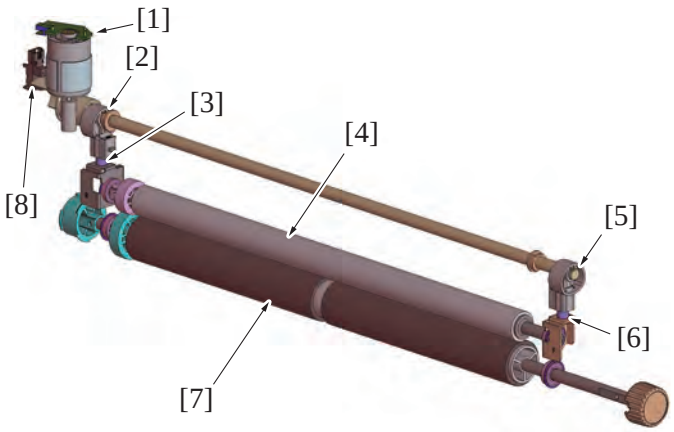


[1]	Transport roller 1 (finisher section)	[2]	Folding guide

[3]	Transport roller 2 (finisher section)	-	-

11.3.4 Transport roller pressure change

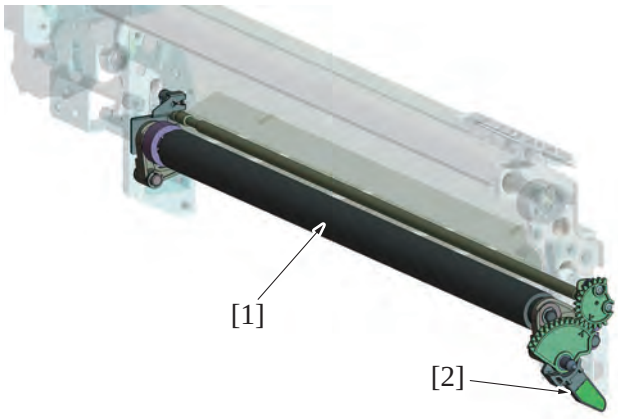
- The transport roller in the finisher transports paper during the Z-fold process. In this scenario, the normal transport roller pressure may be too weak to produce folds reliably.
- The transport roller pressure can be changed to enable reliable production of folds.
- Rotation of the pressure cam that is installed in the Z-fold unit moves the transport roller 1 vertically. This movement changes the transport roller pressure via the pressure spring.
- The pressure motor drives the pressure cam. The press home sensor controls the position of the pressure cam.



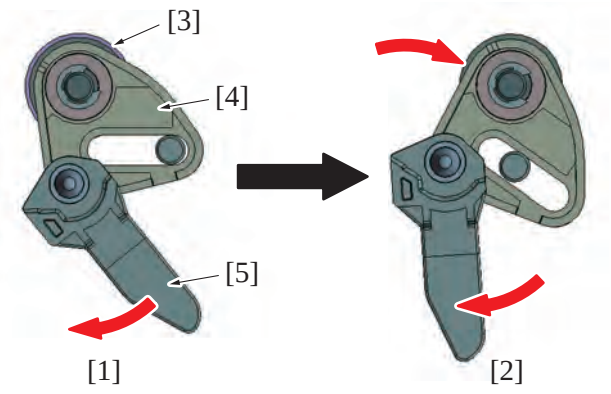
[1]	Pressure motor (M502)	[2]	Pressure cam /R
[3]	Pressure spring /R	[4]	Transport roller 1 (finisher section)
[5]	Pressure cam /F	[6]	Pressure spring/F
[7]	Transport roller 2 (finisher section)	[8]	Press home sensor (PS502)

11.3.5 Z-fold pressure release mechanism

- A Z-fold roller pressure release mechanism is provided to enable the removal of jams in the Z-fold unit.
- Operation of the pressure release lever rotates the cam is rotated, and thus releases the Z-fold roller from the transport roller 2 in the finisher.



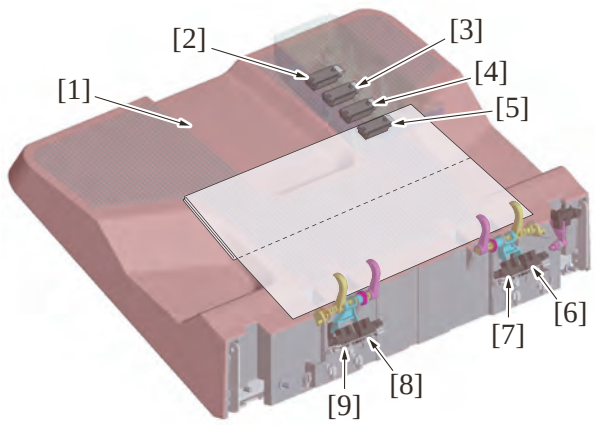
[1]	Z-fold roller	[2]	Pressure release lever

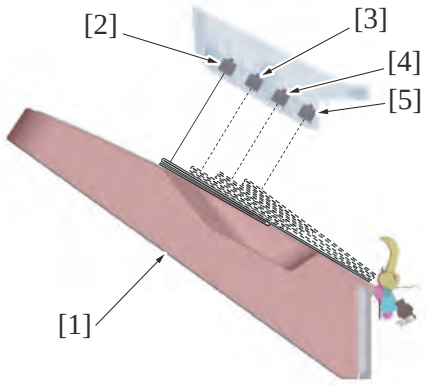


[1]	Before release	[2]	After release
[3]	Z-fold roller	[4]	Pressure release cam
[5]	Pressure release lever	-	-

11.3.6 Z-fold paper detection

- The upper limit sensor detects the Z-folded paper.
- When paper is discharged from the Z-fold section, the thickness of paper is different at the leading edge and trailing edge. The main tray upper sensor in the finisher cannot detect the Z-folded area. For this reason, the Z-folding upper limit sensor detects paper thickness (height).
- The main tray is lowered in accordance with the paper thickness (height).
- The upper limit sensor only makes detections for paper that is discharged from the Z-fold section. For normal paper discharge scenarios (including staple and punch operations), the finisher main tray upper sensor detects paper for the main tray.
- Four sensors are installed in the upper limit sensor, and the thickness (height) of the paper can be detected depending on the paper size.



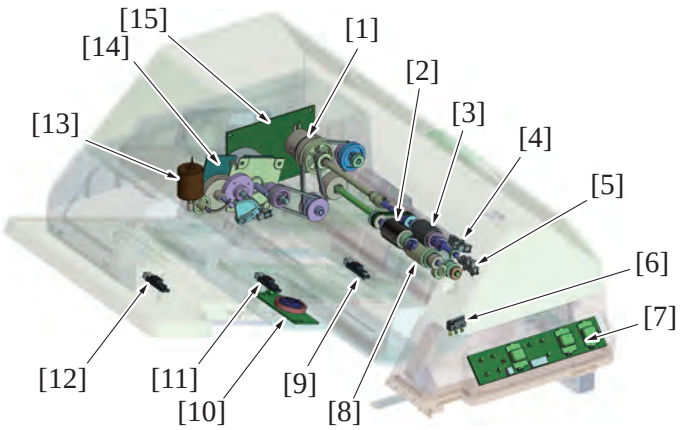


[1]	Main tray	[2]	Upper limit sensor1 (PS503)
[3]	Upper limit sensor2 (PS504)	[4]	Upper limit sensor3 (PS505)
[5]	Upper limit sensor4 (PS506)	[6]	Main tray lift up detection sensor/R (PS17: finisher section)
[7]	Main tray lift down detection sensor/R (PS15: finisher section)	[8]	Main tray lift down detection sensor/F (PS14: finisher section)
[9]	Main tray lift up detection sensor/F (PS16: finisher section)	-	-

12. PI-507

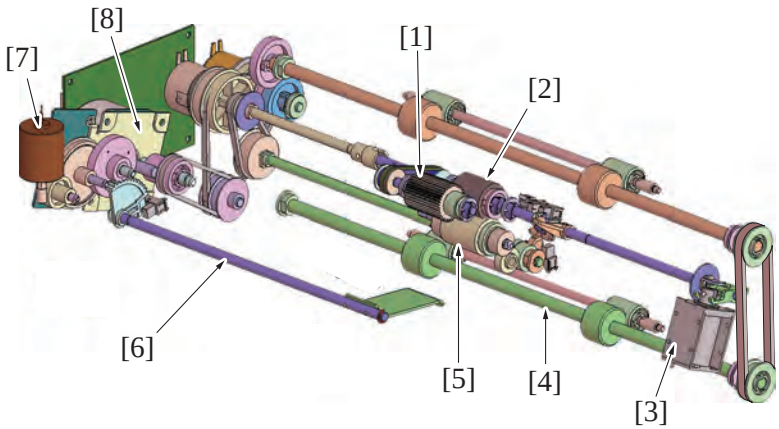
12.1 Configuration

- No control operation is performed for the upper tray.
- The detail of the post inserter section is explained with lower tray.



[1]	Transfer clutch /Lw (CL202)	[2]	Pick-up roller/Lw
[3]	Paper feed roller /Lw	[4]	Tray upper limit sensor /Lw (PS209)
[5]	Paper entrance sensor /Lw (PS206)	[6]	Upper door open/close switch (MS205)
[7]	PI operation board (PIOB)	[8]	Separation roller /Lw
[9]	Paper empty sensor /Lw (PS207)	[10]	Paper size VR /Lw (VR202)
[11]	Paper set sensor /Lw (PS208)	[12]	L size sensor /Lw (PS212)
[13]	Tray lift motor /Lw (M202)	[14]	Transfer motor (M203)
[15]	PI drive board (PIDB)	-	-

12.2 Drive

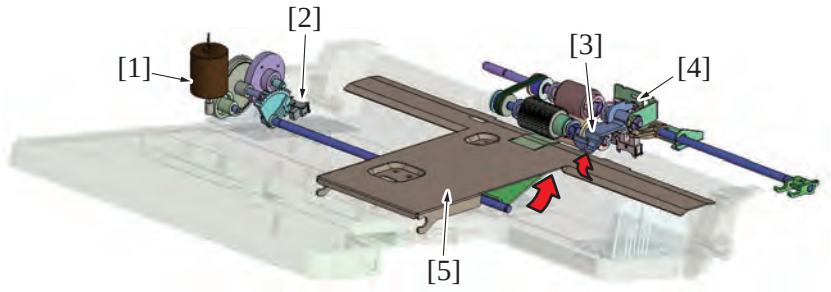


[1]	Pick-up roller/Lw	[2]	Paper feed roller /Lw
[3]	Pick-up solenoid /Lw (SD202)	[4]	Transport roller
[5]	Separation roller /Lw	[6]	Tray lift shaft/Lw
[7]	Tray lift motor /Lw (M202)	[8]	Transfer motor (M203)

12.3 Operation

12.3.1 Tray lift mechanism

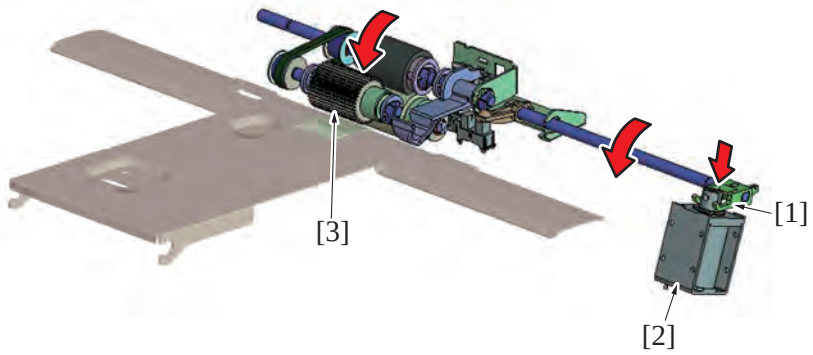
- The tray lift motors /up and /Lw move up and down the trays /Lw by rotating in the forward and reverse direction to drive the lift arms /Lw and move up and down the lift plates /Lw, respectively.
- At the upper limit position of the tray, the tray upper limit sensors /Lw detect the actuators lifted up by the lift plates.
- At the lower limit position of the tray, the tray lower limit sensors /Lw detect the actuators coupled with the lift arms /Lw.



[1]	Tray lift motor /Lw (M202)	[2]	Tray lower limit sensor /Lw (PS210)
[3]	Actuator /Lw	[4]	Tray upper limit sensor /Lw (PS209)
[5]	Tray lift plate /Lw	-	-

12.3.2 Pick-up mechanism

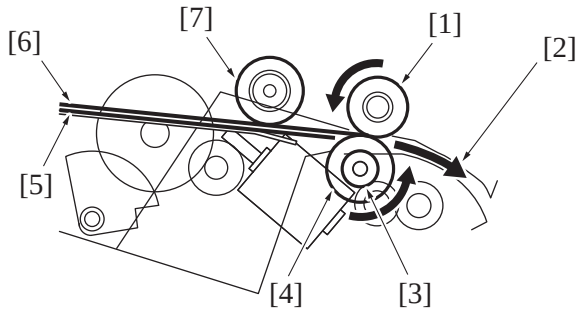
- The pick-up solenoids /Lw turn ON to pick up the paper.
- The release arm held upward by the spring lifts up the pick-up roller mounting plate to release the pick-up roller.
- When the pick-up solenoids /Lw turn ON, the release arm moves backward, and then the pick-up roller mounting plate and the pickup roller fall down by their own weight.
- The pick-up roller driven by the transfer motor presses the paper and picks it up to transfer it to the separation section.



[1]	Release arm/Lw	[2]	Pick-up solenoid /Lw (SD202)
[3]	Pick-up roller/Lw	-	-

12.3.3 Separation mechanism

- The separation roller is driven to rotate in the opposite direction from the paper transfer direction. When transferring no or 1 sheet of paper, the separation roller rotates in the paper transfer direction to transfer the paper to the paper transfer section because the frictional force between the paper feed roller or the paper and the separation roller is stronger than the frictional force of the torque limiter.
- When transferring 2 or more sheets of paper, the separation roller rotates in the reverse direction to prevent the bottom sheet from being transferred because the frictional force between the sheets is smaller than the frictional force of the torque limiter.



[1]	Paper feed roller	[2]	Paper transfer direction
[3]	Torque limiter	[4]	Separation roller
[5]	Second sheet	[6]	First sheet
[7]	Pick-up roller	-	-

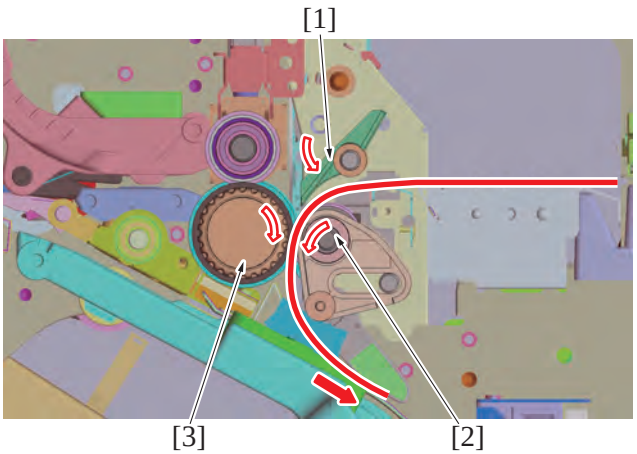
12.3.4 Path switching mechanism

- A path switching mechanism is provided to transport paper to the saddle unit when tri-folding or booklet is selected from the post inserter section.

- When the normal switchback operation is performed, pages can become misaligned. For this reason, a transport path mechanism is provided to transport paper to the saddle unit.
- The transport path is changed with the Z-folding unit if the Z-folding unit is installed as option. If the Z-folding unit is not installed, the path switching assy that is supplied with the post inserter is required.
- When the tri-folding or the booklet function is selected from the post inserter, the folding guide motor is driven to lower the folding clip.
- Paper that is transported to the finisher is transported to the transport roller and Z-fold roller by the lowered folding clip. Paper is then transported to the saddle unit.

NOTE

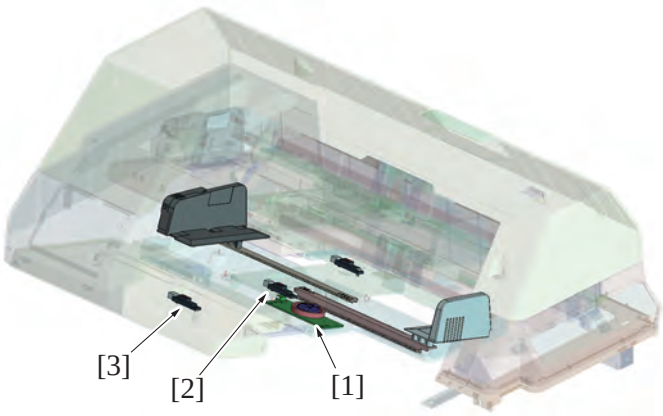
- **The dedicated the transport roller drive motor(M204) is required for the finisher when the post inserter is installed.**
- **At time of set-up, make sure to replace the ZU transport motor (M21) that is attached to the finisher with the supplied the transport roller drive motor(M204). However, it is not necessary to install the transport roller drive motor(M204) if the Z-folding unit is already installed.**



[1]	Folding claw	[2]	Z-fold roller
[3]	Transport roller 2 (finisher section)	-	-

12.3.5 Paper size detection control

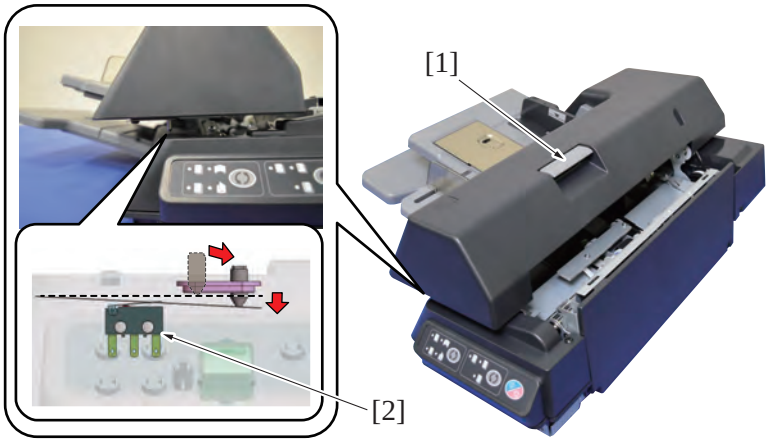
- The paper size VR /Lw coupled with the side guide detects the paper size in the main scan direction.
- The paper set sensors /Lw and the L size sensor /Lw detects the paper size in the sub scan direction.



[1]	Paper size VR /Lw (VR202)	[2]	Paper set sensor /Lw (PS208)
[3]	L size sensor /Lw (PS212)	-	-

12.3.6 Door open/close detection mechanism

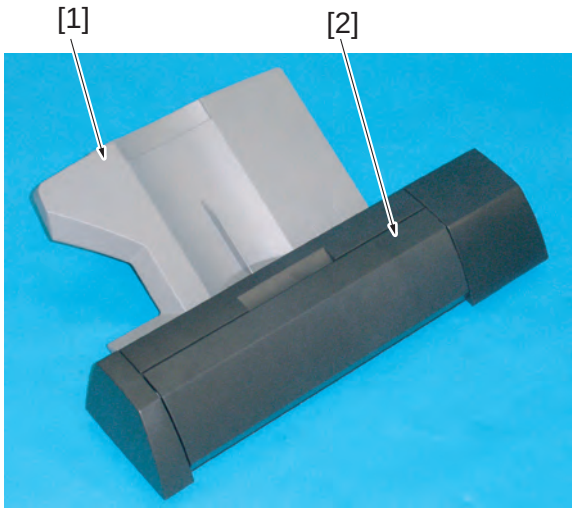
- The upper door open/close switch is installed in the lower-front of the post inserter to detect open/close states of the door.
- Open the door, the warning screen will display on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.



[1]	Upper door open/close lever	[2]	Upper door open/close switch (MS205)

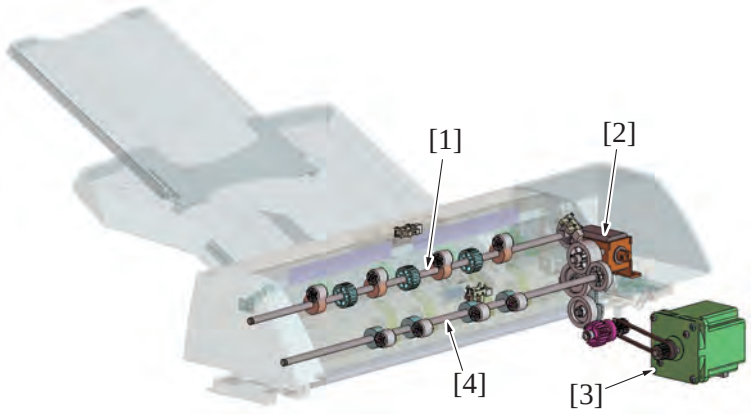
13. JS-602

13.1 Configuration



[1]	Job tray	[2]	Job separator cover

13.2 Drive

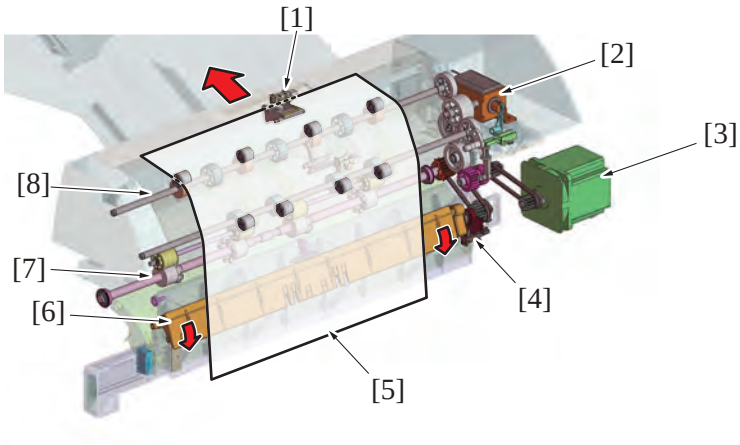


[1]	Job separator exit roller	[2]	Entrance switching solenoid (SD401)
[3]	Sub tray discharge motor (M18: finisher section)	[4]	Job separator transport roller

13.3 Operation

13.3.1 Job tray transport mechanism

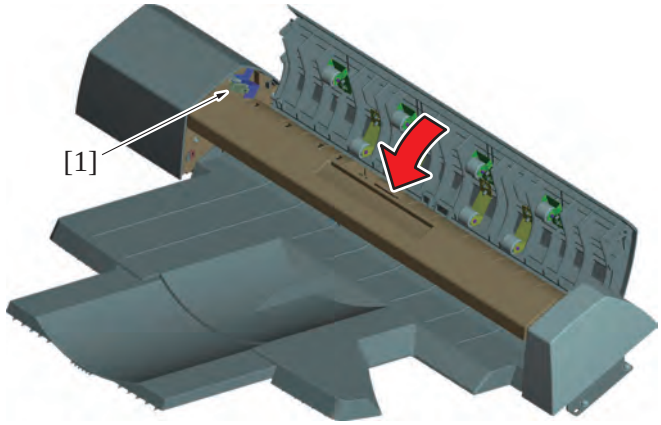
- The sub tray discharge motor in the finisher drives to rotate the job separator transport roller and job separator exit roller to transport paper to the tray.
- At the sub tray/JS route change gate, change of the transport path to the job tray is performed.
- The sub tray discharge motor of finisher drives to move the sub tray/JS route change gate horizontally to switch between the paper paths. Therefore the entrance switching solenoid is not used.



[1]	Job tray paper exit sensor (PS402)	[2]	Entrance switching solenoid (SD401)
[3]	Sub tray discharge motor (M18: finisher section)	[4]	Sub tray/JS route change gate home sensor (PS23: finisher section)
[5]	Paper	[6]	Route change gate
[7]	Job separator transport roller	[8]	Job separator exit roller

13.3.2 Door open/close detection mechanism

- The job tray door sensor is installed in the rear of the job separator section to detect open/close states of the door.
- When the job tray door is opened, a warning screen appears on the control panel. All the setting operations and jobs are disabled while the warning screen is displayed. The printing job is interrupted, and the paper being transported causes paper misfeed. The warning screen can be cancelled by closing the door.

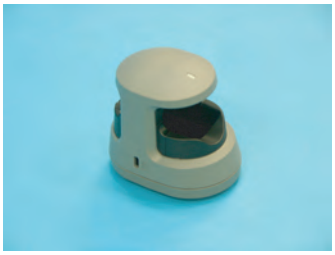


[1]	Job tray door sensor (PS401)	-	-

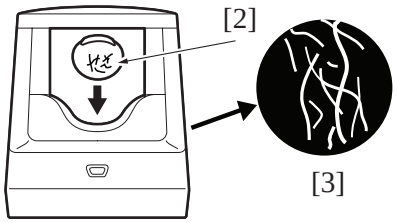
PF THEORY OF OPERATION AU-102/AU-201S/OT-508

1. AU-102

1.1 Configuration



[1]



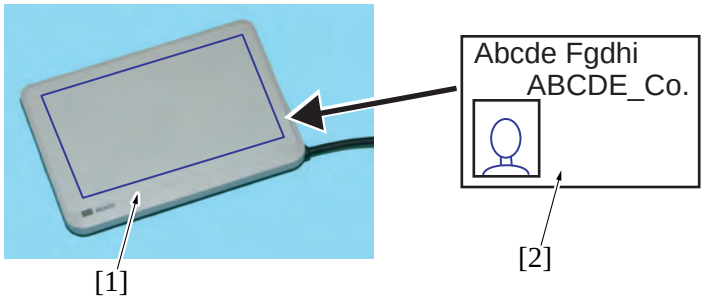
[1]	Authentication unit (AU-102)	[2]	Finger
[3]	Vein image	-	-

1.2 Operation

- A finger vein pattern is used for personal identification.
- Vein patterns are inside the body and cannot be visually recognized. This makes vein patterns extremely difficult to forge or falsify. The vein pattern authentication system can provide high security.
- With ultra-red LED radiation, a finger vein pattern is captured by camera and its image is created. The vein pattern image is registered and a person can be identified if the person's vein pattern matches the registered one at the time of user authentication.

2. AU-201S

2.1 Configuration



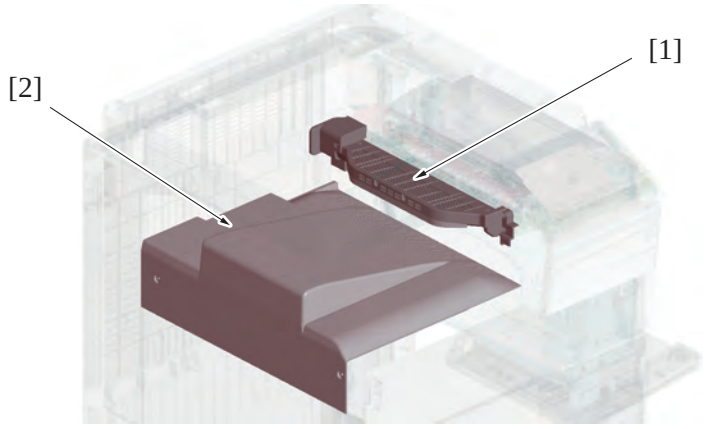
[1]	Authentication unit (AU-201)	[2]	Non-contact IC card

2.2 Operation

- A non-contact IC card, such as an employee ID card, is used for personal identification.
- The system supports the communications protocol in compliance with Type A and FeliCa (Type C) of ISO14443.
- It can be used that the card corresponded to FeliCa, Type A, SSFC (Shared Security Formats Cooperation), FCF (FeliCa common-use format), or FCF campus.
- Simply placing the IC card on the authentication unit will let the unit read the data from the card.

3. OT-508

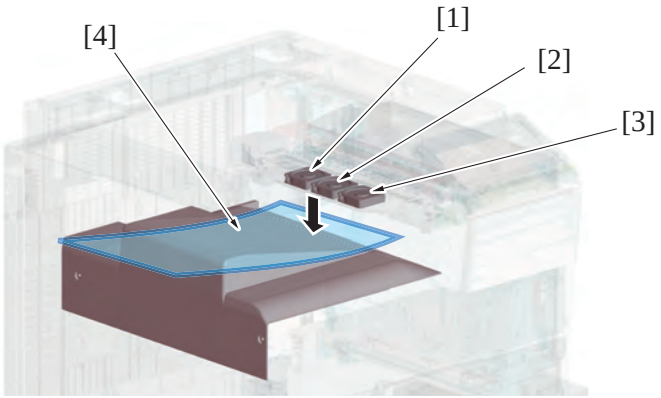
3.1 Configuration



[1]	Fan unit	[2]	Output tray

3.2 Operation

- Output Tray OT-508 is comprised a fan unit and a paper exit tray.
- In order to avoid toner adhesion to other things, three tucking fan motors installed in the fan unit send outside air to an ejected paper for cool it down.

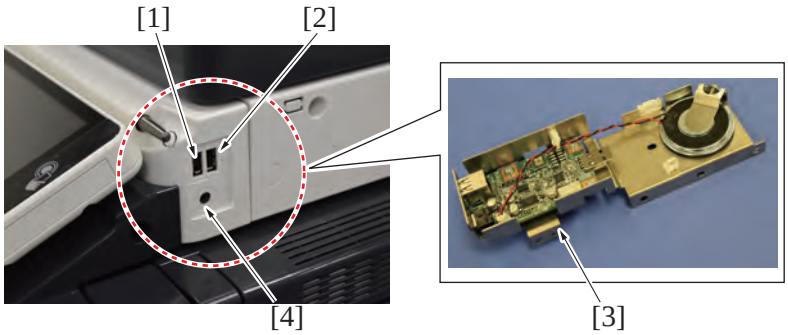


[1]	Tucking fan/Rr (FM102)	[2]	Tucking fan/Md (FM101)
[3]	Tucking fan/Fr (FM103)	[4]	Paper

PG THEORY OF OPERATION EK-610/EK-611/SC-508

1. EK-610

1.1 Configuration



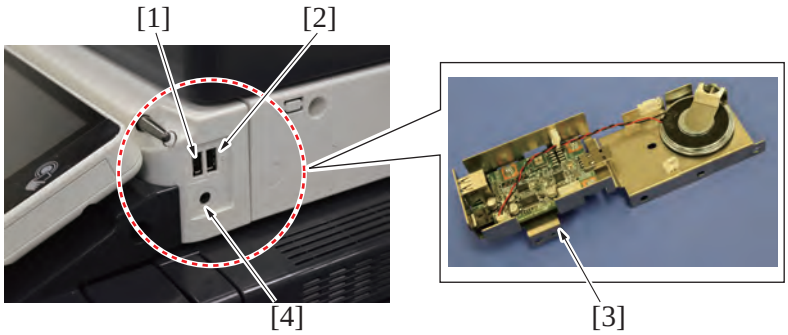
[1]	USB terminal (extension)	[2]	USB terminal (standard)
[3]	Local Interface Kit EK-610	[4]	Voice guidance output terminal

1.2 Operation

- The document can be printed directly from, or saved in, the USB memory.
- Connecting the USB keyboard (dealer option: overseas market only) will permit keyboard input.
- The voice guidance function can be used. To use the voice guidance function, i-Option LK-104 v3 is required.

2. EK-611

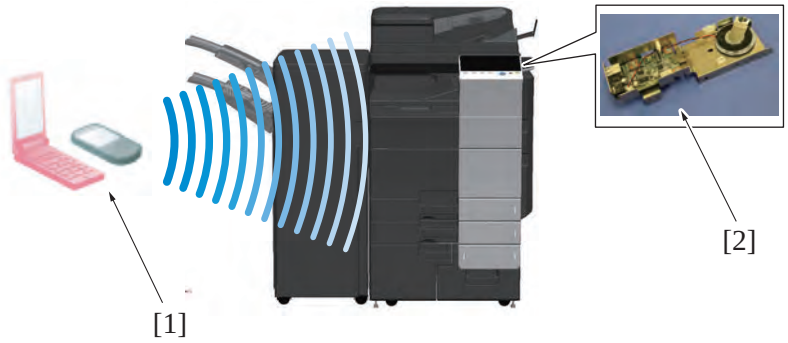
2.1 Configuration



[1]	USB terminal (extension)	[2]	USB terminal (standard)
[3]	Local Interface Kit EK-611	[4]	Voice guidance output terminal

2.2 Operation

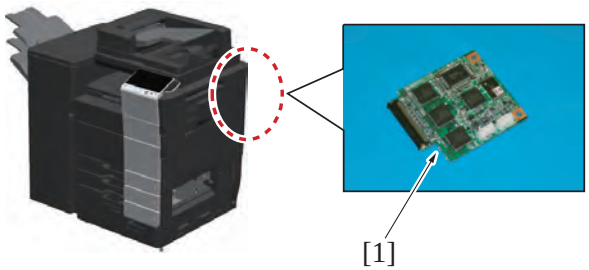
- The document can be printed directly from, or saved in, the USB memory.
- Connecting the USB keyboard (dealer option: overseas market only) will permit keyboard input.
- The local interface kit is mounted when the voice guidance function, and functions interacting with the portable phone or PDA (portable data device), compatible with Bluetooth, are to be used. It has a built-in speaker and Bluetooth communication receiver.
- To use the voice guidance function, i-Option LK-104 v3 is required.



[1]	Portable phone, PDA	[2]	Local Interface Kit EK-611

3. SC-508

3.1 Configuration



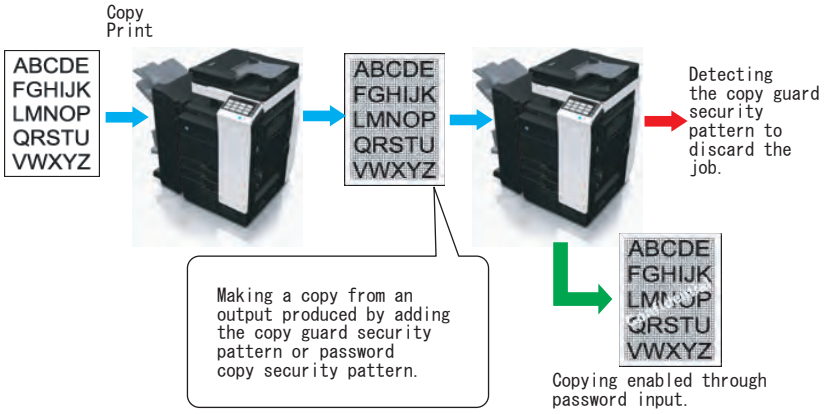
[1]	Security Kit SC-508 *	

NOTE

- ***: It is necessary to install two security kits to the machine for each front side scanning and back side scanning.**

3.2 Operation

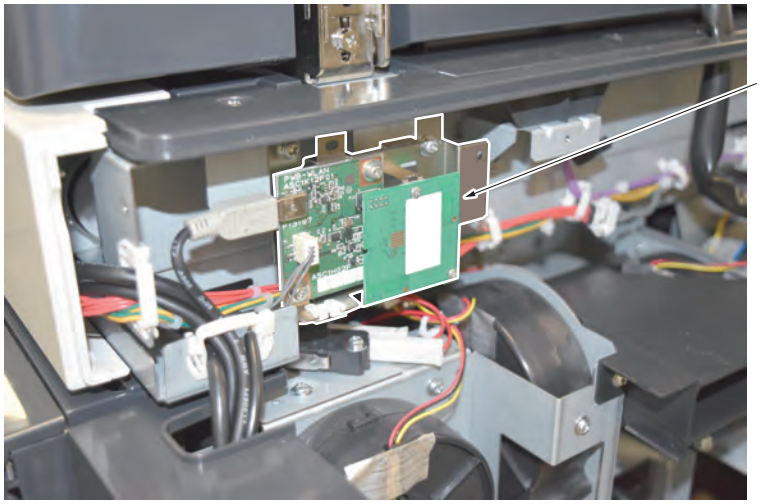
- The security kit offers the copy guard (copy prohibited) and password copy functions in addition to the conventional copy protect function. The copy guard security pattern or password copy security pattern printed on the original, is detected to thereby prevent unauthorized copies from being produced.
- The copy guard security pattern and password copy security pattern can be detected only by the Konica Minolta machine mounted with the copy guard and password copy functions.



PH THEORY OF OPERATION UK-212

1. CONFIGURATION

1.1 Mounting position



[1]	Upgrade kit (UK-212)	-	-

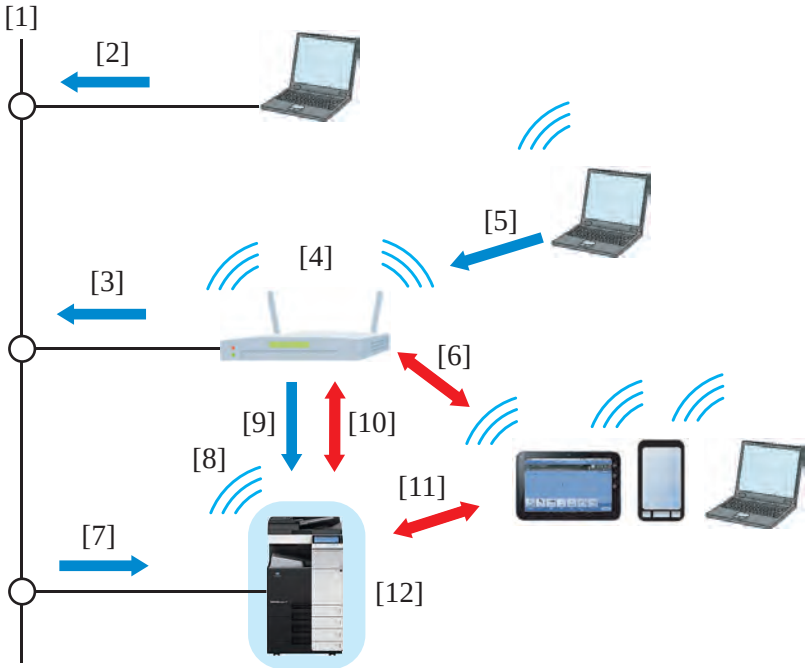
2. OPERATION

2.1 Outline

When the Upgrade kit UK-212 is installed, the following functions can be added.

- By connecting the MFP main unit as a wireless LAN adapter to a wireless LAN access point connected to the LAN environment, a job can be executed. The MFP main unit can be connected to both a wireless LAN environment and a LAN environment. (Wireless Only, Wired +Wireless (Secondary Mode))
- Direct communication between the MFP main unit and the mobile terminal (Android terminal, iOS terminal or Wi-Fi support devices) will be enabled. (Wired+Wireless (Primary Mode)*, Wired+Wireless (Wi-Fi Direct))
- Even when the MFP main unit is on standby state in "ErP Auto Power Off mode", the MFP main unit can be started from a client to execute a job.

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC connected to the LAN environment
[3]	Job received via the wireless LAN access point	[4]	Wireless LAN access point connected to the LAN environment
[5]	Job received from a PC connected to the wireless LAN environment	[6]	Communication with a mobile terminal connected to the wireless LAN environment*1
[7]	Job received from the MFP main unit via the LAN	[8]	• Communication with the wireless LAN access point (Wireless Only, Wired+Wireless (Secondary Mode)) • Enabled communication with a mobile terminal (Wired + Wireless (Primary Mode)*, Wired + Wireless (Wi-Fi Direct))
[9]	Job received from the MFP main unit via the wireless LAN	[10]	Communication via the wireless LAN access point connected to a mobile terminal (Android terminal, iOS terminal or Wi-Fi support devices)
[11]	Direct communication with a mobile terminal (Wired + Wireless (Primary Mode)*, Wired + Wireless (Wi-Fi Direct))	[12]	Machine (on startup)

NOTE

- **To use UK-212, the following settings are required.**
  [Service Mode] -> [Network Settings] -> [2nd Network Setting]
- **The "Interface structure" includes the following five patterns. These patterns can be selected depending on the connection environment of the MFP main unit.**
  [Service Mode] -> [Network Settings] -> [2nd Network Setting]- > [Network Interface Settings]

No.	Network Interface Settings	Connection environment of MFP main unit
1	Wired Only	Use when the MFP main unit is connected only to a LAN environment.
2	Wireless Only	Use when the MFP main unit is connected only to a wireless LAN environment.
3	Wired+Wireless (Secondary Mode)	Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment.
4	Wired+Wireless (Primary Mode) *	• Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment. • The MFP main unit is used as a wireless LAN access point (Primary Mode).
5	Wired+Wireless (Wi-Fi Direct)	• Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment. • The MFP main unit is used as a wireless LAN access point. • With this mode, a mobile terminal (excluding iOS) can be connected to Wi-Fi Direct authentication devices easily.

- **For details of the structure of the MFP interface, see "PH.2.2 2nd network interface structure".**

2.2 2nd network interface structure

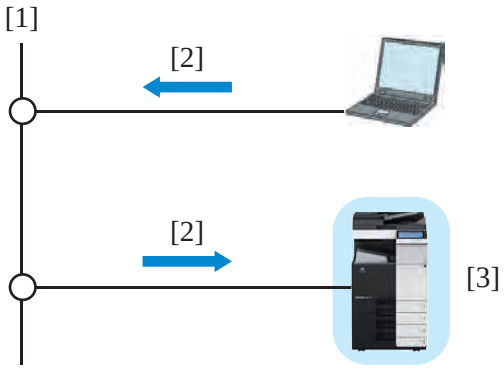
2.2.1 Wired Only

- The MFP main unit is used only when being connected to the LAN environment. (Initial setting)
- The LAN line is the main line.

(1) Operation

- To execute a job received from a client via the LAN.

Basic concept of connection



[1]	LAN environment	[2]	Job
[3]	MFP main unit (on startup)	-	-

2.2.2 Wireless Only

- Use when the MFP main unit is connected only to a wireless LAN environment.
- The wireless LAN line is the main line.

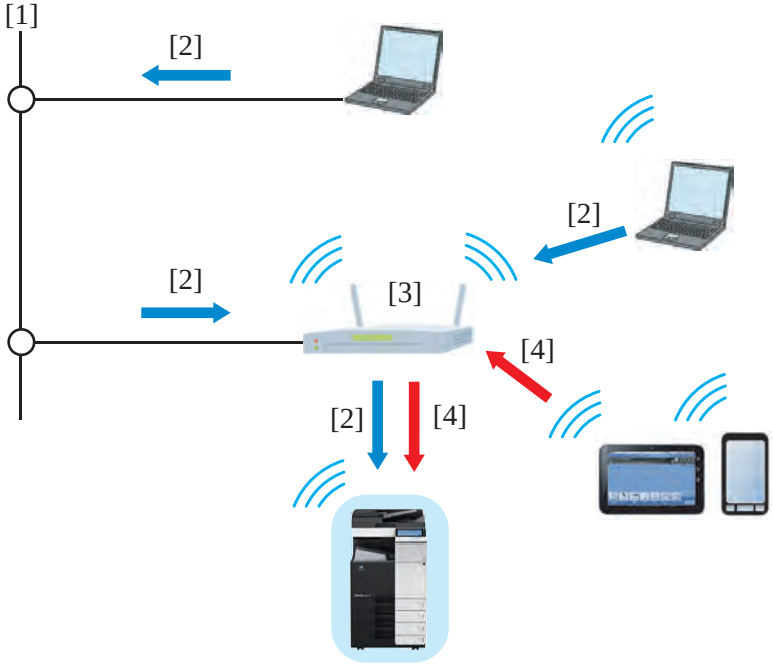
(1) Operation

- To execute a job received from a client via the wireless LAN access point.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
  - To execute a job received from an Android terminal or iOS terminal (called mobile terminal hereafter) connected to the wireless LAN.

NOTE

- **A wireless communication is performed between the MFP main unit and a client via the wireless LAN access point.**

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC
[3]	Wireless LAN access point	[4]	Job received from a mobile terminal

2.2.3 Wired+Wireless (Secondary Mode)

- Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment.

- The LAN line is the main line, and the wireless LAN line is the sub line.

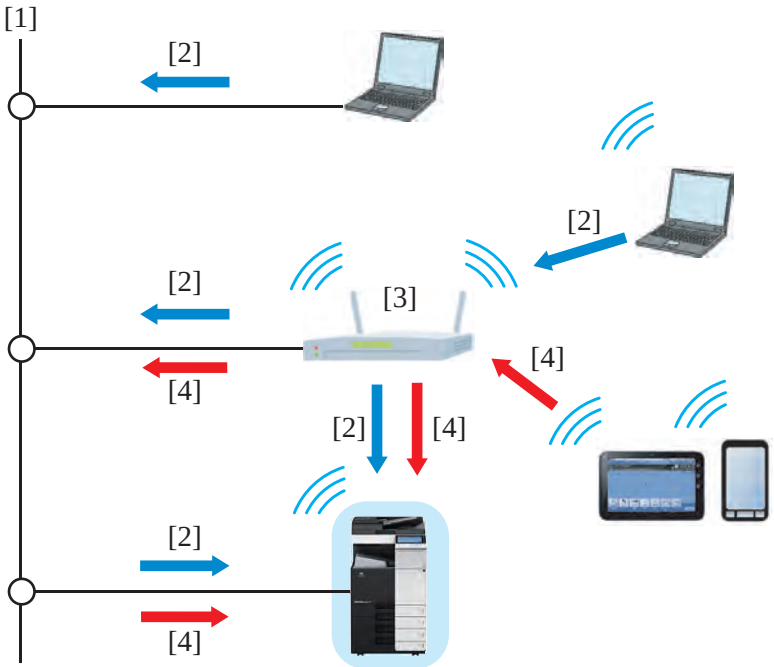
(1) Operation

- To execute a job received from a client via the LAN.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
  - To execute a job received from an Android terminal or iOS terminal (called mobile terminal hereafter) connected to the wireless LAN.
- To execute a job from a client via the wireless LAN access point.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
  - To execute a job received from an Android terminal or iOS terminal (called mobile terminal hereafter) connected to the wireless LAN.

NOTE

- **A communication is performed between the MFP main unit and the mobile terminal via the LAN and wireless LAN access point.**

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC
[3]	Wireless LAN access point	[4]	Job received from a mobile terminal

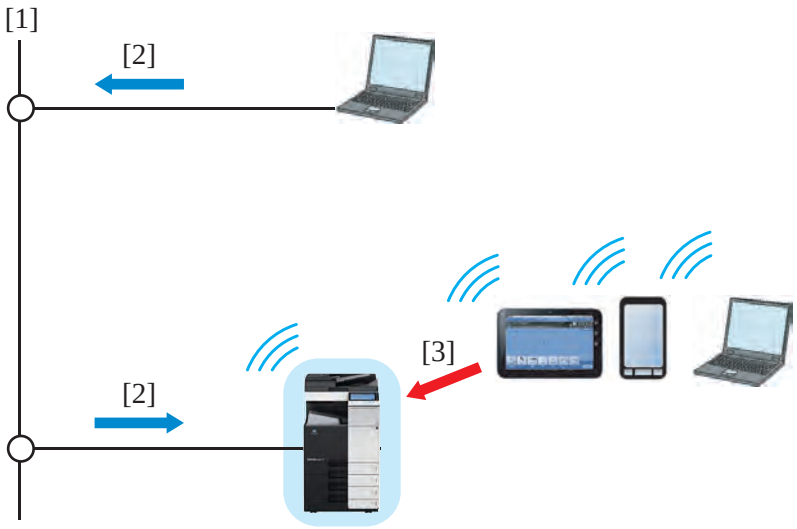
2.2.4 Wired+Wireless (Primary Mode)

- Use when the MFP main unit is connected to both a LAN environment and a wireless LAN environment.
- The LAN line is the main line, and the wireless LAN line is the sub line.
- The MFP main unit is used as a wireless LAN access point.
- When starting up the MFP main unit, perform wireless LAN communication between the MFP main unit and the mobile terminal (Android terminal, iOS terminal, or devices supporting Wi-Fi) without via wireless LAN access point.

(1) Operation

- To execute a job received from a client via the LAN.
  - To execute a job received from a PC connected to the LAN.
  - To execute a job received from a PC connected to the wireless LAN.
- To execute a job received from a mobile terminal through a wireless communication.

Basic concept of connection



[1]	LAN environment	[2]	Job received from a PC
[3]	Job received from a mobile terminal	-	-

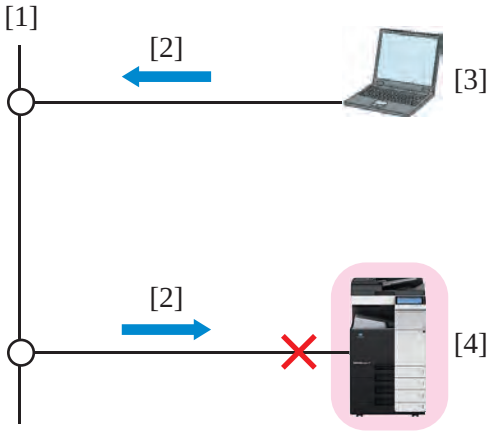
2.2.5 Wired+Wireless (Wi-Fi Direct)

- This mode performs same control as that with Wired+Wireless (Primary Mode).
- When connected to devices supporting Wi-Fi Direct authentication, connection without settings of SSID and password is enabled.

2.3 Operation on ErP Auto Power Off mode

- On ErP Auto Power Off mode, the sub power supply turns off, so that the power consumption is controlled. Touching the power key to start the MFP main unit.
- When the MFP main unit on which UK-212 is not installed, is switched to ErP Auto Power Off mode, the operations such as receiving data, receiving fax, reading original, printing and so on cannot be executed.
- When UK-212 is installed, ErP Auto Power Off mode can be released remotely (by starting up the MFP main unit).
  [Utility] -> [Administrator Settings] -> [Network Settings] -> [Wireless Network Setting]

Diagram of standby state in "ErP Auto Off mode" of the MFP main unit



[1]	LAN environment	[2]	Print job
[3]	Client (PC)	[4]	Machine (on standby in ErP Auto Power Off mode)

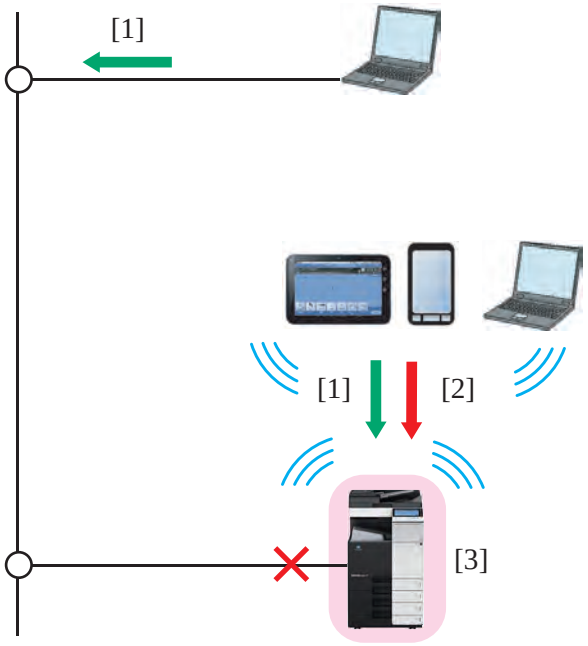
2.3.1 Wired + Wireless (Secondary Mode)

NOTE

- **To awake from the ErP Auto Power Off mode, select [Awake with ARP + Unicast Communication].**

1. The MFP main unit waits for a startup indication sent via the wireless LAN communication.
2. Receiving a startup indication from a client via the wireless LAN communication without via the wireless LAN access point to start up the MFP main unit.
   - Receiving a startup indication from a PC to start up the MFP main unit.
   - Receiving a communication from a mobile terminal to start up the MFP main unit.

Diagram of startup operation

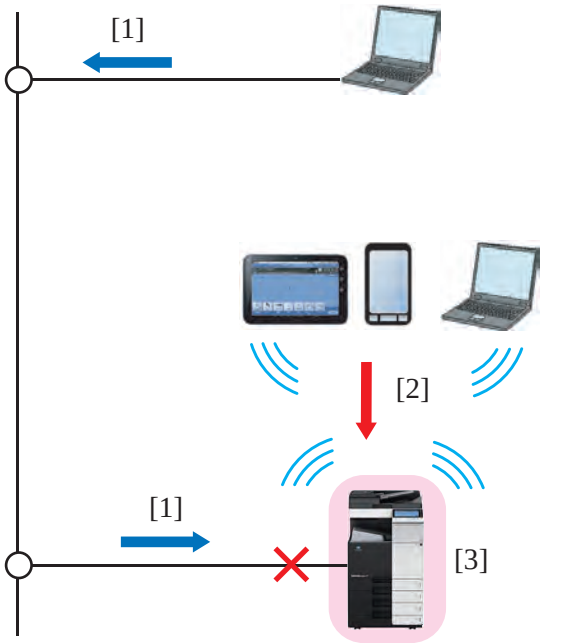


[1]	Startup indication *1	[2]	Job received from a mobile terminal
[3]	MFP main unit (on startup)	-	-

- *1: To execute a print job, [Wake-On-Lan setting] is required to be configured at [Initial settings] of a printer driver.

3. After starting up the MFP main unit, execute a job received from a client.
   - Execute a job received from a PC via the LAN.
   - Execute a job received from a PC via the wireless LAN communication.
   - Execute a job received from a mobile terminal via the wireless LAN communication.

Diagram of operation after startup



[1]	Job received from a PC	[2]	Job received from a mobile terminal
[3]	MFP main body (after startup)	-	-

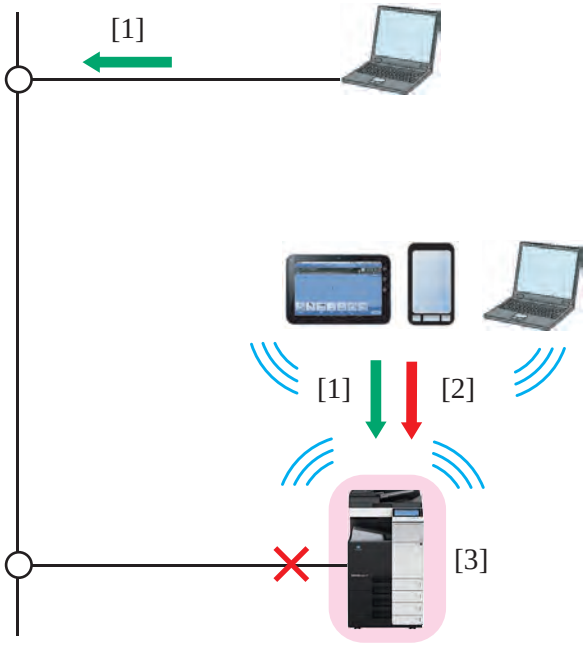
2.3.2 Wired + Wireless (Primary Mode), Wired + Wireless (Wi-Fi Direct)

NOTE

- **To awake from the ErP Auto Power Off mode, select [Awake with ARP + Unicast Communication].**

1. The MFP main unit waits for a startup indication sent via the wireless LAN communication.
2. Receiving a startup indication from a client via the wireless LAN communication without via the wireless LAN access point to start up the MFP main unit.
   - Receiving a startup indication from a PC to start up the MFP main unit.
   - Receiving a communication from a mobile terminal to start up the MFP main unit.

Diagram of startup operation

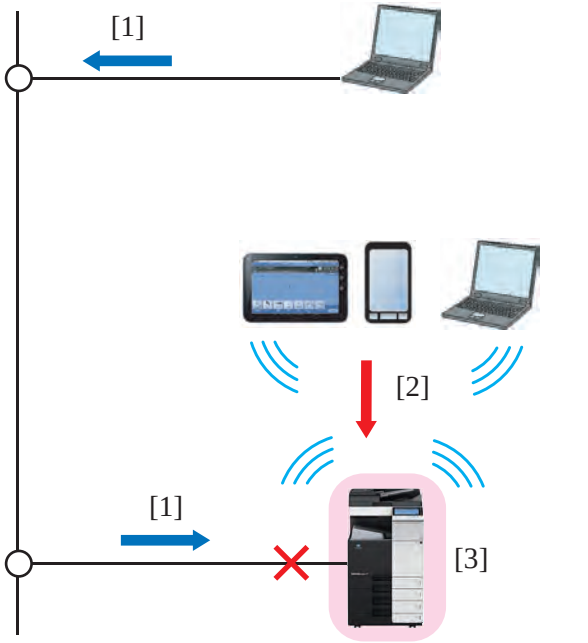


[1]	Startup indication *1	[2]	Job received from a mobile terminal
[3]	MFP main unit (on startup)	-	-

- *1: To execute a print job, [Wake-On-Lan setting] is required to be configured at [Initial settings] of a printer driver.

3. After starting up the MFP main unit, execute a job received from a client.
   - Execute a job received from a PC via the LAN.
   - Execute a job received from a mobile terminal through a direct wireless LAN communication.

Diagram of operation after starting up the MFP main unit



[1]	Job received from a PC	[2]	Job received from a mobile terminal
[3]	MFP main unit (on startup)	-	-

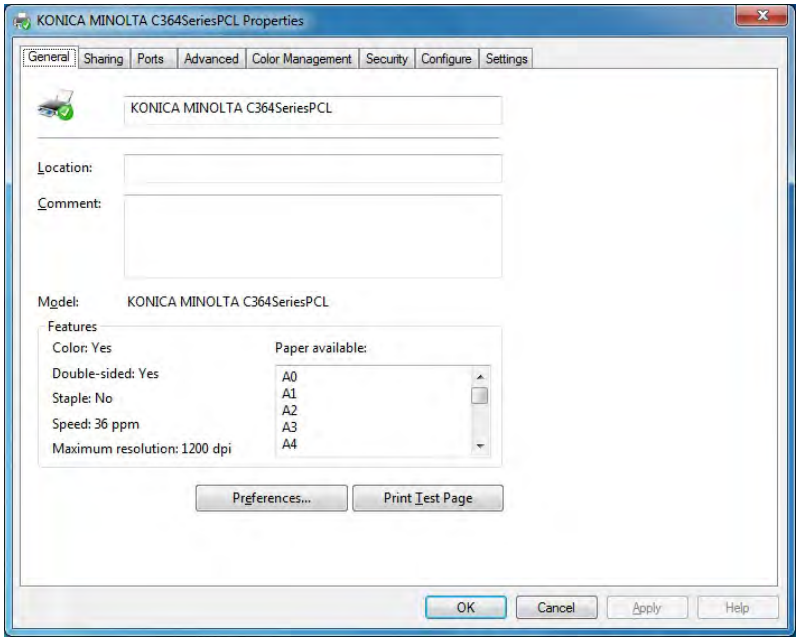
- After starting up the MFP main unit, the wireless LAN communication between the MFP main unit and the wireless LAN access point will be completed.

2.3.3 Setting for printer driver

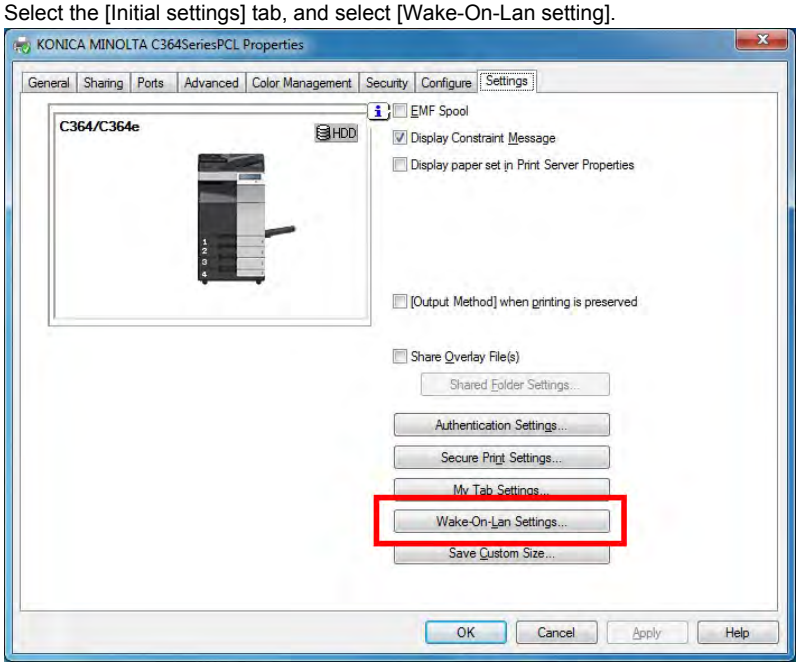
- To execute a print job, property setting is required for the printer driver to start up the MFP main unit from ErP Auto Power Off mode.

(1) Setting procedure

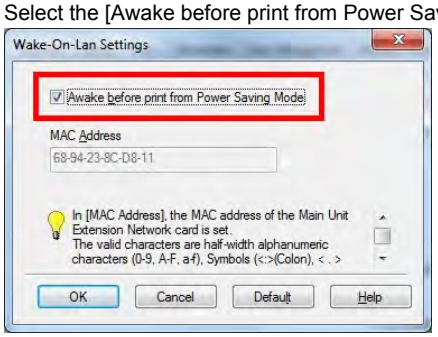
1. Open the property window of the printer.



2. Select the [Initial settings] tab, and select [Wake-On-Lan setting].



3. Select the [Awake before print from Power Saving Mode] check box.

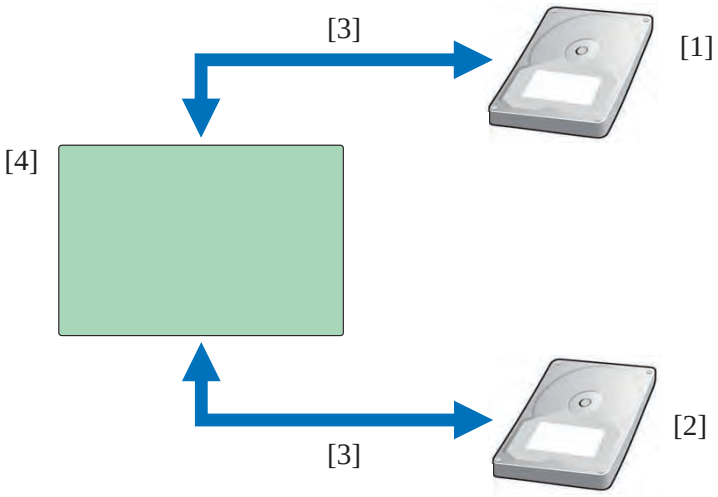


PI THEORY OF OPERATION HD-524

1. CONFIGURATION

1.1 Outline

- Executes mirroring (RAID 1) of 2 hard disks (hereafter: HDD). (A single HDD is installed as standard, the second is an optional addition)
- Prevents data loss by duplicating data on the HDD.
- Improves data safety/reliability through protecting customers important data from an unexpected failure. Furthermore, it reduces a downtime due to the HDD failure.



[1]	HDD (A) (Master drive): 250 GB	[2]	HDD (B) (Slave drive): HD-524 250 GB
[3]	Job data	[4]	MFP board (MFPB)

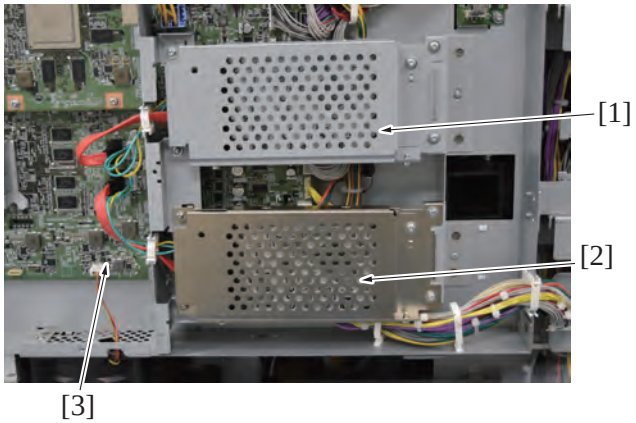
1.1.1 About RAID 1

- RAID 1: Redundant Arrays of Independent Disks 1
- Simultaneously write identical data to 2 HDDs. This procedure is known as data mirroring (duplicating).
- If one HDD fails, the risk of the other HDD failing at the same time is minimal, therefore the MFP can continue operating.

NOTE

- **The added HD-524 (250 GB) does not change the data capacity same as the standard 250 GB HDD that can be stored on the HDD.**

1.2 Unit configuration



[1]	HDD (A): Equipped as standard (Master drive)	[2]	HDD (B): HD-524 250 GB (Slave drive)
[3]	MFP board (MFPB)	-	-

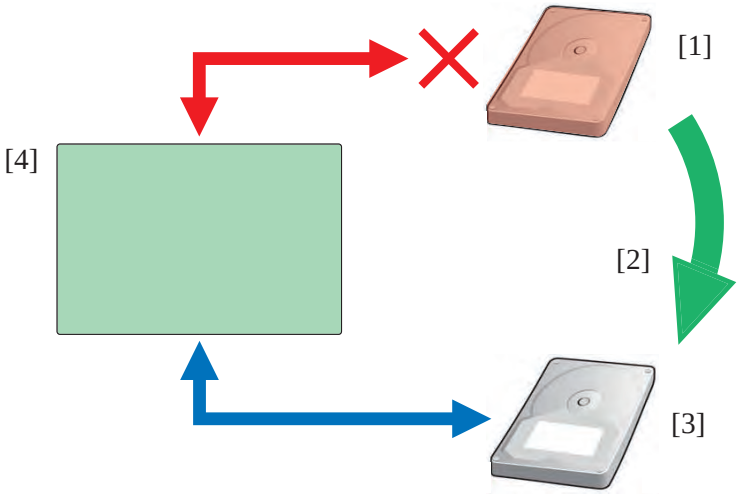
2. OPERATION

- At normal operation, a "Master Drive" is used when the machine reads out data and the "Slave Drive" is used on the backup-side.
- The master drive and the slave drive read out data simultaneously.
- When HD-524 is installed in the initial state, the standard equipped HDD (A) is specified as the master drive and HD-524 (B) as the slave drive.

2.1 HDD master/slave automatic switching control

- During correct HDD operation, the master drive and slave drive roles are locked.
- The slave drive automatically switches to the role of the master drive only during a restart when a master drive data read/write error (hereafter: R/W error) occurs.
- The machine operation can be continued or restarted without HDD data loss through accessing the drive that is switched to the new master drive.

Example: When an HDD (A) error occurs



[1]	HDD (A): R/W error occurs in the master drive	[2]	Switch the roles of master drive and slave drive
[3]	HDD (B): During normal operation (slave drive -> master drive)	[4]	MFP board (MFPB)

2.2 HDD failure detection control

- When an R/W error occurs on either the master drive of slave drive, the trouble code (CFA14: Application error inside the MFP board) is displayed on the control panel and the current job forcibly terminates.
- Restart the machine, either of the trouble codes (CD013 to CD017) relating to HDD mirroring will be displayed.
- Restart the machine, the master drive will change over, which resets the trouble screen and enables execution of a job.
- See below for the actual content/function of each trouble code

NOTE

- **It requires to disconnect the machine power cable before the faulty HDD is attempting to be replaced. The replacement of the HDD is, however, enabled at a timing at which the machine does not execute a print job.**

HDD mirroring trouble codes

Trouble code	Item	Outline
CD013	HDD mirroring error master	A master drive R/W error has occurred during the mirroring operation.
CD014	HDD mirroring error slave	A slave drive R/W error has occurred during the mirroring operation.
CD015	HDD mirroring error master slave	An R/W error has occurred on both drives during the mirroring operation.
CD016	HDD mirroring error master (rebuild)	A master drive R/W error has occurred during the HDD mirroring rebuilding.
CD017	HDD mirroring error slave (rebuild)	A slave drive R/W error has occurred during the HDD mirroring rebuilding.

- R/W error: Read error/Write error

2.2.1 A master drive error has occurred (CD013)

- After trouble code CD013 is displayed, turn the main power switch ON/OFF to switch the role of the master drive to the slave drive.
- Restart the machine, the job can be executed. A message prompting HDD replacement appears on the control panel.
- After the HDD is replaced, the message disappears when the rebuilding is completed.

2.2.2 A slave drive error has occurred (CD014)

- After trouble code CD014 is displayed, turn the main power switch ON/OFF to restart the machine and execute the job.
- A message prompting HDD replacement appears on the control panel.
- After the HDD is replaced, the message disappears when the rebuilding is completed.

2.2.3 A master-slave drive error has occurred (CD015)

- Trouble code CD015 indicates both HDDs have failed at the same time and both HDDs require replacement. (HDD data loss)
- After replacement of both HDDs, HDD formatting (physical + logical formatting) and video data installation are required.

- If the HDD data has been previously backed up, after replacement of the HDD, the data on the HDD can be recovered through implementing [HDD Data Backup/Restore].

2.2.4 A master drive error has occurred during the HDD mirroring rebuilding (CD016)

- If an R/W error occurs while the master drive is being rebuilt, the trouble code is displayed on the control panel and rebuilding is suspended.
- Before completion of rebuilding, due to a master drive error data is not correctly copied to the slave drive. It requires to replace the master drive. (HDD data loss)
- After replacement of the master drive, HDD formatting (physical + logical formatting) and video data installation are required.
- If the HDD data has been previously backed up, after replacement of the HDD, the data on the HDD can be recovered through implementing [HDD Data Backup/Restore].

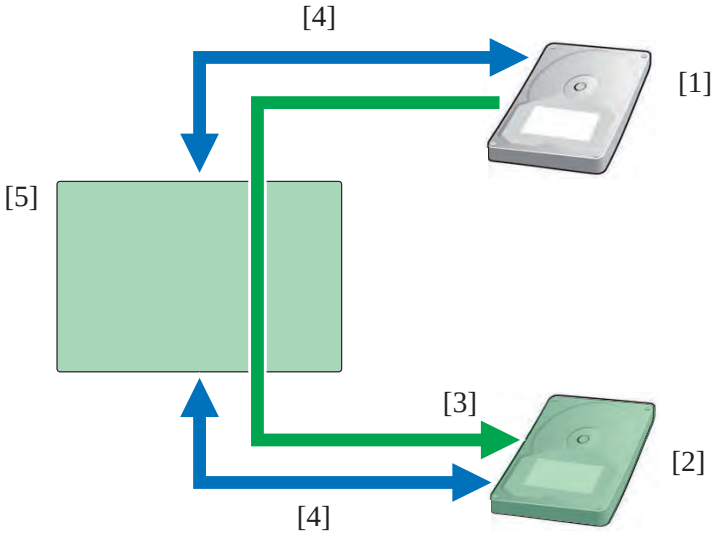
2.2.5 A slave drive error occurred during the HDD mirroring rebuilding (CD017)

- If an R/W error occurs while the slave drive is being rebuilt, the trouble code is displayed on the control panel and rebuilding is suspended.
- After trouble code CD017 is displayed, turn the main power switch ON/OFF to restart the machine and execute the job.
- A message indicating an on-going rebuilding appears on the control panel.
- After the HDD is replaced, the message disappears when the rebuilding is completed.

2.3 HDD mirroring rebuild

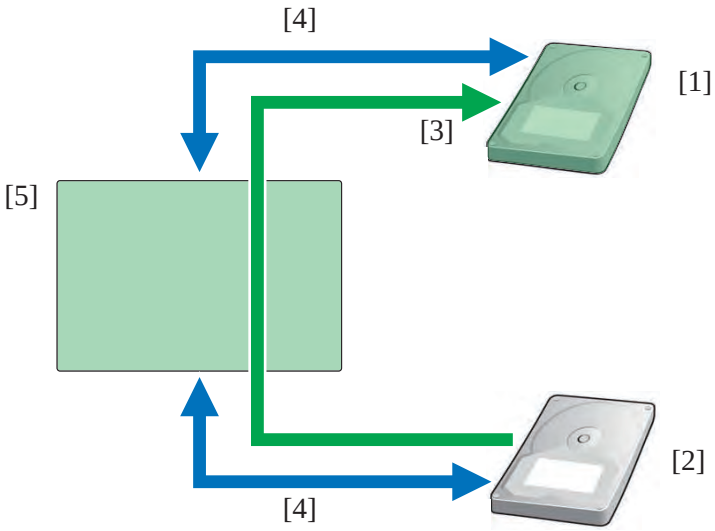
- HDD mirroring rebuilding represents a process to duplicate all data in the master drive onto the slave drive. (hereafter: rebuilding)
- When an HD-524 is newly installed, or an HDD error occurs and it is replaced with a new HD-524, it requires rebuilding from Service Mode.
  [Service Mode] -> [State Confirmation] -> [Memory/Storage Adjustment] -> [HDD Mirroring Rebuild]
  NOTE
  - **Approximately 1 hour is required for rebuilding.**
  - **Never turn off the main power switch, disconnect the power cord during rebuilding.**
  - **During a rebuilding, do not pause or force-quit until rebuilding is completed.**
  - **Jobs can be executed even during rebuilding. However, during a job access performance to the HDD is reduced to approx. 40%. Therefore, it also takes a longer time to complete rebuilding. (The rebuilding speed is lowered without slowing the job processing speed)**
  - **The HDD operating status and rebuilding progress can be confirmed with [Service Mode] -> [State Confirmation] -> [Memory/Storage status].**

2.3.1 Example: When HDD (B) is installed and rebuilding is executed



[1]	HDD (A): During normal operation (Master drive)	[2]	HDD (B): HD-524 (Slave drive) added
[3]	Duplicate all data in HDD (A) onto HDD (B)	[4]	Job data
[5]	MFP board (MFPB)	-	-

2.3.2 Example: When an HDD (A) R/W error occurs and HDD is replaced



[1]	HDD (A): Replaced HD-524 (Slave drive)	[2]	HDD (B): During normal operation (Master drive)
[3]	Duplicate all data in HDD (B) onto HDD (A)	[4]	Job data
[5]	MFP board (MFPB)	-	-

2.4 Format HDD

- At the time of executing HDD format with HD-524 has been installed, both HDD (A) and HDD (B) are formatted.
  NOTE
  - **No data exists on the slave drive. Caution is required at the time of formatting the HDD.**
  - **When it is used together with the HDD Data Backup security settings, data can be recovered to the formatted HDD. It requires to backup the HDD data before the HDD is formatted.**

PJ THEORY OF OPERATION FK-515/FK-516

1. COMMUNICATION CONTROL

1.1 FIF bits of DIS, DTC and DCS

NOTE

- **Considered to be A4 width when the DIS recording paper width is invalid (1, 1).**
- **Becomes a FIF error when the DCS recording paper width is invalid (1, 1).**
- **Considered to be unlimited when the DIS recording paper length is invalid (1, 1).**
- **Considered to be unlimited when the DCS recording paper length is invalid (1, 1).**
- **The DCS recording paper length in a machine is made to be of the same length as that in a remote station and is sent.**
- **Considered to be 2400 bps when the DIS transmission speed is an undefined value.**
- **Becomes a FIF error when the DCS transmission speed is an undefined value.**
- **Considered to be 40ms instruction when the MSLT of DCS is an undefined value.**
- **Considered to have mm ability when DIS inch ability and mm ability are both set to OFF.**
- **Considered to be 200x100 pels/inch when the DCS resolution receives the inch instruction at 3.85 l/mm.**
- **Becomes a FIF error when more than one of bit41, 42 and 43 are set to on in the resolution of DCS.**
- **Becomes a FIF error when DCS receives the MMR instruction without ECM.**
- **Becomes a FIF error when DCS receives the file transfer (BFT) instruction without ECM.**
- **Becomes a FIF error when DCS shows an instruction which exceeds the ability of the machine.**
- **FIF of DIS/DTC is not sent if last octet is 0.**
- **DCS sends FIF whose length is the same as that of the machine.**
- **When undefined signals are received, they are received and ignored in consideration of the future expansion. (not an error)**

1.1.1 FIF data configuration list (DIS/DTC)

(1) Octet 4

bit	Function	Contents	Default
1	T.37 Internet fax (Simple mode)		0
2	Reserved		0
3	T.38 real time Internet fax		0
4	Third generation mobile network		0
5	Reserved		0
6	V.8 ability		0
7	ECM frame	1: 64 octet 0: 256 octet	0
8	Reserved		0

(2) Octet 5

bit	Function	Contents	Default
9	Ready for polled transmission	1: polled transmission documents exist 0: no polled transmission documents	@
10	Receiver ability	1: Reception is possible. 0: Reception is impossible.	@
11	Transmission speed ability	Refer to *1.	1
12			1
13			0
14			1
15	R8×7.7 l/mm and/or 200×200 pels/25.4 mm		1
16	Two-dimensional coding ability	1: MR 0: MH	1

- @: Changes to 0 or 1 according to a status of devices.
- *1: Transmission speed ability (bit 11, 12, 13 and 14)

11	12	13	14	Contents	Transmission speed
0	0	0	0	V27 ter fall back mode	24
0	1	0	0	V27 ter	48, 24
1	0	0	0	V29	96, 72
1	1	0	0	V27 ter & V29	96, 72, 48, 24
1	1	0	1	V27 ter & V29 & V17	144, 120, 96, 72, 48, 24

(3) Octet 6

bit	Function	Contents	Default
17	Recording paper width ability	bit 17, 18 0,0=A4 0,1=A3 1,0=B4 1,1=Invalid	0
18			1

bit	Function	Contents	Default
19	Recording paper length ability	bit 19, 20 0,0=A4 0,1=Unlimited 1,0=B4 1,1=Invalid	0
20			1
21	Minimum scan line time ability	Refer to *2.	1
22			0
23			0
24	Expansion field		1

- *2: Minimum scan line time ability (bit 21, 22 and 23)

21	22	23	Contents	
0	0	0	3.85 l/mm --- 20 ms	7.7 l/mm --- 20 ms
0	0	1	3.85 l/mm --- 40 ms	7.7 l/mm --- 40 ms
0	1	0	3.85 l/mm --- 10 ms	7.7 l/mm --- 10 ms
0	1	1	3.85 l/mm --- 10 ms	7.7 l/mm --- 5 ms
1	0	0	3.85 l/mm --- 5 ms	7.7 l/mm --- 5 ms
1	0	1	3.85 l/mm --- 40 ms	7.7 l/mm --- 20 ms
1	1	0	3.85 l/mm --- 20 ms	7.7 l/mm --- 10 ms
1	1	1	3.85 l/mm --- 0 ms	7.7 l/mm --- 0 ms

(4) Octet 7

bit	Function	Contents	Default
25	Reserved		0
26	Non-compression mode		0
27	Error correction mode (ECM) ability	1: with ECM 0: without ECM	1
28		0: fixed	0
29	Reserved		0
30	Reserved		0
31	T.6 coding (MMR) ability	1: with MMR 0: without MMR	1
32	Expansion field		1

(5) Octet 8

bit	Function	Contents	Default
33	Field not valid		0
34	Multi-selective polling	1: Ability 0: No ability	0
35	Polled sub-address		0
36	T.43 coding ability		0
37	Plain Interleave		0
38	32K ADPCM voice coding		0
39	Reserved		0
40	Expansion field		1

(6) Octet 9

bit	Function	Contents	Default
41	R8×15.4 l/mm		1
42	300×300 pels/25.4 mm		0
43	R16×15.4 l/mm and/or 400×400 pels/25.4 mm		1
44	inch ability		1
45	mm ability		1
46	Minimum scan line time ability of high resolution	0: T15.4=T7.7 1: T15.4=1/2T7.7	0
47	Selective polling		1
48	Expansion field		1

(7) Octet 10

bit	Function	Contents	Default
49	Sub address ability		1
50	Password		1
51	Ready for data file transmission (polling)		0
52	Reserved		0
53	BFT transfer ability		0
54	DTM transfer ability		0
55	EDI transfer ability		0
56	Expansion field		0

(8) Octet 11

bit	Function	Contents	Default
57	BTM transfer ability		0
58	Reserved		0
59	Character or mixed mode documents ready for Tx (polling)		0
60	Character mode ability		0
61	Reserved		0
62	Mixed mode ability		0
63	Reserved		0
64	Expansion field		0

(9) Octet 12

bit	Function	Contents	Default
65	Processible mode (T.505)		0
66	Digital network ability		0
67	Full-duplex communication ability	1: Full-duplex 0: Half-duplex	0
68	JPEG coding ability		0
69	Full color mode		0
70		0: Fixed	0
71	12 bits / pixel component		0
72	Expansion field		1

(10) Octet 13

bit	Function	Contents	Default
73	No sub sampling (1:1:1)		0
74	Custom illuminance		0
75	Custom gamut range		0
76	North America Letter (215.9*279.4) ability		0
77	North America Legal (215.9*355.6) ability		0
78	Single progression sequential coding (T.85) basic ability		1
79	Single progression sequential coding (T.85) optional LO ability		@
80	Expansion field		0

- @: Changes to 0 or 1 according to a status of devices.

(11) Octet 14

bit	Function	Contents	Default
81	HKM key management capability		0
82	RSA key management capability		0
83	Override capability		0
84	HFX40 cipher capability		0
85	Alternative cipher number 2 capability		0
86	Alternative cipher number 3 capability		0
87	HFX40-I hashing capability		0

bit	Function	Contents	Default
88	Expansion field		1

(12) Octet 15

bit	Function	Contents	Default
89	Alternative hashing system number 2 capability		0
90	Alternative hashing system number 3 capability		0
91	Reserved		0
92	T.44 (Mixed raster content)		0
93	T.44 (Mixed raster content)		0
94	T.44 (Mixed raster content)		0
95	Page length maximum strip size for T.44 (Mixed raster content)		0
96	Expansion field		1

(13) Octet 16

bit	Function	Contents	Default
97	Color/gray-scale 300 pels/25.4 mm x 300 lines/25.4 mm or 400 pels/25.4 mm x 400 lines/25.4 mm resolution		0
98	100 pels/25.4 mm x 100 lines/25.4 mm for color/gray scale		0
99	Simple phase C BFT negotiations capability		0
100	Extended BFT negotiations capability		0
101	Internet selective polling address (ISP)		0
102	Internet routing address (IRA)		0
103	Reserved		0
104	Expansion field		1

(14) Octet 17

bit	Function	Contents	Default
105	600 pels/25.4 mm x 600 lines/25.4 mm		1
106	1200 pels/25.4 mm x 1200 lines/25.4 mm		0
107	300 pels/25.4 mm x 600 lines/25.4 mm		0
108	400 pels/25.4 mm x 800 lines/25.4 mm		0
109	600 pels/25.4 mm x 1200 lines/25.4 mm		0
110	Color/gray-scale 600 pels/25.4 mm x 600/25.4 mm resolution		0
111	Color/gray-scale 1200 pels/25.4 mm x 1200/25.4 mm resolution		0
112	Expansion field		0

(15) Octet 18

bit	Function	Contents	Default
113	Double sided printing capability (alternate mode)		0
114	Double sided printing capability (continuous mode)		0
115	Black and white mixed raster content profile (MRCbw)		0
116	T.45 (run length color encoding)		0
117	Shared date memory capacity	bit 117, 118 0,0=Disable 0,1= Level 1=1.0 Mbytes 1,0= Level 2=2.0 Mbytes 1,1= Level 3=unlimited (i.e. 32 Mbytes or more)	0
118			0
119	Reserved		0
120	Expansion field		0

(16) Octet 19

bit	Function	Contents	Default
121	Flow control capability for T.38 communication		0
122	K > 4		0

bit	Function	Contents	Default
123	Internet aware T.38 mode fax device		0
124	T.89 (Application profiles for ITU-T T.88)	Refer to *3.	0
125			0
126			0
127	sYCC-JPEG coding		0

- *3: T.89 (Application profile for ITU-T T.88)

124	125	126	Contents
0	0	0	Not used
0	0	1	Profile 1
0	1	0	Profile 2
0	1	1	Profile 3
1	0	0	Profile 2 and 3
1	0	1	Reserved
1	1	0	Reserved
1	1	1	Reserved

1.1.2 FIF data configuration list (DCS)

(1) Octet 4

bit	Function	Contents	Default
1	T.37 Internet fax (Simple mode)		0
2	Reserved		0
3	T.38 real time Internet fax		0
4	Third generation mobile network		0
5	Reserved		0
6	Invalid		0
7	Invalid		0
8	Reserved		0

(2) Octet 5

bit	Function	Contents	Default
9		0: fixed	0
10	Reception command		1
11	Transmission speed instruction	Refer to *1.	@
12			@
13			@
14			@
15	R8×7.7 l/mm or 200×200 pels/25.4 mm	1: 7.7 l/mm 0: 3.85 l/mm	@
16	Two-dimensional coding instruction	1: MR 0: MH	@

- @: Changes to 0 or 1 according to a status of devices.
- *1: Transmission speed appointment (bit 11, 12, 13 and 14)

11	12	13	14	Contents
0	0	0	0	24/V27 ter
0	1	0	0	48/V27 ter
1	0	0	0	96/V29
1	1	0	0	72/V29
0	0	0	1	144/V17
0	1	0	1	120/V17
1	0	0	1	96/V17
1	1	0	1	72/V17

(3) Octet 6

bit	Function	Contents	Default
17	Recording paper width instruction	bit 17, 18 0,0=A4 0,1=A3 1,0=B4 1,1=Invalid	@
18			@

bit	Function	Contents	Default
19	Recording paper length instruction	bit 19, 20 0,0=A4 0,1=Unlimited 1,0=B4 1,1=Invalid	@
20			@
21	Minimum scan line time instruction	Refer to *2.	@
22			@
23			@
24	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.
- *2: Minimum scan line time instruction (bit 21, 22 and 23)

21	22	23	Contents
0	0	0	20 ms
0	0	1	40 ms
0	1	0	10 ms
1	0	0	5 ms
1	1	1	0 ms

(4) Octet 7

bit	Function	Contents	Default
25	Reserved		0
26	Non-compression mode		0
27	Error correction mode (ECM) instruction	1: with ECM 0: without ECM	@
28	Frame size instruction	1: 64 octet 0: 256 octet	@
29	Reserved		0
30	Reserved		0
31	T.6 coding (MMR) instruction	1: with MMR 0: without MMR	@
32	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(5) Octet 8

bit	Function	Contents	Default
33	Field not valid capability		0
34		0: fixed	0
35		0: fixed	0
36	T.43 Coding		0
37	Plain Interleave		0
38	32K ADPCM voice coding		0
39	Reserved		0
40	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(6) Octet 9

bit	Function	Contents	Default
41	R8×15.4 l/mm		@
42	300×300 pels/25.4 mm		@
43	R16×15.4 l/mm or 400×400 pels/25.4 mm		@
44	inch/mm instruction	1: mm setting 0: inch setting	@
45	Arbitrary		0
46	Arbitrary		0
47		0: fixed	0
48	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(7) Octet 10

bit	Function	Contents	Default
49	Sub address transmission		@
50	Password (SID) transmission		@
51		0: fixed	0
52	Reserved		0
53	BFT transfer		@
54	DTM transfer		0
55	EDI transfer		0
56	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(8) Octet 11

bit	Function	Contents	Default
57	BTM transfer		0
58	Reserved		0
59		0: fixed	0
60	Character mode		0
61	Reserved		0
62	Mixed mode		0
63	Reserved		0
64	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(9) Octet 12

bit	Function	Contents	Default
65	Processible mode (T.505)		0
66	Digital network ability		0
67	Full-duplex communication instruction	1: Full-duplex 0: Half-duplex	0
68	JPEG coding		0
69	Full color mode		0
70	Default Huffman table use		0
71	12 bits / pixel component		0
72	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(10) Octet 13

bit	Function	Contents	Default
73	No sub sampling (1:1:1)		0
74	Custom illuminance		0
75	Custom gamut range		0
76	North America Letter (215.9 x 279.4)		0
77	North America Legal (215.9 x 355.6)		0
78	Single progression sequential coding (T.85) basic		@
79	Single progression sequential coding (T.85) optional LO		@
80	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(11) Octet 14

bit	Function	Contents	Default
81	HKM key management selected		0
82	RSA key management selected		0
83	Override mode selected		0
84	HFX40 cipher selected		0
85	Alternative cipher number 2 selected		0
86	Alternative cipher number 3 selected		0
87	HFX40-I hashing selected		0
88	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(12) Octet 15

bit	Function	Contents	Default
89	Alternative hashing system number 2 selected		0
90	Alternative hashing system number 3 selected		0
91	Reserved		0
92	T.44 (Mixed raster content)		0
93	T.44 (Mixed raster content)		0
94	T.44 (Mixed raster content)		0
95	Page length maximum strip size for T.44 (Mixed raster content)		0
96	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(13) Octet 16

bit	Function	Contents	Default
97	Color/gray-scale 300 pels/25.4 mm x 300 lines/25.4 mm or 400 pels/25.4 mm x 400 lines/25.4 mm resolution		0
98	100 pels/25.4 mm x 100 lines/25.4 mm for color/gray scale		0
99	Simple phase C BFT negotiations capability		0
100		0: Fixed	0
101		0: Fixed	0
102	Internet routing address (IRA) Transmission		0
103	Reserved		0
104	Expansion field		@

- @: Changes to 0 or 1 according to a status of devices.

(14) Octet 17

bit	Function	Contents	Default
105	600 pels/25.4 mm x 600 lines/25.4 mm		@
106	1200 pels/25.4 mm x 1200 lines/25.4 mm		0
107	300 pels/25.4 mm x 600 lines/25.4 mm		0
108	400 pels/25.4 mm x 800 lines/25.4 mm		0
109	600 pels/25.4 mm x 1200 lines/25.4 mm		0
110	Color/gray-scale 600 pels/25.4 mm x 600/25.4 mm resolution		0
111	Color/gray-scale 1200 pels/25.4 mm x 1200/25.4 mm resolution		0
112	Expansion field		0

- @: Changes to 0 or 1 according to a status of devices.

(15) Octet 18

bit	Function	Contents	Default
113	Double sided printing selected (alternate mode)		0
114	Double sided printing selected (continuous mode)		0
115		0: Fixed	0
116	T.45 (run length color encoding)		0
117	Shared date memory required	bit 117, 118 0,0= not used 0,1= Level 1=1.0 Mbytes 1,0= Level 2=2.0 Mbytes 1,1= Level 3=unlimited (i.e. 32 Mbytes or more)	0
118			0
119	Reserved		0
120	Expansion field		0

(16) Octet 19

bit	Function	Contents	Default
121	Flow control capability for T.38 communication		0

bit	Function	Contents	Default
122	K > 4		0
123	Internet aware fax device operating in T.38 mode		0
124	T.89 (Application profiles for ITU-T T.88)	Refer to *3.	0
125			0
126			0
127	sYCC-JPEG coding		0

- *3: T.89 (Application profile for ITU-T T.88)

124	125	126	Contents
0	0	0	Not used
0	0	1	Profile 1
0	1	0	Profile 2
0	1	1	Profile 3
1	0	0	Invalid
1	0	1	Reserved
1	1	0	Reserved
1	1	1	Reserved

1.2 Modem fallback sequence

- Fallback sequences of TCF and CTC are shown as follows:

1.2.1 V17, V29, and V27 ter

Ability of a remote station	TCF fallback sequence
V27 ter/V29	96/V.29 -> 72/V.29 -> 48/V.27 ter -> 24/V27 ter
V27 ter/V29/V33 V17	144/V.17 -> 120/V.17 -> 96/V.17 -> 72/V.17 -> 48/V.27 ter -> 24/V27 ter

- On the transmission side: If PPR is received four times, a modem is set in the fallback state.
- On the reception side: In case of sending PPR, when the number of error frames exceeds the FP value, a modem is set in the fallback state.

1.2.2 V34 fallback

- Line quality is always water by modem. Optimum speed is automatically selected on-the-fly.

1.3 V8/V34 sequence

1.3.1 V34

(1) Outline

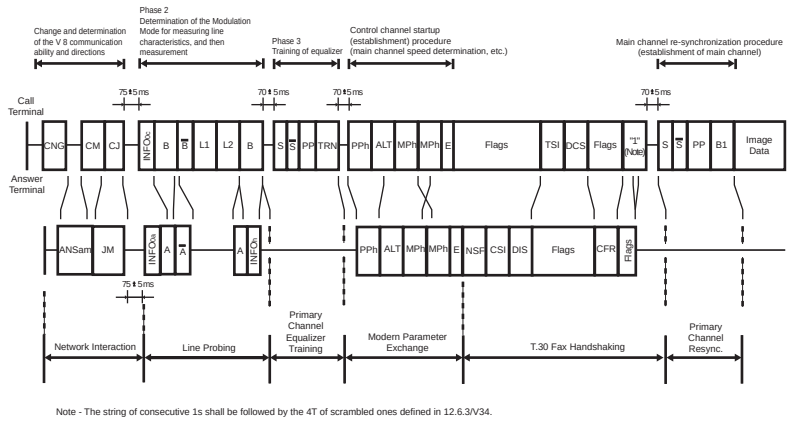
- The 33.6kbps data transmission method and protocol including the V8 protocol. As for each of full-duplex and half-duplex, startup handshake until data transmission starts is divided into four phases, phase1 to 4, and signals used in each phase are regulated.

