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SERVICE MANUAL

Field Service

bizhub 500/420/360

2007.01

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	S-2
SAFETY INFORMATION	S-12
IMPORTANT NOTICE	S-12
INDICATION OF WARNING ON THE MACHINE	S-13
MEASURES TO TAKE IN CASE OF AN ACCIDENT	S-15
Composition of the service manual	C-1
Notation of the service manual	C-2
bizhub 500/420/360 Main Body	
OUTLINE	1
MAINTENANCE	7
ADJUSTMENT/SETTING	167
TROUBLESHOOTING	307
APPENDIX	345
* For particulars, see the contents of the main body.	
DF-607	
OUTLINE	1
MAINTENANCE	5
ADJUSTMENT/SETTING	19
* For particulars, see the contents of DF-607.	
PC-202	
OUTLINE	1
MAINTENANCE	
ADJUSTMENT/SETTING	
* For particulars, see the contents of PC-202.	
PC-402	
OUTLINE	1
MAINTENANCE	
ADJUSTMENT/SETTING	
* For particulars, see the contents of PC-402.	18
For particulars, see the contents of PC-402.	

LU-201 * For particulars, see the contents of LU-201. FS-510/PU-501/OT-601 OUTLINE 1 * For particulars, see the contents of FS-510/PU-501/OT-601. FS-511/RU-502 OUTLINE 1 ADJUSTMENT/SETTING 17 * For particulars, see the contents of FS-511/RU-502. SD-502 MAINTENANCE 3 * For particulars, see the contents of SD-502. MT-501 OUTLINE 1 * For particulars, see the contents of MT-501. JS-502 OUTLINE 1 * For particulars, see the contents of JS-502. IC-204 TROUBLESHOOTING 9 * For particulars, see the contents of IC-204.

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 "ADANGER", "AWARNING", and "ACAUTION" 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:

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

SAFETY WARNINGS

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

Konica Minolta brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.

Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. The points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

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

[2] POWER PLUG SELECTION

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

Power Cord Set or Power Plug

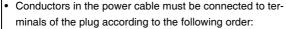
⚠ WARNING

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



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

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

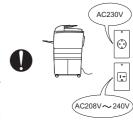


· Black or Brown: L (line)

· White or Light Blue: N (neutral) PE (earth)

· Green/Yellow:

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 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.



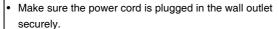
 Plug the power cord into the dedicated wall outlet with a capacity greater than the maximum power consumption.
 If excessive current flows in the wall outlet, fire may result.



 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



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





Connection to Power Supply

⚠ WARNING

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



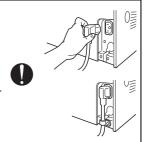
Power Plug and Cord

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.

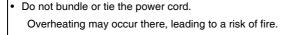
Overheating may occur there, leading to a risk of fire.



 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 or cord set (with plug and connector on each end) specified by KMBT.

Using the damaged power cord may result in fire or electric shock.







Power Plug and Cord

⚠ WARNING

 Check whether dust is collected around the power plug and wall outlet.

Using the power plug and wall outlet without removing dust may result in fire.



 Do not insert the power plug into the wall outlet with a wet hand.



The risk of electric shock exists.

 When unplugging the power cord, grasp the plug, not the cable.

The cable may be broken, leading to a risk of fire and electric shock.



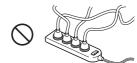


Wiring

! WARNING

 Never use multi-plug adapters to plug multiple power cords in the same outlet.

If used, the risk of fire exists.



When an extension cord is required, use a specified one.
 Current that can flow in the extension cord is limited, so using a too long extension cord may result in fire.





Do not use an extension cable reel with the cable taken up. Fire may result.

2. Installation Requirements

Prohibited Installation Places

⚠ WARNING

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

A risk of fire exists.

 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.

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



Ventilation

! CAUTION

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

If a bad smell of ozone is present in the following cases, ventilate the room.

- a. When the product is used in a poorly ventilated room
- b. When taking a lot of copies
- c. When using multiple products at the same time



Fixing

⚠ 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

⚠ CAUTION

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.



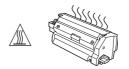
If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

 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 damages.

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.



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

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





 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.

Safety Checkpoints

⚠ WARNING

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





Improper replacement can cause explosion.

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





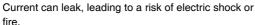
A risk of fire exists.

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





 Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.





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 Consumables

⚠ WARNING

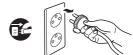
Never throw the used cartridge and toner into fire.
 You may be burned due to dust explosion.



Handling of Service Materials

⚠ CAUTION

 Unplug the power cord from the wall outlet.
 Isopropyl alcohol and acetone 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.





 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.

A risk of fire exists.

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





SAFETY INFORMATION

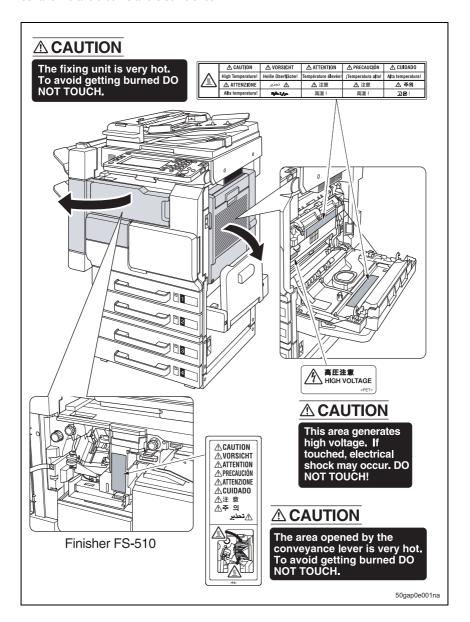
IMPORTANT NOTICE

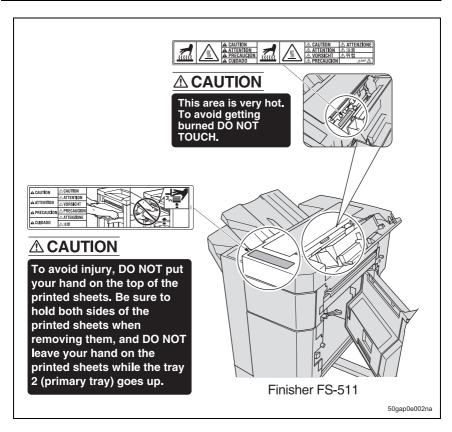
The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration implemented regulations for laser products manufactured since August 1, 1976. Compliance is manufactory for products marketed in the United States.

This copier is certified as a "Class 1" laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside this copier is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

INDICATION OF WARNING ON THE MACHINE

Caution labels shown below 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 by any
caution label to keep yourself away from. Do not remove caution labels. And also,
when the caution label is peeled off or soiled and cannot be seen clearly, replace
it with a new caution label.

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 the following sections and chapters:

<Theory of Operation section>

OUTLINE: System configuration, product specifications,

unit configuration, and paper path

COMPOSITION/OPERATION: Configuration of each unit, explanation of the operating

system, and explanation of the control system

This 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>

OUTLINE: System configuration, and product specifications

MAINTENANCE: Service schedule *, maintenance steps,

list of service tools and directions for use *,

firmware version up method *,

and removal/reinstallation methods of major parts

ADJUSTMENT/SETTING: Utility mode *, service mode *, security and mechanical

adjustment

TROUBLESHOOTING*: List of jam codes, their causes, operation when a jam

occurs and its release method, and list of error codes, their causes, operation when a warning is issued and esti-

mated abnormal parts.

APPENDIX*: Parts layout drawings, connector layout drawings, timing

chart, overall layout drawing

This 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 details of items with an asterisk "*" are described only in the service manual of the main body.

Notation of the service manual

A. Product name

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

(1) IC board: Standard printer

(2) bizhub 500/420/360: Main body
 (3) Microsoft Windows 95: Windows 95
 Microsoft Windows 98: Windows 98
 Microsoft Windows Me: Windows Me

Microsoft Windows NT 4.0: Windows NT 4.0 or Windows NT

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

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

Windows 95/98/Me Windows NT 4.0/2000 Windows NT/2000/XP

Windows 95/98/Me/NT/2000/XP

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. Electrical parts and signals

Those listed by way of example below are not exhaustive, but only some instances among many.

Classification	Load symbol	Ex. of signal name	Description
Sensor		IN	
		PS	
	PS	Door PS1	Sensor detection signal
		SIG	
		102 PS	
	SD	24V	Power to drive the solenoid
Solenoid		DRV	Drive signal
		SOL	Drive signal
		24V	Power to drive the clutch
Clutch	CL	DRV	Drive signal
		SOL	- Drive signal

Classification	Load symbol	Ex. of signal name	Description
		24V	Power to drive the motor
		CONT	Drive signal
Matau		DRV1	
Motor	M	DRV2	Drive eigenele efficiele
		D1	Drive signals of two kinds
		D2	
		_U	
		_V	
		_W	Doi:
		DRV1	Drive signals (control signals) of three kinds
		DRV2	
		DRV3	
		D1	
		D2	
		D3	
		D4	
		DRV A	
		DRV A	
		DRV B	Drive signals (control signals) of four kinds
		DRV B	Motor, phases A and B control signals
		A	
Motor	М	/A	
		В	
		/B	
		AB	
		BB	
		CLK, PLL	PLL control signal
		LCK, Lock, LD	PLL lock signal
		FR	Forward/reverse rotation signal
		EM, Lock, LCK, LD	Motor lock abnormality
		BLK	Drive brake signal
		P/S	Power/stop
		S/S	O
		SS	Operating load start/stop signal
		CW/CCW, F/R	Rotational direction switching signal
		ENB	Effective signal
		TEMP_ER	Motor temperature abnormality detection signal
		24V	Power to drive the fan motor
_	EN4	CONT, DRIVE	Drive signal
Fan	FM	HL	Speed control signal (2 speeds)
		EM, Lock, LCK, FEM	Detection signal
Others		TH1.S, ANG	Analog signal

Classification	Load symbol	Ex. of signal name	Description
Ground		SG, S.GND, S_GND	Signal ground
Ground		PG, P.GND	Power ground
		DCD	Data carrier detection
		SIN	Serial input
		SOUT	Serial output
		DTR	Data terminal operation available
0		GND	Signal ground (earth)
Serial com- munication		DSR, DSET	Data set ready
		RTS	Transmission request signal
		CTS	Consent transmission signal
		RI	Ring indicator
		TXD	Serial transmission data
		RXD	Serial reception data

D. Paper feed direction

When the direction in which paper is fed is in parallel with the longer side of paper, the paper feed direction like this is referred to as the longitudinal feed.

And the paper feed direction that is perpendicular to the longitudinal feed is referred to as the transverse feed.

When specifying the longitudinal feed, "S (abbreviation for Short Edge Feeding)" is added to the paper size. For the transverse feed, no specific notation is employed.

However, when only the longitudinal feed is specified for one and the same paper size with no specification made for the transverse feed, "S" is not added even when being fed longitudinally.

<Example>

Paper size	Feed direction	Notation
A4	Transverse feed	A4
Λ4	Longitudinal feed	A4S
A3	Longitudinal feed	A3



SERVICE MANUAL

Field Service

bizhub 500/420/360 Main body

Confidential – for internal use only, do not distribute

Revision history

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

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

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

Revision mark:

- To indicate clearly a section revised, show
 \(\begin{align*}
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- To indicate clearly a section revised, show in the lower outside section of the corresponding page.

A number within **\(\hat{\hat{h}} \)** 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.

200	7/01	2.0	A	Revision in relation to launching of bizhub 360
200	6/02	1.0	_	Issue of the first edition
Da	ate	Service manual Ver.	Revision mark	Descriptions of revision

MAINTENANCE

CONTENTS

bizhub 500/420/360

Oι	JTL	.IN	Ε

1. SYSTEM	I CONFIGURATION	'
2. PRODUC	CT SPECIFICATIONS	3
	IANOS	
MAINTEN		
	C CHECK	
	edule	
3.1.1	Main body (bizhub 500) / DF / PC / LU / FS / MT / SD / RU	
3.1.2	Main body (bizhub 420) / DF / PC / LU / FS / MT / SD / RU	
3.1.3	Main body (bizhub 360) / DF / PC / LU / FS / MT / SD / RU	
	ntenance item	
3.2.1	Main body	
3.2.2	DF	
3.2.3	PC	
3.2.4	LU	
3.2.5	FS	
3.2.6	MT	
3.2.7	SD	
3.2.8	RU	
	lacement parts list	
3.3.1	Periodically replacement parts list (bizhub 500/420)	
3.3.2	Periodically replacement parts list (bizhub 360)	
	value	
3.4.1	Life value of materials	
3.5 Mair	ntenance procedure of the external section	. 22
3.5.1	Replacing the ozone filter	
3.5.2	Replacing the filter cover assy and the suction filter /A assy	
3.5.3	Replacing the paper exit suction filter	. 2
3.6 Mair	ntenance procedure of the write section	. 26
3.6.1	Replacing the write unit	
3.7 Mair	ntenance procedure of the photosensitive material section	. 30
3.7.1	Replacing the drum unit	
3.7.2	Replacing the drum	. 3
3.8 Mair	ntenance procedure of the transfer/separation corona section	. 37
3.8.1	Replacing the transfer/separation corona unit	
3.9 Mair	ntenance procedure of the developing section	. 38
3.9.1	Replacing the developing unit	. 38
3.9.2	Replacing developer	. 39
	ntenance procedure of the toner supply section	
3.10.1	Replacing the filter mounting plate assy	. 42
	Replacing the suction cover /2 assy	
	aning/toner recycle section	
	Replacing the cleaning blade assy	
3.12 Mair	ntenance procedure of the paper feed section	. 47

	Replacing the feed roller/pick-up roller (tray 1)	
	Replacing the separation roller assy (tray 1)	
	Replacing the feed roller/pick-up roller (tray 2)	
	Replacing the separation roller assy (tray 2)	
	ntenance procedure of the bypass tray section	
	Removing/reinstalling the bypass unit	
	Replacing the separation roller assy	
	Replacing the feed roller	
	ntenance procedure of the registration section	
	Cleaning the paper dust removing brush	72
3.14.2	Replacing the loop roller, the loop bearing, the registration roller /Rt, and the registration bearings /Rt and /Lt.	73
	ntenance procedure of the fusing section	
3.15.1	Removing/reinstalling the fusing unit	80
3.15.2	Replacing the fusing claw assy	82
3.15.3	Replacing the fusing web	85
3.15.4	Replacing the fusing driven roller assy /A and /B	87
3.15.5	Removing/reinstalling the fusing heater lamps /1 (L2) and /2 (L3)	89
3.15.6	Replacing the fusing roller, the fusing pressure roller, the heat insulating sleeve /A, the fusing bearings /Up and /Lw and the fusing input gear assy	91
3.15.7	Replacing the fusing sensor assy	95
3.15.8	Replacing the fuse holder assy	97
4. SERVICE	TOOLS	98
4.1 Serv	ice material list	98
4.2 Jig li	st	99
4.3 Mate	erials	100
5. FIRMWA	RE VERSION UP	101
5.1 ISW		101
5.1.1	Outline	101
5.1.2	Firmware data flow	101
5.1.3	Settings on the main body side while in ISW	
5.2 ISW	Tms	
5.2.1	Specifications	
5.2.2	Installation of the ISWTrns	
5.2.3	Usage of the ISWTrns.	
5.2.4	Error list	
	net ISW.	
5.3.1	Outline	
5.3.2	Service environment	
5.3.3	Preparations for Firmware rewriting	
5.3.4	Firmware rewriting	
5.3.5	Error Code List for the Internet ISW	
	net ISW Setting.	
5.4.1	Internet ISW Set	
5.4.2	HTTP Setting	
5.4.3	FTP Setting	
5.4.4	Forwarding Access Setting.	
5.4.5	Download	
	Down Iload.	
	s not allowed to be disassembled and adjusted	
6.1.1	Scanner section	
0.1.1	Oodimor goodon	100

6.1.2	Write section
6.1.3	Developing unit
6.1.4	Drum unit
6.2 List of	of parts to be disassembled and reassembled
6.3 Disas	ssembling/assembling procedure
6.3.1	Removing/reinstalling the rear cover /1140
6.3.2	Removing/reinstalling the rear cover /2
6.3.3	Removing/reinstalling the rear cover /3
6.3.4	Removing/reinstalling the right cover /Up
6.3.5	Removing/reinstalling the right cover /Lw
6.3.6	Removing/reinstalling the left cover
6.3.7	Removing/reinstalling the front door
6.3.8	Removing/reinstalling the original glass
6.3.9	Removing/reinstalling the upper covers /Fr and /Lt
6.3.10	Removing/reinstalling the upper cover /Rr
6.3.11	Removing/reinstalling the front cover
6.3.12	Removing/reinstalling the operation panel
6.3.13	Removing/reinstalling the CCD unit
6.3.14	Replacing the exposure lamp
6.3.15	Removing/reinstalling the exposure unit
6.3.16	Stretching the scanner wire
6.3.17	Removing/reinstalling the toner supply unit
6.3.18	Removing/reinstalling the trays 1 and 2
6.4 Option	on counter
6.4.1	Configuration of the key counter
6.4.2	Installation procedure of the key counter
ADJUSTN	IENT/SETTING
ADJUSTN 7. HOW TO	TENT/SETTING USE THE ADJUSTMENT/SETTING SECTION
ADJUSTN 7. HOW TO 7.1 Com	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION
ADJUSTN 7. HOW TO 7.1 Com 8. UTILITY N	TENT/SETTING USE THE ADJUSTMENT/SETTING SECTION
ADJUSTN 7. HOW TO 7.1 Com 8. UTILITY N 8.1 List of	IENT/SETTING 167 USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168
ADJUSTN 7. HOW TO 7.1 Com 8. UTILITY N 8.1 List of 9. LIST OF A	JENT/SETTING 167 USE THE ADJUSTMENT/SETTING SECTION 167 position 168 JENU 168 of utility mode 168 ADJUSTMENT ITEMS 173
ADJUSTN 7. HOW TO 7.1 Com 8. UTILITY N 8.1 List of 9. LIST OF A 10. SERVICE	MENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 167 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174
ADJUSTN 7. HOW TO 7.1 Com 8. UTILITY N 8.1 List of 9. LIST OF / 10. SERVICE 10.1 List of	MENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 167 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174
7. HOW TO 7.1 Com 8. UTILITY N 8.1 List 0 9. LIST OF N 10. SERVICE 10.1 List 0 10.2 Setti	MENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 167 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF M 10. SERVICE 10.1 List 0 10.2 Setti 10.2.1	MENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List of 9. LIST OF M 10. SERVICE 10.1 List of 10.2 Settii 10.2.1 10.3 Macd	MENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178 nine Adjust 179
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List of 9. LIST OF M 10. SERVICE 10.1 List of 10.2 Settii 10.2.1 10.3 Macd	MENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF / 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 179 Print Positioning: Side Edge (Printer Area) 180
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF A 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 179 Print Positioning: Side Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF A 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 179 Print Positioning: Side Edge (Printer Area) 180
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF A 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 179 Print Positioning: Side Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183 Bypass Tray Adjustment 184
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF A 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 ng Method 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183
7. HOW TO 7.1 Com 8. UTILITY M 8.1 List 0 9. LIST OF A 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 of service mode active fithe service mode 178 Start and exit of the service mode 178 Nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183 Bypass Tray Adjustment 184 Image Position: Leading Edge (Scan Area) 185
7. HOW TO 7.1 Com 8. UTILITY N 8.1 List 0 9. LIST OF / 10. SERVICE 10.1 List 0 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5 10.3.6 10.3.7	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 of service mode active of the service mode 178 Start and exit of the service mode 178 Nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183 Bypass Tray Adjustment 184 Image Position: Leading Edge (Scan Area) 185
7. HOW TO 7.1 Com 8. UTILITY N 8.1 List 0 9. LIST OF / 10. SERVICE 10.1 List 0 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5 10.3.6 10.3.7 10.3.8	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 of service mode start and exit of the service mode 178 Start and exit of the service mode 178 Print Positioning: Leading Edge (Printer Area) 179 Print Positioning: Side Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183 Bypass Tray Adjustment 184 Image Position: Leading Edge (Scan Area) 185 Image Position: Side Edge (Scan Area) 186
7. HOW TO 7.1 Com 8. UTILITY N 8.1 List 0 9. LIST OF / 10. SERVICE 10.1 List 0 10.2 Settii 10.2.1 10.3 Maci 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5 10.3.6 10.3.7 10.3.8 10.3.9	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 167 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 of service mode start and exit of the service mode 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183 Bypass Tray Adjustment 184 Image Position: Leading Edge (Scan Area) 185 Image Position: Side Edge (Scan Area) 186 Cross Direction Adjustment (Scan Area) 187
7. HOW TO 7.1 Com 8. UTILITY N 8.1 List 0 9. LIST OF / 10.2 Settii 10.2.1 10.3 Macl 10.3.1 10.3.2 10.3.3 10.3.4 10.3.5 10.3.6 10.3.7 10.3.8 10.3.9 10.3.10	IENT/SETTING USE THE ADJUSTMENT/SETTING SECTION 167 position 168 MENU 168 of utility mode 168 ADJUSTMENT ITEMS 173 MODE 174 of service mode 174 of service mode 178 Start and exit of the service mode 178 nine Adjust 179 Print Positioning: Leading Edge (Printer Area) 180 Paper Feed Direction Adj. (Printer Area) 181 Printer Resist Loop 183 Bypass Tray Adjustment 184 Image Position: Leading Edge (Scan Area) 185 Image Position: Side Edge (Scan Area) 186 Cross Direction Adjustment (Scan Area) 187 Feed Direction Adjustment (Scan Area) 187

		Charging Main Manual Adj	
		Transfer Manual Adj	
		Separation (AC) Manual Adj	
		Separation (DC) Manual Adj	
		Grid Charging Manual Adj	
	10.4.6	Bias Voltage Manual Adj	191
	10.4.7	TCR Adjustment	191
	10.4.8	Toner Auto Supply	191
	10.4.9	Toner Density Adjustment	192
	10.4.10	Laser Diameter Adjustment	193
	10.4.11	LD1 Offset Adj. / LD2 Offset Adj	194
	10.4.12	LD1 Bias Adj. / LD2 Bias Adj	194
10	0.5 Syste	m 1	195
	10.5.1	Marketing Area	195
	10.5.2	Tel/Fax Number	196
	10.5.3	Serial Number	196
	10.5.4	Trouble Isolation	197
	10.5.5	No Sleep	197
	10.5.6	Foolscap Size Setting	197
	10.5.7	Original Size Detection	198
	10.5.8	Detected Size Setting	198
	10.5.9	Install Date	199
	10.5.10	Initialization	199
	10.5.11	Communication System Setting	200
10	.6 Count	ter	201
	10.6.1	Display of the Counter	201
	10.6.2	Present Parts Life	210
	10.6.3	PM	212
10	0.7 State	Confirmation	213
	10.7.1	Sensor Check.	213
	10.7.2	Load Check	221
		Memory/HDD Condition	
		Memory Check (Memory/HDD Adjustment)	
		HDD R/W Check (Memory/HDD Adjustment)	
		HDD Format (Memory/HDD Adjustment)	
		Adj. Data Table	
		Adj. Data Table.	
10			
		Paper Feed Direction	
		Lead Edge	
		Side Edge.	
		Resist Loop Adj.	
		Original Size Adj.	
		Density Adj.	
		Scan Position Adjustment.	
		Sensor Auto Adjust.	
10		er	
10		Center Staple Position (SD-502)	
		Half-Fold Position (SD-502)	
		Punch Horizontal Position (PU).	
	10.5.0	1 UNOTH TOTAL OFFICE (1 O)	444

MAINTENANCE

10.9.4 Punch Resist Loop (PU)	. 245
10.10Firmware Version	. 246
10.11CS Remote Care	. 247
10.11.1 Outlines	. 247
10.11.2 Setting Up the CS Remote Care	. 247
10.11.3 Software SW setting for CS Remote Care	. 251
10.11.4 Setup confirmation	. 256
10.11.5 Calling the Maintenance	. 256
10.11.6 Calling the Center from the Administrator	. 256
10.11.7 Checking the transmission log	. 256
10.11.8 Detail on settings	. 257
10.11.9 List of the CS Remote Care error code	. 263
10.11.10Troubleshooting for CS Remote Care	. 267
10.12System 2	. 268
10.12.1 Data Capture	. 268
10.12.2 Paper Size Setting	. 268
10.12.3 DipSW Setting	. 268
10.12.4 ISW	. 286
10.12.5 Option	. 286
10.12.6 Network FAX Setting	. 286
10.12.7 Trouble Reset	. 287
10.12.8 Internet ISW	. 287
10.13List Output	. 288
10.13.1 List output	. 288
10.14Test Mode	. 289
10.14.1 Test pattern list	. 289
10.14.2 Test pattern output	. 296
10.14.3 Running Mode	. 297
10.15Fax setting	. 298
10.16Enhanced Security	. 299
10.16.1 List of the security setting.	. 299
10.16.2 Start and termination of the security mode	. 299
10.16.3 CE Password	. 300
10.16.4 Administrator Password	. 300
10.16.5 Administrator Feature Level	. 301
10.16.6 CE Authentication	. 301
10.17Billing Setting	. 302
10.17.1 List of the billing setting	. 302
10.17.2 Start and termination of the billing setting mode	. 302
10.17.3 Counter Setting	. 303
10.17.4 Management Function Choice	
11. MECHANICAL ADJUSTMENT	
11.1 Mis-centering adjustment of the trays 1 and 2	
11.2 Mis-centering adjustment of the bypass tray	. 306
TROUBLECHOOTING	
TROUBLESHOOTING	
12. JAM CODE	
12.1 Jam code list	
13. MALFUNCTION CODE	
13.1 Malfunction code list	. 319

Λ	D	D	E	N	ח	IX	7

14. PARTS LAYOUT DRAWING	345
14.1 Main body	345
14.1.1 Switch/sensor	345
14.1.2 Load	351
14.1.3 Boards and others	357
14.2 DF	362
14.3 PC	364
14.3.1 PC-202	364
14.3.2 PC-402	365
14.4 LU	366
14.5 FS	367
14.5.1 FS-510	367
14.5.2 FS-511	368
14.6 PU-501	374
14.7 SD-502	375
14.8 MT-501	
14.9 RU-502	377
14.10JS-502	
15. CONNECTOR LAYOUT DRAWING.	
15.1 Main body	
15.1.1 Connector in the board.	
15.2 DF	
15.2.1 Connector in the board.	
15.3 PC	
15.3.1 Connector in the board.	
15.4 LU	
15.4.1 Connector in the board.	
15.5 FS	
15.5.1 Connector in the board.	391
15.6 SD	393
15.6.1 Connector in the board.	393
15.7 MT	394
15.7.1 Connector in the board.	
16. TIMING CHART	395
16.1 Main body	395
16.2 DF	397
16.3 LU	402
16.4 FS	403
16.4.1 FS-510	403
16.4.2 FS-511	405
17. OVERALL WIRING DIAGRAM	
17.1 Main body 1/4	
17.2 Main body 2/4	
17.3 Main body 3/4	
17.4 Main body 4/4	
17.5 DF	
17.6 PC	
17.6.1 PC-202	
17.6.0 PC 400	

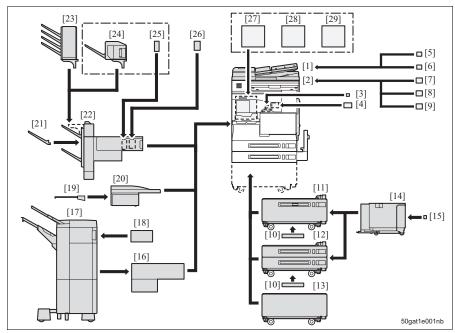
17.7 LU 17.8 FS 17.8.1 FS-510/PU-501 17.8.2 FS-511 17.9 SD 17.10MT Blank page

■ OUTLINE

1. SYSTEM CONFIGURATION

A. System configuration

Δ



- [1] Reverse automatic document feeder (DF-607) (standard equipment)
- [2] Main body
- [3] Image controller (IC-204)
- [4] Hard disk (HD-505)
- [5] Stamp unit (SP-501)
- [6] Spare TX marker stamp 2
- [7] Key counter kit 4 *1
- [8] Key counter *1
- [9] Key counter mount kit *1
- [10] Dehumidifier heater 1C
- [11] Paper feed cabinet (PC-402)
- [12] Paper feed cabinet (PC-202)
- [13] Desk (DK-501)
- [14] Large capacity unit (LU-201)

- [15] Dehumidifier heater *2
- [16] Relay unit (RU-502)
- [17] Finisher (FS-511)
- [18] Swedish punch kit G *3
- [19] Job separator (JS-502)
- [20] Output tray kit (OT-501)
- [21] Output tray (OT-601)
- [22] Finisher (FS-510)
- [23] Mail bin kit (MT-501)
- [24] Saddle stitcher (SD-502)
- [25] Folding unit (included in SD-502)
- [26] Punch unit (PU-501)
- [27] FAX kit (FK-502)
- [28] Mount kit (MK-708)
- ↑ [29] FAX multi line (ML-503)
- ↑ ★1 See "6.4 Option counter" in Field Service bizhub 500/420/360 main body for details.
 - *2 Dehumidifier heater is set up as service part.
 - *3 Swedish punch kit G is for Europe only.

B. Configuration for optional device connection

Note

. Any combination other than those listed below is not available.

No.	Combinations for paper fee	Combinations for finishing		Remarks	
1	DK-501/PC-202/PC-402	OT-501			
2	DK-501/PC-202/PC-402	OT-501	JS-502		
3	DK-501/PC-202/PC-402	RU-502 + FS-511			
4	DK-501/PC-202/PC-402 *1		FS-510 *2*3		
5	DK-501/PC-202/PC-402	DK-501/PC-202/PC-402 *1		SD-502	
6	DK-501/PC-202/PC-402	DK-501/PC-202/PC-402 *1		MT-501	
7	PC-202/PC-402 *4	PC-202/PC-402 *4 LU-201		OT-501	
8	PC-202/PC-402 *4	LU-201	OT-501	JS-502	
9	PC-202/PC-402 *4	LU-201	RU-502 + FS-511		
10	PC-202/PC-402 *4 LU-201		FS-510 *2*3		
11	PC-202/PC-402 *4	LU-201	FS-510 *2*3	SD-502	
12	PC-202/PC-402 *4	LU-201	FS-510 *2*3	MT-501	

^{*1} Either one of DK-501, PC-202 and PC-402 can be selected.

^{*2} FS-510 can be installed optionally with OT-601.

^{*3} FS-510 can be installed optionally with PU-501.

^{*4} Either one of PC-202 and PC-402 can be selected.

bizhub 500/420/360

2. PRODUCT SPECIFICATIONS

A. Type

Туре	Desktop type			
Copying method	Indirect electrostatic method			
Original stand	Fixed	Fixed		
Original alignment	Left rear standard			
Photo conductor	OPC			
Sensitizing method	Laser writing	Laser writing		
Paper feed trays	Two trays	500 sheet x 2, 80g/m ²		
	Bypass feed	150 sheet x 1, 80g/m ²		
	PC-402 *1	2,500 sheet x 1, 80g/m ²		
	PC-202 *1	500 sheet x 1, 80g/m ²		
	LU-201 *1	2,000 sheet x 1, 80g/m ²		

^{*1} PC-402, PC-404, and LU-201 are optional.

R Functions

Original	Sheet, book, solid	object					
Max. original size	A3 or 11 x 17						
Copy size	Trays 1, 2	Inch: Metric:	11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½ A3, A4, A4S, A5S, Foolscap A3, B4, A4, A4S, B5, A5S, 11 x 17, 8½ x 11, 8½ x 11S, Foolscap, 8K, 16K				
	Bypass feed	Inch:	11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½ S A4 A3, B4, A4, A4S, B5, B5S, A5S, B6S, 8½ x 11,				
		Wictio.	8½ x 11S, Foolscap, 8K, 16K, 16KS				
	ADU	Inch:	11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½ A3, A4, A4S, A5S, Foolscap				
		Metric:	A3, B4, A4, A4S, B5, B5S, A5S, 11 x 17, 8½ x 1 8½ x 11S, Foolscap				
Magnification	Fixed magnifica- tion	Inch:	x 1.000, x 1.214, x 1.294, x 1.545, x 2.000 x 0.500, x 0.647, x 0.772, x 0.785				
		Metric:	x 1.000, x 1.154, x 1.224, x 1.414, x 2.000 x 0.500, x 0.707, x 0.816, x 0.866				
	Special magnifi- cation setting	x 0.930					
	Preset zoom set- ting	3 types					
	Zoom magnifica- tion	x 0.25 to x 4.00 (at the step of 0.1%)					
	Vertical magnifi- cation	x 0.25 to x 4.00 (at the step of 0.1%)					
	Horizontal magnification	x 0.25 to x 4.00 (at the step of 0.1%)					
Warm-up time	60 seconds or less	(bizhub	500)				
	30 seconds or less	(bizhub	420/360)				
First copy out time	3.2 seconds or les	s (bizhub	500)				
	3.6 seconds or les	s (bizhub	420/360)				
Continuous copy speed	50 copies /min. (A4	4 / 8½ x	11) (bizhub 500)				
	42 copies /min. (A	4 / 8½ x	11) (bizhub 420)				
	36 copies /min. (A	4 / 8½ x	11) (bizhub 360)				
Continuous copy count	Up to 999 sheets	ets					
Original density selection	Auto density select	ion, Man	ual (9 steps), Manual underprint density (9 steps)				
Resolution	Scan	600 x 6	00 dpi				
	Write	600 x 600 dpi					
Memory	Standard 192 MB Maximum 320 MB		own: 64 MB (on board) + 128 MB (DIMM) own: 64 MB (on board) + 256 MB (DIMM) *1				
Interface section	RJ45 Ethernet, Serial port (RS232-C), Serial port (USB TypeB), Parallel port (IEEE1284), RJ-11 *2						

^{*1 256} MB (DIMM) is available from distributors.

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A

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Specification: 144 pin SO-DIMM, PC100/PC133 MHz Compliant

^{*2 1} port when MK-708 and FK-502 are optionally installed.

^{△ 2} ports when MK-708, HL-503 and FK-502 x 2 are optionally installed.

C. Type of paper

Plain paper *1	All trays	High quality paper of 60 to 90 g/m ²
Special paper *2	Bypass feed only	OHP film, label paper *3, blueprint master paper *3
		High quality paper of 50 to 59 g/m ² (thin paper)
	All trays	High quality paper of 91 to 105 g/m ² (thick paper)
	Bypass feed only	High quality paper of 106 to 210 g/m ² (thick paper)

*1 Standard specified paper

Plain paper: Inch: Hammermill Tidal MP (20 lbs)

Metric: Konica Minolta Original (80 g/m²), Konica Minolta Profi (80 g/m²)

Recycle paper: Inch: Weyerhaeuser Recycled Laser Copy (20 lbs)

Metric: Nautilus (80 g/m²)

*2 Special paper/recommended paper

Thick paper: Inch: Weyerhaeuser Cougar Cover 65 lbs

Metric: Xerox colortech 200 g/m²

Thin paper: Inch: SOISE BOND 16 lbs

Metric: NEU 60 g/m²

Label paper: Inch: AVERY 5160, 5352

Metric: AVERY DSP 24

OHP film: Inch: 3M CG3700

Metric: Folex overhead X-500, 3M CG3700

Envelope: Inch: Preservation Wove (24 lbs) #6-3/4, #9, #10 (4-1/8 x 9-1/2)

Metric: Briefhullen 211210 (100 g/m²) #C6

Schneider Soehne Distinction 100 (100 g/m 2) #lang Schneider Soehne (Briefumschlage) (100 g/m 2) #C5

D. Maintenance

Λ	Maintenance	Every 250,000 prints (bizhub 500/420)
		Every 225,000 prints (bizhub 360)

E. Machine data

Power source	Inch: AC120V 12A, 60Hz								
	Metric: AC220-24	Metric: AC220-240V 10A, 50Hz							
Maximum power consump-	1,560 W or less (fu	1,560 W or less (full option)							
tion									
Dimensions	Main body	677 (W) x 708 (D) x 1,150 (H) mm *1							
	+ DF-607								
	+ PC or DK								
Weight	Approx. 91.2 kg								

^{*1} Overturning prevention board is not included.

^{*3} Label paper is loaded and fed one sheet at a time.

F. Operating environment

Temperature	10 to 30 °C
Humidity	10 to 80%RH (with no condensation)

Note

• The information herein may be subject to change for improvement without notice.

■ MAINTENANCE

3. PERIODIC CHECK

3.1 Schedule

3.1.1 Main body (bizhub 500) / DF / PC / LU / FS / MT / SD / RU

Guarantee period: 5 years or 2,250,000 prints

	Service item				x 10),000 p	rints				No. of
		0	25	50	75	100	125	150	175	200	executions
(O)	Maintenance 1		•	•	•	•	•	•	•	•	8 times
p 50	Every 250,000 prints										
Main body (bizhub 500)	Maintenance 2			•		•		•		•	4 times
g) A	Every 500,000 prints										
poq	Maintenance 3				•			•			2 times
ain	Every 750,000 prints										
2	Maintenance 4						•				1 times
	Every 1,250,000 prints			_							
DF	Maintenance 1		•	•	•	•	•	•	•	•	8 times
	Every 250,000 prints Maintenance 2									_	4 times
	Every 500,000 prints			•		•		•		•	4 times
	Maintenance 1			•			•				8 times
PC	Every 250,000 prints		Ŭ								O times
	Maintenance 2				•			•			2 times
	Every 750,000 prints										
\Box	Maintenance 1		•	•	•	•	•	•	•	•	8 times
-	Every 250,000 prints										
	Maintenance 2			•		•		•		•	4 times
	Every 500,000 prints										
FS	Maintenance 1		•	•	•	•	•	•	•	•	8 times
	Every 250,000 prints										
∀	Maintenance 1		•	•	•	•	•	•	•	•	8 times
	Every 250,000 prints										
SD	Maintenance 1		•	•	•	•	•	•	•	•	8 times
	Every 250,000 prints										
忌	Maintenance 1		•	•	•	•	•	•	•	•	8 times
	Every 250,000 prints										

3.1.2 Main body (bizhub 420) / DF / PC / LU / FS / MT / SD / RU

Guarantee period: 5 years or 1,800,000 prints

	Service item				x 10,00	00 prints	;			No. of
		0	25	50	75	100	125	150	175	executions
0	Maintenance 1		•	•	•	•	•	•	•	7 times
0 42	Every 250,000 prints									
zhul	Maintenance 2			•		•		•		3 times
Main body (bizhub 420)	Every 500,000 prints									
pod	Maintenance 3				•			•		2 times
ain	Every 750,000 prints									
Ž	Maintenance 4						•			1 times
	Every 1,250,000 prints									
DF	Maintenance 1		•	•	•	•	•	•	•	7 times
-	Every 250,000 prints									
	Maintenance 2			•		•		•		3 times
	Every 500,000 prints									
PC	Maintenance 1		•	•	•	•	•	•	•	7 times
1	Every 250,000 prints									
	Maintenance 2				•			•		2 times
	Every 750,000 prints									
\square	Maintenance 1		•	•	•	•	•	•	•	7 times
-	Every 250,000 prints									
	Maintenance 2			•		•		•		3 times
	Every 500,000 prints									
FS	Maintenance 1		•	•	•	•	•	•	•	7 times
	Every 250,000prints									
MT	Maintenance 1		•	•	•	•	•	•	•	7 times
_	Every 250,000 prints									
SD	Maintenance 1		•	•	•	•	•	•	•	7 times
37	Every 250,000 prints									
R	Maintenance 1		•	•	•	•	•	•	•	7 times
1	Every 250,000 prints									

$\underline{\wedge}$ 3.1.3 Main body (bizhub 360) / DF / PC / LU / FS / MT / SD / RU

Guarantee period: 5 years or 1,800,000 prints

	Service item		No. of							
		0	22.5	45	67.5	90	112.5	135	157.5	executions
0	Maintenance 1		•	•	•	•	•	•	•	7 times
36	Every 225,000 prints									
zhuł	Maintenance 2			•		•		•		3 times
Main body (bizhub 360)	Every 450,000 prints									
bod	Maintenance 3				•			•		2 times
ain k	Every 675,000 prints									
Ĕ	Maintenance 4						•			1 times
	Every 900,000 prints									
PF	Maintenance 1		•	•	•	•	•	•	•	7 times
-	Every 225,000 prints									
	Maintenance 2			•		•		•		3 times
	Every 450,000 prints									
PC	Maintenance 1		•	•	•	•	•	•	•	7 times
"	Every 225,000 prints									
	Maintenance 2				•			•		2 times
	Every 675,000 prints									
	Maintenance 1		•	•	•	•	•	•	•	7 times
	Every 225,000 prints									
	Maintenance 2			•		•		•		3 times
	Every 450,000 prints									
R	Maintenance 1		•	•	•	•	•	•	•	7 times
	Every 225,000prints									
Ψ	Maintenance 1		•	•	•	•	•	•	•	7 times
_	Every 225,000 prints									
SD	Maintenance 1		•	•	•	•	•	•	•	7 times
Ĺ	Every 225,000 prints									
B	Maintenance 1		•	•	•	•	•	•	•	7 times
	Every 225,000 prints									

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3.2 Maintenance item

Note

- For the replacement procedure of periodically replaced parts, see "3.5 Maintenance procedure of the external section" to "3.15 Maintenance procedure of the fusing section".
- · The alcohol described in this section represents the isopropyl alchol.

3.2.1 Main body

A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Imple	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Image check			•			
		Exterior		•	•			Alcohol/cleaning pad
2	Photo con- ductor sec- tion	Drum DR510 • Drum count reset (Service mode)	1				•	
		Cleaning blade assy 50GA-209	1				•	Setting powder
		Charge unit		•	•			Cotton swab (wire), Alcohol/cleaning pad
3	Transfer/sep- aration sec- tion	Transfer/separation unit		•	•			Cotton swab (wire)
4	Developing section	Developer DV511 TCR adjustment (Service mode)	1				•	
5	Main body	Filter mounting plate assy 50GA-336	1				•	
		Ozon filter 50GA1031	1				•	
		Suction filter /A assy 40LAR705	1				•	
		Filter cover assy 50GA-314	1				•	
		Suction cover /2 assy 50GA-311	2				•	
6	Scanner section	Original glass (including slit glass)		•				Alcohol/cleaning pad
		Mirror 1 to mirror 3		•				Alcohol/cleaning pad
7	Paper feed section	Pick-up roller, feed roller (Tray 1, 2)		•				Alcohol/cleaning pad
		Separation roller assy (Tray 1, 2)		•				Alcohol/cleaning pad

10

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
8	Bypass tray section	Feed roller		•				Alcohol/cleaning
		Separation roller		•				Alcohol/cleaning
9	Fusing section	Fusing roller 50GA5303	1				•	
		Fusing pressure roller 50GA5304	1				•	
		Fusing web 50GA-540 Fusing counter reset	1				•	
		Heat insulating sleeve /A 26NA5372	2				•	
		Fusing bearing /Up 26NA5371	2				•	
		Fusing bearing /Lw 50GA5359	2				•	
		Fusing driven roller /A assy 4040R706	2				•	
		Fusing driven roller /B assy 4040R707	2				•	
		Fusing sensor		•				Alcohol/cleaning
		Fusing claw		•				Alcohol/cleaning
		Thermostat		•				Alcohol/cleaning
10	Paper reverse section	Paper exit suction filter 50GA4406	1				•	
11	Registration section	Paper dust removing brush		•				Blower brush
		Registration roller /Rt		•				Alcohol/cleaning
		Registration roller /Lt		•				Alcohol/cleaning
		Loop roller		•				Alcohol/cleaning
		Reflective sensor		•				Blower brush
12	Final check	Paper through, Image check			•			
		PM count reset			•			
		Exterior cleaning		•				

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B. Maintenance 2 (Every 500,000 prints (bizhub500/420) / Every 450,000 prints (bizhub360))

No.	Unit	Description	Quantity	tity Implementation classification			cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Transfer/sep- aration sec-	Transfer/separation unit 50GA-260	1				•	
	tion		1				_	
2	Fusing section	Fusing sensor assy 50GA-544	1				•	
		Fuse holder assy 26NA-535	1				•	
		Fusing claw assy 50GA-533	1				•	
		Fusing input gear assy 50GA-546	1			•	•	

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↑ C. Maintenance 3 (Every 750,000 prints (bizhub500/420) / Every 675,000 prints (bizhub360))

No.	Unit	Description	Quantity	Imple	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Photo con- ductor sec- tion	Drum unit 50GA-200	1				•	
2	Developing section	Developing unit 50GA-300	1				•	
3	Paper feed section	Pick-up roller 40303005	2				•	Actual: 300,000 feeds
		Feed roller 40303005	2				•	Actual: 300,000 feeds
		Separation roller assy (Tray 1, 2) 40300151	2				•	Actual: 300,000 feeds
4	Bypass tray section	Paper feed roller 41313001	1				•	Actual: 200,000 feeds
		Separation roller assy 40340151	1				•	Actual: 200,000 feeds

MAINTENANCE

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Registration section	Registration bearing /Rt 26NA4536	2				•	
		Registration bearing /Lt 26NA4537	2				•	
		Loop roller 50GA3865	1				•	
		Registration roller /Rt 50GA3848	1				•	
		Loop bearing 26NA4082	2				•	
2	Write section	Write unit 50GA-650	1				•	

3.2.2 DF

⚠ A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Paper through, mage condition			•			
		Appearance			•			
2	Paper feed section	Pick-up roller		•				Alcohol/cleaning pad Actual: 50,000 faces
		Feed roller		•				Alcohol/cleaning pad Actual: 50,000 faces
		Separation roller		•				Alcohol/cleaning pad Actual: 50,000 faces
		Other rollers		•				Alcohol/cleaning pad Actual: 50,000 faces
		Each sensor		•				Blower brush Actual: 30,000 faces
3	Paper con- veyance sec- tion	Scanning guide		•				Alcohol/cleaning pad Actual: 50,000 faces
4	Final check	Paper through, image check			•			
		Exterior cleaning		•				

B. Maintenance 2 (Every 500,000 prints (bizhub500/420) / Every 450,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Paper feed section	Pick-up roller 43445003	1				•	Actual: 200,000 faces
		Feed roller 45823014	1				•	Actual: 200,000 faces
		Separation roller 45823047	1				•	Actual: 200,000 faces

PC 3.2.3

A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Imple	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Paper through check			•			
2	Paper feed	Pick-up roller		•				
	section	Feed roller		•				
		Separation roller		•				
3	Final check	Paper through check			•			
		Exterior cleaning		•				

B. Maintenance 2 (Every 750,000 prints (bizhub500/420) / Every 675,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Paper feed section	Pick-up roller 40303005	1				•	Actual: 300,000 feeds
		Feed roller 40303005	1				•	Actual: 300,000 feeds
		Separation roller assy 40300151	1				•	Actual: 300,000 feeds

14

MAINTENANCE

3.2.4 LU

⚠ A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Paper through check			•			
2	Paper feed section	Pick-up rubber		•				Alcohol/cleaning pad
		Feed rubber		•				Alcohol/cleaning pad
		Separation rubber		•				Alcohol/cleaning pad
3	Final check	Paper through check			•			
		Exterior cleaning		•				

⚠ B. Maintenance 2 (Every 500,000 prints (bizhub500/420) / Every 450,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classific	cation	Materials	
	classification			Cleaning	Check	Lubrication	Replacement	Tools used	
1	Paper feed section	Pick-up rubber 40LA1009	1				•	Actual: 200,000 feeds	
		Feed rubber 26NA4011	1				•	Actual: 200,000 feeds	
		Separation rubber 26NA4012	1				•	Actual: 200,000 feeds	

3.2.5 FS

⚠ A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Implei	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Paper through check			•			
2	Conveyance section, staple section	Each roller		•				Alcohol/cleaning pad
3	Staple section	Paddle		•				Alcohol/cleaning pad
4	Final check	Paper through check			•			
		Exterior cleaning		•				

3.2.6 MT

A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	Materials	
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Paper through check			•			
2	Conveyance section	Each roller		•				Alcohol/cleaning pad
3	Final check	Paper through check			•			
	•	Exterior cleaning		•				

3.2.7 SD

⚠ A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

No.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
	classification			Cleaning	Check	Lubrication	Replacement	Tools used
1	Preparations	Paper through check			•			
2	Conveyance section	Each roller		•				Alcohol/cleaning pad
3	Final check	Paper through check			•			
		Exterior cleaning		•				

3.2.8 RU

A. Maintenance 1 (Every 250,000 prints (bizhub500/420) / Every 225,000 prints (bizhub360))

Ν	lo.	Unit	Description	Quantity	Impler	mentatio	n classifi	cation	Materials
		classification			Cleaning	Check	Lubrication	Replacement	Tools used
	1	Preparations	Paper through check			•			
:	2	Conveyance section	Each roller		•				Alcohol/cleaning pad
;	3	Final check	Paper through check			•			
		•	Exterior cleaning		•				

3.3 Replacement parts list

∴ 3.3.1 Periodically replacement parts list (bizhub 500/420)

Note

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- For the replacement procedure of periodically replaced parts, see "3.5 Maintenance procedure of the external section" to "3.15 Maintenance procedure of the fusing section".
- The parts count No. given in the table below represents the number of the fixed parts number in the Service mode.

A. Main body

No.	Classification	Part name	Part number	Qt.	Actual replace- ment cycle	Parts count No.	Page referred to
1	Photo con-	Drum	DR510	1	250,000		P.31
2	ductor section	Cleaning blade assy	50GA-209	1	250,000		P.45
3	-	Drum unit (without drum)	50GA-200	1	750,000		P.30
4	Transfer/ separation section	Transfer/separation unit	50GA-260	1	500,000		P.37
5	Developing	Developer	DV511	1	250,000		P.39
6	section	Developing unit	50GA-300	1	750,000		P.38
7	Main body	Filter mounting plate assy	50GA-336	1	250,000		P.42
8	-	Ozon filter	50GA1031	1	250,000		P.22
9	-	Suction filter /A assy	40LAR705	1	250,000		P.23
10	-	Filter cover assy	50GA-314	2	250,000		P.23
11	-	Suction cover /2 assy	50GA-311	4	250,000		P.43
12	Paper feed section	Pick-up roller	40303005	2	300,000		P.47 P.54
13		Feed roller	40303005	2	300,000		P.47 P.54
14		Separation roller assy (Tray 1, 2)	40300151	2	300,000		P.52 P.61
15	Bypass tray	Paper feed roller	41313001	1	200,000		P.69
16	section	Separation roller assy	40340151	1	200,000		P.66
17	Registration	Loop roller	50GA3865	1	1,250,000		P.73
18	section	Registration roller /Rt	50GA3848	1	1,250,000		P.73
19		Registration bearing /Rt	26NA4536	2	1,250,000		P.73
20		Registration bearing /Lt	26NA4537	2	1,250,000		P.73
21		Loop bearing	26NA4082	1	1,250,000		P.73
22	Fusing	Fusing roller	50GE5303	1	250,000		P.91
23	section	Fusing pressure roller	50GA5304	1	250,000		P.91
24	1	Fusing web	50GA-540	1	250,000		P.85
25	1	Heat insulating sleeve /A	26NA5372	2	250,000		P.91
26		Fusing bearing /Up	26NA5371	2	250,000		P.91
27	1	Fusing bearing /Lw	50GA5359	2	250,000		P.91

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No.	Classification	Part name	Part number	Qt.	Actual replace-	Parts count	Page
					ment cycle	No.	referred to
28	Fusing	Fusing sensor assy	50GA-544	1	500,000		P.95
29	section	Fuse holder assy	26NA-535	1	500,000		P.97
30		Fusing claw assy	50GA-533	1	500,000		P.82
31		Fusing driven roller /A assy	4040R706	2	250,000		P.87
32		Fusing driven roller /B assy	4040R707	2	250,000		P.87
33		Fusing input gear assy	50GA-546	1	500,000		P.91
34	Paper reverse section	Paper exit suction filter	50GA4406	1	250,000		P.25
35	Write section	Write unit	50GA-650	1	1,250,000		P.26

B. Option

No.	Classification	Part name	Part number	Qt.	Actual replace-	Parts count	Page
					ment cycle	No.	referred to
1	DF	Pick-up roller	43445003	1	200,000		*1
2		Feed roller	45823014	1	200,000		*1
3		Separation roller	45823047	1	200,000		*2
4	PC	Pick-up roller	40303005	1	300,000		*3
5		Feed roller	40303005	1	300,000		*4
6		Separation roller assy	40300151	1	300,000		*5
7	LU	Pick-up rubber	40LA4009	1	200,000		*6
8		Feed rubber	26NA4011	1	200,000		*6
9		Separation rubber	26NA4012	1	200,000		*7

- *1 (See P.5 in "Field Service DF-607")
- *2 (See P.6 in "Field Service DF-607")
- *3 (See P.7 in "Field Service PC-202 (bizhub 500/420/360)" / See P.7 in "Field Service PC-402 (bizhub 500/420/360)")
- *4 (See P.4 in "Field Service PC-202 (bizhub 500/420/360)" / See P.4 in "Field Service PC-402 (bizhub 500/420/360)")
- *5 (See P.3 in "Field Service PC-202 (bizhub 500/420/360)" / See P.3 in "Field Service PC-402 (bizhub 500/420/360)")
- *6 (See P.3 in "Field Service LU-201")
- *7 (See P.7 in "Field Service LU-201")

MAINTENANCE

Note

- For the replacement procedure of periodically replaced parts, see "3.5 Maintenance procedure of the external section" to "3.15 Maintenance procedure of the fusing section".
- The parts count No. given in the table below represents the number of the fixed parts number in the Service mode.

A. Main body

No.	Classification	Part name	Part number	Qt.	Actual replace- ment cycle	Parts count No.	Page referred to
1	Photo con-	Drum	DR510	1	225,000		P.31
2	ductor section	Cleaning blade assy	50GA-209	1	225,000		P.45
3		Drum unit (without drum)	50GA-200	1	675,000		P.30
4	Transfer/ separation section	Transfer/separation unit	50GA-260	1	450,000		P.37
5	Developing	Developer	DV511	1	225,000		P.39
6	section	Developing unit	50GA-300	1	675,000		P.38
7	Main body	Filter mounting plate assy	50GA-336	1	225,000		P.42
8		Ozon filter	50GA1031	1	225,000		P.22
9		Suction filter /A assy	40LAR705	1	225,000		P.23
10		Filter cover assy	50GA-314	2	225,000		P.23
11		Suction cover /2 assy	50GA-311	4	225,000		P.43
12	Paper feed section	Pick-up roller	40303005	2	300,000		P.47 P.54
13		Feed roller	40303005	2	300,000		P.47 P.54
14		Separation roller assy (Tray 1, 2)	40300151	2	300,000		P.52 P.61
15	Bypass tray	Paper feed roller	41313001	1	200,000		P.69
16	section	Separation roller assy	40340151	1	200,000		P.66
17	Registration	Loop roller	50GA3865	1	900,000		P.73
18	section	Registration roller /Rt	50GA3848	1	900,000		P.73
19		Registration bearing /Rt	26NA4536	2	900,000		P.73
20		Registration bearing /Lt	26NA4537	2	900,000		P.73
21		Loop bearing	26NA4082	1	900,000		P.73
22	Fusing	Fusing roller	50GA5303	1	225,000		P.91
23	section	Fusing pressure roller	50GA5304	1	225,000		P.91
24		Fusing web	50GA-540	1	225,000		P.85
25		Heat insulating sleeve /A	26NA5372	2	225,000		P.91
26		Fusing bearing /Up	26NA5371	2	225,000		P.91
27		Fusing bearing /Lw	50GA5359	2	225,000		P.91
28		Fusing sensor assy	50GA-544	1	450,000		P.95
29	1	Fuse holder assy	26NA-535	1	450,000		P.97

900.000

Page

P.82 P.87 P.87 P.91 P.25

P.26

A	No.	Classification	Part name	Part number	Qt.	Actual replace-	Parts count
						ment cycle	No.
	30	Fusing	Fusing claw assy	50GA-533	1	450,000	
	31	section	Fusing driven roller /A assy	4040R706	2	225,000	
	32		Fusing driven roller /B assy	4040R707	2	225,000	
	33		Fusing input gear assy	50GA-546	1	450,000	
	34	Paper reverse	Paper exit suction filter	50GA4406	1	225,000	

B. Option

35

section

Write section

Write unit

No.	Classification	Part name	Part number	Qt.	Actual replace-	Parts count	Page
					ment cycle	No.	referred to
1	DF	Pick-up roller	43445003	1	200,000		*1
2		Feed roller	45823014	1	200,000		*1
3		Separation roller	45823047	1	200,000		*2
4	PC	Pick-up roller	40303005	1	300,000		*3
5		Feed roller	40303005	1	300,000		*4
6		Separation roller assy	40300151	1	300,000		*5
7	LU	Pick-up rubber	40LA4009	1	200,000		*6
8		Feed rubber	26NA4011	1	200,000		*6
9		Separation rubber	26NA4012	1	200,000		*7

50GA-650

- *1 (See P.5 in "Field Service DF-607")
- *2 (See P.6 in "Field Service DF-607")
- *3 (See P.7 in "Field Service PC-202 (bizhub 500/420/360)" / See P.7 in "Field Service PC-402 (bizhub 500/420/360)")
- *4 (See P.4 in "Field Service PC-202 (bizhub 500/420/360)" / See P.4 in "Field Service PC-402 (bizhub 500/420/360)")
- *5 (See P.3 in "Field Service PC-202 (bizhub 500/420/360)" / See P.3 in "Field Service PC-402 (bizhub 500/420/360)")
- *6 (See P.3 in "Field Service LU-201")
- *7 (See P.7 in "Field Service LU-201")

3.4 Life value

3.4.1 Life value of materials

	Item	Number of prints	Remarks
\triangle	Drum	250,000 (bizhub 500/420)	The life value is defined only by the number of prints.
		225,000 (bizhub 360)	
\triangle	Developer	250,000 (bizhub 500/420)	
		225.000 (bizhub 360)	

Maintenance procedure of the external section 3.5

3.5.1 Replacing the ozone filter

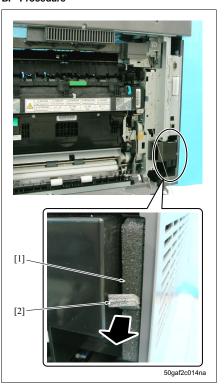
A. Periodically replaced part/cycle

Ozone filter : Every 250,000 prints *1

: Every 225,000 prints *2

500/420 *2 360

B. Procedure



- 1. Remove the right cover /Up. (See P.142)
- 2. Remove the ozone filter [1].

- · When removing the ozone filter, be sure to pull it out by holding it at the section indicated
- 3. Reinstall the above parts following the removal steps in reverse.

3.5.2 Replacing the filter cover assy and the suction filter /A assy

A. Periodically replaced parts/cycle

Filter cover assy : Every 250,000 prints *1

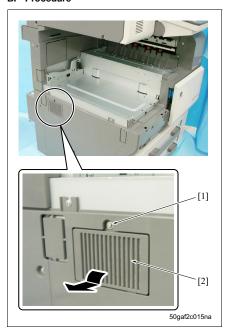
: Every 225,000 prints *2

♠ Suction filter /A assy : Every 250,000 prints *1

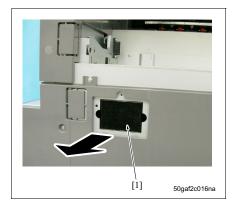
: Every 225,000 prints *2

*1 500/420 *2 360

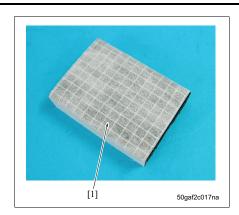
B. Procedure



 Remove the screw [1] and then remove the filter cover assy [2].



2. Remove the suction filter /A assy [1].



- Be sure to install the suction filter /A assy with the white filter face [1] inside.
- 3. Reinstall the above parts following the removal steps in reverse.

3.5.3 Replacing the paper exit suction filter

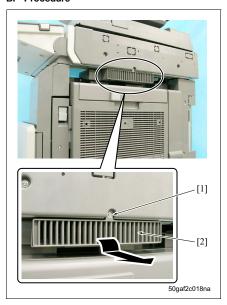
A. Periodically replaced part/cycle

Paper exit suction filter : Every 250,000 prints *1

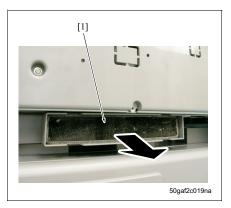
: Every 225,000 prints *2

*1 500/420 *2 360

B. Procedure



1. Remove the screw [1] and then remove the paper exit suction filter cover [2].



- 2. Remove the paper exit suction filter [1].
- Reinstall the above parts following the removal steps in reverse.

3.6 Maintenance procedure of the write section

3.6.1 Replacing the write unit

⚠ Warning

- . Be sure not to turn on the write unit with it shifted from its regular installation position.
- Be absolutely sure not to remove the write unit cover. Otherwise, laser beams get in your eyes and you may suffer loss of sight.
- Be absolutely sure not to remove the write unit for about 2 minutes after you turn off the main power switch (SW1) or the power switch (SW2).

A. Periodically replaced part/cycle

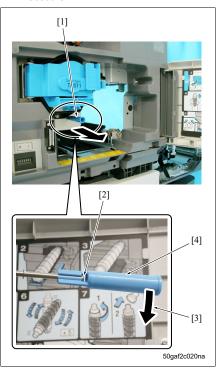
• Write unite : Every 1,250,000 prints *1

: Every 900,000 prints *2

*1 500/420

*2 360

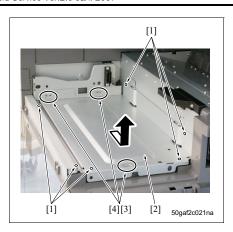
3. Procedure



- Remove the developing unit from the main body. (See P.38)
- Remove the drum unit from the main body. (See P.30)
- 3. Pull out the dust-proof glass cleaning rod [1].
- 4. Remove the cleaning knob [4] from the dust-proof glass cleaning rod [1] by rotating it in the arrowmarked direction [3] with the section indicated by [2] as a fulcrum.
- 5. Replace the dust-proof glass cleaning rod [1] to its original position.

Note

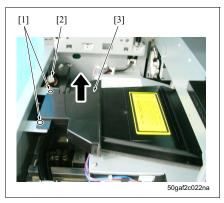
 Be sure to push in fully the dust-proof glass cleaning rod [1] so that it does not come in contact with the main body frame when removing the unit.



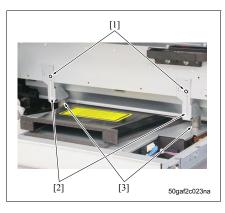
6. Remove the 6 screws [1] and then remove the write cover [2].

Note

 When installing the write cover, be sure to set the projections [3] at 3 places into each of the holes [4] of the frame.



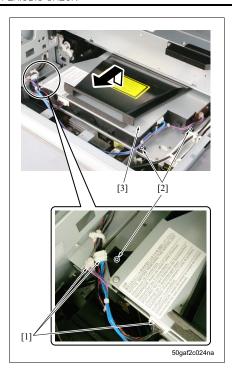
- 7. Remove the 2 screws [1].
- 8. Remove the connector [2] and then remove the drum cooling fan assy [3].



 Remove the screws [1], 1 each, and then remove the 2 write section mounting member assy's [2].

Note

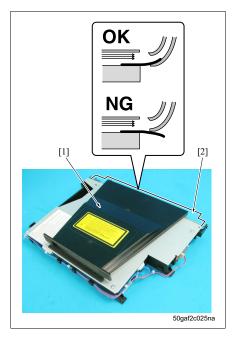
 When installing the write section mounting member assy [2], be sure to install it so that the spring [3] gets straight.



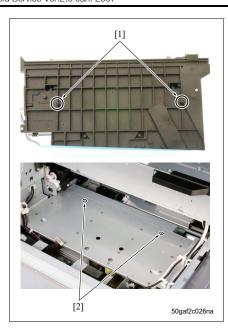
- 10. Remove the 3 connectors [1].
- 11. Remove the 3 screws [2] and then remove the write unit [3].

Note

 When removing the write unit, be sure to avoid touching the dust-proof glass.



- When installing the write unit [1], be sure to take note of the position into which the dustproof sheet /A [2] is inserted.
- When checking the insertion of the sheet, be sure to check it with the drum unit removed.



- When installing the write unit, be sure to set the projections [1] at 2 places provided on the bottom to the 2 holes [2] of the main body frame for positioning.
- 12. Reinstall the above parts following the removal steps in reverse.

3.7 Maintenance procedure of the photosensitive material section

3.7.1 Replacing the drum unit

Note

- . When removing the drum unit, be sure to hold it at both ends.
- . When removing the drum unit, be sure to avoid holding it at the separation claw unit section.
- . Be sure to avoid touching the drum with bare hands, and also be careful not to damage it.
- · Be sure to avoid turning the drum in any direction other than in the specified direction.
- · When storing the drum unit, be sure to store it in the dark place with a drum cover attached.

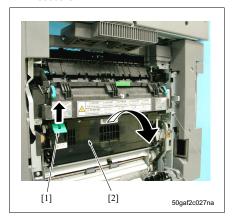
A. Periodically replaced part/cycle

♠ Drum unit : Every 750,000 prints *1

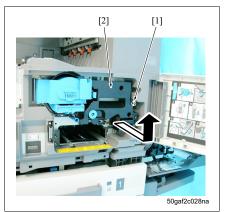
: Every 675,000 prints *2

*1 500/420

*2 360



- Open ADU. (See P.142)
- Pull the lock release lever [1] to open the conveyance unit [2].



- Remove the developing unit from the main body. (See P.38)
- Loosen the screw [1] and remove the drum unit [2].
- 5. Reinstall the above parts following the removal steps in reverse.

3.7.2 Replacing the drum

Note

- . Be sure to avoid touching the drum and the cleaning blade with bare hands, and also be careful not to damage them.
- . When storing the drum, be sure to store it in the dark place with a drum cover attached.
- . When installing the drum and the cleaning blade, be sure to apply setting powder to the circumference of the drum and the cleaning blade, regardless of these parts being new or used ones.
- . When setting powder is applied to the drum, be sure to conduct the following operations before installing the drum unit to the main body.
 - 1) With the charging corona unit removed, rotate the drum one full turn (to prevent setting powder from splashing onto the charging corona unit and the image from getting defective.)
 - 2) When installing a new drum, be sure to reset the drum counter in the service mode. Failing to reset it may result in image fogging and toner splashing. (See P.210)

A. Periodically replaced part/cycle

: Every 250,000 prints *1

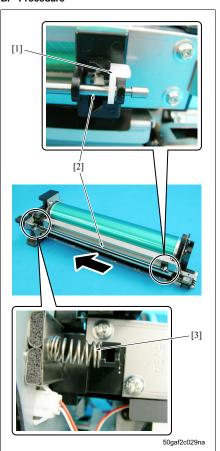
Drum

*1

: Every 225,000 prints *2 500/420

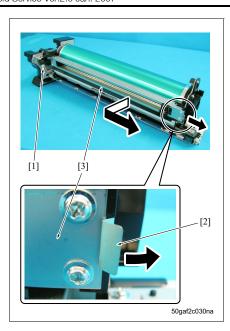
*2 360

B. Procedure

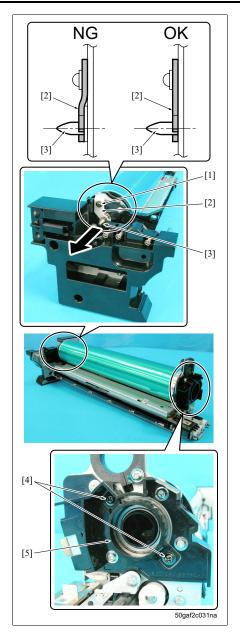


- Remove the drum unit from the main body. (See P.30)
- 2. Remove the C-clip [1] and pull out the cleaning rod [2].

- When installing the cleaning rod, be sure to take note of the direction of the C-clip.
- 3. Remove the spring [3].



- 4. Remove the connector [1].
- 5. Open the lock lever [2] and remove the charging corona unit [3].

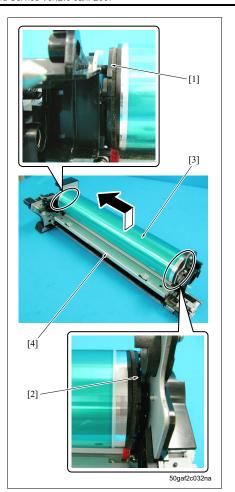


- 6. Remove the screw [1] and then remove the shaft mounting plate [2].
- 7. Pull out the drum shaft [3] for removal.

- When installing the drum shaft, be sure to insert the drum shaft until the shaft mounting plate comes into contact firmly with it as shown in the drawing.
- 8. Remove the 2 screws [4] and then remove the bearing [5].

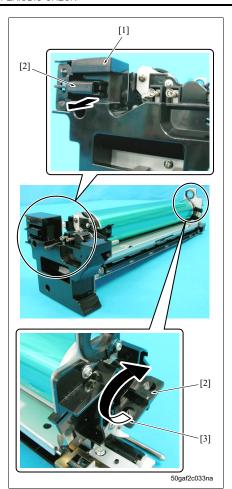
MAINTENANCE

bizhub 500/420/360



Remove the seal blocks [1] and [2].
 Hold the drum [3] at both ends and remove it.

- When removing the drum, be careful not to damage the photosensitive surface.
- When removing the drum, be careful not to hit it against the metal frame section [4] of the cleaning blade.



- When installing the drum, using the attached jig [2] with the drum unit cover [1] before installing the charging corona unit, rotate the drum 1 full turn in the arrow-marked direction [3]. And then check to see if setting powder is not scraped off, and also if the toner collection sheet and the cleaning blade do not turned up.
- 11. Reinstall the above parts following the removal steps in reverse.

Maintenance procedure of the transfer/separation corona section 3.8

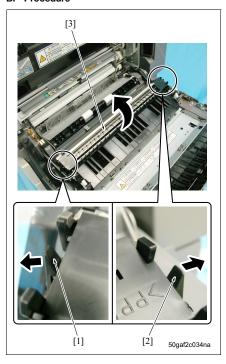
3.8.1 Replacing the transfer/separation corona unit

A. Periodically replaced part/cycle

Transfer/separation corona unit : Every 500,000 prints *1

: Every 450,000 prints *2

*1 500/420 *2 360



- 1. Open ADU. (See P.142)
- 2. Open the conveyance unit. (See P.30)
- 3. Release the lock levers [1] and [2] and remove the transfer/separation corona unit [3].
- 4. Reinstall the above parts following the removal steps in reverse.

Maintenance procedure of the developing section 3.9

3.9.1 Replacing the developing unit

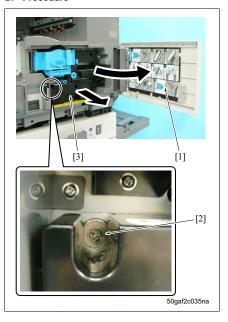
A. Periodically replaced part/cycle

Developing unit : Every 750,000 prints *1

: Every 675,000 prints *2

500/420

*2 360



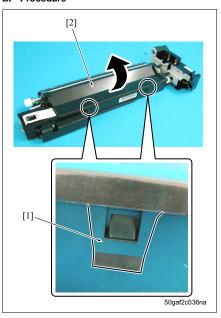
- 1. Open the front door [1].
- 2. Loosen the screw [2] and remove the developing unit [3].
- 3. Reinstall the above parts following the removal steps in reverse.

3.9.2 Replacing developer

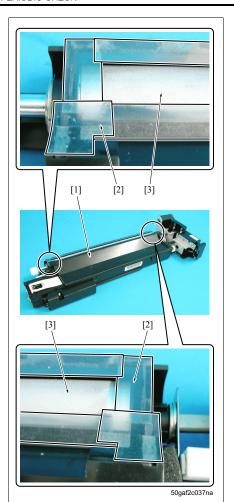
A. Periodically replaced part/cycle

⚠ • Developer : Every 250,000 prints *1: Every 225,000 prints *2

*1 500/420 *2 360

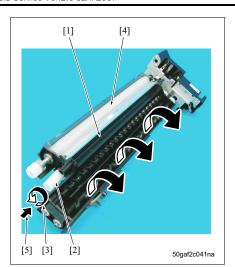


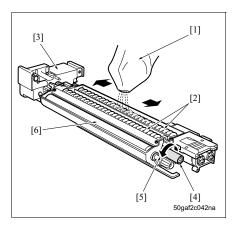
- Remove the developing unit from the main body. (See P.38)
- 2. Release the locks [1] at 2 places and remove the developing unit cover /1 [2].



Note

When installing the developing unit cover /1
[1], be sure to install it so that the splash prevention sheet [2] does not get caught into the developing roller [3].





- Tilt the developing unit [1], and rotate the developing gear [2] in the arrow-marked direction [3] to discharge thoroughly developer in the developing unit [1].
- Clean developer and toner that adhere to the developing roller [4].

Note

- Be absolutely sure not to turn the developing gear [2] in any direction other than in the arrow-marked direction [3]. (Never rotate it clockwise as seen from the direction indicated by [5].)
- If there remains any used developer on the developing roller, this may cause image fogging.
- 5. Put in new developer [1] evenly from above the agitator screw [2].
- Rotate the developing gear [4] in the arrowmarked direction [5] so that developer [1] gets deep into the developing unit [3].
- Repeat steps 8 and 9 to put in the developer [1] thoroughly.
- Rotate the developing gear [4] in the arrowmarked direction [5] and check to see if the spiking of developer is found on the entire surface of the developing roller [6].
- Reinstall the above parts following the removal steps in reverse.

Note

 When developer [1] is replaced, be sure to conduct the TCR adjustment in the service mode.

(See P.191)

3.10 Maintenance procedure of the toner supply section

Replacing the filter mounting plate assy

Periodically replaced part/cycle

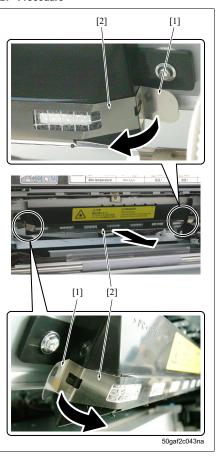
Filter mounting plate assy : Every 250,000 prints *1

: Every 225,000 prints *2

*1 500/420

*2 360

B. Procedure



- 1. Remove the developing unit from the main body. (See P.38)
- 2. Open ADU. (See P.142)
- 3. Open the conveyance unit. (See P.30)
- 4. Remove the drum unit from the main body.
- 5. Release the lock levers [1] at 2 places and remove the filter mounting plate assy [2].
- 6. Reinstall the above parts following the removal procedure in reverse.

3.10.2 Replacing the suction cover /2 assy

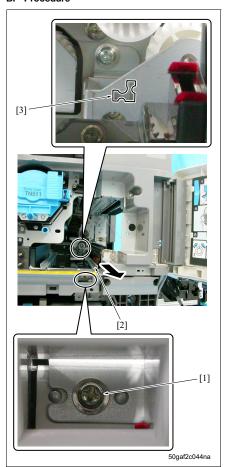
A. Periodically replaced part/cycle

Suction cover /2 assy : Every 250,000 prints *1

: Every 225,000 prints *2

*1 500/420 *2 360

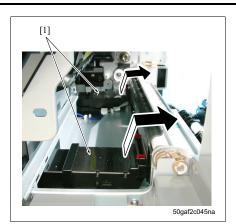
B. Procedure



- Remove the developing unit from the main body. (See P.38)
- 2. Open ADU. (See P.142)
- Open the conveyance unit. (See P.30)
- Remove the drum unit from the main body. (See P.30)
- 5. Remove the screw [1] and then remove the rail [2].

Note

• When installing the rail, be sure first to insert the tip into the notch [3].



- 6. Remove the 2 suction cover /2 assy's [1].
- 7. Reinstall the above parts following the removal steps in reverse.

3.11 Cleaning/toner recycle section

3.11.1 Replacing the cleaning blade assy

Note

- · Be sure to avoid touching the edge section of the cleaning blade assy with bare hands.
- When installing the cleaning blade assy, be sure to apply setting powder to the circumference of the drum and the cleaning blade, regardless of these parts being new or used ones.
- When setting powder is applied to the drum, be sure to conduct the following operations before installing the drum unit to the main body.
 - With the charging corona unit removed, rotate the drum 1 full turn (to prevent setting powder from splashing onto the charging corona unit and the image from getting defective.)

A. Periodically replaced part/cycle

A

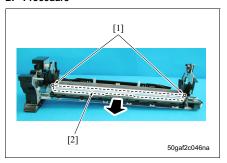
Cleaning blade assy : Every 250,000 prints *1

: Every 225,000 prints *2

*1 500/420

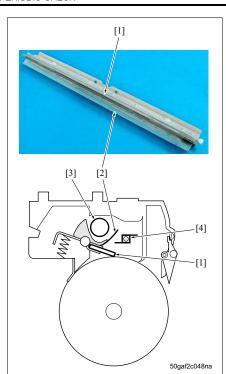
*2 360

B. Procedure



[1] 50gaf2c047na

- Remove the developing unit from the main body. (See P.38)
- 2. Open ADU. (See P.142)
- 3. Open the conveyance unit. (See P.30)
- Remove the drum unit from the main body. (See P.30)
- Remove the drum from the drum unit. (See P.31)
- Remove the 2 screws [1] and then remove the cleaning blade presser plate [2].
- 7. Remove the cleaning blade assy [1].



Note

- When installing the cleaning blade assy [1], be sure to insert the transparent sheet section [2] of the unit the between the collection screw [3] and the collection paddle [4].
- 8. Reinstall the above parts following the removal steps in reverse.

3.12 Maintenance procedure of the paper feed section

3.12.1 Replacing the feed roller/pick-up roller (tray 1)

A. Periodically replaced parts/cycle

★ Feed roller : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

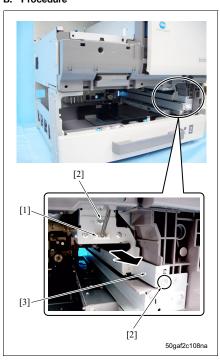
: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

♠ Pick-up roller : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

*1 500/420 *2 360

B. Procedure



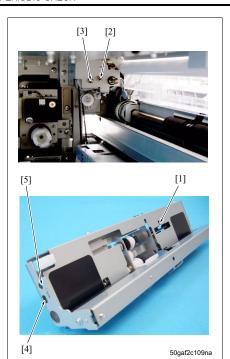
1. Remove the front cover.

(See P.148)

2. Remove the tray 1.

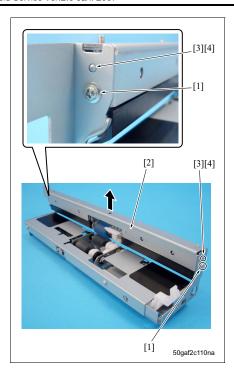
(See P.163)

3. Remove the connector [1] and the 2 screws [2], and then remove the paper feed unit /1 [3].



Note

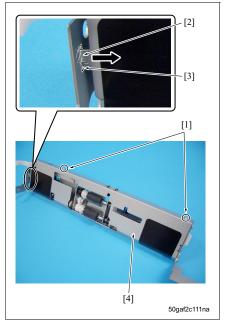
 When installing the paper feed unit /1 [1], be sure to set the shafts [2] and [3] to the holes [4] and [5].



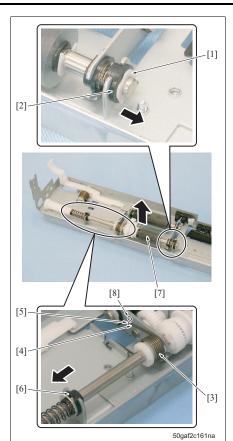
4. Remove the 2 screws [1] and then remove the separation roller unit /1 [2].

Note

 When installing the separation roller unit /1, be sure to set the projections [3], 1 each, to each of the holes [4].



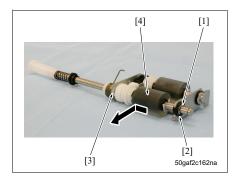
- 5. Remove the 2 screws [1].
- 6. Detach the convex section [2] from the hole [3] and remove the paper feed unit cover [4].



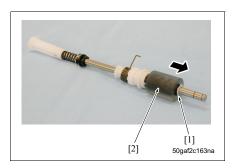
- 7. Remove the C-ring [1] and then remove the bearing [2].
- 8. Detach the hook [4] of the spring [3] from the oblong hole [5].
- Remove the bearing [6] and then remove the paper feed roller unit [7].

Note

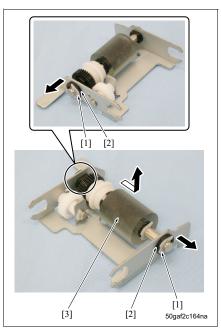
 When attaching the spring, be sure to put the hook into the oblong hole (not into the round hole [8]).



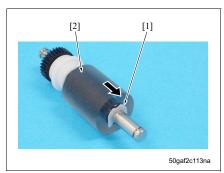
- 10. Remove the E-ring [1] and then remove the bearing [2].
- 11. Remove the bearing [3] and then remove the feed roller assy [4].



12. Remove the C-ring [1] and then remove the feed roller [2].



- 13. Remove the C-rings [1], 1 each, and then remove the 2 bearings [2].
- 14. Remove the pick-up roller assy [3].



- 15. Remove the C-ring [1] and then remove the pickup roller [2].
- 16. Reinstall the above parts following the removal steps in reverse.

3.12.2 Replacing the separation roller assy (tray 1)

A. Periodically replaced part/cycle

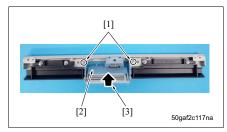
Separation roller assy : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

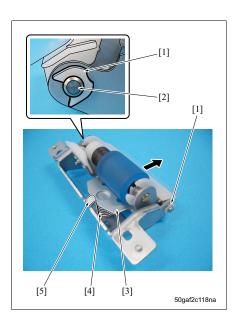
: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

*1 500/420

*2 360

B. Procedure





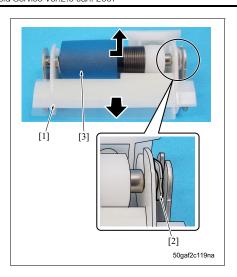
- Remove the tray 1. (See P.163)
- Remove the paper feed unit /1. (See P.47)
- Remove the separation roller unit /1. (See P.47)
- Remove the 2 screws [1] and then remove the separation roller mounting plate assy [2].

Note

- When installing the separation roller mounting plate assy, be sure to fasten it with screws while pressing it in the arrow-marked direction [3].
- 5. Remove the 2 C-rings [1] and pull out the shaft [2].
- 6. Remove the separation roller mounting plate [3].

Note

- When removing the separation roller mounting plate, be careful that the spring [4] does not get lost since it is apt to come off.
- When installing the separation roller mounting plate, be sure to install it so that it comes under the projection [5].



- 7. Remove the guide [1].
- 8. Remove the C-ring [2] and then remove the separation roller assy [3].
- Reinstall the above parts following the removal steps in reverse.

3.12.3 Replacing the feed roller/pick-up roller (tray 2)

Periodically replaced parts/cycle

Feed roller : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

Pick-up roller : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

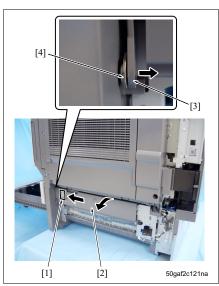
: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

500/420 *2 360

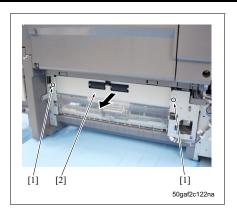
Procedure



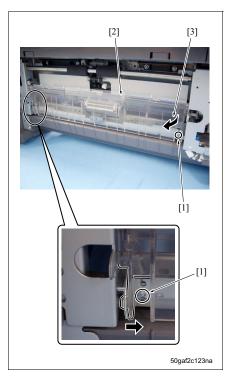
- 1. Remove the bypass unit. (See P.63)
- 2. Pull out the tray 2 [1].



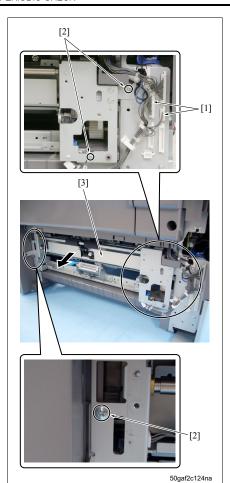
- 3. Push the lever [1] to open the vertical conveyance door [2].
- 4. Detach the fulcrum [3] of the vertical conveyance door from the mounting plate [4] and remove the vertical conveyance door.



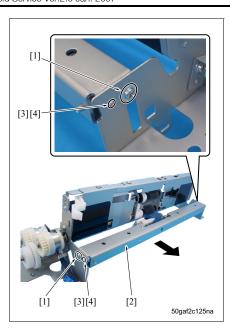
5. Remove the 2 screws [1] and then remove the conveyance roller cover [2].



6. Remove 2 screws [1] and then remove the paper feed guide /2 [2] in the arrow-marked direction [3].



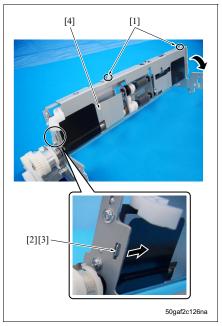
- 7. Remove the 2 connectors [1].
- 8. Remove the 3 screws [2] and then remove the paper feed unit /2 [3].



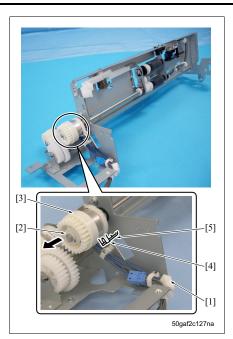
9. Remove the 2 screws [1] and then remove the separation roller unit /2 [2].

Note

 When installing the separation roller unit /2, be sure to set the projection [3] to the hole [4].



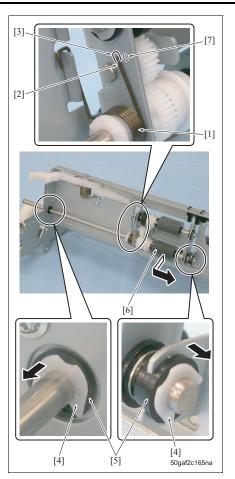
- 10. Remove the 2 screws [1].
- 11. Detach the convex section [2] from the hole [3] and remove the paper feed roller cover [4].



- 12. Remove the connector [1].
- 13. Remove the C-ring [2] and then remove the feed clutch /2 (CL5) [3].

Note

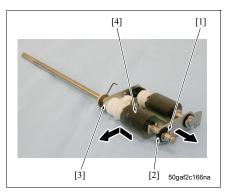
 When installing CL5, be sure to set the stopper [4] to the guide plate [5].



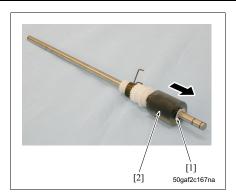
- 14. Detach the hook [2] of the spring [1] from the oblong hole [3].
- 15. Remove the C-rings [4], 1 each, and then remove the 2 bearings [5].
- 16. Remove the paper feed roller unit [6].

Note

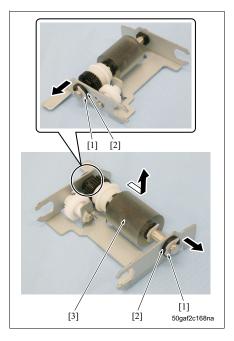
 When attaching the spring, be sure to put the hook into the oblong hole (not into the round hole [7]).



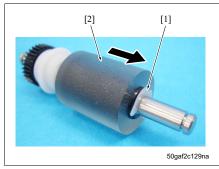
- 17. Remove the E-ring [1] and then remove the bearing [2].
- 18. Remove the bearing [3] and then remove the feed roller assy [4].



19. Remove the C-ring [1] and then remove the feed roller [2].



- 20. Remove the C-rings [1], 1 each, and then remove the 2 bearings [2].
- 21. Remove the pick-up roller assy [3].



- 22. Remove the C-ring [1] and then remove the pick-up roller [2].
- 23. Reinstall the above parts following the removal steps in reverse.

3.12.4 Replacing the separation roller assy (tray 2)

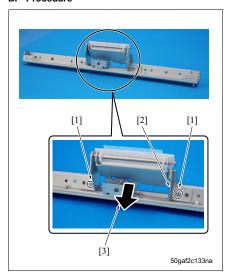
A. Periodically replaced part/cycle

• Separation roller assy : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

*1 500/420 *2 360

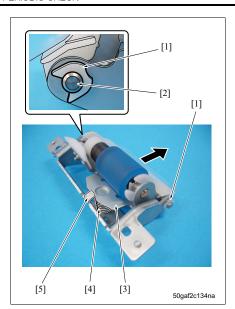
B. Procedure



- Remove the bypass unit. (See P.63)
- 2. Pull out the tray 2.
- 3. Remove the vertical conveyance door. (See P.54)
- Remove the conveyance roller cover. (See P.54)
- Remove the paper feed guide /2.
 (See P.54)
- Remove the paper feed unit /2. (See P.54)
- 7. Remove the separation roller unit /2. (See P.54)
- 8. Remove the 2 screws [1] and then remove the separation roller mounting plate assy [2].

Note

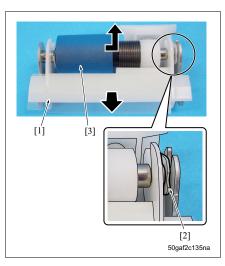
 When installing the separation roller mounting plate assy, be sure to fasten it with screws while pressing it in the arrow-marked direction [3].



9. Remove the 2 C-rings [1] and pull out the shaft [2]. 10. Remove the separation roller mounting plate [3].

Note

- When removing the separation roller mounting plate, be careful that the spring [4] does not get lost since it is apt to come off.
- When installing the separation roller mounting plate, be sure to install it so that it comes under the projection [5].

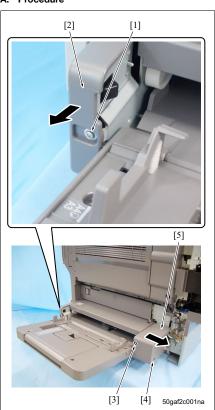


- 11. Remove the guide [1].
- 12. Remove the C-ring [2] and then remove the separation roller assy [3].
- 13. Reinstall the above parts following the removal steps in reverse.

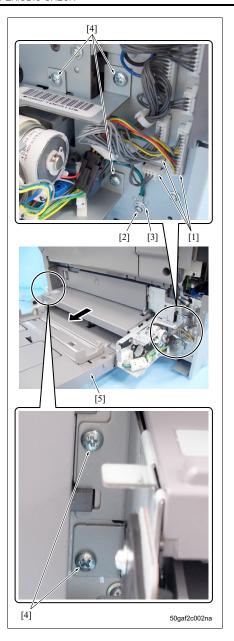
3.13 Maintenance procedure of the bypass tray section

3.13.1 Removing/reinstalling the bypass unit

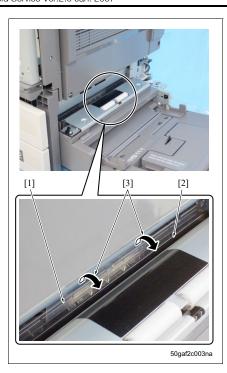
A. Procedure



- Remove the right cover /Lw. (See P.143)
- 2. Remove the screw [1] and then remove the bypass cover /Fr [2].
- Loosen the screw [3] and then remove the screw
 [4] to remove the bypass cover /Rr [5].



- 4. Remove the 3 connectors [1].
- 5. Remove the screw [2] and then remove the ground terminal [3].
- 6. Remove the 5 screws [4] and then remove the bypass unit [5].



- 7. Reinstall the above parts following the removal steps in reverse.
- 8. After installing the bypass unit, open the tray 2 paper feed guide [1] and the bypass feed guide [2] in the arrow-marked direction [3] to check to see if they operate smoothly.

3.13.2 Replacing the separation roller assy

Periodically replaced part/cycle

Separation roller assy : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

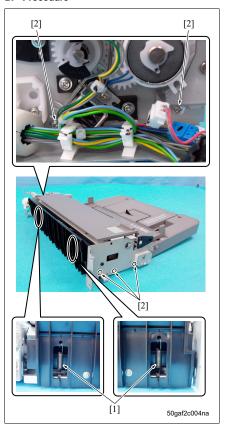
500/420

*2 360

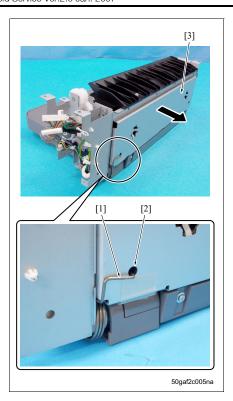
Note

· When replacing the separation roller assy, be sure also to replace the feed roller at the same time.

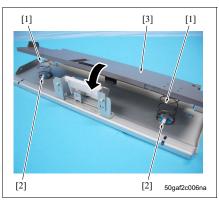
B. Procedure



- 1. Remove the bypass unit. (See P.63)
- 2. Remove the 2 springs [1].
- 3. Remove the 5 screws [2].

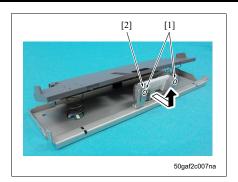


4. Detach the hook [1] from the hole [2] and remove the push-up plate assy [3].

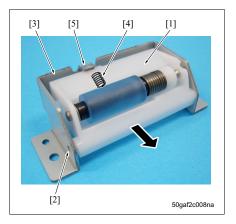


Note

 When installing the push-up plate assy, be sure to install it while pressing the push-up plate [3] so that each of the springs [1] does not comes off each cross-headed boss [2].



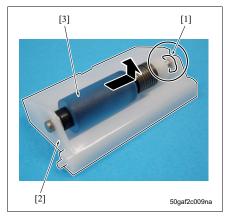
5. Remove the 2 screws [1] and then remove the separation roller fixing plate assy [2].



