

SERVICE MANUAL

bizhub C31P

FIELD SERVICE TOTAL CONTENTS

SAFETY AND IMPORTANT WARNING ITEMS	S-1
IMPORTANT NOTICE	S-1
DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION	S-1
SAFETY WARNINGS	
WARNING INDICATIONS ON THE MACHINE	S-18
MEASURES TO TAKE IN CASE OF AN ACCIDENT	
Composition of the service manual	
Notation of the service manual	C-2
bizhub C31P Main body	
General	1
Maintenance	5
Adjustment/Setting	93
Troubleshooting	195
Appendix	239
Lower feeder unit	
General	1
Maintenance	3
Adjustment/Setting	13
Troubleshooting	15
Duplex option	
General	1
Maintenance	3
Troubleshooting	9
Staple finisher	
General	1
Maintenance	5
Troubleshooting	23

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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

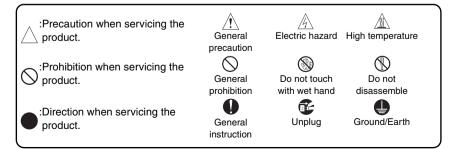


WARNING: Action having a possibility of suffering death or serious injury



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.

 Conductors in the power cable must be connected to terminals of the plug according to the following order:

 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.

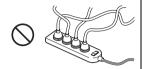


Wiring

! 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





2. Installation Requirements

up. Fire may result.

Prohibited Installation Places

! WARNING

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

A risk of fire exists.





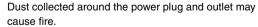
• Do not place the product in a place exposed to water such as rain.

A risk of fire and electric shock exists.

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.







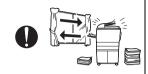
Ventilation

! 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.





If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

 Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

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.





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





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.
 - They can short internal circuits and cause electric shock or fire.

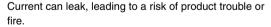




Check wiring for squeezing and any other damage.
 Current can leak, leading to a risk of electric shock or fire.



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





Check high-voltage cables and sheaths for any damage.
 Current can leak, leading to a risk of electric shock 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 eye, 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.

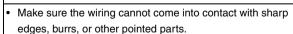


 After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.

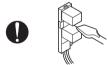




- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.
 - If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam).



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

Never throw the used cartridge and toner into fire.
 You may be burned due to dust explosion.

! 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

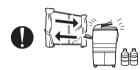
! CAUTION

 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

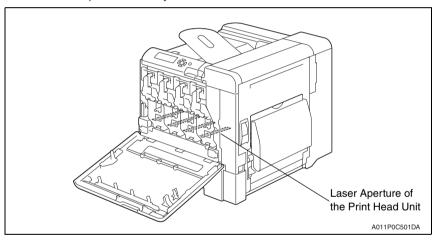
 This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

5.1 Internal Laser Radiation

semiconductor laser		
Maximum power of the laser diode	15 mW	
Maximum average radiation power (*)	8.5 μW	
Wavelength	770-800 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	15 mW	
Wavelength	770-800 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	15 mW	
Wavelength	770-800 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	15 mW
bølgelængden	770-800 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	15 mW
aallonpituus	770-800 nm

VARNING!

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

halvledarlaser	
Den maximala effekten för laserdioden	15 mW
våglängden	770-800 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

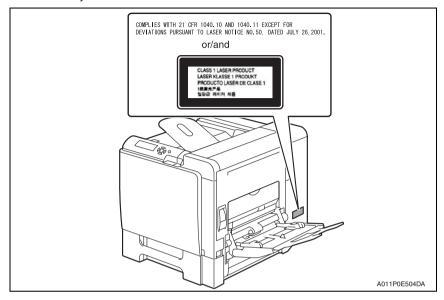
ADVERSEL

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 15 mW			
bølgelengde	770-800 nm		

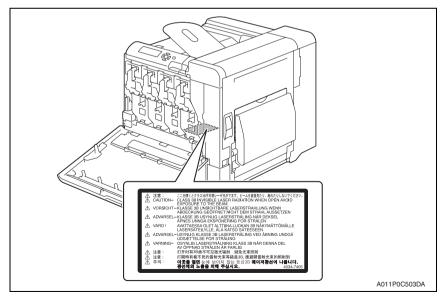
5.2 Laser Safety Label

· 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.



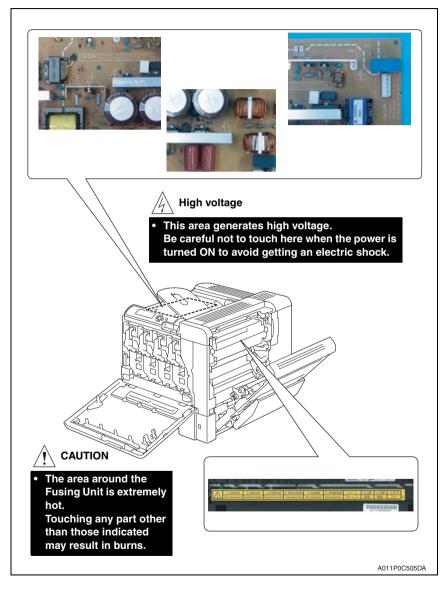
5.4 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

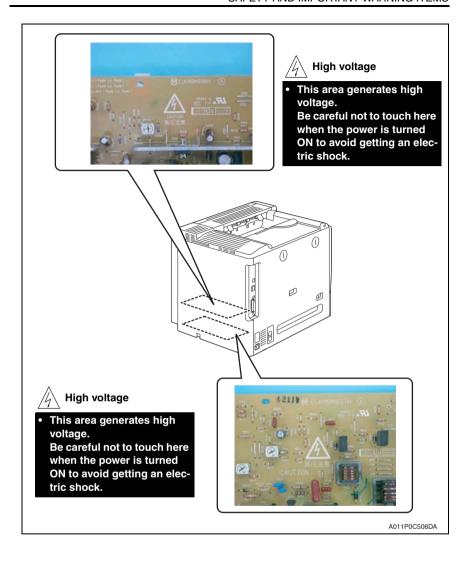
- When laser protective goggles are to be used, select ones with a lens conforming to the above specifications.
- When a disassembly job needs to be performed in the laser beam path, such as when working around the printerhead and PC drum, be sure first to turn the printer OFF.
- If the job requires 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.

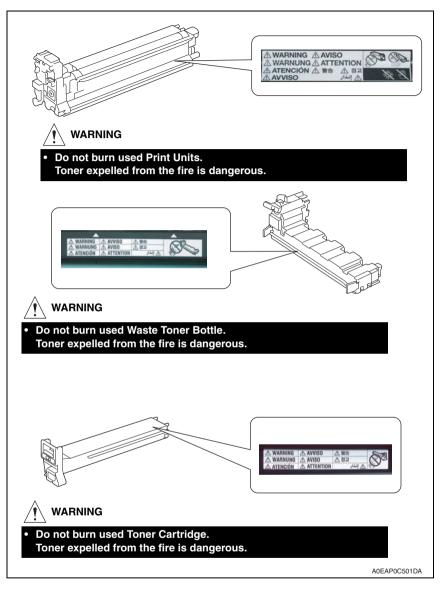
WARNING INDICATIONS ON THE MACHINE

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.
- 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.

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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 C31P 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 98/Me

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
A4	Short edge feeding	A4S
A3	Short edge feeding	А3



SERVICE MANUAL

FIELD SERVICE

bizhub C31P 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 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.

2008/08	1.1	A	Error correction
2008/04	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

bizhub C31P Main body

General

1.	Syst	tem configuration	1
2.	Prod	duct specifications	2
Ma	inten	ance	
3.		odical check	F
_		aintenance items.	
Ū	3.1.1	Parts to be replaced by users (CRU)	
	3.1.2	Parts to be replaced by a service engineer (FRU)	
3	.2 Ma	aintenance parts	
	3.2.1	Replacement parts	
3	.3 Co	oncept of parts life	7
3	.4 Ma	aintenance Procedure (periodical check parts)	g
	3.4.1	Replacing the tray 2 feed roller	9
	3.4.2	Replacing the tray 1 feed roller	10
	3.4.3	Replacing the ozone filter	13
	3.4.4	Replacing the toner cartridge (C,M,Y,K)	13
	3.4.5	Replacing the imaging unit (C,M,Y,K)	16
	3.4.6	Replacing the waste toner bottle	20
	3.4.7	Replacing the transfer roller	21
	3.4.8	Replacing the transfer belt	22
	3.4.9	Replacing the fuser unit	24
4.	Serv	vice tool	25
4	.1 CE	E tool list	25
4	.2 Co	onsumable parts	25
	4.2.1	Toner cartridge	25
	4.2.2	Imaging unit	25
	4.2.3	Waste toner bottle	26
5.	Firm	ware upgrade	27
5		necking the current firmware version	
5	.2 Fir	mware upgrading procedure by USB memory device	
	5.2.1	Preparations for firmware upgrading	
5	.3 Fir	mware upgrading procedure by updater	
	5.3.1	Updating method	29

5.3	3.2	Checking the version after the firmware update	42
6.	Other		43
6.1	Disa	assembly/adjustment prohibited items	43
6.2	Disa	assembly/assembly/cleaning list (other parts)	
6.2	2.1	Disassembly/assembly parts list	44
6.2	2.2	Cleaning parts list	45
6.3	Disa	assembly/assembly procedure	46
6.3	3.1	Front door	46
6.3	3.2	Upper front cover	46
6.3	3.3	Right front cover	47
6.3	3.4	Left cover	47
6.3	3.5	Rear Cover	48
6.3	3.6	Exit tray	48
6.3	3.7	Right rear cover	49
6.3	3.8	Tray 2	50
6.3	3.9	Tray 1	50
6.3	3.10	Operation board (OB)	51
6.3	3.11	Hard disk kit (option)	52
6.3	3.12	MFP board (MFPB)	53
6.3	3.13	Print control board (PRCB)	55
6.3	3.14	DC power supply (DCPU)	57
6.3	3.15	High voltage unit/1 (HV1)	59
6.3	3.16	High voltage unit/2 (HV2)	60
6.3	3.17	Toner level sensor board (TLSB)	61
6.3	3.18	PH Unit	64
6.3	3.19	Driving unit	71
6.3	3.20	MFP board fan motor (FM5)	72
6.3	3.21	Backup battery	73
6.3	3.22	PWB box/1	74
6.3	3.23	PWB box/2	75
6.3	3.24	Color PC drum motor (M2)	75
6.3	3.25	Developing motor/K (M5)	76
6.3	3.26	Toner supply motor/Y,M (M6)	76
6.3	3.27	Toner supply motor/C,K (M7)	77
6.3	3.28	Fusing motor (M4)	77
6.3	3.29	Intermediate transport motor (M3)	78
6.3	3.30	Registration roller clutch (CL2)	78
6.3	3.31	Pressure/retraction clutch/2 (CL5)	79

Troubleshooting

6.3.32	Pressure/retraction clutch/1 (CL4)	81
6.3.33	Media feed clutch/1 (CL1)	82
6.3.34	Media feed clutch/2 (CL3)	86
6.3.35	Temperature/ humidity sensor (TEM/HUMS)	89
6.3.36	IDC sensor board/Re, IDC sensor board/Fr (IDCSB/R, IDCSB/L)	90
6.4 Cle	aning procedure	91
6.4.1	Tray 1 feed roller	91
6.4.2	Tray 2 feed roller	91
6.4.3	Laser irradiation section	92
∆diustm <i>i</i>	ent/Setting	
•	to use the adjustment section	03
	ription of the control panel	
	ntrol panel display	
8.1.1	Parts of the control panel display	
8.1.2	Message structure	95
8.1.3	Normal messages	96
8.1.4	Operator call messages	101
8.1.5	Service call messages	102
8.1.6	Help screen	103
8.2 List	of control panel messages	104
8.2.1	Normal messages	104
8.2.2	Operator call messages	107
8.2.3	Service call messages	110
8.3 Car	ncelling a print job	112
9. Menu	1	113
9.1 List	of menu functions	113
	OOF/PRINT MENU	
9.3 PR	NT MENU	118
9.3.1	CONFIGURATION PG	118
9.3.2	STATISTICS PAGE	119
9.3.3	FONT LIST	125
9.3.4	MENU MAP	125
9.3.5	DIRECTORY LIST	125
	PER MENU	
9.4.1	PAPER SOURCE	126
9.4.2	DUPLEX	129
9.4.3	COPIES	130

9.4.4	COLLATE	130
9.4.5	FINISHING	130
9.4.6	JOB SEPARATION	131
9.4.7	IMAGE ROTATION	131
9.5 QU	ALITY MENU	131
9.5.1	COLOR MODE	131
9.5.2	BRIGHTNESS	131
9.5.3	HALFTONE	132
9.5.4	EDGE ENHANCEMENT	132
9.5.5	EDGE STRENGTH	133
9.5.6	ECONOMY PRINT	133
9.5.7	GLOSSY MODE	134
9.5.8	PCL SETTING	134
9.5.9	PS SETTING	136
9.5.10	CALIBRATION	140
9.5.11	COLOR SEPARATION	141
9.6 ME	MORY DIRECT	142
9.6.1	LIST OF FILES	142
9.6.2	TYPE OF FILES	142
9.7 CA	MERA DIRECT	142
9.7.1	PAPER SOURCE	142
9.7.2	LAYOUT	143
9.7.3	PAPER MARGIN	143
9.7.4	IMAGE QUALITY	143
9.8 INT	ERFACE MENU	145
9.8.1	JOB TIMEOUT	145
9.8.2	ETHERNET	146
9.8.3	MEMORY DIRECT	153
9.8.4	CAMERA DIRECT	153
9.9 SY	S DEFAULT MENU	153
9.9.1	LANGUAGE	153
9.9.2	EMULATION	153
9.9.3	PAPER	156
9.9.4	GRAY SCALE PAGE	158
9.9.5	STARTUP OPTIONS	158
9.9.6	AUTO CONTINUE	158
9.9.7	HOLD JOB TIMEOUT	158
9.9.8	ENERGY SAVER	159

9.9.9	ENERGY SAVER TIME	159
9.9.10	MENU TIMEOUT	159
9.9.11	LCD CONTRAST	159
9.9.12	SECURITY	160
9.9.13	CLOCK	161
9.9.14	HDD FORMAT	162
9.9.15	CARD FORMAT	162
9.9.16	RESTORE DEFAULTS	163
9.9.17	ENABLE WARNING	171
9.10 MAI	NTENANCE MENU	173
9.10.1	How to enter the MAINTENANCE MENU	173
9.10.2	PRINT MENU	173
9.10.3	ALIGNMENT	174
9.10.4	SUPPLIES	177
9.10.5	QUICK SETTING	177
10. Adjus	tment item list	179
11. SER\	/ICE MENU	180
11.1 Hov	v to enter the service menu	180
	vice menu function tree	
	RVICE MENU	
11.3.1	SERIAL NUMBER	
11.3.2	FIRMWARE VERSION	182
11.3.3	ALIGNMENT	182
11.3.4	DIAGNOSIS MENU	186
11.3.5	SUPPLIES	189
11.3.6	RESTORE PASSWARD	190
11.3.7	BK CLEAR	190
11.3.8	QUICK SETTING	191
11.3.9	FIRMWARE UPDATE	192
11.3.10	SOFT SWITCH	192
12. Other	functions	193
12.1 Rev	vriting security information into the hard disk kit and the compact flash	193
12.1.1	Outline	193
12.1.2	Procedure	193
Troublesh	S .	
	display	
13.1 Mis	feed display	195

13.2 Mis	feed display resetting procedure	196
13.3 Ser	nsor layout	196
13.4 Sol	ution	197
13.4.1	Initial check items	197
13.4.2	Misfeed at tray 2 media feed section	198
13.4.3	Misfeed at tray1 media feed section	198
13.4.4	Misfeed at transfer section	199
13.4.5	Misfeed at fusing/exit section	200
13.4.6	Media misfeed in control logic	201
14. Malfu	unction code	202
14.1 Tro	uble codes (service call)	202
14.1.1	Trouble code list	
	setting a malfunction	
	ution	
14.3.1	0010: Color PC drum motor malfunction	
14.3.2	0017: Intermediate transport motor malfunction	
14.3.3	0018: Developing motor/K malfunction	207
14.3.4	001B: Developing motor/Y,M,C malfunction	207
14.3.5	0046: Fusing fan motor malfunction	208
14.3.6	004C: Ozone ventilation fan motor malfunction	208
14.3.7	004E: DC power supply fan motor malfunction	209
14.3.8	0060: Fusing motor malfunction	209
14.3.9	0094: 2nd image transfer pressure/retraction failure	210
14.3.10	0096: 1st image transfer pressure/retraction failure	211
14.3.11	0300: Polygon motor malfunction	211
14.3.12	0310: Laser malfunction	212
14.3.13	0500: Heating roller warm-up failure	212
14.3.14	0501: Fusing pressure roller warm-up failure	212
14.3.15	0510: Abnormally low heating roller temperature	212
14.3.16	0511: Abnormally low fusing pressure roller temperature	212
14.3.17	0520: Abnormally high heating roller temperature	212
14.3.18	0521: Abnormally high fusing pressure roller temperature	212
14.3.19	0F52: Toner level sensor/Y malfunction	213
14.3.20	0F53: Toner level sensor/M malfunction	213
14.3.21	0F54: Toner level sensor/C malfunction	213
14.3.22	0F55: Toner level sensor/K malfunction	213
14.3.23	133B: Finisher communication malfunction	213
14.3.24	13C0: Print control board malfunction	213

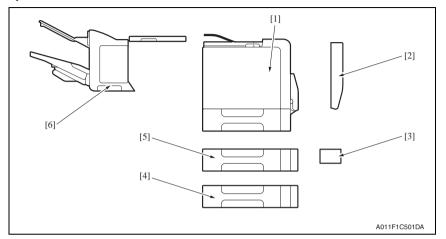
14.3.25	13E2: Flash ROM write error	214
14.3.26	13E3: Flash ROM device fault	214
14.3.27	3FFB: Finisher flash ROM error	214
14.3.28	C002: RAM error at startup (standard memory)	214
14.3.29	C003: RAM error at startup (expanded memory)	214
14.3.30	C013: MAC address error at startup	215
14.3.31	C015: BOOT ROM error at startup	215
14.3.32	C025: Controller ROM error (Configuration information error)	215
14.3.33	C026: Controller ROM error (Access error)	215
14.3.34	C027: Controller ROM error (Data error)	215
14.3.35	C050: HDD access error	215
14.3.36	C051: HDD full error	216
14.3.37	C052: Compact flash access error	216
14.3.38	C053: Compact flash full error	217
14.3.39	C060: Firmware update error	217
14.3.40	C071: Hardware configuration error	218
14.3.41	FFFF: Interface communication error	218
15. Powe	er supply troubles	219
15.1 Mad	chine is not energized at all (DCPU operation check)	219
15.2 Cor	ntrol panel indicators do not light	219
15.3 Fus	ing heaters do not operate	220
16. Imag	e quality problems	221
	ution	
16.1.1	White lines/bands, colored lines/bands in sub scan direction	
16.1.2	White lines/bands, colored lines/bands in main scan direction	
16.1.3	Uneven density in sub scan direction	
16.1.4	Uneven density in main scan direction	
16.1.5	Low image density	225
16.1.6	Gradation reproduction failure	226
16.1.7	Foggy background	227
16.1.8	Poor color reproduction	228
16.1.9	Void areas, white spots	229
16.1.10	Colored spots	230
16.1.11	Blurred image	231
16.1.12	Blank copy, black copy	232
16.1.13	Incorrect color image registration	233
16.1.14	Poor fusing performance, offset	234
16.1.15	Brush effect	235

16.1.1	6 Back marking	236
16.1.1	7 Uneven pitch	237
16.1.1	8 No print cycles can be run as commanded via the network	238
	ı.	
Append	lix	
17. Pai	rts layout drawing	239
17.1 N	lain body	239
17.2 L	ower feeder unit (option)	242
17.3 D	uplex option (option)	243
17.4 S	taple finisher (option)	244
18. Co	nnector layout drawing	247
19. Tin	ning chart	248

General

1. System configuration

System front view



- [1] bizhub C31P
- [2] Duplex option
- [3] Hard disk kit

- [4] Lower feeder unit
- [5] Lower feeder unit
- [6] Staple finisher

2. Product specifications

A. Type

Туре	Desktop tandem full-color laser beam printer
Printing system	Semiconductor laser and electrostatic image transfer to media
Exposure system	4 laser diode and polygon mirror
PC drum type	OPC (organic photo conductor)
Photoconductor cleaning	Blade cleaning system
Print resolution	600 dpi x 600 dpi x 4 bit
Media feeding system	Two-way system (Tray 1: 100 sheets, Tray 2: 500 sheets) * Expandable up to a four-way system by adding lower feeder units (up to two)
Developing system	Single-element developing system
Charging system	Needle charging system (with ozone suctionfeature)
Image transfer system	Intermediate transfer belt system
Media separating system	Curvature separation + charge-neutralizing system
Fusing system	Belt fusing
Media exit system	Face down (Output tray capacity: A4S/LetterS, 250 sheets)

B. Functions

Warm-up time	Average: 52 sec. or less (Sleep mode to ready, at ambient temperature of 23° C/73.4° F and rated source voltage)			
Process speed	216 mm/sec (plain	paper, full-color mode)		
First-page-out-time	14.0 second (Full-	color mode, A4S/LetterS, 1-sided mode, plain paper)		
Print speed	37.0 pages/min. (LetterS, 1-sided print, plain paper) 35.0 pages/min. (A4S, 1-sided print, plain paper)			
Media sizes	Tray 1 (Manual tray)	Standard size: *SEF only Legal, Letter, Government Letter, Statement, Executive, Folio, SP Folio, UK Quatro, Foolscap, Government Legal, A4, B5, B5(ISO), A5, A6, B6, Photo size, 16K, Kai16, Kai32, Com10, C5, C6, DL, Monarch Youkei #4, Youkei 4, Choukei #3, Youkei 0, Choukei #4, Japanese postcard, Double postcard Custom size: Minimum size /92 mm x 148 mm (3.6 inch x 5.8 inch) Maximum size /216 mm x 356 mm (8.5 inch x 14.0 inch) Long size paper /357 mm to 1,200 mm (14.0 inch x 47.2 inch)(1-sided mode only)		
	Tray 2	A4S/LetterS		

Media types	Tray 1 (Manual tray)	Plain paper (60 to 90 g/m² / 16 to 24 lb) Recycled paper (60 to 90 g/m² / 16 to 24 lb) Thick stock 1 (91 to 150 g/m² / 24 to 40 lb) Thick stock 2 (128 to 210 g/m² / 34 to 56 lb) Glossy paper 1 (100 to 150 g/m² / 26.6 to 40 lb) Glossy paper 2 (128 to 210 g/m² / 34 to 56 lb) OHP film Letterhead Envelopes Labels Postcards Double postcards (Folded double postcards cannot be used.) Long size paper (up to 1200 mm/47.2 inches)		
	Tray 2	 Plain paper (60 to 90 g/m² / 16 to 24 lb) Recycled paper (60 to 90 g/m² / 16 to 24 lb) 		
Tray capacities	Tray 1 (Manual tray)	Plain paper and recycled paper: 100 sheets Thick stock 1, thick stock 2, glossy paper 1, glossy paper 2, OHP film, letterhead, labels, postcards and double postcards: 20 sheets Envelopes: 10 sheets Long size paper: 1 sheet * No indication of remaining media amount		
	Tray 2	Plain paper and recycled paper: 500 sheets * Indication of remaining media amount available		
Interfaces	Parallel (IEEE 1284) Support only an ECP mode 10 Base-T/100 Base-TX/1000 Base-T (IEEE 802.3) Ethernet USB 2.0 (High-Speed) Host USB (PictBridge 1.0/USB Drive Printing)			
CPU	Freescale PowerPC 7448, 866 MHz			
Memory	DDR-SDRAM 133 MHz 184 pin non ECC CL2 or 2.5 256 MB (Upgradable up to a 1024 MB)			
Hard disk	Optional: 40 GB			
Compact flash card	Commercially available compact flash cards of 512 MB, 1 GB, 4 GB storage capacity are supported. (Microdrive is not supported)			

Lower feeder unit: Only plain paper and recycled paper weighing 60 to 90 g/m² (16 to 24 lb) can be loaded.

can be fed through the unit.

C. Maintenance

D. Machine specifications

Power requirements Voltage:	AC 110 to 127 V, -10 % +6 % (AC 120 V -10 % +10 %: only US/Canada) AC 220 to 240 V, -10 % +10 %
Frequency:	50 to 60 Hz ± 3 Hz
Max power consumption	1,450 W or less
Dimensions	420 mm (W) x 526 mm (D) x 420 mm (H) 16.5 inch (W) x 20.7 inch (D) x 16.5 inch (H)
Weight	33.4 kg (73.6 lb) or less without consumables
Operating noise	During standby : 39 dB (A) or less During printing : 56 dB (A) or less

E. Operating environment

Temperature	10° to 35° C / 50° to 95° F (with a fluctuation of 10° C / 18° F or less per hour)
Humidity	15% to 85% (with a fluctuation of 20%/h)

NOTE

• These specifications are subject to change without notice.

Maintenance

3. Periodical check

3.1 Maintenance items

3.1.1 Parts to be replaced by users (CRU)

No	Class	Part to be replaced	Number of prints	Clean	Replace	Description
1		High-capacity toner cartridge (C,M,Y,K)	12,000 (Continuous printing)		•	
2	Processing section	Imaging unit (C,M,Y,K)	30,000 (Continuous printing)		•	
3		Ozone filter*4	120,000		•	
4	Tray 2 media feed section	Feed roller	When malfunction occurs	•		
5	Tray 1 media feed section	Feed roller	When malfunction occurs	•		
6		Transfer belt unit	120,000 (Continuous printing, 2P/J*1)		•	
7	Image transfer section	Transfer roller*4	120,000 (Continuous printing, 2P/J*1)		•	
8		Waste toner bottle	36,000 (K*2)			·
		Waste toner bottle	9,000 (Y,M,C,K*3)			

^{*1: 2} pages/job

3.1.2 Parts to be replaced by a service engineer (FRU)

No	Class	Part to be replaced	Number of prints	Clean	Replace	Description
1	Fusing	Fuser unit	150,000 (Continuous printing)		•	
section	section		130,000 (2P/J ^{*1})			
2	Tray 2 media feed section	Feed roller	300,000		•	
3	Tray 1 media feed section	Feed roller	300,000		•	
4	Lower feeder unit	Feed roller	300,000		•	

^{*1: 2} pages/job

^{*2:} When printed in black only

^{*3:} When printed in color only

^{*4:} The transfer roller and ozone filter are available as a kit and must be replaced at the same time

3.2 Maintenance parts

- To ensure that the machine produces good prints and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.
- The replacing time is to be determined by the total counter value.
- Maintenance conditions are based on A4S or letterS,1-side print.

3.2.1 Replacement parts

A. Main body

No	Class	Maintenance parts	Quan tity	Actual durable cycle	Parts No.	Descrip tion	Ref.page
1	Tray 2 media feed section	Feed roller	1	300,000	4138 3032 ##		P.9
2	Tray 1 media feed section	Feed roller	1	300,000	4138 3032 ##		P.10
	Fusing			150,000	A0EA R706 ## *2		
3	section	Fuser unit	1	(Continuous printing) 130,000 (2P/J ^{*2})	A0EA R707 ## *3		P.24

^{*1: 2} pages/job

B. Option

No	Class	Maintenance parts	Quan tity	Actual durable cycle	Parts No.	Descrip- tions	Ref.page
1	Lower feeder unit	Feed roller	1	300,000	4128 3214 ##		*1

^{*1:} For details, see the optional lower feeder unit service manual.

^{*2: 120} V areas only

^{*3: 230} V areas only

3.3 Concept of parts life

	Description	Near life value	Life value
	Detected by the waste toner full sensor.	Monochrome	Monochrome
	A waste toner full condition is detected	: 32,000 prints	: 36,000 prints
Waste toner bottle	under the following conditions after a waste toner near full condition has been detected. Monochrome: About 4,000 printed pages are produced (continuous printing) Color: About 1,000 printed pages are produced (continuous printing)	Color: 8,000 prints	Color: 9,000 prints
Fuser unit	 Based on the fusing motor rotation data, the fuser unit driving time is counted. The consumption rate is calculated from each of the fuser unit driving time count value and the number of pages printed. The machine then detects the life when whichever of these values reaches the value corresponding to the life value shown on the right earlier. 	104,000 prints (120,000 prints for continuous printing)	130,000 prints (150,000 prints for continuous printing)
	* The actual number of pages printed relative to the consumption rate varies depending on the print conditions.		
Ozone filter	_	_	120,000 prints
Transfer roller	 The life is detected based on the number of pages printed. The consumption rate is calculated from the number of pages printed and the machine detects the life when the consumption rate reaches the value corresponding to the life value shown on the right. 	96,000 prints	120,000 prints
Transfer belt	 Base on the intermediate transport motor rotation data, the transfer belt driving time is counted. The consumption rate is calculated from the transfer belt driving time count value and the machine detects the life when the consumption rate reaches the value corresponding to the life value shown on the right. 	96,000 prints	120,000 prints
Imaging unit	Base on the color PC drum motor or intermediate transport motor rotation data, the imaging unit driving time is counted. The consumption rate is calculated from each of the imaging unit driving time count value and the number of pages printed. The machine then detects the life when whichever of these values reaches the value corresponding to the life value shown on the right earlier.	25,500 prints	30,000 prints

A. Conditions for life specifications values

• The life specification values represent the number of pages printed or figures equivalent to it when the given conditions (see the table given below) are met. They may be more or less, depending on the machine operating conditions of each individual user.

Item	Description
Job type	2 consecutive pages (2 pages/job)
PV/M	1,800
Media size	A4S or LetterS
Color ratio	Black to Color = 1:1
Original density	C/W ratio = 5% each color

3.4 Maintenance Procedure (periodical check parts)

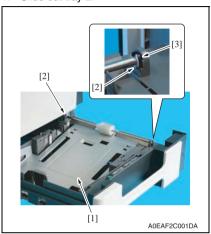
3.4.1 Replacing the tray 2 feed roller

A. Periodically replacing parts/cycle

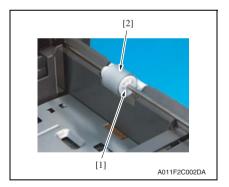
• Tray 2 feed roller: Every 300,000 prints

B. Procedure

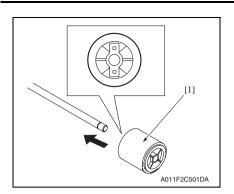
1. Slide out tray 2.



- 2. Lock the media lift plate [1].
- 3. Snap off two C-rings [2], and remove the bearing [3] at the front.



4. Snap off the C-ring [1], and remove the feed roller [2].



NOTE

 When reinstalling the feed roller [1], make sure that it is mounted in the direction shown in the illustration on the left.

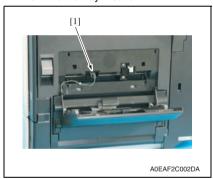
3.4.2 Replacing the tray 1 feed roller

A. Periodically replacing parts/cycle

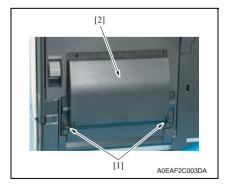
• Tray 1 feed roller: Every 300,000 prints

B. Procedure

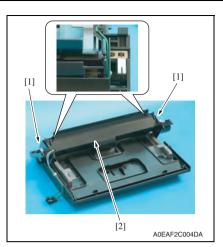
- 1. Open the tray 1.
- 2. Remove the tray 1 cover.



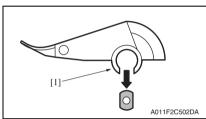
3. Disconnect the connector [1].



- 4. Move two lock levers [1] up.
- 5. Remove the tray 1 [2].

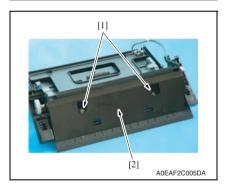


6. Press two pins [1] in, and lift the feed roller cover [2] upward to remove it.

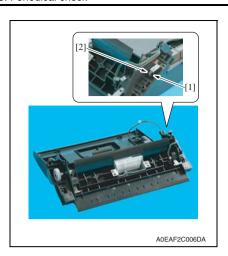


NOTE

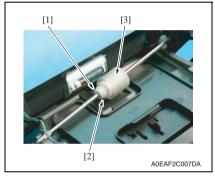
Make sure that the bearing goes all the way into both of [1] shown on the left when installing the feed roller cover.



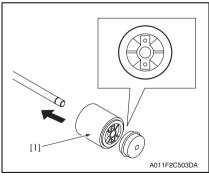
7. Remove the two screws [1], and remove the cover [2].



8. Snap off the C-ring [1], and remove the bearing [2] at the front.



9. Snap off the C-ring [1], and remove the clutch [2] and the feed roller [3].



NOTE

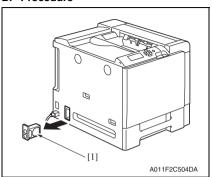
 When reinstalling the feed roller [1] and the clutch, make sure that it is mounted in the direction shown in the illustration on the left.

3.4.3 Replacing the ozone filter

A. Periodically replacing parts/cycle

• Ozone filter: Every 120,000 prints

B. Procedure



 Hold onto the handle of the ozone filter [1], and slide it out of the machine.

- 2. Install a new ozone filter in the machine.
- Replace the transfer roller. See P.21

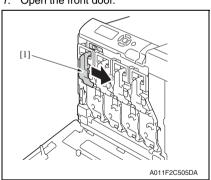
3.4.4 Replacing the toner cartridge (C,M,Y,K)

A. Periodically replacing parts/cycle

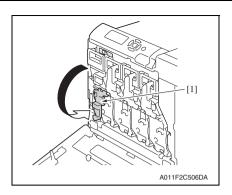
Standard-capacity toner cartridge (C,M,Y,K): Every 6,000 prints
 High-capacity toner cartridge (C,M,Y,K): Every 12,000 prints

B. Removal procedure

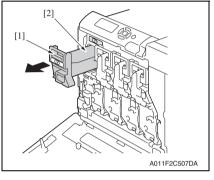
1. Open the front door.



2. Slide the lock lever [1] to the right.



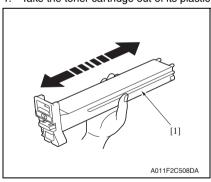
3. Pull down the lock lever [1] to unlock the toner cartridge.



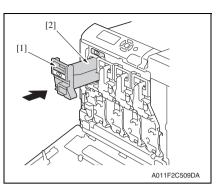
4. Grasp the toner cartridge handle [1], and pull the toner cartridge [2] out.

C. Reinstallation procedure

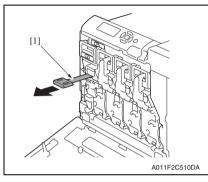
1. Take the toner cartridge out of its plastic bag.



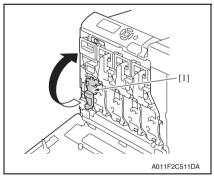
2. Gently shake the toner cartridge [1] three times to agitate the toner.



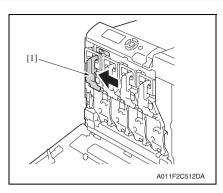
3. Grasp the toner cartridge handle [1], and slide the toner cartridge [2] in.



4. Remove the protective sheet by pulling it.



5. Raise the lock lever [1].



6. Slide the lock lever [1] to the left to lock the toner cartridge.

7. Close the front door.

NOTE

When removing or reinstalling the toner cartridge while it is being used or after it
has been used up, do not hold it or place it upside down, as spilled toner could
result.

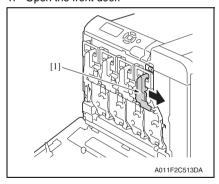
3.4.5 Replacing the imaging unit (C,M,Y,K)

A. Periodically replacing parts/cycle

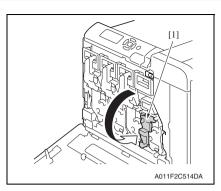
• Imaging unit (C,M,Y,K): Every 30,000 prints (continuous)/20,000 prints (2 pages/job)

B. Removal procedure

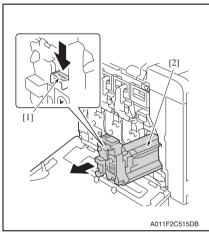
1. Open the front door.



2. Slide the lock lever [1] to the right.

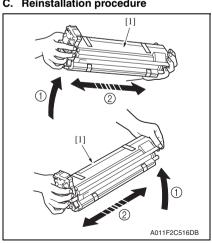


3. Pull down the lock lever [1] to unlock the imaging unit.

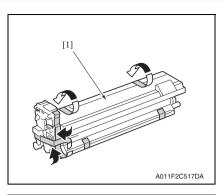


- 4. Press down the "Push" marked place
- 5. Pull the imaging unit [2] out.

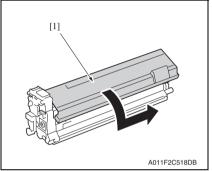
C. Reinstallation procedure



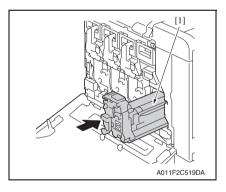
1. After removing the plastic bag, hold the imaging unit [1] with your hands and shake it two times as shown in the left illustration.



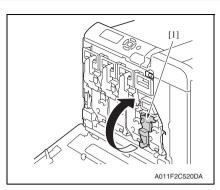
2. Remove the shipping tape of the imaging unit [1].



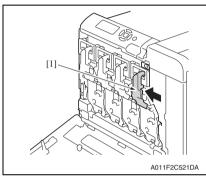
3. Remove the protective cover [1].



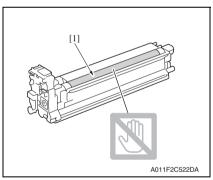
4. Slide the imaging unit [1] in.



5. Raise the lock lever [1].



- 6. Slide the lock lever [1] to the left to lock the imaging unit.
- 7. Close the front door.



NOTE

 When installing and removing the imaging unit, take care not to touch the surface of the PC drum [1].

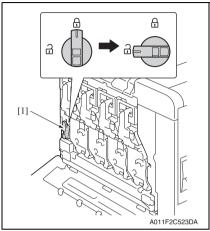
3.4.6 Replacing the waste toner bottle

A. Periodically replacing parts/cycle

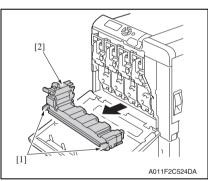
• Waste toner bottle: Every 36,000 prints (black print only)/9,000 prints (color print only)

B. Procedure

1. Open the front door.



2. Turn the lever [1] to unlock the waste toner bottle.



- 3. Holding the left and right handles [1], remove the waste toner bottle [2].
- 4. To reinstall, reverse the order of removal.

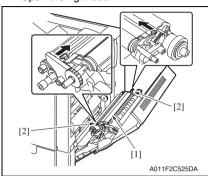
3.4.7 Replacing the transfer roller

A. Periodically replacing parts/cycle

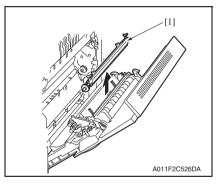
• Transfer roller: Every 120,000 prints

B. Procedure

1. Open the right door.



 Press the locks [2] located at the front and rear ends of the transfer roller [1] inward to unlock the transfer roller [1].



3. Holding the levers, remove the transfer roller [1].

- 4. To reinstall, reverse the order of removal.
- 5. Replace the ozone filter.

See P.13

From the Menu, select [SERVICE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. ROLLER.] and execute this function to reset the transfer roller counter value.
 See P.190

From the Menu, select [QUALITY MENU] → [CARIBRATION] → [AIDC PROCESS] and
execute this function.

See P.140

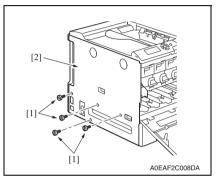
3.4.8 Replacing the transfer belt

A. Periodically replacing parts/cycle

• Transfer belt: Every 120,000 prints

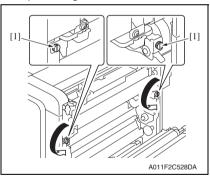
B. Procedure

- 1. Turn OFF the power switch.
- 2. Open the front door.
- 3. Remove the imaging units (C,M,Y,K). See P.16
- Remove the waste toner bottle.
 See P.20

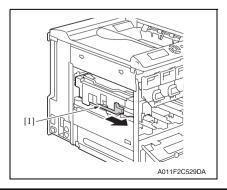


5. Remove four screws [1], and remove the left cover [2].

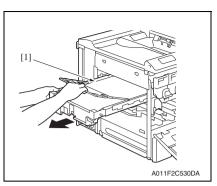




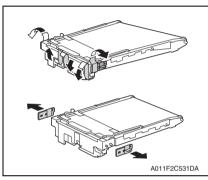
7. Loosen two screws [1], and unlock the transfer belt.



8. Slide the shutter lever [1] to the front.



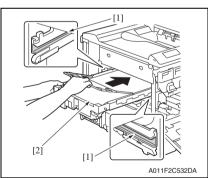
Grasp the transfer belt handle and pull the transfer belt [1] out.



 Remove the packing material from the new transfer belt.

NOTE

 Use care not to touch the belt of the transfer belt.



11. Insert the transfer belt [2] along the rails [1].

NOTE

 When inserting the unit, use care not to allow the docking gear to hit against the rail or other mechanism to prevent damage.

- 12. To reinstall, reverse the order of removal.
- 13. From the Menu, select [SERVICE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. BELT] and execute this function to reset the transfer belt counter value.
 See P.189
- 14. From the Menu, select [QUALITY MENU] → [CALIBRATION] → [AIDC PROCESS] and execute this function.

See P.140

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3.4.9 Replacing the fuser unit

↑ CAUTION



The temperature gets high in the vicinity of the fuser 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

• Fuser unit: Every 150,000 prints (continuous)/130,000 prints (2 pages/job)

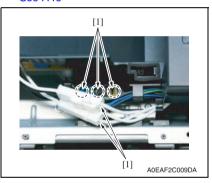
B. Procedure

- Turn OFF the power switch, unplug the power cord from the power outlet, and let the machine to stand idle for about 20 min.
- 2. Open the front door.
- 3. Remove the operation board.

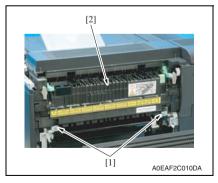
See P.51

4. Remove the upper front cover.

See P.46



5. Disconnect five connectors [1].



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

- 7. Install the new fuser unit.
- From the Menu, select [SERVICE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and execute this function to reset the fuser unit counter value.
 See P.190

4. Service tool

4.1 CE tool list

Tool name	Shape	Material No.	Remarks
Cleaning pad	A02EF2C526DA	000V-18-1	10pcs/1pack
Isopropyl alcohol	A00KF2C506DA	-	
Laser lens cleaning tool	A011F2C544DA	A011 1901 ##	

4.2 Consumable parts

4.2.1 Toner cartridge

Part name	Life expectancy	
High-capacity toner cartridge - black (K)	12,000 prints	
High-capacity toner cartridge - yellow (Y)	12,000 prints	
High-capacity toner cartridge - magenta (M)	12,000 prints	
High-capacity toner cartridge - cyan (C)	12,000 prints	

For the predetermined conditions, See P.8

4.2.2 Imaging unit

Part name	Life expectancy
Black imaging unit	30,000 prints
Yellow imaging unit	30,000 prints
Magenta imaging unit	30,000 prints
Cyan imaging unit	30,000 prints

For the predetermined conditions, See P.8

4.2.3 Waste toner bottle

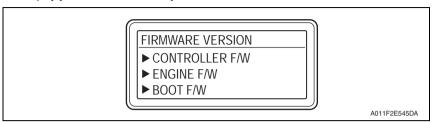
Part name	Life expectancy	
Waste toner bottle	Monochrome: 36,000 prints	
	Color: 9,000 prints	

For the predetermined conditions, See P.8

5. Firmware upgrade

5.1 Checking the current firmware version

- 1. Display [SERVICE MENU].
- 2. Display [FIRMWARE VERSION].



Select the firmware to be updated and check the current version.See P182

5.2 Firmware upgrading procedure by USB memory device

5.2.1 Preparations for firmware upgrading

A. System requirements

- PC equipped with a USB port
- · USB memory device

B. Saving the firmware data into the USB memory device

- 1. Save the firmware data in appropriate space in the PC.
- 2. Connect the USB memory device to the PC.
- 3. Create a "firmware" folder immediately under the drive of the USB memory device.
- 4. Copy the firmware data (***.exe) in the firmware folder created in step 3.

NOTE

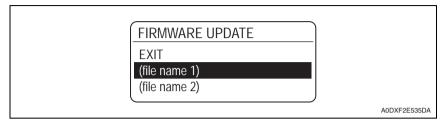
- Be sure to save the firmware data in "drive:/firmware/***.exe."
- . The printer can display up to 20 files of firmware data during upgrading.

C. How to write firmware data

- 1. Turn the power switch ON.
- 2. Connect the USB memory device to the printer.
- 3. Call the SERVICE MENU to the display.

See P.180

Select [FIRMWARE UPDATE] and press the Menu/Select key.
 A list of firmware data in the USB memory device is displayed.

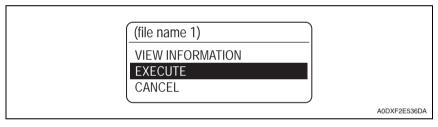


NOTE

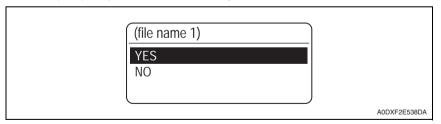
 Before upgrading firmware, use [VIEW INFORMATION] to check that the firmware data is correct.

See P.192

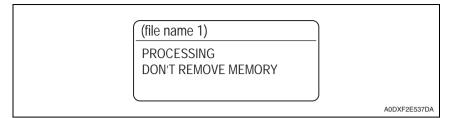
- 5. Select the specific firmware data to be upgraded and press the Menu/Select key.
- 6. Select [EXECUTE] and press the Menu/Select key.



7. Select [YES] and press the Menu/Select key.



8. The firmware upgrading procedure starts.



NOTE

- NEVER disconnect the USB memory device from the printer during the firmware upgrading procedure.
- 9. The printer is automatically restarted as soon as the firmware is upgraded correctly.

5.3 Firmware upgrading procedure by updater

5.3.1 Updating method

• To update the firmware, perform "Firmware Updater."

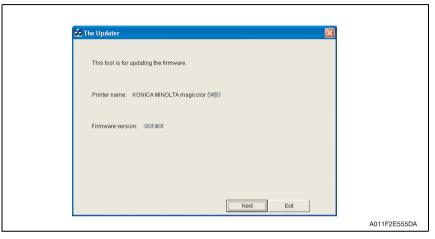
A. System requirements

Computer	Windows	PC with a Pentium 2,400 MHz or faster processor (A Pentium 3,500 MHz or faster processor is recommended.)	
	Macintosh	Apple Macintosh computer with a PowerPC G3 or later processor (A PowerPC G4 or later is recommended.)	
os	Windows	Microsoft Windows XP Home Edition/Professional, Windows 2000	
	Macintosh	MacOS X 10.2 or later (We recommend installing the newest patch.)	
Available hard disk space	Windows	Approximately 20 to 26 MB	
	Macintosh	Approximately 30 to 42 MB	
Memory		128 MB or more	
Interface	Windows	10Base-T/100Base-TX/1000Base-T Ethernet USB 2.0 (High Speed) compliant Parallel (IEEE 1284)	
	Macintosh	10Base-T/100Base-TX/1000Base-T Ethernet	

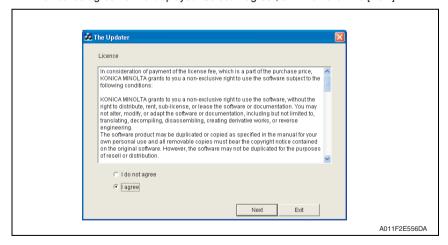
- **B.** Connection for Windows
- (1) Starting the firmware updater

NOTE

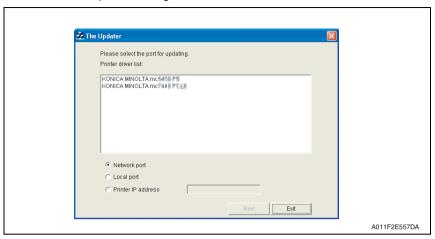
- Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.
- 1. Download the firmware updater.
- Double-click "xxxxxxxxxxxxxxx.exe."
- 3. The printer name and firmware version are displayed. Click the [Next].



4. The license agreement is displayed. Select "I agree", and then click the [Next].



The list of printer drivers is displayed. Select the appropriate connection for the environment where the printer is being used.



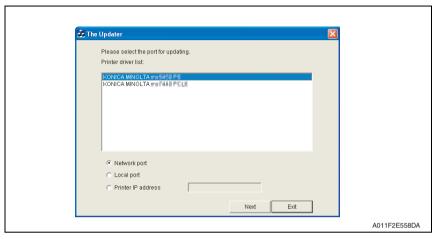
- For a network connection: Select "Network port."
 - See P.32
- For a local connection: Select "Local port."
 - See P.35
- When specifying the IP address of the printer: Select "Printer IP address."
 See P.36

NOTE

- If you select "Network port" or "Local port", make sure that the printer driver has been installed.
- If you select "Printer IP address", the firmware can be updated even if a printer driver is not already installed.

(2) For a network connection

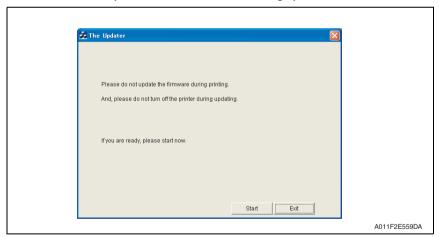
- 1. When "Network port" is selected, a list of printer drivers for the network port appears.
- 2. Select the printer driver, and then click the [Next].



A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

· Do not turn off the printer while its firmware is being updated.



4. The result of the firmware transfer is displayed. Click the [Exit].



5. If the firmware was successfully updated, the printer will automatically restart.

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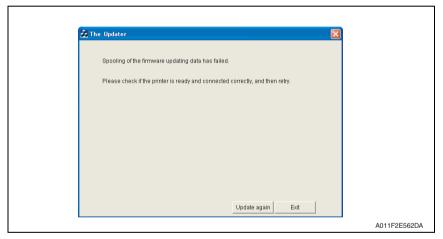
spooling of the data fails>

NOTE

- If spooling fails, data may remain in the printer spooler. Delete this data, and then try again.
- 1. If spooling of the data fails, the following message appears.
- 2. Click [OK].

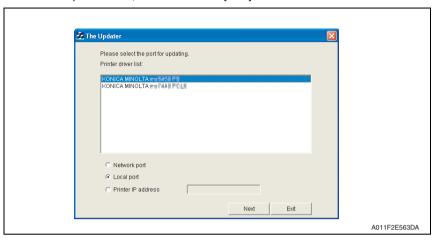


Check that the printer is ready and that it is correctly connected, and then click the [Update again].



(3) For a local connection

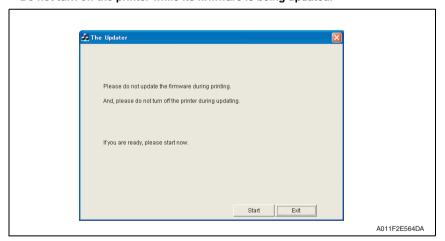
- 1. When "Local port" is selected, a list of printer drivers for the local port appears.
- 2. Select the printer driver, and then click the [Next].



 A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

· Do not turn off the printer while its firmware is being updated.



4. The result of the firmware transfer is displayed. Click the [Exit].



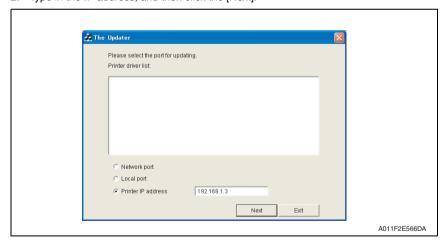
5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

For details, see "For a network connection."
 See P.34

(4) When specifying the IP address of the printer

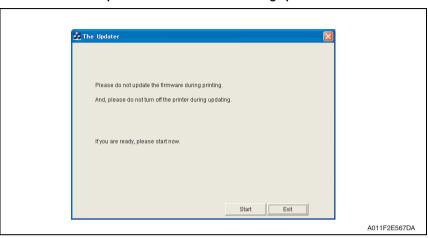
- 1. When "Printer IP address" is selected, the "Printer IP address" box becomes available.
- 2. Type in the IP address, and then click the [Next].



