

SERVICE MANUAL

FIELD SERVICE

bizhub C353/C253/C203

This service manual is designed for machine with firmware card ver. J8 and onward.

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SAFETY AND IMPORTANT WARNING ITEMS

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

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 BUSINESS TECHNOLOGIES, INC. (hereafter called the KMBT) strongly recommends that all servicing be performed only by KMBT-trained service technicians.

Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KMBT 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.

DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

In this Service Manual, each of three expressions " \(\underset \) DANGER", " \(\underset \) WARNING", and " \(\underset \) CAUTION" is defined as follows together with a symbol mark to be used in a limited meaning.

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

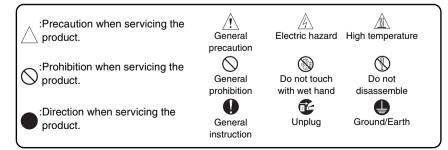


WARNING: Action having a possibility of suffering death or serious injury



CAUTION: Action having a possibility of suffering a slight wound, medium trouble, and property damage

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



SAFETY WARNINGS

[1] MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA BUSINESS TECHNOLOGIES, 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.

Prohibited Actions ⚠ DANGER Using any cables or power cord not specified by KMBT. Using any fuse or thermostat not specified by KMBT. Safety will not be assured, leading to a risk of fire and injury. Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object. Disabling relay functions (such as wedging paper between relay contacts) Disabling safety functions (interlocks, safety circuits, etc.) Safety will not be assured, leading to a risk of fire and injury. Making any modification to the product unless instructed by KMBT Using parts not specified by KMBT

[2] POWER PLUG SELECTION

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

Power Cord Set or Power Plug

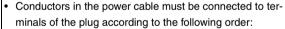
⚠ WARNING

- Use 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.



- 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.



- •Black or Brown:L (line)
- •White or Light Blue:N (neutral)
- •Green/Yellow:PE (earth)

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







[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.

Power Supply

Connection to Power Supply

⚠ WARNING

Check that mains voltage is as specified.
 Connection to wrong voltage supply may result in fire or electric shock.



 Connect power plug directly into wall outlet having same configuration as the plug.

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

If proper wall outlet is not available, advice the customer to contact qualified electrician for the installation.



 Plug the power cord into the dedicated wall outlet with a capacity greater than the maximum power consumption.
 If excessive current flows in the wall outlet, fire may result.



 If two or more power cords can be plugged into the wall outlet, the total load must not exceed the rating of the wall outlet.



If excessive current flows in the wall outlet, fire may result

 Make sure the power cord is plugged in the wall outlet securely.

Contact problems may lead to increased resistance, overheating, and the risk of fire.



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.



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 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.



 Check whether the power cord is not stepped on or pinched by a table and so on.

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 KMBT. 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.



 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.

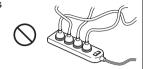


Wiring

⚠ 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 a specified one.
 Current that can flow in the extension cord is limited, so using a too long extension cord may result in fire.
 Do not use an extension cable reel with the cable taken up. Fire may result.





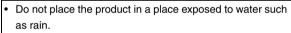
2. Installation Requirements

Prohibited Installation Places

! WARNING

 Do not place the product near flammable materials or volatile materials that may catch fire.

A risk of fire exists.









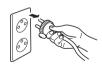
When not Using the Product for a long time

! WARNING

 When the product is not used over an extended period of time (holidays, etc.), switch it off and unplug the power cord.

Dust collected around the power plug and outlet may cause fire.





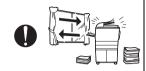
Ventilation

CAUTION

 The product generates ozone gas during operation, but it will not be harmful to the human body.

If a bad 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 taking a lot of copies
- c. When using multiple products at the same time



Stability

! CAUTION

Be sure to lock the caster stoppers.

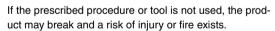
In the case of an earthquake and so on, the product may slide, leading to a injury.

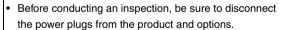


Inspection before Servicing

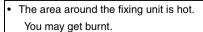
ACAUTION

Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure in safety clothes, using only the prescribed tools.
 Do not make any adjustment not described in the documentation.

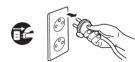


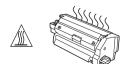


When the power plug is inserted in the wall outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.









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.



Safety Checkpoints

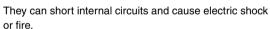
! WARNING

 Check the exterior and frame for edges, burrs, and other damage.



The user or CE may be injured.

 Do not allow any metal parts such as clips, staples, and screws to fall into the product.







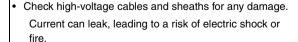
Check wiring for squeezing and any other damage.
 Current can leak, leading to a risk of electric shock or fire.



 Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit.



Current can leak, leading to a risk of product trouble or fire.







Safety Checkpoints

! WARNING

Check electrode units such as a charging corona unit for deterioration and sign of leakage.

Current can leak, leading to a risk of trouble or fire.



Before disassembling or adjusting the write unit (P/H unit) incorporating a laser, make sure that the power cord has been disconnected.

The laser light can enter your eye, leading to a risk of loss of eyesight.





Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position.

The laser light can enter your eve, leading to a risk of loss of eyesight.



When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority.





Improper replacement can cause explosion.

· 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.



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.

Current can leak, leading to a risk of electric shock or fire.





Safety Checkpoints

! WARNING

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, electric shock, and fire exists.

Handling of Consumables

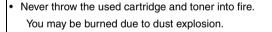
/ WARNING

 Toner and developer are not harmful substances, but care must be taken not to breathe excessive amounts or let the substances come into contact with eyes, etc. It may be stimulative.



If the substances get in the eye, rinse with plenty of water immediately. When symptoms are noticeable, consult a physician.







Handling of Service Materials

CAUTION

 Unplug the power cord from the wall outlet. Drum cleaner (isopropyl alcohol) and roller cleaner (acetone-based) are highly flammable and must be handled with care. A risk of fire exists.



 Do not replace the cover or turn the product ON before any solvent remnants on the cleaned parts have fully evaporated.





A risk of fire exists.

Handling of Service Materials

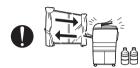
! CAUTION

 Use only a small amount of cleaner at a time and take care not to spill any liquid. If this happens, immediately wipe it off.



A risk of fire exists.

When using any solvent, ventilate the room well.
 Breathing large quantities of organic solvents can lead to discomfort.



[4] Used Batteries Precautions

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.

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.

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.

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.

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.

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.

[5] Laser Safety

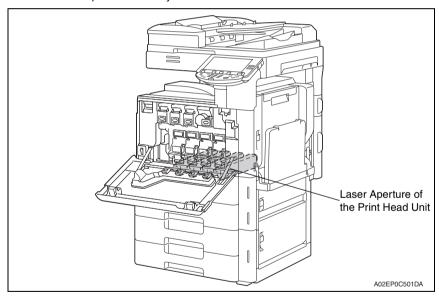
 This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

5.1 Internal Laser Radiation

semiconductor laser		
Maximum power of the laser diode		30 mW
Maximum average radiation power (*)	bizhub C353	11.6 μW
	bizhub C253/C203	7.7 µW
Wavelength		775-800 nm

^{*}at laser aperture of the print head unit

- 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.



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 page S-16 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	30 mW	
Wavelength	775-800 nm	

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	30 mW	
Wavelength	775-800 nm	

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	30 mW	
bølgelængden	775-800 nm	

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	30 mW	
aallonpituus	775-800 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	30 mW	
våglängden	775-800 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.

Norway

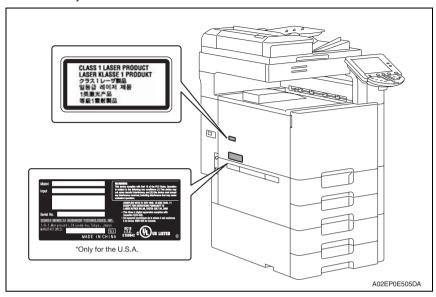
ADVERSEL

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

halvleder laser		
Maksimal effekt till laserdiode	30 mW	
bølgelengde	775-800 nm	

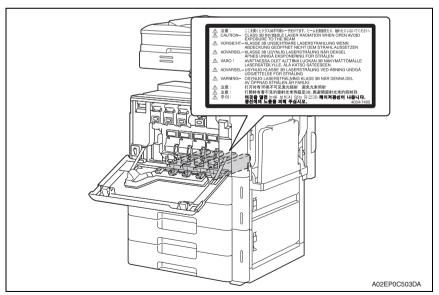
5.2 Laser Safety Label

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



5.3 Laser Caution Label

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



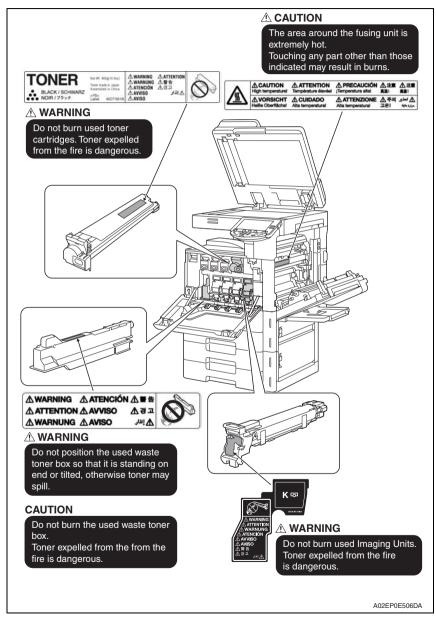
5.4 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

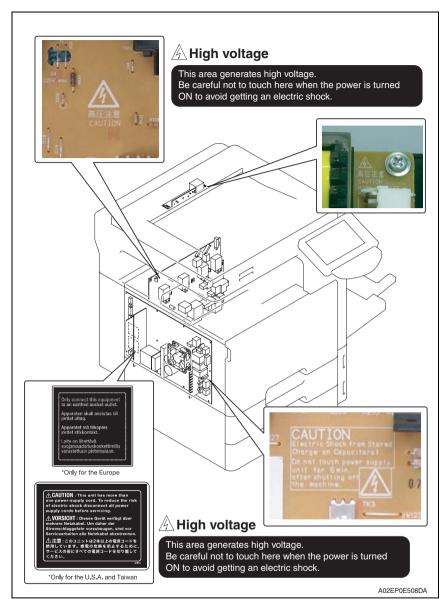
- When laser protective goggles are to be used, select ones with a lens conforming to the above specifications.
- When a disassembly job needs to be performed in the laser beam path, such as when working around the printerhead and PC drum, be sure first to turn the printer OFF.
- If the job requires 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.
- The Print head is not to be disassembled or adjusted in the field. Replace the unit or Assembly including the control board. Therefore, remove the laser diode, and do not perform control board trimmer adjustment.

WARNING INDICATIONS ON THE MACHINE

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.





∱ 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.

MEASURES TO TAKE IN CASE OF AN ACCIDENT

- 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.
- If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and KMBT 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 KMBT.
- For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

Composition of the service manual

This service manual consists of Theory of Operation section and Field Service section to explain the main machine and its corresponding options.

Theory of Operation section gives, as information for the CE to get a full understanding of the product, a rough outline of the object and role of each function, the relationship between the electrical system and the mechanical system, and the timing of operation of each part.

Field Service section gives, as information required by the CE at the site (or at the customer's premise), a rough outline of the service schedule and its details, maintenance steps, the object and role of each adjustment, error codes and supplementary information.

The basic configuration of each section is as follows. However some options may not be applied to the following configuration.

<Theory of Operation section>

OUTLINE: Explanation of system configuration,

product specifications, unit configuration, and paper path

COMPOSITION/OPERATION: Explanation of configuration of each unit,

operating system, and control system

<Field Service section>

GENERAL: Explanation of system configuration, and product

specifications

MAINTENANCE: Explanation of service schedule, maintenance steps, ser-

vice tools, removal/reinstallation methods of major parts,

and firmware version up method etc.

ADJUSTMENT/SETTING: Explanation of utility mode, service mode, and mechanical

adjustment etc.

TROUBLESHOOTING: Explanation of lists of jam codes and error codes, and

their countermeasures etc.

APPENDIX: Parts layout drawings, connector layout drawings, timing

chart, overall layout drawing are attached.

Notation of the service manual

A. Product name

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

(1) bizhub C353/C253/C203: Main body

(2) Microsoft Windows NT 4.0: Windows NT 4.0 or Windows NT

Microsoft Windows 2000: Windows 2000
Microsoft Windows XP: Windows XP
Microsoft Windows Vista: Windows Vista

When the description is made in combination of the OS's mentioned above:

Windows NT 4.0/2000

Windows NT/2000/XP/Vista

B. Brand name

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

C. 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	А3



SERVICE MANUAL

FIELD SERVICE

bizhub C353/C253/C203 Main body

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised, show to the left of the revised section.
 A number within represents the number of times the revision has been made.
- To indicate clearly a section revised, show in the lower outside section of the corresponding page.

A number within A represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2009/10	4.02	A	Error corrections (FS-519/PK-515/OT-602)
2009/04	4.01	A	Description addition of NOTE for the MFP board replacement, the Internet ISW does not work when i-Option is installed, error correction
2008/06	4.0	<u> </u>	Description addition of function enhanced version 3 firmware (Card Ver. J8)/Error corrections
2008/01	3.0	<u>^2</u>	Description addition of function enhanced version 2 firmware (Card Ver. 88)/Error corrections
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Date	Service manual Ver.	Revision mark	Descriptions of revision

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bizhub C353/C253/C203 Main body

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585	Printer monocolor: blurred image	18.3.24
586	Printer monocolor: blank copy, bla	18.3.25

Troubleshooting

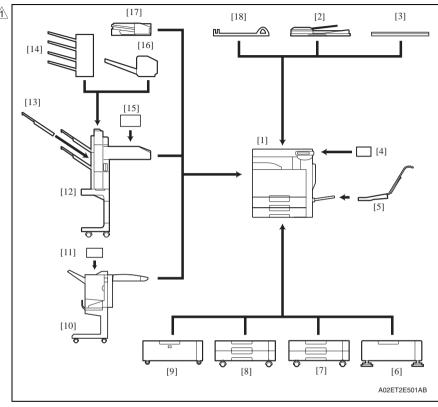
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	nector layout drawinging chart	
	ain body	
	F-611	

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Outline

1. System configuration

1/2 System front view

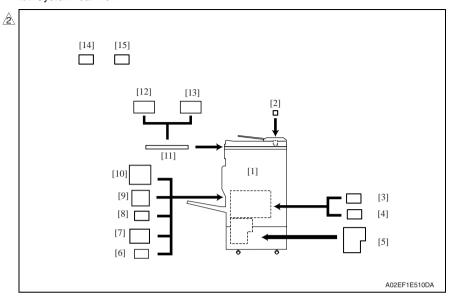


[1]	Main body		[10]	Finisher	FS-609
[2]	Reverse Automatic docui	ment feeder DF-611	[11]	Punch kit	PK-501
[3]	Original cover	OC-507	[12]	Finisher	FS-519
[4]	Key counter kit	KIT-1	[13]	Output tray	OT-602
[5]	Mount kit	MK-713	[14]	Mailbin kit	MT-502
[6]	Desk	DK-504	[15]	Punch kit	PK-515
[7]	Paper feed cabinet	PC-104	[16]	Saddle stitcher	SD-505
[8]	Paper feed cabinet	PC-204	[17]	Job separator	JS-505
[9]	Paper feed cabinet	PC-405	[18]	Assist handle	AH-101 *1

^{*1:} Option of OC-507

<u>1</u> <u>1</u>

2/2 System rear view



	[1]	Main body		[9]	Fax kit	FK-502
	[2]	Stamp unit	SP-501	[10]	Mount kit	MK-711
	[3]	Security kit	SC-503	[11]	Working table	WT-502
	[4]	Video interface kit *1	VI-504	[12]	Authentication unit (biome	etric type) AU-101
	[5]	Image controller *1	IC-409	[13]	Authentication unit (IC ca	ird type) AU-201
2	[6]	Scan accelerator kit	SA-501	[14]	i-Option	LK-101/102/103
2	[7]	Fax multi line	ML-501	[15]	Upgrade kit	UK-201
	[8]	Local interface kit	EK-603			

^{*1:} Only for bizhub C353/C253, VI-504 and IC-409 are available with upgraded firmware that includes function enhancement.

2. Product specifications

A. Type

Туре	Desktop/console *1 scanner/printer			
Printing process	Laser electrostatic printing system			
PC drum type	OPC drum: KM-12 (OPC with high mold releasability)			
Scanning density	600 dpi			
Exposure lamp	White rare-gas fluorescent lamp 30 W			
Platen	Stationary (mirror scan)			
Original scanning	Mirror scanning CCD optical system * Sheet through system when DF-611 is used			
Registration	Rear left edge			
Paper feeding separation system	Manual bypass: Small roller separation system with torque limiter Tray 1 : Roller separation system with pick-up mechanism Tray 2 : Roller separation system with pick-up mechanism Tray 3 : Roller separation system with pick-up mechanism Tray 4 : Roller separation system with pick-up mechanism			
Exposure system	Four-multi array PH unit system Polygon mirror scan system			
Exposure density	Equivalent to 1800 dpi in main scanning direction × 600 dpi in sub scanning direction			
Developing system	Dry 2 components developing method, HMT developing system			
Charging system	DC comb electrode scorotron system with electrode cleaning function (manual)			
Neutralizing system	Red LED system			
Image transfer system	Belt image transfer system (1st)/roller image transfer system (2nd)			
Paper separating system	Combination of curvature, separating claws, and bias system			
Fusing system	Belt fusing			
Heating system	Halogen lamp			

^{*1:} Only when the optional paper feed cabinet/desk is installed.

B. Functions

B. Functions				
Types of original		Sheets, books	s, and three-dimensional objects	
Max. original size		A3 or 11 x 17		
Max. original weight		Max. 2 kg		
Multiple copies		1 to 999		
Warm-up time (at ambient tempera-	· ·	switch is turned ON at any timing while the main power rapredetermined period of time or more.		
ture of 23° C/73.4° F and rated source volt- age)	C353	30 sec. or less (Monochrome print) 41 sec. or less (Color print)		
age	C253, C203	27 sec. or less 37 sec. or less	s (Monochrome print) s (Color print)	
	When the sub power s switch is turned ON.	witch is turned	ON immediately after the main power	
	C353	75 sec. or less	s (Monochrome print, Color print)	
	C253, C203	80 sec. or less	s (Monochrome print, Color print)	
Image loss	Сору	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)		
First copy time	(Tray1/2 A4 or 8 1/2 x 1	ay1/2 A4 or 8 ¹ / ₂ x 11, full size)		
	C353	5.9 sec. or less (Monochrome print) 8.5 sec. or less (Color print)		
	C253, C203	7.7 sec. or less (Monochrome print) 11.7 sec. or less (Color print)		
Processing speed	Plain paper	C353: 166.6 mm/s		
	(monochrome, full color), OHP film *2	C253, C203: 111.0 mm/s		
	Thick 1, Thick 2, Thick 3, Thick 4, Post card, Envelope, Label sheet	C353, C253, C203: 55.5 mm/s		
Copying speed for		C353: 1-sided	: 35 copies/min, 2-sided: 35 copies/min	
multi-copy cycle (A4 or 8 ½ x 11, plain	Monochrome, Full color	C253: 1-sided: 25 copies/min, 2-sided: 25 copies/min		
paper)	Coloi	C203: 1-sided	: 20 copies/min, 2-sided: 20 copies/min	
Fixed zoom ratios	Full size	x1.000		
		Metric area	x0.500, x0.707, x0.816, x0.866	
	Reduction	Inch area	x0.500, x0.647, x0.733, x0.785	
	Enlargement	Metric area	x1.154, x1.224, x1.414, x2.000	
	Enlargement	Inch area	x1.214, x1.294, x1.545, x2.000	
	Zoom ratios memory	3 memories		

in 0.001 increments

×0.250 to ×4.000

Variable zoom ratios

Paper size		Metric area	A3 to B5/B5S, A5S, 16K, 8K	
	Tray 1	Inch area	11 x 17 to 8 ½ x 11, 8 ½ x 11S, 5 ½ x 8 ½S, 8 x 13	
	Tray 2	Metric area	A3 to B5/B5S, A3 wide,16K, 8K	
		Inch area	12 x 18 to 8 ½ x 11, 8 ½ x 11S, 5 ½ x 8 ½S, 8 x 13	
	Manual bypass tray	Metric area	A3 to B6S, A6S, A3 wide, banner paper, 16K/16KS, 8K	
		Inch area	12 x 18 to 5 ¹ / ₂ x 8 ¹ / ₂ , 5 ¹ / ₂ x 8 ¹ / ₂ S, 4 x 6S, 8 x 13	
Copy exit tray capacity	Plain paper	250 sheets		
	Thick paper	10 sheets		
	OHP film	1 sheet		

C. Paper

Туре		Paper s	source (maximum tra	ay capacity)	
		Tray 1	Tray 2	Multiple bypass	
	Plain paper (60 to 90 g/m² / 16 to 24 lb)	O (500 sheets)	O (500 sheets)	O (150 sheets)	
	Translucent paper	_	_	_	
	OHP film (crosswise feeding only) *2	_	_		
	Thick paper 1 (91 to 150 g/m ² / 24.25 to 40 lb)				
	Thick paper 2 (151 to 209 g/m ² / 40.25 to 55.5 lb)	150 sheets	150 sheets	O (20 sheets)	
Copy paper type	Thick paper 3 (210 to 256 g/m² / 55.75 to 68 lb) *1				
	Thick paper 4 (256 to 271 g/m² / 68 lb to 72 lb) *1	_	_		
	Postcards	_	_		
	Envelopes	_	_	O (10 sheets)	
	Labels			O (20 sheets)	
	Long size paper (127 to 210 g/m² / 33.75 to 55.75 lb)	_	_	O (10 sheets)	
	Width	139.7 to 297 mm 5 ¹ / ₂ to 11 ³ / ₄ inch	139.7 to 311.1 mm 5 ½ to 12 ¼ inch	90 to 311.1 mm 3 ¹ / ₂ to 12 ¹ / ₄ inch	
Copypaper	Length	182 to 431.8 mm 7 ¹ / ₄ to 17 inch	182 to 457.2 mm 7 ¹ / ₄ to 18 inch	139.7 to 457.2 mm 5 ½ to 18 inch	
dimensions	Long size paper (Width x Length)	_	_	210 to 297 mm x 457.3 to 1200 mm or less 8 ¹ / ₄ to 11 ³ / ₄ inch x 18 to 47 ¹ / ₄ inch or less	

3

*1: Image is not guaranteed when thick paper 3/4 is used.

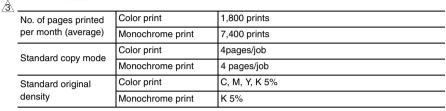
*2: Monochrome print only.

Automatic duplex unit

: Only the plain paper weighing 64 to 90 g/m² (17 to 24 lb) or thick paper weighing 91 to 256 g/m² (24.25 to 68 lb) are reliably fed.

D. Maintenance

• bizhub C353



bizhub C253

\			
	No. of pages printed per month (average) Standard copy mode	Color print	1,000 prints
		Monochrome print	4,100 prints
		Color print	3 pages/job
	Standard copy mode	Monochrome print	3 pages/job
Standard	Standard original	Color print	C, M, Y, K 5%
	density	Monochrome print	K 5%

bizhub C203

3	DIZITOD OZOG		
	No. of pages printed	Color print	700 prints
	per month (average)	Monochrome print	2,600 prints
	Standard copy mode	Color print	2 pages/job
		Monochrome print	2 pages/job
	Standard original density	Color print	C, M, Y, K 5%
		Monochrome print	K 5%

E. Machine specifications

	Voltage:	AC 100 V, 12	20 V, 127 V, 220-240 V		
	Current:	100 V	15 A		
Power requirements		110 V	15 A		
		120 V	12 A		
		127 V	12 A		
		230 V	8 A		
	Frequency:	50/60 Hz ± 3 Hz			
Max power consumption		1,500 W or less			
Dimensions		643 *1 (W) x 852 (H) x 770 mm (H) *2 25.25 *1 (W) x 33.5 (D) x 30.25 inch (H)			
Space requirements		39 (W) x 33.	52 mm (D) *2 5 inch (D) *2 1,168 mm (D) *3 inch (D) *3		
Woight	Machine	Approx. 99 k	g / 218.25 lb (without IU and TC)		
Weight	IU and TC	Approx. 6.8 kg / 15 lb			

^{*1:} Width when the manual bypass tray is closed

F. 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.

^{*2:} Height up to the original glass

^{*3:} When the finisher is separated and the paper feed tray is slide out

G. Print functions

Type		Built-in type controller				
		C353	35 prints/min (color/monochrome, A4, 1-sided)			
Print	speed	C253	25 prints/min (color/monochrome, A4, 1-sided)			
		C203	20 prints/min (color/monochrome, A4, 1-sided)			
		C353	5.9 sec. or less (monochrome, A4)			
First p	print time	C253	7.7 sec. or less (monochrome, A4)			
		C203	7.7 sec. or less (monochrome, A4)			
Reso	lution	Data processing	600 x 600 dpi (print function, FAX function) 400 x 400 dpi (FAX function) 200 x 200 dpi (FAX function)			
		Printing	Equivalent to 1800 dpi in main scanning direction x 600 dpi in sub scanning direction			
Printe	er language	PCL5e/c emulation PCL XL Ver. 2.1 e PostScript 3 emul XPS Ver. 1.0	emulation			
RAM		1024 MB				
Hard	Disk	60 GB				
Host	interface	Ethernet (10Base-T or 100Base-TX) USB 2.0/1.1				
Netwo	ork protocol	TCP/IP(IPv4/IPv6), BOOTP, ARP, ICMP, DHCP, AutoIP, SLP, SNMP, FTP, LPR/L RAW Socket, SMB over TCP/IP, IPP, HTTP, POP, SMTP, LDAP, NTP, SSL, IPX/S AppleTalk, Bonjour, NetBEUI, WebDAV, WSD, S/MIME, IPsec, DNS, DynamicDI				
Netwo service	ork print ce	Pserver (Bindery)	(NDS) NetWare 4.x, 5.x, 6.x (Bindery) NetWare 4.x NetWare 5.x, 6.x W port printing			
		PCL6 printer driver	Windows NT4.0 (SP6a or later) Windows 2000 Professional (SP4 or later) Windows XP Home Edition/Professional (SP2 or later) Windows XP Professional x64 Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise, Windows Vista Home Basic/ Home Premium /Ultimate /Business /Enterprise x64 edition Windows Server 2003, Windows Server 2003 x64			
		PS3 printer driver	Windows 2000 Professional (SP4 or later) Windows XP Home Edition/Professional (SP2 or later) Windows XP Professional x64, Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise, Windows Vista Home Basic/ Home Premium /Ultimate /Business /Enterprise x64 edition Windows Server 2003, Windows Server 2003 x64			

_	Driver	PostScript PPD driver	Macintosh OS 9.2 or later Macintosh OS X 10.2/10.3/10.4			
Δ		Fax driver	Windows NT4.0 (SP6a or later) Windows 2000 Professional (SP4 or later) Windows XP Home Edition/Professional (SP2 or later) Windows XP Professional x64 Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise, Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise x64 edition Windows Server 2003, Windows Server 2003 x64			
		XPS driver	Windows Vista XPS mini driver			
_	Utility	PageScope Web	Connection			
	Compatible paper size	Max. standard paper size A3 Wide (Long size paper: Width 210 mm to 297 mm x Length 457.3 mm to 1200 mm)				
	Power require- ments	' I Shared with Main body				
	Operating envi- ronmental requirements	10 to 30° C (50 to 15 to 85 %	86° F)			
_	Fonts	PCL	Latin 80 fonts			
	FUIIS	PS	Latin 137 fonts			

H. Scan functions

Driver	KONICA MINOLTA scanne	KONICA MINOLTA scanner driver				
Compatible operating systems	Windows / NT4.0 SP6 / 2000 / XP/Vista					
Scan speed (A4 or 8 ¹ / ₂ x 11)	Monochrome, Full color	Monochrome, Full color 70 pages/min (Resolution 300 dpi)				
Scannable range	Same as the copier (Max.	Same as the copier (Max. A3)				
Functions	Scan to E-mail, Scan to FTP, Scan to SMB, Scan to BOX					
Resolution	200/300/400/600 dpi					

NOTE

• These specifications are subject to change without notice.

neral

Blank Page

bizhub C353/C253/C203

Maintenance

3. Periodical check

3.1 Maintenance items

NOTE

 Cleaning/replacement cycle for each maintenance item of main body/options can be evaluated with each life counter value of [Service mode] → [Counter] → [Life].

3.1.1 Main body

A. Parts to be replaced by users (CRU)

No	Class	Parts to be replaced	Cycle	Clean	Replace	Descrip- tions
1		Imaging unit Y,M,C	C353:90,000 C253:75,000 C203:55,000		•	*1
2		Imaging unit K	C353:120,000 C253:100,000 C203:70,000		•	*1
3	Processing sections	Toner cartridge Y,M,C	C353:20,000 C253:19,000 C203:19,000		•	*1
4		Toner cartridge K	C353:26,000 C253:24,500 C203:24,500		•	*1
5		Electrostatic charger wire	When toner cartridge K is replaced	•		
6	Image transfer section	Waste toner box	(50,000)		•	*1,2

^{*1:} The parts can be replaced either by user or service engineer. For details of setting, see [Unit Change] on "Adjustment/Setting." See P.397

B. Maintenance call (per 60,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3	Conveyance section	Timing roller	_		•			
4	Image transfer section	Around waste toner port	_		•			
5	Duplex section	Duplex transport roller	_		•			

^{*2:} A waste toner full condition is detected with detecting the actual waste toner emissions.

À

C. Periodical parts replacement/cleaning 1 (per 150,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3		Image transfer entrance guide	_		•			
4	Image transfer section	IDC/registration sensor	_		•			
5	Section	Transfer belt unit	1			•		
6		Transfer roller unit	1			•		
7	Processing sections	Ozone filter	1			•		

D. Periodical parts replacement/cleaning 2 (per 200,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3	Manual bypass	Feed roller	1			•		*1
4	tray	Separation roller assy	1			•		

^{*1:} Replace those parts at the same time.

E. Periodical parts replacement/cleaning 3 (per 300,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3		Pick-up roller	1			•		
4	Tray1, Tray 2	Feed roller	1			•		*1
5		Separation roller assy	1			•		

^{*1:} Replace those parts at the same time.

F. Periodical parts replacement/cleaning 3 (per 400,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3	Fusing section	Fusing unit	1			•		

3.1.2 DF-611

A. Maintenance call (per 50,000-original feed)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3		Pick-up roller	_		•			
4	Paper feed section	Feed roller			•			
5	00011011	Separation roller			•			
6	Conveyance section	Roller and rolls	_		•			
7	Scanning section	Scanning guide	_		•			
8	Paper feed section	Reflective sensor section	_		•			

B. Periodical parts replacement/cleaning 1 (per 200,000-original feed)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3		Pick-up roller	2			•		
4	Paper feed section	Feed roller	1			•		*1
5		Separation roller	1			•		

^{*1:} Replace those three parts at the same time.

3.1.3 PC-104/204/405

A. Periodical parts replacement/cleaning 1 (per 300,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3		Pick-up roller	1			•		
4	Paper feed section	Feed roller	1			•		*1
5		Separation roller	1			•		

^{*1:} Replace those three parts at the same time.

3.1.4 FS-519

A. Periodical parts replacement/cleaning 1 (per 300,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3	Conveyance	Paper feed roller, roll	_		•			
4	section	Paddle	_		•			

B. Periodical parts replacement/cleaning 2 (per 800,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3		Paddle	1			•		
4	Conveyance	Cleaning pad	1			•		
5	section	Worm gear	_		•		•	
6		Cover film	1			•		

1 3.1.5 FS-609

A. Periodical parts replacement/cleaning 1 (per 300,000-print)

No.	Class	Parts to be replaced	Qt.	Check	Clean	Replace	Lubri- cation	Descrip- tions
1	Overall	Paper feed and image conditions	_	•				
2		Appearance	_	•	•			
3	Conveyance section	Paper transport roller, roll	_		•			

bizhub C353/C253/C203

3.2 Maintenance parts

- To ensure that the machine produces good copies and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.
- Replace with reference to the numeric values displayed on the Life counter.
- Maintenance conditions are based on the case of A4 or 8 ¹/₂ x 11, standard mode and low power mode OFF.

		Color	B/W
	bizhub C353	4 pages per job	4 pages per job
*Standard mode	bizhub C253	3 pages per job	3 pages per job
	bizhub C203	2 pages per job	2 pages per job

3.2.1 Replacement parts

A. Main body

No.	Classification	Parts name	Qt.	Actual durable cycle *1	Parts No.	Descrip tions	Ref. page
1		Feed roller	1	300,000	A00J 5636 ##		P.22
2	Tray 1	Separation roller assy	1	300,000	A02E F566 ##	*2	P.25
3		Pick-up roller	1	300,000	A00J 5636 ##		P.22
4		Feed roller	1	300,000	A00J 5636 ##		P.26
5	Tray 2	Separation roller assy	1	300,000	A02E F566 ##	*2	P.29
6		Pick-up roller	1	300,000	A00J 5636 ##		P.26
7	Manual	Feed roller	1	200,000	A02E 5947 ##	*2	P.30
8	bypass tray	Separation roller assy	1	200,000	4034 0151 ##	2	P.32
9		Imaging unit Y,M,C	1	C353:90,000 C253:75,000 C203:55,000	_		P.35
10	December	Imaging unit K		C353:120,000 C253:100,000 C203:70,000	_		F.33
11	Processing section	Ozone filter	1	150,000	A02E R730 ##	*3	P.39
12		Toner cartridge Y,M,C	1	C353:20,000 C253:19,000 C203:19,000	_		P.39
13		Toner cartridge K	1	C353:26,000 C253:24,500 C203:24,500	_		P.39
14		Transfer roller unit	1	150,000 *5	A02E R713 ##		P.34
15	Image trans- fer section	Transfer belt unit	1	150,000	A02E R730 ##	*3	P.41
16	ioi deciloii	Waste toner box	1	(50,000)	A0DT WY0	*4	P.33
	. .				A02E R733 ##	*6	
17	Fusing section	Fusing unit	1	400,000	A02E R720 ##	*7	P.44
	section				A02E R721 ##	*8	

^{*1:} Actual durable cycle is the life counter value.

^{*2:} Replace those parts at the same time.

^{*3:} The ozone filter is furnished with the transfer belt unit so that all of them are replaced at one time.

- *4: A waste toner full condition is detected with detecting the actual waste toner emissions.
- *5: Because there is no life-counter for the transfer roller unit, substitute it by the life-counter of the transfer belt unit.
- *6: 110 V areas only.
- *7: 120 V areas only.
- *8: 220-240 V areas only.

B. Option

No.	Classification	Parts name	Qt.	Actual durable cycle *1	Parts No.	Descrip tions	Ref. Page
1		Pick-up roller	2	200,000	9J07 3301 ##		
2	DF-611	Feed roller	1	200,000	4030 3005 ##	*2	
3		Separation roller	1	200,000	9J07 3409 ##		
4	PC-104	Pick-up roller	1	300,000	A00J 5636 ##		
5	PC-204	Feed roller	1	300,000	A02E F566 ##	*2	*3
6	PC-405	Separation roller	1	300,000	A00J 5636 ##		3
7	7 8 FS-519	Paddle	1	800,000	9J08 1605 ##		
'		radule	1	800,000	A01G 7203 ##		
8		Cleaning pad	1	800,000	A01G 7205 ##		
9		Cover film	1	800,000	A01G 8947 ##		

^{*1:} Actual durable cycle is the life counter value.

^{*2:} Replace those parts at the same time.

^{*3:} See each option service manual.

bizhub C353/C253/C203

3.2.2 Cleaning parts

No.	Classification	Parts name	Actual cleaning cycle *1	Descrip tions	Ref.Page
1	Processing section	Electrostatic charger wire	When toner cartridge C/M/Y is replaced		P.20
2	Conveyance section	Timing roller	Upon each call (60,000)		P.20
3		Area around the waste toner collecting port	Upon each call (60,000)		P.21
4	Image transfer section	mage transfer entrance quide When transfer belt unit is replaced			P.43
5		IDC/registration sensor	(150,000)		P.43
6	Duplex section Duplex transport roller U		Upon each call (60,000)		P.21
7		Pick-up roller	50,000		
8		Feed roller	50,000		
9		Separation roller	50,000		
10	DF-611	Rollers and rolls	50,000		*1
11		Scanning guide	50,000		
12		Reflective sensor section	50,000		
13		Paper feed roller, roll	300,000		
14	FS-519	Paddle	300,000		*2
15		Worm gear	800,000		
16	FS-609	Paper transport roller, roll	300,000		_

^{*1:} See DF-611 service manual.

^{*2:} See FS-519/PK-515/OT-602 service manual.

3.3 Concept of parts life

3.3.1 Life value of consumables and parts

- The life counter value of each materials and parts is available from [Service Mode] → $[Counter] \rightarrow [Life].$
- · 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.

		Description	Life value (Specifica- tion value)	Max. life value
	Waste toner box	The waste toner full sensor detects the amount of toner accumulated in the waste toner box and sends a signal that determines the end of the waste toner box life.	50,000 *1,2	-
î	Fusing unit	When the number of printed pages *6 reaches the set life value shown on the right, the end of unit life is detected.	400,000	470,000 *3
Ŷ	Transfer belt unit	Comparing the number of printed pages *6 with the number of printed pages calculated based on how long the transfer belt has run, the machine detects the end of unit life when either of them reaches the set value shown on the right. (However, to detect whether the unit reaches the max. life value, the machine uses only the number of printed pages calculated based on how long the transfer belt has run.)	150,000	180,000 *3
	Imaging unit C,M,Y	Comparing the PC drum rotation time with the PC drum rotation time calculated based on the number of printed pages *6, the machine detects the end of unit life when		
	Imaging unit K	either of them reaches the set value shown in the table below. * The PC drum rotation is calculated based on the distance the PC drum has run.	See the imag values in the	

<maging unit life value *4>

\triangle			Life value (Sp	pecification value)	Max. life value		
			Normal *5	Long (Suspend) *5	Normal *5	Long (Suspend) *5	
	bizhub C353	Y,M,C	M,C 5,005 M	7,508 M	5,116 M	7,674 M	
	DIZNUD C353	K	5,674 M	8,511 M	5,769 M	8,654 M	
	bizhub C253	Y,M,C	8,334 M	12,501 M	8,557 M	12,836 M	
	DIZITUD CZ55	K	8,201 M	12,302 M	8,365 M	12,548 M	
	bizhub C203	Y,M,C	8,570 M	12,855 M	8,882 M	13,323 M	
	DIZITUD OZOG	K	8,560 M	12,840 M	8,805 M	13,208 M	

- *1: A waste toner full condition is detected with detecting the actual waste toner emissions.
- *2: Once the toner-full is detected, it has to be replaced with the new waste toner box in order to reset.
- *3: The initiation of any new print cycle is inhibited when reaching the max. life value.
- *4: The mark "M" is indicated the value of the number of distance through which the PC drum has run translated to a corresponding value of the number of hours and the value.

- *5: "Normal" and "Long" are the settings provided in [Service Mode] → [System 1] →

 [IU Life Setting]. (The options available on the display are [Normal] / [Suspend], if the firmware of function enhanced version 1 or later is installed.)
 - *6: The count condition is different according to the paper length of the sub scanning direction.

Paper length of sub scanning direction	Count value
Less than 216 mm	1 count
216 mm to 432 mm	2 counts
432 mm to 648 mm	3 counts
648 mm to 864 mm	4 counts
over 864 mm	5 counts

3.3.2 Conditions for life specifications values

Item		Description		
	bizhub C353	Monochrome : Making 4 copies per job Color : Making 4 copies per job		
Job type	bizhub C253	Monochrome : Making 3 copies per job Color : Making 3 copies per job		
	bizhub C203	Monochrome : Making 2 copies per job Color : Making 2 copies per job		
Paper size		A4 or 8 ¹ / ₂ x 11		
	bizhub C353	Black: 7,400 / Color: 1,800		
CV/M	bizhub C253	Black: 4,100 / Color: 1,000		
	bizhub C203	Black: 2,600 / Color: 700		
Original density	Color	5 % for each color		
(Coverage)	Monochrome	K 5 %		
Low power mode		OFF		
No. of operating days per month		20 days (main power switch turned ON and OFF 20 times per month)		

3.3.3 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.

Target parts: Fusing unit, image transfer belt unit, imaging unit /C, imaging unit /M, imaging unit /Y. imaging unit /K

nance

3.4 Maintenance procedure (periodical check parts)

NOTE

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

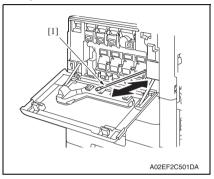
3.4.1 Cleaning of the electrostatic charger wire

A. Periodically cleaning parts/cycle

• Electrostatic charger wire: when toner cartridge K is replaced

B. Procedure

1. Open the front door.



 Slowly pull out the charger-cleaning tool [1] as far as possible.
 Next, slowly push in the charger cleaning tool as far as possible.
 Repeat the above operations three times.

NOTE

Move the charger-cleaning tool slowly all the way to the end of either way.

3.4.2 Cleaning of the timing roller

A. Periodically cleaning parts/cycle

• Timing roller: Every 60,000 prints (upon each call)

B. Procedure

1. Open the right door.



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

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3.4.3 Cleaning of the area around the waste toner collecting port

A. Periodically cleaning parts/cycle

Area around the waste toner collecting port: Every 60,000 prints (upon each call)

B. Procedure

Remove the waste toner box.
 See P.33



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

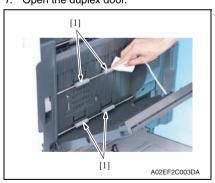
3.4.4 Cleaning of the duplex transport rollers

A. Periodically cleaning parts/cycle

• Duplex transport rollers: Every 60,000 prints (upon each call)

B. Procedure

1. Open the duplex door.



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

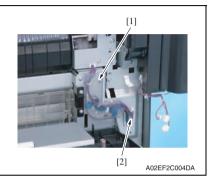
3.4.5 Replacing the tray 1 feed roller/tray 1 pick-up roller

A. Periodically replacing parts/cycle

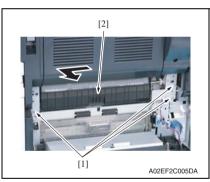
- Tray 1 feed roller: Every 300,000 prints
- Tray 1 pick-up roller: Every 300,000 prints

B. Procedure

- 1. Slide out the tray 1.
- Remove the manual bypass tray unit. See P.102



3. Remove the harness cover [1], and disconnect the connector [2].



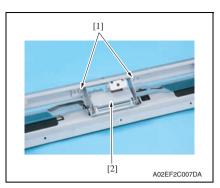
 Remove three screws [1], and remove the tray 1 paper feed assy [2].

NOTE

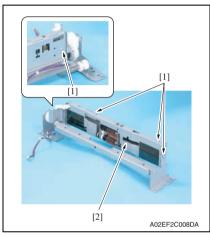
- The tray 1 paper feed assy is positioned by the shaft that passes through the back frame of the assy.
 When removing the tray 1 paper feed assy, slide it in the direction of the arrow.
- [2]
 A02EF2C006DA
- 5. Remove two springs [1], and remove the cover [2].

Maintenance

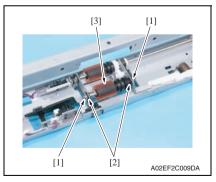
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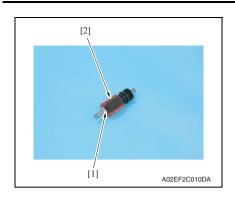
6. Remove two screws [1], and remove the tray 1 separation roller assy [2].



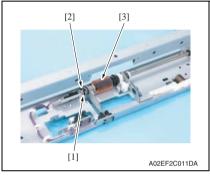
7. Remove four screws [1], and remove the tray 1 feed roller cover [2].



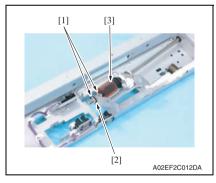
 Remove two C-clips [1] and two bearings [2], and remove the tray 1 pick-up roller assy [3].



9. Remove the C-clip [1], and remove the tray 1 pick-up roller [2].



Remove the C-clip [1] and the bearing [2].
 Slide the tray 1 feed roller assy [3].



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

- 12. To reinstall, reverse the order of removal.
- Replace the tray 1 separation roller assy.
 See P.25
- 14. Select [Service Mode] \rightarrow [Counter] \rightarrow [Life] and clear the count of [1st.]. See P.405

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3.4.6 Replacing the tray 1 separation roller assy

A. Periodically replacing parts/cycle

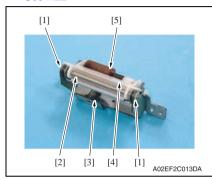
• Tray 1 separation roller assy: Every 300,000 prints

B. Procedure

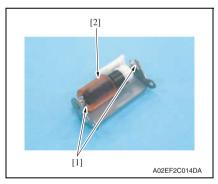
- 1. Slide out the tray 1.
- 2. Remove the manual bypass tray unit.

See P.102

Remove the tray 1 separation roller assy.
 See the replacement procedures 1 to 6 in "Tray 1 feed roller/tray 1 pick-up roller."
 See P.22



 Remove two C-clips [1], the shaft [2], spring [3], and guide [4].
 Remove the separation roller fixing plate assy [5].



Remove two C-clips [1], and remove the tray 1 separation roller assy [2].

6. To reinstall, reverse the order of removal.

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3.4.7 Replacing the tray 2 feed roller/tray 2 pick-up roller

A. Periodically replacing parts/cycle

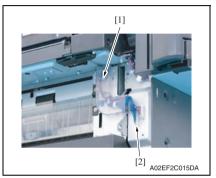
- Tray 2 feed roller: Every 300,000 prints
- Tray 2 pick-up roller: Every 300,000 prints

B. Procedure

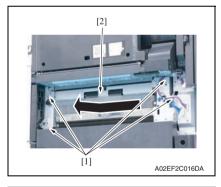
- 1. Slide out the trav 2.
- 2. Remove the vertical transport door.

See P.92

3. Remove the rear right cover /3. See P.90



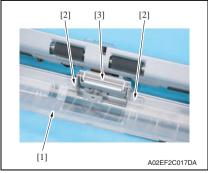
4. Remove the harness cover [1], and disconnect the connector [2].



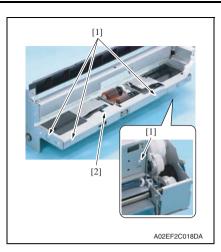
5. Remove four screws [1], and remove the tray 2 paper feed assy [2].

NOTE

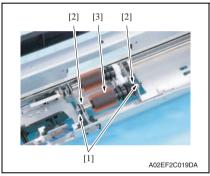
The tray 2 paper feed assy is positioned by the shaft that passes through the back frame of the assy.
 When removing the tray 2 paper feed assy, slide it in the direction of the arrow.



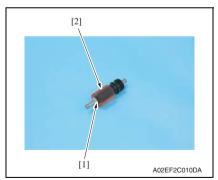
 Lower the jam clearing cover [1], remove two screws [2], and remove the tray 2 separation roller assy [3].



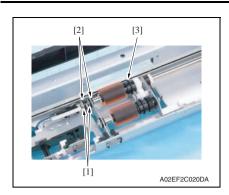
7. Remove four screws [1], and remove the tray 2 paper feed cover [2].



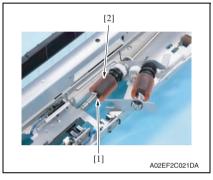
 Remove two C-clips [1] and two bearings [2], and remove the tray 2 pick-up roller assy [3].



9. Remove the C-clip [1], and remove the tray 2 pick-up roller [2].



10. Remove two C-clips [1] and two bearings [2]. Slide the tray 2 feed roller [3] in the direction of the arrow.



11. Remove the C-clip [1], and remove the tray 2 feed roller [2].

- 12. To reinstall, reverse the order of removal.
- 13. Replace the tray 2 separation roller assy. See P.29
- 14. Select [Service Mode] \rightarrow [Counter] \rightarrow [Life] and clear the count of [2nd.]. See P.405

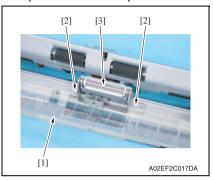
3.4.8 Replacing the tray 2 separation roller assy

A. Periodically replacing parts/cycle

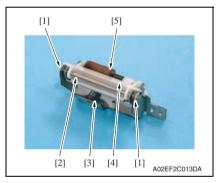
• Tray 2 separation roller assy: Every 300,000 prints

B. Procedure

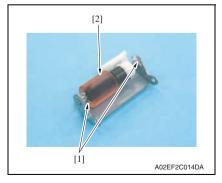
- 1. Slide out the tray 2.
- 2. Open the vertical transport door.



 Opening the jam clearing cover [1], remove two screws [2], and remove the tray 2 separation roller assy [3].



 Remove two C-clips [1], the shaft [2], spring [3], and cover [4].
 Remove the separation roller fixing plate assy [5].



Remove two C-clips [1], and remove the tray 2 separation roller assy [2].

6. To reinstall, reverse the order of removal.

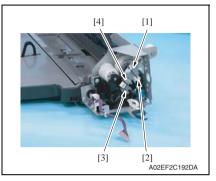
3.4.9 Replacing the manual bypass tray feed roller

A. Periodically replacing parts/cycle

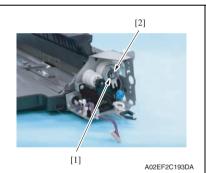
• Manual bypass tray feed roller: Every 200,000 prints

B. Procedure

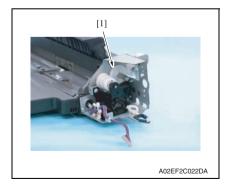
 Remove the manual bypass tray unit. See P.102



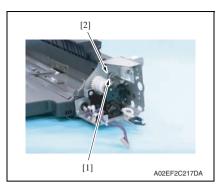
- Remove the harness from the edge cover [1], and remove the wire saddle [2] and the screw [3].
- 3. Remove the metal plate [4].



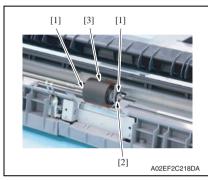
4. Remove the E-ring [1], and remove the manual paper feed clutch [2].



5. Remove the gear [1].



6. Remove the C-clip [1] and the bearing [2].



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

- 8. To reinstall, reverse the order of removal.
- Replace the manual bypass tray separation roller assy. See P.32
- 10. Select [Service Mode] \rightarrow [Counter] \rightarrow [Life] and clear the count of [Manual Tray]. See P.405

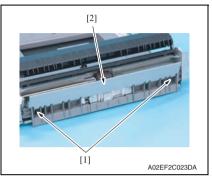
3.4.10 Replacing the manual bypass tray separation roller assy

A. Periodically replacing parts/cycle

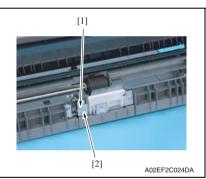
Manual bypass tray separation roller assy: Every 200,000 prints

B. Procedure

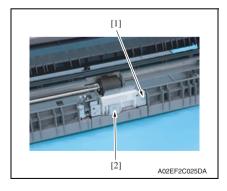
 Remove the manual bypass tray unit. See P.102



2. Remove two springs [1] and the guide plate [2].



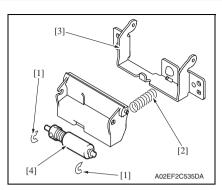
3. Remove the screw [1], and remove the ground terminal [2].



 Remove the screw [1], and remove the manual bypass tray separation roller assy [2].

5. Snap off two C-clips [1], and remove the spring [2] and the guide plate [3]. Remove the manual bypass tray separation roller assy [4].

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To reinstall, reverse the order of removal.

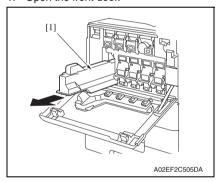
Replacing the waste toner box 3.4.11

A. Periodically replacing parts/cycle

• Waste toner box: Every 50,000 prints

B. Removal procedure

1. Open the front door.



2. Raise the waste toner box [1] and remove it.

3. Clean the surface around the waste toner collecting port. See P.21

1. Remove a new waste toner box from its packaging and remove the pack-

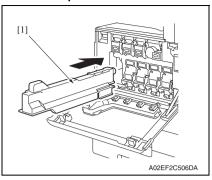
2. Place the waste toner box [1] in posi-

ing material.

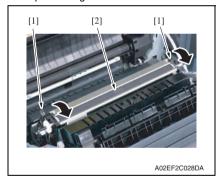
tion.

Maintenance

C. Reinstall procedure

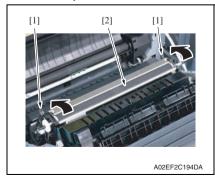


- 3. Close the front door.
- 3.4.12 Replacing the transfer roller unit
- A. Periodically replacing parts/cycle
- Transfer roller unit: Every 150,000 prints
- B. Removal procedure
- 1. Open the right door.



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

C. Reinstall procedure



3. Close the right door.

- 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).

NOTE

 Make sure that the levers are locked in position both at front and rear.

3.4.13 Replacing the imaging unit

A. Periodically replacing parts/cycle

• Imaging unit Y,M,C: Every 90,000 prints (bizhub C353)

: Every 75,000 prints (bizhub C253)

: Every 55,000 prints (bizhub C203)

• Imaging unit K : Every 120,000 prints (bizhub C353)

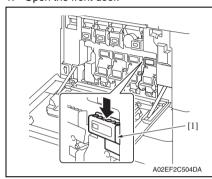
: Every 100,000 prints (bizhub C253) : Every 70,000 prints (bizhub C203)

NOTE

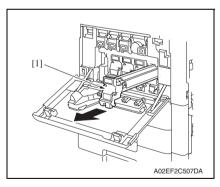
 Although the procedure shown below is for the replacement of the imaging unit K, use the same procedure to replace other imaging units Y,M,C.

B. Removal procedure

1. Open the front door.

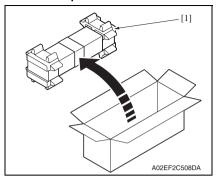


Press down to release the unlock lever [1] of the imaging unit to be replaced.

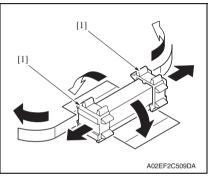


3. Remove the imaging unit [1].

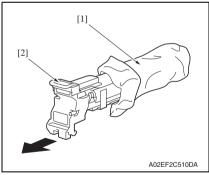
C. Reinstall procedure



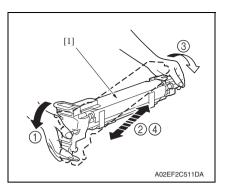
1. Remove the imaging unit [1] from its packaging.



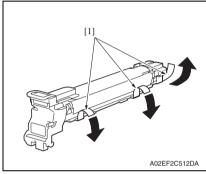
2. Peel off the tapes, and then remove the packing materials [1].



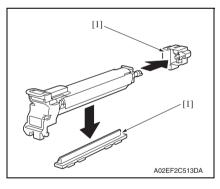
3. Remove the imaging unit [2] from the black protective bag [1].



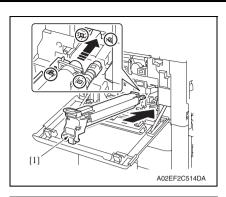
4. Tilt the imaging unit [1] to the left and shake it a little left to right twice. Then, tilt the imaging unit to the right and shake it a little right to left twice.



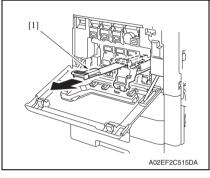
5. Peel off the tapes [1].



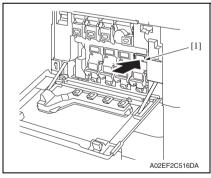
6. Remove the packing material and securing material [1].



 Align the ▲ mark on the imaging unit with the ▼ mark on the main body. Install the imaging unit [1] into the main body.



 To remove the protective sheet [1] which guards against PC drum damage, slowly pull its tab.



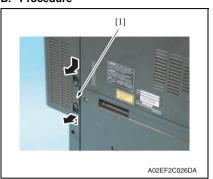
9. Insert the imaging unit [1] completely and close the front door.

3.4.14 Replacing the ozone filter

A. Periodically replacing parts/cycle

• Ozone filter: Every 150,000 prints

B. Procedure



 Grip the handle on the ozone filter [1] and slide it out of the main body.

3.4.15 Replacing the toner cartridge

A. Periodically replacing parts/cycle

• Toner cartridge Y,M,C: Every 20,000 prints (bizhub C353)

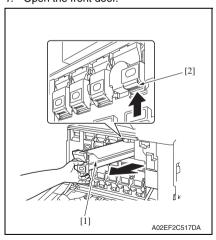
: Every 19,000 prints (bizhub C253/C203)

• Toner cartridge K : Every 26,000 prints (bizhub C353)

: Every 24,500 prints (bizhub C253/C203)

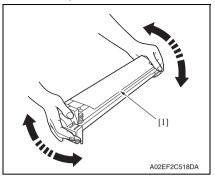
B. Removal procedure

1. Open the front door.

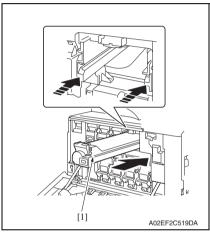


- Pull up the locking tab [2] of the empty toner cartridge [1] to unlock it.
- Pull out the toner cartridge [1] as far as possible, and then pull it up to remove it.

C. Reinstall procedure



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



 Align the toner cartridge [1] with the slots in the machine, and then insert the cartridge until the locking tab locks into place.

3. Clean the electrostatic charger wire. See P.20

3 4 16 Replacing the transfer belt unit

A. Periodically replacing parts/cycle

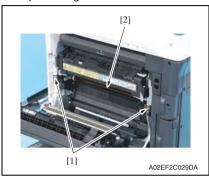
· Transfer belt unit: Every 150,000 prints

⅓ NOTE

· Before replacement operations of the transfer belt unit, make sure to turn OFF the main power switch and the sub power switch.

B. Removal procedure

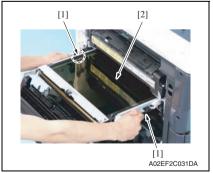
1. Open the right door.



2. Remove two screws [1] and release the lock of the transfer belt unit [2].



Hold the both sides and lift it to take out the transfer belt unit [1] a little.



4. Hold the position [1] as shown in the left and remove the transfer belt unit [2].

NOTE

- · Do not touch the surface of the Image transfer belt unit.
- · Cover the image transfer belt unit with something such shade cloth to protect its surface from dust or foreign matter.

C. Reinstall procedure





1. Insert the transfer belt unit [1].

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.
- · Do not touch the surface of the image transfer belt unit.
- · Cover the image transfer belt unit with something such shade cloth to protect its surface from dust or foreign matter.
- 2. Install the transfer belt unit with two screws [1].

NOTE

· Replace the ozone filter, which is supplied with the transfer belt unit, at the same time.

- 3. Close the right door.
- 4. Turn ON the main power switch.
- 5. Select [Service Mode] → [Imaging Process Adjustment] → [Gradation Adjust] and carry out gradation adjust. See P.362

3.4.17 Cleaning of the image transfer entrance guide

A. Periodically cleaning parts/cycle

 Image transfer entrance guide: When the transfer belt unit is replaced (every 150,000 print)

B. Procedure

Remove the transfer belt unit.
 See P.41



 Wipe the image transfer entrance guide [1] clean of spilled toner and dirt using a cleaning pad with water or alcohol.

3.4.18 Cleaning of the IDC/registration sensor/MK,YC

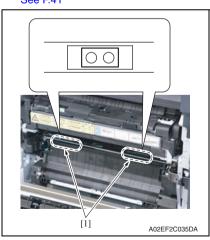
A. Periodically cleaning parts/cycle

 IDC/registration sensor/MK,YC: When the transfer belt unit is replaced (every 150,000 print)

B. Procedure

1. Remove the transfer belt unit.

See P.41



Wipe the surface of the IDC/registration sensor/MK,YC [1] clean of spilled toner and dirt using a cotton bud.

3.4.19 Replacing the fusing unit

∧ CAUTION



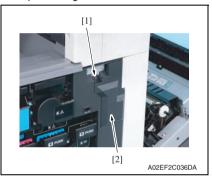
The temperature gets high in the vicinity of the fusing unit. You may get burned when you come into contact with the area. Before replacement operations, make sure that more than 20 minutes have elapsed since the main and sub power switches were turned off.

A. Periodically replacing parts/cycle

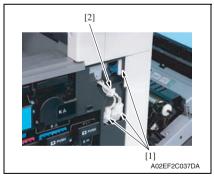
• Fusing unit: Every 400,000 prints

B. Procedure

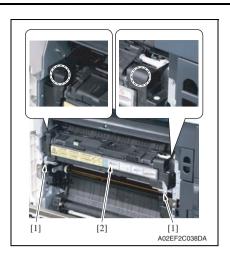
- 1. Open the front door.
- 2. Open the right door.



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



- 4. Disconnect three connectors [1].
- 5. Remove the harness from the wire saddle [2].



6. Remove two screws [1], and remove the fusing unit [2].

NOTE

 When removing the fusing unit, hold the parts shown on the picture on the left so that it would not fall.

4. Service tool

4.1 Service material list

Name	Shape	Material No.	Remarks
Cleaning pad	A02EF2C526DA	000V-18-1	10pcs/1pack
Isopropyl alcohol	A00KF2C506DA	_	
Molykote EM-50L grease	A00KF2C507DA	4478 7801 ##	Used with FS-519

4.2 CE tool list

Tool name	Shape	Quantity	Parts No.	Remarks
Original glass moving unit height adjustment jig	9J06F2C637DA	1	9J06 PJG0 ##	
PH window cleaning jig	4038F2C557DA	1	4038 2083 ##	
PH window cleaning jig pad	4038F2C558DA	1	4038 2084 ##	
Slit glass cleaning jig	A00JF2C527DA	1	A01H 1005 ##	

Tool name	Shape	Quantity	Parts No.	Remarks
Color chart		9J06 PJP1 ## A3		А3
Color Chart	A02EF2C520DA	•	9J06 PJP2 ## 11 x 17	
Compact flash	4037F2C601DA	1	V865400001 (blank)	*1

^{*1:} Inquire of KMBT about the part number of compact flash in which the firmware data is written.

4.3 Copy materials

4.3.1 Imaging unit single parts (IU)

Parts name	Replacing period		
	bizhub C353	bizhub C253	bizhub C203
Imaging unit K	120,000 prints	100,000 prints	70,000 prints
Imaging unit Y	90,000 prints	75,000 prints	55,000 prints
Imaging unit M	90,000 prints	75,000 prints	55,000 prints
Imaging unit C	90,000 prints	75,000 prints	55,000 prints

See P.18

4.3.2 Toner cartridge single parts (T/C)

Parts name	Replacing period		
	bizhub C353	bizhub C253	bizhub C203
Toner cartridge K	26,000 prints	24,500 prints	24,500 prints
Toner cartridge Y	20,000 prints	19,000 prints	19,000 prints
Toner cartridge M	20,000 prints	19,000 prints	19,000 prints
Toner cartridge C	20,000 prints	19,000 prints	19,000 prints

^{*1:} Life value that can be achieved with a probability of 90% even with product-to-product variations and fluctuating operating environmental conditions taken into consideration, when the T/C is used under the conditions of B/W ratio 5% for each color

4.3.3 Waste toner box

Parts name	Replacing period *1
Waste toner box	50,000 prints *1

^{*1:} A waste toner full condition is detected with detecting the actual waste toner emissions. See P.18

4.3.4 Maintenance kit

There is no setting for the maintenance kit.

Maintenance

5. Firmware upgrade

5.1 Outline

 There are two ways to update the firmware: One is by directly connecting with the main body using the compact flash, and the other is by downloading over a network using the Internet ISW.

5.2 Notes about firmware rewrite

5.2.1 Types of firmware

 Two types of firmware are released for bizhub C353/C253/C203. They are a maintenance release version and an enhanced version.

Maintenance release version: Addresses remaining problems

Function enhanced version : Adds new features and includes the contents of the

maintenance release version available at the same time

The function enhanced version firmware is available in three types:

"Function Enhancement 1", "Function Enhancement 2" and "Function Enhancement 3"

Before rewriting a firmware, check the current firmware version of the machine and confirm the type of the current firmware using CSES.
 Select an appropriate firmware and rewrite the current firmware.

5.2.2 Rewrite to/from a function enhanced version of firmware

 The processing that ensures compatibility is required when upgrading the firmware to the function enhanced version.

HDD Version Up (LK)

: To maintain the compatibility of management information data and documents stored in HDD after the firmware upgrade. (only for Function Enhancement 2).



Down Version

NOTE

- Firmware can be rewritten only through the menu operation on the control panel and cannot be rewritten with the CS Remote Care system.
- Take the following steps to perform processing that ensures compatibility.

A. Upgrade to the function enhancement 2 from the early mass-production firmware/function enhancement 1

- After rewriting the firmware, turn OFF and ON the main power switch and sub power switch.
- 2. Trouble code C-E002 is displayed.
- 3. Call the Service Mode to the screen.
- Touch [State Confirmation] → [Memory/HDD Adj.] → [HDD Version Up (LK)].
- 5. Check to see that the Start key is lit in blue. Touch the Start key to initiate version up.
- 6. When version up is completed, the result is displayed on the screen.
- 7. Turn OFF and ON the main power switch and sub power switch.



B. Downgrade from the function enhancement 3 to the function enhancement 2 NOTE

· Before downgrading the firmware, the following steps are required to be taken.

(1) Down Ver.

- 1. Call the Service Mode to the screen.
- Touch [State Confirmation] → [Memory/HDD Adj.] → [Down Ver.].
- 3. Check to see that the Start key is lit in blue. Touch the Start key to initiate Down Ver.
- 4. When Done Ver. is completed, the result is displayed on the screen.
- 5. Turn OFF and ON the main power switch and sub power switch.
- 6. Rewrite the firmware.
- 7. Trouble code C-E002 is displayed.
- 8. Call the Service Mode to the screen.
- Touch [State Confirmation] → [Memory/HDD Adj.] → [HDD Format] → [Logical Format].
- 10. Check to see that the Start key is lit in blue. Touch the Start key to initiate Logical Format.
- 11. Turn OFF and ON the main power switch and sub power switch.

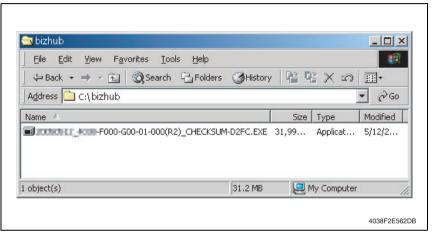
5.3 Preparations for firmware rewriting by Windows Command Prompt

5.3.1 Service environment

- OS: Windows 2000/XP
- · Drive which enables writing/reading of compact flash
- Compact flash (service tool)

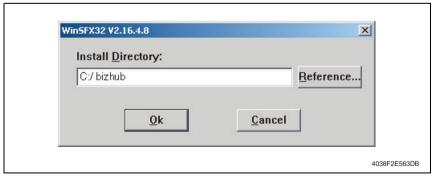
5.3.2 Writing into the compact flash

1. Put the data of firmware in the optional directory. (C:\bizhub in the below figure)



NOTE

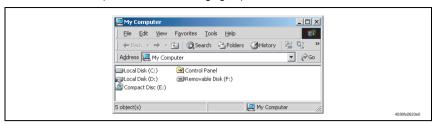
- The file name of firmware data consists of the "Release Date Version CHECKSUM-****.exe."
- Double-click the firmware data, and specify the directory to be uncompressed, and then uncompress it.



NOTE

- When old firmware is still left in the specified directory to be uncompressed, delete it before uncompressing.
- When the firmware data is decompressed, "card_work" folder is created in the selected directory and the data is decompressed in this folder.

Mount the compact flash on the PC, and check the drive name, which was recognized in the Windows. (F-drive in the following figure)

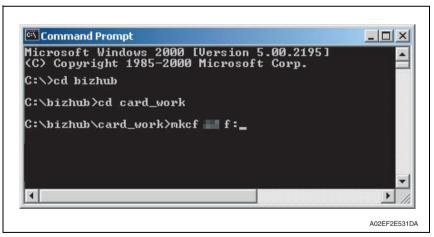


- Click [Start] → [Program] → [Accessories] → [Command Prompt] to open the command prompt.
- 5. Use the command prompt to move into the uncompressed directory.
- 6. Specify the drive of compact flash, which was recognized through the procedure 3, and execute the "mksf.bat." (Input the C: \bizhub\card_work>mkcf ## f (drive number): in the below figure, and push the "Enter".)

NOTE

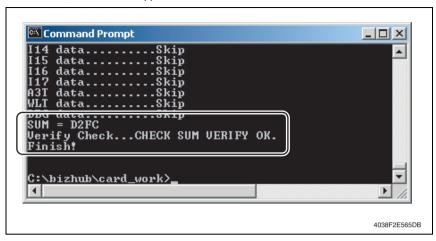
 For ## within the above mkcf command, type two characters that correspond to the machine model on which firmware upgrading is made.
 Take a look at the following list to find right characters for a correct command.

Model and command list		
bizhub C353 t1		
bizhub C253	t2	
bizhub C203	t25	



7. Once the "mkcf.bat" is executed, data writing into the compact flash is started.

8. Upon completion of writing, CHECKSUM is executed. If CHECKSUM value is precisely matched, "VERIFY OK" appears.



9. Remove the compact flash from PC.

NOTE

 When removing the compact flash, be sure to check if data is written as normal and then remove it according to the precise removing method.

5.4 Preparations for firmware rewriting by Firmware Imaging Toolkit 2006

 This software is designed as the tool to write firmware data of MFP/printer released by KMBT into the compact flash card.

5.4.1 Correspond model

· Correspond models of the software is as follows.



	Color machine	 bizhub C650/C550/C451/C450/C353/C352/C351/C350/C300/C253/C250/C203 bizhub C450P/C353P/C352P/C250P
	B/W machine	bizhub 350/250/200 Pizzus (27.45/27.45
		 Di3510/3510f/3010/3010f/2510/2510f

5.4.2 Function outline

• The following functions are available with this software.

Function type	Function name	Description	
Basic functions	Write Firmware to a card	Write firmware data into the compact flash card. See P.59	
	Compare Firmware with a card	Compare the firmware data written into the compact flash card with the one saved in PC. See P.59	
Advanced functions	Create a Firmware Image from a card	Create the firmware image form using the firmware data written into the compact flash card. See P.60	
	Format a card	Format the compact flash card by the FAT or vxWorks form. NOTE vxWorks form is not applicable	
	Display information about a card	Acquisition the information of firmware data written into the compact flash card. See P.60	

5.4.3 System environment

• The following system environments are required or recommended to use the software.

Computer	IBM PC/AT compatible machine
CPU	Pentium III / 500 MHz or higher is recommended.
Correspond OS	Windows 2000, Windows XP or Windows Server 2003
Required memory	More than 128 MB (Windows 2000), 256MB (Windows XP/2003) is recommended.
Others	Drive that is able to Read/Write compact flash.

5.4.4 Installation of software

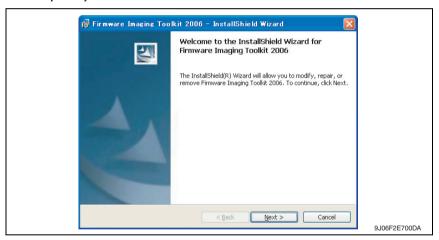
• Follow the procedures shown below to install the software.

NOTE

- Install the software to the PC with the administration authentication.
- When any anti-virus program is activated, quite the program before the installation.
- 1. Double click [setup.exe] to start the installation of the software.



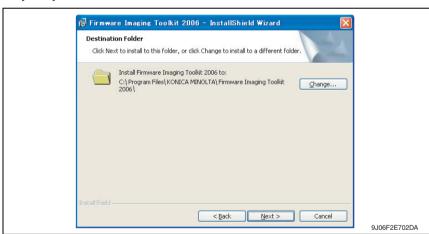
2. Click [Next >].



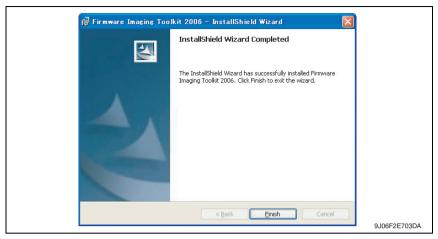
 After checking the contents of license agreement, select [I accept the terms in the license agreement] and click [Next >].



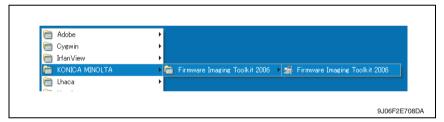
 Select the installed destination folder of Firmware Imaging Toolkit 2006, and click [Next>].



- 5. Click [Install] to start installation.
- 6. Click [Finish] to complete the installation.



Shortcut file will be created inside Windows Start menu ([Program] → [KONICA MINOLTA] → [Firmware Imaging Toolkit 2006]).



5.4.5 Update of software

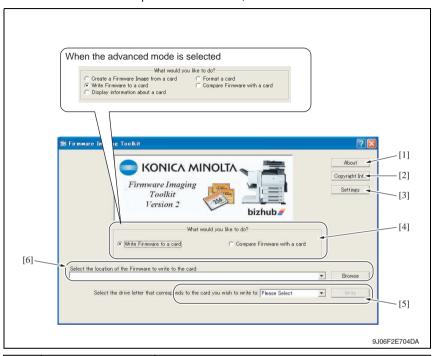
- To update the software version, delete (uninstall) the currently installed program and install the new version.
- Follow the procedures shown below to delete (uninstall) the program.
- 1. Quite the program if the software is activated.
- Select [Firmware Imaging Toolkit 2006] of [Add/Remove Programs] in Windows Control Panel menu to delete the program.



5.4.6 Screen

A. Main window

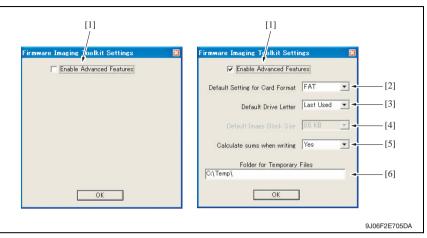
- The main window will be displayed after activating the software.
- Main window consists of 2 patterns: Basic mode, Advanced mode



[1]	About	To display the outline of the tool.
[2]	Copyright Info	To display the license agreement and version information of the tool.
[3]	Settings	To display the dialog to enable the advanced functions. Select the check box of [Enabled Advanced Features] to enable advanced functions at main window. See P.58
[4]	What would you like to do?	 To select the function to be used. Displayed screen is different between Basic mode and Advanced mode. See P.59
[5]	Select the location of the Firmware to write to the card:	To select the compact flash drive to which the data to write.
[6]	Select the drive letter that corresponds to the card you wish to write to:	To select the location where the firmware is stored in PC.

B. Settings dialog

- It will be displayed by clicking [Settings] at main window.
- Other settings will be enabled by selecting the check box of [Enabled Advanced Features].



[1]	Enable Advanced Features	 Enable the setting of advanced functions at the dialog by sele- ing the check box. Also advanced functions can be selected at the main window.
[2]	Default Setting for Card Format	Select the default card format during software starting. FAT : The format to be used by all models that the soft ware supports. vxWorks: Not available yet.
[3]	Default Drive Letter	Select how to set default of compact flash drive during softwar starting. LastUsed: The drive used at previous time is selected. None: [Please Select] is displayed on the screen every starting and the drive should be selected every time.
[4]	Default Image Block Size	Not available yet.
[5]	Calculate sums when writing	Set whether to calculate check sums during data writing. If [YES] is selected, data consistency can be ensured by data verification of check sums during data writing. However, it take more time for data writing compared to the case without sums calculation. (Basically this mode shall be selected.) If [No] is selected, check sums calculation is skipped during data writing. Although it take less time for data writing compared to the case with sums calculation, it fails to ensure the reliability of the written data.
[6]	Folder for Temporary Files	 Set the folder for saving temporary files during the tool is activating. The temporary file is automatically deleted after the operation completes normally.

5.4.7 Details of each function

A. Basic functions

(1) Write Firmware to a card

- To write FW data into the compact flash. The FW data of the models shown below can be written.
- To write FW data into the compact flash. The FW data of the models shown below can be written.

<Corresponding models and firmware file type>

	File type Models	Indexed firmware type	Compressed firmware type	Uncompressed firmware type	Di3510/350/250/ 200 firmware type
<u> </u>	C650	Mosel1_cf.tar.gz	*.img.gz	*.img	=
	C550	Mosel2_cf.tar.gz			_
	C451	Mosel3_cf.tar.gz			_
	C353/C353P	thames1_cf.tar.gz			_
	C253	thames2_cf.tar.gz			_
	C203	thames25_cf.tar.gz			_
	C450/C450P/C351	rhein1_cf.tar.gz			_
	C352/C352P/C300	rhein2_cf.tar.gz			_
	C350	tss2_cf.tar.gz			_
	C250/C250P	rhein3_cf.tar.gz			_
	Di3510/3510f/3010/ 3010f/2510/2510f	=	_	_	ma001
	350/250/200	_	_	_	ma001a

NOTE

- The above-mentioned [Indexed firmware type] and [Di3510/350/250/200 firmware type] shall be comprised of multiple files and one of the files shall be named as above.
- [Compressed firmware type] means the compressed formed image file that is created using the tool's function of the [Create a Firmware Image from a card].
- [Uncompressed firmware type] means the image file that is uncompressed the compressed firmware file.
- To write the image file data (*.img.gz or *.img) into the compact flash, use the compact flash with the same capacity as the one used for the original image file.
 Although the compact flash with larger capacity than the original one can be used, it is not covered under warranty.
- C350 firmware requires the compact flash over 64 MB.
- Firmware of C650/C550/C451/C450/C450P/C353/C352/C352P/C351/C300/C253/ C250/C250P/C203 requires the compact flash over 128 MB.

(2) Compare Firmware with a card

- · Compare the firmware data written into the compact flash and the one (file) saved in PC.
- After the comparison, display the check sum information (comparison result dialog) of the firmware data of the compact flush and the file.
- The firmware data (file) format saved in PC shall consistent with the one written into the compact flash.

B. Advanced functions

(1) Create a Firmware Image from a card

- Create the image file from the firmware data written into the compact flash.
 Create the image file by dumping directly the data in the card. This function allows us to save the various type of firmware data in the compact flash as the image file and hold as copy data.
- The created FW image file is automatically compressed and created as the Compressed firmware file (*.img.gz).

The image file is written into the compact flash in the uncompressed form, however, the uncompressed data would occupy too much capacity, which makes file control difficult. Therefore this tool doesn't create uncompressed firmware file (*.img).

(2) Format a card

- Make format of the compact flash in FAT or vxWork form.
- To write the firmware data into the compact flash, the card should be formatted in FAT form to clear (initialize) the description of the compact flash.

NOTE

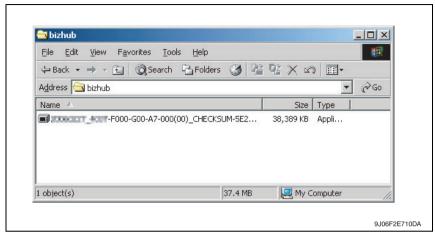
- In current version, only FAT format is available but not vxWork format.
- After the firmware data is written into the compact flash, it becomes the own file style that is different from the FAT, and the compact flash that the firmware data is written cannot be browsed on the Windows OS.

(3) Display information about a card

- Display the information of the firmware data written into the compact flash.
 The information to be displayed is according to the type of written FW data.
- For the series of Di3510/200/250/350 series, MSC version is displayed.
- For the series of C650/C550/C451/C450/C450P/C353/C353P/C352/C352P/C351/C350/C300/C253/C250/C250P/C203, check sums of each firmware data is displayed.

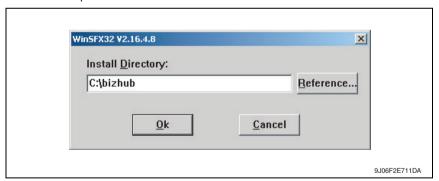
5.4.8 How to write firmware data

- A. In the case of C650/C550/C451/C450/C450P/C353/C353P/C352/C352P/C351/C350/C300/C253/C250/C250P/C203 series
 - 1. Put the firmware data in the optional directory. (C:\bizhub in the below figure)



NOTE

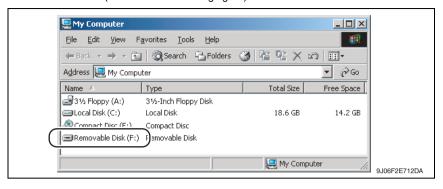
- The file name of firmware data consists of the "Release Date Version CHECKSUM-****.exe."
- Double-click the firmware data, and specify the directory to be uncompressed, and then uncompress it.



NOTE

 When old firmware is still left in the specified directory to be uncompressed, delete it before uncompressing.

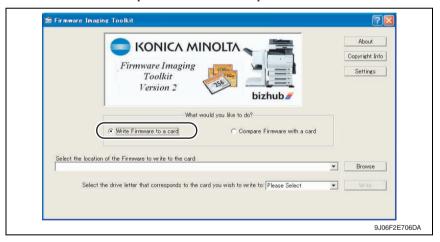
 Mount the compact flash on the PC, and check the drive name, which was recognized in the Windows. (F-drive in the following figure)



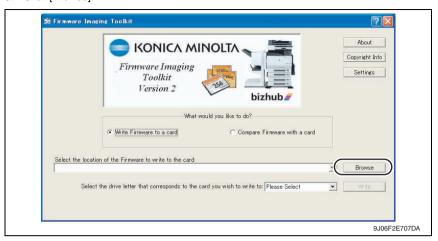
4. Start Firmware Imaging Toolkit 2006.

NOTE

- When using the external compact flash drive such as USB be sure to connect them before starting this tool.
- 5. Select the check box of [Write Firmware to a card].



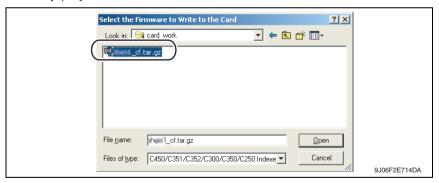
6. Click [Browse].



- 7. Select the file type [C353/C253/C203 Indexed Firmware].
- Move to the folder decompressed at step 2, confirm that only "###_cf.tar.gz" (### is for model name) is displayed, and select.

NOTE

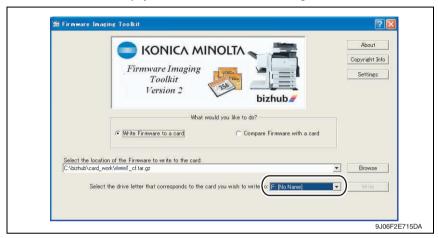
- If the file extension is set to be not displayed in Windows, the file name ".gz" will not be displayed.
- 9. Click [Open].



10. Select the drive that the compact flash is inserted, which is confirmed at step 3.

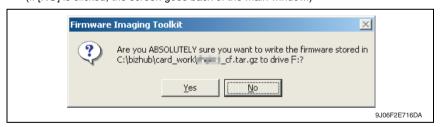
NOTE

The drives other than the compact flash that is recognized as "Removable Disk"
can be selected for the writing destination. If these drives are selected mistakenly
to make the writing, it may give fatal damage on Windows system or delete the
saved data. Therefore pay close attention when selecting the drive.



- [Write] button is changed form gray into active status.
 When clicking [Write] button, the following dialog is displayed.
- 12. In the dialog, re-confirm the firmware data and the written destination drive, and click [YES].

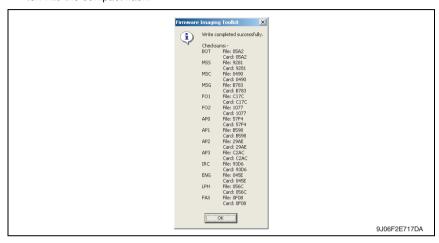
(If [NO] is clicked, the screen goes back of the main window.)



13. Click [Yes], and data writing starts.

NOTE

- Writing a card is a resource intensive operation for your computer do not attempt to multitask (use the computer for anything else) during the writing procedure.
- 14. When the writing is completed, the following screen appears. In this screen, check sums will be compared between the firmware data and one written into the compact flash.



NOTE

- The contents displayed on the screen may different according to the model type.
 The above is the screen displayed for firmware data writing of bizhub C450.
- 15. Confirm each check sums are identical and quit Firmware Imaging Toolkit 2006.
- 16. Take out the compact flash from the PC.

NOTE

 When removing the compact flash, be sure to check if data is written as normal and then remove it according to the precise removing method.

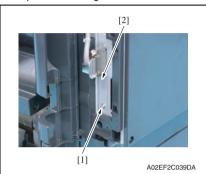
5.5 Firmware rewriting by compact flash

· The firmware is updated using the compact flash.

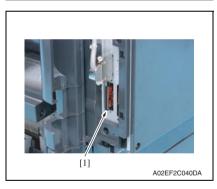
5.5.1 Updating method

NOTE

- NEVER remove or insert the compact flash card with the machine power turned ON.
- 1. Turn OFF the main power switch.
- 2. Open the rear right door.



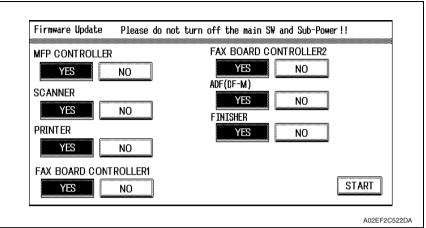
3. Remove the screw [1] and the metal blanking plate [2].



4. Insert the compact flash card [1] into the slot.

- 5. Turn ON the main power switch and the sub power switch.
- 6. Control panel shows F/W items to be updated.

7. Select the particular type of F/W to be updated. (Select [YES].)

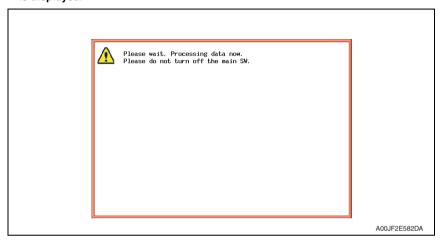


F/W to be updated	Appropriate board
MFP CONTROLLER	MFP board (MFPB)
SCANNER	Image processing board (IPB)
PRINTER	Printer control board (PRCB)
FAX BOARD CONTROLLER1	Fax board (Main) *1
FAX BOARD CONTROLLER2	Fax board (Sub) *2
ADF (DF-M)	DF control board (DFCB)
FINISHER	FS control board (FSCB) *3

- *1: The optional fax kit is necessary for the above procedure.
- *2: The optional fax multi line ML-501 is necessary for the above procedure.
- ↑ *3: The optional finisher FS-519 or FS-609 is necessary for the above procedure.
 - 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]). Check also the check sum value ([Check Sum ####]) shown on the control panel. (The Start key blinks blue.)
 - 10. Turn OFF the main power switch.
 - 11. Remove the compact flash card from the slot.
 - 12. Turn ON the main power switch, and close the front door.

NOTE

 When turning the main power switch ON for the first time after the firmware is updated, data may sometimes be internally updated.
 In that case, the following message will be displayed. Never turn the main power switch OFF until either the serial number input screen or the trouble code screen is displayed.



- 13. Call the Service Mode to the screen.
- 14. Select [Firmware Version].
- 15. Make sure if the version of firmware is updated.

5.5.2 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 compact flash for a new one and try another rewriting sequence.
- If the procedure is still abnormally terminated, change the board that has caused "NG" and carry out data rewriting procedure.

MFP CONTROLLER	MFP board (MFPB)
SCANNER	Image processing board (IPB)
PRINTER	Printer control board (PRCB)
FAX BOARD CONTROLLER1	Fax board (Main) *1
FAX BOARD CONTROLLER2	Fax board (Sub) *2
ADF (DF-M)	DF control board (DFCB)
FINISHER	FS control board (FSCB) *3

- *1: The optional fax kit is necessary for the above procedure.
- *2: The optional fax multi line ML-501 is necessary for the above procedure.

5.6 Updating the firmware with the Internet ISW

5.6.1 Outline

[Internet ISW] is the system which gives the instruction for updating the firmware with the
control panel of the main body, so the main body will automatically receive the firmware
from the program server over a network for updating. With the Internet ISW, the firmware
can be updated when the CE is at the user's without firmware data.

5.6.2 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.

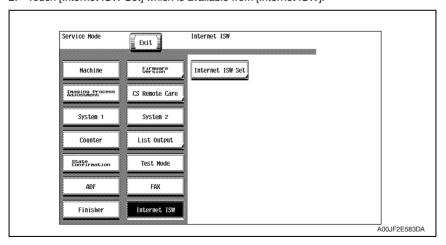
- · Main power switch is set to OFF.
- · Sub power switch is set to OFF.
- When the following setting is set to "ON":
 [Administrator Setting] → [Security Setting] → [Enhanced Security Mode]
- The main body has the job currently performing.
- When the i-Option (LK-101/102/103) is installed.

5.6.3 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.
- For details of each setting item, refer to Adjustment/Setting "Internet ISW".
 See P.433

A. Internet ISW Set

- 1. Call the Service Mode to the screen.
- 2. Touch [Internet ISW Set] which is available from [Internet ISW].



3. Touch [ON], and touch [END].

NOTE

- Settings such as server setting, etc. will be available by selecting "ON" on this setting.
- When the following setting is set to "ON", "ON" cannot be selected on this setting. [Administrator Setting] \rightarrow [Security Setting] \rightarrow [Enhanced Security Mode]

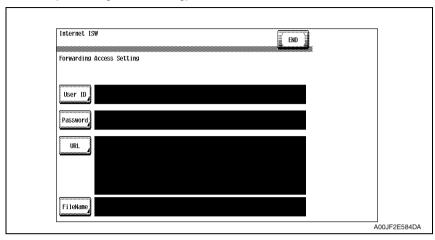
B. Protocol setting

- It performs the setting concerning the protocol (ftp or http) for connecting to the Internet ISW.
- When connecting to the program server using a proxy server, perform the setting for a proxy server.

Step	Connecting by http	Connecting by ftp	
0	Select [Internet ISW] which is available from [Service Mode].		
1	Data Input Setting Touch [HTTP Setting], and select [ON].	Data Input Setting Touch [FTP Setting], and select [ON].	
2	Connect Proxy • For connecting via proxy server, select [ON].		
3	Proxy Server • For connecting via proxy server, set the proxy server address and the port number. 1. Select the [Server Address], and set the proxy server address by IP addressing scheme or FQDN scheme. 2. Select [Port Number], and set the port number for the proxy server from 1 through 65535.		
4	Proxy Authentication Set the login name and the password which may be necessary for authentication when accessing to the proxy server. When Authentication is necessary for accessing to the proxy server, select [Authentication], and select [ON]. Select [Log-in Name], and enter the login name on the on-screen keyboard. Select [Password], and enter the password on the on-screen keyboard.	Connection Setting Perform the setting for accessing FTP server. Select [Port Number], and set the port number for FTP server from 1 through 65535. Select [Connection Time Out], and set the time for the connection time out from 1 through 60. When connecting in PASV mode, select [PASV Mode], and select [ON]. *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.	
5	Connection Time-Out Select [Connection Time-Out], and set the time for the connection time out between 30 and 300 seconds.	_	

C. Forwarding access setting

- To make the access setting for the program server which stores the firmware data.
- 1. Select [Internet ISW] which is available from [Service Mode].
- 2. Touch [Forwarding Access Setting].



- 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].
- Select [Password], and enter the password which is necessary for connecting to the program server on the on-screen keyboard, and touch [END].
- 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

 or https://(host name or IP address)/directory name

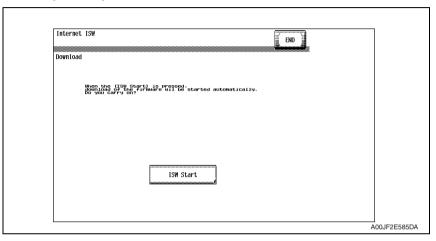
 When connecting to ftp

 When connecting to ftp
- 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 [END] to finish setting.

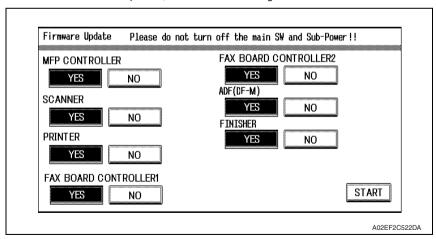
5.6.4 Firmware rewriting

NOTE

- When performing the Internet ISW, ask the administrator for permission beforehand.
- DO NOT turn OFF the main/sub power switch while downloading.
- A. Conducting rewriting on the control panel.
- 1. Perform the following setting. [Service Mode] \rightarrow [Internet ISW] \rightarrow [Download]
- 2. Touch [ISW Start].



- 3. The main body will automatically start running, and it starts accessing the server.
- 4. Select the F/W to be updated, and start downloading.



B. During firmware updating

 The message to indicate the status will be displayed on the screen while connecting or transferring data.

C. Completed or failed

(1) Firmware updated normally

 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.

(2) Failing to update the firmware due to the network trouble

- 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.

NOTE

For error codes, refer to "Error code list for the Internet ISW".
 See P.74

(3) Failing to update the firmware after downloading has started

- 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.
- 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 compact flash with the main power switch OFF.

D. Confirming the firmware version

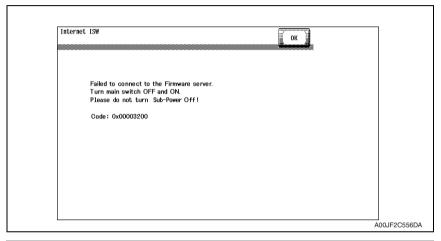
- 1. Call the Service Mode to the screen.
- 2. Select the [Firmware Version].
- 3. Check if the firmware version is updated.

5.6.5 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.

When updating with CS Remote Care, the error code will be sent to the CS Remote Care center.

<Sample display>



Error code	Description	Countermeasure	
Control panel	Description		
0x0000001	Illegal error on the control	Check if the following setting is set to "ON". [Service Mode] → [Internet ISW] → [Internet ISW Set] Check the status of the following setting. [Service Mode] → [Internet ISW] → [Forwarding Access Setting] If the above process does not solve the problem, inform the corresponding error code to the KMBT.	
0x00000010	Parameter error	Check if the following setting is set to "ON". [Service Mode] → [Internet ISW] → [Internet ISW Set] If the above process does not solve the problem, inform the corresponding error code to KMBT.	

Error code Description		Countermeasure	
Control panel	Description	Countermeasure	
0x00111000	Error concerning the network Connection has been completed.	 Check the User's network environment (LAN cable's connection) Check the status of the following setting. [Service Mode] → [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 network environment of the User.	
0x00111100	Error concerning the network Communication timeout.	Check to see if the FTP server operates normally.	
0x00111101	Error concerning the network Disconnection occurred	Check the network environment of the	
0x00111110	Error concerning the network The network is not connected.	User. • Check to see if the FTP server oper-	
0x00110010	Error concerning the network Others	ates normally.	
0x00001###	FTP error Reply code when it failed to be connected	Check to see if FTP server normally operates. 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 FTP server operates normally.	
0x00003###	FTP error Error reply code for CWD command	Hormany.	
0x00004###	FTP error FTP error	Check to see if FTP server operates	
0x00005###	FTP error • Error reply code for the PORT command.	normally.	
0x00006###	FTP error Error reply code for the PASV command.	Check to see if FTP server operates normally. Set the PASV mode to "OFF", and try it again.	
0x00007###	FTP error • Error rely code for the RETR command.	Check to see if FTP server operates normally. Wait for about 30 minutes and try it again.	
0x1000 0100	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 sub power switch is OFF.	Turn sub power switch ON and try it again.	
0x10000102	The Internet ISW is already being executed.	Wait for the current Internet ISW to be completed.	

Error code	Description	Countermeasure	
Control panel	Bosciipaon	Countermeasure	
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 the following setting is set to "ON". [Service Mode] → [Internet ISW] → [Internet ISW Set]	
0x10000104	There is no space for F/W data to be downloaded.	If the above process does not solve the problem, inform the corresponding error code to the KMBT.	
0x10000106	Check sum error	0.101 0000 to the 1.1112	
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 F/W.	Check to see if the downloaded F/W is of the correct type.	
0x10000108	The area F/W is stored is destroyed, and another ISW is necessary.		
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. Other

6.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

6.2 Disassembly/assembly/cleaning list (other parts)

6.2.1 Disassembly/assembly parts list

No.	Section	Part name	Ref. page
1		Front door	P.81
2		Upper front cover/1	P.82
3		Upper front cover/2	P.83
4		Right front cover/1	P.83
5		Right front cover/2	P.84
6		Left cover	P.85
7		Rear left cover/1	P.86
8		Rear left cover/2	P.86
9		Exit cover	P.87
10		Paper exit rear cover	P.87
11		IR rear cover	P.88
12		IR right cover	P.88
13		IR upper rear cover/1	P.88
14		IR upper rear cover/2	P.88
15		IR upper rear cover/3	P.88
16		IR left cover	P.88
17		IR upper front cover	P.88
18	Exterior parts	IR front cover	P.89
19		Original glass	P.89
20		Rear right cover/1	P.90
21		Rear right cover/2	P.90
22		Rear right cover/3	P.90
23		Manual bypass tray front cover	P.91
24		Manual bypass tray rear cover	P.91
25		Upper rear cover	P.91
26		Rear cover/1	P.91
27		Rear cover/2	P.91
28		Lower rear cover/1	P.92
29		Lower rear cover/2	P.92
30		Vertical transport door	P.92
31		Control panel assy	P.92
32		Exit tray	P.93
33		Tray 1	P.94
34		Tray 2	P.94
35		Front cover	P.95

No.	Section	Part name	Ref. page
36		PH unit	P.97
37		Manual bypass tray unit	P.102
38		CCD unit	P.103
39		Original glass moving unit	P.105
40		Glass step sheet	P.108
41		Scanner assy	P.110
42	Units	Hard disk drive	P.112
43		Main drive unit	P.112
44		Transport drive unit	P.114
45		Fusing drive unit	P.118
46		Hopper drive unit (C/K, Y/M)	P.120
47		Right door assy	P.121
48		IR Assy	P.124
49		Scanner relay board (REYB/SCAN)	P.126
50		Original glass position control board (OGPCB)	P.127
51		Inverter board (INVB)	P.128
52		Image processing board (IPB)	P.129
53		PH relay board (REYB/PH)	P.131
54		DC power supply (DCPU)	P.133
55		Printer control board (PRCB)	P.135
56		MFP board (MFPB)	P.137
57	PWBs	High voltage unit (HV)	P.141
58		Service EEPROM board (SV ERB)	P.142
59		SODIMM/1, SODIMM/2	P.144
60		JMP board (JMPB)	P.144
61		NVRAM board (NRB)	P.145
62		Machine condition monitor board (MCMB)	P.145
63		Paper feed tray 1 paper FD size detect board (PSDTB/1)	P.146
64		Paper feed tray 2 paper FD size detect board (PSDTB/2)	P.147
65		Scanner motor (M201)	P.148
66		Original glass moving motor (M202)	P.151
67		Duplex transport motor (M7)	P.152
68	- Motors	Transport motor (M1)	P.153
69		Color PC motor (M2)	P.153
70		Fusing motor (M5)	P.154
71		Switchback motor (M6)	P.155
72		Fusing retraction motor (M12)	P.156
73		Paper feed tray 1 lift-up motor (M8)	P.157
74		Paper feed tray 2 lift-up motor (M9)	P.158
75		Toner supply motor/CK (M3)	P.160
76		Toner supply motor/YM (M4)	P.160

No.	Section	Part name	Ref. page
77		Paper feed tray 1 paper feed clutch (CL1)	P.161
78		Paper feed tray 2 vertical transport clutch (CL3)	P.162
79		Paper feed tray 2 paper feed clutch (CL2)	P.163
80	Clutches	Manual paper feed clutch (CL4)	P.163
81		Transfer belt retraction clutch (CL7)	P.164
82		Developing clutch/K (CL5)	P.164
83		Tim. roller clutch (CL6)	P.165
84		IDC registration sensor/MK (IDCS/MK)	P.166
85	etc.	IDC registration sensor/YC (IDCS/YC)	P.166
86		Scanner drive cables	P.168

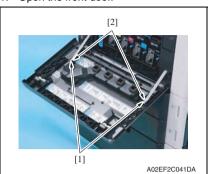
6.2.2 Cleaning parts list

No.	Section	Part name	Ref. page
1	Dropposing postion	Transfer belt unit	P.179
2	Processing section	PH window	P.179
3		Tray 1 feed roller	P.180
4	Tray 1	Tray 1 pick-up roller	P.180
5		Tray 1 separation roller	P.180
6		Tray 2 feed roller	P.181
7	Tray 2	Tray 2 pick-up roller	P.181
8		Tray 2 separation roller	P.181
9		Tray 2 transport roller	P.182
10	Manual bypass tray	Manual bypass tray feed roller	P.182
11	Manual bypass tray	Manual bypass tray separation roller	P.182
12		Original glass	P.183
13	Scanner section	Scanner rails	P.183
14		Mirrors (1st/2nd/3rd)	P.184
15		Lens	P.184
16		CCD sensor	P.185

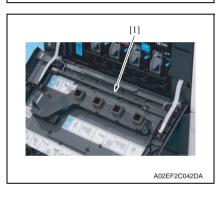
6.3 Disassembly/assembly procedure

6.3.1 Front door

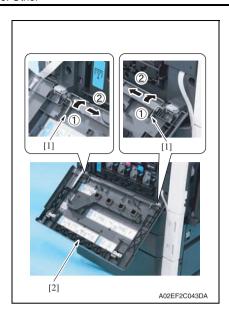
1. Open the front door.



2. Remove two screws [1] and two suppression plates [2].



3. Remove the PH window cleaning jig [1].



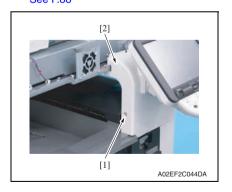
- 4. Slide two pins [1] in the direction of the arrow and remove it.
- 5. Remove the front door [2].

6.3.2 Upper front cover/1

- 1. Open the front door.
- 2. Remove the IR left cover.

See P.88

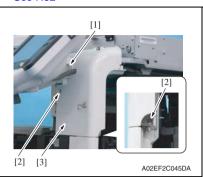
- 3. Remove the IR right cover. See P.88
- 4. Remove the IR upper front cover. See P.88



5. Remove the screw [1], and remove the upper front cover/1 [2].

6.3.3 Upper front cover/2

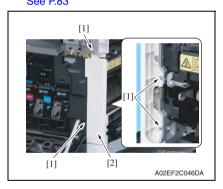
- 1. Open the right door.
- 2. Remove the upper front cover/1. See P.82



- 3. Remove the harness cover [1].
- 4. Remove two screws [2], and remove the upper front cover/2 [3].

6.3.4 Right front cover/1

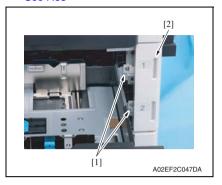
- 1. Open the right cover.
- 2. Remove the upper front cover/2. See P.83



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

6.3.5 Right front cover/2

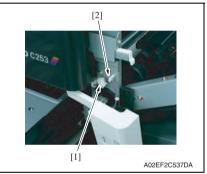
- 1. Slide out the tray 1 and tray 2.
- 2. Remove the right front cover/1.
 See P.83



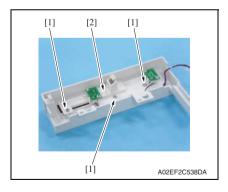
3. Remove two screws [1], and remove the right front cover/2 [2].

NOTE

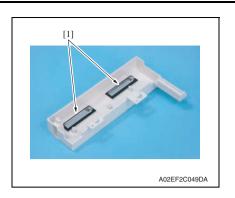
Do not remove it in rush as it is connected to the harness.



 Disconnect the connector [1], and remove the harness from the wire saddle [2].



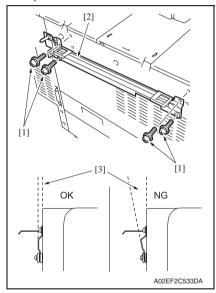
Remove three screw [1], and remove the paper empty indicator board assy [2].



6. Remove two empty display lenses [1].

6.3.6 Left cover

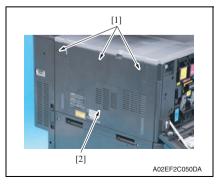
1. Open the front door.



 If the optional finisher FS-519 is mounted, remove it.
 See P.28 of the FS-519/PK-515/OT-602 service manual.

NOTE

- After removing the finisher FS-519, remove four screws [1] and mounting plate [2].
- When reinstalling the mounting plate, do not secure two lower screws too tight, and make sure that the plate and the main unit will be parallel and the clearance [3] between those two will be even.



3. Remove three screws [1], and remove the left cover [2].

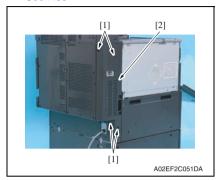
6.3.7 Rear left cover/1

- 1. Open the front door.
- 2. Remove the ozone filter.

See P.39

3. Remove the left cover.

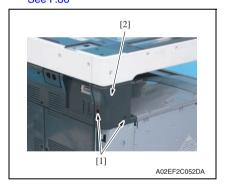
See P.85



4. Remove four screws [1], and remove the rear left cover/1 [2].

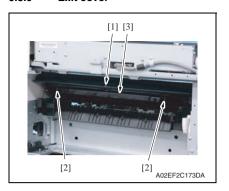
6.3.8 Rear left cover/2

Remove the rear left cover/1.
 See P.86



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

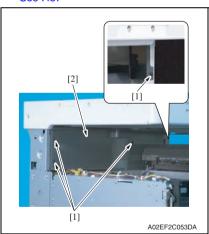
6.3.9 Exit cover



 Remove the screw [1], unhook two tabs [2], and remove the paper exit cover [3].

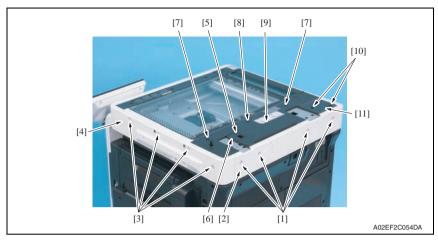
6.3.10 Paper exit rear cover

- 1. Remove the rear left cover/2.
 - See P.86
- 2. Remove the rear right cover/1.
 - See P.90
- 3. Remove the exit tray.
 - See P.93
- 4. Remove the exit cover.
 - See P.87



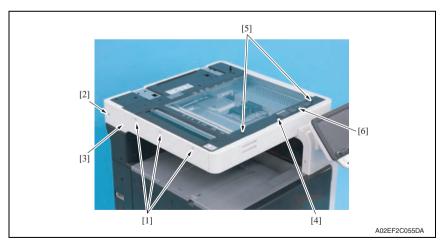
5. Remove four screws [1], and remove the paper exit rear cover [2].

6.3.11 IR rear cover, IR right cover, IR upper rear cover/1, IR upper rear cover/2, IR upper rear cover/3



- 1. Remove four screws [1], and remove the IR rear cover [2].
- 2. Remove four screws [3], and remove the IR right cover [4].
- 3. Remove the screw [5], and remove the IR upper rear cover/3 [6].
- Remove two shoulder screws [7] and the screw [8], and remove the IR upper rear cover/1 [9].
- 5. Remove two screws [10], and remove the IR upper rear cover/2 [11].

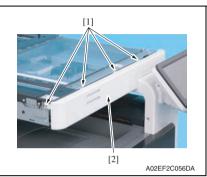
6.3.12 IR left cover, IR upper front cover

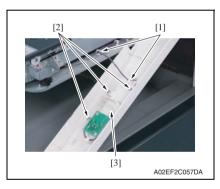


- 1. Remove three screws [1] and the shoulder screw [2], and remove the IR left cover [3].
- 2. Remove the screw [4] and two shoulder screws [5], and remove the IR upper front cover [6].

6.3.13 IR front cover

- Remove the IR left cover.
 See P.88
- 2. Remove the IR right cover. See P.88
- Remove the IR upper front cover. See P.88





4. Remove four screws [1], and remove the IR front cover [2].

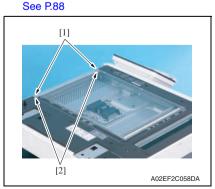
NOTE

Do not remove it in rush as it is connected to the harness.

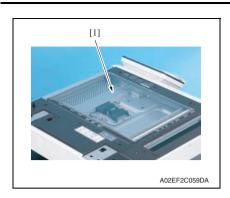
- 5. Remove the harness from two wire saddles [1].
- Remove three screws [2], and remove the machine condition monitor board assy [3].
- 7. Remove two display lenses.

6.3.14 Original glass

1. Remove the IR right cover.

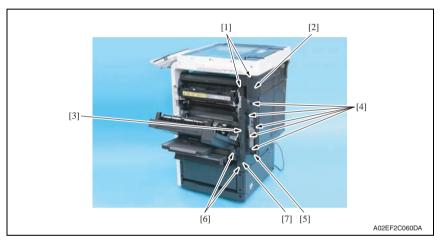


2. Remove each screw [1], and remove two original glass fixing brackets [2].



3. Remove the original glass [1].

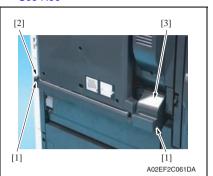
6.3.15 Rear right cover/1, rear right cover/2, rear right cover/3



- 1. Open the right door.
- 2. Remove two screws [1], and remove the rear right cover/1 [2].
- 3. Open the rear right door [3], remove five screws [4], and remove the rear right cover/2
- 4. Remove two screws [6], and remove the rear right cover/3 [7].

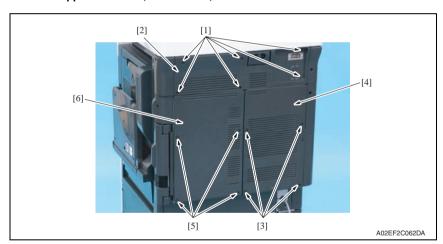
6.3.16 Manual bypass tray front cover, manual bypass tray rear cover

- 1. Open the vertical transport door.
- 2. Remove the rear right cover/3. See P.90



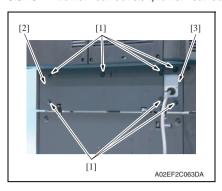
 Remove two screws [1], and remove the manual bypass tray front cover [2] and the manual bypass tray rear cover [3].

6.3.17 Upper rear cover, rear cover/1, rear cover/2



- 1. Remove six screws [1], and remove the upper rear cover [2].
- 2. Remove four screws [3], and remove the rear cover/2 [4].
- 3. Remove four screws [5], and remove the rear cover/1 [6].

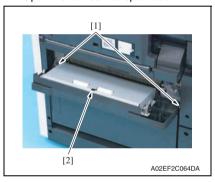
6.3.18 Lower rear cover/1, lower rear cover/2



 Remove seven screws [1], and remove the lower rear cover/1 [2] and the lower rear cover/2 [3].

6.3.19 Vertical transport door

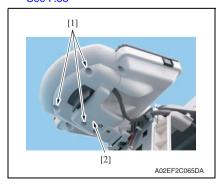
1. Open the vertical transport door.



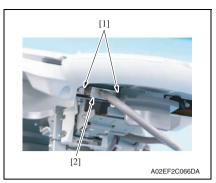
2. Unhook two tabs [1], and remove the vertical transport door [2].

6.3.20 Control panel assy (UN201)

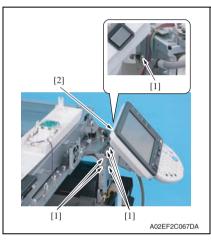
- 1. Remove the upper front cover/1. See P.82
- 2. Remove the upper front cover/2. See P.83



 Remove three screws [1], and remove the control panel support cover [2].



4. Remove two screws [1], and disconnect the connector [2].

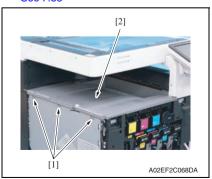


5. Remove six screws [1], and remove the control panel assy [2].

6.3.21 Exit tray

- 1. Open the front door.
- 2. Remove the left cover.

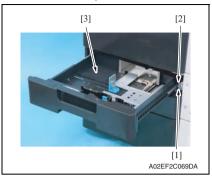
See P.85



3. Remove three screws [1], and remove the exit tray [2].

6.3.22 Tray 1

1. Slide out the tray 1.



2. Remove the screw [1] and metal plate [2], and remove the tray 1 [3].

6.3.23 Tray 2

- 1. Slide out the tray 1 and tray 2.
- 2. Remove the right front cover/2. See P.84



3. Remove the screw [1] and metal plate [2], and remove the tray 2 [3].

6.3.24 Front cover

- 1. Slide out the tray 1.
- 2. Remove the front door.

See P.81

3. Remove the left cover.

See P.85

4. Remove the toner cartridges (C, M, Y, K).

See P.39

5. Remove the waste toner box.

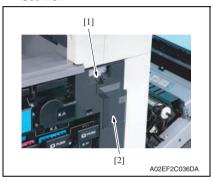
See P.33

6. Remove the imaging units (C, M, Y, K).

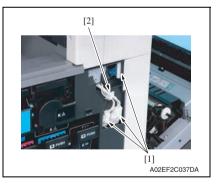
See P.35

7. Remove the right front cover/2.

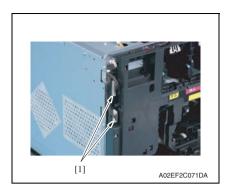
See P.84



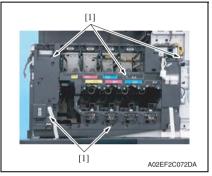
8. Remove the screw [1], and remove the connector protective cover [2].



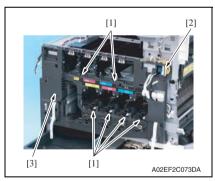
 Disconnect three connectors [1], and remove the harness from the wire saddle [2].



10. Disconnect two connectors [1].



11. Remove five screws [1].



- Unhook six tabs [1], and disconnect the connector [2] from the front cover.
- 13. Remove the front cover [3].

6.3.25 PH unit

♠ CAUTION



Do not replace the printer head unit while the power is ON.

Laser beam generated during the above mentioned activity may cause blindness.



Do not disassemble or adjust the printer head unit.
 Laser beam generated during the above mentioned activity may cause blindness.

NOTE

• When replace the PH unit, replace 4-color PH units at the same time.

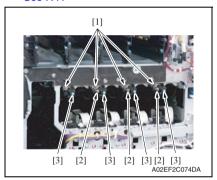
A. Removal procedure

1. Remove the front cover.

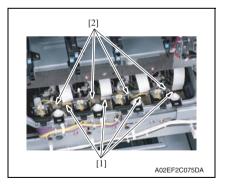
See P.95

2. Remove the transfer belt unit.

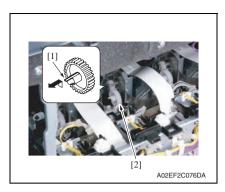
See P.41



Remove four screws [1] and disconnect three connectors [2], and remove four imaging unit guide rails [3].



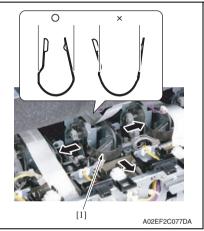
4. Disconnect four flat cables [1] and four connectors [2] of the PH unit.



5. Unhook the tab [1], and remove the gear [2] of the PH unit.

NOTE

 This step is not needed when removing PH unit (Black) that does not have a gear.

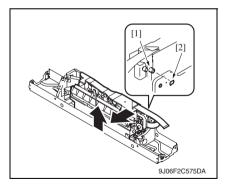


Remove the stopper [1] of the PH unit.

NOTE

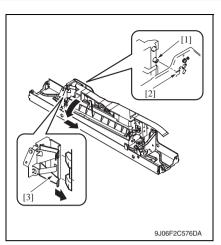
 When removing the stopper, use care so that both ends of the stopper will not open but stay parallel as shown on the left.

Keep using the stopper after once stretched out may cause uneven pitch or other image troubles.



7. Remove the PH unit.

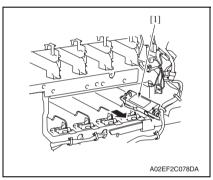
Move the front side of the PH unit to left a little, and remove the boss [1] from the locating hole [2]. Lift up the front side of the PH unit a little.



Remove the boss [1] at the rear side of the PH unit from the locating hole [2].

NOTE

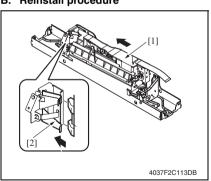
 Since the back of the PH unit is pushed to the right with the two plate springs [3], remove it by tilting the backside of the PH unit to the left as shown in the left illustration.



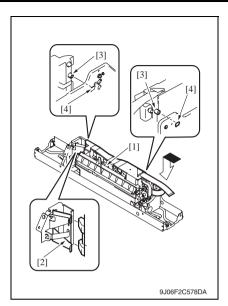
Remove the PH unit [1].

Follow the same procedures to remove all PH units.

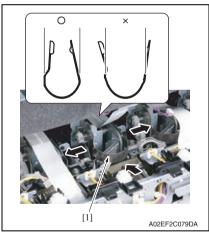




1. Fit the back of the PH unit [1] into the plate spring [2] of installation plate.



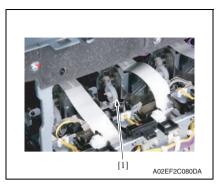
- Push the PH unit [1] along the right side line of PH unit installation plate all the way and fit it into the plate spring [2].
- Make sure that the two bosses [3] at front and rear side of the PH unit fit in two locating holes [4].

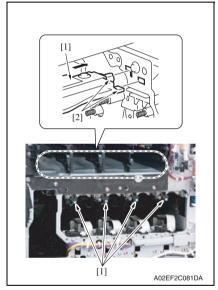


4. Reinstall the stopper [1]. **NOTE**

 When reinstalling the stopper, use care so that both ends of the stopper will not open but stay parallel as shown on the left.

Keep using the stopper after once stretched out may cause uneven pitch or other image troubles.





- 9. Reinstall the Image transfer belt unit.
- 10. Reinstall the front cover.
- Make skew adjustment of the PH unit.
 See P.461

NOTE

• When replacing the PH unit, make sure to conduct PH unit skew adjustment.

5. Reinstall the gear [1].

NOTE

- Make sure that the gear claw is fit in.
- 6. Connect the connector and the flat cable.

NOTE

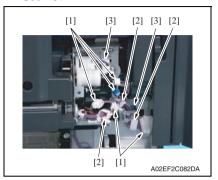
- Make sure the harness is installed along with the harness guide.
- 7. Follow the same procedures to install all the PH units.
- $\it 8.$ Install the imaging unit guide rails [1]. **NOTE**
- Make sure that the two claws [2] at rear end of the rail are fit in the locating hole on the main unit.

6.3.26 Manual bypass tray unit

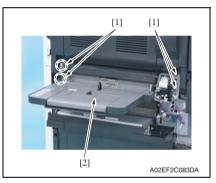
- 1. Open the vertical transport door.
- 2. Remove the rear cover/3.

See P.91

Remove the manual bypass tray front cover and the manual bypass tray rear cover.
 See P.91



 Disconnect five connectors [1], and remove the harness from the three wire saddles [2] and two edge covers [3].

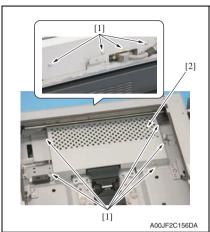


5. Remove four screws [1], and remove the manual bypass tray unit [2].

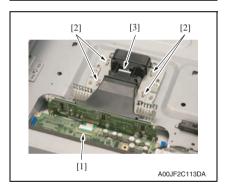
6.3.27 CCD unit

A. Removal procedure

Remove the original glass.
 See P.89

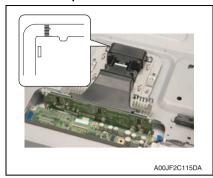


Remove nine screws [1], and remove the image processing board protective shield [2].



- 3. Remove the flat cable [1].
- 4. Remove four screws [2], and take out the CCD unit [3].

B. Reinstall procedure



 Set the CCD unit to the mounting position at the center of the scale, and fix it with four screws

- 2. Reinstall the original glass.
- 3. Turn ON the main power switch and sub power switch.
- Carry out the [Cross Direction Adjustment]. If the specifications are not met, loosen the CCD unit mounting screws and move the CCD unit in the sub scan direction as necessary.

See P.355

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.
- When CCD unit is replaced, [Scan Calibration] and [Line Mag Setting] under [System 2] available in Service Mode should be OFF.

6.3.28 Original glass moving unit

A. Removal procedure

1. Remove the IR left cover.

See P.88

2. Remove the IR right cover.

See P.88

3. Remove the IR upper front cover.

See P.88

4. Remove the IR front cover.

See P.89

5. Remove the original glass.

See P.89

Remove the IR upper rear cover/1, the IR upper rear cover/2 and the IR upper rear cover/3.

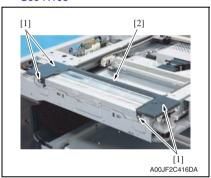
See P.88

7. Remove the original glass moving motor.

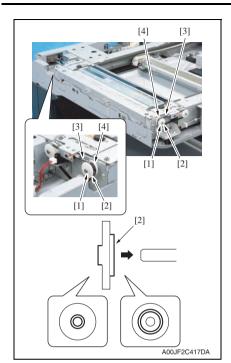
See P.105

8. Remove the glass step sheet.

See P.108



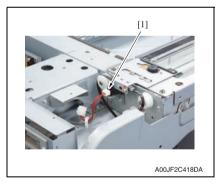
 Remove four screws [1], and remove the original glass moving unit cover [2].



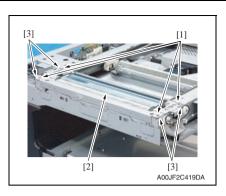
10. Remove the C-ring [1] and the collar [2] one each, and remove the belts [3] of both sides of the original glass mounting unit out of the gear [4].

NOTE

Be sure the direction of the collar
 [2] to be as shown in the left illustration when mounting it.



11. Disconnect the connector [1].



12. Remove four screws [1], and remove the original glass moving unit [2].

NOTE

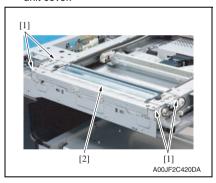
- Use care not to lose the spacer [3] mounted on each screw.
- Write down the type and numbers of the spacer [3].

The same numbers of the spacer of the same type with what is written should be mounted when replacing the original glass moving unit.

B. Reinstall procedure

NOTE

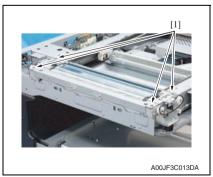
- When replacing the original glass moving unit, clean the glass surface of the original glass moving unit.
 - Clean the inside of the glass well since it cannot be easily cleaned once it is mounted.
- When mounting the new original glass moving unit, take out the original glass moving unit cover.



Set the spacers [1] and mount the original glass moving unit [2] to the machine.

NOTE

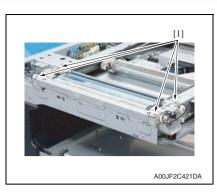
 Make sure to set the spacers [1] which are exact same type and number as before removing the original glass moving unit.



 Tighten four screws [1] loosely and adjust the height of the original glass moving unit.

See P.455





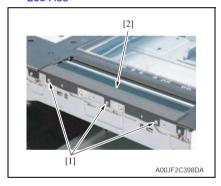
4. Tighten four screws [1] fully.

- 5. Follow the removing procedures in the opposite steps.
- Perform the following setting.
 [Service Mode] → [ADF] → [Read Pos Adj]
 See P.32 of the DF-611 service manual.

6.3.29 Glass step sheet

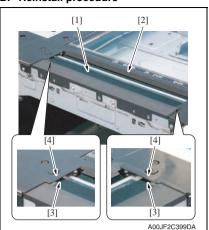
A. Removal procedure

Remove the IR left cover.
 See P.88



2. Remove three screws [1], and remove the glass step sheet [2].

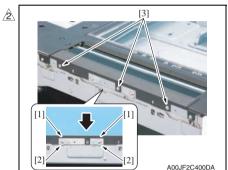
B. Reinstall procedure



1. Mount the glass step sheet [1] to the original glass moving unit [2].

NOTE

- Set the sheet [3] under the cover of the original glass moving unit [4].
- Use care not to bend the edge of the glass step sheet.



3. Perform the following setting.

[Service Mode] \rightarrow [ADF] \rightarrow [Read Pos Adj] See P.32 of the DF-611 service manual.

4

[2] on the original glass moving unit, and mount it with three screws [3].

2. Set the points [1] of the glass step

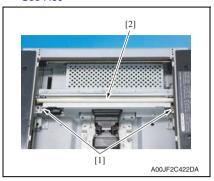
sheet to the edge of the scale plate

6.3.30 Scanner assy

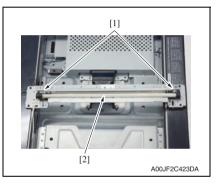
A. Removal procedure

1. Remove the original glass.

See P.89

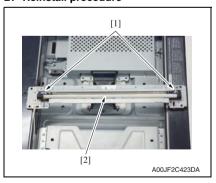


2. Remove two screws [1], and remove the scanner assy [2].

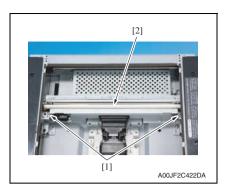


 Remove two screws [1], and remove the exposure lamp [2] from the scanner assy.

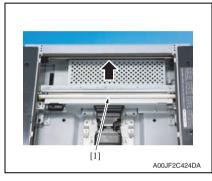
B. Reinstall procedure



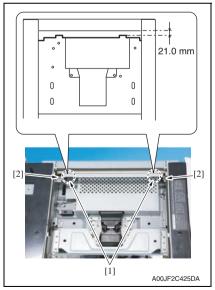
 Fix the exposure lamp [2] to the scanner assy with the two screws [1].



2. Tighten the scanner assy [2] with the two screws [1] temporarily.



3. Move the scanner assy [1] and the mirror unit to the end of the right.



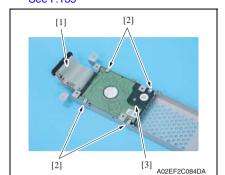
Perform the following setting.
 [Service Mode] → [ADF] → [Read Pos Adj]
 See P.32 of the DF-611 service manual.

- 4. Slide the mirror unit until it hits the end of the IR right frame.
- Provide the length of 21.0 mm between the end of the left indentation [1] on the scanner assy upper surface and the end of the IR right frame upper surface. When the length is ensured, tighten the two screws [2].

6.3.31 Hard disk drive (HDD)

1. Remove the hard disk drive unit.

See the steps 1 to 8 of printer control board removing procedure. See P.135



- 2. Disconnect the connector [1].
- 3. Remove four screws [2], and remove the hard disk drive [3].

NOTE

When the hard disk is replaced, select [State Confirmation] → [Memory/HDD Adj.]
 → [HDD Format] in Service Mode for logical format.

6.3.32 Main drive unit

1. Remove the transfer belt unit.

See P.41

2. Remove the high voltage unit.

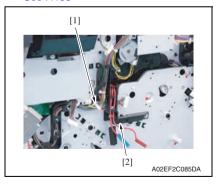
See P.141

3. Remove the Color PC motor.

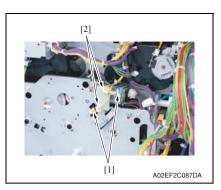
See P.153

4. Remove the transport motor.

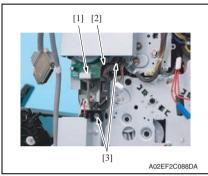
See P.153



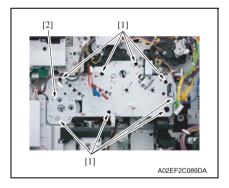
5. Remove the harness from the wire saddle [1] and the harness cover [2].



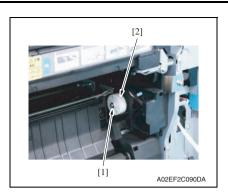
Disconnect two connectors [1], and remove the harness from two wire saddles [2].



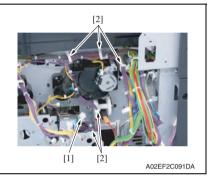
- Disconnect the connector [1], and remove the harness from the harness guide [2].
- 8. Remove two screws [3], and remove the harness guide [2].



9. Remove eight screws [1], and slide out the main drive unit [2].



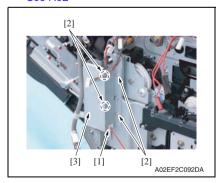
10. Remove the E-ring [1], and remove the gear [2].



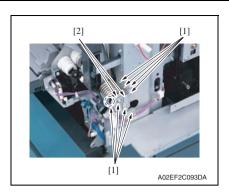
- 11. Disconnect the connector [1], and remove the harness from five wire saddles [2].
- 12. Remove the main drive unit.

6.3.33 Transport drive unit

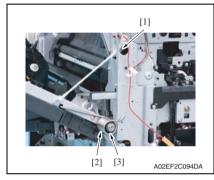
- 1. Remove the main drive unit.
 - See P.112
- Remove the lower rear cover/1 and the lower rear cover/2. See P.92



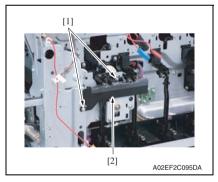
- 3. Remove the harness from the edge cover [1].
- 4. Remove four screws [2], and remove the metal plate [3].



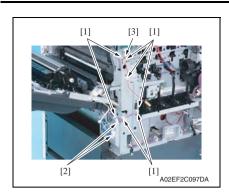
- 5. Close the right door.
- Remove eight screws [1], and remove two reinforcement plates [2] of the right door.



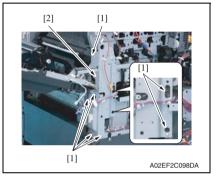
7. Remove the shoulder screw [1], the spring [2] and the collar [3].



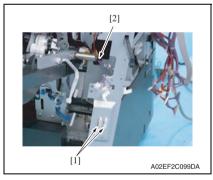
8. Remove two screws [1], and remove the rear handle cover [2].



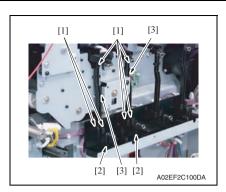
- 9. Remove the harness from seven wire saddles [1].
- Disconnect two connectors [2], and remove the harness from the edge cover [3].

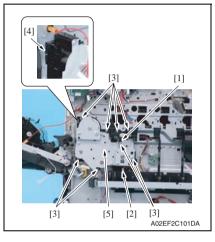


11. Remove seven screws [1], and remove the rear handle assy [2].



 Disconnect two connectors [1], and remove the harness from the edge cover [2].





- 13. Remove each six tabs [1] and two hooks [3].
- 14. Remove two wire guides [2].

- Remove the wire guide [1] and eight screws [3], and disconnect the connector [2].
- 16. Unhook the tab [4], and remove the transport drive unit [5].

6.3.34 Fusing drive unit

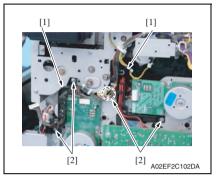
1. Remove the transfer belt unit.

See P.41

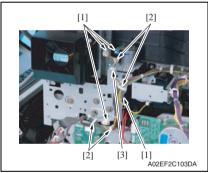
2. Remove the fusing unit.

See P.44

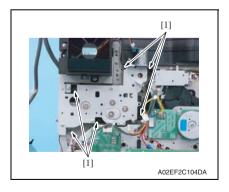
Remove the fusing motor. See P.154



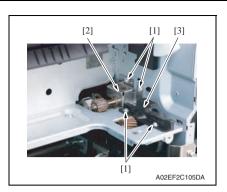
- 4. Remove the harness from two harness guides [1].
- 5. Remove four screws [2], and remove the harness guide [1].



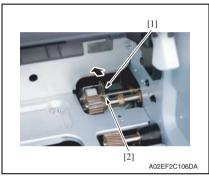
- Disconnect four connectors [1], and remove the harness from four wire saddles [2].
- 7. Remove the harness from the edge cover [3].



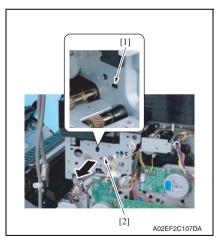
8. Remove six screws [1] of the fusing drive unit.



Remove four screws [1], and remove the fusing rear guide [2] and the shaft cover [3].



10. Remove the spring [1] from the protrusion [2].



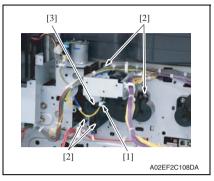
11. Unhook the tab [1].
Pull the fusing drive unit [2] to the front and remove it.

6.3.35 Hopper drive unit (C/K, Y/M)

A. Hopper drive unit (C/K)

1. Remove the main drive unit.

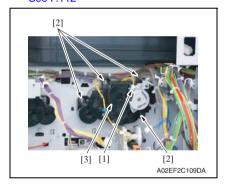
See P.112



- 2. Disconnect the connector [1].
- 3. Remove four screws [2], and remove the hopper drive unit (C/K) [3].

B. Hopper drive unit (Y/M)

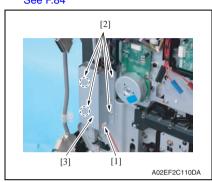
 Remove the main drive unit. See P.112



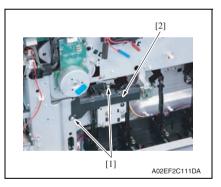
- 2. Disconnect the connector [1].
- 3. Remove four screws [2], and remove the hopper drive unit (Y/M) [3].

6.3.36 Right door assy

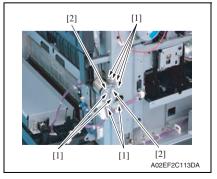
- Remove the lower rear cover/1 and the lower rear cover/2.
 See P.92
- Remove the manual bypass tray unit. See P.102
- 3. Remove the high voltage unit. See P.141
- 4. Slide out the tray 1.
- 5. Remove the right front cover/2. See P.84



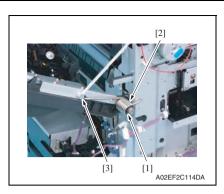
- 6. Remove the harness from the edge cover [1].
- 7. Remove four screws [2], and remove the metal plate [3].



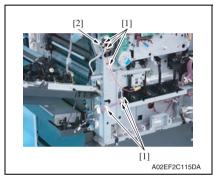
8. Remove two screws [1], and remove the rear handle cover [2].



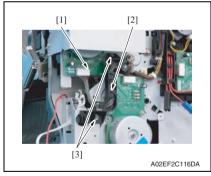
 Remove eight screws [1], and remove two reinforcement plates [2] of the right door.



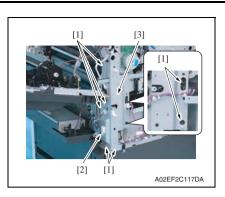
10. Open the right door, and remove the collar [1], the spring [2] and the shoulder screw [3].



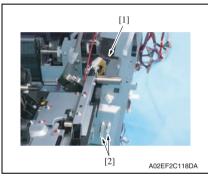
11. Remove the harness from six wire saddles [1] and the edge cover [2].



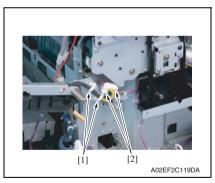
- Disconnect the connector [1], and remove the harness from the harness guide [2].
- 13. Remove two screws [3], and remove the harness guide [2].



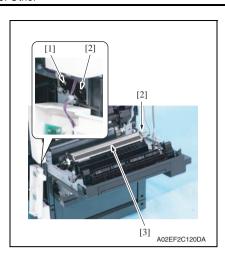
14. Disconnect the connector [2], remove seven screws [1], and remove the rear handle assy [3].



15. Disconnect two connectors [2], and remove the harness from the edge cover [1].



16. Remove two wire saddles [1] and two connectors [2].



- 17. Remove the screw [1], and remove two shafts [2].
- 18. Remove the right door assy [3].

6.3.37 IR Assy

1. Remove the IR left cover.

See P.88

2. Remove the IR right cover.

See P.88

3. Remove the IR upper front cover.

See P.88

4. Remove the IR front cover.

See P.89

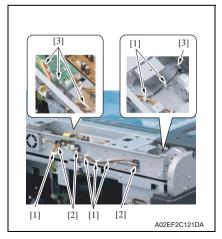
5. Remove the IR rear cover.

See P.88

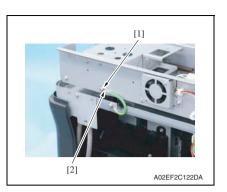
 Remove the IR upper rear cover/1, the IR upper rear cover/2 and the IR upper rear cover/3.
 See P.88

7. Remove the upper rear cover.

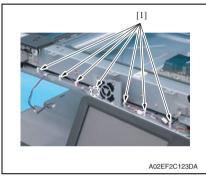
See P.91



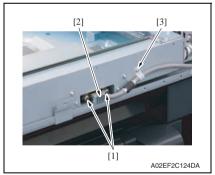
 Disconnect four connectors [3], and remove the harness from six wire saddles [1] and three edge covers [2].



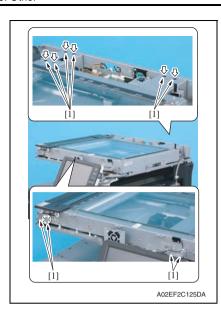
9. Remove the screw [1], and remove the ground terminal [2].



10. Remove the harness from seven wire saddles [1].



- 11. Loosen two screws [1] and remove the connector [2].
- 12. Remove the screw [3] that fixes the IR cable.



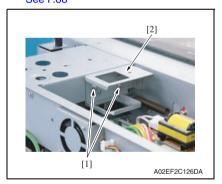
13. Remove ten screws [1], and remove IR assy.

NOTE

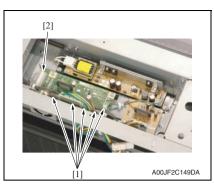
 The two right rear screws are hidden under the seals. Peel off the stickers first and remove the screws.

6.3.38 Scanner relay board (REYB/SCAN)

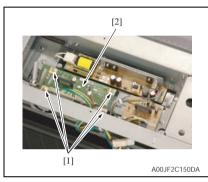
 Remove the IR upper rear cover/1 and the IR upper rear cover/2. See P.88



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



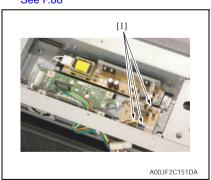
3. Disconnect five connectors [1] and the flat cable [2].



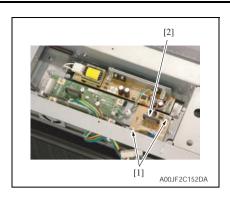
4. Remove four screws [1], and remove the scanner relay board [2].

6.3.39 Original glass position control board (OGPCB)

Remove the IR upper rear cover/1 and the IR upper rear cover/2.
 See P.88



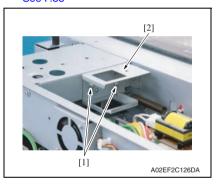
2. Disconnect three connectors [1].



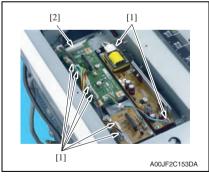
 Remove two screws [1], and remove the original glass position control board [2].

6.3.40 Inverter board (INVB)

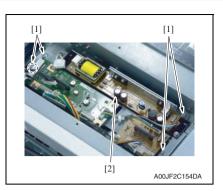
Remove the IR upper rear cover/1 and the IR upper rear cover/2.
 See P.88



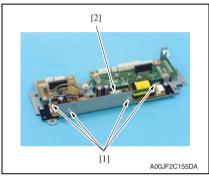
2. Remove two screws [1], and remove the bracket [2].



3. Disconnect eight connectors [1] and the flat cable [2].



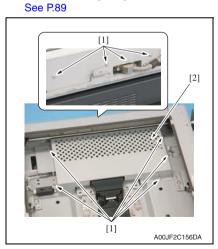
4. Remove four screws [1], and the inverter board assy [2].



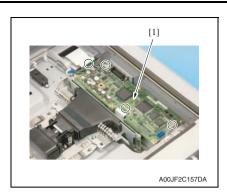
5. Remove four screws [1], and remove the inverter board [2].

6.3.41 Image processing board (IPB)

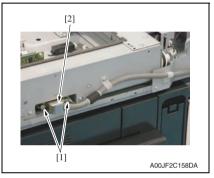
1. Remove the original glass.



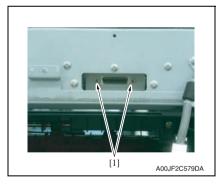
 Remove nine screws [1], and remove the image processing board protective shield [2].



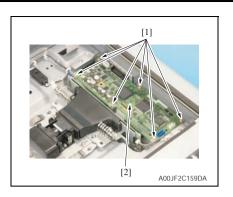
 Remove all the connectors and flat cables on the image processing board [1].



4. Loosen two screws [1], disconnect the IR cable connector [2].



5. Remove the two bolts [1].



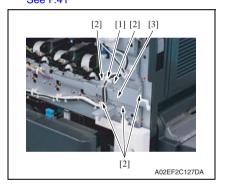
6. Remove six screws [1], and remove the image processing board [2].

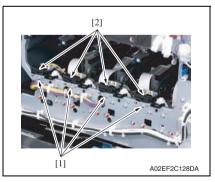
NOTE

 When the image processing board is replaced, make sure to update the firmware.

6.3.42 PH relay board (REYB/PH)

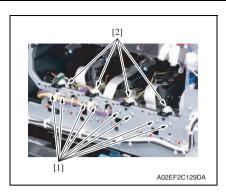
- Remove the front cover.
 See P.95
- Remove the transfer belt unit. See P.41



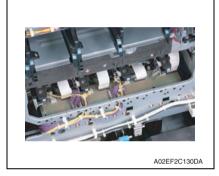


- 3. Remove the harness from the wire saddle [1].
- 4. Remove five screws [2], and remove the front handle assy [3].

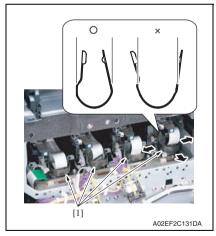
 Remove the screw [1] each, and remove the imaging unit contact assy [2] of each color.



 Remove two screws [1] each, and remove the imaging unit roll assy [2] of each color.



7. Remove all the connectors and the flat cables on the PH relay board.

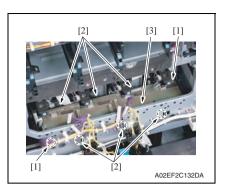


8. Remove the stopper [1] of the PH unit.

NOTE

 When removing the stopper, use care so that both ends of the stopper will not open but stay parallel as shown on the left.

Keep using the stopper after once stretched out may cause uneven pitch or other image troubles.



 Remove two screws [1] and six tabs [2], and remove the PH relay board [3].

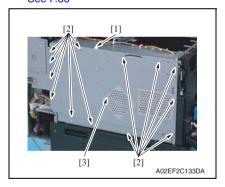
6.3.43 DC power supply (DCPU)



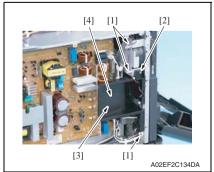


- Remove the DC power supply after six minutes or more have passed since the power plug was disconnected.
- 1. Remove the left cover.
 - See P.85
- 2. Remove the rear left cover/1.

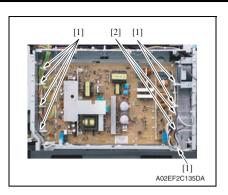
See P.86



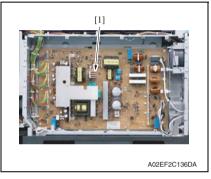
- 3. Disconnect the connector [1].
- Remove thirteen screws [2], and remove the DC power supply protective shield [3].



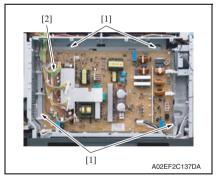
- 5. Remove the harness from three wire saddles [1].
- 6. Remove the harness from the cover [2].
- 7. Remove the screw [3], and remove the cover [4].



8. Remove the harness from seven wire saddles [1] and two edge covers [2].



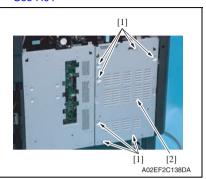
Remove all the connectors on the DC power supply [1].



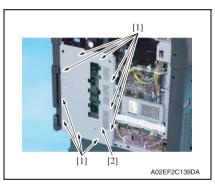
10. Remove four screws [1], and remove the DC power supply [2].

6.3.44 Printer control board (PRCB)

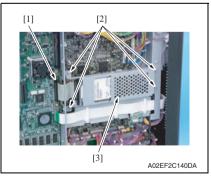
- 1. Open the front door.
- Remove the rear left cover/1 and the rear left cover/2.See P.86
- Remove the upper rear cover, the rear cover/1 and the rear cover/2.See P.91



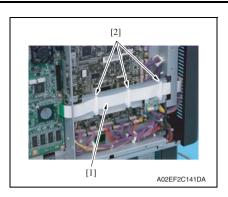
4. Remove seven screws [1], and remove the protective shield/2 [2].



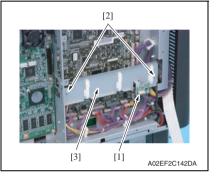
5. Remove ten screws [1], and remove the protective shield/1 [2].



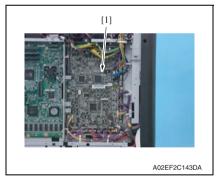
 Disconnect the connector [1], remove four screws [2], and remove the hard disk drive unit [3].



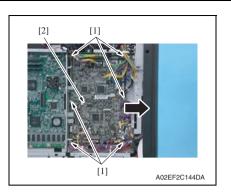
- 7. Disconnect the flat cable [1].
- Remove the flat cable [1] from three cable holders [2] and get the flat cable out of the way.



 Disconnect the connector [1], remove two screws [2], and remove the metal plate [3].



10. Remove all the connectors on the printer control board [1].



 Remove six screws [1]. Slide the printer control board [2] in the direction of the arrow and remove it.

NOTE

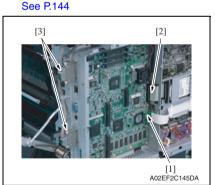
When the printer control board is to be replaced, rewriting the firmware to the latest one.

6.3.45 MFP board (MFPB)

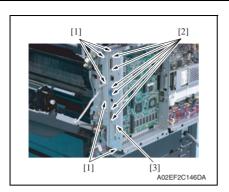
- Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135
- Remove the rear right cover/2 and the rear right cover/3. See P.90
- 3. Remove the NVRAM board.

See P.145

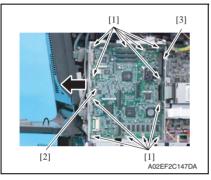
- 4. Remove the JMP board. See P.144
- 5. Remove the SODIMM/1, SODIMM/2.



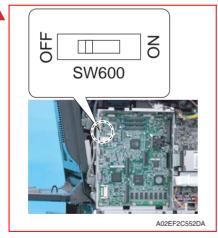
Disconnect the flat cable [1] and the connector [2], and remove two cables [3].



7. Remove five screws [1] and six bolts [2], and remove the metal plate [3].



- 8. Remove twelve screws [1] of the MFP board.
- Slide the MFP board [2] in the direction of the arrow, disconnect the connector [3], and remove the MFP board.



NOTE

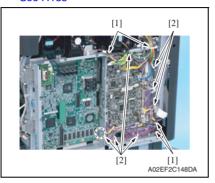
 When the MFP board is to be replaced, install a new MFP board after confirm whether the DIP SW600 on a new board is OFF position as shown on the left.

NOTE

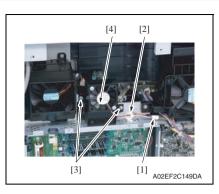
• When the MFP board is to be replaced, rewriting the firmware to the latest one.

6.3.46 PWB box

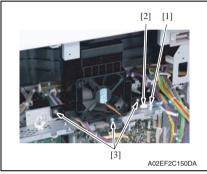
- Remove the rear right cover/1 and the rear right cover/2.
 See P.90
- Remove the lower rear cover/1 and the lower rear cover/2. See P.92
- Remove the hard disk drive and the metal plate.
 See the steps 1 to 6 of printer control board removing procedure.
 See P.135



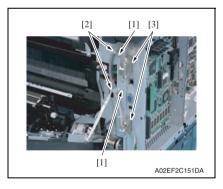
 Remove the harness from four edge covers [1] and seven wire saddles [2].