(2) Features

- Full-duplex (echo canceler method) / Half-duplex method are regulated (for data / FAX respectively)
- 2400, 3000 and 3200 symbols / sec (mandatory) and 2743, 2800 and 3429 symbols / sec (option) QAM synchronous transmission at each symbol rate
- Communication at each signal rate of 33600, 31200, 28800, 26400, 24000, 21600, 19200, 16800, 14400, 12000, 9600, 7200, 4800 and 2400 bps
- Four-dimensional-symbol trellis coding
- A 200bps sub channel which can be used as an asynchronous second channel (option)
- Negotiation in which characteristics of a line is measured before transmission starts and the maximum communication speed is achieved by finely adjusting the transmission parameter, based on the result of measurement (carrier / frequency / equalizer / symbol rate / level, etc.)
- Data transmission in the super frame with the hierarchical structure

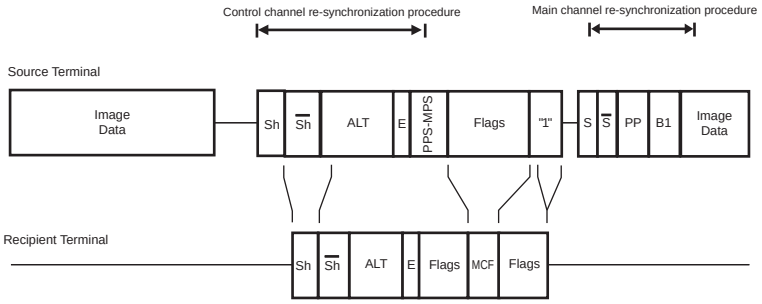
1.3.2 Sample of a signal procedure at sending two pages

(1) Beginning of communications to beginning of 1st page transmission

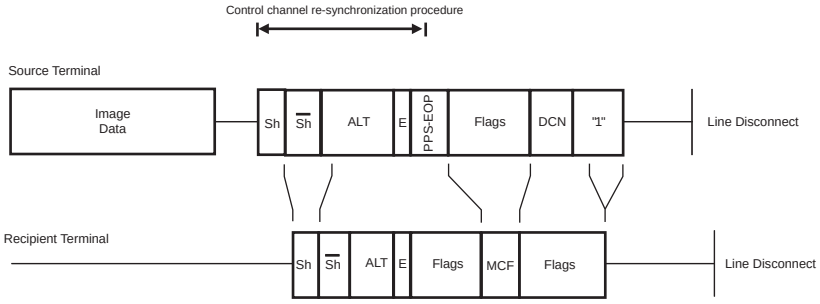


Note - The string of consecutive 1s shall be followed by the 4T of scrambled ones defined in 12.6.3/V34.

(2) Signals between pages



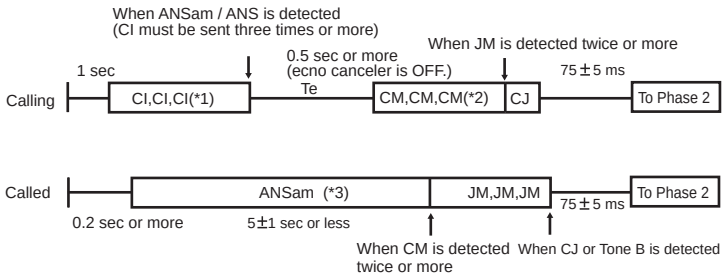
(3) 2nd page transmission termination to communication termination



Note - Some terminals may disconnect the line immediately after sending DCN without sending consecutive 1s.

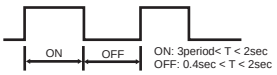
1.3.3 Procedure details

(1) Phase 1 (V8) ....Beginning of connection between a calling modem and a called modem



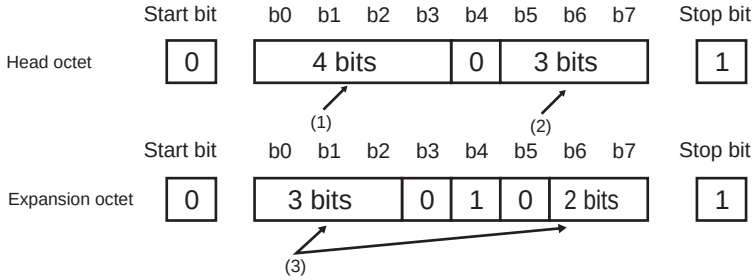
- *1: One of no signals / C1 / CNG (T.30) / CT (V.25)
- *2: V.34 full-duplex ability in the modulation mode bit is ON.
- *3: ANSam of phase inversion is sent. Phase inversion is an option in case of supporting only half-duplex. When CM or valid signal from the calling side is not detected, the procedure is moved to T.30, etc. after 75 ± 5 ms interval.

(a) Signal Definition

Signal type	Meaning	Signal direction call called	Signal speed	Timing of transmission
CI (Call Indicator)	Function display on the calling side	->	V21(L) (300 bps)	• Start: after 0.4 seconds after line connection from ON condition (in the following format) • Stop: when 3 period or more has passed after ANSam / ANS is detected 
	[Comments] • CI is a signal to carry call function. • The calling side send CI, CT (Call Tone - V25) or CNG. • CI transmission and detection are optional. • The ON minimum time (=3 Period) is of duration of three CI signals in the following format.			
ANSam (Modified Answer Tone)	V.8 procedure on the called side Support display	<-	-	When 0.2 seconds or more has passed after reception
	[Comments] • Essential for a called machine which supports the V8 procedure. • 2100 Hz sine wave is phase-inverted by 400 +/-25 ms periods, then amplitude modulated by 15 +/-0.1 Hz sine wave • Average value of modulation factor (x) 0.8 +/- 0.01 < x < 1.2 +/- 0.01 • Average transmission power compliant to V2 • 2100 +/- 200 Hz external power is smaller than the average power by 24 dB or more.			
CM (Call Menu)	Modulation mode etc. on the calling side	-> (300 bps)	V.21 (L)	• Start: Te (0.5 sec. ≤ Te ≤ 1 sec.) has passed after CI transmission stops • Stop: When two or more JM are detected
	[Comments] • CM is a signal which carries call function, modulation modes, protocols and GSTN access. • The first information category is call function. • Protocols and GSTN access category are added when the calling side has ability and when needed to inform to a remote station.			
CJ	CM termination	-> (300 bps)	V.21 (L)	When CM is completed
	[Comments] • START bit (0) and STOP bit (1) are added to 1 octet of all bit 0. • Signal format Start bit b0 b1 b2 b3 b4 b5 b6 b7 Stop bit 0 0 0 0 0 0 0 0 0 1			
JM (Joint Menu)	Display of common ability on both calling and called sides	<- (300 bps)	V.21 (H)	• Start: When two or more same CM are received • Stop: When CJ is received or receives a signal matching the selected Modulation Mode from the calling side
	[Comments] • JM is a response signal to CM and of the same format as the received CM. • The fist information category is Call Function as same as CM. • Modulation mode sets the common bit on calling and called sides and sends by the same octet as received CM. • When there is no common ability, all bits are set to 0 and send by the same octet as received CM. • The minimum item No. is selected from the common bits to determine the actual Modulation Mode. • Protocol is added when it is included in received CM and needed to instruct. • GSTN access is added when it is included in received CM and needed to instruct. • Bit 6 is set to ON when needed to show ability. Bit 5 is set to the same one as received CM.			

(b) Signal format

1. Preamble: a signal added before each signal when CI, CM and JM signals are sent.
   - Format: 1111111111 +0000000001 (for CI)
   - Format: 1111111111 +0000001111 (for CM and JM)
2. Common format among each signal CI, CM and JM
   - Start Bit (=0) is put at the top and Stop Bit (=1) is put at the end of each octet.



- (1): Category tag (tags which represent information types)

Bit assignment					Meaning (information type)	Included signal
b0	b1	b2	b3			
1	0	0	0	...	Call Func	Top of CM, JM / CI
1	0	1	0	...	Modulation Mode	CM/JM
0	1	0	1	...	Protocols	CM/JM
1	0	1	1	...	GSTN access	CM/JM
0	1	1	0	...	PCM modem ability	CM/JM

- (2): Option bit (Differs depending on category tags. See "PJ.1.3.4 Common signal bit definition".)
- (3): Additional option bit (Differs depending on category tags. See "PJ.1.3.4 Common signal bit definition".)

1.3.4 Common signal bit definition

(1) Call function (1 octet)

(a) Top octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning
1	0	0	0	0				(Call Function category tag)
					0	0	0	Defined by ITU-T
					1	0	0	PSTN multi-media terminal
					0	1	0	V18 text phone
					1	1	0	Video tex
					0	0	1	FAX transmission from the calling terminal
					1	0	1	FAX reception in the calling terminal
					0	1	1	Data transmission / reception
					1	1	1	Expansion octet = with call function represented by next octet

- (Other than the above = Reserved)

(2) Modulation mode (3 octets)

(a) 1st octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
1	0	1	0	0				(Modulation mode category tag, b4 = 0 is first octet)	
					0/1			PCM modem ability disabled/enabled	
						0/1		V34 full-duplex ability disabled/enabled	1
							0/1	V34 half-duplex ability disabled/enabled	2

(b) 2nd octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
			0	1	0			(b3, 4 and 5=0, 1, 0 means expanded oct.)	
0/1								V32 bis / V32 ability disabled / enabled	3
	0/1							V22 bis / V22 ability disabled / enabled	4
		0/1						V17 ability disabled / enabled	5
						0/1		V29 half-duplex ability disabled / enabled (used in T.30)	6
							0/1	V27 ter ability disabled / enabled	7

(c) 3rd octet

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
			0	1	0			(b3, 4 and 5=0, 1, 0 means expanded oct.)	
0/1								V26 ter ability disabled / enabled	8
	0/1							V26 bis ability disabled / enabled	9

b0	b1	b2	b3	b4	b5	b6	b7	Meaning	Item No.
		0/1						V23 full-duplex ability disabled / enabled	10
						0/1		V23 half-duplex ability disabled / enabled	11
							0/1	V21 ability disabled / enabled	12

(3) Protocols (1 octet)

b0	b1	b2	b3	b4	b5	b6	b7	Meaning
0	1	0	1	0				(Protocols category tag)
					1	0	0	V42 LAPM protocol
					1	1	1	Protocol represented by expanding octet

- (Other than the above = Reserved)

(4) GSTN access (1 octet)

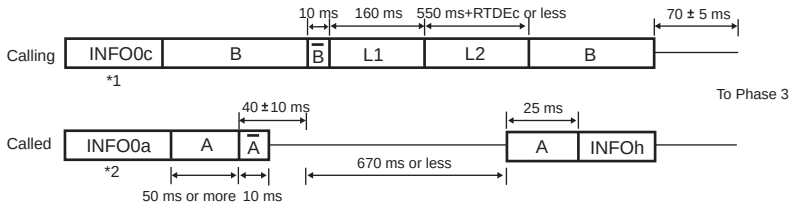
b0	b1	b2	b3	b4	b5	b6	b7	Meaning
1	0	1	1	0				(GSTN access category tag)
					0/1			Celluler connection in the calling side
						0/1		Celluler connection in the called side
							0/1	0: Analog network connection 1: Digital network connection

(5) PCM modem capability (1 octet)

b0	b1	b2	b3	b4	b5	b6	b7	Meaning
1	1	1	0	0				(PCM modem category tag)
					0/1			V.90 analog modem capability
						0/1		V.90 digital modem capability
							0/1	V.91 capability

1.3.5 Phase 2 (Probing) ..... V.34 basic setting

- Exchange of modulation ability
- Measurement of line characteristics (bi-direction)
- Determination and exchange of compensation values to line characteristics (compensation values of maximum data rate, transmission level, pre-emphasis (*))
  - *: linear equalizer for compensating amplitude distortion



A	• 2400 Hz tone signal output from the called side (Level is a set value -1 dB). • 1800 Hz guard tone (Level is a set value -7 dB) is output simultaneously from the called side.	
$\bar{A}$	• 2400 Hz tone signal output from the called side (Phase inversion of A). • 1800 Hz guard tone.	
B	1200 Hz tone signal output from the called side.	
$\bar{B}$	1200 Hz tone signal output from the calling side (Phase inversion of B).	
INFO 0x	Binary signal for indicating auto modulation option signal (x=a/c: a: called side, c: calling side)	
L1, L2	Signal for conditioning line characteristics (tone synthesis at the interval of 150 Hz from 150 to 3750 Hz (except for 900, 1200, 1800 and 2400 Hz))	• L1: 160 ms, Level= Set value+6 dB • L2: Maximum 550 ms+TRDEx, Level = Set value
INFO h	Binary signal for indicating parameters used in Phase 3 (training of main channel equalizer). This signal is sent from a modem receiving main channel data to a transmitting modem.	

- *1: INFO 0c Bit 28 OFF
- *2: INFO 0a Bit 28 OFF

(1) <INFO 0x Bit Assignment>

Bits (LSB-MSB)	Value	Meaning	
0-3	1111	Fill Bits	
4-11	01110010	Bit string for frame synchronization	
12	0/1	2743 symbol / sec support	• 0: No

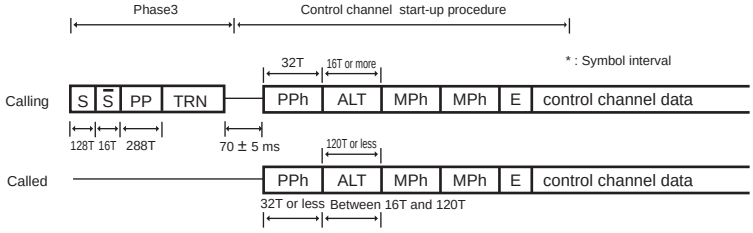
Bits (LSB-MSB)	Value	Meaning	
			• 1: Yes
13	0/1	2800 symbol / sec support	• 0: No • 1: Yes
14	0/1	3429 symbol / sec support	• 0: No • 1: Yes
15	0/1	Ability to transmit at low carrier frequency at 3000 symbol / sec	• 0: No • 1: Yes
16	0/1	Ability to transmit at high carrier frequency at 3000 symbol / sec	• 0: No • 1: Yes
17	0/1	Ability to transmit at low carrier frequency at 3200 symbol / sec	• 0: No • 1: Yes
18	0/1	Ability to transmit at high carrier frequency at 3200 symbol / sec	• 0: No • 1: Yes
19	0/1	3429 symbol / sec transmission	• 0: Disable • 1: OK
20	0/1	Ability to lower the transmission level than a preset value	• 0: No • 1: Yes
21-23	0 to 5	Maximum tolerance of symbol rates between transmission and reception	• 0: 2400 symbol/sec • 1: 2743 symbol/sec • 2: 2800 symbol/sec • 3: 3000 symbol/sec • 4: 3200 symbol/sec • 5: 3429 symbol/sec
24	0/1	1=INFO 0 is sent from the CME modem	
25	0/1	1664 signal point (33.6 K) ability	• 0: No • 1: Yes
26-27	0 to 3	Clock source transmission	• 0: Internal • 1: External • 2: Synchronous to the reception clock • 3: Reserved
28	0/1	1=Correct INFO 0 frame is received during error recovery	
29-44		CRC	
45-48	1111	Fill Bits	

(2) <INFO h Bit Assignment>

Bits (LSB-MSB)	Value	Meaning	
0-3	1111	Fill Bits	
4-11	01110010	Bit string for frame synchronization (transmitted from the left side)	
12-14	0 to 7	• Output reduction width demanded by the reception modem (dB) • When *the modem on the transmitting side can not reduce output* at INFO 0, the value is set to 0.	
15-21	0 to 127	The length of TRN which the modem of the transmitting side send in the Phase 3 (x 35 ms)	
22	0/1	High carrier is user for data mode Tx.	
23-26	0 to 10	Pre-emphasis filer index No.which is used for data transmission	
27-29	0 to 5	Symbol rate of data transmission	0: 2400 ... 5: 3429 (symbol / sec)
30	0/1	Selection of parameters used for TRN.	• 0: 4 points • 1: 16 points
31-46		CRC	
47-50	1111	Fill Bits	

1.3.6 Phase 3 .....Training of the main channel equalizer

- Band division full-duplex method
- Transmission and reception of Phase 3 signals (S,S̄PP, TRN) are executed by using parameter values which are determined by exchanging INF Oh. (symbol rate, carrier frequency, pre-emphasis filter and transmission level)



- The speed of the following signals (Phase 3) are determined by INFOh. (The following signals are used in the main channel in the half-duplex procedure.)

S	Signal which sends alternately 0 point and a point which rotated 0 point counterclockwise by 90 degrees
$\overline{S}$	Signal which sends alternately a point which rotated 0 point counterclockwise by 180 degrees and a point which rotated 0 point counterclockwise by 270 degrees
PP	Special signal which is sent from a remote station for adjusting an equalizer
TRN	Training signal. (Symbol rate and duration are determined in INFOh.)

(1) Control channel signal

- The following signals are used for establishing the control channel or re-synchronization and retrain. (peculiar to half-duplex procedure)

Modulation method	1200 / 2400 bps QAM modulation (600 ± 0.01 symbols / sec). However, training and synchronous signals are 1200 bps.	• Calling modem: Carrier (=1200 Hz ± 0.01 % (level = set value)) • Called modem: Carrier (=2400 Hz ± 0.01 % (level = set value-1 dB)) + Guard tone (=1800 Hz ± 0.01 % (level = set value-7 dB))
Sh	Signal which sends alternately 0 point and a point which rotated 0 point counterclockwise by 90 degrees (the same as S)	
$\overline{Sh}$	Signal which sends alternately a point which rotated 0 point counterclockwise by 180 degrees and a point which rotated 0 point counterclockwise by 270 degrees (the same as S)	
AC	Signal which send alternately 0 point and a point which rotated 0 point by 180 degrees	
PPh	Special signal which is sent from a remote station for adjusting an equalizer (used when the initial of the control channel and re-synchronization are executed)	
ALT	Signal which scrambled alternate signals of 0 and 1 (1200 bps)	
MPh	Binary signal used for exchanging parameters of the modulation method when data is actually sent and received by using the main channel (1200 bps)	• Both type 0 and type 1 (type 0+pre-recording coefficient) must be received. • When type 0 is received, pre-recording coefficient is considered to be 0 and never functions.
E	“1”, binary of 20 bit, which represents the beginning of user data transmission on the control channel	

(2) MPh (type 0) bit assignment

Bits (LSB-MSB)	Value	Meaning	
0-16	All bit 1	Bit string for frame synchronization	
17	0	Start bit	
18	0	MP signal type	
19	0	Reserved	
20-23	1 to 14	Maximum transmission rate from the calling modem to the called modem (x 2400) *1	
24-26	0,0,0	Reserved	
27	0/1	Control channel data transmission rate which is selected by the opposed transmitter	• 0: 1200 bps • 1: 2400 bps
28	0	Reserved	
29-30		Trellis coding device selection *2	• 00: 16 state • 10: 32 state • 01: 64 state • 11: Reserved
31	0/1	Non-linear encoder parameter selection for the terminal transmitter of a remote station *2	• 0: φ=0 • 1: φ=0.3125
32	0/1	Parameter (shaping) selection when the data rate is determined within each symbol rate *2	• 0: Minimum • 1: Expanded
33	0	Reserved	
34	0	Start bit	
35-49		Communication speed mask (Bit 35=2400 bps ... Bit 46=28.8 kbps, Bit 47=31.2 kbps, Bit 48=33.6 kbps and Bit 49=Reserved)	• 0: Ability of both modems disabled • 1: Enabled
50	0/1	Use of control channel imbalance data rate	• 0: No • 1: Yes
51	0	Start bit	
52-67	0	Reserved	
68	0	Start bit	
69-84		CRC	
85-87	0,0,0	Fill Bits	

- *1: 13 and 14 are used when the opposed modem supports up to 1664 points
- *2: Set to 0 on the transmitting modem.

(3) MPh (type 1) bit assignment

Bits (LSB-MSB)	Value	Meaning	
0-16	All bit 1	Bit string for frame synchronization	
17	0	Start bit	
18	1	MP signal type	
19	0	Reserved	
20-23	1 to 14	Maximum transmission rate from the calling modem to the called modem (x 2400) *1	
24-26	0,0,0	Reserved	
27	0/1	Control channel data transmission rate which is selected by the opposed transmitter	• 0: 1200 bps • 1: 2400 bps
28	0	Reserved	
29-30		Trellis coding device selection *2	• 00: 16 state • 10: 32 state • 01: 64 state • 11: Reserved
31	0/1	Non-linear encoder parameter selection for the terminal transmitter of a remote station *2	• 0: φ=0 • 1: φ=0.3125
32	0/1	Parameter (shaping) selection when the data rate is determined within each symbol rate *2	• 0: Minimum • 1: Expanded
33	0	Reserved	
34	0	Start bit	
35-49		Communication speed mask (Bit 35=2400 bps ... Bit 46=28.8 kbps, Bit 47=31.2 kbps, Bit 48=33.6 kbps and Bit 49=Reserved)	• 0: Ability of both modems disabled • 1: Enabled
50	0/1	Use of control channel imbalance data rate	• 0: No • 1: Yes
51	0	Start bit	
52-67		Pre-coding coefficient h (1) Real	
68	0	Start bit	
69-84		Pre-coding coefficient h (1) Imaginary	
85	0	Start bit	
86-101		Pre-coding coefficient h (2) Real	
102	0	Start bit	
103-118		Pre-coding coefficient h (2) Imaginary	
119	0	Start bit	
120-135		Pre-coding coefficient h (3) Real	
136	0	Start bit	
137-152		Pre-coding coefficient h (3) Imaginary	
153	0	Start bit	
154-169		Reserved	
170	0	Start bit	
171-186		CRC	
187	0	Fill Bits	

- *1: 13 and 14 are used when the opposed modem supports up to 1664 points
- *2: Set to 0 on the transmitting modem.

1.3.7 Re-synchronization procedure / Startup procedure

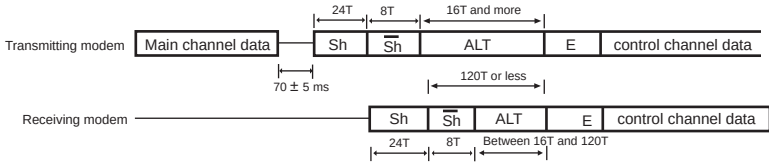
- A procedure required to switch control channel and main channel in the half-duplex procedure
- A procedure which includes another modulation parameter exchanging is especially called the startup procedure. (used for changing the communication speed)

(1) Startup procedure

- Control channel startup procedure (By exchanging MPh, the communication speed is changed.)
- “Control channel re-synchronization procedure” is not used.

(2) Re-synchronization procedure

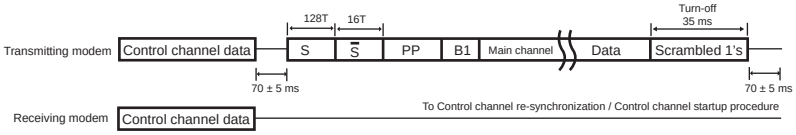
- Control channel re-synchronization.
- See signals related to control channels for signal names and change method.



(a) Main channel re-synchronization procedure and Turn-off

- The receiving modem re-synchronizes the main channel by using the PP signal. After B1, starts receiving Primary Data.
- The transmitting modem sends the scrambled 1's for 35 ms after Primary Data transmission has been completed.
- Both modems move to the control channel re-synchronization procedure or the control channel startup procedure.

S	Signal which sends alternately 0 point and a point which rotated 0 point counterclockwise by 90 degrees
$\overline{S}$	Signal which sends alternately a point which rotated 0 point counterclockwise by 180 degrees and a point which rotated 0 point counterclockwise by 270 degrees
PP	Special for adjusting an equalizer
B1	High-speed signal of one frame length which is sent at the end of a series of startup sequence in the selected modulation parameter.



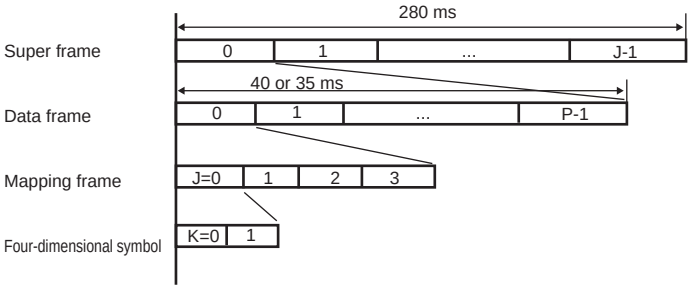
1.3.8 Other

(1) Minimum reception signal level (RLSD) (half-duplex mode only)

- The reception circuit is turned to ON when the signal becomes 43 dBm or more.
- When the signal becomes 48 dBm or less, the reception circuit is turned OFF within 20 to 25 ms after it has exceeded the thresh old.

(2) Data frame structure

- All data transmitted in V.34 (after the Phase 4) is treated in the following frame format.
  - J: The number of data frames within one super frame
  - P: The number of mapping frames within one data frame



Modulation Speed	J	P
2400 baud	7	12
2743 baud	8	12
2800 baud	7	14
3000 baud	7	15
3200 baud	7	16
3429 baud	8	15

2. FUNCTION

2.1 Telephone function

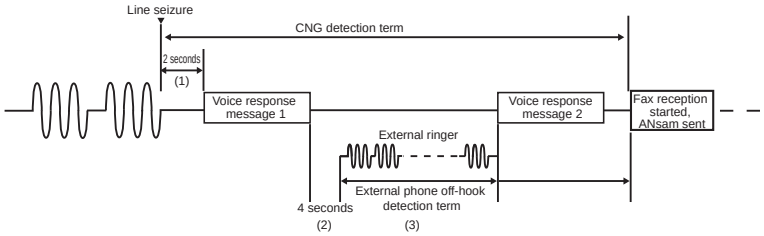
2.1.1 TEL/FAX switching

(1) Outline

- A function to switch telephone and FAX automatically after reception. (Depends on specifications of each country.)

(2) Operation

1. When CNG is not detected for 2 seconds (or 4 seconds, following address parameter) after line seizure, this function sends voice response message 1 and continues CNG detection.
2. If voice response 1 is sent and CNG detection is continued for 4 seconds but could not be detected, external ringer is sent to the externally installed phone.
3. When CNG is not detected for a given period (Default is 20 seconds. Changeable by address parameters), this function stops external ringer transmission and becomes fax reception after the voice response message 2 is sent.
4. This function detects OFF-HOOK of the external telephone during external ringer transmission only.
5. When OFF-HOOK of the external telephone is detected during external ringer transmission, the line is connected to the external telephone. Even if you use the telephone, you can manually switch to the fax reception after that.
6. When CNG is detected during the above-mentioned external ringer transmission, External ringer transmission is stopped and the fax reception starts.



(3) Related FP

No.	FP	Meaning and purpose	Address	Value	Default	Note
1	Tel-Fax switching	TEL/FAX switching mode	0x0e0095 bit5	0: Disabled 1: Enabled	0	Those with a Administrator Settings
2	RBT transmission time	RingBackTone signal transmission time	0x0e00fc	unit: 1000 ms, HEX	0x14 (20 sec.)	• A serviceman setting by address setting • Those with a Administrator Settings 30 sec. or less: 5 seconds 30 sec. or more: 30 seconds
3	Tel-Fax switching parameter	Time from vocal response to RBT transmission (CNG detection waiting time 2)	0x0e0095 bit7	0: 4 sec. 1: 2 sec.	0	A serviceman setting by address setting
4	Tel-Fax switching parameter	Time from reception to voice response transmission (CNG detection waiting time 1)	0x0e0095 bit6	0: 2 sec. 1: 4 sec.	0	
5	Tel-Fax switching parameter	TEL/FAX switching ON response details	0x0e0095 bit3	0: Voice response + RBT transmission 1: RBT transmission only	0	Those with a Administrator Settings

2.2 F-code

- F-code is a function to realize confidential transmission / bulletin board polling / relay transmission by using SUB, SEP and SID signals.
- To be more specific, a machine which can open “a box” on the memory is called “a F code compliant center machine” and a machine which can access to a center machine by using the F code function is called “a F-code compliant machine.” The center machine can have plural “boxes” and they are used as the confidential box, bulletin board box and relay box respectively.
- Function outline is as follows.

Function	Outline	Signals to be used			Use (Meaning)	Required function	Remark
		SUB	SEP	SID			
Confidential transmission	Sent to the center machine which opens a confidential box by appointing the confidential box No. (The center machine has memory reception to the confidential box.)	○	×	△	• SUB = Appointment of a confidential box • SID = Password	Registration = Message adding	Each box No. = Contents of a signal (20 digits or less)

Function	Outline	Signals to be used			Use (Meaning)	Required function	Remark
		SUB	SEP	SID			
Bulletin board polling	By appointing a box No. in the center machine which opens a bulletin board, contents are polled.	×	○	×	SUB = Appointment of a bulletin board box	• Registration = Message overwriting • With a mode which is not deleted by polling.	
Relay transmission	Requesting relay to the relay machine which opens a relay box (No.) in which a broadcasting transmission remote station is registered.	○	×	○	• SUB = Appointment of a relay box (No.) • SID = Password		

- ○ = interact is required
- △ = selectable
- × = do not use

2.2.1 Signal format

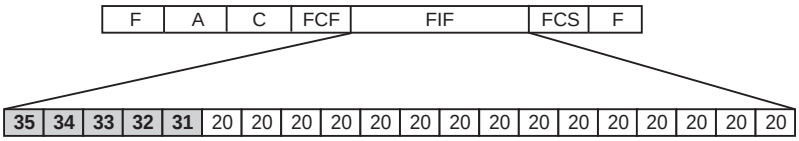
(1) Contents of signals

Item / Signal Name	SUB/SEP	SID
Characters	0 to 9 only (* and # must not be used.)	• 0 to 9 • * • #
Contents	Box No.	Password
No. of digits	Arbitrary between 1 and 20	
Space between digits	Prohibited	
Others	Impossible to designate more than one box	

(2) FIF (SUB/SEP/SID) common

- The last digit is left-justified. The remaining are filled with space (0x20)

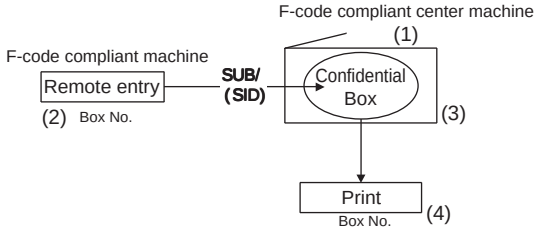
eg.) 12345



(3) DIS/DTC/DCS bit condition

Bit No.	Meaning	DIS/DTC	DCS
47	Selective polling ability	• DIS = ON when SEP reception is possible • DTC = ON when SEP is transmitted	0: fixed
49	Sub address ability / function	ON when SUB reception is possible	ON when SUB transmission is possible
50	Password / sender ID	• DIS = ON when SID reception is possible • DTC = ON when SID is transmitted	ON when SID is transmitted

2.2.2 F-code confidential transmission



1. The confidential box is registered in the center machine.
   - Registration of confidential box No. and name
   - Registration of communication password
   - Registration of box password
2. Transmission operation on the transmitting side
   - Specification of confidential box No.
3. Reception in the center machine

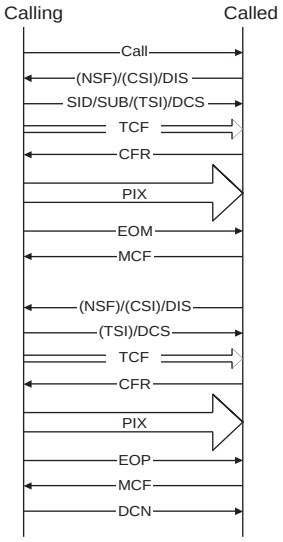
- Automatic output of confidential communication report

4. Printing in the center machine
   - Output by entering an access protect No.

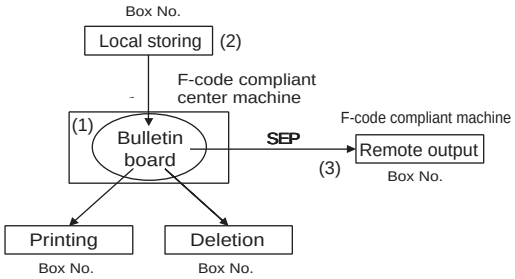
(1) BOX specifications

Confidential box No.	• Represented by a nine digit number. Operationally between 1 and 999999999. • You can not open the same box number as the bulletin board No. which has been already opened.
Communication password	Possible to use.
Confidential BOX name	Possible to resister up to 20 characters.
Erased at printing	Erased on every page after output.
Box password	Represented by eight digit number between 00000000 and 99999999.
No. of files in confidential box	100 files at the maximum including bulletin board.

(2) Example of the protocol sequence



2.2.3 F-code bulletin board polling



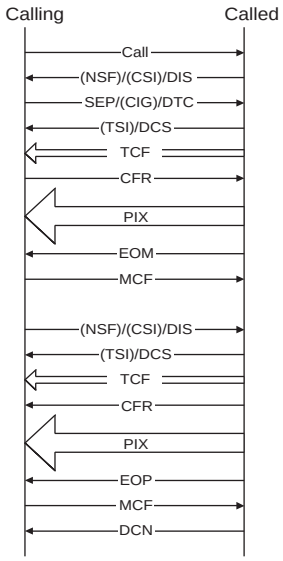
1. Registration of the bulletin board box in the center machine
   - Registration of the bulletin board No. and name
2. Storing documents in the bulletin board
3. Operations for polling reception on the compliant machine
   - Appointment of bulletin board No.

(1) BOX specifications

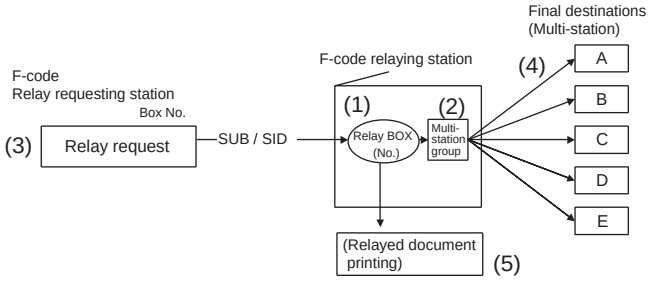
Bulletin board box No.	• Represented by a nine digit number. Operationally between 1 and 999999999. • You can not open the same box number as the confidential box which has been already opened.
Bulletin board password	No
Bulletin board box name	• Yes • Same number of characters as the confidential box
Erased at printing	Not erased when printed.
Erased at polling	Not erased when polled.
Access protect No.	No

No. of document registration to the bulletin board box	Only once. If already exist, it is overwritten.

(2) Example of protocol sequence



2.2.4 F-code relay transmission



NOTE

- **This machine is only relay requests and do not function as a relaying station.**

1. The relay box is registered in the relaying station.
   - Registering relay box No., relay password and relay group No.

2. Registration of group
   - Registering final destinations in the group No.

3. Transmission operation in the relay requesting station
   - Instructs relay box no. and relay password.

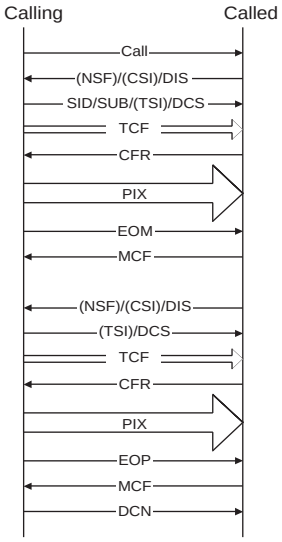
4. Transmission to the final remote stations registered in the group

5. Possible to printed relayed documents on the relaying station (depends on the parameter setting)

(1) BOX specifications

Relay box	Possible to register up to 5.
Relay box No.	Any box number that can range between 1 and 999999999
Relay password	Any 8-digit number
Relay BOX name	To be assignable
Access protect No.	No
Final destination designation	Possible only to register in the relay box by appointing the group.
File erasure after transfer	Always erased
Conditions to erase box by operations	Only when there are no files of received messages in the relay box, box can be erased.

(2) Protocol sequence example



2.3 Transmission function

2.3.1 Original scan mode

- The original scan mode is roughly classified by the regular original scan and the irregular original scan.

Regular original	Irregular original	Mode selection
Normal mode	Irregular mode	Default setting
Mixed original mode		Scan setting

(1) Scan mode default setting

- The scan mode can be set by [Service Mode] -> [FAX] -> [Line1] -> [System] -> [Scan Setting]. The default is the irregular mode.

	Paper size detection	Default	Frame erasure
Irregular mode	Trailing edge detection	Yes	Trailing edge erasure may not be done.
Normal mode	DF paper size sensor	Automatically selected when using the page related application function (book transmission, etc.).	Frame erasure of all sides

2.4 Reception function

2.4.1 Reduction / division of reception

- Parameters related to reduction / division are set on the [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings]. There are two parameters as follows:
  - [Min. Reduction for RX Print]: 96, 95, 94, ..., 87: a
  - [Print Separate Fax Pages]: ON, OFF: b
- The reception recording mode is determined by the above-mentioned parameters, a and b.

(1) Auto reduction reception mode

- a = Don’t care (except 100)
- b = OFF
- The received documents are automatically reduced in the range of 35 to 96 %.

(2) Page division recording reception mode

- a = 96, 95, ..., 87
- b = ON
- Documents are reduced to three reduction rate (90 %, 86 %, or 82 %) determined by the width of received documents and the selected recording paper. When they are still larger than a paper size, they are reduced to a value in “a” for the division recording.
  - 90% = Fixed value
  - 86%, 82% = Reduction rate determined by the main scanning direction
- The paper selection and division are determined in accordance with the following figure.

(3) Paper selected for division printing, magnification

(a) A4S width at reception

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
152 mm or less	A5	A5/a %	A5S/69 %	A4S/a %	A4/a %	B5S/84 %	B5/a %	B4/a %	A3/a %
153 to 311 mm	A4S	A4S/a %	A4/a %	B4/a %	A3/a %	-	-	-	-
312 to 384 mm	B4	B4/a %	B5/a %	B5S/84 %	A3/a %	A4/a %	A4S/a %	-	-
Over 384 mm	A3	A3/a %	A4/a %	B5S/84 %	-	-	-	-	-

- a : Set magnification

(b) B4 width at reception

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
189 mm or less	B5	B5/a %	B5S/71 %	B4/a %	A4S/82 %	A4/a %	A3/a %	-	-
189 to 384 mm	B4	B4/a %	B5/a %	B5S/71 %	A3/a %	A4/a %	A4S/82 %	-	-
Over 384 mm	A3	A3/a %	A4/a %	A4S/82 %	-	-	-	-	-

- a : Set magnification

(c) A3 width at reception

Original length=Received original size*(1/a)	Optimum paper	Selected paper size / Division operation							
		Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7	Priority 8
219 mm or less	A4	A4/a %	A4S/69 %	B4/85 %	A3/a %	-	-	-	-
Over 219 mm	A3	A3/a %	A4/a %	A4S/69 %	-	-	-	-	-

- a : Set magnification

2.4.2 Cassette / paper selection

- The cassette and paper selection is performed by using two parameters of the [Administrator Settings] -> [Fax Settings] -> [TX/RX Settings].
  - [Print Paper Selection]: Auto Select, Fixed Size, Priority Size: a
  - [Tray Selection for RX Print]: Auto, Tray 1, Tray 2, Tray 3, Tray 4 and LCT: b

NOTE

- **When “b” is fixed to tray 1, 2, 3 or 4, “a” becomes invalid.**
- **Only when “b” is set to Auto, “a” becomes valid.**
- **Only A3, B4 and A4 sizes can be selected for the fixed size and preferential size modes.**
- **Bypass cannot be specified as fix-tray.**
- **Page dividing function becomes invalid when the tray is fixed.**

2.4.3 Compulsory memory reception

- The function to enable to print out by operations without printing out documents at reception in the FAX communications.

(1) Related settings

(a) Compulsory memory reception function

- Set in the [Service Mode] -> [FAX] > [Line1] -> [System] -> [Display Setting].
- When this setting is set to “OFF”, display and actions related to the Compulsory memory reception are not performed. In addition, you can not perform operations. If this setting is not set, the following Compulsory memory reception function used is also set to disabled.

(b) Compulsory memory reception function use

- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Memory RX Setting].
- When this setting is set to “NO”, the compulsory memory reception actions are not performed at reception. In addition, you can not display, erase and print the compulsory memory reception documents. The compulsory memory reception documents are displayed on the main menu irrelevant to this setting.

(c) Compulsory memory reception password

- Within eight digits (0 to 9)
- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Memory RX Setting].
- This setting is required to display, delete or print the compulsory memory reception documents.

(2) Operation

(a) Necessary conditions for this function

- When there is the compulsory memory reception function, and it is used, the compulsory memory reception action is performed.

(b) Line seizure

- It is possible to receive up to 500 compulsory memory reception jobs including the normal reception and the substitute reception. When 500 compulsory memory reception jobs are received, machine will not catch the line. (Except the case that the polled transmission documents and bulletin board documents are registered.)

(c) Reception

- When the reception is performed in the compulsory memory reception mode, printing is not performed even with recording paper and the reception is performed in memory as the compulsory memory reception documents.
- The same as in the polled reception and manual reception.
- The auto forwarding setting is neglected in this mode, and the compulsory memory reception is performed.
- When SUB is received, related applications will start.

(d) Setting change

- When there are received compulsory memory reception documents, even if the compulsory memory reception setting is set to invalid in the utility mode, the compulsory memory reception file is not printed.
- For printing, the compulsory memory reception setting is required to be set to “ON.”

2.4.4 Closed reception (Junk FAX)

- The closed reception function used only at the time of the reception by using the F-code SID signal.

NOTE

- **You can not use this function with the F-code communications.**

(1) Closed reception function

- Set in the [Service Mode] -> [FAX] > [Line1] -> [System] -> [Display Setting].

(2) Closed reception function use

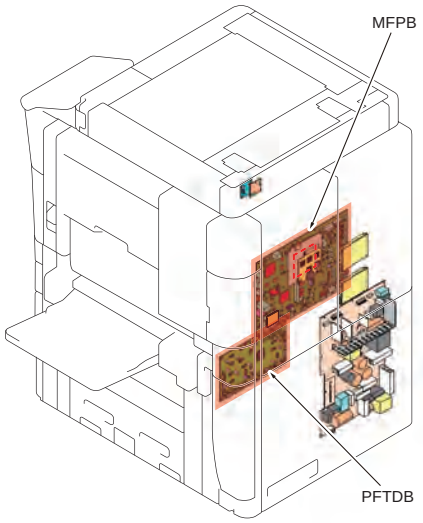
- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Closed Network RX].
- When this setting is set to “No”, the closed reception actions are not performed at reception.

(3) Closed reception password

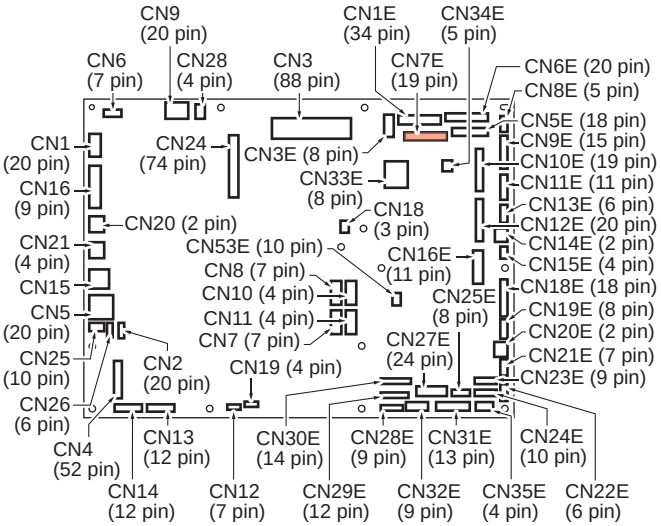
- Four digits (0 to 9)
- Set in the [Administrator Settings] -> [Fax Settings] -> [Function Settings] -> [Closed Network RX].

S LAYOUT DRAWINGS FOR RELATED PARTS BY EACH TROUBLE CODE

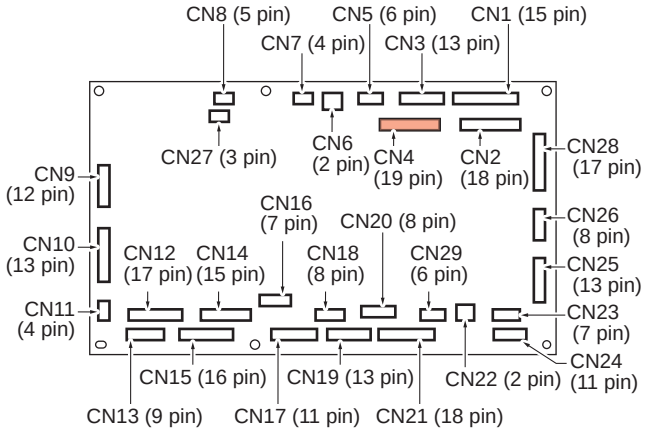
1. C0002



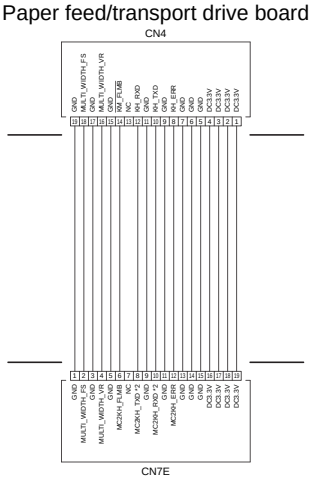
MFPB



PFTDB

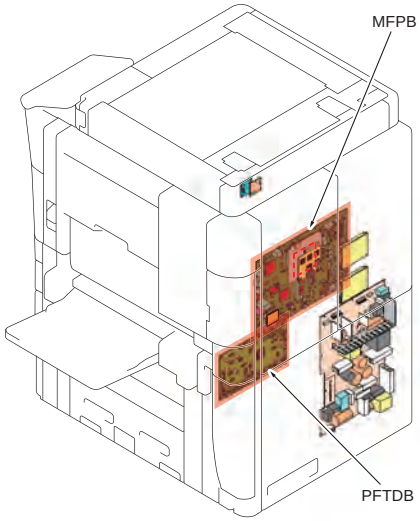


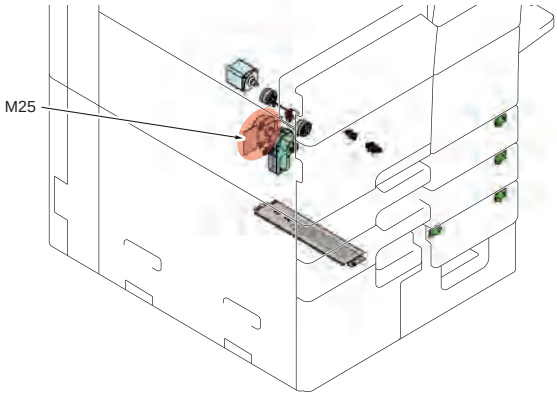
PFTDB
Paper feed/transport drive board



MFPB
MFP board

2. C0104, C0105





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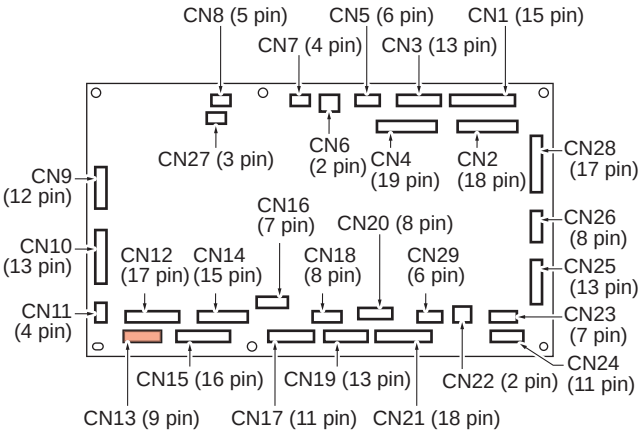
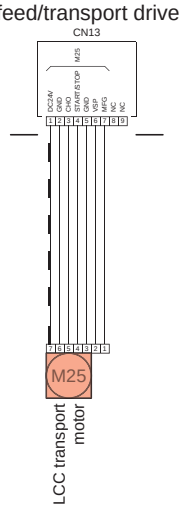
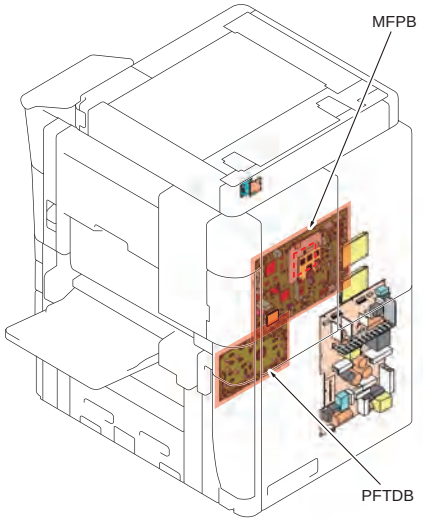
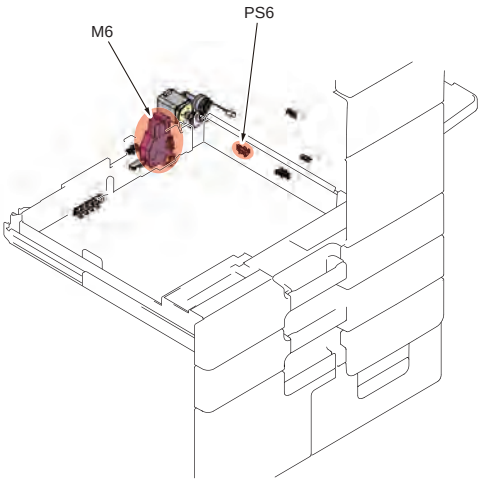


PFTDB
Paper feed/transport drive board

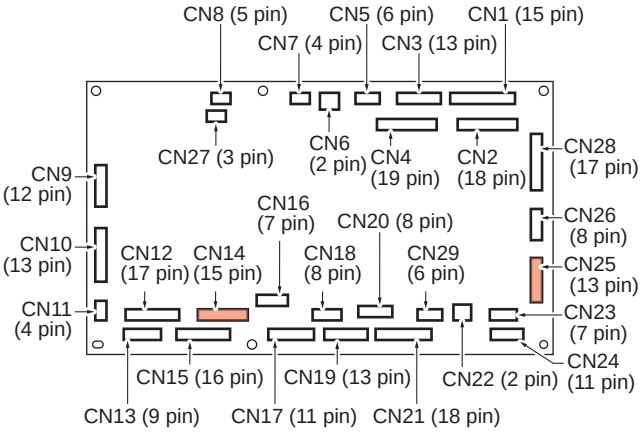


3. C0202

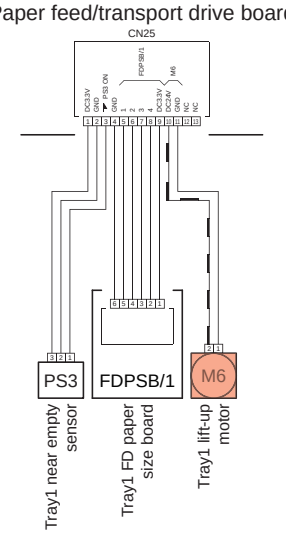


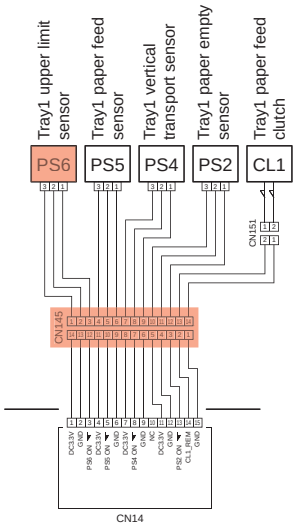


PFTDB

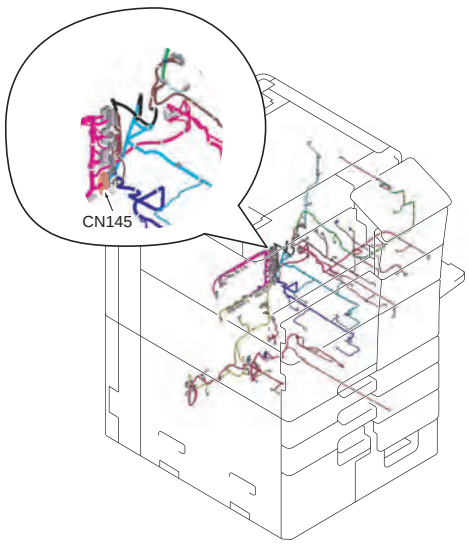


PFTDB
Paper feed/transport drive board

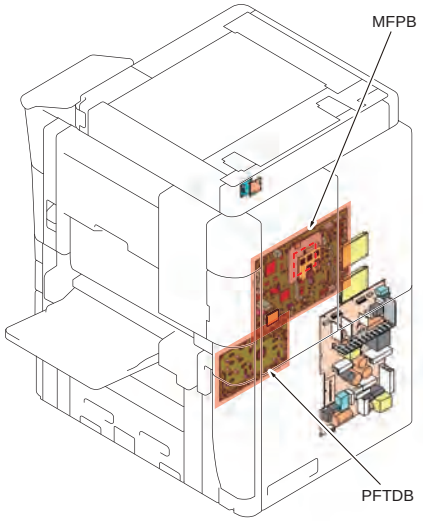


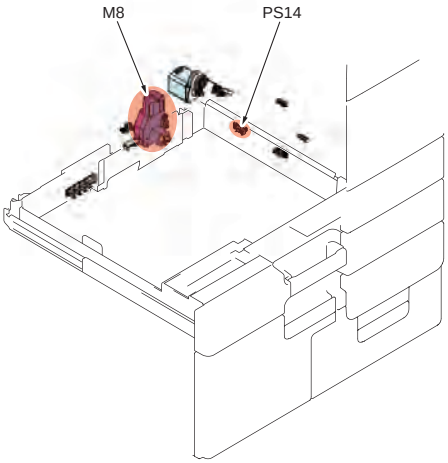


PFTDB
Paper feed/transport drive board



4. C0204





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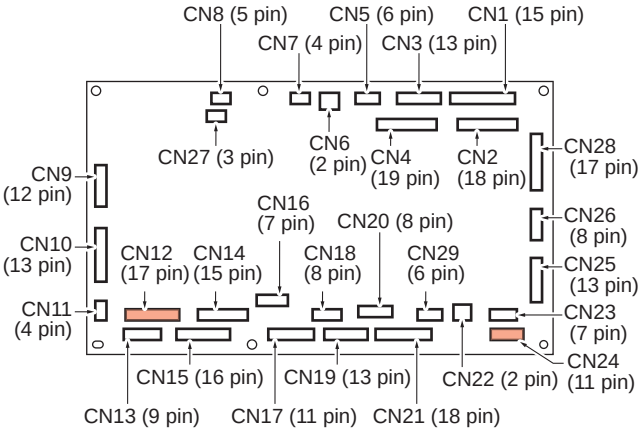

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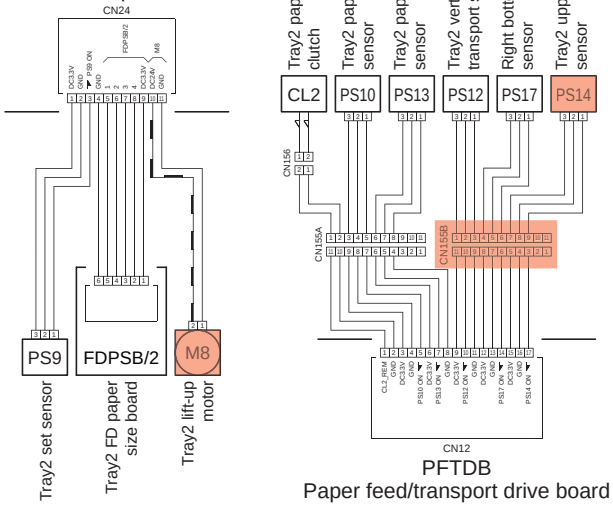
Paper feed/transport drive board



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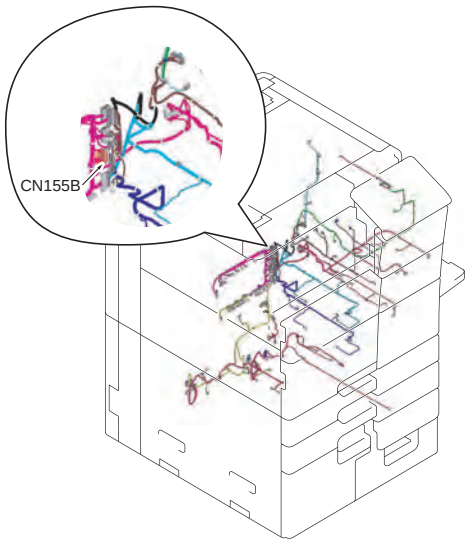
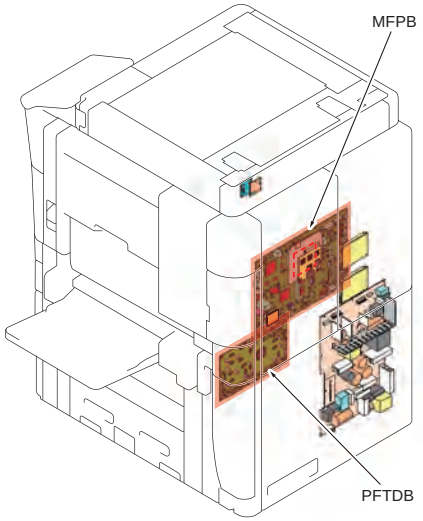
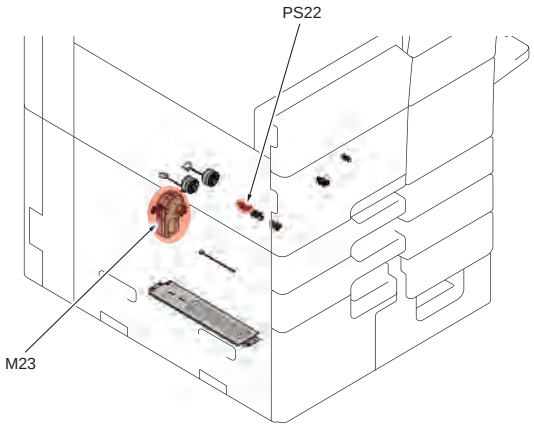
Paper feed/transport drive board