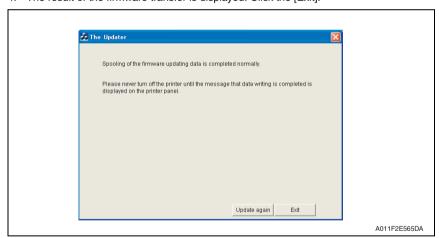
3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

· Do not turn off the printer while its firmware is being updated.



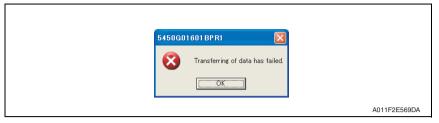
4. The result of the firmware transfer is displayed. Click the [Exit].



5. If the firmware was successfully updated, the printer will automatically restart.

<If transferring of the data fails>

- 1. If transferring of the data fails, the following message appears.
- 2. Click [OK].



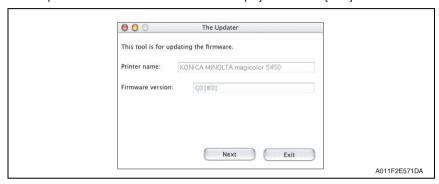
3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].



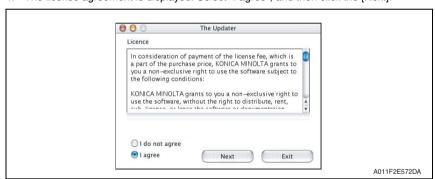
- C. Connection for Macintosh
- (1) Starting the firmware updater and the updating procedure

NOTE

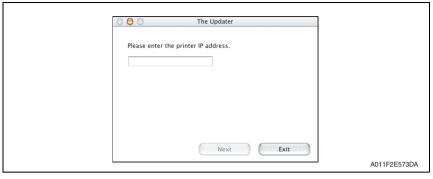
- Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.
- 1. Download the firmware updater.
- Double-click "xxxxxxxxxxxxxx."
- 3. The printer name and firmware version are displayed. Click the [Next].



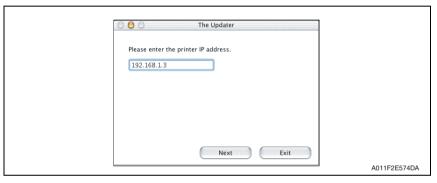
4. The license agreement is displayed. Select "I agree", and then click the [Next].



5. The screen for specifying the IP address of the printer appears.



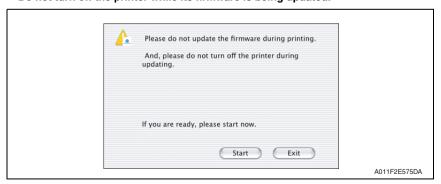
6. Type in the IP address, and then click the [Next].



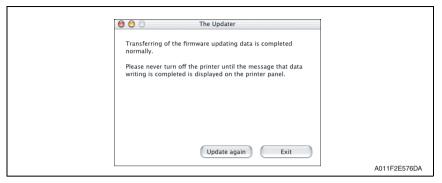
A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

NOTE

· Do not turn off the printer while its firmware is being updated.



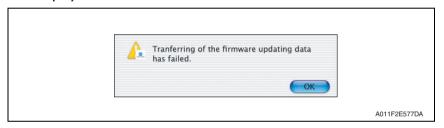
8. The result of the firmware transfer is displayed. Click the [Exit].



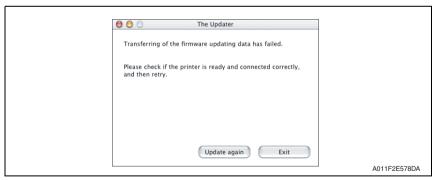
9. If the firmware was successfully updated, the printer will automatically restart.

<If transferring of the data fails>

- 1. If transferring of the data fails, the following message appears.
- 2. Click [OK].



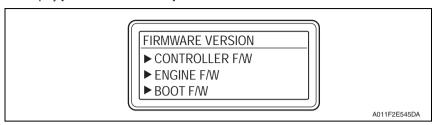
Check that the printer is ready and that it is correctly connected, and then click the [Update again].



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5.3.2 Checking the version after the firmware update

- 1. Display [SERVICE MENU].
- 2. Display [FIRMWARE VERSION].



Select the firmware that has been updated and check the current version. See P.182

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

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.

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.46
2	Exterior parts	Upper front cover	P.46
3		Right front cover	P.47
4		Left cover	P.47
5		Rear cover	P.48
6		Exit tray	P.48
7		Right rear cover	P.49
8		Tray 2	P.50
9		Tray 1	P.50
10		Operation board (OB)	P.51
11	Boards and etc.	Hard disk kit (option)	P.52
12		MFP board (MFPB)	P.53
13		Print control board (PRCB)	P.55
14		DC power supply (DCPU)	P.57
15		High voltage unit/1 (HV1)	P.59
16		High voltage unit/2 (HV2)	P.60
17		Toner level sensor board (TLSB)	P.61
18	Llaita	PH Unit	P.64
19	Units	Driving unit	P.71
20		MFP board fan motor (FM5)	P.72
21		Backup battery	P.73
22		PWB box/1	P.74
23		PWB box/2	P.75
24		Color PC drum motor (M2)	P.75
25		Intermediate transport motor (M3)	P.78
26		Fusing motor (M4)	P.77
27		Developing motor/K (M5)	P.76
28	Other Parts	Toner supply motor/Y,M (M6)	P.76
29	Other Faits	Toner supply motor/C,K (M7)	P.77
30		Media feed clutch/1 (CL1)	P.82
31		Media feed clutch/2 (CL3)	P.86
32		Registration roller clutch (CL2)	P.78
33		Pressure/retraction clutch/2 (CL5)	P.79
34		Pressure/retraction clutch/1 (CL4)	P.81
35		Temperature/ humidity sensor (TEM/HUMS)	P.89
36		IDC sensor board/Re (IDCSB/R)	P.90
37		IDC sensor board/Fr (IDCSB/F)	F.90

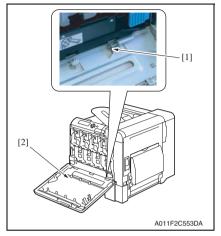
6.2.2 Cleaning parts list

No	Section	Part name	Ref.Page
1	Tray 1	Feed roller	P.91
2	Tray 2	Feed roller	P.91
3	Processing section	Laser irradiation section	P.92

6.3 Disassembly/assembly procedure

6.3.1 Front door

1. Open the front door.

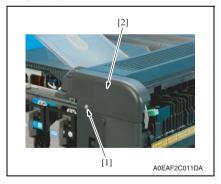


- 2. Remove the E-ring [1].
- 3. Slide the front door [2] to the left off the machine.

6.3.2 Upper front cover

- 1. Open the front door.
- 2. Open the right door.
- 3. Remove the operation board.

See P.51



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

6.3.3 Right front cover

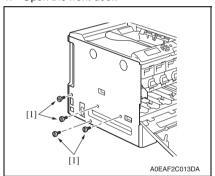
- 1. Remove the front door.
 - See P.46
- Remove the upper front cover. See P.46



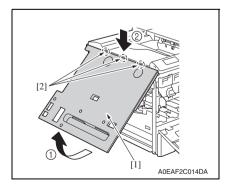
3. Remove the screw [1], and remove the right front cover [2].

6.3.4 Left cover

1. Open the front door.



2. Remove four screws [1].

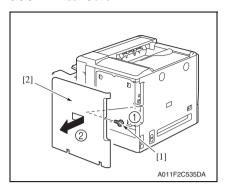


3. Remove the left cover [1].

NOTE

 Remove the left cover as shown in the illustration on the left, taking care not to damage three tabs [2] on the upper edge of the left cover.

6.3.5 Rear Cover



- 1. Remove the screw [1].
- Slide the rear cover [2] in the direction shown in the illustration on the left off the machine.

6.3.6 Exit tray

- 1. Open the front door.
- 2. Remove the operation board.

See P.51

3. Remove the upper front cover.

See P.46

4. Remove the left cover.

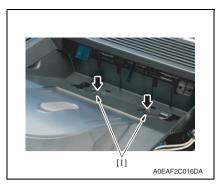
See P.47

5. Remove the rear cover.

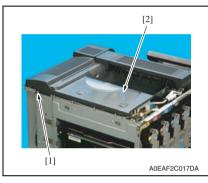
See P.48



6. Remove two covers [1].



7. Remove two screws [1].



8. Remove the screw [1], and remove the exit tray [2].

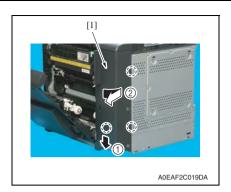
6.3.7 Right rear cover

- 1. Open the right door.
- 2. Remove the rear cover. See P.48



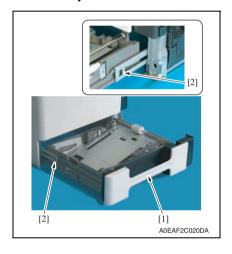
3. Open the cover and remove the screw [1].





4. Unhook three tabs, and remove the right rear cover [1].

6.3.8 Tray 2



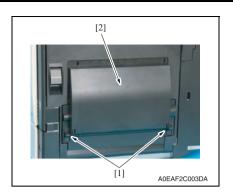
- 1. Slide out the tray 2 [1].
- 2. Pressing the tabs [2] on both sides, remove the tray 2 [1].

6.3.9 Tray 1

- 1. Open the tray 1.
- 2. Remove the tray 1 cover.



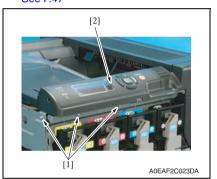
3. Disconnect the connector [1].



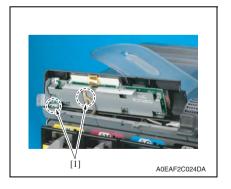
- 4. Move two lock levers [1] up.
- 5. Remove the tray 1 [2].

6.3.10 Operation board (OB)

- 1. Open the front door.
- 2. Remove the left cover. See P.47



3. Remove three screws [1], and remove the operation board [2].

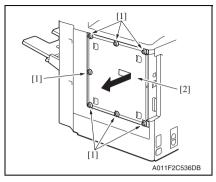


4. Disconnect two connectors [1].

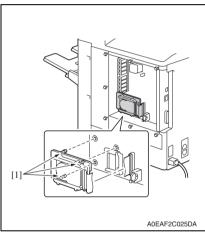
6.3.11 Hard disk kit (option)

1. Remove the rear cover.

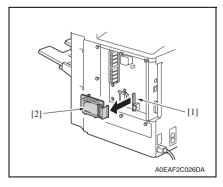
See P.48



Loosen seven screws [1], and remove the MFP board protective shield [2].



3. Remove three mounting pins [1].



4. Disconnect the connector [1], and remove the hard disk kit [2].

6.3.12 MFP board (MFPB)

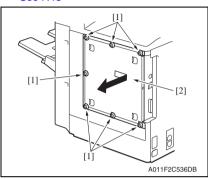
NOTE

 After the MFP board replacement, you need to set the language to be displayed on the control panel again.

See P.153

1. Remove the rear cover.

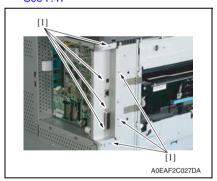
See P.48



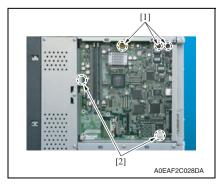
Loosen seven screws [1], and remove the MFP board protective shield [2].

- 3. Remove the MFP board fan motor.
 - See P.72
- 4. Remove the left cover.

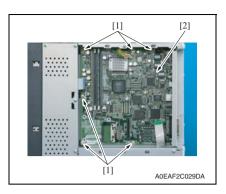
See P.47



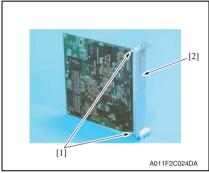
5. Remove seven screws [1].



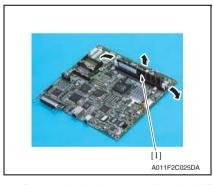
- Disconnect three connectors [1] on the MFP board.
- 7. Disconnect two flat cables [2] from the MFP board.



8. Remove six screws [1], and remove the MFP board assy [2].



9. Remove two screws [1] and the interface protective cover [2].



Remove the memory [1] from the MFP board.

 Remove the backup battery from the MFP board. See P.73

NOTE

When the MFP board is replaced, upgrade the firmware to the latest version.
 See P.27

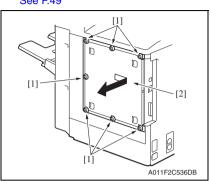
NOTE

 After the replacement of the MFP board, you need to rewrite new security data into the hard disk and the compact flash if you would like to continue to use the data that has been stored in these disks.

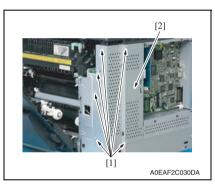
See P.193

6.3.13 Print control board (PRCB)

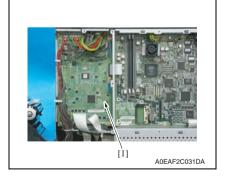
- 1. Remove the rear cover.
 - See P.48
- 2. Remove the right rear cover. See P.49



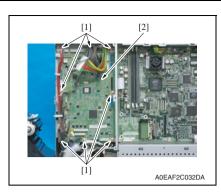
Remove seven screws [1], and remove the MFP board protective shield [2].



4. Remove six screws [1] and the print control board protective shield [2].



 Disconnect all connectors and flat cables from the print control board [1].

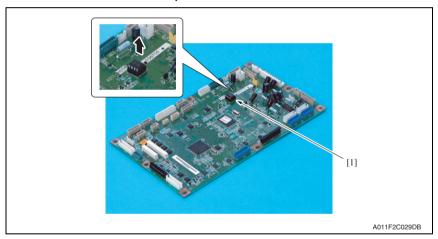


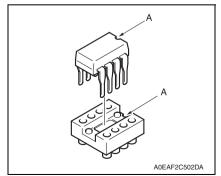
6. Remove eight screws [1], and remove the print control board [2].

7. Remove parameter chip (IC4) [1] from the print control board.

NOTE

 When the print control board (PRCB) has been replaced, be sure to remount parameter chip (IC4). Unmount parameter chip (IC4) from the old print control board and mount it on the new print control board.





NOTE

 When mounting parameter chip (IC4), make sure the notches ("A") are precisely lined up.

6.3.14 DC power supply (DCPU)

1. Remove the rear cover.

See P.48

2. Remove the left cover. See P.47

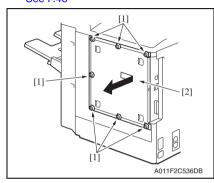
3. Remove the operation board.

See P.51

4. Remove the upper front cover.

See P.46
5. Remove the exit tray.

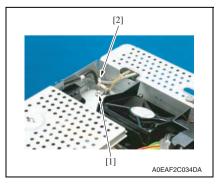
See P.48



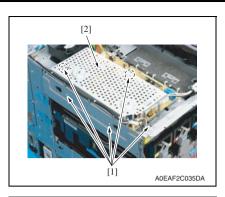
 Loosen seven screws [1], and remove the MFP board protective shield [2].



7. Disconnect two connectors [1] on the MFP board.



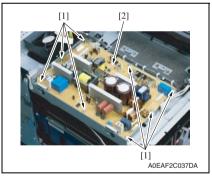
- 8. Remove the screw [1].
- Remove the cable from the wire saddle [2].



10. Remove five screws [1] and the DC power supply protective cover [2].



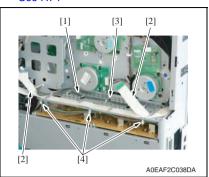
Disconnect all connectors on the DC power supply.



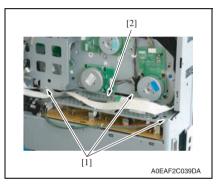
12. Remove eight screws [1] and the DC power supply [2].

6.3.15 High voltage unit/1 (HV1)

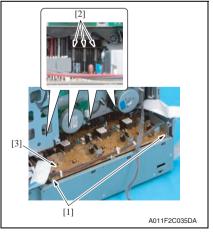
1. Remove PWB box/1. See P.74



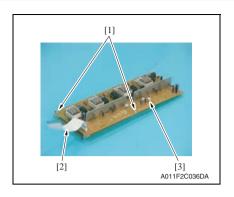
- Disconnect the harness [1] and two flat cables [2] from the harness plate [3].
 - 3. Remove the harness from three wire saddles [4].



4. Remove three screws [1], and remove the harness plate [2].



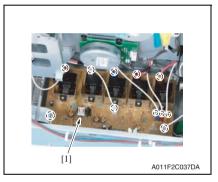
 Remove two screws [1], twelve springs [2], and the high voltage unit/ 1 assy [3].



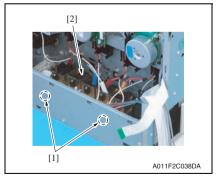
- 6. Remove two screws [1], and disconnect the flat cable [2].
- 7. Remove the high voltage unit/1 [3].

6.3.16 High voltage unit/2 (HV2)

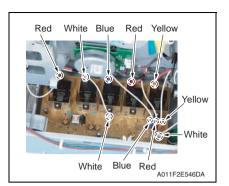
1. Remove the high voltage unit/1. See P.59



 Disconnect all connectors and flat cables from the high voltage unit/2 [1].



3. Remove two screws [1], and remove the high voltage unit/2 [2].



NOTE

 When reinstalling high voltage unit/ 2, make sure that each color connector is in the correct position, as shown in the illustration on the left.

6.3.17 Toner level sensor board (TLSB)

- 1. Open the Front Door.
- 2. Remove the toner cartridge (C,M,Y,K). See P.13
- 3. Remove the imaging unit (C,M,Y,K). See P16

NOTE

 After the imaging unit has been removed from the main body, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place.

Do not leave the imaging unit exposed to light for a extended period of time, as it may become damaged.

4. Remove the waste toner bottle.

See P.20

Remove the upper front cover. See P.46

6. Remove the right front cover.

See P.47

7. Remove the operation board.

See P.51

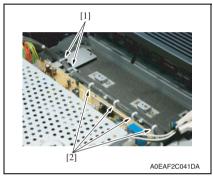
8. Remove the exit trav.

See P.48

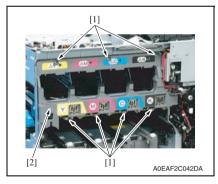
Remove the print control board protective shield. See the steps 1 to 4 on P.55 "Print control board".



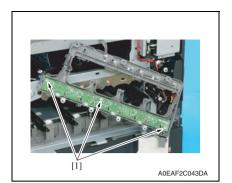
10. Disconnect the connector (PJ13A)[1] from the print control board.



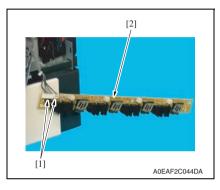
Remove the harness from the harness plate [1] and four wire saddles
 [2].



Remove seven screws [1], and remove the toner level sensor board assy [2].



13. Remove three screws [1].



14. Disconnect two connectors [1] and remove the toner level sensor board [2].

6.3.18 PH Unit

- A. Removal procedure
- 1. Open the front door.
- 2. Remove the toner cartridge (C,M,Y,K).

See P.13

3. Remove the imaging unit (C,M,Y,K).

See P.16

NOTE

 After the imaging unit has been removed from the main body, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place.

Do not leave the imaging unit exposed to light for a extended period of time, as it may become damaged.

4. Remove the waste toner bottle.

See P.20

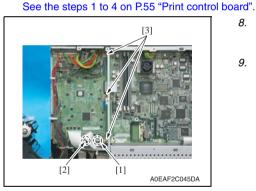
5. Remove the transfer belt.

See P.22

6. Remove the left cover.

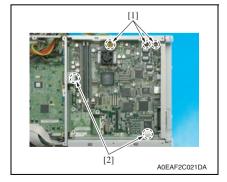
See P.47

7. Remove the print control board protective shield.

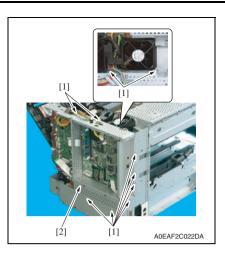


- Disconnect the connector (PJ22A)

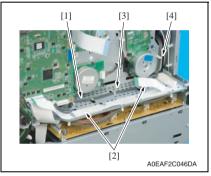
 [1] and the flat cable (PJ23A) [2]
 from the print control board.
- 9. Remove three screws [3].



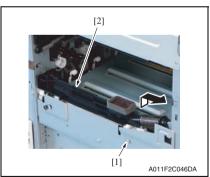
- Disconnect three connectors [1] on the MFP board.
- Disconnect two flat cables [2] from the MFP board.



- 12. Remove ten screws [1].
- 13. Remove the harness, and remove the PWB box/1 [2].



- 14. Disconnect the harness [1] and two flat cables [2] from the harness plate [3]
- 15. Remove the harness from the wire saddle [4].

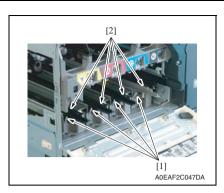


16. Remove the screw [1], and remove the drawing up transportation assy [2].

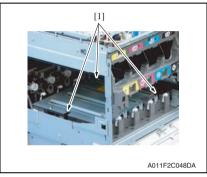
NOTE

 Waste toner may spill out from the waste toner inlet of the drawing up transportation assy.

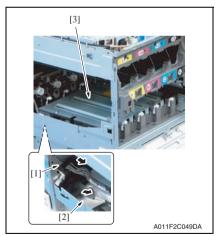
Take care not to tilt the waste toner inlet when removing the drawing up transportation assy [2]. The drawing up transportation assy [2] also needs to be placed in a horizontal position where no waste toner will spill out.



 Remove four screws [1], and remove corresponding four imaging unit rails [2].



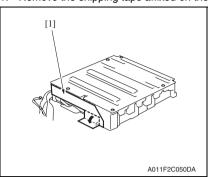
18. Remove three shoulder screws [1] of the PH unit.



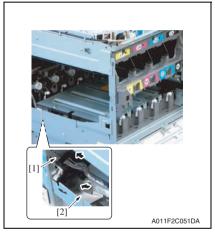
 Pull the connector [1] and the flat cable [2] out, and remove the PH unit [3].

B. Reinstallation procedure

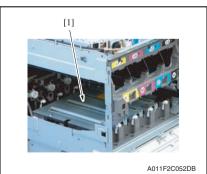
1. Remove the shipping tape affixed on the new PH unit shield sheet.



Unfold the rectangular area of the shield sheet [1] so that the part is lying flat.



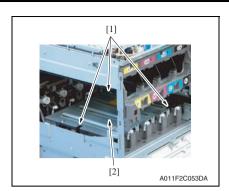
 Insert the PH unit connector [1] and flat cable [2] from the positions shown in the left illustration.
 Then route them to the rear direction.



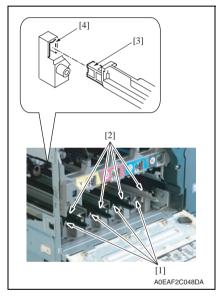
4. Install the PH unit [1] into the main body.

NOTE

- After the PH unit installation, check that the shield sheet is grounded properly onto the base of the PH unit.
- Make sure that the shield sheet does not have any unnecessary crease, positional misalignment nor loose attachment.



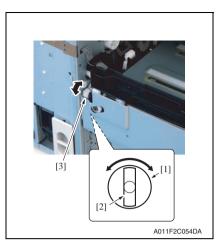
5. Fix the PH unit [2] with three shoulder screws [1].



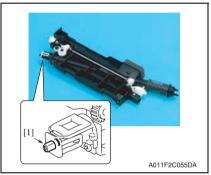
6. Attach the four imaging unit rails [2] with one screw [1] for each rail.

NOTE

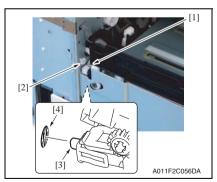
 Make sure that the convex parts [3] at rear end of the rail are fit in the locating hole [4] on the main body.



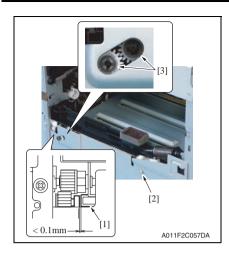
- 7. Install the drawing up transportation assy into the main body.
- <1> Turn the middle drive gear [3] so that the rear gear [1] keeps its own rectangular slot [2] vertically long.



<2> Turn the connecting part [1] so that it becomes vertically long.



- <3> Insert the drawing up transportation assy shaft [1] into the rear mounting hole [2].
- <4> Insert the connecting part [3] of the drawing up transportation assy into the rear gear slot [4].



9. To reinstall, reverse the order of removal.

While pushing the positioning protrusion [1] of the drawing up transportation assy against the housing, fix the assy with one screw [2].

NOTE

- Check that the two drive gears [3] of the drawing up transportation assy are engaged.
- Use a 0.1 mm piece of a thickness gauge to check the gap between the positioning protrusion [1] and the main body frame. Make sure that the piece of the thickness gauge cannot pass through the gap.
 (A transparency can replace the thickness gauge.)
- Check that the shield sheet which confirmed in step 4, is well grounded onto PH unit base plate at malt of drawing up transportation assy.

6.3.19 **Driving unit**

1. Remove the PWB box/1.

See P.74

2. Remove the PWB box/2.

See P.75

3. Remove the high voltage unit/1. See P.59

4. Remove the color PC drum motor.

See P.75

5. Remove the developing motor/K.

See P.76

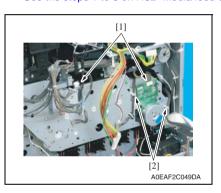
6. Remove the fusing motor.

See P.77

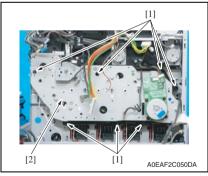
7. Remove the intermediate transport motor.

See P.78

8. Remove the media feed and transport assy. See the steps 1 to 6 on P.82 "Media feed clutch/1".



- 9. Disconnect the connector [1].
- 10. Remove the harness from two wire saddles [2].



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

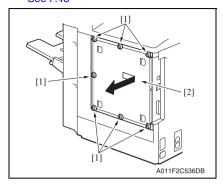
NOTE

· When installing the driving unit assy [2], take care not to damage or soil the gears.

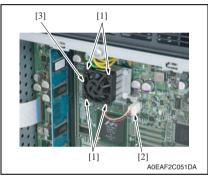
12. Remove the pressure/retraction clutch/1 assy. See the steps 3 on P.81 "Pressure/retraction clutch/1".

6.3.20 MFP board fan motor (FM5)

1. Remove the rear cover See P.48



Loosen seven screws [1], and remove the MFP board protective shield [2].



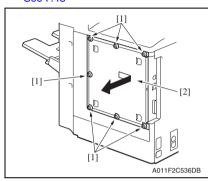
 Remove four screws [1], connector [2], and remove the MFP board fan motor [3].

6.3.21 Backup battery

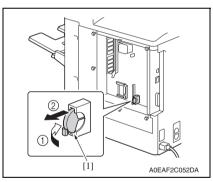
NOTE

- This printer uses a lithium battery to backup memory. Replace the battery with our specified memory backup battery (CR2032). Use of a different battery or the one not equal to our specified battery may present risk of explosion.
- Before your backup battery replacement, refer to the section of Removal of PWBs on P.43.
- . When working with printed boards, hold the boards only by the edges.
- 1. Remove the rear cover.

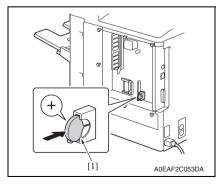
See P.48



Loosen seven screws [1], and remove the MFP board protective shield [2].



Press the backup battery [1] in the way shown in the picture on the left and remove it from the housing.



4. Insert a new backup battery [1].

NOTE

When inserting the new backup battery, be sure that the + side faces toward the left.

6.3.22 PWB box/1

1. Remove the MFP board.

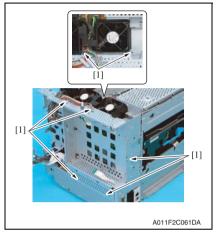
See P.53

2. Remove the print control board.

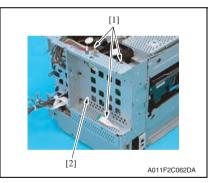
See P.55

3. Remove the exit tray.

See P.48



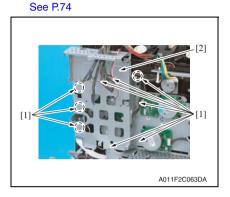
4. Remove seven screws [1].



5. Remove the harness [1], and remove the PWB box/1 [2].

6.3.23 PWB box/2

- 1. Remove the MFP board.
 - See P.53
- 2. Remove the print control board.
- See P.55
 3. Remove the PWB box/1.

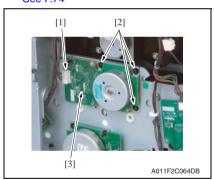


4. Remove nine screws [1], and remove the PWB box/2 [2].

6.3.24 Color PC drum motor (M2)

1. Remove the PWB box/1.

See P.74



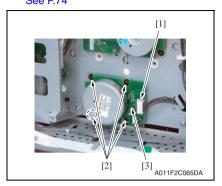
Disconnect the connector [1] and remove three screws [2], and the color PC drum motor [3].

NOTE

 When installing the color PC drum motor [3], try to insert it straight, and take care not to damage the gears.

6.3.25 Developing motor/K (M5)

Remove the PWB box/1.
 See P.74



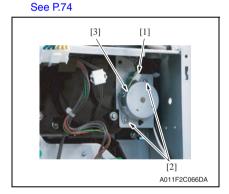
Disconnect the connector [1] and remove four screws [2], and the developing motor/K [3].

NOTE

 When installing the developing motor/K [3], try to insert it straight, and take care not to damage the gears.

6.3.26 Toner supply motor/Y,M (M6)

1. Remove the PWB box/1.



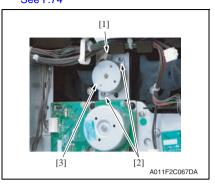
Disconnect the connector [1] and remove two screws [2], and the toner supply motor/Y,M [3].

NOTE

 When installing the toner supply motor/Y,M [3], try to insert it straight, and take care not to damage the gears.

6.3.27 Toner supply motor/C,K (M7)

Remove the PWB box/1.
 See P.74



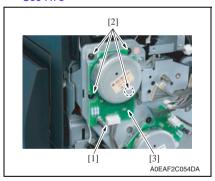
Disconnect the connector [1] and remove two screws [2], and the toner supply motor/C,K [3].

NOTE

 When installing the toner supply motor/C,K [3], try to insert it straight, and take care not to damage the gears.

6.3.28 Fusing motor (M4)

- Remove the PWB box/1.
 See P.74
- 2. Remove the PWB box/2. See P.75



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

NOTE

 When installing the fusing motor
 [3], try to insert it straight, and take care not to damage the gears.

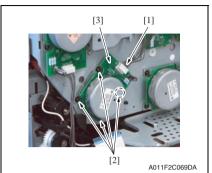
6.3.29 Intermediate transport motor (M3)

1. Remove the PWB box/1.

See P.74

2. Remove the PWB box/2.

See P.75



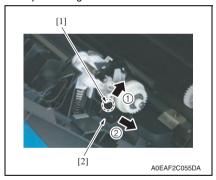
 Disconnect the connector [1] and remove four screws [2], and the intermediate transport motor [3].

NOTE

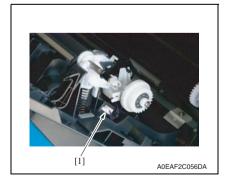
 When installing the intermediate transport motor [3], try to insert it straight, and take care not to damage the gears.

6.3.30 Registration roller clutch (CL2)

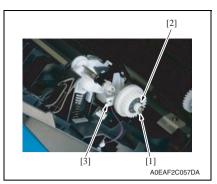
1. Open the right door.

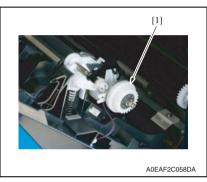


2. Unhook the tab [1], and remove the connector cover [2].



3. Disconnect the connector [1].





4. Remove the E-ring [1] and the bearing [2].

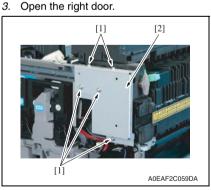
Precautions for reinstallation

· When reinstalling the bearing, make sure that the notch [3] on the registration roller clutch comes to the position shown in the left picture.

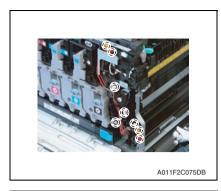
5. Remove the registration roller clutch [1].

6.3.31 Pressure/retraction clutch/2 (CL5)

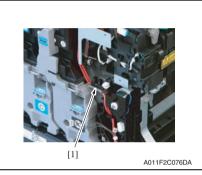
- 1. Open the front door.
- 2. Remove the right front cover. See P.47



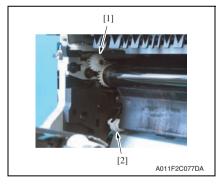
4. Remove five screws [1], and remove the connector cover [2].



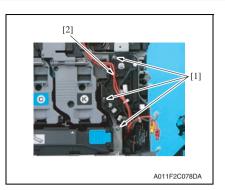
5. Disconnect eight connectors.



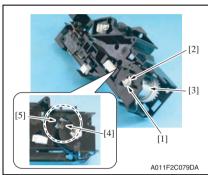
6. Remove the door sensor/Fr (PS14) [1].



7. Remove the gear/1 [1] and the gear/2 [2].



 Remove three screws [1], and remove the 2nd image transfer pressure/retraction drive assy [2].



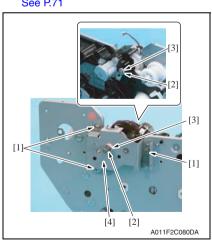
- 9. Snap off the C-ring [1].
- 10. Remove the bearing [2] and the pressure/retraction clutch/2 [3].

NOTE

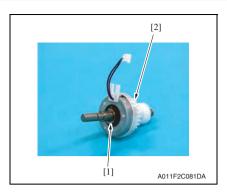
 When reinstalling the bearing and pressure/retraction clutch/2, make sure that the protrusion [4] on the pressure/retraction clutch/2 fits into the locking slot [5].

6.3.32 Pressure/retraction clutch/1 (CL4)

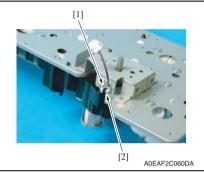
 Remove the driving unit assy. See P.71



- 2. Remove three screws [1].
- 3. Snap off two E-rings [2].
- 4. Remove two bearings [3] and the pressure/retraction clutch/1 assy [4].



5. Remove the gear [1], and remove the pressure/retraction clutch/1 [2].

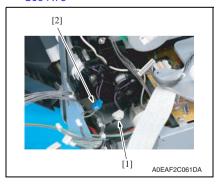


NOTE

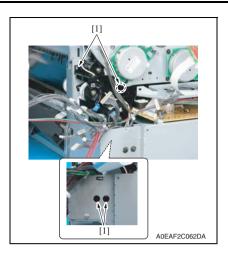
 When reinstalling the bearing and pressure/retraction clutch/1, make sure that the protrusion [1] on the pressure/retraction clutch/1 fits into the locking slot [2].

6.3.33 Media feed clutch/1 (CL1)

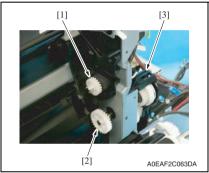
- 1. Remove the PWB box/1.
 - See P.74
- 2. Remove the PWB box/2. See P.75



3. Disconnect the white connector [1] and the blue connector [2].



4. Remove four screws [1].



[1] [2] A011F2C086DC

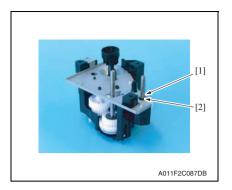
5. Remove the gear [1] and the gear [2].

NOTE

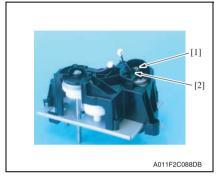
- When the media feed clutch/1 is reinstalled, replace the gears that have been removed, as these gears could have been damaged.
- 6. Remove the media feed and transport assy [3].
- 7. Snap off the E-ring [1].
- 8. Remove the bearing [2] and spring [3].

NOTE

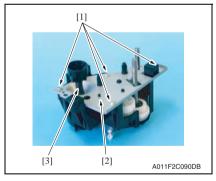
• Fit the E-ring [1] to the lower groove [4] of the two grooves in the shaft.



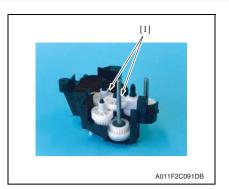
9. Snap off the E-ring [1], and remove the bearing [2].



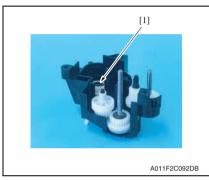
10. Snap off the E-ring [1], and remove the bearing [2].



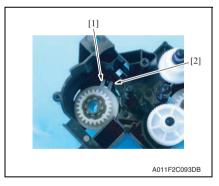
- 11. Remove four screws [1].
- 12. Remove the media feed and transport assy holding metal plate [2] and the shaft [3].



13. Remove two gears [1].



14. Remove the media feed clutch/1 [1].



NOTE

- When reinstalling the media feed clutch/1, make sure that the protrusion [1] on the media feed clutch fits into the locking slot [2].
- Pass the harness of the media feed clutch through the location shown in the picture on the left.

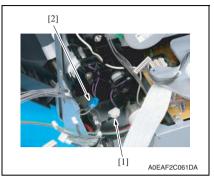
6.3.34 Media feed clutch/2 (CL3)

1. Remove the PWB box/1.

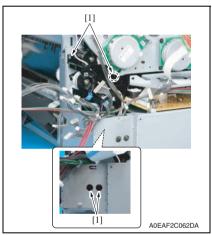
See P.74

2. Remove the PWB box/2.

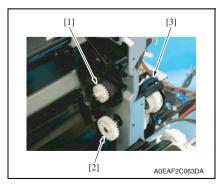
See P.75



3. Disconnect the white connector [1] and the blue connector [2].



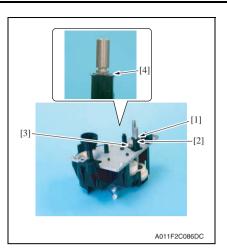
4. Remove four screws [2].

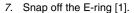


5. Remove the gear [1] and the gear [2].

NOTE

- When the media feed clutch/2 is reinstalled, replace the gears that have been removed, as these gears could have been damaged.
- 6. Remove the media feed and transport assy [3].

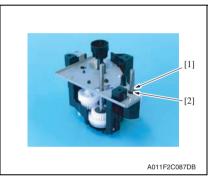




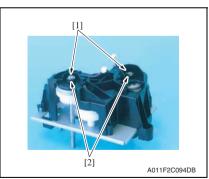
8. Remove the bearing [2] and spring [3].

NOTE

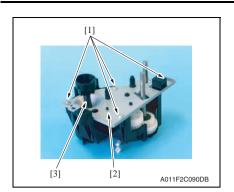
 When reinstalling the E-ring [1], fit it to the lower groove [4] of the two grooves in the shaft.



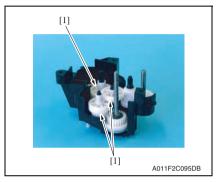
Snap off the E-ring [1], and remove the bearing [2].



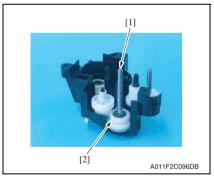
10. Snap off two E-rings [1], and remove two bearings [2].



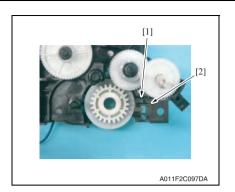
- 11. Remove four screws [1].
- Remove the media feed and transport assy holding metal plate [2] and the shaft [3].



13. Remove three gears [1].



14. Remove the shaft [1], and remove the media feed clutch/2 [2].

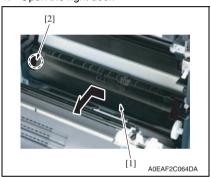


NOTE

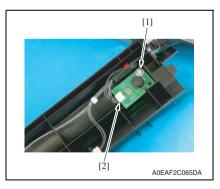
 When reinstalling the shaft and the media feed clutch/2, make sure that the protrusion [1] on the media feed clutch/2 fits into the locking slot [2].

6.3.35 Temperature/ humidity sensor (TEM/HUMS)

1. Open the right door.



- 2. Remove the screw [2] from the sensor holder [1].
- 3. Remove the sensor holder [1] by sliding it to the front.

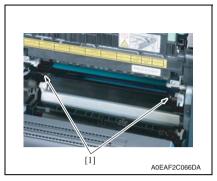


 Remove the screw [1], disconnect the connector [2], and remove the temperature/humidity sensor.

6.3.36 IDC sensor board/Re, IDC sensor board/Fr (IDCSB/R, IDCSB/L)

- 1. Open the right door.
- 2. Remove the transfer belt.

See P.22



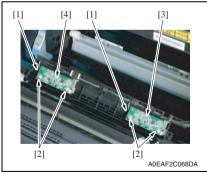
3. Remove two screws [1].



4. Unhook the spring, and remove the cover [1].

NOTE

· Be careful not to lose the spring.



- 5. Disconnect one connector [1] each.
- Remove two screws [2] each, and remove the IDC sensor board/Fr [3] and IDC sensor board/Re [4].

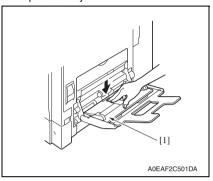
6.4 Cleaning procedure

NOTE

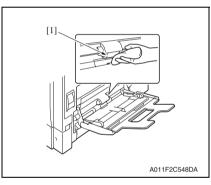
 The alcohol described in the cleaning procedure represents the ethanol isopropyl alcohol.

6.4.1 Tray 1 feed roller

1. Open the tray 1.



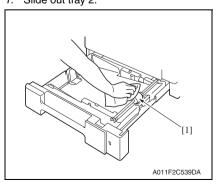
 Press down on the center of the media lifting plate [1] until the left and right locking tabs lock into place.



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

6.4.2 Tray 2 feed roller

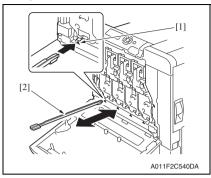
1. Slide out tray 2.



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

6.4.3 Laser irradiation section

1. Open the front door.



 Align the edge of the laser lens cleaning tool [2] with the marker [1] (at four places) of the waste toner bottle.
 Insert the tool [2], and make two to

Insert the tool [2], and make two to three reciprocating motions to clean the laser irradiation section.

NOTE

 For cleaning, do not use any tool other than the specified laser lens cleaning tool.

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 " ".

A. Advance checks

- Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:
- 1. The power supply voltage meets the specifications.
- 2. The power supply is properly grounded.
- 3. 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).
- 4. The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
- 5. The original has a problem that may cause a defective image.
- 6. The density is properly selected.
- 7. Correct media is being used for printing.
- 8. 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.
- 9. Toner is not running out.

B. Precautions for service jobs

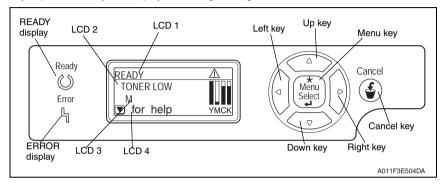
- 1. To unplug the power cord of the machine before starting the service job procedures.
- 2. Special care should be used when handling the fuser unit which can be extremely hot.
- The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
- 4. Take care not to damage the PC drum with a tool or similar device.
- 5. Do not touch IC pins with bare hands.

8. Description of the control panel

8.1 Control panel display

8.1.1 Parts of the control panel display

- The following shows the names of each part of the control panel. These names are used throughout this manual.
 - From the top, the panel is divided into LCD 1, LCD 2, LCD 3, and LCD 4.
- LCD 4 may display a message instructing you to press a key on the control panel. When
 you press that key, the displayed message changes.



NOTE

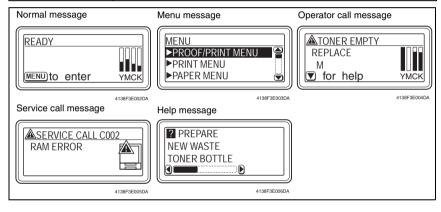
Adjustment / Setting

 The display screen is not designed for touch panel operation; therefore, do not touch the icons on the screen. If it is pushed too hard, the LCD (liquid crystal display) may be damaged.

8.1.2 Message structure

· There are five types of messages.

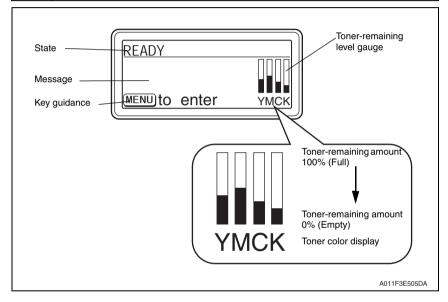
Message	Description
Normal messages	These messages are displayed after warmup has been completed: Toner remaining gauge Data-receiving message Printing message Firmware update messages Warnings
Menu messages These messages are displayed after the MENU key is pressed.	
Operator call messages	These messages are displayed when minor error(s) that can be handled by users occur.
Service call messages	These messages are displayed when error(s) that cannot be handled by users occur.
Help messages	These messages are displayed when the down key ▼ is pressed when a normal message/warning or operator call message is displayed.



8.1.3 Normal messages

- The basic screen is displayed after warmup has been completed.
- The "READY LEDO" lights up while the message is displayed.

Display	Description		
LCD 1	Printer mode is displayed. (Normally, "READY" is displayed.)		
LCD 2	The message is displayed. (Normally, no message is displayed.)		
LCD 3	The message is displayed. (Normally, no message is displayed.)		
LCD 4	 Key guidance is displayed. Normally "MENU to enter" is displayed. When the MENU key is pressed, the panel displays the MENU screen. When a WARNING message is displayed, "▼ for help" is also displayed. When the Down key ▼ is pressed, the panel displays the HELP screen. 		



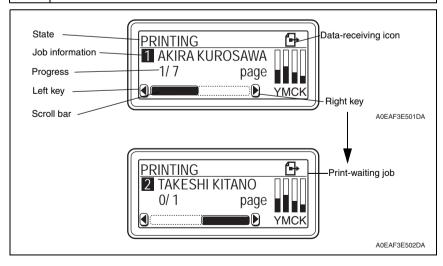
A. Toner-remaining level gauge

- The amount of each color of toner remaining is graphed in 10% increments (11 scales.)
 However, it's not displayed during the following states:
 - Operator call
 - Service call
 - Menu
 - Help menu
 - BOOT message
 - When the toner remaining amount is not determined immediately after startup.
 - When using toner made by companies other than KMBT

B. Data receiving message/print

• The control panel displays the following description at data receiving message/print.

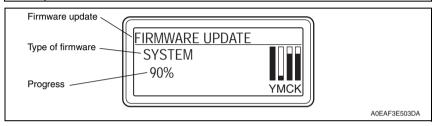
Display	Description		
LCD 1	Printer mode is displayed (for example, PRINTING). PROCESSING is displayed during data receiving or printer startup. PRINTING is displayed during printing. When printing in sets, [COPYING] is displayed after the second set starts printing. The normal printing data-receiving icon "♣" is displayed on the right during data receiving. The Camera-Direct connecting icon "♠" is displayed on the right when the digital camera is connected to the machine. The Camera-Direct printing data-receiving icon "✓" is displayed on the right during data receiving. The Memory-Direct connecting icon "✓" is displayed on the right when the USB memory device is connected to the machine. The Memory-Direct printing data-receiving icon "✓" is displayed on the right during data receiving.		
LCD 2	Job information is displayed (for example, 1 AKIRA KUROSAWA). The job owner name, etc. set with PJL commands is displayed. When multiple jobs are set, the number is displayed to the left of the owner name.		
LCD 3	Job progress is displayed (for example, 1/7 page). In normal print mode, "Number of processed print / Total number of print" is displayed. When printing in sets, "Number of processed print/Total number of a set print" is displayed while the first set is copying. After the second set starts printing, the LCD 1 state is changed to COPYING and "Number of processed print /Total number of print" is displayed.		
LCD 4	Scroll bar is displayed. • When multiple jobs are sent, a scroll bar is displayed. • By pressing the left key ◀/right key▶, the jobs waiting to be printed are displayed. The following example shows the scroll bar in the case of two jobs. By pressing the right key, the panel displays the job waiting to be printed. To return to the display of the job currently processing, press the left key.		



C. Firmware update

• The control panel displays the following description at firmware update.

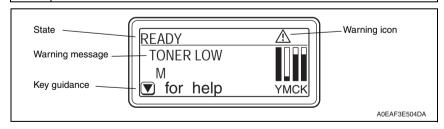
Display	Description	
LCD 1	FIRMWARE UPDATE is displayed.	
LCD 2	LCD 2 displays the type of firmware (for example, SYSTEM). SYSTEM: Controller firmware BOOT: Boot firmware RESOURCE: Resource file CONFIGURATION: Equipment configuration file ENGINE: Engine firmware	
LCD 3	Progress of the update is displayed (for example, 90%).	
LCD 4	No display	



D. Warning

 This message is displayed when the print is available but some user manipulation(s) are required. The control panel displays the following description for warning.

Display	Description
LCD 1	Print mode is displayed and warning icon is displayed on the right (for example, READY).
LCD 2	Warning message is displayed (for example, TONER LOW M).
LCD 3	Walthing message is displayed (for example, TONETT LOW M).
LCD 4	Key guidance is displayed (for example, ▼ for help: By pressing the down key ▼, the screen displays the help screen).

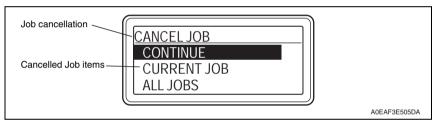


E. Job cancellation

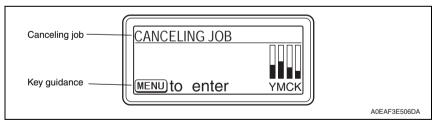
- By pressing the Cancel key after the job is sent, the control panel displays the job cancel menu.
- When no job is has been sent, pressing the Cancel key has no effect.
- The control panel displays the following description at the job cancel menu.

Display	Description	
LCD 1	CANCEL JOB is displayed.	
LCD 2	CONTINUE is displayed. • Function: Continue the print of currently processing job.	
LCD 3	CURRENT JOB is displayed. • Function: Stop the print of currently processing job.	
LCD 4	ALL JOBS is displayed Stop the printing of all jobs, including the job currently being processed and all jobs waiting to be printed.	

- By pressing the up key ▲/down key ▼, the item can be selected.
- The selected item is displayed with highlighted text. The default setting is CONTINUE.
- By pressing the MENU key, the selected item is entered.
- · By pressing the Cancel key, the job cancel menu is closed.



 By selecting CURRENT JOB or ALL JOB and pressing the MENU key, job cancellation is implemented.



F. Menu

- The menu is displayed when the MENU key is pressed.
- The control panel displays the following description at the menu screen.

Display	Description	
LCD 1	A Warning icon is displayed.	
LCD 2	Menu items are displayed (3 items/ 7 items). • By pressing the up key ▲/down key ▼, the item is selected. • The menu consists of the following 8 items: - PROOF/ PRINT MENU	
LCD 3	- PRINT MENU - PAPER MENU - QUALITY MENU - MEMORY DIRECT - CAMERA DIRECT	
LCD 4	- INTERFACE MENU - SYS DEFAULT MENU - MAINTENANCE MENU - SERVICE MENU	



• For the details of each item, see "Menu."

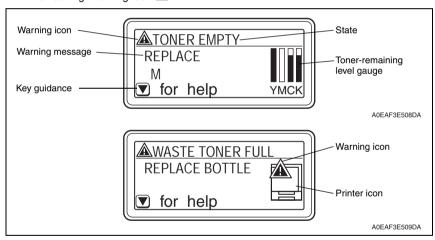
See P.113

8.1.4 Operator call messages

- These messages are displayed when minor error(s) that can be handled by user occur.
- The "Error LED \" ights while the message is displayed on the control panel.
- The "Ready LEDO" on control panel turns OFF during operator call.
- The control panel displays the following when an operator call message is displayed.

Display	Description	
LCD 1	A warning icon " 🏝 " is displayed and the state is displayed on the right (for example, TONER EMPTY).	
LCD 2	Message is displayed (for example, REPLACE M).	
LCD 3	IMESSAGE IS displayed (for example, REPLACE M).	
LCD 4	"▼ for help" is displayed. • By pressing the down key, the panel displays the Help screen.	

- In the case of an operator call message related to a toner cartridge, the toner-remaining level gauge is displayed, and the gauge of the appropriate color flashes (for example, the M gauge).
- In the case of an operator call message for another reason, the printer icon is displayed with a flashing "warning icon ..."