6. Detach the support axis [2] of the holder [1] from the mounting plate [3] and remove the holder.

Note

- When removing the holder [1], the spring [4] provided under the holder is apt to come off.
 Be careful that it does not get lost.
- When installing the holder [1], be sure to install it so that it comes under the projection [5].



- 7. Remove the C-ring [1] and then remove the separation roller assy [3] from the holder [2].
- 8. Reinstall the above parts following the removal steps in reverse.

3.13.3 Replacing the feed roller

A. Periodically replaced part/cycle

Feed roller : Every 750,000 prints (Actual replacement cycle: Every 300,000 prints) *1

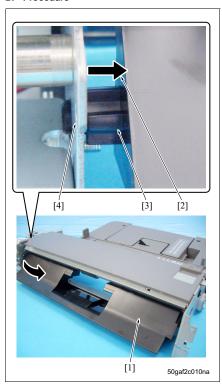
: Every 675,000 prints (Actual replacement cycle: Every 300,000 prints) *2

*1 500/420 *2 360

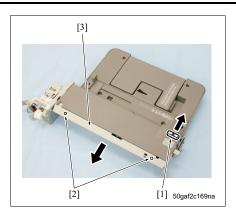
Note

· When replacing the feed roller, be sure also to replace the separation roller assy at the same time.

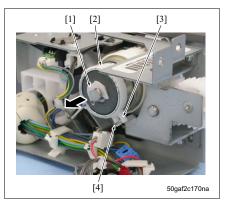
B. Procedure



- 1. Remove the bypass unit.
 - (See P.63)
- Remove the push-up plate assy. (See P.66)
- Press the conveyance guide [1] in the arrowmarked direction [2] to remove the support axis [3] from the hole [4], and then remove the conveyance guide.



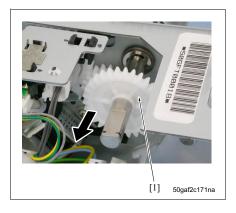
4. Open the lever [1]. Remove the 2 screws [2] and then remove the paper roller cover [3].



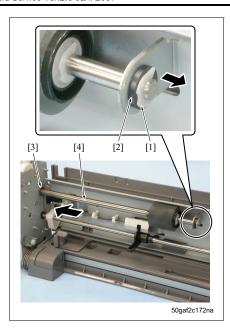
5. Remove the C-ring [1] and then remove the feed clutch /BP (CL6) [2].

Note

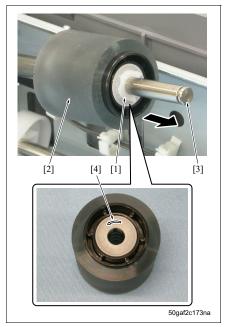
 When installing CL6, be sure to set the stopper [3] to the guide plate [4].



6. Remove the gear [1].



- 7. Remove the C-ring [1] and then remove the bearing [2].
- 8. Remove the bearing [3] and slide the shaft [4].



 Remove the C-ring [1] and then remove the feed roller [2] from the shaft [3].

Note

- When installing the feed roller, be sure to take note of the direction of the arrow mark [4].
- 10. Reinstall the above parts following the removal steps in reverse.

ENANCE

3.14 Maintenance procedure of the registration section

3.14.1 Cleaning the paper dust removing brush

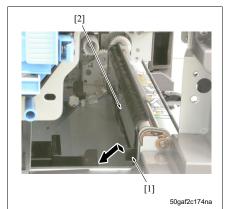
A. Periodic cleaning cycle

Paper dust removing brush : Every 250,000 prints *1

: Every 225,000 prints *2

*1 500/420 *2 360

B. Procedure



1. Open ADU.

(See P.142)

2. Open the conveyance unit.

(See P.30)

- Remove the developing unit from the main body. (See P.38)
- Remove the drum unit from the main body. (See P.30)
- Remove the suction cover /2 assy. (See P.43)
- With the lever [1] pulled, remove the paper dust removing brush [2] and clean the paper dust removing brush with a blower brush.
- Reinstall the above parts following the removal steps in reverse.

3.14.2 Replacing the loop roller, the loop bearing, the registration roller /Rt, and the registration bearings /Rt and /Lt

⚠ A. Periodically replaced parts/cycle

Loop roller : Every 1,250,000 prints *1

: Every 900,000 prints *2

Loop bearing : Every 1,250,000 prints *1

: Every 900,000 prints *2

Registration roller /Rt : Every 1,250,000 prints *1

: Every 900,000 prints *2

• Registration bearing /Rt : Every 1,250,000 prints *1

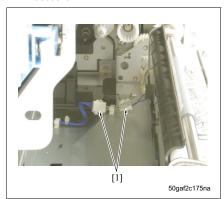
: Every 900,000 prints *2

Registration bearing /Lt : Every 1,250,000 prints *1

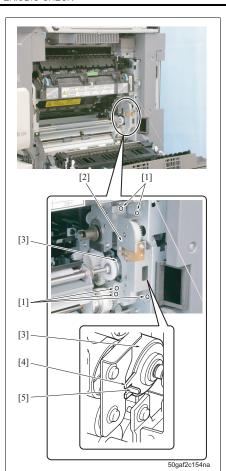
: Every 900,000 prints *2

*1 500/420 *2 360

B. Procedure



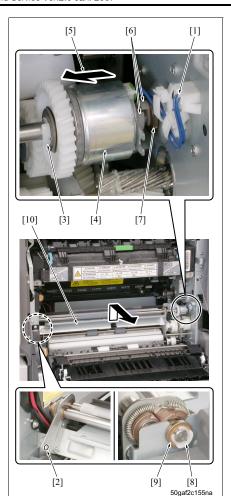
- Open ADU. (See P.142)
- Open the conveyance unit. (See P.30)
- Remove the developing unit from the main body. (See P.38)
- Remove the drum unit from the main body. (See P.30)
- Remove the suction cover /2 assy. (See P.43)
- 6. Remove the 2 connectors [1].



7. Remove the 5 screws [1] and then remove the ADU drive assy [2].

Note

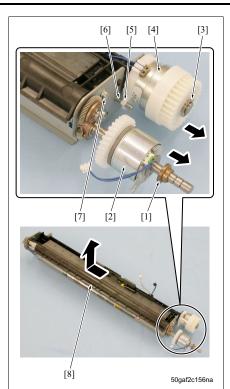
 When installing the ADU drive assy, be sure to set the stopper [4] of the registration clutch (CL1) [3] to the guide plate [5].



- 8. Remove the connector [1].
- 9. Remove the screw [2].
- 10. Remove the C-clip [3] and slide CL1 [4] in the arrow-marked direction [5].
- 11. Remove the 2 C-clips [6] to release the bearing [7].

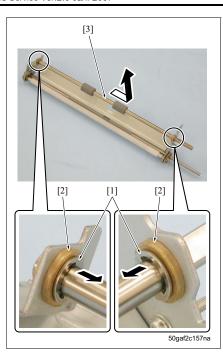
Note

- When installing the 2 C-clips [6], be sure to install them with their collars come face to face each other.
- 12. Remove the C-clip [8] and then remove the bearing [9].
- 13. Remove the registration unit [10].

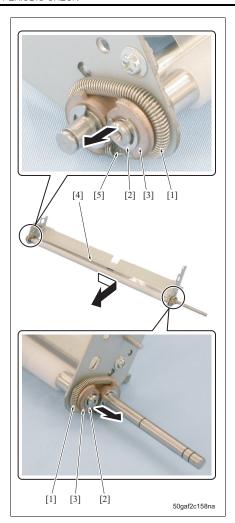


- 14. Remove the bearing [1] and CL1 [2].
- 15. Remove the E-ring [3] and then remove the loop clutch (CL2) [4].

- When installing CL2, be sure to set the stopper [5] to the screw [6].
- 16. Remove the screw [7] and then remove the registration main body assy [8].



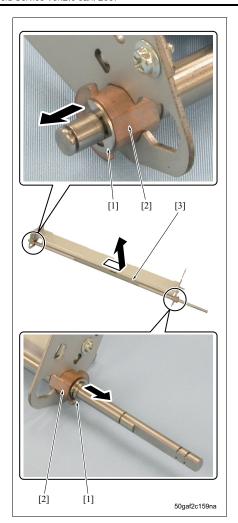
- 17. Remove the E-rings [1], 1 each, and release the 2 loop bearings [2].
- 18. Remove the loop roller [3].
- 19. Remove the 2 loop bearings from the loop roller.



- 20. Remove the 2 springs [1].
- 21. Remove the E-rings [2], 1 each, and then remove the 2 registration bearings /Lt [3].
- 22. Remove the registration roller /Lt [4].

Note

 When attaching the spring, be sure to couple the hook [5] of the spring at the position as shown in the drawing left.



- 23. Remove the E-rings [1], 1 each, and then remove the 2 registration bearings /Rt [2].
- 24. Remove the registration roller /Rt [3].
- 25. Reinstall the above parts following the removal steps in reverse.

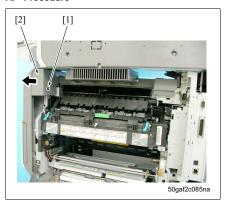
3.15 Maintenance procedure of the fusing section

3.15.1 Removing/reinstalling the fusing unit

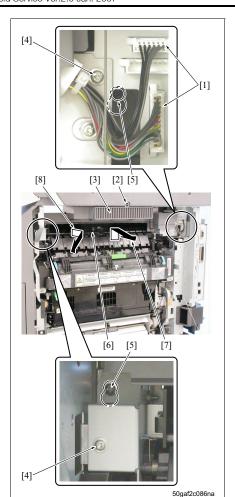
⚠Caution

Since the fusing section gets hot immediately after turning off the main power switch (SW1) or the
power switch (SW2), you may suffer a burn. Be sure to conduct the operations when the temperature goes down sufficiently.

A. Procedure

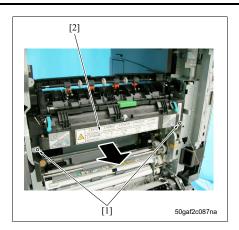


- 1. Open ADU.
 - (See P.142)
- Remove the right cover /Up. (See P.142)
- 3. Open the conveyance unit. (See P.30)
- Loosen the screw [1] and remove the front auxiliary cover [2].



- 5. Remove the 2 connectors [1].
- Remove the screw [2] and then remove the filter cover [3].
- 7. Remove the 2 screws [4].
- 8. Loosen the 2 screws [5]. And after sliding the entire reverse unit [6] in the arrow-marked direction [7], tilt the front side in the arrow-marked direction [8] for removal.





9. Remove the 2 screws [1] and then remove the fusing unit [2].

Note

- . When lifting the fusing unit, be sure to hold it at both ends.
- · When installing/removing it, be careful not to damage rollers.
- 10. Reinstall the above parts following the removal steps in reverse.

3.15.2 Replacing the fusing claw assy

Periodically replaced part/cycle

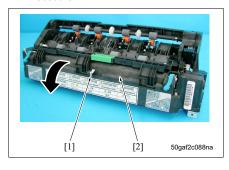
Fusing claw assy : Every 500,000 prints *1

: Every 450,000 prints *2

500/420

360

Procedure

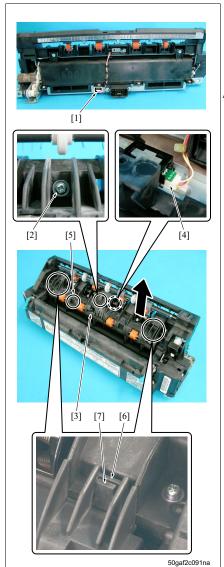


- 1. Remove the fusing unit. (See P.80)
- 2. Remove the C-clip [1].
- 3. Open the fusing front guide assy [2].

82



4. Slide the fusing front guide assy [1] for removal.



- 5. Remove the connector [1].
- 6. Remove the screw [2] and raise the fusing claw assy [3].
- 7. Remove the connector [4] from the fusing claw assy.

⚠ Note

- . When installing the fusing claw assy, be careful not to neglect attaching the connector [4].
- . When installing the fusing claw assy, be sure to insert the positioning sections [6] at 2 places into each of the projections [7].
- · When installing the fusing claw assy, be careful not to damage the roller surface with the tip of the claw.
- 8. Reinstall the above parts following the removal steps in reverse.

3.15.3 Replacing the fusing web

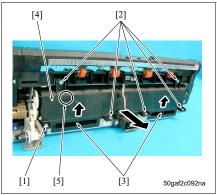
A. Periodically replaced part/cycle

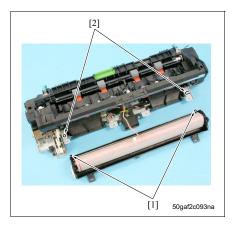
◆ Fusing web : Every 250,000 prints *1

: Every 225,000 prints *2

*1 500/420 *2 360

B. Procedure





1. Remove the fusing unit.

(See P.80)

Remove the fusing claw assy. (See P.82)

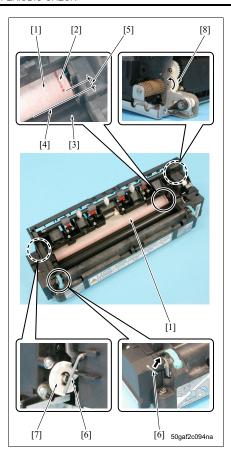
- 3. Remove the screw [1].
- 4. Remove the 5 screws [2].
- Apply pressure from the inside of the ducts [3] at 2 places to release the lock and remove the fusing web [4].

∧ Note

 When installing the fusing web, be sure to install the screw [1] first.

Note

 When installing the fusing web, be sure to insert the projections [1] at 2 places into the positioning holes [2].



- The performance of a new fusing web [1] is guaranteed from the position at which a brown line [2] is broken. When replacing the fusing web, be sure to take up the fusing web up to the position at which the distance [5] from the nip section [4] of the fusing roller [3] and the fusing web to the brown line becomes 0 to 10 mm or less.
- When taking up the fusing web, be sure to bring down the release lever [6] to release the cleaner lock gear [7] and rotate the web drive gear [8].
- When replacing the fusing web, be sure to reset the fusing web counter in the service mode.

(See P.210)

Reinstall the above parts following the removal step in reverse.

3.15.4 Replacing the fusing driven roller assy /A and /B

A. Periodically replaced parts/cycle

Fusing driven roller assy /A : Every 250,000 prints *1

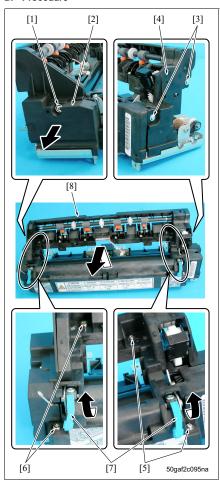
: Every 225,000 prints *2

♠ Fusing driven roller assy /B : Every 250,000 prints *1

: Every 225,000 prints *2

*1 500/420 *2 360

B. Procedure



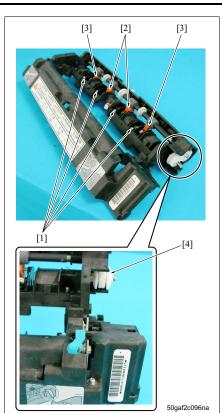
- 1. Remove the fusing unit. (See P.80)
- Remove the fusing claw assy from the fusing unit. (See P.82)
- Remove the fusing web from the fusing unit. (See P.85)
- Remove the screw [1] and then remove the fusing unit cover /Fr [2].
- Remove the 2 screws [3] and then remove the fusing unit cover /Rr [4].

Note

- When removing the fusing unit cover /Rr, be careful that the internal gear does not fall down.
- 6. Remove the 2 screws [5] and the 2 screws [6].
- 7. Release the 2 envelope levers [7].
- Remove the fusing casing [8] without touching the envelope lever.

Note

 When installing the fusing casing [8], be sure to install first the screw [5] (upper side).



- 9. Remove the 4 screws [1].
- 10. Remove the 2 fusing driven roller assy's /A [2] and the 2 fusing driven roller assy's /B [3].

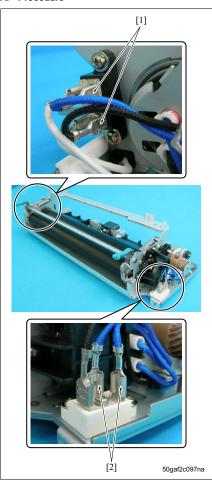
- The gear [4] is not fixed. Take care when moving it.
- 11. Reinstall the above parts following the removal steps in reverse.

3.15.5 Removing/reinstalling the fusing heater lamps /1 (L2) and /2 (L3)

Note

 Be careful not to touch the lamp sections of L2 and L3 with bare hands. When touched, be sure to clean them with a roller cleaner.

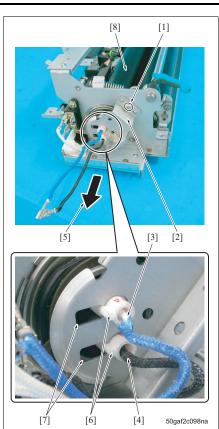
A. Procedure



- Remove the fusing unit. (See P.80)
- 2. Remove the fusing claw assy from the fusing unit. (See P.82)
- 3. Remove the fusing web from the fusing unit. (See P.85)
- Remove the fusing casing. (See P.87)
- 5. Remove the fastons [1] and [2], 2 each.

Note

 When removing the faston, be sure to remove it by holding the connector section. Be absolutely sure not to pull out by holding the wiring harness section.



- 6. Remove the screw [1] and then remove the lamp fixing plate /Fr [2].
- Pull out the fusing heater lamps /1 (L2) [3] and /2 (L3) [4] in the arrow-marked direction [5] and remove them.

Note

- When installing each of the fusing heater lamps, be sure to set the projections [6] of each lamp to the notch [7] of the lamp fixing plate /Fr [2].
- After installing each of the fusing heater lamps, be sure to check to see if it is not in touch with the inner face of the fusing roller [8].
- Be sure to install the fusing heater lamp L2 [3] (main) on the upper side with L3 [4] (sub) on the lower side.
- 8. Reinstall the above parts following the removal steps in reverse.

Note

 When installing the fusing heater lamp, be sure to take note of the direction of installation.

Lamp		Destir	nation	
	North A	America	Europe	Others
	Fr	Rr	Fr	Rr
L2	Red	Red	Blue	Blue
L3	Red	Black	Blue	Black

3.15.6 Replacing the fusing roller, the fusing pressure roller, the heat insulating sleeve /A, the fusing bearings /Up and /Lw and the fusing input gear assy

⚠ A. Periodically replaced parts/cycle

• Fusing roller : Every 250,000 prints *1

: Every 225,000 prints *2

Fusing pressure roller : Every 250,000 prints *1

: Every 225,000 prints *2

Heat insulating sleeve /A : Every 250,000 prints *1

: Every 225,000 prints *2

Fusing bearing /Up : Every 250,000 prints *1

: Every 225,000 prints *2

Fusing bearing /Lw : Every 250,000 prints *1

: Every 225,000 prints *2

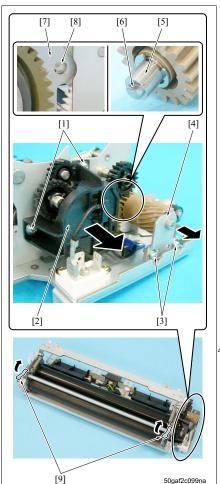
Fusing input gear assy : Every 500,000 prints *1

: Every 450,000 prints *2

*1 500/420

*2 360

B. Procedure



- 1. Remove the fusing unit.
 - (See P.80)
- 2. Remove the fusing claw assy from the fusing unit. (See P.82)
- 3. Remove the fusing web from the fusing unit. (See P.85)
- 4. Remove the fusing casing.
 - (See P.87)
- 5. Remove the fusing heater lamps /1 (L2) and /2 (L3).

(See P.89)

- 6. Remove the 2 screws [1] and then remove the lamp fixing plate /Rr [2].
- 7. Remove the 2 screws [3] and then remove the fusing input gear assy [4].

Note

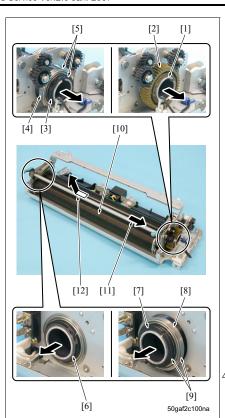
- . When installing the fusing input gear assy, be sure to set the D cut section [6] of the shaft [5] to the D cut hole [8] of the frame [7].
- 8. Release the 2 envelope levers [9].

Note

♠ The envelope lever varies in the number of the release steps for bizhub 500/360 and 420. Be sure to release it up to the limit in either case. bizhub 500/360 : 2 steps

bizhub 420: 3 steps

50gaf2c099na



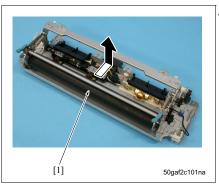
- Remove the C-ring [1] and then remove the gear [2].
- 10. Remove the heat insulating sleeve /A [3] and the fusing bearing /Up [4].

Note

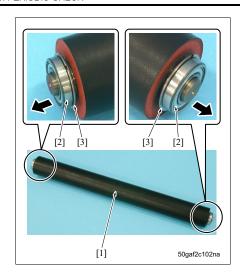
- When installing the heat insulating sleeve /A and the fusing bearing /Up, be sure to install them with their respective collar [5] outside.
- When installing the heat insulating sleeve /A, be sure to apply Multemp FF-RM to its inside and outside peripheries.
- 11. Remove the C-ring [6] and then remove the heat insulating sleeve /A [7] and the fusing bearing /Up [8].

Note

- When installing the heat insulating sleeve /A and the fusing bearing /Up, be sure to install them with their respective collar [9] outside.
- When installing the heat insulating sleeve /A, be sure to apply Multemp FF-RM to its inside and outside peripheries.
- ↑ 12. After sliding once the fusing roller [10] in the arrow-marked direction [11], remove it in the arrow-marked direction [12].



13. Remove the fusing pressure roller [1].



14. Remove the 2 fusing bearings /Lw [2] from the fusing pressure roller [1].

- When installing the fusing bearing /Lw, be sure to install it with its collar section [3] inside. Coat the cored bar section with grease.
- 15. Reinstall the above parts following the removal steps in reverse.

3.15.7 Replacing the fusing sensor assy

⚠ Caution

After installing the fusing sensor assy, be sure to check to see if it is in touch with the fusing roller.

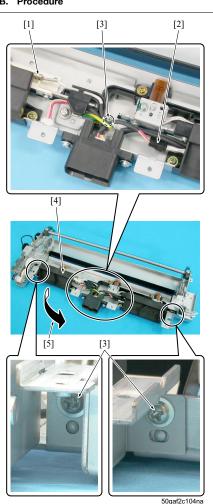
A. Periodically replaced part/cycle

Fusing sensor assy : Every 500,000 prints *1

: Every 450,000 prints *2

*1 500/420 *2 360

B. Procedure



1. Remove the fusing unit.

(See P.80)

- 2. Remove the fusing claw assy from the fusing unit. (See P.82)
- 3. Remove the fusing web from the fusing unit. (See P.85)
- 4. Remove the fusing casing.

(See P.87)

5. Remove the fusing heater lamps /1 (L2) and /2 (L3).

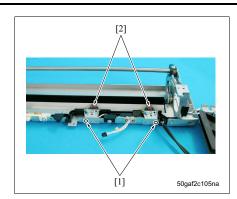
(See P.89)

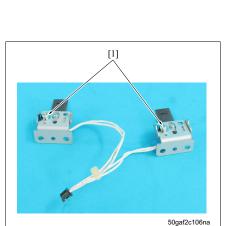
6. Remove the fusing roller and the fusing pressure roller.

(See P.91)

7. Remove the faston [1].

- . When removing the faston, be sure to remove it by holding its base section. Be absolutely sure not to pull it out by holding the wiring harness section.
- 8. Remove the connector [2].
- 9. Remove the 3 screws [3].
- 10. Remove the web support assy /2 [4] and pull it out in the arrow-marked direction [5].





11. Remove the screws [1], 1 each, and then remove the fusing sensor assy [2].

Note

- When installing the fusing sensor assy, be careful not to deform the sensor section.
- After installing the fusing sensor assy, be sure to check to see if the wiring harness is not in touch with the fusing roller.

⚠Caution

 After installing the fusing sensor assy, be sure to check to see if the thermistors /1 (TH1) and /2 (TH2) are in touch with the fusing roller.

- The fusing sensor assy is made up of TH1 and TH2. The sections of TH1 and TH2 have been adjusted when they were assembled, and be absolutely sure not to loosen the screw [1].
- 12. Reinstall the above parts following the removal steps in reverse.

3.15.8 Replacing the fuse holder assy

· After installing the fuse holder assy, be sure to check to see if it is in touch with the fusing roller.

A. Periodically replaced part/cycle

A

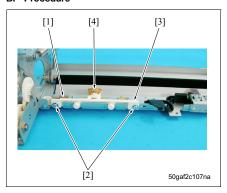
Fuse holder assy : Every 500,000 prints *1

: Every 450,000 prints *2

*1 500/420

*2 360

B. Procedure



- 1. Remove the fusing unit. (See P.80)
- Remove the fusing claw assy from the fusing unit. (See P.82)
- Remove the fusing web from the fusing unit. (See P.85)
- 4. Remove the fusing casing. (See P.87)
- Remove the fusing heater lamps /1 (L2) and /2 (L3). (See P.89)
- Remove the fusing roller and the fusing pressure roller. (See P.91)
- 7. Pull out the web support assy /2. (See P.95)
- 8. Remove the faston [1].

Note

- When removing the faston, be sure to remove it by holding its base section. Be absolutely sure not to pull it out by holding the wiring harness section.
- Remove the 2 screws [2] and then remove the fuse holder assy [3].

Note

- When installing the fuse holder assy, be careful not to deform the thermostat section.
- After installing the fuse holder assy, be sure to check to see if the wiring harness is not in touch with the fusing roller.

⚠ Caution

- After installing the fuse holder assy, be sure to check to see if the thermostat (TS) [4] is in touch with the fusing roller.
- 10. Reinstall the above parts following the removal steps in reverse.

4. SERVICE TOOLS

4.1 Service material list

Material No.	Name	Shape	Remark
000V-19-0	Setting powder		25 g
000V-18-0	Cleaning pad		10 pcs/1 pack
00GR0026	Multemp FF-RM		25 g
00GR0021	Solvest 240		Multemp FF-RM is recommended.

4.2 Jig list

Parts No.	Name	Shape	Quantity	Remark
26NA2134	Drum rotation mem- ber	The state of the s	1	Mounted to the drum unit
26NAJG01	Optic unit positioning jig		2	
4040PJP1	Test chart (A3 size)		1	With a KONICA MINOLTA logo
4040PJP3	Test chart (A3 size)		1	Without a KONICA MINOLTA logo
4040PJP2	Test chart (11 x 17 size)		1	
120A9711	Adjustment chart (A3 size)		1	For DF adjustment
120AJG02	Adjustment chart (11 x 17 size)		1	For DF adjustment
120A9712	White chart (A4 size)		1	For DF adjustment
120AJG03	White chart (8½ x 11 size)		1	For DF adjustment
00VC-2-0	Drum cover		1	
00VD-100	Blower brush		1	

	Parts No.	Name	Shape	Quantity	Remark
	00VE-1005	Tester		1	
ŀ	14GS4631	Stapler unit position-		1	For SD staple adjust-
		ing jig			ment

4.3 **Materials**

A. Item

	Parts name	Useful sheets	Type name
	Toner bottle	32,200 prints	TN511
\triangle	Drum	250,000 prints (bizhub 500/420)	DR510
		225,000 prints (bizhub 360)	
\triangle	Developer	250,000 prints (bizhub 500/420)	DV511
		225,000 prints (bizhub 360)	

5. FIRMWARE VERSION UP

5.1 ISW

5.1.1 Outline

A. ISW (In-System Writer)

The operation to rewrite firmware stored in the flash ROM that is built in each control board in the main body with the board left built in the main body is called an ISW. Executing ISW allows you to upgrade the firmware version without replacing the board, or install the latest firmware when replacing the board. As a tool to execute ISW, there is ISWTrns (PC software) that rewrites firmware with the personal computer (PC) locally connected to the main body.

(1) ISWTrns

This is a software for Windows to rewrite flash ROM of the main body and rewrites firmware with the main body and the PC locally connected with a parallel cable or UBS cable.

Note

- When upgrading the ISWTrns version, be sure to uninstall the old version of ISWTrns before installing the new version of ISWTrns. When installed by overwriting, this may result in the installation by the USB driver unavailable.
- When the main body uses the USB to conduct the ISW, it is necessary to install the USB driver of
 the ISWTrns. For procedure for installation, see "5.2.3 Usage of the ISWTrns A. Installation of the
 USB driver (Windows2000/XP)." After installing the ISWTrns, be absolutely sure to install the USB
 driver of the ISWTrns.

(See P.106)

5.1.2 Firmware data flow

The following shows the flow of the ISW data.



When executing the ISW over the entire system, be sure to execute it in the order given below. (To minimize the occurrence of troubles resulting from the mismatch of the firmware version)

Step	Type of programs
1	Fax board controller 1, Fax board controller 2, Finisher, DF
2	Image controller
3	Operation panel message data
4	MFP controller

- When replacing the OACB, be sure to conduct the ISW of the MFP controller first. When the firmware of the MFP controller is not contained in the OACB, no display is shown on the touch panel.
- The finisher above refers to the FS-510. The ISW of the FS-511 is conducted by changing the EPROM.

Λ

5.1.3 Settings on the main body side while in ISW

Following the description given below, be sure to make appropriate settings on the main body side to conduct the operations of the firmware version upgrade and writing.

Types of the setting

Power ON mode

This mode is used when the firmware of the MFP controller is not installed to the overall control board (OACB) or when it is damaged. In a case like this, it is not possible to enter the service mode. The firmware writing of the MFP controller can be made with the power switch ON.

Service mode

This mode is used when the firmware of the MFP controller is installed properly. Selecting [ISW] of [System 2] in the service mode allows you to write the firmware.

B. When upgrading the firmware

Applicable board	Display when the power is turned ON	Mode
Overall control board	Normal	Service mode
Other boards	Normal	Service mode

C. When writing the firmware afresh (When replacing the board or when failed in rewriting the firmware)

Applicable board Display when the power is turned ON Mode Overall control board Power LED turns ON with nothing Power ON mode shown on the touch panel. Other boards ISW error displayed Service mode

For the overall control board (OACB), when something is wrong with the firmware or no firmware is written, the normal start-up cannot be made. In a case like this, when the power switch is ON, the power LED turns ON with nothing shown on the touch panel, and the system is placed in the firmware stand-by mode.

For other boards, when the firmware of the MFP controller is normal and something is wrong with other firmware, an ISW error is shown on the touch panel section when the power is turned ON.

102

5.2 ISWTrns

5.2.1 Specifications

A. ISWTrns (PC software)

(1) Operating environment of the software

OS: Windows95/98/98SE/Me/NT4.0/2000/XP

CPU: Pentium 75 MHz or above

Memory: 16 MB or moreFree space in hard disk: 100 MB or more

Others: PC provided with parallel (printer) or USB interface (type A)

(2) Transmission time

· Varies according to each PC

(3) Parts required to conduct the ISW

Personal computer (PC): 1
 IBM-compatible PC/AT, Provided with D-sub25 pin parallel (printer) interface or USB interface

ISWTrns setup program

• Parallel cable or USB cable: 1

Firmware

Item	Specifications
Board to be rewritten	Overall control board (OACB), Printer control board (PRCB), FAX control
	board (FK-502), FS control board (FSCB), DF control board (DFCB)
Rewritable firmware	MFP controller
	Operation panel message data
	Image controller
	FAX board controller 1
	FAX board controller 2
	Finisher
	ADU

Note

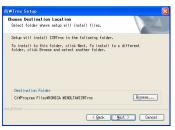
. For boards other than the above, ROM replacement is required.

5.2.2 Installation of the ISWTrns

Install the ISWTrns program to the PC.

(1) Procedure

Step	Operation
1	Start the PC.
2	Copy the setup files to the PC and double click the [Setup.exe] icon to start the install program.
	Note
	When there remains the ISWTrns of the old version, uninstall the old version first, and
	• When there remains the 15W Irns of the old version, uninstall the old version lirst, and
	then install the new version.
3	
3	then install the new version.

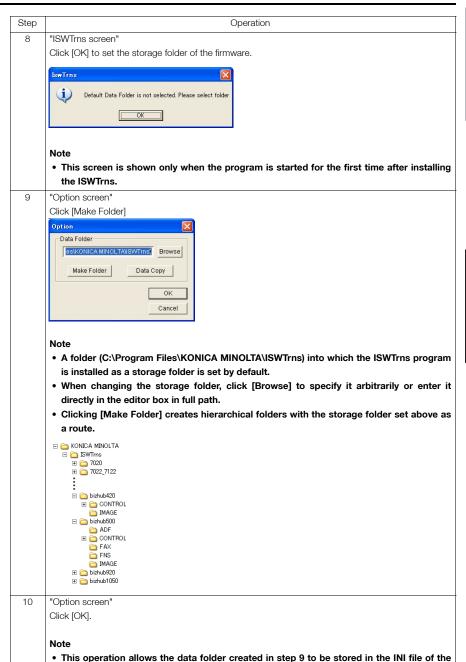


Note

- For default, "C:\Program Files\KONICA MINOLTA\ISWTrns" is set as a folder to which an
 installation is made.
- When changing the folder to which an installation is made, click [Browse] and specify the folder.
- 4 Following the instructions on the screen, check the folder to which the ISWTrns program is stored and then click [Next].



- · For default, "ISWTrns" is set as a folder to which an installation is made.
- When changing the folder to which an installation is made, enter the folder name directly, or select one from the existing folder displayed.
- 5 Following the instructions on the screen, click [Finish].
- 6 The installation of the ISWTrns program is automatically completed.
- 7 Select [ISWTrns] from the start menu or double-click the [ISWTrns] icon on the desk top to start up the ISWTrns program.



ISWTrns program.

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 \triangle

5.2.3 Usage of the ISWTrns

A. Installation of the USB driver (Windows2000/XP)

When a connection is made between the PC and the main body with a USB cable, the installation of the USB driver is automatically started by the plug-and-play. However, this may result in the installation of the Windows USB driver (USBPRINT.SYS) and be sure to set the USB driver following the steps given below.

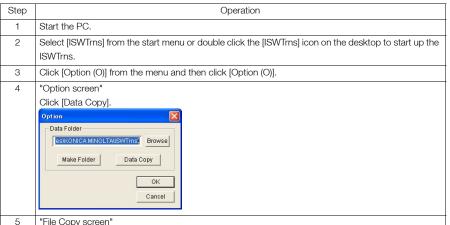
Step	Operation
1	Connect the USB cable to the main body.
2	Connect the USB cable to the USB connector of the USB.
3	From the screen below, select "Install from a list or specific location," and then click [Next]. The driver is stored in the C:\WINDOWS\Drivers\Usb. Found New Hardware Wizard Welcome to the Found New Hardware Wizard Wild The wided help upo install college Brises to: KONICA MINICAL 5004/CDUSE Brises for: KONICA MINICAL 5004/CDUSE FOR: KONICA MIN
	What do you want the sized to dis? I noted the software automatically [Reconserreded] I noted than a let or specific borden (Ad-Ancora) Click Need to continue. Risch Need > Cancel
4	In the "Please choose your search and installation options" screen, select "Don't search. I will choose the driver to install," and then click [Next].
5	Check the driver name and click [Next]. Driver name: KONICA MINOLTA 500/420/360 USB Driver for ISW Control flow Bandware Wicard Select the device driver you want to install for this hardware. Select the next datase with clock of your hardware device and then clock flow. For the sea and the device or the select of the power of the profit clock flower body. P Steer compatible hardware For the chiver is not digitally signed! Have Disk.
6	When the "Completing the Found New Hardware Wizard" screen is displayed, click [Finish] to exit the installation.
7	Check the "Device Manager screen" to see if the USB driver has been correctly installed. Driver name: KONICA MINOLTA 500/420/360 USB Driver for ISW Device Manager

106

B. Firmware copy

By using the ISWTrns, firmware that transfers it to the main body is copied into the specified folder.

(1) Procedure



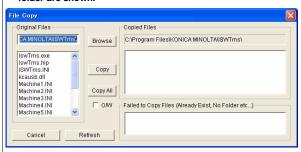
"File Copy screen"

Click [Browse].

Select the folder into which firmware is stored as a copied file.

Note

- . The folder selected is shown in the upper display section of the "Original Files."
- . In the lower display section of the "Original Files," the firmware related files stored in the folder are shown.



6 Select a file you want to copy from the lower display section of the "Original Files."

- · The plural transferred files (rewritten data) can be selected.
- . When copying all of the files that are displayed, skip this step and proceed to the step 7.

Step	Operation
7	Click [Copy] automatically copies the selected file into the specified folder created by installing the ISWTrns.
	Note
	When copying all of the files that are displayed in the lower display section of the "Original Files", click [Copy All] instead of [Copy].
	In the upper display section of the "Copied Files", a folder name created at the setup of the ISWTrns is displayed.
	In the list shown in the lower display section of the "Copied Files," files the copy of which has been successfully completed are listed in full path. In the "Failed to Copy
	Files", files the copy of which have been failed are listed. As the causes of failure, following are considered.
	A. There exists a file of the same name and "O/W" is not checked.
	B. A folder into which a file is stored is not found.
	C. An overwrite is made on an overwrite-prohibited file.
	When changing a file that is currently stored into a new data, click the overwrite check
	box to make a check mark.
8	After completion of copy, click [Refresh].
9	Click [Cancel] to get back to "option screen."
10	"Option screen"

C. Preparation for transfer of the main body

(1) Checking the firmware version

Click [OK].

Before rewriting firmware, be sure to check the current firmware version following the procedure given below.

Step			Operation
1	Ente	er the Service mode.	
2	Pres	s the [Firmware Version]	in "Service mode screen"
3	India	cation of "Firmware Versi	on screen"
	Firm	ware Version	END.
		MFP Controller 506A-0100-F02-0C-000(10)	Fax Board Controller1 15LA-0040-600-04-000
	2	Image Controller 426A-1402-F00-A4-000(02)	Fax Board Controller2
		Operation Panel Message Data 426A-8100-F02-0C-000(10)	
		Finisher 4349-0071-F00-02-000	
		ADF 16EA-0024-F00-A4-000	

(2) ISW transfer standby

Open the Service mode of the main body to put the ISW transfer in the standby condition.

Step	Operation
1	Enter the Service mode.
2	Press the [System 2] in "Service mode screen."
3	Press the [ISW] in the sub menu shown to the right of the screen.
4	"Board Type Selection screen" ISW Serviction MFP Controller Operation Panel Message Data Inage Controller Fax Board Controller1
5	Press the key corresponding to the firmware to be rewritten. e.g.: MFP controller "ISW Execution Check MFP Controller screen" ISW Execution Check MFP Controller Execution ISW? Yes No
6	Press the [Yes] in "Execution Check screen". ISW Execution Check MFP Controller If the start key is pushed, the data reading becomes possible. Yes No
7	Press the Start key.

D. Connection to the main body

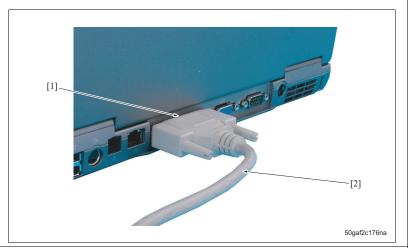
(1) When using the parallel cable

Preparations are made of the following when a connection is made.

- · PC which firmware have been copied.
- Parallel cable

1) Procedure

Step	Operation
1	Turn OFF the power of the main body.
2	Turn OFF the power of the PC.
3	Connect the parallel cable [2] to the IEEE1284 port [1] of the PC



4 Connect the parallel cable [1] of the PC to the ISW connector [2] of the main body.

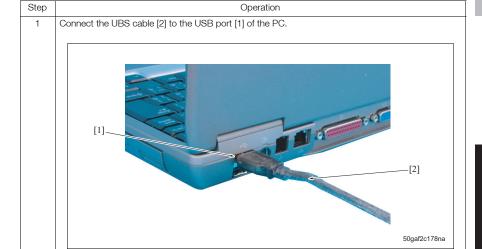


(2) When using the USB cable

Preparations are made of the following when a connection is made.

- · PC which firmware have been copied.
- UBS cable

1) Procedure



Note

 Be sure to connect the UBS cable to the ISW connector of the main body after the setting is made in the following condition.

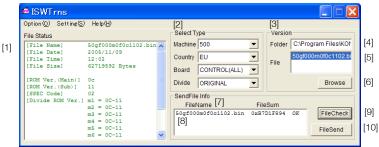


MAINTENANCE

E. Rewriting of firmware

(1) Relationship between the ISW and the display of the operation panel

When the ISWTrns starts up, the main screen is displayed. In the main screen, the transmission file (firmware) is selected, the information is diplayed, the checksum and the transmission file are sent out. For detailed information of the functions, refer to the following.



[1] File status information list

View detailed information about the version file when select firmware.

[2] Select type frame

Select condition for a transfer file. When selecting all of the 4 types of the combo boxes, a folder [4] is set from the information set in the ISWTrns.INI file. The setting of the selected combo boxes are saved to the ISWTrns.INI file and it is display initially when it is started next time.

[3] Version selection frame

This frame let you select which version of a transfer file you want transmitted when more than one version is stored in a folder.

[4] Version storage folder edit box

When the select type frame of [2] is decided, a folder name is displayed in full path from the information of the data folder set in the option window and the INI file. When the firmware is in a folder other than the specified data folder, this can be changed by clicking [Browse] [6] to specify the file location or entering directly the file location. A firmware corresponding to the INI file conditions in the folder shown here is displayed in the list box of [5].

[5] Version file selection list box

Displays files that is in the folder selected at [4]. When more than one version files are stored in the same folder, all versions are displayed in this list box. The list displayed here is sorted in the order of names, and an item displayed last is selected when the list is displayed. Changing the selected item decides a firmware version to be transmitted.

[6] Version file [Browse]

This key is used when the firmware is in a folder other than the specified data folder. Display the folder selection screen to select the folder of [4].

[7] Send file information frame

Display the list of firmware to be actually transmitted based on the information selected in the frames [2] and [3], and click [FileCheck] [9] to display the checksum of the file and the consistency (OK, NG, ??) of the checksum.

[8] Send file information display list

When version files are selected at [5], files to be actually transmitted are displayed. The number of files actually transmitted is described in the checksum attached to the firmware.

Click [FileCheck] at [9] to calculate the checksum of the entire displayed files. And compare the obtained value with the checksum value stored in the checksum file (*.sum) attached to the firmware to display the result.

[9] [FileCheck]

With a transmission file displayed in "SendFile info" of [8], press this key to calculate the file checksum (checksum of the entire file) of the displayed transmission file and show a result beside the transmission file. And also, compare the result of the checksum with the checksum file attached to the firmware and display the obtained result in the form shown below.

"OK": Accord
"NG": Not accord

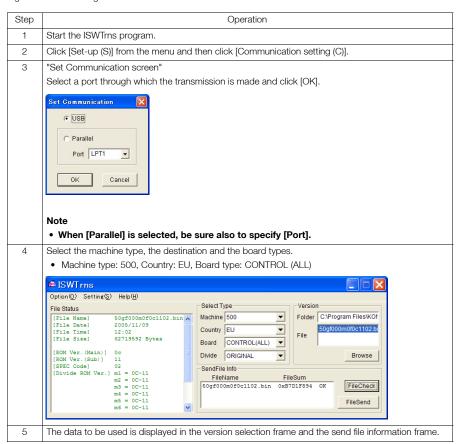
"??": Checksum file (*.sum) not found

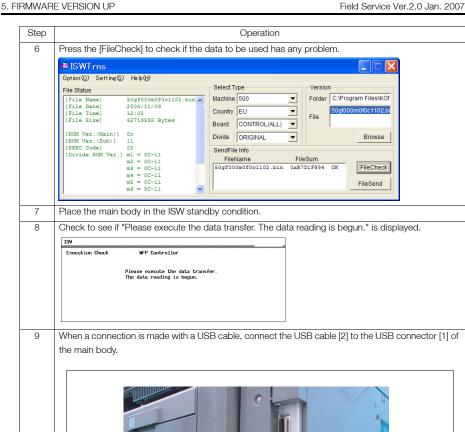
[10] [FileSend]

The transmission of the transferred file is started.

(2) Procedure

e.g.: When conducting the ISW of the MFP controller for bizhub 500.







Note

- . Be sure to press the start key before connecting the USB cable. When connecting the USB cable before the start key is pressed, the main body is put in the stand-by position for the print data with no ISW data accepted.
- Click [FileSend] of the ISWTrns. 10

Step	Operation
11	The following window is displayed on the PC while in the data transfer.
	Now Transmittine Now File Sending 436736 Byte Transmitted
12	When the data transfer is completed, the following window is displayed and click [OK]. "ISWTrns"
	Transmission of ISW file complete
13	When the data writing is completed, the reboot is automatically made to show the trouble reset display. When conducting the ISW successively after that, press [Trouble reset]. And then, after checking to see if "OK" is displayed, press the key that sets the number of sheets in the order shown below and start the service mode. $ Stop \rightarrow 0 \rightarrow Stop \rightarrow 0 \rightarrow 1 $
	Note • When the ISW other than for the MFP controller is completed, no reboot is made automatically. In cases like this, when conducting the ISW for another board successively, press [OK] on the screen showing a message "ISW completed," and select again a board type that conducts the rewrite on the board type selection screen.
14	Check the firmware version in the service mode to see if the rewriting is completed successfully.

5.2.4 Error list

A. Overall control board firmware abnormality

Mhen the main body detects an overall control board firmware abnormality after turning ON the power switch, the power LED turns ON with nothing displayed on the LCD of the operation panel (ISW stand-by condition). For details of the power LED display, refer to the table below.

No.	Operation	Power LED
1	CPU in initialization when the power is turned on	OFF
2	Flash memory in checking	OFF
3	When an error is detected while in memory check (ISW standby status)	ON
4	ISW processing (data being received from the PC and flash memory being written)	While in the data reception: It flashes at high speed. While in the flash memory write: It flashes at low speed.
5	When an abnormality is detected while in data transmission	Start key LED (orange) turns ON
6	When an error is detected while in writing flash memory	Start key LED (orange) turns ON
7	Memory check successfully completed: while in rebooting	OFF

B. ISWTrns error list

The ISWTrns displays messages when an error is shown or the operation is completed. The table below shows the contents of the message and the status of the ISWTrns.

Message	Status of the ISWTrns
Cannot open a checksum file	Opening of a checksum file failed. Possible causes include a corrupted file and a file in use.
Cannot read a checksum file	Loading of a checksum file into memory failed. Possible causes include a shortage of memory and an OS problem.
Cannot open a file	Opening of a send file failed. Possible causes include a corrupted file and a file in use.
Cannot open the LPT port	Opening of the LPT port failed.
Communications port setup acquisition error	A call to GetCommState failed.
Communications port setup error	A call to SetCommState failed.
Cannot open a send file	Opening of a send file failed. Possible causes include a corrupted file and a file in use.
Cannot send a Term Test file	Transmission of a communications test block failed. 1. The main body is not ready to receive. 2. The cable is out of position. 3. Transmission of the wrong send file was attempted.
Unsuccessful file transmission	The transmission of a send file failed. Possible causes include a cable out of position.
Unsuccessful transmission to the LPT port	Output to the LPT port failed. Possible causes include a cable out of position.
Invalid folder name	An invalid folder name was entered. Start a folder name with a drive name, such as C:\.
Default data folder is not set. Please select folder.	A data folder is not set in ISWTrns.INI. This message is displayed when ISW Trns launches for the fist time.
Unsuccessful thread creation	The creation of a thread failed.
No send file available	No file to copy file is selected or exists in the folder.
Unable to copy several files	The destination folder does not exist. When the overwrite check box is not checked, an attempt is made to copy to a file having the same file name. An attempt is made to overwrite a protected file. Any other cause (such as a file being used by another application or OS problem)
Send file not found, or invalid file name in the folder. Check.	The number of divisions of a send file recorded in the checksum file and the number of files actually existing do not match. 1. A file having an invalid file name exists in the data folder. Delete possibly invalid file names from the folder list. 2. The number of files in a divided file is wanting. Identify the wanting files in the folder list and recopy them. 3. When the checksum file is damaged, copy it to the folder again.

 \triangle

bizhub 500/420/360

C. Main body error list

The following shows the error displays.

Error display	Descriptions
Finisher not connected	The finisher is in the condition in which no connection is made.
Parameter error	A parameter abnormality occurs on the program.
Sequence error	An abnormality occurs with the processing sequence on the program.
Memory full error	The memory is full.
Device initialization error	A USB or parallel device initialization error occurs.
Machine type/board incompatible	The data transferred from the PC is not the data for bizhub 500/420/360,
	or not for the board selected from the panel.
Time-out error	While in the file transfer from the PC, a time-out error occurs.
Checksum error	A checksum error occurs with the ROM file.
Flash erasure error	An abnormality occurs while in the flash erasure.
Engine power source error	Printer control board (PRCB) power source abnormality. Other abnormal-
	ities occur with PRCB (when selecting the image controller, finisher or
	ADF).
Write error	An error occurs with the write answer check (when selecting the fax
	board controller 1 or the fax board controller 2).
Task generation error	A task generation error occurs.
Other errors	Errors other than the above occur, such as an OS error.

D. ISWTrms troubleshooting

When an error occurs while in the execution of the ISWTrns program.

	Condition	Cause	Measure taken
1	The ISWTrns does not	The ISWTrns.EXE file is damaged	Set it up again.
	start up.	The setup files itself is damaged.	Check the setup files and set it up
			again.
2	When an item in the	The transferred file is not stored in the	Check to see if the firmware file is
	combo box is selected,	specified folder.	stored in the folder displayed in the
	the transferred file is		"File" text box of "Version."
	not displayed.		Use the "Data Copy" function if the file
			storage location is unknown.
		The data folder in the option screen is	Check the setting of the data folder.
		set incorrectly.	
		The file name is illegal (or has been	The file name must be used with no
		changed.)	change made. When the file name is
			changed, the display or selection of
			the file becomes unavailable. When
			the file name is changed, return it to
			former state.
		The folder name is illegal (or has been	When the folder name created by the
		changed.)	"Make Folder" in the option screen
			has been changed, it cannot be
			found. Return it to former state and
			check it again.

	,	VENSION OF		Tield Service Ver.2.0 Jan. 200
		Condition	Cause	Measure taken
3	"NG" is displayed while in the file checksum.		The transferred firmware is damaged.	Copy the firmware and check it again. When "NG" still recurs, contact the supplier of the firmware.
4	"??" is displayed while in the file checksum.		When the firmware was copied to the PC, the copying of the checksum file (*.sum) was forgotten.	Copy the checksum file to the same firmware as the one for the firmware at the same time. (If you use the "Data Copy" function, a copy is made automatically.)
5	file failed.	An error "Cannot open a file" is displayed.	The file is being used by anther program or system.	Exit another program. The error still recurs, reboot Windows.
	The transfer of the file failed.	An error "Cannot send a Term Test file" is displayed.	The connection of the cable is loosened.	Check the cable to see if it is con- nected securely or if there is any prob- lem found with the cable itself.
	The tra		The main body is not in the receiving condition.	Check the main body to see if it is in the receiving condition.
		An error "Unsuc- cessful transmis- sion to the LPT	The connection of the cable is loosened.	Check the cable to see if it is connected securely or if there is any problem found with the cable itself.
		port" is displayed.	Wrong data has been sent.	Check the file status screen to see if the receiving mode on the main body side (type of receiving board) corre- sponds with the transferred file on the PC side.
			The length of the cable is out of specifications.	Use a cable the length of which is less than 2 m.
			The parallel port of the PC is set to the ECP mode.	See the PC manual to release the ECP mode.
			There is a compatibility problem between the parallel port of the PC and the port on the main body side.	Conduct a test with a PC with an actual performance of transmission, and check to see if there is a compatibility problem found.

↑ 5.3 Internet ISW

5.3.1 Outline

[Internet ISW] is the system which gives the instruction for updating the Firmware with the control panel of
the Copier, so the Copier will automatically receive the Firmware from the Program Server over a network
for updating. With the Internet ISW, the Firmware can be updated when the operator is at the User's without Firmware data.

5.3.2 Service environment

The following conditions are necessary for using the Internet ISW function.

The Copier is connected to such a network environment that the Firmware can be downloaded on the internet using the ftp or http Protocol.

The "Internet ISW" will not operate under the following conditions.

- Main power switch(SW1) is set to OFF.
- Sub-power switch(SW2) is set to OFF.
- When the following setting is set to "ON":
 [Administrator Setting]

 [Security Setting]

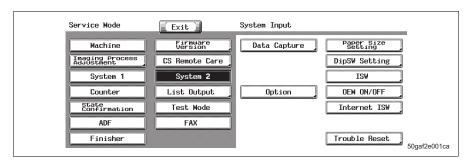
 [Enhanced Security Mode]
- · The Copier has the job currently performing.
- In case of not attaching Option Harddisk(HD-505).
- · When HDD Encryption is set.
- · When HDD Lock password is set.

5.3.3 Preparations for Firmware rewriting

- For using the Internet ISW, the Network parameter, Program Server Address as well as Firewall Address need to be set to the Copier.
- For details of each setting item, refer to "5.4 Internet ISW Setting". (See P.128)

A. Internet ISW Set

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



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

Note

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

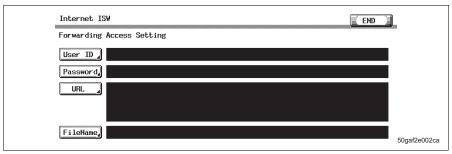
B. Protocol Setting

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

Step	Connecting by http	Connecting by ftp	
0	Select [Internet ISW] which is available from [Ser	* * *	
1			
'	Data Input SettingTouch [HTTP Setting], and select [ON].	Data Input Setting Touch [FTP Setting], and select [ON].	
0		• Todor [FTF Setting], and select [OT4].	
2	Connect Proxy		
	For connecting via Proxy Server, select [ON].		
3	Proxy Server • For connecting via Proxy Server, set the Prox	xy Server Address and the Port Number.	
	 Select the [Server Address], and set the Pro- FQDN scheme. Select [Port Number], and set the Port Number 	oxy Server Address by IP addressing scheme or ber for the Proxy Server from 1 through 65535.	
4	Proxy Authentication	Connection Setting	
	Set the Login name and the Password	Perform the setting for accessing FTP	
	which may be necessary for Authentication	server.	
	when accessing to the Proxy Server.		
	When Authentication is necessary for accessing to the Proxy Server, select Authentication and select (CNI).	Select [Port Number], and set the Port Number for FTP server from 1 through 65535. Select [Connection Time Out] and set the	
	[Authentication], and select [ON].2. Select [Log-in Name], and enter the Login name on the on-screen keyboard.	Select [Connection Time Out], and set the time for the Connection Time Out from 1 through 60.	
	3. Select [Password], and enter the Password on the on-screen keyboard.	3. When connecting in PASV mode, select [PASV Mode], and select [ON].	
		*PASV Mode:	
		This mode is for transferring the file with FTP under the condition where communication is restricted such as inside the Firewall. Since with PASV mode, the client with restriction sets the Port Number, data transmission port can be secured to enable the file transmission.	
5	Connection Time-Out	-	
	Select [Connection Time-Out], and set the		
	time for the Connection Time Out between		
	30 and 300 seconds.		

120

- To make the access setting for the Program Server which stores the Firmware data.
- 1. Select [Internet ISW] which is available from [Service Mode] → [System 2].
- 2. Touch [Forwarding Access Setting].



- Select [User ID], and enter the user ID which is necessary for connecting to the Program Server on the onscreen keyboard, and touch [END].
- Select [Password], and enter the Password which is necessary for connecting to the Program Server on the on-screen keyboard, and touch [END].
- Select [URL], and enter the directory which stores the Program Server Address and the Firmware on the onscreen keyboard by URL method, and touch [END].

Note

. Enter the URL which matches to the Protocol to be used.

When connecting to http://(host name or IP address)/directory name

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

When connecting to ftp ftp://(host name or IP address)/directory name

- Select [File Name], and enter the file name of the Firmware data to be downloaded on the on-screen keyboard, and touch [END].
- 7. Touch [END] to finish setting.

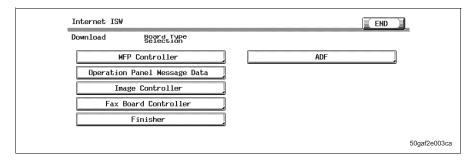
♠ 5.3.4 Firmware rewriting

Note

- . When performing the Internet ISW, ask the administrator for permission beforehand.
- . Do not turn OFF Main power switch(SW1) and Sub-power switch(SW2) while downloading.

A. Conducting rewriting on the control panel

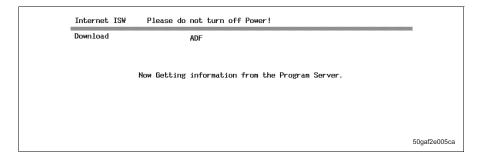
- Perform the following setting.
 [Service Mode] → [System 2] → [Internet ISW] → [Download]
- 2. Select Board Type Selection.



3. Touch [ISW Start].



4. The Copier will automatically start running, and it starts accessing the server.



122

♠ B. During Firmware Updating

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

C. Completed or failed

(1) Firmware updated normally

 When the Firmware is normally updated, restart the Copier in auto or manual mode to display the outcome, and touch [OK] to return to the Main screen.

Note

 When turning the main power switch (SW1) ON for the first time after the Firmware is updated, data may sometimes be internally updated.

In that case, the following message will be displayed. Never turn SW1 OFF until either the Serial number input screen or the trouble code screen is displayed.



(2) Failing to update the Firmware due to the Network trouble

- When updating failed to complete due to the trouble on connecting to the network, an error code and the message will be displayed.
- Restart the Copier in auto or manual mode, and touch [OK]. It can be used with the Firmware Version before conducting updating.
- 3. Check the settings for the network by error codes, and try updating again.

Note

• For error codes, refer to "5.3.5 Error Code List for the Internet ISW".

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

- 1. Once Firmware updating has started, the ROM in the Copier will be deleted.
 - When it failed right after updating has started, restart the Copier, and shift to the standby screen to retry downloading.
- When updating on the control panel, touch [settings] on the standby screen, and check the Network settings again.

Touch [Download], and restart the Internet ISW.

Note

 Return to the standby screen without fail after turning the Main power OFF/ON if the Firmware is not updated.

D. Confirming the Firmware Version

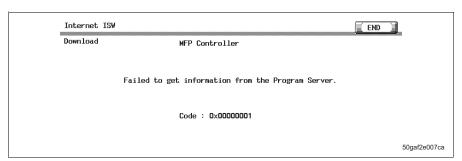
- 1. Call the Service Mode to the screen.
- 2. Select the [Firmware Version].
- 3. Check if the Firmware Version is updated.

♠ 5.3.5 Error Code List for the Internet ISW

When a trouble occurred while conducting the Internet ISW and it was not normally connected, the message on the status and the error code will be displayed on the control panel.

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

<Sample Display>



Error code	Description	Countermeasure
Control panel		
0x0000001	Illegal error on the control	Check if the following setting is set to "Valid". [Service Mode] → [System 2] → [Internet ISW] → [Internet ISW setting] Check the status of the following setting. [Service Mode] → [System 2] → [Internet ISW] → [Transfer access setting] If the above process does not solve the problem, inform the corresponding error code to the KONICA MINOLTA.
0x00000010	Parameter error	Check if the following setting is set to "Valid". [Service Mode] → [System 2] → [Internet ISW] → [Internet ISW setting] If the above process does not solve the problem, inform the corresponding error code to KONICA MINOLTA.
0x00111000	Error concerning the network Connection has been completed.	Check the User's network environment. (LAN cable's connection) Check the status of the following setting. [Service Mode] → [System 2] → [Internet ISW] → [Transfer access setting] Check to see if the FTP server operates normally.

î [Error code	Description	Countermeasure
	Control panel		
	0x00111001	Error concerning the network It cannot be connected to the server.	Check the network environment of the User. Check to see if the FTP server operates
	0x00111100	Error concerning the network Communication Timeout.	normally.
	0x00111101	Error concerning the network Disconnection occurred	Check the network environment of the User.
	0x00111110	Error concerning the network The network is not connected.	 Check to see if the FTP server operates normally.
	0x00110010	Error concerning the network Others	
	0x00001###	FTP error • Reply code when it failed to be connected	Check to see if FTP server normally operates. Check the IP address, User's name, etc.
	0x00002###	FTP error • Error reply code for the User command or Pass command	Check to see if FTP server operates normally.
	0x00003###	FTP error • Error reply code for CWD command	
		Check to see if FTP server operates normally.	
	0x00005###	FTP error • Error reply code for the PORT command	
	0x00006###	FTP error Frror reply code for the PASV command FTP error FTP	Check to see if FTP server operates normally. Set the PASV mode to "Invalid", and try it again.
	0x00007###	FTP error • Error rely code for the RETR command	Check to see if FTP server operates normally. Wait for about 30 minutes and try if again.
	0x10000100	It cannot be accepted because of the job currently being executed. ISW being executed by other method.	Wait for the current job to be com- pleted and try it again.
	0x10000101	It cannot be accepted because the sub-power is OFF.	Turn sub-power ON and try it again.
	0x10000102	The Internet ISW is already being executed.	 Wait for the current Internet ISW to be completed.

126

A	Error code	Description	Countermeasure
	Control panel		
	0x10000103	It failed to prohibit the job. (It failed to lock the operation.) → It failed to lock the job because the operation is already locked with PSWC, etc.	Check if the following setting is set to "Valid". [Service Mode] → [System 2] → [Internet ISW] → [Internet ISW setting] If the above process does not solve the
	0x10000104	There is no space for F/W data to be downloaded.	problem, inform the corresponding error code to the KONICA MINOLTA.
	0x10000106	Check sum error	
	0x10000107	File access error The file downloaded has an error. The header of the file which has been read has an error. The size of the file to be downloaded is too large. When it is identified to be the different type of F/W.	Check to see if the downloaded F/W is of the correct type.
	0x10000108	The area F/W is stored is destroyed, and another ISW is necessary.	Wait until ISW is automatically executed on the main body side.
	0x20000000	The temporary error when running the subset • When starting the Internet ISW in a normal program, the rebooting will start and the Internet ISW will be executed with the subset program. During the process by the subset program, it has to be in the "Failed" status unless the Internet ISW is successfully conducted. This code is used temporarily to make it in error	

Note

 If the above process does not solve the problem, inform the corresponding errorcode to the KON-ICA MINOLTA.

status.

△ 5.4

5.4 Internet ISW Setting
By using this setting, the Firmware stored in the Server can be downloaded over internet for upgrading.

5.4.1 Internet ISW Set

Functions	To set whether or not to enable each setting for Internet ISW.		
Use	To use when upgrading the Firm	ware by Internet ISW.	
	Each setting such as Server sett	ing will be valid by setting this to "ON".	
Note • When the following setting is set to "ON", this setting will autor set to "OFF" and cannot be changed.		,	
	[Administrator Setting] →[Sec	urity Setting] →[Enhanced Security Mode]	
Setting/	The default setting is "OFF".		
Procedure	ON	"OFF"	

5.4.2 **HTTP Setting**

It will be displayed only when [Internet ISW Set] is set to "ON".

A. Data Input Setting

Functions	To set whether or not to enable downloading using the HTTP Protocol.	
Use	To use when accessing the Server using the HTTP Protocol.	
	Setting on the Proxy Server will be valid when this setting is "ON".	
Setting/	The default setting is "OFF".	
Procedure	ON	"OFF"

B. Connect Proxy

Functions	To set whether or not to connect via Proxy Server when accessing the Server.	
Use	To use when accessing the Server via Proxy Server.	
Setting/	The default setting is "OFF".	
Procedure	ON	"OFF"

C. Proxy Server

Functions	To set the Address and the Port Number for the Proxy Server.
Use	To use when accessing the Server via Proxy Server.
Setting/	<server address=""></server>
Procedure	Enter the IP Address using the Version 4 method or FQDN method.
	<port number=""></port>
	Enter the value between 1 and 65535 using the 10-key pad.



⚠ D. Proxy Authentication

Functions	To set the Login name or Password when Auth the Proxy Server.	entication is necessary for accessing
Use	To use when Authentication is necessary for accessing the Proxy Server.	
Setting/	<authentication></authentication>	
Procedure	The default setting is "OFF".	
	ON	"OFF"
	<log-in name=""></log-in>	
	Enter the Login name (up to 32 one-byte character)	cters) on the on-screen keyboard.
	<password></password>	
	 Enter the Password (up to 32 one-byte characte 	ers) on the on-screen keyboard.

E. Connection Time-Out

Functions	To set the time for the Timeout for accessing the Server.
Use	To use when changing the time for the Timeout for accessing the Server.
Setting/	The default setting is "60 sec".
Procedure	30 to 300 sec

FTP Setting 5.4.3

• It will be displayed only when [Internet ISW Set] is set to "ON".

A. Data Input Setting

Functions	To set whether or not to enable downloading using FTP Protocol.	
Use	To use when accessing the Server with FTP Protocol.	
	Setting this to "ON" will enable the Pro-	oxy Server setting.
Setting/	The default setting is "ON".	
Procedure	"ON"	OFF

B. Connect Proxy

Functions	To set whether or not to access the Server via Proxy Server.	
Use	To use when accessing the Server via Proxy Server.	
Setting/	The default setting is "OFF".	
Procedure	ON	"OFF"

C. Proxy Server

Functions	To set the Address and the Port No. of the Proxy Server.
Use	To use when accessing the Server via Proxy Server.
Setting/	<server address=""></server>
Procedure	Enter the IP Address using the Version 4 method or FQDN method.
	<port number=""></port>
	Enter the value between 1 and 65535 using the 10-key pad.

D. Connection Setting

Functions	To set the Port No. and the time for Timeout when accessing the FTP Server, and also to set whether or not to enable PASV Mode.
Use	To use when accessing the FTP Server. To use when connecting by the PASV (passive) Mode (FTP Server side will inform the connection port before connecting).
Setting/	<port number=""></port>
Procedure	Enter the value between 1 and 65535 using the 10-key pad.
	<connection out="" time=""></connection>
	Enter the value between 1 and 60 (min.) using the 10-key pad.
	<pasv mode=""></pasv>
	The default setting is "OFF".
	ON "OFF"



♠ 5.4.4 Forwarding Access Setting

A. User ID

Functions	To register the User ID for accessing the Program Server where Firmware is to be
Use	stored.
Setting/	1. Select [User ID].
Procedure	2. Enter the User ID (up to 64 one-byte characters) on the on-screen keyboard.

B. Password

Functions	To register the Password for accessing the Program Server where Firmware is to be
Use	stored.
Setting/	1. Select [Password].
Procedure	2. Enter the Password (up to 64 characters) on the on-screen keyboard.

C. URL

Functions	To register the Address and Directory of the Program Server where the Firmware is to	
Use	be stored in URL.	
Setting/	1. Select [URL].	
Procedure	2. Enter the URL (up to 256 one-byte characters) on the on-screen keyboard.	
	Note	
	Enter the URL which format suits the Protocol to be used.	
	When connecting to http http:// (Host name or IP Address)/ Directory name	
	or https:// (Host name or IP Address)/Directory name	
	When connecting to ftp ftp:// (Host name or IP Address) / Directory name	

D. FileName

Functions	To register the file name of the Firmware data to be downloaded.
Use	
Setting/	1. Select [FileName].
Procedure	2. Enter the File Name (up to 46 one-byte characters) on the on-screen keyboard.

A

5.4.5 Download

Functions	Access the Program Server according to the Internet ISW setting, and download the		
	Firmware.		
Use	To use when updating the Firmware via network.		
Setting/	1. Select [Download].		
Procedure	2. Touch [ISW Start] to start downloading the Firmware.		
	3. The message to show the status will be displayed on the screen while connecting		
	and transferring data.		
	Note		
	When it failed to connect to the Program Server, or failed to download, the error code and the message will be displayed. Check the cause of the error by the error code, and follow the message for resetting.		
	Refer to "5.3.5 Error Code List for the Internet ISW" for the error codes. (See		
	P.125)		
	4. When the Firmware is normally upgraded, the Copier will automatically be restarted to complete the Internet ISW.		

6. OTHERS

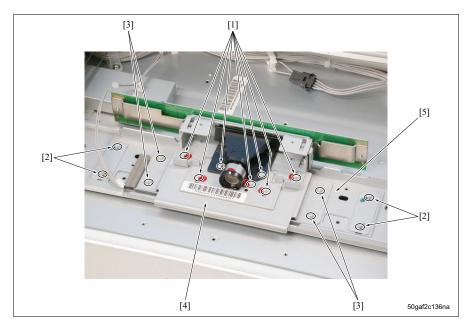
6.1 Items not allowed to be disassembled and adjusted

6.1.1 Scanner section

A. CCD unit

(1) Parts not allowed to be removed

- 7 screws that are used to assemble the CCD unit.
- 4 attaching screws of the lens reference plate assy



- [1] Screws not allowed to be removed
- [2] Screws not allowed to be removed
- [3] CCD unit attaching screws (Can be removed when replacing the CCD unit.)
- [4] CCD unit
- [5] Lens reference plate assy

(2) Reason for prohibition

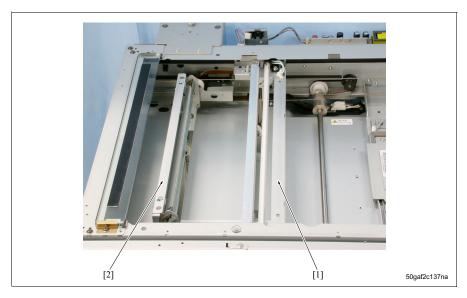
Since the accuracy of the CCD unit is guaranteed as a unit, no accuracy is guaranteed if it is disassembled. Therefore, screws that lead to the disassembly of the CCD unit must not be removed.

The lens reference plate assy becomes a reference for the installation of the CCD unit and removing it may cause the light axis to shift. Therefore, the attaching screws of the lens reference assy must not be removed.

B. Mirror unit/exposure unit

(1) Positions not allowed to be adjusted

· Positions at which the mirror unit and the exposure unit are installed



[1] Mirror unit

[2] Exposure unit

(2) Reason for prohibition

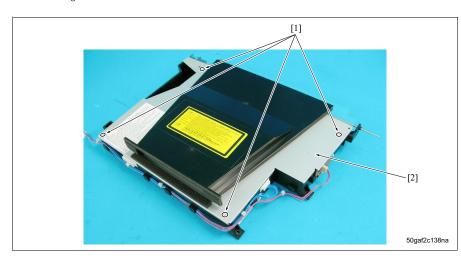
The distance between the mirror unit and the exposure unit has an effect on the magnification in the sub scan direction of the original to be read. Accordingly, the positions at which the mirror unit and the exposure unit are installed must not be arbitrarily adjusted. However, when removing the exposure unit and the scanner wire, the adjustments can be made only if they are reinstalled by using the optics unit positioning jig.

6.1.2 Write section

A. Write section cover

(1) Parts not allowed to be removed

· 4 attaching screws of the write section cover



- [1] Screws not allowed to be removed
- [2] Write section cover

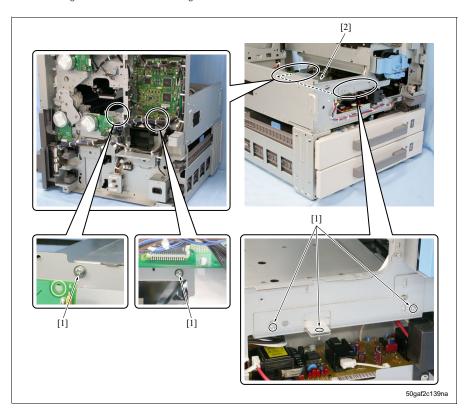
(2) Reason for prohibition

The inside of the write section becomes a laser beam path. Opening the cover allows the entry of dust and dirt into the inside and they may block the laser beam path. Therefore, the attaching screws of the write section cover must not be removed.

B. Write attaching plate

(1) Parts not allowed to be removed

. 5 attaching screws of the write mounting board



- [1] Screws not allowed to be removed
- [2] Write attaching plate

(2) Reason for prohibition

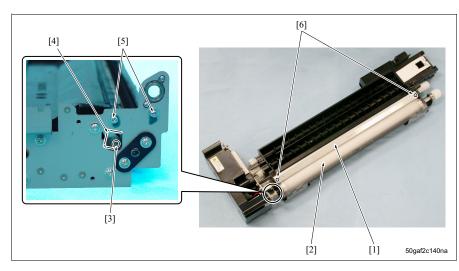
The write attaching plate is a reference for the attaching angle of the write section against the drum. Removing it may impair the parallelism of the drum with the write section, thus resulting in the image being deformed. Therefore, the attaching screws of the write attaching plate must not be normally removed.

6.1.3 Developing unit

(1) Parts not allowed to be removed

- · 2 attaching screws of the developer restriction blade
- · 1 fixing screw of the magnet adjustment plate
- Ds adjustment screws

Developing unit at 2 places (inside the cover)



- [1] Developer restriction blade
- [2] Developing roller
- [3] Screws not allowed to be removed
- [4] Magnet adjustment plate

- [5] Screws not allowed to be removed (Ds adjustment screws)
- [6] Screws not allowed to be removed

(2) Reason for prohibition

Each of the developer restriction blade and the magnet adjustment plate is used to determine the height of developer on the developing roller. And the Ds adjustment screws are also used to determine the distance between the drum and the developing roller. These parts are adjusted to an appropriate value in advance. Therefore do not remove these attaching screws and fixing screws.

6.1.4 Drum unit

(1) Parts not allowed to be removed

· Ds adjustment screws, 2 pcs.



[1] Screws not allowed to be removed (Ds adjustment screws)

(2) Reason for prohibition

The Ds adjustment screws are used to determine the distance between the drum and the developing roller and they are adjusted to an appropriate value in advance. Therefore, do not remove these fixing screws.

6.2 List of parts to be disassembled and reassembled

Note

- This list shows the explanation of the disassembly and reassembly of the parts which are considered necessary to replace (other than periodically replaced parts). However, these parts except for the covers are not required to be disassembled while in normal service operations.
- For the method of replacing the periodically replaced parts, see "3.5 Maintenance procedure of the external section" to "3.15 Maintenance procedure of the fusing section".

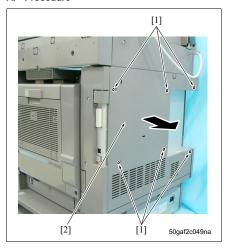
No.	Section	Part name	Page referred to
1	Cover	Rear cover /1	P.140
2		Rear cover /2	P.140
3		Rear cover /3	P.141
4		Right cover /Up	P.142
5		Right cover /Lw	P.143
6		Left cover	P.143
7		Front door	P.144
8		Upper cover /Rt	P.145
9		Original glass	P.145
10		Upper cover /Fr	P.147
11		Upper cover /Lt	P.147
12		Upper cover /Rr	P.147
13		Front cover	P.148
14	Operation panel	Operation panel	P.149
15	Scanner section	CCD unit	P.150
16		Exposure lamp	P.153
17		Exposure unit	P.154
18		Scanner wire	P.157
19	Toner supply section	Toner supply unit	P.159
20	Paper feed section	Tray 1	P.163
21		Tray 2	P.163

6.3 Disassembling/assembling procedure

 When disassembling or assembling the parts, be sure the power cord has been unplugged from the power outlet.

6.3.1 Removing/reinstalling the rear cover /1

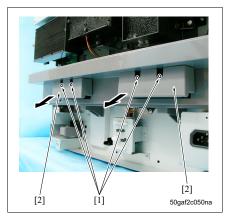
A. Procedure



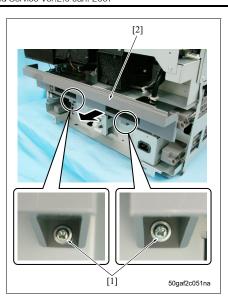
- 1. Remove the 6 screws [1] and then remove the rear cover /1 [2].
- 2. Reinstall the above parts following the removal steps in reverse.

6.3.2 Removing/reinstalling the rear cover /2

A. Procedure

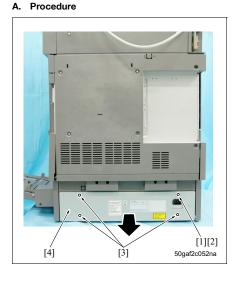


- 1. Remove the rear cover /1.
 - (See P.140)
- 2. Remove the rear cover /3.
 - (See P.141)
- Remove the screws [1], 2 each, and then remove the 2 handles [2].



- 4. Remove the 2 screws [1] and then remove the rear cover /2 [2].
- 5. Reinstall the above parts following the removal steps in reverse.

6.3.3 Removing/reinstalling the rear cover /3



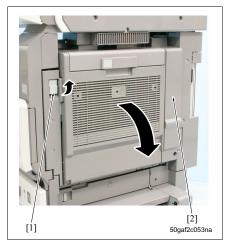
1. Remove the screw [1].

Note

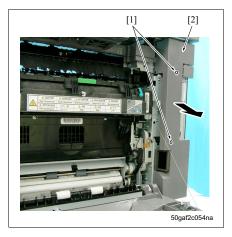
- The screw [1] is attached with the washer [2].
 Be careful that it does not get lost.
- 2. Remove the 3 screws [3] and then remove the rear cover /3 [4].
- Reinstall the above parts following the removal steps in reverse.

6.3.4 Removing/reinstalling the right cover /Up

A. Procedure



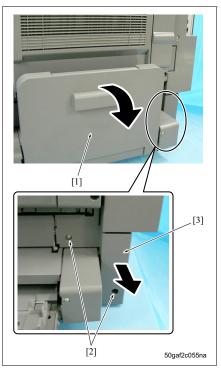
 Open the bypass tray. (See P.143)
 Pull the ADU release lever [1] to open ADU [2].



- 3. Remove the 2 screws [1] and then remove the right cover /Up [2].
- 4. Reinstall the above parts following the removal steps in reverse.

6.3.5 Removing/reinstalling the right cover /Lw

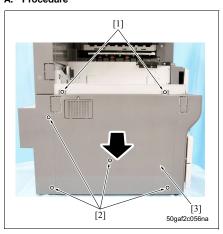
A. Procedure



- 1. Open the bypass tray [1].
- 2. Remove the 2 screws [2] and then remove the right cover /Lw [3].
- Reinstall the above parts following the removal steps in reverse.

6.3.6 Removing/reinstalling the left cover

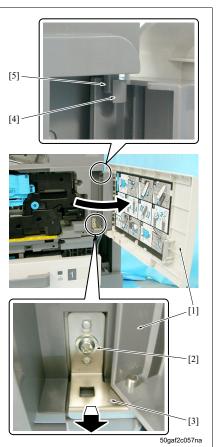
A. Procedure



- 1. Loosen the 2 screws [1].
- 2. Remove the 4 screws [2] and then remove the left cover [3].
- Reinstall the above parts following the removal steps in reverse.

6.3.7 Removing/reinstalling the front door

A. Procedure



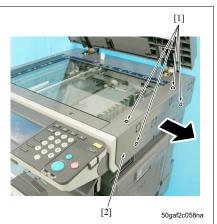
- 1. Open the front door [1].
- 2. Remove the screw [2] and then remove the support plate [3] and the front door at the same time.

Note

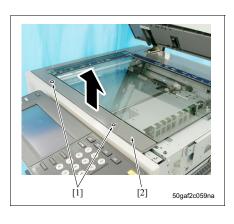
- When installing the front door, be sure first to fit the installation hole [4] to the shaft [5].
- Reinstall the above parts following the removal steps in reverse.

6.3.8 Removing/reinstalling the original glass

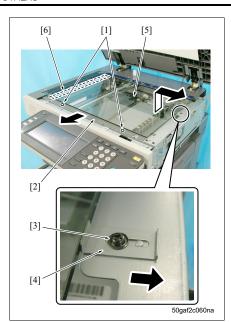
A. Procedure



1. Remove the 4 screws [1] and then remove the upper cover /Rt [2].



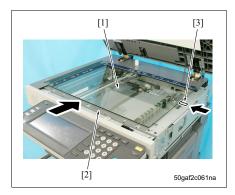
2. Remove the 2 screws [1] and then remove the glass attaching plate /Up [2].



- 3. Loosen the 2 screws [1] and slide the glass attaching plate /Lw [2].
- 4. Loosen the screw [3] and slide the glass holding plate [4].
- 5. Remove the original glass [5].

Note

 When removing the original glass, be careful not to stain the position to which the shading correction plate [6] is attached.

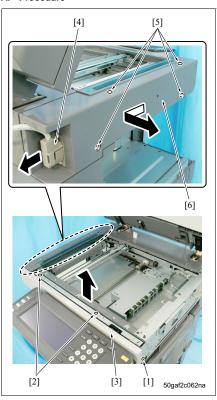


Note

- When installing the original glass [1], be sure to fix first the glass attaching plate /Lw [2] while pressing it against the original glass and then fix the glass holding plate [3] while also pressing it against the original glass.
- 6. Reinstall the above parts following the removal steps in reverse.

6.3.9 Removing/reinstalling the upper covers /Fr and /Lt

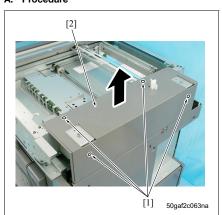
A. Procedure



- 1. Remove the original glass.
 - (See P.145)
- 2. Loosen the screw [1].
- 3. Remove the 2 screws [2] and then remove the upper cover /Fr [3].
- 4. Remove the connector [4].
- Remove the 4 screws [5] and then remove the upper cover /Lt [6].
- Reinstall the above parts following the removal steps in reverse.

6.3.10 Removing/reinstalling the upper cover /Rr

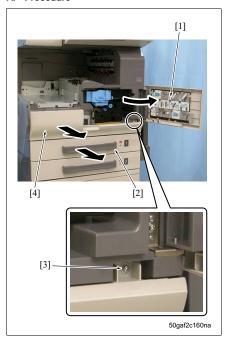
A. Procedure



- 1. Remove the original glass.
 - (See P.145)
- Remove the upper covers /Fr and /Lt. (See P.147)
- 3. Remove DF from the main body.
- o. Hemove bi irom the main body
- Remove the 4 screws [1] and then remove the upper cover /Rr [2].
- Reinstall the above parts following the removal steps in reverse.

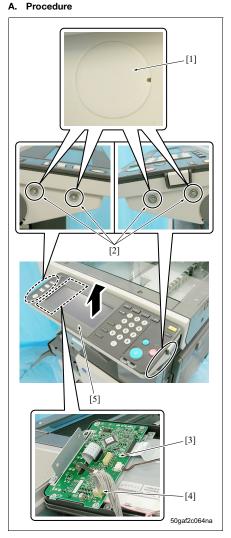
6.3.11 Removing/reinstalling the front cover

A. Procedure



- 1. Open the front door [1].
- 2. Pull out the tray 1 [2].
- 3. Remove the screw [3] and then remove the front cover [4].
- 4. Reinstall the above parts following the removal steps in reverse.

6.3.12 Removing/reinstalling the operation panel



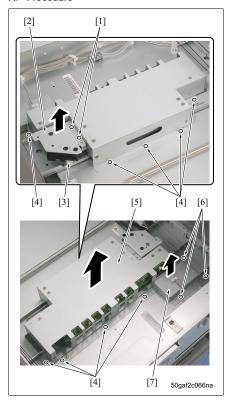
- 1. Remove the 4 screw caps [1] and then remove the 4 screws [2].
- Remove the connector [4] of the operation board (OB) [3] and then remove the operation panel [5].

Note

- When installing the operation panel, be sure to install the connector [4] without fail.
- Reinstall the above parts following the removal steps in reverse.

6.3.13 Removing/reinstalling the CCD unit

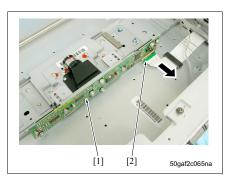
A. Procedure



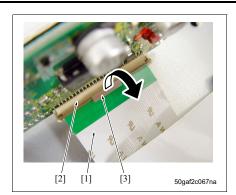
- Remove the original glass. (See P.145)
- 2. Remove the 2 screws [1] and the remove the lens light blocking cover assy [2].
- 3. Remove the connector [3].
- 4. Remove the 9 screws [4] and then remove the lens light blocking cover [5].
- 5. Remove the 3 screws [6] and then remove the ribbon cable cover [7].

Note

· Be careful not to damage the scanner wire.

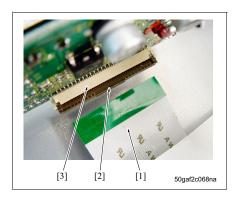


6. Remove the ribbon cable [2] from the CCD board (CCDB) [1].

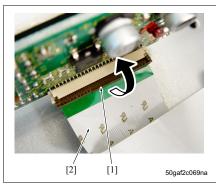


Note

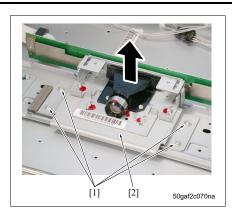
 When removing the ribbon cable [1], be sure to bring down the lock lever [3] of the connector [2] in the arrow-marked direction to release the lock and pull out the ribbon cable.



When installing the ribbon cable [1], be sure
to check to see if the lock lever [2] is
released. And insert deep it into connector [3]
securely while taking note that the conductor
side of the ribbon cable comes to the opposite side of the lock lever.



 After that, bring the lock lever [1] back to its original position and lock the ribbon cable [2].



- 7. Remove the 4 screws [1] and then remove the CCD unit [2].
- 8. Reinstall the above parts following the removal steps in reverse.

Note

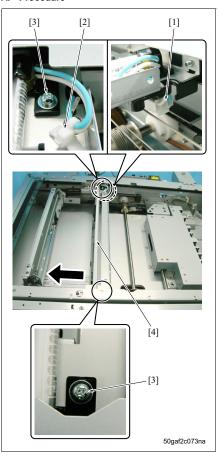
After installing the CCD unit, be sure to conduct the image adjustment in the service mode. (See P.185, P.186, P.187, P.188, P.189, P.190)

6.3.14 Replacing the exposure lamp

Note

. Be careful not to touch the lamp section of the exposure lamp (L1) with bare hands.

A. Procedure



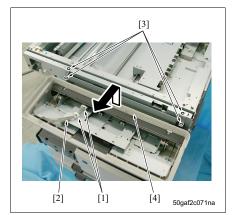
- 1. Remove the original glass. At this time, remove also the glass attaching plate /Lw.
 - (See P.145)
- 2. Remove the connector [1].
- 3. Remove the harness clamp [2].
- 4. Remove the 2 screws [3] and slide the exposure lamp (L1) [4] for removal.
- Reinstall the above parts following the removal steps in reverse.

6.3.15 Removing/reinstalling the exposure unit

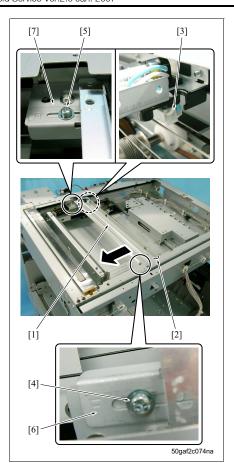
Note

- . When installing the exposure unit, be sure to use the optics unit positioning jig.
- When installing the exposure unit, be sure to conduct the image adjustment in the service mode. (See P.185, P.186, P.187, P.188, P.189, P.190)

A. Procedure for removal

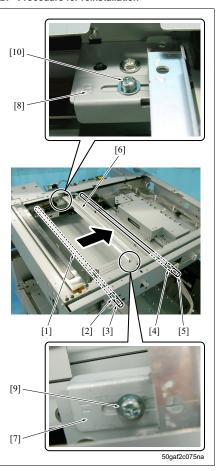


- Remove the original glass. At this time, remove also the glass attaching plate /Lw.
 - (See P.145)
- Remove the upper covers /Fr and /Lt. (See P.147)
- 3. Remove the upper cover /Rr. (See P.147)
- 4. Remove the operation panel. (See P.149)
- 5. Remove the wiring harness [2] from the 2 harness clamps [1].
- Remove the 4 screws [3] and then remove the operation panel unit /Lw assy [4].



- Move the exposure unit [1] to the notch [2] of the frame.
- 8. Remove the connector [3].
- Remove the screws [4] and [5] and then remove the exposure unit from the exposure unit mounting plates /Fr [6] and /Rr [7].
- 10. Slide the exposure unit [1] for removal.

B. Procedure for reinstallation



- Move the V-mirror unit [1] to the vicinity of the V-mirror positioning hole [2].
- Insert the optics unit positioning jig [3] into the V-mirror positioning hole and fix the V-mirror unit.

Note

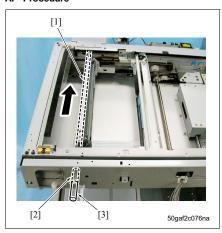
- Be sure to insert the optics unit positioning jig from the front side and pass it through the Vmirror unit.
- 3. Insert the optics unit positioning jig [5] into the exposure unit positioning hole [4].
- 4. Hit the exposure unit [6] against the optics unit positioning jig [5].
- Install the exposure unit to the exposure unit mounting plates /Fr [7] and /Rr [8] with the screws [9] and [10].
- 6. Pull off the 2 optics unit positioning jigs.
- For the parts to be installed in the succeeding steps, be sure install them following the removal steps in reverse.

6.3.16 Stretching the scanner wire

Note

- Be sure to wind the scanner wire around the pulley closely with no scanner wire overlapping each other.
- · When restretching or replacing the scanner wire, be sure to use the optics unit positioning jig.
- When restretching or replacing the scanner wire, be sure to conduct the image adjustment in the service mode. (See P.185, P.186, P.187, P.188, P.189, P.190)

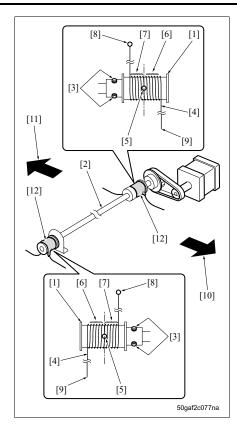
A. Procedure

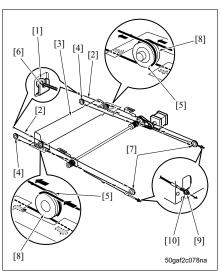


- Remove the original glass. At this time, remove also the glass attaching plate /Lw. (See P.145)
- Remove the upper covers /Fr and /Lt. (See P.147)
- Remove the upper cover /Rr. (See P.147)
- 4. Remove the operation panel. (See P.149)
- Remove the operation panel unit /Lw assy. (See P.154)
- Move the V-mirror unit [1] to the vicinity of the V-mirror positioning hole [2].
- Insert the optics unit positioning jig [3] into the Vmirror positioning hole and fix the V-mirror unit.

Note

 Be sure to insert the optics unit positioning jig
 [3] from the operation panel side and pass it through the V-mirror unit.

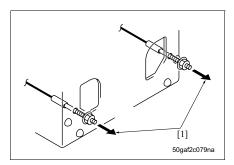




- Loosen the 2 hexagon socket screws [3] of the drive pulley on the side so that the drive pulley [1] can rotate freely against the pulley shaft [2].
- 9. Drop the metal ball [5] provided at the intermediate section of the scanner wire [4] into the drive pulley installation hole and, with this as a starting point, wind the wire 6 turns [6] outwards and 5 turns [7] inwards.

Note

- The scanner wires are color-coded. Be sure to use the one painted black on the front side with the one with no paint on the rear side.
- For each scanner wire that is wound around the pulley, be sure to use on the outside the one at the end of which the metal ball [8] is provided and on the inside the one at the end of which the screw thread [9] is provided.
- For each scanner wire, be sure to pull out the one that is wound on the outside in the paper feed direction [10] from the upper side of the drive pulley and the one wound on the inside in the paper exit direction [11] from the upper side of the drive pulley.
- 10. After completion of the winding of the scanner wire, be sure to fix it with the tape [12] so that it does not come off.
- 71. Pass the scanner wire [2] provided with the metal ball [1] through the pulley [4] on the paper exit side after passing through under the V-mirror unit [3], and pass further through the pulley [5] inside the V-mirror unit. And then hook it to the notch [6] of the frame.
- 12. Pass the scanner wire provided with the screw thread through the pulley [7] on the paper feed side. And then pass it from above through the pulley [8] on the outside of the V-mirror unit and further through under the V-mirror unit and, with the nut [9] and the washer [10], fix it at the tension of 1.3 kg to 1.7 kg.



Note

- When fixing the screw thread side of the scanner wire, be sure fix it with a tension of 1.3 to 1.7 kg applied by a spring balance in the arrow-marked direction [1].
- When fixing the scanner wire, be sure to check to see if the V-mirror unit has been fixed with the optics unit positioning jig.
- Be sure to tighten up the set screw of the drive pulley that has been loosened.
- Be sure to peel off the tape that has been used for fixing.

13. Install the exposure unit.

(See P.154)

Note

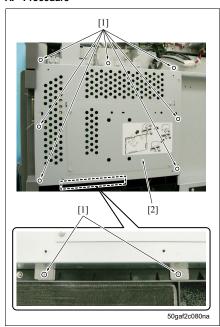
 Be sure to slide the exposure unit and check to see if it operates smoothly.

6.3.17 Removing/reinstalling the toner supply unit

Note

· Be sure to remove the toner bottle in advance.

A. Procedure



- 1. Remove the original glass.
 - (See P.145)
- 2. Remove the upper covers /Fr and /Lt.