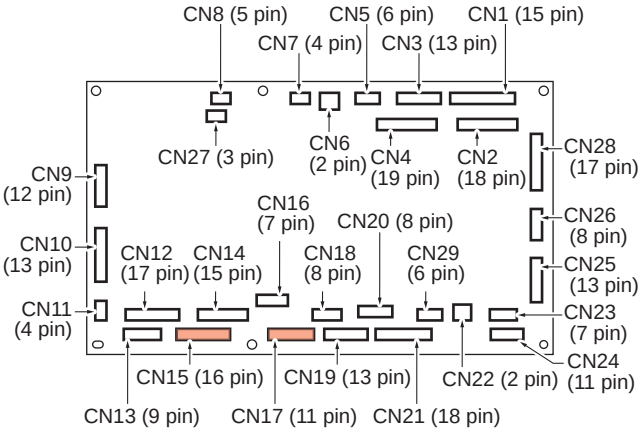


5. C0206

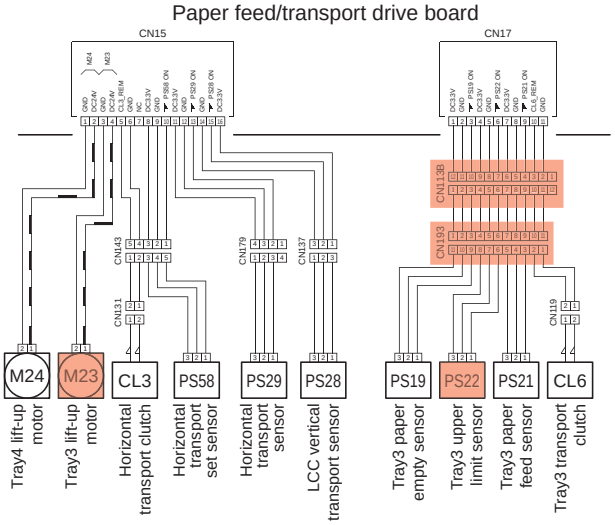


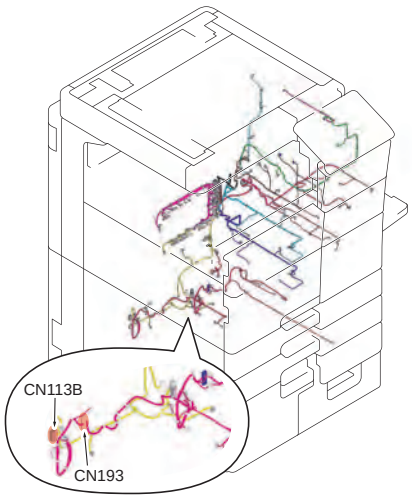


PFTDB

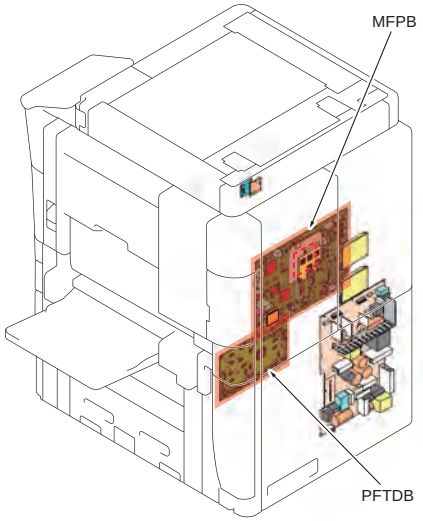


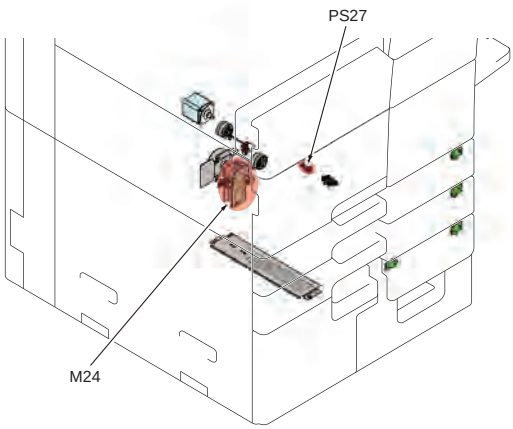
PFTDB
Paper feed/transport drive board



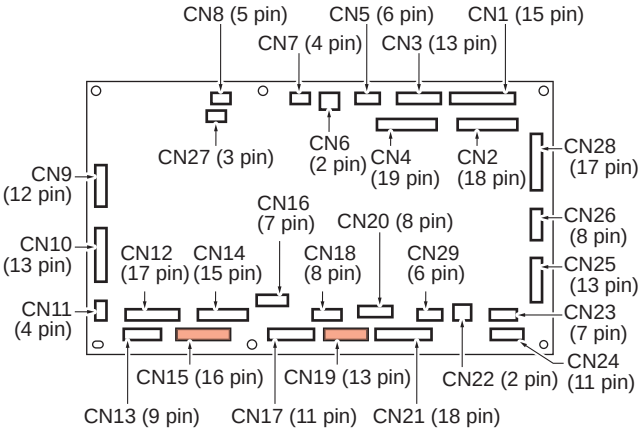


6. C0208

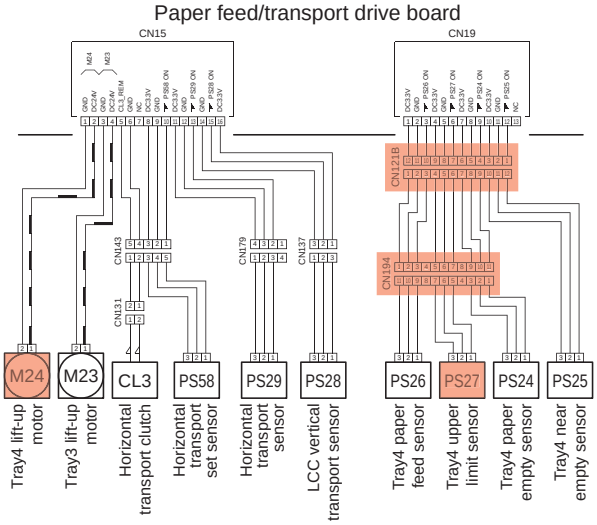


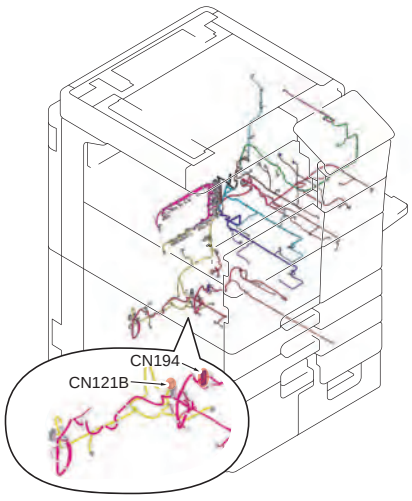


PFTDB

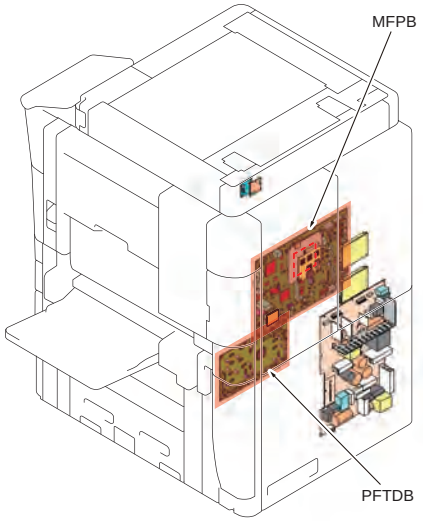


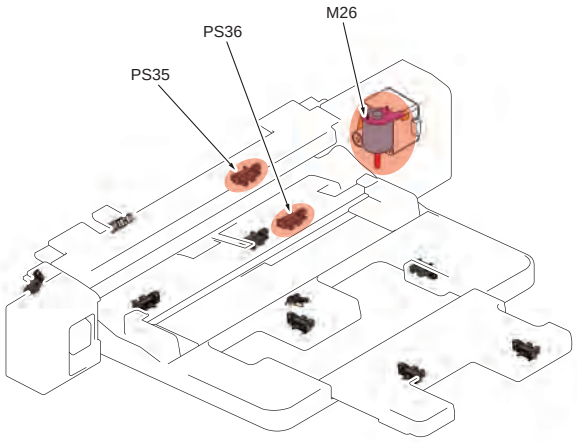
PFTDB
Paper feed/transport drive board



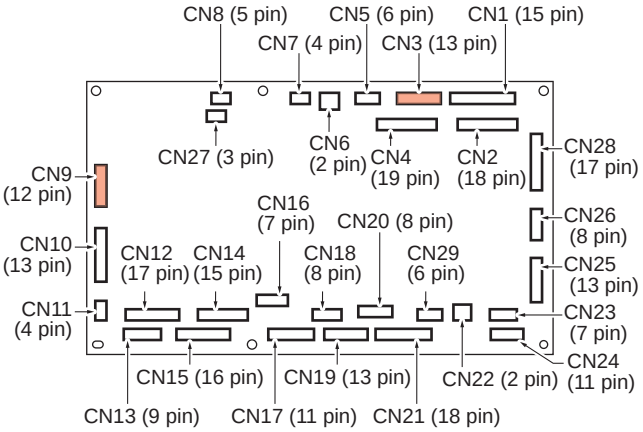


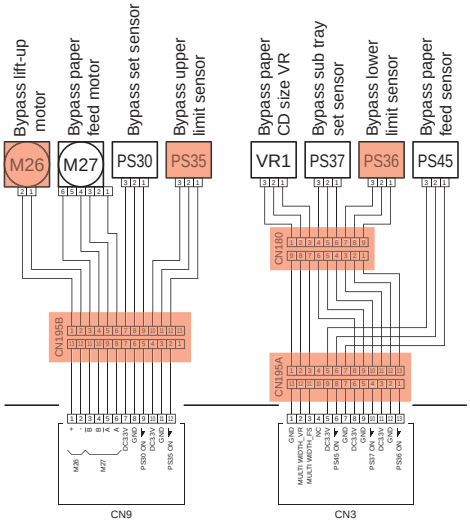
7. C0211



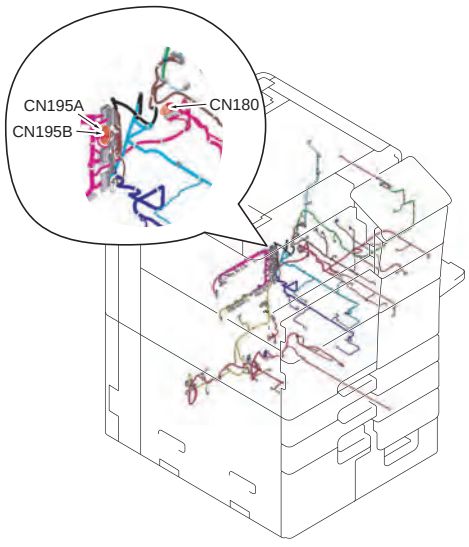


PFTDB



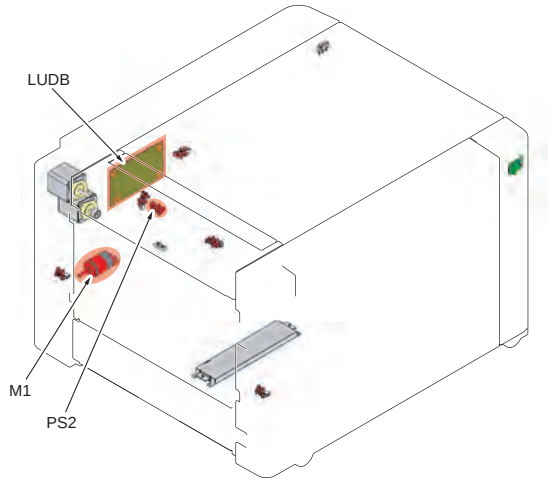


PFTDB
Paper feed/transport drive board

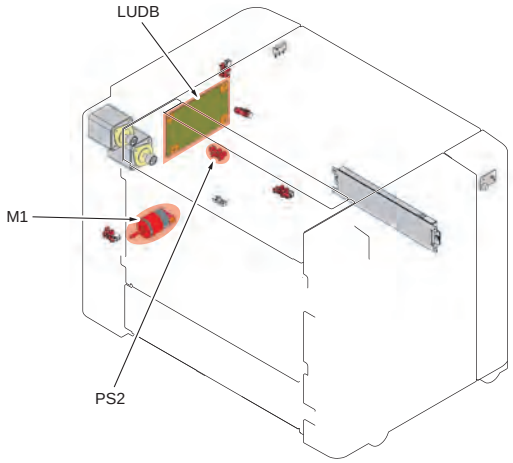


8. C0216

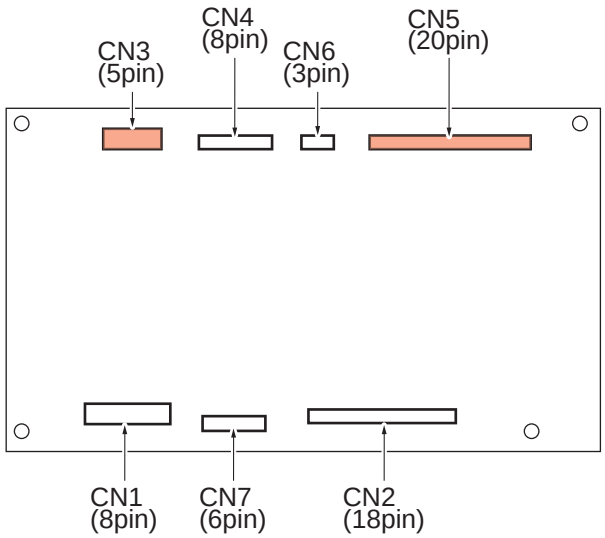
LU-205

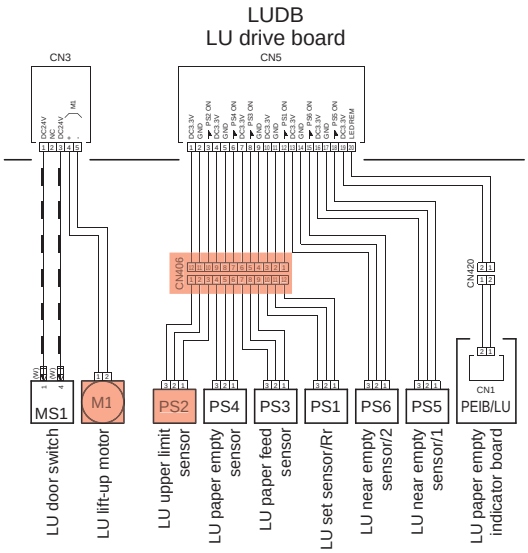


LU-303

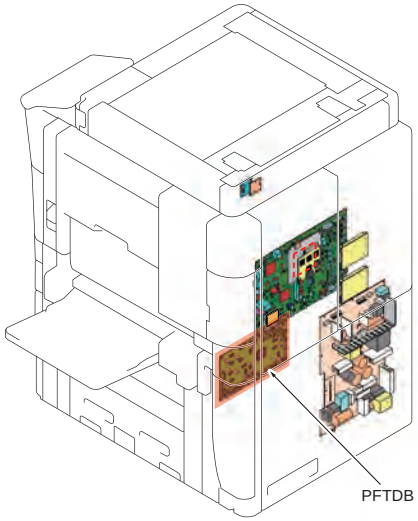


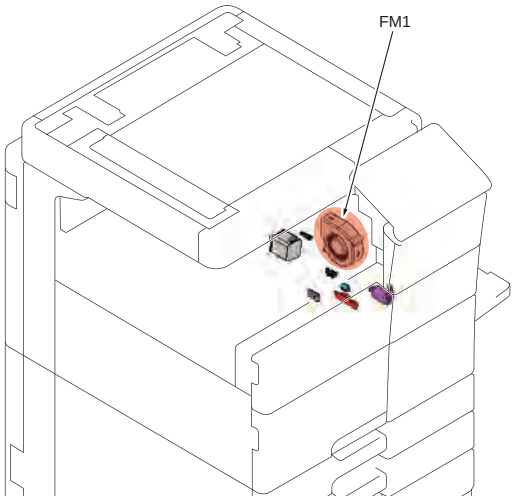
LUDB



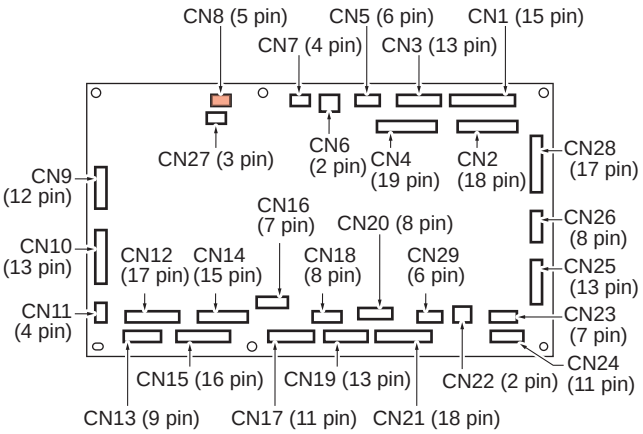


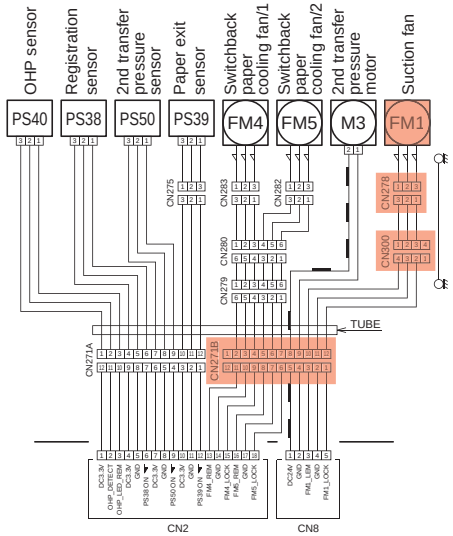
9. C0301



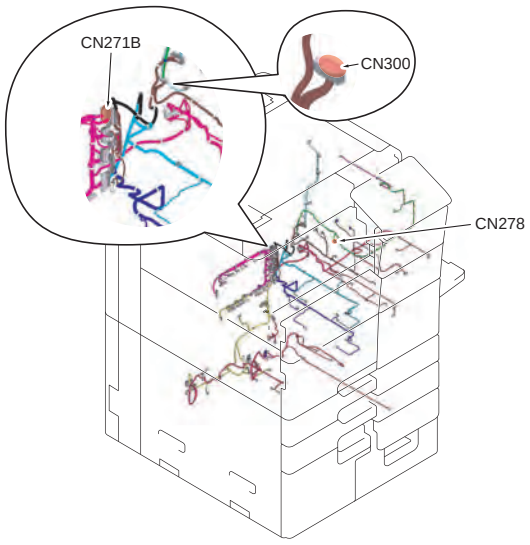


PFTDB

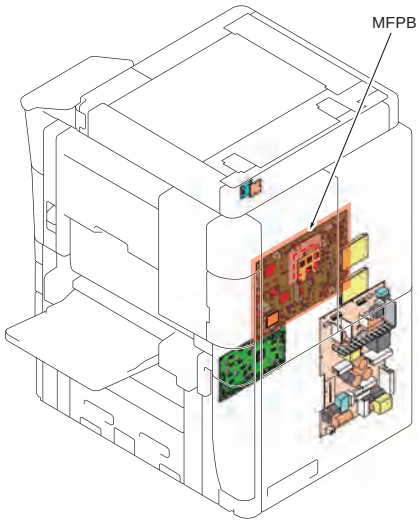


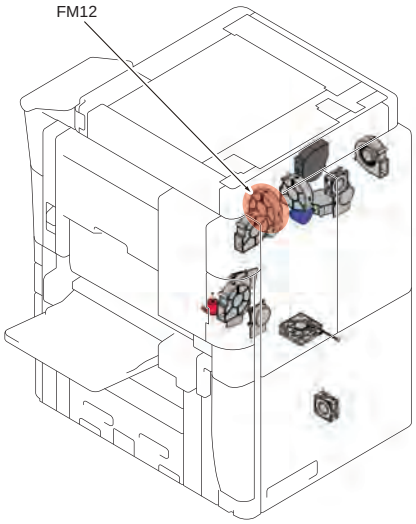


PFTDB
Paper feed/transport drive board

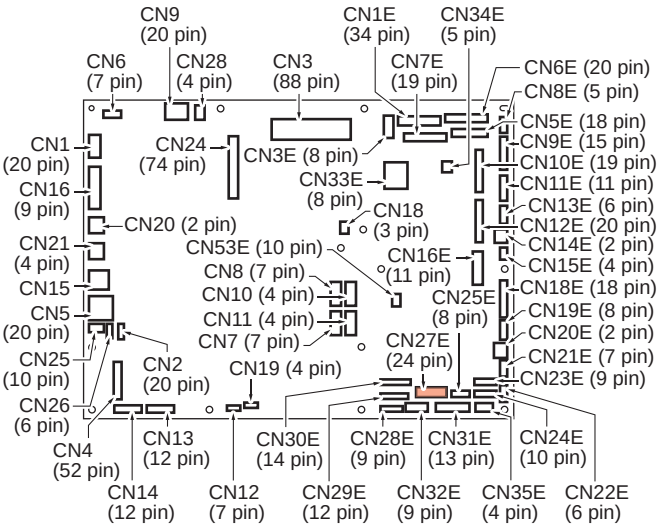


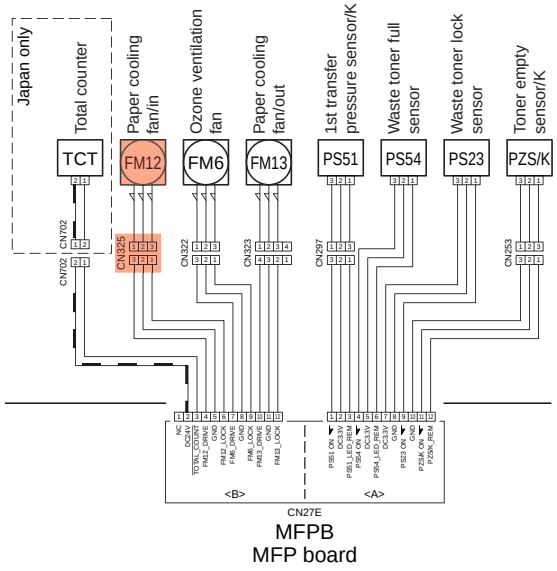
10. C0351



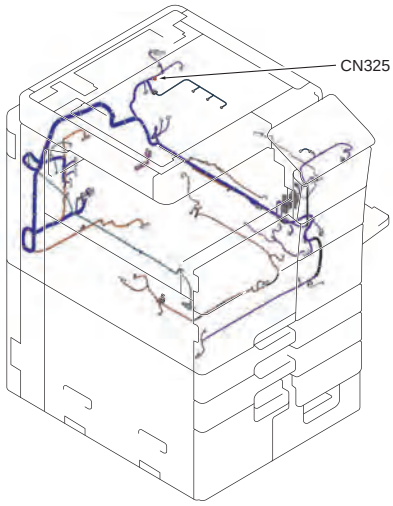


MFPB

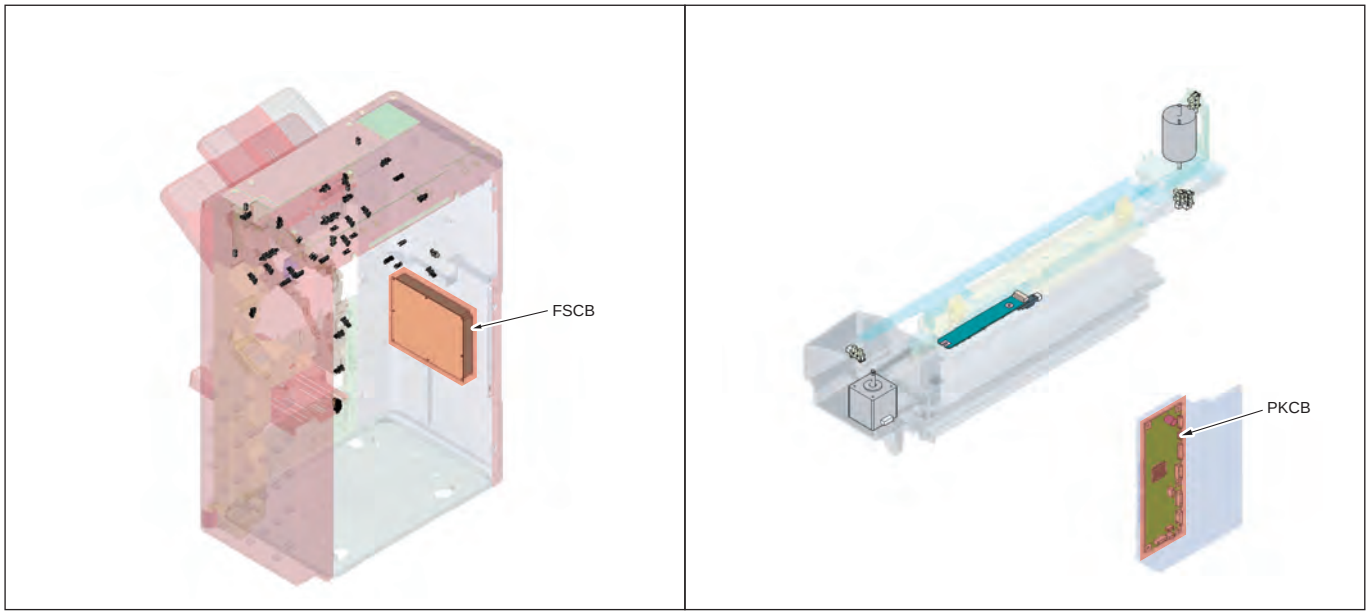




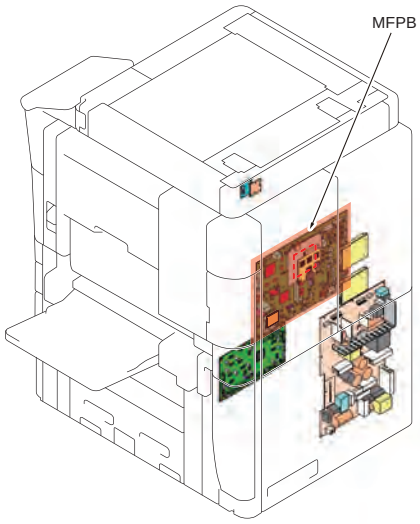
MFPB
MFP board



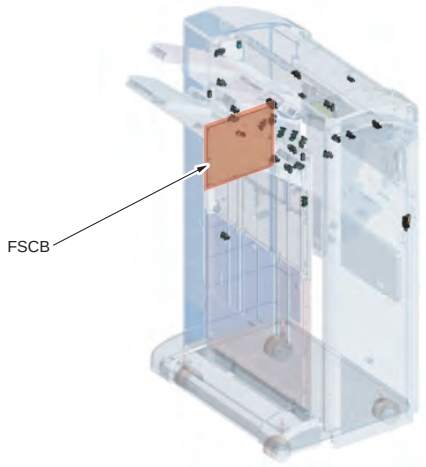
11. C1003, C1013



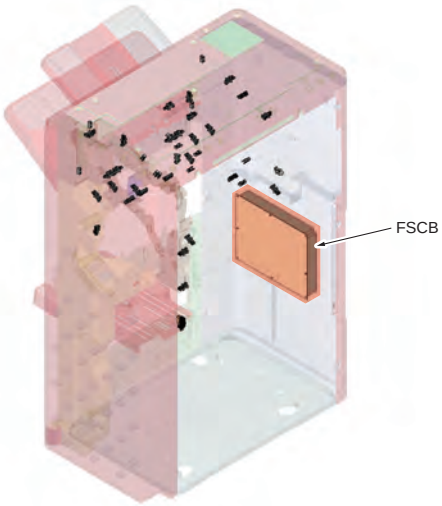
12. C1004, C1014



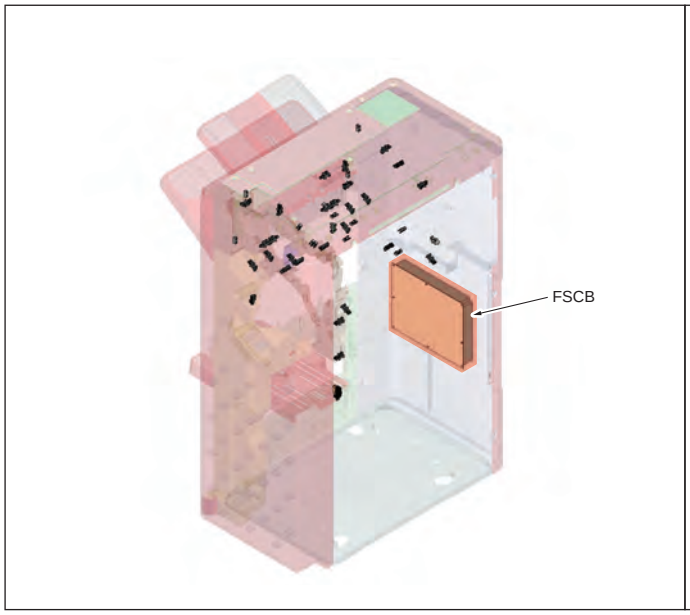
FS-536/FS-536SD

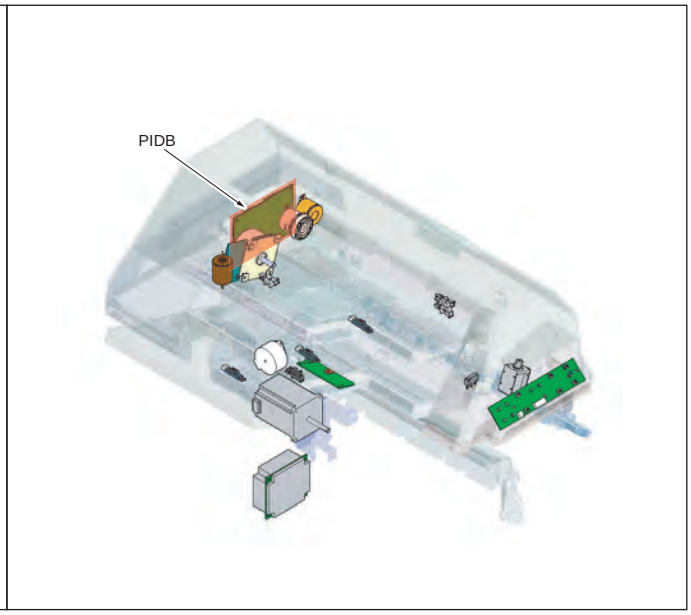


FS-537/FS-537SD



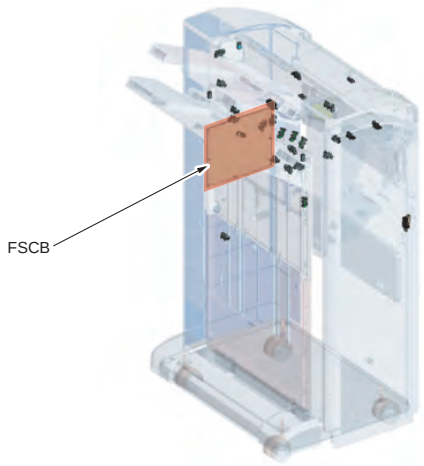
13. C1007, C1017



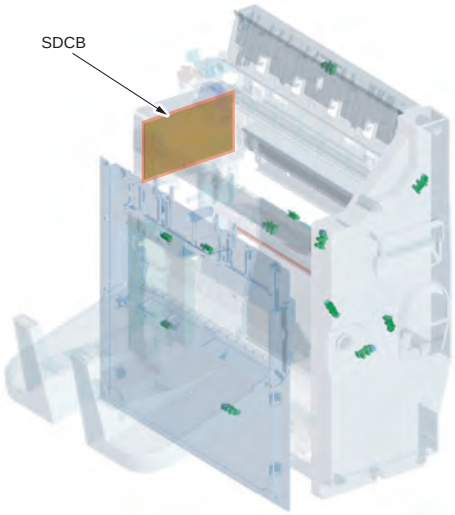


14. C1081, C1082

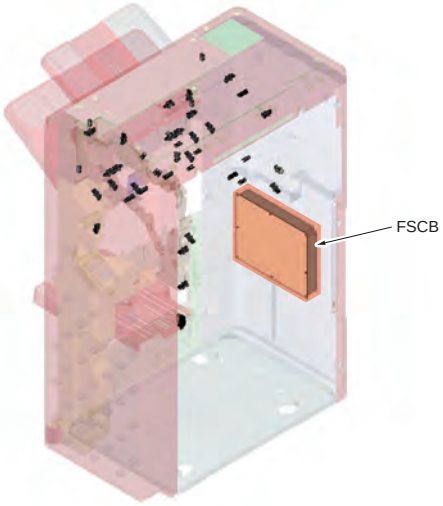
FS-536SD



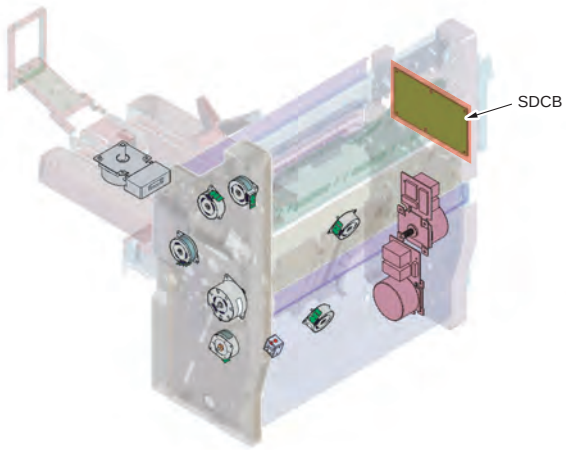
FS-536SD



FS-537SD

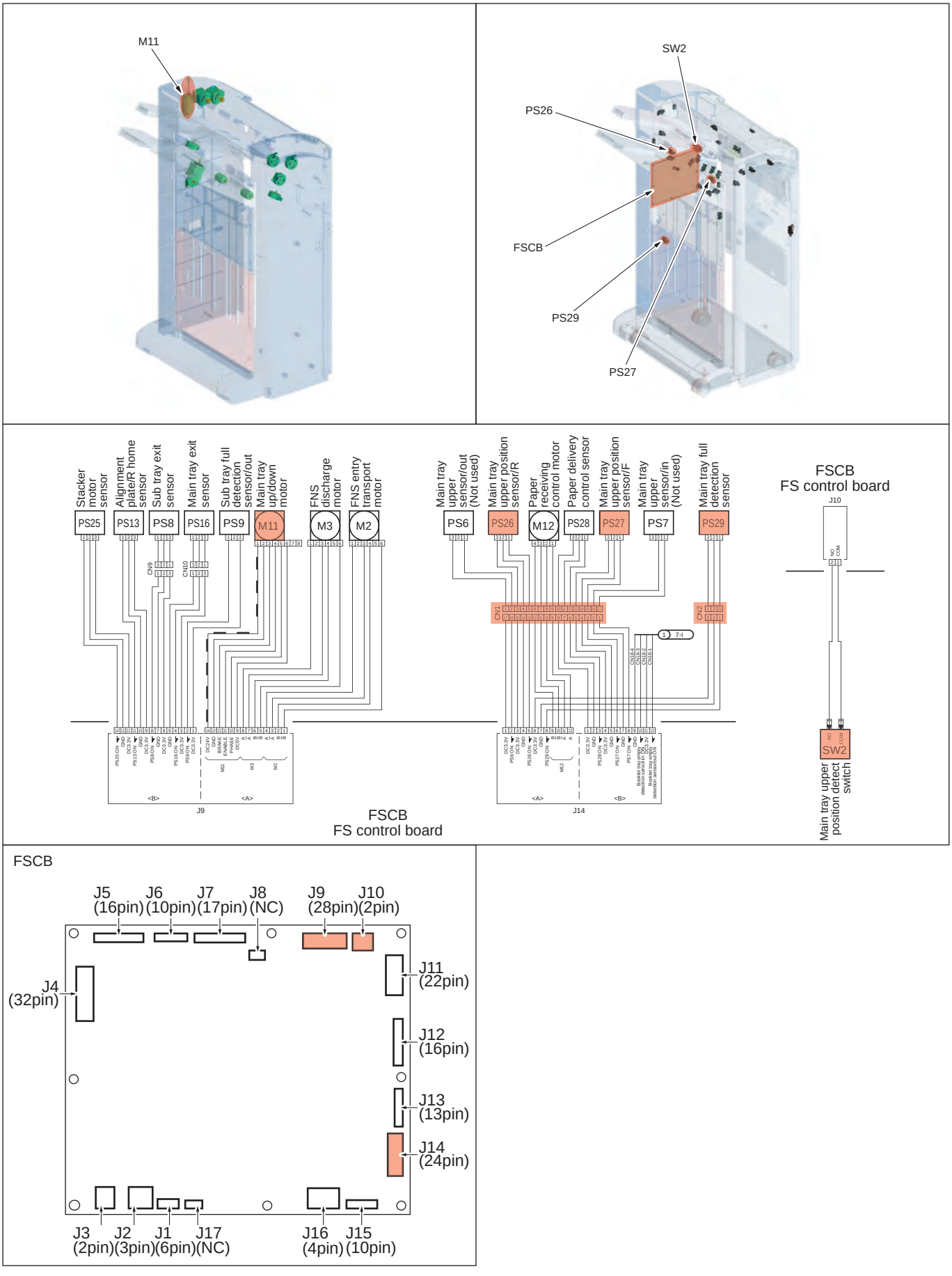


FS-537SD

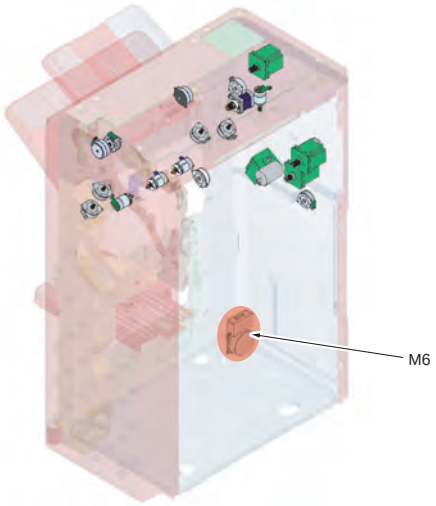


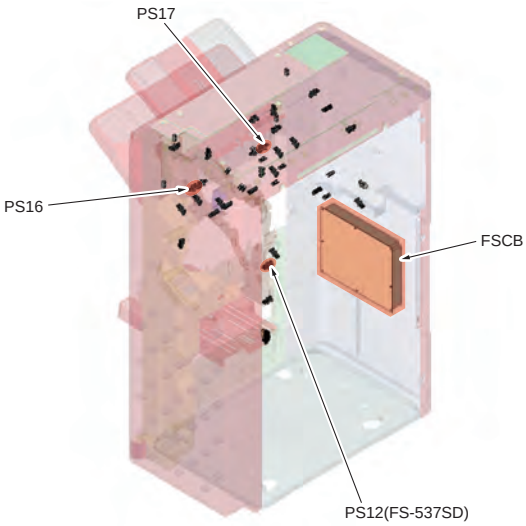
15. C1102

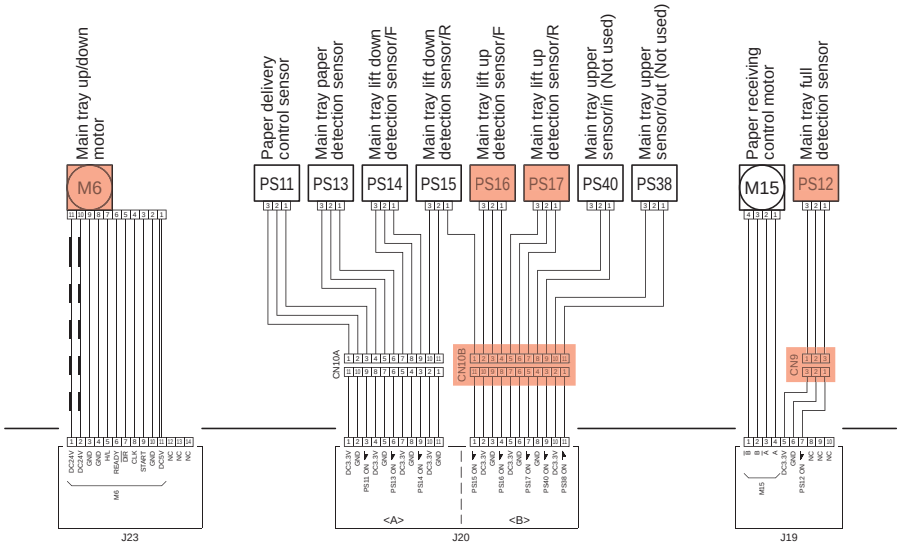
15.1 FS-536/FS-536SD



15.2 FS-537/FS-537SD

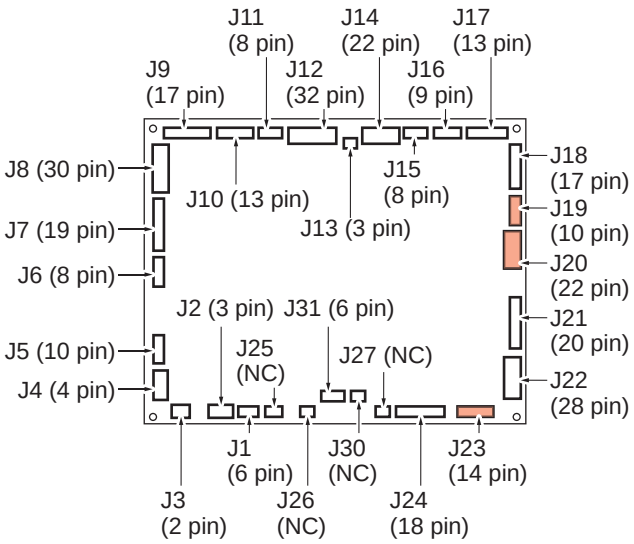






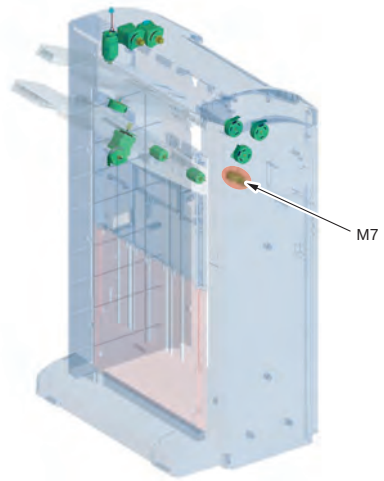
FSCB
FS control board

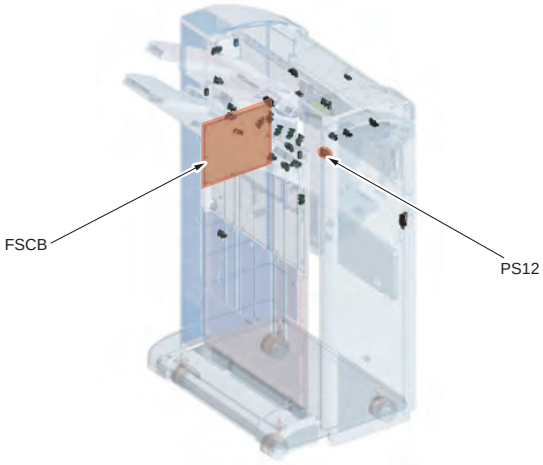
FSCB

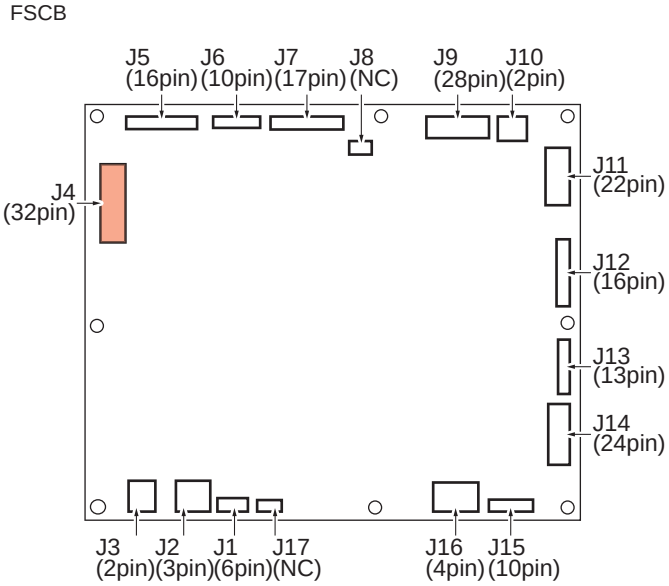


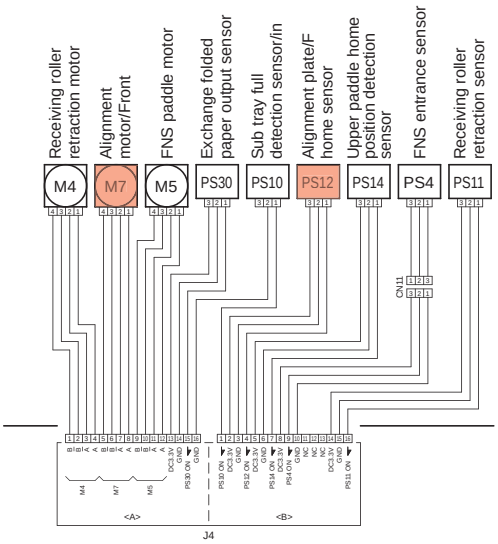
16. C1103

16.1 FS-536/FS-536SD



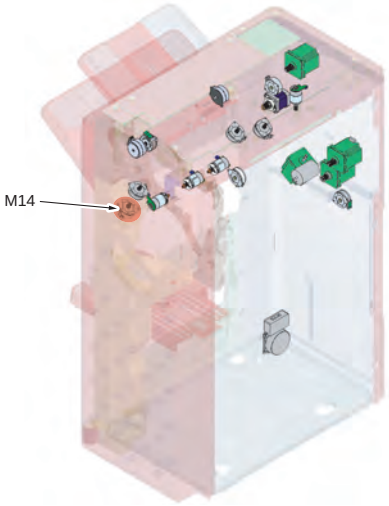


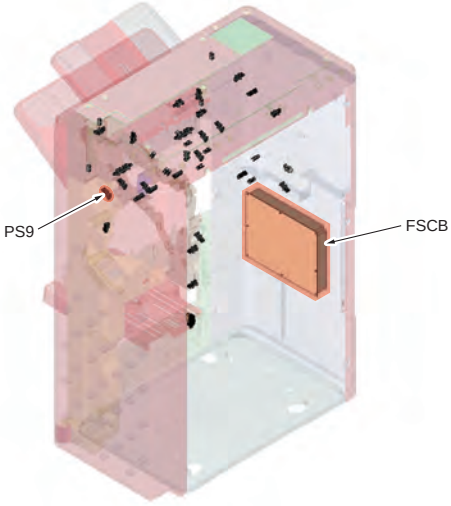




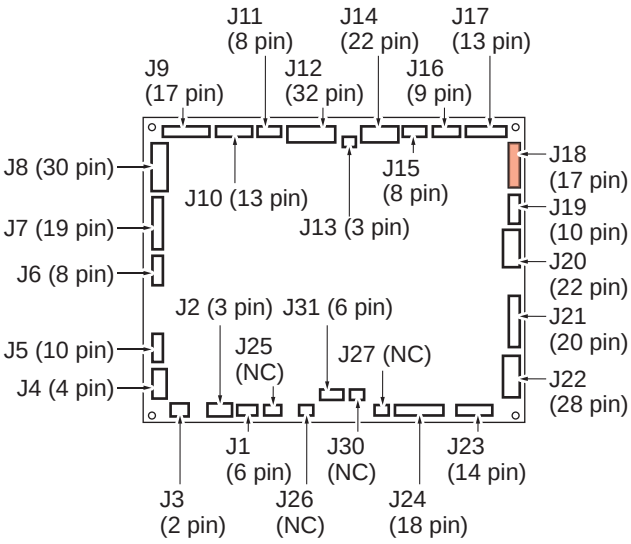
FSCB
FS control board

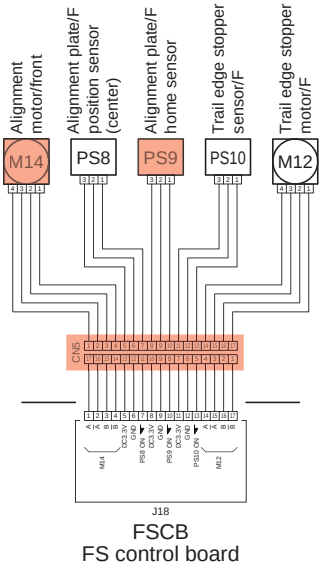
16.2 FS-537/FS-537SD





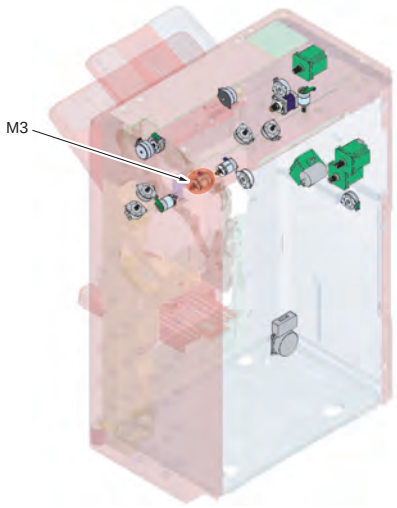
FSCB

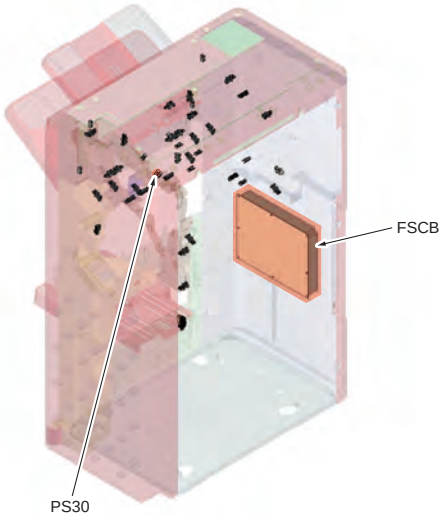




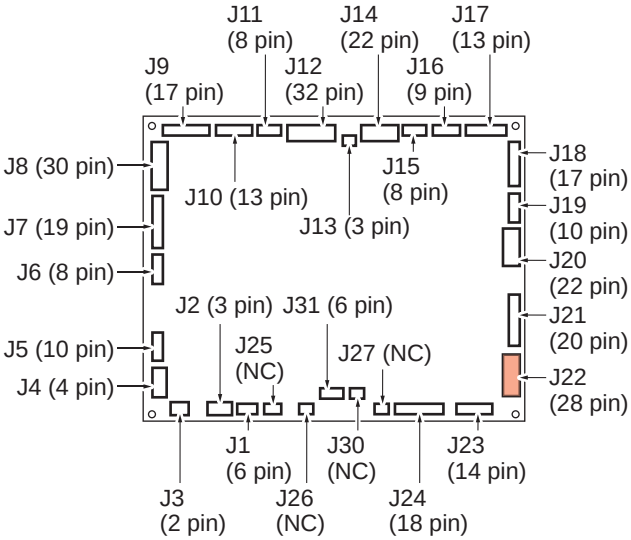
FSCB
FS control board

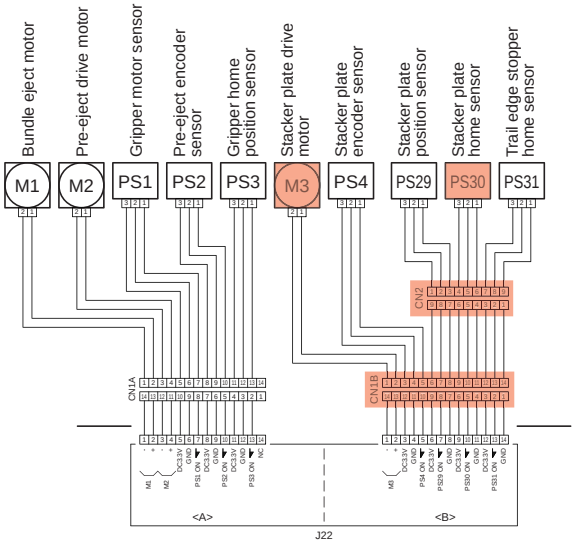
17. C1104





FSCB

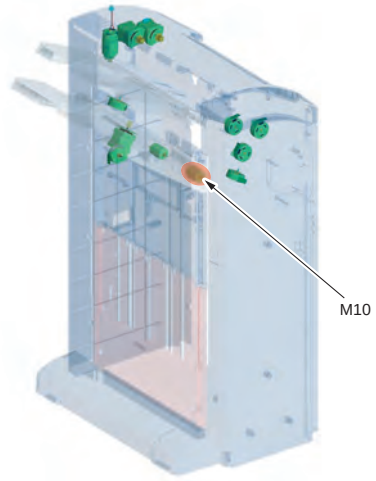


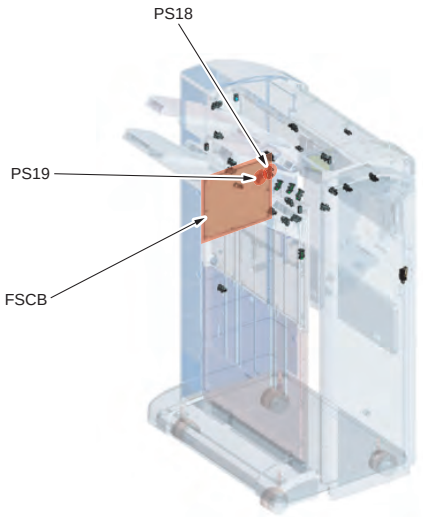


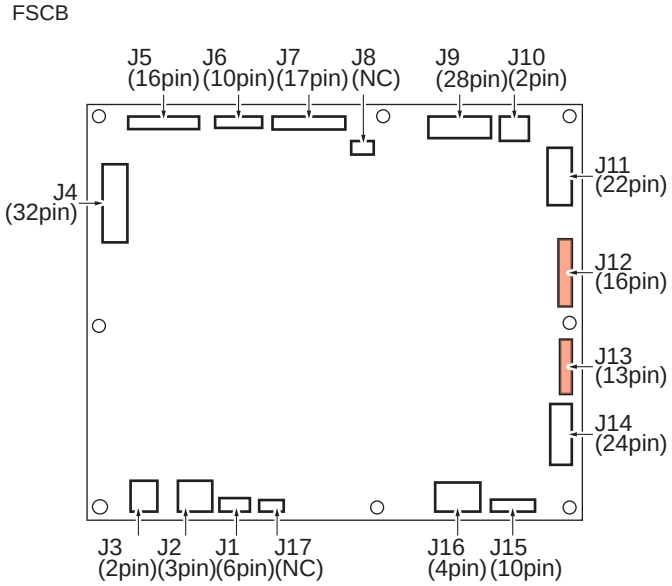
FSCB
FS control board

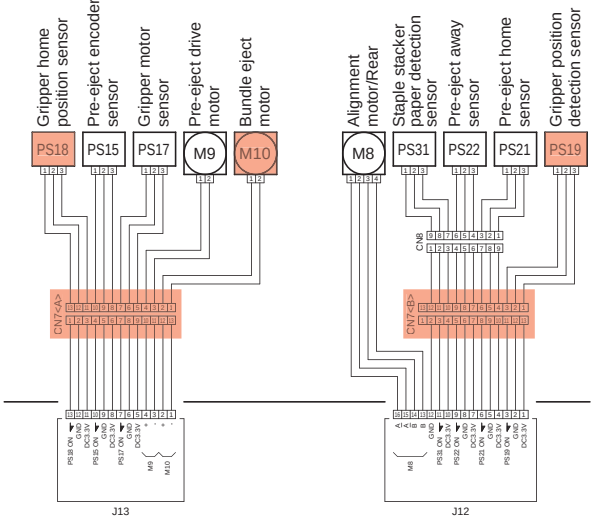
18. C1105

18.1 FS-536/FS-536SD

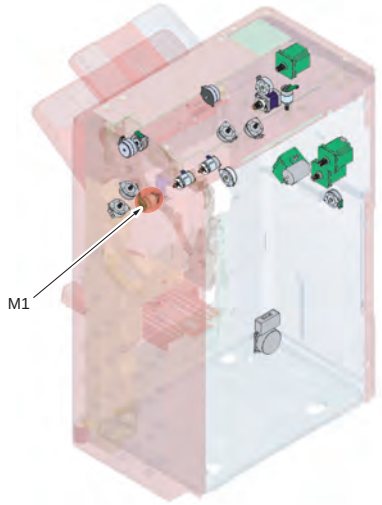


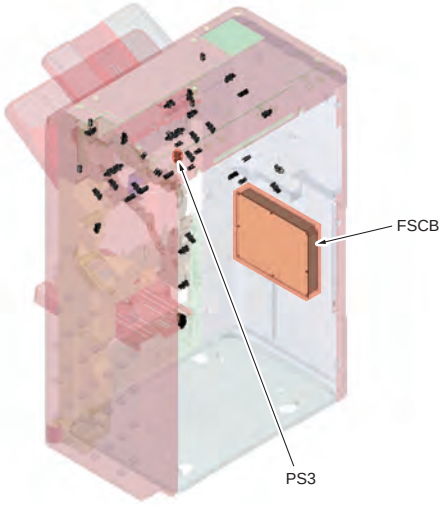




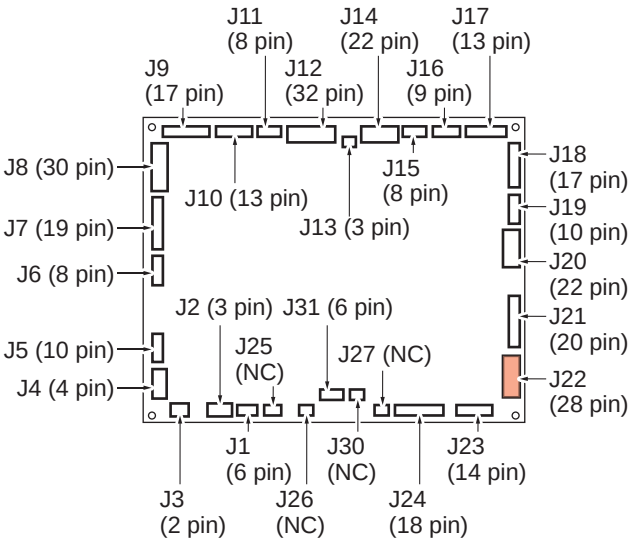


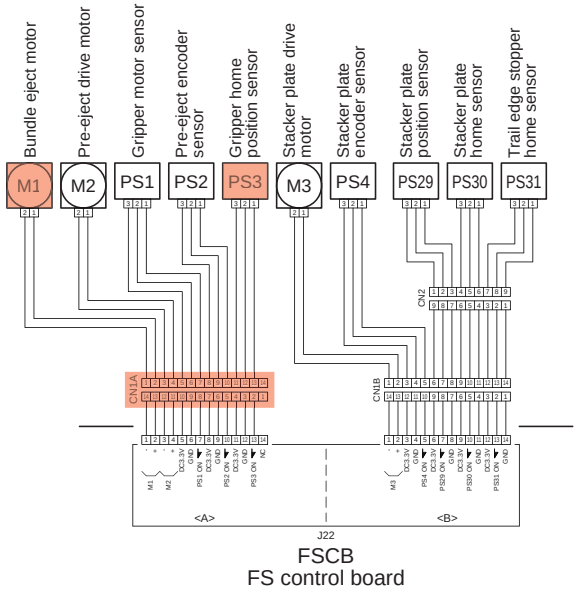
18.2 FS-537/FS-537SD





FSCB

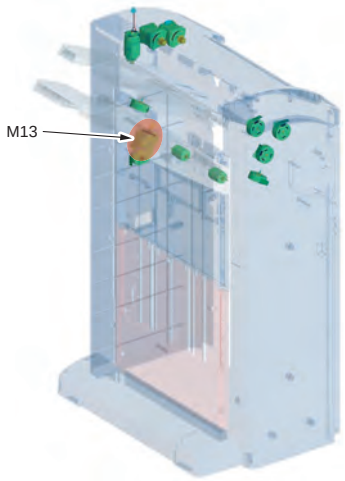


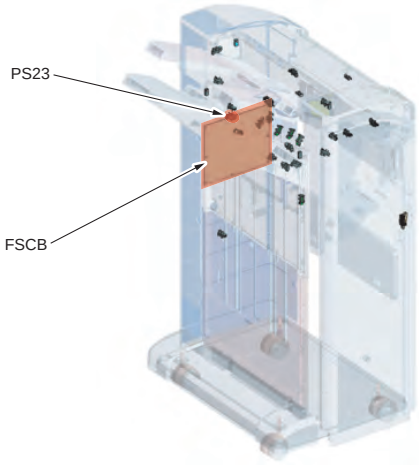


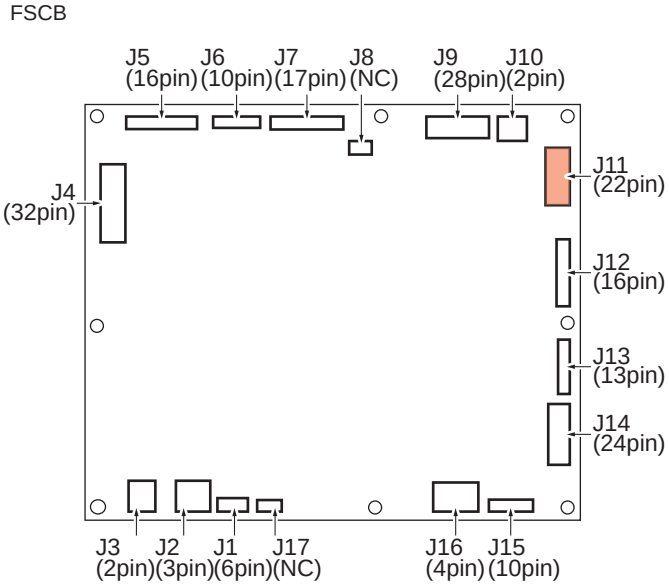
FSCB
FS control board

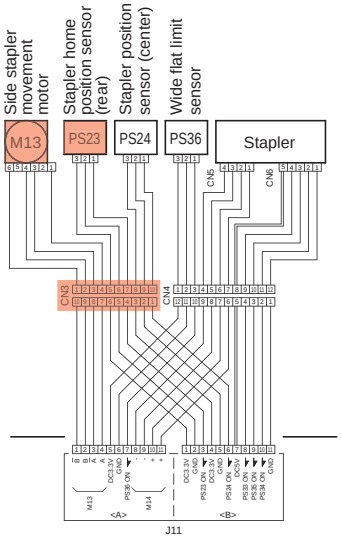
19. C1106

19.1 FS-536/FS-536SD

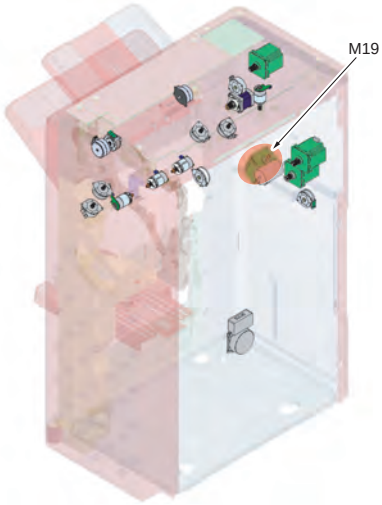


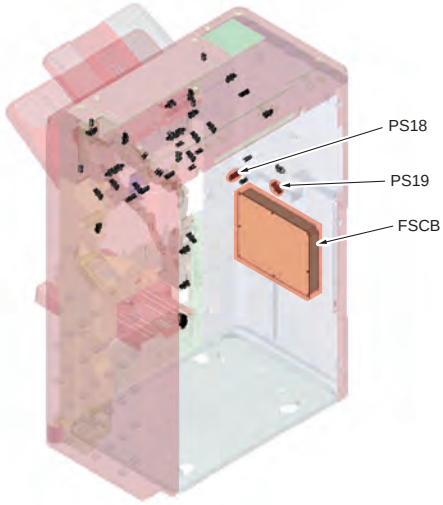




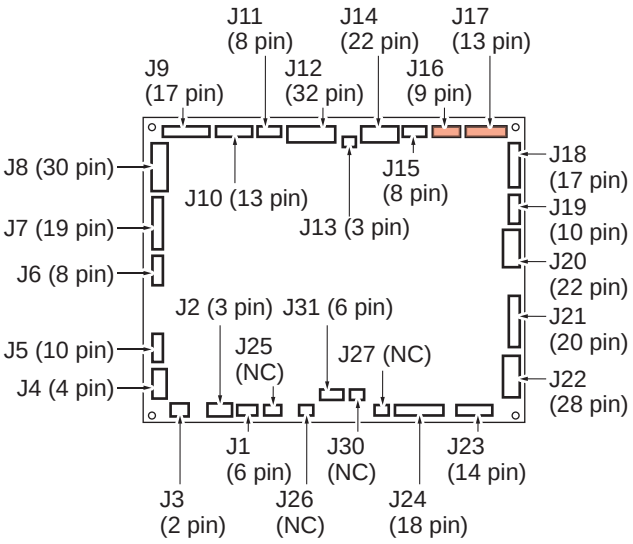


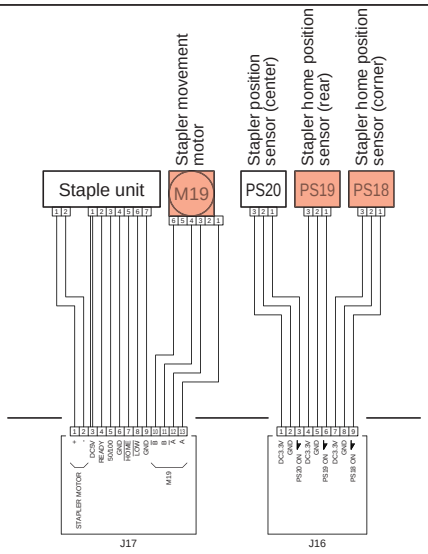
19.2 FS-537/FS-537SD





FSCB

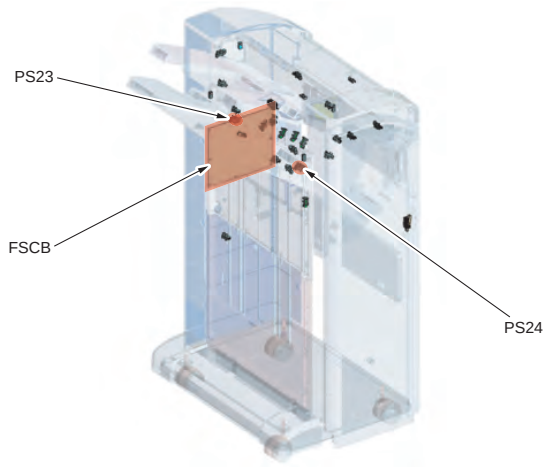


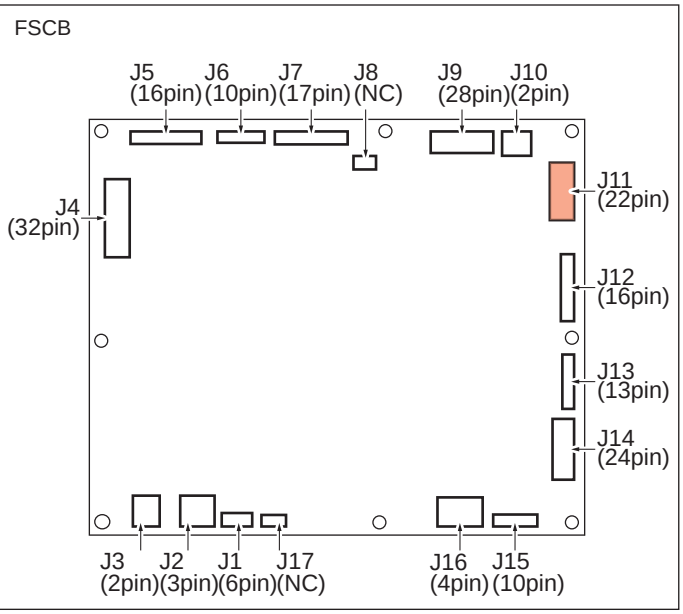


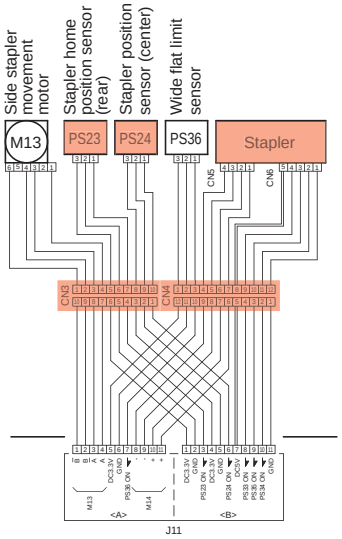
FSCB
FS control board

20. C1109

20.1 FS-536/FS-536SD

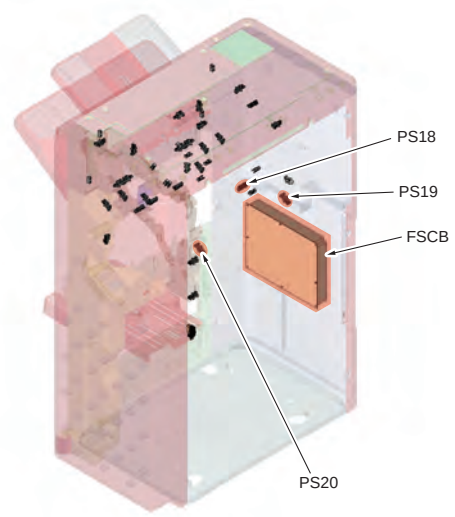




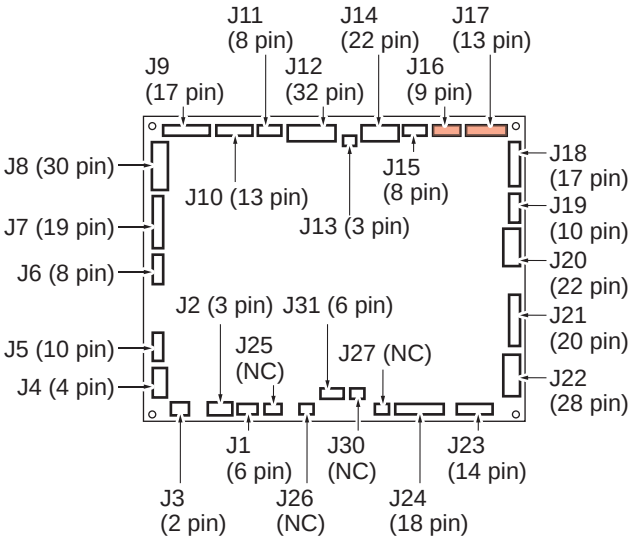


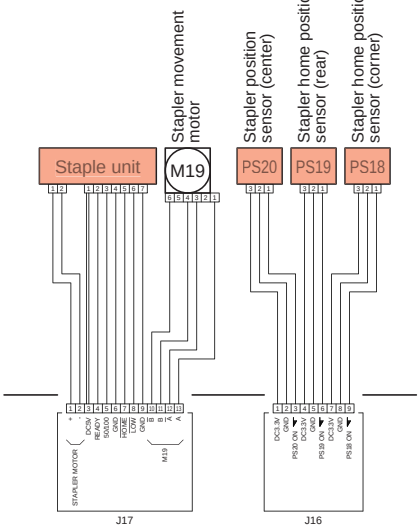
FSCB
FS control board

20.2 FS-537/FS-537SD



FSCB

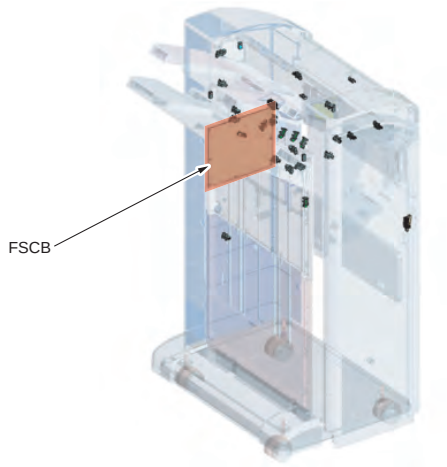


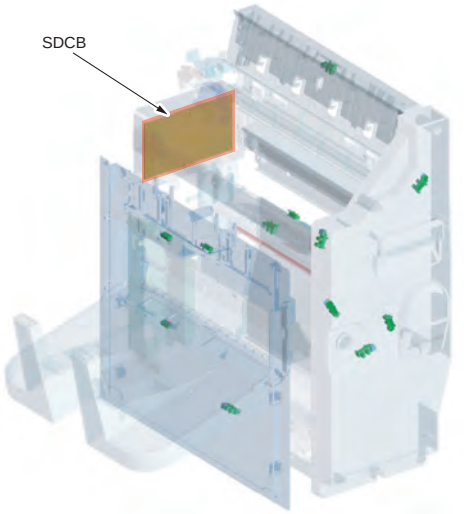


FSCB
FS control board

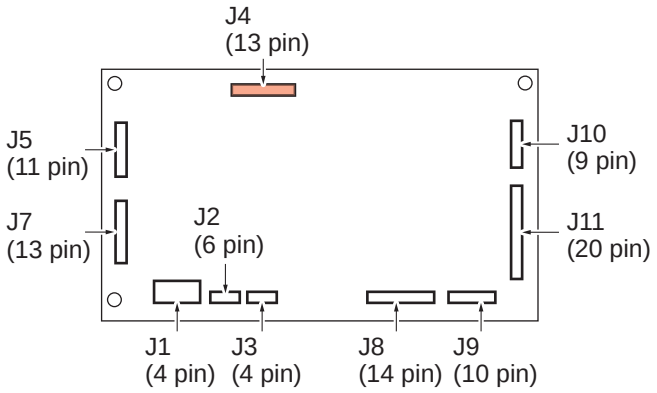
21. C1112

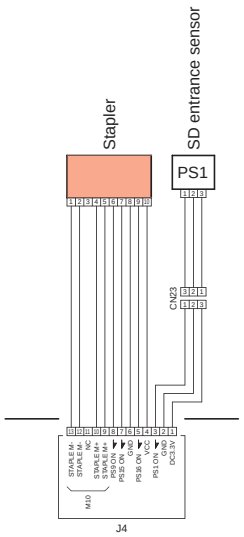
21.1 FS-536SD



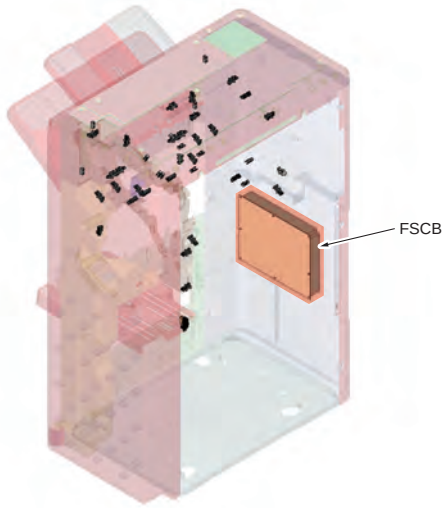


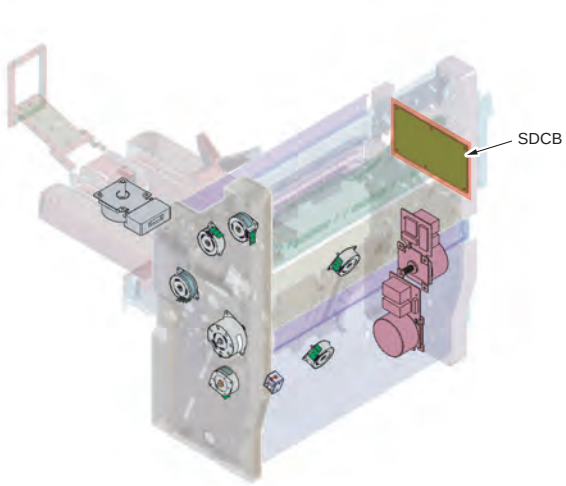
SDCB



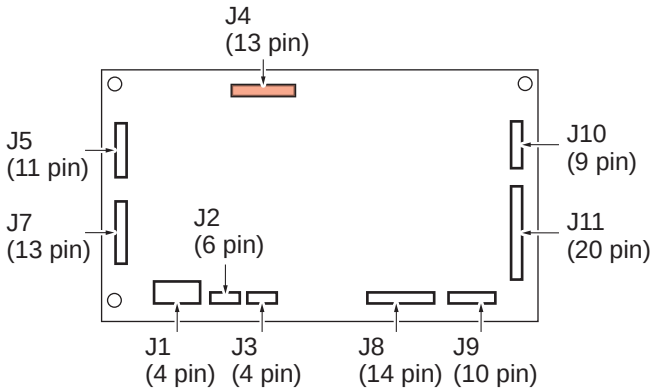


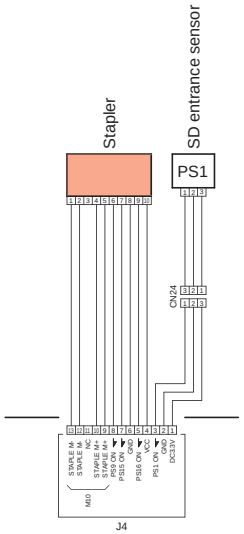
21.2 FS-537SD





SDCB

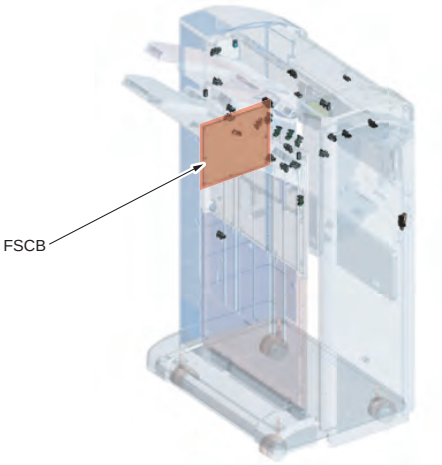


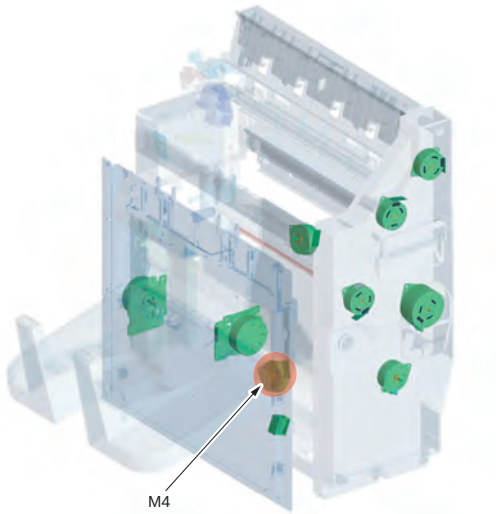


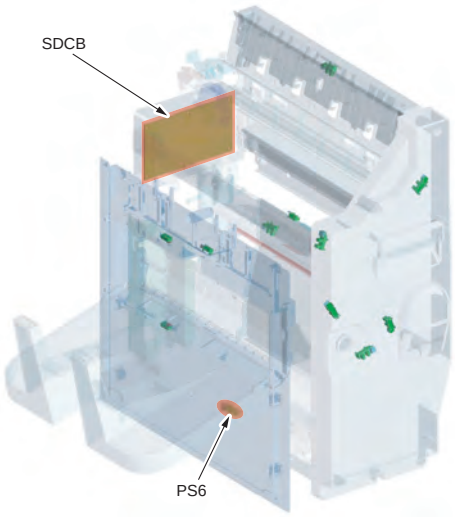
SDCB
SD control board

22. C1113

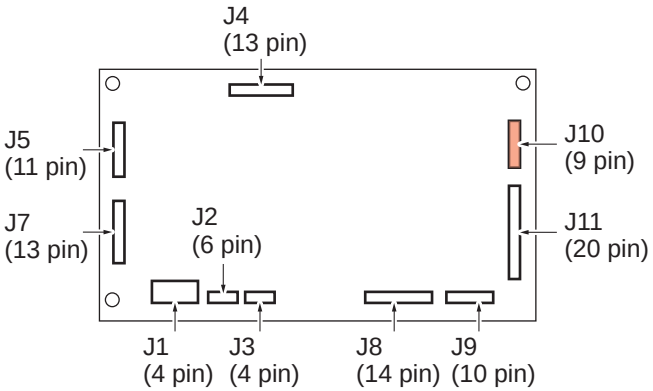
22.1 FS-536SD

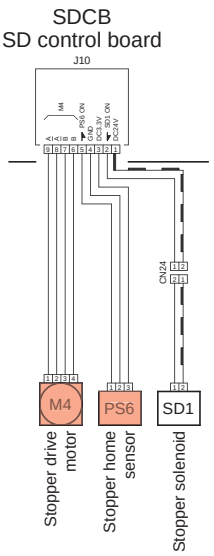




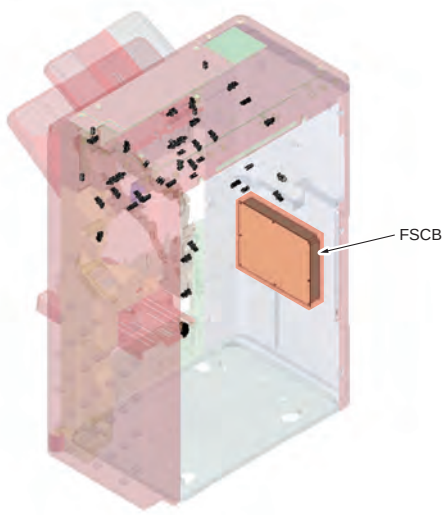


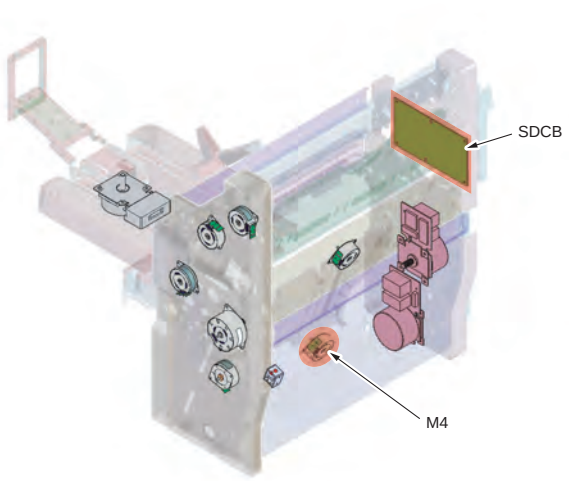
SDCB

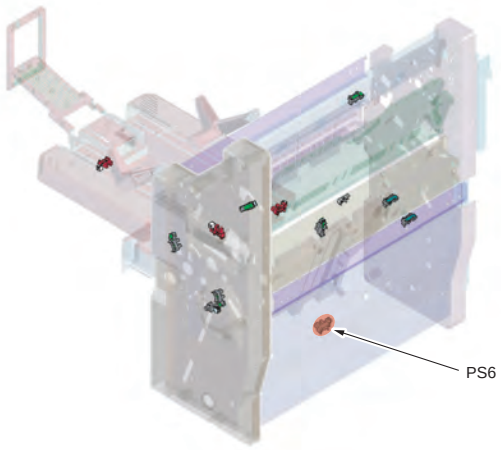




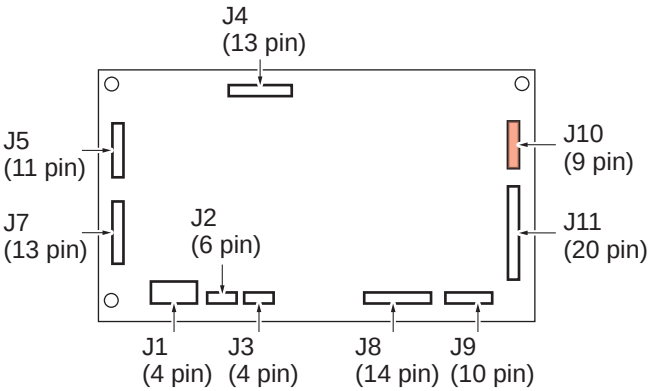
22.2 FS-537SD

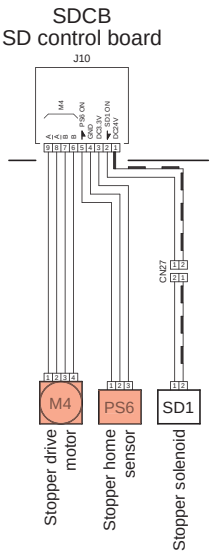






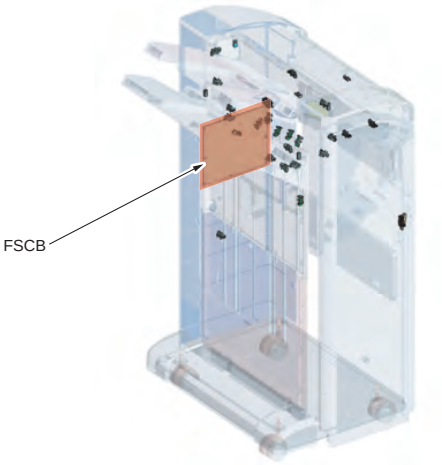
SDCB

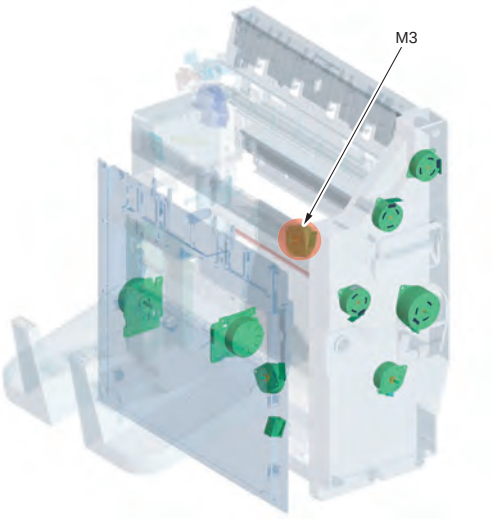


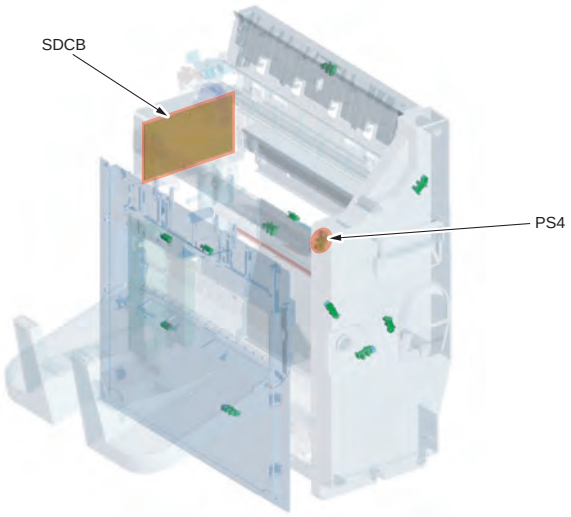


23. C1114

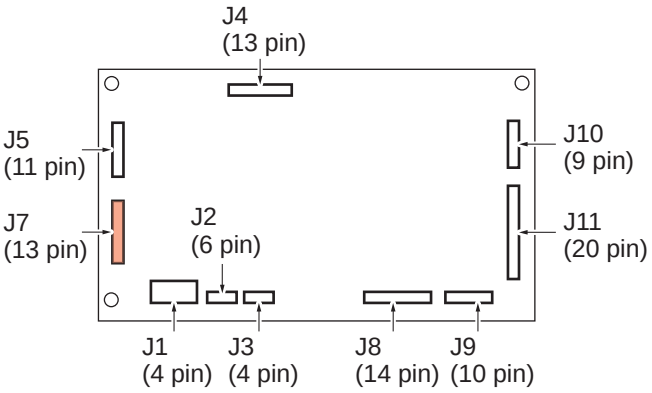
23.1 FS-536SD

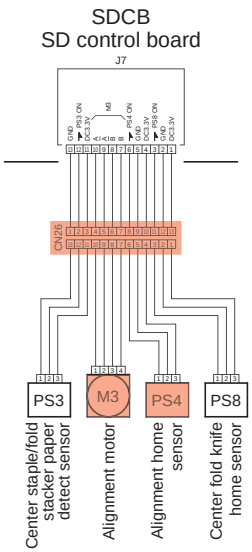




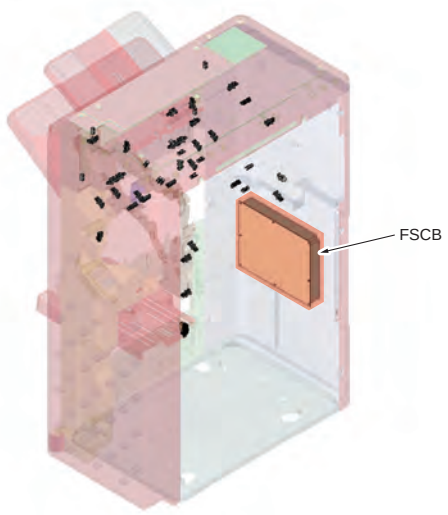


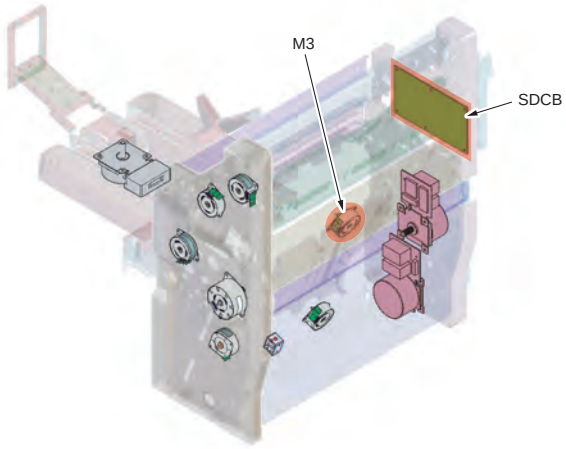
SDCB

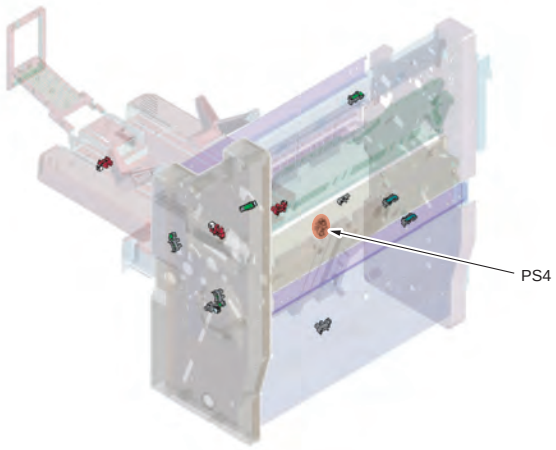




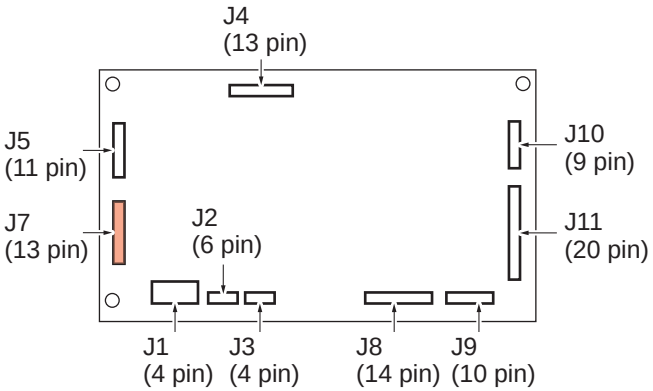
23.2 FS-537SD

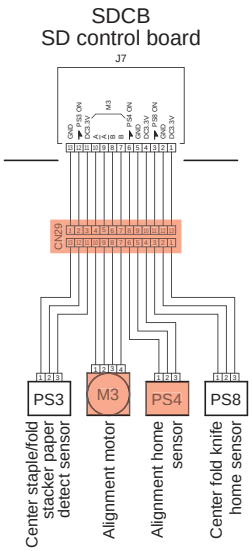






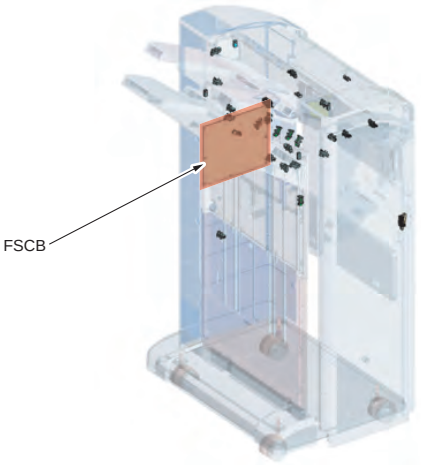
SDCB

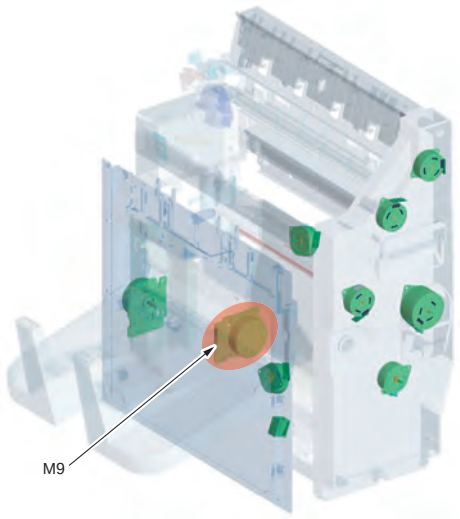


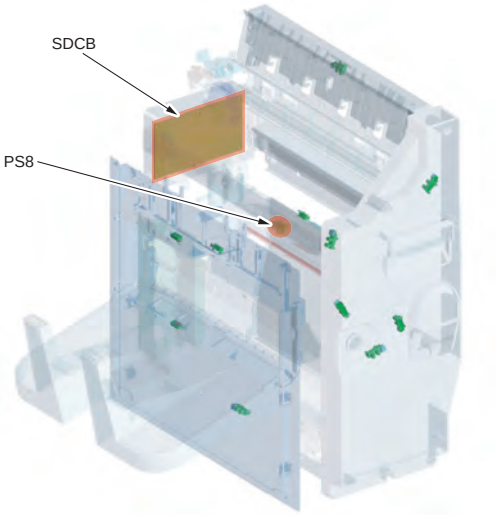


24. C1115

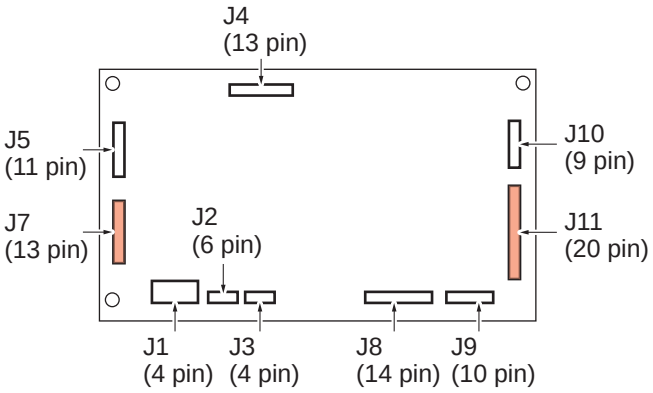
24.1 FS-536SD

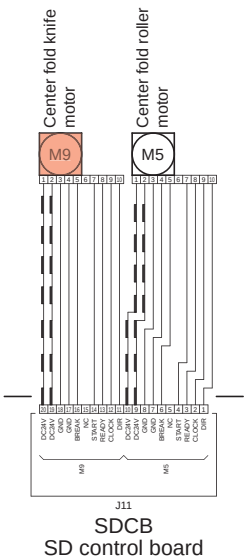


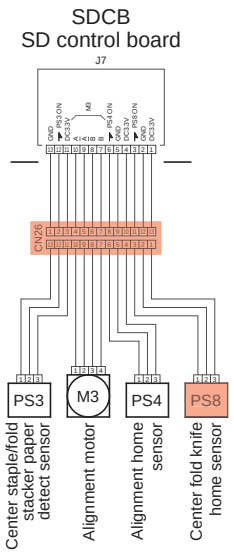




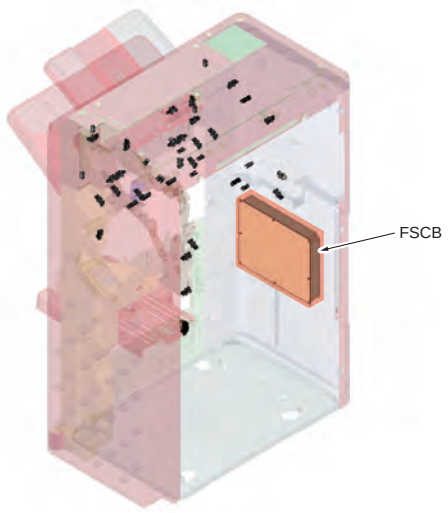
SDCB

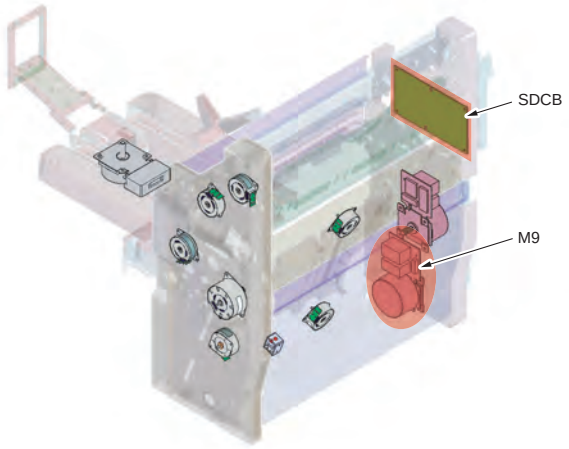


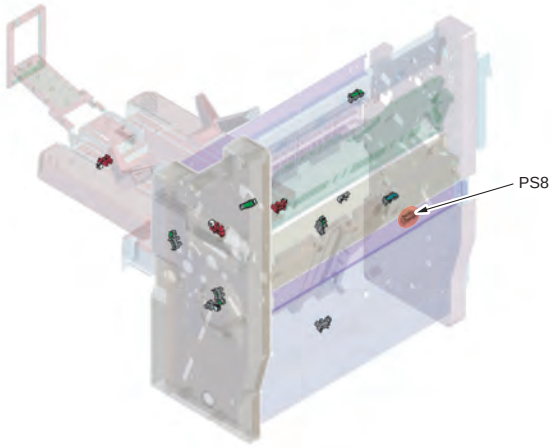




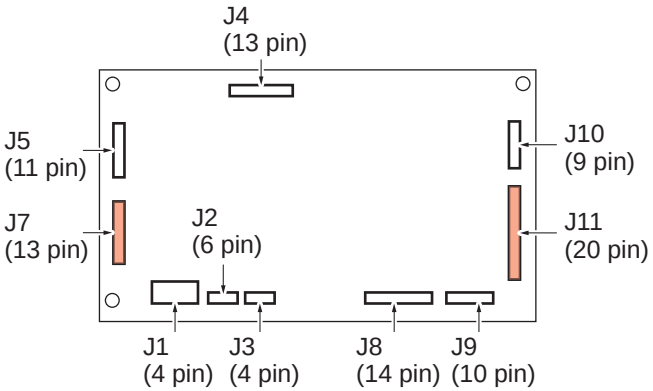
24.2 FS-537SD

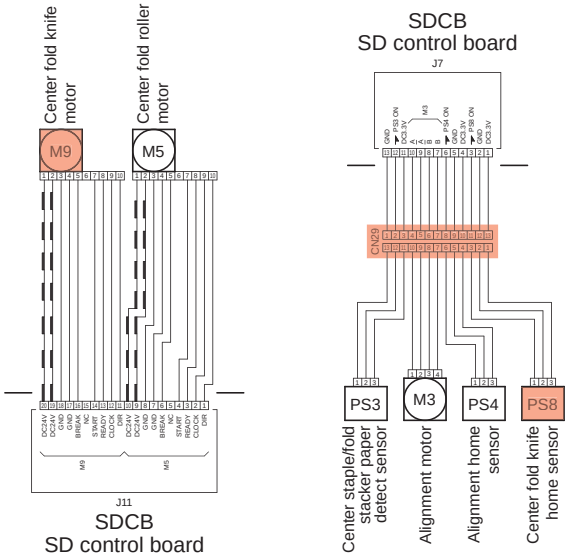




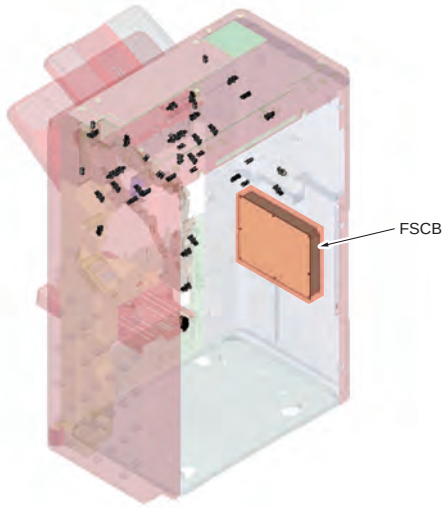


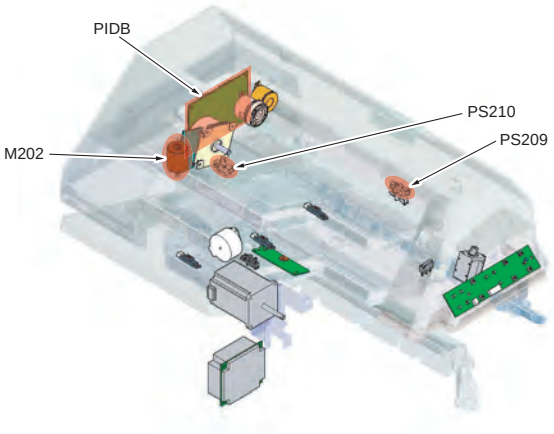
SDCB



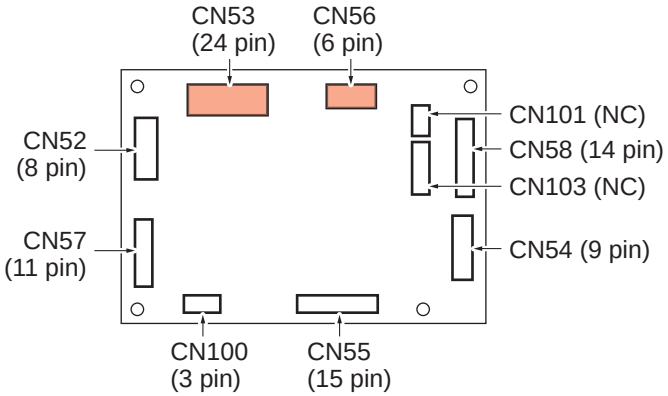


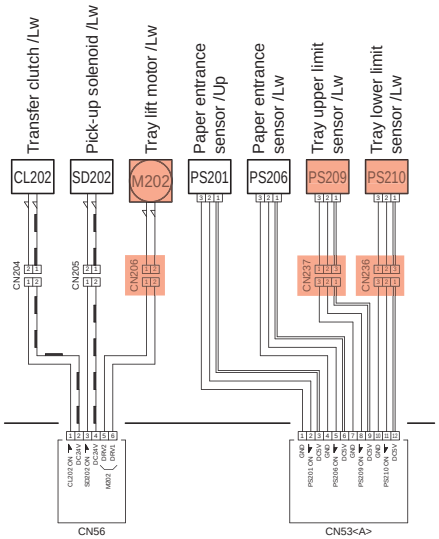
25. C1124





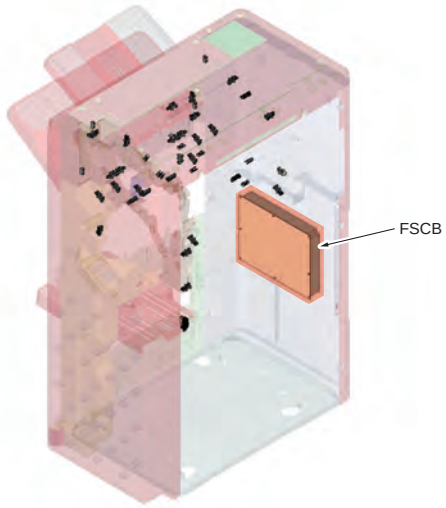
PIDB

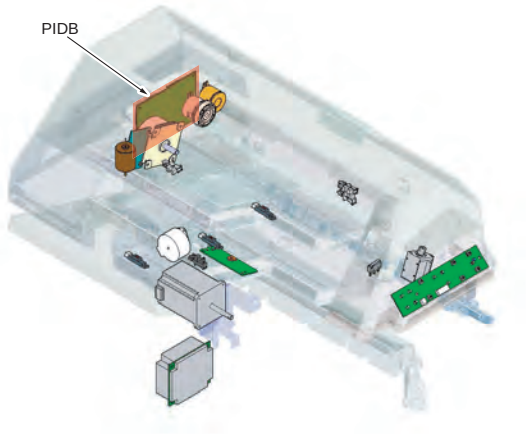