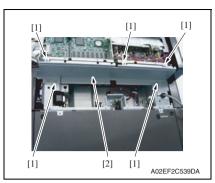
- Disconnect the connector [1], and remove the harness from the wire saddle [2].
- 6. Remove two screws [3], and remove the MFP board cooling fan motor [4].



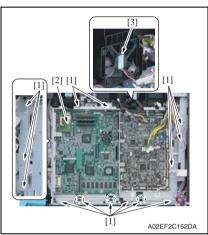
- Remove the harness from the wire saddle [1], and disconnect the connector [2].
- 8. Remove three screws [3] of the cooling fan motor/2.



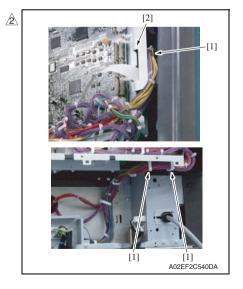
 Remove two screws [1] and two cable clamps [2], and remove two cables [3]. 2



10. Remove five screws [1], and remove the metal plate [2].



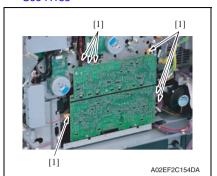
 Remove fourteen screws [1]. While raising the PWB box [2] a little, slide it to the left. Then, remove the cooling fan motor/2 [3].



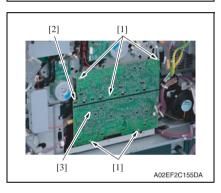
 Remove the harness from three wire saddles [1], and remove the PWB box [2].

6.3.47 High voltage unit (HV)

1. Remove the PWB box See P.138



2. Disconnect seven connectors [1].



 Remove five screws [1] and the tab [2], and remove the high voltage unit [3].

NOTE

 When reinstalling the high voltage unit, make sure that the terminal end surely contacts. See P.135

Maintenance

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6.3.48 Service EEPROM board (SV ERB)

- Remove the rear cover /1 and the rear cover /2 See P.91
- Remove the protective shield/1 and the protective shield/2.See the steps 1 to 5 of printer control board removing procedure.

 Remove two screws [2] and the connector [1], and take out the service EEPROM board [3].

NOTE

After replacing the service EEPROM board, all parts shown below are required to be replaced with new ones.

A02EF2C532DA

- Imaging unit Y/M/C/K
- Toner cartridge Y/M/C/K

[1]

- · Image transfer belt unit
- · Fusing unit

NOTE

- When Service EEPROM is replaced, data of all adjustment settings stored in EEPROM disappear and the adjustment settings are returned to the default ones. After replacing the service EEPROM board, take the following steps to make readjustments.
- Open the front door and turn OFF and ON the main power switch and sub power switch.
- 5. Enter the Service mode. Make individual adjustments shown in the following table in the order listed, using the machine maintenance list and the adjustment lists that were output at the time of main body installation and maintenance.

NOTE

· At this time, a front door must be an open state.

<u>1</u>	Order	Items that require readjustment in the Service mode			Ref. page
	1	Machine	Color Registration	Cyan	P.358
	2		Adjustment	Magenta	
	3			Yellow	
	4	Imaging Process	TCR Level Setting		P.364
	5 Adjustm	Adjustment	Background Voltage Margin		P.365
-	6		D Max Density		P.364
	7		Dev. Bias Choice		P.368
	8	System 1	Change Warm Up Time		P.394



7	Order	Items that require readjustment in the Service mode			Ref. page
	9	Machine	Exhaust Fan Stop Delay		P.359
	10	System 2	Unit Change	Warning Display	P.397
	11	System 1	IU Life Setting		P.393

NOTE

- After replacing the service EEPROM board, be sure to make the above listed adjustments before the first warm-up is made.
- 6. Turn OFF the main power switch and sub power switch.
- Close the front door and turn ON the main power switch and sub power switch.Check to see that warm-up and image stabilization operations are completed normally.
- 8. Enter the Service mode again. Make individual adjustments shown in the following table in the order listed, using the machine management list and the adjustment lists that were output at the time of main body installation and maintenance.

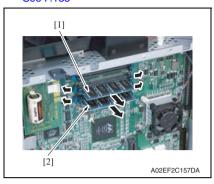
Order	Items tha	Items that require readjustment in the Service mode		
1	Machine	LD adjustment	LD lightness balance adjust.	P.360
2		Manual Bypass Tray Adjustment Printer Resist Loop Fusing Temperature		P.361
3				P.357
4				P.346
5	Finisher	CB-FN adjustment	Fold&Staple Pos. Adjust- ment	P.432
6			Finisher Check	
7			Punch Regist Loop Size	
8			Punch Horizontal Position	
9	Machine	Printer Area	Paper Feed Direction Adj.	P.352
10		Fusing Transport Speed		P.347
11		Printer Area	Centering	P.349
12			Centering (Duplex 2nd Side)	P.351
13			Leading Edge Adjustment	P.348
14			Leading Edge Adj. (Duplex Side 2)	P.350
15	Imaging Process	Transfer Output Fine	Secondary transfer adj.	P.366
16	Adjustment	Adjustment	Primary transfer adj.	P.365

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6.3.49 SODIMM/1, SODIMM/2

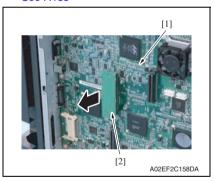
Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135



2. Remove the SODIMM/1 [1] and SODIMM/2 [2] on the MFP board.

6.3.50 JMP board (JMPB)

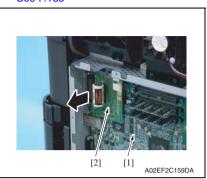
Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135



2. Remove the JMP board [2] on the MFP board [1].

6.3.51 NVRAM board (NRB)

Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135



2. Remove the NVRAM board [2] on the MFP board [1].

6.3.52 Machine condition monitor board (MCMB)

1. Remove the IR left cover.

See P.88

2. Remove the IR right cover.

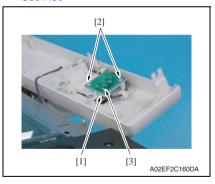
See P.88

3. Remove the IR upper front cover.

See P.88

4. Remove the IR front cover.

See P.89



 Disconnect the connector [1], remove two screws [2], and remove the machine condition monitor board [3].

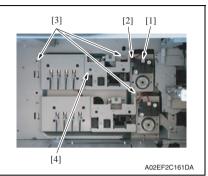
6.3.53 Paper feed tray 1 paper FD size detect board (PSDTB/1)

1. Remove the tray 1.

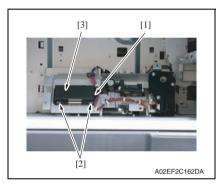
See P.94

2. Remove the tray 2.

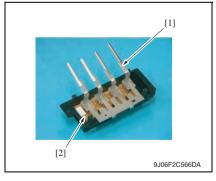
See P.94



- Disconnect the connector [1], and remove the harness from the edge cover [2].
- Remove three screws [3], take out the paper feed tray 1 lift-up motor assy [4] and turn it around.



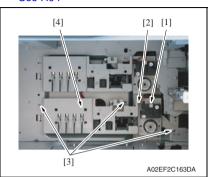
- 5. Disconnect the connector [1].
- Unhook two tabs [2] and remove the paper feed tray 1 paper FD size detect board assy [3].



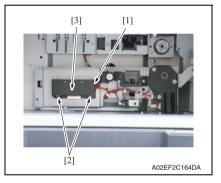
Remove the lever [1], and remove the paper feed tray 1 paper FD size detect board [2].

6.3.54 Paper feed tray 2 paper FD size detect board (PSDTB/2)

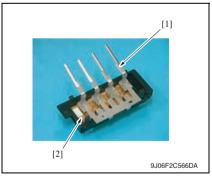
- 1. Remove the tray 1.
 - See P.94
- 2. Remove the tray 2. See P.94



- Disconnect the connector [1], and remove the harness from the edge cover [2].
- Remove three screws [3], take out the paper feed tray 2 lift-up motor assy [4] and turn it around.



- 5. Disconnect the connector [1].
- Unhook two tabs [2] and remove the paper feed tray 2 paper FD size detect board assy [3].



 Remove the lever [1], and remove the paper feed tray 2 paper FD size detect board [2].

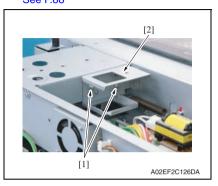
6.3.55 Scanner motor (M201)

A. Removal procedure

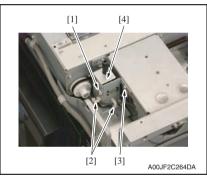
1. Remove the IR rear cover.

See P.88

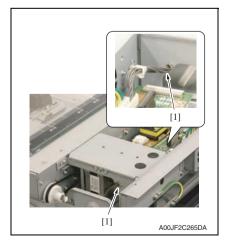
Remove the IR upper rear cover/1 and the IR upper rear cover/2. See P.88



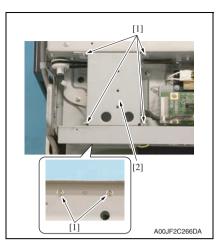
3. Remove two screws [1], and remove the bracket [2].



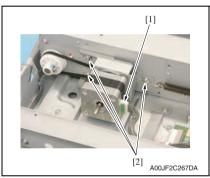
- Remove the connector [1] and take out the harnesses from two wire saddles [2].
- 5. Remove the screw [3], and remove the 20 degree sensor assy [4].



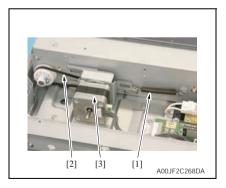
6. Remove the harness from two edge covers [1].



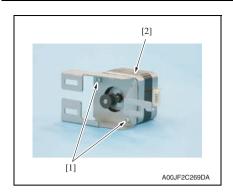
7. Remove six screws [1] and take out the ADF table [2].



8. Disconnect the connector [1] and remove three screws [2].

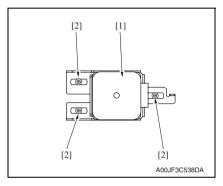


 Remove the spring [1] and the belt [2], and take out the scanner motor assy [3].

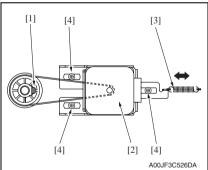


10. Remove two screws [1], and remove the scanner motor [2].

B. Reinstall procedure



1. Temporarily secure the scanner motor assy [1] with three screws [2].

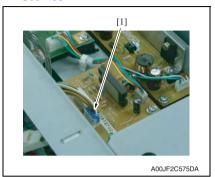


- With the scanner drive gear set screw [1] located on the right-hand side as shown on the left, slide the scanner motor assy [2] to the left and check that it is returned to the original position by the tension of the spring [3].
 - Perform this step three times.
- Turn the pulley and make sure that the belt does not ride up on the pulley teeth.
- 4. Tighten the three screws [4] to fix the scanner motor assy into position.

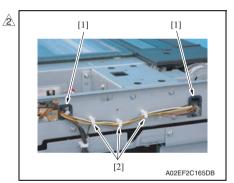
6.3.56 Original glass moving motor (M202)

- 1. Remove the IR rear cover.
 - See P.88
- Remove the IR upper rear cover/1, the IR upper rear cover/2 and the IR upper rear cover/3.

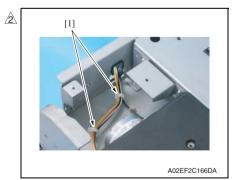
See P.88



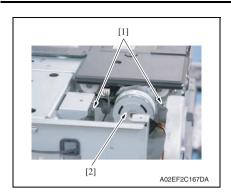
3. Disconnect the connector [1].



4. Remove the harness from two edge covers [1] and three wire saddles [2].

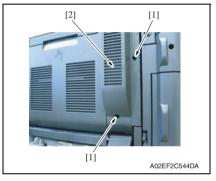


5. Remove the harness from two wire saddles [1].



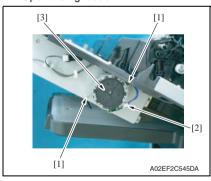
Remove two screws [1], and remove the original glass moving motor assy [2].

↑ 6.3.57 Duplex transport motor (M7)



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

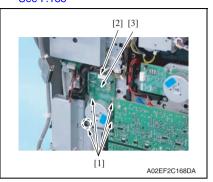
2. Open the right door.



 Remove two screws [1], disconnect the connector [2], and remove the duplex transport motor [3].

6.3.58 Transport motor (M1)

1. Remove the PWB box. See P.138

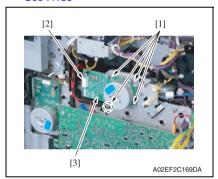


Remove four screws [1], disconnect the connector [2], and remove the transport motor [3].

6.3.59 Color PC motor (M2)

1. Remove the PWB box.

See P.138

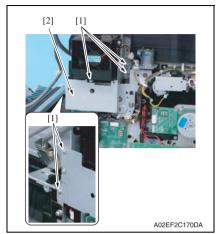


Remove four screws [1], disconnect the connector [2], and remove the color PC motor [3].

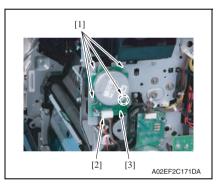
6.3.60 Fusing motor (M5)

1. Remove the PWB box.

See P.138



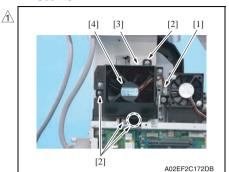
2. Remove five screws [1], and remove the bracket [2].



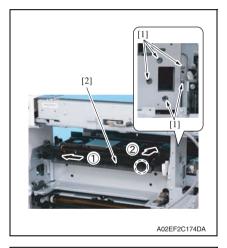
 Remove four screws [1], disconnect the connector [2], and remove the fusing motor [3].

6.3.61 Switchback motor (M6)

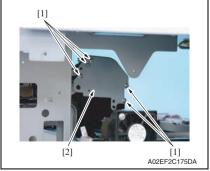
 Remove the paper exit rear cover. See P.87



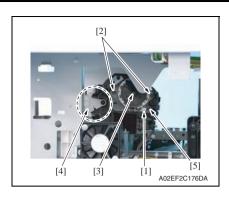
- 2. Disconnect the connector [1].
- Remove four screws [2], unhook the tab [3], and remove the paper cooling fan motor assy [4].



 Remove five screws [1] and slide the paper exit section assy [2] in the direction of the arrow.



5. Remove five screws [1], and remove the metal plate [2].



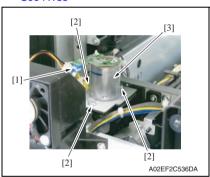
- 6. Disconnect the connector [1].
- 7. Remove two screws [2], and remove the switchback motor [3].

NOTE

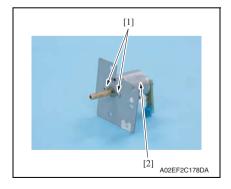
- Care should be taken to avoid letting the lever [4] hit the housing and be damaged.
- Care should be taken to prevent the harness wires [5] from being pulled loose or pulled out of the connector.

6.3.62 Fusing retraction motor (M12)

- Remove the paper exit rear cover.
 See P.87
- Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135



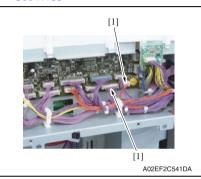
- 3. Disconnect the connector [1].
- Remove three screws [2], and remove the fusing retraction motor assy [3].



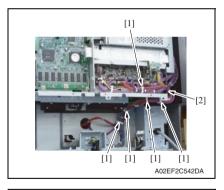
Remove two screws [1], and remove the fusing retraction motor [2].

6.3.63 Paper feed tray 1 lift-up motor (M8)

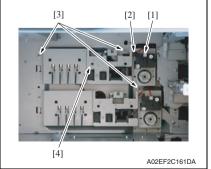
- 1. Remove the tray 1.
 - See P.94
- 2. Remove the tray 2.
 - See P.94
- 3. Remove the right front cover/2.
 - See P.84
- Remove the lower rear cover/1 and the lower rear cover/2.
 See P.92
- Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135



 Disconnect two connectors (CN10, CN11) [1] on the printer control board.

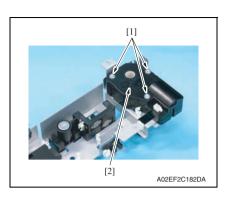


7. Remove the harness from five wire saddles [1] and the edge cover [2].



- Disconnect the connector [1], and remove the harness from the edge cover [2].
- Remove three screws [3], take out the paper feed tray 1 lift-up motor assy [4].





 Remove three screws [1], and remove the paper feed tray 1 lift-up motor [2].

6.3.64 Paper feed tray 2 lift-up motor (M9)

1. Remove the tray 1.

See P.94

2. Remove the tray 2.

See P.94

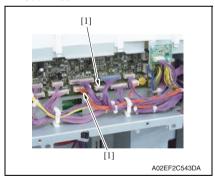
3. Remove the right front cover/2.

See P.84

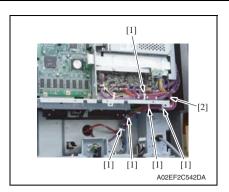
4. Remove the lower rear cover/1 and the lower rear cover/2.

See P.92

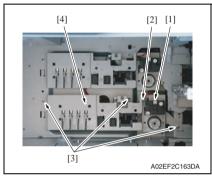
Remove the protective shield/1 and the protective shield/2.
 See the steps 1 to 5 of printer control board removing procedure.
 See P.135



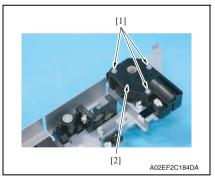
 Disconnect two connectors (CN7, CN8) [1] on the printer control board



7. Remove the harness from five wire saddles [1] and the edge cover [2].



- Disconnect the connector [1], and remove the harness from the edge cover [2].
- Remove three screws [3], take out the paper feed tray 2 lift-up motor assy [4].



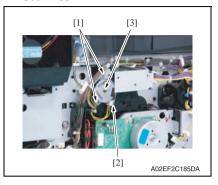
 Remove three screws [1], and remove the paper feed tray 2 lift-up motor [2]. Maintenance

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6.3.65 Toner supply motor/CK (M3)

1. Remove the PWB box.

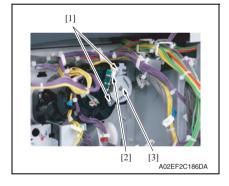
See P.138



 Disconnect the connector [2], remove two screws [1], and remove the toner supply motor/CK [3].

6.3.66 Toner supply motor/YM (M4)

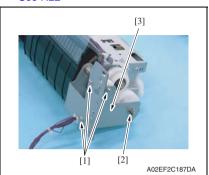
 Remove the PWB box. See P.138



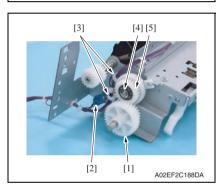
Disconnect the connector [2], remove two screws [1], and remove the toner supply motor/YM [3].

6.3.67 Paper feed tray 1 paper feed clutch (CL1)

Remove the tray 1 paper feed assy.
 See the steps 1 to 4 of tray 1 feed roller/tray 1 pick-up roller removing procedure.
 See P.22



 Remove three screws [1] and the Ering [2], and remove the metal plate [3].



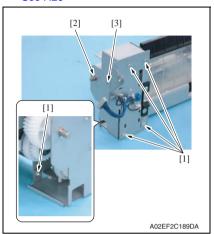
- 3. Remove the gear [1].
- Disconnect the connector [2], and remove the harness from two wire saddles [3].
- Remove the E-ring [4], and remove the paper feed tray 1 paper feed clutch [5].

NOTE

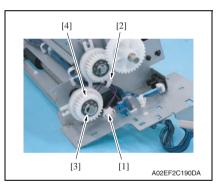
 When mounting the paper feed tray 1 paper feed clutch [5], set the convex part of the stopper into the concave part of the paper feed tray 1 paper feed clutch.

6.3.68 Paper feed tray 2 vertical transport clutch (CL3)

Remove the tray 2 paper feed assy.
 See the steps 1 to 5 of tray 2 feed roller/tray 2 pick-up roller removing procedure.
 See P.26



 Remove five screws [1] and the Ering [2], and remove the metal plate [3].



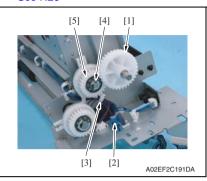
- Disconnect the connector [1], and remove the harness from the wire saddle [2].
- Remove the E-ring [3], and remove the paper feed tray 2 vertical transport clutch [4].

NOTE

 When mounting the paper feed tray 2 vertical transport clutch [4], set the convex part of the stopper into the concave part of the paper feed tray 2 vertical transport clutch.

6.3.69 Paper feed tray 2 paper feed clutch (CL2)

Remove the tray 2 paper feed assy.
 See the steps 1 to 5 of tray 2 feed roller/tray 2 pick-up roller removing procedure.
 See P.26



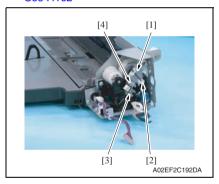
- 2. Remove the gear [1].
- Disconnect the connector [2], and remove the harness from the wire saddle [3].
- Remove the E-ring [4], and remove the paper feed tray 2 paper feed clutch [5].

NOTE

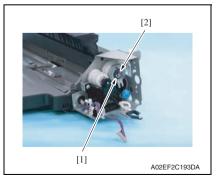
 When mounting the paper feed tray 2 paper feed clutch [5], set the convex part of the stopper into the concave part of the paper feed tray 2 paper feed clutch.

6.3.70 Manual paper feed clutch (CL4)

 Remove the manual bypass tray unit. See P.102



- Remove the harness from the edge cover [1] and the wire saddle [2], and remove the screw [3].
- 3. Remove the metal plate [4].



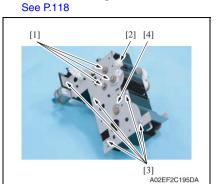
4. Remove the E-ring [1], and remove the manual paper feed clutch [2].

NOTE

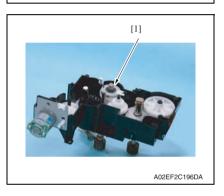
 When mounting the manual paper feed clutch [2], set the convex part of the stopper into the concave part of the manual paper feed clutch.

6.3.71 Transfer belt retraction clutch (CL7)

1. Remove the fusing drive unit.



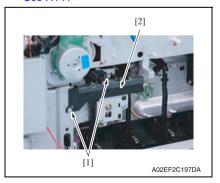
Disconnect the connector [2], remove three E-rings [1] and five screws [3], and remove the metal plate [4].



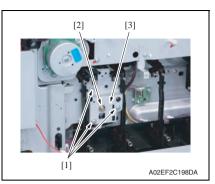
3. Remove the transfer belt retraction clutch [1].

6.3.72 Developing clutch/K (CL5)

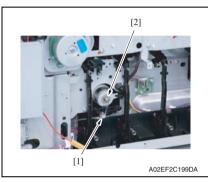
 Remove the high voltage unit. See P.141



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



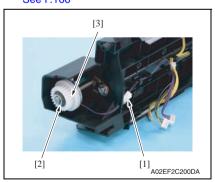
Remove three screws [1] and the Ering [2], and remove the developing clutch/K cover [3].



4. Disconnect the connector [1], and remove the developing clutch/K [2].

6.3.73 Tim. roller clutch (CL6)

Remove the vertical transport unit.
 See the steps 1 to 7 of IDC registration sensor removing procedure.
 See P.166



 Disconnect the connector [1], remove the E-ring [2], and remove the tim. roller clutch [3]. Maintenance

bizhub C353/C253/C203

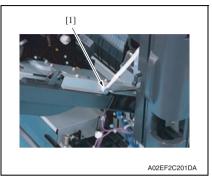
6.3.74 IDC registration sensor/MK (IDCS/MK), IDC registration sensor/YC (IDCS/YC)

1. Remove the transfer belt unit.

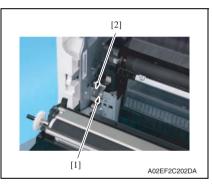
See P.41

2. Remove the manual bypass tray unit.

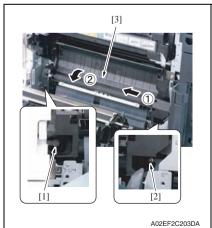
See P.102



3. Remove the shoulder screw [1].



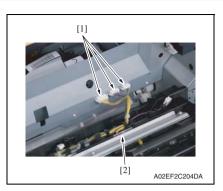
4. Remove the screw [1], and remove the plate spring [2].



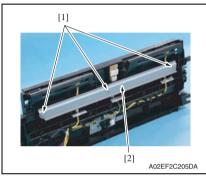
- 5. Remove the shoulder screw [1] and the screw [2].
- 6. Remove the vertical transport unit [3] as shown in the left illustration.

NOTE

Since multiple connectors are connected to the backside of the vertical transport assy, do not pull it by force.



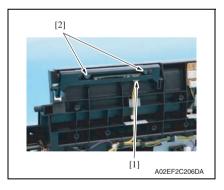
7. Disconnect three connectors [1], and remove the vertical transport unit [2].



8. Remove three screws [1], and remove the metal plate [2].

NOTE

Both end screws has a spacer.
 Remove the screws, being careful not to drop the spacers.



- Disconnect the connector [1], remove two screws [2], and remove the IDC registration sensor/MK.
- 10. Repeat steps 8 to 9 to remove IDC registration sensor/YC.

6.3.75 Scanner drive cables

A. Removal procedure

1. Remove the IR assy.

See P.124

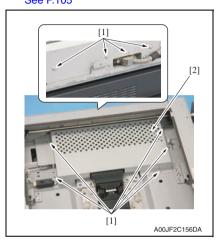
2. Remove the scanner assy.

See P.110

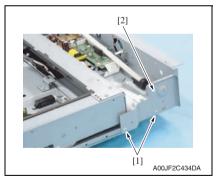
3. Remove the scanner motor.

See P.148

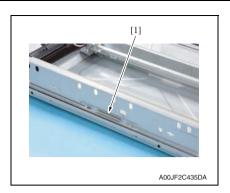
Remove the original glass moving unit.
 See P.105



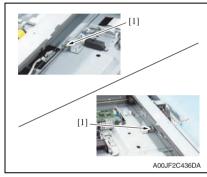
 Remove nine screws [1], and remove the image processing board protective shield [2].



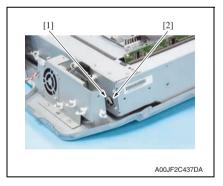
6. Remove two screws [1], and remove the metal plate [2].



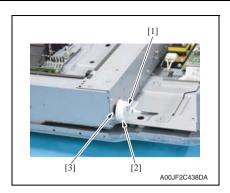
7. Remove the hook side spring [1] of the scanner drive cables.



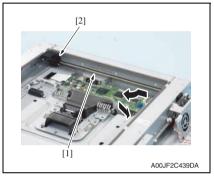
 Remove the bead side [1] of the scanner drive cables from the adjustment anchor.



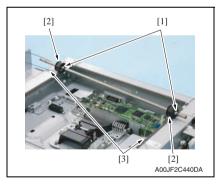
9. Remove the C-ring [1] and bearing [2].



- 10. Remove the screw [1], and remove the scanner drive gear [2].
- 11. Remove the bearing [3].



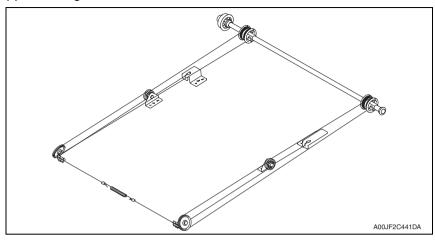
12. Remove the shaft [1] and pulley [2].



- Remove the screw [1] one each and take out the two pulleys [2] from the shaft.
- 14. Remove the scanner drive cables [3] from each pulley [2].

B. reinstall procedure

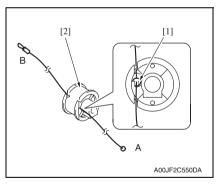
(1) Overall figure



(2) Winding of the scanner drive cables

NOTE

 The scanner drive cable differs in type between the front (silver) and the rear (black), which are colored differently.

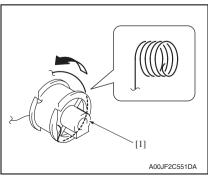


<Front>

Set the round bead [1] of the scanner drive cable (silver) to the pulley
 [2] at the position as shown in the illustration.

NOTE

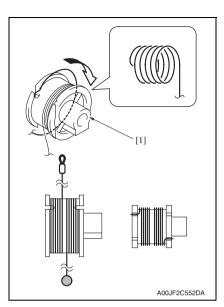
 Make sure that the bead snugly rests in the slit in the pulley.



 Twist the A side scanner drive cable around the pulley [1] starting from the front groove in anticlockwise direction five times.

NOTE

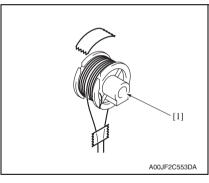
 Make sure that no part of the cable rides on the other.



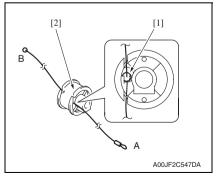
 Twist the B side scanner drive cable around the pulley [1] starting from the rear groove in clockwise direction five times.

NOTE

 Make sure that no part of the cable rides on the other.



4. Apply the tape to fix the scanner drive cable to the pulley [1].

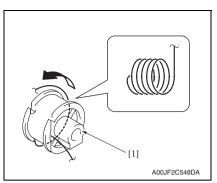


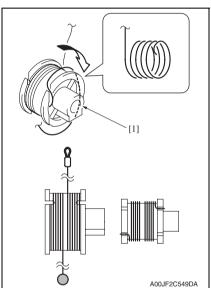
<Rear>

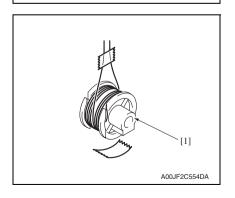
Set the round bead [1] of the scanner drive cable (black) to the pulley
 [2] at the position as shown in the illustration.

NOTE

 Make sure that the bead snugly rests in the slit in the pulley.







 Twist the B side scanner drive cable around the pulley [1] starting from the rear groove in anticlockwise direction five times.

NOTE

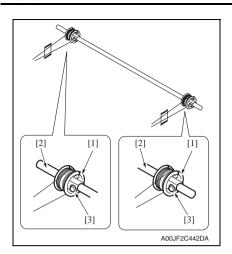
 Make sure that no part of the cable rides on the other.

 Twist the A side scanner drive cable around the pulley [1] starting from the front groove in clockwise direction five times.

NOTE

 Make sure that no part of the cable rides on the other.

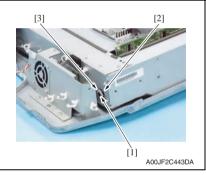
8. Apply the tape to fix the scanner drive cable to the pulley [1].



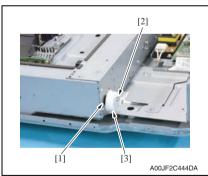
 Put the front/rear pulleys [1] into the shaft [2], and fix them with one screw each [3].

NOTE

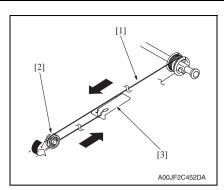
- Set the pulley at the direction as shown in the illustration.
- Fix the pulley at the position as shown in the illustration.
- Apply the screw lock on the screw.

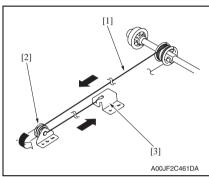


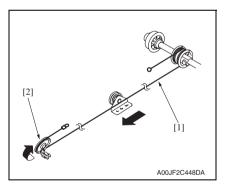
10. Set the shaft [1] and install the bearing [2] and the C-ring [3].



- 11. Install the bearing [1].
- 12. Install the gear [3] with the screw [2]. **NOTE**
- Apply the screw lock on the screw.







<Front>

13. Place the fixed bead side of the scanner drive cable [1] to the pulley B [2], and place the fixed bead to the adjustment anchor [3].

NOTE

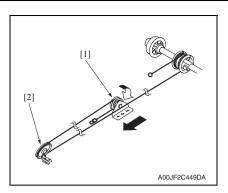
 Make sure to hook the scanner drive cable to the outside groove of the pulley B.

<Rear>

14. Place the fixed bead side of the scanner drive cable [1] to the pulley D [2], and place the fixed bead to the adjustment anchor [3].

<Rear>

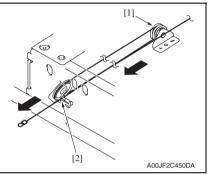
15. Place the hook side of the scanner drive cable [1] to the pulley C [2].



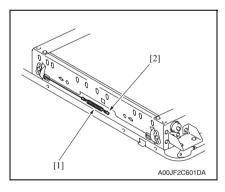
16. Place the scanner drive cable to the pulley D [2] via the pulley C [1].

NOTE

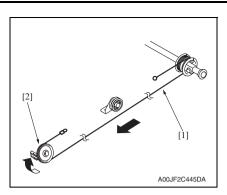
 Make sure to hook the scanner drive cable to the outside groove of the pulley D [2].



17. Put the scanner drive cable into the IR frame hole [2] via the pulley D [1].

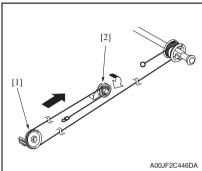


18. Hook the end of the spring [1] to the wire and the other end to the hook [2] on the IR left frame.



<Front>

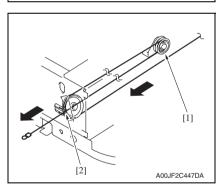
19. Place the hook side of the scanner drive cable [1] to the pulley A [2].



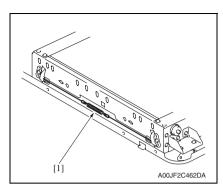
20. Place the scanner drive cable to the pulley B [2] via the pulley A [1].

NOTE

 Make sure to hook the scanner drive cable to the outside groove of the pulley B [2].



21. Put the scanner drive cable into the IR frame hole [2] via the pulley B [1].



22. Remove the end of the spring [1] from the hook. Hook the end of the spring to the wire coming from the front.

- 23. Remove the tape that fixes the front/rear pulleys.
- 24. Adjust the focus positioning of the scanner and mirrors unit.

See P.453

- Adjust the position of the scanner and 2nd/3rd mirrors carriage.
 See P.454
- 26. Mount the original glass moving unit, and adjust the height of the original glass moving unit

See P.455

27. Perform the following setting.

[Service Mode] \rightarrow [Machine] \rightarrow [Scan Area] \rightarrow [Feed Direction Adjustment]] See P.356

28. Perform the following setting.

 $[\mathsf{Service}\ \mathsf{Mode}] \to [\mathsf{ADF}] \to [\mathsf{Read}\ \mathsf{Pos}\ \mathsf{Adj}]$

See P.32 of the DF-611 service manual.

6.4 Cleaning procedure

NOTE

 The alcohol described in the cleaning procedure represents the ethanol isopropyl alcohol.

6.4.1 Transfer belt unit

1. Remove the transfer belt unit.



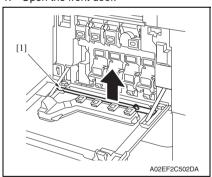
2. Using a cleaning pad, wipe the transfer belt [1].

NOTE

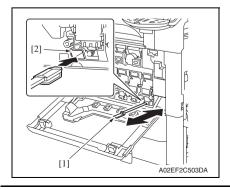
- · Do not wipe out with water.
- · Do not wipe out with any solvents.

6.4.2 PH window Y,M,C,K

1. Open the front door.



2. Remove the PH window cleaning jig [1] from the front door.



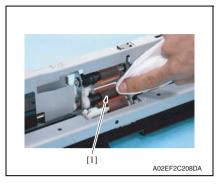
 Insert the PH window cleaning jig [1] to the cleaning port [2] and clean it by putting the jig back and forth a couple times.

NOTE

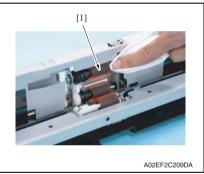
Clean every PH window of Y,M,C,K.

6.4.3 Tray 1 feed roller, tray 1 pick-up roller, tray 1 separation roller

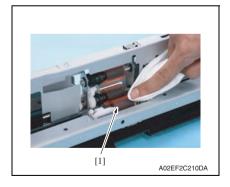
Remove the tray 1 paper feed assy.
 See the steps 1 to 4 of tray 1 feed roller/tray 1 pick-up roller removing procedure.
 See P.22



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



 Using a cleaning pad dampened with alcohol, wipe the tray 1 pick-up roller
 clean of dirt.



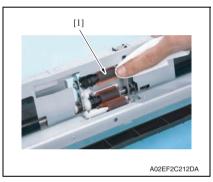
 Using a cleaning pad dampened with alcohol, wipe the tray 1 separation roller [1] clean of dirt.

6.4.4 Tray 2 feed roller, tray 2 pick-up roller, tray 2 separation roller

Remove the tray 2 paper feed assy.
 See the steps 1 to 5 of tray 2 feed roller/tray 2 pick-up roller removing procedure.
 See P.26



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



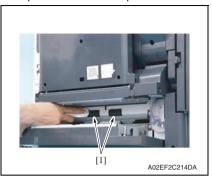
 Using a cleaning pad dampened with alcohol, wipe the tray 2 pick-up roller
 clean of dirt.



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

6.4.5 Tray 2 transport roller

1. Open the vertical transport door.



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

6.4.6 Manual bypass tray feed roller

 Remove the manual bypass tray unit. See P.102



Using a cleaning pad dampened with alcohol, wipe the manual bypass tray feed roller [1] clean of dirt.

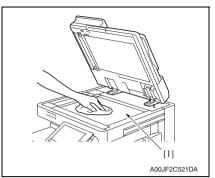
6.4.7 Manual bypass tray separation roller

 Remove the manual bypass tray separation roller assy. See P.32

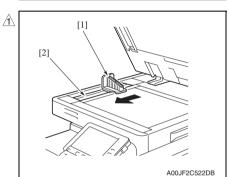


Using a cleaning pad dampened with alcohol, wipe the manual bypass tray separation roller [1] clean of dirt.

6.4.8 **Original glass**



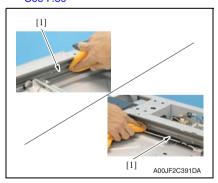
1. Using a cleaning pad dampened with alcohol, wipe the original glass [1] clean of dirt.



2. Clean the slit glass [2] with the cleaner [1].

6.4.9 Scanner rails

1. Remove the original glass. See P.89



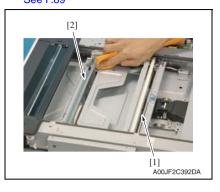
2. Using a cleaning pad dampened with alcohol, wipe the scanner rails [1] clean of dirt.

NOTE

· Apply lubricant after cleaning.

6.4.10 Mirrors (1st/2nd/3rd)

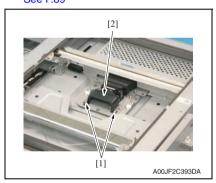
 Remove the original glass. See P.89



Using a cleaning pad dampened with alcohol, wipe the mirror 1 [1] and mirror 2/3 [2].

6.4.11 Lens

 Remove the original glass. See P.89



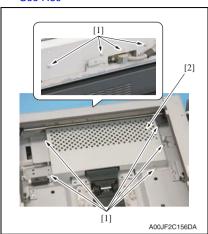
2. Remove two screws [1] and lens cover [2].



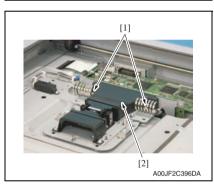
 Using a cleaning pad dampened with alcohol, wipe the lens [1] clean of dirt.

6.4.12 CCD sensor

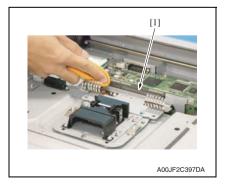
 Remove the original glass. See P.89



Remove nine screws [1], and remove the image processing board protective shield [2].



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

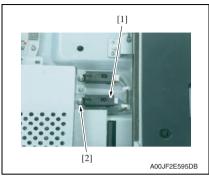


 Using a cleaning pad dampened with alcohol, wipe the CCD sensor [1] clean of dirt.

6.5 Mount the original size detection 2 sensor (PS205)

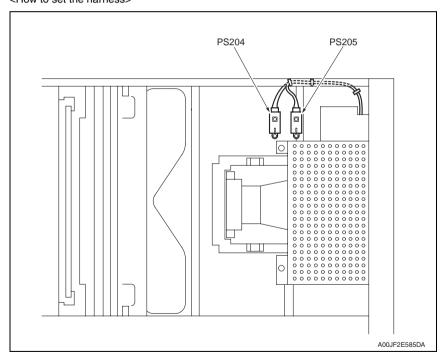
 Remove the original glass. See P.89

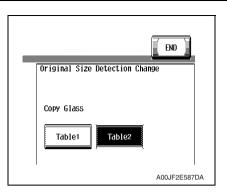




Using the screw [2], mount the original size detection 2 sensor (PS205)
 and fix it.

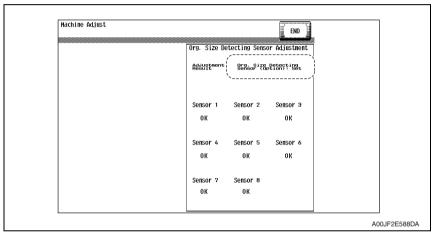
<How to set the harness>





Select [Service Mode] → [System 1]
 → [Original Size Detection], and set
the original glass to [Table2].

Select [Service Mode] → [Machine] → [Org. Size Detecting Sensor Adj].
 See P.347



Check to make sure that the [Org. Size Detecting Sensor (Option): Set] is displayed on the original size detection sensor adjustment screen.

6.6 Option counter

6.6.1 Installation method for the key counter

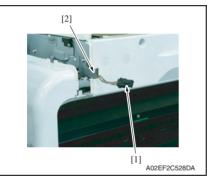


A. Key counter kit Kit-1 (4623-472)

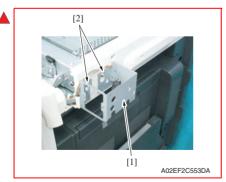
 Remove the IR front cover. See P.89



Remove the knockouts [1] on the IR right cover.



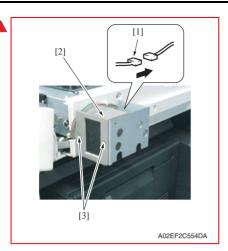
Run the key counter harness [1] out through the hole [2] on the IR right cover.



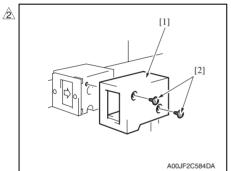
4. Using two screws [2], secure the counter mounting bracket [1].

NOTE

- Secure the counter mounting bracket passing the connector into the bracket.
- Use the four long screws (9646 0418 14: M4 x 18) in the key counter kit to secure the counter mounting bracket.



- Connect the key counter socket connector [1].
- 6. Using two screws [3], secure the counter socket [2].



7. Using two screws [2], secure the key counter cover [1].

Select [Service Mode] → [Billing Setting] → [Management Function Choice] → [Key Counter Only], [Vendor 1 + Key Counter] or [Vendor 2 + Key Counter].
 Set color mode and message.
 For details on setting, see "Adjustment/Setting."

For details on setting, see "Adjustment/Setting." See P.443

Blank Page

Adjustment/Setting

7. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

- Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

⚠ CAUTION

- 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.
- 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.

8. Utility Mode

8.1 Touch Panel Adjustment

Functions	To adjust the position of the touch panel display
Use	 Make this adjustment if the touch panel is slow to respond to a pressing action. Use during the setup procedure.
Setting/ Procedure	1. Press the Accessibility key. 2. Touch [Touch Panel Adj.]. 3. Using the tip of a pen or similar object, touch the four keys (+) on the screen in sequence. • These crosses may be touched in any order; but be sure to touch the center of each cross. • Use care not to damage the screen surface with the tip of the pen. Touch Panel Adjustment Adjust the position of keys on touch screen. Touch 4 check keys located on corner and press [Start]. To reset, press [C]. To cancel, press [Stop].
	A00JF3E532DA
	 Touching all four crosses will turn the Start key ON in blue. Press the Start key.

8.2 Utility Mode function tree

- * The function tree is shown to comply with the format displayed on the screen. **NOTE**
- . Keys displayed on screens are different depending on the setting.
- For displaying the keys with *, ** marks, see "Administrator Security Level." See P.320
- For displaying the keys with *** marks, see "Administrator Feature Level."
 See P.439

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Registration	destination		Fax		P.204
			PC (SMB)		P.204
			FTP		P.204
			WebDAV		P.205
			IP Address Fax	(P.205
			Internet Fax		P.205
		Group	I.		P.205
		E-mail Setting	E-mail Subject		P.205
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			Output Tray Se	ettings**	P.210
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			Shortcut Key 1	P.213	
			Shortcut Key 2		
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		Default Enlarg	Default Enlarge Display Settings		
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				Thick - Cyan]
				Thick - Black]
				Black Image Density	P.240
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Adjustment / Setting

bizhub C353/C253/C203

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				Color Registra (Cyan)	tion Adjust	
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<u>^2</u> <u>^2</u>

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	-	ction Setting		-	
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	Details	Coverage Rate	_
		Сору	_
		Print	
		Scan/Fax	
		Other	_
Remaining Co	py Count *1	1	_

^{*1:} Displayed after a user or account authentication if maximum limit is set for the number of copies the user or account can make.

8.3 Utility Mode function setting procedure

8.3.1 Procedure

- 1. Press the Utility/Counter key.
- 2. The Utility Mode screen will appear.



8.3.2 Exiting

· Touch the [Close] key.

8.3.3 Changing the setting value in Utility Mode functions

- Use the [+] / [-] key to enter or change the setting value.
- Use the 10-key pad to enter the setting value.
 (To change the setting value, first press the Clear key before making an entry.)

8.4 One-Touch User Box Registration

- In a copier where the user authentication function that uses an external server or MFP is set to ON, when you operate the copier without performing user authentication, this menu is not displayed.
- It will not be displayed when the authentication device is set to "Set" by the following setting.

[Service Mode] → [Billing Setting] → [Management Function Choice]

8.4.1 Create One-Touch destination

A. Address Book

(1) E-mail

Functions	To register/change e-mail address to send scanned data.
Use	
Setting/	A new address can be registered by touching [New].
Procedure	Select any displayed address to check, edit or delete the setting.

(2) User Box

 It will not be displayed when the following setting shows that authentication device or the vendor is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the key counter is mounted.)

Functions	To register/change the Box address when storing the scanned data in the box in the
Use	hard disk in the main body.
Setting/	A new address can be registered by touching [New].
Procedure	Select any displayed address to check, edit or delete the setting.
	At least one User Box must be registered for registering a Box address.

(3) Fax

Functions	To register/change the fax destinations.
Use	
Setting/	A new address can be registered by touching [New].
Procedure	 Select any displayed address to check, edit or delete the setting.

(4) PC(SMB)

Functions	To register/change SMB address to send scanned data.
Use	
Setting/	A new address can be registered by touching [New].
Procedure	 Select any displayed address to check, edit or delete the setting.

(5) FTP

Functions	To register/change FTP address to send scanned data.
Use	
Setting/ Procedure	 A new address can be registered by touching [New]. Select any displayed address to check, edit or delete the setting.

(6) WebDAV

Functions	To register/change WebDAV address to send scanned data.
Use	
Setting/ Procedure	 A new address can be registered by touching [New]. Select any displayed address to check, edit or delete the setting.

(7) IP Address Fax

Setting will be available only when [IP Address FAX] is set to "ON" in the following settings.

 $[Administrator \ Settings] \rightarrow [Network \ Settings] \rightarrow [Network \ Fax \ Settings] \rightarrow [Network \ Fax \ Function \ Settings]$

Functions Use	To register/change the IP address fax destination when transmitting the IP address fax data.
_ ~.	 A new address can be registered by touching [New]. Select any displayed address to check, change or delete the setting.

(8) Internet Fax

Setting will be available only when [Internet FAX] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Settings] → [Network Fax Function Settings]

Functions	To register/change the Internet fax address when transmitting the internet fax data.
Use	
Setting/ Procedure	 A new address can be registered by touching [New]. Select any displayed address to check, change or delete the setting.

B. Group

Functions	To register/change a group to send scanned data/fax data simultaneously.
Use	
Procedure	 A new address can be registered by touching [New]. Select any displayed group to check, edit or delete them. At least one address must be registered for registering a new group.

C. E-mail Settings

 It will not be displayed when the following setting shows that the management device 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) E-mail Subject

Functions	To register the e-mail subject when transmitting the scanned data. A new address can be registered by touching [New]. Select any displayed address to detail check, edit or delete the setting. The subject can be set as default by selecting the subject displayed on the screen and pressing [Set as Default].
Use	
Setting/ Procedure	

(2) E-mail Body

Functions	To register the e-mail message when transmitting the scanned data.	
Use		
Procedure	 A new address can be registered by touching [New]. Select any displayed address to detail check or delete the setting. The text can be set as default by selecting the text displayed on the screen and pressing [Set as Default]. 	

8.4.2 Create User Box

- It will not be displayed when the authentication device is set to "Set" by the following setting.
 - $[Service Mode] \rightarrow [Billing Setting] \rightarrow [Management Function Choice]$
- It will not be displayed when the following setting shows that the vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
 (It will be displayed when the key counter is mounted.)
- This menu is not available due to functional restriction during user authentication when [User Box] is set to Restrict.

A. Public/Personal User Box

Functions	To register/change the box for storing text data in the hard disk of the machine.	
Use	Shared or personal box can be registered according to its intended use.	
Setting/	A new box can be registered by touching [New].	
Procedure	Select any displayed box to change or delete it.	

B. Bulletin Board User Box

- It will be displayed only when the optional fax kit (FK-502) is mounted.
- It will not be displayed during user authentication if the fax operation is set to "Restrict" by the function restriction.

Functions	To register/change the bulletin board user box.
Use	10 register, orienge the ballothir board door box.
Setting/	A new box can be registered by touching [New].
Procedure	Select any displayed box to change or delete it.

C. Relay User Box

- It will be displayed only when the optional FAX kit (FK-502) is mounted.
- It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Relay]

Functions	To register/change the Relay User Box.	
Use	To register/change the netay Oser Dox.	
Setting/ Procedure	 A new box can be registered by touching [New]. Select any displayed box to change or delete it. 	

8.4.3 Limiting Access to Destinations

It will not be displayed when the following setting is set to "ON."
 [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]

A. Outline

 The Limiting Access to Destinations setting allows or restricts individual user's access to each destination. This enables security control by restricting information that can be accessed.

(1) Apply Levels

One of the six levels from 0 to 5 can be assigned to all destinations. Similarly, one of the
levels from 0 to 5 can be assigned to all users. Depending on the combination of the destination and user levels, destinations that a user can access can be limited.
 For example, users of level 2 can access the destinations that belong to the levels 0 to 2,
but cannot access to the destinations that belong to the levels 3 to 5. Level 5 users can
access all destinations of the levels 0 to 5.

(2) Groups

- A group can be made with a certain name to allow its members to access its destinations. Users and destinations can be registered for the group so that the registered destinations can be accessed by the registered users.
 - Access restriction depending on an individual level is also applied to the group with access to the destinations determined by the combination of the user and destination levels within a group.
- · A destination can be included in only one group.
- A user can be included in multiple different groups.

B. Apply Levels/Groups to Destinations

(1) Address Book

Functions Use	Sets a level and a group for destinations registered in the address book.
Setting/ Procedure	Select a destination, press [Apply Level] or [Apply Group] and make a setting.

(2) Group

Functions	Sets a level and a group for destinations registered in the group.
Use	Sets a level and a group for destinations registered in the group.
Setting/ Procedure	Select a destination, press [Apply Level] or [Apply Group] and make a setting.

(3) Program

Functions Use	Sets a level and a group for destinations registered in the program.
Setting/ Procedure	Select a destination, press [Apply Level] or [Apply Group] and make a setting.

8.5 User Settings

8.5.1 System Settings

A. Language Selection

Functions	To select the language on the LCD display.	
Use	To change the language on the control panel to another language.	
Setting/ Procedure	 The language options depend on the marketing area selected in [Marketing Area] available from [System 1] under Service Mode. 	

B. Measurement Unit Settings

Functions	To select the unit displayed on the LCD display.	
Use	To change the unit displayed on the control panel.	
Cotting,	The default setting varies depending on the marketing area.	
Procedure	mm (Numerical Value) inch (Numerical Value) inch (Fraction)	

C. Paper Tray Settings

(1) Auto Tray Selection Settings

 To set the tray for automatic selection when APS is being set. To establish the priority for switching the Tray when ATS is being set.
 To specify the tray to be used when APS is being set. To establish the priority of the Tray when ATS is being set.
 Select the tray on the [Auto Tray Select] screen. Set the priority on the [Tray Priority] screen.

(2) Auto Tray Switch ON/OFF

Functions	To set whether to automatically switch to another tray with same size paper when the paper feed tray runs out of paper during printing.	
Use	To switch the paper feed tray automatically.	
Setting/ Procedure	The default setting is Restrict.	
Flocedule	Allow	"Restrict"

(3) No Matching Paper in Tray Setting

Functions	To set whether to switch to another tray automatically when the specified tray runs	
Use	out of paper during printing.	
	Stop Printing (Tray Fixed): It stops printing when the specified tray runs out of	
	paper. Switch Trays (Tray Priority): To switch to another tray with the specified pa	
	print when	n the tray is out of paper
Setting/	The default setting is Stop Printing (Tray Fixed).	
Procedure	"Stop Printing (Tray Fixed)"	Switch Trays (Tray Priority)

(4) Print Lists

 It will not be displayed when the following setting shows that authentication device or the vendor is mounted.

[Service Mode] \rightarrow [Billing Setting] \rightarrow [Management Function Choice] (It will be displayed when the key counter is mounted.)

 It will not be displayed when the authentication device 1 is set to "Set" by the following setting.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set the paper feed tray for output the list for the meter count or the unit check.
Use	It sets the simplex/duplex printing of the output for the sales counter or the unit check list.
Setting/	<paper tray=""></paper>
Procedure	The default setting is Tray 1.
	<simplex duplex=""></simplex>
	The default setting is 1-Sided.

D. Auto Color Level Adjust.

Functions	To set the criterion level to discriminate between a colored original and a black-and- white original in the auto color mode.	
Use	To change the criterion level for the partly colored image to be taken as a black-and- white original.	
Setting/ Procedure	Five levels are available to choose from and the default setting is 3. Black Standard Full Color 1 2 "3" 4 5	

E. Power Save Settings

- It will be displayed only when the following setting is set to "Level 1" or "Level 2."
 [Administrator Settings] → [Security Setting] → [Administrator Security Level]
- t will not be displayed when the following setting shows that authentication device 1 or the vendor is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) Low Power Mode Settings

Functions	To set the time until low power starts operating after the last key operation has been completed. Low power: To turn LED and LCD OFF, and lower the power consumption.	
Use	To change the time until low power starts.	
Setting/ Procedure	Use the 10-key pad for setting. The default setting is 15 min.	
	"15 min." (2 to 240)	

(2) Sleep Mode Settings

Functions	 To set the time until sleep mode starts operating after the last key operation has been completed. Turn all lines OFF except 5 V line for control. "OFF" will only be displayed when [No Sleep] in Service Mode is set. 	
Use	To change the time until the sleep mode starts.	
Setting/ Procedure	Use the 10-key pad for setting. The default setting is 20 min.	
	"20 min." (2 to 240) / OFF	

F. Output Settings

- It will be displayed only when the following setting is set to "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]
- It will not be displayed when the following setting shows that authentication device or the vendor is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the key counter is mounted.)

(1) Print/Fax Output Settings

Functions	To set the timing for printing for the PC print job or fax received.	
Use	Batch Print: Starts printing when all data are received Page Print: Starts printing every time data for each page are received	
Setting/ Procedure	<printer> • The default setting is Page Print.</printer>	
	<fax> The default setting is Batch Print. NOTE [FAX] will be displayed only when the optional fax kit (FK-502) is mounted. </fax>	

(2) Output Tray Settings

• It will be displayed only when the optional finisher FS-509 or job separator JS-505 is mounted.

<When the FS-519 is mounted>

Functions	To set the priority output tray for each application (Copy print, Printer, Fax and Print Reports).	
Use	To change the prior output tray according to the application.	
Setting/ Procedure	The default settings Copy Print Report Output Fax	s are as follows. : Tray 1 (Tray 3: When [Bin Setting] is enabled.) : Tray 1 : Tray 2 (Tray 3: When the optional OT-602 is mounted./When [Bin Setting] is enabled.) : Tray 2 (Tray 3: When the optional OT-602 is mounted./When [Bin Setting] is enabled.)

<When the JS-505 is mounted>

Functions	To set the priority output tray for each application (Copy print, Printer, Fax and Print Reports).	
Use	To change the prior output tray according to the application.	
Setting/ Procedure	The default setting Copy Print Report Output Fax	s are as follows. : Tray 1 : Tray 2 : Tray 1 : Tray 2 : Tray 1 : Tray 2

(3) Bin Setting

• It will be displayed only when the optional mailbin kit MT-502 is mounted.

Functions	 Assign the tray 1 of the finisher to the mailbin 5, and the tray 2 to the mailbin 6. The tray 2 can be assigned when the optional exit tray OT-602 is mounted. 	
Use	Use when assigning the tray 1 and the tray 2 of the finisher to the mailbins.	
Setting/	The default setting is Disable.	
Procedure	Enable	"Disable"

G. AE Level Adjustment

- It will be displayed only when the following setting is set to "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]
- It will not be displayed when the following setting shows that authentication device or the vendor is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the key counter is mounted.)

Functions	To set the default setting for AE (Auto Exposure) The larger the value becomes the more emphasized the background will be.	
Use	To make the background level foggier: Increase the setting value To make the background level less foggy: Decrease the setting value	
Setting/ Procedure	The default setting is 2. "2" (0 to 4)	

H. Auto Paper Select for Small Original

Functions	To make the copy setting when the paper is undetectably small, or no original is being set.	
Use	To copy the original such as business cards with which the original detection is not effective. Copy on Small Size : Copies on A5 paper. Copy on A4/Letter : Copies on A4 or Letter (8 ½ x 11) size paper. Prohibit Copy : Does not copy since the original size cannot be detected. paper feed tray needs to be selected prior to pressing the Start key.	
Setting/	The default setting is Prohibit Copy.	
Procedure	Copy on Small Size Copy on A4/Letter "Prohibit Copy"	

I. Blank Page Print Settings

- It will be displayed only when the following setting is set to "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]
- It will not be displayed when the following setting shows that vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	Select wether or not to print the stamp/composition on blank pages.	
Use	To print a stamp/composition on blank pages.	
Setting/	The default setting is Do Not Print.	
Procedure	Print	"Do Not Print"

8.5.2 Custom Display Settings

A. Copier Settings

(1) Default Tab

Functions	Selects a default tab display in the copy mode.	
Use	To change the default tab display in the copy mode. Basic : Normal basic screen Quick Copy : This screen displays all options that can be selected for Paper, Zoom, and Duplex/Combine functions. For color functions, all selectable options can be displayed on the screen. The normal [Basic] screen is also displayed as another tab on the screen.	
Setting/ Procedure	The default setting is Basic. "Basic" Quick Copy	

(2) Shortcut Key 1/2

Functions	Selects whether to use the shortcut	key.	
Use	Adds frequently used shortcut keys of auxiliary functions to the basic screen		
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	
	 When this setting is set to ON, select auxiliary functions to get their sl played on the screen. 		dis-

B. Scan/Fax Settings

 It will not be displayed when the following setting shows that authentication device is mounted.

 $[Service Mode] \rightarrow [Billing Setting] \rightarrow [Management Function Choice]$

(1) Default Tab

Functions	To set the basic screen display in scan/fax mode.	
Use	To change the basic screen display in scan/fax mode.	
Setting/ Procedure	The default setting is Address Book.	
Frocedure	Address Search (LDAP) Job History "Address Book" Direct Input	

(2) Program Default

Functions	To set the default display for the program screen during scan/fax mode.
Use	 To keep the default display on the program screen which frequently changes during scan/fax mode
Setting/	The default setting is PAGE 1.
Procedure	Temporary One-Touch/ "PAGE1" to PAGE27

(3) Address Book Index Default

Functions	To set the default display for the address book screen during scan/fax mode.	
Use	To keep the default display instead of search string on the address book which frequently changes during scan/fax mode.	
Setting/	The default setting is Favorite.	
Procedure	"Favorite" /ABC to WXYZ / etc	

(4) Shortcut Key 1/2

• [Shortcut Key 2] is not displayed when the optional image controller (IC-409) is installed.

Functions	Selects whether to use the shortcut key.		
Use	Adds frequently used shortcut keys of the shor	f auxiliary functions to the basic screen.	
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	
	When this setting is set to ON, select auxiliary functions to get their shortcut keys played on the screen.		lis-

(5) Default Address Book

Functions	Sets a default screen display for the scan/fax mode where the address book is set to be displayed.	
Use		
Setting/	The default setting is Index.	
Procedure	"Index"	Address Type

C. Copy Screen

 It will not be displayed when the following setting shows that key counter, vendor, or authentication device 1 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

However, this menu is available when the key counter is installed and [The next job reservation] is set to License.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) Copy Operating Screen

Functions	To set the display on the control panel screen during printing.		
Use	 To display the screen to indicate printing when printing is being carried out. Yes: The screen shows that the printing is being carried out. The job can be reserved with [Program Next Job]. No: The screen does not indicate the printing being carried out. The normal copy setting screen will be displayed. The copy reservation is available. 		
Setting/ Procedure	The default setting is No. Yes "No"		

D. Fax Active Screen

- It will be displayed only when the optional fax kit (FK-502) is mounted.
- It will not be displayed when the following setting shows that key counter, vendor, or authentication device 1 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) TX Display

Functions	To set the screen display for the control panel when transmitting fax.	
Use	To display [Sending] on the screen when transmitting fax.	
	The default setting is No.	
Procedure	Yes	"No"

(2) RX Display

Functions	To set the screen display on the control panel when receiving fax.	
Use	To display [Receiving] on the screen when receiving the fax.	
Setting/ Procedure	The default setting is No.	
Fiocedule	Yes	"No"

E. Color Selection Settings

Functions	Specifies a color that highlights a selection on the control panel.				
Use					
Setting/ • The default setting is Green.					
Procedure	"Green"	Blue	Yellow	Pumpkin	

F. Left Panel Display Default

Functions	Specifies an item that is shown as a default on the left panel display.		
Use	To change the item that is shown as a default on the left panel display.		
	Job List (List Display) : Displays a list of jobs that are both being printed and waiting to be printed.		
	, , , , , , , , , , , , , , , , , , , ,	Displays the status of jobs that are being processed. Displays the setting of the copy job that is being printed.	
Setting/	The default setting is Job List.		
Procedure	"Job List."	Check Job Settings	

G. Search Option Settings

(1) Uppercase and Lowercase Letters

Functions	Select whether or not to differentiate between upper case and lowercase letters.	
Use		
Setting/	The default setting is Differentiate.	
Procedure	"Differentiate"	Do Not Differentiate

(2) Search Option Screen

Functions Use	advanced search.	percase and Lowercase Letters] setting in the allows changing the search criteria for an indi-
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

8.5.3 Copier Settings

A. Auto Booklet ON when Fold & Staple

• It will be displayed only when the optional saddle stitcher SD-505 is mounted.

Functions	To set whether to set the auto booklet when fold & staple is selected.	
Use	To cancel setting the auto booklet when fold & staple is selected.	
Setting/	The default setting is Auto Select Booklet.	
Procedure	"Auto Select Booklet" OFF	

B. Auto Zoom for Combine/Booklet

Functions Use	To set whether to select the appropriate selected during auto paper select.	magnification when combine or booklet is
Setting/	The default setting is Auto Display Zoom	Ratio.
Procedure	"Auto Display Zoom Ratio"	OFF

C. Auto Sort/Group Selection

Functions Use	 Selects whether to use the auto sort/group selection function when a job has output of two or more sheets. 		
	Yes: Automatically disables the Auto sort/group selection when a sheet of original is placed on the ADF and the start key is pressed. Automatically enables the Auto sort/group selection when two or more sheets of originals are placed of the ADF and the start key is pressed. No: Disable the Auto sort/group selection.		
Setting/ Procedure	The default setting is Yes.		
	"Yes" No		

D. Default Copy Settings

- This menu is unavailable if user authentication is not made while either of authentication devices is set to Set in the [Service Mode] → [Billing Setting] → [Management Function Choice].
- 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 is set to Set in the [Service Mode] →
 [Billing Setting] → [Management Function Choice].

Functions	To make default settings for the copy mode.	
	 * The machine is initialized at the following timings: • The main power switch is turned ON. • Panel is reset. • In an Interrupt mode. • Auto Reset • The password entry screen for account track is changed. 	
Use	To change the Initial mode setting to meet the user's need.	
Setting/ Procedure	Current Setting> The settings made on the control panel before entering the setting menu screens a registered as the default settings of copy functions.	
	<factory default=""> The settings made at the time of shipment from the factory are registered as the default settings of copy functions. </factory>	

E. Default Enlarge Display Settings

 Displayed only when you select [Utility/Counter] → [User Settings] → [Copier Settings] in the enlarge display mode.

Functions	To make default settings for the enlarge display mode.		
	* The machine is initialized at the following timings: • The main power switch is turned ON. • Panel is reset. • In an Interrupt mode. • Auto Reset		
	The password entry screen for account track is changed.		
Use	To change the Initial mode setting to meet the user's need.		
Setting/ Procedure	<current setting=""> The settings made on the control panel before entering the setting menu screens registered as the default settings of copy functions. </current>		
	<factory default=""> The settings made at the time of shipment from the factory are registered as the default settings of copy functions. </factory>		

F. When AMS Direction is Incorrect

It will not be displayed when the following setting shows that vendor1 is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions		To set whether to print when the original is set in different direction from the set paper during auto zoom select.		
Use	To display alarm when original is set in different direction from paper and to cancel the job during auto zoom select.			
	Print Delete Job	: To print according : To display alarm a	to the selected direction and size of paper and cancel the job	
Setting/	The default setting is Print.			
Procedure		"Print"	Delete Job	

G. Separate Scan Output Method

It will not be displayed when the following setting shows that vendor1 is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set the output mode at Separate Scan setting.		
Use	To print all at once after reading all data.		
	Page Print: Print consecutively during the read operation. Batch print: Print all at once after reading all data. Copy setting can be changed after the read operation.		
Setting/	The default setting is Page Print.		
Procedure	"Page Print"	Batch Print	

H. Enlargement Rotation

It will not be displayed when the following setting shows that vendor1 is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions Use	 Sets whether to rotate images of which length is more than 297 mm in the main scar direction (in the horizontal direction on the ADF or the Original glass) in the copying process. 		
	Allow : Makes an enlargement rotation only when black is selected for the color setting. Restrict : Disables an enlargement rotation regardless of the color setting.		
Setting/	The default setting is Restrict.	The default setting is Restrict.	
Procedure	Allow "Restrict"		

I. Auto Zoom (Platen)

It will be displayed only when the following setting is set to "Level 1" or "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions	 To set whether to function the auto magnification when the feed tray is selected with document set on the original glass (excepting at automatic paper selection mode.) 	
Use	To function the auto magnification when the Tray is selected.	
	The default setting is OFF.	
Procedure	ON "OFF"	

J. Auto Zoom (ADF)

It will be displayed only when the following setting is set to "Level 1" or "Level 2".
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions	 To set whether to function the auto magnification when the feed tray is selected with document set on the ADF (excepting at automatic paper selection mode.) 	
Use	To function the auto magnification when the feed tray is selected.	
Setting/	The default setting is ON.	
Procedure	"ON" OFF	

K. Specify Default Tray when APS Off

It will be displayed only when the following setting is set to "Level 1" or "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions	To set the tray to be used when APS is cancelled.	
Use	To set the tray for the initial setting when APS is cancelled.	
Setting/ Procedure	The default setting is Tray (Tray 1) Before APS OF	F.
riocedure	"Tray Before APS OFF"	Default Tray

L. Select Tray for Insert Sheet

It will be displayed only when the following setting is set to "Level 1" or "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions Use	To select the default setting of the tray for cover sheet paper.
Setting/ Procedure	The default setting is Tray 2.

M. Print Jobs During Copy Operation

It will be displayed only when the following setting is set to "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions	To set whether to accept the printing job for print data or fax data during copy operation.	
Use	To refuse print data or fax data during copy operation. Accept : Receives the print data or fax data to print. Receive Only: Print data or fax data will be printed when the copy operation is finished.	
Setting/ Procedure	The default setting is Accept. "Accept"	Receive Only

N. Automatic Image Rotation

[It will be displayed only when the following setting is set to "Level 1" or "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions	•	nages to print if the original and specified	
Use	paper directions are not consistent wit	h each other.	
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	

8.5.4 Scan/Fax Settings

A. JPEG Compression Level

Functions	To set the JPEG compression method when scanning with JPEG while in scan/fax mode.		
Use	High Quality Standard	npression rate when JPEG scann : Lowers the compression rate scanning. : Compression rate and quality scanning. ion: Makes the compression rate ing the data volume while sca	and puts priority in quality while are normally balanced while higher and puts priority in lower-
Setting/ Procedure	The default setting High Quality	g is Standard. "Standard"	High Compression

B. Black Compression Level

Functions	To set the monochrome compression method for scanning in the monochrome mode while in scan/fax mode.	
Use	To be used when changing the monochrome mode while in scanner mode.	
Setting/	The default setting is MMR.	
Procedure	МН	"MMR"

C. TWAIN Lock Time

• It will not be displayed when the optional image controller IC-409 is mounted.

Functions	To set the period of time for unlocking the operation panel while in TWAIN scanning.
Use	• To set the period of time for diffocking the operation parter write in TWAIN scattling.
Setting/	The default setting is 120 sec.
Procedure	"120 sec." (30 to 300 sec.)

8.5.5 Default Scan/Fax Settings

- This menu is unavailable if user authentication is not made while either of authentication devices is set to Set in the [Service Mode] → [Billing Setting] → [Management Function Choice].
- 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 is set to Set in the [Service Mode] → [Billing Setting] → [Management Function Choice].

Functions	To make default settings for the fax/scan mode. The machine is initialized at the following timings: The main power switch is turned ON. Panel is reset. In an Interrupt mode. Auto Reset The password entry screen for account track is changed.
Use	To change the Initial mode setting to meet the user's need.
Setting/ Procedure	Current Setting> The settings made on the control panel before entering the setting menu screens are registered as the default settings of fax/scan functions. Factory Default> The settings made at the time of shipment from the factory are registered as the
	default settings of fax/scan functions.

8.5.6 Default Enlarge Display Settings

Displayed only when you select [Utility/Counter] → [User Settings] → [Scan/Fax Settings] in the enlarge display mode.

Functions	To make default settings for the enlarge display mode.	
	* The machine is initialized at the following timings:	
	The main power switch is turned ON.	
	Panel is reset.	
	In an Interrupt mode.	
	Auto Reset	
	The password entry screen for account track is changed.	
Use	To change the Initial mode setting to meet the user's need.	
Setting/ Procedure	 Current Setting> The settings made on the control panel before entering the setting menu screens are registered as the default settings of fax/scan functions. 	
	<factory default=""> The settings made at the time of shipment from the factory are registered as the default settings of fax/scan functions. </factory>	

A. Compact PDF Compression Level

Functions	Selects a compression method applied to scanned data that is produced with the use of Compact PDF in the scan/fax mode.		
Use	Compact PDF for High Quality Standard	Lowers the compression rate scanning. Compression rate and qualit scanning.	e and puts priority in quality while y are normally balanced while higher and puts priority in lower-
Setting/ Procedure	The default setting is Standard. High Quality "Standard" High Compression		High Compression

8.5.7 Printer Settings

A. Basic Settings

(1) PDL Setting

Functions	To set the PDL (Page Description Language) for PC printing.			
Use	To fix the PDL as necess	sary. It usually switches auto	matically.	
Setting/	The default setting is Auto.			
Procedure	"Auto"	PCL	PS	

(2) Number of Copies

Functions	To set the number to be copied when not specified by the printer driver during PC printing.	
Use	To use when the number cannot be specified by the printer driver during printing from Windows DOS, etc.	
Setting/ Procedure	The default setting is 1. "1" (1 to 999)	

(3) Original Direction

Functions	To set the default setting for the direction of the original during PC printing.	ation of the original during PC printing
Use	To set the details setting for the direction of the original during PO printing.	
Setting/	The default setting is Portrait.	
Procedure	"Portrait"	Landscape

(4) Spool Print Jobs in HDD before RIP

Functions	• To set whether to store the print data to HDD when receiving the next job during RIF		
Use	process of the current job.		
Setting/	The default setting is ON		1
Procedure	"ON"	OFF	

(5) A4/A3 ↔ LTR/LGR Auto Switch

Functions	To set whether to switch between A4 and Letter (8 ½ x 11) size paper, and A3 and Ledger (11 x 17) size paper in reading.	
Use	 To output Letter (8 ½ x 11) size document to A4 size, and Ledger (11 x 17) size ument to A3 size. To output A4 size document to Letter (8 ½ x 11) size, and A3 size document to ger (11 x 17) size. 	
	NOTE • When switching the size, the image • The image will not be reduced when	will be printed in the same magnification. there is image deficiency.
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(6) Banner Sheet Setting

Functions	To set whether or not to print on the banner (front cover) page.	
Use	To use when the banner (front cover) page is to be printed.	
Setting/ Procedure	The default setting is OFF.	
Procedure	ON	"OFF"

(7) Binding Direction Adjustment

Functions	 Specifies the alignment between the sides of paper (binding position adjustment) in duplex printing. 	
Use	To achieve faster printing performance, select Productivity Priority. To address misalignment problems between sides of copies in the horizontal and vertical directions, select Finishing Priority.	
	Finishing Priority : Able to optimize sides aligning operation as the process is performed after the machine receives all of the print data. Productivity Priority : Able to accelerate print speed as sides alignment proceeds together with data reception and print operation.	
	Control Adjustments: Comply with the command from the printer driver and does not take the side alignment step.	
Setting/	The default setting is Finishing Priority.	
Procedure	"Finishing Priority" Productivity Priority Control Adjustments	

1 (8) Line Width Adjustment

• This is displayed only when the function enhanced version 1 firmware is installed.

Functions	To correct line width of the output data during PC print.			
Use	To correct the line width of the output data according to user's needs.			
Setting/ Procedure	The default setting is T	hin.		
Flocedule	"Thin"	Normal	Thick	

B. Paper Setting

(1) Paper Tray

Functions	To set the paper feed tray when not specified by the printer driver during PC printing.
Use	To use when paper feed tray cannot be specified by the printer driver when printing from Windows DOS, etc.
Setting/ Procedure	The default setting is Auto.

(2) Paper Size

Functions	To set the paper size when not specified by the printer diver during printing.
Use	 To use when the paper size cannot be specified by the printer driver during printing from Windows DOS, etc.

(3) 2-Sided Print

Functions	To set whether to carry out duplex print during PC printing when not specified by the printer driver.	
Use	To use when 2-sided printing cannot be specified by the printer driver while printing by Windows DOS, etc.	
Setting/ Procedure	The default setting is OFF.	
	ON "OFF"	

(4) Binding Position

Functions	To set the binding direction during duplex printing when not specified by the printer driver during PC printing.		
Use	To use when binding direction cannot be specified by the printer driver during printing by Windows DOS, etc.		
Setting/ Procedure	The default setting is Left Top Bind	Bind. "Left Bind"	Right Bind

(5) Staple

↑ • The menu is available only when the optional finisher FS-519 or FS-609 is mounted.

Functions	To set whether to staple or not when not specified by the printer driver during PC printing.		
Use	To use hen staple is not specified by the printer driver during printing by the Windows DOS, etc.		
Setting/ Procedure	 The default setting is OFF 1 Position 	2 Position	"OFF"

(6) Punch

 $\underline{\wedge}$ • The menu is available only when the optional finisher FS-519/FS-609 and punch kit PK-515/PK-501 is mounted.

Functions	To select whether to make punch-holes or not when not specified by the printer driver during PC printing.	
Use	To use when the printer driver cannot specify punching during printing from Windows DOS, etc.	
Setting/	The default setting is OFF.	
Procedure	2-Hole/3-Hole/4-Hole "OFF"	
	* The number of punch holes being set is available from [Service Mode] \rightarrow [Finisher].	

(7) Banner Paper Tray

Functions	To set the feed tray for printing on the banner (front cover) page.
Use	To set the feed tray for printing on the banner (front cover) page.
Setting/ Procedure	The default setting is Auto.

C. PCL Settings

(1) Font Settings

Functions	To set the font when not specified by the printer driver during PC printing.
Use	 To use when the printer driver cannot specify the font during printing from Windows DOS, etc. It can be selected from the Resident font or the download font.
Setting/ Procedure	 The default setting is Courier. 1. When selecting from the Internal font, touch [Internal], and select the one from the displayed font list.

(2) Symbol Set

Functions	To set the font symbol set when not specified by the printer driver during PC printing.
Use	 To use when the font symbol set cannot be specified by the printer driver during printing from Windows DOS, etc.
Setting/ Procedure	The default setting is Roman-8 or PC8, Code Page 437.

(3) Font Size

Functions	To set the font size when not specified by the printer driver during PC printing.
Use	 To set the font size when it cannot be specified by the printer driver during printing from Windows DOS, etc. To set scalable font (: Point) and bitmap font (: Pitch) respectively.
Setting/ Procedure	The default setting is Scalable Font : 12.00 points Bitmap Font : 10.00 pitch

(4) Line/Page

Functions	To set the number of lines per page for printing the text data.
Use	To change the number of lines per page for printing the text data.
Setting/ Procedure	Default setting value differs depending on the values by the following two different settings. [Utility] → [User Setting] → [Printer Setting] → [Basic Setting] → [Original Direction] [Utility] → [User Setting] → [Printer Setting] → [Paper Setting] → [Default Paper Size]
	"60 or 64 lines" (5 to 128)

(5) CR/LF Mapping

Functions	To set the mode for replacing data when printing the text data.
Use	To change the mode for replacing data when printing the text data. Mode 1 : CR → CR-LF LF=LF FF=FF Mode 2 : CR=CR LF→CR-LF FF→CR-FF Mode 3 : CR→CR-LF LF→CR-LF FF→CR-FF OFF : Does not replace
Setting/ Procedure	The default setting is OFF. Mode 1 Mode 2 Mode 3 "OFF"

D. PS Setting (1) Print PS Errors

Functions	To set whether to print or not the error information when an error occurred during PS rasterizing.	
Use	To print the information concerning the second	ne postscript error.
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(2) ICC Profile Settings

Functions	To select a profile to be used for print specified by printer driver.	jobs from a computer when a profile is not
Use	Possible to set a profile separately for Photo-RGB Color Photo-Output Profile Text-RGB Color Text-Output Profile Figure/Table/Graph-RGB Color Figure/Table/Graph-Output Profile Simulation Profile	each of the following items.
Setting/ Procedure	The default settings are shown below. Photo-RGB Color Photo-Output Profile Text-RGB Color Text-Output Profile Figure/Table/Graph-RGB Color Figure/Table/Graph-Output Profile Simulation Profile	: Device Color : Auto : Device Color : Auto : Device Color

E. XPS Settings

(1) Verify XPS Digital Signature

Functions Use	 Selects whether to verify digital signatures attached to XPS (XML Paper Specification) files when printing the files. When digital signature verification is selected, files with invalid digital signatures are not printed.
	The default setting is OFF.
Procedure	ON "OFF"

F. Print Reports

 It will not be displayed when the following setting shows that authentication device 1 or vendor is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the key counter is mounted.)

Functions	To output the report or demo page concerning the print setting.	
Use	To check the setting concerning the printer. The types of report available for output are as follows.	
	Configuration Page : The list of printer setting will be output. Demo Page : The test page will be output. PCL Font List : PCL font list will be output. PS Font List : PS font list will be output.	
Setting/ Procedure	 Touch [User Setting] → [Printer Setting] → [Print Reports]. Select the report to be output. Select the feed tray. Select Simplex or Duplex print, and touch the Start key. 	

8.5.8 Change Password

- When conducting user authentication (MFP only), it will be displayed only when the authentication is complete.
- This menu is available only when box administrator authentication is established during user authentication or account track.

Functions	To modify the password used for the user authentication.	
Use	To modify the user authentication password currently used.	
Setting/ Procedure	Enter the user authentication password with the keys on the control panel.	
	Current Password : Enter the user authentication password currently used.	
	New Password : Enter the new user authentication password to be used.	
	Retype Password : Enter the new user authentication password again.	
	NOTE • When [Password Rules] which can be displayed by the following setting is set to "ON", password using the single letter or the password same with the previous one, less than 8-digit will not be modified. [Utility] → [Administrator Settings] → [Security Setting] • When the following setting is set to "ON", entering the incorrect password three times will cause access lock. When an access lock occurred, turn the main power switch OFF, and wait for 10 seconds or more and turn main power switch ON again to enter the password again. [Administrator Settings] → [Security Setting] → [Enhanced Security Mode]	

8.5.9 Change E-mail Address

- When conducting user authentication (MFP only), it will be displayed only when the authentication is complete.
- It will be displayed only when the following setting is set to "Level 2."
 [Administrator Settings] → [Security Settings] → [Administrator Security Levels]

Functions	To modify the e-mail address which is registered as a user.
Use	To use when modifying the e-mail address currently being used.
Setting/ Procedure	Enter the new e-mail address using the keys on the control panel.

8.6 Administrator Settings

The Administrator Settings will be available by entering the administrator password (8 digits) set by the Administrator Settings or Service Mode.
 (The administrator password is initially set to "12345678.")

NOTE

bizhub C353/C253/C203

 When the following setting 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 after the main power switch is turned OFF and then ON more than 10 seconds later. The access lock can be released by touching keys as follows.

[Service Mode] → [Enhanced Security] → [Administrator unlocking].

8.6.1 System Settings

A. Power Save Settings

(1) Low Power Mode Settings

Functions	To set the time until low power starts operating after the last key operation has been completed. Low power: To turn LED and LCD OFF, and lower the power consumption.
Use	To change the time until low power starts.
Setting/ Procedure	Use the 10-key pad for setting. The default setting is 15 min.
	"15 min." (2 to 240)

(2) Sleep Mode Settings

Functions	 To set the time until sleep mode starts operating after the last key operation has been completed. Turn all lines OFF except 5 V line for control. "OFF" will only be displayed when "No Sleep" in Service Mode is set. 	
Use	To change the time until the sleep mode starts. NOTE The sleep mode will begin in 48 hours even if it sets it to "OFF."	
Setting/ Procedure	Use the 10-key pad for setting. The default setting is 20 min.	
	"20 min." (2 to 240) / OFF	

(3) Power Save Key

Functions	To set the type of the power save mode which starts by pressing the Power Save key.	
Use	To change the power save function which starts by pressing the Power	wer Save key.
Setting/ Procedure	The default setting is Low Power.	
Procedure	"Low Power" Sleep	

(4) Enter Power Save Mode



Functions	 To set whether to immediately switch to the power save mode after printing in case of receiving the fax or PC printing during power save mode. 	
Use	To immediately switch to the power save mode after printing in case of receiving the fax or PC printing during power save mode. Normal: Switches to the power save mode according to the normal power save mode after the printing. Immediately: Switches to the power save mode immediately after the printing.	
Setting/	The default setting is "Immediately."	
Procedure	Normal Immediately	

B. Output Settings

(1) Print/Fax Output Settings

Functions	To set the timing for printing for the PC print job or fax received.	
Use	Batch Print: Starts printing when all data are received Page Print: Starts printing every time data for each page are received	
Setting/ Procedure	<printer> • The default setting is Page Print.</printer>	
	<fax> The default setting is Batch Print. NOTE [FAX] will be displayed only when the optional fax kit (FK-502) is mounted. </fax>	

(2) Output Tray Settings

 \triangle • It will be displayed only when the optional finisher FS-509 or job separator JS-505 is mounted.

<When the FS-519 is mounted>

Functions	To set the priority output tray for each application (Copy print, Printer, Fax and Print Reports).	
Use	To change the prior output tray according to the application.	
Setting/ Procedure	The default setting Copy Print Report Output Fax	s are as follows. : Tray 1 (Tray 3: When [Bin Setting] is enabled.) : Tray 1 : Tray 2 (Tray 3: When the optional OT-602 is mounted./When [Bin Setting] is enabled.) : Tray 2 (Tray 3: When the optional OT-602 is mounted./When [Bin Setting] is enabled.)

<When the JS-505 is mounted>

Functions	To set the priority output tray for each application (Copy print, Printer, Fax and Print Reports).	
Use	To change the prior output tray according to the application.	
Setting/	The default settings are as follows.	
Procedure	Copy : Tray 1 Print : Tray 2 Report Output : Tray 1 Fax : Tray 2	

(3) Bin Setting

• It will be displayed only when the optional mailbin kit MT-502 is mounted.

Functions	 Assign the tray 1 of the finisher to the mailbin 5, and the tray 2 to the mailbin 6. The tray 2 can be assigned when the optional exit tray OT-602 is mounted. 	
Use	Use when assigning the tray 1 and the t	ray 2 of the finisher to the mailbins.
Setting/	The default setting is Disable.	
Procedure	Enable	"Disable"

(4) Shift Output Each Job

• It will be displayed only when the optional finisher FS-519/FS-609 or Job separator JS-505 is mounted.

Functions	To set whether to offset each job when paper is printed using the finisher or job sep arator.	
Use	Some paper type may fail to be discharged or get deteriorated loading when large volume copies are printed using the finisher or job separator. This function is used to print large volume copies when finisher or job separator is mounted. (When this function is set to "No", the paper is discharged without offsetting the paper to the center of the tray.)	
Setting/ Procedure	The default setting is Yes. "Yes" No	

C. Date/Time Settings

Functions	To set the date/time and the time zone to start the clock.	
Use	 To change settings concerning the date/time. This setting should be carried out for set up. 	
Setting/ Procedure	 For time zone, set the time difference with the world standard time. Setting range for the time zone: -12:00 to +12:00 (by 30 minutes) When the following setting is set to "ON", [Set Data] will be displayed. Touch [Set Data] and modify the time. [Administrator Settings] → [Network Settings] → [Detail Settings] → [Time Adjustment Setting] 	

D. Daylight Saving Time

Functions	 To set whether to set the daylight saving time. To set the time difference in setting the daylight saving time. 	
Use	To set the daylight saving time.	
Setting/ Procedure	The default setting is No. Yes	"No"
	When setting to ON, set the time difference to move up. "60 min." (1 to 150)	

E. Weekly Timer Settings

(1) Weekly Timer ON/OFF Settings

Functions	To set whether to use or not to use the weekly timer.		
Use	To set the weekly timer.		
Setting/ Procedure	The default setting is OFF.		
Procedure	ON	"OFF"	

(2) Time Settings

Functions	To set the time to turn ON/OFF the weekly timer for each day of the week.	
Use		
Procedure	1. Touch the key of the day to be set. 2. Using the 10-key pad, input the ON time and the OFF time. 3. For cancelling the setting, press [Clear].	

(3) Date Settings

Functions	To select the date or the day of the week for the weekly timer to function. 1. Select the Year/Month with [+] / [-] keys.	
Use		
Setting/		
Procedure	2. For setting by the date, touch the appropriate key of the day.	
	8. For setting by the day of the week, touch the appropriate key of the week by [Daily Setting].	
	4. Check to make sure that the set key of the day is highlighted, and touch [OK].	

(4) Select Time for Power Save

Functions	To set the time to turn power OFF/ON when the weekly timer is set and the power is ON.	
Use	To turn power OFF for a certain per	eriod of time when the weekly timer is set.
Setting/ Procedure	The default setting is No. Yes "No" Set Time for Power Save> Using the 10-key pad, input the time to turn OFF and to turn back ON again.	

(5) Password for Non-Business Hours

Functions	To set whether to input the password before using when the weekly timer is set.	
Use	To set the password for turning the power ON temporarily when the weekly timer is set.	
Setting/	The default setting is No.	
Procedure	Yes "No"	
	When setting to Yes, enter the password (eight digits).	

F. Restrict User Access

(1) Copy Program Lock Settings

Functions	To set the prohibition for modifying the registered copy program.	
Use	To be used when prohibiting the user from changing the copy program.	
Setting/	1. Touch the key for the appropriate copy program.	
Procedure	2. Touch [OK].	

(2) Delete Saved Copy Program

Functions	To delete the registered program job.	
Use	To delete the registered program job.	
	 Touch the appropriate program job. Touch [Delete]. Touch [Yes] on the check screen to delete the program job. 	

(3) Restrict Access to Job Settings

 It will not be displayed when the following setting shows that authentication device 1 or vendor 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

<Changing Job Priority>

Functions	To got whother to allow or restrict the ch	range on the print priority for the job
Use	• To set whether to allow or restrict the change on the print priority for the job.	
	The default setting is Allow.	
Procedure	"Allow"	Restrict

<Delete Other User Jobs>

Functions	To set whether to allow or restrict job delete by other users when the user is authenti-	
Use	cated.	
Setting/	The default setting is Restrict.	
Procedure	Allow	"Restrict"

<Registering and Changing Addresses>

Functions	To set whether to allow or restrict the change of the registered address.	
Use	• 10 Set whether to allow or restrict the change of the registered address.	
Setting/	The default setting is Allow.	
Procedure	"Allow" Restrict	
	NOTE • [Allow] cannot be selected when the following setting is set to "ON". [Administrator Settings] → [Security Setting] → [Enhanced Security Mode]	

<Changing Zoom Ratio>

Functions	• To got whother to allow or restrict the	hange on the registered magnification
Use	 To set whether to allow or restrict the change on the registered magnification. 	
Setting/	The default setting is Allow.	
Procedure	"Allow"	Restrict

<Change the "From" Address>

Functions	To set whether or not to prohibit the registered from address to be changed.	
Use		
Setting/	The default setting is Allow.	
Procedure	"Allow"	Restrict

<Change Registered Overlay>

Functions	Selects allow or restrict for the change of registered overlay.		
Use			
Setting/	The default setting is Allow.		
Procedure	"Allow"	Restrict	

(4) Restrict Operation

<Restrict Broadcasting>

Functions	To set whether or not to prohibit send	ing the fax to more than one address
Use	To set whether or not to prohibit sending the fax to more than one address.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

G. Expert Adjustment

• It will not be displayed when the following setting shows that vendor 2 is mounted. [Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the Key Counter is mounted or when the following setting shows that switch No.33 is set to [01] at HEX assignment.

[Service Mode] → [System 2] → [Software Switch Setting])

(1) AE Level Adjustment

Functions	To set the default setting for AE (Auto Exposure) the larger the value becomes the more emphasized the background will be.	
Use	To make the background level foggier: Increase the setting value To make the background level less foggy: Decrease the setting value	
Setting/ Procedure	The default setting is 2. "2" (0 to 4)	

(2) Printer Adjustment

<Leading Edge Adjustment>

- It will not be displayed when the following setting shows that Management Device 1 is mounted during the device power is OFF or no authentication is set.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
- 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].

Functions	 To vary the print start position in the sub scan direction for each of different paper types in the manual bypass tray. 	
Use	 The PH unit has been replaced. The paper type has been changed. The image on the copy deviates in the sub scan direction. A faint image occurs on the leading edge of the image. Able to make an individual adjustment for each paper type of plain paper, thick 1, thick 2, thick 3, thick 4, transparencies, and envelopes. 	
Adjustment Specification	Width A on the test pattern produced should fall within the following range. Specifications: 4.2 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)	
Adjustment Instructions	If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.	
Setting/ Procedure	 Place A3 paper on the manual bypass tray. Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Printer Adjustment] → [Leading Edge Adjustment]. Select the [Normal]. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. Check the dimension of width A on the test pattern. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch [OK]. Following the same procedure, adjust for thick 1 to 3, OHP, and envelope. 	

<Centering>

- It will not be displayed when the following setting shows that Management Device 1 is mounted during the device power is OFF or no authentication is set. [Service Mode] → [Billing Setting] → [Management Function Choice]
- 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].

Functions	To vary the print start position in the main scan direction for each paper source.	
Use	 The PH unit has been replaced. A paper feed unit has been added. The image on the copy deviates in the main scan direction. 	
Adjustment Specification	Width A Width A on the test pattern produced sho fall within the following range. Specifications: 3.0 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)	
Adjustment Instructions	If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.	
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Printer Adjustment] → [Centering]. Select the paper source to be adjusted. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch [OK]. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 ¹/₂ × 11 plain paper for the bypass.) 	

<Leading Edge Adjustment (Duplex Side 2)>

- It will not be displayed when the following setting shows that Management Device 1 is mounted during the device power is OFF or no authentication is set. [Service Mode] → [Billing Setting] → [Management Function Choice]
- 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].

Functions	Makes an adjustment by changing the image write start position in the sub scan direction on the 2nd side of duplex printing for individual types of paper.	
Use	 When the 2nd side image on paper fed from the tray is shifted in the sub scan direction. Able to make an individual adjustment for each paper type of plain paper, thick 1, thick 2 and thick 3. 	
Adjustment Specification	Width A on the test pattern produced should fall within the following range. Specifications: 4.2 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)	
Adjustment Instructions	If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.	
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Printer Adjustment] → [Leading Edge Adjustment (Duplex side 2)]. Select the [Normal]. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch [OK]. Following the same procedure, adjust for thick 1 to 3. OHP, and envelope. 	

<Centering (Duplex 2nd Side)>

Functions	To vary the print start position in the main scan direction for each paper source in the 2-sided mode.	
Use	To use when the optional automatic duplex unit AD-503 is set up. The image on the backside of the 2-sided copy deviates in the main scan direction.	
Adjustment Specification	Width A ◆Width A on the test pattern produced should fall within the following range. ◆For measurement, use the image produced on the backside of the test pattern. Specifications: 3.0 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)	
Adjustment Instructions	 If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one. 	
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Printer Adjustment] → [Centering (Duplex 2nd Side)]. Select the paper source to be adjusted. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern on the backside of the copy. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch [OK]. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 ½ x 11 plain paper for the manual bypass tray.) 	

<Erase Leading Edge>

It will be displayed only when the following setting is set to "Level 2".
 [Service Mode] → [Enhanced Security] → [Administrator Feature Level]

Functions	To set the leading edge erase amount of the paper.		
Use	To change the width of the area	not printed al	ong the leading edge of the paper.
Setting/	The default setting is 4 mm.		
Procedure	"4 mm"	5 mm	7 mm

<Vertical Adjustment>

It will be displayed only when the following setting is set to "Level 2."
 [Service Mode] → [Enhanced Security] → [Administrator Feature Level]

Functions	To synchronize the paper transport speed with the image writing speed.	
Use	 The I adjustment becomes necessary. The printed image on the copy distorts (stretched, shrunk). When the printed image on the copy is stretched in the sub scan direction. Able to make an individual adjustment for each paper type of plain paper, thick 1, thick 2, thick 3 and thick 4. 	
Adjustment Specification	Width A and width B on the test pattern produced should fall within the following ranges. Width A: equivalent to one grid Width B: equivalent to 48 grids Specifications A: 7.9 to 8.3 B: 389.1 to 392.1 Setting Range A, B: -7 to +7	
Adjustment Instructions	If width A or B is longer than the specifications, make the setting value smaller than the current one. If width A or B is shorter than the specifications, make the setting value greater than the current one.	
Adjustment Procedure	 Load manual bypass tray with A3 or 11 × 17 plain paper. Call the Administrator Settings to the screen. Touch these keys in this order: [System Settings] → [Expert Adjustment] → [Vertical Adjustment]. Press the Start key to let the machine produce a test pattern. Check width A (equivalent to one grid) and width B (equivalent to 48 grids) on the test pattern. If width of A or B falls outside the specified range, change the setting using the [+]/[-] keys. Press the Start key to let the machine produce a test pattern again. Check width A and width B on the test pattern. If width A or B falls outside the specified range, change the setting value and make a check again. If width A or B falls within the specified range, touch [OK]. Following the same procedure, adjust for [Thick 1 to 3], [OHP], and [Envelope]. (Check width A only for [OHP] and [Envelope].) 	



<Media Adjustment>

Functions	Adjust the 2nd image transfer output (ATVC) on the 1st page and the 2nd page for each paper type. This function is provided to open [Transfer Output Fine Adjustment] → [2nd Transfer Adjust] of Service Mode up to administrator and the fine-adjusted value is reflected in the Service Mode setting.
Use	To use when the transfer failure at the trailing edge occurs.
Adjustment Specification	"0" (-8 to +7)
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image): increase the setting value in + direction. To decrease the ATVC value (in the direction of a less foggy image): increase the setting value in - direction.
Setting/ Procedure	 Call the Administrator Setting to the screen. Touch these keys in this order: [Expert Adjustment] → [Printer Adjustment] → [Media Adjustment]. Select the side of the image (Front side or Back side), on which the transfer failure at the trailing edge occurs.
	NOTE Only 1st side can be selected for Envelope and Transparency.
	 4. Select the paper type with the transfer failure at the trailing edge. 5. Enter the new setting from the [+] / [-]. 6. Touch [OK] to validate the adjustment value. 7. Check the copy image for any image problem.

(3) Finisher Adjustment

See P.28 of the SD-505 service manual.



See P.62 of the FS-519/PK-515/OT-602 service manual.

See P.37 of the FS-609/PK-501 service manual.

(4) Density Adjustment

<Thick Paper Image Density-Yellow, Magenta, Cyan, Black>

Functions	To fine-adjust density of printed images of each color for thick paper and OHP transparencies. (Only black color adjustable for OHP transparencies)	
Use	 To change the density of the printed image for each color with thick paper and OHP transparencies 	
Adjustment Range	Lighter (5 steps), "Std", Darker (5 steps)	
Adjustment Instructions	Light color: Touch the Darker key. Dark color: Touch the Lighter key.	
Adjustment Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Density Adjustment]. Select a type of thick paper and a color that need to be adjusted. Touch the Lighter or Darker key to correct the image density. 	

<Black Image Density>

Functions	To fine-adjust the density of the printed image for a black copy	
Use	To vary the density of the printed image of a black copy	
Adjustment Range	Lighter (2 steps), "Std", Darker (2 steps)	
Adjustment Instructions	If the black is light, touch the Darker key. If the black is dark, touch the Lighter key.	
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Density Adjustment] → [Black Image Density]. Touch the Lighter or Darker key as necessary to correct the image density. 	

(5) Image Stabilization (5) Image Stabilization Only>

Functions	The image stabilization sequence is carried out without clearing the historical data of image stabilization control.
Use	 Use if an image problem persists even after [Gradation Adjustment] has been executed. When [D Max Density] and [Background Voltage Margin] of Service Mode are changed.
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Image Stabilization] → [Image Stabilization Only]. Press the Start key to start Stabilizer. The Start key turns red and stays lit up red during the Stabilizer sequence. Stabilizer is completed when the Start key turns blue.

<Initialize+Image Stabilization>

Functions	To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized.
Use	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.
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Image Stabilization] → [Initialize+Image Stabilization]. Press the Start key to start Stabilizer. The Start key turns red and stays lit up red during the Stabilizer sequence. Stabilizer is completed when the Start key turns blue.

(6) Color Registration Adjust

- It will not be displayed when the following setting shows that Management Device 1 is mounted during the device power is OFF or no authentication is set.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
- 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].
 <Color Registration Adjust (Yellow, Magenta, Cyan)>

Functions	 To adjust color shift if there is any when comparing the original with copy of the plair or thick paper. 	
Use	 To correct any color shift. Able to make an individual adjustment for each paper type of plain paper, thick 1, thick 2, thick 3 and thick 4. 	
Adjustment Range	"0" (-6 to +6 dot)	
Adjustment Instructions	If the cross deviates in the direction of A, increase the setting. If the cross deviates in the direction of B, decrease the setting.	
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Color Registration Adjust]. Load tray 1 with A3/11x17 or A4/8 ½ x11 normal paper. Press the Start key. On the test pattern produced, check for deviation between the black line and the of each color at positions X and Y. Select the color to be adjusted. Using the [+] / [-] key, change the setting value as necessary. (At this time, only t line of the selected color moves.) Produce another test pattern and make sure that there is no deviation. 	
	Check Procedure Check point X, Y Adjustment for X direction: Check point X	If the cross deviates in the direction of A, increase the setting. If the cross deviates in the direction of B,
	Direction of A	decrease the setting. Direction of B
	Adjustment for Y direction: Check point Y Direction of A	If the cross deviates in the direction of A, increase the setting. If the cross deviates in the direction of B, decrease the setting. Direction of B

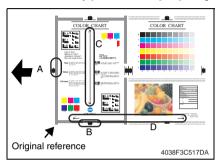
(7) Gradation Adjustment

- It will not be displayed when the following setting is set to "ON."
 [Service Mode] → [Imaging Process Adjustment] → [Dev. Bias Choice]
- It will not be displayed when the following setting shows that Management Device 1 is
 mounted during the device power is OFF or no authentication is set.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
- 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].

Functions	To make an automatic adjustment of gradation based on the test pattern produced and the readings taken by the scanner.
Use	Color reproduction performance becomes poor. The IU has been replaced. The image transfer belt unit has been replaced.
	Printer (Gradation): It gives the highest priority to gradation performance of the image as it adjusts. Printer (Resolution): It gives the highest priority to reproduction performance of let-
	ters and lines as it adjusts. Copy : It gives the highest priority to increasing the number of images to be stored in the memory as it adjusts.
Adjustment Procedure	Touch [Stabilizer] and the Start key to perform image stabilization. NOTE Before executing gradation adjust, be sure to perform Stabilizer.
	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Gradation Adjustment]. Select the appropriate mode for the gradation adjustment. Press the Start key to let the machine produce a test pattern. Place the test pattern produced on the original glass. Place ten blank sheets of A3/11 x 17 paper on the test pattern and lower the original cover. Press the Start key. (The machine will then start scanning the test pattern.) Touch [OK] and repeat steps from 2 through 7 twice (a total of three times). If the image is faulty, perform the troubleshooting procedures for image problems.

(8) Scanner Area

- Use the following color chart for the adjustment of the scanner section.
- If the color chart is not available, a scale may be used instead.
- It will be displayed only when the following setting is set to "Level 2."
 [Service Mode] → [Enhanced Security] → [Administrator Feature Level]
- It will not be displayed when the following setting shows that Management Device 1 is mounted during the device power is OFF or no authentication is set.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
- 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].



- A: Scanner Adjustment: Leading Edge Adjustment
- · B: Scanner Adjustment: Centering
- C: Horizontal Adjustment
- D: Vertical Adjustment

<Scanner Adjustment: Leading Edge>

Functions	 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 posi- tion in the main scan direction. 	
Use	When the original glass is replaced. When the original width scale is replaced.	
Adjustment Specification	A width on the color chart and one on the copy sample are measured and adjusted so that the difference of A width satisfies the specifications shown below. Hue Hue Value A00JF3C507DA A00JF3C507DA Setting range -5.0 to +5.0 (in 0.1 mm increments)	
Adjustment Instructions	If the copy image is less than the specified length, increase the setting value. If the copy image exceeds the specified length, decrease the setting value.	
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Scanner Adjustment] → [Scanner Adjustment: Leading Edge]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check point A on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met. 	

<Scanner Adjustment: Centering>

Functions	To adjust part-to-part variations in accuracy of IR parts and their mounting accuracy by varying the scan start position in the main scan direction.	
Use	When the CCD unit is replaced. When the original glass is replaced. The scanner home sensor has been replaced.	
Adjustment Specification	B width on the color chart and one on the copy sample are measured and adjusted so that the difference of B width satisfies the specifications shown below. An adjustment must have been completed correctly of [Leading Edge Adjustment] of the Printer Adjustment. Specifications B: ± 1.0 mm Setting range -10.0 to +10.0 (in 0.1 mm increments)	
Adjustment Instructions	If the copy image is less than the specified length, increase the setting value. If the copy image exceeds the specified length, decrease the setting value.	
Setting/ Procedure	 Call the Administrator Setting to the screen. Touch [System Settings] → [Expert Adjustment] → [Scanner Adjustment] → [Scanner Adjustment: Centering]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check point B on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make a copy. Check point B of the image on the copy to see if the specifications are met. Make adjustments until the specifications are met. 	

<Horizontal Adjustment>

Functions	To adjust the zoom ratio in the main scan direction for the scanner section.
Use	The CCD unit has been replaced.
Adjustment Specification	•Measure C width on the color chart and on the sample copy, and adjust the gap to be within the following specification. Specifications C: ± 1.0 mm Setting range
	0.990 to 1.010 (in 0.001 increments)
Adjustment Instructions	If the C width on the copy sample is less than one on color chart, increase the setting. If the C width on the copy sample exceeds one on color chart, decrease the setting.
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Scanner Adjustment] → [Horizontal Adjustment]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check the C width on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met.

<Vertical Adjustment>

Functions	To adjust the zoom ratio in the sub scan direction for the scanner section
Use	The scanner assy has been replaced. The scanner motor has been replaced. The scanner drive cables have been replaced.
Adjustment Specification	Measure D width on the color chart and on the sample copy, and adjust the gap to be within the following specification. Specifications D: ± 1.5 mm Setting Range 0.990 to 1.010 (in 0.001 increments)
Adjustment Instructions	If the D width on the copy sample is less than one on color chart, increase the setting. If the D width on the copy sample exceeds one on color chart, decrease the setting.
Setting/ Procedure	 Call the Administrator Settings to the screen. Touch [System Settings] → [Expert Adjustment] → [Scanner Adjustment] → [Vertical Adjustment]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check the D width on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met.

(9) ADF Adjustment

It will be displayed only when the following setting is set to "Level 2."
 [Service Mode] → [Enhanced Security] → [Administrator Feature Level]
 See P.28 of the DF-611 service manual.

(10) Line Detection <Prior Detection Setting>

Functions	To set the detection le	to perform pre-detection of vel of the pre-detection of he warning when stain or	stain on the AD	F original glass.
Use	stain on the glass dete TYPE1: Warning w D-2) TYPE2: Warning w TYPE3: Warning w OFF: Warning w • Use when changing th glass. Low: Stain on t Normal: Normal d	ne detection level for the p the glass will not be detec etection level	of the lines. aintenance mark essage area on eens. bre-detection of seconds.	. (warning code: D-1/ the basic screen.
		the glass will easily be de	ieciea.	
Setting/ Procedure	The default setting is "Yes"	∕es.	No	
	NOTE • [Warning Level] and [Detection Level] can be set when "Yes" is selected. • Be aware that selecting "No" and performing the pre-detection with the following setting will display "NG." [Service Mode] → [Machine] → [Split Line Prior Detection] • When "No" is selected, the original glass cleaning operation after the job ends does not operate.			
		ed, the original glass cle	eaning operation	n after the job ends
			eaning operation	n after the job ends
	does not operate. <warning level=""></warning>		eaning operation	on after the job ends
	does not operate. <warning level=""> • The default setting is</warning>	TYPE2. "TYPE2"		·

<Detection While Feeding Setting>

Functions	To set the operation for detection and removing operation of stain on the ADF original glass when feeding the original.	
Use	 Use when changing the operation for detection and removing operation of stain on the ADF original glass when feeding the original. The glass will stop moving when the original is fed, and will not perform removing the stain. The glass will move between originals when feeding the original. When the original is fed, the glass will move while reading the original in order to remove the stain, and reduce the lines. When the original is fed, the glass will move while reading the original in order to remove the stain. The lines will be reduced also by the image process control.	
	set will be restricted to "0 (Disable)" or "1 (Enable)." [Service mode] → [System 2] → [Split Line Detect. Setting] → [Paper Passaging Detection]	
Setting/	The default setting is 1.	
Procedure	0 to 6	

H. List/Counter

(1) Management List

It will not be displayed when the following setting shows that vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
 (It will be displayed when the Key counter is mounted or when the following setting shows that switch No.33 is set to [01] at HEX assignment.
 [Service Mode] → [System 2] → [Software Switch Setting])

<Job Settings List>

Functions	To output the value set by the setting menu.
Use	10 output the value set by the setting menu.
Setting/	1. Touch [Job Settings List].
Procedure	2. Select the feed tray.
	3. Select simplex or duplex print, and touch the Start key.

(2) Paper Size/Type Counter

Functions	To register the combination of the specific paper size and the paper type, and to set
Use	the count.
Setting/ Procedure	Press a key out of 1 to 10 registration keys. Select the paper type.
	3. Touch the paper size key to select the paper size.

(3) Meter Counter List

• Setting will be available only when the following setting shows that either authentication device, management device 2, vendor 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To output the meter counter list.
Use	To print out the list in this setting because counter list cannot be printed when the following setting shows that vendor is mounted. [Meter Counter] → [Details]
Setting/ Procedure	1. Touch [Meter Counter List]. 2. Select the Feed tray. 3. Select Simplex or Duplex print, and touch the Start key.

(4) Check Consumables List

Setting will be available only when the following setting shows that either authentication device, management device 2, vendor 2 is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To output the consumable life list.
Use	To print out the list in this setting because the list cannot be printed when the following setting shows that Vendor is mounted. [Utility] → [Check Consumable Life]
Setting/ Procedure	Touch [Consumable Life List]. Select the Feed tray. Select Simplex or Duplex print, and touch the Start key.

I. Reset Settings

(1) System Auto Reset

Functions	To set the period of time until system auto reset starts functioning.	
Use	To change the period of time until system auto reset starts functioning.	
Setting/ Procedure	<priority mode=""> To set the functions displayed during system auto reset from Copy and Scan/Fax. The default setting is Copy. </priority>	
	"Copy"	Scan/Fax
	<system auto="" reset="" time=""> The default setting is 1 min. </system>	
		"1 min." (1 to 9, OFF)

(2) Auto Reset

Functions	To set the period of time until auto reset starts functioning in "Copy" and "Scan/Fax."	
Use	To change the period of time until auto reset starts functioning.	
Setting/ Procedure	The default setting is 1 min.	
Tiocedule	"1 min." (1 to 9, No)	

(3) Job Reset

<When Account is changed>

 It will not be displayed when the following setting shows that authentication device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the key counter is mounted.)

Functions	Selects whether to reset (initialize) a machine when the key counter is unplugged, a magnetic card is pulled out, or user authentication/account track is set.	
Use	To select not to reset to the default through the use of a data manage	t settings even when the accounts are changed ment device.
Setting/ • The default setting is Reset.		
Procedure	"Reset"	Do Not Reset

<When Original is set on ADF>

Functions	Select whether to reset the function when originals are placed on the ADF.	
Use	Reset the function when originals are set on the ADF.	
Setting/	The default setting is Do Not Reset.	
Procedure	Reset	"Do Not Reset"

<Next Job: Staple Setting>

Functions Use	To set whether to cancel the staple set next job setting has become available.	ting when the staple setting job started and the
	The default setting is OFF.	
Procedure	ON	"OFF"

<Next Job: Original Set/Bind Direction>

Functions	To set whether to cancel the original set.	et/bind direction when the job (which original
Use	set/bind direction is set) started and the	e next job setting has become available.
- U	The default setting is OFF.	
Procedure	ON	"OFF"

<Next Job: Reset Data After Job>

Functions Use	 To set whether to cancel the setting for scanning or transmitting fax when the scanning is finished or fax is transmitted, making the next job setting available. (The address will be cleared even when [OFF] is selected.)
	The default setting is ON.
Procedure	"ON" OFF

J. User Box Settings

(1) Delete Unused User Box

Functions	To delete the unnecessary box without data.
Use	To delete the diffiecessary box without data.
Setting/	1. Touch [Delete Unused User Box].
Procedure	2. Touch [Yes] on the Check screen.

(2) Delete Secure Print Documents

Functions	To delete the whole classified documents in the box.
Use	To delete the whole classified documents in the box.
Setting/	1. Touch [Delete Secure Documents].
Procedure	2. Touch [Yes] on the Check screen.

(3) Auto Delete Secure Document

Functions	• To set whether or not to delete the confidential documents in the box after a certain
Use	period of time. It also sets the period of time to store data.
Setting/	The default setting is 1 Day.
Procedure	12 Hours "1 Day" 2 Days 3 Days 7 Days 30 Days Save

(4) Encrypted PDF Delete Time

Functions Use	 Specifies whether to delete encrypted PDF data stored in the box after a lapse of a predetermined period of time. Sets the time period for which encrypted PDF data can be stored.
Setting/ • The default setting is 1 Day.	
Procedure	12 Hours "1 Day" 2 Days 3 Days 7 Days 30 Days Save

(5) Touch & Print Delete Time

Functions	Specifies whether to delete touch & print data stored in the box after a lapse of a pre-	
Use	determined period of time. Sets the time period for which touch & print data can be stored	
Setting/	The default setting is 1 Day.	
Procedure	12 Hours "1 Day" 2 Days 3 Days 7 Days 30 Days Save	

(6) Document Hold Setting

Functions Use	 Selects whether to store the document again box. If the function is set to No, the document is a retrieved. 	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(7) External Memory Function Settings

Functions Use	this machine.	functions using an external memory connected to nt] and [Print Document] separately.
	using [Save Docum Print Document: a function that print	s scanned documents into the external memory ent] in the box mode. s and sends documents saved in the external Document] in the box mode.
Setting/ Procedure	<save document=""> The default setting is OFF. ON</save>	"OFF"
	<print document=""> • The default setting is ON.</print>	
	"ON"	OFF

K. Standard Size Setting

It will be displayed only when the following setting is set to "Level 2."
 [Service Mode] → [Enhanced Security] → [Administrator Feature Level]

(1) Original Glass Original Size Detect

Functions	To change the document size detection table.	
Use	Use to change the setting for the document size detection table.	
	The default setting is Table1.	
Procedure	"Table1" Table2	

(2) Foolscap Size Setting

Functions	To set the size for foolscap paper.
Use	Upon setup. To change the size for foolscap paper.
Setting/	Select the size from among the following five.
Procedure	220 x 330 mm 8 ¹ / ₂ x 13 8 ¹ / ₄ x 13 8 ¹ / ₈ x 13 ¹ / ₄ "8 x 13"

L. Stamp Settings

(1) Header/Footer Settings

Functions Use	 Saves or deletes header/footer settings. Able to obtain registered header/footer data by [Application] → [Stamp/Composition]
Setting/ Procedure	Touch [New] to register new headers and footers.

(2) Fax TX Settings

Functions	Specifies whether to reset a stamp setting when fax is sent.	
Use	Specifies whether to reset a stamp setting when lax is sent.	
Setting/	The default setting is Cancel.	
Procedure	"Cancel"	Do Not Cancel

M. Blank Page Print Settings

Functions Use	Specifies whether to print a stamp/	page number on blank pages.
Setting/	The default setting is Print.	
Procedure	"Print"	Do Not Print

2 N. Application Key Settings

- This is displayed only when the function enhanced version 2 or later firmware is installed.
- This is displayed only when the optional i-Option (LK-101 or LK-103) is activated.

Functions	To assign the additional functions provided by i-Option to the application keys.
Use	This settings allow free application key assignment to additional functions provided by i-Option as well as to "User Box", "Fax/Scan" and "Copy" to which the application keys were conventionally assigned. (However, Key 0 is assigned to the function of displaying the application menu so that other functions cannot be assigned to Key 0.) The functions that can be assigned are as follows: Copy, Fax/Scan, User Box, Image Panel, Web Browser, My Panel
Setting/ Procedure	 Select [Key 1] or [Key 2]. Select a function to which the key is assigned, and touch [OK].

8.6.2 Administrator/Machine Settings

A. Administrator Registration

Functions	Registers administrator information displayed Help service/Administrator information
Use	screen as well as sender addresses used for E-mail transmission from the machine.
	1. Touch [Administrator Name], [E-mail Address] to input them. 2. Using the 10-key pad, enter the extension No.

B. Input Machine Address

Functions	To register the name of the machine and e-mail address.
Use	Machine Name: When the file name of the transmitted file or the document name of document registered in Box is generated automatically, it is added. E-mail: To be used as from address at internal Fax transmission.
Setting/ Procedure	Touch [Device Name] and input the name. Touch [E-mail Address] and input the E-mail address.

8.6.3 One-Touch/User Box Registration

A. Create One-Touch Destination

(1) Address Book

<E-mail>

Functions	To register/change the e-mail address for transmitting the scanned data by e-mail.
Use	10 register/oriange the e-mail address for transmitting the scanned data by e-mail.
Setting/ Procedure	Touch [New] to register the new address.Select any displayed address to check, edit, or delete the setting.

<User Box>

 It will not be displayed when the following setting shows that authentication device or the vendor is mounted.

 $[Service\ Mode] \rightarrow [Billing\ Setting] \rightarrow [Management\ Function\ Choice]$ (It will be displayed when the key counter is mounted.)

Functions	To register or change the box address for storing the scanned data to the box in the
Use	hard disk of the machine.
Setting/ Procedure	Touch [New] to register the new address. Select any displayed address to check, edit, or delete the setting.
Fiocedule	At least one user box must be registered in order to register the box address.

<Fax>

Functions	To register or change the fax number for transmitting the fax.
Use	To register of change the lax number for transmitting the lax.
Setting/ Procedure	 Touch [New] to register the new address. Select any displayed address to check, edit, or delete the setting.

<PC (SMB)>

Functions	To register or change the SMB address for transmitting the scanned data by SMB.
Use	To register of change the SMD address for transmitting the scarnied data by SMD
Setting/	Touch [New] to register the new address.
Procedure	 Select any displayed address to check, edit, or delete the setting.

<FTP>

Functions	To register and change the FTP address for transmitting the scanned data by FTP.
Use	10 register and change the FFF address for transmitting the scarned data by FFF.
Setting/ Procedure	Touch [New] to register the new address.Select any displayed address to check, edit, or delete the setting.

<WebDAV>

Functions Use	To register and change the WebDAV address for transmitting the scanned data by FTP.
Setting/ Procedure	 Touch [New] to register the new address. Select any displayed address to check, edit, or delete the setting.

<IP Address Fax>

Setting will be available only when [IP Address FAX] is set to "ON" in the following settings.

 $[\text{Administrator Settings}] \rightarrow [\text{Network Settings}] \rightarrow [\text{Network Fax Settings}] \rightarrow [\text{Network Fax Function Settings}]$

Functions Use	To register/change the IP address fax destination when transmitting the IP address fax data.
Setting/ Procedure	 A new address can be registered by touching [New]. Select any displayed address to check, change or delete the setting.

<Internet Fax>

Setting will be available only when [Internet FAX] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Settings] → [Network Fax Function Settings]

Functions	To register/change the Internet fax address when transmitting the internet fax data.
Use	- 10 register/change the internet lax address when transmitting the internet lax data.
Setting/ Procedure	 A new address can be registered by touching [New]. Select any displayed address to check, change or delete the setting.

(2) Group

Functions	• To register or change the group with a number of addresses to transmit data simulta-
Use	neously.
Setting/ Procedure	 Touch [New] to register the new group. elect any displayed group to check, edit, or delete the setting. At least one address must be registered in order to register the group.

(3) E-mail Settings

It will not be displayed when the management device 2 is set to "Set" by the following setting.

[Service Mode] → [Billing Setting] → [Management Function Choice]

<E-mail Subject>

Functions	To register the e-mail subject for transmitting the scanned data by e-mail.
Use	
Setting/ Procedure	 Touch [New] to register the new subject. Select any displayed subject to detail check, edit, or delete the setting. The subject can be set as default by selecting the subject displayed on the screen and pressing [Set as Default].

<E-mail Body>

Functions	To register the e-mail message for transmitting the scanned data by e-mail.
Use	• To register the e-mail message for transmitting the scanned data by e-mail.
Setting/ Procedure	 Touch [New] to register the new message. Select any displayed message to detail check or delete the setting. The text can be set as default by selecting the text displayed on the screen and pressing [Set as Default].

B. Create User Box

 It will not be displayed when the following setting shows that authentication device 1 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

 It will not be displayed when the following setting shows that vendor is mounted. [Service Mode] → [Billing Setting] → [Management Function Choice] (It will be displayed when the key counter is mounted.)

(1) Public/Personal User Box

Functions	To register or change the box for storing the text data in the hard disk of the machine.
Use	To register the shared or personal box for any purpose.
Setting/ Procedure	Touch [New] to register the new box.Select any displayed box to edit or delete it.

(2) Bulletin Board User Box

Functions	To register or change the bulletin board user box.
Use	
	Touch [New] to register the new box. Select any displayed box to edit or delete it.

(3) Relay User Box

It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Relay]

Functions	To register/change the Relay User Box.
Use	To register/change the helay oser box.
Setting/	A new box can be registered by touching [New].
Procedure	Select any displayed box to change or delete it.

(4) Annotation User Box

Functions	To register or change the annotation user box.	
Use	 To attach the image of the date, time, and/or filing number to the document data stored in the scanner mode, and to distribute them. 	
Setting/ Procedure	 Touch [New] key to register the new box. Select any displayed box to change or delete it. 	

C. One-Touch/User Box Registration List

It will not be displayed when the following setting shows that vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
 (It will be displayed when the Key counter is mounted or when the following setting shows that switch No.33 is set to [01] at HEX assignment.

 $[Service\ Mode] \rightarrow [System\ 2] \rightarrow [Software\ Switch\ Setting])$

(1) Address Book List

Functions	To output the address book list.	
Use	To print the list of abbreviated addresses which are registered.	
Setting/ Procedure	 Select the destination type to be output. Touch [Starting destination No.] and enter the number from which output starts. Touch [No. of Destinations] and specify the number of destinations to be output. Touch [Print], and select the paper feed tray. Select the simplex or duplex print, and press the Start key to output the list of abbreviated addresses. 	

(2) Group List

Functions	To output the group list.	
Use	 To print out the list of addresses of the group which are registered. 	
Setting/ Procedure	 Touch [Starting destination No.] and enter the number from which output starts. Touch [No. of Destinations] and specify the number of destinations to be output. Touch [Print], and select the paper feed tray. Select the simplex or duplex print, and press the Start key to output the list of abbreviated addresses. 	

(3) Program List

Functions	To output the program list.	
Use	To print out the list of the program addresses which are registered.	
Setting/ Procedure	 Select the destination type to be output. Touch [Starting destination No.] and enter the number from which output starts. Touch [No. of Destinations] and specify the number of destinations to be output. Touch [Print], and select the paper feed tray. Select the simplex or duplex print, and press the Start key to output the list of abbre- 	
	viated addresses.	

(4) E-mail Subject/Text List

Functions	To output the subject or the text list.	
Use	To print out the e-mail subject/text List which are registered.	
Setting/ Procedure	 Select the paper feed tray. Select the simplex or duplex print, and press the Start key to output the list of abbreviated addresses. 	

D. Maximum Number of User Boxes

Functions	Set the maximum of public, personal, and group boxes that individual users can hole.	
Use		
Setting/	Select a user box type and name.	
Procedure	If a maximum number of user boxes is not specified, set Max. No. of Use Boxes to [OFF].	
	 If a maximum number of user boxes is not specified, set Max. No. of Use Boxes to [OFF]. 	

8.6.4 User Authentication/Account Track

 It will not be displayed when the following setting shows that key counter or vendor is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

A. General Settings

(1) User Authentication

Functions	To set the user authentication method.	
Use	To select whether to authenticate the user by the external server or MFP.	
Setting/	The default setting is OFF.	
Procedure	"OFF" ON (External Server) ON (MFP)	
	NOTE • [OFF] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [Enhanced Security Mode] • [ON (External Server)] cannot be selected when external servers are not registered in the following setting. [Administrator Settings] → [User Authentication/Account Track] → [External Server Settings] • Neither [ON (External Server)] or [ON (MFP)] can be selected when the presence of management device is set in the following setting. [Service Mode] → [Billing Setting] → [Management Function Choice]	

(2) Public User Access

Functions Use	 To set whether to allow or prohibit the nonregistered user to use the system when User authentication has been set. Able to use the machine without authentication by logging in as a public user when [ON (Without Login)] is selected. 		
Setting/	The default setting is Restrict.		
Procedure	"Restrict"	Allow	ON (Without Login)
	NOTE • This setting is not available without user authentication. • [Allow] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [Enhanced Security Mode] • [Allow] cannot be selected when [Synchronize User Authentication & Account Track] is set to "Do Not Synchronize."		

(3) Account Track

Functions	To set whether to enable the account track function or not.	
Use	To enable the account track function.	
Setting/	The default setting is OFF.	
Procedure	"OFF"	ON

(4) Account Track Input Method

Functions	To set the authentication method for the account track.	
Use	To select whether to authenticate by password or by account name & password.	
Setting/ Procedure	The default setting is Account Name & Password. "Account Name & Password" Password Only	
	NOTE This setting is not available without the account track. "Password Only" cannot be set when using both user authentication and account track.	

(5) Synchronize User Authentication & Account Track

Functions	To set whether to synchronize the user authentication and account track.		
Use	To be used when not to synchronize the user authentication and account track.		
Setting/	The default setting is Synchronize.		
Procedure	"Synchronize"	Do not synchronize	
	NOTE The setting is available only wher account track.	carrying out the user authentication and	

(6) When # of Jobs Reach Maximum

Functions	 To set whether to stop the currently printing job and start the next job, or to stop the machine, when reaching to the upper limit for the number of printed pages set by the user authentication and the account track. 	
Use	To stop the machine when the number of printed pages reach the upper limit set by the user authentication and the account track.	
Setting/ • The default setting is Skip Job.		
Procedure	"Skip Job"	Stop Job

(7) Number of User Counters Assigned

 It will not be displayed when the following setting shows that management device 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set the number available to be assigned for the user registration and account registration.
Use	To change the number available to be assigned for the user registration and account registration.
Setting/ Procedure	The default setting is 500. The total number to be registered for the user authentication and account track is 1000. The number for the user registration will be set. When setting the [# of Counters Assigned for Users] to 50, the number available for Account Track will be 950.
	NOTE • The setting is available only when carrying out the user authentication and account track.

(8) Ticket Hold Time Setting

Functions	Specify the desired length of holding time of Kerberos authentication ticket.	
Use	NOTE This setting takes effect only when the authentication server type is set to active directory.	
Setting/	The default settings is 60 min.	
Procedure	1 to 60 min.	

(9) Scanner Settings

 It will be displayed only when the optional image controller IC-409 is mounted and user authentication or account track has been set.

Functions	To select whether to use TWAIN scan function available in Fiery Remote Scan when user authentication or account track is set to on.	
Use		t track is set to on, select the use of TWAIN scan can software that is supplied with the image con-
Setting/ • The default settings is Restrict.		
Procedure	Allow	"Restrict"

B. User Authentication Setting

• The settings are available only when carrying out the user authentication.

(1) Administrative Setting

<User Name List>

• It cannot select [OFF] when the following setting is set to "ON." [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]

Functions	To set whether to display or not the list key for user names on user authentication screen.	
Use	To display the list key for user names on user authentication screen.	
Setting/ Procedure	The default setting is OFF.	
Frocedure	ON "OFF" • [ON] cannot be selected when [ON] is specified in the following setting. [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]	

<Default Function Permission>

Functions	To set the default value for the function permission in user authentication by the external server.	
Use	To set the function which authenticated user can use when initially authenticating the user by the external server. Items available for setting: Copy, Scan, Fax, Print, User Box, Print Scan/Fax TX and Save to External Memory	
Setting/ • The default settings are Allow.		
Procedure	"Allow"	Restrict

2 <ID & Print Settings>

• This is displayed only when the function enhanced version 2 or later firmware is installed.

Functions Use	 To set whether to use ID & Print (a job sent by a user cannot be printed until the user authentication is completed). To set whether to print a job of unauthenticated or public user or to save the job into the ID & Print User Box. 	
Setting/ Procedure	<id &="" print=""> • The default setting is OFF.</id>	
	ON	"OFF"
	<public user=""> The default setting is Print Immediately.</public>	
	"Print Immediately"	Save



- <ID & Print Operation Settings>
 This is displayed only when the function enhanced version 2 or later firmware is installed.
 - It will be displayed only when the following setting shows that authentication device is set to "installed".

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set whether to print all jobs or only one job from the same authenticated user	
Use	when ID & Print is selected.	
Setting/	The default setting is Print All Jobs.	
Procedure	"Print All Jobs"	Print Each Job

(2) User Registration

Functions	To register or change the user.	
Use	To register, change or delete the user for authentication.	
Setting/ Procedure	Select the user, and touch [Edit] Input the user name, user password, and e-mail address.	
	NOTE • It cannot be entered when conducting authentication by external server.	
	3. Set the output permission, max allowance set, function permission, and touch [OK].	
	NOTE • When the public users are allowed, the output permission and the function permission can be set. • [Authentication Information Registration] does not appear when the presence of Authentication Device 2 is set in the following setting. [Service Mode] → [Billing Setting] → [Management Function Choice] • [Output Permission], [Max. Allowance Set], and [Function Permission] do not appear when the presence of Management Device 1 is set in the following setting. [Service Mode] → [Billing Setting] → [Management Function Choice]	

(3) User Counter

Functions	To display the status of use of the copy+print, copy, print and scan/fax for each user.	
Use	To check the status of use of the copy+print, copy, print and scan/fax for each user.	
Setting/	1. Select the user and touch [Counter Details].	
Procedure	2. Select the key to check to see the status of use.	
	3. For clearing the counter, touch [Clear Counter].	
	4. For clearing the all counters, touch [Reset All Counters].	

Field Service Ver. 4.0 Jun. 2008 C. Account Track Setting

• The settings are available only when carrying out the account track.

(1) Account Track Registration

Functions	To register and change the account.	
Use	To register, change or delete the account for account track.	
Setting/ Procedure	Select the proper Account and touch [Edit]. Input the [Account Name], [Password] and [Name]. Set the [Output Permission], and [Max. Allowance Set], and touch [OK].	
	NOTE • When the "Password Only" is selected for [Account Track Input Method], [Account Name] does not appear. • When the "Password Only" is selected for [Account Track Input Method], [Account Name] does not appear.	

(2) Account Track Counter

	•
Functions	To display the status of use of the copy+print, copy, print and scan/fax for each account.
Use	To check the status of use of the copy+print, copy, print and scan/fax for each account.
Setting/ Procedure	Select the account and touch [Counter Details]. Select the key for the item to be checked. For clearing the counter, touch [Clear Counter]. For clearing the all counters, touch [Reset All Counters].

D. Print without Authentication

· It cannot select [Allow] when the following setting is set to "ON." [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]

Functions	To set whether to allow or restrict the print which user and account are not specified.	
Use	To allow or restrict printing which user and account are not specified. When Allow is selected, pages printed by unidentified users are counted and included in the count of the public user.	
Setting/	The default setting is Restrict.	
Procedure	Allow	"Restrict"

E. Print Counter List

- The setting is available only when carrying out the user authentication or account track.
- It will not be displayed when the following setting shows that key counter, vendor, authentication device1 or management device 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To print out the User counter and the account counter.	
Use	To output the user counter and account counter to be checked.	
_	 Touch [Counter List]. Select the simplex or duplex print, and press the start key to output the counter list. 	

F. External Server Settings

Functions	Registers and sets an external server that is used for user authentication.		
Use	To make user authentication by external server authentication.		
Setting/ Procedure	1. Select one from No. 1 to No. 20 and touch [NEW]. 2. Set [Server Name] and [Server Type]. 3. To change settings, select an external server to be edited and touch [Edit]. <server type=""></server>		
	Active Directory NTLM v1 NTLM v2 NDS LDAP		
	NOTE Neither [NTLM v1] nor [NTLM v2] appear when OFF is selected in the following setting. [Administrator Settings] → [Network Settings] → [SMB Settings] → [User Authentication (NTLM)] [NDS] does not appear when OFF is selected in the following setting. [Administrator Settings] → [Network Settings] → [NetWare Settings] → [User Authentication Setting (NDS)]		

G. Limiting Access to Destinations(1) Create Group

Functions	Registers and edits groups of destinations for limiting access.	
Use		
Procedure	1. Select a group and touch [Edit]. 2. Enter [Group Name]. 3. Set the Access Allowed Level and touch [OK].	

(2) Apply Levels/Groups to Destinations

Functions	Sets Apply Level and Apply Group for individual destinations.	
Use		
Setting/	1. Select one from Address Book, Group, and Program.	
Procedure	Select a registered address. Touch [Apply Group] and [Apply Level] independently make each settings.	

(3) Apply Levels/Groups to Users

Functions	Sets Apply Level or Apply Group for individual users.
Use	- Sets Apply Level of Apply Group for individual users.
Setting/ Procedure	 Select a registered user. Touch [Apply Group] and [Apply Level] independently to make each settings.

H. Authentication Device Settings

 The function can be displayed only when the authentication device 2 is set to Set by [Service Mode] → [Billing Setting] → [Management Function Choice]

(1) General Settings

	Functions	Specifies a device used for user authentication.		
	Use	Card Authentication: Select the IC card type and operation settings. Bio Authentication: Select the beep and operation settings.		
3	Setting/	Card Authentication Bio Authentication		
	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] → [Management Function Choice] → [Authentication Device 2]. When [Card 1] is selected as the authentication device, select the card type from among [FeliCa], [TypeA], [SSFC], [FCF], and [FCF (Campus)] and make the oper tion settings. When [Card 2] is selected as authentication device, the authentication device nar will be displayed differently depending on the type of installed loadable device dri		
		 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]. 		
		If LEGIC (PID) is selected in Card Authentication, perform the access setting (STAMP input) for LEGIC (PID).		
		If MIFARE (PID) is selected in Card Authentication, perform the MIFARE key setting.		

(2) Touch & Print Setting

Functions	Specifies whether to store jobs in the touch & print box when bio authentication is	
Use	used.	
Setting/	The default setting is Yes.	
Procedure	"Yes"	No

(3) Logoff Settings

Functions	Select whether or not the user is logged off after a scan or fax is sent or after the	
Use	copy document is scanned.	
Setting/	The default setting is Do not log off.	
Procedure	"Do not log off" Log off	

③ I. Auth/Acct Track Common Setting

• This is displayed only when the function enhanced version 3 or later firmware is installed.

(1) Logout Confirmation Screen Display Setting

Functions Use	 Select whether or not to display the log If the setting is made not to display the performed only through the Access key appearing. 	confirmation screen, the logout sequence is	
Setting/	The default setting is ON.		1
Procedure	"ON"	OFF	

Network Setting 8.6.5

A. TCP/IP Settings(1) TCP/IP Settings

Functions	To set whether to enable or disable TCP/IP settings.	
Use		
Setting/	The default setting is ON. "ON" OFF	
Procedure		
	NOTE • When the setting is changed, turn again more than 10 seconds after.	off the main power switch and turn it on

(2) IP Settings

Functions	To set whether to enter the IP address directly or to obtain it automatically.	
Use	To change the method for setting the IP address.	
Setting/	The default setting is Auto Input.	
Procedure	Manual Input	"Auto Input"
	When it is set to [Auto Input], select the method to obtain it automatically.	
	DHCP Setting : ON BOOTP Setting : ON	OFF OFF
	ARP/PING Setting : ON AUTO IP Setting : ON	OFF OFF
	NOTE • [ARP/PING Setting] and [Auto IP Setting] cannot be set to "OFF" simultaneously. • They will all be set to "ON" when [Manual Input] is changed to [Auto Input].	
	When it is set to [Manual Input], set way.	the IP address, subnet mask and default gate

(3) DNS Host

Functions	To set the DNS host name.To set whether or not to enable the d	namic DNS setting.
Use	To enter the DNS host name.To set the dynamic DNS.	
Setting/ Procedure	<dns host="" name=""> 1. Touch [DNS Host Name]. 2. Enter the DNS host name on the scr <dynamic dns="" settings=""> • The default setting is No Limit.</dynamic></dns>	een key board, and touch [OK].
	Enable	"No Limit"

(4) DNS Domain

Functions	 To set whether or not to enable the auto obtaining for the DNS domain name. To set the DNS default domain name. To set the DNS search domain name. 			
Use	To enter the DNS default domain name. To enter the DNS search domain name.			
Setting/ Procedure	<dns auto="" domain="" name="" retrieval=""> The default setting is Enable.</dns>			
	"Enable" No Limit			
	NOTE • "Enable" cannot be set when [IP Settings] is set to "Auto Input."			
	<domain name=""> Touch [Default DNS Domain Name] or [DNS Search Domain Name 1 to 3]. Enter the domain name using the keyboard on the screen and touch [OK]. </domain>			

(5) DNS Server Settings

Functions	To set whether or not to enable the auto obtaining of the DNS server address. To set the priority/substitute DNS server.		
Use	To enter priority/substitute DNS server.		
Setting/ Procedure	ONS Server Auto Obtain> The default setting is Enable. "Enable" NOTE "Enable" cannot be set when [IP S <priority dns="" server.="" substitute=""> Touch the corresponding key, and inp mat.</priority>	No Limit ettings] is set to "Auto Input." ut the server address by IPv4 or the IPv6 for-	

(6) RAW Port Number

Functions	To set the RAW port number.
Use	To set the RAW port number for the printer. Several data can be accepted at the same time by selecting several ports.
Setting/ Procedure	Select the necessary port number. When using the selected port, press the Clear key to clear the value, and enter the RAW port number using the 10-key pad. Touch [OK].

(7) IP Filtering (Permit Access)

Functions	To set the IP filtering (Permit Access).
Use	To set whether to allow only IP addresses that are within a specified range.
Setting/ Procedure	Select Enable or "Disable". When [Enable] is set, select one from Set 1 to Set 5 and specify the range of IP addresses to be allowed using the 10-key pad. Touch [OK].

(8) IP Filtering (Deny Access)

Functions	To set the IP filtering (Deny Access).
Use	When [Enable] is set, select one from Set 1 to Set 5 and specify the range of IP addresses to be allowed using the 10-key pad.
Setting/ Procedure	1. Select Enable or "Disable". 2. When [Enable] is set, select one from Set 1 to Set 5 and enter the range of IP addresses to be denied using the 10-key pad. 3. Touch [OK].

(9) IPv6 Settings

Functions	 To set whether to use IPv6 in IP network communication. To set whether to use the IPv6 address automatic acquisition setting. 			
	To set IPv6 addresses.			
Use	To use IPv6 in IP network communication.			
Setting/	<ipv6 settings=""></ipv6>			
Procedure	The default setting is ON.			
	"ON"	OFF		
	<auto ipv6="" settings=""></auto>			
	The default setting is ON.			
	"ON"	OFF		
	NOTE • When the setting is changed, turn off the main power switch and turn it of again more than 10 seconds after.			
	gateway address. 1. Touch [Global Address] or [Gatewa 2. Enter the address with the keys on	the screen. al address, touch [Prefix Length] and specify the		
	NOTE • [Link-Local Address] key appears, but its settings are not allowed to be changed.			

(10) IPsec Settings

Functions	To set whether to use IPsec protocol for IP network communication.	
Use	When IPsec protocol is used to perform encrypted communication.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

Adjustment / Setting

bizhub C353/C253/C203

<IKE Settings>

Functions	To make the settings that relate to IKE (Internet Key Exchange) protocol which is used for IPsec communication. Settings can be made independently for four different sets (Group 1 to 4).			
Use				
Setting/ Procedure	<group> Among four groups (Group 1 to 4), select a group where settings are made.</group>			
	<encryption algorithm=""> Set a encryption algorithm used for IPsec communication. The default setting is OFF. </encryption>			
	DES_CBC 3DES_CBC "OFF"			
	<authentication algorithm=""> Set an authentication algorithm used for IPsec communication. The default setting is OFF. </authentication>			
	MD5 SHA-1 "OFF"			
	<key period="" validity=""> • Set a key validity period. • The default setting is 28800 (sec.). 80 to 604800 (sec.)</key>			
	<diffie-hellman group=""> • Set Diffie-Hellman group. • The default setting is Group 2.</diffie-hellman>			

<IPsec SA Settings>

Functions	To make the settings that relate to IPsec SA (Security Association) which is used for				
Use	IPsec communication. Settings can be made independently for eight different sets (Group 1 to 8).				
0-44:/					
Setting/ Procedure	 <group number="" set=""></group> Among Group 1 to 8, select a group where settings are made. After touching the key of the Group, make the following settings. (If the combination of each selection is not allowed among different settings, the key operation of the corresponding option is locked.) 				
	<security protocol=""> Set a security protocol The default setting in</security>				
	АН	ESP	ESP_AH	"OFF"	
	<esp al="" algo="" an="" default="" encryption="" in<="" set="" setting="" td="" the=""><td>gorithm used for</td><td>ESP protocol.</td><td></td></esp>	gorithm used for	ESP protocol.		
	DES_CBC 3DE	S_CBC AES_C	BC AES_CTR	NULL "OFF"	
	<esp algorithm="" authentication=""> • Set authentication algorithm used for ESP protocol. • The default setting is OFF.</esp>				
	MD5		SHA-1	"OFF"	
	<ah algorithm="" authentication=""> • Set authentication algorithm used for AH protocol. • The default setting is OFF. MD5 SHA-1 "OFF"</ah>				
	 Set the period of time when the SA connection 	 <lifetime after="" establishing="" sa=""></lifetime> Set the period of time starting from when SA connection is established and ending when the SA connection is cut. The default setting is 3600 (sec.). 			
	120 to 604800 (sec.)				

<Peer>

Functions	To register destinations used for IPsec communication. Settings can be made independently for different ten sets (Group 1 to 10).			
Use				
Setting/ Procedure	<peer> Among Group 1 to 10, select a group where settings are made.After touching the key of the Group, make the following setting.<encapsulation mode=""> Set a encapsulation mode used for IPsec.The default setting is OFF.</encapsulation></peer>			
	Tunnel Mode Transport Mode "OFF"			
	<ip address=""> When the encapsulation mode is set, specify the IP address of destinations. Touch [IP Address] and enter the IP address with IPv4 or IPv6 format. </ip>			
	 <pre-shared key="" text=""></pre-shared> When the encapsulation mode is set, specify a Pre-shared key (Key data). Touch [Input] and enter the Pre-shared key. 			
	<perfect forward="" secrecy=""> When the transport mode is selected, set whether to use Perfect forward secrecy. The default setting is OFF. </perfect>			
	ON "OFF"			

B. NetWare Settings(1) IPX Settings

Functions	To enable or disable the NetWare (IPX) setting. To set the ethernet frame type.				
Use	To use NetWare (IPX) setting. To specify the frame type for transmission.				
Setting/ Procedure	<ipx settings=""> • The default setting is ON. "ON" OFF</ipx>				
	<ethernet \(="" \)="" default="" frame="" setti<="" td="" the="" •=""><td>,,</td><td>Detect.</td><td></td><td></td></ethernet>	,,	Detect.		
	"Auto Detect"	802.2	802.3	Ethernet II	802.3SNAP

(2) Netware Print Settings

Functions	To set whether to use the NetWare print mo To set the NetWare print mode. To display NetWare status.	ode.
Use	To change the NetWare print mode. To check NetWare status.	
Setting/ Procedure	<netware print="" settings=""> • The default setting is ON.</netware>	
	"ON"	OFF
	<netware mode="" print=""> • The default setting is PServer.</netware>	
	"PServer"	Nprinter/Rprinter
	After selecting either key in the NetWare priscreen.	int mode setting, proceed to each setting
	<status> 1. Touch [Status]. 2. Touch up/down arrow keys to select the set 3. Check the NetWare status.</status>	rver to check.

(3) P Server Settings: Print Server Name/Print Server Password

Functions	To set the print server name and print server password.
Use	To enter the print server name or the print server password.
Setting/	1. Touch [Print Server name] or [Print Server Password].
Procedure	2. Enter the print server name or the print server password (up to 63 characters) using
	the on-screen keyboard, and touch [OK].

(4) P Server Settings: Polling Interval

Functions	To set the polling interval.
Use	To set the interval to search the print queue.
Setting/ Procedure	Press the Clear key. Enter the polling interval between 1 and 65535 using the 10-key pad.

(5) P Server Settings: NDS/Bindery Setting

Functions	To set whether to enable or disable the bindery setting when using NetWare4.x model and after.	
Use	To enable the bindery service.	
Setting/	The default setting is NDS.	
Procedure	"NDS" NDS/Bindery	

(6) P Server Settings: File Server Name

Functions	To set the file server name.
Use	To set the full server name for the print server to logon.
	 Touch [File Server Name]. Enter the File server name (up to 47 characters) on the on-screen keyboard, and touch [OK].

(7) P Server Settings: NDS Context Name

Functions	To set the NDS context name (context name to register NDS print server).
Use	To set the NDS context name.
Setting/ Procedure	Touch [NDS Context name]. Enter the NDS context name (up to 191 characters) on the on-screen keyboard, and touch [OK].

(8) P Server Settings: NDS Tree Name

Functions	To set the NDS tree name (name to login).
Use	To set the NDS tree name.
Setting/ Procedure	Touch [NDS Tree Name]. Enter the NDS tree name (up to 63 characters) on the on-screen keyboard, and touch [OK].

(9) Nprinter/Rprinter Settings: Print Server Name

Functions	To set the print server name.
Use	To set the print server name.
Setting/ Procedure	Touch [Print Server Name]. Enter the printer name (up to 63 characters) on the on-screen keyboard, and touch [OK].

(10) Nprinter/Rprinter Settings: Printer Number

Functions	To set the printer number.
Use	To set the printer number.
Setting/	1. Touch [Auto] and cancel the reverse display.
Procedure	2. Press the Clear key.
	3. Enter the number between 0 and 254 using the 10-key pad.

(11) User Authentication Setting (NDS)

Functions	To set whether or not to use the user authentication setting.	
Use	To conduct user authentication in netware environment.	
Setting/ Procedure	The default setting is ON.	
	"ON" OFF	

C. http Server Settings

 It will not be displayed when the following setting shows that authentication device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) http Server Settings

Functions	To set whether or not to use the http server setting.		
Use	To set whether of not to use the http server setting.		
Setting/	The default setting is ON.		
Procedure	"ON" OFF		

(2) PSWC Settings

Functions	To set whether to use the PageScope Web Connection.			
Use	To set whether to use the ragescope web connection.			
Setting/ Procedure	The default setting is ON.			
	"ON"	OFF		

(3) IPP Settings

Functions	To set whether to enable or disable IPP (Internet Printing Protocol) setting.			
Use	- To set whether to enable of disable IFF (litternet Fillitting Flotocol) setting.			
Setting/	The default setting is ON.			
Procedure	"ON"	OFF		

(4) Accept IPP jobs

Functions	To set whether to allow or restrict the IPP job.
Use	To set whether to allow of festilet the IFF job.
	The default setting is ON.
Procedure	"ON" OFF

(5) Support Information

Functions	To set the operation support information.
Use	For the response setting to see if IPP transmission supports each function.
Setting/	1. Touch [Support Information].
Procedure	2. Set "ON" or OFF for each item.

(6) Printer Information

Functions	To set the printer information.
Use	To set the printer information.
	Touch [Printer Information]. Enter the printer name, printer location, and printer information on the on-screen keyboard. Touch [Print URI] to check the printer URI information.

(7) IPP Authentication Settings

Functions	To set whether or not to use the IPP authentication setting.
Use	To conduct IPP authentication.
Setting/	The default setting is ON.
Procedure	"ON" OFF

(8) Authentication Method

Functions	To set the authentication method	for IPP authenticati	on.
Use	To change the authentication me	ethod when conduction	ng IPP authentication.
	The default setting is requesting	-user-name.	
Procedure	"requesting-user-name"	basic	digest

(9) User Name

Functions	To set the user name for IPP authentication.
Use	
Setting/	1. Touch [User Name].
Procedure	2. Enter the user name on the on-screen keyboard, and touch [OK].

(10) Password

Functions Use	To set the password for IPP authentication.
Setting/ Procedure	Touch [Password]. Enter the password on the on-screen keyboard, and touch [OK].

(11) realm

Functions	To set the realm for identifying the authentication setting for IPP authentication.
Use	- 10 Set the realition identifying the authentication setting for it is authentication.
Setting/	1. Touch [realm].
Procedure	2. Enter the realm on the on-screen keyboard, and touch [OK].

D. FTP Settings

(1) FTP TX Settings

Functions	To set whether to use FTP TX settings.
Use	• 10 Set whether to use it if it settings.
Setting/	The default setting is ON.
Procedure	"ON" OFF

(2) FTP TX Settings: Proxy Server Address

Functions	To set the proxy server address.	
Use	To enter the proxy server address.	
Setting/	1. Touch [Host Address].	
Procedure	Select [Input Host Name], [IPv4 Address Input], or [IPv6 Address Input] and enter a host address.	