(See P.147)

3. Remove the upper cover /Rr.

(See P.147)

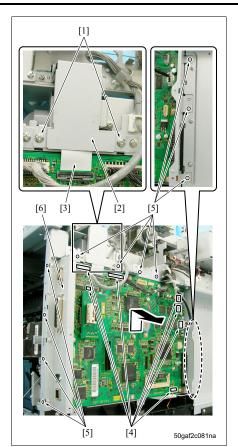
4. Remove the right cover /Up.

(See P.142)

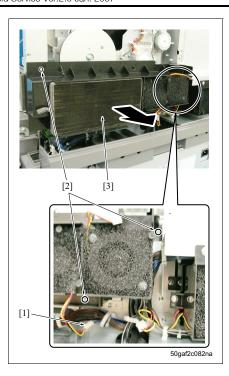
5. Remove the rear cover /1.

(See P.140)

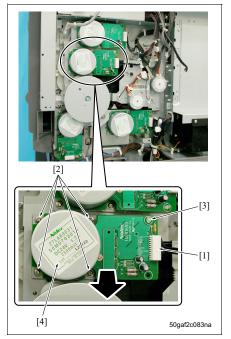
Remove the 9 screws [1] and then remove the system unit cover [2].



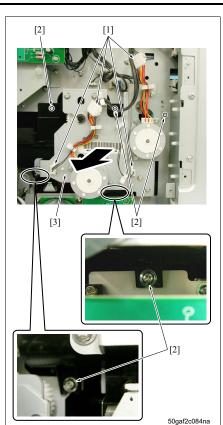
- 7. Remove the 2 screws [1] and then remove the ribbon cable cover [2].
- 8. Remove the ribbon cable [3].
- 9. Remove the 7 connectors [4].
- 10. Remove the 11 screws [5] and then remove the overall control board mounting box [6].



- 11. Remove the connector [1].
- 12. Remove the 3 screws [2] and then remove the ozone filter mounting assy [3].



- 13. Remove the connector [1].
- 14. Remove the 4 screws [2].
- 15. Remove the board support [3] and the remove the drum motor (M1) [4].



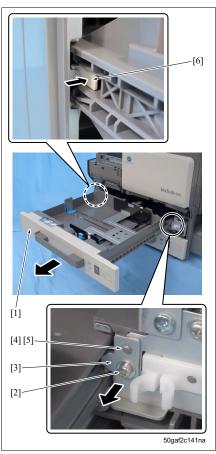
- 16. Remove the 4 connectors [1].
- 17. Remove the 5 screws [2] and then remove the toner supply unit [3].
- 18. Reinstall the above parts following the removal steps in reverse.

6.3.18 Removing/reinstalling the trays 1 and 2

Note

- The trays 1 and 2 are of the same form and of the same mechanism. The procedure given here shows mainly the operations employed for the tray 1.
- · When there remains paper in the tray, be sure to remove it thoroughly before starting operations.

A. Procedure



- 1. Pull out the tray 1 [1].
- Remove the screw [2] and then remove the stopper [3].

Note

- When installing the stopper, be sure to set the positioning hole [4] to the projection [5].
- While holding down the stopper [6], pull out the tray 1 for removal.

Note

- When installing the tray 1, be sure to check to see if the tray can be pulled out and pushed in smoothly.
- When installing the tray 1, be sure to check to see if the tray is not thoroughly pulled out.

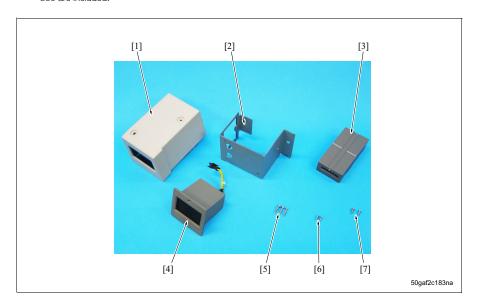
Option counter 6.4

6.4.1 Configuration of the key counter

As shown below, the key counter is configured as a product so that it can be supplied according to the application. In principle, the key counter can be installed by obtaining the key counter kit 4.

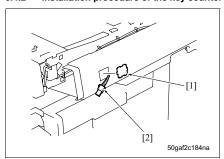
	[1] Cover	[2] Mounting plate	[3] Key counter	[4] Counter socket	[5] Screws for the cover	[6] Screws for the counter socket	[7] Screws for the mounting plate
Key counter kit 4*	•	•	•	•	•	•	•
Key counter mounting kit*	•	•			•		•
Key counter			•				

 Λ In the kit, parts (such as a mounting plate, mylar, wire saddle and screws) that are not used for 500/420/ 360 are included.

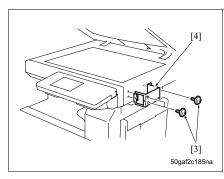


164

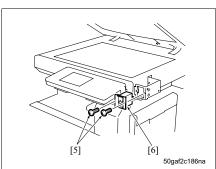
6.4.2 Installation procedure of the key counter



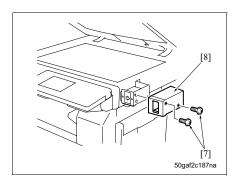
- Remove the upper cover /Lt. (See P.147)
- 2. Remove the split cover [1] of the upper cover /Lt.
- 3. Put the harness [2] for the key counter through the upper cover /Lt.
- 4. Install the upper cover /Lt.



5. Install the mounting plate [4] with the 3 screws [3].



- 6. Hook up the connector of the key counter socket.
- 7. Install the counter socket [6] with the 2 screws [5].



8. Install the cover [8] with the 2 screws [7].

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■ ADJUSTMENT/SETTING

7. HOW TO USE THE ADJUSTMENT/SETTING SECTION

7.1 Composition

This part "ADJUSTMENT/SETTING" describes items to be adjusted and the method of adjustment that is required by this machine, it also gives detailed explanations.

A. Checking before starting work

When conducting claims in the field, it is necessary to check first the following:

- 1. Are the power supply and voltage secured in accordance with the specifications?
- 2. Is the power supply properly grounded?
- Is any equipment that repeatedly consumes a lot of electricity connected to the same power supply? (e.g.: Electric noise sources such as elevator and air conditioner)
- 4. Are environmental conditions suitable for the machine?
- · High temperature and high humidity, direct sunlight, air ventilation, etc.
- · Levelness of the location on which the machine is installed.
- 5. Does the cause of poor images lie in the original itself?
- 6. Is density selected properly?
- 7. Is the original glass stained?
- 8. Is proper paper used for copy?
- 9. Are copy consumable replaced with new ones at their life? (e.g.: Developer, drum, cleaning blade, etc)
 10. Is toner filled?

B. Checkpoints when conductions on-site service

Due attention should be paid to the following when repairing the machine.

- 7. Be sure to unplug the power cord from the power outlet. Also, when operating the machine with the power supplied, be careful of the scan of the exposure unit and be sure not to get caught by the gear.
- 2. The fusing section may be very hot. Be careful not to get burnt when handling it.
- 3. The developing unit is strongly magnetized. Be careful not to bring a watch and instrument near to the unit.
- 4. Be careful not to damage the drum with a tool.
- 5. Be careful not to touch IC directly with bare hands.

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8. UTILITY MENU

8.1 List of utility mode

Note

• For detail on the utility mode, refer to "User's guide".

UTILITY MENU						
[1] One-Touch	[1] Scan	[1] Address	[1] E-Mail			
Registration		Book	[2] FTP			
			[3] SMB			
			[4] User Box			
		[2] Group				
		[3] Program				
		[4] Subject/Text	[1] Subject			
		(for E-mail)	[2] Text			
	[2] Fax	[1] Address	[1] Abbr. Dial			
		Book	[2] E-Mail			
			[3] User Box			
		[2] Group				
		[3] Program				
		[4] Subject/Text	[1] Subject			
		(for E-mail)	[2] Text			
	[3] User Box	[1] Public/Personal User Box (HDD installed) /Confidential RX User Box				
		(HDD not installe	<u>'</u>			
		[2] Bulletin Board	I User Box			
		[3] Relay User Bo				
[2] User Setting	[1] System Set-	[1] Language Sel				
	ting	[2] Measurement Unit Setting				
		[3] Paper Tray	[1] Paper Type			
		Setting	[2] Auto Tray Select Setting			
			[3] Auto Tray Switch ON/OFF			
			[4] No Matching Paper in Tray Setting			
			[5] Print Lists			
		[5] Power Save	[1] Low Power Mode Setting			
		Setting	[2] Sleep Mode Setting			
		[6] Output Set-	[1] Print/Fax Output Setting			
		ting				
		[7] Original Image	<u> </u>			
	[2] Display Set-	[1] Sub Screen D	isplay ON/OFF			
	ting	[2] Copier Setting				
		[3] Scan Basic So	creen Default Setting			
		[4] Fax Basic Scr	een Default Setting			
		[5] Copy Screen				
	•	•				

			UTILITY	MENU				
	[2] User Setting	[2] Display Set-	[6] Fax Active Sc	reen				
Â		ting	[7] Copier Basic S	Screen Setting				
Â			[8] Job List Defau	ult				
		[3] Initial Setting						
		[4] Copier Setting	I					
		[5] Scanner Settin	ng					
		[6] Printer Set-	[1] Basic Setting					
		ting	[2] Paper Setting					
			[3] PCL Setting	[1] Typeface				
				[2] Symbol Set				
				[3] Font Size				
				[4] Line/Page				
				[5] CR/LF Mappi	ng			
			[4] PS Setting					
			[5] Print Report					
	[3] Administrator	[1] System Set-	[1] Power Save S	Setting				
	Setting	ting	[2] Output Set- [1] Print/Fax Output Setting					
			ting	[2] Output Tray S	etting			
			[3] Date/Time Se	tting				
			[4] Daylight Savin	g Time Setting				
			[5] Weekly	[1] Weekly Timer ON/OFF Setting				
			Timer Setting	[2] Time Setting				
				[3] Date Setting				
				[4] Select Time for	or Power Save			
				[5] Password for	Non-Business Hours			
			[6] Restrict User	[1] Restrict Acces	ss to Saved Program Jobs			
			Access	[2] Delete Saved	Program Jobs			
				[3] Restrict Acces	ss to Job Settings			
\triangle				[4] Restrict Opera	ation Settings			
			[7] Expert	[1] Original Image	e Density			
			Adjustment	[2] Erase Adjustn	nent			
				[3] Finisher	[1] Center Staple Position			
				Adjustment	[2] Half-Fold Position			
					[3] Punch Horizontal Position			
					[4] Punch Resist Loop Size			
			[8] List/Counter	[1] Management				
				[2] Paper Size/Ty	'			
Â			[9] Reset Set-	[1] System Auto	Reset			
Â			ting	[2] Auto Reset				
Â				[3] Job Reset				
Â				[4] System Auto	Reset for Proof copy			

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_	TIETT WEITO							
			UTILITY	MENU				
\triangle	[3] Administrator	[1] System Set-	[0] User Box	[1] Delete unused	d User Box			
\triangle	Setting	ting	Setting	[2] Delete Secure Print Documents				
\triangle				[3] Auto Delete S	ecure Document			
		[2] Administra-	[1] Administrator Registration					
		tor/Machine	[2] Input Machine Address					
		Setting						
		[3] One-Touch	[1] Scan	[1] Address	[1] E-Mail			
		Registration		Book	[2] FTP			
					[3] SMB			
					[4] User Box			
				[2] Group				
				[3] Program				
				[4] Subject/Text	[1] Subject			
				(for E-mail)	[2] Text			
			[2] Fax	[1] Address	[1] Abbr. Dial			
				Book	[2] E-Mail			
					[3] User Box			
				[2] Group				
				[3] Program				
				[4] Subject/Text	[1] Subject			
				(for E-mail)	[2] Text			
			[3] User Box	[1] Public/Person	nal Use Box			
				[2] Bulletin Board User Box				
\triangle				[3] Relay User Box				
\triangle				[4] Annotation User Box				
			[4] One-Touch	[1] Address Book List				
			Registration List	[2] Group List				
				[3] Program List				
				[4] E-Mail Subject/Text List				
		[4] User	[1] General Settin	igs				
		Authentication/	[2] User Authentic	cation Setting				
		Account Track	[3] Account Track	Setting				
			[4] Print without A	Authentication				
		[5] Network	[1] Network Setting					
		Setting	[2] TCP/IP Setting	g				
			[3] Netware Settin	ng				
			[4] IPP Setting					
			[5] FTP Setting					
			[6] SMB Setting					

170

		UTILIT	Y MENU			
[3] Administrator	[5] Network	[7] AppleTalk Se	tting			
Setting	Setting	[8] LDAP Set-	[1] Enabling LDA	P		
		ting	[2] Setting Up LDAP			
			[3] Default LDAP	Server Setting		
		[9] E-Mail Set-	[1] E-Mail TX (SM	MTP)		
		ting	[2] E-Mail RX (PC			
		[0] Detail Set-	[1] Device Setting			
		ting	[2] Time Adjustm	ent Settina		
			[3] Status Notifi-			
			cation Setting	[2] Notification Item Setting		
			[4] T-t-l Ot-	[3] Notification Time Setting		
			[4] Total Counter Report Setting			
			[5] PING Confirmation			
			[6] SLP Setting			
			[7] LPD Setting			
			[8] Prefix/Suffix	[1] ON/OFF Setting		
			Setting [2] Prefix/Suffix Setting			
			[9] Action for Inva	alid Certificate		
	[6] Copier Settin					
	[7] Printer Set- ting	[1] I/F Timeout				
	[8] Fax Setting	[1] Header Inform	mation			
		[2] Header/Foot				
		[3] Telephone Lii				
		[4] TX/RX Setting				
		[5] Function	[1] Function ON/	OFF Setting		
		Setting	[2] Dial-In Setting			
			[3] Memory RX	,∽		
			[4] Closed Network RX			
			[5] Forward TX Setting			
			[6] Remote RX			
			[7] Incomplete TX	/ Hold		
			[8] PC-Fax RX Se			
		[6] PBX CN Set	[9] TSI User Box	oetui ig		
			nge			
		[7] Report Settings				
	[0] 0	[8] Job Settings				
	[9] System	[1] Open API Se				
	Connection	[3] Prefix/Suffix /	Auto Setting			

	UTILITY MENU								
	[3] Administrator	[0] Security Set-	[1] Administrator	[1] Administrator Password					
	Setting	ting	[2] User Box Adm	[2] User Box Admin. Setting					
			[3] Administrator	Security Level					
			[4] Security Detai	[4] Security Details					
\triangle			[5] Enhanced Security Mode						
\triangle			[6] HDD Setting [1] Check HDD Capacity						
\triangle			[2] Temporary Data Overwrite Setting						
\triangle			[3] Overwrite All Data						
\triangle				[4] HDD Lock Password					
\triangle				[5] HDD Formatting					
\triangle			[6] HDD Encryption Setting						
			[7] Manage- [3] Network Fuction Setting						
			ment Function						
			Setting						

9. LIST OF ADJUSTMENT ITEMS

				ı —		1							1	
		Replacement parts/Others	to	n of PM			parts ing unit			, expo- nit		slated		q
			Page referred to	After completion of PM	_	Developer	Replacement parts related to fusing unit	Write unit	Slit glass	Scanner wire, expo- sure/mirror unit		Roller parts related to paper feed	CCD unit	NVRAM board
Adjustment/s	setting iter	ms	Page	After	Drum	Deve	Repla relate	Write	Slit g	Scar sure/	DF	Rolle to pa	CCD	NVR
Machine	Printer	Print Positioning: Leading Edge	P.179					6				3		0
	Area	Print Positioning: Side Edge	P.180					7				4		0
		Paper Feed Direction Adj.	P.181					(5)				2	1	0
	Printer F	Resist Loop	P.183									①		0
	Bypass	Tray Adjustment	P.184											
	Scan	Image Position: Leading Edge	P.185							2			4	0
	Area	Image Position: Side Edge	P.186							4			(5)	0
		Cross Direction Adjustment	P.187							3			3	0
		Feed Direction Adjustment	P.188							1		(\$)	2	0
	Lead Ed	lge Erase Adjustment	P.189					8						0
	Non-Ima	age Area Erase Check	P.190											0
Imaging	TCR Ad	justment	P.191			1								0
Process	Toner D	ensity Adjustment	P.192			2		1						0
Adjustment	Laser Di	iameter Adjustment	P.193			3		2						0
	LD1 Off:	set Adj.	P.194		2	4		3						0
	LD2 Off:	set Adj.			3	(5)		4						0
Counter	Present	Parts Life (Reset)	P.201		0		0							
334.1131	PM Cou	inter (Reset)	P.212	0	1	0	0							
	PM Cou	inter (Set)												0
ADF	Paper F	eed Direction	P.235								2		6	0
	Lead Ed	lge	P.236								3		7	0
	Side Ed	ge	P.237								(5)		8	0
	Resist L	oop Adj.	P.238								1			0
	Original	Size Adj.	P.238								6			0
	Density	Adj.	P.239						0		8		9	0
	Scan Po	osition Adjustment	P.240							(5)	4			0
	Sensor A	Auto Adjustment	P.241								7			0
Finisher	Center S	Staple Position	P.242											0
1101 101	Half-Fold	d Position	P.243											0
	Punch F	Horizontal Position	P.244											0
	Punch F	Resist Loop	P.245											0

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- · After changing developer, be sure to avoid the printing operation before completion of the TCR adjustment.
- . When replacing the NVRAM board (NRB), be sure to conduct the TCR adjustment after changing developer.
- . When replacing the overall control board (OACB) due to the board being damaged, the NRB that has been provided on the damaged OACB should be reused on a new OACB in principle. When the NRB is considered to be damaged, be sure to refer to the support division of the authorized distributor.

10.SERVICE MODE

10.1 List of service mode

	Adjustment	t/setting items	page				
Machine	Printer Area	Print Positioning: Leading Edge	P.179				
		Print Positioning: Side Edge	P.180				
		Paper Feed Direction Adj.	P.181				
	Printer Resist Loop		P.183				
	Bypass Tray Adjustme	Bypass Tray Adjustment					
	Scan Area	Image Position: Leading Edge	P.185				
		Image Position: Side Edge	P.186				
		Cross Direction Adjustment	P.187				
		Feed Direction Adjustment	P.188				
	Lead Edge Erase Adju	ustment	P.189				
	Non-Image Area Eras	e Check	P.190				
Imaging Process	Charging Main Manua	al Adj.	P.191				
Adjustment	Transfer Manual Adj.	Transfer Manual Adj.					
	Separation (AC) Manu	Separation (AC) Manual Adj.					
	Separation (DC) Manu	P.191					
	Grid Charging Manua	Grid Charging Manual Adj.					
	Bias Voltage Manual A	Adj.	P.191				
	TCR Adjustment	TCR Adjustment					
	Toner Auto Supply	Toner Auto Supply					
	Toner Density Adjustn	P.192					
	Laser Diameter Adjus	Laser Diameter Adjustment					
	LD1 Offset Adj.	P.194					
	LD2 Offset Adj.						
	LD1 Bias Adj.	LD1 Bias Adj.					
	LD2 Bias Adj.	LD2 Bias Adj.					
System 1	Marketing Area		P.195				
	Tel/Fax Number	Tel/Fax Number					
	Serial Number		P.196				
	Trouble Isolation		P.197				
	No Sleep		P.197				
	Foolscap Size Setting		P.197				
	Original Size Detection	Original Glass Original Size Detect	P.198				
		ADF Original Size Detect					
		Original Glass Small Size Detect					
	Detected Size Setting		P.198				
	Install Date	Install Date					

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bizhub 500/420/360

	Adjustment/	setting items		page			
System 1	Initialization	Utility/Administrator Setting Data	Job memory Setting Data	P.199			
			FAX Setting Data	-			
			Network Setting Data	+			
		Destination Storage Da		+			
		CS Remote Care Settin					
		Service Mode Setting	Image Process Adj.				
		(Adj.) Data	Data				
			Machine and ADF	-			
			Adjustment Data				
		All History Data	-				
	Communication System	n Setting		P.199			
Counter	Total Service			P.202			
	Fax Communication Er	ror		P.202			
	Mode			P.202			
	ADF Counter			P.204			
	Service Call						
	JAM						
	Present Parts Life						
	Optional Parts Life						
	PM			P.212			
	Reuse						
	Each Size						
	Pape Jam History						
	Jam Counter History						
	Time Series Trouble (SC)						
	Each Section Trouble (SC)						
State Confirmation	Sensor Check						
	Load Check			P.221			
	Memory/HDD Conditio	n		P.228			
	Memory/HDD Adjust-	Memory Check	P.228				
	ment	HDD R/W Check		P.228			
		HDD Format	P.229				
	Adj. Data Table						
ADF	Paper Feed Direction			P.235			
	ADF Adjustment:Lead Edge						
	ADF Adjustment:Side E	Edge		P.237			
	Resist Loop Adj.			P.238			
	Original Size Adj.			P.238			
	Density Adj.			P.239			
	Scan Position Adjustme	ent		P.240			
	Sensor Auto Adjustment						

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	Adjustment/set	ting items	page			
Finisher	Center Staple Position		P.242			
	Half-Fold Position	Half-Fold Position				
	Punch Horizontal Position		P.244			
	Punch Resist Loop		P.245			
Firmware Version	·		P.246			
CS Remote Care			P.247			
System 2	Data Capture		P.268			
	Paper Size Setting	• Tray3	P.268			
		• LCT				
	DipSW Setting		P.268			
	ISW		P.286			
	Option		P.286			
	OEM ON/OFF		_			
	Network Fax Setting		P.286			
	Internet ISW	P.287				
	Trouble Reset	P.287				
List Output	Machine Management	Machine Management List				
	Adjustments List					
	Service Parameter	Service Parameter				
	Protocol Trace					
	 Fax Setting List 					
	 Fax Analysis List 	Fax Analysis List				
Test Mode	Full Image Halftone	P.289				
	Gradation Pattern (No.2)					
	Gradation Pattern (No.3)					
	Gradation Pattern (No.5)					
	Beam Gap Check					
	Line Check Pattern	·				
	Test Pattern Output Mode		P.296			
	Running Mode		P.297			
	Test Fax L	ine1	*1			
	I	ine2				
FAX	Modem/NCU		*1			
	NetWork					
	System					
	Fax File Format					
	Communication					
	List Output					
	Function Parameter					
	Initialization					

176

Adjustment/setting items				
Enhanced Security	CE Password	P.300		
	Administrator Password	P.300		
	Administrator Feature Level	P.301		
	CE Authentication	P.301		
Billing Setting	Counter Setting	P.303		
	Management Function Choice	P.304		

^{*1 (}See the FK-502 Service Manual)

10.2 Setting Method

This machine is provided with a service mode for various types of adjustments/settings. Data adjusted and/or set in this mode are stored in the NVRAM board (NRB).

10.2.1 Start and exit of the service mode

You can access the service mode while the power is both turned ON and OFF. In either way, the started service mode is the same, but how to exit differs.

A. Starting and exiting service mode while the power is ON

- 1. Check to see if the regular copy screen is displayed.
- 2. Press the Utility/Counter key.
- "Meter Count/ Utility screen" Press [Details].
- 4. "Meter Count screen"

Press the Stop key and key pad in the order shown below.

Stop
$$\rightarrow 0 \rightarrow 0 \rightarrow \text{Stop} \rightarrow 0 \rightarrow 1$$

NOTE

- When the CE password is set, a password is required to input to enter the service mode.
- 5. "Service Mode screen"

The service mode is in the start-up condition.

- 6. Select an item to set.
 - The setup screen of each item is displayed.
- 7. Conduct required operations, and press [END/OK] after completion of the operations.
 - The setting made at step 6 becomes effective.
- 8. "Service Mode screen"
 - Press [Exit] to return to the regular copy screen.

B. Starting and exiting service mode while the power is OFF

- 1. While pressing the Utility/Counter key, turn ON the power switch (SW2).
- 2. Trouble reset screen appears.
- 3. Press the [Trouble reset].
- 4. On the Operation panel, press the following keys.

Stop
$$\rightarrow 0 \rightarrow 0 \rightarrow \text{Stop} \rightarrow 0 \rightarrow 1$$

5. Service Mode screen appears.

NOTE

- When the CE password has been set, you must enter the password to enter the service mode.
- 6. Press the key for an item you want to configure.

The setting screen for each item appears.

- 7. Conduct necessary operations and turn OFF the SW2 after completion of operations.
- 8. The new settings become effective after restart.

10.3 Machine Adjust

10.3.1 Print Positioning: Leading Edge (Printer Area)

Adjusts the leading edge timing of the printer image.

This adjustment is used to change the restart timing of paper of the registration roller and adjust the relative position in the sub scan direction of the image against the paper.

The adjustment can be made for each paper feed (each tray, bypass feed and ADU). And for the bypass feed, it is possible to make an adjustment for each type of paper (plain paper, thick paper, thin paper, OHP, envelope and label).

Note

Be sure to complete the Paper Feed Direction Adj. (Printer Area) before starting this adjustment.
 (See P.181)

A. Procedure

- 1. "Service Mode screen"
 - Press [Machine].
- 2. "Machine Adjust screen"
 - Press [Printer Area].
- 3. "Printer Area screen"

Press [Print Positioning: Leading Edge].

"Print Positioning: Leading Edge screen"
 Select an item to adjust and then press [Test Copy].

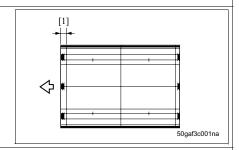
NOTE

- . When [Batch] is pressed, no test copy is available.
- 5. "Test Copy screen"

With paper set in the tray selected, press the Start key to output the test pattern (No. 16).

When paper is fed from the bypass feed, set the corresponding type of paper. And then press the Start key to output the test pattern (No. 16).

- 6. Press [END].
- Measure the leading edge timing with a scale.
 Standard value [1]: 20 ± 0.5 mm



8. "Print Positioning: Leading Edge screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 12.8 (shorter) to + 12.7 mm (longer)

1 step = 0.1 mm

Press [Restore] to return to a value before change.

- 9. Repeat steps 4 to 8 until it gets within the standard value.
- 10. Press [END].

10.3.2 Print Positioning: Side Edge (Printer Area)

Changes the laser write timing and also changes the image position on the drum in the main scan direction to adjust the mis-centering of the printer image.

For each paper feed (each tray, bypass feed, ADU) and for each paper size (common, small size, large size), the adjustment can be made.

Note

Be sure to complete the Cross Direction Adjustment (Scan Area) before making this adjustment.
 (See P.181)

A. Procedure

- "Service Mode screen"
 - Press [Machine].
- 2. "Machine Adjust screen"
 - Press [Printer Area].
- 3. "Printer Area screen"
 - Press [Printer Positioning: Side Edge].
- "Print Positioning: Side Edge screen"
 Select an item to adjust and press [Test Copy].

NOTE

- . When [Batch] is pressed, no test copy is available.
- 5. "Test Copy screen"

With paper set in the tray selected, press the Start key to output the test pattern (No. 16).

- 6. Press [END].
- Fold the output paper into two in the main scan direction to check it for any discrepancy against the center line of the print.

Standard value: 0 ± 1.5 mm or less

8. "Print Positioning: Side Edge screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 4.77 (image: to the rear) to + 4.77 (image: to the front) mm

1 step = 0.09 mm

Press [Restore] to return to a value before change.

- Repeat steps 4 to 8 until it gets within the standard value.
- 10. Press [END].

180

10.3.3 Paper Feed Direction Adj. (Printer Area)

A. Printer

Adjusts the magnification of the printer in the sub scan direction.

This adjustment is used to change uniformly the process speed of the drum and the registration roller and change the magnification in the sub scan direction of the image on the drum.

The adjustment can be made for each type of paper (normal paper, OHP, thick paper, envelope, label and custom paper)

Note

- · The background of the test pattern to be output is fogging. However, this is not abnormal.
- . For thin paper, the setting of normal paper is applicable.

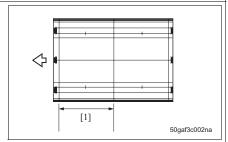
(1) Procedure

- 1. "Service Mode screen"
 - Press [Machine].
- 2. "Machine Adjust screen"
 - Press [Printer Area].
- 3. "Printer Area screen"
 - Press [Paper Feed Direction Adj.]
- "Paper Feed Direction Adj. screen" Press [Printer].
- 5. Select an item for the type of paper and press [Test Copy].
- 6. "Test Copy screen"

Set A3 (for metric) or 11 x 17 (for inch) paper that is the type of paper selected. And then press the Start key to output the test pattern (No. 16).

- 7. Press [END].
- Measure the magnification in the sub scan direction with a scale.

Standard value [1]: \pm 0.5% or less (190 \pm 1 mm or less)



9. "Paper Feed Direction Adj. screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range (normal paper): - 5.0 (smaller) to + 5.0 % (larger)

Setting range (other than the above): - 2.0 (smaller) to + 2.0 % (larger)

1 step = 0.1 %

Press [Restore] to return to a value before change.

10. Repeat steps 4 to 9 until it gets within the standard value.

11. Press [END].

B. Fixing motor clock

Makes appropriate a paper feed loop amount between the registration roller and the fusing roller to prevent the \(\Lambda\) transfer slippage at the position about 26 mm from the trailing edge of the transfer paper.

The adjustment can be made for each type of paper (normal paper, OHP, thick paper, envelope, label, custom paper and user paper).

Note



- This adjustment checks copy image to see if there occurs no transfer jitter. When it is difficult to
 check transfer jitter at copy image, be sure to set "1" for DipSW37-2 before adjustment. By this
 setting, test pattern will be printed.
- Printer magnification in the paper through direction: The adjustment of the printer should have been completed. (See P.181)
- · For thin paper, the setting of normal paper is applicable.

(1) Procedure

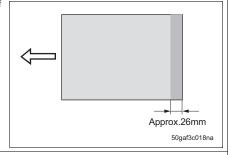
- 1. "Service Mode screen"
 - Press [Machine].
- 2. "Machine Adjust screen"
- Press [Printer Area].
- 3. "Printer Area screen"
 - Press [Paper Feed Direction Adj.]
- 4. "Paper Feed Direction Adj. screen"
 - Press [Fixing Motor Clock].
- 5. Select an item for the type of paper and press [Test Copy].



- 6. "Test Copy screen"
- · Place the original onto the original glass.
- Set A3 (for metric) or 11 x 17 (for inch) paper that is the type of paper selected. With the print count set at 5, press the Start key.
- 7. Press [END].



8. Check all of the 5 output sheets; copy or print, of paper to see if there occurs no transfer jitter.



9. "Paper Feed Direction Adj. screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range (normal paper): -5.0 (smaller) to +5.0 % (larger)

Setting range (user paper): - 0.5 (smaller) to + 0.5 % (larger)

Setting range (other than the above): - 2.0 (smaller) to + 2.0 % (larger)

1 step = 0.1 %

Press [Restore] to return to the value before change.

10. Repeat steps 4 to 9 until it gets within the standard value.

11. Press [END].

10.3.4 Printer Resist Loop

Adjusts the paper loop amount at the registration roller section to adjust a paper skew, wrinkles, or a jam at the registration section.

The adjustment can be made for each paper feed (each tray, bypass feed and ADU) and for each paper size (large size, intermediate size and small size). And for the bypass feed, it is also possible to make an adjustment for each type of paper (normal paper, thick paper, thin paper, OHP, envelope, and label).

A. Procedure

1. "Service Mode screen" Press [Machine].

2. "Machine Adjust screen"

Press [Printer Resist Loop].

3. "Printer Resist Adjustment screen" Select an item to adjust and press [Test Copy].

NOTE

- . When [Batch] is pressed, no test copy is available.
- 4. "Test Copy screen"

With the paper selected set in the tray, press the Start key to output the test pattern (No. 16).

- 5. Press [END].
- 6. Check to see if there occurs no paper skew, wrinkle, or jam at the registration section.
- 7. "Printer Resist Adjustment screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range:

For bypass feed thick paper (large/small), bypass feed thin paper (large/small), bypass feed OHP (large/ small), bypass feed envelope (large/small), and bypass feed label (large/small):

- 16.64 (smaller) to + 16.51 mm (larger)
- 1 step = 0.13 mm

For other than the above:

- Setting range for bizhub 500: 32.00 to + 31.75 mm 1 step = 0.25 mm
- Setting range for bizhub 420: 26.88 to + 26.67 mm 1 step = 0.21 mm
- Setting range for bizhub 360: 26.88 to + 26.67 mm 1 step = 0.21 mm

Press [Restore] to return to the value before change.

- 8. Repeat steps 3 to 7 until it gets within the standard value.
- 9. Press [END].

 Λ



10.3.5 Bypass Tray Adjustment

Conduct this adjustment when the paper size of the bypass tray is not detected correctly.

- "Service Mode screen" Press [Machine].
- "Machine Adjust screen"Press [Bypass Tray Adjustment].
- "Bypass Tray Adjustment screen"
 Press [Max. Width] to expand the guide plate of the bypass tray to the maximum, and then press the Start key.
- 4. When the adjustment is completed normally, "OK" is displayed in the "Result" area.
- Press [Min. Width] to narrow the guide plate of the bypass tray to the minimum, and then press the Start key.
- 6. When the adjustment is completed normally, "OK" is displayed in the "Result" area.
- 7. Press [Test Copy].
- "Test Copy screen"
 Check to see if the size of paper set in the bypass tray is detected correctly and then press [END].
- 9. Repeat steps 3 to 8 when the paper size is not correct.
- 10. Press [END].

10.3.6 Image Position: Leading Edge (Scan Area)

Adjusts the leading edge timing while in the scan in the platen mode.

This adjustment is used to adjust the position at which the read is started in the sub scan direction while the original is being scanned by the exposure unit.

A. Procedure

- "Service Mode screen"
 Press [Machine].
- 2. "Machine Adjust screen"
 - Press [Scan Area].
- 3. "Scan Area screen"
 - Press [Image Position: Leading Edge].
- 4. "Scan Area (Image Position: Leading Edge) screen"
 - Press [Test Copy].
- 5. "Test Copy screen"

With the test chart set on the original glass, select A3 (for metric) or 11×17 (for inch) paper and press the Start key.

- 6. Press [OK].
- 7. Check the scanner leading edge position (original glass).
 - Standard value: a. Envelope 0 ± 2.5 mm or less
 - b. Other paper 0 ± 1.5 mm or less
- 8. "Scan Area (Image Position: Leading Edge) screen"
 - Enter a value through the [+]/[-] or numeric keys and press [Setting].
 - Setting range: 2.0 (shorter) to +2.0 mm (longer)
 - 1 step = 0.1 mm
 - Press [Restore] to return to the value before change.
- 9. Repeat steps 4 to 8 until it gets within the standard value.
- 10. Press [END].

10.3.7 Image Position: Side Edge (Scan Area)

Adjusts the mis-centering of the image in the main scan direction while in the scan in the platen mode.

Note

 Be sure that the adjustment of the Print Position: Side Edge has been completed. (See P.180)

A. Procedure

- "Service Mode screen" Press [Machine].
- 2. "Machine Adjust screen"
 - Press [Scan Area].
- 3. "Scan Area screen"

Press [Image Position: Side Edge].

4. "Scan Area (Image Position: Side Edge) screen"

Press [Test Copy].

5. "Test Copy screen"

With the test chart set on the original glass, select A3 (for metric) or 11 x 17 (for inch) paper and press the Start key.

- 6. Press [OK].
- 7. Fold the output paper into two at the center in the main scan direction and check it for discrepancy against the center line of the print.

Standard value: 0 ± 1.5 mm or less

8. "Scan Area screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 2.96 (image: to the rear) to + 2.96 mm (image: to the front)

1 step = 0.04 mm

Press [Restore] to return to a value before change.

9. Repeat steps 4 to 8 until it gets within the standard value.

10. Press [END].

10.3.8 Cross Direction Adjustment (Scan Area)

Adjusts the magnification of the image in the main scan direction while in the scan in the platen mode and in the DF mode.

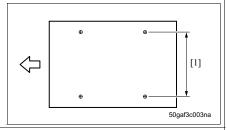
A. Procedure

- 1. "Service Mode screen"
 - Press [Machine].
- 2. "Machine Adjust screen"
 - Press [Scan Area].
- 3. "Scan Area screen"
 - Press [Cross Direction Adjustment].
- "Scan Area (Cross Direction Adjustment) screen" Press [Test Copy].
- 5. "Test Copy screen"

With the test chart set on the original glass or ADF, select A3 (for metric) or 11 x 17 (for inch) paper and press the Start key.

- 6. Press [OK].
- Measure the magnification in the main scan direction with a scale.

Standard value [1]: $\pm~0.5~\%$ or less (200 $\pm~1~mm$ or less)



8. "Scan Area screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 5,0 (smaller) to + 5.0% (larger)

1 step = 0.1%

Press [Restore] to return to the value before change.

9. Repeat steps 4 to 8 until it gets within the standard value.

10. Press [END].

10.3.9 Feed Direction Adjustment (Scan Area)

Adjusts the magnification of the image in the sub scan direction while in the scan on the original glass.

This adjustment is used to change the scan speed of the exposure unit.

A. Procedure

- "Service Mode screen" Press [Machine].
- 2. "Machine Adjust screen"

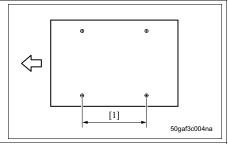
Press [Scan Area].

- 3. "Scan Area screen"
 - Press [Feed Direction Adjustment].
- "Scan Area (Feed Direction Adjustment) screen" Press [Test Copy].
- 5. "Test Copy screen"

With the test chart set on the original glass, select A3 (for metric) or 11×17 (for inch) paper and press the Start key.

- 6. Press [OK].
- 7. Measure the magnification in the sub scan direction with a scale.

Standard value [1]: \pm 0.5 % or less (200 \pm 1 mm or less)



8. "Scan Area (Feed Direction Adjustment) screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 1.00 (smaller) to + 1.00% (larger)

1 step = 0.05%

Press [Restore] to return to a value before change.

- 9. Repeat steps 4 to 8 until it gets within the standard value.
- 10. Press [END].

10.3.10 Lead Edge Erase Adjustment

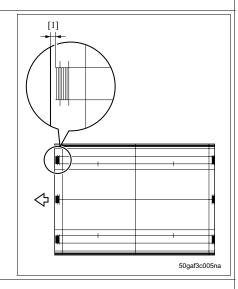
Adjusts the leading edge erasure amount.

A. Procedure

- "Service Mode screen" Press [Machine].
- "Machine Adjust screen"Press [Lead Edge Erase Adjustment].
- "Lead Edge Erase Adjustment screen" Press [Test Copy].
- 4. "Test Copy screen"

With A3 (for metric) or 11 x 17 (for inch) paper selected, press the Start key to output the test pattern (No. 16).

- 5. Press [OK].
- Check the printer leading edge erasure amount. Standard value [1]: 3.5 mm or less



- 7. "Lead Edge Erase Adjustment screen"
 - Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 2.0 (erasure: smaller) to + 2.0 mm (erasure: larger)

1 step = 0.1 mm

Press [Restore] to return to a value before change.

- 8. Repeat steps 3 to 7 until it gets within the standard value.
- 9. Press [END].

10.3.11 Non-Image Area Erase Check

When installing this machine, or when moving its installation location, check to see if the non-image area erase check mechanism of the copy applied setting operates correctly in its installation location, and adjust automatically the sensitivity with which the non-image area is detected.

Pre-arrangements:

- · Open DF fully to the limit.
- Avoid putting anything on the original glass.
- Clean the original glass.

A. Procedure

- "Service Mode screen" Press [Machine].
- 2. "Machine Adjust screen"

Press [Non-Image Area Erase Check].

- "Non-Image Area Erase Check screen" Press the Start key.
- 4. Check to see if "OK" is displayed.
- 5. Press [OK].

When anything other than "OK" is displayed, see "B. Problems and their countermeasures" to check again the non-image area erase setting.

B. Problems and their countermeasures

When a problem is detected by checking the non-image area erase check, an error number is displayed as shown below.

(1) Error 1

Countermeasure - 1

When the non-image area erase function is not used very frequently, or when copy originals that have a dark background are not copied very frequently in non-image area erase, the copier can be used in the current installation location. However, when copy originals that have a dark background are frequently copied, install the copier in a location where less external light gets in (darker) than the present location, and check the non-image area erase check mode again.

(2) Error 2

Countermeasure - 2

When the non-image area erase function is not used very frequently, the copier can be used in the current installation location. However, if the non-image area erase function is frequently used, install the copier in a location where less external light gets in (darker) than the present location, and check the non-image area erase check mode again. At this time, when there is a bright light source such as a fluorescent light installed directly above the copier, reconsider the installation location, or take some measures to shield the light source and check the mode again.

10.4 Imaging Process Adjustment

10.4.1 Charging Main Manual Adj.

Do not conduct this adjustment in the field.

10.4.2 Transfer Manual Adj.

Do not conduct this adjustment in the field.

10.4.3 Separation (AC) Manual Adj.

Do not conduct this adjustment in the field.

10.4.4 Separation (DC) Manual Adj.

Do not conduct this adjustment in the field.

10.4.5 Grid Charging Manual Adj.

Do not conduct this adjustment in the field.

10.4.6 Bias Voltage Manual Adj.

Do not conduct this adjustment in the field.

10.4.7 TCR Adjustment

When changing developer, conduct this adjustment before starting the copy operation. The developer counter is automatically reset.

Note

 When changing developer, be sure not to conduct the copy operation before completion of the TCR adjustment.

A. Procedure

- 1. "Service Mode screen"
 - Press [Imaging Process Adjustment].
- 2. "Process screen"

Press [TCR Adjustment].

- 3. "TCR Adjustment screen"
 - Press the Start key.
- 4. Check to see if "OK is displayed, and also check the TCR adjustment data value.

NOTE

- · The adjustment is completed in about 180 seconds.
- When there occurs a TCR adjustment error due to the developer agitating operation not completed successfully, the message "operating ..." disappears and an error code is displayed.
 (See P.319)
- 5. Press [OK].

10.4.8 Toner Auto Supply

Since this is normally conducted automatically, do not conduct this adjustment in the field.

10.4.9 Toner Density Adjustment

This adjustment can be used to increase and/or decrease the toner density of developer.

Use this adjustment when an image fogging occurs due to the increased toner density of developer and you want to decrease the toner density.

A. Procedure

- "Service Mode screen"
 Press [Imaging Process Adjustment].
- 2. "Process screen"

Press [Toner Density Adjustment].

3. "Toner Density Adjustment screen"

Enter a value through the [+]/[-] or numeric keys.

Setting range: -2 (toner density reduced) to +2 (toner density increased)

1 step = 1

NOTE

- The set value is a value relative to the present set value. When the set value is set to "0," this returns the toner density back to the normal level.
- 4. Press the Start key.
- While in the adjustment, a message "operating ..." is displayed. And after completion of the adjustment, it disappears.

NOTE

- . The toner density is automatically adjusted according to a value set.
- When an error code is displayed while in the toner density adjustment, be sure to check the
 expected defective parts given in the error code list and then conduct again the toner density
 adjustment.

(See P.319)

6. Press [OK].

10.4.10 Laser Diameter Adjustment

The MPC value can be corrected by entering a set value to change the image density (dot diameter).

Major cases in which this adjustment is used.

- · When you want to change the image density.
- When replacing the write unit or TCSB (toner control sensor board), or when cleaning the dust proof glass.

A. Procedure

- "Service Mode screen"
 Press [Imaging Process Adjustment].
- 2. "Process screen"

Press [Laser Diameter Adjustment].

3. "Laser Diameter Adjustment screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: -3 (thinner) to +3 (denser)

1 step = 1

NOTE

- When an adjustment is made in the denser direction, this increases the dot diameter with the toner consumption also increased.
- 4. Press the Start key.
- 5. While in the adjustment, a message "operating ..." is displayed. And after completion of the adjustment, it disappears.
- 6. Press [OK].

10.4.11 LD1 Offset Adj. / LD2 Offset Adj.

Adjusts the 2 laser beam amount (LD1/LD2) equally.

Be sure to make this adjustment when replacing the write unit, drum and developer.

Note

bizhub 500/420/360

Make sure that the TCR adjustment, the toner density adjustment and the dot diameter adjustment have been completed.

A. Procedure

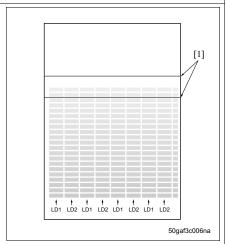
- "Service Mode screen"
 - Press [Imaging Process Adjustment].
- 2. "Process screen"
 - With an item displayed by [↑]/[↓], press "LD1 Offset Adj." / "LD2 Offset Adj.".
- 3. "LD1 Offset Adj. screen" / "LD2 Offset Adj. screen"
 Select "Normal Paper" or "Thick Paper" and press [Test Copy].
- 4. "Test Copy screen"

With corresponding A3 (for metric) or 11×17 (for inch) paper set, press the Start key to output the test pattern.

- 5. Press [END].
- 6. Check the test pattern.

Standard value: Check to see if the density of the image patterns created by LD1/LD2 is the same, and if the starts of the patterns in the high-lighted section are aligned between the 2 reference lines [1] (± 1 gap is OK).

[1] Reference lines



7. "LD1 Offset Adj. screen" / "LD2 Offset Adj. screen"

When outside the standard value, enter a value through the [+]/[-] or numeric keys and press [Setting]. Setting range: – 128 (thinner) to + 127 (denser)

- 1 step = 1 (Pressing the button for a long period allows the value to be changed in increments of 10 steps.)
- 8. Repeat steps 2 to 7 until it gets inside the standard value.
- 9. Press [OK].

10.4.12 LD1 Bias Adj. / LD2 Bias Adj.

Do not conduct this adjustment in the field.

10.5 System 1

10.5.1 Marketing Area

Sets the marketing area of the main body and the fax.

Marketing area of the main body:

By setting the marketing area, the definition of the original detection size and the paper size will be changed. And the selectable languages in "Marketing Area screen" varies according to the marketing area of the firmware.

Japan	US	Europe	Other1	Other2	Other3	Other4
Japan	America	Europe	Saudi Arabia /	Asia-Pacific	China	Taiwan
			Brazil			

Fax Target:

US (America), CA (Canada), JP (Japan), AU (Australia), NZ (New Zealand), EU (Europe), DE (Germany), GB (England), FR (France), CH (Switzerland), NL (Netherlands), BE (Belgium), AT (Austria), NO (Norway), SE (Sweden), FI (Finland), IE (Ireland), DK (Denmark), IT (Italy), ES (Spain), PT (Portuguese), PL (Poland), ZA (South Africa), TW (Taiwan), SA (Saudi Arabia), CN (China), MY (Malaysia), SG (Singapore), KR (Korea), HK (Hong Kong), OT (Argentine)

- "Service Mode screen"
 Press [System 1].
- "System Input screen" Press [Marketing Area].
- "Marketing Area screen"
 Press [Japan] to [Other 4] to select a marketing area.
- When no FK-502 is provided, press [END] to complete the marketing area.
 When FK-502 is provided, press [Fax Target].
- "Fax Target screen"
 Select the marketing area of the fax by [+]/[-].
- 6. Press [END] for registration.
- "Marketing Area screen"
 Press [END] to complete the marketing area.

10.5.2 Tel/Fax Number

Sets the telephone number and the fax number of the service station that are displayed on the screen when a service call occurs.

These telephone and fax numbers are also displayed as the service center contact of the basic screen help of the user screen.

A. Procedure

- 1. "Service Mode screen"
 - Press [System 1].
- 2. "System Input screen"
 - Press [Tel/Fax Number].
- 3. "Service Telephone/Fax Number Setting"
 - Press [TEL] or [FAX].
- 4. Enter the telephone number or fax number through the copy count setting key.
- 5. When setting both the telephone number and the fax number, repeat steps 3 to 4.
- 6. Press [END].

NOTE

. Pressing the Clear key erases all the figures of the items selected.

10.5.3 Serial Number

Sets and displays the serial numbers of the main body and the optional devices.

⚠ Caution

Be absolutely sure not to change the serial numbers of the main body set when installing them.
 Otherwise, a fusing temperature abnormality may result.

- 1. "Service Mode screen"
 - Press [System 1].
- 2. "System Input screen"
 - Press [Serial Number].
 - A serial number that is registered is displayed.
- 3. "Serial Number Input screen"
 - Press a device to be registered: [Printer (Body)], [Option Tray], [LCT], [Finisher], [Fax #1], [Fax #2], [Punch Kit], [Suddle Kit], [Mail Bin Kit].
- 4. "Soft Keyboard screen"
 - Enter a serial number through the alphabet and numeric keys.
- 5. Press [OK].
 - Press [Clear] if you want to make the settings entered invalid.
- 6. Repeat steps 3 to 5 to enter the serial number of each device.
- 7. Press [OK].

10.5.4 Trouble Isolation

When each function (device) is in trouble, isolating a trouble allows the limited use of this machine.

Press [1] or [2] to display an item and set the isolation by [Set] or [Unset] of each item.

A. Procedure

1.	"Service Mode screen"
	Press [System 1].
2.	"System Input screen"
	Press [Trouble Isolation].
3	"Trouble Isolation screen"

4. Press [END].

10.5.5 No Sleep

Sets the availability/unavailability of the sleep while in the administrator mode.

A. Procedure

1.	"Service Mode screen"
	Press [System 1].
2.	"System Input screen"
	Press [No Sleep].
3.	"No Sleep screen"
	Set the availability/unavailability of the sleep by [Permit] or [Prohibit].
4.	Press [END].

10.5.6 Foolscap Size Setting

Sets the Foolscap size.

1.	"Service Mode screen"
	Press [System 1].
2.	"System Input screen"
	Press [Foolscap Size Setting].
3.	"Foolscap Size Setting screen"
	Press [8½ x 13], [8¼ x 13], [8½ x 13¼] or [8 x 13] to set a Foolscap size.
4.	Press [END].

10.5.7 Original Size Detection

Sets the detection size of the original size on the original glass and ADF.

A. Procedure

- 1. "Service Mode screen"
 - Press [System 1].
- 2. "System Input screen"
 - Press [Original Size Detection].
- 3. Press [Original Glass Original Size Detect] of the menu.
- 4. "Original Glass Original Size Detect screen"
 - Press one of the 4 types to set a size series to be detected on the original glass.
- 5. Press [ADF Original Size Detect] of the menu.
- 6. "ADF Original Size Detect screen"
 - Press one of the 4 types to set a size series to be detected on ADF.
- 7. Press [Original Glass Small Size Detect] of the menu.
- 8. "Original Glass Small Size Detect screen"
 - Press either [Detected Size] or [A4S / $8\frac{1}{2}$ x 11S] to set the minimum size to be detected on the original glass.
- 9. Press [OK].

10.5.8 Detected Size Setting

Sets the size detection of the bypass tray and those other than the bypass tray in B series or K size (8K/16K size).

- 1. "Service Mode screen"
 - Press [System 1].
- 2. "System Input screen"
 - Press [Detected Size Setting].
- 3. "8K/16K Select screen"
 - Press [B series] or [K size] to set the size series to be detected.
- 4. Press [END].

10.5.9 Install Date

Sets the start date of the total counter.

A. Procedure

- 1. "Service Mode screen" Press [System 1].
 - 2. "System Input screen" Press [Install Date].
 - 3. "Install Date screen" Press Year (4 digits), Month (2 digits), Day (2 digits) with the copy count setting key and press [Entry].
 - 4. Check the display "The present contents of a setting" to see if it is replaced with a set value that has been input.
 - 5. Press [END].

10.5.10 Initialization

Initializes the setting/adjustment data controlled in non-volatile memory to the value set when shipped from the factory.

Data that can be initialized are as follows.

Data classification	Data
Utility/Administrator Setting Data	Job Memory Setting Data
	FAX Setting Data
	Network Setting Data
Destination Storage Data	
CS Remote Care Setting Data	
Service Mode Setting (Adj.) Data	Image Process Adj. Data
	Machine and ADF Adjustment Data
All History Data	

A. Procedure

- 1. "Service Mode screen" Press [System 1].
- 2. "System Input screen" Press [Initialization].
- 3. "Initialize screen"

Press either one of the data items in the data classification.

- 4. "Utility / Administrator Setting Data" / "Destination Storage Data" / "CS Remote Care Setting Data" / "Service Mode Setting (Adj.) Data" / "Counter Data" Select a data to initialize.
- Pressing [All Select] selects all the data items in the data classification. 5. Pressing the Start key initializes the data selected of the data classification selected.
- 6. When initializing the data of each classification, repeat steps 3 to 5.
- 7. Press [OK].

↑ 10.5.11 Communication System Setting

Selects the communication system used at the RS-232C port.

A. Procedure

1. "Service Mode screen"

Press [System 1].

2. "System Input screen"

Press [Communication System Setting].

- 3. "System Input screen"
- System Input ([CS Remote Care] / [JScribe1] / [JScribe2]) Selects the communication system used at the RS-232C port.
- JScribe ([ON] / [OFF])

When [JScribe1] or [JScribe2] is selected at System Input, set [JScribe] to ON. When [CS Remote Care] is selected at System Input, set [JScribe] to OFF.

Communication specifications of each system are as follows:

	CS Remote Care	JScribe1	JScribe2
Baud rate	9,600 bps	19,200 bps	19,200 bps
Data bit	8 bit	7 bit	8 bit
Parity bit	None	Odd	None
Stop bit	1 bit	1 bit	1 bit

NOTE

Operating conditions when using JScribe are as follows:

- · An optional hard disk and an image controller shall be equipped.
- System memory shall be added (Add-on memory: 128MB).
- 4. Press [OK].

200

10.6 Counter

10.6.1 Display of the Counter

Displays the following data held by this machine on the touch panel.

The counter can be also checked by the output list, CSRemoteCare.

- Total Service
- Fax Communication Error
- Mode
- ADF Counter
- Service call
- JAM
- Present parts life
- Optional parts life
- DM
- Reuse
- Each size
- Paper Jam History
- · Jam counter history
- Time series trouble (SC)
- Each section trouble (SC)

A. Procedure

- "Service Mode screen" Press [Counter].
- 2. "Counter screen"

Press a counter item you want to check.

The counter spread over 2 pages. The displayed page can be switched over by $[\uparrow]$ or $[\downarrow]$.

3. Each "Counter screen"

When there are two or more pages of items, the page can be switched over by $[\uparrow]$ or $[\downarrow]$.

NOTE

• For the individual data check screens of "JAM Counter History" and "Each Section Trouble (SC)," [Clear Counter] is displayed.

Pressing [Clear Counter] displays "Clear Counter Check screen" and pressing [Yes] clears the block data. Pressing [No] returns to the previous screen with no block data cleared. While in the visit to the user for the PM execution, clear these data to check the JAM and SC counts that have occurred since the previous visit.

4. Press [OK].

B. Total Service

Displays the total copy count printed in the service mode and the user mode.

Note

bizhub 500/420/360

• The maximum count is 99,999,999.

No.	CSRC parameter	Item collected	Count condition
1	_	Total Service	Number of paper printed and exited in the single and double sided copy modes.
2	_	Total Service (2-Sides)	Of the above, the number of paper printed and exited in the double sided print mode.

C. FAX Communication Error

Displays the number of errors that occurred while in sending and receiving FAX with errors while in sending separated from those while in receiving.

Note

• The maximum count is 999,999.

No.	CSRC parameter	Item collected	Count condition
1	_	FAX TX Error	Number of errors that occurred while in the FAX sending.
2	_	FAX RX Error	Number of error that occurred while in the FAX receiving.

D. Mode

Displays the use condition for each of the modes used by the copier/scanner/printer/FAX.

Note

• The maximum count is 99,999,999.

CSRC parameter	Item	Count condition
(F1)		
01	No. of Prints in Half-Fold Mode	1 count made while in the folding exit.
02	No. of Prints in Center Staple Mode	1 count made while in the stitch-and-
		fold exit.
05	No. of Staples 1	1 count for 1 staple when stapling in
		the 1-staple mode.
06	No. of Staples 2	1 count for 1 staple when stapling in
		the 2-staple mode.
07	No. of Punches	1 count made while in the punch.
	(F1) 01 02 05 06	(F1) 01 No. of Prints in Half-Fold Mode 02 No. of Prints in Center Staple Mode 05 No. of Staples 1 06 No. of Staples 2

No.	CSRC parameter (F1)	ltem	Count condition
6	08	BOX Housing: Copy – Proof Print	1 count for each completion of a job.
7	09	BOX Housing: Copy – BOX Hold	,
8	0A	BOX Housing: Print – Proof Print	
9	0B	BOX Housing: Print – BOX Hold	
10	0C	BOX Housing: Print	
		- Classified Document	
11	0D	BOX Housing: Scanner - BOX Hold	
12	0E	BOX Housing: FAX Scanning	1 count for each completion of a job
		- BOX Hold	
13	OF	BOX Housing: FAX RX	
		- Distribute by F-Code	
14	10	BOX Housing: FAX RX – Distribute by TSI	
15	11	BOX Housing: FAX RX – BOX Hold	1 count for each completion of a job. F code and other than TSI.
16	12	Output from Box: Copy Image - Print	1 count for each completion of a job.
			Except for the print for checking.
17	13	Output from Box: Copy Image – E-Mail TX	1 count for each completion of a job.
18	14	Output from Box: Copy Image – FTP TX	
19	15	Output from Box: Copy Image – SMB TX	
20	16	Output from Box: Print Image	1 count for each completion of a job.
		- Print (Except Proof Print)	Except for the print for checking.
21	17	Output from Box: Print Image – E-Mail TX	1 count for each completion of a job
22	18	Output from Box: Print Image – FTP TX	
23	19	Output from Box: Print Image – SMB TX	
24	1A	Output from Box: Scan Image - Print	
25	1B	Output from Box: Scan Image	
		– E-Mail TX	
26	1C	Output from Box: Scan Image – FTP TX	
27	1D	Output from Box: Scan Image - SMB TX	
28	1E	Output from Box: FAX Scan Image – Print	
29	1F	Output from Box: FAX Scan Image - FAX TX	
30	20	Output from Box: FAX Scan Image – E-Mail/IFAX TX	
31	21	Output from Box: FAX RX Image - Print	
32	22	Output from Box: FAX RX Image - FAX TX	
33	23	Output from Box: FAX RX Image – E-Mail/IFAX TX	

E. ADF Counter

Displays the number of the paper through by modes of ADF.

Note

bizhub 500/420/360

- The maximum count is 99,999,999.
- 1 count for the single sided copy and 2 counts for the double sided copy.

No.	CSRC parameter	Item	Remarks
	(FO)		
1	00	N of originals fed in ADF mode	
2	01	N of originals fed in RADF mode	
3	02	N of originals fed in RDH mode	No count is made with "0" at all times.
4	03	N of originals fed in RRDH mode	No count is made with "0" at all times.
5	07	N of originals fed in mixed original ADF mode	
6	08	N of originals fed in mixed original RADF mode	
7	0C	N of 2 sided SDF original fed	No count is made with "0" at all times.

F. Service Call

Displays troubles that have occurred for each SC.

Note

- The maximum count is 9,999.
- . The block trouble count is not available for CSRC.
- When the service mode DipSW3-1 is set to "1" (latched), SC34, 35 and 36 make no count.

No.	CSRC	SC cord	
	parameter		
	(EO)		
001	00	02	01
002	01	02	02
003	02	02	03
004	03	02	04
005	04	02	05
006	05	02	06
007	06	02	07
800	07	03	01
009	08	10	01
010	09	10	02
011	0A	10	03
012	0B	11	01
013	0C	11	02
014	0D	11	03
015	0E	11	04
016	0F	11	05
017	10	11	06

parameter (E0)	
/EO\	
(E0)	
018 11 11	07
019 12 11	08
020 13 11	09
021 14 11	10
022 15 11	11
023 16 11	12
024 17 11	13
025 18 11	14
026 19 11	15
027 1A 11	16
028 1B 11	17
029 1C 11	18
030 1D 11	19
031 1E 11	20
032 1F 11	21
033 20 20	01
034 21 22	01

No.	CSRC	SC	cord
	parameter		
	(E0)		
035	22	22	02
036	23	23	01
037	24	23	02
038	25	23	03
039	26	24	01
040	27	24	02
041	28	24	03
042	29	27	01
043	2A	27	02
044	2B	27	03
045	2C	28	01
046	2D	28	02
047	2E	28	03
048	2F	28	04
049	30	32	01
050	31	33	01
051	32	33	02

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Nie	CCDC	00.	a wal
No.	CSRC parameter	SC o	cora
	(E0)		
052	33	35	01
053	34	35	02
054	35	37	01
055	36	38	01
056	37	38	02
057	38	38	03
058	39	38	04
059	ЗА	38	05
060	3B	38	06
061	3C	38	07
062	3D	38	08
063	3E	39	01
064	3F	39	02
065	40	39	03
066	41	39	04
067	42	40	01
068	43	41	01
069	44	44	01
070	45	47	01
071	46	50	01
072	47	50	02
073	48	50	03
074	49	50	04
075	4A	53	01
076	4B	53	02
077	4C	53	03
078	4D	54	01
079	4E	54	02
080	4F	60	01
081	50	60	02
082	51	60	03
083	52	61	01
084	53	62	01
085	54	67	01
086	55	67	02
087	56	80	01
088	57	83	01
089	58	B0	01
090	59	B0	02
091	5A	B0	03
092	5B	B1	10

No.	CSRC	SC	cord
	parameter		50.u
	(EO)		
093	5C	B1	11
094	5D	B1	12
095	5E	B1	13
096	5F	B1	14
097	60	B1	15
098	61	B1	16
099	62	B1	17
100	63	B1	18
101	64	B1	19
102	65	B1	20
103	66	B1	22
104	67	B1	23
105	68	B1	25
106	69	B1	26
107	6A	B1	27
108	6B	B1	28
109	6C	B1	29
110	6D	B1	30
111	6E	B1	31
112	6F	B1	32
113	70	B1	33
114	71	B1	34
115	72	B1	35
116	73	B1	36
117	74	B1	37
118	75	B1	40
119	76	B1	41
120	77	B1	42
121	78	B1	43
122	79	B1	44
123	7A	B1	45
124	7B	B1	46
125	7C	B1	50
126	7D	B1	51
127	7E	B1	52
128	7F	B1	53
129	80	B1	54
130	81	B1	60
131	82	B1	61
132	83	B1	62
133	84	B1	63

No.	CSRC	SC cord	
	parameter		
	(EO)		
134	85	B1	64
135	86	B1	65
136	87	B1	66
137	88	B1	67
138	89	B1	68
139	8A	B1	69
140	8B	B1	70
141	8C	B1	71
142	8D	B1	72
143	8E	B1	73
144	8F	B1	74
145	90	B1	75
146	91	B1	76
147	92	B1	77
148	93	B1	78
149	94	B1	80
150	95	B1	81
151	96	B1	82
152	97	B1	83
153	98	B1	84
154	99	B1	85
155	9A	B1	86
156	9B	B1	87
157	9C	B1	88
158	9D	C1	03
159	9E	C1	81
160	9F	C1	82
161	A0	C1	83
162	A1	C2	84
163	A2	C2	85
164	АЗ	C2	86
165	A4	C2	87
166	A5	C2	88
167	A6	D0	01
168	A7	D0	02
169	A8	D2	01
170	A9	D2	03
171	AA	D2	81
172	AB	D2	82
173	AC	E0	01
174	AD	E0	02

No.	CSRC	SC (cord
	parameter		
	(EO)		
175	AE	E0	03
176	AF	E0	04
177	В0	E0	05
178	B1	E0	06
179	B2	E0	07
180	В3	E0	81
181	B4	E0	82
182	B5	E0	83
183	B6	E0	84
184	B7	E0	85
185	B8	E0	86
186	В9	E0	87
187	BA	E0	88
188	BB	E0	89
189	BC	E0	8A
190	BD	E0	8B
191	BE	E0	8C
192	BF	E0	8D

No.	CSRC	SC (cord
	parameter		
	(EO)		
193	C0	E0	8E
194	C1	E0	8F
195	C2	E0	90
196	C3	E0	91
197	C4	E0	92
198	C5	E0	93
199	C6	E0	94
200	C7	E0	95
201	C8	E0	96
202	C9	E0	97
203	CA	E0	98
204	CB	E0	99
205	CC	E0	9A
206	CD	E0	9B
207	CE	E0	9C
208	CF	E0	9D
209	D0	E0	9E
210	D1	E0	9F

No.	CSRC	SC (cord
	parameter		
	(EO)		
211	D2	E0	A0
212	D3	E0	A1
213	D4	E0	A2
214	D5	E0	АЗ
215	D6	E0	A4
216	D7	E0	A5
217	D8	E0	A6
218	D9	E0	A7
219	DA	E0	A8
220	DB	E0	A9
221	DC	E0	AA
222	DD	E0	AB
223	DE	E0	AC
224	DF	E0	AD
225	E0	E0	AE
226	E1	E0	AF
227	E2	E0	B0
228	E3	E0	B1

G. Time Series Trouble (SC)

For the latest 50 SC's, displays the SC code of cause, the total count, the date of occurrence, the time of occurrence, and the firmware version.

Note

. Press the corresponding SC item to display a firmware version.

H. JAM Counter History

Displays the number of occurrences for each jam code. (Except for stationary jams)

Note

- . The maximum count is 999,999.
- The jam code is a code that is displayed when DipSW10-7 is set at "1."

No.	CSRC	Jam cord	
	parameter	Upper	Lower
	(JO)		
01	00	10	-
02	01	11	_
03	02	12	0
04	03	12	1
05	04	13	0
06	05	13	1

No.	CSRC	Jam cord	
	parameter	Upper	Lower
	(JO)		
07	06	13	2
08	07	13	5
09	08	13	6
10	09	13	7
11	OA	13	8
12	0B	13	9

No.	CSRC	Jam cord	
	parameter	Upper	Lower
	(JO)		
13	0C	13	11
14	0D	14	0
15	0E	14	1
16	OF	15	0
17	10	15	1
18	11	20	1

No.	CSRC	Jam cord	
	parameter	Upper	Lower
	(JO)		
19	12	20	2
20	13	20	3
21	14	20	4
22	15	20	5
23	16	20	6
24	17	20	7
25	18	20	8
26	19	20	9
27	1A	20	10
28	1B	30	-
29	1C	31	-
30	1D	32	-
31	1E	33	-
32	1F	34	-
33	20	50	1
34	21	60	1
35	22	60	2
36	23	61	1
37	24	61	2
38	25	61	3
39	26	61	4

	No.	CSRC	Jam	cord
		parameter	Upper	Lower
		(JO)		
	40	27	61	5
	41	28	61	6
	42	29	61	7
	43	2A	61	8
	44	2B	62	1
	45	2C	62	2
	46	2D	62	3
	47	2E	62	4
	48	2F	62	5
	49	30	62	6
	50	31	62	7
	51	32	62	8
	52	33	63	1
	53	34	63	2
	54	35	63	3
	55	36	63	4
	56	37	63	5
	57	38	63	6
	58	39	63	7
٠	59	ЗА	63	8
	60	3B	66	1

No.	CSRC	Jam	cord
	parameter	Upper	Lower
	(JO)		
61	3C	66	2
62	3D	66	3
63	3E	66	4
64	3F	66	5
65	40	66	6
66	41	66	7
67	42	66	8
68	43	72	16
69	44	72	17
70	45	72	18
71	46	72	21
72	47	72	25
73	48	72	43
74	49	72	81
75	4A	72	82
76	4B	72	84
77	4C	72	85
78	4D	72	90
79	4E	97	1
80	4F	97	2
81	50	97	3

I. Paper Jam History

For the latest 100 jams, displays JAM code, Total Count, Date of Occurrence, Paper Tray, Paper Size, and Zoom.

J. Reuse

Displays the accumulated hours of the parts and the number of occurrences of the job that uses the parts.

Note

• The maximum count is 99,999,999.

No.	CSRC parameter	Item	Count condition
	(F5)		
1	00	Power condition /1 (Total Power ON	1 count for 1 minute.
		time)	
2	01	Power condition /2 (EN-5V ON time)	1 count for 1 minute.
3	02	Low power mode time	1 count for 1 minute.
4	03	WUP time	Accumulated hours during which the
			fusing heater turns on in the warm-up
			condition. 1 count for 1 second.

No.	CSRC parameter (F5)	Item	Count condition
5	04	Print operating time (single sided mode)	Accumulated hours from start to stop of the print. 1 count for 1 second (not including the time period during which the counter stops due to a jam).
6	05	Print operating time (double sided mode)	Accumulated hours from start to stop of the print. 1 count for 1 second (not including the time period during which the counter stops due to a jam).
7	06	Correction operation count	Number of counts the image stabilization control (the fusing temperature lower than 50 °C) is executed. 1 count for each execution.
8	07	APS sensor ON time	Accumulated hours during which the APS sensor turns ON. 1 count for 1 second.
9	08	Platen scan count	Counts the number of occasions in which the scan is made in the platen mode.
10	09	The number of occurrences of the stop due to toner running out.	Counts the number of occasions in which the system stops due to no toner.
11	0A	Polygon stop operation time	
12	0B	The number of occurrences of the Main Power OFF	Counts the number of NMI's.
13	0C	The number of occurrences of the feed door closed	1 count is made each time the feed door is closed.
14	0D	The number of starting all print jobs	
15	0E	Tray 1 paper feed count	1 count is made when paper is fed from the tray 1 each time 1 sheet of paper is exited.
16	0F	Tray 2 paper feed count	1 count is made when paper is fed from the tray 2 each time 1 sheet of paper is exited.
17	10	Tray 3 paper feed count	1 count is made when paper is fed from the tray 3 each time 1 sheet of paper is exited.
18	11	Tray 4 paper feed count	1 count is made when paper is fed from the tray 4 each time 1 sheet of paper is exited.
19	12	The number of prints made by selecting the bypass paper feed tray	1 count is made when paper is fed from the bypass tray each time 1 sheet of paper is exited.
20	13	The number of prints made by selecting the LCT paper feed tray	1 count is made when paper is fed from LCT each time 1 sheet of paper is exited.

K. Each Size

Displays the number of print of each paper size.

Note

- The maximum count is 99,999,999.
- 1 count each time paper is exited (0 count for a blank sheet and 2 counts for the double sided print).

No.	CSRC parameter	Paper size	Remarks
1	01	A3	
2	02	A4	
3	03	A5	
4	04	A6	
5	05	B4	
6	06	B5	
7	07	B6	
8	08	12 x 18	Not used
9	09	11 x 17	
10	0A	8½ x 14	
11	0B	8½ x 11	
12	0C	71/4 x 101/2	Not used
13	0D	5½ x 8½	
14	0E	Foolscap	
15	0F	Post card	
16	10	4 x 6	Not used
17	11	8K	
18	12	16K	
19	13	Others	Not used

10.6.2 Present Parts Life

Displays the counter of an intended part.

And, when replacing an intended part, the counter of the replaced part is reset to manage the service history.

A. Procedure for the display/reset

1. "Service Mode screen"

Press [Counter].

2. "Counter/Data screen"

Press [Present Parts Life].

3. "Parts Counter (Fixed) screen"

Press [\uparrow]/[\downarrow] to check the counter or display a part to be reset.

4. "Parts Counter (Fixed) screen"

Check the count value of an intended part.

When resetting it, press a part to be reset and then press the Clear key.

5. Press [OK].

B. Fixed parts counter list

No.	CSRC	Unit	Parts name	Parts No.
	parameter			
	(Z1)			
1	00	DC (including charge unit)	Drum	_
2	01		Cleaning blade assy	50GA-209
3	02		Drum unit (including charge unit)	50GA-200
4	03	Transfer/separation section	Transfer/separation unit	50GA-260
5	04	Developing unit	Developer	_
6	05		Developing unit	50GA-300
7	06	Main body	Filter mounting plate assy	50GA-336
8	07		Ozon filter	50GA1031
9	08		Suction filter /A assy	40LAR705
10	09		Filter cover assy	50GA-314
11	OA		Suction cover /2 assy	50GA-311
12	0B	Paper feed unit	Tray 1 pick-up roller	40303005
13	0C		Tray 1 paper feed roller	40303005
14	0D		Tray 1 separation roller	40300151
15	0E		Tray 2 pick-up roller	40303005
16	0F		Tray 2 paper feed roller	40303005
17	10		Tray 2 separation roller	40300151
18	11	Bypass unit	Bypass paper feed roller	41313001
19	12		Bypass separation roller	40340151
20	13	Registration section	Paper feed connection roller	50GA3865
21	14		Registration roller /A	50GA3848
22	15		Registration bearing /1	26NA4536
23	16		Registration bearing /2	26NA4537
24	17		Paper feed slide bearing	26NA4082

No	. CSRC	Unit	Parts name	Parts No.
	parameter			
	(Z1)			
25	18	Fusing unit	Fusing roller	50GA5303
26	19		Fusing pressure roller	50GA5304
27	1A		Fusing cleaner assy	50GA-540
28	1B		Heat insulating sleeve /A	26NA5372
29	1C		Fusing bearing /Up	26NA537
30	1D		Fusing bearing /Lw	50GA5359
31	1E		Fusing sensor assy	50GA-54
32	1F	-	Fuse holder assy	26NA-535
. 33	20	-	Fusing claw assy	50GA-530
34	21	-	Fusing driven roller A assy	4040R706
35	22	-	Fusing driven roller B assy	4040R70
36	23	Reverse unit	Paper exit suction filter	50GA440
37	24	Write unit	Write unit	50GA-650
38	25	LU-201	Pick-up rubber	40LA4009
39	26	-	Paper feed rubber	26NA401
40	27	-	Separation rubber	26NA4012
41	28	DF-607	Pick-up roller	43445000
42	29	-	Paper feed roller	45823014
43	2A	-	Separation roller	45823047
44	2B	PC-202 (tray 3/tray 4)	Tray 3 pick-up roller	40303005
45	2C	PC-402 (tray 3 only)	Tray 3 paper feed roller	40303005
46	2D	-	Tray 3 separation roller	40300151
47	2E	-	Tray 4 pick-up roller	40303005
48	2F	-	Tray 4 paper feed roller	40303005
49	30	-	Tray 4 separation roller	40300151
50	31	Fusing unit	Fusing input gear assy	50GA-546

10.6.3 PM

Sets the PM execution cycle or resets the PM counter.

Note

bizhub 500/420/360

• The PM cycle setting has been input in advance and be sure not to change this setting normally.

A. Procedure for the counter reset

- "Service Mode screen"
 Press [Counter].
- "Counter/Data screen" Press [PM].
- 3. "PM Counter screen"
 Check the PM counter.
 - When resetting it, press the Clear key.
- 4. Press [OK].

B. Procedure for the cycle setting

- 1. "Service Mode screen"
 - Press [Counter].
- 2. "Counter/Data screen"
 - Press [PM].
- 3. "PM Counter screen"
 - Enter a PM cycle value (1 to 999999) through the copy count setting button and press [Set].
- 4. Press [OK].

10.7 State Confirmation

10.7.1 Sensor Check

This machine is provided with an input/output check function as a self-diagnostic function. For the sensor check (input check), the state confirmation of each signal can be made.

A. Procedure

- "Service Mode screen"
 Press [State Confirmation].
- "State Confirmation screen" Press [Sensor check].
- 3. "Sensor Check screen"

Press [Check Code] and, when entering the sensor check code in 3 digit through the copy count setting button, a state (ON/OFF or value) is displayed in the Result area.

- For the multi mode, press [Multi Code] and enter a three-digit multi code through the copy count setting key.
- 5. When conducting the sensor check of other signal sources, repeat steps 3 to 4.

B. List of sensors

L		0			Display and	I signal source
Classification	Code	Multi code	Symbol	Name	ON	OFF
<u>B</u>	0	0	TCRS	Drum temperature	0 to 255 *1	
Sig	1	0	TCRS	TCR sensor		
Analog signal	2	0	TCRS	TCR sensor		
A	3	0	TH1	Thermistor /1		
	4	0	TH2	Thermistor /2		
	5	0	IDCS	IDC sensor		
	6	0	HUMS	Humidity sensor		
	7	0	VR1	Paper size VR/BP (bypass)		
eq	10	1	PS18	paper empty sensor /BP (bypass)	No paper	Paper
Paper feed		2	PS23	Lift sensor (bypass)	Up position	Down position
Рар		3	_	Connect detection signal (bypass)	Connection	Non-connection
		4	PS19	Paper size sensor /BP1 (bypass)	Paper	No paper
		5	PS20	Paper size sensor /BP2 (bypass)		
		6	PS21	Paper size sensor /BP3 (bypass)		
		7	PS22	Paper size sensor /BP4 (bypass)		
	11	1	PS5	Paper empty sensor /1	No paper	Paper
		2	PS9	Near-empty sensor /1	Near-empty	Non-near-empty
		3	PS6	Upper limit sensor /1	Upper limit	Not at upper limit
		4	PS8	Tray set sensor /1	Set	Not set
		5	PS10	Paper size sensor /Rr1	*2	•
		6	PS11	Paper size sensor /Fr1		

uc		(D)			Display and	signal source
Classification	de	Multi code	Symbol	Name	ON	OFF
Ssiffi	Code	ij	Sym	Name		
Sa		Σ				
pe	12	1	PS12	Paper empty sensor /2	No paper	Paper
ير و		2	PS15	Near-empty sensor /2	Near-empty	Non-near-empty
Paper feed		3	PS13	Upper limit sensor /2	Upper limit	Not at upper limit
-		4	PS14	Tray set sensor /2	Set	Not set
		5	PS16	Paper size sensor /Rr2	*2	
		6	PS17	Paper size sensor /Fr2		
	13	1	PS115	Paper empty sensor /3 (PC-202)	No paper	Paper
		2	PS113	Near-empty sensor /3 (PC-202)	Near-empty	Non-near-empty
		3	PS114	Upper limit sensor /3 (PC-202)	Upper limit	Not at upper limit
		4	PS112	Tray set sensor /3 (PC-202)	Set	Not set
		5	PS116	Paper feed sensor /3 (PC-202)	Paper	No paper
		6	PS117	Vertical conveyance sensor /3 (PC-202)		
		7	PS118	Paper size sensor /Rr3 (PC-202)	*2	
		8	PS119	Paper size sensor /Fr3 (PC-202)		
	14	1	PS124	Paper empty sensor /4 (PC-202)	No paper	Paper
		2	PS122	Near-empty sensor /4 (PC-202)	Near-empty	Non-near-empty
		3	PS123	Upper limit sensor /4 (PC-202)	Upper limit	Not at upper limit
		4	PS121	Tray set sensor /4 (PC-202)	Set	Not set
		5	PS125	Paper feed sensor /4 (PC-202)	Paper	No paper
		6	PS126	Vertical conveyance sensor /4 (PC-202)		
		7	PS127	Paper size sensor /Rr4 (PC-202)	*2	
		8	PS128	Paper size sensor /Fr4 (PC-202)		
	15	1	PS153	Paper empty sensor (LU)	No paper	Paper
		2	PS155	LU exit sensor (LU)	Paper	No paper
		3	PS152	Upper limit sensor (LU)	Upper limit	Not at upper limit
		4	PS154	Remaining paper sensor /1 (LU)	*3	
		5	PS151	Remaining paper sensor /2 (LU)		
		6	MS151	Upper door interlock switch (LU)	Open	Close
		7	PS156	LU set sensor (LU)	Not set	Set
		8	-	Connect detection signal (LU)	Connection	Non-connection
	16	1	PS5	Right door open/close sensor (PC-402)	Open	Close
		2	PS6	Tray set sensor (PC-402)	Not set	Set
		3	PS7	Lower limit over run sensor (PC-402)	Over run	Not over run
		4	PS2	Vertical conveyance sensor (PC-402)	Paper	No paper
		5	PS1	Paper feed sensor (PC-402)		
		6	MEB	Main tray empty board (PC-402)		
		7	PS9	Sub tray empty sensor (PC-402)		
		8	PS3	Paper empty sensor (PC-402)		
		9	PS4	Upper limit sensor (PC-402)	Upper limit	Not at upper limit

_					Display and	signal source				
atio	Ф	Multi code	0		ON	OFF				
Sific	Code	llti c	Symbol	Name						
Classification		ž	0)							
	16	10	PS13	Lower limit sensor (PC-402)	Lower limit	Not at lower limit				
ir fee		11	PS12	Shift home sensor (PC-402)	Home position	Other than				
Paper feed						home position				
		12	PS11	Shift position sensor (PC-402)	Shift position	Not at shift				
						position				
		13	PS14	Shift gate position sensor (PC-402)	Gate lock	Gate release				
		14	PS10	Paper lift motor encoder sensor (PC-402)	0 to 255					
		15	SW1	Tray release switch	ON	OFF				
	17	1	PS19,	Paper size sensor /BP1, /BP2, /BP3, /BP4	0 to 15 *4					
			PS20,	(bypass)						
			PS21,							
		0	PS22	Day on size to a such (4	0+- 45 *5					
		2	PSB/1	Paper size board /1	0 to 15 *5					
						3	PSB/2	Paper size board /2		
		4	PSDB3	Paper size detect board /3 (PC-202)						
		5	PSDB4	Paper size detect board /4 (PC-202)		T.				
nce	20	1	PS1	Registration sensor	Paper	No paper				
/eya		2	PS2	Vertical conveyance sensor						
Conveyance	22	0	PS3	Fusing exit sensor	_					
	23	0	MS	Interlock switch	Open	Close				
	24	0	PS7	Feed door open/close sensor						
	25	0	PS111	Right door open/close sensor (PC-202)						
Optical device	40	1	PS30	Scanner home sensor	Other than home position	Home position				
otical o		2	PS31	APS timing sensor	DF close	DF open				
ion ion	50	1	_	Serial communication check when the	OK	NG				
ruct				power is turned ON (DF)						
Specific function		2	_	Serial communication check when the						
peci				power is turned ON (FS)	1					
\overline{\sigma}		3	_	Serial communication check when the power is turned ON (SubCPU)						
		4		Serial communication check when the						
		4	_	power is turned ON (Main body)						
	51	1	_	Main body identification signal	bizhub 420/360	bizhub 500				
		2	_	Machine type code	"129" =	"128" =				
		_	_	Widoriino type code	bizhub 420/360	bizhub 500				
S	52	1	_	JS connection detection	Connection	Non-connection				
1 2	-	2	_		_	_				
		3	PS1	Paper full sensor	Full	Other than full				
		Ü	. 01	. apa. ia. ooilooi		Salor train full				

<u>A</u>



Ē					Display and	signal source		
Classification	Code	Multi code	Symbol	Name	ON	OFF		
Analog signal	57	1	PZS	Toner remaining sensor	Detected	Not detected		
Toner supply		2	PS4	Toner bottle sensor				
Analog signal	58	0	TH1/ TH2	The higher value of thermistor /1 and thermistor /2	0 to 255			
님	60	1	PS5	Original empty sensor	Original	No original		
		2	PS6	Original feed sensor				
		3	PS9	Original registration sensor				
		4	PS8	Original detection sensor				
		5	PS10	Original exit sensor				
		6	PS7	Cover open/close sensor	Close	Open		
		7	SW3	DF open/close switch (Main body side)				
		8	MOSDB	Mix original size detection board	Original	No original		
		9	MOSDB	Mix original size detection board				
		10	MOSDB	Mix original size detection board				
		11	PS1	Original size sensor /1				
				12	PS2	Original size sensor /2		
		13	PS3	Original size sensor /3				
		14	PS4	Original size sensor /4				
		15	VR1	Original size VR	0 to 255 *1			
510	70	1	PS4	Entrance sensor	Paper	No paper		
FS-5		2	PS5	Conveyance sensor				
		3	PS6	Alignment sensor /1	Home position	Other than		
		4	PS7	Alignment sensor /2		home position		
		5	SW3	Tray overrun switch	Not at upper limit/lower limit	Upper limit/ lower limit		
		6	SW2	Shutter switch	Not open	Close		
		7	SW1	Door switch	Close	Open		
		8	_	_	-	-		
		9	PS4	Encoder sensor (PU)	Light blocking	Light passing through		
		10	PS23	Paper guide home sensor (SD)	Home position	Other than home position		

_					Display and	signal source
atior	m	ode	0		ON ON	OFF
Classification	Code	Multi code	Symbol	Name	ON	OH
	70	11	PS14	Lower limit sensor	Lower limit	Not at lower limit
FS-510		12	PS15	Upper limit sensor	Upper limit	Not at upper limit
ŭ		13	_	OT-601 connection detection	Connection	Non-connection
		14	PS3	Tray position sensor	Tray detected	Tray not detected
		15	PS16	Shutter home sensor	Close	Open
		16	_	_	_	_
		17	PS11	Exit paddle home sensor	Home position	Other than
		18	PS12	Exit roller home sensor		home position
		19	PS8	Stacker sensor	Paper	No paper
		20	PS10	Stapler home sensor	Other than home position	Home position
		21	_	Stapler ready sensor	Ready	Unready
		22	_	Staple empty sensor	No staple	Staple
		23	_	Staple home sensor	Home position	Other than home position
		24	_	_	_	_
		25	PS2	Punch position sensor /1 (PU)	Home position at odd numbered times	Home position at initialization
			26	PS3	Punch position sensor /2 (PU)	At the center of stroke
		27	PS1	Punch scraps full sensor (PU)	Full	Other than full
		28	PS22	Folding roller home sensor (SD)	Home position	Other than home position
		29	SW4	Guide plate switch	Close	Open
		30	PS23	Paper guide home sensor (SD)	Home position	Other than home position
		31	PS20	Exit sensor (SD)	Paper	No paper
		32	PS21	Tray empty sensor (SD)		
		33	-	Staple home sensor /Rr (SD)	Home position	Other than home position
		34	_	Stapler ready sensor /Rr (SD)	Ready	Unready
		35	_	Staple empty sensor /Fr (SD)	No staple	Staple
		36	_	Staple home sensor /Fr (SD)	Home position	Other than home position
		37	_	Stapler ready sensor /Fr (SD)	Ready	Unready
		38	_	Staple empty sensor /Fr (SD)	No staple	Staple
		39	SW4	SD interlock switch (SD)	Set	Not set
		40	PS18	Exit home sensor (SD)	Open	Close
		41	PS1	Paper detection sensor /1 (MT)	No paper	Paper

С					Display and	signal source
Classification	Code	Multi code	Symbol	Name	ON	OFF
10	70	42	PS5	Paper full sensor /1 (MT)	Full	Other than full
-S-510		43	PS2	Paper detection sensor /2 (MT)	No paper	Paper
ш		44	PS6	Paper full sensor /2 (MT)	Full	Other than full
		45	PS3	Paper detection sensor /3 (MT)	No paper	Paper
		46	PS7	Paper full sensor /3 (MT)	Full	Other than full
		47	PS4	Paper detection sensor /4 (MT) No paper		Paper
		48	PS8	Paper full sensor /4 (MT)	Full	Other than full
F	70	1	PS1	Sub tray exit sensor	Paper	No paper
FS-511		2	PS3	Intermediate conveyance sensor		
ш.		3	PS4	Main route conveyance sensor		
		4	PS2	Bypass route conveyance sensor		
		5	PS6	Sub tray full sensor	Full	Other than full
		6	PS7	Main tray full sensor		
		7	PS9	Alignment home sensor	Home position	Other than
		8	PS14	Stapler home sensor		home position
		9	PS12	Roller release home sensor	Released	Pressed
		10	PS13	Exit roller home sensor		
		11	PS5	Alignment tray sensor	Paper	No paper
		12	PS22	Stapler home sensor /Rr	Home position	Other than
						home position
		13	PS20	Staple empty sensor /Rr	No staple	Staple
		14	PS21	Stapler ready sensor /Rr	Ready	Unready
		15	PS25	Stapler home sensor /Fr	Home position	Other than home position
		16	PS23	Staple empty sensor /Fr	No staple	Staple
		17	PS24	Stapler ready sensor /Fr	Ready	Unready
		18	PS19	Main tray upper limit sensor	Paper surface detected	Paper surface not detected
		19	PS8	Main tray reset sensor	Other than paper removal	Paper removal
		20	SW2	Main tray upper limit switch	Upper limit	Not at upper limit
		21	PS10	Shift home sensor	Front home	Rear home
	-				position	position
		22	_	_	_	-
		23	PS15	Punch encoder sensor	Light passing	Light blocking
		24	PS11	Shift encoder sensor	through	
		25	_	_	_	_
		26	_	_	_	_
		27	PS2	Path sensor (RU)	Paper	No paper

LO		O)			Display and signal source	
Classification	Code	Multi code	Symbol	Name	ON	OFF
Se	80	1 PS24		ADU conveyance sensor /1	Paper	No paper
ADU/Reverse	•	2	PS25	ADU conveyance sensor /2		
	81	81 1 PS27		Reverse sensor		
AD		2	PS26	ADU open/close sensor	Open	Close
		3	_		Set	Not set

^{*1} Resolution 1024 is also displayed as resolution 256.

^{*2} The size in the main scan direction is shown by the combination of the ON/OFF of the paper size sensors /Rr and /Fr.

Sensor check	Tray 1	11-5	11-6	Paper size	
	Tray 2	12-5	12-6		
	Tray 3	13-7	13-8		
	Tray 4	14-7	14-8		
Sensor check display		ON	OFF	A3, B4, A4, B5	
		ON	ON	11 x 17	
		OFF	ON	A4S, 81/2 x 11S	
		OFF	OFF	A5S, B5S, 81/2 x 11S	

*3 ON/OFF combination of remaining paper sensor /1 (PS154) and /2 (PS151) represents an amount of paper remained in LU.

Sensor check	15-4	15-5
Remaining paper sensor	/1 (PS154)	/2 (PS151)
Full amount	ON	OFF
Medium amount	ON	ON
Small amount	OFF	ON

*4 The combination of the ON/OFF of the paper size sensors /BP1 (PS19), /BP2 (PS20), /BP3 (PS21) and /BP4 (PS22) is shown in 4-bit data (0 to 15).

, ,		,	,	
Sensor check display	PS19	PS20	PS21	PS22
0	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF
2	OFF	ON	OFF	OFF
3	ON	ON	OFF	OFF
4	OFF	OFF	ON	OFF
5	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF
7	ON	ON	ON	OFF
8	OFF	OFF	OFF	ON
9	ON	OFF	OFF	ON
10	OFF	ON	OFF	ON
11	ON	ON	OFF	ON
12	OFF	OFF	ON	ON
13	ON	OFF	ON	ON
14	OFF	ON	ON	ON
15	ON	ON	ON	ON

*5 The combination of the ON/OFF of the paper size boards and the paper size detection boards (4 in all) is shown in 4-bit data (0 to 15).

Sensor check display	State of each	of the 4 senso	rs on the pape	r size boards		
17-2 (tray 1), 17-3 (tray 2),	/1 (PSB /1) and /2 (PSB /2) and the paper size detect					
17-4 (tray 3), 17-5 (tray 4)	boards /3 (PS	boards /3 (PSDB /3) and /4 (PSDB /4)				
	1	2	3	4		
0	OFF	OFF	OFF	OFF		
1	ON	OFF	OFF	OFF		
2	OFF	ON	OFF	OFF		
3	ON	ON	OFF	OFF		
4	OFF	OFF	ON	OFF		
5	ON	OFF	ON	OFF		
6	OFF	ON	ON	OFF		
7	ON	ON	ON	OFF		
8	OFF	OFF	OFF	ON		
9	ON	OFF	OFF	ON		
10	OFF	ON	OFF	ON		
11	ON	ON	OFF	ON		
12	OFF	OFF	ON	ON		
13	ON	OFF	ON	ON		
14	OFF	ON	ON	ON		
15	ON	ON	ON	ON		

10.7.2 Load Check

This machine is provided with an input/output check function as a self-diagnostic function. For the load check, the check and adjustment (output check) of the load operation can be made.

A. Procedure

- "Service Mode screen"
 Press [State Confirmation].
- 2. "State Confirmation screen"
- Press [Load check].

 3. "Load Check screen"
 - Press [Check Code] and enter a load check code in 3 digits through the copy count setting key.
- For the multi mode, press [Multi Code] and enter a multi code in 3 digits through the copy count setting key.
- 5. Press the Start key.

The load check operation starts with a message "Operating" displayed.

6. Press the Stop key.

The load check is completed with a message "Fin" displayed.

7. When conducting other load operations or the output check of signals, repeat steps 3 to 6.

B. List of loads

Classification	Code	Multi code	Symbol	Name	Restrictive conditions
ge	0	0	L1	Exposure lamp	
High voltage/image	1	0	M4, SD5	Toner supply motor, toner solenoid turn ON at the same time	Same as 55-003
peg	20	1	CL4	Feed clutch /1	
e e		2	CL5	Feed clutch /2	
Paper feed	•	3	CL6	Feed clutch /BP	
	•	4	SD1	Pick-up solenoid /BP	
		5	SD151	Pick-up solenoid (LU)	
	21	1	M9	Feed motor (LS250)	
	•	2		Feed motor (LS210)	
	•	3		Feed motor (LS125)	
	•	4	M122	Paper feed motor /3 (LS250) (PC-202)	Valid only when the paper empty sen-
	•	5		Paper feed motor /3 (LS210) (PC-202)	sor /3 (PS115) detects a no paper condition.
		6	M123	Paper feed motor /4 (LS250) (PC-202)	Valid only when the paper empty sen-
		7		Paper feed motor /4 (LS210) (PC-202)	sor /4 (PS124) detects a no paper condition.