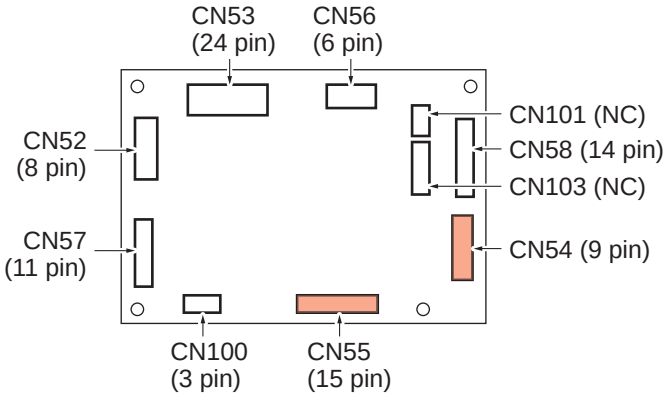
PIDB
PI drive board

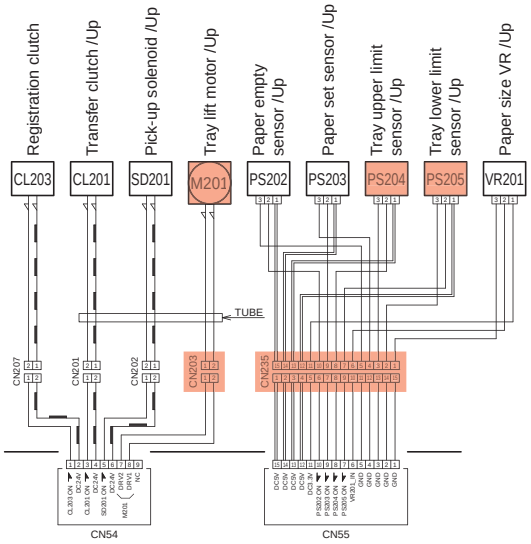
26. C1125





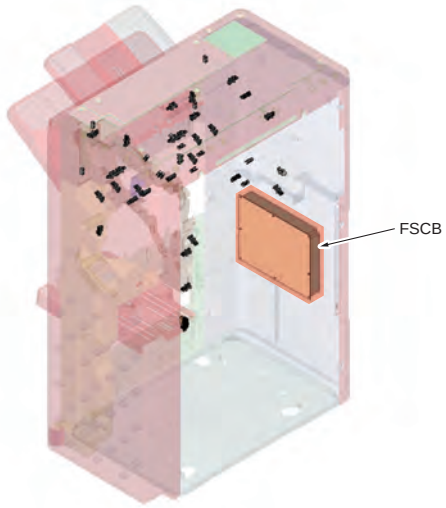
PIDB

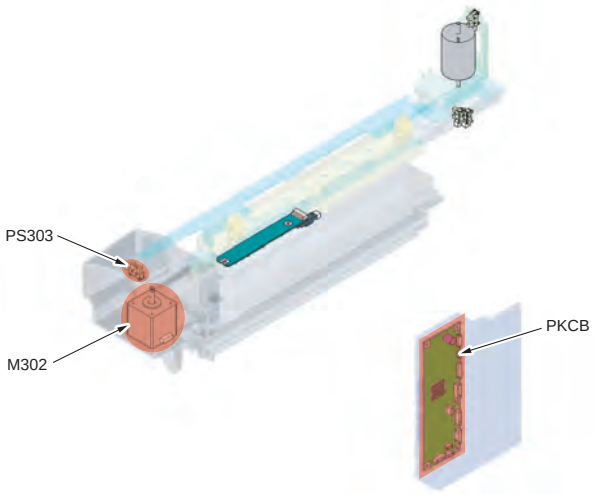




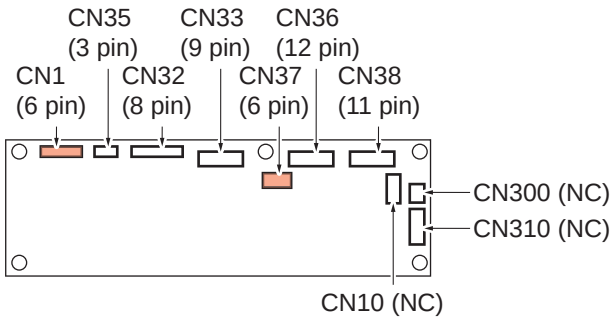
PIDB
PI drive board

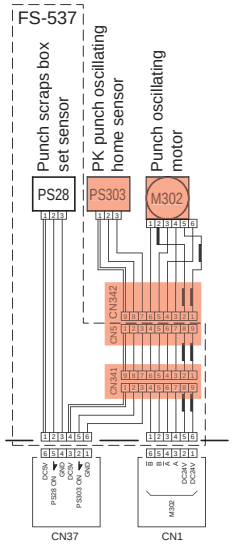
27. C1127





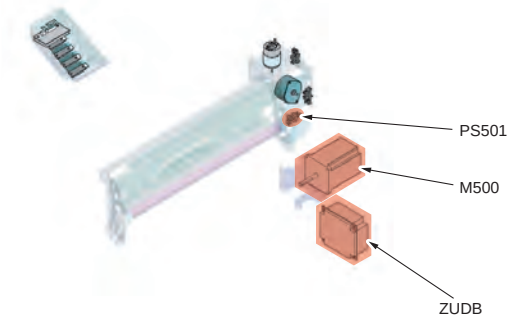
PKCB



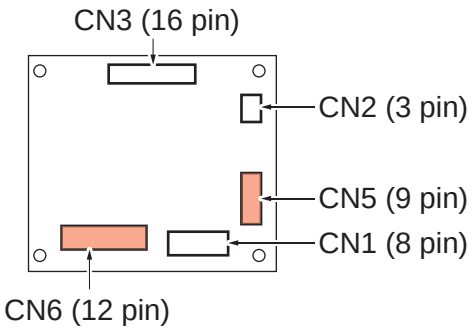


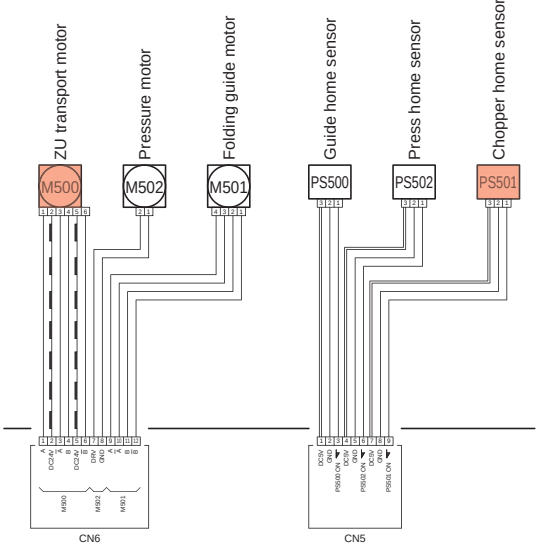
PKCB
Punch control board

28. C1130



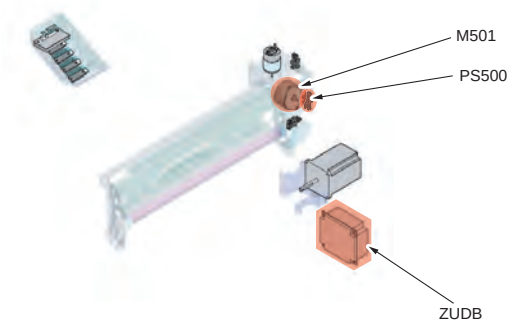
ZUDB



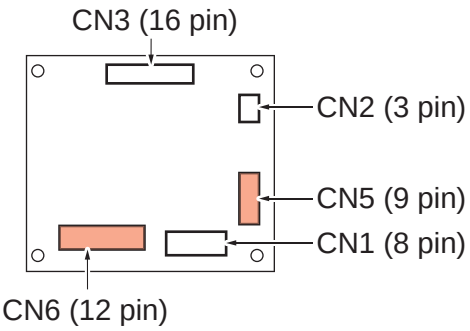


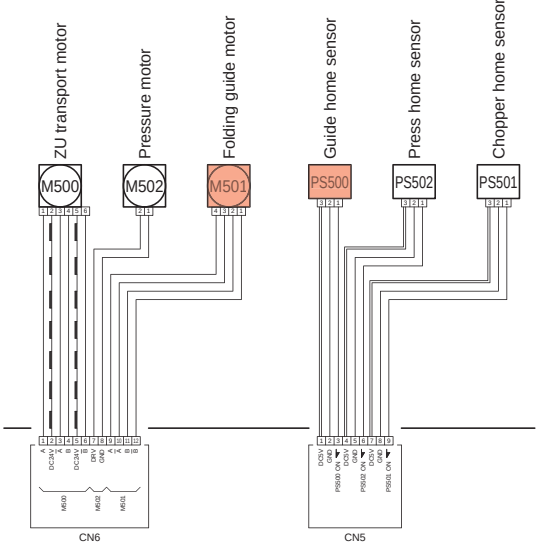
ZUDB
ZU drive board

29. C1131



ZUDB

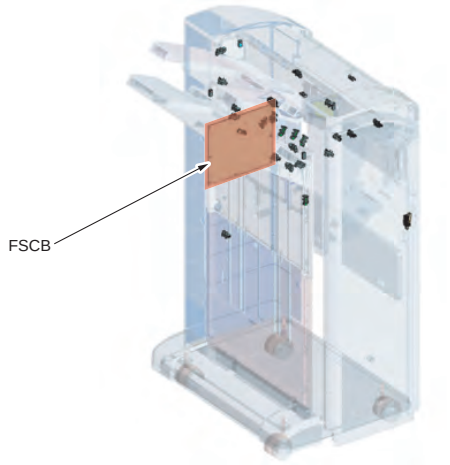


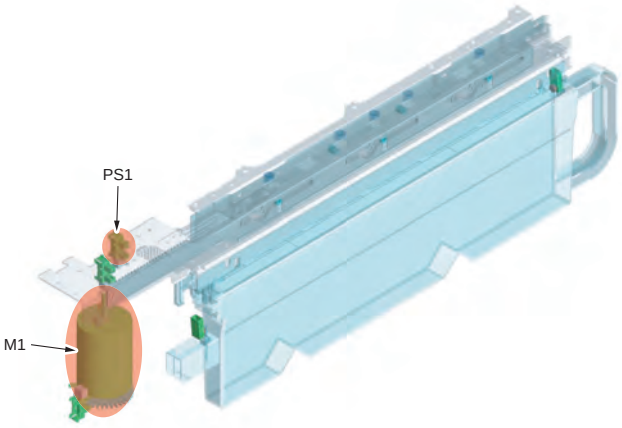


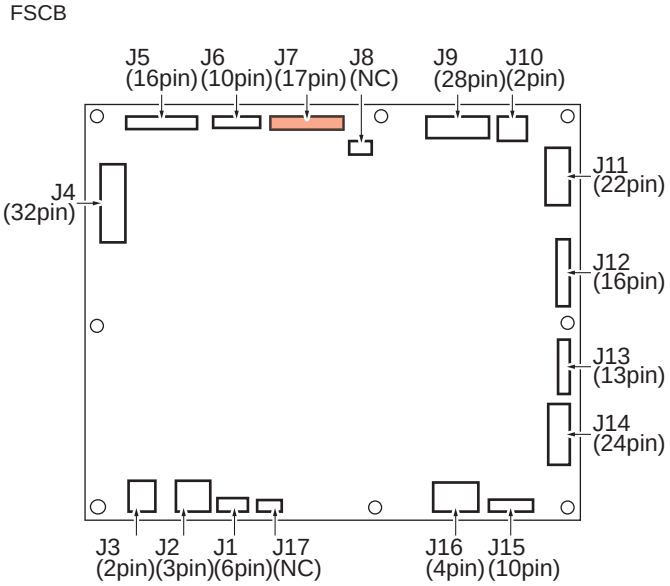
ZUDB
ZU drive board

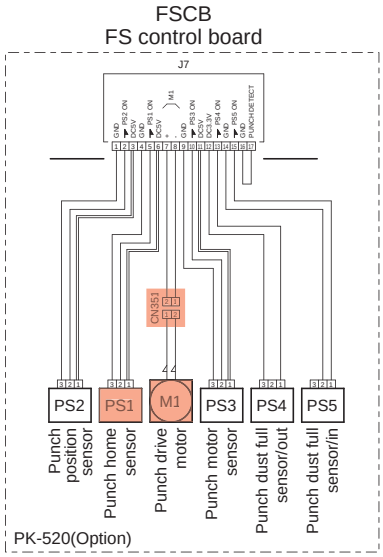
30. C1132

30.1 FS-536/FS-536SD

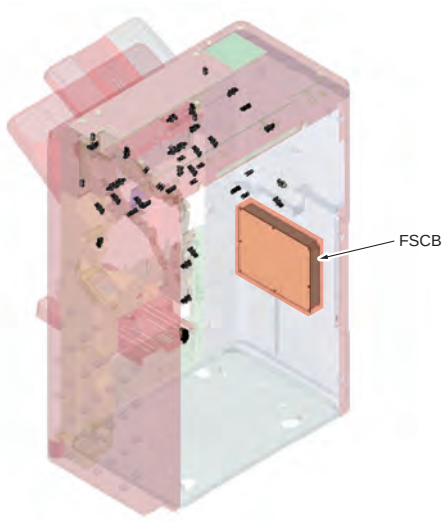


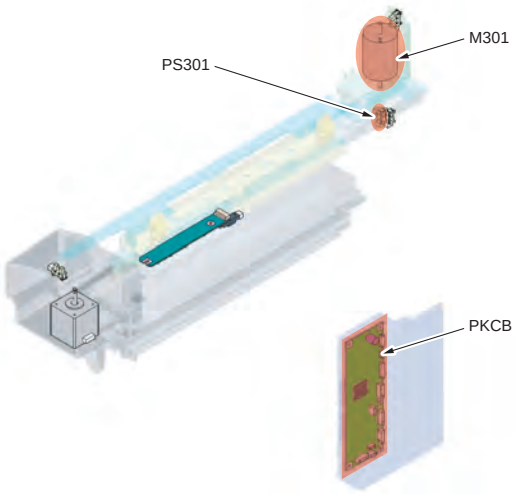




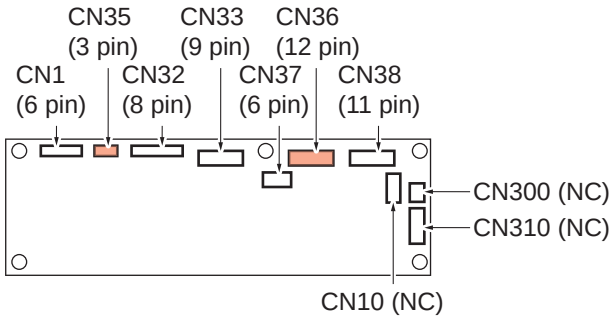


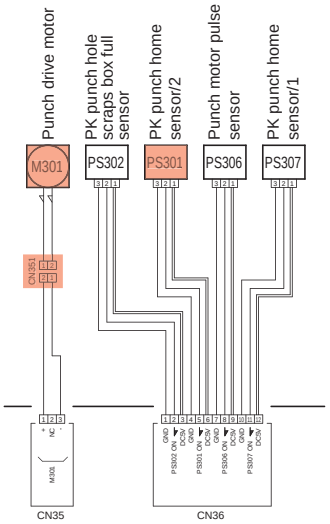
30.2 FS-537/FS-537SD





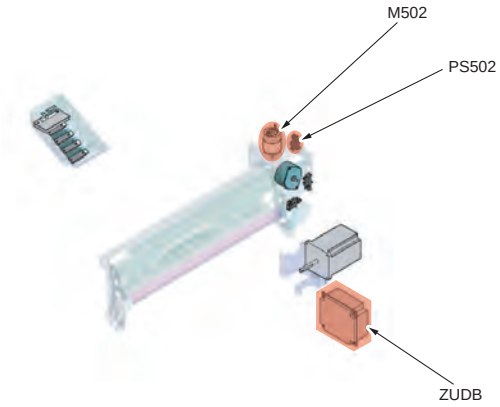
PKCB



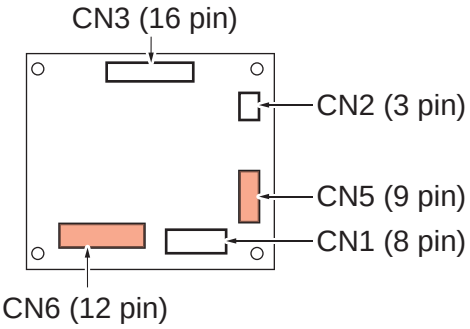


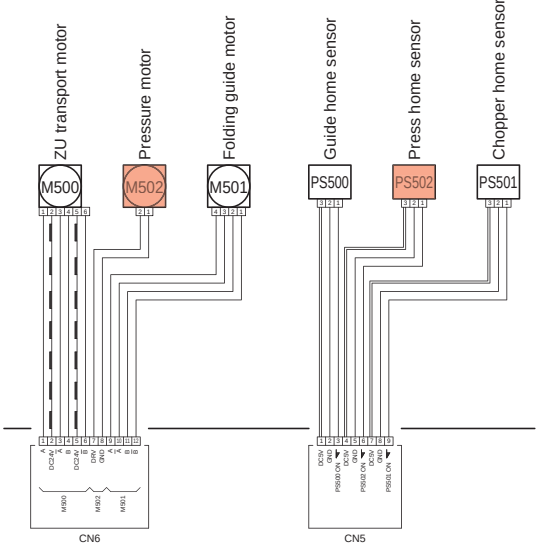
PKCB
Punch control board

31. C1133



ZUDB

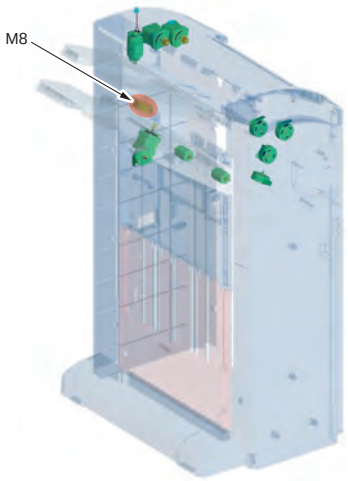


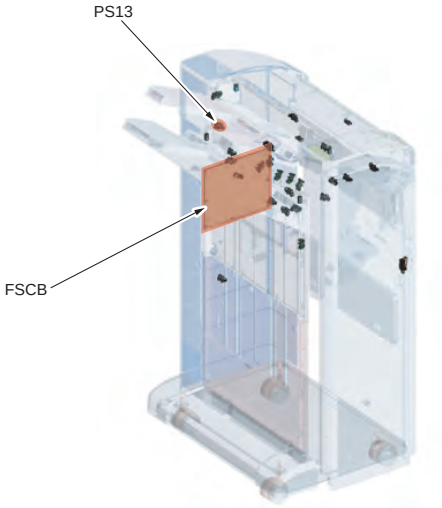


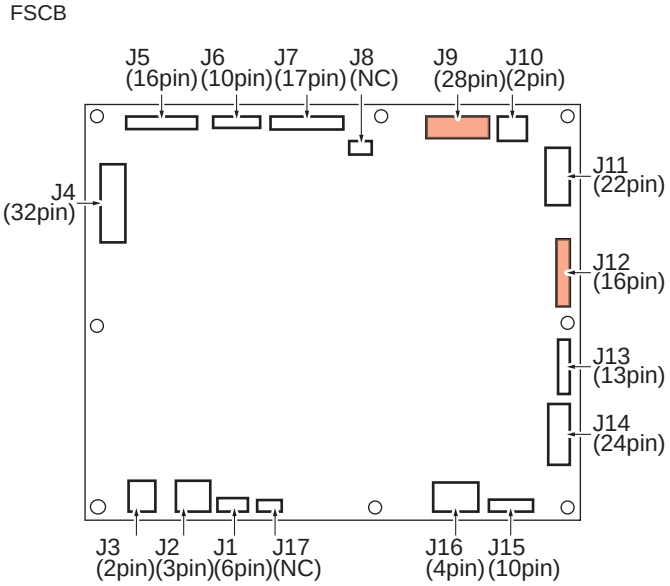
ZUDB
ZU drive board

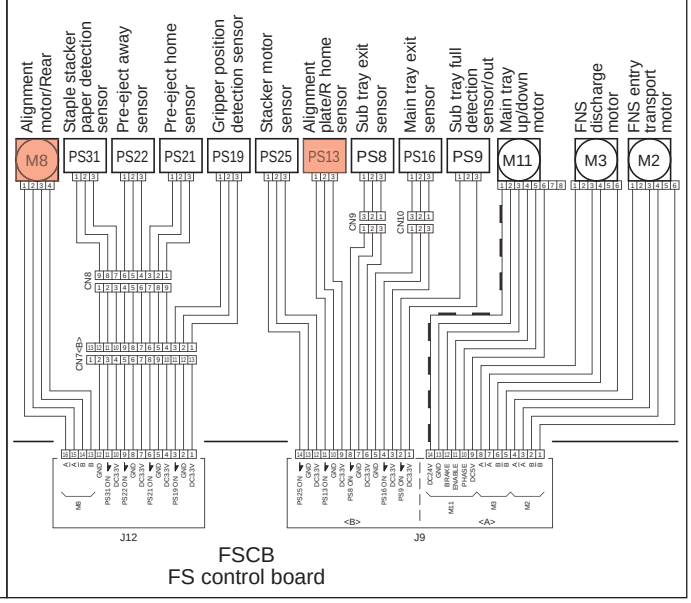
32. C1140

32.1 FS-536/FS-536SD

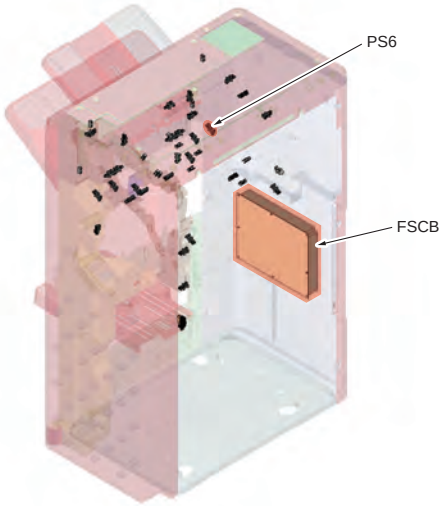


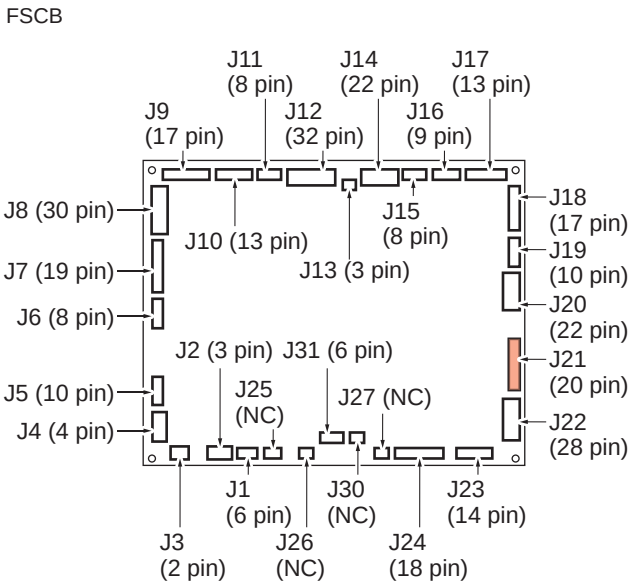


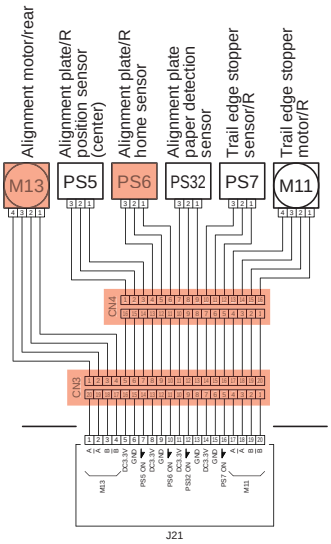




32.2 FS-537/FS-537SD

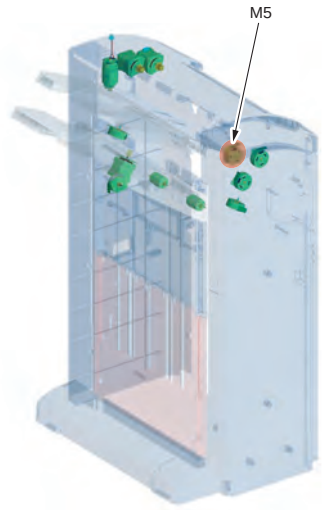


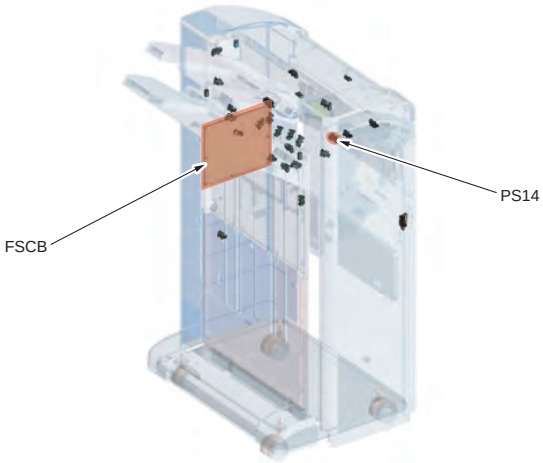


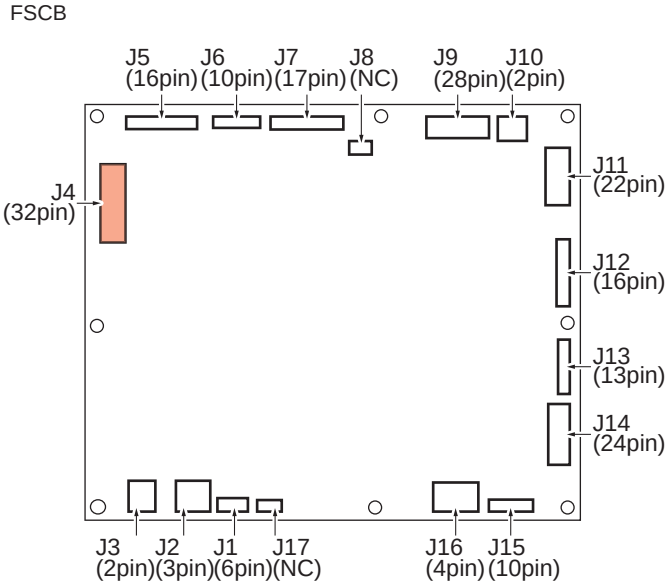


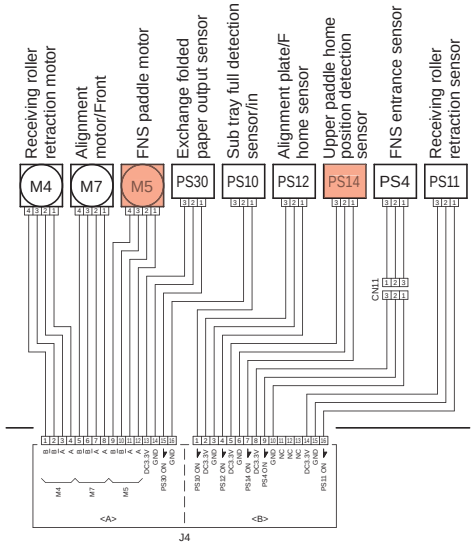
33. C1141

33.1 FS-536/FS-536SD

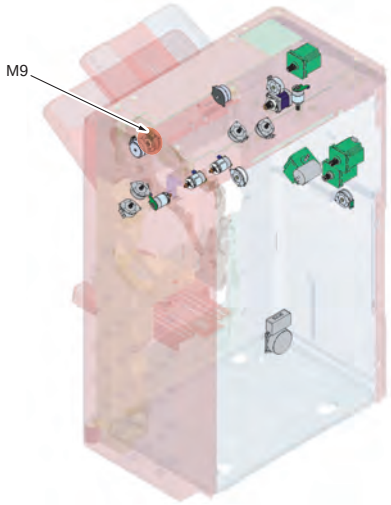


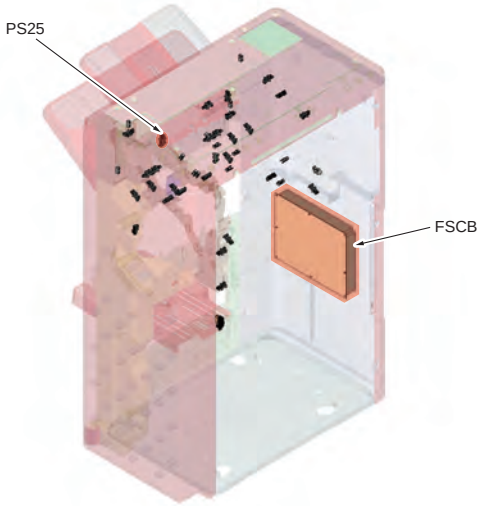




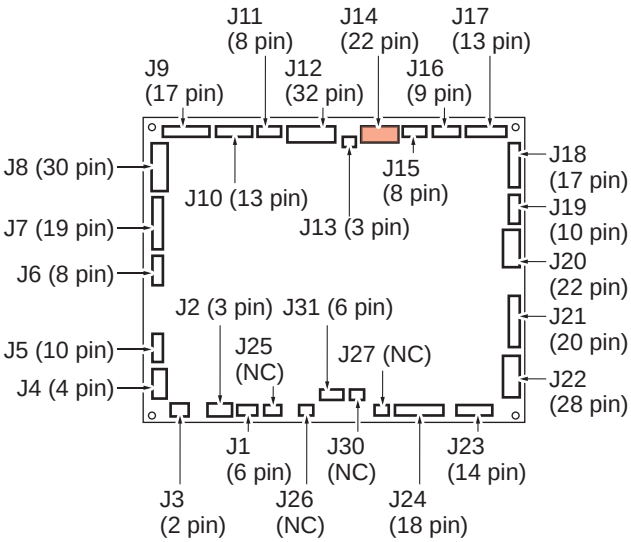


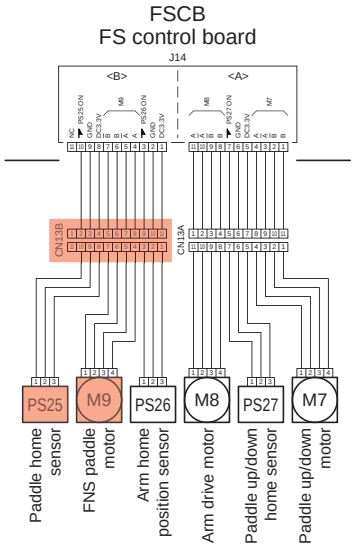
33.2 FS-537/FS-537SD



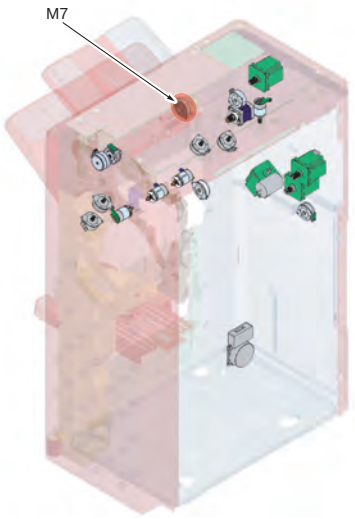


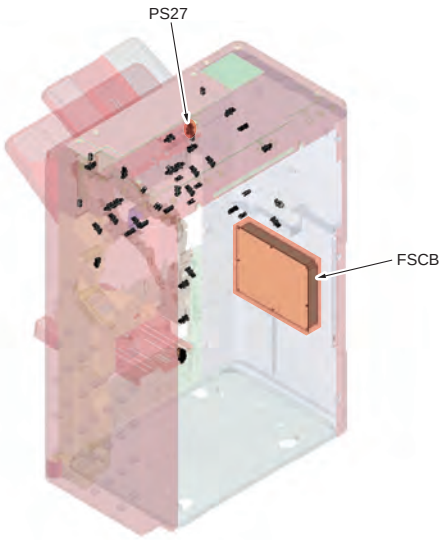
FSCB



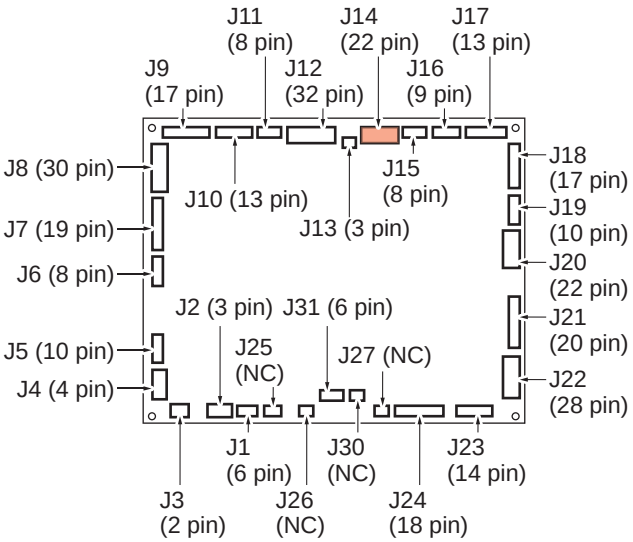


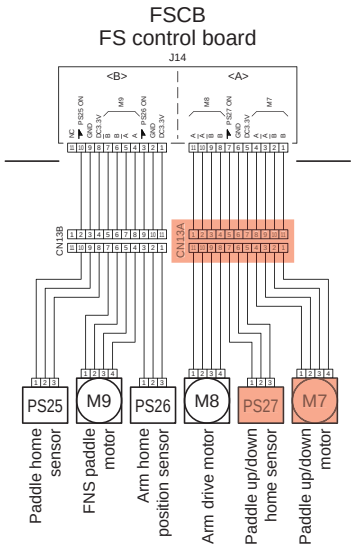
34. C1142



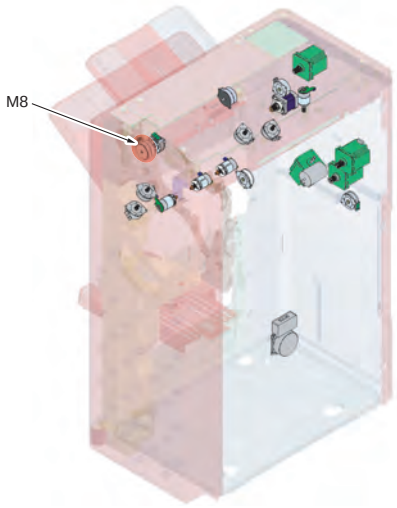


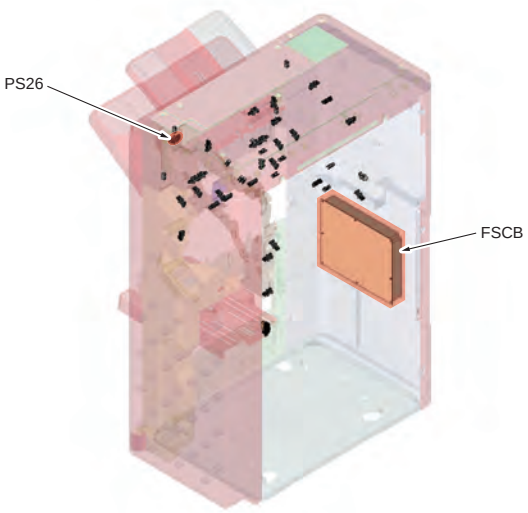
FSCB



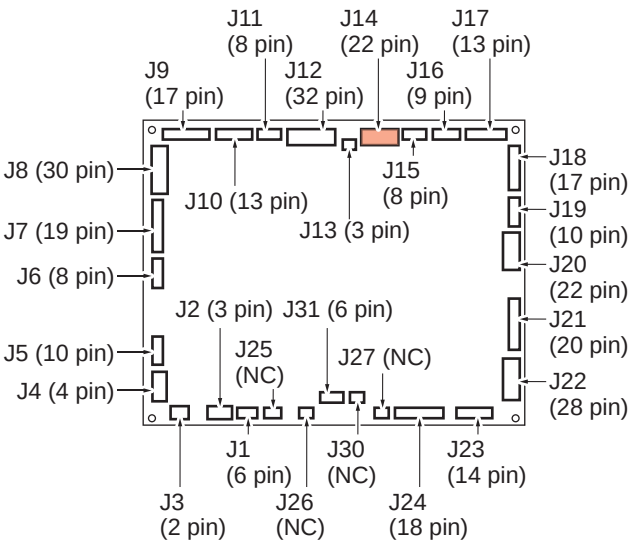


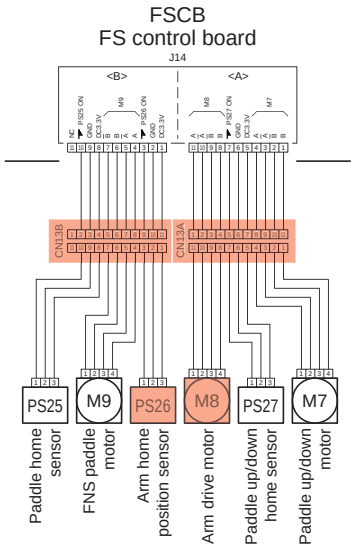
35. C1143





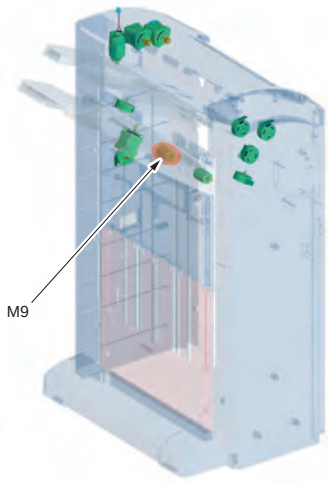
FSCB

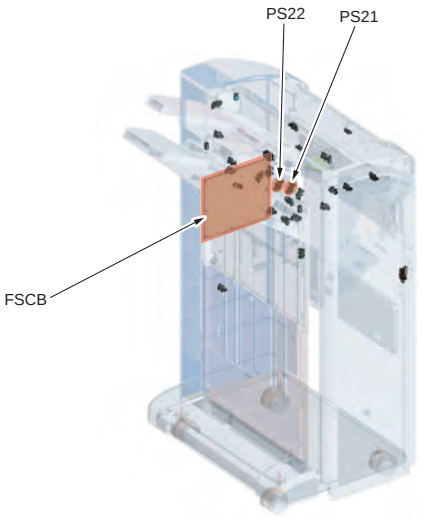


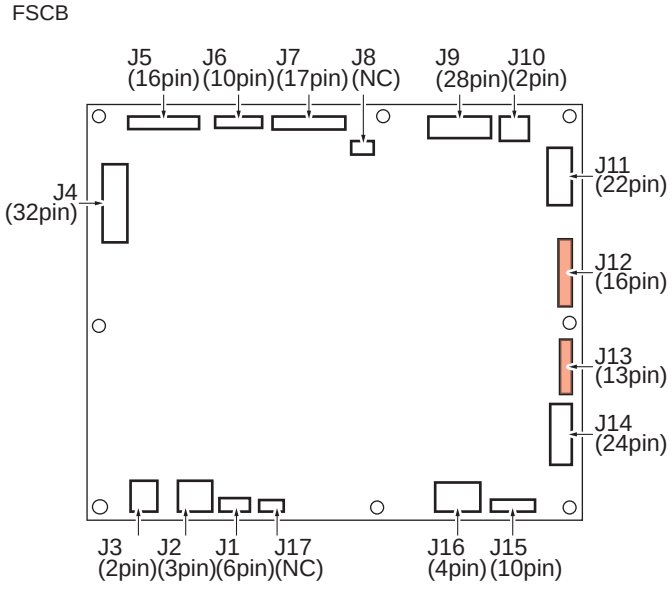


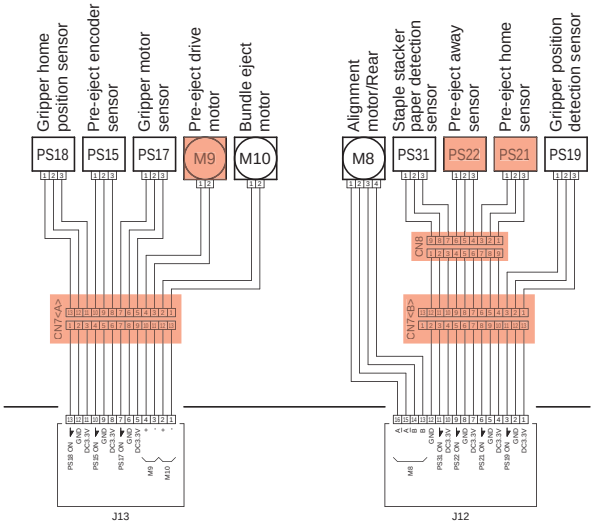
36. C1144

36.1 FS-536/FS-536SD



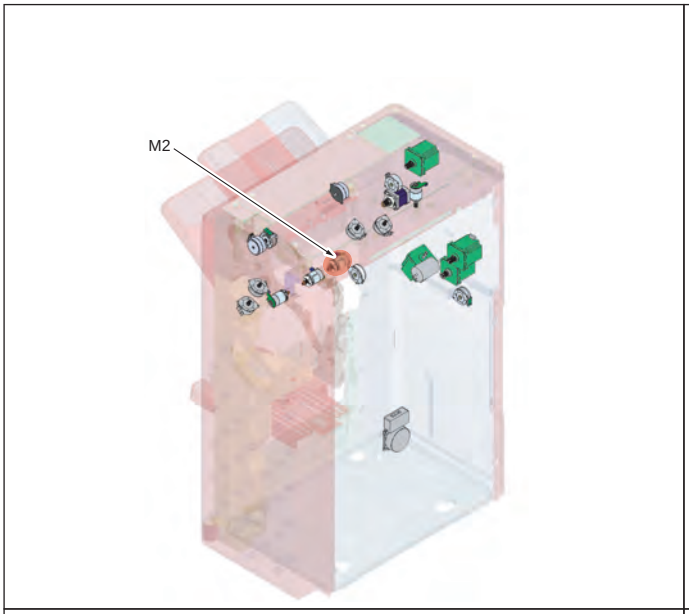


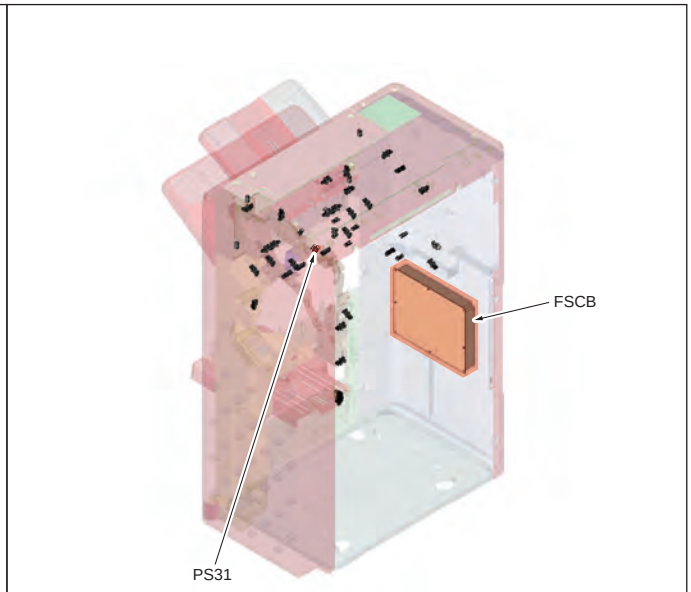


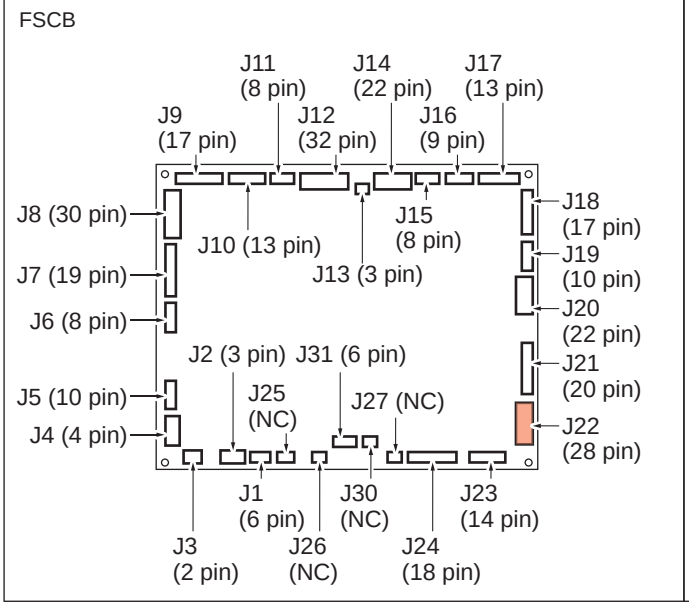


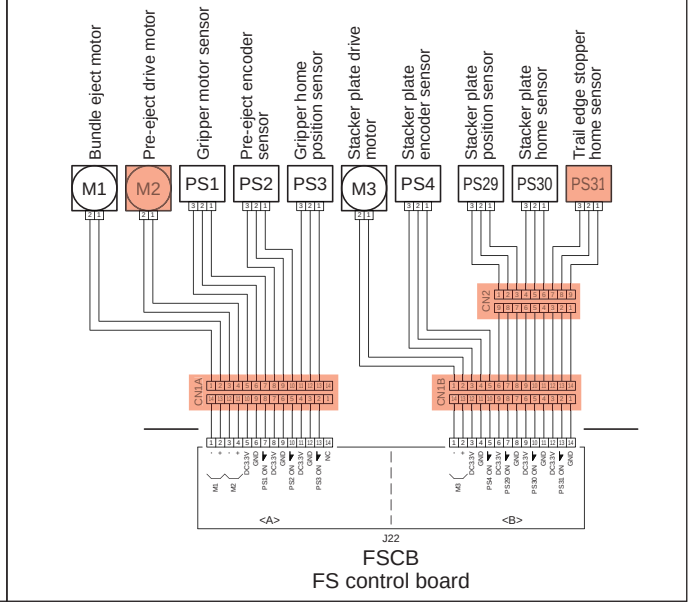
FSCB
FS control board

36.2 FS-537/FS-537SD



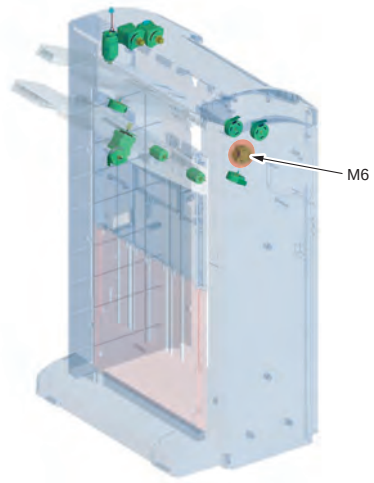


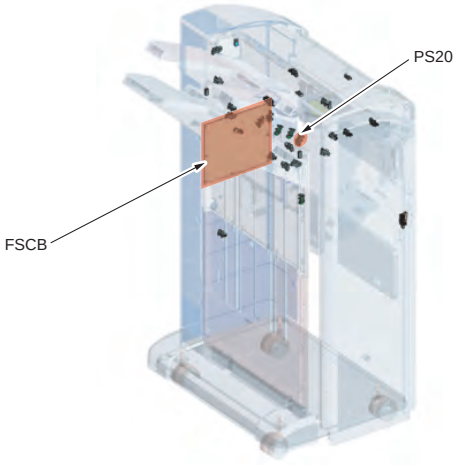


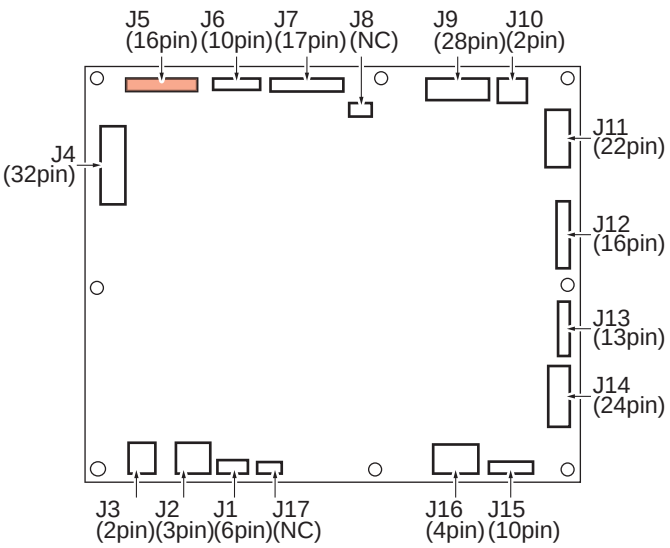


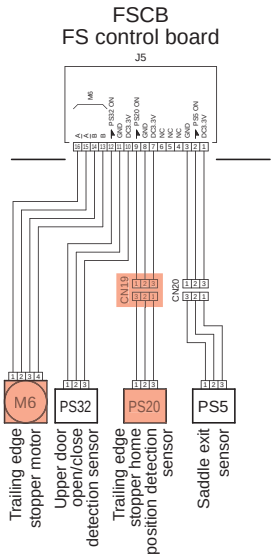
37. C1145

37.1 FS-536/FS-536SD

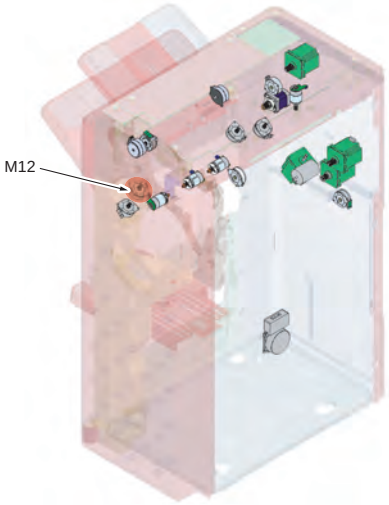


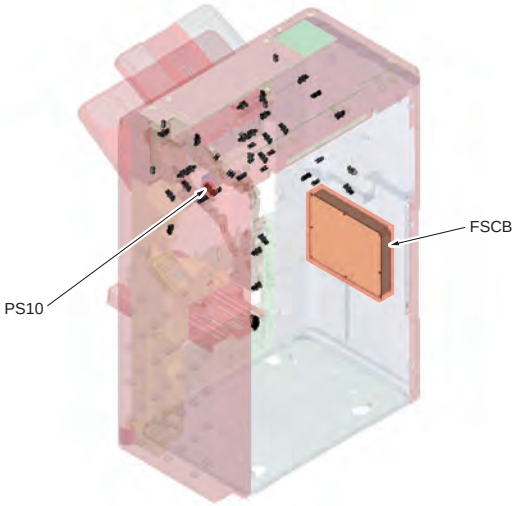




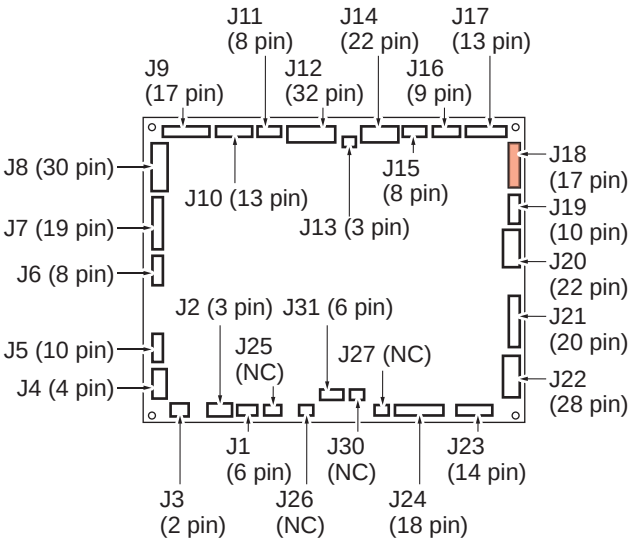


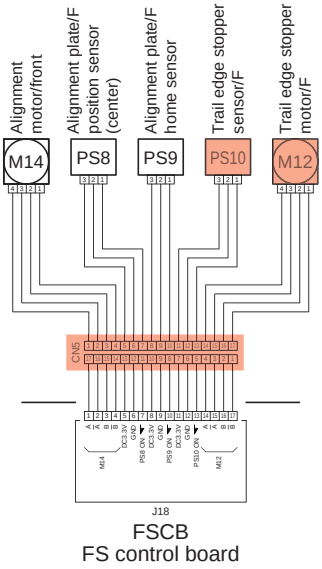
37.2 FS-537/FS-537SD



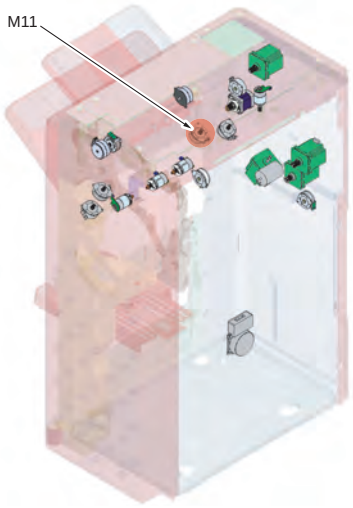


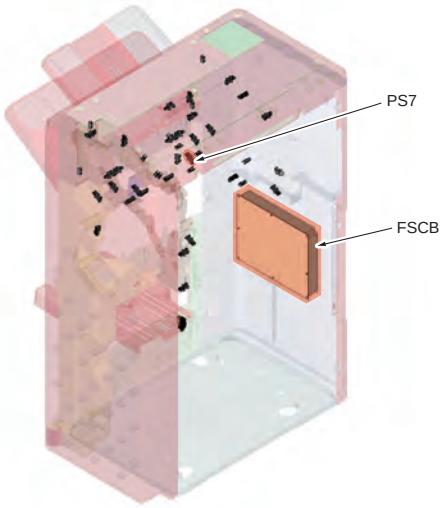
FSCB



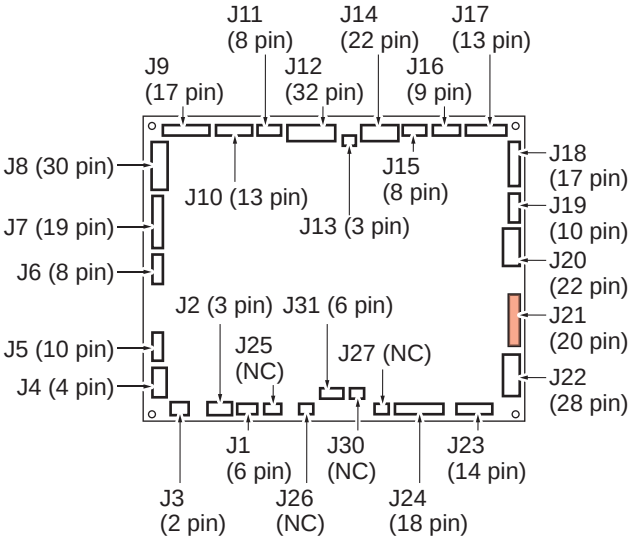


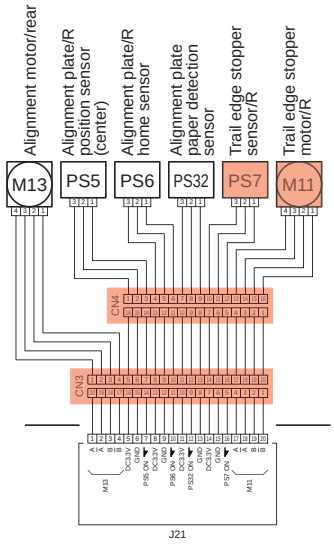
38. C1146





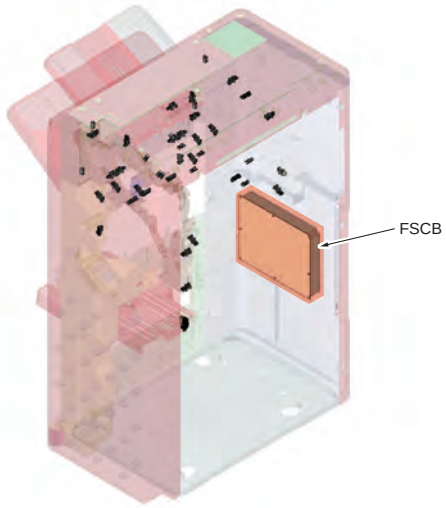
FSCB

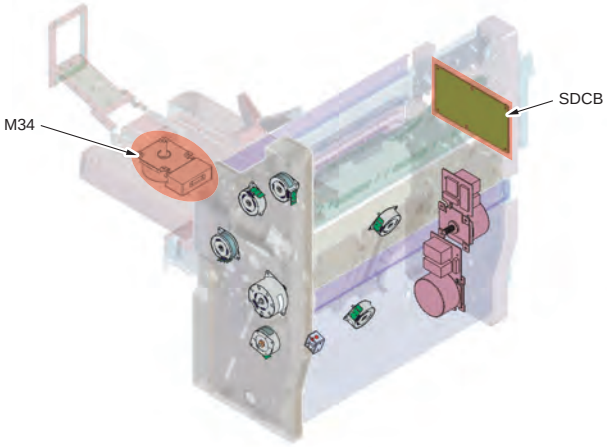




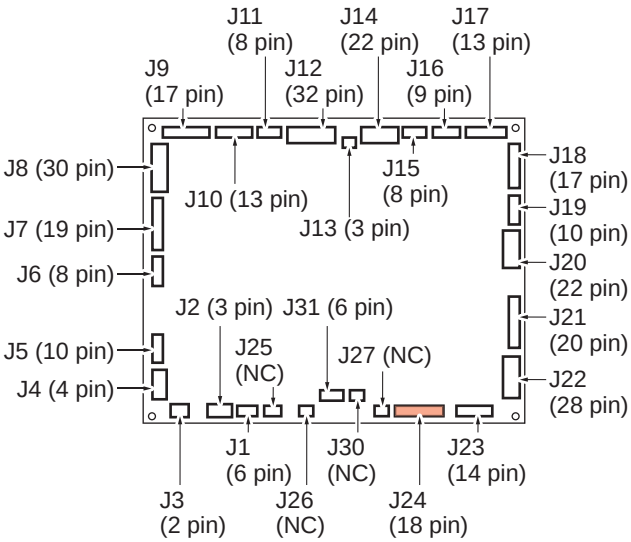
FSCB
FS control board

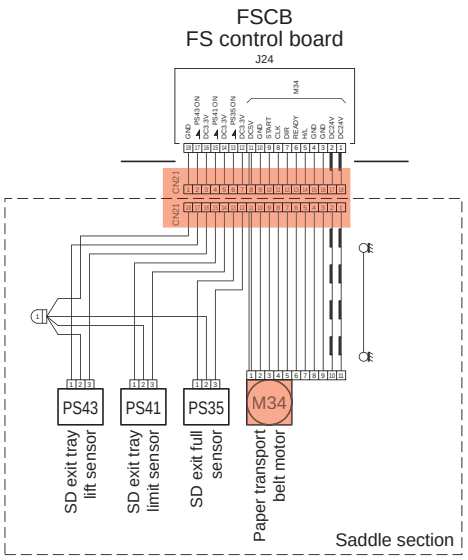
39. C1152





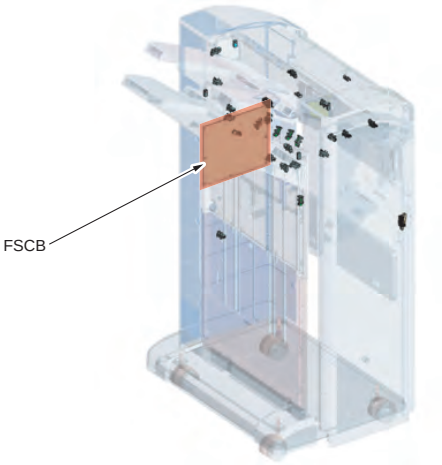
FSCB

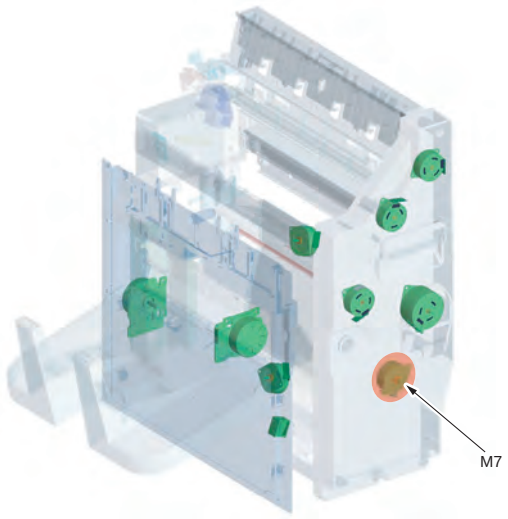


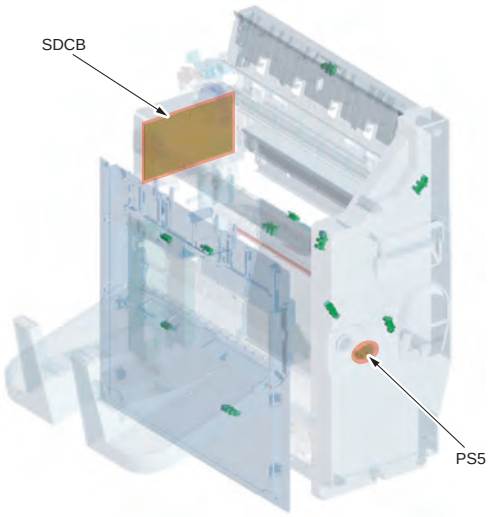


40. C1156

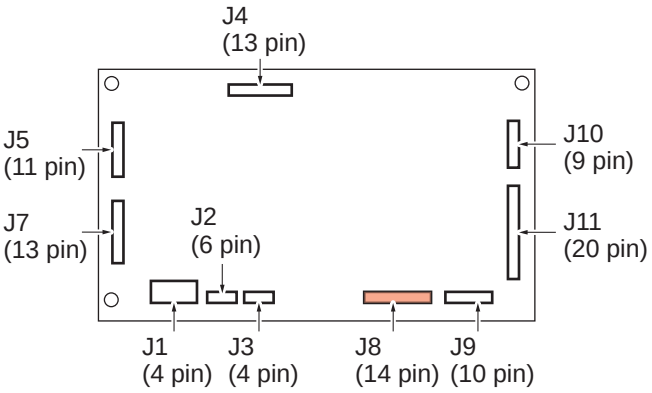
40.1 FS-536SD

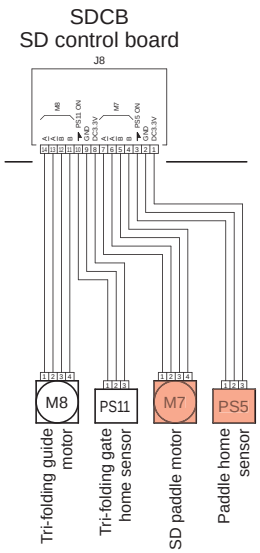




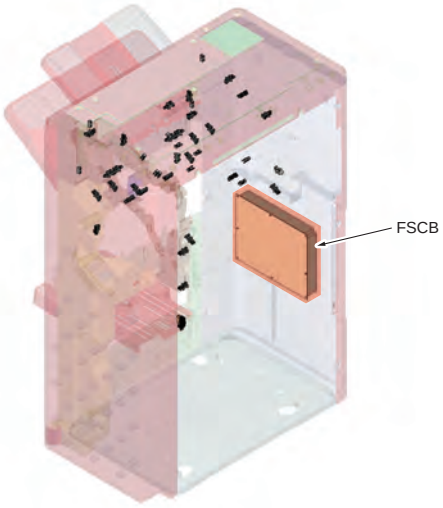


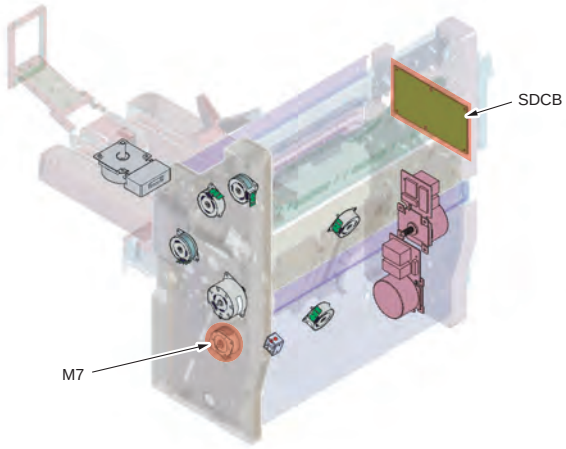
SDCB

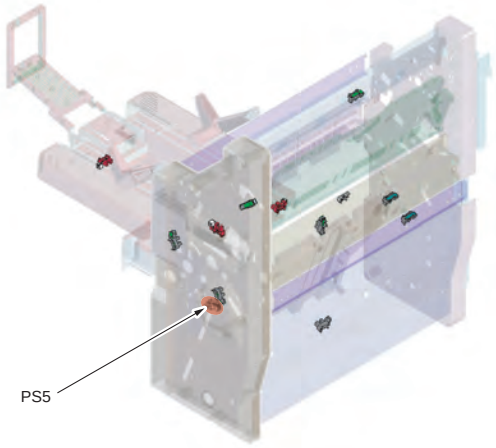




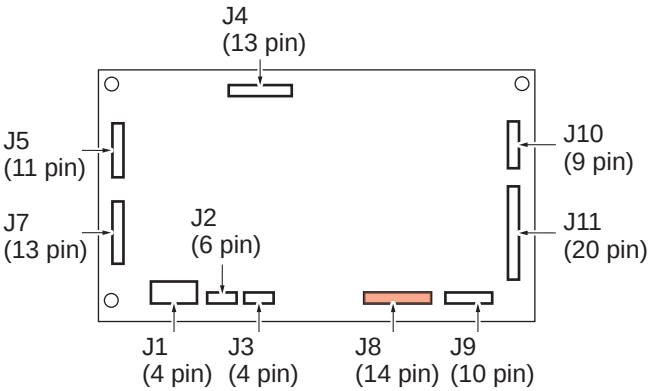
40.2 FS-537SD

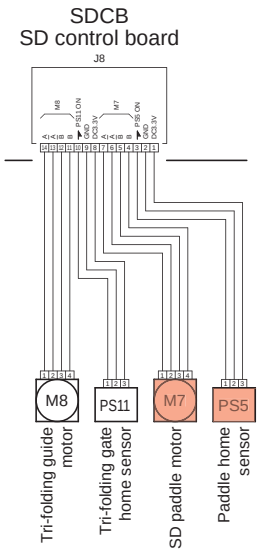






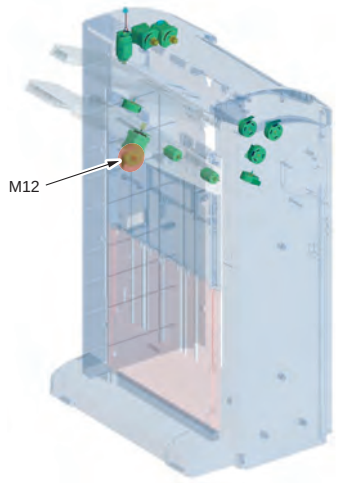
SDCB

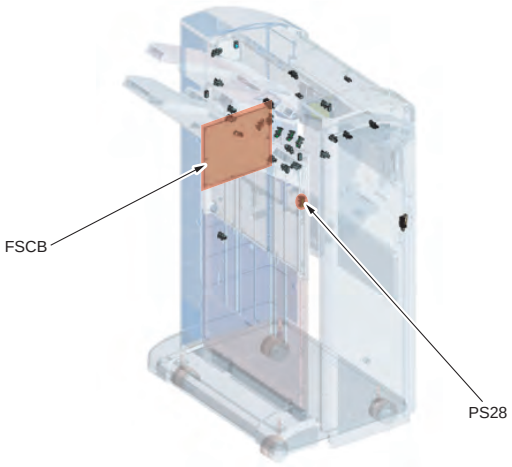


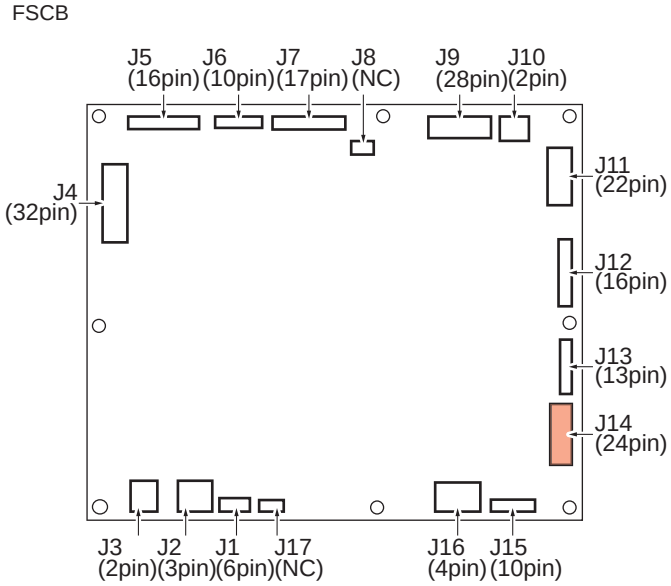


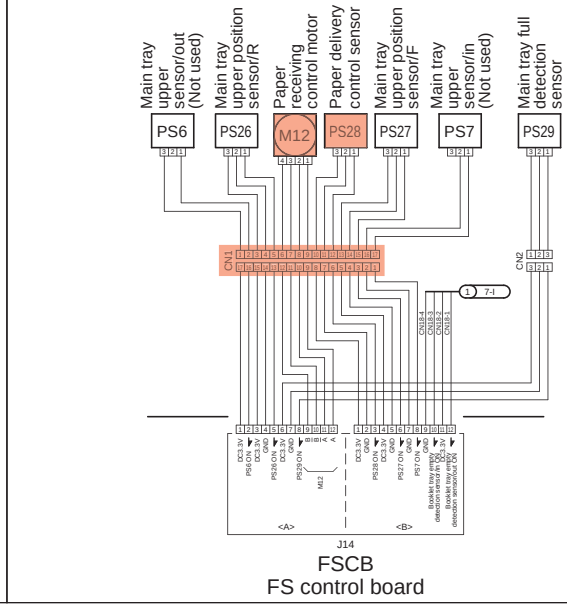
41. C1184

41.1 FS-536/FS-536SD

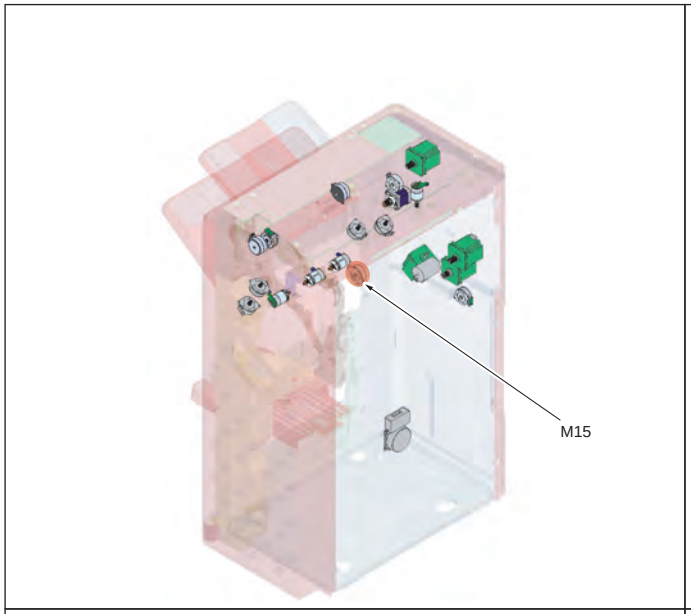


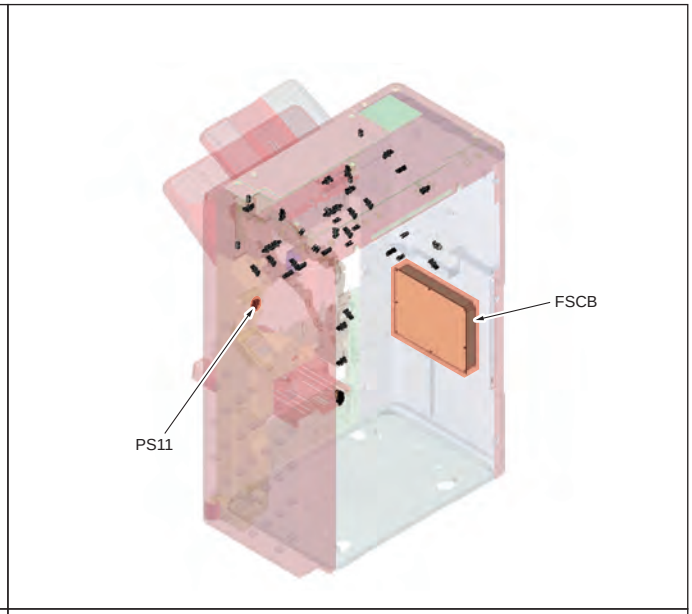


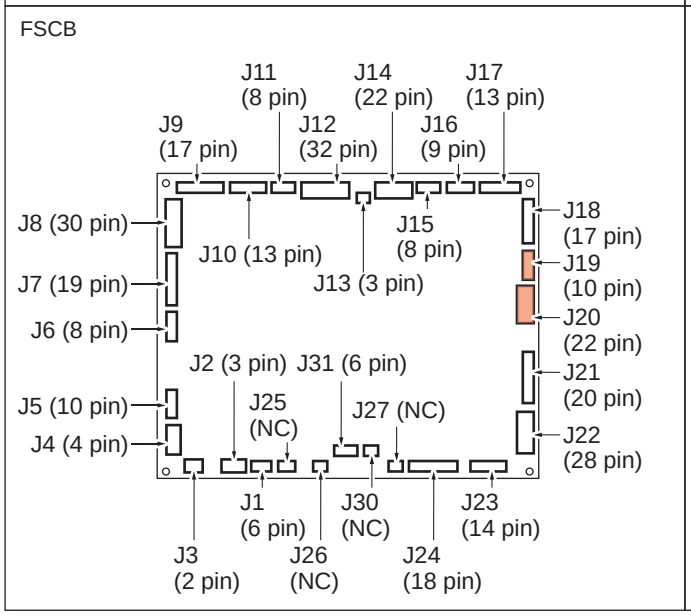


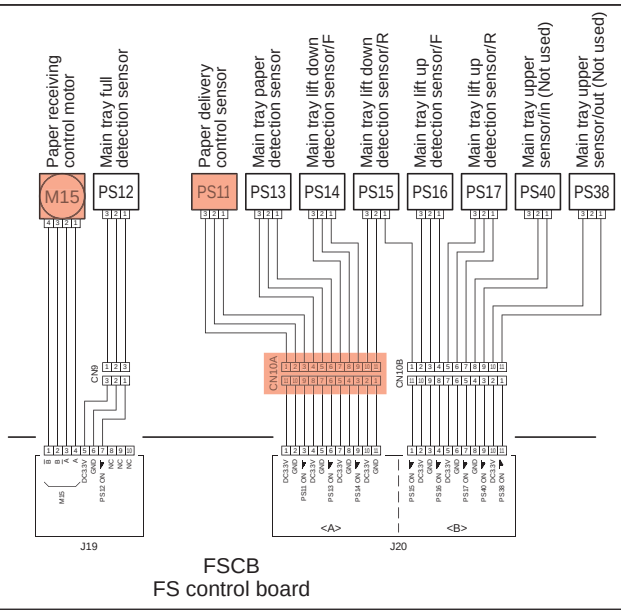


41.2 FS-537/FS-537SD



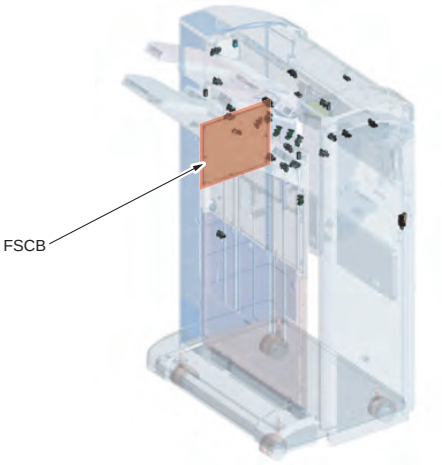


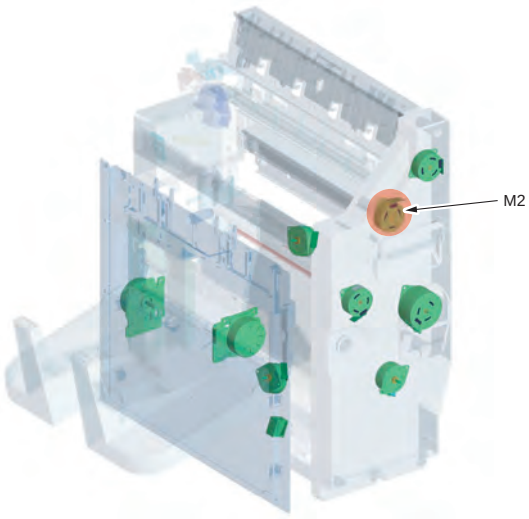


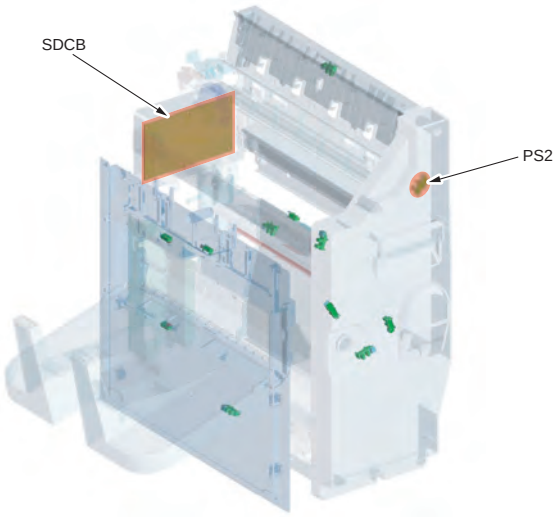


42. C1195

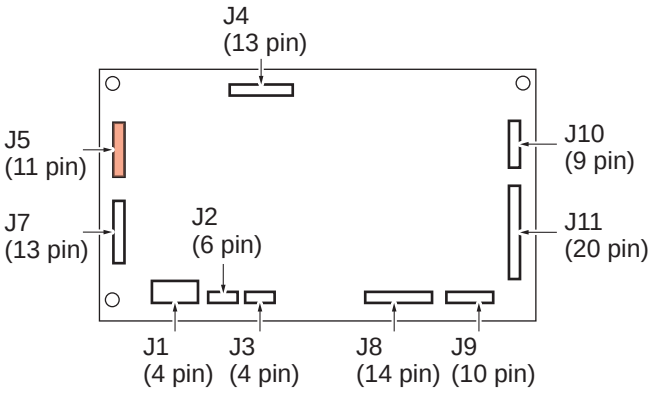
42.1 FS-536SD

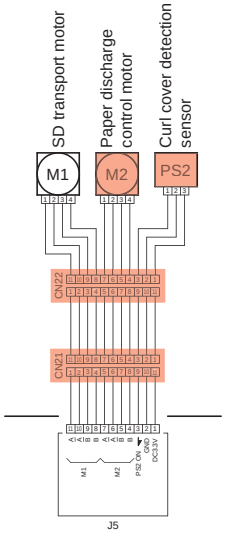






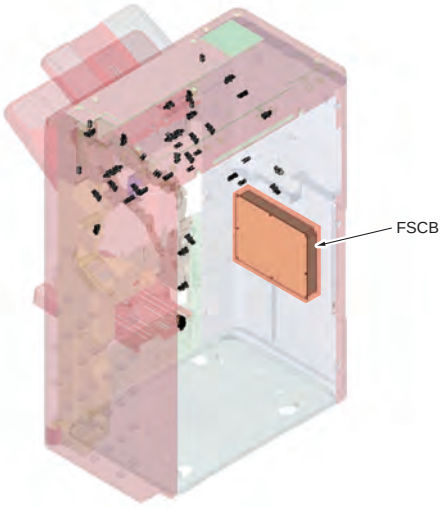
SDCB

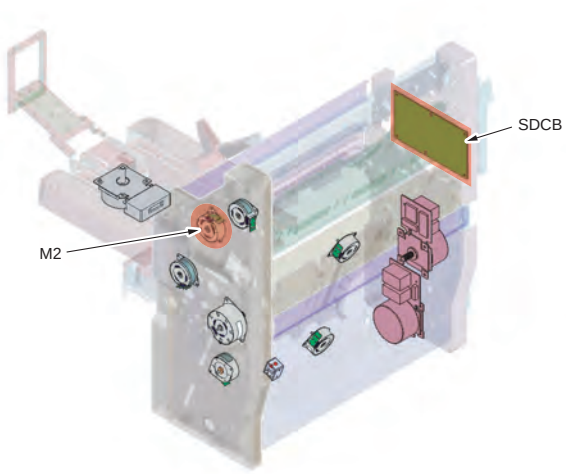


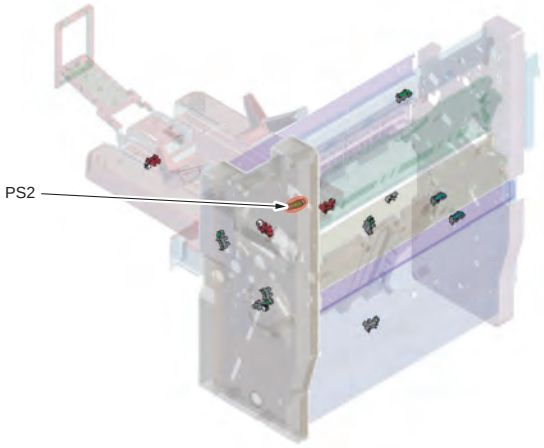


SDCB
SD control board

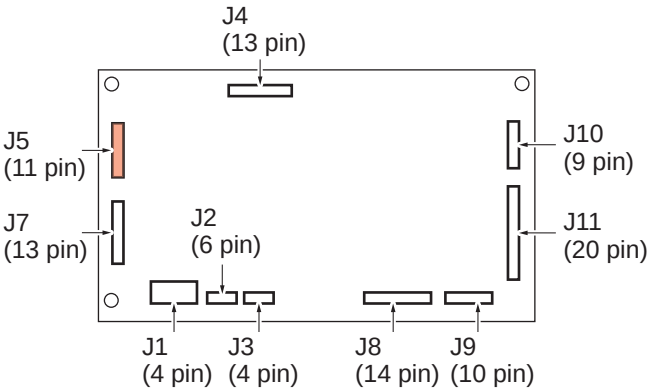
42.2 FS-537SD

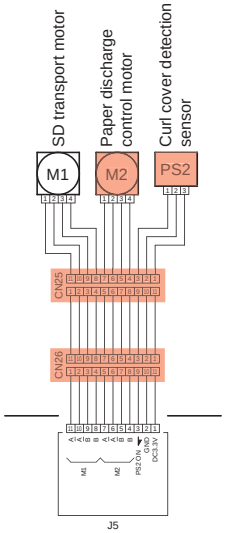






SDCB

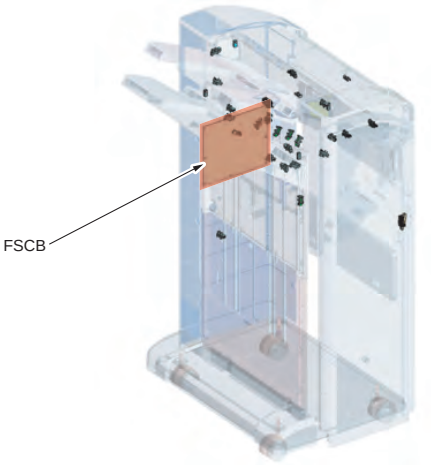


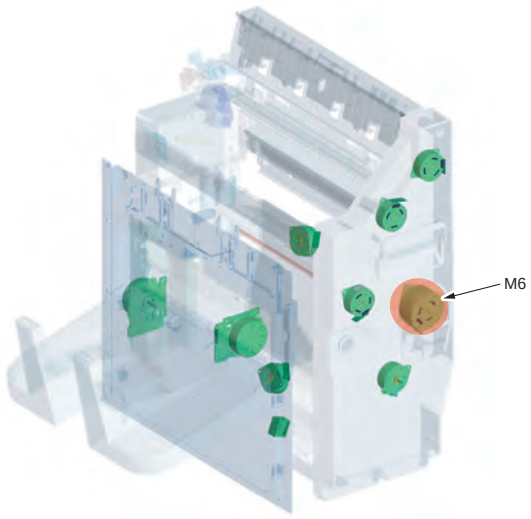


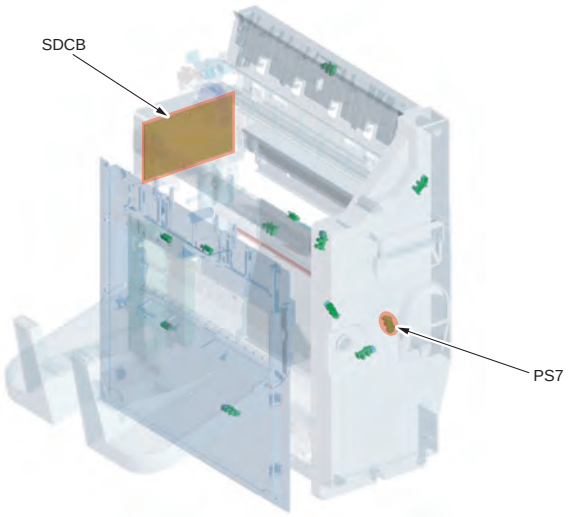
SDCB
SD control board

43. C1196

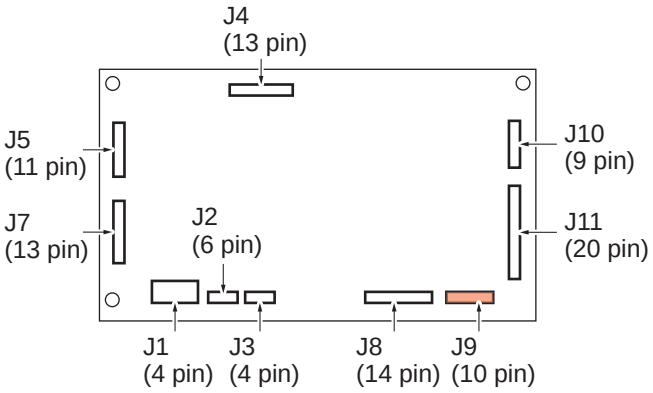
43.1 FS-536SD

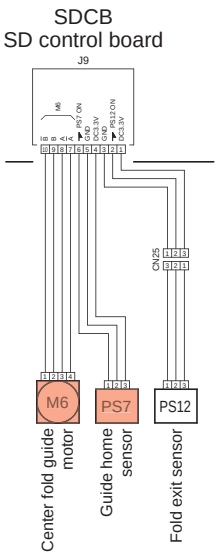




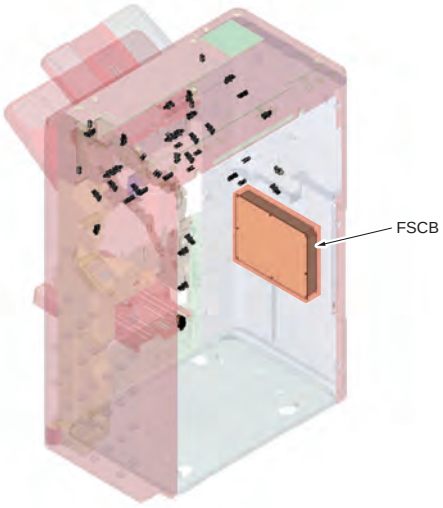


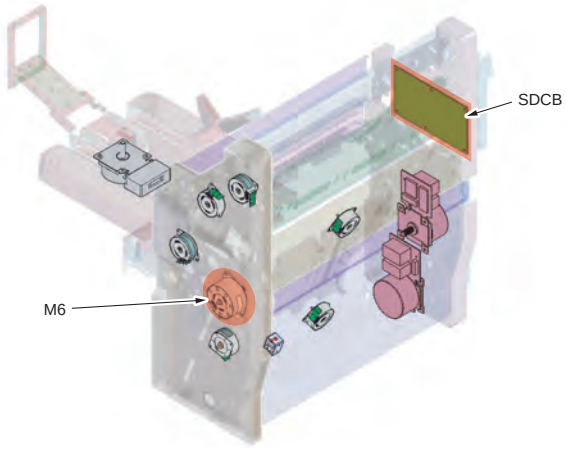
SDCB

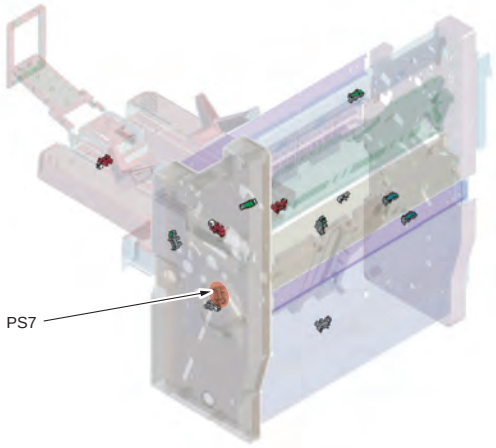




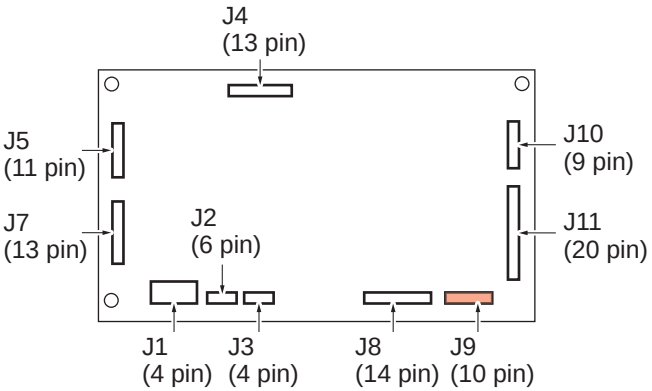
43.2 FS-537SD

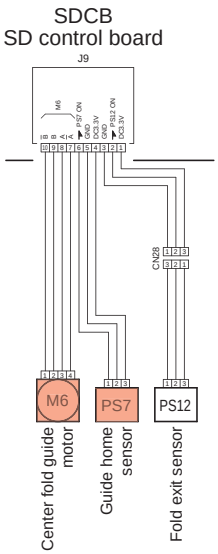






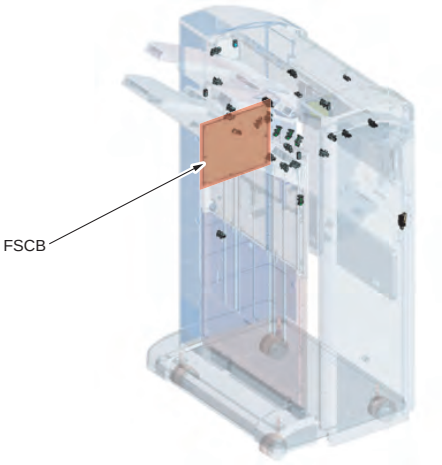
SDCB

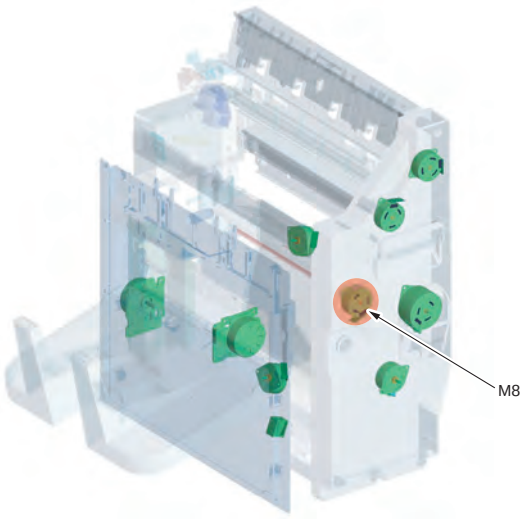


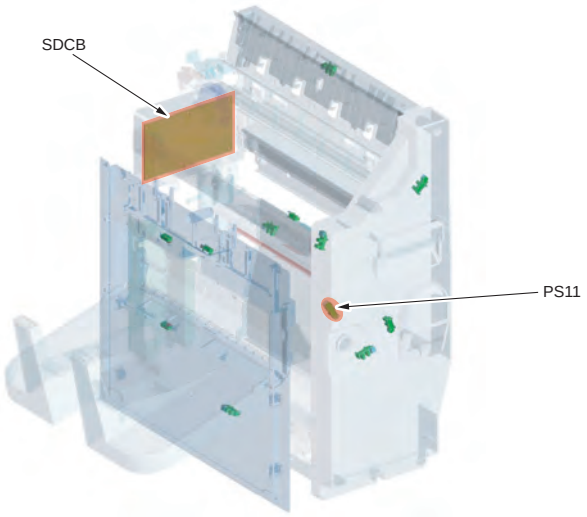


44. C1197

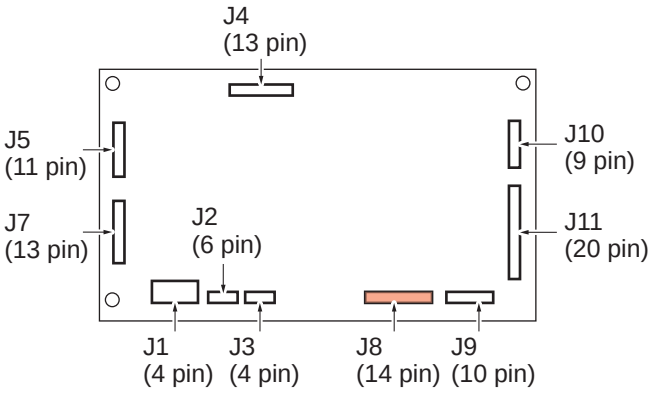
44.1 FS-536SD

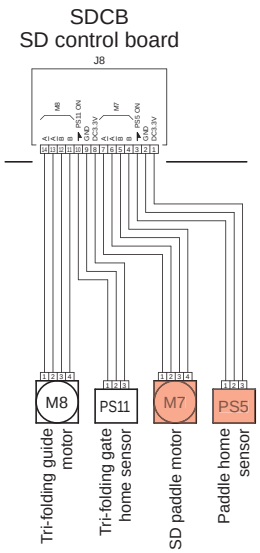




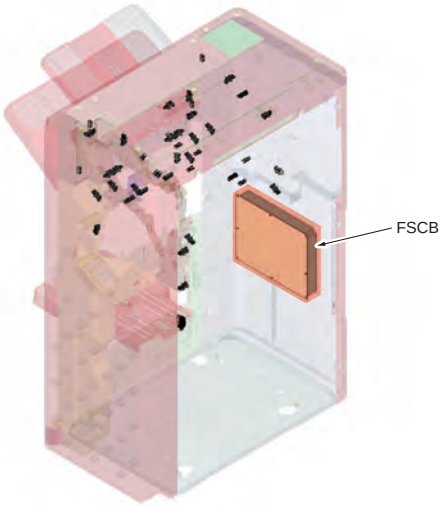


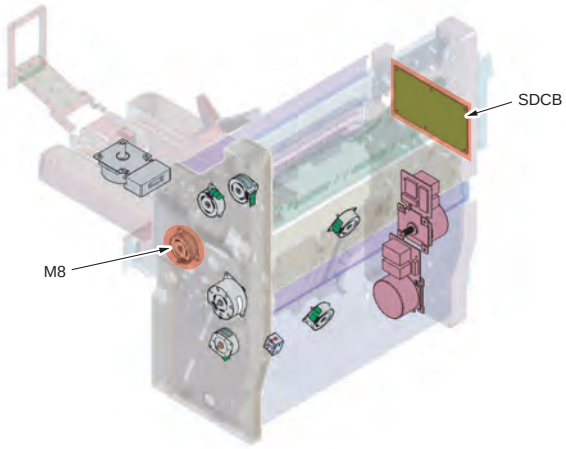
SDCB

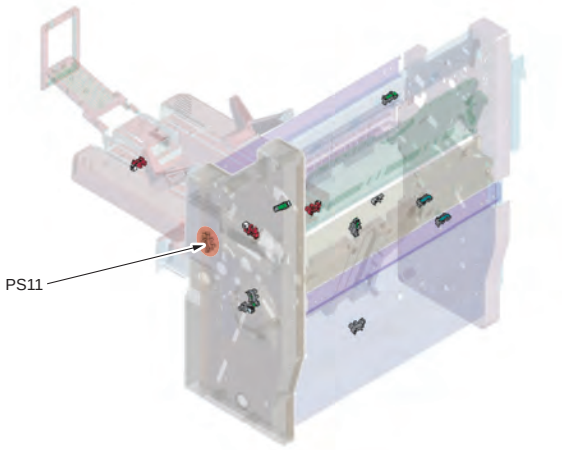




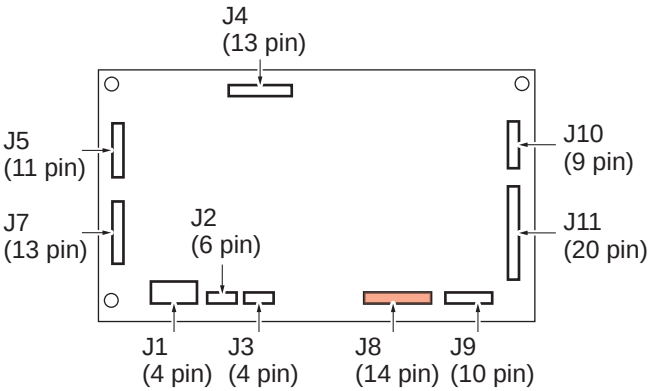
44.2 FS-537SD

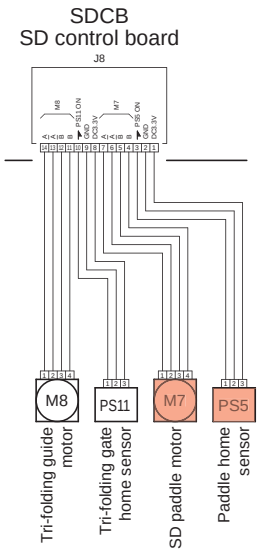






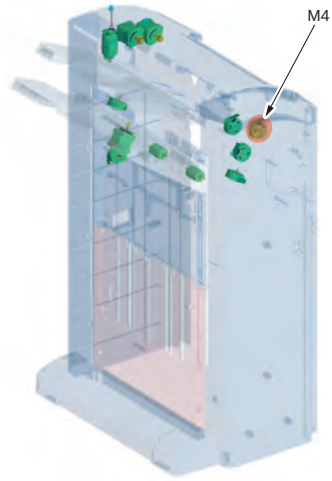
SDCB

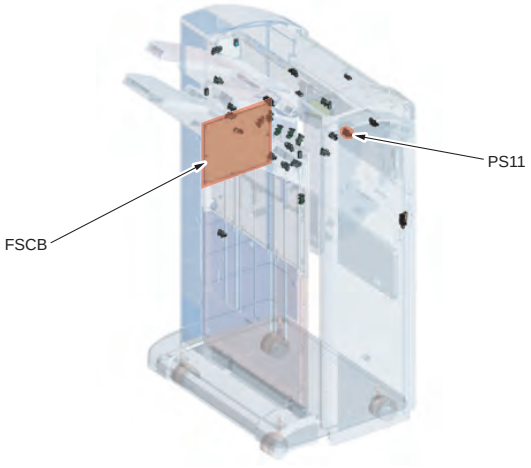


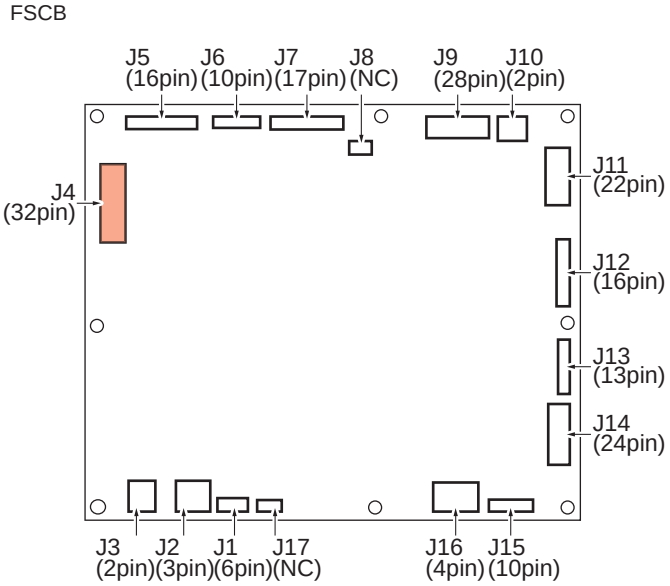


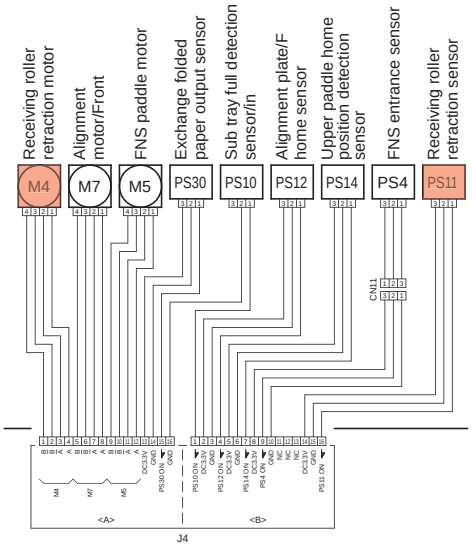
45. C11A2

45.1 FS-536/FS-536SD

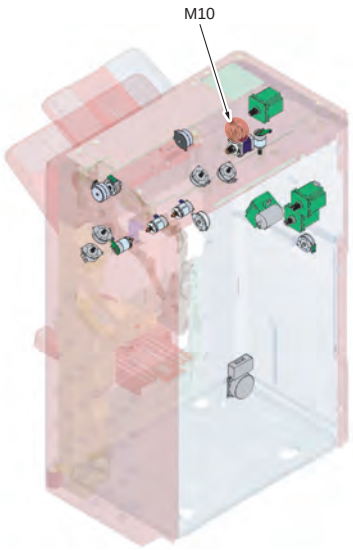


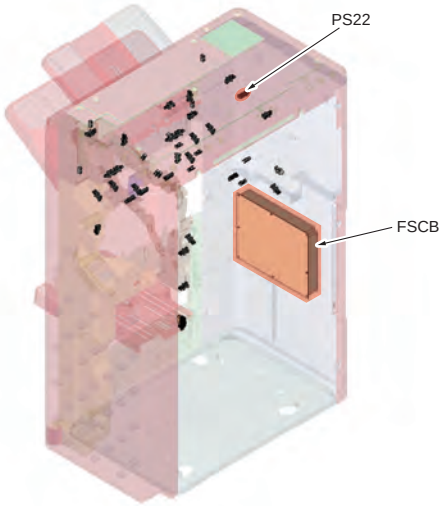


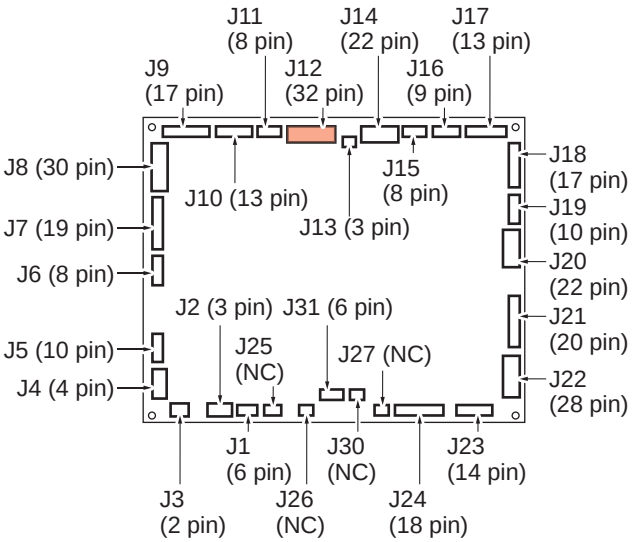


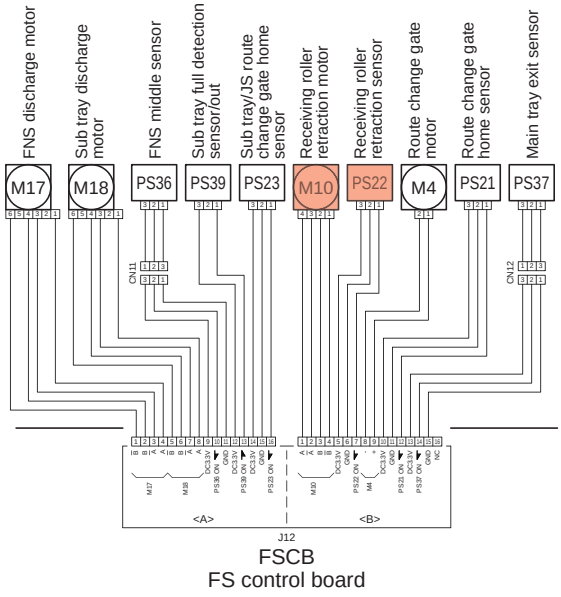


45.2 FS-537/FS-537SD