(3) FTP TX Settings: Proxy Server Port Number

Functions	To set the proxy server port number.	
Use	To enter the proxy server port number.	
Setting/	Press the Clear key.	
Procedure	 Enter the proxy server port number between 1 and 65535 using the 10-key pad. 	

(4) FTP TX Settings: Port No.

Functions	To set the port number to be used for transmission with FTP server.	
Use	To enter the port number to be used for transmission with FTP server.	
Procedure	 Touch [Input]. Press the Clear key. Enter the proxy server port number between 1 and 65535 using the 10-key pad. 	

(5) FTP TX Settings: Connection Timeout

Functions	To set the timeout period for connecting to FTP server.	
Use	To change the timeout period for connecting.	
Setting/	1. Touch [Input].	
Procedure	2. Press the Clear key.	
	3. Enter the connecting timeout period between 5 and 300 using the 10-key pad.	

(6) FTP Server Settings

Functions	To set whether to use this machine as FTP server.	
Use	Not to use the machine as FTP server.	
Setting/ • The default setting is ON.		
Procedure	"ON"	OFF
NOTE • [ON] cannot be selected when the following setti [Administrator Settings] → [Security Settings] →		

E. SMB Setting

 It will not be displayed when the following setting shows that authentication device is mounted.

 $[Service\ Mode] \rightarrow [Billing\ Setting] \rightarrow [Management\ Function\ Choice]$

(1) Client Settings

Functions	To set whether or not to use the SMB transmission setting. To set whether or not to enable the user authentication setting by NTLM. To set the NTLM version for the user authentication.		
Use	 To use when setting the SMB transmission setting. To use when conducting the user authentication by NTLM (NT LAN Manager). To use when changing the NTLM version for user authentication. NTLM has v1 and v2. Select the version which suits the network environment. 		
Setting/ Procedure	<client settings=""></client>		
Frocedure	The default setting is ON.		
	"ON"		OFF
	<ntlm settings=""> • The default setting is v1.</ntlm>		
	"v1"	v2	v1/v2
	<user (ntlm)<="" authentication="" li="">The default setting is ON.</user>)>	
	"ON"		OFF

(2) Print Settings

Functions	To set whether to use SMB port or not in printer mode.		
Use	• 10 Set whether to use SMD port of hot in printer mode.		
Setting/ • The default setting is ON.			
Procedure	"ON"	OFF	

(3) Print Settings: NetBIOS Name

Functions	To set NetBIOS name.	
Use	To set NetBIOS name.	
	Touch [NetBIOS Name]. Enter the NetBIOS name (up to 15 characters) on the on-screen keyboard, and touch [OK].	

(4) Print Settings: Print Service Name

Functions	To set the print service name.	
Use	To set the print service name.	
Setting/ Procedure	Touch [Print Service Name]. Enter the print service name (up to 13 characters) on the on-screen keyboard, and touch [OK].	

(5) Print Settings: Workgroup

Functions	To set the workgroup.	
Use	To set the workgroup.	
	Touch [Workgroup]. Enter the workgroup (up to 15 characters) on the on-screen keyboard, and touch [OK].	

(6) WINS Settings

Functions	To set whether or not to enable the WINS setting.		
Use	To use the WINS (Windows Internet Name Service) setting is necessary. By using the WINS, the traffic by broadcast can be reduced, and the communication becomes available with the network where broadcast does not reach.		
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	

(7) WINS Settings: Automatic Retrieval Settings

Functions	To set whether or not to enable the auto obtaining of the WINS server address.	
Use	To acquire the WINS server address automatically. To obtain the WINS server address from DHCP server. If there are more than on address settings, up to two can be acquired.	
Setting/ • The default setting is Enable.		
Procedure	"Enable"	No Limit

(8) WINS Settings: WINS Server Address 1, 2

Functions	To set the WINS server address.
Use	To use when manually entering the WINS server address. The primary address and the secondary address can be set. (The primary address has the priority during operation.)
Setting/	1. Touch [1] or [2].
Procedure	2. Enter the WINS server address.

(9) WINS Settings: Node Type Setting

Functions	To set a node type.				
Use	To change the current	nt node type.			
Setting/	The default setting is	H Node.			
Procedure	B Node	P Node	N Node	"H Node"	

(10) Direct Hosting Setting

Functions	To set whether or not to enable the direct hourself.	esting setting.
Use	To use the direct hosting setting is necessary	y.
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

F. LDAP Settings

 It will not be displayed when the following setting shows that authentication device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) Enabling LDAP

Functions	To set whether to enable or disable the L	DAP function.	
Use	To use LDAP function.		
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	

(2) Setting Up LDAP

- Registration and/or setting concerning the LDAP server can be conducted.
- Touch [Setting Up LDAP], and select the optional blank key to register and/or set.

<LDAP Server Name>

Functions	Set the LDAP server name.
Use	Set the LDAP server name.
Setting/ Procedure	Touch [Server Name]. Enter the server name (up to 32 one-byte characters) on the on-screen keyboard, and touch [OK].

<Max. Search Results>

Functions	To set the Max. results of address for LDAP search.
Use	To change the Max. results of address for LDAP search.
Setting/ Procedure	Touch [Max. Search Results]. Press the Clear key. Enter the Max. Search result numbers between 5 and 1000 using the 10-key pad.

<Timeout>

Functions	To set the Max. timeout period for LDAP search.
Use	To change the Max. timeout period for LDAP search.
	1. Touch [Timeout]. 2. Press the Clear key. 3. Enter the timeout period between 5 and 300 using the 10-key pad.

<Initial Setting for Search Details>

Functions	To set the initial items for search conditions in LDAP detail search.
Use	To set the initial items for search conditions in LDAP detail search.
	Touch [Initial Setting for Search Details]. Touch the key about condition for each search item, and select the condition.

<Check Connection>

- It will not be displayed when [Enabling LDAP] is set to "OFF."
- It will not be displayed when the following is set to "Restrict."
 [Administrator Settings] → [Security Settings] → [Security Details] → [Manual Destination Input]

Functions Use	To check the connection with the LDAP server which has been set.
	Touch [Check Connection]. Confirm a proper connection and touch [Close].

<Reset All Settings>

Functions	To return the contents registered in the LDAP server to what they were prior to the
Use	shipping.
Setting/	1. Touch [Reset All Settings].
Procedure	2. Check the message and touch [Yes].
	3. Touch [OK].

<Server Address>

Functions	To set the LDAP server address.
Use	To enter LDAP server address.
Setting/ Procedure	 Touch [Server Address]. Select [Input Host Name], [IPv4 Address Input] or [IPv6 Address Input], and enter the server address.

<Search Base>

Functions	To set the directory path for LDAP server.
Use	To enter the directory path for LDAP server.
Setting/	1. Touch [Search Base].
Procedure	2. Enter the search base (up to 255 characters) on the on-screen keyboard, and touch
	[OK].

<SSL Setting>

Functions	To set whether to use SSL (data encryption) for connecting to LDAP server.		
Use	To use SSL (data encryption) for connecting to LDAP server.		
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	

<Port Number>

Functions	To set the LDAP server port number.
Use	To enter the LDAP server port number.
	1. Touch [Input]. 2. Press the Clear key.
	3. Enter the port number between 1 and 65535 using the 10-key pad.

<Port Number (SSL)>

Functions	To set the port number for LDAP server when using SSL.	
Use	To enter the port number for LDAP server when using SSL.	
	1. Touch [Input]. 2. Press the Clear key. 3. Enter the port number between 1 and 65535 using the 10-key pad.	

<Authentication Type>

Functions	To set the authentication method to logon to LDAP server.			
Use	To change the authentication method to logon to LDAP server. anonymous: User name and password are not necessary (Dynamic authentication will be invalid when anonymous is selected.)			
	Simple : Simple method which needs the user name and the password Digest-MD5 : Method available with normal LDAP server. When failing to authenticate with Digest-MD5, it automatically switches to CRAM-MD5.			
	GSS-SPNEGO: Method available with Windows active directory (Kerberos authentication). NTLM (v1): Standard user authentication format used for Windows NT, etc. NTLM (v2): Standard user authentication format used for Windows NT, etc. It has been applied to the Windows NT4.0 SP4 and later versions. Its security has been enhanced compared to v1.			
Setting/ Procedure	The default setting is anonymous. "anonymous" Simple Digest-MD5 GSS-SPNEGO NTLM v1 NTLM v2			

<Select Server Authentication Method>

Functions	To set the authentication system when conducting LDAP server authentication.		
Use	To use when changing the server authentication system.		
	Use Set Value : It conducts authentication with the setting value set by [LDAP Server Registration].		
	Use User Authentication ID and Password		
	: It conducts authentication with the registration data for the copier's user authentication.		
	Dynamic Authentication : It conducts authentication by dynamic authentication.		
Setting/	The default setting is Use Set Value.		
Procedure	"Use Set Value" Use User Authentication ID and Password Nprinter/Rprinter		

<Referral Setting>

Functions	To set whether or not to use the referral setting.		
Use	To use when tracing the server with referral at the time of LDAP connection.		
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	

<Login Name>

	NOTE The setting is not available when authentication method is set to anonymous.		
Setting/ Procedure	Touch [Login Name]. Enter the logon name (up to 255 characters) on the on-screen keyboard, and touch [OK].		
Use	To set the login name to connect to LDAP server.		
Functions	To set the login name to connect to LDAP server.		

<Password>

Functions	To set the password for connecting to LDAP server.
Use	To set the password for connecting to LDAP server.
Setting/ Procedure	 Touch [Password]. Enter the password (up to 63 characters) on the on-screen keyboard, and touch [OK].
	NOTE The setting is not available when authentication method is set to anonymous.

<Domain Name>

Functions	To set the domain name for connecting to LDAP server.	
Use	To set the domain name for connecting to LDAP server.	
Setting/ Procedure	 Touch [Domain Name]. Enter the domain name (up to 64 characters) on the on-screen keyboard, and touch [OK]. 	

(3) Default LDAP Server Setting

Functions	To set the server to be used as the default when searching LDAP.
Use	To set the server to be used as the deladit when searching LDAF.
Setting/	1. Touch [Default LDAP Server Setting].
Procedure	2. Select the optional server.

G. E-mail Settings

 It will not be displayed when the following setting shows that authentication device is mounted.

 $[Service\ Mode] \rightarrow [Billing\ Setting] \rightarrow [Management\ Function\ Choice]$

(1) E-mail TX (SMTP)

<E-mail TX (SMTP)>

Functions	To set whether to enable or disable the e-mail transmission setting.		
Use	To disable the e-mail transmission setting.		
Setting/ Procedure	The default setting is ON.		
	"ON"	OFF	

<Scan to E-mail>

Functions	To set whether or not to transfer scanned data by e-mail.		
Use	To use when not transferring scanned data by e-mail.		
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	

<Status Notification>

Functions	To set whether or not to inform the status by e-mail.		
Use	To use when not informing the status by e-mail.		
Setting/ Procedure	The default setting is ON.		
riocedure	"ON"	OFF	

<Total Counter Notification>

Functions	To set whether or not to inform the total counter by e-mail.		
Use	To use when not informing the total counter by e-mail.		
Setting/ Procedure	The default setting is ON.		
Procedure	"ON"	OFF	

<SMTP Server Address>

Functions	To set the SMTP server address.	
Use	To enter the SMTP server address.	
Setting/ Procedure	Touch [Host Address]. Select [Input Host Name], [IPv4 Address Input] or [IPv6 Address Input], and enter the server address.	

<Binary Division>

Functions	To set whether to carry out binary division for data to be transmitted.	
Use	Not to carry out binary division for data to be transmitted.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

<Divided Mail Size>

Functions	 To set the dividing size when carrying out the binary division for data to be transmit- ted.
Use	To change the dividing size of the data.
Setting/ Procedure	Press the Clear key. Enter the dividing mail size between 100 and 15000 (in 100 increments) using the 10-key pad.

<Connection Timeout>

Functions	To set the timeout period for connection in transmitting e-mail to SMTP server.	
Use	To change the timeout period for connection in transmitting e-mail to SMTP server.	
g/	 Select the timeout period using [+] / [-] keys. The default setting is 60 sec. 	
	"60 sec." (30 to 300, in 30 sec. increments)	

<Server Capacity>

Functions	To set the Max. capacity per mail which SMTP server can receive.	
Use	To change the Max. capacity per mail which SMTP server can receive.	
Setting/ Procedure	The default setting is No Limit.	
Frocedure	"No Limit" (1 to 100)	

<SSL Setting>

Functions	To set whether or not to use SSL when sending an e-mail.			
Use	To use when sending an e-mail using SSL.			
Setting/ • The default setting is OFF.				
Procedure	SMTP over SSL	Start TLS	"OFF"	

<Port No.>

Functions	To set the port number for transmission with SMTP server.	
Use	To enter the port number for transmission with SMTP server.	
	1. Touch [Input]. 2. Press the Clear key. 3. Enter the port number between 1 and 65535 using the 10-key pad.	

<Port Number (SSL)>

Functions	To set the port number when using SSL.
Use	To use for entering the port number when using SSL.
Setting/	1. Touch [Input].
Procedure	2. Touch the Clear key.
	3. Enter the port number (SSL) between 1 and 65535 using the 10-key pad.

<Detail Settings: SMTP Authentication>

Functions	To set whether or not to enable SMTP authentication.	
Use	To use when conducting SMTP authentication.	
Setting/	The default setting is OFF.	
Procedure ON "OFF"		"OFF"
	When set to "ON", enter the [User ID], [Password] and [Domain Name].	

<Detail Settings: POP Before SMTP Authentication>

Functions	To set whether or not to enable the POP Before SMTP authentication.	
Use	To use when conducting POP Before SMTP authentication.	
Setting/ Procedure	The default setting is OFF.	
Procedure	ON	"OFF"

<Detail Settings: POP Before SMTP Time>

Functions	To set the time necessary for POP Before SMTP authentication.
Use	To change the time necessary for POP Before SMTP authentication.
Procedure	 Touch [Input]. Press the Clear key. Enter the time for POP Before SMTP between 0 and 60 using the 10-key pad.

(2) E-mail RX (POP)

<E-mail RX (POP)>

Functions	To set whether to enable or disable the e-mail reception setting.	
Use	To disable the e-mail reception setting.	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

<POP Server Address>

Functions	To set the POP server address.
Use	To enter the POP server address.
Setting/ Procedure	Touch [Host Address]. Select [Input Host Name], [IPv4 Address Input] or [IPv6 Address Input], and enter the server address.

<Connection Timeout>

Functions	To set the timeout period for connection in receiving e-mail to POP server.
Use	To set the timeout period of connection in receiving e-mail to POP server.
Setting/ Procedure	Select the timeout period of connection using [-]/[+] keys.

<SSL Setting>

Functions	To set whether or not to use SSL when receiving an e-mail.		
Use	To use when receiving an e-mail which	used SSL.	
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	

<Port No.>

Functions	To set the port No. for transmitting with POP server.
Use	To enter the port No. for transmitting with POP server.
Setting/	1. Touch [Input].
Procedure	2. Touch the Clear key.
	3. Enter the port No. between 1 and 65535 using the 10-key pad.

<Port Number (SSL)>

Functions	To set the port number when using SSL.
Use	To enter the port number when using SSL.
	Touch [Input]. Touch the Clear key. Enter the port number (SSL) between 1 and 65535 using the 10-key pad.

<Login Name>

Functions	To enter a login name used for POP server authentication.
Use	
Setting/ Procedure	1. Touch [Login Name]. 2. Enter a login name.

<Password>

Functions	To enter a login name used for POP server authentication.
Use	
Setting/	1. Touch [Password].
Procedure	2. Enter a password.

<APOP Authentication>

Functions	To set whether to use APOP authentication.	
Use	To use APOP authentication.	
	The default setting is OFF.	
Procedure	ON	"OFF"

<Check for New Messages>

Functions	To set whether to automatically check a POP server for new messages.	
Use	To set whether to automatically check a FOF server for new messages.	
Setting/	The default setting is Yes.	
Procedure	"Yes" No	

<Polling Interval>

Functions	To set a polling interval at which a POP server is checked for new messages.
Use	• 10 Set a politing interval at which a FOF Server is checked for new messages.
Setting/ Procedure	The default setting is 15 minutes.
Flocedule	1 to 60 minutes

(3) S/MIME Communication Settings

Functions Use	 To set whether to activate S/MINE comm transmission. 	unication that provides encrypted E-mail
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

<Digital Signature>

Functions	Set whether to add a digital signature to S/MIME messages.	
Use		
Setting/	The default setting is Do not add signature.	
Procedure	"Do not add signature" Always add signature Select when sending	

<E-mail Text Encryption Method>

Functions	To select an encryption method used for S/MIME E-mail text.	
Use	To select an encryption method used for Symme E-mail text.	
Setting/ Procedure	The default setting is 3DES.	
Procedure	RC2-40 RC2-64 RC2-128 DES "3DES" AES-128 AES-192 AES-256	

<Print S/MIME Information>

Functions	To select whether to print S/MIME information when sending and receiving E-mail.	
Use	- To select whether to print 5/Minist information when sending and receiving E-mail.	
Setting/	The default setting is No.	
Procedure	Yes "No"	

<Automatically Obtain Certificates>

Functions	To set whether to automatically acquire a	certificate when sending or receiving E-
Use	mail.	
Setting/	The default setting is No.	
Procedure	Yes	"No"

H. SNMP Setting

(1) SNMP Setting

Functions	To set whether to use SNMP (Sim To set the SNMP version to be use	ple Network Management Protocol) or not. ed.
Use	Not to use SNMP.To readout management informati	on base and to enter community name for writing.
Setting/ Procedure	The default setting is ON. "ON" To individually set whether or not to SNMP v1 (IPX). The default setting is ON.	OFF o use SNMP v1/v2c (IP), SNMP v3 (IP), and
	"ON"	OFF

(2) UDP Port Number

Functions	To set the UDP standby port number which is used for SNMP (IP).
Use	
U	1. Touch the Clear key. 2. Enter the port number between 1 and 65535 using the 10-key pad.

(3) SNMP v1/v2c Settings

 To use when changing write setting. To use when entering the community name for reading the Management Information Base (MIB) and writing to it.
D 10 3 N 0 W
<read community="" name="" settings=""> • Enter a Read community name. <write setting=""> • The default setting is Enable.</write></read>
"Enable" Disable
NOTE • [Enable] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [Enhanced Security Mode] <write community="" name="" settings=""> • Enter a Write community name.</write>

(4) SNMP v3 Settings

<Context Name Settings>

Functions	Set the context name which is used for SNMP v3.
Use	
Setting/ Procedure	Touch [Name]. Enter the context name (up to 64 characters) on the on-screen keyboard, and touch [OK].

<Discovery User Permissions>

Functions	To set whether or not to enable the discover	ery authority user which is used for SNMP
Use	v3.	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

<Discovery User Name Settings>

Functions	To set the name of the discovery authority Users which is used for SNMP v3.
Use	
Setting/ Procedure	Touch [Discovery User Name]. Enter the discovery user name (up to 32 characters) on the on-screen keyboard, and touch [OK].
	NOTE The user name same with the read user name or the write user name cannot be set.

<Read User Name Settings>

Functions	To set the read-only user name used for SNMP v3.
Use	
Setting/ Procedure	Touch [Read User Name]. Enter the read user name (up to 32 characters) on the on-screen keyboard, and touch [OK].
	NOTE The user Name same with the discovery user name cannot be used.

<Security Level>

Functions	To set the security level of the read-only user used for SNMP v3.		
Use	To use when changing the security level of the read-only user.		
	OFF	 No authentication will buser accesses. 	e conducted when the read-only
	auth-password : Conducts authentication only for the authentication password when the read-only user accesses.		
	auth-Password/privpassword		
			n by authentication password and read-only User accesses.
Setting/	The default setting is	s auth-password/privpasswo	ord.
Procedure	OFF	auth-password	"auth-password/privpassword"

<Password Setting>

	To set the Authentication password for the read-only User which is used for SNMP
Use	v3.
Setting/	Select a type of password.
Procedure	Enter the password (up to 32 characters) on the on-screen keyboard, and touch [OK].

<Write User Name Settings>

	NOTE The user name same with the discovery use name cannot be used.	
Setting/ Procedure	Touch [Write User Name]. Enter the write user name (up to 32 characters) on the on-screen keyboard, and touch [OK].	
Use	10 Set the name of the reading/whiting authority user which is used for Sixing vs.	
Functions	To set the name of the reading/writing authority user which is used for SNMP v3.	

<Security Level>

Functions	To set the security level for the reading/writing authority user which is used for SNMP v3.		
Use	To use for changing	the security level of the re	ading/writing authority user.
	OFF	: Authentication will no authority user access	t be conducted when reading/writing ses.
	auth-password	: Conducts authentication only with authentication password when reading/writing authority user accesses.	
	auth-password/privpassword		
			ion by authentication password and en reading/writing authority user
Setting/	The default setting i	s auth-password/privpassv	word.
Procedure	OFF	auth-password	"auth-password/privpassword"
	"ON."	-	when the following setting is set to $ngs] o [Enhanced Security Mode]$

I. AppleTalk Settings

 It will not be displayed when the following setting shows that authentication device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

(1) AppleTalk Settings

Functions	To set whether to enable or disable the AppleTalk setting.	
Use	To use AppleTalk setting.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(2) Printer Name

Functions	To set the printer name displayed on the AppleTalk network.	
Use	To set the printer name displayed on the AppleTalk network.	
Setting/ Procedure	1. Touch [Printer Name]. 2. Enter the printer name (up to 31 characters) on the on-screen keyboard, and touch [OK].	

(3) Zone Name

Functions	To set the zone name connected with AppleTalk network.	
Use	To set the zone name connected with AppleTalk network.	
	Touch [Zone Name]. Enter the zone name (up to 31 characters) on the on-screen keyboard, and touch [OK].	

(4) Current Zone

Functions	To display the current zone on AppleTalk network.
Use	To check the current zone on the AppleTalk network.

J. Bonjour Setting

(1) Bonjour Setting

Functions	To set whether or not to use the Bonjour setting.	
Use	To use when operating under the Bonjour service environment.	
Setting/ Procedure	The default setting is ON.	
riocedure	"ON"	OFF

(2) Bonjour Name

Functions	To set the bonjour name.	
Use	To set the name for identifying over the bonjour network.	
	Touch [Bonjour Name]. Enter the Bonjour name (up to 64 characters) on the on-screen keyboard, and touch [OK].	

K. TCP Socket Settings

(1) TCP Socket

Functions	 To set whether or not to set the TCP socket. To set the port number for TCP socket transmission. 	
Use	To use when using the application, etc. for TCP socket transmission. To be used when entering the port number used for TCP socket transmission.	
Setting/ Procedure	The default setting is ON. "ON" OFF	
	<port number=""> 1. Touch the Clear key. 2. Enter the port number between 1 and 65535 using the 10-key pad.</port>	

(2) TCP Socket (ASCII Mode)

Functions	To set whether or not to set the TCP socket for ASCII mode. To set the port number which is used for TCP socket transmission by ASCII mode.	
Use	To use when using the application, etc. for TCP socket transmission by ASCII mode. To use when entering the port number for TCP socket transmission by ASCII mode.	
Setting/ Procedure	The default setting is ON. "ON"	OFF
	<port (ascii="" mode)="" number=""> 1. Touch the Clear key. 2. Enter the port number between 1</port>	and 65535 using the 10-key pad.

L. Network Fax Setting

(1) Network Fax Function Settings

 It will not be displayed on the screen when all items are set to "OFF" in the following settings.

[Service Mode] → [System 2] → [Network Fax Settings]

<IP Address Fax Function>

Setting will be available only when [IP Address Fax] is set to "ON" in the following settings.

[Service Mode] \rightarrow [System 2] \rightarrow [Network Fax Settings]

Functions	To set whether or not to use IP address fax function.	
Use	To use IP address fax function.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

<Internet Fax Function>

Setting will be available only when [Internet Fax] is set to "ON" in the following settings.
 [Service Mode] → [System 2] → [Network Fax Settings]

Functions	To set whether or not to use Internet fax function.	
Use	To use Internet fax function.	
	The default setting is OFF.	
Procedure	ON	"OFF"

(2) SMTP TX Settings

Functions	To set SMTP TX when network fax function is being used.
Use	To set SMTP TX port number and connecting time out period when network fax function is being used.
Setting/ Procedure	<port number=""> 1. Touch [Input]. 2. Enter the port number between 1 and 65535 using the 10-key pad. <connection timeout=""> 1. Touch [Input]. 2. Enter the connection timeout time between 5 and 1000 (sec.) using the 10-key pad.</connection></port>

(3) SMTP RX Settings

Functions	To set SMTP RX when network fax function is being used.		
Use	To use SMTP RX function 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.		
Setting/	<smtp rx=""></smtp>		
Procedure	The default setting is ON.		
	"ON" OFF		
	 /Port No.> 1. Touch [Input]. 2. Enter the port number between 1 and 65535 using the 10-key pad.		
	2. Effet the port number between 1 and 00000 using the 10-key pad.		
	<connection timeout=""></connection>		
	1. Touch [Input].	1. Touch [Input].	
	2. Enter the connection timeout time between 5 and 1000 (sec.) using the	10-key pad.	

(1) WebDAV Client Settings

• This is displayed only when the function enhanced version 1 or later firmware is installed.

<WebDAV Client Setting>

Functions	To set whether to use WebDAV Client Settings.	
Use	To set whether to use WebbAV Cheft Settings.	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

<WebDAV Client Settings: Proxy Server Address>

Functions	To set the proxy server address.
Use	To enter the proxy server address.
	 Touch [Host Address]. Select [Input Host Name], [IPv4 Address Input], or [IPv6 Address Input] and enter a host address.

<WebDAV Client Settings: Proxy Server Port Number>

Functions	To set the proxy server port number.
Use	To enter the proxy server port number.
_	 Press the Clear key. Enter the proxy server port number between 1 and 65535 using the 10-key pad.

<WebDAV Client Settings: User Name>

Functions Use	To set the user name for WebDAV authentication.
_	Touch [User Name]. Enter the user name on the on-screen keyboard, and touch [OK].

<WebDAV Client Settings: Password>

Functions Use	To set the password for WebDAV authentication.
Setting/	1. Touch [Password].
Procedure	2. Enter the password on the on-screen keyboard, and touch [OK].

< WebDAV Client Settings: Connection Timeout>

Functions	To set the timeout period for connecting to WebDAV server.
Use	To change the timeout period for connecting.
Setting/ Procedure	1. Touch [Input]. 2. Press the Clear key. 3. Enter the connecting timeout period between 5 and 300 using the 10-key pad.

2 (2) WebDAV Server Settings

• This is displayed only when the function enhanced version 2 or later firmware is installed.

<WebDAV Server Setting>

Functions	To set whether to use WebDAV Server Settings.	
Use	To set whether to use webbay server settings.	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

<WebDAV Server Settings: SSL Setting>

Functions	To set whether to use SSL/TSL for communications when using the machine as WebDAV server.		
Use			
	The default setting is Non-SSL Only.		
Procedure	"Non-SSL Only" SSL Only SSL/Non-SS	L	

< WebDAV Server Settings: Password Setting

Functions	To set a password to access WebDAV server.
Use	
Setting/ Procedure	Touch [Password Setting]. Enter a password with the keyboard on the screen, and touch [OK]. Touching [Initial Password] can restore the default password setting. (Default password: sysadm)

N. Web Service Settings

(1) Web Service Common Settings

<Web Service Common Settings: Friendly Name>

Functions	To define a friendly name that is used when printing a job with Web Service function.
Use	• To define a mendiy name that is used when printing a job with web service function
	Touch [Friendly Name]. Enter the friendly name (up to 62 characters) on the on-screen keyboard, and touch IOKI.

<Web Service Common Settings: SSL Setting>

Functions	To set whether to use SSL when using	na Wah Sarvica function	
Use To set whether to use SSE when		ng web Service function.	
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	

(2) Printer Settings

<Printer Settings>

Functions	To set whether to use this printer as a WS printer.	
Use	10 Set whether to use this printer as a w5 printer.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

<Printer Settings: Printer Name>

Functions	To set the WS printer name.
Use	• 10 Set the WS printer name.
Setting/ Procedure	Touch [Printer Name]. Enter the friendly name (up to 63 characters) on the on-screen keyboard, and touch [OK].

<Printer Settings: Printer Location>

Functions	To set the WS printer location.
Use	To set the WS printer location.
Setting/ Procedure	Touch [Printer Location]. Enter the friendly name (up to 63 characters) on the on-screen keyboard, and touch [OK].

<Printer Settings: Printer Information>

Functions	To set the WS printer information.
Use	
Setting/ Procedure	Touch [Printer Information]. Enter the friendly name (up to 63 characters) on the on-screen keyboard, and touch [OK].

(3) Scanner Settings

<Scanner Settings>

Functions	To set whether to use this machine as a WS scanner.	
Use	- 10 Set whether to use this machine as a wo scanner.	
Setting/	The default setting is ON.	
Procedure	"ON" OFF	

<Scanner Settings: Scanner Name>

Functions	To set the WS scanner name.	
Use	10 Set the WO Scaliner Hame.	
Setting/ Procedure	Touch [Scanner Name]. Enter the friendly name (up to 63 characters) on the on-screen keyboard, and touch [OK].	

<Scanner Settings: Scanner Location>

Functions	To set the WS scanner location.
Use	10 Set the VVO Scattlet location.
Setting/ Procedure	Touch [Scanner Location]. Enter the friendly name (up to 63 characters) on the on-screen keyboard, and touch [OK].

<Scanner Settings: Scanner Information>

Functions	To set the WS scanner information.
Use	• 10 Set the WS scanner information.
Setting/	1. Touch [Scanner Information].
Procedure	Enter the friendly name (up to 63 characters) on the on-screen keyboard, and touch [OK].

<Scanner Settings: Connection Timeout>

Functions	To set the timeout period for connection of WS scanner.
Use	To set the unleadt period for connection of WS scanner.
Setting/	1. Press the Clear key.
Procedure	2. Enter the connecting timeout period between 30 and 300 using the 10-key pad.

O. Detail Settings (1) Device Setting

<MAC Address>

Functions	To display the MAC address of the machine.
Use	To check the MAC address of the machine.
Setting/ Procedure	The address cannot be changed.

<Network Speed>

Functions	To set the network speed.	
Use	To set the specific network speed.	
Setting/ Procedure	The default setting is Auto. "Auto" 10Mbps Full Duplex 10Mbps Half Duplex 100Mbps Full Duplex 100Mbps Full Duplex 100Mbps Full Duplex	
	NOTE When Network speed setting is changed, turn off the main power switch and turn it on again more than 10 seconds after.	

tment / Settina

(2) Time Adjustment Setting

Functions	To set whether to enable or disable the NTP setting.	
Use	To synchronize the time between the	e server and the client.
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

<NTP Server Setting>

Functions	To set the NTP server address.
Use	To enter the NTP server address.
Setting/ Procedure	 < Host Address> 1. Touch [Host Address]. 2. Select [IP Address Input], and enter the IP address. 3. Select [Host name Input], and enter the host name. < Port Number> 1. Touch the Clear key. 2. Enter the port number between 1 and 65535 using the 10-key pad.

(3) Status Notification Setting

 It will not be displayed when the following setting shows that authentication device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

 To notify status, notifications both by E-mail and by SNMP TRAP function can be set. For E-mail, up to ten IP addresses and one IPX address can be set. For SNMP TRAP function, up to five IP addresses and one IPX can be set.

<Register Notification Address (IP Address)>

Functions	To set IP addresses to which machine status notifications are sent.
Use	Use this function when setting IP addresses to which machine status notifications are sent. Up to 5 addresses can be registered.
Setting/ Procedure	 From IP address 1 to 5, select an IP address where settings are made. Touch [Host Address]. Select [Input Host], [IPv4 Address Input] or [IPv6 Address Input] and enter a host address. Touch the Clear key and enter a port number within the range of 1 to 65535 using the 10-key pad. Touch [Community Name] and enter a community name. Touch [Notification Item] and set the items to be notified to [ON]. Touch [OK] and finish the settings.

<Register Notification Address (IPX Address)>

Functions	To set IPX addresses to which machine status notifications are sent.
Use	Use this function when setting IPX addresses to which machine status notifications are sent.
Setting/ Procedure	1. Touch [IPX Address]. 2. Touch [Network Address] or [Node Address] and enter an address. 3. Touch [Community Name] and enter a community name. 4. Touch [Notification Item] and set the items to be notified to [ON]. 5. Touch [OK] and finish the settings.

<Register Notification Address (E-mail Address)>

Functions	To set E-mail addresses to which machine status notifications are sent.
Use	Use this function when setting E-mail addresses to which machine status notifications are sent. Up to 10 addresses can be registered.
Setting/ Procedure	 Touch [Forward]. From E-mail addresses 1 to 10, select an E-mail address where settings are made. Touch [Edit E-mail Address]. Enter an E-mail address (up to 320 one-byte characters) using the keyboard on the screen and touch [OK]. Touch [Notification Item] and set the items to be notified to [ON]. Touch [OK] and finish the settings.

(4) Total Counter Notification Settings

<Notification Schedule Setting>

Functions	To set the schedule for informing the total counter value.
Use	To use when informing the total counter value by e-mail regularly. Two different schedules can be set for reporting.
Setting/ Procedure	 Touch [Schedule 1] or [Schedule 2]. Select the reporting cycle from [Daily], [Weekly] or [Monthly]. When selecting [Daily] for the reporting cycle, set the Interval of day(s). When selecting [Weekly] for the reporting cycle, set the Interval of week(s) and day of the Week. When selecting [Monthly] for the reporting cycle, set the Interval of month(s) and date of the month.

<Notification Address Setting>

Functions Use	 To set the e-mail address for reporting the total counter value. Up to three e-mail addresses can be set. It can be selected whether to apply the schedule of the [Set Schedule] to each address.
Setting/ Procedure	 Touch [Address 1], [Address 2] or [Address 3]. Touch [E-mail Address Edit]. Enter the e-mail address (up to 320 one-byte characters) on the on-screen keyboard, and touch [OK]. Touch [Set Schedule]. Select ON/OFF for each schedule.

<Model Name>

Functions	To set the device name for identifying the copier when reporting the total counter.
Use	- 10 Set the device fiame for identifying the copier when reporting the total counter.
	1. Touch [Model Name].
Procedure	Enter the model name (up to 20 one-byte characters) on the on-screen keyboard, and touch [OK].

<Send Now>

Functions	To transfer the current total counter value to the set address.
Use	to transfer the current total counter value to the set address.

(5) PING Confirmation

Functions	To set the TCP/IP network diagnosis by PING.
Use	To check the condition of TCP/IP network.
Procedure	Touch [Host Address] for PING transmission. Select [Input Host Name], [IPv4 Address Input], or [IPv6 Address Input] and enter a host address. Touch [Check Connection] key to check the connection.

(6) SLP Setting

Functions	To set whether to use SLP or not.	
Use	Device search will be available with TWAIN by setting SLP enable.	
Setting/	The default setting is Enable.	
Procedure	"Enable" Disable	

(7) LPD Setting

Functions	To set whether to use LPD during printing or not.	
Use	• To set whether to use LFD during printing of not.	
Setting/ • The default setting is Enable.		
Procedure	"Enable"	Disable

(8) Prefix/Suffix Setting

<ON/OFF Setting>

Functions	 To set whether to add prefix or suffix to the address when calling or entering an address. 	
Use	To add prefix or suffix to the address.	
Setting/ Procedure	The default setting is OFF.	
Procedure	ON "OFF"	

<Pre><Prefix/Suffix Setting>

Functions	 To register or change the prefix or suffix. Eight types of prefix and suffix can be added. Prefix: Letters added to the top of the text (header part) Suffix: Letters added to the bottom of the text (footer part) 	
Use	To register or change the address displayed for prefix or suffix.	
Setting/ Procedure	 Available number to be registered as prefix is up to 20 characters. Available number to be registered as suffix is up to 64 characters. 	

(9) Action for Invalid Certificate

Functions	To set how to process the job when SSL certificate becomes invalid.	
Use		
Setting/	The default setting is Continue.	
Procedure	"Continue"	Delete the Job

8.6.6 Copier Settings

A. Auto Zoom (Platen)

Functions	To set whether to function the auto zoom when the tray is selected with document set on the original glass (excepting at automatic paper selection mode.)	
Use	To function the auto zoom when the feed tray is selected.	
Setting/	The default setting is OFF.	
Procedure	ON "OFF"	

B. Auto Zoom (ADF)

Functions	To set whether to function the auto zoom when the feed tray is selected with document set on the ADF (excepting at automatic paper selection mode.)	
Use	To function the auto zoom when the tray is selected.	
Setting/	The default setting is ON.	
Procedure	"ON" OFF	

C. Specify Default Tray when APS OFF

Functions	To set the tray to be used when APS is cancelled.	
Use	To set the tray (tray 1) for the default setting when cancelling APS.	
	The default setting is Tray Before APS ON.	
Procedure	"Tray Before APS ON"	Default Tray

D. Select Tray for Insert Sheet

Functions Use	To select the initial value for the tray for the cover sheet paper.
Setting/ Procedure	The default setting is Tray 2.

E. Print Jobs During Copy Operation

Functions	To set whether to receive printing jobs for print data or fax data during copy operation.	
Use	To restrict receiving printing jobs for print data or fax data during copy operation. Accept : Receives the print data or fax data and print Receive Only : Print data or fax data will be printed when the copy operation is finished	
Setting/ Procedure	The default setting is Accept. "Accept" Receive Only	

F. Automatic Image Rotation

Functions	 Select whether or not the image is automatically rotated when the document and copy paper orientations are different. 	
Use	When Auto Paper / Auto Zoom / Reduce is set: If the "Auto" Paper setting, "A setting or a Reduce setting is the image is automatically rothe orientation of the paper.	
	When Auto Paper / Auto Zoom is set	: If the "Auto" Paper setting or "Auto" Zoom setting is selected, the image is automatically rotated to fit the orienta- tion of the paper.
	When Auto Zoom / Reduce is set	: If the "Auto" Zoom setting or a Reduce setting is selected, the image is auto- matically rotated to fit the orientation of the paper.
	When Auto Zoom is set	: If the "Auto" Zoom setting is selected, the image is automatically rotated to fit the orientation of the paper.
Setting/	The default setting is When Auto Paper / Auto Zoom is set.	
Procedure	When Auto Paper / Auto Zoom / Reduce When Auto Zoom / Reduce is set	is set "When Auto Paper / Auto Zoom is set" When Auto Zoom is set

8.6.7 Printer Settings

A. USB Timeout

Functions	To set a period of time that elapses before input and output timeouts of communication are activated.	
Use	 To set a period of time that elapses before input and output timeouts of communica- tion are activated. 	
Setting/	The default setting is 60 seconds for input and output timeouts.	
Procedure	"60 seconds" (10 to 1000 seconds)	

B. Network Timeout

Functions	To set a period of time that elapses before input and output timeouts of communication are activated.
Use	To set a longer time period when timeout happens under some network statuses.
Setting/	The default setting is 60 seconds for input and output timeouts.
Procedure	"60 seconds" (10 to 1000 seconds)

C. Print XPS Errors

Functions	To set whether to print error information when an error occurs while printing a X	(PS
Use	file.	
Setting/	The default setting is Yes.	
Procedure	"Yes" No	

8.6.8 Fax Settings

• Settings are available only when the optional fax kit (FK-502) is mounted.

A. Header Information

Functions	To register the name of the sender and fax ID which will be printed when transmitting fax.
Use	To register or change the name of the sender and fax ID.
Setting/ Procedure	 Touch [Sender] and enter the name of the sender (up to 30 characters) on the on-screen keyboard. Enter Sender Fax No. (up to 20 characters) using the 10-key pad and [+], [Space] displayed on the screen.

B. Header/Footer Position

(1) Header Position

	Setting/ Procedure		,	OFF
, ,	Procedure	Inside Body Text "Outside Body Text" OFF		
	U	The default setting is Outside	de Body Text.	

(2) Print Receiver's Name

• It will not be displayed on the screen when [Fax Target] is set to "US" or "HK" in the following settings.

[Service Mode] \rightarrow [System 1] \rightarrow [Marketing Area]

Functions	To set whether to print the information of TX destination (Registered name or Fax No.) when transmitting fax.	
Use	To print information of TX destination. (Registered name or Fax No.)	
Setting/	The default setting is OFF.	
Procedure	ON "OFF"	

(3) Footer Position

Functions	To set whether to print the footer when transmitting fax.	
Use	To print the footer when transmitting fax.	
Setting/	The default setting is OFF.	
Procedure	Inside Body Text Outside Body Text "OFF"	
	NOTE • [Outside Body Text] cannot be selected for the color mode of Internet Fax/IP Address Fax.	

C. Line Parameter Setting

(1) Dialing Method

Functions	To set the dialing method.	
Use	To change the dialing method.The displays are different depend	ng on the country.
Setting/ Procedure	The default setting is PB. "PB"	10 pps
	NOTE • The displays are different depe	nding on the country.

(2) Receive Mode

 It will not be displayed when the following setting shows that management device 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set the fax reception mode.	
Use	To change to manual reception when using connected to the external telephone.	ng the remote reception function, etc. when
Setting/	The default setting is Auto RX.	
Procedure	"Auto RX"	Manual RX

(3) Number of RX Call Rings

Functions	To set the number of times to receive call rings.	
Use	 To change the number of times of the fake ringback tone after it starts calling until it starts receiving. 	
Setting/ Procedure	The default setting is 2 X. "2 X" (0 to 15)	

(4) Number of Redials

Functions	To set the number of redials.	
Use • To change the number of times to redial when the line is busy, etc. • The line which can be set up is different depending on the country.		
Setting/ Procedure	The default setting is 3 X. "3 X" (0 to 7)	
	NOTE • The line which can be set up is different depending on the country.	

(5) Redial Interval

	To set the interval for redialing.	
Use • To	To change the interval for redialing.	
Setting/ Procedure	The default setting is 3 min. "3 min" (1 to 15)	

(6) Line Monitor Sound

Functions	To set whether to output the line monitor sound from the speaker or not.
Use	• 10 Set whether to output the line monitor sound from the speaker of not.
Setting/	The default setting is ON.
Procedure	"ON" OFF

(7) Line Monitor Sound Vol.

Functions	To set the volume of the speaker.
Use	To change the volume of the speaker.
Setting/ Procedure	Change the volume by touching the [Lower] or [Higher].

D. TX/RX Settings

(1) Duplex Print (RX)

• It will not be displayed when [Print Separate Fax Pages] is set to "ON."

Functions	To set whether to carry out the duplex print for the received original when receiving fax.	
Use	To carry out the duplex print for the re	ceived original.
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(2) Letter/Ledger over A4/A3

Functions	To set weather to use the inch paper priority when receiving fax.		
Use	To use the inch paper priority when receiving fax.		
Setting/ Procedure	ON NOTE	OFF	
	The default setting is different depending on the country.		

(3) Print Paper Selection

Functions	To set the priority for paper feed tray when receiving fax.			
Use	Auto select : Selected au Priority Size : Printed on s printed on tl	To change the priority for paper feed tray when receiving fax. Auto select : Selected automatically Priority Size : Printed on size with priority. When the size is not set, it will be printed on the closest size. Fixed Size : Printed only on the fixed size.		
Setting/ Procedure	The default setting is Auto Select. "Auto Select" Fixed Size Priority Size			

(4) Print Paper Size

Functions	To set the paper size to print the text when receiving fax.		
Use	 To change the paper size for printing the received text. The displays are different depending on the country. To make the setting of [Print Paper Size] enable, set [Tray Selection for RX Print] to [Auto]. 		
Setting/	The initial setting is A4.		
Procedure	A3	B4	"A4"
NOTE • The displays are different depending on the country.			

(5) Incorrect User Box No. Entry

Functions	To set the operation when the unregistered box number is entered.			
Use	To change the operation when the unregistered box number is entered.			
Setting/ Procedure	The default setting	is Print.		
Procedure	"Print"	Show Error Message	Auto Create User Box	

(6) Tray Selection for RX Print

Functions	To select the	To select the paper tray to be fixed when printing the received text.			
Use	To fix the pap	To fix the paper tray when printing the received text.			
Setting/ Procedure		The default setting is Auto. Items available for selection are different depending on the paper feed option mounted.			
	"Auto"	Tray 1	Tray 2	Tray 3	Tray 4

(7) Min. Reduction for RX Print

Functions	To set the print magnification for received text.
Use	To change the print magnification for received text.
Setting/ Procedure	The default setting is 96.
lilocedule	"96" (87 to 96, x1.0)

(8) Print Separate Fax Pages

• It will not be displayed when [Duplex print (RX)] is set to "ON."

Functions	To set whether to divide the original into pages when it is longer than the standard size.
Use	To divide the original into pages when it is longer than the standard size.
Setting/	The default setting is OFF.
Procedure	ON "OFF"

(9) File After Polling TX

Functions	To set whether to delete the original which polling transmission has been completed.		
Use	For not deleting the original which polling transmission has been completed.		
Setting/	The default setting is Delete.		
Procedure	"Delete"	Save	

(10) No. of Sets (RX)

Functions	To set the number of copies to be printed with the received document.
Use	To use when changing the number of copies to be printed with the received document.
Setting/ Procedure	The default setting is 1 set.
	1 to 10 set.

E. Function Settings

(1) Function ON/OFF Setting

<F-Code TX>

Functions	To set whether to use the F code transmission.		
Use	10 set whether to use the F code transmission.		
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	
	NOTE When the setting is changed, turn off the main power switch and turn it on again more than 10 seconds after.		

<Relay RX>

It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Relay]

Functions	To set whether to use the relay RX function.	
Use	To use the machine as the relay delivery station of	luring relay TX.
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

<Relay Printing>

It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Relay]

Functions	To set whether to use the relay print function.	
Use	3. When the delivery job is cance 4. When main power switch is tur 5. When delivery job is deleted in	ollowing case. etes appropriately. Iled halfway by turning OFF sub power switch. Iled due to redial over. ned OFF/ON during relay print error.
Setting/ Procedure	The default setting is OFF. ON	"OFF"

<Destination Check Display Function>

Functions	To set whether or not to display the list of specified addresses when sending the fax.	
Use	To use when displaying and checking the list of specified addresses when sending the fax.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

/2 <Confirm Address (TX)>

Functions	To set whether to use Confirm Address (the machine displays the screen where the user reenters the fax number for confirmation when the user faxes by entering the fax number directly with the keys).	
Use	To enable entering the fax number again to avoid faxing to a wrong recipient.	
Setting/ Procedure	The default setting is OFF.	
li locedule	ON "OFF"	

2 <Confirm Address (Register)>

Functions	 To set whether to use Confirm Address (the machine displays the screen where the user reenters the fax number for confirmation when the user faxes by entering the fax number directly with the keys). 	
Use	To enable entering the fax number again to avoid faxing to a wrong recipient.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(2) Memory RX Setting

- It will be displayed only when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Compulsory Memory RX]
- It will not be displayed when [PC-FAX RX Setting], [Forward TX Setting] or [TSI User Box Setting] is set to "ON."
- It will not be displayed when the following setting shows that vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set whether to use the forced memory RX function.
Use	 To store the received text in the hard disk without printing, and print it out when ordered.
Setting/ Procedure	 The default setting is NO. Enter the password (up to 8 digits) for printing when set to [ON].

(3) Closed Network RX

It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Closed area RX]

Functions	To set whether to use the closed network function.
Use	To receive data only from the device which password matches.
Setting/	The default setting is OFF.
Procedure	When set to [ON], enter the password (up to 4 digits) to be used.

(4) Forward TX Setting

- It will not be displayed when [PC-FAX RX Setting], [Memory RX] or [TSI User Box Setting] is set to "ON."
- It will not be displayed when the following setting shows that Vendor or Authentication Device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set whether to use the forward fax function.	
Use	To forward the received text to the receiver which has been specified. Forward & Print : Forward the received text, and print all out Forward & Print (If TX Fails) : Forward the received text, and prints out only when fails to be forwarded	
Setting/ Procedure	<forward setting="" tx=""> The default setting is No.When set to [Yes], set the address to forward to.</forward>	

(5) Incomplete TX Hold

- It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Re-Transmission]
- It will not be displayed when the following setting shows that Management Device 2 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set whether to use incomplete TX hold function.	
Use	To re-send the data failed to be sent after a given time.	
Setting/ Procedure	The default setting is No. Yes	"No"
	When set to Yes, specify the Incomplete TX	X Hold Time.

(6) PC-Fax RX Setting

It will not be displayed when [Forward TX Setting], [Memory RX] or [TSI User Box Setting] is set to "ON."

Functions	To set whether to use the PC-FAX reception function.	
Use	To store the received text file in the box in the hard disk.	
Setting/ Procedure	The default setting is Restrict. Allow "Restrict"	
	When Allow is selected, make the settings of Receiving user box destination, Prir ON/OFF, and Password check ON/OFF.	

(7) TSI User Box Setting

It will not be displayed when [Forward TX Setting], [Memory RX] or [PC-Fax RX Setting] is set to "ON."

Functions	 To set whether to use TSI distribution or not. To set setting method when there is no matched box at receiving. 	
Use	To use TSI distribution. To change setting method when there is no matched box at receiving. Automatically Print: To print the received data. Memory RX Use Box: To store the received data in the forced memory receiving box.	
Setting/ Procedure	<tsi box="" setting="" user=""> • The default setting is No.</tsi>	
	Yes	"No"
	Press [TSI User Box Registration] and register the distribution.	
	<non-matched box="" setting=""> • The default setting is Automatically Prince</non-matched>	nt.
	"Automatically Print"	Memory RX User Box

F. PBX Connection Setting

Functions	To set whether to use PBX connection setting or not.
Use	This will be used when the machine is connected to PBX line.
Setting/	The default setting is No.
Procedure	When set to [Yes], enter the external number between 0 and 9999.

G. Report Settings

(1) Activity Report

 It will not be displayed when the following setting shows that vendor or authentication device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set whether to print out the activity report or not, and also the timing for printing.		
Use	To print out the activit	To print out the activity report.	
Setting/ Procedure	The default setting is	ON.	
Procedure	"ON"	OF	FF .
	 When this setting is set to ON, make the setting of Output Setting. The default setting is Every 100 Comm. 		out Setting.
	Daily	"Every 100 Comm."	100/ Daily

(2) TX Result Report

Functions	To set whether to print out the TX report, and also the timing for printing.		
Use	To print out the TX report.		
	The default setting is If TX Fails.		
Procedure	ON	"If TX Fails"	OFF

(3) Sequential TX Report

Functions	To set whether to print out the sequential TX report or not.	
Use	To print out the sequential TX report.	
	The default setting is ON.	
Procedure	"ON" OFF	

(4) Timer Reservation TX Report

Functions	To set whether to print out the reservation TX or not.		
Use	To print out the reservation TX.		
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	

(5) Confidential RX Report

Functions	To set whether to print out the confidential RX report.		
Use	To print out the confidential RX report.		
Setting/	The default setting is ON.		
Procedure	"ON"	OFF	

(6) Bulletin TX Report

Functions	To set whether to print out the bulletin TX report or not.		
Use	To print out the bulletin TX report.		
Setting/ Procedure	The default setting is ON.		
Frocedure	"ON"	OFF	

(7) Relay TX Result Report

It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Relay]

Functions	To set whether to print out the Relay TX Result Report or not.	
Use	To print out the relay TX result report after the relay delivery is completed when the machine is used as the relay delivery station.	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

(8) Relay Request Report

It will be displayed when the following setting is set to "ON."
 [Service Mode] → [FAX] → [System] → [Display Setting] → [Relay]

Functions	To set whether to print out the Relay Request RX Report or not.	
Use	 To print out the Relay request RX report during relay request RX when the machine is used as the relay delivery station. 	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

(9) PC-Fax TX Error Report

Functions	To set whether to print out the PC-Fax TX Error Report or not.	
Use	To print out the PC-Fax error report when TX error occurs during PC-Fax TX.	
Setting/ Procedure	The default setting is OFF.	
Procedure	ON	"OFF"

(10) Broadcast Result Report

Functions	To set the format to output the broadcast result report.	
Use	To print out the broadcast result report All Destinations : Outputs all reports after transmitting to all addresses Each Destination: Outputs a report after each transmission	
Setting/ Procedure	The default setting is All Destinations. "All Destinations" Each Destination	

(11) TX Result Report Check

Functions	To set whether to display the TX result report screen.		
Use	To display the TX result report screen.		
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	

(12) Network Fax RX Error Report

 Settings will be available when either [IP Address Fax] or [Internet Fax] is set to "ON" in the following settings.

[Administrator Settings] \rightarrow [Network Setting] \rightarrow [Network Fax Setting] \rightarrow [Network Fax Function Settings]

Functions	To set whether to print RX error report when network fax function is being used.	
Use	To print the error report at unusual situation such as receiving the image data that cannot be processed.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(13) MDN Message

Settings will be available only when [Internet Fax] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Setting] → [Network Fax Function Settings]

Functions	To set whether to print message when receiving response message to MDN request when internet fax function is being used.	
Use		
Setting/	The default setting is ON	
Procedure	"ON"	OFF

(14) DSN Message

Settings will be available only when [Internet Fax] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Setting] → [Network Fax Function Settings]

Functions Use	To set whether to print message wher when network fax function is being us	receiving response message to DSN request ed.
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(15) Print E-mail Message Body

Settings will be available only when [Internet Fax] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Setting] → [Network Fax Setting] → [Network Fax Function Settings]

Functions	To set whether to print mail text received normally as the report when internet fax function is being used.	
Use	To print the received mail text when printing the received image data.	
Setting/ Procedure	The default setting is ON.	
Procedure	"ON" OFF	

H. Job Settings List

It will not be displayed when the following setting shows that Vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]
 (It will be displayed when the Key counter is mounted or when the following setting shows that switch No.33 is set to [01] at HEX assignment.

[Service Mode] → [System 2] → [Software Switch Setting])

Functions	The set value list of the fax set up into this machine can be printed.	
Use		
Procedure	 Touch [Administrator Settings] → [Fax Setting] → [Job Settings List]. Select the feed tray. Select the simplex or duplex print, and touch the Start key. 	

I. Multi Lines Settings

• It will be displayed only when the optional fax multi line (ML-501) is mounted.

(1) Line Parameter Setting

<Dialing Method>

Functions	To set the dial method for the expanded line.	
Use	To use when changing the dial method for the expanded line.	
Setting/	The default setting is PB.	
Procedure	"PB"	10 pps
	NOTE • The displays are different deper	iding on the country.

<Number of Rx Call Rings>

Functions	To set the number of RX call rings for the expanded line.	
Use	To change the number of artificial ringback tones with expanded line when receiving calls until it starts receiving operation.	
Setting/ Procedure	The default setting is 2 X. "2 X" (0 to 15)	

<Line Monitor Sound>

Functions Use	To set whether or not to output the line monitor sound of the expanded line from the speaker.	
Setting/	The default setting is ON.	
Procedure	"ON"	OFF

(2) Function Settings

<PC-FAX TX Setting>

• This setting does not appear when "RX Only" is selected for [Multi Line Settings].

Functions	To set the number of the line used for PC-FAX transmission.		
Use	To use when specifying the line to be used for PC-FAX transmission when using the expanded line.		
Setting/ Procedure	The default setting is No Set	election.	
	"No Selection"	Line 1	Line 2

(3) Multi Lines Setting

Functions	To set the system for using each line when using more than one line.		
Use	To use when setting the system for using each line when using more than one line.		
Setting/ Procedure	<multi line="" usage=""> When selecting [Normal], perform the transmission setting for Line 2. <line 2="" setting=""></line> The default setting is TX and RX. </multi>		
	"TX and RX"	RX Only	TX Only

(4) Sender Fax No.

Functions	To register the fax ID when using the additional line.	
Use	To register the fax ID (for additional line).	
Setting/ Procedure	Use 10-key pad or [+] / [space], enter the fax ID (up to 20 characters).	

J. Network Fax Settings

 It will be displayed only when either [IP Address Fax] or [Internet Fax] is set to "ON" in the following settings.

 $[Administrator\ Settings] \rightarrow [Network\ Settings] \rightarrow [Network\ Fax\ Settings] \rightarrow [Network\ Fax\ Settings]$

(1) Black Compression Level

It will be displayed only when either [IP Address Fax] or [Internet Fax] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Settings] → [Network Fax Function Settings]

Functions	To set black compression level at monochrome TX mode when network fax function is being used.		
Use	To change black compression level at monochrome TX mode.		
Setting/	The default setting is MH.		
Procedure	"MH" MR MMR		

(2) Internet Fax Self Rx Ability

It will be displayed only when [Internet Fax] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Settings] → [Network Fax Settings] → [Network Fax Function Settings]

Functions	 To set image data compression system, paper size and resolution, which can be received by the machine with internet fax. 				
Use	To limit the data according to the second seco	To limit the data acceptable with internet fax.			
Setting/ Procedure					
	Compression Type	Paper Size	Resolution		
	"MMR"	"A3"	Ultra Fine		
	"MR"	"B4"	Super Fine		
	"MH"	"A4"	Fine		
	_	_	Std.		
	,				

(3) I-Fax Advanced Settings

It will be displayed only when [Internet Fax] is set to "ON" in the following settings.
 [Administrator Settings] → [Network Settings] → [Network Fax Function Settings]

Functions	To set advanced functions of internet fax.			
Use	MDN Request	: To set whether to send sition Notification) requ through internet fax.	` ' '	
	DSN Request	: To set whether to send Notification) request we internet fax.	I DSN (Delivery Status hen transmitting through	
	MDN Response	: To set whether to responde by the other made through internet fax.		
	MDN/DSN Response Watch Time	the other machine who	o set the period to observe the response from ne other machine when sending MDN/DSN equest. In the case of time over, time out mes- age is notified.	
	Max Resolution	: To set maximum resolution for reading, TX/RX and record when internet fax function is being used.		
	NOTE			
	Only MDN Request will be sent w set to "ON."	hen both MDN Reques	t and DSN Request are	
Setting/	Default settings are shown below.			
Procedure	MDN Request	: "ON"	OFF	
	DSN Request	: ON	"OFF"	
	MDN Response	: "ON"	OFF	
	MDN/DSN Response Watch Time	e: "24 hours" (1 to 99)	OFF	
	Max Resolution	: 400 x 400	"600 x 600"	

8.6.9 System Connection

A. OpenAPI Settings

(1) Access Setting

Functions	To allow or restrict the access from other systems with OpenAPI when using Page Scope Data Administrator.	
Use	To restrict access from other systems with OpenAPI.	
Setting/	The default setting is Allow.	
Procedure	"Allow"	Restrict

(2) Port Number

Functions	To set the access port for other systems with OpenAPI when using PageScope Data Administrator.	
Use	To change the access port number for other systems with OpenAPI.	
Setting/	1. Select Port No. or Port Number (SSL), and touch [Input].	
Procedure	2. Press the Clear key.	
	3. Enter the port number between 1 and 65535 using the 10-key pad.	

(3) SSL

• It will be displayed when certificate is issued from PageScope Web Connection.

Functions	To set whether to encrypt access from other systems by SSL when using Page Scope Data Administrator.	
Use	To encrypt access by SSL from other systems using OpenAPI.	
Setting/	The default setting is OFF.	
Procedure	ON "OFF"	

(4) Authentication

Functions	To set whether to authenticate access of other systems which uses OpenAPI when using PageScope Data Administrator.	
Use	To set authentication of the access from other systems using OpenAPI.	
Setting/ Procedure	The default setting is OFF.	
Procedure	ON "OFF"	
	When setting to [ON], enter the login name and the password to be set.	

B. Call Remote Center

• It will be displayed when the setup at the CS Remote Care center is complete.

Functions	To call the CS Remote Care center from the administrator, when the CS Remote
Use	Care setup is complete.
_	For details, see "CS Remote Care." See P.369

8.6.10 Security Settings

A. Administrator Password

Functions	To set/change the administrator password.	
Use	To change the administrator password.	
Setting/ Procedure	Enter the administrator password on the on-screen keyboard. Current Password : Enter the current administrator password New Password : Enter the new administrator password to be used Re-Input Password : Re-enter the new administrator password NOTE When selecting Utility → [Administrator Settings] → [Security Setting] → [Security Details] leads to [Password Rules] being ON, the password with the same letters, the password which is same as the previous one and the password of less than eight digits cannot be changed.	

B. User Box Admin. Setting

Functions	To set whether to allow or restrict the box administrator to use the system.		
Use	To allow the box administrator to use the system. The box administrator is the special administrator for box, who is allowed to browse contents in common box / individual box without the password.		
	NOTE • [Allow] cannot be set when the user authentication or account track is not carried out.		
Setting/	The default setting is Restrict.		
Procedure	Allow "Restrict"		
	NOTE • [Allow] cannot be selected when user authentication and account track are not conducted. • [Allow] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]		
	Set the password when setting to [Allow].		
	NOTE • When the following setting shows that [Password Rules] is set to "ON", the Password using only a single letter or the password same with the previous one, or the password with less than eight letters cannot be accepted. [Administrator Settings] → [Security Settings]		

C. Administrator Security Levels

It will not be displayed when the following setting shows that vendor or authentication device 1 is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set the level for administrator settings item open to the user.			
Use	Magnification and [Select of and select of and select of and selection (Please of a selecti	Setting], [Auto Magnifican Selection (ADF)], [Spe fray for Insert Sheet] are Setting], [Output Setting e Setting], [AE Level Adj aten)], [Auto Magnification	ation Selection (Platen)], [Auto cify Default Tray when APS Off], available to users. [a], [Date/Time Setting], [Daylight lustment], [Auto Magnification on Selection (ADF)], [Specify Tray for Insert Sheet], and [Print ailable to users.	
Setting/ Procedure	The default setting is Prof Level 1	nibit. Level 2	"Prohibit"	

D. Security Details(1) Password Rules

Functions	To set whether to apply the password rules.		
Use	To apply the password rule to enhance security. Passwords to be covered: CE password, administrator password, user box password, user password, account track password, passwords for confidential documents. Details of the password rules: Password except user password, user box password shall be 8 digits of one-bite alphanumeric characters. (Case-sensitive) User password shall be 8 digits of one-bite alphanumeric characters. (Case-sensitive) User box password shall be 8 digits of one-bite alphanumeric characters. Password with only the same letter is prohibited. Password same with the one prior to change is prohibited. When the password rule is set to [ON], the password cannot be changed or registered unless it follows the above conditions.		
Setting/ Procedure	The default setting is OFF. ON "OFF" NOTE [OFF] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Settings] → [Enhances Security Mode] [ON] cannot be selected when the following setting is set to "OFF." [Service Mode] → [Enhanced Security] → [CE Authentication] [CE Authentication] will not be displayed and cannot be set to "OFF" when [Password Rules] is set to "ON."		

8. Utility Mode

(2) Prohibited Functions When Authentication Error

Functions	To set the function for prohibiting authentication operation in order to prevent the unauthorized access.			
Use	 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, administra authentication, user+ accounts authentication, SNMP authentication, secure print authentication, user box authentication. 			
	word) will Mode 2 : When faile word) will The numb number re and the ac When the main pow For CE au main pow When the	and to authenticate, authentication operation (entering the pass- be prohibited for a certain period of time. and to authenticate, authentication operation (entering the pass- be prohibited for a certain period of time. wer of times failure occurred will be counted, and when the eaches to the specified time, authentication will be prohibited access will be locked. access is locked, touch [Release] on the main body, or turn er switch OFF/ON to cancel it. Ithentication and administrator authentication, only turning er switch OFF/ON will cancel it. machine goes into an access lock condition, release the lock wing procedure.		
	user+ accounts authentication SNMP authentication secure print authentication cation user box authentication • Touch keys in the following order. [Administ → [Security Setting] → [Security Details] → Functions When Authentication Error]. Then touch [Release].			
	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.		
	Callon	 [Service Mode] → [Enhanced Security] → [Administrator unlocking] 		
	CE authentication	The lock release timer starts to operate by input the Stop → 0 → 9 → 3 → 1 → 7 in [Meter Count] → [Check Details] → [Coverage Rate] 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.		
Setting/	The default setting is Mode 1.			
Procedure	"Mode	1" Mode 2		
	 NOTE [Mode1] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [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.			
	Touch [Release Time S lock is released.	Settings] and set a period of time that elapses before access		

(3) Confidential Document Access Method

Functions	 To display the status of the authentical dential document access. 	ation system on the control panel for the con	ıfi-
It cannot be changed at the operator's option since it will ing to the [Prohibit Functions When Auth. Error] setting. It will be set to [Mode 1] when [Prohibit Functions When I [Mode 1]. It will be set to [Mode 2] when [Prohibit Functions when I [Mode 2]. Mode 1: This mode is for authentication by confidenti word. It displays the list of the corresponding print them. Mode 2: This mode is for authentication by confidenti the list of the corresponding confidential documents.		uth. Error] setting. bit Functions When Auth. Error] is set to	ord-
		of the corresponding confidential document in ication by confidential document ID. It displating confidential document, and print them we	to ys
	NOTE • [Mode1] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [Enhanced Security Mode]		
Setting/	The default setting is Mode 1.		
Procedure	"Mode 1"	Mode 2	

(4) Manual Destination Input

Functions	To set whether to allow or prohibit to manually enter the destination address on the Destination Input screen.	
Use	To prohibit entering the destination address manually.	
Setting/	The default setting is Allow.	
Procedure	"Allow" Restrict	

(5) Print Data Capture

Functions	To set whether to allow or restrict capturing the print job data.	
Use	To be used when carrying out [Service Mode] → [System 2] → [Data capture].	
Setting/ Procedure	The default setting is Allow. "Allow"	Restrict
	NOTE • [Allow] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [Enhanced Security Mode]	

(6) Audit Log Settings

 It will be displayed when the following setting shows that switch No.42 is set to [01] at HEX assignment.

[Service Mode] \rightarrow [System 2] \rightarrow [Software Switch Setting]

Functions	Selects whether to keep logs of operations and access made by users and service engineers. To set whether to overwrite existing logs.	
Use	To ensure security, this settings is used to keep logs of operations and access including security settings changes, authentication, and job executions by users and service engineers. Audit logs are saved in HDD and NVRAM.	
Setting/	The default setting is No.	
Procedure	Yes	"No"
	NOTE After selecting "Yes", the main power that the new setting takes effect. When ON is selected in [Administrator [Enhanced Security Mode], this setting	· Settings] → [Security Settings] →
	 Set whether to allow or restrict overwriting The default setting is Restrict. 	g existing logs when saving audit logs.
	Allow	"Restrict"
	To erase audit logs, press [Erase Audit Log].	

(7) Restrict Fax TX

Functions	To set whether or not to prohibit sending fax.	
Use	To prohibit sending fax.	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(8) Hide Personal Information

Functions	Selects whether to display file names and destinations in job logs.	
Use	 Not to display file names and destinations that appears on job logs for security protection purpose. 	
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

(9) Display Activity Log

Functions	Selects whether to display communication logs for scan/fax transmission.
Use	- Selects whether to display communication logs for scalinax transmission.
Setting/	The default setting is ON.
Procedure	"ON" OFF

(10) Delete Job Log

Functions	Clear the all job logs.	
Use		
_	Touch [Delete Job Log]. Select [Yes] on the confirmation screen and touch [OK].	

E. Enhanced Security Mode

Use	To set whether or not to enhance security.	
Setting/ Procedure	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 "User Authentication (MFP)" or "User Authentication (External Server)". HDD Lock Password or Encryption word : Set the HDD lock password or encryption word with 20 characters. (Encryption word can be set only when	
	SSL Certificate Image Controller Setting CE Password Operation Ban release tim CE Authentication CS Remote Care Management Function Ch	Change it with the one which meets password rules. e:Set to 5 minutes or more. Set to [ON]. Conduct RAM clear, and cancel the setting.
Use	The default setting is OFF.	
	ON	"OFF"

NOTE

 Setting the Enhanced Security Mode "ON" will change the setting values for the following functions.

Name of the function	Default setting	When Enhanced Security Mode is ON
Password Rules	OFF	ON (Cannot be changed)
Prohibit Functions When Auth. Error	Mode 1	Mode 2 (Cannot be changed) set to three times *Can change times (from once to three times)
User Name List	OFF	OFF (Cannot be change)
Print without Authentication	Restrict	Restrict (Cannot be changed)
User Box Admin. Setting	Restrict	Restrict (Cannot be changed)
Temporary Data Overwrite Setting	OFF	Mode 1 (Cannot be changed to Mode 2)
Secure Document Access Method	Mode 1	Mode 2 (Cannot be changed) *It will be changed according to "Prohibit Functions When Auth. Error".
SSL	OFF	ON (Cannot be changed)
FTP Server	ON	OFF (Cannot be changed)
SNMPv1/v2c	Read/Write allowed	Only "Read" is allowed (Cannot be changed)
SNMPv3 Write User Security Level	auth-password/ priv-password	Cannot be changed to disable authentication system

Name of the function	Default setting	When Enhanced Security Mode is ON
Network Setting Clear (PageScope Web Connection)	Allow	Restrict
Administrator password change via network (Page-Scope Web Connection)	Allow	Restrict (Cannot be changed)
Registering and Changing Addresses by user	Allow	Restrict (Cannot be changed)
Public User Access	Restrict	Restrict (Cannot be changed)
Print Data Capture	Allowed	Prohibited (Cannot be changed)
Release Time Settings	5 min.	The lower limit of settable range is 5 minutes. (Cannot be set to less than 5 minutes)
Secure print user box preview	Image display/List display/document detail display	Only list display available before password authentication (Mode 2)
Internet ISW (Service Mode)	Disabled	Disabled (Cannot be changed)
Operation Ban release time (Service Mode)	5 min.	The lower limit of settable range is 5 minutes. (Cannot be set to less than 5 minutes)

F. HDD Settings(1) Check HDD Capacity

Functions	To display the used space capacity, total space capacity, and the remaining capacity of the hard disk.
Use	To check the capacity and the status of use of the hard disk.

(2) Overwrite Temporary Data

 When the image becomes unnecessary, temporary data overwrite function will write meaningless data over all area where images are stored, and destroy the image data itself.

The structure of image data will be destroyed so that in case HDD is stolen, the remaining data included in the image data will not leak. Using the HDD lock password function or optional security kit (SC-503) along with this function will provide a high level of security which prevents images of great importance from leaking. It is recommended to use HDD lock password function or security kit (SC-503) along with this function for those who require high level of security.

	T			
Functions	To set whether or not to use overwrite temporary data.			
	To set overwriting method to use temporary data overwrite function.			
Use	 To use when making temporary data overwrite function valid. All data are temporarily written into HDD or memory during PC print, copier print, scanning and fax transmission. When the operation is complete, perform overwritir to the area data were once written in HDD or memory in order to enhance security To change overwriting method to use temporary data overwrite function. Mode 1: To overwrite 0x00 one time. Mode 2: Overwrite 0x00 → overwrite 0xff → overwrite 0x61 →validation 		overwriting security.	
	"Encryption Priority/Ov SC-503 is mounted.	verwrite Priority" can be se	lected when the optional s	security kit
	Encryption Priority: When the encryption word is set, the security level of data will be enhanced before writing to HDD. When e data, they will all be converted into encryption data b overwritten. Therefore, overwriting will be executed w value besides the value specified by the selected mo		en erasing ta before ed with the	
	Overwrite Priority	· · · ·		ta written overwriting e specified
	NOTE • It is necessary to make HDD format when encryption priority/overwrite patting is changed.		te priority	
Setting/	The default setting is 0	OFF.		
Procedure	"OFF"	Mode 1	Mode 2	
	NOTE • [OFF] cannot be selected when the following setting is set to "ON." [Administrator Settings] → [Security Setting] → [Enhanced Security Mode]			
	The default setting is E is mounted.)	Encryption Priority. (Only w	hen the optional security k	kit SC-503
	"Encryption	n Priority"	Overwrite Priority	

(3) Overwrite All Data

Functions	To delete the whole data in the hard disk by overwriting. To initialize the area of use for the user stored in NVRAM.	
Use	 To use when disposing of the hard disk. Select the overwriting method from Mode 1 through 8. Mode 1: It overwrites 0x00 once. Mode 2: Overwrites with random numbers → overwrites with random numbers → overwrites with 0x00 Mode 3: Overwrites with 0x00 → overwrites with 0xff → overwrites with random numbers → verifies Mode 4: Overwrites with random numbers → overwrites with 0x00 → overwrites with 0xff Mode 5: Overwrites with 0x00 → overwrites with 0xff → overwrites with 0x00 → overwrites with 0xff Mode 6: Overwrites with 0x00 → overwrites with 0xff → overwrites wit	
Setting/	overwrites with 0xaa → verifies 1. Touch [Overwrite All Data].	
Procedure	2. Touch [Overwrite All Data]. 3. Touch [Yes] on the check screen. 4. Touch [YES] on the confirmation screen. 5. Turn off the main power switch and turn it on again more than 10 seconds after.	

(4) HDD Lock Password

Functions	To set the lock password for the hard disk.	
Use	To enter, change or delete the lock password for the hard disk.	
Setting/	1. Touch [HDD Lock Password].	
Procedure	2. Enter the password (20 characters) on the on-screen keyboard, and touch [OK].	
	NOTE Password using only a single letter is not acceptable. Don't forget the password. When the password is forgotten, the replacement of hard disk is needed.	
	3. Re-enter the password to confirm.4. Turn OFF the main power switch and turn it ON again more than 10 seconds after.	

(5) Format HDD

Functions	To conduct logical formatting of HDD.	
Use	To initialize HDD.	
	NOTE • It is subject to logical formatting here, therefore if starting with physical formatting, follow as [Service Mode] → [State Confirmation] → [Memory/HDD Adj.] → [HDD Format].	
Setting/ Procedure	1. Touch [HDD Formatting]. 2. Select [Yes] on the confirmation screen and touch [OK]. 3. Turn off the main power switch and turn it on again more than 10 seconds after.	

(6) HDD Encryption SettingIt can be set only when the optional security kit (SC-503) is mounted.

Functions	 To set encryption key necessary to mount the optional security kit SC-503. 	
Use	To setup security kit SC-503.To re-set encrypting word due to exchange of NVRAM board or etc.	
	NOTE • This setting is available only when the optional security kit SC-503 is mounted. • 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	
Setting/	1. Press [HDD Encryption Setting].	
Procedure	Enter encryption key (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. 	

G. Function Management Setting

(1) Each Function Setting

 It will be displayed only when the following setting shows that Vendor 2 or Management Device is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	 To set whether to use management function for each item of [Copy], [PC print], [Send data] and [Print others]. [Print others] is not displayed when vendor is connected. [ON] for [Send Data] will not be displayed when the optional image controller (IC-409) is mounted. 	
Use	To set whether to use Management function for each item of [Copy], [PC print], [Send data] and [Print others]. [Print others] is not displayed when Vendor is connected.	
Setting/ Procedure	The default setting is ON. "ON" OFF Prohibit	

(2) Max Copy Set

It will be displayed only when the following setting shows that vendor is mounted.
 [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	• To set the upper limit of the number of copy or PC print when management function	
Use	has been set.	
Setting/ Procedure	The default setting is 999.	
Flocedule	1 to "999"	

(3) Network Function Settings

Functions	To set whether to use network function or not when management function has been set.	
Use	Not to use the network function whose counter is difficult to be managed when management function has been set. The following are target functions. PC-FAX transmission/Using the HDD TWAIN driver to view and retrieve documents in user boxes/Using PageScope Box Operator to view and retrieve documents in user boxes/Using PageScope Scan Direct to retrieve documents in user boxes/Using PageScope Job Spooler to view and retrieve documents in user boxes/Box operations using the PageScope Web Connection	
Setting/	The default setting is ON.	
Procedure	"ON" OFF NOTE • However, 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.	

(4) Authentication Time Setting

 It will be displayed only when the following setting shows that authentication device 1 is mounted.

[Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To set the authentication mode when authentication device is used.	
Use	To change the authentication mode when authentication device is used. Keep Card Authentication is available leaving the card in the given place when making authentication with the device. Touch and Go Card is placed only when authentication is made with the device and if the card is left for a given time (Authentication reset time) the authentication setting is reset. When selecting "Touch and Go", authentication reset is set after completing the job in [Authentication Time].	
Setting/ Procedure	<authentication method=""> The default setting is Touch and Go Keep Card </authentication>	o. "Touch and Go"
	<authentication time=""> The default setting is 1 min. </authentication>	
	<authentication is<="" job="" log-out="" p="" when=""> The default setting is Yes.</authentication>	1 to 30 min. Completed>
	"Yes"	No

H. Stamp Settings

(1) Apply Stamps

Functions	Selects whether to add a stamp to documents when jobs are printed or fax/scanned.	
Use	data is sent.	
Setting/	0 117	
Procedure	Apply	"Do Not Apply"
	Touch "Apply" to make stamp settings independently for print and transmission modes.	

(2) Delete Registered Stamp

Functions	Deletes registered stamps, and copy protect/repeat stamps.					
Use	• Deletes registered stamps, and copy protect/repeat stamps.					
Setting/ Procedure	Touch [Delete Registered Stamp]. Select [Stamp] or [Copy Protect/Stamp Repeat]. Select [Yes] on the confirmation screen and touch [OK] to delete the registered stamps.					

I. Image Log Transfer Settings

 It will be displayed when the following setting shows that switch No.63 is set to [01] at HEX assignment.

[Service Mode] → [System 2] → [Software Switch Setting]



2	Functions	Specifies whether to transfer the input or output image data to the server using whenever MFP inputs or outputs image data. Makes the settings of the WebDAV server or the FTP server where image data are transferred.
	Use	Use this settings to keep logs of input and output image data for security purpose.
	Setting/	The each default setting is No.
	Procedure	Yes "No"
		When selecting [Yes], make the settings of the FTP server where data are transferred. Set the following item.
<u>^2</u>		<webdav server="" setting=""> Host Name, File Path, User Name, Password, Port Number, Proxy, SSL Setting. </webdav>
		<ftp server="" setting=""> Host Name, File Path, User Name, Password, Port Number, PASV, and Proxy. </ftp>
		NOTE • When [Yes] is selected, a person who is registered as User cannot use Scan To FTP/WebDAV function

J. Driver Password Encryption Setting

Functions 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.							
		ets an encryption word. Enter an encryption word of 20 leters.						
	•	ses the factory default encryption word (Undisclosed prefined encryption key).						
	same letters in the prin differs from the encrypt passwords are created	efined], set an encryption key being consisted of the er driver. If the encryption word set in the main body ion key set in the printer driver, different encrypted and printing cannot be made. was an encryption key to be obtained from the main						
Setting/	The default setting is Use	Factory Default.						
Procedure	User-Defi	ned "Use Factory Default"						



8.6.11 **License Settings**

This is displayed only when the function enhanced version 2 or later firmware is installed.

A. Get Request Code

Functions	To display and print a request code and serial number used to activate i-Option.
Use	Used to confirm the request code and serial number.
Procedure	Touch [Get Request Code], and [Yes]. A serial number and request code are issued. By touching [Print], the serial number and request code are printable.

B. Install License

 This is displayed only when the additional memory included in the optional upgrade kit UK-201 is installed.

Functions	To allow administrator to activate functions provided by i-Option.
Use	 Used when administrator activates functions provided by i-Option. By selecting a desired function and entering the corresponding license code, the function can be activated. By making settings in [Service Mode] → [Billing Setting], CE can also activate functions provided by i-Option.
Setting/ Procedure	1. Touch [Install License]. 2. Touch [Select Function]. 3. Select i-Option function to be activated, and touch [Yes]. 4. Touch [OK]. 5. Touch [License Code]. 6. Enter the license code that was issued in the license management server using the key board on the control panel, and touch [OK]. 7. Touch [Install] key. 8. Confirm the message, select [Yes], and touch [OK]. 9. Turn OFF and ON the main power switch.

C. List of Enabled Functions

· This is displayed only when the additional memory included in the optional upgrade kit UK-201 is mounted.

Functions	To display currently activated functions.
Use	Used to check the functions that are activated now.

8.7 **Banner Printing**



(a) • It will not be displayed when the following setting shows that vendor is mounted. [Service Mode] → [Billing Setting] → [Management Function Choice]

Functions	To shift to the banner printing mode.
Use	To use when printing on the long size paper.
Setting/ Procedure	1. Set the long size paper to the bypass tray. 2. Touch [Banner Printing], and touch [ON]. 3. Send the job for the long paper print. 4. Touch [Finish] to finish banner printing mode.
	NOTE Only PC print is available for the long paper print. Normal job cannot be accepted during banner printing mode.

<u></u> 8.8

3.8 My Panel Settings

This is displayed only 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.

Functions	To make various settings about My Panel.
Use	To customize My Panel screen for individual registered users. Items that can be set are as follows: Language Setting, Measurement Unit Setting, Copier Settings, Scan/Fax Settings, Color Selection Setting, Main Menu Settings, and Initial Screen Setting
Setting/ Procedure	Touch [My Panel Settings]. Touch a key that represents a desirable item and change its settings. NOTE
	 Registering, editing, and deleting My Panel settings are allowed only when logging in as a registered user. When My Panel is not customized, the settings for MFP 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 MFP and the optional device configuration, not all My Panel settings may not take effect.

Blank Page

9. Adjustment item list

<u>9.</u>	Auju	isimen	t item list										
Adi	ustment/se	N	Replace paper feed roller	Replace separation roller assy	Change marketing area	Install LCT	Replace CCD unit	Replace mirror unit	Replace IU	Replace transfer belt unit	Replace PH unit		
Auj	I	T T T T T T T T T T T T T T T T T T T	No	ď	æ	Ö	Ë	ď	ď	æ	Ä		
		Printer	Print Positioning: Leading Edge	1									(3)
		Area	Print Positioning: Side Edge	2				0	(F)	(F)			(4)
			Paper Feed Direction Adj.	3					(5)	(5)			
		_	Image position: Leading Edge	4					(4)				
	Machine	Scan Area	Image position: Side Edge	5					(4)				
		Alea	Cross Direction Adjustment	6					(3)				
			Feed Direction Adjustment	7						(4)			
			cting Sensor Adj.	8			0						
		LD adjustment	LD lightness balance adjust.	9									(2)
Jode	Touch Par	nel Adjust		10									
Service Mode	State Confir-	Memory/	HDD R/W Check	11									
		HDD	HDD Format	12									
	mation	Table Num	13										
	Firmware	Version		14									
		Re-entry of	Re-entry of setting values										
	System	Serial Nun	Serial Number										
	1/2	Scan Calib	Scan Calibration						(1)				
		Line Mag	18					(2)					
	Counter	Life	Counter Clear	19	0	0							
	Image Proces	ss Adjustment	Gradation Adjust	20							О	О	
	ADF		Read Pos Adj	21						(3)			
	Enhanced	d Security	NVRAM Data Backup	22									
Re-	entry of Ut	tility settings	3	23									
Re-	entry of Er	nhanced Se	curity settings	24									
Par	allel adjust	ment of sca	inner/mirrors carriage	25						(1)			
Pos	Positioning scanner unit									(2)			
Sca	anner moto	r belt adjus	tment	27									
Ori	ginal glass	28											
РΗ	skew adju	29									(1)		
F/V	V upgrading	g		30									
Ins	tallation of	original size	e sensor	31									
		f NVRAM (I		32									

• This table shows the adjustment items that are required when a part of the machine has been replaced. Priority order, if applicable, during the adjustment procedures is indicated by the corresponding number in the parentheses.

		-		_				ie pa										
No	Replace original size detection sensor	Wind scanner drive cables	Replace scanner motor	Replace scanner assy	Replace scanner home sensor	Replace original glass moving unit	Replace glass step sheet	Replace printer control board	Replace MFP board	Replace image processing board	Replace original glass	Replace IDC/registration sensor/F,R	Replace hard disk	Add key counter	Execute initialize	Execute add. option	Execute F/W update	Add fax board
1																		
2																		
3																		
4											(2)							
5					0						(1)							
6																		
7		(5)	(2)	(3)														
8	(3)																	
9																		
10															(6)			
11													(2)					
12													(1)					
13	(2)														(2)			
14																О	О	
15															(4)			
16															(3)			
17																		
18																		
19																		
20									(3)									
21		(4)		(2)		(2)	0											
22									(4)									
23															(1)			
24														0	(5)			
25		(2)																
26		(3)		(1)														
27		(1)	(1)															
28						(1)												
29																		
30								О	(2)	О								О
31	(1)																	
32									(1)									
33												0						

10 Service Mode

10.1 Service Mode function setting procedure

NOTE

oizhub C353/C253/C203

 Ensure appropriate security for Service Mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.

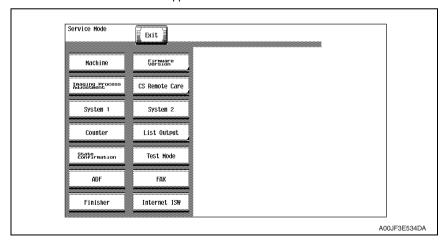
A. Procedure

- 1. Press the Utility/Counter key.
- 1 2. Touch [Check Details] on meter count display.
 - 3. Press the following keys in this order.; Stop $\rightarrow 0 \rightarrow 0 \rightarrow \text{Stop} \rightarrow 0 \rightarrow 1$

NOTE

- When selecting [CE Authentication] under [Enhanced Security] available from Service Mode, authentication by CE password is necessary.
 Enter the 8 digits CE password, and touch [END].
 - (The initial setting for CE password is "92729272.")
- When the following setting is set to "ON", CE password authentication is necessary.
 - [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]
- 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 sub power switch and turn it ON again.
 When the following setting 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
 - If the access lock is activated, the lock release timer starts to operate by input the Stop \rightarrow 0 \rightarrow 9 \rightarrow 3 \rightarrow 1 \rightarrow 7 in [Meter Count] \rightarrow [Check Details] \rightarrow [Coverage Rate] 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 "*."
- 4. 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 Enhanced Security.
 See P.437

B. Exiting

· Touch the [Exit] key.

C. Changing the setting value in Service Mode functions

- Use the [+] / [-] key to enter or change the setting value.
- Use the 10-key pad to enter the setting value. (To change the setting value, first press the Clear key before making an entry.)

10.2 Service Mode function tree

- * The function tree is shown to comply with the format displayed on the screen.
- *1: Settings are available only when the optional fax kit (FK-502) is mounted.
- *2: It will be displayed only when the optional fax multi line (ML-501) is mounted.
- *3: It will be displayed only when the optional finisher (FS-519) or job separator (JS-505) is mounted.
- *4: It will be displayed only when the optional finisher (FS-519) is mounted.
- *5: It will be displayed only when the optional job separator (JS-505) is mounted.
- *6: It will be displayed only when the [Internet ISW Set] is set to "ON."
- ↑ *7: It will be displayed only when the optional finisher (FS-609) is mounted.

	Service Mode	9	Ref. Page				
Machine	Fusing Temperature		P.346				
	Fusing Transport Speed	d	P.347				
	Org. Size Detecting Sensor Adj.						
	Printer Area	Leading Edge Adjustment	P.348				
		Centering	P.349				
		Leading Edge Adj. (Duplex Side 2)	P.350				
		Centering (Duplex 2nd Side)	P.351				
		Paper Feed Direction Adj.	P.352				
	Scan Area	Image Position: Leading Edge	P.353				
		Image Position: Side Edge	P.354				
		Cross Direction Adjustment	P.355				
		Feed Direction Adjustment	P.356				
	Printer Resist Loop	•	P.357				
	Color Registration	Cyan	P.358				
	Adjustment	Magenta	1				
		Yellow	1				
	Exhaust Fan Stop Dela						
	LD adjustment	LD delay adjust.	P.359				
		LD lightness balance adjust.	P.360				
	Manual Bypass Tray Ad	P.361					
	Lead Edge Erase Adjus	stment	P.361				
	Split Line Prior Detection	on	P.362				
Firmware Version			P.362				
Imaging Process	Gradation Adjust		P.362				
Adjustment	D Max Density		P.364				
	TCR Level Setting		P.364				
	Background Voltage Ma	argin	P.365				
	Transfer Output Fine	Primary transfer adj.	P.365				
	Adjustment	Secondary transfer adj.	P.366				

	Service M	ode	Ref. Page
Imaging Process	Stabilizer	Stabilization Only	P.366
Adjustment		Initialize+Image Stabilization	n P.367
	Thick Paper Density	P.367	
	TCR Toner Supply	P.367	
	Monochrome Dens	ty Adjustment	P.368
	Dev. Bias Choice		P.368
CS Remote Care	•		P.369
System 1	Marketing Area		P.389
	Tel/Fax Number		P.389
	Serial Number		P.390
	No Sleep		P.390
	Foolscap Size Setti	ng	P.390
	Original Size Detec	tion	P.390
	Install Date		P.391
	Initialization	Data Clear	P.391
		System Error Clear	P.391
	Trouble Isolation	P.392	
	IU Life Setting	P.393	
	Change Warm Up	P.394	
	Machine State LED	Setting	P.395
System 2	HDD	P.396	
	Image Controller Se	P.396	
	Option Board Statu	P.397	
	Consumable Life R	P.397	
	Unit Change	P.397	
	Software Switch Se	P.398	
	Scan Calibration	P.399	
	LCT Paper Size Se	P.399	
	Line Mag Setting		P.400
	Data Capture		P.400
	Split Line Detect. S	etting	P.402
	Stamp		P.403
	Network Fax Setting	P.404	
Counter	Life		P.405
	Jam		P.406
	Service Call Counte	er	P.406
	Warning		P.406
	Maintenance		P.407
	Service Total		P.407
	Counter Of Each M	ode	P.407
	Service Call History	(Data)	P.407

<u>3</u>

	Service Mod	le	Ref. Page
Counter	ADF Paper Pages		P.407
	Paper Jam History		P.408
	Fax Connection Error		P.408
	Split Line Counter		P.408
	Counter Reset		_
List Output	Machine Management List		P.409
	Adjustments List		P.409
	Parameter List		P.409
	Service Parameter		P.409
	Protocol Trace	Last	P.409
		Error	
	Fax Setting List		P.409
	Fax Analysis List		P.409
State Confirmation	Sensor Check		P.410
	Table Number		P.423
	Level History1		P.423
	Level History2		P.423
	Temp. & Humidity		P.423
	CCD Check		P.424
	Memory/HDD Adj.	Memory Check	P.424
		Compress / Decompression Check	P.424
		JPEG check	P.425
		Memory Bus Check	P.425
		Work Memory In/Out Check	P.425
		HDD Version Upgrade (LK)	P.425
		Down Ver.	P.426
		HDD Version Up	P.426
		HDD R/W Check	P.426
		HDD Format	P.427
	Memory/HDD State		P.427
	Color Regist		P.427
	IU Lot No.		P.428
	Adjustment Data List		P.428

	Service Mode		Ref. Page
Test Mode	Gradation Pattern		P.428
	Halftone Pattern		P.429
	Lattice Pattern		P.429
	Solid Pattern		P.430
	Color Sample		P.430
	8 Color Solid Pattern		P.431
	CMM Pattern		P.431
	Running Mode		P.431
	Fax Test		P.432
ADF	Original Stop Position		P.432
	Registration Loop Adj.		
	Auto Stop Position Adjus	stment	
	Paper Passage		
	Sensor Check		
	Original Tray Width		
	Read Pos Adj		
	Feed Zoom	Orig. Feed Zoom Ad	
		Auto Adjust	
	Scanning Light Adjustm	ent	
FAX *1	Line 1 *1	Modem/NCU *1	P.432
		NetWork *1	
		System *1	
		Fax File Format *1	
		Communication *1	
		List Output *1	
		Function Parameter *1	
		Initialization *1	
	Line 2 *2	Modem/NCU *2	
		NetWork *2	
		Communication *2	
		Initialization *2	
Finisher *3	CB-FN adjustment *4	Fold&Staple Pos. Adjustment *4	P.432
		Finisher Check *4	
		Punch Regist Loop Size *4	
		Punch Horizontal Position *4	
	FN-X3 Adjustment *7	Center-Staple Position Adj. *7	
		Half-Fold Position Adj. *7	
	Punch option setting		
	Job Separator *5		

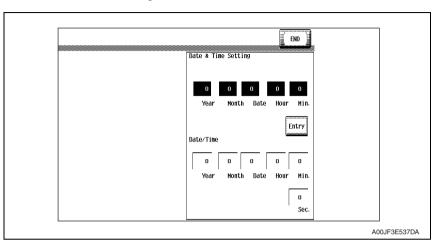


	Service Mode	Ref. Page
Internet ISW	Internet ISW Set	P.433
	HTTP Setting *6	P.433
	FTP Setting *6	P.434
	Forwarding Access Setting *6	P.435
	Download *6	P.436

10.3 Date/Time Input mode

• This mode is used to set time-of-day and date.

10.3.1 Date & Time Setting mode screen



A. Date & Time Setting mode setting procedure

- 1. Call the Service Mode to the screen.
- 2. Press the following keys in this order. Stop \rightarrow 1 \rightarrow 1 \rightarrow 4 \rightarrow 4 \rightarrow Clear
- Enter year, month, day, hour, and minute, in that order, from 10-key pad.
 (Year 4 digits → Month 2 digits → Day 2 digits → Hour 2 digits → Minute 2 digits)

NOTE

- · When setting the month, day, hour, or minute, enter "0" first if the data one digit.
- 4. Make sure that correct figures have been entered and then touch [Entry].
- 5. Touch [END] to return to the Service Mode.

10.4 Machine

10. Service Mode

10.4.1 Fusing Temperature

Functions	To adjust individually the temperature of the heating roller and the fusing pressure roller for each type of paper, thereby coping with varying fusing performance under changing environmental conditions.			
Use	 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. 			
Adjustment				
Range		Paper type	Setting range	step
		Plain Paper	-20 °C to +5 °C	5 °C
		OHP Film	-20 °C to +5 °C	5 °C
		Thick 1	-20 °C to +5 °C	5 °C
		Thick 2	-20 °C to +5 °C	5 °C
		Thick 3	-20 °C to +5 °C	5 °C
		Thick 4	-20 °C to +5 °C	5 °C
		Post.	-20 °C to +5 °C	5 °C
		Enve.	-5 °C to +5 °C	5 °C
Adjustment Instructions	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.			
Procedure	To adjust the fusing temperature, adjust on the heating side first. If the further adjustment is necessary, adjust on the pressure side.			
	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Fusing Temperature]. Select the paper type and fusing roller type (Heater Roller or Pressure). Enter the new setting from the [+] / [-] key. Touch [END] to validate the adjustment value. Return to the basic screen. Output two or three test printing and check to see whether the image has a lem. Make the adjustment for each type of paper. 		oller or Pressure).	

10.4.2 Fusing Transport Speed

Functions	 To adjust the speed of the fusing drive motor so as to match the fusing speed with transport speed. 		
Use	 Brush effect or blurred image is evident as a result of changes in environmental conditions or degraded durability. 		
Variable Range		-20 to +20 (in 1 increments)	
Adjustment Instructions	If brush effect is evident, vary the setting value and check for image. If a blurred image occurs, decrease the setting.		
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Fusing Transport Speed]. Select the transport speed, at which the brush effect or blurred image has occurred. <bizhub c353=""></bizhub> 		
	Transport speed	Paper Setting	
	166.6 mm/s	Plain paper: color/monochrome, OHP film	
	55.5 mm/s	Thick 1, Thick 2, Thick 3, Thick 4, envelope, postcard: monochrome/color	
	 Transport speedPaper Setting		
	111 mm/s	Plain paper: color/monochrome, OHP film	
	55.5 mm/s	Thick 1, Thick 2, Thick 3, Thick 4, envelope, postcard: monochrome/color	
	4. Enter the new setting from the 10-key pad.5. Touch [END] to validate the adjustment value.6. Check the copy image for any image problem.		

10.4.3 Org. Size Detecting Sensor Adj.

Functions	 To automatically adjust the original detection distance for the original size sensor. To display if the original size detection 2 Sensor is mounted.
Use	When the sensor is replaced with a new one. When an optional sensor has been added. When an erroneous original size detection is made. When the marketing area setting is changed.
Adjustment Instructions	If the adjustment has been successfully made, it completes the adjustment procedure. If the adjustment has turned out to be unsuccessful, check the optional original size sensors for correct installation and change the defective sensor or harness.
Setting/ Procedure	 Place a blank sheet of A3 or 11 x 17 paper on the original glass and lower the original cover. Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Org. Size Detecting Sensor Adj.]. Press the Start key.

10.4.4 **Printer Area**

A. Leading Edge Adjustment

	T =		
Functions	To vary the print start position in the types in the manual bypass tray.	sub scan direction for each of different paper	
	(To adjust the timing where paper is	sent out from the timing roller)	
Use	 The PH unit has been replaced. The paper type has been changed. The image on the copy 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, Thick 1, Thick 2, Thick 3, Thick 4, OHP transparencies, and envelopes. 		
Adjustment Specification	<u>*</u> †	Width A on the test pattern produced should fall within the following range.	
	Width A	Specifications: 4.2 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)	
	A00JF3C504DA		
Adjustment	If width A is longer than the specifications, make the setting value smaller than the cur-		
Instructions	rent one. If width A is shorter than the specificati rent one.	ons, make the setting value greater than the cur-	
Setting/	Place A3 paper on the manual bypass tray.		
Procedure	 2. Call the Service Mode to the screen 3. Touch [Machine] → [Printer Area] → 		
	 Finite Area → [Finite Area] → Select the [Plain Paper]. 	Leading Edge Adjustinentj.	
	5. Press the Start key to let the machin	·	
	6. Check the dimension of width A on t	•	
	8. Press the Start key to let the machin	range, change the setting using the [+] / [-] key. ne produce a test pattern.	
	9. Check the dimension of width A on the test pattern.		
	10.If width A is outside the specified range, change the setting again and make a check again.		
	11.If width A falls within the specified ra 12.Following the same procedure, adju	ange, touch [END]. st for Thick 1 to 3, OHP film, and Enve.	

B. Centering

Functions	To vary the print start position in the main scan direction for each paper source.		
Use	 The PH Unit has been replaced. A paper feed unit has been added. The image on the copy deviates in the main scan direction. 		
Adjustment Specification	Width A Width A on the test pattern produced should fall within the following range. Specifications: 3.0 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)		
Adjustment Instructions	If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.		
Setting/ Procedure	 Call the Service Mode to the screen. Touch [Machine] → [Printer Area] → [Centering]. Select the paper source to be adjusted. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch [END]. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 ¹/₂ × 11 plain paper for the bypass.) 		

C. Leading Edge Adj. (Duplex Side 2)

Functions	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.		
Use	 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. 		
Adjustment Specification	Width A on the test pattern produced should fall within the following range. Specifications: 4.2 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)		
Adjustment Instructions	If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.		
Setting/ Procedure	 Place A3 paper on the manual bypass tray. Call the Service Mode to the screen. Touch [Machine] → [Printer Area] → [Leading Edge Adj. (Duplex Side 2)]. Select the [Plain Paper]. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch [END]. Following the same procedure, adjust for Thick paper. 		

D. Centering (Duplex 2nd Side)

Functions	To vary the print start position in the main scan direction for each paper source in the 2-Sided mode.		
Use	The image on the backside of the 2-sided copy deviates in the main scan direction.		
Adjustment Specification	Width A •Width A on the test pattern produced should fall within the following range. •For measurement, use the image produced on the backside of the test pattern. Specifications: 3.0 ± 0.5 mm Setting range: -3.0 mm to +3.0 mm (in 0.2 mm increments)		
Adjustment Instructions	If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.		
Setting/ Procedure	current one. 1. Call the Service Mode to the screen. 2. Touch [Machine] → [Printer Area] → [Centering (Duplex 2nd Side)]. 3. Select the paper source to be adjusted. 4. Press the Start key to let the machine produce a test pattern. 5. Check the dimension of width A on the test pattern. 6. If width A falls outside the specified range, change the setting using the [+] / [-] key. 7. Press the Start key to let the machine produce a test pattern. 8. Check the dimension of width A on the test pattern on the backside of the copy. 9. If width A is outside the specified range, change the setting again and make a check again. 10.If width A falls within the specified range, touch [END]. 11.Following the same procedure, adjust for all other paper sources. (Use A4 or 8 ½ × 11 plain paper for the manual bypass tray.)		

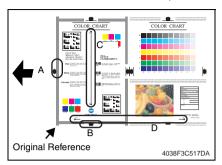
E. Paper Feed Direction Adj.

10. Service Mode

Functions	To synchronize the paper transport speed with the image writing speed.			
Use	Feed Direction Adjustment 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 setting can be made independently for plain paper, Thick 1, Thick 2, Thick 3, and Thick 4.			
Adjustment Specification	Width A and width B on the test pattern produced should fall within the following ranges. Width A: equivalent to one grid Width B: equivalent to 48 grids Specifications A: 7.9 to 8.3 B: 389.1 to 392.1 Setting Range A, B: -7 to +7			
A -1:4	A00JF3C506DA			
Adjustment Instructions	If width A or B is longer than the specifications, make the setting value smaller than the current one. If width A or B is shorter than the specifications, make the setting value greater than the current one.			
Adjustment Procedure	 Load manual bypass tray with A3 or 11 × 17 plain paper. Call the Service Mode to the screen. Touch [Machine] → [Printer Area] → [Paper Feed Direction Adj.]. Select [Plain Paper]. Press the Start key to let the machine produce a test pattern. Check width A (equivalent to one grid) and width B (equivalent to 48 grids) on the test pattern. Touch these keys in this order: [Machine] → [Printer Area] → [Paper Feed Direction Adj]. If width of A or B falls outside the specified range, change the setting using the [+]/[-] keys. Press the Start key to let the machine produce a test pattern again. Check width A and width B on the test pattern. If width A or B falls outside the specified range, change the setting value and make a check again. If width A or B falls within the specified range, touch [END]. Following the same procedure, adjust for thick paper. 			

10.4.5 Scan Area

- Use the following color chart for the adjustment of the scanner section.
- If the color chart is not available, a scale may be used instead.



- A: Image Position: Leading Edge
- B: Image Position: Side Edge
- C: Cross Direction Adjustment
- D: Feed Direction Adjustment

A. Image Position: Leading Edge

Functions	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.		
Use	When the original glass is replaced. When the original width scale is replaced.		
Adjustment Specification	B width on the color chart and one on the copy sample are measured and adjusted so that the difference of A width satisfies the specifications shown below. Hue B width on the color chart and one on the copy sample are measured and adjusted so that the difference of A width satisfies the specifications shown below. An adjustment must have been completed correctly of [Leading Edge Adjustment] of [Printer Area].		
	Value Specifications A00JF3C507DA A: ± 0.5 mm (10 ± 0.5 mm if a scale is used)		
	Setting range -5.0 to +5.0 (in 0.1 mm increments)		
Adjustment Instructions	If the copy image is less than the specified length, increase the setting value. If the copy image exceeds the specified length, decrease the setting value.		
Setting/ Procedure	Call the Service Mode to the screen.		

B. Image Position: Side Edge

Functions	To adjust part-to-part variations in accuracy of IR parts and their mounting accuracy by varying the scan start position in the main scan direction.		
Use	When the CCD unit is replaced. When the original glass is replaced. The scanner home sensor has been replaced.		
Adjustment Specification	•A width on the color chart and one on the copy sample are measured and adjusted so that the difference of B width satisfies the specifications shown below. •An adjustment must have been completed correctly of [Centering] of [Printer Area]. Specifications B: ± 1.0 mm Setting range -10.0 to +10.0 (in 0.1 mm increments)		
Adjustment Instructions	If the copy image is less than the specified length, increase the setting value. If the copy image exceeds the specified length, decrease the setting value.		
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Scan Area] → [Image Position: Side Edge]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check point B on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make a copy. Check point B of the image on the copy to see if the specifications are met. Make adjustments until the specifications are met. 		

C. Cross Direction Adjustment

Functions	To adjust the zoom ratio in the main scan direction for the scanner section.		
Use	The CCD unit has been replaced.		
Adjustment Specification	Measure C width on the color chart and on the sample copy, and adjust the gap to be within the following specification. An adjustment must have been completed correctly of "Paper Feed Direction Adj." of [Printer Area].		
	Specifications C: ± 1.0 mm		
	4038F3C516DA Setting range 0.990 to 1.010 (in 0.001 increments)		
Adjustment Instructions	If the C width on the copy sample is less than one on color chart, increase the setting. If the C width on the copy sample exceeds one on color chart, decrease the setting.		
Setting/ Procedure	 If the C width on the copy sample exceeds one on color chart, decrease the setting. Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Scan Area] → [Cross Direction Adjustment]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check the C width on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met. 		

D. Feed Direction Adjustment

Functions	To adjust the zoom ratio in the sub scan direction for the scanner section.		
Use	The scanner assy has been replaced. The scanner motor has been replaced. The scanner drive cables have been replaced.		
Adjustment Specification	•Measure D width on the color chart and on the sample copy, and adjust the gap to be within the following specification. •An adjustment must have been completed correctly of "Paper Feed Direction Adj." of [Printer Area]. Specifications D: ± 1.5 mm Setting range 0.990 to 1.010 (in 0.001 increments)		
Adjustment Instructions	If the D width on the copy sample is less than one on color chart, increase the setting. If the D width on the copy sample exceeds one on color chart, decrease the setting.		
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Scan Area] → [Feed Direction Adjustment]. Position the color chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check the D width on the image of the copy. If the image falls outside the specified range, change the setting using the [+] / [-] key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met. 		

10.4.6 Printer Resist Loop

Functions	To set the correction value of the paper loop length for each process speed of tray 1, tray 2 to tray 4 / LCT, bypass, and duplex. To adjust the length of the loop formed in paper before the registration rollers. Use "Paper Passage" for paper passage check.				
Use	When a paper skew occurs. When a paper misfeed occurs.				
Adjustment Instructions	To decrease the loop amount: Decrease the setting value To increase the loop amount: Increase the setting value				
Adjustment Range	• The adjustable 	range is differen	t depending on p	aper source and	processing speed.
		Tray 1/2	Tray 3/4 LCT	Duplex	Manual Tray
	166.6 mm/sec	-5 to +5	-5 to +5	-5 to +5	-5 to +5
	55 mm/sec	-15 to +15	-15 to +15	-8 to +8	-15 to +15
		Tray 1/2	Tray 3/4 LCT	Manual	Duplex
	110 mm/sec	-8 to +8	-8 to +8	-8 to +8	-8 to +8
	55 mm/sec	-15 to +15	-15 to +15	-8 to +8	-15 to +15
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Printer Resist Loop]. Select a paper source and a processing speed where the settings are made by touching the corresponding keys. Enter the new setting from the 10-key pad. 				

10.4.7 Color Registration Adjustment

A. Cyan, Magenta, Yellow

Functions	To adjust color shift if there is any when comparing the original with copy of the plain or thick paper.		
Use	 To correct any color shift. This setting can be made independently for plain paper, Thick 1, Thick 2, Thick 3, and Thick 4. 		
Adjustment Range	"0" (-	6 to +6 dot)	
Adjustment Instructions	If the cross deviates in the direction of A If the cross deviates in the direction of B		
Setting/ Procedure	of each color at positions X and Y. 6. Select the color to be adjusted.	x 17 or A4/8 ½ x 11 plain paper. or deviation between the black line and the line ing value as necessary. (At this time, only the	
	Check Procedure		
	Check point X, Y	Y A02EF3C501DA	
	Adjustment for X direction: Check point X Direction of A	If the cross deviates in the direction of A, increase the setting. If the cross deviates in the direction of B, decrease the setting. Direction of B	
	Adjustment for Y direction: Check point Y	A02EF3C503DA If the cross deviates in the direction of A, increase the setting. If the cross deviates in the direction of B, decrease the setting.	
	Direction of A	Direction of B	

10.4.8 **Exhaust Fan Stop Delay**

Functions	To set the period of time before the exhaust fan motor stops.			
Use	At the completion of a print job/image stabilization or at jam/malfunction, the fan motor rotating at full speed comes to a stop. The period of time before the fan motor stops can be delayed so that ozone left around the PC drum can be discharged.			
Setting/ Procedure	0 to 15 (minutes) can be entered with the ten-key pad. (Default is 0.) NOTE When this setting is set to 0 (minute), the fan motor runs for 5 seconds before it stops.			

10.4.9 LD adjustment

A. LD delay adjust.

$\triangle\!$	Functions	Not used.	
	Use	- Not used.	
		The default setting is 14. NOTE Do NOT change this setting from the default value.	

B. LD lightness balance adjust.

Functions	This function adjusts the LD lightness balance between the two LDs to correct the dif-		
	ference of LD lightness between the LDs.		
Use	 This setting is made after the PH unit or the service EEPROM 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. 		
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [LD adjustment] → [LD lightness balance adjust.]. Select [For adjustment] and press Start key. The test print includes seven rows of patterns produced with different levels of LD: light intensity towards LD1. 		
	-9 % -6 % -3 % 0 % +3 % +6 % +9 %		
	5. Three squares each made up by four small squares are printed with the different four colors. The two small squares diagonal to each other are printed using the same LD. Depending on individual print timing, it is decided that which pair of small squares corresponds to which LD. The pair of small squares where image density changes corresponds to LD2. 6. From the test pattern, select the pattern where the least density difference appears between LD1 and LD2 for each color. 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 ten key pads 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].		

10.4.10 Manual Bypass Tray Adjustment

Functions	To set the maximum width and the minimum width for the manual bypass paper size unit of the manual bypass guide.
Use	 Use when the manual bypass paper size unit of the manual bypass guide has been changed. Use when a false paper size is displayed when the manual bypass is used.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Manual Bypass Tray Adjustment]. Touch [Max. Width]. Load the bypass tray with paper having a width of 297 mm. Press the Start key and check that the results are [OK]. Touch [Min. Width.]. Load the bypass tray with paper having a width of 100 mm. Press the Start key and check that the results are [OK]. * Make the adjustment again if the results are [NG].

10.4.11 Lead Edge Erase Adjustment

Functions	To set the leading edge era	ase amount of the paper.	
Use	Upon user requests, it is palong the leading edge.	ossible to specify the void	d area where image is not printed
Setting/	The default setting is 4 mm.		
Procedure	"4 mm"	5 mm	7 mm
	NOTE • When "4 mm" is selecte based on the control sys		amount to be erased in print

10.4.12 Split Line Prior Detection

Functions	To check the stain on the ADF original glass and display the result.
Use	 To manually perform the pre-detection of the stain which is normally conducted when the main/sub power switch is turned ON, recovering from the sleep/low power mode, etc. [Split Line Prior Detection] will be conducted with the detection level set by the following setting. [Service Mode] → [System 2] → [Split Line Detect. Setting] → [Prior Detection] When the above setting is set to "Not Set", "NG" will be displayed even though the pre-detection is conducted.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Machine] → [Split Line Prior Detection]. Press the start key to start the pre-detection. Check to make sure that "OK" is displayed for the result. * When the result says "NG", clean the glass and check again.

10.5 Firmware Version

Functions	To check the firmware version.
Use	Use when the firmware is upgraded.When the firmware is upgraded or PWB is replaced.
Setting/ Procedure	Call the Service Mode to the screen. Touch [Firmware Version]. Select the appropriate key from 1 to 3 to check the Firmware Version.

10.6 Imaging Process Adjustment

10.6.1 Gradation Adjust

It will not be displayed when the following setting is set to "ON".
 [Service Mode] → [Image Process Adjustment] → [Dev. Bias Choice]

Functions	To make an automatic adju- and the readings taken by t	stment of gradation based on the test pattern produced the scanner.
Use	sent how much corrections shows the difference from t	t has been replaced. nd "Highlight" shown on the gradation adjust screen repre- are made to produce an ideal image output. Conv. Value
	Gradation Mode : Resolution Mode : High Compression Mode :	Before Gradation adjust, perform image stabilization. It gives the highest priority to gradation performance of the image as it adjusts. It gives the highest priority to reproduction performance of letters and lines as it adjusts. It gives the highest priority to increasing the number of images to be stored in the memory as it adjusts.
Adjustment Specification	Dark : 0 ± 100 Highlight: 0 ± 60	mages to be stored in the montery to it dujusts.

Setting/ Procedure

- 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 the appropriate mode for the gradation adjustment.
- 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 alert codes, P-5, P-6, P-7, P-8, P-9, and P-28 is on the screen and [Gradation Mode] is selected, the Start key stops functioning.
- 6. Place the test pattern produced on the original glass.
- Place ten blank sheets of A3/11x17 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 of each color (C, M, Y and K) for Dark and Highlight.
- 11. Use the following procedures to check the Conv. Value.

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.

NOTE

- 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 D Max Density.
- 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.

10.6.2 D Max Density

Functions	To adjust gradation, color, and image density to target reproduction levels by varying the maximum amount of toner sticking to paper through auxiliary manual fine-adjust- ment of gamma of each color after gradation adjust.
Use	An image quality problem is not corrected even after gradation adjust has been run.
Adjustment Range	The default setting is 0. -10 to +10 (step: 1 *)
	*: 1 step corresponds to 0.03 in density difference.
Adjustment Instructions	To increase the maximum amount of toner sticking, increase the setting value. To decrease the maximum amount of toner sticking, decrease the setting value.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [D Max Density]. Select [COPY] or [Printer]. Select the color to be adjusted. Enter the new setting from the 10-key pad or [+/-]. Touch [END] to return to the [Process] menu screen. Touch [Stabilizer]. Touch [Stabilizer Mode]. Press the Start key to validate the adjustment value. Check the copy 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.

10.6.3 TCR Level Setting

Functions	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	Use when T/C changes due to changes in environmental conditions of the user site.
Adjustment Range	The default setting is 0. -3 to +3 (1 step :0.5 %, Center value 0 corresponds to 7 % T/C ratio.)
Adjustment Instructions	To increase T/C, increase the setting value. To decrease T/C, decrease the setting value.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Process] → [TCR Level Setting]. Select the color to be adjusted. Enter the new setting from the 10-Key Pad and [+/-] key. Touch [END] to validate the adjustment value. Check the copy image for any image problem.

10.6.4 Background Voltage Margin

Functions	• 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	Use when a foggy background occurs due to a printer problem.
Adjustment Range	The default setting is 0. -5 to +5 (step: 1)
Adjustment Instructions	To make the background level foggier, decrease the setting value. To make the background level less foggy, increase the setting value.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [Background Voltage Margin]. Select the color to be adjusted. Enter the new setting from the 10-key pad. Touch [END] to return to the [Image Adjust] menu screen. Touch [Stabilizer]. Touch [Stabilization Only]. Press the Start key to validate the adjustment value. Check the copy 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.

10.6.5 Transfer Output Fine Adjustment

A. Primary transfer adj.

unctions	Adjust the output value for the 1st image transfer voltage.
Jse •	To use when white spots appeared.
djustment •	The default setting is 08 to +7 (step: 1)
nstructions In	Adjust the output value for the 1st image transfer voltage by; ncreasing it: Increase the setting value (white spots will decrease) Decreasing it: Decrease the setting value
Procedure 2 S 3 4 5 6 7 8	Call the Service Mode to the screen. Select [Test Mode] → [Halftone Pattern] to output the red or green test pattern. See P.429 When the test pattern image has white spots, adjust with the following procedure. Touch these keys in this order: [Imaging Process Adjustment] → [Transfer Output Fine Adjustment]. Select [Primary transfer adj.]. Select (Primary transfer adj.]. Change the setting value using the [+] / [-] keys. Touch [OK] key to set the adjustment value. Gradually increase the adjustment value to the acceptable white spots level while checking the test pattern.
	checking the test pattern.

B. Secondary transfer adj.

Functions	Adjust the 2nd image transfer output (ATVC) on the 1st page and the 2nd page for each paper type.
Use	To use when the transfer failure at the trailing edge occurs.
Adjustment Range	The default setting is 0. -8 to +7 (step: 1)
Adjustment Instructions	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.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [Transfer Output Fine Adjustment]. Select [Secondary transfer adj.]. Select the side of the image (1st side or 2nd side), on which the transfer failure occurs. NOTE
	 For envelopes, only first side can be selected. 5. Select the paper type with the transfer failure. 6. Enter the new setting from the [+] / [-] keys. 7. Touch [END] to validate the adjustment value. 8. Check the print image for any image problem.

10.6.6 Stabilizer

A. Stabilization Only

Functions	The image stabilization sequence is carried out without clearing the historical data of image stabilization control.
Use	Use if an image problem persists even after gradation adjustment has been executed. When [D Max Density] and [Background Voltage Margin] of Service Mode are changed.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [Stabilization Only]. Press the Start key to start Stabilizer. The Start key turns red and stays lit up red during the Stabilizer sequence. Stabilizer is completed when the Start key turns blue.

B. Initialize+Image Stabilization

Functions	To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized.
Use	 Use if an image problem persists even after gradation adjustment has been executed. Use if tone reproduction and maximum density are faulty even after Stabilizer Mode has been executed. When color shift correction is needed again after the machine maintenance. After executing the skew adjustment reset.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [Stabilizer]. Touch [Initialize+Image Stabilization]. Press the Start key to start stabilizer. The Start key turns red and stays lit up red during the Stabilizer sequence. Stabilizer is completed when the Start key turns blue.

10.6.7 Thick Paper Density Adjustment

Functions	 To fine-adjust density of printed images of each color for thick paper and OHP trans- parencies. (Only black color adjustable for OHP transparencies) 				
Use	 To change the density of the printed image for each color with thick paper and OHP transparencies. 				
Adjustment Range	The default setting is 0. -5 to +5 (step: 1)				
Adjustment Instructions	Light color: Touch the Darker key. Dark color: Touch the Lighter key.				
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [Thick Paper Density Adjustment]. Touch the Lighter or Darker key for the desired color to correct the image density. 				

10.6.8 TCR Toner Supply

Functions	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.
Use	When there is a drop in T/C.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Imaging Process Adjustment] → [TCR Toner Supply]. Select the color, for which supply of toner is to be replenished. 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. These sequences are repeated up to a maximum of four times until the toner density reaches the reference value. If the toner density is found to be higher than the reference

10.6.9 Monochrome Density Adjustment

	T				
Functions	To fine-adjust the density of the printed image for a black print.				
Use	To vary the density of the printed image of a black print.				
Adjustment	The default setting is 0.				
Range -2 to +2 (step: 1)					
Adjustment	If the black is light, touch the Darker key.				
Instructions	If the black is dark, touch the Lighter key.				
Setting/	1. Call the Service Mode to the screen.				
Procedure	 Touch these keys in this order: [Imaging Process Adjustment] → [Monochrome Density Adjustment]. 				
	3. Touch [Lighter] or [Darker] as necessary to correct the image density.				

10.6.10 Dev. Bias Choice

Functions	 To change the setting of the developing bias voltage. When this function is turned ON, it decreases the developing bias voltage, th preventing voltage leak from occurring. 			
Use	Use when patches of white occur in the image in an ambience of low atmospheric pressure, such as in high altitudes. If ON is set, the screen doesn't display [Service Mode] → [Imaging Process Adjustment] → [Gradation Adjust] and the Gradation Adjust is not allowed.			
Setting/ Procedure	The default setting is OFF. ON	"OFF"		

10.7 CS Remote Care

10.7.1 Outlines

- CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone/fax line 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.
 - a. 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.
 - c. Data on adjustment
 - d. Data on setting

NOTE

It cannot be set when the following setting is set to "ON".
 [Administrator Settings] → [Security Settings] → [Enhanced Security Mode]

10.7.2 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.

See P.380

 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.

	Procedure					
Step	Using the telephone line modem	Using the Fax line modem *1	Using E-mail			
0		o the application at CS F not available unless the				
1	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. * For connecting the modular cable, see the manual for the modem.		Be sure to remove the telephone line modem when e-mail is used.			
2	Clearing the RAM 1. Select [Service Mode] → [CS Remove Care], and touch [Detail Setting]. 2. Touch [RAM Clear]. 3. Select Set, and touch [OK]. See P.380					

	Procedure					
Step	Using the telephone line modem	Using the Fax line modem *1	Using E-mail			
3	Selecting the CS Remote Care function Select [Service Mode] → [CS Remove Care] → [System Selection], and touch [Modem].	Selecting the CS Remote Care function Select [Service Mode] → [CS Remove Care] → [System Selection], and touch [Fax].	Selecting the CS Remote Care function Select [Service Mode] → [CS Remote Care] → [System Setting], and touch [E-Mail 1] or [E-Mail 2].			
4			→ [ID Code], and touch [ID Code]. n, and touch [ID Code] again.			
5	Setting the date and time for CS Remote Care 1. Select [Service Mode] → [CS Remote Care], 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]. See P.379					
6	Setting the Center ID 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. 2. Touch [Machine Setting] → [Center ID], and input the Center ID (five digits). See P.379					
7	•		and touch [Detail Setting]. nput Device ID (nine digits).			
8	Proceed to step 9.		 Encryption setting 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. 2. Touch [Basic Setting] and select either Encryption or No Encryption. Retransmission interval on e-mail delivery error When selecting [E-mail2], set the retransmission interval on e-mail delivery error in software SW setting. See P.372 			
9	and touch [Detail Se 2. Touch [Machine Sett phone Number]. 3. Input the telephone	$e] \rightarrow [CS Remote Care],$ tting]. ing] $\rightarrow [Center Tele-$	Setting the Respond Timeout 1. Select [Service Mode] → [CS Remote Care], 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. See P.379			
10	and touch [Detail Se 2. Touch [Machine Sett phone Number].	a] → [CS Remote Care], tting]. ing] → [Device Tele- phone number using the	Proceed to step 11.			

		Proc	edure	
Step	Using the telephone line modem	Using the Fax line modem *1	Using E-mail	
11	Inputting the AT command for initializing the modem 1. Select [Service Mode] → [CS Remote Care] → and touch [Detail Setting]. 2. Touch [AT Command].		Setting the E-mail address 1. Select [Service Mode] → [CS Remote Care] and touch [Server Set]. 2. Touch [Server for RX], and set POP3 serve address, POP3 login name, POP3 password and POP3 port number. See P.381 3. Press [Receive], and set the E-Mail address Mail Check, Connection Time Out and APOP Authentication. See P.381 4. Touch [Send], and set the SMTP server address, SMTP port number, Connection Time Out, and APOP Authentication. See P.381 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. See P.381	
12	Setting the DIPSW for C NOTE This setting is not r Take this step only specific connecting	normally necessary. when necessary in a	Proceed to step 13.	
13	 Executing the initial transmission Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. Touch [initial transmission] key on the right bottom of the screen to start initial transmission. 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. See P.379 		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 dis- played, the current setting information will be deleted, and CS Remote Care set- ting will be displayed. For sending the initial connection E-mail, see the manual for CS Remote Care cen- ter. 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] → [Detail Setting], [Basic Setting] → [E-Mail address].	

10.7.3 Software SW setting for CS Remote Care

NOTE

SW bits data are written into the NVRAM every time a change is made. In case you
changed bit data by accident, be sure to restore the previous state.

A. Input procedure

- Select [Service Mode] → [CS Remote Care] → [Detail Setting], and touch [Software Switch Setting].
- 2. Touch [Switch No.], and input the switch number (two digits) using the 10-key pad.
- 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 "B. List of software SW for CS Remote Care."

B. List of software SW for CS Remote Care

NOTE

· Do not change any bit not described on this table.

	SW No.	Bit	Functions	0	1	Default
	SW 01	0	Dial mode	Pulse	Tone	1
	1		Reservation	_	_	0
		2	Reservation	_	_	0
		3	Reservation	_	_	0
		4	Baud rate	*1	*1	0
		5		*1	*1	0
		6		*1	*1	0
		7		*1	*1	1
	SW 02	0	Emergency transmission	Do not call	Call	1
		1	Auto call on date specification	Do not call	Call	1
		2	Reservation	_	_	0
		3	Reservation	_	_	0
		4	Reservation	_	_	0
		5	Auto call on the IC Life	Do not call	Call	1
		6	Auto call on CCD clamp/gain adjustment failure	Do not call	Call	1
		7	Reservation	_	I	0
<u>3</u>	SW 03	0	Trouble display setting	*10	*10	0
		1	Auto call on the toner empty	Do not call	Call	1
		2	Reservation	_	_	0
		3	Auto call on the waste toner bottle full	Do not call	Call	1
		4 to 7	Reservation			0
	SW 04	0 to 7	Reservation	_		0

SW No.	Bit	Functions	0	1	Default
SW 05	0	Modem redial interval	*2	*2	1
	1		*2	*2	1
	2		*2	*2	0
	3		*2	*2	0
	4 to 7	Reservation	_	_	0
SW 06	0	Modem redial times	*3	*3	0
	1		*3	*3	1
	2		*3	*3	0
	3		*3	*3	1
	4		*3	*3	0
	5		*3	*3	0
	6		*3	*3	0
	7	Reservation	_	_	0
SW 07	0	Redial for response time out	Do not redial	Redial	1
	1 to 7	Reserved	_	_	0
SW 08	0	Retransmission interval on e-mail	*4	*4	0
	1	delivery error	*4	*4	1
	2		*4	*4	1
	3		*4	*4	0
	4 to 7	Reservation	_	_	0
SW 09	0	Retransmission times on e-mail	*5	*5	0
	1	delivery error	*5	*5	1
	2		*5	*5	0
	3		*5	*5	1
	4		*5	*5	0
	5		*5	*5	0
	6		*5	*5	0
	7	Reservation	_	_	0
SW 10	0 to 7	Reservation	_	_	0
SW 11	0	Timer 1	*6	*6	0
	1	RING reception → CONNECT reception	*6	*6	0
	2	reception	*6	*6	0
	3		*6	*6	0
	4		*6	*6	0
	5		*6	*6	1
	6		*6	*6	0
	7		*6	*6	0

01111			_		5 ();
SW No.	Bit	Functions	0	1	Default
SW 12	0	Timer 2 Dial request completed → CONNECT	*7	*7	0
	1	reception	*7	*7	0
	2		*7	*7	0
	3		*7	*7	0
	4		*7	*7	0
	5		*7	*7	0
	6		*7	*7	1
	7		*7	*7	0
SW 13	0 to 7	Reservation	_	_	0
SW 14	0	Timer 4	*8	*8	0
	1	Line connection → Start request	*8	*8	0
	2	telegram delivery	*8	*8	0
	3		*8	*8	0
	4		*8	*8	0
	5		*8	*8	1
	6		*8	*8	0
	7		*8	*8	0
SW 15	0	Timer 5	*9	*9	0
	1	Wait time for other side's response	*9	*9	1
	2		*9	*9	1
	3		*9	*9	1
	4		*9	*9	1
	5		*9	*9	0
	6		*9	*9	0
	7		*9	*9	0
SW 16	0 to 7	Reservation	_	_	0
SW 17	0 to 7	Reservation	_	_	0
SW 18	0	Attention display To set weather to give the alarm display when using the modem but the power for the modem is OFF.	Do not call	Call	1
	1 to 7	Reservation	_	_	0
SW 19 to SW 40	0 to 7	Reservation	_	_	0

*1: Baud rate

Mode	01-7	01-6	01-5	01-4
9600 bps	0	1	1	0
19200 bps	0	1	1	1
"38400 bps"	1	0	0	0

*2: Modem redial interval

Mode	05-3	05-2	05-1	05-0
1 minute	0	0	0	1
2 minutes	0	0	1	0
"3 minutes"	0	0	1	1
4 minutes	0	1	0	0
5 minutes	0	1	0	1
6 minutes	0	1	1	0
7 minutes	0	1	1	1
8 minutes	1	0	0	0
9 minutes	1	0	0	1
10 minutes	1	0	1	0

*3: Modem redial times

Mode	06-6	06-5	06-4	06-3	06-2	06-1	06-0
0 to 9 times	000 0000 to 000 1001						
"10 times"	0	0 0		1	0	1	0
11 to 99 times	000 1011 to 110 (0011				

*4: Retransmission interval on e-mail delivery error

Mode	08-3	08-2	08-1	08-0
0 minute	0	0	0	0
10 minutes	0	0	0	1
20 minutes	0	0	1	0
30 minutes	0	0	1	1
40 minutes	0	1	0	0
50 minutes	0	1	0	1
"60 minutes"	0	1	1	0
70 minutes	0	1	1	1
80 minutes	1	0	0	0
90 minutes	1	0	0	1
100 minutes	1	0	1	0
110 minutes	1	0	1	1
120 minutes	1	1	0	0

*5: Retransmission times on e-mail delivery error

Mode	09-6	09-5	09-4	09-3	09-2	09-1	09-0
0 to 9 times	000 0000 to		000 to 000	1001			
"10 times"	0	0	0	1	1 0		
11 to 99 times	000 1011 to 110 0011						

*6: Timer 1 (RING reception → CONNECT reception)

Mode	11-7	11-6	11-5	11-4	11-3	11-2	11-1	11-0
0 to 31 sec	0000 0000 to 0001 1111							
"32 sec"	0	0	1	0	0	0	0	0
33 to 255 sec	0010 0001 to 1111 1111							

*7: Timer 2 (Dial request completed → CONNECT reception)

Mode	12-7	12-6	12-5	12-4	12-3	12-2	12-1	12-0
0 to 63 sec	0000 0000 to 0011 1111							
"64 sec"	0	1	0	0	0	0	0	0
65 to 255 sec	0100 0001 to 1111 1111							

*8: Timer 4 (Line connection → Start request telegram delivery)

Mode	14-7	14-6	14-5	14-4	14-3	14-2	14-1	14-0
0 to 31 (x 100 msec)	0000 0000 to 0001 1111							
"32 (x 100 msec)"	0	0	1	0	0	0	0	0
33 to 255 (x 100 msec)	0010 0001 to 1111 1111							

*9: Timer 5 (Wait time for other side's response)

Mode	15-7	15-6	15-5	15-4	15-3	15-2	15-1	15-0
0 to 29 sec	0000 0000 to 0001 1101							
"30 sec"	0	0 0		1	1	1	1	0
31 to 255 sec	0001 1111 to 1111 1111							

3 *10: Trouble display setting

• Select the message for the trouble automatic notification when the machine is connected to the CSRC from among the following two, either the message when the machine is connected to the CSRC (The service representative will automatically be notified.) or the message when the machine is not connected to the CSRC (Please contact your service representative.).

If the message when the machine is not connected to the CSRC is selected in the condition in which the machine is connected to the CSRC, the CS Remote Care center is automatically notified of any trouble that may occur and the message given on the control panel is that when the machine is not connected to the CSRC.

 This function is available only when the function enhanced version 3 or later firmware is installed.

Mode	03-0
"The message when the machine is not connected to the CSRC is given."	0
The message when the machine is connected to the CSRC is given.	1

10.7.4 Setup confirmation

- Follow the steps below to make sure that CS Remote Care has been properly set up.
- 1. Call the Service Mode to the screen.
- 2. Touch [CS Remote Care].
- 3. Check to make sure that only selected item is displayed.

10.7.5 Calling the maintenance

 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.

A. When starting the maintenance

- 1. Select Service Mode and touch [CS Remote Care].
- 2. Touch [ID Code], and input ID Code.
- 3. Touch [ID Coke].

B. When finishing the maintenance

- 1. Select Service Mode and touch [CS Remote Care].
- 2. Touch [Maintenance Complete].

^{*} The Start key blinks while maintenance is being carried out.

10.7.6 Calling the center from the administrator

- When the CS Remote Care setup is complete, the administrator can call the CS Remote Care center.
- 1. Select [Administrator Settings], and touch [System Connection].
- 2. Touch [Admin. transmission].
- 3. Press the Start key.

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.

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.

10.7.7 Checking the transmission log

- · The transmission log list will be output to be checked.
- 1. Select [Service Mode] → [CS Remote Care], and touch [Detail setting].
- 2. Touch [Communication Log Print].
- 3. Load tray 1 or bypass tray with A4S paper.
- 4. Press the Start key to output transmission log.

10.7.8 Detail on settings

A. System Selection

Functions	To select the system type for remote diagnosis.				
Use	Use to newly build or change the system.				
Setting/ Procedure		Select E-Mail, Modem, or Fax. Fax is available only when the optional fax kit is being installed.			
	E-Mail	Modem	Fax		

B. ID Code

Functions	To register the service ID.
Use	Use when registering and changing service ID.
Setting/ Procedure	 Enter a 7-digit code from the 10-key pad. (0000001 to 9999999) Registration> Touch ID code and enter the service ID. Touch [ID code] to register the ID. The [Detail Setting] will appear when the ID has been registered.

C. Detail Setting

(1) Basic Setting

Functions	 Execu 	te the primary setting.							
Use		change the set contents.	D	2					
0 -44:/		o register the machine to the CS Remote Care center. the Service Mode to the screen.							
Setting/ Procedure		ouch [CS Remote Care].							
		3. Touching the [Detail Setting] will display the primary setting.							
	 Set the 	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							
		ss of the center is displayed.	•	, ,					
	* When e	• •	keys and l	keys on the screen have following					
		ose : Waits to start transm	•	•					
		Wait : Detects the dial tone fone dial : Carry out tone dialin		ner end					
		Pulse dial : Carry out tone diali	•						
	[*], [#] : To be used as neces	ssary						
	Set the Up to Select When When the we When <center select="" td="" throug<=""><td colspan="8"><schedule (only="" [e-mail2]="" is="" selected)="" the="" when=""> 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 (only="" [e-mail2]="" is="" notification="" selected)="" the="" when=""> 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.</center></schedule></td></center>	<schedule (only="" [e-mail2]="" is="" selected)="" the="" when=""> 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 (only="" [e-mail2]="" is="" notification="" selected)="" the="" when=""> 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.</center></schedule>							
	[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 • Multip	ole items of data can be selec only EKC data cannot be sent	ted and s together	ent at one time. However, be sure 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) Date & Time Setting

Functions	To set the data and time-of-day.
Use	Use to set or change the date and time-of-day.
Setting/ Procedure	1. Call the Service Mode to the screen. 2. Touch [CS Remote Care]. 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.

(3) RAM Clear

Functions	To clear the following data at the could Code, Primary Setting, Date/Tin Command.	enter ne Input (Time Zone), Software SW Setting and AT
Use		
Setting/ Procedure	The default setting is "Unset." Set	"Unset"

(4) Communication Log Print

Functions	To print out the communication log.
Use	Use to output and use the communication log.
Setting/ Procedure	 Call the Service Mode on the screen. Touch [CS Remote Care]. Touch [Detail Setting] to access communication log print. Load tray 1 or bypass tray with A4S or 8½ x 11 paper. Press Start key to print out the communication log.

(5) Software Switch Setting

Functions	To change the CS Remote Care settings.
Use	To change the settings for CS Remote Care as necessary.
Setting/ Procedure	Refer to "Software SW setting for CS Remote Care" for the setting. See P.372

(6) Response Time Out

Functions	It sets the intervals for resending e-mails when transmission error occurred. It can be set only when [E-Mail] is selected by System Setting.
Use	 To use when changing the intervals for resending e-mails when transmission error occurred.
Setting/ Procedure	The default setting is 60 minute. "60 minute" (10 to 1440)

D. AT Command

	 To set the command to be issued at the time of modem initialization. This setting is available only when [Modem] is selected for the system setting.
Use	To set the command to be issued at the time of modem initialization.
Setting/ Procedure	Enter the command and touch [SET] to register.

E. Server Setting

• Server Setting can be set only when [E-Mail] is selected by System Setting.

(1) Server for RX

<POP3 server>

Functions	To set the POP3 server address used for the CS Remote Care.
Use	To set the address of the POP3 Server. POP3 server address can be set with IP address or the domain name.
Setting/ Procedure	<input address="" ip=""/> • IP address version 4 format [0 to 255].[0 to 255].[0 to 255]
	<input fqdn=""/> • Enter the domain name.

<POP3 login name>

Functions	To set the logon name for the POP3 server used for the CS Remote Care.
Use	To set the logon name for the POP3 server.
Setting/ Procedure	 The default setting is No. Up to 64 characters (alphanumeric characters and symbols) can be used.

<POP3 password>

Functions	To set the logon password for the POP3 server used for the CS Remote Care.
Use	To set the logon password for the POP3 server.
	The default setting is No. Up to 15 characters (alphanumeric characters and symbols) can be used.

<POP3 port number>

Functions	To set the POP3 port number used for the CS Remote Care.
Use	To set the port number for the POP3 server.
Setting/ Procedure	The default setting is 110.
Flocedule	"110" (1 to 65535)

(2) Receive

<E-mail Address>

Functions	To set the e-mail address used for the CS Remote Care.
Use	To set the e-mail address.
Setting/	The default setting is No.
Procedure	 Up to 129 characters (alphanumeric characters and symbols) can be used.

<Mail Check>

Functions	To set whether or not to use mail check and the time interval for the POP server used for the CS Remote Care.
Use	To set whether or not to use mail check and the time interval for the POP server used for the CS Remote Care. To change the time interval for mail check.
Setting/ Procedure	The default setting is No. "No" (1 to120 min., No)

<Connection timeout>

Functions	To set the timeout period for connection during reception.
Use	To change the timeout period for connection during reception.
Setting/ Procedure	The default setting is 60 Sec.
	"60 Sec" (30 to 300 Sec)

<APOP Authentication>

Functions	To set whether or not to authenticate the APOP during reception.	
Use	To authenticate the APOP during reception.	
Setting/ Procedure	The default setting is No.	
Frocedure	Yes	"No"

(3) Send

<SMTP server>

Functions	To set the SMTP sever address for transmission used for the CS Remote Care.
Use	 To set the SMTP server address. SMTP server address can be set by the IP address or the domain name.
Setting/ Procedure	IP address> • IP address version 4 format [0 to 255].[0 to 255].[0 to 255].
	<input fqdn=""/> • Enter the domain name.

<SMTP port number>

Functions	To set the SMTP port number for transmission used for the CS Remote Care.	
Use	To set the Port Number of the SMTP Server.	
Setting/ Procedure	The default setting is 25. "25" (1 to 65535)	

<SMTP Connection Time-out>

Functions	To set the timeout period for transmission.	
Use	To change the timeout period for connection during transmission.	
Setting/ Procedure	The default setting is 60 Sec.	
	"60 Sec" (30 to 300 Sec)	

<Authentication Setting>

Functions	To set whether or not to authenticate during transmission via SMTP server.		
Use	To use when authenticating during transmission. Available authentication mode: POP Before SMTP, SMTP authentication		
Setting/ Procedure	The default setting is OFF.		
	"OFF" POP Before SMTP SMTP Authentication		
	* Setting to "POP Before SMTP" will set the time for POP Before SMTP.		
	The default setting is 60 Sec. "60 Sec" (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.		

(4) TX/RX Test

Functions	To determine the correct transmission and reception using CS Remote Care.
Use	Use to determine the correct transmission and reception using CS Remote Care.
Setting/ Procedure	 Press the Start key to let the machine start the transmission and reception test. The test procedure and result will be displayed on the screen.

(5) Data Initialization

Functions	To initialize the contents for the sever setting.	
Use	Use to initialize the contents for the server setting.	
Setting/	The default setting is No.	
Procedure	Yes "No"	

10.7.9 List of the CS Remote Care error code

A. When connecting by modem

Error code	Error	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.
8000	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	If the same error is detected several times, turn the modem power OFF and ON.	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 (When selected baud rate is out of the specifica- tion (9600 bps to 38400 bps).)	Check the baud rate of the soft- ware DipSW.
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 center ID setting of the main body side.

Error code	Error	Solution
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 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 machine ID yet.)	Check device ID setting of the main body side. Check the setting of the host side.
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.
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.
0027	Transmission / receiving collision (Receiving is detecting during transmitting processing)	Try communication again.

NOTE

 When a code other than the ones listed above is displayed, contact KMBT and inform the error code.

B. When connecting by e-mails

Error code	Error	Solution
0001	Connection timeout during transmission	Check the SMTP server on
0001	ů	User side.
0###	Transmission error ***: SMTP responding code (hexadecimal)	Check the SMTP server on User side.
0003	Connection timeout when receiving	Check the POP3 server on User side.
0005	Receiving error	Check the POP3 server on User side.
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.
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.
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.
1084	Date expired Expiration date for data modification command has passed.	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.
2039	Socket is not connected. • LAN cable on the copier side is detached.	Check the SMTP server and POP3 server on user side.
203E	Network is down. • LAN cable on the copier side is detached.	Check the connection between the copier on the user's side and the network connector. Check the network environment on the user's side.
3000	POP3_AUTHORIZATION_ERR	Check the POP3 server envi- ronment on user's side.
3001	POP3_TRANSACTION_ERR	Check the POP3 server envi- ronment on user's side.
3002	POP3_CONNECT_ERR	Check the POP3 server envi- ronment on user's side.
3003	POP3_TIMEOUT_ERR	Check the POP3 server envi- ronment on user's side.
3004	POP3_FORMAT_ERR	Check the POP3 server envi- ronment on user's side.
3005	POP3_MEMORY_ERR	Check the POP3 server envi- ronment on user's side.
3006	POP3_JOBID_ERR	Check the POP3 server envi- ronment on user's side.
3007	POP3_NO_DATA_ERR	Check the POP3 server envi- ronment on user's side.

Error code	Error	Solution
3008	POP3_DELETE_FAIL_ERR	Check the POP3 server environment on user's side.
3009	POP3_MAILBOX_FULL	Check the POP3 server envi- ronment on user's side.
4103	Not ready Tried to transmit or receive an e-mail when the machine was not yet in the e-mail receiving status after power was turned ON.	Wait for a while and try trans- mitting again.
4104	SMTP channel not ready	Wait for a while and try trans- mitting again.
4105	POP3 channel not ready	Wait for a while and try trans- mitting again.
4106	Not Ready other than the ones listed above.	Wait for a while and try trans- mitting again.

NOTE

When a code other than the ones listed above is displayed, contact KMBT and inform the error code.

C. When connecting by Fax modem

Error code	Error	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 trans- mitting 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 KMBT and inform the error code.
R84	NVRAM writing error.	Contact KMBT and inform the error code.

NOTE

 When a code other than the ones listed above is displayed, see the FK-502 Service Manual.

10.7.10 Troubleshooting for CS Remote Care

If communication is not done properly, check the condition by following the procedures shown below.

- 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.
- * 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. See P.384
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 envi- ronment of the center side.

10.8 System 1

10.8.1 Marketing Area

Functions	To make the various settings (language, paper size, fixed zoom ratios, etc.) according to the applicable marketing area.			
Use	Upon setup.			
Setting/ Procedure	<marketing area=""> Select the applicable marketing area and touch [END] to set the marketing area. </marketing>			
	* Those are the	JAPAN US Europe Others1 Others2 Others3 Others4		
	* These are the languages that can be selected on the Utility screen according to different marketing area settings:			
	Japan English, Japanese			
	US	English, French, Spanish, Japanese		
	Europe	English, French, Italian, German, Spanish, Japanese		
	Others1	English, French, Spanish, Japanese		
	Others2 English, French, Spanish, Traditional Chinese, Hungle			
	Others3 English, Simplified Chinese			
	Others4 English, Traditional Chinese			
	<fax target=""> 1. Touch the [Fax 2. Select the app</fax>	Target]. licable marketing area using [+] and [-] keys, and touch [END].		

10.8.2 Tel/Fax Number

Functions	To enter the tel/fax number of the service contact that will appear on the control panel when a malfunction occurs in the machine.
Use	Upon setup.
Setting/ Procedure	Enter the tel/fax number (19 digits) from the 10-key pad. Use Interrupt key to enter ""

10.8.3 Serial Number

Functions	To register the serial numbers of the machine and options. The numbers will be printed on the list output. To use the serial number as Machine ID during CS Remote Care communication.
Use	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.
Setting/ Procedure	Type the serial numbers. Printer, Scanner, ADF, LCT, Sorter/FN, Duplex, Vendor, Fax1, Fax2

10.8.4 No Sleep

Functions	To display the option of "OFF" for the administrator settings.	sleep mode setting screen available from
Use	To display the option of "OFF" for the sleep mode setting. NOTE The sleep mode will begin in 48 hours even if it sets it to "OFF."	
Setting/ Procedure	The default setting is "Prohibit."	
	Permit	"Prohibit"

10.8.5 Foolscap Size Setting

Functions	To set the size for f	oolscap pape	er.		
Use	Upon setup.To change the size	for foolscap	paper.		
Setting/ Procedure	Select the size from	Ü	J	01/ 101/	0 10
	220 x 330 mm	$8^{1}/_{2} \times 13$	8¹/₄ x 13	$8^{1}/_{8} \times 13^{1}/_{4}$	8 x 13

10.8.6 Original Size Detection

Functions	To change the document size detection table.	
Use	Use to change the setting for the document size detection table.	
	Copy Glass: To change the size d	etection table for the document glass.
Setting/	<copy glass=""></copy>	
Procedure	The default setting is "Table1."	
	"Table1"	Table2
	NOTE Table 2 can be set only when orig mounted.	inal size detection 2 sensor is being

10.8.7 Install Date

Functions	To register the date the main body was installed.
Use	Upon setup.
Setting/ Procedure	 Call the Service Mode on the screen. Select the key as follows. [System 1] → [Install Date]. Enter the date (Year 4 digit → Month 2 digit → date 2 digit) from the 10-key pad. Touch [Entry] to set the date of installation.

10.8.8 Initialization

A. Data Clear

Functions	To initialize the setting data.	
Use	To clears the setting data. For details on items to be cleared, see "Contents to be cleared by reset function." See P.451	
	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.	
Setting/ Procedure	 Call the Service Mode to the screen. Select the key as follows. [System 1] → [Initialization] → [Data clear]. Press the Start key. When [OK] is displayed, turn off the main power switch and turn it on again more than 10 seconds after. 	

B. System Error Clear

Functions	To reset the trouble data.
Use	Use to clear the [Jam], [Trouble], [Error] displays, and other improper displays. For details on items to be cleared, see "Contents to be cleared by reset function." See P.451
Setting/ Procedure	 Call the Service Mode to the screen. Select the key as follows. [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.

10.8.9 Trouble Isolation

	T
Functions	 Individual units and options have a set or unset setting for the trouble isolation func- tion.
Use	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 second of the units that are not affected by separately controlling them and isolating other units that have a problem. The second 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, LCT, manual, Half-Fold/Tri-Fold Center Stapling, Staple and Scanner.
	Though trouble isolation 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 "Trouble shooting" section for the corresponding trouble codes. See P.486
Setting/	The default setting is Unset for individual units and options.
Procedure	Set "Unset"
	After changing the setting, touch [Decision] and turn the main power switch OFF and ON to make the new setting effective.

10.8.10 IU Life Setting

	Functions	To set the life threshold for imaging units.
	Use	 Use this setting when a gap appears between the actual life value of imaging unit and the life specification value due to the way * a machine is used. Comparing the PC drum rotation time with the PC drum rotation time calculated based on the number of printed pages, the machine detects the end of unit life using the one that reaches the life specification value earlier. This setting aims to extend the life threshold for the PC drum rotation time and achieve a longer imaging unit life.
À		Normal : detects the end of life when the life specification value is reached. Long (Suspend): detects the end of life when a value greater (longer) than the life specification value is reached.
		*The product specification value is determined based on what types of printing are made on the machine. If the types of printing made on the machine are different from the specified printing conditions, the life value of the imaging unit tends to be different from the life specification value. See conditions for life specification values in the service manual titled maintenance for more information on printing conditions. See P.19
î		NOTE • The options that can be selected are [Normal] / [Suspend], if the firmware of function enhanced version 1 or later is mounted. • When "Long (Suspend)" is selected, images printed after the life specification value is out of guarantee. The life counter value of imaging unit is accessed from [Service Mode] → [Counter] → [Life]. • Before making this setting, be sure to check that the machine does not display any message that warns each of imaging units, fusing unit, or image transfer belt unit reaches their life value.
<u>1</u>	Setting/ Procedure	The default setting is Normal. "Normal" Long (Suspend)
		NOTE • When the setting has been changed, turn off the sub power switch and turn it on again.