Classification	Code	Multi code	Symbol	Name	Restrictive conditions
Ø	21	8	M150	Feed motor (LS250) (LU)	
fee		9		Feed motor (LS210) (LU)	
Paper feed		11	M9,	Feed motor (LS250), registration	
۵			CL1,	clutch, loop clutch turn ON at the	
			CL2	same time	
		12	M122	Paper feed motor /3 (LS125) (PC-202)	Valid only when the paper empty sensor /3 (PS115) detects a no paper condition.
		13	M123	Paper feed motor /4 (LS125) (PC-202)	Valid only when the paper empty sensor /4 (PS124) detects a no paper condition.
		14	M150	Feed motor (LS125) (LU)	
	22	1	M120	Vertical conveyance motor /3 (LS250) (PC-202)	
		2		Vertical conveyance motor /3 (LS210) (PC-202)	
		3		Vertical conveyance motor /3 (LS125) (PC-202)	
		4	M121	Vertical conveyance motor /4 (LS250) (PC-202)	
		5	-	Vertical conveyance motor /4 (LS210) (PC-202)	
		6		Vertical conveyance motor /4 (LS125) (PC-202)	
		7	M120, M121	Vertical conveyance motor /3, /4 (LS250) (PC-202)	
		8		Vertical conveyance motor /3, /4 (LS210) (PC-202)	
		9		Vertical conveyance motor /3, /4 (LS125) (PC-202)	
		10	M2	Vertical conveyance motor (LS250) (PC-402)	
		11		Vertical conveyance motor (LS210) (PC-402)	
		12		Vertical conveyance motor (LS125) (PC-402)	
	23	1	M7	Paper lift motor /1	The upper limit sensor /1 (PS6) turns ON, or it is stopped by the stop button.
		2	M8	Paper lift motor /2	The upper limit sensor /2 (PS13) turns ON, or it is stopped by the stop button.

Paper feed Classification	Code	Multi code	Symbol	Name	Restrictive conditions
aper feed	23	3	M124	Paper lift motor /3 (PC-202)	The upper limit sensor /3 (PS114) turns ON, or it is stopped by the stop button.
ď		4	M125	Paper lift motor /4 (PC-202)	The upper limit sensor /4 (PS123) turns ON, or it is stopped by the stop button.
		5	M151	Paper lift motor (LU)	The upper limit sensor (PS152) turns ON, or it is stopped by the stop button.
		6	M9, SD1	Feed motor, pick-up solenoid /BP turn ON at the same time	Valid only when the paper empty sensor/BP (PS18) detects a no paper condition.
	25	1	CL1	Registration clutch	
		2	CL2	Loop clutch	
		3	CL3	Vertical conveyance clutch	
		4	CL151	Feed clutch (LU)	
	29	0	SD2	Drum claw solenoid ON	
device	31	1	M2, L1	Scanner motor, exposure lamp	After home position search, A3 makes a single scan operation.
Optical device		2		Scanner motor, exposure lamp	After home position search, A3 makes a continuous scan operation.
0	32	1	M5	Polygon motor (LS250)	
		2		Polygon motor (LS210)	
	34	0	M2, L1	Shading correction operation	
	36	0	LDB	Laser PWM (0 to 255)	
•	37	0	LDB, M5	Laser turns ON forcibly	The polygon motor (M5) turns ON and OFF at the same time.
•	38	0	LDB, M5	LD alarm check	The polygon motor (M5) turns ON at the same time and the results are displayed when it turns OFF.
		999		LD alarm, data clear	
	39	0	L1	Platen stop APS	The exposure lamp turns ON with APS processed forcibly.
dy	40	1	M11	Fusing motor (LS250)	
ybod r		2		Fusing motor (LS210)	
Mair		3		Fusing motor (LS125)	
·	41	1	M1	Drum motor (LS250)	The charging corona turns ON at the same time.
		2		Drum motor (LS210)	The charging corona turns ON at the same time.
		3		Drum motor (LS125)	The charging corona turns ON at the same time.

Classification	Code	Multi code	Symbol	Name	Restrictive conditions
हे	41	4	M1	Drum motor (LS250)	
òq		5		Drum motor (LS210)	
Main body		6		Drum motor (LS125)	
	42	1	FM3,	Exhaust fan /Fr, /Rr turn ON at the	
			FM9	same time	
		2	FM4	Drum cooling fan	
		3	FM2,	Fusing cooling fan /Fr, /Rr turns ON at	
			FM8	the same time	
		4	FM1	Power supply cooling fan	
		5	FM6	Developing suction fan	
		6	FM5	Coveyance suction fan	
		7	FM7	Developing cooling fan	
	43	1	TCT	Total counter 1 count up	
		2	KCT	Key counter 1 count up	
	44	1	_	_	_
		2	МЗ	Developing motor (LS210)	
		3		Developing motor (LS125)	
	45	1	L2	Fusing heater lamp /1	∆ Caution
		2	L3	Fusing heater lamp /2	Since no high temperature
		3	L2, L3	Fusing heater lamp /1, /2 turn ON at	detection is made, be careful not to turn on for more than 10
				the same time	seconds. Otherwise, the fusing
		4	L2, M11	Fusing heater lamp /1, fusing motor turn ON at the same time	roller may deform, thus caus-
		5	L3,	Fusing heater lamp /2, fusing motor	ing a fire.
			M11	turn ON at the same time	
		6	L2, L3,	Fusing heater lamp /1, /2, fusing	
			M11	motor turn ON at the same time	
oanel	48	0	PKB	Operation panel check (panel key- board LEDs all turm ON)	
ion	49	0	LCD	Operation panel check	
Specific function Operation panel		1	_	-	_
	51	1	EL	Only erase lamp 24V ON	
nctic		2	EL	Erase lamp	
c fu	52	0	TSL	Transfer exposure lamp	
ecifi	53	0	SD4	Web solenoid	
Sp	55	1	M4	Toner supply motor	
		2	SD5	Toner solenoid	
		3	M4,	Toner supply motor, toner solenoid	
			SD5	turn ON at the same time	

Specific function Classification	Code	Multi code	Symbol	Name	Restrictive conditions
uc	56	1	M10	Toner bottle motor (CW)	
ncti		2		Toner bottle motor (CCW)	
ic fu	57	0	PZS	Toner remaining sensor ON/OFF	
ecif		1		Toner remaining sensor ON	
S	59	0	RL1	Main relay	
H	60	1	M1	Original feed motor	
		2	M2	Original conveyance motor	
		3	FM3	Cooling fan	
		4	SD1	Pressure roller release solenoid	
		5	SD2	Stamp solenoid	
		6	LB	Print lamp (LED board) green ON	
		7	LB	Print lamp (LED board) red ON	
		8	M1, M2,	1 side original scan continuous operation (no original)	
		9	SD1	2 sides original scan continuous operation (no original)	
		10		1 side original scan continuous operation (original)	Operates according to the original size set.
		11		1 side mixed original scan continuous operation (original)	
		12		2 sides original scan continuous operation (original)	
0	70	1	M2	Conveyance motor (10 seconds ON)	
FS-510		2	_	_	_
Œ		3	M4, M5	After alignment motor /Rr, /Fr operation, home position search	
		4	_	_	_
		5	M11	Tray lift motor up	Stops when the upper limit sensor (PS15) turns ON after the tray position sensor (PS3) detects the tray 2.
		6	M11	Tray lift motor initial operation	After the tray goes down, it goes up when the lower limit sensor (PS14) turns ON and it stops when PS15 turns ON. It becomes valid after executing the load check 70-5.
		7	M12	Shutter close/open operation once	At the same time, the paper exit roller release/pressure operation is made by the paper exit roller release motor (M6).
		8	_	_	_
		9	_	_	_
		10	-	_	_

_					
Classification	Code	Multi code	Symbol	Name	Restrictive conditions
FS-510	70	11	M6	Release/press operation of exit roller once	
Œ.		12	M9	Open/close operation once of paper exit opening (SD)	
		13	_	_	_
		14	_	_	_
		15	_	_	_
		16	_	_	_
		17	M7	After 2-staple positioning, home position search	
		18	-	_	_
		19		_	_
		20	-	_	_
		21		_	_
		22	_	_	_
		23	M10, M14	Folding once (SD)	
		24 to 52	-	_	_
		53	M1,	Exit motor (1 second ON), stacker	
			SD1	paddle solenoid ON/OFF	
		54	M1, SD2	Exit motor (1 second ON), exit paddle solenoid ON/OFF	
		55 to 77	_	_	_
		78	M1	Punching once (PU)	
		79	M2	Switching the number of punches	Inch only
verse	80	1	M6	Reverse motor (LS250) rotating forward	
ADU/Reverse		2		Reverse motor (LS210) rotating forward	
4		3		Reverse motor (LS125) rotating forward	
		4		Reverse motor (LS250) rotating backward	
		5		Reverse motor (LS210) rotating back-	
		6		Reverse motor (LS125) rotating back-	
	0.1		OL 7	ward	
	81	1	CL7	ADU conveyance clutch /Up	
		2	CL8	ADU conveyance clutch /Lw	
		3	M9, CL7	Feed motor, ADU conveyance clutch /Up turn ON at the same time	
			OLI	7 Op turn Orvat the same time	

	Classification	Code	Multi code	Symbol	Name	Restrictive conditions
	se	81	4	M9,	Feed motor, ADU conveyance clutch	
	ver			CL8	/Lw turn ON at the same time	
	ADU/Reverse		5	M9,	Feed motor, ADU conveyance clutch	
	ADL			CL7,	/Up, /Lw turn ON at the same time	
				CL8		
		83	0	SD3	Reverse solenoid	
A	de	89	0	_	KM brand setting	
A	mo		1	_	OEM setting (A-Type)	
\triangle	ecial		2	_	OEM setting (B-Type)	
A	Adjustment/special mode		3	_	OEM setting (C-Type)	
	nen	90	0	_	PM counter clear	
	ustr	91	0	_	Process counter clear	No use allowed in the field.
	Adj		1	_	Drum counter clear	No use allowed in the field.
		92	_	_	NVRAM board data reset	No operation available in the field.
		93	0	-	Field initial set	

10.7.3 Memory/HDD Condition

Displays the memory capacity and the hard disc capacity (total/free space).

A. Procedure

1. "Service Mode screen"

Press [State Confirmation].

2. "State Confirmation screen"

Press [Memory/HDD condition].

The memory package capacity, and the total capacity and the free capacity of HDD are displayed.

3. Press [END].

10.7.4 Memory Check (Memory/HDD Adjustment)

Checks the memory operation.

A. Procedure

1. "Service Mode screen"

Press [State Confirmation].

2. "State Confirmation screen"

Press [Memory/HDD Adjustment].

- 3. Press [Memory Check] from the menu.
- 4. "Memory Check screen"

Press [Rough Check] or [Detail Check].

5. Press the Start key.

When completed normally, it is displayed that the memory check result is "OK."

6. Press [END].

10.7.5 HDD R/W Check (Memory/HDD Adjustment)

Conducts the read/write check of the hard disc.

A. Procedure

1. "Service Mode screen"

Press [State Confirmation].

2. "State Confirmation screen"

Press [Memory/HDD Adjustment].

3. Press [HDD R/W Check] from the menu.

4. "HDD R/W Check screen"

Press the Start key.

When completed normally after checking, it is displayed that the check result is "OK."

5. Press [END].

10.7.6 HDD Format (Memory/HDD Adjustment)

Formats HDD.

Note

. When formatting HDD, all the data stored in HDD gets lost and becomes unrecoverable.

A. Procedure

- "Service Mode screen"
 Press [State Confirmation].
- 2. "State Confirmation screen"

Press [Memory/HDD Adjustment].

3. Press [HDD Format] from the menu.

The screen for confirmation is display.

4. Press [Yes].

When formatting is executed and completed, a message "The formatting of HDD is completed" is displayed.

- 5. Turn OFF the power switch (SW2) and the main power switch (SW1) in this order.
- 6. After waiting for 10 seconds or more, turn ON SW1 and SW2 in this order.

Note

 Turning ON SW1 not waiting for 10 seconds or more after turning it OFF may damage HDD. Be sure to turn ON SW1 10 seconds or more after turning it OFF.

10.7.7 Adj. Data Table

Displays the adjustment data set for this machine.

A. Procedure

- 1. "Service Mode screen"
- Press [State Confirmation].

 2. "State Confirmation screen"
 - Drago [Adi Data Table]
 - Press [Adj. Data Table].
- 3. "Adj. Data Table screen"
 - Press [\uparrow] or [\downarrow] to display necessary items.
- 4. Pressing [NVRAM Value] switches the display into the step number display set and pressing also [Adjust Value] switches the display into the adjustment value (the value of 1 step x the number of steps).
- 5. Press [OK].

10.7.8 Adj. Data Table

Display	Adjustment item
1/28	Print position adjustment: leading edge (tray 1)
	Print position adjustment: leading edge (tray 2)
	Print position adjustment: leading edge (tray 3)
	Print position adjustment: leading edge (tray 4)
	Print position adjustment: leading edge (LCT)
	Print position adjustment: leading edge (bypass (normal paper))
	Print position adjustment: leading edge (bypass (thick paper: large))
2/28	Print position adjustment: leading edge (bypass (thick paper: small))
	Print position adjustment: leading edge (bypass (thin paper))
	Print position adjustment: leading edge (bypass (OHP))
	Print position adjustment: leading edge (bypass (envelope))
	Print position adjustment: leading edge (bypass (label: large))
	Print position adjustment: leading edge (bypass (label: small))
	Print position adjustment: leading edge (ADU)
3/28	Print position adjustment: side edge (tray 1 (common))
	Print position adjustment: side edge (tray 1 (small size))
	Print position adjustment: side edge (tray 1 (large size))
	Print position adjustment: side edge (tray 2 (common))
	Print position adjustment: side edge (tray 2 (small size))
	Print position adjustment: side edge (tray 2 (large size))
	Print position adjustment: side edge (tray 3 (common))
4/28	Print position adjustment: side edge (tray 3 (small size))
	Print position adjustment: side edge (tray 3 (large size))
	Print position adjustment: side edge (tray 4 (common))
	Print position adjustment: side edge (tray 4 (small size))
	Print position adjustment: side edge (tray 4 (large size))
	Print position adjustment: side edge (LCT)
	Print position adjustment: side edge (ADU (common))
5/28	Print position adjustment: side edge (ADU (small size))
	Print position adjustment: side edge (ADU (large size))
	Print position adjustment: side edge (bypass (common))
	Print position adjustment: side edge (bypass (small size))
	Print position adjustment: side edge (bypass (large size))
	Magnification in the printer feed direction (printer: normal paper)
	Magnification in the printer feed direction (printer: OHP (large))

Display	Adjustment item
6/28	Magnification in the printer feed direction (printer: OHP (small))
	Magnification in the printer feed direction (printer: thick paper (large))
	Magnification in the printer feed direction (printer: thick paper (small))
	Magnification in the printer feed direction (printer: envelope)
	Magnification in the printer feed direction (printer: label (large))
	Magnification in the printer feed direction (printer: label (small))
	Magnification in the printer feed direction (printer: custom paper)
7/28	Magnification in the printer feed direction (fixing motor clock: normal paper)
	Magnification in the printer feed direction (fixing motor clock: OHP (large))
	Magnification in the printer feed direction (fixing motor clock: OHP (small))
	Magnification in the printer feed direction (fixing motor clock: thick paper (large))
	Magnification in the printer feed direction (fixing motor clock: thick paper (small))
	Magnification in the printer feed direction (fixing motor clock: envelope)
	Magnification in the printer feed direction (fixing motor clock: label (large))
8/28	Magnification in the printer feed direction (fixing motor clock: label (small))
	Magnification in the printer feed direction (fixing motor clock: custom paper)
	Magnification in the printer feed direction (fixing motor clock: user paper)
	Printer registration loop amount (tray 1 (small))
	Printer registration loop amount (tray 1 (large))
	Printer registration loop amount (tray 2 (small))
	Printer registration loop amount (tray 2 (middle1))
9/28	Printer registration loop amount (tray 2 (middle2))
	Printer registration loop amount (tray 2 (large))
	Printer registration loop amount (tray 3 (small))
	Printer registration loop amount (tray 3 (middle))
	Printer registration loop amount (tray 3 (large))
	Printer registration loop amount (tray 4 (small))
	Printer registration loop amount (tray 4 (middle))
10/28	Printer registration loop amount (tray 4 (large))
	Printer registration loop amount (option tray)
	Printer registration loop amount (LCT)
	Printer registration loop amount (bypass (normal (small)))
	Printer registration loop amount (bypass (normal (middle)))
	Printer registration loop amount (bypass (normal (large)))
	Printer registration loop amount (bypass (thick paper: small))
11/28	Printer registration loop amount (bypass (thick paper: large))
	Printer registration loop amount (bypass (thin paper: small))
	Printer registration loop amount (bypass (thin paper: large))
	Printer registration loop amount (bypass (OHP: small))
	Printer registration loop amount (bypass (OHP: large))
	Printer registration loop amount (bypass (envelope))
	Printer registration loop amount (bypass (label: small))

Display	Adjustment item
12/28	Printer registration loop amount (bypass (label: large))
	-
	Printer registration loop amount (ADU (small))
	Printer registration loop amount (ADU (large))
	Tray adjustment (maximum width)
	Tray adjustment (minimum width)
	Scan area (scanning position: leading edge)
13/28	Scan area (scanning position: side edge)
	Magnification in the scanner feed crossover direction
	Magnification in the scanner feed direction
	Printer leading edge erasure amount adjustment
	Charging main manual
	Transfer manual
	Separation AC manual
14/28	Separation DC manual
	Carging grid manual
	Developing grid manual
	TCR
	Toner density
	Dot diameter
	LD1 offset (normal paper)
15/28	LD1 offset (thick paper)
	LD2 offset (normal paper)
	LD2 offset (thick paper)
	LD1 bias (normal paper)
	LD1 bias (thick paper)
	LD2 bias (normal paper)
	LD2 bias (thick paper)
16/28	Magnification in the ADF feed direction (single sided: 50%)
	Magnification in the ADF feed direction (single sided: 100%)
	Magnification in the ADF feed direction (single sided: 200%)
	Magnification in the ADF feed direction (single sided: 400%)
	Magnification in the ADF feed direction (double sided: 50%)
	Magnification in the ADF feed direction (double sided: 100%)
	Magnification in the ADF feed direction (double sided: 200%)
17/28	Magnification in the ADF feed direction (double sided: 400%)
	ADF leading edge (single sided)
	ADF leading edge (double sided (front side))
	ADF leading edge (double sided (back side))
	ADF side edge (single sided)
	ADF side edge (double sided (front side))
	ADF side edge (double sided (back side))

Display	Adjustment item
18/28	ADF registration loop amount (single sided)
	ADF registration loop amount (double sided)
	ADF original size (maximum width)
	ADF original size (minimum width)
	ADF density
	ADF scan position
	Center staple position (B5S)
19/28	Center staple position (A4S)
	Center staple position (B4)
	Center staple position (A3)
	Center staple position (8½ x 11S)
	Center staple position (11 x 17)
	Center staple position (8K)
	Center staple position (8½ x 14)
20/28	Half-fold position (B5S)
	Half-fold position (A4S)
	Half-fold position (B4)
	Half-fold position (A3)
	Half-fold position (8½ x 11S)
	Half-fold position (11 x 17)
	Half-fold position (8K)
21/28	Half-fold position (8½ x 14)
	Punch horizontal position
	Punch registration loop amount (B5S)
	Punch registration loop amount (B5)
	Punch registration loop amount (A4S)
	Punch registration loop amount (A4)
	Punch registration loop amount (B4)
22/28	Punch registration loop amount (A3)
	Punch registration loop amount (81/2 x 11S)
	Punch registration loop amount (81/2 x 11)
	Punch registration loop amount (81/2 x 14S)
	Punch registration loop amount (11 x 17)
	Punch registration loop amount (8K)
	Punch registration loop amount (16K)
23/28	Punch registration loop amount (16KS)
	Punch registration loop amount (FLS)
	Test pattern density
	DipSW No.01
	DipSW No.02
	DipSW No.03
	DipSW No.04

Display	Adjustment item
24/28	DipSW No.05
	DipSW No.06
	DipSW No.07
	DipSW No.08
	DipSW No.09
	DipSW No.10
	DipSW No.11
25/28	DipSW No.12
	DipSW No.13
	DipSW No.14
	DipSW No.15
	DipSW No.16
	DipSW No.17
	DipSW No.18
26/28	DipSW No.19
	DipSW No.20
	DipSW No.21
	DipSW No.22
	DipSW No.23
	DipSW No.24
	DipSW No.25
27/28	DipSW No.26
	DipSW No.27
	DipSW No.28
	DipSW No.29
	DipSW No.30
	DipSW No.31
	DipSW No.32
28/28	DipSW No.33
	DipSW No.34
	DipSW No.35
	DipSW No.36
	DipSW No.37
	DipSW No.38
	DipSW No.39

10.8 ADF

10.8.1 Paper Feed Direction

Adjusts the magnification in the sub scan direction while in the DF original scan.

This adjustment adjusts the magnification of the image data in the sub scan direction by changing the scan speed of DF.

The adjustment is made for each mode (single sided, double sided (front/rear)) and expansion/reduction ratio (50%, 100%, 200%, 400%).

Note

 Make sure that the adjustment of the magnification in the printer paper feed direction has been completed.

(See P.181)

A. Procedure

- 1. "Service Mode screen"
 - Press [ADF].
- "ADF Adjustment screen"
 - Press [Paper Feed Direction].
- 3. "Paper Feed Direction screen"
 - Press the magnification that adjusts the 1-Sided or 2-Sided.
- 4. Press [Test Copy].
- 5. "Test Copy screen"

Select A3 (for metric) or 11 \times 17 (for inch) paper, and press the Start key with the adjustment chart set to DF.

- 6. Press [OK].
- 7. Measure the magnification in the paper feed direction with a scale.

Standard value (while in the life size): ± 0.5% or less (200 ± 1 mm or less)

8. "Paper Feed Direction screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: – 2.0 (shorter) to + 2.0% (longer)

1 step = 0.1%

- 9. Repeat steps 4 to 8 until it gets inside the standard value.
- 10. Repeat steps 3 to 9 for each magnification.
- 11. Press [OK].

10.8.2 Lead Edge

Adjusts the position at which the image read is started while in the DF original scan.

This adjustment adjusts the leading edge position of the image by changing the image read start timing after the leading edge of the original passes through the read position.

The adjustment is made for each mode (1-Sided, 2-Sided (Front/Back)).

A. Procedure

- "Service Mode screen" Press [ADF].
- "ADF Adjustment screen" Press [Lead Edge].
- 3. "ADF Adjustment: Lead Edge screen"
 Press [1-Sided], [2-Sided (Front)], or [2-Sided (Back)] to select the mode.
- 4. Press [Test Copy].
- 5. "Test Copy screen"

Select A3 (for metric) or 11 x 17 (for inch) paper, and press the Start key with the adjustment chart set to DE

- 6. Press [END].
- 7. Measure the leading edge position of the image with a scale.

Standard value: 0 ± 2.0 mm or less

8. "ADF Adjustment: Lead Edge screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 5.0 (slower start of read) to + 5.0 mm (faster start of read)

1 step = 0.1 mm

- 9. Repeat steps 4 to 8 until it gets inside the standard value.
- 10. Repeat steps 3 to 9 for each mode.

11. Press [OK].

10.8.3 Side Edge

Adjusts the mis-centering of the image in the main scan direction while in the DF original scan.

The adjustment is made for each mode (1-Sided, 2-Sided (Front/Back)).

Note

 Make sure that the adjustment of the printer position: side edge has been completed. (See P.180)

A. Procedure

- "Service Mode screen"
 - Press [ADF].
- 2. "ADF Adjustment screen"
 - Press [Side Edge].
- 3. "ADF Adjustment: Side Edge screen"
 - Press [1-Sided], [2-Sided (Front)], or [2-Sided (Back)] to select the mode.
- 4. Press [Test Copy].
- 5. "Test Copy screen"

Select A3 (for metric) or 11 x 17 (for inch) paper, and press the Start key with the adjustment chart set to DF.

- 6. Press [END].
- 7. Fold the output paper into two at the center in the main scan direction, and check the discrepancy of the print center line.

Standard value: ± 3.0 mm or less

- 8. "ADF Adjustment: Side Edge screen"
 - Enter a value through the [+]/[-] or numeric keys and press [Setting].
 - Setting range: -2.96 (image: to the rear) to +2.96 mm (image: to the front)
 - 1 step = 0.04 mm
- 9. Repeat steps 4 to 8 until it gets inside the standard value.
- 10. Repeat steps 3 to 9 for each mode.
- 11. Press [OK].

10.8.4 Resist Loop Adj.

Adjusts the original loop amount (1-Sided or 2-Sided) at the registration roller section of DF to adjust a paper skew, wrinkles or an original jam at the registration section.

This adjustment adjusts the re-start timing of the DF registration roller.

A. Procedure

- "Service Mode screen" Press [ADF].
- 2. "ADF Adjustment screen"
 - Press [Resist Loop Adj.].
- 3. "Resist Loop Adj. screen"
 - Press [1-Sided] or [2-Sided] to select the mode.
- 4. Press [Test Copy].
- Select paper according to the item selected at step 3. Set A3 (for metric) or 11 x 17 (for inch) original that is used more frequently set to DF and press the Start key.
- 6. Press [END].

Return to the registration loop amount adjustment screen.

7. "Resist Loop Adj. screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 5.0 (smaller) to + 5.0 mm (larger)

1 step = 0.5 mm

- 8. Repeat steps 5 to 7 until it becomes appropriate.
- 9. Repeat steps 3 to 8 for each mode.

10. Press [OK].

10.8.5 Original Size Adj.

This adjustment is made when the original size detection does not function properly at DF.

A. Procedure

- 1. "Service Mode screen"
 - Press [ADF].
- 2. "ADF Adjustment screen"
 - Press [Original Size Adj.].
- 3. "Original Size Adj. screen"
 - Press [Max. Width].
- 4. With A3 (for metric) or 11 x 17 (for inch) paper set to DF, press the Start key.
- 5. Check to see if the result is OK.
- 6. Press [Min. Width].
- 7. With B6S (for metric) or 5.5 x 8.5S (for inch) size paper set to DF, press the Start key.
- 8. Check to see if the result is "OK".
- 9. Press [OK].

10.8.6 Density Adj.

This adjustment is made when the slit glass is replaced.

The slit glass at the scanner section is coated, and therefore, its transmittance of the exposure lamp is different when compared to the original glass.

Prearrangements

- · Clean the slit glass.
- Check the whole area of the white chart to see if it is not soiled.

A. Procedure

- "Service Mode screen" Press [ADF].
- "ADF Adjustment screen" Press [Density Adj.].
- "Density Adj. screen"Set the white chart to DF.

NOTE

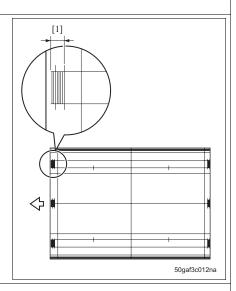
- . Be sure to set the white chart in the A4 direction.
- 4. Press the Start key.
 - When the white chart is scanned and the auto adjustment of density is completed successfully, "OK" is displayed.
- 5. When an error message is displayed, turn OFF and ON the power switch (SW2) of the main body and repeat steps 3 to 4 until it is completed successfully.
- 6. Press [OK].

10.8.7 Scan Position Adjustment

Adjusts the read start position of the exposure unit in the sub scan direction.

A. Procedure

- "Service Mode screen" Press [ADF].
- "ADF Adjustment screen" Press [Scan Position Adjustment].
- 3. "Scan Position Adjustment screen" Press [Test Copy].
- "Test Copy screen"
 Select A3 (for metric) or 11 x 17 (for inch) paper, and press the Start key with the adjustment chart set to ADF.
- 5. Press [END].
- 6. Check the read position. Standard value [1]: $10 \pm 1.0 \text{ mm}$



- 7. "Scan Position Adjustment screen"
 - Enter a value through the [+]/[-] or numeric keys and press [Setting].
 - Setting range: 2.0 (faster) to + 2.0 mm (slower)
 - 1 step = 0.1 mm
- 8. Repeat steps 4 to 8 until it gets inside the standard value.
- 9. Repeat steps 3 to 9 for each mode.
- 10. Press [OK].

10.8.8 Sensor Auto Adjust

This adjustment is made when an erroneous detection occurs with the reflective sensor, or after the DF control board (DFCB) and each of the reflective sensors are replaced. Conducting this adjustment backs up the sensitivity value of each of the reflective sensors to RAM in DFCB.

Prearrangement

· Clean each of the reflective sensors of DF.

Note

 After conducting [Initialization + Auto Adjust], the value of the original size VR (VR1) is reset. Be sure to conduct [Original Size Adjustment].

A. Procedure

- 1. "Service Mode screen"
 - Press [ADF].
- 2. "ADF Adjustment screen"
 - Press [Sensor Auto Adjust].
- 3. "ADF Sendor Adjustment screen"
 - Press [Initialize And Sensor Auto Adj.] or [ADF Sensor Auto Adj.].
- 4. Press the Start key.
 - Check the check results, the initialization, and the sensors 1 to 4 to see if they are "OK."
- 5. Press [END].

10.9 Finisher

10.9.1 Center Staple Position (SD-502)

Adjusts the stapling position in the sub scan direction while in the stitch-and-fold by SD-502.

Note

bizhub 500/420/360

 Before conducting this adjustment, make sure that the adjustment of the half-fold position has been completed.

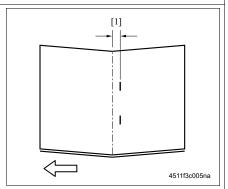
(See P.243)

A. Procedure

- "Service Mode screen"
 - Press [Finisher].
- 2. "Finisher Adjustment screen"
 - Press [Center Staple Position].
- "Center Staple Position Adj. screen"
 Press each key and select the paper size to be adjusted.
- 4. Press [Test Copy].
- 5. "Test Copy screen"

With 5 or more originals (2 or more sheets at the finish of the stitch-and-fold) set to DF, select suitable paper and press the Start key.

- 6. Press [END].
- Check the stitch-and-fold position of paper and the position of the staple in the sub scan direction.
 Standard value [1]: 0 ± 1.5 mm



8. "Center Staple Position Adj. screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 5.0 (to the right) to + 5.0 mm (to the left)

1 step = 0.5 mm

Press [Restore] to return to the value before change.

9. Repeat steps 3 to 8 until it gets inside the standard value.

10. Press [OK].

10.9.2 Half-Fold Position (SD-502)

Adjusts the folding position while in the stitch-and-fold print by SD-502.

A. Procedure

- 1. "Service Mode screen"
 - Press [Finisher].
- "Finisher Adjustment screen" Press [Half-Fold Position].
- "Half-Fold Position Adjustment screen"

 Press each key to select the paper size to be adjusted.
- 4. Press [Test Copy].
- 5. "Test Copy screen"

With the original set to DF, select a paper size and press the Start key.

- 6. Press [END].
- 7. Fold the output paper along the folding line and check the paper edge to see if it is not shifted [1]. Standard value [1]: 0 ± 1.5 mm



8. "Half-Fold Position Adjustment screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: -5.0 (to the right) to +5.0 mm (to the left)

1 step = 0.5 mm

Press [Restore] to return to the value before change.

NOTE

- When there occurs a shift shown at step 7, enter a value on the minus (-) side.
- 9. Repeat steps 3 to 8 until it gets inside the standard value.

10. Press [OK].

10.9.3 Punch Horizontal Position (PU)

Adjusts the position of the punch holes by PU-501 in the sub scan direction.

A. Procedure

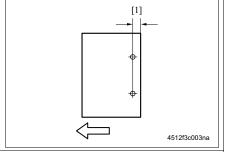
- "Service Mode screen" Press [Finisher].
- 2. "Finisher Adjustment"

and 10.5 mm (swedish)

- Press [Punch Horizontal Position].
- "Punch Horizontal Position Adj. screen" Press [Test Copy].
- 4. With the original set to DF, select a suitable paper size and press the Start key.
- 5. Press [END].

Return to the punch horizontal position adjustment screen.

 Check the distance between the paper edge and the center of the punch hole.
 Standard value [1]: 11 mm (metric), 9.5 mm (inch)



7. "Punch Horizontal Position Adj. screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 5.0 (shorter) to + 5.0 mm (longer)

1 step = 0.5 mm

Press [Restore] to return to the value before change.

- 8. Repeat steps 3 to 7 until it gets inside the standard value.
- 9. Press [OK].

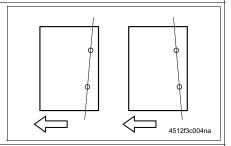
10.9.4 Punch Resist Loop (PU)

Adjusts the registration loop amount while in the punch by PU-501.

This adjustment is made when there occurs a tilt with the punch hole, or when a jam occurs frequently in the punch mode.

A. Procedure

- "Service Mode screen" Press [Finisher].
- 2. "Finisher Adjustment screen"
 - Press [Punch Resist Loop].
- "Punch Resist Loop screen" Press [Test Copy].
- 4. With the original set to DF, select a suitable paper size and press the Start key.
- 5 Press [FND]
- Check the punch holes to see if they are parallel with the paper edge. And also check to see if a jam occurs.



7. "Punch Resist Loop screen"

Enter a value through the [+]/[-] or numeric keys and press [Setting].

Setting range: - 4 (longer) to + 4 mm (shorter)

1 step = 1 mm

Press [Restore] to return to the value before change.

NOTE

- When a jam occurs in the punch mode, set a value to the minus (-) side.
- When the line of punch holes is slanted, set a value to the plus (+) side.
- 8. Repeat steps 3 to 7 until it gets inside the standard value.
- 9. Press [OK].

10.10Firmware Version

Displays the version of the firmware (main body and optional).

- MFP Controller
- Image Controller
- · Operation Panel Message Data
- Finisher
- ADF
- Fax board controller 1
- Fax board controller 2
- MFP Controller BOOT Program
- Image Controller BOOT Program

A. Procedure

- "Service Mode screen"
 Press [Firmware Version].
- "Firmware Version screen"

 Press [1] or [2] to display the intended item.
- 3. Press [END].

10.11CS Remote Care

10.11.1 Outlines



- CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone/fax line or e-mail in order to control the machine.
- CS Remote Care enables the machine to call the computer at the center when trouble occurs. It also enables the computer at the center to contact the machine for the necessary data.
- Data which CS Remote Care handles can be divided into the following groups.
 - a. Data which show the status of use of the machine such as Total count. PM count.
 - b. Data which show the abnormal situation on the machine such as where and how often errors occur.
 - c. Data on adjustment
 - d. Data on setting

Note



 It cannot be set when the following setting is set to "ON". [Administrator Setting] → [Security Setting] → [Enhanced Security Mode]

10.11.2 Setting Up the CS Remote Care

Note

. For resetting up the machine which CS Remote Care has already been set up, clear the RAM for CS Remote Care before resetting. For clearing RAM, see "(3) RAM Clear" in "C. Detail Setting" in "10.11.8 Detail on settings".

(See P.257)

• When using the telephone line for connection, use the recommended modem. (For recommended modem, contact responsible person of KONICA MINOLTA.)

♠ When using the telephone line for connection, select [CS Remote Care] in [Communication System Setting] screen ([Service Mode] → [System 1] → [Communication System Setting]).

Step		Proce	edure			
	Using the telephone line	Using the Fax line	Using E-mail			
	modem	modem *1				
0	Register the device ID to	the application at CS Rer	Remote Care Center.			
	The initial connection is r	ot available unless the device ID is registered.				
1	Connecting the	Be sure to remove the	Be sure to remove the telephone line modern			
	modem	telephone line modem	when e-mail is used.			
	Turn the power for the	when the fax line is				
	modem OFF. Connect	used.				
	the machine and the					
	modem with a modem					
	cable. Connect the					
	modem and the wall					
	jack with a modular					
	cable.					
	* For connecting the					
	modular cable, see the					
	manual for the modem.					

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Step Procedure Using the telephone line Using the Fax line Using E-mail modem modem *1 2 Clearing the RAM 1. Select [Service Mode] → [CS Remove Care], and touch [Detail Setting]. 2. Touch [RAM Clear]. 3. Select Set, and touch [OK]. (See P.258) Selecting the CS Selecting the CS Selecting the CS Remote Care function Remote Care function Remote Care function Select [Service Mode] → [CS Remote Care] → Select [Service Mode] Select [Service Mode] [System Setting], and touch [E-Mail]. → [CS Remove Care] → [CS Remove Care] → [System Selection], → [System Selection], and touch [Modem]. and touch [Fax]. Inputting the ID Code 1. Select [Service Mode] \rightarrow [CS Remote Care] \rightarrow [ID Code], and touch [ID Code]. 2. Input the seven digits ID of the service person, and touch [ID Code] again. (See P.257) Setting the date and time for CS Remote Care 5 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. 2. Touch [Date & Time Setting]. 3. Input the date, time and the time zone using the 10-Key Pad, and touch [Set]. (See P.257) Setting the Center ID 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. Touch [Machine Setting] → [Center ID], and input the Center ID (five digits). (See P.257) 7 Setting the Device ID 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. Touch [Machine Setting] → [Device ID], and input Device ID (nine digits). (See P.257) Setting the telephone number of the Center Setting the Respond Timeout 1. Select [Service Mode] → [CS Remote Care], 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. and touch [Detail Setting]. 2. Touch [Machine Setting] → [Center Tele-2. Touch [Respond Timeout] and enter the phone Number]. response timeout using the 10-Key Pad. 3. Input the telephone number of the Center NOTE using the 10-Keys Pad and [P], [T], [W], [-]. · Under normal conditions, there is no (See P.257) need to change the default setting. (See P.257) Inputting the Device telephone number Proceed to Step 10. 1. Select [Service Mode] → [CS Remote Care], and touch [Detail Setting]. 2. Touch [Machine Setting] → [Device Telephone Number]. 3. Input the Device telephone number using the 10-Key Pad and [P], ∏, [W], [-]. (See P.257)

248

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ld Servic	ce Ver.2.0 Jan. 2007		10. SERVICE MO
Step		Proce	edure
	Using the telephone line	Using the Fax line	Using E-mail
	modem	modem *1	
10	Inputting the AT command for initializing the modem 1. Select [Service Mode] → [CS Remote Care] → and touch [Detail Setting]. 2. Touch [AT Command]. 3. Input AT Command. NOTE • Change this Command only when it is necessary. (They do not need to be changed in normal condition.) • For details on AT Command, see the manual for the modem. (See P.259)	Proceed to step 11.	 Setting the E-mail address Select [Service Mode] → [CS Remote Care], and touch [Server Set]. Touch [Server for RX], and set POP3 server address, POP3 Login name, POP3 password and POP3 port number. (See P.259) Press [Receive], and set the E-Mail address, Mail Check, Connection Time Out and APOP Authentication. (See P.260) Touch [Send], and set the SMTP server address, SMTP port number, Connection Time Out, and APOP Authentication. (See P.261) Touch [TX/RX Test], and press Start key to carry out a transmission/reception test. If it fails to exchange messages, see the error message to take necessary measure, and try again. (See P.262)
11	Setting the DIPSW for C NOTE		Proceed to Step 12.
	-	t normally necessary.	
		when necessary in a	
	specific connecting	condition.	

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Step		Proce	dure
	Using the telephone line	Using the Fax line	Using E-mail
	modem	modem *1	
12	Executing the initial trans		Receiving the initial connection E-mail message
	1. Select [Service Mode		Sending the initial connection E-mail message
	and touch [Detail Set	0,	from the Center to the address of the Copier.
	2. Touch [initial transmi		NOTE
		to start initial transmis-	When receiving the initial connection E-
	sion.		mail message from the Center while CS
	3. When the machine is		Remote Care-related screen is being
	,	ote Care setting screen	displayed, the current setting informa-
	will be displayed.		tion will be deleted, and CS Remote
	NOTE		Care setting will be displayed.
		sion key at the right	For sending the initial connection E-
		en will be displayed	mail, see the manual for CS Remote
	•	ter ID, the Device ID,	Care Center.
	-	of the Center and the	Messages can be exchanged only
	•	number have been	between the Center with initial connec-
	input.		tion and the Copier.
	(See P.257)		The initial connection from the Center
			will be carried out, and the E-mail
			address of the Center will be stored in
			the Copier.
			When the initial registration is complete,
			the E-mail address of the Center will be
			displayed by selecting [Service Mode] \rightarrow
			[CS Remote Care] \rightarrow [Detail Setting],
			[Basic Setting] \rightarrow [E-Mail address].

^{*1:} This procedure is available only when the optional Fax kit (FK-502) is mounted.

250

10.11.3 Software SW setting for CS Remote Care

Note

 SW bits data are written into the NVRAM every time a change is made. In case you changed bit data by accident, be sure to restore the previous state.

A. Input procedure

- 1. Select [Service Mode] → [CS Remote Care] → [Detail Setting], and touch [Software Switch Setting].
- 2. Touch [Switch No.], and input the SW number (two digits) using the 10-Key Pad.
- Touch [Bit Assignment], and select SW bit number using the arrow keys, and input 0 or 1 using the 10-Key Pad.
 - (For setting by hexadecimal numbers, touch [HEX Assignment] key, and input using the 10-Key Pad or A to F keys.)
- 4. Touch [Fix].

Note

· About functions of each switch, see to "B. List of software SW for CS Remote Care".

B. List of software SW for CS Remote Care

Note

. Do not change any bit not described on this table.

SW No.	Bit	Functions	0	1	Default
SW 01	0	Dial Mode	Pulse	Tone	1
	1	Reservation	-	_	0
	2	Reservation	-	_	0
	3	Reservation	-	_	0
	4	Baud rate	*1	*1	0
	5		*1	*1	0
	6		*1	*1	0
	7		*1	*1	1
SW 02	0	Emergency transmission	Do not call	Call	1
	1	Auto call on date specification	Do not call	Call	1
	2	Reservation	-	_	0
	3	Reservation	-	_	0
	4	Reservation	_	_	0
	5	Auto call on the IC Life	Do not call	Call	1
	6	Auto call on CCD Clamp/Gain Adjustment failure	Do not call	Call	1
	7	Reservation	-	_	0
SW 03	0	Reservation	-	_	0
	1	Auto call on the toner empty	Do not call	Call	1
	2	Reservation	-	_	0
	3	Auto call on the waste toner bottle full	Do not call	Call	1
	4 to 7	Reservation	_	_	0

SW No.	Bit	Functions	0	1	Default
SW 04	0 to 7	Reservation	_	_	0
SW 05	0	Modem redial interval	*2	*2	1
	1		*2	*2	1
	2		*2	*2	0
	3		*2	*2	0
	4 to 7	Reservation	-	_	0
SW 06	0	Modem redial times	*3	*3	0
	1		*3	*3	1
	2		*3	*3	0
	3		*3	*3	1
	4		*3	*3	0
	5		*3	*3	0
	6		*3	*3	0
	7	Reservation	_	_	0
SW 07	0	Redial for response time out	Do not redial	Redial	1
	1 to 7	Reserved	-	_	0
SW 08	0	Retransmission interval on E-Mail deliv-	*4	*4	0
	1	ery error	*4	*4	1
	2		*4	*4	1
	3		*4	*4	0
	4 to 7	Reservation	-	_	0
SW 09	0	Retransmission times on E-Mail	*5	*5	0
	1	delivery error	*5	*5	1
	2		*5	*5	0
	3		*5	*5	1
	4		*5	*5	0
	5		*5	*5	0
	6		*5	*5	0
	7	Reservation	_	_	0
SW 10	0 to 7	Reservation	_	_	0
SW 11	0	Timer 1	*6	*6	0
	1	RING reception → CONNECT	*6	*6	0
	2	reception	*6	*6	0
	3		*6	*6	0
	4		*6	*6	0
	5		*6	*6	1
	6		*6	*6	0
	7		*6	*6	0

SW No.	Bit	Functions	0	1	Default
SW 12	0	Timer 2	*7	*7	0
	1	Dial request completed \rightarrow CONNECT	*7	*7	0
	2	reception	*7	*7	0
	3		*7	*7	0
	4		*7	*7	0
	5		*7	*7	0
	6		*7	*7	1
	7		*7	*7	0
SW 13	0 to 7	Reservation	_	_	0
SW 14	0	Timer 4	*8	*8	0
	1	Line connection \rightarrow Start request	*8	*8	0
	2	telegram delivery	*8	*8	0
	3		*8	*8	0
	4		*8	*8	0
	5		*8	*8	1
	6		*8	*8	0
	7		*8	*8	0
SW 15	0	Timer 5	*9	*9	0
	1	Wait time for other side's response	*9	*9	1
	2		*9	*9	1
	3		*9	*9	1
	4		*9	*9	1
	5		*9	*9	0
	6		*9	*9	0
	7		*9	*9	0
SW 16	0 to 7	Reservation	_	_	0
SW 17	0 to 7	Reservation	_	_	0
SW 18	0	Attention display	Do not call	Call	1
		To set weather to give the alarm display			
		when using the modem but the power			
	4 4- 7	for the modem is OFF.			
0/4/10 +- 0/4/	1 to 7	Reservation	_	_	0
SW 19 to SW 40	0 to 7	Reservation	_	_	0
40					

*1 Baud rate

Mode	01-7	01-6	01-5	01-4
9600 bps	0	1	1	0
19200 bps	0	1	1	1
"38400 bps"	1	0	0	0

*2 Modem redial interval

Mode	05-3	05-2	05-1	05-0
1 minute	0	0	0	1
2 minutes	0	0	1	0
"3 minutes"	0	0	1	1
4 minutes	0	1	0	0
5 minutes	0	1	0	1
6 minutes	0	1	1	0
7 minutes	0	1	1	1
8 minutes	1	0	0	0
9 minutes	1	0	0	1
10 minutes	1	0	1	0

*3 Modem redial times

Mode	06-6	06-5	06-4	06-3	06-2	06-1	06-0
0 to 9 times	000 0000 to 000 1001						
"10 times"	0	0	0	1	0	1	0
11 to 99 times	000 1011 to 110 0011						

*4 Retransmission interval on E-Mail delivery error

Mode	08-3	08-2	08-1	08-0
0 minute	0	0	0	0
10 minutes	0	0	0	1
20 minutes	0	0	1	0
30 minutes	0	0	1	1
40 minutes	0	1	0	0
50 minutes	0	1	0	1
"60 minutes"	0	1	1	0
70 minutes	0	1	1	1
80 minutes	1	0	0	0
90 minutes	1	0	0	1
100 minutes	1	0	1	0
110 minutes	1	0	1	1
120 minutes	1	1	0	0

*5 Retransmission times on E-Mail delivery error

Mode	09-6	09-5	09-4	09-3	09-2	09-1	09-0		
0 to 9 times	000 0000 to 000 1001								
"10 times"	0	0	0	1	0	1	0		
11 to 99 times	000 1011 to 110 0011								

*6 Timer 1 (RING reception → CONNECT reception)

Mode	11-7	11-6	11-5	11-4	11-3	11-2	11-1	11-0
0 to 31 sec	0000 0000 to 0001 1111							
"32 sec"	0	0	1	0	0	0	0	0
33 to 255 sec	0010 0001 to 1111 1111							

*7 Timer 2 (Dial request completed → CONNECT reception)

Mode	12-7	12-6	12-5	12-4	12-3	12-2	12-1	12-0
0 to 63 sec	0000 0000 to 0011 1111							
"64 sec"	0	1	0	0	0	0	0	0
65 to 255 sec	0100 0001 to 1111 1111							

*8 Timer 4 (Line connection → Start request telegram delivery)

Mode	14-7	14-6	14-5	14-4	14-3	14-2	14-1	14-0
0 to 31 (x 100 msec)	0000 0000 to 0001 1111							
"32 (x 100 msec)"	0	0	1	0	0	0	0	0
33 to 255 (x 100 msec)	0010 0001 to 1111 1111							

*9 Timer 5 (Wait time for other side's response)

Mode	15-7	15-6	15-5	15-4	15-3	15-2	15-1	15-0
0 to 29 sec	0000 0000 to 0001 1101							
"30 sec"	0	0	0	1	1	1	1	0
31 to 255 sec	0001 1111 to 1111 1111							

10.11.4 Setup confirmation

- Follow the steps below to make sure that CS Remote Care has been properly set up.
- 1. Call the Service Mode to the screen.
- 2. Touch [CS Remote Care].
- 3. Check to make sure that only selected item is displayed.

10.11.5 Calling the Maintenance

When CE starts maintenance, inputting the ID code of CE (seven digits: numbers which CE can identify.
They are controlled by the distributor.) will transmit the information to the Center side and tells that the maintenance has started. When the maintenance is finished, touching [Maintenance Complete] key will transmit the information to the Center and tells that it is finished.

A. When starting the Maintenance

- 1. Select Service Mode and touch [CS Remote Care].
- 2. Touch [ID Code], and input ID Code.
- Touch [ID Coke].

B. When finishing the Maintenance

- 1. Select Service Mode and touch [CS Remote Care].
- 2. Touch [Maintenance Complete].

10.11.6 Calling the Center from the Administrator

- · When the CS Remote Care setup is complete, the administrator can call the CS Remote Care center.
- 1. Select [Administrator Setting], and touch [System Connection].
- 2. Touch [Admin. transmission].
- 3. Press the Start key.

When the setup is not complete or another transmission is being carried out, the Admin. transmission key will not be displayed, and the transmission is not available.

Note

 For transmitting data of the machine by calling the center on the specified date and time, refer to the manual for CS Remote Care Center.

10.11.7 Checking the transmission log

• The transmission log list will be output to be checked.

- Select [Service Mode] → [CS Remote Care], and touch [Detail setting].
- 2. Touch [Communication Log Print].
- 3. Load Tray 1 or Bypass tray with A4S paper.
- 4. Press the Start key to output transmission log.

^{*} The Start key blinks while maintenance is being carried out.

10.11.8 Detail on settings

A. System Selection

	Functions	To select the system type for remote diagnosis.
Λ	Use	Use to newly build or change the system.
	Setting/	Select E-Mail, Modem, or Fax.
	Procedure	Fax is available only when the optional Fax kit is being installed.
		E-Mail Modem Fax

B. ID Code

Functions	To register the Service ID.
Use	Use when registering and changing Service ID.
Setting/	Enter a 7-digit code from the 10-Key Pad. (0000001 to 9999999)
Procedure	<registration></registration>
	Touch ID Code and enter the Service ID.
	Touch [ID code] to register the ID.
	The [Detail Setting] will appear when the ID has been registered.

C. Detail Setting

(1) Basic Setting

Functions	Execute the primary setting.
Use	Use to change the set contents.
	Use to register the machine to the CS Remote Care Center.
Setting/	Call the Service Mode to the screen.
Procedure	2. Touch [CS Remote Care].
	3. Touching the [Detail Setting] will display the primary setting.
	Primary Setting
	Set the Center ID, Device ID, and the phone No.
	When e-mail is selected for system and all setup procedures are completed, E-mail
	address of the Center is displayed.
	* When entering the phone No, 10-Keys and keys on the screen have following meanings.
	[-] Pose : Waits to start transmitting after dialing
	[W] Wait : Detects the dial tone of the other end
	[T] Tone dial : Carry out tone dialing
	[P] Pulse dial : Carry out pulse dialing
	[*], [#] : To be used as necessary
	Initial Transmission
	Touching the Initial Transmission key will sent the information to the CS Remote Care
	Center to register the machine.
	(Only when the Modem or Fax is selected on the system Input.)

(2) Date & Time Setting

Functions	To set the data and time-of-day
Use	Use to set or change the date and time-of-day.
Setting/	1. Call the Service Mode to the screen.
Procedure	2. Touch [CS Remote Care].
	3. Touch [Detail Setting] to access Date & Time Setting.
	4. Enter the date (month, day and year), time-of-day, and the time zone from the 10-Key
	Pad.
	5. Touch [SET] to start the clock.

(3) RAM Clear

Functions	To clear the following data at the Center ID Code, Primary Setting, Date/Time Input (Time Zone), Software SW Setting and AT Command.
Use	To be used for setting CS Remote Care. To be used for reset the every data of the Center to default.
	NOTE • If RAM Clear is selected during transmission, RAM clear processing will be implemented at the time the transmission is completed regardless of whether it is done properly or not.
Setting/	The default setting is "Unset."
Procedure	
	Set "Unset"

(4) Communication Log Print

Functions	To print out the Communication Log.
Use	Use to output and use the Communication Log.
Setting/	1. Call the Service Mode on the screen.
Procedure	2. Touch [CS Remote Care].
	3. Touch [Detail Setting] to access [Communication Log Print].
	4. Load Tray 1 or Bypass Tray with A4S or 81/2 x 11 paper.
	5. Press Start key to print out the Communication Log.

(5) Software Switch Setting

Functions	To change the CS Remote Care settings.
Use	To change the settings for CS Remote Care as necessary.
Setting/	For procedures on settings, see "10.11.3 Software SW setting for CS Remote Care".
Procedure	(See P.251)

⚠ (6) Response Time Out

Functions	It sets the intervals for resending E-Mails when transmission error occurred. It can be set only when [E-Mail] is selected by System Setting.
Use	To use when changing the intervals for resending E-Mails when transmission error occurred.
Setting/ Procedure	The default setting is 60 minute. "60 minute" (10 to 1440)

(7) AT Command

Functions	To set the command to be issued at the time of Modem Initialization.
	This setting is available only when [Modem] is selected for the system setting.
Use	To set the command to be issued at the time of Modern Initialization.
Setting/	Enter the command and touch [SET] to register.
Procedure	

D. Server Setting

Server Setting can be set only when [E-Mail] is selected by System Setting.

(1) Server for RX

<POP3 server>

Functions	To set the POP3 server address used for the CS Remote Care.
Use	To set the address of the POP3 Server. POP3 server address can be set with IP address or the domain name.
Setting/ Procedure	<input address="" ip=""/> IP Address Version 4 format [0 to 255].[0 to 255].[0 to 255] <input fqdn=""/> Enter the domain name.

<POP3 login name>

Functions	To set the logon name for the POP3 server used for the CS Remote Care.
Use	To set the logon name for the POP3 server.
Setting/	The default setting is No.
Procedure	Up to 64 characters (alphanumeric characters and symbols) can be used.

<POP3 password>

Functions	To set the logon password for the POP3 server used for the CS Remote Care.
Use	To set the logon password for the POP3 server.
Setting/	The default setting is No.
Procedure	 Up to 15 characters (alphanumeric characters and symbols) can be used.

<POP3 port number>

Functions	To set the POP3 port number used for the CS Remote Care.	
Use	To set the port number for the POP3 server.	
Setting/	The default setting is 110.	
Procedure	"110" (1 to 65535)	

(2) Receive

<E-mail Address>

Functions	To set the e-mail address used for the CS Remote Care.	
Use	To set the e-mail address.	
Setting/	The default setting is No.	
Procedure	 Up to 129 characters (alphanumeric characters and symbols) can be used. 	

<Mail Check>

Functions	To set whether or not to use Mail Check and the time interval for the POP server		
	used for the CS Remote Care.		
Use	To set whether or not to use Mail Check and the time interval for the POP server		
	used for the CS Remote Care.		
	To change the time interval for Mail Check.		
Setting/	The default setting is No.		
Procedure	"No" (1 to120 min., No)		

<Connection timeout>

Functions	To set the timeout period for connection during reception.	
Use	To change the timeout period for connection during reception.	
Setting/	The default setting is 60 Sec.	
Procedure	"60 Sec" (30 to 300 Sec)	

<APOP Authentication>

Functions	To set whether or not to authenticate the APOP during reception.		
Use	To authenticate the APOP during reception.		
Setting/	The default setting is No.		
Procedure	Yes "No"		



<SMTP server>

Functions	To set the SMTP sever address for transmission used for the CS Remote Care.		
Use	To set the SMTP server address		
	SMTP server address can be set by the IP address or the domain name.		
Setting/	<input address="" ip=""/>		
Procedure	IP Address Version 4 format		
	[0 to 255].[0 to 255].[0 to 255].[0 to 255]		
	<input fqdn=""/>		
	Enter the domain name.		

<SMTP port number>

Functions	To set the SMTP port number for transmission used for the CS Remote Care.	
Use	To set the Port Number of the SMTP Server.	
Setting/	The default setting is 25.	
Procedure	"25" (1 to 65535)	

<SMTP Connection Time-out>

Functions	To set the timeout period for transmission.	
Use	To change the timeout period for connection during transmission.	
Setting/	The default setting is 60 Sec.	
Procedure	"60 Sec" (30 to 300 Sec)	

<Authentication Setting>

Functions	 To set whether or not to authenticate during transmission via SMTP server. 		
Use	To use when authenticating during transmission.		
	Available authentication mode: POP Before SMTP, SMTP authentication		
Setting/	The default setting is OFF.		
Procedure	"OFF"	POP Before SMTP	SMTP Authentication
	* Setting to "POP Before SMTP" will set the time for POP Before SMTP. • The default setting is 60 Sec. "60 Sec" (0 to 60 Sec)		
	* When setting to SMTP authentication, touch the "Setting Check" key for authentication.		
	User ID : Enter the User ID for SMTP authentication.		
	Password : Enter the password for SMTP authentication.		ntication.
Domain name : Enter the domain name for SMTP authentication.		thentication.	

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(4) TX/RX Test

Functions	To determine the correct transmission and reception using CS Remote Care.	
Use	Use to determine the correct transmission and reception using CS Remote Care.	
Setting/	Press the Start key to let the machine start the transmission and reception test.	
Procedure	 The test procedure and result will be displayed on the screen. 	

(5) Data Initialization

Functions	To initialize the contents for the sever setting.		
Use	Use to initialize the contents for the server setting.		
Setting/	The default setting is No.		
Procedure	Yes	"No"	

10.11.9 List of the CS Remote Care error code

A. When Connecting by Modem

Error code	Error	Solution
0001	The line is busy (Busy detection)	Transmit again manually.
0002	Failure of the Modem default setting at transmitting (When the transmission completes with modem initial setting failed)	Check if the power of the modem is ON. Check the connecting condition between the modem and the main unit.
0003	Timeout of CONNECT at transmitting (No response to ATD)	Transmit again manually Check if the power of the modem is ON. Check the connecting condition between the modem and the main unit.
0005	Timeout of CONNECT at receiving (No response to ATA)	Check if the power of the modem is ON. Check the connecting condition between the modem and the main unit.
0006	Shut down of the data modem line (Host) (Carrier OFF is detected)	No solution, because the line is shut down at the host side.
8000	Timeout of start request telegram delivery (Start request telegram is not delivered after line connection)	Transmit again manually.
0009	Timeout of finish request telegram delivery (Finish request telegram is not delivered (Start of shut down).)	Transmit again manually.
000A	Receiving rejection (Receiving is made when the main unit is set to reject receiving.)	 Check the setting condition of the host side. Check the setting condition of the main unit side.
000B	RS232C Driver Over Run (When the modem detects Over Run.)	If the same error is detected several times, turn the modem power OFF and ON.
000C	If the same error is detected several times, turn the modem power OFF and ON.	If the same error is detected several times, turn the modem power OFF and ON.
000D	Break Interrupt (BI) Indicator (When the modem detects Break Interrupt (BI) Indicator.)	If the same error is detected several times, turn the modem power OFF and ON.
0011	Baud Rate ERROR (When selected Baud Rate is out of the specifi- cation (9600 bps to 38400 bps).)	Check the Baud rate of the software DipSW.

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. [Error code	Error	Solution
	0018	Machine ID has already been registered (Request telegram 2 (SET-UP) comes from the main unit that has already registered Machine ID.)	Set the initial registrations again for all including the host side.
	0019	Center ID Error (Center ID of the host is not identical with the one of start request telegram.)	Check Center ID setting of the main unit side. Check Center ID setting of the main unit side.
	001A	Device ID inconsistency (Device ID of the host is not identical with the one of start request telegram.)	Check Device ID setting of the main unit side. Check the setting of the host side.
	001B	Device ID Unregistered (Request telegram 2 (Constant data transmitting, Emergency call) comes from the main unit that has not registered Machine ID yet.)	Check Device ID setting of the main unit side. Check the setting of the host side.
	001E	Impossible to change (During printing) (Setting cannot be changed because the setting change is made during the machine is printing or starts printing.)	Try again when the machine is not printing.
	0020	Timeout of Telegram Delivery (At waiting mode of telegram delivery the machine fails to receive the telegram in a given time.)	Try communication again.
	0027	Transmission / Receiving collision (Receiving is detecting during transmitting processing)	Try communication again.

Note

When a code other than the ones listed above is displayed, contact KONICA MINOLTA and inform
the error code.

B. When connecting by E-Mails

Error code	Error	Solution
0001	Connection Timeout during transmission	Check the SMTP Server on
		User side.
O###	Transmission error	Check the SMTP Server on
	***: SMTP responding code (hexadecimal)	User side.
0003	Connection timeout when receiving	Check the POP3 Server on
		User side.
0005	Receiving error	Check the POP3 Server on
		User side.
1030	Machine ID mismatching	Check the Machine ID set-
	Received an E-Mail which tells that Machine	ting.
	ID mismatches.	Check the Machine ID set-
		ting on host side.

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Error code	Error	Solution
1062	Modifying not available due to the copy job currently performing When informing the host that it cannot be modified due to the copy job currently performing.	Ask the host to send another instruction mail for modifying.
1081	Frame No. errorThe last frame has not been received.There are missing frame No.	Check the status of the Machine registration on host side.
1084	Date expired Expiration date for data modification command has passed.	 Ask the host to send another instruction mail for modifying.
1092	Received an error mail when Center setup is not complete	Check the status of the Machine registration on host side.
2039	Socket is not connected. • LAN cable on the Copier side is detached.	Check the SMTP Server and POP3 Server on User side.
203E	Network is down. • LAN cable on the Copier side is detached.	Check the connection between the Copier on the User's side and the Network connector. Check the Network environment on the User's side.
3000	POP3_AUTHORIZATION_ERR	Check the POP3 Server environment on User's side.
3001	POP3_TRANSACTION_ERR	Check the POP3 Server environment on User's side.
3002	POP3_CONNECT_ERR	Check the POP3 Server environment on User's side.
3003	POP3_TIMEOUT_ERR	Check the POP3 Server environment on User's side.
3004	POP3_FORMAT_ERR	Check the POP3 Server environment on User's side.
3005	POP3_MEMORY_ERR	Check the POP3 Server environment on User's side.
3006	POP3_JOBID_ERR	Check the POP3 Server environment on User's side.
3007	POP3_NO_DATA_ERR	Check the POP3 Server environment on User's side.
3008	POP3_DELETE_FAIL_ERR	Check the POP3 Server environment on User's side.
3009	POP3_MAILBOX_FULL	Check the POP3 Server environment on User's side.
4103	Not Ready Tried to transmit or receive an E-Mail when the machine was not yet in the E-Mail receiving status after power was turned ON.	Wait for a while and try transmitting again.

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7	Error code	Error	Solution		
	4104	SMTP Channel Not Ready	Wait for a while and try		
			transmitting again.		
	4105	POP3 Channel Not Ready	Wait for a while and try		
			transmitting again.		
	4106	Not Ready other than the ones listed above.	Wait for a while and try		
			transmitting again.		

Note

- When a code other than the ones listed above is displayed, contact KONICA MINOLTA and inform
 the error code.
- C. When connecting by Fax modem

Error code	Error	Solution
T50	Host terminal ID not correct	Check the telephone number set for host.
R80	Serial number received from the host not correct.	Check the status of the Machine registration on host side.
R81	Disconnection of writing instruction from host during machine is running.	Wait for a while and try transmitting again.
R82	Disconnection of FAX-CSRC instruction when FASX-CSRC is not allowed.	Check the status of the Machine registration on host side.
R83	Host command error.	Contact KONICA MINOLTA and inform the error code.
R84	NVRAM writing error.	Contact KONICA MINOLTA and inform the error code.

Note

• When a code other than the ones listed above is displayed, see the FK-502 Service Manual.

10.11.10Troubleshooting for CS Remote Care

If communication is not done properly, check the condition by following the procedures shown below.

Shift the screen in the order of [Service Mode] → [CS Remote Care] → [Detail Setting].
 At this time, in the cases of Initial transmitting / Administrator transmitting / Maintenance Start transmitting / Maintenance Finish transmitting, the communication result will be displayed at the top of the screen.

^{*} For the communication result, the following message will be displayed based on its success or failure.

Display of	Cause	Solution
Communication result		
Communicating	_	_
Communication	Although the machine tries to commu-	See the list of error message and
trouble with the	nicate with the Center, there is any	confirm the corresponding point.
Center	trouble and the communication com-	(See P.263)
	pletes unsuccessfully.	
Complete success-	_	_
fully		
Modem trouble	Although the machine tries to commu- nicate with the Center, there is any	Check if the Power of modem in ON.
	trouble in the modem.	Check if there is any problem in
		connection between the modem
		and the main unit.
Busy line	Although the machine tries to commu-	Communicate with the Center
	nicate with the Center, the line to the	again.
	Center is busy.	
No response	Although the machine tries to commu-	Communicate with the Center
	nicate with the Center, there is no	again.
	response from the Center.	Check the communication envi- ronment of the Center side.

10.12System 2

10.12.1 Data Capture

Set the availability/unavailability of the capture of the print job data.

Keeping the print data captured allows the reproduction of a print with which a trouble occurred.

(For particulars, see "IV. Troubleshooting" of "Field Service IC-204.")

10.12.2 Paper Size Setting

Set the paper size of LU.

A. Procedure

1. "Service Mode screen"

Press [System 2].

2. "System Input screen"

Press [Paper Size Setting].

3. "Paper Size Setting screen"

Select [Tray 3] or [LCT] and press [Paper size].

4. Press [A4] or [81/2 x 11].

5. Press [OK] twice to return to [System Input screen].

10.12.3 DipSW Setting

Set the software DipSW.

Note

· Be sure not to change the setting of DipSW that is not given in this service manual.

A. Procedure

1. "Service Mode screen"

Press [System 2].

2. "System Input screen"

Press [DipSW Setting].

3. "Software Switch Setting screen"

Press [SW No.].

4. Press the [+]/[-] or numeric keys to enter the DipSW No.

In "SW Setting value", 8-bit data of the DipSW number selected is displayed in binary digit and hexadecimal digit.

5. Press [Bit No.].

6. Press the [+]/[-] or numeric keys to enter the bit number.

7. Press either of [OFF (0)] or [ON (1)] of "Bit Data" to set a value.

8. Press [Set].

9. Repeat steps 3 to 8 to set necessary software DipSW.

10. Press [OK].

B. List of software DipSW

Note

. Be sure not to change bits with no particular reference made of the function.

DipSW1		DIPSW No.	Bit	Function	0	1	Def	ault set	ting
A Image: removal form of the properties of the completed of A3 (11 x 17) 1 count 2 counts 2 counts 0 1 1 1 2 — — — 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0							Japan	Inch	Metric
A 1 Total counting method of A3 (11 x 17) 1 count 2 counts 0 1 1 2 — — — — 0 0 0 3 — — — — 0 0 0 4 — — — — 0 0 0 0 6 — — — — 0 <		DipSW1	0	Operation at key counter	Ignore.	Decide promptly	0	1	1
A				removal		as a jam.			
2	\triangle		1	Total counting method of A3	1 count	2 counts	0	1	1
A				(11 x 17)					
A - - - 0			2	_	_	_	0	0	0
S			3	_	_	_	0	0	0
Restriction of the FS-510 stapled copy count			4	_	_	_	0	0	0
PipSW2			5	_	-	_	0	0	0
Abstract DipSW2 0 No toner stop condition 1 Decided by DipSW3-2 after paper exit. Stop at once after paper exit. 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			6	_	_	_	0	0	0
Ab DipSW2 0 No toner stop condition 1 Decided by DipSW3-2 after paper exit. Stop at once after paper exit. 0			7	Restriction of the FS-510 sta-	None	Stop once at 20	0	0	0
A DipSW3-2 after paper exit. Image: content of the toner level of the roper of copy DipSW4 DipSW4 DipSW4 DipSW4 DipSW4 DipSW4 Detection of the toner level of the copy of copy 1				pled copy count		copies.			
A 1 - - 0 0 0 2 - - - 1 1 1 3 - - - 1 1 1 4 - - - - 0 0 0 5 - - - - 0 0 0 0 7 - - - - 0 <t< td=""><td></td><td>DipSW2</td><td>0</td><td>No toner stop condition 1</td><td>Decided by</td><td>Stop at once</td><td>0</td><td>0</td><td>0</td></t<>		DipSW2	0	No toner stop condition 1	Decided by	Stop at once	0	0	0
A 2 - - 1					DipSW3-2	after paper exit.			
A 3 - - - 1 1 1 1 4 - - - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			1	_	-	_	0	0	0
A - - - 0 0 0 5 - - - 1 1 1 6 - - - 0 0 0 7 - - - 0 0 0 1 SC latch (fusing SC) Latch released Latched¹ 0 0 0 2 No toner stop condition 2 When a job completed Stop at the break of the copy print. 0 0 0 3 - - - - 0 0 0 4 - - - - 0 0 0 4 - - - - 0 0 0 6 - - - - 0 0 0 7 - - - 0 0 0 1 (toner supply display) *1 *1 *1 1 1 2 Print stop condition after toner *2 *2 1 1 1 <			2	_	_	_	1	1	1
A 5 - - - 1 1 1 6 - - - - 0 0 0 7 - - - 0 0 0 0 1 SC latch (fusing SC) Latch released Latched¹ 0 0 0 2 No toner stop condition 2 When a job completed of the copy print. Stop at the break of the copy print. 0 0 0 3 - - - - 0 0 0 4 - - - - 0 0 0 6 - - - - 0 0 0 6 - - - - 0 0 0 7 - - - 0 0 0 1 (toner supply display) *1 *1 *1 1 1 2 Print stop condition after toner *2 *2 1 1 1 3 supply display <td< td=""><td></td><td></td><td>3</td><td>_</td><td>_</td><td>_</td><td>1</td><td>1</td><td>1</td></td<>			3	_	_	_	1	1	1
A 6 - - - 0 0 0 7 - - - - 0 0 0 0 DipSW3 0 - - - 0 <td< td=""><td></td><td></td><td>4</td><td>_</td><td>_</td><td>_</td><td>0</td><td>0</td><td>0</td></td<>			4	_	_	_	0	0	0
DipSW3 0 — — — 0 0 0 1 SC latch (fusing SC) Latch released Latched 0 0 0 0 2 No toner stop condition 2 When a job completed Stop at the break of the copy print. 0 0 0 3 — — — — 0 0 0 4 — — — — 1 <td< td=""><td></td><td></td><td>5</td><td>_</td><td>_</td><td>_</td><td>1</td><td>1</td><td>1</td></td<>			5	_	_	_	1	1	1
DipSW3 0 — — — 0 0 0 1 SC latch (fusing SC) Latch released Latched¹ 0 0 0 2 No toner stop condition 2 When a job completed of the copy print. 0 0 0 3 — — — — 0 0 0 4 — — — — 1 <	\triangle		6	_	-	_	0	0	0
1 SC latch (fusing SC) Latch released Latched 0 0 0 0 2 No toner stop condition 2 When a job completed of the copy print. 0 0 0 0 3 — — — — 0 0 0 4 — — — — 1 1 1 5 — — — — 0 0 0 6 — — — — 0 0 0 7 — — — 0 0 0 0 1 (toner supply display) *1 *1 *1 0 0 0 0 2 Print stop condition after toner *2 *2 1 1 1 1 3 supply display *2 *2 1 1 1 1 4 proof copy valid invalid 0 0 0 0 5 Job stop when there remains no toner Not stop Stop 1 1 </td <td></td> <td></td> <td>7</td> <td>_</td> <td>-</td> <td>_</td> <td>0</td> <td>0</td> <td>0</td>			7	_	-	_	0	0	0
2 No toner stop condition 2 When a job completed Stop at the break of the copy print. 3		DipSW3	0	_	-	_	0	0	0
A completed of the copy print. 0 0 0 4 - - - 1 1 1 5 - - - 0 0 0 6 - - - 0 0 0 7 - - - 0 0 0 1 (toner supply display) *1 *1 0 0 0 2 Print stop condition after toner *2 *2 1 1 1 3 supply display *2 *2 1 1 1 4 proof copy valid invalid 0 0 0 5 Job stop when there remains no toner Not stop Stop 1 1 1			1	SC latch (fusing SC)	Latch released	Latched`	0	0	0
3			2	No toner stop condition 2	When a job	Stop at the break	0	0	0
A - - - 1 1 1 5 - - - 0 0 0 6 - - - 0 0 0 7 - - - 0 0 0 1 (toner supply display) *1 *1 0 0 0 2 Print stop condition after toner *2 *2 1 1 1 3 supply display *2 *2 1 1 1 4 proof copy valid invalid 0 0 0 5 Job stop when there remains no toner Not stop Stop 1 1 1					completed	of the copy print.			
Image: Sign of the content of the			3	_	_	_	0	0	0
A 6 - - - 0			4	_	_	_	1	1	1
This is a supply display This is a supply di			5	_	-	_	0	0	0
DipSW4 0 Detection of the toner level *1 *1 0 0 0 0 1 (toner supply display) *1 *1 0 0 0 0 2 Print stop condition after toner *2 *2 1 1 1 1 3 supply display *2 *2 1 1 1 1 4 proof copy valid invalid 0 0 0 5 Job stop when there remains Not stop Stop 1 1 1 1 no toner 1 1 1 1 1 1 1 1 1			6	_	_	_	0	0	0
1 (toner supply display) *1 *1 0 0 0 0 2 Print stop condition after toner 3 supply display *2 *2 1 1 1 1 4 proof copy valid invalid 0 0 0 5 Job stop when there remains Not stop Stop 1 1 1 1 no toner			7	_	_	_	0	0	0
2 Print stop condition after toner		DipSW4	0	Detection of the toner level	*1	*1	0	0	0
3 supply display *2 *2 1 1 1 1 1 4 proof copy valid invalid 0 0 0 0 5 Job stop when there remains no toner Stop 1 1 1 1 1			1	(toner supply display)	*1	*1	0	0	0
4 proof copy valid invalid 0 0 0 5 Job stop when there remains Not stop Stop 1 1 1 1 no toner			2	Print stop condition after toner	*2	*2	1	1	1
5 Job stop when there remains Not stop Stop 1 1 1 no toner			3	supply display	*2	*2	1	1	1
no toner	Â		4	proof copy	valid	invalid	0	0	0
A 6 copy reservation valid invalid 0 0 0			5	·	Not stop	Stop	1	1	1
	A		6	copy reservation	valid	invalid	0	0	0

DIPSW No. Function Default setting Japan Inch Metric PWSaiD ⚠ Detection of the toner bottle Not detects Detects when installed DipSW5 *3 *3 Toner save setting *3 *3 DipSW6 Preliminary drum rotation of Not rotate Rotate when the power is on Δ Selection of K size for machine Metric size K size dispatched to Taiwan (original size) Selection of K size for machine Δ Metric size K size dispatched to Taiwan (bypass) DipSW7 DipSW8 Selection of the non-image Square erase Diagonal erase auto erase mode Print inhibition when getting at Invalid Valid PM PM counting method of A3 (11 ⚠ 1 count 2 counts x 17)

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	DIPSW No.	Bit	Function	0	1	Det	fault set	ting
						Japan	Inch	Metric
\triangle	DipSW9	0	Copy quantity limit	*4	*4	0	0	0
		1		*4	*4	0	0	0
		2		*4	*4	0	0	0
		3		*4	*4	0	0	0
		4	_	_	_	0	0	0
		5	_	_	_	0	0	0
		6	_	_	_	0	0	0
		7	_	_	_	0	0	0
	DipSW10	0	_	_	_	0	0	0
		1	_	_	_	1	1	1
		2	_	_	_	1	1	1
		3	_	_	_	0	0	0
		4	_	_	_	0	0	0
\triangle		5	Download font display setting	*5	*5	0	0	0
		6		*5	*5	0	0	0
\triangle		7	Jam code display	Not displayed	Displayed	1	1	1
	DipSW11	0	_	_	_	0	0	0
		1	_	_	_	1	1	1
		2	_	_	_	0	0	0
		3	_	_	_	0	0	0
		4	_	_	_	0	0	0
		5			_	0	0	0
		6			_	0	0	0
		7			_	0	0	0
	DipSW12	0			_	0	0	0
		1			_	0	0	0
		2			_	0	0	0
		3	Print count setting up to the	*6	*6	0	0	0
		4	print inhibition when getting at	*6	*6	0	0	0
		5	PM	*6	*6	0	0	0
		6			_	0	0	0
		7			_	0	0	0
	DipSW13	0			_	0	0	0
		1	_	_	_	0	0	0
		2			_	0	0	0
		3	Jaggy filter selection	OFF	ON	0	0	0
		4			_	0	0	0
		5			_	0	0	0
		6	Discrimination level of the non-	*7	*7	1	1	1
		7	image auto erase mode	*7	*7	0	0	0

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DIPSW No.	Bit	Function	0	1	Def	fault set	ting
					Japan	Inch	Metric
DipSW14	0	_	_	_	0	1	0
	1	_	_	_	0	1	0
	2	_	_	_	0	1	0
	3	_	_	_	0	1	0
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	0	0	0
	7	_	_	_	0	0	0
DipSW15	0	_	_	_	0	0	0
	1	_	_	_	0	0	0
	2	_	_	_	0	0	0
	3	_	_	_	0	0	0
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	Stop/non-stop due to overload	Stop at 400	Not stop	0	0	0
		when not connected to FS/job	sheets				
		tray.					
	7	_	_	_	1	1	1
DipSW16	0	Fusing temperature while in the	*8	*8	0	1	1
	1	low power mode	*8	*8	0	0	0
	2	Heater operation	Heater turns ON	Heater is OFF while	1	1	1
	_	Dilata a maioria de la eferma a car	at all times.	in the sleep mode.			
	3	Print permission before con- ducting TCR adjustment	Permit	Prohibit	1	1	1
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	Dot diameter adjustment con-	*9	*9	1	1	1
	7	trol	*9	*9	0/1	0	0
DipSW17	0	Foolscap size setting	*10	*10	1	1	1
	1		*10	*10	1	1	1
	2		*10	*10	0	0	0
	3	_	_	_	0	0	0
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	0	0	0
	7	Separation claw operation OFF mode (for destination to China)	Normal	OFF	0	0	0
	1	1	[l l		1

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DIPSW No.	Bit	Function	0	1	Det	fault set	ting
					Japan	Inch	Metric
DipSW18	0	Separation of a defective part from the tray 1 (upper stage of the main body)	Normal	Separated	0	0	0
	1	Separation of a defective part from the tray 2 (lower stage of the main body)	Normal	Separated	0	0	0
	2	Separation of a defective part from the bypass feed	Normal	Separated	0	0	0
	3	_	_	_	0	0	0
	4	Separation of a defective part from the tray 3 (PC-202 upper stage/PC-402)	Normal	Separated	0	0	0
	5	Separation of a defective part from the tray 4 (PC-202 lower stage)	Normal	Separated	0	0	0
	6	Separation of a defective part from the tray 5 (LU)	Normal	Separated	0	0	0
	7	_	_	_	0	0	0
DipSW19	0	Separation of a defective part from the printer controller (IC)	Normal	Separated	0	0	0
	1	Separation of a defective part from the FAX kit (FK)	Normal	Separated	0	0	0
	2	_	_	_	0	0	0
	3	Separation of a defective part from HDD	Normal	Separated	0	0	0
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	0	0	0
	7	Separation of a defective part from DF	Normal	Separated	0	0	0
DipSW20	0	Separation of a defective part from the network	Normal	Separated	1	1	1
	1	Separation of a defective part from IEEE1284	Normal	Separated	0	0	0
	2	Separation of a defective part from USB	Normal	Separated	0	0	0
	3	_	-	_	0	0	0
	4	_	-	_	0	0	0
	5	Separation of a defective part from SD	Normal	Separated	0	0	0
	6	_	_	-	0	0	0
	7	_	_	_	0	0	0
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	DIPSW No.	Bit	Function	0	1	Det	ault sett	ting
						Japan	Inch	Metric
	DipSW21	0	_	_	_	1	0	1
		1	_	_	_	0	0	0
		2	Platen/ADF size recognition	8½ x 14	Foolscap	0	0	0
			switchover					
		3	_	_	_	0	0	0
7		4	Operation at key counter	Destroy jobs	Not destroy jobs	0	0	0
			removal					
		5	Platen small size (81/2 x 11/A4	*11	*11	0	1	0
			or less) setting					
7		6	Operation at key counter	Ignore	(same as the)	0	0	0
			removal (printer)		Setting of			
					DipSW1-0			
		7	_	_	_	0	0	0
7	DipSW22	0	FAX print operation when a	Forced memory	Print all FAX jobs	0	0	0
			parallel vendor is connected	reception				
		1	FAX print fee collection control	Not collect for	Collect for forced	0	0	0
			when a parallel vendor is con-	forced memory	memory recep-			
			nected	reception	tion, too			
		2	Printer operation when a paral-	Permit to print	Prohibit printing	0	0	0
			lel vendor is connected					
		3	Printer operation when a paral-	Permit confiden-	Permit all print	0	0	0
			lel vendor is connected (Confi-	tial print only				
			dential print)					
		4	_	_	_	0	0	0
		5	Non-image area erase when	Not erase	Erase	0	0	0
			copying with magnification					
		_	changed (original glass)	11111000	N	0	-	0
		6	Image rotation not at continu-	rotate to 180°	Not rotate	0	0	0
		7	ous scanning (original glass)	_		0	0	0
	D: OM/OO	7	_		_	0	0	0
	DipSW23	0	_	_	_	1	1	1
		1	_	_	_	1	1	1
		2	_	_	_	1	1	1
		3	_	_	_	1	1	1
		4	Tray full detection at the exit of	Not detected	Detected	0	0	0
			100 sheets while in the FS					
			non-staple (FS-510)					
		5	Tray full detection at the exit of	Not detected	Detected	1	1	1
			100 sheets while in the FS sta-					
			ple (FS-510)			0		_
		6	_	_	_	0	0	0
		7	_	_	_	0	0	0

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DipSW24 O Mixed original direction setting Not detected Detected O O O O O	DIPSW No.	Bit	Function	0	1	Def	fault set	tina
DipSW24	Bii 611 116.	Dit	Turiotion	Ū.	·			
2	DipSW24	0	Mixed original direction setting	Not detected	Detected		0	0
3		1	job history display setting	Valid	Invalid	0	0	0
A -		2	_	_	_	0	0	0
S		3	_	_	_	0	0	0
Believe Beli		4	_	_	_	0	0	0
The color of the tension of the te		5	_	_	_	0	0	0
DipSW25		6	_	_	_	0	0	0
1		7	_	_	_	0	0	0
2	DipSW25	0	_	_	_	0	0	0
3 Switchover of the TSL control Normally ON/OFF		1	_	_	_	0	0	0
A -		2	_	_	_	0	0	0
S		3	Switchover of the TSL control	-	All OFF	0	0	0
Comparison Com		4	_	_	_	0	0	0
Not selected Not		5	_	_	_	0	0	0
DipSW26 O Polygon motor stop timer 15 seconds 30 seconds O O O O		6		Not rotate	rotate to 180°	0	0	0
1		7	_	_	_	0	0	0
2	DipSW26	0	Polygon motor stop timer	15 seconds	30 seconds	0	0	0
Selected Selected		1	_	_	_	0	0	0
bypass custom paper		2	_	_	_	0	0	0
A RS-232C I/F setting		3		At the center		0	0	0
5 — — — 0 0 0 6 — — — 0 0 0 7 — — — 0 0 0 1 — — — 0 0 0 2 — — — 0 0 0 3 — — — 0 0 0 4 — — — 0 0 0 5 Density setting when the printer toner save function is selected. *12 *12 0 0 0 0 printer toner save function is selected. *12 *12 0 0 0 0 printer toner save function is selected. *12 *12 0 0 0 0 printer toner save function is selected. *12 *12 0 0 0 0 printer toner save function is selected. *13 *13 0 0 0 0 printer toner save function is selected. *12 *12 0		1		Valid		0	0	0
6 — — — 0 0 0 7 — — — 0 0 0 1 — — — 0 0 0 1 — — — 0 0 0 2 — — — 0 0 0 3 — — — — 0 0 0 4 — — — — 0 0 0 0 5 Density setting when the existing when the printer toner save function is selected. *12 *12 0 0 0 0 0 Image leading edge position adjustment while in the image rotation *13 *13 0 0 0 0 2 rotation *13 *13 0 0 0 0				- Valid				_
7 — — — 0 0 0 1 — — — — 0 0 0 1 — — — — 0					_			_
DipSW27 0 - - 0 0 0 1 - - - 0 0 0 2 - - - 0 0 0 3 - - - 0 0 0 4 - - - 0 0 0 5 Density setting when the printer toner save function is selected. *12 *12 0 0 0 7 selected. *12 *12 0 0 0 DipSW28 0 Image leading edge position adjustment while in the image rotation *13 *13 0 0 0 2 rotation *13 *13 0 0 0				_	_			
1 — — — 0 0 0 2 — — — 0 0 0 3 — — — — 0 0 0 4 — — — — 0 0 0 5 Density setting when the printer toner save function is selected. *12 *12 0 0 0 7 selected. *12 *12 0 0 0 0 Image leading edge position adjustment while in the image rotation *13 *13 0 0 0 2 rotation *13 *13 0 0 0	DipSW27			_	_	_		_
2	,				_			
4 — — — 0 0 0 5 Density setting when the 6 printer toner save function is 7 selected. *12 *12 0 0 0 7 selected. *12 *12 0 0 0 DipSW28 0 Image leading edge position 1 mage 1 adjustment while in the image 2 rotation 1 mage 1			_	_	_			
4 — — — 0 0 0 5 Density setting when the printer toner save function is 3 selected. *12 *12 0 0 0 7 selected. *12 *12 0 0 0 DipSW28 0 Image leading edge position 1 adjustment while in the image 2 rotation 1 rota		3	_	_	_	0	0	0
6 printer toner save function is selected. *12 *12 0 0 0 7 selected. *12 *12 0 0 0 DipSW28 0 Image leading edge position adjustment while in the image rotation *13 *13 0 0 0 2 rotation *13 *13 0 0 0		4		_	_	0	0	0
6 printer toner save function is selected. *12 *12 0 0 0 7 selected. *12 *12 0 0 0 DipSW28 0 Image leading edge position adjustment while in the image rotation *13 *13 0 0 0 2 rotation *13 *13 0 0 0		5	Density setting when the	*12	*12	0	0	0
DipSW28 0 Image leading edge position *13 *13 0 0 0 0 0 0 0 0 0		6		*12	*12	0	0	0
1 adjustment while in the image rotation *13 *13 0 0 0 0 0 0		7	selected.	*12	*12	0	0	0
2 rotation *13 *13 0 0 0	DipSW28	0	Image leading edge position	*13	*13	0	0	0
		1	,	*13	*13	0	0	0
3 *13 *13 0 0 0		2	rotation	*13	*13	0	0	0
		3		*13	*13	0	0	0

DIPSW No.	Bit	Function	0	1	Def	fault set	ting
					Japan	Inch	Metric
DipSW28	4	Image leading edge position	*14	*14	0	0	0
	5	adjustment while in the platen	*14	*14	0	0	0
	6	memory copy	*14	*14	0	0	0
	7		*14	*14	0	0	0
DipSW29	0	Transfer/separation output	*15	*15	0	0	0
	1	selection of the user paper	*15	*15	0	0	0
	2	(tray)	*15	*15	1	1	1
	3	TSL (transfer exposure lamp)	*16	*16	0	0	0
	4	control of the user paper (tray)	*16	*16	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	1	1	1
	7	_	_	_	0	0	0
DipSW30	0	Transfer/separation output	*17	*17	0	0	0
	1	selection of the user paper	*17	*17	0	0	0
	2	(bypass)	*17	*17	0	0	0
	3	TSL control of the user paper	*18	*18	0	0	0
	4	(bypass)	*18	*18	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	0	0	0
	7	FCOT-EE setting	No pre-scan	Pre-scan	0	0	0
DipSW31	0	_	_	_	1	1	1
	1	_	_	_	0	0	0
	2	_	_	_	0	0	0
	3	_	_	_	0	0	0
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	1	1	1
	7	_	_	_	1	1	0
DipSW32	0	_	_	_	0	0	0
	1	_	_	_	0	0	0
	2	_	_	_	0	0	0
	3	_	_	_	0	0	0
	4	_	_	_	0	0	0
	5	_	_	_	0	0	0
	6	_	_	_	0	0	0
	7	_	_	_	0	0	0
DipSW33	0	Switchover of the punch hole	*19	*19	0	1	0
	1	number (PU)	*19	*19	0	0	1
	2	_	_	_	0	0	0
	3	_	_	_	0	0	0
	4	_	_	_	0	0	0
1		İ		il	1		1

	DIPSW No.	Bit	Function	0	1	Det	fault set	tina
	Dii 011 110.	Dit	Tanonom	Ü		Japan	Inch	Metric
	DipSW33	5	_	_	_	0	0	0
	·	6	_	_	_	0	0	0
A		7	_	_	_	0	0	0
	DipSW34	0	System ON/OFF while in the sleep or the power switch (SW2) OFF	ON	OFF	1	1	1
		1	FS-510 paper exit tray position	*20	*20	0	0	0
		2		*20	*20	0	0	0
		3		*20	*20	0	0	0
		4	Print start permission when SD-502 is supplied with paper.	Permit	Prohibit	0	0	0
		5	_	_	_	0	0	0
		6	USB function	ISW mode	Printer mode	1	1	1
		7	-	_	-	0	0	0
\triangle	DipSW35	0	Custom original support	*21	*21	0	0	0
		1		*21	*21	0	0	0
		2	-	_	-	0	0	0
		3	_	_	_	0	0	0
		4	Stitch direction correction in 2 → 2 mode	Valid	Invalid	0	0	0
		5	Address book password export permission setting	Valid	Invalid	0	0	0
		6	Address setting after sending through the scanner	Reset	Not reset	0	0	0
		7	_	_	_	0	0	0
	DipSW36	0	IPX used or not used	Not used	Used	1	1	1
		1	Telnet used or not used	Not used	Used	0	0	0
		2	Fusing temperature setting	*22	*22	0	0	0
		3	when normal paper is selected	*22	*22	0	0	0
		4	Fusing temperature setting when thick paper, envelope or label is selected	*23	*23	0	0	0
		5	Fusing temperature setting when thin paper is selected.	*24	*24	0	0	0
		6	Fusing temperature setting	*25	*25	0	0	0
		7	when OHP is selected.	*25	*25	0	0	0

	DIPSW No.	Bit	Function	0	1	Det	fault set	ting
						Japan	Inch	Metric
1	DipSW37	0	Operation when FS reaches the maximum capacity	Restore automati- cally	Restore manually	0	0	0
		1	FAX stamp setting	Invalid	Valid	0	0	0
		2	Image selection when fixing motor clock adjusted	Copier image	Test pattern No.9	0	0	0
		3	_	_	_	0	0	0
		4	_	_	_	0	0	0
		5	_	_	_	0	0	0
		6	_	_	_	0	0	0
		7	_	_	_	0	0	0
1	DipSW38	0	_	_	_	0	0	0
		1	_	_	_	0	0	0
		2	_	_	_	0	0	0
		3	Operation at setting paper	*26	*26	0	0	0
		4	onto the bypass feed tray	*26	*26	0	0	0
		5	The number of copies stored in the box in printing	1 copy	Some copies specified with the driver	0	0	0
		6	_	_	_	0	0	0
		7	_	_	_	0	0	0
1	DipSW39	0	_	_	_	0	0	0
		1	_	_	_	0	0	0
		2	_	_	_	0	0	0
		3	_	_	_	0	0	0
		4	_	_	_	0	0	0
		5	_	_	_	0	0	0
		6	_	_	_	0	0	0
		7	_	_	_	0	0	0

*1 Toner level detection (toner supply display)
Set the copy count that is printed until the print operation is terminated from the toner near empty is displayed after the toner level sensor (PZS) detects toner empty for a certain period of time.

Mode	4-1	4-0
After 0 print or its equiva-	0	0
lent		
After 100 print or its	0	1
equivalent		
After 200 print or its	1	0
equivalent		
After 500 print or its	1	1
equivalent		

*2 Print stop condition after the toner supply display Set the copy count that is printed until the print is prohibited after a message set by DipSW4-0/1 is displayed.

Mode	4-3	4-2
100 prints or its equiva-	0	0
lent		
400 prints or its equiva-	0	1
lent		
700 prints or its equiva-	1	0
lent		
1000 prints or its equiva-	1	1
lent		

*3 Toner save setting

Toner consumption can be reduced by bringing the developing bias and the charging grid potential down below 50V (20 steps). And it is also possible to increase the image density a little by bringing the potential up above 50V (20 steps).

Mode	5-6	5-5
No adjustment made	0	0
Toner consumption	0	1
increased (Image density		
increased)		
Toner consumption	1	0
reduced (Image density		
reduced)		
No adjustment made	1	1

*4 Copy quantity limit

Mode	9-3	9-2	9-1	9-0
No limit	0	0	0	0
1 print	0	0	0	1
3 prints	0	0	1	0
5 prints	0	0	1	1
9 prints	0	1	0	0
10 prints	0	1	0	1
20 prints	0	1	1	0
30 prints	0	1	1	1
50 prints	1	0	0	0
99 prints	1	0	0	1
250 prints	1	0	1	0
No limit	1	0	1	1
No limit	1	1	0	0
No limit	1	1	1	0
No limit	1	1	1	1

*5 Download font display setting



Mode	10-6	10-5
Does not display	0	0
Display the Greek alpha-	0	1
bets		
Display the Hebrew	1	0
alphabets		
Display the Greek/	1	1
Hebrew alphabets		

*6 Setting of the print count made up to the time of the print inhibition when gettint to PM

When getting at DipSW8-2PM with the print inhibition set to "1," the print stops after getting at the PM count shown on the right.

Mode	12-5	12-4	12-3
1000 prints	0	0	0
2000 prints	0	0	1
3000 prints	0	1	0
4000 prints	0	1	1
5000 prints	1	0	0

*7 Discrimination level of the non-image auto erase mode

This setting is made in the non-image erase mode of an applicable function. The image area detection threshold value is set when the non-image erase function set by the administrator is set to no limit.

Mode	13-7	13-6
Corresponding to dark	0	0
original		
Standard	0	1
Corresponding to light	1	0
interference		
-	1	1

*8 Fusing temperature while in the low power Set the fusing temperature while in the low power mode.