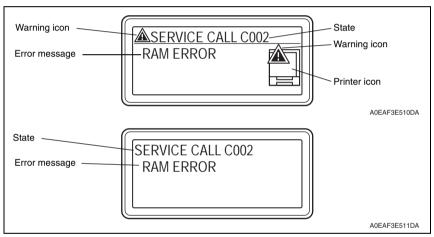
For the details of each item, see "Operator call messages."
 See P.107

8.1.5 Service call messages

- These messages are displayed when error(s) that cannot be handled by the user occur.
- The "Error LED \ " turns ON while the message is displayed on the control panel.
- The "Ready LED O" on control panel turns OFF while an service call message is displayed on the control panel.
- The control panel displays the following description at service call.

Display	Description	
LCD 1	A "Warning icon " is displayed and the service call message and a 4-digit-service call ID are displayed on the right (for example, SERVICE CALL C002).	
LCD 2	The error description is displayed (for example, RAM ERROR).	
LCD 3	The error description is displayed (for example, native Ennon).	
LCD 4	No display	

- A printer icon is displayed with a flashing "warning icon ..."
- A service call detected during startup of the printer is displayed as shown in the bottom
 of the following picture.



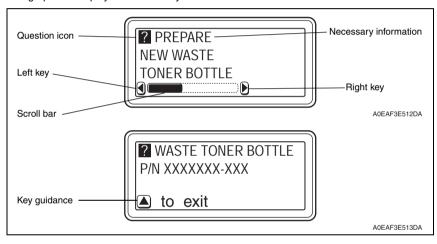
For the details of each item, see "Service call messages."
 See P.110

8.1.6 Help screen

- This screen is displayed when the down key ▼ is pressed when a normal message/ warning or operator call message is displayed.
- The control panel displays the following description at the help screen.

Display	Description	
LCD 1		
LCD 2	A "Question icon "" is displayed and the necessary information is displayed on the right (for example, PREPARE NEW WASTE TONER BOTTLE).	
LCD 3	example, THE ARE NEW WASTE TONETI BOTTLE).	
LCD 4	A scroll bar or "▲ to exit" message is displayed. If there are several messages, a scroll bar is displayed. By pressing the left key ◀/right key ▶, a previous/next screen message is displayed. If all messages are displayed, "▲ to exit" displays on the screen.	

· A graphic is displayed if necessary.



8.2 List of control panel messages

NOTE

- When two or more messages are to be displayed, the message with the higher priority will be displayed.
- When a message concerning consumables/periodic replacement parts (units) is displayed, print a statistics page from the [PRINT MENU] → [STATISTICS] menu and check the status of the other consumables, too.

See P.119

8.2.1 Normal messages

A. Normal messages

Message (LCD1)	Description
INITIALIZING	The printer is being initialized
READY	Print enabled (Data not being printed)
OFFLINE	Off line condition (Data reception not available) • TELNET allows offline setting.
ENERGY SAVER	Machine in energy saver mode
PROCESSING	Print data processing (Data receiving - printer is started)
PRINTING	Data being printed (Printer is started)
COPYING	Data being printed in sets
WARMING UP	During warmup
CALIBRATING	Color shift correction in progress
CANCELING JOB	Job canceled
REBOOTING	The printer is restarting
FIRMWARE UPDATE	The printer's firmware is being upgraded

B. Warning messages

Priority	Message (LCD2/LCD3)	Description
High 1	UNABLE TO COLLATE JOB	Print in sets disabled (full hard disk) (This warning message is displayed during printing.)
2	UNABLE TO STAPLE JOB *1	When a job with stapling is printing, the number of printed pages already exceeds the number of pages that can be stapled. (This warning message is displayed during printing.)
3	HDD NEAR FULL	The hard disk space will run out soon.
4	MEMORY CARD NEAR FULL	The compact flash space will run out soon.
5	I-UNIT END X	Service life of the imaging unit (X) has been reached. (END status) Executing the printing with one of Y,M,C,K being at the END will make the operator call.
6	I-UNIT LIFE X	Service life of the imaging unit has been reached. Printing can be continued, but print quality is out of guarantee.
7	TONER OUT X	The specified color toner cartridge is empty.
8	TRANS. BELT END OF LIFE	Transfer belt unit service life has been reached.
9	TRANS.ROLLER END OF LIFE	Transfer roller service life has been reached.
10	FUSER UNIT END OF LIFE	Fuser unit service life has been reached.
11	STAPLER EMPTY *1	The staple finisher has run out of staples. Otherwise, the staples are almost empty.
12	WASTE TONER NEAR FULL	The waste toner bottle needs replacement soon.
13	I-UNIT LOW X	The specified color imaging unit will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARN-ING/I-UNIT LOW is set to ON.)
14	TONER LOW X	The specified color toner cartridge will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARN-ING/TONER LOW is set to ON.)
15	PAPER EMPTY TRAY X	No media in the specified tray. The specified tray is not installed, but it is set in the printer driver.
16	INCORRECT I-UNIT X	The specified color imaging unit is not the correct type. A print cycle can be initiated, but is run at 1/3 the normal print speed.
17	INCORRECT TONER X	The specified color toner cartridge is not the correct type. A print cycle can be initiated, but is run at 1/3 the normal print speed.
18	NON SUPPORT CARD	A compact flash card which is inserted is not supported. The compact flash card will be invalid.
19	INCORRECT HDD	A hard disk which was formatted by other unit is installed.
20	INCORRECT MEMORY CARD	A compact flash card which was formatted by other unit is installed.
21	HUBS NOT SUPPORTED	A USB hub is connected to the USB host I/F.

Priority	Message (LCD2/LCD3)	Description	
22	DEVICE NOT SUPPORTED	An unsupported device is connected to the USB host I/F.	
23	AUTH TIMEOUT	Time-out of the IEEE 802.1X port authentication processing.	
Low 24	PORT AUTH ACTIVE	IEEE 802.1X port authentication processing is being executed.	

^{*1:} Only when the optional staple finisher is mounted.

8.2.2 Operator call messages

	Mess	age	
Priority	LCD1	LCD2/LCD3	Description
High 1	CONFIGURA- TION ERR	TURN OFF THEN ON	Device configuration was changed while the main switch was ON. In this condition, key operation on the control panel is disabled. To make the machine recover from the condition, turn the power switch OFF and ON.
2	COVER OPEN	FRONT COVER	The front door of the machine is open.
		SIDE COVER	The right door of the machine is open.
		DUPLEX COVER	The duplex option door is open.
		TRAY3 COVER	The right cover of tray 3 is open.
		TRAY4 COVER	The right cover of tray 4 is open.
		FINISHER COVER *1	The finisher cover is open.
		UPPER COVER *1	The finisher upper cover is open.
		STAPLER COVER *1	The finisher stapler cover is open.
3	INCORRECT TONER	INCORRECT TONER DETECTED	The printer detects a toner manufactured by KMBT but not the type specified for the model. By pressing the right key, different messages appear one after another. (During the display of the messages, key operations other than the right key are disabled.) In the last message screen, the machine can recover from the error by pressing the Menu Select key. However, the same message appears when the power switch is turned OFF and ON, the printer is being rebooted, or the printer covers are being opened or closed.
4	PAPER JAM	STAPLER *1	A media jam has occurred at the staple section of the optional staple finisher.
		MAIN EXIT *1	A media jam has occurred at the main tray of the optional staple finisher.
		SUB EXIT *1	A media jam has occurred at the sub tray of the optional staple finisher.
		FINISHER *1	A media jam has occurred at the optional staple finisher.
		UPPER TRANS *1	A media jam has occurred at the upper transport section of the optional staple finisher.
		FUSER/EXIT	A media jam has occurred at the fusing section.
		SECOND TRANS	A media jam has occurred at the second transfer section.
		VERTICAL TRANS	A media jam has occurred at the vertical transport.
		DUPLEX1	A media jam has occurred at the duplex media feed section of the duplex option.

	Message			
Priority	LCD1	LCD2/LCD3	Description	
	2001	DUPLEX2	A media jam has occurred at the duplex transport section of the duplex option.	
		TRAY1	A media jam has occurred at tray 1 (manual feed tray).	
4	PAPER JAM	TRAY2	A media jam has occurred at tray 2.	
		TRAY3	A media jam has occurred at tray 3.	
		TRAY4	A media jam has occurred at tray 4.	
5	I-UNIT MISSING	CHECK X	The specified color imaging unit is not installed.	
6	TONER MISSING	CHECK X	The specified color toner cartridge is not installed.	
7	FUSER MISSING	CHECK UNIT	The fuser unit is not installed.	
8	WASTE TONER FULL	REPLACE BOTTLE	The waste toner bottle is full.	
9	I-UNIT END	REPLACE XY	The specified color imaging unit has reached its life. This message will be displayed when performing the printing while warning message [I-UNIT END] is being displayed.	
10	TONER OUT	REPLACE X	The specified color toner cartridge has run out.	
11	TRAYX SIZE ERR	ADD SSSS *2	The media size set in the printer driver does not match that of the media loaded in the specified tray. Load "SSSS" size media in the specified tray.	
12	TRAYX TYPE ERROR	ADD TTTT *2	The media size set in the printer driver does not match that of the media loaded in the specified tray. Load "TTTT" type media in the specified tray.	
13	ADJUST TRAY1	_	Tray 1 (manual feed tray) is removed from the printer.	
14	STAPLER EMPTY	REPLACE STAPLE CARTRIDGE	The staples are empty when an attempt was made to print a staple job.	
15	MANUAL FEED	SSSS *2 TTTT *2	During print start-up, media has been loaded in manual feed tray and is waiting for a print start command. After the user confirms the media and gives the print start command, printing starts. How to start printing: Press the up key. Press the down keys, select tray with help menu and press the MENU key. Set the media loaded in the tray 1 again.	
16	PAPER EMPTY	SSSS *2 TTTT *2 SSSS *2	 No specified media in trays 1 to 4. Tray 3/4 is loaded with the specified media but is not set appropriately. Displays when [TRAY CHAINING] is set to [ON]. No specified media in the specified tray or tray 3/4 is not set appropriately. 	
		TTTT *2	Displays when [TRAY CHAINING] is set to [OFF].	

Priority	Mess	age	Description
Filolity	LCD1	LCD2/LCD3	Description
17	PAPER ERROR	SSSS *2 TTTT *2	 The size and type of media specified in the driver is not loaded in any tray. A different size of media from the one specified in the driver is loaded in the tray at media feeding. Displays when [TRAY CHAINING] is set to [ON].
17	TRAYX PAPER ERR	SSSS *2 TTTT *2	 The size and type of media specified in the driver is not loaded in the specified tray. A different size of media from the one specified in the driver is loaded in the specified tray at media feeding. Displays when [TRAY CHAINING] is set to [OFF].
		REMOVE PAPER	The printed media volume has reached maximum capacity in the exit tray of the main body.
18	OUTPUT FULL	REMOVE PAPER (SUB TRAY) *1	The printed media volume has reached maximum capacity in the sub tray of the staple finisher.
		REMOVE PAPER (MAIN TRAY) *1	The printed media volume has reached maximum capacity in the main tray of the staple finisher.
19	MEMORY FULL	PRESS CANCEL	The volume of data to be printed exceeds the permissible amount of data to be processed by the machine's memory.
20	HOLD JOB	UNABLE TO STORE JOB	The specified data of the held job is being received, but an optional HDD is not installed.
Low 21		XXXX PRESS CAN- CEL	When printing a stored job, the printer configuration was changed since the job was stored.

^{*1:} Only when the optional staple finisher is mounted.
*2: SSSS represents the media size while TTTT shows the media type.

8.2.3 Service call messages

For troubleshooting procedures, see "Troubleshooting".
 See P.202

Mas	2000	T
LCD1	LCD2/LCD3	Description
(Service Call ID)	(Error description)	Description
0010	P MOTOR 1	Color PC drum motor malfunction
0017	P MOTOR 2	Intermediate transport motor malfunction
0018	D MOTOR 2	Developing motor/K malfunction
001B	D MOTOR 1	Developing motor/Y,M,C malfunction
0046	FUSER FAN	Fusing fan motor malfunction
004C	OZONE FAN	Ozone ventilation fan motor malfunction
004E	POWER FAN	DC power supply fan motor malfunction
0060	FUSER MOTOR	Fusing motor malfunction
0094	XFER DETACH2	2nd image transfer pressure/retraction failure
0096	XFER DETACH1	1st image transfer pressure/retraction failure
0300	POLYGON MOTOR	Polygon motor malfunction
0310	LASER ERROR	Laser malfunction
0500	FUSER ERROR	Heating roller warm-up failure
0501	FUSER ERROR	Fusing pressure roller warm-up failure
0510	FUSER ERROR	Abnormally low heating roller temperature
0511	FUSER ERROR	Abnormally low fusing pressure roller temperature
0520	FUSER ERROR	Abnormally high heating roller temperature
0521	FUSER ERROR	Abnormally high fusing pressure roller temperature
0B30	FINISHER ERROR	Finisher aligning plate drive malfunction
0B47	FINISHER ERROR	Finisher media holding drive malfunction
0B48	FINISHER ERROR	Finisher exit roller pressure/retraction malfunction
0B4A	FINISHER ERROR	Finisher aligning belt pressure/retraction malfunction
0B4C	FINISHER ERROR	Finisher media ejector motor malfunction
0BA0	FINISHER ERROR	Finisher tray up/down motor ascent/descent drive mal- function
0BE1	FINISHER FAN	Finisher fan motor malfunction
0F52	TE SENSOR Y	Toner level sensor/Y malfunction
0F53	TE SENSOR M	Toner level sensor/M malfunction
0F54	TE SENSOR C	Toner level sensor/C malfunction
0F55	TE SENSOR K	Toner level sensor/K malfunction
133B	FINISHER COMMUNICATION	Finisher communication error
13C0	ENGINE H/W ERROR	MFP board malfunction
13E2	FLASH WRITE	Flash ROM write error
13E3	FLASH DEVICE	Flash ROM device fault
3C00	EEPROM1	Trouble related to security
3C10	EEPROM2	Trouble related to security

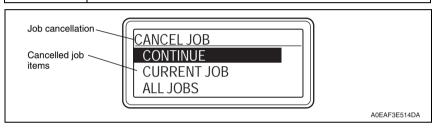
Mes	sage	
LCD1 LCD2/LCD3		Description
(Service Call ID)	(Error description)	
3FFB	FINISHER ROM	Finisher flash ROM error
C002,	RAM ERROR	RAM error at startup (standard memory)
C003	TIAW ETITION	RAM error at startup (expanded memory)
C013	H/W ADDRESS	MAC address error at startup (MAC address is invalid)
C015	BOOT ROM	Boot ROM error at startup
C025		Controller ROM error (Configuration information error)
C026	CONTROLLER ROM	Controller ROM error (Access error)
C027		Controller ROM error (Data error)
C050	HDD ERROR	HDD access error
C051	HDD DISK FULL	HDD full error *1
C052	CARD ERROR	Compact flash access error
C053	CARD FULL	Compact flash full error *1
C060	UPDATE ERROR	Firmware update error
C071	H/W CONFIGURA- TION ERROR	Hardware configuration error
FFFF	I/F COMMUNICA- TION ERROR	Interface communication error

8.3 Cancelling a print job

- A print job being processed or printed can be cancelled by pressing the Cancel key.
- When no job has been sent, pressing the Cancel key has no effect.
- If the Cancel key is pressed while a print job is being printed, a message appears on the control panel.
- Select the job to be cancelled using the up key ▲/ down key ▼ and press the MENU SELECT key.

By pressing the Cancel key, the job cancel menu is closed.

Panel Display (LCD2-LCD4)	Description
CONTINUE Continue printing the currently processing job.	
CURRENT JOB	Stop printing the currently processing job.
ALL JOB	Stop printing all jobs, including the currently processing job and all jobs waiting to be printed.



9. Menu

9.1 List of menu functions

		MENU		Ref. page	
PROOF/PRINT M	PROOF/PRINT MENU *1 P.118				
PRINT MENU	CONFIGURATION PG			P.118	
	STATISTICS PAGE				
	FONT LIST	POSTSCRIPT		P.125	
		PCL			
	MENU MAP	•		P.125	
	DIRECTORY LIS	T *1		P.125	
PAPER MENU	PAPER	DEFAULT TRAY		P.126	
	SOURCE	TRAY 1		P.126	
		TRAY 2		P.128	
		TRAY 3		P.128	
		TRAY 4			
		TRAY CHAINING	à	P.129	
		TRAY MAPPING	i	P.129	
	DUPLEX *2				
	COPIES				
	COLLATE *4				
	FINISHING *5				
	JOB SEPARATION *5				
	IMAGE ROTATION *3				
QUALITY MENU	COLOR MODE			P.131	
	BRIGHTNESS				
	HALFTONE	IMAGE PRINTING		P.132	
		TEXT PRINTING	P.132		
		GRAPHICS PRII	P.132		
	EDGE	IMAGE PRINTIN	P.132		
	ENHANCE- MENT	TEXT PRINTING	P.133		
	IVILIAI	GRAPHICS PRII	P.133		
	EDGE STRENGTH				
	ECONOMY PRINT				
	GLOSSY MODE			P.134	
	PCL SETTING	CONTRAST		P.134	
		IMAGE PRINTING	RGB SOURCE	P.134	
			RGB INTENT	P.134	
			RGB GRAY	P.135	

bizhub C31P

		MENU		Ref. page
QUALITY MENU	PCL SETTING	TEXT	RGB SOURCE	P.135
		PRINTING	RGB INTENT	P.135
			RGB GRAY	P.135
	GRAPHICS PRINTING		RGB SOURCE	P.136
		PRINTING	RGB INTENT	P.136
			RGB GRAY	P.136
	PS SETTING	IMAGE	RGB SOURCE	P.136
		PRINTING	RGB INTENT	P.137
			RGB GRAY	P.137
			DESTINATION PROF	P.137
		TEXT	RGB SOURCE	P.137
		PRINTING	RGB INTENT	P.138
			RGB GRAY	P.138
			DESTINATION PROF	P.138
		GRAPHICS	RGB SOURCE	P.138
		PRINTING	RGB INTENT	P.139
			RGB GRAY	P.139
			DESTINATION PROF	P.139
		SIMULATION	SIMULATION PROF	P.139
			SIMULATION INTENT	P.140
			CMYK GRAY	P.140
1	CALIBRATION	TONE CALIBRAT	ION	P.140
		AIDC PROCESS		P.140
		CMYK DENSITY	CYAN	P.140
			MAGENTA	P.141
			YELLOW	P.141
			BLACK	P.141
1	COLOR SEPARA	TION		P.141
MEMORY	LIST OF FILES *7	7		P.142
DIRECT *1, 6	TYPE OF FILES			P.142
CAMERA	PAPER SOURCE			P.142
DIRECT *8	LAYOUT			P.143
	PAPER MARGIN			P.143
	IMAGE	BRIGHTNESS		P.143
	QUALITY	CONTRAST	P.143	
		ECONOMY PRINT		P.144
		GLOSSY MODE	P.144	
		RGB SOURCE	P.144	
		RGB INTENT		P.144
		RGB GRAY		
		HALFTONE		P.145

bizhub C31P

		MENU			Ref. page
INTERFACE	JOB TIMEOUT		P.145		
MENU	ETHERNET	TCP/IP	ENABLE		P.146
			IP ADDRESS		P.146
			SUBNET MASK		P.146
			DEFAULT GATEV	VAY	P.147
			DHCP		P.147
			BOOTP		P.147
			ARP/PING		P.147
			HTTP	ENABLE	P.148
			FTP	ENABLE	P.148
			TELNET		P.148
			BONJOUR	ENABLE	P.148
			DYNAMIC DNS	ENABLE	P.148
			IPP	ENABLE	P.149
			RAW PORT	ENABLE	P.149
				BIDIRECTIONAL	
			SLP	ENABLE	P.149
			SMTP	ENABLE	P.149
			SNMP	ENABLE	P.150
			WSD PRINT	ENABLE	P.150
			IPSEC	ENABLE	P.150
			IP ADDRESS FILTER	ACCESS PREMISSION	P.150
				ACCESS REFUSE	
			IPv6	ENABLE	P.151
				AUTO SETTING	
				LINK LOCAL	
				GLOBAL ADDRESS	
				GATEWAY ADDRESS	
		NETWARE	ENABLE	1	P.152
		APPLETALK	ENABLE		P.152
		SPEED/DUPLEX			P.152
		IEEE802.1X			P.152
	MEMORY DIREC	T *1			P.153
	CAMERA DIREC	т			P.153

MENU Ref. pag					Ref. page
SYS DEFAULT	LANGUAGE			P.153	
MENU	EMULATION	DEF. EMULATION	V		P.153
		POSTSCRIPT	WAIT TIMEOUT		P.153
			PS ERROR PAGE		P.154
			PS PROTOCOL		P.154
		PCL	CR/LF MAPPING		P.154
			LINES PER PAGE		P.154
			FONT SOURCE	FONT NUMBER	P.155
				PITCH SIZE	P.155
				POINT SIZE	
				SYMBOL SET	P.155
		XPS *1	DIGITAL SIGNAT	URE	P.156
			XPS ERROR PAG	SE .	P.156
	PAPER	DEFAULT	PAPER SIZE		P.156
		PAPER	CUSTOM SIZE		P.157
			PAPER TYPE		P.157
		UNIT OF MEASU	İRE		P.157
	GRAYSCALE PAG	GE			P.158
	STARTUP OPTIONS	DO STARTUP PA	GE		P.158
	AUTO CONTINUI	Ē			P.158
	HOLD JOB TIME	OUT *1			P.158
	ENERGY SAVER	1			P.159
	ENERGY SAVER	TIME *9			P.159
	MENU TIMEOUT				P.159
	LCD CONTRAST	•			P.159
	SECURITY	CHANGE PASSV	VORD		P.160
		LOCK PANEL			P.160
	CLOCK	DATE (xx.xx.xx)			P.161
		TIME			P.161
		TIME ZONE			P.161
	HDD FORMAT *1				P.162
	CARD FORMAT	¹ 10			P.162
	RESTORE	RESTORE NETW	VORK		P.163
	DEFAULTS	RESTORE PRINT	TER		
		RESTORE ALL			
	ENABLE	PAPER EMPTY			P.171
	WARNING	TONER LOW			P.172
		I-UNIT LOW			P.172

		MENU		Ref. page
MAINTENANCE	PRINT MENU	EVENT LOG	P.173	
MENU		HALFTONE 64	P.173	
		HALFTONE 128		P.173
		HALFTONE 256		P.174
		GRADATION		P.174
	ALIGNMENT	TOP ADJUSTME	NT	P.174
		LEFT ADJUSTMI	P.174	
		LEFT ADJ DUPLEX		P.175
		TRANSFER POWER	SIMPLEX PASS	P.175
			DUPLEX PASS	P.175
			MANUAL DUPLEX	P.176
		IMG ADJ THICK		P.176
		IMG ADJ BLACK		P.176
	SUPPLIES	REPLACE	TRANS. BELT	P.177
			TRANS ROLLER	P.177
			FUSER UNIT	P.177
	QUICK SETTING *11	UPDATE SETTING		P.177
		BACKUP SETTING		P.178

^{*1:} It will be displayed only when an optional hard disk kit or compact flash is installed.

^{*2:} It will be displayed only when an optional duplex option is installed.

^{*3:} It will not be displayed when an optional staple finisher is installed.

^{*4:} It will be displayed only when an optional hard disk kit or compact flash (1 GB or more) is installed.

^{*5:} It will be displayed only when an optional staple finisher is installed.

^{*6:} It will be displayed only when the following setting is set to "ENABLE." [INTERFACE MENU] → [MEMORY DIRECT]

^{*7:} It will not be displayed when the flash memory is not connected or not recognized.

^{*8:} It will be displayed only when the following setting is set to "ENABLE." [INTERFACE MENU] → [CAMERA DIRECT]

^{*9:} It will be displayed when [ENERGY SAVER] is set to either of the options other than OFF

^{*10:} It will be displayed only when a compact flash is installed.

^{*11:} It will be displayed only when a USB memory device is installed.

9.2 PROOF/PRINT MENU

Function	Selects and prints the job held temporarily in the printer.
	Selects and deletes the job held temporarily in the printer.
	NOTE
	This menu is available only when an optional hard disk kit is installed.
Use	To proof one copy of a print job before printing the rest of the copies.
Setting	How to print the held job
/procedure	Select [PROOF/PRINT MENU] and press the Menu/Select key.
	2. Select user name and press the Menu/Select key.
	3. Select desired print job and press the Menu/Select key.
	4. Select [PRINT] and press the Menu/Select key.
	 If the hold job is set as secured job, enter the password with the up key▲/down key▼.
	 Set the number of copies with the up key ▲/down key ▼ and press the Menu/Select key.
	NOTE • If the hold job is set as secured job, the held job cannot be printed until the correct password is entered at the printer control panel. • The held job is deleted automatically after the period of time specified in the "SYSTEM DEFAULT MENU/HOLD JOB TIMEOUT" menu.
	How to delete the held job
	Select [PROOF/PRINT MENU] and press the Menu/Select key.
	2. Select user name and press the Menu/Select key.
	3. Select desired print job and press the Menu/Select key.
	4. Select [DELETE] and press the Menu/Select key.
	 If the held job is set as secured job, enter the password with the up key ▲/down key ▼.
	6. Select [YES] and press the Menu/Select key.
	NOTE
	 If the hold job is set as secured job, the held job cannot be deleted until the correct password is entered.

9.3 PRINT MENU

9.3.1 CONFIGURATION PG

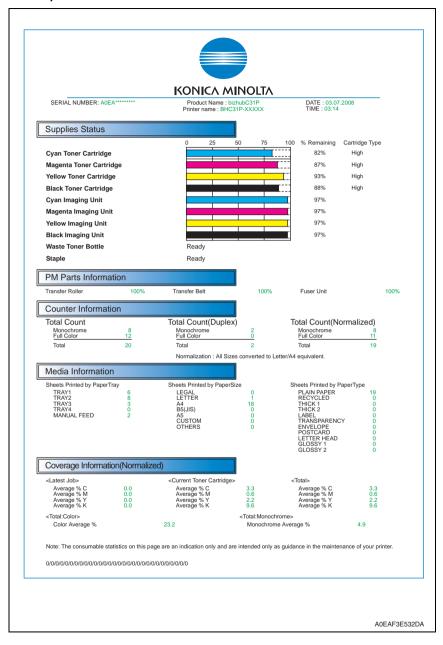
Function	Prints a configuration page.
Use	To check the configuration and the setting values of the machine. The following items can be checked: PRINTER INFORMATION OPTIONS INTERFACE MENU PAPER MENU SYSTEM DEFAULT MENU QUALITY MENU CAMERA DIRECT MEMORY DIRECT
Setting /procedure	Select [PRINT] and press the Menu/Select key.

bizhub C31P

9.3.2 STATISTICS PAGE

Function	Prints a statistics page.
Use	To check consumable status and the usage of the machine. The following items can be checked:
	Supplies Status PM Parts Information Counter Information Media Information Coverage Information Consumable/periodic replacement parts (units) counter information*1 *1: For details, see the following table, "How to read consumable/periodic replacement parts (units) counter information.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

A. Sample of STATISTICS PAGE



B. Supplies Status

- Display the estimated percent of life remaining in the toner cartridge and imaging unit.
 The type of the toner cartridges that are installed in the printer is also displayed (See the table below).
- Display the status of the waste toner bottle and the staple unit.

	Types of toner cartridges
High	High-capacity toner cartridge: 12.0 K

NOTE

 The percent of life remaining in the toner cartridge or imaging unit can be used as a guide, but may not exactly reflect the amount that has been used in the toner cartridge or imaging unit.

C. PM Parts Information

 Display the estimated percent of life remaining in periodic replacement parts and units such as the transfer roller, transfer belt and fuser unit.

D. Counter Information

 The total number of pages that have been printed is counted and displayed based on the description shown in the following table.

<Counter information list>

Types of count		Contents	Count timing	
Total Count	Monochrome	The total number of monochrome pages ejected from the printer. Increment by one per simplex and by two per duplex		
	Full color	The total number of color pages ejected from the printer. Increment by one per simplex and by two per duplex		
Total Count	Monochrome * The total number of monochrome duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex)		When a sheet of	
(duplex)	Full color	The total number of color duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex)	media is ejected properly	
Total Count	Monochrome	The total number of monochrome pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1 The total number of monochrome pages on a A4 basis that have been ejected from the printer. The total number of monochrome pages on a A4 basis that have been ejected from the printer.		
(Normalized)	Full color	The total number of color pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1 The total number of color pages on a A4 basis that have been ejected from the printer. The total number of color pages on a A4 basis that have been ejected from the printer. The total number of color pages on a A4 basis that have been ejected from the printer. The total number of color pages on a A4 basis that		
Sheets Printed by Paper Tray		The number of sheets used for each media source. Increment by one for both simplex and duplex		
Sheets Printed by Paper Size		The number of sheets used for each media size. Increment by one for both simplex and duplex	When a sheet of media is fed	
Sheets Printed by Paper Type		The number of pages used per each media type. Increment by one for both simplex and duplex		

^{*1:} A count of 100 in the counter is converted to 1 sheet of media and display the number of decimals are discarded.

NOTE

The total counters and the print counters count at a different timing, when a sheet
of media is properly ejected and when a sheet of media is fed, respectively.
 Therefore, the sum of each total counter value may not be same with the sum of
each print counter value if a sheet of media cannot be ejected due to media jam
inside the machine or other possible problems.

E. Coverage Information

• Each coverage information is calculated and displayed based on the description shown in the following table.

<Coverage information list>

Coverage information	Contents		
Normalized Coverage Information <latest job=""></latest>	 Individual average dot coverage of four colors (Y,M,C,K) in the last job is calculated on an A4 basis. (The average of the ratios of dot space on each page when the print- able area is defined as 100% and shown in 0.1 percent increments) 		
Normalized Coverage Information <current cartridge="" toner=""></current>	 Individual average dot coverage of four colors (Y,M,C,K) in the current toner cartridges is calculated on an A4 basis. (The average of the ratios of dot space on each page when the print- able area is defined as 100% and shown in 0.1 percent increments) 		
Normalized Coverage Information <total></total>	 Individual average dot coverage of four colors (Y,M,C,K) is calculated on an A4 basis for all prints performed after the printer was installed. (The average of the ratios of dot space on each page when the print- able area is defined as 100% and shown in 0.1 percent increments) 		
Normalized Color (CMYK) Coverage Information	Average dot coverage is calculated on an A4 basis for full color printing performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)		
Normalized Monochrome Coverage Information	Average dot coverage is calculated on an A4 basis for monochrome printing performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)		

NOTE

 Coverage information can be used as a guide and may not completely reflect the actual amount of toner used.

F. How to read consumable/periodic replacement parts (units) counter information.

 The lower left part of the statistics page shows numerical values that represent consumable/periodic replacement parts (units) counter information.

The table below explains counter information that is provided by each numerical data.

<Display on the statistics page>

<Meaning of counter value> (From the left of the numerical values)

No	Contents
No.	Contents
1	Number of times a high-capacity toner cartridge (K) has been replaced
2	Not used.
3	Number of times a toner cartridge (K) made by companies other than KMBT has been replaced
4	Number of times a high-capacity toner cartridge (C) has been replaced
5	Not used.
6	Number of times a toner cartridge (C) made by companies other than KMBT has been replaced
7	Number of times a high-capacity toner cartridge (M) has been replaced
8	Not used.
9	Number of times a toner cartridge (M) made by companies other than KMBT has been replaced
10	Number of times a high-capacity toner cartridge (Y) has been replaced
11	Not used.
12	Number of times a toner cartridge (Y) made by companies other than KMBT has been replaced.
13	Use of counterfeit toner cartridge (K) is set at "1." (The default value is 0.)
14	Use of counterfeit toner cartridge (C) is set at "1." (The default value is 0.)
15	Use of counterfeit toner cartridge (M) is set at "1." (The default value is 0.)
16	Use of counterfeit toner cartridge (Y) is set at "1." (The default value is 0.)
17	Use of toner refill cartridge (K) is set at "1." (The default value is 0.)
18	Use of toner refill cartridge (C) is set at "1." (The default value is 0.)
19	Use of toner refill cartridge (M) is set at "1." (The default value is 0.)
20	Use of toner refill cartridge (Y) is set at "1." (The default value is 0.)
21	Rate of transfer roller use (%)
22	Number of times a transfer roller has been replaced
23	Rate of transfer belt unit use (%)
24	Number of times a transfer belt unit has been replaced
25	Rate of fuser unit use (%)
26	Number of times a fuser unit has been replaced
27	Number of times a imaging unit (K) has been replaced
28	Number of times a imaging unit (C) has been replaced
29	Number of times a imaging unit (M) has been replaced
30	Number of times a imaging unit (Y) has been replaced

bizhub C31P

No.	Contents		
1		Year (e.g. The year 2008 is displayed as 8.)	
2	Start date of use *1	Month (e.g. January is displayed as A. February is B. March is C. and December is L.)	
3		Day (e.g. The day 7 is displayed as 07.)	

^{*1:} Start date of use begins when 100 prints are complete after the first new toner cartridge was detected following the main body installation.

9.3.3 FONT LIST

A. POSTSCRIPT

Function	Prints a postscript font list.
Use	To determine which postscript fonts are available on the printer.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

B. PCL

Function	Prints a PCL font list.
Use	To determine which PCL fonts are available on the printer.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

9.3.4 **MENU MAP**

Function	Prints a menu map.
Use	To see the printer's menu structure.
Setting /procedure	Select [PRINT] and press the Menu/Select key.

9.3.5 DIRECTORY LIST

	Prints a directory list of the hard disk kit's contents.
Use	To check the data saved in the optional hard disk kit.
Setting /procedure	 Select [PRINT] and press the Menu/Select key. NOTE This menu is available only when an optional hard disk kit is installed.

9.4 PAPER MENU

9.4.1 PAPER SOURCE

A. DEFAULT TRAY

Function	Sets the priority feed tray.			
Use	To set the priority me	To set the priority media feed tray.		
Setting /procedure	Select [DEFAULT TRAY] and press the Menu/Select key. Select desired tray and press the Menu/Select key. The default setting is TRAY 2.			
	TRAY 1	"TRAY 2"	TRAY 3	TRAY 4
	NOTE TRAY 3/TRAY 4 can be selected only when one or more optional lower feeder units are installed.			

B. TRAY 1

(1) PAPER SIZE

Function	Sets the size of the media in tray 1.
Use	To specify the size of the media loaded in tray 1.
Setting /procedure	Select [PAPER SIZE] and press the Menu/Select key. Select desired paper size and press the Menu/Select key.
	For North America • The default setting is LETTER.
	For other destinations • The default setting is A4.
	ANY/LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATE-MENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/PHOTO 4x6/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM
	NOTE ANY specifies any media size. CUSTOM is used to set a "custom media size." Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE. PHOTO 4x6 may change to PHOTO 10x15.

(2) CUSTOM SIZE

Function	Sets the custom size of media in tray 1.
Use	To specify the custom size media loaded in tray 1.
Setting /procedure	 Select [CUSTOM SIZE] and press the Menu/Select key. Select [WIDTH] or [LENGTH] and press Menu/Select key. Set desired number with the up key△/down key▽ and press the Menu/Select key.
	<for america="" north=""> • The default setting of WIDTH is 8.50 inches.</for>
	WIDTH: 3.63 inches to 8.50 inches.
	The default setting of LENGTH is 11.00 inches.
	LENGTH: 5.83 inches to 14.00 inches.
	<for destinations="" other=""> The default setting of WIDTH is 210 mm.</for>
	WIDTH: 92 mm to 216 mm.
	The default setting of LENGTH is 297 mm.
	LENGTH: 148 mm to 356 mm.
	NOTE By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.

(3) PAPER TYPE

Function	Sets the media type for tray 1.
Use	To specify the type of media loaded in tray 1.
Setting /procedure	Select [PAPER TYPE] and press the Menu/Select key. Select desired paper type and press Menu/Select key.
	The default setting is PLAIN PAPER.
	ANY/PLAIN PAPER/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ENVELOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2
	NOTE • ANY identifies any media type.

C. TRAY 2

(1) PAPER SIZE

Function	Sets the size of the media in tray 2.
Use	To specify the size of the media loaded in tray 2.
Setting /procedure	7. Select [PAPER SIZE] and press the Menu/Select key. 2. Select desired paper size and press the Menu/Select key. For North America> The default setting is LETTER. For other destinations>
	The default setting is A4.
	LETTER A4

(2) PAPER TYPE

Function	Sets the media type for tray 2.		
Use	To specify the type of media lo	To specify the type of media loaded in tray 2.	
Setting /procedure	Select [PAPER TYPE] and press the Menu/Select key. Select desired paper type and press Menu/Select key. The default setting is PLAIN PAPER.		
	ANY "P	PLAIN PAPER"	RECYCLED
	NOTE • ANY identifies any media ty	pe.	

D. TRAY 3 / TRAY 4

(1) PAPER SIZE

Function	Automatically detects the set paper size and displays it.
Use	To check the paper size.
Setting /procedure	Select [PAPER SOURCE] and press the Menu/Select key. Select desired feed tray (TRAY 3-4) and press the Menu/Select key. Select [PAPER SIZE] and press the Menu/Select key.
	NOTE TRAY3/TRAY4 can be selected only when one or more optional lower feeder units are installed.

(2) PAPER TYPE

Function	Sets the paper type for tray 3 or tray 4.		
Use	To specify the type of media loaded in tray 3 or tray 4.		
Setting	 The default setting is 	PLAIN PAPER.	
/procedure	ANY	"PLAIN PAPER"	RECYCLED
	NOTE • TRAY3/TRAY4 can units are installed. • ANY identifies any	•	ore more optional lower feeder

E. TRAY CHAINING

Function	Sets auto tray switching.	
Use	 To specify that the printer should pull mer runs is empty. 	dia from another tray when the specified tray
Setting	The default setting is ON.	
/procedure	"ON"	OFF

F. TRAY MAPPING

(1) TRAY MAPPING MODE

Function	Selects whether or not the tray mapping function is used.		
Use	To specify whether trays are mapped.		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	

(2) LOGICAL TRAY0-9

Function	Specifies whether jobs received from another manufacturer's printer driver are printed using tray 1 to tray 4.	
Use	To specify the media source for print jobs using another manufacturer's printer driver.	
Setting /procedure	Only the default for LOGICAL TRAY 1 is PHYSICAL TRAY 1. PHYSICAL TRAY 2 is the default for all trays other than LOGICAL TRAY 1.	
	PHYSICAL TRAY 1	"PHYSICAL TRAY 2"
	PHYSICAL TRAY 3	PHYSICAL TRAY 4
	NOTE • Only the mounted tray can be select	ted.

9.4.2 **DUPLEX**

Function	Sets duplex printing mode.		
Use	To specify duplex printing. OFF: Duplex print is OFF LONG EDGE: Duplex print is ON, long edge SHORT EDGE: Duplex print is ON, short edge		
Setting	The default setting is OFF.		
/procedure	"OFF"	LONG EDGE	SHORT EDGE
	NOTE This menu is available only when a duplex option is installed. The setting in the printer driver overrides the setting in this menu.		

bizhub C31P

9.4.3 COPIES

Function	Sets the number of prints.
Use	To specify the number of copies of the job to be printed.
Setting /procedure	 Select [COPIES] and press the Menu/Select key. Select desired print number with the up key ▲/down key ▼ and press the Menu/Select key. The default setting is "1" copy.
	"1" copy to 9999 copies.
	NOTE • The setting in the printer driver overrides the setting in this menu.

9.4.4 COLLATE

Function	Sets printing in sets.
Use	To print several sets of multiple pages. ON : Print in sets. OFF : Print in page.
Setting	The default setting is OFF.
/procedure	ON "OFF"
	NOTE This menu is available only when an optional hard disk kit is installed. The setting in the printer driver overrides the setting in this menu.

9.4.5 FINISHING

Function	Selects an exit tray and finishing option at the staple finisher.			
Use	To select an exit tray and finishing option when a optional staple finisher is installed. SUB TRAY: Printing to the sub tray MAIN TRAY: Printing to the main tray OFFSET: The media is fed to the main tray with each copy slightly shifted. STAPLING: Each copy is stapled and fed to the main tray. (When the collate function is selected, each set of copy is stapled.)			
Setting /procedure	The default setting is MAIN TRAY. SUB TRAY "MAIN TRAY" OFFSET STAPLING NOTE.			
	NOTE • This menu is available only when a staple finisher option is installed. • The setting in the printer driver overrides the setting in this menu. • OFFSET and STAPLING functions are available only for the following media types and media sizes. Media type: Plain/Recycled/Letterhead paper Paper size: 182 to 216 mm in width and 257 to 356 mm in length • 2 to 30 sheets of paper can be stapled at a time.			

9.4.6 JOB SEPARATION

Function	Selects whether or not to use a shift function for each job that prints to the staple fit			
Use	isher.			
Setting	The default setting is OFF.			
/procedure	ON "OFF"			
	NOTE This menu is available only when a staple finisher option is installed. This setting is disabled when "SUB TRAY" or "STAPLING" is selected for [FIN-ISHING]. This function is available only for the following media types and media sizes. Media type: Plain/Recycled/Letterhead paper. Paper size: 182 to 216 mm in width and 257 to 356 mm in length			

9.4.7 IMAGE ROTATION

Function	Prints 180 degrees rotated images.		
Use	 To exit the leading edge of a printed image first during printing when an optional sta- ple finisher is not installed. 		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	
	NOTE • This menu is available only when	an optional staple finisher is not installed.	

9.5 QUALITY MENU

9.5.1 COLOR MODE

Function	Sets the color mode for printing.			
Use	To specify whether jobs should be printed.	To specify whether jobs should be printed in color or grayscale.		
Setting	The default setting is COLOR.			
/procedure	"COLOR"	GRAYSCALE		

9.5.2 BRIGHTNESS

Function	Sets the brightness of the printed image.							
Use	 To adjus 	To adjust the brightness of the printed image.						
Setting /procedure	The default setting is 0 %.							
procedure	-15 %	-10 %	-5 %	"0 %"	+5 %	+10 %	+15 %	

9.5.3 HALFTONE

A. IMAGE PRINTING

Function	Sets the halftone characteristic of image to be printed.					
Use	To set the halftone characteristic that is used for the printed image (picture.) LINE ART: HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL: HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH: HALFTONE characteristic that emphasizes the tone reproducibility of the print image.					
Setting /procedure	The default setting is DETAIL.					
procedure	LINE ART "DETAIL" SMOOTH					

B. TEXT PRINTING

Function	Sets the halftone characteristic of the text to be printed.			
Use	To set the halftone characteristic that is used for printing text (letter). LINE ART: HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL: HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH: HALFTONE characteristic that emphasizes the tone reproducibility of the print image.			
Setting /procedure	The default setting is LINE ART. "LINE ART" DETAIL SMOOTH			

C. GRAPHICS PRINTING

Function	Sets the halftone characteristic for graphics printing.			
Use	To set the halftone characteristic that is used for printing graphics (figures). LINE ART: HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL: HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH: HALFTONE characteristic that emphasizes the tone reproducibility of the print image.			
Setting /procedure	The default setting is LINE ART. LINE ART "DETAIL" SMOOTH			

9.5.4 EDGE ENHANCEMENT

A. IMAGE PRINTING

Function	Selects whether or not to add edge enhancement during image printing.		
Use	 To add edge enhancement and sharpen the outline of images when printing image data such as photographs. 		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	

B. TEXT PRINTING

Function	Selects whether or not to add edge enhancement during text printing.		
Use	 To add edge enhancement and sharpen the outline of images when printing text data such as letters. 		
Setting	The default setting is ON.		
/procedure	"ON"	OFF	

C. GRAPHICS PRINTING

Function	Selects whether or not to add edge enhancement during graphic printing.		
Use	 To add edge enhancement and sharpen the outline of images when printing text data such as graphics. 		
Setting	The default setting is ON.		
/procedure	"ON" OFF		

9.5.5 EDGE STRENGTH

Function	Sets edge strength applied to printing with edge enhancement.			
Use	To adjust edge strength depending on each image. In the order of Low, Middle, and High, edge strength increases.			
Setting	The default setting is MIDDLE.			
/procedure	OFF	LOW	"MIDDLE"	HIGH
	NOTE • If this setting is set to OFF, the [EDGE ENHANCEMENT] setting is disabled and jobs print without edge enhancement.			

9.5.6 ECONOMY PRINT

Function	Selects whether or not to use the economy print mode where job prints with lower print density and less toner consumption.	
Use	To reduce toner consumption In the economy print mode, toner consumption will be reduced by approx. 30 % compared to the normal mode.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"
	NOTE • When [GLOSSY MODE] is set to "ON", the economy print setting is disabled even if the economy mode is set to "ON."	

9.5.7 GLOSSY MODE

	NOTE • When this setting is set to "ON" cally recognized as "OFF."	, the [ECONOMY PRINT] setting is automati-
Setting /procedure	The default setting is OFF. ON	"OFF"
Use	To print more glossy images.This mode can be used for media types other than transparencies and envelopes.	
Function	 Selects whether or not to use the glossy mode that increases toner adhesion and enhances glossiness of images. 	

9.5.8 PCL SETTING

A. CONTRAST

Function	Sets the	contrast of	a PCL print	ed image.				
Use	 To adjus 	t the contras	st of a PCL	printed imag	e.			
Setting	The defa	ult setting is	3 0%.					
/procedure	-15 %	-10 %	-5 %	"0 %"	+5 %	+10 %	+15 %	

B. IMAGE PRINTING

(1) RGB SOURCE

Function	Sets the RGB color space of the image to be printed.	
Use	To set the input RGB color space that is used for printing the image (picture). SRGB: Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR	"sRGB"

(2) RGB INTENT

Function	Sets the RGB characteristics of the image to be printed.	
Use	used for printing the image (pictur VIVID : Color conve ing on color	rsion characteristic suited to the image emphasiz- vividness. vision characteristic suited to the image emphasiz-
Setting /procedure	 The default setting is PHOTOGRA VIVID 	APHIC. "PHOTOGRAPHIC"

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the image to be printed.	
Use	To set the gray print method that is used for the printed image (picture). COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.	
Setting /procedure	The default setting is COMPOSITE BLACK.	
procedure	"COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY	

C. TEXT PRINTING

(1) RGB SOURCE

Function	Sets the RGB color space of the text to be printed.	
Use	To set the input RGB color space that is used for printing text (letter). sRGB : Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting	The default setting is sRGB.	
/procedure	DEVICE COLOR "sRGB"	

(2) RGB INTENT

Function	Sets the RGB characteristic of the text to be printed.	
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for printing text (letter). VIVID: Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasizing on color image.	
Setting /procedure	The default setting is VIVID. "VIVID"	PHOTOGRAPHIC

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the text to be printed.	
Use	To set the gray print method that is used for printing text (letter). COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.	
Setting	The default setting is BLACK AND GRAY.	
/procedure	COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY	

D. GRAPHICS PRINTING

(1) RGB SOURCE

Function	Sets the RGB color space of the graphics to be printed.	
Use	To set the input RGB color space that is used for printing graphics (figures). SRGB: Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB.	
	DEVICE COLOR "sRGB"	

(2) RGB INTENT

Function	Sets the RGB characteristic for graphics printing.	
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for graphics (figures). VIVID: Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasizing on color image.	
Setting /procedure	The default setting is VIVID. "VIVID" PHOTOGRAPHIC	

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the graphics to be printed.	
Use	To set the gray print method that is used for graphics (figures). COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.	
Setting	The default setting is BLACK AND GRAY.	
/procedure	COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY	

9.5.9 PS SETTING

A. IMAGE PRINTING

(1) RGB SOURCE

Function	Sets the RGB color space of the image to be printed.	
Use	To set the input RGB color space that is used for printing the image (picture). SRGBBlueAdjustRGB: Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB	

(2) RGB INTENT

Function	Sets the RGB characteristics of the image to be printed.		
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for printing the image (picture).		
	VIVID : Color conversion characteristic suited to the image empha- sizing on color vividness.		
	PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image.		
	RELATIVE COLOR: Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.)		
	ABSOLUTE COLOR: Reproduce the color that maintains the absolute color within the device reproduced color.		
Setting	The default setting is PHOTOGRAPHIC.		
/procedure	VIVID "PHOTOGRAPHIC" RELATIVE COLOR ABSOLUTE COLOR		

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the image to be printed.	
Use	To set the gray print method that is processed by the printer for the printed image (picture). COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.	
Setting /procedure	The default setting is COMPOSITE BLACK. "COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY	

(4) DESTINATION PROF

Function	Sets the output profile.	
Use	To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been preset at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.	
Setting	The default setting is AUTO.	
/procedure	"AUTO"	Custom Profile

B. TEXT PRINTING

(1) RGB SOURCE

Function	Sets the RGB color space of the text to be printed.	
Use	To set the input RGB color space that is used for printing text (letter). sRGBBlueAdjustRGB: Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB	

(2) RGB INTENT

Function	Sets the RGB characteristic of the text to be printed.		
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for printing text (letter). VIVID : Color conversion characteristic suited to the image empha-		
	sizing on color vividness.		
	PHOTOGRAPHIC : Color conversion characteristic suited to the image emphasizing on color image.		
	RELATIVE COLOR: Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.)		
	ABSOLUTE COLOR: Reproduce the color that maintains the absolute color within the device reproduced color.		
Setting /procedure	The default setting is VIVID.		
	"VIVID" PHOTOGRAPHIC RELATIVE COLOR ABSOLUTE COLOR		

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the text to be printed.		
Use	To set the gray print method that is used for printing text (letter). COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.		
Setting /procedure	The default setting is BLACK AND GRAY. COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY		

(4) DESTINATION PROF

Function	Sets the output profile.	
Use	To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been preset at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.	
Setting /procedure	The default setting is AUTO.	
procedure	"AUTO"	Custom Profile

C. GRAPHICS PRINTING

(1) RGB SOURCE

Function	Sets the RGB color space of the graphics to be printed.	
Use	To set the input RGB color space that is used for printing graphics (figures). sRGBBlueAdjustRGB: Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR / "sRGB" /AppleRGB /AdobeRGB1998 /ColorMatchRGB / BlueAdjustRGB	

(2) RGB INTENT

Function	Sets the RGB characteristic of the graphics to be printed.	
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for printing graphics (figures). VIVID: Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasizing on color image. RELATIVE COLOR: Reproduce the color that minimize the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR: Reproduce the color that maintains the absolute color within	
	the device reproduced color.	
Setting /procedure	The default setting is VIVID.	
	"VIVID" PHOTOGRAPHIC RELATIVE COLOR ABSOLUTE COLOR	

(3) RGB GRAY

Function	Sets the RGB gray reproduction of the graphics to be printed.		
Use	To set the gray print method that is used for printing graphics (figures). COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.		
Setting	The default setting is BLACK AND GRAY.		
/procedure	COMPOSITE BLACK "BLACK AND GRAY" BLACK ONLY		

(4) DESTINATION PROF

Function	Sets the output profile.	
Use	To set the custom profile used for output. AUTO : Select automatically appropriate output profile that has been preset at the printer with other print conditions. Custom Profile : Custom profile that has been downloaded to the printer by user.	
Setting		
/procedure	"AUTO"	Custom Profile

D. SIMULATION

(1) SIMULATION PROF

Function	Sets the simulation profile.	
Use	To set a CMYK simulation profile at implementation of the simulation. SWOPDIC: Profile that has been preset at the printer. Custom profile: Custom profile that has been downloaded to the printer by users.	
Setting /procedure	The default setting is NONE. "NONE" /SWOP /Euroscale /CommercialPress /TOYO /DIC /Custom Profile	

(2) SIMULATION INTENT

Function	Sets the color characteristics.	
Use	To set the color characteristics at the implementation of the simulation. RELATIVE COLOR: Reproduce the color that minimizes the color difference between original and print by adjusting the basic color (white.) ABSOLUTE COLOR: Reproduce the color that maintains the absolute color within the device reproduced color.	
Setting /procedure • The default setting is RELATIVE COLOR.		
procedure	"RELATIVE COLOR"	ABSOLUTE COLOR

(3) CMYK GRAY

Function	Sets CMYK gray reproduction.		
Use	To set the CMYK data K maintain method at the implementation of the simulation. COMPOSITE BLACK: Print according to the result of color conversion with profile. BLACK AND GRAY: Print by maintaining the value only for black (C=M=Y=0, K=255) BLACK ONLY: Print by maintaining the value only for gray (C=M=Y=0, K=any)		
Setting	The default setting is COMPOSITE BLACK.		
/procedure	"COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY		

9.5.10 CALIBRATION

A. TONE CALIBRATION

Function	Sets the gradation adjustment (Image stabilization with the controller).	
Use	To use for a particular calibration made by users. ON : Gradation adjustment is ON. OFF : Gradation adjustment is OFF.	
Setting	The default setting is ON.	
/procedure	"ON"	OFF

B. AIDC PROCESS

Function	Controls the image stability.	
Use	To be used to adjust image quality. To be used when the transfer belt unit and/or the transfer roller are replaced.	
Setting	The default setting is CANCEL.	
/procedure	EXCUTE	"CANCEL"

C. CMYK DENSITY

(1) CYAN

Function	Sets the cyan level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.	
Use	To set the cyan level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.	
Setting /procedure	The default setting is 0. -3 to +3	
	0 10 10	

(2) MAGENTA

Function	Sets the magenta level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.	
Use	To set the magenta level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.	
Setting /procedure	The default setting is 0. -3 to +3	

(3) YELLOW

Function	Sets the yellow level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.	
Use	To set the yellow level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.	
Setting /procedure	The default setting is 0.	
	-3 to +3	

(4) BLACK

Function	Sets the black level for the HIGHLIGHT, MIDDLE, and SHADOW area respectively.	
Use	To set the black level for the HIGHLIGHT, MIDDLE, and SHADOW are respectively.	
Setting /procedure	The default setting is 0. -3 to +3	
	-3 to +3	

9.5.11 COLOR SEPARATION

Function	Sets the color separation function.		
Use	To create color separations.		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	

9.6 MEMORY DIRECT

- This menu appears only when the optional hard disk kit and/or the compact flash is installed.
- This menu does not appear when "DISABLE" is selected in the [INTERFACE MENU] →
 [MEMORY DIRECT] setting.

