Model MT-C5 Machine Codes: D131/D132/D133

Field Service Manual

Safety, Conventions, Trademarks

Safety

Prevention of Physical Injury

- 1. Before disassembling or assembling parts of the machine and peripherals, make sure that they are unplugged.
- 2. The plug should be near the machine and easily accessible.
- 3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.
- 4. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
- 5. If the [Start] key is pressed before the machine completes the warm-up period (the [Start] key starts blinking red and green), keep hands away from the mechanical and the electrical components as the machine starts making copies as soon as the warm-up period is completed.
- 6. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.
- 7. Always connect the power cord directly into a wall outlet. Never use an extension cord.
- 8. Inspect the power cord for damage. Never cut or attempt to modify the power cord in any way.
- Keep the machine away from dust and high humidity. Never expose the machine to corrosive gases.
- 10. Never use flammable liquids or aerosols around the machine.
- 11. Never handle the power cord or plug with wet hands.

Health Safety Conditions

- 1. Never operate the machine without the ozone filters installed.
- 2. Always replace the ozone filters with the specified types at the proper intervals.
- 3. Toner and developer are non-toxic, but if you get either of them in your eyes by accident, it may cause temporary eye discomfort. Try to remove with eye drops or flush with water as first aid. If unsuccessful, get medical attention.
- 4. This machine employs an LED array in the scanner and image writing unit.



This machine is rated as a Class 1 LED Device. It is safe for both office and EDP use.

Observance of Electrical Safety Standards

- 1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models.
- 2. The NVRAM on the controller board has a lithium battery which can explode if replaced incorrectly. Replace the NVRAM only with an identical type. However, the manufacturer recommends replacing the entire NVRAM, not just the battery. Never recharge or incinerate a used NVRAM battery. Dispose of a used NVRAM or NVRAM battery in accordance with local regulations.
- 3. The danger of explosion exists if the battery on the controller board is incorrectly replaced. Replace the battery only with the equivalent type recommended by the manufacturer. Discard the used controller board battery in accordance with the manufacturer's instructions and local regulations.
- 4. Test the breaker switches on the main machine and all peripheral devices at least once a year.

Safety and Ecological Notes For Disposal

- 1. Do not incinerate toner bottles or used toner. Toner dust may ignite suddenly when exposed to an open flame.
- 2. Dispose of used toner, developer, and organic photoconductors in accordance with local regulations. (These are non-toxic supplies.)
- 3. Dispose of replaced parts in accordance with local regulations.
- 4. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.

ACAUTION

 The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

Laser Safety

The Center for Devices and Radiological Health (CDRH) prohibits the repair of laser-based optical units in the field. The optical housing unit can only be repaired in a factory or at a location with the requisite equipment. The laser subsystem is replaceable in the field by a qualified Customer Engineer. The laser chassis is not repairable in the field. Customer engineers are therefore directed to return all chassis and laser subsystems to the factory or service depot when replacement of the optical subsystem is required.

AWARNING

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

WARNING:

Turn off the main switch before attempting any of the procedures in the Laser Unit section. Laser beams can seriously damage your eyes.

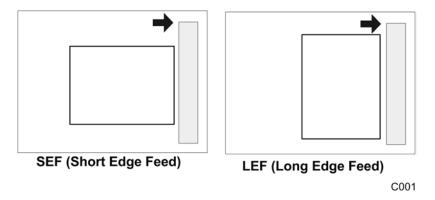
CAUTION MARKING:



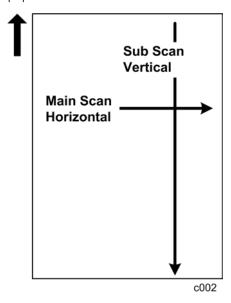
Conventions and Trademarks

Conventions

Symbol	What it means
CT	Core Tech Manual
F	Screw
	Connector
C	E-ring
(7)	C-ring
Ş.	Harness clamp



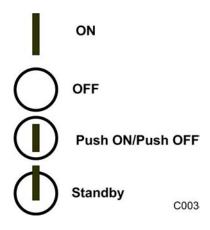
The notations "SEF" and "LEF" describe the direction of paper feed. The arrows indicate the direction of paper feed.



In this manual "Horizontal" means the "Main Scan Direction" and "Vertical" means the "Sub Scan Direction" relative to the paper feed direction.

Switches and Symbols

Where symbols are used on or near switches on machines for Europe and other areas, the meaning of each symbol conforms with IEC60417.



Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

⚠ WARNING

 A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

ACAUTION

 A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

Important

 Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine

UNote

• This information provides tips and advice about how to best service the machine.