		1
Mode	16-1	16-0
The fusing heater lamps /1 (L2) and /2	0	0
(L3) turn on when the thermistors /1		
(TH1) and /2 (TH2) are respectively at		
70 °C, and turn OFF when they are at		
80 °C.		
The fusing heater lamps /1 (L2) and /2	0	1
(L3) turn ON when the thermistors /1		
(TH1) and /2 (TH2) are respectively at		
120 °C, and turn OFF when they are at		
130 °C.		
The fusing heater lamps /1 (L2) and /2	1	0
(L3) turn ON when the thermistors /1		
(TH1) and /2 (TH2) are respectively at		
150 °C, and turn OFF when they are at		
160 °C.		
The fusing heater lamps /1 (L2) and /2	1	1
(L3) turn ON when the thermistors /1		
(TH1) and /2 (TH2) are respectively at		
70 °C, and turn OFF when they are at		
80 °C		

*9 Dot diameter adjustment control Change the timing when the dot diameter adjustment is made.

Mode	16-7	16-6
The humidity is 60% or	0	0
more and the power		
switch turns OFF for more		
than 8 hours.		
The power switch turns	0	1
OFF for more than 8		
hours.		
At all times	1	0
None	1	1

*10 Foolscap size setting
Set the definition of the foolscap size.

Mode	17-2	17-1	17-0
8½ x 13	0	0	0
81/4 x 13	0	0	1
81/8 x 131/4	0	1	0
8 x 13	0	1	1



*11 Platen small size $(81/2 \times 11/A4 \text{ or less})$ setting Default setting is "1" for inch and "0" for metric.

Mode	21-5
A notice is made in a size detected by APS.	0
A notice is made as A4 (Japan) / 81/2 x 11 (inch) size.	1

*12 Density setting when selecting the printer toner save function.

When "Toner save mode" for the printer driver turns ON, set the printer density in the range shown in the table.

Mode	27-7	27-6	27-5
Standard	0	0	0
- 4 (thin)	0	0	1
- 3	0	1	0
- 2	0	1	1
- 1	1	0	0
+ 1	1	0	1
+ 2	1	1	0
+ 3 (dense)	1	1	1

*13 Adjustment of the image leading edge while in the image rotation

While in the location in the 1-sided/2-sided copy, adjust the slippage at the leading edge when there occurs a leading edge slippage of 3 to 4 mm on the back page.

Mode	28-3	28-2	28-1	28-0
+ 0 mm	0	0	0	0
+ 0.5 mm	0	0	0	1
– 0.5 mm	1	0	0	1
+ 3.5 mm	0	1	1	1
– 3.5 mm	1	1	1	1

*14 Adjustment of the image leading edge position while in the platen memory copy

While in the platen copy, the paper exit direction is reversed for the normal print and the memory print. Adjust the discrepancy when the image leading edge position is slipped.

Mode	28-7	28-6	28-5	28-4
+ 0 mm	0	0	0	0
+ 0.5 mm	0	0	0	1
– 0.5 mm	1	0	0	1
+ 3.5 mm	0	1	1	1
– 3.5 mm	1	1	1	1

*15 Selection of the transfer/separation output of the user paper (tray)

Set the transfer/separation output that is applicable when selecting the user paper in [Paper type] of [Utility menu].

Mode	29-2	29-1	29-0
Normal paper (Japan)	0	0	0
Normal paper (inch)	0	0	1
Normal paper (metric)	0	1	0
Thick paper	0	1	1
Thin paper	1	0	0
Recycled paper	1	0	1

*16 TSL control of the user paper (tray)

Set the TSL control that is applicable when selecting the user paper in [Paper type] of [Utility menu]. When selecting "Switch over depending on the environment," conduct the TSL control by switching over "Normal ON control"/"All OFF" according to the humidity detected by the humidity sensor (HUMS).

Mode	29-4	29-3
Normal ON control	0	0
All OFF	0	1
Switching over depending on the environment	1	0

*17 Selection of the transfer/separation output of the user paper (bypass)

When selecting the bypass tray, set the transfer/separation output that is applicable when the user paper is selected in [Specialty paper] of "Change Tray settings" or when it is selected in [Paper type] of [Utility menu].

Mode	30-2	30-1	30-0
Normal paper (Japan)	0	0	0
Normal paper (inch)	0	0	1
Normal paper (metric)	0	1	0
Thick paper	0	1	1
Thin paper	1	0	0
Recycled paper	1	0	1

*18 TSL control of the user paper (bypass)

When selecting the bypass tray, set the TSL control that is applicable when the user paper is selected in [Specialty paper] of "Change Tray settings" or when it is selected in [Paper type] of [Utility menu].

When selecting "Switch over depending on the environment," conduct the TSL control by switching over "Normal control"/"All OFF" according to the humidity detected by the humidity sensor (HUMS).

Mode	30-4	30-3
Normal control	0	0
All OFF	0	1
Switching over depending on the environment	1	0

*19 Switchover of the punch hole number (PU) While in the use of PU-501, set the number of punch holes to be displayed on the operation board. This can be set regardless of the destination of the main body.

Default setting is 3 holes for inch and 4 holes for metric.

Mode	33-1	33-0
2 holes (Japan)	0	0
3 holes (inch)	0	1
4 holes (metric)	1	0
4 holes (Sweden)	1	1

*20 FS-510 paper exit tray position Set the stop position of the paper exit tray.

Mode	34-3	34-2	34-1
Not fixed	0	0	0
Tray 1	0	0	1
Tray 2	0	1	0
Tray 3	0	1	1
Folding/stitch-and-fold tray (SD)	1	0	0
Not fixed	1	0	1
	1	1	0
	1	1	1

↑ *21 Custom original support Set when copying custom originals.

Mode	35-1	35-0
Does not support cus-	0	0
tom originals		
Custom original mode	0	1
Custom original size AMS	1	0
(center zoom)		
Not allowed	1	1

*22 Fusing temperature setting while in the selection of plain paper

When there occurs a problem (insufficient fusing, large paper curl) with fusibility while in the selection of plain paper, change the fusing set temperature.

- Countermeasure
 - 1) Increase the temperature: To suppress a jam due to an insufficient fusing and the wind-up of paper around the roller.
 - 2) Decrease the temperature: To suppress a paper curl and the undulation of paper.

Mode	36-3	36-2
Standard	0	0
Standard + 10 °C	0	1
Standard + 5 °C	1	0
Standard – 10 °C	1	1

*23 Fusing temperature setting while in the selection of thick paper, envelope, label.

When there occurs a problem (insufficient fusing) with fusibility while in the selection of thick paper, envelope and label, change the fusing set temperature. (For countermeasure, see *22.)

*24 Fusing temperature setting while in the selection of thin paper

When there occurs a problem (insufficient fusing) with fusibility while in the selection of thin paper, change the fusing set temperature. (For countermeasure, see *22.)

Mode	36-4
Standard	0
Standard + 10 °C	1

Mode	36-5
Standard	0
Standard + 10 °C	1

*25 Fusing temperature setting while in the selection of OHP

When there occurs a problem (insufficient fusibility and large paper curl) with fusibility while in the selection of OHP, change the fusing set temperature. (For countermeasure, see *22.)

Mode	36-7	36-6
Standard	0	0
Standard + 10 °C	0	1
Standard – 20 °C	1	0
Standard – 10 °C	1	1

/	î	\

*26 Operation at setting paper onto the bypass feed tray

Set the operation when setting paper onto the bypass feed tray.)

Mode	38-4	38-3
Reset size with selecting	0	0
the bypass feed tray		
Does not reset size with	0	1
selecting the bypass feed		
tray		
Reset size without select-	1	0
ing the bypass feed tray		
Reset size without select-	1	1
ing the bypass feed tray		
	1	1

10.12.4 ISW

For particulars, see "5. FIRMWARE VERSION UP".

(See P.101)

10.12.5 Option

Let the main body recognize the installing condition of the optional HDD and FAX.

A. Procedure

- 1. "Service Mode screen" Press [System 2].
- 2. "System Input screen"

Press [Option].

3. "Option screen"

Press [Installed] or [Not Installed] to select the installation or non-installation of the HDD and FAX.

4. Press [OK].

10.12.6 Network FAX Setting

Sets to use the network FAX.

• At this moment on January 2007, "SIP FAX" is unavailable.

A. Procedure

- 1. "Service Mode screen"
 - Press [System 2].
- 2. "System Input screen"

Press [Network FAX Setting].

3. "Network FAX Setting screen"

Press either [ON] or [OFF] to choose whether to use the network FAX (IP address FAX / SIP FAX / Internet FAX) or not.

NOTE

- . When it is set to "ON", you can choose whether to use or not by performing the following set-
- [Administrator Setting] → [Network Setting] → [Network FAX Setting] → [Network FAX Function Settings]
- 4. Press [OK].

10.12.7 Trouble Reset

After completion of the handling of a trouble related to the fusing system, release the trouble.

Note

- When a trouble related to the fusing system occurs, the software DipSW3-1 (SC latch) is set to "1" ("0" for default). This adjustment is used to return this to the default condition (normal operation).
- . When an SC code is displayed on the touch panel, you cannot enter the service mode. Accordingly, the following shows the method for resetting a trouble from the power-off condition.

A. Procedure

- 1. Turn ON the main power switch (SW1).
- 2. With the Utility/Counter key pressed, turn ON the power switch (SW2).
- 3. Press [Trouble reset] to release a trouble with [OK] displayed.
- 4. Turn OFF and ON the power switch (SW2).

10.12.8 Internet ISW

⚠ For details, See "5. FIRMWARE VERSION UP".

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bizhub 500/420/360

10.13List Output

10.13.1 List output

Outputs various types of lists.

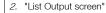
Lists that can be output are as shown below.

- Machine Management List
- Adjustment List
- Service Parameter
- Protocol Trace Last
- Protocol Trace Error
- · Fax Setting List



A. Procedure

1. "Service Mode screen" Press [List Output].



Press the list to output for selection, then select [1-Sided/2-Sided] and [Paper Tray].

3. Press the Start key.

The list selected is output.

4. "List Output screen" When outputting other lists, repeat steps 2 to 3.

5. Press [END].

Service Mode screen appears.

10.14Test Mode

10.14.1 Test pattern list

The following test patterns can be output.

- Full Image Halftone (No. 1)
- Gradation Pattern (No. 2)
- Gradation Pattern (No. 3)
- Gradation Pattern (No. 5)
- Beam Gap Check (No. 11)
- Line Check Pattern (No. 16)

Note

• Be sure not to output a test pattern that is not given in this service manual.

No.1 Overall halftone (8-bit output)

[Check item]

· When the density is set at 70 (halftone)

When there are white stripes or black stripes, check to see if an abnormality is found with the scanner system or process system

[Recommended sections to be checked]: Developing unit, cleaning glass, charging corona, transfer/separation corona, scanner mirror, slit glass and original glass

• When the density is set at 0 (white)

When an image fogging occurs, check the process system to see if an abnormality is found with it. [Recommended sections to be checked]: Charging corona, and the contact of a high voltage power source

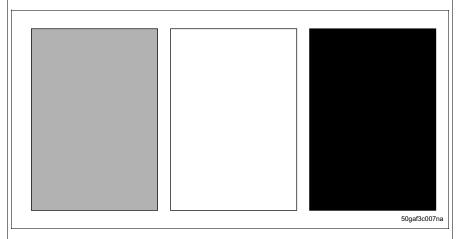
When the density is set at 255 (black)

When the density is thin, check the process system to see if an abnormality is found with it.

[Recommended sections to be checked]: Write unit

Test pattern

When the density is set at 70. When the density is set at 0. When the density is set at 255.



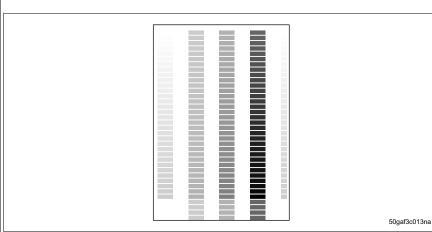
No.2 Gradation pattern

[Check item]

When fogging appears or density is thin, check the process system and the gamma correction to see if which is defective.

Regardless of this test pattern being normal, any trouble is found with the print image, the image processing system or scanner system is considered defective.

Test patterns

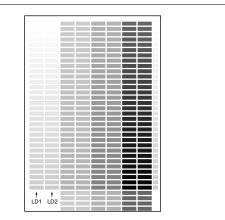


No.3 Gradation pattern (8-bit output)

[Check item]

- Check to see if the laser output of LD1/LD2 is uniform and if the gradation is reproduced without a break.
 [Recommended sections to be checked]: Write unit, and LD offset adjustment
- For LD offset adjustment, see "10.4.11 LD1 Offset Adj. / LD2 Offset Adj.".
 (See P.194)

Test pattern



50gaf3c008na

No.5 Gradation pattern (8-bit output)

[Check item]

Check the pattern to see if the laser output of LD1/LD2 is uniform with the gradation continuously reproduced.

[Recommended checkpoints]: Write unit, LD offset adjustment

For LD offset adjustment, see "10.4.11 LD1 Offset Adj. / LD2 Offset Adj.". (See P.194)

Test pattern

No.11 Beam check (8-bit output)

[Check item 1]

 Check to see if there is a difference in density found with the solid black pattern in the main scan and sub scan directions

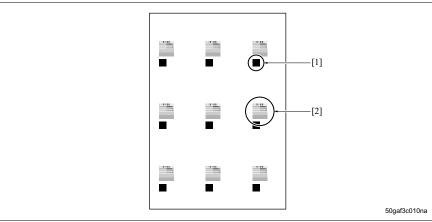
[Recommended sections to be checked]: Charging corona, transfer/separation corona, developing unit, and write dust-proof glass.

[Check item 2]

 Check to see if an image crawling occurs with the gradation pattern at the leading edge and/or trailing edge of the test pattern in the sub scan direction.

[Recommended sections to be checked]: Transfer/separation corona

Test pattern



[1] Solid black pattern

[2] Gradation pattern

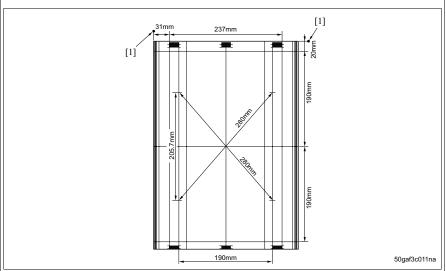
No.16 Linearity evaluation pattern (1-bit error diffusion output)

[Check item]

Judge from this test pattern whether the scanner system or the printer system is abnormal.

Items that can be checked include main scan magnification, sub scan magnification, image skew, and leading edge timing of the printer system. If the copy image is defective despite no abnormality being visible on the test pattern, the scanner system is defective.

Test pattern



[1] Edge of paper

10.14.2 Test pattern output

There are two methods provided for the test pattern output.

- · Output it by selecting the item of each test pattern. (Procedure A)
- Output it by specifying the test pattern number. (Procedure B)

Note

bizhub 500/420/360

· Be sure not to output a test pattern that is not given in this service manual.

A. Procedure for a test pattern output

1. "Service Mode screen"

Press [Test Mode].

2. "Test Mode screen"

Press either of the following: [Full Image Halftone], [Gradation Pattern (No. 2)], [Gradation Pattern (No. 5)], [Gradation Pattern (No. 5)], [Beam Gap Check] and [Line Check Pattern].

3. Screen for each pattern

When specifying any density, enter a density value through [+]/[-] keys and press [Setting].

When selecting an overall halftone, it is possible to select a halftone density by [0 (White)], [70 (Halftone)] and [255 (Black)].

- 4. Press [Test Copy].
- 5. "Test Copy screen"

Select A3 (for metric) or 11 x 17 (for inch) paper and press the Start key.

- 6. Check the test pattern and press [END].
- 7. When outputting other test patterns, repeat steps 2 to 6.
- 8. Press [OK].

B. Procedure for any test pattern output

1. "Service Mode screen"

Press [Test Mode].

2. "Test Mode screen"

Press [Test pattern output mode].

3. "Test Pattern Output Mode screen"

Press [Pattern No.] and specify a test pattern number through the [+]/[-] keys.

When specifying any density, press [Density Setting], enter a density value through the [+]/[-] keys and press [Setting].

- 4. Press [Test Copy].
- 5. "Test Copy screen"

With A3 (for metric) or 11 x 17 (for inch) paper selected, press the Start key.

- 6. Check the test pattern and press [END].
- 7. When outputting other test patterns, repeat steps 3 to 7.
- 8. Press [OK].

10.14.3 Running Mode

Conduct a continuous print operation test.

In this mode, the following items can be selected.

Intermittent Copy Mode

The machine shifts into the ready condition after completion of the print operation of the set copy count and conducts the same operation after waiting for 0.5 sec.

Paperless Running Mode

In this mode, no paper is fed and none of the paper detection/jam detection is made while in the operation. The print operation is made nearly at the same timing as the usual operation with no transfer/separation control made. The machine shifts into the ready condition after completion of the print operation of the set copy count and conducts the same operation after waiting for 0.5 sec.

Paperless Mode

With no paper fed and none of the paper detection/jam detection made, the print operation is made nearly at the same timing as the usual operation.

· Paperless Endless Mode

The operation is made with the set copy count automatically set with no limit. Like the paperless mode, the print operation is made nearly at the same timing as the usual operation with no paper fed and none of the paper detection/jam detection made.

· Progress Running Mode

The combined operation of the paperless endless mode plus the scan operation and the stepped change of the auto paper feed is made. This is not use in the field.

A. Procedure

- "Service Mode screen" Press [Test Mode].
- 2. "Test Mode screen"
- Press [Running mode].
- "Running Mode screen"
 Press [Intermittent Copy] to [Paperless Endless] and select a test mode to be conducted.
- 4. Press the Start key to start the running test.
- 5. Press the Stop key to stop the running test.
- 6. Turn off and on the power switch (SW2) to exit the running test mode.

10.15Fax setting

For particulars of the setting, see FK-502 Service Manual.

10.16Enhanced Security

10.16.1 List of the security setting

Adjustment/setting item			
Enhanced Security	CE Password		
	Administrator Password		
	Administrator Feature Level	Level 1	
		Level 2	
		Prohibit	
	CE Authentication	ON	
		OFF	

10.16.2 Start and termination of the security mode

Security setting is made on "Enhanced security screen" in the security mode.

A. Procedure

1. "Service Mode screen"

With none of the service mode items selected, press the copy count setting keys in the order shown below.

Stop $\rightarrow 0 \rightarrow C$

2. "Enhanced Security screen"

The security mode is put in the start-up condition and the security setting is available.

3. "Enhanced Security screen"

When selecting either of the service mode items, the selected service mode item screen is displayed and the security mode terminates.

10.16.3 CE Password

Set a password to enter the service mode.

Note

bizhub 500/420/360

- Be sure to avoid using as a password the name and the birth day that can be easily suspected by other people.
- · CE must not leak the password to other people.
- The CE password is valid when the CE authentication function is valid. (See P.301)

A. Procedure

- "Enhanced Security screen" Press [CE Password].
- 2. "CE Password Setting screen"

Enter 8 digits of a password currently set in the alphanumeric characters and press [END]. "92729272" is set for default.

- 3. Enter 8 digits of a new password in the alphanumeric characters and press [END].
- 4. Enter 8 digits of the re-entered password in the alphanumeric characters and press [END] to make the setting valid with [Enhanced Security screen] displayed.
 If you want to make the entered setting invalid, press [Cancel].

10.16.4 Administrator Password

Set a password to enter the administrator setting of the set-up menu.

The administrator password can also be set from the administrator setting of the set-up menu.

Note

 Be sure to avoid using as a password the name and the birth day that can be easily suspected by other people.

A. Procedure

- 1. "Enhanced Security screen"
 - Press [Administrator Password].
- 2. "Administrator Password Setting screen"

Enter 8 digits of a new password in the alphanumeric characters and press [END]. "12345678" is set for default.

Enter 8 digits of the re-entered password in the alphanumeric characters and press [END] to make the setting valid with [Enhanced Security screen] displayed.

If you want to make the entered setting invalid, press [Cancel].

10.16.5 Administrator Feature Level

Set the range of the administrator feature to be displayed in Administrator Setting in the Utility menu. When the setting is made to [Prohibit] in this feature, the following features are not displayed.

A. Features not diaplayed

		-
[3] Administrator setting	[1] System setting	[0] Standard Size setting

B. Procedure

1.	"Enhanced Security screen"
	Press [Administrator Feature Level].
2.	"Administrator Feature Level Setting screen"
	Select either of [Level 1]/[Level 2]/[Prohibit].
3.	Press [END] to register the feature selected.

10.16.6 CE Authentication

Set the request or non-request of the password entry to enhance the security level in the service mode.

A. Procedure

1. "Enhanced Security screen"
Press [CE Authentication].

2. "CE Authentication screen"
Press [ON] or [OFF].

3. Press [END] to decide the setting with [Enhanced Security screen] displayed.

10.17Billing Setting

10.17.1 List of the billing setting

Adjustment/setting item	
Billing Setting	Counter Setting
	Management Function Choice

10.17.2 Start and termination of the billing setting mode

The billing setting is made in [Billing Setting screen] in the billing setting mode.

A. Procedure

1. "Service Mode screen"

With none of the service mode items selected, press the copy count setting keys in the order shown below.

Stop \rightarrow 9

2. "Billing Setting screen"

The billing mode is put in the start-up condition and the billing setting is available.

3. "Billing Setting screen"

When selecting either of the service mode items, the billing setting mode is terminated and the selected service mode item screen is displayed.

10.17.3 Counter Setting

Set the counter mode of the counters of 2 types.

- Total Counter Mode
- · Large Size Counter Mode

A. Procedure

"Billing Setting screen"
 Press [Counter Setting].

2. "Counter Setting screen"

Select a count mode of the total counter in either of [Mode 1] or [Mode 2].

• Total counter count mode ([Mode 2] for the initial setting)

[Mode 1]: 1 count for each print

[Mode 2]: 2 counts depending on the paper size and the print mode.

 ${\it 3.}$ Select a count mode of the large size counter from among the following items.

• Large size counter count mode ([No Count] for the initial setting)

[No Count]

[A3/11 x 17] (Initial setting for inch area)

[A3/B4/11 x 17/8 $\frac{1}{2}$ x 14] (Initial setting for metric area)

[A3/11 x 17/B4/81/2 x 14/Foolscap]

NOTE

 When selecting other than [No count], the count-up is as shown below in the combination of the total counter and the counter mode.

Copy mode		1-sided copy				2-sided copy			
Print paper	Othertl	nan the	Specified size		Other than the		Specified size		
	specified size			specified size					
Count mode se	election of the total counter	Mode 1	Mode 2	Mode 1	Mode 2	Mode 1	Mode 2	Mode 1	Mode 2
Number of	Total counter	1	1	1	2	2	2	2	4
counts Size counter		0	0	1	1	0	0	2	2
	2-sided total counter		0	0	0	1	1	1	1

4. Press [END].

10.17.4 Management Function Choice

Set the installation/non-installation of the key counter and the management device.

A. Procedure

- "Billing Setting screen"
 Press [Management Function Choice].
- "Management Function Choice screen" Select the management device.

NOTE

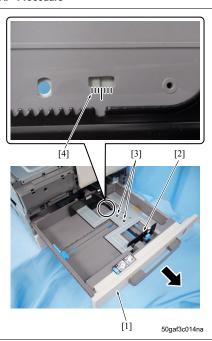
- . The initial setting is [Unset].
- 3. Select the message type.
- 4. Press [END].

11. MECHANICAL ADJUSTMENT

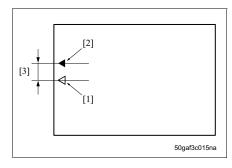
11.1 Mis-centering adjustment of the trays 1 and 2

This adjustment is made when there occurs a mis-centering that cannot be adjusted in the service mode.

A. Procedure



- 1. Pull out the tray [1].
- 2. If there remains any paper, remove it thoroughly.
- When the paper guide [2] is set to the small size position, expand it.
- 4. Loosen the 2 screws [3].
- 5. Move the paper guide [2] and adjust the center position with the marking-off [4] as a guide.
- 6. Tighten the 2 screws [3].

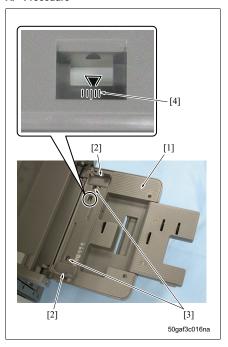


- 7. Set the tray with paper put in it.
- 8. Conduct the copy/print operation and check to see if the mis-centering between the center [1] of the paper and the center [2] of the copied image is within a standard value (± 3 mm or less [3]).
- When the value is not within the standard value, repeat steps 1 to 8 until the standard value can be obtained.

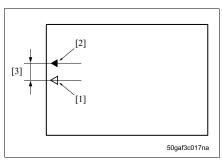
11.2 Mis-centering adjustment of the bypass tray

This adjustment is made when there occurs a mis-centering that cannot be adjusted in the service mode.

A. Procedure



- 1. Open the bypass tray [1].
- 2. If paper is set, remove it.
- When the paper guide [2] is set to the small size position, expand it.
- 4. Loosen the 2 screws [3].
- Move the paper guide [2] and adjust the center position with the marking-off [4] as a guide.
- 6. Tighten the 2 screws [3].



- 7. Set paper in the bypass tray.
- Conduct the copy/print operation and check to see if the mis-centering between the center [1] of the paper and the center [2] of the copied image is within a standard value (± 3 mm or less [3]).
- When the value is not within the standard value, repeat steps 1 to 8 until the standard value can be obtained.

■ TROUBLESHOOTING

12. JAM CODE

12.1 Jam code list

Classification	Jam code		Cause	Resulting operation	Correction
Bypass	J-1000	Juring operation	The vertical conveyance sensor (PS2) does not turn ON within a specified period of time after the feed clutch /BP (CL6) turns ON.	If there is a sheet of paper being printed when a jam	Pull out the paper from the bypass tray and remove jammed paper if any.
Tray 1	J-1100	Duri	The registration sensor (PS1) does not turn ON within a specified period of time after the feed clutch /1 (CL4) turns ON.	occurs, the main body completes the paper exit before stopping	Open the vertical conveyance door and ADU and remove jammed paper if any.
Tray 2	J-1200		The vertical conveyance sensor (PS2) does not turn ON within a specified period of time after the feed clutch /2 (CL5) turns ON.	operations.	Pull out the tray and remove jammed paper if any.
	J-1201		The registration sensor (PS1) does not turn ON within a specified period of time after the vertical conveyance sensor (PS2) turns ON.		
PC-202	J-1300		The vertical conveyance sensor /3 (PS117) does not turn ON a specified period of time after the paper feed motor /3 (M122) turns ON.		Open the right door of PC and the vertical conveyance door of the main body and remove
PC-402			The vertical conveyance sensor (PS2) does not turn ON a specified period of time after the paper feed motor (M1) turns ON.		jammed paper if any. Pull out the tray and remove jammed paper if any.
PC-202	J-1301	-	The vertical conveyance sensor (PS2) of the main body does not turn ON within a specified period of time after the vertical conveyance sensor /3 (PS117) of PC-202 turns ON.		
PC-402	J-1302		The vertical conveyance sensor (PS2) of the main body does not turn ON within a specified period of time after the vertical conveyance sensor (PS2) of PC-402 turns ON.		
	J-1305		The paper feed sensor (PS1) does not turn ON within a specified period of time after the paper feed motor (M1) turns ON.		

Classification	Jam code		Cause	Resulting operation	Correction
PC-402	J-1306	Ouring operation	The paper feed sensor (PS1) does not turn OFF within a specified period of time after the PS1 turns ON.	If there is a sheet of paper being printed	Open the right door of PC and the vertical conveyance door of the
	J-1307	During	The vertical conveyance sensor (PS2) does not turn ON within a specified period of time after the paper feed sensor (PS1) turns ON.	when a jam occurs, the main body completes the paper exit	main body and remove jammed paper if any. Pull out the tray and remove jammed paper
	J-1308		The paper feed sensor (PS2) does not turn OFF within a specified period of time after the PS2 turns ON.	before stopping operations.	if any.
	J-1309		When a paper feed start signal is sent out to PC-402 from the main body, a recieve signal from PC-402 is not sent out within a specified period of time after that.		
	J-1311		The shift position sensor (PS11) does not turn ON within a specified period of time after shift home sensor (PS12) turns OFF.		
PC-202	J-1400		The vertical conveyance sensor /4 (PS126) does not turn ON within a specified period of time after the paper feed motor /4 (M123) turns ON.		
	J-1401		The vertical conveyance sensor /3 (PS117) does not turn ON within a specified period of time after the vertical conveyance sensor /4 (PS126) turns ON.		
LU	J-1500		The LU exit sensor (PS155) does not turn ON within a specified period of time after the feed clutch (CL151) turns ON.		Open the upper door of LU and the vertical conveyance door of the main body and remove
	J-1501		The vertical conveyance sensor (PS2) of the main body does not turn ON within a specified period of time after the LU exit sensor (PS155) turns ON.		jammed paper if any.
Other	J-2001 J-2002		Emergency stop jam of the system While in the print, the vertical convey-	The main body and the optional	Remove jammed paper if any from optional
			ance door opens.	device stop	device / main body.
	J-2003		The ADU door is opened while in printing.	immediately.	
	J-2004		The ADU is opened while in printing.		
PC	J-2005		While in the print, the right door opens.		

Classification	Jam code		Cause	Resulting operation	Correction
FS	J-2006	ration	While in the print, the front door opens.	The main body and the optional	Remove jammed paper if any from optional
FS-510	J-2007	During operation	While in the print, the guide plate switch (SW4) turns OFF. While in the up drive operation of the tray, the shutter switch (SW2) turns ON.	device stop immediately.	device / main body.
FS-511	J-2008		While in the print, FS-511 comes off from the main body.		
RU	J-2009		While in the print, the front door opens.		
FS-511	J-2010		While in the print, the upper door opens.		
MT			While in the print, the right door opens.		
SD			While in the print, the saddle-stitching section opens.		
Conveyance	J-3000		The registration sensor (PS1) does not turn OFF within a specified period of time after the registration clutch (CL1) turns ON.	The printer section stops immediately.	Open ADU and remove jammed paper if any.
	J-3100		The fusing exit sensor (PS3) does not turn ON within a specified period of time after the registration clutch (CL1) turns ON.		
Fusing	J-3200		The fusing exit sensor (PS3) does not turn OFF within a specified period of time after the PS3 turns ON.		
Reversing	J-3300		The reverse sensor (PS27) does not turn ON within a specified period of time after the fusing exit sensor (PS3) turns ON.		
	J-3400		The reverse sensor (PS27) does not turn OFF within a specified period of time after the PS27 turns ON.		
Other	J-5001		A print start signal is not sent out from the overall control board (OACB) within a specified period of time after the registration sensor (PS1) turns ON.	The main body and the optional device stop immediately.	Open the right door of PC, the vertical convey- ance door of the main body and ADU and remove jammed paper if any.

Classification	Jam code		Cause	Deculting	Correction
Classification	Jam code		Cause	Resulting operation	Correction
DF	J-6001		The DF open/close switch (SW3)	The DF stops	Open the open/close
DF	J-6001	operation	turns OFF while in the DF operation.	immediately. If	cover and remove
	1.0000	era	'	there is paper	jammed paper if any.
	J-6002	gop	The cover open/close sensor (PS7)	being trans-	јантнец рарег п ану.
		During 6	turns OFF while in the DF operation.	ferred or having	
	J-6101	△	While in the single sided mode, the	been trans-	
			original feed sensor (PS6) does not	ferred, the main	
			turn ON within a specified period of	body completes	
			time after the original feed motor (M1)	the paper exit	
			turns ON.	before stopping	
	J-6102		When feeding the first original in the	operations.	
			mode other than the single sided	oporationo.	
			mode, the original feed sensor (PS6)		
			does not turn ON within a specified		
			period of time after the original feed		
			motor (M1) turns ON.		
	J-6103		When feeding the second original in		
			the mode other than the single sided		
			mode, the original feed sensor (PS6)		
			does not turn ON within a specified		
			period of time after the original feed		
			motor (M1) turns ON.		
	J-6104		When feeding the third original in the		
			mode other than the single sided		
			mode, the original feed sensor (PS6)		
			does not turn ON within a specified		
			period of time after the original feed		
			motor (M1) turns ON.		
	J-6105		While in the single sided mode, the		
			original feed sensor (PS6) does not		
			turn OFF within a specified period of		
			time after the PS6 turns ON.		
	J-6106		When feeding the first original in the		
			mode other than the single sided		
			mode, the original feed sensor (PS6)		
			does not turn OFF within a specified		
			period of time after the PS6 turns ON.		
	J-6107		When feeding the second original in		
			the mode other than the single sided		
			mode, the original feed sensor (PS6)		
			does not turn OFF within a specified		
			period of time after the PS6 turns ON.		

Classification	Jam code		Cause	Resulting operation	Correction
DF	J-6108	During operation	When feeding the third original in the mode other than the single sided mode, the original feed sensor (PS6) does not turn OFF within a specified period of time after the PS6 turns ON.	The DF stops immediately. If there is paper being trans- ferred or having	Open the open/close cover and remove jammed paper if any.
	J-6201		While in the single sided mode, the original registration sensor (PS9) does not turn ON within a specified period of time after the feed motor (M1) turns ON.	ferred, the main body completes the paper exit before stopping	
	J-6202		When feeding the first original in the mode other than the single sided mode, the original registration feed sensor (PS9) does not turn ON within a specified period of time after the feed motor (M1) turns ON.	operations.	
	J-6203		When feeding the second original in the mode other than the single sided mode, the original registration sensor (PS9) does not turn ON within a specified period of time after the feed motor (M1) turns ON.		
	J-6204		When feeding the third original in the mode other than the single sided mode, the original registration sensor (PS9) does not turn ON within a specified period of time after the feed motor (M1) turns ON.		
	J-6205		While in the single sided mode, the original registration sensor (PS9) does not turn OFF within a specified period of time after the PS9 turns ON.		
	J-6206		When feeding the first original in the mode other than the single sided mode, the original registration sensor (PS9) does not turn OFF within a specified period of time after the PS9 turns ON.		
	J-6207		When feeding the second original in the mode other than the single sided mode, the original registration sensor (PS9) does not turn OFF within a specified period of time after the PS9 turns ON.		

Classification	Jam code		Cause	Resulting	Correction
Ciacomoation	our codo		Guade	operation	Concention
DF	J-6208	During operation	When feeding the third original in the mode other than the single sided mode, the original registration sensor (PS9) does not turn OFF within a specified period of time after the PS9	The DF stops immediately. If there is paper being trans- ferred or having	Open the open/close cover and remove jammed paper if any.
	J-6301	_	turns ON. While in the single sided mode, the original detection sensor (PS8) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.	been trans- ferred, the main body completes the paper exit before stopping operations.	
	J-6302		When feeding the first original in the mode other than the single sided mode, the original detection sensor (PS8) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.		
	J-6303		When feeding the second original in the mode other than the single sided mode, the original detection sensor (PS8) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.		
	J-6304		When feeding the third original in the mode other than the single sided mode, the original detection sensor (PS8) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.		
	J-6305		While in the single sided mode, the original detection sensor (PS8) does not turn OFF within a specified period of time after the PS8 turns ON.		
	J-6306		When feeding the first original in the mode other than the single sided mode, the original detection sensor (PS8) does not turn OFF within a specified period of time after the PS8 turns ON.		
	J-6307		When feeding the second original in the mode other than the single sided mode, the original detection sensor (PS8) does not turn OFF within a specified period of time after the PS8 turns ON.		

Classification	Jam code		Cause	Resulting	Correction
				operation	
DF	J-6308	on	When feeding the third original in the	The DF stops	Open the open/close
		During operation	mode other than the single sided	immediately. If	cover and remove
		edc	mode, the original detection sensor	there is paper	jammed paper if any.
		ng	(PS8) does not turn OFF within a	being trans-	
		Juri	specified period of time after the PS8	ferred or having	
			turns ON.	been trans-	
	J-6501	g	While in the idle, the original feed sen-	ferred, the main	
		When idling	sor (PS6) is ON.	body completes	
	J-6502	en i	While in the idle, the original registra-	the paper exit	
	0-0002	Wh	tion sensor (PS9) is ON.	before stopping	
	1.0500	1		operations.	
	J-6503		While in the idle, the original feed sen-	,	
			sor (PS6) or the original registration		
			sensor (PS9) is ON.		
	J-6504		While in the idle, the original exit sen-		
			sor (PS10) is ON.		
	J-6505		While in the idle, the original registra-		
			tion sensor (PS6) or the original exit		
			sensor (PS10) is ON.		
	J-6506		While in the idle, the original registra-		
			tion sensor (PS9) or the original exit		
			sensor (PS10) is ON.		
	J-6507		While in the idle, any of the original		
	J-0301		feed sensor (PS6), the original regis-		
			tration sensor (PS9) or the original exit		
	1.0500		sensor (PS10) is ON.		
	J-6508		While in the idle, the original detection		
			sensor (PS8) is ON.		
	J-6509		While in the idle, the original registra-		
			tion sensor (PS6) or the original		
			detection sensor (PS8) is ON.		
	J-6510		While in the idle, the original registra-		
			tion sensor (PS9) or the original		
			detection sensor (PS8) is ON.		
	J-6511		While in the idle, any of the original		
			feed sensor (PS6), the original regis-		
			tration sensor (PS9) or the original		
			detection sensor (PS8) is ON.		
	J-6512		While in the idle, the original detection		
	0-0012		sensor (PS8) or the original exit sen-		
	1.05:-	4	sor (PS10) is ON.		
	J-6513		While in the idle, any of the original		
			feed sensor (PS6), the original detec-		
			tion sensor (PS8) or the original exit		
			sensor (PS10) is ON.		

Z	1	

Classification	Jam code	Cause	Resulting	Correction
DF	J-6514	While in the idle, any of the original registration sensor (PS9), the original detection sensor (PS8) or the original exit sensor (PS10) is ON.	operation The DF stops immediately. If there is paper	Open the open/close cover and remove jammed paper if any.
	J-6515	exit sensor (PS10) is ON. While in the idle, any of the original feed sensor (PS6), the original registration sensor (PS9), the original detection sensor (PS8) or the original exit sensor (PS10) is ON.	being trans- ferred or having been trans- ferred, the main body completes the paper exit	
	J-6601	While in the single sided mode, the original exit sensor (PS10) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.	before stopping operations.	
	J-6602	When feeding the first original in the mode other than the single sided mode, the original exit sensor (PS10) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.		
	J-6603	When feeding the second original in the mode other than the single sided mode, the original exit sensor (PS10) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.		
	J-6604	When feeding the third original in the mode other than the single sided mode, the original exit sensor (PS10) does not turn ON within a specified period of time after the original coveyance motor (M2) turns ON.		
	J-6605	While in the single sided mode, the original exit sensor (PS10) does not turn OFF within a specified period of time after the PS10 turns ON.		
	J-6606	When feeding the first original in the mode other than the single sided mode, the original exit sensor (PS10) does not turn OFF within a specified period of time after the PS10 turns ON.		

314

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Classification	Jam code		Cause	Resulting	Correction
				operation	
DF	J-6607	on	When feeding the second original in	The DF stops	Open the open/close
		ırati	the mode other than the single sided	immediately. If	cover and remove
		obe	mode, the original exit sensor (PS10)	there is paper	jammed paper if any.
		During operation	does not turn OFF within a specified	being trans-	
		Dur	period of time after the PS10 turns	ferred or having	
			ON.	been trans-	
	J-6608		When feeding the third original in the	ferred, the main	
			mode other than the single sided	body completes	
			mode, the original exit sensor (PS10)	the paper exit	
			does not turn OFF within a specified	before stopping	
			period of time after the PS10 turns	operations.	
			ON.		
FS-510	J-7201	ng	While in the idle, the entrance sensor	FS, RU, MT, SD,	Remove jammed paper
		When idling	(PS4) is ON.	main body stop	if any from the FS/main
FS-511		her.	While in the idle, the passage sensor	immediately.	body.
		>	(PS2) of RU turns ON.		
FS-510	J-7202		While in the idle, the conveyance sen-		
			sor (PS5) or the stacker sensor (PS8)		
			is ON.		
FS-511			While in the idle, any of the sub tray		
			exit sensor (PS1), the bypass route		
			conveyance sensor (PS2), the inter-		
			mediate conveyance sensor (PS3),		
			the main route conveyance sensor		
			(PS4) or the alignment tray sensor		
			(PS5) is ON.		
FS-510	J-7203		While in the idle, the stacker sensor		
			(PS8) is ON.		
SD	J-7204		While in the idle, the the paper exit		
			sensor (PS20) is ON.		
MT	J-7205		While in the idle, the conveyance sen-		
			sor /Up (PS9) or /Lw (PS10) is ON.		
FS-510	J-7216	пc	The entrance sensor (PS4) of FS does		
		ratic	not turn ON within a specified period		
		obe	of time after the fusing exit sensor		
		During operation	(PS3) of the main body turns ON.		
FS-511		Juri	The path sensor (PS2) of RU does not		
		_	turn ON within a specified period of		
			time after the fusing exit sensor (PS3)		
		1	of the main body turns ON.		

		ı			
Classification	Jam code		Cause	Resulting	Correction
				operation	
FS-510	J-7217	During operation	The entrance sensor (PS4) does not	FS, RU, MT, SD,	Remove jammed paper
		ərat	turn OFF within a specified period of	main body stop	if any from the FS/main
		do	time after the PS4 turns ON.	immediately.	body.
		ring	The conveyance sensor (PS5) does		
			not turn ON within a specified period		
			of time after the entrance sensor		
			(PS4) turns ON.		
FS-511			The path sensor (PS2) of RU does not		
			turn OFF within a specified period of		
			time after the PS2 turns ON.		
			The sub tray paper exit sensor (PS1)		
			of FS does not turn ON within a spec-		
			ified period of time after the path sen-		
			sor (PS2) of RU turns ON.		
			The main route conveyance sensor	1	
			(PS4) of FS does not turn ON within a		
			specified period of time after the path		
			sensor (PS2) of RU turns ON.		
			The bypass route conveyance sensor		
			(PS2) of FS does not turn ON within a		
			specified period of time after the path		
			sensor (PS2) of RU turns ON.		
			The main route conveyance sensor		
			(PS4) does not turn OFF within a		
			specified period of time after the PS4		
			turns ON.		
			The bypass route conveyance sensor		
			(PS2) does not turn OFF within a		
			specified period of time after the PS2		
			turns ON.		
			The intermediate conveyance sensor		
			(PS3) does not turn ON within a spec-		
			ified period of time after the main		
			route conveyance sensor (PS4) turns		
			ON.		
			The intermediate conveyance sensor		
			(PS3) does not turn OFF within a		
			specified period of time after the		
			bypass route conveyance sensor		
			(PS2) turns ON.		
FS-510	J-7218		The conveyance sensor (PS5) does		
			not turn OFF within a specified period		
			of time after the PS5 turns ON.		
FS-511			The sub tray exit sensor (PS1) does		
			not turn OFF within a specified period		
			of time after the PS1 turns ON.		
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Classification	Jam code		Cause	Resulting	Correction
				operation	
FS-511	J-7218	ion	The intermediate conveyance sensor	FS, RU, MT, SD,	Remove jammed paper
		operation	(PS3) does not turn OFF within a	main body stop	if any from the FS/main
		do	specified period of time after the PS3	immediately.	body.
		During	turns ON.		
FS-510	J-7221		After completion of stapling, the		
			stacker sensor (PS8) does not turn		
			OFF within a specified period of time		
			after the paper exit motor (M1) turns		
			ON.		
FS-511			After completion of stapling, the align-		
			ment tray sensor (PS5) does not turn		
			OFF within a specified period of time		
			after the paper exit motor (M3) turns		
			ON.		
SD	J-7225		Folding jam		
PU	J-7243		Punch jam		
FS-510	J-7281		The stapler motor does not return to		
			the home position within a specified		
			period of time after the stapler motor		
			turns ON.		
FS-511			The stapler home sensor /Fr (PS22)		
			does not turn ON within a specified		
			period of time after the stapler motor		
			/Fr (M16) turns ON.		
	J-7282		The stapler home sensor /Rr (PS25)		
			does not turn ON within a specified		
			period of time after the stapler motor		
			/Rr (M17) turns ON.		
SD	J-7284		The clincher motor /Fr does not return		
			to the home position within a speci-		
			fied period of time after the clincher		
			motor /Fr turns ON.		
	J-7285		The clincher motor /Rr does not		
			return to the home position within a		
			specified period of time after the		
			clincher motor /Rr turns ON.		
MT	J-7290		The conveyance sensor /Up (PS9) or		
			/Lw (PS10) of MT does not turn ON		
			within a specified period of time after		
			the conveyance sensor (PS5) of FS		
			turns ON.		
			The conveyance sensor /Up (PS9) or		
			/Lw (PS10) do not turn OFF within a		
			specified period of time after PS9 or		
		L	PS10 turn ON.		

Classification	Jam code	T	Causa	Doculting	Correction
Classification	Jam code		Cause	Resulting operation	Correction
Paper	J-8100	_	The registration sensor (PS1) turns	The printer sec-	Open the vertical con-
feed	3-0100	idling	ON while in idling.	tion stops	veyance door and ADU
loca	J-8200	: E	The vertical conveyance sensor (PS2)	immediately.	and remove jammed
	J-0200	When	turns ON while in idling.	iriiriodiatory.	paper if any.
PC-202	J-8300	-	The vertical conveyance sensor /3	-	Open the right door
FU-202	J-0300		(PS116) turns ON while in idling.		and remove jammed
PC-402			The vertical conveyance sensor (PS2)	-	paper if any.
PG-402			turns ON while in idling.		рарог п агу.
PC-202	J-8400	+	The vertical conveyance sensor /4	-	
PG-202	J-8400		(PS126) turns ON while in idling.		
111	1.0500	+	` ,	-	On on the upper dear
LU	J-8500		The LU exit sensor (PS155) turns ON while in idling.		Open the upper door and remove jammed
			Write it iding.		paper if any.
Fusing	J-9000	+	The fusing exit sensor (PS3) turns ON	-	Open ADU and remove
i using	3-9000		while in idling.		jammed paper if any.
Reverse	J-9100	1	The reverse sensor (PS27) turns ON	_	jammod papor ir arry.
11000130	0 0 100		while in idling.		
ADU	J-9200	1	The ADU conveyance sensor /1	-	
7180	0 0200		(PS24) turns ON while in idling.		
	J-9300	1	The ADU conveyance sensor /2	_	
			(PS25) turns ON while in idling.		
	J-9701	_	The ADU conveyance sensor /1		
		atio	(PS24) does not turn ON within a		
		ber	specified period of time after the		
		During operation	reverse motor (M6) turns ON for		
		Duri	reverse rotation.		
	J-9702		The ADU conveyance sensor /2	-	
			(PS25) does not turn ON within a		
			specified period of time after the ADU		
			conveyance sensor /1 (PS24) turns		
			ON.		
	J-9703		The registration sensor (PS1) does		
			not turn ON within a specified period		
			of time after the ADU conveyance		
			sensor /2 (PS25) turns ON.		

13. MALFUNCTION CODE

13.1 Malfunction code list

A. Note for use

Turn OFF/ON the power switch (SW2) of the main body when releasing an abnormal condition.

B. Code list

NOTE

- For codes with "*" given in the error code column, a message "Turn off the power and turn it on again" is displayed on the operation panel.
- For codes with no "*" given in the error code column, a message "Contact the service" is displayed.

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Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
				operation	
₹	Drive	C-0201	The upper limit sensor /1 (PS6)	The main body	Paper lift motor /1 (M7)
òq			does not turn ON within a speci-	stops immedi-	Upper limit sensor /1 (PS6)
Main body			fied period of time after the paper	ately to turn OFF	Printer control board (PRCB)
2			lift motor /1 (M7) turns ON.	the main relay	
		C-0202	The upper limit sensor /2 (PS13)	(RL1).	Paper lift motor /2 (M8)
			does not turn ON within a speci-		Upper limit sensor /2 (PS13)
			fied period of time after the paper		Printer control board (PRCB)
			lift motor /2 (M8) turns ON.		
32		C-0203	The upper limit sensor /3 (PS114)		Paper lift motor /3 (M124)
C-202			does not turn ON within a speci-		Upper limit sensor /3
P			fied period of time after the paper		(PS114)
			lift motor /3 (M124) turns ON.		PC control board (PCCB)
		C-0204	The upper limit sensor /4 (PS123)		Paper lift motor /4 (M125)
			does not turn ON within a speci-		Upper limit sensor /4
			fied period of time after the paper		(PS123)
			lift motor /4 (M125) turns ON.		PC control board (PCCB)
\Box		C-0205	The upper limit sensor (PS152)		Paper lift motor (M151)
-			does not turn ON within a speci-		Upper limit sensor (PS152)
			fied period of time after the paper		LU drive board (LTDB)
			lift motor (M151) turns ON.		
32		C-0206	Paper lift motor (M5) abnormality.		Paper lift motor (M5)
C-402			Shift motor (M4) abnormality.		Shift motor (M4)
Ы			Shift gate motor (M3) abnormality.		Shift gate motor (M3)
					PC control board (PCCB)
					1 5 control board (1 GOB)

Clo	ssification	Code	Causes	Deculting	Estimated abnormal parts
Cla	SSIIICALION	Code	Causes	Resulting operation	Estimated abnormal parts
Bypass	Drive	C-0207	While in the paper feed, there occurs a condition twice in succession in which the lift sensor (PS23) does not turn ON within a specified period of time after the pick-up solenoid /BP (SD1) turns ON. While in the power switch (SW2) ON, there occurs a condition twice in succession in which PS23 does not turn OFF within a specified period of time after SD1 turns ON.	The main body stops immedi- ately to turn OFF the main relay (RL1).	Pick-up solenoid /BP (SD1) Lift sensor (PS23) Feed motor (M9) Printer control board (PRCB)
Main body	Fan abnor- mality Commu-	C-0301	Conveyance suction fan (FM5) abnormality. Communication abnormality		Conveyance suction fan (FM5) Printer control board (PRCB) Overall control board (OACB)
	nication abnor- mality		between the engine control of the overall control board (OACB) and that of the printer control board (PRCB). While in the stand-by, an FS Ready signal cannot be detected for a specified period of time.		Printer control board (PRCB)
FS	FS	C-1002	FS communication abnormality. A serial communication is unavailable between the FS control board (FSCB) and the printer control board (PRCB).		FS control board (FSCB) Printer control board (PRCB)
	FS-510	C-1003	Flash ROM abnormality. A checksum error of the flash ROM is detected.		FS control board (FSCB)
	FS-511	C-1101	Shift motor (M8) drive abnormality. When starting the home position movement, the shift home sensor (PS10) does not turn ON a specified period of time after M8 turns ON. When starting the shift position movement, PS10 does not turn OFF a specified period of time after M8 turns ON.		Shift motor (M8) Shift home sensor (PS10) FS control board (FSCB)

Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
FS	FS-511	C-1102	Tray lift motor (M7) drive abnormality. While in the main tray up drive, the main tray upper limit sensor (PS19) does not turn ON within a specified period of time after M7 turns ON. While in the main tray down drive, the lock signal of M7 is detected. While in the M7 ON, the main tray upper limit switch (SW2) or the main tray lower limit switch (SW3) turns ON.	The main body stops immedi- ately to turn OFF the main relay (RL1).	Tray lift motor (M7) Main tray upper limit sensor (PS19) FS control board (FSCB)
		C-1103	Alignment motor (M5) drive abnormality. While in the alignment home position search, the alignment home sensor (PS9) does not turn ON within a specified period of time after M5 turns ON. While in the alignment operation, PS9 does not turn OFF within a specified period of time after M5 turns ON.		Alignment motor (M5) Alignment home sensor (PS9) FS control board (FSCB)
		C-1104	Paper exit roller release motor (M13) drive abnormality. • When starting the pressure position drive, the exit roller home sensor (PS13) does not turn ON within a specified period of time after M13 turns ON. • When starting the separation position drive, PS13 does not turn OFF within a specified period of time after M13 turns ON.		Paper exit roller release motor (M13) Exit roller home sensor (PS13) FS control board (FSCB)

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Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
S	FS-511	C-1105	Intermediate conveyance roller release motor (M12) drive abnormality. • When starting the pressure position drive, the roller release home sensor (PS12) does not turn ON within a specified period of time after M12 turns ON. • When starting the separation position drive, PS12 does not turn OFF within a specified period of time after M12 turns ON.	The main body stops immedi- ately to turn OFF the main relay (RL1).	Intermediate conveyance roller release motor (M12) Roller release home sensor (PS12) FS control board (FSCB)
		C-1106	Stapler movement motor (M6) drive abnormality. • While in the home position search, the stapler home sen- sor (PS14) does not turn ON within a specified period of time after M6 turns ON. • While in the 1-staple position movement, PS14 does not turn OFF within a specified period of time after M6 turns ON.		Stapler movement motor (M6) Stapler home sensor (PS14) FS control board (FSCB)
		C-1107	Stapler motor /Rr (M16) drive abnormality. The stapler home sensor /Rr (PS22) does not turn OFF within a specified period of time after M16 turns ON. PS22 does not turn ON within a specified period of time after the OFF of PS22 is detected. PS22 does not turn ON within a specified period of time after the OFF of PS20 is detected.		Stapler motor /Rr (M16) Stapler home sensor /Rr (PS22) FS control board (FSCB)

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
	oomounor.	5545	344333	operation	Louinatou abriornat parto
FS	FS-511	C-1108	Stapler motor /Fr (M17) drive abnormality. The stapler home sensor /Fr (PS25) does not turn OFF within a specified period of time after M17 turns ON. PS25 does not turn ON within a specified period of time after the OFF of PS25 is detected. PS25 does not turn ON within a specified period of time after the OFF of PS05 is detected.	The main body stops immedi- ately to turn OFF the main relay (RL1).	Stapler motor /Fr (M17) Stapler home sensor /Fr (PS25) FS control board (FSCB)
	SD	C-1109	Saddle stapler motor /Fr drive abnormality. When the saddle stapler motor /Fr is ON, it does not get off from the home position within a specified period of time. After its getting off from the home position is detected, it does not get to the home position within a specified period of time. After the saddle stapler motor /Fr turns ON for reverse rotation, it does not get to the home position within a specified period of time.		Saddle stapler motor /Fr SD control board (SDCB)

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
	ı			operation	
FS	SD	C-1110	Saddle stapler motor /Rr drive abnormality. When the saddle stapler motor /Rr turns ON, it does not get off from the home position within a specified period of time. After its getting off from the home position is detected, it does not get to the home position within a specified period of time. After the saddle stapler motor /Rr turns ON for reverse rotation, it does not get to the home position within a speci-	The main body stops immediately to turn OFF the main relay (RL1).	Saddle stapler motor /Rr SD control board (SDCB)
		C-1111	fied period of time. Paper guide motor (M13) drive abnormality. When M13 turns ON for protrusion, the paper guide home sensor (PS23) does not turn OFF within a specified period of time. When M13 turns ON for evacuation, PS23 does not turn ON within a specified period of time.		Paper guide motor (M13) Paper guide home sensor (PS23) SD control board (SDCB)
		C-1112	Staple guide motor (M14) drive abnormality. • While in the home position return operation, the staple guide home sensor (PS26) does not turn ON within a specified period of time after M14 turns ON. • When starting a retraction operation, PS26 does not turn OFF within a specified period of time after M14 turns ON.		Staple guide motor (M14) Staple guide home sensor (PS26) SD control board (SDCB)

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
				operation	
ES	SD	C-1113	Exit open/close motor (M9) drive	The main body	Exit open/close motor (M9)
			abnormality.	stops immedi-	Saddle exit home sensor
			 When starting a pressure 	ately to turn OFF	(PS18)
			contact operation, the saddle	the main relay	SD control board (SDCB)
			exit home sensor (PS18) does	(RL1).	
			not turn ON within a specified		
			period of time after M9 turns		
			ON.		
			 When starting a separation 		
			operation, PS18 does not		
			turn OFF within a specified		
			period of time after M9 turns		
			ON.		
		C-1114	Folding motor (M10) drive abnor-		Folding motor (M10)
			mality.		Folding roller home sensor
			The folding roller home sensor		(PS22)
			(PS22) does not turn ON within a		SD control board (SDCB)
			specified period of time after M10		
			turns ON.		
		C-1115	Conveyance motor (M8) drive		Conveyance motor (M8)
			abnormality.		SD control board (SDCB)
			 Within a specified period of 		
			time after M8 turns ON, the		
			ON of a motor lock signal is		
			detected for a prescribed		
			period of time in succession.		
			 A specified period of time 		
			after M8 turns OFF, the OFF		
			of a motor lock signal is		
			detected for a prescribed		
			period of time in succession.		
	FS-510	C-1116	Exit roller release motor (M6) drive		Exit roller release motor (M6)
			abnormality.		Shutter home sensor (PS16)
			When the shutter is closed,		FS control board (FSCB)
			the shutter home sensor		
			(PS16) does not turn ON		
			within a specified period of		
			time after M6 turns ON.		
			When the shutter is open,		
			PS16 does not turn OFF		
			within a specified period of		
			time after M6 turns ON.		

Classification		Code	Causes	Resulting operation	Estimated abnormal parts
FS	FS-510	C-1117	Alignment motor /Fr (M5) drive abnormality. While in the home position search, the alignment home sensor /Fr (PS7) does not turn ON within a specified period of time after M5 turns ON. While in the home position search, PS7 does not turn OFF within a specified period of time after M5 turns ON.	operation The main body stops immediately to turn OFF the main relay (RL1).	Alignment motor /Fr (M5) Alignment home sensor /Fr (PS7) FS control board (FSCB)
		C-1118	Exit paddle solenoid (SD2) drive abnormality. While in the paddle evacuation, the exit paddle home sensor (PS11) does not turn ON within a specified period of time after SD2 turns ON. While in the paper hold-down operation, PS11 does not turn OFF within a specified period of time after SD turns ON.		Exit paddle solenoid (SD2) Exit paddle home sensor (PS11) FS control board (FSCB)
	FS-511	C-1119	Punch motor (M11) drive abnormality. The punch encoder sensor (PS15) does not turn OFF within a specified period of time after M11 turns ON.		Punch motor (M11) FS control board (FSCB)
		C-1120	Hole punch selector motor (M14) drive abnormality (inch system only) • When starting the punch 2-hole position switch drive, the hole punch position switch (SW4) is not turned ON in the specified period of time after the M14 is turned ON. • When starting the punch 3-hole position switch drive, the SW4 is not turned OFF in the specified period of time after the M14 is turned ON.		FS control board (FSCB) Hole punch selector motor (M14)

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
				operation	
S	PU	C-1121	Punch motor (M1) drive abnor-	The main body	Punch motor (M1)
			mality.	stops immedi-	Punch position sensor /1
			The punch position sensors /1	ately to turn OFF	(PS2)
			(PS2) and /2 (PS3) do not turn	the main relay	Punch position sensor /2
			OFF within a specified period of	(RL1).	(PS3)
			time after M1 turns ON.		FS control board (FSCB)
≥	Image	C-2001	Communication abnormality		Overall control board (OACB)
Main body	process		between the engine control of the		Printer control board (PRCB)
aj.	commu-		overall control board (OACB) and		, ,
Σ	nication		that of the printer control board		
	abnor-		(PRCB)		
	mality		While in the stand-by, a process		
	,		Ready signal cannot be detected		
			for a specified period of time.		
	Motor	C-2201	Developing motor (M3) speed		Developing motor (M3)
	speed	0 2201	abnormality.		Printer control board (PRCB)
	abnor-		While M3 is ON, an EM error sig-		Times control board (Frieb)
	mality		nal has been detected 5 times in		
	mailty		succession within a specified		
			period of time.		
		C-2202	'		Druma master (M41)
		G-2202	Drum motor (M1) speed abnor-		Drum motor (M1)
			mality.		Printer control board (PRCB)
			While M1 is ON, an EM error sig-		
			nal has been detected 5 times in		
			succession within a specified		
			period of time.		
	Fan	C-2301	Drum cooling fan (FM4) abnor-		Drum cooling fan (FM4)
	lock		mality.		Printer control board (PRCB)
	abnor-		While FM4 is ON, an EM error		
	mality		signal has been detected 5 times		
			in succession within a specified		
			period of time.		
		C-2302	Developing suction fan motor		Developing suction fan
			(FM6) abnormality.		motor (FM6)
			While FM6 is ON, an EM error		Printer control board (PRCB)
			signal has been detected 5 times		
			in succession within a specified		
			period of time.		
		C-2303	Developing cooling fan (FM7)		Developing cooling fan (FM7)
			abnormality.		Printer control board (PRCB)
			While FM7 is ON, an EM error		
			signal has been detected 5 times		
			in succession within a specified		
			period of time.		
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Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
				operation	
Main body	Abnor- mality around the drum	C-2401	High machine inside temperature abnormality. When the temperature around the drum is above 58 °C	The main body stops immedi- ately to turn OFF the main relay	TCR sensor (TCRS) Printer control board (PRCB)
		C-2402	Erase lamp (EL) connector slip-off abnormality. When EL turns ON before starting an initial charging, EL abnormality has been detected 15 times in succession at prescribed intervals after a specified period of time.	(RL1).	Erase lamp (EL) Printer control board (PRCB)
	Toner bottle abnor- mality	C-2403	Toner bottle phase detection abnormality. While in the power switch (SW2) ON, the toner bottle position sensor (PS28) does not turn ON within a specified period of time after the toner bottle motor (M10) turns ON.		Toner bottle motor (M10) Toner bottle position sensor (PS28) Printer control board (PRCB)
	High voltage power source abnor- mality	C-2701	Charging abnormality. An error signal is detected 5 times in succession at prescribed intervals.	If there is a sheet of paper being printed, the main body completes the paper exit to stop operations. The main relay (RL1) turns OFF.	Charging corona High voltage unit (HV) Printer control board (PRCB)
		C-2702	Transfer lightning abnormality. There occurs a phenomenon 5 times in a job, in which an error signal is detected 3 times in succession at prescribed intervals.	The main body stops immedi- ately to turn OFF the main relay (RL1).	Transfer/separation charger High voltage unit (HV) Printer control board (PRCB)
		C-2703	Separation lightning abnormality. There occurs a phenomenon 5 times in a job, in which an error signal is detected 5 times in succession at prescribed intervals.		
		C-2801	TCR output abnormality. When the TCR output is in excess of 3.0 V.		TCR sensor (TCRS) Printer control board (PRCB)
		C-2802	TCR output abnormality. When the TCR sensor (TCRS) maximum output is 1.0 V or less.		

Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
Main body	High voltage power source	C-2803	TCR output abnormality. When the output ripple voltage of the TCR sensor (TCRS) is less than 0.5 V.	The main body stops immediately to turn OFF the main relay	TCR sensor (TCRS) Printer control board (PRCB)
	abnor- mality	C-2804	Toner density abnormality. When the L detection output is in excess of 2.6 V before the toner remaining sensor (PZS) detects a no toner condition, toner density does not recover even when toner is automatically supplied.	(RL1).	Toner remaining sensor (PZS) TCR sensor (TCRS) Printer control board (PRCB)
	Motor speed abnor- mality	C-3201	Fusing motor (M11) speed abnormality. When M11 is ON, an EM error signal is detected 30 times in succession within a specified period of time.		Fusing motor (M11) Printer control board (PRCB)
	Fan lock abnor- mality	C-3301	Fusing cooling fan /Fr (FM2) abnormality. When FM2 is ON, an EM error signal is detected 3 times in suc- cession within a specified period of time.		Fusing cooling fan /Fr (FM2) Printer control board (PRCB)
		C-3302	Fusing cooling fan /Rr (FM8) abnormality. When FM8 is ON, an EM error signal is detected 3 times in suc- cession within a specified period of time.		Fusing cooling fan /Rr (FM8) Printer control board (PRCB)
	Fusing high temper- ature abnor- mality	C-3501	Fusing main sensor high temperature abnormality. The thermistor /1 (TH1) detects a temperature higher than 236 °C for more than a specified period of time.	The main body stops immedi- ately to turn OFF the main relay (RL1). All the keys are not	Thermistor /1 (TH1) Printer control board (PRCB) DC power supply (DCPS)
		C-3502	Fusing sub sensor high temperature abnormality. The thermistor /2 (TH2) detects a temperature higher than 236 °C for more than a specified period of time.	taken in.	Thermistor /2 (TH2) Printer control board (PRCB) DC power supply (DCPS)

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	Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
	Main body	Fusing low temper-ature abnor-mality	C-3801	Fusing main sensor low temperature abnormality. While in the idle or in the low power mode, the fusing heater lamp /1 (L2) turns on for more than 12 seconds in succession.	The main body stops immedi- ately to turn OFF the main relay (RL1). All the keys are not	Thermistor /1 (TH1) Printer control board (PRCB) DC power supply (DCPS)
		,	C-3802	Fusing main sensor low temperature abnormality. While in other than the warm-up, the thermistor /1 (TH1) detects a temperature lower than 130 °C for more than 10 seconds.	taken in.	
			C-3803	Fusing main sensor low temperature abnormality. The detection temperature of the thermistor /1 (TH1) does not get to the prescribed temperature within a specified period of time after it starts the warm-up.		
			C-3804	Fusing sub sensor low temperature abnormality. While in the idle, the fusing heater lamp /2 (L3) turns on for more than 12 seconds in succession.		Thermistor /2 (TH2) Printer control board (PRCB) DC power supply (DCPS)
			C-3805	Fusing sub sensor low temperature abnormality. While in other than the warm-up, the thermistor /2 (TH2) detects a temperature lower than 130 °C for more than 10 seconds.		
			C-3806	Fusing sub sensor low temperature abnormality. The detection temperature of the thermistor /2 (TH2) does not get to the prescribed temperature within a specified period of time after it starts the warm-up.		
			C-3807	Fusing main sensor high temperature abnormality (sub CPU detection) In the sub CPU, the thermistor /1 (TH1) detects a temperature higher than 236 °C for more than a specified period of time.		Thermistor /1 (TH1) Printer control board (PRCB) DC power supply (DCPS)

Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
Main body	Fusing low temper-ature abnor-mality	C-3808	Fusing sub sensor high temperature abnormality (sub CPU detection) In the sub CPU, the thermistor /2 (TH2) detects a temperature higher than 236 °C for more than a specified period of time.	The main body stops immediately to turn OFF the main relay (RL1). All the keys are not taken in.	Thermistor /2 (TH2) Printer control board (PRCB) DC power supply (DCPS)
	Fusing sensor abnor- mality	C-3901	Inferior contact of the thermistor /1 (TH1) While in the warm-up condition, when the thermistor /2 (TH2) detection temperature gets to the Ready temperature before the TH1 detection temperature, the TH1 detection temperature does not get to the Ready temperature a specified period of time after the TH2 detection temperature got to the Ready temperature		Thermistor /1 (TH1) Printer control board (PRCB)
		C-3902	Inferior contact of the thermistor /2 (TH2) While in the warm-up condition, when the thermistor /1 (TH1) detection temperature gets to the Ready temperature before the TH2 detection temperature, the TH2 detection temperature does not get to the Ready temperature a specified period of time after the TH1 detection temperature got to the Ready temperature.		Thermistor /2 (TH2) Printer control board (PRCB)
		C-3903	Thermistor /1 (TH1) open abnormality (sub CPU detection) In the sub CPU, the TH1 detection temperature detects a temperature between -8 and 20 °C for more than a specified period of time.		Thermistor /1 (TH1) Printer control board (PRCB)
		C-3904	Thermistor /2 (TH2) open abnormality (sub CPU detection) In the sub CPU, the TH2 detection temperature detects a temperature between -8 and 20 °C for more than a specified period of time.		Thermistor /2 (TH2) Printer control board (PRCB)

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
Old	ISSIIICALIOIT	Code	Gauses	operation	Estimated abnormal parts
ਰੇ	Image	C-4001	Index board (INDEXB) contact	The main body	Index board (INDEXB)
poq	proces-		abnormality.	stops immedi-	Overall control board (OACB)
Main body	sing			ately to turn OFF	
2	abnor-			the main relay	
	mality			(RL1).	
	Motor	C-4101	Polygon motor (M5) speed abnor-		Polygon motor (M5)
	speed		mality.		Printer control board (PRCB)
	abnor-		When M5 is ON, an error signal is		
	mality		detected 3 times in succession		
			within a specified period of time.		
	Image	C-4401	Laser drive board (LDB) abnor-		Laser drive board (LDB)
	proces-		mality.		Overall control board (OACB)
	sing		When an overcurrent flows for		
	abnor-		laser output.		
	mality	C-4701	Laser index abnormality.		Index board (INDEXB)
			When the cycle of the index is dif-		Overall control board (OACB)
			ferent from an expected value.		
	Commu-	C-5001	Main body control board commu-		Overall control board (OACB)
	nication		nication abnormality 1		Scanner drive board (SDB)
	abnor-		Communication abnormality		
	mality		between the overall control board		
			(OACB) and the scanner drive		
			board (SDB).		
		C-5002	Main body control board commu-		Printer control board (PRCB)
			nication abnormality 2		
			Communication abnormality,		
			incoming command abnormality,		
			platen operation sequence		
			abnormality to the sub CPU in the		
			overall control board (OACB).		
		C-5003	Sub CPU A/D conversion abnor-		
			mality.		
			There is no response 2 times in		
			succession to the A/D conversion		
			request of the overall control		
			board (OACB).		

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Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
	_	0.500	E (E (E) (E)	operation	
ypc	Fan	C-5301	Exhaust fan /Fr (FM3) conversion	The main body	Exhaust fan /Fr (FM3)
Main body	lock		abnormality.	stops immedi-	Printer control board (PRCB)
Mai	abnor-		When FM3 is ON, an error signal	ately to turn OFF	
	mality		is detected 5 times in succession	the main relay	
			within a specified period of time.	(RL1).	
		C-5302	Exhaust fan /Rr (FM9) conversion		Exhaust fan /Rr (FM9)
			abnormality.		Printer control board (PRCB)
			When FM9 is ON, an error signal		
			is detected 5 times in succession		
			within a specified period of time.		
		C-5303	Power supply cooling fan (FM1)		Power supply cooling fan
			conversion abnormality.		(FM1)
			When FM1 is ON, an error signal		Printer control board (PRCB)
			is detected 5 times in succession		
			within a specified period of time.		
	OS	C-5401*	There occurs an OS error with the	Engine section	Printer control board (PRCB)
	error		engine control section in the	power OFF.	
			printer control board (PRCB).		
	System	C-5402*	Time out for tuning off the power	Engine section	Overall control board (OACB)
	control		switch (SW2)	power OFF.	Printer control board (PRCB)
	commu-			Operation panel	
	nication			display all ON.	
	abnor-				
	mality				
	Image	C-6001	CCD board (CCDB) connection	Scanner sec-	CCD board (CCDB)
	process		abnormality.	tion stops	Overall control board (OACB)
	commu-			immediately.	
	nication	C-6002*	Communication abnormality	Engine section	Overall control board (OACB)
	abnor-		between the engine control of the	power OFF.	Printer control board (PRCB)
	mality		overall control board (OACB) and		
			that of the printer control board		
			(PRCB).		
			While in the stand-by, a scanner		
			Ready signal cannot be detected		
			for a specified period of time.		
		C-6003*	Communication abnormality		Overall control board (OACB)
			between the engine control of the		Printer control board (PRCB)
			overall control board (OACB) and		
			that of the printer control board		
			(PRCB).		
			Time out for the notice time of the		
			platen original size.		

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
				operation	
ð	Scanner	C-6101	While in the exposure unit initial	Scanner sec-	Scanner motor (M2)
Main body	abnor-		search, the scanner home sensor	tion stops	Scanner home sensor
/ain	mality		(PS30) does not turn on within a	immediately.	(PS30)
2			specified period of time. And		Printer control board (PRCB)
			also, while in the return scan,		
			PS30 does not turn on within a		
			specified period of time.		
		C-6201	Exposure lamp (L1) abnormality.		Exposure lamp (L1)
			A specified period of time after L1		L1 inverter (L1 INVVB)
			turns on, an L1 abnormality signal		Printer control board (PRCB)
			is detected in succession for a		
			specified period of time.		
	Image	C-6701	AOC abnormality.		CCD board (CCDB)
	proces-		AOC counter overflow		Exposure lamp (L1)
	sing	C-6702	AGC abnormality.		L1 inverter (L1 INVVB)
	abnor-		AGC counter overflow		Scanner motor (M2)
	mality				Overall control board (OACB)
PF	Commu-	C-8001	DF control board (DFCB) commu-	The main body	DF control board (DFCB)
_	nication		nication abnormality.	stops immedi-	Printer control board (PRCB)
	abnor-		Communication abnormality	ately to turn OFF	
	mality		between the printer control board	the main relay	
			(PRCB) and DFCB.	(RL1).	
	Fan	C-8301	Cooling fan (FM3) abnormality.		Cooling fan (FM3)
	lock				DF control board (DFCB)
	abnor-				
	mality				
FAX	FAX	C-B001	FAX ROM checksum error	FAX breakdown	FK-502
E.	board	C-B002	A FAX board hardware error is		
	abnor-		detected.		
	mality	C-B003	A FAX file initialization abnormality		
			is detected.		
	FAX	C-B110	Instance generation error or an		
	driver		observer registration error		
	error	C-B111	Initialization failure of the configu-		
			ration space		
		C-B112	A semaphore is obtained; release	+	
			error		
		C-B113	Sequence error between the	+	
			tasks on the main body side.		
		C-B114	Message queue control error		
		C-B115	Sequence error between the	†	
			main body and the FAX board		
		C-B116	FAX board no response (no	†	
			response after initialization)		
		1	· · · · · · · · · · · · · · · · · · ·	1	1

Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
oid	oomoanori	Code	Jauses	operation	Estimated apriornal parts
×	FAX	C-B117	Time out error for ACK standby	FAX breakdown	FK-502
FAX	driver	C-B118	Undefined frame reception		
	error	C-B119	DMA transfer error		
	JC	C-B120	JC software error		
	00	C-B122	Device error (GA LOCAL SRAM)		
		C-B123	Device error (DRAM)		
		C-B125	Device error (GA)		
		C-B126	While in the interruption process-		
		0 8120	ing, there occurs a time out error		
			due to no response from DC.		
		C-B127	While in the interruption process-		
			ing, there occurs a time out error		
			due to no response from CC.		
		C-B128	While in the interruption process-		
			ing, there occurs a time out error		
			due to no response from Line.		
		C-B129	While in the interruption process-		
			ing, there occurs a time out error		
			due to no response from the File		
			system/File Driver.		
	MIF	C-B130	Driver software error		
	software error	C-B131	Length error of the frame received from the main side.		
		C-B132	Header error of the frame receive		
			from the main side.		
		C-B133	232C I/F sequence error	•	
		C-B134	DPRAM I/F sequence error		
		C-B135	DPRAM CTL/STS register abnor-		
			mality.		
		C-B136	Time out for ACK standby		
		C-B137	DPRAM RESET received		
		C-B140	MSG I/F error with JC		
		C-B141	I/F error with driver	•	
	I/F	C-B142	Undefined command received		
	error	C-B143	Command frame length error	†	
		C-B144	Command parameter length error		
		C-B145	Undefined parameter		
		C-B146	Command/response sequence		
			error		

Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
FAX	Line control	C-B150	External class instance acquisition error	FAX breakdown	FK-502
		C-B151	Job start-up error (start-up JOB parameter/slave job generation error)		
		C-B152	Doc access error (report Buf access error)		
		C-B153	Time out for a response from the external task		
		C-B154	Internal Que table control error (create/enque/deque)		
	1 des-	C-B160	Instance generation error		
	tination	C-B161	Time out error		
	control	C-B162	Interface error		
		C-B163	Message queue control error		
		C-B164	A semaphore is obtained: release		
			error.		
		C-B165	Observer registration error		
		C-B166	Incoming resource check error		
		C-B167	Outgoing image information expansion error		
		C-B168	Incoming image serialization error	•	
		C-B169	Quick memory data access error	•	
	Page	C-B170	Internal Que table control error		
	control		(create/enque/deque)		
		C-B171	Instance generation error		
		C-B172	Time out error		
		C-B173	Interface error		
		C-B174	A semaphore is obtained: release error.		
		C-B175	Observer registration error		
		C-B176	TTI area cannot be secured.	•	
		C-B177	Error return from TTI_Rasterizer		
		C-B178	Incoming Job generation error	•	
		C-B180	Quick transfer memory data	•	
		0 100	access error		
		C-B181	Block Buff acquisition error		
		C-B182	Outgoing block image error (Req, Restore)		
		C-B183	Incoming block image error (Req, Store)		
		C-B184	Incoming image information storage error		

Page C-B185 Incoming data size logic error (The incoming data is not a multiple number of DottLine. C-B186 Image Buff acquisition (alloc) error C-B187 Error return from Compressor C-B188 Band Buff control error (new Instance/get/free) Band Buff control error (new Instance/get/free) Engine section parel communication lowing is detected or after starting the transmission, the transmission cannot be completed within a specified period of time. Data checksum error Communication GA generates an error vector. Machine type information given on the machine type mentioned in the software is different from the machine type information given on the main body drive board. A flash ROM checksum error of the image control board is detected. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different to the machine type men	Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
C-B186 Image Buff acquisition (alloc) error C-B187 Error return from Compressor C-B188 Band Buff control error (new instance/get/free) Parel C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-C-	0.0	oomoadon	5545	544050	· ·	Zotimatod abriormal parto
C-B187 Error return from Compressor C-B188 Band Buff control error (new Instance/get/free) Band Buff control error (new Instance/get/free) While in the completion of the reception from the control of the operation panel, either of the following is detected or after starting the transmission, the transmission, the transmission cannot be completed within a specified period of time. Data checksum error C-C181 The machine type mentioned in the software is different from the machine type information given on the main body drive board. Flash ROM abnormality Software abnormality Software abnormality Flash C-C284 Non-volatile memory abnormality in C-C285 Non-volatile memory abnormality in C-C286 Non-volatile memory abnormality in C-C288 No	FAX	-	C-B185	(The incoming data is not a multi-	FAX breakdown	FK-502
C-B188 Band Buff control error (new Instance/get/free) C-C103 While in the completion of the reception from the control of the operation panel, either of the following is detected or after starting the transmission, the transmission cannot be completed within a specified period of time. Data checksum error C-C181 The machine type mentioned in the software is different from the machine type information given on the main body drive board. Flash C-C182 A flash ROM checksum error on the main body drive board is detected. The machine type mentioned in the software is different from the machine type information given on the main body drive board. Flash ROM abnormality Software abnormality Software C-C183 The machine type mentioned in the software is different between the overall control and the image control. Roman C-C284 Non-volatile memory abnormality volatile memory abnormality T-C-C285 Non-volatile memory abnormality T-C-C286 Non-volatile memory abnormality T-C-C288 Non-volatile memory abnormality T-C-			C-B186	Image Buff acquisition (alloc) error		
Instance/get/free Instanc			C-B187	Error return from Compressor		
panel communication abnormality panel communication abnorded by the comparation panel, either of the following is detected or after starting the transmission, the transmission, the transmission, annot be completed within a specified period of time. • Data checksum error • Communication GA generates an error vector. Machine type detection abnormality Flash ROM abnormality Software abnormality Software The machine type mentioned in the software is different between the overall control and the image control. Non-volatile memory abnormality abnormality "1 C-C285 Non-volatile memory abnormality abnormality "1 C-C286 Non-volatile memory abnormality "1 C-C287 Non-volatile memory abnormality "1 C-C288 Non-volatile memory abnormality "1 C-C289 Non-volatile memory abnormality "1 C-C280 Non-volatile memory abnormality "1 C-C2			C-B188	,		
type detection abnormality Flash ROM abnormality Software abnormality Non-volatile memory abnormality abnormality abnormality Non-volatile memory abnormality abnormality Teleform abnormality Non-volatile memory abnormality abnormality Teleform abnormality Non-volatile memory abnormality abnormality Teleform abnormality Telef	MSI	panel commu- nication abnor-	C-C103	reception from the control of the operation panel, either of the following is detected or after starting the transmission, the transmission cannot be completed within a specified period of time. • Data checksum error • Communication GA gener-	ŭ.	Overall control board (OACB)
ROM abnormality Software abnormality Non-volatile memory abnormality The machine type mentioned in the software is different between the overall control and the image control. Non-volatile memory abnormality abnormality The machine type mentioned in the software is different between the overall control and the image control. It stops immediately. The machine type mentioned in the software is different between the overall control and the image control. The machine type mentioned in the software is different between the overall control board (OACB) ately. The machine type mentioned in the software is different between the overall control board (OACB) ately. The machine type mentioned in the software is different between the overall control board (OACB) ately. The machine type mentioned in the software is different between the software is different between the overall control board (OACB) ately. The machine type mentioned in the software is different between the softwa		type detection abnor-	C-C181	the software is different from the machine type information given		
abnormality the software is different between the overall control and the image control. Non-volatile memory abnormality abnormality abnormality C-C286 Non-volatile memory abnormality *1 C-C286 Non-volatile memory abnormality *1 C-C287 Non-volatile memory abnormality *1 C-C288 Non-volatile memory abnormality *1		ROM abnor-	C-C182	the image control board is		
Volatile memory abnormality *1 C-C285 Non-volatile memory abnormality *1 C-C286 Non-volatile memory abnormality *1 C-C287 Non-volatile memory abnormality *1 C-C288 Non-volatile memory abnormality *1 C-C288 Non-volatile memory abnormality *1 HDD C-D001 HDD initialization abnormality. Engine section HD-505		abnor-	C-C183	the software is different between the overall control and the image		
abnor- mality C-C286 Non-volatile memory abnormality *1 C-C287 Non-volatile memory abnormality *1 C-C288 Non-volatile memory abnormality *1 HDD C-D001 HDD initialization abnormality. Engine section HD-505	body 1		C-C284		·	, ,
*1 C-C287 Non-volatile memory abnormality *1 C-C288 Non-volatile memory abnormality *1 C-C288 Non-volatile memory abnormality *1 HDD C-D001 HDD initialization abnormality. Engine section HD-505	Mair	abnor-	C-C285	,		
*1 C-C288 Non-volatile memory abnormality *1 HDD C-D001 HDD initialization abnormality. Engine section HD-505		mality	C-C286			
+1 HDD C-D001 HDD initialization abnormality. Engine section HD-505			C-C287			
, , , , , , , , , , , , , , , , , , , ,			C-C288	,		
055		HDD	C-D001	HDD initialization abnormality.	Engine section	HD-505
C-D002 JOB RAM retention abnormality. power OFF.			C-D002	JOB RAM retention abnormality.	power OFF.	

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	Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
		Fan	C-D201	Overall central beard cealing for	·	Overall central beard (OACD)
	Main body	lock	C-D201	Overall control board cooling fan (FM8) abnormality.	The main body stops immedi-	Overall control board (OACB) Overall control board cool-
	ain b	abnor-		(1 Wo) abnormality.	ately to turn OFF	ing fan (FM8)
	Me	mality			the main relay	ing ican (invio)
		Commu-	C-D203	Communication abnormality	(RL1).	Overall control board (OACB)
7		nication		between the main body control		Printer control board (PRCB)
		abnor-		board and the printer control		, ,
		mality		board.		
			C-D282*	Communication abnormality		Overall control board (OACB)
				between the overall control board		Scanner drive board (SDB)
				(OACB) and the scanner drive		
				board (SDB).		
				When the power switch (SW2)		
				turns on, there is no SDB response.		
		System	C-E001	,	Engine section	Overall control board (OACB)
		control	C-E001	Message queue abnormality. Incorrect parameters of the mes-	power OFF.	Overali control board (OACB)
		commu-	C-E002	sage and the method	power err.	
		nication	C-E003	Incorrect task		
		abnor-	C-E004	Incorrect event		
		mality	C-E005	Memory access abnormality.		
			C-E003	-		
			C-E000	Header access abnormality.		
			C-E007	DIMM initialization abnormality.		
			C-E081	DRAM initialization abnormality.	If the sure is a	
			C-E082"	Image abnormality. Image processing abnormality on	If there is a sheet of paper	
				the overall control side	being printed,	
				the everal certific olde	the main body	
					completes the	
					paper exit to	
					stop opera-	
					tions. The main	
					relay (RL1) turns	
			0 F000±		OFF.	
			C-E083*	Copy sequence abnormality.	Engine section	
				Job object pointer abnormality (For some reason, the acquisition	power OFF.	
				of the page management object		
				is unavailable.)		
			C-E084*	Copy sequence abnormality.		
				Memory copy sequence abnor-		
				mality (the one the cause of which		
				cannot be identified.)		

		_	-	_	
Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
	1			operation	
ð	System	C-E085*	Copy sequence abnormality.	Engine section	Overall control board (OACB)
oq c	control		Through copy sequence (FCOT)	power OFF.	
Main body	commu-		abnormality (the one that the		
_	nication		cause of which cannot be identi-		
	abnor-		fied.)		
	mality	C-E086*	Copy sequence abnormality.		
			The memory scanner stop is not		
			completed. (A stop completion		
			notice is not sent from the engine		
		0.5007	side.)		
		C-E087*	Copy sequence abnormality.		
			The memory printer stop is not		
			completed. (A stop completion		
			notice is not sent from the engine side.)		
		C-E088*	· · · · · · · · · · · · · · · · · · ·		
		C-E088	Unrecoverable error (The count is made by C-5402.)		
			An error occurs when the timer is		
			set.		
		C-E089*	Unrecoverable error (The count is		
		O L000	made by C-5402.)		
			An error occurs when the timer is		
			cancelled.		
		C-E08A*	Unrecoverable error (The count is		
		0 200, 1	made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(printer user job).		
		C-E08B*	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(printer job 0).		
		C-E08C	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(printer job 1).		
		C-E08D*	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(FCOT print user job).		

Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
Main body	System control communication abnormality	C-E08E*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FCOT print job). Unrecoverable error (The count is made by C-5402.)	Engine section power OFF.	Overall control board (OACB)
			An abnormal operation occurs when an interrupt copy is made (copy print user job).		
		C-E090*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (copy print job 0).		
		C-E091*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (copy print job 1).		
		C-E092*	Unrecoverable error (The count is made by C-5402.) An error occurs when the task 0 is deleted with the queue 1 generation not allowed.		
		C-E093*	Unrecoverable error (The count is made by C-5402.) An error occurs when the queue 0 is deleted with the queue 1 generation not allowed.		
		C-E094*	Unrecoverable error (The count is made by C-5402.) An error occurs when the queue n is deleted with the task n generation not allowed.		
		C-E095*	Unrecoverable error (The count is made by C-5402.) An error occurs when the task 0 is deleted with the task 1 generation not allowed.		
		C-E096*	Unrecoverable error (The count is made by C-5402.) An error occurs when the queue 0 is deleted with the task 1 generation not allowed.		

				T	T
Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts
Main body	System control communication	C-E097*	Unrecoverable error (The count is made by C-5402.) An error occurs when the task n is started.	Engine section power OFF.	Overall control board (OACB)
	abnor- mality	C-E098*	Unrecoverable error (The count is made by C-5402.) An error occurs when the task n is deleted.		
		C-E099*	Unrecoverable error (The count is made by C-5402.) An error occurs when the queue n is deleted.		
		C-E09A*	Unrecoverable error (The count is made by C-5402.) A scheduling abnormality occurs when the FAX print cannot be started due to a memory shortage (queue operation abnormality).		
		C-E09B*	Unrecoverable error (The count is made by C-5402.) A scheduling abnormality occurs when the FAX print cannot be started due to a memory shortage (message transmission error).		
		C-E09C*	Unrecoverable error (The count is made by C-5402.) A printer scheduling abnormality occurs due to memory being full (message transmission error)		
		C-E09E*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (scanner scan user job).		
		C-E09F*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (scanner mixed original scan job 0).		
		C-E0A0*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (scanner z-folding scan job 0).		

Cla	ssification	Code	Causes	Resulting operation	Estimated abnormal parts	
Main body	System control communication abnormality	C-E0A1*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (scanner normal scan job 0). Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made	Engine section power OFF.	Engine section Overall control boa	Overall control board (OACB)
		C-E0A3*	(scanner scan job 1). Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FAX scan user job).			
		C-E0A4*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FAX mixed original scan job 0).			
		C-E0A5*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FAX z-folding scan job 0).			
		C-E0A6*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FAX normal scan job 0).			
		C-E0A7*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FAX scan job 1).			
		C-E0A8*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FCOT scan user job).			
		C-E0A9*	Unrecoverable error (The count is made by C-5402.) An abnormal operation occurs when an interrupt copy is made (FCOT scan job).			

	141				
Cla	ssification	Code	Causes	Resulting	Estimated abnormal parts
				operation	
ਣ੍ਹੇ	System	C-E0AA*	Unrecoverable error (The count is	Engine section	Overall control board (OACB)
oq ı	control		made by C-5402.)	power OFF.	
Main body	commu-		An abnormal operation occurs		
_	nication		when an interrupt copy is made		
	abnor-		(copy scan user job).		
	mality	C-E0AB*	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(copy mixed original scan job 0).		
		C-E0AC*	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(copy z-folding scan job 0).		
		C-E0AD*	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(copy normal scan job 0).		
		C-E0AE*	Unrecoverable error (The count is		
			made by C-5402.)		
			An abnormal operation occurs		
			when an interrupt copy is made		
			(copy scan job 1).		
		C-E0AF*	Unrecoverable error (The count is		
			made by C-5402.)		
			A SUSPEND occurs.		
		C-E0B0*	Unrecoverable error (The count is		
			made by C-5402.)		
			An EXCEPTION occurs.		
Щ.			-		

1 NVRAM board (NRB) error code display priority

When two or more error codes related to NRB occur at the same time, a code with the highest precedence is displayed according to the priorities shown below.

- C-C287
- C-C288
- C-C286
- C-C284
- C-C285

C. Function to separate defective sections

For setting of DipSW that is specified for the following items, it is possible to use them with a failed section separated. After setting DipSW, however, no abnormality detection is made on the separated section.

NOTE

bizhub 500/420/360

 This function is employed to make temporary use of sections that are not affected. So, be sure that this is limited only to a provisional use until a defective section is repaired.

(1) DipSW setting

Turning the main power switch (SW1) OFF and ON after setting the specified software DipSW bit allows you to make a limited use of it until the bit setting is released next time.