9.6.1 LIST OF FILES

Function	 Displays folders and files stored in a USB memory connected to the USB port and sends print jobs.
Use	 To select files to be printed with the USB memory direct print function. The maximum of 99 files and folders in total can be displayed. The maximum of 7 folder hierarchies can be displayed.
Setting /procedure	 Insert a USB memory into the USB port. Select [MEMORY DIRECT] → [LIST OF FILES] and select files to be printed then press the menu/select key. (When a desired file is in a folder, select the folder that includes the file and press the Menu/select key. Specify a media type, duplex printing ON/OFF, the number of copies, and other necessary settings. Select [PRINT] and press the menu/select key. NOTE Do not remove the USB memory from the main body during memory direct printing.

9.6.2 TYPE OF FILES

Function	Specifies the types of files to be displayed on [LIST OF FILES].	
Use	To limit the types of files that can be listed.	
	The default setting is PDF, XPS.	
/procedure	PDF, XPS, JPEG, TIFF	"PDF, XPS"

9.7 CAMERA DIRECT

9.7.1 PAPER SOURCE

Function	Sets the tray using for camera direct photo printing.				
Use	To change the tray using for camera direct photo printing.				
Setting /procedure	The default setting is TRAY 2. TRAY1" "TRAY2" TRAY3 TRAY4				
	NOTE • Only the mounted	tray can be selec	ted.		

9.7.2 LAYOUT

Function	Sets the number of images printed on one page for camera direct photo printing.					
Use	To specify the number of camera direct photo printing images to be printed on each sheet.					
Setting /procedure	The default setting is 1-UP.					
	"1-UP" 1 2-UP 1 3-UP 2					
	4-UP 1 2 6-UP 3 4 8-UP 3 4 5 6 7 8					

9.7.3 PAPER MARGIN

Function	Sets the media margin for direct photo printing.			
Use	To perform direct photo printing with the minimum media margin.			
Setting /procedure	The default setting is STANDARD.			
	"STANDARD"	MINIMUM		

9.7.4 IMAGE QUALITY

A. BRIGHTNESS

Function	Sets the brightness of the printed image for camera direct photo printing.							
Use	To adjust the brightness of the printed image for camera direct photo printing.							
Setting /procedure	The defa	ult setting is	s 0 %.					
procedure	-15 %	-10 %	-5 %	"0 %"	+5 %	+10 %	+15 %	

B. CONTRAST

Function	Sets the contrast of the printed image for camera direct photo printing.							
Use	To adjust the contrast of the printed image for camera direct photo printing.							
Setting /procedure	The defa	ault setting is	6 0%.					
	-15 %	-10 %	-5 %	"0 %"	+5 %	+10 %	+15 %	

C. ECONOMY PRINT

Function	Sets whether or not to use the eding.	conomy print mode during camera direct photo print-
Use	To reduce toner consumption during camera direct photo printing. In the economy print mode, toner consumption can be reduced by approx. 30 % compared to the normal print mode.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"
	NOTE • When [GLOSSY MODE] is set to "ON", the economy print setting is disabled even if the economy mode is set to "ON."	

D. GLOSSY MODE

Function	Selects whether or not to use the glossy mode during camera direct photo printing.	
Use	To print more glossy images during camera direct photo printing. This mode can be used for media types other than transparencies and envelopes.	
Setting	The default setting is OFF.	
/procedure	ON "OFF"	
	NOTE • When this mode is set to "ON", the [ECONOMY PRINT] setting as being "OFF."	is recognized

E. RGB SOURCE

Function	Sets the RGB color space of the printed image for camera direct photo printing.	
Use	To set the input RGB color space that is used for camera direct photo printing. SRGB: Profile that has been preset to the printer. DEVICE COLOR: It uses the device color in the color space.	
Setting /procedure	The default setting is sRGB. DEVICE COLOR "sRGB"	

F. RGB INTENT

Function	Sets the RGB characteristics of the printed image for camera direct photo printing.	
Use	To set the color conversion characteristic from input RGB to device CMYK that is used for camera direct photo printing. VIVID: Color conversion characteristic suited to the image emphasizing on color vividness. PHOTOGRAPHIC: Color conversion characteristic suited to the image emphasizing on color image.	
Setting /procedure	 The default setting is PHOTOGRA VIVID 	PHIC. "PHOTOGRAPHIC"

G. RGB GRAY

Function	Sets the RGB gray reproduction of the printed image for camera direct photo printing.	
Use	To set the gray print method that is processed by the printer for camera direct photo printing. COMPOSITE BLACK: Print gray with the toner of 4 colors CMYK. BLACK AND GRAY: Print black (R=G=B=0) only with K toner and print gray with toner of 4 colors CMYK. BLACK ONLY: Print gray only with K toner.	
Setting /procedure	The default setting is COMPOSITE BLACK. "COMPOSITE BLACK" BLACK AND GRAY BLACK ONLY	

H. HALFTONE

Function	Sets the halftone characteristic of the printed image for camera direct photo printing.	
Use	To set the halftone characteristic that is used for camera direct photo printing. LINE ART: HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL: HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH: HALFTONE characteristic that emphasizes the tone reproducibility of the print image.	
Setting /procedure	The default setting is DETAIL. LINE ART "DETAIL" SMOOTH	

9.8 INTERFACE MENU

9.8.1 JOB TIMEOUT

Function	Sets the time to activate JOB TIMEOUT.
Use	To specify the amount of time before a print job times out.
Setting /procedure	The default setting is 15 seconds.
	5 seconds to 300 seconds

9.8.2 ETHERNET

NOTE

. When the ETHERNET setting is changed, the printer restarts automatically.

A. TCP/IP

(1) ENABLE

Function	Enables TCP/IP	
Use	To specify that the printer is connected to a TCP/IP network. YES: Enable TCP/IP. Print can be made at TCP/IP environment. NO: Disable TCP/IP. Print cannot be made at TCP/IP environment.	
Setting /procedure	The default setting is YES. "YES"	NO
		ULT GATEWAY/DHCP/BOOTP/ARP/PING/ AMIC DNS/IPP/RAW PORT/SLP/SMTP/

(2) IP ADDRESS

Function	Sets the IP address of the printer used for the network.
Use	To set the printer's IP address.
Setting /procedure	 Select [IP ADDRESS] and press the Menu/Select key. Set desired IP address (first bite) with the up key ▲/down key ▼ and press the right key ►. Repeat the above procedures and set the IP address up to fourth bite. Press the Menu/Select key.
	NOTE When setting the IP address manually, [DHCP/BOOTP] (IP auto acquisition function) setting is set to [OFF] automatically. When IP address is not allocated from the server, the IP address is set automatically within the range "169.254.0.0. to 169.254.255.255."

(3) SUBNET MASK

Function	Sets the subnet mask of the printer used in the network.
Use	To set the printer's subnet mask.
Setting /procedure	 Select [SUBNET MASK] and press the Menu/Select key. Set desired subnet mask (first bite) with the up key ▲/down key ▼ and press the right key ►. Repeat the above procedures and set the subnet mask up to fourth bite. Press the Menu/Select key. The default setting is "000.000.000.000."
	000.000.000.000 to 255.255.255

(4) DEFAULT GATEWAY

Function	Sets the gateway address of the printer used in the network.
Use	To set the printer's gateway address.
Setting /procedure	 Select [DEFAULT GATEWAY] and press the Menu/Select key. Set desired default gateway address (first bite) with the up key ▲/down key ▼ and press the right key ►. Repeat the above procedures and set the default gateway address up to fourth bite. Press the Menu/Select key. The default setting is "000.000.000.000." 000.000.000.000 to 255.255.255.255

(5) DHCP

Function	 Automatically acquires an IP address from the DHCP server, if there is one in the network, and specifies whether to load other network information. 	
Use	To automatically acquire an IP address and load other network information. YES: Enable IP auto acquisition setting. No: Disable IP auto acquisition setting.	
Setting	The default setting is ON.	
/procedure	"ON" OFF	
	NOTE • When setting the IP address manually, the [DHCP] setting is changed to [OFF].	

(6) BOOTP

Function	Automatically acquires an IP address from BOOTP and specifies whether to load other network information.	
Use	To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF: Disable IP auto acquisition setting.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"
	NOTE • When setting the IP address manually, the [BOOTP] setting is changed to [OFF].	

(7) ARP/PING

Function	Select whether or not the IP address is automatically acquired.	
Use	To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF: Disable IP auto acquisition setting.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"
	NOTE • When setting the IP address manually, the [ARP/PING] setting is changed to [OFF].	

(8) HTTP <ENABLE>

Function	Enables HTTP.
Use	To enable HTTP. YES: HTTP is enabled. NO: HTTP is disabled.
Setting	The default setting is YES.
/procedure	"YES" NO
	NOTE • Setting this function to "NO" will automatically set [IPP] to "NO."

(9) FTP <ENABLE>

Function	Enables FTP.	
Use	To enable FTP. YES: FTP is enabled. NO: FTP is disabled.	
Setting	The default setting is YES.	
/procedure	"YES"	NO

(10) TELNET

Function	Select whether to enable or disable TELNET transmissions.	
Use	To specify that the printer is connected by TELNET transmissions.	
	The default setting is ENABLE.	
/procedure	"ENABLE"	DISABLE

(11) BONJOUR <ENABLE>

Function	Select whether or not to use the bonjour setting.		
Use	To use when operating under the bonjour service environment. YES: Bonjour is enabled. NO: Bonjour is disabled.		
Setting	The default setting is YES.		
/procedure	"YES"	NO	

(12) DYNAMIC DNS <ENABLE>

Function	Select whether or not to use the dynamic DNS setting.	
Use	To use when operating under the dynamic DNS service environment. YES: Dynamic DNS is enabled. NO: Dynamic DNS is disabled.	
Setting	The default setting is NO.	
/procedure	YES	"NO"

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(13) IPP <ENABLE>

Function	To set whether to enable or disable IPP setting.
Use	YES : IPP is enabled. NO : IPP is disabled.
Setting	The default setting is YES.
/procedure	"YES" NO

(14) RAW PORT <ENABLE>

Function	To set whether to enable or disable raw port setting.
Use	YES : Raw port is enabled. NO : Raw port is disabled.
Setting	The default setting is YES.
/procedure	"YES" NO

<BIDIRECTIONAL>

Function	Enables or disables bi-directional comm	•
Use	ON: Raw port is enabled for bi-directional communication. OFF: Raw port is disabled for bi-directional communication.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"

(15) SLP <ENABLE>

Function	To set whether to enable or disable SLP setting.
Use	YES: SLP is enabled. NO: SLP is disabled.
Setting	The default setting is YES.
/procedure	"YES" NO

(16) SMTP <ENABLE>

Function	• To set whether to enable or disable SMTP setting.	
Use	YES: SMTP is enabled. NO: SMTP is disabled.	
Setting	The default setting is YES.	
/procedure	"YES"	NO

(17) SNMP <ENABLE>

Function	To set whether to enable or disable SNMP setting.	
Use	YES: SNMP is enabled. NO: SNMP is disabled.	
Setting	The default setting is YES.	
/procedure	"YES" NO	

(18) WSD PRINT <ENABLE>

Function	To set whether to use this printer as a WSD printer.
Use	YES: WSD print is enabled. NO: WSD print is disabled.
Setting	The default setting is YES.
/procedure	"YES" NO

(19) IPSEC <ENABLE>

Function	To set whether to use IPsec protocol for	IP network communication.
Use	When IPsec protocol is used to perform YES: IPsec is enabled. NO: IPsec print is disabled.	encrypted communication.
Setting	The default setting is NO.	
/procedure	YES	"NO"

(20) IP ADDRESS FILTER <ACCESS PERMISSION>

Function	To set the IP filtering (access permission ENABLE : Access permission is en DISABLE : Access permission is dis	abled.	
Use	NOTE • The range for the IP addresses, to which access is enabled, is set using the PageScope Web Connection.		
Setting	The default setting is DISABLE.		
/procedure	ENABLE	"DISABLE"	

<ACCESS REFUSE>

Function	To set the IP filtering (access refuse). ENABLE: Access refuse is enabled.	1.
	DISABLE : Access refuse is disable	d.
Use	NOTE • The range for the IP addresses, to w PageScope Web Connection.	rhich access is disabled, is set using the
Setting	The default setting is DISABLE.	
/procedure	ENABLE	"DISABLE"

(21) IPV6 <ENABLE>

Function	 To set whether to use IPv6 in IP network commun 	ication.
Use	YES: IPv6 is enabled. NO: IPv6 is disabled.	
Setting	The default setting is YES.	
/procedure	"YES"	NO

<AUTO SETTING>

Function	To set whether to use the IPv6 address automatic acquisition setting.	
Use	YES: IPv6 address is automatically obtained. NO: IPv6 auto configuration is disabled.	
Setting	The default setting is YES.	
/procedure	"YES" NO	

<LINK LOCAL>

Function	Displays the link-local address of IPv6.
Use	Displays the link local address of it vo.

<GLOBAL ADDRESS>

Function	Displays the global address of IPv6.
Use	- Displays the global address of it vo.

<GATEWAY ADDRESS>

Function	Displays the gateway address of IPv6.
Use	Displays the gateway address of it vo.

B. NETWARE

(1) ENABLE

Function	Enables NetWare.
Use	 To specify that the printer is connected to a NetWare network. YES: Enable NetWare. Printing can be done via NetWare. No: Disable NetWare. Printing cannot be done via NetWare.
Setting	The default setting is NO.
/procedure	YES "NO"

C. APPLETALK

(1) ENABLE

Function	Enables AppleTalk.	
Use	To specify that the printer is connected to an AppleTalk network. YES: Enable AppleTalk. Printing can be done via AppleTalk. No: Disable Apple Talk. Printing cannot be done via AppleTalk.	
Setting	The default setting is YES.	
/procedure	"YES" NO	

D. SPEED/DUPLEX

Function	Sets the communication specific	Sets the communication speed and method of network.	
Use	To set the network communic	To set the network communication speed and method.	
Setting /procedure	Setting items Network speed (SPEED): AUTO, 10 Mbps, 100 Mbps, 1,000 Mbps Duplex mode (DUP): AUTO, full-duplex mode, half-duplex mode The default setting is AUTO.		
	"AUTO" 100BASE FULL	10BASE FULL 100BASE HALF	10BASE HALF 1000BASE FULL

E. IEEE802.1X

(1) ENABLE



Function	 Prevents unauthorized access by performing authentication by the RADIUS server under the network environment. 	
Use	Set this function to YES when a network connection is made using the authentication server (RADIUS server).	
Setting /procedure	The default setting is NO. YES	"NO"

9.8.3 MEMORY DIRECT

Function	Select whether to enable or disable makes	emory direct printing.
Use	enabled.	u is appeared, and memory direct printing is u is disappeared, and memory direct printing is
Setting /procedure	The default setting is ENABLE.	
procedure	"ENABLE"	DISABLE

9.8.4 CAMERA DIRECT

Function	Select whether to enable or disable camera direct printing.	
Use	ENABLE: CAMERA DIRECT menu is appeared, and camera direct printing is enabled. DISABLE: CAMERA DIRECT menu is disappeared, and camera direct printing disabled.	
Setting	The default setting is ENABLE.	
/procedure	"ENABLE"	DISABLE

9.9 SYS DEFAULT MENU

9.9.1 LANGUAGE

Function	Sets the language of the control panel display.
Use	To change the language of the control panel display at user's option.
Setting /procedure	The default setting is ENGLISH. "ENGLISH"/FRENCH/GERMAN/SPANISH/ITALIAN/PORTUGUESE/CZECH/ JAPANEASE/KOREAN/SIMPLIFIED CHINESE/TRADITIONAL CHINESE/DUTCH/ RUSSIAN/POLISH

9.9.2 EMULATION

A. DEF. EMULATION

Function	To set the PDL (Page Description Language).			
Use	To fix the PDL as necessary. It usually switches automatically.			
Setting • The default setting is AUTO.				
/procedure	"AUTO"	POSTSCRIPT	PCL	

B. POSTSCRIPT

(1) WAIT TIMEOUT

Function	Sets the amount of time to wait for a postscript file.	
Use	To set the amount of time to wait for a postscript file before the print job times out.	
Setting /procedure	 Select [WAIT TIMEOUT] and press the Menu/Select key. Select desired time with the up key ▲/down key ▼ and press the Menu/Select key. The default setting is 0 second. 	
	"0" second to 300 seconds.	

(2) PS ERROR PAGE

Function	Specifies whether error pages are printed at the time of a postscript error.	
Use	To specify whether error pages are printed after a postscript error occurs. ON: Error pages are printed at the time of postscript error. OFF: Error pages are not printed at the time of postscript error.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"

(3) PS PROTOCOL

Function	Sets the protocol to be used for postscript printing.			
Use	To use the protocol when printing by postscript printing. AUTO : Automatic recognition NORMAL: ASCII letter code data BINARY : Binary data			
Setting • The default setting is AUTO.				
/procedure	"AUTO"	NORMAL	BINARY	

C. PCL

(1) CR/LF MAPPING

Function	Sets the linefeed code for PCL printing.	
Use	To specify the type of linefeed to be used for PCL printing.	
Setting • The default setting is "CR=CR LF=LF."		
/procedure	"CR=CR LF=LF" CR=CRLF LF=LF CR=CR LF=LFCR CR=CRLF LF=LFCR	

(2) LINES PER PAGE

Function	Sets the lines per page for PCL printing.	
Use	To set the number of lines to be printed per page for PCL jobs.	
Setting /procedure	 Select [LINES PER PAGE] and press the Menu/Select key. Select desired line number with the up key ▲/down key ▼ and press the Menu/Select key. 	
	The default setting is 60 lines.	
	5 lines to 128 lines	

(3) FONT SOURCE

Function	Sets the PCL font to be used for PCL printing.	
Use	To set the font to be used for printing PCL jobs.	
Setting /procedure	 Select [FONT NUMBER] and press the Menu/Select key. Select desired font with the up key ▲/down key ▼ and press the Menu/Select key. The default setting is 0. 	
	"0" to 102	
	NOTE • According to the selected [FONT NUMBER], [PITCH SIZE] or [POINT SIZE] setting is available. • Details on the font which corresponds to the font No. can be checked by the PCL font list. See P.125	

<PITCH SIZE>

Function	Sets the pitch size of the PCL font for PCL printing.		
Use	To set the pitch size of the font to be used for printing PCL jobs.		
Setting /procedure	 Select [PITCH SIZE] and press the Menu/Select key. Select desired pitch size with the up key ▲/down key ▼ and press the Menu/Select key. The default setting is 10.00 pt. 		
	0.44 pt to 99.99 pt		
	NOTE • When one of the following "FONT NUMBERs" is selected, "PITCH SIZE" setting is available. FONT NUMBER: 0 to 5, 21 to 23, 54 to 57, 81, 82.		

<SYMBOL SET>

Function	Sets the symbol set for PCL printing.		
Use	To set the symbol set to be used for printing PCL jobs.		
/procedure	The default setting is PC8. "PC8"/DESKTOP/ISO4/ISO6/ISO11/ISO15/ISO17/ISO21/ISO60/ISO69/ISOL1/ISOL2/ISOL5/ISOL6/ISOL9/LEGAL/MATH8/MCTEXT/MSPUBL/PC775/PC850/PC852/PC858/PC8BN/PC8TK/PC1004/PIFONT/PSMATH/PSTEXT/ROMAN8/WIN30/WINBALT/WINL1/WINL5/ARABIC8/HPWARA/PC864ARA/HEBREW7/HEBREW8/ISOHEB/PC862HEB/ISOCYR/PC866CYR/WINCYR/PC866UKR/GREEK8/WINGRK/PC851GRK/PC8GRK/ISOGRK		

D. XPS

(1) DIGITAL SIGNATURE

Function	 Selects whether to verify digital signatures attached to XPS (XML Paper Specification) files when printing the files. When ON is selected, files with invalid digital signatures are not printed. 		
Use			
Setting	,		
/procedure	ENABLE	"DISABLE"	

(2) XPS ERROR PAGE

Function	To set whether to print error information when an error occurs while printing a XPS				
Use	use file. ON: XPS error page is printed when an XPS error occurs. OFF: No XPS error page is printed when an XPS error occurs.				
Setting	The default setting is ON.				
/procedure	"ON" OFF				

9.9.3 PAPER

A. DEFAULT PAPER

(1) PAPER SIZE

Function	Sets the default media size.
Use	To set the default media size.
Setting /procedure	<for america="" north=""> The default setting is LETTER. </for>
	<for destinations="" other=""> The default setting is A4.</for>
	LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATE-MENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/PHOTO 4x6/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM
	NOTE • Depending on the setting selected for SYS DEFAULT MENU/PAPER/UNIT OF MEASURE, PHOTO 4x6 may change to PHOTO 10x15.

(2) CUSTOM SIZE

Function	Sets the custom media width and length.	
Use	To set the width and length of the custom media size.	
Setting /procedure	 Select [CUSTOM SIZE] and press the Menu/Select key. Select [WIDTH] or [LENGTH] and press Menu/Select key. Set desired number with the up key ▲/down key ▼ and press the Menu/Select key. 	
	<for america="" north=""> The default setting of WIDTH is 8.50 inches. </for>	
	WIDTH: 3.63 inches to 8.50 inches.	
	The default setting of LENGTH is 11.00 inches.	
	LENGTH: 5.83 inches to 14.00 inches.	
	<for destinations="" other=""> • The default setting of WIDTH is 210 mm.</for>	
	WIDTH: 92 mm to 216 mm.	
	The default setting of LENGTH is 297 mm.	
	LENGTH: 148 mm to 356 mm.	
	NOTE • By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.	

(3) PAPER TYPE

Function	Sets the default media type.
Use	To set the default media type.
Setting /procedure	The default setting is PLAIN PAPER.
procedure	"PLAIN PAPER"/RECYCLED/THICK 1/THICK 2/LABEL/TRANSPARENCY/ENVE- LOPE/POSTCARD/LETTERHEAD/GLOSSY 1/GLOSSY 2

B. UNIT OF MEASURE

Function	Sets the measurement units for custom size mode. Sets the measurement units for SYS DEFAULT MENU/DEFAULT PAPER/CUSTOM SIZE mode.		
Use	To change media measurement uni	ts.	
Setting /procedure	 For North America> The default setting is INCHES. For other destinations> The default setting is MILLIMETERS 		
	INCHES	MILLIMETERS	

9.9.4 GRAY SCALE PAGE

Function	Sets the color mode (color or monochrome) applied to monochrome pages included				
Use	in a color print job.				
	AUTO	: Automatically determines color job's first page.	or monochrome from the		
	GRAYSCALE PRI	NT: Automatically determines color page basis.	or monochrome on a job's		
	COLOR PRINT	 Always makes color printing for print. 	a job where it selected color		
Setting	The default setting is	AUTO.			
/procedure	"AUTO"	GRAYSCALE PRINT	COLOR PRINT		

9.9.5 STARTUP OPTIONS

A. DO STARTUP PAGE

Function	Sets whether a startup page is printed at startup of the printer.		
Use	To specify whether a startup page is printed. ON : Start up page is printed at startup the printer. OFF: Start up page is not printed at startup of the printer.		
Setting	The default setting is OFF.		
/procedure	ON	"OFF"	

9.9.6 AUTO CONTINUE

Function	 At the time of the following operator call, continues auto printing by ignoring the media type or size. "PAPER EMPTY" (except "MANUAL FEED"), "xxxx SIZE ERROR", "xxxx TYPE ERROR". 		
Use	To specify whether printing should continue when the specified media size and type are not available. ON: Auto continuous printing is ON. OFF: Auto continuous printing is OFF.		
Setting /procedure	The default setting is OFF.		
	ON	"OFF"	

9.9.7 HOLD JOB TIMEOUT

Function	Sets the amound deleted.	t of time befor	e a job saved te	emporarily in th	ne printer is automatically
Use	To change the amount of time a job is held before being deleted.				
Setting /procedure	The default setting is DISABLE (No auto delete.).				
procedure	"DISABLE"	1 hour	4 hours	1 day	1 week
	NOTE • This menu is a	vailable only	when an optic	onal hard disk	kit is installed.

9.9.8 ENERGY SAVER

Function	 Sets whether the printer should go into energy saver mode when not printing or processing a print job and when the control panel is not being used. To set the amount of time before energy saver mode is activated, use the "ENERGY SAVER TIME" menu. Energy saver mode is automatically cancelled when any of the following operations is performed: The machine is restarted. A print job is received. Any of the keys on the control panel is pressed. 	
Use	To specify whether energy saver mode is to be used.	
Setting	The default setting is ON.	
/procedure	"ON" OFF	

9.9.9 ENERGY SAVER TIME

Function	 Sets the amount of time before the machine enters energy saver mode after the last print is received or the last key operated. 			
Use	To change the ar	To change the amount of time before the machine enters energy saver mode.		
Setting /procedure	The default setting is 15 minutes. 5 minutes 6 minutes 7 minutes 8 minutes 9 minutes 10 minutes 11 minutes 12 minutes 13 minutes 14 minutes "15 minutes" 30 minutes 1 hour 3 hours NOTE			
	This menu is available only when [ENERGY SAVER] is not set to "OFF."			

9.9.10 MENU TIMEOUT

Function	Sets the amount of time before the control panel returns to the status screen from menu mode and the help display.		
Use	To set the amount of the time before the control panel returns to the status screen from the menu and the help display.		
Setting /procedure	The default setting is 2 n	ninutes.	
	OFF	1 minute	"2 minutes"

9.9.11 LCD CONTRAST

Function	Sets the brightness of the control panel LCD display.							
Use	To set the brightness of the control panel LCD display.							
Setting The default setting is 0.								
/procedure	-3	-2	-1	"0"	+1	+2	+3	

9.9.12 SECURITY

A. CHANGE PASSWORD

Function	Sets the password used for the lock panel function.		
Use	To change the password used for the lock panel function. 0000 : Panel lock function is OFF. 0001 to FFFF : Valid password for panel lock function.		
Setting /procedure	 Select [CHANGE PASSWORD] and press the Menu/Select key. Set desired password (first digit) with the up key ▲/down key ▼ and press the right key ►. Repeat the above procedures to set up to fourth digit password. The default setting is 0000. 		
	"0000" to FFFF		
	NOTE • Make sure to set the password to something other than "0000" when the [LOCK PANEL] function is set to [ON]. • If you forget the password, it can be initiated (0000) with [SERVICE MENU/ RESTORE PASSWORD]. See P.190		

B. LOCK PANEL

Function	 Protects the menu (except the service menu) with a password. 		
Use	To make the menu (except the service menu) impossible to change unless the correct password is entered. OFF: Panel lock function is OFF. MINIMUM: Panel lock function is ON. Protect the operation of [INTERFACE MENU], [SYS DEFAULT MENU]. ON: Panel lock function is ON. Protect the operation of [PROF/PRINT MENU], [PRINT MENU], [PAPER MENU], [QUALITY MENU], [INTERFACE MENU], [SYS DEFAULT MENU], [MEMORY DIRECT], [CAMERA DIRECT].		
Setting /procedure	The default setting is "OFF." "OFF" MINIMUM ON		

9.9.13 CLOCK

A. DATE

Function	Sets the date of the printer's built-in clock.
Use	To change the date of the printer's built-in clock.
Setting /procedure	DATE (DD.MM.YY): For Europe DATE (MM.DD.YY): For North America DATE(YY.MM.DD): For Japan, Asia, China The following shows how to set DATE (DD.MM.YY). 1. Select [CLOCK] and press the Menu/Select key. 2. Select [DATE (DD.MM.YY)] and press the Menu/Select key. 3. Set date with the up key△/down key ▽ and press the right key▷. 4. Repeat the above procedures to set month and year. 5. Press the Menu/Select key. DD : 01 to 31 MM : 01 to 12 YY : 2006 to 2032
1	

B. TIME

Function	Sets the time of the printer's built-in clock.	
Use	To change the time of the printer's built-in clock.	
Setting /procedure	 Select [CLOCK] and press the Menu/Select key. Select [TIME] and press the Menu/Select key. Set hour with the up key ▲/down key ▼ and press the right key ►. Repeat the above procedures to set minute. Press the Menu/Select key. 	

C. TIME ZONE

Function	Sets the time zone.
Use	Gets the time 20ne.
Setting /procedure	 Select [CLOCK] and press the Menu/Select key. Select [TIME ZONE] and press the Menu/Select key. Set time zone with the up key ▲/down key ▼. Press the Menu/Select key.

9.9.14 HDD FORMAT

Function	Initializes the format of the optional hard disk kit.		
Use	To initialize the format of the optional hard disk kit. USER AREA ONLY: Initialize only user area ALL: Initialize all area		
Setting /procedure	Select [HDD FORMAT] and press the Menu/Select key. Select desired initialization method and press the Menu/Select key. [ARE YOU SURE?] is displayed. By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. The default setting is USER AREA ONLY. USER AREA ONLY ALL		
	NOTE This menu is available only when an optional hard	disk kit is installed.	

9.9.15 CARD FORMAT

Function	Initializes the format of the optional compact flash card.		
Use	To initialize the format of the optional comp USER AREA ONLY: Initialize only user a ALL: Initialize all area		
Setting /procedure	1. Select [CARD FORMAT] and press the Menu/Select key. 2. Select desired initialization method and press the Menu/Select key. 3. [ARE YOU SURE?] is displayed. 4. By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. 5. The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled.		
	The default setting is USER AREA ONLY.		
	USER AREA ONLY ALL		
	NOTE • This menu is available only when an op	tional compact flash card is installed.	

bizhub C31P

9.9.16 RESTORE DEFAULTS

Function	Restores the factory default of each setting.		
Use	To restore the defaults of all settings. RESTORE NETWORK: Restore the default for [INTERFACE MENU/ETHERNET] setting. RESTORE PRINTER: Restore the default for [PAPER MENU], [QUALITY MENU], [SYS DEFAULT MENU] and [CAMERA DIRECT] setting.		
	RESTORE ALL : Restore defaults for all settings.		
Setting /procedure	1. Select [RESTORE DEFFAULTS] and press the Menu/Select key. 2. Select desired mode and press the Menu/Select key. 3. [ARE YOU SURE?] is displayed. 4. By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. 5. The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled.		
	The default setting is RESTORE NETWORK.		
	RESTORE NETWORK RESTORE PRINTER RESTORE ALL		

					Reset Item			Ref.
			RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page	
		DEFAU	ILT TRAY	_	Reset	Reset	TRAY2	P.126
			PAPER SIZE	_	Reset	Reset	Letter/A4 *1	P.126
		TRAY1	CUSTOM SIZE		Reset	Reset	WIDTH: 8.5inches LENGTH: 11inches	P.127
		INALL		_	Reset	Reset	WIDTH:210mm LENGTH:297mm	F. 127
			PAPER TYPE	_	Reset	Reset	PLAIN PAPER	P.127
		TRAY2	PAPER SIZE	_	Reset	Reset	Letter/A4 *1	P.128
PAPER	DADED		PAPER TYPE	_	Reset	Reset	PLAIN PAPER	P.128
MENU	PAPER SOURCE	TRAY 3 to 4	PAPER TYPE		Reset	Reset	PLAIN PAPER	P.128
		TRAY CHAINING		_	Reset	Reset	ON	P.129
		DU	PLEX	_	Reset	Reset	OFF	P.129
		CO	PIES	_	Reset	Reset	1	P.130
		COI	LATE		Reset	Reset	OFF	P.130
		FINISHING			Reset	Reset	MAIN TRAY	P.130
		JOB SE	PARATION		Reset	Reset	OFF	P.131
		IMAGE I	ROTATION	_	Reset	Reset	OFF	P.131

^{*1:} Destination items. For details, see the page referenced.

					Reset Item			D-f
	Iter	m		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Ref. Page
	COLOR MODE			_	Reset	Reset	COLOR	P.131
	BF	BRIGHTNESS			Reset	Reset	0 %	P.131
		IMAGE P	RINTING	_	Reset	Reset	DETAIL	P.132
	HALFTONE	TEXT PF	RINTING	_	Reset	Reset	LINE ART	P.132
	TIME TONE	GRAF PRIN		_	Reset	Reset	DETAIL	P.132
	5005	IMAGE P	RINTING	_	Reset	Reset	OFF	P.132
	EDGE ENHANCE-	TEXT PF	RINTING	_	Reset	Reset	ON	P.133
	MENT	GRAF PRIN		_	Reset	Reset	ON	P.133
	EDG	EDGE STRENGTH			Reset	Reset	MIDDLE	P.133
	ECO	CONOMY PRINT		_	Reset	Reset	OFF	P.133
	GLOSSY MODE			_	Reset	Reset	OFF	P.134
		CONT	RAST	_	Reset	Reset	0 %	P.134
		IMAGE PRINTING	RGB SOURCE		Reset	Reset	sRGB	P.134
011411771			RGB INTENT	_	Reset	Reset	PHOTO- GRAPHIC	P.134
QUALITY MENU			RGB GRAY	_	Reset	Reset	COMPOSITE BLACK	P.135
		G TEXT PRINTING	RGB SOURCE	_	Reset	Reset	sRGB	P.135
	PCL SETTING		RGB INTENT	_	Reset	Reset	VIVID	P.135
			RGB GRAY		Reset	Reset	BLACK AND GRAY	P.135
			RGB SOURCE	_	Reset	Reset	sRGB	P.136
		GRAPHICS PRINTING	RGB INTENT		Reset	Reset	VIVID	P.136
			RGB GRAY	_	Reset	Reset	BLACK AND GRAY	P.136
			RGB SOURCE		Reset	Reset	sRGB	P.136
	PS	IMAGE	RGB INTENT		Reset	Reset	PHOTO- GRAPHIC	P.137
	SETTING		RGB GRAY	_	Reset	Reset	COMPOSITE BLACK	P.137
			DESTINA- TION PROF	_	Reset	Reset	AUTO	P.137

bizhub C31P

				<u> </u>	Deset Item			l
	Ite	m			Reset Item		Initial Value	Ref.
	ite	III		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	IIIIIai value	Page
			RGB SOURCE	_	Reset	Reset	sRGB	P.137
		TEXT	RGB INTENT	_	Reset	Reset	VIVID	P.138
		PRINTING	RGB GRAY	=	Reset	Reset	BLACK AND GRAY	P.138
			DESTINA- TION PROF	_	Reset	Reset	AUTO	P.138
			RGB SOURCE	_	Reset	Reset	sRGB	P.138
	PS SETTING	GRAPHICS PRINTING	RGB INTENT	_	Reset	Reset	VIVID	P.139
			RGB GRAY	_	Reset	Reset	BLACK AND GRAY	P.139
QUALITY MENU			DESTINA- TION PROF		Reset	Reset	AUTO	P.139
IVILIVO			SIMULA- TION PROF		Reset	Reset	NONE	P.139
		SIMULA- TION	SIMULA- TION INTENT		Reset	Reset	RELATIVE COLOR	P.140
			CMYK GRAY		Reset	Reset	COMPOSITE BLACK	P.140
	CALIBRA-	TO CALIBF		_	Reset	Reset	ON	P.140
			CYAN	_	Reset	Reset	0	P.140
		CMYK	MAGENTA	_	Reset	Reset	0	P.141
		DENSITY	YELLOW	_	Reset	Reset	0	P.141
			BLACK	_	Reset	Reset	0	P.141
	COLO	COLOR SEPARAT		_	Reset	Reset	OFF	P.141

				Reset Item		Initial Value	Ref.
	Item			RESTORE PRINTER	RESTORE ALL	Initial Value	Page
MEMORY DIRECT	TYF	PE OF FILES	_	Reset	Reset	PDF	P.142
	PAP	ER SOURCE	_	Reset	Reset	TRAY2	P.142
		LAYOUT	_	Reset	Reset	1-UP	P.143
	PAP	PER MARGIN	_	Reset	Reset	STANDARD	P.143
		BRIGHTNESS	_	Reset	Reset	0 %	P.143
		CONTRAST	_	Reset	Reset	0 %	P.143
CAMERA		ECONOMY PRINT	_	Reset	Reset	OFF	P.144
DIRECT		GLOSSY MODE	_	Reset	Reset	OFF	P.144
	IMAGE	RGB SOURCE	_	Reset	Reset	sRGB	P.144
	QUALITY	RGB INTENT	_	Reset	Reset	PHOTO- GRAPHIC	P.144
		RGB GRAY	_	Reset	Reset	COMPOS- ITE BLACK	P.145
		HALFTONE		Reset	Reset	DETAIL	P.145

					Reset Item			I
	Iter	m		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Ref. Page
	JO	B TIMEOU	Т	_	Reset	Reset	15 seconds	P.145
		ENA	BLE	Reset	_	Reset	YES	P.146
		IP ADI	DRESS	Reset	_	Reset	000.000. 000.000	P.146
		SUBNE	T MASK	Reset	=	Reset	000.000. 000.000	P.146
INTER-		DEFAULT GATEW		Reset	=	Reset	000.000. 000.000	P.147
		DH	ICP	Reset	=	Reset	ON	P.147
		ВО	OTP	Reset	_	Reset	OFF	P.147
FACE	ETHER-	ARP/PING		Reset	_	Reset	OFF	P.147
MENU	NET- TCP/IP	HTTP		Reset	_	Reset	YES	P.148
	TOF/IF	FTP		Reset		Reset	YES	P.148
		TELNET		Reset		Reset	ENABLE	P.148
		BON	JOUR	Reset		Reset	YES	P.148
		DYNAN	IIC DNS	Reset		Reset	NO	P.148
		IF	PP	Reset		Reset	YES	P.149
		RAW	ENABLE	Reset		Reset	YES	
		PORT	BIDIREC- TIONAL	_	Reset	Reset	OFF	P.149
		SI	LP	Reset	-	Reset	YES	P.149

					Reset Item	ı		Ref.
	Ite	m		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
		SN	ITP	Reset	_	Reset	YES	P.149
		SN	MP	Reset	_	Reset	YES	P.150
		WSD PRINT		Reset	_	Reset	YES	P.150
		IPSEC		Reset	_	Reset	NO	P.150
	ETHER- NET- TCP/IP	NET- IP	ACCESS PERMIS- SION	Reset		Reset	DISABLE	P.150
INTER-			ACCESS REFUSE	Reset	_	Reset	DISABLE	
FACE			ENABLE	Reset	_	Reset	YES	
MENU		IPv6	AUTO SETTING	Reset	_	Reset	YES	P.151
	1	NETWARE		Reset	_	Reset	NO	P.152
	A	PPLE TALK		Reset	_	Reset	YES	P.152
	SPE	ED/DUPLE	ΞX	Reset	_	Reset	AUTO	P.152
	IE	IEEE802.1X			_	Reset	NO	P.152
	MEM	ORY DIRE	CT	_	Reset	Reset	ENABLE	P.153
	CAN	IERA DIRE	СТ	Reset	_	Reset	ENABLE	P.153

					Reset Item			Ref.
	Iter	m		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
	L	ANGUAGE		_	Reset	Reset	ENGLISH	P.153
		DEF. EM	ULATION	_	Reset	Reset	AUTO	P.153
			WAIT TIM- EOUT		Reset	Reset	0	P.153
		POST- SCRIPT	PS ERROR PAGE		Reset	Reset	OFF	P.154
sys			PS PRO- TOCOL		Reset	Reset	AUTO	P.154
		EMULA-TION SO PCL N	CR/LF MAPPING		Reset	Reset	CR=CR LF=LF	P.154
DEFAULT MENU	_		LINES PER PAGE		Reset	Reset	60	P.154
2.10	TION		FONT SOURCE/ FONT NUMBER	_	Reset	Reset	0	P.155
			FONT SOURCE/ PITCH SIZE		Reset	Reset	10.00	P.155
			FONT SOURCE/ SYMBOL SET	_	Reset	Reset	PC8	P.155

					Reset Item			Ref.
	Iter	n		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL	Initial Value	Page
	EMULA-	XPS	DIGITAL SIGNA- TURE	_	Reset	Reset	DISABLE	P.156
	TION	χ	XPS ERROR PAGE		Reset	Reset	ON	P.156
			PAPER SIZE		Reset	Reset	LETTER	P.156
		DEFAULT	CUSTOM SIZE/ WIDTH		Reset	Reset	8.5 inches	P.157
	PAPER	PAPER	CUSTOM SIZE/ LENGTH		Reset	Reset	11.00 inches	1.107
			PAPER TYPE		Reset	Reset	PLAIN PAPER	P.157
		UNIT OF N	MEASURE	_	Reset	Reset	INCHES	P.157
SYS DEFAULT	STARTUP OPTIONS	DO START	TUP PAGE		Reset	Reset	OFF	P.158
MENU	AUTO CONTINUE			_	Reset	Reset	OFF	P.158
	HOLD JOB TIMEOUT			_	Reset	Reset	DISABLE	P.158
	ENE	RGY SAVE	ER	_	Reset	Reset	ON	P.159
	ENERG	SY SAVER	TIME	_	Reset	Reset	15 minutes	P.159
	MEN	NU TIMEOU	JT	_	Reset	Reset	2 minutes	P.159
	LCD	CONTRA	ST	_	Reset	Reset	0	P.159
	OFOURITY.	CHANGE P	ASSWORD	_	Reset	Reset	0000	P.160
	SECURITY	LOCK	PANEL	_	Reset	Reset	OFF	P.160
			TRAY 1	_	Reset	Reset	OFF	
		PAPER	TRAY 2	_	Reset	Reset	ON	D 1 7 1
	ENABLE	EMPTY	TRAY 3	_	Reset	Reset	ON	P.171
	WARNING		TRAY 4	_	Reset	Reset	ON	
		TONE	RLOW	_	Reset	Reset	OFF	P.172
		I-UNIT	LOW	_	Reset	Reset	OFF	P.172

			Reset Item			Ref.
	Item		RESTORE PRINTER	RESTORE ALL	Initial Value	Page
	Admin Password	_	Reset	Reset	administrator	_
	Refresh Rate	_	Reset	Reset	30 sec.	_
	Contact Name	_	Reset	Reset	KONICA MINOLTA Customer Support	
	Contact Information	_	Reset	Reset	http://printer. konicaminolta. com/	1
ction	Contact Utility Link	_	Reset	Reset	http://page scope.com/	
o Conne	Corporate URL	_	Reset	Reset	http://printer. konicaminolta. com/	l
Wet	Supplies and Accessories	_	Reset	Reset	Blank	_
PageScope Web Connection	Product Help URL	_	Reset	Reset	http://printer. konicaminolta. com/	1
Pag	Auto IP	Reset	_	Reset	DHCP	_
	WINS/NetBIOS Resolution	Reset		Reset	Checked	
	** NetBIOS Name	Reset	_	Reset	C31PXX- XXXXXX	
	Domain/Workgroup	Reset	_	Reset	WORK- GROUP	
	Use DHCP	Reset	_	Reset	Checked	_
	IPP Config Printer Name	Reset	_	Reset	Blank	_
	IPP Config Printer Location	Reset	_	Reset	Blank	_

^{*:} Destination items. For details, see the page referenced.
**: XXXXXX are the final 6 digits of the printer's MAC address.

9.9.17 ENABLE WARNING

A. PAPER EMPTY

(1) TRAY1

Function	Specifies whether a [TRAY 1 Paper Empty] (manual feed tray) is displayed as a normal message when it is empty.
Use	To specify whether to display a [TRAY 1 Paper Empty] message as a normal message. ON: Paper empty message is displayed on normal message when tray is empty. OFF: Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	The default setting is OFF. "OFF" ON

(2) TRAY2

Function	Specifies whether a [TRAY 2 Paper Empty] is displayed as a normal message when it is empty.
Use	To specify whether to display a [TRAY 2 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	The default setting is ON. OFF "ON"

(3) TRAY3

Function	Specifies whether a [TRAY 3 Paper Empty] is displayed as a normal message when it is empty.
Use	To specify whether to display a [TRAY 3 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF: Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	The default setting is ON. OFF "ON" NOTE This menu is available only when an optional lower feeder unit is installed.

(4) TRAY4

Function	Specifies whether a [TRAY 4 Paper Emis empty.	pty] is displayed as a normal message when it
Use		4 Paper Empty] message as a normal layed on normal message when tray is empty. displayed on normal message when tray is
Setting /procedure	The default setting is ON. OFF	"ON"
	NOTE • This menu is available only when a	n optional lower feeder unit is installed.

B. TONER LOW

Function	• Specifies whether or not a warning appr	pare when the tener is about to run out
Use	Specifies whether or not a warning appears when the toner is about to run out.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"

C. I-UNIT LOW

Function	Specifies whether or not a warning approximately	opears when the imaging unit is about to reach
Use	the end of its service life.	
Setting	The default setting is OFF.	
/procedure	ON	"OFF"

9.10 MAINTENANCE MENU

9.10.1 How to enter the MAINTENANCE MENU

A. Procedure

- 1. Display [MAINTENANCE MENU] on the menu screen and press the Menu/Select key.
- 2. [ENTER PASSWORD] message is displayed.
- Set the first digit of user password with the up key ▲/down key ▼ and press the right key ►.
- Repeat the above procedures to set up to fourth digit of password. (The initial setting for user password is [0000].)
- 5. Press the Menu/Select key.

B. Exiting

· Press the Cancel key.

9.10.2 PRINT MENU

A. EVENT LOG

Function	Prints the event log.	
Use	To check the jams/troubles that occurred, and history of replacing the consumables, etc. The items that can be checked are as follows. Paper Jam Error: The number of jams occurred and its history Engine Fatal Error: The history of troubles which caused service call Fuser Unit: The history of replacing the fuser unit Transfer Belt: The history of replacing the transfer belt Second Trans: The history of replacing the transfer roller Toner Cartridge: The history of replacing the toner cartridge Imaging Unit: The history of replacing the imaging unit Trouble Counter: Troubles counted at each section	
Setting /procedure	Select [EVENT LOG] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.	

B. HALFTONE 64

Function	Prints the halftone pattern with 25 % level for CMYK respectively.
Use	To check the unevenness of the density and the pitch.
Setting /procedure	 Set the A4S or letterS media on the tray. Select [HALFTONE 64] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

C. HALFTONE 128

Function	Prints the halftone pattern with 50 % level for CMYK respectively.
Use	To check the unevenness of the density and the pitch.
Setting /procedure	 Set the A4S or letterS media on the tray. Select [HALFTONE 128] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

D. HALFTONE 256

Function	Prints the halftone pattern with 100 % level for CMYK respectively.
Use	To check the unevenness of the density and the pitch.
Setting /procedure	 Set the A4S or letterS media on the tray. Select [HALFTONE 256] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

E. GRADATION

Function	Prints the gradation pattern.
Use	To check the gradation reproductively.
Setting /procedure	Set the A4S or letterS media on the tray. Select [GRADATION] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

9.10.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	Adjusts the top margin of media for single-sided printing.	
Use	To correct a misaligned print image. PLAIN PAPER: Adjust the head margin of plain paper. THICK: Adjust the head margin of thick paper. ENVELOPE: Adjust the head margin of envelope. TRANSPARENCY: Adjust the head margin of transparency.	
Setting /procedure	 Select [TOP ADJUSTMENT] and press the Menu/Select key. Select desired media type and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key. 	
	-15 to +15 (1 step: 0.2 mm)	

B. LEFT ADJUSTMENT

Function	Adjusts the left margin of media for single-sided printing.
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of media fed from tray 4.
Setting /procedure	 Select [LEFT ADJUSTMENT] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key.
	-15 to +15 (1 step: 0.2 mm)

C. LEFT ADJ DUPLEX

Function	Adjusts the left margin of media for double-sided printing.	
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of duplex print media fed from tray 1	
Setting /procedure	 Select [LEFT ADJ DUPLEX] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key. 	
	-15 to +15 (1 step: 0.2 mm)	

D. TRANSFER POWER

(1) SIMPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.
Use	To use when the transfer failure at the trailing edge occurs.
Adjustment Range	The default setting is 0. -8 to +7
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [SIMPLEX PASS] and press the Menu/Select key. Select desired media type with theup key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key.

(2) DUPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the duplexed pages for each media type.									
Use	To use when the transfer failure at the trailing edge occurs.									
Adjustment Range	The default setting is 0. -8 to +7									
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.									
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [DUPLEX PASS] and press the Menu/Select key. Select desired media type with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 									

(3) MANUAL DUPLEX

Functions	Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.								
Use	To use when the transfer failure at the trailing edge occurs.								
Adjustment Range	The default setting is 0. -8 to +7								
Adjustment Instructions To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.									
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [MANUAL DUPLEX] and press the Menu/Select key. Select desired media type with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 								

E. IMG ADJ THICK

Functions	 To fine-adjust density of printed images of each color for thick paper and OHP trans- parencies.
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
Adjustment Instructions	Light color: increase the setting value Dark color: decrease the setting value
Setting/ Procedure	 Select [IMG ADJ THICK] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key.

F. IMG ADJ BLACK

Functions	To fine-adjust the density of the printed image for a black printing.							
Use	To vary the density of the printed image of a black printing.							
Adjustment Range	The default setting is 0. -2 to +2							
Adjustment If the black is light, increase the setting value. Instructions If the black is dark, decrease the setting value.								
Setting/ Procedure	 Select [IMG ADJ BLACK] and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 							

9.10.4 SUPPLIES

A. REPLACE

(1) TRANS. BELT

Function	Resets the transfer belt counter.
Use	To use when the transfer belt has been replaced.
Setting /procedure	 Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS. BELT] and select YES. Press the menu/select key and reset the counter.

(2) TRANS. ROLLER

Function	Resets the transfer roller counter.
Use	To use when the transfer roller has been replaced.
Setting /procedure	 Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [TRANS Roller] and select YES. Press the menu/select key and reset the counter.

(3) FUSER UNIT

Function	Resets the fuser unit counter.
Use	To use when the fuser unit has been replaced.
Setting /procedure	 Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and select YES. Press the Menu/select key and reset the counter.

9.10.5 QUICK SETTING

A. UPDATE SETTING

Function	To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	 Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	1. Set the USB memory device. 2. Call the MAINTENANCE MENU screen to the display. 3. Select [QUICK SETTING] → [UPDATE SETTING]. 4. The "/setup/*.ini" files in the USB memory device appear on the display. NOTE • The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized. • Up to 20 files can be displayed.
	 5. Using the up key ▲/down key ▼, select the definition file to be updated and press the Menu/Select key. 6. Select [EXECUTE] and press the Menu/Select key. 7. The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. 8. When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. NOTE The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.

B. BACKUP SETTING

Function	 To store, as a definition file, the current printer setting information in the USB memory device.
Use	Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	 Set the USB memory device. Call the MAINTENANCE MENU screen to the display. Select [QUICK SETTING] → [BACKUP SETTING]. Select [EXECUTE] and press the Menu/Select key. The definition file with a file name of "SETUP**.ini" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. NOTE Any number from 01 to 20 takes the place of " **" in the file name. Up to 20 definition files can be saved.

10. Adjustment item list

Replacement part/Service job															
Adjustment/setting Items			No	Change media type (tray 2)	Install lower feeder unit	Install duplex option	Replace transfer roller	Replace transfer belt	Replace fuser unit	Replace PH unit	Replace print control board	Replace MFP board	RESTORE DEFAULTS	Execute F/W update	
	QUALITY MENU	CALIBRA- TION	AIDC PROCESS	1				(2)	(2)	(2)					
	SERVICE MENU	FIRMWARE VERSION	CONTROLLER F/W	2									(2)		0
			ENGINE F/W	3								(3)			0
١			BOOT F/W	4											0
MENU		ALIGN- MENT	TOP ADJUSTMENT	5	0	0					(1)				
Σ			LEFT ADJUSTMENT	6		0					(2)				
			LEFT ADJ DUPLEX	7			0								
		SUPPLIES	TRANS. BELT	8					(1)						
			TRANS. ROLLER	9				(1)							
			FUSER UNIT	10						(1)					
Re	Re-entry			11										0	
F/V	F/W update		12								(2)	(1)			
Rei	Remounting of parameter chip (PRCB)			13								(1)			

^{*} 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.