Points to Confirm with Operators

At the end of installation or a service call, instruct the user about use of the machine. Emphasize the following points.

- Show operators how to remove jammed paper and troubleshoot other minor problems by following the procedures described in the operating instructions.
- Point out the parts inside the machine that they should never touch or attempt to remove.
- Confirm that operators know how to store and dispose of consumables.
- Make sure that all operators have access to an operating instruction manual for the machine.

- Confirm that operators have read and understand all the safety instructions described in the operating instructions.
- Demonstrate how to turn off the power and disconnect the power plug (by pulling the plug, not the cord) if any of the following events occur:
 - 1. Something has spilled into the product.
 - 2. Service or repair of the product is necessary.
 - 3. The product cover has been damaged.
- Caution operators about removing paper fasteners around the machine. They should never allow paper clips, staples, or any other small metallic objects to fall into the machine.
- Caution operators about storing extra toner cartridges. To prevent clumping on one end of the
 toner cartridge, it should always be stored horizontally on a flat service. A toner cartridge should
 never be stored on its end vertically.

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1. Product Information

Specifications

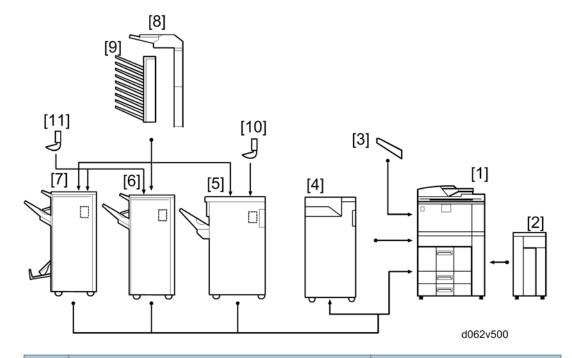
See "Appendices" for the following information:

- General Specifications
- Peripheral Specifications

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Machine Configuration

Peripheral Units



No.	Item	Code
1	Mainframe	D131/D132/D133
	A3/11" x 17" Tray Type 9001	D482
	Tab Sheet Holder Type 3260	B499
2	LCIT RT4010	D613
	8 1/2"x14" Paper Size Tray Type 9002	B474
3	Copy Tray Type 9002	B756
4	Multi Folding Unit FD4000	D615
5	Finisher SR4080	D610
	Output Jogger Unit Type 9002B	B513
	Punch Unit Type 850 SC	A812

1

No.	Iter	n	Code
		Punch Unit Type 1075 3/2	B531
		Punch Unit Type 1075 EU 2/4	B531
6	Fin	isher SR4060	D611
7	Fin	isher SR4070	D612
		Punch Unit Type 3260 SC	B702
		Punch Unit Type 3260 2/4 EU	B702
		Punch Unit Type 3260 NA 3/2	B702
8	Со	ver Interposer Tray Cl4000	D614
9	Мс	nilbox CS4000	D616
10	Ou	tput Jogger Unit Type 9002B	B513 for SR4080
11	Ou	tput Jogger Unit Type 9002A	B703 for SR4030/4040

Other Options

Mainframe Options: External

Item	Code	Comment
Card Reader Bracket	B498	On mainframe
Key Counter Bracket Type 1027	B452	On mainframe
USB2.0/SD Slot Type C	D464	On mainframe

Mainframe Options: Internal

Item	Code	Comment
Copy Connector Type 3260	B328	Connect to Slot B
Copy Data Security Unit Type F	B829	Connect to IPU
Gigabit Ethernet Type B	D377	Connect to CTL
Optional Counter Interface Unit Type A	B879	Connect to IPU

Controller Options: I/F Slots

Item	Code	Comment*1
Bluetooth Interface Unit Type D	D566	USB Host
File Format Converter Type E	D377	I/F Slot A
IEEE 1284 Interface Board Type A	B679	I/F Slot A
IEEE 802.11a/g Interface Unit Type J	D377	I/F Slot A
IEEE 802.11g Interface Unit Type K	D377	I/F Slot A

 $\textbf{Note} : An \ \textbf{IEEE} \ 802.11 \ interface \ unit \ and \ \textbf{Bluetooth} \ interface \ unit \ cannot \ be \ installed \ and \ used \ together.$

Controller Options: SD Cards

Item	Code	Comment	
Browser Unit Type J	D620	SD Card Slot 2	
Data Overwrite Security Unit Type H	D377	Built-in	
HDD Encryption Unit Type A	D377	Built-in	
PostScript3 Unit Type 9002	D620	SD Card Slot 2	
Printer/Scanner Unit Type 9002	D620	SD Card Slot 1	
VM Card Type U	D640	SD Card Slot 2	
IPDS Unit Type 9002	D620	SD Card Slot 2	
Netware	D620	SD Card Slot 2	

Fax Options

Item	Code
Fax Option Type 9002	D619
G3 Interface Unit Type 9002	D619
Fax Connection Unit Type E	D621

1

Guidance for Those Who are Familiar with Predecessor Products

The D131/D132/D133 series succeeds the D062/D063/D065/D066 series. If you have experience with the predecessor products, the following information will be of help when you read this manual.