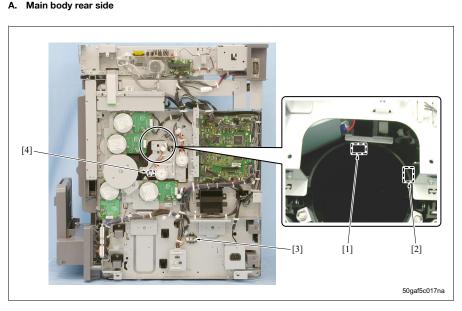
Classification	Malfunction code			DipSW
Main body	C-0201	Paper lift motor /1 (M7) abnormality	Paper feed in tray 1 is unavailable (There remains no paper, and on the operation panel, the tray 1 is displayed in hatching.)	DipSW18-0
	C-0202	Paper lift motor /2 (M8) abnormality	Paper feed in tray 2 is unavailable (There remains no paper, and on the operation panel, the tray 2 is displayed in hatching.)	DipSW18-1
PC-202	C-0203	Paper lift motor /3 (M124) abnormality	Paper feed in tray 3 is unavailable (There remains no paper, and on the operation panel, the tray 3 is displayed in hatching.)	DipSW18-4
	C-0204	Paper lift motor /4 (M125) abnormality	Paper feed in tray 4 is unavailable (There remains no paper, and on the operation panel, the tray 4 is displayed in hatching.)	DipSW18-5
LU	C-0205	Paper lift motor (M151) abnormality	Paper feed in LU is unavailable (There remains no paper, and on the operation panel, LU is displayed in hatching.)	DipSW18-6
PC-402	C-0206	Paper lift motor (M5) abnormality Shift motor (M4) abnormality Shift gate motor (M3) abnormality	Paper feed in tray 3 is unavailable (There remains no paper, and on the operation panel, the tray 3 is displayed in hatching.)	DipSW18-4
FK	C-B001 to B188	FK-502 abnormality	FAX mode is unavailable	DipSW19-1
HDD	C-D001 to D002	HD-505 abnormality	HDD is unavailable (HD-505 is not connected)	DipSW19-3
DF	C-8001	DF communication abnormality	DF mode is unavailable (DF connection is not recognized)	DipSW19-7
SD	C-1109 to 1115	SD drive abnormality	SD is unavailable (SD connection is not recognized)	DipSW20-5

■ APPENDIX

14. PARTS LAYOUT DRAWING

14.1 Main body

14.1.1 Switch/sensor



- [1] Toner bottle sensor (PS4)
- [2] Toner bottle position sensor (PS28)
- [3] Humidity sensor (HUMS)
- [4] Toner remaining sensor (PZS)

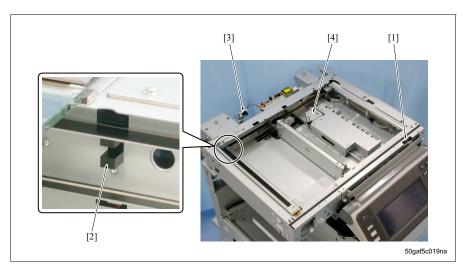
B. Main body front side



- [1] Power switch (SW2)
- [2] Interlock switch (MS)

[3] Main power switch (SW1)

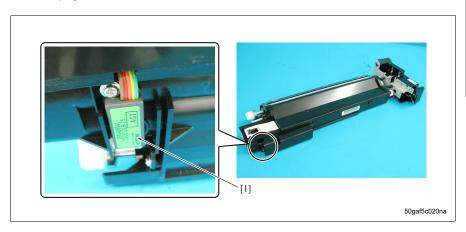
C. Main body upper surface



- [1] DF open/close switch (SW3)
- [2] Scanner home sensor (PS30)

- [3] APS timing sensor (PS31)
- [4] APS sensor (PS32)

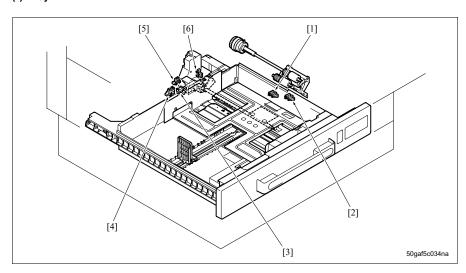
D. Developing section



[1] TCR sensor (TCRS)

E. Paper feed section

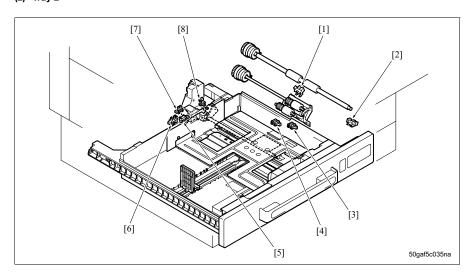
(1) Tray 1



- [1] Upper limit sensor /1 (PS6)
- [2] Paper empty sensor /1 (PS5)
- [3] Paper size sensor /Fr1 (PS11)

- [4] Paper size sensor /Rr1 (PS10)
- [5] Tray set sensor /1 (PS8)
- [6] Near-empty sensor /1 (PS9)

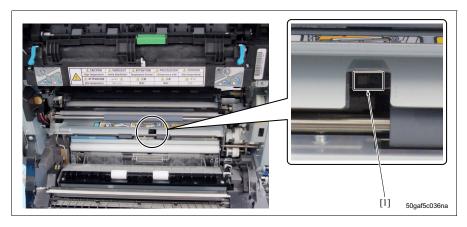
(2) Tray 2



- [1] Vertical conveyance sensor (PS2)
- [2] Feed door open/close sensor (PS7)
- [3] Paper empty sensor /2 (PS12)
- [4] Upper limit sensor /2 (PS13)

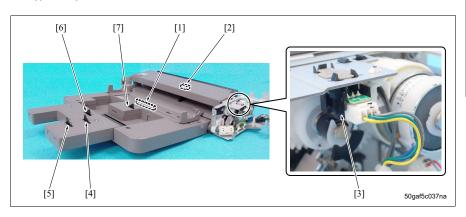
- [5] Paper size sensor /Fr2 (PS17)
- [6] Paper size sensor /Rr2 (PS16)
- [7] Tray set sensor /2 (PS14)
- [8] Near-empty sensor /2 (PS15)

(3) Registration



[1] Registration sensor (PS1)

F. Bypass tray section



- [1] Paper size VR/BP (VR1)
- [2] Paper empty sensor /BP (PS18)
- [3] Lift sensor (PS23)
- [4] Paper size sensor /BP3 (PS21)

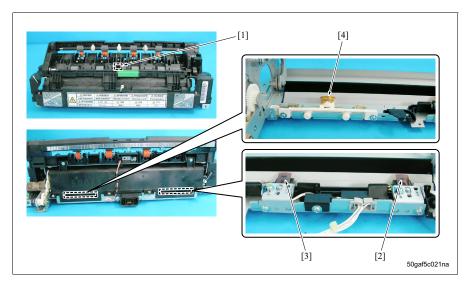
- [5] Paper size sensor /BP4 (PS22)
- [6] Paper size sensor /BP2 (PS20)
- [7] Paper size sensor /BP1 (PS19)

G. ADU section



- [1] ADU open/close sensor (PS26)
- [2] ADU conveyance sensor /1 (PS24)
- [3] ADU conveyance sensor /2 (PS25)

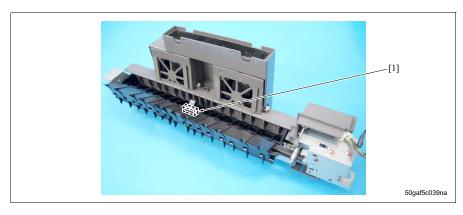
H. Fusing section



- [1] Fusing exit sensor (PS3)
- [2] Thermistor /2 (TH2)

- [3] Thermistor /1 (TH1)
- [4] Thermostat (TS)

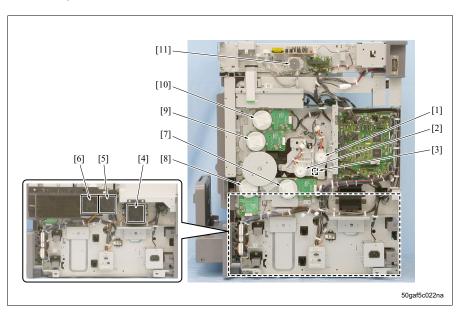
I. Reverse/paper exit section



[1] Reverse sensor (PS27)

14.1.2 Load

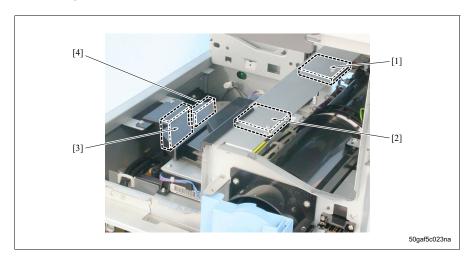
A. Main body rear side



- [1] Toner supply motor (M4)
- [2] Toner bottle motor (M10)
- [3] Toner solenoid (SD5)
- [4] Power supply cooling fan (FM1)
- [5] Overall control board cooling fan (FM10)
- [6] Developing cooling fan (FM7)

- [7] Developing motor (M3)
- [8] Feed motor (M9)
- [9] Drum motor (M1)
- [10] Fusing motor (M11)
- [11] Scanner motor (M2)

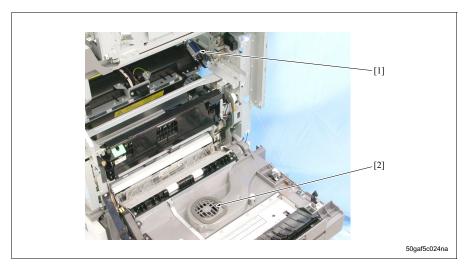
B. Main body inside



- [1] Fusing cooling fan /Rr (FM8)
- [2] Fusing cooling fan /Fr (FM2)

- [3] Drum cooling fan (FM4)
- [4] Developing suction fan (FM6)

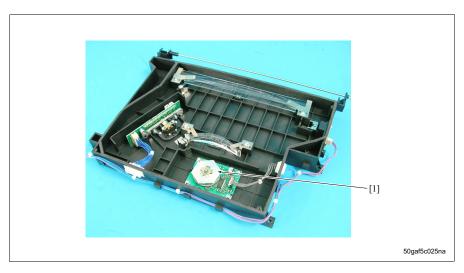
C. Main body right side



[1] Web solenoid (SD4)

[2] Coveyance suction fan (FM5)

D. Write section



[1] Polygon motor (M5)

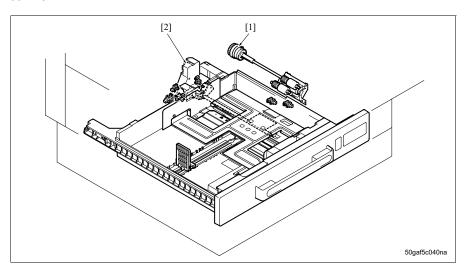
E. Photo conductor section



[1] Drum claw solenoid (SD2)

F. Paper feed section

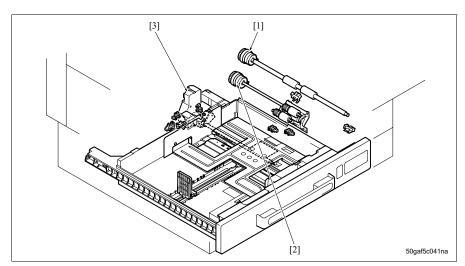
(1) Tray 1



[1] Feed clutch /1 (CL4)

[2] Paper lift motor /1 (M7)

(2) Tray 2



[1] Vertical conveyance clutch (CL3)

[2] Feed clutch /2 (CL5)

3] Paper lift motor /2 (M8)

APPENDIX

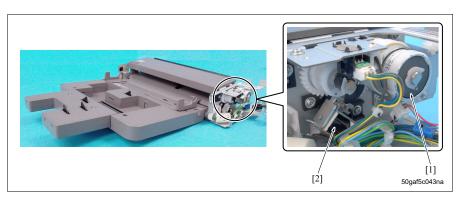
(3) Registration



[1] Registration clutch (CL1)

[2] Loop clutch (CL2)

G. Bypass tray section



[1] Feed clutch /BP (CL6)

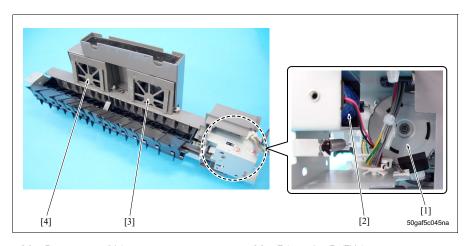
[2] Pick-up solenoid /BP (SD1)

H. ADU section



- [1] ADU conveyance clutch /Up (CL7)
- [2] ADU conveyance clutch /Lw (CL8)

I. Reverse/paper exit section

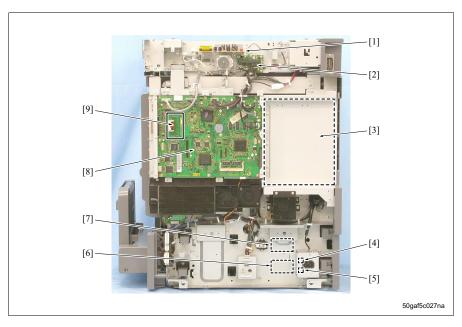


- [1] Reverse motor (M6)
- [2] Reverse solenoid (SD3)

- [3] Exhaust fan /Rr (FM9)
- [4] Exhaust fan /Fr (FM3)

14.1.3 Boards and others

A. Main body rear side



- [1] L1 inverter (L1 INVB)
- [2] Scanner drive board (SDB)
- [3] Printer control board (PRCB)
- [4] Circuit breaker /1 (CBR1)
- [5] Circuit breaker /2 (CBR2)

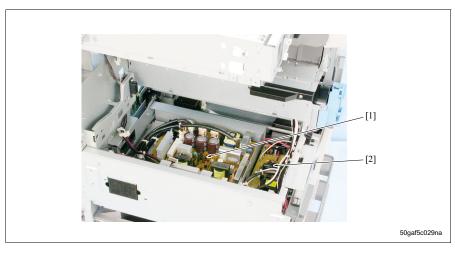
- [6] Paper size board /2 (PSB/2)
- [7] Paper size board /1 (PSB/1)
- [8] Overall control board (OACB)
- [9] NVRAM board (NRB)

B. Main body front side



[1] Total counter (TCT)

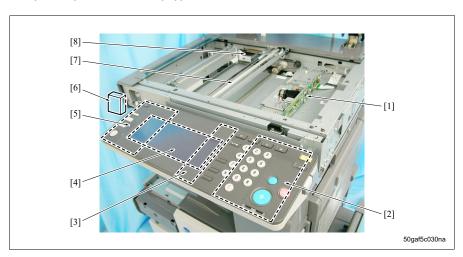
C. Main body inside



[1] DC power supply (DCPS)

[2] Hight voltage unit (HV2)

D. Operation panel and main body upper surface



- [1] CCD board (CCDB)
- [2] Panel key board (PKB)
- [3] OB inverter (OB INVB)
- [4] LCD board (LCDB)

- [5] Operation board (OB)
- [6] Speaker (SP) (option)
- [7] Exposure lamp (L1)
- [8] L1 relay board (L1 RLB)

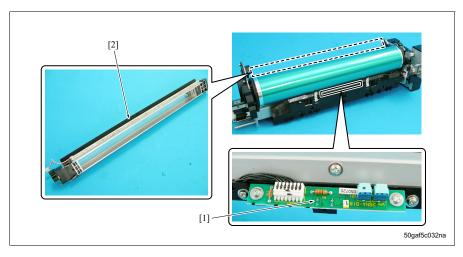
E. Write section



[1] Index board (INDEXB)

[2] Laser drive board (LDB)

F. Photo conductor section



[1] IDC sensor (IDCS)

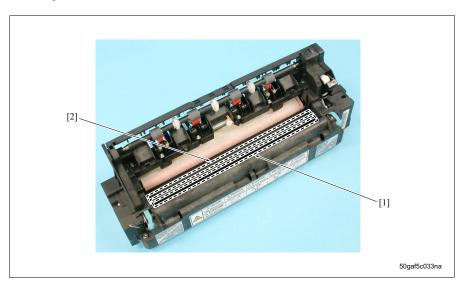
[2] Erase lamp (EL)

G. ADU section



[1] Transfer exposure lamp (TSL)

H. Fusing section



[1] Fusing heater lamp /2 (L3)

[2] Fusing heater lamp /1 (L2)

APPENDI)

14.2 DF

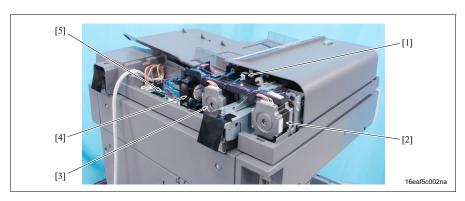
A. Front side



[1] Pressure roller release solenoid (SD1)

[2] LED board (LB)

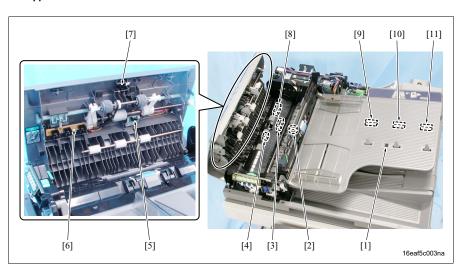
B. Rear side



- [1] Cover open/close sensor (PS7)
- [2] Original conveyance motor (M2)
- [3] Original feed motor (M1)

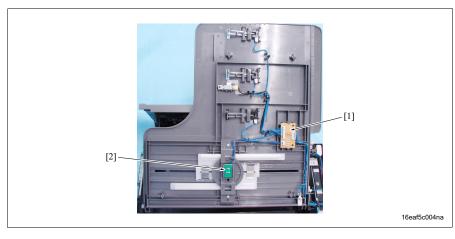
- [4] Cooling fan (FM3)
- [5] DF control board (DFCB)

C. Upper surface



- [1] Original size sensor /2 (PS2)
- [2] Stamp solenoid (SD2)
- [3] Original exit sensor (PS10)
- [4] Original detection sensor (PS8)
- [5] Original feed sensor (PS6)
- [6] Mix original size detection board (MOSDB)
- [7] Original empty sensor (PS5)
- [8] Original registration sensor (PS9)
- [9] Original size sensor /1 (PS1)
- [10] Original size sensor /3 (PS3)
- [11] Original size sensor /4 (PS4)

D. Paper feed tray

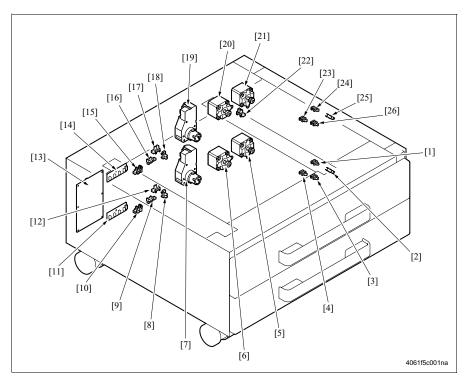


[1] Tray board (TB)

[2] Original size VR (VR1)

14.3 PC

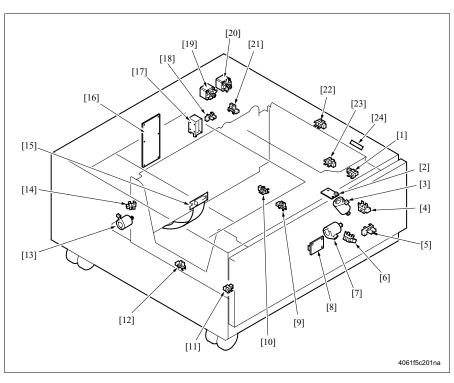
14.3.1 PC-202



- [1] Vertical conveyance sensor /4 (PS126)
- [2] Paper feed sensor /4 (PS125)
- [3] Paper empty sensor /4 (PS124)
- [4] Upper limit sensor /4 (PS123)
- [5] Vertical conveyance motor /4 (M121)
- [6] Paper feed motor /4 (M123)
- [7] Paper lift motor /4 (M125)
- [8] Near-empty sensor /4 (PS122)
- [9] Paper size sensor /Fr4 (PS128)
- [10] Paper size sensor /Rr4 (PS127)
- [11] Paper size detect board /4 (PSDB4)
- [12] Tray set sensor /4 (PS121)
- [13] PC control board (PCCB)

- [14] Paper size detect board /3 (PSDB3)
- [15] Paper size sensor /Rr3 (PS118)
- [16] Paper size sensor /Fr3 (PS119)
- [17] Tray set sensor /3 (PS112)
- [18] Near-empty sensor /3 (PS113)
- [19] Paper lift motor /3 (M124)
- [20] Paper feed motor /3 (M122)
- [21] Vertical conveyance motor /3 (M120)
- [22] Right door open/close sensor (PS111)
- [23] Upper limit sensor /3 (PS114)
- [24] Vertical conveyance sensor /3 (PS117)
- [25] Paper feed sensor /3 (PS116)
- [26] Paper empty sensor /3 (PS115)

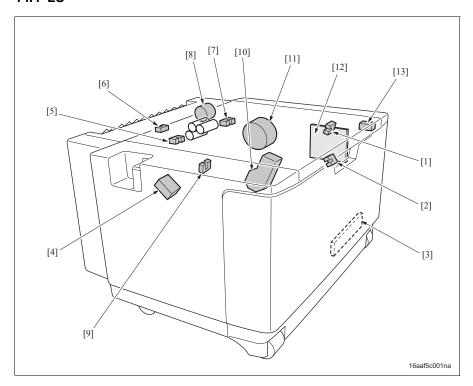
14.3.2 PC-402



- [1] Paper empty sensor (PS3)
- [2] Main tray empty board (MEB)
- [3] Paper lift motor (M5)
- [4] Paper lift motor encoder sensor (PS10)
- [5] Lower limit over run sensor (PS7)
- [6] Shft motor encoder sensor (PS8)
- [7] Shift motor (M4)
- [8] Tray release switch (SW1)
- [9] Shift position sensor (PS11)
- [10] Lower limit sensor (PS13)
- [11] Sub tray empty sensor (PS9)
- [12] Shift home sensor (PS12)

- [13] Shift gate motor (M3)
- [14] Shift gate position sensor (PS14)
- [15] Rely board (RLB)
- [16] PC control board (PCCB)
- [17] Tray lock solenoid (SD1)
- [18] Tray set sensor (PS6)
- [19] Paper feed motor (M1)
- [20] Vertical conveyance motor (M2)
- [21] Right door open/close sensor (PS5)
- [22] Vertical conveyance sensor (PS2)
- [23] Upper limit sensor (PS4)
- [24] Paper feed sensor (PS1)

14.4 LU

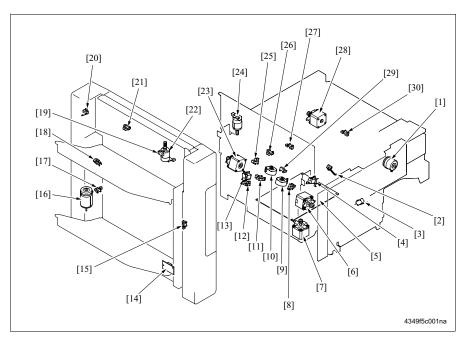


- [1] Remaining paper sensor /1 (PS154)
- [2] Remaining paper sensor /2 (PS151)
- [3] Dehumidifier heater (HTR101) (Service parts setting (P/N 56AA-710#)
- [4] Pick-up solenoid (SD151)
- [5] Paper empty sensor (PS153)
- [6] LU exit sensor (PS155)

- [7] Upper limit sensor (PS152)
- [8] Feed clutch (CL151)
- [9] LU set sensor (PS156)
- [10] Paper lift motor (M151)
- [11] Feed motor (M150)
- [12] LU drive board (LUDB)
- [13] Upper door interlock switch (MS151)

14.5 FS

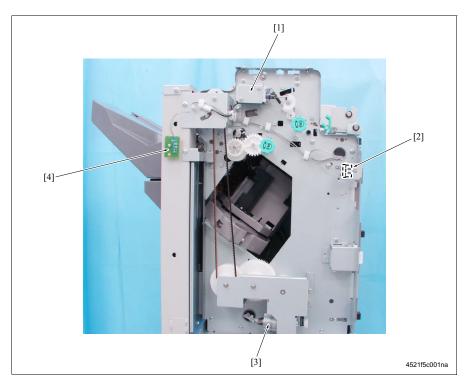
14.5.1 FS-510



- [1] Registration clutch (CL1)
- [2] Guide plate switch (SW4)
- [3] Door switch (SW1)
- [4] Stacker paddle solenoid (SD1)
- [5] FS control board (FSCB)
- [6] Exit motor (M1)
- [7] Stapler movement motor (M7)
- [8] Alignment sensor /Fr (PS7)
- [9] Alignment motor /Fr (M5)
- [10] Alignment motor /Rr (M4)
- [11] Exit paddle home sensor (PS11)
- [12] Stapler home sensor (PS10)
- [13] Exit paddle solenoid (SD2)
- [14] Tray lift board (TLB)
- [15] Tray position sensor (PS3)

- [16] Tray lift motor (M11)
- [17] Lower limit sensor (PS14)
- [18] Upper limit sensor (PS15)
- [19] Shutter switch (SW2)
- [20] Tray overrun switch (SW3)
- [21] Shutter home sensor (PS16)
- [22] Shutter motor (M12)
- [23] Conveyance motor (M2)
- [24] Exit roller release motor (M6)
- [25] Alignment sensor /Rr (PS6)
- [26] Exit roller home sensor (PS12)
- [27] Conveyance sensor (PS5)
- [28] Entrance motor (M3)
- [29] Stacker sensor (PS8)
- [30] Entrance sensor (PS4)

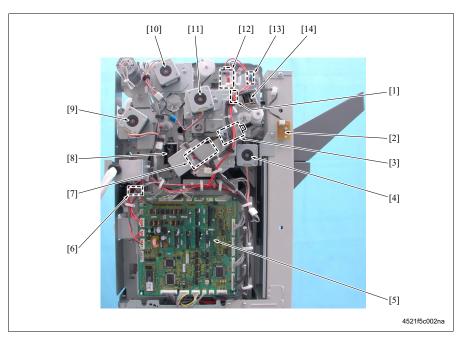
14.5.2 FS-511 A. Front side



- [1] Main gate solenoid (SD2)
- [2] Front door sensor (PS17)

- [3] Tray lift motor (M7)
- [4] Main tray upper limit LED (LED19)

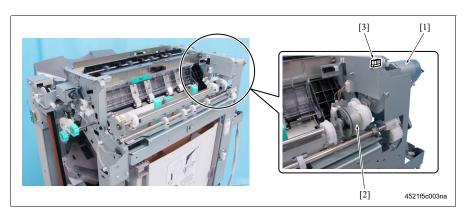
B. Rear side



- [1] Main tray lower limit switch (SW3)
- [2] Main tray upper limit sensor (PS19)
- [3] Paddle motor /Up (M15)
- [4] Paper exit motor (M3)
- [5] FS control board (FSCB)
- [6] Interlock switch (SW1)
- [7] Intermediate conveyance roller release motor (M12)

- [8] Bypass gate solenoid (SD1)
- [9] Entrance conveyance motor (M1)
- [10] Conveyance motor /Up (M4)
- [11] Conveyance motor /Lw (M2)
- [12] Paper exit roller release motor (M13)
- [13] Main tray full sensor (PS7)
- [14] Paddle solenoid /Up (SD3)

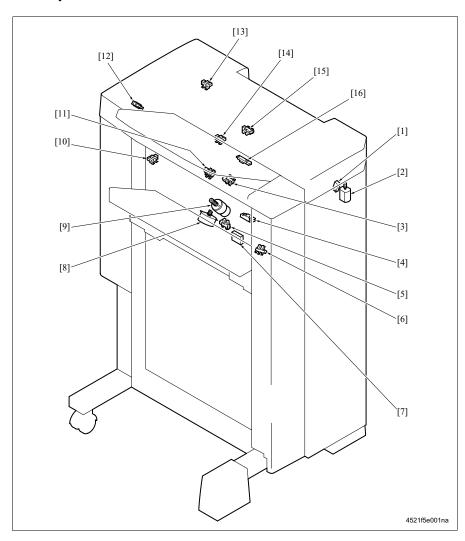
C. Punch section



- [1] Punch motor (M11)
- [2] Punch clutch (CL1)

[3] Punch encoder sensor (PS15)

D. Conveyance section



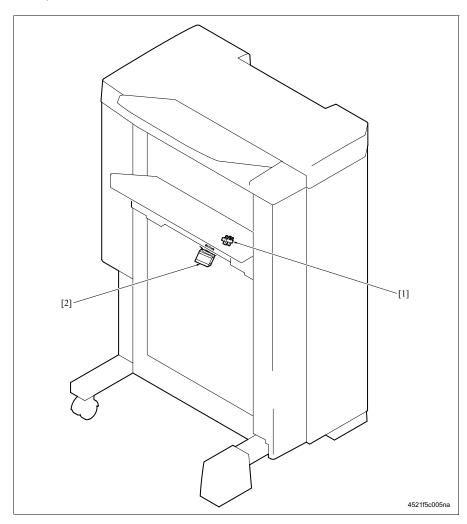
- Hole punch position switch (SW4) [1]
- [2] Hole punch selector motor (M14)
- Intermediate conveyance sensor (PS3) [3]
- [4] Alignment tray sensor (PS5)
- [5] Main tray reset sensor (PS8)
- [6] Alignment home sensor (PS9)
- [7] Main tray upper limit switch (SW2)
- [8] Alignment motor (M5)

- Paddle motor /Lw (M9) [9]
- Roller release home sensor (PS12) [10]
- Main route conveyance sensor (PS4) [11]
- [12] Exit roller home sensor (PS13)
- [13] Upper door sensor (PS18)
- Sub tray full sensor (PS6)

[14]

- [15] Sub tray exit sensor (PS1)
- Bypass route conveyance sensor (PS2) [16]

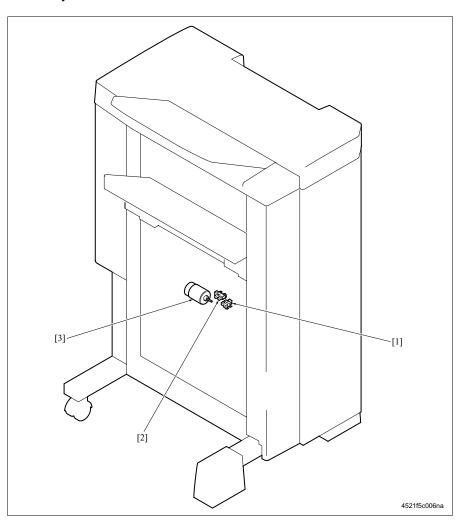
E. Stapler section



[1] Stapler home sensor (PS14)

[2] Stapler moving motor (M6)

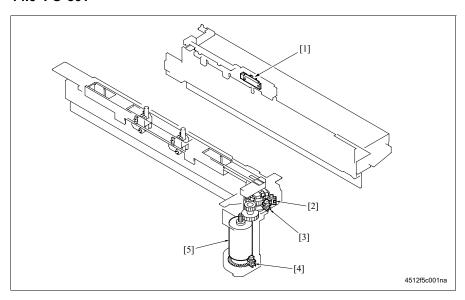
F. Main tray section



- [1] Shift home sensor (PS10)
- [2] Shift encoder sensor (PS11)

[3] Shift motor (M8)

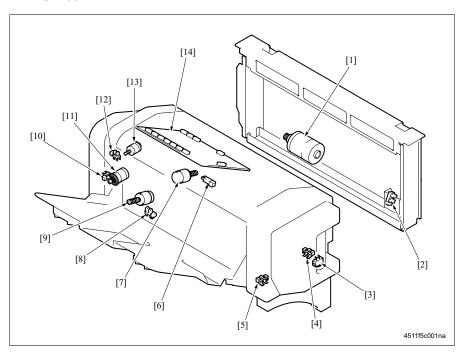
14.6 PU-501



- [1] Punch scraps full sensor (PS1)
- [2] Punch position sensor /1 (PS2)
- [3] Punch position sensor /2 (PS3)

- [4] Encoder sensor (PS4)
- [5] Punch motor (M1)

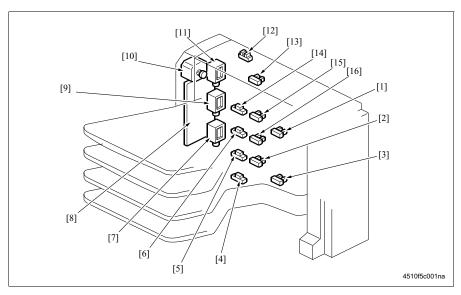
14.7 SD-502



- [1] Folding motor (M10)
- [2] Folding roller home sensor (PS22)
- [3] SD interlock switch (SW4)
- [4] Staple guide home sensor (PS26)
- [5] Paper guide home sensor (PS23)
- [6] Exit sensor (PS20)
- [7] Staple guide motor (M14)

- [8] Tray empty sensor (PS21)
- [9] Paper guide motor (M13)
- [10] Exit motor encoder sensor (PS25)
- [11] Conveyance motor (M8)
- [12] Saddle exit home sensor (PS18)
- [13] Exit open/close motor (M9)
- [14] SD control board (SDCB)

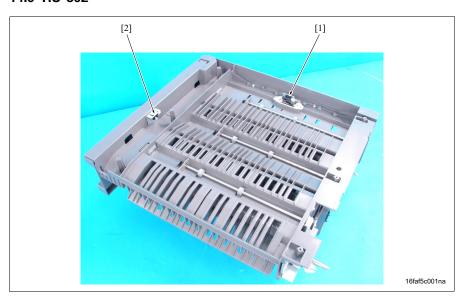
14.8 MT-501



- [1] Conveyance sensor /Up (PS9)
- [2] Paper full sensor /1 (PS5)
- [3] Conveyance sensor /Lw (PS10)
- [4] Paper detection sensor /1 (PS1)
- [5] Paper detection sensor /2 (PS2)
- [6] Paper detection sensor /3 (PS3)
- [7] Gate solenoid /1 (SD1)
- [8] MT control board (MTCB)

- [9] Gate solenoid /2 (SD2)
- [10] Conveyance motor (M1)
- [11] Gate solenoid /3 (SD3)
- [12] Right door open/close sensor (PS11)
- [13] Paper full sensor /4 (PS8)
- [14] Paper detection sensor /4 (PS4)
- [15] Paper full sensor /3 (PS7)
- [16] Paper full sensor /2 (PS6)

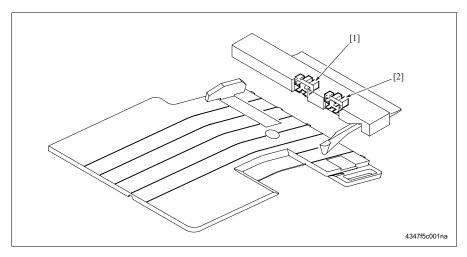
14.9 RU-502



[1] Path sensor (PS2)

[2] Door sensor (PS1)

14.10 JS-502



[1] Paper full sensor (PS1)

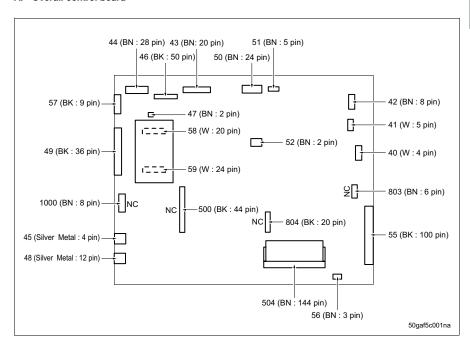
[2] Not used

15. CONNECTOR LAYOUT DRAWING

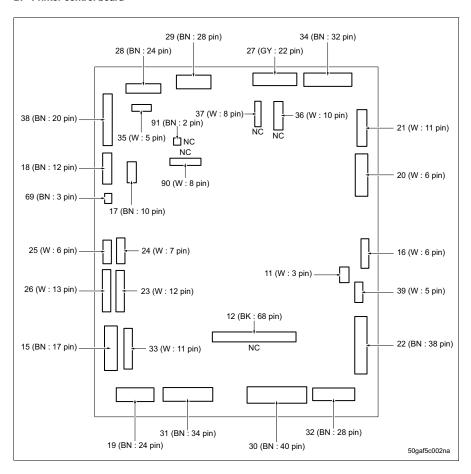
15.1 Main body

15.1.1 Connector in the board

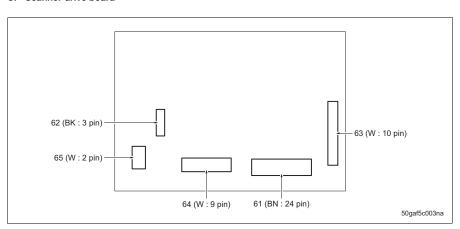
A. Overall control board



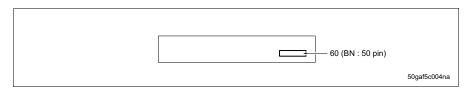
B. Printer control board



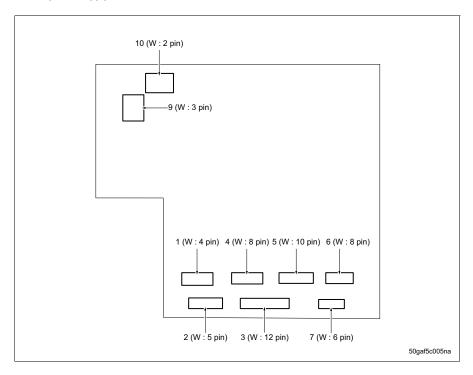
C. Scanner drive board



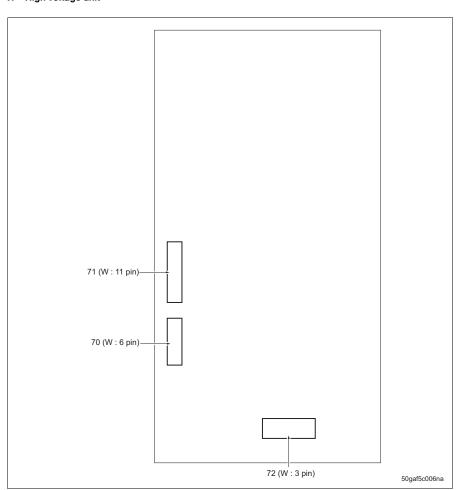
D. CCD board



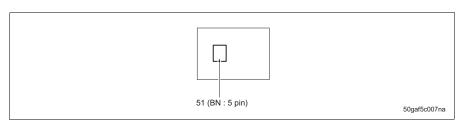
E. DC power supply



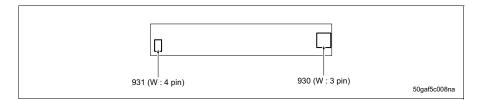
F. High voltage unit



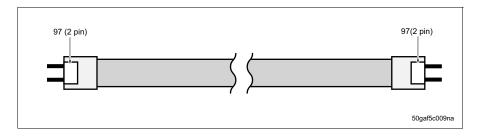
G. Index board



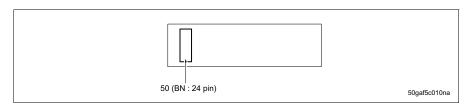
H. L1 inverter



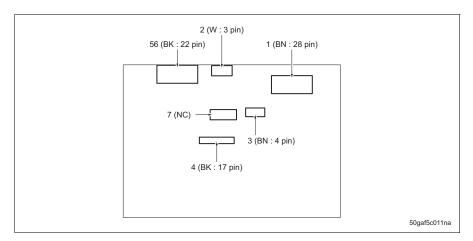
I. L1 relay board



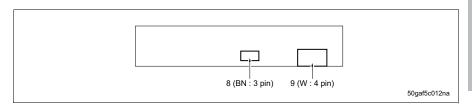
J. Laser drive board



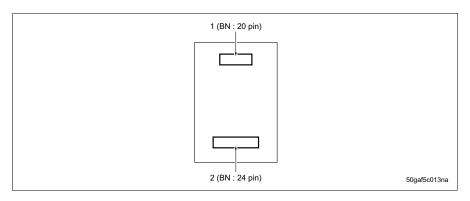
K. Operation board



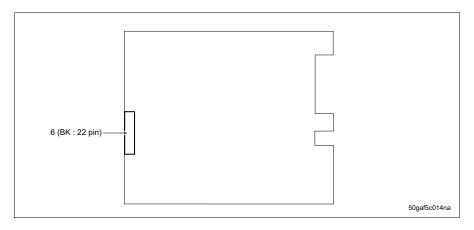
L. OB inverter



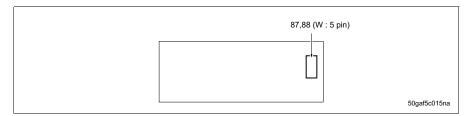
M. NVRAM board



N. Panel key board



O. Paper size board /1, /2



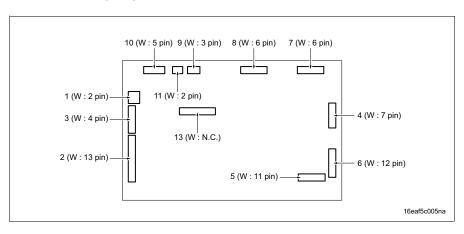
P. Toner control sensor board



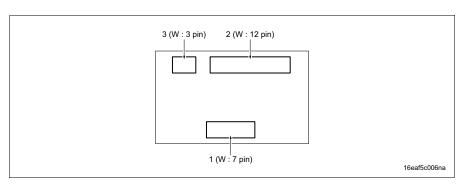
15.2 DF

15.2.1 Connector in the board

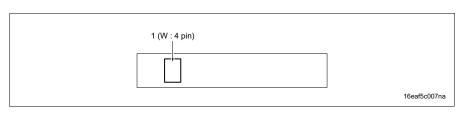
A. DF control board (DFCB)



B. Tray board (TB)



C. LED board (LB)

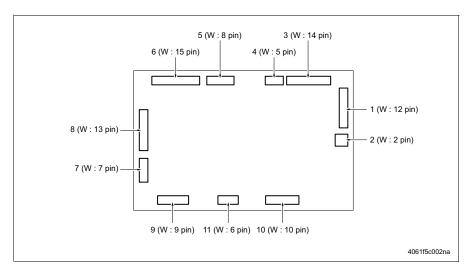


ENDIX

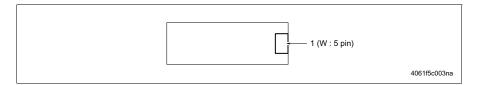
15.3 PC

15.3.1 Connector in the board

- A. PC-202
- (1) PC control board (PCCB)

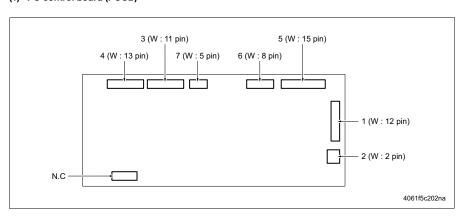


(2) Paper size detect board /3, /4 (PSDB3, PSDB4)

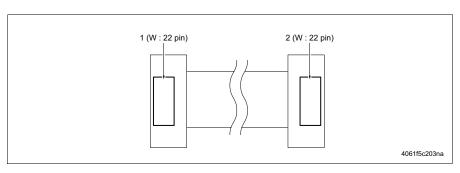


B. PC-402

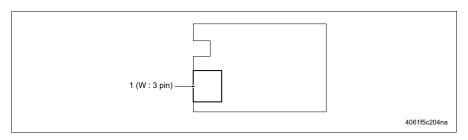
(1) PC control board (PCCB)



(2) Relay board (RLB)

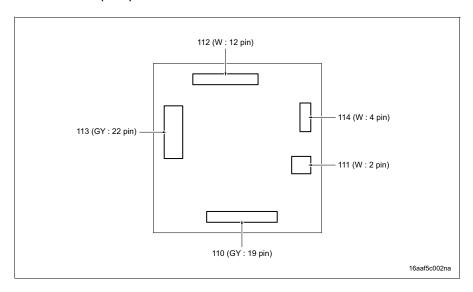


(3) Main tray empty board (MEB)



15.4 LU

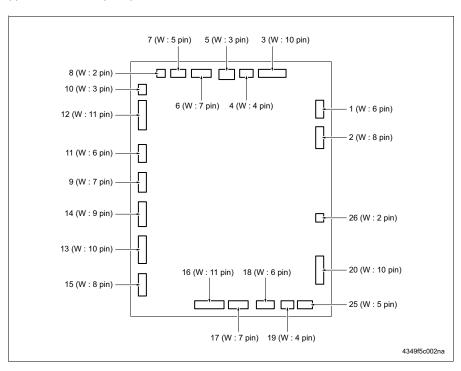
15.4.1 Connector in the board A. LU drive board (LUDB)



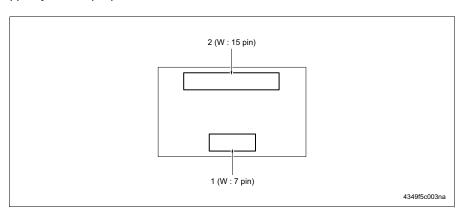
15.5 FS

15.5.1 Connector in the board

- A. FS-510
- (1) FS control board (FSCB)

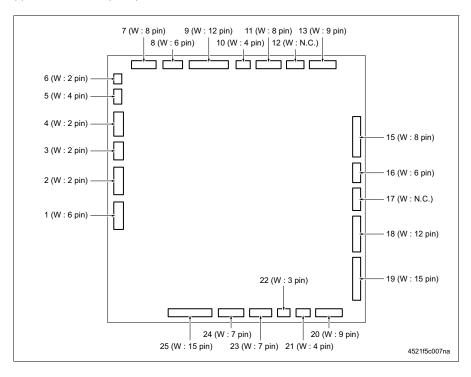


(2) Tray lift board (TLB)



B. FS-511

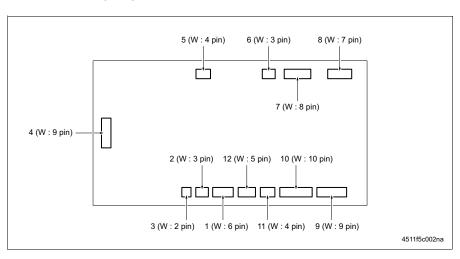
(1) FS control board (FSCB)



15.6 SD

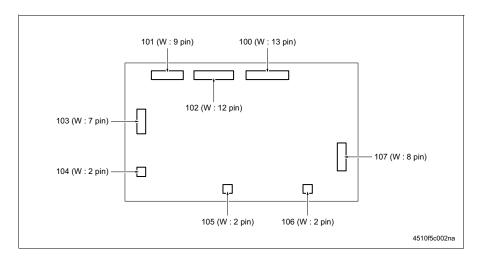
15.6.1 Connector in the board

A. SD control board (SDCB)



15.7 MT

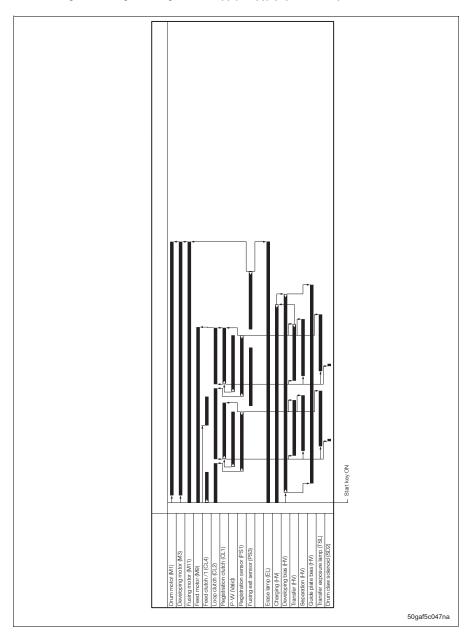
15.7.1 Connector in the board A. MT control board (MTCB)



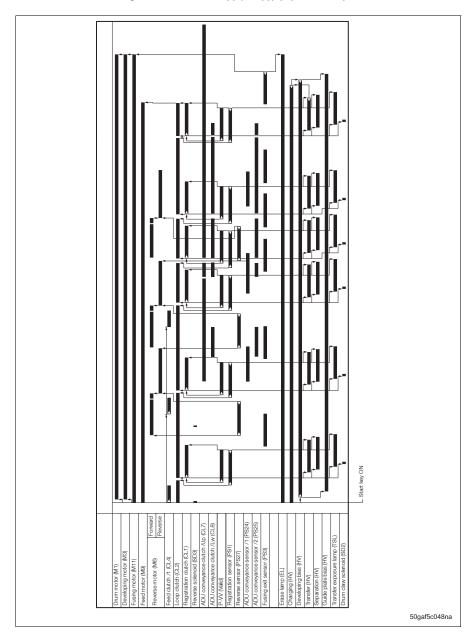
16. TIMING CHART

16.1 Main body

A. A4, 2 single sided originals, single sided copy (1 copy), paper feed tray 1

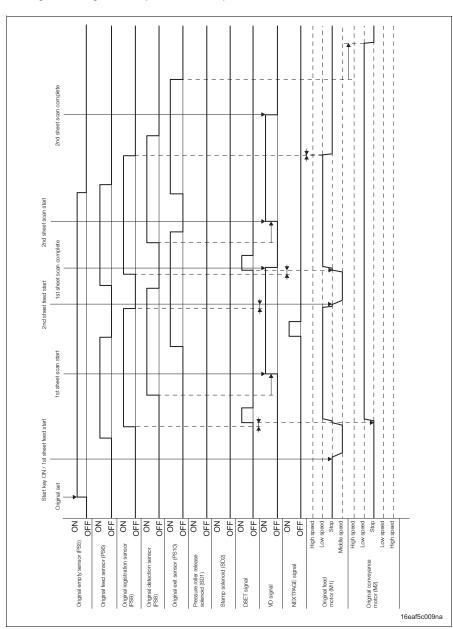


B. A4, 3 double sided original, double sided copy (1 copy), paper feed tray 1

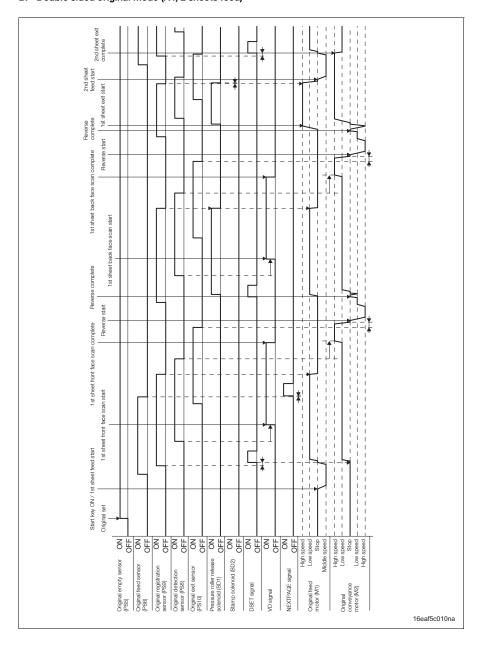


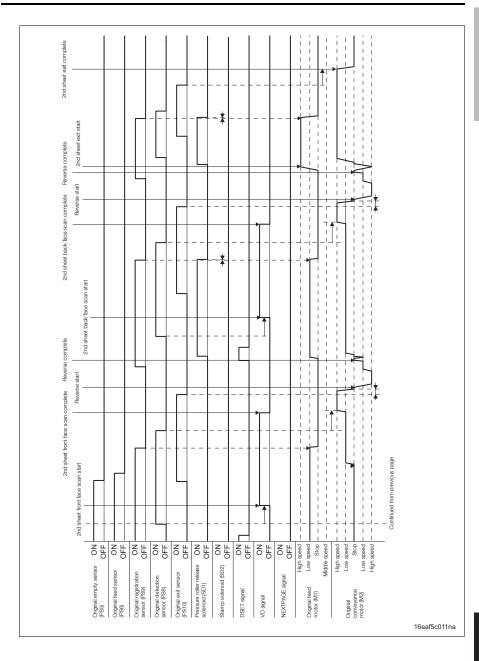
16.2 DF

A. Single sided original mode (A4, 2 sheets feed)

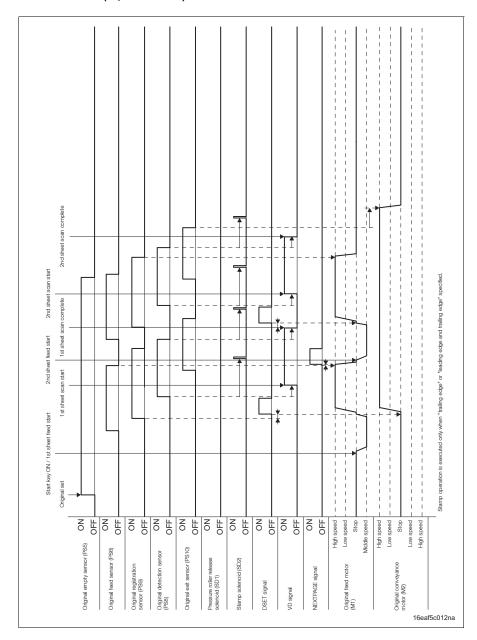


B. Double sided original mode (A4, 2 sheets feed)

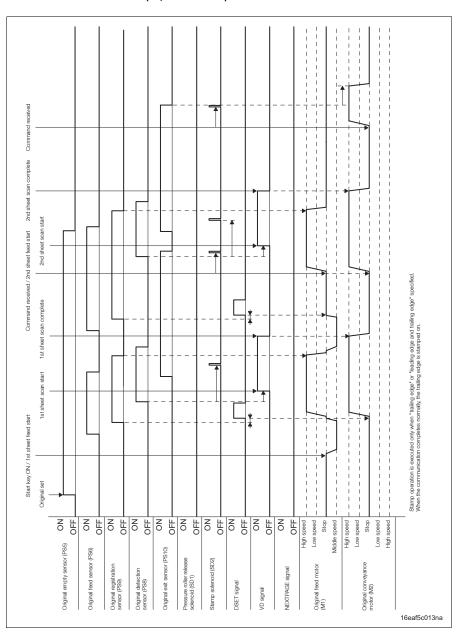




C. FAX fine mode (A4, 2 sheets feed)

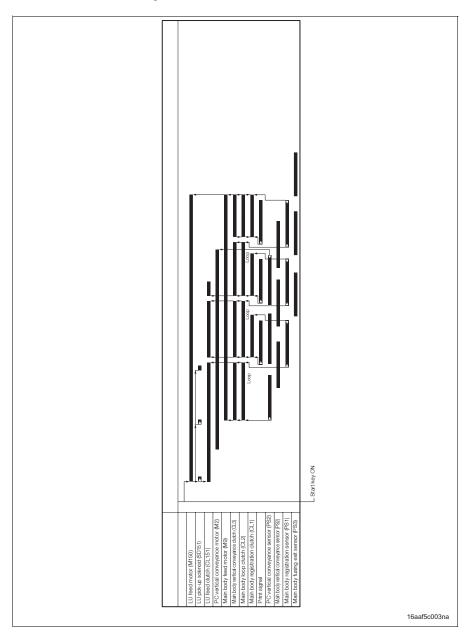


D. FAX immediate send mode (A4, 2 sheets feed)



16.3 LU

A. A4, life size, 1-1 mode, 3 originals

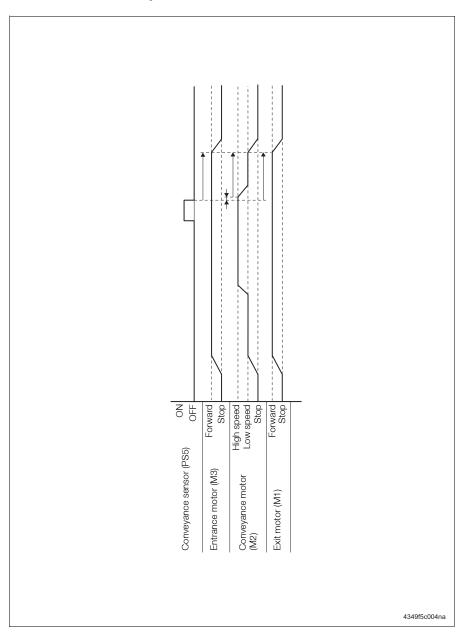


bizhub 500/420/360

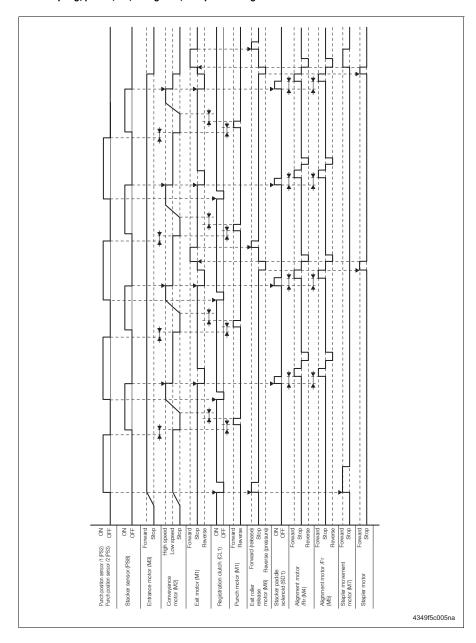
16.4 FS

16.4.1 FS-510

A. Non-sort, A4, 1 sheet setting



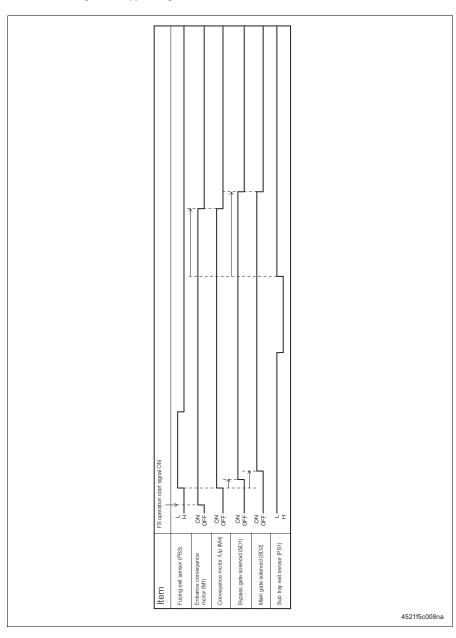
B. 1 stapling, punch, A4, 2 originals, 2 copies setting



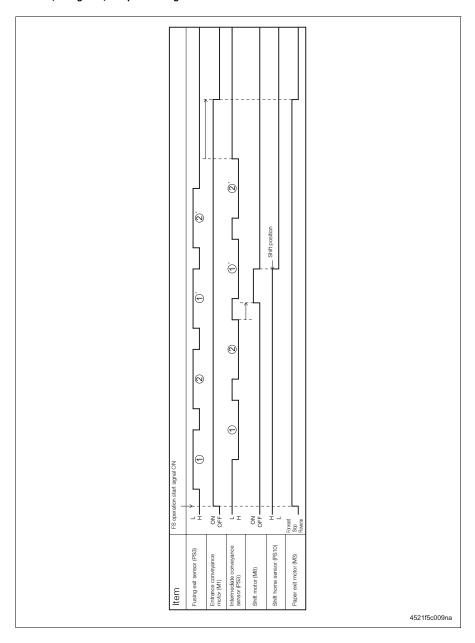
bizhub 500/420/360

16.4.2 FS-511

A. No-sort, 1 original, 1 copy setting

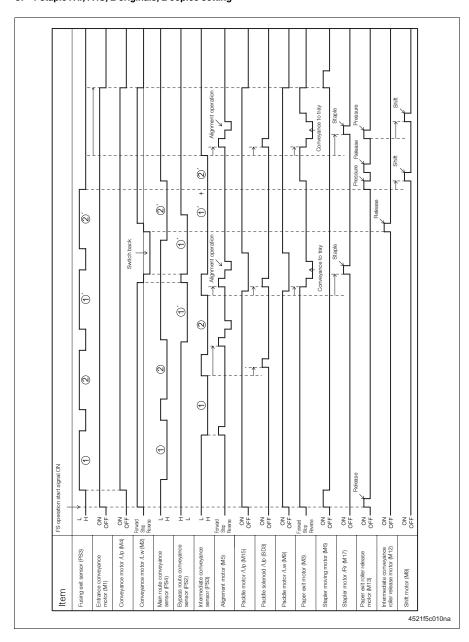


B. Sort, 2 originals, 2 copies setting

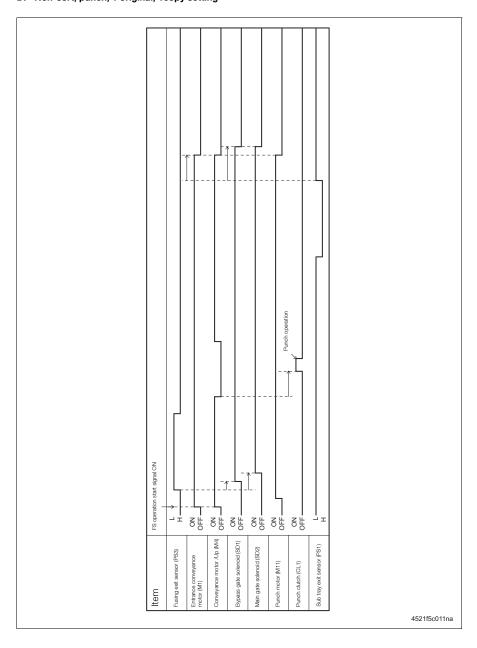


APPENDIX

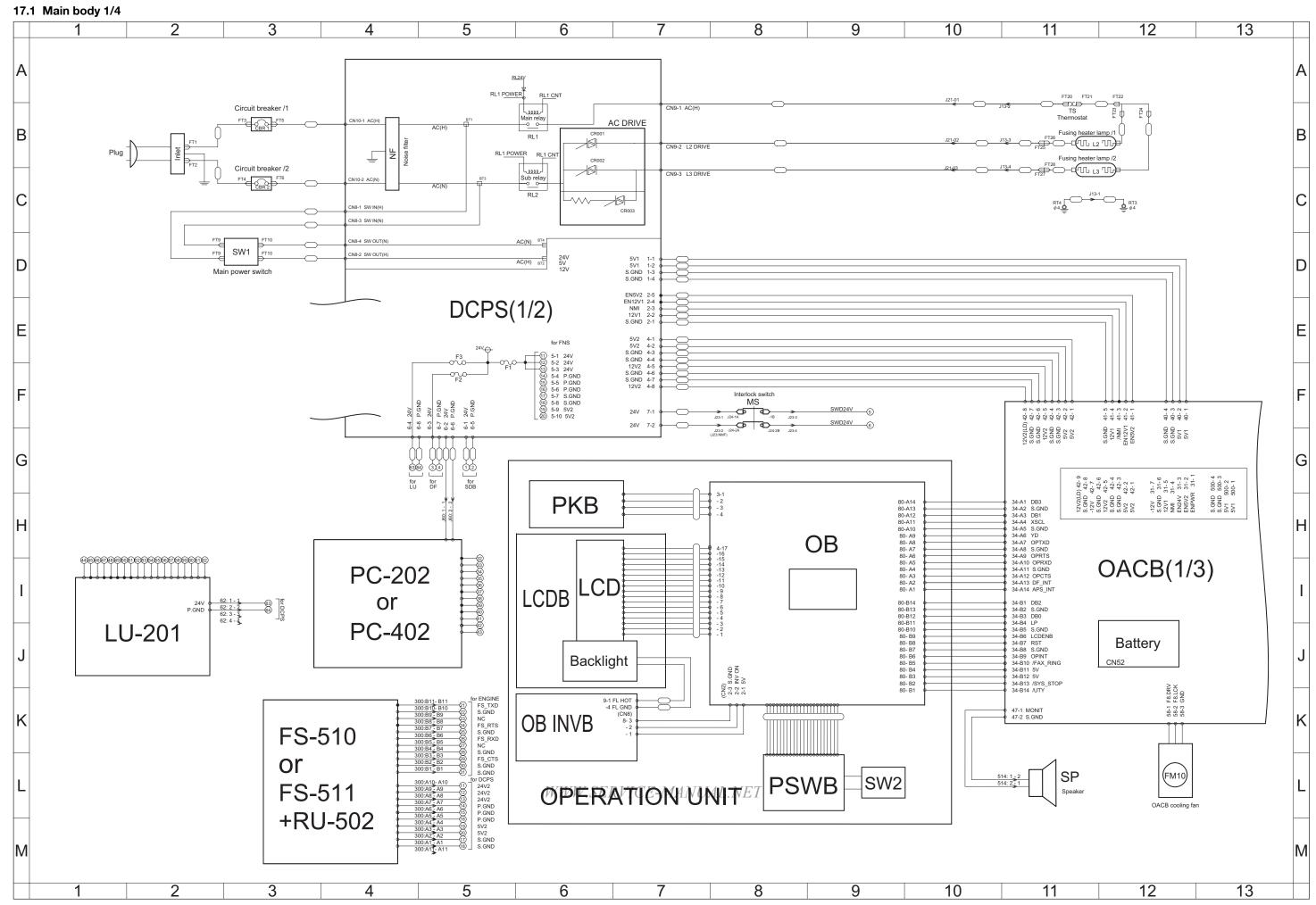
C. 1 staple /Rr, A4S, 2 originals, 2 copies setting



D. Non-sort, punch, 1 original, 1copy setting



17. OVERALL WIRING DIAGRAM

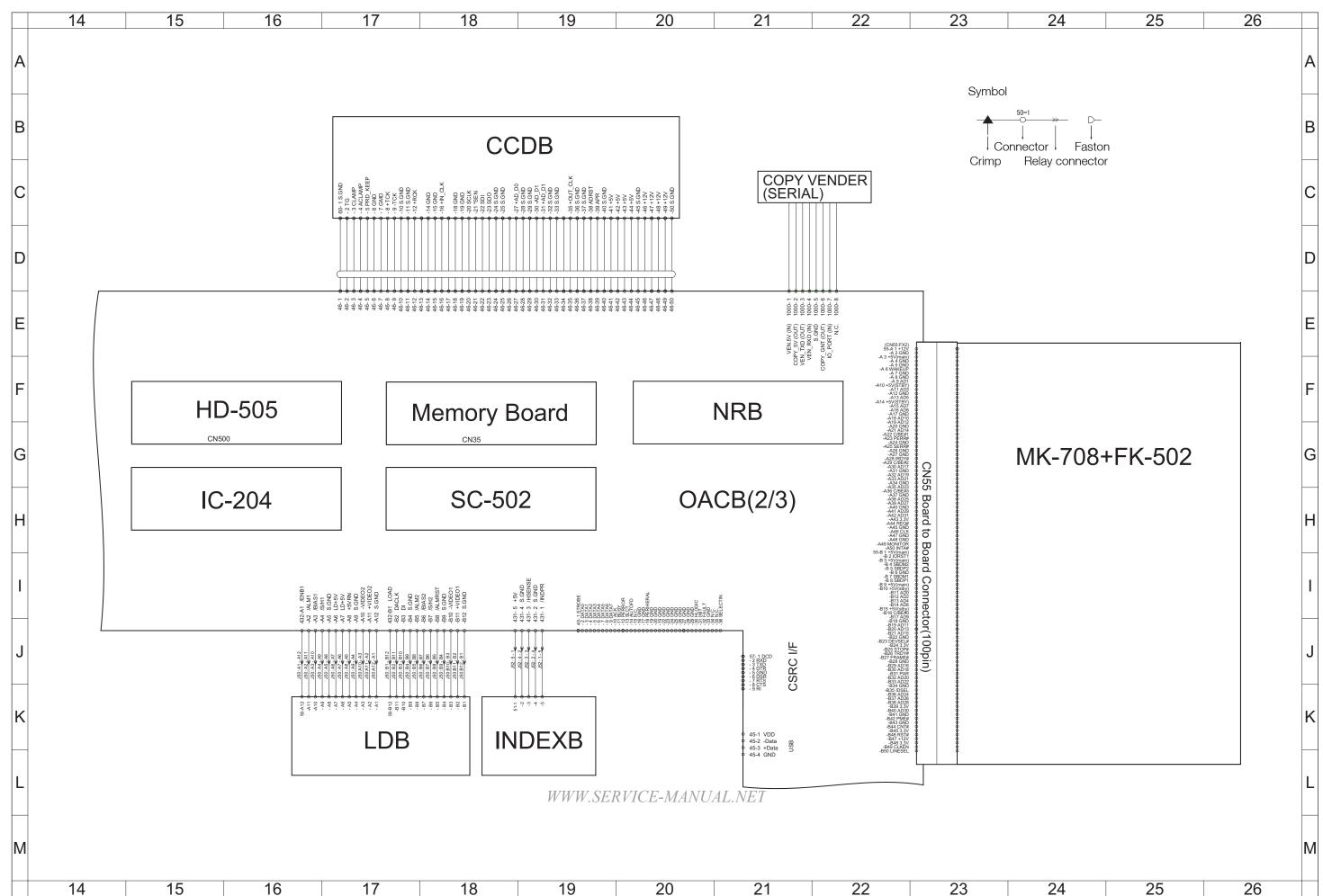


Main Body location list

17. OVERALL WIRING DIAGRAM

Wall Body location list				
Symbol	Part name	Location		
CBR1	Circuit breaker /1	3-B		
CBR2	Circuit breaker /2	3-C		
DCPS	DC power supply	4-A		
FM10	Overall control board cooling fan	12-K		
L2	Fusing heater lamp /1	11-B		
L3	Fusing heater lamp /2	11-B		
LCD	LCD	6-H		
LCDB	LCD board	6-H		
MS	Interlock switch	8-F		
NF	Noise filter	4-B		
OACB	Overall control board	11-F		
OB	Operation board	8-G		
OB INVB	OB inverter	6-K		
PKB	Panel key board	6-G		
PSWB	Power switch board	8-L		
RL1	Main relay	6-B		
RL2	Sub relay	6-B		
SP	Speaker	11-L		
SW1	Main power switch	3-D		
SW2	Power switch	9-L		
TS	Thermostat	11-B		
_	FS-510	3-K		
_	FS-511	3-K		
_	LU-201	1-1		
_	PC-202	3-H		
_	PC-402	3-H		
_	RU-502	3-K		
_	Inlet	2-B		
_	Backlight	6-J		
_	Battery	12-l		
_	Plug	2-B		

WWW.SERVICE-MANUAL.NET



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Main Body location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
CCDB	CCD board	17-B
INDEXB	Index board	18-K
LDB	Laser drive board	16-K
NRB	NVRAM board	20-F
_	FK-502	23-E
_	HD-505	15-F
_	IC-204	15-G
_	MK-708	23-E
_	SC-502	17-G
_	Copy vender (serial)	21-C

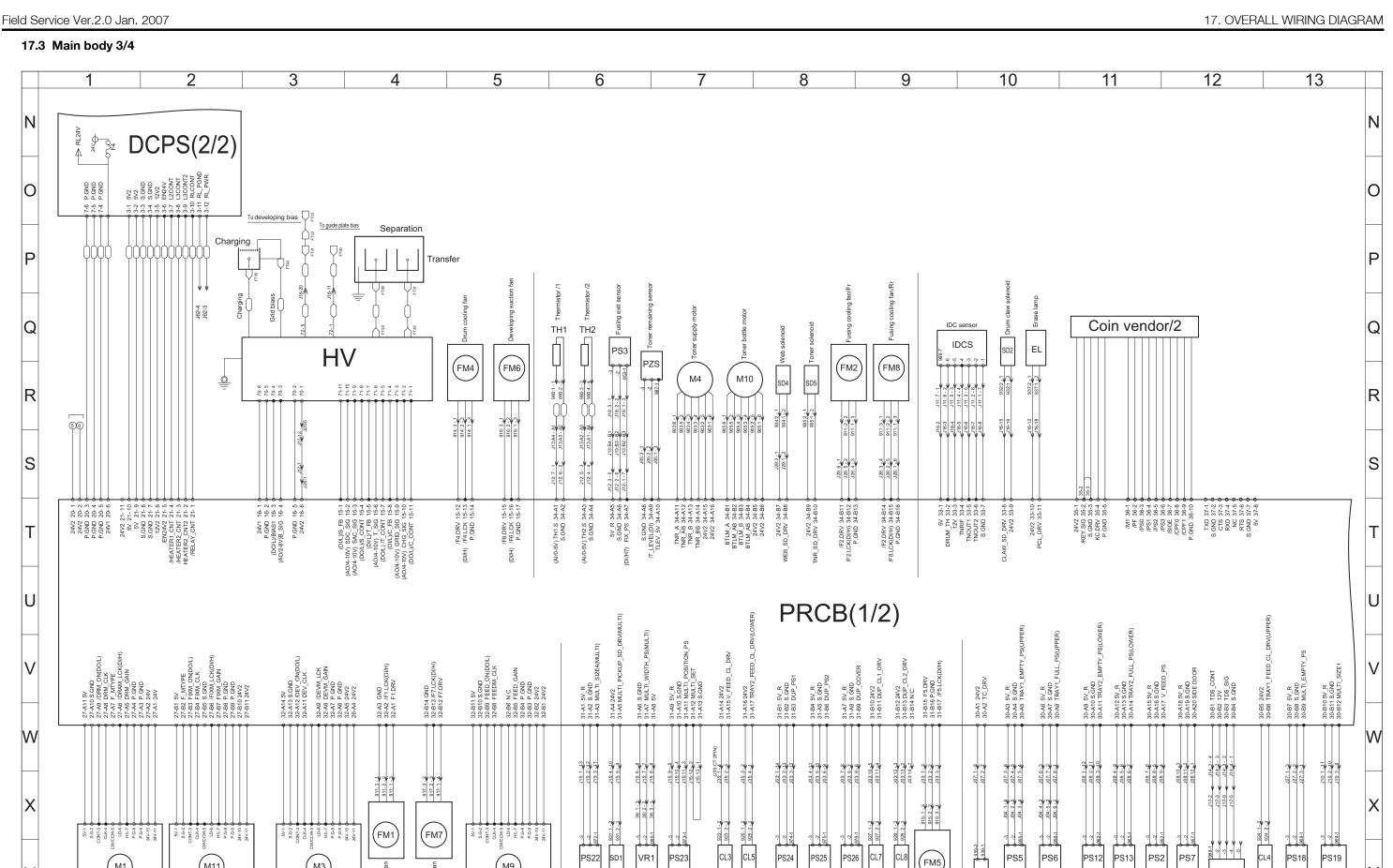
WWW.SERVICE-MANUAL.NET

5V-1 S.G-2 CONT-3 CLK-4 CCCW-5 HAL-7 P.G-8 P.G-9 24V-10 24V-11

(M1)

5V-1 S.G-2 S.G-2 CLK-4 CLK-4 CCW-5 LD-6 HAL-7 P.G-9 24V-10

(M11)



CT2

PS24

PS25

RT3

8

conveyance CD 927: 1--

(FM5)

9

PS26

PS6

10

PS12

PS13

11

PS7

CL4

TCRS

12

PS19

13

CT3

BBB. SERVICEE-MAD Some property of the service of t

I (FM7) I

5V-1 S.G-2 COKH-3 CCKW-5 LD-6 H/L-7 P.G-9 P.G-9 Z4V-10

(M9)

5

PS22

© RT3 = φ3

6

्रन्जू VR1

(FM1)

4

5V-1 S.G-2 CONT-3 CLK-4 /CCW-5 LD-6 H.L-7 P.G-8 P.G-9

(M3)

3

Main Body location list

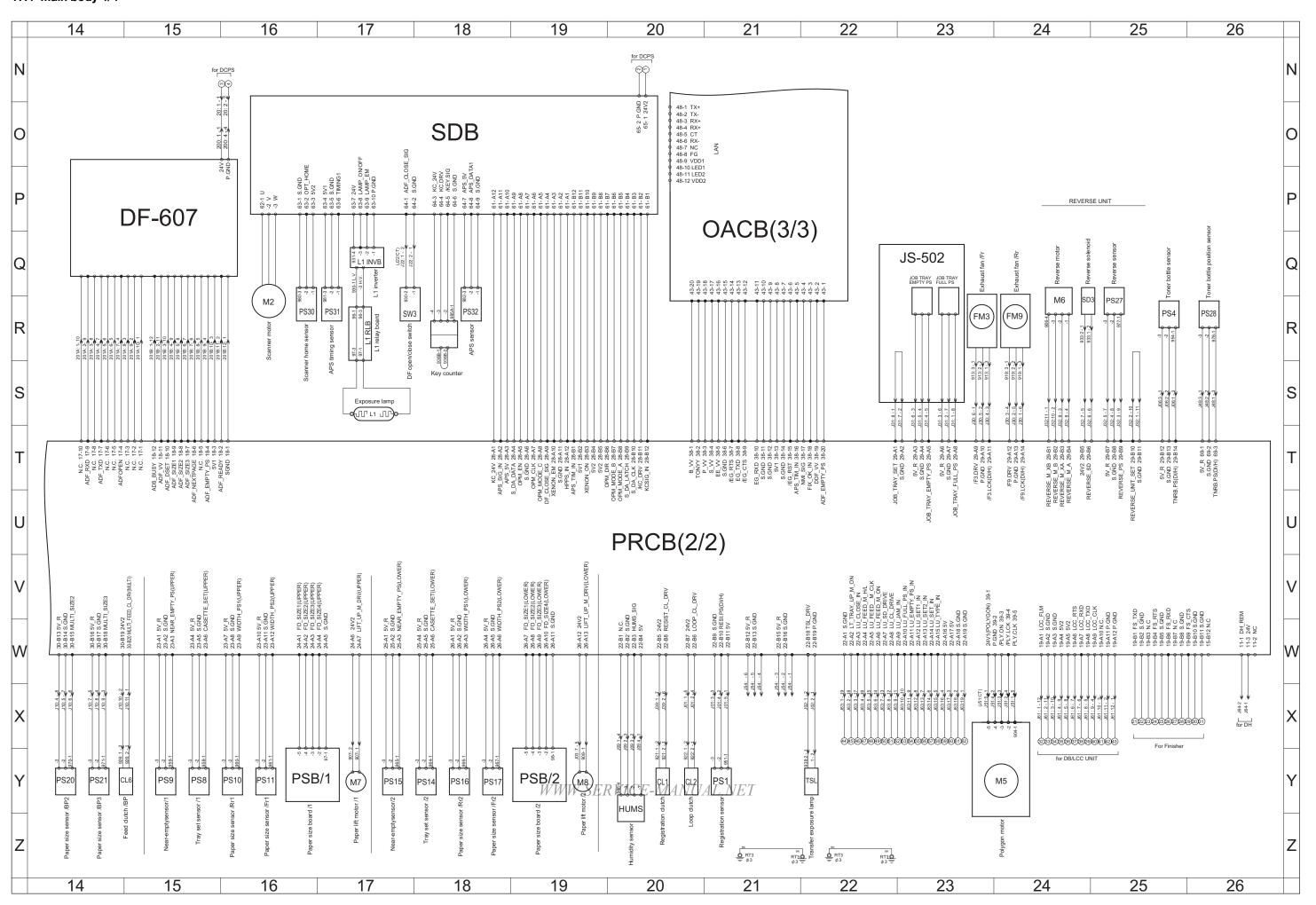
17. OVERALL WIRING DIAGRAM

Main Body loc	ation list	
Symbol	Part name	Location
CL3	Vertical conveyance clutch	7-Y
CL4	Feed clutch /1	12-Y
CL5	Feed clutch /2	7-Y
CL7	ADU conveyance clutch /Up	9-Y
CL8	ADU conveyance clutch /Lw	9-Y
EL	Erase lamp	10-Q
FM1	Power supply cooling fan	4-X
FM2	Fusing cooling fan /Fr	8-Q
FM4	Drum cooling fan	5-Q
FM5	Coveyance suction fan	9-X
FM6	Developing suction fan	5-Q
FM7	Developing cooling fan	4-X
FM8	Fusing cooling fan /Rr	9-Q
HV	Hight voltage unit	3-Q
IDCS	IDC sensor	9-Q
M1	Drum motor	1-X
M3	Developing motor	3-X
M4	Toner supply motor	7-R
M9	Feed motor	5-X
M10	Toner bottle motor	7-R
M11	Fusing motor	2-X
PRCB	Printer control board	1-T
PS2	Vertical conveyance sensor	11-Y
PS3	Fusing exit sensor	6-Q
PS5	Paper empty sensor /1	10-Y
PS6	Upper limit sensor /1	10-Y
PS7		12-Y
	Feed door open/close sensor	
PS12	Paper empty sensor /2	11-Y
PS13	Upper limit sensor /2	11-Y
PS18	Paper empty sensor /BP4	13-Y
PS19	Paper size sensor /BP1	13-Y 6-Y
PS22	Paper size sensor /BP4	
PS23	Lift sensor	7-Y
PS24	ADU conveyance sensor /1	8-Y
PS25	ADU conveyance sensor /2	8-Y
PS26	ADU open/close sensor	8-Y
PZS	Toner remaining sensor	6-Q
SD1	Pick-up solenoid /BP	6-Y
SD2	Drum claw solenoid	10-Q
SD4	Web solenoid	8-R
SD5	Toner solenoid	8-R
TCRS	TCR sensor	12-Y
TCT	Total counter	10-Y
TH1	Thermistor /1	6-Q
TH2	Thermistor /2	6-Q
VR1	Paper size VR /BP	6-Y
_	DF-607	14-0
_	Guide plate bias	3-P
_	Grid	3-Q
_	Developing	3-O
_	Coin vendor /2	11-Q
_	Charging	3-Q
	Transfer	4-P
_	Separation	4-P

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bizhub 500/420/360

17.4 Main body 4/4



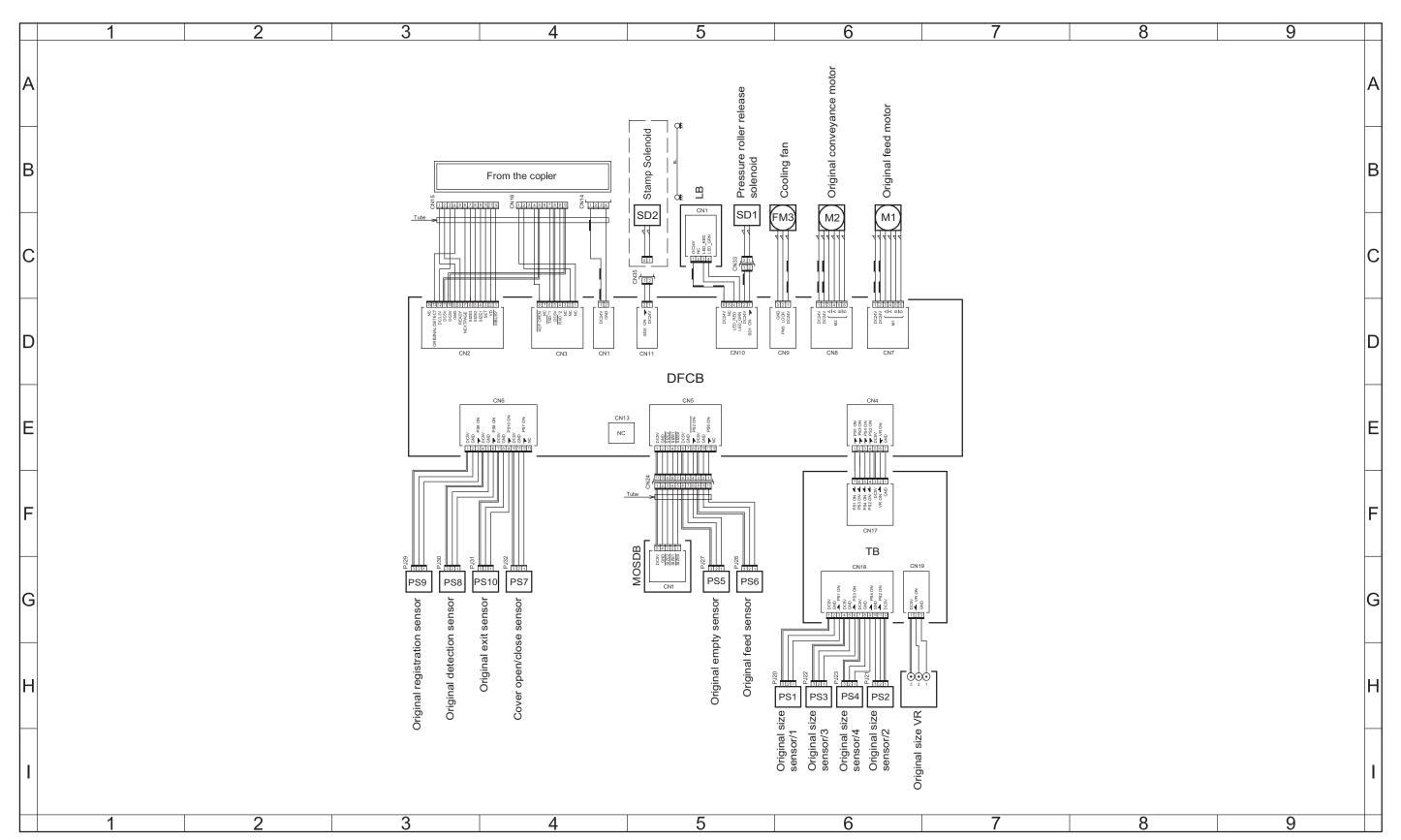
Main Body location list

17. OVERALL WIRING DIAGRAM

Main Body location list				
Symbol	Part name	Location		
CL1	Registration clutch	20-Y		
CL2	Loop clutch	20-Y		
CL6	Feed clutch /BP	14-Y		
FM3	Exhaust fan /Fr	23-Q		
FM9	Exhaust fan /Rr	24-Q		
HUMS	Humidity sensor	20-Y		
KCT	Key counter	18-R		
L1	Exposure lamp	17-S		
L1 INVB	L1 inverter	17-Q		
L1 RLB	L1 relay board	17-R		
M2	Scanner motor	16-Q		
M5	Polygon motor	23-X		
M6	Reverse motor	24-Q		
M7	Paper lift motor /1	17-Y		
M8	Paper lift motor /2	19-Y		
PS1	Registration sensor	21-Y		
PS4	Toner bottle sensor	25-R		
PS8	Tray set sensor /1	15-Y		
PS9	Near-empty sensor /1	15-Y		
PS10	Paper size sensor /Rr1	16-Y		
PS11	Paper size sensor /Fr1	16-Y		
PS14	Tray set sensor /2	18-Y		
PS15	Near-empty sensor /2	17-Y		
PS16	Paper size sensor /Rr2	18-Y		
PS17	Paper size sensor /Fr2	18-Y		
PS20	Paper size sensor /BP2	14-Y		
PS21	Paper size sensor /BP3	14-Y		
PS27	Reverse sensor	25-Q		
PS28	Toner bottle position sensor	26-R		
PS30	Scanner home sensor	16-Q		
PS31	APS timing sensor	17-Q		
PS32	APS sensor	18-Q		
PSB/1	Paper size board /1	16-Y		
PSB/2	Paper size board /2	19-Y		
SD3	Reverse solenoid	24-Q		
SDB	Scanner drive board	16-N		
SW3	DF open/close switch	17-Q		
TSL	Transfer exposure lamp	22-Y		
_	JS-502	22-Q		

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17.5 DF



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DF-607 location list

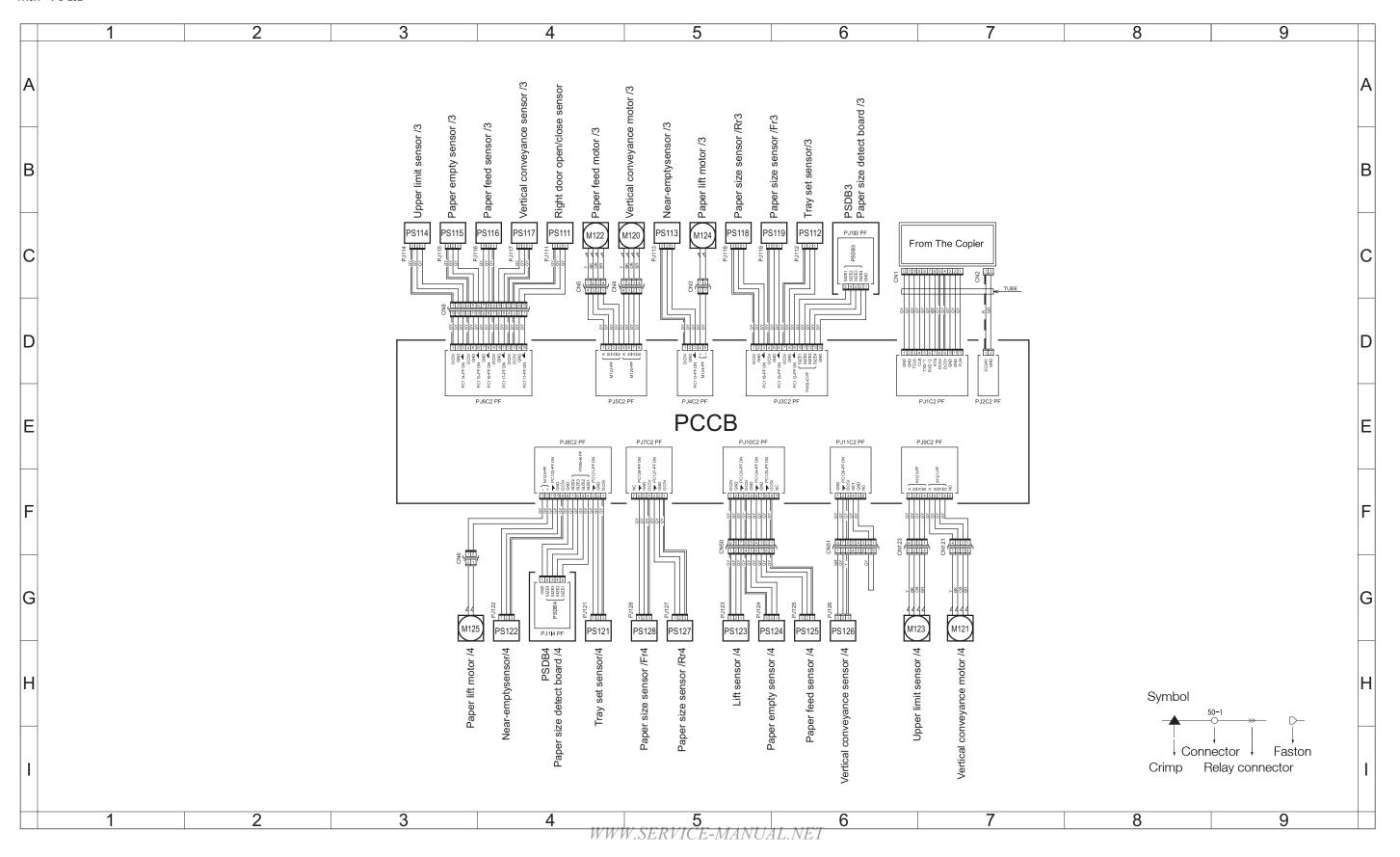
17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
DFCB	DF control board	3-D
FM3	Cooling fan	5-B
LB	LED board	5-B
M1	Original feed motor	6-B
M2	Original conveyance motor	6-B
MOSDB	Mix Original size detection board	5-F
PS1	Original size sensor /1	6-H
PS2	Original size sensor /2	6-H
PS3	Original size sensor /3	6-H
PS4	Original size sensor /4	6-H
PS5	Original empty sensor	5-G
PS6	Original feed sensor	5-G
PS7	Cover open/close sensor	4-G
PS8	Original detection sensor	3-G
PS9	Original registration sensor	3-G
PS10	Original exit sensor	3-G
SD1	Pressure roller release solenoid	5-B
SD2	Stamp solenoid	5-B
TB	Tray board	6-F
VR1	Original size VR	6-H

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17.6 PC

17.6.1 PC-202



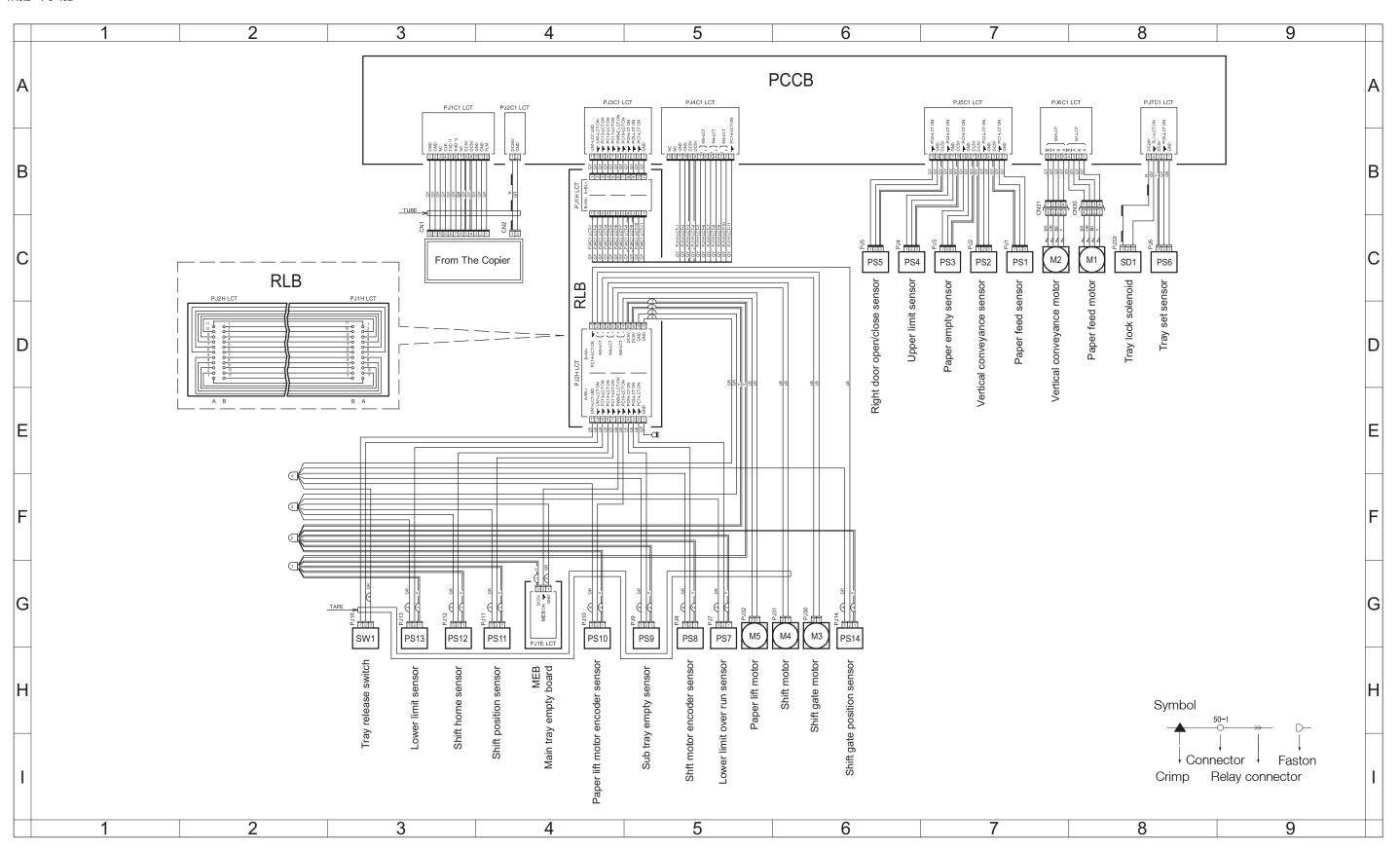
PC-202 location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
M120	Vertical conveyance motor /3	4-C
M121	Vertical conveyance motor /4	7-G
M122	Paper feed motor /3	4-C
M123	Paper feed motor /4	6-G
M124	Paper lift motor /3	5-C
M125	Paper lift motor /4	3-G
PCCB	PC control board	3-D
PS111	Right door open/close sensor	4-C
PS112	Tray set sensor/3	6-C
PS113	Near-empty sensor /3	5-C
PS114	Upper limit sensor /3	3-C
PS115	Paper empty sensor /3	3-C
PS116	Paper feed sensor /3	3-C
PS117	Vertical conveyance sensor /3	4-C
PS118	Paper size sensor /Rr3	5-C
PS119	Paper size sensor /Fr3	5-C
PS121	Tray set sensor /4	4-G
PS122	Near-empty sensor /4	4-G
PS123	Upper limit sensor /4	5-G
PS124	Paper empty sensor /4	5-G
PS125	Paper feed sensor /4	6-G
PS126	Vertical conveyance sensor /4	6-G
PS127	Paper size sensor /Rr4	5-G
PS128	Paper size sensor /Fr4	5-G
PSDB3	Paper size detect board /3	6-C
PSDB4	Paper size detect board /4	4-G