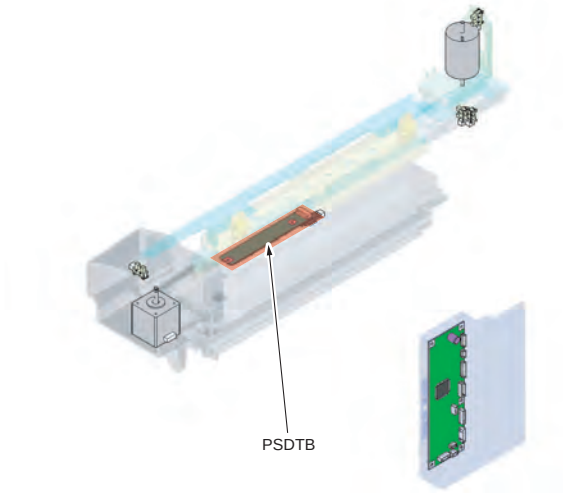




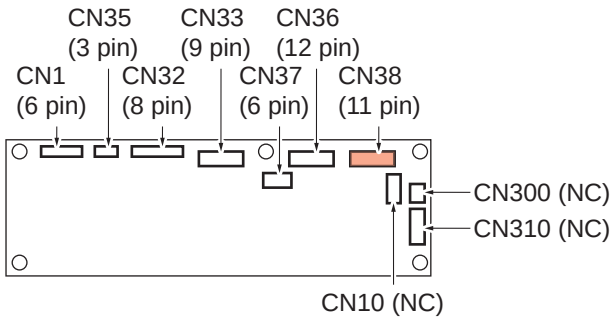


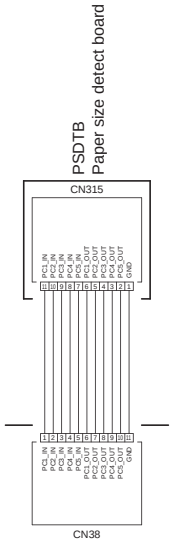


46. C11C5



PKCB

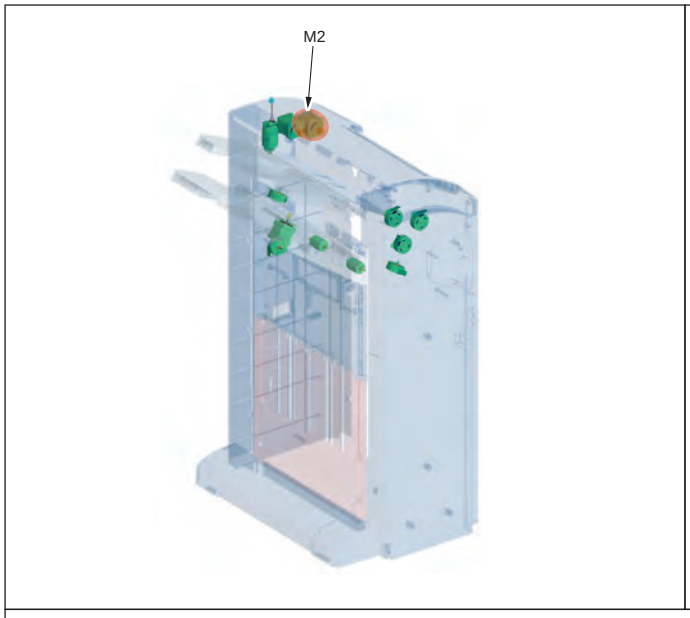


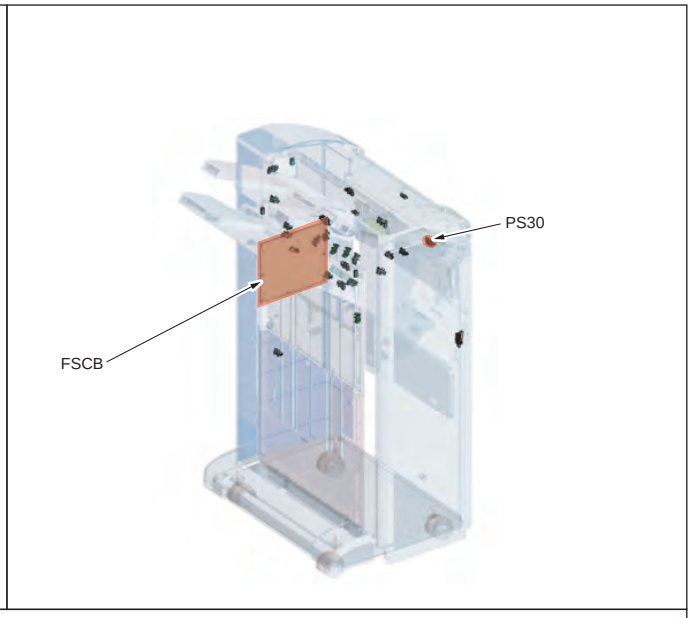


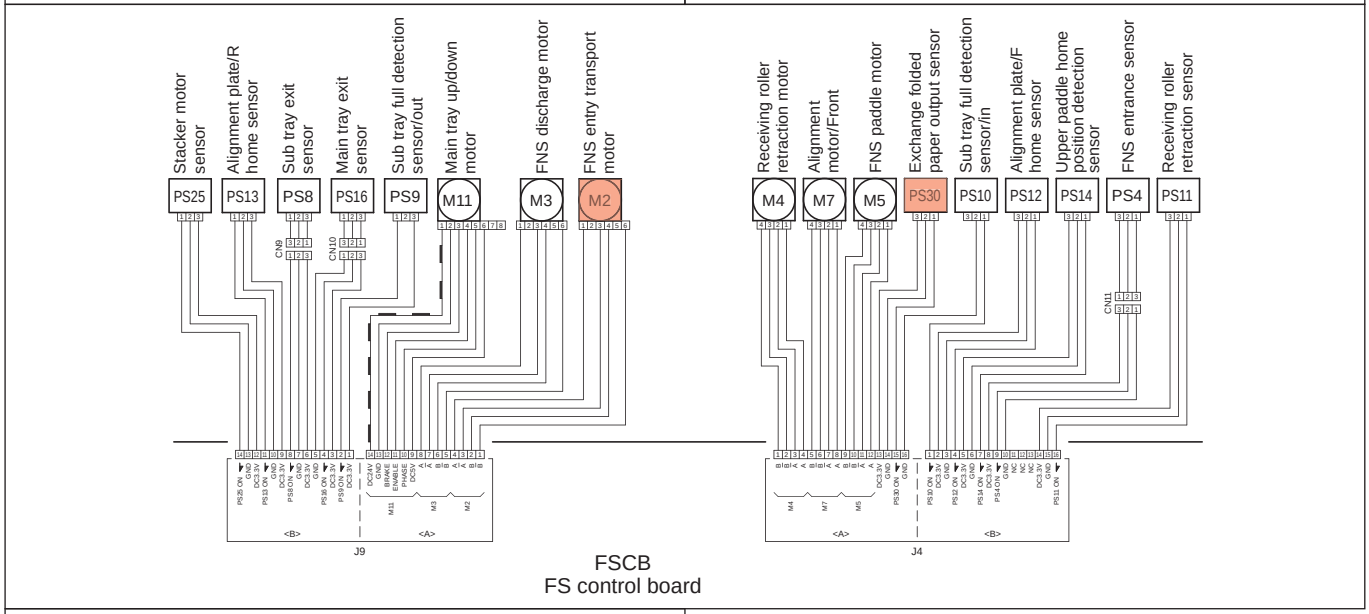
PKCB
Punch control board

47. C11E1

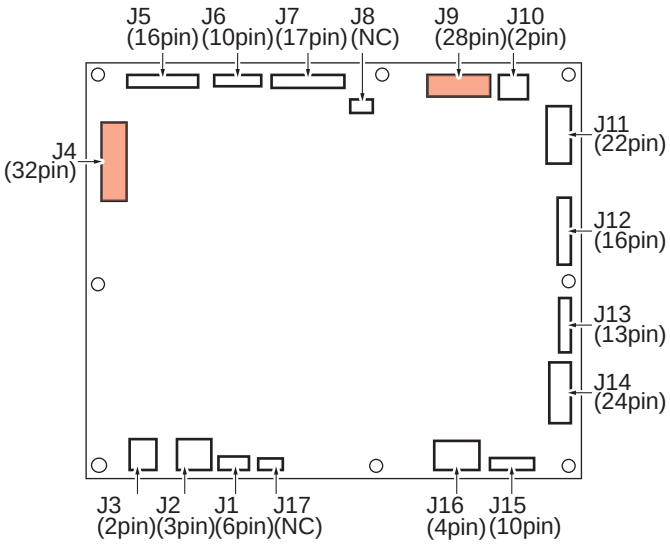
47.1 FS-536/FS-536SD



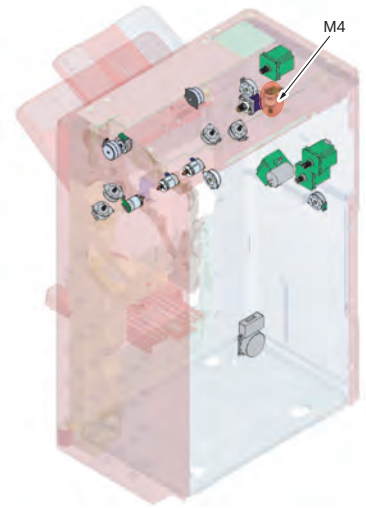


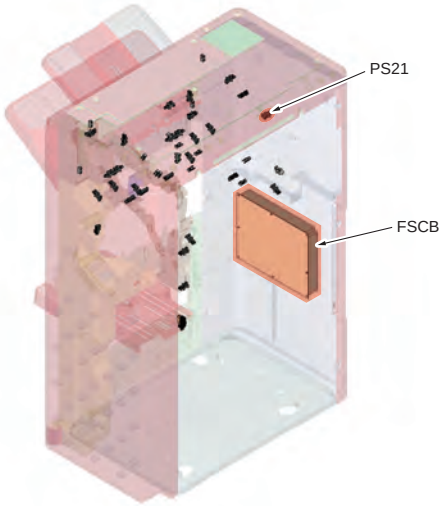


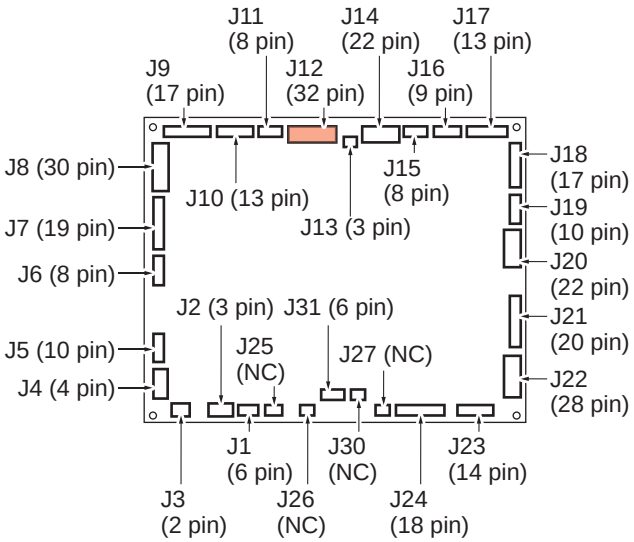
FSCB
FS control board

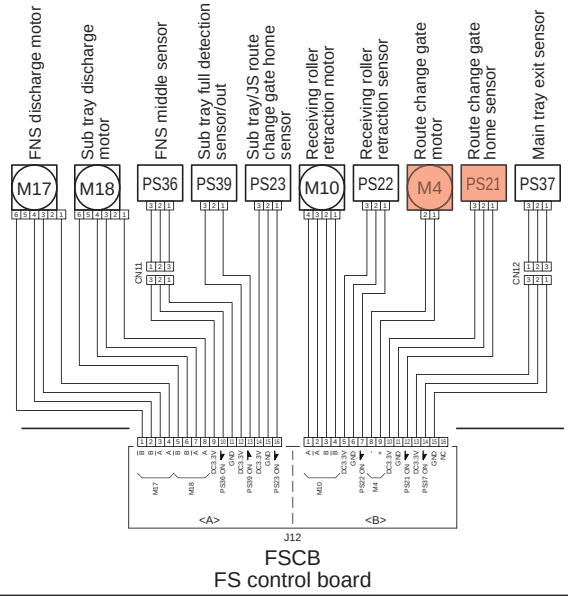


47.2 FS-537/FS-537SD

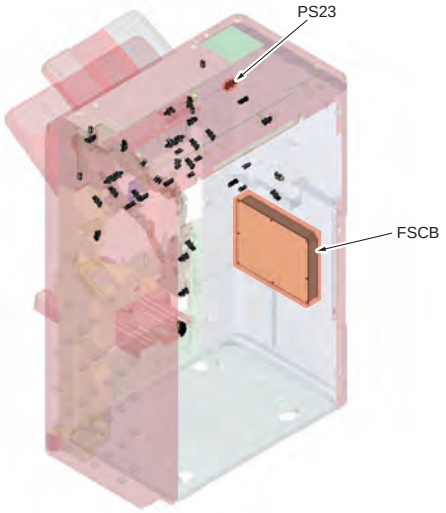




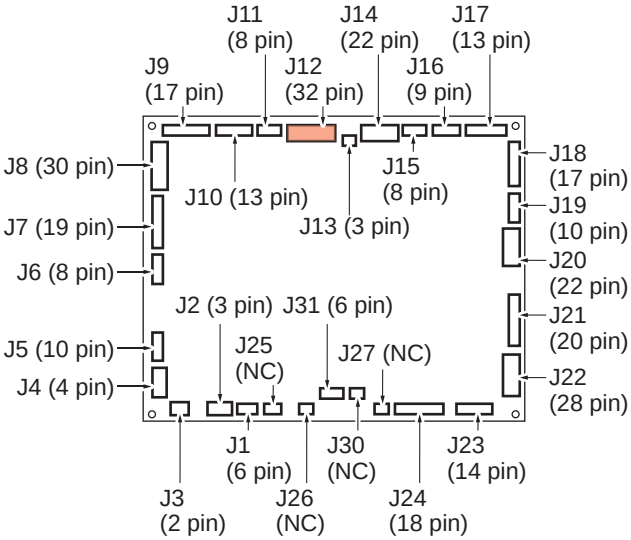


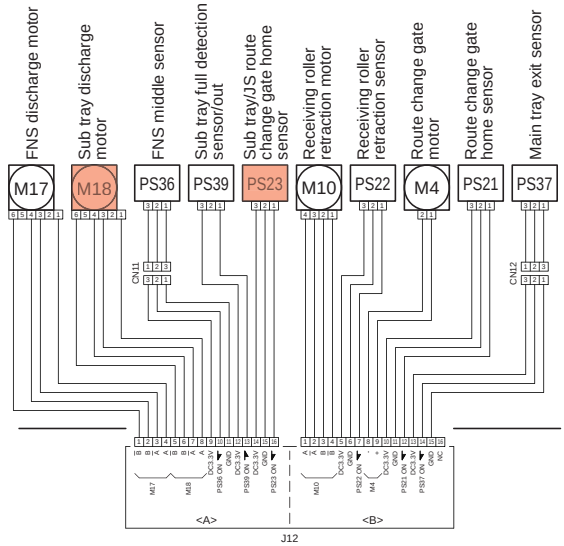


48. C11E2



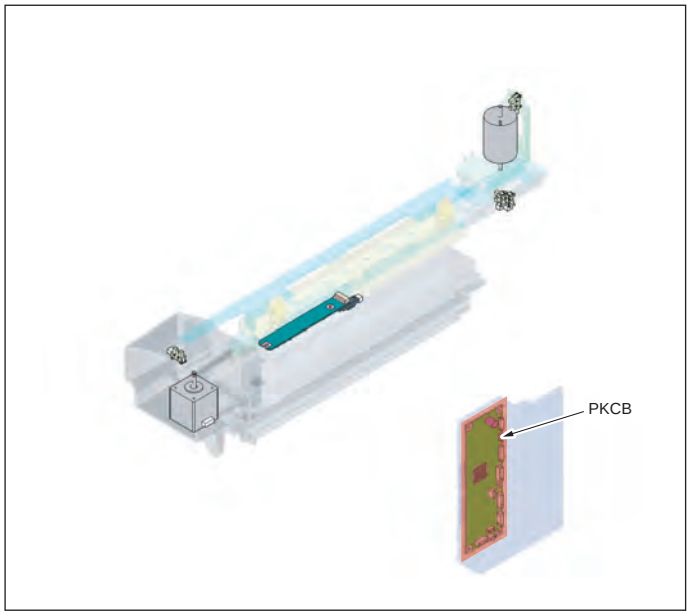
FSCB



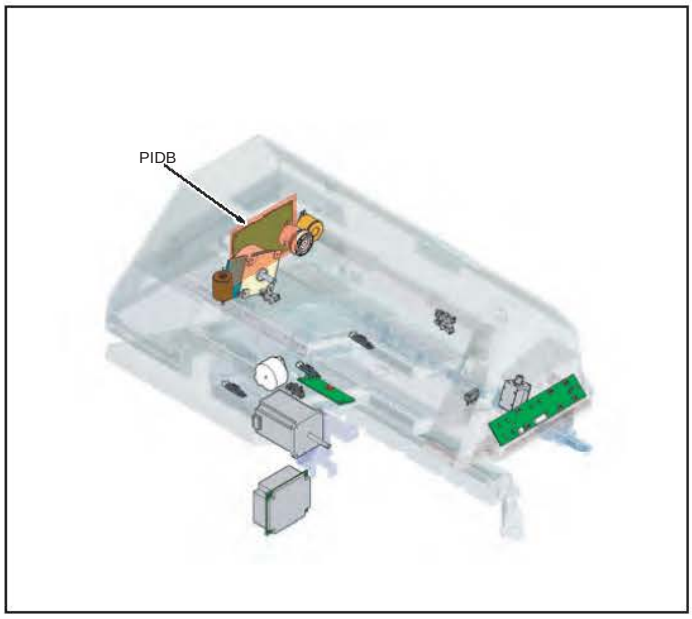


FSCB
FS control board

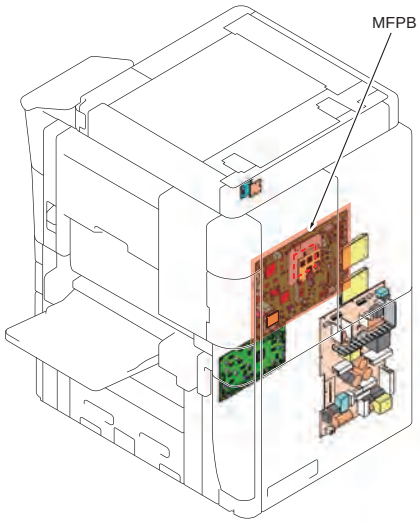
49. C1403

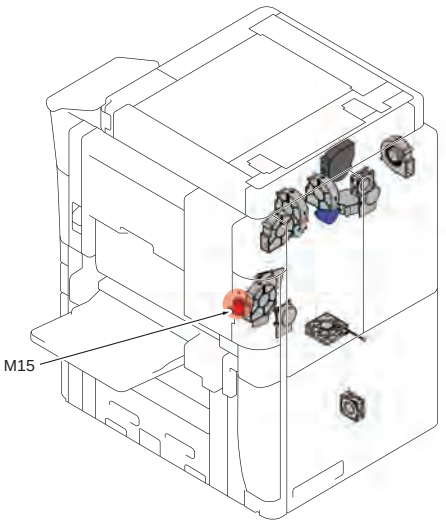


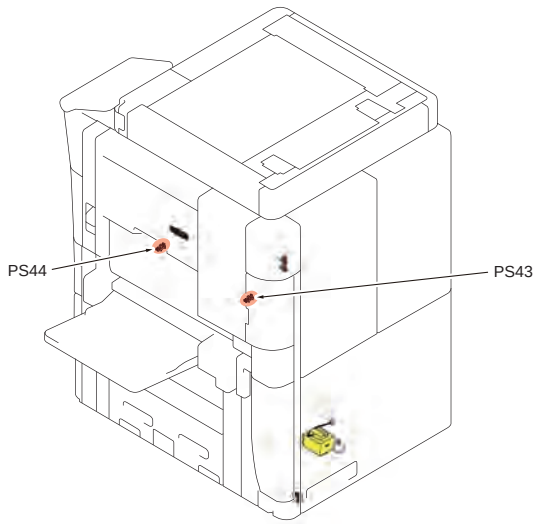
50. C1404

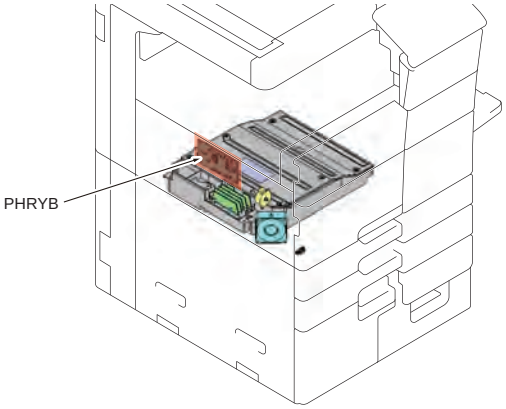


51. C2101

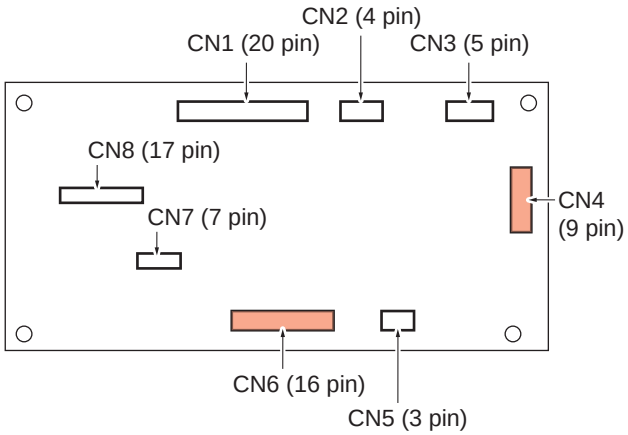


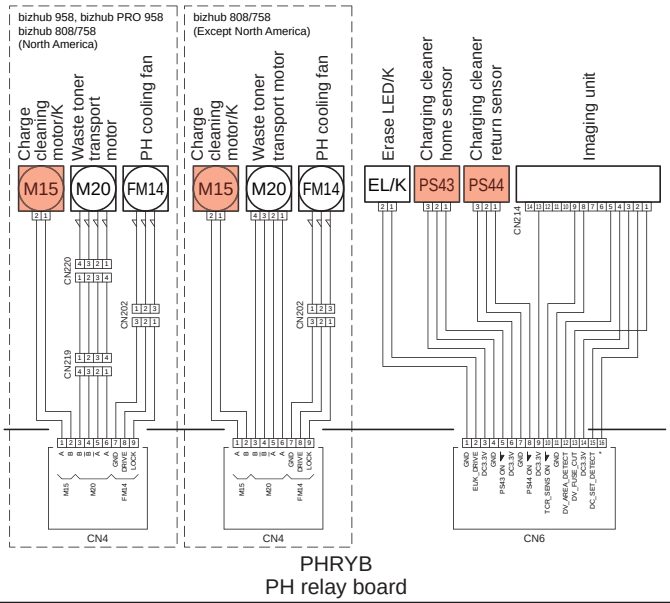




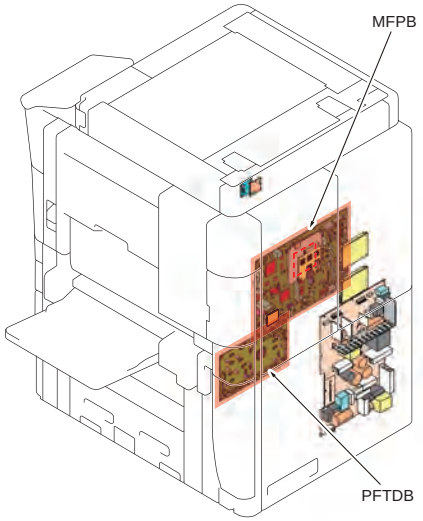


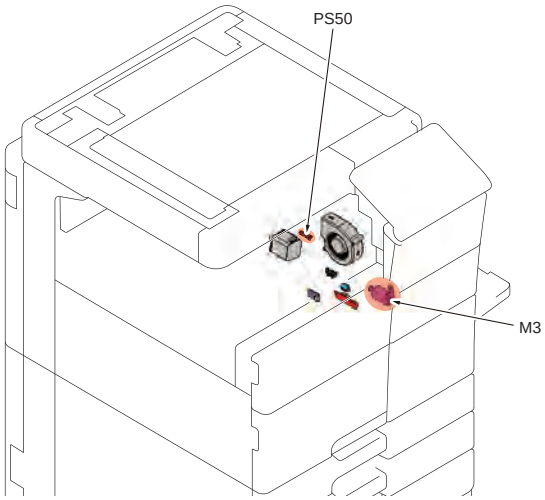
PHRYB



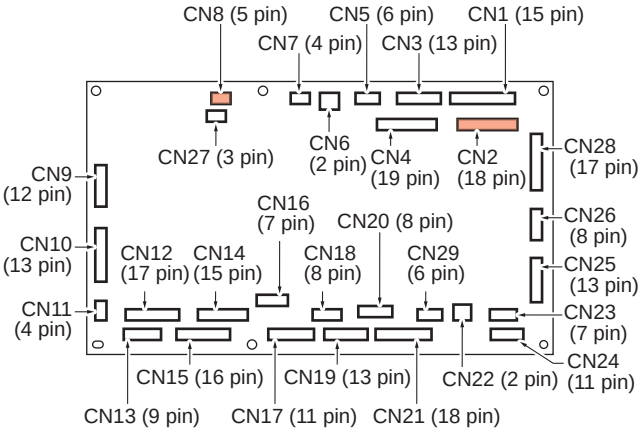


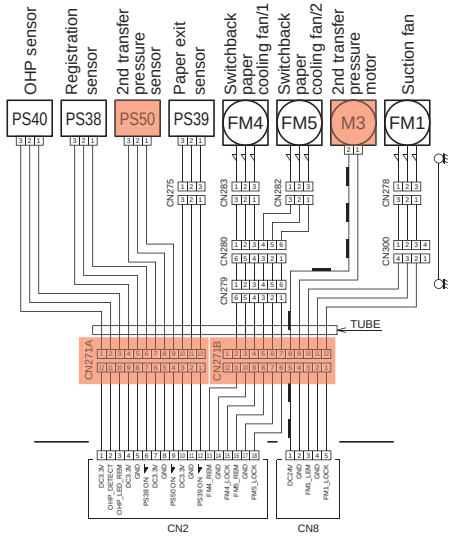
52. C2151



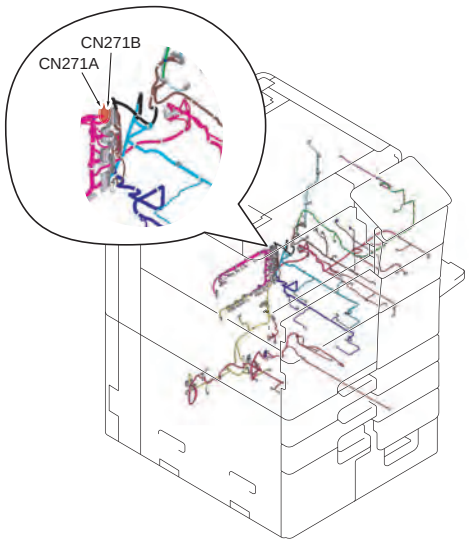


PFTDB

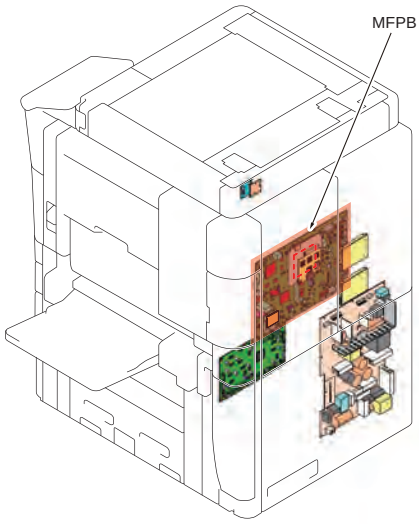


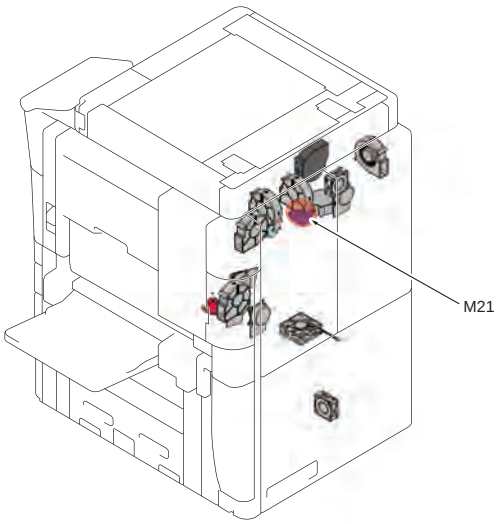


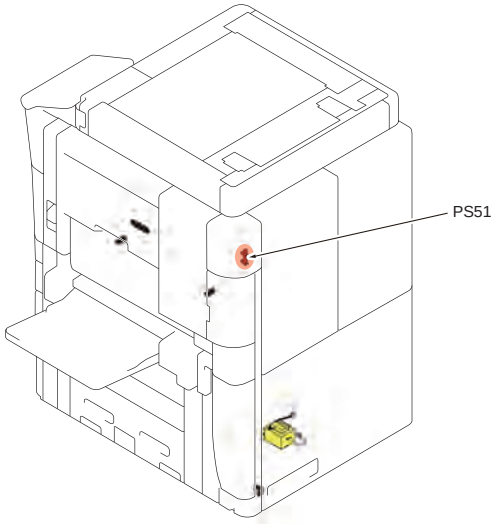
PFTDB
Paper feed/transport drive board



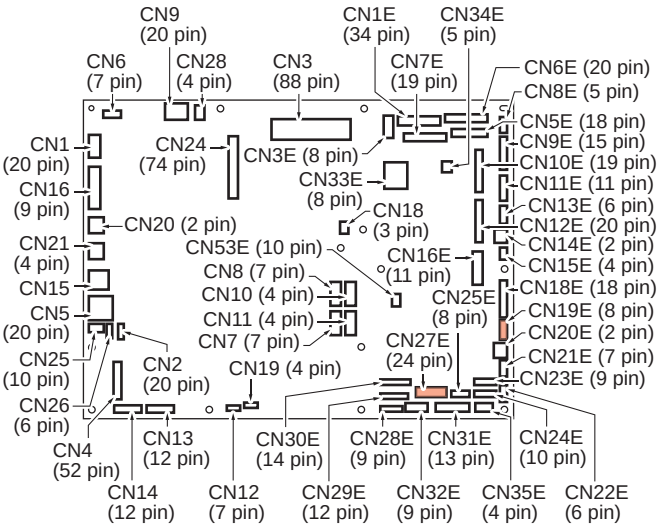
53. C2152, C2153, C2155, C2157

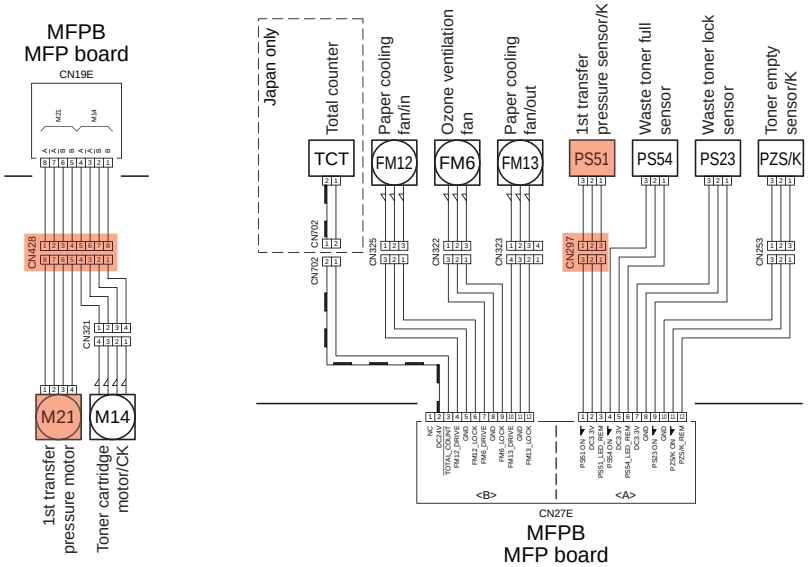


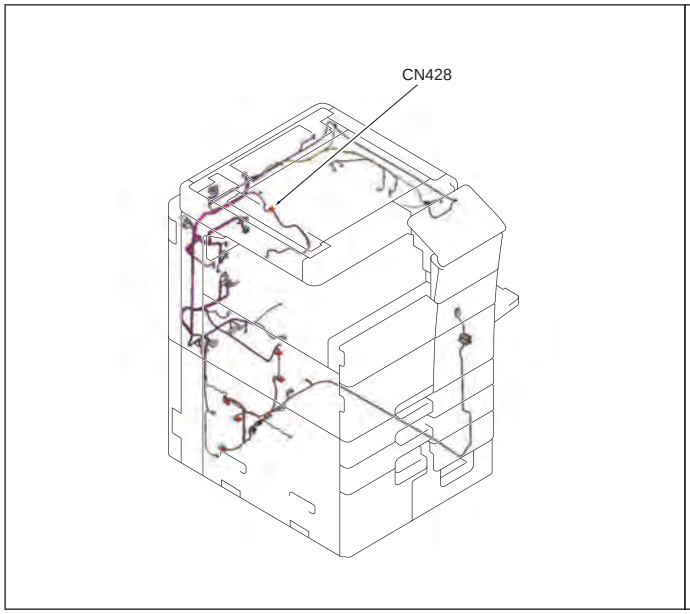


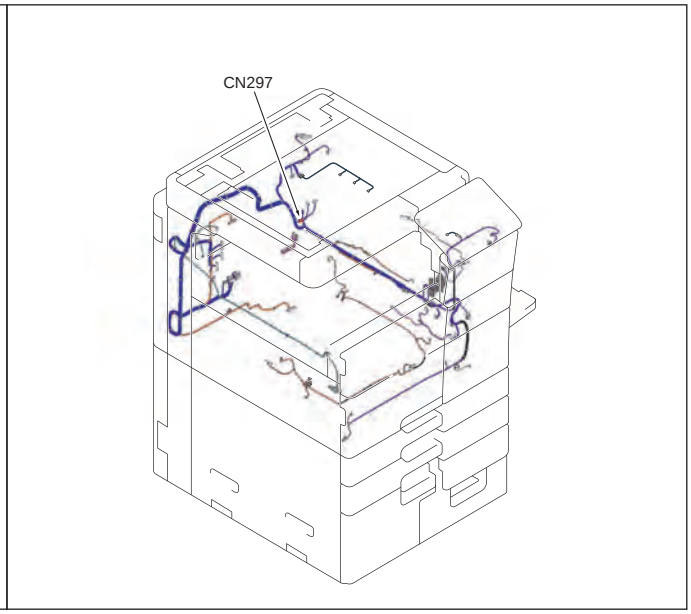


MFPB

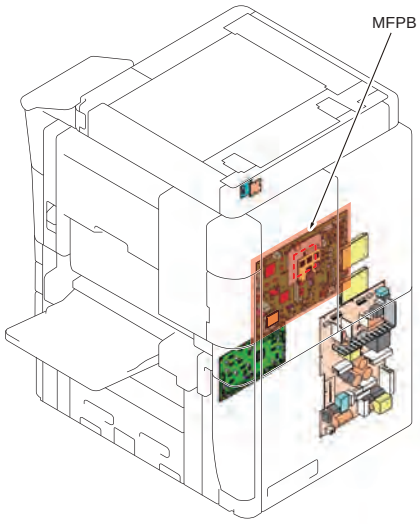


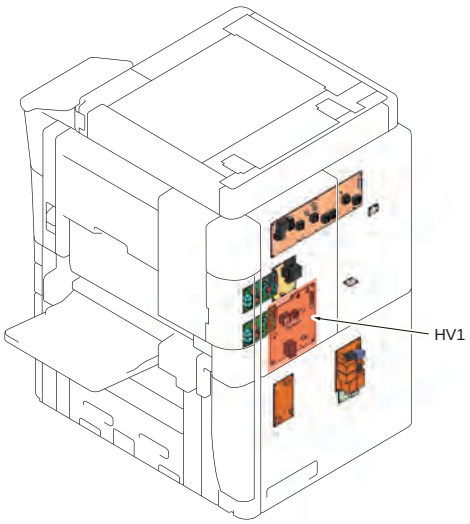



CN428

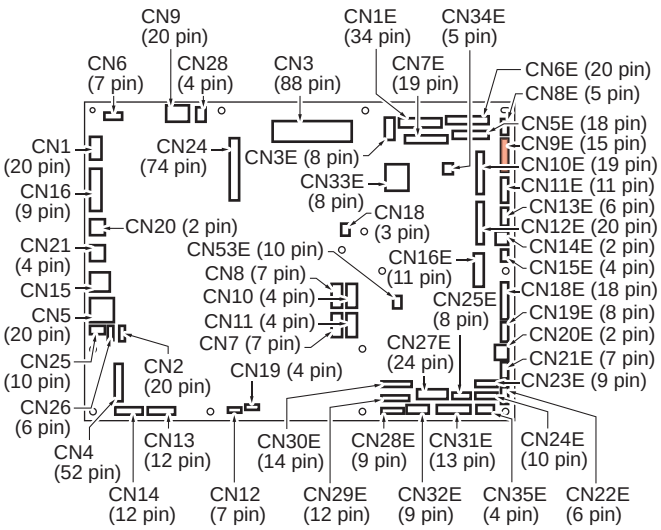

CN297

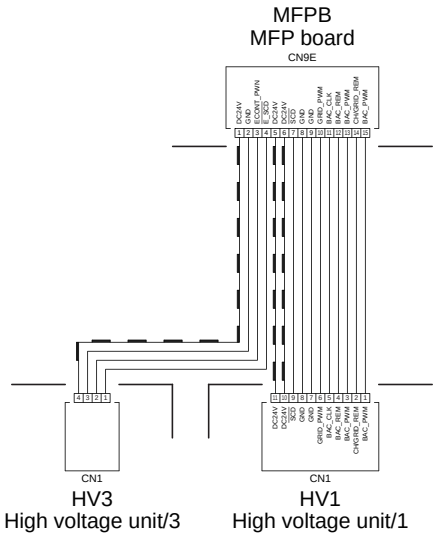
54. C2163



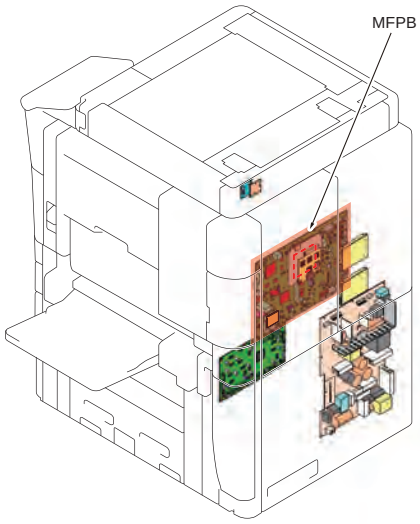


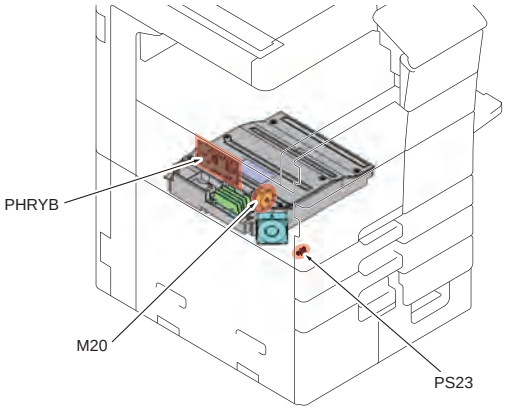
MFPB





55. C2204





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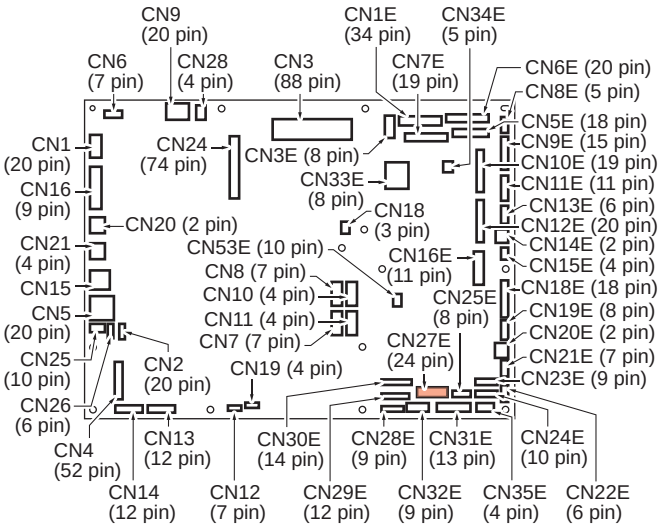

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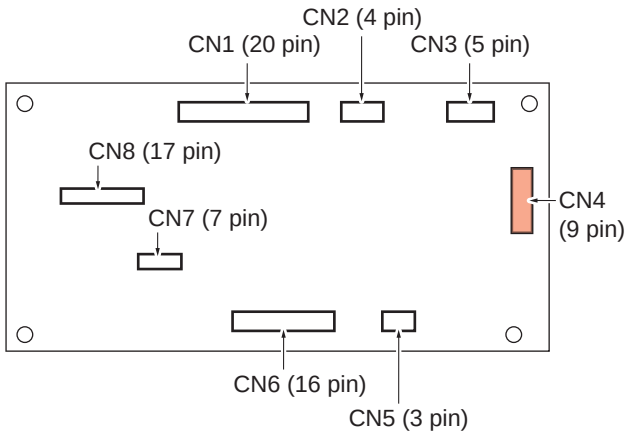
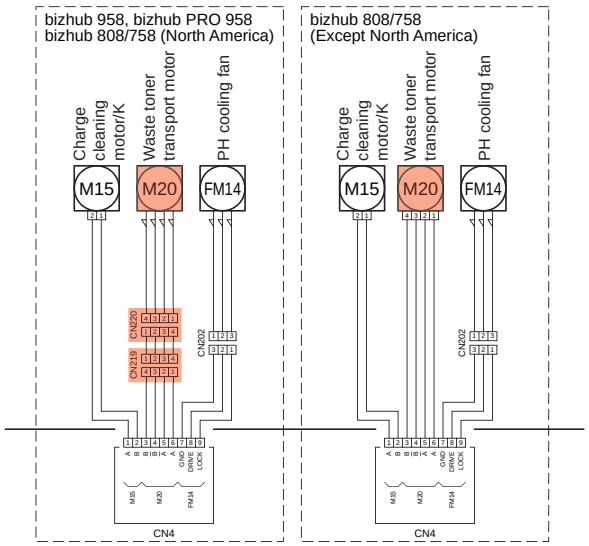
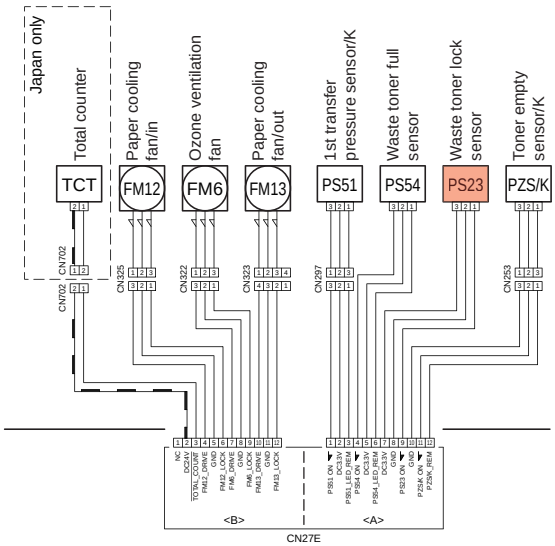
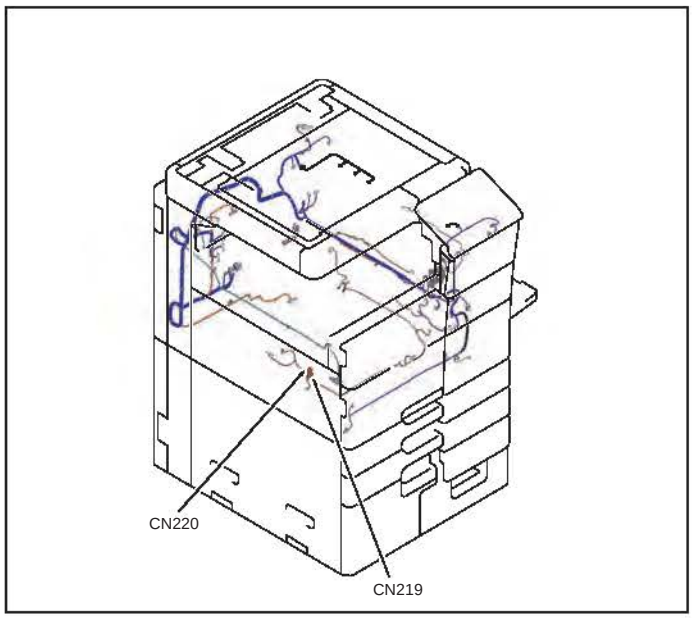
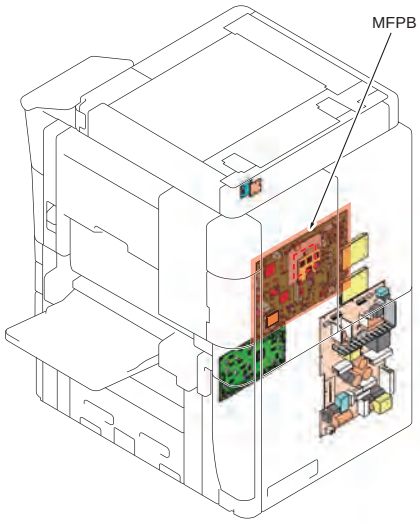


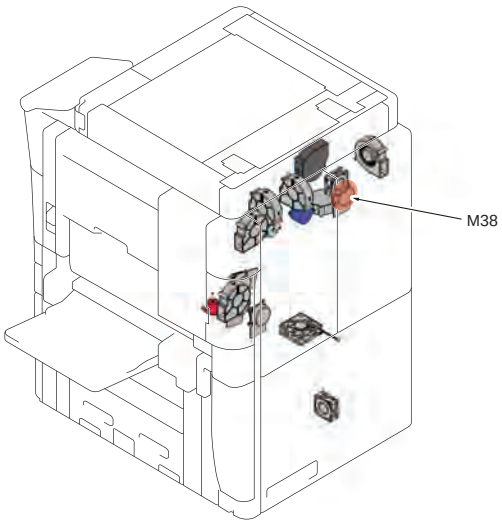





CN220
CN219

56. C2257, C2258





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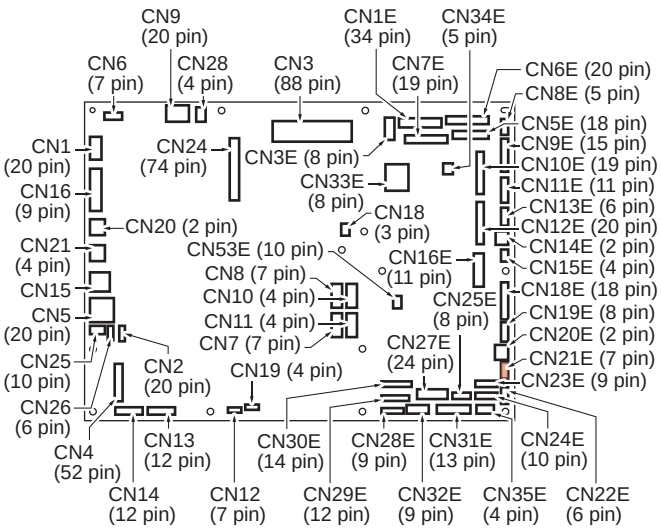
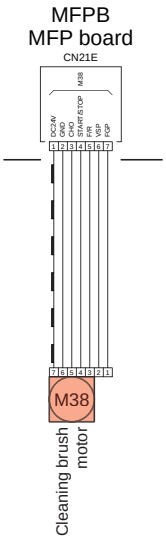
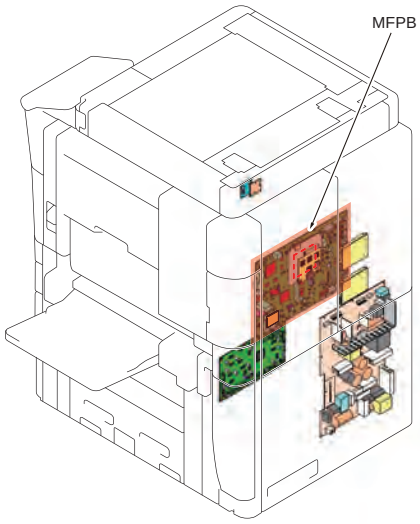
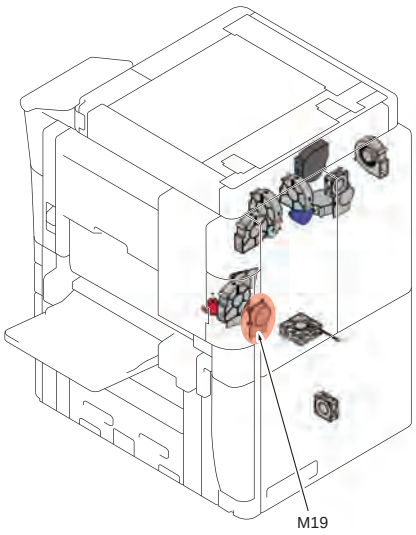




57. C2259, C225A





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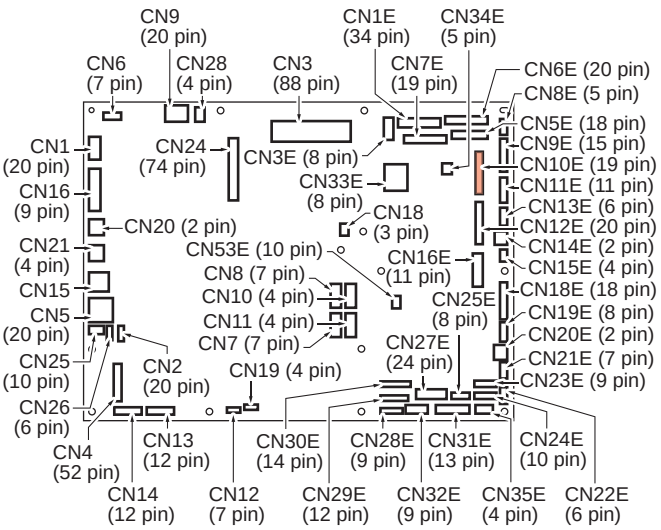
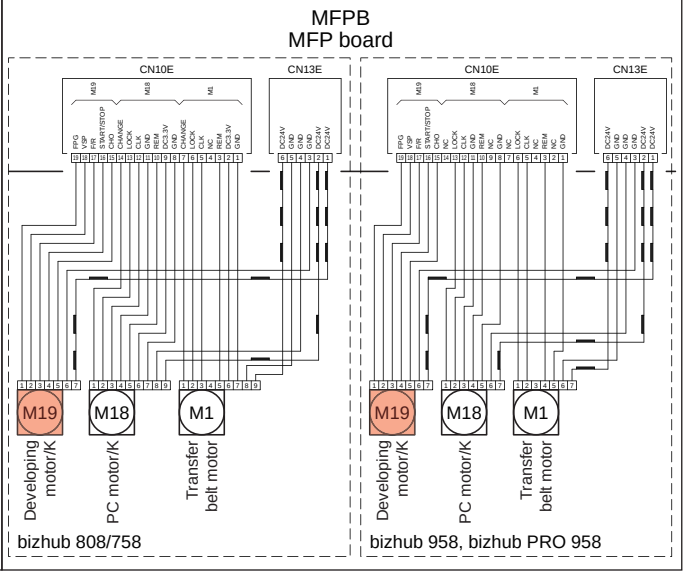
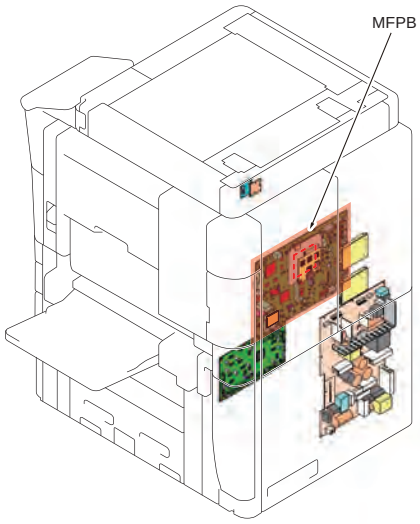
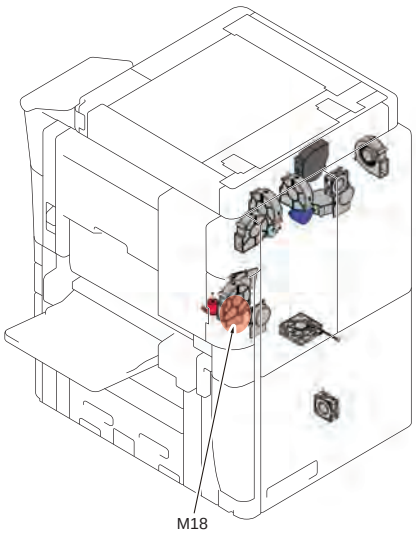




58. C225B, C225C





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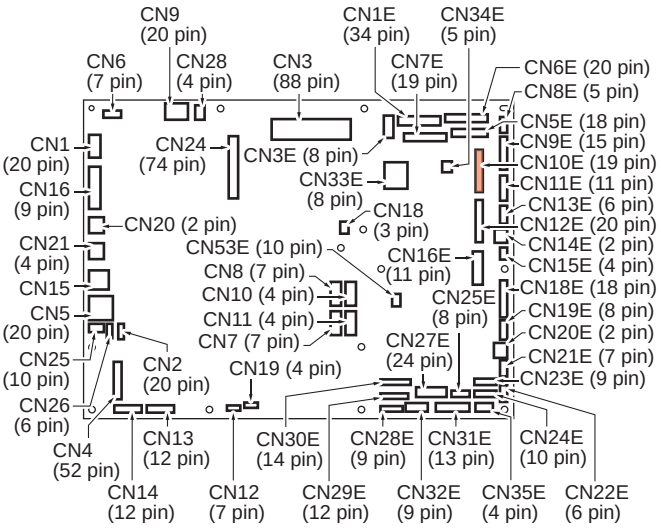
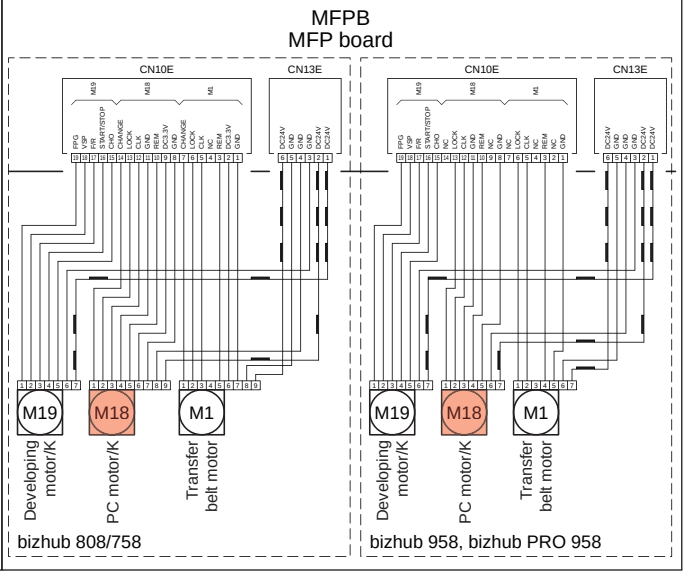
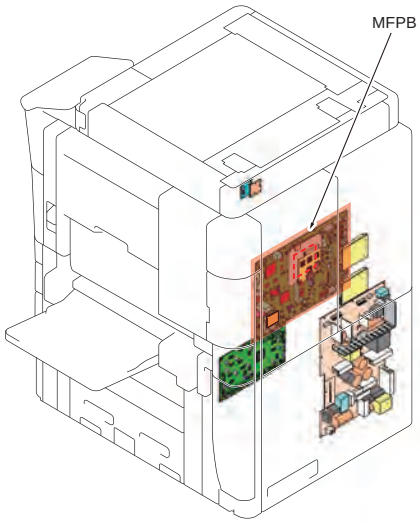
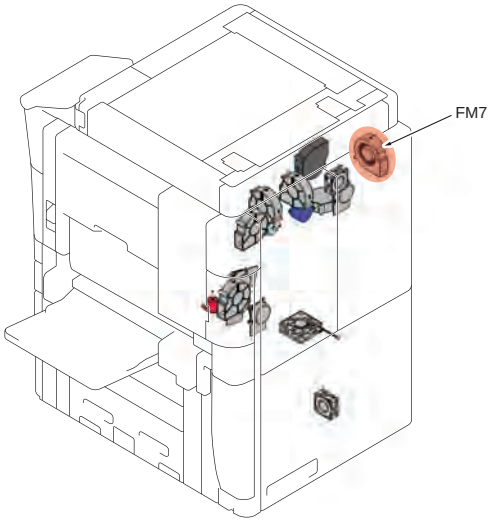




59. C2350





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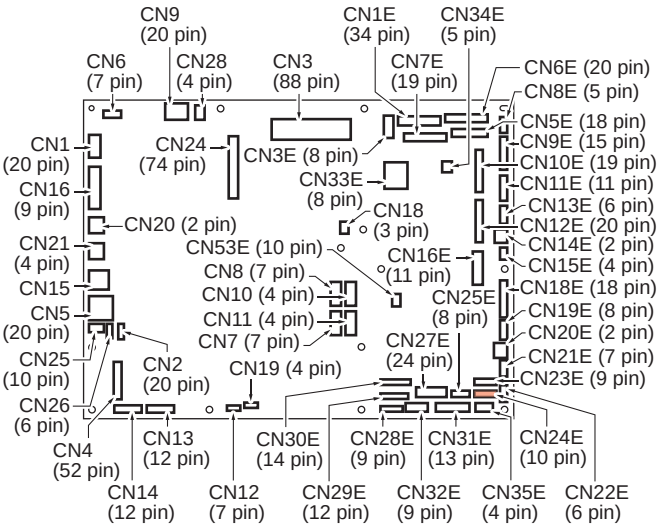
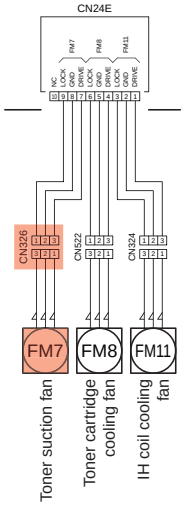
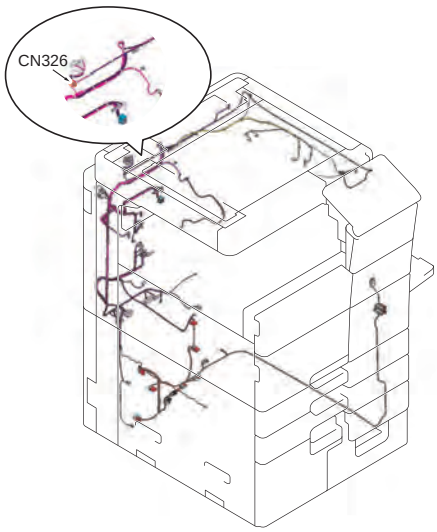
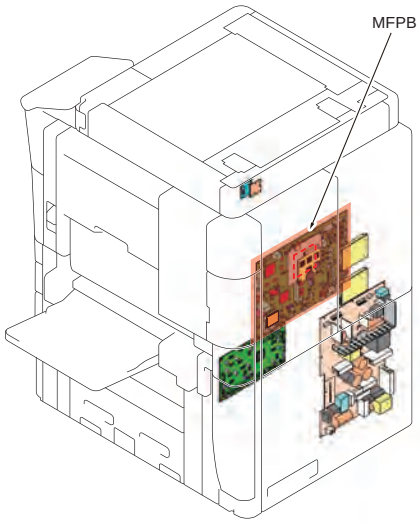


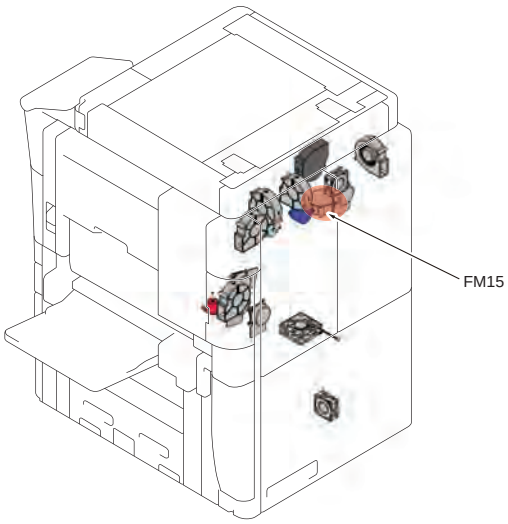
MFPB
MFP board

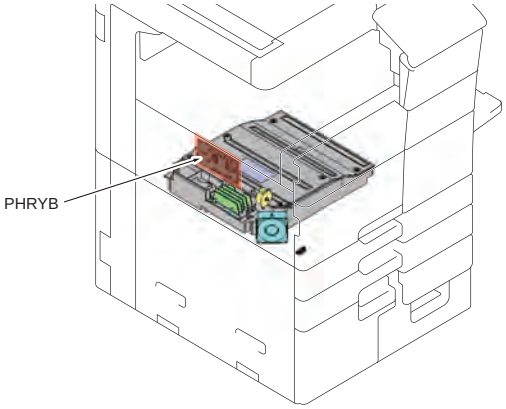




60. C2353







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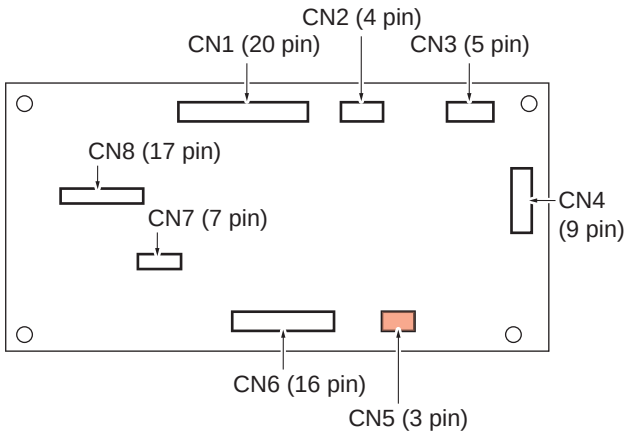
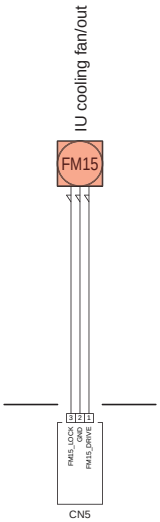
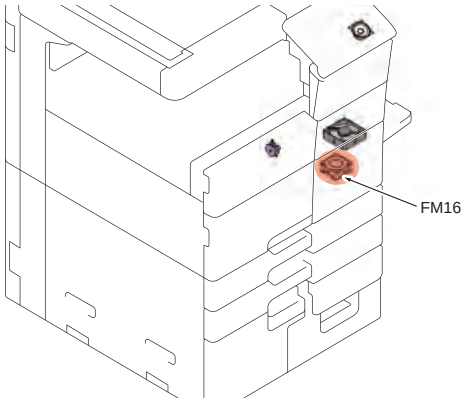
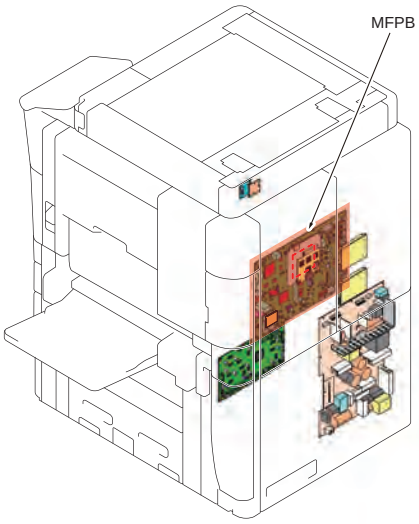




PHRYB
PH relay board

61. C2356





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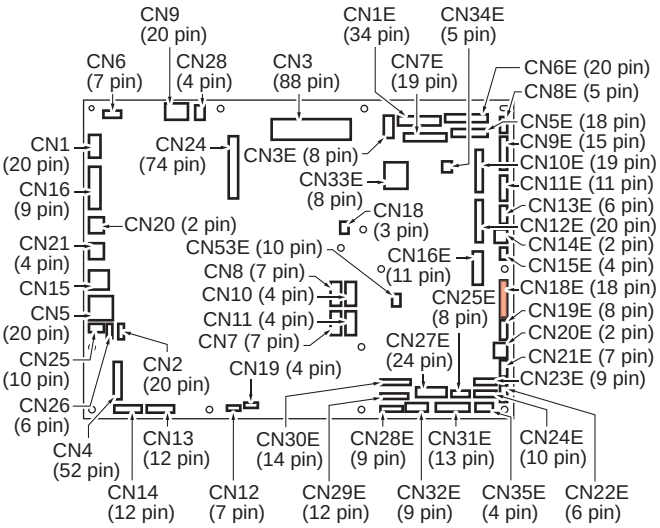
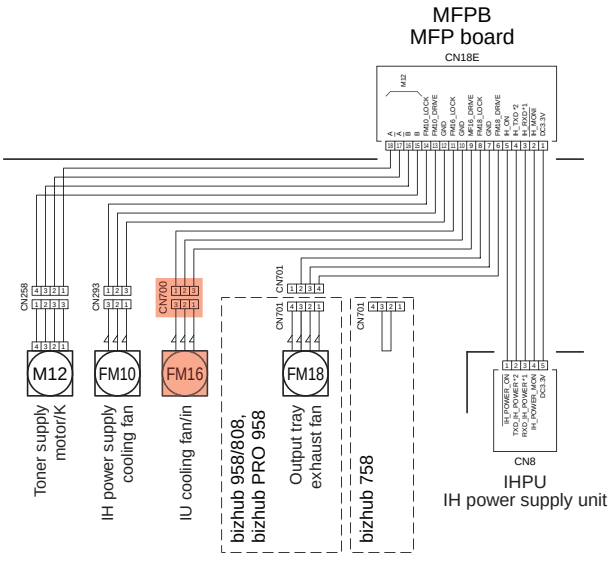
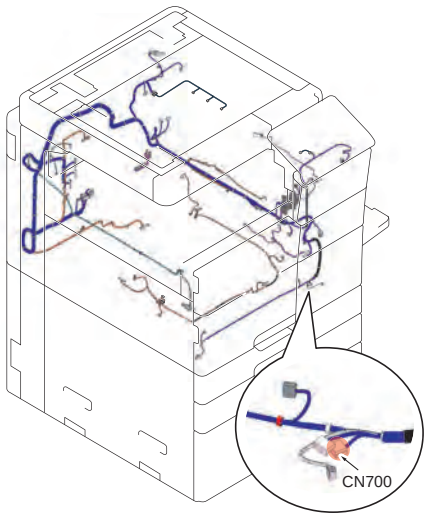
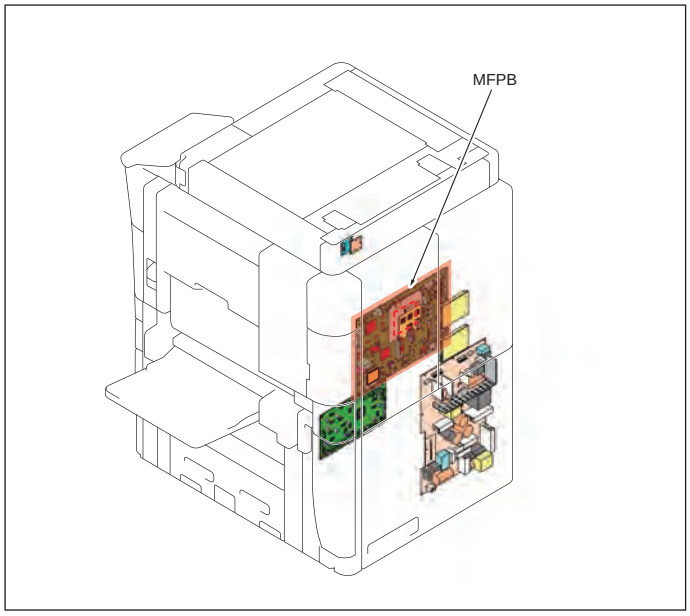


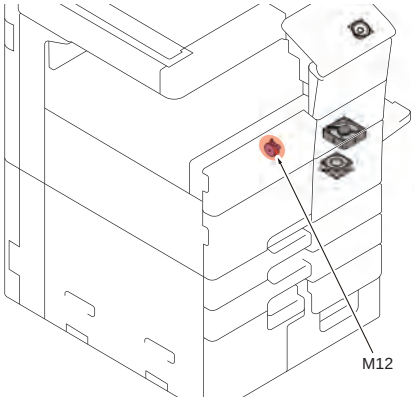


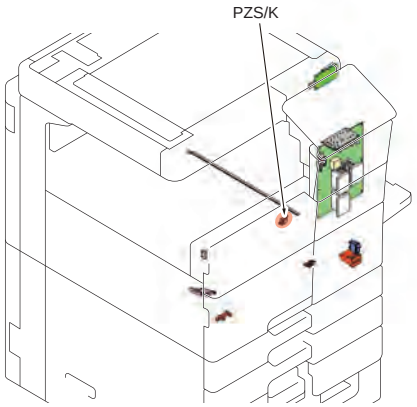


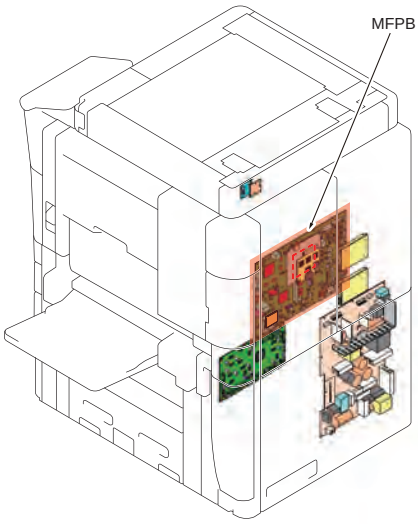
62. C2414, C2558, C255C, C2A14, C2A24, C40A1-C40C5, C5372, C5601-C5606, CA051-CA053, CC170-CC186, CC191-CC216, CD201-CD242, CD271, CD401-CD413, CD701-CD706, CE001, CE003-CE305, CEEE1, CEEE3

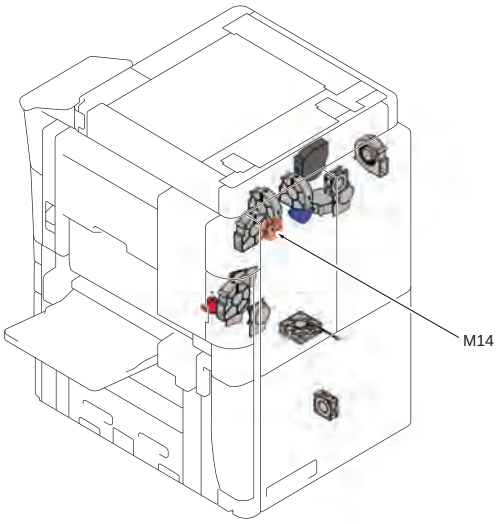


63. C2557









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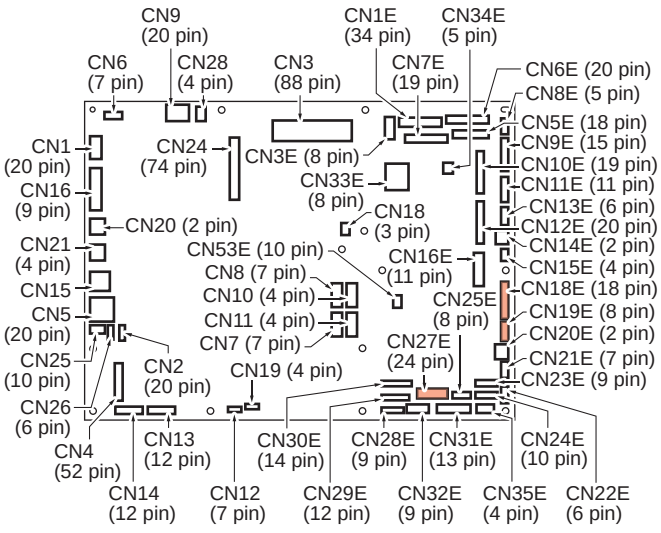
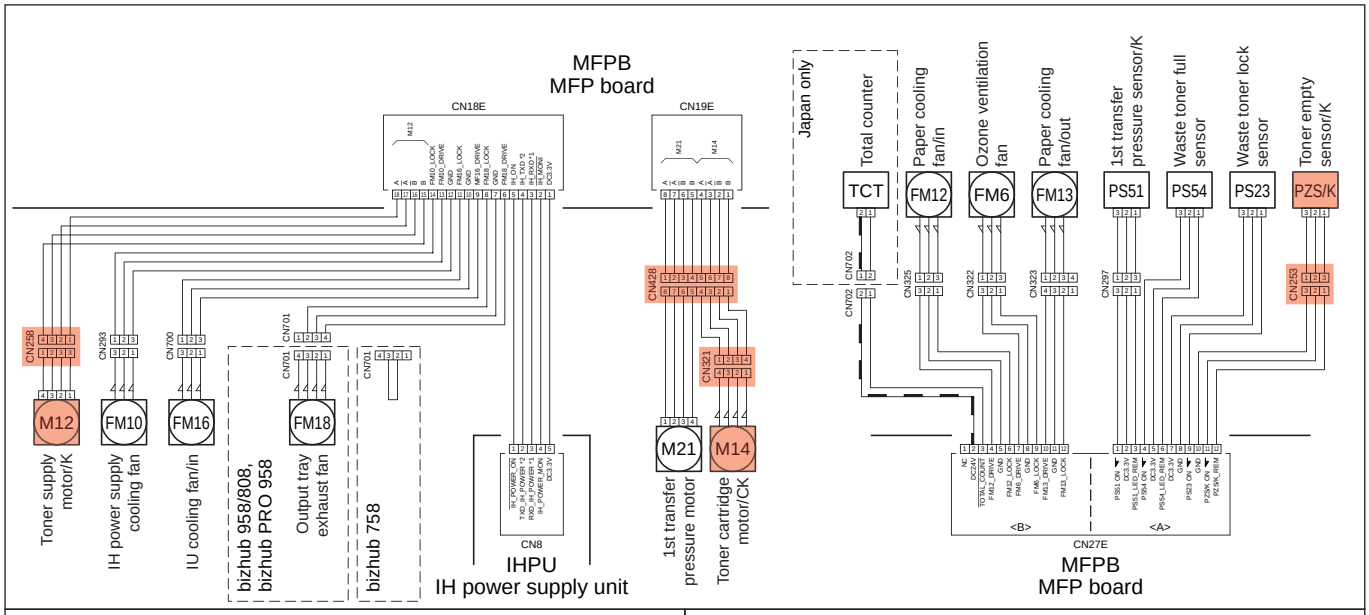
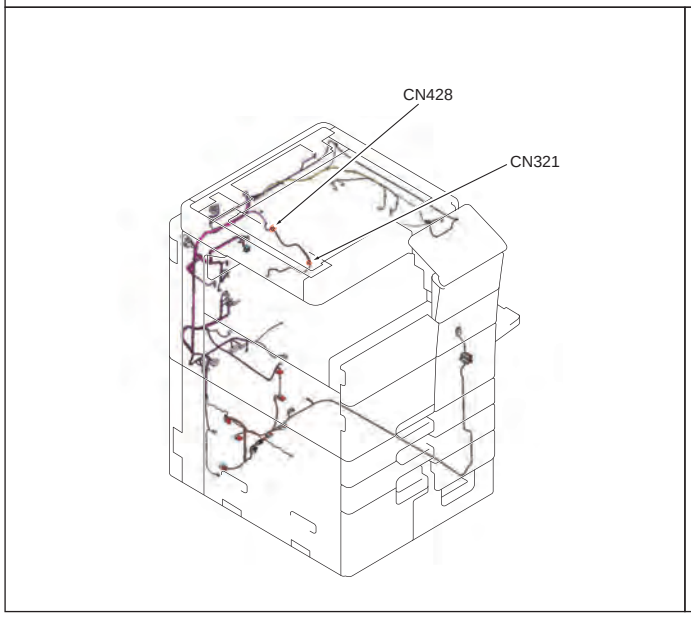
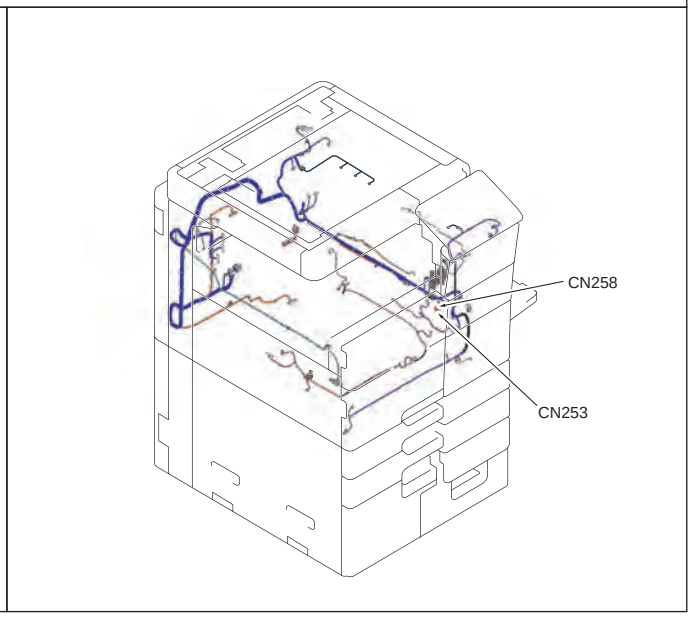
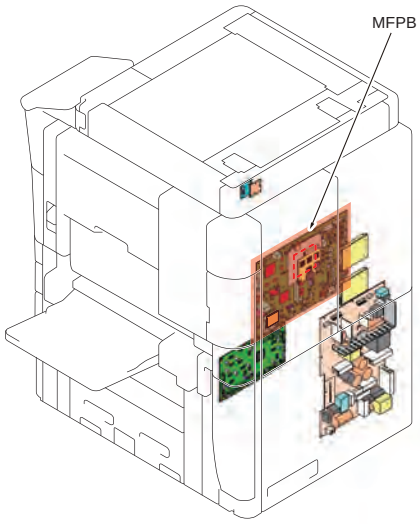


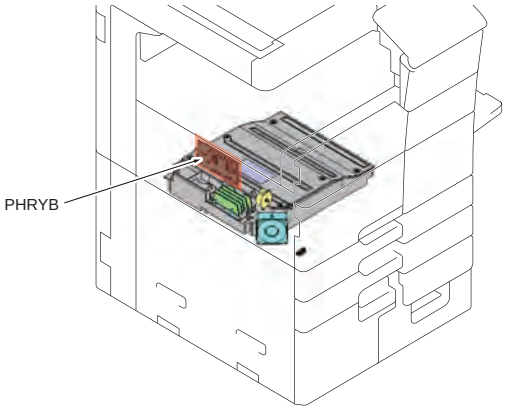

MFPB
MFP board
CN18E
CN19E
Japan only
Total counter
Paper cooling fan/in
Ozone ventilation fan
Paper cooling fan/out
1st transfer pressure sensor/K
Waste toner full sensor
Waste toner lock sensor
Toner empty sensor/K
TCT
FM12
FM6
FM13
PS51
PS54
PS23
PZS/K
M12
FM10
FM16
FM18
M21
M14
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
bizhub 958/808, bizhub PRO 958
Output tray exhaust fan
bizhub 758
IHPU
IH power supply unit
1st transfer pressure motor
Toner cartridge motor/CK
MFPB
MFP board


CN428
CN321


CN258
CN253

64. C2564





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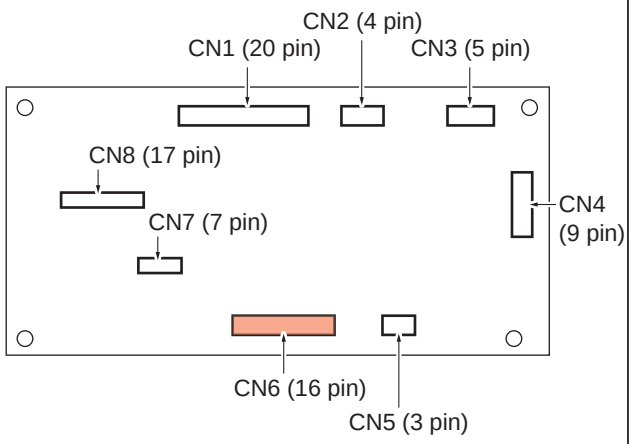
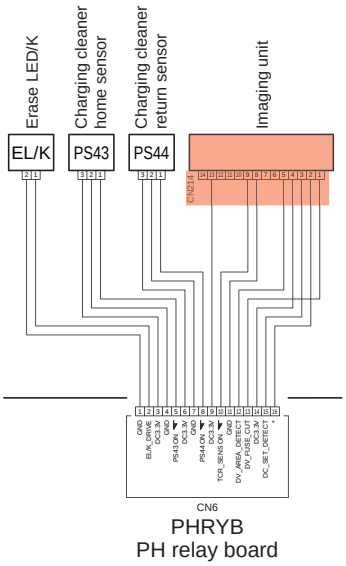
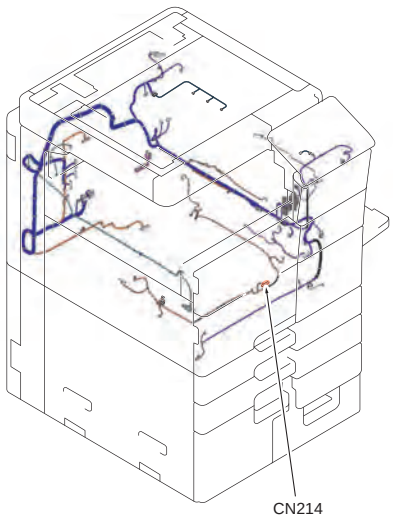
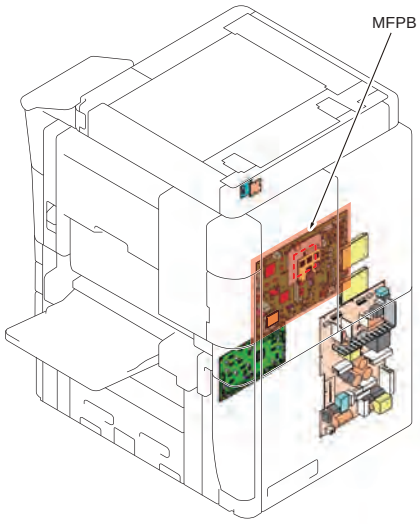
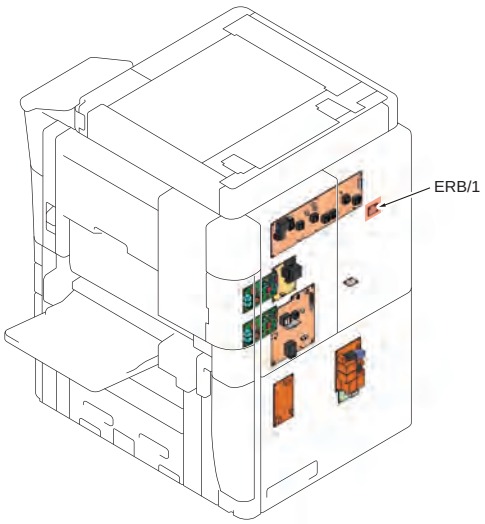






65. C2650





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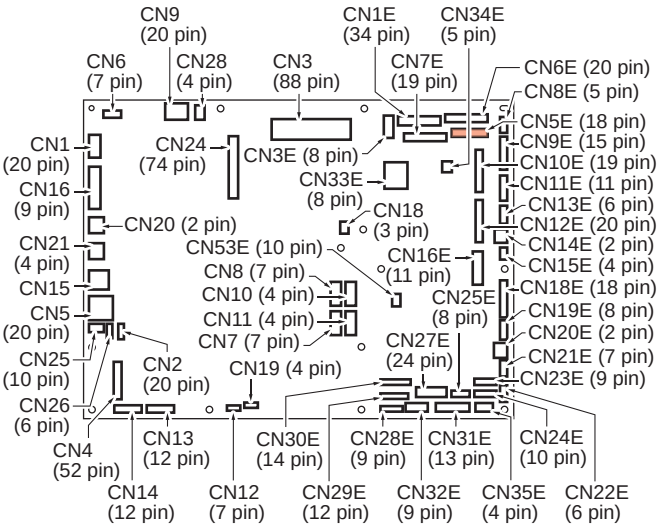
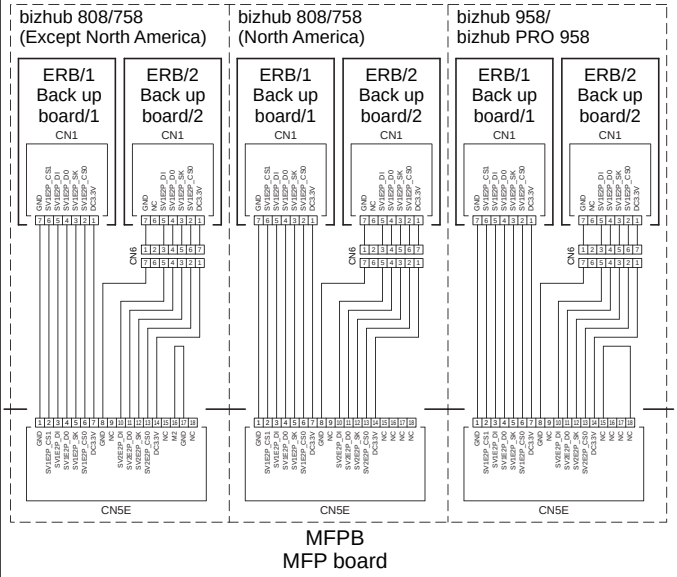
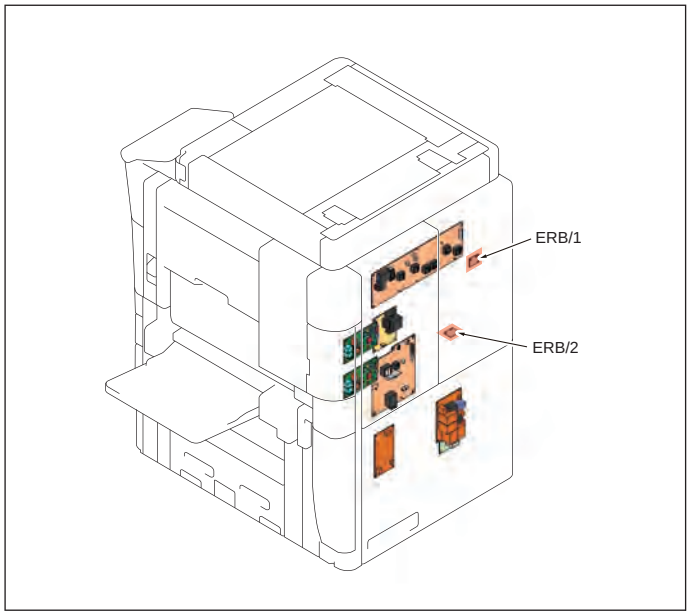


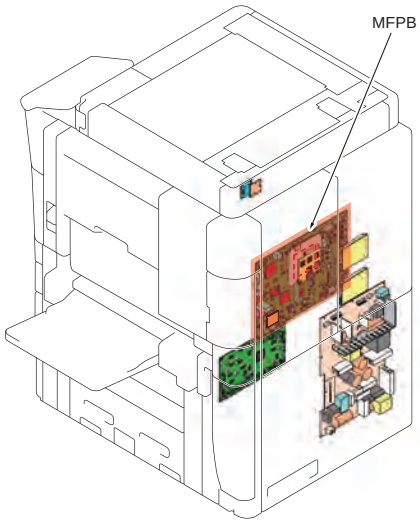


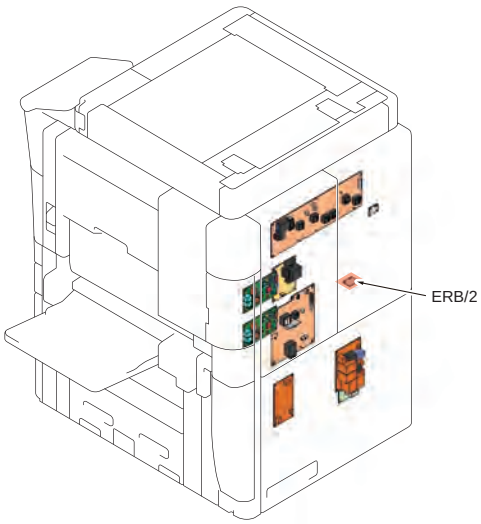
MFPB
MFP board

66. C265A



67. C265B





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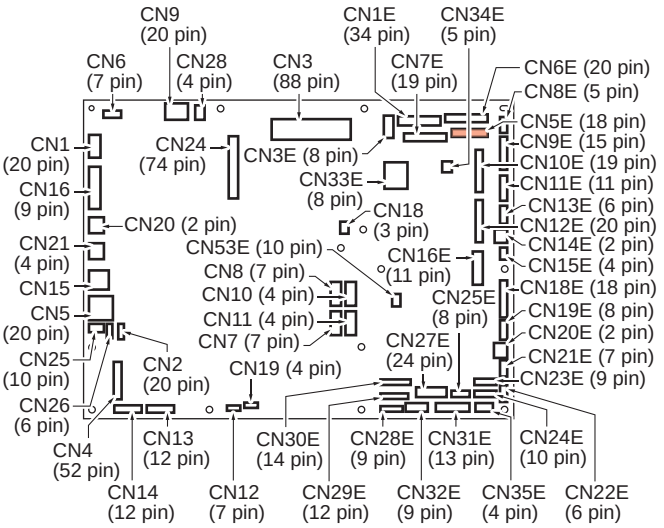
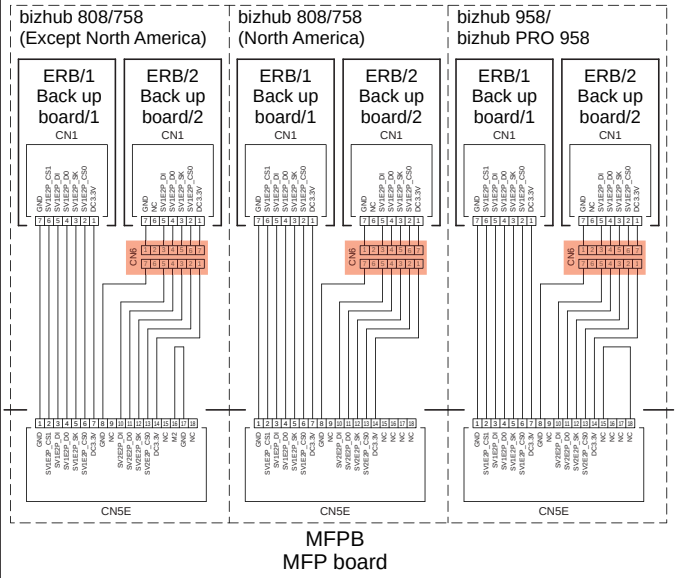
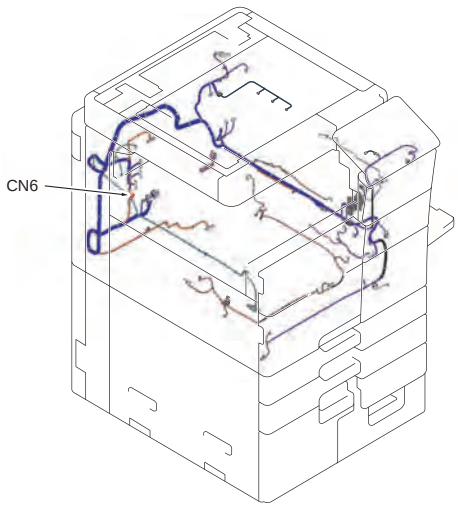
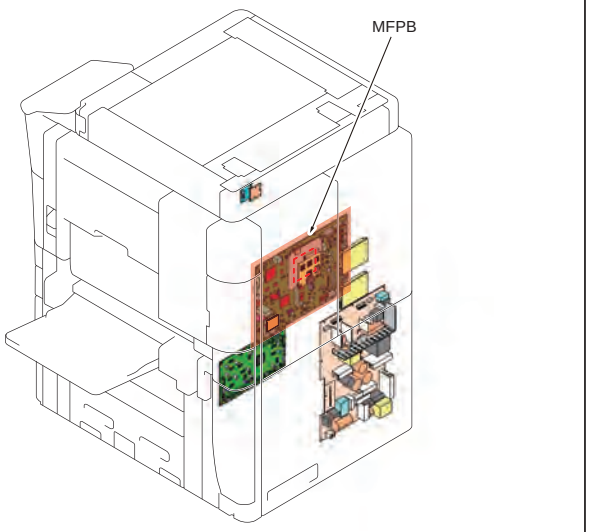


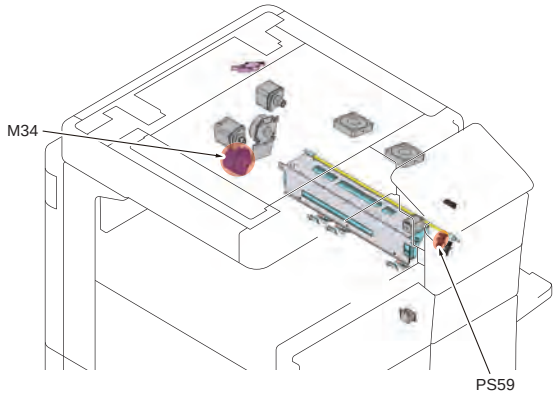


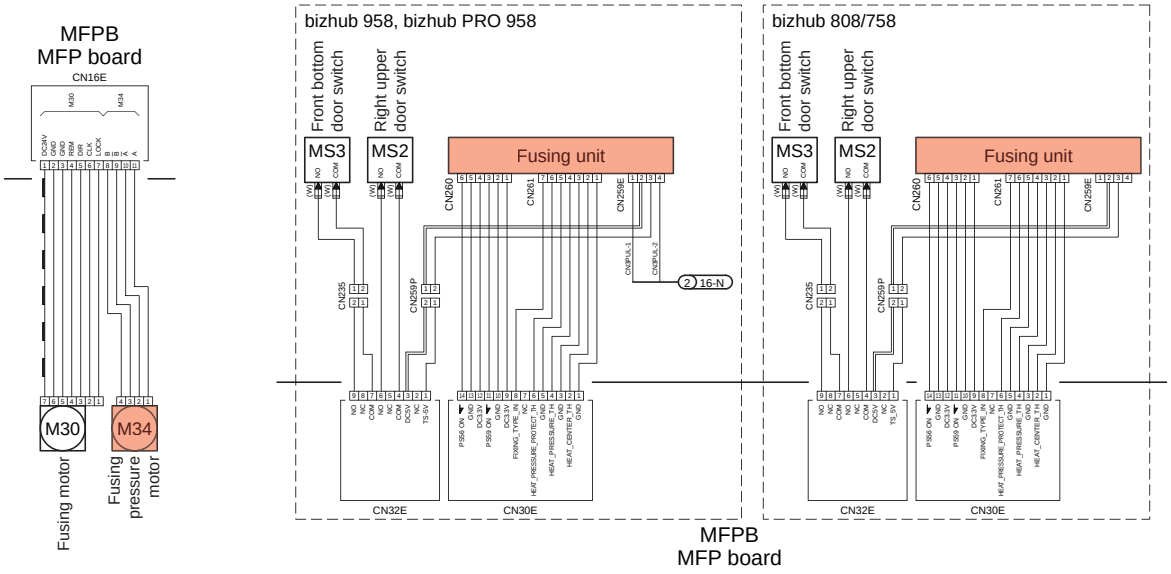
MFPB
MFP board



68. C3101, C3103







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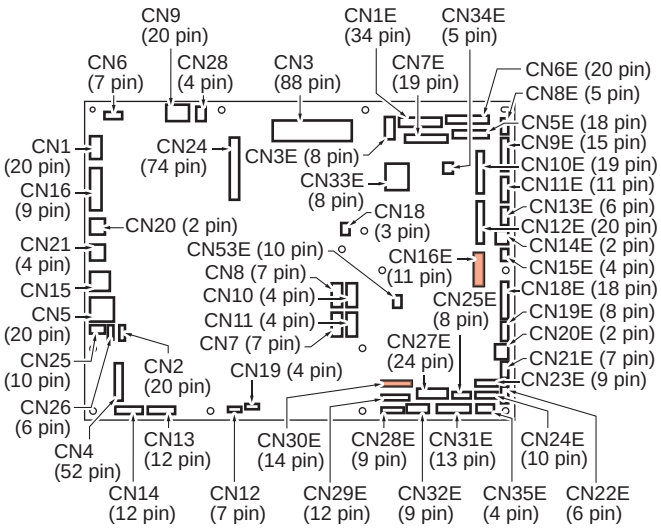
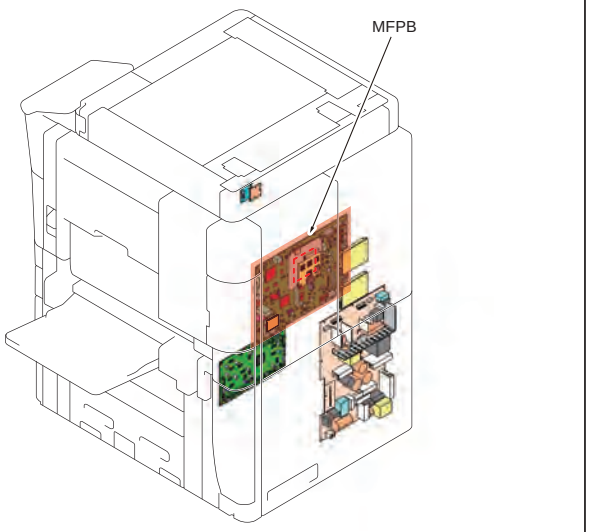
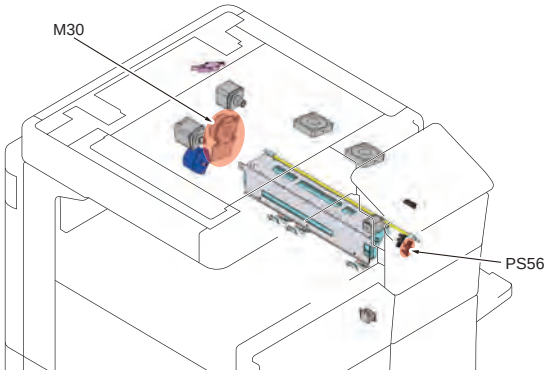
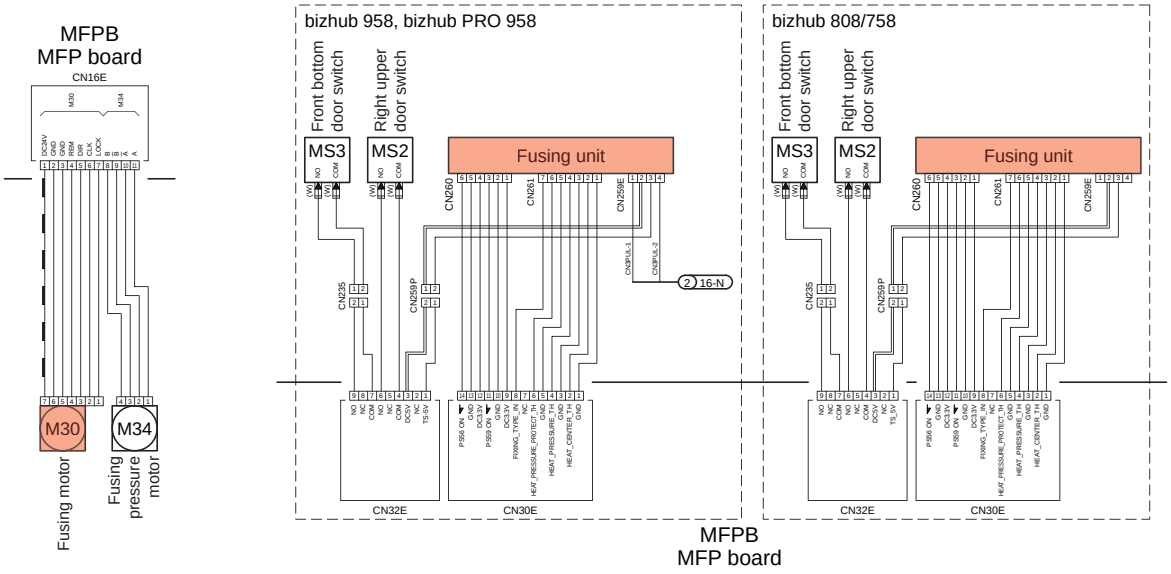