Differences from Predecessor Products

	D062/D063/D065/D066	D131/D132/D133
SD Slot	2 slots	
I/F Slot	2 slots	
Model Line Up	Four Models	Three Models
	D062 60 ppm	D131 60 ppm
	D063 70 ppm	
	D065 80 ppm	D132 75 ppm
	D066 90 ppm	D133 90 ppm

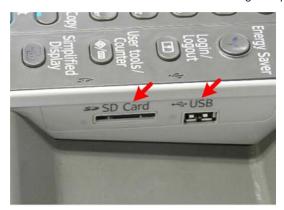
Hot Roller Dia.	D062/063/06 5	D066	D131/132	D133
	40 mm	50 mm	40 mm	50 mm
Pressure Roller Dia.	D062/063/06 5	D066	D131/132	D133
	40 mm	50 mm	40 mm	50 mm

Here is a summary of some other differences:

• ADF. The speed of scanning originals has been improved..

Mode	Previous (mm/s)	New (mm/s)
BW	426.5	472
FC	310.5	708

- ADF Cable. The relay connector has been discarded to prevent noise.
- Exposure Unit. The exposure lamp has been upgraded. The 3-beam APS sensors have been
 replaced with a 2-beam + 1-beam configuration. The exposure unit is spot welded (two screws
 have been eliminated).
- Web Motor Lock Detection. Three new SC codes (SC540-02, -03, -04) have been added to detect web motor lock.
- Development unit. The color of the pressure release filter has been changed from white to gray.
- Paper Feed. Paper feed has been upgraded. There is no change in the removal or replacement of the paper feed units.
- Controller. The GW controller has been upgraded to the GW+ Controller.
- MFP Options. DOS (Data Overwrite Security), Data Encryption, and Scan-to-Media are now provided as standard.
- USB/SD Slots. A USB slot and SD card slot is provided on the right side of the operation panel.
 Installation of a device for these slots is no longer required.



d131f101

- Safe Shutdown. After the main power switch of the machine has been turned off, the machine will not shut down immediately. A message states that shutting down may require up to two minutes to complete. The SDB (a new board) keeps the power supply to the controller until the HDD unit has been shutdown safely. When shutting down from normal stand-by mode, if the safe shutdown takes more than 2 minutes, there is a problem with the controller board and it may need to be replaced.
- Fax Unit. The MBU and FCU are combined on one board. After replacing the FCU, the SRAM data
 from the old FCU must be transferred to the new FCU. The following data are transferred: TTI, RTI,
 CSI, bit switch settings, RAM address settings, and NCU parameter settings. For more, see the fax
 installation manual.

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Unit and Option Name and Number Changes

The main peripherals and other options are essentially the same as the same items for the predecessor machines. However, some of the item names and codes have changed due to changes in the shapes of external covers, cover colors, etc.

Main Machine and Peripheral Units



• Changes are marked in **bold** in the right column.

D062/D063/D065/D066	D131/D132/D133
Item	İtem
Mainframe (D062/D064)	Mainframe (D131)
Mainframe (D065)	Mainframe (D132)
Mainframe (D066)	Mainframe (D133)
LG Size Tray Type 1075 (B474)	8 1/2"x14" Paper Size Tray Type 9002 (B474)
	ADF Handle C (D593)
Copy Tray Type 2075 (B756)	Copy Tray Type 9002 (B756)
Cover Interposer Tray Type 3260 (B704)	Cover Interposer Tray CI4000 (D614)
Finisher SR4030 (D374)	Finisher SR4060 (D611)
Finisher SR4040 (D373)	Finisher SR4070 (D612
Punch Unit Type 3260 SC (B702	Punch Unit Type 3260 SC (B702)
Output Jogger Unit Type 3260 (B703)	Output Jogger Unit Type 9002A (B703)
Finisher SR4050 (D460)	Finisher SR4080 (D610)
Punch Unit Type 850 SC (A812)	Punch Unit Type 850 SC (A812)
Output Jogger Unit Type 1075 (513)	Output Jogger Unit Type 9002B (513)
Key Counter Bracket Type 1027 (B452)	Key Counter Bracket Type 1027 (B452)
RT43 (LCT) (B473)	LCIT RT4010 (D613)
Mailbox CS391 (B762)	Mailbox CS4000 (D616)