10.8.11 Change Warm Up Time

Functions	To change the warm up time.				
Use	With the warm-up time set to mode 1, if monochrome printing is made immediately after a warm-up cycle and a paper curl problem occurs, change the setting to mode2. With the use of recycled or low quality paper, if a paper curl problem or other paper curl related failures occur immediately after a normal warm-up cycle, set the setting to mode 3 or mode 4. Other paper curl related failures include jam, paper ejection failure, and punch/staple/fold position failure. The following table shows the warm-up time (normal warm-up) in each mode.				
		bizhub C353 bizhub C253/C203			C253/C203
	Mode 1	Monochrome: 30 : Color: 41 sec.	sec.	Monochrome: 2 Color: 37 sec.	7 sec.
Mode 2 Monochrome: 41 sec. Color: 41 sec.		Monochrome: 40 sec. Color: 40 sec.			
	Mode 3 Monochrome: 41 sec. Monochrome: 40 sec. Color: 41 sec. Color: 40 sec.		0 sec.		
Mode 4 Monochrome: 130 sec. Color: 130 sec.		Monochrome: 1 Color: 140 sec.	40 sec.		
Setting/ Procedure	The de	fault setting is Mod			
		"Mode 1"	Mode 2	Mode3	Mode4

10.8.12 Machine State LED Setting

Mac	Attention Toner supply door open Improper toner cartridge placement Near life Alert code Trouble isolation	Blinking Blinking Unlit	Type2 Blinking Unlit Unlit	
Warning statuses	Toner supply door open Improper toner cartridge placement Near life Alert code	Blinking Unlit	Unlit	
Warning statuses	Alert code	Unlit		
Warning statuses			Liplit	
Warning statuses	Trouble isolation	D:: 11	Utilit	
		Blinking	Blinking	
	Fatal error Trouble code Jam Door opened Life stop	Lit	Lit	
Amount of paper remaining (Tray 1 and 2)	100 % to 66 % of paper remaining	Unlit	Unlit	
	Near empty	Blinking	Unlit	
	Empty	Lit	Lit	
	Being lifted up Door opened or closed	Unlit	Unlit	
Amount of paper remaining (Tray 3 and 4, LCT)	100 % to 33 % paper remaining	Unlit	Unlit	
	33 % to near empty	Blinking	Unlit	
	Near empty	Blinking	Unlit	
	Empty	Lit	Lit	
	Being lifted up Door opened or closed	Unlit	Unlit	
Each default setting is Type1.				
"Type 1" Type 2				
	remaining (Tray 1 and 2) Amount of paper remaining (Tray 3 and 4, LCT) Each default setting "Typ	Door opened Life stop Amount of paper remaining (Tray 1 and 2) Amount of paper remaining (Tray 1 and 2) Empty Being lifted up Door opened or closed 100 % to 33 % paper remaining 33 % to near empty Near empty Empty Empty Being lifted up Door opened or closed 100 % to 33 % paper remaining 33 % to near empty Near empty Empty Being lifted up Door opened or closed • Each default setting is Type1. "Type 1" Type 2 NOTE • [Type 2] is the default setting, if the firmware of function e	Door opened Life stop In the stop	

<u>1</u>

10.9 System 2

10.9.1 HDD

Functions	
Use	Not used.
Setting/ Procedure	Tel deed.

10.9.2 Image Controller Setting

Functions	 To set the type of the controller. [Peripheral Mode] appears when [Others] is selected. 			
Use	When setting up the controller.			
Setting/	Image Controller Setting			
Procedure	Select the controller to be used.			
1 Tocedure	"Controller 0": The standard controller is used.			
	Controller 1 : The optional image controller IC-409 is used.			
	Controller 2 : undefined.			
	Controller 3 : undefined.			
	Others : undefined.			
	Peripheral Mode			
	· ·			
	 This setting is available when the Image Controller Setting is set to "Others." Mode 1: undefined. 			
	Mode 2: undefined.			
	Mode 3: undefined.			
	NOTE			
	When the following setting is "ON", this setting should be set to "Controlled"			
	0". [Administrator Settings] → [Security Settings] → [Enhanced Security Mode] When [Enhanced Security Mode] is set to "ON", this setting cannot be changed.			
	 After changing setting, make sure to turn off the main power switch and turn on again more than 10 seconds after. 			
	Note on returning the setting from "Controller 1" to "Controller 0". • Selecting "Controller 0" will initialize the following settings made while "Controller was selected. Reset the following items as necessary when using the internal standard controller.			
	<control machine="" on="" panel="" the=""></control>			
	 Setting items included in [Network Setting] available from [Administrator Setting]. (Except [Status Notification Setting] and [Prefix/Suffix Setting] available from the following setting. [Administrator Settings] → [Network Settings] → [Detail Settings].) The following setting 			
	[Administrator Settings] → [User Authentication /Account Track] →[General Settin → [External Server]			
	The following setting			
	[Administrator Settings] → [System Connection] → [IS OpenAPI Setting]			
	Mailbox Destination (scan)			
	Information on the original specified by the program destination			
	<page connection="" scope="" web=""> • SSL/TLS</page>			

10.9.3 Option Board Status

Functions	To set when the optional fax mount kit, scan accelerator is mounted.		
Use	Use when setting up the optional fax mount kit, scan accelerator is mounted.		
Setting/ Procedure	 Setting modes are Fax (circuit 1), Fax (circuit 2) and JPEG. The default settings are "Unset." 		
	Fax (circuit 1) Fax (circuit 2) JPEG	: Set : Set : Set	"Unset" "Unset" "Unset"
	NOTE • When the setting on again more that		ed, turn off the main power switch and turn it ter.

10.9.4 Consumable Life Reminder

Functions	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, imaging unit (C, M, Y, K)
Use	Use to select not to give the display of PM parts lifetime.
Setting/	The default setting is "Yes."
Procedure	"Yes" No

10.9.5 Unit Change

Functions	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.			
Use	Upon setup			
Setting/ Procedure	- The following are the default settings:			
	Toner Cartridge Imaging Unit Waste Toner Box Punch Dust Box	: User "Ser	ice "User" vice" "User"	e, Others1/2/3 Service Service Service Service
	<warning display=""> Toner Near Empty</warning>	: "Yes"	No	

Software Switch Setting 10.9.6

Functions	To set the operating characteristic of each function from software switch depending
Use	on what types of printing are normally made.
Setting/	1. Touch [Software Switch Setting].
Procedure	2. Touch [Switch No.] and enter the intended switch number with the ten-key pad.
	3. Touch [Bit Assignment].
	4. Use $[\leftarrow]$ or $[\rightarrow]$ to select a bit. To set the bit, enter 0 or 1 with the ten-key pad.
	5. To set the bit in hex, touch [HEX Assignment] and use the ten-key pad and [A] to [F]
	keys to enter numbers and characters.
	6. Touch [Fix].

A. Setting items in the software switch setting

(1) ACS mode control change

Functions	To change the 1st image transfer roller pressure/retraction operation control in ACS mode.
Use	 When a user makes mainly monochrome prints, selecting 01 may allow avoiding the PC drum wear-out caused by unnecessary rotation of color imaging units. HEX Assignment 00: The color print (pressed) position is set as the default position
	of the 1st image transfer roller. (Default setting) HEX Assignment 01: The monochrome print (retracted) position is set as the default position of the 1st image transfer roller.
Setting/ Procedure	1. Touch [Software Switch Setting]. 2. Touch [Switch No.] and enter "50" with the ten-key pad. 3. Touch [HEX Assignment] and enter "00" or "01" with the 10-key pad. 4. Touch [Fix].

$\underline{\hat{\textbf{3}}}$ (2) Secure Print shortcut key display in the User Box mode menu

• This function is available only when the function enhanced version 3 or later firmware is installed.

Functions Use	To display the [Secure Print] shortcut key in the User Box mode menu (the default setting is not shown). bit0-0: Does not display the shortcut key bit0-1: Displays the shortcut key
Setting/ Procedure	 Touch [Software Switch Setting]. Touch [Switch No.] and enter "69" with the ten-key pad. Touch [BIT Assignment] and select "bit0" with [←]/[→] key. Enter "0" or "1" with the 10-key pad. Touch [Fix].



(3) Printing on paper of nonstandard size fed from the bypass tray (AnySize mode) • This function is available only when the function enhanced version 3 or later firmware is

installed.

Functions Use	To enable printing only by the setting made on the printer driver when printing is attempted on paper of nonstandard size fed by way of the bypass tray (the default setting is the conventional operation). bit0-0: Conventional operation bit0-1: The print cycle is initiated for the paper specified on the printer driver regardless of the bypass tray paper setting.
Setting/ Procedure	 Touch [Software Switch Setting]. Touch [Switch No.] and enter "69" with the ten-key pad. Touch [BIT Assignment] and select "bit2" with [←]/[→] key. Enter "0" or "1" with the 10-key pad. Touch [Fix].

10.9.7 **Scan Caribration**

Functions	To set whether to use the calibration adjustment value set prior to the shipping.		
Use	 To be used when CCD unit has been changed. After replacing the CCD unit, the default 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). The original calibration adjustment value can be disabled to address image failure and other problems caused by individual CCD performance difference. 		
Setting/ Procedure	The default setting is ON. "ON" NOTE	OFF	
When the setting is changed, the function becomes ava sub power switch OFF and ON again.			

10.9.8 **LCT Paper Size Setting**

Functions	To set the paper size for the LCT.		
Use	Use to change the paper size for the LCT (PC-405).		
Setting/ Procedure	The default setting depends on the s	setting made for the applicable marketing area.	
Procedure	A4	8 ¹ / ₂ x 11	

10.9.9 Line Mag Setting

Functions	To set whether to use the offset value which has been set prior to the shipping.		
Use	To be used after replacing the CCD unit. After replacing the CCD unit, the default 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). The original offset value can be disabled to address image failure and other problems caused by individual CCD performance difference.		
Setting/ Procedure	The default setting is ON. "ON"	OFF	
	NOTE When the setting is changed, the funct power switch OFF and ON again.	tion becomes valid by turning the sub	

10.9.10 Data Capture

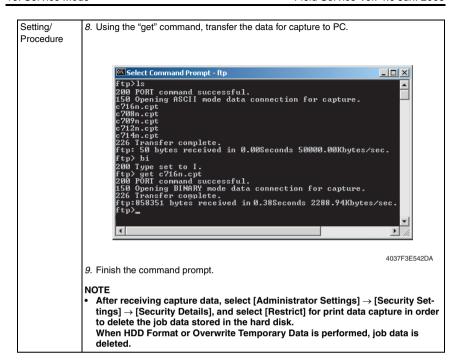
Functions	When an error occurs, it acquires the print job data in order to analyze the cause of the error.		
Use	When an error occurs, this will be used to analyze the cause of the error according to the print job data.		
Setting/ Procedure	NOTE • The following conditions are necessary for this function. When selecting [Security Setting] → [Security Details] → [Print Data Capture] in Administrator Settings, [Allow] must be set. The hard disk must be mounted to the machine. When selecting [Administrator Settings] → [Network Settings] → [FTP Settings], [FTP Server Settings: ON] must be set. • This function is not available when the optional image controller IC-409 is mounted. 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 The original offset value can be disabled to address image failure and other problems caused by individual CCD performance difference. Check the IP address of the machine. Connect the PC (Windows) and the machine with ethernet cable. Start the DOS command prompt of the PC, and specify the IP address of the machine to start FTP.		
	M Select Command Prompt - Rp Microsoft Windows 2000 [Uersion 5.00.2195] (G) Copyright 1985-2000 Microsoft Corp. C:\Stp 172.16.0.225 Connected to 172.16.0.225. 228 KONICA MINOLIA FTP gerver ready.		

Field Service Ver. 4.0 Jun. 2008 10. Service Mode Setting/ 5. Input the user name and the password. Procedure User name: capture Password: sysadm Select Command Prompt - ftp _ | 🗆 | × | Microsoft Windows 2000 [Version 5.00.2195] (C) Copyright 1985-2000 Microsoft Corp. C:\>ftp 172.16.0.225 Connected to 172.16.0.225. 220 KONICA MINOLIA FIP server ready. User (172.16.0.225:(none)>: capture 331 Password required for capture. Password: 230 User capture logged in. ftp> 4 F 4037F3F539DA 6. Using the "Is" command, display the list of the file available for capture. Select Command Prompt - ftp Microsoft Windows 2000 [Version 5.00.2195] (C) Copyright 1985-2000 Microsoft Corp. C:\>ftp 172.16.0.225 Connected to 172.16.0.225. 220 KONICA MINOLIA FIP server ready. User (172.16.0.225:(none)>: capture 331 Password required for capture. Passyond Password: 230 User capture logged in. ftp>1s ftp)1s
200 PORI command successful.
150 Opening ASCII mode data connection for capture.
c?16n.cpt
c?08n.cpt
c?09n.cpt
c?12n.cpt
c?14n.cpt
c?14n.cpt
c?14n.spt
c?14n.spt
c?14n.spt
c?150 bytes received in 0.00Seconds 50000.00Kbytes/sec. 1 F 4037F3F540DA

7. Using the "binary" command, set the File transfer mode to the binary transfer.

```
Select Command Prompt - ftp
                                                                                 _ U ×
ftp>ls
200 PORT command successful.
150 Opening ASCII mode data connection for capture.
 716n.cpt
c708n.cpt
c70611.cpc
c709n.cpt
c712n.cpt
c714n.cpt
226 Transfer complete.
ftp: 50 bytes received in 0.00Seconds 50000.00Kbytes/sec.
ftp> bi
200 Type set to I.
ftp>
1
                                                                                     Þ
```

4037F3E541DA



10.9.11 Split Line Detect. Setting

A. Prior Detection

Functions	To set the detection level for the pre-detection of stain on the ADF original glass.			
Use	power being ON, recover Not Set : Detection Low : Stain on Normal : Normal length High : Stain on NOTE Be aware that selecting will [Service Mode] → [M	g/closing ADF as vering from the sle of stain on the glathe glass will not be evel detection. the glass will easily mg "Not Set" and display "NG." achine] — [Thin belected, the origin	well as its detection leve ep/low power mode, etc ass will not be conducte be detected easily.	el as the main/sub
Setting/	The default setting is "l	Normal."		
Procedure	Not Set	Low	"Normal"	High

B. Warning Level

Functions	To set how to display the warning when stain on the ADF original glass is detected.			
Use	Use when changing the display of the warning which requests the cleaning of the stain on the glass detected by the pre-detection of the lines. O: Warning will not be displayed. I: Warning will be displayed by the maintenance mark. (warning code: D-1/D-2) 2: Warning will be displayed on the message area on the basic screen. Warning will be displayed on all screens.			
	NOTE This setting is invalid when [Prior Detection] is set to "Not Set."			
Setting/	The default setting is	s 2.		
Procedure	0	1	"2"	3

C. Paper Passaging Detection

Functions	 To set the operation for detection and removing operation of stain on the ADF original glass when feeding the original. 				
Use	Use when changing the operation for detection and removing operation of stain on the ADF original glass when feeding the original. The glass will stop moving when the original is fed, and will not perform removing the stain. The glass will move between originals when feeding the original. When the original is fed, the glass will move while reading the original in order to remove the stain, and reduce the lines. The love is the original is fed, the glass will move while reading the original in order to remove the stain. The lines will be reduced also by the image process control. The level 3, 4, 5, and 6 of the image process are set in this order with 3 being the most efficient in reducing the lines. NOTE When this function is used, an image quality problem might be occurred in the				
	side effect by the image processing control according to the dirt condition of the original glass.				
	 When setting to "0" or "1", the setting area available for the administrator by the following setting will be restricted to "0 (Disable)" or "1 (Enable)." [Administrator Setting] → [System Setting] → [Expert Adjustment] → [Line Detection] → [Detection While Feeding Setting] 				
Setting/	The default setting is 1.				
Procedure	0 to 6				

10.9.12 Stamp

Functions	To set the mounting status of the optional stamp unit SP-501.		
Use	To use when setting up the stamp unit SP-501.		
Setting/ Procedure	The default setting is Unset.		
Frocedure	Set	"Unset"	

10.9.13 Network Fax Settings

Functions	To set whether or not to use network fax function.		
Use	To use network fax function (IP address fax, internet fax). Selection will be available when each network fax function is set to "ON" in the following settings. [Administrator Settings] → [Network Settings] → [Network Fax Settings] → [Network Fax Function Settings]		
Setting/ Procedure	The default settings are OFF. IP Address Fax: ON "OFF" SIP-Fax: Not Used Internet Fax: ON "OFF"		5

10.10 Counter

 The counter displays the counts of various counters to allow the technical representative to check or set as necessary.

10.10.1 Procedure

- 1. Touch [Counter] to show the counter menu.
- 2. Select the specific counter to be displayed.
- 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.

10.10.2 Life

Functions	To check the number of hours or times each of the different maintenance parts has been used. To clear the count of each counter.		
Use	When each of the mainter	nance parts is replaced.	
Setting/ Procedure	 To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation. 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, which are provided with a new unit detection function. 		
	<1> Fusing Unit Image Transfer Belt Unit 1st. 2nd. 3rd. 4th. Manual Tray	: Number of times a sheet of paper is fed through : Number of times a sheet of paper is fed through : Number of sheets of paper fed from tray 1 : Number of sheets of paper fed from tray 2 : Number of sheets of paper fed from tray 3 : Number of sheets of paper fed from tray 4 : Number of sheets of paper fed from the bypass	
	<2> • Imaging Unit (C)	: Period of time over which the cyan imaging unit has been used.	
	 Imaging Unit (M) 	: Period of time over which the magenta imaging unit has been used.	
	Imaging Unit (Y)	: Period of time over which the yellow imaging unit has been used.	
	Imaging Unit (K)	: Period of time over which the black imaging unit has been used.	
1	LCT PartsADF Feed	Number of sheets of paper fed from the LCT Number of sheets of paper fed through the take-up section of the ADF	
	ADF Reverse	: Number of sheets of paper fed through the turnover unit of the ADF	
	 Sorter/Finisher 	: Number of sheets of paper fed out of the sorter/finisher	

Setting/	<3>
Procedure	TCR new article detection (C) : Period of time over which the cyan toner cartridge has been used.
	TCR new article detection (M): Period of time over which the magenta toner cartridge has been used.
	TCR new article detection (Y) : Period of time over which the yellow toner cartridge has been used.
	TCR new article detection (K) : Period of time over which the black toner cartridge has been used.

10.10.3 Jam

Functions	 To check the number of misfeeds that have occurred at different locations in the machine. To clear the count of each counter.
Use	To check the number of paper misfeeds that have occurred.
	 To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation.

10.10.4 Service Call Counter

Functions	 To check the number of malfunctions that have occurred at different locations in the machine. To clear the count of each counter.
Use	To check the number of malfunctions that have occurred.
Setting/ Procedure	 To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation.

10.10.5 Warning

Functions	 To check the number of warning conditions detected according to the warming type To clear the count of each counter.
Use	To check the number of warning conditions that have been detected.
Setting/ Procedure	 To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation. When a warning condition occurs, an oil mark appears at the lower left corner of the basic screen. Touching the oil mark will display the warning code screen.

10.10.6 Maintenance

	r	
	Functions	To set a count value for maintenance of any given part.
	Use	When any given part is replaced.
	Setting/	MaintSet
	Procedure	Enter the maintenance counter value from the 10-key pad.
1		The default setting is "0."
		0 to 999999
		MaintCount
		 Counts up when a sheet of paper is fed through the machine.
1		 A warning message appears if the count reaches a preset value.
		Pressing the Clear key will clear the count.
		If the count is cleared mistakenly, press the Interrupt key, which will undo the clearing
		operation.

10.10.7 Service Total

A. Total

Functions	To display the count value for the service total counter.
Use	 Use to check the total No. of printed pages including the ones printed by the Service Mode.
Setting/ 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.

B. Paper Size

Functions	To display the count value for service total counter of each paper size.
Use	 To check the total number of printed pages including the one at Service Mode according to each paper size.

10.10.8 Counter of Each Mode

Functions	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.
Use	 Use to check the printed pages in the following specified modes; copy, printer, scanner, and fax, as well as No. of times each mode was used, in order to know the using condition.

10.10.9 Service Call History (Data)

Functions	To display the trouble history in chronological order.
Use	Use to check the trouble history in chronological order.

10.10.10 ADF Paper Pages

Functions	To display the No. of pages fed to the automatic document feeder.
Use	Use to check the No. of pages fed to the automatic document feeder.

10.10.11 Paper Jam History

Functions	To display the jam history in chronological order.
	Use to check the jam history in chronological order. NOTE [Code] displayed on the screen of JAM history indicates JAM code. For details of JAM code, see "Trouble shooting." See P.463

10.10.12 Fax Connection Error

Functions	To display the No. of fax transmission errors occurred.
Use	Use to check the No. of fax transmission errors occurred.

10.10.13 Split Line Counter

Functions	To display the average number of detected stain on the ADF original glass at the pre- detection.
	Pre-detect Large Size : Large-sized detected stain divided by the number of times pre-detection is practiced (average number of detected lines) will be displayed.
	Pre-detect Small Size : Small-sized detected stain divided by the number of times pre-detection is practiced (average number of detected lines) will be displayed.
	Detect Split line in acting: Number of detected stain on the original glass during the original feed divided by the number of scanning by ADF (average number of detected lines) will be displayed.
Use	Used for checking the number of detected stain on the ADF original glass.
Setting/ Procedure	To clear each counter value, select the items to be cleared, and press the Clear key. (When selecting [Pre-detect Large Size] or [Pre-detect Small Size] is selected, both values will be cleared.) If the count is cleared mistakenly, press the Interrupt key, which will undo the clearing operation.

10.11 List Output

10.11.1 Machine Management List

Functions	 To produce an output of a list of setting values, adjustment values, total counter values, and others.
Use	At the end of setup or when a malfunction occurs.
Setting/ Procedure	 Load the A4S or 8 ½ 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.

10.11.2 Adjustment List

Functions	To output the adjustment list for machine adjustment, process adjustment, etc. in Service Mode.
Use	At the end of setup or when a malfunction occurs.
	 Load the A4S or 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.

10.11.3 Parameter List

• For details, see FK-502 Service Manual.

10.11.4 Service Parameter

• For details, see FK-502 Service Manual.

10.11.5 Protocol Trace

• For details, see FK-502 Service Manual.

10.11.6 Fax Setting List

• For details, see FK-502 Service Manual.

10.11.7 Fax Analysis List

• For details, see FK-502 Service Manual.

10.12 State Confirmation

10.12.1 Sensor Check

Functions	To display the states of the input ports of sensors and switches when the machine remains stationary.
Use	Used for troubleshooting when a malfunction or a misfeed occurs.
Setting/ 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

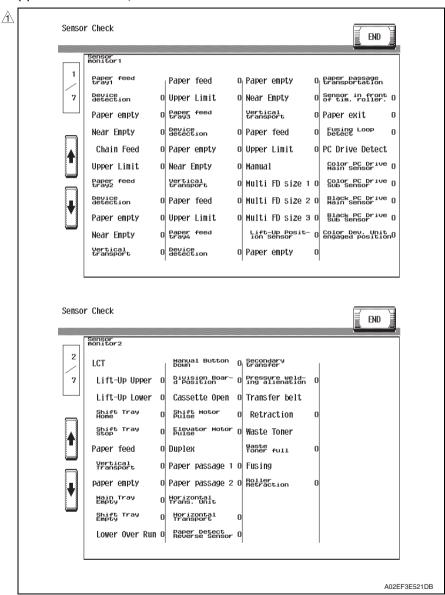
- When a paper misfeed occurs in the paper feed section of the machine, the tray 2 paper feed sensor is considered to be responsible for it.
- 1. Remove the sheet of paper misfed.
- From the sensor check list that follows, check the panel display of the tray 2 paper feed sensor. For the tray 2 paper feed sensor, you check the data of "Paper feed" of "Tray 2."
- 3. Call the Service Mode to the screen.
- Select [State Confirmation] → [Sensor Check] and then select the screen that contains "Paper feed" under "Tray 2." For "Paper feed" under "Tray 2," select "1" on the left-hand side of the 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.
- 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.

10.12.2 Sensor check screens

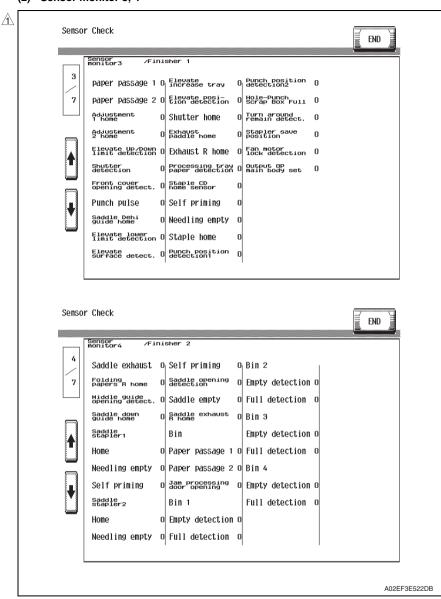
These are only typical screens which may be different from what are shown on each individual machine.

A. Sensor monitor

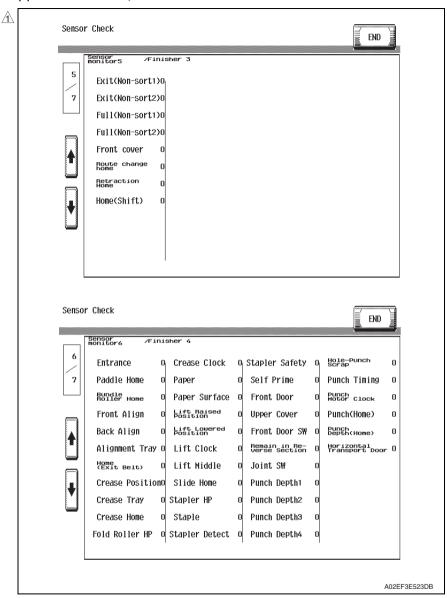
(1) Sensor monitor 1, 2



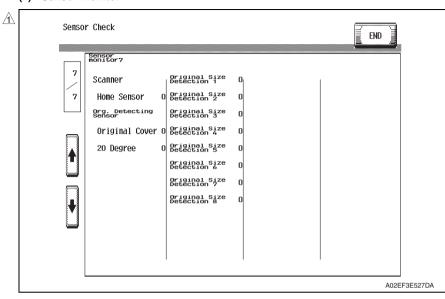
(2) Sensor monitor 3, 4



(3) Sensor monitor 5, 6



(4) Sensor monitor 7



10.12.3 Sensor check list

A. Sensor monitor

(1) Sensor monitor 1

Symbol		Panel display	Part/signal name		characteris- el display
				1	0
PS2		Device detection	Paper feed tray 1 device detection sensor	In position	Out of position
PS7	ay 1	Paper empty	Paper feed tray 1 paper empty sensor	Paper not present	Paper present
PS9	Paper feed tray	Near Empty	Paper feed tray 1 near empty sensor	Near empty	Unblocked
PS1	Paper	Chain feed	Paper feed tray 1 chain feed sensor	Paper present	Paper not present
PS8		Upper Limit	Paper feed tray 1 upper limit sensor	At raised position	Not at raised position
PS10		Device detection	Paper feed tray 2 device detection sensor	In position	Out of position
PS13		Paper empty	Paper feed tray 2 paper empty sensor	Paper not present	Paper present
PS9	d tray 2	Near Empty	Paper feed tray 2 near empty sensor	Near empty	Unblocked
PS16	Paper feed tray	Vertical transport	Paper feed tray 2 vertical transport sensor	Paper present	Paper not present
PS14	Рар	Paper feed	Paper feed tray 2 paper feed sensor	Paper present	Paper not present
PS15		Upper Limit	Paper feed tray 2 upper limit sensor	At raised position	Not at raised position
PS112	3	Device detection	See P.19 of the PC-104/204 service manu	ıal.	•
PS115		Paper empty			
PS113	ed tr	Near Empty			
PS117	Paper feed tray	Vertical transport			
PS116	аре	Paper feed			
PS114	Ľ	Upper Limit			
PS121	4	Device detection	See P.19 of the PC-104/204 service manu	ıal.	
PS124	ray '	Paper empty			
PS122	ed ti	Near Empty			
PS126	er fe	Vertical transport			
PS125	Paper feed tray	Paper feed			
PS123	_	Upper Limit			

Symbol		Panel display	Part/signal name		characteris- el display
				1	0
PS18		Multi FD size 1	Manual multi FD size sensor/1	ON	OFF
PS19		Multi FD size 2	Manual multi FD size sensor/2	ON	OFF
PS20	_	Multi FD size 3	Manual multi FD size sensor/3	ON	OFF
PS17	Manual	Lift-Up Position Sensor	Manual lift-up position sensor	Paper not present	Paper present
PS21		Paper empty	Manual paper empty sensor	At raised position	Not at raised position
PS23	rtation	Sensor in front of tim. roller.	Sensor in front of tim. roller	Paper present	Paper not present
PS25	anspoi	Paper exit	Paper exit sensor	Paper present	Paper not present
PS24	Paper passage transportation	Fusing Loop Detect	Fusing loop detect sensor	Loop present	Loop not present
PS27		Color PC Drive Main Sensor	Color PC drive main sensor	Blocked	Unblocked
PS28	actor	Color PC Drive Sub Sensor	Color PC drive sub sensor	Blocked	Unblocked
PS29	Photo conductor	Black PC Drive Main Sensor	Black PC drive main sensor	Blocked	Unblocked
PS30		Black PC Drive Sub Sensor	Black PC drive sub sensor	Blocked	Unblocked
PS26		Color Dev. Unit engaged position	Color dev. unit engaged position sensor	engaged	not engaged

(2) Sensor monitor 2

Symbo		Panel display	Part/signal name	Operation of tics/pane	characteris- el display
,			1	0	
PS4		Lift-Up Upper	See P.23 of the PC-405 service manual.	1	I
PS13		Lift-Up Lower	7		
PS12		Shift Tray Home	7		
PS11		Shift Tray Stop	7		
PS1		Paper feed	7		
PS2		Vertical Transport			
PS3		Paper empty	7		
MTPEE	3	Main Tray Empty	7		
PS9	ICT	Shift Tray Empty	7		
PS7	7	Lower Over Run	7		
MDCB		Manual Button Down			
PS14	1	Division Board Position			
PS6		Casette Open	7		
PS8		Shift Motor Pulse	7		
PS10		Elevator Motor Pulse			
PS33	kex	Paper passage1	Duplex paper passage sensor/1	Paper present	Paper no present
PS34	Duplex	Paper passage2	Duplex paper passage sensor/2	Paper present	Paper no present
PS25	ns. Unit	Horizontal Transport	Paper sensor	Paper present	Paper no present
_	Horizontal Trans.	Paper Detect Reverse Sensor	_	_	_
PS36	secondary transfer	Pressure welding alienation	2nd image transfer welding alienation sensor	Not Retracted	Retracte
PS31	Transfer belt		Transfer belt retraction sensor	Not Retracted	Retracte
PS32	Waste toner	Waste toner full	Waste toner full sensor	Blocked	Unblocke
PS38	Fusing		Fusing roller retraction sensor	Not Retracted	Retracte

(3) Sensor monitor 3

Symbol		Panel display	Panel display Part/signal name		ration teristics/ display
				1	0
PS1		Carrying Paper Passage	See P.61 of the FS-519/PK-515/OT-	602 service	manual.
PS2		Middle Paper Passage			
PS7		Home1 (CD-Align)			
PS8		Home2 (CD-Align)			
SW3		Elevate Tray Raised/ Lowered			
SW2		Shutter			
SW1		Front Cover			
PS502		Punch Pulse			
PS23		Home (Saddle In and Out)			
PS13		Elevate Tray Lowered			
PS12		Surface (Elev.)			
_	ű	Elevate Tray Proliferation			
PS11	Sensors monitor3	Elevate Position			
PS14	, mc	Home (Shutter)			
PS6	sors	Home (Exit Paddle)			
PS5	Sen	Home (Exit R)			
PS3		Empty (Finisher)			
PS9		Home (Staple CD)			
_		Self Printing			
_		Staple Empty			
_		Home (Stapler)			
PS500		Punch Position1			
PS501		Punch Position2			
PS503		Punch Dust Full			
PS4		Remain in Reverse Section			
PS10		Stapler Save Position			
M9		Fan Motor Lock			
SW4	1	Exit OP Machine Set			

(4) Sensor monitor 4

Symbol		Panel display	Part/Signal name		characteris el display
				1	0
PS20		Saddle exit	See P.27 of the SD-505 service manual.		
PS22		Folding R home			
SW5		Middle guide			
PS24		Saddle guide			
_		Saddle stapler 1			
_	4	Home			
_	itor	Staple empty			
_	mor	Self priming			
_	Sensors monitor	Saddle stapler 2			
_	ens	Home			
_	S	Staple empty			
_		Self priming			
SW4		Saddle			
PS21		Saddle empty			
PS18		Home (Saddle exit)			
PS10		Paper Passage 1	See P.9 of the MT-502 service manual.		
PS9	Bin	Paper Passage 2			
PS11		Door (Jam)			
PS1	Bin 1	Empty			
PS5	Bii	Full			
PS2	Bin2	Empty			
PS6	置	Full			
PS3	Bin3	Empty			
PS7	ä	Full			
PS4	Bin4	Empty			
PS8	Ē	Full			

(5) Sensor monitor 5

Symbol		Panel display	Part/Signal name	Operation of tics/pane	
				1	0
PS1		Exit (Non-sort 1)	See P.16 of the JS-505 service manual.		
PS2		Exit (Non-sort 2)			
T1FDTB/ LED	or 5	Full (Non-sort 1)			
T2FDTB/ LED	monitor	Full (Non-sort 2)			
PS3	Sensors	Front cover			
PS4	Sen	Route change home			
PS5		Retraction home			
PS6		Home (Shift)			

(6) Sensor monitor 6

A	
/ •	Λ.

Symbol		Panel display	Part/Signal name	Operation of tics/pane	characteris el display
Cyrribor		i anei dispiay	i ait/Signai name	1	0
PS1		Entrance	See P.35 of the FS-609/PK-501 ser	vice manual.	ı
PS2	İ	Paddle Home	1		
PS3	İ	Bundle Roller Home	1		
PS4	İ	Front Align	1		
PS5	İ	Back Align	1		
PS6	İ	Alignment Tray	1		
PS7	İ	Home (Exit Belt)	1		
PS10	İ	Crease Position	1		
PS13	İ	Crease Tray	1		
PS11	l	Crease Home	†		
PS12	l	Fold Roller HP	†		
PS14		Crease Clock			
PS8		Paper			
PS9		Paper Surface			
PS15		Lift Raised Position			
PS16	9	Lift Lowered Position			
PS17	itor	Lift Clock			
_	Sensors monitor	Lift Middle			
PS18	ors	Slide Home			
PS19	ens	Stapler HP			
PS20	0)	Staple	1		
_	İ	Stapler Detect	1		
SW3 SW4		Stapler Safety			
PS21	1	Self Prime			
PS22	1	Front Door			
PS23	1	Upper Cover			
SW1	1	Front Door SW			
_		Remain in Reverse Section			
SW2		Joint SW	1		
_		Punch Depth1	1		
_		Punch Depth2	1		
_		Punch Depth3	1		
_		Punch Depth4	1		
_	İ	Hole-Punch Scrap	7		

Symbol		Panel display	Part/Signal name	Operation characteris- tics/panel display	
				1	0
_	ı 6	Punch Timing	See P.35 of the FS-609/PK-501 ser	vice manual.	
PS3	nito	Punch Motor Clock			
PS1	s mo	Punch (Home)			
PS2	nsors	Punch Depth (Home)			
PS26	Sen	Horizontal Transport Door			

	(7) Sensor monitor 7					
<u>1</u>	Symbol	Panel display		Part/signal name	Operation characteris- tics/panel display	
					1	0
	PS201	Scanner	Home Sensor	Scanner home sensor	At home	Out of home
	S201		Original Cover	Original cover sensor	Lowered	Raised
	PS202		20 Degree	20 degree sensor	Less than 20 degree	20 degree or more
	PS204	Sensor	Original Size Detection 1	Original size detection 1 sensor	Original loaded, not mounted	Original not loaded
	PS205		Original Size Detection 2	Original size detection 2 sensor	Original loaded, not mounted	Original not loaded
	_	cting S	Original Size Detection 3	Not used	_	_
	Org. Detecting	g. Dete	Original Size Detection 4	Not used	_	_
		Ö	Original Size Detection 5	Not used	_	_
	_		Original Size Detection 6	Not used	_	_
	_		Original Size Detection 7	Not used	_	_
	_		Original Size Detection 8	Not used	_	_

10.12.4 Table Number

Functions	 When IDC is detected, for plain paper, Thick 1, Thick, 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: C, M, Y K Vdc: around 400 V, Vg: around 500 V
Use	Used for troubleshooting of image problems.
Setting/ 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.

10.12.5 Level History1

Functions	To display TCR (T/C ratio), IDC/registration sensor output values, and fusing temperature.
Use	Used for troubleshooting of image problems.
Setting/ Procedure	TCR-C/-M/-Y/-K: Shows the T/C output reading taken last. DC1/IDC2: Shows the latest IDC data. Temp-Heat: Displays the latest temperature of the heating roller. Temp-Press: Displays the latest temperature of the pressure roller. Reading taken last" means Density of toner of the latest image. When a test print is produced by pressing the Start key while level history 1 is being displayed.

10.12.6 Level History 2

Functions	IDC Sensor (Transfer belt bare surface level) as adjusted through the image stabilization sequence and ATVC value.
Use	Used for troubleshooting of image problems.
Setting/ Procedure	 IDC Sensor: Shows the intensity adjustment value (0 to 255) of the IDC sensor. ATVC (C, M, Y, K): Shows the first image transfer ATVC adjustment value (5 to 40 μA). ATVC (2nd) : Shows the second image transfer ATVC adjustment value (300 to 4800 V).

10.12.7 Temp. & Humidity

Functions	To display the temperature and humidity of a specific location (AIDC sensor portion) inside the machine and fusing temperature.	
Use	 Used as reference i 	information when a malfunction occurs.
Setting/ Procedure	Temp-Inside Temp-Heater Temp-press. Humidity Absolute Humidity	: 0 to 100 °C in 1 °C increments : 0 to 260 °C in 1 °C increments : 0 to 260 °C in 1 °C increments : 0 to 100 % in 1 % increments : 0 to 100 in 1 increments

10.12.8 CCD Check

Functions	To display the D/A value of CCD clamp/gain for R, G, and B.
Use	Used for troubleshooting for the CCD sensor.
Setting/ Procedure	Use the following guidelines on the correct range of values. CLAMP: The difference between the max. and min. output values should be within ±100. GAIN: The difference from the CLAMP values (R, B) should be within (90 for R and B. The difference from the CLAMP value (G) should be within ±50 for G. The difference between each pair of RO and RE, GO and GE, and BO and BE should be within 30.

10.12.9 Memory/HDD Adj.

A. Memory Check

Functions	To check correspondence of data written to and that read from memory through write/read check.
	Rough Check A check is made 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.
	Detail Check A check is made to see if the image data reading and writing are correctly made at the addresses and buses in all areas. The progress of the check sequence is displayed in percentage.
Use	If the copy image is faulty.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [Memory Check]. Select the desired type of check, either [Rough Check] or [Detail Check]. Press the Start key to start the check procedure. When the check procedure is completed, the results are shown on the screen. If the check results are NG, check the memory for connection or replace the memory with a new one. Press the Stop key to interrupt the check sequence.

B. Compress / Decompression Check

Functions	To check whether compression and decompression are carried out properly.
Use	If the copy image is faulty.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [Compress / Decompression Check]. Pressing the Start key will automatically start to complete a compression/decompression check sequence. The check result will be displayed.

C. JPEG check

 This function is available only when the optional scan accelerator kit (SA-501) is mounted.

Functions	This function enables you to check whether image data are compressed properly through the scan accelerator kit (SA-501).
Use	When a copy image problem occurs, you can refer to JPEG check.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [JPEG check]. Pressing the Start key will automatically start to complete a JPEG check sequence. The check result will be displayed.

D. Memory Bus Check

Functions	To check to see if image data is correctly transferred from scanner to memory, and from memory to printer.
Use	If the copy image is faulty.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [Memory Bus Check]. Select either [Scanner → Memory], [Memory → PRT], or both. Pressing the Start key will start the memory bus check and be terminated automatically. The check result will be displayed, [OK] or [NG].

E. Work Memory In/Out Check

Functions	To check to see if input and output of image data of work memory are correctly performed.
Use	If the print image is faulty.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [Work Memory In/Out Check]. Select either [Input Check], [Output Check], or both. Pressing the Start key will start the work memory input/output operation check sequence and be terminated automatically. The check result will be displayed, [OK] or [NG].

∠ F. HDD Version Upgrade (LK)

• This is displayed only when the function enhanced version 2 or later firmware is installed.

Functions	To maintain the compatibility of management information data and documents stored in HDD after the firmware upgrade.
Use	This must be performed after upgrading the firmware to the function enhanced version 2.
Adjustment Procedure	 Call the Service Mode to the screen. Touch [State Confirmation] → [Memory/HDD Adj.] → [HDD Version Upgrade (LK)]. Touch Start key to initiate upgrading the current HDD version. When the upgrade is completed, the result is displayed on the screen.
	NOTE • Make sure to turn OFF the main power switch when firmware upgrade is completed, and turn it ON again more than 10 seconds after.

G. Down Ver.

• This is displayed only when the function enhanced version 3 or later firmware is installed.



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7	Functions Use	• In the process of firmware downgrade from the function enhanced version 3 firmware to the function enhanced version 2, use this function before rewriting the firmware.
	,	 For the details about how to use this function, see "Firmware upgrade." See P.48

H. HDD Version Up

Functions	To upgrade administration data (Document management information, address infor-
Use mation, etc.) other than image data in HDD.	mation, etc.) other than image data in HDD.
Adjustment Procedure	 Open the Service Mode. Set the following setting. [State Confirmation] → [Memory/HDD Adj.] → [HDD Version Up] Touch the Start key to start upgrading the version. When upgrading the version is complete, the outcome will be displayed on the screen. NOTE Make sure to turn main power switch OFF when upgrading is complete, and wait for ten seconds to turn back ON.

I. HDD R/W Check

Functions	To check to see if the hard disk is connected properly, and if read/write operation of the hard disk is correctly performed.
Use	When the hard disk is mounted.
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [HDD R/W Check]. Pressing the Start key will start the hard disk R/W check sequence and be terminated automatically. The check result will be displayed, [OK] or [NG].

J. HDD Format

Functions	 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.
Use	When the hard disk is mounted. When the hard disk is to be initialized. (Physical format to logical format)
Adjustment Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [State Confirmation] → [Memory / HDD Adj.] → [HDD Format].
	(1) Physical Format 1. Touch [Physical Format]. 2. Press the Start key to start the formatting sequence. 3. The sequence will be automatically terminated as it is completed. 4. Turn off the main power switch and turn it on again more than 10 seconds after. (2) Logical Format (only when initial is set up) 1. Touch [Logical Format]. 2. Press the Start key to start the formatting sequence. 3. The sequence will be automatically terminated as it is completed. 4. Turn off the main power switch and turn it on again more than 10 seconds after. *Formatting the hard disk will erase all data contained in it.

10.12.10 Memory/HDD State

Functions	 To display the condition and amount of the memory and hard disk. To display the mounting condition of the optional encryption board (security kit SC-503).
Use	 Use to check the condition and amount of the memory and hard disk. Use to setup the optional security kit SC-503.
Setting/ Procedure	 When the encryption board is mounted, the machine automatically recognizes it and displays [Set].

10.12.11 Color Regist

Functions	 To check each of C, M, and Y for color shift amount. The data is updated after a color shift correction has been made or color shift adjustment has been completed.
Use	Use for check when color shift is evident. Use for adjustment of PH skew.
Setting/ Procedure	 For each of C, M, and Y, the color shift amount (in X and Y directions) at two locations (one at the front and the other in the rear) and the difference in color shift amount between the front and rear (X and Y directions) are displayed. Display unit: dots The shift amounts is displayed with reference to K for C, M and Y, and that for K is displayed with reference to an ideal position.

10.12.12 IU Lot No.

Functions	 To display the 10-digit lot number for each of Cyan, Magenta, Yellow, and Black IUs. The lot number data is stored in EEPROM of each IU.
Use	Use for checking the IU Lot No.

10.12.13 Adjustment Data List

Functions	To display the adjustment and setting value set in the main body.
Use	Use to check the adjustment and setting value set in the main body.

10.13 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 running mode, 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.

10.13.1 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.

10.13.2 Gradation Pattern

Functions	To produce a gradation pattern.
Use	Used for checking gradation reproducibility.
Pattern	SINGLE HYPER Gradation Cyan
Setting/ Procedure	# of Print ("1" to 999) Select "SINGLE" (single copy) or MULTI (multi copy). Select FEET or "HYPER". Select "Gradation" or Resolution if HYPER has been selected. Select the color mode. "Cyan", Magenta, Yellow, Black (4PC), CMYK, 8Color, 4Color, Black (1PC) Black (4PC): Uses four colors. Black (1PC): Uses one color of black.

10.13.3 Halftone Pattern

Functions	To produce a solid halftone pattern.
Use	Used for checking uneven density and pitch noise.
Pattern	SINGLE HYPER Gradation Cyan Density: 255
Setting/ Procedure	 # of Print ("1" to 999) Select "SINGLE" (single copy) or MULTI (multi copy). Select FEET or "HYPER." Select "Gradation" or Resolution if HYPER has been selected. Select the color mode. "Cyan", Magenta, Yellow, Black (4PC), Red, Green, Blue, CMYK, 3 Color, 4 Color, Black (1PC), MIX Type the density level (0 to "255").

10.13.4 Lattice Pattern

Functions	To produce a lattice pattern.
Use	 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.
Pattern	SINGLE FEET Cyan CD Width: 5 FD Width: 5 Density: 255 Normal A02EF3C511DA
Setting/ Procedure	 # of Print ("1" to 999) Select "SINGLE" (single copy) or MULTI (multi copy). Select "FEET" or HYPER. Select Gradation or Resolution. (Only select HYPER) Select the color mode. "Cyan", Magenta, Yellow, Black (4PC), Red, Green, Blue, CMYK, 3 Color, 4 Color, Black (1PC) Enter CD width and FD width (0 to 191 dots). Type the density level (0 to "255"). Select "Normal" or Reverse.

10.13.5 Solid Pattern

Functions	To produce each of the C, M, Y, and K solid patterns.
Use	Used for checking reproducibility of image density.
Pattern	SINGLE HYPER Gradation Density: 255
Setting/ Procedure	 # of Print ("1" to 999) Select "SINGLE" (single copy) or MULTI (multi copy). Select FEET or "HYPER." Select "Gradation" or Resolution if HYPER has been selected. Type the density level (0 to "255").

10.13.6 Color Sample

Functions	To produce a color sample.	
Use	Used for checking reproducibility of each of the different colors.	
Pattern	SINGLE HYPER Gradation	
Setting/ Procedure	 # of Print ("1" to 999) Select "SINGLE" (single copy) or MULTI (multi copy). Select FEET or "HYPER." Select "Gradation" or Resolution if HYPER has been selected. Produce 12-gradation-level patches of C, M, Y, K, R, G, and B, and a patch of each of the 12 reference colors in the hue circle with lightness and saturation corrected. 	

10.13.7 8 Color Solid Pattern

Functions	To produce an 8-color solid pattern.
Use	Used for checking color reproducibility and uneven density of each color.
Pattern	SINGLE HYPER Gradation Density: 255
Setting/ Procedure	 # of Print ("1" to 999) Select "SINGLE" (single copy) or MULTI (multi copy). Select FEET or "HYPER." Select "Gradation" or Resolution if HYPER has been selected. Type the density level (0 to "255").

10.13.8 CMM pattern

F #	To any division of ONMA (Octor Marian and Marian) marketing	
Functions	To produce a CMM (Color Management Module) pattern.	
Use	Used to check color difference depending on the places where output is made.	
Pattern		
	Error diffusion 270 degrees	
	A02EF3C515DA	
Setting/ Procedure	 # of Print is always "1". Select "Error diffusion", Gradation, or Resolution. Select an angle from among "0 degrees", 90 degrees, 180 degrees, and 270 degrees. 	

10.13.9 Running Mode

Functions	To test the printing operation in running mode.
Use	Use to check the printing operation in running mode from each paper source.
Setting/ Procedure	 Call the Service Mode to the screen. Touch these keys in this order: [Test Mode] → [Running Mode]. Select the paper size (Tray 1, bypass only). Select the paper type. Press the Start key to start the running mode. Pressing the Stop key will stop operation.

10.13.10 Fax Test

• For details, see FK-502 Service Manual.

10.14 ADF

See P.28 of the DF-611 service manual.

10.15 FAX

For details, see FK-502 Service Manual.

↑ 10.16 Finisher

10.16.1 CB-FN adjustment

A. Fold&Staple Pos. Adjustment

(1) Fold Position Adjustment

See P.30 of the SD-505 service manual.

(2) Center Staple position Adjustment

See P.32 of the SD-505 service manual.

B. Finisher Check

See P.62 of the FS-519/PK-515/OT-602 service manual.

C. Punch Regist Loop Size

See P.64 of the FS-519/PK-515/OT-602 service manual.

D. Punch Horizontal Position

See P.65 of the FS-519/PK-515/OT-602 service manual.

10.16.2 FN-X3 Adjustment

See P.37 of the FS-609/PK-501 service manual.

10.16.3 Punch option setting

See P.66 of the FS-519/PK-515/OT-602 service manual. See P.40 of the FS-609/PK-501 service manual.

10.16.4 Job Separator

See P.17 of the JS-505 service manual.

10.17 Internet ISW

- By using this setting, the firmware stored in the server can be downloaded over internet for upgrading.
- For details for upgrading the firmware, refer to "Firmware upgrade" in the Maintenance section.

See P.48

10.17.1 Internet ISW Set

Functions	To set whether or not to enable each setting for Internet ISW.	
Use	NOTE • When the following setting is to "OFF" and cannot be chan	ting will be valid by setting this to "ON". set to "ON", this setting will automatically be set
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

10.17.2 HTTP Setting

· It will be displayed only when [Internet ISW Set] is set to "ON".

A. Data Input Setting

Functions	To set whether or not to enable download	pading using the HTTP protocol.
Use	To use when accessing the server usinSetting on the proxy server will be valid	•
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

B. Connect Proxy

Functions	To set whether or not to connect via pro	xy server when accessing the server.
Use	To use when accessing the server via p	roxy server.
Setting/	The default setting is OFF.	
Procedure	ON	"OFF"

C. Proxy Server

Functions	To set the address and the port number for the proxy server.
Use	To use when accessing the server via proxy server.
Setting/ Procedure	<server address=""></server>Enter an address using IPv4, IPv6, or FQDN format.
	<port number=""> Enter the value between 1 and 65535 using the 10-key pad. (The default setting is 80) </port>

D. Proxy Authentication

Functions	 To set the login name or password whethe proxy server. 	en authentication is necessary for accessing
Use	To use when authentication is necess.	ary for accessing the proxy server.
Setting/ Procedure	<authentication> The default setting is OFF.</authentication>	
	ON	"OFF"
	<log-in name=""> • Enter the login name (up to 32 one-by</log-in>	te characters) on the on-screen keyboard.
	<password> • Enter the password (up to 32 one-byte</password>	e characters) on the on-screen keyboard.

E. Connection Time-Out

Functions	To set the time for the timeout for accessing the server.	
Use	To use when changing the time for the timeout for accessing the server.	
Setting/ Procedure	The default setting is 60 sec.	
	30 to 300 sec.	

10.17.3 FTP Setting

• It will be displayed only when [Internet ISW Set] is set to "ON".

A. Data Input Setting

Functions	To set whether or not to enable downloading using FTP protocol.	
Use	 To use when accessing the server with FTP protocol. Setting this to "ON" will enable the proxy server setting. 	
Setting/	The default setting is ON.	
Procedure	"ON" OFF	

B. Connect Proxy

Functions	To set whether or not to access the server via proxy server.		
Use	To use when accessing the server via proxy server.		
Setting/ Procedure	The default setting is OFF.		
Procedure	ON "OF	F"	

C. Proxy Server

Functions	To set the address and the port No. of the proxy server.		
Use	To use when accessing the server via proxy server.		
Setting/ Procedure	<server address=""> • Enter an address using IPv4, IPv6, or FQDN format.</server>		
	<port number=""> Enter the value between 1 and 65535 using the 10-key pad. </port>		

D. Connection Setting

Functions	To set the port No. and the time for timeout when accessing the FTP server, and all to set whether or not to enable PASV mode.		
Use	 To use when accessing the FTP server. To use when connecting by the PASV (passive) mode (FTP server side will inform connection port before connecting). 		
Setting/ Procedure	<port number=""> Enter the value between 1 and 65535 using the 10-key pad. </port>		
	<connection out="" time=""> Enter the value between 1 and 60 (min.) using the 10-key pad. </connection>		
	<pasv mode=""> • The default setting is OFF.</pasv>		
	ON	"OFF"	

10.17.4 Forwarding Access Setting

A. User ID

Functions	To register the user ID for accessing the program server where firmware is to be stored.
Use	Storea.
Setting/ Procedure	Select [User ID]. Enter the user ID (up to 64 one-byte characters) on the on-screen keyboard.

B. Password

Functions	To register the password for accessing the program server where firmware is to be
Use	stored.
	1. Select [Password].
Procedure	2. Enter the password (up to 64 characters) on the on-screen keyboard.

C. URL

Functions Use	To register the address and directory of the program server where the firmware is to be stored in URL.
Setting/	1. Select [URL].
Procedure	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.

D. FileName

Functions	To register the file name of the firmware data to be downloaded.		
Use	to register the file flame of the firmware data to be downloaded.		
Setting/	1. Select [FileName].		
Procedure	2. Enter the file name (up to 63 one-byte characters) on the on-screen keyboard.		

10.17.5 Download

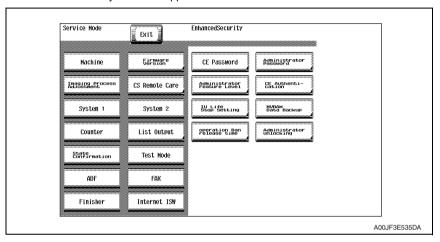
Functions	Access the program server according to the Internet ISW setting, and download the firmware.
Use	To use when updating the firmware via network.
Setting/ Procedure	Select [Download]. Touch [ISW Start] to start downloading the firmware. The message to show the status will be displayed on the screen while connecting and transferring data.
	NOTE When it failed to connect to the program server, or failed to download, the error code and the message will be displayed. Check the cause of the error by the error code, and follow the message for resetting. Refer to "Error cord list" for the error codes. See P.74 When the firmware is normally upgraded, the main body will automatically be restarted to complete the Internet ISW.

11. Enhanced Security

11.1 Enhanced Security function setting procedure

11.1.1 Procedure

- 1. Call the Service Mode to the screen.
- 2. Press the following keys in this order. Stop \rightarrow 0 \rightarrow Clear
- 3. Enhanced Security menu will appear.



11.1.2 Exiting

· Touch the [Exit].

11.2 Enhanced Security function tree

Service Mode		Ref. Page
Enhanced Security	CE Password	P.438
	Administrator Password	P.438
	Administrator Feature Level	P.439
	CE Authentication	P.439
	IU Life Stop Setting	P.439
	NVRAM Data Backup	P.440
	Operation Ban release time	P.440
	Administrator unlocking	P.440

11.3 Settings in the Enhanced Security

11.3.1 CE Password

Functions	To set and change the CE password.			
Use	Use to change the CE password.			
Setting/ Procedure	Enter the CE password (8 digits) on the on-screen keyboard. The initial setting is "92729272."			
	Current Password : Enter the currently using CE password. New Password : Enter the new CE password. Re-Input Password : Enter the new CE password again.			
	NOTE • When the following setting leads to the Password Rules [ON], the password with the same letters as well as the password which is same as the previous one cannot be changed. [Administrator Settings] → [Security Settings] • NEVER forget the CE password. When forgetting the CE password, call responsible person of KMBT.			

11.3.2 Administrator Password

Functions	To set and change the administrator password.			
Use	Use to 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.			
Setting/ Procedure	 Enter the administrator password (8 digits) on the on-screen keyboard. The initial setting is "12345678." 			
	New Password : Enter the new administrator password. Re-Input Password : Enter the new administrator password again.			
	NOTE • When the following setting leads to the Password Rules [ON], the password with the same letters, the password which is same as the previous one and the password of less than eight digits cannot be changed. [Administrator Settings] → [Security Settings]			

11.3.3 Administrator Feature Level

Functions	To set which modes to be allowed for the administrator to use in Service Mode.				
Use	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.				
	Ad	Administrator settings function			Level 2
		Printer Adjustment	Erase Leading Edge	_	0
		Scanner Adjustment	Leading Edge Adjustment	_	0
	[System Setting] → [Expert Setting]		Centering	_	0
			Horizontal Adjustment	_	0
			Vertical Adjustment	_	0
		ADF Adjust- ment	Centering	_	0
			Original Stop Position	_	0
			Centering Auto Adjustment	_	0
			Auto Adj. of Stop Position	_	0
	[Standard Size	Original Glass Original Size Detect Foolscap Size Setting		_	0
	Setting]			_	0
Setting/ Procedure	The default setting is Prohibit.				
riocedule	Level1	Level2 "Pr		"Prohibit"	

11.3.4 CE Authentication

It will not be displayed when the following settings are set to "ON".
 [Administrator Settings] → [Security Setting] → [Enhanced Security Mode] or [Password Rules].

Functions	To determine whether or not to authenticate CE password as entering Service Mode.		
Use	se Use when authenticating CE password as entering Service Mode.		
NOTE • For setting the following setting to "ON", set the CE and change the initial CE password beforehand. [Administrator Settings] → [Security Setting] → [Engasword Rules]		word beforehand.	
Setting/	The default setting is OFF.		
Procedure	ON	"OFF"	

11.3.5 IU Life Stop Setting

Functions	To select whether or not to stop a prin	t cycle when the IU reaches its service life.
Use	Use to select not to stop the print cycl	e when the IU reaches its service life.
Setting/ Procedure	The default setting is Stop.	
Procedure	"Stop"	No Stop

11.3.6 NVRAM Data Backup

Functions	To backup NVRAM data in the main body to the flash memory.
Use	To backup current data in order to prevent data in NVRAM 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. See P.547
Setting/ Procedure	1. Touch [NVRAM 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.

11.3.7 Operation Ban release time

Functions	 To set the time that elapses before the machine releases an access lock that is activated after the CE password authentication.
Use	 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 by input the Stop → 0 → 9 → 3 → 1 → 7 in [Meter Count] → [Check Details] → [Coverage Rate] 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.
Setting/	The default setting is 1 (minutes).
Procedure	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.

11.3.8 Administrator unlocking

Functions	To release an access lock that is activated after an administrator password authentication.
Use	 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.
Setting/ Procedure	Touch [Administrator unlocking]. Touch [unlocking] to release an access lock. When [OK] is displayed, touch [OK].

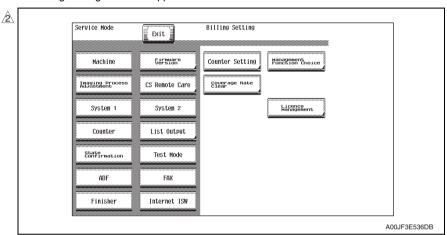
bizhub C353/C253/C203

12. Billing Setting

Billing Setting function setting procedure

12.1.1 Procedure

- 1. Call the Service Mode to the screen.
- 2. Press the following keys in this order. Stop \rightarrow 9
- 3. Billing Setting menu will appear.



12.1.2 **Exiting**

· Touch the [Exit].

12.2 Billing Setting function tree

			Ref. Page	
	Billing Setting	Counter Setting		P.442
	•	Management Function Cho	P.443	
	•	Coverage Rate Clear		P.450
2	•	License Management	Activation	*1
			Deactivation	
			Repair	
			Initialize	
			Request Code	
			List	

^{*1:} For details, see the LK-101/102/103 service manual.

12.3 Settings in the Billing Setting

	C	 To set the counting method for the total counter, size counter and long length paper counter. To set the size regarded as the large size (2 counts.) 								
Use	• (Jse to change the c	ounting m	ethod fo	r the co	ounter	S.			
Setting/ Procedure	Mo Mo	Total Counter Mode 1: 1 count per 1 copy cycle (Default: Japan) Mode 2: Large size is double counts								
		e Counter								
		A3/11 x 17 A3/B4/11 x 17/8 ½	c 14	and 4	120 mn at fax s	n in the can), i	279 mm in e sub scar t is regard 215 mm in	n direction ded as the	e large	eds 399 size.
	and 3 mm a • A3/11 x 17/B4/8 ¹ / ₂ x 14/Foolscap: Whe and 3 mm a (How					n in the can), i ceeds 2 n in the can), i ne size	e sub scar t is regard	n direction ded as the the main direction ded as the ain scan d	e large scan d (exce e large	eds 337 size. direction eds 310 size
	 Not counted (Default: Japan) A3 and 11 x 17 (Default: US) A3, B4, 11 x 17, and 8½ x 14 (Default: Europe, Others 1, Others 2, Others 3, Others 4) A3, B4, Foolscap, 11 x 17, 11 x 14, and 8½ x 14 							·		0,
	* Count-up table Copying 1-Sided						2-Sided			
	1 [Copying							0	ifical
		Copying Size	Sizes oth those sp		Spec			her than pecified		es es
		., ,		ecified		es	those s		siz	
		Size	those sp Mod	de 2	siz Mo	es de 2	those s Mo	pecified ode 2	Siz Mo	es de 2
		Size Mode Total	Model 1	de 2	siz Mo	es ode 2 2	those s Mo	pecified ode 2 2	Siz Mo	es ode 2 4
		Size Mode Total Size	Model 1 1 0	de 2 1 0	Mo	ees ode 2 2 1	those s Mo 1 2 0	pecified ode 2 2 0	Mo 1 2 2	ees ode 2 4 2
		Size Mode Total	those sp Mod 1 1 0	de 2 1 0 0	1 1 0	2 2 1	those s Mo 1 2 0 1	pecified ode 2 2	Siz Mo	es ode 2 4

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)

12.3.2 Management Function Choice

To set whether or not the following items are to be mounted.
 Key Counter, Management Device (Data controller), Authentication Device, or Vendor

NOTE

- It will not be displayed when the following setting is set to "ON".
 [Administrator Settings] → [Security Setting] → [Enhanced Security Mode]
- When the setting shows that [Management Device 1], [Management Device 2] or [Vendor 2] is mounted, the following applications will be invalid.

 The following applications will be invalid.

 The following applications will be invalid.

PC FAX transmission / HDD TWAIN/PS Box Operator / PS Scan Direct / PS Job Spooler / Fierv: Scan to Box

Also, the following setting will be set to "Disable".

[Administrator Settings] \rightarrow [Security Setting] \rightarrow [Management Function Setting] \rightarrow [Network Function Setting]

A. Key Counter IF Vendor

Functions		
Use	Not used	
Setting/	1101 4004	
Procedure		

B. Authentication Device 1

Functions	To set whether or not the authentication device 1 is installed.
Use	Set when the authentication device 1 (PageACSES) is mounted.
Setting/ Procedure	NOTE • The setting is available only when user authentication and account track are set "OFF" with [Administrator Settings] → [User Authentication/Account Track] → [General Setting]. • When the Authentication Device mount setting is set to "mount", make sure that the [IP Address Fax] and [Internet Fax] settings are set to "OFF" with [Service Mode] → [System 2] → [Network Fax Settings].

C. Authentication Device 2

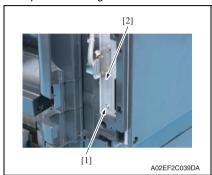
	Functions	To set whether or not the authentication device 2 is installed.				
2	Use	Set when the authentication unit (biometric type or card type) is mounted.				
		Card 1 : Uses IC	metrics (finger vein) authent card authentication system dable device card authentica	•		
		 Card 2 : Uses loadable device card authentication system When selecting biometrics, set a film timeout interval. When selecting [Card 1] or [Card 2], a response timeout interval is displayed. (The interval is unchangeable.) When the setting is set to Card 2, the main power switch must be turned OFF and ON to let the new setting take effect. Selecting Card 2, a loadable device driver allows to install. 				
	Setting/ Procedure	<authentication mode=""></authentication> Card 1 Card 2 Biometrics				

(1) Installing method of the loadable device driver

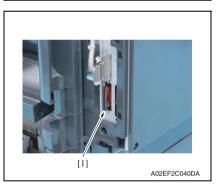
• The firmware is updated using the compact flash.

NOTE

- NEVER remove or insert the compact flash card with the machine power turned
- 1. Prepare a compact flash on which the driver data of the loadable device to be used was written.
- Turn OFF the main power switch.
- 3. Open the rear right door.



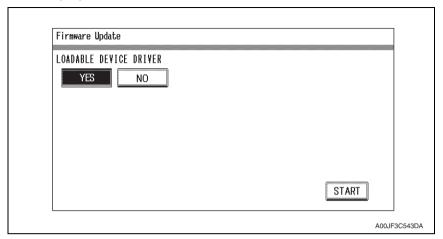
4. Remove the screw [1] and the metal blanking plate [2].



5. Insert the compact flash card [1] into the slot.

6. Turn ON the main power switch and the sub power switch.

7. Select [Yes] on the loadable device driver installation screen.



- 8. Press the [START] to start installing the driver. (At this time, the Start key starts blinking red.)
- Check that the control panel shows the message indicating that the data has been installed correctly ([Downloading Completed]). Check also the check sum value ([Check Sum ####]) shown on the control panel. (The Start key lights blue.)
- 10. Turn OFF the main power switch.
- 11. Remove the compact flash card from the slot.
- 12. Turn ON the main power switch, and close the front door.

D. Key Counter Only

D. Rey Cou	inci only
Functions	To set whether or not the key counter is installed.
Use	Set when the key counter is mounted. Select [Color Mode] and [Message] when the key counter is mounted.
Setting/ Procedure	 Color Mode When [Mode 1] is set on [Total Counter Mode] after selecting [Billing Setting] → [Counter setting]. Mode 1: 1 count per 1 copy cycle Mode 2: 2 counts per 1 copy cycle Mode 3: 3 counts per 1 copy cycle Mode 4: 4 counts per 1 copy cycle Mode 5: 5 counts per 1 copy cycle
	When [Mode 2] is set on [Total Counter Mode] after selecting [Billing Setting] → [Counter setting] and large size is selected on [Large Size Counter Mode] Mode 1: 2 counts per 1 copy cycle Mode 2: 4 counts per 1 copy cycle Mode 3: 6 counts per 1 copy cycle Mode 4: 8 counts per 1 copy cycle Mode 5: 10 counts per 1 copy cycle
	When [Mode 2] is set on [Total Counter Mode] after selecting [Billing Setting] → [Counter setting] and sizes other than large size are selected on [Large Size Counter Mode] Mode 1: 1 count per 1 copy cycle Mode 2: 2 counts per 1 copy cycle Mode 3: 3 counts per 1 copy cycle Mode 4: 4 counts per 1 copy cycle Mode 5: 5 counts per 1 copy cycle
Setting/ Procedure	* Message 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
	Confirmation copy Set whether to allow a confirmation copy when a key counter is installed. The default setting is Ban.
	License "Ban"
	 The next job reservation Set whether to allow the reservation of the next job when a key counter is installed. The default setting is Ban.
	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 Setting].

E. Management Device 1

Functions	To set whether or not the management device 1 is installed.
Use	Set when the management device 1 is mounted.
Setting/ Procedure	NOTE • The setting is available only when user authentication is set "OFF" and account track is set "Off" or "Account Name + Password" with [Administrator Settings] → [User Authentication/Account Track] → [General Settings].

F. Management Device 2

Functions	To set whether or not the management device 2 is installed.
Use	Set when the management device 2 is mounted.
Setting/ Procedure	* Management Setting • Select the Management Setting Mode 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.) NOTE • The setting is not available when either "External Server" of user authentication, "Password Only" of account track, "Do not synchronize" of user authentication and account track or "Allow" of public user access has been set with [Administrator Settings] → [User Authentication/Account Track] → [General Settings].

G. Vendor 1

Functions	
Use	Not used.
Setting/ Procedure	

H. Vendor 2

Functions	To set whether or not the vendor 2 is installed.				
Use		ne key counter, inserting the key counter and removing it will set it to the "Vendor			
Setting/ Procedure	Select color mode and message of key counter. (Only for key counter, the type of the color mode and message are same after moding.) * Confirmation copy Set whether to allow a confirmation copy when a key counter is installed. The default setting is Ban.				
	License	"Ban"			
	 The next job reservation Set whether to allow the reservation of the next job when a key counter is installe The default setting is Ban. 				
	License	"Ban"			
	Select message of vendor.				
	* Message Type 1: Message for key counter Type 2: Message for card scanning Type 3: Message for ID management				
	NOTE • The setting is available only when user authentication and account track are set "OFF" with [Administrator Settings] → [User Authentication/Account Track] → [General Setting].				

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.

Setting Item		Vendor 2	Authentication Device 1	Key Counter	Management Device 1	Management Device 2
	Default Copy Settings	Factory Default		_	_	_
	Default Scan/Fax Settings	Factory	Default	_	_	_
Utility	Copy Operating Screen	[Y	es]	_	_	_
⊃	Fax Active Screen Rx Display [N		lay [Yes]	_	_	_
	Scan/Fax Settings Default Tab	Direct Input	_	_	_	_
	Left Panel Display Default	[Job	List]	_	_	_
	Each Function Set- ting (When IC-409 is not mounted)	Copy, PC print, Send Data, and Print others will be set to "ON".	Copy, PC print, Send Data, and Print others will be set to "ON".	_	Copy will be set to "ON". PC print, Send Data, and Print others will be set to "OFF".	Copy, PC print, Send Data, and Print others will be set to "ON".
	Each Function Set- ting (When IC-409 is mounted)	Send Data will be	set to "ON".			
	Administrator Security Level	Pro	hibit	_	_	_
	Weekly Timer ON/ OFF Setting			_	_	_
	Reset Setting	_	Reset Data After Job will be set to "ON".	_	_	_
ettings	Application Key Settings		to My Panel, reset sign Key 1 to [FAX/ 2 is set to My etting and assign	_	When Key 1 is set to My Panel, reset the setting and assign Key 1 to [FAX/ SCAN]. When Key 2 is set to My Panel, reset the setting and assign Key 2 to [Copy].	
Administrator Settings	Restrict Access to Job Settings Changing Job Priority, Deleting Other User's Jobs, Registering and Changing Addresses, Changing Zoom Ratio will be set to "Restrict".		_	_	_	
Ad	External Memory Function Settings	Save Document a ment will be set to			_	_
	ID & Print Settings	_			_	_
	Forward TX Setting	OFF		_	_	_
	Line Parameter Setting	_		_	_	Receive Mode will be set to "Auto RX".
	OpenAPI Setting	Access Setting will be set to "Restrict" and Authentication will be changed to "OFF" setting.	Access Setting will be set to "Restrict".	_	_	_
	IPP Setting	_	IPP Setting will be set to "OFF", and Accept IPP job will be set to "OFF".	_	_	_







<u>2</u>

2

	Setting Item	Vendor 2	Authentication Device 1	Key Counter	Management Device 1	Management Device 2
	AppleTalk Setting	_	OFF	_		_
	SMB Setting	_	Scan Setting, Print Setting will be set to "OFF".	_	_	_
	E-mail TX (SMTP)	_	E-mail TX Set- ting, Scan to E- mail, E-mail Noti- fication, Meter Count Notifica- tion will be set to "Restrict".	_	_	-
sbui	E-mail RX (POP)	_	E-mail RX Setting will be set to "OFF".	_	_	_
Administrator Settings	LDAP Settings	_	Enabling LDAP will be set to "OFF".	_	_	_
Administ	Prefix/Suffix Setting	_	Prefix/Suffix Setting will be set to "OFF".	_	_	_
	WebDAV Client Settings	_	WebDAV Client Settings will be set to "OFF".	_	_	_
	Web Service Settings Printer setting/ Scanner setting		nd Scanner setting t to "OFF".	_	Printer Setting and Scanner setting will be set to "OFF".	
	Setting Notification — w		All setting items will be set to "OFF".	_	_	_
	Image Log Transfer Settings	[No]	_		1	ı
Φ	Software SW Setting	SW No. 63 will be set to "00" as HEX assignment.	_	_	_	_
Service Mode	Management Function Choice	Confirmation copy will be set to "Ban."	_	_	_	_
Ser	FAX	Re-transmission in System-Dis- play Setting will be set to "OFF."	_	_	_	_

12.3.3 Coverage Rate Clear

Functions	To clear the coverage rate.		
Use	Use to clear the coverage rate.		
Setting/ Procedure	The default setting is Unset. Set	"Unset"	
	Touching [END] key will clear the coverage rate.		

13. Procedure for resetting

13.1 Trouble resetting

Functions	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 front door, clear the status of the machine.
Use	To be used when the status would not be cleared by turning main power switch OFF and ON again, or opening and closing the front door in case of a trouble.
Setting/ Procedure	 Turn OFF the main power switch. Turn main power switch ON while pressing the Utility/Counter key. Touch [Trouble Reset]. Check to make sure that [OK] is displayed and the it has been reset. After turning off the main power switch, turn it on again more than 10 seconds after and check if the machine starts correctly.

13.2 Contents to be cleared by reset function

Items for clearing			Front door	Main power	Trouble	Initialization	
Contents to be cleared			open/close	switch OFF/ON	resetting	System Error Clear	Data Clear
Jam display			0	_	_	0	0
	Rank A	Fusing	_	_	0	0	_
Malfunction	nalik A	Optical	_	_	0	0	0
display	Rank B		0	_	0	_	_
	Rank C		_	0	0	_	_
Erratic operation / display			_	0	_	_	_
Utility Mode (Except items on Expert Adjustment.)		_	_	_	_	0	
Service Mode (System 1/2)		_	_	_	_	□ *1	
Counter S		Setting	_	_	_	_	0
Billing Setting	Management Function Choice		_	_	_	_	0
Adjustment of the touch panel position		_	_	_	_	0	

O: Will be cleared (initialized)

-: Will not be cleared

□ *1: Items to be cleared		
	Marketing Area (Fax Target only)	
	Foolscap Size Setting	
System 1	Install Date	
System	Tel/Fax Number	
	No Sleep	
	Original Size Detection	
System 2	HDD	
Gystem 2	Image Controller Setting	

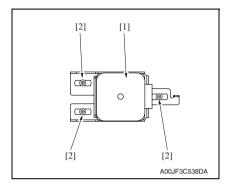
14. Mechanical adjustment

14.1 Mechanical adjustment of the scanner section

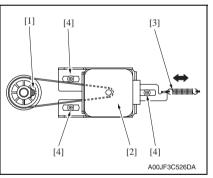
14.1.1 Adjustment of the scanner motor belt

This adjustment must be made in the following case:

- · The scanner motor assy has been removed.
- · The scanner drive cables have been rewound.



1. Temporarily secure the scanner motor assy [1] with three screws [2].

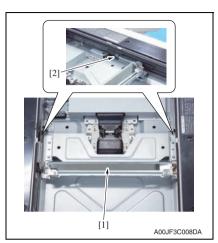


- With the scanner drive gear set screw [1] located on the right-hand side as shown on the left, slide the scanner motor assy [2] to the left and check that it is returned to the original position by the tension of the spring [3].
 - Perform this step three times.
- 3. Tighten the three screws [4] to fix the scanner motor assy into position.

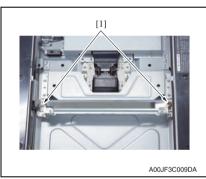
14.1.2 Focus positioning of the scanner and mirrors unit

This adjustment must be made in the following case:

• The scanner drive cables have been rewound



 Move the mirror unit [1] to the center and push it against the notches [2] on the rail.



- When the mirror unit do not push its both sides against the notches, loosen two mirror unit adjustment screws [1] and adjust the mirror unit position until it pushes its both sides against the notches.
 Tighten the adjustment screw.
- 3. Then conduct scanner positioning adjustment.

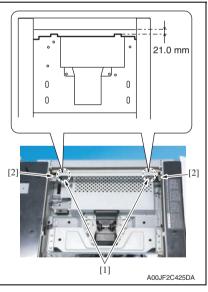
14.1.3 Scanner position adjustment

This adjustment must be made in the following case:

- The scanner drive cables have been rewound.
- Focus positioning of the scanner and mirrors unit must be completed.



1. Move the scanner assy [1] and the mirror unit to the end of the right.



- 2. Slide the mirror unit until it hits the end of the IR right frame.
- Provide the length of 21.0 mm between the end of the left indentation [1] on the scanner assy upper surface and the end of the IR right frame upper surface. When the length is ensured, tighten the two screws [2].

Mount the original glass moving unit, and adjust the height of the original glass moving unit.

See P.455

Whenever the scanner drive cables have been removed, be sure to carry out the [Feed Direction Adjustment] procedure.

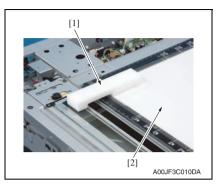
See P.356

 Perform the following setting. [Service Mode] → [ADF] → [Read Pos Adj] See P.32 of the DF-611 service manual.

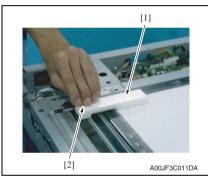
14.1.4 Adjusting the height of the original glass moving unit

This adjustment must be made in the following case:

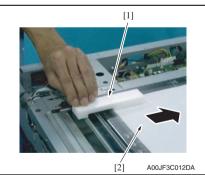
· When replacing the original glass moving unit.



 Set the height adjustment jig for the original glass moving unit [1].
 Insert the paper [2] between the original glass and the height adjusting jig for the original glass moving unit.



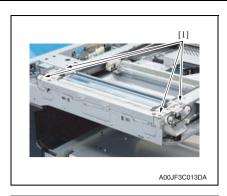
Press the height adjusting jig for the original glass moving unit [1] on the original glass moving unit side [2].



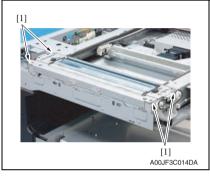
 Pull the paper [2] while pressing the height adjusting jig for the original glass moving unit [1] and make sure that the paper will not come out.

NOTE

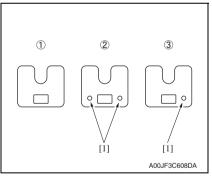
- Pull the paper [2] while pressing the height adjusting jig for the original glass moving unit [1] and make sure that the paper will not come out.
- When the paper comes off, the adjustment of the height is necessary by the following procedure.



5. Remove four screws [1] from the original glass moving unit.

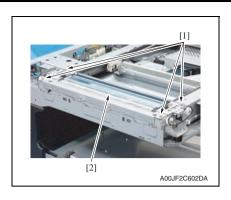


6. Install four spacers [1] and make a height adjustment.



NOTE

- Prepare and use the spacers described below as necessary.
 - ①A00J 2903 ##: 0.5 mm thickness
 - ②A00J 2908 ##: 0.2 mm thickness
 - 3A00J 2909 ##: 0.1 mm thickness
- Each spacer can be identified by the number of holes [1] which are 1.5 mm in diameter.



- 7. Temporarily secure the original glass moving unit [2] with four screws [1].
- Check the height repeating step 1 to 3.
- Secure the original glass moving unit with four screws [1].

14.1.5 Adjusting the height of the guide support for the original glass moving unit This adjustment must be made in the following case:

. Only when original jam, bend, or tilt occurred during original feeding by ADF.



Adjust the guide support for the original glass moving unit by rotating the small screws (one on the near side and one on the far side) with the hexagon wrench (1.5 mm) to adjust the height.

Turning clockwise: Up Turning counterclockwise: Down NOTE

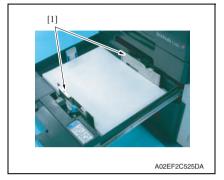
 Feed a paper with ADF, and adjust so that no original jam, bending, or tilt will occur.

14.2 Mechanical adjustment of the paper feed section

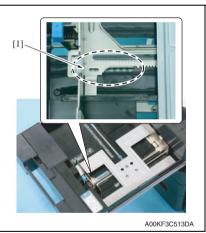
14.2.1 Skew adjustment of the tray 1, 2

This adjustment must be made in the following case:

- To reduce paper skew that cannot be corrected by the registration loop adjustment when the tray 1 or 2 is within the specifications.
- 1. Pull out the tray where this adjustment is made.



- 2. Load the tray with the paper.
- Move the set of the paper guides [1] until no gap is produced between the both ends of paper and the paper guides.

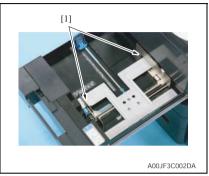


- 4. Remove the paper from the tray.
- Secure the set of paper guides [1] on the tray using a screw (M3 x 8 mm: V121 0308 04).

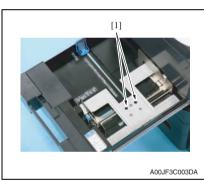
14.2.2 Centering adjustment of the tray 1, 2

This adjustment must be made in the following case:

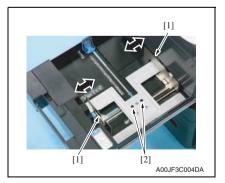
- When an image printed on a copy is displaced from the correct position with the use of the tray1/2.
- 1. Make a test print and check the amount of misalignment.
- 2. Pull out the tray where this adjustment is made.



3. Stretch the paper guide [1] to the maximum size position.



4. Loosen two screws [1].

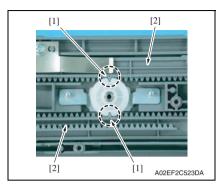


- Move the paper guide [1] complete according to the amount of the miscentering you checked in step 1 and adjust the center position of it.
- 6. Tighten two screws [2].
- 7. Make another test print and check the amount of misalignment.

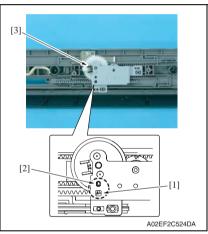
14.2.3 Adjustment of the manual bypass tray paper size unit

This adjustment must be made in the following case:

• The bypass paper size unit has been removed.



 Align the match mark [1] on the bypass guide rack gear with the groove on the gear rim at two places and install two bypass guide rack gears [2].



- 2. When installing the manual CD size sensor assy [3], make sure that the part [1] (pointed by the arrow) on the bypass guide rack gear and the gear's hole [2] on the manual CD size sensor assy are placed in a straight line.
- Secure the manual CD size sensor assy with two screws.

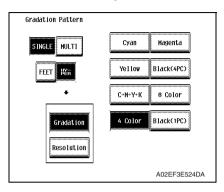
- 4. After the bypass paper size unit base has been mounted, check that the lever of the bypass paper size unit moves smoothly in a manner operatively connected to the bypass guide.
- Call the Service Mode to the screen and select [Machine] → [Manual Bypass Tray Adjustment]. Then, carry out manual bypass tray adjustment.
 See P.361

14.3 PH unit mechanical adjustment

14.3.1 Skew adjustment

This adjustment must be made in the following case:

· When PH unit is replaced.



- 1. Turn ON the main power switch.
- Select [Service Mode] → [Test Mode] → [Gradation Pattern] and output the test pattern with the following conditions.

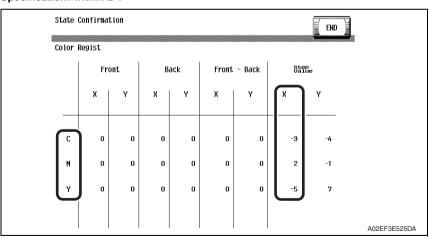
Conditions: SINGLE, HYPER, Gradation, 4 Color

Using the output test pattern, check if each color of CMYK is printed in correct pattern.

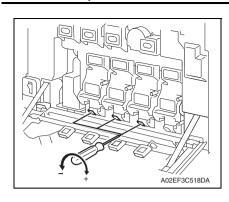
If the pattern is not correct, any troubles such as connecting failure in PH unit of the corresponding color may occur, which should be modified. If there is not any problem, proceed to step 4.

- Touch [Service Mode] → [Imaging Process Adjustment] → [Stabilizer] → [Initialize + Image Stabilization].
- After image stabilization is completed, display [Service Mode] → [State Confirmation]
 → [Color Regist] and check if the Step Value: X of each color C, M, Y, is within the specification.

Specification: within \pm 4







- If either value is out of the specification, follow the procedures shown below to adjust it to satisfy the specification.
- If the value of all color, C, M, Y satisfy the specification, proceed to step 10.
- 6. Open the front door.
- Turn the skew adjustment dial of the corresponding PH with flathead screwdriver.
- To the left : When the step value goes direction
- To the right : When the step value goes + direction

<Adjustment sample>

If the yellow value, among the step values confirmed in step 5, is [-5], which means out of the specification, turn the skew adjustment dial of PH (yellow) to the left (- direction) for 5 clicks.

NOTE

- · Do not execute the skew adjustment of black PH unit.
- Close the front door and touch [Imaging Process Adjustment] → [Stabilizer] → [Initialize + Image Stabilization].
- After image stabilization is completed, display [Service mode] → [State Confirmation]
 → [Color Regist] again and check if the step value: X of each color C, M, Y is within the specification.

NOTE

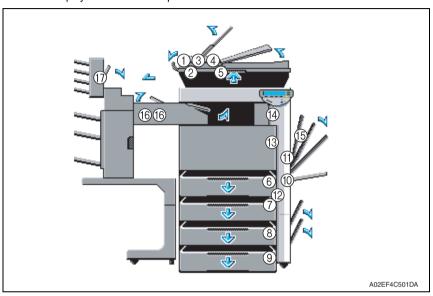
- Each color's Step value displayed on [Color Regist] changes every time the image stabilization is conducted. Therefore the value may change even if skew adjustment is not made.
- If either value is out of the specification, repeat step 6 to 9 to continue the adjustment until all C, M, Y colors satisfy the specification.
- 10. Exit the Service Mode.

Troubleshooting

15. Jam display

15.1 Misfeed display

When a paper misfeed occurs, the misfeed message, misfeed location, and paper location are displayed on the control panel of the machine.

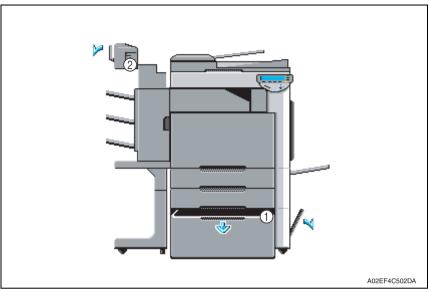


Display	Code *1	Jam type	Misfeed processing location	Action
[1]	6601	See P.53 of the DF-611 service manual.		
[2]	6602			
[3]	6603			
[4]	6604			
[5]	6605			
[1], [2], [3],	6606			
[4], [5]	6607			
[6]	1101	Misfeed at tray 1 feed section	Right door	P.470
[7]	1201	Misfeed at tray 2 feed section	Vertical transport door	P.471
[8]	1301	See P.23 of the PC-104/204 serv	rice manual.	
[12]	2001			
[9]	1401			
[12]	2001			
[10]	1001	Misfeed at manual bypass feed section	Right door	P.472
[11]	9201	Misfeed at duplex pre-registration section	Right door, duplex door	P.473
[12]	2001	Misfeed at vertical transport section	Right door, vertical transport door	P.474
[13]	3001	2nd image transfer section	Right door	P.475

	Display	Code *1	Jam type	Misfeed processing location	Action
	[14]	3201	Misfeed at exit section	Right door	P.476
	[15]	9301	Misfeed at duplex transport section	Duplex door	P.477
À	_	9901	Controller jam	=	P.478
		7216	See P.73 of the FS-519/PK-515/0	OT-602 service manual.	
		7218			
	[16]	7221			
		7243			
		7281			
	[17]	7290	See P.11 of the MT-502 service manual.		

^{*1:} JAM code is displayed at [Paper Jam History] under [Counter] available from Service Mode.

Regarding jam at paper exit options, jam codes are available by selecting [Service Mode] \rightarrow [Counter] \rightarrow [JAM]. To identify misfeed locations, use the jam codes and refer to the above list.



Display	Code *1	Jam type	Misfeed processing location	Action
[1]	1501	See P.29 of the PC-405 s	ervice manual.	
[1]	2001			
	7221	See P.37 of the SD-505 service manual.		
[0]	7225			
[2] 7284				
	7285			

^{*1:} JAM code is displayed at [Paper Jam History] under [Counter] available from Service Mode.

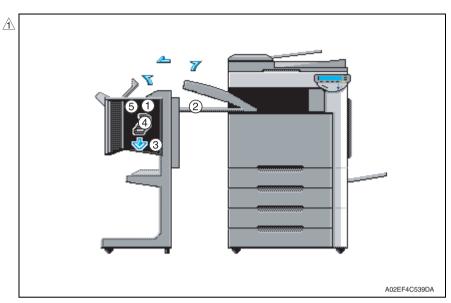
Regarding jam at paper exit options, jam codes are available by selecting [Service Mode] \rightarrow [Counter] \rightarrow [JAM]. To identify misfeed locations, use the jam codes and refer to the above list.



Display	Code *1	Jam type	Misfeed processing location	Action
[1]	7216	See P.19 of the JS-505 s	ervice manual.	

*1: JAM code is displayed at [Paper Jam History] under [Counter] available from Service Mode.

Regarding jam at paper exit options, jam codes are available by selecting [Service Mode] \rightarrow [Counter] \rightarrow [JAM]. To identify misfeed locations, use the jam codes and refer to the above list.



Display	Code *1	Jam type	Misfeed processing location	Action
[1]	7218	See P.63 of the FS-609/P	K-501 service manual.	
[2]	7216			
[3]	7225			
[4]	7281			
[5]	7221			

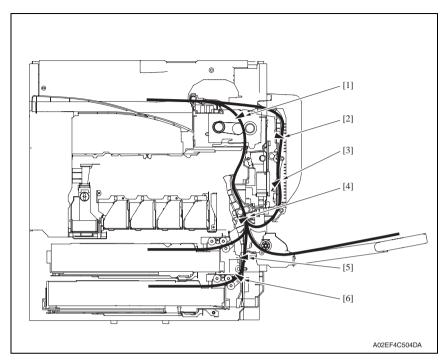
^{*1:} JAM code is displayed at [Paper Jam History] under [Counter] available from Service Mode.

Regarding jam at paper exit options, jam codes are available by selecting [Service Mode] \rightarrow [Counter] \rightarrow [JAM]. To identify misfeed locations, use the jam codes and refer to the above list.

15.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfed, and close the door.

15.2 Sensor layout



- [1] Paper exit sensor PS25
- [2] Duplex paper passage sensor/1 PS33
- [3] Duplex paper passage sensor/2 PS34
- [4] Sensor in front of tim. roller PS23
 - 5] Paper feed tray 2 vertical PS16 transport sensor
- [6] Paper feed tray 2 paper feed PS14 sensor

15.3 Solution

15.3.1 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.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path and replace if necessary.
Are rolls/rollers dirty, deformed, or worn?	Clean or replace the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators operating correctly?	Correct or replace the defective actuator.

15.3.2 Solution when paper curl occurs

Step	Check items/actions		
1	Turn over the stacked paper in the paper tray.		_
	Turri over the stacked paper in the paper tray.	NG	Go to step 2.
2	Does paper curl occur just after a warm-up has been completed or the sleep mode has been turned OFF?	YES	Go to step 3.
2	Does paper curl occur under normal conditions (under conditions other than those mentioned above)?	YES	Go to step 5.
	1. Call the Service Mode to the screen.	OK	_
3	 2. Select [System 1] → [Change Warm Up Time]. 3. Change the setting to [Mode 3]. See P.394 	NG	Go to step 4.
4	 Call the Service Mode to the screen. Select [System 1] → [Change Warm Up Time]. Change the setting to [Mode 4]. See P.394 	_	_
	1. Call the Service Mode to the screen.	OK	_
5	 2. Select [Machine] → [Fusing Temperature]. 3. Select a paper type. 4. Change the temperature of Heater Roller to [-10 °C]. See P.346 	NG	Go to step 6
6	 Call the Service Mode to the screen. Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-20 °C]. See P.346 	_	_

15.3.3 Misfeed at tray 1 feed section

A. Detection timing

	Туре	Description
	Detection of misfeed at tray 1 feed section	 The leading edge of the paper does not turn ON the sensor in front of tim. roller (PS23) even after the lapse of a given period of time after the tray 1 starts to feed paper.
	Detection of paper left in tray 1 feed section	 The paper feed tray 1 chain feed sensor (PS1) is turned ON when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	Tray 1 feed section loop registration reversing jam	 For paper fed from the tray 1, due to a delay in paper arrival, loop forming in front of the timing roller is not complete before the rise timing of the transport motor (M1).
<u>^2</u>	Tray 1 feed section image write start signal permit waiting jam	 For paper fed from the tray1, 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.

Relevant parts		
Transport motor (M1) Paper feed tray 1 paper feed clutch (CL1) Paper feed tray 1 chain feed sensor (PS1) Sensor in front of tim. roller (PS23)	Printer control board (PRCB)	

			WIRING DIAGRAM		
2	Step Action	Action	Control signal	Location (Electrical component)	
	1	Initial check items	_	_	
	2	PS1 I/O check, sensor check	PRCB CN12-8 (ON)	D-8	
	3	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	D-18	
	4	CL1 operation check	PRCB CN12-11 (ON)	D-9	
	5 M1 operation check		PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23	
	6	Change PRCB	_	_	

15.3.4 Misfeed at tray 2 feed section

A. Detection timing

	Type	Description
	Detection of misfeed at tray 2 feed section	 The leading edge of the paper does not unblock the paper feed tray 2 vertical transport sensor (PS16) even after the lapse of a given period of time after the tray 2 starts to feed paper.
	Detection of paper left in tray 2	 The paper feed tray 2 vertical transport sensor (PS16) is unblocked when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset. The paper feed tray 2 paper feed sensor (PS14) is unblocked when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
2	Tray 2 feed section image write start signal permit wait-	 For paper fed from the tray2, 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.

Relevant parts		
Transport motor (M1)	Printer control board (PRCB)	
Paper feed tray 2 paper feed clutch (CL2)		
Paper feed tray 2 vertical transport clutch (CL3)		
Paper feed tray 2 paper feed sensor (PS14)		
Paper feed tray 2 vertical transport sensor (PS16)		

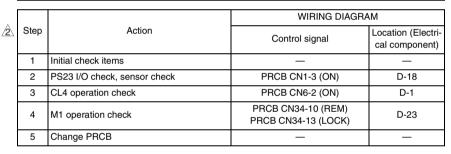
			WIRING DIAGRAM	
2	Step Action		Control signal	Location (Electrical component)
	1	Initial check items	_	_
	2	PS14 I/O check, sensor check	PRCB CN9-8 (ON)	D-10
	3	PS16 I/O check, sensor check	PRCB CN9-11 (ON)	D-10
	4	CL2 operation check	PRCB CN9-19 (ON)	D-11
	5	CL3 operation check	PRCB CN9-17 (ON)	D-11
	6	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
	7	Change PRCB	_	_

15.3.5 Misfeed at manual bypass feed section

A. Detection timing

Туре	Description
Detection of misfeed at manual bypass feed section	 The leading edge of the paper does not turn ON the sensor in front of tim. roller (PS23) even after the lapse of a given period of time after the manual bypass tray starts to feed paper.
Manual bypass feed section loop registration reversing jam	 For paper fed from the manual bypass, loop forming has not been complete before a sheet enters the timing roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
Manual bypass feed section image write start signal permit wait- ing jam	 For paper fed from the manual bypass, 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.

Relevant parts		
Transport motor (M1) Manual paper feed clutch (CL4) Sensor in front of tim. roller (PS23)	Printer control board (PRCB)	



15.3.6 Misfeed at duplex pre-registration section

A. Detection timing

	Туре	Description
	Detection of misfeed at duplex pre-registration section	The leading edge of the paper does not turn ON the sensor in front of tim. roller (PS23) even after the lapse of a given period of time after a duplex paper feed sequence has been started.
	Duplex pre-regis- tration section loop registration revers- ing jam detection	 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 timing roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.
<u>2</u>	Duplex pre-regis- tration section image write start signal permit wait- ing jam	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.

Relevant parts		
Transport motor (M1)	Printer control board (PRCB)	
Duplex transport motor (M7)		
Sensor in front of tim. roller (PS23)		

		Step Action	WIRING DIAGRAM	
2	Step		Control signal	Location (Electrical component)
	1	Initial check items	_	_
	2	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	D-18
	3	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
	4	M7 operation check	PRCB CN4-1 to 4	D-3
	5	Change PRCB	_	_

15.3.7 Misfeed at tray 2 vertical transport section

A. Detection timing

Туре	Description
Detection of misfeed at vertical transport section	 The leading edge of the paper does not turn ON the sensor in front of tim. roller (PS23) even after the lapse of a given period of time after the paper has blocked the paper feed tray 2 vertical transport sensor (PS16). The paper feed tray 2 vertical transport sensor (PS16) is not unblocked even after the lapse of a given period of time after the paper has blocked the PS16.
Vertical transport section loop registration reversing jam	 For paper fed from the tray 2, loop forming has not been complete before a sheet enters the timing roller because the rise timing of load to perform registra- tion is earlier than the rise timing of load to form a loop.

Relevant parts		
Transport motor (M1) Paper feed tray 2 vertical transport clutch (CL3) Paper feed tray 2 vertical transport sensor (PS16) Sensor in front of tim. roller (PS23)	Printer control board (PRCB)	

A
<u> </u>

			WIRING DIAGRAM	
Ste	ер	Action	Action Control signal	Location (Electrical component)
1	ı	Initial check items	_	_
2	2	PS16 I/O check, sensor check	PRCB CN9-11 (ON)	D-10
3	3	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	D-18
4	1	CL3 operation check	PRCB CN9-17 (ON)	D-11
5	5	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
6	6	Change PRCB	_	_

15.3.8 Misfeed at 2nd image transfer section

A. Detection timing

Туре	Description
Detection of misfeed at 2nd image transfer section	 A sheet of paper does not turn OFF the sensor in front of tim. roller (PS23) after a predetermined period of time has elapsed since the sheet has turned ON the PS23. A sheet of paper does not turned ON the paper exit sensor (PS25) after a predetermined period of time has elapsed since the sheet has turned ON the sensor in front of tim. roller (PS23).
Detection of paper left in 2nd image transfer section	 The sensor in front of tim. roller (PS23) is turned ON when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or mal- function is reset.
2nd image transfer section loop registration reversing jam	For paper fed from the tray, loop forming has not been complete before a sheet enters the timing roller because the rise timing of load to perform registration is earlier than the rise timing of load to form a loop.

Relevant parts		
Transport motor (M1) Fusing motor (M5) Tim. roller clutch (CL6) Sensor in front of tim. roller (PS23) Paper exit sensor (PS25)	Printer control board (PRCB)	



Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	D-18
3	PS25 I/O check, sensor check	_	_
4	CL6 operation check	PRCB CN1-5 (ON)	D-17
5	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
6	M5 operation check	PRCB CN34-2 (REM) PRCB CN34-5 (LOCK)	D-23
7	Change PRCB	_	_

15.3.9 Misfeed at exit section

A. Detection timing

Туре	Description
Detection of misfeed at exit section	The paper exit sensor (PS25) is not turned OFF even after the lapse of a given period of time after the paper has turned ON the PS25. The paper exit sensor (PS25) is not turned ON even after the lapse of a given period of time after the switchback sequence is started. The duplex paper passage sensor/1 (PS33) is not turned ON even after the lapse of a given period of time after the switchback sequence is started.
Detection of paper left in exit section	The paper exit sensor (PS25) is turned ON when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant parts		
Transport motor (M1)	Printer control board (PRCB)	
Fusing motor (M5)		
Switchback motor (M6)		
Duplex transport motor (M7)		
Paper exit sensor (PS25)		
Duplex paper passage sensor/1 (PS33)		



Step		WIRING DIAGRA	M
	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS25 I/O check, sensor check	_	_
3	PS33 I/O check, sensor check	PRCB CN4-7 (ON)	D-4
4	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
5	M5 operation check	PRCB CN34-2 (REM) PRCB CN34-5 (LOCK)	D-23
6	M6 operation check	PRCB CN40-10 to 13	D-19
7	M7 operation check	PRCB CN4-1 to 4	D-3
8	Change PRCB	_	_

15.3.10 Misfeed at duplex transport section

A. Detection timing

Туре	Description	
Detection of misfeed at duplex transport section	 A sheet of paper does not unblock the duplex paper passage sensor/2 (PS34) after a predetermined period of time has elapsed since the sheet blocks the duplex paper passage sensor/1 (PS33). A sheet of paper does not unblock the duplex paper passage sensor/1 (PS33) after a predetermined period of time has elapsed since the sheet blocks PS33. A sheet of paper does not block the duplex paper passage sensor/2 (PS34) after a predetermined period of time has elapsed since the sheet unblocks PS34. 	
Detection of paper left in duplex paper passage sensor/1 (PS33) is blocked, or the duplex passage sensor/2 (PS34) is unblocked when the main power switch is transport section ON, a door or cover is opened and closed, or a misfeed or malfunction		

Relevant parts		
Switchback motor (M6)	Printer control board (PRCB)	
Duplex transport motor (M7)		
Duplex paper passage sensor/1 (PS33)		
Duplex paper passage sensor/2 (PS34)		



Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS33 I/O check, sensor check	PRCB CN4-7 (ON)	D-4
3	PS34 I/O check, sensor check	PRCB CN4-10 (ON)	D-4
4	M6 operation check	PRCB CN40-10 to 13	D-19
5	M7 operation check	PRCB CN4-1 to 4	D-3
6	Change PRCB	_	_



15.3.11 Controller jam

A. Detection timing

Туре	Description	
	A control erratic operation as it relates to the duplex unit occurs.	
Controller jam	A stop command (a command to effect a forced stop) is received.	
	A media error (wrong type or size of paper) occurs during a 2-sided print cycle.	

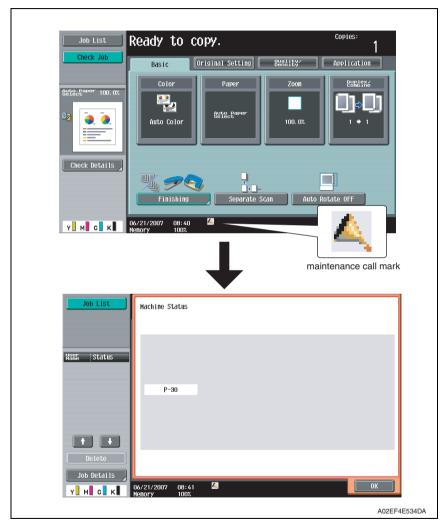
Relevant parts	
MFP board (MFPB)	Printer control board (PRCB)

	WIRING DIAG		AM
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	Check for the paper left in the machine.	_	_
3	Check to see if the size or type of the paper specified on the control panel or printer driver coincides with that of the paper actually loaded.	-	_
4	One possible cause is a control erratic operation. So, turn OFF and ON the main power switch and run the print cycle again.	-	_
5	Upgrade the firmware.	_	_
6	Change PRCB	_	_
7	Change MFPB		_

16. Malfunction code

16.1 Alert code

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding warning code and maintenance call mark on the control panel.
- Touching the maintenance call mark will display the corresponding warning code on the state confirm screen.



16.1.1 Alert code list

• If an image stabilization or scanner fault occurs, the corresponding warning code appears.

Code	Item	Description
S-1	CCD gain adjustment failure	It is detected that the CCD clamp gain adjustment value is faulty.
D-1	Split line detect	 While recovering from the power save mode or when the main/sub power switch is ON, it detects whether or not stain exist at the original glass moving unit when the ADF is closed. This warning will be displayed if the original is set to ADF when stain exist. The thin line detection level and the warning display can be changed by the following setting. [Service Mode] → [System 2] → [Thin line Detect. Setting]
D-2	Read guide trouble	 While recovering from the power save mode or when the main/sub power switch is ON, it detects whether or not stain exist at the scanning guide when the ADF is closed. This warning will be displayed if the original is set to ADF when stain exist. This setting is valid only when the [Detection during Paper Passing] available from the following setting is set to one between 2 and 6. [Service Mode] → [System 2] → [Split Line Detect. Setting]
P-5	IDC sensor (front) failure	When adjusting the IDC sensor, output voltage
P-28	IDC sensor (rear) failure	detected for all sample patterns are specified value or more. • When adjustment is complete, sensor's output voltage with selected light intensity is specified value or under. • 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 of each color for hyper 0 gradation after the primary approximation is half the detection level on the belt surface or under
P-6	Cyan imaging unit failure	All density readings taken from the density pattern pro-
P-7	Magenta imaging unit failure	duced on the transfer belt are 1.0 g/m² (IDC sensor photo receiver output) or less during max. density
P-8	Yellow imaging unit failure	adjustment (Vg/Vdc adjustment).
P-9	Black imaging unit failure	
P-21	Color regist test pattern failure	 The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. The number of points detected in the sub scan direction is more or less than the specified value during sub scan direction registration correction.

Code	Item	Description
P-22	Color regist adjust failure	 The color shift amount is greater than the specified range during main scan direction registration correction. The color shift amount is greater than the specified range during sub scan direction registration correction. On the color shift test pattern, the maximum and minimum deviations detected in the main and sub scan directions go over the predetermined value.
P-27	Secondary transfer ATVC failure	An abnormal average value is detected during an adjustment of the second image transfer ATVC value.
P-30	Color PC drive sensor malfunction	The output from the color PC drive main and sub sensors remains unchanged for a continuous period of 1,000 ms while the color PC motor is turning stably and the lock signal is active (LOW-0).
P-31	Black PC drive sensor malfunction	 The output from the black PC drive main and sub sensors remains unchanged for a continuous period of 1,000 ms while the transport motor is turning stably and the lock signal is active (LOW-0).

16.2 Solution

16.2.1 S-1: CCD gain adjustment failure

Relevant parts	
Scanner assy	CCD sensor unit Image processing board (IPB)

Step	Action
1	Correct the harness connection between CCDB and IPB 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.
5	Change CCD sensor unit.
6	Change IPB.

16.2.2 D-1: Split line detect

Relevant parts	
Original glass moving unit	Image processing board (IPB) Printer control board (PRCB)

Step	Action
1	Wipe clean the glass surface of the original glass moving unit.
2	Correct the harness connection between IPB and PRCB if faulty.
3	Change original glass moving unit.
4	Change IPB.
5	Change PRCB.

16.2.3 D-2: Read guide trouble

Relevant parts	
ADF scanning guide (DF-611)	

Step	Action
	Wipe clean the surface of the ADF scanning guide with a cleaning pad, if it is dirty. See P.13 of the DF-611 service manual.

16.2.4 P-5: IDC sensor (front) failure

16.2.5 P-28 IDC sensor (rear) failure

Relevant parts	
IDC registration sensor/YC (IDCS/YC)	Printer control board (PRCB) High voltage unit (HV) Transfer belt unit

Step	Action
1	Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2	Change the image transfer belt unit if the transfer belt is damaged.
3	Reinstall or reconnect IDCS/MK or IDCS/YC, sensor shutter or connector, if it is installed or connected improperly.
4	Clean IDCS/MK or IDCS/YC if it is dirty.
5	Check the HV 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. IDC1: IDCS/MK, IDC2: IDCS/CY If the value is 1.0 V or less, change IDCS/MK or IDCS/CY.
7	Change PRCB.

16.2.6 P-6: Cyan imaging unit failure

16.2.7 P-7: Magenta imaging unit failure

16.2.8 P-8: Yellow imaging unit failure

16.2.9 P-9: Black imaging unit failure

Relevant parts	
Imaging unit /C	Transfer belt unit
Imaging unit /M	High voltage unit (HV)
Imaging unit /Y	Printer control board (PRCB)
Imaging unit /K	

Step	Action
1	Select [Imaging Process Adjustment] \rightarrow [D Max Density] and, if the setting value is negative, readjust.
2	Check the drive transmission portion of the Imaging Unit and correct as necessary.
3	Clean the IDC registration sensor/MK (IDCS/MK) or IDC registration sensor/CY (IDCS/CY) window if dirty.
4	Clean the contact of the imaging unit connector if dirty.
5	Check the HV connector for proper connection and correct as necessary.
6	Change imaging unit.
7	Change the transfer belt unit.
8	Change PRCB.

16.2.10 P-21: Color regist test pattern failure

Relevant parts	
Transfer belt unit PH unit	Printer control board (PRCB)

Step	Action
1	Wipe clean the surface of the transfer belt with a soft cloth, if it is dirty.
2	Change the image transfer belt unit if the transfer belt is damaged.
3	Change the PH unit.
4	Change PRCB.

16.2.11 P-22: Color regist adjust failure

Relevant parts		
IDC registration sensor /MK (IDCS/MK) IDC registration sensor/CY (IDCS/CY)	Printer control board (PRCB)	

Step	Action	
1	Slide out the imaging unit and reinstall it in position.	
2	Reinstall or reconnect IDCS/MK or IDCS/CY if it is installed or connected improperly.	
3	Check the vertical transport guide for installed position and correct as necessary.	
4	Change PRCB.	

16.2.12 P-27: Secondary transfer ATVC failure

Relevant parts		
0 0 1	Image transfer entrance guide 2nd image transfer assy Transfer belt unit	

Step	Action	
1	Check roller opposed to the 2nd image transfer roller is grounded. 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 2nd transfer roller and correct if necessary.	
4	Check the contact at the joint of the 2nd image transfer assy and HV. Clean the joint or correct if necessary.	
5	Change the transfer belt unit.	
6	Change HV.	
7	Change PRCB.	

16.2.13 P-30: Color PC drive sensor malfunction

Relevant electrical parts		
Color PC drive main sensor (PS27)	Main drive unit	
Color PC drive sub sensor (PS28)	Printer control board (PRCB)	

Step	Action	
1	Perform the faulty sensor check procedure. *1	
2	Check the sensor, for which a faulty condition has been checked, for installed position and proper connection.	
3	Wipe the sensor, for which a faulty condition has been checked, clean of dirt if any.	
4	If P-30 occurs again, change the main drive unit.	
5	Change PRCB.	

- *1: Faulty sensor check procedure
- 1. Open the front door and turn ON the main power switch of the machine.
- Call the [Sensor Check] screen to the screen by way of Service Mode. For details how to display, see "Adjustment /Setting." See P.410
- 3. Close the front door and start [Stabilization].
- During the stabilization sequence, check to see if the values of the phase detection sensors (color PC drive main/sub sensors) change.
- 5. A sensor is faulty if its value does not change.

16.2.14 P-31: Black PC drive sensor malfunction

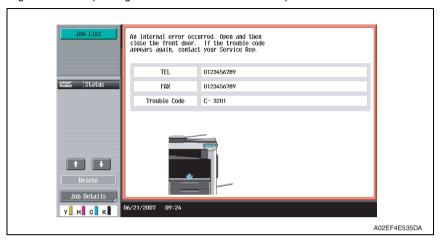
Relevar	nt parts
Black PC drive main sensor (PS29)	Main drive unit
Black PC drive sub sensor (PS30)	Printer control board (PRCB)

Step	Action	
1	Perform the faulty sensor check procedure. *1	
2	Check the sensor, for which a faulty condition has been checked, for installed position and proper connection.	
3	Wipe the sensor, for which a faulty condition has been checked, clean of dirt if any.	
4	If P-31 persists, change the main drive unit.	
5	Change PRCB.	

- *1: Faulty sensor check procedure
- 1. Open the front door and turn ON the main power switch of the machine.
- Call the [Sensor Check] screen to the screen by way of Service Mode. For details how to display, see "Adjustment /Setting." See P.410
- 3. Close the front door and start [Stabilization].
- During the stabilization sequence, check to see if the values of the phase detection sensors (black PC drive main/sub sensors) change.
- 5. A sensor is faulty if its value does not change.

16.3 Trouble code

 The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the control panel.



16.3.1 Trouble code list

* For the details of the malfunction codes of the options, see the Service Manual for the corresponding option.

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C0001	LCT connection failed	See P.34 of the PC-405 service manual.	_	С
C0202	Tray 1 feeder up/down abnormality	 The paper feed tray 1 upper limit sensor is not blocked even after the lapse of a given period of time after the lifting motion has been started. 	Tray 1	В
C0204	Tray 2 feeder up/down abnormality	 The paper feed tray 2 upper limit sensor is not blocked even after the lapse of a given period of time after the lifting motion has been started. 	Tray 2	В
C0206	Tray 3 feeder up/down abnormality	See P.28 of the PC-104/204 service manual.	Tray 3	В
C0208	Tray 4 feeder up/down abnormality		Tray 4	В
C0209	LCT elevator motor malfunction	See P.34 of the PC-405 service manual.	LCT	В
C0210	LCT ascent motion failure		LCT	В

	Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
-	C0211	Manual feed up/down abnormality	The manual lift-up position sensor is not unblocked even when the transport motor has turned for a given number of pulses after the sequence to move the paper lifting plate from the standby position to the feed position was started. The manual lift-up position sensor is not blocked even when the transport motor has turned for a given number of pulses after the sequence to move the paper lifting plate from the feed position to the standby position was started.	manual	В
Ī	C0212	LCT ejection failure	See P.34 of the PC-405 service manual.	LCT	В
	C0213	LCT shift gate malfunction		LCT	В
	C0214	LCT shifting failure		LCT	В
	C0215	LCT shift motor malfunction		LCT	В
	C0301	Suction fan motor's failure to turn	The fan lock signal remains HIGH for a pre- determined continuous period of time while the motor remains stationary.	_	В
	C1004	FNS communication error	See P.79 of the FS-519/PK-515/OT-602 service manual. See P.22 of the JS-505 service manual.	_	С
1	C1180	Transport system drive malfunctions	See P.69 of the FS-609/PK-501 service manual.	_	В
1	C1181	Paddle motor malfunctions		_	В
	C1182	Shift motor mechanism failure	See P.22 of the JS-505 service manual.	_	В
î	C1183	Finishing option elevator drive malfunction	See P.79 of the FS-519/PK-515/OT-602 service manual. See P.69 of the FS-609/PK-501 service manual.	_	В
	C1190	Finishing option aligning bar moving mechanism malfunction 1	See P.79 of the FS-519/PK-515/OT-602 service manual.	_	В
	C1191	Finishing option aligning bar moving mechanism malfunction 2		_	В
1	C1192	Front aligning plate motor malfunctions	See P.69 of the FS-609/PK-501 service manual.		В
î	C1193	Rear aligning plate motor malfunctions			В
Ī	C11A0	Paper holding drive failure	See P.79 of the FS-519/PK-515/OT-602 ser-	_	В
	C11A1	Finishing option exit roller pressure/retraction failure	vice manual.	_	В
	C11A2	Saddle exit roller pres- sure/retraction failure	See P.42 of the SD-505 service manual.	_	В

	Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
	C11A3	Shutter drive failure	See P.79 of the FS-519/PK-515/OT-602 service manual.	_	В
<u>/1</u>	C11A4	Saddle exit motor failure Booklet exit motor malfunctions	See P.42 of the SD-505 service manual. See P.69 of the FS-609/PK-501 service manual.	_	В
	C11A5	Saddle in & out guide motor failure	See P.42 of the SD-505 service manual.	_	В
	C11A6	Saddle layable guide drive failure		_	В
	C11B0	Finishing option stapler unit CD drive failure	See P.79 of the FS-519/PK-515/OT-602 service manual.	_	В
1	C11B1	Stapler unit slide motor malfunctions	See P.69 of the FS-609/PK-501 service manual.	_	В
	C11B2	Finishing option stapling mechanism malfunction 1	See P.79 of the FS-519/PK-515/OT-602 service manual.	_	В
1	C11B4	Stapler/folding motor malfunctions	See P.69 of the FS-609/PK-501 service manual.	_	В
	C11B5	Side staple 1 drive failure	See P.42 of the SD-505 service manual.	_	В
	C11B6	Side staple 2 drive failure		_	В
	C11C0	Punch motor malfunction	See P.79 of the FS-519/PK-515/OT-602 service manual.	_	В
1	C11C1	Punch control board malfunctions	See P.69 of the FS-609/PK-501 service manual.	_	С
<u>1</u>	C11C2	Punch side registration motor malfunctions		_	С
À	C11C3	Punch motor malfunctions		_	С
1	C11C5	Punch sensor malfunctions		_	С
	C11D0	Crease motor drive failure	See P.42 of the SD-505 service manual.	_	В
	C11E0	Route switch malfunction	See P.22 of the JS-505 service manual.	_	В
	C1301	Finishing option cooling fan motor failure	See P.79 of the FS-519/PK-515/OT-602 service manual.	_	В
1	C1401	Backup RAM failure	See P.69 of the FS-609/PK-501 service manual.	_	С
	C2151	Secondary transfer roller pressure welding alienation	 During a retraction operation of the 2nd image transfer roller, the 2nd image transfer welding alienation sensor cannot detect the 2nd image transfer roller at its retracted position within a predetermined period of time after the 2nd image transfer retraction motor starts rotating. During a pressure operation of the 2nd image transfer roller, the 2nd image transfer welding alienation sensor cannot detect the 2nd image transfer roller at its pressed position within a predetermined period of time after the 2nd image transfer retraction motor starts rotating. 	_	В

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C2152	Transfer belt pressure welding alienation	 During a retraction operation of the transfer belt, the transfer belt retraction sensor cannot detect the transfer belt at its retracted position within a predetermined period of time after the transfer belt retraction clutch is turned ON. During a pressure operation of the transfer belt, the transfer belt retraction sensor cannot detect the transfer belt at its pressed position within a predetermined period of time after the transfer belt clutch is turned ON. 	_	В
C2164	PC charge malfunction	 When electrostatic charge output is ON, electrostatic charge leak detection system continues to detect leaks for a predeter- mined period of time. 	_	В
C2253	Color PC motor's failure to turn	 The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. 	_	В
C2254	Color PC motor's turning at abnormal timing	 The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary. 	_	В
C225D	Color dev. unit engage- ment/disengagement failure	 The gears remain disengaged after the lapse of a predetermined period of time after the engagement operation is started by the color dev. unit engaged motor. The gears remain engaged after the lapse of a predetermined period of time after the disengagement operation is started by the color dev. unit engaged motor. 	_	В
C2351	K toner suction fan motor's failure to turn	 The motor lock signal remains HIGH for a predetermined continuous period of time while the motor is turning. 	_	В
C2451	Release new transfer belt unit	 A new installation is not detected when a new transfer cleaner unit (image transfer belt unit) is installed. 	_	В
C2551	Abnormally low toner density detected cyan TCR sensor	 TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 4 % or less for a given number of times consecutively. 	_	В
C2552	Abnormally high toner density detected cyan TCR sensor	 TC ratio in the developing machine, which is determined by Toner replenishing amount control mechanism, is 11 % or more for a given number of times consecutively. 	_	В
C2553	Abnormally low toner density detected magenta TCR sensor	 TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 4 % or less for a given number of times consecutively. 	_	В

	T	T .	T	
Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C2554	Abnormally high toner density detected magenta TCR sensor	TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 11 % or more for a given number of times consecutively. When the connector of the TCR sensor is disconnected.	_	В
C2555	Abnormally low toner density detected yellow TCR sensor	TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 4 % or less for a given number of times consecutively. When the connector of the TCR sensor is disconnected.	_	В
C2556	Abnormally high toner density detected yellow TCR sensor	TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 11 % or more for a given number of times consecutively. When the connector of the TCR sensor is disconnected.	_	В
C2557	Abnormally low toner density detected black TCR sensor	TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 4 % or less for a given number of times consecutively.	_	В
C2558	Abnormally high toner density detected black TCR sensor	TC ratio in the developing machine, which is determined by toner replenishing amount control mechanism, is 11 % or more for a given number of times consecutively. When the connector of the TCR sensor is disconnected.	_	В
C2559	Cyan TCR sensor adjustment failure	TCR sensor automatic adjustment does not function properly, failing to adjust to an appropriate value.	_	В
C255A	Magenta TCR sensor adjustment failure		_	В
C255B	Yellow TCR sensor adjustment failure		_	В
C255C	Black TCR sensor adjustment failure		_	В
C2650	Main backup media access error	 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 machine detects that the service EEPROM board is not loaded in position. 	_	_

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C2651	EEPROM access error (IU C)	An error was found when reading or writing data.	_	С
C2652	EEPROM access error (IU M)	The error was found when reading out the counter value.	_	С
C2653	EEPROM access error (IU Y)		_	С
C2654	EEPROM access error (IU K)		_	С
C2A01	EEPROM access error (TC C)	An error was found when reading or writing data.	_	С
C2A02	EEPROM access error (TC M)	The error was found when reading out the counter value.	_	С
C2A03	EEPROM access error (TC Y)		_	С
C2A04	EEPROM access error (TC K)		_	С
C3101	Fusing roller separation failure	With the fusing roller being retracted, the pulse of the fusing roller retraction sensor does not change even after the specified period of time has passed after the fusing retraction motor started rotating. With the fusing roller being pressed, the pulse of the roller retraction sensor does not change even after the specified period of time has passed after the fusing retraction motor started rotating. During a pressure operation of the fusing roller, the fusing roller is not at the pressed position even after the roller retraction sensor counts the specified number of pulses after the fusing retraction motor starts rotating.		В
C3201	Fusing motor failure to turn	The motor lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В
C3202	Fusing motor turning at abnormal timing	The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.	_	В
C3301	Fusing cooling fan motor/ 1 failure to turn	The fan motor lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В
C3302	Fusing cooling fan motor/ 2,3 failure to turn	The fan motor lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C3421	Fusing heaters trouble (heating side)	The temperature detected by the heating roller thermistor/C does not reach a predetermined level after the lapse of a predetermined period of time after the heating roller fusing heater lamp lights up. The difference between the maximum and minimum temperatures detected by the heating roller thermistor/C within a predetermined period of time after the start of a warm-up cycle is below or above a predetermined value. The temperature detected after a pressure level correction remains under a predetermined level even after the lapse of a predetermined period of time after the start of the temperature detection. During a warm-up, a zero cross signal cannot be detected after the lapse of a predetermined period of time after the fusing heater is turned ON or OFF.	_	Α
C3423	Fusing heaters trouble (pressurizing side)	After warm-up operation starts, the fusing pressure roller thermistor does not detect a temperature as high as a predetermined one though a predetermined period of time has elapsed. The temperature of the pressure roller remains lower than a predetermined level even after the lapse of a predetermined period of time after a temperature correction.	_	А
C3461	Release new fusing unit	A new installation is not detected when a new fusing Unit is installed.	_	В
C3721	Fusing abnormally high temperature detection (heating side)	The heating roller thermistor continues to detect a temperature higher than a predetermined one for a predetermined period of time. Hard protection signal L is detected continuously over a predetermined period of time.	_	А
C3723	Fusing abnormally high temperature detection (pressurizing side)	The temperature of the pressure roller continues to be higher than a predetermined level for a predetermined period of time after a temperature correction.	_	А
C3821	Fusing abnormally low temperature detection (heating side)	The heating roller thermistor continues to detect a temperature lower than a predetermined one for a predetermined period of time. In the states other than a warm-up operation, a zero cross signal cannot be detected after the lapse of a predetermined period of time after the fusing heater is turned ON or OFF. The power supply frequency cannot be detected.	_	А

Code	Item		Detection timing	Trouble iso- lation com- pliant unit	Rank
C3823	Fusing abnormally low temperature detection (pressurizing side)	•	The temperature of the pressure roller continues to be lower than a predetermined level for a predetermined period of time after a temperature correction.	_	Α
C4151	Polygon motor rotation trouble (C)		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.	_	В
C4152	Polygon motor rotation trouble (M)			_	В
C4153	Polygon motor rotation trouble (Y)			_	В
C4154	Polygon motor rotation trouble (K)			_	В
C4551	Laser malfunction (C)	•	SOS signal is not detected even after the	_	В
C4552	Laser malfunction (M)		lapse of a given period of time after staring the laser output.	_	В
C4553	Laser malfunction (Y)		SOS signal is not detected for a given	_	В
C4554	Laser malfunction (K)		period of time during printing or image stabilization adjustment.	_	В
C5102	Transport motor's failure to turn	•	The motor lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В
C5103	Transport motor's turning at abnormal timing	•	The motor lock signal remains LOW for a predetermined continuous period of time while the motor remains stationary.	_	В
C5351	Power supply cooling fan motor/1's failure to turn	•	The fan lock signal remains HIGH for a pre- determined continuous period of time while the motor remains stationary.	_	В
C5353	Cooling fan motor/2's failure to turn	•	The fan lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В
C5354	Exhaust fan motor's failure to turn	•	The fan lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В
C5357	Cooling fan motor/1's failure to turn	•	The fan lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.	_	В
C5370	MFP board cooling fan motor's failure to turn	•	The fan lock signal remains HIGH for a pre- determined continuous period of time while the motor remains stationary.	_	В
C5371	MFP board CPU cooling fan motor's failure to turn	•	The fan lock signal remains HIGH for a pre- determined continuous period of time while the motor remains stationary.	_	В



Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C6102	Drive system home sensor malfunction	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.		В
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.		Scanner	В
C6301	Optical cooling fan motor's failure to turn • The fan lock signal remains HIGH for a predetermined continuous period of time while the motor remains stationary.			В
C6704	Image input time out • Image data is not input from the image processing board (IPB) to the printer control board (PRCB).			С
C6751	CCD clamp/gain adjustment failure	 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. 		В
C6F01	Scanner sequence trouble 1	 The original transport interval becomes shorter than the designed value due to an original transport control error in original reading in ADF. 		С
C6F02	Reserved	l	I.	
C6F03	Reserved			
C6F04	Reserved			
C6F05	Reserved			
C6F06	Reserved			
C6F07	Reserved			
C6F08	Reserved			
C6F09	Reserved			
C6F10	Reserved			
C6FDC	Reserved			
C8101	Before reading pressure welding alienation mechanism	See P.60 of the DF-611 service manual.	_	В
C8102	Turn around pressure welding alienation trouble		_	В
C8103	Lift up mechanism trouble		_	В
C8104	Glass movement trouble		_	В

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
C8105	Undetectable			
C8302	Read cooling fan trouble	See P.60 of the DF-611 service manual.	_	В
C9401	Exposure turning on the lamp trouble detection	 The output from the CCD sensor is a prede- termined value or less during CCD sensor gain adjustment. 	Scanner	Α
C9402	Exposure turning on the lamp abnormally detection	 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. 	Scanner	А
CA051	Standard controller configuration failure	The controller of the printer control board (PRCB) is faulty.	=	С
CA052	Controller hardware error	A controller hardware error is detected in the network I/F.	_	С
CA053	Controller start failure	 A controller start failure is detected in the controller interface. 	_	С
CB001	FAX board error 1	See the FK-502 Service Manual.	_	С
CB002	FAX board error 2		_	С
CB003	FAX board error 3		_	С
CB051	FAX board mount failure line 1			С
CB052	FAX board mount failure line 2		_	С
CB110	FAX driver error: Instance generation error or observer registration error		_	С
CB111	FAX driver error: Configuration space initialization NG		_	С
CB112	FAX driver error: Semaphore acquisition, release error		_	С
CB113	FAX driver error: Sequence error among main body tasks		_	С
CB114	FAX driver error: Message queue control error		_	С
CB115	FAX driver error: Main body - sequence error among FAX boards		_	С

Code	ltem	Detection timing	Trouble iso- lation com- pliant unit	Rank
CB116	FAX driver error: FAX board nonresponse (Nonresponse after initial- ization)	See the FK-502 Service Manual.	_	С
CB117	FAX driver error: ACK waiting timeout error		_	С
CB118	FAX driver error: Receiving undefined frame			С
CB119	FAX driver error: DMA transfer error		_	С
CB120	JC soft error		_	С
CB122	Device error (GA LOCAL SRAM)		_	С
CB123	Device error (DRAM)		_	С
CB125	Device error (GA)			С
CB126	Timeout error due to non- response from DC during suspension process			С
CB127	Timeout error due to non- response from CC during suspension process		_	С
CB128	Timeout error due to non- response from LINE dur- ing suspension process		_	С
CB129	Timeout error due to non- response from file system/ file driver during suspension process		_	С
CB130	MIF driver error: Driver soft error		_	С
CB131	MIF driver error: Reception frame length error from main		=	С
CB132	MIF driver error: Reception frame header error from main		_	С
CB133	MIF driver error: 232C i/f sequence error		=	С
CB134	MIF driver error: DPRAM i/f sequence error		_	С
CB135	MIF driver error: DPRAM CTL/STL register error		_	С
CB136	MIF driver error: AKC waiting timeout			С
CB137	MIF driver error: DPRAM RESET reception			С
CB140	MSG I/F Error with JC		_	С

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
CB141	I/F error with main: I/F error with driver	See the FK-502 Service Manual.	_	С
CB142	I/F error with main: Unde- fined command reception		_	С
CB143	I/F error with main: Com- mand frame length error		_	С
CB144	I/F error with main: Command parameter length error		_	С
CB145	I/F error with main: Undefined parameter		_	С
CB146	I/F error with main: Command/response sequence error		_	С
CB150	Line control: External class instance acquisition error		_	С
CB151	Line control: Job start error (Starting job parameter error/child job generation error)		_	O
CB152	Line control: Doc access error (Report buf access error)		_	С
CB153	Line control: Response wait timeout from external task		_	O
CB154	Line control: Internal que table control error (create/enque/deque)		_	O
CB160	1 destination control: Instance generation error		_	С
CB161	1 destination control: Timeout error		_	С
CB162	1 destination control: Interface error		_	С
CB163	1 destination control: Message que control error		_	С
CB164	1 destination control: Semaphore acquisition release error		_	С
CB165	1 destination control: Observer registration error		_	С
CB166	1 destination control: Reception resource check error		_	С

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
CB167	1 destination control: Deployment error of send- ing image information	See the FK-502 Service Manual.	_	С
CB168	1 destination control: Serialization error of receiving image			С
CB169	1 destination control: Access error to quick memory data		_	С
CB170	Page control: Internal que table control error (create/enque/deque)		_	С
CB171	Page control: Instance generation error		_	С
CB172	Page control: Timeout error		_	С
CB173	Page control: Interface error		_	С
CB174	Page control: Semaphore acquisition release error			С
CB175	Page control: Observer registration error			С
CB176	Page control: Unable to check TTI domain		_	С
CB177	Page control: Error return from TTI rasterizer		_	С
CB178	Page control: Receiving job generation error		_	С
CB185	Page control: Receiving data size logic error (Receiving data are not multiples of dotline)		_	С
CB186	Page control: Image buf acquisition (alloc) error		_	С
CB187	Page control: Error return from compressor		_	С
CB188	Page control: BandBuf control error (newInstance/get/free)		_	С
CC001	Vendor connection failure	It is detected that communications with the vendor are interrupted for a given period of time or more with "Installed" selected for the setting of vendor installation.	_	С
CC151	ROM contents error upon startup (MSC)	A fault is detected in a sequence of ROM contents check of the MSC (PRCB) during starting	_	С
CC152	ROM contents error upon startup (scanner)	A fault is detected in a sequence of ROM contents check of the IPB during starting.	_	С

	Code	ltem	Detection timing	Trouble iso- lation com- pliant unit	Rank
	CC153	ROM contents error upon startup (PRT)	 A fault is detected in a sequence of ROM contents check of the mechanical control board (MFPB) during starting. 	_	С
	CC155	Finisher ROM error	See P.79 of the FS-519/PK-515/OT-602 service manual. See P.22 of the JS-505 service manual.	_	С
	CC156	ADF ROM error	See P.60 of the DF-611 service manual.	_	С
	CC163	ROM contents error (PRT)	The wrong model of firmware is detected in the engine during the initial connection to the engine is being checked.	_	С
	CC164	ROM contents error (MSC)	The wrong model of firmware is detected in the MFP board when the main power switch is turned ON.	_	С
	CC165	ROM contents error (ADF)	See P.60 of the DF-611 service manual.	_	С
	CC170	Dynamic link error during starting (AP0)	A dynamic link error occurs in the program on the MFP board due to an insufficient	_	С
	CC171	Dynamic link error during starting (AP1)	memory space available, a ROM fault, or other reason when the main power switch is turned ON.		С
	CC172	Dynamic link error during starting (AP2)	iunieu on.		С
	CC173	Dynamic link error during starting (AP3)			С
	CC174	Dynamic link error during starting (AP4)			С
2	CC180	Dynamic link error during starting (LDR)			С
2	CC181	Dynamic link error during starting (IBR)			С
2	CC182	Dynamic link error during starting (IID)			С
2	CC183	Dynamic link error during starting (IPF)		_	С
2	CC184	Dynamic link error during starting (IMY)			С
	CD002	JOB RAM save error	The error in save of JOB data to the mem- ory/ hard disk and its read error are detected.	_	С
	CD004	Hard disk access error	Unable to communicate between the hard disk and printer control board (PRCB).	_	С

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rank
CD005	Hard disk error 1	Hard disk is faulty.	_	С
CD006	Hard disk error 2		_	С
CD007	Hard disk error 3		_	С
CD008	Hard disk error 4		_	С
CD009	Hard disk error 5		_	С
CD00A	Hard disk error 6		_	С
CD00B	Hard disk error 7		_	С
CD00C	Hard disk error 8		_	С
CD00D	Hard disk error 9		_	С
CD00E	Hard disk error A		_	С
CD00F	Hard disk data transfer error	Data transfer from the hard disk is faulty.	_	С
CD010	Hard disk unformat	Unformatted hard disk is connected.	_	С
CD011	Hard disk out of specifications mounted	A hard disk that falls outside the specifications is connected.	_	С
CD020	Hard disk verify error	The data abnormality is detected by the HDD verify check.	_	С
CD030	Hard disk management information reading error	The machine fails to read administrative information data saved in the hard disk.	_	С
CD201	File memory mounting error	The file memory is not mounted.The file has any abnormality.	_	С
CD202	Memory capacity discrepancy	 File memory capacity on the printer control board (PRCB) is not enough. File memory capacity necessary for duplex printing is not enough during duplex unit mounting. 	_	С
CD203	Memory capacity discrepancy 2	File memory capacity on the printer control board (PRCB) is not enough.	_	С
CD211	PCI-SDRAM DMA operation failure	Hardware related to the transfer of memory image of the Printer control board (PRCB) fails to respond.	_	С
CD212	Compression/extraction timeout detection	 Hardware related to the BTC compression function of the Printer control board (PRCB) fails to respond. 	_	С
CD231	No Fax memory at FAX board mounting	 The DIMM for FAX is not mounted during the FAX board is mounting. The FAX board is not mounted when the FAX board mounting is set ON at Service Mode. 	_	С
CD241	Encryption board setting error	Initialization error of the encrypted ASIC is detected during the machine is starting.		С
CD242	Encryption board mounting error	 The faulty of the installation of encrypted ASIC is detected during the machine is starting. 	_	С
CD251	No JPEG board mounting at JPEG board mount setting	JPEG board (scan accelerator kit) is not mounted when the JPEG board mounting is set ON at Service Mode.	_	С

Code	Item	Detection timing	Trouble iso- lation com- pliant unit	Rani
CD252	No relay circuit boards for IC-409 mounting at IC-409 mount setting	 Relay circuit boards (VI-504) are not mounted when the IC-409 is set to mount settling at Service Mode. 	_	С
CD261	USB host board failure	 When a failure is detected in USB host board included in the local interface kit. Non-standard USB device is connected. 	_	С
CD271	i-Option activated and additional memory not installed	 While the i-Option is activated, the additional memory included in UK-201 is not installed. 	_	С
CD3##	NVRAM data error	Abnormality is detected by the abnormal check of each NVRAM data.	_	_
CD370	NVRAM data multiple errors	Multiple errors (over 5) are detected by the abnormal check of each NVRAM data.		_
CDC##	Trouble related to security	Contact the responsible people of KMBT before taking some countermeasures.	ı	_
CD401	NACK command incorrect		_	С
CD402	ACK command incorrect	cation of controller.		С
CD403	Checksum error		_	С
CD404	Receiving packet incorrect		_	С
CD405	Receiving packet analysis error		_	С
CD406	ACK receiving timeout			С
CD407	Retransmission timeout		_	С
CE001	Abnormal message queue	Printer control board (PRCB) is faulty.	_	С
CE002	Message and method parameter failure		_	С
CE003	Task error		_	С
CE004	Event error		_	С
CE005	Memory access error		_	С
CE006	Header access error		_	С
CE007	DIMM initialize error		_	С
CEEE1	MSC undefined malfunction occurring	An undefined malfunction occurs in the MSC of the printer control board (PRCB).	_	С
CEEE2	Scanner section undefined malfunction	An undefined malfunction occurs in the scanner section.		С
CEEE3	Engine section undefined malfunction	 An undefined malfunction occurs in the engine section (MFPB, etc.). 	_	С

- 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.