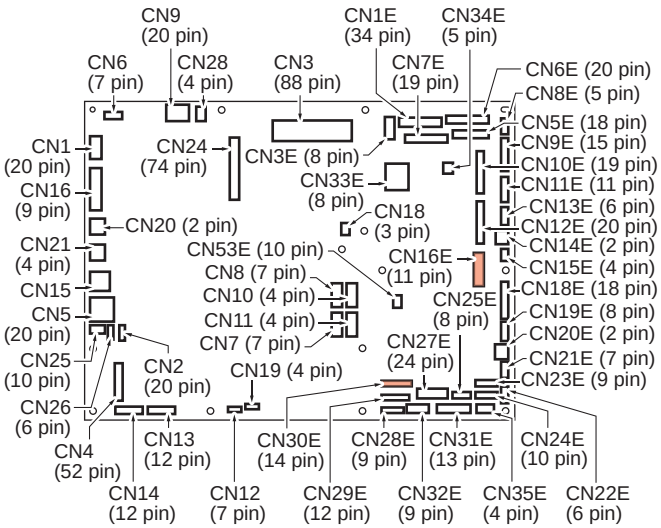
69. C3102



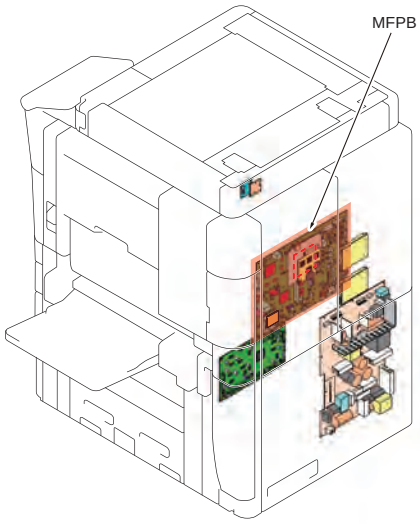


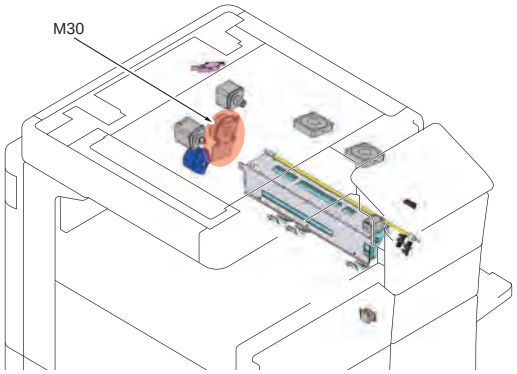


MFPB



70. C3201, C3202





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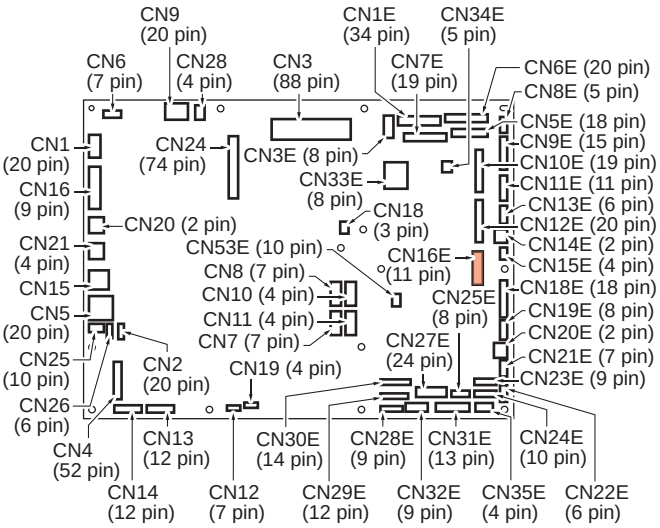
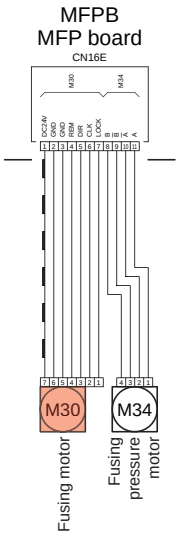
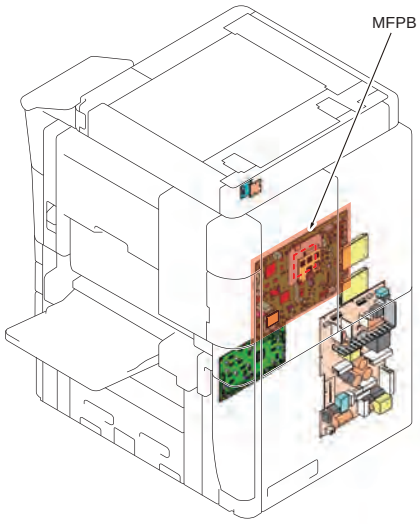
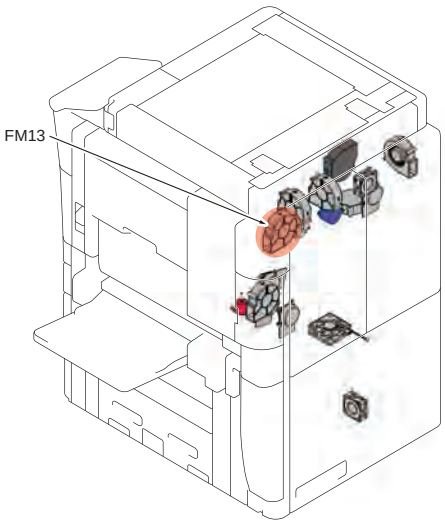




71. C3303





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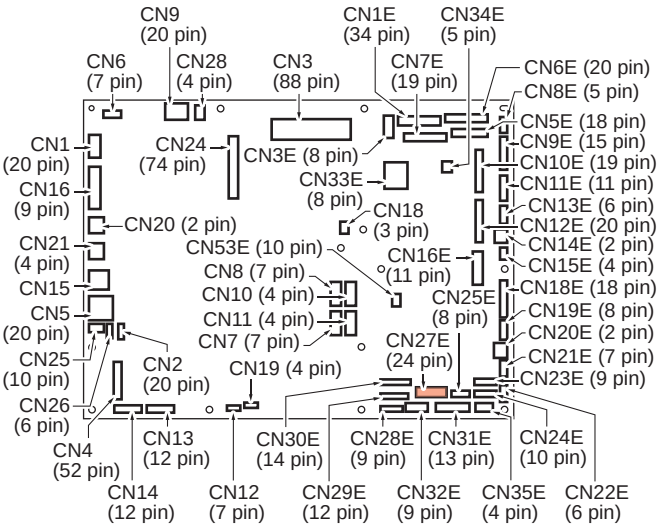
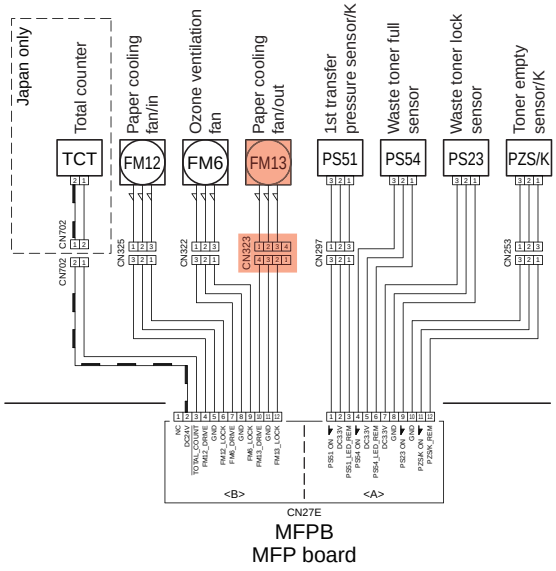
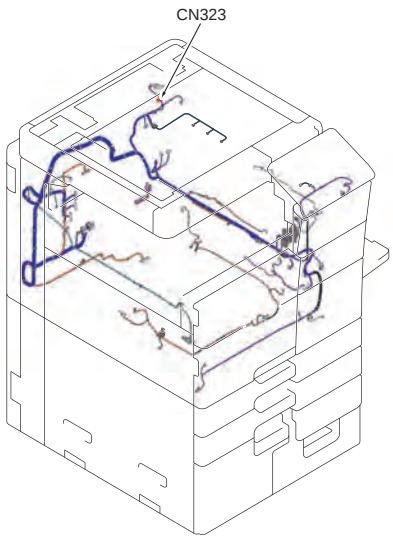
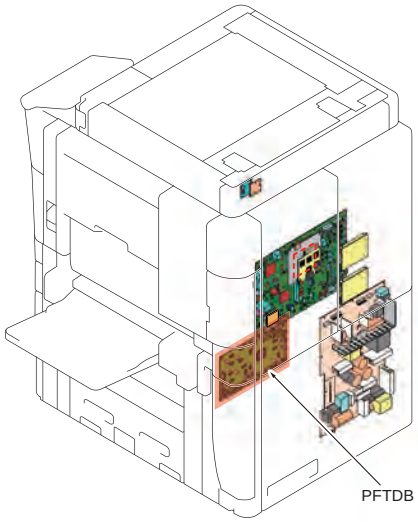


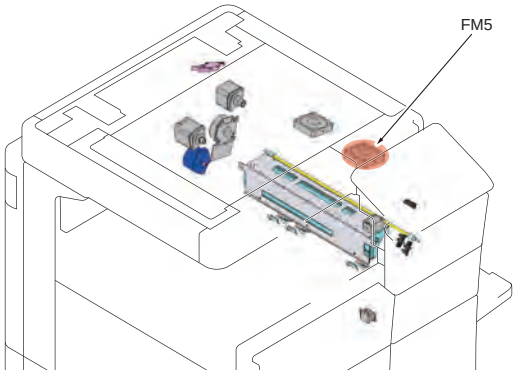


MFPB
MFP board

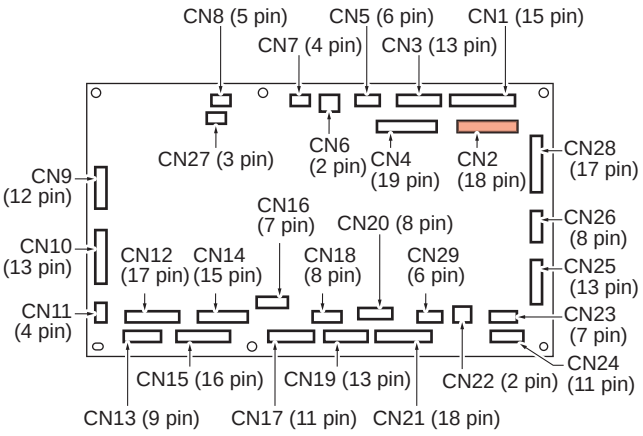


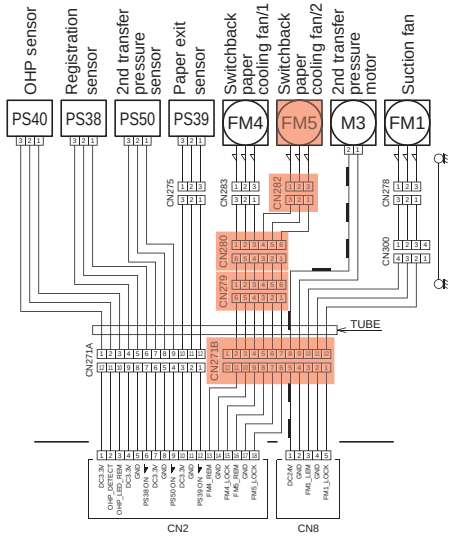
72. C3304



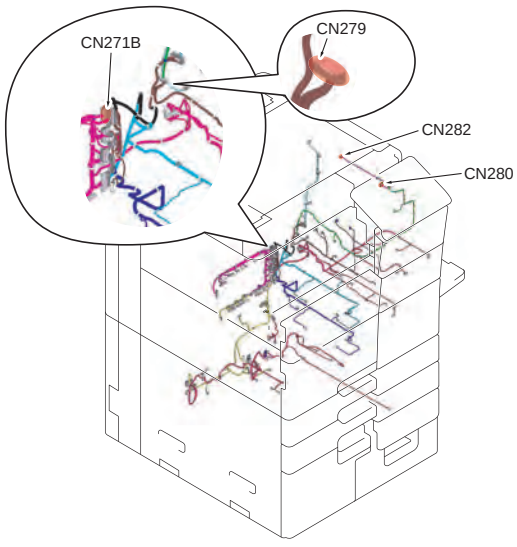


PFTDB

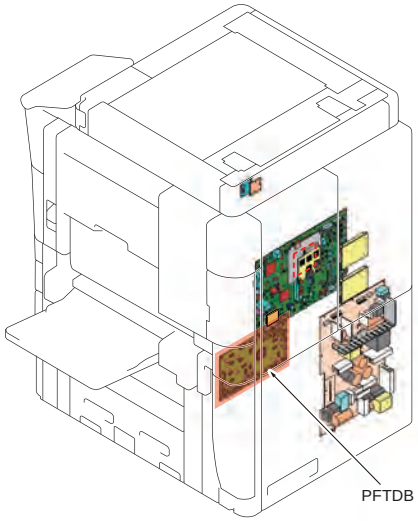


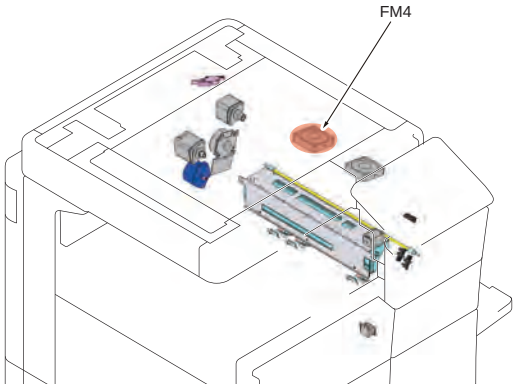


PFTDB
Paper feed/transport drive board



73. C3305





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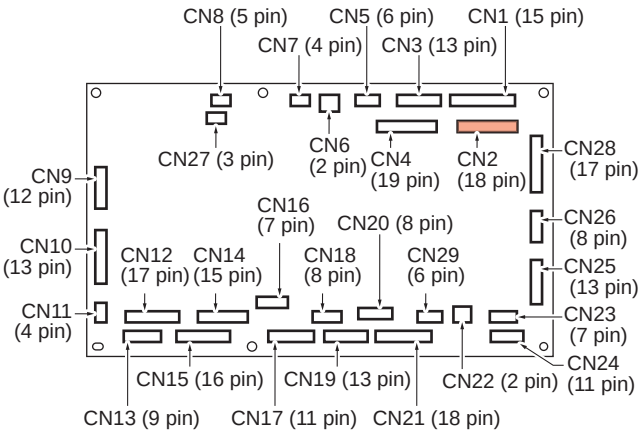
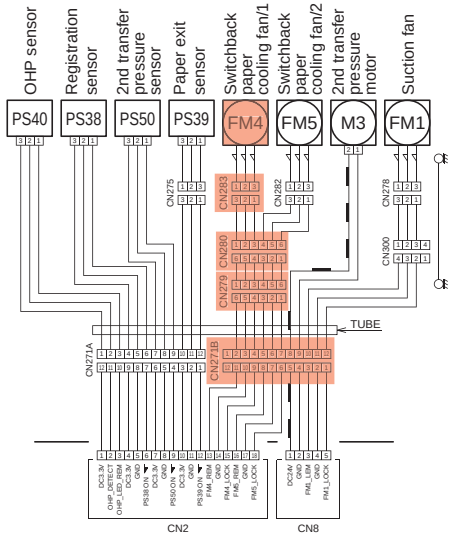
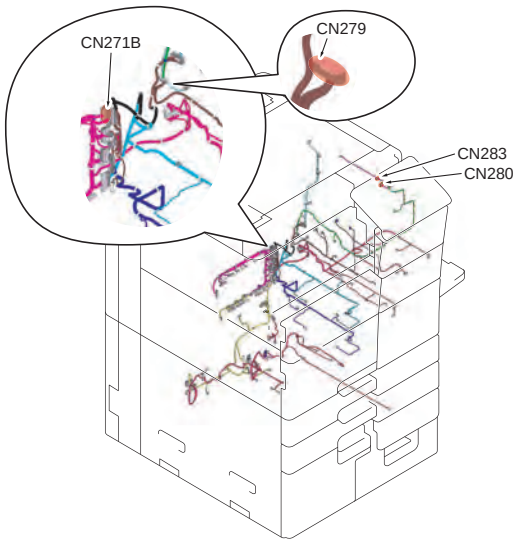
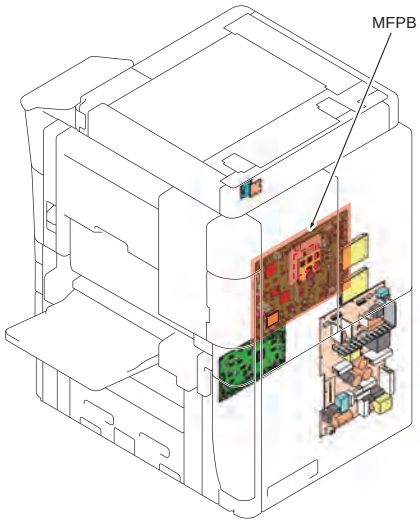


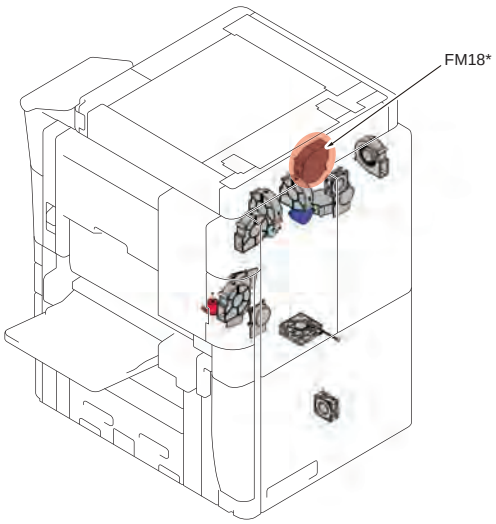


PFTDB
Paper feed/transport drive board

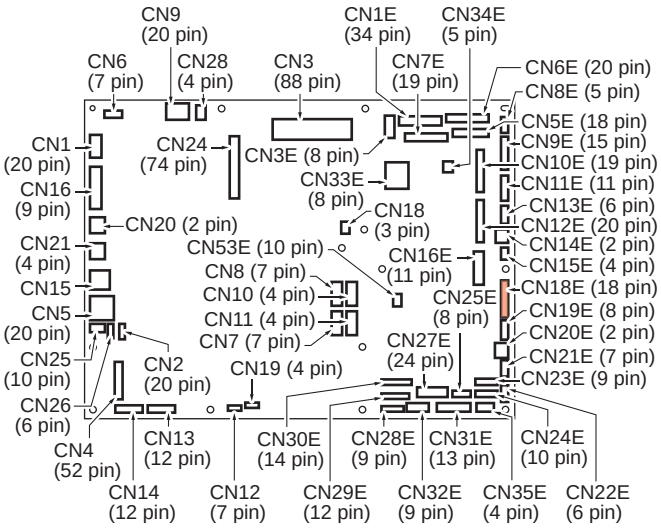


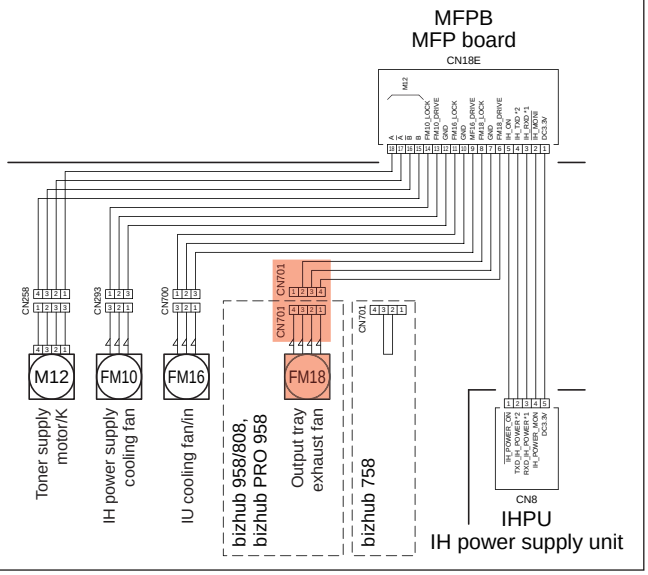
74. C3310

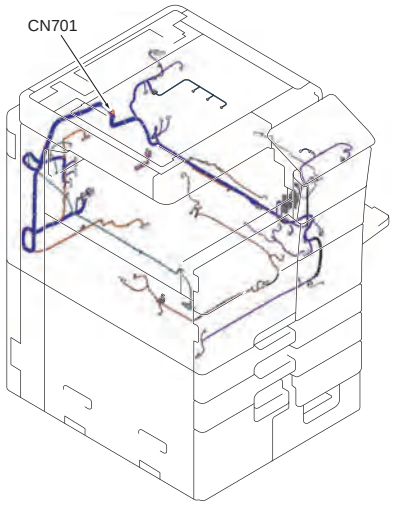




MFPB

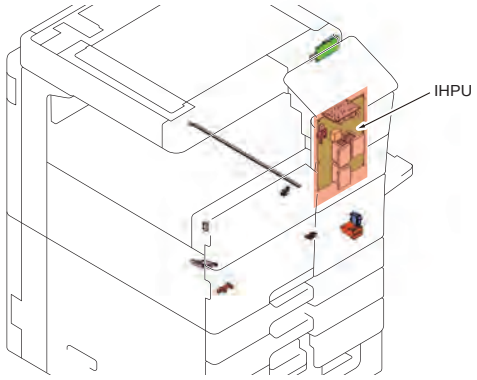


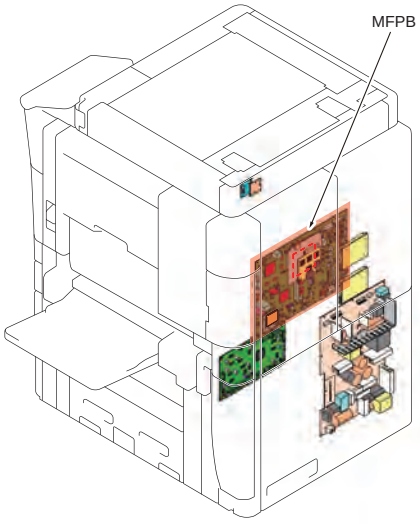


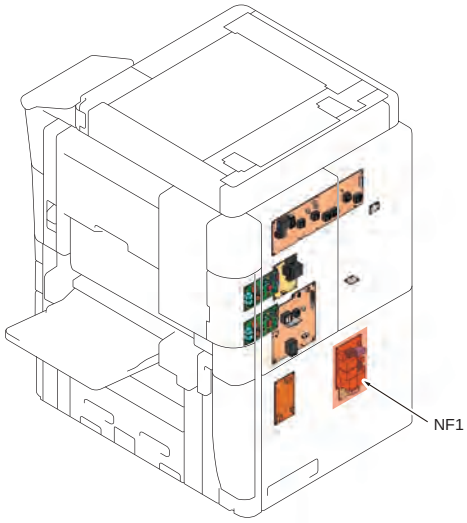


- *: bizhub 958/808, bizhub PRO 958 only

75. C3423







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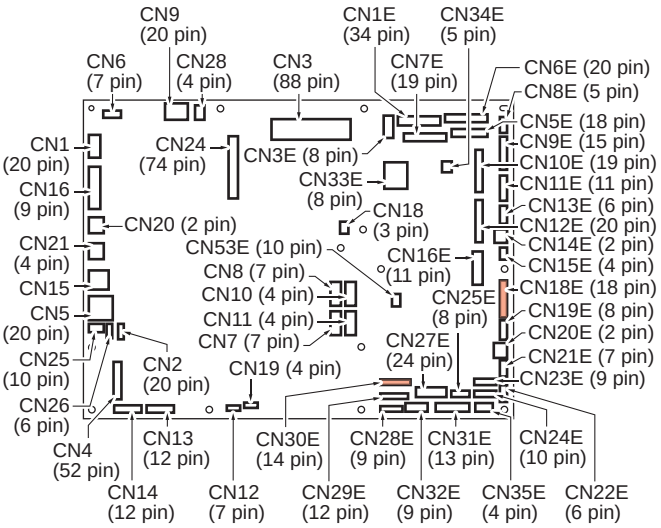
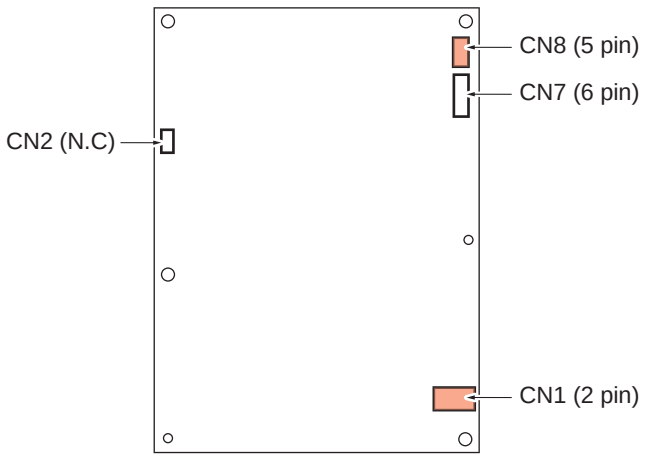
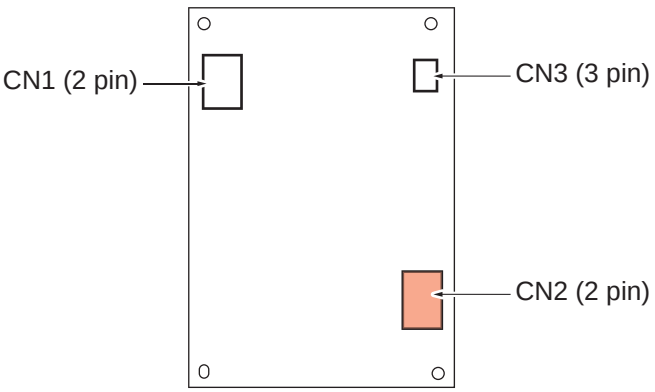
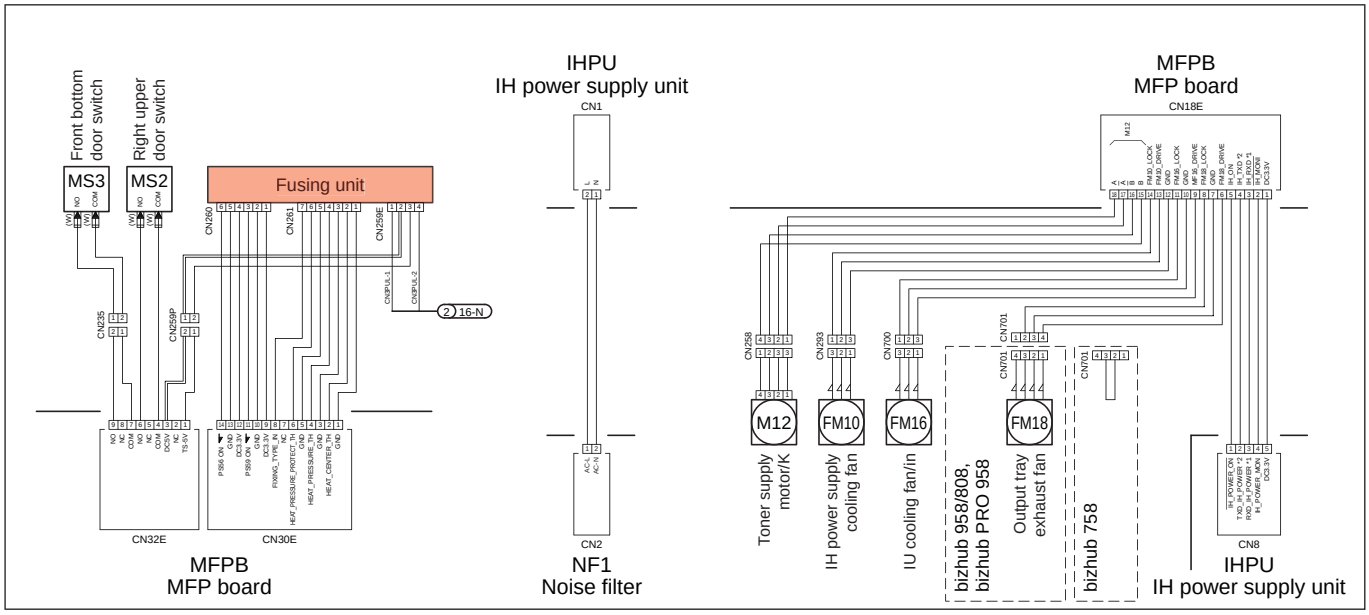


IHPU

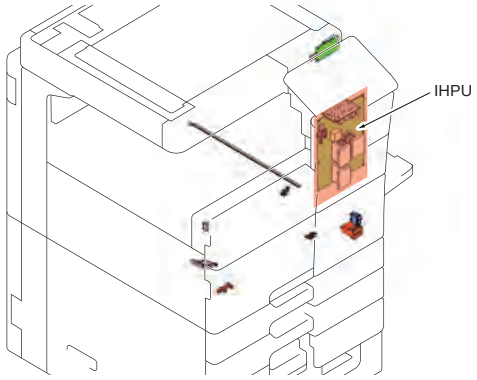


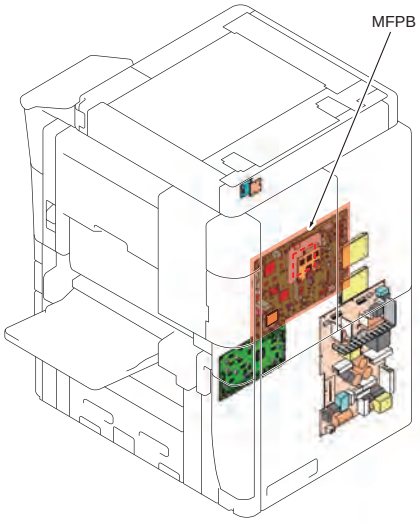
NF1

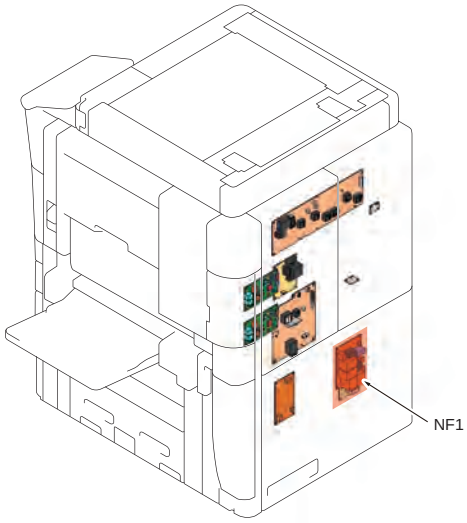


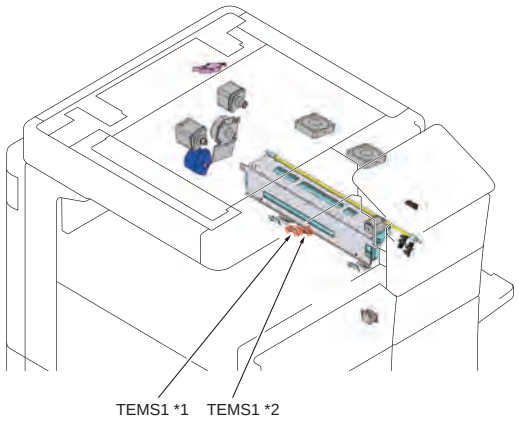

Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN250
CN261
CN259E
CN235
CN259P
2 16-N
CN32E
CN30E
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter
MFPB
MFP board
CN18E
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
bizhub 958/808, bizhub PRO 958
Output tray exhaust fan
bizhub 758
CN8
IHPU
IH power supply unit

76. C3425, C3725, C3825, C3925, C392B

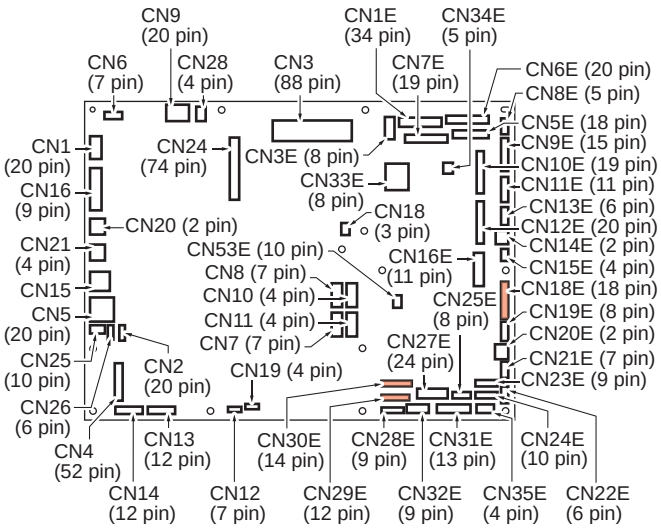




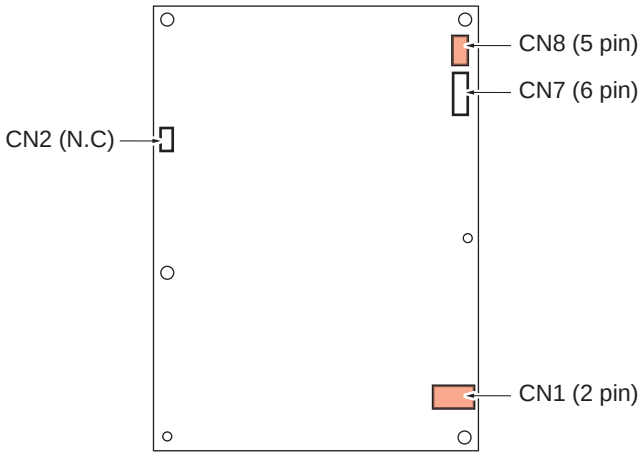




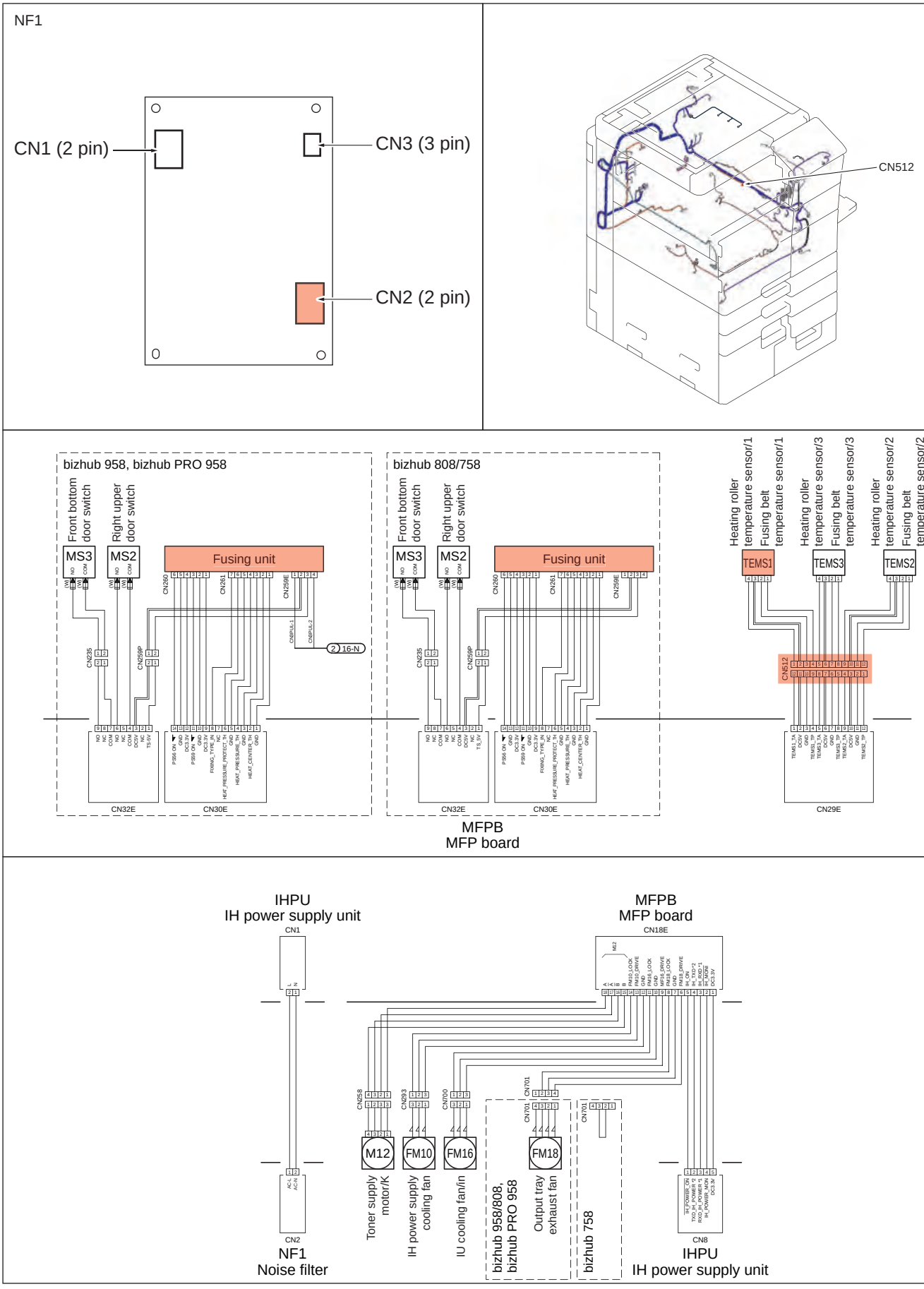
MFPB



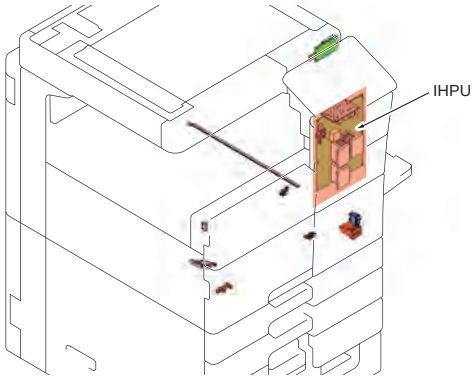
IHPU

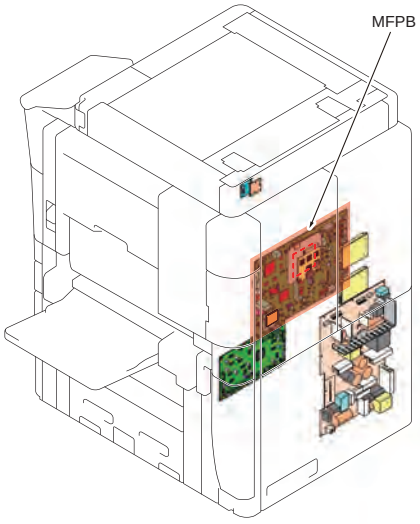


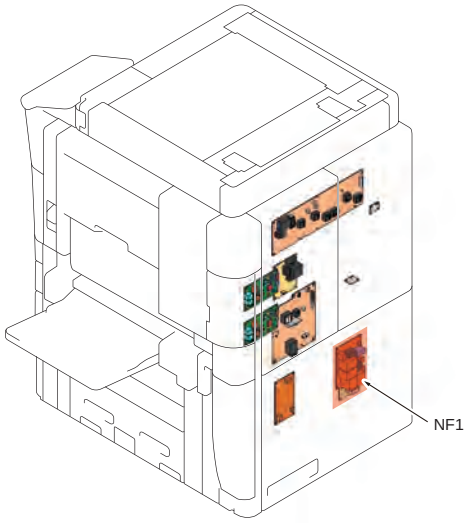
- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

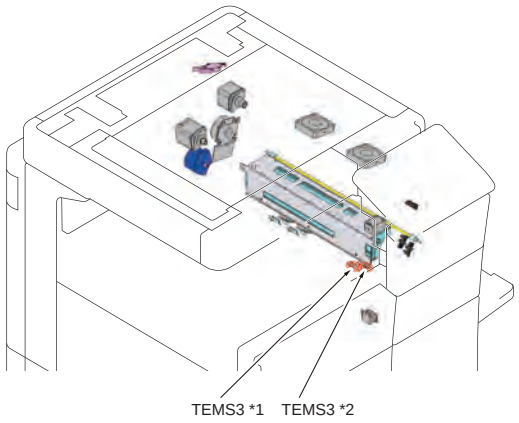

NF1
CN1 (2 pin)
CN3 (3 pin)
CN2 (2 pin)
CN512
bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN260
CN261
CN259E
CN235
CN259P
2 16-N
CN32E
CN30E
Heating roller temperature sensor/1
Fusing belt temperature sensor/1
Heating roller temperature sensor/3
Fusing belt temperature sensor/3
Heating roller temperature sensor/2
Fusing belt temperature sensor/2
TEMS1
TEMS3
TEMS2
CN512
CN29E
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter
MFPB
MFP board
CN18E
CN8
IHPU
IH power supply unit
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
Output tray exhaust fan
bizhub 958/808, bizhub PRO 958
bizhub 758

77. C3722, C3822, C3922

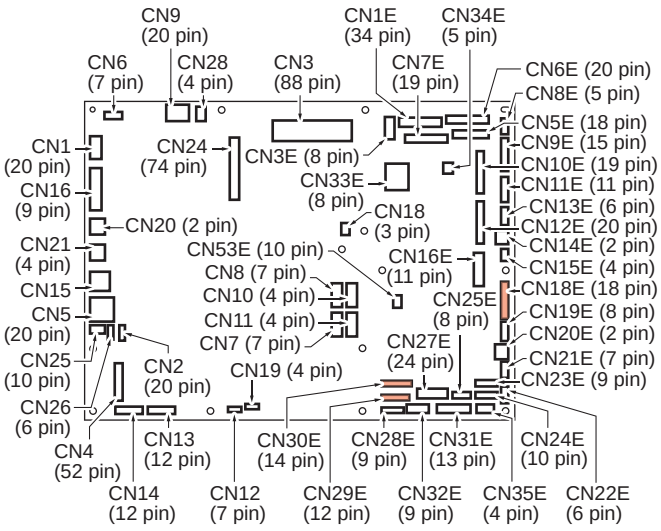




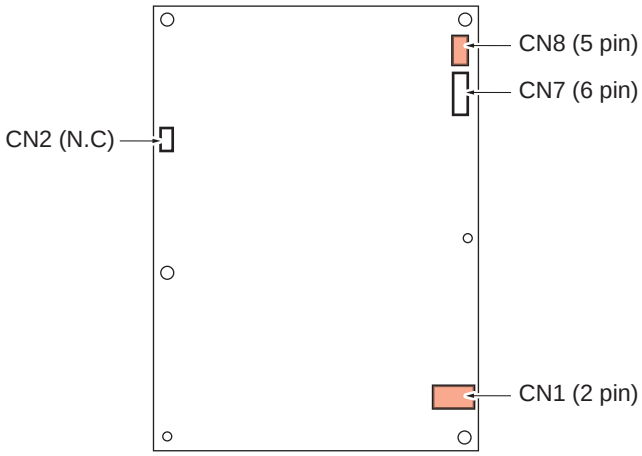




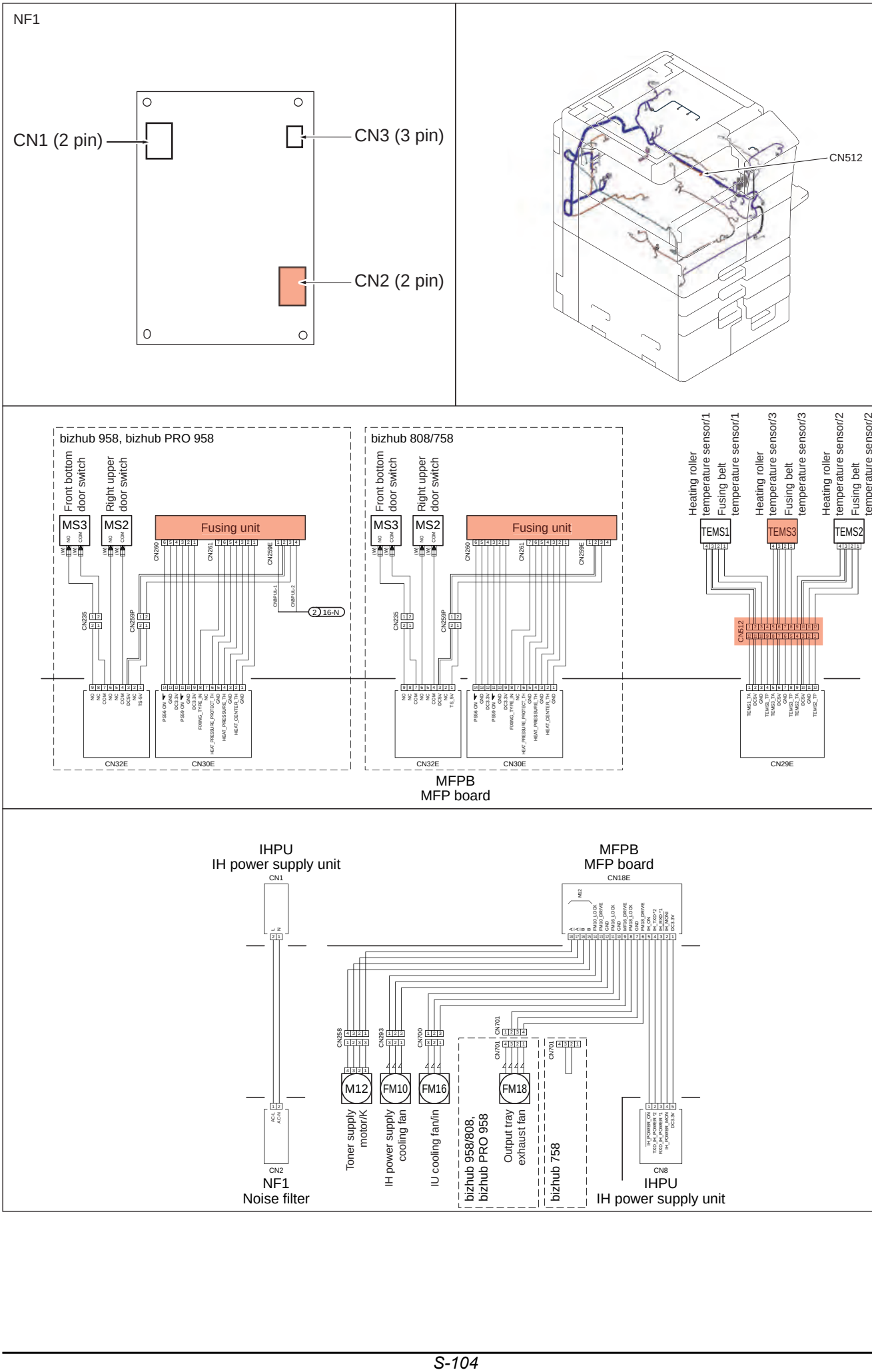
MFPB



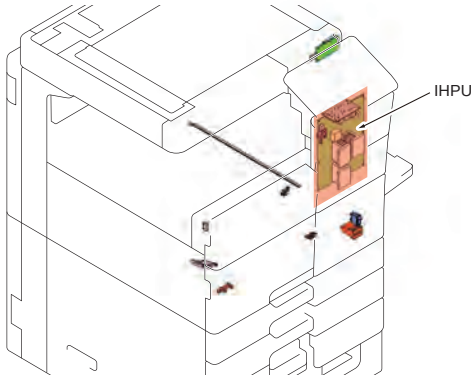
IHPU

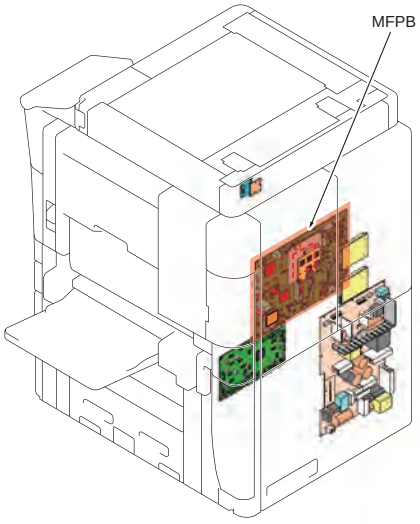


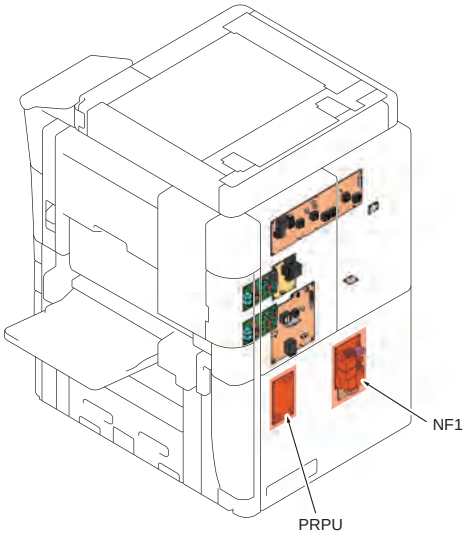
- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only


NF1
CN1 (2 pin)
CN3 (3 pin)
CN2 (2 pin)
CN512
bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN260
CN261
CN259E
CN235
CN259P
2 16-N
CN32E
CN30E
Heating roller temperature sensor/1
Fusing belt temperature sensor/1
Heating roller temperature sensor/3
Fusing belt temperature sensor/3
Heating roller temperature sensor/2
Fusing belt temperature sensor/2
TEMS1
TEMS3
TEMS2
CN512
CN29E
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter
MFPB
MFP board
CN18E
CN8
IHPU
IH power supply unit
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
Output tray exhaust fan
bizhub 958/808, bizhub PRO 958
bizhub 758

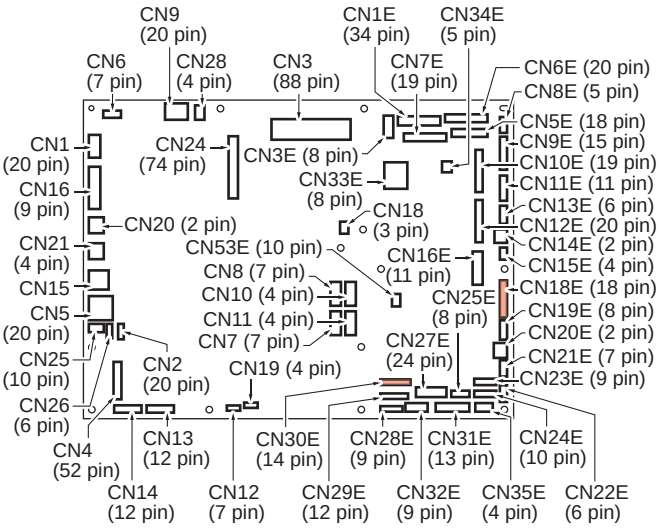
78. C3723



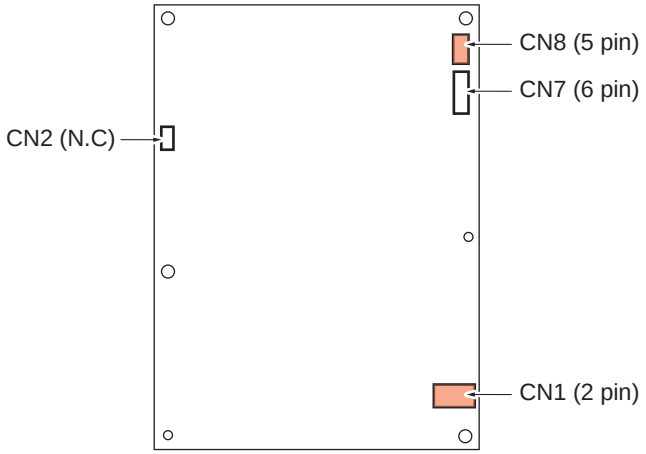




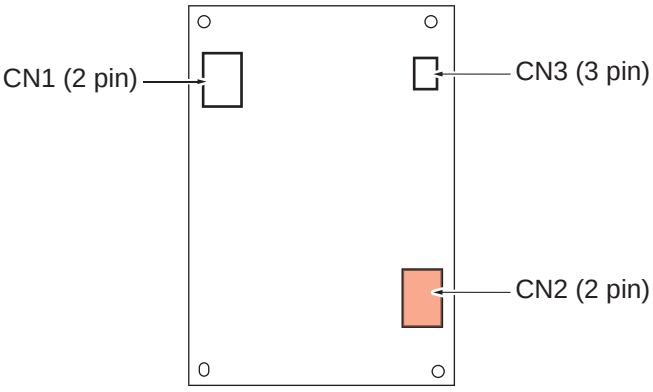
MFPB

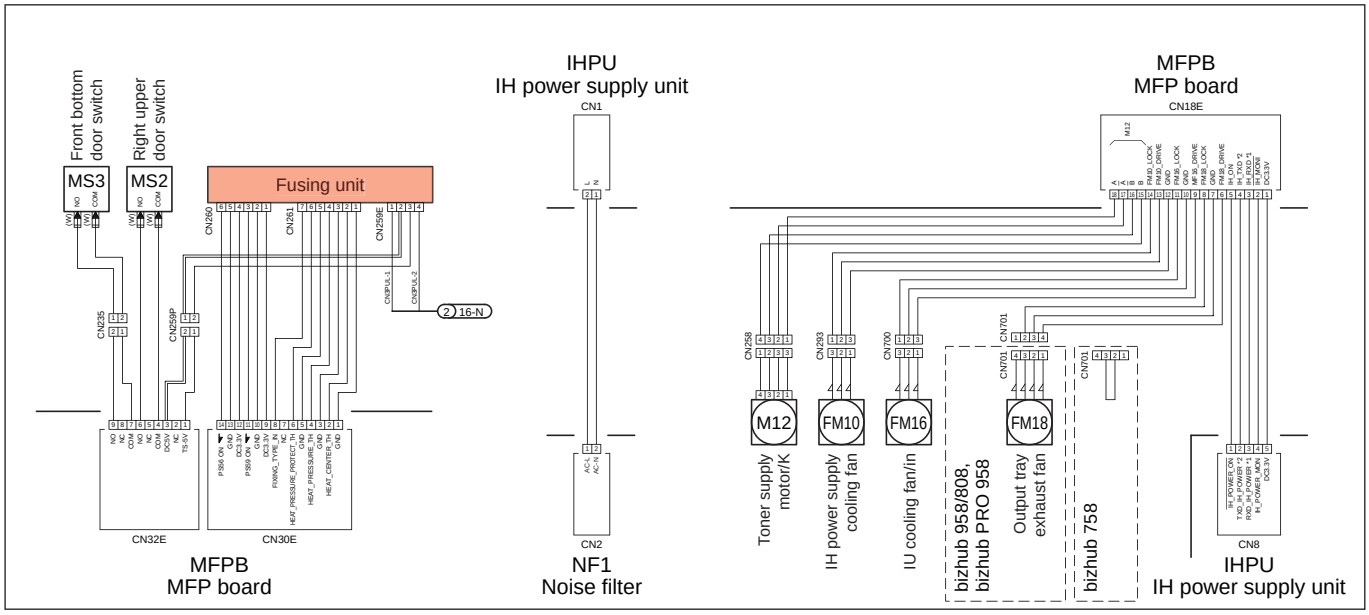


IHPU

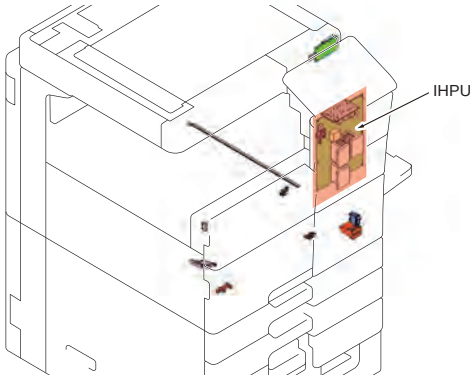


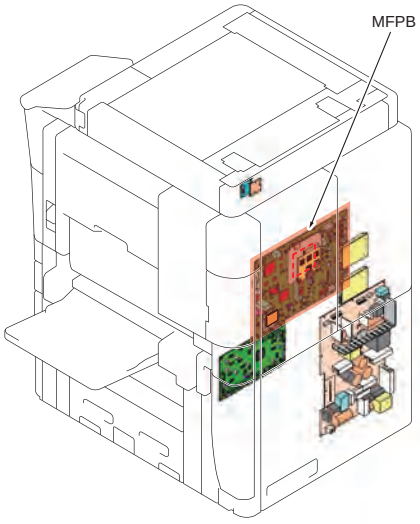
NF1

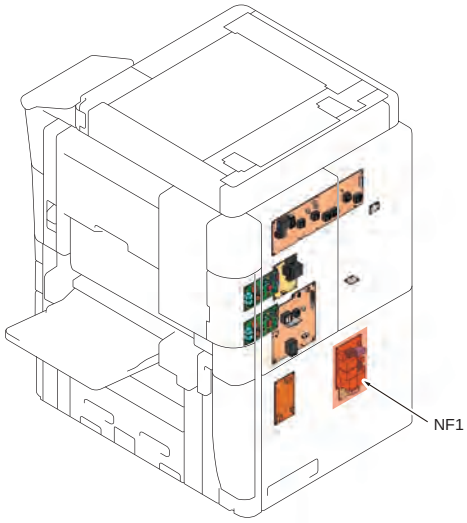


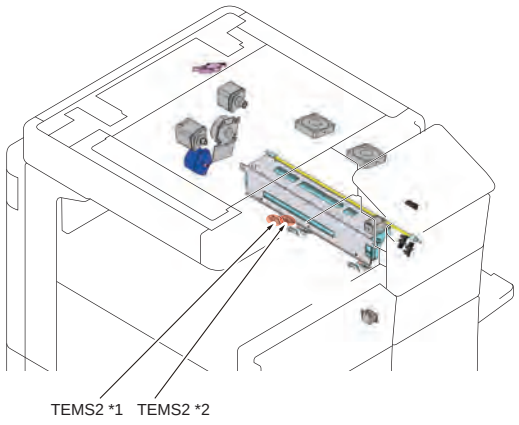

Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN250
CN261
CN259E
CN235
CN259P
2 16-N
CN32E
CN30E
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter
MFPB
MFP board
CN18E
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
bizhub 958/808, bizhub PRO 958
Output tray exhaust fan
bizhub 758
CN8
IHPU
IH power supply unit

79. C3726, C3826, C3926

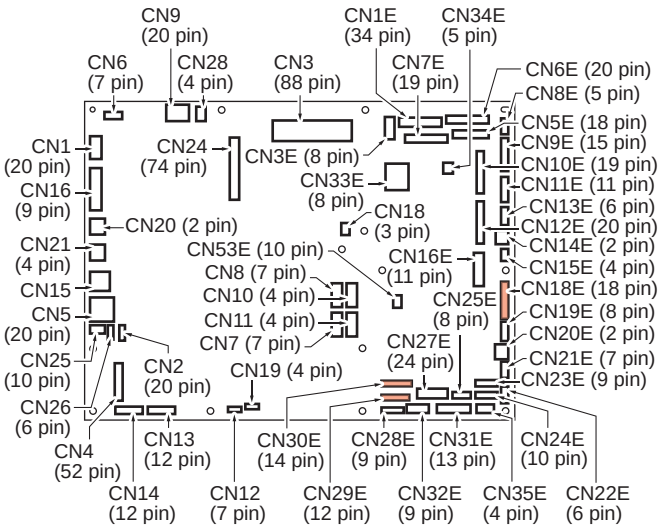




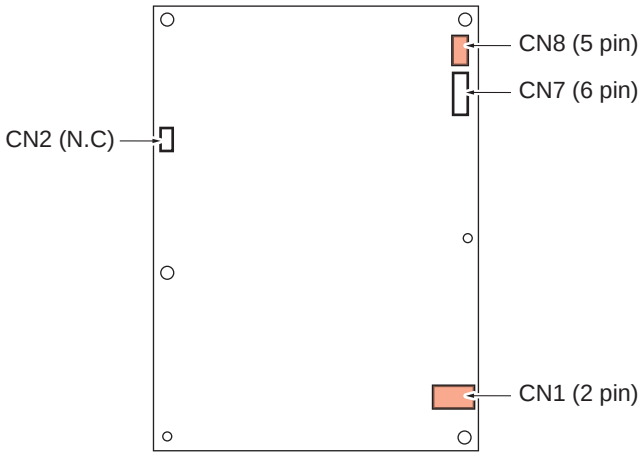




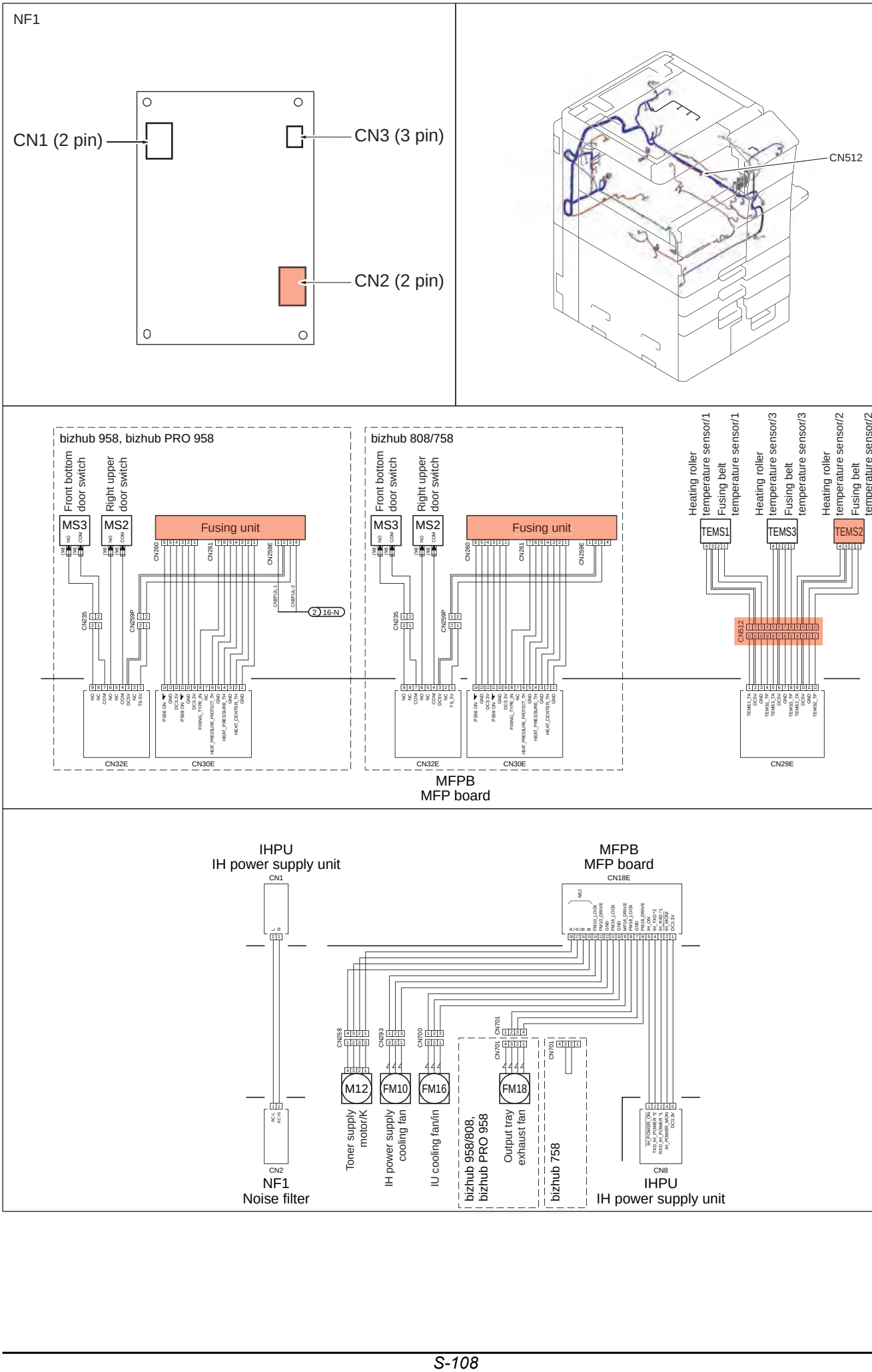
MFPB



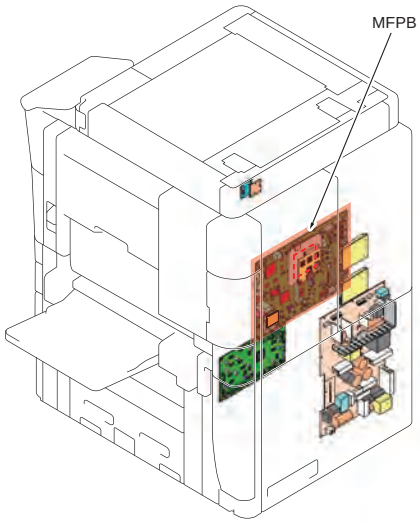
IHPU

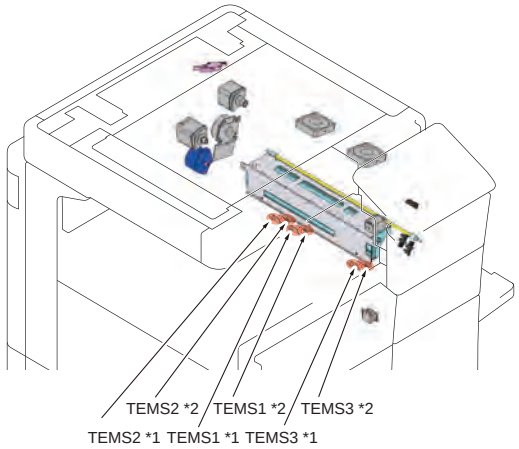


- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

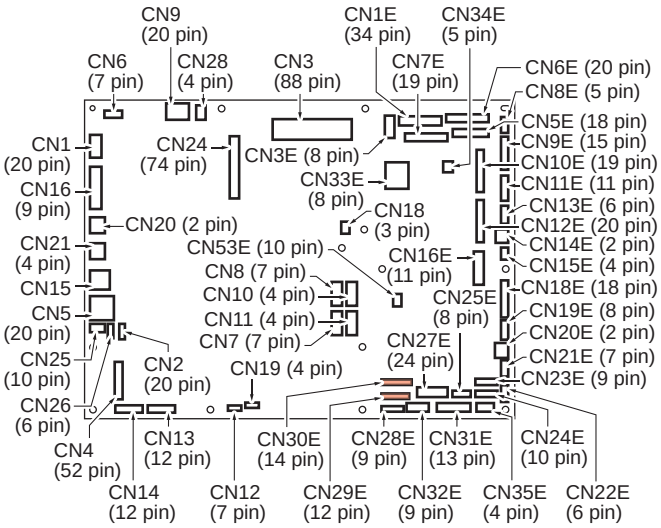

NF1
CN1 (2 pin)
CN3 (3 pin)
CN2 (2 pin)
CN512
bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN260
CN261
CN259E
CN235
CN259P
2 16-N
CN32E
CN30E
MFPB
MFP board
Heating roller temperature sensor/1
Fusing belt temperature sensor/1
Heating roller temperature sensor/3
Fusing belt temperature sensor/3
Heating roller temperature sensor/2
Fusing belt temperature sensor/2
TEMS1
TEMS3
TEMS2
CN512
CN29E
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter
MFPB
MFP board
CN18E
CN8
IHPU
IH power supply unit
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
Output tray exhaust fan
bizhub 958/808, bizhub PRO 958
bizhub 758

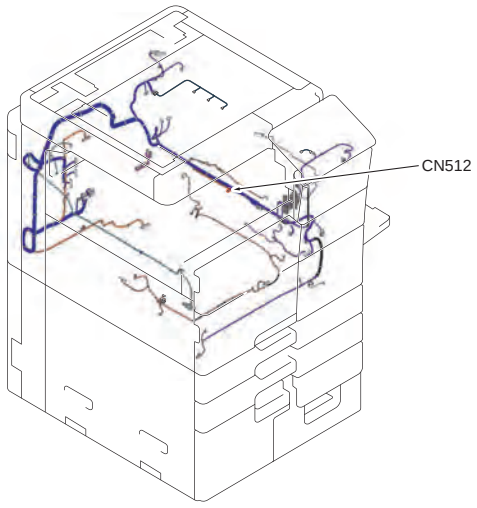
80. C3731

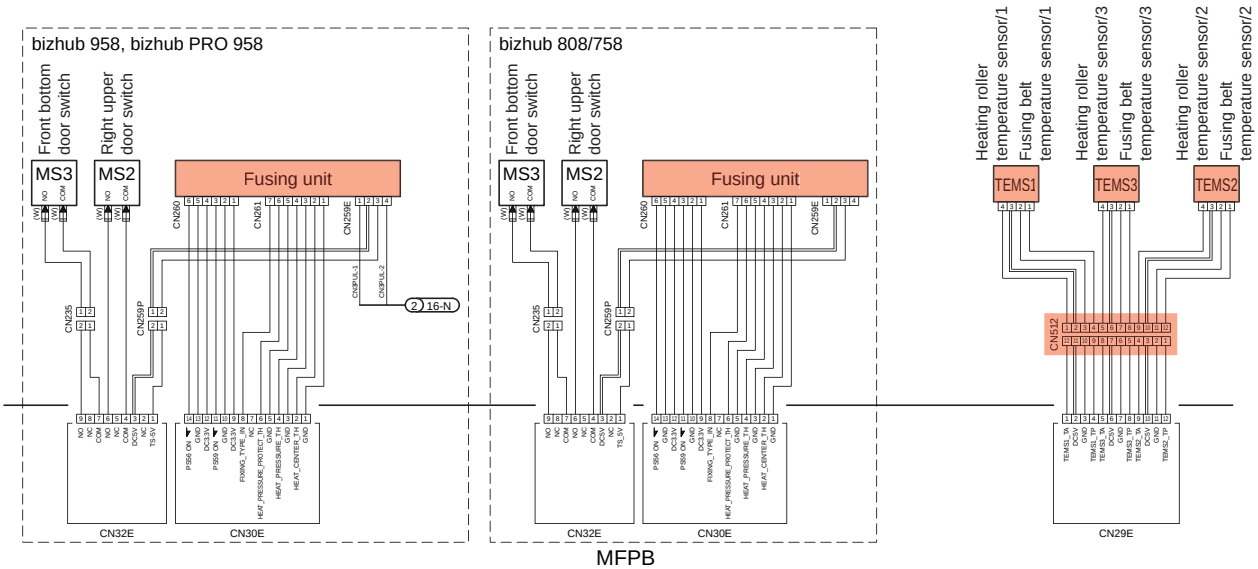




MFPB



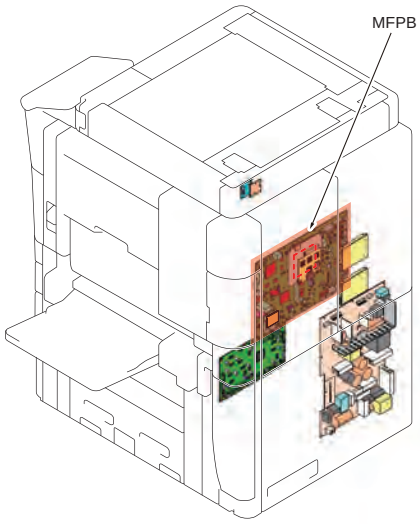


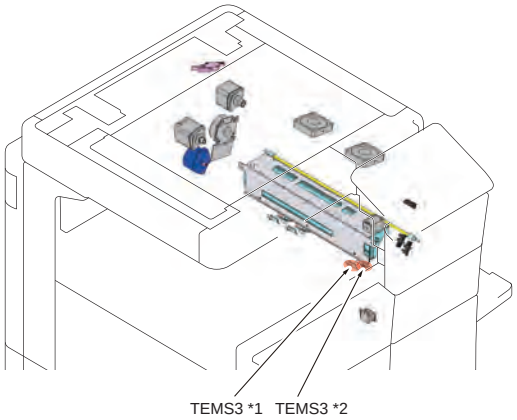


MFPB
MFP board

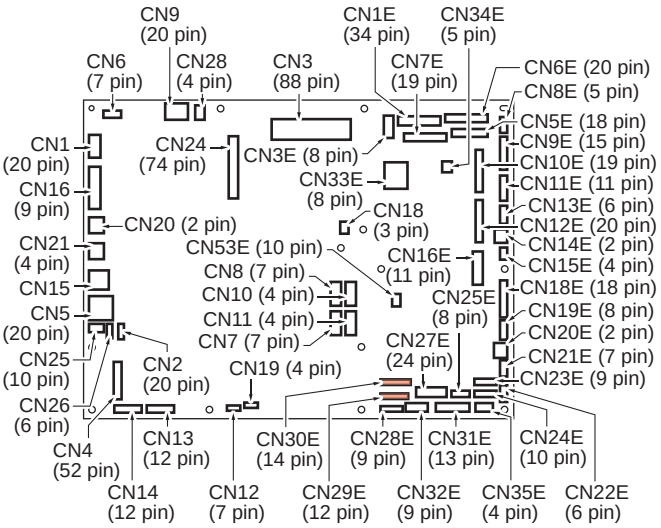
- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

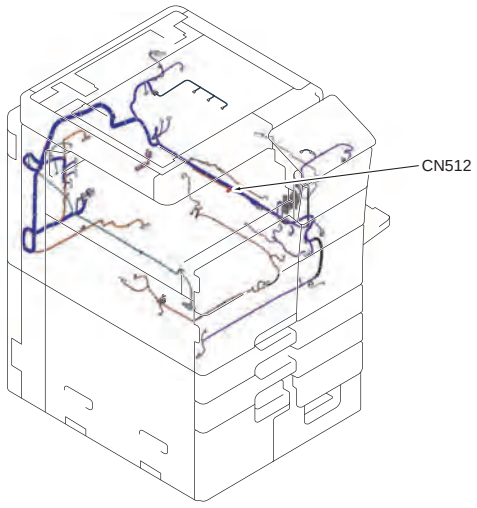
81. C3732

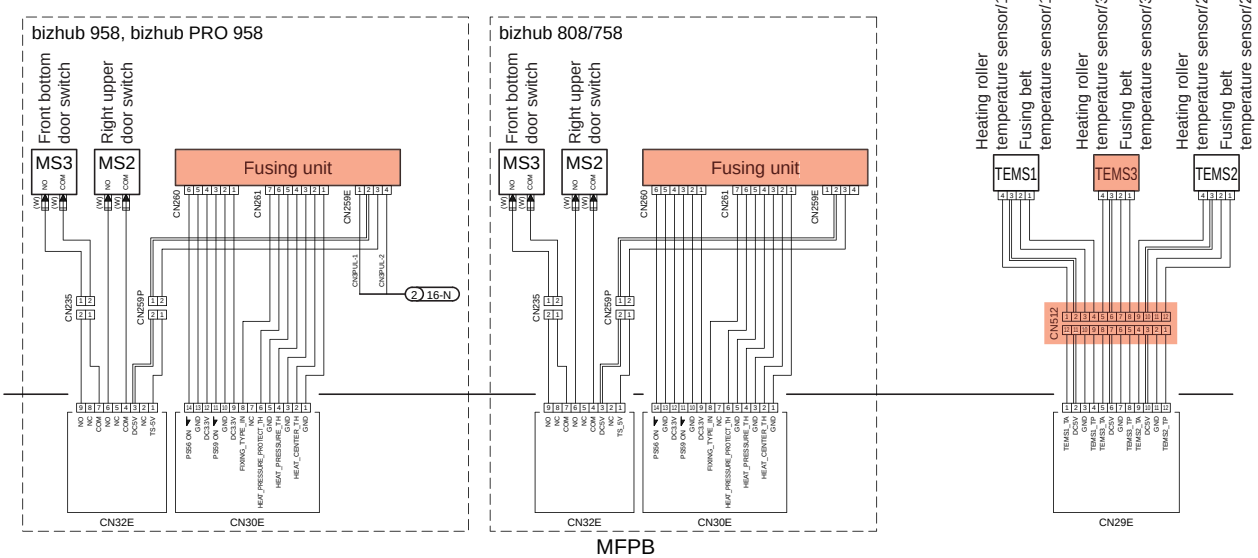




MFPB



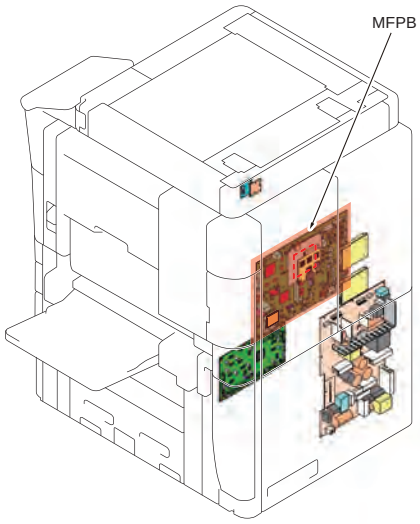




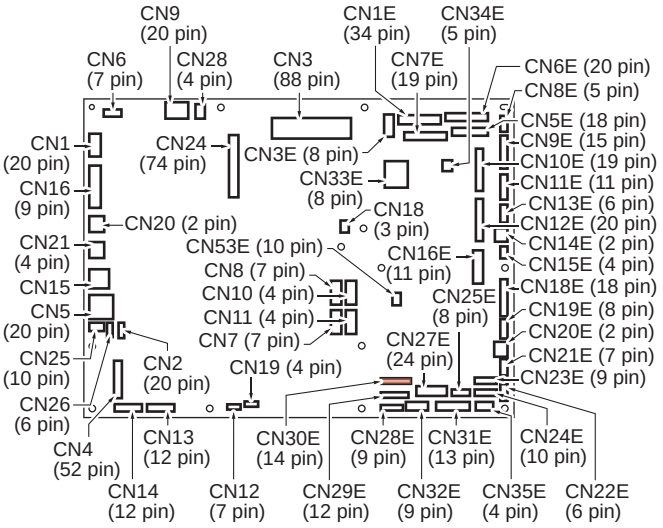
MFPB
MFP board

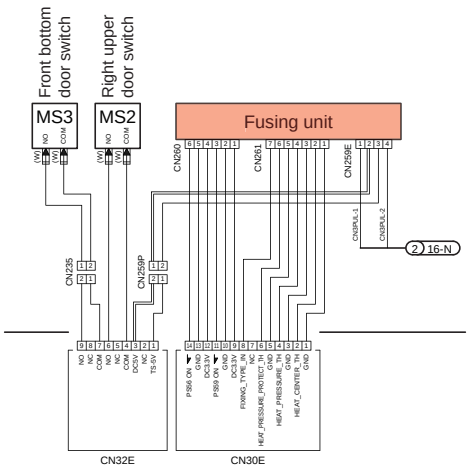
- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

82. C3733



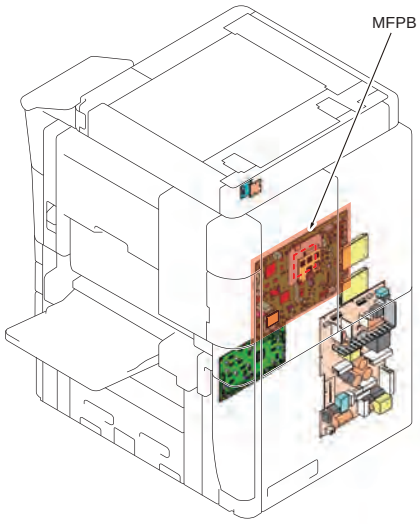
MFPB

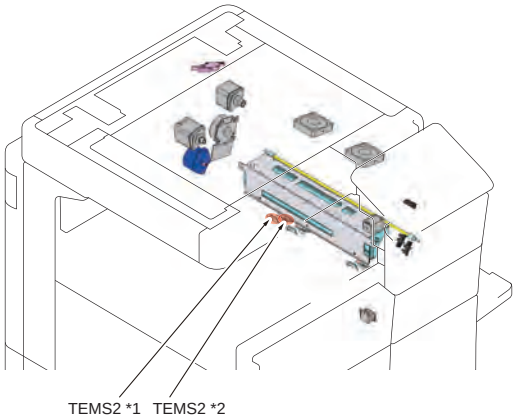




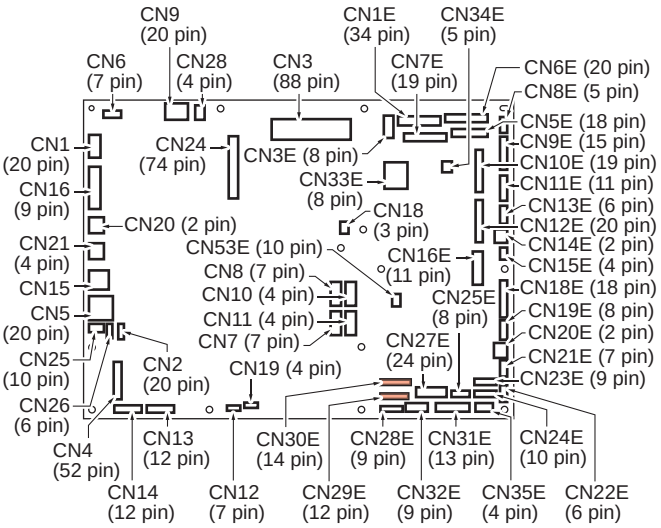
MFPB
MFP board

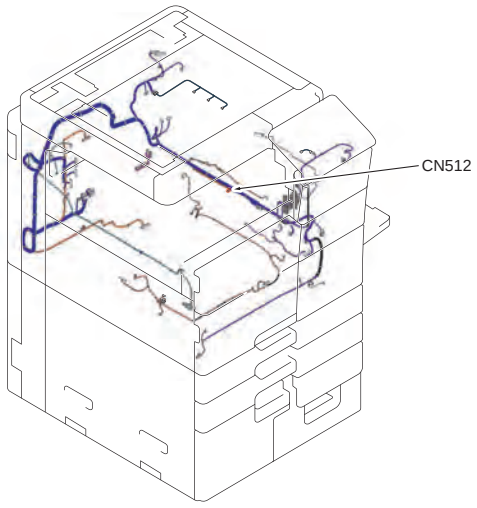
83. C3736

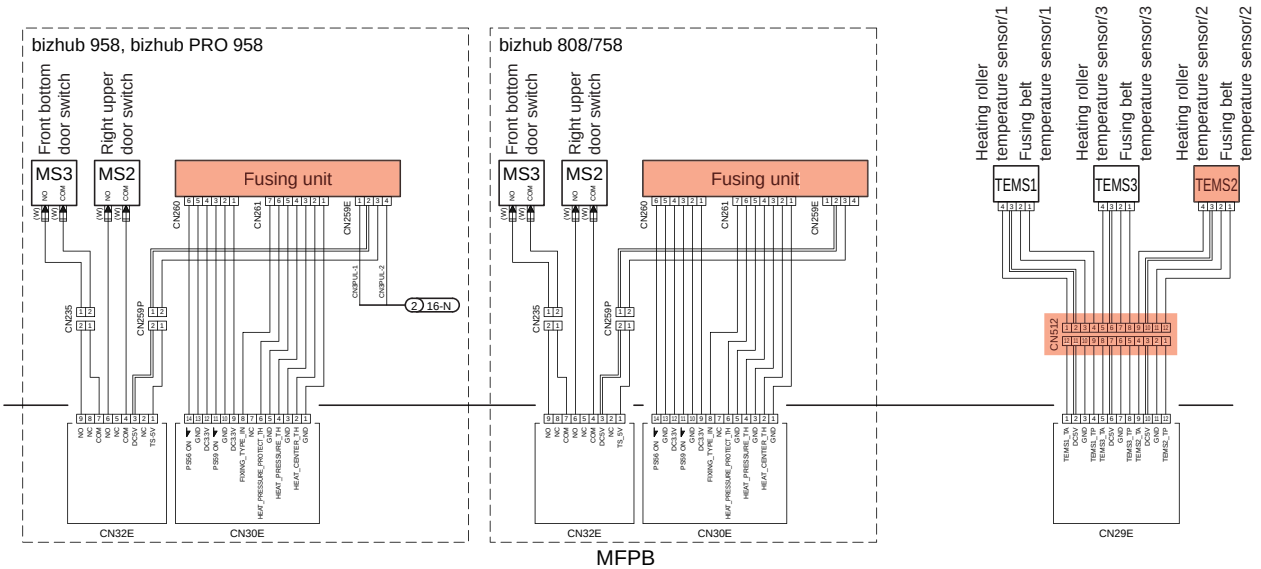




MFPB



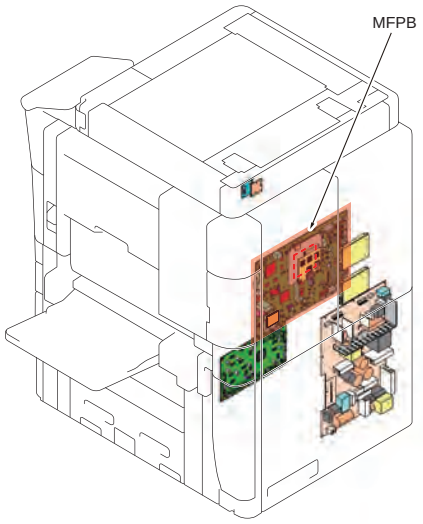


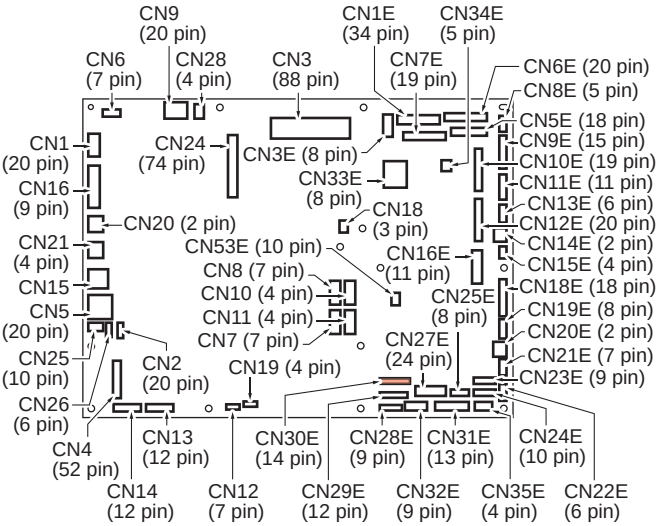


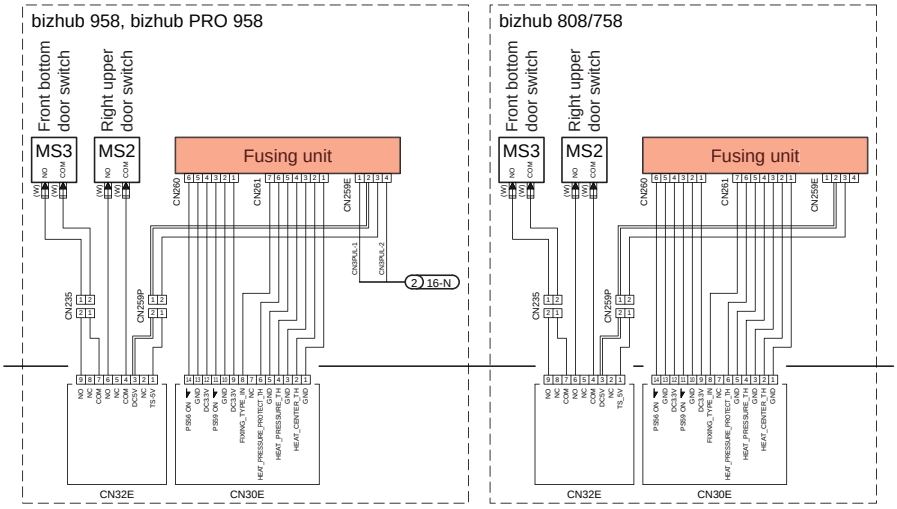
MFPB
MFP board

- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

84. C3737

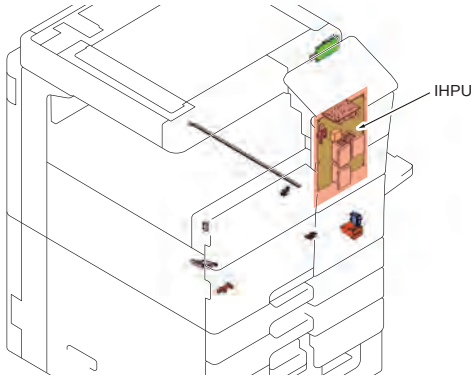


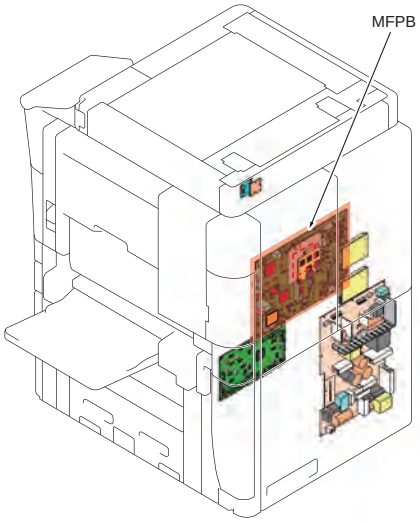


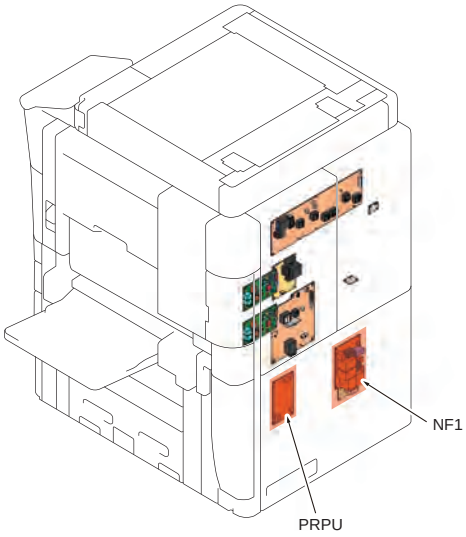


MFPB
MFP board

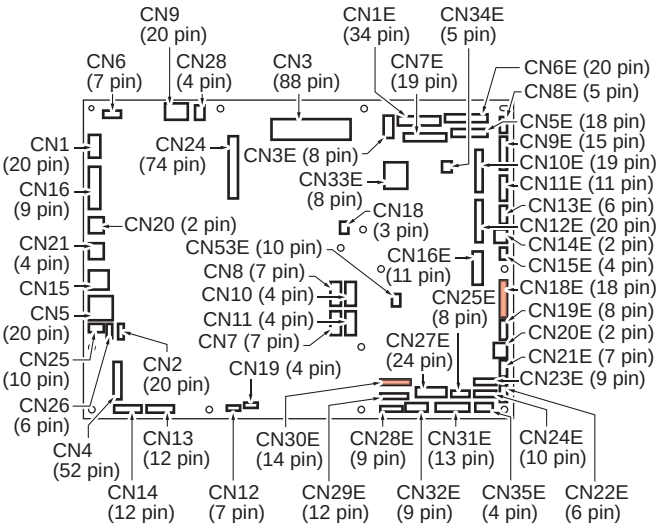
85. C3823



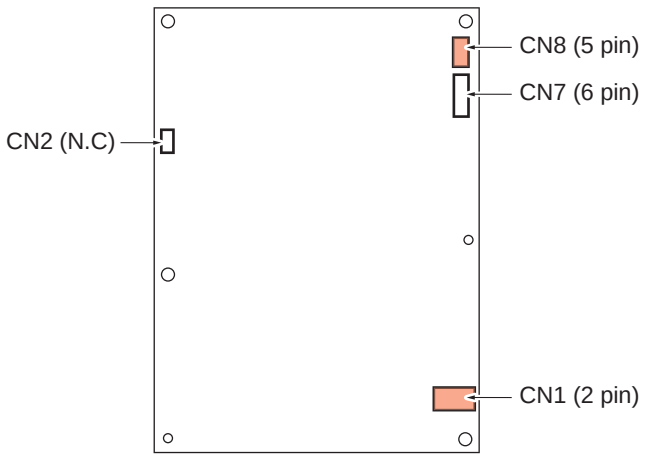




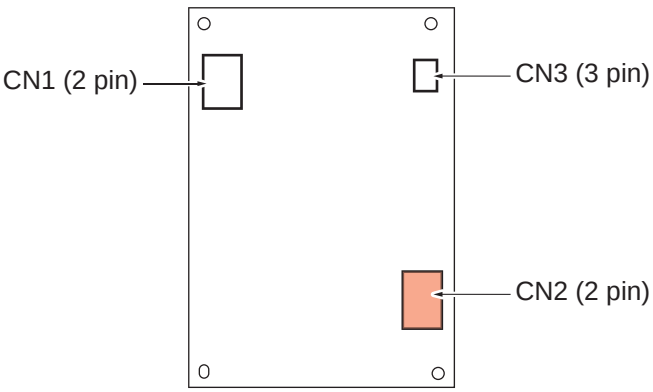
MFPB

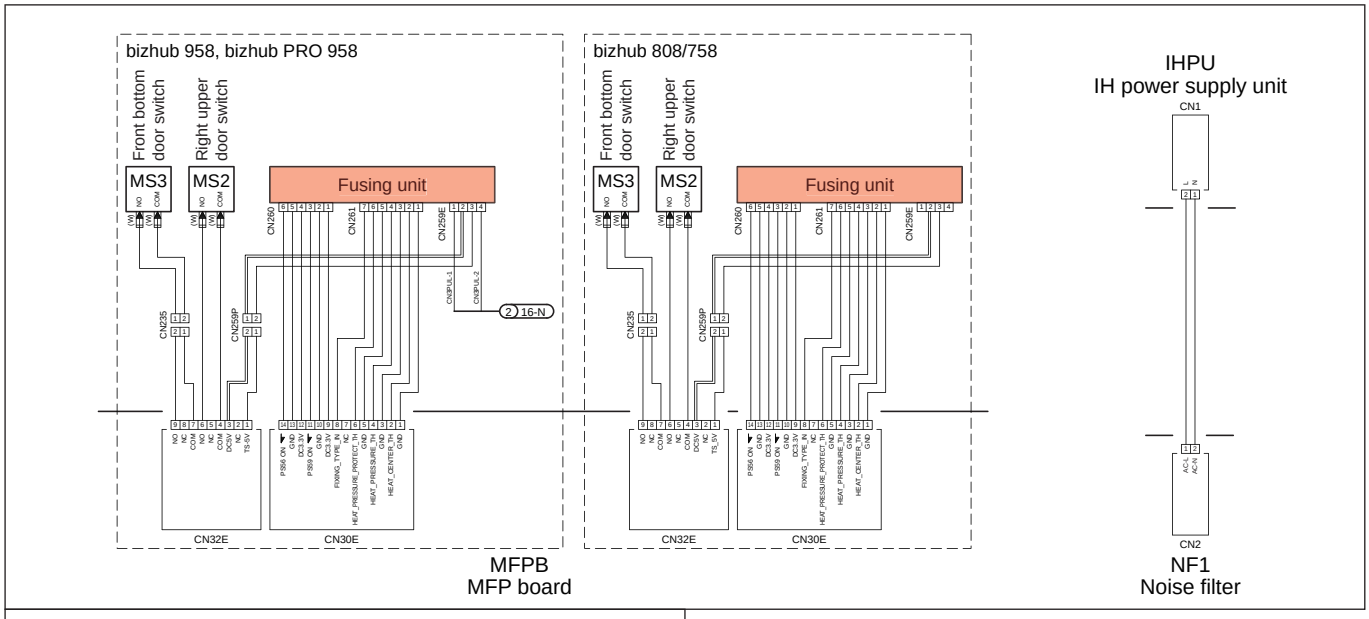


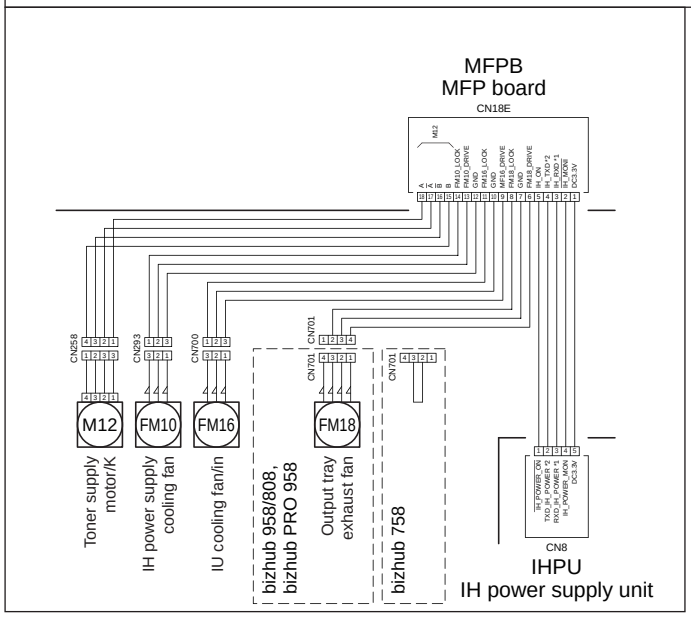
IHPU



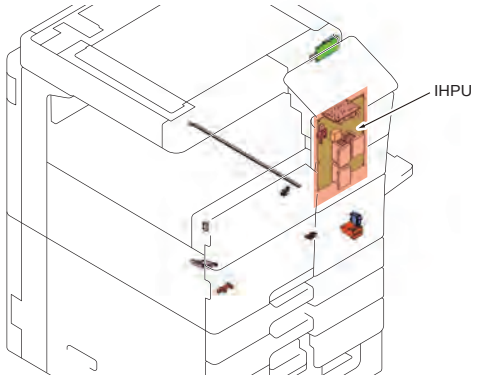
NF1

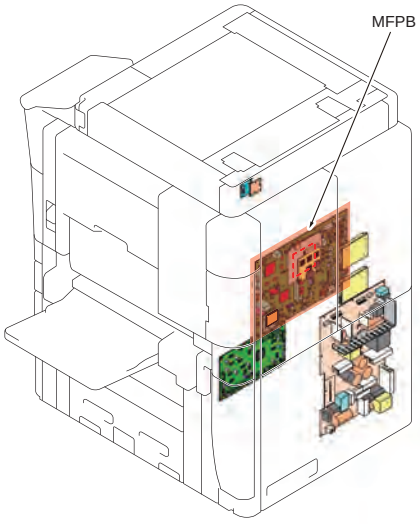


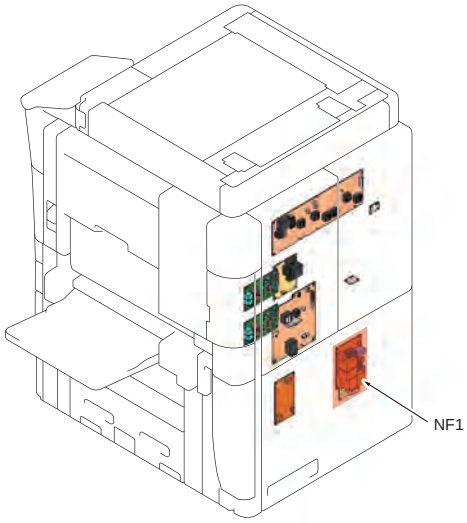

bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN260
CN261
CN259E
CN235
CN259P
CN32E
CN30E
2) 16-N
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter


MFPB
MFP board
CN18E
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
Output tray exhaust fan
bizhub 958/808, bizhub PRO 958
bizhub 758
CN8
IHPU
IH power supply unit

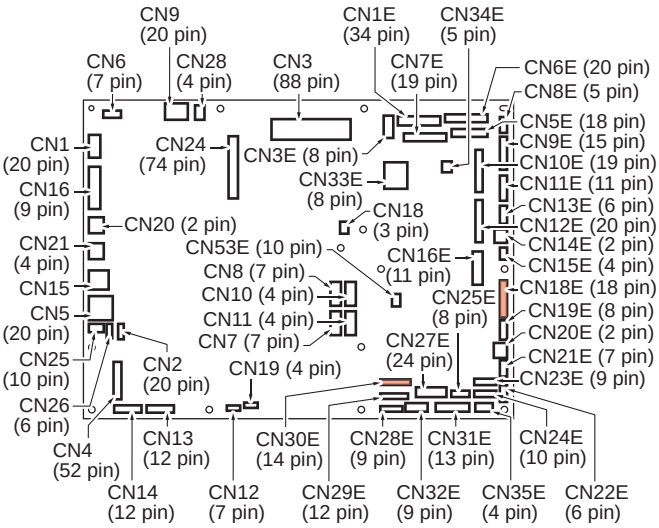
86. C3903, C3923



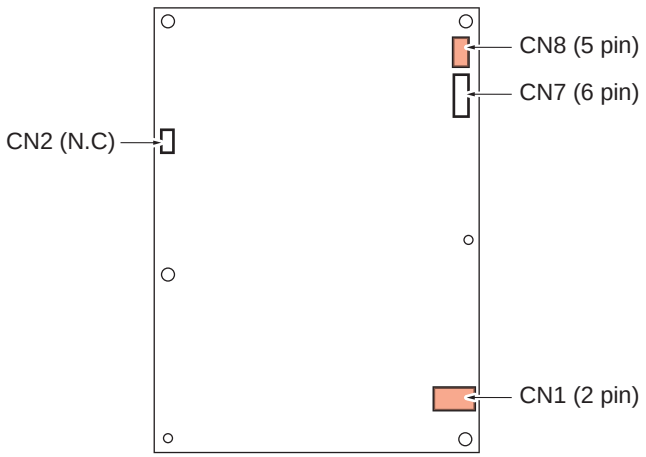




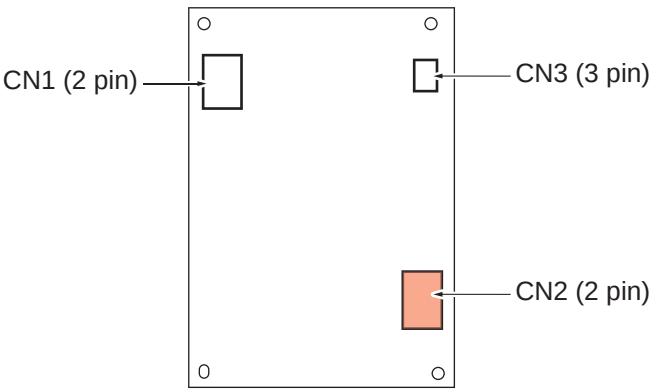
MFPB

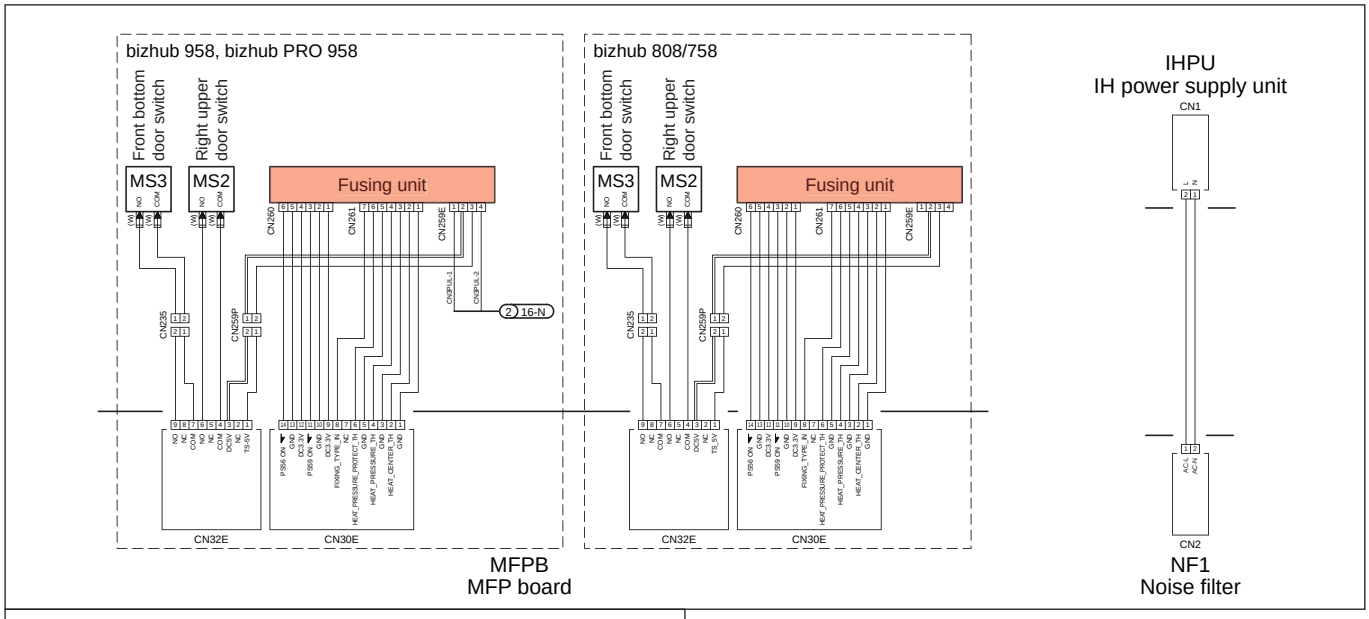


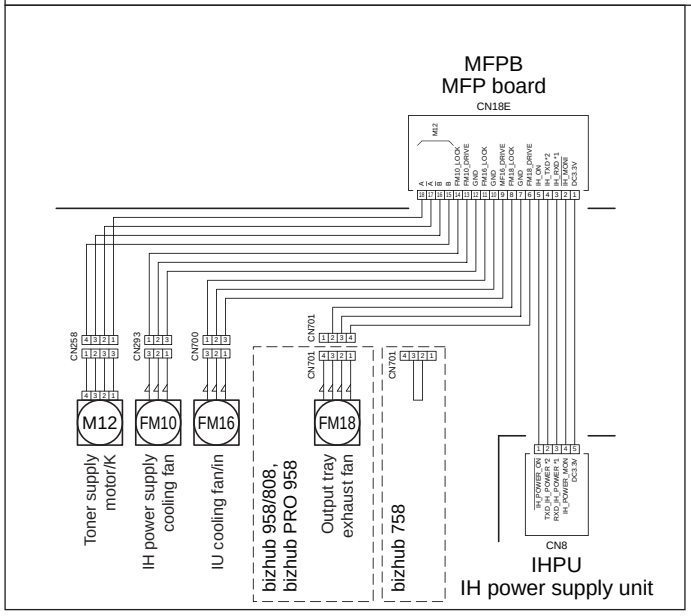
IHPU



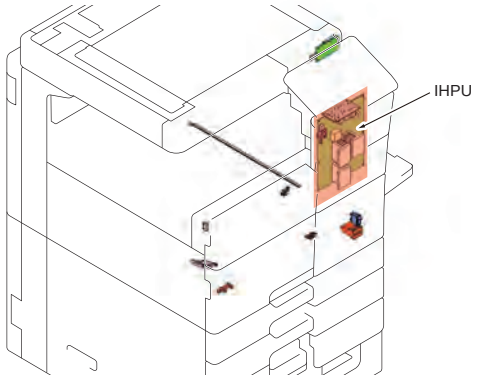
NF1

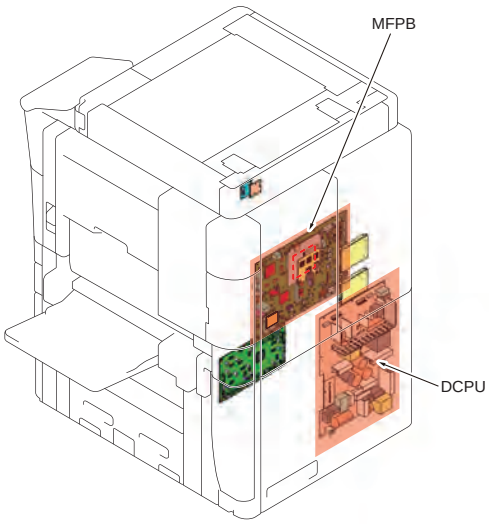


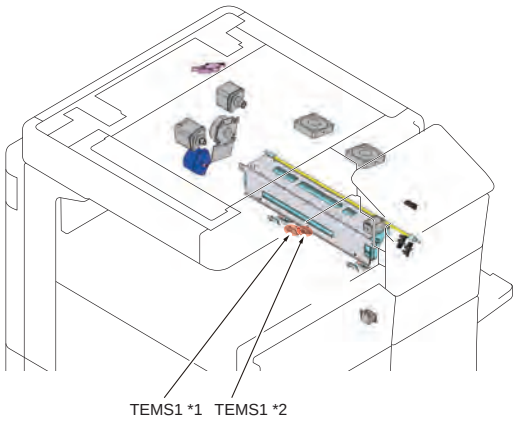

bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN260
CN261
CN259E
CN235
CN259P
CN2PUL-1
CN2PUL-2
2) 16-N
CN32E
CN30E
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter


MFPB
MFP board
CN18E
CN258
CN293
CN700
CN701
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
Output tray exhaust fan
bizhub 958/808, bizhub PRO 958
bizhub 758
CN8
IHPU
IH power supply unit

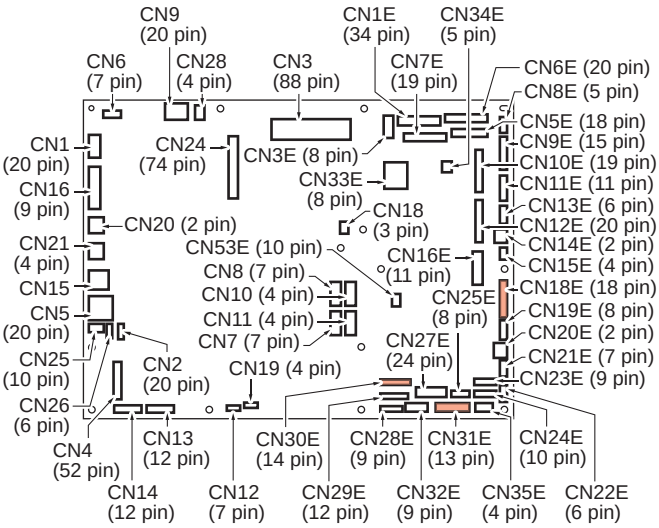
87. C392A



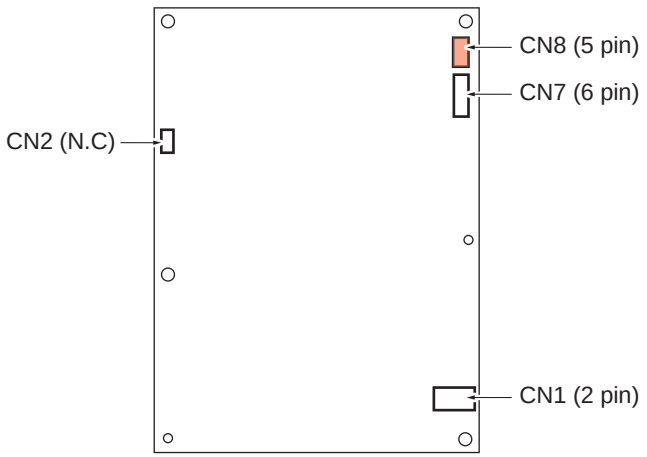




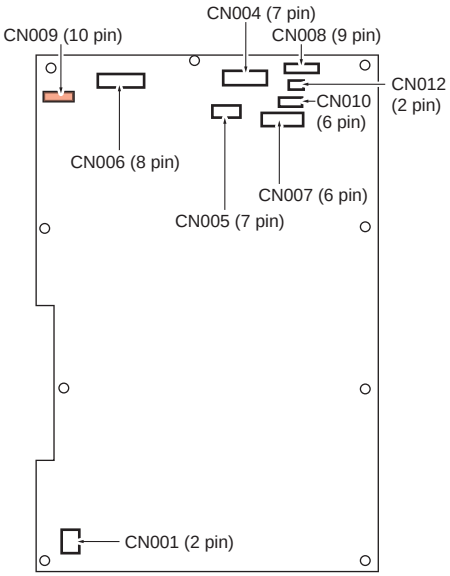
MFPB



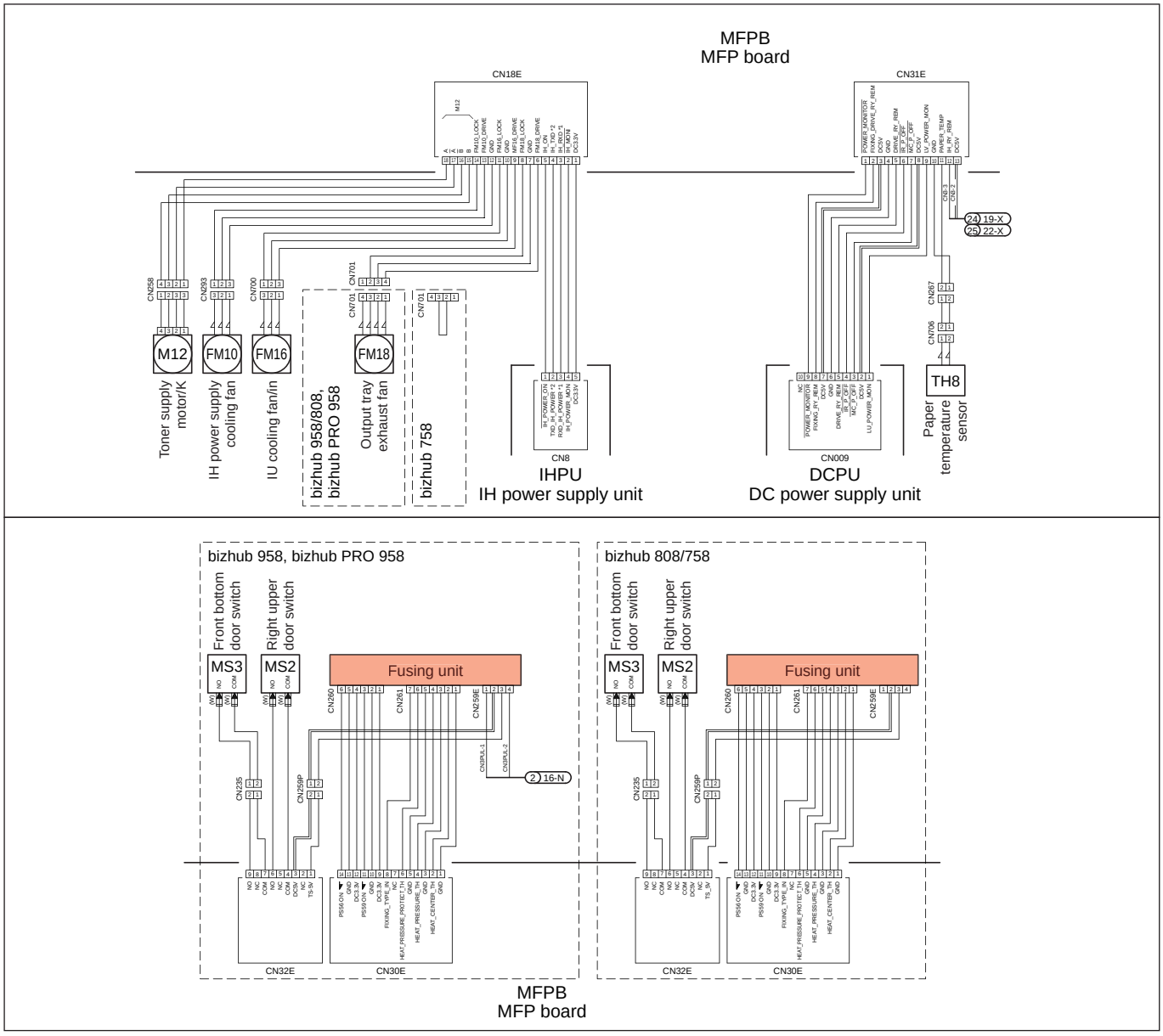
IHPU



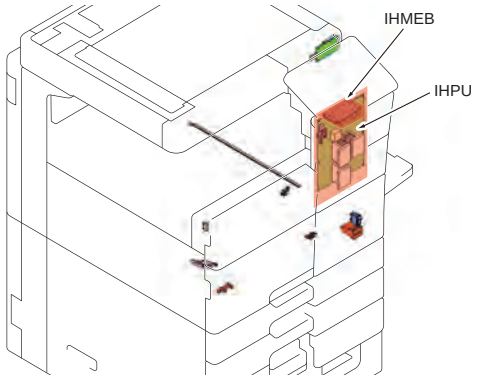
DCPU

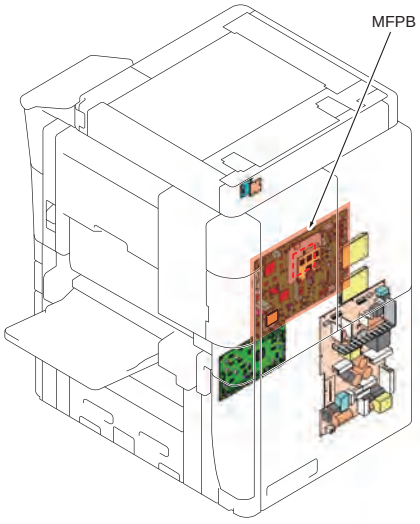


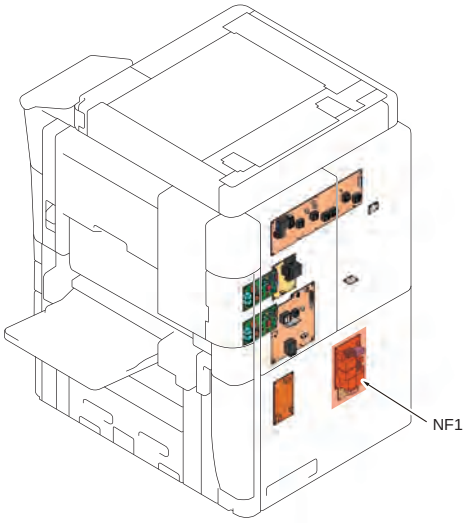
- *1: bizhub 958, bizhub PRO 958 only
- *2: bizhub 808, bizhub 758 only

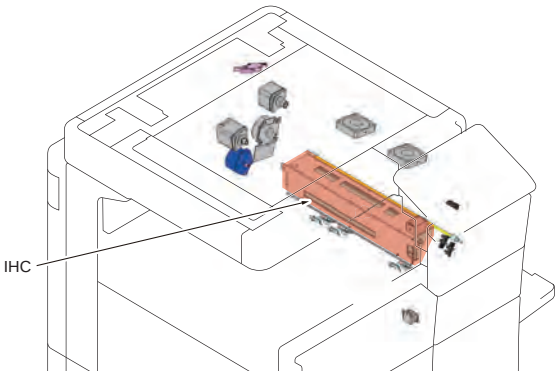

MFPB
MFP board
CN18E
CN31E
CN258
CN293
CN700
CN701
CN267
CN706
M12
FM10
FM16
FM18
TH8
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
bizhub 958/808, bizhub PRO 958
Output tray exhaust fan
bizhub 758
Paper temperature sensor
CN8
IHPU
IH power supply unit
CN009
DCPU
DC power supply unit
24 19-X
25 22-X
bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN260
CN261
CN259E
CN259P
CN235
CN32E
CN30E
2 16-N
MFPB
MFP board

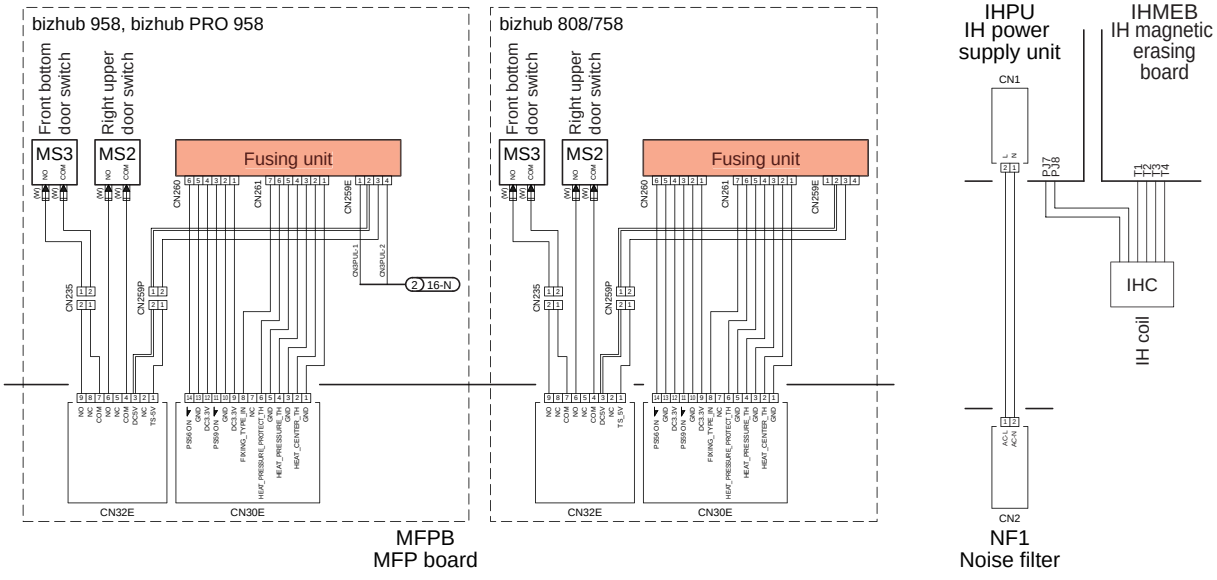
88. C3B02, C3B03



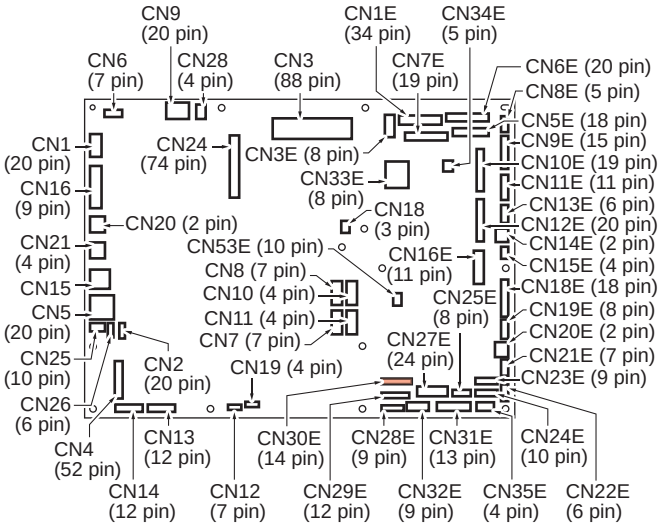




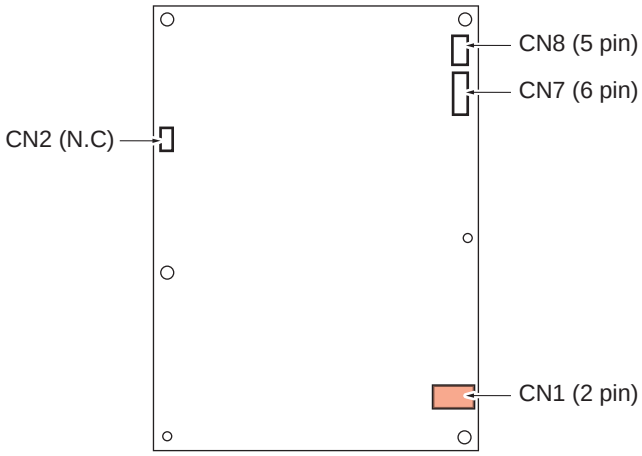




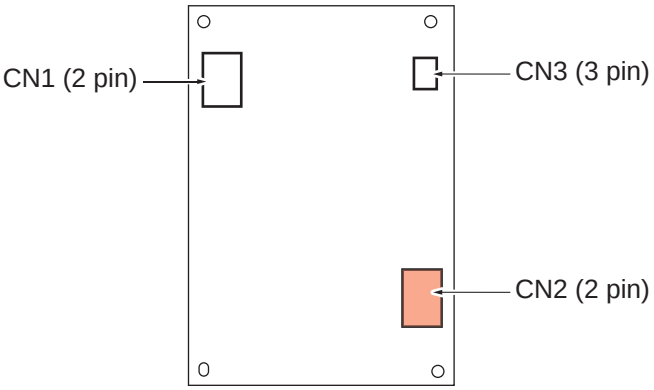
MFPB



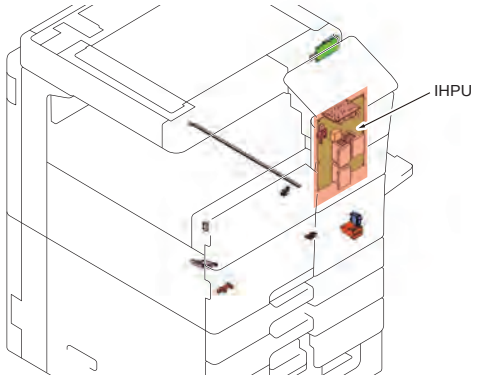
IHPU

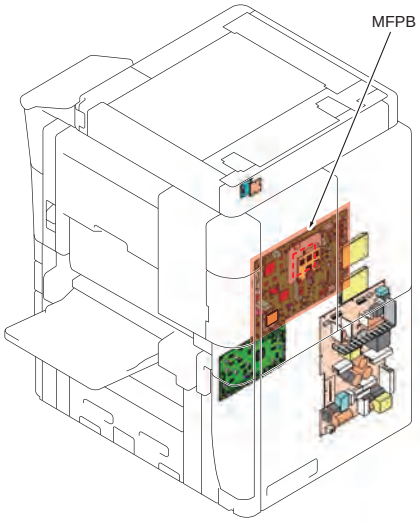


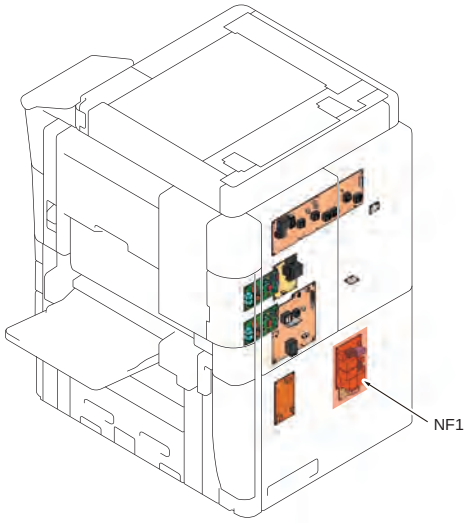
NF1

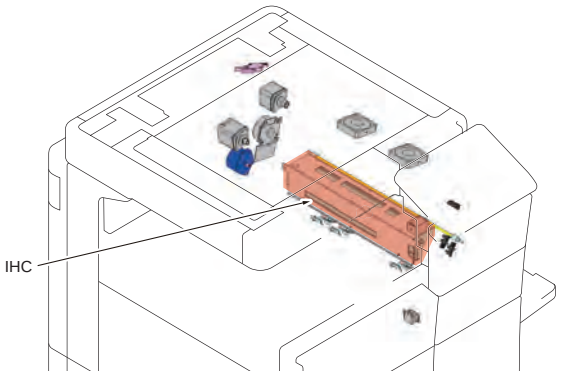


89. C3B07, C3B08

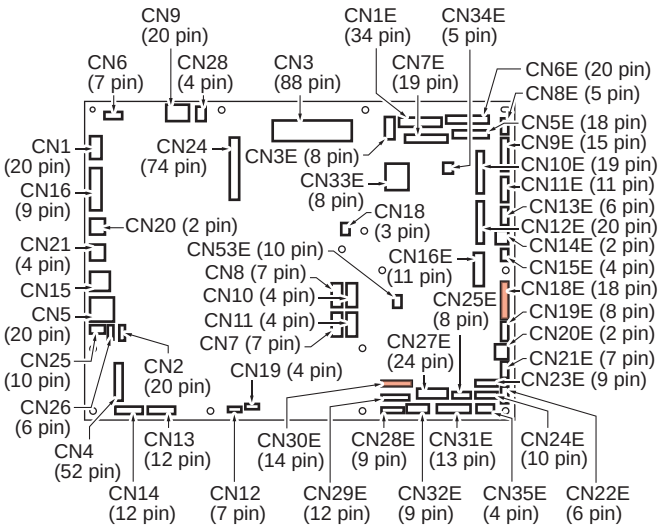




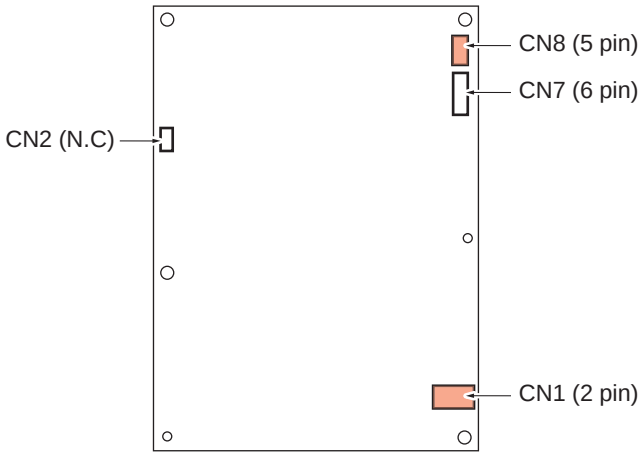


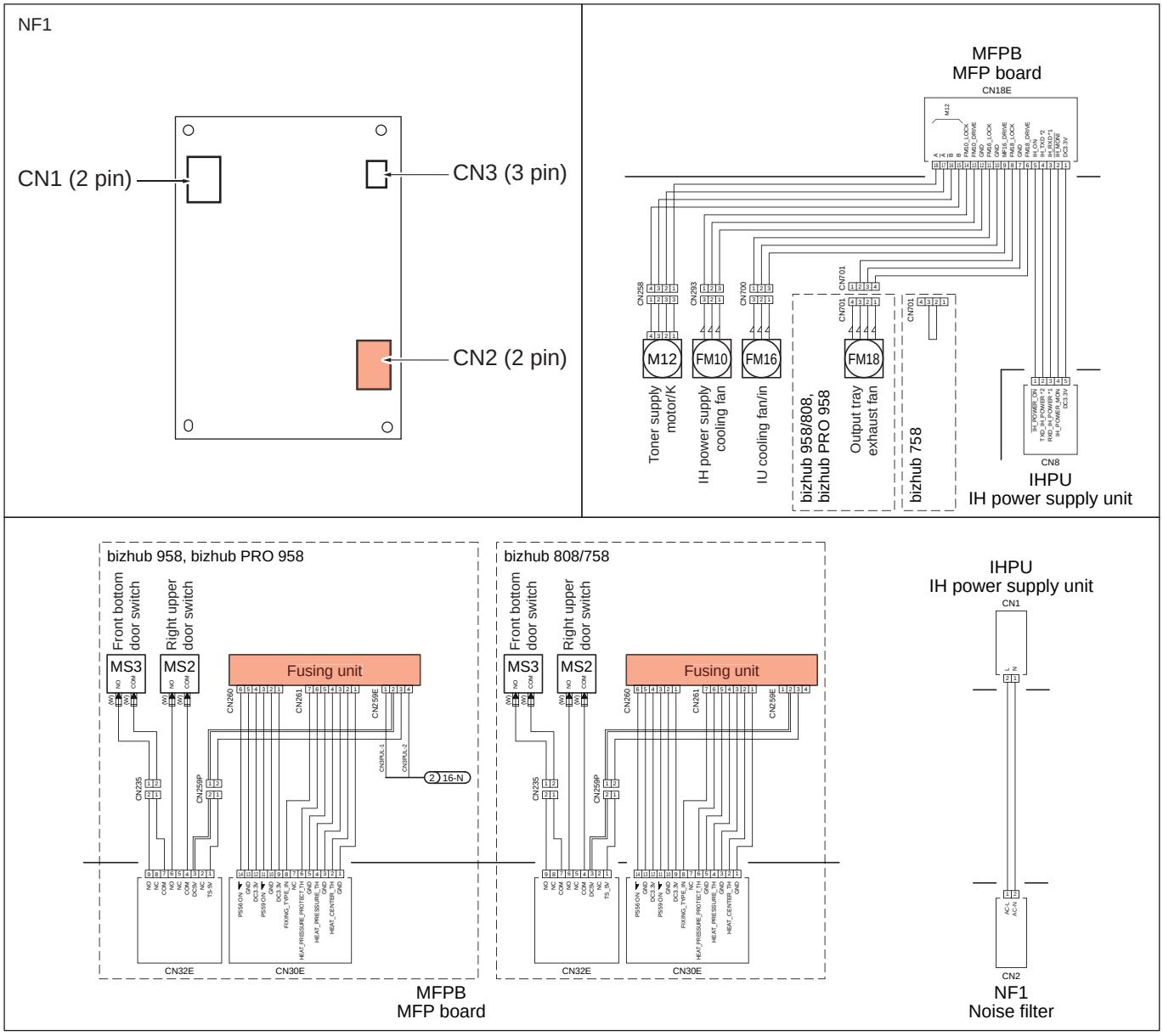


MFPB

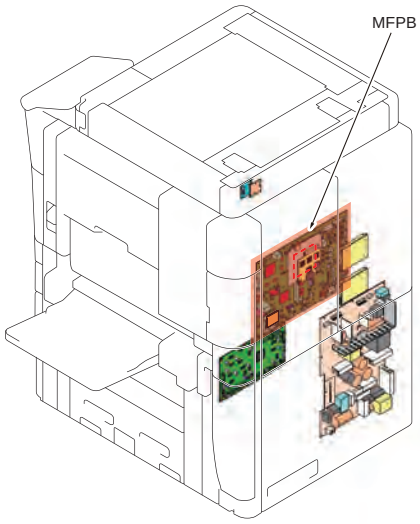


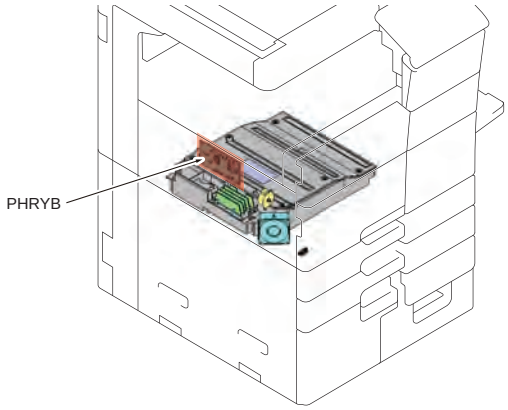
IHPU



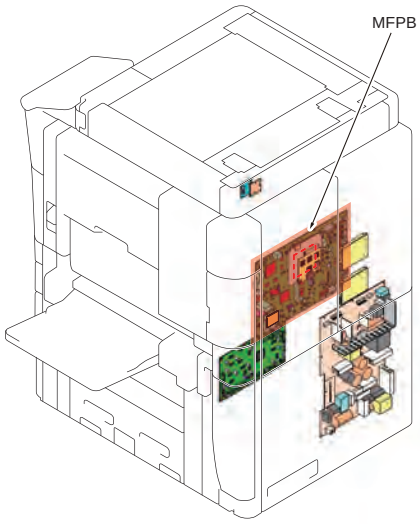

NF1
CN1 (2 pin)
CN3 (3 pin)
CN2 (2 pin)
MFPB
MFP board
CN18E
M12
FM10
FM16
FM18
Toner supply motor/K
IH power supply cooling fan
IU cooling fan/in
Output tray exhaust fan
bizhub 958/808, bizhub PRO 958
bizhub 758
CN8
IHPU
IH power supply unit
bizhub 958, bizhub PRO 958
bizhub 808/758
Front bottom door switch
Right upper door switch
MS3
MS2
Fusing unit
CN32E
CN30E
MFPB
MFP board
IHPU
IH power supply unit
CN1
CN2
NF1
Noise filter

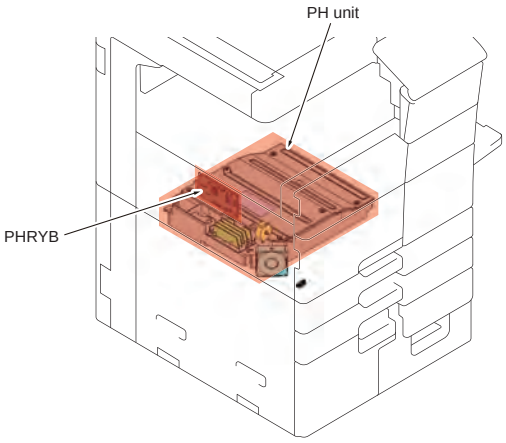
90. C4002



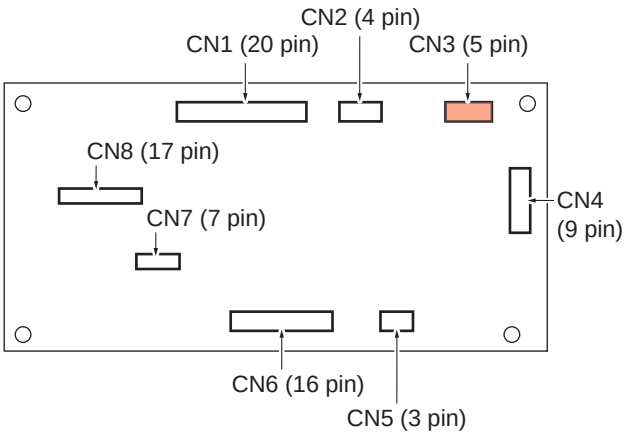


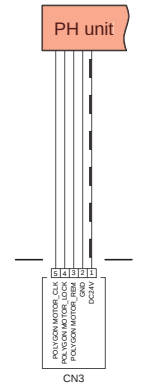
91. C4101





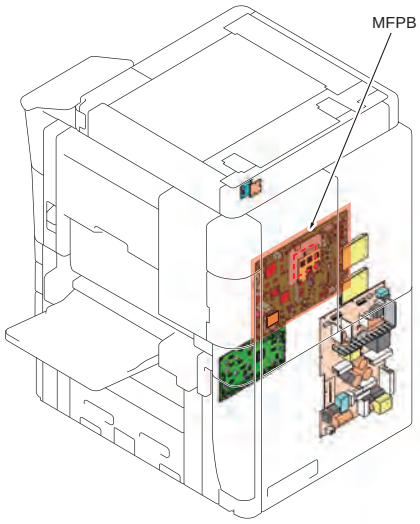
PHRYB

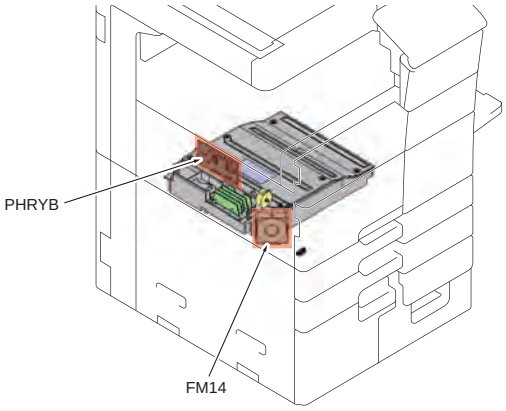




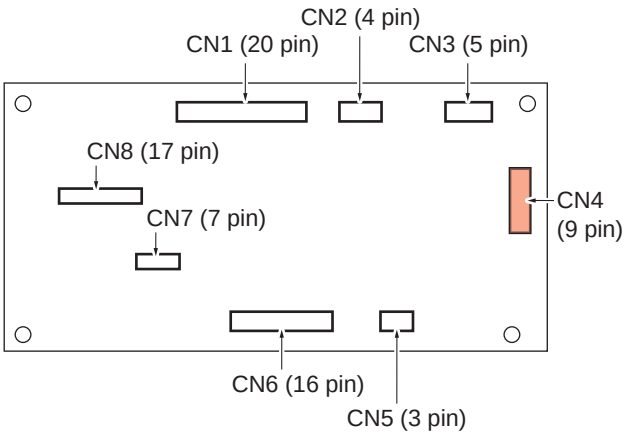
PHRYB
PH relay board

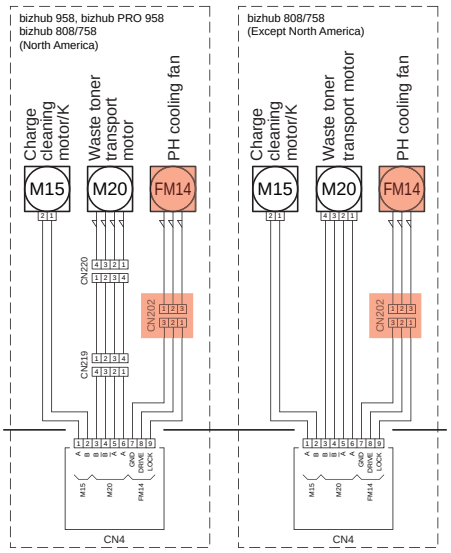
92. C4301



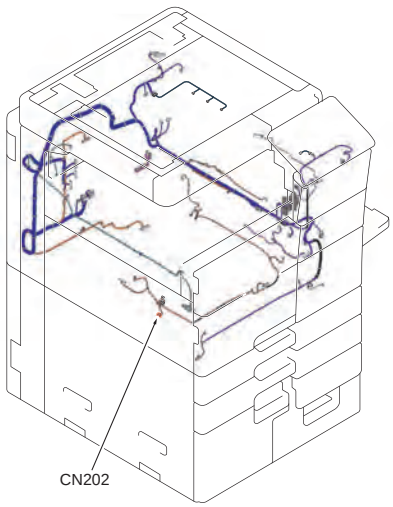


PHRYB

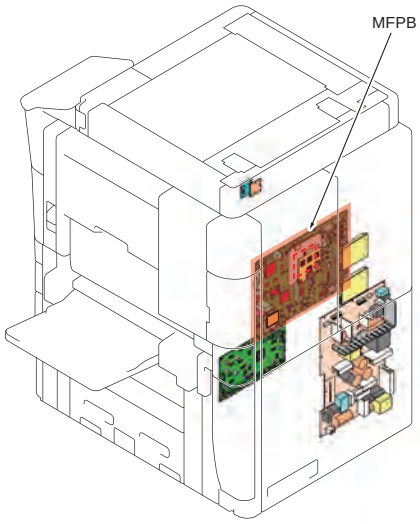


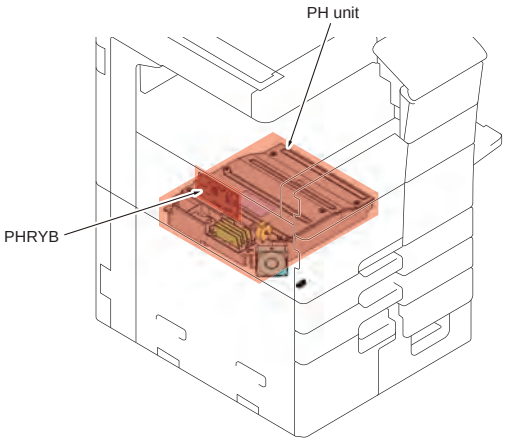


PHRYB
PH relay board

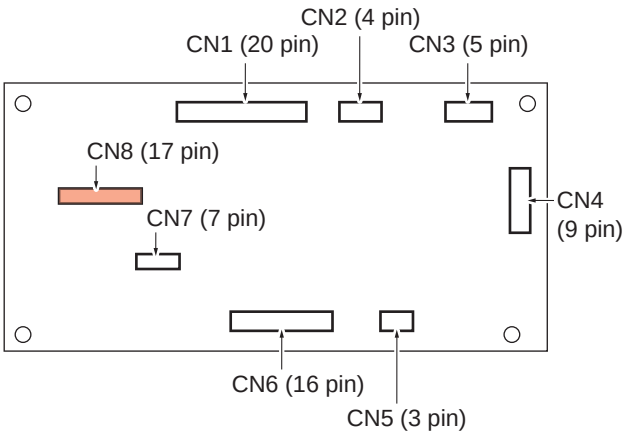


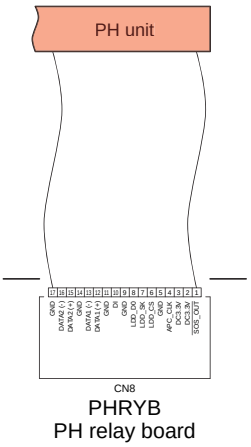
93. C4501



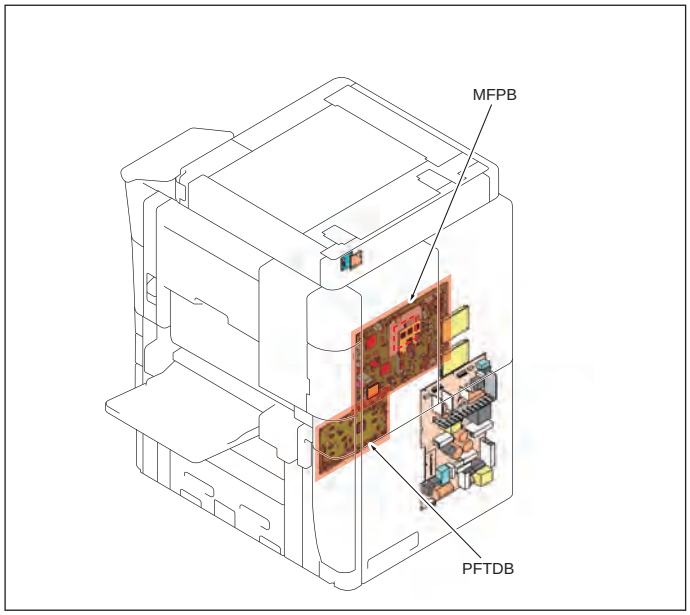


PHRYB

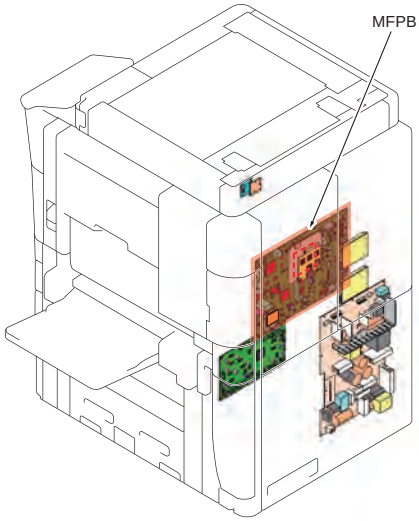


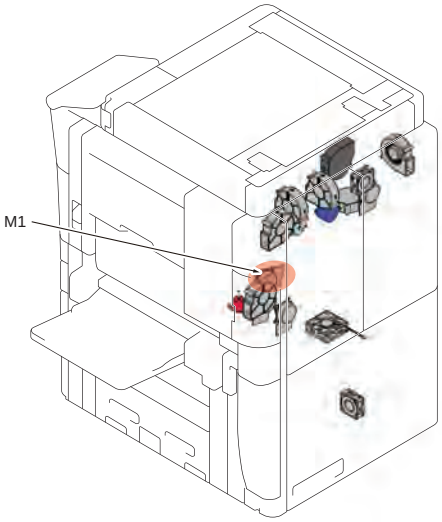


94. C4810



95. C5104, C5105





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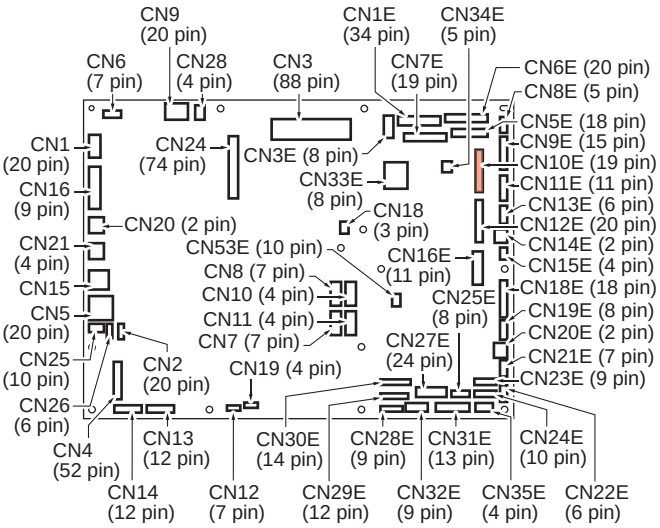
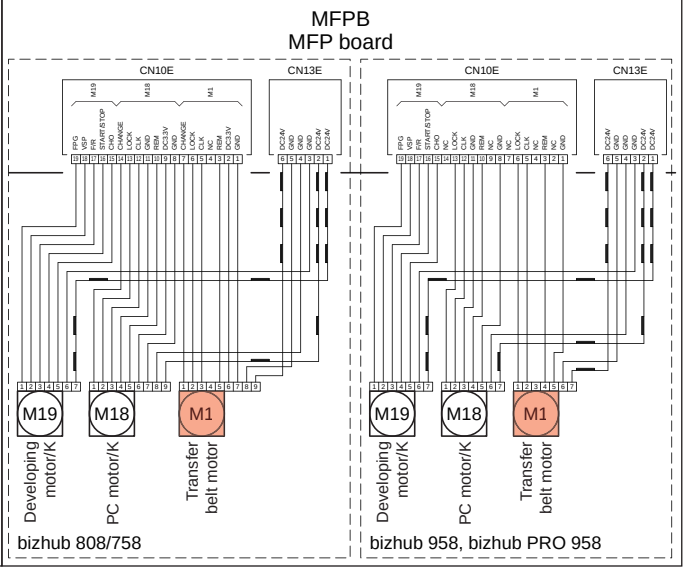
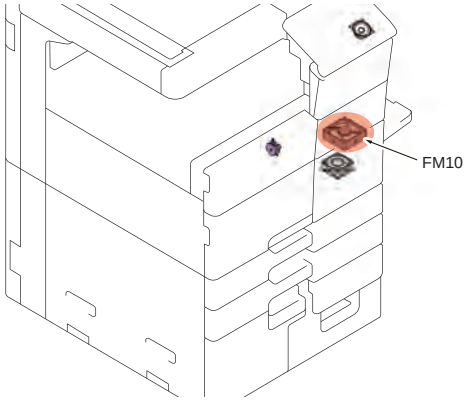
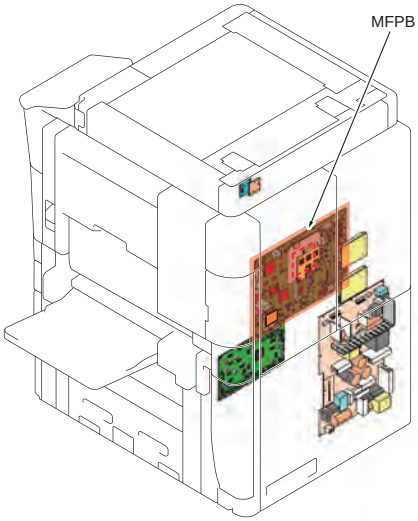




96. C5304





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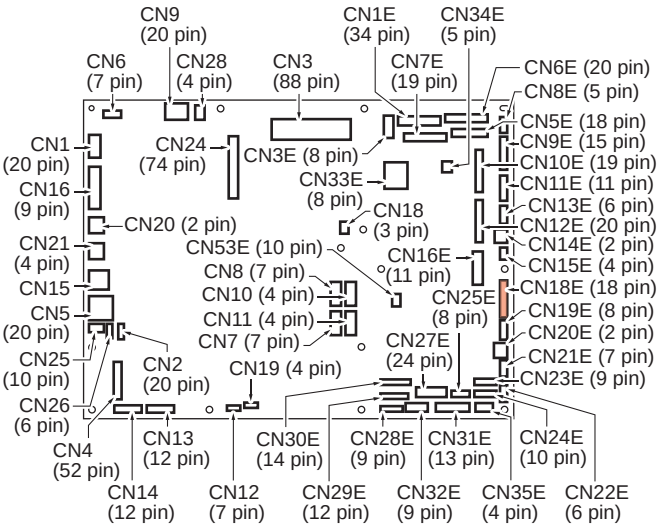
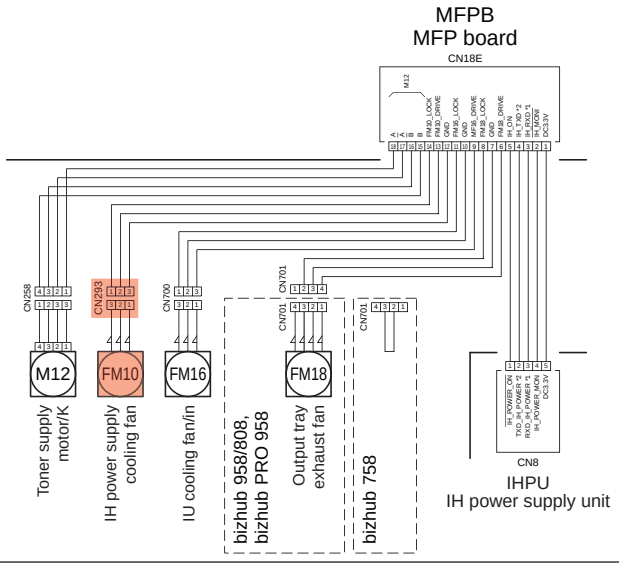
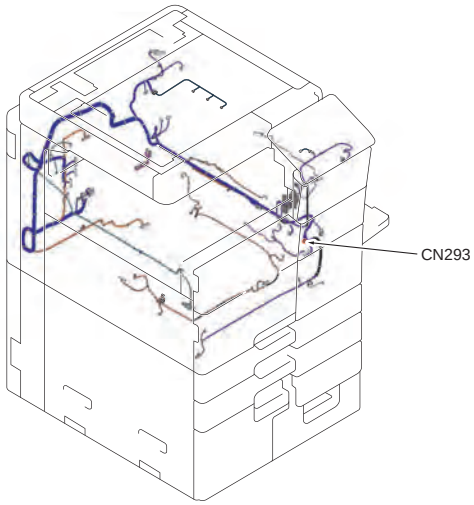
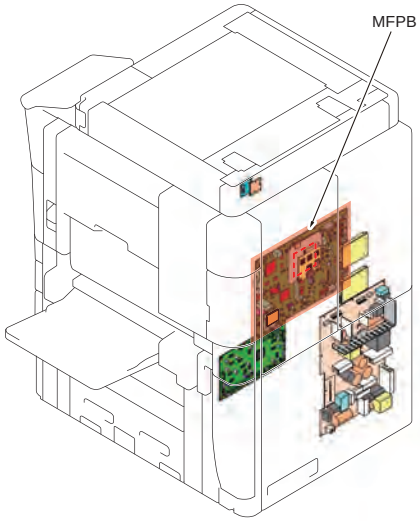
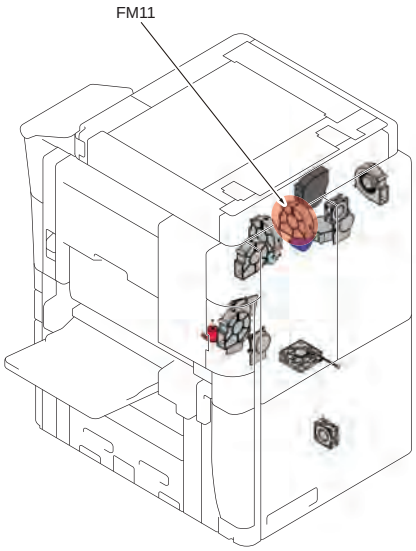






97. C5306





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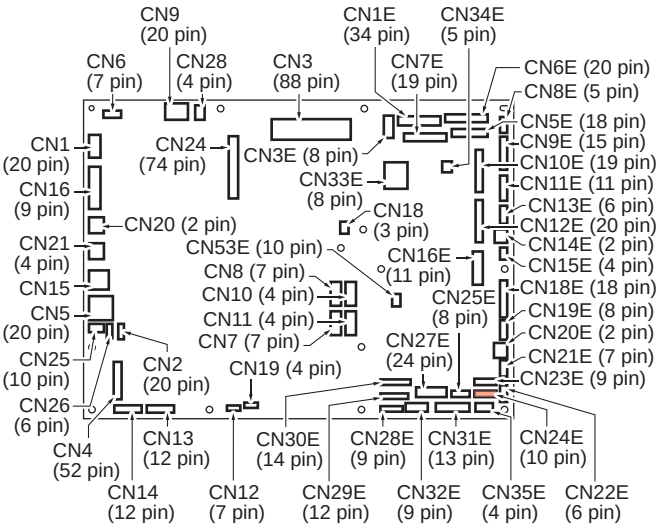

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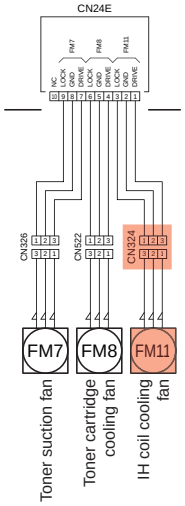
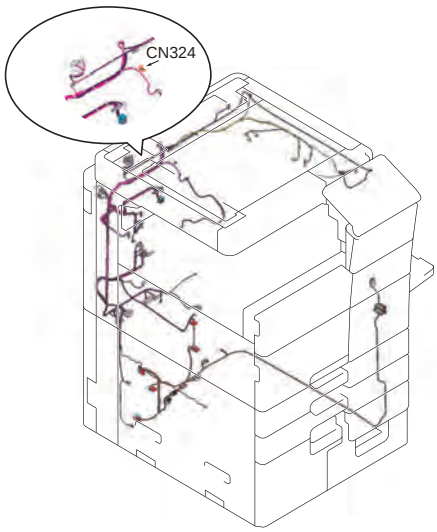
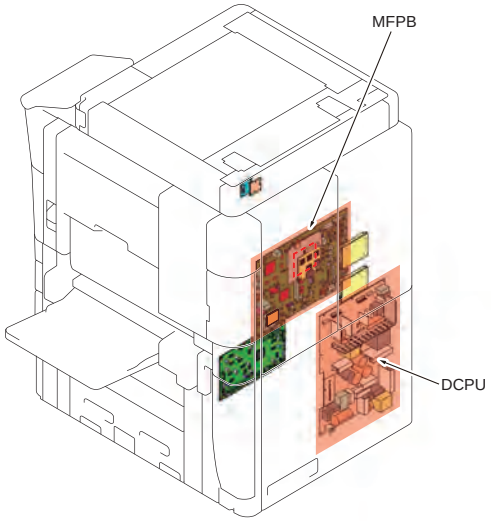
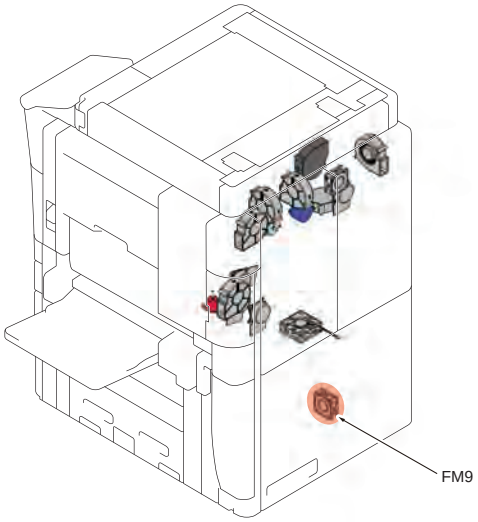




98. C5351





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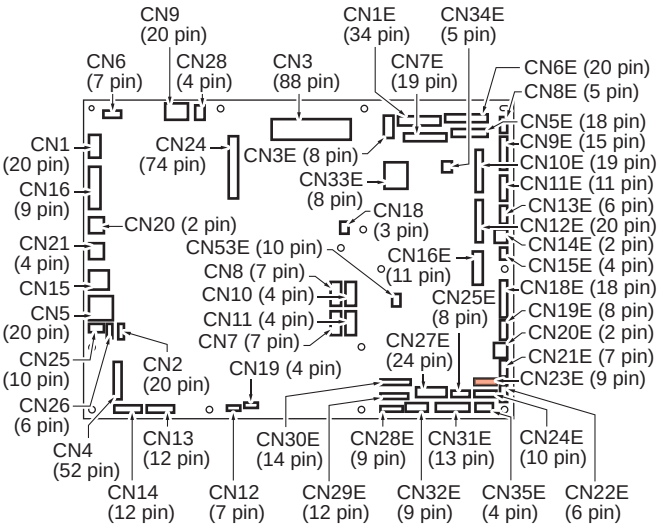

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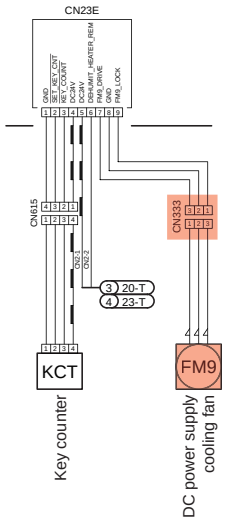
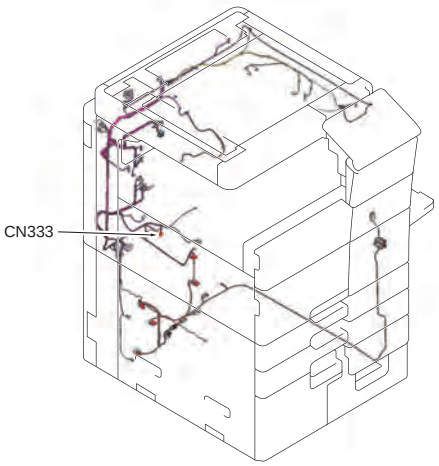
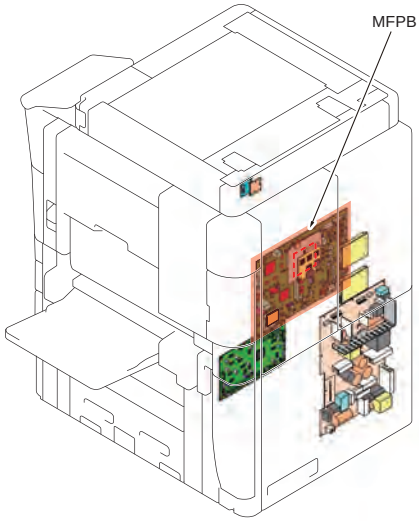
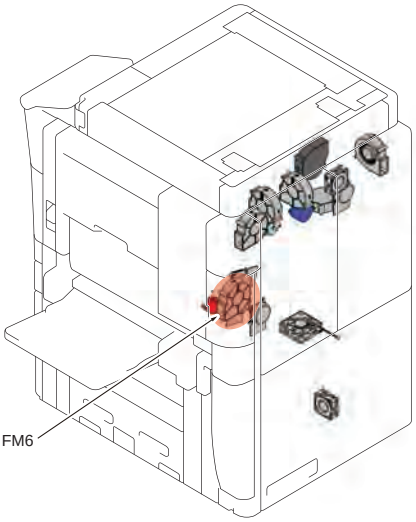




99. C5354





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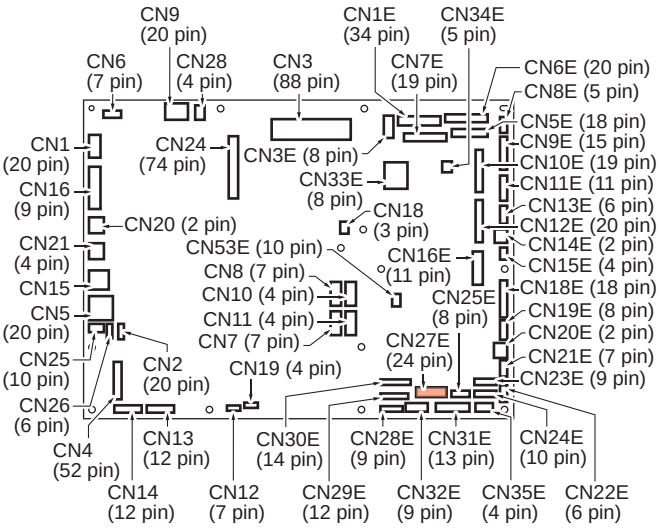

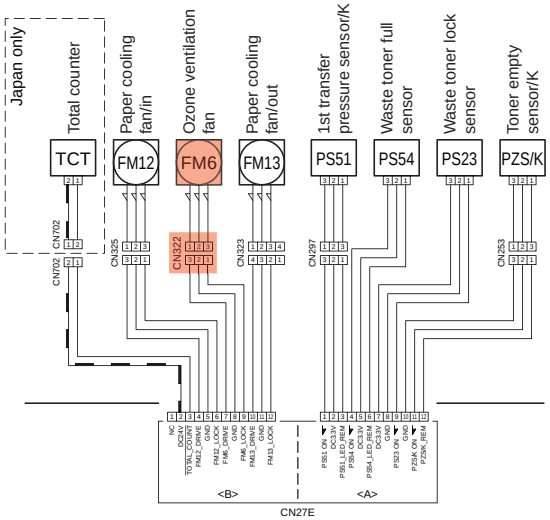

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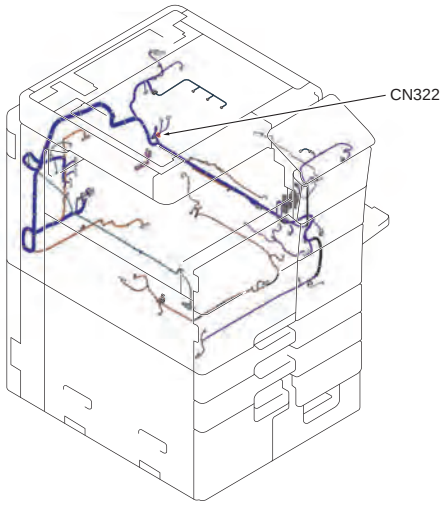
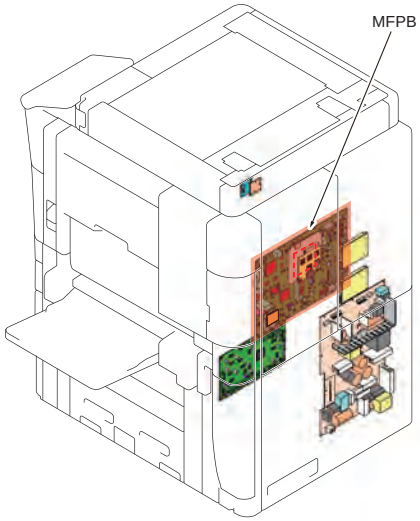
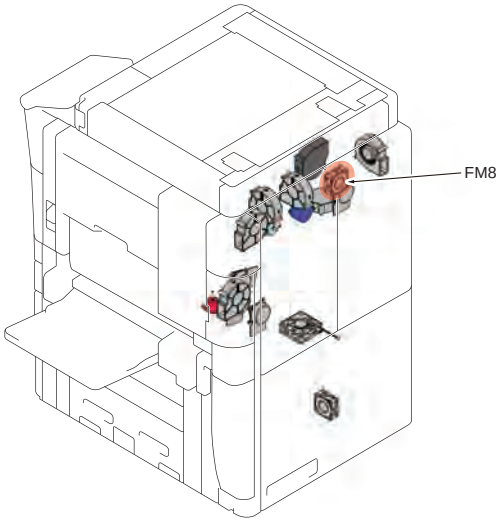


100. C5355





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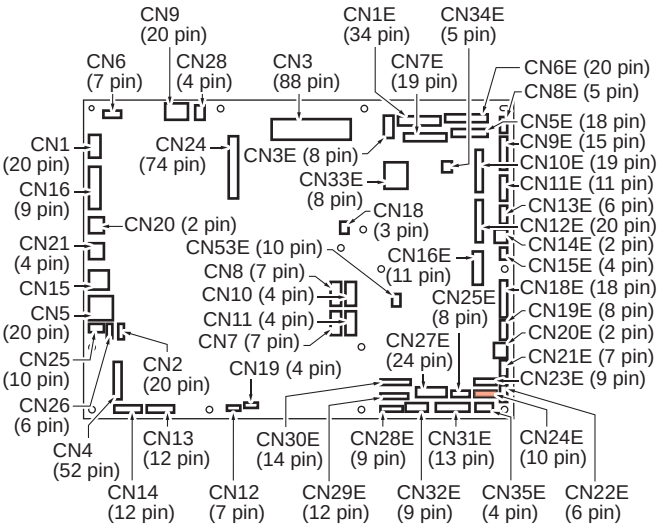

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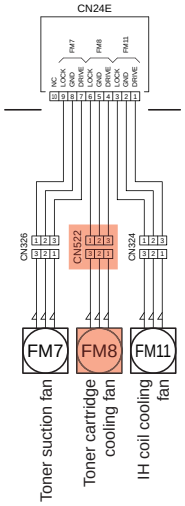
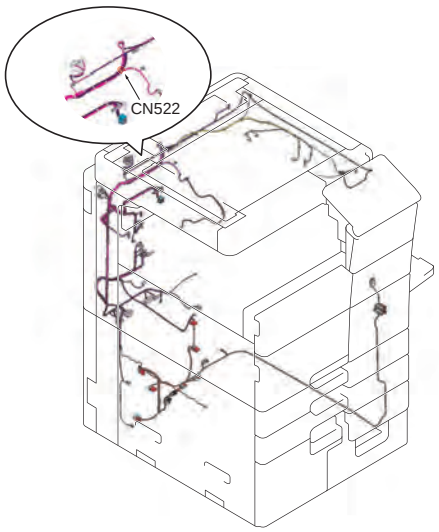
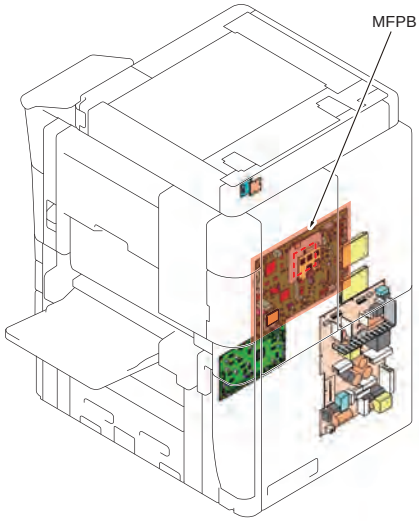
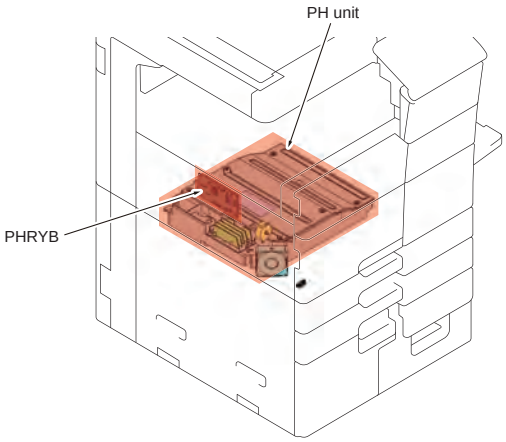
MFP board





101. C5610





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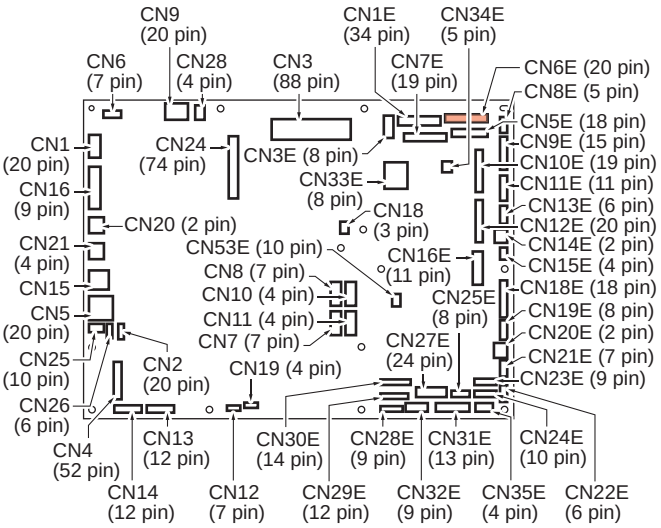

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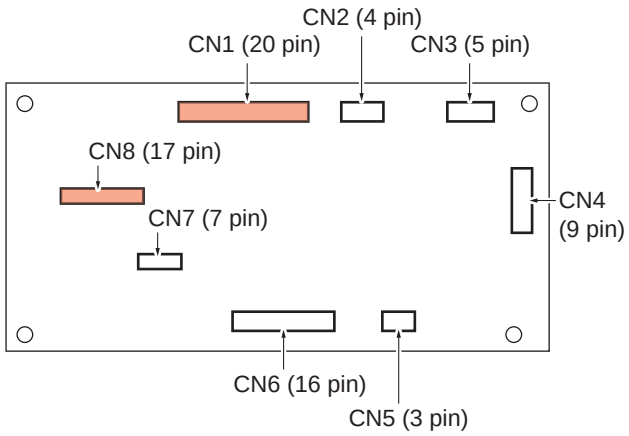
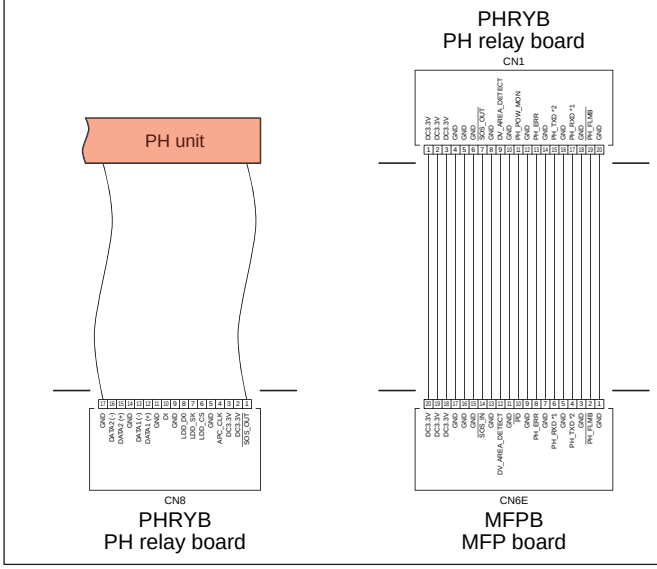
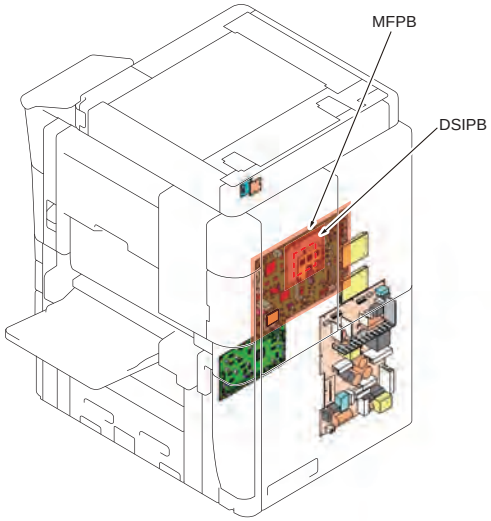
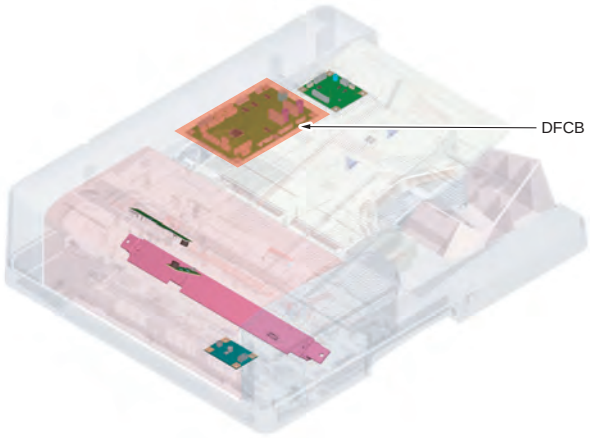




102. C6001





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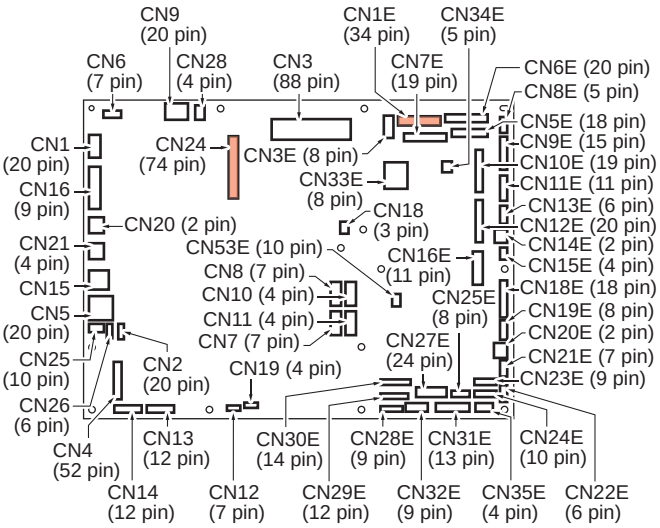
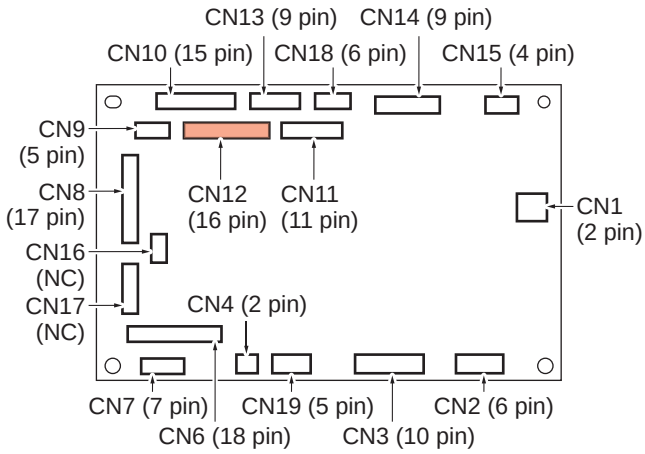


DFCB



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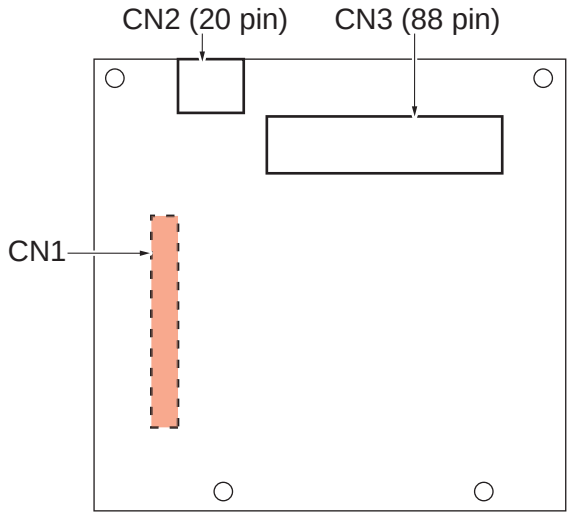
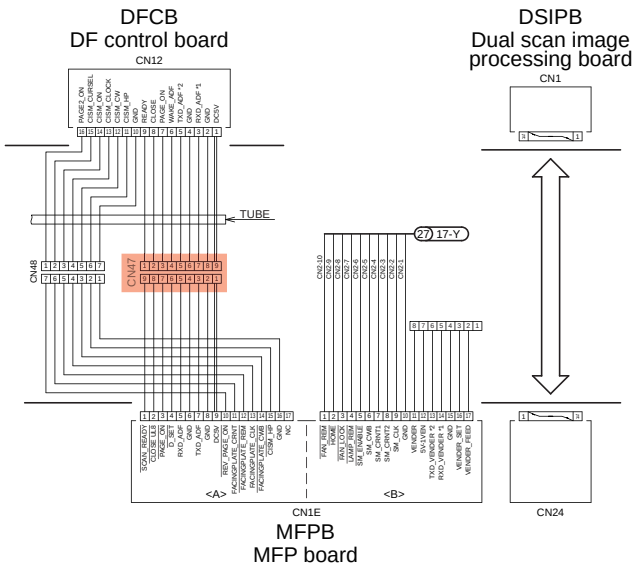
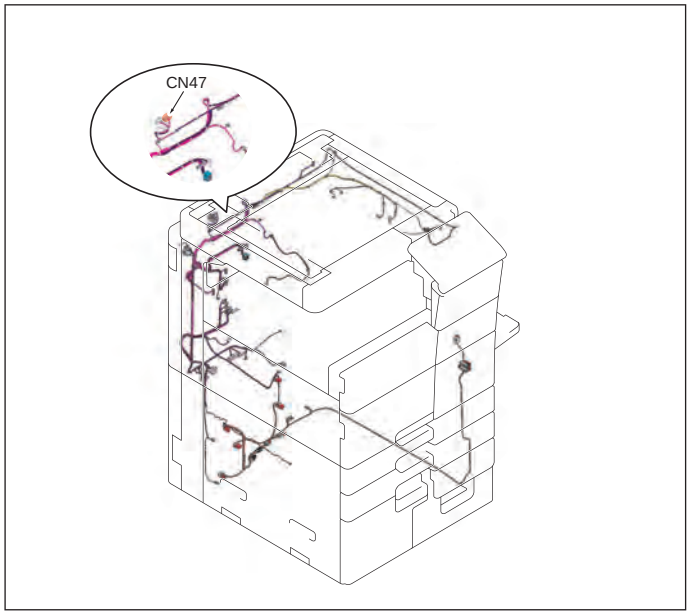
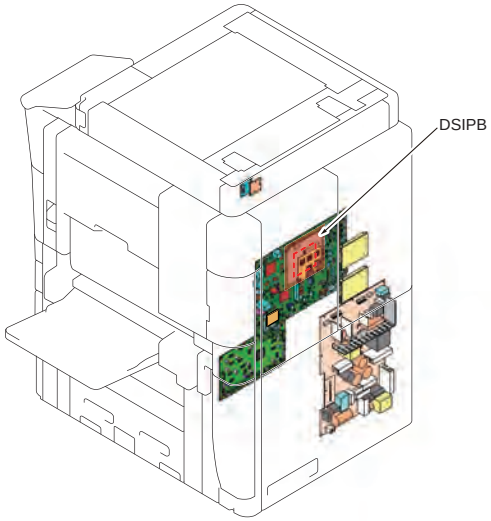
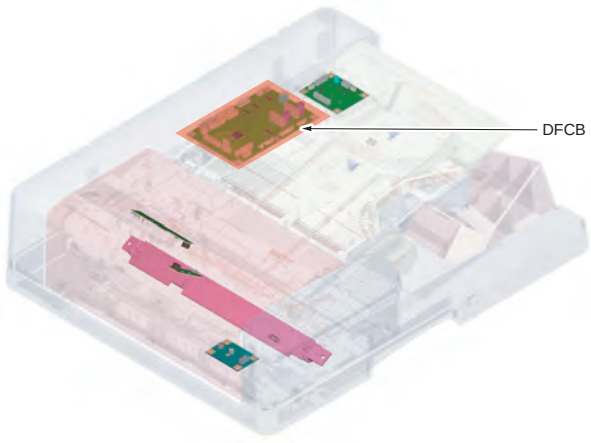





CN47

103. C6002





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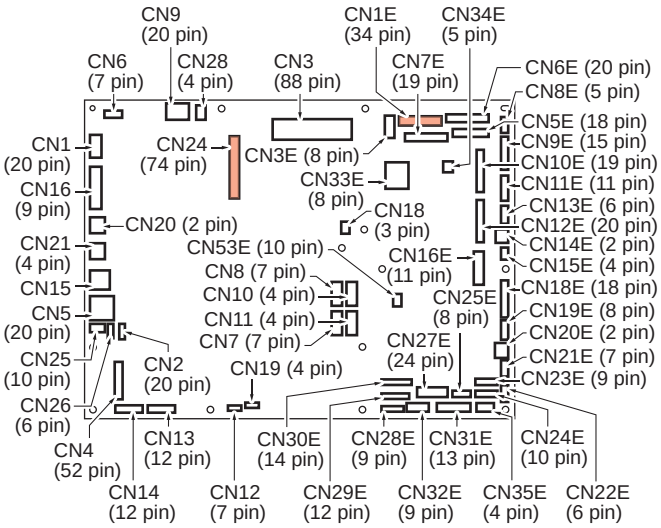

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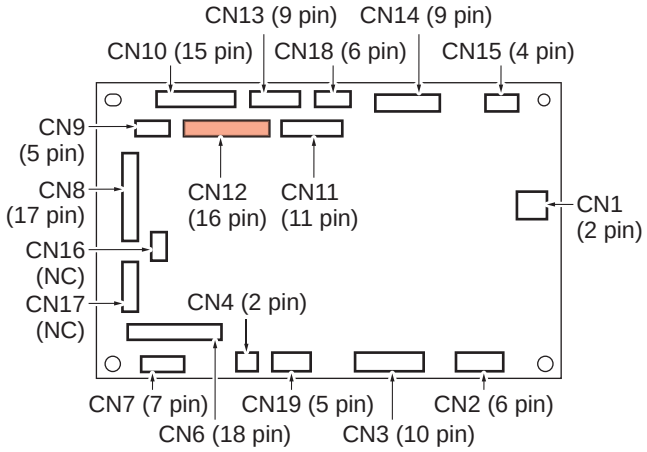