D062/D063/D065/D066	D131/D132/D133
Item	İtem
Memory Unit Type B 32MB (G578)	Memory Unit Type B 32MB (G578)
Multi Folding Unit FD5000 (D454)	Multi Folding Unit FD4000 (D615)
Optional Counter Interface Unit Type A (B870)	Optional Counter Interface Unit Type A (B870)
Tab Sheet Holder Type 9002 (B499)	Tab Sheet Holder Type 3260 (B499)
Punch Unit Type 3260 2/4 EU (B702)	Punch Unit Type 3260 2/4 EU (B702)
Punch Unit Type 1075 EU 2/4 (B531)	Punch Unit Type 1075 EU 2/4 (B531)
Punch Unit Type 3260 NA 3/2 (B702)	Punch Unit Type 3260 NA 3/2 (B702)
Punch Unit Type 1075 3/2 (B531)	Punch Unit Type 1075 3/2 (B531)
A3/11"x17" Tray Type 9001 (D482)	A3/11"x17" Tray Type 9001 (D482)

Controller Options

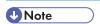


• Changes are marked in **bold** in the right column.

D062/D063/D065/D066	D131/D132/D133
Item	ltem
Bluetooth Interface Unit Type 3245 (B826)	Bluetooth Interface Unit Type D (D566)
Browser Unit Type E (D430)	Browser Unit Type J (D620)
Card Reader Bracket (B498)	Card Reader Bracket (B498)
Copy Connector Type 3260 (B328)	Copy Connector Type 3260 (B328)
Copy Data Security Unit Type F (B829)	Copy Data Security Unit Type F (B829)
Data Overwrite Security Unit Type H (D377)	Data Overwrite Security Unit Type H (D377)
File Format Converter Type E (D377)	File Format Converter Type E (D377)
Gigabit Ethernet Type B (D377)	Gigabit Ethernet Type B (D377)
IEEE 1284 Interface Unit Board Type A (B679)	IEEE 1284 Interface Unit Board Type A (B679)

D062/D063/D065/D066	D131/D132/D133
Item	ltem
IEEE 802.11g Interface Unit Type K (D377)	IEEE 802.11g Interface Unit Type K (D377)
IEEE 802.11a/g Interface Type J (D377)	IEEE 802.11a/g Interface Type J (D377)
PostScript3 Unit Type 9001 (D462)	PostScript3 Unit Type 9002 (D620)
Printer/Scanner Unit Type 9001 (D462)	Printer/Scanner Unit Type 9002 (D620)
USB 2.0/SD Slot Type C (D464)	
VM Card Type J (D463)	VM Card Type U (D640)

Fax Options

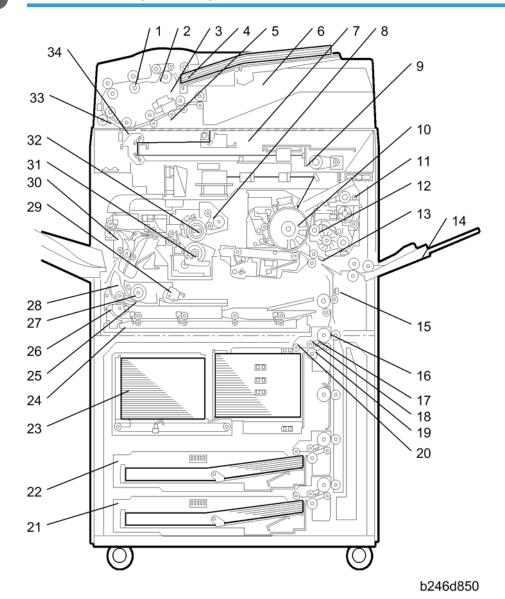


• Changes are marked in **bold** in the right column.

D062/D063/D065/D066	D131/D132/D133
Item	ltem
Fax Option Type 9001 (D418)	Fax Option Type 9002 (D619)
G3 Interface Unit Type 9001 (D418)	G3 Interface Unit Type 9002 (D619)
Memory Unit Type B 32MB (G578)	
	Fax Connection Unit Type E (D621)

Overview

Mechanical Component Layout



- 1. Entrance Roller (ADF)
- 2. Feed Belt (ADF)
- 3. Separation Roller (ADF)
- 4. Pick-up Roller (ADF)