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17.6.2 PC-402



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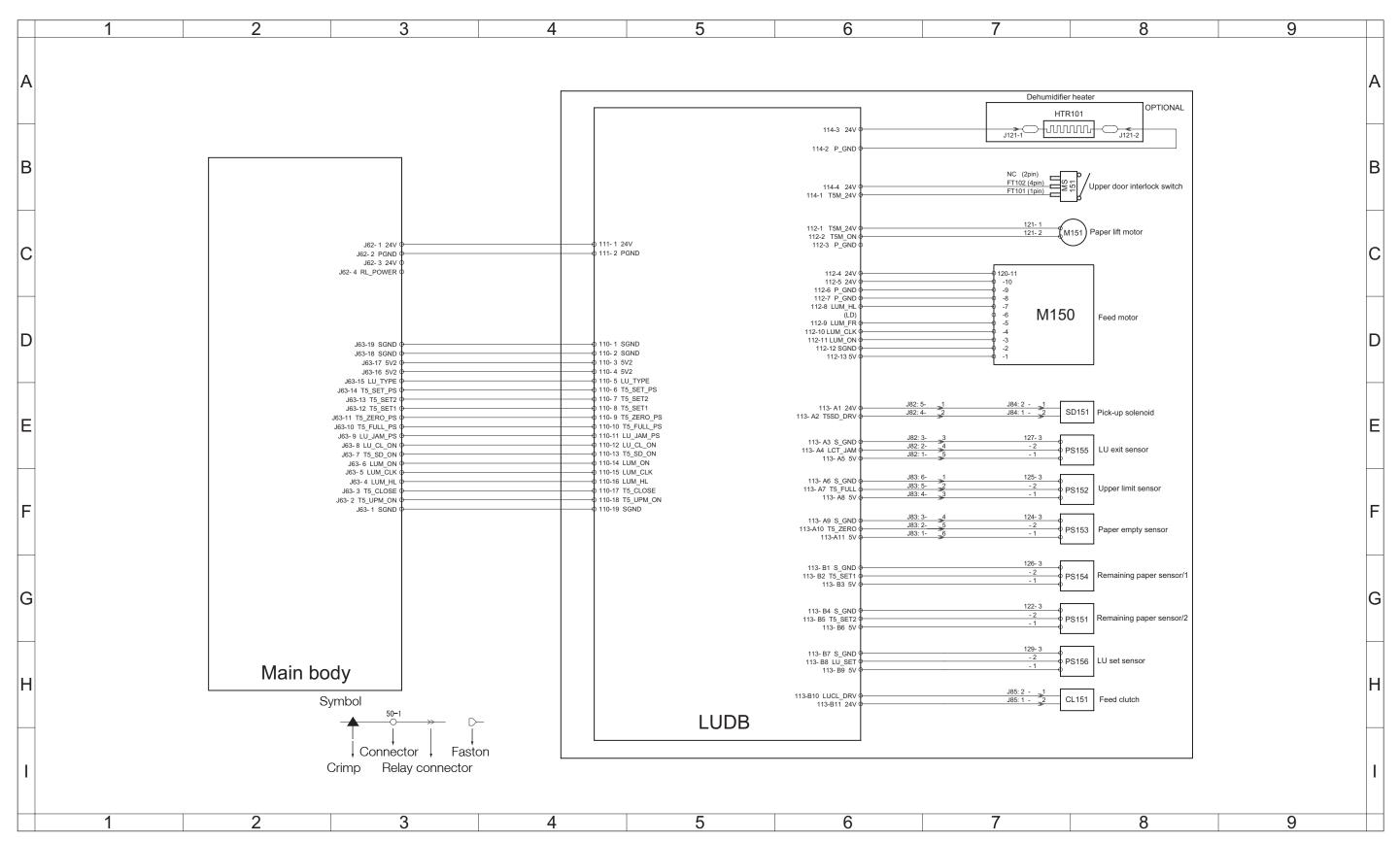
PC-402 location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
M1	Paper feed motor	8-C
M2	Vertical conveyance motor	7-C
МЗ	Shift gate motor	6-G
M4	Shift motor	6-G
M5	Paper lift motor	5-G
MEB	Main tray empty board	4-G
PCCB	PC control board	3-A
PS1	Paper feed sensor	7-C
PS2	Vertical conveyance sensor	7-C
PS3	Paper empty sensor	7-C
PS4	Upper limit sensor	6-C
PS5	Right door open/close sensor	6-C
PS6	Tray set sensor	8-C
PS7	Lower limit over run sensor	5-G
PS8	Shft motor encoder sensor	5-G
PS9	Sub tray empty sensor	5-G
PS10	Paper lift motor encoder sensor	4-G
PS11	Shift position sensor	4-G
PS12	Shift home sensor	3-G
PS13	Lower limit sensor	3-G
PS14	Shift gate position sensor	6-G
RLB	Rely board	4-B
SD1	Tray lock solenoid	8-C
SW1	Tray release switch	3-G

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17.7 LU



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LU-201 location list

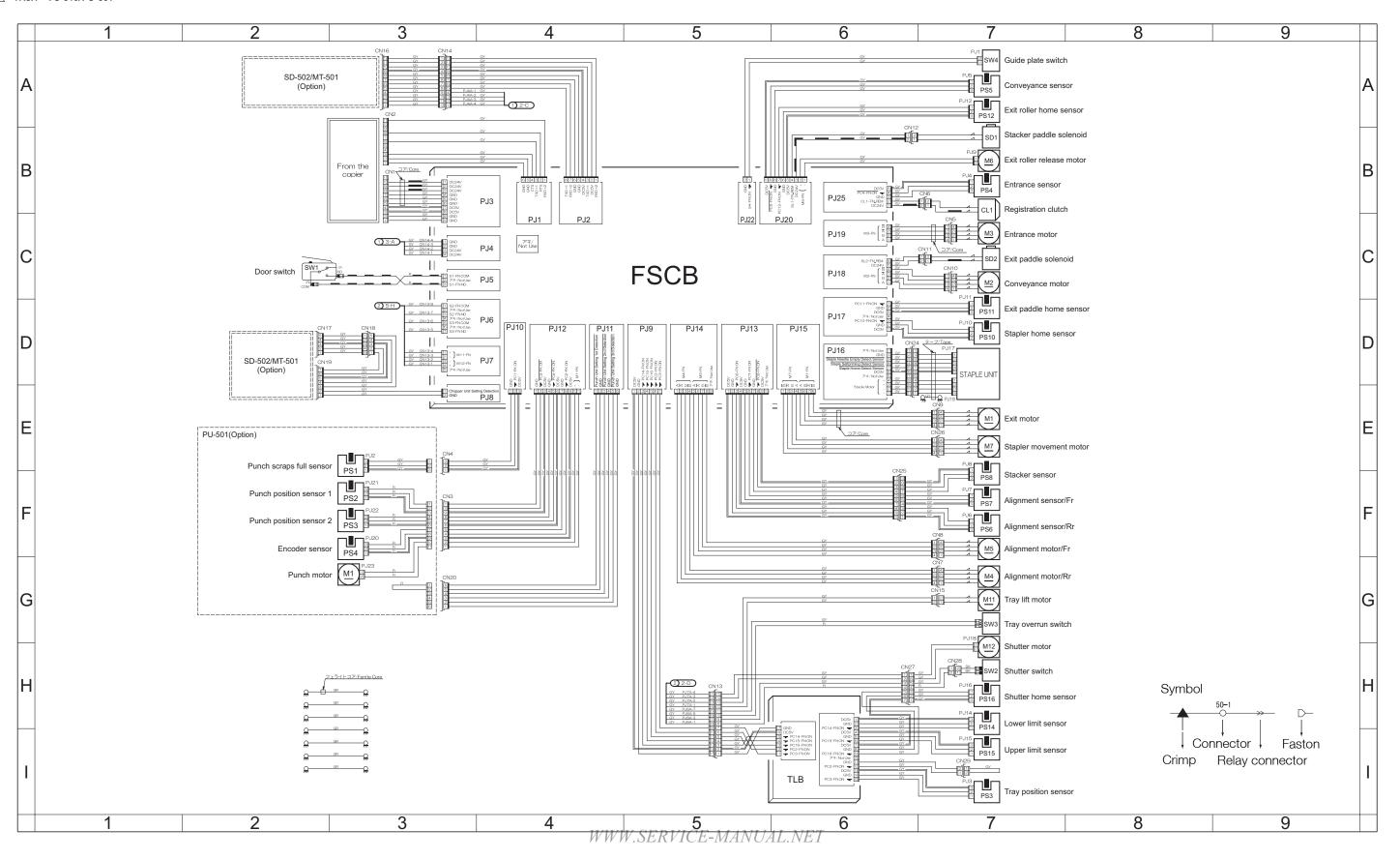
17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
CL151	Feed clutch	7-H
HTR101	Dehumidifier heater	7-A
LUDB	LU drive board	4-A
M150	Feed motor	7-C
M151	Paper lift motor	7-C
MS151	Upper door interlock switch	7-B
PS151	Remaining paper sensor /2	7-G
PS152	Upper limit sensor	7-F
PS153	Paper empty sensor	7-F
PS154	Remaining paper sensor /1	7-G
PS155	LU exit sensor	7-E
PS156	LU set sensor	7-H
SD151	Pick-up solenoid	7-E

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17.8 FS

17.8.1 FS-510/PU-501



FS-510 location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
CL1	Registration clutch	7-B
FSCB	FS control board	3-B
M1	Exit motor	7-E
M2	Conveyance motor	7-C
M3	Entrance motor	7-C
M4	Alignment motor /Rr	7-G
M5	Alignment motor /Fr	7-F
M6	Exit roller release motor	7-B
M7	Stapler movement motor	7-E
M11	Tray lift motor	7-G
M12	Shutter motor	7-G
PS3	Tray position sensor	7-I
PS4	Entrance sensor	7-B
PS5	Conveyance sensor	7-A
PS6	Alignment sensor /Rr	7-F
PS7	Alignment sensor /Fr	7-F
PS8	Stacker sensor	7-E
PS10	Stapler home sensor	7-D
PS11	Exit paddle home sensor	7-C
PS12	Exit roller home sensor	7-A
PS14	Lower limit sensor	7-H
PS15	Upper limit sensor	7-1
PS16	Shutter home sensor	7-H
SD1	Stacker paddle solenoid	7-A
SD2	Exit paddle solenoid	7-C
SW1	Door switch	2-C
SW2	Shutter switch	7-H
SW3	Tray overrun switch	7-G
SW4	Guide plate switch	7-A
TLB	Tray lift board	5-H

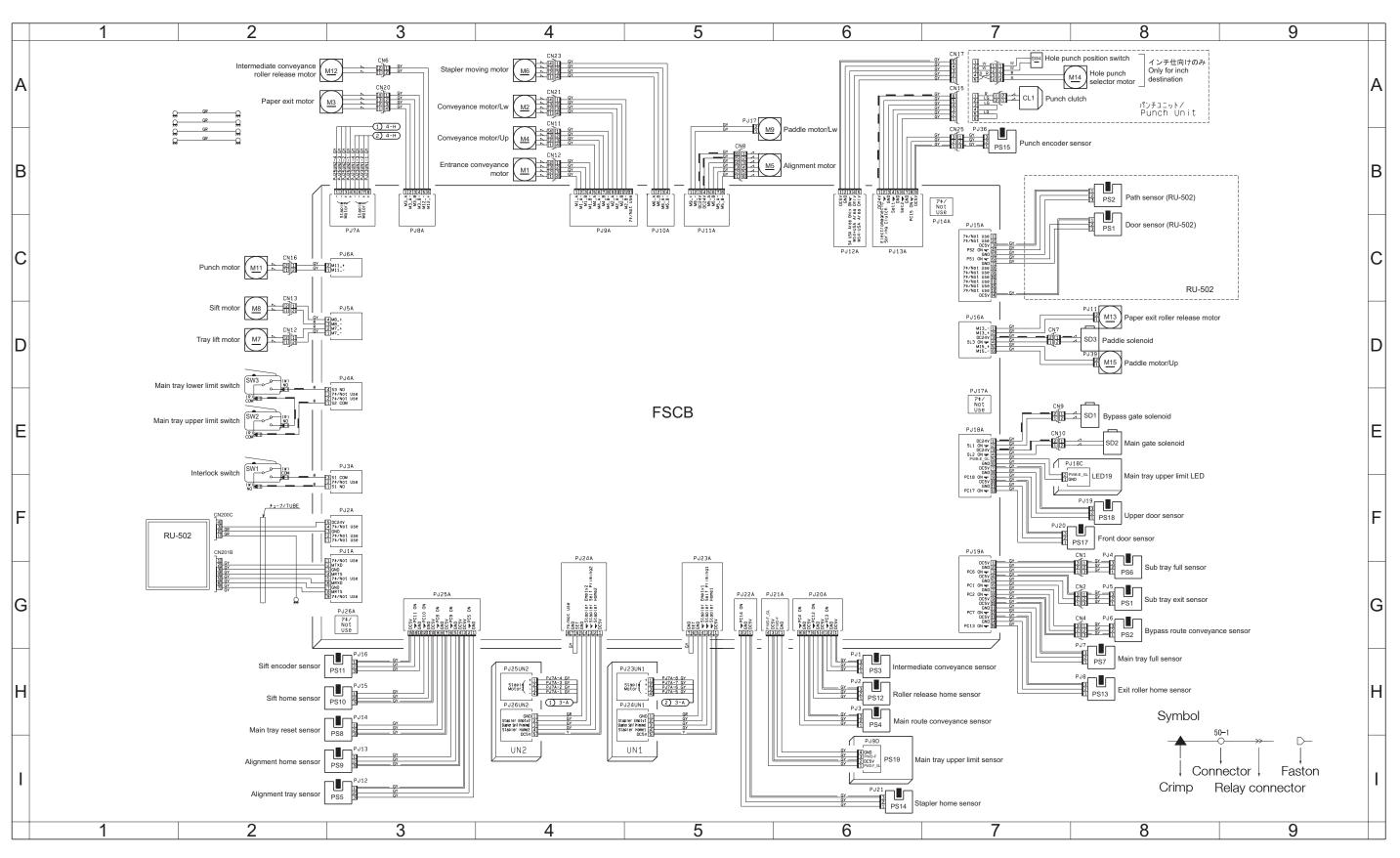
PU-501 location list

Symbol	Part name	Location
M1	Punch motor	3-G
PS1	Punch scraps full sensor	3-E
PS2	Punch position sensor /1	3-F
PS3	Punch position sensor /2	3-F
PS4	Encoder sensor	3-F

Field Service Ver.2.0 Jan. 2007

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17.8.2 FS-511



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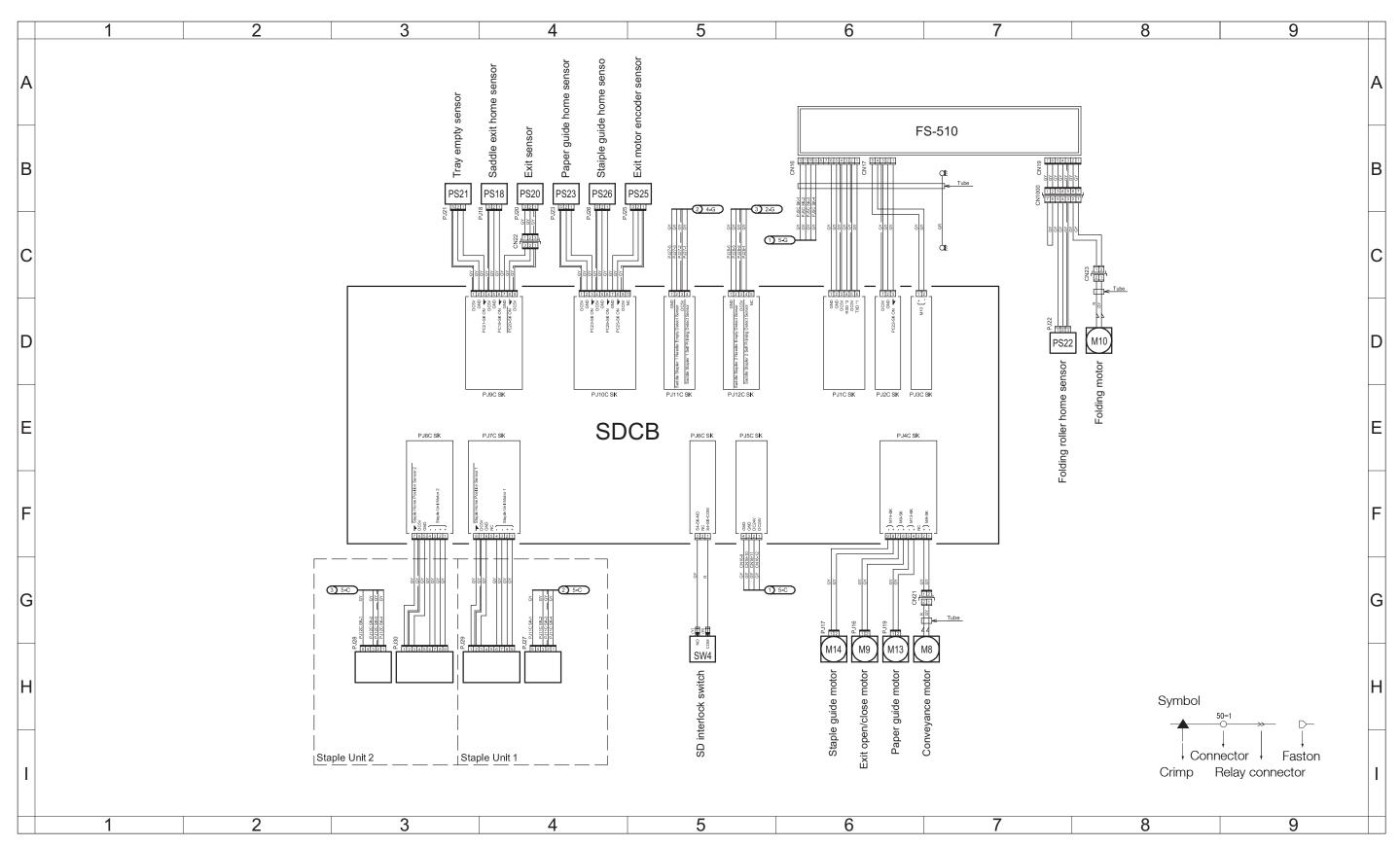
FS-511 location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
CL1	Punch clutch	7-A
FSCB	FS control board	2-B
LED19	Main tray upper limit LED	7-E
M1	Entrance conveyance motor	4-B
M2	Conveyance motor /Lw	4-A
МЗ	Paper exit motor	2-A
M4	Conveyance motor /Up	4-B
M5	Alignment motor	5-B
M6	Stapler moving motor	4-A
M7	Tray lift motor	2-D
M8	Shift motor	2-C
M9	Paddle motor /Lw	5-A
M11	Punch motor	2-C
M12	Intermediate conveyance roller release motor	2-A
M13	Paper exit roller release motor	8-D
M14	Hole punch selector motor (Inch area only)	7-A
M15	Paddle motor /Up	8-D
M16	Stapler motor /Rr	4-H
M17	Stapler motor /Fr	4-H
PS1	Sub tray exit sensor	8-G
PS1	Door sensor (RU-502)	8-B
PS2	Bypass route conveyance sensor	8-G
PS2	Path sensor (RU-502)	8-B
PS3	Intermediate conveyance sensor	6-H
PS4	Main route conveyance sensor	6-H
PS5	Alignment tray sensor	2-I
PS6	Sub tray full sensor	8-F
PS7	Main tray full sensor	8-G
PS8	Main tray reset sensor	2-H
PS9	Alignment home sensor	2-I
PS10	Shift home sensor	2-H
PS11	Shift encoder sensor	2-H
PS12	Roller release home sensor	6-H
PS13	Exit roller home sensor	8-H
PS14	Stapler home sensor	6-1
PS15	Punch encoder sensor	7-B
PS17	Front door sensor	7-F
PS18	Upper door sensor	8-F
PS19	Main tray upper limit sensor	6-1
PS20	Staple empty sensor /Rr	4-H
PS21	Stapler ready sensor /Rr	4-H
PS22	Stapler home sensor /Rr	4-H
PS23	Staple empty sensor /Fr	4-H
PS24	Stapler ready sensor /Fr	4-H
PS25	Stapler home sensor /Fr	4-H
SD1	Bypass gate solenoid	8-E
SD2	Main gate solenoid	8-E
SD3	Paddle solenoid	8-D
SW1	Interlock switch	2-E
SW2		2-E
SW3	Main tray upper limit switch Main tray lower limit switch	
		2-D
SW4	Hole punch position switch (Inch area only)	7-A

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17.9 SD



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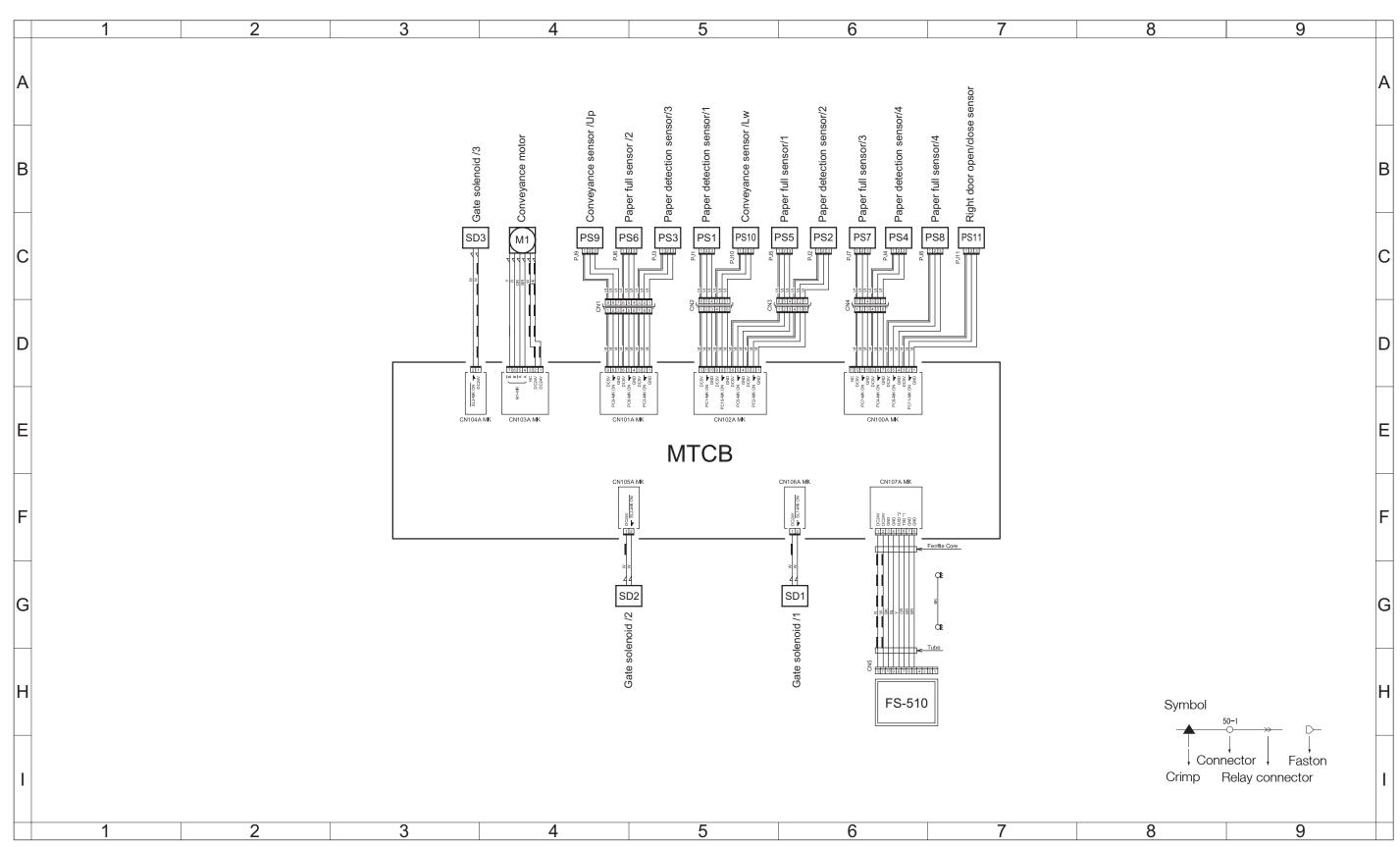
SD-502 location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
M8	Conveyance motor	6-G
M9	Exit open/close motor	6-G
M10	Folding motor	8-D
M13	Paper guide motor	6-G
M14	Staple guide motor	6-G
PS18	Saddle exit home sensor	4-B
PS20	Exit sensor	4-B
PS21	Tray empty sensor	3-B
PS22	Folding roller home sensor	7-D
PS23	Paper guide home sensor	4-B
PS25	Exit motor encoder sensor	4-B
PS26	Staiple guide home sensor	4-B
SDCB	SD control board	3-C
SW4	SD interlock switch	5-G

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17.10 MT



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MT-501 location list

17. OVERALL WIRING DIAGRAM

Symbol	Part name	Location
M1	Conveyance motor	4-C
MTCB	MT control board	3-D
PS1	Paper detection sensor /1	5-C
PS2	Paper detection sensor /2	6-C
PS3	Paper detection sensor /3	5-C
PS4	Paper detection sensor /4	6-C
PS5	Paper full sensor /1	5-C
PS6	Paper full sensor /2	4-C
PS7	Paper full sensor /3	6-C
PS8	Paper full sensor /4	6-C
PS9	Conveyance sensor /Up	4-C
PS10	Conveyance sensor /Lw	5-C
PS11	Right door open/close sensor	7-C
SD1	Gate solenoid /1	6-G
SD2	Gate solenoid /2	4-G
SD3	Gate solenoid /3	3-C

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SERVICE MANUAL

Field Service

DF-607

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Revision history

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

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

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

Revision mark:

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

A number within **\(\hat{\hat{h}} \)** 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.

2007/01	2.0	A	Revision in relation to launching of bizhub 360
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

DF-607

4.1

OUTLINI	E	
1. PRO	DUCT SPECIFICATIONS	1
MAINTE	NANCE	
2. PERI	ODIC CHECK	5
2.1 Mai	intenance procedure	5
2.1.1	Replacing the Pick-up Roller and Feed Roller	
2.1.2	Replacing the Separation Roller	
2.1.3	Cleaning of the Pick-up Roller, Feed Roller and Separation Roller	
2.1.4	Cleaning of Miscellaneous Rollers	8
2.1.5	Cleaning of the Scanning Guide	11
2.1.6	Cleaning of the Reflective Sensor Section	12
3. OTH	ER	13
3.1 Dis	assembly/Adjustment prohibited items	13
	assembling and assembling list	
3.3 Dis	assembling and assembling procedure	14
3.3.1	Cover /Fr, Cover /Rr and Original Feed Tray Cover /Lw	14
3.3.2	DF Control Board (DFCB)	15
3.3.3	Original Size VR (VR1)	15
3.3.4	Complete Stamp Unit 2	17
3.3.5	Replacing the Replace Stamp 2	18
	MENT/CETTING	
ADJU21	MENT/SETTING	

Leading Edge Skew Adjustment19

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■ OUTLINE

1. PRODUCT SPECIFICATIONS

A. Type

Name	Reverse Automatic Document Feeder			
	Paper Feed	Paper Feed from top of stack		
Туре	Turnover	Switch back system		
	Paper Exit	Straight exit system		
Installation	Screw cramp to the main unit			
Document Alignment	Center			
Document Loading	Left image side up			

B. Functions

Modes	1-Sided Mode / 2-Sided Mode
-------	-----------------------------

C. Paper type

	Standard Mode Plain Paper	1-Sided Mode 35 to 128 g/m² (9.25 to 34 lbs)		
		2-Sided Mode 50 to 128 g/m² (13.25 to 34 lbs)		
Type of Document	Mixed Original Detection Mode Plain Paper	1-Sided / 2-Sided Mode 50 to 128 g/m² (13.25 to 34 lbs)		
	FAX Mode Plain Paper	1-Sided Mode 35 to 128 g/m² (9.25 to 34 lbs)		
		2-Sided Mode 50 to 128 g/m² (13.25 to 34 lbs)		
Detectable Document Size*1	Inch area A3, A4S, A4, B4, B5S, B5 11 x 17, 8½ x 14, 8½ x 11S, 8½ x 11, 8½ x 5½S, 8½ x 5½ Metric area A3, A4S, A4, A5S, A5, B4, B5S, B5, B6S 11 x 17, 8½ x 11S, 8½ x 11			
Capacity	80 sheets (80 g/m²) or load height of 11 mm or less.			

^{*1:} For the Combined Original Detection Mode, Refer to the Mixed Original Detection Enabled Size Combination Table.

D. Paper feed prohibited originals

• If fed, trouble occurrence will be highly possible.

Type of Original	Possible Trouble
Original that is stapled or clipped.	Feed failure, damage to the original, or drive failure due to clip clogging
Book original	Feed failure, damage to the original, or drive failure
Original weighing less than 35g/m ² or 128g/m ² or more	Feed failure
Torn original	Feed failure, damaged sheet
Highly curled original (15 mm or more)	Original misfeed due to dog-ear or skew
OHP transparencies	Feed failure
Label Sheet	Feed failure
Offset master	Feed failure
Sheets clipped or notched	Damaged sheet
Sheets patched	Patched part folded or torn sheet

E. Paper feed not guaranteed originals

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

Type of Original	Possible Trouble
Sheets lightly curled (Curled amount: 10 - 15 mm)	Dog-eared, exit failure
Heat Sensitive Paper	Edge folded, exit failure, conveyance failure
Coated Paper (Ink Jet Paper)	Take-up failure, conveyance failure
Translucent paper	Take-up failure, conveyance failure
Paper immediately after paper exit from the main unit	Take-up failure, conveyance failure
Paper with many punched holes (e.g., loose leaf) limited to vertical feeding	Multi-page feed due to flashes from holes
Sheets with 2 to 4 holes	Conveyance failure
Sheets two-folded or Z-folded (amount of non-flatness: 15 mm or less)	Take-up failure, conveyance failure, image deformation
Sheets folded	Image deformation, multi-page feed, take-up failure

F. Mixed original feed chart

For Metric

		Reference original (original with a maximum width)							
		A3	A4	B4S	B5	A4S	A5	B5S	A 5
Other	A3	Δ	0	_	_	_	_	_	_
originals	A4	0	Δ	_	_	_	_	_	_
	B4S	•	•	Δ	0	_	_	_	_
	B5	•	•	0	Δ	_	_	_	_
	A4S	•	•	•	•	Δ	0	_	_
	A 5	•	•	•	•	0	Δ	_	_
	B5S	Х	Х	•	•	•	•	Δ	_
	A5S	Х	Х	X	Х	Х	Х	Х	Δ

^{△:} Same size O: Same group O: Different group X: Mix prohibited —: No need to set

For Inch

			Reference original (original with a maximum width)						
		11 x 17	8½ x 11	8½ x 14	81/2 x 11S	5½ x 8½	51/2 x 81/2 S		
Other	11 x 17	Δ	0	_	_	_	_		
originals	8½ x 11	0	Δ	_	_	_	_		
	8½ x 14	•	•	Δ	0	0	_		
	81/2 x 11S	•	•	0	Δ	0	_		
	51/2 x 81/2	•	•	0	0	Δ	_		
	51/2 x 81/2S	Х	Х	Х	Х	Х	Δ		

^{△:} Same size O: Same group ⊙: Different group X: Mix prohibited —: No need to set

G. Maintenance

Maintenance	Every 250,000 prints
-------------	----------------------

H. Machine data

Power Requirements	24V DC ± 10% (supplied from the main body)	
Max. Power Consumption	48 W or less	
Dimensions	582 (W) x 558 (D) x 145 mm (H)	
Weight	Approx. 10 kg	

I. Operating environment

Temperature	10 to 30°C	
Humidity	10 to 80% RH (with no condensation)	

NOTE

• These specifications are subject to change without notice.

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■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure

NOTE

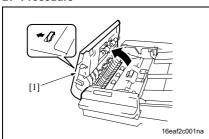
 The alcohol described in the cleaning procedure of Maintenance represents the isopropyl alcohol.

2.1.1 Replacing the Pick-up Roller and Feed Roller

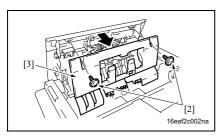
A. Periodically replaced part/cycle

• Pick-up Roller: Every 500,000 prints (Actual replacement cycle: Every 200,000 faces)

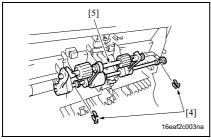
B. Procedure



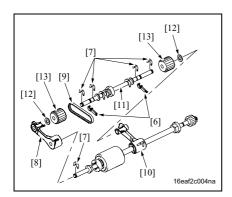
1. Open the Open/Close Cover [1].

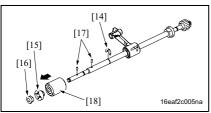


2. Remove two screws [2], and remove the cover [3].



3. Remove two C-clips [4], and remove the Pick-up Roller Assy [5].





- 4. Remove two levers [6].
- 5. Remove five C-rings [7].
- 6. Remove the arm /Fr [8].
- 7. Remove the belt [9].
- Remove the Pick-up Roller Shaft [11] from the Arm /Rr [10].
- Remove the 2 Spacers [12] from the Pick-up Roller Shaft.
- 10. Remove two Pick-up Rollers [13].

NOTE

- Be sure to take note of the direction of the pick-up roller when installing it.
- 11. Remove the C-ring [14], and remove the gear [15] and the bushing [17].
- 12. Remove two pins [16].
- 13. Remove the Feed Roller [18].

NOTE

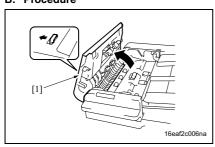
· Use care not to lose the pin.

2.1.2 Replacing the Separation Roller

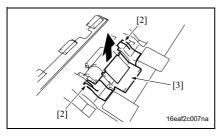
A. Periodically replaced part/cycle

• Separation Roller: Every 500,000 prints (Actual replacement cycle: Every 200,000 faces)

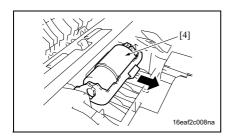
B. Procedure



1. Open the Open/Close Cover [1].

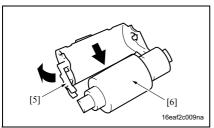


2. Hold the [2] sections in the figure, and remove the cover [3].



3. Remove the Separation Roller Assy [4]. **NOTE**

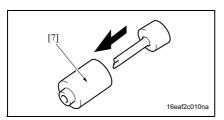
 Use care not to lose the spring at the bottom side of the Separation Roller Assy.



4. While opening up the holder [5], remove the Separation Roller Shaft [6].

NOTE

 Opening the holder too much can break the holder.



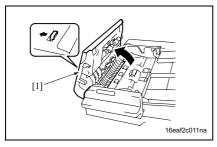
5. Remove the Separation Roller [7] from the Separation Roller Shaft.

2.1.3 Cleaning of the Pick-up Roller, Feed Roller and Separation Roller

A. Periodic cleaning parts/cycle

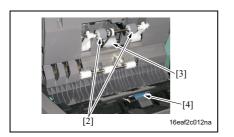
- Pick-up Roller: Every 250,000 prints (Actual replacement cycle: Every 50,000 faces)
- Feed Roller: Every 250,000 prints (Actual replacement cycle: Every 50,000 faces)
- Separation Roller: Every 250,000 prints (Actual replacement cycle: Every 50,000 faces)

B. Procedure



1. Open the Open/Close Cover [1].





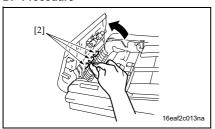
Using a soft cloth dampened with alcohol, wipe the Pick-up Roller [2], Feed Roller [3] and Separation Roller [4].

1.1.4 Cleaning of Miscellaneous Rollers

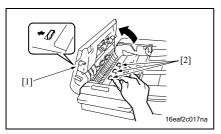
A. Periodic cleaning parts/cycle

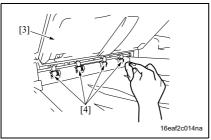
• Miscellaneous Rollers: Every 250,000 prints (Actual replacement cycle: Every 50,000 faces)

B. Procedure



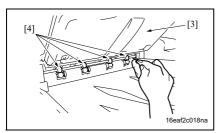
- 1. Open the Open/Close Cover [1].
- 2. Using a soft cloth dampened with alcohol, wipe the roller [2].

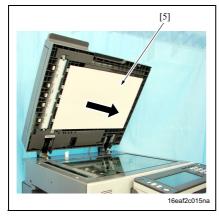




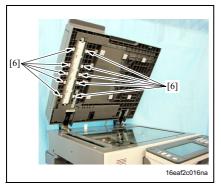
- 3. Lift up the Original Feed Tray [3].
- 4. Using a soft cloth dampened with alcohol, wipe the roller [4].

MAINTENANCE

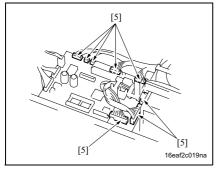




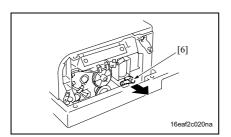
- 5. Open the DF.
- 6. Remove the Platen Guide [5].



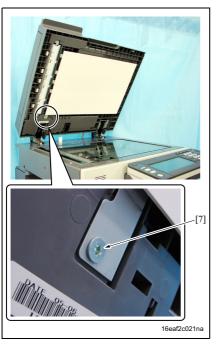
7. Using a soft cloth dampened with alcohol, wipe the roller [6].



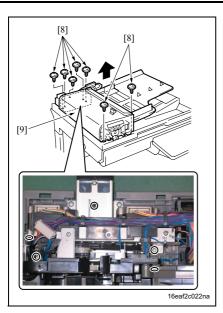
- Remove the Cover /Fr and Cover /Rr. (See P.14)
- Disconnect eight connectors [5] on the DF Control Board (DFCB).



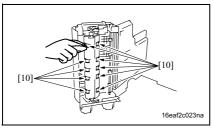
10. Remove the lever [6].



11. Remove the screw [7].



12. Remove seven screws [8], and remove the Paper Feed Unit [9].



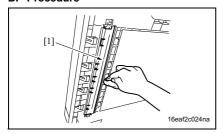
13. Using a soft cloth dampened with alcohol, wipe the roller [10].

2.1.5 Cleaning of the Scanning Guide

A. Periodic cleaning part/cycle

• Scanning Guide: Every 250,000 prints (Actual replacement cycle: Every 50,000 faces)

B. Procedure



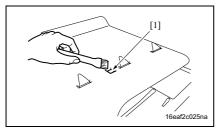
- 1. Open the DF.
- 2. Using a soft cloth dampened with alcohol, wipe the Scanning Guide [1].

2.1.6 Cleaning of the Reflective Sensor Section

A. Periodic cleaning part/cycle

• Reflective Sensor: Every 250,000 prints (Actual replacement cycle: Every 50,000 faces)

B. Procedure



Clean the Original Size Sensor /2 (PS2)
 using a brush or other similar tools.

3. OTHER

3.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards



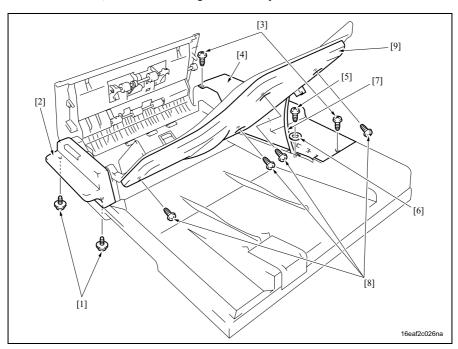
- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembling and assembling list

No.	Section	Part name	Ref.Page
1		Cover /Fr	P.14
2	Cover	Cover /Rr	P.14
4		Original Feed Tray Cover /Lw	P.14
5	Board and etc.	DF Control Board (DFCB)	P.15
6	Board and etc.	Original Size VR (VR1)	P.15
7	Others	Complete Stamp Unit 2	P.17
8	Otileis	Replace Stamp 2	P.18

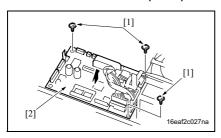
3.3 Disassembling and assembling procedure

3.3.1 Cover /Fr, Cover /Rr and Original Feed Tray Cover /Lw



- 1. Remove two screws [1], and remove the Cover /Fr [2].
- 2. Remove the 2 Screws [3] and raise the Original Feed Tray. Open DF to release the Lock Claws (at 2 places) and then remove the Cover /Rr [4].
- 3. Remove the screw [5] and the washer [6], and remove the stopper [7].
- 4. Lift up the Original Feed Tray.
- 5. Remove four screws [8], and remove the Original Feed Tray Cover /Lw [9].

3.3.2 DF Control Board (DFCB)

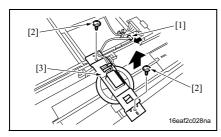


- Turn OFF the Main Power Switch (SW1).
- 2. Remove the Cover /Rr. (See P.14)
- Disconnect all the connectors on the DF Control Board (DFCB).
- 4. Remove three screws [1], and then remove the DFCB [2].

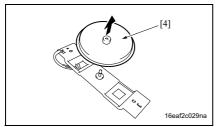
NOTE

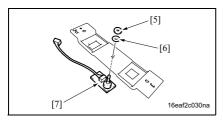
When DFCB is replaced, be sure to conduct the back-up data initialization, the original width detection adjustment and the rewrite of the firmware.

3.3.3 Original Size VR (VR1)

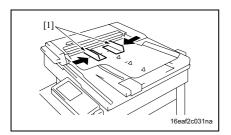


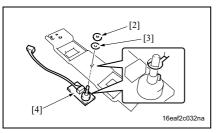
- A. Removal Procedure
- Turn OFF the Main Power Switch (SW1).
- Remove the Original Feed Tray Cover /Lw.
 (See P.14)
- 3. Disconnect the connector [1].
- Remove two screws [2] and the mounting plate [3].
- 5. Remove the gear [4].

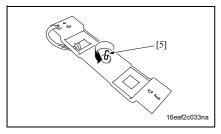


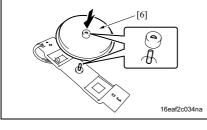


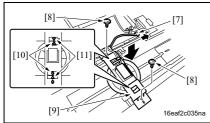
 Remove the nut [5] and the washer [6], and remove the Original Size VR (VR1) [7].











B. Reinstallation Procedure

 Close the Side Edge Stop [1] of the Original Feed Tray.

NOTE

- Be sure to perform document width detection adjustment after replacing the Original Size VR (VR1). (See P.235 "10.8 ADF" in Field Service bizhub 500/420/360 main body.)
- 2. Use the nut [2] and the washer [3] to install the VR1 [4].

NOTE

 Align the protrusion of the VR1 and the cutout of the mounting plate.

Turn the protrusion of the VR1 [5] counterclockwise until it stops.

4. Reinstall the gear [6].

NOTE

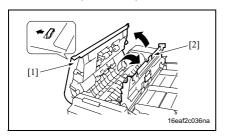
 Note the mounting position of the gear and the VR1.

- 5. Connect the connector [7].
- 6. Use two screws [8] to install the VR1 [9]. **NOTE**
- Install the gear and rack gear by aligning the arrows [10] and [11].
- 7. Install the Original Feed Tray Cover /Lw and turn ON the Main Power Switch (SW1).

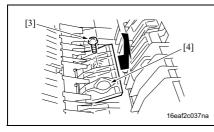
NOTE

When VR1 is replaced, be sure to conduct the back-up data initialization and the original width detection adjustment.

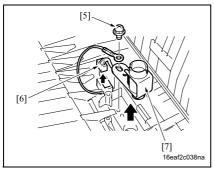
3.3.4 Complete Stamp Unit 2



- 1. Open the Open/Close Cover [1].
- 2. Open the Processing Guide [2].

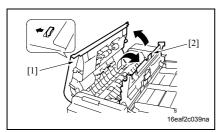


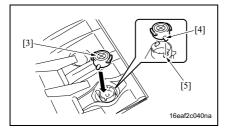
3. Remove the screw [3] and the cover [4].



 Remove the screw [5] and disconnect the connector [6], and remove the Complete Stamp Unit 2 [7].

3.3.5 Replacing the Replace Stamp 2





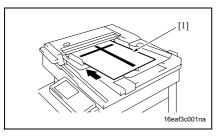
- 1. Open the Open/Close Cover [1].
- 2. Open the Processing Guide [2].

- 3. Remove the stamp.
- 4. Reinstall the new Replace Stamp 2 [3]. **NOTE**
- Align the protrusion [4] of the stamp to the crevice [5] of the holder.
- 5. Close the Processing Guide.
- 6. Close the Open/Close Cover.

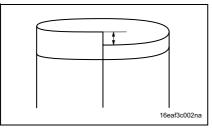
■ ADJUSTMENT/SETTING

4. MECHANICAL ADJUSTMENT

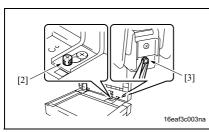
4.1 Leading Edge Skew Adjustment



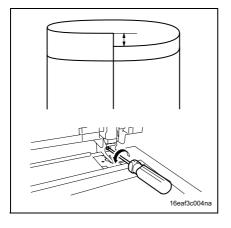
 Load the test chart [1] in the DF and make one 1-sided copy five consecutive times.



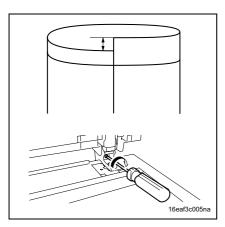
- Fold each of the sample copies as illustrated and check for any deviation.
 Specifications: 0 ± 3.0 mm
- If the deviation does not fall within the specified range, perform the following adjustment procedure.



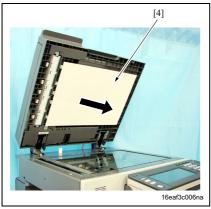
- 4. Open the DF.
- 5. Loosen the decorative screw [2] and the nut [3] in the back to the right.



If there is a deviation as shown on the figure, turn the screw counterclockwise to adjust it. Λ



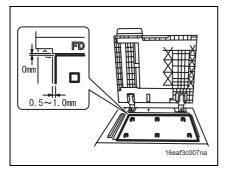
- If there is a deviation as shown on the figure, turn the screw clockwise to adjust it.
- After the adjustment procedure has been completed, tighten the decorative screw and the nut which has been loosened in step 5.



Remove the Platen Guide[4] from the DF.

NOTE

 When removing the Platen Guide, pull apart the hook and loop fastener one by one. Pulling them all at once may damage the sponge.



- 10. With the rear edge of the Platen Guide pressed up against the Original Length Scale, place it on the Original Glass so that its left edge is 0.5 to 1.0 mm away from the Original Width Scale.
- 11. Gently lower the DF.

NOTE

- When lowering the DF, use utmost care to prevent the Platen Guide from deviating from its correct position.
- 12. Gently raise the DF and press the Platen Guide up against the DF by hand so that it is affixed in position.



SERVICE MANUAL

Field Service

PC-202 (bizhub 500/420/360)

Confidential – for internal use only, do not distribute

Revision history

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

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

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

Revision mark:

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

A number within **\(\hat{\hat{h}} \)** 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.

2007/01	2.0	A	Revision in relation to launching of bizhub 360
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

PC-202

\sim	- 17	_		$\overline{}$
()	Ш		IN	-

COIL	
1.	PRODUCT SPECIFICATIONS1
MAIN	TENANCE
2.	PERIODIC CHECK3
2.1	Maintenance procedure3
2.1.	.1 Replacing the Separation Roller Assy3
2.1.	2 Replacing the Feed Roller4
2.1.	.3 Replacing the Pick-up Roller7
3.	OTHER9
3.1	Disassembly/Adjustment prohibited items9
3.2	Disassembling, assembling and cleaning list10
3.2.	.1 Disassembling and assembling list10
3.2.	2 Cleaning list10
3.3	Disassembling and assembling procedure11
3.3.	.1 Right Door/Rear Right Cover/Lower Right Cover/Front Right Cover11
3.3.	.2 Rear Cover
3.4	Cleaning procedure12
3.4.	.1 Separation Roller
3.4.	.2 Feed Roller
3.4.	.3 Pick-up Roller13
3.4.	4 Vertical Conveyance Roller
ADJU	ISTMENT/SETTING
4.	MECHANICAL ADJUSTMENT15
4.1	Mis-centering adjustment of the Trays 3 and 415

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■ OUTLINE

1. PRODUCT SPECIFICATIONS

A. Type

Name	2 way Paper Take-Up Cabinet	
Туре	Front loading type 2 way paper take-up device	
Installation	Desk type	
Document Alignment	Center	

B. Paper type

Paper Type	Plain paper	56 to 90 g/m ²
Paper Size	Metric: A3, B4, A4, A4S, B5, A5S, 11×17 , $8\frac{1}{2} \times 11$, $8\frac{1}{2} \times 11$ S, Foolscap Inch: 11×17 , $8\frac{1}{2} \times 14$, $8\frac{1}{2} \times 11$, $8\frac{1}{2} \times 11$ S, $5\frac{1}{2} \times 8\frac{1}{2}$ S, A3, A4, A4S, Foolscap	
Capacity	Tray 3	500 sheets (80 g/m²)
Сараспу	Tray 4	500 sheets (80 g/m²)

C. Maintenance

|--|

D. Machine specifications

Power Requirements	24V DC ± 10 %, 5V DC ± 5 % (supplied from the main body)
Power Consumption	15 W or less
Dimensions	570 mm (W) × 548 mm (D) × 263 mm (H)
Weight	Approx. 26.0 kg

E. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

NOTE

• The information herein may be subject to change for improvement without notice.

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■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure

2.1.1 Replacing the Separation Roller Assy

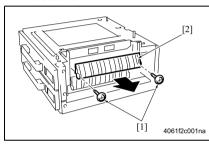
A. Periodically replaced part/cycle

Separation Roller Assy: Every 750,000 prints (Actual replacement cycle: Every 300,000 prints)

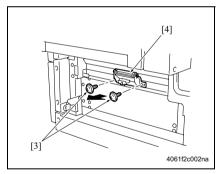
NOTE

· Replace the Separation Roller Assy, Feed Roller and Pick-up Roller at the same time.

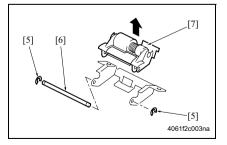
B. Procedure



- Remove the Right Door. (See P.11)
- 2. Remove two screws [1] and remove the Jam Access Cover [2].



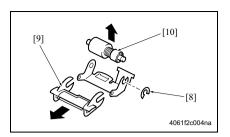
 Remove two screws [3] and remove the Separation Roller Mounting Plate Assy [4].



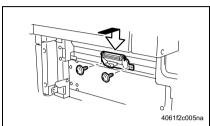
 Remove two C-rings [5] and the shaft [6], and remove the Separation Roller Fixing Plate Assy [7].

NOTE

Be careful not to lose spring at this time.



- Remove the C-ring [8], the Guide [9], and remove the Separation Roller Assy [10].
- 6. Repeat steps 1 to 5 similarly for the Trav 4.



NOTE

 When installing the Separation Roller Mounting Plate Assy, be sure to fix the holder with screws while holding it down.

2.1.2 Replacing the Feed Roller

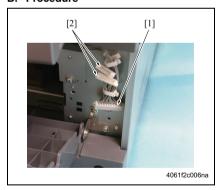
A. Periodically replaced part/cycle

• Feed Roller: Every 750,000 prints (Actual replacement cycle: Every 300,000 prints)

NOTE

• Replace the Separation Roller Assy, Feed Roller and Pick-up Roller at the same time.

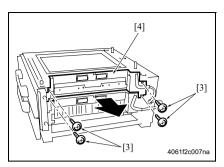
B. Procedure



- Remove the Rear Right Cover. (Remove the Right Lower Cover for Tray 4.) (See P.11)
- 2. Remove the Tray.
- Remove the Separation Roller Mounting Plate Assy. (See P.3)
- Disconnect the connector [1] (Tray 3), two connectors [2] (Tray 4) and remove the harness from two wire saddles.

NOTE

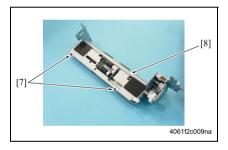
 Be careful not to confuse the connector of the Tray 3 with the connectors of the Tray 4.



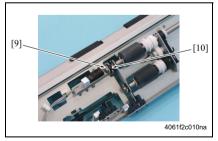
5. Remove four screws [3] and remove the Paper Feed Unit [4].



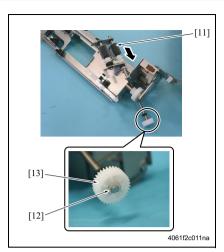
 Remove two screws [5] and remove the Mounting Frame [6] for the Separation Roller Mounting Plate Assy.



7. Remove two screws [7] and remove the Feed Roller Cover [8].



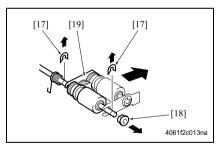
8. Remove the C-ring [9] and remove the bearing [10].



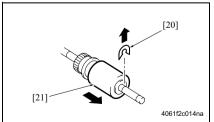
 Shift the Shaft Assy [11] in the orientation as shown on the left, and remove the C-ring [12] and the gear [13].



10. Remove the C-ring [14], the bearing [15], and remove the shaft Assy [16].



 Remove two C-rings [17] and the bearing [18], and remove the Pick-up Roller Fixing Plate Assy [19].



- 12. Remove the C-ring [20] and remove the Feed Roller [21].
- 13. Repeat steps 1 to 12 similarly for the Tray 4.

PC-202

2.1.3 Replacing the Pick-up Roller

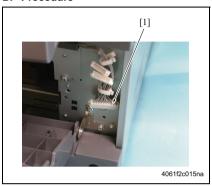
A. Periodically replaced part/cycle

• Pick-up Roller: Every 750,000 prints (Actual replacement cycle: Every 300,000 prints)

NOTE

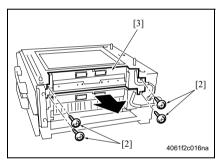
Replace the Separation Roller Assy, Feed Roller and Pick-up Roller at the same time.

B. Procedure

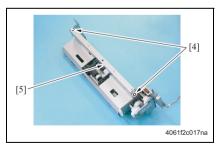


 Remove the Rear Right Cover. (Remove the Right Lower Cover for Tray 4.) (See P.11)

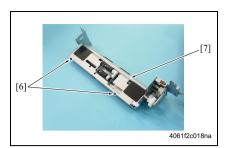
- 2. Remove the Tray.
- Remove the Separation Roller Mounting Plate Assy. (See P.3)
- Disconnect the connector [1] and remove the harness from two wire saddles.



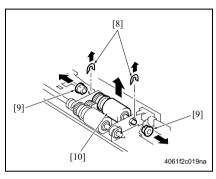
5. Remove four screws [2] and remove the Paper Feed Unit [3].



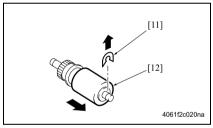
 Remove two screws [4] and remove the Separation Roller Mounting Plate Assy
 [5] together with frame.



7. Remove two screws [6] and remove the Feed Roller Cover [7].



 Remove two C-rings [8], two bearings [9], and remove the Pick-up Roller Assy [10].



- 9. Remove the C-ring [11] and remove the Pick-up Roller [12].
- 10. Repeat steps 1 to 9 similarly for the tray 4.

3. OTHER

3.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" 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.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembling, assembling and cleaning list

3.2.1 Disassembling and assembling list

No	Section	Part name	Ref. page
1		Right Door	See P.11
2		Rear Right Cover	See P.11
3	Covers	Lower Right Cover	See P.11
4		Front Right Cover	See P.11
5		Rear Cover	See P.11

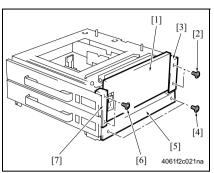
3.2.2 Cleaning list

No	Section	Part name	Ref. page
1	Paper feed section	Separation Roller	See P.12
2		Feed Roller	See P.13
3		Pick-up Roller	See P.13
4		Vertical Conveyance Roller	See P.13

PC-202

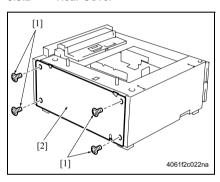
3.3 Disassembling and assembling procedure

3.3.1 Right Door/Rear Right Cover/Lower Right Cover/Front Right Cover



- 1. Open the Right Door [1].
- 2. Remove the Right Door [1].
- 3. Remove two screws [2] and remove the Rear Right Cover [3].
- Remove two screws [4] and remove the Lower Right Cover [5].
- 5. Remove two screws [6] and remove the Front Right Cover [7].

3.3.2 Rear Cover



1. Remove four screws [1] and remove the Rear Cover [2].

3.4 Cleaning procedure

NOTE

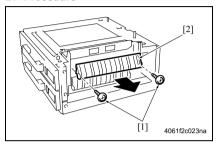
• The alcohol described in the cleaning procedure represents the isopropyl alcohol.

3.4.1 Separation Roller

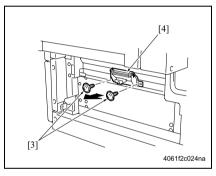
A. Periodically cleaning cycle

· Separation Roller: Every 250,000 prints

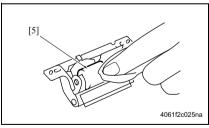
B. Procedure



- Remove the Right Door. (See P.11)
- 2. Remove two screws [1] and remove the Jam Access Cover [2].



 Remove two screws [3] and remove the Paper Separation Roller Mounting Plate Assy [4].



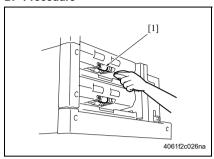
- 4. Using a soft cloth dampened with alcohol, wipe the Separation Roller [5].
- Repeat steps 1 to 4 similarly for the Tray 4.

3.4.2 Feed Roller

A. Periodically cleaning cycle

· Feed Roller: Every 250,000 prints

B. Procedure



- 1. Remove the Tray 3.
- Remove the Separation Roller Mounting Plate Assy.

(See P.12)

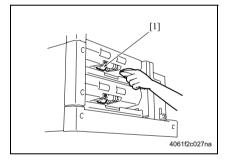
- Using a soft cloth dampened with alcohol, wipe the Feed Roller [1] clean of dirt.
- Repeat steps 1 to 3 similarly for the Tray 4.

3.4.3 Pick-up Roller

A. Periodically cleaning cycle

• Pick-up Roller: Every 250,000 prints

B. Procedure



- 1. Remove the Tray 3.
- 2. Remove the Separation Roller Mounting Plate Assy.

(See P.12)

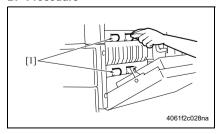
- Using a soft cloth dampened with alcohol, wipe the Pick-up Roller [1].
- 4. Repeat steps 1 to 3 similarly for the Tray 4.

3.4.4 Vertical Conveyance Roller

A. Periodically cleaning cycle

• Vertical Conveyance Roller: Every 250,000 prints

B. Procedure



- 1. Open the Right Door.
- Using a soft cloth dampened with alcohol, wipe the Vertical Conveyance Roller [1].

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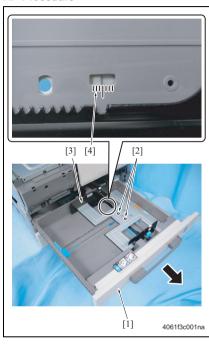
■ ADJUSTMENT/SETTING

4. MECHANICAL ADJUSTMENT

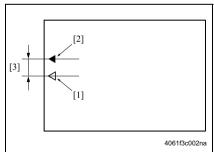
4.1 Mis-centering adjustment of the Trays 3 and 4

Conduct this adjustment when a mis-centering occurs that cannot be adjusted in the service mode.

A. Procedure



- 1. Pull out the Tray [1].
- If there remains any paper, remove it thoroughly.
- 3. Loosen the 2 screws [2].
- Move the Paper Guide [3] and adjust the center position with the marking-off [4] as a guide.
- 5. Tighten the 2 screws [2].



- 6. Set the Tray with paper put it in.
- Conduct the copy/print operation and check to see if the mis-centering between the center [1] of the paper and the center [2] of the copied image is within a standard value (± 3 mm or less [3]).
- When the value is not within the standard value, repeat steps 1 to 7 until the standard value can be obtained.

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SERVICE MANUAL

Field Service

PC-402 (bizhub 500/420/360)

Confidential – for internal use only, do not distribute

Revision history

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

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

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

Revision mark:

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

A number within **\(\hat{\hat{h}} \)** 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.

2007/01	2.0	A	Revision in relation to launching of bizhub 360
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

PC-402

_	 		_
\sim	 ГІ	INI	_
	 	11/1	_

'	
ODUCT SPECIFICATION	1
ENANCE	
RIODIC CHECK	3
aintenance procedure	3
Replacing the Separation Roller Assy	3
Replacing the Feed Roller	2
Replacing the Pick-up Roller	7
HER	9
sassembly/Adjustment prohibited items	9
sassembling, assembling and cleaning list	10
Disassembling and assembling list	10
Cleaning list	10
sassembling and assembling procedure	11
Right Door/Rear Right Cover/Lower Right Cover/Front Right Cover	11
Rear Cover	11
Tray	12
Wire	13
eaning procedure	16
Separation Roller	16
Feed Roller	16
Pick-up Roller	17
Vertical Conveyance Roller	17
TMENT/SETTING	
CHANICAL ADJUSTMENT	19
nifter Movement Timing Belt Adjustment	21
	ENANCE RIODIC CHECK aintenance procedure Replacing the Separation Roller Assy Replacing the Feed Roller Replacing the Pick-up Roller HER sassembly/Adjustment prohibited items sassembling, assembling and cleaning list Disassembling and assembling list Cleaning list sassembling and assembling procedure Right Door/Rear Right Cover/Lower Right Cover/Front Right Cover Tray Wire eaning procedure Separation Roller Feed Roller Pick-up Roller Vertical Conveyance Roller TMENT/SETTING CHANICAL ADJUSTMENT is-centering adjustment infter Movement Timing Belt Adjustment infter Movement Timing Belt Adjustment

ETTING MAIN

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OUTLINE

1. PRODUCT SPECIFICATION

A. Type

Name	2500 sheets paper feed cabinet
Туре	Front loading type LCC
Installation	Desk type
Document Alignment	Center

B. Paper type

Paper Type	Plain paper	56 to 90 g/m ²
Paper Size	Metric: A4 Inch: 8½ × 11	
Capacity	2500 sheets (80 g/m²)	

C. Maintenance

Maintenance Every 250,000 prints

D. Machine specifications

Power Requirements	24V DC \pm 10 %, 5V DC \pm 5 % (supplied from the main body)	
Power Consumption	45 W or less	
Dimensions	570 mm (W) × 548 mm (D) × 263 mm (H)	
Weight	Approx. 26.0 kg	

E. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

NOTE

• The information herein may be subject to change for improvement without notice.

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■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure

2.1.1 Replacing the Separation Roller Assy

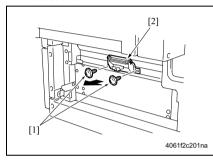
A. Periodically replaced part/cycle

Separation Roller Assy: Every 750,000 prints (Actual replacement cycle: Every 300,000 prints)

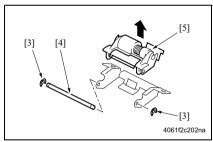
NOTE

· Replace the Separation Roller Assy, Feed Roller and Pick-up Roller at the same time.

B. Procedure



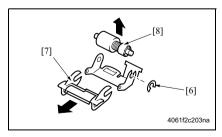
- Remove the Right Door. (See P.11)
- Remove two screws [1] and remove the Separation Roller Mounting Plate Assy [2].



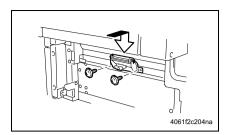
 Remove two C-rings [3] and the shaft [4], and remove the Separation Roller Fixing Plate Assy [5].

NOTE

Be careful not to lose spring at this time.



 Remove the C-ring [6], the Guide [7], and remove the Separation Roller Assy [8].



NOTE

 When installing the Separation Roller Mounting Plate Assy, be sure to fix the holder with screws while holding it down.

2.1.2 Replacing the Feed Roller

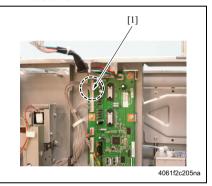
A. Periodically replaced part/cycle

• Feed Roller: Every 750,000 prints (Actual replacement cycle: Every 300,000 prints)

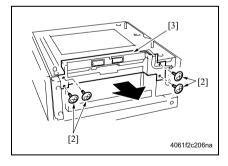
NOTE

· Replace the Separation Roller Assy, Feed Roller and Pick-up Roller at the same time.

B. Procedure



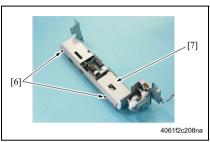
- Remove the Rear Cover and the Rear Right Cover.
 - (See P.11)
- 2. Remove the Tray.
- Remove the Separation Roller Mounting Plate Assy.
 - (See P.3)
- Disconnect the connector [1] from the PC Control Board (PCCB).



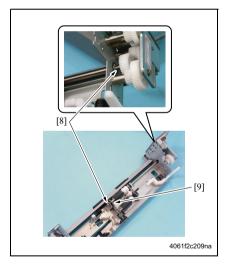
Remove four screws [2] and remove the Paper Feed Unit [3].



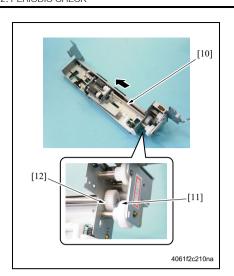
 Remove two screws [4] and remove the Mounting Frame [5] for the Separation Roller Mounting Plate Assy.



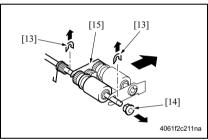
7. Remove two screws [6] and remove the Feed Roller Cover [7].



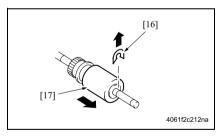
8. Remove two C-rings [8] and remove the bearing [9].



- Shift the Shaft Assy [10] in the orientation as shown on the left, and remove the C-ring [11] and the gear [12].
- 10. Remove the Shaft Assy [10].



 Remove two C-rings [13] and the bearing [14], and remove the Pick-up Roller Fixing Plate Assy [15].



12. Remove the C-ring [16] and remove the Feed Roller [17].

2.1.3 Replacing the Pick-up Roller

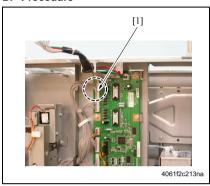
A. Periodic replaced part/cycle

• Pick-up Roller: Every 750,000 prints (Actual replacement cycle: Every 300,000 prints)

NOTE

· Replace the Separation Roller Assy, Feed Roller and Pick-up Roller at the same time.

B. Procedure



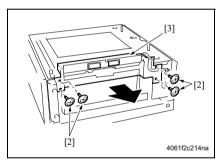
 Remove the Rear Cover and the Rear Right Cover.

(See P.11)

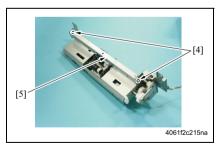
- 2. Remove the Tray.
- Remove the Separation Roller Mounting Plate Assy.

(See P.3)

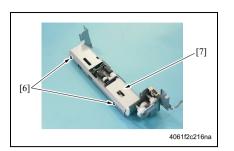
Disconnect the connector [1] from the PC Control Board (PCCB).



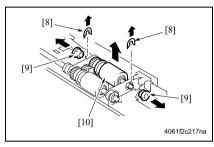
5. Remove four screws [2] and the Paper Feed Unit [3].



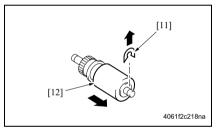
 Remove two screws [4] and remove the Separation Roller Mounting Plate Assy
 [5] together with frame.



7. Remove two screws [6] and remove the Paper Feed Roller Cover [7].



8. Remove two C-rings [8], two bearings [9], and the Pick-up Roller Assy [10].



Remove the C-ring [11] and remove the Pick-up Roller [12].

OTHER

3.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards

⚠ CAUTION

- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" 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.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembling, assembling and cleaning list

3.2.1 Disassembling and assembling list

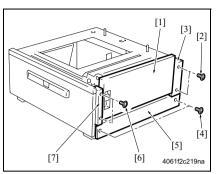
No	Section	Part name	Ref. page
1		Right Door	P.11
2		Rear Right Cover	P.11
3	Cover	Lower Right Cover	P.11
4		Front Right Cover	P.11
5		Rear Cover	P.11
6	- Tray section	Tray	P.12
7		Wire	P.13

3.2.2 Cleaning list

No	Section	Part name	Ref. page
1	Paper feed section	Separation Roller	P.16
2		Feed Roller	P.16
3		Pick-up Roller	P.17
4		Vertical Conveyance Roller	P.17

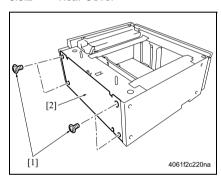
3.3 Disassembling and assembling procedure

3.3.1 Right Door/Rear Right Cover/Lower Right Cover/Front Right Cover



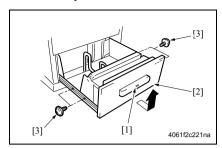
- 1. Open the Right Door [1].
- 2. Remove the Right Door [1].
- 3. Remove two screws [2] and remove the Rear Right Cover [3].
- 4. Remove two screws [4] and remove the Lower Right Cover [5].
- 5. Remove two screws [6] and remove the Front Right Cover [7].

3.3.2 Rear Cover

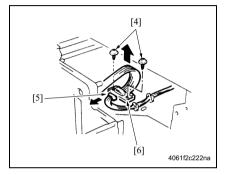


1. Remove four screws [1] and remove the Rear Cover [2].

3.3.3 Tray



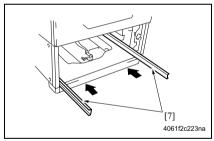
- 1. Press the Tray Release Key [1] and slide out the Tray [2].
- 2. Remove the paper.
- 3. Remove four screws [3] and slide out the Tray [2].



- Remove two screws [4], the connector [5], and remove the Relay Board (RLB) [6].
- 5. Remove the Tray.

NOTE

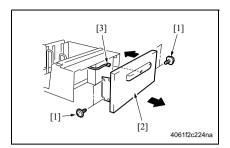
 When removing the RLB, take care not to drop the Tray from the guide rail.



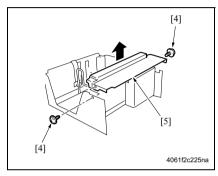
⚠ CAUTION

To prevent injuries, press the guide rail [7] inside the machine.

3.3.4 Wire



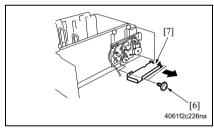
- Remove the Tray.
 (See P.12)
 Remove four screws [1] and remove the
- Remove four screws [1] and remove the Front Cover Assy [2].
 Unplug the connector [3].



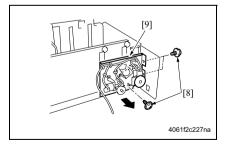
4. Remove two screws [4] and the Inner Cover Assy [5].

NOTE

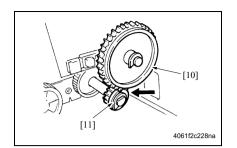
Do not peel off pulley protective mylar sheet.



5. Remove two screws [6] and remove the Driver Cover [7].

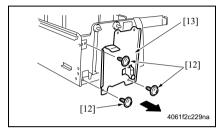


6. Remove three screws [8] and remove the Driver Mounting Plate Assy [9].

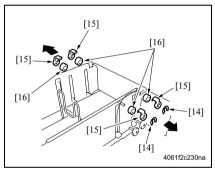


NOTE

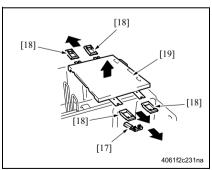
 When assembling, be sure to engage rib of gear 1 [10] with concave section of gear 2 [11].



7. Remove three screws [12] and remove the Reinforcement Plate Assy [13].



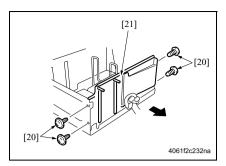
- 8. Remove two C-clips [14].
- 9. Remove four Pulley Covers [15].
- 10. Unhook four pulleys [16].



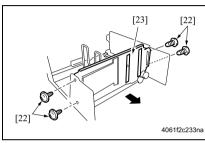
- 11. Remove the Ground Plate [17].
- 12. Remove four Cable Holders [18] and remove the Main Tray [19].

NOTE

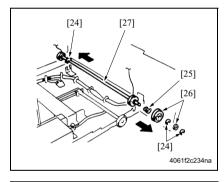
· Take care not to bend the wires.



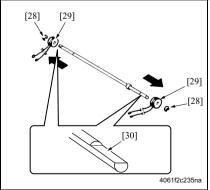
13. Remove four screws [20] and remove the Side Guide Assy /Rr [21].



14. Remove four screws [22] and remove the Side Guide Assy /Fr [23].



- 15. Remove three C-rings [24], the bearing [25], and two gears [26].
- 16. Remove the Wire Pulley Assy [27].



17. Remove two C-rings [28] and the Wire Pulley [29].

NOTE

- · Take care not to lose fixing pins.
- When reinstalling the Wire Pulley, check that the direction of the wire coming from both wire pulleys are the same.
- Install so that cut parts [30] at both ends of shaft face up.

3.4 Cleaning procedure

NOTE

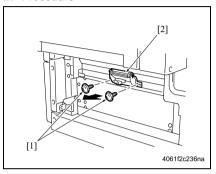
The alcohol described in the cleaning procedure represents the isopropyl alcohol.

3.4.1 Separation Roller

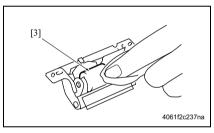
A. Periodic cleaning cycle

· Separation Roller: Every 250,000 prints

B. Procedure



- Remove the Right Door. (See P.11)
- Remove two screws [1] and remove the Paper Separation Roller Mounting Plate Assy [2].



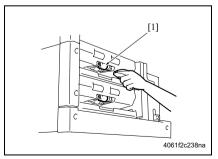
3. Using a soft cloth dampened with alcohol, wipe the Separation Roller [3].

3.4.2 Feed Roller

A. Periodic cleaning cycle

• Feed Roller: Every 250,000 prints

B. Procedure



- 1. Remove the Tray.
- 2. Remove the Separation Roller Mounting Plate Assy.

(See P.16)

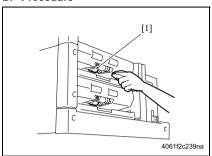
Using a soft cloth dampened with alcohol, wipe the Feed Roller [1].

3.4.3 Pick-up Roller

A. Periodic cleaning cycle

• Pick-Up Roller: Every 250,000 prints

B. Procedure



- 1. Remove the Tray.
- 2. Remove the Separation Roller Mounting Plate Assy.

(See P.16)

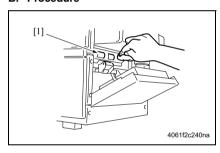
3. Using a soft cloth dampened with alcohol, wipe the Pick-up Roller [1].

3.4.4 **Vertical Conveyance Roller**

A. Periodic cleaning cycle

Vertical Conveyance Roller: Every 250,000 prints

B. Procedure



- 1. Open the Right Door.
- 2. Using a soft cloth dampened with alcohol, wipe the Vertical Conveyance Roller [1].

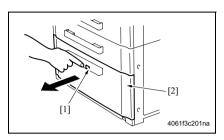
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■ ADJUSTMENT/SETTING

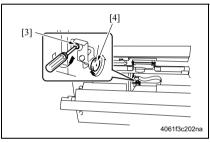
4. MECHANICAL ADJUSTMENT

4.1 Mis-centering adjustment

Conduct this adjustment when a mis-centering occurs that cannot be adjusted in the service mode.



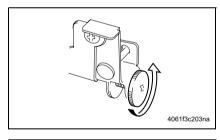
1. Press the Tray Release Key [1] and slide out the Tray [2].



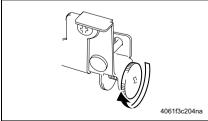
- 2. Open the Right Door.
- 3. Loosen the adjustment screw [3] and turn screw D [4].

NOTE

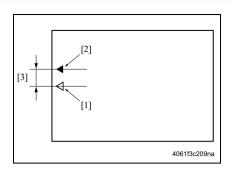
 Do not damage the passage surface of the Right Door.



 When moving the center of the paper to the rear side, rotate the screw D counterclockwise.

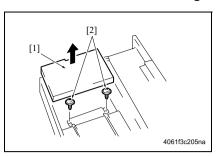


 When moving the center of the paper to the front side, rotate the screw D clockwise.



- 4. Close the Right Door and set the Tray.
- Conduct the copy/print operation and check to see if the mis-centering between the center [1] of the paper and the center [2] of the copied image is within a standard value (± 3 mm or less [3]).
- When the value is not within the standard value, repeat steps 1 to 5 until the standard value can be obtained.
- 7. Slide out the Tray and tighten the adjustment screw.

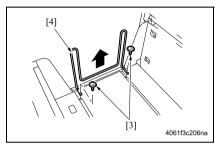
4.2 Shifter Movement Timing Belt Adjustment



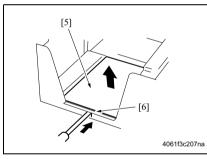
- 1. Slide out the Tray and remove it.
- 2. Lift the Main Tray [1], and remove two screws [2] fixing the Shift Tray.

NOTE

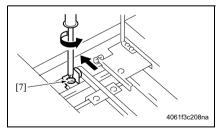
 When reinstalling, take care not to unfasten the wire of the Main Tray.



3. Remove two screws [3] and remove the Shifter [4].



- 4. Push the tab [6] of the Shift Tray [5] as shown on the left and release the lock.
- 5. Remove the Sub Tray [5].



- Loosen the screw [7] as shown to the left and move it in the direction of the arrow.
- 7. After moving the Shifter, tighten the screw [7].

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SERVICE MANUAL

Field Service

LU-201

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Revision history

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

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

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

Revision mark:

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

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

NOTE

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

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

2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

LU-201

ADJUSTMENT/SETTING

CONTENTS

LU-201

OUTLINE
1. PRODUCT SPECIFICATION
MAINTENANCE
2. PERIODIC CHECK
2.1 Maintenance procedure of the paper feed section
2.1.1 Replacing the pick-up rubber and the feed rubber
2.1.2 Replacing the separation roller
3. OTHERS
3.1 Disassembling and assembling list
3.2 Disassembling and assembling procedure
3.2.1 Removal and reinstallation of the right cover, the front cover and the rear cover
3.2.2 Replacing the wires
ADJUSTMENT/SETTING
4. MECHANICAL ADJUSTMENT
4.1 Adjusting the tilt of the lift plate

ADJUSTMENT/SETTING

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■ OUTLINE

1. PRODUCT SPECIFICATION

A. Type

Туре	Side mount type large volume paper feed tray
------	--

B. Functions

Maximum tray capacity	2,000 sheets (80 g/m ²)

C. Type of paper

Paper type *1	Plain paper, recycled paper, high quality paper of 60 to 105 g/m ²
Paper size	A4, 81/2 x 11

*1 Recommended paper

Plain paper Inch: Hammermill Tidal MP (20 lbs)

Metric: Konica Profi (80 g/m²), Konica Minolta Original (80 g/m²)

Recycled paper Inch: Weyehaeuser Recycled Laser Copy (20 lbs)

Metric: Nautilus (80 g/m²)

D. Maintenance

E. Machine data

Power source	24/5V DC (supplied from the main body)
Power consumption	30 W or less (internal heater is not used)
Dimensions	424 (W) x 515 (D) x 295 (H) mm
Weight	Approx. 16 kg

F. Operating environment

Temperature	Same as the main body
Humidity	Same as the main body

Note

. The information herein may be subject to change for improvement without notice.

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■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure of the paper feed section

⚠ Caution

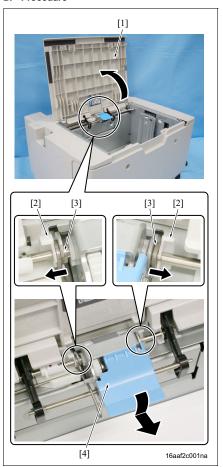
 When connected to the main body, make sure that the power cord of the main body is unplugged from the power outlet.

2.1.1 Replacing the pick-up rubber and the feed rubber

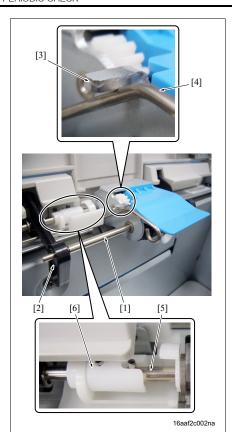
A. Periodically replaced parts/cycle

- Pick-up rubber: Every 500,000 prints (Actual replacement cycle: Every 200,000 prints)
- Feed rubber: Every 500,000 prints (Actual replacement cycle: Every 200,000 prints)

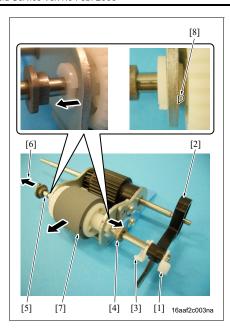
B. Procedure



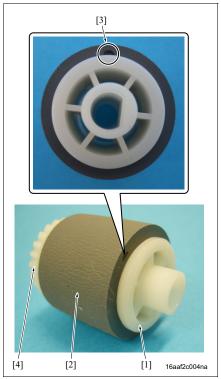
- 1. Open the upper door [1].
- Remove the C-clips [2], 1 each, and release the 2 bearings [3].
- 3. Remove the paper feed roller unit [4].



- When installing the paper feed roller unit, be sure to insert the shaft [1] into the ring of the actuator [2].
- When installing the paper feed roller unit, be sure to install it so that the hook [3] comes above the lift-up shaft [4].
- When installing the paper feed roller unit, be sure to insert the shaft [5] securely into the coupling [6].

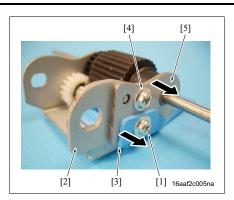


- 4. Remove the C-clip [1] and then remove the actuator [2].
- Remove the C-clip [3] and then remove the bearing [4].
- 6. Pull out the shaft [5] in the arrow-marked direction[6] and remove the feed roller [7].

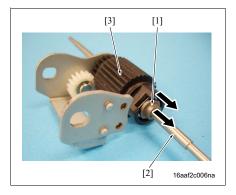


Remove the feed rubber [2] from the paper feed roller [1].

- Be sure to install the feed rubber [2] so that the paint mark [3] comes in the opposite direction of the gear [4].
- When setting the feed rubber, apply alcohol on the inside of the feed rubber. By doing so, the feed rubber can be set more easily.



- 8. Remove the screw [1] and then remove the handle [3] from the roller mounting plate [2].
- Remove the screw [4] and then remove the bearing holder [5] from the roller mounting plate [2].



10. Remove the bearing [1] and then remove the pickup roller [3] from the shaft [2].



11. Remove the pick-up rubber [2] from the pick-up roller [1].

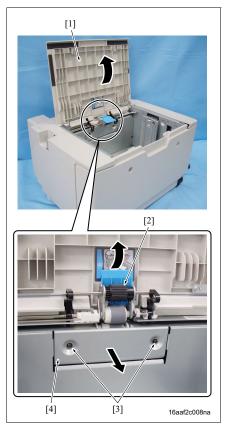
- When setting the pick-up rubber, apply alcohol on the inside of the pick-up rubber. By doing so, the pick-up rubber can be set more easily.
- 12. Reinstall the above parts following the removal steps in reverse.

2.1.2 Replacing the separation roller

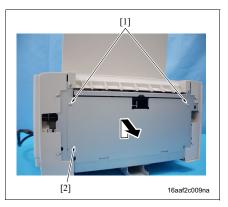
A. Periodically replaced part/cycle

Separation rubber: Every 500,000 prints (Actual replacement cycle: Every 200,000 prints)

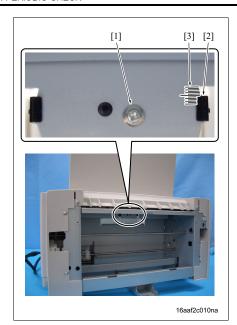
B. Procedure



- 1. Pull out LU from the main body.
- 2. Open the upper door [1].
- 3. Lift up the paper feed roller unit [2].
- 4. Remove the 2 screws [3] and then remove the guide plate [4].



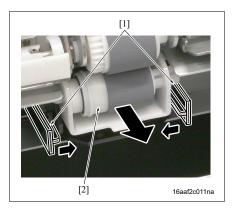
5. Remove the 2 screws [1] and then remove the left cover [2].



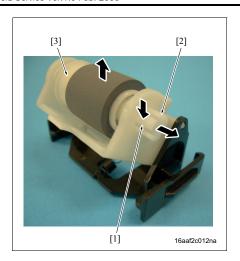
6. Remove the screw [1].

Note

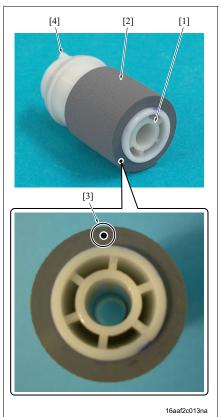
 When installing the separation roller assy, be sure to set the upper section of the claw [2] at the center of the marking-off [3] of the plate.
 In this way, the separation roller assy can be horizontally positioned.



7. Release the lock lever [1] and remove the separation roller assy [2].



8. Pull out the shaft [2] while pressing the lever [1] and remove the separation roller [3].



Remove the separation rubber [2] from the separation roller [1].

- Be sure to install the separation rubber [2] so that the paint mark [3] comes in the opposite direction of the projection [4].
- When setting the separation rubber, apply alcohol on the inside of the separation rubber.
 By doing so, the separation rubber can be set more easily.
- 10. Reinstall the above parts following the removal steps in reverse.

3. OTHERS

3.1 Disassembling and assembling list

- This list shows the explanation of the disassembly and reassembly of the parts which are considered necessary to replace (other than periodically replaced parts). However, these parts except for the covers are not required to be disassembled while in normal service operations.
- For the method of replacing the periodically replaced parts, see "2.1 Maintenance procedure of the paper feed section".
 (See P.3)

No.	Section	Part name	Page referred to
1	Cover	Right cover	P.11
		Front cover	P.11
		Rear cover	P.11
2	Tray section	Wire A	P.14
		Wire B	P.14
		Wire C	P.14
		Wire D	P.14

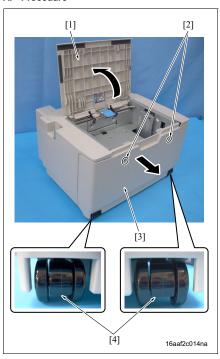
3.2 Disassembling and assembling procedure

∴ Caution

 When connected to the main body, make sure that the power cord of the main body is unplugged from the power outlet.

3.2.1 Removal and reinstallation of the right cover, the front cover and the rear cover

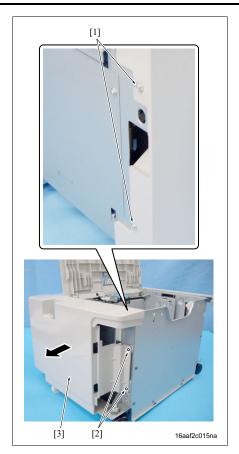
A. Procedure



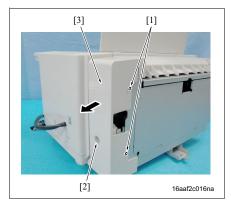
- 1. Pull out LU from the main body side.
- 2. Open the upper door [1].
- 3. Remove the 2 screws [2] and then remove the right cover [3].

Note

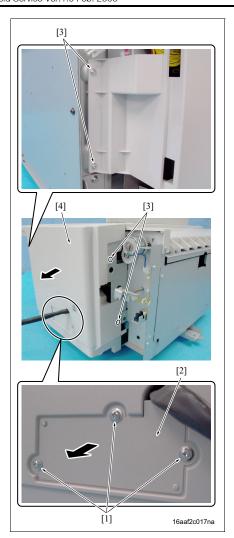
 When installing the right cover [3], be sure to take note of the direction of the 2 casters [4].



- 4. Loosen the 2 screws [1].
- 5. Remove the 2 screws [2] and then remove the front cover [3].



- 6. Loosen the 2 screws [1].
- 7. Remove the screw [2] and then remove the auxiliary cover /Rr [3].



- 8. Remove the 3 screws [1] and then remove the cable cover [2].
- 9. Remove the 4 screws [3] and then remove the rear cover [4].
- 10. Reinstall the above parts following the removal steps in reverse.

3.2.2 Replacing the wires

The length of the wires

Wire /A: 707.2 mm

Wire /B: 585.7 mm

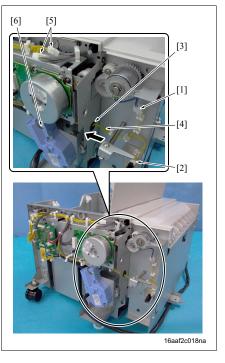
Wire /C: 558.7 mm

Wire /D: 680.2 mm

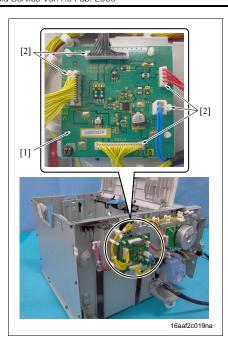
Auxiliary wire: 706.3 mm

Detection wire: 609.6 mm

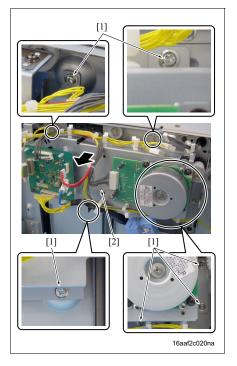
A. Removing the wire



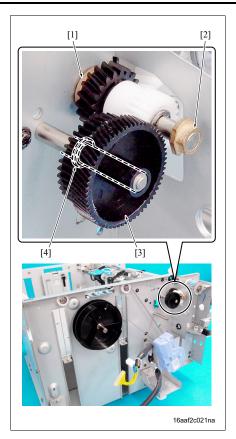
- Remove the right cover, the front cover and the rear cover.
 - (See P.11)
- 2. Remove the connectors [1] and [2], and pull out the wiring harness [4] from the hole [3].
- 3. Remove the 2 connectors [5] and the connector [6].



4. Remove the 5 connectors [2] from the LU drive board (LUDB) [1].

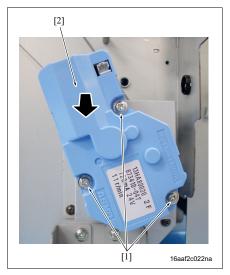


5. Remove the 6 screws [1] and then remove the LU drive board unit [2].

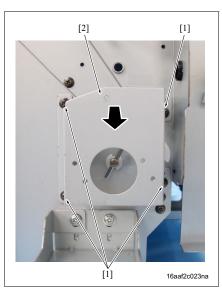


Note

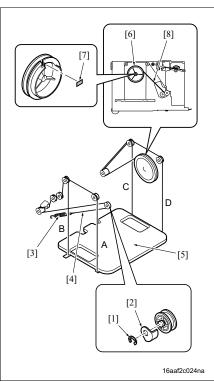
- When removing the LU drive board unit, the bearings [1] and [2] may come off and fall. Be careful that they do not get lost.
- On the inside of the gear [3], the spacer [4] is provided. Be careful that it does not get lost.



6. Remove the 3 screws [1] and then remove the paper lift motor (M151) [2].

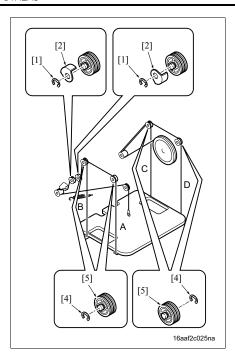


7. Remove the 4 screws [1] and then remove the motor mounting plate [2].

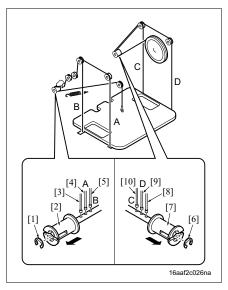


- 8. Remove the E-ring [1], and remove the wire stopper [2].
- 9. Remove the assist wire [4] from the spring [3].

- Be careful that the lift plate [5] comes down by its own weight.
- 10. Peel off the seal [7] from the detection reel [6].
- 11. Rotate the detection reel [6] clockwise as seen from the rear side, and remove the detection wire [8] from the reel.

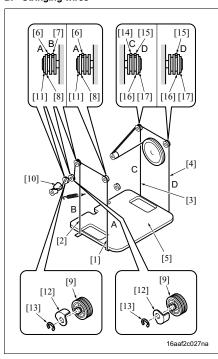


- 12. Remove the 2 E-rings [1] and the 2 wire stoppers [2].
- 13. Remove the 4 E-rings [4] and remove the 4 upper pulleys [5].

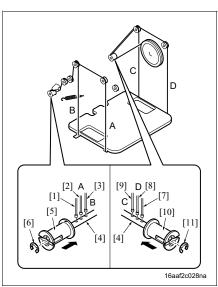


- 14. Remove the E-ring [1] and the drive pulley [2], then remove the auxiliary wire [3], the wire A [4] and the wire B [5].
- 15. Remove the E-ring [6] and the drive pulley [7], then remove the detection wire [8], the wire D [9] and the wire C [10].

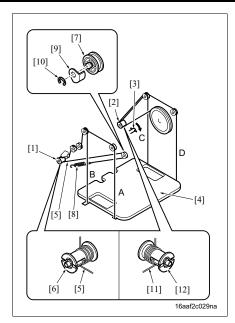
B. Stringing wires

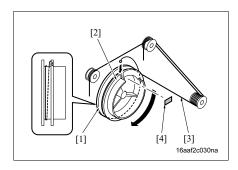


- 1. Pass the wire A [1], the wire B [2], the wire C [3] and the wire D [4] through the lift plate [5].
- Run the wire A [6] and the wire B [7] through the 2
 upper pulleys [8] and the 2 lower pulleys [9], and
 then through the adjustment part [10].
- Tighten the 2 upper pulleys [8] with the 2 E-rings [11].
- Install the wire stopper [12] to each of the 2 lower pulleys [9] in the direction as shown in the drawing. And then fasten it with the 2 E-Rings [13].
- 5. Run the wire C [14] and the wire D [15] through the groove of the pulley [16].
- Tighten the 2 pulleys [16] with each of the E-ring [17].



- 7. After putting the auxiliary wire [1], the wire A [2] and the wire B [3] into the holes in the front section of the drive shaft [4], install the drive pulley [5] and tighten it with the E-ring [6].
- 8. After putting the detection wire [7], the wire D [8] and the wire C [9] into the holes in the rear section of the drive shaft [4], install the drive pulley [10] and tighten it with the E-ring [11].