11 SERVICE MENU

11.1 How to enter the service menu

NOTE

Make sure not to reveal the password of the service menu to any unauthorized person.

A. Procedure 1

- 1. Display [SERVICE MENU] on the menu screen and press the Menu/Select key.
- 2. [ENTER PASSWORD] message is displayed.
- Set first digit of password with the up key ▲/down key ▼ and press the right key ►.
- Repeat the above procedures to set up to seventh digit of password. Enter "KMBC31P" for service password.

NOTE

- · The service password needs to correspond to the product name.
- 5. Press the Menu/Select key.

B. Procedure 2

 Turn the power switch ON while pressing the up key and the Menu/Select key at the power switch OFF.

NOTE

- Continue to press the up key▲ and the Menu/Select key until "INITIALIZING" message appears on the control panel.
- 2. When initializing is complete, the service menu appears.

NOTE

 Password authentication is not required before starting to operate the service menu, however, once the service menu is closed, you need to enter the password to display the service menu again.

C. Procedure 3

- If a service call message is on the display, perform the following steps, since the ordinary
 procedure may not be good for entering the service menu.
- With the service call message on the display, hold down the Menu/Select key for 5 sec. or more.
- Set first digit of password with the up key ▲/down key ▼ and press the right key ►.
- Repeat the above procedures to set up to seventh digit of password.
 Enter "KMBC31P" for service password.

Only the following menu items are, however, available if the service menu is accessed through the above steps.

- SERIAL NUMBER
- FIRMWARE VERSION
- RESTORE PASSWORD
- BK CLEAR
- FIRMWARE UPDATE
- SOFT SWITCH

D. Exiting

· Press the Cancel key.

11.2 Service menu function tree

SERVICE MENU		Ref. Page	
SERIAL NUMBER			P.182
FIRMWARE	CONTROLLER F/W		P.182
VERSION	ENGINE F/W		
	FINISHER F/W *1		
	BOOT F/W		
ALIGNMENT	TOP ADJUSTMEN	IT	P.182
	LEFT ADJUSTMENT		P.182
	LEFT ADJ DUPLE	X	P.183
	TRANSFER	SIMPLEX PASS	P.183
	POWER	DUPLEX PASS	P.183
		MANUAL DUPLEX	P.184
	IMG ADJ THICK	•	P.184
	IMG ADJ BLACK		P.184
	IMAGE ADJ PARA	M	P.185
	MAXIMUM DENSITY		P.185
	FUSER CONTROL		P.185
	AIDC MODE		P.186
PRINT MENU	MAINTENANCE INFO		P.186
	EVENT LOG		P.188
	CONFIGURATION PG		P.188
	HALFTONE 64		P.189
	HALFTONE 128		P.189
	HALFTONE 256		P.189
	GRADATION		P.189
SUPLLIES	REPLACE	TRANS. BELT	P.189
		TRANS. ROLLER	P.190
		FUSER UNIT	P.190
RESTORE PASSWO	RD	•	P.190
BK CLEAR		P.190	
QUICK SETTING *2	UPDATE SETTING		P.191
	BACKUP SETTING		P.191
FIRMWARE UPDATE *2		P.192	
SOFT SWITCH	SOFT SWITCH 1		P.192
	SOFT SWITCH 2		
	SOFT SWITCH 3		
	SOFT SWITCH 4		

^{*1:} It will be displayed only when the optional staple finisher is mounted.

^{*2:} It will be displayed only when a USB memory device is mounted.

11.3 SERVICE MENU

11.3.1 SERIAL NUMBER

Function	Displays the serial number of the printer.
Use	To confirm the printer's serial number.
	Select [SERVICE MENU] and press the Menu/Select key. Select [SERIAL NUMBER] and press the Menu/Select key. The serial number of the printer is displayed.

11.3.2 FIRMWARE VERSION

Function	Displays the version number of the printer firmware.	
Use	To use when the firmware is updated. To confirm the version number of the printer firmware. CONTROLLER F/W: Firmware of controller ENGINE F/W: Firmware of engine FINISHER F/W: Firmware of finisher (only when the optional staple finisher is mounted.) BOOT/F/W: Boot firmware	
Setting /procedure	Select [FIRMWARE VERSION] and press the Menu/Select key. Select desired firmware and press the Menu/Select key. Version number of firmware is displayed.	

11.3.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	Adjusts the top margin of media for single-sided printing.	
Use	To correct a misaligned print image. PLAIN PAPER: Adjust the head margin of plain paper. THICK: Adjust the head margin of thick paper. ENVELOPE: Adjust the head margin of envelope. TRANSPARENCY: Adjust the head margin of transparency.	
Setting /procedure	 Select [TOP ADJUSTMENT] and press the Menu/Select key. Select desired paper type and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key. 	
	-15 to +15 (1 step: 0.2 mm)	

B. LEFT ADJUSTMENT

Function	Adjusts the left margin of media for single-sided printing.	
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of media fed from tray 4.	
Setting /procedure	 Select [LEFT ADJUSTMENT] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key. 	
	-15 to +15 (1 step: 0.2 mm)	

C. LEFT ADJ DUPLEX

Function	Adjusts the left margin of media for double-sided printing.	
Use	To correct a misaligned print image. LEFT ADJ TRAY 1: Adjust the left margin of duplex print media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2: Adjust the left margin of duplex print media fed from tray 2. LEFT ADJ TRAY 3: Adjust the left margin of duplex print media fed from tray 3. LEFT ADJ TRAY 4: Adjust the left margin of duplex print media fed from tray 4.	
Setting /procedure	 Select [LEFT ADJ DUPLEX] and press the Menu/Select key. Select desired tray and press the Menu/Select key. Select desired adjustment amount with the up key ▲/down key ▼ and press the Menu/Select key. 	
	-15 to +15 (1 step: 0.2 mm)	

D. TRANSFER POWER

(1) SIMPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the single-sided pages for each media type.	
Use	To use when the transfer failure at the trailing edge occurs.	
Adjustment Range	The default setting is "0." -8 to +7	
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.	
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [SIMPLEX PASS] and press the Menu/Select key. Select desired media type with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 	

(2) DUPLEX PASS

Functions	Adjust the 2nd image transfer output (ATVC) on the duplexed pages for each media type.	
Use	To use when the transfer failure at the trailing edge occurs.	
Adjustment Range	The default setting is "0." -8 to +7	
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.	
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [DUPLEX PASS] and press the Menu/Select key. Select desired media type with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 	

(3) MANUAL DUPLEX

Functions	Adjust the 2nd image transfer output (ATVC) on the manual duplexed pages for each media type.	
Use	To use when the transfer failure at the trailing edge occurs.	
Adjustment Range	• The default setting is 08 to +7	
Adjustment Instructions	To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.	
Setting/ Procedure	 Select [TRANSFER POWER] and press the Menu/Select key. Select [MANUAL DUPLEX] and press the Menu/Select key. Select desired media type with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 	

E. IMG ADJ THICK

Functions	 To fine-adjust density of printed images of each color for thick paper and OHP trans- parencies. 	
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	
Adjustment Instructions	Light color: increase the setting value Dark color: decrease the setting value	
Setting/ Procedure	 Select [IMG ADJ THICK] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 	

F. IMG ADJ BLACK

Functions	To fine-adjust the density of the printed image for a black printing.	
Use	To vary the density of the printed image of a black printing.	
Adjustment Range	The default setting is 0. -2 to +2	
Adjustment Instructions	If the black is light, increase the setting value. If the black is dark, decrease the setting value.	
Setting/ Procedure	 Select [IMG ADJ BLACK] and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key. 	

G. IMAGE ADJ PARAM

Function	Adjusts the printer in case of an image quality problem (uneven density)	
Use	To correct image quality problems (uneven density) due to the printer being operated at a high altitude.	
Setting /procedure	The default setting is 0. "0"	1
	NOTE • When the setting has been changed, be sure to run a CALIBRATION/AIDC process. See P.140	

H. MAXIMUM DENSITY

Functions	 To adjust gradation, color, and image density to target reproduction levels by varying the maximum amount of toner sticking to media 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	-10 to +10
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	 Select [MAXIMUM DENSITY] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select desired setting value with the up key ▲/down key ▼ and press the Menu/Select key.
	NOTE • When the setting has been changed, be sure to run a CALIBRATION/AIDC process. See P.140

I. FUSER CONTROL

Function	Sets the heater lamp lighting control so that it implements the flicker standards.
Use	To use when flickering from fluorescent light occurs.
	0: Not set flicker control
	1: Control flickering
	2: Not control flickering
	3: Undefined (When "3" is selected, it becomes "0: Not set flicker control.")
Setting	The default setting is "0."
/procedure	0 to 3

J. AIDC MODE

Function	Sets the frequency of image stabilization switch is turned ON or the machine returns.	·
Use	ON or the machine returns from MODE2: Reduces the frequency of ima	zation when the main power switch is turned in sleep mode. (Standard mode) ge stabilization that is performed when the N or the machine returns from sleep mode.
Setting /procedure	The default setting is MODE1. "MODE1"	MODE2

11.3.4 DIAGNOSIS MENU

A. PRINT MENU

(1) MAINTENANCE INFO

Functions	 To produce an output of a list of setting values, adjustment values, total counter values, and others. 		
Use	To check the maintenance information. The items which can be checked are as follows. Device Caution Information: Process caution information Count (total) : Counter value for each color Coverage (total) : Coverage rate for each color Replace count (total) : Number of times IU, TC, transfer belt, transfer roller, and fuser unit have been replaced. Imaging Unit Information : Information concerning the imaging unit Toner Cartridge Information: Information concerning the toner cartridge		
Setting/ Procedure	Select [MAINTENANCE INFO] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.		

PROCESS CAUTION INFORMATION 1

BIT	Item		Description
0	_		_
1	_		_
2	_		_
3	_		_
4	_		_
		1	IDC sensor output values are out of the specified range.
5	IDC Sensor (Front) failure	0	 Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
6	_		_
7	_		_
8	_		_
9	_	_	
		1	IDC sensor output values are out of the specified range.
10	IDC Sensor (Back) failure	0	 Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.

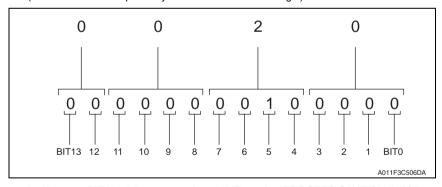
BIT	Item		Description
11	Color Shift Test Pattern failure		The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. The number of points detected in the sub scan direction is more or less than the specified value during sub scan direction registration correction.
			 Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
12	Color Shift Adjust failure	1	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. The skew correction amount is greater than the specified value.
		0	 Front door open/close, power switch OFF/ON, and normal image stabilization are complete besides the ones listed above.
13	=		_

<How to read process caution information>

 Convert the numerical value of the hexadecimal number printed on "PROCESS CAU-TION INFORMATION 1 in [MAINTENANCE INFO] into the binary number, it compares with the allocation of each BIT, and the caution status is confirmed.

ex. When process caution information is displayed as 0x0020.

- 1. Convert four end digits "0020" of 0x0020 into the binary number (14 digits).
- The BIT number is allocated in converted value "0000000100000." (BIT0 to BIT13 is sequentially allocated from the first digit.)



 In this case, BIT No. "5" corresponds to "1". From the "PROCESS CAUTION INFOR-MATION 1", IDC sensor (front) malfunction can be detected.

Conversion method from hexadecimal number to binary number

 The hexadecimal number (four digits) is converted in each digit based on the following table.

Hexadeci- mal number	Binary number	Hexadeci- mal number	Binary number	Hexadeci- mal number	Binary number	Hexadeci- mal number	Binary number
0	0000	4	0100	8	1000	С	1100
1	0001	5	0101	9	1001	D	1101
2	0010	6	0110	Α	1010	Е	1110
3	0011	7	0111	В	1011	F	1111

Match the converted numerical value of four digits, then two head digits are excluded and it is assumed the binary number of 14 digits.

(2) EVENT LOG

Functions	To print the EVENT LOG.		
Use	To check the jams/troubles which occurred, and the history of replacing the consumables. The items which can be checked are as follows.		
	Paper Jam Error : The number of times jam have occurred and its history Engine Fatal Error : The history of the troubles which required service call Fuser Unit : The history of replacing the fuser unit Transfer Belt : The history of replacing the transfer belt Second Trans : The history of replacing the transfer roller Toner Cartridge : The history of replacing the toner cartridge Imaging Unit : The history of replacing the imaging unit Trouble Counter : Trouble counting for each section		
Setting/ Procedure	Select [EVENT LOG] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.		

(3) CONFIGURATION PG

Functions	Prints the information concerning the Configuration.		
Use	To check the adjustment values set by the Maintenance Menu and Service Menu. The items which can be checked are as follows.		
	TOP ADJUSTMENT LEFT ADJUSTMENT LEFT ADJ DUPLEX TRANSFER POWER IMG ADJ THICK IMG ADJ BLACK		
	IMAGE ADJ PARAM MAXIMUM DENSITY FUSER CONTROL		
Setting/ Procedure	Select [CONFIGURATION PG] and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.		

(4) HALF TONE 64

Functions	Prints the halftone pattern with 25 % level for CMYK respectively.
Use	To check the unevenness of the density and the pitch.
Procedure	 Set the A4S or letterS media on the tray. Select [HALF TONE 64] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

(5) HALF TONE 128

Functions	Prints the halftone pattern with 50 % level for CMYK respectively.
Use	To check the unevenness of the density and the pitch.
	 Set the A4S or letterS media on the tray. Select [HALF TONE 128] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

(6) HALF TONE 256

Functions	Prints the halftone pattern with 100 % level for CMYK respectively.
Use	To check the unevenness of the density and the pitch.
Procedure	 Set the A4S or letterS media on the tray. Select [HALF TONE 256] and press the Menu/Select key. Select desired color with the up key ▲/down key ▼ and press the Menu/Select key. Select [PRINT] and press the Menu/Select key.

(7) GRADATION

Functions	Prints the gradation pattern.			
Use	To check the gradation reproductively.			
Setting/	1. Set the A4S or letterS media on the tray.			
Procedure	2. Select [GRADATION] and press the Menu/Select key.			
	3. Select [PRINT] and press the Menu/Select key.			

11.3.5 SUPPLIES

A. REPLACE

(1) TRANS. BELT

Function	Resets the transfer belt counter.			
Use	To use when the transfer belt has been replaced.			
/procedure	 Call the service menu to the screen. Select [SUPPLIES] → [REPLACE] → [TRANS. BELT], and select "YES." Press the menu/select key and reset the counter. 			

(2) TRANS. ROLLER

Function	Resets the transfer roller counter.			
Use	To use when the transfer roller has been replaced.			
Setting /procedure	 Call the service menu to the screen. Select [SUPPLIES] → [REPLACE] → [TRANS. ROLLER], and select "YES." Press the menu/select key and reset the counter. 			

(3) FUSER UNIT

Function	Resets the fuser unit counter.			
Use	To use when the fuser unit has been replaced.			
Setting /procedure	 Call the service menu to the screen. Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT], and select "YES." Press the menu/select key and reset the counter. 			

11.3.6 RESTORE PASSWARD

Function	Reinitializes the user password used for the "INTERFACE MENU / SYSTEM DEFAULT MENU / MAINTENANCE MENU" set by user.		
Use	To reinitialize the user password when the menu cannot be opened even when entering the correct password. To reinitialize the user password when the user forgets the password. YES: Initialize password NO: Not initialize password		
Setting /procedure	Select "RESTORE PASSWORD" and press the Menu/Select key. Select "YES" and press the Menu/Select key. Return the password set at "INTERFACE MENU/SYSTEM DEFAULT MENU/MAINTENANCE MENU" to "0000." The default setting is NO.		
	YES "NO"		

11.3.7 BK CLEAR

Function	To clear engine information backup data		
Use	Use when the engine information backup data is cleared. YES: Executes data clear NO: Does not execute data clear		
Setting	The default setting is NO.		
/procedure	YES	"NO"	

11.3.8 QUICK SETTING

A. UPDATE SETTING

Function	To update printer settings according to the printer setting definition file stored in the USB memory device.			
Use	 Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly. 			
Setting /procedure	 Set the USB memory device. Call the SERVICE MENU screen to the display. Select [QUICK SETTING] → [UPDATE SETTING]. The "/setup/*.ini" files in the USB memory device appear on the display. NOTE The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized. Up to 20 files can be displayed. Using the up key ▲/down key ▼, select the definition file to be updated and press the Menu/Select key. Select [EXECUTE] and press the Menu/Select key. The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. NOTE The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items. 			

B. BACKUP SETTING

Function	To store, as a definition file, the current printer setting information in the USB memory device.			
Use	Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.			
Setting /procedure	 Set the USB memory device. Call the SERVICE MENU screen to the display. Select [QUICK SETTING] → [BACKUP SETTING]. Select [EXECUTE] and press the Menu/Select key. The definition file with a file name of "SETUP**.ini" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. NOTE Any number from 01 to 20 takes the place of "**" in the file name. Up to 20 definition files can be saved. If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved. When the saving procedure is completed, the printer gives a message notifying that the procedure is completed. 			

11.3.9 FIRMWARE UPDATE

A. VIEW INFORMATION

Function Use	To display the firmware information stored in the USB memory device. The following information is displayed: Model name of firmware data
	Version information of firmware data
Setting /procedure	1. Set the USB memory device. 2. Call the SERVICE MENU screen to the display. 3. Select [FIRMWARE UPDATE] and press the Menu/Select key. 4. Select the specific type of firmware data to be upgraded and press the Menu/Select key. 5. Select [VIEW INFORMATON] and press the Menu/Select key. NOTE • An error message appears if the selected data is not of the appropriate data format.

B. EXECUTE

Function	To upgrade firmware using the USB memory device.			
Use	Use for upgrading firmware.			
Setting /procedure	See P.27			

11.3.10 SOFT SWITCH

Function	
Use	Not used.
Setting	1101 40041
/procedure	

oizhub C31P

12 Other functions

12.1 Rewriting security information into the hard disk kit and the compact flash

12.1.1 Outline

 When the optional hard disk kit and compact flash are formatted, they save the values specific to the MFP board (MFPB) installed in each printer.
 Because of this, the hard disk kit and compact flash that have been used in a printer can-

not be used in a different printer, in this way, job and account information stored in the hard disk kit and compact flash are protected.

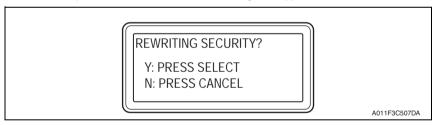
- There may be cases where the print control board is damaged and replaced, in that
 case, it is required to rewrite security information into the user's current hard disk kit and
 compact flash in order to continue to use the data included in the hard disk kit and compact flash.
- Without rewriting new security information, the hard disk kit and compact flash can be used if they are formatted again.

12.1.2 Procedure

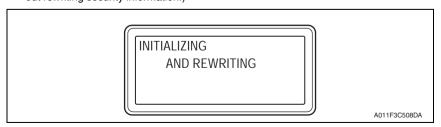
 After the MFP board (MFPB) replacement, in the condition of the hard disk and the compact flash being installed, turn the power switch ON while pressing the up key and the cancel key.

NOTE

- Continue to press the up key▲ and the cancel key until "INITIALIZING" message appears on the control panel.
- 2. After startup, "REWRITING SECURITY" message will appears.



 When the menu/select key is pressed, the printer starts rewriting security information and then start operating. (If the cancel key is pressed, the printer starts operating without rewriting security information.)



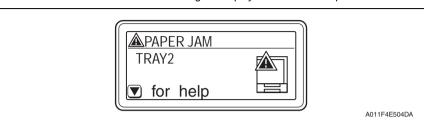
Blank Page

Troubleshooting

13. Jam display

13.1 Misfeed display

• When a media misfeed occurs a message is displayed on the control panel.



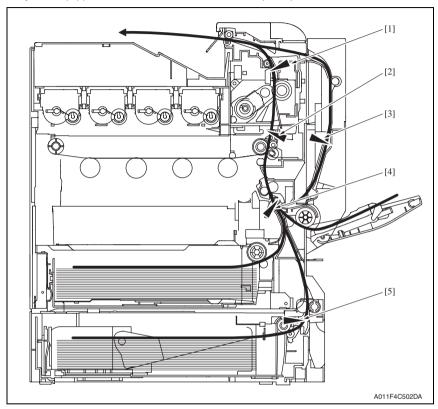
Display		Misfeed location	Misfeed processing	Action
LCD 1	LCD 2	Misieed location	location	Action
	FUSER/EXIT	Fusing/exit section	Right door Fuser unit	P.200
	SECOND TRANS	Transfer section	Right door	P.199
			Right door	P.198
	VERTICAL TRANS	Vertical transport	Tray 3 right door Tray 4 right door	See P.15 of the lower feeder unit service manual.
	DUPLEX1	See P.9 of the duplex opti	on service manual.	
	DUPLEX2			
PAPER JAM	TRAY1	Tray 1 media feed	Manual feed tray Right door	P.198
	TRAY2	Tray 2 media feed	Tray 2 Right door	P.198
	TRAY3	See P.15 of the lower feeder unit service manual.		
	TRAY4			
	FINISHER	See P.23 of the staple finisher service manual.		
	SUB EXIT			
	UPPER TRANS			
	MAIN EXIT			
	STAPLER			
Service call: F001		Media misfeed in control logic		P.201

13.2 Misfeed display resetting procedure

• Open the relevant door, clear the sheet of misfed media, and close the door.

13.3 Sensor layout

• System equipped with a lower feeder units and a duplex option



- [1] Exit sensor (PS8)
- [2] Media loop sensor (PS6)
- [3] Sensor on AD control board (ADCB)
- [4] Registration sensor (PS4)
- [5] Media feed sensor (optional lower feeder unit) (PS2)

13.4 Solution

13.4.1 Initial check items

• When a media misfeed occurs, first make checks of the following initial check items.

Check item	Action	
Does media meet product specifications?	Change media.	
Is media curled, wavy, or damp.	Change media. Instruct user in correct media storage.	
Is a foreign matter present along the media path, or is the media path deformed or worn?	Clean or change the media path.	
Are the media separator fingers dirty, deformed, or worn?	Clean or change the defective media separator finger.	
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.	
Are the edge guide and trailing edge stop at correct position to accommodate the media?	Set as necessary.	
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.	

13.4.2 Misfeed at tray 2 media feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 2 media feed section	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the media feed clutch/1 (CL1) is turned ON.

B. Action

Relevant electrical parts	
Registration sensor (PS4) Media feed clutch/1 (CL1) Intermediate transport motor (M3)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electri- cal component)
1	Initial check items	_	_
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3
3	CL1 operation check	PRCB PJ6-2 (ON)	I-6
4	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
5	Change PRCB.	=	_

13.4.3 Misfeed at tray1 media feed section

A. Detection timing

Туре	Description
,	The media does not unblock the registration sensor (PS4) even after the lapse
media feed section	of a given period of time after the media feed clutch/2 (CL3) is turned ON.

Relevant electrical parts	
Registration sensor (PS4)	Print control board (PRCB)
Media feed clutch/2 (CL3)	
Intermediate transport motor (M3)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Initial check items	_	_
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3
3	CL3 operation check	PRCB PJ6-4 (ON)	I-6
4	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
5	Change PRCB.	_	_

13.4.4 Misfeed at transfer section

A. Detection timing

Туре	Description
Detection of misfeed at transfer section	 The registration sensor (PS4) is not blocked even after the lapse of a given period of time after the media has unblocked PS4. The media does not block the exit sensor (PS8) even after the lapse of a given period of time after the media has unblocked the registration sensor (PS4). When a sheet of media is passing through the registration sensor (PS4), the pressure sequence of the 2nd transfer section has not started.
Detection of media left in transfer section	 The registration sensor (PS4) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset. The media loop sensor (PS6) is unblocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts		
Registration sensor (PS4)	Print control board (PRCB)	
Exit sensor (PS8)		
Media loop sensor (PS6)		
Pressure/retraction clutch/2 (CL5)		

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	_	_
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3
3	PS8 sensor check	PRCB PJ4-6 (ON)	I-2
4	PS6 sensor check	PRCB PJ16-3 (ON)	C-3 to 4
5	CL5 operation check	PRCB PJ10-8 (ON)	I-7
6	Change PRCB.	=	_

13.4.5 Misfeed at fusing/exit section

A. Detection timing

Туре	Description
Detection of misfeed at fusing/ exit section	 The exit sensor (PS8) is not unblocked even after the lapse of a given period of time after the media has blocked PS8. The media does not unblock the sensor on the AD control board (ADCB) even after the lapse of a given period of time after it has blocked the exit sensor (PS8) during media feeding from the duplex option.
Detection of media left in fusing/exit section	The exit sensor (PS8) is blocked when the power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts	
Exit sensor (PS8)	AD control board (ADCB) Print control board (PRCB)

		WIRING DIAGRAM		
Step	Action	Control signal	Location (electrical component)	
1	Initial check items	_	_	
2	PS8 sensor check	PRCB PJ4-6 (ON)	I-2	
3	Change ADCB.	_	_	
4	Change PRCB.	_	_	

13.4.6 Media misfeed in control logic

A. Detection timing

Туре	Description
Detection of media misfeed in control logic	By image write start signal timing The pressure operation of the first image transfer mechanism is not completed during full color printing. The first image transfer mechanism is not in the state of retraction during monochrome printing.
	 While the leading edge of an image has reached the position where the first image transfer process is performed, the pressure operation of the second image transfer mechanism is not completed.
	A duplex print job is sent with the number of pages that goes beyond the maximum number of pages allowed to be in the printer for the selected media type.
	When trying to feed duplex media though there is no media to be fed to the duplex print unit.
	When printing is directed with the duplex print unit selected as a media source and an exit media set to be fed to the duplex unit.
	While two sheets of media are in the printer, printing is directed with normal media feed settings other than a duplex media feed setting.
	In duplex printing, a size error or media error occurs.

Relevant electrical parts	
,	Print control board (PRCB)
AD control board (ADCB)	

		WIRING DIAGRAM		
Step	Action	Control signal	Location (electri- cal component)	
1	Check printer driver settings.	_	_	
2	Change ADCB.	_	_	
3	Change MFPB.	=	_	
4	Change PRCB.	=	_	

14. Malfunction code

14.1 Trouble codes (service call)

 The printer's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the control panel.



14.1.1 Trouble code list

 For the details of the malfunction codes of the options, see the service manual for the corresponding option.

LCD1	LCD2/LCD3		
(service	(error	Item	Detection timing
call ID)	description)		
0010	P MOTOR 1	Color PC drum motor malfunction	 The color PC drum motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the color PC drum motor is being rotated.
0017	P MOTOR 2	Intermediate transport motor malfunction	 The intermediate transport motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the intermediate transport motor is being rotated.
0018	D MOTOR 2	Developing motor/K malfunction	 The developing motor/K does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the developing motor/K is being rotated.
001B	D MOTOR 1	Developing motor/ Y,M,C malfunction	 The developing motor/Y,M,C does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the developing motor/Y,M,C is being rotated.
0046	FUSER FAN	Fusing fan motor malfunction	 The fusing fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the fusing fan motor is being rotated.

bizhub C31P

LCD1	LCD2/LCD3		
(service	(error	Item	Detection timing
call ID)	description)	0	The constitution for grades do not not be
004C	OZONE FAN	Ozone ventilation fan motor malfunction	 The ozone ventilation fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the ozone ventilation fan motor is being rotated.
004E	POWER FAN	DC power supply fan motor malfunction	 The DC power supply fan motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the DC power supply fan motor is being rotated.
0060	FUSER MOTOR	Fusing motor malfunction	 The fusing motor does not rotate evenly even after the lapse of a given period of time while it is being started. The motor lock signal remains HIGH for a given period of consecutive time while the fusing motor is being rotated.
0094	XFER DETACH 2	2nd image transfer pressure/ retraction failure	 The retraction position sensor/2 is not activated (retracted position) within a given period of time after the retraction sequence of the 2nd transfer roller has been started. The retraction position sensor/2 is not deactivated (pressed position) within a given period of time after the pressure sequence of the 2nd transfer roller has been started.
0096	XFER DETACH 1	1st image transfer pressure/ retraction failure	 The retraction position sensor/1 is not activated (retracted position) within a given period of time after the intermediate transport motor has started rotating. The retraction position sensor/1 is not deactivated (pressed position) within a given period of time after the intermediate transport motor has started rotating.
0300	POLYGON MOTOR	Polygon motor malfunction	 The polygon motor does not rotate evenly even after the lapse of a given period of time after it has been started. The motor lock signal remains HIGH for a given period of consecutive time while the polygon motor is being rotated.
0310	LASER ERROR	Laser malfunction	The SOS signal is not detected within a given period of time after the output of the laser has been started.
0500	FUSER ERROR	Heating roller warm-up failure	 The thermistor/1 does not detect the specified tem- perature and the warm-up cycle is not completed even after the lapse of a given period of time after the cycle has been started.
0501	FUSER ERROR	Fusing pressure roller warm-up failure	The thermistor/2 does not detect the specified tem- perature and the warm-up cycle is not completed even after the lapse of a given period of time after the cycle has been started.

bizhub C31P

LCD1	LCD2/LCD3	ltom	Detection timing
(service call ID)	(error description)	Item	Detection timing
0510	FUSER ERROR	Abnormally low heating roller temperature	The temperature detected by the thermistor/1 remains lower than the specified value for a given period of time or longer.
0511	FUSER ERROR	Abnormally low fusing pressure roller temperature	The temperature detected by the thermistor/2 remains lower than the specified value for a given period of time or longer.
0520	FUSER ERROR	Abnormally high heating roller temperature	 The temperature detected by the thermistor/1 remains higher than the specified value for a given period of time or longer. The heater lamp remains ON for a given period of time or longer.
0521	FUSER ERROR	Abnormally high fusing pressure roller temperature	The temperature detected by the thermistor/2 remains higher than the specified value for a given period of time or longer.
0B30	FINISHER ERROR	Finisher aligning plate drive malfunction	See P.29 of the staple finisher service manual.
0B47	FINISHER ERROR	Finisher media holding drive malfunction	
0B48	FINISHER ERROR	Finisher exit roller pres- sure/retraction mal- function	
0B4A	FINISHER ERROR	Finisher aligning belt pressure/retraction malfunction	
0B4C	FINISHER ERROR	Finisher media ejector motor malfunction	
0BA0	FINISHER ERROR	Finisher tray up/down motor ascent/descent drive malfunction	
0BE1	FINISHER ERROR	Finisher fan motor mal- function	
0F52	TE SENSOR Y	Toner level sensor/Y malfunction	An error occurs on the toner level sensor board (TLSB).
0F53	TE SENSOR M	Toner level sensor/M malfunction	
0F54	TE SENSOR C	Toner level sensor/C malfunction	
0F55	TE SENSOR K	Toner level sensor/K malfunction	
133B	FINISHER COMMUNI- CATION	Finisher communication error	A communication error occurs between the main body and the finisher.
13C0	ENGINE H/W ERROR	Print control board mal- function	A communication error occurs in print control board (PRCB).
13E2	FLASH WRITE	Flash ROM write error	Flash ROM writing is found faulty during a check.

LCD1	LCD2/LCD3	Item	Detection timing
(service call ID)	(error description)	item	Detection timing
,		E BOM	
13E3	FLASH DEVICE	Flash ROM device fault	An erase error occurs during erasing of data in flash ROM.
3C00	EEPROM1	Trouble related to	Contact the responsible people of KMBT when not
3C10	EEPROM2	security	returning in power switch OFF/ON.
3FFB	FINISHER ROM	Finisher flash ROM error	An error occurs with flash ROM of the optional sta- ple finisher.
C002	RAM ERROR	RAM error at startup (standard memory)	RAM error at standard memory is detected during printer start-up.
C003	RAM ERROR	RAM error at startup (expanded memory)	RAM error at expanded memory is detected during printer start-up.
C013	H/W ADDRESS	MAC address error at startup	 Invalid MAC address is detected during printer start-up.
C015	BOOT ROM	Boot ROM error at startup	Boot ROM error is detected during printer start-up.
C025	CONTROL- LER ROM	Controller ROM error (Configuration information error)	Lead error of destination setting file is detected during the printer starting.
C026		Controller ROM error (Access error)	Flash ROM access error is detected during the printer starting.
C027		Controller ROM error (Data error)	Final check sum error is detected during the printer starting.
C050	HDD ERROR	HDD access error	When correct access to the hard disk kit is failed during access.
C051	HDD DISK FULL	HDD full error	Range for user space is full during access to the hard disk kit.
C052	CARD ERROR	Compact flash access error	When correct access to the compact flash card is failed during access.
C053	CARD FULL	Compact flash full error	Range for user space is full during access to the compact flash card.
C060	UPDATE ERROR	Firmware update error	Firmware update fails to complete correctly during update.
C071	H/W CON- FIG ERROR	Hardware configura- tion error	An error occurs with hardware configuration (video clock etc.).
FFFF	I/F COMM ERROR	Interface communication error	Correct communication is failed when receiving/ sending the command between PRCB and MFPB.

14.2 Resetting a malfunction

• To reset a malfunction, turn the power switch OFF and then ON again.

14.3 Solution

14.3.1 0010: Color PC drum motor malfunction

Relevant electrical parts		
Color PC drum motor (M2) Print control board (PRCB) DC power supply (DCPU)		

	Action	WIRING DIAGRAM		
Step		Control signal	Location (electrical component)	
1	Check the M2 connector for proper connection and correct as necessary.	_	_	
2	Check M2 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 PJ14-3 (REM) PRCB PJ14-6 (LOCK)	C-6	
5	Change M2.	_	_	
6	Change PRCB.	_	_	
7	Change DCPU.	_		

14.3.2 0017: Intermediate transport motor malfunction

Relevant electrical parts	
Intermediate transport motor (M3)	Print control board (PRCB) DC power supply (DCPU)

	Action	WIRING DIAGRAM		
Step		Control signal	Location (electrical component)	
1	Check the M3 connector for proper connection and correct as necessary.	_	_	
2	Check M3 for proper drive coupling and correct as necessary.	_	_	
3	Check the PRCB connector for proper connection and correct as necessary.	_	_	
4	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5	
5	Change M3.	_	_	
6	Change PRCB.	_	_	
7	Change DCPU.	<u> </u>	_	

14.3.3 0018: Developing motor/K malfunction

Relevant electrical parts	
Developing motor/K (M5)	Print control board (PRCB) DC power supply (DCPU)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M5 connector for proper connection and correct as necessary.	_	_
2	Check M5 for proper drive coupling and correct as necessary.	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	_
4	M5 operation check	PRCB PJ33-3 (REM) PRCB PJ33-6 (LOCK)	C-6
5	Change M5.	_	_
6	Change PRCB.	_	_
7	Change DCPU.	_	_

14.3.4 001B: Developing motor/Y,M,C malfunction

Relevant electrical parts		
Developing motor/Y,M,C (M1) Print control board (PRCB)		
Driving unit	DC power supply (DCPU)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M1 connector for proper connection and correct as necessary.	_	_
2	Check the PRCB connector for proper connection and correct as necessary.	_	_
3	M1 operation check	PRCB PJ8-3 (REM) PRCB PJ8-6 (LOCK)	C-7
4	Change driving unit.	_	_
5	Change PRCB.	_	_
6	Change DCPU.	_	_

14.3.5 0046: Fusing fan motor malfunction

Relevant electrical parts	
Fusing fan motor (FM2)	Print control board (PRCB)

	Action	WIRING DIAGRAM	
Step		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.	_	_
3	FM2 operation check	PRCB PJ21-1 (ON) PRCB PJ21-3 (LOCK)	C-9
4	Change FM2.	_	_
5	Change PRCB.	_	_

14.3.6 004C: Ozone ventilation fan motor malfunction

Relevant electrical parts	
Ozone ventilation fan motor (FM3)	Print control board (PRCB)

	Action	WIRING DIAGRAM	
Step		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 PJ6-5 (ON) PRCB PJ6-7 (LOCK)	J-6
4	Change FM3.	=	_
5	Change PRCB.	_	_

14.3.7 004E: DC power supply fan motor malfunction

Relevant electrical parts	
DC power supply fan motor (FM1)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		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 PJ9-1 (ON) PRCB PJ9-3 (LOCK)	C-2
4	Change FM1.	_	_
5	Change PRCB.		_

14.3.8 0060: Fusing motor malfunction

Relevant electrical parts	
Fusing motor (M4)	Print control board (PRCB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical component)
1	Check the M4 connector for proper connection and correct as necessary.	_	_
2	Check the fuser unit driving mechanism for possible overload and correct as necessary.	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	=
4	M4 operation check	PRCB PJ19-3 (REM) PRCB PJ19-6 (LOCK)	C-9
5	Change M4.		_
6	Change PRCB.		

14.3.9 0094: 2nd image transfer pressure/retraction failure

Relevant electrical parts		
Retraction position sensor/2 (PS10)	Print control board (PRCB)	
Pressure/retraction clutch/2 (CL5)		
Intermediate transport motor (M3)		

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical component)
1	Check the M3 connector for proper connection and correct as necessary.	_	_
2	Check the CL5 connector for proper connection and correct as necessary.	_	_
3	Check M3 for proper drive coupling and correct as necessary.	_	_
4	Check CL5 for proper drive coupling and correct as necessary.	_	_
5	Check the PRCB connector for proper connection and correct as necessary.	_	_
6	PS10 sensor check	PRCB PJ10-6 (ON)	J-7
7	CL5 operation check	PRCB PJ10-8 (ON)	J-7
8	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
9	Change M3.	_	_
10	Change CL5.	_	_
11	Change PRCB.	_	_

14.3.10 0096: 1st image transfer pressure/retraction failure

Relevant electrical parts		
Retraction position sensor/1 (PS9) Pressure/retraction clutch/1 (CL4) Intermediate transport motor (M3)	Print control board (PRCB)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Check the M3 connector for proper connection and correct as necessary.	_	_
2	Check the CL4 connector for proper connection and correct as necessary.	—	_
3	Check M3 for proper drive coupling and correct as necessary.	_	_
4	Check CL4 for proper drive coupling and correct as necessary.	_	_
5	Check the PRCB connector for proper connection and correct as necessary.	_	_
6	PS9 sensor check	PRCB PJ7-13 (ON)	C-2
7	CL4 operation check	PRCB PJ7-10 (ON)	C-1
8	M3 operation check	PRCB PJ27-3 (REM) PRCB PJ27-6 (LOCK)	C-5
9	Change M3.	_	_
10	Change CL4.	=	_
11	Change PRCB.	=	_

14.3.11 0300: Polygon motor malfunction

Relevant electrical parts	
PH unit	Print control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electri- cal component)
1	Check the cable and connector for proper connection and correct as necessary.	_	_
2	Change PH unit.	_	_
3	Change PRCB.	_	_

14.3.12 0310: Laser malfunction

Relevant electrical parts	
PH unit	Print control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electrical component)
1	Check the cable and connector for proper connection and correct as necessary.	_	_
2	Change PH unit.	_	_
3	Change PRCB.	_	_

14.3.13 0500: Heating roller warm-up failure

14.3.14 0501: Fusing pressure roller warm-up failure

14.3.15 0510: Abnormally low heating roller temperature

14.3.16 0511: Abnormally low fusing pressure roller temperature

14.3.17 0520: Abnormally high heating roller temperature

14.3.18 0521: Abnormally high fusing pressure roller temperature

Relevant electrical parts	
Fuser unit	Print control board (PRCB)
	DC power supply (DCPU)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electrical component)
1	Check the fuser unit for correct installation (whether it is secured in position).	_	_
2	Check the fuser unit, DCPU, and PRCB for proper connection and correct as necessary.		
3	Change fuser unit.	_	_
4	Change PRCB.		_
5	Change DCPU.	=	_

- 14.3.19 0F52: Toner level sensor/Y malfunction
- 14.3.20 0F53: Toner level sensor/M malfunction
- 14.3.21 0F54: Toner level sensor/C malfunction
- 14.3.22 0F55: Toner level sensor/K malfunction

Relevant electrical parts	
Toner level sensor board (TLSB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electri- cal component)
1	Check the TLSB and PRCB for proper connection and correct as necessary.	_	_
2	Change TLSB.	=	_
3	Change PRCB.	_	_

14.3.23 133B: Finisher communication malfunction

Relevant electrical parts	
FS control board (FSCB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electri- cal component)
1	Reboot the main body.	_	_
2	Change FSCB.	_	_
3	Change PRCB.	=	_

14.3.24 13C0: Print control board malfunction

Relevant electrical parts	
Print control board (PRCB)	

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	_	_
2	Change PRCB.	_	_

14.3.25 13E2: Flash ROM write error

14.3.26 13E3: Flash ROM device fault

Relevant electrical parts	
MFP board (MFPB)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the PRCB for proper connection and correct as necessary.	_	_
2	Change MFPB.	_	_
3	Change PRCB.	_	_

14.3.27 3FFB: Finisher flash ROM error

Relevant electrical parts	
FS control board (FSCB)	

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FSCB for proper connection and correct as necessary.	_	_
2	Change FSCB.	=	_

14.3.28 C002: RAM error at startup (standard memory)

14.3.29 C003: RAM error at startup (expanded memory)

Relevant electrical parts	
IMEP board (MEPR)	Standard memory Expanded memory

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Reboot the main body.	_	_
2	Check connection state of the standard/ expanded memory and correct as neces- sary.	_	_
3	Check the MFPB connector for proper connection and correct as necessary.	_	_
4	Change the standard/expanded memory.	_	_
5	Change MFPB.	_	_

14.3.30 C013: MAC address error at startup

14.3.31 C015: BOOT ROM error at startup

Relevant electrical parts	
MFP board (MFPB)	

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	_	_
2	Check the MFPB connector for proper connection and correct as necessary.	_	_
3	Change MFPB.	_	_

14.3.32 C025: Controller ROM error (Configuration information error)

14.3.33 C026: Controller ROM error (Access error)14.3.34 C027: Controller ROM error (Data error)

Relevant electrical parts

MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	=	_
2	Check the MFPB connector for proper connection and correct as necessary.	_	_
3	If this error message is displayed after update of firmware, conduct the firmware update procedures again.	_	_
4	Change MFPB.	_	_

14.3.35 C050: HDD access error

Relevant electrical parts			
MFP board (MFPB)	Hard disk kit (HDD)		

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.		_
2	Check the HDD connector for proper connection and correct as necessary.	_	_
3	Check the MFPB connector for proper connection and correct as necessary.	_	_
4	Change HDD.	=	_
5	Change MFPB.	_	_

14.3.36 C051: HDD full error

Relevant electrical parts	
MFP board (MFPB)	Hard disk kit (HDD)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical component)
1	Reboot the main body.	_	_
2	Delete the job hold in "PROOF/PRINT MENU" to increase the available range for user space.	_	_
3	Check the HDD connector for proper connection and correct as necessary.	_	_
4	Format HDD with "SYS DEFAULT MENU/ HDD FORMAT."	_	_
5	Change HDD.	_	_

14.3.37 C052: Compact flash access error

Relevant electrical parts	
MFP board (MFPB)	Compact flash card

Step		WIRING DIAGRAM	
	Action	Control signal	Location (electrical component)
1	Reboot the main body.	=	_
2	Check the compact flash for proper connection and correct as necessary.	_	_
3	Check the MFPB connector for proper connection and correct as necessary.	_	_
4	Change compact flash.	=	_
5	Change MFPB.	_	_

14.3.38 C053: Compact flash full error

Relevant electrical parts	
MFP board (MFPB) Compact flash card	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Reboot the main body.	_	_
2	Delete the job hold in "PROOF/PRINT MENU" to increase the available range for user space.	_	_
3	Check the compact flash for proper connection and correct as necessary.	_	_
4	Format compact flash with "SYS DEFAULT MENU/CARD FORMAT."	_	_
5	Change compact flash.	_	_

14.3.39 C060: Firmware update error

	Relevant electrical parts	
MFP board (MFPB)		

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electri- cal component)
1	Reboot the main body.	=	_
2	Check the cable that has been used for update of the firmware for proper connection and correct as necessary.	_	_
3	Check the firmware update file and if the file is not the correct one, update the firmware again.	_	_
4	Check the firmware update procedure and if the procedure is not correct, update the firmware again.	_	_
5	Update the firmware again.	=	_
6	Check the MFPB connector for proper connection and correct as necessary.	_	_
7	Change MFPB.	_	_

14.3.40 C071: Hardware configuration error

	Relevant electrical parts	
MFP board (MFPB)		

Step		WIRING DIAGRAM	
	Action	Control signal	Location (electrical component)
1	Reboot the main body.	_	_
2	Check the MFPB connector for proper connection and correct as necessary.	_	_
3	Change MFPB.	_	_

14.3.41 FFFF: Interface communication error

Relevant electrical parts	
MFP board (MFPB)	Print control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electrical component)
1	Reboot the main body.	_	_
2	Check the MFPB connector for proper connection and correct as necessary	_	_
3	Check the PRCB connector for proper connection and correct as necessary.	_	_
4	Change PRCB.	=	_
5	Change MFPB.	=	_

15. Power supply troubles

15.1 Machine is not energized at all (DCPU operation check)

Relevant electrical parts				
Power switch (S1) Print control board (PRCB)	DC power supply (DCPU)			

Step	Check item	Location (electri- cal component)	Result	Action
1	Is the power source voltage being applied to CN1 on DCPU?	H to I-4	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Are fuses (F1 and F2) on DCPU conducting?	_	NO	Change DCPU.
3	Are DC 24 V, DC 5 V and DC 3.3 V being applied to PJ1 on the print control board?	F-3	NO	Change PRCB. Change MFPB.
			YES	Change DCPU.

15.2 Control panel indicators do not light

Relevant electrical parts			
MFP board (MFPB) Operation board (OB) DC power supply (DCPU)			

Step	Check item	Location (electri- cal component)	Result	Action
1	1 Is the power source voltage being applied to CN1 on DCPU?		NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Are fuses (F1 and F2) on DCPU conducting?	_	NO	Change DCPU.
3	Is J22 on MFPB properly connected? I-10		NO	Reconnect.
4	Is J7000 on MFPB properly connected?	I-11	NO	Reconnect.
	Is CN2 on OB properly connected?	K-10 to 11	NO	Reconnect.
5			YES	Change OB. Change MFPB.

15.3 Fusing heaters do not operate

Relevant electrical parts				
Safety switch/Fr (S2) Safety switch/Rt (S3) Fuser unit	DC power supply (DCPU)			

Step	Check item	Location (electri- cal component)	Result	Action
1	Is the power source voltage being applied to CN1 on DCPU? The front door and right door should in closed position at this time.	H to I-4	NO	Check wiring from power outlet to PG1 to CN1DCPU.
2	Is the power source voltage being applied 2 to CNO on DCRU2 H to I-3		YES	Change fuser unit.
_	to CN2 on DCPU?	111010	NO	Change DCPU.

16. Image quality problems

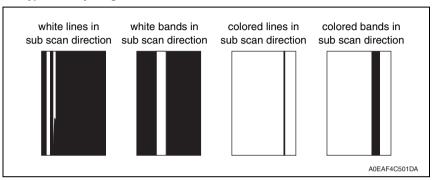
16.1 Solution

NOTE

Typical faulty image samples shown in the following are all printed with A4S setting.

16.1.1 White lines/bands, colored lines/bands in sub scan direction

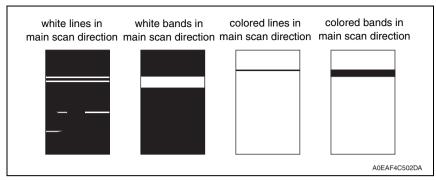
A. Typical faulty images



Step	Section	Check item	Result	Action
1		Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
2		Is the outside dirty?	YES	Clean.
3	Imaging unit	Is the connector or contact termi- nal between each imaging unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
4		Is the developing bias contact terminal in good contact?	NO	Clean the contact terminal or check the terminal position.
5	PH unit	Is the window surface dirty?	YES	Clean.
6		Is the transfer belt dirty with fingerprints or oil?	YES	Clean.
7	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
8		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
9	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
10	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean. Change the fuser unit.
11		Is the separator fingers dirty?	YES	Change the fuser unit.
12		Has the problem been eliminated through the checks of steps up to 11?	NO	Change the transfer belt. Change the PH unit.

16.1.2 White lines/bands, colored lines/bands in main scan direction

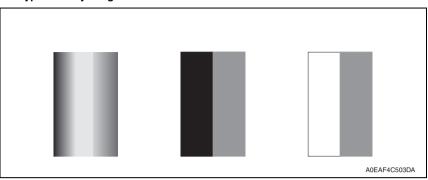
A. Typical faulty images



Cton	Continu	Charle itam	Result	Action
Step	Section	Check item	Result	Action
1		Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
2		Is the outside dirty?	YES	Clean.
3	Imaging unit	Is the connector or contact termi- nal between each imaging unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
4		Is the developing bias contact terminal in good contact?	NO	Clean the contact terminal or check the terminal position.
5	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
7	Media path	Is there a foreign matter on the media path?	YES	Remove the foreign matter.
8	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean.
9		Is the separator fingers dirty?	YES	Change the fuser unit.
10		Has the problem been eliminated through the checks of steps up to 9?	NO	Change the DC power supply. Change the transfer belt.

16.1.3 Uneven density in sub scan direction

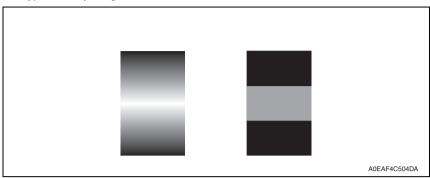
A. Typical faulty images



Step	Section	Check item	Result	Action
1 A	Adjustment	The printer is being operated at	YES	Adjust the image with "IMAGE ADJ PRAM"
'	/Setting	high altitude.	11.5	→ SERVICE MENU/ALIGN- MENT/IMAGE ADJ PRAM
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4	PH unit	Is the window surface dirty?	YES	Clean.
5		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6	Transfer belt	Is the terminal dirty?	YES	Clean.
7		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt unit. Change the PH unit. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.4 Uneven density in main scan direction

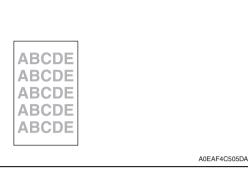
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated at high altitude.	YES	Adjust the image with "IMAGE ADJ PRAM." → SERVICE MENU/ALIGN- MENT/IMAGE ADJ PRAM
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4		Is the contact on the rail of the Transfer belt in good contact with the mating part?	NO	Check or correct contact.
5		Is the transfer belt dirty with fingerprints or oil?	YES	Clean.
6	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
7		Is the terminal dirty?	YES	Clean.
8		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
9		Has the problem been eliminated through the checks of steps up to 8?	NO	Change the transfer belt. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.5 Low image density

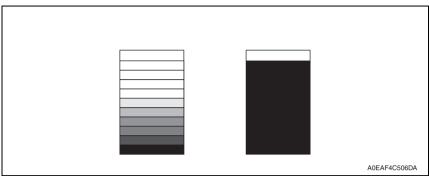
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Adjustment /Setting	The printer is being operated in the climate such as dry or highly humid.	YES	Adjust the image with "TRANS- FER POWER" → SERVICE MENU/ALIGNMENT /TRANSFER POWER/
2	Imaging unit	Is the outside dirty?	YES	Clean.
3	PH unit	Is the window surface dirty?	YES	Clean.
4	Transfer belt	Is the contact on the rail of the transfer belt in good contact with the mating part?	NO	Check or correct contact.
5		Is the terminal dirty?	YES	Clean.
6	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
7	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the imaging unit. Change the transfer belt. Change the PH unit. Change the IDC sensor board. Change the print control board. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.6 Gradation reproduction failure

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Imaging unit	Is the outside dirty?	YES	Clean.
2	PH unit	Is the window surface dirty?	YES	Clean.
3	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
4		Has the problem been eliminated through the checks of steps up to 3?	NO	Change the imaging unit. Change the PH unit. Change the IDC sensor board. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.7 Foggy background

A. Typical faulty images

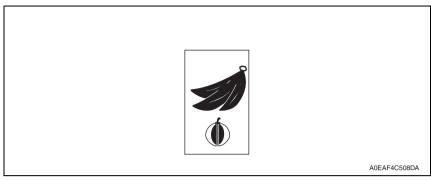


A0EAF4C507DA

	1	1		
Step	Section	Check item	Result	Action
1	Adjustment	The Printer is being operated in	YES	Adjust the image with "TRANS- FER POWER."
'	/Setting	the climate such as dry or highly humid.	TES	→ SERVICE MENU/ALIGNMENT /TRANSFER POWER/
2		Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4	Imaging unit	Is the connector or contact termi- nal between each imaging unit and PH unit connected properly?	NO	Clean the contact terminal or reconnect the connector.
5		Is the developing bias contact terminal in good contact?	NO	Clean the contact terminal or check the terminal position.
6	PH unit	Is the window surface dirty?	YES	Clean.
7	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the PH unit. Change the IDC sensor board.