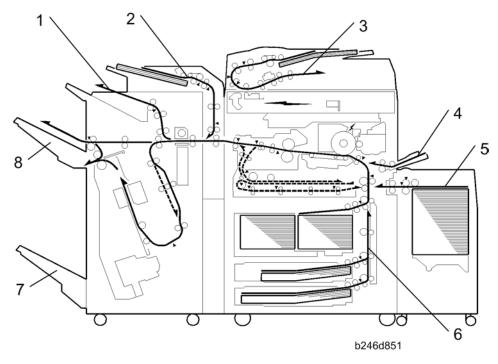
- 5. CIS (Contact Image Sensor)
- 6. Original Feed-in Tray
- 7. Exposure Glass
- 8. Fusing Unit

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- 9. CCD
- 10. OPC Drum
- 11. Development Unit
- 12. Development Roller
- 13. Registration Sensor
- 14. By-pass Tray
- 15. Relay Sensor
- 16. Grip Roller
- 17. Feed Sensor (Paper Tray)
- 18. Feed Roller (Paper Tray)
- 19. Separation Roller (Paper Tray)
- 20. Pick-up Roller (Paper Tray)
- 21. Universal Tray (Tray 3)

- 22. Universal Tray (Tray 2)
- 23. Tandem Tray (Tray 1)
- 24. Duplex Unit
- 25. Inverter
- 26. Inverter Exit Roller
- 27. Inverter Entrance Roller
- 28. Duplex Junction Gate
- 29. Reverse Trigger Roller
- 30. Exit Unit
- 31. Pressure Roller
- 32. Hot Roller
- 33. Scanning (ADF)
- 34. Exposure (ADF)

Paper Path (With Cover Interposer Tray)



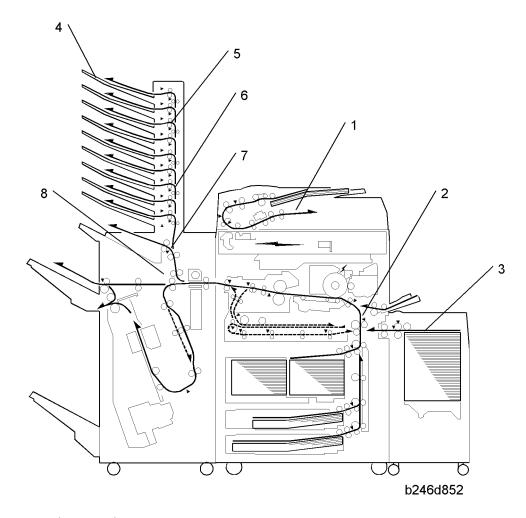
- 1. Proof Exit Tray
- 2. Cover Sheet Path

- 3. Original Path
- 4. By-pass Tray

- H
- 5. LCT Feed
- 6. Vertical Transport Path

- 7. Finisher Exit Tray 2
- 8. Finisher Exit Tray 1

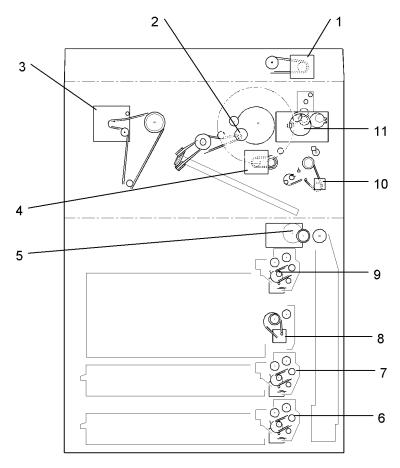
Paper Path (With 9-Bin Mailbox)



- 1. Original Paper Path
- 2. Vertical Transport Path
- 3. LCT Feed
- 4. Selected Trays
- 5. Turn Gates
- 6. Mailbox Paper Path
- 7. Junction Gate (paper goes either up to the mailbox or out to the finisher's proof tray)

8. Junction Gates (two junction gates control the paper path inside the finisher)

Drive Layout



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- 1. Scanner Motor
- 2. Drum Motor
- 3. Fusing/Exit Motor
- 4. Registration Motor
- 5. Toner Collection Motor
- 6. Paper Feed Motor 3

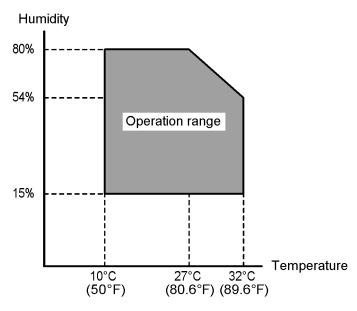
- 7. Paper Feed Motor 2
- 8. Lower Relay Motor
- 9. Paper Feed Motor 1
- 10. By-pass Motor
- 11. Development Motor