Code	Item		Relevant electrical components, units, and options	Rank
CF001	CT_singleList table abnormal	An exceptional	MFP board (MFPB)	С
CF002	CT_doubleList table abnormal	instance occurred due to the unex-		С
CF003	CT_doubleList table abnormal	pected parameter in		С
CF004	CT_queue full abnormal	the system F/W.		С
CF011	Array link abnormal			С
CF012	FAT link abnormal			С
CF013	File size abnormal			С
CF021	setDelayMessage Table OverFlow			С
CF022	procSetBootParamTcpipAddress() injustice			С
CF023	MsgQue OverFlow			С
CF031	getJobPageToIPE() page number injustice			С
CF032	getJobHDDPageToIPE() page number injustice			С
CF033	setDivTbl() limitation over			С
CF034	HDDQUEUE Over Flow			С
CF041	getAPPPtrFromAPPID() abnormal			С
CF042	getAPPIndexFromAPPID() abnormal			С
CF051	CC_InputPageEntry:operator[] page injustice	An exceptional instance occurred		С
CF061	IdeCommand_Set() status abnormal	due to the unex- pected parameter in		С
CF062	IdeCommand_Set() parameter abnormal	the system F/W.		С
CF091	PCI ASIC1 ERROR	ASIC1 error		С
CF092	PCI ASIC2 ERROR	ASIC2 error		С
CF093	PCI ASIC4 ERROR	ASIC3 error		С
CF101	SCAN TIME OUT	Image transfer mal- functions		С
CF111	Compress TIME OUT	Compression mal-		С
CF112	Compress table OverFlow	functions		С
CF113	Compress table check	Compression mal-		С
CF121	Expand TIME OUT	functions		С
CF122	Expand table OverFlow			С
CF123	Expand expandLine abnormal			С

Code	ltem		Relevant electrical components, units, and options	Rank
CF131	Print TIME OUT	Image transfer mal- functions	MFP board (MFPB)	С
CF201	startIRReadAnd Compress()Sequence	An exceptional instance occurred		С
CF202	startWorkSave()Sequence abnormal	due to the unex- pected parameter in the system F/W.		С
CF203	convAPItoIJCParameter()page abnormal	tile system i /vv.		С
CF204	calcCompresserUse()CmpEx- pID Abnormal			С
CF211	setParameterBandColorPlane() Table OverFlow			С
CF212	convAPItoIJCParameter()page abnormal			С
CF213	calcExpandUse() CmpExpID abnormal			С
CF221	startPrintOutput outputsize zero			С
CF222	Next request comes during processing of startPrintOutput ()		С	
CF223	Next request comes during processing of startWorkLoad-Output ()			С
CF300	IR Bus Check Timeout	Image transfer error on IR input bus		С
CF411	Parity error	Communication error		С
CF421	Overrun error	(between IR-sys-		С
CF431	Parity error + Overrun error	tems)		С
CF441	Framing error			С
CF451	Parity error + Framing error			С
CF461	Overrun error + Framing error			С
CF471	Parity error + Overrun error + Framing error			С
CF412	Parity error			С
CF422	Overrun error			С
CF432	Parity error + Overrun error			С
CF442	Framing error			С
CF452	Parity error + Framing error			С
CF462	Overrun error + Framing error			С
CF472	Parity error + Overrun error + Framing error			С
CF510	Parity error			С

Code	Item		Relevant electrical components, units, and options	Rank
CF520	Framing error	Communication error	MFP board (MFPB)	С
CF530	Parity error + Framing error	(IR detected)		С
CF540	Overrun error	1		С
CF550	Parity error + Overrun error			С
CF560	Overrun error + Framing error			С
CF570	Parity error + Overrun error + Framing error			С
CF580	Frame distortion of ADF			С
CF600	Report receiving of print start that is out of sequence		MFP board (MFPB)/ Engine	С
CF601	Report receiving of paper feed- ing that is out of sequence			С
CF604	Outside IF/Command queue		MFP board (MFPB)	С
CF614	"Output sequence" queue	An exceptional		С
CF624	Panel LCD date queue	instance occurred due to the unex- pected parameter in the system F/W.		С
CF704	Common data "Delete-waiting HDD accumulated job ID" queue			С
CF714	IRC/Command queue			С
CF724	Engine/Command queue		MFP board (MFPB)/ Engine	С
CF734	Panel/Command queue		MFP board (MFPB)/ Control Panel	С
CF744	File memory transfer start-wait- ing command queue	An exceptional instance occurred	MFP board (MFPB)	С
CF754	File memory compression requesting command queue	due to the unex- pected parameter in the system F/W.		С
CF764	Panel instruction delete job queue	Tille System F/W.		С
CF774	Warning delete job queue			С
CF784	Application instruction delete job queue			С
CF794	Output page information for duplex back side queue			С
CF7A4	Paper feed completion output pate information queue			С
CF7B4	Exposure compaction output page information queue			С
CF7C4	Pre-discharge completion output page information queue			С
CF7D4	Touch panel coordinate data queue			С
CF7E4	Direct key data queue			С
CF7F4	Scan sequence queue			С
CF802	SIO sending portENG		MFP board (MFPB)/ Engine	С

Code	Item		Relevant electrical components, units, and options	Rank
CF806	SIO sending portIRC		MFP board (MFPB)	С
CF807	SIO sending portADF			С
CF812	SIO sending portFiery		External controller I/F board	С
CF815	SIO sending portPIC/PIC termi	nal	MFP board (MFPB)	С
CF8ED	SIO sending portEPNet			С
CF902	SIO receiving portENG		MFP board (MFPB)/ Engine	С
CF906	SIO receiving portIRC		MFP board (MFPB)	С
CF912	SIO receiving portFiery		External controller I/F board	С
CF915	SIO receiving portPIC/PIC term	ninal	MFP board (MFPB)	С
CF9ED	SIO receiving portEPNet			С
CFA01	getOneImgTransInfoFromTh() No applied thread	An exceptional instance occurred		С
CFA02	chkEnableAllocExec() default error	due to the unex- pected parameter in the system F/W.		С
CFA03	setTransBandAndRepeatNum() error	The System F/VV.		С
CFA04	Application ID error			С
CFA05	Thread selection image processing mode error			С
CFA06	getOneImgIndexNumFromTh() No applied thread	An exceptional instance occurred		С
CFA07	setBufBandFromOut() No applied thread	due to the unex- pected parameter in		С
CFA08	chkStartOutput() No applied thread	the system F/W.		С
CFA09	rptReleaseMemResultACS() No applied thread			С
CFA10	rptEndBandTrans() No applied thread			С
CFA11	cancelTransExec() No applied thread			С
CFA12	CC_ImgTransInfo:allocTransIndex			С
CFA13	CC_MultiThreadProfile:rptBuf2 MemClrEnd			С
CFA14	Thread software error		Whole electrical compo- nents, units, and options	С
CFA50	IGC control error	DB error	MFP board (MFPB)	С
CFA51		IGC internal error		С

		Relevant electrical	
Code	Item	components, units, and	Rank
		options	
CFB00	ASIC117 first sheet DMA00	MFP board (MFPB)	С
CFB01	ASIC117 first sheet DMA01		С
CFB02	ASIC117 first sheet DMA02		С
CFB03	ASIC117 first sheet DMA03		С
CFB04	ASIC117 first sheet DMA04		С
CFB05	ASIC117 first sheet DMA05		С
CFB06	ASIC117 first sheet DMA06		С
CFB07	ASIC117 first sheet DMA07		С
CFB08	ASIC117 first sheet DMA08		С
CFB09	ASIC117 first sheet DMA09		С
CFB0A	ASIC117 first sheet DMA10		С
CFB10	ASIC117 first sheet DMA16		С
CFB11	ASIC117 first sheet DMA17		С
CFB12	ASIC117 first sheet DMA18		С
CFB13	ASIC117 first sheet DMA19		С
CFB14	ASIC117 first sheet DMA20		С
CFB15	ASIC117 first sheet DMA21		С
CFB16	ASIC117 first sheet DMA22		С
CFB17	ASIC117 first sheet DMA23		С
CFB18	ASIC117 first sheet DMA24		С
CFB19	ASIC117 first sheet DMA25		С
CFB1A	ASIC117 first sheet DMA26		С
CFB1B	ASIC117 first sheet DMA27		С
CFB1C	ASIC117 first sheet DMA28		С
CFB1D	ASIC117 first sheet DMA29		С
CFB1E	ASIC117 first sheet DMA30		С
CFB20	ASIC117 second sheet DMA00	External controller I/F	С
CFB21	ASIC117 second sheet DMA01	board	С
CFB22	ASIC117 second sheet DMA02		С
CFB23	ASIC117 second sheet DMA03		С
CFB24	ASIC117 second sheet DMA04		С
CFB25	ASIC117 second sheet DMA05		С
CFB26	ASIC117 second sheet DMA06		С
CFB27	ASIC117 second sheet DMA07		С
CFB28	ASIC117 second sheet DMA08		С
CFB29	ASIC117 second sheet DMA09		С
CFB2A	ASIC117 second sheet DMA10		С
CFB30	ASIC117 second sheet DMA16		С
CFB31	ASIC117 second sheet DMA17		С
CFB32	ASIC117 second sheet DMA18		С

Code	ltem	Relevant electrical components, units, and options	Rank
CFB33	ASIC117 second sheet DMA19	External controller I/F	С
CFB34	ASIC117 second sheet DMA20	board	С
CFB35	ASIC117 second sheet DMA21		С
CFB36	ASIC117 second sheet DMA22		С
CFB37	ASIC117 second sheet DMA23		С
CFB38	ASIC117 second sheet DMA24		С
CFB39	ASIC117 second sheet DMA25		С
CFB3A	ASIC117 second sheet DMA26		С
CFB3B	ASIC117 second sheet DMA27		С
CFB3C	ASIC117 second sheet DMA28		С
CFB3D	ASIC117 second sheet DMA29		С
CFB3E	ASIC117 second sheet DMA30		С
CFB40	ASIC7 DMA A	JPEG board	С
CFB41	ASIC7 DMA C		С
CFB42	ASIC7 DMA D		С
CFB60	ASIC117 first sheet interruption	MFP board (MFPB)	С
CFB61	ASIC117 second sheet interruption	 External controller I/F board 	С
CFB62	ASIC7 interruption	JPEG board	С
CFB70	ASIC117 first sheet common register setting	MFP board (MFPB)	С
CFB71	ASIC117 second sheet common register setting	 External controller I/F board 	С
CFB72	ASIC7 common register setting	JPEG board	С
CFB80	ASIC117 first sheet PCIBridgeDMA	MFP board (MFPB)	С
CFB81	ASIC117 second sheet PCIBridgeDMA	External controller I/F board	С
CFB82	ASIC7 PCIBridgeDMA	JPEG board	С
CFB90	ASIC117 first sheet BTC compander/expander	MFP board (MFPB)	С
CFB91	ASIC117 second sheet BTC compander/expander	External controller I/F board	С
CFB92	ASIC7 BTC compander/expander	JPEG board	С
CFC00	ASIC117 first sheet DMA00 error interruption	MFP board (MFPB)	С
CFC01	ASIC117 first sheet DMA01 error interruption		С
CFC02	ASIC117 first sheet DMA02 error interruption		С
CFC03	ASIC117 first sheet DMA03 error interruption		С
CFC04	ASIC117 first sheet DMA04 error interruption		С
CFC05	ASIC117 first sheet DMA05 error interruption		С
CFC06	ASIC117 first sheet DMA06 error interruption		С
CFC07	ASIC117 first sheet DMA07 error interruption		С
CFC08	ASIC117 first sheet DMA08 error interruption		С
CFC09	ASIC117 first sheet DMA09 error interruption		С
CFC0A	ASIC117 first sheet DMA10 error interruption		С

		Relevant electrical	
Code	Item	components, units, and	Rank
		options	
CFC10	ASIC117 first sheet DMA16 error interruption	MFP board (MFPB)	С
CFC11	ASIC117 first sheet DMA17 error interruption		С
CFC12	ASIC117 first sheet DMA18 error interruption		С
CFC13	ASIC117 first sheet DMA19 error interruption		С
CFC14	ASIC117 first sheet DMA20 error interruption		С
CFC15	ASIC117 first sheet DMA21 error interruption		С
CFC16	ASIC117 first sheet DMA22 error interruption		С
CFC17	ASIC117 first sheet DMA23 error interruption		С
CFC18	ASIC117 first sheet DMA24 error interruption		С
CFC19	ASIC117 first sheet DMA25 error interruption		С
CFC1A	ASIC117 first sheet DMA26 error interruption		С
CFC1B	ASIC117 first sheet DMA27 error interruption		С
CFC1C	ASIC117 first sheet DMA28 error interruption		С
CFC1D	ASIC117 first sheet DMA29 error interruption		С
CFC1E	ASIC117 first sheet DMA30 error interruption		С
CFC20	ASIC117 first sheet SDC sleep illegal access error		С
CFC21	ASIC117 first sheet watchdog timer error interruption		С
CFC22	ASIC117 first sheet underrun at image output interface		С
CFC23	ASIC117 first sheet overflow at image input interface		С
CFC24	ASIC117 first sheet underrun at image output interface		С
CFC25	ASIC117 first sheet PCI master detects target abort		С
CFC26	ASIC117 first sheet master abort by PCI master		С
CFC27	ASIC117 first sheet PCI master detects illegal setting		С
CFC28	ASIC117 first sheet PCI master detects retry error		С
CFC29	ASIC117 first sheet PCI master detects split completion byte count malfunction		С
CFC2A	ASIC117 first sheet PCI master detects split completion error message		С
CFC2B	ASIC117 first sheet unknown marker detected at JBIG core		С
CFC2C	ASIC117 SC count overflow detected at JBIG core		С
CFC2D	ASIC117 first sheet master read data parity error		С
CFC2E	ASIC117 first sheet master write data parity error		С
CFC2F	ASIC117 first sheet system error		С
CFC30	ASIC117 first sheet sleep read data parity error		С
CFC31	ASIC117 first sheet sleep write data parity error		С
CFC32	ASIC117 first sheet address parity error		С
CFC50	ASIC117 second sheet DMA00 error interruption	External controller I/F	С
CFC51	ASIC117 second sheet DMA01 error interruption	board	С

Code	Item	Relevant electrical components, units, and options	Rank
CFC52	ASIC117 second sheet DMA02 error interruption	External controller I/F	С
CFC53	ASIC117 second sheet DMA03 error interruption	board	С
CFC54	ASIC117 second sheet DMA04 error interruption		С
CFC55	ASIC117 second sheet DMA05 error interruption		С
CFC56	ASIC117 second sheet DMA06 error interruption		С
CFC57	ASIC117 second sheet DMA07 error interruption		С
CFC58	ASIC117 second sheet DMA08 error interruption		С
CFC59	ASIC117 second sheet DMA09 error interruption		С
CFC5A	ASIC117 second sheet DMA10 error interruption		С
CFC60	ASIC117 second sheet DMA16 error interruption		С
CFC61	ASIC117 second sheet DMA17 error interruption		С
CFC62	ASIC117 second sheet DMA18 error interruption		С
CFC63	ASIC117 second sheet DMA19 error interruption		С
CFC64	ASIC117 second sheet DMA20 error interruption		С
CFC65	ASIC117 second sheet DMA21 error interruption		С
CFC66	ASIC117 second sheet DMA22 error interruption		С
CFC67	ASIC117 second sheet DMA23 error interruption		С
CFC68	ASIC117 second sheet DMA24 error interruption		С
CFC69	ASIC117 second sheet DMA25 error interruption		С
CFC6A	ASIC117 second sheet DMA26 error interruption		С
CFC6B	ASIC117 second sheet DMA27 error interruption		С
CFC6C	ASIC117 second sheet DMA28 error interruption		С
CFC6D	ASIC117 second sheet DMA29 error interruption		С
CFC6E	ASIC117 second sheet DMA30 error interruption		С
CFC70	ASIC117 second sheet SDC sleep illegal access error		С
CFC71	ASIC117 second sheet watchdog timer error interruption		С
CFC72	ASIC117 second sheet underrun at image output interface 1		С
CFC73	ASIC117 second sheet overflow at image input interface		С
CFC74	ASIC117 first sheet underrun at LCD output interface	MFP board (MFPB)	С
CFC75	ASIC117 second sheet PCI master detects target abort	External controller I/F	С
CFC76	ASIC117 second sheet master abort by PCI master	board	С
CFC77	ASIC117 second sheet PCI master detects illegal setting		С
CFC78	ASIC117 second sheet PCI master detects retry error		С
CFC79	ASIC117 first sheet PCI master detects split completion byte count malfunctio	MFP board (MFPB)	С
CFC7A	ASIC117 first sheet PCI master detects split completion error message		С

Code	Item	Relevant electrical components, units, and options	Rank
CFC7B	ASIC117 second unknown marker detected at JBIG core	External controller I/F board	С
CFC7C	ASIC117 second SC count overflow detected at JBIG core		С
CFC7D	ASIC117 second sheet master read data parity error		С
CFC7E	ASIC117 second sheet master write data parity error		С
CFC7F	ASIC117 second sheet system error		С
CFC80	ASIC117 second sheet sleep read data parity error		С
CFC81	ASIC117 second sheet sleep write data parity error		С
CFC82	ASIC117 second sheet address parity error		С
CFCA0	ASIC7 DMA_A error interruption	JPEG board	С
CFCA1	ASIC7 DMA_C error interruption		С
CFCA2	ASIC7 DMA_D error interruption		С
CFCA3	ASIC7 watchdog timer error		С
CFCA4	ASIC7 PCI sleep error		С
CFCA5	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCA6	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCA7	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCA8	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCA9	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCAA	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCAB	ASIC7 JPEG related interruption during internal processing at DMA_A, error interruption		С
CFCAC	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCAD	ASIC7 JPEG related interruption during internal processing at DMA_A		С
CFCAE	ASIC7 JPEG related interruption with multiple statuses during internal processing at DMA_A		С
CFCAF	ASIC7 No EOI marker after the completion of transmitting the amount of codes set during expansion at DMA_A		С
CFCB0	ASIC7 compressed data go beyond the set value during compression at DMA_A		С
CFCB1	ASIC7 no EOI marker after the completion of transmitting the amount of codes set during compression at DMA_A		С
CFCB2	ASIC7 target abort		С
CFCB3	ASIC7 master abort		С

		Relevant electrical	
Code	Item	components, units, and	Rank
CECP4	ACIC7 formed augmention	options	С
	ASIC7 PCI meeter detects retry error	JPEG board	С
	ASIC7 PCI master detects retry error		С
	ASIC7 master read data parity error		С
	ASIC7 master write data parity error ASIC7 system error		С
	ASIC7 system error ASIC7 sleep read data parity error		С
	ASIC7 sleep read data parity error		С
	ASIC7 address parity error		С
	CPS2300Great watchdog timer error	MFP board (MFPB)	С
		- WII F DOAIG (WII FD)	С
	CPS2300Great local bus error		С
	CPS2300Great sleep read data parity error		
	CPS2300Great sleep write data parity error		С
	CPS2300Great address parity error		С
	PIC3400Great watchdog timer error		С
	PIC3400Great sleep read data parity error		С
	PIC3400Great sleep write data parity error		С
	PIC3400Great address parity error		С
	ASIC117 first sheet DMA00 time out ASIC117 first sheet DMA01 time out		С
	ASIC117 first sheet DMA02 time out		С
	ASIC117 first sheet DMA02 time out		С
	ASIC117 first sheet DMA03 time out		С
	ASIC117 first sheet DMA04 time out		С
	ASIC117 first sheet DMA06 time out		С
	ASIC117 first sheet DMA07 time out		С
	ASIC117 first sheet DMA08 time out		С
	ASIC117 first sheet DMA09 time out		С
	ASIC117 first sheet DMA10 time out		С
	ASIC117 linst sheet DMA16 time out		С
	ASIC117 first sheet DMA17 time out		С
	ASIC117 linst sheet DMA17 time out ASIC117 first sheet DMA18 time out		С
	ASIC117 first sheet DMA19 time out		С
	ASIC117 linst sheet DMA19 time out		С
	ASIC117 first sheet DMA21 time out		С
	ASIC117 first sheet DMA21 time out		С
			С
	ASIC117 first sheet DMA23 time out		С
	ASIC117 first sheet DMA24 time out	_	
	ASIC117 first sheet DMA25 time out		С
	ASIC117 first sheet DMA26 time out ASIC117 first sheet DMA27 time out	_	С
		_	С
CFD1C	ASIC117 first sheet DMA28 time out		U

Code	Item	Relevant electrical components, units, and options	Rank
CFD1D	ASIC117 first sheet DMA29 time out	MFP board (MFPB)	С
CFD1E	ASIC117 first sheet DMA30 time out		С
CFD50	ASIC117 second sheet DMA00 time out	External controller I/F	С
CFD51	ASIC117 second sheet DMA01 time out	board	С
CFD52	ASIC117 second sheet DMA02 time out		С
CFD53	ASIC117 second sheet DMA03 time out		С
CFD54	ASIC117 second sheet DMA04 time out		С
CFD55	ASIC117 second sheet DMA05 time out		С
CFD56	ASIC117 second sheet DMA06 time out		С
CFD57	ASIC117 second sheet DMA07 time out		С
CFD58	ASIC117 second sheet DMA08 time out		С
CFD59	ASIC117 second sheet DMA09 time out		С
CFD5A	ASIC117 second sheet DMA10 time out		С
CFD60	ASIC117 second sheet DMA16 time out		С
CFD61	ASIC117 second sheet DMA17 time out		С
CFD62	ASIC117 second sheet DMA18 time out		С
CFD63	ASIC117 second sheet DMA19 time out		С
CFD64	ASIC117 second sheet DMA20 time out		С
CFD65	ASIC117 second sheet DMA21 time out		С
CFD66	ASIC117 second sheet DMA22 time out		С
CFD67	ASIC117 second sheet DMA23 time out		С
CFD68	ASIC117 second sheet DMA24 time out		С
CFD69	ASIC117 second sheet DMA25 time out		С
CFD6A	ASIC117 second sheet DMA26 time out		С
CFD6B	ASIC117 second sheet DMA27 time out		С
CFD6C	ASIC117 second sheet DMA28 time out		С
CFD6D	ASIC117 second sheet DMA29 time out		С
CFD6E	ASIC117 second sheet DMA30 time out		С
CFDA0	ASIC7 DMA_A time out	JPEG board	С
CFDA1	ASIC7 DMA_C time out		С
CFDA2	ASIC7 DMA_D time out		С
CFE00	ASIC117 first sheet DMA00 time out	MFP board (MFPB)	С
CFE01	ASIC117 first sheet DMA01 time out		С
CFE02	ASIC117 first sheet DMA02 time out		С
CFE03	ASIC117 first sheet DMA03 time out		С
CFE04	ASIC117 first sheet DMA04 time out		С
CFE05	ASIC117 first sheet DMA05 time out		С
CFE06	ASIC117 first sheet DMA06 time out		С
CFE07	ASIC117 first sheet DMA07 time out		С
CFE08	ASIC117 first sheet DMA08 time out		С
	· · · · · · · · · · · · · · · · · · ·	•	

Code	ltem	Relevant electrical components, units, and options	Rank
CFE09	ASIC117 first sheet DMA09 time out	MFP board (MFPB)	С
CFE0A	ASIC117 first sheet DMA10 time out		С
CFE10	ASIC117 first sheet DMA16 time out		С
CFE11	ASIC117 first sheet DMA17 time out		С
CFE12	ASIC117 first sheet DMA18 time out		С
CFE13	ASIC117 first sheet DMA19 time out		С
CFE14	ASIC117 first sheet DMA20 time out		С
CFE15	ASIC117 first sheet DMA21 time out		С
CFE16	ASIC117 first sheet DMA22 time out		С
CFE17	ASIC117 first sheet DMA23 time out		С
CFE18	ASIC117 first sheet DMA24 time out		С
CFE19	ASIC117 first sheet DMA25 time out		С
CFE1A	ASIC117 first sheet DMA26 time out		С
CFE1B	ASIC117 first sheet DMA27 time out		С
CFE1C	ASIC117 first sheet DMA28 time out		С
CFE1D	ASIC117 first sheet DMA29 time out		С
CFE1E	ASIC117 first sheet DMA30 time out		С
CFE50	ASIC117 second sheet DMA00 time out	External controller I/F	С
CFE51	ASIC117 second sheet DMA01 time out	board	С
CFE52	ASIC117 second sheet DMA02 time out		С
CFE53	ASIC117 second sheet DMA03 time out		С
CFE54	ASIC117 second sheet DMA04 time out		С
CFE55	ASIC117 second sheet DMA05 time out		С
CFE56	ASIC117 second sheet DMA06 time out		С
CFE57	ASIC117 second sheet DMA07 time out		С
CFE58	ASIC117 second sheet DMA08 time out		С
CFE59	ASIC117 second sheet DMA09 time out		С
CFE5A	ASIC117 second sheet DMA10 time out		С
CFE60	ASIC117 second sheet DMA16 time out		С
CFE61	ASIC117 second sheet DMA17 time out		С
CFE62	ASIC117 second sheet DMA18 time out		С
CFE63	ASIC117 second sheet DMA19 time out		С
CFE64	ASIC117 second sheet DMA20 time out		С
CFE65	ASIC117 second sheet DMA21 time out		С
CFE66	ASIC117 second sheet DMA22 time out		С
CFE67	ASIC117 second sheet DMA23 time out		С
CFE68	ASIC117 second sheet DMA24 time out		С
CFE69	ASIC117 second sheet DMA25 time out		С
CFE6A	ASIC117 second sheet DMA26 time out		С
CFE6B	ASIC117 second sheet DMA27 time out		С

Code	ltem	Relevant electrical components, units, and	Rank
05500	ACIONAZ	options	0
	ASIC117 second sheet DMA28 time out	External controller I/F board	С
	ASIC117 second sheet DMA29 time out		С
	ASIC117 second sheet DMA30 time out	10501	С
	ASIC7 DMA_A time out	JPEG board	С
	ASIC7 DMA_C time out		С
	ASIC7 DMA_D time out	MED L (MEDD)	С
CFF00	ASIC117 first sheet DMA00 time out	MFP board (MFPB)	С
CFF01	ASIC117 first sheet DMA01 time out		С
CFF02	ASIC117 first sheet DMA02 time out		С
CFF03	ASIC117 first sheet DMA03 time out		С
CFF04	ASIC117 first sheet DMA04 time out		С
CFF05	ASIC117 first sheet DMA05 time out		С
CFF06	ASIC117 first sheet DMA06 time out		С
CFF07	ASIC117 first sheet DMA07 time out		С
CFF08	ASIC117 first sheet DMA08 time out		С
CFF09	ASIC117 first sheet DMA09 time out		С
CFF0A	ASIC117 first sheet DMA10 time out		С
CFF10	ASIC117 first sheet DMA16 time out		С
CFF11	ASIC117 first sheet DMA17 time out		С
CFF12	ASIC117 first sheet DMA18 time out		С
CFF13	ASIC117 first sheet DMA19 time out		С
CFF14	ASIC117 first sheet DMA20 time out		С
CFF15	ASIC117 first sheet DMA21 time out		С
CFF16	ASIC117 first sheet DMA22 time out		С
CFF17	ASIC117 first sheet DMA23 time out		С
CFF18	ASIC117 first sheet DMA24 time out		С
CFF19	ASIC117 first sheet DMA25 time out		С
CFF1A	ASIC117 first sheet DMA26 time out		С
CFF1B	ASIC117 first sheet DMA27 time out		С
CFF1C	ASIC117 first sheet DMA28 time out		С
CFF1D	ASIC117 first sheet DMA29 time out		С
CFF1E	ASIC117 first sheet DMA30 time out		С
CFF50	ASIC117 second sheet DMA00 time out	External controller I/F	С
CFF51	ASIC117 second sheet DMA01 time out	board	С
CFF52	ASIC117 second sheet DMA02 time out		С
CFF53	ASIC117 second sheet DMA03 time out		С
CFF54	ASIC117 second sheet DMA04 time out		С
CFF55	ASIC117 second sheet DMA05 time out		С
CFF56	ASIC117 second sheet DMA06 time out		С
CFF57	ASIC117 second sheet DMA07 time out		С

Code	Item	Relevant electrical components, units, and options	Rank
CFF58	ASIC117 second sheet DMA08 time out	External controller I/F	С
CFF59	ASIC117 second sheet DMA09 time out	board	С
CFF5A	ASIC117 second sheet DMA10 time out		С
CFF60	ASIC117 second sheet DMA16 time out		С
CFF61	ASIC117 second sheet DMA17 time out		С
CFF62	ASIC117 second sheet DMA18 time out		С
CFF63	ASIC117 second sheet DMA19 time out		С
CFF64	ASIC117 second sheet DMA20 time out		С
CFF65	ASIC117 second sheet DMA21 time out		С
CFF66	ASIC117 second sheet DMA22 time out		С
CFF67	ASIC117 second sheet DMA23 time out		С
CFF68	ASIC117 second sheet DMA24 time out		С
CFF69	ASIC117 second sheet DMA25 time out		С
CFF6A	ASIC117 second sheet DMA26 time out		С
CFF6B	ASIC117 second sheet DMA27 time out		С
CFF6C	ASIC117 second sheet DMA28 time out		С
CFF6D	ASIC117 second sheet DMA29 time out		С
CFF6E	ASIC117 second sheet DMA30 time out		С
CFFA0	ASIC7 DMA_A time out	JPEG board	С
CFFA1	ASIC7 DMA_C time out		С
CFFA2	ASIC7 DMA_D time out		С

16.4 How to reset

- 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 For details of Trouble Reset, see Adjustment/ Setting. See P.451
Rank B	Opening/closing the front door
Rank C	Turning main power switch OFF/ON

16.5 Solution

16.5.1 C0202: Tray 1 feeder up/down abnormality

Relevant parts	
Paper feed tray 1 lift-up motor (M8)	Printer control board (PRCB)
Paper feed tray 1 upper limit sensor (PS8)	

			WIRING DIAGRAM	
2	Step	Action	Control signal	Location (Electri- cal component)
	1	Check the M8 connector for proper connection and correct as necessary.	_	_
	2	Check the connector of M8 for proper drive coupling and correct as necessary.	_	_
	3	PS8 I/O check, sensor check	PRCB CN12-3 (ON)	D-8
	4	M8 operation check	PRCB CN11-4 (REM)	D-13
	5	Change M8	_	_
	6	Change PRCB		

16.5.2 C0204: Tray 2 feeder up/down abnormality

Relevant parts		
Paper feed tray 2 lift-up motor (M9)	Printer control board (PRCB)	
Paper feed tray 2 upper limit sensor (PS15)		

<u>2</u>			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electri- cal component)
	1	Check the M9 connector for proper connection and correct as necessary.	_	_
	2	Check the connector of M9 for proper drive coupling and correct as necessary.	_	_
	3	PS15 I/O check, sensor check	PRCB CN9-3 (ON)	D-9
	4	M9 operation check	PRCB CN7-9 (REM)	D-11
	5	Change M9		_
	6	Change PRCB	_	

16.5.3 C0211: Manual feed up/down abnormality

Relevant parts		
Transport motor (M1) Manual pick-up solenoid (SL1) Manual lift-up position sensor (PS17)	Printer control board (PRCB)	



		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electri- cal component)
1	Check the M1 connector for proper connection and correct as necessary.	_	_
2	Check the connector of M1 for proper drive coupling and correct as necessary.	_	_
3	PS17 I/O check, sensor check	PRCB CN6-7 (ON)	D-2
4	SL1 operation check	PRCB CN6-4 (ON)	D-1
5	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
6	Change SL1	_	_
7	Change M1	_	_
8	Change PRCB	_	_

16.5.4 C0301: Suction fan motor's failure to turn

Relevant parts	
Suction fan motor (FM8)	Printer control board (PRCB)

		WIRING DIAGRAM	
Step	Action	I Control signal I '	Location (Electrical component)
1	Check the FM8 connector for proper connection and correct as necessary.	_	_
2	Check the fan for possible overload and correct as necessary.	_	_
3	FM8 operation check	PRCB CN3-2 (ON) PRCB CN3-3 (LOCK)	D-5
4	Change the right door assy	_	_
5	Change PRCB	_	_



16.5.5 C2151: Secondary transfer roller pressure welding alienation

Relevant parts	
2nd image transfer retraction motor (M11) 2nd image transfer welding alienation sensor (PS36)	Printer control board (PRCB)

			WIRING DIAGRAM		
2	Step Action	Control signal	Location (Electrical component)		
	1	Check the M11 connector for proper connection and correct as necessary.	_	_	
	2	Check the connector of M11 for proper drive coupling and correct as necessary.	_	_	
	3	PS36 I/O check, sensor check	PRCB CN3-9 (ON)	D-5	
	4	Change the right door assy	_	_	
	5	Change PRCB	1		

16.5.6 C2152: Transfer belt pressure welding alienation

Relevant parts		
Fusing motor (M5) Transfer belt retraction clutch (CL7) Transfer belt retraction sensor (PS31)	Printer control board (PRCB)	

2	
	ı

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Check the M5 connector for proper connection and correct as necessary.	_	_
2	PS31 I/O check, sensor check	PRCB CN36-15 (ON)	D-28
3	CL7 operation check	PRCB CN39-10 (ON)	D-25
4	M5 operation check	PRCB CN34-2 (REM) PRCB CN34-5 (LOCK)	D-23
5	Change CL7	_	_
6	Change M5	_	_
7	Change PRCB	_	_

C2164: PC charge malfunction 16.5.7

Relevant parts	
Imaging unit	High voltage unit (HV) Printer control board (PRCB)

2

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Check the imaging unit for proper connection and correct as necessary.	_	_
2	Check the HV connector for proper connection and correct as necessary.	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	_
4	Change IU	_	_
5	Change HV	_	_
6	Change PRCB	_	_

16.5.8 C2253: Color PC motor's failure to turn

16.5.9 C2254: Color PC motor's turning at abnormal timing

Relevant parts	
Color PC motor (M2)	Printer control board (PRCB)



		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the M2 connector for proper connection and correct as necessary.	_	_
2	Check the M2 connector for proper drive coupling and correct as necessary.	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	_
4	M2 operation check	PRCB CN35-4 (REM) PRCB CN35-7 (LOCK)	D-24
5	Change M2	_	_
6	Change PRCB	_	_

16.5.10 C225D: Color dev. unit engagement/disengagement failure

Relevant parts	
Color dev. unit engaged motor (M10) Color dev. unit engaged position sensor (PS26)	Printer control board (PRCB)

١.			WIRING DIAGRAM	
2	Step Action		Control signal	Location (Electrical component)
	1	Check the M10 connector for proper connection and correct as necessary.	_	_
	2	Check the M10 connector for proper drive coupling and correct as necessary.	_	_
	3	Check the PRCB connector for proper connection and correct as necessary.	_	_
	4	PS26 I/O check, sensor check	PRCB CN39-18 (ON)	D-26
	5	M10 operation check	PRCB CN39-12 (REM)	D-25
	6	Change M10	_	_
	7	Change PRCB		_

16.5.11 C2351: K toner suction fan motor's failure to turn

Relevant parts	
Toner suction fan motor (FM3)	Printer control board (PRCB)

	Step		WIRING DIAGRAM	
2		Action	Control signal	Location (Electrical component)
	1	Check the FM3 connector for proper connection and correct as necessary.	_	_
	2	Check the fan for possible overload and correct as necessary.	_	_
	3	FM3 operation check	PRCB CN30-7 (ON) PRCB CN30-9 (LOCK)	K-7
	4	Change FM3	_	_
	5	Change PRCB	_	_

16.5.12 C2451: Release new transfer belt unit

Releva	nt parts
Transfer belt unit	Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Reinstall unit	_	_
2	Check there is a short circuit in the fuse of the transfer belt unit.	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	_
4	Change PRCB	_	_

- C2551: Abnormally low toner density detected cyan TCR sensor 16.5.13
- 16.5.14 C2553: Abnormally low toner density detected magenta TCR sensor

16.5.15 C2555: Abnormally low toner density detected yellow TCR sensor

Relevant parts	
Imaging unit /C	Toner supply motor/CK (M3)
Imaging unit /M	Toner supply motor/YM (M4)
Imaging unit /Y	Printer control board (PRCB)
Toner cartridge /C	
Toner cartridge /M	
Toner cartridge /Y	

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2	Step	

			WIRING DIAGRAM	
<u> </u>	Step Action	Control signal	Location (Electrical component)	
	1	Reinstall imaging unit	_	_
	2	Reinstall toner cartridge	_	_
	3	M3, M4 operation check (At this time, IU must be non-installation.)	PRCB CN39-1 to 4 (M3) PRCB CN39-5 to 8 (M4)	D-24
	4	Change imaging unit	_	_
	5	Change PRCB		_

16.5.16 C2552: Abnormally high toner density detected cyan TCR sensor

16.5.17 C2554: Abnormally high toner density detected magenta TCR sensor

16.5.18 C2556: Abnormally high toner density detected yellow TCR sensor

Relevant parts		
Imaging unit /C	Printer control board (PRCB)	
Imaging unit /M		
Imaging unit /Y		
Toner cartridge /C		
Toner cartridge /M		
Toner cartridge /Y		

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Reinstall imaging unit	_	_
2	Reinstall toner cartridge	_	_
3	Change imaging unit	_	_
4	Change PRCB	_	_

16.5.19 C2557: Abnormally low toner density detected black TCR sensor

Relevant parts	
_ = =	Toner supply motor/CK (M3) Printer control board (PRCB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	M3 operation check (At this time, IU must be non-installation.)	PRCB CN39-1 to 4	D-24
2	Reinstall imaging unit	_	_
3	Reinstall toner cartridge	_	_
4	Change imaging unit /K	_	_
5	Change PRCB.	_	_

16.5.20 C2558: Abnormally high toner density detected black TCR sensor

Relevant parts	
Imaging unit /K	Printer control board (PRCB)
Toner cartridge /K	

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Reinstall imaging unit	_	_
2	Reinstall toner cartridge	_	_
3	Change imaging unit/K	_	_
4	Change PRCB	_	_

16.5.21 C2559: Cyan TCR sensor adjustment failure

16.5.22 C255A: Magenta TCR sensor adjustment failure

16.5.23 C255B: Yellow TCR sensor adjustment failure

Relevant parts		
Imaging unit /C Printer control board (PRCB) Imaging unit /M		
Imaging unit /Y		

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Reinstall imaging unit	_	_
2	Change imaging unit	_	_
3	Change PRCB	_	_

16.5.24 C255C: Black TCR sensor adjustment failure

Relevant parts	
Imaging unit /K	Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Reinstall imaging unit /K	_	_
2	Change imaging unit /K	_	_
3	Change PRCB		_

16.5.25 C2650: Main backup media access error

Relevant parts	
Service EEPROM board (SV ERB)	Printer control board (PRCB)

		WIRING DIAGRA	M
Step	Action	Control signal	Location (Electrical component)
1	Check the connector (CN23PRCB) on PRCB, the connector (CN1SV ERB) on SV ERB, and the harness between the boards for proper connection and correct as necessary.	1	I
2	Change PRCB 1. Turn OFF the main power switch and replace the current PRCB with a new one. (When using a PRCB of another machine in service, be sure to use a PRCB installed in the same model.) See P.135 2. Update the PRCB firmware. 3. After completing the firmware update, turn OFF and ON the main power switch and check to see that warm-up is started. Make sure that malfunction codes other than C2650 or improper IU/TC placement is not detected. 4. When the trouble cannot be solved, reinstall the removed PRCB to the original board.		
	When taking the above steps, check whether PRCB is defective or not without replacing the SV ERB.		
3	Change SV ERB 1. Replace the current SV ERB with a new one. See P.142 2. Turn ON the main power switch and check to see that warm-up is started. (One minute is spent to prepare the new SV ERB for use. During the period, the control panel backlight stays off.) Make sure that malfunction codes other than C2650 or improper IU/TC placement is not detected. 3. Make the specified readjustments. See P.142	-	_
4	If the above actions do not solve the problem, contact KMBT.	_	_

16.5.26 C2651: EEPROM access error (IU C)
16.5.27 C2652: EEPROM access error (IU M)
16.5.28 C2653: EEPROM access error (IU Y)
16.5.29 C2654: EEPROM access error (IU K)

Relevant parts		
Imaging unit /C Imaging unit /M Imaging unit /Y Imaging unit /K	Printer control board (PRCB)	

	WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical component)
1	Clean the connection between the imaging unit and the machine if dirty	_	_
2	Reinstall imaging unit	_	_
3	Check the harness for proper connection and correct as necessary.	_	_
4	Change imaging unit	_	_
5	Change PRCB		_

16.5.30 C2A01: EEPROM access error (TC C)
16.5.31 C2A02: EEPROM access error (TC M)
16.5.32 C2A03: EEPROM access error (TC Y)
16.5.33 C2A04: EEPROM access error (TC K)

Relevant parts		
Toner cartridge /C	Printer control board (PRCB)	
Toner cartridge /M		
Toner cartridge /Y		
Toner cartridge /K		

		WIRING DIAGRA	AM
Step	Action	Control signal	Location (Electrical component)
1	Clean the connection between the toner cartridge and the machine if dirty.	_	_
2	Reinstall toner cartridge	_	_
3	Check the harness for proper connection and correct as necessary.	_	_
4	Change toner cartridge	_	_
5	Check that CN29 harness on PRCB has a ferrite core. If not, attach the ferrite core to the harness.	_	_
6	Change PRCB	_	_

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16.5.34 C3101: Fusing roller separation failure

Relevant parts		
Printer control board (PRCB) Fusing unit		
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١.	Step Action	WIRING DIAGRA	M	
2		Control signal	Location (Electrical component)	
	1	Check the M12 connector for proper connection and correct as necessary.	_	_
	2	PS38 I/O check, sensor check	PRCB CN28-8 (ON)	D-26
	3	M12 operation check	PRCB CN28-4 to 5	D-26
	4	Change M12	_	_
	5	Change fusing unit	_	_
	6	Change PRCB	_	_

16.5.35 C3201: Fusing motor failure to turn

16.5.36 C3202: Fusing motor turning at abnormal timing

Relevant parts	
Fusing motor (M5)	Printer control board (PRCB)

2	

		WIRING DIAGRA	M
Step	Action	Control signal	Location (Electrical component)
1	Check the M5 connector for proper connection and correct as necessary.	_	_
2	Check the loading status of the fusing unit drive, and correct the error as necessary.	_	-
3	Check the fusing unit, PRCB for proper connection and correct or change as necessary.	_	_
4	M5 operation check	PRCB CN34-2 (REM) PRCB CN34-5 (LOCK)	D-23
5	Change M5	_	_
6	Change PRCB	_	_

16.5.37 C3301: Fusing cooling fan motor/ 1 failure to turn

	Relevant parts		
3	Paper cooling fan motor (FM7)		Printer control board (PRCB)

			WIRING DIAGRAM	
3 Step		Action	Control signal	Location (Electrical component)
	1	Check the FM7 connector for proper connection and correct as necessary.	_	_
	2	Check the fan for possible overload and correct as necessary.	_	_
	3	FM7 operation check	PRCB CN39-14 (ON) PRCB CN39-15 (LOCK)	D-25
	4	Change FM7	_	_
	5	Change PRCB	_	_

16.5.38 C3302: Fusing cooling fan motor/ 2,3 failure to turn

Relevant parts		
Fusing cooling fan motor/1 (FM9) Fusing cooling fan motor/2 (FM10) Fusing cooling fan motor/3 (FM11)	Printer control board (PRCB)	

			WIRING DIAGRAM	
3	Step	Action	Control signal	Location (Electrical component)
	1	Check the FM9, FM10 or FM11 connector for proper connection and correct as necessary.	_	_
	2	Check the fan for possible overload and correct as necessary.	_	_
	3	FM9/FM10/FM11 operation check	PRCB CN40-2 (ON) PRCB CN40-3 (LOCK)	D-20
			PRCB CN40-5 (ON) PRCB CN40-6 (LOCK)	D-20
			PRCB CN40-8 (ON) PRCB CN40-9 (LOCK)	D-20
	4	Change FM10/FM11	_	_
	5	Change PRCB	_	_

16.5.39 C3421: Fusing heaters trouble (heating side)

16.5.40 C3423: Fusing heaters trouble (pressurizing side)

Relevant parts	
_	DC power supply (DCPU) Printer control board (PRCB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
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, PRCB and DCPU for proper connection and correct or change as necessary.	_	_
4	Change fusing unit	_	_
5	Change PRCB		
6	Change DCPU	_	_

16.5.41 C3461: Release new fusing unit

Relevant parts	
Fusing unit	Printer control board (PRCB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Check the fusing unit for correct installation (whether it is secured in position).	_	_
2	Check the fusing unit, PRCB for proper connection and correct or change as necessary.	_	_
3	Reinstall fusing unit	_	_
4	Change fusing unit	1	_
5	Change PRCB		_

16.5.42 C3721: Fusing abnormally high temperature detection (heating side)

16.5.43 C3723: Fusing abnormally high temperature detection (pressurizing side)

Relevant parts	
Fusing unit	DC power supply (DCPU) Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
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, PRCB and DCPU for proper connection and correct or change as necessary.	_	_
4	Change fusing unit	_	_
5	Change PRCB		_
6	Change DCPU	_	_

16.5.44 C3821: Fusing abnormally low temperature detection (heating side)

16.5.45 C3823: Fusing abnormally low temperature detection (pressurizing side)

Relevant parts	
Fusing unit	DC power supply (DCPU)
	Printer control board (PRCB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
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, PRCB and DCPU for proper connection and correct or change as necessary.	_	_
4	Change fusing unit	_	_
5	Change PRCB		_
6	Change DCPU	_	_

16.5.46 C4151: Polygon motor rotation trouble (C)
16.5.47 C4152: Polygon motor rotation trouble (M)
16.5.48 C4153: Polygon motor rotation trouble (Y)
16.5.49 C4154: Polygon motor rotation trouble (K)

Relevant parts	
	PH relay board (REYB/PH) Printer control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the connector for proper connection and correct as necessary.	_	_
2	Change PH unit	_	_
3	Change REYB/PH	_	_
4	Change PRCB	_	_

16.5.50 C4551: Laser malfunction (C) 16.5.51 C4552: Laser malfunction (M) 16.5.52 C4553: Laser malfunction (Y) 16.5.53 C4554: Laser malfunction (K)

Relevant parts	
PH unit	PH relay board (REYB/PH)
	Printer control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the connector for proper connection and correct as necessary.	_	_
2	Change PH unit	_	_
3	Change REYB/PH	_	_
4	Change PRCB	_	_

16.5.54 C5102: Transport motor's failure to turn

16.5.55 C5103: Transport motor's turning at abnormal timing

Relevant parts	
Transport motor (M1)	Printer control board (PRCB)



	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Check the M1 connector for proper connection and correct as necessary.	_	_
2	Check M1 for proper drive coupling and correct as necessary.	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	_
4	M1 operation check	PRCB CN34-10 (REM) PRCB CN34-13 (LOCK)	D-23
5	Change M1	_	_
6	Change PRCB	_	_

16.5.56 C5351: Power supply cooling fan motor's failure to turn

Relevant parts	
Power supply cooling fan motor (FM5)	Printer control board (PRCB)



	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Check the FM5 connector for proper connection and correct as necessary.	_	_
2	Check the fan for possible overload and correct as necessary.	_	_
3	FM5 operation check	PRCB CN30-11 (ON) PRCB CN30-12 (LOCK)	K-8
4	Change FM5	_	_
5	Change DCPU	_	_
6	Change PRCB	_	_

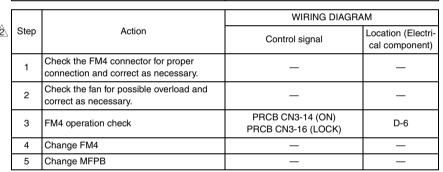
16.5.57 C5353: Cooling fan motor/2's failure to turn

Relevant parts	
Cooling fan motor/2 (FM2)	Printer control board (PRCB)

	Step Action	WIRING DIAGRAM		
		Action	Control signal	Location (Electrical component)
	1	Check the FM2 connector for proper connection and correct as necessary.	_	_
	2	Check the fan for possible overload and correct as necessary.	_	_
<u>^2</u>	3	FM2 operation check	PRCB CN28-2 (ON) PRCB CN28-3 (LOCK)	D-26
	4	Change FM2	_	_
	5	Change PRCB		_

16.5.58 C5354: Exhaust fan motor's failure to turn

Relevant parts	
Exhaust fan motor (FM4)	Printer control board (PRCB)



16.5.59 C5357: Cooling fan motor/1's failure to turn

Relevant parts	
Cooling fan motor/1 (FM1)	Printer control board (PRCB)

2

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Check the FM1 connector for proper connection and correct as necessary.	_	_
2	Check the fan for possible overload and correct as necessary.	_	_
3	FM1 operation check	PRCB CN30-4 (ON) PRCB CN30-6 (LOCK)	K-7
4	Change FM1	_	_
5	Change PRCB	_	_

≥ 16.5.60 C5370: MFP board cooling fan motor's failure to turn

Relevant parts	
MFP board cooling fan motor (FM6)	MFP board (MFPB)
	Printer control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the FM6 connector for proper connection and correct as necessary.	_	_
2	Check the fan for possible overload and correct as necessary.	_	_
3	FM6 operation check	PRCB CN44-1 (REM) PRCB CN44-3 (LOCK)	K-9
4	Change FM6	_	_
5	Change PRCB		_
6	Change MFPB	_	_



2 16.5.61 C5371: MFP board CPU cooling fan motor's failure to turn

Relevant parts	
MFP board CPU cooling fan motor	MFP board (MFPB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Check the MFP board CPU cooling fan motor connector for proper connection and correct as necessary.	-	_
2	Check the fan for possible overload and correct as necessary.	_	_
3	MFP board CPU cooling fan motor operation check	MFPB PJ20-3 (LOCK)	Q-23
4	Change MFPB	_	_

16.5.62 C6102: Drive system home sensor malfunction

16.5.63 C6103: Slider over running

Relevant parts	
Scanner home sensor (PS201)	Scanner relay board (REYB/SCAN)
Scanner motor (M201)	Image processing board (IPB)

			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical component)
	1	Correct or change the scanner drive (cable, pulley, gear, belt) if it is faulty.	_	_
	2	Correct the scanner motor set screw if loose.	_	_
_	3	Adjust [Image Position Leading Edge] and [Feed Direction Adjustment].	_	_
	4	Check the PS201, M201, REYB/SCAN and IPB connector for proper connection and correct as necessary.	_	_
<u>2</u>	5	PS201 I/O check, sensor check	IPB CN11-3 (ON)	U-8
<u>^2</u>	6	M201 operation check	REYB/SCAN CN5-4 to 7	R-11
	7	Change REYB/SCAN.	_	_
	8	Change IPB.	_	_

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16.5.64 C6301: Optical cooling fan motor's failure to turn

Relevant parts	
Optical cooling fan motor (FM201)	Scanner relay board (REYB/SCAN) Image processing board (IPB)

			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical component)
Ī	1	Check the FM201 connector for proper connection and correct as necessary.	_	_
Ī	2	Check the fan for possible overload and correct as necessary.	_	_
Ī	3	FM201 operation check	REYB/SCAN CN2-3 (LOCK)	R-12
I	4	Change REYB/SCAN	1	_
ľ	5	Change IPB		_

16.5.65 C6704: Image input time out

Relevant parts	
MFP board (MFPB)	Image processing board (IPB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Select [Service Mode] → [State Confirmation] → [Memory/HDD Adj.] → [Memory Bus Check] → [Scanner→Memory], and conduct the memory bus function.	_	_
2	Check the connectors between IPB and MFPB for proper connection and correct as necessary.	-	_
3	Change MFPB	_	_
4	Change IPB	_	_

16.5.66 C6751: CCD clamp/gain adjustment failure

Relevant parts	
Scanner assy	CCD sensor unit
	Image processing board (IPB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electri- cal component)
1	Correct the harness connection between CCDB and IPB 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.	_	_
5	Change CCD sensor unit	_	_
6	Change IPB	_	_

16.5.67 C6F01: Scanner sequence trouble 1

Relevant parts	
MFP board (MFPB)	DF control board (DFCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Correct the harness connection between main body and ADF if faulty.	_	_
2	Change DFCB	_	_
3	Change MFPB	_	_

16.5.68 C9401: Exposure turning on the lamp trouble detection

16.5.69 C9402: Exposure turning on the lamp abnormally detection

Relevant parts		
Scanner assy Flat cable	Inverter board (INVB) CCD board (CCDB) Scanner relay board (REYB/SCAN) Image processing board (IPB)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	Check the connection between the lamp harness and the inverter board, and correct if necessary.	_	_
2	Check the connection between REYB/ SCAN and the inverter board, and correct if necessary.	_	_
3	Check the connection between REYB/ SCAN and IPB, and correct if necessary.	_	_
4	Check that the connection between CCDB and IPB, and correct if necessary.	_	_
5	Change INVB	_	_
6	Change scanner assy		_
7	Change IPB		_
8	Change CCDB		_
9	Change REYB/SCAN		_

16.5.70 CA051: Standard controller configuration failure

16.5.71 CA052: Controller hardware error16.5.72 CA053: Controller start failure

Relevant parts		
MFP board (MFPB)		

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Check to see if the following setting has been correctly made: [Service Mode] → [System 2] → [Image Controller Setting]. 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 MFP board (MFPB) for proper connection and correct as necessary.	_	_
3	Change MFPB	_	_

16.5.73 CC001: Vendor connection failure

Relevant parts	
, ,	Coin vendor (Japan) Coin vendor kit (North America, Europe)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the vendor connector for proper connection and correct as necessary.	_	_
2	Check the PRCB connector for proper connection and correct as necessary.	_	_
3	Change PRCB	_	_

16.5.74 CC151: ROM contents error upon startup (MSC)

16.5.75 CC152: ROM contents error upon startup (Scanner)

16.5.76 CC153: ROM contents error upon startup (PRT)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical component)
1	Check the ROM version.	_	_
2	Rewrite the firmware.	_	_
3	Replace the appropriate board.	_	_

16.5.77 CC163: ROM contents error (PRT)

Releva	nt parts
Service EEPROM board (SV ERB)	Printer control board (PRCB)

		WIRING DIAGRA	AM
Step	Action	Control signal	Location (Electri- cal component)
1	Rewrite the firmware.	_	_
2	Change PRCB 1. Turn OFF the main power switch and replace the current PRCB with a new one. (When using a PRCB of another machine in service, be sure to use a PRCB installed in the same model.) See P.135 2. Update the PRCB firmware. 3. After completing the firmware update, turn OFF and ON the main power switch and check to see that warm-up is started. 4. When the trouble cannot be solved, reinstall the removed PRCB to the original board. NOTE When taking the above steps, check whether PRCB is defective or not without replacing the SV ERB.	_	_
3	Change SV ERB 1. Replace the current SV ERB with a new one. See P.142 2. Turn ON the main power switch and check to see that warm-up is started. (One minute is spent to prepare the new SV ERB for use. During the period, the control panel backlight stays off.) 3. Make the specified readjustments. See P.142	-	_
4	If the above actions do not solve the problem, contact KMBT.	_	_

16.5.78 CC164: ROM contents error (MSC)

Relevant parts	
Printer control board (PRCB)	MFP board (MFPB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the ROM version.	_	_
2	Rewrite the firmware.	_	_
3	Replace the corresponding board.	_	_
4	When not reviving even if the above-mentioned procedure is done, contact the responsible people of KMBT.	_	_

<u>2</u> 16.5.79	CC170: Dynamic link error during starting (AP0)
16.5.80	CC171: Dynamic link error during starting (AP1)
16.5.81	CC172: Dynamic link error during starting (AP2)
16.5.82	CC173: Dynamic link error during starting (AP3)
16.5.83	CC174: Dynamic link error during starting (AP4)
16.5.84	CC180: Dynamic link error during starting (LDR)
16.5.85	CC181: Dynamic link error during starting (IBR)
16.5.86	CC182: Dynamic link error during starting (IID)
16.5.87	CC183: Dynamic link error during starting (IPF)

16.5.88 CC184: Dynamic link error during starting (IMY)

Relevant parts	
MFP board (MFPB)	NVRAM board (NRB)

	Step Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical component)
1	If the malfunction code "C-C172" has occurred, access [Service Mode] → [System 2] → [Image Controller Setting] and check to see if "Controller 2," "Controller 3," or "Others" is set for [Image Controller Setting]. If any of these is set, according to the kind of controller, select "Controller 0" or "Controller 1."	ļ	ı
2	Change MFPB.	_	_
3	When not reviving even if the above-mentioned procedure is done, contact the responsible people of KMBT.	_	_

16.5.89 CD002: JOB RAM save error

Relevant parts	
MFP board (MFPB)	Hard disk

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the hard disk connector for proper connection and correct as necessary.	_	_
2	Format hard disk.	_	_
3	Change hard disk.	_	_
4	Change MFPB.	_	_

16.5.90 CD004: Hard disk access error

16.5.91 CD005: Hard disk error 1

16.5.92 CD006: Hard disk error 2

16.5.93 CD007: Hard disk error 3

16.5.94 CD008: Hard disk error 4

16.5.95 CD009: Hard disk error 5

16.5.96 CD00A: Hard disk error 6

16.5.97 CD00B: Hard disk error 7

16.5.98 CD00C: Hard disk error 8

16.5.99 CD00D: Hard disk error 9 16.5.100 CD00E: Hard disk error A

16.5.101 CD00F: Hard disk data transfer error

16.5.102 CD020: Hard disk verify error

Relevant parts	
MFP board (MFPB)	Hard disk

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electri- cal component)
1	Check the hard disk connector for proper connection and correct as necessary.	_	_
2	Reinstall the hard disk.	_	_
3	Change hard disk.	_	_
4	Change MFPB.	_	_

16.5.103 CD010: Hard disk unformat

Relevant parts	
MFP board (MFPB)	Hard disk

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	$ \begin{split} & \text{Select [Service Mode]} \rightarrow [\text{State Confirmation}] \rightarrow [\text{Memory/HDD Adj.}] \rightarrow [\text{HDD Format]}, \text{ and conduct the HDD format function.} \end{split} $	_	_
2	Change hard disk.	_	_
3	Change MFPB	_	_

16.5.104 CD011: Hard disk out of specifications mounted

Relevant parts	
Hard disk	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the hard disk specifications.	_	_
2	Change the hard disk.	_	_

16.5.105 CD201: File memory mounting error

16.5.106 CD202: Memory capacity discrepancy

16.5.107 CD203: Memory capacity discrepancy 2

Releva	nt parts
MFP board (MFPB)	Memory

		WIRING DIAGRAM	
Step	Action	Control Signal	Location (Electrical Component)
1	Check to see if the memory on MFPB is installed correctly.	_	_
2	Change the memory on MFPB.	_	_
3	Change MFPB.	_	

16.5.108 CD211: PCI-SDRAM DMA operation failure

16.5.109 CD212: Compression/extraction timeout detection

	Releva	nt parts
MFP board (MFPB)		

		WIRING DIAGRAM	
Step	Action	Control Signal	Location (Electrical Component)
1	Change MFPB.	_	_

16.5.110 CD231: No Fax memory at FAX board mounting

Relevant parts	
MFP board (MFPB)	FAX board
	FAX memory

		WIRING DIAGRAM	
Step	Action	Control Signal	Location (Electrical Component)
1	Check to see if the FAX memory is installed correctly.	_	_
2	Check to see if the FAX board is installed correctly.	_	_
3	Change FAX memory.	_	_
4	Change PRCB.	_	_

16.5.111 CD241: Encryption board setting error

16.5.112 CD242: Encryption board mounting error

	Relevant parts	
Encryption board (SC-503)		

		WIRING DIAGRAM	
Step	Action	Control Signal	Location (Electrical Component)
1	Check the encryption board connector for proper connection and correct as necessary.	-	_
2	Change encryption board.	_	_

16.5.113 CD251: No JPEG board mounting at JPEG board mount setting

Releva	nt parts
MFP board (MFPB)	JPEG board (SA-501)

		WIRING DIAGRA	NG DIAGRAM	
Step	Action	Control Signal	Location (Electrical Component)	
1	Check the JPEG board connector for proper connection and correct as necessary.	_	_	
2	Change JPEG board.	_	_	
3	Change MFPB.	_	_	

3 16.5.114 CD252: No relay circuit boards for IC-409 mounting at IC-409 mount setting

Releva	nt parts
MFP board (MFPB)	Relay circuit boards (VI-504)

Step		WIRING DIAGRAM	
	Action	Control signal	Location (Electrical component)
1	If the IC-409 is not mounted, access [Service Mode] \rightarrow [System 2] \rightarrow [Image Controller Setting] and check to see if "Controller 0" is set for [Image Controller Setting].	-	_
2	Check the relay circuit boards connector for proper connection and correct as necessary.	_	_
3	Change relay circuit board(s).	_	_
4	Change MFPB.		_

16.5.115 CD261: USB host board failure

Releva	nt parts
MFP board (MFPB)	USB host board (EK-603)

Step		WIRING DIAGRA	M
	Action	Control Signal '	Location (Electrical Component)
1	Check that the USB device in use is compliant with the standard.	_	_
2	Check the operation with another USB device.	_	_
3	Check the USB host board connector for proper connection and correct as necessary.	1	
4	Change USB host board.	_	_
5	Change MFPB.	_	_



16.5.116 CD271: i-Option activated and additional memory not installed

Releva	nt parts
MFP board (MFPB)	Memory for i-Option

Step		WIRING DIAGRAM	
	Action	Control Signal	Location (Electrical Component)
1	Check the memory for proper connection and correct as necessary.	_	_
2	Change memory.	_	_
3	Change MFPB.	_	_

16.5.117 CD401: NACK command incorrect

16.5.118 CD402: ACK command incorrect

16.5.119 CD403: Checksum error

16.5.120 CD404: Receiving packet incorrect

16.5.121 CD405: Receiving packet analysis error

16.5.122 CD406: ACK receiving timeout 16.5.123 CD407: Retransmission timeout

Releva	nt parts
MFP board (MFPB)	

Step		WIRING DIAGRAM	
	Action	Control Signal	Location (Electrical Component)
1	Check whether there is an strong electromagnetic noise source near the main body.	_	_
2	Check the connectors on MFPB for proper connection and correct as necessary.	_	_
3	Change MFPB.	_	_

16.5.124 CE001: Abnormal message queue

16.5.125 CE003: Task error 16.5.126 CE004: Event error

16.5.127 CE005: Memory access error 16.5.128 CE006: Header access error 16.5.129 CE007: DIMM initialize error

	Relevant parts	
1	MFP board (MFPB)	

			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical component)
		Check the connectors on MFPB for proper connection and correct as necessary.	_	_
Λ	2	Change MFPB.	_	_

16.5.130 CD3##: NVBAM data error

- When the data stored due to the NVRAM trouble is lost, backup data can be used for restoration.
- Trouble code [C-D370] will be displayed when multiple errors (over 5) of NVRAM data are detected, which can be restored with one restoration command.
- Data backup will be automatically performed every hour. Backup can also be performed manually with the following setting.

[Service Mode] \rightarrow [Enhanced Security] \rightarrow [NVRAM Data Back Up] See P.440

1. When a trouble caused by NVRAM data error occurs, the screen below appears.



- 2. Select [Yes] and touch [OK].
- 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.
- 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.

16.5.131 CE002: Message and method parameter failure

Relevant parts		
MFP board (MFPB)	Hard disk	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	If it occurred after upgrading the firmware, conduct the following setting. [Service Mode] → [Sate Confirmation] → [Memory/HDD Adj.] → [HDD Version Up] See P.426	-	-
2	Turn OFF the main power switch and turn it ON again, and conduct the following setting. [Service Mode] → [System 1] → [Initialization] → [Data Clear]. See P.391	-	_
3	Format hard disk.	_	_
4	Change hard disk.	_	_
5	Change MFPB.	_	_

16.5.132 CEEE1: MSC undefined malfunction occurring

	Relevant parts	
MFP board (MFPB)		

		WIRING DIAGRA	M
Step	Action	Control signal	Location (Electrical component)
1	Check the connectors on MFPB for proper connection and correct as necessary.	_	_
2	Change MFPB	_	_

16.5.133 CEEE2: Scanner section undefined malfunction

Relevant parts			
CCD board (CCDB) Image processing board (IPB)			
-			

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electri- cal component)
1	Correct the connector connection between CCDB and IPB if faulty.	_	_
2	Change IPB	_	_
3	Change CCDB	_	_

16.5.134 CEEE3: Engine section undefined malfunction

Releva	ant parts
Printer control board (PRCB)	

		WIRING DIAGRAM Control signal Location (Elect	M
Step	Action	Control signal	Location (Electrical component)
1	Check the PRCB connector for proper connection and correct as necessary.	_	_
2	Change PRCB	_	_

17. Power supply trouble

17.1 Machine is not energized at all (DCPU operation check)

Relevant parts				
Main power switch (S1)	DC power supply (DCPU)			
Front door switch/1 (S3)				
Front door switch/2 (S4)				
Printer control board (PRCB)				

	Step	Check item	WIRING DIAGRAM (Location)	Result	Action
<u>^2</u>	1	Is a power voltage supplied across CN1-1 and 2 on DCPU?	R to S-2	NO	Check the WIRING from the wall outlet to S1 to CN1.
	2	Are the fuses on DCPU conducting?	_	NO	Change DCPU.
2	3	Is DC24 V being output from CN7-5 on DCPU?	P-7	NO	Change DCPU.
2	4	Is DC5 V being input to CN5-1 on DCPU?	P-6	NO	Change DCPU.
	_	Is DC5 V being input to CN31-3 on the		NO	Change DCPU.
	5	printer control board? (LED on PRCB does not blink.)	H to I-4	YES	Change PRCB.

17.2 Control panel indicators do not light.

Relevant parts			
Image processing board (IPB) Scanner relay board (REYB/SCAN) Control panel	JMP board (JMPB) DC power supply (DCPU)		

	Step	Check item	WIRING DIAGRAM (Location)	Result	Action
	1	Is the I/F cable between the scanner and engine connected properly?	_	NO	Reconnect or change the I/F cable.
	2	After the main or sub main power switch is turned ON, the blue and orange status indicator lights continue to be on while the control panel is not being displayed. Is JMPB (PJ17) securely set on the MFPB?	U to V-19	NO	Reconnect.
2	3	Is a power voltage being applied across CN1-1 and 2 on DCPU?	R to S-2	NO	Check the WIRING from the wall outlet to S1 to CN1.
	4	Is the fuse on DCPU conducting?	I	NO	Change DCPU.
2	5	Is DC24 V being output from CN9-10 on DCPU and DC5 V from CN11-1?	Q-3	NO	Change DCPU.
2	6	Is CN1 on IPB securely connected?	T-9 to 10	NO	Reconnect.
	7	Is CN6 on REYB/SCAN securely connected?	U to V-10	NO	Reconnect.

17.3 Fusing heaters do not operate

Relevant parts			
Main power switch (S1) Right door switch (S5) Fusing unit	DC power supply (DCPU)		

	Step	Check item	DIAGRAM (Location)	Result	Action
<u>^</u> 2	1	Is the power source voltage applied across CN7-5 on DCPU? During this time, the right door should be closed.	Q-7	IXI()	Check wiring from power outlet to S1 to CN7 to S5.
<u>^</u> 2\	2	Is the power source voltage applied across	D-21	YES	Fusing unit
/2\	_	CN47-1?	D 21	NO	Change DCPU.

17.4 Power is not supplied to option

17.4.1 DF-611

	Step	Check item	DIAGRAM (Location)	Result	Action
2	1	Is DC24 V being output from CN5-1 on DF-611?	Y-12	YES	Malfunction in DF-611
2	2	Is DC24 V being output from CN9-9 on DCPU?	P-3	NO	Check wiring from DCPU to ADF.
	3	3 Is the fuse on DCPU conducting?	_	YES	Change DCPU.
	3			NO	Malfunction in DF-611

17.4.2 PC-104/204/405

	Step	Check item	WIRING DIAGRAM (Location)	Result	Action
2	1	Is DC24 V being applied to hookup connector CN44-13?	J-16	NO	Malfunction in paper feed cabinet
	2	Is DC24 V being output from CN14-2 on PRCB?	H-16	NO	Check wiring from PRCB to CN44 to paper feed cabinet.
				YES	Change DCPU.
	3	Is the fuse on DCPU conducting?	_	NO	Malfunction in paper feed cabinet

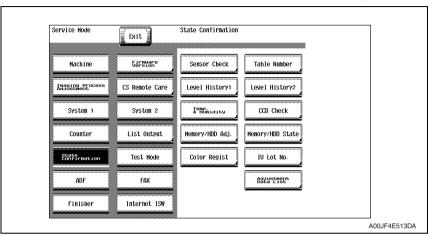
17.4.3 FS-519/JS-505/FS-609

	Step	Check item	WIRING DIAGRAM (Location)	Result	Action
2	1	Are DC24 V being applied to CN78L-1?	J-18	NO	Malfunction in FS-519/ JS-505/FS-609
	2	Are DC24 V being applied to CN4-1 on DCPU?	Q-1	NI()	Check wiring from DCPU to FS-519/JS-505/FS-609.
		Is the fuse on DCPU conducting?	_	YES	Change DCPU.
	3			NO	Malfunction in FS-519/JS-505/FS-609.

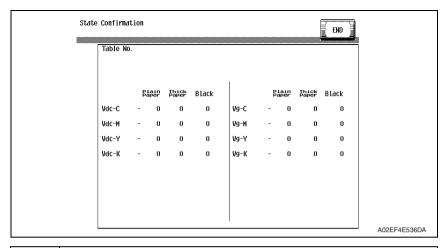
18. Image quality problem

18.1 How to read element date

 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.

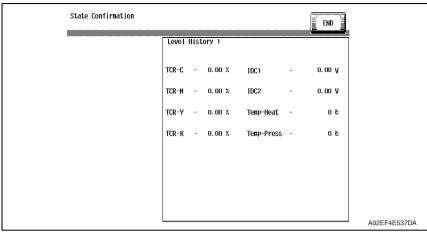


18.1.1 Table number



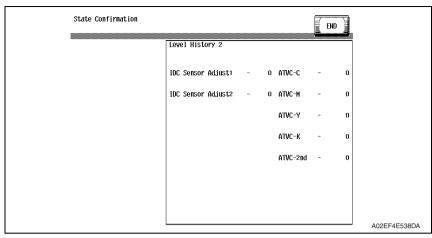
Vdc-C Vdc-M Vdc-Y Vdc-K	 Shows the developing bias value of each color of toner when an image is produced. Standard values: around 100 to 800 V A correction is made to make the image lighter when the numeric value is greater. A correction is made to make the image darker when the numeric value is smaller. Relevant Components: Imaging unit, high voltage unit (HV)
Vg-C Vg-M Vg-Y Vg-K	Shows the grid voltage value of each color of toner when an image is produced. Standard values: around 300 to 1100 V A correction is made to make the image lighter when the numeric value is greater. A correction is made to make the image darker when the numeric value is smaller. Relevant Components: Imaging unit, high voltage unit (HV)

18.1.2 Level history 1



TCR-C	Shows the T/C ratio reading taken last (in 0.01 % increments).
TCR-M	Standard value: 6 to 8 %
TCR-Y	Relevant components: TCR sensor
TCR-K	"Reading taken last" means:
	Latest value
	When the Start key is pressed, the output value is displayed while a test print is being produced.
IDC1	Shows the IDC bare surface output reading taken last (in 0.01 V incre-
IDC2	ments).
	It should normally be around 4.3 V.
	The output range is 0 V to 5 V.
	"Reading taken last" means: Present value
	Relevant components: IDC sensor, transfer belt unit
Temp-Heat	Shows the temperature of the each part of the fusing unit
Temp-Press	(in 1 °C increments).
	Relevant components: Fusing unit

18.1.3 Level history 2



IDC Sensor Adjust 1 IDC Sensor Adjust 2	 Shows the IDC intensity adjustment value. It should normally be around 40 and can range from 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 ATVC -M ATVC -Y ATVC -K ATVC -2nd	 Shows the latest ATVC level (which varies according to the paper type). 5 μA to 40 μA (ATVC-C/-M/-Y/-K) 300 V to 4800 V (ATVC-2nd) Relevant components: Transfer belt unit, High voltage unit (HV), 2nd transfer assy

18.2 How to identify problematic part

- This chapter is divided into two parts: "Initial check items" and "Troubleshooting procedure by a particular image quality problem."
- When an image quality problem occurs, first go through the "Initial check items" and, if
 the cause is yet to be identified, go to "Troubleshooting procedure by a particular image
 quality problem."

18.2.1 Initial check items

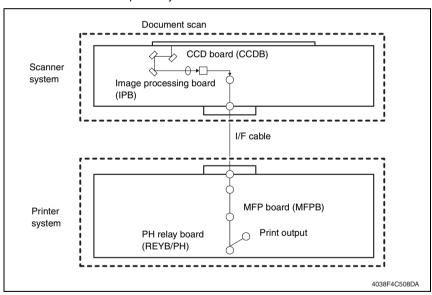
A. Initial check items 1

 Check first to see if image data is properly transmitted between scanner and memory, and between memory and printer.

Action	Result	Next Step
Enter the Service Mode, select [State Confirmation] \rightarrow [Memory/	OK	Initial check items 2
HDD Adj.] → [Memory Bus Check], and select and carry out [Scanner→Memory] and [Memory→PRT] checks.	NG	P.535 (action as instructed)

B. Initial check items 2

 Let the machine produce a test print and determine whether the image problem is attributable to the scanner or printer system.

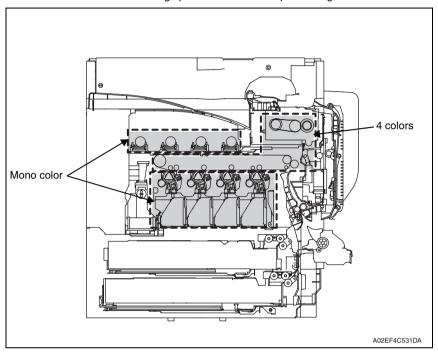


· Evaluation procedure

Image problem	Action	Result	Cause	Next step
	From [Service Mode], select [Test Mode] \rightarrow [Halftone Pattern] \rightarrow [SINGLE] \rightarrow [HYPER] \rightarrow [Gradation] \rightarrow [C \rightarrow M \rightarrow Y \rightarrow K] \rightarrow [Density 64], and produce a test print. Is image problem evident?	YES	Printer	Initial check items 3
Lines, bands		NO	Scanner	P.559

C. Initial check items 3

• If the printer is responsible for the image problem, let the machine produce a test print and determine whether the image problem occurs in a specific single color or four colors



· Evaluation procedure

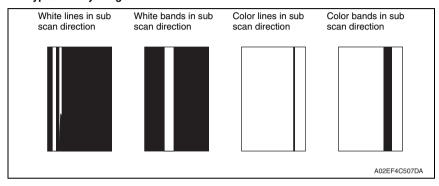
Image problem	Action	Result	Cause	Next step
	From [Service Mode], select [Test Mode] → [Halftone Pattern] → [SINGLE] → [HYPER] bands → [Gradation] → [C→M→Y→K] → [Density 64], and produce a test print. Is image problem evident in each of all four colors?	YES	Printer, 4 colors	P.588
Lines, bands		NO	Printer, single color	P.574

18.3 Solution

NOTE

- Typical faulty image samples shown in the following are all printed with A4S setting.
- 18.3.1 Scanner system: white lines in sub scan direction, white bands in sub scan direction, colored lines in sub scan direction, and colored bands in sub scan direction

A. Typical faulty images



B. Troubleshooting procedure

(1) When the original glass is used

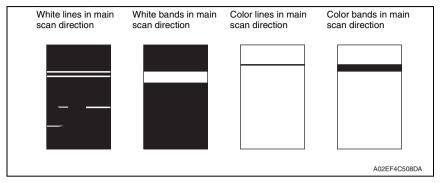
Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
	Mirror, lens, exposure Lamp, and reflectors	Mirror is dirty	YES	Clean.
5		Lens is dirty	YES	Clean.
3		Exposure lamp is dirty	YES	Clean.
		Reflectors are dirty	YES	Clean.
6	Machine → Scan Area → Image Position: Side Edge (Service Mode)	The adjustment value for [Image Position: Side Edge] falls within the specified range.	NO	Readjust.
7		The white lines/bands or colored lines/bands are blurry.	YES	Change scanner assy. Change CCD unit.

(2) When the ADF is used

Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF reading section	Glass is dirty.	YES	Clean.
3	ADF scanning guide	ADF scanning guide is damaged or dirty.	YES	Clean.
4	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
	Mirror, lens, expo-	Mirror is dirty	YES	Clean.
5	sure lamp, and reflectors	Lens is dirty	YES	Clean.
3		Exposure lamp is dirty	YES	Clean.
		Reflectors are dirty	YES	Clean.
6	ADF → Original Stop Position (Service Mode)	The adjustment value for [Main Scanning Direction] falls within the specified range.	NO	Readjust.
7	Glass step sheet for the original glass moving unit	The glass step sheet is tilted.	YES	Readjust.
8	ADF read position	The white lines/bands or colored lines/bands occurs when reading the original from ADF.	YES	Readjust.
9		The white lines/bands or colored lines/bands are blurry.	YES	Change scanner assy. Change CCD unit.

18.3.2 Scanner system: white lines in main scan direction, white bands in main scan direction, colored lines in main scan direction, and colored bands in main scan direction

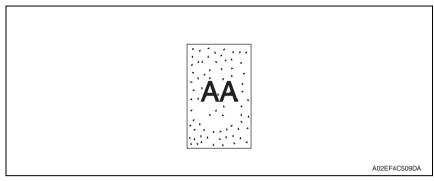
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Machine → Scan Area → Image Position: Top Edge (Service Mode)	The adjustment value for [Image Position: Leading Edge] falls within the specified range.	NO	Readjust.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change scanner assy. Change CCD unit.

18.3.3 Scanner system: color spots

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change scanner assy. Change CCD unit.

18.3.4 Scanner system: fog

A. Typical faulty images

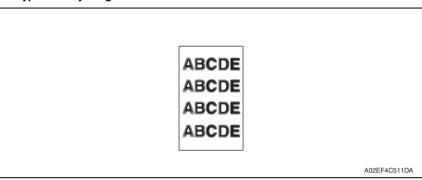


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Step	Section	Check item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	ADF	Original pad is dirty.	YES	Clean.
3		ADF does not lie flat.	YES	Change ADF if it is deformed or hinges are broken.
4	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
5	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
6	Mirror, lens,	Mirror is dirty.	YES	Clean.
7	exposure lamp, and reflectors	Lens is dirty.	YES	Clean.
8		Exposure lamp is dirty.	YES	Clean.
9		Reflectors are dirty.	YES	Clean.
10	Basic screen Quality/Density	The problem is eliminated when the image is produced in the manual exposure setting.	NO	Try another exposure level in manual.
11		The problem has been eliminated through the checks of steps up to 10.	NO	Change scanner assy. Change CCD unit.

18.3.5 Scanner system: blurred image, blotchy image

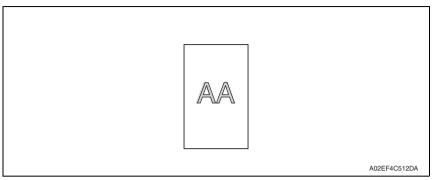
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Original	Original does not lie flat.	YES	Change original.
2	ADF	ADF does not lie flat.	YES	Change ADF if it is deformed or hinges are broken.
3	Original glass	Original glass tilts.	YES	Position original glass correctly. Check original loading position.
4	2nd/3rd mirrors carriage	Scanner is not aligned with the 2nd/3rd mirrors carriage.	YES	Perform "Focus Positioning of the scanner and 2nd/3rd mirrors car- riage" and "Scanner Position Adjustment."
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change scanner assy. Change CCD unit.

18.3.6 Scanner system: incorrect color image registration, sync shift (lines in main scan direction)

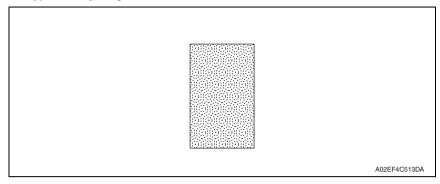
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Original	Original does not lie flat.	YES	Change original.
2	ADF	ADF does not lie flat.	YES	Change ADF if it is deformed or hinges are broken.
3	Scanner rails	Foreign matter on rails.	YES	Clean and apply lubricant.
4	Drive cables	Cable kinks or is damaged.	YES	Correct or change.
5	Scanner assy	Scanner moves smoothly.	NO	Adjust the scanner motor timing belt. → Change bushing. → Change scanner motor. → Change scanner relay board.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change CCD unit.

18.3.7 Scanner system: moire

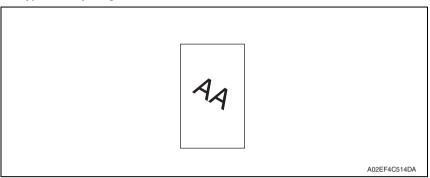
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Original	Moire distortions recur even after the orientation of original has been changed.	NO	Change the original mode (select one other than that resulted in moire).
2	Basic screen Quality/Density	Moire distortions recur even after the original mode has been changed.	YES	Select "Text Mode" or "Photo Mode".
3	Basic screen zoom	The problem has been eliminated through the checks of steps up to 2.	NO	Change the zoom ratio.

18.3.8 Scanner system: skewed image

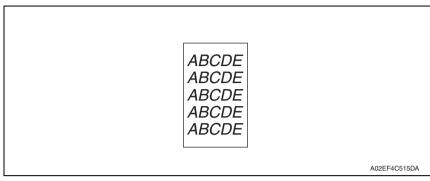
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Original	Original is skew.	YES	Reposition original.
2	Original glass	Original glass is in positive contact with the flat spring without being tilt.	NO	Reinstall the glass. Check the original loading position.
3	2nd/3rd mirrors carriage	Scanner assy is not properly aligned with 2nd/3rd mirrors carriage.	YES	Perform "Focus Positioning of the scanner and 2nd/3rd mirrors car- riage" and "Scanner Position Adjustment."
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change scanner assy. Change CCD unit.

18.3.9 Scanner system: distorted image

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Installation	Machine is installed on a level surface.	NO	Reinstall.
2	2nd/3rd mirrors carriage	Scanner assy is not properly aligned with 2nd/3rd mirrors carriage.		Perform "Focus positioning of the scanner and 2nd/3rd mirrors car- riage" and "Scanner Position Adjustment."
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change scanner assy. Change CCD unit.

18.3.10 Scanner system: low image density, rough image

A. Typical faulty images

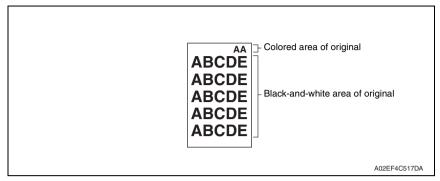


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Step	Section	Check item	Result	Action
1	Original glass	Original glass is dirty.	YES	Wipe the surface clean with a soft cloth.
2	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
3	Mirror, lens, expo-	Mirror is dirty.	YES	Clean.
4	sure lamp, and reflectors	Lens is dirty.	YES	Clean.
5	Tellectors	Exposure lamp is dirty.	YES	Clean.
6		Reflectors are dirty.	YES	Clean.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Clean exposure lamp. → Change scanner assy. → Change CCD unit.

18.3.11 Scanner system: defective ACS

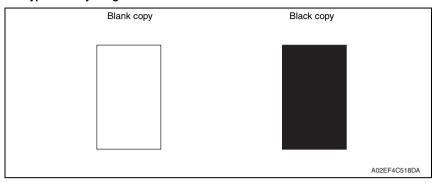
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Auto Color Level Adjustment [User Setting]	The problem persists even after the ACS determination level adjust function has been changed.	YES	Change the original loading direction. Make manual settings according to the type of original. (If the original contains a colored area in one of its corners, the machine may fail to properly detect the colored area.)

18.3.12 Scanner system: blank copy, black copy

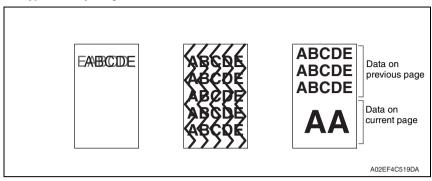
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Cable connecting scanner and printer	Connector is connected properly with no pins bent.	NO	Reconnect.
2	Image process- ing board (IPB)	Connectors on the image processing board are connected properly.	NO	Reconnect.
3	CCD Unit	Connectors of the CCD unit are connected properly.	NO	Reconnect.
4	Test Mode [Service Mode]	The problem is eliminated as checked with the image on a test pattern produced.	NO	Change I/F connection cable.
5	Image process- ing board (IPB)	The problem is eliminated after the I/F connection cable has been changed.	NO	Change image processing board.

18.3.13 Scanner system: abnormal image

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Cable connecting scanner and printer	Connector is connected properly with no pins bent.	NO	Reconnect.
2	Image process- ing board (IPB)	Connectors on the image processing board are connected properly.	NO	Reconnect.
3	MFP board (MFPB)	Data on previous page is mixed with data on current page.	NO	Reinstall the memory.
4	Test Mode [Service Mode]	The problem is eliminated as checked with the image on a test pattern produced.	NO	Change interface connection cable.
5	Image process- ing board (IPB)	The problem is eliminated after the interface connection cable has been changed.	NO	Change image processing board.
6	Printer control board (PRCB) PH relay board (REYB/PH)	Check the connection of connectors, harness, and flat cables between PRCB and REYB/PH, and correct if necessary.	NO	Change printer control board. Change PH relay board.
7	MFP board (MFPB)	The problem has been eliminated through the checks of steps up to 6.	NO	Change MFP board.

18.3.14 Scanner system: uneven density

A. Typical faulty images



B. Troubleshooting procedure

(1) When the original glass is used

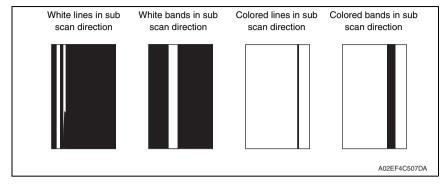
Step	Section	Check item	Result	Action
1	2nd/3rd mirrors carriage	Scanner assy is not properly aligned with 2nd/3rd mirrors carriage.	YES	Perform "Focus positioning of the scanner and 2nd/3rd mirrors car- riage" and "Scanner Position Adjustment."
2	Scanner motor	Scanner motor turns smoothly.	NO	Change belt. Change scanner motor.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change scanner assy. Change CCD unit.

(2) When the ADF is used

Step	Section	Check item	Result	Action
1	ADF read position	The uneven density occurs when reading the original from ADF.	YES	Readjust.
2	Guide support for the original glass moving unit	Guide support is tilted.	YES	Readjust.
3	Original glass moving unit	The original glass moving unit is tilted.	YES	Readjust.

18.3.15 Printer monocolor: white lines in sub scan direction, white bands in sub scan direction, colored lines colored bands in sub scan direction

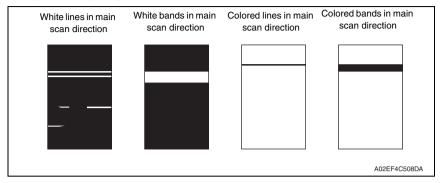
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Image check	A white line or black line in sub scan direction is sharp.	YES	Clean the electrostatic charger wire.
2		When printing thick paper, black lines appear.	YES	Select [Service Mode] → [Machine] → [Thick Paper Mode] and set [Image Quality].
3	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
4		Dirty on the outside.	YES	Clean.
5		Contact terminals make good con- nection between each IU and machine.	NO	Clean contact terminals.
6		Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
7	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Change imaging unit. → Change transfer belt unit. → Change PH unit.

18.3.16 Printer monocolor: white lines in main scan direction, white bands in main scan direction, colored lines in main scan direction, colored bands in main scan direction

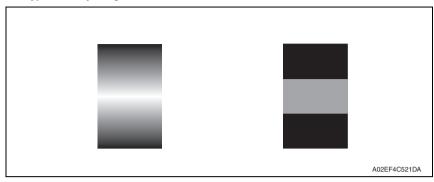
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Image check	A white line or black line in main scan direction is sharp.	NO	Clean the electrostatic charger wire.
2	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
3		Dirty on the outside.	YES	Clean.
4		Contact terminals make good connection between each IU and machine.	NO	Clean contact terminals.
5		Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
6	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change imaging unit. → Change transfer belt unit. → Change PH unit.

18.3.17 Printer monocolor: uneven density in sub scan direction

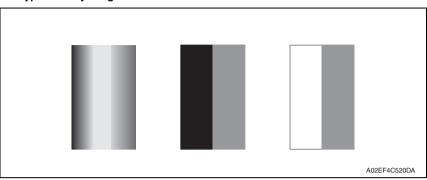
A. Typical faulty images



Step	Section	Check item	Result	Action
1	High image density original	Uneven density in sub scan direction occurs at a pitch of 40 mm to 50 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 IU fails to keep up with a high demand for toner.
2	Machine → LD adjust- ment → LD lightness bal- ance adjust. (Service Mode)	The problem has been eliminated through the LD lightness balance adjust.	NO	Go to next step.
3	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
4		Dirty on the outside.	YES	Clean.
5	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
6	Image transfer belt unit	Is abnormality found in the cam gear?	YES	Change transfer belt unit.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change IU. → Change PH unit. → Change printer control board → Change High voltage unit.

18.3.18 Printer monocolor: uneven density in main scan direction

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Machine → LD adjust- ment → LD lightness bal- ance adjust. (Service Mode)	The problem has been eliminated through the LD lightness balance adjust.	NO	Go to next step.
2	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
3		Dirty on the outside.	YES	Clean.
4	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
5	Transfer roller	Check that the spring does not come off during the pressure operation of the transfer roller.	NO	Correct. Change transfer roller unit.
6	Transfer belt unit	Transfer belt unit makes positive contact with plates on rails.	NO	Check and correct contacts.
7		Is abnormality found in the cam gear?	YES	Change transfer belt unit.
8		The problem has been eliminated through the checks of steps up to 6.	NO	Change imaging unit. → Change PH unit. → Change high voltage unit.

18.3.19 Printer monocolor: low image density

A. Typical faulty images



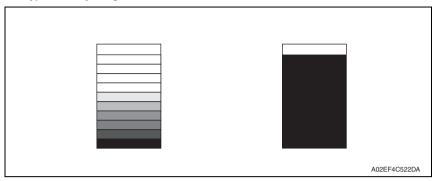
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Step	Section	Check item	Result	Action
1	Warning display	The maintenance call mark is displayed on the panel.	YES	Take action according to the warning code shown on the state confirm screen.
2	State Confirmation → Table Number (Service Mode)	Check data for Vg and Vdc. Color Vdc: around 400 V Vg : around 500 V Black Vdc: around 400 V Vg : around 500 V	_	Go to next step.
3	State Confirma- tion → Level His-	Check TCR data. (specified rang: 6 to 8 %)	NO	Go to next step.
4	tory 1 (Service Mode)	IDC output value is around 4.3 V.	NO	Clean IDC sensor and execute the image stabilization. Check image transfer belt for damage and correct as necessary.
5	Level history data	Low TCR and low Vg and Vdc	YES	Go to step 10.
6	check results	Low TCR and high Vg and Vdc	YES	Go to step 14.
7		TCR falling within specified range and low Vg and Vdc	YES	Go to step 10.
8		TCR falling within specified range and high Vg and Vdc	YES	Go to step 14.
9		The situations other than the above- mentioned.	YES	Go to step 10.
10	Imaging unit	Dirty on the outside.	YES	Clean.
11	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
12	Transfer belt unit	Transfer belt unit makes positive contact with plates on rails.	NO	Check and correct contacts.
13		Is abnormality found in the cam gear?	YES	Change transfer belt unit.

Step	Section	Check item	Result	Action
14	Hopper unit	Connectors are loose.	YES	Reconnect.
15		Gear is cracked.	YES	Change gear.
16	Image Process Adjustment → TCR Toner Supply (Service Mode)	Toner is properly supplied when TCR toner supply is run.	NO	Go to next step.
17	Image Process Adjustment →Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through gradation adjust. Dark: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 20.
18	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max.	NO	Go to next step.
19	Image Process Adjustment → Stabilizer → Initialize + Image Stabilization (Service Mode)	After the Initialize + Image Stabilization sequence has been completed, run gradation adjust.	NO	Go to next step.
20		The problem has been eliminated through the checks of steps up to 19.	NO	Change imaging unit. → Change printer control board →Change PH unit. →Change high voltage unit.

18.3.20 Printer monocolor: gradation reproduction failure

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Warning display	The maintenance call mark is displayed on the panel.	YES	Take action according to the warning code shown on the state confirm screen.
2	Photo/density	Original type and screen pattern are selected properly.	NO	Change screen pattern.
3	Imaging unit	Dirty on the outside.	YES	Clean.
4	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
5	State Confirma- tion → Level His- tory 1 (Service Mode)	IDC output value is around 4.3 V.	NO	Clean IDC sensor and execute the image stabilization. Check transfer belt for damage and correct as necessary.
6	Image Process Adjustment →Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through gradation adjust. Dark: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 9.
7	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max.	NO	Go to next step.
8	Image Process Adjustment → Stabilizer → Initialize + Image Stabilization (Service Mode)	After the Initialize + Image Stabilization sequence has been completed, run gradation adjust;	NO	Go to next step.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change imaging unit. → Change printer control board → Change PH unit. → Change high voltage unit.

18.3.21 Printer monocolor: foggy background

A. Typical faulty images



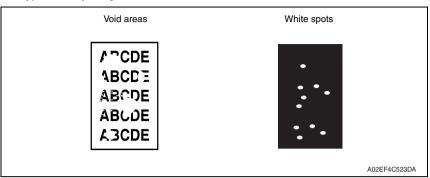
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Step	Section	Check item	Result	Action
1	Warning display	The maintenance call mark is displayed on the panel.	YES	Take action according to the warning code shown on the state confirm screen.
2	State Confirmation → Table Number (Service Mode)	Check data for Vg and Vdc. Color Vdc: around 400 V Vg : around 500 V Black Vdc: around 400 V Vg : around 500 V	NO	Go to next step.
3	State Confirma- tion → Level His-	Check TCR data. (specified rang: 6 to 8 %)	NO	Go to next step.
4	tory 1 (Service Mode)	IDC output value is around 4.3 V.	NO	Clean IDC sensor and execute the image stabilization. Check transfer belt for dam- age and correct as necessary.
5	Level history data	Low TCR and low Vg and Vdc	YES	Go to step 10.
6	check results	Low TCR and high Vg and Vdc	YES	Go to step 12.
7		TCR falling within specified range and low Vg and Vdc	YES	Go to step 10.
8		TCR falling within specified range and high Vg and Vdc	YES	Go to step 12.
9		The situations other than the abovementioned.	YES	Go to step 10.
10	Imaging unit	Dirty on the outside.	YES	Clean.
11	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
12	Image Process Adjustment → Background Voltage Margin (Service Mode)	The problem is eliminated after background voltage margin has been adjusted.	NO	Go to next step.

Step	Section	Check item	Result	Action
13	Image Process Adjustment →Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through gradation adjust. Dark: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 17.
14	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max.	NO	Go to next step.
15	Image Process Adjustment → Stabilizer → Initialize + Image Stabilization (Service Mode)	After the Initialize + Image Stabilization sequence has been completed, run gradation adjust.	NO	Go to next step.
16	Printer control board (PRCB) PH relay board (REYB/PH)	Check the connection of connectors, harness, and flat cables between PRCB and REYB/PH, and correct if necessary.	NO	Change printer control board. Change PH relay board.
17		The problem has been eliminated through the checks of steps up to 16.	NO	Change imaging unit. → Change PH unit. → Change high voltage unit.

18.3.22 Printer monocolor: void areas, white spots

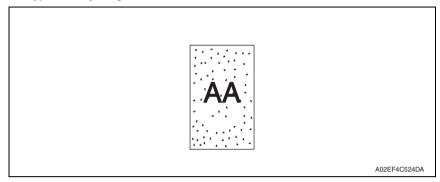
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Image check	There are void areas at the front side or high density section.	YES	See P.578
2		There is void area at the rear side section.	YES	Perform [Transfer Adjust] of [Image Process Adjustment] under Service Mode.
3	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
4]	Dirty on the outside.	YES	Clean.
5	Toner cartridge	Foreign matter or caked toner in the toner cartridge.	YES	Remove foreign matter.
6	Installation environment	Is the atmospheric pressure at the installation site low?	YES	Make the following adjustment: $[Service\ Mode] \rightarrow [Image\ Process\ Adjustment] \rightarrow [Dev.\ Bias\ Choice].$

18.3.23 Printer monocolor: colored spots

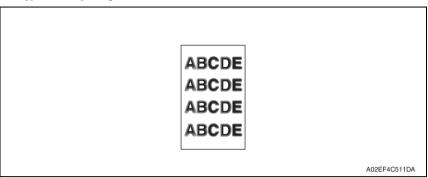
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Imaging unit	Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
2		The surface of the PC drum is scratched.	YES	Change imaging unit.
3		Dirty on the outside.	YES	Clean.

18.3.24 Printer monocolor: blurred image

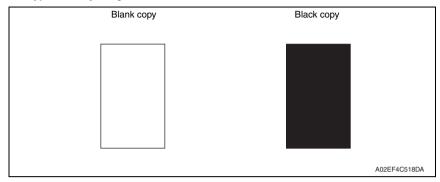
A. Typical faulty images



Step	Section	Check item	Result	Action
1	PH unit	The surface of the PH window is dirty.	YES	Clean with cleaning jig.
2	Imaging unit	Dirty on the outside.	YES	Clean.
3		The problem has been eliminated through the checks of steps up to 2.		Change imaging unit. → Change PH unit.

18.3.25 Printer monocolor: blank copy, black copy

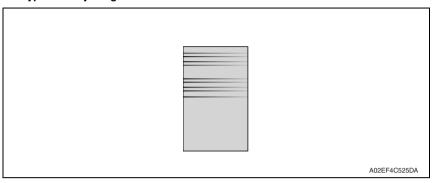
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Image check	A blank copy occurs.	YES	Check PH unit connector for proper connection.
2	Imaging unit	Coupling of IU drive mechanism is installed properly.	NO	Check and correct drive transmitting coupling. Change IU.
3		The PC drum charge corona voltage contact or PC drum ground contact of the imaging unit is connected properly.	NO	Check, clean, or correct the contact.
4	High voltage unit	Connector is connected properly.	NO	Reconnect.
5		The problem has been eliminated through the check of step 4.	NO	Change high voltage unit. → Change printer control board → Change PH unit.

18.3.26 Printer monocolor: uneven image

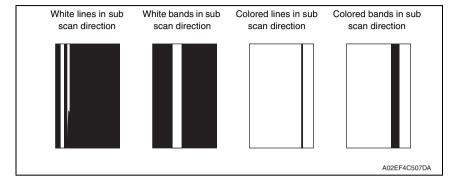
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Toner cartridge	The toner cartridge of every color is surely installed.	NO	Re-install it.
2	PH unit	The PH unit is surely installed.	NO	Re-install it.
3	Toner cartridge	There is any stain or breakage on the drive section of the toner cartridge.	YES	Clean/replace the toner cartridge.
4	Imaging unit	There is any stain, damage or abrasion on the PC drum.	YES	Replace the imaging unit.
5	Transfer roller	There is any stain, damage, deformation or abrasion on the transfer roller.	YES	Replace the transfer roller.
6	Fusing unit	There is any stain, damage, deformation or abrasion on the roller and drive section of the fusing unit.	YES	Replace the fusing unit.
7		The problem has been eliminated through the check of step 6.	NO	Replace the transfer belt unit.

18.3.27 Printer 4-color: white lines in sub scan direction, white bands in sub scan direction, colored lines in sub scan direction, and colored bands in sub scan direction

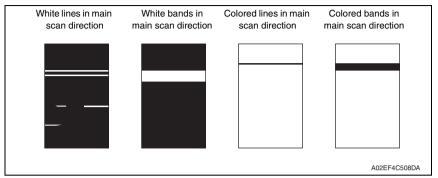
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Image check	A white line or colored line in sub scan direction.	YES	Clean the comb electrode by moving the comb electrode cleaning lever.
2	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.
3		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
4		Cleaning blade is not effective in removing toner completely.	YES	Clean cleaning blade. Change transfer belt unit.
5	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
7		Image transfer paper separator fingers are damaged or dirty.	YES	Clean or change.
8	Fusing unit	Fusing entrance guide plate is dirty or damaged.	YES	Clean. Change fusing unit.
9		Fusing paper separator fingers are dirty.	YES	Clean.
10		The problem has been eliminated through the checks of steps up to 9.	NO	Change printer control board

18.3.28 Printer 4-color: white lines in main scan direction, white bands in main scan direction, colored lines in main scan direction, and colored bands in main scan direction

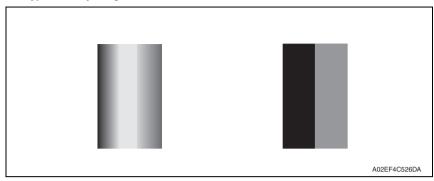
A. Typical faulty images



Step	Section	Check item	Result	Action	
1	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.	
2		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.	
3	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.	
4	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.	
5		Image transfer paper separator fingers are damaged or dirty.	YES	Clean or change.	
6	Fusing unit	Fusing entrance guide plate is dirty or damaged.	YES	Clean. Change fusing unit.	
7		Fusing paper separator fingers are dirty.	YES	Clean.	
8	Neutralizing brush	The resistance values between the neutralizing brush and the ground terminal is not ∞ .	NO	Check the contact modify. Change neutralizing brush.	
9		The problem has been eliminated through the checks of steps up to 9.	NO	Change printer control board	

18.3.29 Printer 4-color: uneven density in sub scan direction

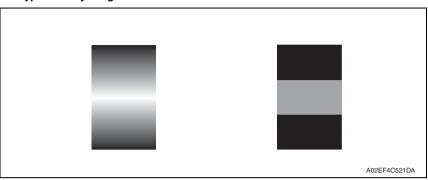
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.
2		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
3		Terminal is dirty.	YES	Clean.
4	Transfer roller unit	Image transfer roller is installed properly.	NO	Reinstall.
5		Image transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit.

18.3.30 Printer 4-color: uneven density in main scan direction

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.
2		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
3		Terminal is dirty.	YES	Clean.
4	Transfer roller unit	Image transfer roller is installed properly.	NO	Reinstall.
5		Image transfer roller is dirty or scratched.	YES	Change transfer roller unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit. → Change high voltage unit.

18.3.31 Printer 4-color: low image density

A. Typical faulty images

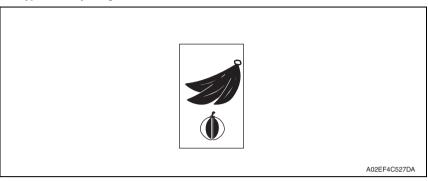


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Step	Section	Check item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2	Transfer belt unit	Terminal is dirty.	YES	Clean.
3	Transfer roller	Transfer roller is installed properly.	NO	Reinstall.
4	unit	Transfer roller is dirty or scratched.	NO	Change transfer roller unit.
5	IDC sensor	Sensor is dirty.	YES	Clean IDC sensor and execute the image stabilization.
6	Image Process Adjustment →Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through gradation adjust. Dark: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 9.
7	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max Density.	NO	Go to next step.
8	Image Process Adjustment → Stabilizer → Initialize + Image Stabilization (Service Mode)	After the Initialize + Image Stabilization sequence has been completed, run gradation adjust.	NO	Go to next step.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change image transfer belt unit. → Change printer control board → Change high voltage unit.

18.3.32 Printer 4-color: poor color reproduction

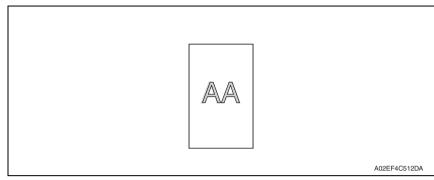
A. Typical faulty images



	5. Housicanooting procedure				
Step	Section	Check item	Result	Action	
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.	
2	Transfer belt unit	Terminal is dirty.	YES	Clean.	
3	Transfer roller	Transfer roller is installed properly.	NO	Reinstall.	
4	unit	Transfer roller is dirty or scratched.	NO	Change transfer roller unit.	
5	IDC sensor	Sensor is dirty.	YES	Clean IDC sensor and execute the image stabilization.	
6	Image Process Adjustment → Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through gradation adjust. Dark: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 9.	
7	Image Process Adjustment →D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max Density.	NO	Go to next step.	
8	Image Process Adjustment → Stabilizer → Initialize + Image Stabilization (Service Mode)	After the Initialize + Image Stabilization sequence has been completed, run gradation adjust.	NO	Go to next step.	
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change image transfer belt unit. → Change printer control board → Change high voltage unit.	

18.3.33 Printer 4-color: incorrect color image registration

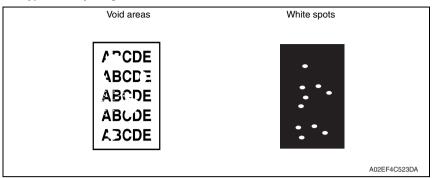
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Warning display	The maintenance call mark is displayed on the panel.	YES	Take action according to the warning code shown on the state confirm screen.
2	Machine condition	Vibration is given to the machine after main power switch has been turned ON.	YES	Turn off the main power switch and turn it on again more than 10 seconds after.
3	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.
4		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
5		Drive coupling to the machine is dirty.	YES	Clean.
6	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
7	Transfer roller	Transfer roller is installed properly.	NO	Reinstall.
8	unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
9	Machine → Fusing Transport Speed (Service Mode)	Brush effect or blurred image occurs.	YES	Readjust fusing transport speed.
10	Machine → Color registration Adjustment (Service Mode)	Check the specific color in which color shift occurs.	YES	Perform "Color registration Adjustment." If color shift is not corrected even with a correction of ± 1 dot, go to next step.
11	_	The problem has been eliminated through the checks of steps up to 10.	NO	Change transfer belt unit. → Change printer control board

18.3.34 Printer 4-color: void areas, white spots

A. Typical faulty images

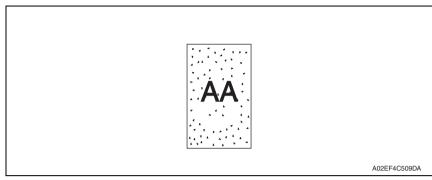


Step	Section	Check item	Result	Action
1	Image check	There are void areas at the front side or high density section.	YES	P.593
2		There are void areas in the trailing edge.	YES	Perform [Transfer Adjust] of [Image Process Adjustment] under Service Mode.
3	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.
4		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
5	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change 2nd image transfer roller unit.
6		Charge neutralizing cloth is not separated and ground terminal is connected properly.	NO	Correct or change.
7	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
8		Pre-image transfer guide plate is damaged or dirty.	YES	Clean or change.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change transfer belt unit.

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18.3.35 Printer 4-color: colored spots

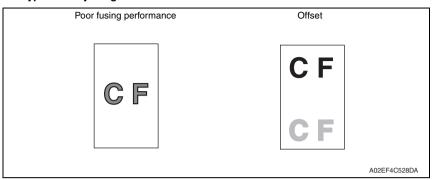
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Imaging unit	The surface of the PC drum is scratched.	YES	Change imaging unit.
2	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the image transfer belt.	YES	Clean.
3		Transfer belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change transfer belt unit if belt is damaged.
4	Transfer roller unit	Transfer roller is dirty or scratched.	YES	Change transfer roller unit.
5	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
6	Fusing unit	Fusing belt is dirty or scratched.	YES	Change fusing unit.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change transfer belt unit.

18.3.36 Printer 4-color: poor fusing performance, offset

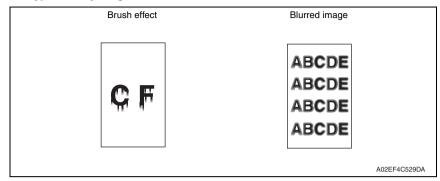
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Paper	Paper type does not match.	YES	Change the setting.
2	Machine→ Fus- ing Temperature (Service Mode)	Changing fusing temperature eliminates the problem of poor fusing performance and offset.	YES	Readjust fusing temperature.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change fusing unit.

18.3.37 Printer 4-color: brush effect, blurred image

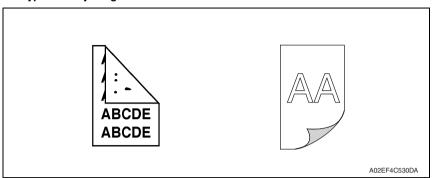
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package.
2		Paper type does not match.	YES	Change the setting.
3	Fusing unit	Fusing unit is installed properly.	NO	Reinstall.
4		Fusing entrance guide plate is dirty.	YES	Clean.
5		Fusing belt is dirty or scratched.	YES	Change fusing unit.
6	Machine → Fusing Transport Speed (Service Mode)	Changing fusing speed eliminates the problem of brush effect and blurred image.	YES	Readjust fusing transport speed.

18.3.38 Printer 4-color: back marking

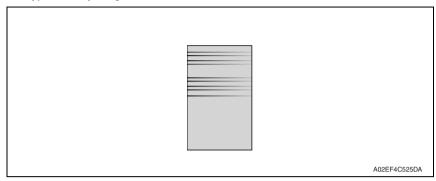
A. Typical faulty images



Step	Section	Check item	Result	Action
1	2nd image trans- fer roller unit	Image transfer roller is scratched or dirty.	YES	Change transfer roller unit.
2	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
3	Fusing unit	Fusing entrance guide plate is scratched or dirty.	YES	Clean or change.
4		Lower fusing roller is scratched or dirty.	YES	Change fusing unit.
5	Transfer belt unit	Fingerprints, oil, or other foreign matter is evident on the transfer belt.	YES	Clean.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change transfer belt unit. → Change high voltage unit.

18.3.39 Printer 4-color: uneven image

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Toner cartridge	The toner cartridge of every color is surely installed.	NO	Re-install it.
2	PH unit	The PH unit is surely installed.	NO	Re-install it.
3	Toner cartridge	There is any stain or breakage on the drive section of the toner car- tridge.	YES	Clean/replace the toner cartridge.
4	Imaging unit	There is any stain, damage or abrasion on the PC drum.	YES	Replace the imaging unit.
5	Transfer roller unit	There is any stain, damage, deformation or abrasion on the transfer roller.	YES	Replace the transfer roller unit.
6	Fusing unit	There is any stain, damage, deformation or abrasion on the roller and drive section of the fus- ing unit.	YES	Replace the fusing unit.
7		The problem has been eliminated through the check of step 6.	NO	Replace the transfer belt unit.

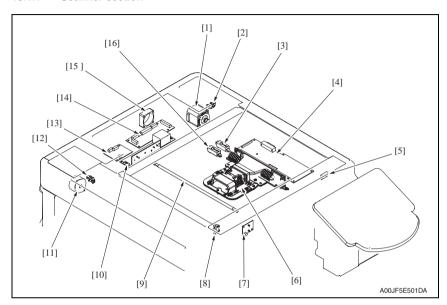
Appendi>

Appendix

19. Parts layout drawing

19.1 Main body

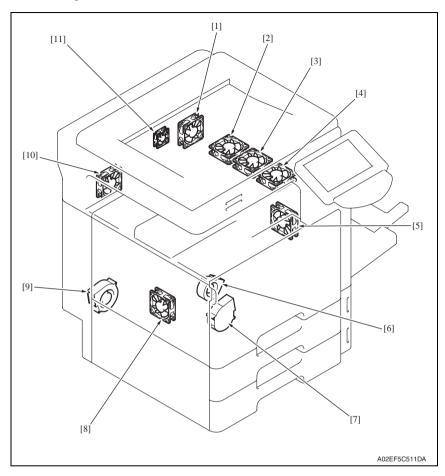
19.1.1 Scanner section



- [1] Scanner motor (M201)
- [2] 20 degree sensor (PS202)
- [3] Original size detection sensor/1 (PS204)
- [4] Image processing board (IPB)
- [5] Original cover sensor (RS201)
- [6] CCD board (CCDB)
- [7] Machine condition monitor board (MCMB)
- [8] Home sensor (PS201)

- [9] Exposure lamp (FL201)
- [10] Inverter board (INVB)
- [11] Original glass moving motor (M202)
- [12] Glass home pos. sensor (PS203)
- [13] Original glass position control board (OGPCB)
- [14] Scanner relay board (REYB/SCAN)
- [15] Optical cooling fan motor (FM201)
- [16] Original size detection sensor/2 (PS205)

19.1.2 Engine section

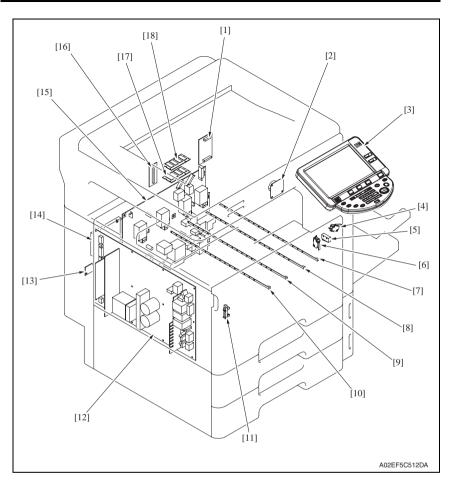


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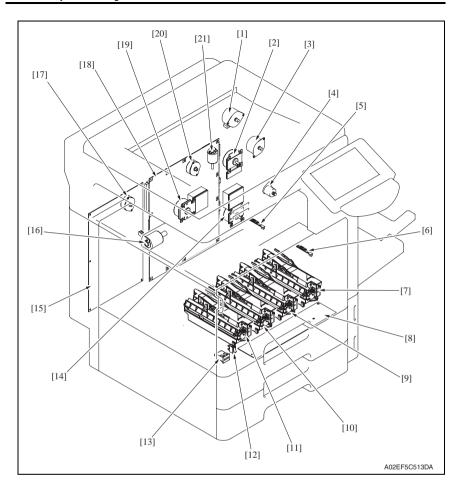
- [1] Paper cooling fan motor (FM7)
- [2] Fusing cooling fan motor/2 (FM10)
- [3] Fusing cooling fan motor/3 (FM11) *
- [4] Fusing cooling fan motor/1 (FM9)
- [5] Suction fan motor (FM8)
- [6] Toner suction fan motor (FM3)
- *: bizhub C353 only

- [7] Cooling fan motor/1 (FM1)
- [8] Power supply cooling fan motor (FM5)
- [9] Exhaust fan motor (FM4)
- [10] Cooling fan motor/2 (FM2)
- [11] MFP board cooling fan motor (FM6)



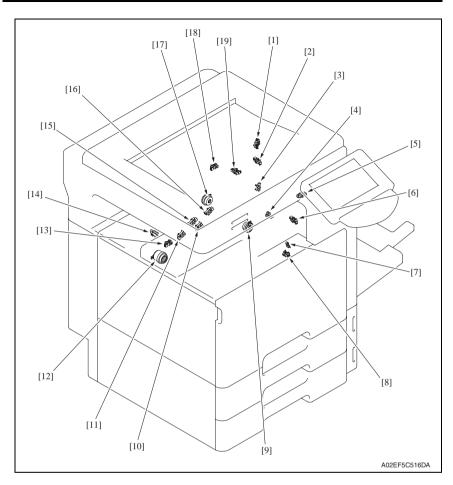
- [1] NVRAM board (NRB)
- [2] Speaker (SP)
- [3] Control panel (UN201)
- [4] Right door switch (S5)
- [5] Front door switch/1 (S3)
- [6] Front door switch/2 (S4)
- [7] Erase lamp/K (EL/K)
- [8] Erase lamp/C (EL/C)
- [9] Erase lamp/M (EL/M)

- [10] Erase lamp/Y (EL/Y)
- [11] Waste toner full sensor (PS32)
- [12] DC power supply (DCPU)
- [13] Service EEPROM board (SV ERB)
- [14] Hard disk drive (HDD)
- [15] High voltage unit (HV)
- [16] JMP board (JMPB)
- [17] SODIMM/1 (SODIMM/1)
- [18] SODIMM/2 (SODIMM/2)



- [1] Switchback motor (M6)
- [2] Fusing motor (M5)
- [3] Duplex transport motor (M7)
- [4] 2nd image transfer retraction motor (M11)
- [5] IDC registration sensor/YC (IDCS/YC)
- [6] IDC registration sensor/MK (IDCS/MK)
- [7] PH unit/K
- [8] PH relay board (REYB/PH)
- [9] PH unit/C
- [10] PH unit/M
- [11] PH unit/Y

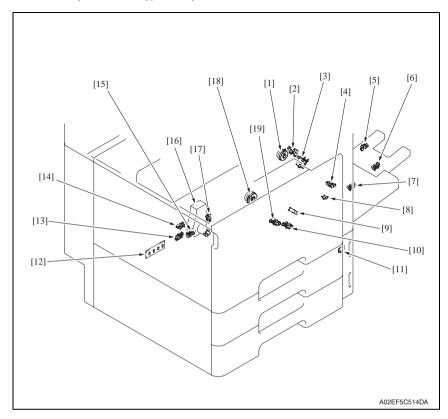
- [12] Main power switch (S1)
- [13] Total counter (TCT)
- [14] Transport motor (M1)
- [15] Printer control board (PRCB)
- [16] Color dev. unit engaged motor (M10)
- [17] Toner supply motor/YM (M4)
- [18] MFP board (MFPB)
- [19] Color PC motor (M2)
- [20] Toner supply motor/CK (M3)
- [21] Fusing retraction motor (M12)



- [1] Duplex paper passage sensor/1 (PS33)
- [2] Duplex door sensor (PS35)
- [3] Duplex paper passage sensor/2 (PS34)
- [4] 2nd image transfer welding alienation sensor (PS36)
- [5] Fusing retraction sensor (PS37)
- [6] Fusing loop detect sensor (PS24)
- [7] Temperature/humidity sensor (TEM/HUM)
- [8] Sensor in front of tim. roller (PS23)
- [9] Developing clutch/K (CL5)
- [10] Black PC drive main sensor (PS29)

- [11] Color PC drive main sensor (PS27)
- [12] Transfer belt retraction clutch (CL7)
- [13] Transfer belt retraction sensor (PS31)
- [14] Color dev. unit engaged position sensor (PS26)
- [15] Color PC drive sub sensor (PS28)
- [16] Black PC drive sub sensor (PS30)
- [17] Tim. roller clutch (CL6)
- [18] Fusing roller retraction sensor (PS38)
- [19] Paper exit sensor (PS25)

19.1.3 Tray 1, manual bypass tray

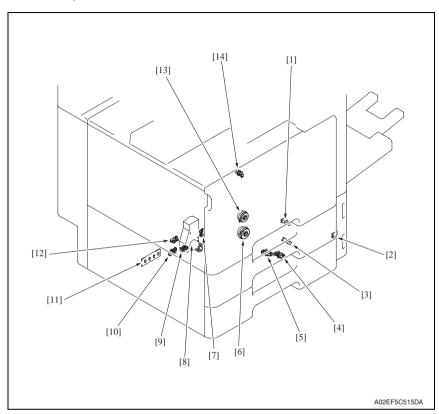


- [1] Manual paper feed clutch (CL4)
- [2] Manual lift-up position sensor (PS17)
- [3] Manual pick-up solenoid (SL1)
- [4] Manual paper empty sensor (PS21)
- [5] Manual multi FD size sensor/3 (PS20)
- [6] Manual multi FD size sensor/2 (PS19)
- [7] Manual multi FD size sensor/1 (PS18)
- [8] Manual CD size sensor (PS22)
- [9] Paper feed tray 1 chain feed sensor (PS1)
- [10] Paper feed tray 1 paper empty sensor (PS7)

- [11] Paper feed tray 1 paper empty indicator board (PEIB/1)
- [12] Paper feed tray 1 paper FD size detect board (PSDTB/1)
- [13] Paper feed tray 1 paper CD size detect sensor/2 (PS6)
- [14] Paper feed tray 1 device detection sensor (PS2)
- [15] Paper feed tray 1 paper CD size detect sensor/1 (PS5)
- [16] Paper feed tray 1 lift-up motor (M8)
- [17] Paper feed tray 1 near empty sensor (PS4)
- [18] Paper feed tray 1 paper feed clutch (CL1)
- [19] Paper feed tray 1 upper limit sensor (PS8)

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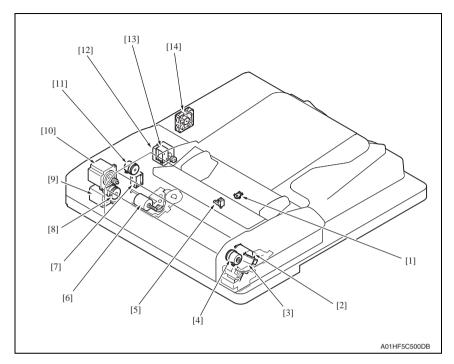
19.1.4 Tray 2



- [1] Paper feed tray 2 vertical transport sensor (PS16)
- [2] Paper feed tray 2 paper empty indicator board (PEIB/2)
- [3] Paper feed tray 2 paper feed sensor (PS14)
- [4] Paper feed tray 2 paper empty sensor (PS13)
- [5] Paper feed tray 2 upper limit sensor (PS15)
- [6] Paper feed tray 2 paper feed clutch (CL2)
- [7] Paper feed tray 2 near empty sensor (PS9)

- [8] Paper feed tray 2 lift-up motor (M9)
- [9] Paper feed tray 2 paper CD size detect sensor/1 (PS11)
- [10] Paper feed tray 2 paper CD size detect sensor/2 (PS12)
- [11] Paper feed tray 2 paper FD size detect board (PSDTB/2)
- [12] Paper feed tray 2 device detection sensor (PS10)
- [13] Paper feed tray 2 vertical transport clutch (CL3)
- [14] Paper feed tray 2 door sensor (PS3)

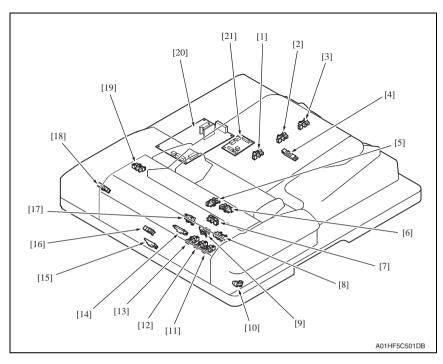
19.2 DF-611 (option)



- [1] Document width detection variable resistor (VR1)
- [2] Switchback roller pressure/retraction motor (M5)
- [3] Reading roller pressure/retraction motor (M4)
- [4] Brake clutch (CL3)
- [6] Lift-up motor (M6)
- [7] Exit switch back solenoid (SD2)
- [5] Stamp solenoid (SD3) *

- [8] Registration clutch (CL1)
- [9] Reading motor (M1)
- [10] Take-up motor (M2)
- [11] Take-up clutch (CL2)
- [12] Exit motor (M3)
- [13] Switch back solenoid (SD1)
- [14] Cooling fan (FM1)

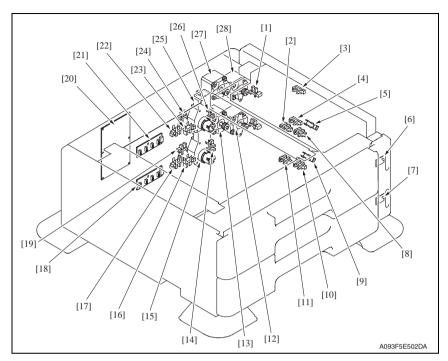
^{*:} option



- [1] Length sensor/1 (PS10)
- [2] Length sensor/3 (PS12)
- [3] Length sensor/4 (PS13)
- [4] Length sensor/2 (PS11)
- [5] Lift up upper sensor (PS16)
- [6] Empty sensor (PS14)
- [7] After separate sensor (PS4)
- [8] Reverse roller sensor (PS7)
- [9] Lift up lower sensor (PS15)
- [10] Read roller sensor (PS6)
- [11] Consolidation/3 (PS17)

- [12] Consolidation/2 (PS18)
- [13] Consolidation/1 (PS19)
- [14] Reverse registration sensor (PS8)
- [15] Before read sensor (PS9)
- [16] Registration sensor (PS3)
- [17] Exit sensor (PS5)
- [18] Read open/close sensor (PS2)
- [19] Feed open/close sensor (PS1)
- [20] DF control board (DFCB)
- [21] Relay board (REYB)

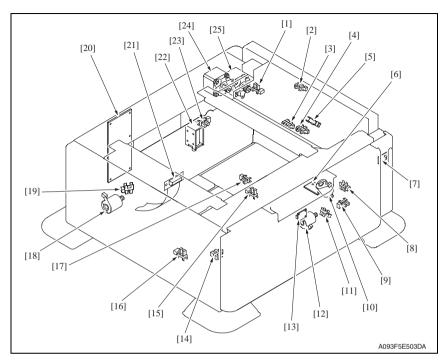
19.3 PC-104/204 (option)



- [1] Tray3 door set sensor (PS111)
- [2] Tray3 upper limit sensor (PS114)
- [3] Tray3 vertical transport sensor (PS117)
- [4] Tray4 vertical transport sensor (PS126)
- [5] Tray3 paper feed sensor (PS116)
- [6] Paper feed tray3 paper empty indicator board (PEIB/1)
- [7] Paper feed tray4 paper empty indicator board (PEIB/2)
- [8] Tray3 empty sensor (PS115)
- [9] Tray4 paper feed sensor (PS125)
- [10] Tray4 empty sensor (PS124)
- [11] Tray4 upper limit sensor (PS123)
- [12] Tray4 vertical transport motor (M121)
- [13] Tray4 paper feed motor (M123)
- [14] Tray4 near empty sensor (PS122)

- [15] Tray4 lift-up motor (M125)
- [16] Tray4 CD paper size sensor/2 (PS128)
- [17] Tray4 CD paper size sensor/1 (PS127)
- [18] Tray4 paper size detect board/2 (PSDTB/2)
- [19] Tray4 device detection sensor (PS121)
- [20] PC Control board (PCCB)
- [21] Tray3 paper size detect board/1 (PSDTB/1)
- [22] Tray3 CD paper size sensor/1 (PS118)
- [23] Tray3 CD paper size sensor/2 (PS119)
- [24] Tray3 device detection sensor (PS112)
- [25] Tray3 lift-up motor (M124)
- [26] Tray3 near empty sensor (PS113)
- [27] Tray3 paper feed motor (M122)
- [28] Tray3 vertical transport motor (M120)

19.4 PC-405 (option)



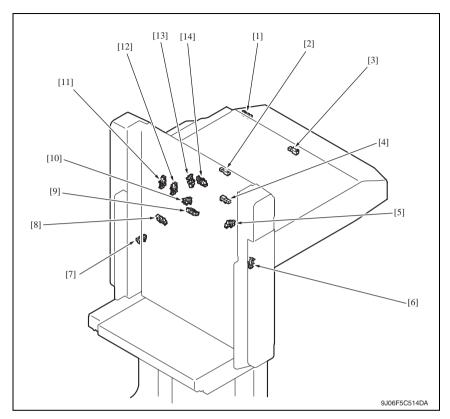
- [1] Door sensor (PS5)
- [2] Vertical transport sensor (PS2)
- [3] Lift-up upper sensor (PS4)
- [4] Paper empty sensor (PS3)
- [5] Paper feed sensor (PS1)
- Main tray paper empty board (MTPEB) [6]
- [7] Paper feed tray3 paper empty indicator board (PEIB/1)
- Elevator motor pulse sensor (PS10) [8]
- [9] Lower over run sensor (PS7)
- [10] Elevator motor (M5)
- Shift motor pulse sensor (PS8) [11]
- Shift motor (M4) [12]
- Manual down control board (MDCB) [13]

- Shift tray empty sensor (PS9) [14]
- [15] Shift tray stop sensor (PS11)
- Shift tray home sensor (PS12) [16]
- [17] Lift-up lower sensor (PS13)
- Division board position motor (M3) [18]
- Division board position sensor (PS14) [19]
- [20] PC control board (PCCB)
- Relay board (REYB) [21]
- [22] Tray lock solenoid (SD1)
- [23] Cassette open sensor (PS6)
- Paper feed motor (M1) [24]

[25]

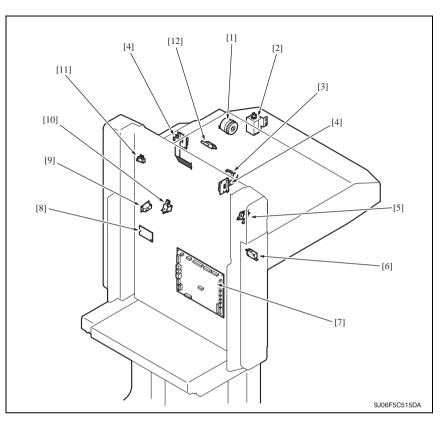
Vertical transport motor (M2)

19.5 FS-519 (option)



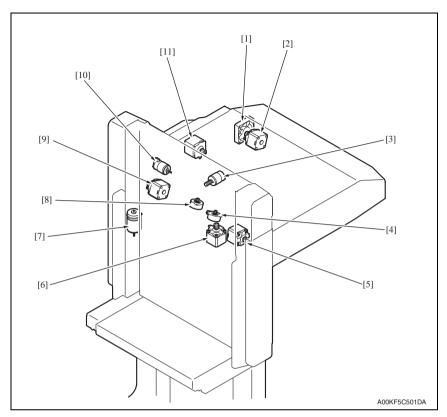
- [1] Entrance switch back sensor (PS4)
- [2] Transport sensor (PS2)
- [3] Entrance sensor (PS1)
- [4] Storage tray detect sensor (PS3)
- [5] Alignment home position sensor /2 (PS8)
- [6] Elevator tray home position sensor (PS11)
- [7] Elevator tray lower limit sensor (PS13)

- [8] Elevator top face detection sensor (PS12)
- [9] Exit paddle home position sensor (PS6)
- [10] Alignment home position sensor /1 (PS7)
- [11] Stapler save position sensor (PS10)
- [12] Staple home position sensor (PS9)
- [13] Shutter home position sensor (PS14)
- [14] Exit roller home position sensor (PS5)



- [1] Skew registration clutch (CL1)
- [2] Duplex guide solenoid (SD3)
- [3] Shutter detect switch (SW2)
- [4] Relay board/2 (REYB/2)
- [5] Storage paddle solenoid (SD1)
- [6] Front door switch (SW1)

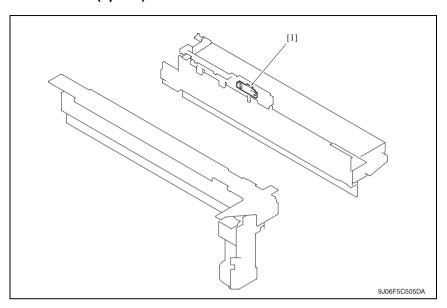
- [7] FS control board (FSCB)
- [8] Relay board/1 (REYB/1)
- [9] Slide switch (SW4)
- [10] Exit paddle solenoid (SD2)
- [11] Elevator tray switch (SW3)
- [12] Middle guide switch (SW5)



- [1] Cooling fan motor (FM9)
- [2] Entrance motor (M1)
- [3] Exit roller motor (M10)
- [4] Align motor/2 (M6)
- [5] Exit motor (M4)
- [6] Stapling unit moving motor (M7)

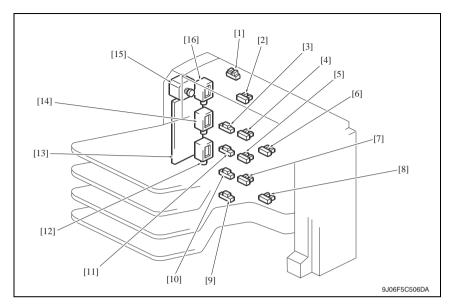
- [7] Elevator motor (M11)
- [8] Align motor/1 (M5)
- [9] Transport motor/2 (M3)
- [10] Shutter motor (M8)
- [11] Transport motor/1 (M2)

19.6 PK-515 (option)



[1] Punch trash full sensor (PS30)

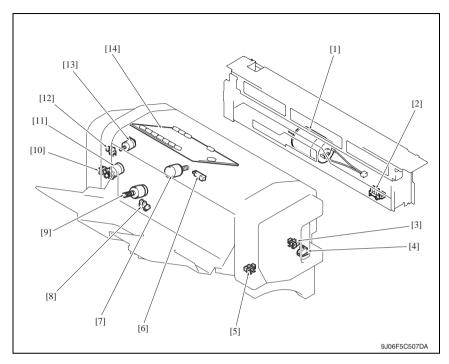
19.7 MT-502 (option)



- [1] Cover open/close sensor (PS11)
- [2] Paper full detection sensor 4 (PS8)
- [3] Paper detection sensor 4 (PS4)
- [4] Paper full detection sensor 3 (PS7)
- [5] Paper full detection sensor 2 (PS6)
- [6] Upper transport sensor (PS9)
- [7] Paper full detection sensor 1 (PS5)
- [8] Lower transport sensor (PS10)

- [9] Paper detection sensor 1 (PS1)
- [10] Paper detection sensor 2 (PS2)
- [11] Paper detection sensor 3 (PS3)
- [12] Bin entrance switching solenoid 1 (SD1)
- [13] MT control board (MTCB)
- [14] Bin entrance switching solenoid 2 (SD2)
- [15] Transport motor (M1)
- [16] Bin entrance switching solenoid 3 (SD3)

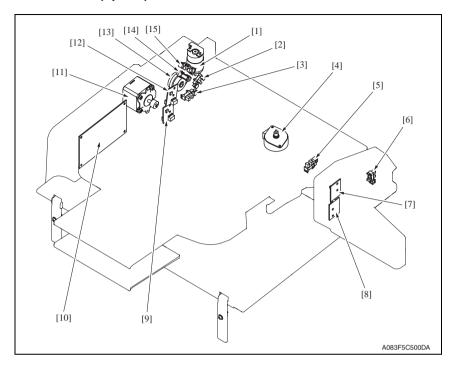
19.8 SD-505 (option)



- [1] Crease motor (M10)
- [2] Crease roller home position sensor (PS22)
- [3] Layable guide home sensor (PS24)
- [4] Saddle opening switch (SW4)
- [5] In & out guide home sensor (PS23)
- [6] Saddle exit sensor (PS20)
- [7] Layable guide motor (M14)

- [8] Saddle tray empty sensor (PS21)
- [9] In & out guide motor (M13)
- [10] Transport pulse sensor (PS25)
- [11] Saddle exit motor (M8)
- [12] Saddle exit roller home position sensor (PS18)
- [13] Saddle exit open/close motor (M9)
- [14] SD control board (SDCB)

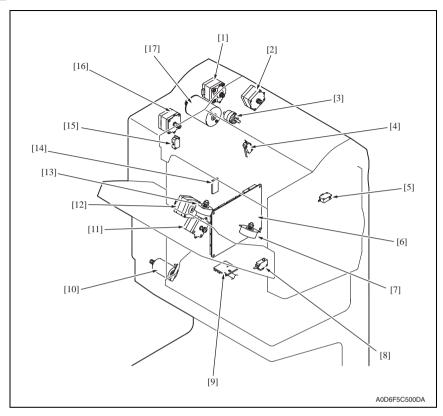
19.9 JS-505 (option)



- [1] Route change motor (M3)
- [2] Route change home sensor (PS4)
- [3] Pressure/retraction home sensor (PS5)
- [4] Shift motor (M2)
- [5] Shift home sensor (PS6)
- [6] Front door sensor (PS3)
- [7] Upper tray paper full detect board/LED (T2FDTB/LED)
- [8] Lower tray paper full detect board/LED (T1FDTB/LED)

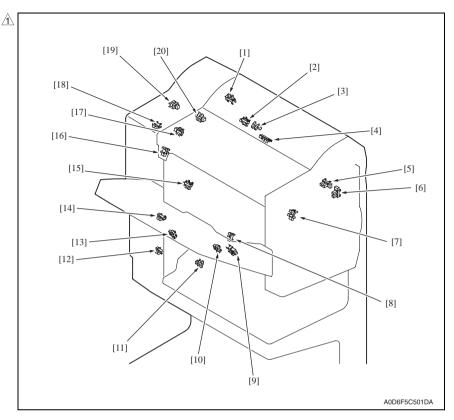
- [9] Lower tray paper full detect board/PR (T1FDTB/PR)
- [10] JS control board (JSCB)
- [11] Transport Motor (M1)
- [12] Upper tray paper full detect board/PR (T2FDTB/PR)
- [13] Roller pressure/retraction clutch (CL1)
- [14] Lower tray exit sensor (PS1)
- [15] Upper tray exit sensor (PS2)

↑ 19.10 FS-609 (option)



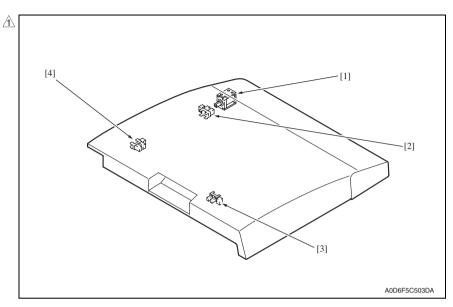
- Transport motor (M1) [1]
- [2] Entrance motor (M9)
- Saddle clutch (CL1) [3]
- Joint open switch (SW2) [4]
- [5] Front door open switch (SW1)
- [6] Finisher control board (FSCB)
- [7] Front aligning motor (M4)
- [8] Stapler safely switch/F (SW4)
- [9] Slide home position sensor (PS18)

- [10] Lift motor (M6)
- [11] Slide motor (M8)
- [12] Exit motor (M3)
- [13] Rear aligning motor (M5)
- [14] EEPROM (ER)
- [15] Stapler safely switch/R (SW3)
- [16] Paddle motor (M2)
- Staple/folding motor (M7) [17]



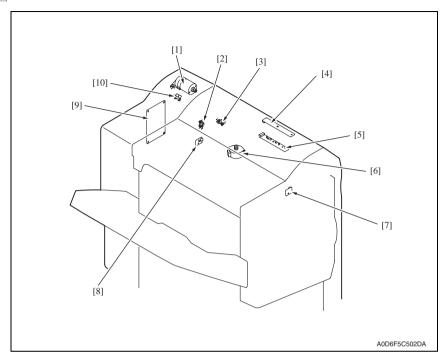
- [1] Entrance sensor (PS1)
- [2] Folding roller home position sensor (PS12)
- [3] Folding home position sensor (PS11)
- [4] Folding position sensor (PS10)
- [5] Upper cover open sensor (PS23)
- [6] Front door open sensor (PS22)
- [7] Front aligning plate home position sensor (PS4)
- [8] Finisher tray sensor (PS6)
- [9] Exit tray sensor (PS8)
- [10] Exit tray home position sensor (PS9)

- [11] Saddle tray sensor (PS13)
- [12] Lift motor clock sensor (PS17)
- [13] Stack full sensor (PS24)
- [14] Lift lower limit sensor (PS16)
- [15] Exit belt home position sensor (PS7)
- [16] Rear aligning plate home position sensor (PS5)
- [17] Paddle home position sensor (PS2)
- [18] Lift upper limit sensor (PS15)
- [19] Staple/folding motor clock sensor (PS14)
- [20] Bundle exit roller home position sensor (PS3)



- [1] Entrance switching solenoid (SD1)
- Turnover empty sensor (PS27) [2]
- [3] Paper sensor (PS25)
- Horizontal unit door sensor (PS26) [4]

19.11 PK-501 (option)



- [1] Punch motor (M1)
- [2] Side registration home sensor (PS2)
- [3] Punch motor cock sensor (PS3)
- [4] Photo sensor board (PSB)
- [5] LED board (LEDB)

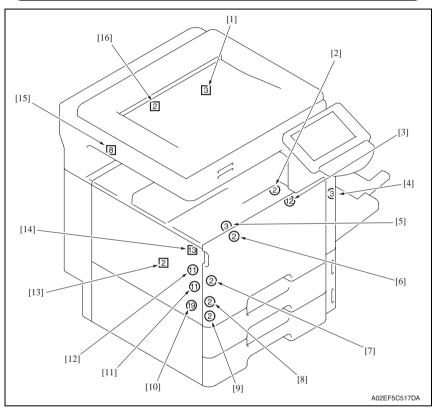
- [6] Side registration motor (M2)
- [7] Punch trash full LED board (PTFB/LED)
- [8] Punch trash full photo sensor board (PTFB/PR)
- [9] Punch control board (PKCB)
- [10] Punch home position sensor (PS1)

20. Connector layout drawing

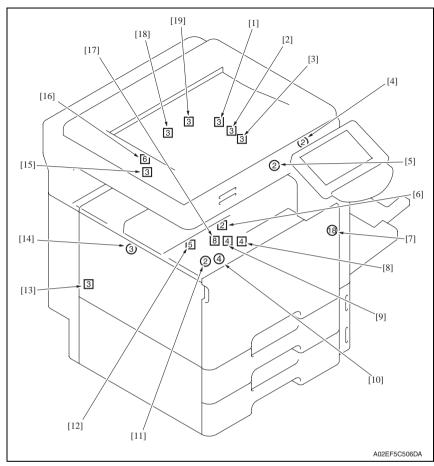
Number of pin

O Possible to confirm by removing external cover.

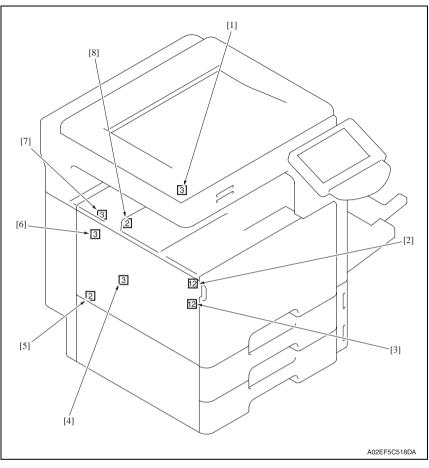
O Not possible to confirm by removing external cover.



2	No.	CN No.	Location	No.	CN No.	Location
	[1]	CN68	E-6	[9]	CN36	D-11
	[2]	CN1	E-1	[10]	CN29	E-9 to 10
	[3]	CN4	E-2	[11]	CN18	E-8
	[4]	CN63	D-5	[12]	CN62	E-5
	[5]	CN10	E-3	[13]	CN67	E-6
	[6]	CN2	E-1	[14]	CN57	E-3 to 4
	[7]	CN22	D-9	[15]	CN131	J-8
	[8]	CN35	D-11	[16]	CN6	O-3



2	No.	CN No.	Location	No.	CN No.	Location
ĺ	[1]	CN140	D-20	[11]	CN8	J-17
ĺ	[2]	CN55	D-20	[12]	CN69	E-17 to 18
ĺ	[3]	CN54	D-20	[13]	CN126	J-7 to 8
ĺ	[4]	CN23	U-8	[14]	CN127	J-8
ĺ	[5]	CNMT	D-18	[15]	CN148	E-20
_ [[6]	CN74	D-17	[16]	CN53	E-20
	[7]	CN47	D-21	[17]	CN141	E-14
	[8]	CN146	E-17	[18]	CN137	D-26
	[9]	CN75	E-16	[19]	CN85	D-25
	[10]	CN39	J-17 to 18			



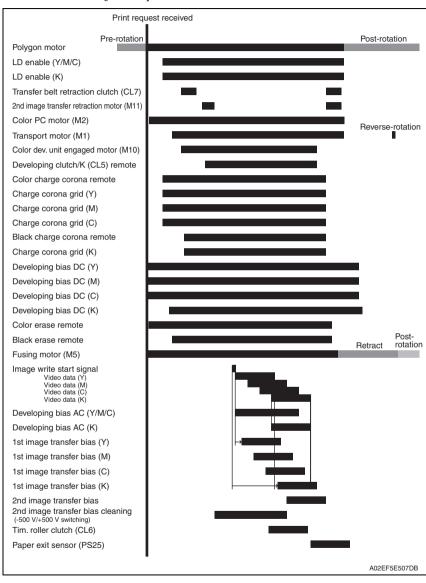
2	No.	CN No.	Location	No.	CN No.	Location
	[1]	CN49	I-9	[5]	CN2AC	J-16
	[2]	CN103	I-11	[6]	CN120	J-7
	[3]	CN98	I-10	[7]	CN125	J-7
	[4]	CN136	D-28	[8]	CN84	D-25

<u>/2</u>\

21. Timing chart

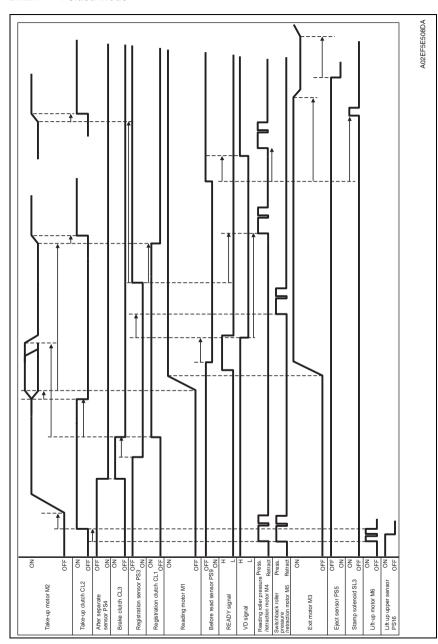
21.1 Main body

Color mode/A4 or 8 1/2 x 11/tray1

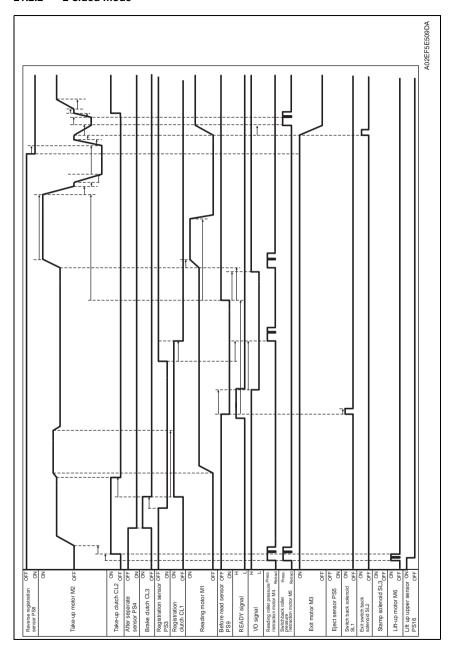


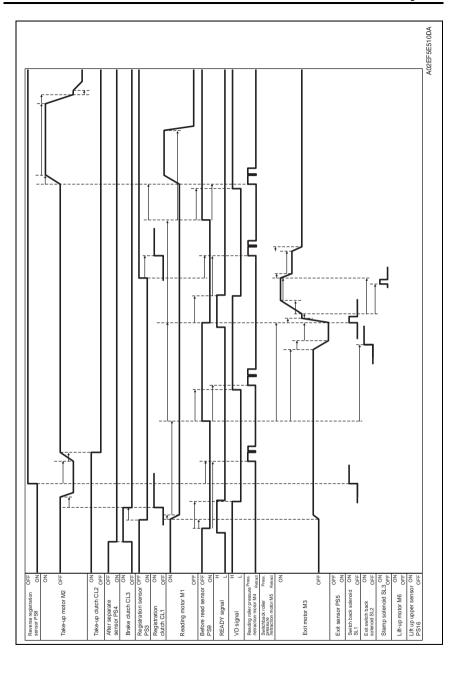
21.2 DF-611

21.2.1 1-sided mode



21.2.2 2-sided mode





bizhub C353/C253/C203

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SERVICE MANUAL

FIELD SERVICE

bizhub C353/C253/C203 Standard controller

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text,
 \(\frac{\(\)}{\(\)} \) is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.
- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with .
 The number inside represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2008/06	4.0	<u> </u>	Description addition of function enhanced version 3 firmware (Card Ver. J8)
2008/01	3.0	2	Description addition of function enhanced version 2 firmware (Card Ver. 88)/Error corrections
2007/11	2.0	À	Description addition of function enhancement 1, error corrections
2007/07	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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Outline

1. Controller specifications

1.1 Type

	Туре	Built-in type contr	oller				
		bizhub C353	35 prints/min (color/monochrome, A4, 1-sided)				
	Print speed	bizhub C253	25 prints/min (color/monochrome, A4, 1-sided)				
		bizhub C203	20 prints/min (color/monochrome, A4, 1-sided)				
		bizhub C353	5.9 sec. or less (monochrome, A4)				
	First print time	bizhub C253	7.7 sec. or less (monochrome, A4)				
		bizhub C203	7.7 sec. or less (monochrome, A4)				
	Resolution	Data processing	600 x 600 dpi (print function, FAX function) 400 x 400 dpi (FAX function) 200 x 200 dpi (FAX function)				
		Printing	Equivalent to 1800 dpi in main scanning direction x 600 dpi in sub scanning direction				
	Printer language	PCL5e/c emulation PCL XL Ver. 2.1 emulation PostScript 3 emulation (3016) XPS Ver. 1.0					
	RAM	1024 MB					
	Hard Disk	60 GB					
Host interface Ethernet (10 USB 2.0/1.1			Base-T or 100Base-TX)				
Network protocol RAW Socket, SMB over TCP/IP, IPP, HTTP, POP. AppleTalk, Bonjour, NetBEUI, WebDAV, WSD, S/ Pserver (NDS) NetWare 4.x, 5.x, 6.x Pserver (Bindery) NetWare 4.x NDPS NetWare 5.x, 6.x SMB, RAW port printing IPP 1.1), BOOTP, ARP, ICMP, DHCP, AutoIP, SLP, SNMP, FTP, LPR/LPD B over TCP/IP, IPP, HTTP, POP, SMTP, LDAP, NTP, SSL, IPX/SPX ır, NetBEUI, WebDAV, WSD, S/MIME, IPsec, DNS, DynamicDNS					
		Pserver (Bindery) NDPS NetWare SMB, RAW port p	NetWare 4.x e 5.x, 6.x				
	Driver	PCL6 printer driver	Windows NT4.0 (SP6a or later) Windows 2000 Professional (SP4 or later) Windows XP Home Edition/Professional (SP2 or later) Windows XP Professional x64 Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise, Windows Vista Home Basic/Home Premium /Ultimate /Business /Enterprise x64 edition Windows Server 2003, Windows Server 2003 x64				
		PS3 printer driver	 Windows 2000 Professional (SP4 or later) Windows XP Home Edition/Professional (SP2 or later) Windows XP Professional x64, Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise, Windows Vista Home Basic/ Home Premium /Ultimate /Business /Enterprise x64 edition Windows Server 2003, Windows Server 2003 x64 				

		PostScript PPD	Macintosh OS 9.2 or later		
		driver	Macintosh OS X 10.2/10.3/10.4		
Â	Driver	Fax driver	Windows NT4.0 (SP6a or later) Windows 2000 Professional (SP4 or later) Windows XP Home Edition/Professional (SP2 or later) Windows XP Professional x64 Windows Vista Home Basic /Home Premium /Ultimate /Business /Enterprise, Windows Vista Home Basic /Home Premium /Uttimate /Business /Enterprise x64 edition Windows Server 2003, Windows Server 2003 x64		
	Utility	PageScope Web Connection			
	Compatible	Max. standard paper size A3 Wide			
	paper size	(Long size paper: Width 210 mm to 297 mm x Length 457.3 mm to 1200 mm)			
	Power require- ments	Shared with Main body			
	Operating envi- ronmental requirements	10 to 30° C (50 to 15 to 85 %	o 86° F)		
	Fonts	PCL	Latin 80 fonts		
	i Onto	PS	Latin 137 fonts		

1.2 Supporting client specifications

PC	IBM PC and its compatible, Macintosh			
	Server	Windows NT4.0 SP6/2000 SP3/2003 Server/2003 Server 64 bit/XP 64 bit		
os	Client	Windows NT4.0 SP6/2000 SP3/XP/XP 64 bit Macintosh OS 9.2 or later, OS X 10.2, 10.3, 10.4 Macintosh OS 10.4 Intel		
	With a network	Connection method	Ethernet 10Base-T/100Base-TX	
Interface	connection	Protocols	TCP/IP, NetBEUI, IPX/SPX (NetWare 4.x, 5.x, 6.x)	
	With a local connection USB 2.0/1.1			
Browser	PageScope Web Connection Web browsers: Microsoft Internet Explorer 6 or later recommended (JavaScript enabled, Cookies enabled) Microsoft XML Parser MSXML3.X must be installed when using Internet Explorer 5.5. Netscape Navigator 7.02 or later (JavaScript enabled, Cookies enabled) Mozilla Firefox 1.0 or later (JavaScript enabled, Cookies enabled) Macromedia® Flash® (If "Flash" is selected in View Mode, version 7.0 or later plugin is required.)			

NOTE

• These specifications are subject to change without notice.

Standard Controller

Maintenance

2. Checking the controller firmware version

- The version of the controller firmware can be checked on the Control panel of the machine.
- 1. Call the Service Mode to the screen.
- 2. Touch [Firmware Version].
- Check the firmware versions.

Firmware upgrade

3.1 Outline

 There are two ways to update the firmware: One is by directly connecting with the main body using the compact flash, and the other is by downloading over a network using the Internet ISW.

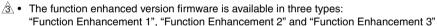
3.2 Notes about firmware rewrite

3.2.1 Types of firmware

Two types of firmware are released for bizhub C353/C253/C203. They are a maintenance release version and an enhanced version.

Maintenance release version: Addresses remaining problems

Function enhanced version : Adds new features and includes the contents of the maintenance release version available at the same time



Before rewriting a firmware, check the current firmware version of the machine and confirm the type of the current firmware using CSES.
 Select an appropriate firmware and rewrite the current firmware.

3.2.2 Rewrite to/from a function enhanced version of firmware

 The processing that ensures compatibility is required when upgrading the firmware to the function enhanced version.

HDD Version Up (LK)

: To maintain the compatibility of management information data and documents stored in HDD after the firmware upgrade. (only for Function Enhancement 2).

Down Version

NOTE

- Firmware can be rewritten only through the menu operation on the control panel and cannot be rewritten with the CS Remote Care system.
- Take the following steps to perform processing that ensures compatibility.

A. Upgrade to the function enhancement 2 from the early mass-production firmware/function enhancement 1

- After rewriting the firmware, turn OFF and ON the main power switch and sub power switch.
- 2. Trouble code C-E002 is displayed.
- 3. Call the Service Mode to the screen.
- Touch [State Confirmation] → [Memory/HDD Adj.] → [HDD Version Up (LK)].
- 5. Check to see that the Start key is lit in blue. Touch the Start key to initiate version up.
- 6. When version up is completed, the result is displayed on the screen.
- 7. Turn OFF and ON the main power switch and sub power switch.

• Before downgrading the firmware, the following steps are required to be taken.

(1) Down Ver.

- 1. Call the Service Mode to the screen.
- Touch [State Confirmation] → [Memory/HDD Adj.] → [Down Ver.].
- 3. Check to see that the Start key is lit in blue. Touch the Start key to initiate Down Ver.
- 4. When Done Ver. is completed, the result is displayed on the screen.
- 5. Turn OFF and ON the main power switch and sub power switch.
- 6. Rewrite the firmware.
- 7. Trouble code C-E002 is displayed.
- 8. Call the Service Mode to the screen.
- Touch [State Confirmation] → [Memory/HDD Adj.] → [HDD Format] → [Logical Format].
- Check to see that the Start key is lit in blue. Touch the Start key to initiate Logical Format.
- 11. Turn OFF and ON the main power switch and sub power switch.

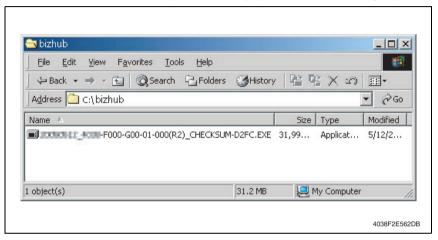
3.3 Preparations for firmware rewriting by Windows Command Prompt

3.3.1 Service environment

- OS: Windows 2000/XP
- · Drive which enables writing/reading of compact flash
- · Compact flash (service tool)

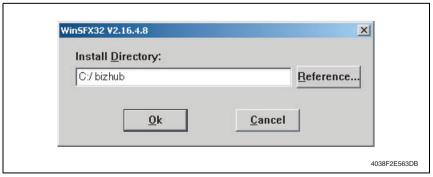
3.3.2 Writing into the compact flash

1. Put the data of firmware in the optional directory. (C:\bizhub in the below figure)



NOTE

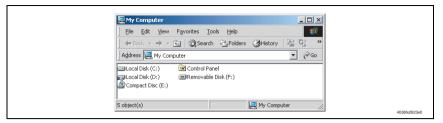
- The file name of firmware data consists of the "Release Date Version CHECKSUM-****.exe."
- Double-click the firmware data, and specify the directory to be uncompressed, and then uncompress it.



NOTE

- When old firmware is still left in the specified directory to be uncompressed, delete it before uncompressing.
- When the firmware data is decompressed, "card_work" folder is created in the selected directory and the data is decompressed in this folder.

 Mount the compact flash on the PC, and check the drive name, which was recognized in the Windows. (F-drive in the following figure)

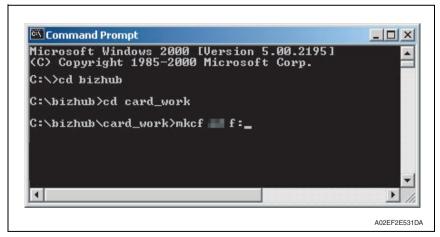


- Click [Start] → [Program] → [Accessories] → [Command Prompt] to open the command prompt.
- 5. Use the command prompt to move into the uncompressed directory.
- 6. Specify the drive of compact flash, which was recognized through the procedure 3, and execute the "mksf.bat." (Input the C: \bizhub\card_work>mkcf ## f (drive number): in the below figure, and push the "Enter".)

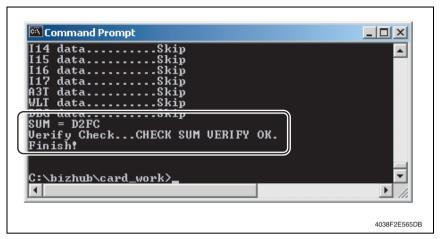
NOTE

 For ## within the above mkcf command, type two characters that correspond to the machine model on which firmware upgrading is made.
 Take a look at the following list to find right characters for a correct command.

Model and command list			
bizhub C353	t1		
bizhub C253	t2		
bizhub C203 t25			



- 7. Once the "mkcf.bat" is executed, data writing into the compact flash is started.
- Upon completion of writing, CHECKSUM is executed. If CHECKSUM value is precisely matched, "VERIFY OK" appears.



9. Remove the compact flash from PC.

NOTE

 When removing the compact flash, be sure to check if data is written as normal and then remove it according to the precise removing method.

3.4 Preparations for firmware rewriting by Firmware Imaging Toolkit 2006

 This software is designed as the tool to write firmware data of MFP/printer released by KMBT into the compact flash card.

3.4.1 Correspond model

· Correspond models of the software is as follows.



Ŋ	Color machine	 bizhub C650/C550/C451/C450/C353/C352/C351/C350/C300/C253/C250/C203 bizhub C450P/C353P/C352P/C250P
	B/W machine	 bizhub 350/250/200 Di3510/3510f/3010/3010f/2510/2510f

3.4.2 Function outline

• The following functions are available with this software.

Function type	Function name	Description
Basic functions	Write Firmware to a card	Write firmware data into the compact flash card. See P.14
	Compare Firmware with a card	Compare the firmware data written into the compact flash card with the one saved in PC. See P.14
Advanced functions	Create a Firmware Image from a card	Create the firmware image form using the firmware data written into the compact flash card. See P.15
	Format a card	Format the compact flash card by the FAT or vxWorks form. NOTE
		vxWorks form is not applicable See P.15
	Display information about a card	Acquisition the information of firmware data written into the compact flash card. See P.15

3.4.3 System environment

• The following system environments are required or recommended to use the software.