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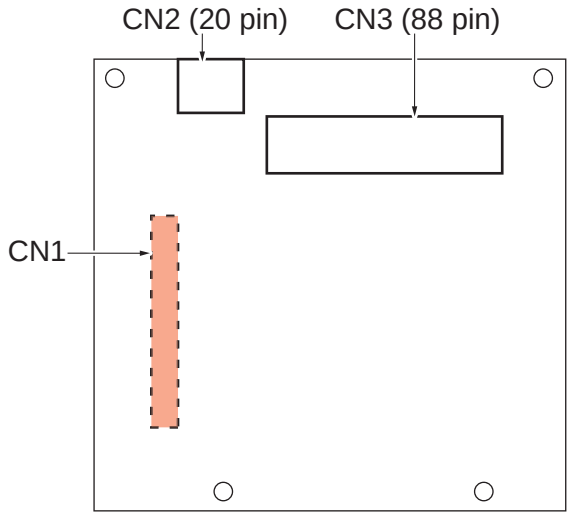
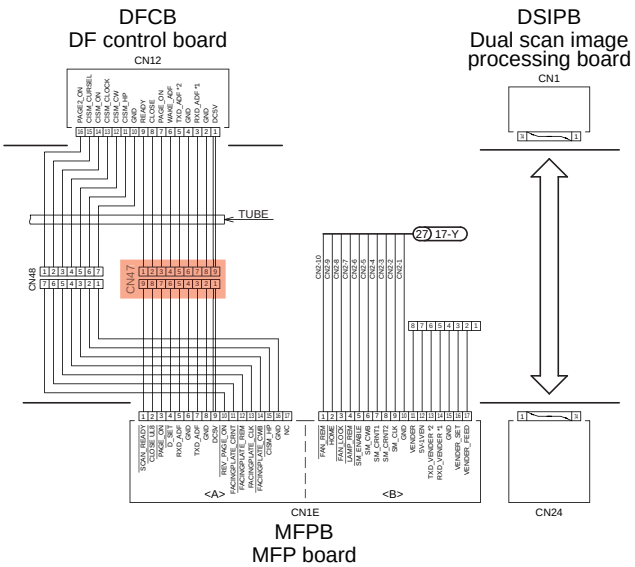
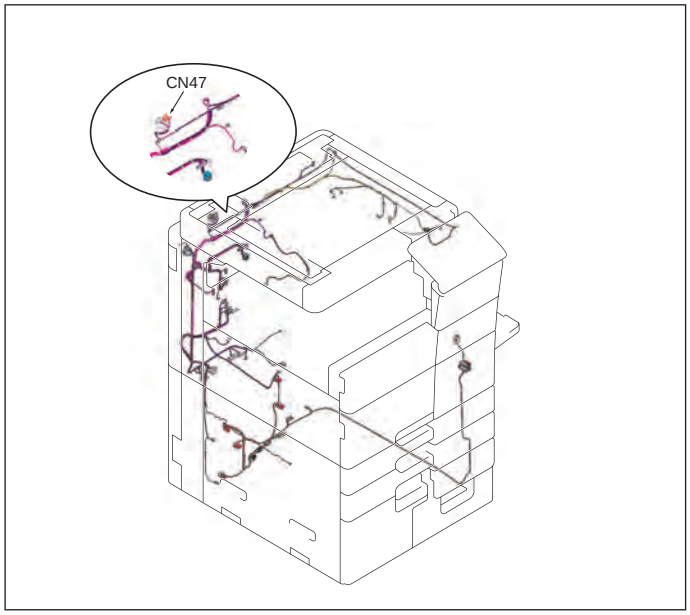
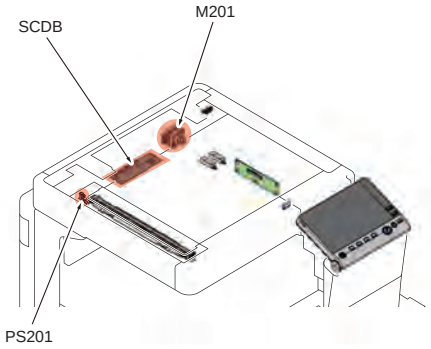
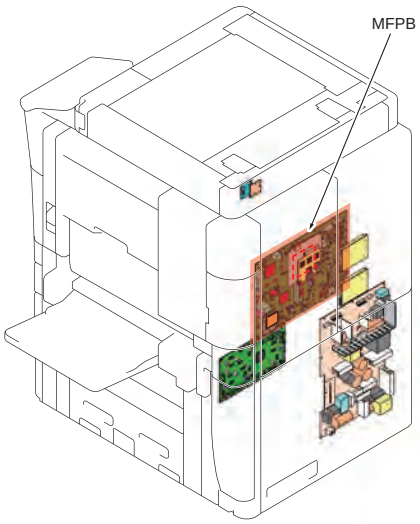





CN47

104. C6102, C6103





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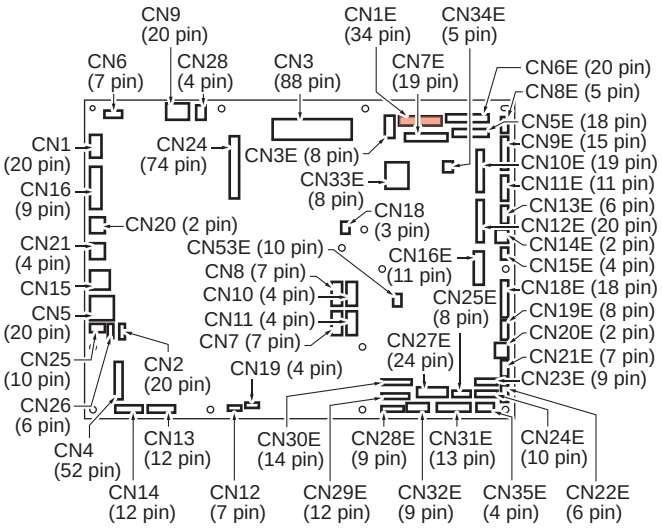

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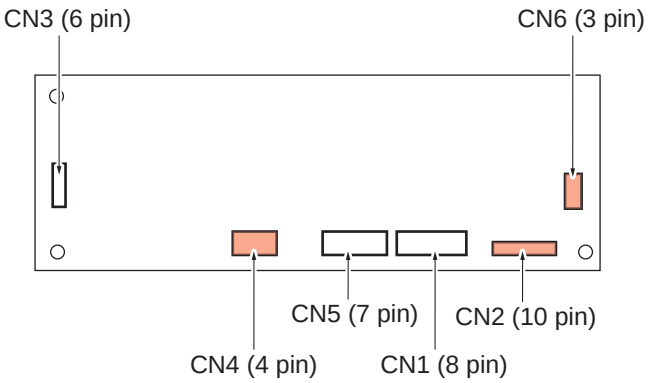
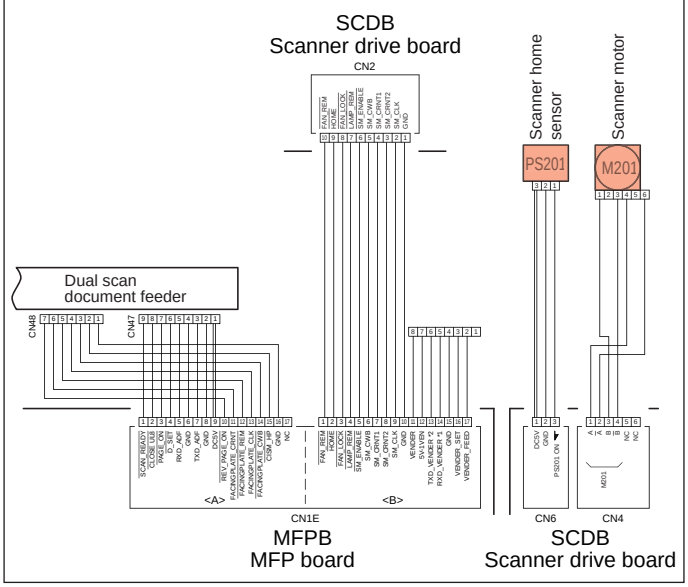
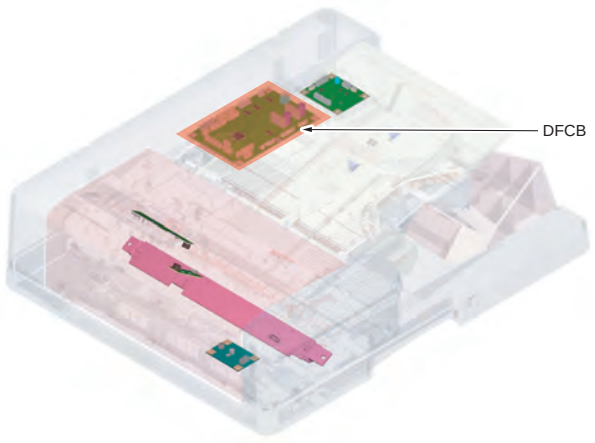
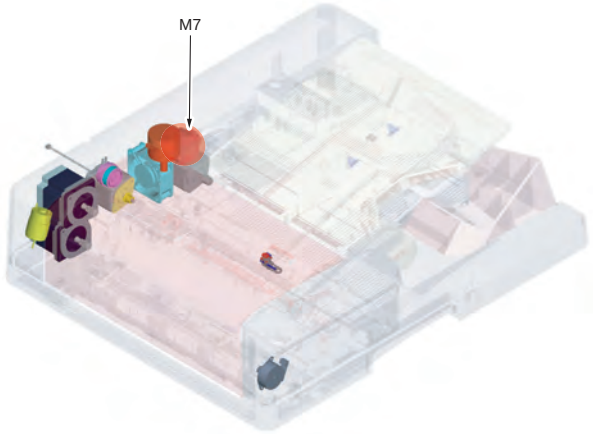
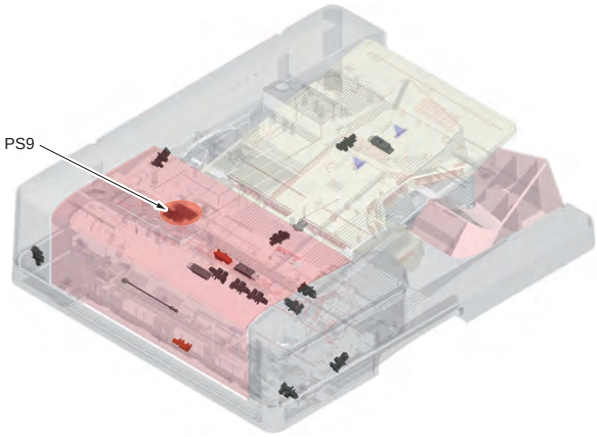




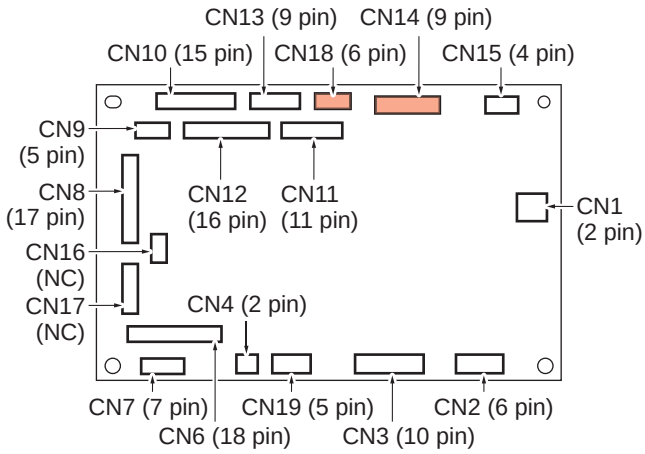
105. C6104, C6105

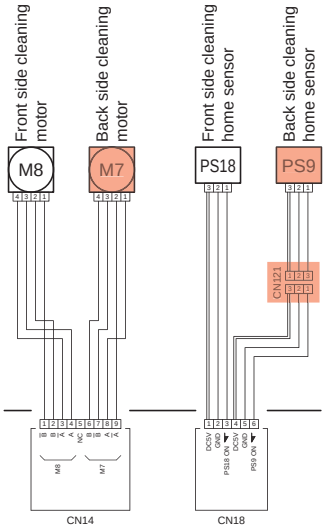






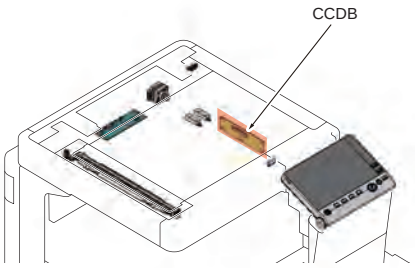
DFCB

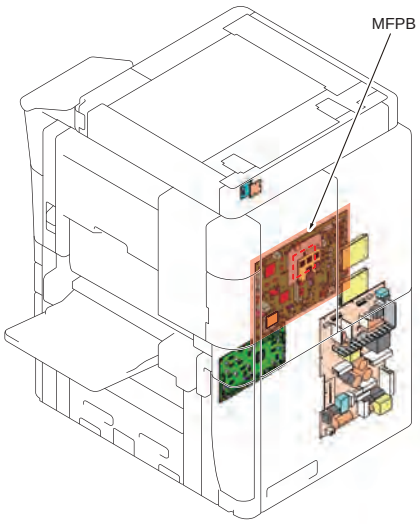




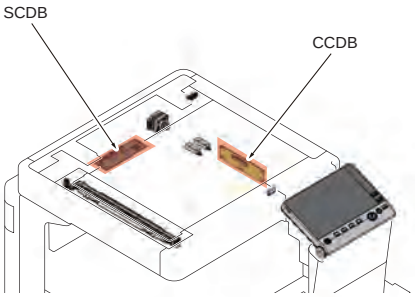
DFCB
DF control board

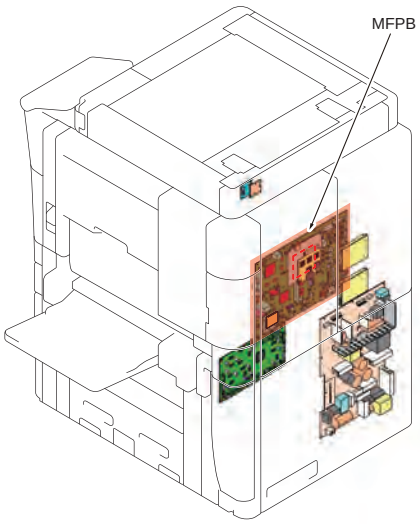
106. C6704, C6752



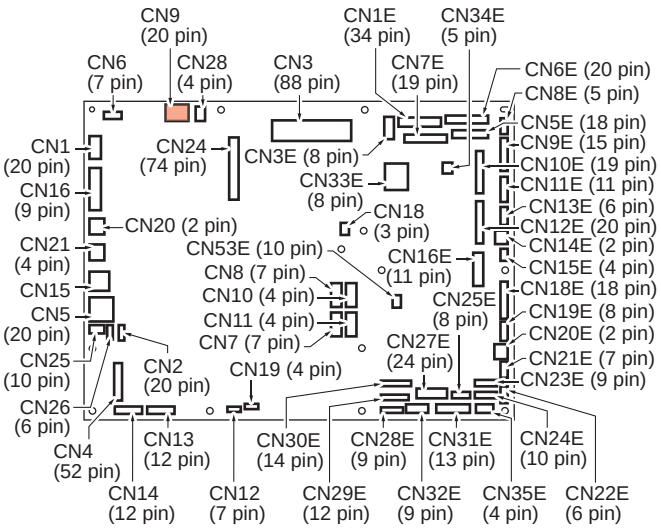


107. C6751

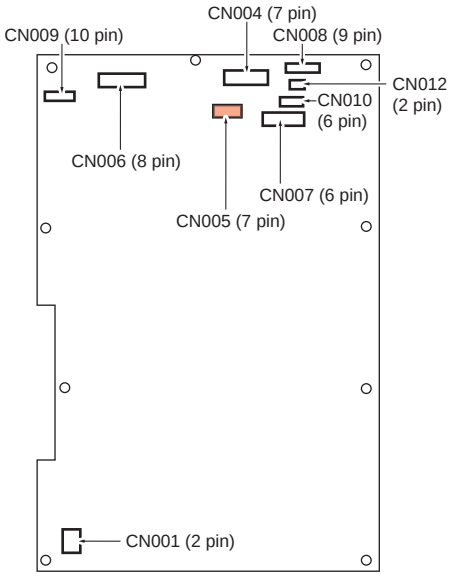




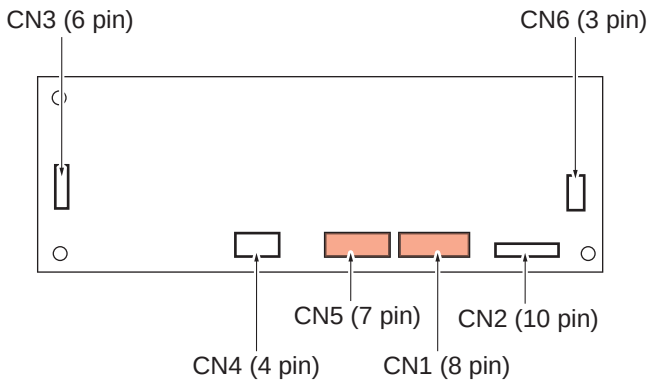
MFPB

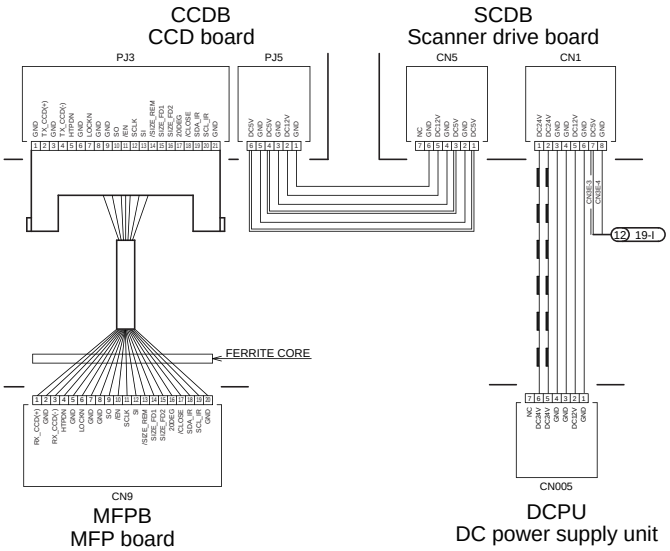


DCPU

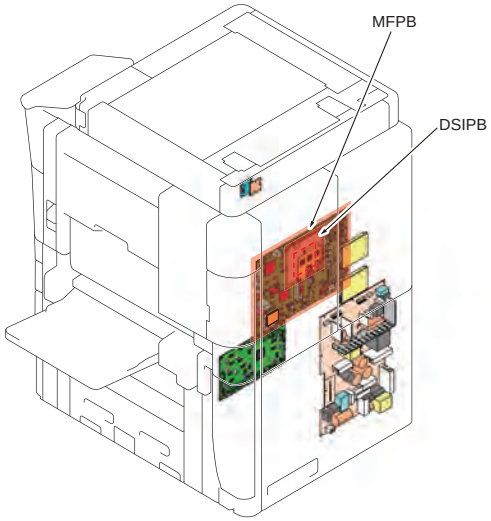


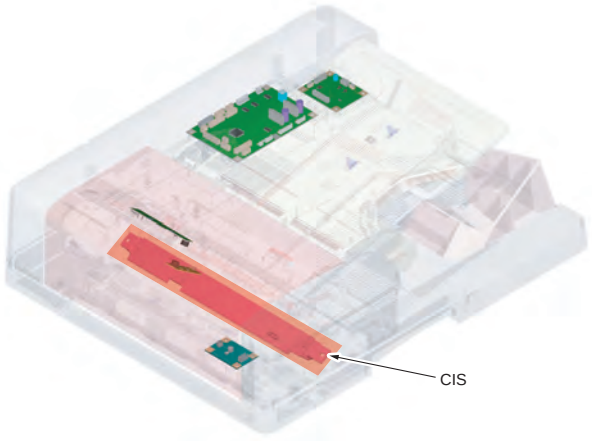
SCDB





108. C6753





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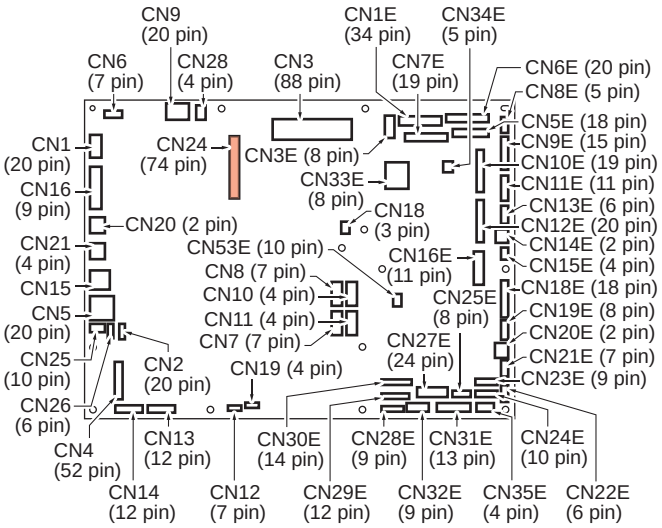
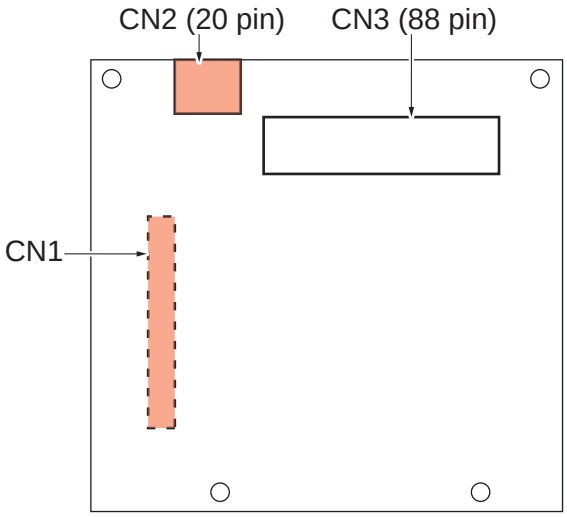
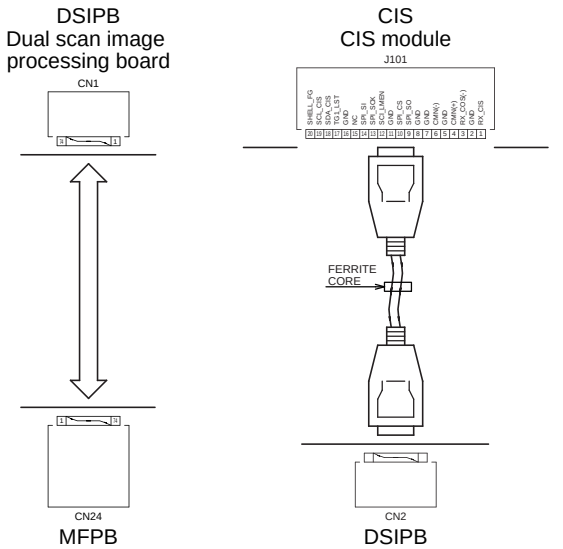
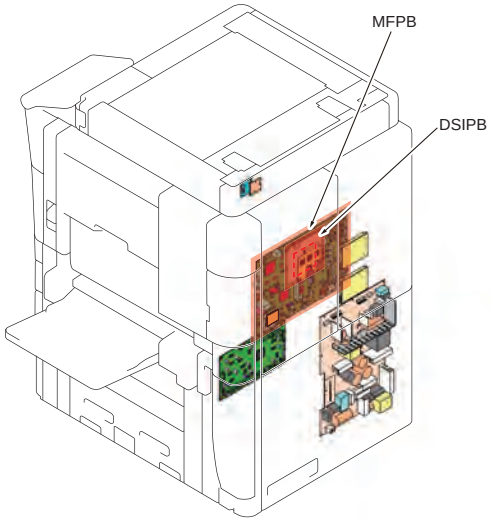


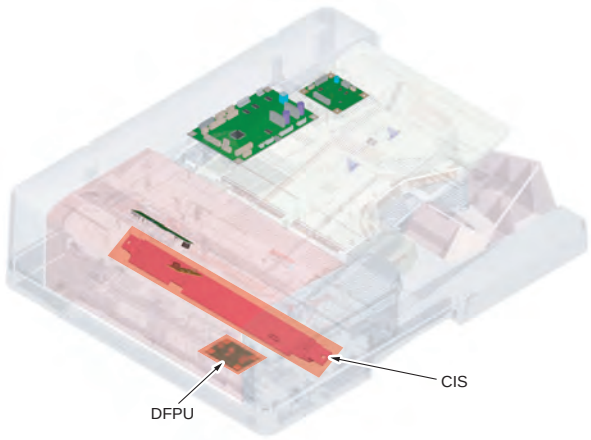
DSIPB



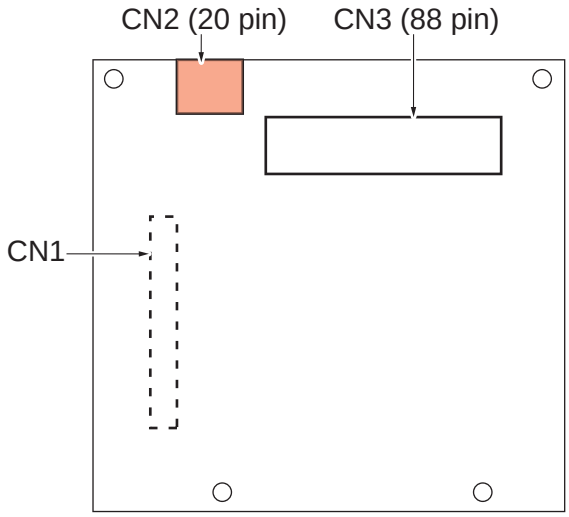


109. C6754, C6755, C9403, C9404

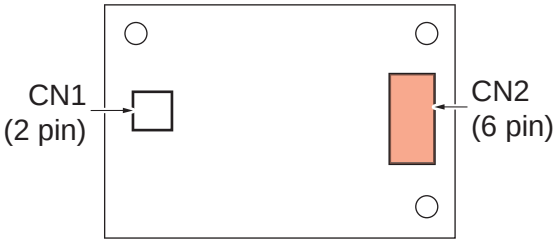


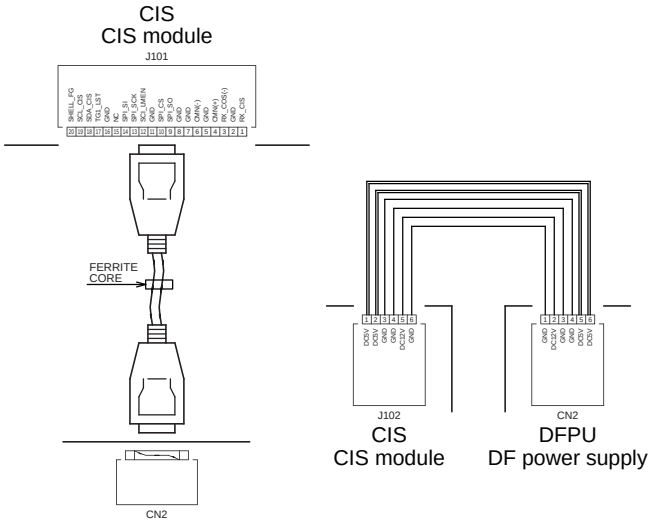


DSIPB

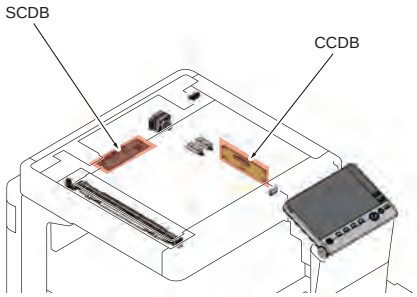


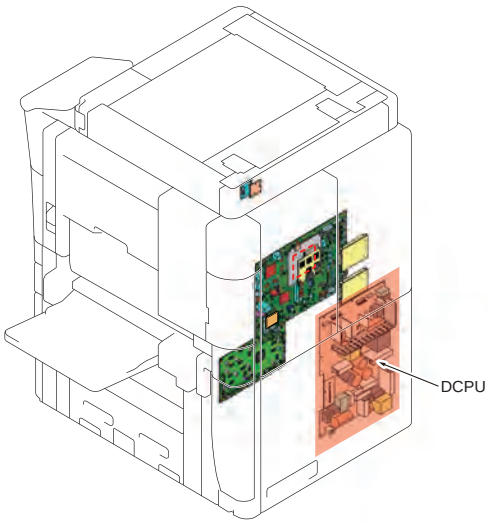
DFPU



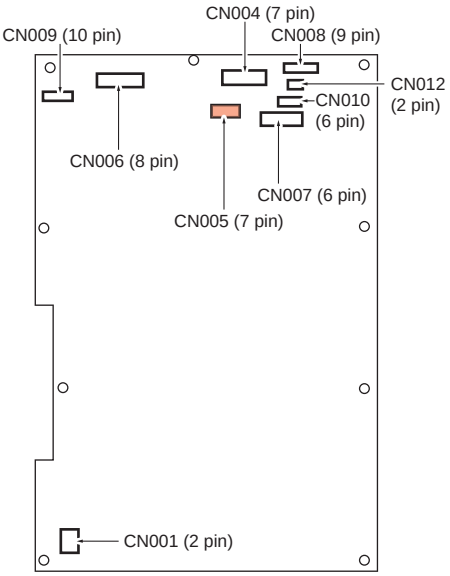


110. C6756

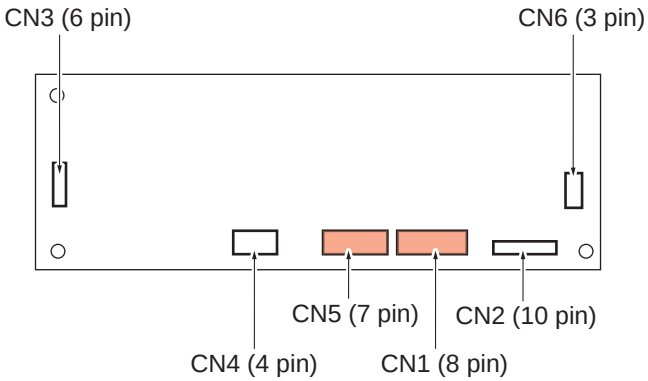


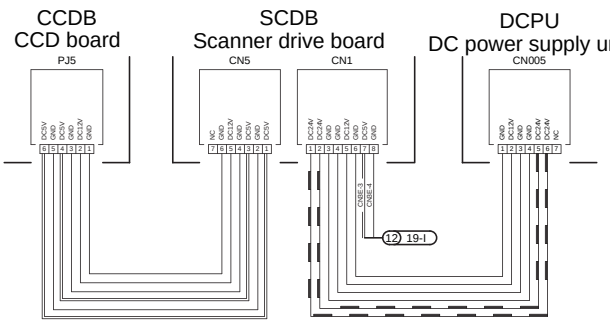


DCPU

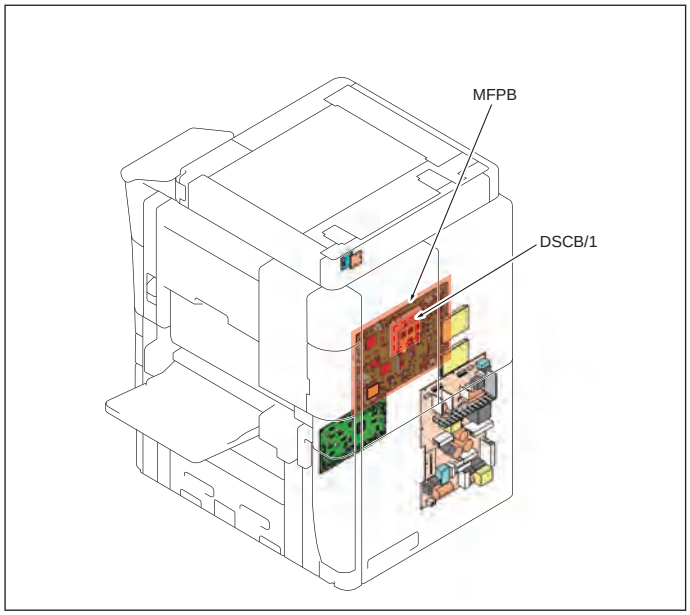


SCDB

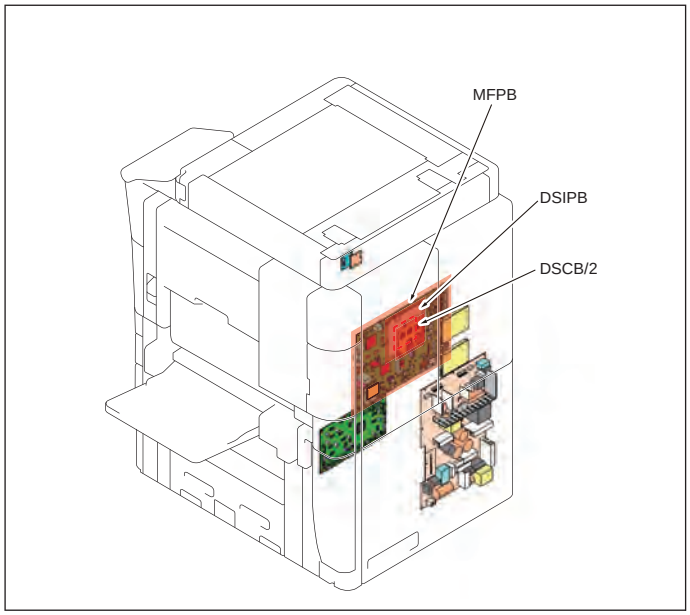




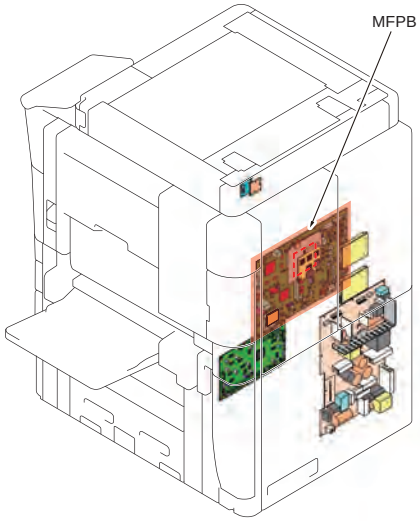
111. C6901, C6902, C6903

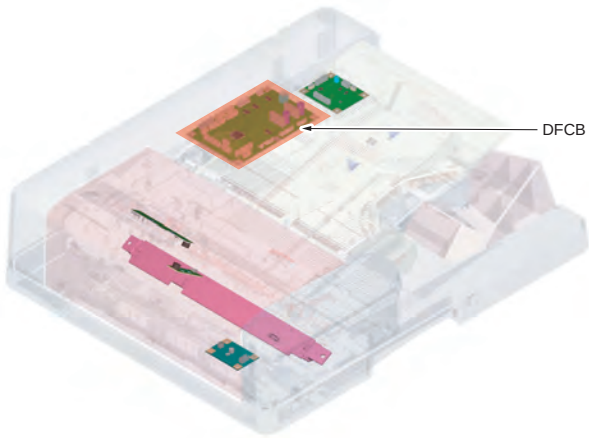


112. C6911, C6912, C6913

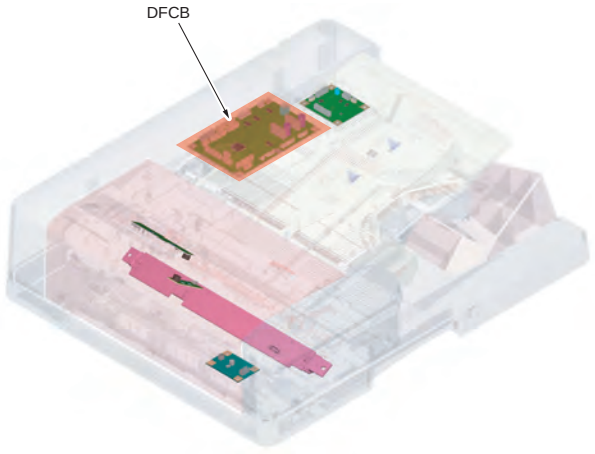


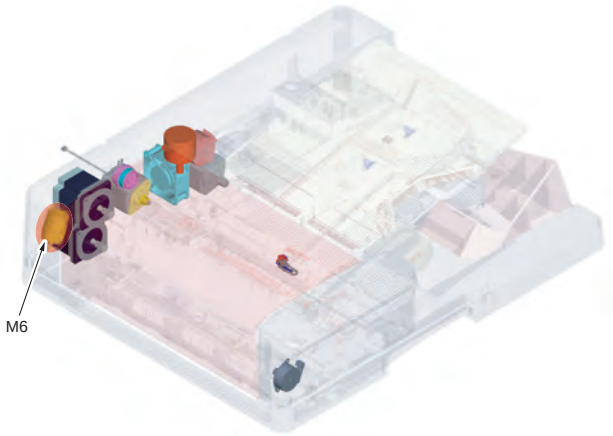
113. C6F01

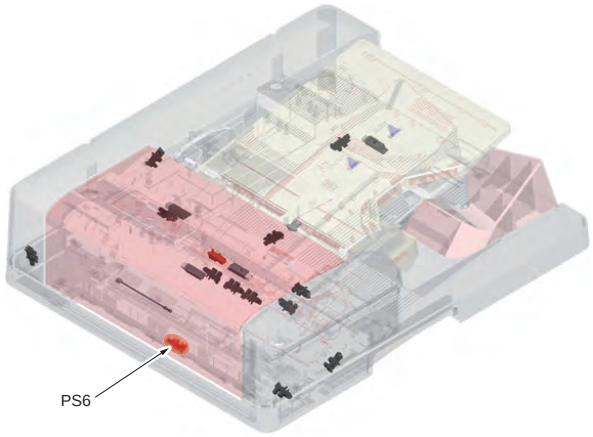




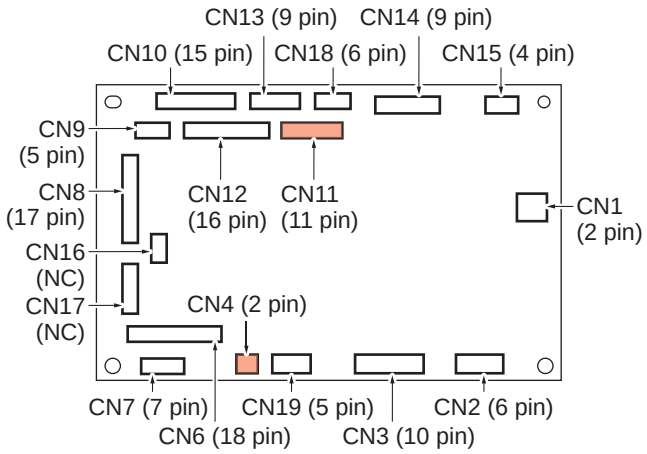
114. C8101

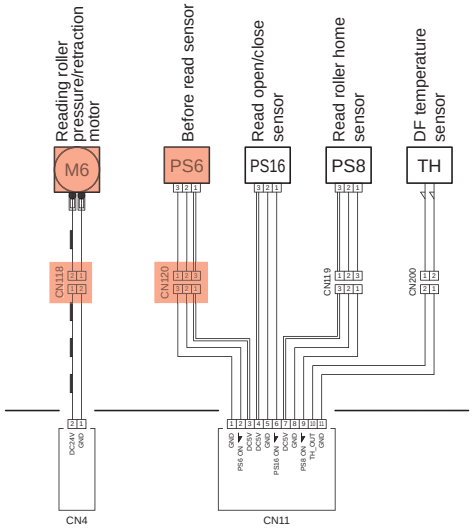






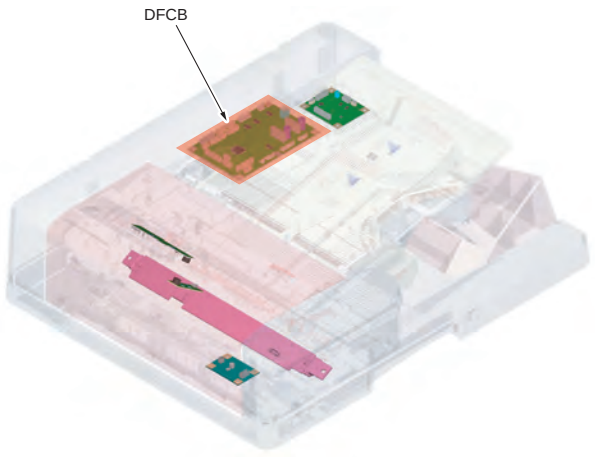
DFCB

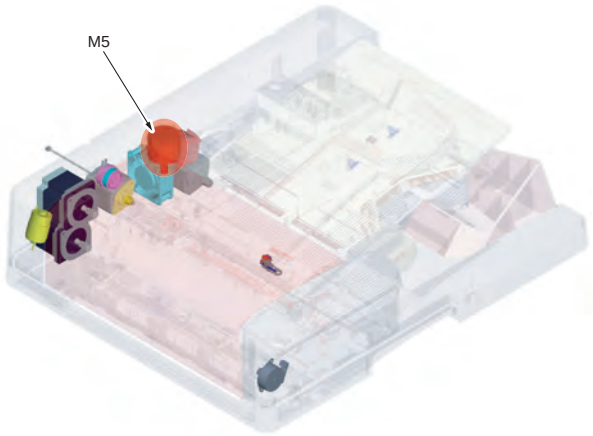


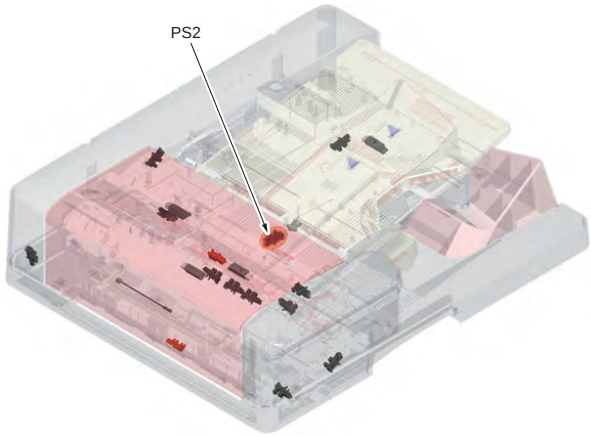


DFCB
DF control board

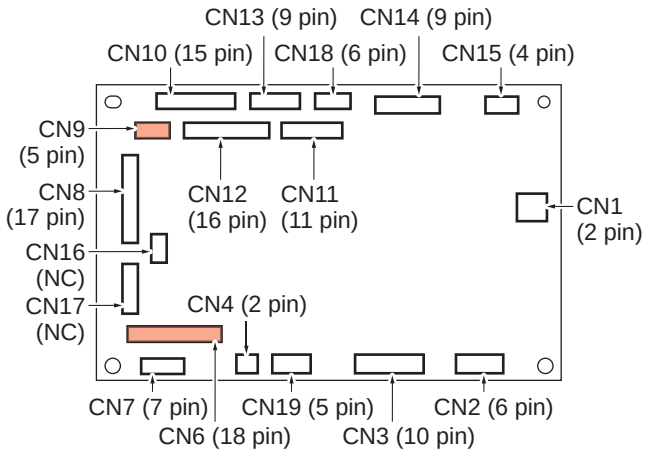
115. C8103

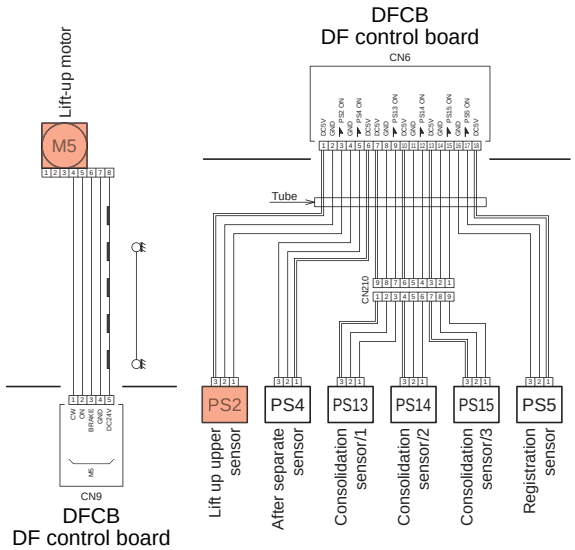




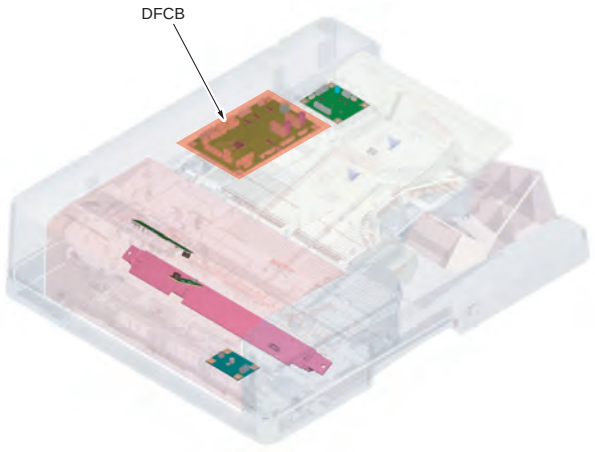


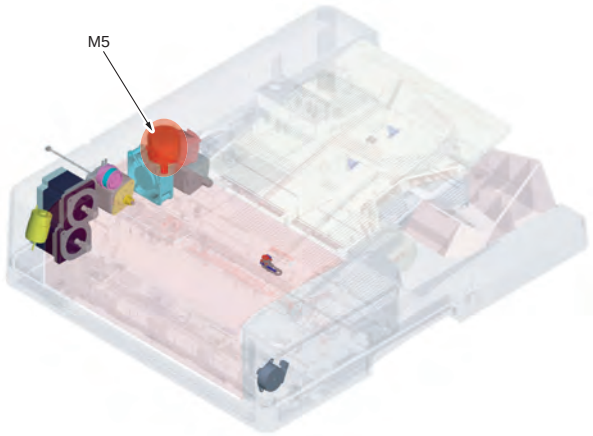
DFCB

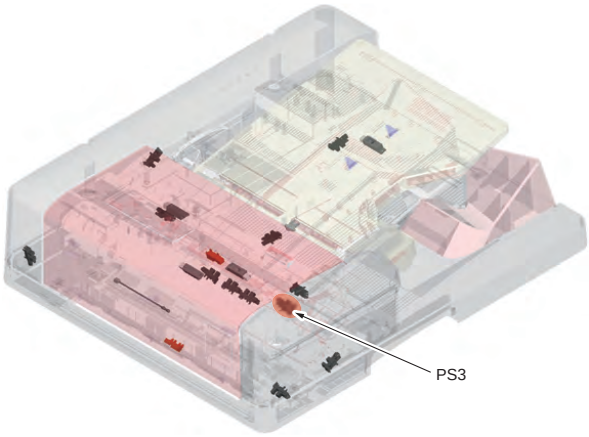




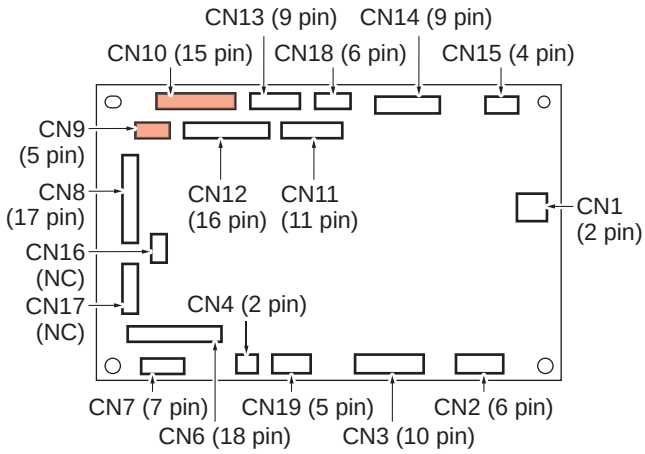
116. C8106

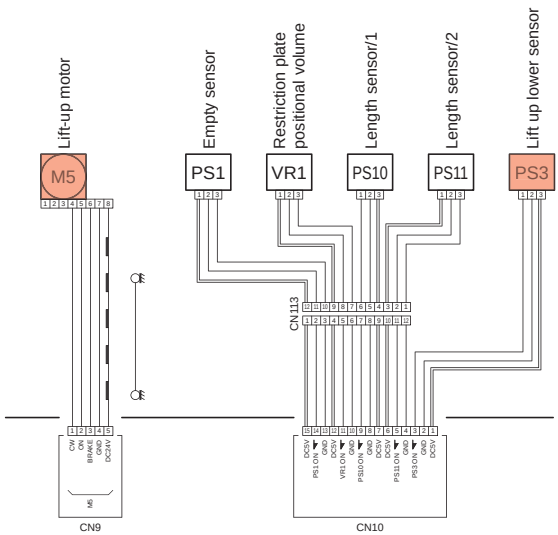






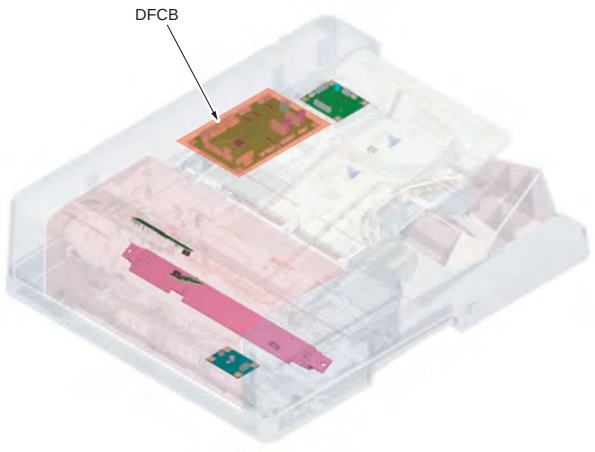
DFCB

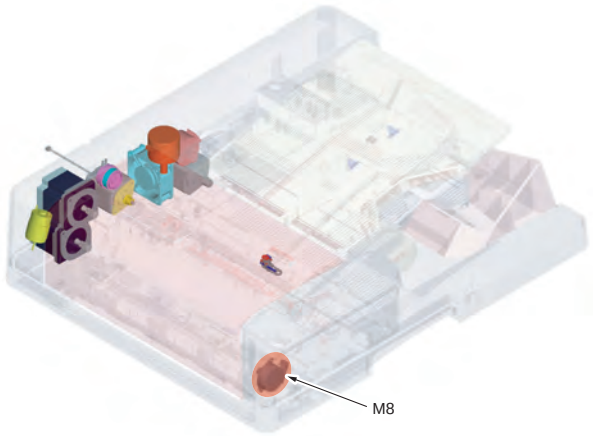


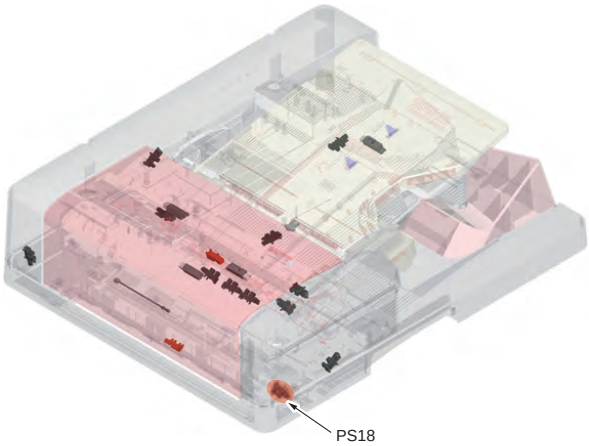


DFCB
DF control board

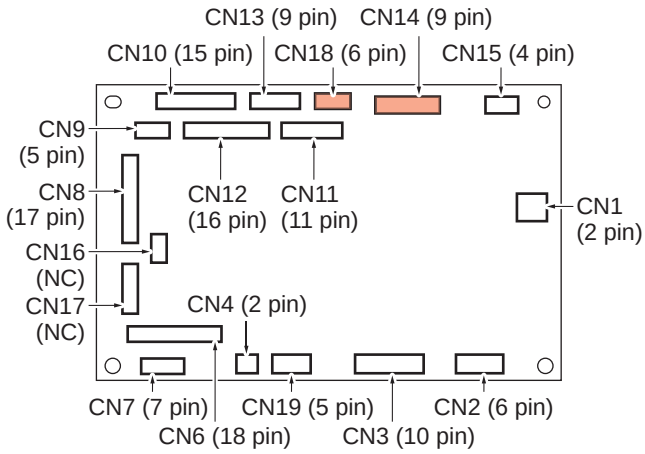
117. C8107

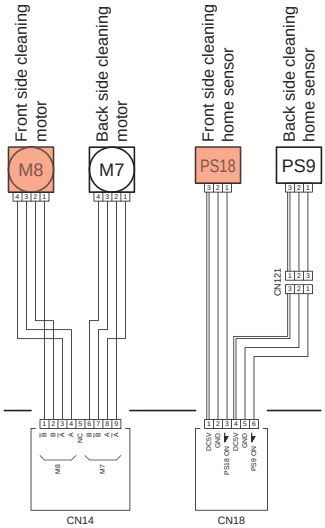






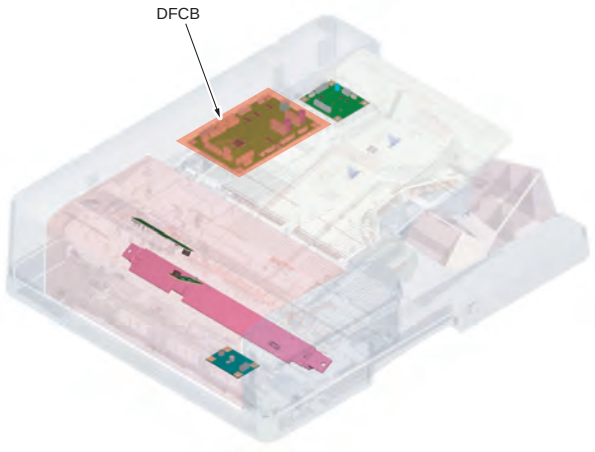
DFCB

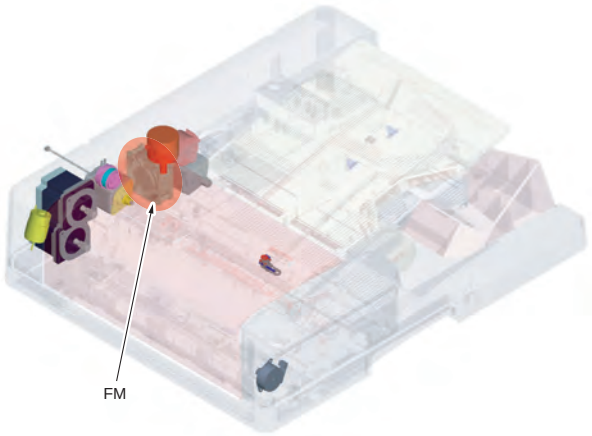




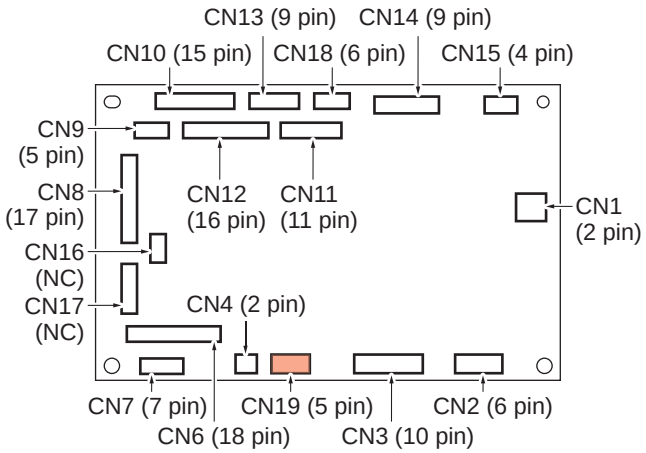
DFCB
DF control board

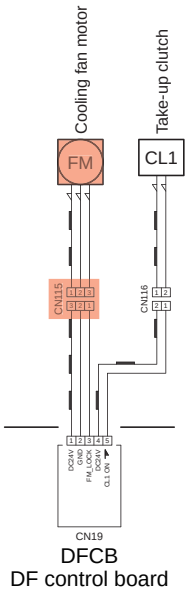
118. C8302





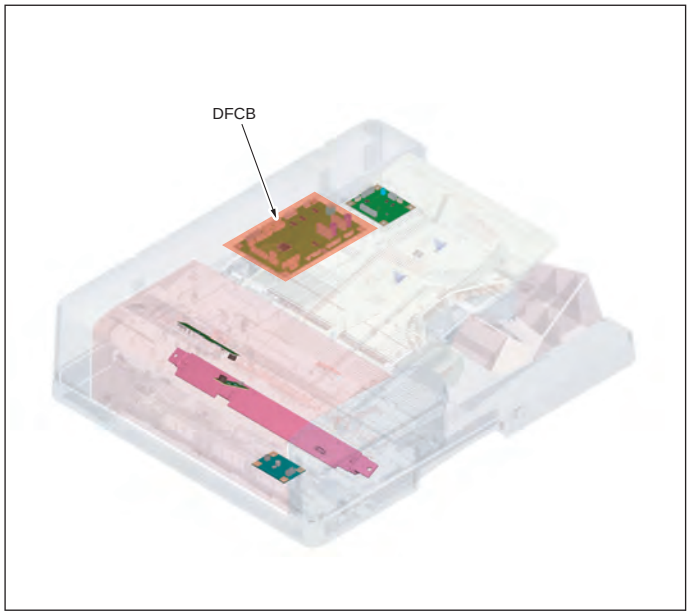
DFCB



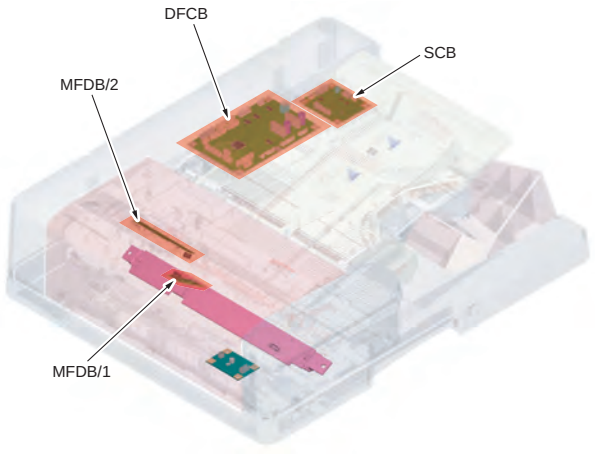


DFCB
DF control board

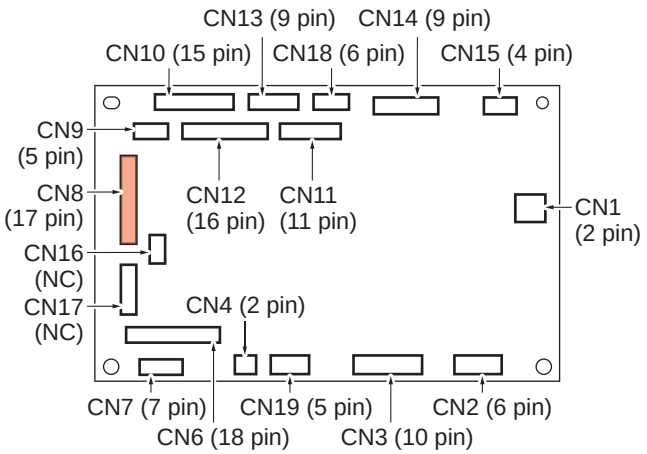
119. C8401, CC156



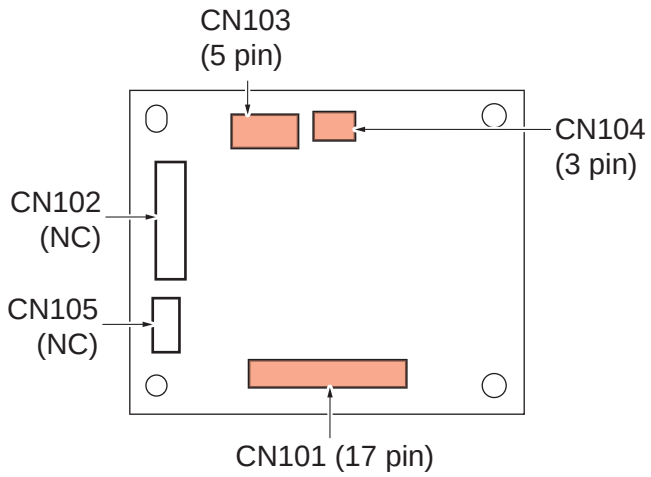
120. C8402

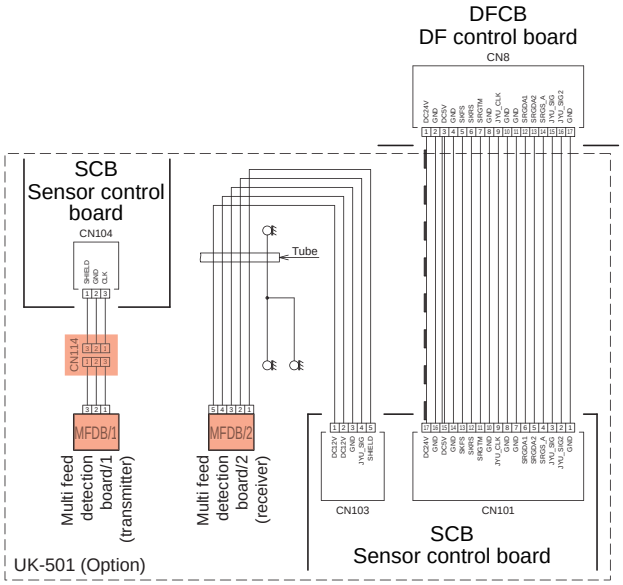


DFCB

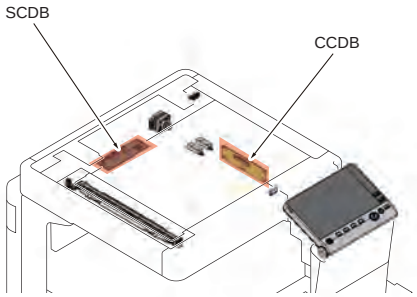


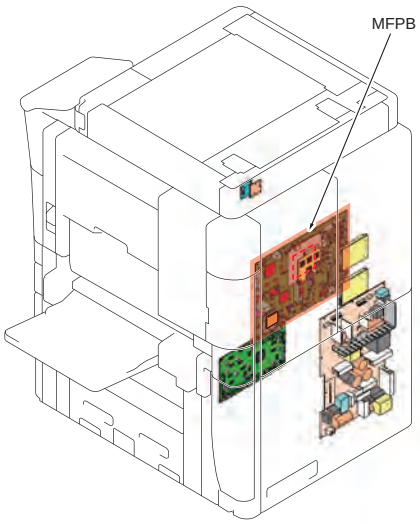
SCB



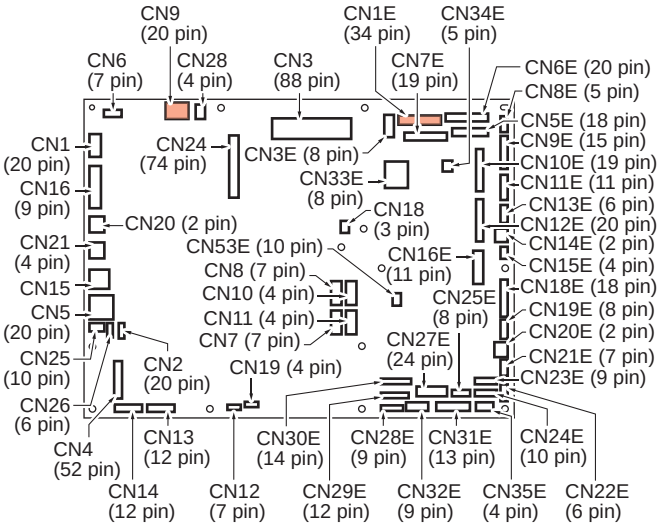


121. C9401, C9402

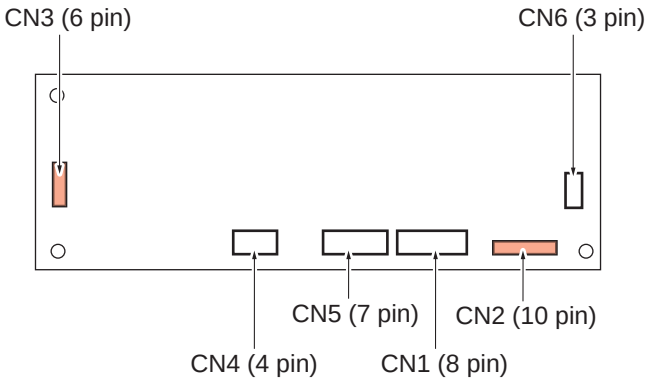


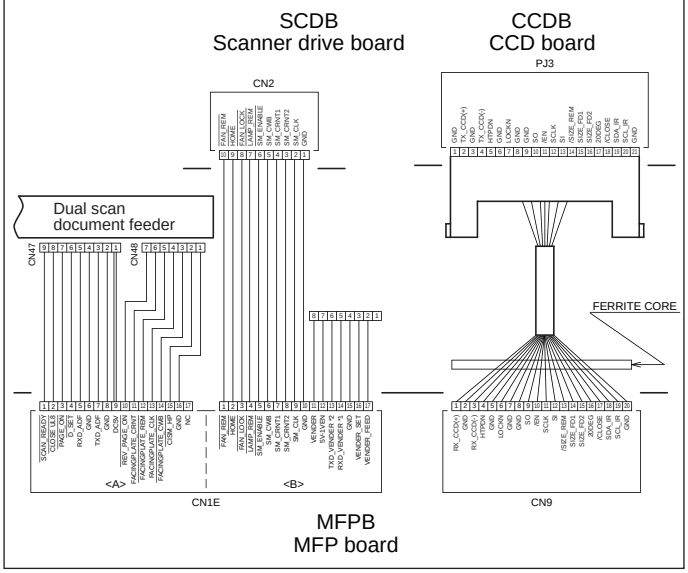


MFPB



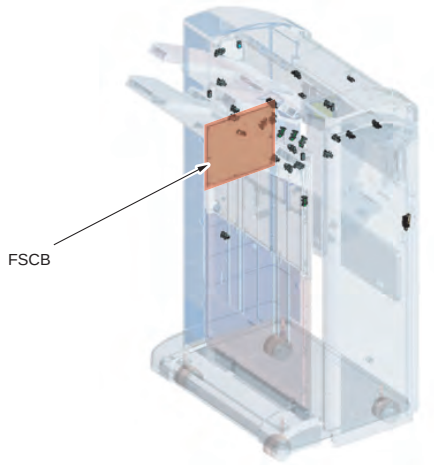
SCDB



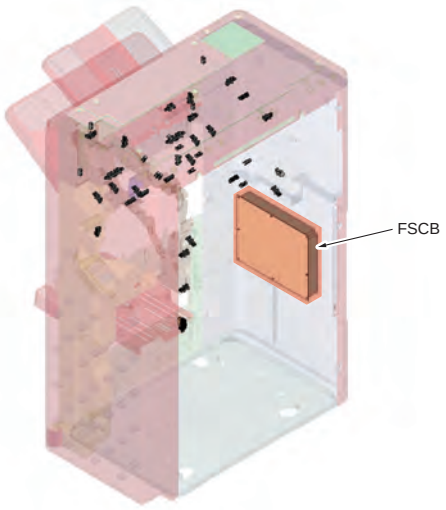


122. CC155, CD704

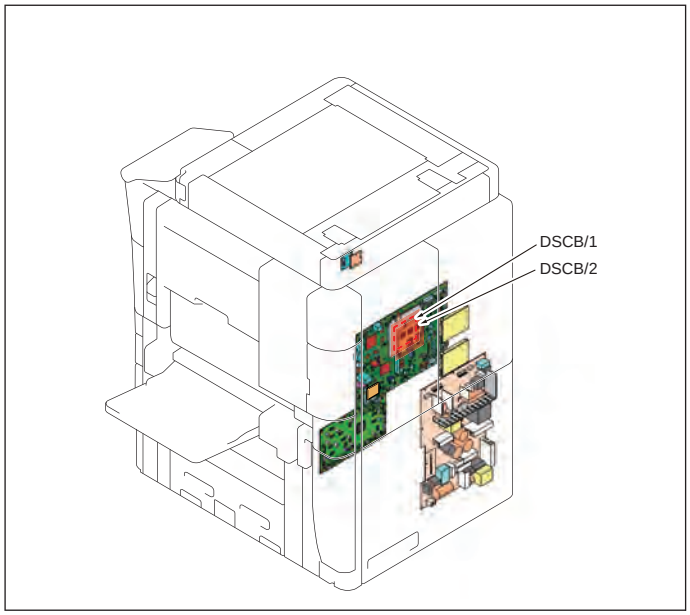
FS-536/FS-536SD



FS-537/FS-537SD

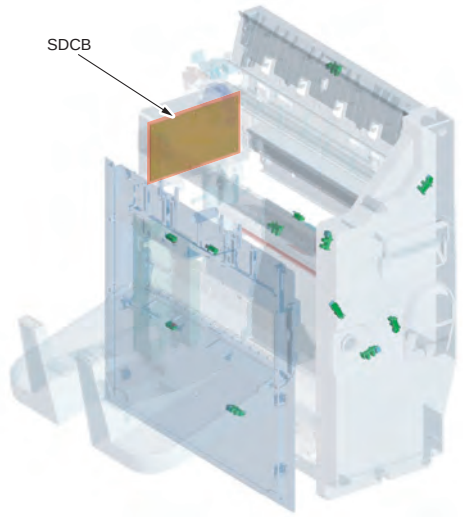


123. CC159, CC15A

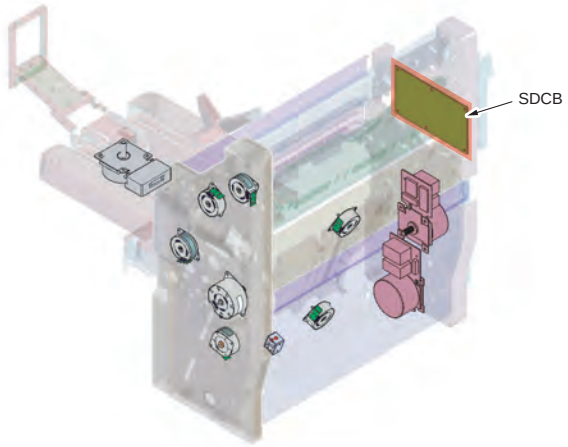


124. CC15B

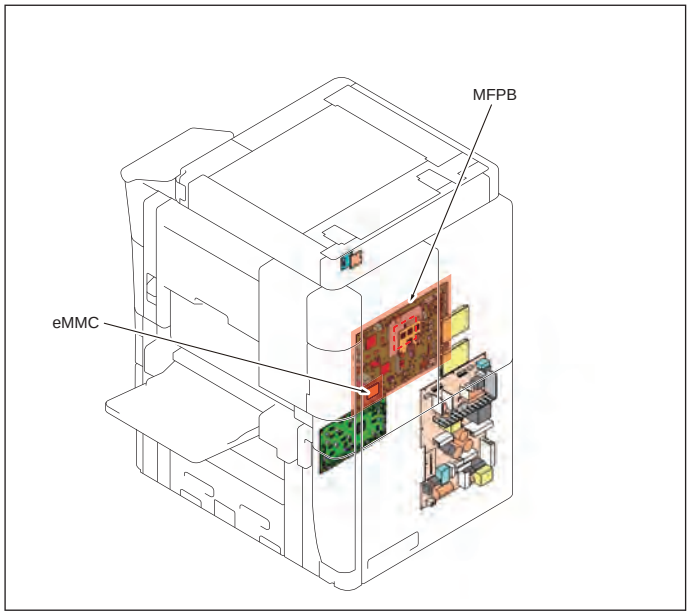
FS-536SD



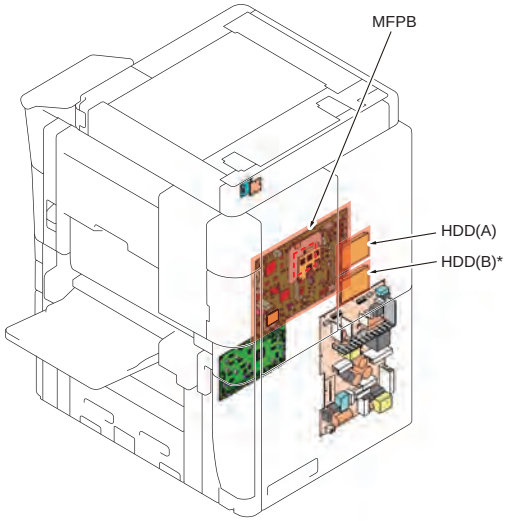
FS-537SD



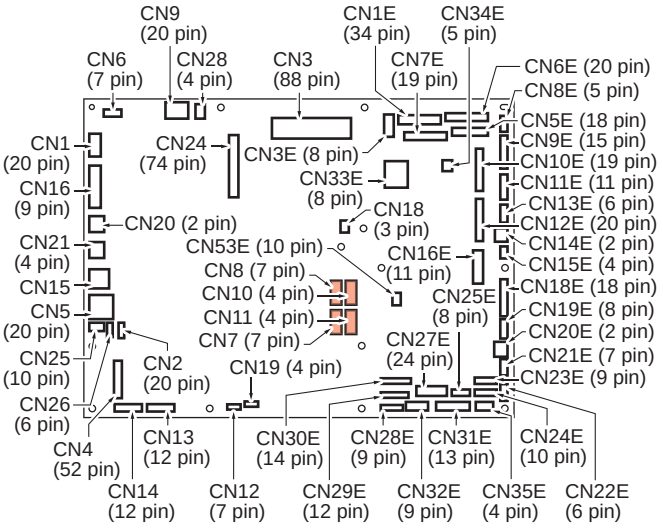
125. CC163, CC164, CD3A0

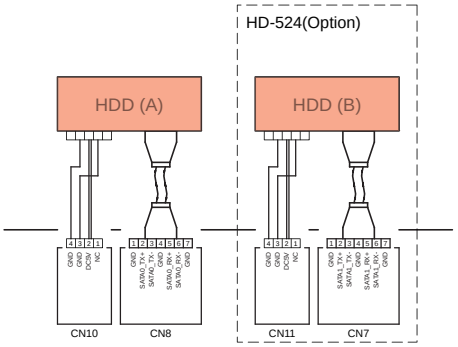


126. CC190, CD002, CD004, CD00F, CD020, CD050



MFPB

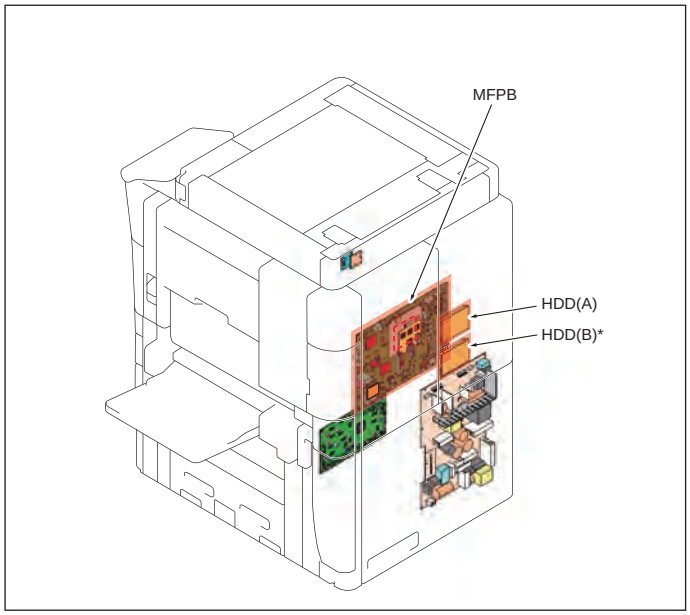




MFPB
MFP board

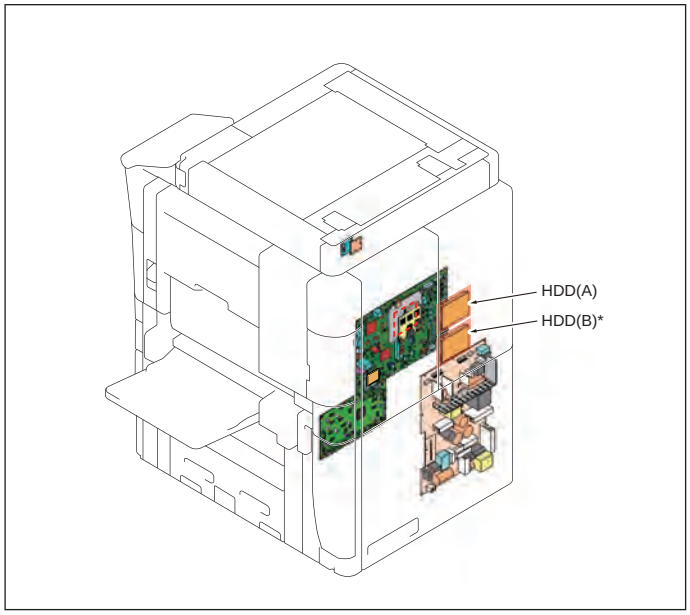
- *: Optional

127. CD010, CE002



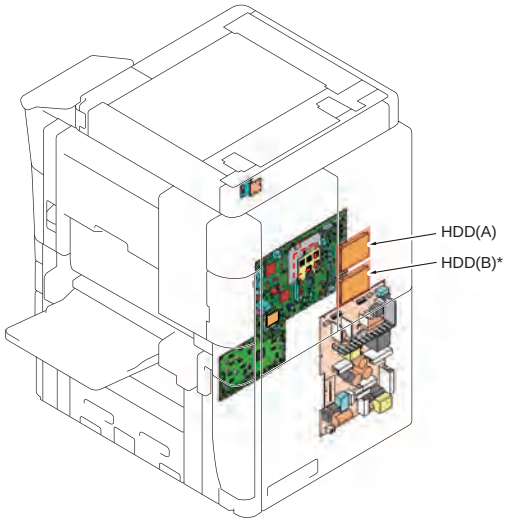
- *: Optional

128. CD011, CD012, CD013, CD014, CD015, CD016, CD017, CD041, CD042, CD043, CD044, CD045, CD046, CD047, CD048, CD049, CD04A, CD04B

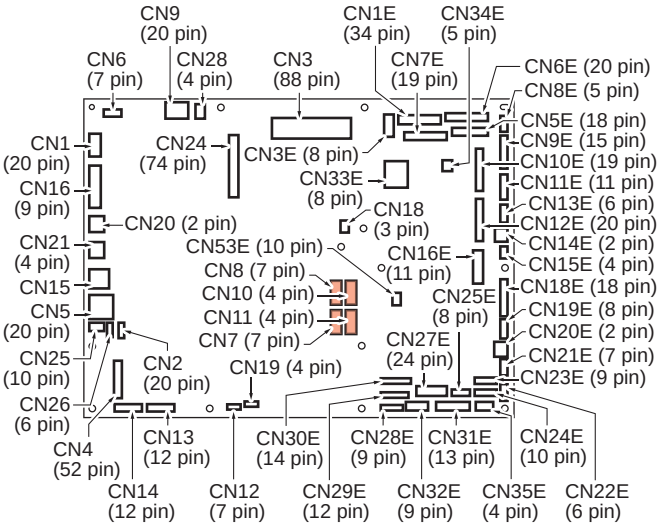


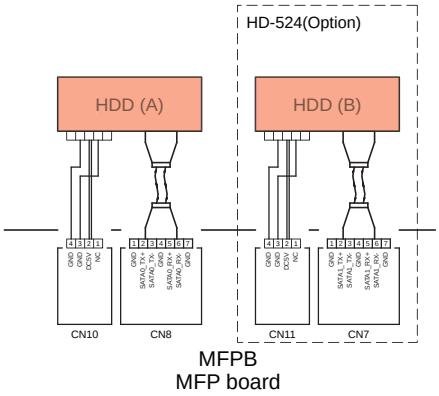
- *: Optional

129. CD030



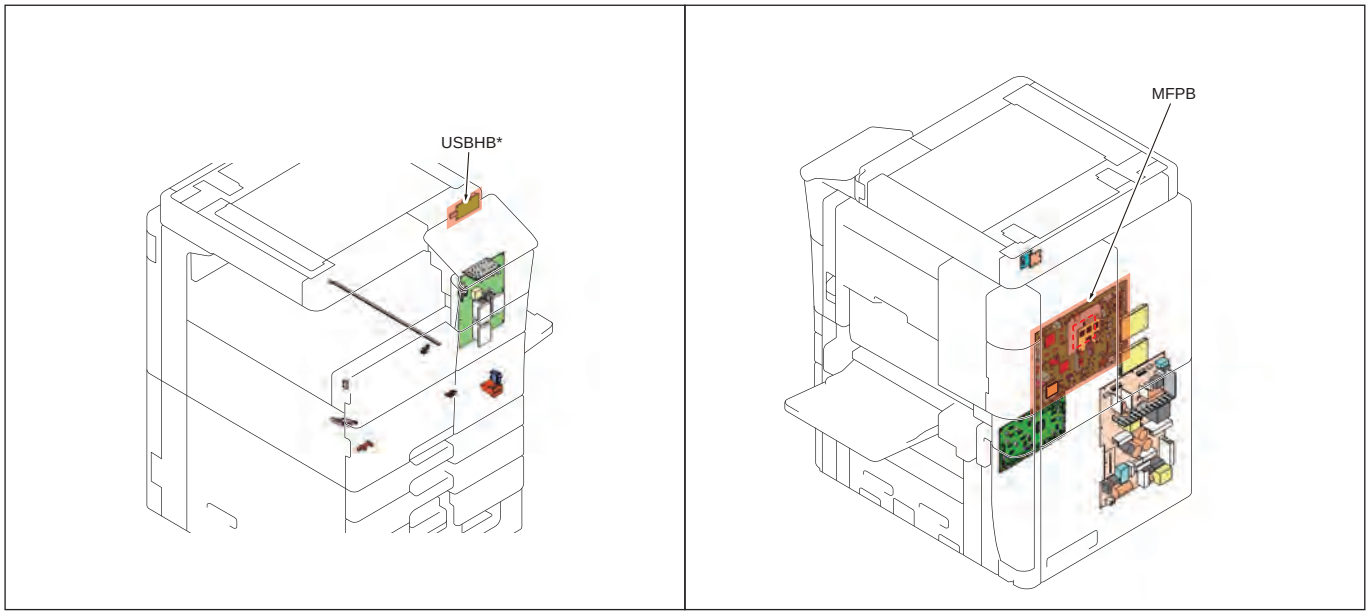
MFPB





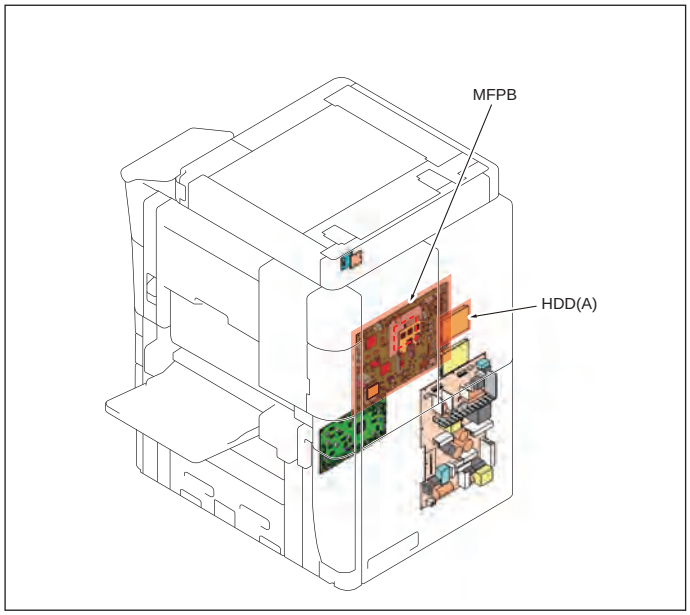
- *: Optional

130. CD261

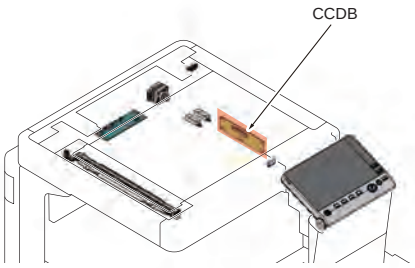


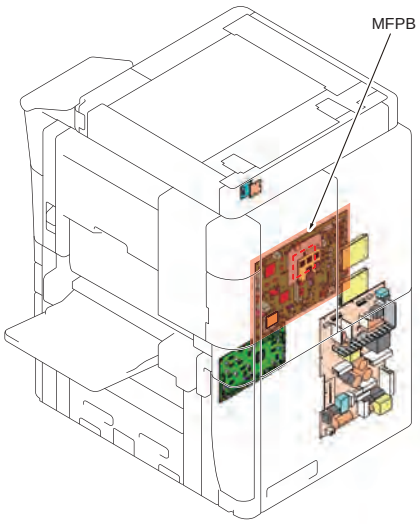
- *: Optional

131. CD272

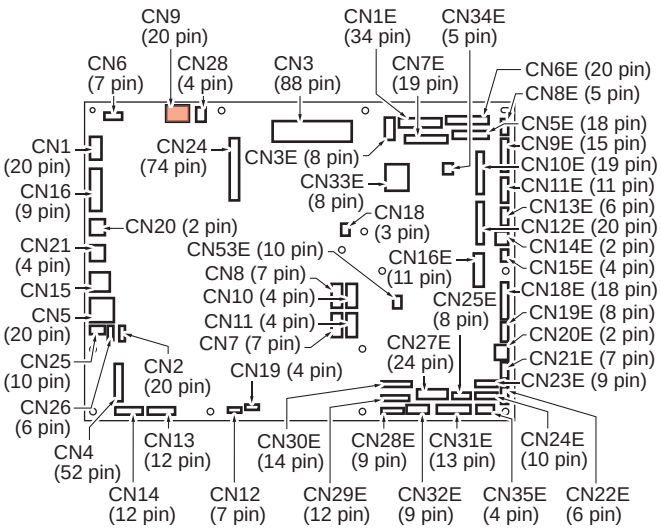


132. CDF50, CDF70, CDFA0

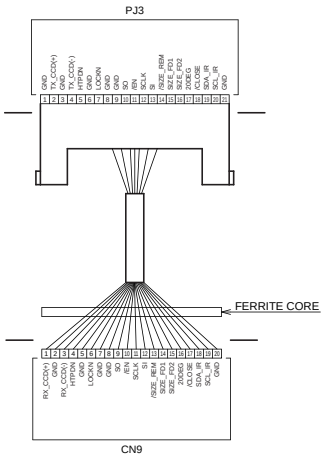




MFPB

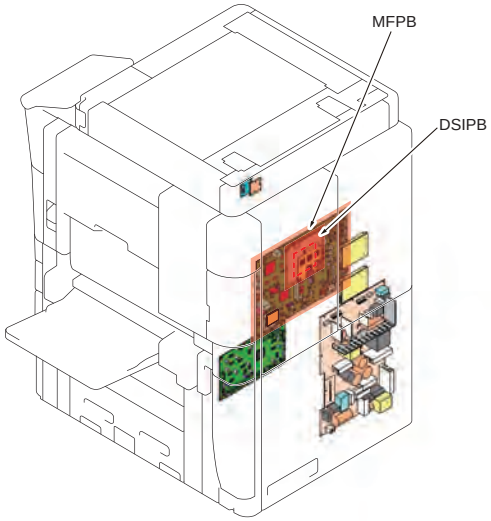


CCDB
CCD board

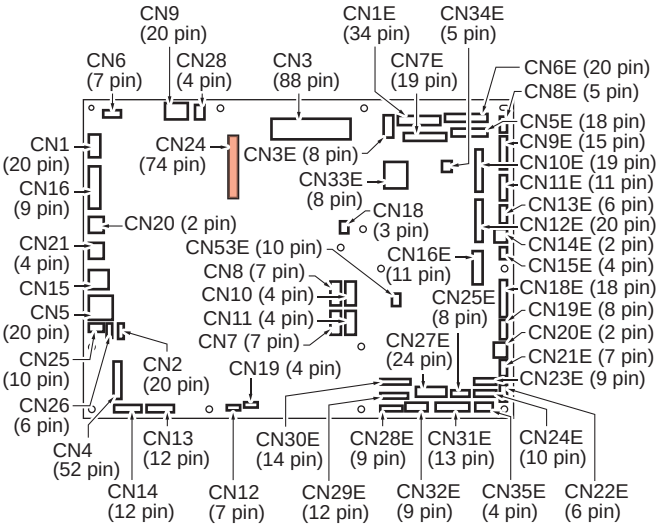


MFPB
MFP board

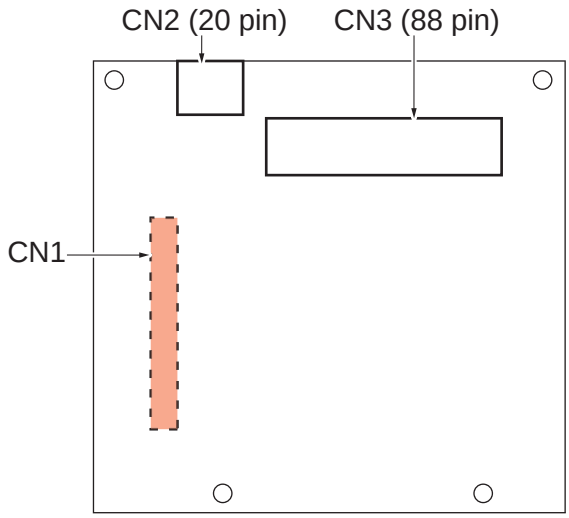
133. CDF51, CDF71, CDFA1



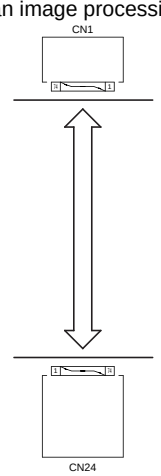
MFPB



DSIPB

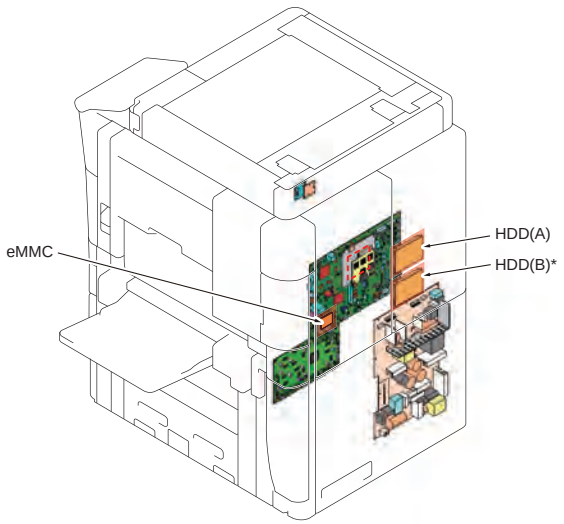


DSIPB
Dual scan image processing board

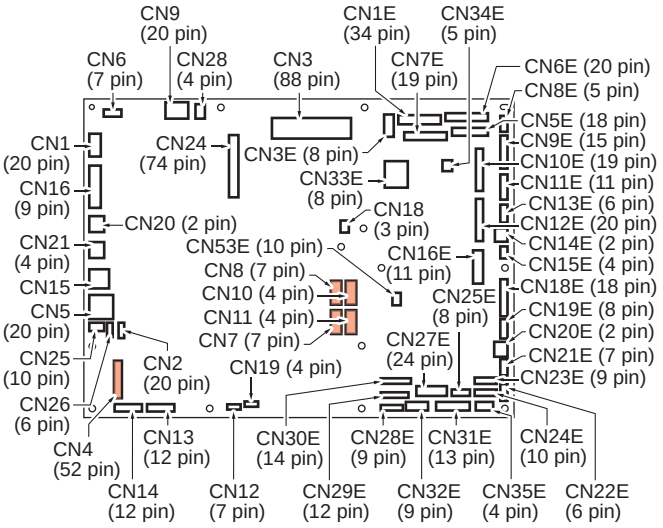


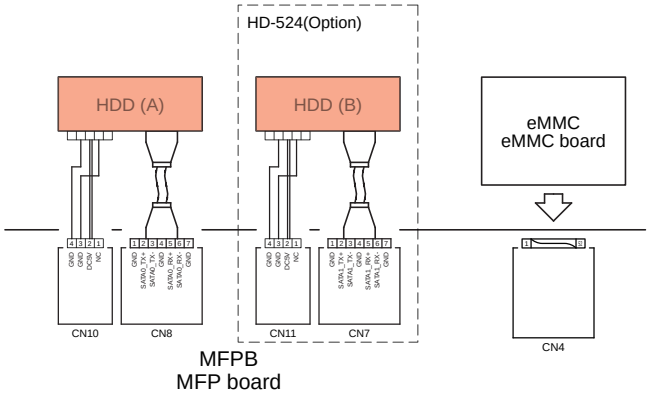
MFPB
MFP board

134. CED01



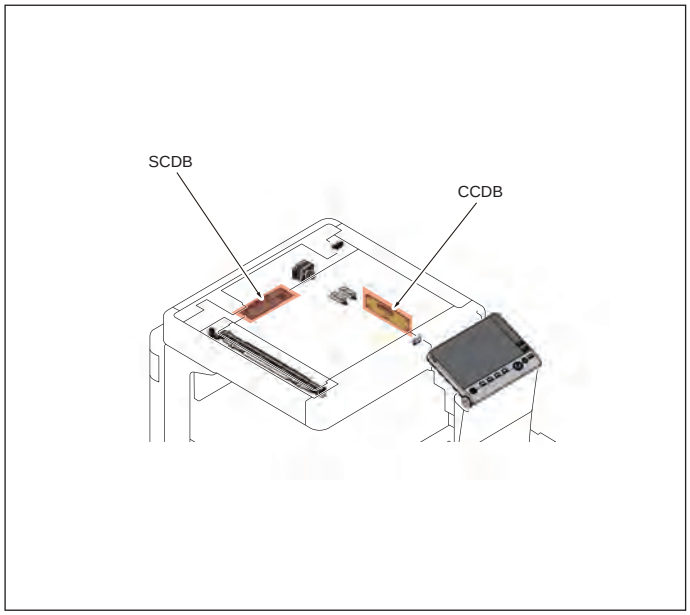
MFPB





- *: Optional

135. CEEE2



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