Installation Requirements

Operating Environment

2. Installation

- 1. Temperature Range
 - Recommended: 15 °C to 25 °C (59 °F to 77 °F)
 - Possible: 10 °C to 32 °C (50 °F to 90 °F)
- 2. Humidity Range:
 - Recommended: 30% to 70 %RH
 - Possible: 15% to 80% RH (27 °C 80%, 32 °C 54%)
- 3. Ambient Illumination: Less than 1,500 lux (do not expose to direct sunlight or strong light.)
- 4. Ventilation: Room air should turn over at least 3 times per hour
- 5. Ambient Dust: Less than 0.10 mg/m³



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- 6. If the place of installation is air-conditioned or heated, do not place the machine where it will be:
 - Subjected to sudden temperature changes
 - · Directly exposed to cool air from an air-conditioner

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- · Directly exposed to heat from a heater
- 7. Do not place the machine where it will be exposed to corrosive gases.
- 8. Do not install the machine at any location over 2,000 m (6,500 feet) above sea level.
- 9. Place the copier on a strong and level base with the front and back of the machine within ±5 mm (0.2") of level.
- 10. Do not place the machine where it may be subjected to strong vibrations.
- 11. Do not connect the machine to a power source shared with another electrical appliance.
- 12. The machine can generate an electromagnetic field which could interfere with radio or television reception.

Machine Level

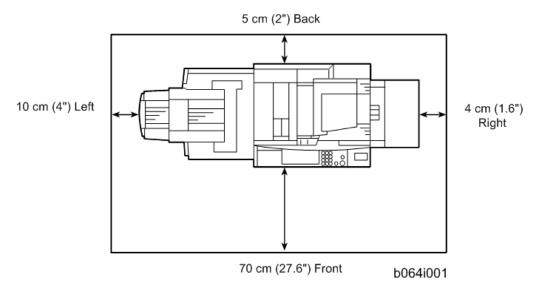
Front to back: Within ±5 mm (0.2") of level

Right to left: Within ±5 mm (0.2") of level

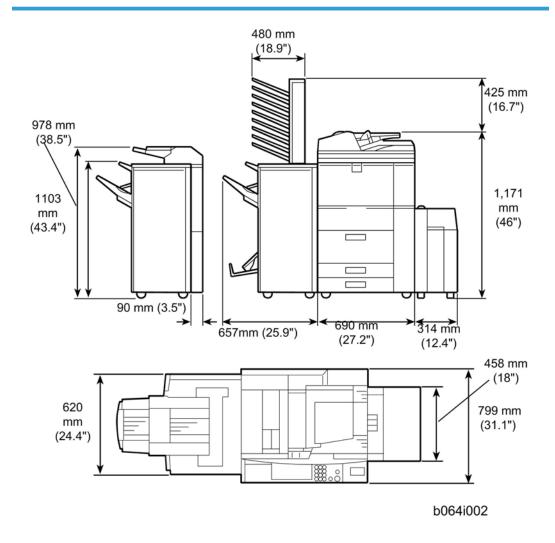
The machine legs may be screwed up or down in order to level the machine. Set a carpenter's level on the exposure glass.

Minimum Space Requirements

Place the copier near the power source, providing minimum clearance as shown below. The same amount of clearance is necessary when optional peripheral devices are installed.



Dimensions



Peripheral/Option Summary Table

The table below summarizes all the peripheral devices and controller options.

	Name	Class* 1	Comment
B498	Card Reader Bracket	1	Connected directly to the mainframe
B328	Copy Connector Type 3260	1	Links two mainframes
B756	Copy Tray Type 9002	1	Small output tray for mainframe

	Name	Class* 1	Comment
D619	Fax Option Type 9002	1	Board
D611	Finisher SR4060 (D611)	1	Punching, sorting, shifting, corner/booklet stapling
D612	Finisher SR4070	1	Punching, sorting, shifting, corner stapling only
D610	Finisher SR4080 (D610)	1	Punching, sorting, shifting, corner stapling only
D619	G3 Interface Unit Type 9002 (D619)	1	Board
B452	Key Counter Bracket Type 1027	1	Common option
D613	LCIT RT4010	1	Paper bank for LT/A4 paper
D615	Multi Folding Unit FD4000	1	
B474	8 1/2"x14" Paper Size Tray Type 9002	1	Paper bank for LG paper
D482	A3/11" x 17" Tray Type 9001	1	Installed in Tray 1 (Tandem Tray)
D614	Cover Interposer Tray CI4000	2	Installed on the D610, D611, D612
D616	Mailbox CS4000	2	Installed on D611, D612
B703	Output Jogger Unit Type 9002A	2	Installed on D611, D612
B513	Output Jogger Unit Type 9002B	2	Finisher SR4080 (D610)
B513	Output Jogger Unit Type 9002B	2	Installed on D610
A812	Punch Unit Type 850 SC	2	Installed in D610
B499	Tab Sheet Holder Type 3260	2	Installed in Tray 1 (Tandem Tray)
B702-17	Punch Unit Type 3260 NA 2/3	2	Installed in D611, D612
B531-27	Punch Unit Type 1075 EU 2/4	2	Finisher SR4080 (D610)
B702-27	Punch Unit Type 3260 EU 2/4	2	Installed in D611, D612
B531-17	Punch Unit Type 1075 NA 3/2	2	Finisher SR4080 (D610)