- 9. Hold the drive pulley [1] and the drive pulley [2] with both hands and rotate them counterclockwise as seen from the front side until there are no slacks found in the wires A, B, C, and D.
- 10. Rotate the coupling shaft [3] on the rear side to lift the lift plate [4] to the upper limit.

Note

- Be sure to wind the wires from the inside of the LU to the outside.
- At this time, the auxiliary wire [5] and the detection wire [11] should not have been wound around the drive pulleys [6] and [12].
- 11. Wind the auxiliary wire [5] about half turn counterclockwise around the drive pulley [6].
- 12. Wind the auxiliary wire [5] about 1.5 turn clockwise around the pulley [7] and install it to the spring [8].
- 13. Install the wire stopper [9] to the pulley [7] in the direction as shown in the drawing, and tighten it with the E-ring [10].
- 14. With the lift plate [4] lifted fully up to the upper limit, wind the detection wire [11] about half turn clockwise around the drive pulley [12].
- 15. Set the wire attaching notch [2] at the right above position with no tension applied on the detection reel [1], and wind the detection wire [3] a full turn counterclockwise around the detection reel [1] starting at the top side.

Note

- Be sure to wind the wire from the inside of the LU to the outside.
- 16. Rotate the detection reel [1] clockwise to apply tension. After rotating about ³/₄ turn, install the detection wire [3].
- 17. Stick the seal [4] to the detection reel [1].
- 18. Follow Steps 1 to 10 in "A. Removing the wire" in reverse order.

Note

- After finishing wire replacement, move the lift plate up and down to confirm that it moves smoothly.
- Make sure that the wires do not cross each other, or a wire does not run on another wire.
- After installing the wires, adjust the tilt of the lift plate.

(See P.21)

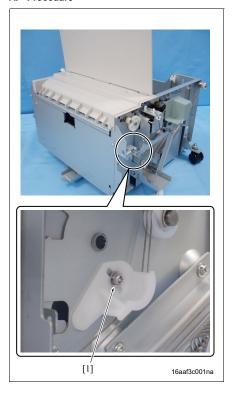
■ ADJUSTMENT/SETTING

4. MECHANICAL ADJUSTMENT

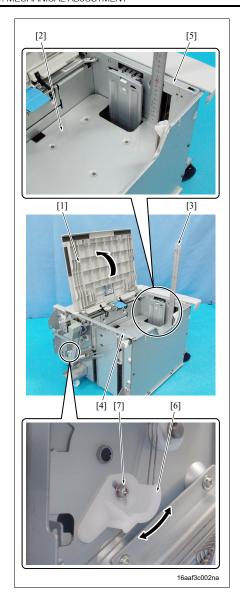
4.1 Adjusting the tilt of the lift plate

When the lift plate is tilted, paper may not be fed correctly. Adjust the lift plate so that it becomes parallel to the paper feed roller shaft. When replacing the wire, be sure to conduct this adjustment.

A. Procedure



- Remove the right cover and the front cover. (See P.11)
- 2. Loosen the screw [1].



- 3. Open the upper door [1].
- 4. Stand the scale [3] on the upper surface of the lift plate [2].
- 5. Move and adjust the wire adjusting member [6] so that the distance from each of the upper surfaces of the panels /Fr [4] and /Rr [5] to the upper surface of the lift plate become identical.
- 6. After completion of the adjustment, tighten up the screw [7] securely.



SERVICE MANUAL

Field Service

FS-510/PU-501/ OT-601

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Revision history

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

A number within **\(\hat{\hat{h}} \)** 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.

2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

FS-510/PU-501/OT-601

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				_
\sim	u.		114	_

1.	PROD	DUCT SPECIFICATIONS	1
1.1	FS-	510	1
1.2	PU-	501	3
1.3	OT-	601	4
MAII	NTEI	NANCE	
2.		ODIC CHECK	
2.1	Mair	ntenance procedure	5
2.	1.1	Cleaning of the Roller	5
3.	OTHE	ER	7
3.1	Disa	assembly/Adjustment prohibited items	7
3.2		assembling and assembling list	
3.3		assembling and assembling procedure	
3.	3.1	Conveyance Front Cover /Up, /Rt, /Lw	
3.	3.2	Conveyance Upper Cover	9
3.	3.3	Front Door	
3.	3.4	Conveyance Front Cover /Lt	10
3.	3.5	Paper Exit Front Cover, Rear Cover, Connector Cover	11
3.	3.6	Tray /2	12
3.	3.7	OT	12
3.	3.8	Tray /1	12
3.	3.9	Lift Tray	13
3.	3.10	Conveyance Unit	13
3.	3.11	Stapler	14
3.	3.12	PU	15
3.	3.13	Stacker Paddle Drive Clutch Assy	16
3.	3.14	Paper Holding Paddle Drive Clutch Assy	17
۸ D II	LIOTI	MENT/OFTTINO	
_		MENT/SETTING	
4.		HANICAL ADJUSTMENT	
4.1		ole Position Adjustment	
4.2		ustment of the Installation Position of the Shutter Drive Gear	
4.3	Pun	ch Mis-centering Adjustment (PU-501)	23

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■ OUTLINE

1. PRODUCT SPECIFICATIONS

1.1 FS-510

A. Type

Name	Multi tray finisher built into the main body
Installation	Installed in the main body
Document Alignment	Center
Consumables	Staples (5,000 staples/cartridge)

B. Functions

C. Paper type

(1) Non sort

Туре	Size	Weight		Max. Capacity	
	Metric: A3, B4, A4, A4S, B5, B5S, A5, A5S, B6S 11 x 17, 8½ x 11, 8½ x 11S, Foolscap	50 to 90 g/m ²	Tray /1	200 sheets	
Plain paper			Tray /2	A4S, 8½ x 11S or less	1000 sheets
				B4, 8½ x 14 or greater	500 sheets
Thick paper		91 to 210 g/m ²	20 sheets		
OHP transparencies	Inch: 11 x 17, 8½ x 14,	-			
Translucent paper	8½ x 11, 8½ x 11S,	-			
Envelope	5½ x 8½S	-			
Label	A3, A4, A4S, A5S, Foolscap	-			
Letterhead] '	-			

(2) Sort/Group

Туре	Size	Weight		Max. Capacity	
	Metric:		Tray /1	200 sheets	
Plain paper	A3, B4, A4, A4S, B5, B5S, A5 11 x 17, 8½ x 11, 8½ x 11S, Foolscap	50 to 90 g/m ²		A4S, 8½ x 11S or less 100 she	
1 8 5 A	Inch: 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½S A3, A4, A4S, A5S, Foolscap	50 to 60 gm	Tray /2	B4, 8½ x 14 or greater	500 sheets

(3) Sort Staple

Туре	Size	Weight		Max. Capacity	
	Metric:		Tray /1	200 sheets	
	A3, B4, A4, A4S, B5, B5S, A5, A5S, B6S 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, Foolscap			A4S, 8½ x 11S or less	1000 sheets
Plain paper	Inch: 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½S A3, A4, A4S, A5S, Foolscap	50 to 90 g/m ²	Tray /2	B4, 81/2 x 14 or greater	500 sheets

D. Stapling

Staple Filling Mode	Dedicated Staple Cartridge (5000 staples)				
Staple Detection	Available (Nearly Empty: 20 remaining staples)				
	Front: Diagonal 45° 1 point *1 A3, B4, A4, B5	A3, B4, A4, B5			
	Rear: Diagonal 45° 1 point *1	11 x 17, 8½ x 11			
Stapling Position	Front: Parallel 1 point	A4S, B5S, A5			
Caping Comon	Rear: Parallel 1 point	8½ x 14, 8½ x 11S, 5½ x 8½S			
	Side: Parallel 2 point	A3, B4, A4, A4S, B5, B5S, A5 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½S			

^{*1:} Diagonal 30° for B5 and B4

E. Maintenance

Maintenance	Every 250,000 prints	
-------------	----------------------	--

F. Machine specifications

Power Requirements	24/5V DC (supplied from the main body)
Power Consumption	66 W or less
Dimensions	319 (W) x 558 (D) x 573 mm (H)
Weight	Approx. 21.4 kg

G. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

1.2 PU-501

A. Type

Туре	FS built-in type punching operation device
Installation	Screwed to the FS
	Metric: A3, B4, A4, A4S, B5, B5S 11 x 17, 8½ x 11, 8½ x 11S, Foolscap
Paper Size	Inch: 2 holes: 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S
Paper Type	Plain Paper (60 to 130 g/m²), Recycled Paper (60 to 130 g/m²)
Punch Hole	Metric: 4 holes, Swedish 4 holes (φ6.5 mm) Inch: 2 and 3 holes (can be switched) (φ8 mm)
Number of Stored Punch Wastes	Metric (4 holes): For 1,500 sheets of paper (80 g/m²) Inch (2, 3 holes): For 1,000 sheets of paper (20 lbs)
Document Alignment	Center

B. Maintenance

Maintenance	Every 250,000 prints	

C. Machine specifications

Power Requirements	24/5V DC (Supplied from FS)
Dimensions	114 (W) x 461 (D) x 136 mm (H)
Weight	Approx. 1.9 kg

D. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

1.3 OT-601

A. Type

Туре	Additional Tray to FS	
Installation Screwed to the FS		
Mode	Non sort, sort, group, and sort staple	
Number of Bins	1 bin	
Document Alignment	Center	

B. Paper Type

Mode	Size		Туре	Capacity
	Metric: A3, B4, A4, A4S, B5, B5S, A5, A5S, B6S 11 x 17, 8½ x 11, 8½ x 11S, Foolscap	Plain Paper, Recycled Paper (56 to 90 g/m ² ,15 to 24 lb)		200 sheets
Non sort			OHP transparencies	
			Thick paper (91 to 210 g/m²)	
	11 x 17, 8½ x 14,	Special	Envelope	20 sheets
	8½ x 11, 8½ x 11S, 5½ x 8½S A3, A4, A4S, A5S, Foolscap		Label paper	
			Letterhead	
			Translucent paper	
Sort / group	Metric: A3, B4, A4, A4S, B5, B5S, A5 11 x 17, 8½ x 11, 8½ x 11S, Foolscap	Plain Paper, Recycled paper (56 to 90 g/m²)		200 sheets
Sort staple	Inch: 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½S A3, A4, A4S, A5S, Foolscap			200 sheets or 20 copies

C. Maintenance

D. Machine specifications

Dimensions	282 (W) x 368 (D) x 57 mm (H)
Weight	Approx. 0.7 kg

E. Operating environment

Temperature	Same as the main body.	
Humidity	Same as the main body.	

NOTE

• The information herein may be subject to change for improvement without notice.

■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure

NOTE

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

2.1.1 Cleaning of the Roller

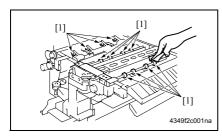
1. Remove the Lift Tray.

(See P.13)

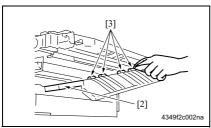
Remove the Conveyance Unit. (See P.13)

 $\it 3.\,\,\,$ Remove the Conveyance Top Cover.

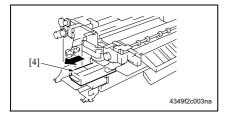
(See P.9)



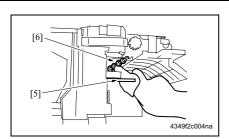
4. Using a soft cloth dampened with alcohol, wipe the roller [1].



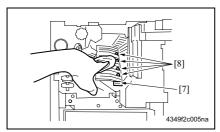
- 5. Lower Processing Guide FN1 [2].
- Using a soft cloth dampened with alcohol, wipe the roller [3].



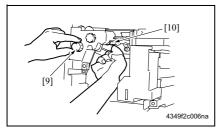
Remove Punch Scraps Box FN3.1 [4]. (only when PU is installed)



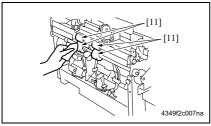
- 8. Lower Processing Guide FN-3 [5].
- 9. Using a soft cloth dampened with alcohol, wipe the roller [6].



- 10. Lower Processing Guide FN-4 [7].
- 11. Using a soft cloth dampened with alcohol, wipe the roller [8].



 While turning Processing Knob FN-5 [9], wipe the roller [10] using a soft cloth dampened with alcohol.



13. Using a soft cloth dampened with alcohol, wipe the roller [11].

3. OTHER

3.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards



- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" 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.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembling and assembling list

No.	Section	Part name	Ref.Page
1		Conveyance Front Cover /Up	P.9
2		Conveyance Upper Cover	P.9
3		Conveyance Front Cover /Rt	P.9
4		Front Door	P.10
5		Conveyance Front Cover /Lw	P.9
6	Cover	Conveyance Front Cover /Lt	P.10
7	Cover	Paper Exit Front Cover	P.11
8		Tray /2	P.12
9		OT (Option)	P.12
10		Tray /1	P.12
11		Connector Cover	P.11
12		Paper Exit Rear Cover	P.11
13		Lift Tray	P.13
14	Unit	Conveyance Unit	P.13
15		Stapler Unit	P.14
16		PU (Option)	P.15
17	Others	Stacker Paddle Drive Clutch Assy	P.16
18	Ouicio	Paper Holding Paddle Drive Clutch Assy	P.17

3.3 Disassembling and assembling procedure

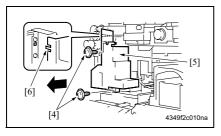
3.3.1 Conveyance Front Cover /Up, /Rt, /Lw



- 1. Open the Front Door.
- Unhook the tab, and remove the Conveyance Front Cover /Up [1].



3. Remove two screws [2], and remove the Conveyance Front Cover /Rt [3].

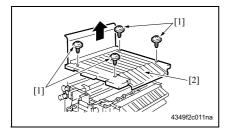


4. Remove two screws [4], and remove the Conveyance Front Cover /Lw [5].

NOTE

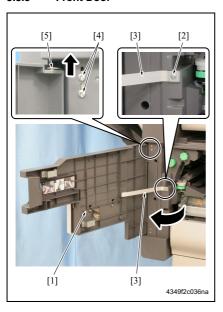
At reinstallation, first fit the claw [6] into position.





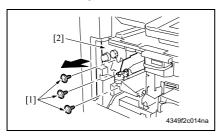
 Remove four screws [1], and remove the Conveyance Upper Cover [2].

3.3.3 Front Door



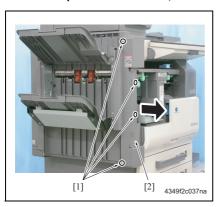
- 1. Open the Front Door [1].
- 2. Remove the screw [2], and remove the stopper [3].
- 3. Loosen two screws [4].
- 4. Slide up the Fulcrum /Up [5] and remove the Front Door.
- 5. Reinstall the above parts following the removal steps in reverse.

3.3.4 Conveyance Front Cover /Lt

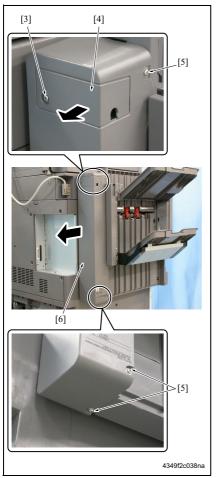


1. Remove three screws [1], and remove the Conveyance Front Cover /Lt [2].

3.3.5 Paper Exit Front Cover, Rear Cover, Connector Cover

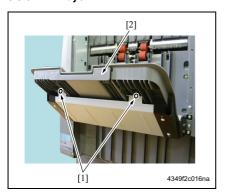


- Remove the Front Door. (See P.10)
- Remove the Conveyance Front Cover /Lt.
 (See P.10)
- 3. Remove four screws [1], and remove the Paper Exit Front Cover [2].



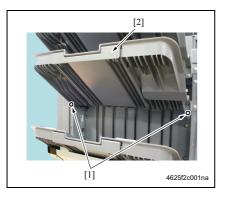
- 4. Remove the screw [3], and remove the Connector Cover [4].
- 5. Remove three screws [5] and remove the Paper Exit Rear Cover [6].
- 6. Reinstall the above parts following the removal steps in reverse.

3.3.6 Tray /2



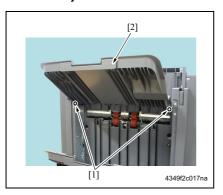
1. Remove two screws [1], and remove the Tray /2 [2].

3.3.7 OT



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

3.3.8 Tray /1

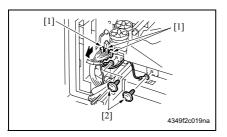


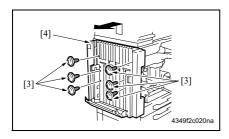
1. Remove two screws [1], and remove the Tray /1 [2].

3.3.9 Lift Tray

NOTE

- . When removing the Lift Tray, be sure to bring the Tray down to the bottom.
- If the OT is installed, remove it in advance.





- Remove the Front Door. (See P.10)
- Remove the Conveyance Front Cover /Lt.

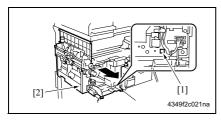
(See P.10)

- 3. Disconnect three connectors [1].
- 4. Remove two screws [2], and remove the ground wire.
- Remove the Tray /1, Tray /2 and OT. (See P.12)
- Remove six screws [3], and lift the Lift Tray [4] upward and off from the Conveyance Unit.

NOTE

 The removal of the upper 2 screws [3] is not available when the Lift Tray is not brought down to the bottom.

3.3.10 Conveyance Unit

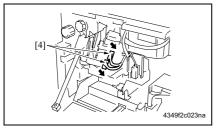


- 1. Remove the Lift Tray.
 - (See P.13)
- 2. Remove the Front Door. (See P.10)
- While holding down the lock release button [1], remove the Conveyance Unit [2].

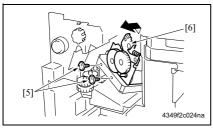
3.3.11 Stapler



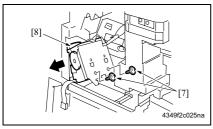
- 1. Open the Front Door.
- Turn the knob [1], and move the stapler forward.
- 3. Remove the Staple Cartridge.
- 4. Remove the screw [2], and remove the cover [3].



5. Disconnect two connectors [4].



6. Remove two screws [5], and remove the Stapler Unit [6].

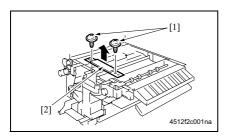


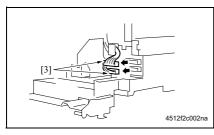
7. Remove two screws [7] and remove the Stapler [8].

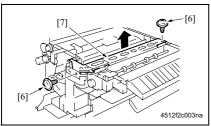
MAINTENANCE

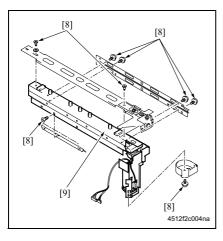
FS-510/PU-501/OT-601

3.3.12 PU







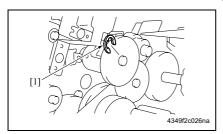


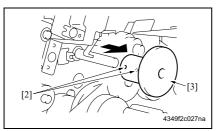
- Remove the Lift Tray. (See P.13)
- Remove the Conveyance Unit. (See P.13)
- 3. Remove the Conveyance Upper Cover. (See P.9)
- Remove the Conveyance Front Cover /Lw.
 (See P.9)
- 5. Remove two screws [1], and remove the Reinforcement Plate [2].
- 6. Disconnect two connectors [3].

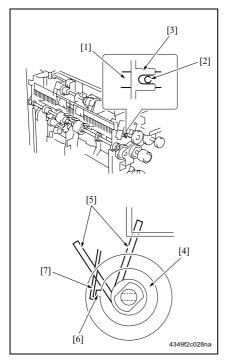
7. Remove two screws [6], and remove the PU [7].

8. Remove nine screws [8], and the Punch Unit [9].

3.3.13 Stacker Paddle Drive Clutch Assy







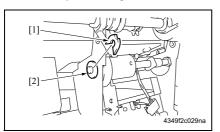
A. Removal Procedure

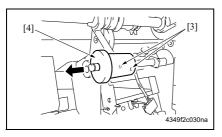
- 1. Remove the Lift Tray. (See P.13)
- Remove the Conveyance Unit. (See P.13)
- Remove the Conveyance Upper Cover. (See P.9)
- 4. Remove the E-ring [1].
- Loosen two hexagonal socket head screws [2], and remove the Stacker Paddle Drive Clutch Assy [3].

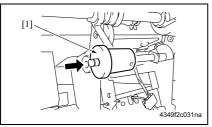
B. Reinstallation Procedure

- Check that the 2-mm hole [2] of the stacker paddle drive shaft [1] and the cutout of the frame [3] are aligned and install the Stacker Paddle Drive Clutch Assy [4].
- 2. Refer to the figure and check the paddle position [5].
- Hook the Solenoid Flapper [7] to the claw [6] of the Stacker Paddle Drive Clutch Assy [4].
- Attach the E-ring and reinstall the Stacker Paddle Drive Clutch Assy.
- Adjust the spacing between the E-ring and the Stacker Paddle Drive Clutch Assy to 0.2 mm and tighten two hexagonal socket head screws.

3.3.14 Paper Holding Paddle Drive Clutch Assy







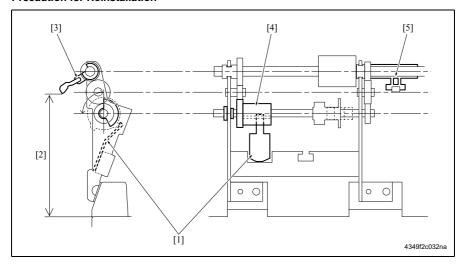
A. Removal Procedure

- 1. Remove the Lift Tray. (See P.13)
- Remove the Conveyance Unit. (See P.13)
- 3. Remove the Conveyance Upper Cover. (See P.9)
- 4. Remove the C-ring [1].
- 5. Remove the bearing [2].
- Loosen two hexagonal socket head screws [3], and remove the Paper Holding Paddle Drive Clutch Assy [4].

B. Reinstallation Procedure

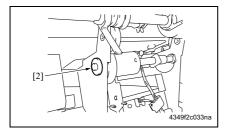
 Reinstall the Paper Holding Paddle Drive Clutch Assy [1].

Precaution for Reinstallation

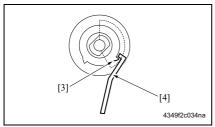


- [1] Solenoid Flapper
- [2] 107 ± 3mm
- [3] Paper Holding Paddle

- [4] Paper Holding Paddle Drive Clutch Assy
- [5] Paper Holding Paddle



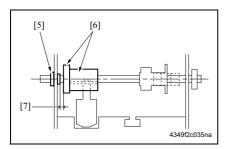
2. Install the bearing [2].



 Hook the Solenoid Flapper [4] to the claw [3] of the Paper Holding Paddle Drive Clutch Assy.

NOTE

 Install the Paper Holding Paddle Drive Clutch Assy with the side having a wider spacing between the claws facing upward.



- Attach the C-ring and press the Paper Holding Paddle Drive Clutch Assy [6] to the bearing [5].
- Adjust the spacing [7] between the bushing [5] and the Paper Holding Paddle Drive Clutch Assy [6] to 0.2 mm and tighten two hexagonal socket head screws.

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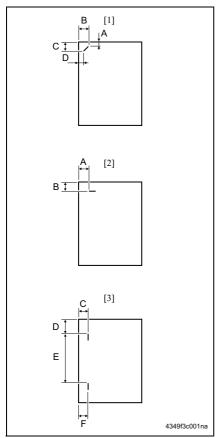
ADJUSTMENT/SETTING

FS-510/PU-501/OT-60

ADJUSTMENT/SETTING

4. MECHANICAL ADJUSTMENT

4.1 Staple Position Adjustment



- 1. Set the staple and make a print.
- 2. Check the staple position of the paper.
- Slant one point Staple [1] (Paper Width: 216 to 297 mm) 279 to 297 mm: 45°, B5, B4: 30°

Measurement position	Specification	Adjustment range
A, C	4.4 mm	_
B, D	12.1 mm	+1 to -2mm

 Parallel one point Staple [2] (Paper Width: 182 to 216 mm)

Measurement position	Specification	Adjustment range
Α	4.5 mm	_
В	6 mm	+1 to -2mm

• Parallel two points Staple [3]

Specification	Adjustment range
6 mm	+1 to -2mm
Υ	_
Х	
	'

Y = (paper width-X-11) / 2

X = A3, A4: 137 mm B4, B5: 114 mm

> A4S: 190 mm B5S: 162 mm

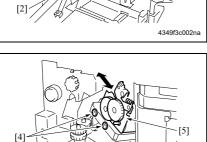
11 x 17, 81/2 x 11: 119.4 mm

8½ x 11S: 196 mm

Substitute above into the equation.

3. If the staple position is misaligned, adjust with the following procedure.

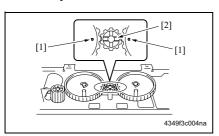




- 4. Open the Front Door.
- 5. Turn the knob [1], and move the stapler forward.
- 6. Loosen the screw [2], and remove the cover [3].
- Loosen two adjustment screws [2] and move the Stapler Unit [3] in the direction of the arrow to make the adjustment.
- 8. Make another print and check the staple position.

4.2 Adjustment of the Installation Position of the Shutter Drive Gear

4349f3c003na

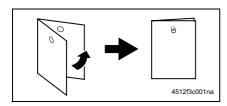


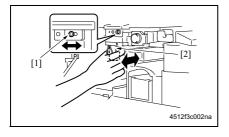
1. Set three gears.

NOTE

 Set the gears so that the marks on Gears 1 and 3 [1] are aligned with the rib of Gear 2 [2] as shown on the right.

4.3 Punch Mis-centering Adjustment (PU-501)





- Set the copier into the Punch mode and make a 1-sided print from a 1-sided original.
- Fold the output paper in half and check whether the punch hole positions are aligned.
 - Specification: 0 ± 2 mm
- 3. If the punch hole position is misaligned, adjust with the following procedure.
- Remove the Conveyance Front Cover /Lw.
 (See P.9)
- Loosen the adjustment screw [1], and move the Punch Unit [2] forward or backward to make the adjustment.
- 6. Make another print and check the punch displacement.

DJUSTMENT/SETTING

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SERVICE MANUAL

Field Service

FS-511/RU-502

Confidential – for internal use only, do not distribute

Revision history

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

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

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

Revision mark:

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

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

NOTE

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

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

2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

MAINTENANCE

FS-511/RU-502

CONTENTS

FS-511/RU-502

Oι		

1. PR	ODUC	CT SPECIFICATION1
1.1	FS-5	511
1.2	RU-	5024
MAI	NTEN	IANCE
2. OT	HERS	5
2.1	Disa	ssembling and assembling list
2.2	Disa	ssembling and assembling procedure
2	2.2.1	Removal/reinstallation of the upper cover
2	2.2.2	Removal/reinstallation of the front cover /Up8
2	2.2.3	Removal/reinstallation of the front cover /Lw9
2	2.2.4	Removal/reinstallation of the rear cover
2	2.2.5	Removal/reinstallation of the punch unit
2	2.2.6	Replacing the stapler unit
ADJI	JSTN	MENT/SETTING
3. ME	CHAN	NICAL ADJUSTMENT
3.1	Outp	out check mode
3	3.1.1	Switches provided inside the board
3	3.1.2	Output check mode
3.2	Adju	sting the punch hole position in the vertical direction
3.3	Adju	sting the solenoid
3	3.3.1	Adjustment of the bypass gate solenoid (SD1)
3	3.3.2	Adjustment of the main gate solenoid (SD2)27
3.4	Adju	sting the belt tension
3	3.4.1	Adjustment of the timing belt of the conveyance motor /Up (M4)
3	3.4.2	Adjustment of the timing belt of the conveyance motor /Lw (M2)
3	3.4.3	Adjustment of the timing belt of the paper exit motor (M3)
3.5	Adju	sting the tray upper surface detection position
3.6	Adju	sting the tray overload detection level

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■ OUTLINE

1. PRODUCT SPECIFICATION

1.1 FS-511

A. Type

Туре	Multi staple finisher	
Installation	Floor-mounted type	
Document alignment	Center	
Consumables	Staples	

B. Functions

Mode	Normal	Non-sort, sort, group, sort-staple
	Punch	Non-sort-punch, sort-punch, group-punch,
		sort-staple-punch

C. Type of paper

• Maximum load capacity: (80 g/m²) when loaded with paper of the same size.

(1) Straight

Type of paper	Size of paper	Weight	Max. capacity	Exit tray	Max. number of sheets stapled
Plain paper Recycled paper	A3, B4, A4, A4S, B5, B5S, A5S, and B6S	60 to 90 g/m ²	250 sheets	Sub tray	_
Thick paper	5½ x 8½S, 8½ x 11, 8½ x 11S, 8½ x 14,	91 to 130 g/m ²	20 sheets		
Thin paper	11 x 17	50 to 59 g/m ²			
OHP	11211	_			
transparencies					
Label					
Envelope					
Label sheet					
Letterhead					

(2) Non-sort, sort, group

Type of paper	Size of paper	Weight	Max. capacity	Exit tray	Max. number of
					sheets stapled
Plain paper	A3, B4, A4, A4S, B5,	50 to 130 g/m ²	3000 sheets	Main tray	_
Recycled paper	B5S		(A4S or smaller)		
Thick paper	8½ x 11, 8½ x 11S,		1500 sheets		
Thin paper	8½ x 14, 11 x 17		(B4 or larger)		

(3) Sort-staple, group-staple

Type of paper	Size of paper	Weight	Max. capacity	Exit tray	Max. number of
					sheets stapled
Plain paper	A3, B4, A4, A4S, B5,	60 to 90 g/m ²	3000 sheets	Main tray	50 sheets
Recycled paper	B5S		(A4S or smaller)		
	8½ x 11, 8½ x 11S,		1500 sheets		
	8½ x 14, 11 x 17		(B4 or larger)		

(4) Punch

a. Metric/Swedish

Type of paper	Size of paper	Weight	Max. capacity	Exit tray	Max. number of
					sheets stapled
Plain paper	A3, B4, A4, A4S, B5,	60 to 90 g/m ²	_	Main tray	_
Recycled paper	B5S			Sub tray	

b. Inch 2 holes

Type of paper	Size of paper	Weight	Max. capacity	Exit tray	Max. number of
					sheets stapled
Plain paper	8½ x 11S, 8½ x 14	60 to 90 g/m ²	_	Main tray	_
Recycled paper				Sub tray	

c. Inch 3 holes

Type of paper	Size of paper	Weight	Max. capacity	Exit tray	Max. number of
					sheets stapled
Plain paper	8½ x 11S, 11 x 17	60 to 90 g/m ²	_	Main tray	_
Recycled paper				Sub tray	

D. Stapling

Staple filling method	Dedicated staple cartridge (5000 staples)	
Staple detection	Available (near empty: 20 remaining staples)	
Staple position *1	Rear: Diagonal 45° 1 point	Metric: A3, B4, A4, B5
	Front: Diagonal 45° 1 point	Inch: 8½ x 11, 11 x 17
	Rear: Diagonal 28° 1 point	Metric: B4, B5
	Front: Diagonal 28° 1 point	Inch: —
	Rear: Parallel 1 point	Metric: A4S, B5S
	Front: Parallel 1 point	Inch: 8½ x 11S, 8½ x 14
	Side: 2 points	A4, A4S, A3, B5, B5S, B4, 81/2 x 11, 81/2 x 11S,
		8½ x 14, 11 x 17
Manual staple	None	

^{*1} In case of the 1-staple mode, conduct a parallel and a skew adjustment according to the length in the main scan direction.

Parallel: main scan direction 182 to 216 mm Diagonal: main scan direction 216 to 297 mm

E. Punch

No. of holes	Inch: 2 holes, 3 holes
	Metric: 4 holes
Punch scraps full detection	None

F. Maintenance

Maintenance	Same as the main body.

G. Machine data

Power source	24V DC \pm 10 % (supplied from the main body)
Power consumption	64 W or less
Dimensions	538 (W) x 637 (D) x 978 (H) mm
Weight	39.2 kg

H. Operating environment

Temperature	10 to 30 °C
Humidity	10 to 80 % RH (with no condensation)

Note

. The information herein may be subject to change for improvement without notice.

1.2 RU-502

A. Type

Туре	Roller method relay conveyance unit
------	-------------------------------------

B. Functions

Conveyance	Paper conveyance from the main body to FS

C. Type of paper

Paper size	Same as the main body.
Paper type	Same as the main body.
Amount of curling	b = 10 mm or less
(5 sheets)	h 16fat1c001na

D. Maintenance

Maintenance Same as the main body.	
------------------------------------	--

E. Machine data

Power source	$5.1V DC \pm 5 \%$ (supplied from FS)
Dimensions	474.5 (W) x 469.5 (D) x 254.4 (H) mm
Weight	Approx. 4.5 kg

F. Operating environment

Temperature	10 to 30 °C
Humidity	20 to 80 % RH (with no condensation)

Note

• The information herein may be subject to change for improvement without notice.

■ MAINTENANCE

2. OTHERS

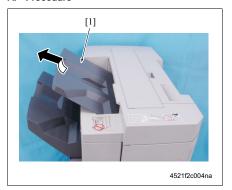
2.1 Disassembling and assembling list

No.	Section	Part name	Page referred to
1	Cover	Upper cover	P.6
2		Front cover /Up	P.8
3		Front cover /Lw	P.9
4		Rear cover	P.10
5	Punch section	Punch unit	P.11
6	Staple section	Stapler unit	P.13

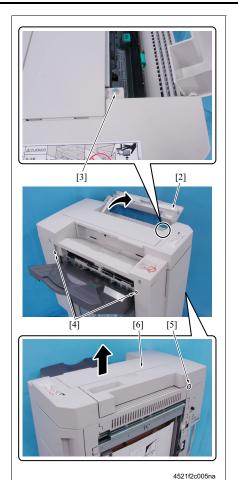
2.2 Disassembling and assembling procedure

2.2.1 Removal/reinstallation of the upper cover

A. Procedure



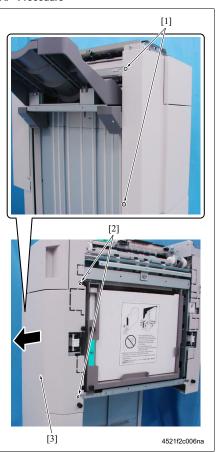
1. Remove the sub tray [1].



- 2. Open the upper door [2].
- 3. Remove the screw [3].
- 4. Loosen 2 screws [4].
- Loosen the screw [5] and remove the upper cover [6].
- 6. Reinstall the above parts following the removal steps in reverse.

2.2.2 Removal/reinstallation of the front cover /Up

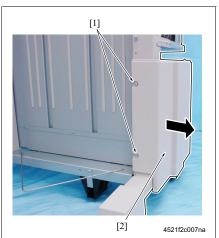
A. Procedure



- 1. Loosen 2 screws [1].
- Loosen 2 screws [2] and remove the front cover /Up [3].
- 3. Reinstall the above parts following the removal steps in reverse.

2.2.3 Removal/reinstallation of the front cover /Lw

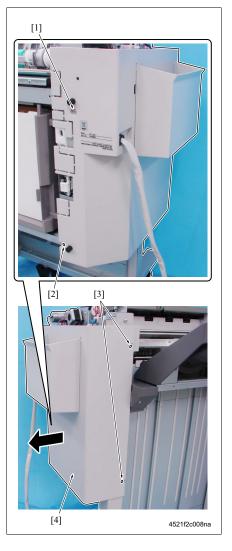
A. Procedure



- Loosen 2 screws [1] and remove the front cover /Lw [2].
- 2. Reinstall the above parts following the removal steps in reverse.

2.2.4 Removal/reinstallation of the rear cover

A. Procedure



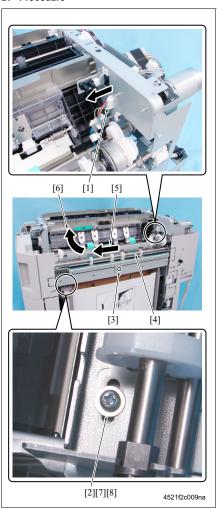
- 1. Remove the screw [1] and loosen the screw [2].
- 2. Loosen 2 screws [3] and remove the rear cover [4].
- 3. Reinstall the above parts following the removal steps in reverse.

2.2.5 Removal/reinstallation of the punch unit

A. Installation of the Swedish punch kit G

When installing the Swedish punch kit G, be sure to remove the existing punch unit and follow the procedure given below.

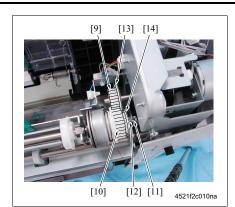
B. Procedure



- Remove the upper cover. (See P.6)
- 2. Remove the connector [1].
- Remove the screws [2] and [3]. After sliding the punch unit [4] in the arrow-marked direction [5], remove it in the arrow-marked direction [6].

Note

 The screw [2] is provided with the spacer [7] and the washer [8]. Be careful that they do not get lost.



Note

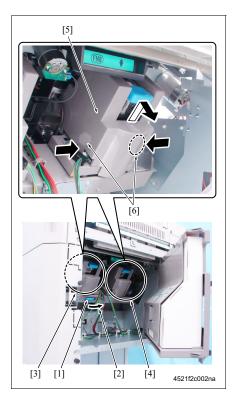
- When installing the punch unit, be sure to set the gear [9] of the main body to the gear [10] of the punch unit, and then insert the shaft [11] into the hole [12] of FS.
- When engaging the gears, be sure to engage them so that the gear flange [13] of the main body comes inside the gear flange [14] of the punch unit.
- 4. Reinstall the above parts following the removal steps in reverse.

2.2.6 Replacing the stapler unit

A. Procedure



1. Open the punch scraps box holder [1].



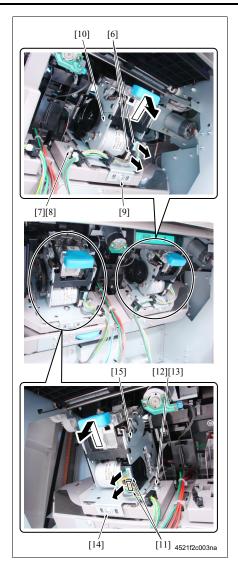
Rotate the dial [1] in the arrow-marked direction
 [2] to expand the intervals of the stapler units /Fr
 [3] and /Rr [4].

Note

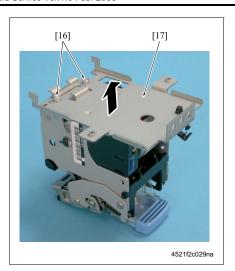
- After replacing the stapler units /Fr and /Rr, be sure to return these intervals to their original widths.
- 3. While pressing both sides [6] of each of the stapler unit covers [5], remove 2 stapler unit covers.

Note

For each FS unit, 2 stapler units are provided.
 When replacing these 2 stapler units, they are replaced at the same time. So, be sure to remove both the covers.



- 4. Remove 2 connectors [6].
- 5. Remove the screw [7] and then remove the ground terminal [8].
- 6. Remove the screw [9] and then remove the stapler unit /Rr [10].
- 7. Remove 2 connectors [11].
- 8. Remove the screw [12] and then remove the ground terminal [13].
- 9. Remove the screw [14] and then remove the stapler unit /Fr [15].



- 10. Remove 2 screws [16] and then remove the plate [17], 1 each, from each of the stapler units.
- 11. Reinstall the above parts following the removal steps in reverse.

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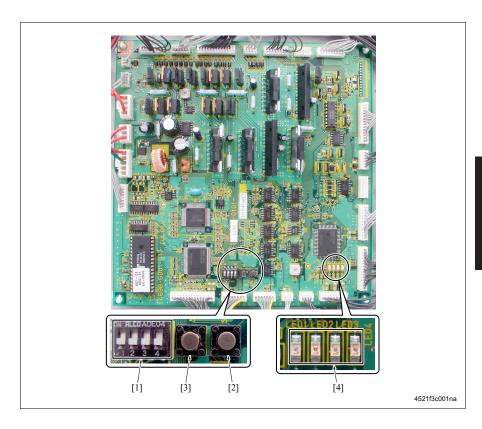
■ ADJUSTMENT/SETTING

3. MECHANICAL ADJUSTMENT

3.1 Output check mode

3.1.1 Switches provided inside the board

Test switch [1]	Dipswitch used for the mode setting of the output check mode. (All settings are off in the initial condition.)
Output check switch /1 [2]	Used to execute the output check mode.
Output check switch /2 [3]	
LED1 to 4 [4]	Display the conditions while in the output check mode.



3.1.2 Output check mode

- A. Setting of the output check mode.
- (1) Procedure for setting

Note

 Before executing the output check mode, be sure to remove the upper cover, the front cover /Up and the rear cover of FS in advance.

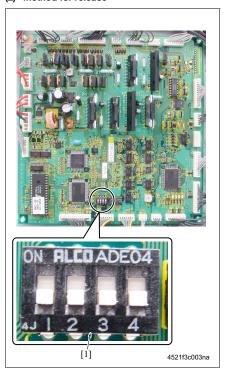
(See P.6, P.8, P.10)

 When removing the covers of FS, be sure to block the light that strikes on the front door sensor (PS17) and the upper door sensor (PS18).



- 1. Turn OFF the power switch (SW2) of the main body.
- Switch the test switch [1] to the output check mode. (See P.19)
- 3. Turn ON SW2.
- 4. The output check mode is set.

(2) Method for release



- Turn OFF the power switch (SW2) of the main body
- Set the test switch [1] to the initial condition (all OFF).
- 3. Turn ON SW2.

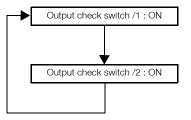
B. Types of the output check modes

Output check mode	Test switch				LED1 to 4			
	1	2	3	4	1	2	3	4
Sub tray paper exit mode	ON	OFF	OFF	OFF	•	0	0	0
Main tray paper exit mode	OFF	ON	OFF	OFF	0	•	0	0
Alignment tray paper exit mode	ON	ON	OFF	OFF	•	•	0	0
Shift operation mode	ON	OFF	ON	OFF	•	0	•	0
Alignment plate operation mode	OFF	ON	ON	OFF	0	•	•	0
Stapler unit CD movement mode	ON	ON	ON	OFF	•	•	•	0
Paper exit roller release mode	OFF	OFF	OFF	ON	0	0	0	•
Intermediate conveyance roller release mode	ON	OFF	OFF	ON	•	0	0	•
Main tray operation mode	OFF	ON	OFF	ON	0	•	0	•
Punch hole operation mode	ON	ON	OFF	ON	•	•	0	•
Sensor output check mode	ON	OFF	ON	ON	The sensor conditions are displayed.			

• : Blink • : Off

C. Operation of each of the output check modes

(1) Sub tray paper exit mode



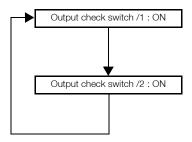
The motor and the solenoid turn ON.

- Entrance conveyance motor (M1)
- Conveyance motor /Up (M4)
 Bypass gate solenoid (SD1)
- Main gate solenoid (SD2)

The motor and the solenoid turn OFF.

- Entrance conveyance motor (M1)
- Conveyance motor /Up (M4)
- Bypass gate solenoid (SD1)
- · Main gate solenoid (SD2)

(2) Main tray paper exit mode



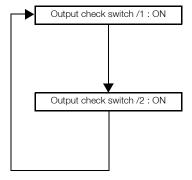
The motor turns ON.

- Entrance conveyance motor (M1)
- Conveyance motor /Up (M4)
- Conveyance motor /Lw (M2)
- Paper exit motor (M3)
- Shift motor (M8)

The motor turns OFF.

- Entrance conveyance motor (M1)
- Conveyance motor /Up (M4)
 Conveyance motor /Lw (M2)
- Paper exit motor (M3)
- Shift motor (M8)

(3) Alignment tray paper exit mode



The motor and the solenoid turn ON.

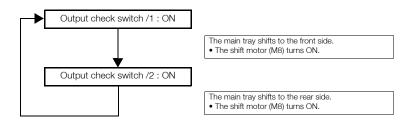
• Entrance conveyance motor (M1)

- Conveyance motor /Up (M4)
- Conveyance motor /Lw (M2)
- Paper exit motor (M3)
- Bypass gate solenoid (SD1)Paddle motor /Up (M15)
- Paper exit roller release motor (M13)

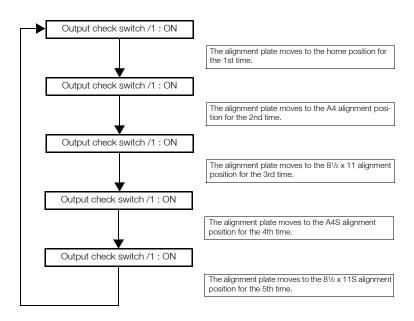
The motor and the solenoid turn OFF.

- Entrance conveyance motor (M1)
- Conveyance motor /Up (M4)
- Conveyance motor /Lw (M2)
- Paper exit motor (M3)
- Bypass gate solenoid (SD1)
- Paddle motor /Up (M15)
- Paper exit roller release motor (M13)

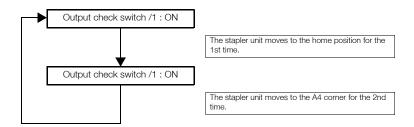
(4) Shift operation mode



(5) Alignment plate operation mode



(6) Stapler unit CD moving mode

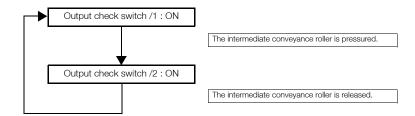


(7) Paper exit roller release mode

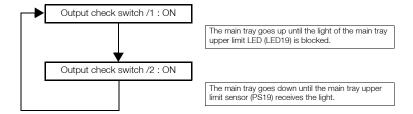
Output check switch /1 : ON Output check switch /2 : ON

The paper exit roller is in the pressure/release operation

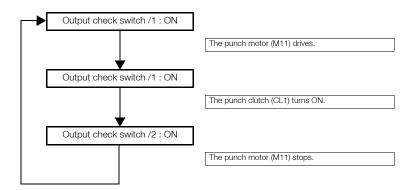
(8) Intermediate conveyance roller release mode



(9) Main tray operation mode



(10) Punch hole operation mode



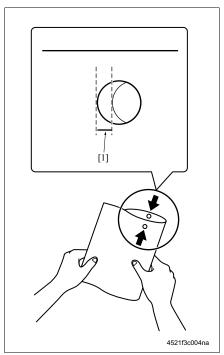
(11) Sensor output check mode

Sensor	Status	LED			
		1	2	3	4
Main tray upper limit sensor (PS19)	Light pass through	0	0	0	•
Intermediate conveyance sensor (PS3)	Light blocked	0	0	•	0
Bypass route conveyance sensor (PS2)	Light blocked	0	•	0	0
Main route conveyance sensor (PS4)	Light blocked	•	0	0	0

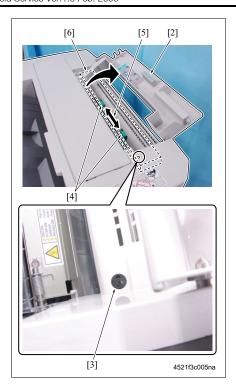
● : On O : Off

3.2 Adjusting the punch hole position in the vertical direction

A. Procedure



- 1. Set the punch hole mode, and make a copy in the single sided original -> single sided print mode.
- Fold the copy exited into two and check the position of the punch holes to see if the discrepancy "A" [1] is 2 mm or less.
- 3. When "A" is in excess of 2 mm, adjust the punch hole position in the vertical direction.

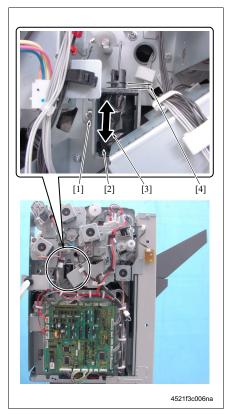


- 4. Open the upper door [2].
- Loosen the screw [3] and move the handle [4] in the arrow-marked direction [5] to adjust the position of the punch unit [6].
- Repeat steps 1 and 2 and check the punch holes to see if the discrepancy "A" is 2 mm or less.
- 7. When "A" is in excess of 2 mm, repeat steps 3 to 6 until "A" gets inside 2 mm.

3.3 Adjusting the solenoid

3.3.1 Adjustment of the bypass gate solenoid (SD1)

A. Procedure

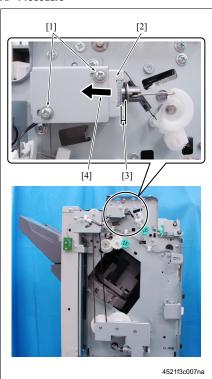


- Remove the upper cover. (See P.6)
- 2. Remove the rear cover.
 - (See P.10)
- 3. Loosen the screw [1].
- 4. Move the bypass gate solenoid (SD1) [2] in the arrow-marked direction [3] and tighten the screw [1] when the length of "A" [4] comes to the specified value.

Specified value "A" = 4.4 mm

3.3.2 Adjustment of the main gate solenoid (SD2)

A. Procedure



- 1. Remove the upper cover.
 - (See P.6)
- 2. Remove the front cover /Up.
 - (See P.8)
- 3. Loosen 2 screws [1].
- Move the main gate solenoid (SD2) [2] and tighten the 2 screws [1] when the length of "A" [3] comes to the specified value.

Note

 With the plunger of SD2 pressed in the arrowmarked direction [4] in advance, be sure to adjust the clearance with no play.

Specified value "A" = 3.6 mm

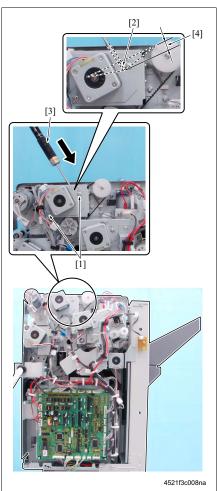
ADJUSTMENT/SETTING

FS-511/RU-502

3.4 Adjusting the belt tension

3.4.1 Adjustment of the timing belt of the conveyance motor /Up (M4)

A. Procedure

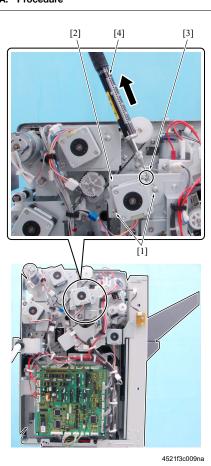


- Remove the upper cover. (See P.6)
- 2. Remove the rear cover.
 - (See P.10)
- 3. Loosen 2 screws [1].
- 4. Press the timing belt at the center section [2] with a spring balance [3] from above. And when the amount of the deflection [4] comes to 4 mm, tighten 2 screws [1] at the position in which the scale of the spring balance points to the specified value "A."

Specified value "A" = $200 \pm 100 \text{ gf}$

3.4.2 Adjustment of the timing belt of the conveyance motor /Lw (M2)

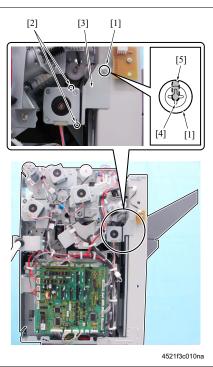
A. Procedure



- 1. Remove the upper cover.
 - (See P.6)
- 2. Remove the rear cover /Up.
 - (See P.10)
- 3. Loosen 2 screws [1].
- 4. Pull the square hole [3] provided on the conveyance motor /Lw mounting plate [2] with the spring balance [4] and tighten 2 screws [1] at the position in which the scale of the spring balance points to the specified value "A."
 - Specified value "A" = $800 \pm 50 \text{ gf}$

3.4.3 Adjustment of the timing belt of the paper exit motor (M3)

A. Procedure

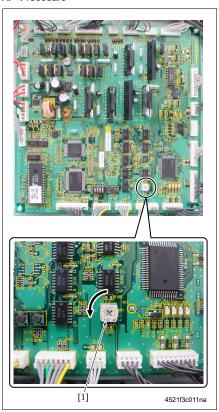


- 1. Loosen the screw [1] and 2 screws [2].
- Tighten the screw [1] and 2 screws [2] at the position [5] in which the external form of the screw [1] and that of the oblong hole [4] provided on the paper exit motor mounting plate [3] coincide each other.

3.5 Adjusting the tray upper surface detection position

This adjustment is made when replacing the FS control board (FSCB), or the main tray upper limit LED (LED19) or the main tray upper limit sensor (PS19).

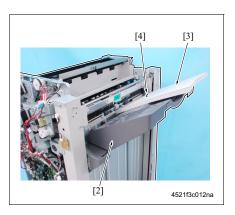
A. Procedure



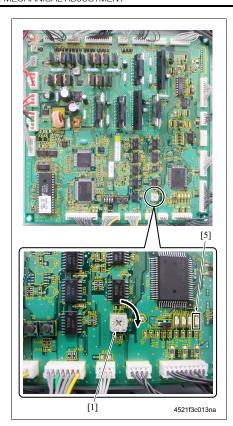
 Set the output check mode "Sensor output check mode."

(See P.17)

Rotate VR1 [1] provided on the FS control board (FSCB) up to the limit counterclockwise.



 Place the paper [3] on the main tray [2] to block the light of the main tray upper limit LED (LED19)
 [4].

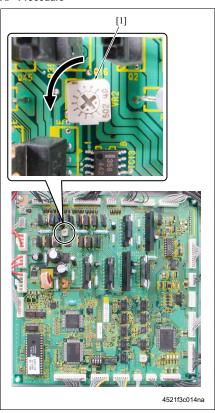


 Check to see if LED4 [5] on FSCB turns OFF from ON. If it is left ON, rotate VR1 [1] slowly clockwise and stop the rotation of VR1 at the position in which LED4 turns OFF.

3.6 Adjusting the tray overload detection level

This adjustment is made when replacing the FS control board (FSCB) or replacing the tray lift motor (M7).

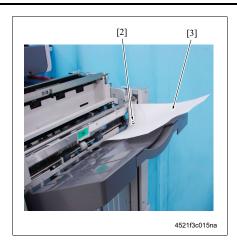
A. Procedure



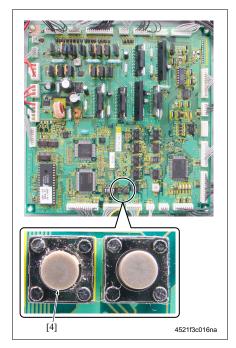
 Set the output check mode "Main tray operation mode."

(See P.17)

Rotate VR2 [1] on the FS control board (FSCB) counterclockwise up to the limit.



3. Place the paper [3] to block the light of the main tray upper limit LED (LED19) [2].

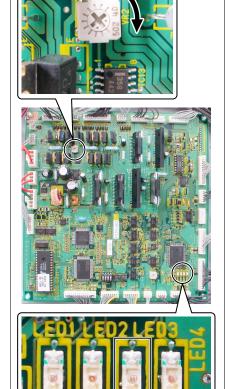


4. Press the output check switch /2 [4] to bring down the main tray.

[1]

ADJUSTMENT/SETTING

FS-511/RU-502



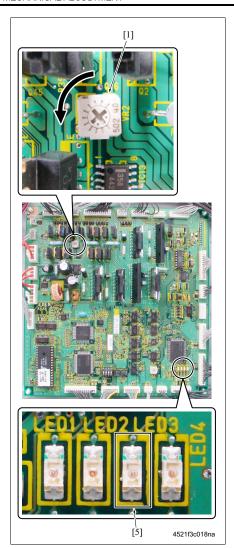
[5]

4521f3c017na

- 5. Load 1500 sheets of A3 paper (80 g/m²) on the main tray.
- Remove the paper that was put in step 3 to block the light and let the light of LED19 pass through.

Note

- When letting the light of LED19 pass through, the main tray starts to go up. Be sure to conduct the following steps 7 and 8 while in the up drive of the main tray.
- While in the up drive of the main tray, rotate VR2
 [1] on FSCB clockwise.
 LED3 [5] on FSCB turns ON.



 When LED3 [5] on FSCB turns ON, rotate VR2 [1] counterclockwise, and stop VR2 at the position in which LED3 changes to OFF from ON.



SERVICE MANUAL

Field Service

SD-502 (bizhub 500/420/360)

Confidential – for internal use only, do not distribute

Revision history

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

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

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

Revision mark:

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

A number within **\(\hat{\hat{h}} \)** 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.

2007/01	2.0	Revision in relation to launching of bizhub 360	
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

SD-502

CONTENTS

SD-502

4.1

4.2

OUTLINE
1. PRODUCT SPECIFICATIONS
MAINTENANCE
2. PERIODIC CHECK
2.1 Maintenance procedure
2.1.1 Cleaning of the Rollers
3. OTHER
3.1 Disassembly/Adjustment prohibited items
3.2 Disassembling and assembling list
3.3 Disassembling and assembling procedure
3.3.1 Paper Output Tray/Front Cover
3.3.2 Rear Cover
3.3.3 Upper Cover
3.3.4 Saddle Unit
3.3.5 Folding Unit
3.3.6 Stapler Unit
3.3.7 Paper Guide Motor (M13)14
3.3.8 Folding Roller
ADJUSTMENT/SETTING
4. MECHANICAL ADJUSTMENT23

Center Staple Skew Adjustment24

MENT/SETTING N

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■ OUTLINE

PRODUCT SPECIFICATIONS

A. Type

Туре	FS built-in saddle-stitching device
Installation	Screwed to the FS
Document Alignment	Center
Stapling Function	Center parallel two points No. of sheets to be stapled together: 2 to 15
Consumables	Staples (2000 staples/cartridge)

B. Paper type

Туре	Plain Paper	56 to 90 g/m ²
Size	Metric: A3, B4, A4S, B5S Inch: 11 x 17, 8½ × 11S	
Capacity	200 sheets or 20 copies	

C. Maintenance

Maintenance Every 250,000 prints	
----------------------------------	--

D. Machine specifications

Power Requirements	24/5V DC (supplied from FS)
Power Consumption	9.5 W or less
Dimensions	445 (W) x 203 (D) x 478 mm (H)
Weight	Approx. 9.3 kg

E. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

NOTE

• The information herein may be subject to change for improvement without notice.

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■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure

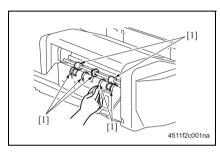
NOTE

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

2.1.1 Cleaning of the Rollers

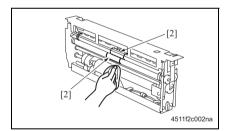
A. Periodic cleaning cycle

· Various Rollers: Every 250,000 prints



1. Using a soft cloth dampened with alcohol, wipe the roller [1].

Remove the Folding Unit. (See P.8)



3. Using a soft cloth dampened with alcohol, wipe the roller [2].

3. OTHER

3.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards

⚠ Caution

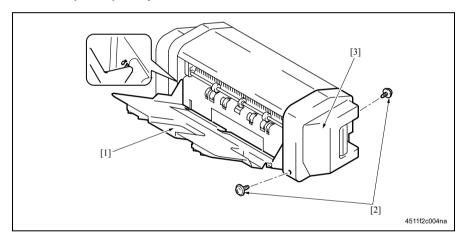
- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembling and assembling list

No.	Section	Part name	Ref.Page
1	Paper Output Tray	Paper Output Tray	P.5
2		Front Cover	P.5
3	Cover	Upper Cover	P.6
4		Rear Cover	P.6
5		Saddle Unit	P.7
6	Unit	Folding Unit	P.8
7	•	Stapler Unit	P.9
8	Others	Paper Guide Motor (M13)	P.14
9	Others	Folding Roller	P.16

3.3 Disassembling and assembling procedure

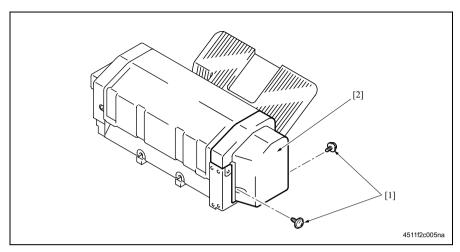
3.3.1 Paper Output Tray/Front Cover



- 1. Align the cutout and remove the Paper Output Tray [1].
- 2. Remove two screws [2], and remove the Front Cover [3].

SD-502

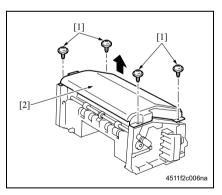
3.3.2 Rear Cover



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

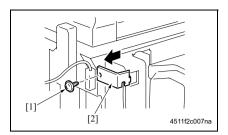
3.3.3 Upper Cover

- Remove the Front Cover. (See P.5)
- 2. Remove the Rear Cover. (See P.6)

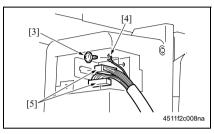


3. Remove four screws [1], and remove the Upper Cover [2].

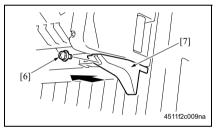
3.3.4 Saddle Unit



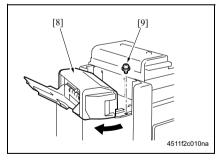
1. Remove the screw [1], and remove the Connector Cover [2].



- 2. Remove the screw [3], and remove the ground terminal [4].
- 3. Unplug two connectors [5].

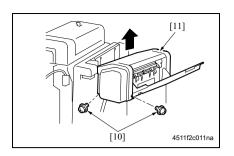


4. Remove the screw [6], and remove the Front Cover /Lw [7].



- 5. Pull the lock release lever [8], and open the Saddle Unit.
- 6. Remove the screw [9].

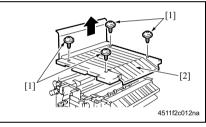
SD-502



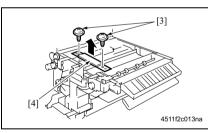
7. Remove two screws [10], and remove the Saddle Unit [11].

3.3.5 Folding Unit

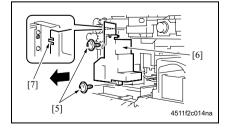
- Remove the Saddle Unit. (See P.7)
- Remove the Lift Tray.
 (See P.13 in "Field Service FS-510/PU-501/OT-601")
- Remove the Horizontal Conveyance Unit. (See P.13 in "Field Service FS-510/PU-501/OT-601")



 Remove four screws [1], and remove the Horizontal Conveyance Upper Cover [2].



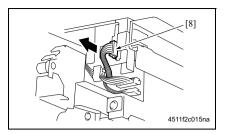
5. Remove two screws [3], and remove the Reinforcement Plate [4].



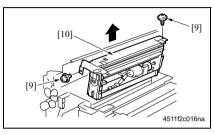
 Remove two screws [5], and remove the Horizontal Conveyance Front Cover /Lw [6].

NOTE

At reinstallation, first fit the claw [7] into position.



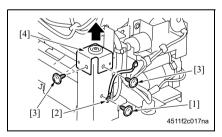
7. Unplug the connector [8].



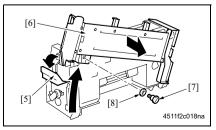
Remove two screws [9], and remove the Folding Unit [10].

3.3.6 Stapler Unit

- 1. Remove the Saddle Unit.
 - (See P.7)
- 2. Remove the Paper Output Tray. (See P.5)
- 3. Remove the Front Cover. (See P.5)
- 4. Remove the Rear Cover. (See P.6)
- Remove the Upper Cover. (See P.6)

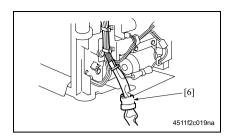


- 6. Remove the screw [1], and remove the ground terminal [2].
- 7. Remove two screws [3], and remove the holder [4].

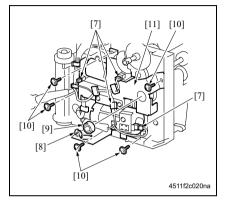


- Release the lock release lever [5], and slide the Saddle Unit Mounting Plate [6].
- Remove the screw [7] and the washer [8], and remove the Saddle Unit Mounting Plate [6].

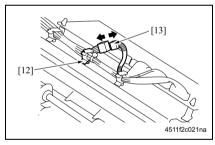
SD-502



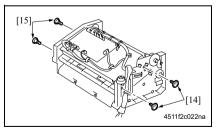
- 10. Remove the harness clamp [6] from the Metal Plate.
- 11. Remove the wiring harness from the harness clamp [6].



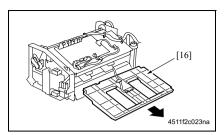
- 12. Unplug four connectors [7].
- 13. Remove the C-ring [8], and remove the bearing [9].
- 14. Remove five screws [10], and remove the Drive Unit [11].



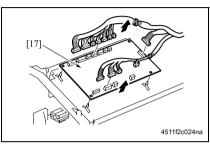
15. Remove the harness clamp [12], and unplug the connector [13].



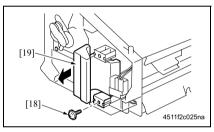
16. Remove two screws [14] and two screws [15].



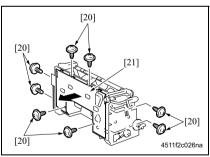
17. Remove the Tray [16].



- Unplug all the connectors on the SD Control Board (SDCB) [17].
- 19. Remove the Board support, and then remove the SDCB.

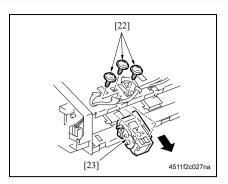


20. Remove the screw [18], and remove the lock release lever [19].

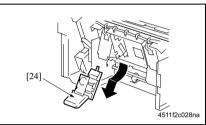


21. Remove eight screws [20], and remove the Lower Cover [21].

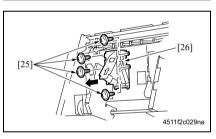
SD-502



- 22. Remove the harness clamp and unplug the connector.
- 23. Remove three screws [22], and remove the Clincher /1 [23].



24. Remove the Staple Cartridge /1 [24].



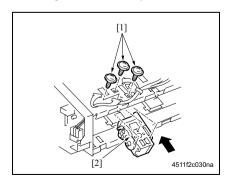
 Remove four screws [25], unplug the connector, and remove the Stapler /1 [26].

NOTE

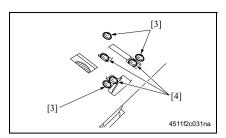
• To replace Clincher /2 and Stapler /2, repeat steps 22 to 25.

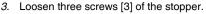
Precaution for Clincher Reinstallation

 When the Clincher is installed, the position of the Stapler and the Clincher will be misaligned. Be sure to perform the following adjustment.

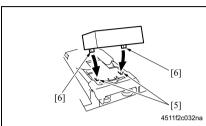


- 1. Use three screws [1] to temporary fix the Clincher [2].
- 2. Install the Staple Cartridge.





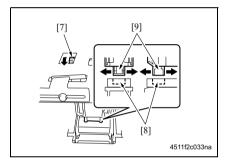
4. Loosen three screws [4] of the Clincher.



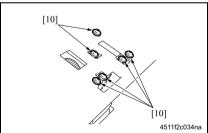
 Aligning the protrusions of the jig [6] with the recesses in the Staple Cartridge [5], fit the jig to the Stapler.

NOTE

 Make sure that the protrusions of the jig properly rest in the recesses.



 Turn the gear [7] of the Clincher and then slide the Clincher so that the protrusion of the Clincher [9] fits into the recess in the jig [8].



7. Tighten six screws [10].

NOTE

- Turn the gear again and check to see that the protrusion of the Clincher smoothly fits into the recess in the jig.
- 8. Turn the gear and remove the jig.

SD-502

3.3.7 Paper Guide Motor (M13)

1. Remove the Saddle Unit.

(See P.7)

2. Remove the Paper Output Tray.

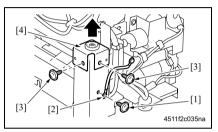
(See P.5)

3. Remove the Front Cover. (See P.5)

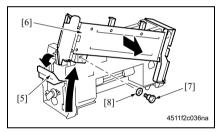
4. Remove the Rear Cover.

(See P.6)
5. Remove the Upper Cover.

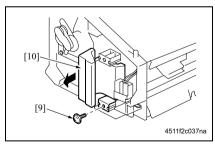
Remove the Upper Cover. (See P.6)



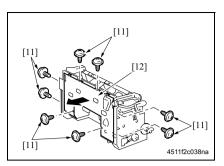
- 6. Remove the screw [1], and remove the ground terminal [2].
- 7. Remove two screws [3], and remove the holder [4].



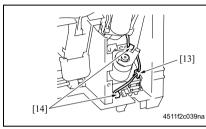
- 8. Release the lock release lever [5], and slide the Saddle Unit Mounting Plate [6].
- Remove the screw [7] and the washer
 [8], and remove the Saddle Unit Mounting Plate [6].



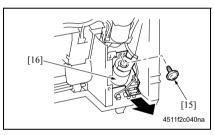
10. Remove the screw [9], and remove the lock release lever [10].



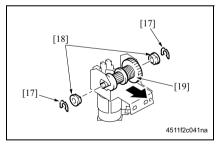
11. Remove eight screws [11], and remove the Lower Cover [12].



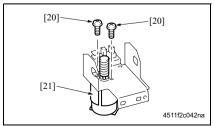
12. Remove the wire saddle [13], and unplug two connectors [14].



13. Remove the screw [15], and remove the Paper Guide Motor Assy [16].

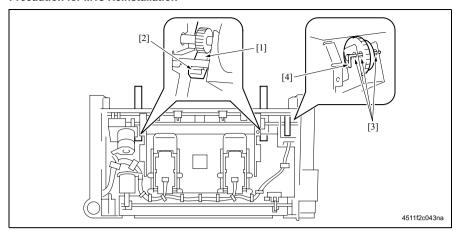


- 14. Remove two C-rings [17].
- 15. Remove two bearings [18], and remove the Clutch Gear Assy [19].



16. Remove two screws [20], and remove M13 [21].

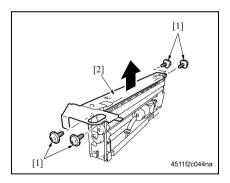
Precaution for M13 Reinstallation



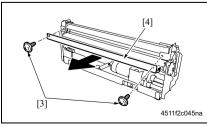
- Press the two Paper Guides [1] in and check that they touch the stopper [2] simultaneously.
- Check that pins [4] can be inserted through the positioning holes [3] (3 holes) of the Paper Guide Sensor Assy.
- 3. Use two screws to secure M13.

3.3.8 Folding Roller

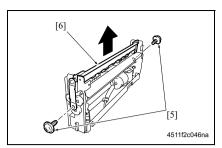
 Remove the Folding Unit. (See P.8)



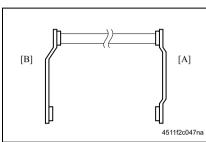
Remove four screws [1] and two springs, and remove the Upper Plate [2].



3. Remove two screws [3], and remove the guide plate [4].

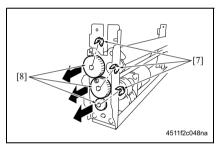


4. Remove two screws [5], and remove the Folding Blade Assy [6].

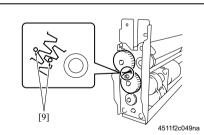


NOTE

- Install the Folding Blade Assy in the direction shown in the left figure.
 [A] Front
 - [B] Rear

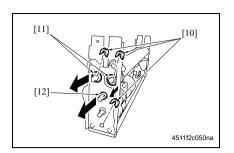


5. Remove three C-rings [7], and remove three gears [8].



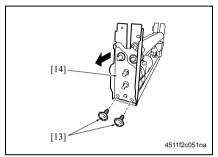
NOTE

 Install the gears so that the mark [9] are aligned to the position shown in the left figure.

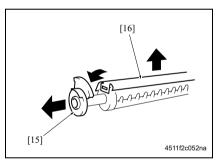


6. Remove three C-rings [10], and remove two bearings [11].

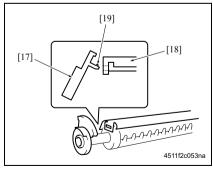
7. Remove the bearing [12].



8. Remove two screws [13], and remove the Rear Holder [14].

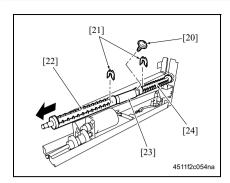


 Remove the gear [15] of Folding Roller /Rt, and remove the Lower Guide Plate [16].

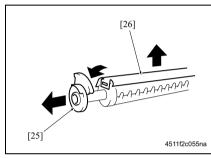


NOTE

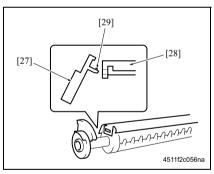
- When installing the gear [17] to the Lower Guide Plate [18], insert the gear [17] at an angle and take care not to break the claws [19].
- Install the Lower Guide Plate as shown on the left.



- 10. Remove the screw [20].
- Remove two C-rings [21], and remove the Folding Roller A [22], B [23] and C [24].

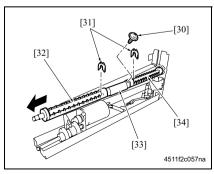


 Remove the gear [25] of Folding Roller /Lt, and remove the Lower Guide Plate [26].



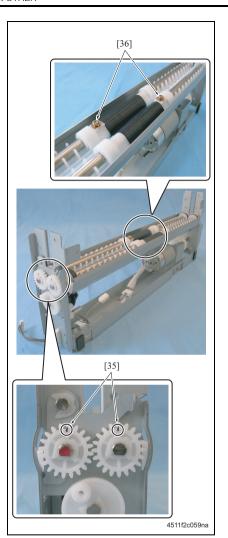
NOTE

- When installing the gear [27] to the Lower Guide Plate [28], insert the gear [27] at an angle and take care not to break the claws [29].
- Install the Lower Guide Plate as shown on the left.



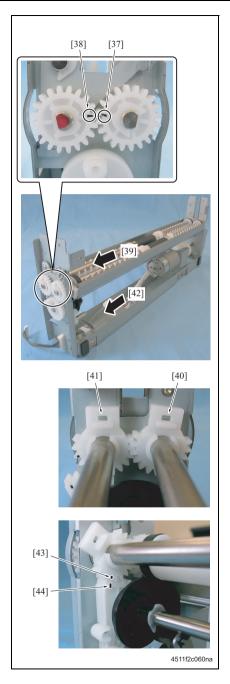
- 13. Remove the screw [30].
- 14. Remove two C-rings [31], and remove the Folding Roller A [32], B [33] and C [34].





NOTE

 When installing the Folding Rollers A, B and C, be sure to align the direction of the mark [35] of the gear with the direction in which the screw [36] is tightened.



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

NOTE

- When installing the Folding Rollers /Rt and /Lt, be sure to install them so that the mark [37] of the Roller Gear /Rt provided on the front of the Folding Unit comes one tooth above the mark [38] of the Roller Gear /Lt.
- When installing the Folding rollers /Rt and /Lt, be sure to install them so that the gear of the Guide Gear /Lt [40] comes one tooth above the gear of the Guide Gear /Rt [41] as seen from the direction of the arrow mark [39].
- When installing the Folding Rollers /Rt and /Lt, be sure to install them so that the mark [43] of the Guide Gear /Rt and the mark [44] of the Sector Gear get aligned with each other as seen from the direction of the arrow mark [42].

■ ADJUSTMENT/SETTING

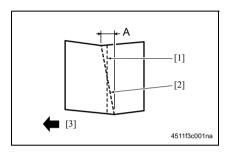
4. MECHANICAL ADJUSTMENT

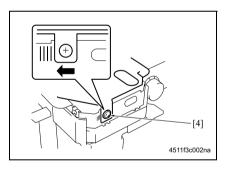
4.1 Fold Skew Adjustment

NOTE

Make this adjustment after any of the following procedures has been performed.

- When the Folding Unit has been replaced.
- When skew occurs in the crease.
- 1. Enter the Half-fold mode and make a copy. (A3 or 11 x 17 Size)





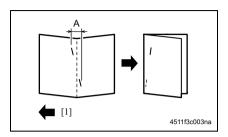
- 2. Fold the output paper along the crease [2].
- Fold the output paper and measure the width A of the paper.
 Specification: 0 ± 1.5 mm
- If the fold position is skewed as shown on the left, make the following adjustment.
- [1] Center
- [2] Crease
- [3] Exit direction
- Open the Front Door, loosen the adjustment screw [4], and move the Folding Unit to the left to make the adjustment. Graduated in 1 mm divisions
- If the fold position is skewed opposite to the figure of step 4, move the Folding Unit to the right to make the adjustment.
- Make another copy and check the fold position.

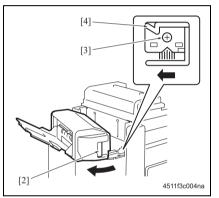
4.2 Center Staple Skew Adjustment

NOTE

Make this adjustment after any of the following procedures has been performed.

- · When Staple Unit 1 or 2 has been replaced.
- When skew occurs in the position of the center staple.





- Set to Fold & Staple mode and make a copy. Measure the width A of the paper. Specification: 0 ± 1.5 mm
- If the staple position is skewed as shown on the left, make the following adjustment.
- [1] Exit direction
- Release the lock release lever [2] of the Saddle Unit.
- Loosen the adjustment screw [3] and move the lock member [4] to the left to make the adjustment.
- If the staple position is skewed opposite to the figure of step 2, move the lock member to the right to make the adjustment.
- Make another copy and check the staple position.



SERVICE MANUAL

Field Service

MT-501 (bizhub 500/420/360)

Confidential – for internal use only, do not distribute

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.

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2007/01	2.0	A	Revision in relation to launching of bizhub 360
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

MT-501

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OO I		
1.	PRODUCT SPECIFICATIONS	1
MAI	NTENANCE	
2.	PERIODIC CHECK	3
2.1	Maintenance procedure	3
2.	.1.1 Cleaning of the Roller	3
3.	OTHER	2
3.1	Disassembly/Adjustment prohibited items	2
3.2	Disassembling and assembling list	5
3.3	Disassembling and assembling procedure	5
3.3	.3.1 Rear Cover/Right Door	5
3.3	.3.2 Front Cover/Upper Cover/Paper Output Tray	5

■ OUTLINE

1. PRODUCT SPECIFICATIONS

A. Type

Туре	4 bins Mailbin (available only for printing from PC)
Installation	Screwed to the FS
Number of Bins	4 bins
Number of Sheets Stored per Bin	125 sheets (80 g/m²)
Storable Paper	Plain Paper (56 to 90 g/m²)
Storable Paper Size	Metric: A4, B5, 8½ x 11 Inch: 8½ x 11, 5½ x 8½S

B. Maintenance

Maintenance Every 250,000 prints

C. Machine specifications

Power Requirements	24V DC (supplied from FS)
Dimensions	624 (W) x 503 (D) x 390 mm (H)
Weight	Approx. 8 kg

D. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

NOTE

• The information herein may be subject to change for improvement without notice.

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■ MAINTENANCE

2. PERIODIC CHECK

2.1 Maintenance procedure

NOTE

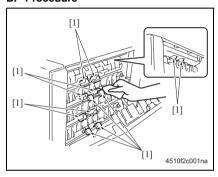
 The alcohol described in the cleaning procedure of Maintenance represents the isopropyl alcohol.

2.1.1 Cleaning of the Roller

A. Periodic cleaning cycle

· Various Rollers: Every 250,000 prints

B. Procedure



- 1. Open the Right Door.
- 2. Using a soft cloth dampened with alcohol, wipe the rollers [1].

3. OTHER

3.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards

NOTE

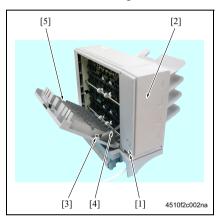
- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

3.2 Disassembling and assembling list

No.	Section	Part name	Ref. page
1		Rear Cover	P.5
2	Cover	Front Cover	P.5
3		Upper Cover	P.5
4		Right Door	P.5
5	Paper Output Tray	Paper Output Tray	P.5

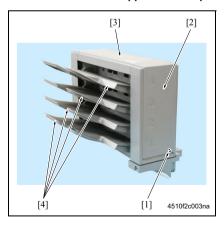
3.3 Disassembling and assembling procedure

3.3.1 Rear Cover/Right Door



- 1. Remove the screw [1] and remove the Rear Cover [2].
- 2. Remove the screw [3], the stopper [4], and remove the Right Door [5].

3.3.2 Front Cover/Upper Cover/Paper Output Tray



- 1. Remove the screw [1] and remove the Front Cover [2].
- Remove the Rear Cover. (See P.5)
- 3. Remove the Upper Cover [3].
- 4. Remove the Paper Output Trays [4].



SERVICE MANUAL

Field Service

JS-502 (bizhub 500/420/360)

Confidential – for internal use only, do not distribute

Revision history

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2007/01	2.0	A	Revision in relation to launching of bizhub 360
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

JS-502

CONTENTS

JS-502

OU	ΓLI	NΕ
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1.	PRODUCT SPECIFICATIONS	1
ΛΑIN	NTENANCE	
2.	OTHER	3
2.1	Disassembly/Adjustment prohibited items	3
2.2	Disassembling and assembling list	4
2.3	Disassembling and assembling procedure	4
2.3	3.1 Upper Cover	4

ANCE

■ OUTLINE

PRODUCT SPECIFICATIONS

A. Type

Name	Job Separator
Туре	Expansion tray
Installation	Installed in the main body
Document Alignment	Center

B. Paper type

Exit Tray	Size		Туре	Capacity
	8½ x 11, 8½ x 11S, 5½ x 8½S Tray 1 A3, A4, A4S, A5S, (Main 8 x 13	Plain Par	Plain Paper (56 to 90 g/m²)	
			OHP transparencies	
,		Special	Thick paper (91 to 210g/m ²)	20 sheets
`			Envelope	
,			Label	
			Letterhead	
Tray 2 (Job Tray)	Inch: 11 x 17, 8½ x 14, 8½ x 11, 8½ x 11S, 5½ x 8½S Metric: A3, B4, A4, A4S, B5, B5S, A5S	Plain Pap	per (56 to 90 g/m ²)	100 sheets

C. Maintenance

D. Machine specifications

Power Requirements	5V DC ± 5 % (supplied from the main body)
Power Consumption	0.2 W or less
Dimensions	450 (W) x 443 (D) x 75 mm (H)
Weight	Approx. 1.7 kg

E. Operating environment

Temperature	Same as the main body.
Humidity	Same as the main body.

NOTE

• The information herein may be subject to change for improvement without notice.

MAINTENANCE

OTHER

2.1 Disassembly/Adjustment prohibited items

- A. Screws to which blue paint or green paint is applied
- Blue paint or green paint is applied to some screws to prevent them from coming loose.
- As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.

B. Red-painted screws

 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 Boards

⚠ Caution

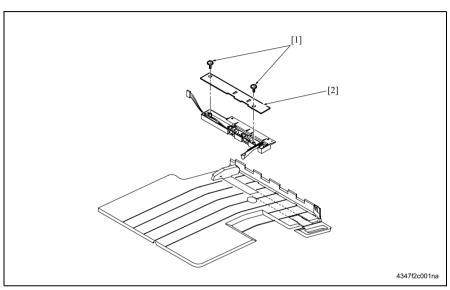
- When removing a circuit board or other electrical component, refer to "SAFETY AND IMPORTANT WARNING ITEMS" and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- When it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

2.2 Disassembling and assembling list

ĺ	No.	Section	Part name	Ref.Page
ĺ	1	Cover	Upper Cover	See P.4

2.3 Disassembling and assembling procedure

2.3.1 Upper Cover



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



SERVICE MANUAL

Field Service

IC-204

Confidential – for internal use only, do not distribute

Revision history

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2007/01	2.0	A	Revision in relation to launching of bizhub 360
2006/02	1.0	_	Issue of the first edition
Date	Service manual Ver.	Revision mark	Descriptions of revision

CONTENTS

IC-204

OI	UTLINE	
1.	PRODUCT SPECIFICATIONS.	1
M	AINTENANCE	
2.	FIRMWARE VERSION UP	3
	DISASSEMBLY / REASSEMBLY	
(3.1 Tools Required	4
(3.2 Removal / Installation of Printer key control board	5
ΑI	DJUSTMENT / SETTING	
4.	SERVICE MODE	7
5.	Starting and Finishing the Service Mode	7
TF	ROUBLESHOOTING	
	TROUBLESHOOTING THE PRINTING SYSTEM	
6	6.1 Troubleshooting of the print controller and copier	9
		_

■ OUTLINE

1. PRODUCT SPECIFICATIONS

A. Type

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Type:	Built-in box type for the KONICA MINOLTA Printer/Copier
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B. Functions

Resolution	600 x 600 dpi
Gradation	binary
Blank area	PCL6: 4.23mm (left, right, top and bottom without variation)
	PCL5e: 4.23mm (left, right, top and bottom without variation)
	PS: 4.23mm (left, right, top and bottom without variation)
Printable Area	292.77 x 427.57mm (The maximum paper size)
No. of Print	1 to 999
Continuous Print Speed	bizhub 500: 50 ppm (A4, 8.5 x 11) / (600 x 600 dpi)
	bizhub 420: 42 ppm (A4, 8.5 x 11) / (600 x 600 dpi)
	bizhub 360: 36 ppm (A4, 8.5 x 11) / (600 x 600 dpi)
Printer Description Language	PCL5e/PCL6/PostScript3 (compatible)
Compliant OS	Windows 98SE/Me
	Windows NT 4.0 (Service Pack 6a or more)
	Windows 2000 (Service Pack 4 or more)
	Windows XP (Service Pack 1 or more)
	Windows XP x64 Edition
	Windows Server 2003
	Windows Server 2003 x64 Editions
	Mac OS 9.x
	Mac OS X v10.2/v10.3/v10.4
Printer Driver	PCL printer driver for Windows 98SE/Me/NT 4.0/2000/XP/Server
	2003 (XP/Server 2003 includes the x64 Edition (PS).)
	PS printer driver for Windows
	PS printer driver for Windows/Macintosh
	No driver for PCL5e
Network Functions	
Printing Method	SMB (Windows), Pserver (IPX/SPX), Ipd/lpr (TCP/IP for Windows NT
	4.0/2000), lpd/lpr (TCP/IP for UNIX), IPP (TCP/IP), AppleTalk (Ether-
	Talk), NPrinter/RPrinter (IPX/SPX), RAW (Port 9100; extensible up to
	ports)
Dedicated Utilities	EMS Plug-in
	NDPS Gateway
	Direct Print

C. Paper

Paper Size	Same as copier
Paper Type	Same as copier
Paper Weight	Same as copier

D. Maintenance

Maintenance	Same as copier	

E. Machine Data

System Memory	Same as copier
Host Interface	Ethernet, Serial (RS-232C/USB), Parallel (IEEE1284)
Hard Disk Drive	40 GB (supporting HD-505)
Power	Same as copier
Network Function	
Network Interface	Ethernet (100 Base-TX/10-Base-T)
Frame Type	IEEE 802.2/802.3/Ethernet II/IEEE802.3 SNMP
Ethernet Connection	100 Base-TX/10-Base-T
Network Connector	RJ-45
LED	Green LED 2

F. Operating Environment

Temperature	Same as copier
Humidity	Same as copier

■ MAINTENANCE

2. FIRMWARE VERSION UP

Firmware for IC-204 is contained in the copier firmware (MFP Controller). With the updating of MFP controller version, the version of the IC-204 firmware is also updated.

Firmware's version is upgraded by ISW.

See "5. FIRMWARE VERSION UP" in the Field Service for the main body.

3. DISASSEMBLY / REASSEMBLY

⚠ Caution

· Assembly should be made in reverse order of disassembly unless otherwise noted.

Precautions against static electricity.

- · Keep the image controller in an antistatic bag while transporting it or storing it.
- When working in places where static electricity tends to accumulate, such as on a carpet, discharge electricity from your body by touching any metallic portion before handling the image controller.
- Do not touch the contacts on the image controller with your hands, as that may result in poor conductivity.
- Do not physically damage the image controller by dropping it, bending it, etc.

3.1 Tools Required

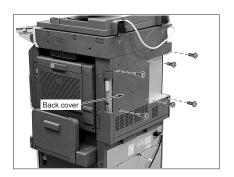
Standard screwdriver

Be sure to unplug the power cable, not only to turn the copier off, before attempting to make servicing.

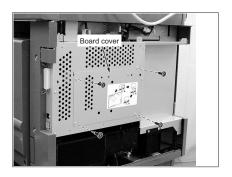
⚠ Caution

- Before engaging in Disassembly/Reassembly, check to make sure that all the cables are unplugged from the copier.
- There may be occasions when boards are damaged if no appropriate grounding measures are taken. Wear a wrist strap or others during servicing.
- Disassembly/Reassembly should be made on cushioning materials.

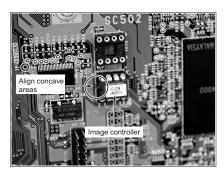
3.2 Removal / Installation of Printer key control board



- Turn the Sub and Main power switches OFF of the main body, and unplug the power cord from the outlet.
- 2. Remove the back cover(6 screws).



3. Remove the board cover(4 screws).



 Remove the image controller in the location with the IC204 mark on the system control board.

NOTE

- You should be careful not to damage the board.
- Remove the image controller pulling it perpendicularly to the system control board.
- Align the concave area on the left side of the image controller and the concave area on left side of the slot in the system control board when installing.
- Assembly should be made in reverse order from disassembly.

■ ADJUSTMENT / SETTING

4. SERVICE MODE

In the service mode, various adjustments / settings are available. See "10. SERVICE MODE" in Field Service for the main body.

5. Starting and Finishing the Service Mode

- 1. Confirm that the normal Copy Mode screen is on the display.
- Press the [Utility/Counter] button. [MetaCount/Utility] screen appears.
- 3. Press the [Details] key.
 - [MetaCount] screen appears.
- 4. Press the keypad in the following order.

Stop -> 0 -> 0 -> Stop -> 0 -> 1
[Service Mode menu] screen appears.

NOTE

- If the CE password has been provided, you should enter the password to enter the service mode.
- Press the key of items to be set.
 Setting screen of each item appears.
- Set items as required and press the [OK] key after completion.
 Setting is accepted and the [Service Mode menu] screen returns.
- Press the [Exit] key.
 Normal Copy Mode screen returns.

■ TROUBLESHOOTING

6. TROUBLESHOOTING THE PRINTING SYSTEM

This table lists information about the symptoms, possible causes, and remedies for problems that may occur with the printing system (combination of the print controller and copier). It is intended to help engineers find information as quickly as possible, and provide basic solutions.

⚠ Caution

. See the "Copier Service Manual" for information about Error Cord List.

6.1 Troubleshooting of the print controller and copier

Symptoms	Causes	Actions
"Warming up" does not disappear.	Copier is in trouble.	Locate the cause of trouble of the copier.
Printout is defective, or nothing can be printed.	The system board or some boards of the copier are defective.	Put the copier in service mode and per- form test. If it operates properly, system board may be failure.
Print controller does not start.	The printer key control board is inactive. Or printer key control board is not installed.	Check the connector of the controller board. Replace the system board as necessary.
	Software of the print controller is defective.	Reinstall the software of the print controller.
Test print can be produced but not from the parallel port, USB port.	The parallel port, USB port has something wrong or the cable is wrong or, the problem is on the computer side.	Check the cables (internal/external). Perform test using a data generator or a well-proven PC/I/O cable. Replace the system board as necessary.
Test print can be produced and all ports are good, but user jobs cannot be printed.	Some software error has happened.	Print controller's software or application program has something wrong. Save the file, which failed to be printed, in the disk and analyze the problem by suitable means.

7. Data Capture

If any fault is caused in relation with the printer, acquire the print job data for the fault analysis. Capture data of up to 5 jobs can be saved. When new data is saved, oldest one is deleted.

⚠ Caution

To enable this function, following conditions should be met.

- · Hard disk should have been installed in the main body printer (copier).
- [Administrator Setting] [Security Setting] [Security Details] [Print Data Capture] should be set to [Allow].
- [Administrator Setting] [Network Setting] [FTP Setting] [FTP Server] should be set to [ON].
 - Activate the service mode.
 - (Refer to the steps 1 through 7 of "ADJUSTMENT / SETTING, 5. Starting and Finishing the Service Mode".)
 - Press [System2] [Data Capture] and select [ON]. Selecting [ON] saves the job data transmitted from PC in the copier hard disk.
 - 3. Confirm the IP address of the copier.
 - Connect the Windows PC and copier with the Ethernet cable.
 - Activate the command prompt, specify the IP address of the copier and activate the FTP.



- Microsoft Windows MP [Version 5.1.2600]
 (C) Copyright 1985-2001 Microsoft Corp.
 (C) Yfto 172.18.0.225
 Connected to 172.18.0.225.
 Connection closed by remote host.
 220 MONICA MINUTA FIP server readv.
 User (172.18.0.225: (none)): capture
 331 Password required for capture.
 Password:
 230 User capture lossed in.
- 230 User capture lossed in.

 230 User capture lossed in.

 250 PRR command successful.

 150 Osenins ASCII mode data connection for capture.

 2708n.cpt

 2708n.cpt

 2712n.cpt

 2714n.cpt

 2714n.cpt

 2714n.spt

 2715 bytes received in 0.00Seconds 50000.00Kbytes/sec.

 150

- Enter User and Password.
- User: capture
- Password: sysadm

 Display the list of files which can be captured with the [Is] or [dir] command.

```
cal c716n.cpt
c706n.cpt
c706n.cpt
c706n.cpt
c706n.cpt
c714n.cpt
c714n.cpt
c714n.cpt
c714n.cpt
c714n.cpt
c714n.cpt
c714n.cpt
ftp: 50 bytes received in
ftp: 5inary
200 Type set to 1.
```

8. Set the file transfer mode to binary transfer with the [binary] command.

- Transfer the data to be captured to PC with the [get] or [mget] command.
- 10. Exit from the command prompt.

NOTE

 If you set [Administrator Setting] - [Security Setting] - [Security Details] - [Print Data Capture] to [Restrict] after acquiring the capture data, the job data saved in the hard disk will be deleted.



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Printed in Japan CC36GA-M-FE2-910