16.1.8 Poor color reproduction

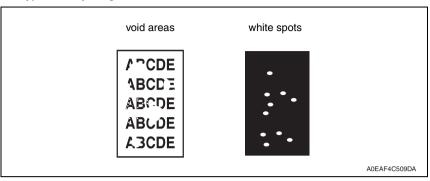
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
2	Transfer belt	Is the terminal dirty?	YES	Clean.
3	IDC sensor board/Re, Fr	Is the sensor dirty?	YES	Clean.
4		Has the problem been eliminated through the checks of steps up to 3?	NO	Change the transfer belt. Change the IDC sensor board. Change the print control board. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.9 Void areas, white spots

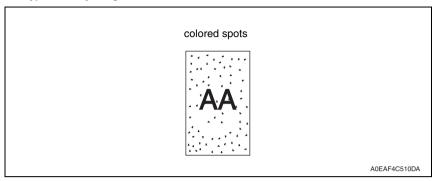
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Adjustment /Setting	Thick or special media is being used.	YES	Adjust the image with "TRANS- FER POWER." → SERVICE MENU/ALIGNMENT /TRANSFER POWER/
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the outside dirty?	YES	Clean.
4		Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
5	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
6		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
7		Is the ground terminal connected properly?	NO	Correct.
8	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
9	iviedia patri	Is the fusing entrance guide plate dirty or scratched?	YES	Clean or change.
10		Has the problem been eliminated through the checks of steps up to 9?	NO	Change the transfer belt.

16.1.10 Colored spots

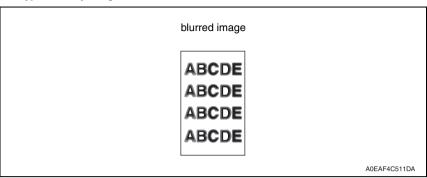
A. Typical faulty images



Step	Section	Check item	Result	Action
1		Are the spots in a single color?	YES	Change the imaging unit.
2	Imaging unit	Are there scratches or lines evident on photo conductor surface?	YES	Change the imaging unit.
3		Is the transfer belt dirty with fin- gerprints, oil, or other foreign mat- ter?	YES	Clean.
4	Transfer belt	Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
5		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
6	Media path	Is there a foreign matter on the media path?	YES	Remove foreign matter.
7	Fuser unit	Is the fusing roller dirty or scratched?	YES	Change the fuser unit.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt.

16.1.11 Blurred image

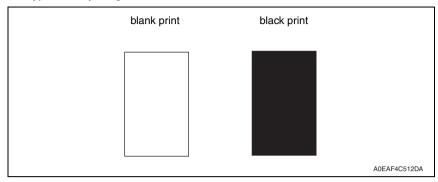
A. Typical faulty images



Step	Section	Check item	Result	Action
1	PH unit	Is the window surface dirty?	YES	Clean.
2	Imaging unit	Is the outside dirty?	YES	Clean.
3		Has the problem been eliminated through the checks of steps up to 2?	NO	Change the imaging unit. Change the PH unit.

16.1.12 Blank copy, black copy

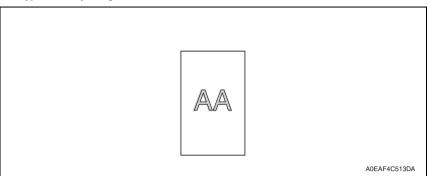
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Image check	Does a blank print occur?	YES	Check the PH unit connector for proper connection.
2		Is the coupling of the imaging unit drive mechanism installed properly?	NO	Check or correct drive transmitting coupling or change the imaging unit.
3	Imaging unit	Is the charge corona voltage contact or photo conductor ground contact of the imaging unit connected properly?	NO	Check, clean, or correct the contact.
4	High voltage unit/1, 2	Is the connector corrected properly?	NO	Reconnect.
5		Has the problem been eliminated through the checks of steps up to 4?	NO	Change the high voltage unit/1. Change the high voltage unit/2. Change the print control board. Change the PH unit.

16.1.13 Incorrect color image registration

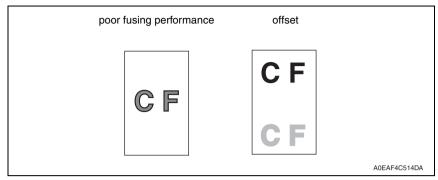
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Transfer belt	Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
2		Is the transfer belt dirty or scratched?	YES	Wipe the surface clean of dirt with a soft cloth. Change a scratched transfer belt for a transfer belt.
3		Is the drive coupling to the machine dirty?	YES	Clean.
4		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
5	Imaging unit	Is the imaging unit installed in position?	NO	Reinstall the imaging unit.
6	imaging unit	Is the photo conductor scratched?	YES	Change the imaging unit.
7		Has the problem been eliminated through the checks of steps up to 6?	NO	Change the transfer belt. Change the PH unit. Change the print control board.

16.1.14 Poor fusing performance, offset

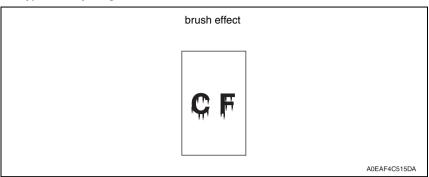
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Media	Does the media being used conform to specifications?	NO	Change the media.
2		Has the problem been eliminated through the check of step 1?	N()	Change the fuser unit. Change the print control board.

16.1.15 Brush effect

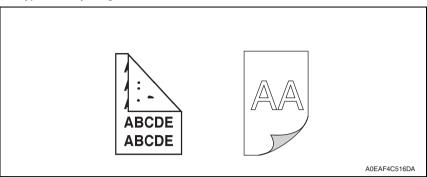
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that has just been unwrapped.
2	iviedia	Does the media being used conform to specifications?	NO	Replace the media.
3	Fuser unit	Is the fusing entrance guide plate	YES	Clean.
	i usei uilit	dirty?	NO	Change the fuser unit.

16.1.16 Back marking

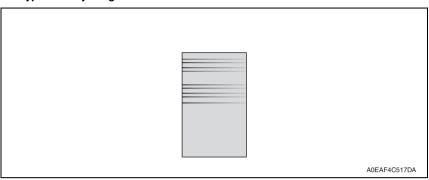
A. Typical faulty images



Step	Section	Check item	Result	Action
1	Media path	Is there a foreign matter on the media path?	YES	Remove the foreign matter.
2	Fuser unit	Is the fusing entrance guide plate dirty or scratched?	YES	Clean or change.
3	i usei uiiit	Is the fusing roller scratched or dirty?	YES	Change the fuser unit.
4	Transfer belt	Is the transfer belt dirty with fingerprints, oil, or other foreign matter?	YES	Clean.
5		Is the transfer roller dirty or scratched?	YES	Change the transfer roller.
6		Has the problem been eliminated through the checks of steps up to 5?	NO	Change the transfer belt. Change the fuser unit. Change the high voltage unit/1. Change the high voltage unit/2.

16.1.17 Uneven pitch

A. Typical faulty images



Step	Section	Check item	Result	Action
1	Toner cartridge	Is the toner cartridge for each color of toner installed in position?	NO	Reinstall.
2	PH unit	Is the PH unit secured in position with the fixing screw?	NO	Secure it in position.
3	Imaging unit	Is the drive mechanism of the imaging unit dirty or damaged?	YES	Clean or change the imaging unit.
4	imaging unit	Is the photo conductor dirty, scratched, or worn?	YES	Change the imaging unit.
5	Transfer roller	Are the transfer roller and drive mechanism dirty, scratched, deformed, or worn?	YES	Change the transfer roller.
6	Fuser unit	Are the rollers and drive mechanism of the fuser unit dirty, scratched, deformed, or worn?	YES	Change the fuser unit.
7	Driving unit	During color printing, this symptom happens with 0.5 mm pitches.	YES	Change the driving unit.
8		Has the problem been eliminated through the checks of steps up to 7?	NO	Change the transfer belt.

16.1.18 No print cycles can be run as commanded via the network

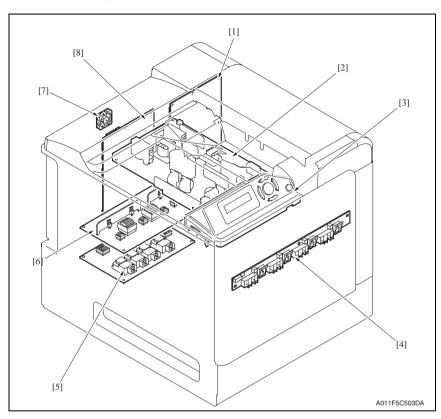
Step	Section	Check item	Result	Action
1	MFPB	Is the ethernet cable connected properly?	NO	Reinstall.
2		Are the network address and other data input correctly?	NO	Retype.
3	Control panel/ MENU	Is the INTERFACE MENU/ETH- ERNET/TCP/IP/SPEED/DUPLEX setting made correctly according to the network environment being used?	NO	Reset.
4	MEPR	MFPB Is the MFPB connector connected properly?	NO	Reinstall.
-	MFPB		YES	Change the MFPB.

ppendix

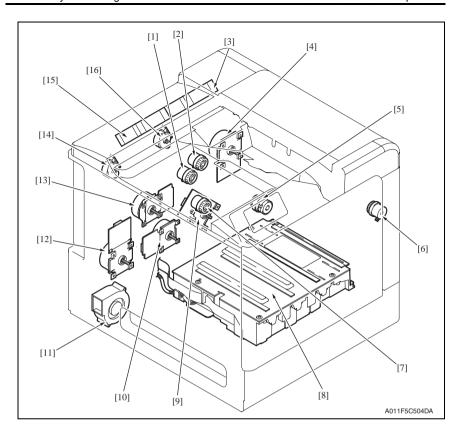
Appendix

17. Parts layout drawing

17.1 Main body

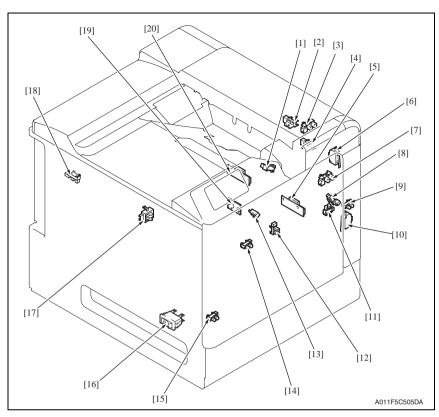


- [1] Print control board (PRCB)
- [2] DC power supply (DCPU)
- [3] Operation board (OB)
- [4] Toner level sensor board (TLSB)
- [5] High voltage unit /2 (HV2)
- [6] High voltage unit /1 (HV1)
- [7] MFP board fan motor (FM5)
- [8] MFP board (MFPB)



- [1] Media feed clutch/1 (CL1)
- [2] Media feed clutch/2 (CL3)
- [3] Fusing fan motor (FM2)
- [4] Fusing motor (M4)
- [5] Registration roller clutch (CL2)
- [6] Pressure/retraction clutch/2 (CL5)
- [7] Pressure/retraction clutch/1 (CL4)
- [8] PH unit

- [9] Intermediate transport motor (M3)
- [10] Developing motor/K (M5)
- [11] Ozone ventilation fan motor (FM3)
- [12] Developing motor/Y,M,C (M1)
- [13] Color PC drum motor (M2)
- [14] Toner supply motor/Y,M (M6)
 - [15] DC power supply fan motor (FM1)
 - [16] Toner supply motor/C,K (M7)

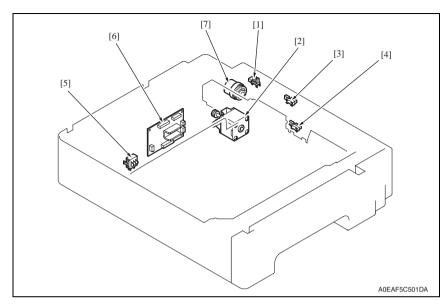


- [1] Media loop sensor (PS6)
- [2] Fusing media size sensor (PS15)
- [3] Media full sensor (PS12)
- [4] Media empty sensor /2 (PS3)
- [5] IDC sensor board/Fr (IDCSB/F)
- [6] Safety switch/Fr (S2)
- [7] Exit sensor (PS8)
- [8] Retraction position Sensor/2 (PS10)
- [9] Door sensor/Rt (PS13)
- [10] Safety switch/Rt (S3)

- [11] Door Sensor/Fr (PS14)
- [12] Registration sensor (PS4)
- [13] OHP sensor (PC7)
- [14] Media empty sensor/1 (PS1)
- [15] Waste toner sensor (PS11)
- [16] Power switch (S1)
- [17] Tray 2 switch (S5)
- [18] Retraction position sensor/1 (PS9)
- [19] Temperature/ humidity sensor (TEM/HUMS)
- [20] IDC sensor board/Re (IDCSB/R)

Appendix

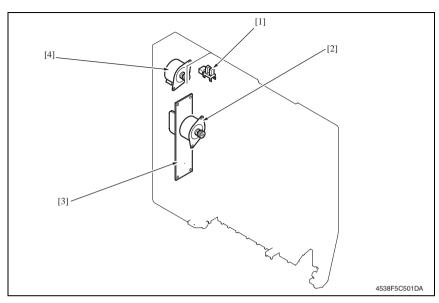
17.2 Lower feeder unit (option)



- [1] Right door switch (MS1)
- [2] Transfer motor (M1)
- [3] Media feed sensor (PS2)
- [4] Media empty sensor (PS1)

- [5] Media size switch (MS2)
- [6] PC control board (PCCB)
- [7] Media feed clutch (CL1)

17.3 Duplex option (option)

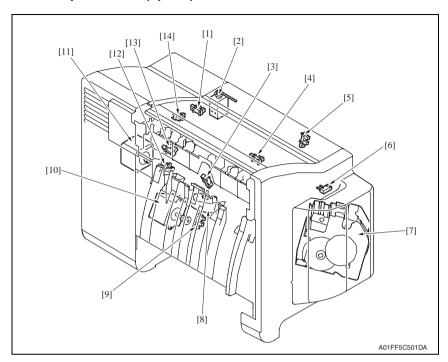


- [1] Door sensor (PC1)
- [2] Transport motor (M1)

- [3] AD control board (ADCB)
- [4] Reverse motor (M2)

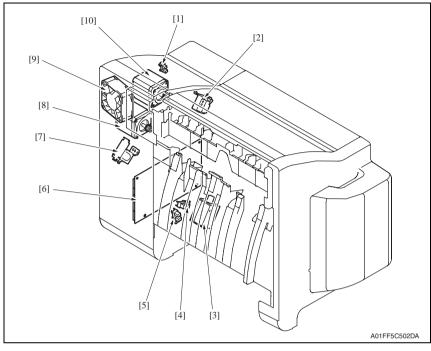
Appendix

17.4 Staple finisher (option)



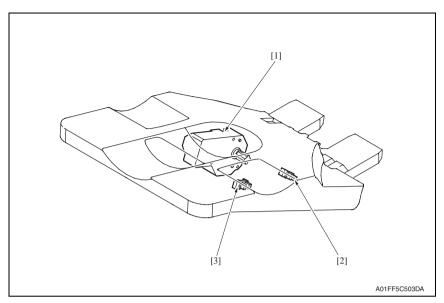
- [1] Finisher cover sensor (PS3)
- [2] Entrance solenoid (SL1)
- [3] Media ejector sensor (PS5)
- [4] Transport section sensor (PS2)
- [5] Entrance sensor (PS1)
- [6] Stapler cover switch (MS1)
- [7] Staple unit

- [8] Align motor (M2)
- [9] Storage section sensor (PS7)
- [10] Media ejector motor (M1)
- [11] Exit roller up/down motor (M5)
- [12] Aligning plate home position sensor (PS6)
- [13] Exit roller sensor (PS8)
- [14] Media full sensor (PS4)



- [1] Aligning belt sensor (PS11)
- [2] Aligning belt up/down solenoid (SL3)
- [3] Media level lever solenoid (SL2)
- [4] Media level sensor/2 (PS10)
- [5] Media level sensor/1 (PS9)

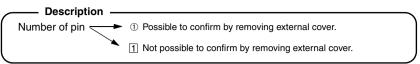
- [6] FS control board (FSCB)
- [7] Paddle solenoid (SL4)
- [8] Exit motor (M4)
- [9] Fan motor (FM1)
- [10] Transport motor (M3)

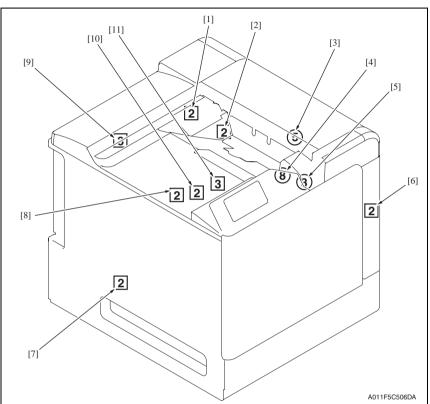


- [1] Tray up/down motor (M6)
- [2] Tray upper sensor (PS12)

[3] Tray lower sensor (PS13)

18. Connector layout drawing



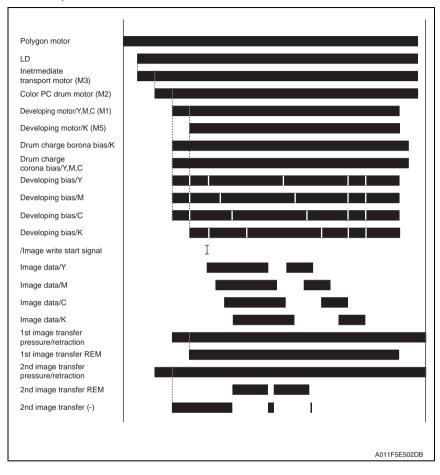


No.	CN No.	Location	No.	CN No.	Location
[1]	CN16	C-3	[7]	CN31	C-7
[2]	CN26	C-1	[8]	CN12	H-6
[3]	CN15	H-5 to 6	[9]	CN27	C-2
[4]	CN19	H-1 to 2	[10]	CN11	H-6
[5]	CN28	C-2	[11]	CN13	H-6
[6]	CN17	H-7			

Appendix

19. Timing chart

Color A4 2-print





SERVICE MANUAL

FIELD SERVICE

Lower Feeder Unit

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.

2008/04	1.0		Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

Troubleshooting

CONTENTS

Lower feeder unit

\sim	_	_	_		ı
G	e	n	е	ra	ı

1.	Prod	uct specifications	1
Mair	ntena	ance	
2.	Perio	odic check	
2.1		intenance procedure (periodic parts check)	
2	.1.1	Replacing the feed roller	
3.	Othe	r	
3.1		assembly/adjustment prohibited items	
3.2		assembly/assembly list (other parts)	
3.3		assembly/assembly procedure	
3	.3.1	Tray	
3	.3.2	PC control board (PCCB)	
3	.3.3	Media feed clutch (CL1)	
3	.3.4	Transport motor (M1)	
3.4	Cle	aning procedure	
3	.4.1	Feed roller	
Adju	ıstme	ent/Setting	
4.	How	to use the adjustment section	13
5.		nanical adjustment	
5.1		gistration adjustment	
Trou	ıbles	hooting	
6.	Jam	display	15
6.1		feed display	
6.2		feed display resetting procedure	
6.3		nsor layout	
6.4		ution	
6	.4.1	Initial check items	17
6	.4.2	Misfeed at the tray 3/ tray 4 media feed section	18
6	.4.3	Misfeed at the tray 3/ tray 4 vertical transport section	
		· · · · · · · · · · · · · · · · · · ·	

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General

1. Product specifications

A. Type

Name	Add-on 500-sheet media feed cassette
Туре	Front-loading type
Installation	Desk type
Media feeding system	Media separation by a small-diameter roller with torque limiter
Document Alignment	Center

B. Media type

Media size	B5S(JIS)/Executive/LetterS/A4S/Letter Plus/G-Legal/Legal
Media type	 Plain paper: 60 to 90 g/m² (16 to 24 lb) Recycled paper: 60 to 90 g/m² (16 to 24 lb)
Capacity	500 sheets

C. Machine specifications

Power Requirements	DC 24 V ± 10% (supplied from the main body)
	DC 5 V ± 5%
Max. Power Consumption	16 W
Dimensions	448 mm (W) × 520 mm (D) × 111.5 mm (H) 17.6 inch (W) × 4.4 inch (D) × 20.5 inch (H)
Weight	Approx. 6.5 kg (14.25 lb)

D. Operating environment

Temperature 10° to 30° C/50° to 95° F (with a fluctuation of 10° C/h (18° F/h	
Humidity	15% to 85% (with a fluctuation of 20%/h)

NOTE

• These specifications are subject to change without notice.

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Maintenance

2. Periodic check

2.1 Maintenance procedure (periodic parts check)

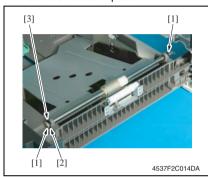
2.1.1 Replacing the feed roller

A. Periodically replacing parts/cycle

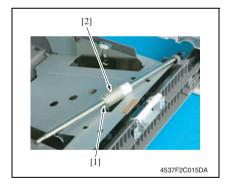
• Feed roller: Every 300,000 prints

B. Procedure

- 1. Slide out tray 1.
- 2. Lock the media lift plate.



- 3. Snap off two C-rings [1].
- 4. Remove the washer [2] and the bearing [3] at the front.



5. Snap off the C-ring [1] and remove the feed 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 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)

A. Disassembly/assembly parts list

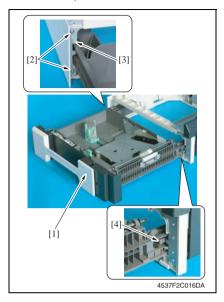
No	Section	Part name	Ref. page
1	Exterior parts	Tray	P.6
2	Board and etc.	PC control board (PCCB)	P.6
3	Others	Media feed clutch (CL1)	P.8
4	Others	Transport motor (M1)	P.11

B. Cleaning parts list

I	No	Section	Part name	Ref. page
	1	Media feed section	Feed roller	P.12

3.3 Disassembly/assembly procedure

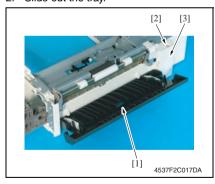
3.3.1 Tray



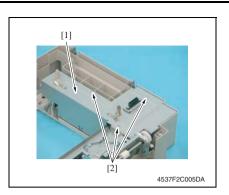
- 1. Slide out the tray [1].
- 2. Remove two screws [2], and remove the stopper [3].
- 3. Pressing the tab [4], remove the tray [1].

3.3.2 PC control board (PCCB)

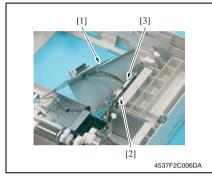
- 1. Remove the lower feeder unit from the machine.
- 2. Slide out the tray.



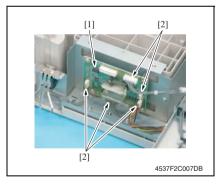
- 3. Open the lower feeder unit right door
- 4. Remove screw [2] and the gear cover [3].



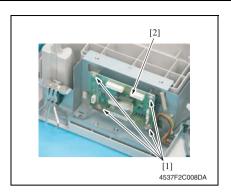
5. Remove three screws [2] from the PWB protective cover [1].



- Slightly raise the PWB protective cover [1] and, at the same time, disconnect the connector [3] from the PC control board [2].
- Remove the PWB protective cover [1].



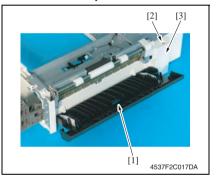
8. Disconnect all connectors [2] from the PC control board [1].



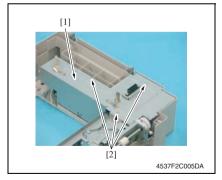
9. Remove four screws [1] and the PC control board [2].

3.3.3 Media feed clutch (CL1)

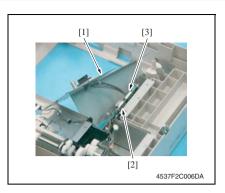
- 1. Remove the lower feeder unit from the machine.
- 2. Slide out the tray.



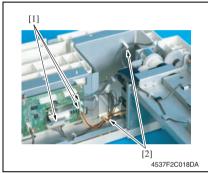
- 3. Open the lower feeder unit right door
- 4. Remove screw [2] and the gear cover [3].



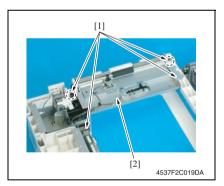
5. Remove three screws [2] from the PWB protective cover [1].



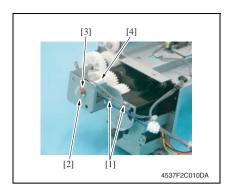
- Slightly raise the PWB protective cover [1] and, at the same time, disconnect the connector [3] from the PC control board [2].
- 7. Remove the PWB protective cover [1].



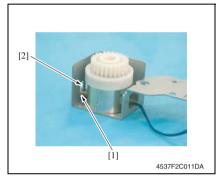
 Disconnect three connectors [1], and remove the harness from two wire saddles [2].



9. Remove four screws [1], and remove the media feed drive assy [2].



10. Remove two screws [1], snap off the C-ring [2] and bearing [3], and remove the media feed clutch [4].

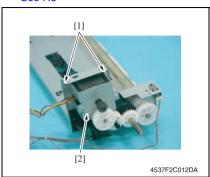


NOTE

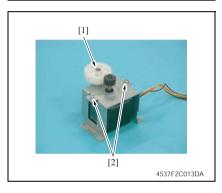
 When reinstalling the media feed clutch, make sure that the protrusion [1] on the media feed clutch fits into the locking slot [2].

3.3.4 Transport motor (M1)

 Remove the media feed drive assy and media feed clutch. See P.8



2. Remove two screws [1] and the transport motor assy [2].



- 3. Remove the gear [1].
- 4. Remove two screws [2] and the transport motor.

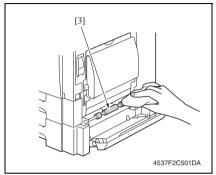
3.4 Cleaning procedure

NOTE

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

3.4.1 Feed roller

1. Open the lower feeder unit right door.



Wipe the feed roller [1] clean of dirt using a cleaning pad dampened with alcohol.

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. Mechanical adjustment

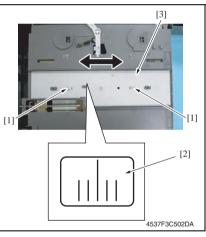
5.1 Registration adjustment

NOTE

- Make this adjustment after any of the following procedures has been performed.
 When the printed image deviates in the CD direction.
- 1. Remove the tray.



2. Loosen two screws [1].



- 3. Loosen two screws [1].
- Watching the graduations [2] on the adjusting plate, move the edge guide plate [3] as necessary.

Adjustment range: \pm 2.0 mm

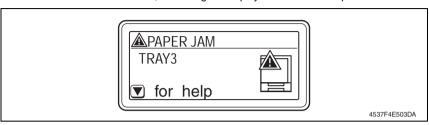
5. Tighten the four screws that have been loosened, and mount the tray.

Troubleshooting

6. Jam display

6.1 Misfeed display

• When a media misfeed occurs, a message is displayed on the control panel.



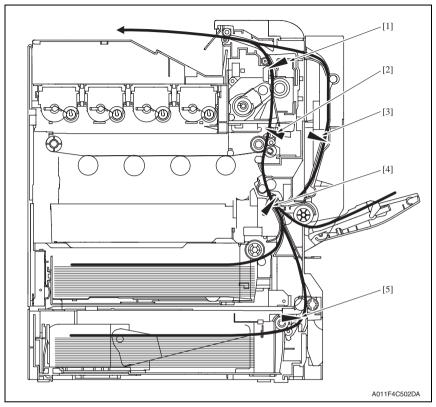
Display		Misfeed location	Misfeed clearing	Ref. page
LCD1	LCD2	Wisieed location	location	rici. page
PAPER	TRAY 3	Tray 3 media feed section	Tray 3	P.18
JAM	INALS	Vertical transport section	Tray 3 right door	P.19
PAPER	TRAY 4	Tray 4 media feed section	Tray 4	P.18
JAM	INAL 4	Vertical transport section	Tray 4 right door	P.19

6.2 Misfeed display resetting procedure

• Open the relevant door, clear the sheet of misfed media, and close the door.

6.3 **Sensor layout**

• For a system equipped with a lower feeder unit and a duplex option.



- Exit sensor [1]
- PS8
- Registration sensor
- PS4

- Media loop sensor
- Media feed sensor PS6 [5] (Lower feeder unit)

- Sensor on AD control board
- ADCB

6.4 Solution

6.4.1 Initial check items

• When a media misfeed occurs, first check the following initial check items.

Check Item	Action
Does the media meet product specifications?	Change the media.
Is the media curled, wavy, or damp.	Change the media. Instruct the user in correct media storage requirements.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the Media Separator Fingers dirty, deformed, or worn?	Clean or change the defective Media Separator Finger.
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 media?	Set as necessary.
Are the actuators found operational as checked for correct operation?	Correct or change the defective actuator.

6.4.2 Misfeed at the tray 3/ tray 4 media feed section

A. Detection timing

Туре	Description
tood at tray 3/ tray /	The media does not block the media feed sensor (PS2) even after the lapse of a given period of time after the media feed clutch (CL1) has turned ON.
Light at tray 3/ tray /	The media feed sensor (PS2) is not blocked when the main power switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant electrical parts		
Media feed sensor (PS2)	PC control board (PCCB)	
Media feed clutch (CL1)	Print control board (PRCB)	
Transport motor (M1)		

	Action	WIRING DIAGRAM		
Step		Control signal	Location (electrical com- ponent)	
1	Initial check items	_	_	
2	PS2 sensor check	PCCB PJ5-6 (ON)	B to C-4	
3	CL1 operation check	PCCB PJ6-2 (REM)	B to C-5	
4	M1 operation check	PCCB PJ3-1 to 4	B to C-5	
5	Change PCCB.	_	_	
6	Change PRCB.	_	_	

6.4.3 Misfeed at the tray 3/ tray 4 vertical transport section

A. Detection timing

Туре	Description
Detection of mis- feed at tray 3 vertical transport section	The media does not block the registration sensor (PS4) even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).
	The media does not unblock the media feed sensor (PS2) even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).
Detection of mis- feed at tray 4 vertical transport section	The media does not block the media feed sensor (PS2) of tray 3 even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).
	The media does not unblock the media feed sensor (PS2) even after the lapse of a given period of time after it has blocked the media feed sensor (PS2).

B. Action

Relevant electrical parts		
Media feed sensor (PS2)	PC control board (PCCB)	
Registration sensor (PS4)	Print control board (PRCB)	
Transport motor (M1)		

Step		WIRING DIAGRAM		
	Action	Control signal	Location (electrical com- ponent)	
1	Initial check items	=	_	
2	PS2 sensor check	PCCB PJ5-6 (ON)	B to C-4	
3	PS4 sensor check	PRCB PJ15-3 (ON)	C-3 (main body)	
4	M1 operation check	PCCB PJ3-1 to 4	B to C-5	
5	Change PCCB.	_	_	
6	Change PRCB.	_	_	

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SERVICE MANUAL

FIELD SERVICE

Duplex Option

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

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2008/04	1.0		Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

Maintenance

CONTENTS

Duplex option

\sim	_	_	_		ı
G	e	n	е	ra	ı

1.	Prod	uct specifications	1
Main	tena	ance	
2.	Othe	r	3
2.1	Dis	assembly/adjustment prohibited items	3
2.2	Dis	assembly/assembly list (other parts)	4
2.2	2.1	Disassembly/assembly parts list	4
2.2	2.2	Cleaning parts list	4
2.3	Dis	assembly/assembly procedure	5
2.3	3.1	Duplex option	5
2.3	3.2	Right cover	6
2.3	3.3	AD control board (ADCB)	6
2.3	3.4	Transport motor (M1)	7
2.3	3.5	Reverse motor (M2)	7
2.4	Cle	aning procedure	8
2.4	4.1	Feed roller	8
Trouk	oles	hooting	
3.	Jam	display	9
3.1	Mis	feed display	9
3.2	Mis	feed display resetting procedure	9
3.3	Ser	nsor layout	10
3.4	Sol	ution	11
3.4	4.1	Initial check items	11
3.4	1.2	Misfeed at duplex option media transport section	12
3.4	1.3	Misfeed at duplex option media feed section	13

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General

1. Product specifications

A. Type

Name	Duplex unit
Туре	Switchback and circulating duplex unit
Installation	Mounted on the right side door of main body
Reversing system	Exit roller switchback
Transfer system	Rubber roller + driven rolls
Document alignment	Center

B. Media type

Media size	B5/A4S/LetterS/Legal
· · · · · · · · · · · · · · · · · · ·	 Plain paper: 60 to 90 g/m² (16 to 24 lb) Recycled paper: 60 to 90 g/m² (16 to 24 lb)

C. Machine specifications

Power requirements	DC 24 V \pm 10% (supplied from the main body)
	DC 5 V \pm 5% (supplied from the main body)
Max. power consumption	35 W
Dimensions	394 mm (W) × 320 mm (D) × 58 mm (H) 15.5 inch (W) × 12.6 inch (D) × 2.3 inch (H)
Weight	Approx. 1.8 kg (4.0 lb)

D. Operating environment

Temperature	10° C to 30° C/50° F to 86° F (with a fluctuation of 10° C/h (18° F/h))
Humidity	15% to 85% (with a fluctuation of 20%/h)

NOTE

• These specifications are subject to change without notice.

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Duplex Option

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

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.

2.2 Disassembly/assembly list (other parts)

2.2.1 Disassembly/assembly parts list

No	Section	Part name	Ref. page
1	_	Duplex option	P.5
2	Exterior parts	Right cover	P.6
3	Board and etc.	AD control board (ADCB)	P.6
4	Others	Transport motor (M1)	P.7
5	Others	Reverse motor (M2)	P.7

2.2.2 Cleaning parts list

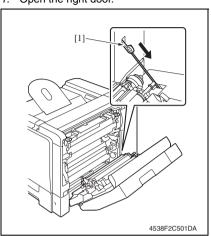
I	No	Section	Part name	Ref. page	l
Ī	1	Media feed section	Feed roller	P.8	l

Duplex Option

2.3 Disassembly/assembly procedure

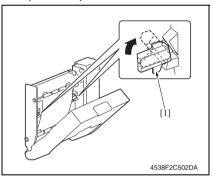
2.3.1 Duplex option

1. Open the right door.

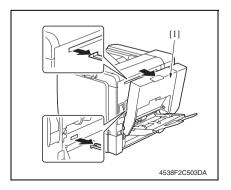


Remove the support wire [1] from the machine.

- 3. Close the right door.
- 4. Open the duplex cover.



5. Turn the two locking knobs [1] to unlock the duplex option.

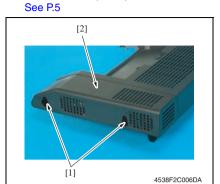


6. Remove the duplex option [1].

Maintenance

2.3.2 Right cover

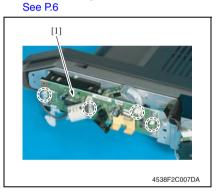
1. Remove the duplex option.



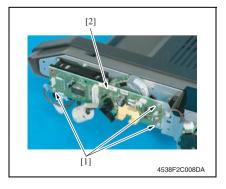
2. Remove two screws [1] and the right cover [2].

2.3.3 AD control board (ADCB)

1. Remove the right cover.



Disconnect all connectors from the AD control board [1].

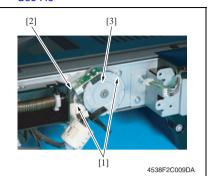


3. Remove three screws [1] and the AD control board [2].

Duplex Option

2.3.4 Transport motor (M1)

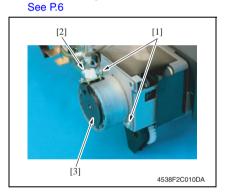
 Remove the AD control board. See P.6



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

2.3.5 Reverse motor (M2)

1. Remove the right cover.



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

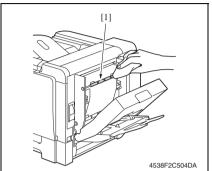
2.4 Cleaning procedure

NOTE

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

2.4.1 Feed roller

1. Open the duplex door.



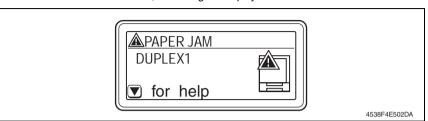
Using a cleaning pad dampened with alcohol, wipe the feed rollers [1] clean of dirt.

Troubleshooting

3. Jam display

3.1 Misfeed display

• When a media misfeed occurs, a message is displayed on the Control Panel.



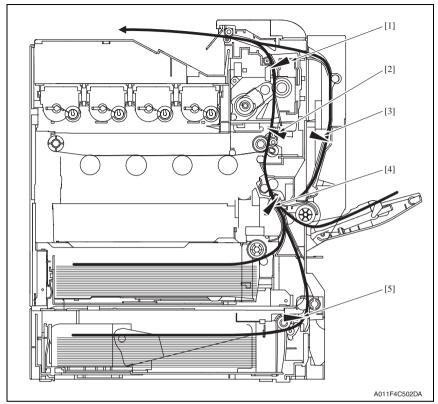
Dis	play	Misfeed location	Misfeed clearing	Ref. page
LCD1	LCD2		location	nei. page
PAPER JAM	DUPLEX 1	Duplex option media transport section	Duplex option door	P.13
PAPER JAM	DUPLEX 2			P.12

3.2 Misfeed display resetting procedure

• Open the relevant door, clear the sheet of misfed media, and close the door.

Duplex Option

Sensor layout 3.3



- Exit sensor [1]
- PS8
- Registration sensor

- [2] Media loop sensor
- PS6
- Media feed sensor
- PS4

- Sensor on AD control board
- **ADCB**

- [5] (Lower feeder unit)
- PS2

3.4 Solution

3.4.1 Initial check items

• When a media misfeed occurs, first make checks of the following initial check items.

Check Item	Action
Does media meet product specifications?	Change media.
Is media curled, wavy, or damp.	Change media. Instruct user in correct media storage.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the Media Separator Fingers dirty, deformed, or worn?	Clean or change the defective Media Separator Finger.
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at correct position to accommodate media?	Set as necessary.
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

3.4.2 Misfeed at duplex option media transport section

A. Detection timing

Туре	Description
Detection of mis- feed at duplex	The sensor on the AD control board (ADCB) is not blocked even after the lapse of a given period of time after it has been unblocked.
option media trans- port section	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the sensor on the AD control board (ADCB) has been unblocked.
Detection of media left at duplex option media transport section	The sensor on the AD control board (ADCB) 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.

Relevant Electrical Parts		
. , ,	AD control board (ADCB) Print control board (PRCB)	

		WIRING DIAGRAM		
Step	Action	Control signal	Location (electrical com- ponent)	
1	Initial check items	_	_	
2	Sensor check on the ADCB	ADCB PJ1-12	D-3 to 4	
3	M1 operation check	ADCB PJ2-1 to 4	C-4 to 5	
4	M2 operation check	ADCB PJ3-1 to 4	F to G-4	
5	Change ADCB.	_	_	
6	Change PRCB.	_	_	

3.4.3 Misfeed at duplex option media feed section

A. Detection timing

Туре	Description
Detection of mis- feed at duplex option media feed section	The media does not unblock the registration sensor (PS4) even after the lapse of a given period of time after the media feed sequence has been started at the duplex option.

Relevant Electrical Parts		
Registration sensor (PS4)	AD control board (ADCB)	
Transport motor (M1)	Print control board (PRCB)	

		WIRING DIAGRAM		
Step	Action	Control signal	Location (electrical com- ponent)	
1	Initial check items	_	_	
2	PS4 sensor check	PRCB PJ15-3 (ON)	C-3 (main body)	
3	M1 operation check	ADCB PJ2-1 to 4	C-4 to 5	
4	Change ADCB.	=	_	
5	Change PRCB.			

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SERVICE MANUAL

FIELD SERVICE

Staple Finisher

Revision history

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2008/04	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

Staple finisher

\sim			_		ı
(-	$\boldsymbol{\Delta}$	n	Δ	ra	ı

1.	Produ	ct specifications	1
Main	itena	nce	
2.	Other		5
2.1		ssembly/adjustment prohibited items	
2.2		ssembly/assembly list (Other parts)	
2.5	2.1	Disassembly/assembly parts list	
2.3	Disa	ssembly/Assembly procedure	
2.3	3.1	Front cover	
2.3	3.2	Rear cover	8
2.3	3.3	Carry-in entrance upper cover	8
2.3	3.4	Right metal plate cover	9
2.3	3.5	Sub tray	9
2.3	3.6	Main tray	9
2.3	3.7	Stapling unit	0
2.3	3.8	Relay unit1	1
2.3	3.9	Staple finisher	3
2.3	3.10	FS control board (FSCB)	3
2.3	3.11	Tray up/down motor assy 1	4
2.3	3.12	Fan motor (FM1)	5
2.3	3.13	Transport motor (M3)	6
2.3	3.14	Exit motor (M4)	7
2.3	3.15	Exit roller up/down motor (M5)	
2.5	3.16	Entrance solenoid (SL1)	
Troul	blesh	nooting	
3.	Jam d	lisplay2	23
3.1	Misf	eed display2	23
3.	1.1	Misfeed display resetting procedure	23
3.2	Sen	sor layout2	<u>'</u> 4
3.3	Solu	tion2	25
3.3	3.1	Initial check items	25
3.3	3.2	Staple misfeed	25

3.3.3	Horizontal transport section misfeed	26
3.3.4	Finisher transport section misfeed	
3.3.5	Sub tray section misfeed	
3.3.6	Main tray section misfeed	
4. Er	ror codes	
	rouble code list (Service call)	
4.2	Solution	30
4.2.1	0B30: Aligning plate drive malfunction	30
4.2.2	0B47: Media holding drive malfunction	30
4.2.3	0B48: Exit roller pressure/retraction malfunction	31
4.2.4	0B4A: Aligning belt pressure/retraction malfunction	31
4.2.5	0B4C: Media ejector motor malfunction	32
4.2.6	0BA0: Tray up/down motor ascent/descent drive malfunction	32
4.2.7	0BE1: Fan motor malfunction	33
4.2.8	133B: Communication malfunction	33
420	2EED: Floob BOM molfunation	99

General

1. Product specifications

A. Type

Type	Staple finisher suspended on the main body	
Installation	Suspended on the main body	
Document alignment	Center	
Media ejection system	Face down, Output from the back end	
Consumables	Staples	

B. Functions

Modes	Sub tray	Sort, group
	Main tray	Sort, group, Sort offset, group offset, Sort stable

C. Media type

(1) Non sort, sort, group

Type	Size	Weight	Max. Capacity (Sub tray, Main tray)	
Туре	Size	weight	8-1/2 x 11S, A4S or less	Media length: longer than 300 mm
Plain paper Recycled paper		60 to 90 g/m ² 16 to 24 lb	Sub: 100 sheets Main: 500 sheets	Sub: 50 sheets Main: 250 sheets
Postcard	A6S, A5S, B5S, A4S	-		
Envelope		-		
OHP Film	5-1/ ₂ x 8-1/ ₂ S, 8-1/ ₂ x 11S, 8-1/ ₂ x 14	-		
Glossy paper	_	-		
Label	Max.: 216 mm x 356 mm 8.5 x 14 inch	-	Sub: 20 sheets	Sub: 20 sheets
Letterhead	Min.: 92 mm x 148 mm	-	Main: 20 sheets	Main: 20 sheets
Thick paper 1	3.5 x 5.75 inch	91 to 150 g/m ² 24.25 to 40 lb		
Thick paper 2		151 to 210 g/m ² 40.25 to 55.75 lb		

(2) Sort offset, group offset

Type	Size	Weight	Max. Capacity (Main tray)	
Туре	Size	weight	8-1/ ₂ x 11S, A4S or less	Media length: longer than 300 mm
Plain paper Recycled paper	B5S, A4S 8- ¹ / ₂ x 11S, 8- ¹ / ₂ x 14 Max.: 216 mm x 356 mm 8.5 x 14 inch Min.: 182 mm x 257 mm 7.25 x 10 inch	60 to 90 g/m² 16 to 24 lb	500 sheets or 50 sets	250 sheets or 25 sets

(3) Sort stable

<Normal mode>

				apacity n tray)	No. of
Туре	Size	Weight	8-1/ ₂ x 11S, A4S or less	Media length: longer than 300 mm	sheets to be stapled
Plain paper Recycled paper	B5S, A4S 8-1/ ₂ x 11S, 8-1/ ₂ x 14 Max.: 216 mm x 356 mm 8.5 x 14 inch Min.: 182 mm x 257 mm 7.25 x 10 inch	60 to 90 g/m² 16 to 24 lb	400 sheets or 40 sets	200 sheets or 20 sets	30 sheets *

^{*:} The number of sheets to be stapled is limited for high-density images. (Color wise 3: 20 sheets x 20 sets)

<Cover mode>

				apacity n tray)	No. of
Туре	Size	Weight	8-1/ ₂ x 11S, A4S or less	Media length: longer than 300 mm	sheets to be stapled
Plain paper Recycled paper	11VIAX.: 210 HIIII X 330 HIIII	60 to 210 g/m ² 16 to 55.75 lb	_	_	28 sheets (2 sheets or less for thick paper)

D. Stapling

Staple filling mode	Dedicated Staple Cartridge (5000 staples)
Staple detection	Available (Near empty: 20 remaining staples)
Stapling position	Rear corner (49 degrees)
Media size	B5S, A4S, 8-1/ ₂ x 11S, 8-1/ ₂ x 14
Manual staple	None

E. Machine specifications

Power requirements	DC 24 V \pm 10% (supplied from the main body)
Max. power consumption	48 W or less
Dimensions	Stapling unit: 475 (W) × 462 (D) × 360 (H) mm 18.75 (W) × 18.25 (H) × 14.25 (D) inch Relay unit: 284 (W) × 394 (D) × 360 (H) mm 11.0 (W) × 15.5 (D) × 14.0 (D) inch
Weight	Stapling unit: 10.0 kg (22 lb) Relay unit: 2.0 kg (4.5 lb) (Excluding items furnished with the unit.)

F. 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

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.

2.2 Disassembly/assembly list (Other parts)

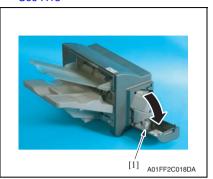
2.2.1 Disassembly/assembly parts list

No	Section	Part name	Ref. page
1		Front cover	P.7
2		Rear cover	P.8
3	Exterior parts	Carry-in entrance upper cover	P.8
4	Exterior parts	Right metal plate cover	P.9
5		Sub tray	P.9
6		Main tray	P.9
7		Stapling unit	P.10
8	Unit	Relay unit	P.11
9		Staple finisher	P.13
10	Board and etc.	FS control board (FSCB)	P.13
11		Tray up/down motor assy	P.14
12		Fan motor (FM1)	P.15
13	Others	Transport motor (M3)	P.16
14		Exit motor (M4)	P.17
15		Exit roller up/down motor (M5)	P.18
16		Entrance solenoid (SL1)	P.19

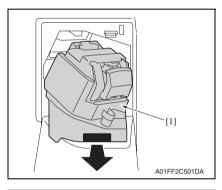
2.3 Disassembly/Assembly procedure

2.3.1 Front cover

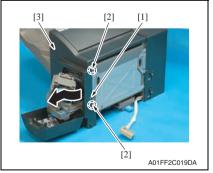
 Remove the staple finisher. See P.13



2. Open the staple cover. [1].



3. Pull out the stapling unit [1].



- 4. Remove the screw [1].
- 5. Unhook two tabs [2] and remove the front cover [3].

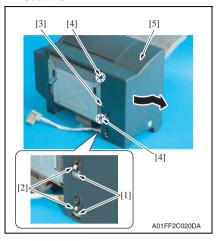
Maintenance

Staple Finisher

2.3.2 Rear cover

1. Remove the staple finisher.

See P.13

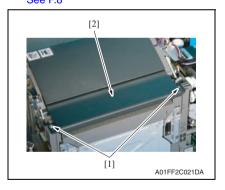


- 2. Remove two screws [1] and remove two earth metal plates [2].
- 3. Remove the screw [3].
- 4. Unhook two tabs [4] and remove the rear cover [5].

2.3.3 Carry-in entrance upper cover

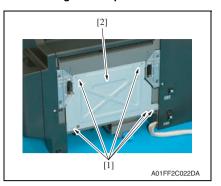
- 1. Remove the front cover.
 - See P.7
- 2. Remove the rear cover.

See P.8



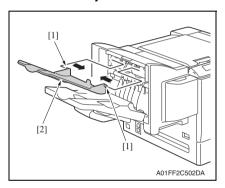
3. Remove two screws [1] and remove the carry-in entrance upper cover [2].

2.3.4 Right metal plate cover



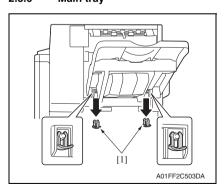
1. Remove five screws [1] and remove the right metal plate cover [2].

2.3.5 Sub tray

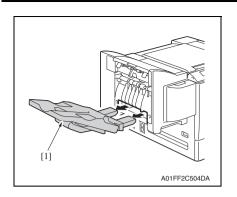


1. Hold two tabs [1] and remove the sub tray [2].

2.3.6 Main tray



1. Remove two clips [1].

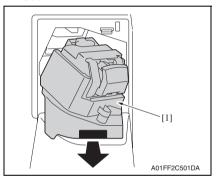


2. Remove the main tray [1].

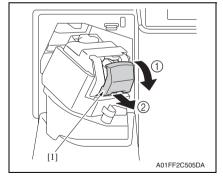
2.3.7 Stapling unit

1. Remove the front cover.

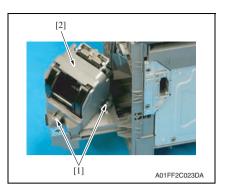
See P.7



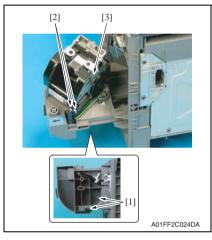
2. Pull out the stapling unit [1].



3. Remove the stapler [1].

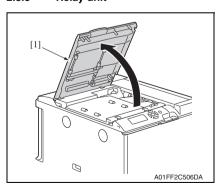


4. Remove two screws [1] and remove the stapling unit cover [2].

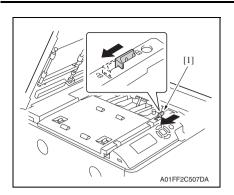


 Remove two screws [1], disconnect two connectors [2] and remove the stapling unit [3].

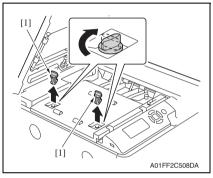
2.3.8 Relay unit



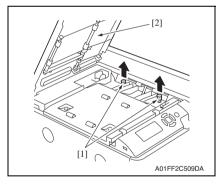
1. Open the relay unit cover [1].



2. Unlock the relay unit lever [1].

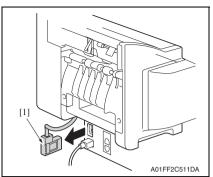


3. Remove two mounting hooks [1].

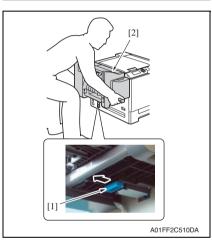


- Pull up two fixed pins [1] for unlocking.
- 5. Remove the relay unit [2].

2.3.9 Staple finisher



 Disconnect the connector [1] from the main body.



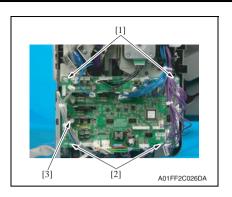
2. Pull the lever [1] and remove the staple finisher [2].

2.3.10 FS control board (FSCB)

Remove the rear cover.
 See P.8



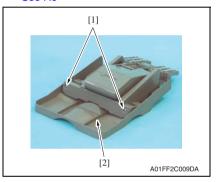
Remove all connectors on the FS control board.