	Name	Class* 1	Comment
D566	Bluetooth Interface Unit Type D (D566)	3	USB Host
D620	Browser Unit Type J	3	SD card
B829	Copy Data Security Unit Type F	3	IPU Board
D377-06	Data Overwrite Security Unit Type H	3	SD card (pre-installed)
D377	File Format Converter Type E	3	Board
D377	Gigabit Ethernet Type B	3	Board
B679	IEEE1284 Interface Board Type A	3	Board
D620	PostScript3 Unit Type 9002 (D620)	3	SD card
D620	Printer/Scanner Unit Type 9002 (D620)	3	SD Card
D640	VM Card Type U (D640)	3	SD card
D377	IEEE 802.11a/g, /g Interface Unit Type K/J	3	Board
D464	USB2.0/SD Slot Type B	3	Installed in mainframe

*1 Key:

- Class 1: Peripheral units connected directly to the mainframe
- Class 2: Components installed on or in peripheral units (punches, etc.)
- Class 3: MFP controller options (SD cards, boards)

Power Requirements

ACAUTION

- Make sure that the wall outlet is near the main machine and easily accessible. Make sure the plug is firmly inserted in the outlet.
- Avoid multi-wiring.
- Be sure to ground the machine.

• Never set anything on the power cord.

	North America 120 V, 60 Hz: 20 A or more
Input voltage level	Europe/Asia 220 V to 240 V, 50 Hz/60 Hz: 10 A or more
	Taiwan 110V, 60 Hz, 20A or more
Permissible voltage fluctuation	±10%

ACAUTION

Never turn off the main power switch when the power LED is lit or flashing. To avoid damaging the
hard disk or memory, press the operation power switch to switch the power off, wait for the power
LED to go off, and then switch the main power switch off.

The Main Power LED lights or flashes at the following times:

- While the platen cover or ADF is open
- While the main machine is communicating with the network server
- While the machine is accessing the hard disk or memory when reading or writing data.

There are two power switches on the machine:

- Main Power Switch: Located on the front left corner of the machine and covered by a plastic cover.

 This switch should always remain on unless the machine is being serviced.
- Operation Power Switch: Located on the right side of the operation panel. This is the switch normally used by the customer to power the machine on and off.

Main Machine

Accessory Check

Check the accessories and their quantities against this list:

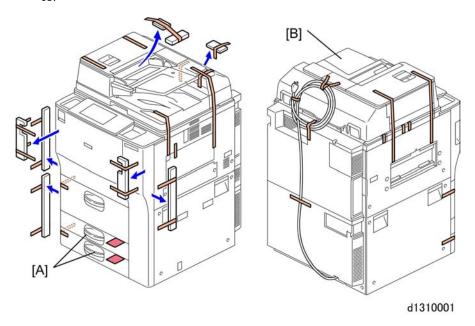
No.	Description	Q'ty
1.	Model Name Decal (-29 Only)	1
2.	Operation Instructions (-17, -19, -21, -29, -57 Only)	2
3.	Support	2
4.	Decal – Paper Size	1
5.	Decal: Caution Chart: Paper Set: Direction	1
6.	Leveling Shoe	2
7.	Operating Instructions Holder	2
8.	Decal – Cleaning - Multiple	1
9.	Cloth – DF Exposure Glass	1
10.	Cloth Holder	1
11.	Decal – Toner Supply - Multiple	1
12.	Decal: Power Source: Off	1
13.	Decal Exposure Glass: Multiple	1
14.	Decal – D1/E1 Multiple	1
15.	EU Safety Sheet (-27, -67 only)	1
16.	Ferrite Core (RFC-13)	1
17.	EULA Sheet: 18 languages (-28, -57, -67 only)	1
18.	Decal: License Agreement 18 Languages (-28, -57, -67 only)	1
19.	TEL Name Sheet (-21 only)	1

Installation Procedure

Removing Tapes and Retainers

ACAUTION

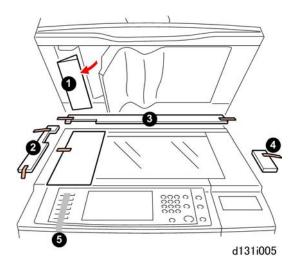
• To avoid serious injury, do not connect the power plug to the machine until you are instructed to do so.