Computer	IBM PC/AT compatible machine
CPU	Pentium III / 500 MHz or higher is recommended.
Correspond OS	Windows 2000, Windows XP or Windows Server 2003
Required memory	More than 128 MB (Windows 2000), 256MB (Windows XP/2003) is recommended.
Others	Drive that is able to Read/Write compact flash

3.4.4 Installation of software

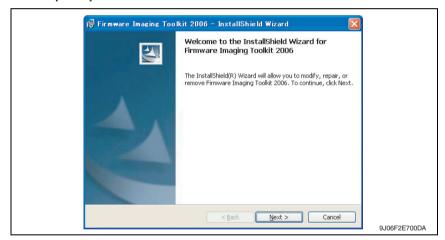
• Follow the procedures shown below to install the software.

NOTE

- Install the software to the PC with the administration authentication.
- When any anti-virus program is activated, quite the program before the installation.
- 1. Double click [setup.exe] to start the installation of the software.



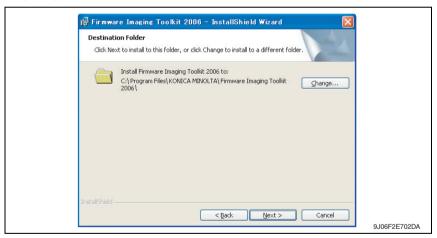
2. Click [Next >].



3. After checking the contents of license agreement, select [I accept the terms in the license agreement] and click [Next >].



Select the installed destination folder of Firmware Imaging Toolkit 2006, and click [Next>].



- 5. Click [Install] to start installation.
- 6. Click [Finish] to complete the installation.

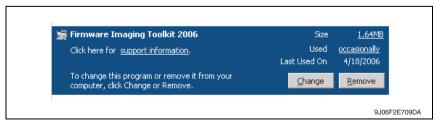


Shortcut file will be created inside Windows Start menu ([Program] → [KONICA MINOLTA] → [Firmware Imaging Toolkit 2006]).



3.4.5 Update of software

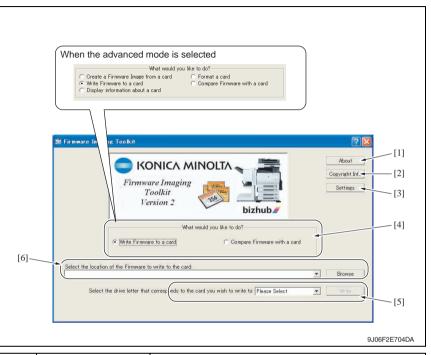
- To update the software version, delete (uninstall) the currently installed program and install the new version.
- Follow the procedures shown below to delete (uninstall) the program.
- 1. Quite the program if the software is activated.
- Select [Firmware Imaging Toolkit 2006] of [Add/Remove Programs] in Windows Control Panel menu to delete the program.



3.4.6 Screen

A. Main window

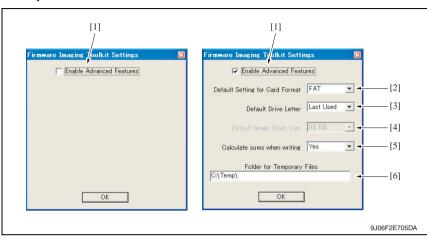
- The main window will be displayed after activating the software.
- · Main window consists of 2 patterns: Basic mode, Advanced mode



[1]	About	To display the outline of the tool.
[2]	Copyright Info	To display the license agreement and version information of the tool.
[3]	Settings	 To display the dialog to enable the advanced functions. Select the check box of [Enabled Advanced Features] to enable advanced functions at main window. See P.13
[4]	What would you like to do?	 To select the function to be used. Displayed screen is different between Basic mode and Advanced mode. See P.14
[5]	Select the location of the Firmware to write to the card:	To select the compact flash drive to which the data to write.
[6]	Select the drive letter that corresponds to the card you wish to write to:	To select the location where the firmware is stored in PC.

B. Settings dialog

- It will be displayed by clicking [Settings] at main window.
- Other settings will be enabled by selecting the check box of [Enabled Advanced Features].



[1]	Enable Advanced Features	•	Enable the setting of advanced functions at the dialog by selecting the check box. Also advanced functions can be selected at the main window.	
[2]	Default Setting for Card Format	•	Select the default card format during software starting. FAT : The format to be used by all models that the software supports. vxWorks: Not available yet.	
[3]	Default Drive Letter	•	Select how to set default of compact flash drive during software starting. LastUsed : The drive used at previous time is selected. None : [Please Select] is displayed on the screen every starting and the drive should be selected every time.	
[4]	Default Image Block Size	•	Not available yet.	
[5]	Calculate sums when writing	•	Set whether to calculate check sums during data writing. If [YES] is selected, data consistency can be ensured by data verification of check sums during data writing. However, it takes more time for data writing compared to the case without sums calculation (Basically this mode shall be selected.)	
			If [No] is selected, check sums calculation is skipped during data writing. Although it take less time for data writing compared to the case with sums calculation, it fails to ensure the reliability of the written data.	

3.4.7 Details of each function

A. Basic functions

(1) Write Firmware to a card

- To write FW data into the compact flash. The FW data of the models shown below can be written.
- To write FW data into the compact flash. The FW data of the models shown below can be written.

<Corresponding models and firmware file type>

	File type	Indexed	Compressed	Uncompressed	Di3510/350/250/
	Models	firmware type	firmware type	firmware type	200 firmware type
	C650	Mosel1_cf.tar.gz			
	C550	Mosel2_cf.tar.gz			
	C451	Mosel3_cf.tar.gz			_
$\underline{\wedge}$	C353/C353P	thames1_cf.tar.gz			_
	C253	thames2_cf.tar.gz	* ima az	*.img	_
	C203	thames25_cf.tar.gz	*.img.gz	.iiig	_
	C450/C450P/C351	rhein1_cf.tar.gz			_
	C352/C352P/C300	rhein2_cf.tar.gz			_
	C350	tss2_cf.tar.gz			_
	C250/C250P	rhein3_cf.tar.gz			_
	Di3510/3510f/3010/ 3010f/2510/2510f	_	_	_	ma001
	350/250/200	_	_	_	ma001a

NOTE

- The above-mentioned [Indexed firmware type] and [Di3510/350/250/200 firmware type] shall be comprised of multiple files and one of the files shall be named as above.
- [Compressed firmware type] means the compressed formed image file that is created using the tool's function of the [Create a Firmware Image from a card].
- [Uncompressed firmware type] means the image file that is uncompressed the compressed firmware file.
- To write the image file data (*.img.gz or *.img) into the compact flash, use the compact flash with the same capacity as the one used for the original image file.
 Although the compact flash with larger capacity than the original one can be used, it is not covered under warranty.
- C350 firmware requires the compact flash over 64 MB.
- ← Firmware of C650/C550/C451/C450/C450P/C353P/C353/C352/C352P/C351/C300/C253/C250/C250P/C203 requires the compact flash over 128 MB.

(2) Compare Firmware with a card

- · Compare the firmware data written into the compact flash and the one (file) saved in PC.
- After the comparison, display the check sum information (comparison result dialog) of the firmware data of the compact flush and the file.
- The firmware data (file) format saved in PC shall consistent with the one written into the compact flash.

B. Advanced functions

(1) Create a Firmware Image from a card

- Create the image file from the firmware data written into the compact flash.
 Create the image file by dumping directly the data in the card. This function allows us to save the various type of firmware data in the compact flash as the image file and hold as copy data.
- The created FW image file is automatically compressed and created as the Compressed firmware file (*.img.gz).

The image file is written into the compact flash in the uncompressed form, however, the uncompressed data would occupy too much capacity, which makes file control difficult. Therefore this tool doesn't create uncompressed firmware file (*.img).

(2) Format a card

- Make format of the compact flash in FAT or vxWork form.
- To write the firmware data into the compact flash, the card should be formatted in FAT form to clear (initialize) the description of the compact flash.

NOTE

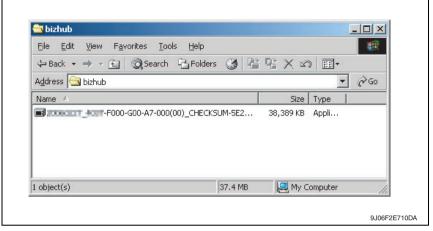
- In current version, only FAT format is available but not vxWork format.
- After the firmware data is written into the compact flash, it becomes the own file style that is different from the FAT, and the compact flash that the firmware data is written cannot be browsed on the Windows OS.

(3) Display information about a card

- Display the information of the firmware data written into the compact flash.
 The information to be displayed is according to the type of written FW data.
- For the series of Di3510/200/250/350 series, MSC version is displayed.
- For the series of C650/C550/C451/C450/C450P/C353/C353P/C352/C352P/C351/C350/C300/C253/C250/C250P/C203, check sums of each firmware data is displayed.

3.4.8 How to write firmware data

- A. In the case of C650/C550/C451/C450/C450P/C353/C353P/C352/C352P/C351/C350/C300/C253/C250/C250P/C203 series
 - 1. Put the firmware data in the optional directory. (C:\bizhub in the below figure)



NOTE

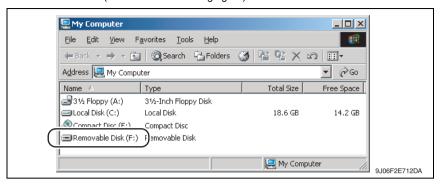
- The file name of firmware data consists of the "Release Date_Version_CHECKSUM-****.exe."
- Double-click the firmware data, and specify the directory to be uncompressed, and then uncompress it.



NOTE

 When old firmware is still left in the specified directory to be uncompressed, delete it before uncompressing.

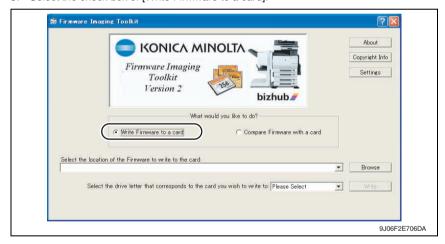
3. Mount the compact flash on the PC, and check the drive name, which was recognized in the Windows. (F-drive in the following figure)



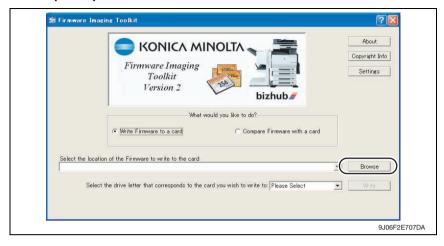
4. Start Firmware Imaging Toolkit 2006.

NOTE

- When using the external compact flash drive such as USB be sure to connect them before starting this tool.
- 5. Select the check box of [Write Firmware to a card].



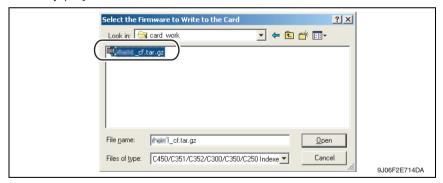
6. Click [Browse].



- 7. Select the file type [C353/C253/C203 Indexed Firmware].
- Move to the folder decompressed at step 2, confirm that only "###_cf.tar.gz" (### is for model name) is displayed, and select.

NOTE

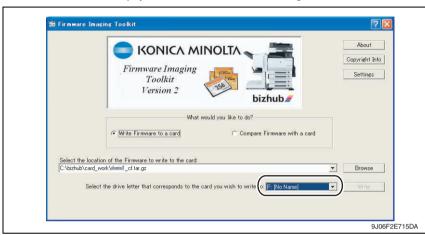
- If the file extension is set to be not displayed in Windows, the file name ".gz" will not be displayed.
- 9. Click [Open].



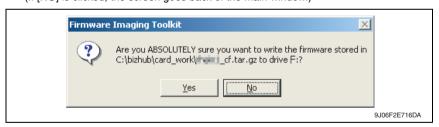
10. Select the drive that the compact flash is inserted, which is confirmed at step 3.

NOTE

The drives other than the compact flash that is recognized as "Removable Disk"
can be selected for the writing destination. If these drives are selected mistakenly
to make the writing, it may give fatal damage on Windows system or delete the
saved data. Therefore pay close attention when selecting the drive.



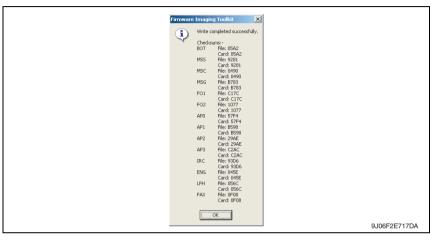
- [Write] button is changed form gray into active status.
 When clicking [Write] button, the following dialog is displayed.
- 12. In the dialog, re-confirm the firmware data and the written destination drive, and click [YES].
 - (If [NO] is clicked, the screen goes back of the main window.)



13. Click [Yes], and data writing starts.

NOTE

- Writing a card is a resource intensive operation for your computer do not attempt to multitask (use the computer for anything else) during the writing procedure.
- 14. When the writing is completed, the following screen appears. In this screen, check sums will be compared between the firmware data and one written into the compact flash.



NOTE

- The contents displayed on the screen may different according to the model type.
 The above is the screen displayed for firmware data writing of bizhub C450.
- 15. Confirm each check sums are identical and quit Firmware Imaging Toolkit 2006.
- 16. Take out the compact flash from the PC.

NOTE

 When removing the compact flash, be sure to check if data is written as normal and then remove it according to the precise removing method.

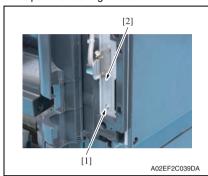
3.5 Firmware rewriting by compact flash

• The firmware is updated using the compact flash.

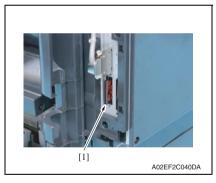
3.5.1 Updating method

NOTE

- NEVER remove or insert the compact flash card with the machine power turned ON.
- 1. Turn OFF the main power switch.
- 2. Open the rear right door.



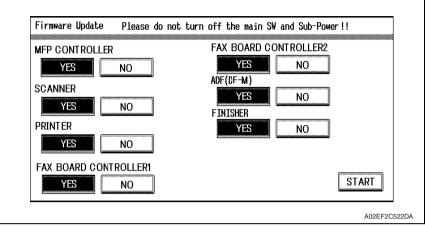
3. Remove the screw [1] and the metal blanking plate [2].



 Insert the compact flash card [1] into the slot.

- 5. Turn ON the main power switch and the sub power switch.
- 6. Control panel shows F/W items to be updated.

7. Select the particular type of F/W to be updated. (Select [YES].)

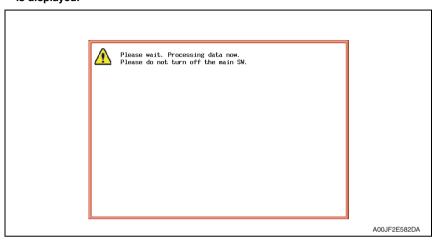


F/W to be updated	Appropriate board
MFP CONTROLLER	MFP board (MFPB)
SCANNER	Image processing board (IPB)
PRINTER	Printer control board (PRCB)
FAX BOARD CONTROLLER1	Fax board (Main) *1
FAX BOARD CONTROLLER2	Fax board (Sub) *2
ADF (DF-M)	DF control board (DFCB)
FINISHER	FS control board (FSCB) *3

- *1: The optional fax kit is necessary for the above procedure.
- *2: The optional fax multi line ML-501 is necessary for the above procedure.
- \triangle *3: The optional finisher FS-519 or FS-609 is necessary for the above procedure.
 - 8. Press the [START]. (At this time, the Start key starts blinking red.)
 - Check that the control panel shows the message indicating that the data has been rewritten correctly ([Downloading Completed]). Check also the check sum value ([Check Sum ####]) shown on the control panel. (The Start key blinks blue.)
 - 10. Turn OFF the main power switch.
 - 11. Remove the compact flash card from the slot.
 - 12. Turn ON the main power switch, and close the front door.

NOTE

 When turning the main power switch ON for the first time after the firmware is updated, data may sometimes be internally updated. In that case, the following message will be displayed. Never turn the main power switch OFF until either the serial number input screen or the trouble code screen is displayed.



- 13. Call the Service Mode to the screen.
- 14. Select [Firmware Version].
- 15. Make sure if the version of firmware is updated.

3.5.2 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 compact flash 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.

MFP CONTROLLER	MFP board (MFPB)
SCANNER	Image processing board (IPB)
PRINTER	Printer control board (PRCB)
FAX BOARD CONTROLLER1	Fax board (Main) *1
FAX BOARD CONTROLLER2	Fax board (Sub) *2
ADF (DF-M)	DF control board (DFCB)
FINISHER	FS control board (FSCB) *3

- *1: The optional fax kit is necessary for the above procedure.
- *2: The optional fax multi line ML-501 is necessary for the above procedure.
- ↑ *3: The optional finisher FS-519 or FS-609 is necessary for the above procedure.

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3.6 Updating the firmware with the Internet ISW

3.6.1 Outline

[Internet ISW] is the system which gives the instruction for updating the firmware with the
control panel of the main body, so the main body will automatically receive the firmware
from the program server over a network for updating. With the Internet ISW, the firmware
can be updated when the CE is at the user's without firmware data.

3.6.2 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.

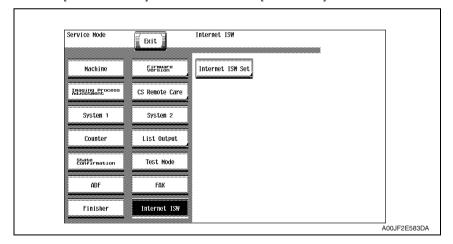
- · Main power switch is set to OFF.
- · Sub power switch is set to OFF.
- When the following setting is set to "ON":
 [Administrator Setting] → [Security Setting] → [Enhanced Security Mode]
- · The main body has the job currently performing.

3.6.3 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.
- For details of each setting item, refer to Adjustment/Setting "Internet ISW".
 See P.433 of the main body service manual.

A. Internet ISW Set

- 1. Call the Service Mode to the screen.
- 2. Touch [Internet ISW Set] which is available from [Internet ISW].



3. Touch [ON], and touch [END].

NOTE

- Settings such as server setting, etc. will be available by selecting "ON" on this setting.
- When the following setting is set to "ON", "ON" cannot be selected on this setting.
 [Administrator Setting] → [Security Setting] → [Enhanced Security Mode]

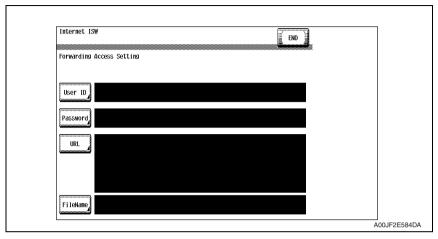
B. Protocol setting

- It performs the setting concerning the protocol (ftp or http) for connecting to the Internet ISW.
- When connecting to the program server using a proxy server, perform the setting for a proxy server.

Step	Connecting by http	Connecting by ftp	
0	Select [Internet ISW] which is available from [Service Mode].		
1	Data Input Setting Touch [HTTP Setting], and select [ON].	Data Input Setting Touch [FTP Setting], and select [ON].	
2	Connect Proxy For connecting via proxy server, select [ON].		
Proxy Server • For connecting via proxy server, set the proxy server address and the port number. 3 1. Select the [Server Address], and set the proxy server address by IP addressing scher FQDN scheme. 2. Select [Port Number], and set the port number for the proxy server from 1 through 658		xy server address by IP addressing scheme or	
4	Proxy Authentication Set the login name and the password which may be necessary for authentication when accessing to the proxy server. Men Authentication is necessary for accessing to the proxy server, select [Authentication], and select [ON]. Select [Log-in Name], and enter the login name on the on-screen keyboard. Select [Password], and enter the password on the on-screen keyboard.	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]. *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.	
5	Connection Time-Out Select [Connection Time-Out], and set the time for the connection time out between 30 and 300 seconds.	_	

C. Forwarding access setting

- To make the access setting for the program server which stores the firmware data.
- 1. Select [Internet ISW] which is available from [Service Mode].
- 2. Touch [Forwarding Access Setting].



- 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].
- 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

 or https://(host name or IP address)/directory name

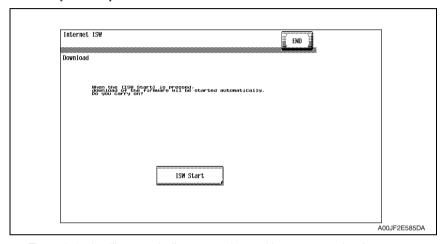
 When connecting to ftp

 when connecting to ftp
- 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 [END] to finish setting.

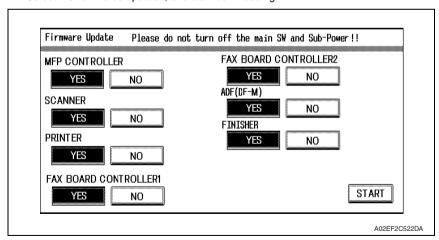
3.6.4 Firmware rewriting

NOTE

- When performing the Internet ISW, ask the administrator for permission beforehand.
- . DO NOT turn OFF the main/sub power switch while downloading.
- A. Conducting rewriting on the control panel.
- Perform the following setting.
 [Service Mode] → [Internet ISW] → [Download]
- 2. Touch [ISW Start].



- 3. The main body will automatically start running, and it starts accessing the server.
- 4. Select the F/W to be updated, and start downloading.



B. During firmware updating

 The message to indicate the status will be displayed on the screen while connecting or transferring data.

C. Completed or failed

(1) Firmware updated normally

 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.

(2) Failing to update the firmware due to the network trouble

- 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.

NOTE

For error codes, refer to "Error code list for the Internet ISW".
 See P.29

(3) Failing to update the firmware after downloading has started

- 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.
- 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 Compact flash with the main power switch OFF.

D. Confirming the firmware version

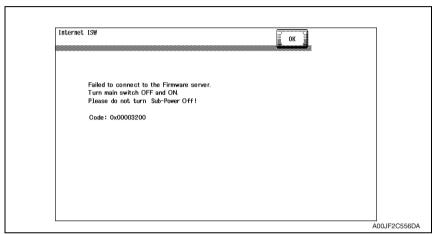
- 1. Call the Service Mode to the screen.
- 2. Select the [Firmware Version].
- 3. Check if the firmware version is updated.

3.6.5 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.

When updating with CS Remote Care, the error code will be sent to the CS Remote Care center.

<Sample display>



	<u> </u>			
Error code	Description	Countermeasure		
Control panel	Description	Countermeasure		
0x0000001	Illegal error on the control	Check if the following setting is set to "Valid". [Service Mode] → [Internet ISW] → [Internet ISW setting] Check the status of the following setting. [Service Mode] → [Internet ISW] → [Transfer 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 the following setting is set to "Valid". [Service Mode] → [Internet ISW] → [Internet ISW setting] If the above process does not solve the problem, inform the corresponding error code to KONICA MINOLTA.		

Error code	Description	Countario		
Control panel	- Description	Countermeasure		
0x00111000	Error concerning the network Connection has been completed.	Check the User's network environment. (LAN cable's connection) Check the status of the following setting. [Service Mode] → [Internet ISW] → [Transfer 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 network environment of the User.		
0x00111100	Error concerning the network Communication timeout.	Check to see if the FTP server operates normally.		
0x00111101	Error concerning the network Disconnection occurred	Check the network environment of the		
0x00111110	Error concerning the network The network is not connected.	User. Check to see if the FTP server oper-		
0x00110010	Error concerning the network Others	ates normally.		
0x00001###	FTP error Reply code when it failed to be connected	Check to see if FTP server normally operates. 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 FTP server operates normally.		
0x00003###	FTP error Error reply code for CWD command			
0x00004###	FTP error • Error reply code for the TYPE command.	Check to see if FTP server operates		
0x00005###	FTP error • Error reply code for the PORT command.	normally.		
0x00006###	FTP error Error reply code for the PASV command.	Check to see if FTP server operates normally. Set the PASV mode to "Invalid", and try it again.		
0x00007###	FTP error • Error reply code for the RETR command.	Check to see if FTP server operates normally. Wait for about 30 minutes and try it again.		
0x1000 0100	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 sub power switch is OFF.	Turn sub power switch ON and try it again.		
0x10000102	The Internet ISW is already being executed.	Wait for the current Internet ISW to be completed.		

Error code	Description	Countermeasure
Control panel	Description	Countermeasure
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 the following setting is set to "Valid". [Service Mode] → [Internet ISW] → [Internet ISW setting] If the above process does not solve the
0x10000104	There is no space for F/W data to be downloaded.	problem, inform the corresponding error code to the KONICA MINOLTA.
0x10000106	Check sum error	0.101 0000 10 11.0 11.0 11.0 11.0 11.1 11.
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 F/W. 	Check to see if the downloaded F/W is of the correct type.
0x10000108	The area F/W is stored is destroyed, and another ISW is necessary.	
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.

Blank Page

Troubleshooting

4. Checking the system configuration

- When a malfunction occurs, let the printer print a configuration page to check for system configuration.
- 1. Press the Utility/Counter key.
- 2. Touch [User Setting] \rightarrow [Printer Setting] \rightarrow [Print Reports].
- 3. Touch [Configuration Page] and press the Start key.

Status codes

Code	Description	Action
CA051	Standard controller configuration failure	Change the MFP board (MFPB).
CA052	Faulty controller hardware	Change the MFP board (MFPB).
CA053	Controller start failure	Change the MFP board (MFPB) if the problem occurs again when turning OFF the main power switch and turn it ON again more than 10 seconds after.

See P.486 of the main body service manual.

6. Troubleshooting procedures

6.1 Unable to print over the network.

	Check		Possible Cause	Action	Remark
1		Yes	An error on machine side (paper running out, toner running out, etc.)	Correct the error.	See "User's Guide [Copy Operations]" of the machine.
	Is the print job dis- played on the machine control panel?		Waiting its turn	Check the machine control panel for jobs in print queue. Priority may be changed as neces- sary.	
			The job is locked.	Enter the password to unlock the job.	
			The correct division ID has not been entered.	Enter the correct divi- sion ID in the printer driver and try re-trans- mitting the job again. (access code)	See "User's Guide [Print Operations]."
		No	Data is yet to be received.	Go to item 2.	

	Check		Possible Cause	Action	Remark
		Yes	The print destination port setting is wrong.	Set the correct port.	See "User's Guide [Print Operations]."
			PC operates erratically temporarily.	Restart the PC.	
2	Is the response of Ping sent from the PC to the machine?		Printer driver incor- rectly installed	Uninstall the printer driver through the proper steps and then reinstall it properly.	See "User's Guide [Print Operations]."
		No	Controller board (MFP Control Board) operates erratically temporarily.	Restart the controller board.	Turn OFF the Main Power Switch and turn it ON again more than 10 seconds after.
			Network cable is dis- connected or a relay device is faulty.	Reconnect the cable and restart or change the faulty relay device.	Check with the controller network LED.
			IP address and/or subnet mask incorrectly set.	Set the correct IP address and subnet mask.	See "TCP/IP Setting" in Installation Guide.

6.2 Unable to transmit data through Scan to FTP.

	Check	Possible Cause	Action	Remark
		The FTP server is not in service.	Check with the network administrator.	
		IP address of the FTP server is wrong.	Check with the network administrator and enter the correct IP address.	
		Proxy setting is wrong.	Check with the network administrator and make the correct proxy setting.	
	The message "Failed to connect to the destination" appears.	Port number is wrong.	Check with the network administrator and enter the correct port number.	
1		A directory not existing in the FTP server is specified.	Check with the network administrator and enter the correct directory.	See "User's Guide [Network Scanner
		Failed to log on to the FTP server because of the wrong user account.	Check with the network administrator and enter the correct user name and password.	Operations]."
		A timeout condition occurs.	Set a longer value for "FTP Connection Time- out." The timeout value depends on the net- work's traffic conditions and load on the FTP server.	
2	The message "Server Connect error" appears.	The network is disconnected during file transfer.	Send Ping from PC to the controller and FTP server to check to see if both parties are connected to the network or not.	
		The FTP server hard disk becomes full during file transfer.	Check with the network administrator.	
		The FTP server stops during file transfer.	Check with the network administrator.	

6.3 Unable to transmit data through Scan to E-Mail.

	Check	Possible Cause	Action	Remark	
1		The SMTP server is not in service.	Check with the network administrator.		
		IP address of the SMTP server is wrong.	Check with the network administrator and enter the correct IP address.		
	The message "Server Connect error" appears.	Port number is wrong.	Check with the network administrator and enter the correct port number.	See "User's Guide [Network Scanner	
		ver Connect	Set a longer value for "SMTP Connection Timeout." The timeout value depends on the network's traffic conditions and load on the FTP server.	Operations]."	
		The network is disconnected during file transfer.	Send Ping from PC to the con- troller and SMTP server to check to see if both parties are connected to the network or not.		
2	The message "E-mail Size Over" appears.	The size of the scan data exceeds the upper limit value set for maximum e-mail size.	Decrease resolution to make small the data size or change the setting for scanned file separation and binary division as necessary so that the scan data does not exceed the maximum e-mail size.	See "User's Guide [Network Scanner Operations]."	

6.4 E-mail does not reach the destination when transmission through Scan to E-Mail is completed.

	Check		Possible Cause	Action	Remark
	An array magaga	Yes	The destination mail address is wrong.	Enter the correct mail address.	See "User's Guide [Network Scanner Operations]."
1	An error message is returned from the mail server.	No	The receiving end is being unable to receive, or is not receiving, mail stored in the POP3 server.		



SERVICE MANUAL

FIELD SERVICE

i-Option LK-101/102/103

Revision history

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2008/06	2.0	À	Description addition of function enhanced version 3 firmware (Card Ver. J8)
2008/01	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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i-Option LK-101/102/103

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Outline

1. Product outline

1.1 Available function for i-Option

• The functions available for i-Option LK-101/102/103 are as follows.

Function	Overview	Application			
Function	Overview	LK-101	LK-102	LK-103	
Web browser	From the control panel, access content on the Internet or Intranet, in order to display or print this content. Additionally, you can operate PageScope Web Connection to use documents saved in user boxes.	1		1	
Image panel	This is a new control panel user interface. It enables the whole operation workflow to be easily grasped.	1		/	
Photo registration	You can add photo data to a registered address book entry. Registered photos are reflected in the Destination List of the Image Panel.	1		1	
Assignment of application keys	Enhanced function can be assigned to the application key.	1	1	1	
PDF process	When transmitting documents in PDF format, you can encrypt PDF file with password or digital ID, add a digital signature, and specify properties.		1	/	



1.2 Product specification

1.2.1 Web browser function

1. Product outline

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

	Browser engine	NetFront		
	Supported protocols	HTTP, HTTPS, TCP/IP		
	Supported markup/script languages	HTML, CSS, JavaSrcript		
<u> </u>	Supported image formats	JPEG, BMP, PNG, GIF, Animation GIF, PDF, Flash		
	Supported SSL/TLS versions	SSL2.0, SSL3.0, TLS1.0		
	Supported character codes	Western (ISO-8859-1), Unicode (UTF-8), Simplified Chinese (GB2312), Traditional Chinese (Big5), Japanese (Shift-JIS), Japanese (ISO-2022-JP), Japanese (EUC-JP)		
	Display modes	Normal, Just-Fit Rendering, Smart-Fit Rendering		
	PDF viewer	Adobe [®] Reader [®] LE		
1	Flash player	Adobe [®] Flash [®] Player 7		



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.

1.2.2 Photo registration function

· Specifications of the photo data to be registered are as follows.

File type	BMP format, 24-bit color, uncompressed
Image size	48 x 48 pixels
Data size	6,966 Byte

Adjustment/Setting

2. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- The original glass, slit 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.

↑ CAUTION

- 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.
- 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.

Service Mode

- When using i-Option LK-101/102/103, license management is done with the following procedures. [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.

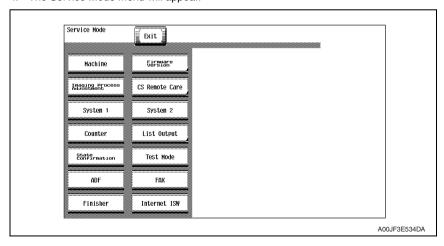
3.1 Billing Setting function setting procedure

- 1. Press the Utility/Counter key.
- 2. Touch [Check Details] on meter count display.
- 3. Press the following keys in this order.; Stop \rightarrow 0 \rightarrow 0 \rightarrow Stop \rightarrow 0 \rightarrow 1

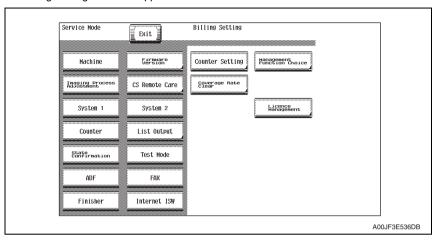
NOTE

- When selecting [CE Authentication] under [Enhanced Security] available from Service Mode, authentication by CE password is necessary.
 Enter the 8 digits CE password, and touch [END].
 (The initial setting for CE password is "92729272.")
- When the following setting is set to "ON", CE password authentication is necessary.
 - $[Administrator\ Settings] \rightarrow [Security\ Settings] \rightarrow [Enhanced\ Security\ Mode]$
- 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 sub power switch and turn it ON again.
 When the following setting is set to "Mode 2", operation will be prohibited since it
 indicates authentication failure by failing to enter the correct CE password within
 - if the access lock is activated, the lock release timer starts to operate by input the Stop \rightarrow 0 \rightarrow 9 \rightarrow 3 \rightarrow 1 \rightarrow 7 in [Meter Count] \rightarrow [Check Details] \rightarrow [Coverage Rate] 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 "*."
- 4. The Service Mode menu will appear.

the specified number of times.



- 5. Press the following keys in this order. Stop \rightarrow 9
- 6. Billing Setting menu will appear.



3.2 Billing Setting function tree

Service Mode			Ref. Page
Billing Setting	Counter Setting	*1	
	Management Function Ch		
	Coverage Rate Clear		
	License Management *2	Activation *2	P.6
		Deactivation *2	P.6
		Repair *2, 3	P.6
		Initialize *2	P.6
		Request Code *2	P.6
		List *2	P.7

^{*1:} For details, see the main body service manual.

See P.22

^{*2:} It is displayed only when the expanded memory furnished with the optional upgrade kit UK-201 is mounted.

^{*3:} It is displayed only when "license management error" occurs.

3.3 Settings in the License management

3.3.1 Activation

3. Service Mode

Functions	To activate i-Option functions.
Use	 To activate i-Option functions with CE. The functions can be activated by selecting the desired function and enter the appropriate license code. Administrators also can activate i-Option functions through Administrator Settings.
Setting/ Procedure	See P.8

3.3.2 Deactivation

Functions	To deactivate i-Option functions.
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.
Setting/ Procedure	See P.12

3.3.3 Repair

Functions	To repair license management information.
Use	To be used when license management information is lost due to replacement of NVRAM board or service EEPROM board or any other trouble. License management information can be repaired by acquiring repair code with repair request code, and entering the repair code.
Setting/ Procedure	See P.17

3.3.4 Initialize

Functions	To initialize license management information.
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.
Setting/ Procedure	See P.20

3.3.5 Request Code

 When the license management error is occured, it will not be displayed until the repair code is input.

Functions	To display and print request code and serial number.
Use	To check the request code and serial number.
Setting/ Procedure	- Set A4S or 8 $^{1/}{_2}$ x 11S paper to the tray, and press start key at request code screen to print.

3.3.6 List

Functions	To display activated functions. To display and print deactivation complete code and serial number.
Use	 To display activated functions. To display and print deactivation complete code and serial number.
Setting/ Procedure	 Set A4S or 8 ½ x 11S paper to the tray, and press start key at deactivation complete code screen to print.

3.4 License Management function setting procedure

- Each setting procedure of License Management function is as follows.
- You need to access License Management System (LMS) to implement each function setting.

3.4.1 Activation

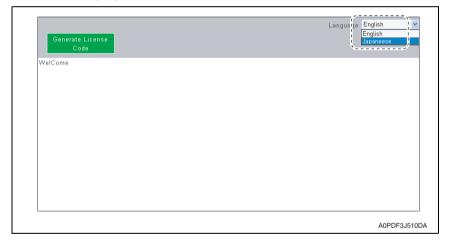
- 1. Prepare "token certification."
- 2. Call the Billing Setting to the screen.

See P.4

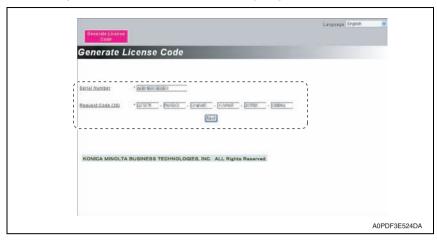
 Display and confirm the serial number and request code with the following procedure. [License Management] → [Request code]
 See P.6

NOTE

- The function enhanced version firmware for i-Option is set at the factory before shipping, this procedure is not needed.
- 4. Access to LMS web site (for service).
- 5. Click [License Registration].
- 6. Select the language.



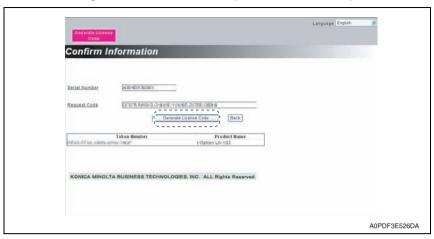
7. Enter request code and serial number, and click [Next].



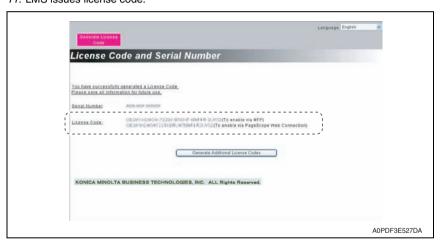
- 8. Enter "token number" described in the "token certificate", and select the product name.
- 9. Click [Next].



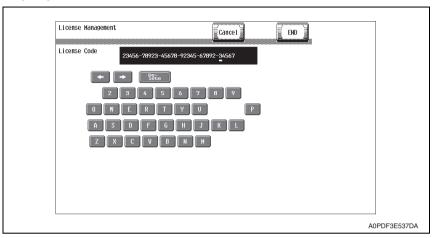
10. Confirm the registered information, and click [Generate License Code].



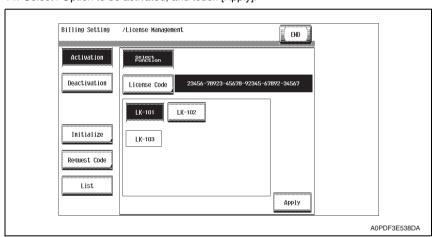
11. LMS issues license code.



- 12. Select [Activation] → [License code] at the MFP.
- 13. Enter the license code issued by LMS using the keyboard on the screen, and touch [END].



14. Select i-Option to be activated, and touch [Apply].



15. Follow the massage appearing on the screen and turn OFF and ON the main power switch.

3.4.2 Deactivation

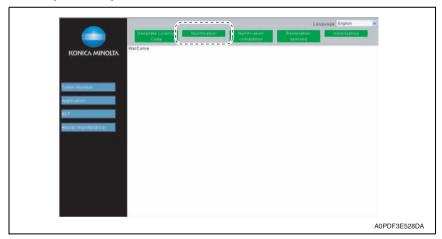
1. Call the Billing Setting to the screen.

See P.4

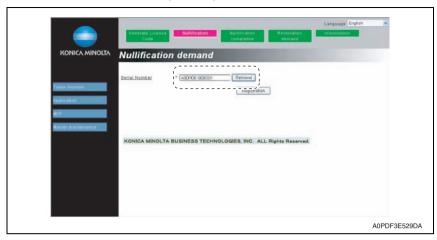
- Display and confirm the serial number with the following procedure. [License Management] → [Request code] See P.6
- 3. Access to LMS web site (for service).
- 4. Click [MFP] and select the language.



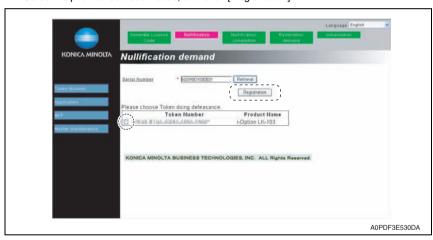
5. Click [Nullification].



6. Enter serial number, and click [Retrieval].



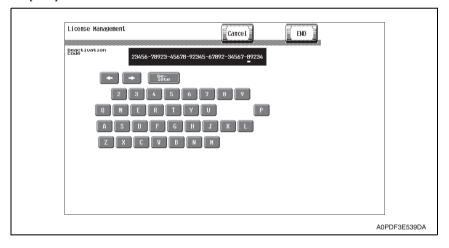
7. Select i-Option to be deactivated, and click [Registration].



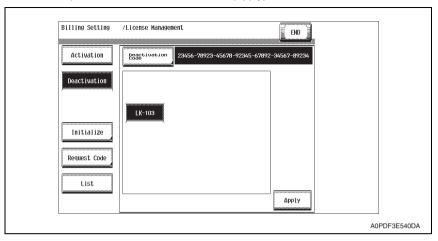
8. Nullification code is issued.



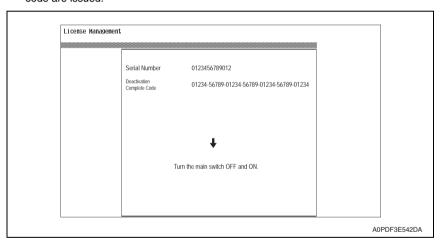
- Select [Deactivation] → [Deactivation code] at the MFP.
- Enter the nullification code issued by LMS using the keyboard on the screen, and touch [END].



11. Select i-Option to be deactivated, and touch [Apply].



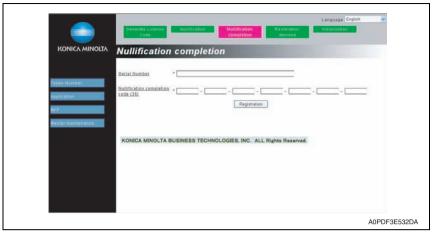
When the deactivation is done appropriately, serial number and deactivation complete code are issued.



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].
- 13. Follow the message appearing on the screen and turn OFF and ON the main power switch.

14. Click [Nullification completion] at LMS web site (for service).



15. Enter serial number and nullification code, and click [Registration].



16. Message for nullification completion appears.

3.4.3 Repair

- 1. Call the Billing Setting to the screen.
 - See P.4
- Display and confirm serial number, repair request code and request code with the following procedure.

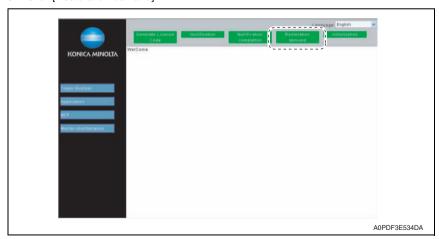
[License Management] → [Repair] → [Repair Request Code] See P.6

NOTE

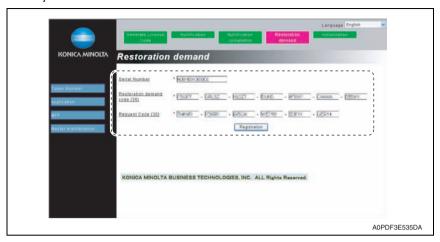
- Do not turn OFF/ON the main power switch until the repair code is input after this
 procedure.
- 3. Access to LMS web site (for service).
- 4. Click [MFP] and select the language.



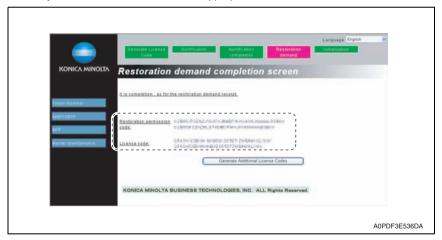
5. Click [Restoration demand].



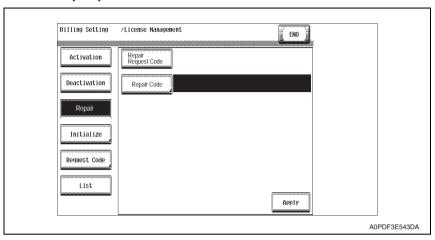
Enter serial number, restoration demand code and request code, and click [Registration].



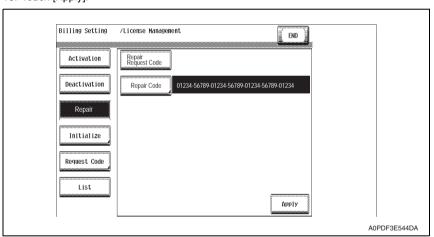
Request permission code is issued.
 If any function needs to be activated, appropriate license code is also issued.



- 8. Select [Repair] → [Repair Code] at the MFP.
- Enter the request permission code issued by LMS using the keyboard on the screen, and touch [END].



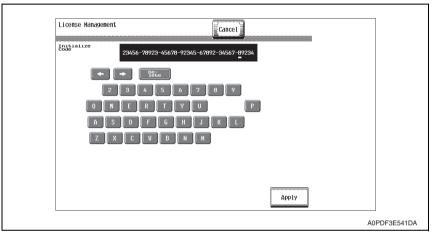
10. Touch [Apply].



11. Close Service Mode, confirm that the functions work correctly.

3 4 4 Initialize

- When license management information cannot be repaired, initialize the information with the following procedure.
- 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.
- Call the Billing Setting to the screen. See P.4
- 4. Touch [License Management] → [Initialize].
- 5. Enter the initialize code issued by call center using the keyboard on the screen, and touch [Apply].



After completing the initialization, follow the message appearing on the screen and turn OFF and ON the main power switch.

Troubleshooting

4. Troubleshooting of i-Option

4.1 Outline

4.1.1 Structure of license management

- The functions available with i-Option can be activated by entering "License code" to the MFP.
- License code is issued and controlled by License Management System (LMS).
 To prevent unauthorized use of the license code, each MFP is identified individually so that the license code cannot be activated unless it matches with the authorized MFP.

4.1.2 License management information

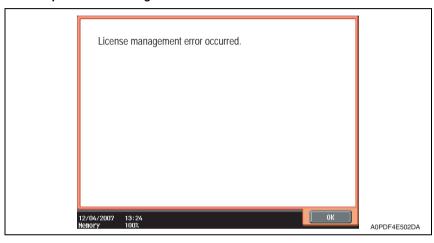
- Since license code needs to identify each MPF, it is issued using the serial number of MFP and "unique value" that is generated inside MFP.
- The "unique value" is stored to the NVRAM board on the MFP board and at the same time some parts of it are memorized by service EEPROM board. The activated function cannot be used unless the both figures conform.
 - Since these figures are out of target of NVRAM data back, when any trouble occurs at either nonvolatile memory or either of them is replaced with new one, "license management error" is generated due to discordance of the figures.

4.2 Error message

4.2.1 License management error

- When abnormal value is detected in the license management information that is stored to the NVRAM board or service EEPROM 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.

A. Example of error message



B. Main reasons of trouble

• The following shows the possible trouble factors and their countermeasure.

Board replacement	Countermeasure
When NVRAM board on MFP board is replaced with new one.	Repair ⇒ Activation
When service EEPROM board is replaced with new one.	Repair
When NVRAM board and service EEPROM board are replaced with the new ones at the same time.	Initialize ⇒ Activation
When mounting the NVRAM board of the machine whose func- tion(s) have already been activated.	Initialize ⇒ Activation
When mounting the service EEPROM board of the machine whose function(s) have already been activated.	Initialize ⇒ Activation
When mounting the NVRAM board and the service EEPROM board of the machine whose function(s) have already been activated.	Initialize ⇒ Activation



C. List of processing performed when boards of another machine are remounted during board replacement procedure

· Remounting boards of machine B on machine A

	Machine B						
	erate	t code is d in mach as new l	ine B	Request code is generated in machine B		•	Remarks: Specific cases of machine
Machine A	EEPROM	NVRAM	both	NVRAM	EEPROM	both	А
Firmware of a version earlier than function enhanced version 3/4	no action	no action	no action	no action	no action	no action	Firmware of a version earlier than function enhanced version 3/4
Request code is not generated.	no action	no action	no action	Initialize	Initialize	Initial- ize *1	The function enhanced version 3/4 is mounted on a non i-Option machine and the request code is not generated.
Request code is generated. Request code is not registered in LMS.	Initialize	Initialize	no action	Initialize	Initialize	Initial- ize *1	The function enhanced version 3/4 is mounted on a machine shipped as a non i-Option machine and the request code is generated. The function enhanced version and the generated.
Request code is generated. Request code is registered in LMS.	Restore	Restore	Initialize	Initialize	Initialize	Initial- ize *1	The machine is shipped as an i-Option machine.

^{*1:} The following are the prerequisites;

The settings (serial number, etc.) of the i-Option machine, on which the boards are remounted, differ from those of the i-Option machine, from which the boards are removed.

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SERVICE MANUAL

FIELD SERVICE

DF-611

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2007/07	1.0	_	Issue of the first edition	
Date	Service manual Ver.	Revision mark	Descriptions of revision	

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DF-611

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Outline

1. Product specifications

A. Type

Name	Reverse automatic document feeder				
	Paper feed section	Paper feed from top of stack			
Type	Image reading section	Sheet-through system			
Туре	Turnover section	Switchback system			
	Exit section	Straight exit system			
Installation	Screw cramp to the main body				
Document alignment	Center				
Document loading	Face up				

B. Functions

Modes	Standard mode / Mixed original detection mode / FAX mode

C. Paper type

	Standard mode	1-sided mode 35 to 210 g/m² (9.25 to 55.75 lb)	
	Plain paper	2-sided mode 50 to 128 g/m² (13.25 to 34 lb)	
Type of document	Mixed original detection mode Plain paper	1-sided / 2-sided mode 50 to 128 g/m² (13.25 to 34 lb)	
	FAX mode	1-sided mode 35 to 210 g/m² (9.25 to 55.75 lb)	
	Plain paper	2-Sided Mode 50 to 128 g/m² (13.25 to 34 lb)	
Detectable document size*1	Standard mode/FAX mode	Metric area: B6S to A3 Inch area: 5-1/ ₂ x 8-1/ ₂ to 11 x 17	
Capacity	100 sheets (80 g/m²) or stack of 14 mm and below		

^{*1:} For the combined original detection mode, refer to the mixed original detection enabled size combination table.

D. Paper feed prohibited originals

• If fed, trouble occurrence will be highly possible.

Type of original	Possible trouble		
Sheets stapled or clipped together	Paper feed failure, damaged sheet, defective drive mechanism due to jammed staples or clips		
Sheets glued together	Paper feed failure, damaged sheet		
Book original	Paper feed failure, damaged sheet		
Original weighing less than 35 g/m² (9.25 lb) or 210 g/m² (55.75 lb) or more	Paper feed failure, transport failure		
Sheets folded, torn or wrinkled	Paper feed failure, damaged sheet, transport failure		
Sheets severely curled	Sheets misfed due to being dog-eared or fed in askew		
OHP film (Transparency film)	Paper feed failure, transport failure		
Label paper	Paper feed failure, transport failure		
Offset master paper	Paper feed failure, transport failure		
Glossy photographic paper or glossy enamel paper	Transport failure, damaged sheet		
Sheets clipped or notched	Damaged sheet, transport failure		
Sheets patched	Patched part folded or torn sheet		

E. Paper feed not guaranteed originals

• 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)	Dog-eared, exit failure, transport failure
Heat sensitive paper	Edge folded, exit failure, transport failure
Ink jet paper	Paper feed failure, transport failure
Sheets with smooth surface (Coated paper)	Paper feed failure, transport failure
Intermediate paper	Paper feed failure, transport failure
Paper immediately after paper exit from the main unit	Paper feed failure, transport failure
Paper with many punched holes (e.g., loose leaf) limited to vertical feeding	Multi-page feed due to flashes from holes
Sheets with 2 to 4 holes	Transport failure
Sheets two-folded or Z-folded	Transport failure, image deformation
Sheets with rough surface (e.g., letterhead)	Paper feed failure

F. Mixed original feed chart For metric

	Max. original size	297	mm	257	mm	210 mm		182 mm	148 mm	128 mm
Mixed original size		А3	A4	B4	B5	A4S	A5	B5S	A5S	B6S
297 mm	А3	OK	OK	_	_	_	_	_	_	_
297 111111	A4	OK	OK	_	_	_	_	_	_	_
257 mm	B4	OK	OK	OK	OK	_	_	_	_	_
237 111111	B5	OK	OK	OK	OK	_	_	_	_	_
210 mm	A4S	OK	OK	OK	OK	OK	OK	_	_	_
210 mm	A5	NG	NG	OK	OK	OK	OK	_	_	_
182 mm	B5S	NG	NG	OK	OK	OK	OK	OK	_	_
148 mm	A5S	NG	NG	NG	NG	NG	NG	NG	OK	_
128 mm	B6S	NG	NG	NG	NG	NG	NG	NG	OK	OK

For inch

	Max. original size	11			5-1/2		
Mixed original size		11 x 17	8-1/ ₂ x 11	8-1/2 x 14	8-1/2 x 11S	5-1/2 x 8-1/2	5-1/2 x 8-1/2S
11	11 x 17	OK	OK	_	_	_	_
'''	8-1/ ₂ x 11	OK	OK	_	_	_	_
	8-1/ ₂ x 14	OK	OK	OK	OK	OK	_
8-1/2	8-1/ ₂ x 11S	OK	OK	OK	OK	OK	_
	5-1/2 x 8-1/2	NG	NG	OK	OK	OK	_
5-1/2	5-1/2 x 8-1/2S	NG	NG	NG	NG	NG	OK

OK	Mixed original feed available (Tilted with in 1.5% or less)
NG	No. mixed original feed
_	Can not set original

G. Machine specifications

Power requirements	DC 24 V (supplied from the main unit)
rower requirements	DC 5 V (generated within the DF-611)
Max. power consumption	60 W or less
Dimensions	618 mm (W) x 575 mm (D) x 130 mm (H) 24.25 inch (W) x 22.75 inch (D) x 5 inch (H)
Weight	16.1 kg (35.5 lb)

H. Operating environment

Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

NOTE

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

2.1.1 Pick-up roller/feed roller

A. Periodically cleaning parts/cycle

• Pick-up roller: Every 50,000 prints

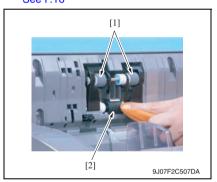
• Feed roller: Every 50,000 prints

B. Periodically replaced parts/cycle

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

C. Cleaning procedure

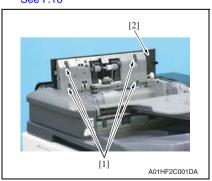
Open the feed cover.
 See P.16



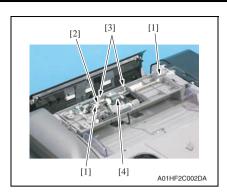
Wet a cloth with alcohol, and use it to wipe up the pick-up roller [1] and feed roller [2].

D. Replacing procedure

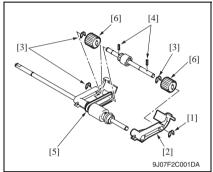
 Open the feed cover. See P.16



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



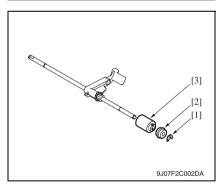
Remove two C-clips [1], the bearing [2] and two springs [3] and remove the pick-up/feed roller assy [4].



- 4. Remove the C-ring [1] and the lever [2].
- 5. Remove three C-rings [3].
- 6. Remove two pins [4].
- 7. Remove the belt [5].
- 8. Remove two pick-up rollers [6].

NOTE

· Be careful not to lose the pin.



- 9. Remove the C-ring [1] and the bushing [2].
- 10. Remove the feed roller [3].

2.1.2 Separation roller

A. Periodically cleaning parts/cycle

• Separation roller: Every 50,000 prints

B. Periodically replaced parts/cycle

• Separation roller: Every 200,000 prints

C. Cleaning procedure

Open the feed cover.
 See P.16



Wet a cloth with alcohol, and use it to wipe up the separation roller [1].

D. Replacing procedure

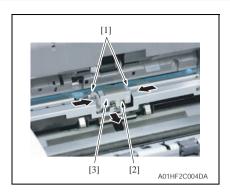
- 1. Open the transportation cover.
- 2. Lift up the document feed tray.



3. Remove the screw [1] and the mounting plate [2].

NOTE

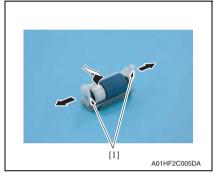
 Be sure to hold the document feed tray to prevent the tray from falling down while removing the mounting plate.



 Hold the two sides [1] between your fingertips to unhook the spring [2] and remove the separation roller assy [3].

NOTE

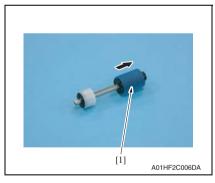
 When reinstalling the separation roller assy, be sure to hook the spring onto the assy.



5. While opening up the holder [1], remove the shaft.

NOTE

Opening the holder too much can break the holder.



6. Remove the separation roller [1] from the shaft.

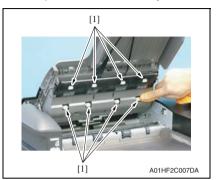
2.1.3 Cleaning of the miscellaneous rolls

A. Periodically cleaning parts/cycle

• Miscellaneous rolls: Every 50,000 prints

B. Cleaning procedure

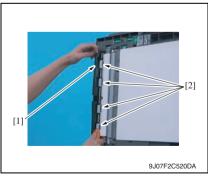
1. Lift up the document feed tray.



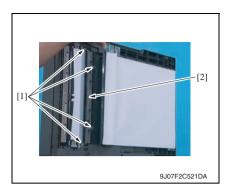
2. Using a soft cloth dampened with alcohol, wipe the roll [1].



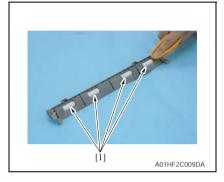
- 3. Open the transportation cover.
- 4. Using a soft cloth dampened with alcohol, wipe the roll [1].



- Open the reverse automatic document feeder.
- While opening the before scanning mylar assy [1], wipe the roll [2] using a soft cloth dampened with alcohol.



7. While opening the processing guide, remove four screws [1] and remove the transport roll assy [2].



8. Using a soft cloth dampened with alcohol, wipe the roll [1].

2.1.4 Cleaning of the miscellaneous rollers

A. Periodically cleaning parts/cycle

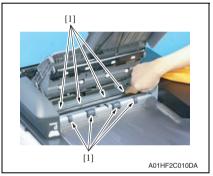
· Miscellaneous rollers: Every 50,000 prints

B. Cleaning procedure

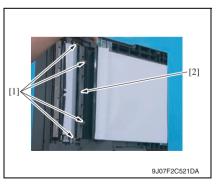
1. Open the transportation cover.



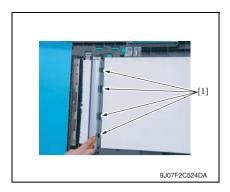
2. Using a soft cloth dampened with alcohol, wipe the roller [1].



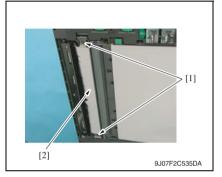
- 3. Lift up the document feed tray.
- 4. Using a soft cloth dampened with alcohol, wipe the roller [1].



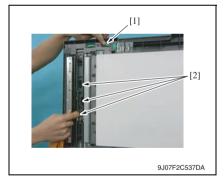
While opening the processing guide, remove four screws [1] and remove the transport roll assy [2].



6. Using a soft cloth dampened with alcohol, wipe the roller [1].



7. Remove two shoulder screws [1] and remove the scanning guide [2].



 While turning processing knob [1], wipe the roller [2] using a soft cloth dampened with alcohol.

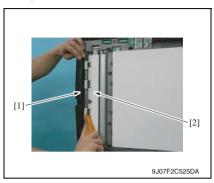
2.1.5 Cleaning of the scanning guide

A. Periodically cleaning parts/cycle

· Scanning guide: Every 50,000 prints

B. Cleaning procedure

1. Open the reverse automatic document feeder.



- 2. Open the before scanning mylar assy [1].
- Using a soft cloth dampened with alcohol, wipe the scanning guide [2] clean of dirt.

NOTE

· Be careful not to damage the mylar.

2.1.6 Cleaning of the reflective sensor section

A. Periodically cleaning parts/cycle

• Reflective sensor section: Every 50,000 prints

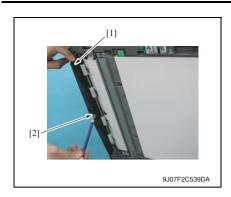
B. Cleaning procedure



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



- 2. Open the transportation cover.
- Clean the cloth [1] using a brush or other similar tools.



- 4. Open the reverse automatic document feeder.
- While opening the before scanning mylar assy [1], clean the cloth [2] using a brush or other similar tools.

3. Service tool

3.1 CE tool list

Tool name	Shape	Personnel	Parts No.	Remarks
ADF reading chart	9J07F2C003DA	1	9J06 PJG1 XX	

4 Other

4.1 Disassembly/Adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

A CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

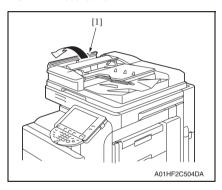
4.2 Disassembly/Assembly/Cleaning list (Other parts)

4.2.1 Disassembly/Assembly parts list

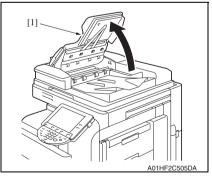
No.	Section	Part name	Ref. page
1		Feed cover	P.16
2	Exterior parts	Front cover	P.17
3	Exterior parts	Rear cover	P.18
4		Document feed tray front cover	P.19
5	Unit	Reverse automatic document feeder	P.19
6	Board and etc.	DF control board	P.21
7	board and etc.	Document width detection variable resistor	P.21
8	Others	Stamp unit	P.24
9	Others	Stamp	P.25

4.3 Disassembly/Assembly procedure

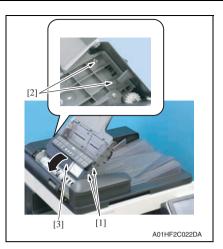
4.3.1 Feed cover



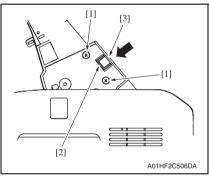
1. Open the transportation cover [1].



2. Lift up the document feed tray [1].



- 3. Remove two shoulder screws [1] and two screws [2].
- 4. Open the feed cover [3].



NOTE

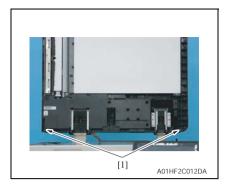
 In the reinstallation steps, when tightening two screws [1], press the feed cover [3] in the direction of the arrow so as not to leave a clearance between the top of the protrusion from the surface of the feed cover and the bottom of the indentation [2].

4.3.2 Front cover

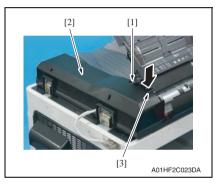


- Open the reverse automatic document feeder.
- 2. Remove two screws [1] and remove the front cover [2].

4.3.3 Rear cover

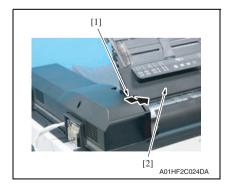


- 3. Open the transportation cover.
- 4. Lift up the document feed tray.



A. Reinstallation procedure

- 1. Open the transportation cover.
- 2. Lift up the document feed tray.



Open the reverse automatic document feeder

NOTE

- If the reverse automatic 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 reverse automatic document feeder can be opened completely.
- 2. Remove two screws [1].
- 5. Remove the screw [1] and remove the rear cover [2].

NOTE

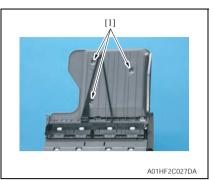
 Be sure to press down part [3] in the picture to prevent any damage when removing the rear cover.

3. Press down part [1] in the picture until it slides under the feed cover [2].

NOTE

- Be careful not to damage the rear cover.
- 4. Install the rear cover tightening three screws.

4.3.4 Document feed tray front cover



AOTHE ZCOZ / DA

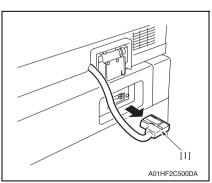
- 1. Lift up the document feed tray.
- 2. Remove three screws [1].

 Disconnect two connectors [1] and remove the document feed tray front cover [2].

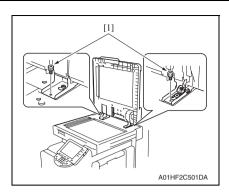
4.3.5 Reverse automatic document feeder

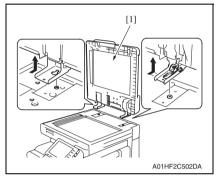
A01HF2C014DA

[2]



 Disconnect the connector [1] of the reverse automatic document feeder from the main body.

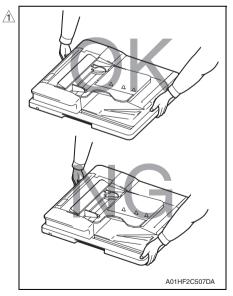




Open the reverse automatic document feeder.

NOTE

- If the reverse automatic 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 reverse automatic document feeder can be opened completely.
- 3. Remove two screws [1].
- Remove the reverse automatic document feeder [1].

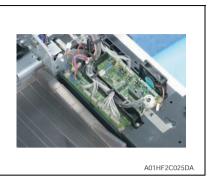


NOTE

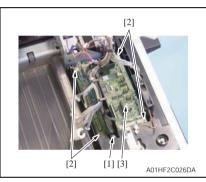
When carrying the reverse automatic document feeder, be sure to hold onto the specified positions.
 The feeder main body can be distorted if held at inappropriate positions.

4.3.6 DF control board

Remove the rear cover.
 See P.18



2. Disconnect all the fifteen connectors from the DF control board.



- 3. Remove the screw [1].
- 4. Remove four screws [2] and remove the DF control board [3].

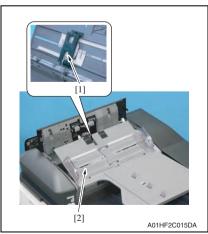
NOTE

- Be sure to perform the following operation when the DF control board is replaced.
- 5. Replace the EEPROM.
- Upgrade the firmware.
 See P.48 of the main body service manual.

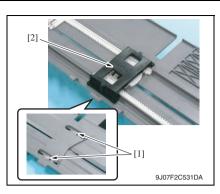
4.3.7 Document width detection variable resistor

1. Open the feed cover.

See P.16

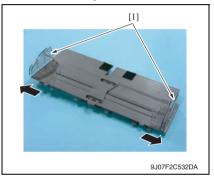


 Disconnect the connector [1] and remove the document width detection variable resistor cover [2].

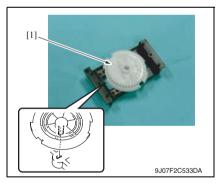


 Remove two screws [1] and remove the document width detection variable resistor [2].

A. Reinstallation procedure



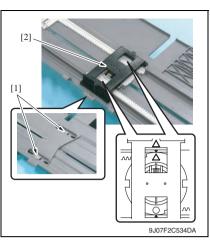
1. Open the side edge stop [1] of the original feed tray.



2. Reinstall the gear [1].

NOTE

 Note the mounting position of the gear and the document width detection variable resistor.



 Use two screws [1] to install the document width detection variable resistor [2].

NOTE

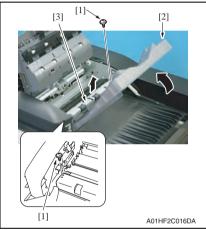
- Install the gear and rack gear by aligning the arrows.
- 4. Connect the connector.
- Install the document width detection variable resistor cover and turn on the main power switch.

NOTE

- Be sure to perform the following operation when the document width detection variable resistor is replaced.
- Perform document width detection adjustment. See P.32
- 7. Turn OFF the main power switch and turn it ON again and check whether size detection operates normally.

4.3.8 Replacing the stamp unit







- 1. Open the transportation cover.
- 2. Lift up the document feed tray.
- 3. Remove the screw [1] and the mounting plate [2].

NOTE

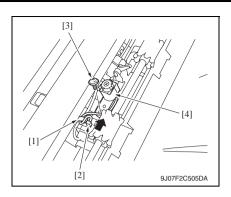
- Be sure to hold the document feed tray to prevent the tray from falling down while removing the mounting plate.
- Remove two screws [1] and remove the plate cover [3] while holding up the exit tray [2].

NOTE

 Take care not to raise the exit tray too much. The stopper may come off.

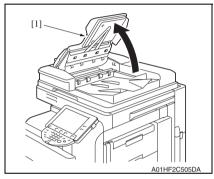
NOTE

 When lowering the exit tray, check that the stopper [1] fits under the plate spring.

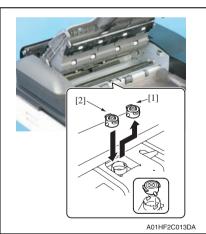


- 5. Remove the cord clamp [1] and disconnect the connector [2].
- 6. Remove the screw [3] and remove the stamp unit [4].





1. Lift up the document feed tray [1].



 Remove the used stamp [1] and install the new stamp of replacement [2].

NOTE

 Align the round pin of the stamp with the slit in the stamp unit side. Blank Page

Adjustment/Setting

5. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by "".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

↑ CAUTION

- Be sure 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.
- 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.

6. Service Mode

6.1 Service Mode setting procedure

See P.338 of the main body service manual.

6.2 ADF setting procedure

6.2.1 Original Stop Position

Functions	To manually adjust the original stop position and the read position in each of the ADF modes.
Use	When the result is Unable in the automatic adjustment of the original stop position.
Setting/ procedure	P.40

6.2.2 Registration Loop Adj.

Functions	To adjust the length of the loop to be formed in paper before the registration rollers.	
Use	When an original misfeed or skew occurs.	
Adjustment instructions	The loop value increases by the entered + value and decreases by the entered - value.	
Adjustment range	The default setting is 0. Adjustable range: -5 mm to + 5 mm (in 1-mm increments)	
range	, , ,	
Setting/ procedure	 Call the Service Mode to the screen. Touch [ADF]. Touch [Registration Loop Adj]. Select either [1-Side] or [Second Side] for the adjustment. Press the clear key and change the setting value using the 10-key pad. (Press the [+/-] key to change the +/- code.) Touch [END]. Touch [Exit] on the Service Mode screen. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON. 	

6.2.3 Auto Stop Position Adjustment

A. Sub Scanning Direction 1-Side

Functions	 To automatically adjust the read position for the Sub Scanning Direction 1-Side. To check skew feed.
Use	When ADF has been replaced.
Setting/ procedure	P.36

B. Sub Scanning Direction 2-Side

Functions	To automatically adjust the read position for the Sub Scanning Direction 2-Side.
Use	When ADF has been replaced.
Setting/ procedure	P.38

C. Main Scanning Direction

Functions	To automatically adjust the read position in the Main Scanning Direction.
Use	When ADF has been replaced.
Setting/ procedure	P.39

6.2.4 Paper Passage

Functions	To check for paper passage through the ADF in each of the ADF modes.	
Use	Used for checking the document path for any abnormal condition when a document misfeed occurs.	
Setting/ procedure	 <procedure></procedure> 1. Call the Service Mode to the screen. 2. Touch [ADF]. 3. Touch [Paper Passage]. 4. Select a paper passage mode to be tested from [1-Sided No Detect], [1-Sided Mixed Org.], [2-Sided], or [AMS Mixed Org.]. 5. Set the original in the feed tray. 6. The Start key color changes from orange to blue. 7. 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. 	

6.2.5 Sensor Check

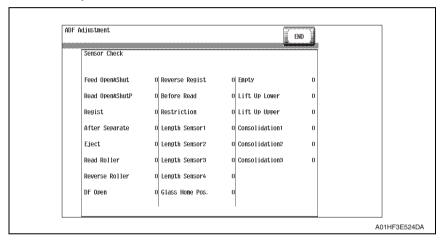
Functions	To check sensors on the paper path.
Use	When a document misfeed occurs.

A. Procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Sensor Check].
- Operate the sensor to check by using paper or the like, and check the screen display.
 (Paper detected: 1, No paper detected: 0)

B. Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



C. Sensor check list

			Operation ch	aracteristics/
Symbol	Panel display	Part/Signal name	panel display	
			1	0
PS1	Feed Open&Close	Feed open/close sensor	Open	Close
PS2	Read Open&Close	Read open/close sensor	Open	Close
PS3	Regist	Registration sensor	Paper present (Blocked)	Paper not present (Unblocked)
PS4	After Separate	After separate sensor	Paper present (Unblocked)	Paper not present (Blocked)
PS5	Eject	Exit sensor	Paper present (Unblocked)	Paper not present (Blocked)
PS6	Read Roller	Read roller sensor	Pressure (Blocked)	Retraction (Unblocked)
PS7	Reverse Roller	Reverse roller sensor	Pressure (Blocked)	Retraction (Unblocked)
RS201	DF Open	Original cover sensor	Open	Close
PS8	Reverse Regist	Reverse registration sensor	Paper present (Blocked)	Paper not present (Unblocked)
PS9	Before Read	Before read sensor	Paper present (Blocked)	Paper not present (Unblocked)
VR1	Restriction Board Position	Document width detection variable resistor	Analog	g value
PS10	Length Sensor1	Length sensor1	Paper present	Paper not present
PS11	Length Sensor2	Length sensor2	Blocked	Unblocked
PS12	Length Sensor3	Length sensor3	Paper present	Paper not present
PS13	Length Sensor4	Length sensor4	Paper present	Paper not present
PS203	Glass Home Pos.	Glass home sensor	At home (Unblocked)	Out of home (Blocked)
PS14	Empty	Empty sensor	Paper present	Paper not present
PS16	Lift Up Lower	Lift up lower sensor	Unblocked	Blocked
PS15	Lift Up Upper	Lift up upper sensor	Blocked	Unblocked
PS19	Mixed Sensor1	Mixed sensor1	Paper present	Paper not present
PS18	Mixed Sensor2	Mixed sensor2	Paper present	Paper not present
PS17	Mixed Sensor3	Mixed sensor3	Paper present	Paper not present

6.2.6 Original Tray Width

Functions	To set the values of maximum (A3 position) and minimum (B6 position) widths on the document width detection variable resistor.
Use	When an original misfeed occurs. When an original size detection error occurs.
Setting/ procedure	P.44

6.2.7 Read Pos Adj

Functions	To adjust the original read position.
Use	 When the first/second carriage, the scanner wire, the scanner assy, the original glass moving unit, and/or the glass step sheet have been replaced.
Setting/ procedure	P.46

6.2.8 Feed Zoom

Functions	To adjust the feed zoom of ADF in the feeding direction.
Use	When ADF has been replaced.
Setting/ procedure	P.49

6.2.9 Scanning Light Adjustment

Functions	To adjust the scanning light of ADF.
Use	When the original glass moving unit has been replaced. Used for adjusting the difference in the scanning lights between scanning from the original glass and scanning from the ADF original glass.
Setting/ procedure	 Adjustable range: -2 to + 2 (1 step) Call the Service Mode to the screen. Touch [ADF]. Touch [Scanning Light Adjustment]. Select a color by pressing [Red], [Green], or [Blue]. 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. Touch [END]. Touch [Exit] on the Service Mode screen. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

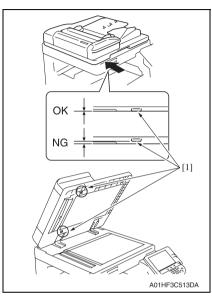
7. Mechanical adjustment

7.1 Adjusting the height

NOTE

Make this adjustment after any of the following procedures has been performed.

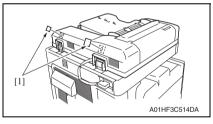
When the reverse automatic document feeder has been reinstalled.



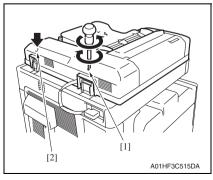
 Check the clearance between the upper face of scanner and the protrusion [1] on the reverse automatic document feeder side (2 spots, front/ back).

NOTE

- There must be no clearance between the protrusion [1] on the reverse automatic document feeder and the upper face of scanner.
- If there is any clearance, the following adjustment is needed.

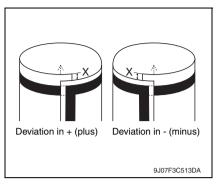


3. Remove the label [1].

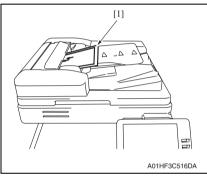


- Remove the clearance by turning the adjusting screw [1].
 Clockwise rotation:
 Lifting up the rear side
 Counterclockwise rotation:
 Lowering the rear side
- Use the adjusting screw [2] when further adjustment is needed.
 Clockwise rotation:
 Lifting up the rear side
 Counterclockwise rotation:
 Lowering the rear side
- 6. Affix again the labels removed in step 3.

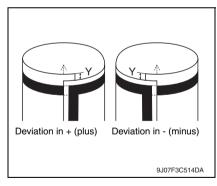
7.2 Adjusting skew feed



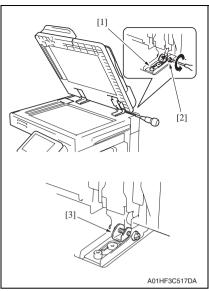
 Check how the edges of the chart are misaligned.
 The amount of the deviation of the chart will be X

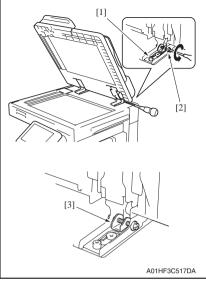


Place the chart [1] in the document feed tray (with the side having an arrow facing up).



- 3. Make copies 5 times repeatedly in single side mode.
- Fold all 5 sample copies as illustrated and check for any deviation.
 Deviation on the sample will be Y.
- Obtain the difference between the deviation of the chart and the deviation of the sample.
 Difference of the deviation = Y - X Specifications: 0 ± 2 mm
- If the difference of the deviation does not fall within the specified range, perform the following adjustment.

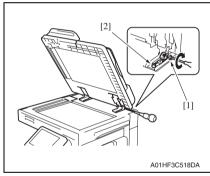




- 7. Loosen the mounting screw [1] on the right hinge viewed from the front.
- 8. When the difference of the deviation is + (plus), turn the screw [2] counterclockwise to adjust.

NOTE

- · When turning the screw, be sure not to raise the reverse automatic document feeder until in an upright position.
- When the adjusting plate [3] is set far left, do not tighten any further.
- To prevent the adjustment screw [2] breakage, be sure to follow the above instructions.



- 9. When the difference of the deviation is - (minus), turn the screw [1] clockwise to adjust.
- 10. After the adjustment is completed, tighten the mounting screw [2] on right side hinge securely with screwdriver.

7.3 Original Stop Position

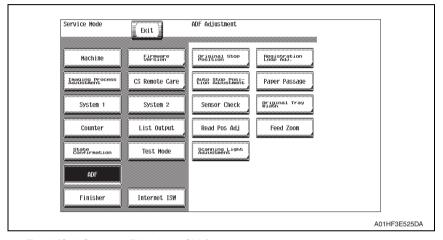
Adjustment of the document stop position is made automatically and manually (by entering numbers). The following adjustment is made in the Service Mode.

NOTE

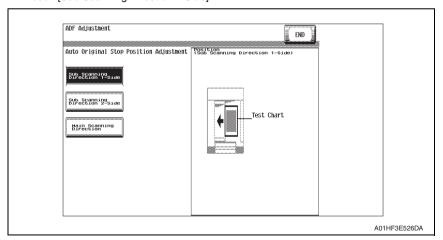
Before performing this adjustment, the feed zoom adjustment needs to be complete.

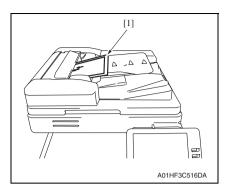
See P.49

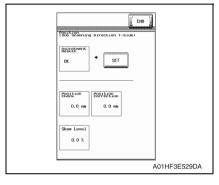
- A. Auto adjust: Sub Scanning Direction 1-Side Stop Position
- 1. Call the Service Mode to the screen.
 - See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Auto Stop Position Adjustment].



4. Touch [Sub Scanning Direction 1-Side].







- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 6. Press the Start key.

- 7. Make sure that result is OK. Then, touch [SET].
- 8. Touch [END].
- 9. Touch [Exit] on the Service Mode screen.
- Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

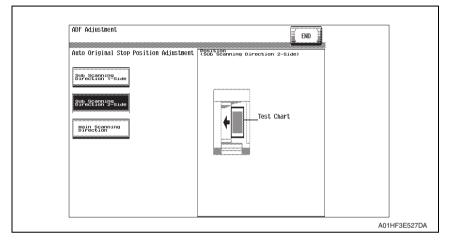
If the result is Unable:

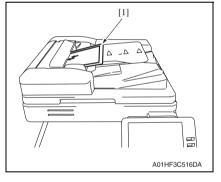
- Check and correct the skew of the document.
- Manually correct the value of [Original Stop Position].

See P.40

B. Auto adjust: Sub Scanning Direction 2-Side Stop Position Call the Service Mode to the screen

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Auto Stop Position Adjustment].
- 4. Touch [Sub Scanning Direction 2-Side].

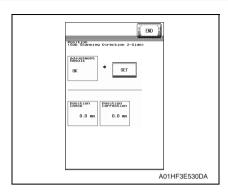




Place the chart furnished with the ADF [1] in the document feed tray.

NOTE

- Make sure that the blank surface of the chart faces up.
- 6. Press the Start key.



- 7. Make sure that result is OK. Then, touch [SET].
- 8. Touch [END].
- Touch [Exit] on the Service Mode screen.
- Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

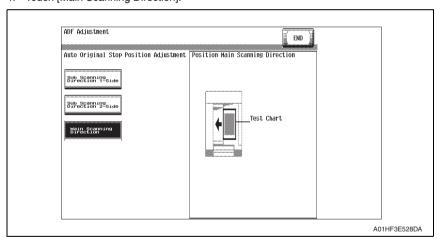
If the result is Unable:

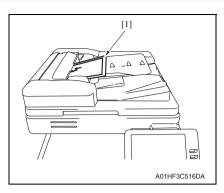
- Check and correct the skew of the document.
- Manually correct the value of [Original Stop Position].

See P.40

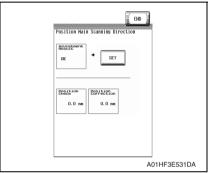
C. Auto adjust: Main Scanning Direction Image scan start position

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Auto Stop Position Adjustment].
- 4. Touch [Main Scanning Direction].





- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 6. Press the Start key.



- 7. Make sure that result is OK. Then, touch [SET].
- 8. Touch [END].
- Touch [Exit] on the Service Mode screen.
- Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

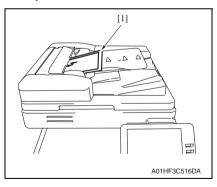
NOTE

If the result is Unable:

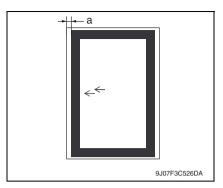
- Check and correct the skew of the document.
- Manually correct the value of [Original Stop Position].

See P.42

D. Manual adjust: Sub Scanning Direction 1-Sided/2-Sided document stop position adjustment



- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 2. Make a full size copy of the chart.

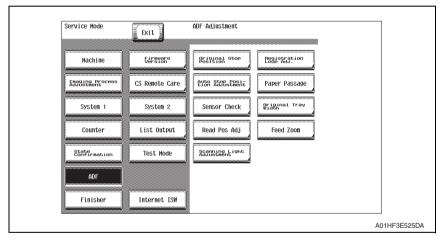


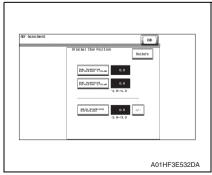
Check that the difference in the widths of a between the chart and the copy sample falls within the specified range.

Specifications: 0 ± 2 mm

NOTE

- In the same way place the chart with the blank side facing up in the document feed tray in the duplex mode and make a copy. Check the difference in the widths of a between the chart and the second sided surface of the copy sample.
- If the difference in the width of a falls outside the specified range, make the following adjustment.
- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 6. Touch [ADF].
- 7. Touch [Original Stop Position].

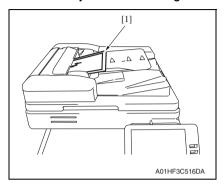




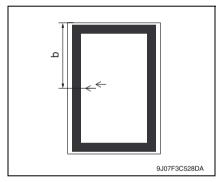
- Touch [Sub Scanning Direction 1-Side] or [Sub Scanning Direction 2-Side].
- Enter the value from the ten-key pad. (Press the [+/-] key to change the +/code.)
- Adjustable range: -4.0 mm to + 4.0 mm (in 1-mm increments)
- If the difference in the widths of a is greater than the specifications, enter the + value.
- If the difference in the widths of a is smaller than the specifications, enter the - value.

- 10. Touch [END].
- 11. Touch [Exit] on the Service Mode screen.
- 12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- 13. Make a copy of the chart again and check that the difference in the widths of a falls within the specified range.

E. Manual adjust: Main Scanning Direction stop position adjustment

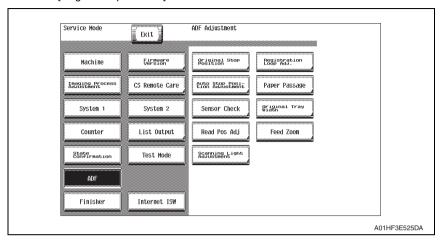


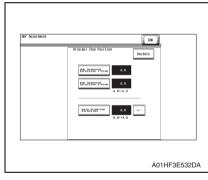
- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 2. Make a full size copy of the chart.



- Check that the difference in the widths of b between the chart and the copy sample falls within the specified range.
 - Specifications: 0 ± 2 mm
- If the difference in the width of b falls outside the specified range, make the following adjustment.

- Call the Service Mode to the screen.See P.338 of the main body service manual.
- 6. Touch [ADF].
- 7. Touch [Original Stop Position].





- 8. Touch [Main Scanning Direction].
- Enter the value from the ten-key pad. (Press the [+/-] key to change the +/code.)
- Adjustable range: -3.0 mm to + 3.0 mm (in 1-mm increments)
- If the difference in the widths of b is greater than the specifications, enter the + value.
- If the difference in the widths of b is smaller than the specifications, enter the - value.

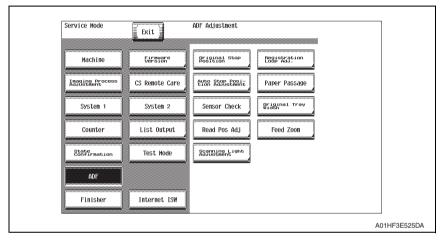
- 10. Touch [END].
- 11. Touch [Exit] on the Service Mode screen.
- 12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- 13. Make a copy of the chart again and check that the difference in the widths of b falls within the specified range.

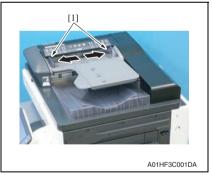
7.4 Original Tray Width

NOTE

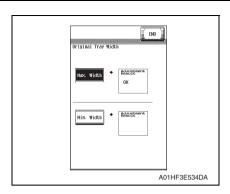
Make this adjustment after any of the following procedures has been performed.

- When the document width detection variable resistor has been replaced.
- When the EEPROM has been replaced.
- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Original Tray Width].

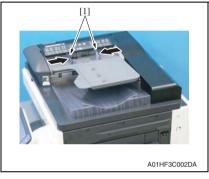




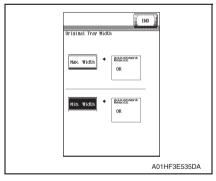
 Widen the width across the edge guides [1] by sliding them to the "A3" position.



- 5. Touch [Max. Width].
- 6. Press the Start key.
- 7. OK is displayed when the adjustment has been completed.



 Narrow the width across the edge guides [1] by sliding them to the "B6" position.



- 9. Touch [Min. Width].
- 10. Press the Start key.
- 11. OK is displayed when the adjustment has been completed.
- 12. Touch [END].

- 13. Touch [Exit] on the Service Mode screen.
- 14. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- * If the result is NG:
- Possible causes includes failure of the document width detection variable resistor, wrong wiring to the volume and failure of the DFCB.

Adjustment / Setting

7.5 Read Pos Adj

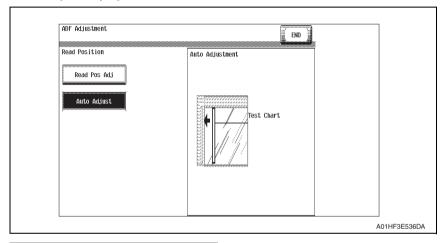
NOTE

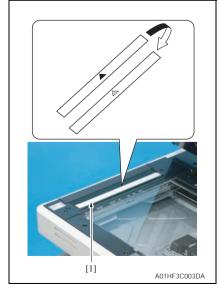
Make this adjustment after any of the following procedures has been performed.

 When the first/second carriage, the scanner wire, the scanner assy, the original glass moving unit, and/or the glass step sheet have been replaced.

A. Auto adjust

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Read Pos Adj].
- 4. Touch [Auto Adjust].

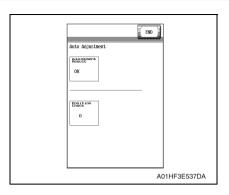




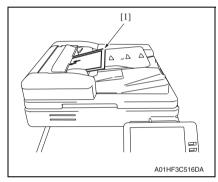
- 5. Open the ADF.
- 6. Place the ADF reading chart [1] so that a triangular mark may become the original glass side (downward) and the pointed tip of the triangle points toward the black sheet on the left side.
- 7. Press the Start key.

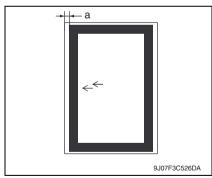
NOTE

- Be sure that the ADF reading chart is in position.
- Keep the automatic document feeder open while making the adjustment.



B. Manual adjust: Read Pos Adj





- 5. Call the Service Mode to the screen. See P.338 of the main body service manual.
- 6. Touch [ADF].

- 8. Make sure that the result is OK.
- 9. Touch [END].
- Touch [Exit] on the Service Mode screen.
- Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

NOTE

If the result is Unable:

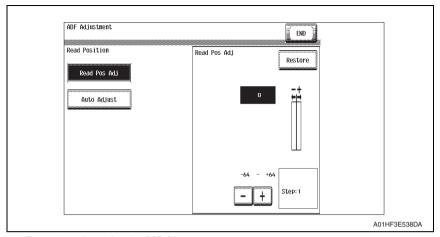
- Check that the chart is in the correct place.
- Make the manual adjustment on the [Read Pos Adj] screen.

See P.47

- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 2. Make a full size copy of the chart.

- Check that the difference in the widths of a between the chart and the copy sample falls within the specified range.
 Specifications: 0 ± 1.0 mm
- If the difference in the width of a falls outside the specified range, make the following adjustment.

7. Touch [Read Pos Adj].



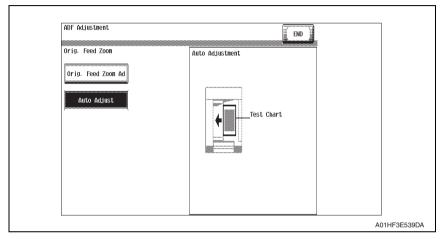
- 8. Enter the value using the [-]/[+] keys.
- If the difference in the widths of a is greater than the specifications, enter the value.
- If the difference in the widths of a is smaller than the specifications, enter the + value.
- 9. Touch [END].
- 10. Touch [Exit] on the Service Mode screen.
- 11. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- 12. Make a copy of the chart again and check that the difference in the widths of a falls within the specified range.

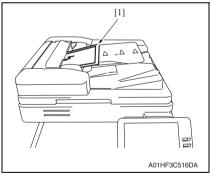
7.6 Feed Zoom

Adjustment of the feed zoom is made automatically and manually (by entering numbers).
 The following adjustment is made in the Service Mode.

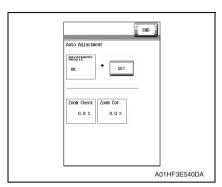
A. Auto adjust

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [ADF].
- 3. Touch [Feed Zoom].
- 4. Touch [Auto Adjust].





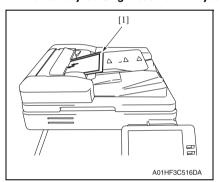
- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 6. Press the Start key.



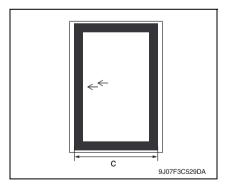
- 7. Make sure that result is OK. Then, touch [SET].
- 8. Touch [END].

- 9. Touch [Exit] on the Service Mode screen.
- 10. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

B. Manual adjust: Orig. Feed Zoom Adjustment

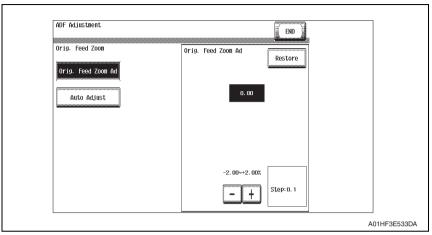


- Place the chart [1] in the document feed tray (with the side having an arrow facing up).
- 2. Make a full size copy of the chart.



- Check that the difference in the widths of c between the chart and the copy sample falls within the specified range.
 - Specifications: 0 ± 1.0 mm
- If the difference in the width of c falls outside the specified range, make the following adjustment.

- Call the Service Mode to the screen.See P.338 of the main body service manual.
- 6. Touch [ADF].
- 7. Touch [Feed Zoom].
- 8. Touch [Orig. Feed Zoom Ad].



- 9. Enter the value using the [-]/[+] keys.
- If the difference in the widths of c is greater than the specifications, enter the value.
- If the difference in the widths of c is smaller than the specifications, enter the + value.
- 10. Touch [END].
- 11. Touch [Exit] on the Service Mode screen.
- 12. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- 13. Make a copy of the chart again and check that the difference in the widths of a falls within the specified range.

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Troubleshooting

8. Jam display

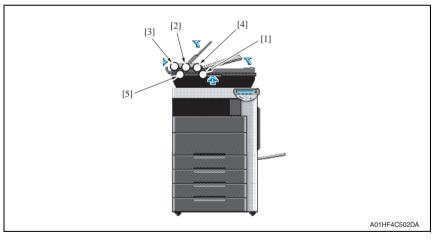
8.1 Initial check items

• 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 the user on the correct paper storage procedures.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path and replace if necessary.
Are rolls/rollers dirty, deformed, or worn?	Clean or replace the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators operating correctly?	Correct or replace the defective actuator.

8.2 Misfeed display

• When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main unit.

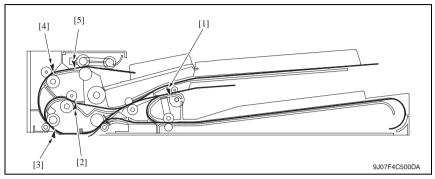


Display	Code	Jam type	Misfeed access location	Action
[1]	6601	Turnover section misfeed		P.55
[2]	6602	Paper feed section misfeed		P.55
[3]	6603	Transport section misfeed		P.56
[4]	6604	Paper exit section misfeed	Transportation cover	P.57
[5]	6605	Image reading section misfeed		P.58
[1][2][3][4][5]	6606	Original feeding interval misfeed		P.59
[1][2][3][4][5]	6607	Remaining paper misfeed		P.59

8.2.1 Misfeed display resetting procedure

• Open the corresponding cover, clear the sheet of paper misfed, and close the cover.

8.3 Sensor layout



[1] Exit sensor

- PS5
- [4] Registration sensor

After separate sensor

PS3 PS4

[2] Reverse registration sensor

[3] Before read sensor

- PS9
- PS8

8.4 Solution

8.4.1 Turnover section misfeed

A. Detection timing

Туре	Description
Detection of misfeed at turnover section	The before read sensor (PS9) is not turned ON after a lapse of a given time after the reverse registration motion is performed.
	The reverse registration sensor (PS8) is not turned ON after a lapse of a given time after the before read sensor (PS9) is turned OFF.
Detection of paper left in turnover section	The reverse registration sensor (PS8) is not turned OFF after a lapse of a given time after the reverse registration motion is performed.

B. Action

Relevant electrical parts	
Switchback roller pressure/retraction motor (M5)	DF control board (DFCB)
Before read sensor (PS9)	
Reverse registration sensor (PS8)	

7		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical components)	
1	Initial check items	_	_	
2	PS9 I/O check, sensor check	DFCB PJ14-8 (ON)	DF-611 C-5	
3	PS8 I/O check, sensor check	DFCB PJ12-2 (ON)	DF-611 I-3	
4	M5 operation check	REYB PJ3-7 to 8	DF-611 K to L-9	
5	DFCB replacement	_	-	

8.4.2 Paper feed section misfeed

A. Detection timing

Type	Description
	The after separate sensor (PS4) is not turned ON after a lapse of a given time after the take-up motor (M2) is turned ON.

Relevant electrical parts	
Take-up motor (M2) After separate sensor (PS4)	DF control board (DFCB)



7		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical components)	
1	Initial check items	_	_	
2	PS4 I/O check, sensor check	DFCB PJ11-6 (ON)	DF-611 C-4 to 5	
3	M2 operation check	DFCB PJ8-5 to 10	DF-611 I-6	
4	DFCB replacement			

8.4.3 Transport section misfeed

A. Detection timing

Туре	Description
Detection of misfeed at transport section	The registration sensor (PS3) is not turned ON after a lapse of a given time after the after separate sensor (PS4) is turned ON.
	The before read sensor (PS9) is not turned ON after a lapse of a given time after the registration sensor (PS3) is turned ON.
Detection of paper left in transport section	The after separate sensor (PS4) is not turn OFF after a lapse of a given time after the after separate sensor (PS4) is turned ON.
	The registration sensor (PS3) is not turned OFF after a lapse of given time after the after separate sensor (PS4) is turned OFF.

Relevant electrical parts		
Take-up motor (M2) Registration sensor (PS3) After separate sensor (PS4) Before read sensor (PS9)	DF control board (DFCB)	

/ I \	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Initial check items	_	_
2	Adjust the height of the guide support for the original glass moving unit. See P.457 of the main body service manual.	_	_
3	PS3 I/O check, sensor check	DFCB PJ10-11 (ON)	DF-611 C-3
4	PS4 I/O check, sensor check	DFCB PJ11-6 (ON)	DF-611 C-4 to 5
5	PS9 I/O check, sensor check	DFCB PJ14-8 (ON)	DF-611 C-5 to 6
6	M2 operation check	DFCB PJ8-5 to 10	DF-611 I-6
7	DFCB replacement	_	_

8.4.4 Paper exit section misfeed

A. Detection timing

Туре	Description
	The exit sensor (PS5) is not turned ON after a lapse of a given time after the before read sensor (PS9) is turned ON.
Detection of misfeed at paper exit section	 The exit sensor (PS5) is not turned ON after a lapse of a given time after the before read sensor (PS9) is turned OFF. The exit sensor (PS5) is not turned OFF after a lapse of a given time after the turnover and paper exit motion is performed.
Detection of paper left in paper exit section	The exit sensor (PS5) is not turned OFF after a lapse of a given time after the before read sensor (PS9) is turned OFF.

Relevant electrical parts		
Exit motor (M3) Before read sensor (PS9) Exit sensor (PS5) DF control board (DFCB)		

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7		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Initial check items	_	_
2	PS9 I/O check, sensor check	DFCB PJ14-8 (ON)	DF-611 C-5 to 6
3	PS5 I/O check, sensor check	DFCB PJ3-3 (ON)	DF-611 I-6
4	M3 operation check	DFCB PJ8-1 to 4	DF-611 I-6
5	DFCB replacement	_	_

8.4.5 Image reading section misfeed

A. Detection timing

Туре	Description
Detection of paper left in	The before read sensor (PS9) is not turned OFF after a lapse of a given time after the registration sensor (PS3) is turned OFF.
image reading section	The before read sensor (PS9) is not turned OFF after a lapse of a given time after the reverse registration sensor (PS8) is turned OFF.

Relevant electrical parts		
Reading motor (M1)	DF control board (DFCB)	
Reading roller pressure/retraction motor (M4)		
Registration sensor (PS3)		
Reverse registration sensor (PS8)		
Before read sensor (PS9)		

- /.	Λ.	
/1	1	

7		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Initial check items	_	_
2	Make the adjustment of original stop position. See P.36	_	_
3	PS3 I/O check, sensor check	DFCB PJ10-11 (ON)	DF-611 C-3
4	PS8 I/O check, sensor check	DFCB PJ12-2 (ON)	DF-611 I-3
5	PS9 I/O check, sensor check	DFCB PJ14-8 (ON)	DF-611 C-5 to 6
6	M1 operation check	DFCB PJ9-1 to 3	DF-611 I-7
7	M4 operation check	DFCB PJ6-4 to 5	DF-611 I-4 to 5
8	DFCB replacement	_	_

8.4.6 Original feeding interval misfeed

A. Detection timing

Type	Description
	The before read sensor (PS9) is turned ON earlier than a given time after
misfeed	the before read sensor (PS9) is turned OFF during original transportation.

Relevant electrical parts		
Take-up motor (M2) Before read sensor (PS9)	DF control board (DFCB)	

<u>1</u>

Step		Control signal — DECR P.114-8 (ON)	M
	Action		Location (Electrical components)
1	Initial check items	_	_
2	PS9 I/O check, sensor check	DFCB PJ14-8 (ON)	DF-611 C-5 to 6
3	M4 operation check	DFCB PJ8-5 to 10	DF-611 I-6
4	DFCB replacement		_

8.4.7 Remaining paper misfeed

A. Detection timing

Туре	Description
	Due to a remaining sheet of paper that has not been detected by sensors, before the start of a job, a sensor detects the sheet at an unexpected timing.

Relevant electrical parts		
Registration sensor (PS3) After separate sensor (PS4) Exit sensor (PS5) Reverse registration sensor (PS8) Before read sensor (PS9)	DF control board (DFCB)	



		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Remove the remaining paper.	_	_
2	Initial check items	_	_
3	PS3 I/O check, sensor check	DFCB PJ10-11 (ON)	DF-611 C-3
4	PS4 I/O check, sensor check	DFCB PJ11-6 (ON)	DF-611 C-4 to 5
5	PS5 I/O check, sensor check	DFCB PJ3-3 (ON)	DF-611 I-6
6	PS8 I/O check, sensor check	DFCB PJ12-2 (ON)	DF-611 I-3
7	PS9 I/O check, sensor check	DFCB PJ14-8 (ON)	DF-611 C-5 to 6
8	DFCB replacement	_	_

9. Trouble code

9.1 Trouble code list

• The main unit's cpu performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the touch panel.

Code	Description	Detection timing	Rank
C8101	Pressure/retraction mechanism failure before image reading	 During a pressure motion being performed, the read roller sensor (PS6) output does not change from H to L. During a retraction motion being performed, the read roller sensor (PS6) output does not change from L to H. 	В
C8102	Pressure/retraction mechanism failure at the turnover section	 During a pressure motion being performed, the reverse roller sensor (PS7) output does not change from H to L. During a retraction motion being performed, the reverse roller sensor (PS7) output does not change from L to H. 	В
C8103	Lift up mechanism failure	 The lift up upper sensor (PS16) is not turned ON after a lapse of a given time after the lift-up motor (M6) moves up (is turned forward). The lift up lower sensor (PS15) is not turned ON after a lapse of a given time after the lift-up motor (M6) goes down (is turned backward). 	В
C8104	Original glass travel failure	 The glass home sensor (PS203) output does not change from H to L after a lapse of a given time while the original glass moving motor (M202) is working. The glass home sensor (PS203) output does not change from L to H after a lapse of a given time while the original glass moving motor (M202) is working. 	В
C8302	Cooling fan failure	 The lock signal continues to detect H during a given time while the cooling fan (FM1) is spinning The lock signal continues to detect L during a given time while the cooling fan (FM1) is during halts. 	В
CC156	ADF ROM malfunction	Upgrade of the firmware has not been successful.	В
CC165	Incorrect ROM content	When the power is turned ON, DF control board or firmware error is detected.	В

9.2 Solution

9.2.1 C8101: Pressure/retraction mechanism failure before image reading

Relevant electrical parts		
Reading roller pressure/retraction motor (M4) Read roller sensor (PS6)	DF control board (DFCB)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	_
2	Check the connector of M4 for proper drive coupling, and correct as necessary.	_	_
3	M4 operation check	DFCB PJ6-4 to 5	DF-611 I-4 to 5
4	PS6 I/O check, sensor check	DFCB PJ6-3 (ON)	DF-611 I-5
5	DFCB replacement	_	_

9.2.2 C8102: Pressure/retraction mechanism failure at the turnover section

Relevant electrical parts		
Switchback roller pressure/retraction motor (M5) Reverse roller sensor (PS7)	DF control board (DFCB)	

 Λ

Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	_
2	Check the connector of M5 for proper drive coupling, and correct as necessary.	I	_
3	M5 operation check	REYB PJ3-7 to 8	DF-611 K to L-9
4	PS7 I/O check, sensor check	REYB PJ3-3 (ON)	DF-611 K to L-10
5	DFCB replacement	_	_

9.2.3 C8103: Lift up mechanism failure

Relevant electrical parts		
Lift-up motor (M6) Lift up lower sensor (PS16) Lift up upper sensor (PS15)	DF control board (DFCB)	

7		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	-
2	Check the connector of M6 for proper drive coupling, and correct as necessary.	_	_
3	M6 operation check	REYB PJ6-1 to 2	DF-611 K to L-11
4	PS16 I/O check, sensor check	DFCB PJ11-3 (ON)	DF-611 C-5
5	PS15 I/O check, sensor check	REYB PJ3-6 (ON)	DF-611 K to L-10
6	DFCB replacement		_

9.2.4 C8104: Original glass travel failure

Relevant electrical parts		
Original glass moving unit Original glass moving motor (M202)	Original glass position control board (OGPCB)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	-
2	Check the connector of M202 for proper drive coupling, and correct as necessary.	_	_
3	Original glass moving unit replacement	_	_
4	OGPCB replacement	_	_

9.2.5 C8302: Cooling fan failure

Relevant electrical parts		
Cooling fan (FM1) DF control board (DFCB)		

 Λ WIRING DIAGRAM Location Step Action Control signal (Electrical components) Check the connector of FM1 for proper connection and correct as necessary. Check the fan for possible overload and 2 correct as necessary. DFCB PJ7-1 (ON) 3 FM1 operation check DF-611 I-7

9.2.6 CC156: ADF ROM malfunction

DFCB replacement

4

Relevant electrical parts			
DF control board (DFCB)			

DFCB PJ7-3 (LOCK)

	Action	WIRING DIAGRAM		
Step		Control signal	Location (Electrical components)	
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	-	_	
2	Rewrite firmware using the compact flash card.	_	_	
3	DFCB replacement	_	_	

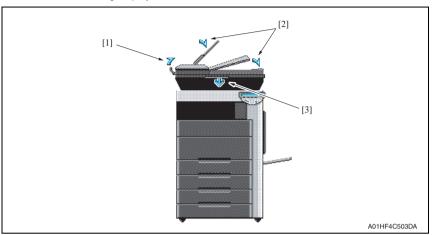
Incorrect ROM content 9.2.7

Relevant electrical parts			
DF control board (DFCB)			

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Rewrite firmware using the compact flash card.	_	_
2	DFCB replacement	_	_

10. Set error detection

• When the ADF or cover set error for some reason is detected, the panel of the main unit will have the following display.



<Panel display and detection timing for each>

Panel display	Description of error	Detection start	Detection timing	
[1]	Transportation cover set error	When the main power switch turn ON.	Read open & close sensor (when light-blocked)	
[2]	Document feed tray set error	When the main power switch turn ON.	Feed open & close sensor (when light-blocked)	
[3]	ADF set error	When the document is set in the ADF	Original cover sensor (ON)	



SERVICE MANUAL

FIELD SERVICE

PC-104/204

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text,
 \(\frac{\(\)}{\(\)} \) is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.
- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with .
 The number inside represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
 The revision marks for Ver. 2.0 are left as they are.

2008/01	2.0	À	Error correction	
2007/07	1.0	_	Issue of the first edition	
Date	Service manual Ver.	Revision mark	Descriptions of revision	

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Outline

1. Product specifications

A. Type

Name 2 way paper feed cabinet	
Туре	Front loading type 2 way paper feed device
Installation	Desk type
Document alignment	Center

B. Paper

Time	Size	Capacity	
Type	Size	Tray 3	Tray 4
Plain paper (60 to 90 g/m² (16 to 24 lb))		500 sheets	500 sheets
Thick paper 1 (91 to 150 g/m² (24.25 to 40 lb))	A50 to A2		
Thick paper 2 (151 to 209 g/m² (40 to 55.5 lb))	A5S to A3, 5-1/ ₂ x 8-1/ ₂ S to 11 x 17	150 sheets	150 sheets
Thick paper 3 (210 to 256 g/m² (55.75 to 68 lb))			

C. Machine specifications

Power requirements	DC 24 V ± 10 % (supplied from the main body)
	DC 5 V ± 5 %
Max. power consumption	15 W or less
Dimensions	600 mm (W) x 578 mm (D) x 301 mm (H) 23.5 inch (W) x 22.75 inch (D) x 11.75 inch (H)
Weight	PC-104: 24.0 kg (53 lb) PC-204: 28.0 kg (61.75 lb)

D. Operating environment

Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

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Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

2.1.1 Replacing the separation roller assy

A. Periodically replaced parts/cycle

· Separation roller assy: Every 300,000 prints

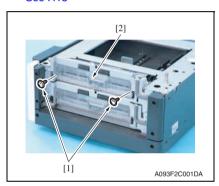
NOTE

· Replace the separation roller assy, feed roller and pick-up roller at the same time.

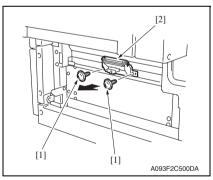
B. Replacing procedure

1. Remove the right door.

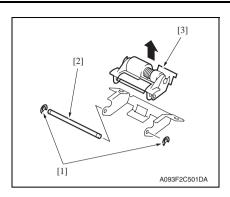
See P.13



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



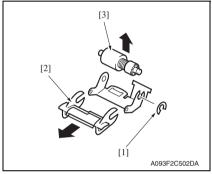
 Remove two screws [1] and remove the paper separation roller mounting bracket assy [2].



 Remove two C-rings [1] and the shaft [2], and remove the paper separation roller fixing bracket assy [3].

NOTE

Be careful not to lose spring at this time.

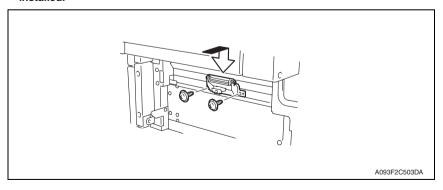


 Remove the C-ring [1], the guide [2], and remove the separation roller assy [3].

6. Repeat steps 1 to 5 similarly for the 4th drawer.

NOTE

- Install the separation roller assy while pressing the holder down so that it aligns to the metal bracket of the machine.
- Make sure that the separation roller assy is not tilted to the right or left when installed.



2.1.2 Replacing the feed roller

A. Periodically replaced parts/cycle

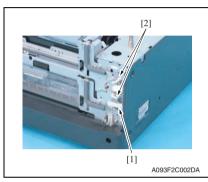
• Feed roller: Every 300,000 prints

NOTE

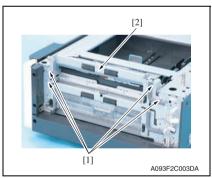
· Replace the separation roller assy, feed roller and pick-up roller at the same time.

B. Replacing procedure

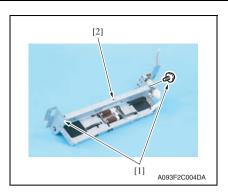
- Remove the rear right cover. (Remove the right lower cover for 4th row.)
 See P.13
- 2. Remove the tray3. (Remove the tray4 from 4th row.)
- Remove the paper separation roller mounting bracket assy.See the procedures 1 to 3 in P.3 "Replacing the separation roller assy."



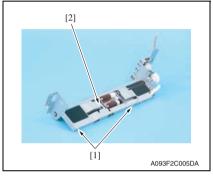
 Disconnect the connector [1] and remove the harness from two wire saddles [2].



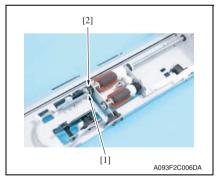
5. Remove four screws [1] and remove the feed unit [2].



 Remove two screws [1] and remove the mounting frame [2] for the paper separation roller mounting bracket assy.

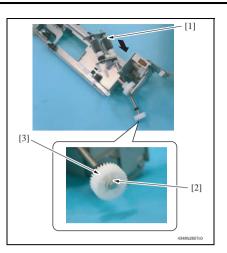


7. Remove two screws [1] and remove the feed roller cover [2].

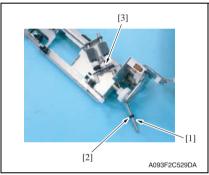


8. Remove the C-ring [1] and remove the bushing [2].

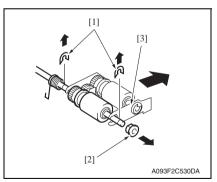
PC-104/204



Shift the shaft assy [1] in the orientation as shown on the left, and remove the C-ring [2] and the gear [3].

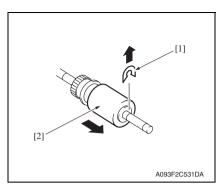


10. Remove the C-ring [1], the bushing [2], and remove the shaft assy [3].



 Remove two E-rings [1] and the bushing [2], and remove the pick-up roller fixing bracket assy [3].





12. Remove the C-ring [1] and remove the feed roller [2].

13. Repeat steps 1 to 12 similarly for the 4th drawer.

2.1.3 Replacing the pick-up roller

A. Periodically replaced parts/cycle

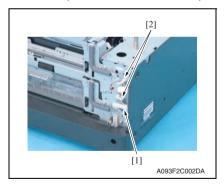
• Pick-up roller: Every 300,000 prints

NOTE

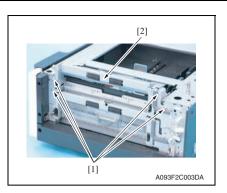
· Replace the separation roller assy, feed roller and pick-up roller at the same time.

B. Replacing procedure

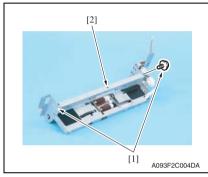
- Remove the rear right cover. (Remove the right lower cover for 4th row.)
 See P.13
- 2. Remove the tray3. (Remove the tray4 from 4th row.)
- Remove the separation roller mounting bracket assy.See the procedures 1 to 3 in P.3 "Replacing the separation roller assy."



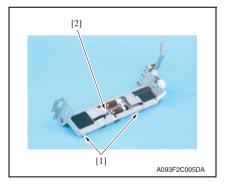
 Disconnect the connector [1] and remove the harness from two wire saddles [2].



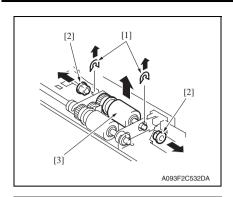
5. Remove four screws [1] and remove the feed unit [2].



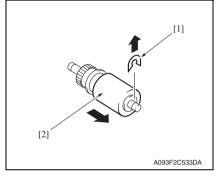
 Remove two screws [1] and remove the mounting frame [2] for the paper separation roller mounting bracket assy.



7. Remove two screws [1] and remove the feed roller cover [2].



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



9. Remove the C-ring [1] and remove the pick-up roller [2].

10. Repeat steps 1 to 9 similarly for the 4th drawer.

3. Other

3.1 Disassembly/Adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

A CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

3.2 Disassembly/Assembly/Cleaning list (Other parts)

3.2.1 Disassembly/Assembly parts list

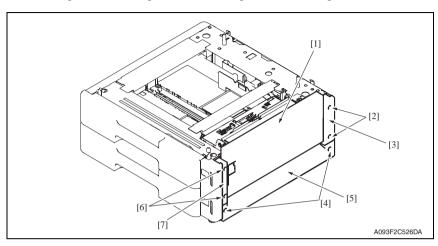
No.	Section	Part name	Ref. page
1		Right door	P.13
2		Rear right cover	P.13
3	Exterior parts	Lower right cover	P.13
4		Front right cover	P.13
5		Rear cover	P.13
6		Left cover	P.13

3.2.2 Cleaning parts list

No.	Section	Part name	Ref. page
1		Separation roller	P.14
2	Feed section	Feed roller	P.15
3		Pick-up roller	P.15
4	Transport section Vertical transport roller		P.16

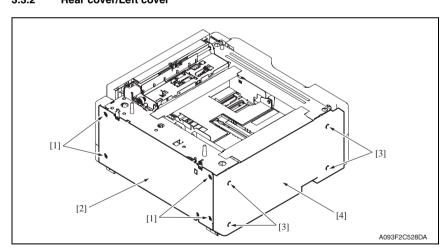
3.3 Disassembly/Assembly procedure

3.3.1 Right door/Rear right cover/Lower right cover/Front right cover



- 1. Open the right door [1].
- 2. Remove the right door [1].
- 3. Remove two screws [2] and remove the rear right cover [3].
- 4. Remove two screws [4] and remove the lower right cover [5].
- 5. Remove two screws [6] and remove the front right cover [7].

3.3.2 Rear cover/Left cover



- 1. Remove four screws [1] and remove the rear cover [2].
- 2. Remove four screws [3] and remove the left cover [4].

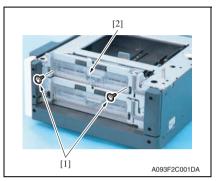
3.4 Cleaning procedure

NOTE

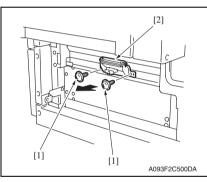
• The alcohol described in the cleaning procedure represents the isopropyl alcohol.

3.4.1 Separation roller

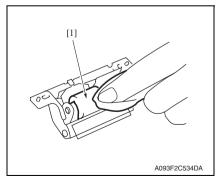
Remove the right door.
 See P.13



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



Remove two screws [1] and remove the separation roller mounting bracket assy [2].

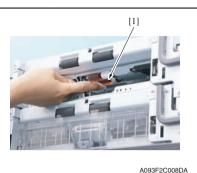


 Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.

5. Repeat steps 1 to 4 similarly for the 4th drawer.

3.4.2 Feed roller

- 1. Remove the tray3. (remove the tray4 from 4th row.)
- Remove the separation roller mounting bracket assy.See the procedures 1 to 3 in P.14 "Cleaning of the separation roller."

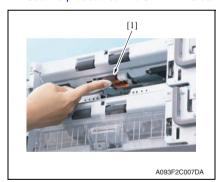


Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

4. Repeat steps 1 to 3 similarly for the 4th drawer.

3.4.3 Pick-up roller

- 1. Remove the tray3. (remove the tray4 from 4th row.)
- Remove the separation roller mounting bracket assy.
 See the procedures 1 to 3 in P.14 "Cleaning of the separation roller."

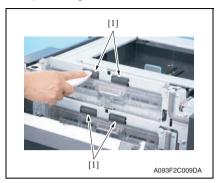


 Using a cleaning pad dampened with alcohol, wipe the pick-up roller [1] clean of dirt.

4. Repeat steps 1 to 3 similarly for the 4th drawer.

3.4.4 Vertical transport roller

1. Open the right door.



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

Adjustment/Setting

4. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by "".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

↑ CAUTION

- Be sure 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.
- 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.

5. Sensor check

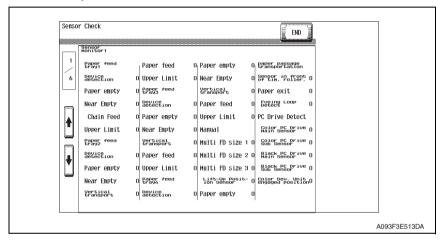
5.1 Check procedure

A. Procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [State Confirmation].
- 3. Touch [Sensor Check].

5.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



5.1.2 Sensor check list

A. Sensor monitor1

Symbol	Panel display		Part/Signal name	Operation characteris- tics/Panel display	
				1	0
PS112		Device Detection	Tray3 device detection sensor	Set	Out of position
PS115	133	Paper Empty	Tray3 empty sensor	Paper not present	Paper present
PS113	d tre	Near Empty	Tray3 near empty sensor	Blocked	Unblocked
PS117	Paper feed tray3	Vertical Transport	Tray3 vertical transport sensor	Paper present	Paper not present
PS116	Pa	Take-Up	Tray3 paper feed sensor	Paper present	Paper not present
PS114		Upper Limit	Tray3 upper limit sensor	Raised Position	Not raised
PS121		Device Detection	Tray4 device detection sensor	Set	Out of position
PS124	ıy4	Paper Empty	Tray4 empty sensor	Paper not present	Paper present
PS122	d tra	Near Empty	Tray4 near empty sensor	Blocked	Unblocked
PS126	Paper feed tray4	Vertical Transport	Tray4 vertical transport sensor	Paper present	Paper not present
PS125	Pal	Take-Up	Tray4 paper feed sensor	Paper present	Paper not present
PS123		Upper Limit	Tray4 upper limit sensor	Raised Position	Not raised

6. Mechanical adjustment

6.1 Adjusting the paper reference position

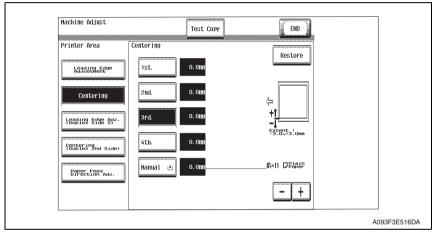
NOTE

Make this adjustment after any of the following procedures has been performed.
 When the PH unit has been replaced.

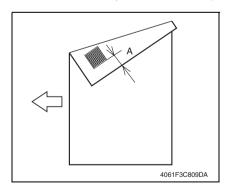
When the image on the print is offset in the sub scan direction. When a faint image occurs on the leading edge of the image.

6.1.1 Centering

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [Machine] → [Printer Area].
- 3. Touch [Centering] \rightarrow [3rd.].



4. Press the Start key to let the machine produce a test print.

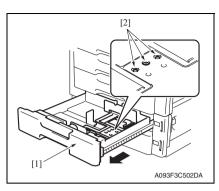


- Measure the width of printed reference line A.
 - Specification: 3.0 mm ± 1.0 mm
- If the measured width A falls outside the specified range, enter the correction value using the [-] or [+] key.
- Produce another test print and check to see if width A falls within the specified range.

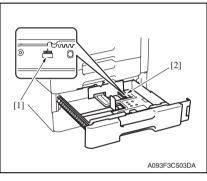
NOTE

 If the use of the [-] or [+] key does not allow the measurement to fall within the specified range, perform the following steps.

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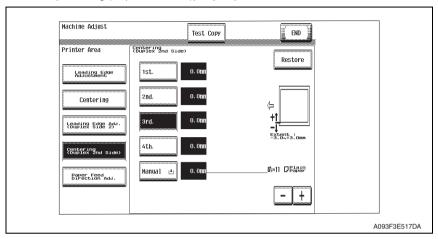
- 8. Slide out the drawer [1] and unload paper from it.
- 9. Loosen three screws [2] at the center of the paper lifting plate.



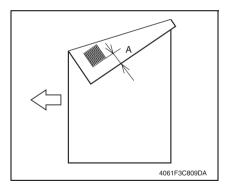
- 10. Watching the graduations [1] provided in the drawer, move the edge guide [2] in the rear.
- If width A is greater than the specified value, move the edge guide toward the front.
- If width A is smaller than the specified value, move the edge guide toward the rear.
- 11. Perform another test print and check the reference deviation.
- 12. Repeat the adjustment until the reference line falls within the specified range.
- 13. Tighten the adjustment screw.
- 14. Repeat steps 1 to 13 similarly for the tray 4.
- 15. Touch [END].
- 16. Touch [Exit] on the Service Mode screen.
- 17. Turn OFF the main power switch, then wait for 10 sec. or more and turn ON the main power switch.

6.1.2 Centering (Duplex 2nd Side)

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [Machine] → [Printer Area].
- 3. Touch [Centering (Duplex 2nd Side)] \rightarrow [3rd.].



4. Press the Start key to let the machine produce a test pattern.



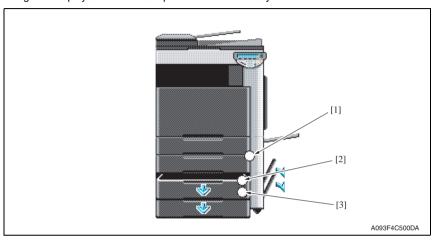
- Measure the width of printed reference line A.
 Specification: 3.0 mm ± 2.0 mm
- If the measured width A falls outside the specified range, enter the correction value using the [-] or [+] key.
- Produce another test print and check to see if width A falls within the specified range.
- 8. Repeat steps 1 to 7 similarly for the tray 4.
- 9. Touch [END].
- 10. Touch [Exit] on the Service Mode screen.
- 11. Turn OFF the main power switch, then wait for 10 sec. or more and turn ON the main power switch.

Troubleshooting

7. Jam display

7.1 Misfeed display

When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main body.

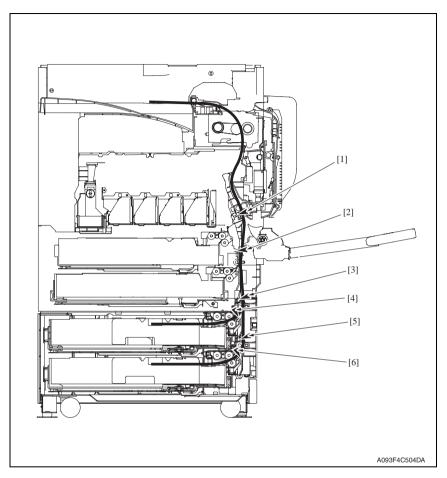


No.	Code	Misfeed location	Misfeed access location	Action
[2]	1301	Tray 3 feed section	Right door	P.26
[1]	2001	Tray 3 paper vertical transport section	Vertical transport door	F.20
[3]	1401	Tray 4 feed section	Right door	P.27
[1]	2001	Tray 4 paper vertical transport section	Vertical transport door	F.41

7.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfed, and close the door.

7.2 Sensor layout



- [1] Sensor in front of tim. roller (PS23)
- [2] Paper feed tray 2 vertical transport sensor (PS16)
- [3] Tray3 vertical transport sensor (PS117)
- [4] Tray3 paper feed sensor (PS116)
- [5] Tray4 vertical transport sensor (PS126)
- [6] Tray4 paper feed sensor (PS125)

7.3 Solution

7.3.1 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 the user on the correct paper storage procedures.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path and replace if necessary.
Are rolls/rollers dirty, deformed, or worn?	Clean or replace the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators operating correctly?	Correct or replace the defective actuator.

7.3.2 Tray3 feed section/vertical transport section misfeed (PC-104/204)

A. Detection timing

Type	Description	
Tray3 feed section/ vertical transport	The leading edge of the paper does not block the tray3 vertical transport sensor (PS117) even after the set period of time has elapsed after the tray3 paper feed motor (M122) is energized.	
section misfeed detection	The paper feed tray 2 vertical transport sensor (PS16) is not blocked even after the lapse of a given period of time after the tray3 vertical transport sensor (PS117) has been blocked by a paper.	
Tray 3 vertical transport section loop registration reversing jam	Rise timing of load for registration is earlier than the one for making the loop at front of the registration roller at tray 3 paper feed.	
Tray3 detection of paper remaining Misfeed detected as a result of delayed deactivation of sensor	The tray3 vertical transport sensor (PS117) is blocked when the main power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.	
	The tray3 paper feed sensor (PS116) is blocked when the main power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.	
	The tray3 vertical transport sensor (PS117) is not unblocked even after the lapse of a given period of time after PS117 has been blocked by a paper.	
Tray3 feed section image write start signal permit waiting jam	For paper fed from the tray3, image write start signal permit continues to be disabled for a predetermined period of time after the timing of image write start signa output.	

B. Action

Relevant electrical parts		
Tray3 paper feed sensor (PS116)	PC control board (PCCB)	
Tray3 vertical transport sensor (PS117)		
Paper feed tray 2 vertical transport sensor (PS16)		
Tray3 paper feed motor (M122)		
Sensor in front of tim. roller (PS23)		

1			WIRING DIAGRAM	
	Step Action	Action	Control signal	Location (Electrical components)
	1	Initial check items		
	2	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	bizhub C353/C253/C203 D-18
	3	PS116 I/O check, sensor check	PCCB PJ6-8 (ON)	PC-104, PC-204 B-1 to 2
	4	PS117 I/O check, sensor check	PCCB PJ6-11 (ON)	PC-104, PC-204 B-2
	5	PS16 I/O check, sensor check	PCCB CN9-11 (ON)	bizhub C353/C253/C203 D-10
	6	M122 operation check	PCCB PJ5-1 to 4	PC-104, PC-204 B-2 to 3
	7	PCCB replacement	_	_

7.3.3 Tray4 feed section/vertical transport section misfeed (PC-204)

A. Detection timing

Type Description	
Tray4 feed section/ vertical transport	The leading edge of the paper does not block the tray4 vertical transport sensor (PS126) even after the set period of time has elapsed after the tray4 paper feed motor (M123) is energized.
section misfeed detection	The tray3 vertical transport sensor (PS117) is not blocked even after the lapse of a given period of time after the tray4 vertical transport sensor (PS126) has been blocked by a paper.
Tray 4 vertical transport section loop registration reversing jam	Rise timing of load for registration is earlier than the one for making the loop at front of the timing roller at tray 4 paper feed.
Tray4 detection of	The tray4 vertical transport sensor (PS126) is blocked when the main power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
paper remaining	The tray4 paper feed sensor (PS125) is blocked when the main power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Misfeed detected as a result of delayed deactiva- tion of sensor	The tray4 vertical transport sensor (PS126) is not unblocked even after the lapse of a given period of time after PS126 has been blocked by a paper.
Tray4 feed section image write start signal permit waiting jam	For paper fed from the tray4, image write start signal permit continues to be disabled for a predetermined period of time after the timing of image write start signal output.

B. Action

Relevant electrical parts		
Tray4 paper feed sensor (PS125) Tray4 vertical transport sensor (PS126) Tray3 vertical transport sensor (PS117) Tray4 paper feed motor (M123) Sensor in front of tim. roller (PS23)	PC control board (PCCB)	

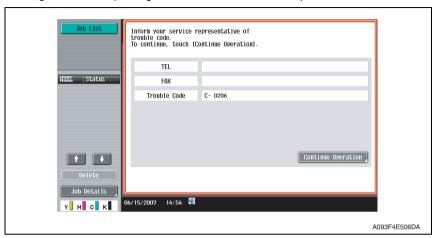


		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical components)	
1	Initial check items	_	_	
2	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	bizhub C353/C253/ C203 D-18	
3	PS125 I/O check, sensor check	PCCB PJ10-8 (ON)	PC-204 G-5	
4	PS126 I/O check, sensor check	PCCB PJ11-2 (ON)	PC-204 G-5	
5	PS117 I/O check, sensor check	PCCB PJ6-11 (ON)	PC-104, PC-204 B-2	
6	M123 operation check	PCCB PJ9-1 to 4	PC-204 G-6	
7	PCCB replacement	_	_	

8. Trouble code

8.1 Trouble code display

• The main unit's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the touch panel.



8.2 Trouble code list

Code	Item	Description
C0206	Tray3 lift-up failure	The lift-up upper sensor is not blocked even after the
C0208	Tray4 lift-up failure	set period of time has elapsed after the paper lift-up operation for the drawer began.

 Open and close the front door, or turn OFF the main power switch. Then, wait for 10 sec. or more and turn ON the main power switch to reset the malfunction display.

8.3 Solution

C0206: Tray3 lift-up failure C0208: Tray4 lift-up failure 8.3.1

Relevant electrical parts		
Tray3 lift-up motor (M124)	PC control board (PCCB)	
Tray4 lift-up motor (M125)	MFP board (MFPB)	
Tray3 upper limit sensor (PS114) Tray4 upper limit sensor (PS123)	DC power supply (DCPU)	



		WIRING DIAGE	RAM
Step	Action	Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	_	_
2	Check the connector of each motor for proper drive coupling, and correct as necessary.	_	_
3	Check the DCPU connector for proper connection, and correct as necessary.	_	_
4	PS114 I/O check, sensor check	PCCB PJ6-3 (ON)	PC-104, PC-204 B-1
5	PS123 I/O check, sensor check	PCCB PJ10-3 (ON)	PC-204 G-4
6	M124 operation check	PCCB PJ4-4 to 5	PC-104, PC-204 B-3 to 4
7	M125 operation check	PCCB PJ8-12 to 13	PC-204 G-1
8	PCCB replacement	_	_
9	MFPB replacement	_	_
10	DCPU replacement	_	_

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SERVICE MANUAL

FIELD SERVICE

PC-405

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text, is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.
- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with .
 The number inside represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2008/01	3.0	<u>/2</u> \	Error correction
2007/11	2.0	À	Error correction
2007/07	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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Outline

1. Product specification

A. Type

Name	Large capacity cabinet
Туре	Front loading type LCC
Installation	Desk type
Document alignment	Center

B. Paper

Туре	Size	Capacity
Plain paper (60 to 90 g/m² (16 to 24 lb))		2,500 sheets
Thick paper 1 (91 to 150 g/m² (24.25 to 40 lb))	AA 0.1/ v.44	
Thick paper 2 (151 to 209 g/m² (40 to 55.5 lb))	A4, 8-1/ ₂ x 11	1,000 sheets
Thick paper 3 (210 to 256 g/m² (55.75 to 68 lb))		

C. Machine specifications

	Power requirements	DC 24 V \pm 10% (supplied from the main body)
		DC 5 V ± 5%
<u> </u>	Max. power consumption	45 W or less
		600 mm (W) x 578 mm (D) x 301 mm (H) 23.5 inch (W) x 22.75 inch (D) x 11.75 inch (H)
	Weight	28.0 kg (61.75 lb)



D. Operating environment

Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

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Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

2.1.1 Replacing the separation roller assy

A. Periodically replaced parts/cycle

· Separation roller assy: Every 300,000 prints

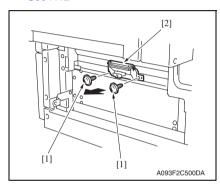
NOTE

· Replace the separation roller assy, feed roller and pick-up roller at the same time.

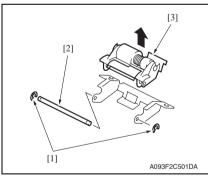
B. Replacing procedure

1. Remove the right door.

See P.12



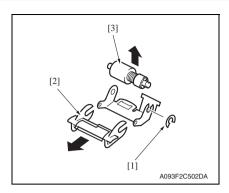
Remove two screws [1] and remove the separation roller mounting bracket assy [2].



 Remove two C-rings [1] and the shaft [2], and remove the separation roller fixing bracket assy [3].

NOTE

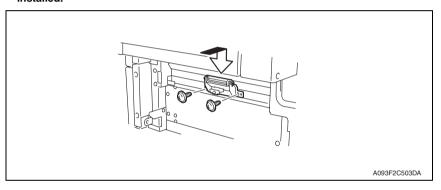
Be careful not to lose spring at this time.



 Remove the C-ring [1], the guide [2], and remove the separation roller assy [3].

NOTE

- Install the separation roller assy while pressing the holder down so that it aligns to the metal bracket of the machine.
- Make sure that the separation roller assy is not tilted to the right or left when installed.



2.1.2 Replacing the feed roller

A. Periodically replaced parts/cycle

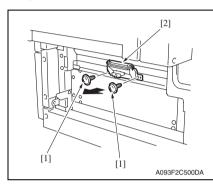
• Feed roller: Every 300,000 prints

NOTE

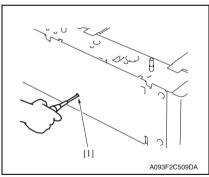
· Replace the separation roller assy, feed roller and pick-up roller at the same time.

B. Replacing procedure

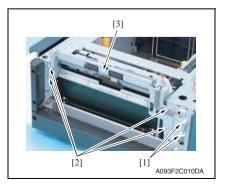
- 1. Remove the right door.
 - See P.12
- Remove the rear cover and the rear right cover. See P.12



3. Remove two screws [1] and separation roller mounting bracket assy [2].

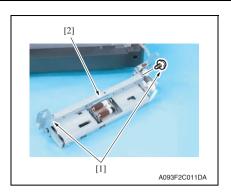


 Insert a driver into the hole [1] at the back of the feed tray and pull out the paper feed tray.

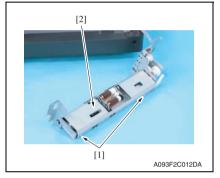


Remove two wire saddles [1] and four screws [2], and remove the paper feed unit [3].

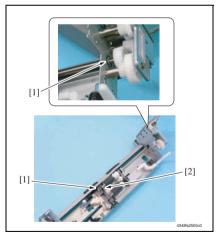




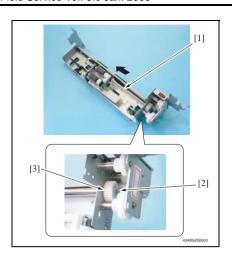
 Remove two screws [1] and remove the mounting frame [2] for the separation roller mounting bracket assy.



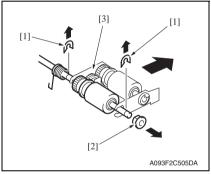
7. Remove two screws [1] and remove the paper feed roller cover [2].



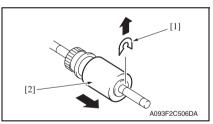
8. Remove two C-rings [1] and remove the bushing [2].



- Shift the shaft assy [1] in the orientation as shown on the left, and remove the C-ring [2] and the gear [3].
- 10. Remove the shaft assy [1].



 Remove two E-rings [1] and the bushing [2], and remove the pick-up roller fixing bracket assy [3].



12. Remove the C-ring [1] and remove the feed roller [2].

2.1.3 Replacing the pick-up roller

A. Periodically replaced parts/cycle

• Pick-up roller: Every 300,000 prints

NOTE

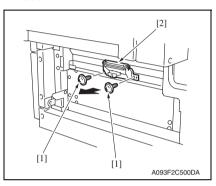
· Replace the separation roller assy, feed roller and pick-up roller at the same time.

B. Replacing procedure

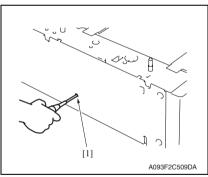
1. Remove the right door.

See P.12

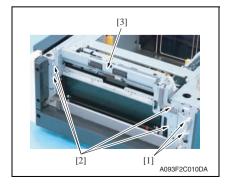
Remove the rear cover and the rear right cover. See P.12



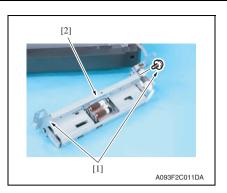
3. Remove two screws [1] and separation roller mounting bracket assy [2].



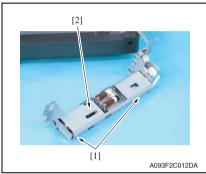
Insert a driver into the hole [1] at the back of the feed tray and pull out the paper feed tray.



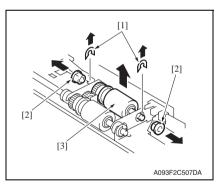
Remove two wire saddles [1] and four screws [2], and remove the paper feed unit [3].



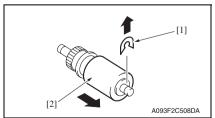
Remove two screws [1] and remove the mounting frame [2] for the separation roller mounting bracket assy.



7. Remove two screws [1] and remove the paper feed roller cover [2].



Remove two C-rings [1], two bushings [2], and the pick-up roller assy [3].



9. Remove the C-ring [1] and remove the pick-up roller [2].

3. Other

3.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

3.2 Disassembly/Assembly/Cleaning list (Other parts)

3.2.1 Disassembly/Assembly parts list

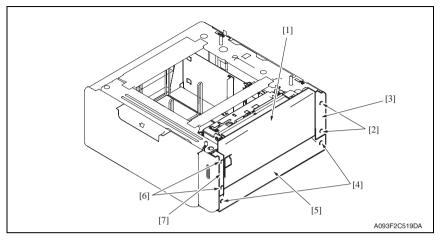
No.	Section	Part name	Ref. page
1	Exterior parts	Right door	P.12
2		Rear right cover	P.12
3		Lower right cover	P.12
4		Front right cover	P.12
5		Rear cover	P.12
6		Left cover	P.12
7	Unit	Drawer	P.13
8	Other	Wire	P.14

3.2.2 Cleaning parts list

No.	Section	Part name	Ref. page
1		Separation roller	P.18
2	Feed section	Feed roller	P.18
3		Pick-up roller	P.19
4	Transport section	Vertical transport roller	P.20

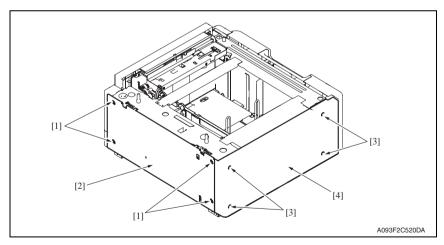
3.3 Disassembly/Assembly procedure

3.3.1 Right door/Rear right cover/Lower right cover/Front right cover



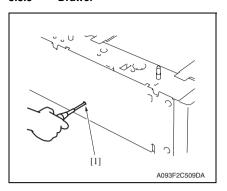
- 1. Open the right door [1].
- 2. Remove the right door [1].
- 3. Remove two screws [2] and remove the rear right cover [3].
- 4. Remove two screws [4] and remove the lower right cover [5].
- 5. Remove two screws [6] and remove the front right cover [7].

3.3.2 Rear cover/Left cover



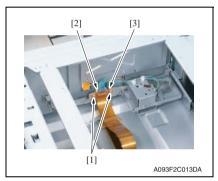
- 1. Remove four screws [1] and remove the rear cover [2].
- 2. Remove four screws [3] and remove the left cover [4].

3.3.3 Drawer

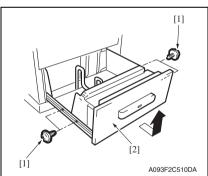


 Insert a driver into the hole [1] at the back of the feed tray and pull out the paper feed tray.

2. Remove the paper.



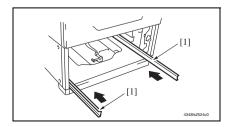
Remove two screws [1], the connector [2], and remove the connector board [3].



4. Remove four screws [1] and remove the drawer [2].

NOTE

 When removing the drawer, be careful not to drop the drawer from the quide rails.



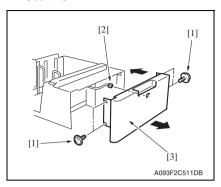
⚠ CAUTION

 To prevent injuries, slide the guide rail [1] into the machine.

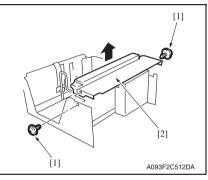
tenance

3.3.4 Wire

Remove the drawer.
 See P.13



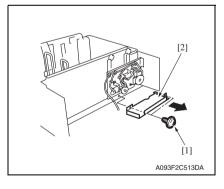
Remove four screws [1] and disconnect the connector [2], and remove the front cover assy [3].



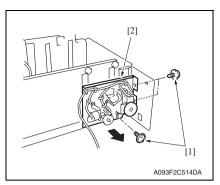
3. Remove two screws [1] and the inner cover assy [2].

NOTE

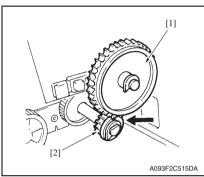
• Do not peel off pulley protective mylar sheet.



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

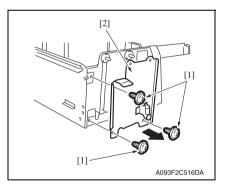


Remove three screws [1] and remove the driver mounting plate assy [2].

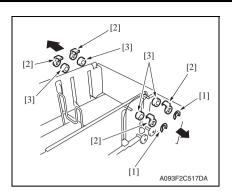


NOTE

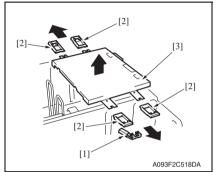
 When assembling, be sure to engage rib of gear 1 [1] with convex section of gear 2 [2].



 Remove three screws [1] and remove the reinforcement bracket assy [2].



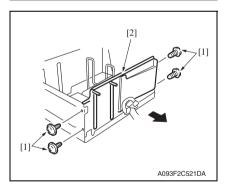
- 7. Remove two C-clips [1].
- 8. Remove four pulley covers [2].
- 9. Unhook four pulleys [3].



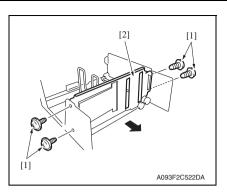
- 10. Remove the ground plate [1].
- 11. Remove four cable holding jigs [2] and remove the main drawer [3].

NOTE

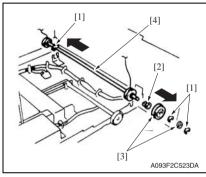
· Use care not to bend the wires.



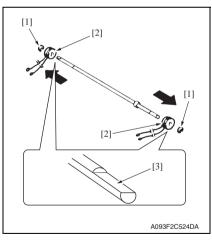
12. Remove four screws [1] and remove the rear trailing edge assy [2].



13. Remove four screws [1] and remove the front trailing edge assy [2].



- 14. Remove three C-rings [1], the bushing [2], and two gears [3].
- 15. Remove the feed drum assy [4].



16. Remove two C-rings [1] and two feed drums [2].

NOTE

- · Take care not to lose fixing pins.
- When reinstalling the feed drum, check that the direction of the wire coming from both feed drums are the same.
- Install so that cut parts [3] at both ends of shaft face up.

3.4 Cleaning procedure

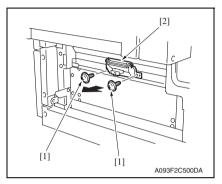
NOTE

• The alcohol described in the cleaning procedure represents the isopropyl alcohol.

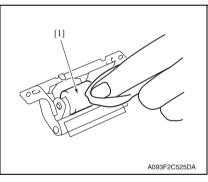
3.4.1 Separation roller

1. Remove the right door.

See P.12

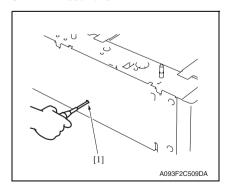


2. Remove two screws [1] and separation roller mounting bracket assy [2].

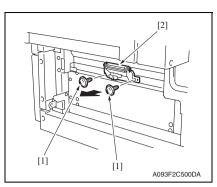


 Using a cleaning pad dampened with alcohol, wipe the separation roller [1] clean of dirt.

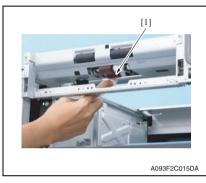
3.4.2 Feed roller



 Insert a driver into the hole [1] at the back of the feed tray and pull out the paper feed tray.

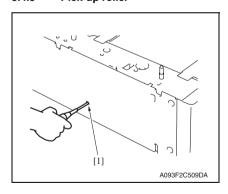


2. Remove two screws [1] and separation roller mounting bracket assy [2].

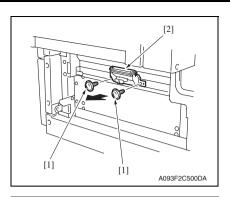


 Using a cleaning pad dampened with alcohol, wipe the feed roller [1] clean of dirt.

3.4.3 Pick-up roller



 Insert a driver into the hole [1] at the back of the feed tray and pull out the paper feed tray.



2. Remove two screws [1] and separation roller mounting bracket assy [2].



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

Vertical transport roller 3.4.4

1. Open the right door.



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

Adjustment/Setting

4. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by "".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

⚠ CAUTION

- Be sure 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.
- 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.

5. Sensor check

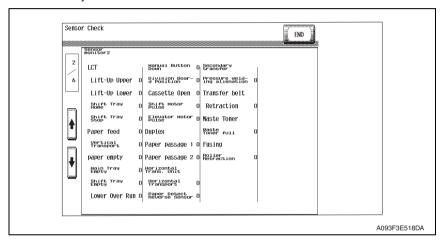
5.1 Check procedure

A. Procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [State Confirmation].
- 3. Touch [Sensor Check].
- 4. Touch [♥]once.