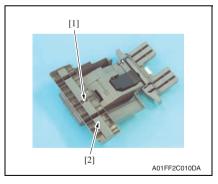
Remove two screws [1], remove two card spacers [2], and remove the FS control board [3].

2.3.11 Tray up/down motor assy

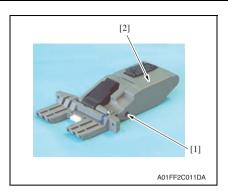
1. Remove the main tray. See P.9



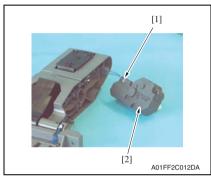
2. Remove two screws [1] and remove the output tray [2].



3. Remove the screw [1] and remove the output tray fixing cover [2].



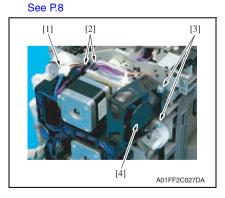
4. Remove the screw [1] and remove the tray up/down motor cover [2].



Disconnect the connector [1] and remove the tray up/down motor assy [2].

2.3.12 Fan motor (FM1)

1. Remove the rear cover.



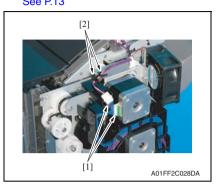
- 2. Disconnect the connector [1] and remove two wire saddles [2].
- 3. Remove two screws [3] and remove the fan motor [4].

2.3.13 Transport motor (M3)

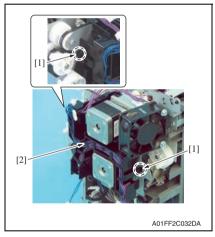
1. Remove the rear cover.

See P.8

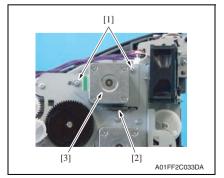
Remove the FS control board. See P.13



- 3. Disconnect two connectors [1].
- 4. Remove the harness from the wire saddle [2].



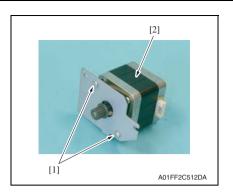
5. Hold down and unhook two tabs [1] and remove the harness guide [2].



 Remove two screws [1], spring [2] and remove the transport motor assy [3].

NOTE

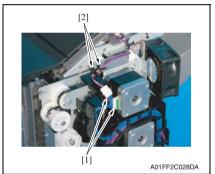
 To reinstall the transport motor assy, hook the spring first and screw the transport motor assy while the spring is stretched to a certain degree.

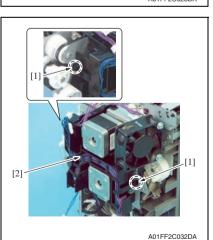


7. Remove two screws [1] and remove the transport motor [2].

2.3.14 Exit motor (M4)

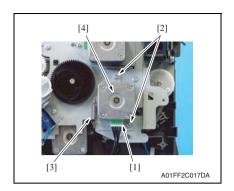
- Remove the rear cover.
 See P.8
- Remove the FS control board. See P.13

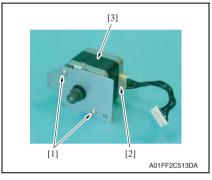




- 3. Disconnect two connectors [1].
- 4. Remove the harness from the wire saddle [2].

5. Hold down and unhook two tabs [1] and remove the harness guide [2].





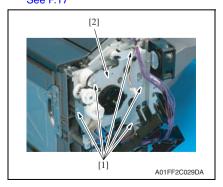
- 6. Disconnect the connector [1].
- 7. Remove two screws [2], spring [3] and remove the exit motor assy [4].

NOTE

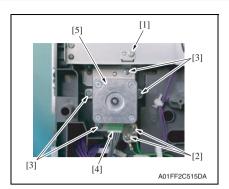
- To reinstall the exit motor assy, hook the spring first and screw the exit motor assy while the spring is stretched to a certain degree.
- 8. Remove two screws [1], connector [2] and remove the exit motor [3].

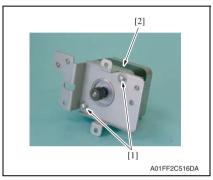
2.3.15 Exit roller up/down motor (M5)

- Remove the rear cover.
 - See P.8
- 2. Remove the FS control board.
 - See P.13
- 3. Remove the transport motor assy.
 - See P.16
- Remove the exit motor assy. See P.17



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



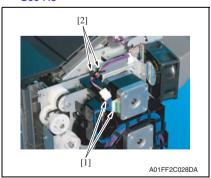


- 6. Loosen the screw [1].
- 7. Remove two screws [2] and remove the ground wire.
- Remove four screws [3], disconnect the connector [4] and remove the exit roller up/down motor assy [5].

Remove two screws [1] and remove the exit roller up/down motor [2].

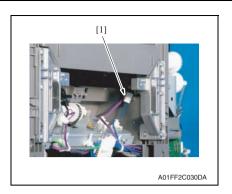
2.3.16 Entrance solenoid (SL1)

- 1. Remove the front cover.
 - See P.7
- 2. Remove the rear cover. See P.8



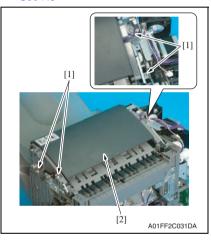
5. Remove the right metal plate cover. See P.9

- 3. Disconnect two connectors [1].
- 4. Remove the harness from the wire saddle [2].

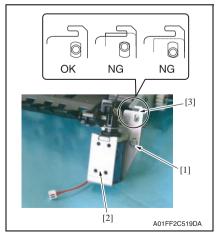


6. Disconnect the connector [1].

Remove the carry-in entrance upper cover.
 See P.8



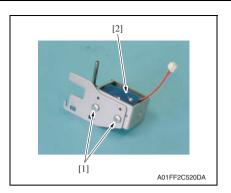
8. Remove four screws [1] and remove the carry-in entrance upper assy [2].



9. Remove the screw [1] and remove the entrance solenoid assy [2].

NOTE

 To reinstall the entrance solenoid assy, the side of the mounting plate [3] needs to be aligned.



10. Remove two screws [1] and remove the entrance solenoid [2].

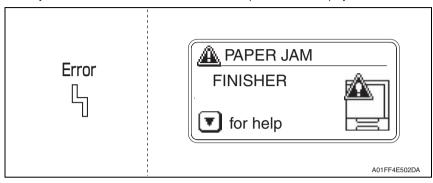
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Troubleshooting

3. Jam display

3.1 Misfeed display

 When a media misfeed occurs, the printer shows the corresponding media misfeed status by means of the Error indicator on the control panel or LCD display.

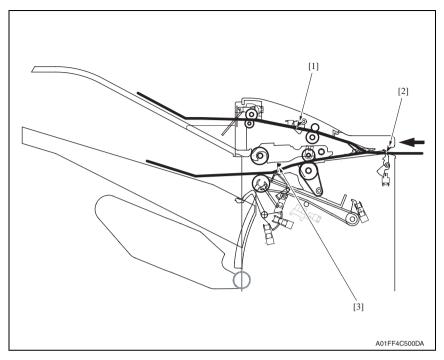


Display		Misfeed location	Misfeed processing	Action
LCD 1	LCD 2	Wildiood foodfiorf	location	7.0
	STAPLER	Staple misfeed	Staple cover	P.25
	UPPER TRANS	Horizontal transport section	Relay unit cover	P.26
PAPER JAM	FINISHER	Finisher transport section	Relay unit cover Finisher cover	P.26
	SUB EXIT	Sub tray section	Relay unit cover Finisher cover	P.27
	MAIN EXIT	Main tray section	Relay unit cover Finisher cover	P.28

3.1.1 Misfeed display resetting procedure

• Open the relevant door, clear the sheet of misfed media, and close the door.

3.2 Sensor layout



- [1] Transport section sensor
- PS3
- [2] Entrance sensor
- PS1
- [3] Storage section sensor PS7

3.3 Solution

3.3.1 Initial check items

• When a media misfeed occurs, first check the following initial check items.

Check Item	Action
Does the media meet product specifications?	Change the media.
Is media curled, wavy, or damp.	Change the media. Instruct the user in correct media storage.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media 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 media?	Set as necessary.
Are the actuators found operational when checked for correct operation?	Correct or change the defective actuator.

3.3.2 Staple misfeed

A. Detection timing

Туре	Description
Stapler section	The stapler does not return to the home position even after the set of time has
misfeed detection	elapsed after the staple motor starts to drive based on normal rotation.

Relevant electrical parts	
Stapling unit	FS control board (FSCB)

		WIRING DIAGRA	M
Step	Action	Control signal	Location (electrical com- ponent)
1	Check the initial check items.	_	_
2	Stapling unit replacement	_	_
3	FSCB replacement	_	_

3.3.3 Horizontal transport section misfeed

A. Detection timing

Туре	Description
Horizontal transport section	The entrance sensor (PS1) is not unblocked even after the set of time has
misfeed detection	elapsed after the main body exit sensor (PS8) is blocked.

B. Action

Relevant electrical parts	
Exit sensor (PS8)	FS control board (FSCB)
Entrance sensor (PS1)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical com- ponent)
1	Check the initial check items.	_	_
2	PS8 I/O, sensor check *	PRCB PJ4-6 (ON)	I-2
3	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
4	FSCB replacement	_	_

3.3.4 Finisher transport section misfeed

A. Detection timing

Туре	Description
Detection of media left in finisher transport section	The entrance sensor (PS1) is unblocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The storage section sensor (PS7) is blocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts		
Entrance sensor (PS1)	FS control board (FSCB)	
Storage section sensor (PS7)		

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical com- ponent)
1	Check the initial check items.	_	_
2	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
3	PS7 I/O, sensor check	FSCB CN9-3 (ON)	B-4
4	FSCB replacement	_	_

3.3.5 Sub tray section misfeed

A. Detection timing

Туре	Description
Sub tray section misfeed	The transport section sensor (PS2) is not unblocked even after the set period of time has elapsed after the entrance sensor (PS1) has been unblocked by the media.
detection	The transport section sensor (PS2) is not blocked even after the set period of time has elapsed after the entrance sensor (PS1) has been blocked by the media.
Detection of media left in sub tray section	The transport section sensor (PS2) is unblocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts		
Entrance sensor (PS1) Transport section sensor (PS2)	FS control board (FSCB)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical com- ponent)
1	Check the initial check items.	_	_
2	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
3	PS2 I/O, sensor check	FSCB CN6-3 (ON)	B-2
4	FSCB replacement		_

3.3.6 Main tray section misfeed

A. Detection timing

Туре	Description
Main tray section misfeed	The storage section sensor (PS7) is not blocked even after the set period of time has elapsed after the entrance sensor (PS1) has been unblocked by the media.
detection	The storage section sensor (PS7) is not unblocked even after the set period of time has elapsed after the entrance sensor (PS1) has been blocked by the media.
Detection of media left in main tray section	The storage section sensor (PS7) is blocked when the main switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

Relevant electrical parts		
Entrance sensor (PS1) Storage section sensor (PS7)	FS control board (FSCB)	

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical com- ponent)
1	Check the initial check items.	_	_
2	PS1 I/O, sensor check	FSCB CN10-3 (ON)	B-4
3	PS7 I/O, sensor check	FSCB CN9-3 (ON)	B-4
4	FSCB replacement	_	_

4. Error codes

4.1 Trouble code list (Service call)

• The CPU performs a self-diagnosis on the condition of the unit, and if a malfunction is detected, the warning appears with the service call ID in the display.

Code	Item	Detection timing
0B30	Aligning plate drive malfunction	 The aligning plate home position sensor (PS6) is not blocked even after the set period of time has elapsed after the main switch is set to ON. The aligning plate home position sensor (PS6) is not unblocked even after the set period of time has elapsed after the align motor (M2) is energized (Start to align operation). The aligning plate home position sensor (PS6) is not blocked even after the set period of time has elapsed after the align motor (M2) is energized (Start to move to the home position).
0B47	Media holding drive malfunction	The media level sensor/1 (PS9) is not transmissive even after the set period of time has elapsed after the tray up/down motor (M6) is turned ON and the tray upper sensor (PS12) is shaded.
0B48	Exit roller pressure/ retraction malfunction	 The exit roller sensor (PS8) is not blocked even after the set period of time has elapsed after the exit roller up/down motor (M5) is energized (beginning of pressure operation). The exit roller sensor (PS8) is not unblocked even after the set period of time has elapsed after the exit roller up/down motor (M5) is energized (beginning of retraction operation).
0B4A	Aligning belt pressure/ retraction malfunction	 The aligning belt sensor (PS11) is not unblocked even after the set period of time has elapsed after the aligning belt up/down solenoid (SL3) is energized (beginning of retraction operation). The aligning belt sensor (PS11) is not blocked even after the set period of time has elapsed after the aligning belt up/down solenoid (SL3) is energized (beginning of pressure operation).
0B4C	Media ejector motor malfunction	 The media ejector sensor (PS5) is not unblocked even after the set period of time has elapsed after the media ejector motor (M1) is energized (Stacks of prints ejection). The media ejector sensor (PS5) is not blocked even after the set period of time has elapsed after the media ejector motor (M1) is energized (Start to move to the home position).
0BA0	Tray up/down motor ascent/descent drive malfunction	 The media level sensor/1 (PS9) and the media level sensor/2 (PS10) are not blocked and unblocked even after the set period time has elapsed after the tray up/down motor (M6) is energized. The tray upper sensor (PS12) and the tray lower sensor (PS13) are not blocked and unblocked even after the set period of time has elapsed after the tray up/down motor (M6) is turned ON.
0BE1	Fan motor malfunction	The fan motor lock signal remains HIGH for a predetermined consecutive period of time while the fan motor remains energized.
133B	Communication mal- function	Contact the responsible people of KMBT before taking some countermeasures.
3FFB	Flash ROM malfunction	Data of flash ROM of the finishing options is determined to be faulty when the power is turned ON.

4.2 Solution

4.2.1 0B30: Aligning plate drive malfunction

Relevant electrical parts		
Align motor (M2)	FS control board (FSCB)	
Aligning plate home position sensor (PS6)		

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical component)
1	Check the M2 connector for proper connection and correct as necessary.	_	_
2	Check M2 for proper drive coupling and correct as necessary.	_	_
3	M2 operation check *	FSCB CN12-1 to 4	G-6
4	PS6 I/O check *	FSCB CN9-6 (ON)	B-3 to 4
5	FSCB replacement		_

^{*1:} M2 and PS6 are not available as a replacement part. If M2 or PS6 has a problem, the staple finisher unit must be replaced.

4.2.2 0B47: Media holding drive malfunction

Relevant electrical parts		
Tray up/down motor (M6) Tray upper sensor (PS12) Media level sensor/1 (PS9)	FS control board (FSCB)	

		WIRING DIAGRAM	
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 CN22-1 to 2	G-2
4	PS12 I/O check	FSCB CN5-4 (ON)	G-2 to 3
5	PS9 I/O check	FSCB CN8-3 (ON)	B-3
6	FSCB replacement	_	_

Staple Finisher

4.2.3 0B48: Exit roller pressure/retraction malfunction

Relevant electrical parts	
Exit roller up/down motor (M5)	FS control board (FSCB)
Exit roller sensor (PS8)	

	Action	WIRING DIAGRAM	
Step		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.	_	_
3	M5 operation check	FSCB CN20-1 to 4	G-3
4	PS8 I/O check *	FSCB CN2-3 (ON)	B-1
5	FSCB replacement	_	_

^{*1:} PS8 is not available as a replacement part. If PS8 has a problem, the staple finisher unit must be replaced.

4.2.4 0B4A: Aligning belt pressure/retraction malfunction

Relevant electrical parts	
Aligning belt up/down solenoid (SL3) Aligning belt sensor (PS11)	FS control board (FSCB)

	Action	WIRING DIAGRAM	
Step		Control signal	Location (electrical component)
1	Check the SL3 connector for proper connection and correct as necessary.	_	_
2	SL3 operation check	FSCB CN19-2 (ON)	G-3 to 4
3	PS11 I/O check	FSCB CN11-3 (ON)	B-4 to 5
4	FSCB replacement	_	_

4.2.5 0B4C: Media ejector motor malfunction

Relevant electrical parts		
Media ejector motor (M1) Media ejector sensor (PS5)	FS control board (FSCB)	

	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	M1 operation check *	FSCB CN21-3 to 6	G-3
4	PS5 I/O check	FSCB CN9-9 (ON)	B-3
5	FSCB replacement	_	_

^{*1:} M1 is not available as a replacement part. If M1 has a problem, the staple finisher unit must be replaced.

4.2.6 0BA0: Tray up/down motor ascent/descent drive malfunction

Relevant electrical parts		
Tray up/down motor (M6)	FS control board (FSCB)	
Media level sensor/1 (PS9)		
Media level sensor/2 (PS10)		
Tray upper sensor (PS12)		
Tray lower sensor (PS13)		

		WIRING DIAGRAM	
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 CN22-1 to 2	G-2
4	PS9 I/O check	FSCB CN8-3 (ON)	B-3
5	PS10 I/O check	FSCB CN8-6 (ON)	B-3
6	PS12 I/O check	FSCB CN5-4 (ON)	G-2 to 3
7	PS13 I/O check	FSCB CN5-1 (ON)	G-2
8	FSCB replacement	_	_

Staple Finisher

4.2.7 0BE1: Fan motor malfunction

Relevant electrical parts	
Fan motor (FM1)	FS control board (FSCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electrical component)
1	Check the FM1 connector for proper connection and correct as necessary.	_	_
2	Check FM1 for proper drive coupling and correct as necessary.	_	_
3	FM1 operation check	FSCB CN13-2 (LOCK)	G-6
4	FSCB replacement	_	_

4.2.8 133B: Communication malfunction

Relevant electrical parts	
FS control board (FSCB)	Print control board (PRCB)

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electrical component)
1	Check the FSCB connector for proper connection and correct as necessary.	_	_
2	Check the PRCB connector for proper connection and correct as necessary.	_	_
3	FSCB replacement	=	_
4	PRCB replacement	=	_

4.2.9 3FFB: Flash ROM malfunction

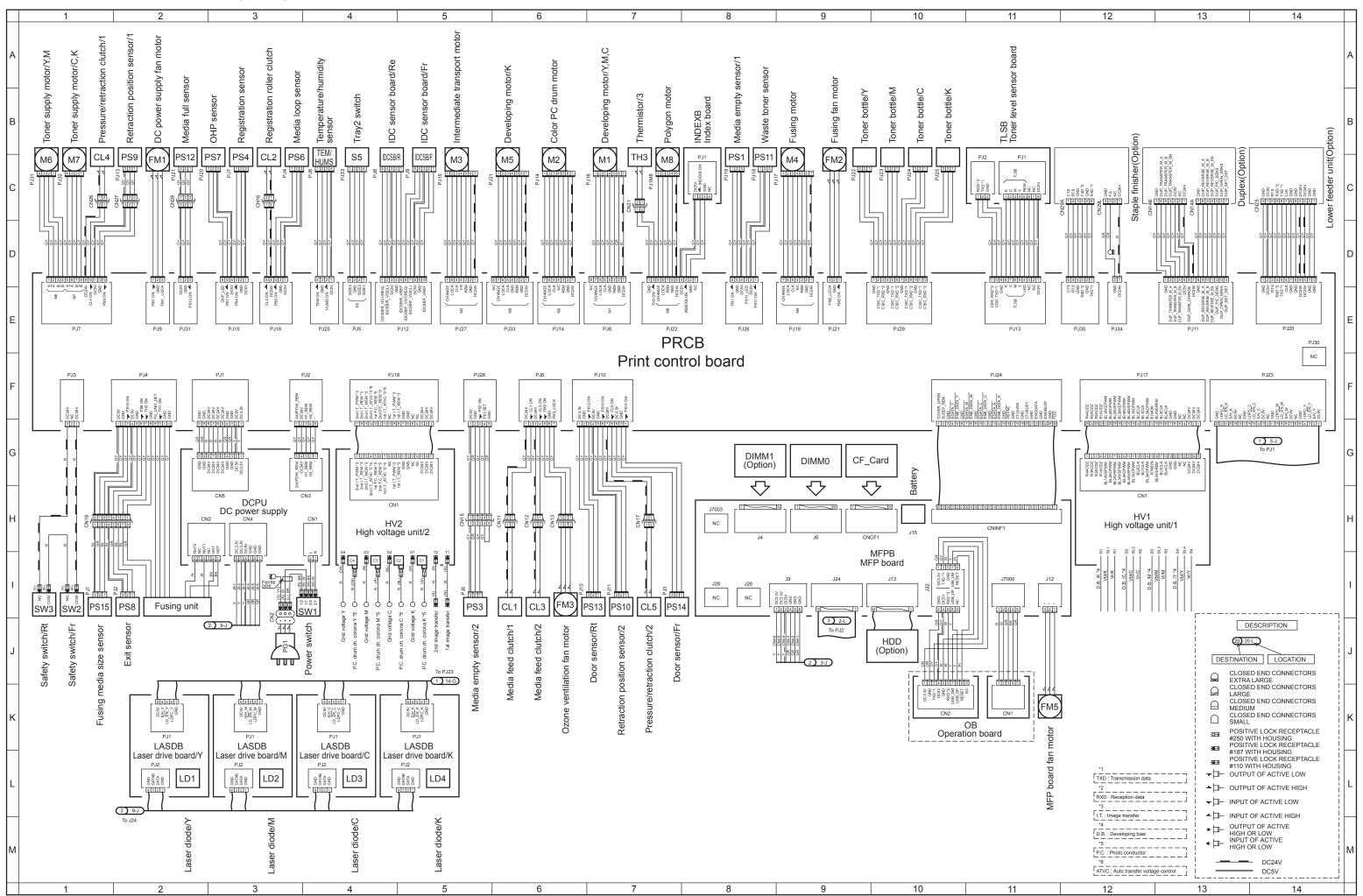
Relevant electrical parts		
FS control board (FSCB)		

		WIRING DIAGRAM	
Step	Action	Control signal	Location (electrical component)
1	Disconnect and then connect the power cord. Turn OFF the main switch, wait for 10 sec. or more, and turn ON the main switch.	_	_
2	The firmware data is overwritten.	=	_
3	FSCB replacement	=	_

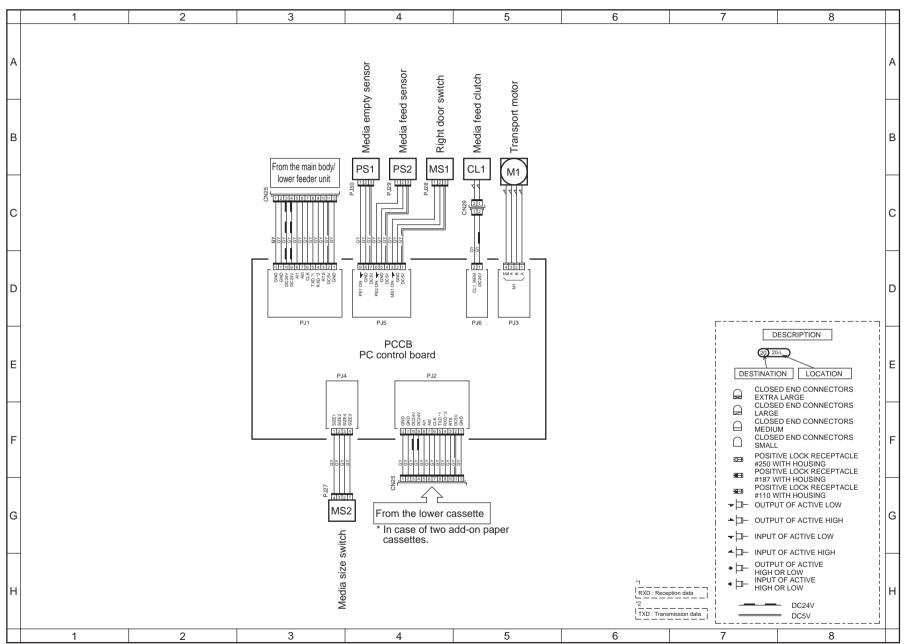
Staple Finisher

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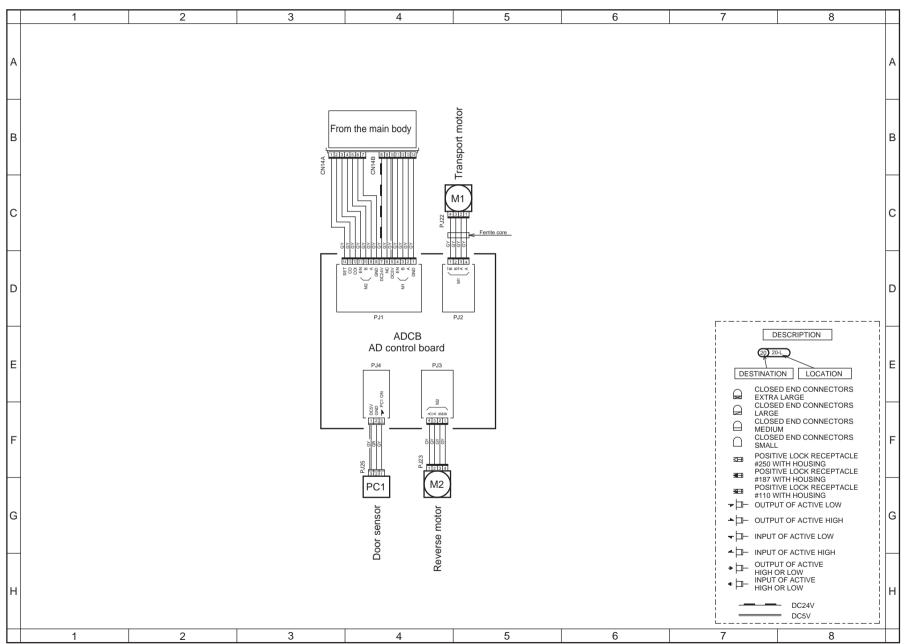
bizhub C31P Overall wiring diagram



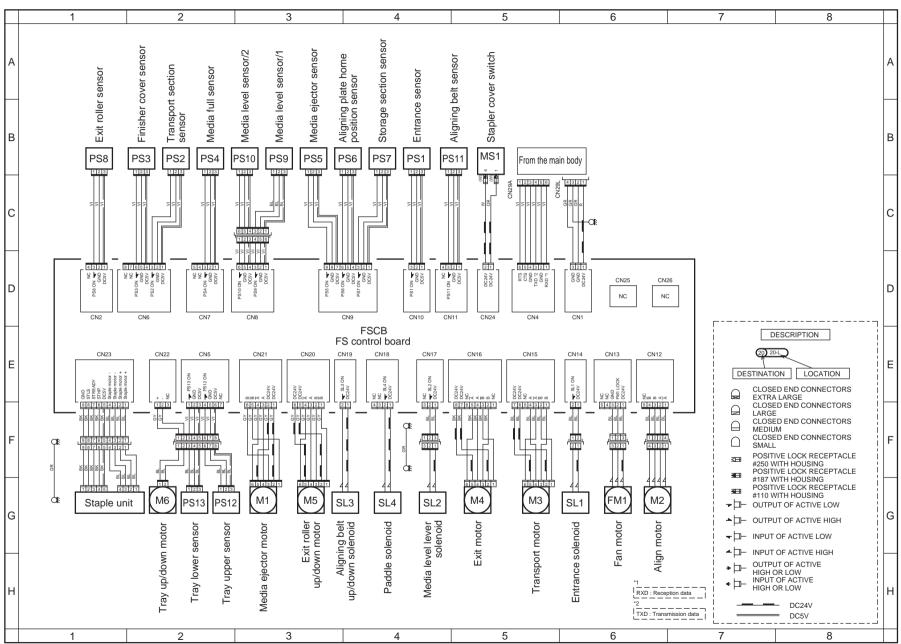
Lower feeder unit Overall wiring diagram



Duplex Overall wiring diagram



Staple finisher Overall wiring diagram





PARTS GUIDE MANUAL

APRIL 2008

bizhub C31P A0EA014

INFORMATION FOR PARTS GUIDE MANUAL

To find correct Parts No., refer to the "HOW TO MAKE THE BEST USE OF THIS MANUAL" in the following page.

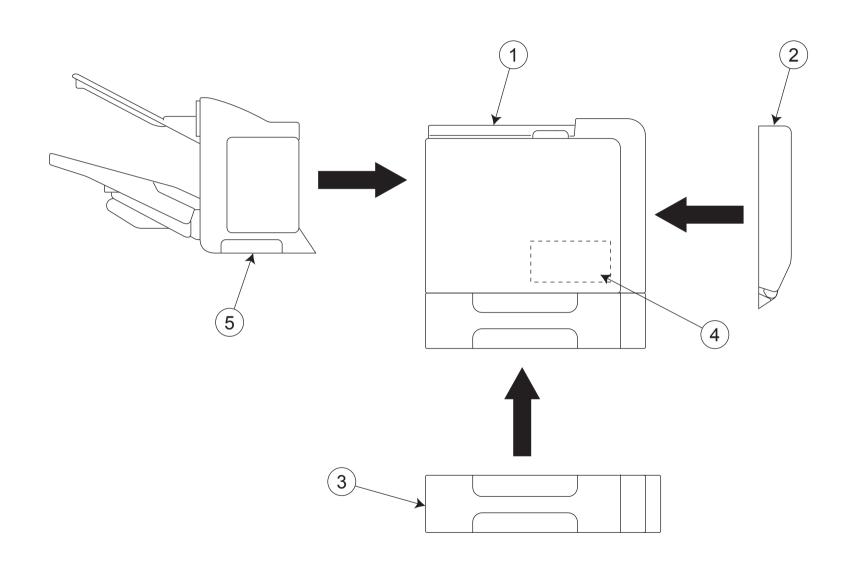
HOW TO MAKE THE BEST USE OF THIS MANUAL

- 1 When you order, please check the proper figures beforehand that are on Our Parts Guide Manual, and order with the appropriate figures.
- 2 For screws, Nuts, Washers, retaining rings and Pins which are used in this model, one letter is shown on the Standard parts column of Parts list and exploded diagrams.
- 3 In order to maintain safety of the product, some specific parts composed of this product are set up as "essential safety parts".
- 4 The assigned parts number for the "essential safety parts" is indicated as "SP00-****". When replacing these parts, follow precautions for disassembling and installing which are listed in the Service Manual. Do not use any parts that are not set up as
- 5 heans that there are exclusive parts for each destination. Please check the appropriate destination when you order.
- 6 Revision Mark

Marked as ▲ on the illustration shows that the revision has been made.

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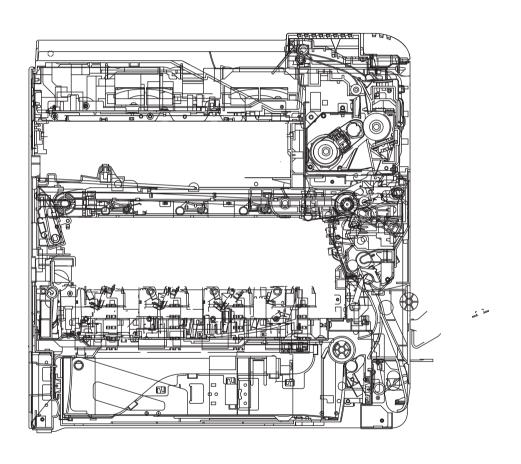
SYSTEM OUTLINE



GENERAL CONTENTS

No.	Description	Model
1	PRINTER COLOR	bizhub C31P
2	DUPLEX	Duplex
3	PAPER FEEDER	SPCU
4	OTHER OPTION	Hard Disk Kit
5	SORTER/FINISHER	Finisher

DIAGRAM OF MAIN PARTS SECTION



CONTENTS

No.	DESCRIPTION	PAGE No.
1	EXTERNAL PARTS	P1
2	MAIN FRAME SECTION	P2
3	MANUAL FEED SECTION	P3
4	I/C RAIL SECTION	P4
5	I/C CONTACT SECTION	P5
6	WASTE TONER TRANSPORT SECTION	P6 P7
7	P/H FRAME SECTION	P8
8	DRIVE SECTION	P9 P10 P11
9	TRANSFER BELT UNIT	P12
10	VERTICAL TRANSPORT UNIT	P13 P14
11	FUSING UNIT	P15
12	ELECTRICAL COMPONENTS	P16
13	500 SHEET TRAY UNIT	P17
14	WIRING	P18 P19
15	WIRING ACCESSORIES AND JIGS	P20
16	ACCESSORY PARTS	P21

INDEX

Parts No.	Page No.
0910 3620 01	7-14
0978 3811 01	17-5
0993 6303 01	8-9
1067 2501 01	6-7
1372 2808 02	6-20
4002 3123 03	5-7
4004 5339 01	6-6
4030 3034 01	3-30
4030 3034 01	17-26
4030 7500 01	1-18
4034 0151 01	3-24
4034 0151 01	17-8
4036 4730 01	9-12
4036 4730 01	10-5
4109 5530 01	14-3
4114 6762 01	21-4
4120 3019 01	3-5
4120 4614 01	5-20
4128 2019 01	2-13
4131 3003 01	17-10
4131 3027 02	3-31
4131 3056 01	3-27
4131 3056 01	17-18
4131 3057 02	3-28
4131 3057 02	17-19
4131 4052 01	13-26
4131 4128 01	11-23
4136 6751 01	4-2
4138 0104 02	4-8
4138 1019 02	1-26
4138 1029 01	2-7
4138 1032 01	1-31
4138 1033 01	21-1
4138 1034 02	1-23
4138 2018 02	1-24
4138 2019 02	12-21
4138 2020 01	12-27
4138 2022 02	12-6
4138 2034 02	2-11
4138 2035 01	12-26

Parts No. Page No. 4138 2041 02 12-1 4138 2055 01 5-9 4138 2056 01 5-8 4138 2057 01 5-16 4138 2063 01 8-8 4138 2064 01 8-7 4138 2078 01 2-10
4138 2055 01 5-9 4138 2056 01 5-8 4138 2057 01 5-16 4138 2063 01 8-8 4138 2064 01 8-7
4138 2056 01 5-8 4138 2057 01 5-16 4138 2063 01 8-8 4138 2064 01 8-7
4138 2057 01 5-16 4138 2063 01 8-8 4138 2064 01 8-7
4138 2063 01 8-8 4138 2064 01 8-7
4138 2064 01 8-7
4139 2079 01 2 10
4138 2084 01 12-3
4138 2088 02 4-14
4138 2089 03 4-15
4138 2091 01 12-24
4138 2092 01 12-8
4138 2093 02 2-4
4138 2094 01 12-5
4138 2095 02 12-25
4138 2096 01 12-7
4138 2098 01 12-9
4138 2099 01 12-28
4138 2100 01 12-2
4138 2103 01 8-4
4138 2105 01 5-1
4138 2106 01 5-2
4138 2107 01 2-6
4138 2110 01 2-8
4138 2111 01 2-12
4138 2113 01 12-19
4138 2117 01 5-19
4138 2205 01 12-4
4138 2207 02 16-14
4138 2217 01 12-18
4138 2224 01 5-24
4138 2225 01 5-25
4138 2226 01 5-23
4138 2230 01 16-4
4138 2232 01 2-2
4138 2236 02 5-4
4138 2238 01 16-1
4138 2239 01 16-23
4138 2240 01 16-11
4138 2246 01 4-7

Parts No.	Page No.
4138 2247 02	9-24
4138 2248 01	9-10
4138 2252 02	9-17
4138 2256 01	16-9
4138 2523 01	10-17
4138 2534 01	10-18
4138 2543 01	10-12
4138 2551 01	10-7
4138 2570 01	10-10
4138 2571 01	10-11
4138 2572 01	10-13
4138 2573 01	9-15
4138 2573 01	10-14
4138 2584 01	10-19
4138 2600 02	10-16
4138 3005 02	2-14
4138 3008 01	2-15
4138 3031 01	17-24
4138 3032 02	3-29
4138 3032 02	17-27
4138 3043 01	17-11
4138 3060 02	5-12
4138 3071 02	7-11
4138 3072 01	7-5
4138 3082 01	17-15
4138 3121 02	17-6
4138 3122 02	17-1
4138 3123 02	17-22
4138 3124 01	17-2
4138 3125 01	17-3
4138 3126 01	17-4
4138 3141 03	17-23
4138 3142 01	17-21
4138 3145 01	17-25
4138 3146 01	17-20
4138 3161 02	17-17
4138 3204 01	3-22
4138 3205 01	3-2
4138 3233 13	3-9
4138 3234 03	3-8

Parts No.	Page No.
4138 3236 02	3-20
4138 3237 01	3-21
4138 3241 01	3-26
4138 3242 02	3-19
4138 3244 01	3-18
4138 3252 01	3-14
4138 3253 01	3-16
4138 3254 01	3-23
4138 3254 01	17-9
4138 3255 01	3-32
4138 3503 02	13-11
4138 3504 01	13-16
4138 3505 01	13-13
4138 3506 01	13-5
4138 3507 01	13-20
4138 3510 01	13-9
4138 3511 02	13-4
4138 3512 01	13-10
4138 3513 02	13-6
4138 3514 01	14-4
4138 3515 01	13-19
4138 3521 02	14-6
4138 3522 03	14-7
4138 3523 01	14-10
4138 3524 01	14-13
4138 3525 02	14-14
4138 3528 02	14-12
4138 3530 01	14-16
4138 3531 02	14-5
4138 3532 02	14-15
4138 3533 01	14-9
4138 3542 01	14-1
4138 3543 01	14-2
4138 3551 02	14-11
4138 3552 02	14-19
4138 3553 12	9-2
4138 3556 01	9-18
4138 3559 01	12-15
4138 3560 02	9-9
4138 3561 01	9-8

Parts No.	Page No.
4138 3562 01	9-7
4138 3563 03	13-14
4138 3564 01	13-22
4138 3566 01	13-8
4138 3567 01	13-12
4138 3568 01	13-24
4138 3569 02	13-25
4138 3570 02	13-18
4138 3571 01	13-17
4138 3582 01	9-1
4138 3583 01	9-20
4138 3584 01	9-19
4138 3589 01	9-14
4138 5402 01	11-19
4138 5403 01	11-18
4138 5404 01	11-17
4138 5406 01	11-13
4138 5412 02	11-14
4138 5414 01	11-21
4138 5877 01	15-8
4138 5881 01	15-9
4138 5885 01	15-4
4138 5894 01	15-6
4138 6812 01	8-2
4138 6830 01	16-12
4138 6834 01	16-5
4138 6835 01	3-11
4138 6839 01	12-23
4138 6840 01	12-22
4138 6844 01	16-10
4138 6853 01	15-5
4138 7001 00	14-21
4138 7301 01	13-7
4138 7303 01	4-12
4138 7305 01	17-16
4139 N300 00	21-3
4163 5293 01	12-10
4470 4024 01	9-5
4498 3404 01	17-12
9313 1300 51	5-21

Parts No.	Page No.
9314 1300 41	11-22
9322 1300 61	9-13
9332 3710 11	5-11
9335 1100 31	9-4 3-10
9335 1300 61	3-10
9335 1300 61	4-11
9335 1300 61	7-4
9335 1300 61 9335 1300 61	9-6
9335 1300 61	12-20
9335 1300 61	13-15
9335 1300 61	15-3
9335 1400 51	9-22
9335 1910 21	14-8
9372 5300 11	9-3
9381 4100 91	21-3
9J06 M601 00	9-16
A00F 5603 00	3-13
A011 1006 01	2-5 2-3
A011 1031 00	2-3
A011 1035 00	10-21
A011 1101 01	4-10
A011 1102 01	4-17
A011 1103 02	4-6
A011 1106 00	7-7
A011 1107 00	7-6
A011 1108 00	9-23
A011 1109 00	7-8
A011 1113 00	8-6
A011 1114 00	9-21
A011 1115 00	4-5
A011 1116 02	4-16
A011 1301 01	8-1
A011 1303 01	8-10
A011 1304 01	4-4
A011 1305 00	4-1
A011 1306 01	16-16
A011 1308 01	11-3
A011 1310 00	4-3
A011 1311 00	2-9
A011 1313 01	11-1

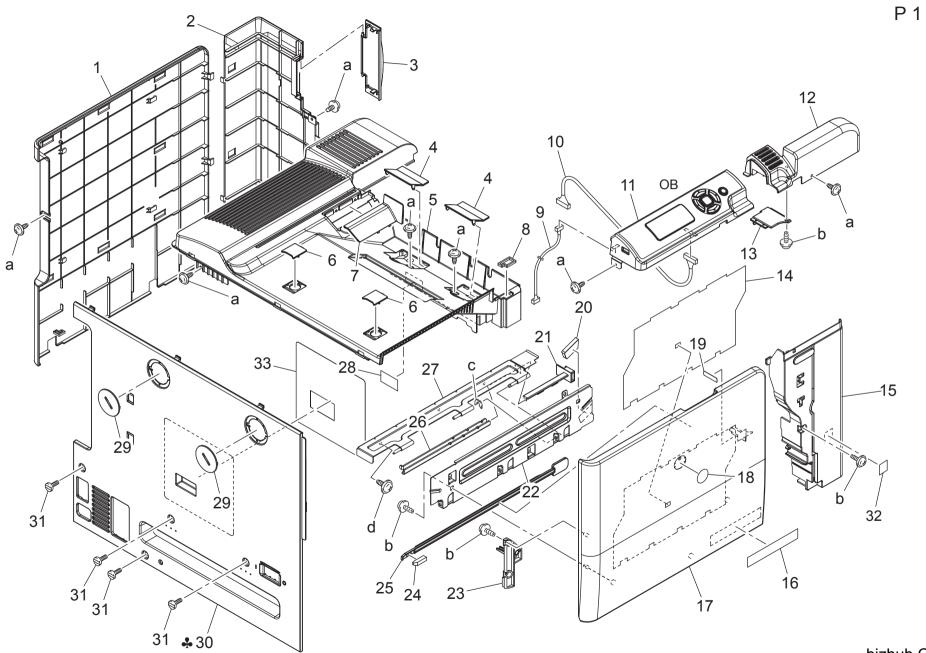
Parts No.	Page No.
A011 1315 00	16-7
A011 1322 00	4-9
A011 1331 00	16-19
A011 1332 00	16-15
A011 1361 00	16-8
A011 1603 00	1-8
A011 1605 00	1-13
A011 1609 01	13-2
A011 1618 01	1-27
A011 1626 02	21-2
A011 1630 01	1-22
A011 1635 00	1-19
A011 1636 00	1-28
A011 1637 00	2-1
A011 1638 00	1-20
A011 1901 00	1-25
A011 2106 00	10-20
A011 2113 00	10-9
A011 2114 00	10-8
A011 2121 00	11-16
A011 2122 00	11-15
A011 2123 01	11-12
A011 2129 00	11-24
A011 3600 00	11-5
A011 3601 00	11-7
A011 3602 00	11-8
A011 3603 00	6-5
A011 3604 00	6-17
A011 3606 00	6-18
A011 3607 00	6-19
A011 3608 00	7-13
A011 3609 00	11-10
A011 3610 00	11-9
A011 3611 00	6-16
A011 3616 00	7-2
A011 3618 00	6-4
A011 3621 00	6-9
A011 3622 01	6-1
A011 3626 00	6-2
A011 3627 00	6-12

Parts No.	Page No.
A011 3628 00	6-14
A011 3629 00	6-15
A011 3631 00	6-13
A011 3632 00	11-11
A011 3633 00	6-11
A011 3634 00	6-10
A011 3639 00	11-6
A011 3642 01	6-8
A011 3643 01	6-22
A011 3646 00	7-3
A011 3648 00	6-23
A011 4600 01	5-5
A011 4601 00 A011 4602 00	5-3
A011 4602 00	5-17
A011 4603 00	5-22
A011 4604 00	5-6
A011 5610 01	3-7
A011 5611 01	3-3
A011 5613 00	3-4
A011 7001 00	14-17
A011 7003 00	12-14
A011 7004 00	12-11
A011 7006 00	12-12
A011 7007 00	13-21
A011 7301 00	15-10
A011 7378 01	15-7
A011 9401 00	4-13
A011 9412 00	1-14
A011 9462 00	1-32
A011 9784 00	17-30
A011 A110 00	7-10
A011 A120 00	7-12
A011 A360 01	7-1
A011 A361 00	6-3
A011 H005 01	16-3
A011 M100 00	10-1
A011 M101 01	10-2
A011 M102 01	10-4
A011 M104 00	11-2
A011 M200 00	10-6

Parts No.	Page No.
A011 M200 00	14-18
A011 M402 12	16-6
A011 M403 01	16-13
A011 M500 00	12-13
A011 M700 01	16-20
A011 M711 00	16-21
A011 N100 00	16-17
A011 N101 01	18-1
A011 N108 00	18-2
A011 N109 00	18-3
A011 N10B 00	18-5
A011 N10C 00	13-23
A011 N10D 00	18-6
A011 N10E 00	19-1
A011 N10F 00	19-2
A011 N10G 00	19-3
A011 N10J 00	19-4
A011 N10K 00	19-5
A011 N10P 00	5-10
A011 N10Q 00	12-17
A011 N10T 00	10-3
A011 N10U 00	16-2
A011 N10W 00	5-13
A011 N10X 00	5-14
A011 N10Y 00	5-15
A011 N110 00	18-4
A011 N111 00	16-18
A011 N120 04	1-10
A011 N121 00	1-9
A011 R701 00	11-4
A011 R702 00	10-22
A011 R703 11	10-15
A011 R704 00	11-20
A011 R705 11	9-11
A011 R707 00	6-21
A011 R709 00	13-1
A011 R715 00	3-25
A011 R716 00	17-7
A06X 010	7-9
A06X 011	12-16

Parts No.	Page No.
A06X 012	14-20
A06X 0Y0	7-9
A06X 0Y1	12-16
A06X 0Y2	14-20
A0EA 1300 00	8-13
A0EA 1301 00	8-12
A0EA 1601 00	1-2
A0EA 1602 00	1-21
A0EA 1603 00	1-3
A0EA 1604 00	1-5
A0EA 1605 00	1-17
A0EA 1606 00	1-15
A0EA 1607 00	1-1
A0EA 1608 00	1-12
A0EA 1609 00	1-7
A0EA 1610 00	1-4
A0EA 1611 00	1-29
A0EA 1612 00	1-6
A0EA 1614 00	1-30
A0EA 1615 00	15-2
A0EA 1616 00	1-30
A0EA 1617 00	1-33
A0EA 3000 00	8-11
A0EA 5601 00	3-15
A0EA 5602 00	3-17
A0EA 5603 00	3-1
A0EA 5604 00	3-6
A0EA 5605 00	17-29
A0EA 6200 00	17-14
A0EA 6201 00	17-13
A0EA 7000 00	13-3
A0EA 9453 00	1-16
A0EA A110 00	5-18
A0EA H012 00	16-22
A0EA M400 00	8-3
A0EA M401 00	8-3
A0EA M713 00	1-11
A0EA R700 00	8-5
A0EA R701 00	3-12
A0EA R702 00	17-28

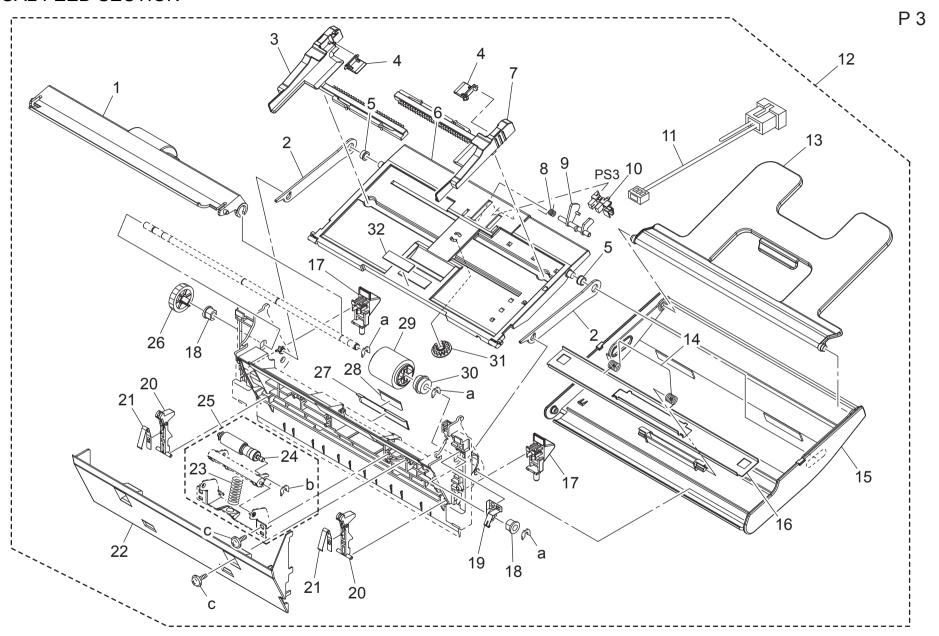
Parts No.	Page No.
A0EA R703 00	17-28
A0EA R706 00	15-1
A0EA R707 00	15-1
V500 0100 05	20-2
V500 0100 13	20-3
V500 0100 20	20-1
V500 0200 19	20-4
V501 0100 01	20-5



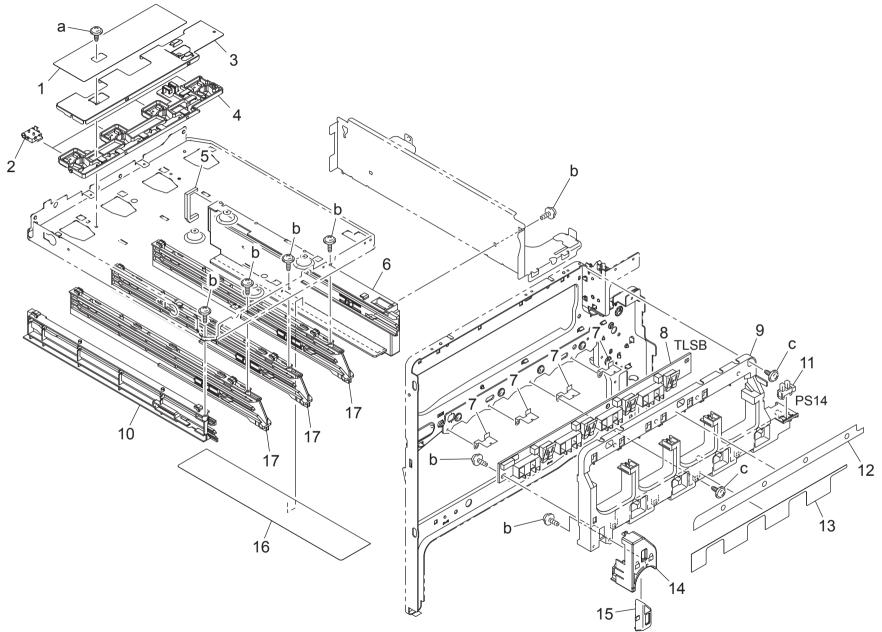
C ey	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A0EA 1607 00	Rear Cover		С	1	a-V137 0306 03
2	A0EA 1601 00	Right Cover		С	1	b-V153 0308 03
	A0EA 1603 00	Door		С	1	c-V217 0300 01 d-V137 0308 03
	A0EA 1610 00	Cover		С	2	4-7 137 0300 03
	A0EA 1604 00	Top Cover		С	1	
	A0EA 1612 00	Cover		С	2	
	A0EA 1609 00	Top Cover		С	1	
	A011 1603 00	SEAL		С	1	
	A011 N121 00	WIRE HARNESS ASSY		D	1	
	A011 N120 04	WIRE HARNESS ASSY		D	1	
	A0EA M713 00	Control Panel Assy			1	
	A0EA 1608 00	Top Cover		C	1	
	A011 1605 00	GUIDE		D	1	
14	A011 9412 00	LABEL I/C SET		D	1	
	A0EA 1606 00	Front Cover		С	1	
	A0EA 9453 00	Label bizhub C31P		С	1	
	A0EA 1605 00	Front Cover		С	1	
	4030 7500 01	LABEL LOGO MARK		С	1	
19	A011 1635 00	SEAL		С	1 1	
	A011 1638 00	MEMBER		С	1	
	A0EA 1602 00	Cover		С	1	
22	A011 1630 01	REINFORCE PLATE		D	1	
	4138 1034 02	LEVER		С	1	
	4138 2018 02	CLEANING PAD		S	1	
25	A011 1901 00	CLANING MATERIAL		D	1	
	4138 1019 02	HANDLE		D	1	
27	A011 1618 01	HINGE		С	1	
	A011 1636 00	SEAL		C	1	
	A0EA 1611 00	Cover		С	2	
	A0EA 1616 00	Left Cover	В	С	1	
30	A0EA 1614 00	Left Cover	С	С	1	
	4138 1032 01	SHOULDER SCREW		D	4	
	A011 9462 00	Label Emperon		D	1	
33	A0EA 1617 00	Shield		С	1	
						_
						-