5.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



5.1.2 Sensor check list

A. Sensor monitor 2

0 1 1	Panel display	D 1/0: 1	Operation characteristics/		
Symbol		Part/Signal name	1 0		
PS4	Lift-Up Upper	Lift-up upper sensor	Raised Position	Not raised	
PS13	Lift-Up Lower	Lift-up lower sensor	Lowered Position	Not lowered	
PS12	Shift Tray Home	Shift tray home sensor	At home	Not at home	
PS11	Shift Tray Stop	Shift tray stop sensor	Return position	Not at return position	
PS1	Paper feed	Paper feed sensor	Paper present	Paper not present	
PS2	Vertical Transport	Vertical transport sensor	Paper present	Paper not present	
PS3	Paper empty	Paper empty sensor	Paper present	Paper not present	
MTPEB	Main Tray Empty	Main tray paper empty board	Paper present	Paper not present	
PS9	Shift Tray Empty	Shift tray empty sensor	Paper present	Paper not present	
PS7	Lower Over Run	Lower over run sensor	malfunction	operational	
MDCB	Manual Button Down	Manual down control board	ON	OFF	
PS14	Division Board Position	Division board position sensor	At home	Not at home	
PS6	Cassette Open	Cassette open sensor	Set	Out of position	
PS8	Shift Motor Pulse	Shift motor pulse sensor	Blocked	Unblocked	
PS10	Elevator Motor Pulse	Elevator motor pulse sensor	Blocked	Unblocked	

6. Mechanical adjustment

6.1 Adjusting the paper reference position

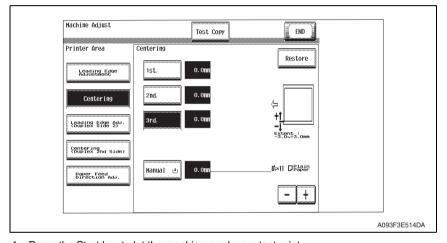
NOTE

Make this adjustment after any of the following procedures has been performed.
 When the PH unit has been replaced.

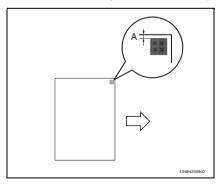
When the image on the print is offset in the sub scan direction. When a faint image occurs on the leading edge of the image.

6.1.1 Centering

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [Machine] → [Printer Area].
- 3. Touch [Centering] \rightarrow [3rd.].



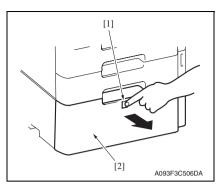
4. Press the Start key to let the machine produce a test print.



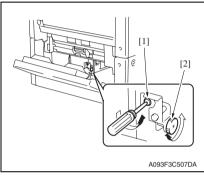
- Measure the width of printed reference line A.
 - Specification: 3.0 mm ± 1.0 mm
- If the measured width A falls outside the specified range, enter the correction value using the [-] or [+] key.
- Produce another test print and check to see if width A falls within the specified range.

NOTE

 If the use of the [-] or [+] key does not allow the measurement to fall within the specified range, perform the following steps.



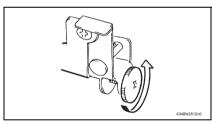
 Press the drawer release button [1] and then slide out the drawer [2] from the paper feed cabinet.



- 9. Open the right door.
- Loosen the adjustment screw [1] and turn screw D [2] to make the adjustment.

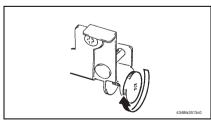
NOTE

 Do not damage the passage surface of the right door.



If width A is greater than the specified value:

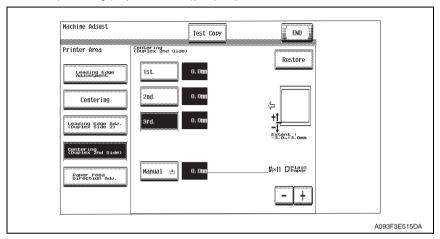
Turn screw D counterclockwise.



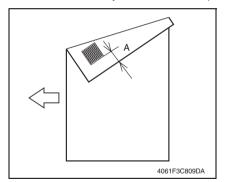
- If width A is smaller than the specified value:
 - Turn screw D clockwise.
- 11. Perform another test print and check the reference deviation.
- 12. Repeat the adjustment until the reference line falls within the specified range.
- 13. Tighten the adjustment screw.
- 14. Touch [END].
- 15. Touch [Exit] on the Service Mode screen.
- 16. Turn OFF the main power switch, then wait for 10 sec. or more and turn ON the main power switch.

6.1.2 Centering (Duplex 2nd Side)

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [Machine] \rightarrow [Printer Area].
- 3. Touch [Centering (Duplex 2nd Side)] \rightarrow [3rd.].



4. Press the Start key to let the machine produce a test print.



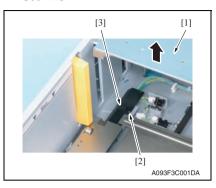
- Measure the width of printed reference line A.
 - Specification: 3.0 mm ± 2.0 mm
- If the measured width A falls outside the specified range, enter the correction value using the [-] or [+] key.
- Produce another test print and check to see if width A falls within the specified range.

- 8. Touch [END].
- 9. Touch [Exit] on the Service Mode screen.
- 10. Turn OFF the main power switch, then wait for 10 sec. or more and turn ON the main power switch.

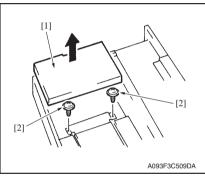
6.2 Shifter movement timing belt adjustment

1. Remove the drawer.

See P.13



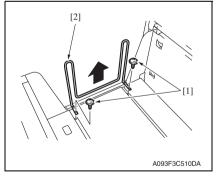
While raising the main tray [1], remove the screw [2] and the connector cover [3].



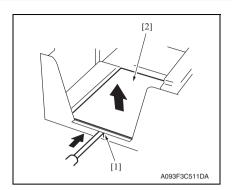
 While raising the main tray [1], remove two screws [2] that hold the shift tray in position.

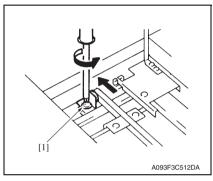
NOTE

 When reinstalling, use caution because the wire of the main tray [1] comes off easily.



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





- Push the tab [1] of the shift tray [2] as shown on the left and release the lock.
- 6. Remove the shift tray [2].

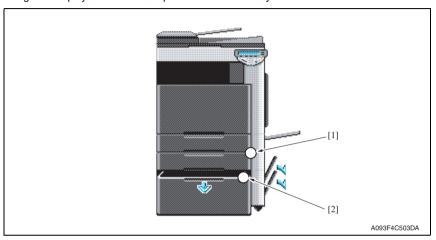
- Loosen the screw [1] fixing the tension pulley assy as shown on the left and move it in the direction of the
- 8. After moving the shifter, tighten the fixing screw [1].

Troubleshooting

7. Jam display

7.1 Misfeed display

When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main body.

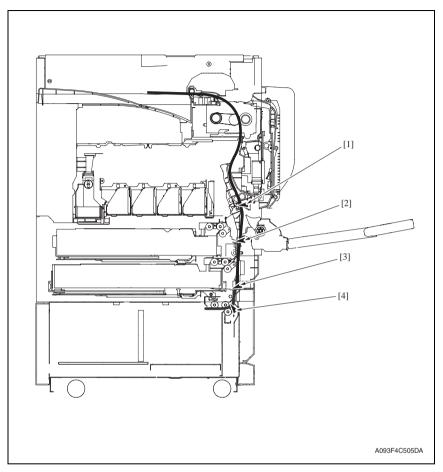


	No.	Code	Misfeed location	Misfeed access location	Action
<u>2</u>	[2]	1501	LCT paper feed section	Right door	P.32
	[1]	2001	LCT paper vertical transport section	Vertical transport door	F.32

7.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfed, and close the door.

7.2 Sensor layout



- [1] Sensor in front of tim. roller
- PS23 PS16
- [3] Vertical transport sensor
- PS2

- [2] Paper feed tray 2 vertical transport sensor
- [4] Paper feed sensor
- PS1

7.3 Solution

7.3.1 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 the user on the correct paper storage procedures.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean the paper path and replace if necessary.
Are rolls/rollers dirty, deformed, or worn?	Clean or replace the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators operating correctly?	Correct or replace the defective actuator.

roubleshooting

7.3.2 LCT paper feed section/vertical transport section misfeed

A. Detection timing

Type	Description
LCT paper feed section misfeed detection	The leading edge of the paper does not block the paper feed sensor (PS1) or the vertical transport sensor (PS2) even after the set period of time has elapsed after the paper feed motor (M1) is energized.
LCT vertical transport section misfeed detection	The paper feed tray 2 vertical transport sensor (PS16) is not blocked even after the lapse of a given period of time after the vertical transport sensor (PS2) has been blocked by a paper.
LCT vertical transport section loop registration reversing jam	Rise timing of load for registration is earlier than the one for making the loop at front of the timing roller at LCT paper feed.
LCT detection of	The vertical transport sensor (PS2) is blocked when the main power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
paper remaining	The paper feed sensor (PS1) is blocked when the main power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Misfeed detected as a result of	The paper feed sensor (PS1) is not unblocked even after the lapse of a given period of time after PS1 has been blocked by a paper.
delayed deactiva- tion of sensor	The vertical transport sensor (PS2) is not unblocked even after the lapse of a given period of time after PS2 has been blocked by a paper.
LCT feed section image write start signal permit wait- ing jam	For paper fed from the LCT, image write start signal permit continues to be disabled for a predetermined period of time after the timing of image write start signal output.

2

B. Action

Relevant electrical parts			
Paper feed sensor (PS1)	PC control board (PCCB)		
Vertical transport sensor (PS2)	MFP board (MFPB)		
Paper feed tray 2 vertical transport sensor (PS16)			
Paper feed motor (M1)			
Sensor in front of tim. roller (PS23)			

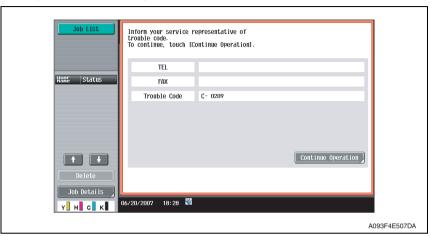


Step	Action	WIRING DIAGRAM		
		Control signal	Location (Electrical components)	
1	Initial check items			
2	PS23 I/O check, sensor check	PRCB CN1-3 (ON)	bizhub C353/C253/ C203 D-18	
3	PS1 I/O check, sensor check	PCCB PJ5-2 (ON)	PC-405 F-9	
4	PS2 I/O check, sensor check	PCCB PJ5-5 (ON)	PC-405 F-9	
5	PS16 I/O check, sensor check	PCCB CN9-11 (ON)	bizhub C353/C253/ C203 D-10	
6	M1 operation check	PCCB PJ6-1 to 4	PC-405 F-10	
7	PCCB replacement	_	_	
8	MFPB replacement	_	_	

8. Trouble code

8.1 Trouble code display

• The main unit's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the touch panel.



8.2 Trouble code list

Code	Item	T	Description
C0001	LCT communication error	•	Due to a software malfunction, etc., the time on the watchdog timer has run out and a reset is performed.
C0102	LCT vertical transport motor mal- function	•	The lock signal remains high for a predetermined continuous period of time while the LCT vertical transport motor is turning.
C0209	LCT elevator motor failure	•	The elevator motor pulse sensor (PS10) cannot detect both edges of H/L even after the set period of time has elapsed while the elevator motor (M5) is turning backward/forward (raise/lower).
C0210	LCT lift failure		The lift-up upper sensor (PS4) is not blocked even after the set period of time has elapsed after the paper lift-up operation began. The lift-up upper sensor (PS4) is not blocked even after the set pulse is detected by the elevator motor pulse
		•	sensor (PS10) after the paper lift-up operation began. The lift-up lower sensor (PS13) is not unblocked even after the set pulse is detected by the elevator motor pulse sensor (PS10) after the paper lift-up operation began.
		•	The lift-up upper sensor (PS4) is not blocked even after the set period of time has elapsed after the paper lift-up operating.
		•	The lift-up lower sensor (PS13) is not blocked even after the set period of time has elapsed after the paper lift-down operation began.
		•	The lift-up lower sensor (PS13) is not blocked even after the set pulse is detected by the elevator motor pulse sensor (PS10) after the paper lift-down operation began.
			The lift-up upper sensor (PS4) is not unblocked even after the set pulse is detected by the elevator motor pulse sensor (PS10) after the paper lift-down operation began. The lower over run sensor (PS7) is blocked while the
			paper lift-down operating.
C0212	LCT ejection failure	•	The drawer cannot be determined to be out of position even after the set period of time has elapsed after the tray lock solenoid (SD1) is energized after the lowering operation is finished.
C0213	LCT shift gate malfunction	•	The division board position sensor (PS14) cannot be set to L even after the set period of time has elapsed after the operation of the division board position motor (M3) began with the division board position sensor (PS14) set to L.

Code	Item	Description
C0214	LCT shifting failure	 The shift tray stop sensor (PS11) is not blocked even after the set period of time has elapsed after the shift operation began (shift to the right). The shift tray stop sensor (PS11) is not blocked even after the set pulse is detected by the shift motor pulse sensor (PS8) after the shift operation began (shift to the right). The shift tray home sensor (PS12) is not unblocked even after the set pulse is detected by the shift motor pulse sensor (PS8) after the shift operation began (shift to the right). The shift tray home sensor (PS12) is not blocked even after the set period of time has elapsed after the return operation began (shift to the left). The shift tray home sensor (PS12) is not blocked even after the set pulse is detected by the shift motor pulse sensor (PS8) after the return operation began (shift to the left). The shift tray stop sensor (PS11) is not unblocked even after the set pulse is detected by the shift motor pulse sensor (PS8) after the return operation began (shift to the left).
C0215	LCT shift motor malfunction	The shift motor pulse sensor (PS8) cannot detect both edges of H/L even after the set period of time has elapsed while the shift motor (M4) is turning backward/ forward (raise/lower).

 Open and close the front door, or turn OFF the main power switch. Then, wait for 10 sec. or more and turn ON the main power switch to reset the malfunction display.

8.3 Solution

8.3.1 C0001: LCT communication error

Relevant electrical parts			
PC control board (PCCB)			

		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical components)	
1	Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	-	_	
2	PCCB replacement	_	_	

8.3.2 C0209: LCT elevator motor failure

Relevant electrical parts		
Elevator motor (M5)	Relay board (REYB)	
Elevator motor pulse sensor (PS10)	PC control board (PCCB)	



7		WIRING DIAGRAM		
Ste	o Action	Control signal	Location (Electrical components)	
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	1	
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_		
3	PS10 I/O check, sensor check	REYB PJ2 <a>-5 (ON)	PC-405 K-5	
4	M5 operation check	REYB PJ2 -6 to 7	PC-405 K-6 to 7	
5	REYB replacement	_	_	
6	PCCB replacement	_	_	

8.3.3 C0210: LCT lift failure

Relevant electrical parts		
Lift-up upper sensor (PS4) Lift-up lower sensor (PS13) Elevator motor pulse sensor (PS10) Lower over run sensor (PS7)	PC control board (PCCB)	



		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the sensor connectors for proper connection, and correct as necessary.	_	_
2	PS4 I/O check, sensor check	PCCB PJ5-12 (ON)	PC-405 F-8
3	PS13 I/O check, sensor check	REYB PJ2 <a>-9 (ON)	PC-405 K-3
4	PS10 I/O check, sensor check	REYB PJ2 <a>-5 (ON)	PC-405 K-5
5	PS7 I/O check, sensor check	REYB PJ2 <a>-2 (ON)	PC-405 K-6
6	PCCB replacement		_

8.3.4 C0212: LCT lock release failure

Relevant electrical parts	
Tray lock solenoid (SD1)	PC control board (PCCB)



7			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical components)
	1	Check the SD1 connector for proper connection, and correct as necessary.	_	_
Ī	2	SD1 operation check	PCCB PJ7-4 (ON)	PC-405 F-10
Ī	3	PCCB replacement	_	_

8.3.5 C0213: LCT shift gate operation failure

Relevant electrical parts		
Division board position sensor (PS14) Division board position motor (M3)	PC control board (PCCB)	

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ı	-	_	=	ľ

7		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	_	_
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
3	PS14 I/O check, sensor check	REYB PJ2 -1 (ON)	PC-405 K-7
4	M3 operation check	REYB PJ2 -2 to 3	PC-405 K-7
5	PCCB replacement		_

8.3.6 C0214: LCT shift failure

Relevant electrical parts	
Shift motor pulse sensor (PS8) Shift tray stop sensor (PS11)	PC control board (PCCB)
Shift tray home sensor (PS12)	



		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical components)	
1	Check the sensor connectors for proper connection, and correct as necessary.	_	_	
2	PS8 I/O check, sensor check	REYB PJ2 <a>-3 (ON)	PC-405 K-6	
3	PS11 I/O check, sensor check	REYB PJ2 <a>-7 (ON)	PC-405 K-4	
4	PS12 I/O check, sensor check	REYB PJ2 <a>-8 (ON)	PC-405 K-4	
5	PCCB replacement	_	_	

8.3.7 C0215: LCT shift motor failure

Relevant electrical parts		
Shift motor (M4) PC control board (PCCB)		
Shift motor pulse sensor (PS8)		



	Action	WIRING DIAGRAM		
Step		Control signal	Location (Electrical components)	
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	-	
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_	
3	PS8 I/O check, sensor check	REYB PJ2 <a>-3 (ON)	PC-405 K-6	
4	M4 operation check	REYB PJ2 -4 to 5	PC-405 K-7	
5	PCCB replacement	1	_	

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SERVICE MANUAL

FIELD SERVICE

FS-519/PK-515 /OT-602

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text,
 \(\frac{\(\)}{\(\)} \) is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.
- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with .
 The number inside represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
 The revision marks for Ver. 2.0 are left as they are.

2008/01	3.0	<u>^2</u>	Error correction
2007/11	2.0	À	Error correction
2007/07	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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Outline

1. Product specifications

1.1 FS-519

A. Type

Name	Multi staple finisher built into the copier
Installation	Installed in the copier
Document alignment	Center
Consumables	Staples

B. Functions

Modes	Sort, group, sort offset, group offset, sort stable, and punch (when PK-515 is mounted)
	mounted)

C. Paper

(1) Non sort/sort/group

	Туре	Size	Weight		Max. capacity		
<u> </u>		A6S, A5S/A5, B5S/B5, B6S, A4S/A4, B4, A3, A3Wide 5-1/ ₂ x 8-1/ ₂ S/5-1/ ₂ x 8-1/ ₂ ,	60 to 90 g/m ² 16 to 24 lb	Exit tray1	200 sheets		
	Plain paper Recycled paper			Exit tray2	A4S, 8-1/2 x 11S or less	1000 sheets *3	
	μαροι				B4, 8-1/2 x 14 or greater	500 sheets *3	
	Government standard postcards		91 to 210 g/m ² 24.25 to 55.75 lb			•	
	Envelope	8-1/ ₂ x 11S/8-1/ ₂ x 11,	_				
	OHP transparencies	8-1/ ₂ x 14, 11 x 17, 12-1/ ₄ x 18 Max. 311.15 mm x 457.2 mm	_				
	Translucent paper		_				
	Label	12.25 x 18 inch	_		20 sheets		
	Thick paper 1	Min. 90 mm x 139.7 mm 3.5 x 5.5 inch	91 to 150 g/m ² 24.25 to 40 lb				
	Thick paper 2 Thick paper 3	- 0.3 x 3.3 iiidii	151 to 209 g/m ² 40.25 to 55.5 lb				
			210 to 256 g/m ² 55.75 to 68 lb				
	Thick paper 4		257 to 271 g/m ² 68.25 to 72 lb				
<u> </u>	Long size paper *1	210 mm to 297 mm x 457.2 mm to 1200 mm	127 to 160 g/m ² 33.75 to 42.5 lb		_		

*1: Long size paper is available only for non-sort mode.

(2) Sort offset/group offset

1. Product specifications

	Туре	Size	Weight	Max. capacity		
		A5, B5S/B5, A4S/A4, B4, A3 8-1/ ₂ x 11S/8-1/ ₂ x 11, 8-1/ ₂ x 14, 11 x 17 Max. 297 mm x 431.8 mm 11.75 x 17 inch Min. 182 mm x 148.5 mm		Exit tray1	200 sheets	
_				Exit tray2	A4S, 8-1/ ₂ x 11S or less	1000 sheets *3
	paper				B4, 8-1/ ₂ x 14 or greater	500 sheets *3
	Thick paper	7.25 x 5.75 inch	91 to 271 g/m ² 24.25 to 72 lb	_		

(3) Sort staple

	Туре	Size	Weight	Max. capacity			No. of sheets to be stapled
				Exit tray1	200 sheets/20) sets	
<u> </u>	Plain paper Recycled paper	A5, B5S/B5, A4S/A4, B4, A3 8- ¹ / ₂ x 11S/8- ¹ / ₂ x 11, 8- ¹ / ₂ x 14, 11 x 17 Max. 297 mm x 431.8 mm 11.75 x 17 inch Min. 182 mm x 148.5 mm 7.25 x 5.75 inch	16 to 24 lb	Exit tray2	A4S, 8-1/ ₂ x 11S or less	1000 sheets /100 sets *3	50 sheets *2
<u> </u>	рарол				B4, 8-1/ ₂ x 14 or greater	500 sheets /50 sets *3	
	Thick paper		91 to 120 g/m ² 24.25 to 32 lb		_		30 sheets
	тпіск рарег		121 to 209 g/m ² 32.25 to 55.5 lb		_		

^{*2:} The number of sheets to be stapled is limited for high-density images. (Color wise: 20 sheets x 20 sets)

*3: The table below shows tray2 max. capacity with other options.

		Sort/Group/ Sort offset/Group offset	Sort staple
FS-519 + OT-602	A4S, 8-1/2 x 11S or less	500 sheets	500 sheets/50 sets
F3-519 + O1-002	B4, 8-1/2 x 14 or greater	250 sheets	250 sheets/25 sets
FS-519 + SD-505	A4S, 8-1/2 x 11S or less	500 sheets	500 sheets/50 sets
F3-519 + 5D-505	B4, 8-1/2 x 14 or greater	250 sheets	250 sheets/25 sets
FS-519 +SD-505 + OT-602	A4S, 8-1/2 x 11S or less	200 sheets	200 sheets/25 sets
FS-519 +SD-505 + O1-602	B4, 8-1/2 x 14 or greater	100 sheets	100 sheets/10 sets
-S-519 + MT-502	A4S, 8-1/2 x 11S or less	500 sheets	500 sheets/50 sets
F3-519 + W11-502	B4, 8-1/2 x 14 or greater	250 sheets	250 sheets/25 sets
FS-519 +MT-502 + OT-602	A4S, 8-1/2 x 11S or less	200 sheets	200 sheets/25 sets
F3-319 +W11-502 + O1-602	B4, 8-1/2 x 14 or greater	100 sheets	100 sheets/10 sets

(4) Punch

Type	Size	Weight	Punched holes	Exit tray
Plain paper Recycled paper	B5S/B5 to A3 8-1/ ₂ x 11S/8-1/ ₂ x 11 to 11 x 17	60 to 256 g/m ² 16 to 68 lb	2, 3, 4 *	Exit tray1 Exit tray2 OT-602 MT-502

^{*:} The punched holes is different because of the difference of area.

D. Stapling

Staple filling mode	Dedicated staple cartridge (5000 staples)		
Staple detection	aple detection Available (Nearly Empty: 20 remaining staples)		
	Back of the corner (30 degree)	A4, A3, B5, B4	
	Front of the corner (30 degree)	8-1/ ₂ x 11, 11 x 17	
Stapling position	Back of the corner (Parallel)	A4S, B5S, A5	
Claping poolion	Front of the corner (Parallel)	8-1/ ₂ x 11S, 8-1/ ₂ x 14	
	Side: Parallel 2 point	A4S/A4, A3, B5S/B5, B4, A5 8-1/ ₂ x 11S/8-1/ ₂ x 11, 8-1/ ₂ x 14, 11 x 17	
Manual staple	staple None		

E. Hole Punch

No. of holes	Metric: 4 holes, Inch: 2 holes/3 holes, Sweden: 4 holes
Punch dust full detection	Available

F. Machine specifications

Power requirements	DC 24 V (supplied from the main unit)
rower requirements	DC 5.1 V (generated by finisher)
Max. power consumption	66 W or less
Dimensions	352 mm (W) x 558 mm (D) x 589 mm (H) 13.75 inch (W) x 22 inch (D) x 23.25 inch (H) 471 mm (W) x 558 mm (D) x 589 mm (H) *1 18.5 inch (W) x 22 inch (D) x 23.25 inch (H) *1
Weight	33.2 kg (73.25 lb)

^{*1:} Size when the paper exit tray is pulled out

G. Operating environment

• Conforms to the operating environment of the main body.

1.2 PK-515

A. Type

Name Punch kit PK-515		515	
Installation	Built into the finisher		
	Metric	B5S, A4, B4, A3	
Papar aiza	Inch (2 holes)	8-1/ ₂ x 11S/8-1/ ₂ x 11, 8-1/ ₂ x 14, 11 x 17	
Paper size	Inch (3 holes)	8-1/ ₂ x 11, 11 x 17	
	Sweden	B5S, A4, B4, A3	
Paper type	Plain paper (60 to 209 g/m², 16 to 55.5 lb) Thick paper 1/2/3 (91 to 256 g/m², 24.25 to 68 lb)		
Punch hole	Metric: 2 holes, 4 holes, Inch: 2/3 hole, Sweden: 4 holes		
Number of stored punch wastes	Metric (2 holes): For 2,500 sheets of paper (64 g/m²) Metric (4 holes): For 1,500 sheets of paper (80 g/m²) Inch (2/3 holes): For 1,000 sheets of paper (75 g/m²) Sweden (4 holes): For 1,500 sheets of paper (80 g/m²)		
Document alignment	Center		

B. Machine specifications

Power requirements	Supplied by the finisher
	114 mm (W) x 461 mm (D) x 106 mm (H) 4.5 inch (W) x 18.25 inch (D) x 4.25 inch (H)
Weight	Approx. 1.9 kg (4.25 lb) or less

C. Operating environment

Conforms to the operating environment of the main body.

1.3 OT-602

A. Type

Name	Output tray OT-602
Installation	Fixed to the finisher
Mode	Sort, group, and sort stable Sort, group, sort offset, group offset, and sort stable
Number of bins	1 bin
Document alignment	Center

B. Paper

Mode	Size		Туре	Capacity	
	A6S, A5S/A5, B5S/B5, B6S, A4S/A4, B4, A3, A3Wide		200 sheets (up to a height of 24 mm)		
	5-1/ ₂ x 8-1/ ₂ S/5-1/ ₂ x 8-1/ ₂ , 8-1/ ₂ x 11S/8-1/ ₂ x 11, 8-1/ ₂ x 14, 11 x 17				
Sort/group	Max. 311.15 mm x 457.2 mm		OHP	_	
	12.25 x 18 inch Min. 90 mm x 139.7 mm		Translucent		
	3.5 x 5.5 inch				
		Thick paper	91 to 271 g/m ² 24.25 to 72 lb	20 sheets	
Sort offset/ group off-	A5, B5S/B5, A4S/A4, B4, A3 8-1/2 x 11S/8-1/2 x 11,	Plain paper Recycled paper	60 to 90 g/m², 16 to 24 lb	200 sheets (up to a height of 24 mm)	
set	8-1/ ₂ x 14, 11 x 17 Max.	Thick paper	91 to 271 g/m ² 24.25 to 72 lb	_	
Sort stable	297 mm x 431.8 mm 11.75 x 17 inch Min. 182 mm x 148.5 mm	Plain paper Recycled	60 to 90 g/m², 16 to 24 lb	200 sheets or 20 copies (up to a height of 24 mm)	
	7.25 x 5.75 inch	Thick paper	91 to 209 g/m ² 24.25 to 55.5 lb	_	

eneral

C. Machine specifications

Limensions	282 mm (W) x 368 mm (D) x 57 mm (H) 11 inch (W) x 14.5 inch (D) x 2.25 inch (H)
Weight	0.7 kg (1.5 lb)

D. Operating environment

Conforms to the operating environment of the main body.

NOTE

How product names appear in the document

FS-519: FinisherPK-515: Punch kitOT-602: Output tray

Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

NOTE

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

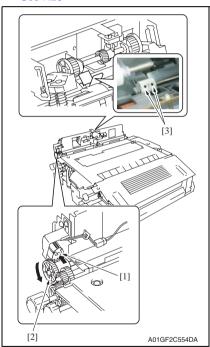
2.1.1 Replacing the paddles

A. Periodically replaced parts/cycle

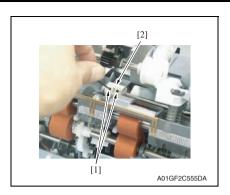
• Paddles: Every 800,000 prints

B. Procedure

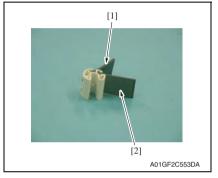
 Remove the finisher unit. See P.28



 While pushing the plunger [1], turn the gear [2] in the direction of the arrow until two screws [3] appear as shown in the illustration.



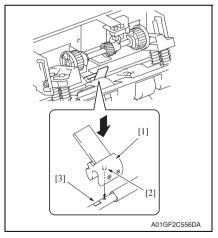
3. Loosen two screws [1] and remove the paddle holder assy [2].



4. Remove two paddles [1] [2] and replace them with new ones.

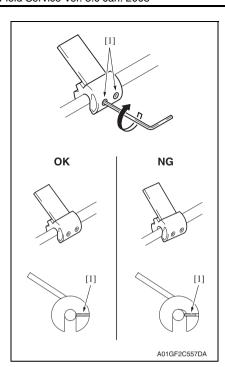
NOTE

- When installing new paddles, be sure to install the paddle covered with black film [1] and the paddle covered with transparent film [2] to their original position.
- If there is difficulty in installing the paddles, apply alcohol to the root of the paddles and install them.



5. Install the paddle holder assy [1]. **NOTE**

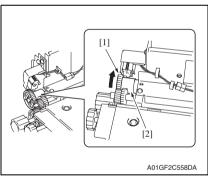
 To reinstall the paddle holder assy, place it where its locating pin [2] is aligned with the hole on the shaft. Attach the paddle holder assy onto the shaft by first pressing the assy on the side where the shaft has a depression [3].



6. Secure the paddle holder assy by tightening two screws [1].

NOTE

- When tightening the two set screws, lightly press the paddle so that it is fixed without any tilt.
- For proper set screw tightening to fix the paddle, turn each set screw only one quarter (1/4) of a turn after the set screw tip has reached the shaft.



NOTE

 After reinstalling the paddle holder assy, check to make sure that the collar [2] remains still when you are turning the gear [1].

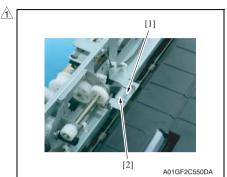
2.1.2 Replacing the cleaning pad

A. Periodically replaced parts/cycle

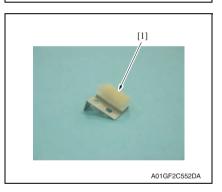
• Cleaning pad: Every 800,000 prints

B. Procedure

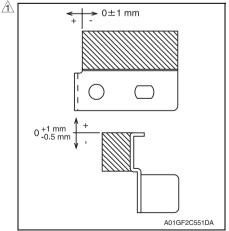
 Remove the finisher unit. See P.28



2. Remove the screw [1] and remove the cleaning pad [2].



3. Peel off the cleaning pad [1].



4. To reinstall, reverse the order of removal.

NOTE

- Before attaching a new cleaning pad, clean the metal surface where the new cleaning pad is attached.
- Align the right ends of the new cleaning pad and the metal as shown in the illustration.

2.1.3 Lubricating the worm gear and replacing the cover film

A. Periodically lubricated parts/cycle

• Worm gear: Every 800,000 prints

B. Periodically replaced parts/cycle

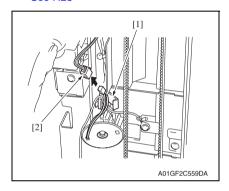
· Cover film: Every 800,000 prints

C. Procedure

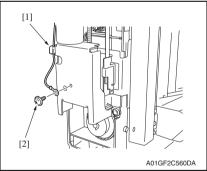
NOTE

- Before the following lubrication and replacement work, make sure to remove optional SD-505 and MT-502 when the finisher is equipped with these options.
- 1. Turn the main and sub power switch ON. Then turn the main power switch OFF when the tray reaches the lowest position during the initial operation.
- 2. Remove the tray unit rear cover.

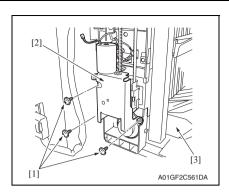
See P.23



3. Remove the wire saddle [1] and disconnect the connector [2].



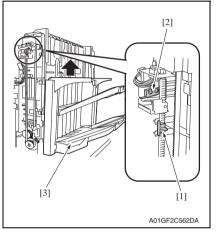
 Remove the wire saddle [1] and the screw [2]. Remove the ground terminal.



5. Remove three screws [1] and remove the elevator motor assy [2].

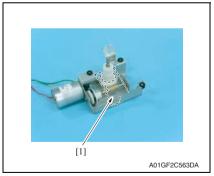
NOTE

 Remove the elevator motor assy while holding the lower part of the tray [3] with your hand.

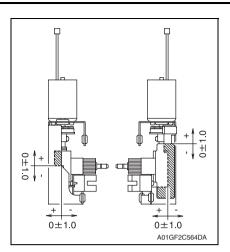


NOTE

 Before reinstalling the elevator motor assy, raise the tray [3] until the lever [1] attached on the timing belt moves to the position lower than that of the sensor [2]. In that state, reinstall the elevator motor assy.

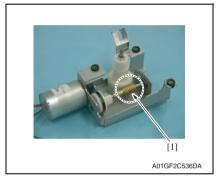


Remove the cover film [1] by peeling off its adhesive tape.



NOTE

- Before attaching a new cover film, clean the metal surface where the new cover film is attached.
- Align the right ends of the new cover film and the metal as shown in the illustration.



8. To reinstall, reverse the order of removal.

 Apply the following grease to the worm gear [1].
 Material: Molykote EM-50L grease (No.: 4478 7801 ##)

2.1.4 Cleaning of the rollers and rolls

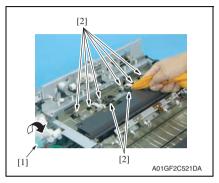
A. Periodically cleaning parts/cycle

• Rollers and rolls: Every 300,000 prints

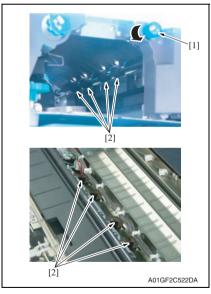
B. Procedure

 Remove the finisher unit. See P.28

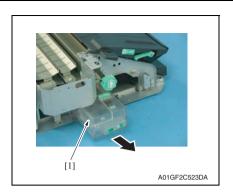
Remove the finisher unit upper cover. See P.21



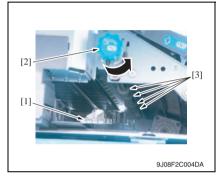
While turning processing knob FN5
 [1], wipe the roller and roll [2] using a soft cloth dampened with alcohol.



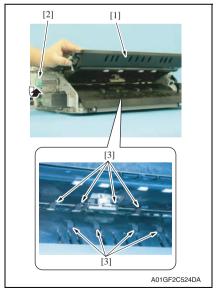
While turning processing knob FN4
[1], wipe the roller and roll [2] using a soft cloth dampened with alcohol.



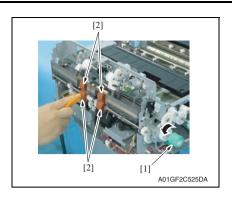
 Remove punch waste storage box FN3.1 [1]. (only when PK-515 is installed)



- 6. Lower processing guide FN3 [1].
- While turning processing knob FN2
 [2], wipe the roll [3] using a soft cloth
 dampened with alcohol.



- 8. Upper processing guide FN1 [1].
- While turning processing knob FN2
 [2], wipe the roller [3] using a soft cloth dampened with alcohol.



10. While turning processing knob FN6 [1], wipe the roller [2] using a soft cloth dampened with alcohol.

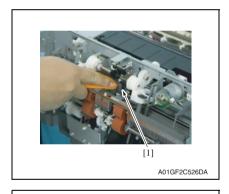
2.1.5 Cleaning of the paddles

A. Periodically cleaning parts/cycle

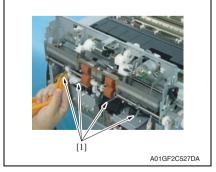
• Paddles: Every 300,000 prints

B. Procedure

 Remove the finisher unit. See P.28



2. Using a soft cloth dampened with alcohol, wipe the paddle 1 [1].



3. Using a soft cloth dampened with alcohol, wipe four paddles 2 [1].

Other

3.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

A CAUTION

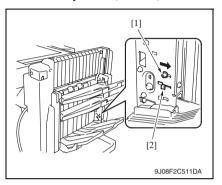
- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely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

3.2 Precautions to be observed when option configuration is changed

• The exit tray detection position must be changed depending on configuration of the options mounted on the copier.

3.2.1 Setting the exit tray detection position

A. When only OT-602, MT-502, or SD-505 is mounted

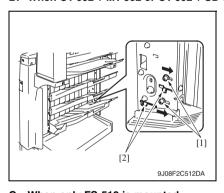


 Loosen the screw [1] and move it in the direction of the arrow. Then, tighten it at the new position.

NOTE

- This step should be done securely.
 If not, any trouble may happen.
- · Be sure to move the screw itself.
- Do not move the screw by using the adjust plate [2].

B. When OT-602 + MT-502 or OT-602 + SD-505 are mounted

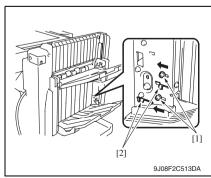


 Loosen two screws [1] and move them in the direction of the arrow.
 Then, tighten them at the corresponding new positions.

NOTE

- This step should be done securely. If not, any trouble may happen.
- · Be sure to move the screw itself.
- Do not move the screw by using the adjust plate [2].

C. When only FS-519 is mounted



 Loosen two screws [1] and move them in the direction of the arrow.
 Then, tighten them at the corresponding new positions.

NOTE

- This step should be done securely. If not, any trouble may happen.
- · Be sure to move the screw itself.
- Do not move the screw by using the adjust plate [2].

3.3 Disassembly/Assembly/Cleaning list (Other parts)

3.3.1 Disassembly/Assembly parts list

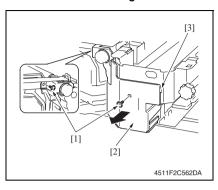
No.	Section	Part name	Ref. page
1	Exterior parts	Finisher unit right front cover	P.20
2		Finisher unit left front cover	P.20
3		Finisher unit rear cover	P.20
4		Finisher unit upper cover	P.21
5		Front door	P.21
6		Middle guide	P.22
7		Intake cover	P.23
8		Tray unit front cover	P.23
9		Tray unit rear cover	P.23
10		Connector cover	P.23
11		Tray 1	P.24
12		Tray 2	P.24
13		Output tray OT-602 (Option)	P.24
14	Units	Tray unit	P.25
15		Finisher unit	P.28
16		Stapler unit	P.36
17		Punch kit PK-515 (Option)	P.37
18	Electric parts	Exit roller motor	P.38
19		Elevator motor	P.49
20		Duplex guide solenoid	P.56
21		FS control board	P.58
22	-Others	Storage paddle drive clutch	P.38
23		Exit upper roller	P.38
24		Storage paddle	P.38
25		Exit paddle drive clutch	P.43
26		Exit lower roller	P.43
27		Aligning section	P.46
28		Timing belt	P.49
29		Shutter drive gear	P.55

Maintenance

FS-519/PK-515/OT-602

3.4 Disassembly/Assembly procedure

3.4.1 Finisher unit right front cover



- 1. Open the front door.
- 2. Remove two screws [1] and remove the finisher unit right front cover [2].

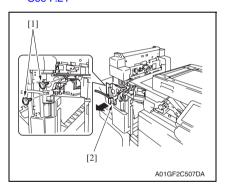
NOTE

At reinstallation, first fit the tab [3] into position.

3.4.2 Finisher unit left front cover

1. Remove the front door.

See P.21

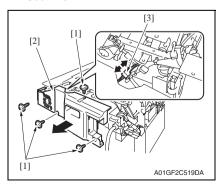


2. Remove two screws [1] and remove the finisher unit left front cover [2].

3.4.3 Finisher unit rear cover

1. Remove the finisher unit.

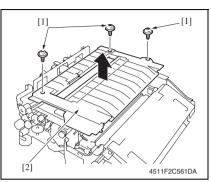
See P.28



- 2. Remove four screws [1] and remove the finisher unit rear cover [2].
- 3. Disconnect the connector [3].

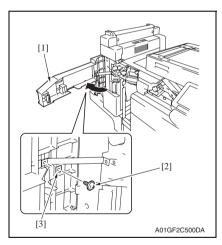
3.4.4 Finisher unit upper cover

- 1. Remove the finisher unit.
 - See P.28
- Remove the finisher unit rear cover. See P.20

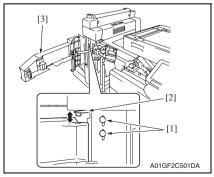


 Remove three screws [1] and remove the finisher unit upper cover [2].

3.4.5 Front door



- 1. Open the front door [1].
- 2. Remove the screw [2] and the retaining plate [3].



 Loosen two screws [1] and move the hinge [2] up. Then remove the front door [3].

3.4.6 Middle guide

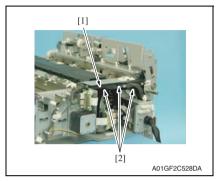
1. Remove the finisher unit.

See P.28

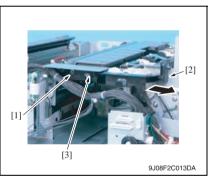
2. Remove the finisher unit rear cover.

See P.20

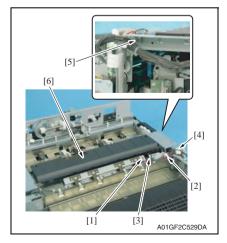
Remove the finisher unit upper cover. See P.21



4. Remove the harness bundle [1] from three harness guides [2].



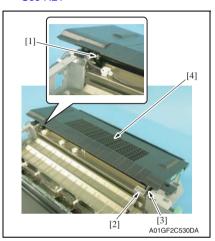
5. Remove the screw [1] and tab [2], and remove the harness guide [3].



- 6. Remove the screw [1] and the ground wire.
- Remove the wire saddle [2] and edge cover [3], and disconnect the connector [4].
- 8. Remove the shoulder screw [5] and remove the middle guide [6].

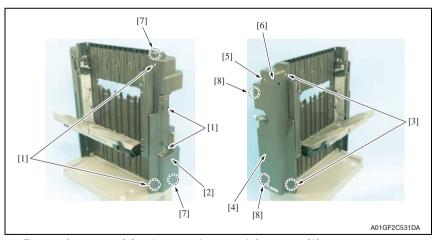
3.4.7 Intake cover

- 1. Remove the finisher unit.
 - See P.28
- Remove the finisher unit rear cover. See P.20
- Remove the finisher unit upper cover. See P.21



- 4. Remove the C-ring [1].
- 5. Remove the screw [2] and the metal bracket [3], and the intake cover [4].

3.4.8 Tray unit front cover/Tray unit rear cover/Connector cover

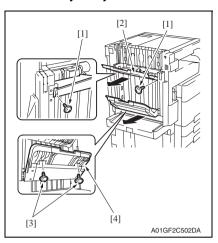


- 1. Remove four screws [1] and remove the tray unit front cover [2].
- 2. Remove two screws [3] and remove the tray unit rear cover [4].
- 3. Remove the screw [5] and remove the connector cover [6].

NOTE

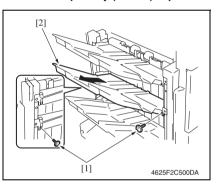
- . When installing the tray unit front cover, snap two tabs [7] first.
- When installing the tray unit back cover, snap two tabs [8] first.

3.4.9 Tray 1/Tray 2



- 1. Remove two screws [1], and remove the tray 1 [2].
- 2. Remove two screws [3], and remove the tray 2 [4].

3.4.10 Output tray (OT-602): Option



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

3.4.11 Tray unit

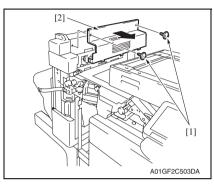
NOTE

- When removing the tray unit, set the tray unit to its home position.
- If the exit tray (OT-602) is installed, remove it in advance.

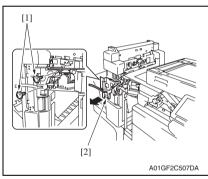
See P.24

1. Remove the front door.

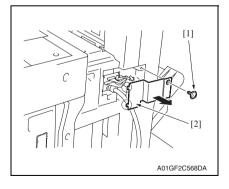
See P.21



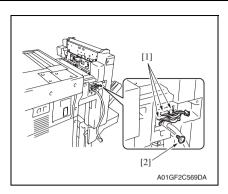
2. Remove two screws [1] and remove the tray unit upper cover [2].



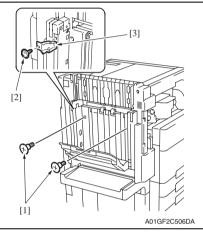
3. Remove two screws [1] and remove the finisher unit left front cover [2].



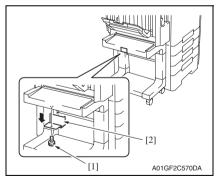
4. Remove the screw [1] and remove the connector cover [2].



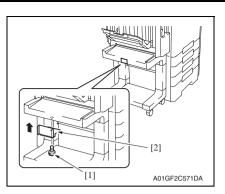
 Disconnect three connectors [1] and remove the screw [2], and the ground wire.



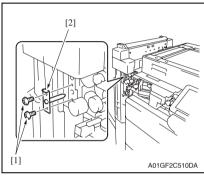
- 6. Remove two shoulder screws [1]. **NOTE**
- When the output tray (OT-602) is mounted, remove the screw [2] and remove the mounting holder [3].



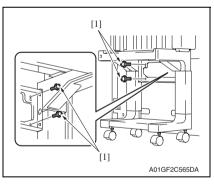
7. Remove the screw [1] and the stopper [2] shown in the illustration.



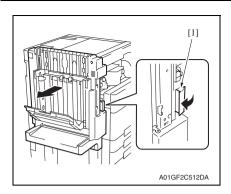
8. Position the stopper [2] as shown and secure it with the screw [1].



9. Remove two screws [1] and remove the mounting bracket [2].



10. Remove four screws [1].



11. Pull the lock release lever [1] and remove the tray unit.

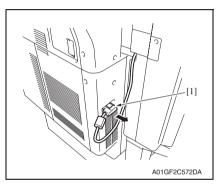
NOTE

 Make sure the height and angle adjustment of stand table when installing the finisher.

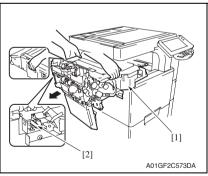
See P.34

3.4.12 Finisher unit

Remove the tray unit.
 See P.25



2. Disconnect the hookup cord [1].



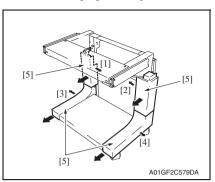
 Hold the positions as shown in the illustration to remove the finisher unit [1].

NOTE

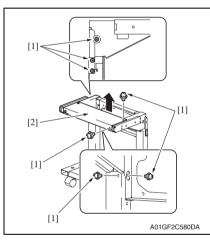
- When setting the finisher unit, make sure to fit the finisher unit hole with stabilizing pin [2] and set it to the end.
- Make sure the height and angle adjustment of stand table when installing the finisher.

See P.34

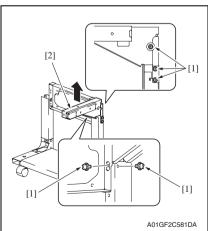
3.4.13 Changing the height of the stand table



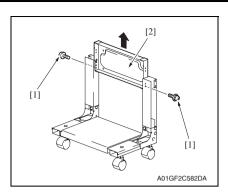
1. Remove four covers [5] while removing four latches [1], [2], [3], and [4].



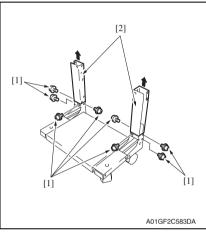
Remove seven screws [1] to remove the upper unit (rear) for the stand table [2].



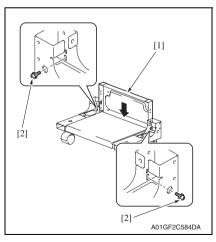
3. Remove five screws [1] to remove the upper unit (front) for the stand table [2].



4. Remove two screws [1] to remove the mounting plate [2].



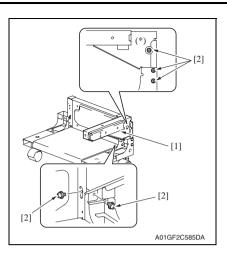
5. Remove eight screws [1] to remove two supports [2].



Set the mounting plate [1] which was removed in step 4, and tighten two screws [2].

NOTE

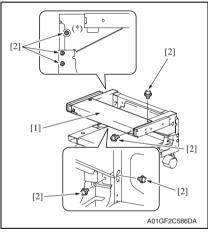
 Use cares since the length of these screws are different from other screws.



 Mount the stand table upper unit (front) [1] which was removed in step 3, and tighten five screws [2].

NOTE

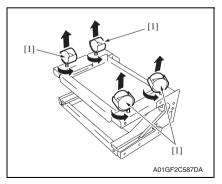
 Use care since the lengths of the screws (*) shown on the illustration are different from other screws.



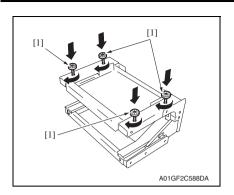
 Mount the stand table upper unit (rear) [1] which was removed in step 2, and tighten seven screws [2].

NOTE

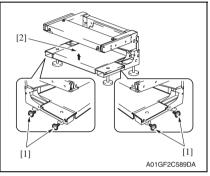
 Use care since the lengths of the screws (*) shown on the illustration are different from other screws.



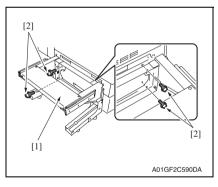
9. Place the stand table upside-down, and remove four casters [1].



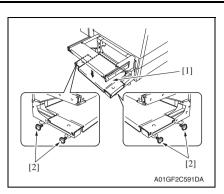
10. Mount four adjusting plates [1] furnished with the main body.



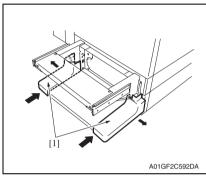
11. Remove four screws [1] and remove the lower unit for the stand table [2].



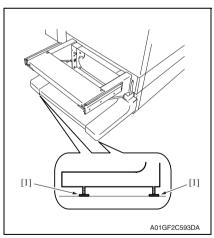
12. Mount the stand table [1] to the main body, and tighten it with four screws [2].



13. Mount the lower unit for the stand table [1] which was removed in step 11, and tighten four screws [2].



14. Mount two covers [1] which were removed in step 1.



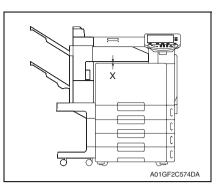
15. Adjust the adjusting plate [1] to touches the floor.

NOTE

 When the height of the setting table is changed, check for the tilt of the setting table.

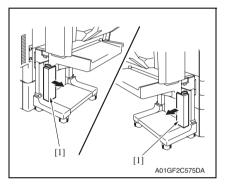
See P.34

3.4.14 Height and angle adjustment of stand table

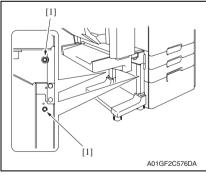


- Measure the width of X on front and back side.
 - Specifications: 5 ± 2 mm
- Following adjustment is necessary when the width does not fall within the specifications.

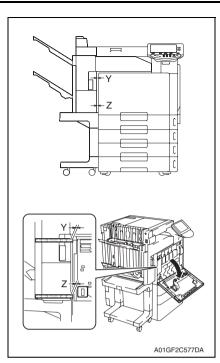
3. Pull the lever to unlock it, and remove the tray unit from the main body.



Remove two covers [1] from the legs of the stand table.



Loosen four screws [1] (two screws each for the left and right) and adjust the height of the stand. Tighten the screws again.



Measure the width of Y and Z (clearance of the exterior parts) on front and back side.

Specifications:

Y = Z - 1 mm

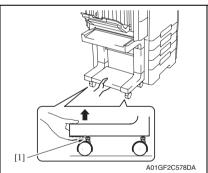
(Y must be smaller than Z)

 $Z = 7 \pm 2 \text{ mm (front side)}$

 $Z = 9 \pm 2 \text{ mm (back side)}$

NOTE

 To measure the front side, open the front door and measure it using finisher side as supporting point referring showed on the illustration left.

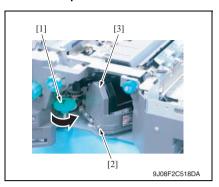


 When the value does not fall within the specified range, remove the tray unit and pull up the casters to adjust them.

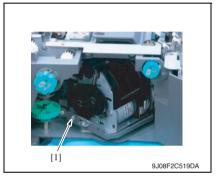
NOTE

 For adjusting the casters, hold the bottom part of the stand table and turn the adjusting bolt [1].

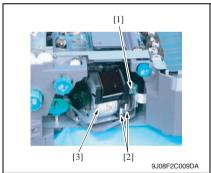
3.4.15 Stapler unit



- 1. Open the front door.
- 2. Turn the dial [1], and move the stapler forward.
- 3. Remove the staple cartridge.
- 4. Remove the screw [2], and remove the cover [3].



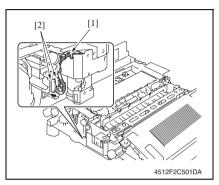
5. Remove the screw [1].



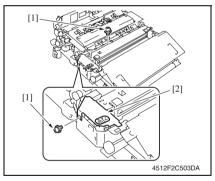
- 6. Remove the screw [1] and remove the ground wire.
- 7. Disconnect two connectors [2] and remove the stapler unit [3].

3.4.16 Punch kit (PK-515): Option

- 1. Remove the finisher unit.
 - See P.28
- Remove the finisher unit rear cover. See P.20
- Remove the finisher unit upper cover. See P.21
- Remove the finisher unit right front cover.
 See P.20

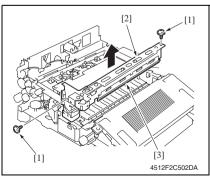


5. Remove the edge cover [1] and disconnect two connectors [2].



NOTE

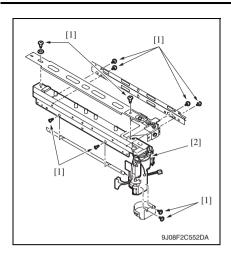
 When the creasing unit is mounted, remove two screws [1], and remove the metal bracket [2].



6. Remove two screws [1] and remove the punch kit [2].

NOTE

 Take care so that the mylar [3] will not be bent.



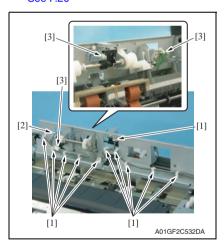
7. Remove ten screws [1] and remove the punch kit [2].

3.4.17 Exit roller motor/Storage paddle drive clutch/Exit upper roller/Storage paddle

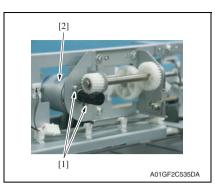
1. Remove the finisher unit.

See P.28

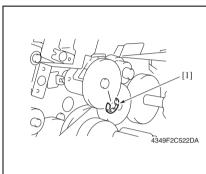
2. Remove the finisher unit left front cover. See P.20



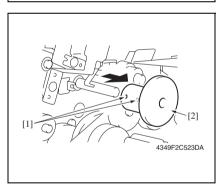
- 3. Remove eleven wire saddles [1] and remove the edge cover [2].
- 4. Disconnect three connectors [3].



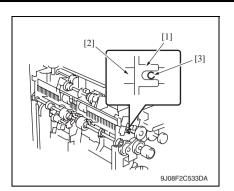
5. Remove two screws [1] and remove the exit roller motor [2].



6. Remove the E-ring [1].

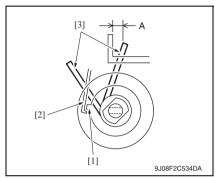


Loosen two hexagonal socket head screws [1], and remove the storage paddle drive clutch assy [2].



NOTE

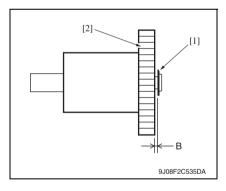
 When installing the storage paddle drive clutch, insert the hexagonal wrench into the flame notch [1], and confirm that the storage paddle drive axis [2] fits to the 2 mm-hole [3].



NOTE

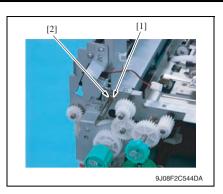
 When installing the storage paddle drive clutch, hook the solenoid flapper [2] on the tab [1] and confirm two storage paddles [3] locates the position as shown in the illustration.

Specifications A: 3.3 ± 3 mm

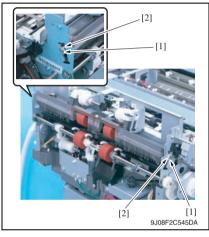


NOTE

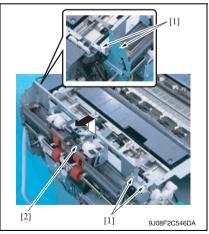
 When installing the storage paddle drive clutch, adjust the distance between the E-ring [1] and the storage paddle drive clutch gear [2].
 Specifications B: 0.2 ± 0.1 mm



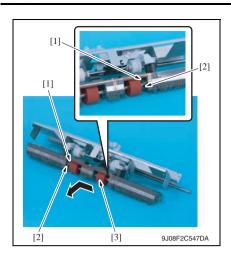
8. Remove the C-ring [1] and the bushing [2].



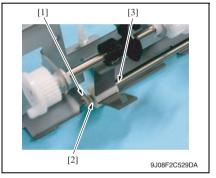
9. Remove two C-rings [1] and two bushings [2].



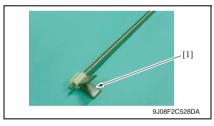
 Remove four screws [1] and remove the exit transportation section (upper) assy [2].



 Remove two C-rings [1] and two bearings [2], and remove the exit upper roller assy [3].

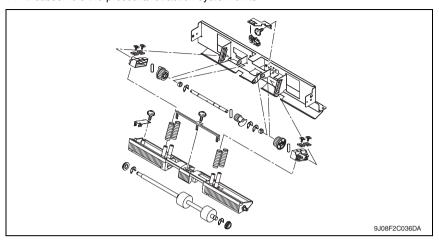


12. Remove the C-ring [1] and the bushing [2], and remove the storage paddle assy [3].



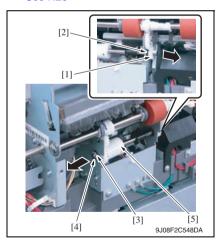
13. Remove the storage paddle [1].

14. Disassemble the pressure/retraction system units

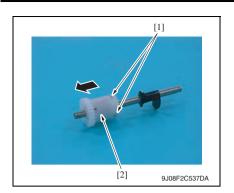


3.4.18 Exit paddle drive clutch/Exit lower roller

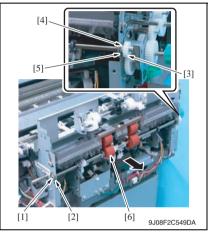
- 1. Remove the finisher unit.
 - See P.28
- 2. Remove the finisher unit left front cover. See P.20



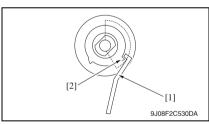
- 3. Remove the gear [1] and the bushing
- 4. Remove the C-ring [3] and the bushing [4].
- 5. Remove the exit paddle drive clutch assy [5].



 Loosen two hexagonal socket head screws [1], and remove the exit paddle drive clutch assy [2].

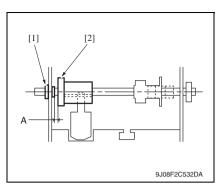


- 7. Remove the C-ring [1] and the bearing [2].
- 8. Remove the gear [3], C-ring [4] and bearing [5].
- 9. Remove the exit lower roller assy [6].



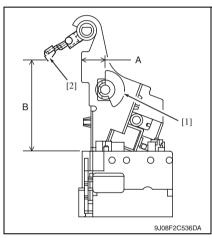
NOTE

 When installing the exit paddle drive clutch, turn up the side that the distance between tabs is wider and hook the solenoid flapper [1] on the tab [2].



NOTE

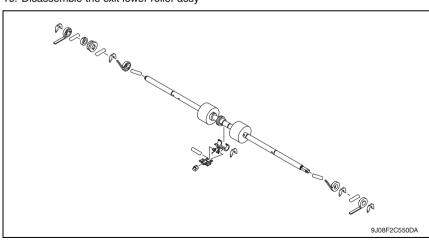
 When installing the exit paddle drive clutch assy, adjust the distance between the bushing [1] and the exit paddle drive clutch [2] to 0.2 mm and tighten two hexagonal socket head screws.



NOTE

- When installing the exit paddle drive clutch assy, adjust the position of blocked panel [1].
 Specifications A: 14.6 ± 1 mm
- When installing the exit lower roller assy, adjust the position of the arm holder [2].
 Specifications B: 56.4 ± 3 mm

10. Disassemble the exit lower roller assy



3.4.19 Aligning section

1. Remove the finisher unit left front cover.

See P.20

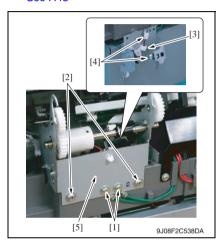
2. Remove the finisher unit rear cover. See P.20

3. Remove the finisher unit upper cover.

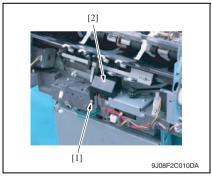
See P.21

4. Remove the exit transportation section (upper) assy. See P.38

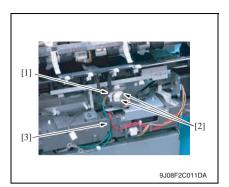
5. Remove the exit lower roller assy. See P.43



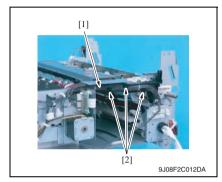
- 6. Remove two screws [1] and remove the ground wire.
- 7. Remove two screws [2].
- 8. Remove the wire saddle [3] and disconnect two connectors [4], and remove the exit paddle drive clutch mounting plate assy [5].



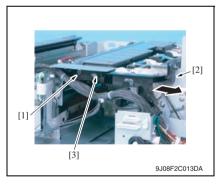
9. Remove the screw [1] and remove the connector cover [2].



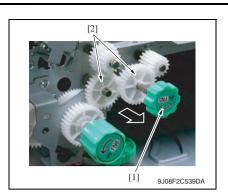
- 10. Remove the wire saddle [1] and disconnect two connectors [2].
- 11. Remove the ground wire from the harness guide [3].



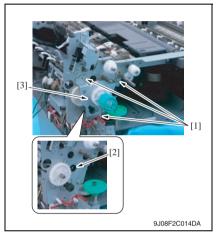
12. Remove the harness bundle [1] from the harness guide [2].



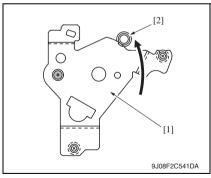
13. Remove the screw [1] and tab [2], and remove the harness guide [3].



14. Remove the knob [1] of FN5 and remove two gears [2].



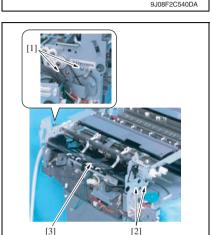
15. Remove three screws [1] and bushing [2], and remove the gear assy [3].



NOTE

- When installing the gear assy, fit the mounting plate [1] to the caulking axis [2], and tightening with screw.
- Make sure that the gear rotates smoothly.





16. Remove the C-ring [1] and remove the gear [2].

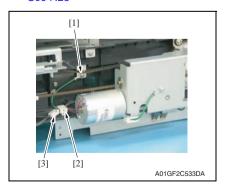
17. Remove two screws [1] and two shoulder screws [2], and remove the aligning plate assy [3].

3.4.20 Elevator motor/Timing belt

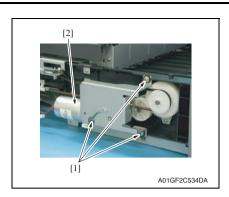
9J08F2C015DA

A. Removal procedure

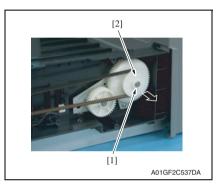
- 1. Remove the tray unit.
 - See P.25
- 2. Remove the tray unit front cover. See P.23
- Remove the tray unit rear cover. See P.23



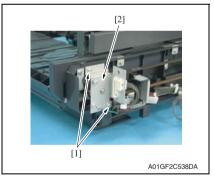
- 4. Remove the screw [1] and remove the ground wire.
- 5. Remove the wire saddle [2] and disconnect the connector [3].



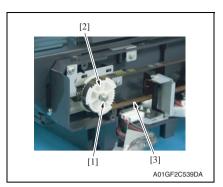
6. Remove three screws [1] and remove the elevator motor assy [2].



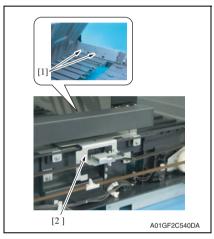
7. Remove the C-ring [1] and remove the gear cover [2].



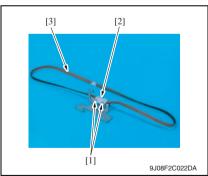
8. Remove two screws [1] and remove the metal bracket [2].



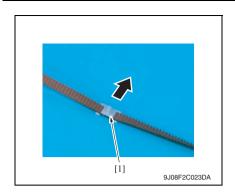
9. Remove the C-ring [1] and remove the gear (upper rear) [2] and belt [3].



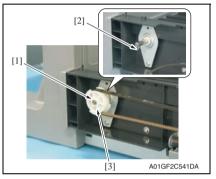
10. Remove two screws [1] and remove elevator mounting plate (rear) [2].



- 11. Remove two screws [1] and remove the belt holder [2].
- 12. Remove the timing belt (rear) [3]. **NOTE**
- When installing the timing belt, make sure there is no looseness.



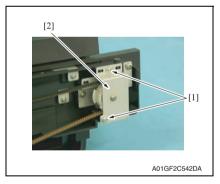
13. Remove the lever [1].



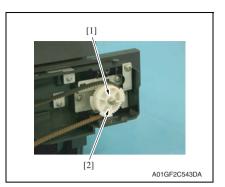
14. Remove the C-ring [1] and pin [2], and remove the gear (lower front) [3].

NOTE

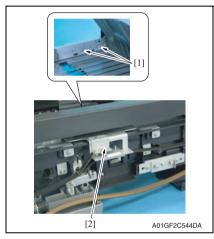
• Use care not to lose the pin.



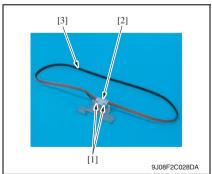
15. Remove two screws [1] and remove the metal bracket [2].



16. Remove the C-ring [1] and remove the gear (upper front) [2].

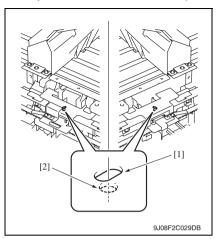


17. Remove two screws [1] and remove elevator mounting plate (front) [2].



- 18. Remove two screws [1] and remove the belt holder [2].
- 19. Remove the timing belt (front) [3].

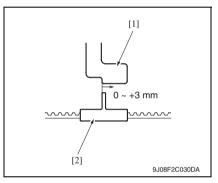
B. Adjustment of lever installation position



1. Install all components excepting for elevator motor assy.

NOTE

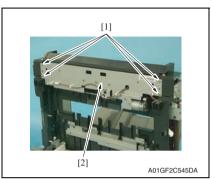
Fit the hole of the elevator mounting plate (front/back) [1] and the hole of the elevator tray [2], and install them by fixing the front and back along.



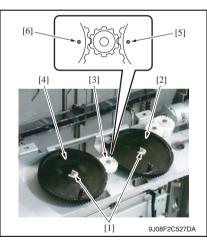
- Fit the blocked plate [1] as shown in the illustration, and install the lever [2].
 - Specifications: 0 to +3 mm
- 3. Install the elevator motor assy.

3.4.21 Shutter drive gear

- 1. Remove the tray unit.
 - See P.25
- 2. Remove the tray unit front cover. See P.23
- Remove the tray unit rear cover. See P.23



4. Remove four screws [1] and remove the shutter drive gear assy [2].



 Remove two C-rings [1] and remove the gear 1 [2], gear 2 [3] and gear 3 [4].

NOTE

 When installing the shutter drive gear, fit the match marks [5] of gear 1 and [6] of gear 3 as shown in the left illustration.

3.4.22 Duplex guide solenoid

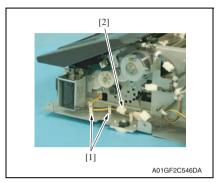
1. Remove the finisher unit.

See P.28

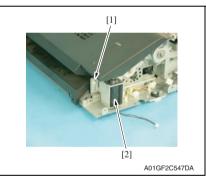
2. Remove the finisher unit rear cover.

See P.20

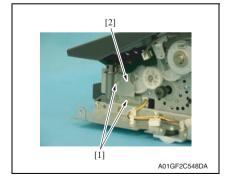
Remove the finisher unit upper cover. See P.21



4. Remove two saddles [1] and disconnect the connector [2].

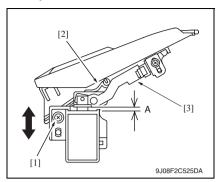


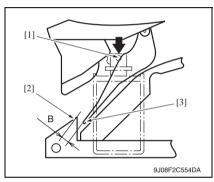
5. Remove the screw [1] and remove the duplex guide solenoid [2].



6. Remove two screws [1] and remove the duplex guide solenoid lever assy [2].

A. Adjustment





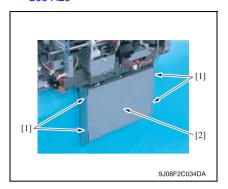
- 1. Loosen the screw [1].
- Move the mounting plate up and down until the space A reaches specification, and tighten the screw [1].
 Specification: 3.5 mm (Tolerance: + 0.5 mm)

NOTE

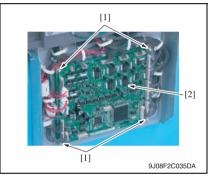
- The switch tab [2] shall face down and touch to the lever [3].
- Lift down the plunger [1], and make sure that the gap B between switch tab end [2] and the guide [3] is over 5 mm.

3.4.23 FS control board

 Remove the tray unit. See P.25



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



- 3. Disconnect all the connectors on the FS control board.
- 4. Remove four board supports [1], and remove the FS control board [2].

Adjustment/Setting

4. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

- Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

⚠ CAUTION

- 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.
- 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.

5. Sensor Check

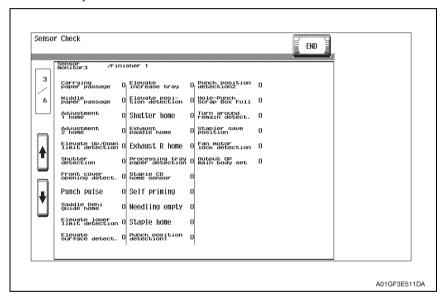
5.1 Check procedure

A. Procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [State Confirmation].
- 3. Touch [Sensor Check].
- 4. Touch two times [♥].

5.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



5.1.2 Sensor check list

Symbol		Panel display	Part/signal name	Operation characteristics/ panel display	
				1	0
PS1	-	Carrying Paper Passage	Entrance sensor	Paper present	Paper not present
PS2		Middle Paper Passage	Transport sensor	Paper present	Paper not present
PS7		Home1 (CD-Align)	Alignment home position sensor /1	At home	Not at home
PS8		Home2 (CD-Align)	Alignment home position sensor /2	At home	Not at home
SW3		Elevate Tray Raised/ Lowered	Elevator tray switch	ON	OFF
SW2		Shutter	Shutter detect switch	Closed	Open
SW1		Front Cover	Front door switch	Closed	Open
PS700		Punch Pulse	Punch motor pulse sensor	Blocked	Unblocked
PS23		Home (Saddle In and Out)	In & out guide home position sensor	Blocked	Unblocked
PS13		Elevate Tray Lowered	Elevator tray lower limit sensor	Blocked	Unblocked
PS12	r 3	Surface (Elev.)	Elevator top face detection sensor	Blocked	Unblocked
_	nito	Elevate Tray Proliferation	Short connector	Set	Not set
PS11	Sensors monitor	Elevate Position	Elevator tray home position sensor	Blocked	Unblocked
PS14	ens	Home (Shutter)	Shutter home position sensor	Blocked	Unblocked
PS6	(U)	Home (Exit Paddle)	Exit paddle home position sensor	Blocked	Unblocked
PS5		Home (Exit R)	Exit roller home position sensor	Blocked	Unblocked
PS3		Empty (Finisher)	Storage tray detect sensor	Blocked	Unblocked
PS9		Home (Staple CD)	Staple home position sensor	Blocked	Unblocked
_		Self Printing	Self-priming sensor	Blocked	Unblocked
_		Staple Empty	Staple empty detection sensor	Blocked	Unblocked
_		Home (Stapler)	Staple home position sensor	Blocked	Unblocked
PS500		Punch Position1	Punch cam sensor	Unblocked	Blocked
PS600		Punch Position2	Punch home position sensor	Unblocked	Blocked
PS30		Punch Dust Full	Punch Trash full sensor	Blocked	Unblocked
PS4		Remain in Reverse Section	Entrance switch back sensor	Unblocked	Blocked
PS10		Stapler Save Position	Stapler save position sensor	Blocked	Unblocked
FM9		Fan Motor Lock	Cooling fan motor	When turning	When stopped
SW4		Exit OP Machine Set	Slide switch	Set	Not set

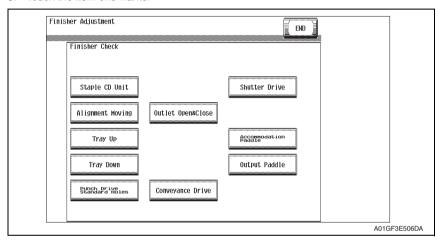
6. Finisher operations

⚠ 6.1 CB-FN adjustment

6.1.1 Finisher Check

A. Entering Finisher

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [Finisher].
- 3. Touch [CB-FN adjustment].
- 4. Touch [Finisher Check].
- 5. Touch the item one wants.



B. Finisher Check

(1) Staple CD Unit

- Returns the staple unit to the predetermined position after it moves to the 2-point stapling position for A4.
 - → Moves from the predetermined position to the inner 2-point stapling position for A4.
 - → Moves from the starting position and stops after the predetermined time.
 - → Moves to the front of A4.
 - → Moves from the starting position and stops after the predetermined time.
 - → Moves to the predetermined position.
 - → The operation is finished.

(2) Alignment Moving

- Aligning plates 1 and 2 return to the predetermined position after moving to the aligning position for A4S.
 - → Moves from the predetermined position to the second predetermined position for A4S.
 - → Stops after the predetermined time.
 - → Moves to the aligning position for A4S.
 - → Stops after the predetermined time.
 - → Moves to the predetermined position.
 - → The operation is finished.

(3) Tray Up

- The elevator tray is raised to bin 1. (Bin 1 \rightarrow Additional bin \rightarrow Bin 2)
 - \rightarrow The exit opens.
 - → The shutter closes.
 - \rightarrow The paper output tray is raised to bin 1.
 - \rightarrow The shutter opens.
 - → The exit closes.
 - \rightarrow The operation is finished.

(4) Tray Down

- The elevator tray is lowered from bin 1. (Bin 2 \rightarrow Additional bin \rightarrow Bin 1)
 - \rightarrow The exit opens.
 - → The shutter closes.
 - \rightarrow The paper output tray is lowered from bin 1.
 - → The shutter opens.
 - \rightarrow The exit closes.
 - → The operation is finished.

(5) Punch Drive Standard Holes (appears only when the punch kit PK-515 is installed)

- The punch is driven once at a standard hole.
 - \rightarrow The operation is finished.

(6) Punch Drive MC 2Holes (appears only when the punch kit PK-515 is installed)

- · The punch is driven once at a 2holes.
 - → The operation is finished.

(7) Outlet Open & Close

- Opens and closes the exit.
 - \rightarrow The exit opens.
 - → Stops after the predetermined time.
 - \rightarrow The exit closes.
 - \rightarrow The operation is finished.

(8) Fold Drive (appears only when the saddle kit SD-505 is installed) See P.29 of the SD-505 service manual.

(9) Saddle Outlet Open & Close (appears only when the saddle kit SD-505 is installed)

See P.29 of the SD-505 service manual.

(10) Conveyance Drive (appears only when the saddle kit SD-505 is installed) See P.29 of the SD-505 service manual.

(11) Shutter Drive

- · Opens and closes the shutter.
 - → The exit opens.
 - → The shutter closes.
 - → Stops after the predetermined time.
 - \rightarrow The shutter opens.
 - \rightarrow The exit closes.
 - \rightarrow The operation is finished.

(12) Bin SL Drive (appears only when the mail bin kit MT-502 is installed)

See P.10 of the MT-502 service manual.

(13) Accommodation Paddle

- Drive the storage paddle two turns
 - → The operation is finished,

(14) Output Paddle

- · Drive the exit paddle one turn
 - → The operation is finished,

6.1.2 Punch Regist Loop Size

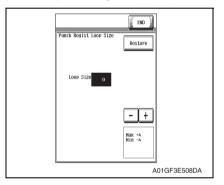
NOTE

This adjustment must be made in any of the following cases:

- · When a slant occurs in the punch hole position.
- · When misfeed frequently occurs in punch hole mode.
- 1. Call the Service Mode to the screen.

See P.338 of the main body service manual.

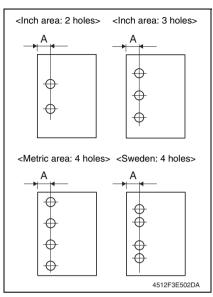
- 2. Touch [Finisher].
- 3. Touch [CB-FN adjustment].
- 4. Touch [Punch Regist Loop Size].



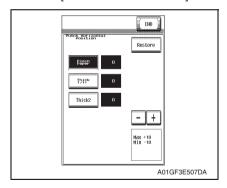
- Set the correction value using the [-]/ [+] kevs.
- Adjustment range: +4 max. and -4 min. (1 increment: 1 mm)
- To make loop length larger, enter a positive value.
- To make loop length smaller, enter a positive value.

- 6. Touch two times [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.
- 9. Make a copy again and check the deviance of punch hole position.

6.1.3 Punch Horizontal Position



- 4. Call the Service Mode to the screen.
- 5. Touch [Finisher].
- 6. Touch [CB-FN adjustment].
- 7. Touch [Punch Horizontal Position].



- Set the copier into the hole punch mode and make a 1-sided copy from a 1-sided original.
- Measure width A on the copy and check to see if the measured dimension falls within the specified range.
 Inch area: 2 holes, 3 holes>
 Specifications: 9.5 ± 1.0 mm
 Metric area: 4 holes>
 Specifications: 11 ± 1.0 mm
 Sweden: 4 holes>
- If the measured width A outside the specified range, perform the following procedure to punch hole position adjustment.

Specifications: 11.5 ± 1.0 mm

- 8. Set the correction value using the [+]/[-] keys.
- To make width A wider, enter a positive value.
- To make width A narrower, enter a negative value.
- Adjustment range: +10 max. and -10 min. (1 increment: 0.5 mm)
- 9. Touch two times [END].
- Touch [Exit] on the Service Mode screen.
- Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.
- 12. Make a copy and check the punch hole positions again.



5.2 Punch option setting

Functions	To set installation and model of the punch kit. To set the number of holes to be made by the punch kit installed.		
Use	Use when the punch kit is installed.		
Setting/ Procedure	 The default setting is Non-installat. 1. Touch [PK-515]. 2. Select the number of punch holes to be made corresponding to the model and destination. 3. Touch [decision]. 4. Turn off the main power switch and turn it on again more than 10 seconds after. 		

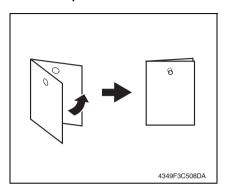
7. Mechanical adjustment

7.1 Punch hole deviance adjustment (PK-515)

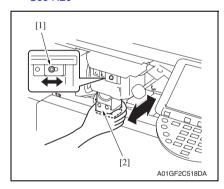
NOTE

Make this adjustment after any of the following procedures has been performed.

- · When the punch kit has been replaced.
- · When the punch kit has been removed.



- Set the copier into the hole punch mode and make a 1-sided copy from a 1-sided original.
- Fold the output paper in half and check whether the punch hole positions are aligned.
 Specification: 0 ± 2 mm
- If the punch hole position is misaligned, adjust with the following procedure.
- Remove the finisher unit right front cover.
 See P.20



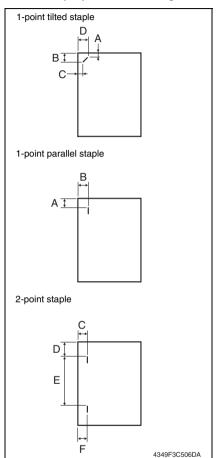
- Loosen the adjustment screw [1], and move the punch unit [2] forward or backward to make the adjustment.
- 6. After the adjustment has been completed, tighten the adjusting screw.
- 7. Make a copy and check the punch hole positions again.

7.2 Staple position adjustment

NOTE

Make this adjustment after any of the following procedures has been performed.

- · When the stapler has been replaced.
- When staple position is misaligned.



- Set the staple mode and make a copy.
- 2. Check the staple position of the paper.
- 1-point tilted staple (Paper width: 216 to 297 mm)
 279 to 297 mm: 45° tilt,
 B5, B4S: 30° tilt

Measurement position	Specification	Adjustment range
Α	4.9 mm	-3 mm to +3 mm
В	10.1 mm	-4 mm to +4 mm
С	6.5 mm	-3 mm to +3 mm
D	16.2 mm	-4 mm to +4 mm

• 1-point parallel staple (Paper width: 182 to 216 mm)

Measurement position	Specification	Adjustment range	
Α	4.5 mm	-3 mm to +3 mm	
В	6 mm	-4 mm to +4 mm	

2-point staple

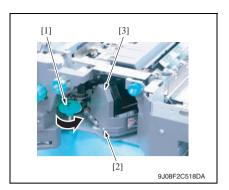
-	-	
Measurement position	Specification	Adjustment range
C, F	6 mm	-4 mm to +4 mm
D	Y	-4 mm to +4 mm
E	Х	-4 mm to +4 mm

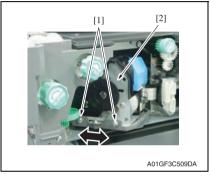
Y = (paper width-X-11) / 2

X = A3, A4: 137 B4, B5: 114 A4S: 190 B5S: 162

Substitute above into the equation.

3. If the staple position is misaligned, adjust with the following procedure.





- 4. Open the front door.
- 5. Turn the dial [1], and move the stapler forward.
- 6. Loosen the screw [2], and remove the cover [3].

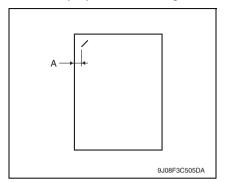
- Loosen two adjustment screws [1] and move the stapler unit [2] in the direction of the arrow to make the adjustment.
- 8. Make another copy and check the staple position.

7.3 Staple home position sensor position adjustment

NOTE

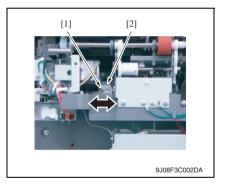
Make this adjustment after any of the following procedures has been performed.

- When the stapler has been replaced.
- When staple position is misaligned.



- 1. Set the staple mode and make a copy.
- 2. Check the staple position of the paper.
- 1-point tilted staple (Paper width: 216 to 297 mm)
 Specification A: 6.5 mm ± 1.5 mm
- If the staple position does not fall within the specified range, make an adjustment as shown below.

Remove the tray unit. See P.25



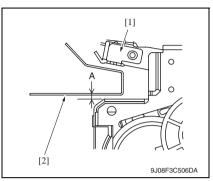
Loosen the screw [1] and make the adjustment by shifting stapler home sensor [2] in the direction of an arrow.

7.4 Adjustment of clearance between stapler and FD stopper

NOTE

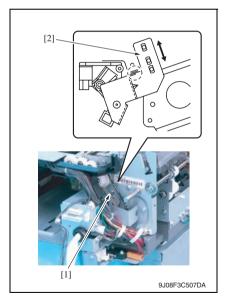
Make this adjustment after any of the following procedures has been performed.

· When stapler fails to move appropriately.



- Check the clearance between the stapler unit [1] and the FD stopper [2] is within the specified range.
 Specification A: 2.0 mm ± 0.5 mm
- If the value does not fall within the specified range, make the adjustment as shown below.

- 3. Remove the finisher unit.
 - See P.28
- Remove the finisher unit rear cover.
 See P.20



5. Loosen the screw [1] and move the mounting plate [2] to adjust.

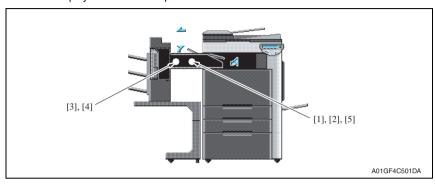
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Troubleshooting

8. Jam display

8.1 Misfeed display

When a paper misfeed occurs, the misfeed message, misfeed location, and paper location are displayed on the touch panel of the machine.

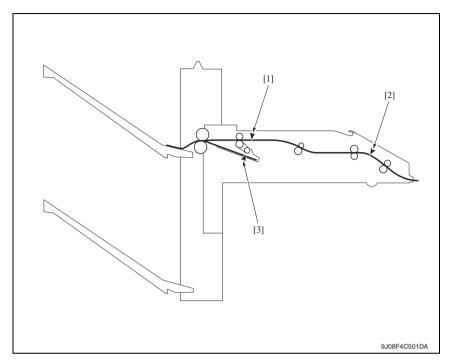


Display	Code	Misfeed location	Misfeed processing location	Action
[1]	7218	Finisher transport section misfeed	Front door	P.76
[2]	7216	Finisher exit section misfeed	Front door	P.77
[3]	7221	Finisher bundle exit misfeed	Front door	P.77
[4]	7281	Finisher staple misfeed	Front door	P.78
[5]	7243	Finisher punch misfeed	Front door	P.78

8.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfed, and close the door.

8.2 Sensor layout



[1] Transport sensor

PS2

[2] Entrance sensor

- PS1
- [3] Storage tray detect sensor
- PS3

8.3 Solution

8.3.1 Initial check items

• When a paper misfeed occurs, first perform the following initial check items.

Check Item	Action
Does the paper meet product specifications?	Change the paper.
Is paper curled, wavy, or damp?	See "Solution when paper curl occurs" on P.75.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.

8.3.2 Solution when paper curl occurs

,	1		
Step	Check items/actions		
1	Turn over the stacked paper in the paper tray.	OK	_
'	rum over the stacked paper in the paper tray.	NG	Go to step 2.
2	Does paper curl occur just after a warm-up has been completed or the sleep mode has been turned OFF?	YES	Go to step 3.
2	Does paper curl occur under normal conditions (under conditions other than those mentioned above)?	YES	Go to step 5.
	1. Call the Service Mode to the screen.	OK	_
3	 2. Select [System 1] → [Change Warm Up Time]. 3. Change the setting to [Mode3]. See P.394 of the main body service manual. 	NG	Go to step 4.
4	 Call the Service Mode to the screen. Select [System 1] → [Change Warm Up Time]. Change the setting to [Mode4]. See P.394 of the main body service manual. 	1	_
	1. Call the Service Mode to the screen.	OK	_
5	 Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-10 °C]. See P.346 of the main body service manual. 	NG	Go to step 6
6	 Call the Service Mode to the screen. Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-20 °C]. See P.346 of the main body service manual. 		_

8.3.3 Transport section misfeed

A. Detection timing

Туре	Description	
Finisher transport section	The entrance sensor (PS1) is not turned ON even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned ON by the paper.	
misfeed detection	The entrance sensor (PS1) is not turned OFF even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned OFF by the paper.	
Finisher transport section	The entrance sensor (PS1) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.	
misfeed detection	The transport sensor (PS2) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.	

Relevant electrical parts	
Paper exit sensor (PS25)	FS control board (FSCB)
Entrance sensor (PS1)	MFP board (MFPB)
Transport sensor (PS2)	

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7		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS25 I/O check, sensor check	_	_
3	PS1 I/O check, sensor check	FSCB PJ19-11 (ON)	FS-519 C-7
4	PS2 I/O check, sensor check	FSCB PJ19-14 (ON)	FS-519 C-7
5	Change FSCB	_	_
6	Change MFPB	_	_

8.3.4 Exit section misfeed

A. Detection timing

Туре	Description
Finisher exit section mis-	The transport sensor (PS2) is not turned ON even after the set period of time has elapsed after the entrance sensor (PS1) is turned ON by the paper.
feed detection	The transport sensor (PS2) is not turned OFF even after the set period of time has elapsed after the entrance sensor (PS1) is turned OFF by the paper.

B. Action

Relevant electrical parts	
Entrance sensor (PS1)	FS control board (FSCB)
Transport sensor (PS2)	MFP board (MFPB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS1 I/O check, sensor check	FSCB PJ19-11 (ON)	FS-519 C-7
3	PS2 I/O check, sensor check	FSCB PJ19-14 (ON)	FS-519 C-7
4	Change FSCB	_	_
5	Change MFPB	_	_

Finisher bundle exit misfeed 8.3.5

A. Detection timing

Туре	Description
	The storage tray detect sensor (PS3) is not turned OFF even after the set period of time has elapsed after the exit motor (M4) is energized.

Relevant electrical parts	
Storage tray detect sensor (PS3) Exit motor (M4)	FS control board (FSCB)



		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS3 I/O check, sensor check	FSCB PJ14-8 (ON)	FS-519 C-12
3	M4 operation check	FSCB PJ10-5 to 8	FS-519 C-3
4	Change FSCB	_	_

8.3.6 Finisher staple misfeed

A. Detection timing

Туре	Description
Finisher staple misfeed detection	The staple home position sensor in the staple unit is not turned ON even after the set period of time has elapsed after the staple motor rotates forward, and then the staple motor rotates backward, and the staple home position sensor in the staple unit is turned ON within the set period of time.

B. Action

Relevant electrical parts	
Staple unit	FS control board (FSCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	Drive coupling section check	_	_
3	Sensor check	_	_
4	Change staple unit	_	_
5	Change FSCB	_	_

8.3.7 Finisher punch misfeed (PK-515)

A. Detection timing

Туре	Description
· '	Punch positioning sensors 1 and 2 are not turned ON even after the set period of time has elapsed after the punch motor is energized.

Relevant electrical parts	
Punch unit	FS control board (FSCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	Drive coupling section check	_	_
3	Sensor check	_	_
4	Change punch unit	_	_
5	Change FSCB	_	_

9. Malfunction code

9.1 Trouble code

 The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the touch panel.

Code	Description	Detection timing
C1004	FNS communication error	When the FS control board (FSCB) is receiving data, a communication error is detected.
C1183	Elevator motor ascent/ descent drive failure	 The elevator tray lower limit sensor (PS13) is not turned ON even after the set period of time has elapsed after the main power switch is set to ON. The elevator tray home position sensor (PS11) and elevator top face detection sensor (PS12) are not turned ON even after the set period of time has elapsed after the elevator motor (M11) is energized. The elevator tray does not stop at the position for the specified tray after the elevator motor (M11) is energized (beginning of descent operation) and the elevator tray lower limit sensor (PS13) is turned ON. The elevator top face detection sensor (PS12) is not turned ON even after the set period of time has elapsed after the elevator motor (M11) is energized (beginning of ascent operation) when paper is being fed out.
C1190	Aligning plate 1 drive failure	 The alignment home position sensor/1 (PS7) is not turned ON even after the set period of time has elapsed after the main power switch is set to ON. The alignment home position sensor/1 (PS7) is not turned OFF even after the set period of time has elapsed after the align motor/1 (M5) is energized.
C1191	Aligning plate 2 drive failure	 The alignment home position sensor/2 (PS8) is not turned ON even after the set period of time has elapsed after the main power switch is set to ON. The alignment home position sensor/2 (PS8) is not turned OFF even after the set period of time has elapsed after the align motor/2 (M6) is energized.
C11A0	Paper holding drive failure	 The exit paddle home position sensor (PS6) is not turned ON even after the set period of time has elapsed after the exit paddle solenoid (SD2) is activated (beginning of paddle retraction operation). The exit paddle home position sensor (PS6) is not turned OFF even after the set period of time has elapsed after the exit paddle solenoid (SD2) is activated (beginning of paddle paper-holding operation).
C11A1	Exit roller pressure/ retraction failure	 The exit roller home position sensor (PS5) is not turned ON even after the set period of time has elapsed after the exit roller motor (M10) is energized (beginning of pressure operation). The exit roller home position sensor (PS5) is not turned OFF even after the set period of time has elapsed after the exit roller motor (M10) is energized (beginning of retraction operation).

Code	Description	Detection timing
C11A3	Shutter drive failure	 The shutter home position sensor (PS14) is not turned OFF even after the set period of time has elapsed after the shutter motor (M8) is energized (beginning of shutter-opening operation). The shutter home position sensor (PS14) is not turned ON even after the set period of time has elapsed after the shutter motor (M8) is energized (beginning of shutter-closing operation).
C11B0	Staple unit CD drive failure	 The staple home position sensor (PS9) is not turned ON even after the set period of time has elapsed after the stapling unit moving motor (M7) is energized (beginning of return opera- tion to predetermined position).
C11B2	Staple drive failure	The home position sensor is not turned ON even after the set period of time has elapsed after the staple motor is energized (beginning of staple operation).
C11C0	Punch cam motor unit failure	The punch home position sensor (PS600) is not turned ON even after the set period of time has elapsed while the punch motor (M99) is energized.
C1301	Finishing option cooling fan motor failure	The cooling fan motor (FM9) lock signal remains set to H for a set period of time while the cooling fan motor (FM9) is turning. The cooling fan motor (FM9) lock signal remains set to L for a set period of time while the cooling fan motor (FM9) remains stopped.
C1402	FNS nonvolatile memory failure	When the main power switch is turned ON, the FS board non-volatile memory failure is detected.
CC155	Finisher ROM failure	Data of flash ROM of the finishing options is determined to be faulty when the power is turned ON.

9.2 Solution

9.2.1 C1004: FNS communication error

Relevant electrical parts		
FS control board (FSCB)		

		WIRING DIAG	
Step	Action	Control signal	Location (Electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	_	_
2	Rewrite firmware using the compact flash card.	_	_
3	Change FSCB	_	_

9.2.2 C1183: Elevator motor ascent/descent drive failure

Relevant electrical parts	
Elevator motor (M11) Elevator top face detection sensor (PS12)	
Elevator tray home position sensor (PS11)	Relay board/1 (REYB/1)
Elevator tray lower limit sensor (PS13)	FS control board (FSCB)

2	ſ

		WIRING DIAG	RAM
Step	Action	Control signal	Location (Electrical component)
1	Check the M11 connector for proper connection and correct as necessary.	_	_
2	Check M11 for proper drive coupling and correct as necessary.	_	_
3	If OT-602 is connected, check the connector for proper connection, and correct as necessary.	-	_
4	Check the installation position of the OT-602 tray, and correct as necessary.	_	_
5	M11 operation check	FSCB PJ6-5 to 6	FS-519 J-4
6	PS11 I/O check, sensor check	FSCB PJ18-6 (ON)	FS-519 L-3
7	PS13 I/O check, sensor check	FSCB PJ18-3 (ON)	FS-519 L-4
8	PS12 I/O check, sensor check	FSCB PJ18-4 (ON)	FS-519 L-3
9	Change REYB/1		_
10	Change FSCB	_	_

9.2.3 C1190: Aligning plate 1 drive failure

9.2.4 C1191: Aligning plate 2 drive failure

Relevant electrical parts	
Align motor/1 (M5) Align motor/2 (M6) Alignment home position sensor/1 (PS7) Alignment home position sensor/2 (PS8)	FS control board (FSCB)

• C1190



FS-519/PK-515/OT-602

7		WIRING DIAGRAM		RAM
	Step	Action	Control signal	Location (Electrical component)
	1	Check the M5 connector for proper connection and correct as necessary.	_	_
	2	Check M5 for proper drive coupling and correct as necessary.	_	_
ĺ	3	M5 operation check	FSCB PJ11-1 to 4	FS-519 C-10
ĺ	4	PS7 I/O check, sensor check	FSCB PJ14-3 (ON)	FS-519 C-11
	5	Change FSCB	_	_

• C1191



2			WIRING DIAG	RAM
	Step	Action	Control signal	Location (Electrical component)
	1	Check the M6 connector for proper connection and correct as necessary.	_	_
	2	Check M6 for proper drive coupling and correct as necessary.	_	_
	3	M6 operation check	FSCB PJ11-5 to 8	FS-519 C-11
	4	PS8 I/O check, sensor check	FSCB PJ14-6 (ON)	FS-519 C-11
	5	Change FSCB	_	_

9.2.5 C11A0: Paper holding drive failure

Relevant electrical parts	
Exit paddle solenoid (SD2) Exit paddle home position sensor (PS6)	FS control board (FSCB)

2

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the SD2 connector for proper connection and correct as necessary.	_	_
2	PS6 I/O check, sensor check	FSCB PJ13-11 (ON)	FS-519 C-4
3	SD2 operation check	FSCB PJ13-2 (REM)	FS-519 C-5
4	Change FSCB		_

C11A1: Exit roller pressure/retraction failure 9.2.6

Relevant electrical parts	
Exit roller motor (M10)	FS control board (FSCB)
Exit roller home position sensor (PS5)	

2

7	WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical component)
1	Check the M10 connector for proper connection and correct as necessary.	_	_
2	Check M10 for proper drive coupling and correct as necessary.	_	_
3	M10 operation check	FSCB PJ12-8 to 9	FS-519 C-9
4	PS5 I/O check, sensor check	FSCB PJ19-3 (ON)	FS-519 C-8
5	Change FSCB	_	_

9.2.7 C11A3: Shutter drive failure

Relevant electrical parts	
Shutter motor (M8)	Relay board/1 (REYB/1)
Shutter home position sensor (PS14)	FS control board (FSCB)

2			WIRING DIAG	RAM
	Step	Action	Control signal	Location (Electrical component)
	1	Check the M8 connector for proper connection and correct as necessary.	_	_
	2	Check M8 for proper drive coupling and correct as necessary.	_	_
	3	M8 operation check	FSCB PJ6-7 to 8	FS-519 J-5
	4	PS14 I/O check, sensor check	FSCB PJ18-5 (ON)	FS-519 J-5
	5	Change REYB/1	_	_
	6	Change FSCB	_	_

9.2.8 C11B0: Staple unit CD drive failure

Relevant electrical parts	
Stapling unit moving motor (M7) Staple home position sensor (PS9)	FS control board (FSCB)

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Step		WIRING DIAGRAM	
	Action	Control signal	Location (Electrical component)
1	Check for interference with the shutter and exit roller, and correct as necessary.	_	_
2	Check the M7 connector for proper connection and correct as necessary.	_	_
3	Check M7 for proper drive coupling and correct as necessary.	_	_
4	M7 operation check	FSCB PJ10-1 to 4	FS-519 C-3 to 4
5	PS9 I/O check, sensor check	FSCB PJ13-5 (ON)	FS-519 C-4 to 5
6	Change FSCB	_	_

9.2.9 C11B2: Staple drive failure

Relevant electrical parts	
Staple unit FS control board (FSCB)	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the staple unit connector for proper connection and correct as necessary.	-	_
2	Check the staple unit for proper drive coupling, and correct as necessary.	_	_
3	Staple unit operation check	_	_
4	Change staple unit		_
5	Change FSCB	_	_

9.2.10 C11C0: Punch cam motor unit failure

Relevant electrical parts	
Punch unit FS control board (FSCB)	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the punch unit connectors for proper connection, and correct as necessary.	-	_
2	Check the punch unit for proper drive coupling, and correct as necessary.	_	_
3	Punch unit sensor check	_	_
4	Change punch unit	_	_
5	Change FSCB	_	_

9.2.11 C1301: Finishing option cooling fan motor failure

Relevant electrical parts	
Cooling fan motor (FM9)	FS control board (FSCB)

2		WIRING DIAGRAM		RAM
	Step	Action	Control signal	Location (Electrical component)
	1	Check the FM9 connector for proper connection and correct as necessary.	_	_
	2	Check FM9 for proper drive coupling and correct as necessary.	_	_
	3	Check the FSCB connectors for proper connection, and correct as necessary.	_	_
	4	FM9 operation check	FSCB PJ12-3	FS-519 C-10
	5	Change FSCB		_

9.2.12 C1402: FNS nonvolatile memory failure

Relevant electrical parts		
FS control board (FSCB)		

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	_	_
2	Rewrite firmware using the compact flash card.	_	_
3	Change FSCB	_	_

9.2.13 CC155: Finisher ROM failure

Relevant electrical parts		
FS control board (FSCB)		

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	_	_
2	Rewrite firmware using the compact flash card.	_	_
3	Change FSCB	_	_

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SERVICE MANUAL

FIELD SERVICE

MT-502

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text, is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2008/01	2.0	À	Error correction
2007/07	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

Adjustment / Setting

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Outline

1. Product specification

A. Type

Name	Mailbin kit	
Installation	Install at the top section of the finisher elevator tray.	
Number of bins	4 bins	
Number of sheets stored per bin	125 sheets (Total 500 sheets) (90 g/m², 24 lb)	
Storable paper	Plain paper	60 to 90 g/m² (16 to 24 lb)
Storable paper	Recycled paper	- 00 to 90 g/m- (10 to 24 lb)
Storable paper size	Metric area	A5S, B5, A4
Storable paper size	Inch area	5-1/2 x 8-1/2S, 8-1/2 x 11

B. Machine specifications

Power requirements	DC 24 V (Supplied from the finisher) DC 5 V (Generated inside the mail bin)
	340 mm (W) x 509 mm (D) x 387 mm (H) 13.5 inch (W) x 20 inch (D) x 15.25 inch (H)
Weight	8.0 kg (17.75 lb)

C. Operating environment

• Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

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Maintenance

2. Other

2.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

2.2 Disassembly/Assembly/Cleaning list (Other parts)

2.2.1 Disassembly/Assembly parts list

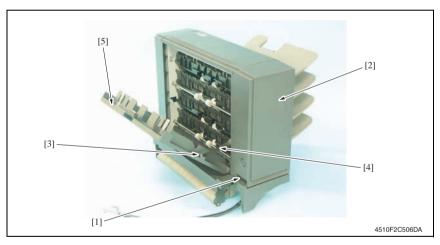
No.	Section	Part name	Ref. page
1		Rear cover	P.4
2		Front cover	P.5
3	Exterior parts	Upper cover	P.5
4		Right door	P.4
5		Paper output tray	P.5

2.2.2 Cleaning parts list

No.	Section	Part name	Ref. page
1	Exit section	Roller and roll	P.5

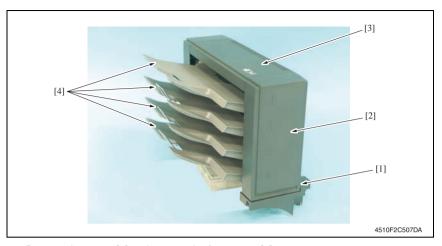
2.3 Disassembly/Assembly procedure

2.3.1 Rear cover/Right door



- 1. Remove the screw [1] and remove the rear cover [2].
- 2. Remove the screw [3], the stopper [4], and remove the right door [5].

2.3.2 Front cover/Upper cover/Paper output tray



- 1. Remove the screw [1] and remove the front cover [2].
- 2. Remove the rear cover.

See P.4

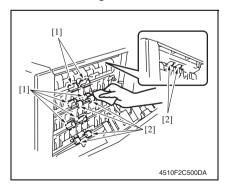
- 3. Remove the upper cover [3].
- 4. Remove the paper output trays [4].

2.4 Cleaning procedure

NOTE

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

2.4.1 Cleaning of the roller and roll



- 1. Open the right door.
- Using a cleaning pad dampened with alcohol, wipe the roller [1] and roll [2].

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Adjustment/Setting

3. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

↑ CAUTION

- 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.
- 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.

4. Sensor check

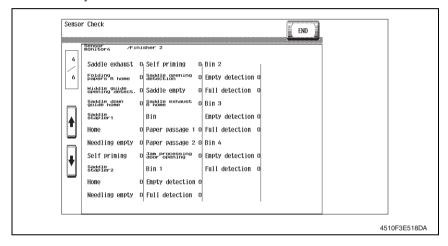
4.1 Check procedure

A. Procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [State Confirmation].
- 3. Touch [Sensor Check].
- 4. Touch three times [♥].

4.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



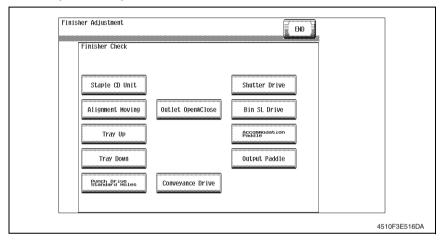
4.1.2 Sensor check list

Symbol	Panel display		Part/signal name	Operation characteristics/ panel display	
				1	0
PS10		Paper Passage 1	Lower transport sensor	Paper present	Paper not present
PS9	Bin	Paper Passage 2	Upper transport sensor	Paper present	Paper not present
PS11		Door (Jam)	Cover open/close sensor	Open	Close
PS1	Bin1	Empty	Paper detection sensor 1	Paper not present	Paper present
PS5		Full	Paper full detection sensor 1	Blocked	Unblocked
PS2	Bin2	Empty	Paper detection sensor 2	Paper not present	Paper present
PS6		Full	Paper full detection sensor 2	Blocked	Unblocked
PS3	Bin3	Empty	Paper detection sensor 3	Paper not present	Paper present
PS7		Full	Paper full detection sensor 3	Blocked	Unblocked
PS4	Bin4	Empty	Paper detection sensor 4	Paper not present	Paper present
PS8		Full	Paper full detection sensor 4	Blocked	Unblocked

5. Finisher operations

5.1 Entering Finisher Check

- 1. Call the Service Mode to the screen.
- See P.338 of the main body service manual.
- 2. Touch [Finisher].
- 3. Touch [CB-FN adjustment].
- 4. Touch [Finisher Check].
- 5. Touch [Bin SL Drive].



5.2 Finisher Check modes

1 A. Bin SL Drive

- Bin entrance switching solenoids 1, 2 and 3 switch, in order, at the predetermined times.
 - → Bin entrance switching solenoid 1 (SD1) activates for the predetermined time.
 - → Bin entrance switching solenoid 2 (SD2) activates for the predetermined time.
 - → Bin entrance switching solenoid 3 (SD3) activates for the predetermined time.
 - → All bin entrance switching solenoids deactivate.
 - → The operation is finished.

Troubleshooting

6. Jam display

6.1 Misfeed display

When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main body.

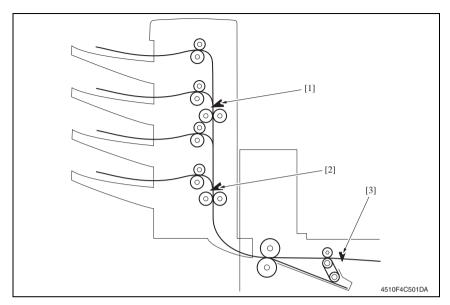


Display	Code	Misfeed location	Misfeed access location	Action
[1]	7290	Vertical transport section	Right door	P.14

6.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfed, and close the door.

6.2 Sensor layout



[1] Upper transport sensor

PS9

[2] Lower transport sensor

PS10

[3] Transport sensor

PS2

6.3 Solution

6.3.1 Initial check items

• When a paper misfeed occurs, first perform the following initial check items.

Check Item	Action
Does the paper meet product specifications?	Change the paper.
Is paper curled, wavy, or damp?	See "Solution when paper curl occurs" on P.13.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.

6.3.2 Solution when paper curl occurs

Step	Check items/actions		
1	Turn over the stacked paper in the paper tray.	OK	_
'	Turn over the stacked paper in the paper tray.	NG	Go to step 2.
2	Does paper curl occur just after a warm-up has been completed or the sleep mode has been turned OFF?	YES	Go to step 3.
	Does paper curl occur under normal conditions (under conditions other than those mentioned above)?	YES	Go to step 5.
	Call the Service Mode to the screen.	OK	_
3	 2. Select [System 1] → [Change Warm Up Time]. 3. Change the setting to [Mode3]. See P.394 of the main body service manual. 	NG	Go to step 4.
4	 Call the Service Mode to the screen. Select [System 1] → [Change Warm Up Time]. Change the setting to [Mode4]. See P.394 of the main body service manual. 	_	_
	1. Call the Service Mode to the screen.	OK	_
5	 Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-10 °C]. See P.346 of the main body service manual. 	NG	Go to step 6
6	 Call the Service Mode to the screen. Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-20 °C]. See P.346 of the main body service manual. 	_	_

6.3.3 Transport section misfeed

A. Detection timing

Туре	Description
Transport section misfeed	The lower transport sensor (PS10) is not turned ON even after the set period of time has elapsed after the transport sensor (PS2) is turned ON by the paper.
detection	The upper transport sensor (PS9) is not turned ON even after the set period of time has elapsed after the lower transport sensor (PS10) is turned ON by the paper.
Detection of paper remain-	The lower transport sensor (PS10) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
ing in the transport section	The upper transport sensor (PS9) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts		
Transport sensor (PS2) Lower transport sensor (PS10) Upper transport sensor (PS9)	MT control board (MTCB)	



7		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical components)	
1	Initial checks	_	_	
2	PS2 I/O check, sensor check	FSCB PJ19-14 (ON)	FS-519 C-7	
3	PS10 I/O check, sensor check	MTCB CN102-8 (ON)	MT-502 B to C-4	
4	PS9 I/O check, sensor check	MTCB CN101-8 (ON)	MT-502 B to C-3	
5	MTCB replacement	_	_	



SERVICE MANUAL

FIELD SERVICE

SD-505

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text, is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0: The revision marks for Ver. 2.0 are left as they are.

2008/01	2.0	À	Error correction
2007/07	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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Outline

1. Product specification

A. Type

Name	Saddle sticher SD-505		
Туре	Built into the finisher		
Installation	Screwed to the finisher		
Document alignment	Center		
Stapling function	Center parallel two points No. of sheets to be stapled together: 2 to 15		

B. Paper

	Plain paper	60 g/m² to 90 g/m²	
Type	Recycled paper	16 to 24 lb	
1,400	Thick paper	91 g/m ² to 209 g/m ² 24.25 to 55.5 lb	
Size	B5S to A3 8-1/ ₂ x 11S to 11 x 17		
Capacity	200 sheets or 20 copies		

C. Machine specifications

Power requirements Max. power consumption		DC 24 V (supplied from the finisher) DC 5 V 9.5 W or less		
Dimensions	Saddle unit	445 mm (W) x 478 mm (D) x 203 mm (H) 17.5 inch (W) x 18.75 inch (D) x 8 inch (H) 576 mm (W) x 478 mm (D) x 281 mm (H) *1 22.75 inch (W) x 18.75 inch (D) x 11 inch (H) *1		
Weight	Crease unit	1.9 kg (0.5 lb)		
vveigiii	Saddle unit	7.4 kg (2.0 lb)		

^{*1:} Size when the paper output tray is pulled out

D. Operating environment

· Conforms to the operating environment of the main body.

E. Consumables

• Staples 2000 (MS-2C) x 2

NOTE

• These specifications are subject to change without notice.

eneral

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Maintenance

2. Service tool

2.1 CE tool list

Tool name	Shape	Personnel	Parts No.	Remarks
Stapler unit positioning jig		1	4511-7901-01	

Other

3.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

3.2 Disassembly/Assembly/Cleaning list (other parts)

3.2.1 Disassembly/Assembly parts list

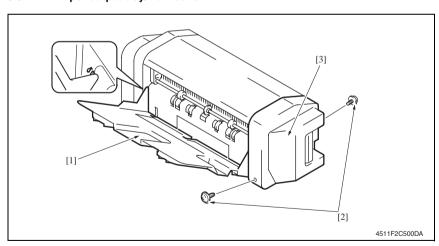
No.	Section	Part name	Ref. page
1		Paper output tray	P.5
2	Exterior parts	Front cover	P.5
3	Exterior parts	Upper cover	P.6
4		Rear cover	P.6
5	Units	Saddle unit	P.7
6		Crease unit	P.9
7		Stapler unit	P.11
8	Others	In & out guide drive motor	P.15
9		Crease roller	P.17

3.2.2 Cleaning parts list

No.	Section	Part name	Ref. page
1	Exit section Transport section	Rollers and rolls	P.24

3.3 Disassembly/Assembly procedure

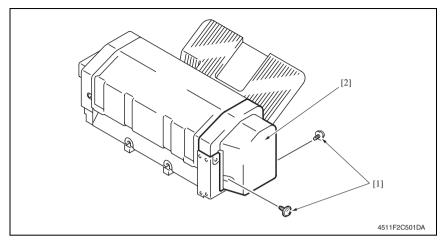
3.3.1 Paper output tray/front cover



- 1. Align the cutout and remove the paper output tray [1].
- 2. Remove two screws [2], and remove the front cover [3].

Maintenance

3.3.2 Rear cover



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

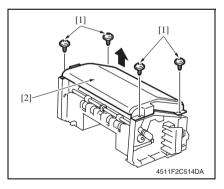
3.3.3 Upper cover

1. Remove the front cover.

See P.5

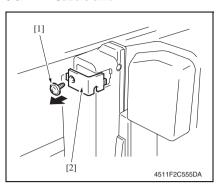
2. Remove the rear cover.

See P.6

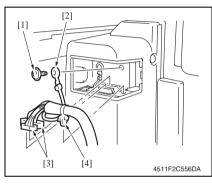


3. Remove four screws [1], and remove the upper cover [2].

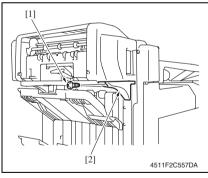
3.3.4 Saddle unit



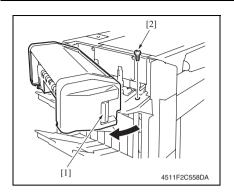
 Remove the screw [1], and remove the connector cover [2].



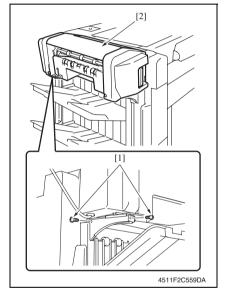
- 2. Remove the screw [1], and remove the ground wire [2].
- 3. Disconnect two connectors [3].
- 4. Remove the snap band [4].



5. Remove the screw [1], and remove the mounting bracket [2].



- 6. Pull the lock release lever [1], and open the saddle unit.
- 7. Remove the screw [2].



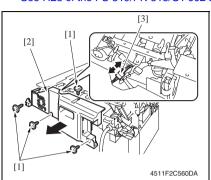
8. Remove two screws [1], and remove the saddle unit [2].

3.3.5 Crease unit

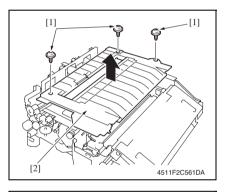
1. Remove the saddle unit.

See P.7

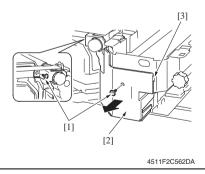
Remove the finisher unit. See P.28 of the FS-519/PK-515/OT-602 service manual.



- 3. Remove four screws [1] and remove the finisher unit rear cover [2].
- 4. Disconnect the connector [3].



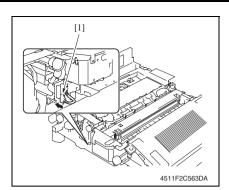
 Remove three screws [1] and remove the finisher unit upper cover [2].



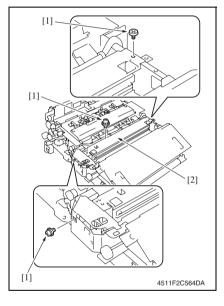
6. Remove two screws [1] and remove the finisher unit right front cover [2].

NOTE

At reinstallation, first fit the tab [3] into position.



7. Disconnect the connector [1].



8. Remove three screws [1], and remove the crease unit [2].

NOTE

• When the punch kit is mounted, remove the punch kit first.

3.3.6 Stapler unit

1. Remove the saddle unit.

See P.7

2. Remove the paper output tray. See P.5

3. Remove the front cover.

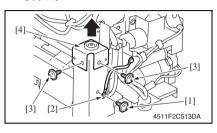
See P.5

4. Remove the rear cover.

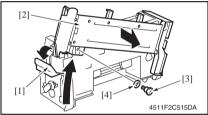
See P.6

5. Remove the upper cover.

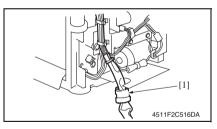
See P.6



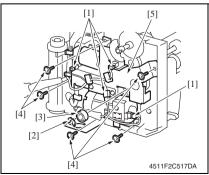
- 6. Remove the screw [1], and remove the ground wire [2].
- 7. Remove two screws [3], and remove the holder [4].



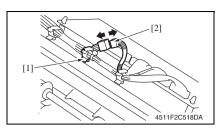
- 8. Release the lock release lever [1], and slide the saddle unit mounting plate [2].
- 9. Remove the shoulder screw [3] and the washer [4], and remove the saddle unit mounting plate [2].



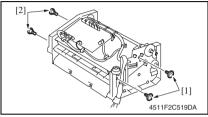
10. Remove the harness clamp [1] from the metal bracket.



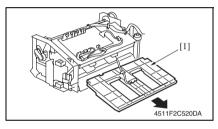
- 11. Remove the harness from the wire saddle.
- 12. Disconnect four connectors [1].
- 13. Remove the C-ring [2], and remove the bearing [3].
- 14. Remove five screws [4], and remove the drive unit [5].



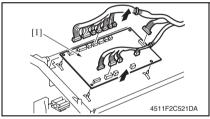
15. Remove the wire saddle [1], and disconnect the connector [2].



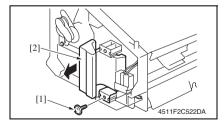
16. Remove two screws [1] and two shoulder screws [2].



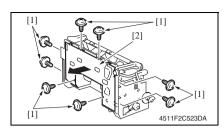
17. Remove the processing tray [1].



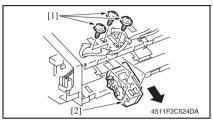
- Disconnect all the connectors on the SD control board.
- 19. Remove the board support, and then remove the SD control board [1].



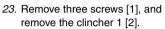
20. Remove the screw [1], and remove the lock release lever [2].

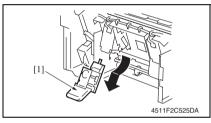


21. Remove eight screws [1], and remove the lower cover [2].

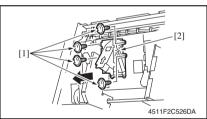


22. Remove the wire saddle and disconnect the connector.





24. Remove the staple cartridge 1 [1].



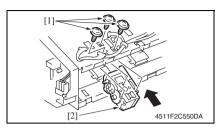
25. Remove four screws [1], and remove the stapler 1 [2].

NOTE

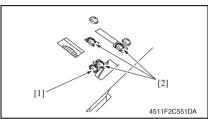
• To replace clincher 2 and stapler 2, repeat steps 22 to 25.

Precaution for clincher reinstallation

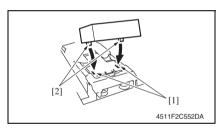
 When the clincher is installed, the position of the stapler and the clincher will be misaligned. Be sure to perform the following adjustment.



1. Use three screws [1] to temporary fix the clincher [2].



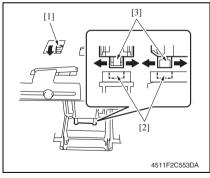
- 2. Loosen the screw [1] of the stopper.
- Loosen three screws [2] of the clincher.



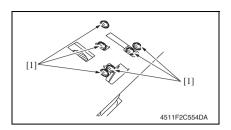
 Aligning the protrusions of the jig [2] with the recesses in the stapler [1], fit the jig to the stapler.

NOTE

 Make sure that the protrusions of the jig properly rest in the recesses.

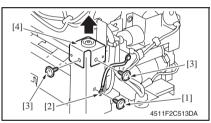


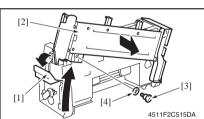
Turn the gear [1] of the clincher and then slide the clincher assy so that the protrusion of the clincher [3] fits into the recess in the jig [2].

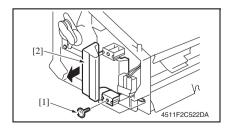


3.3.7 In & out guide motor

- 1. Remove the saddle unit.
 - See P.7
- 2. Remove the paper output tray.
 - See P.5
- 3. Remove the front cover.
 - See P.5
- 4. Remove the rear cover.
 - See P.6
- 5. Remove the upper cover.
 - See P.6

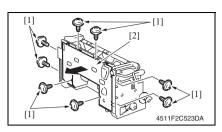




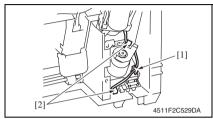


- 6. Tighten six screws [1]. **NOTE**
- Turn the gear again and check to see that the protrusion of the clincher smoothly fits into the recess in the jig.
- 7. Turn the gear and remove the jig.

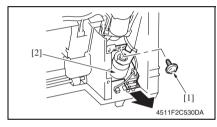
- 6. Remove the screw [1], and remove the ground wire [2].
- 7. Remove two screws [3], and remove the holder [4].
- Release the lock release lever [1], and slide the saddle unit mounting plate [2].
- Remove the shoulder screw [3] and the washer [4], and remove the saddle unit mounting plate [2].
- 10. Remove the screw [1], and remove the lock release lever [2].



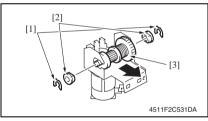
11. Remove eight screws [1], and remove the lower cover [2].



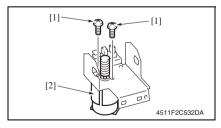
12. Remove the wire saddle [1], and disconnect two connectors [2].



13. Remove the screw [1], and remove the in & out guide motor assy [2].

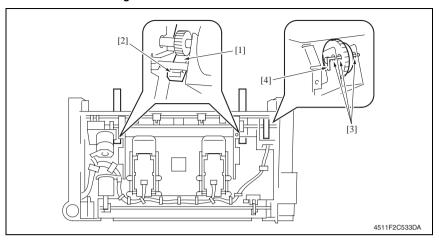


- 14. Remove two C-rings [1].
- 15. Remove two bushings [2], and remove the clutch gear assy [3].



16. Remove two screws [1], and remove the in & out guide motor [2].

Precaution for in & out guide motor reinstallation

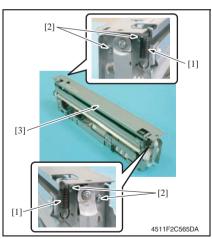


- Press the two in & out guides [1] in and check that they touch the stopper [2] simultaneously.
- 2. Check that pins [4] can be inserted through the positioning holes [3] (3 holes) of the in & out guide sensor assy.
- 3. Use two screws to secure the in & out guide motor.

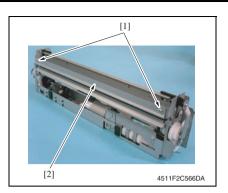
3.3.8 Crease roller

1. Remove the crease unit.

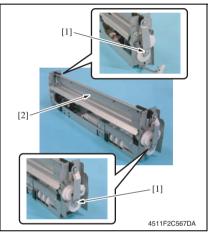
See P.9



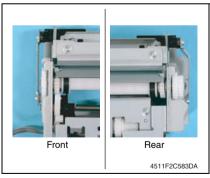
Remove two springs [1] and four screws [2], and remove the upper plate [3].



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

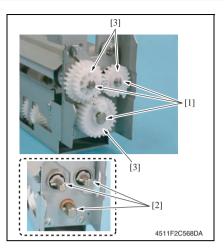


4. Remove two screws [1], and remove the chopper assy [2].



NOTE

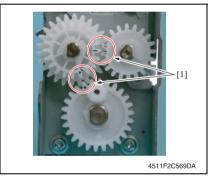
 Install the chopper assy in the direction shown in the left figure.

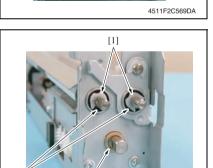


5. Remove three C-rings [1] and three pins [2], and remove three gears [3].

NOTE

• Use care not to lose the pin.





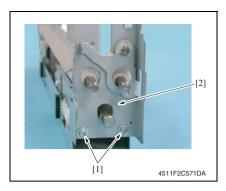
[3]

4511F2C570DA

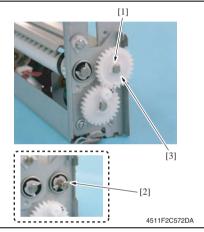
NOTE

 Install the gear so that the mark [1] is aligned to the position shown in the left figure.

- 6. Remove two C-rings [1], and remove two bearings [2].
- 7. Remove the bushing [3].



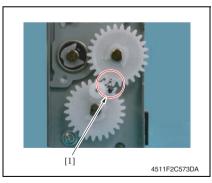
8. Remove two screws [1], and remove the rear holder [2].



Remove the C-ring [1] and the pin [2], and remove the gear [3].

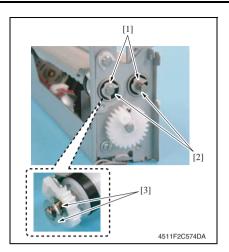
NOTE

• Use care not to lose the pin.



NOTE

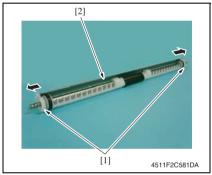
 Install the gear so that the mark [1] is aligned to the position shown in the left figure.



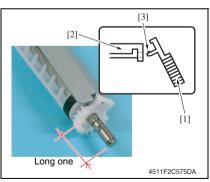
10. Remove two C-rings [1], two bearings [2] and two washers [3].

NOTE

· Use care not to lose the washer.

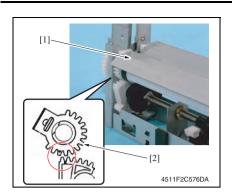


 Remove two gears [1] of crease roller 1 assy, and remove the guide plate [2].

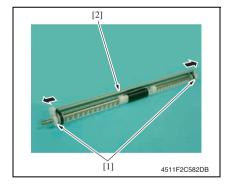


NOTE

- When installing the gear [1] to the guide plate [2], insert the gear [1] at an angle and use care not to break the tabs [3].
- Install the guide plate as shown on the left.



[2] [2] [5] [5] [5] [3] [4] _{4511F2C577DA}

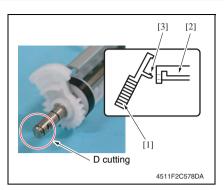


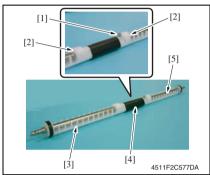
NOTE

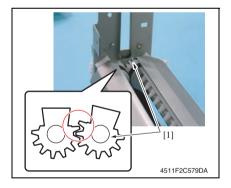
- When mounting the crease roller 1 assy [1], mount it so that the tally mark on the gear [2] for the crease roller 1 and the tally mark on the gear below will be next to each other with the one on the gear [2] being outer side.
- 12. Remove the screw [1].
- Remove two C-rings [2] and remove the crease roller A [3], B [4] and C [5].

14. Remove two gears [1] of crease roller 2 assy, and remove the guide plate [2].

SD-505







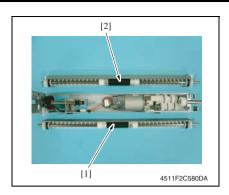
NOTE

- When installing the gear [1] to the guide plate [2], insert the gear [1] at an angle and use care not to break the tabs [3].
- Install the gear and guide plate as shown on the left.

- 15. Remove the screw [1].
- Remove two C-rings [2] and remove the crease roller A [3], B [4] and C [5].

NOTE

 When mounting the crease roller assy 2, mount it so that the gear [1] for the crease roller 2 assy will be over the gear for the cease roller 1 by one tooth.



NOTE

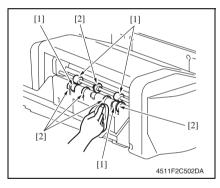
 Use care to mount the crease roller assy 1 [1] and 2 [2] in the proper directions.

3.4 Cleaning procedure

NOTE

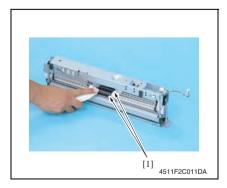
 The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.

3.4.1 Cleaning of the rollers and rolls



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

2. Remove the crease unit. See P.9



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

SD-505

Adjustment/Setting

4. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The original glass, slit 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.

↑ CAUTION

- 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.
- 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.

Sensor check

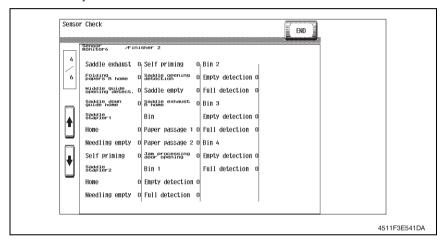
5.1 Check procedure

A. Procedure

- Display the Service Mode screen.
 See P.338 of the main body service manual.
- 2. Touch [State Confirmation].
- 3. Touch [Sensor Check].
- 4. Touch three times [♥].

5.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



5.1.2 Sensor check list

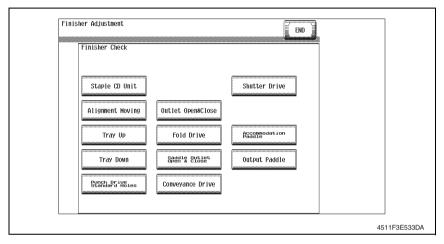
A. Sensors 4

Symbol		Panel display	Part/Signal name	Operation characteris- tics/Panel display			
				1	0		
PS20		Saddle exit	Saddle exit sensor	Paper present	Paper not present		
PS22		Folding R home	Crease roller home position sensor	Paper present	Paper not present		
SW5		Middle guide	Middle guide switch	Open	Closed		
PS24		Saddle guide	Layable guide home sensor	Blocked	Unblocked		
_		Saddle stapler 1					
_	or4	Home	Staple Home Position Sensor 1	Blocked	Unblocked		
_	monitor4	Staple empty	Staple Empty Detection Sensor 1	Blocked	Unblocked		
_		Self priming	Self-Priming Sensor 1	Blocked	Unblocked		
_	Sensors	Saddle stapler 2					
_	Ser	Home	Staple Home Position Sensor 2	Blocked	Unblocked		
_		Staple empty	Staple Empty Detection Sensor 2	Blocked	Unblocked		
_		Self priming	Self-Priming Sensor 2	Blocked	Unblocked		
SW4		Saddle	Saddle opening switch	Open	Closed		
PS21		Saddle empty	Saddle tray empty sensor	Paper present	Paper not present		
PS18		Home (Saddle exit)	Saddle exit roller home position sensor	Paper present	Paper not present		

6. Finisher operations

6.1 Entering Finisher Check

- 1. Display the Service Mode screen.
 - See P.338 of the main body service manual.
- 2. Touch [Finisher].
- 3. Touch [CB-FN adjustment].
- 4. Touch [Finisher Check].
- 5. Touch the item one wants.



6.2 Finisher Check modes

↑ A. Fold Drive

- Performs the creasing drive once.
 - → Raises the layable guide.
 - \rightarrow Stops after the predetermined time.
 - \rightarrow Lowers the layable guide.
 - \rightarrow The operation is finished.

A B. Saddle Outlet Open&Close

- · Opens the saddle exit after the saddle exit is opened and closed.
 - \rightarrow Stops after the predetermined time.
 - \rightarrow The saddle exit closes.
 - → The saddle in & out guide advances.
 - → Stops after the predetermined time.
 - → The saddle in & out guide retracts.
 - \rightarrow The operation is finished.

↑ C. Conveyance Drive

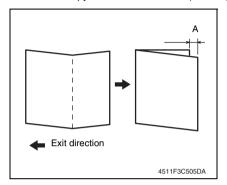
- Transport drive is performed for the predetermined time. (Performs the same transport drive as the pre-drive with the high speed of the connected copier.)
 - \rightarrow Drives the entrance motor (M1).
 - \rightarrow Drives the transport motor/1 (M2).
 - → Drives the transport motor/2 (M3).
 - \rightarrow Drives the exit motor (M4).
 - \rightarrow The operation is finished.
- If the mail bin kit MT-502 is installed, the mail bins are also driven.
- If the saddle kit SD-505 is also installed, the saddle transport motor (M8) is also driven.

6.3 Fold & Staple Pos. Adjustment

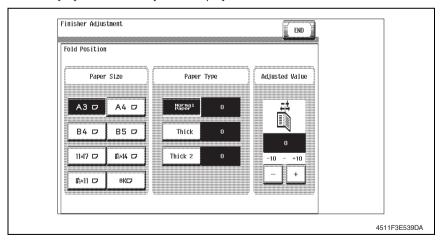
NOTE

Make this adjustment after any of the following procedures has been performed.

- · When the crease unit has been replaced.
- · When a deviation occurs in the crease.
- · When fold angle adjustment has been made.
- 1. Make a copy in the crease mode. (A3 size)

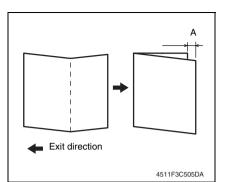


- Fold the copy fed out along the crease.
- Check the crease for deviation (Measure width A).
 Specification: 0 ± 1.5 mm
- When the width A does not fall within the specified value, conduct the following adjustment.
- Display the Service Mode screen.See P.338 of the main body service manual.
- 6. Touch [Finisher].
- 7. Touch [CB-FN adjustment].
- 8. Touch [Fold & Staple Pos.Adjustment].
- 9. Touch [Fold Position Adjustment].
- 10. Touch [A3] and then touch [Normal Paper].



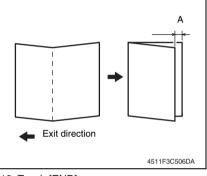
Adjustment / Setting





- If the fold is offset as shown on the left.
- 11. Touch [-] and set the appropriate numeric value.

Adjustment range: 0 to -10 (1 increment 0.5 mm)



- · If the fold is offset as shown on the left.
- 12. Touch [+] and set the appropriate numeric value.

Adjustment range: 0 to +10 (1 increment 0.5 mm)

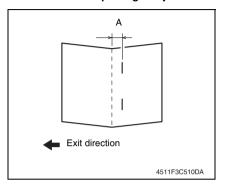
- 13. Touch [END].
- 14. Make another copy, and check the deviation.
- 15. Touch [Exit] on the Service Mode screen.
- 16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

6.4 Center Staple Position Adjustment

NOTE

Make this adjustment after any of the following procedures has been performed.

- · When staple unit has been replaced.
- · When center staple position is misaligned.
- When center staple angle adjustment has been made.

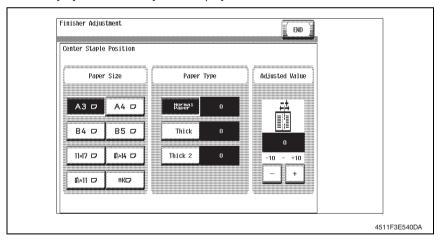


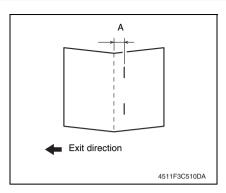
- Load a five-page A4 document in the document feed tray.
- Select the center staple mode and make a copy. (A3 Size)
- Check the staple position for deviation from the crease (Measure width A).

Specification: 0 ± 1.5 mm

 When the width A does not fall within the specified value, conduct the following adjustment.

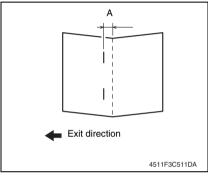
- Display the Service Mode screen.
 See P.338 of the main body service manual.
- 6. Touch [Finisher].
- 7. Touch [CB-FN adjustment].
- 8. Touch [Fold & Staple Pos.Adjustment].
- 9. Touch [Center Staple Position].
- 10. Touch [A3] and then touch [Normal Paper].





- If the fold is offset as shown on the left.
- 11. Touch [-] and set the appropriate numeric value.

Adjustment range: 0 to -10 (1 increment 0.5 mm)



- · If the fold is offset as shown on the left.
- Touch [+] and set the appropriate numeric value.

Adjustment range: 0 to +10 (1 increment 0.5 mm)

- 13. Touch [END].
- 14. Make another copy, and check the deviation.
- 15. Touch [Exit] on the Service Mode screen.
- 16. Turn OFF the main power switch, wait for 10 sec., then turn the switch ON.

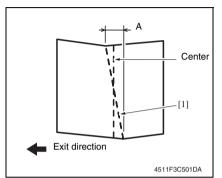
7. Mechanical adjustment

7.1 Fold Angle Adjustment

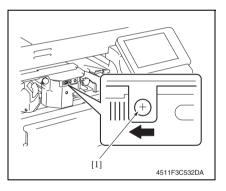
NOTE

Make this adjustment after any of the following procedures has been performed.

- · When the crease unit has been replaced.
- · When a slant occurs in the crease.
- 1. Make a copy in the crease mode. (A3 size)



- 2. Fold the output paper along the crease [1].
- Fold the output paper and half and measure the width A of the paper. Specification: 0 ± 1.5 mm
- If the fold position is slanted as shown on the left, make the following adjustment.



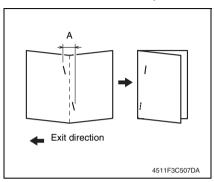
- Open the front door, loosen the adjustment screw [1], and move the crease unit to the left to make the adjustment.
 - Graduated in 1-mm divisions
- If the fold position is slanted opposite to the figure of step 4, move the crease unit to the right to make the adjustment.
- Make another copy and check the fold position.

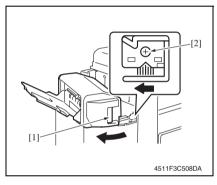
7.2 Center Staple Angle Adjustment

NOTE

Make this adjustment after any of the following procedures has been performed.

- · When staple unit has been replaced.
- · When a slant occurs in the position of the center staple.





- 1. Load a five-page A4 document in the document feed tray.
- 2. Select the center staple mode and make a copy. (A3 Size)
- Check the staple position for deviation from the crease (Measure width A).
 - Specification: 0 ± 1.5 mm
- If the staple position is slanted as shown on the left, make the following adjustment.
- Release the lock release lever [1] of the saddle unit.
- Loosen the adjustment screw [2] and move the lock lever to the left to make the adjustment.
- If the staple position is slanted opposite to the figure of step 2, move the lock lever to the right to make the adjustment.

7. Make another copy and check the staple position.

Adjustment / Setting

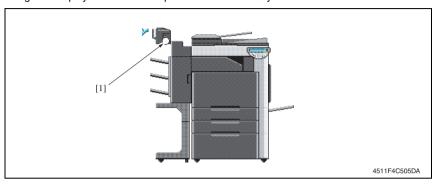
Blank Page

Troubleshooting

8. Jam display

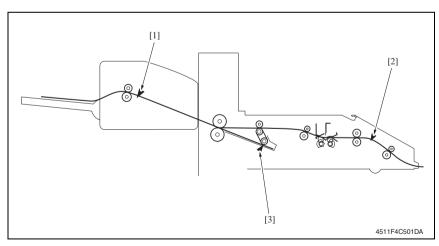
8.1 Misfeed display

When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main body.



Display	Code	Misfeed location	Misfeed processing location	Action
	7221	Paper bundle exit misfeed	Front door	P.39
[4]	7285	Staple unit 1 misfeed	Saddle cover	P.40
[1]	7284	Staple unit 2 misfeed	Saddle cover	F.40
	7225	Creasing section misfeed	Front door	P.41

8.2 Sensor layout



[1] Saddle exit sensor

PS20

[2] Entrance sensor

PS1

[3] Storage tray detect sensor

PS3

8.3 Solution

8.3.1 Initial check items

• When a paper misfeed occurs, first perform the following initial check items.

Check Item	Action
Does the paper meet product specifications?	Change the paper.
Is paper curled, wavy, or damp?	See "Solution when paper curl occurs" on P.38.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.

8.3.2 Solution when paper curl occurs

Step	Check items/actions		
1	Turn over the stacked paper in the paper tray.	OK	_
	Turn over the stacked paper in the paper tray.		Go to step 2.
2	Does paper curl occur just after a warm-up has been completed or the sleep mode has been turned OFF?	YES	Go to step 3.
2	Does paper curl occur under normal conditions (under conditions other than those mentioned above)?	YES	Go to step 5.
	1. Call the Service Mode to the screen.	OK	_
3	 2. Select [System 1] → [Change Warm Up Time]. 3. Change the setting to [Mode3]. See P.394 of the main body service manual. 	NG	Go to step 4.
4	 Call the Service Mode to the screen. Select [System 1] → [Change Warm Up Time]. Change the setting to [Mode4]. See P.394 of the main body service manual. 	_	_
	1. Call the Service Mode to the screen.	OK	_
5	 Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-10 °C]. See P.346 of the main body service manual. 	NG	Go to step 6
6	 Call the Service Mode to the screen. Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-20 °C]. See P.346 of the main body service manual. 		_

8.3.3 Paper bundle exit misfeed

A. Detection timing

Туре	Description	
	The storage tray detecting sensor (PS3) is not turned OFF even after the set period of time has elapsed after the exit motor (M4) is energized.	
Paper bundle misfeed detection	The saddle exit sensor (PS20) is not turned ON even after the set period of time has elapsed after the exit motor (M4) is energized.	
	The saddle exit sensor (PS20) is not turned OFF even after the set period of time has elapsed after the saddle exit sensor (PS20) is turned ON.	

Relevant electrical parts		
Storage tray detect sensor (PS3) Saddle exit sensor (PS20) Exit motor (M4) Saddle exit motor (M8)	SD control board (SDCB)	



	WIRING DIAG		iRAM	
Step	Action	Control signal	Location (Electrical component)	
1	Initial check items	_	_	
2	PS3 I/O check, sensor check	FSCB PJ14-8 (ON)	FS-519 C-12	
3	PS20 I/O check, sensor check	SDCB PJ19-8 (ON)	SD-505 B-2	
4	M4 operation check	FSCB PJ10-5 to 8	FS-519 C-3	
5	M8 operation check	SDCB PJ4-1 to 2	SD-505 G-6	
6	Change SDCB	_	_	

8.3.4 Staple unit 1 misfeed/Staple unit 2 misfeed

A. Detection timing

Туре	Description
detection	The staple home position sensor in the staple unit is not turned ON even after the set period of time has elapsed after the staple motor rotates forward, and then the staple motor rotates backward, and the staple home position sensor in the staple unit is turned ON within the set period of time.

Relevant electrical parts		
Staple unit 1 Staple unit 2	SD control board (SDCB)	

		WIRING DIAG	RAM
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	Drive coupling section check	_	_
3	Sensor check	_	_
4	Change staple unit 1	_	_
5	Change staple unit 2	_	_
6	Change SDCB	_	_

8.3.5 Creasing section misfeed

A. Detection timing

Туре	Description
Creasing section	The entrance sensor (PS1) is not turned ON even after the set period of time has elapsed after the entrance motor (M1) is energized (beginning of backward rotation operation).
misfeed detection	The entrance sensor (PS1) is not turned OFF even after the set period of time has elapsed after the entrance motor (M1) is energized (beginning of forward rotation operation).

Relevant electrical parts		
Entrance sensor (PS1) Entrance motor (M1)	SD control board (SDCB)	



		WIRING DIAG	RAM
Step	Action	Control signal	Location (Electrical component)
1	Initial check items	_	_
2	PS1 I/O check, sensor check	FSCB PJ19-11 (ON)	FS-519 C-7
3	M1 operation check	FSCB PJ9-1 to 4	FS-519 C-6 to 7
4	Change SDCB	_	_

9. Malfunction code

9.1 Trouble code

 The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the touch panel.

Code	Item	Description
C11A2	Saddle exit roller pressure/retraction failure	 The saddle exit roller home position sensor (PS18) is not turned ON even after the set period of time has elapsed after the saddle exit open/close motor (M9) is energized (beginning of pressure operation). The saddle exit roller home position sensor (PS18) is not turned OFF even after the set period of time has elapsed after the saddle exit open/close motor (M9) is energized (beginning of retraction operation).
C11A4	Saddle exit motor failure	The lock signal is detected after the set period of time has elapsed after the saddle exit motor (M8) is energized.
C11A5	Saddle in & out guide motor failure	 The in & out guide home sensor (PS23) is not turned OFF even after the set period of time has elapsed after the in & out guide motor (M13) is energized (beginning of advancing operation). The in & out guide home sensor (PS23) is not turned ON even after the set period of time has elapsed after the in & out guide motor (M13) is energized (beginning of retracting operation).
C11A6	Saddle layable guide drive failure	 The layable guide home sensor (PS24) is not turned ON even after the set period of time has elapsed after the layable guide motor (M14) is energized (beginning of return operation to predetermined position). The layable guide home sensor (PS24) is not turned OFF even after the set period of time has elapsed after the layable guide motor (M14) is energized (beginning of return operation to predetermined position).
C11B5	Side staple 1 drive failure	Home position sensor 1 is not turned OFF even after the set period of time has elapsed after saddle staple motor 1 is energized (beginning of staple operation).
C11B6	Side staple 2 drive failure	Home position sensor 2 is not turned OFF even after the set period of time has elapsed after saddle staple motor 2 is energized (beginning of staple operation).
C11D0	Crease motor drive failure	 The crease roller home position sensor (PS22) is not turned OFF even after the set period of time has elapsed after the crease motor (M10) is energized (beginning of backward rotation operation). The crease roller home position sensor (PS22) is not turned ON even after the set period of time has elapsed after the crease motor (M10) is energized (beginning of forward rotation operation).

9.2 Solution

9.2.1 C11A2: Saddle exit roller pressure/retraction failure

Relevant electrical parts		
. ,	SD control board (SDCB)	
Saddle exit roller home position sensor (PS18)		

1

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the M9 connector for proper connection and correct as necessary.	_	_
2	Check M9 for proper drive coupling and correct as necessary.	_	_
3	M9 operation check	SDCB PJ4-6 to 7	SD-505 G-5 to 6
4	PS18 I/O check, sensor check	SDCB PJ9-6 (ON)	SD-505 B-2
5	Change SDCB	_	_

9.2.2 C11A4: Saddle exit motor failure

Relevant electrical parts		
Saddle exit motor (M8)	SD control board (SDCB)	



7			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical component)
	1	Check the M8 connector for proper connection and correct as necessary.		_
	2	Check M8 for proper drive coupling and correct as necessary.		_
ĺ	3	M8 operation check	SDCB PJ4-1 to 2	SD-505 G-6
ĺ	4	Change SDCB	_	_

roubleshooting

9.2.3 C11A5: Saddle in & out guide motor failure

Relevant electrical parts		
In & out guide motor (M13) In & out guide home sensor (PS23)	SD control board (SDCB)	

<u>A</u> WIRING DIAGRAM Location Step Action Control signal (Electrical component) Check the M13 connector for proper con-1 nection and correct as necessary. Check M13 for proper drive coupling and 2 correct as necessary. 3 M13 operation check SDCB PJ4-4 to 5 SD-505 G-6 4 PS23 I/O check, sensor check SDCB PJ10-3 (ON) SD-505 B-2 to 3 5 Change SDCB

9.2.4 C11A6: Saddle layable guide drive failure

Relevant electrical parts		
Layable guide motor (M14) Layable guide home sensor (PS24)	SD control board (SDCB)	

1\			WIRING DIAGRAM	
5	Step	Action	Control signal	Location (Electrical component)
	1	Check the M14 connector for proper connection and correct as necessary.	_	_
	2	Check M14 for proper drive coupling and correct as necessary.	_	_
	3	M14 operation check	SDCB PJ4-8 to 9	SD-505 G-5
	4	PS24 I/O check, sensor check	SDCB PJ10-6 (ON)	SD-505 B-3
	5	Change SDCB	_	

9.2.5 C11B5: Side staple 1 drive failure

9.2.6 C11B6: Side staple 2 drive failure

Relevant electrical parts		
Staple unit 1	SD control board (SDCB)	
Staple unit 2		

		WIRING DIAGRAM		
Step	Action	Control signal	Location (Electrical component)	
1	Check the staple units 1 and 2 connectors for proper connection and correct as necessary.	-	_	
2	Check staple units 1 and 2 for proper drive coupling, and correct as necessary.	_	_	
3	Staple units 1 and 2 operation check	_	_	
4	Change staple units 1 and 2		_	
5	Change SDCB	_	_	

9.2.7 C11D0: Crease motor drive failure

Relevant electrical parts		
Crease motor (M10)	SD control board (SDCB)	
Crease roller home position sensor (PS22)		

7		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the M10 connector for proper connection and correct as necessary.	_	_
2	Check M10 for proper drive coupling and correct as necessary.	_	_
3	M10 operation check	SDCB PJ3-1 to 2	SD-505 C-7
4	PS22 I/O check, sensor check	SDCB PJ2-3 (ON)	SD-505 C-7
5	Change SDCB	_	_

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SERVICE MANUAL

FIELD SERVICE

JS-505

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text, is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.
- To indicate clearly a specific page that contains a revision or revisions, the page number appearing at the left or right bottom of the specific page is marked with .
 The number inside represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
 The revision marks for Ver. 2.0 are left as they are.