< ey	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A011 1637 00	SEAL		С	1	a-V137 0306 03 b-V144 0306 03
	4138 2232 01	BRACKET		D	1	b-V144 0306 03
3	A011 1031 00	SEAL		D	1	
4	4138 2093 02	PAWL		D	2	
5	A011 1006 01	BRACKET		D	1	
6	4138 2107 01	PROTECTION		D	1	1
7	4138 1029 01	PAWL		D	1	
8	4138 2110 01	SEAL		D	2	
9	A011 1311 00	GUIDE		D	1	
10	4138 2078 01	REINFORCE PLATE		D	1	
11	4138 2034 02	RAIL		D	1	1
12	4138 2111 01	SPACER		D	1	
13	4128 2019 01	SPACER RUBBER FOOT		D	3	
14	4138 3005 02	RAIL		D	1	
14	4130 3003 02	BRACKET				
15	4138 3008 01	BRACKET		D	1	4
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MANUAL FEED SECTION



Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A0EA 5603 00	Guide		D	1	a-V218 0400 86
2	4138 3205 01	LEVER		С	2	b-V218 0300 86
3	A011 5611 01	REGULATING PLATE		D	1	c-V153 0308 03
4	A011 5613 00	GUIDE		D	2	
5	4120 3019 01	COLLAR		С	2	
6	A0EA 5604 00	Lifting Plate		C	1	
7	A011 5610 01	REGULATING PLATE		D	l i	
8	4138 3234 03	TORSION SPRING		C	1	
9	4138 3233 13	ACTUATOR		Č		
10	9335 1300 61	PHOTO INTERRUPTER		В	1	
11	4138 6835 01	WIRE HARNESS ASSY		D	1	-
12	A0EA R701 00	Manual Feed Assy		S		
				C		
13	A00F 5603 00	Tray			1	
14	4138 3252 01	TORSION SPRING		С	1	
15	A0EA 5601 00	Tray		C	1	
16	4138 3253 01	REINFORCE PLATE		D	1	
17	A0EA 5602 00	Lever		С	2	
18	4138 3244 01	BUSHING		С	2	
19	4138 3242 02	EARTH GROUND		D	1	
20	4138 3236 02	STOPPER		D	2	
21	4138 3237 01	PLATE SPRING		D	2	
22	4138 3204 01	GUIDE		D	1	
23	4138 3254 01	PRESSURE SPRING		С	1	
24	4034 0151 01	SEPARATION ROLLER		A	1	
25	A011 R715 00	SEPARATION ROLLER ASSY		C	1	
26	4138 3241 01	GEAR 25T		C	1	1
27	4131 3056 01	GUIDE PLATE		Č	1	
28	4131 3057 02	GUIDE		Č	1	
29	4138 3032 02	ROLLER		В	1	
30	4030 3034 01	CLUTCH		C	l i	
31	4131 3027 02	GEAR 14T		C	1	1
	4138 3255 01	FRICTION SHEET		C		
52	7100 0200 01	THO HOW ONLE !			'	
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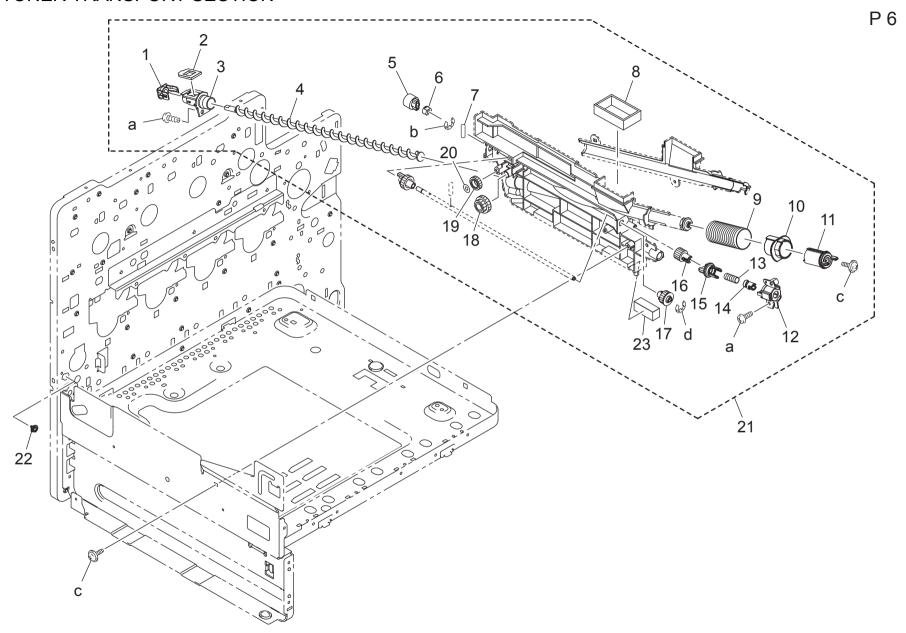
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Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A011 1305 00	SHIELD		С	1	a-V137 0306 03 b-V153 0308 03 c-V144 0306 03
2	4136 6751 01	CONNECTOR PIN		D	4	b-V153 0308 03
3	A011 1310 00	COVER		D	1	c-V144 0306 03
4	A011 1304 01	BRACKET		С	1	
5	A011 1115 00	SEAL		С	1	
6	A011 1103 02	RAIL		D	1	
7	4138 2246 01	EARTH GROUND		D	4	
	4138 0104 02	PWB ASSY		Ī	1	
9	A011 1322 00	COVER		D.	1	
10	A011 1322 00 A011 1101 01	RAIL		D	1	
11	9335 1300 61	PHOTO INTERRUPTER		В	1	1
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12	4138 7303 01	LABEL IC POSITION		D	1	
13	A011 9401 00	LABEL PU INSERTION TARGET		С	1	
14	4138 2088 02	COVER		D	1	
15	4138 2089 03	LEVER		С	1	
	A011 1116 02	Protection		С	1	
17	A011 1102 01	RAIL		D	3	
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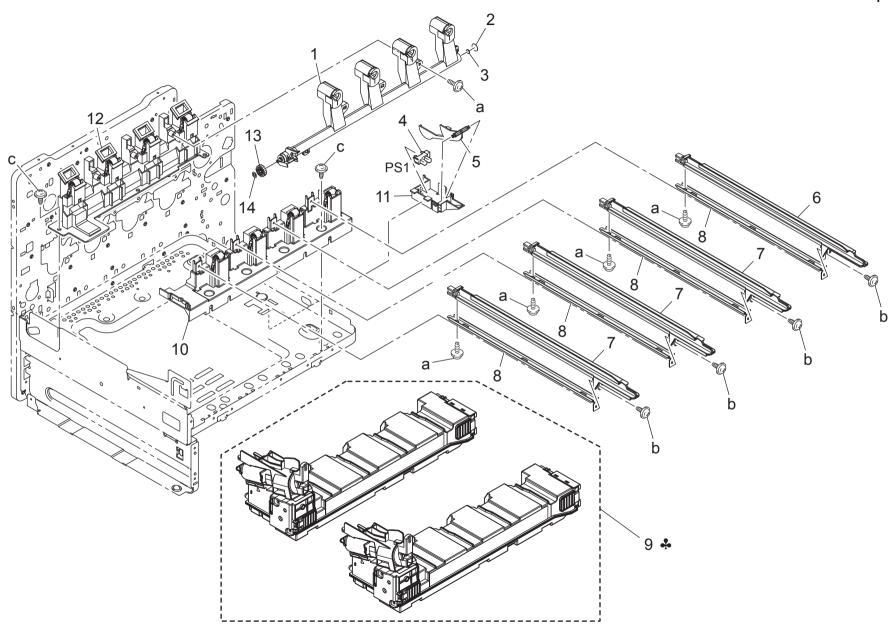
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Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	4138 2105 01	SEAL		D	1	a-V137 0306 03
2	4138 2106 01	SEAL		D	1	b-V144 0306 03
3	A011 4601 00	HOLDER		D	4	
4	4138 2236 02	PRESSURE SPRING		С	4	
5	A011 4600 01	HOLDER		D	4	
6	A011 4604 00	PRESSURE SPRING		С	4	
7	4002 3123 03	HOLDER		D	1	
8	4138 2056 01	SEAL		D	1	
9	4138 2055 01	DUCT		D	1	
	A011 N10P 00	WIRE HARNESS ASSY		D	1	
	9332 3710 11	SWITCH(DETECT)		C	1	1
12	4138 3060 02	LEVER		C	1	
13	A011 N10W 00	WIRE HARNESS ASSY		D	1	
	A011 N10W 00	WIRE HARNESS ASSY		D	1	
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15	A011 N10Y 00	WIRE HARNESS ASSY		D	1	
16	4138 2057 01	DUCT		D	1	1
17	A011 4602 00	HOLDER		D	4	ĺ
18	A0EA A110 00	OZONE FILTER		С	1	ĺ
	4138 2117 01	SEAL		D	1	
	4120 4614 01	SCREW		С	2	
21	9313 1300 51	FAN MOTOR		В	1	1
22	A011 4603 00	COVER		С	4	
23	4138 2226 01	CONTACT		D	4	
24	4138 2224 01	CONTACT		D	4	
25	4138 2225 01	CONTACT		D	4	

WASTE TONER TRANSPORT SECTION

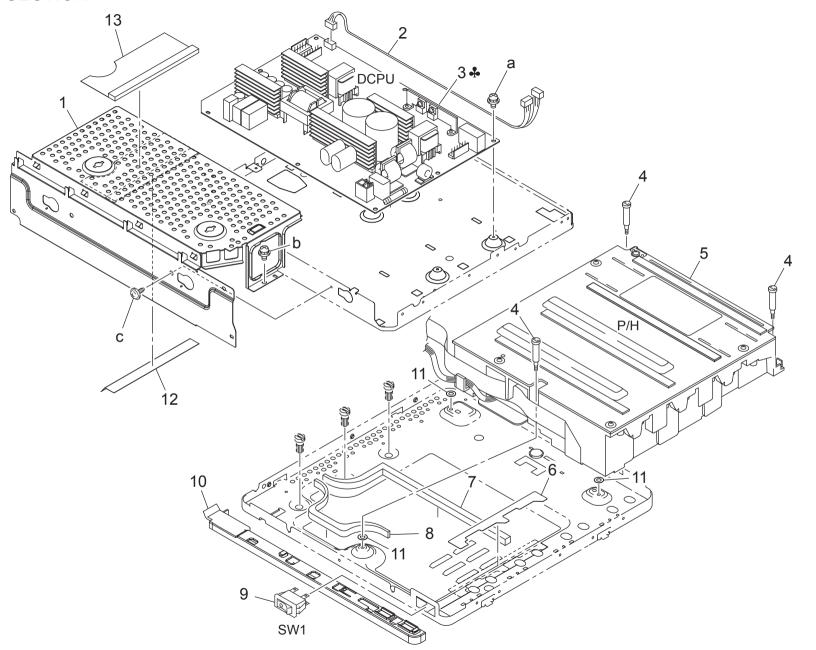


Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A011 3622 01	COVER		C	1	a-V145 0308 03
2	A011 3626 00	SEAL		С	1	b-V217 0300 01
3	A011 A361 00	BUSHING ASSY		C	1	b-V217 0300 01 c-V153 0308 03 d-V217 0200 01
4	A011 3618 00	SCREW		D	1	a 1211 0200 01
5	A011 3603 00	GEAR 16T		С	1	4
6	4004 5339 01	BUSHING		С	1	
7	1067 2501 01	PIN		С	1	
8	A011 3642 01	SEAL		С	1	
9	A011 3621 00	PRESSURE SPRING		С	1	
10	A011 3634 00	SHUTTER		D	1	4
	A011 3633 00	SHUTTER HOLDER		D	1	
12 13	A011 3627 00 A011 3631 00	PRESSURE SPRING		D C	1 1	
14	A011 3628 00	COUPLING		C	1	
	A011 3628 00 A011 3629 00	JOINT		C		
16	A011 3629 00 A011 3611 00	GEAR 14T		C	1	+
	A011 3611 00 A011 3604 00	GEAR 141		C	1	
18	A011 3604 00 A011 3606 00	GEAR 16/20T		C	1	
19	A011 3607 00	GEAR 17T		C	1	
20	1372 2808 02	STOP RING		C	1	
21	A011 R707 00	WASTE TONER DRAWING UP ASSY		C	1	1
22	A011 3643 01	HOLDER		D	1	
23	A011 3648 00	MEMBER		Č	1 1	
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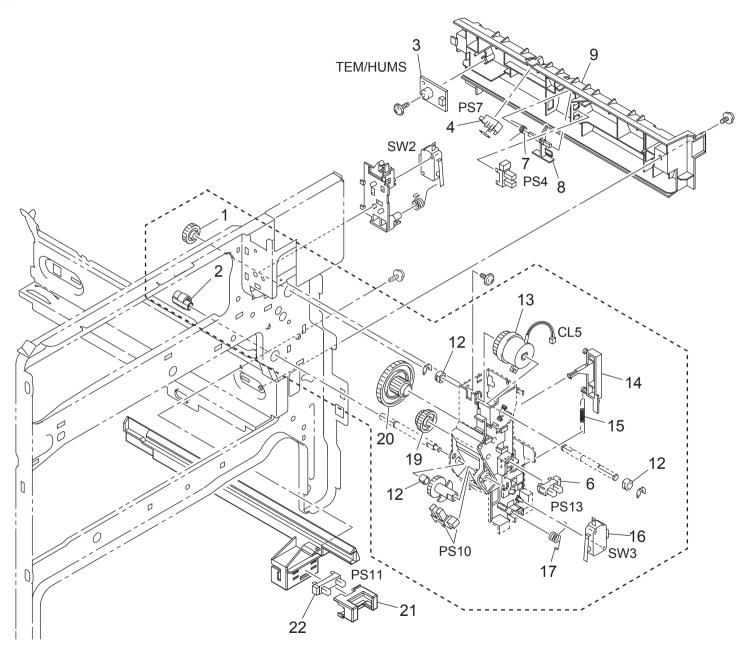


Cey	Part No.	Description	Destinations	Class	QTY	Page. Standard parts
1 A0	11 A360 01	HOLDER ASSY		D	1	a-V153 0308 03
2 A0	11 3616 00	SEAL		С	1	b-V137 0306 03 c-V144 0306 03
3 A0	11 3646 00	SEAL		С	1	c-V144 0306 03
4 933	35 1300 61	PHOTO INTERRUPTER		В	1	
5 413	38 3072 01	ACTUATOR		С	1	
6 A0	11 1107 00	RAIL		D	1	1
7 A0	11 1106 00	RAIL		D	3	
8 A0	11 1109 00	REINFORCE PLATE		D	4	
9 A06	6X 010	Waste Toner Bottle	В	A	2	
9 A06	6X 0Y0	Waste Toner Bottle	C	A	2	
10 A0	011 A110 00	HOLDER ASSY		C	1	1
10 A0	38 3071 02	BRACKET		0		
11 413	38 30/1 02	BRACKET		D	1	
12 A0	11 A120 00	HOLDER ASSY		С	1	
13 A0	11 3608 00	GEAR 19T		С	1	
14 091	10 3620 01	STOP RING		D	1	
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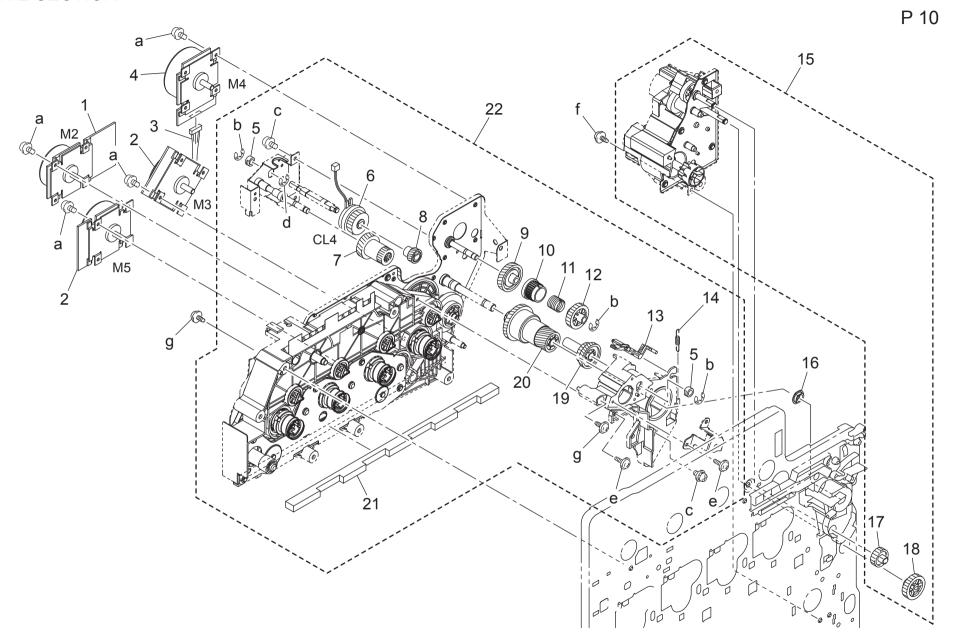




1 /11	1 FRAME SECTION					
Key	Part No.	Description	Destinations	Class	QTY	Page. 8 Standard parts
1 2 3 3 4 5 6 7 8 9 10 11 12 13	A011 1301 01 4138 6812 01 A0EA M401 00 A0EA M400 00 4138 2103 01 A0EA R700 00 A011 1113 00 4138 2063 01 4093 6303 01 A011 1303 01 A0EA 3000 00 A0EA 1301 00 A0EA 1300 00	Description COVER WIRE HARNESS ASSY Power supply 100V Power supply 200V SHOULDER SCREW Printer Head Assy SEAL SEAL SEAL SEAL SEAL SWITCH COVER Seal Seal Seal	B C	Class D I C C C C C C C		a-V116 0306 03 b-V116 0308 03 c-V137 0306 03

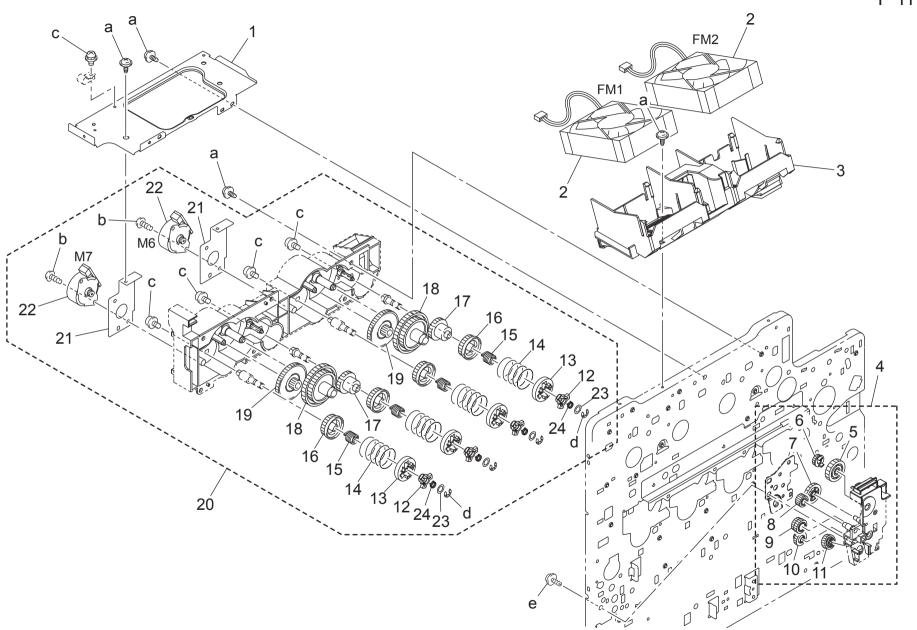


Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	4138 3582 01	GEAR 17T		C	1	a-V153 0308 03
2	4138 3553 12	Cam		С	1	b-V137 0306 03 c-V218 0400 86 d-V217 0300 01
3	9372 5300 11	HUMIDITY CONVERTION EL.		В	1	d-V217 0300 01
4	9335 1100 31	PHOTO INTERRUPTER		<u> </u>	1	e-V144 0306 03
5	4470 4024 01	STOPPER		D	1	4
6	9335 1300 61	PHOTO INTERRUPTER		В	3	
7	4138 3562 01	TORSION SPRING		С	1	
	4138 3561 01	ACTUATOR GUIDE PLATE		С	1	
9 10	4138 3560 02 4138 2248 01	TORSION SPRING		D C	1	
11	A011 R705 11	DRIVE KIT		S	1	4
12	4036 4730 01	BUSHING		C	3	
13	9322 1300 61	CLUTCH		Ĭ	1	
14	4138 3589 01	LEVER		Ċ		
15	4138 2573 01	TENSION SPRING		Č		
16	9J06 M601 00	MICRO SWITCH		Č	2	1
17	4138 2252 02	TORSION SPRING		Č	1	
	4138 3556 01	GEAR 24T		Č		
	4138 3584 01	GEAR 18/25T		Č		
20	4138 3583 01	GEAR 19/44T		Č	1 1	
21	A011 1114 00	COVER		C	1	
22	9335 1400 51	SOLID STATE SWITCH		В	1	
23	A011 1108 00	RAIL		D	1	
24	4138 2247 02	BRACKET		D	1	
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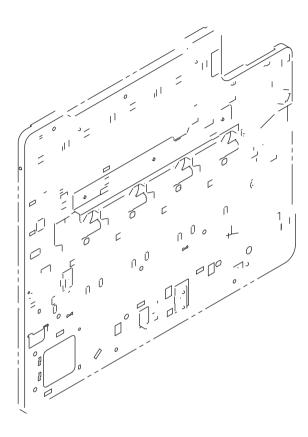
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DRIVE SECTION							
Key	Part No.	Description	Destinations	Class	QTY	Standard parts	
1	A011 M100 00	BRUSHLESS MOTOR		В	1	a-V116 0305 04	
2	A011 M101 01	BRUSHLESS MOTOR /20		В	2	b-V217 0400 01	
3	A011 N10T 00	WIRE HARNESS ASSY		D	1	b-V217 0400 01 c-V116 0306 03 d-V217 0500 01	
4	A011 M102 01	BRUSHLESS MOTOR /30		В		e-V153 0308 03	
5	4036 4730 01	BUSHING		С	2	f-V137 0306 03 g-V144 0306 03	
6	A011 M200 00	CLUTCH		C	1	g-V144 0306 03	
7	4138 2551 01	GEAR 17 50T		С	1		
8	A011 2114 00	GEAR 28T		С	1		
9	A011 2113 00	GEAR 58T		С	1		
10	4138 2570 01	RATCHET TOPOLOGICAL CORPUSE		С	1		
11	4138 2571 01	TORSION SPRING		С	1 1		
12 13	4138 2543 01 4138 2572 01	GEAR 26T LEVER		C C	1		
14	4138 2573 01	TENSION SPRING		C	1		
15	A011 R703 11	PAPER TAKE-UP DRIVE KIT		C	1		
16	4138 2600 02	BUSHING		C	1		
17	4138 2523 01	GEAR 19T		C	1		
18	4138 2534 01	GEAR 191		C	1		
19	4138 2584 01	GEAR 21 66T		C	1		
20	A011 2106 00	GEAR 40T		C	1		
21	A011 1035 00	SEAL		C	1		
22	A011 R702 00	MAIN DRIVE ASSY		Ċ	1		
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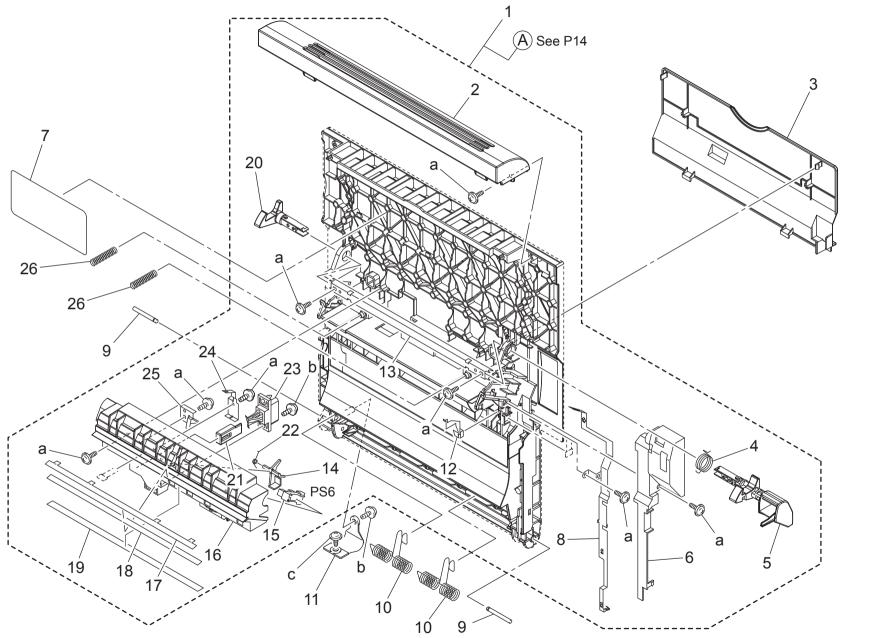


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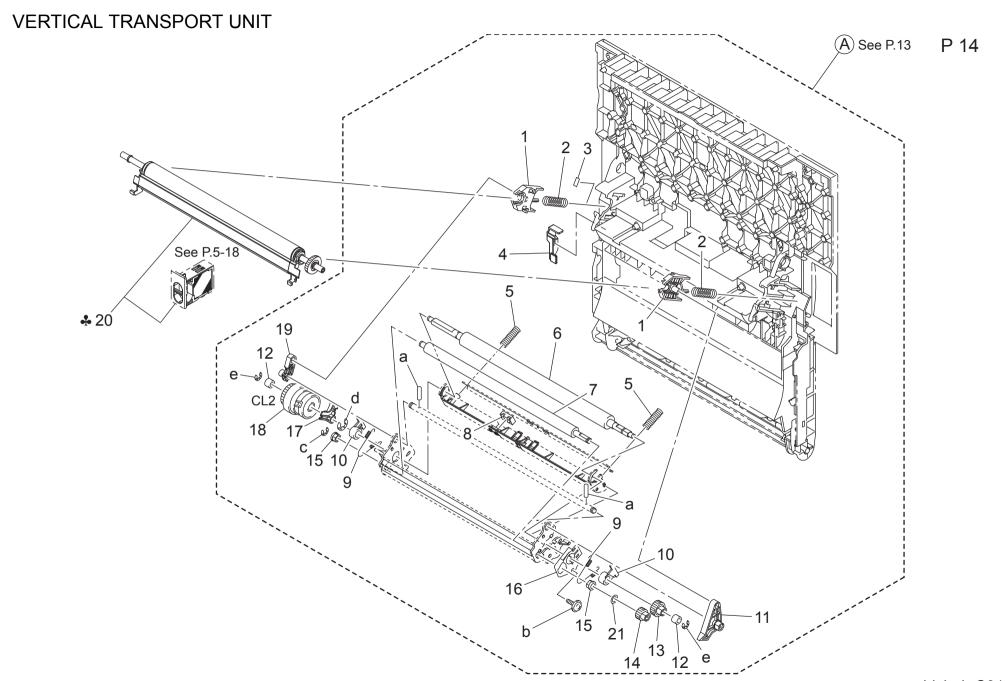
Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A011 1313 01	BRACKET		D	1	a-V137 0306 03 b-V145 0308 03 c-V116 0308 03 d-V217 0400 01
2	A011 M104 00	FAN MOTOR		С	2	b-V145 0308 03
3	A011 1308 01	DUCT		D	1	C-V116 0308 03
4	A011 R701 00	WASTE TONER DRIVE ASSY		С	1	e-V153 0310 03
5	A011 3600 00	GEAR 30T		С	1	e-v 133 03 10 03
6	A011 3639 00	GEAR 14T		C	1	1
7	A011 3601 00	GEAR 28T		Č	1	
8	A011 3602 00	GEAR 15T		Č	1	
9	A011 3610 00	GEAR 17/17T		Č		
9 10	A011 3610 00 A011 3609 00	GEAR 17T		C		
11	A011 3632 00	GEAR 17T		C	1	4
12	A011 2123 01	GEAR		D	4	
13	4138 5406 01	JOINT		С	4	
14	4138 5412 02	PRESSURE SPRING		С	4	
	A011 2122 00	TOSION SPRING		С	4	
16	A011 2121 00	GEAR 30T		С	4	
17	4138 5404 01	GEAR 30T		С	2	
18	4138 5403 01	GEAR 45/96T		С	2	
19	4138 5402 01	GEAR 22/108T		C	2	
20	A011 R704 00	HOPPER DRIVE ASSY		S	<u> </u>	
21	4138 5414 01	HEAT SINK		D	2	1
22	9314 1300 41	MOTOR		В	2	
23	4131 4128 01	WASHER		C	4	
24	A011 2129 00	TORSION SPRING		D	4	
24	A011 2129 00	TORSION SPRING		D	4	



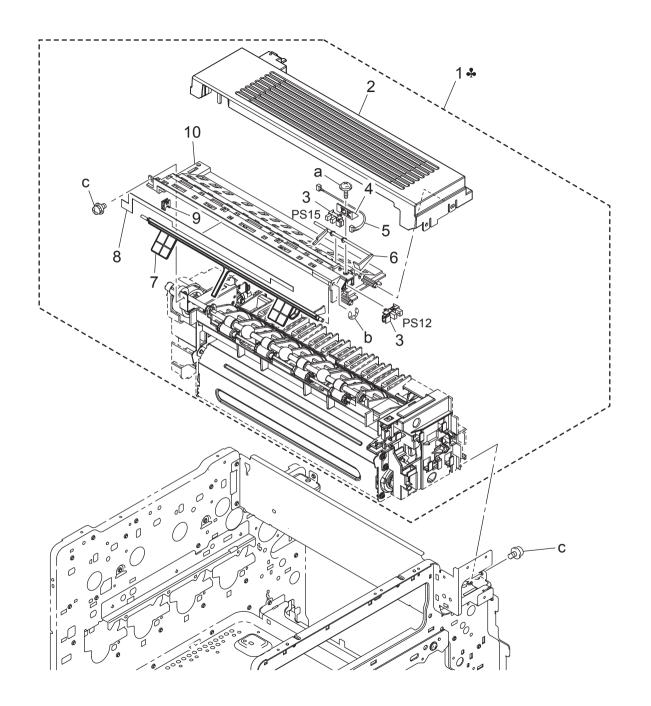
Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	4138 2041 02	RAIL		D	1	a-V137 0306 03
2	4138 2100 01	PLATE NUT		D	1	b-V153 0308 03
3	4138 2084 01	LEVER		С	1	
4	4138 2205 01	CONTACT		D	1	
5	4138 2094 01	PRESSURE SPRING		С	2	1
6	4138 2022 02	STOP PLATE		D	2	
7	4138 2096 01	TORSION SPRING		С	1	
8	4138 2092 01	GUIDE PLATE		D	1	
9	4138 2098 01	SCREW		D	2	
10	4163 5293 01	SCREW		С	4	-
11	A011 7004 00	COVER		С	1	
12	A011 7006 00	EARTH GROUND		D	2	
13	A011 M500 00	PHOTO SENSING ELEMENT		В	2	
14	A011 7003 00	GUIDE		D	1	
15	4138 3559 01	TORSION SPRING		C	1	-
16	A06X 011	TRANSFER BELT UNIT	В	A	1	
16	A06X 0Y1	TRANSFER BELT UNIT	C	A	1	
17	A011 N10Q 00	WIRE HARNESS ASSY		D	1	
18	4138 2217 01	CONTACT		D	1	
19	4138 2113 01	GUIDE PLATE		D	1	1
20	9335 1300 61	PHOTO INTERRUPTER		В	1	
21	4138 2019 02	RAIL		D	1	
22	4138 6840 01	WIRE HARNESS ASSY		D	1	
	4138 6839 01	WIRE HARNESS ASSY		D	1	
24	4138 2091 01	GUIDE PLATE		D	1	
25	4138 2095 02	TORSION SPRING		С	1	
26	4138 2035 01	CONTACT		D	1	
27	4138 2020 01	RAIL		D	1	
28	4138 2099 01	PLATE SPRING		D	1	



Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	A011 R709 00	VERTICAL TRANSPORT ASSY		S	1	a-V153 0308 03 b-V153 0310 03
2	A011 1609 01	COVER		С	1	b-V153 0310 03
3	A0EA 7000 00	Cover		С	1	c-V137 0308 03
4	4138 3511 02	TORSION SPRING		С	1	
5	4138 3506 01	PAWL		С	1	
6	4138 3513 02	COVER		D	1	
7	4138 7301 01	LABEL JAM FUSING		D	1	
8	4138 3566 01	EARTH GROUND		D	1	
9	4138 3510 01	SHAFT		D	2	
10	4138 3512 01	TORSION SPRING		Č	2	
11	4138 3503 02	STOPPER		C	1	†
12	4138 3567 01	EARTH GROUND		D	1	
13	4138 3505 01	BRACKET		D		
		ACTUATOR			· ·	
	4138 3563 03			С	1	
15	9335 1300 61	PHOTO INTERRUPTER		В	1	4
	4138 3504 01	GUIDE		D	1	
17	4138 3571 01	PLATE SPRING		D	1	
	4138 3570 02	NETURALIZING MEMBER		D	1	
19	4138 3515 01	GUIDE		D	1	
20	4138 3507 01	PAWL		С	1	
21	A011 7007 00	GUIDE		D	1	1
22	4138 3564 01	TORSION SPRING		С	1	
23	A011 N10C 00	WIRE HARNESS ASSY		D	1	
	4138 3568 01	PLATE SPRING		D	1	
 25	4138 3569 02	PLATE SPRING		D	1	
	4131 4052 01	PRESSURE SPRING		C	2	†

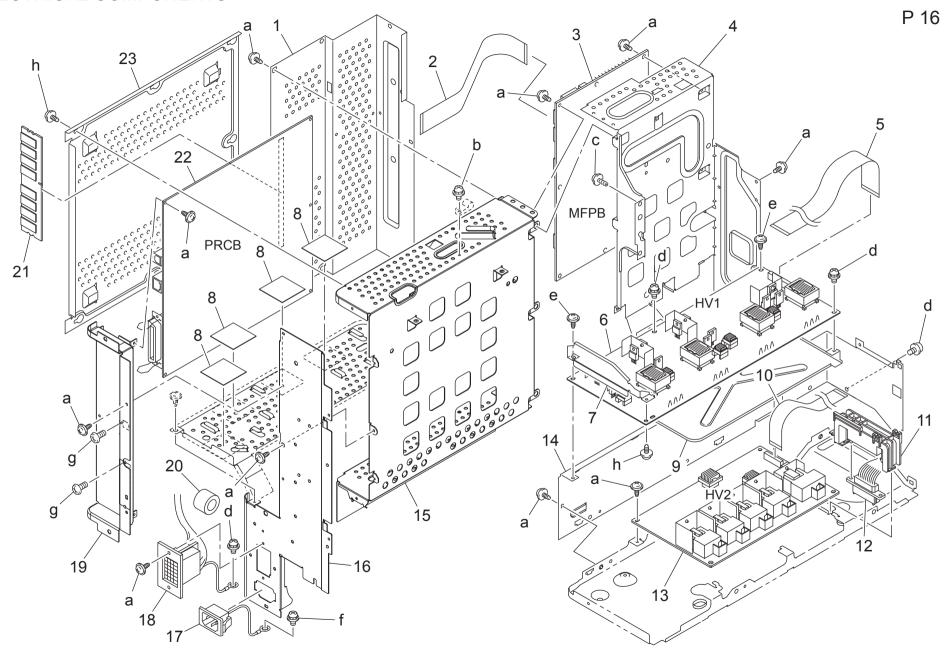


Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	4138 3542 01	HOLDER		D	2	a-V231 2016 50 b-V153 0308 03 c-V217 0400 01 d-V217 0600 01
2	4138 3543 01	PRESSURE SPRING		С	2	b-V153 0308 03
3	4109 5530 01	STOPPER		С	1	c-V217 0400 01
	4138 3514 01	SET PLATE		D	1	d-V217 0600 01
5	4138 3531 02	PRESSURE SPRING		C	2	e-V217 0300 01
6	4138 3521 02	ROLLER		C	1	4
7	4138 3522 03	ROLLER		С	1	
8	9335 1910 21	SOLID STATE SWITCH		С	1	
	4138 3533 01	TENSION SPRING		С	2	
10	4138 3523 01	BUSHING		С	2	
11	4138 3551 02	LEVER		С	1	
12	4138 3528 02	ROLL		С	2	
3	4138 3524 01	GEAR 20T		Č	1 1	
4	4138 3525 02	GEAR 15T		Č		
	4136 3525 02				•	
	4138 3532 02	BUSHING		С	2	
6	4138 3530 01	EARTH GROUND		D	1	
7	A011 7001 00	SPACER		D	1	
8	A011 M200 00	CLUTCH		С	1	
9	4138 3552 02	LEVER		Ċ	1	
20	A06X 012	TRANSFER ROLLER	В	Ä	l i	
20	A06X 0Y2	TRANSFER ROLLER	C	A	1	1
21	4138 7001 00	WASHER		С	1	
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1	A0EA R706 00	Fusing Unit 120V Fusing Unit 230V	В	I	1	a-V153 0308 03 b-V217 0300 01 c-V116 0306 03
1	A0EA R707 00	Fusing Unit 230V	С	1	1	b-V217 0300 01
2	A0EA 1615 00	Cover		С	1	c-V116 0306 03
3	9335 1300 61	PHOTO INTERRUPTER		В	2	
4	4138 5885 01	HOLDER		D	1	
-	4130 3003 01	MUDE HARNEGO ACOV				1
5	4138 6853 01	WIRE HARNESS ASSY ACTUATOR		D	1	
6	4138 5894 01	ACTUATOR		С	1	
7	A011 7378 01	SET PLATE		С	1	
8	4138 5877 01	NEUTRALIZING BRUSH		D	1	
9	4138 5881 01	BUSHING		C	1	
10	A011 7301 00	GUIDE		C	1	
10	AUTI / 301 00	GOIDE		C	1	
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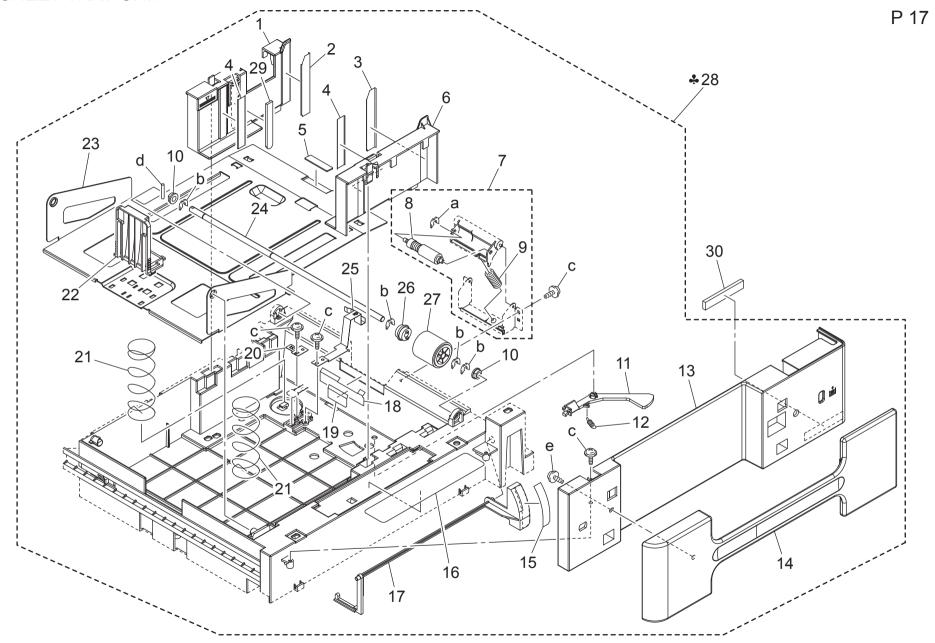
ELECTRICAL COMPONENTS



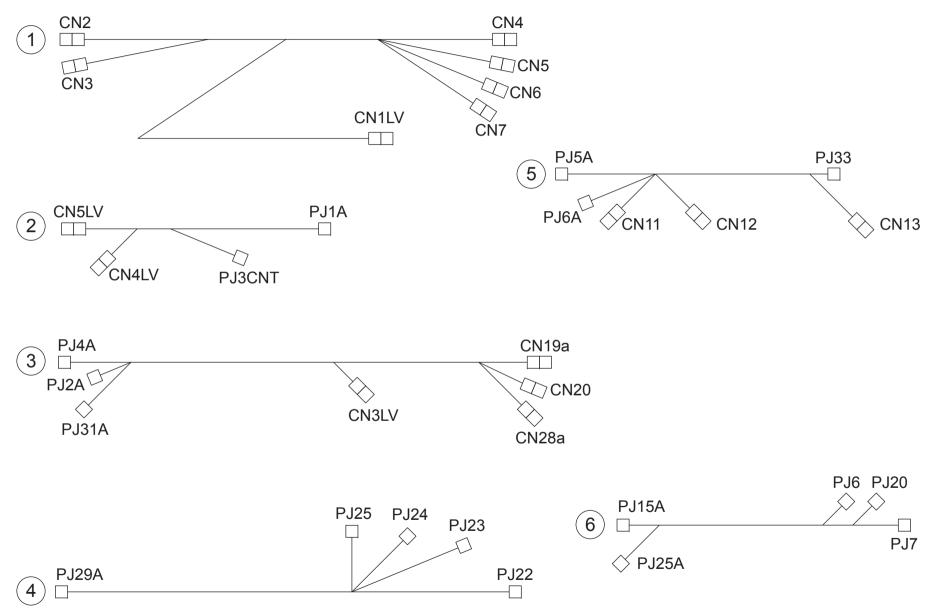
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Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	4138 2238 01	COVER		D	1	a-V137 0306 03
2	A011 N10U 00	WIRE HARNESS ASSY		D	1	b-V116 0308 03
3	A011 H005 01	PWB-A Assy /H for A0EA		1	1	b-V116 0308 03 c-V153 0308 03 d-V116 0306 03
4	4138 2230 01	BRACKET		D		e-V137 0308 03
5	4138 6834 01	WIRE HARNESS ASSY		D	1	f-V116 0408 03 g-V111 0306 03
6	A011 M402 12	HV TRANSFORMER		1		g-V111 0306 03
7	A011 1315 00	SHIELD		D	1	ň-V144 0306 03
8	A011 1361 00	Seal		С	4	
9	4138 2256 01	COVER		D	1	
10	4138 6844 01	WIRE HARNESS ASSY		D	1	
11	4138 2240 01	BRACKET		D 0	1	
12	4138 6830 01	WIRE HARNESS ASSY		D	1	
13	A011 M403 01	HV TRANSFORMER		1	1	
14	4138 2207 02	BRACKET		D	1	
15	A011 1332 00	SHIELD BOX		D D	1	
16	A011 1306 01	BRACKET			1	
17	A011 N100 00	WIRE HARNESS ASSY		D	1	
18	A011 N111 00	WIRE HARNESS ASSY		D D	1	
19 20	A011 1331 00 A011 M700 01	BRACKET FERRITE CORE		D D	•	
21	A011 M700 01 A011 M711 00	PWB ASSY		S	1	
22	A0EA H012 00	PWB ASSY PWB Assy (PH PS/PCL)		5	1	
23	4138 2239 01	COVER		D	1	
23	4130 2239 01	COVER		U	ı	
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500 SHEET TRAY UNIT

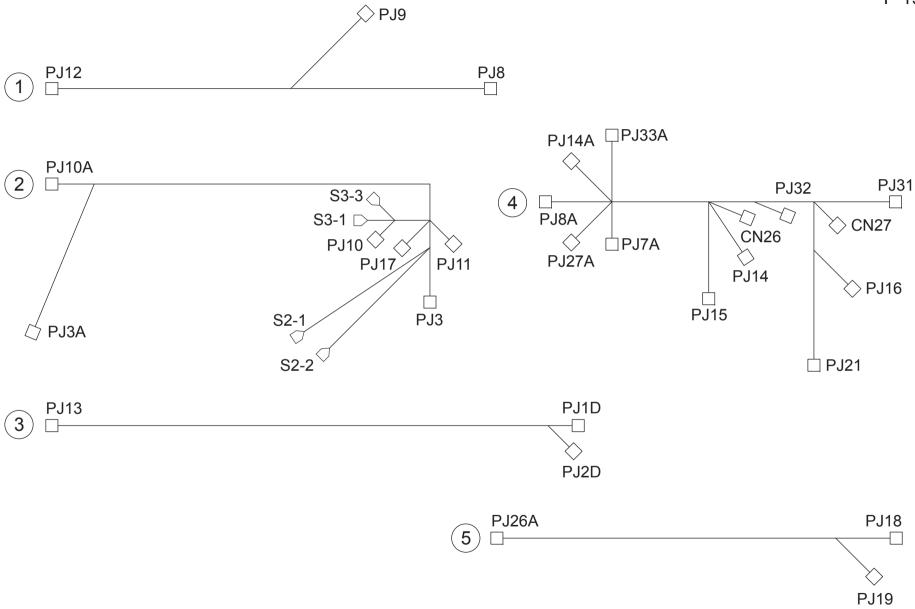


Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1	4138 3122 02	REGULATING PLATE		D	1	a-V218 0300 86
2	4138 3124 01	GUIDE		D	1	b-V218 0400 86
3	4138 3125 01	GUIDE		D	1	b-V218 0400 86 c-V153 0308 03 d-V232 3018 50
4	4138 3126 01	GUIDE		D	2	e-V153 0310 03
5	0978 3811 01	FRICTION SHEET		С	1	
6	4138 3121 02	REGULATING PLATE		D	1	
7	A011 R716 00	SEPARATION ROLLER ASSY		С	1	
8	4034 0151 01	SEPARATION ROLLER		A	1	
9	4138 3254 01	PRESSURE SPRING		С	1	
10	4131 3003 01	BUSHING LEVER		С	2	4
	4138 3043 01			С	•	
12	4498 3404 01 A0EA 6201 00	TENSION SPRING		C C	1	
	A0EA 6201 00 A0EA 6200 00	Cover Handle		C	1	
14	4138 3082 01	LABEL PAPER STACK		D	1	
15 16	4138 7305 01	LABEL		D	1	-
17	4138 3161 02	LEVER		C	1	
18	4131 3056 01	GUIDE PLATE		C	1	
	4131 3057 02	GUIDE		C	1	
20	4138 3146 01	PLATE SPRING		D		
	4138 3142 01	PRESSURE SPRING		С	2	
	4138 3123 02	REGULATING PLATE		D	1	
23	4138 3141 03	LIFTING PLATE		D		
	4138 3031 01	SHAFT		D	1 1	
25	4138 3145 01	PLATE SPRING		D	1 1	
26	4030 3034 01	CLUTCH		C	1	1
27	4138 3032 02	ROLLER		В	1 1	
28	A0EA R703 00	500 Sheet Cassette Assy	В	S	1	
28	A0EA R702 00	500 Sheet Cassette Assy	C	Š	1 1	
29	A0EA 5605 00	Brake		C	1	
30	A011 9784 00	Seal		C	1	1
						-
						-
						1



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Key		Description	Destinations	Class	QTY	Standard parts
1 2 3 4 5	A011 N101 01 A011 N108 00 A011 N109 00 A011 N110 00 A011 N10B 00 A011 N10D 00	WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY		D D D D	1 1 1 1 1	
6	A011 N10D 00	WIRE HARNESS ASSY		D	1	
						1:11

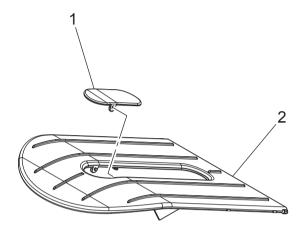


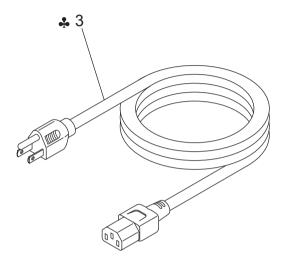
bizhub C31P

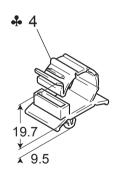
Key		Description	Destinations	Class	QTY	Standard parts
1 2 3 4 5	A011 N10E 00 A011 N10F 00 A011 N10G 00 A011 N10J 00 A011 N10K 00	WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY WIRE HARNESS ASSY		D D D D	1 1 1 1	

							F 20
7.3	6	11	16	21	26	31	36
9.2	7	12	17	22	27	32	37
21.5	8	13	18	23	28	33	38
4 φ5.6	9	14	19	24	29	34	39
5 L=104	10	15	20	25	30	35	40

Key	Part No.	Description	Destinations	Class	QTY	Standard parts
1 2 3 4	V500 0100 20 V500 0100 05 V500 0100 13 V500 0200 19	Saddle saddle saddle clamp		D D D		
5	V501 0100 01	band		D		







Key		Description	Destinations	Class	QTY	Standard parts
1 2 3 3 4	4138 1033 01 A011 1626 02 9381 4100 91 4139 N300 00 4114 6762 01	TRAY TRAY POWER CORD POWER CORD WIRING SADDLE 19.7H	В С В	C C D D	1 1 1 1	

MAINTENANCE LIST 1/1

● The items with no Page/Key numbers are not handled as spare parts.

No.	Section	PM Parts Description	Maintenance Cycle (K=1,000)		Maintenance Cycle (K=1,000)		Maintenance Cycle (K=1,000)		Parts No.	Destinations	Page/Key	Note
			QTY	Replace								
1	Processing section	Print Unit (Y, M, C, Bk)	1	30K	-		-	*4				
2		Print Unit (Y, M, C, Bk)	1	20K	-		-	*5				
3		Standard Toner Cartridge (Y, M, C, Bk)	1	6K	-		-					
4		High-Capacity Toner Cartridge (Y, M, C, Bk)	1	12K	-		-					
5		Ozone Filter	1	120K	-		-	*1				
6	Image transfer section	Transfer Belt Unit	1	120K	A06X011	В	P12-16					
7		Transfer Belt Unit	1	120K	A06X0Y1	С	P12-16					
8		Transfer Roller	1	120K	A06X012	В	P14-20	*1				
9		Transfer Roller	1	120K	A06X0Y2	С	P14-20	*1				
10		Waste Toner Bottle	1	9K	A06X010	В	P7-9	*2				
11		Waste Toner Bottle	1	36K	A06X010	В	P7-9	*3				
12		Waste Toner Bottle	1	9K	A06X0Y0	С	P7-9	*2				
13		Waste Toner Bottle	1	36K	A06X0Y0	С	P7-9	*3				
14	Fusing section	Fusing Unit	1	150K	A0EAR70600	В	P15-1	*4				
15		Fusing Unit	1	130K	A0EAR70600	В	P15-1	*5				
16		Fusing Unit	1	150K	A0EAR70700	С	P15-1	*4				
17		Fusing Unit	1	130K	A0EAR70700	С	P15-1	*5				
18	Manual Feed section	Feed Roller	1	300K	4138303202		P3-29					
19	500 SheetTray Paper Feed sec-	Feed Roller	1	300K	4138303202		P17-27					

^{*1:} The Transfer Roller and Ozone Filter are available as a kit and must be replaced at the same time.

^{*2:} When printed in color only

^{*3:} When printed in black only

^{*4:} Multi-print

^{*5: 2} printed pages/job

DESTINATION

Destination No.		Destinations		V	Hz	Model No.
Α	A1	JAPAN			50/60	
A	A2	JAPAN			50/60	
В		USA, CANADA		120	60	A0EA-014
С		EUROPEAN TYPE		220-240	50/60	A0EA-024
D	D1	S.E ASIA TYPE	THAILAND, SRI LANKA, SINGAPORE, MALAYSIA, HONG KONG, PAKISTAN, INDIA, BANGLADESH, INDONESIA	220-240	50/60	
	D3	OCEANIA TYPE	AUSTRALIA, NEW ZEALAND	220-240	50/60	
E		PHILIPPINES		220-240	50/60	
F	F1	SAUDI ARABIA		127	60	
Г	F2	SAUDI ARABIA		220-240	50/60	
G	G1	C.S AMERICA		220-240	50/60	
G	G2	C.S AMERICA		120	60	
	Н	TAIWAN		110	60	
I		JORDAN, LEBANON, SYRIA, SOUTH AFRICA, IRAQ, IRAN, N.YEMEN, CAMEROON, UAE, BAHRAIN, OMAN, QATAR, KUWAIT, KENYA, TUNISIA, IVORY COAST, MOROCCO		220-240	50/60	
J		CHINA		220-240	50/60	
K		KOREA		220-240	50/60	