2008/01	2.0	À	Error correction
2007/07	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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Outline

1. Product specification

A. Type

Туре	Built-in type 2-bin stacker
Installation	Installed in main body
Document align- ment	Center

B. Functions

Modes	Sort, group, sort offset, group offset

C. Paper

Exit tray	Size	Туре		Capacity
		Plain paper (60 to 90 g/m²) (16 to 24 lb)		150 sheets
			Thick paper 1 (91 to 150 g/m²) (24.25 to 40 lb)	
	A6S, A5S/A5, B6S, B5S/B5, A4S/A4, B4, A3, A3 Wide, Post card S	Special paper	Thick paper 2 (151 to 209 g/m²) (40.25 to 55.5 lb)	20 sheets
Lower tray	5-1/ ₂ X 8-1/ ₂ S/5-1/ ₂ X 8-1/ ₂ , 8-1/ ₂ X 11S/8-1/ ₂ X 11, 8-1/ ₂ X 14, 11 X 17, 12-1/ ₄ X 18 Max.: 311.1 mm X 1200 mm 12.25 inch X 47.25 inch Min.: 90 mm X 139.7 mm 3.5 inch X 5.5 inch		Thick paper 3 (210 to 256 g/m²) (55.75 to 68 lb)	
			Thick paper 4 (257 to 271 g/m²) (68.25 to 72 lb)	
			OHP film	
			Post card	
			Label	
			Envelope	10 sheets
			Long size paper	1 sheet
Upper tray	A5S, B5S/B5, A4S/A4, B4, A3 8-1/ ₂ X 11S/8-1/ ₂ X 11, 8-1/ ₂ X 14, 11 X 17 Max.: 297 mm X 431.8 mm 11.75 inch X 17 inch Min.: 148 mm X 210 mm 5.75 inch X 8.25 inch	Plain paper (60 to 90 g/m²) (16 to 24 lb)		50 sheets

D. Offset function

Exit tray	Lower tray
Shift amount	30 mm
Types of paper to be used	Plain paper, Thick paper 1/2/3/4
Size	B5S/B5, A4S/A4, B4, A3 8-½ X 11S/8-½ X 11, 8-½ X 14, 11 X 17

E. Machine specifications

Power require-	DC 24 V ± 10 % (supplied from the main body)
ments	DC5 V ± 5 %
Max. power consumption	40 W or less
Dimensions	423 mm (W) X 477 mm (D) X 129.5 mm (H) 16.75 inch (W) X 18.75 inch (D) X 5 inch (H) 543 mm (W) X 477 mm (D) X 129.5 mm (H) *1 21.5 inch (W) X 18.75 inch (D) X 5 inch (H) *1
Weight	5.0 kg (11 lb)

^{*1:} Size when the paper exit tray is pulled out

F. Operating environment

• Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

NOTE

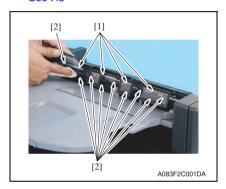
 The alcohol described in the cleaning procedure of maintenance represents the isopropyl alcohol.

2.1.1 Cleaning of the roller and roll

A. Periodically cleaning parts/cycle

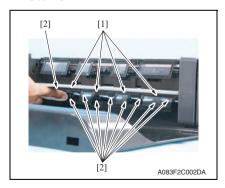
- Roller and roll: Every 300,000 prints
- 1. Remove the separator.

See P.5



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

3. Remove the upper tray. See P.8



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

Other

3.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal 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.

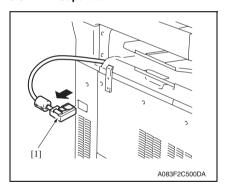
3.2 Disassembly/Assembly list (Other parts)

3.2.1 Disassembly/Assembly parts list

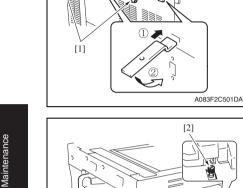
No.	Section	Part name	Ref. page
1	Unit	Separator	P.5
2		Front cover	P.6
3		Rear left cover	P.7
4	Exterior parts	Rear right cover	P.7
5		Upper tray	P.8
6		Paper guide plate	P.8
7	Board	JS control board	P.9
8		Transport motor	P.9
9	Motors	Route change motor	P.10
10		Shift motor	P.11
11	Clutch	Roller pressure/retraction clutch	P.14

3.3 Disassembly/Assembly procedure

3.3.1 Separator



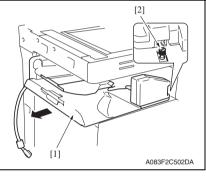
1. Remove the relay connector [1].



2. Remove two screws [1] and remove two fixtures [2].

NOTE

- When installing the attachment plates [2], the attachment plate A with pieces of metal is required to be attached to the left.
- Install the attachment plates as shown in the illustration. Press them downward and secure them with one screw each.



[2]

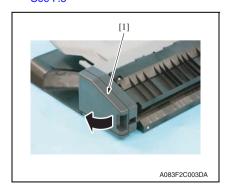
3. Remove the separator [1].

NOTE

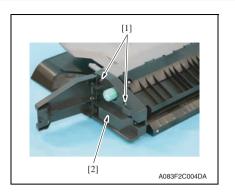
 When installing the job separator, align the U-groove on the job separator with the shoulder screw [2].

3.3.2 Front cover

 Remove the separator. See P.5



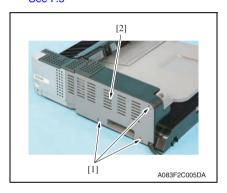
2. Open the misfeed clearing cover [1].



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

3.3.3 Rear left cover

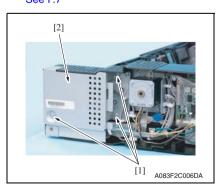
Remove the separator.
 See P.5



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

3.3.4 Rear right cover

- Remove the separator.
 See P.5
- 2. Remove the rear left cover. See P.7

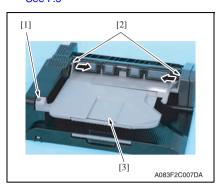


3. Remove three screws [1] and remove the rear right cover [2].

Maintenance

3.3.5 Upper tray

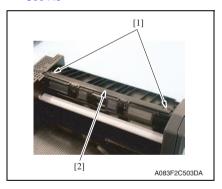
Remove the separator.
 See P.5



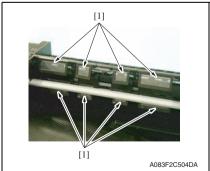
Remove the screw [1]. Push two protrusions [2] in the directions of the arrows and remove the upper tray [3].

3.3.6 Paper guide plate

- 1. Remove the separator.
 - See P.5
- 2. Remove the upper tray. See P.8



3. Remove two screws [1] and remove the paper guide plate cover [2].



- 4. Remove eight paper guide plates [1]. **NOTE**
- When reinstalling the paper guide plates [1], make sure that the film side must face the roller.

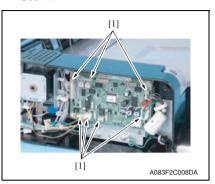
3.3.7 JS control board

1. Remove the separator.

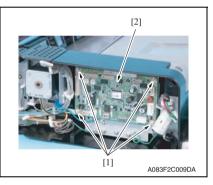
See P.5

2. Remove the rear left cover.

See P.7



Remove all seven connectors [1] from the JS control board.



4. Remove four screws [1] and remove the JS control board [2].

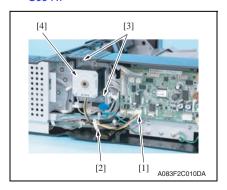
3.3.8 Transport motor

1. Remove the separator.

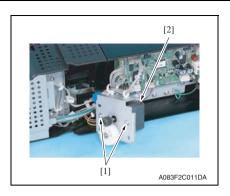
See P.5

2. Remove the rear left cover.

See P.7



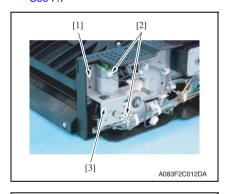
- 3. Disconnect the connector [1] and remove the wire saddle [2].
- 4. Remove two screws [3] and remove the transport motor assy [4].



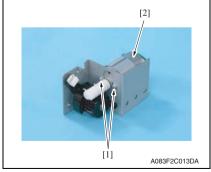
5. Remove two screws [1] and remove the transport motor [2].

3.3.9 Route change motor

- 1. Remove the separator.
 - See P.5
- 2. Remove the rear left cover.
 - See P.7
- 3. Remove the rear right cover. See P.7



 Remove the screw [1] and disconnect two connectors [2], and remove the route change motor assy [3].



5. Remove two screws [1] and remove the route change motor [2].

3.3.10 Shift motor

1. Remove the separator.

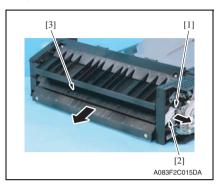
See P.5

2. Remove the front cover.

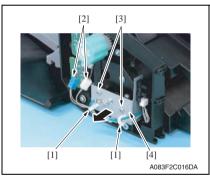
See P.6

3. Remove the route change motor.

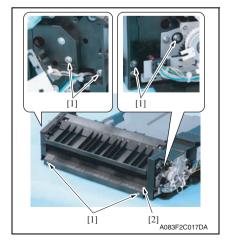
See P.10



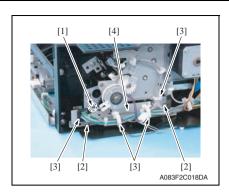
 Remove the C-clip [1] and the lever [2], and remove the route change guide [3].



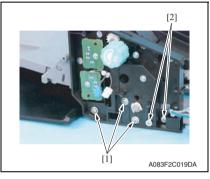
Remove two wire saddles [1], disconnect two connectors [2], and remove two screws [3]. Pull out the sensor assy [4] in the direction of the arrow.



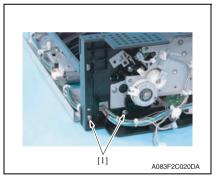
6. Remove six screws [1] and remove the transport guide/lower [2].



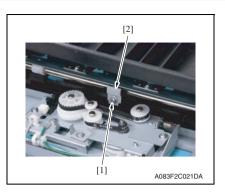
 Disconnect the connector [1], remove two screws [2], and remove the harness from four wire saddles [3]. Remove the sensor mounting plate assy [4].



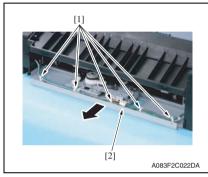
8. Remove three screws [1] and two shoulder screws [2].



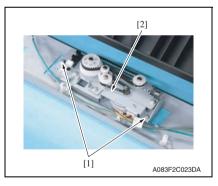
9. Remove two screws [1].



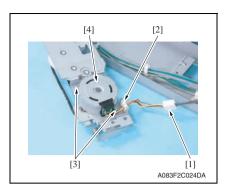
10. Remove the screw [1] and remove the belt fixed plate [2].



 Remove five wire saddles [1] and pull out the shift drive section assy [2] in the direction of the arrow.



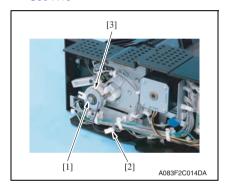
12. Remove two screws [1] and remove the shift motor assy [2].



13. Disconnect the connector [1], remove wire saddle [2] and two screws [3], and remove the shift motor [4].

3.3.11 Roller pressure/retraction clutch

 Remove the route change motor. See P.10



Remove the E-ring [1] and disconnect the connector [2], and remove the roller pressure/retraction clutch [3].

Adjustment/Setting

4. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

Advance checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- · The density is properly selected.
- The original glass, slit 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.

↑ CAUTION

- 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.
- 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.

5. Sensor check

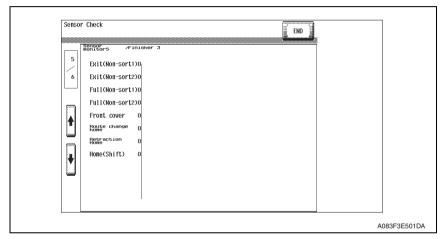
5.1 Check procedure

A. Procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [State Confirmation].
- 3. Touch [Sensor Check].
- 4. Touch four times [♥].

5.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



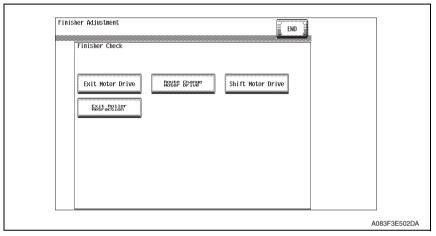
5.1.2 Sensor check list

Symbol	Panel display	Part/Signal name	Operation characteristics/ panel display	
			1	0
PS1	Exit (Non-sort1)	Lower tray exit sensor	Paper present	Paper not present
PS2	Exit (Non-sort2)	Upper tray exit sensor	Paper present	Paper not present
T1FDTB/LED	Full (Non-sort1)	Lower tray paper full detect board/LED	Full	Other than full
T2FDTB/LED	Full (Non-sort2)	Upper tray paper full detect board/LED	Full	Other than full
PS3	Front cover	Front door sensor	Closed	Open
PS4	Route change home	Route change home sensor	Blocked	Unblocked
PS5	Retraction Home	Pressure/retraction home sensor	Blocked	Unblocked
PS6	Home (Shift)	Shift home sensor	Blocked	Unblocked

6. Finisher operations

6.1 Entering Finisher Check

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch [Finisher].
- 3. Touch [Job Separator].
- Touch [Exit Motor Drive], [Route change Motor Drive], [Shift Motor Drive] or [Exit Roller Retraction].



- 5. Touch the Start key to start the operation check.
- 6. Touch the Stop key to stop the ongoing operation check.

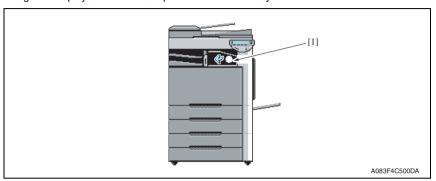
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Troubleshooting

7. Jam display

7.1 Misfeed display

When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main body.

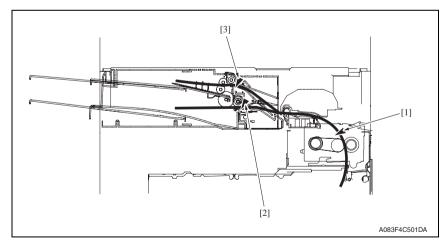


Display	Code	Misfeed location	Misfeed access location	Action
[1]	7216	Job separator transport section	Right door	P.21

7.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfed, and close the door.

7.2 Sensor layout



- [1] Paper exit sensor PS25
- [2] Lower tray exit sensor PS1
- [3] Upper tray exit sensor

7.3 Solution

7.3.1 Initial check items

• When a paper misfeed occurs, first perform the following initial check items.

Check Item	Action	
Does the paper meet product specifications?	Change the paper.	
Is paper curled, wavy, or damp?	See "Solution when paper curl occurs" on P.20.	
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.	
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.	
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.	

7.3.2 Solution when paper curl occurs

Step	Check items/actions		
1	Turn over the stacked paper in the paper tray.	OK	_
	Turri over the stacked paper in the paper tray.		Go to step 2.
2	Does paper curl occur just after a warm-up has been completed or the sleep mode has been turned OFF?	YES	Go to step 3.
	Does paper curl occur under normal conditions (under conditions other than those mentioned above)?	YES	Go to step 5.
3 2. Select [System 1] → 3. Change the setting	1. Call the Service Mode to the screen.	OK	_
	 2. Select [System 1] → [Change Warm Up Time]. 3. Change the setting to [Mode3]. See P.394 of the main body service manual. 	NG	Go to step 4.
4	 Call the Service Mode to the screen. Select [System 1] → [Change Warm Up Time]. Change the setting to [Mode4]. See P.394 of the main body service manual. 	_	_
5	1. Call the Service Mode to the screen.	OK	_
	 Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-10 °C]. See P.346 of the main body service manual. 	NG	Go to step 6
6	 Call the Service Mode to the screen. Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-20 °C]. See P.346 of the main body service manual. 	_	_

7.3.3 Job separator transport section misfeed

A. Detection timing

Туре	Description	
	The lower tray exit sensor (PS1) is not turned ON even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned ON by the paper.	
	The upper tray exit sensor (PS2) is not turned ON even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned ON by the paper.	
Transport section misfeed detection	The lower tray exit sensor (PS1) is not turned OFF even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned OFF by the paper.	
	The upper tray exit sensor (PS2) is not turned OFF even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned OFF by the paper.	
	The paper exit sensor (PS25) is not turned ON even after the set period of time has elapsed after the copier's paper exit sensor (PS25) is turned ON by the paper.	
Detection of paper remain-	The lower tray exit sensor (PS1) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.	
ing in the transport section	The upper tray exit sensor (PS2) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.	

Relevant electrical parts		
Paper exit sensor (PS25)	JS control board (JSCB)	
Lower tray exit sensor (PS1)	Printer control board (PRCB)	
Upper tray exit sensor (PS2)		



Step	Action	WIRING DIAGRAM		
		Control signal	Location (Electrical components)	
1	Initial checks	_	_	
2	PS25 I/O check, sensor check	_	_	
3	PS1 I/O check, sensor check	JSCB PJ7-6 (ON)	JS-505 F-4 to 5	
4	PS2 I/O check, sensor check	JSCB PJ7-9 (ON)	JS-505 F-4	
5	JSCB replacement	_	_	
6	PRCB replacement	_		

8. Malfunction code

8.1 Trouble code

 The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the touch panel.

Code	Description	Detection timing
C1004	FNS communication error	When the JS control board (JSCB) is receiving data, a communication error is detected.
C1182	Shift motor drive failure	 The shift home sensor (PS6) is not blocked after the set period of time has elapsed after the shift motor (M2) is turned ON (start of moving to the home position.) The shift home sensor (PS6) is not unblocked twice in a row after the set period of time has elapsed after the shift motor (M2) is turned ON (start of moving to the shift position.)
C11A1	Exit roller pressure/ retraction failure	 The pressure/retraction home sensor (PS5) is not blocked after the set period of time has elapsed after the roller pressure/retraction clutch (CL1) is turned ON (start of a pressure operation.) The pressure/retraction home sensor (PS5) is not unblocked after the set period of time has elapsed after the roller pressure/retraction clutch (CL1) is turned ON (start of a retraction operation.)
C11E0	Finisher route change failure	 The route change home sensor (PS4) is not blocked after the set period of time has elapsed after the route change motor (M3) is turned ON (start of shifting to the lower tray route.) The route change home sensor (PS4) is not unblocked after the set period of time has elapsed after the route change motor (M3) is turned ON (start of shifting to the upper tray route.)
CC155	Finisher ROM failure	Data of flash ROM of the finishing options is determined to be faulty when the power is turned ON.

8.2 Solution

8.2.1 C1004: FNS communication error

Relevant electrical parts	
JS control board (JSCB)	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	-	_
2	Rewrite firmware using the compact flash card.	_	_
3	Change JSCB	_	_

8.2.2 C1182: Shift motor drive failure

Relevant electrical parts		
Shift motor (M2)	JS control board (JSCB)	
Shift home sensor (PS6)		

 Λ

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the M2 connector for proper connection and correct as necessary.	_	_
2	Check the connector of M2 for proper drive coupling and correct as necessary.	_	_
3	PS6 I/O check, sensor check	JSCB PJ7-18 (ON)	JS-505 F-3
4	M2 operation check	JSCB PJ4-1 to 4	JS-505 F-6
5	Change JSCB	_	_

8.2.3 C11A1: Exit roller pressure/retraction failure

Relevant electrical parts		
Roller pressure/retraction clutch (CL1) Pressure/retraction home sensor (PS5)	JS control board (JSCB)	

<u>1</u>

7			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical component)
	1	Check the CL1 connector for proper connection and correct as necessary.	_	_
	2	Check the connector of CL1 for proper drive coupling and correct as necessary.	_	_
Ī	3	PS5 I/O check, sensor check	JSCB PJ7-12 (ON)	JS-505 F-4
Ī	4	CL1 operation check	JSCB PJ6-4 (ON)	JS-505 F-5
Ī	5	Change JSCB	_	_

8.2.4 C11E0: Finisher route change failure

Relevant electrical parts		
Route change motor (M3)	JS control board (JSCB)	
Route change home sensor (PS4)		

<u>1</u>

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical component)
1	Check the M3 connector for proper connection and correct as necessary.	_	_
2	Check the connector of M3 for proper drive coupling and correct as necessary.	_	_
3	PS4 I/O check, sensor check	JSCB PJ7-15 (ON)	JS-505 F-4
4	M3 operation check	JSCB PJ6-1 to 2	JS-505 F-6
5	Change JSCB	_	_

8.2.5 CC155: Finisher ROM failure

Relevant ele	ectrical parts
JS control board (JSCB)	

		WIRING DIAGRAM	
Step Action		Control signal	Location (Electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	-	_
2	Rewrite firmware using the compact flash card.	_	_
3	Change JSCB	_	_

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SERVICE MANUAL

FIELD SERVICE

FS-609/PK-501

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.

Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a specific section revised within text, is shown at the left margin of the corresponding revised section.
 - The number inside \bigwedge represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
 The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
 The revision marks for Ver. 2.0 are left as they are.

2008/01	2.0	À	Error correction
2007/11	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

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Troubleshooting

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Outline

1. Product specification

1.1 FS-609

A. Type

Туре	Multi staple finisher with saddle (Booklet)
Installation	Freestanding
Document alignment	Center
Supplies	Staple cartridge

B. Functions

Modes		Group, Sort, Group Offset, Sort Offset, Sort Staple, Center Staple & Fold
	,	Group Punch, Sort Punch, Group Offset Punch, Sort Offset Punch, Sort Staple Punch

C. Paper type

- Remove the finisher off the copier for feeding the long paper.
- The maximum loading capacity shown is for when loading the single type of paper (80g/m²)

(1) Group, Sort

Туре	Size	Weight	Tray capacity *1		Exit tray	No. of sheets to be stapled	
Plain paper	B5S/B5 to A3 wide 5-1/ ₂ × 8-1/ ₂ S/ 5-1/ ₂ × 8-1/ ₂ to 12-1/ ₄ × 18	60 to 90 g/m ² 16 to 24 lb	No. of Sheet Height	A4S/ 8-1/ ₂ × 11S or smaller 1,000 150 mm	84/ $8^{-1}/_{2} \times 14$ or larger 500 75 mm	Exit tray1	_
Envelop OHP film Label Thick paper		60 to 271 g/m² 16 to 72 lb		20 sheets			

^{*1:} Controlled by whichever reached earlier

(2) Sort offset, Sort group

Туре	Size	Weight	Tray capacity		Exit tray	No. of sheets to be stapled	
Plain paper	A5, B5S/B5 to A3 $8^{-1}/_2 \times 11S/$ $8^{-1}/_2 \times 11$ to 11×17	60 to 90 g/m² 16 to 24 lb		A4S/ 8-1/2×11S or smaller 1,000 150 mm reached ear	or larger 500 75 mm ichever	Exit tray1	_

(3) Sort staple

1. Product specification

Туре	Size	Weight	Tray capaci	ty	Exit tray	No. of she stap	
Plain paper Thick paper	B5S/B5 to A3 $8^{-1}/_{2} \times 11$ S/ $8^{-1}/_{2} \times 11$ to 11×17	Normal Mode 60 to 90 g/m² 16 to 24 lb Cover Mode 60 to 209 g/m² 16 to 55.5 lb	A4S/ 8-1/ ₂ ×11S or smaller 1,000 150 mm 30 olled by wheached ear		Exit tray1	Normal r A4S/ $8-1/_2 \times 11S$ or smaller 2 to 50	B4/

^{*1:} The number of sheets to be stapled is limited for high-density images. (Color Wise: 20 sheets x 20 sets)

(4) Center staple & fold

Туре	Size	Weight	Tray capacity	Exit tray	No. of sheets to be stapled
Plain paper	A4S, B4, A3 8- ¹ / ₂ × 11S/ 11 × 17	60 to 90 g/m ² 16 to 24 lb	10 sets (No. of Sheets to be Stapled: 6 to 15 sheets) 20 sets (No. of Sheets to be Stapled: 2 to 5 sheets)	Exit tray2	Black copy 2 to 15 sheets (Max. 60 pages) Other copy 2 to 10 sheets (Max. 40 pages)

D. Stapling

Staple filling mode	Dedicated staple cartridge mode (5,000 staples)					
Staple detection	Available (Near empty: 40	Available (Near empty: 40 remaining staples)				
	Rear: Parallel 1 point					
Stapling position	Front: Parallel 1 point	B5S/B5 to A3,				
Stapling position	Side: Parallel 2 points $8^{-1}/_{2} \times 11 \text{ S/8}^{-1}/_{2} \times 11 \text{ to } 11 \times 17$					
	Center: Parallel 2 points					
Manual staple	None					
Folding mode	Roller pressure folding					
Folding position	Center of paper					

E. No. of sheets to be stapled (sort staple)

(1) A4S, $8^{-1}/_2 \times 11S$ or smaller

No. of sheets to be	No. of sets					
stapled	Rear: Parallel	Center: Parallel	Front: Parallel			
2	100	40	40			
3 to 5	80	40	40			
6 to 10	60	40	40			
11 to 20	30	30	30			
21 to 30	30	30	30			
31 to 50	30 sets or 1,000 sheets					

(2) B4, $8^{-1}/_2 \times 14$ or larger

No. of sheets to be	No. of sets					
stapled	Rear: Parallel	Center: Parallel	Front: Parallel			
2	100	50	50			
3 to 5	80	40	40			
6 to 10	40	40	40			
11 to 20		30 sets or 1,000 sheets				
21 to 25	30 sets of 1,000 sneets					

F. Machine specifications

Power requirements	DC 24 V (supplied from the main body)
	DC 5 V (generated by finisher)
Max. power consumption	65 W or less
Dimensions	601 mm (W) × 603 mm (D) × 933 mm (H) 23.75 inch (W) × 23.75 inch (D) × 36.75 inch (H)
Weight	42.0 kg (92.5 lb)

G. Operating environment

Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

1.2 PK-501

A. Type

B. Paper

Туре	Size		Weight	Tray capacity	Exit tray	No. of sheets to be stapled
Plain paper Thick paper	4 holes	A4, A3	60 to 209 g/m² 16 to 55.5 lb			
	2 holes	$8^{-1}/_{2} \times 11S/8^{-1}/_{2} \times 11,$ $8^{-1}/_{2} \times 14, 11 \times 17$		Elevator tray	-	
	3 holes	8-1/ ₂ × 11, 11 × 17				

C. Machine specifications

Power requirements	Supplied from FS-609
	90 mm (W) × 530 mm (D) × 170 mm (H) 3.75 inch (W) × 20.75 inch (D) × 6.75 inch (H)
Weight	2.6 kg (5.75 lb)

D. Operating environment

Conforms to the operating environment of the main body.

NOTE

• These specifications are subject to change without notice.

Maintenance

2. Other

2.1 Disassembly/adjustment prohibited items

A. 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.

B. 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.

C. Variable resistors on board

NOTE

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

D. Removal of PWBs

⚠ CAUTION

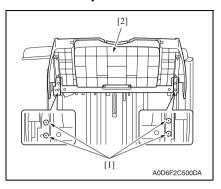
- When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely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

2.2 Disassembly/Assembly list (Other parts)

No	Section	Part name	Ref. page
1	Exterior parts	Exit tray	P.7
2		Front cover	P.7
3		Rear cover	P.8
4		Upper door	P.8
5		Finisher tray upper cover	P.9
6		Upper cover	P.10
7		Horizontal transport unit	P.10
8		Side guide	P.11
9		Middle transport unit	P.12
10		Stapler	P.14
11		Saddle section	P.14
12		Finisher tray	P.16
13	Unit	Paddle section	P.17
14	Offic	Exit roller (upper)	P.18
15		Paddle	P.20
16		Exit roller (lower) and paper exit belt	P.21
17		stapler/folding drive unit	P.24
18		Transport roller	P.26
19	- -	Middle transport roller	P.28
20		Punch unit	P.29
21	Electrical parts	Finisher control board	P.31
22		Punch control board	P.31
23		Transport motor unit	P.31
24		Entrance motor	P.32
25		Punch motor	P.32
26		Side registration motor	P.32

2.3 Disassembly/Assembly procedure

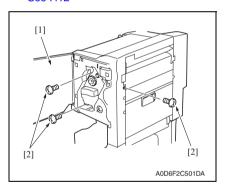
2.3.1 Exit tray



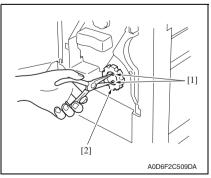
1. Remove four screws [1], and remove the exit tray [2].

2.3.2 Front cover

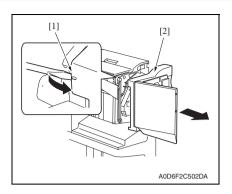
- Remove the horizontal transport unit. See P.10
- Remove the middle transport unit. See P.12



- 3. Open the front door [1].
- 4. Remove three screws [2].



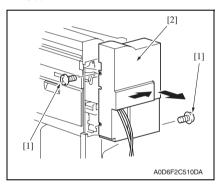
Using long nose pliers or a similar tool, pinch two tabs [1] and remove the misfeed-clearing dial [2].



 Using a screwdriver or a similar tool, unhook the tab [1] and remove the front cover [2].

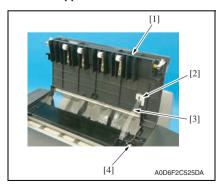
2.3.3 Rear cover

- Remove the horizontal transport unit.
 See P.10
- Remove the middle transport unit. See P.12

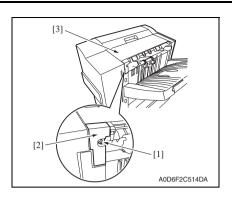


3. Remove two screws [1], and remove the rear cover [2].

2.3.4 Upper door



- Open the upper door [1], and remove the door band holder [2] by turning it clockwise.
- 2. Remove the door band [3].
- 3. Remove the screw [4], and remove the grounding wire.

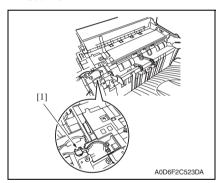


- 4. Remove the screw [1], remove the finisher tray rear cover [2].
- 5. Remove the upper door [3].

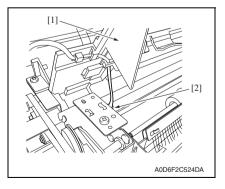
2.3.5 Finisher tray upper cover

- 1. Remove the front cover.
 - See P.7
- 2. Remove the rear cover.
 - See P.8
- 3. Remove the upper door.

See P.8



4. Disconnect the connector [1].



 Disconnect the connector [2] while holding up the finisher tray upper cover [1], and remove the finisher tray upper cover [1].

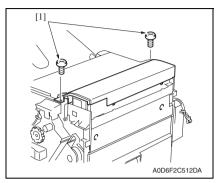
2.3.6 Upper cover

1. Remove the front cover.

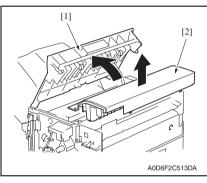
See P.7

2. Remove the rear cover.

See P.8



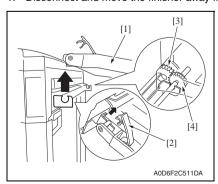
3. Remove two screws [1].



4. Open the upper door [1], and remove the upper cover [2].

2.3.7 Horizontal transport unit

1. Disconnect and move the finisher away from the main body.



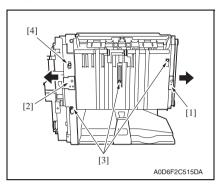
 Raise the horizontal transport unit [1] straight upward and, keeping that condition, disengage the lock lever [2] and remove the horizontal transport unit [1].

NOTE

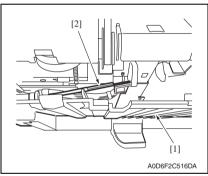
- At reinstallation, be sure to engage the lock lever [2] in position.
- At reinstallation, make sure that the gear [3] of the finisher is in positive mesh with the gear [4] of the horizontal transport unit.

2.3.8 Side quide

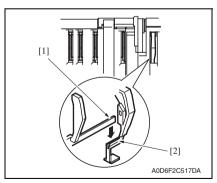
- 1. Remove the exit tray.
 - See P.7
- 2. Remove the front cover.
 - See P.7
- Remove the rear cover.See P.8



- Derail the exit tray support plate (front) [1] and the exit tray support plate (rear) [2] to the outside off the respective rail grooves.
- 5. Remove three screws [3] and the shoulder screw [4].



 Pull down the side guide [1] lightly, disengage the exit tray home position detecting lever (rear) [2], and then remove the side guide [1].

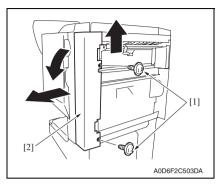


NOTE

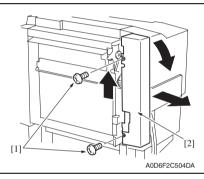
- In reassembling, ensure of exact installation with the exit tray home position detecting lever (rear) [1] set in the slot of the exit tray home position detecting lever (center) [2].
- After reassembly, press each of these levers for several times to make sure of exact installation.

2.3.9 Middle transport unit

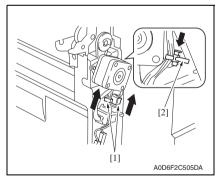
 Remove the horizontal transport unit. See P.10



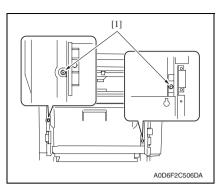
2. Remove two screws [1], and remove the middle front cover [2].



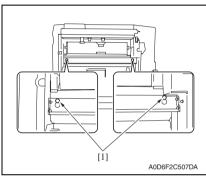
3. Remove two screws [1], and remove the middle rear cover [2].



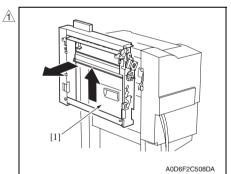
- 4. Disconnect two connectors [1].
- 5. Pinch the tie band [2], and remove it from the sheet metal.



6. Remove two screws [1].

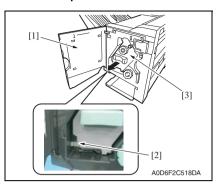


7. Loosen two screws [1].

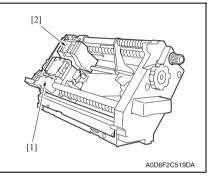


8. Remove the middle transport unit [1] by sliding it upwards.

2.3.10 Stapler



- 1. Open the front door [1].
- 2. Pull out the stapler [3] while pressing the stop lever [2].



NOTE

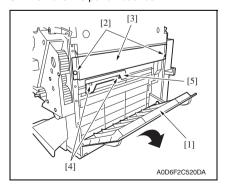
 Do not remove the stapler from the shaft of the stapler frame, or displacement will be caused between the position to which the staple driver [1] (the lower unit of the stapler) feeds staples and the position from which the staple clincher [2] (the upper unit of the stapler) receives them.

2.3.11 Saddle section

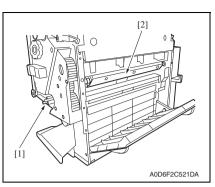
- 1. Remove the front cover.
 - See P.7
- 2. Remove the rear cover.

See P.8

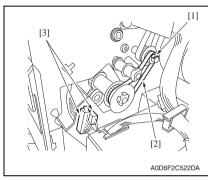
3. Remove the punch dust box.



- Open the jam access cover [1], remove two screws [2], and remove the right stay [3].
- 5. Remove two screws [4], and remove the lever [5].

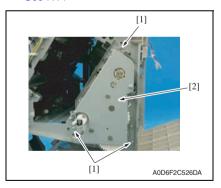


 Turn the folding jam release dial [1] to move the paper pressure [2] inside.



- 7. Remove the C-clip [1], and remove the belt [2].
- 8. Disconnect two connectors [3].

9. Remove the stapler. See P.14



10. Remove three screws [1], and pull out and remove the saddle [2].

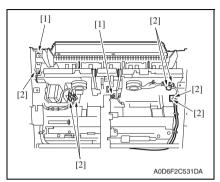
2.3.12 Finisher tray

1. Remove the finisher tray upper cover.

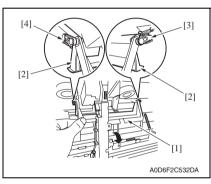
See P.9

2. Remove the side guide.

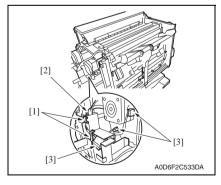
See P.11



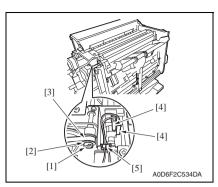
3. Remove two screws [1], and disconnect seven connectors [2].



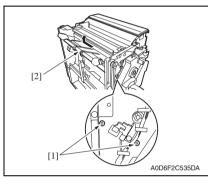
 Pull out the finisher stopper base [1], and disengage the front claw [3] and the rear claw [4] of the finisher stopper [2].



- 5. Remove the motor harness [2] from two harness saddles [1].
- 6. Disconnect three connectors [3].



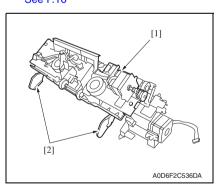
- Remove the C-clip [1], and remove the spacer [2], and remove the belt [3] from the gear.
- Disconnect two connectors [4], and remove the harness from the wire saddle [5].



 Remove two screws [1], and remove the finisher tray [2] by sliding it to the far side and lifting it.

2.3.13 Paddle section

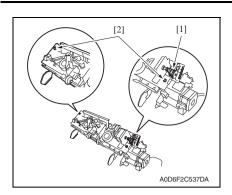
 Remove the finisher tray. See P.16



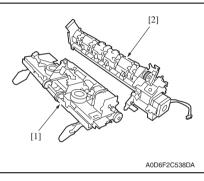
2. Place the finisher tray [1] as shown in the figure.

NOTE

• Be careful not to damage the aligning plate [2].



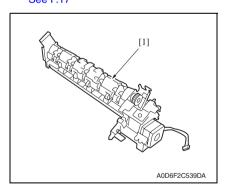
3. Remove the belt [1], and remove two screws [2].



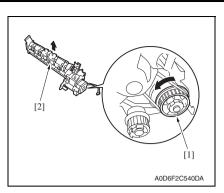
 Separate the section into the tray section [1] and the paddle section [2].

2.3.14 Exit roller (upper)

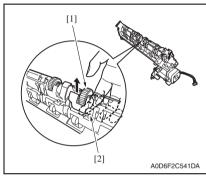
 Remove the paddle section. See P.17



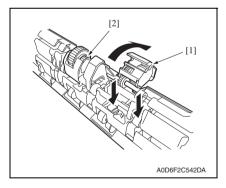
2. Place the paddle section [1] as shown in the figure.



 Turn the gear [1] in the direction indicated by an arrow to move up the exit roller (upper) section [2].



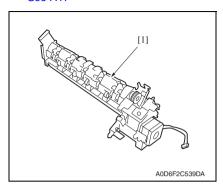
 Push up the exit roller (upper) [1] from the bottom to release it from the shaft [2].



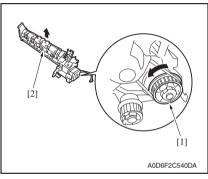
- 5. Turn up the exit roller (upper) [1], and then push it down to remove it.
- 6. Remove the front exit roller (upper)[2] as well in the same way.

2.3.15 Paddle

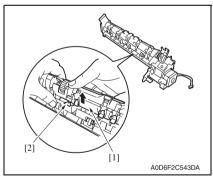
 Remove the paddle section. See P.17



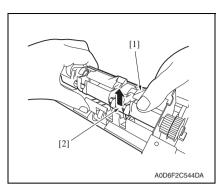
2. Place the paddle section [1] as shown in the figure.



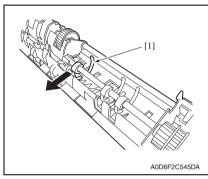
 Turn the gear [1] in the direction indicted by an arrow to move up the exit roller (upper) section [2].



 Push up the safety guide [1] from the bottom to release it on one side from the shaft [2].



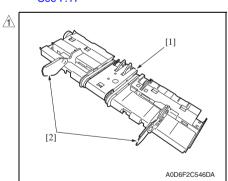
 Push up the safety guide [1] from the bottom to release it from the shaft [2] and remove it.



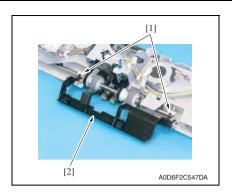
- 6. Remove the paddle [1].
- 7. Remove the other paddles as well in the same way.

2.3.16 Exit roller (lower) and paper exit belt

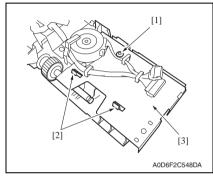
 Remove the tray section. See P.17



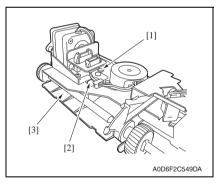
2. Slide the aligning plate (front) [2] and the aligning plate (rear) [2] outside to remove them from the tray [1].



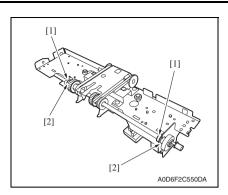
3. Remove two holders [1], and remove the finisher tray stopper [2].



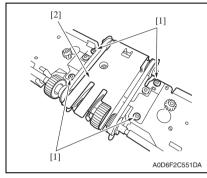
 Remove the screw [1], and remove the paper guide (front) [3] while disengaging two claws [2].



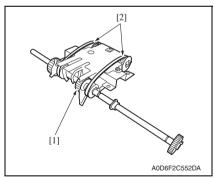
Remove the screw [1], and remove the paper guide (rear) [3] while disengaging the claw [2].



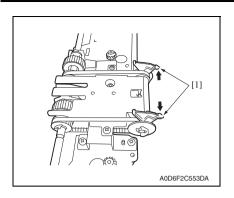
6. Remove two C-clips [1], and move two bushings [2] inside, respectively.



Remove four screws [1], and remove the exit roller (lower) section [2] by lifting it.



8. Remove the exit roller (lower) [1] and two paper exit belts [2].

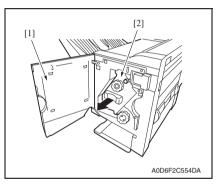


NOTE

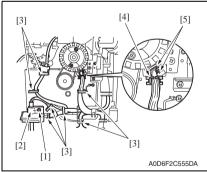
• When installing, align the edge of claws of the paper exit belt [1].

2.3.17 Stapler/folding drive unit

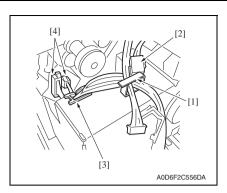
Remove the rear cover.
 See P.8



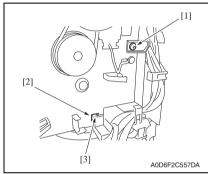
2. Open the front door [1], and slightly pull out the stapler section [2].



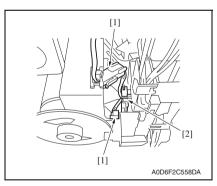
- 3. Remove screw [1], and remove the interface cable presser [2].
- 4. Remove the harness from seven wire saddles [3].
- Remove the harness from the wire saddle [4], and disconnect two connectors [5].



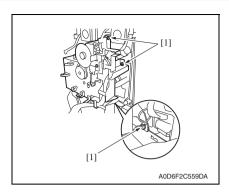
- Remove the harness from the harness saddle [1], and disconnect the connector [2].
- Remove the harness from the wire saddle [3], and disconnect two connectors [4].



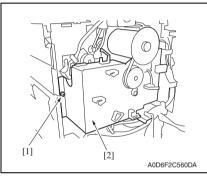
 Remove the screw [1], and remove the claw [3] of harness guide from the square hole [2] in the base plate.



 Disconnect two connectors [1], and remove the harness from the wire saddle [2].



10. Remove three screws [1].

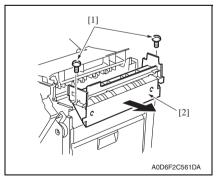


11. Remove the screw [1], and remove the stapler/folding drive unit [2].

2.3.18 Transport roller

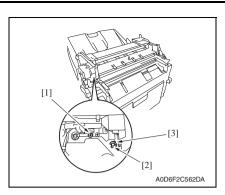
- 1. Remove the upper door.
 - See P.8
- 2. Remove the upper cover.

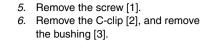
See P.10

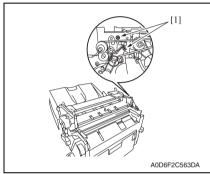


Remove the transport motor unit.
 See P.31

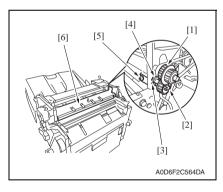
3. Remove two screws [1], and remove the upper cover unit [2].







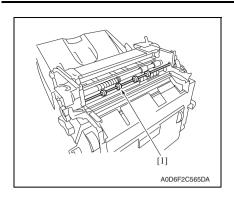
7. Remove two screws [1].



 Remove the gear 1 [1], and remove the gear 2 [2] while disengaging the claw.

NOTE

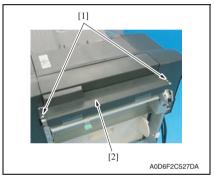
- Be careful not to lose the gear pin.
- 9. Remove the C-clip [3], and remove the bushing [4].
- 10. Remove the screw [5], and remove the paper guide (lower) [6].



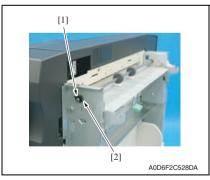
11. Remove the transport roller [1].

2.3.19 Middle transport roller

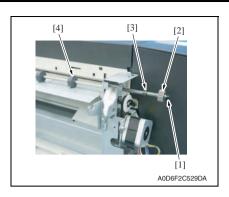
 Remove the middle front cover and the middle rear cover. See P.12



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



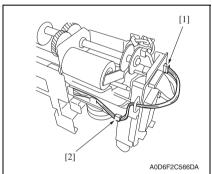
3. Remove the C-clip [1], and remove the bushing [2].



- 4. Shift the shaft assy in the orientation as shown on the left.
- Remove the C-clip [1], the gear [2], the bushing [3], and remove the middle transport roller [4].

2.3.20 Punch unit

1. Remove the punch trash box.

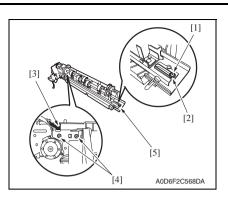


A0D6F2C567DA

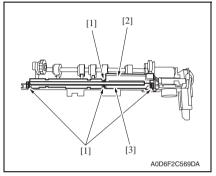
[3]

- 2. Disconnect the connector J1005 [1].
- 3. Remove the harness from the harness guide [2].

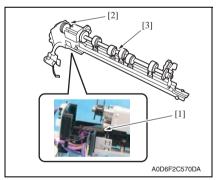
- 4. Disconnect the connector [1].
- 5. Remove the screw [2], and remove the sensor support plate [3].



- 6. Remove the screw [1] and the washer [2].
- 7. Disconnect the connector [3].
- 8. Remove two screws [4], and remove the base cover [5].



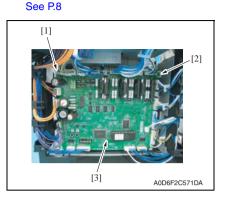
 Remove four screws [1], and remove the Sensor unit (upper) [2] and the sensor unit (lower) [3].



- 10. Remove the spring [1].
- 11. Remove the punch unit [2] from the side registration motor section [3].

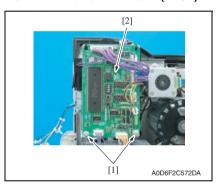
2.3.21 Finisher control board (FSCB)

1. Remove the rear cover.



- 2. Disconnect all connectors on the board, and remove the screw [1].
 - 3. Release the PCB support [2], and remove the finisher control board [3].

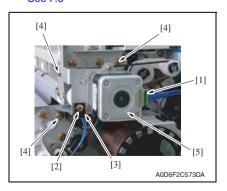
2.3.22 Punch control board (PKCB)



- 1. Remove two screws [1].
- 2. Disconnect all connectors, and remove the punch control board [2].

2.3.23 Transport motor unit

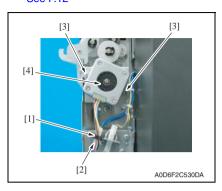
Remove the rear cover.
 See P.8



- 2. Disconnect the connector [1].
- 3. Remove screw [2], and remove the harness guide [3].
- Remove three screws [4], and remove the transport motor unit [5].

2.3.24 Entrance motor

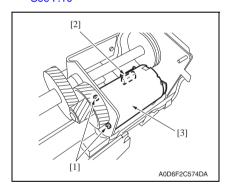
Remove the middle rear cover.
 See P.12



- 2. Remove the harness from the wire saddle [1].
- 3. Disconnect the connector [2].
- 4. Remove two screws [3], remove the entrance motor [4].

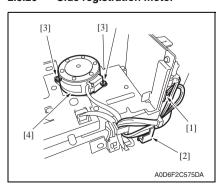
2.3.25 Punch motor

Remove the upper cover.
 See P.10



- 2. Remove two screws [1].
- 3. Disconnect the connector [2], and remove the punch motor [3].

2.3.26 Side registration motor



- 1. Disconnect the connector J1001 [1].
- Remove the harness from the harness guide [2].
- 3. Remove two screws [3], and remove the side registration motor [4].

Adjustment/Setting

3. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by "".

Advance Checks

Before attempting to solve the customer problem, 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.
- The original has a problem that may cause a defective image.
- The density is properly selected.
- · The Original Glass, slit 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.

∴ Caution

- Be sure 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.
- 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.

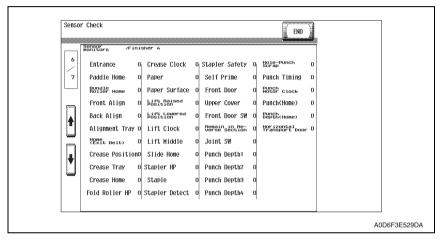
4. Sensor check

4.1 Check procedure

- Call the Service Mode to the screen.
 See P.338 of the main body service manual.
- 2. Touch the [State Confirmation] key.
- 3. Touch the [Sensor Check] key.
- 4. Touch five times [♥].

4.1.1 Sensor check screen

 This is only typical screen which may be different from what are shown on each individual main body.



4.1.2 Sensor check list

Symbol		Panel display	Part/Signal name	Operation characteristics/ Panel display	
		, ,		1	0
PS1		Entrance	Entrance sensor	Paper present	Paper not present
PS2	Paddle Home Paddle home position sensor		At home	Not at home	
PS3		Bundle Roller Home	Bundle exit roller home position sensor	At home	Not at home
PS4		Front Align	Front aligning plate home position sensor	At home	Not at home
PS5		Back Align	Rear aligning plate home position sensor	At home	Not at home
PS6		Alignment Tray	Finisher tray sensor	Paper present	Paper not present
PS7		Home (Exit Belt)	Exit belt home position sensor	At home	Not at home
PS10		Crease Position	Folding position sensor	Paper present	Paper not present
PS13		Crease Tray	Saddle tray sensor	Paper present	Paper not present
PS11		Crease Home	Folding home position sensor	At home	Not at home
PS12	4	Fold Roller HP	Folding roller home position sensor	At home	Not at home
PS14	her	Crease Clock	Staple/folding motor clock sensor	Blocked	Unblocked
PS8	6 / Finisher	Paper	Exit tray sensor	Paper present	Paper not present
PS9		Paper Surface	Exit tray home position sensor	Detected	
PS15	onit	Lift Raised Position	Lift upper limit sensor	Upper limit	
PS16	Sensor monitor	Lift Lowered Position	Lift lower limit sensor	Lower limit	
PS17	ens	Lift Clock	Lift motor clock sensor	Blocked	Unblocked
_	S	Lift Middle	_	Full	
PS18		Slide Home	Slide home position sensor	Not at home	At home
PS19		Stapler HP	Stapler drive home position sensor	At home	Not at home
PS20		Staple	Staple detecting sensor	Supplied	Empty
_		Stapler Detect	_		Detected
SW3 SW4		Stapler Safety	Stapler safely switch (Rear) Stapler safely switch (Front)	Open	Close
PS21		Self Prime	Self-priming sensor		Ready
PS22		Front Door	Front door open sensor	Close	Open
PS23		Upper Cover	Upper cover open sensor	Close	Open
SW1		Front Door SW	Front door open switch	Close	Open
PS27		Remain in Reverse Section	Turnover empty sensor		Horizontal
SW2		Joint SW	Joint open switch	Close	Open
_		Punch Depth 1		_	_
_		Punch Depth 2		_	_

Operation characteristics/

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Symbol	Panel display	Part/Signal name	Panel display	
			1	0
_	Punch Depth 3	_	_	_
_	Punch Depth 4	_	_	_
_	Hole-Punch Scrap	_	Full	
_	Punch Timing	_	_	_
PS3	Punch Motor Clock	Punch motor cock sensor	Blocked	Unblocked
PS1	Punch (Home)	Punch home position sensor	At home	Not at home
PS2	Punch Depth (Home)	Side registration home sensor	At home	Not at home
PS26	Horizontal Transport Door	Horizontal unit door sensor	Blocked	Unblocked
		•		•

5. Finisher

5.1 FN-X3 Adjustment

5.1.1 Center-Staple Position Adj.

- The stapling position is adjusted by aligning the stapling position to the folding position.
- This adjustment is made in the service mode of the main body. Since the adjustment is made in increments of 1 mm, this adjustment is useful for eliminating a displacement of 1 mm or more.
- For the effective adjustment of a minimal displacement smaller than 1 mm, refer to "6. Board switch."

See P.52

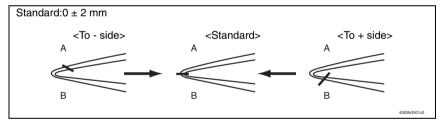
Adjustable range: - 7 to + 7 mm (Increment: 1 mm)

A. Adjustment procedure

- 1. Set A3 or 11 x 17 to the feed tray.
- 2. Touch these keys in this order: [Center staple & Fold] \rightarrow [OK].
- 3. Set five sheets of A3 or 11 x 17 original (blank paper acceptable) in the original tray.
- These five sheets are used for adjustment to minimize variation.
- 4. press the start key.
- Renew the center folding of the finished copies.
 Take the top surface of the finished copies as A, and the under surface as B.
- 6. Check the deviation of the stapling position from the newly folded position.

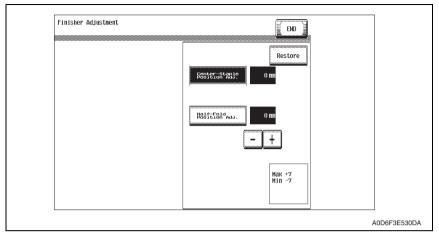
NOTE

 In checking the deviation, refer not to the folded position by the Finisher but to the newly folded position.



- Set the mode to the Service Mode. See P.338 of the main body service manual.
- 8. Touch [Finisher].
- 9. Touch [FN-X3Adjustment].

10. Touch [Center-Staple Position Adj.]



- 11. Adjust with the [+]/[-] Keys.
 - When the stapling position is shifted to the direction A: Adjust the value to the side. When the stapling position is shifted to the direction B: Adjust the value to the + side.
- 12. Touch [END].
- 13. Turn OFF the main power switch, then wait for 10 sec. or more and turn ON the main power switch.
- 14. Make the copy and check again.

5.1.2 Half-Fold Position Adj.

- The folding position is adjusted by aligning the folding position to the stapling position.
- This adjustment is made in the service mode of the main body. Since the adjustment is made in increments of 1 mm, this adjustment is useful for eliminating a displacement of 1 mm or more.
- For the effective adjustment of a minimal displacement smaller than 1 mm, refer to 6. Board switch.

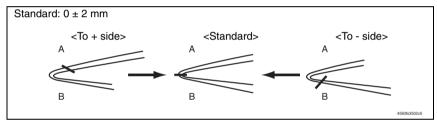
See P.52

Adjustment range: - 7 to + 7 mm (Increment: 1 mm)

A. Adjustment procedure

- 1. Set A3 or 11 x 17 to the Feed Tray.
- Touch these keys in this order: [Center Staple & Fold] → [OK].
- 3. Set five sheets of A3 or 11 x 17 original (blank paper acceptable) in the original tray.
- These five sheets are used for adjustment to minimize variation.
- 4. Press the start key.
- Check the finished copies for deviation of the stapling position of from the newly folded position.

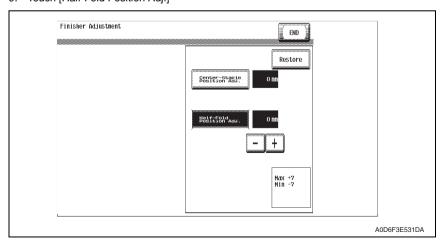
Take the top surface of the finished copies as A, and the under surface as B.



6. Set the mode to the service mode.

See P.338 of the main body service manual.

- 7. Touch [Finisher].
- 8. Touch [FN-X3Adjustment].
- 9. Touch [Half-Fold Position Adj.]



- 10. Adjust with the [+]/[-] Keys.
 - When the stapling position is shifted to the direction A: Adjust the value to the + side.When the stapling position is shifted to the direction B: Adjust the value to the side.
- 11. Touch [END].
- 12. Turn OFF the main power switch, then wait for 10 sec. or more and turn ON the main power switch.
- 13. Make the copy and check again.

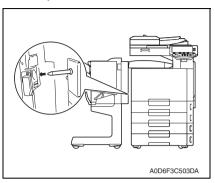
5.2 Punch option setting

Functions	 To set installation and model of the punch kit. To set the number of holes to be made by the punch kit installed. 		
Use	Use when the punch kit is installed.		
Setting/ Procedure	 The default setting is Non-installat. 1. Touch [PK-501]. 2. Select the number of punch holes to be made corresponding to the model and destination. 3. Touch [decision]. 4. Turn off the main power switch and turn it on again more than 10 seconds after. 		

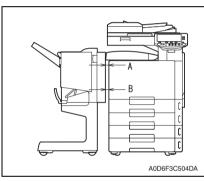
6. Mechanical adjustment

6.1 Adjustment of height and inclination

1. Gently move the finisher toward the machine and check for following.

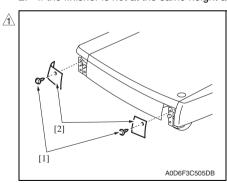


• Is the positioning pin aligned with the hole in the finisher?

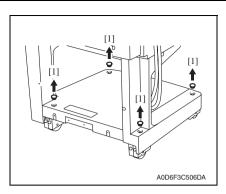


- Does the horizontal transport unit run excessively slantwise?
- Does the clearance at A equal that at B?

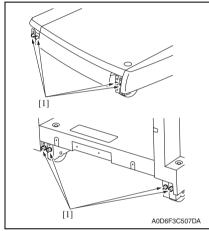
2. If the finisher is not at the same height as the machine, adjust the machine as follows.



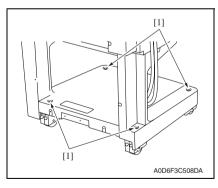
Remove the finisher from the main body, and remove two screws [1], and remove two caster covers [2].



Remove four adjusting screw covers [1].



5. Loosen eight caster fixing screws [1].



- Turn four adjustment screws [1] to make adjustment.
- To heighten: Turn the screw counterclockwise.
- To bring down: Turn the screw clockwise.

- 7. Fasten the caster fixing screws.
- 8. Install the caster covers and the adjustment screw covers.

6.2 Adjustment of the Folding Position

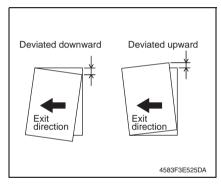
- Folding position is adjusted by adjusting the tray section and the saddle section.
- Adjust the folding position by aligning the tray section. Adjust the position of the saddle section if the position is still not proper.

<Deviation amount which will be adjusted>

Paper Size	Amount of deviation which will be adjusted by aligning the Tray Section	Amount of deviation which will be adjusted by aligning the Saddle Section position	Total amount which will be adjusted
A3	0.55 mm	0.55 mm	1.1 mm
A4	0.4 mm	0.4 mm	0.8 mm
B4	0.5 mm	0.5 mm	1.0 mm
Ledger	0.55 mm	0.55 mm	1.1 mm
Letter	0.35 mm	0.35 mm	0.7 mm

6.2.1 Adjustment procedure

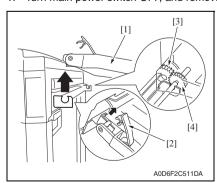
A. Checking the deviation amount



- Load the paper take-up tray with A3 or 11x17 paper.
- Select [Center Staple & Fold] and touch [OK].
- Place the A3 original (blank paper acceptable) to the original tray, and press the start key.
- Check the fed out copy to see if there is any deviation.

B. Adjusting the folding deviation

1. Turn main power switch OFF, and remove the Finisher from the machine.

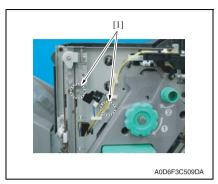


 Raise the horizontal transport unit [1] straight upward and, keeping that condition, disengage the lock lever [2] and remove the horizontal transport unit [1].

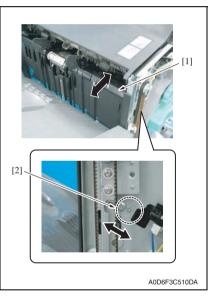
NOTE

- At reinstallation, be sure to engage the lock lever [2] in position.
- At reinstallation, make sure that the gear [3] of the finisher is in positive mesh with the gear [4] of the horizontal transport unit.

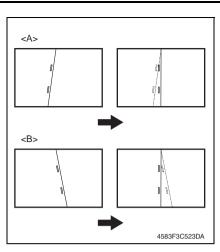
- 3. Remove the middle transport unit.
 - See P.12
- 4. Remove the front cover.
 - See P.7



5. Loosen two screws [1] on the tray section.



 Move the tray section [1] back and forth, and move the positioning dowels [2] right and left to adjust.

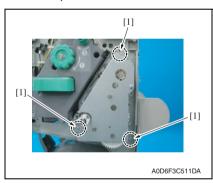


- If it is deviated downward <A>, move the positioning dowels to the left.
- If it is deviated upward , move the positioning dowels to the right.

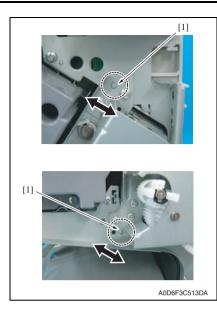
NOTE

 The folding line will move along with the staples.

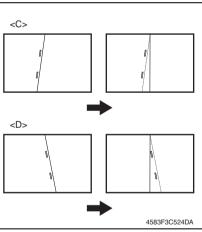
Carry out the test copy to see if there is any folding deviation.If the deviation is not adjusted, repeat the procedure from step 8 to adjust the saddle section position.



8. Loosen three set screws [1] on the saddle section.



9. Move the two positioning dowels [1] to adjust.



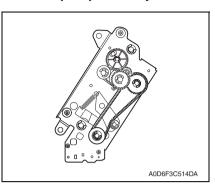
- If it is deviated downward <C>, move the positioning dowel to the left.
- If it is deviated upward <D>, move the positioning dowel to the right.

NOTE

• Only the folding line will move.

10. Feed out the test copy and check if there is any folding deviation.

6.3 Stapler phase adjustment

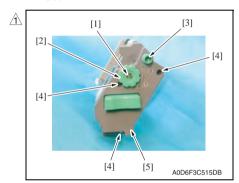


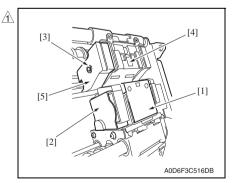
Make phase adjustment of the stapler following the procedures given below whenever the gear or timing belt in front of the stapler has been replaced or removed for some reason, since such replacement or removal will cause mistiming between the staple driving by the staple driver (the lower unit of the stapler) and the staple clinching by the staple clincher (the upper unit of the stapler).

6.3.1 Adjustment procedure

1. Remove the stapler.

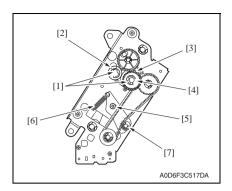
See P.14

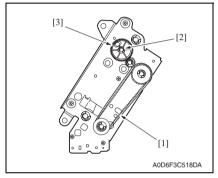


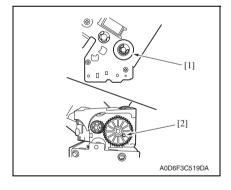


- 2. Remove the E-ring [1], and remove the jam release dial 1 [2].
- 3. Remove the jam release dial 2 [3].
- 4. Remove the three screws [4], and remove the stapler front cover [5].

- 5. Remove the gear cover [2] from the staple driver [1].
- Remove the E-ring [3], and remove the side cover [5] from the staple clincher [4].

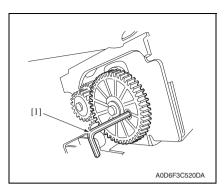




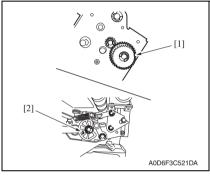


- Remove two E-rings [1], and remove the staple jam release gear [2], the timing belt [3] and the middle gear 1 [4].
- Remove the spacer and the spring located behind the staple jam release gear.
- Remove the screw [5] and the spring [6], and remove the belt tension roller [7].
- 10. Remove the timing belt [1].
- 11. Remove the E-ring [2], and remove the staple position confirm gear [3].

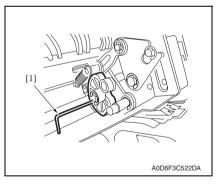
12. Turn the gear [1] to position the hole [2] in the gear of the staple driver to the hole behind.



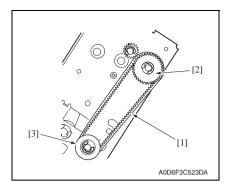
13. Insert a pin of approx. φ2 [1] (alternatively, 2 mm hexagonal wrench or the like can be preferably used) into the hole, and fix the gear.

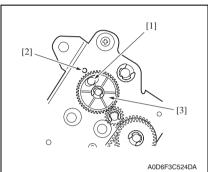


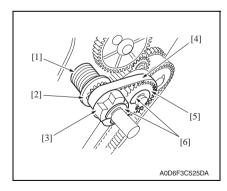
14. Turn the gear [1] to position the hole [2] in the cam of the staple clincher to the hole behind.



15. Insert a pin of approx. φ2 [1] (alternatively, 2 mm hexagonal wrench or the like can be preferably used) into the hole, and fix the cam.







16. Set the timing belt [1] to the gear [2] and gear [3] with the gear and the cam in the fixed condition.

17. Install the staple position confirm gear [3] in such a way that the blue mark [1] of the gear comes face to face with the hole [2] in the frame.

NOTE

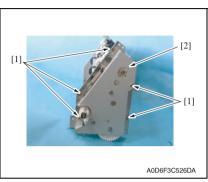
- The position in which the blue mark meets face to face with the hole is the home position for stapling. If the staple jam release gear is turned for some reason, this home position will shift and the staple cartridge will not come off. In this case, the staple position confirm gear plays a role of resuming the stapling home position by referring to the blue mark. Therefore, the gear should be set in place correctly.
- 18. Remove the pin fixing the gear and the cam to release them.
- 19. Set the spring [1], the spacer [2], the staple jam release gear [3], the timing belt [4] and the middle gear 1 [5], and fix them with two E-rings [6].

6.4 Saddle gear phase adjustment

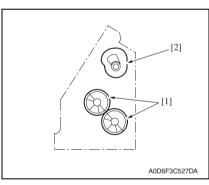
 Whenever the gear in front of the saddle or the folding roller has been replaced or removed for some reason, make gear phase adjustment following the procedures given below.

6.4.1 Adjustment procedure

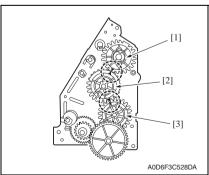
Remove the saddle.
 See P.14



2. Remove five screws [1], and remove the saddle gear cover [2].



- Set the folding roller [1] and saddle cam [2] within the saddle as shown in the figure.
- With the folding roller and the saddle cam positioned as shown in the left figure, set the gears as shown in the figure in the following way.

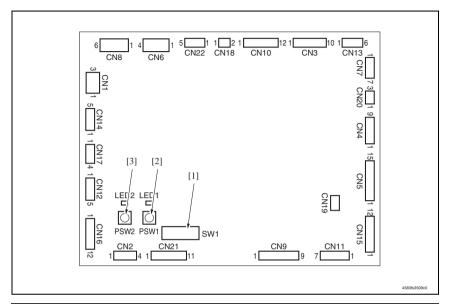


NOTE

- The mark on the saddle cam drive gear [1] (either of the two marks) comes face to face with the mark on the middle gear [2] (the mark on the semi spherical part with narrow gear face width).
- 5. With the saddle cam drive gear [1] and the middle gear [2] positioned as above, the mark on the middle gear [2] (the mark on the other semi spherical part) meets face to face with the rib of the folding roller drive gear [3].

7. Board switch

7.1 FSCB (Finisher control board)



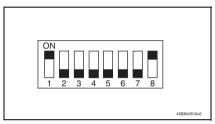
	Symbol	Description
[1]	SW1	Used to adjust the folding position, adjust the center 2-point stapling position and adjust the alignment plate position.
[2]	PSW1	Used to adjust the folding position, adjust the center 2-point stapling position and adjust the alignment plate position.
[3]	PSW2	Used to adjust the folding position, adjust the center 2-point stapling position and adjust the alignment plate position.

7.1.1 Adjustment of the folding positions

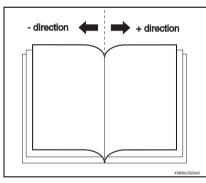
When a folding position is adjusted, adjust the folding position to the stapling position.
make this adjustment after replacing the finisher control board or when the folding position must be changed for some reason.

NOTE

- Depending on the type of paper, both the folding position and the stapling position may be inaccurate. In this case, make adjustment independently from the finisher. In this independent adjustment from the finisher, set the adjustment value of [Center-Stapling Position Adj.] and [Half-Fold Position Adj.] in the service mode to \pm 0 mm on the main body.
- 1. Turn main power switch OFF, and remove the finisher from the machine.
- 2. Remove the rear cover from the finisher. See P.8



Set SW1 on the finisher control board as shown on the left figure.



- Press PSW1 or PSW2 on the finisher control board for the required times to adjust the folding position.
 One pressing of the switch moves the folding position by approx. 0.16 mm.
- Press PSW1 to move the folding position in the direction.
- Press PSW2 to move the folding position in the + direction.
- Press PSW1 and PSW2 simultaneously to clear the present set adjustment value.
- After setting the adjustment value of the folding position, set all bits of SW1 on the finisher control board to OFF.
- Perform the booklet creation on the main body, and confirm that the folding position has been correctly adjusted. If not, redo the adjustment.

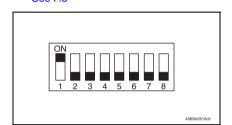
7.1.2 Adjustment of the center stapling position

When a stapling position is adjusted, adjust the stapling position to the folding position.
 Make this adjustment after replacing the finisher control board or when the stapling position must be changed for some reason.

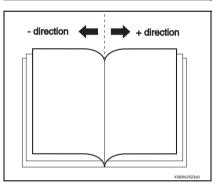
NOTE

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- Depending on the type of paper, both the folding position and the stapling position may be inaccurate. In this case, make adjustment independently from the finisher.
 In this independent adjustment from the finisher, set the adjustment value of [Center-Stapling Position Adj.] and [Half-Fold Position Adj.] in the service mode to ± 0mm on the main body.
- 1. Turn main power switch OFF, and remove the finisher from the machine.
- Remove the rear cover from the finisher.See P8



3. Set SW1 on the finisher control board as shown on the left figure.



- Press PSW1 or PSW2 on the finisher control board for the required times to adjust the stapling position.
 One pressing of the switch moves the stapling position by approx. 0.14 mm.
- Press PSW1 to move the stapling position in the - direction.
- Press PSW2 to move the stapling position in the + direction.
- Press PSW1 and PSW2 simultaneously to clear the present set adjustment value.
- After setting the adjustment value of the stapling position, set all bits of SW1 on the finisher control board to OFF.
- Perform the booklet creation on the main body, and confirm that the stapling position has been correctly adjusted. If not, redo the adjustment.

7.1.3 Adjustment of the alignment plate position

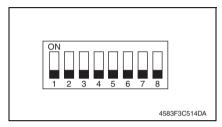
 Alignment plate should be adjusted when there is a faulty alignment, the staple position deviates.

A. Alignment procedure

NOTE

- If a step or steps are wrongly performed in mid procedure, stop the procedure immediately. Then turn OFF the main power switch of the main body, wait for 10 sec. or more, and turn ON the main power switch. After performing these steps, start the procedure over.
- 1. Turn main power switch OFF, and remove the finisher from the machine.
- 2. Remove the rear cover from the finisher.

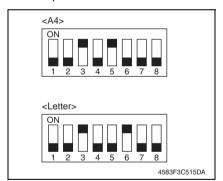
See P.8



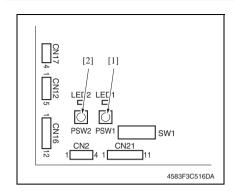
Check to make sure that all SW1 on the finisher controller board are set to OFF.

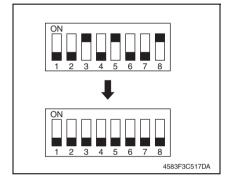
NOTE

- When not all of them are OFF, write down the switch status and turn them OFF.
- With the rear cover of the finisher removed, install the finisher to the machine, and turn main power switch ON.



- When the initial operation of the finisher is complete, turn on the following switches of SW1.
 When adjusting with A4: 3, 5
 - When adjusting with Letter: 3, 6





11. Return the finisher to the original status.

- After the initial operation of the finisher, press the PSW1 [1] on the finisher control board and make sure that the alignment plate moves to the selected paper size area.
- Adjust the alignment plate position with PSW1 [1] or PSW2 [2]. When adjusting inward: Press PSW1. When adjusting outward: Press PSW2.

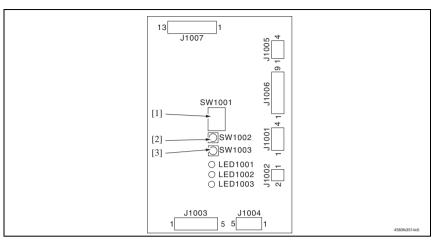
The alignment plate will move 0.367mm every time the push switch is pressed.

Alignment range is ± 2.936 mm.

- When the adjustment is complete, turn switch 8 of SW1 ON to set the adjustment value.
- 9. Turn all adjustment switches OFF.
- 10. Turn main power switch OFF. **NOTE**

When not all SW1 are OFF in step 3, return to the original condition according to the written note.

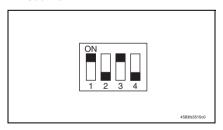
7.2 PKCB (Punch control board)



	Symbol	Description
[1]	SW1001	Used to register the number of punched holes and adjust the sensor output.
[2]	SW1002	Used to register the number of punched holes and adjust the sensor output.
[3]	SW1003	Used to register the number of punched holes and adjust the sensor output.

7.2.1 Adjustment of the sensor output

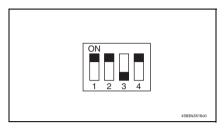
- Be sure to make this adjustment after replacing the punch control board, the side registration sensor (Photosensor board or LED board) or the punch dust full sensor (punch dust full sensor board or punch dust full LED board).
- 1. Turn main power switch OFF, and remove the finisher from the machine.
- 2. Remove the rear cover from the finisher. See P.8



- Set the bits 1 through 4 of DIPSW1001 on the punch control board as shown on the left figure.
- Press SW1002 or SW1003 on the punch control board. The sensor output will be automatically adjusted.
- When all LED1001, LED1002 and LED1003 light up, the adjustment has been completed.
- 5. Set all bits of DIPSW1001 to OFF.

7.2.2 Registration of the number of punch holes

- In order for the finisher to recognize the number of punch holes that can be achieved by
 the installed punch unit, such number of punch holes is registered in the IC on the punch
 control board. Make this registration whenever the punch control board has been
 replaced.
- However, this registration is not necessary if the EEP-ROM used on an old board has been reinstalled to a new board.



 Set the bits 1 through 4 of DIPSW1001 on the punch control board as shown on the left figure.

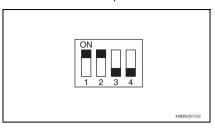
- 2. Press SW1002 on the punch control board to select the number of punch holes.
- Each time SW1002 is pressed, the following display changes in the descending order shown below:

Number of punch holes	LED	LED	LED
Number of punctificies	1001	1002	1003
2 (Punch unit J1)	ON	OFF	OFF
2/3 (Punch unit K1)	ON	ON	OFF
4 (Punch unit G1)	OFF	ON	OFF
4 (Punch unit H1)	OFF	OFF	ON

- Press SW1003 on the punch control board twice. The number of punch holes will be registered in the punch control board.
- The pressing of SW1003 changes the steady lighting of the LED to flickering, and the
 pressing of SW1003 again changes the flickering of the LED to steady lighting. This completes the registration.
- 4. Set all bits of DIPSW1001 to OFF.

7.2.3 Procedure after replacing the EEP-ROM (IC1002)

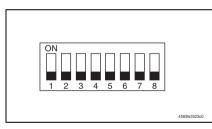
1. Turn OFF the main power switch of the main body.



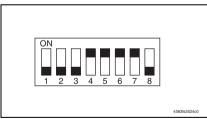
- Set the bits 1 through 4 of DIPSW1001 on the punch control board as shown on the left figure.
- Press SW1002 and SW1003 on the punch control board simultaneously.
- This will initialize the EEP-ROM. After the initialization, all LED1001, LED1002 and LED1003 light up.
- 4. Adjust the sensor output, and register the number of punch holes.
- 5. Set all bits of DIP SW 1001 to OFF.

7.2.4 Punch center position adjustment

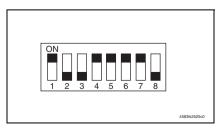
- This adjustment is made when the punch lateral movement is changed from the lateral registration motion (automatic through end face detection) to fixed system based on the paper size.
- 1. Turn main power switch OFF, and remove the finisher from the machine.
- Remove the rear cover from the finisher.See P.8



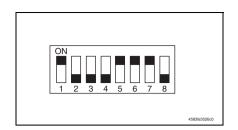
- Check that all keys of SW1 of the finisher control board are OFF.
- Turn ON the main power switch of the main body and wait until the finisher completes its initial operation.

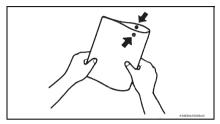


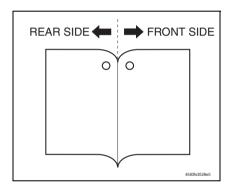
- Use the following procedure to clear the adjustment of the punch lateral movement.
- 5. Turn ON keys 4, 5, 6, and 7 of SW1 of the finisher control board.

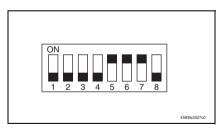


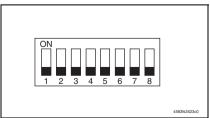
- Turn ON key 1 of SW1 of the finisher control board.
- Press PSW1 and PSW2 of the finisher control board at the same time.



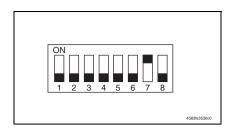








- Turn OFF key 4 of SW1 of the finisher control board.
- Wait until the machine becomes capable of paper feed.
- 10. Feed one sheet of paper through the machine. Fold the copy fed out of the machine in half and check that the punch holes are aligned with each other.
 - Specifications:0 ± 2 mm
- If the specified range is not met, use the following procedure to adjust the punch center position.
- Press PSW1 or PSW2 of the finisher control board once according to the direction of deviation.
- Pressing PSW1 moves the punch position to the front.
- Pressing PSW2 moves the punch position to the rear.
- Each press of PSW1 or PSW2 moves the position 1 mm. The adjustment range should be within ± 5 mm.
- 12. Feed another sheet of paper. If the punch hole position is not properly adjusted, make the adjustment once again.
- When the adjustment procedure has been completed, use the following procedure to finish the adjustment mode.
- 13. Turn OFF key 1 of SW1 of the finisher control board.
- 14. Turn OFF keys 5, 6, and 7 of SW1 of the finisher control board.
- 15. Turn OFF the main power switch of the main body.



Turn ON key 7 of SW1 of the finisher control board.

NOTE

- Flipping ON key 7 of SW1 validates the setting made to the fixed system based on the paper size as changed from the lateral registration motion (automatic through end face detection).
- To return the setting back to the lateral registration motion, flip OFF key 7 of SW1.
- 17. Turn ON the main power switch of the main body.
- 18. Reinstall the rear cover.

See P.8

NOTE

- The procedure must be carried out as specified. In particular, switching ON or OFF must be performed properly.
- If a step or steps are wrongly performed in mid procedure, stop the procedure immediately. Then turn OFF the main power switch of the main body, wait for 10 sec. or more, and turn ON the main power switch. After performing these steps, start the procedure over.
- This adjustment is applicable only to the punch position center adjustment. The
 adjustment range is ± 5 mm. It does not adjust for variations in the punch hole
 positions.

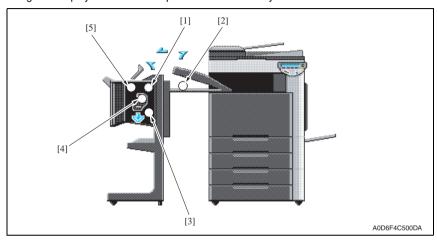
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Troubleshooting

8. Jam display

8.1 Misfeed display

When misfeed occurs, message, misfeed location "Blinking" and paper location "Lighting" are displayed on the touch panel of the main body.

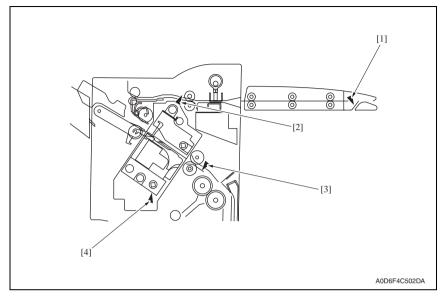


No.	Code	Misfeed location	Misfeed access location	Action
[1]	7218	Transport section	Front door	P.66
[2]	7216	Horizontal transport section	Horizontal transport cover	P.66
[3]	7225	Folding position section	Front door	P.67
[4]	7281	Stapler section	Front door	P.67
[5]	7221	Paper stack exit section	Front door	P.68

8.1.1 Misfeed display resetting procedure

• Open the corresponding door, clear the sheet of paper misfeed, and close the door.

8.2 Sensor layout



PS27

[3] Folding position sensor

PS10

[2] Entrance sensor

PS1

[4] Stapler drive home position sensor

PS19

8.3 Solution

8.3.1 Initial check items

• When a paper misfeed occurs, first perform the following initial check items.

Check Item	Action	
Does the paper meet product specifications?	Change the paper.	
Is paper curled, wavy, or damp?	See "Solution when paper curl occurs" on P.65.	
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.	
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.	
Are the edge guide and trailing edge stop at the correct position to accommodate the paper?	Set as necessary.	
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.	

8.3.2 Solution when paper curl occurs

Step	Check items/actions		
1	Turn over the stacked paper in the paper tray.	OK	_
'		NG	Go to step 2.
2	Does paper curl occur just after a warm-up has been completed or the sleep mode has been turned OFF?	YES	Go to step 3.
2	Does paper curl occur under normal conditions (under conditions other than those mentioned above)?	YES	Go to step 5.
	Call the Service Mode to the screen.	OK	_
3	 2. Select [System 1] → [Change Warm Up Time]. 3. Change the setting to [Mode3]. See P.394 of the main body service manual. 	NG	Go to step 4.
4	 Call the Service Mode to the screen. Select [System 1] → [Change Warm Up Time]. Change the setting to [Mode4]. See P.394 of the main body service manual. 	_	_
	1. Call the Service Mode to the screen.	OK	_
5	 2. Select [Machine] → [Fusing Temperature]. 3. Select a paper type. 4. Change the temperature of Heater Roller to [-10 °C]. See P.346 of the main body service manual. 	NG	Go to step 6
6	 Call the Service Mode to the screen. Select [Machine] → [Fusing Temperature]. Select a paper type. Change the temperature of Heater Roller to [-20 °C]. See P.346 of the main body service manual. 	_	_

8.3.3 Transport section misfeed

A. Detection timing

Type	Description	
Transport coation	The entrance sensor (PS1) does not detect paper even after the lapse of approx. 1.5 sec. after the entrance sensor (PS1) has received the paper exit signal from the main body.	
	Paper is not removed from the entrance sensor (PS1) even after the lapse of approx. 2 sec. after the entrance sensor (PS1) has detected paper edge.	

B. Action

Relevant electrical parts	
Entrance sensor (PS1)	Finisher control board (FSCB)

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FS-609/PK-501

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical components)
1	Initial check items	_	_
2	PS1 I/O, sensor check	FSCB CN16-11 (ON)	FS-609/PK-501 C-11
3	FSCB replacement	_	_

8.3.4 Horizontal transport section misfeed

A. Detection timing

Туре	Description
Horizontal	The turnover empty sensor (PS27) is not unblocked even after the lapse of a
transport section	given period of time after the leading edge of the paper has blocked the turnover
misfeed detection	empty sensor (PS27).

B. Action

Relevant electrical parts		
Turnover empty sensor (PS27)	Finisher control board (FSCB)	



	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical components)
1	Initial check items	_	_
2	PS27 I/O, sensor check	FSCB CN21-5 (ON)	FS-609/PK-501 I-10
3	FSCB replacement	_	_

Folding position section misfeed 8.3.5

A. Detection timing

Type	Description
Folding position section misfeed	The folding position sensor (PS10) does not detect paper even after the set period of time after the paper has been fed from the transport booklet tray to the stapling position during stapling operation.
detection	Paper is not removed from the folding position sensor (PS10) even after the lapse of approx. 10.5 sec. after the staple/folding motor (M7) has been driven during stapling operation.

B. Action

Relevant electrical parts	
Folding position sensor (PS10)	Finisher control board (FSCB)

<u> 1</u>	I

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Initial check items	_	_
2	PS10 I/O, sensor check	FSCB CN16-2 (ON)	FS-609/PK-501 C-12
3	FSCB replacement	_	_

Stapler section misfeed 8.3.6

A. Detection timing

Туре	Description
Stapler section misfeed detection	The stapler drive home position sensor (PS19) is not turned OFF or does not return to its home position even after the set period of time after the stapler has been driven.

B. Action

Relevant electrical parts	
Stapler drive home position sensor (PS19)	Finisher control board (FSCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Initial check items	_	_
2	PS19 I/O, sensor check	_	_
3	FSCB replacement	_	_

8.3.7 Paper stack exit section misfeed

A. Detection timing

Туре	Description
'	The finisher tray sensor (PS6) remains activated when a copy stack, which has been stapled together, is fed out.

B. Action

Relevant electrical parts	
Exit motor (M3) Finisher tray sensor (PS6)	Finisher control board (FSCB)

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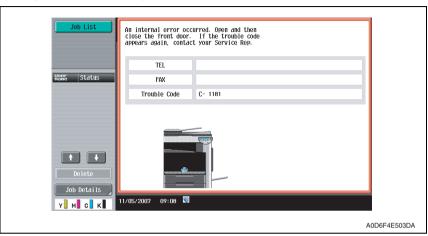
FS-609/PK-501

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Initial check items	_	_
2	PS6 I/O, sensor check	FSCB CN5-3 (ON)	FS-609/PK-501 I-7
3	M3 operation check	FSCB CN13-3 to 6	FS-609/PK-501 C-6
4	FSCB replacement	_	_

9. Trouble code

9.1 Trouble code display

• The main unit's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code on the touch panel.



NOTE

 Before starting the troubleshooting in relation to the punch mechanism C11CX, be sure to turn OFF the main power switch of the machine.

9.2 Trouble code list

Code	Item	Description
C1180	Transport system drive malfunctions	 The folding roller home position sensor (PS12) is not unblocked even after the lapse of a given period of time after the folding roller has started moving from its home position. The folding roller home position sensor (PS12) is not blocked even after the lapse of a given period of time after the folding roller has started moving from a position not the home position.
C1181	Paddle motor malfunctions	 The paddle home position sensor (PS2) is not unblocked even after the lapse of a given period of time after the paddle has started moving from its home position. The paddle home position sensor (PS2) is not blocked even after the lapse of a given period of time after the paddle has started moving from a position not the home position. The bundle exit roller home position sensor (PS3) is not unblocked even after the lapse of a given period of time after the booklet roller has started moving from its home position. The bundle exit roller home position sensor (PS3) is not blocked even after the lapse of a given period of time after the booklet roller has started moving from a position not the home position.

Code	Item	Description
C1183	Elevate mechanism malfunctions	 The exit tray home position sensor (PS9) is not blocked even after the lapse of a given period of time after the tray has started moving up. An encoder clock input is not detected within a given period of time during operation of the tray.
C1192	Front aligning plate motor malfunctions	 The front aligning plate home position sensor (PS4) is not unblocked even after the lapse of a given period of time after the front aligning plate has started moving from its home position to a position out of the home position. The front aligning plate home position sensor (PS4) is not blocked even after the lapse of a given period of time after the front aligning plate has started moving from a position out of the home position to the home position.
C1193	Rear aligning plate motor malfunctions	 The rear aligning plate home position sensor (PS5) is not unblocked even after the lapse of a given period of time after the rear aligning plate has started moving from its home position to a position out of the home position. The rear aligning plate home position sensor (PS5) is not blocked even after the lapse of a given period of time after the rear aligning plate has started moving from a position out of the home position to the home position.
C11A4	Booklet exit motor malfunctions	 The exit belt home position sensor (PS7) is not unblocked even after the lapse of a given period of time after the booklet exit belt has started moving from its home position during an initial operation. The exit belt home position sensor (PS7) is not unblocked even after the lapse of a given period of time after the booklet exit belt has started moving from its home position during an ordinary operation. The exit belt home position sensor (PS7) is not blocked even after the lapse of a given period of time after the booklet exit belt has started moving from a position not the home position during an initial operation. The exit belt home position sensor (PS7) is not blocked even after the lapse of a given period of time after the booklet exit belt has started moving from a position not the home position during an ordinary operation.
C11B1	Stapler unit slide motor malfunctions	 The slide home position sensor (PS18) is not unblocked even after the lapse of a given period of time after the stapler unit has started moving from its home position. The slide home position sensor (PS18) is not blocked even after the lapse of a given period of time after the stapler unit has started moving from a position not the home position.

Code	Item	Description
C11B4	Stapler/folding motor malfunctions	 The stapler drive home position sensor (PS19) is not blocked even after the lapse of a given period of time after the clinch operation has started. An encoder clock input is not detected within a given period of time during a clinch operation. The folding home position sensor (PS11) is not blocked even after the lapse of a given period of time after the folding unit has started moving from a position out of the home position during an initial operation. The folding home position sensor (PS11) is not unblocked even after the lapse of a given period of time after a folding operation has been started during an ordinary operation. The folding home position sensor (PS11) is not blocked even after the lapse of a given period of time after a folding operation has been started and the sensor has been unblocked during an ordinary operation. An encoder clock input is not detected within a given period of time during a folding operation.
C11C1	Punch control board mal- functions	 No response is received to a request made by the finisher within a given period of time during initial communications. No response is received to a request made by the finisher within a given period of time during ordinary communications. There is no match in the checksum values of the backup data as checked twice. The 24 V power source of the punch unit is OFF when an operation request is made from the finisher.
C11C2	Punch side registration motor malfunctions	 The side registration home sensor (PS2) is not unblocked even after the lapse of a given period of time after the punch side registration unit has started moving from its home position. The side registration home sensor (PS2) is not blocked even after the lapse of a given period of time after the punch side registration unit has started moving from a position not the home position.
C11C3	Punch motor malfunctions	 The home position is not detected within a given period of time after the punch motor has been rotated a half turn. An encoder clock input is not detected even after the lapse of a given period of time during operation of the punch motor. The setting value calculated during the initial operation falls outside the threshold value range.
C11C5	Punch sensor malfunctions	 The light receiving voltage is 2.5 V or less when the illuminating voltage is set to 4.4 V. The light receiving voltage is 2.5 V or more when the illuminating voltage is set to 0 V. The illuminating voltage setting is 4.4 V or more after the adjustment has been made.
C1401	Backup RAM malfunction	 Data written in the backup memory differs from what is recorded in it and writing operation is not correctly performed even with two retry sequences (a total of three writing sequences).

NOTE

• The punch unit detects punch-related malfunctions and notifies the finisher of any malfunction detected.

9.3 Solution

9.3.1 C1180: Transport system drive malfunctions

Relevant electrical parts	
Folding roller home position sensor (PS12) Transport motor (M1)	Finisher control board (FSCB)

1			WIRING DIA	GRAM
	Step	Action	Control signal	Location (Electrical components)
	1	Check the motor connectors for proper connection, and correct as necessary.	_	_
	2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
	3	PS12 I/O, sensor check	FSCB CN16-9 (ON)	FS-609/PK-501 C-11
	4	M1 operation check when the main power switch is turned OFF and ON.	FSCB CN10-3 to 6	FS-609/PK-501 C-8 to 9
	5	FSCB replacement	_	_

9.3.2 C1181: Paddle motor malfunctions

Relevant electrical parts	
Paddle home position sensor (PS2)	Finisher control board (FSCB)
Bundle exit roller home position sensor (PS3)	
Paddle motor (M2)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	_	_
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
3	PS2 I/O, sensor check	FSCB CN9-2 (ON)	FS-609/PK-501 I-12
4	PS3 I/O, sensor check	FSCB CN9-8 (ON)	FS-609/PK-501 I-12
5	M2 operation check when the main power switch is turned OFF and ON.	FSCB CN10-9 to 12	FS-609/PK-501 C-9
6	FSCB replacement	_	_

9.3.3 C1183: Elevate mechanism malfunctions

(1) Upper limit sensor

Relevant electrical parts	
Lift upper limit sensor (PS15)	Finisher control board (FSCB)

A

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the sensor connectors for proper connection, and correct as necessary.	_	_
2	PS15 I/O, sensor check	FSCB CN15-12 (ON)	FS-609/PK-501 I-7
3	FSCB replacement	_	_

C1192: Front aligning plate motor malfunctions 9.3.4

Relevant electrical parts	
Front aligning plate home position sensor (PS4)	Finisher control board (FSCB)
Front aligning motor (M4)	

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		WIRING DIAG	iRAM
Step	Action	Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	I	_
2	Check the connector of motor for proper drive coupling, and correct as necessary.	1	_
3	PS4 I/O, sensor check	FSCB CN4-2 (ON)	FS-609/PK-501 I-8 to 9
4	M4 operation check when the main power switch is turned OFF and ON.	FSCB CN3-2 to 5	FS-609/PK-501 C-5
5	FSCB replacement	_	_

9.3.5 C1193: Rear aligning plate motor malfunctions

Relevant electrical parts	
Rear aligning plate home position sensor (PS5) Rear aligning motor (M5)	Finisher control board (FSCB)

1			WIRING DIAG	RAM
	Step	Action	Control signal	Location (Electrical components)
	1	Check the motor and sensor connectors for proper connection, and correct as necessary.	_	_
	2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
	3	PS5 I/O, sensor check	FSCB CN5-15 (ON)	FS-609/PK-501 I-8
	4	M5 operation check when the main power switch is turned OFF and ON.	FSCB CN3-7 to 10	FS-609/PK-501 C-5 to 6
	5	FSCB replacement	_	-

9.3.6 C11A4: Booklet exit motor malfunctions

Relevant electrical parts	
Exit belt home position sensor (PS7) Exit motor (M3)	Finisher control board (FSCB)

1			WIRING DIAGRAM	
	Step	ep Action	Control signal	Location (Electrical components)
	1	Check the motor and sensor connectors for proper connection, and correct as necessary.	_	-
	2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
	3	PS7 I/O, sensor check	FSCB CN5-6 (ON)	FS-609/PK-501 I-7
	4	M3 operation check when the main power switch is turned OFF and ON.	FSCB CN13-3 to 6	FS-609/PK-501 C-6
	5	FSCB replacement	_	_

9.3.7 C11B1: Stapler unit slide motor malfunctions

Relevant electrical parts		
Slide home position sensor (PS18) Slide motor (M8)	Finisher control board (FSCB)	

<u>1</u>

	Action	WIRING DIAGRAM	
Step		Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	1	-
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
3	PS18 I/O, sensor check	FSCB CN11-3	FS-609/PK-501 C to D-7
4	M8 operation check when the main power switch is turned OFF and ON.	FSCB CN7-3 to 6	FS-609/PK-501 C-6 to 7
5	FSCB replacement		_

9.3.8 C11B4: Stapler/folding motor malfunctions

(1) Wiring

Relevant electrical parts		
Stapler drive home position sensor (PS19) staple/folding motor (M7)	Finisher control board (FSCB)	

<u> 1</u>

7	Action	WIRING DIAGRAM		
Step		Control signal	Location (Electrical components)	
1	Check the motor connectors for proper connection, and correct as necessary.	_	_	
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_	
3	PS19 I/O, sensor check	_	_	
4	M7 operation check when the main power switch is turned OFF and ON.	FSCB CN6-3 to 4	FS-609/PK-501 C-4	
5	FSCB replacement		_	

(2) Stapler/crease clock sensor (Stapler Section)

Relevant electrical parts		
Staple/folding motor clock sensor (PS14) Staple/folding motor (M7)	Finisher control board (FSCB)	

1			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical components)
	1	Check the motor and sensor connectors for proper connection, and correct as necessary.	_	_
	2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
	3	PS14 I/O, sensor check	FSCB CN9-5 (ON)	FS-609/PK-501 I-12
	4	M7 operation check when the main power switch is turned OFF and ON.	FSCB CN6-3 to 4	FS-609/PK-501 C-4
	5	FSCB replacement	_	_

(3) Home position sensor

Relevant electrical parts		
Folding home position sensor (PS11)	Finisher control board (FSCB)	
Staple/folding motor (M7)		

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7			WIRING DIAGRAM	
Step		Action	Control signal	Location (Electrical components)
	1	Check the motor and sensor connectors for proper connection, and correct as necessary.	I	I
	2	Check the connector of motor for proper drive coupling, and correct as necessary.	1	1
	3	PS11 I/O, sensor check	FSCB CN16-6 (ON)	FS-609/PK-501 C-11
	4	M7 operation check when the main power switch is turned OFF and ON.	FSCB CN6-3 to 4	FS-609/PK-501 C-4
	5	FSCB replacement	_	

(4) Stapler/crease clock sensor (Saddle Section)

Relevant electrical parts		
Staple/folding motor clock sensor (PS14) Staple/folding motor (M7)	Finisher control board (FSCB)	

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	Action	WIRING DIAGRAM		
Step		Control signal	Location (Electrical components)	
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	_	
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_	
3	PS14 I/O, sensor check	FSCB CN9-5 (ON)	FS-609/PK-501 I-12	
4	M7 operation check when the main power switch is turned OFF and ON.	FSCB CN6-3 to 4	FS-609/PK-501 C-4	
5	FSCB replacement	_	_	

9.3.9 C11C1: Punch control board malfunctions

Relevant electrical parts	
Finisher control board (FSCB)	
Punch control board (PKCB)	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	-	
2	Check the connection condition between the punch unit and FSCB.	_	_
3	Measure the voltage between CN14-5 (+) and CN14-3 (-) of the FSCB. Is the voltage 24VDC?	-	_
4	Initialize punch unit EEP-ROM.	_	_
5	PKCB replacement	_	_
6	FSCB replacement	_	_

9.3.10 C11C2: Punch side registration motor malfunctions

Relevant electrical parts		
Side registration home sensor (PS2)	Punch control board (PKCB)	

1			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical components)
	1	Check the sensor connectors for proper connection, and correct as necessary.	_	_
	2	PS2 I/O, sensor check	PKCB J1006-3 (ON)	FS-609/PK-501 J-3
	3	PKCB replacement	_	_

9.3.11 C11C3: Punch motor malfunctions

Relevant electrical parts	
Punch home position sensor (PS1) Punch motor clock sensor (PS3) Punch motor (M1)	Punch control board (PKCB)

1			WIRING DIAGRAM	
	Step	Action	Control signal	Location (Electrical components)
	1	Check the motor and sensor connectors for proper connection, and correct as necessary.	-	_
	2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
	3	PS1 I/O, sensor check	PKCB J1006-6 (ON)	FS-609/PK-501 J-3
	4	PS3 I/O, sensor check	PKCB J1006-9 (ON)	FS-609/PK-501 J-3 to 4
	5	M1 operation check when the main power switch is turned OFF and ON.	PKCB J1002-1 to 2	FS-609/PK-501 J-2
	6	PKCB replacement	_	_

9.3.12 C11C5: Punch sensor malfunctions

(1) Side registration sensor

Relevant electrical parts	
Side registration home sensor (PS2)	Punch control board (PKCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the sensor connectors for proper connection, and correct as necessary.	_	_
2	PS2 I/O, sensor check	PKCB J1006-3 (ON)	FS-609/PK-501 J-3
3	PKCB replacement	_	_

(2) Wastes full sensor

Relevant electrical parts	
Punch Trash Full Photo Sensor Board (PTFB/PR) Punch Trash Full LED Board (PTFB/LED)	Punch control board (PKCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the connection condition between PKCB and PTFB/PR.	_	_
2	Check the connection condition between PWB-B PK and PTFB/LED.	_	_
3	PTFB/PR replacement	_	_
4	PTFB/LED replacement	_	_
5	PKCB replacement	_	_

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oubleshooting

(3) Finisher control board

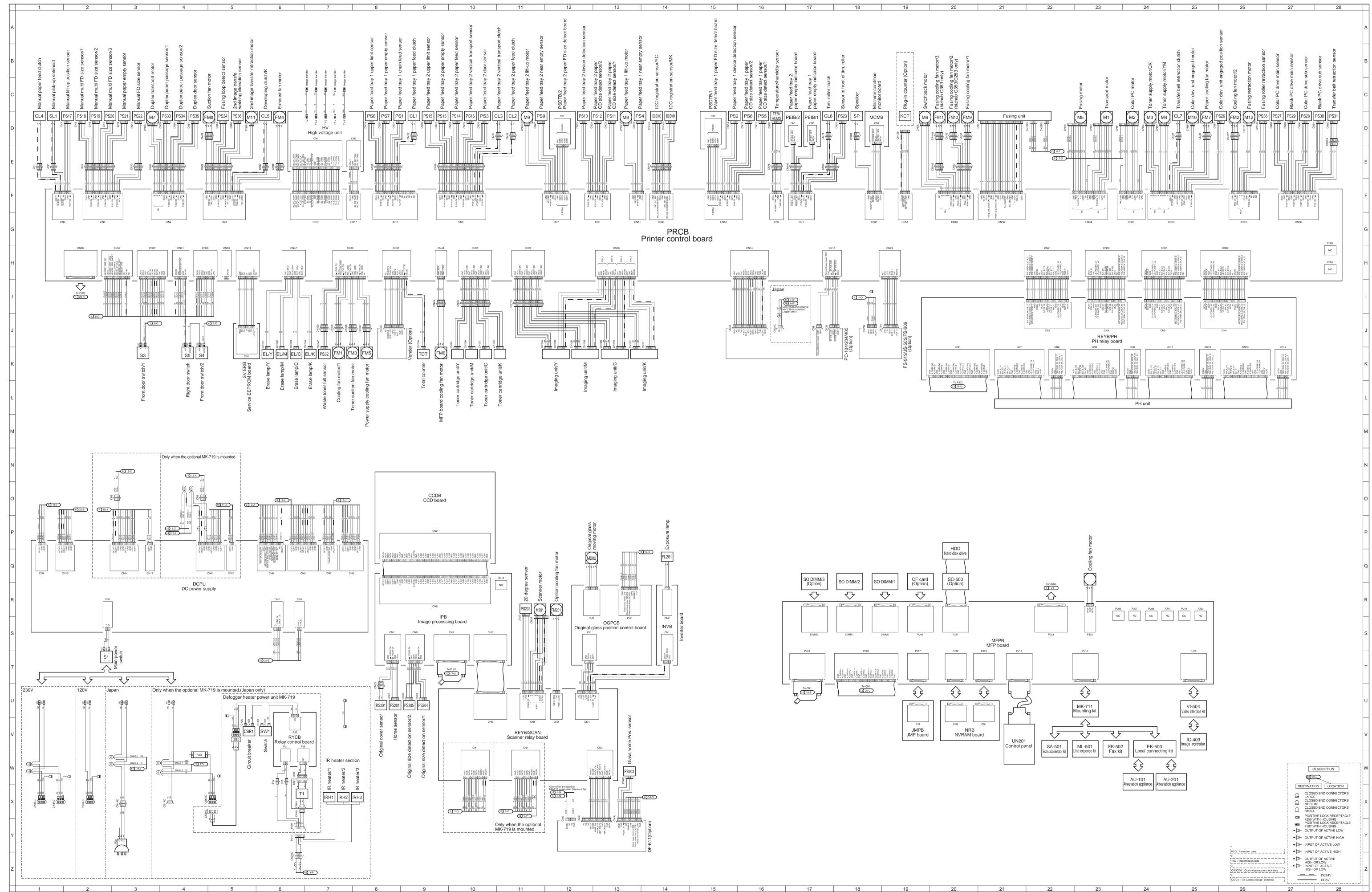
Relevant electrical parts		
Exit tray home position sensor (PS9) Lift motor clock sensor (PS17) Lift motor (M6)	Finisher control board (FSCB)	

		WIRING DIAGRAM	
Step	Action	Control signal	Location (Electrical components)
1	Check the motor and sensor connectors for proper connection, and correct as necessary.	ı	_
2	Check the connector of motor for proper drive coupling, and correct as necessary.	_	_
3	PS9 I/O sensor check	FSCB CN5-12 (ON)	FS-609/PK-501 I-8
4	PS17 I/O sensor check	FSCB CN15-6 (ON)	FS-609/PK-501 I-6
5	M6 operation check when the main power switch is turned OFF and ON.	FSCB CN6-1 to 2	FS-609/PK-501 C-4
6	FSCB replacement	_	_

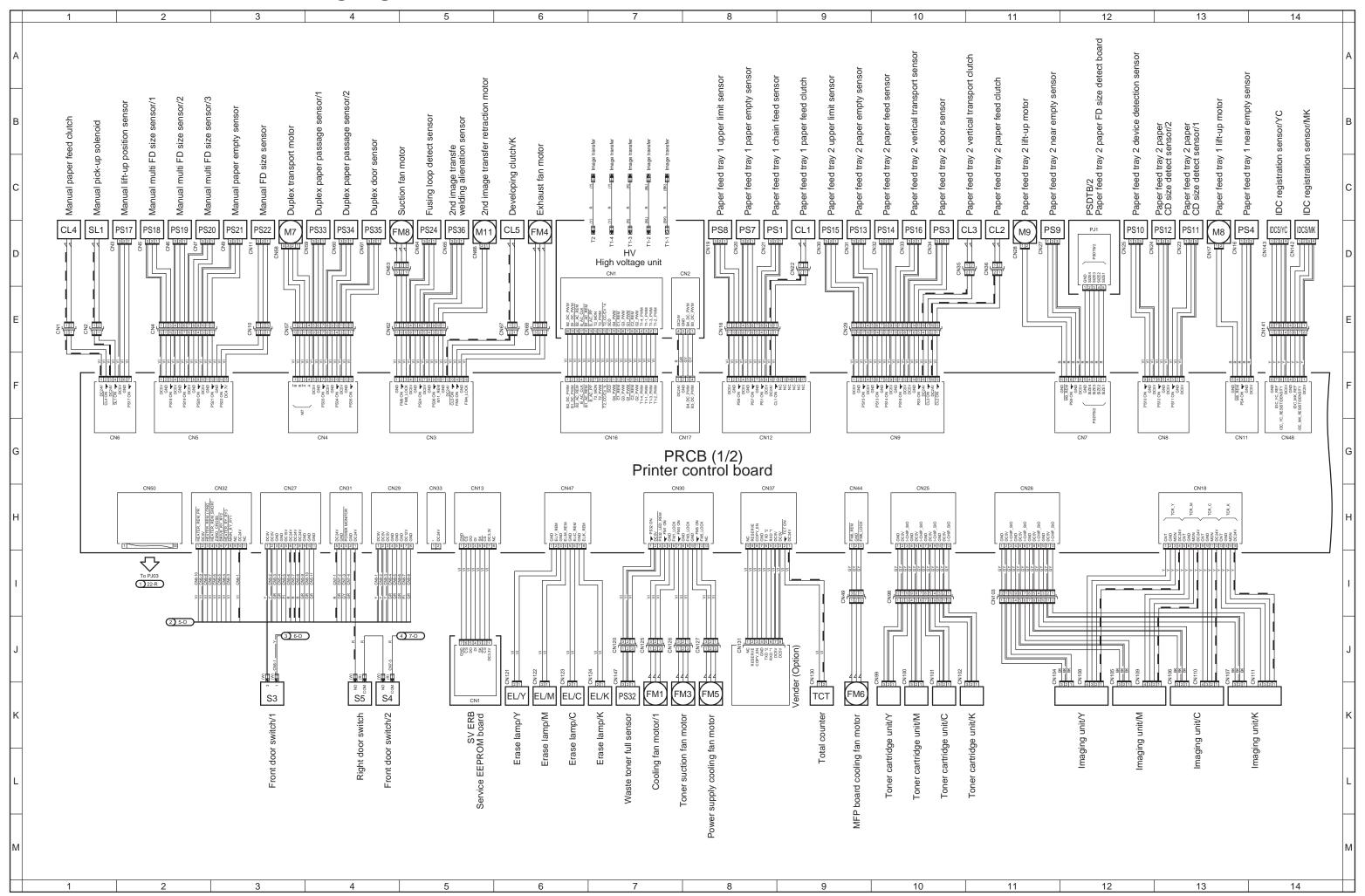
9.3.13 C1401: Backup RAM malfunction

Relevant electrical parts			
Finisher control board (FSCB)			

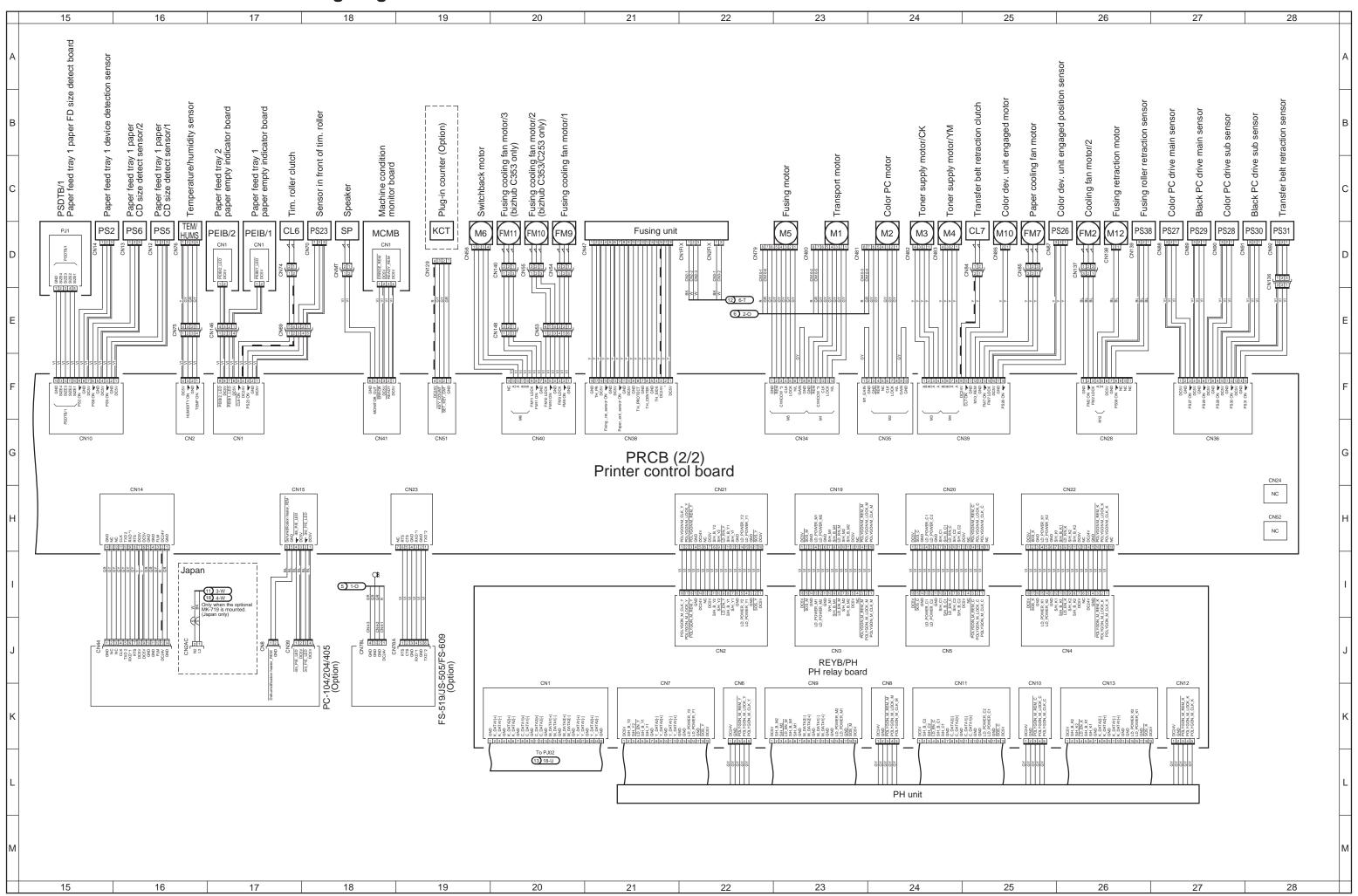
Step	Action	WIRING DIAGRAM	
		Control signal	Location (Electrical components)
1	Disconnect and then connect the power cord. Turn OFF the main power switch, wait for 10 sec. or more, and turn ON the main power switch.	-	-
2	Check the connectors for proper connection on the FSCB.	_	_
3	FSCB replacement	_	_



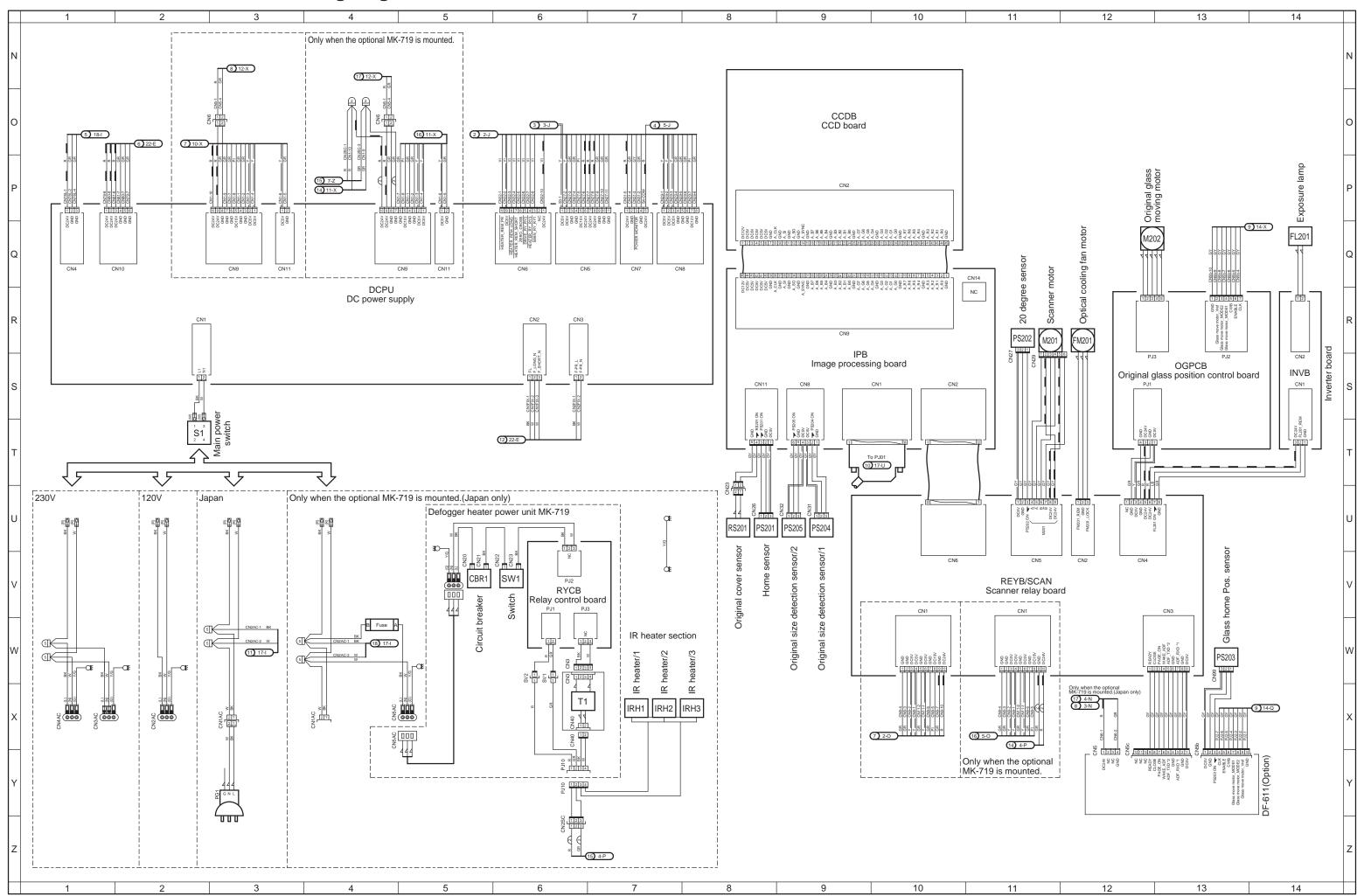
bizhub C353/C253/C203 Overall wiring diagram 1/4



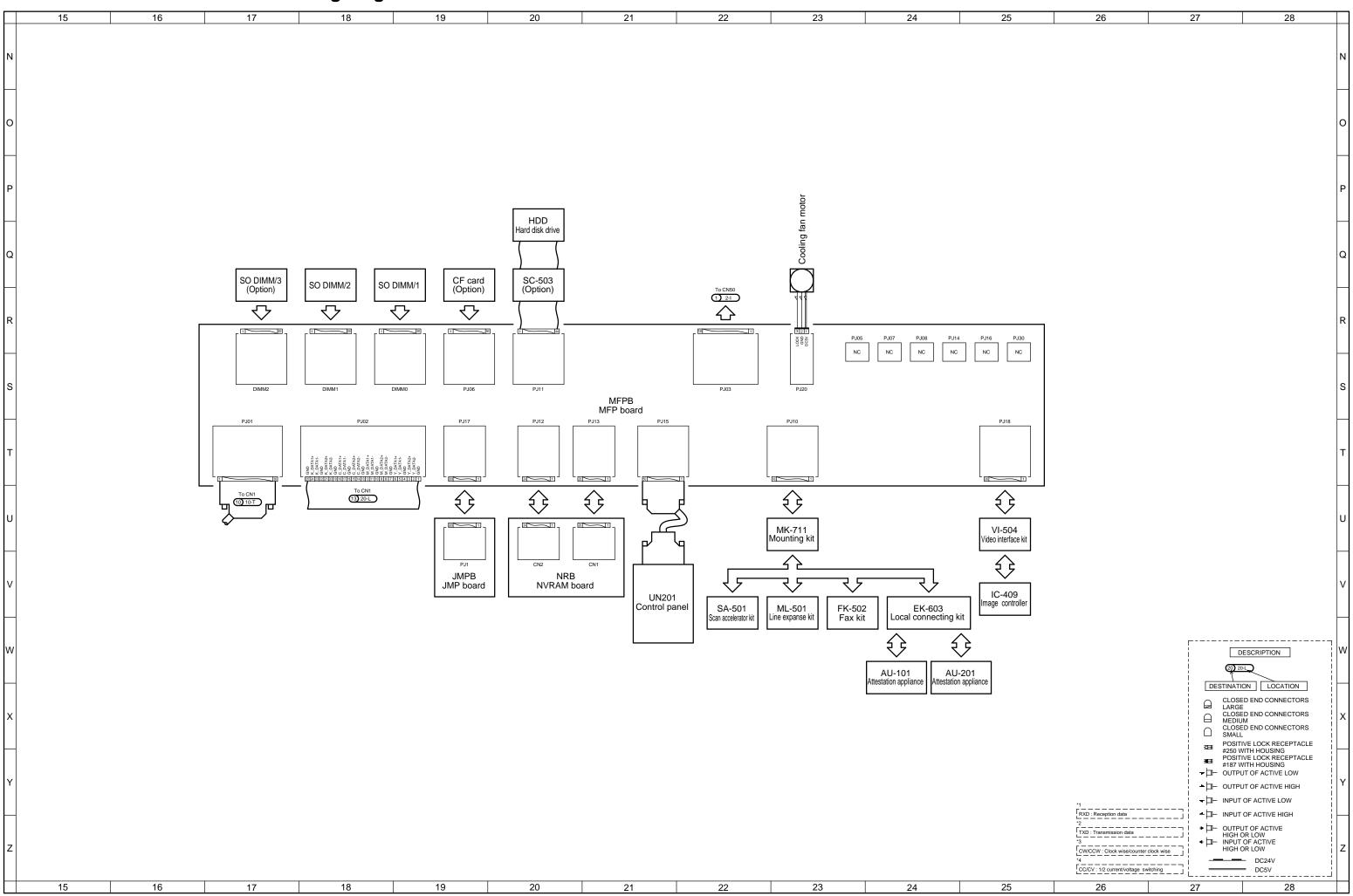
bizhub C353/C253/C203 Overall wiring diagram 2/4



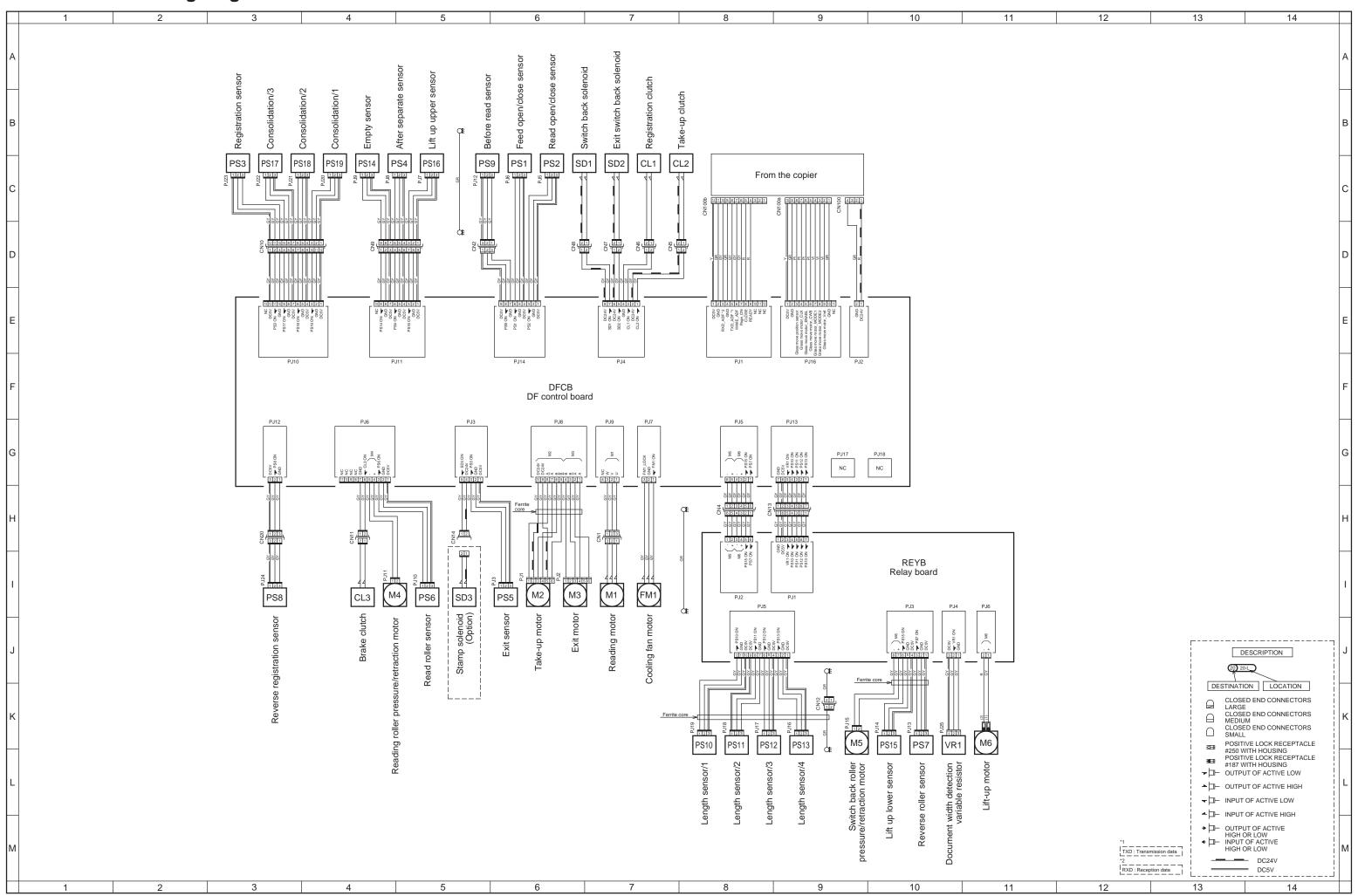
bizhub C353/C253/C203 Overall wiring diagram 3/4



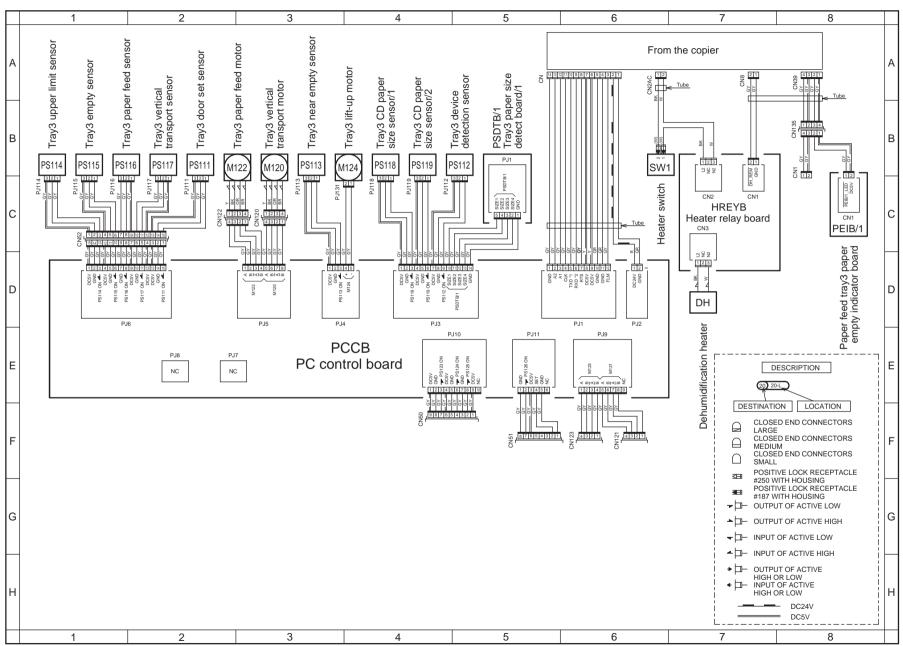
bizhub C353/C253/C203 Overall wiring diagram 4/4



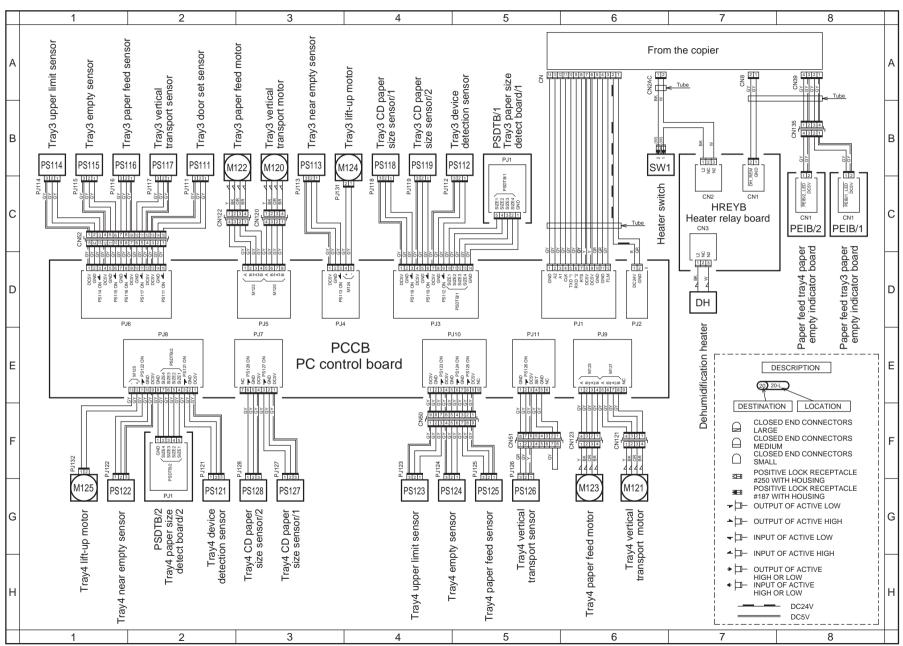
DF-611 Overall wiring diagram



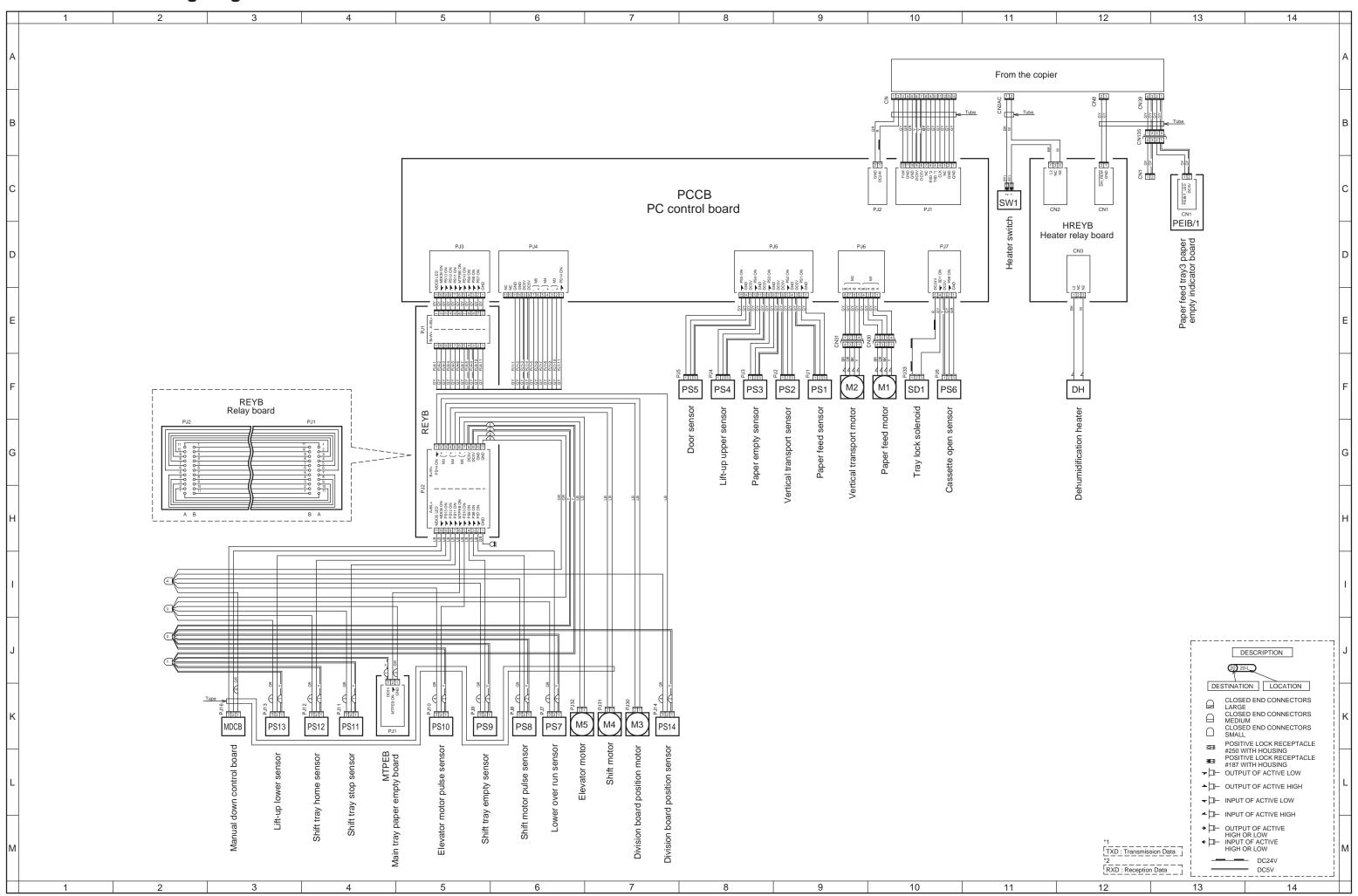
PC-104 Overall wiring diagram



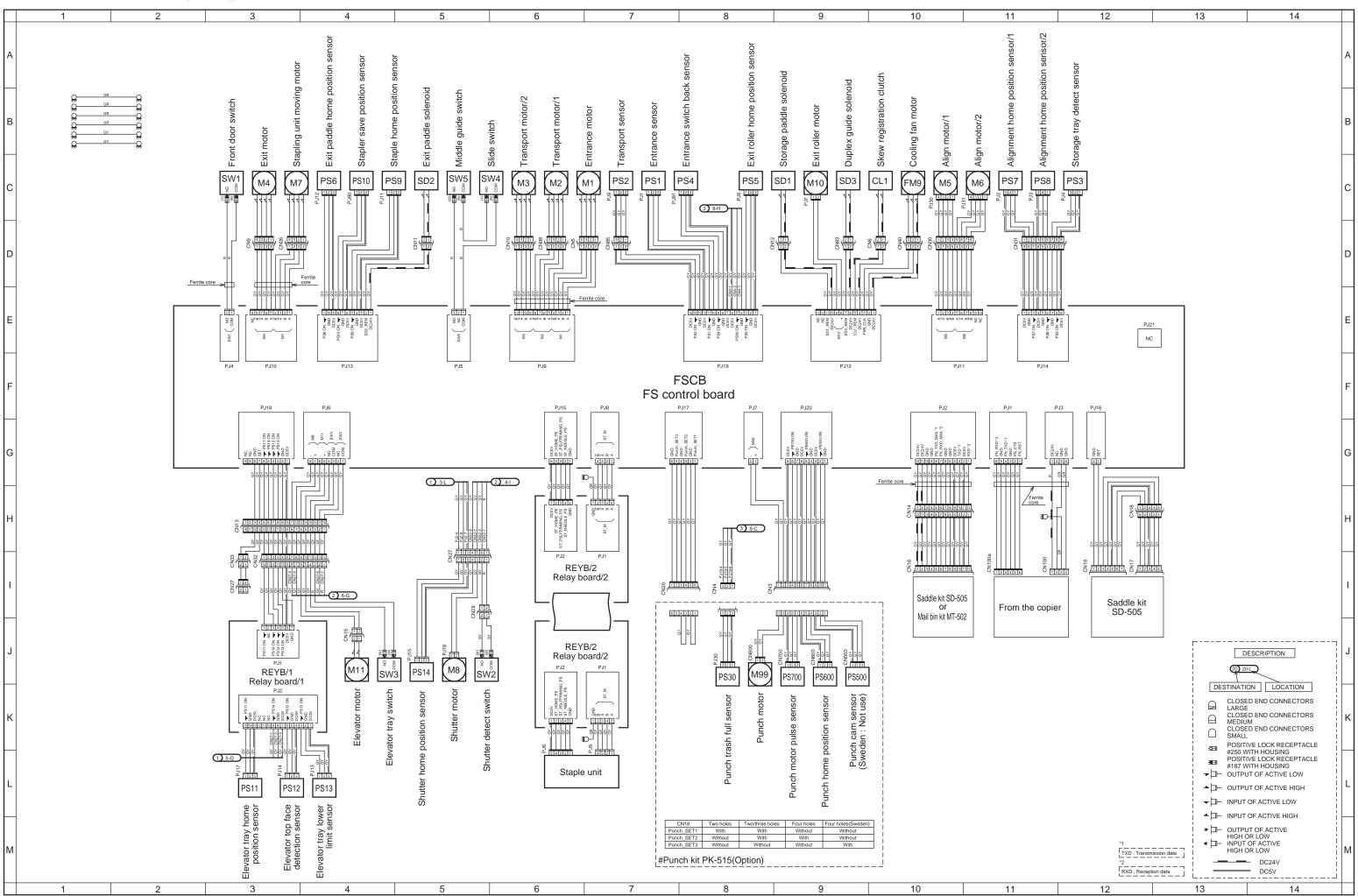
PC-204 Overall wiring diagram



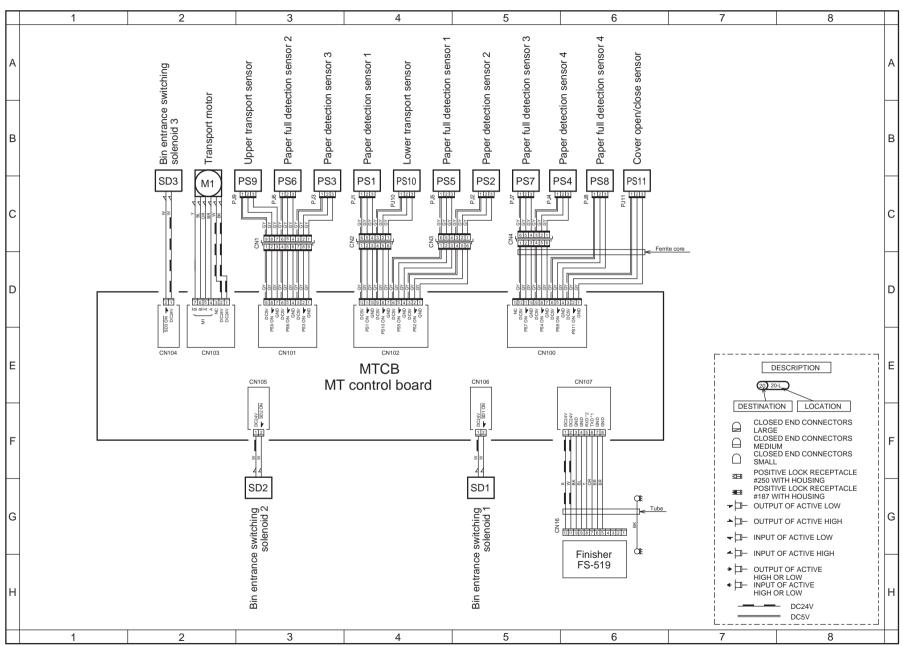
PC-405 Overall wiring diagram



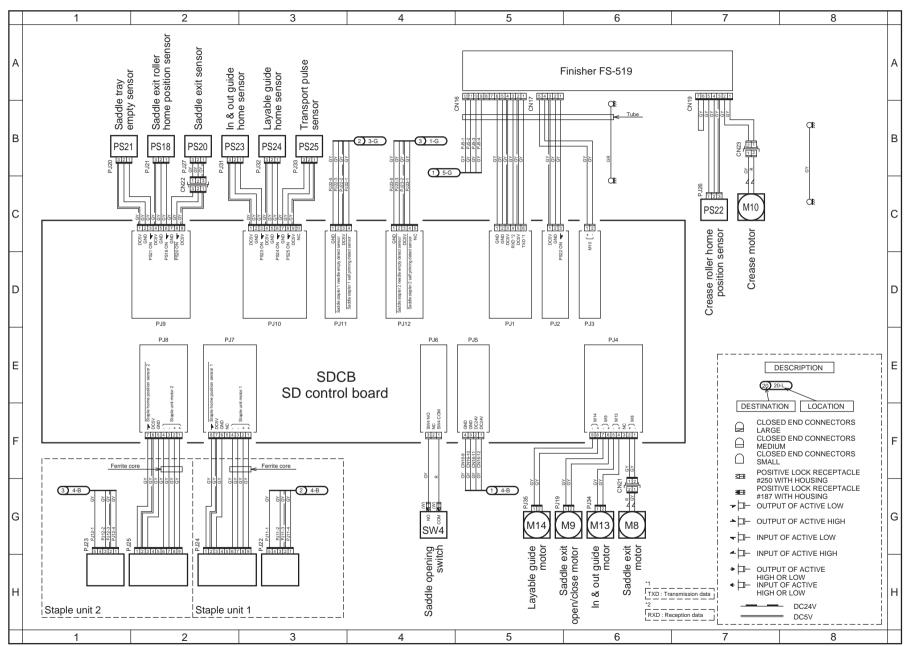
FS-519 Overall wiring diagram



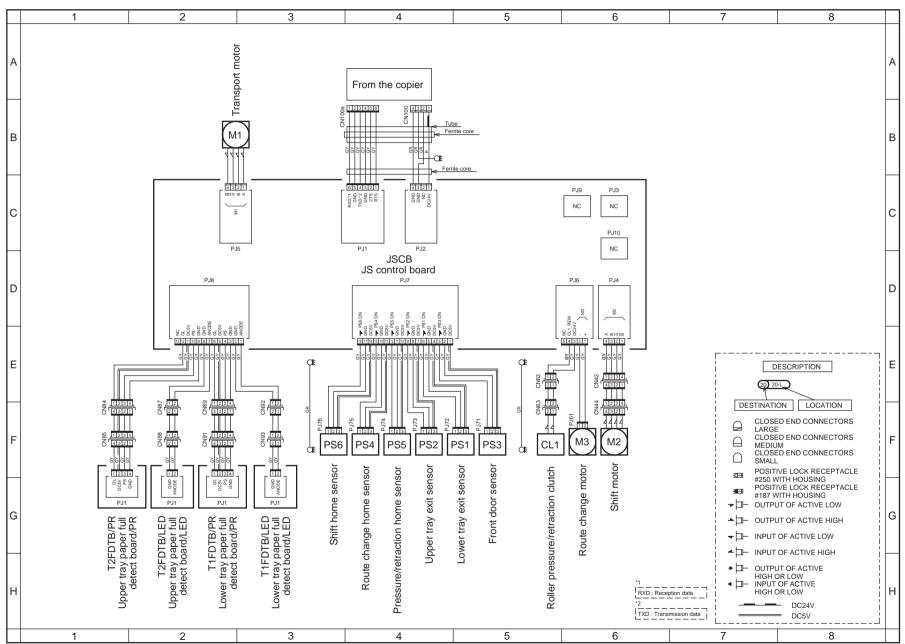
MT-502 Overall wiring diagram



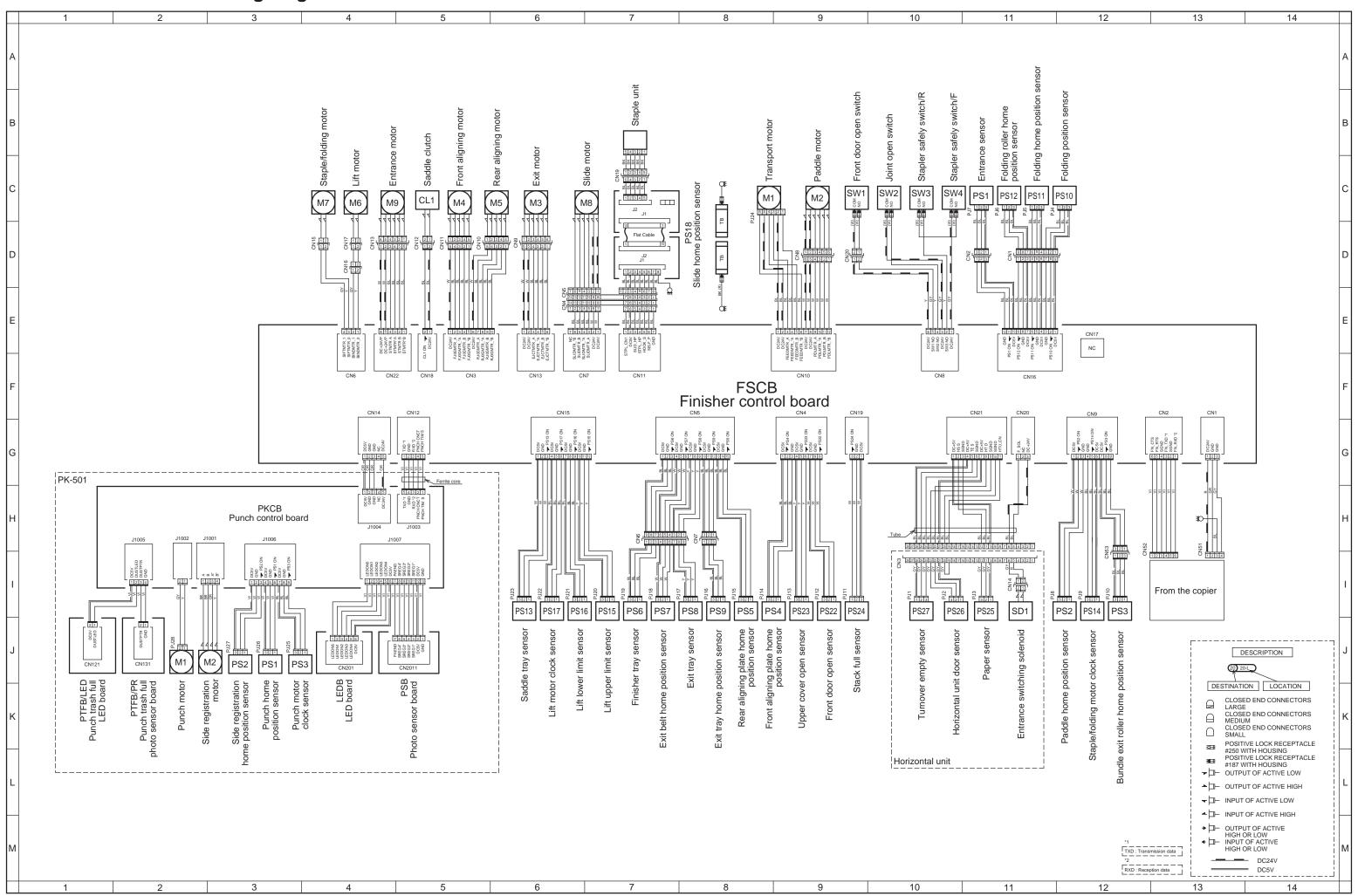
SD-505 Overall wiring diagram



JS-505 Overall wiring diagram



FS-609/PK-501 Overall wiring diagram





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