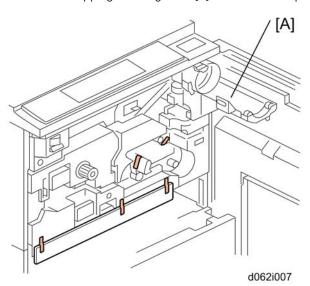
- 1. Unpack the machine and remove all the wrapping.
- 2. Remove all filament tape from the front of the machine.
- 3. Open the lower trays [A] and remove the operating instructions holder, red tabs, and wires (Fx2)...
- 4. Open the ADF [B] and remove all shipping material.
- 5. Remove the tape from the back of the machine.



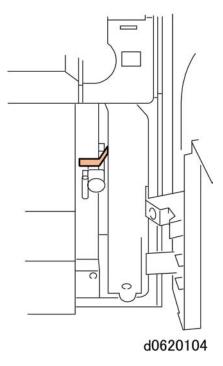
• Save the filament tape and shipping retainers to prepare the machine for shipping in the future.



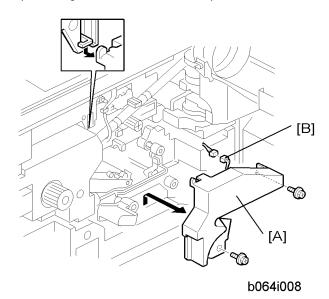
- 6. Raise the ADF and remove all the tapes and shipping retainers around the ADF, exposure glass, and operation panel.
- 7. Remove the shipping retaining sheet [B] under the white pad.



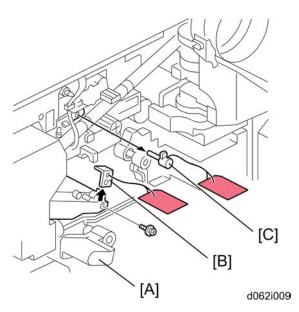
8. Open the front door, open the toner bottle holder [A], then remove all tape and shipping retainers.



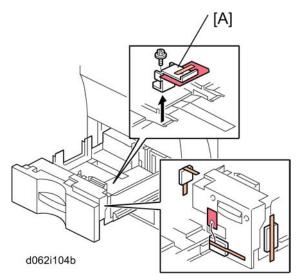
9. Open the right door and remove the tape from the vertical transport plate.



10. Remove the PCU inner cover [A] (\nearrow x 2) and disconnect the fan motor [B] (\searrow x 1).



- 11. Lower the transfer unit by turning its knob [A].
- 12. Remove the bracket [B], and the red tag from the transfer belt (\mathscr{F} x 1).
- 13. Remove the pin [C], and the red tag from the cleaning plate.

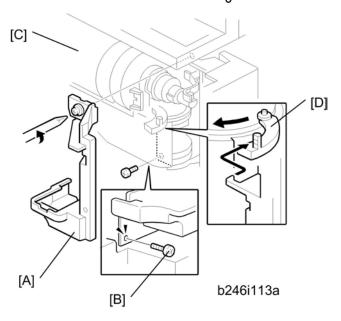


14. Open the tandem tray (top paper tray) and remove the metal retainer bracket [A] (F x 1) and wire, then the red tags (x2) and all tape.

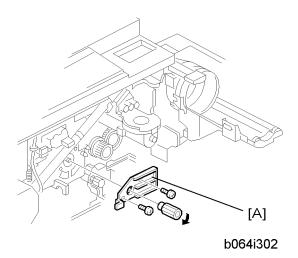
Removing and Filling the Development Unit

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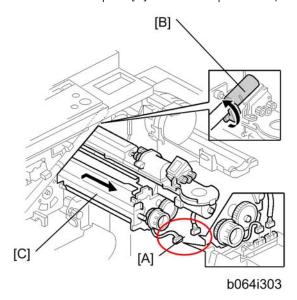
- Before you begin, remove the toner bottle if it is installed.
- The toner bottle holder can be damaged if it is in the machine when you do the procedure below.



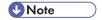
- 1. Open the front door.
- 2. Remove the shutter cover [A] (x 1).
- 3. Remove the lock screw [B].
- 4. Remove any remaining shipping tape [C].
- 5. Swing the bottle holder [D] to the left.



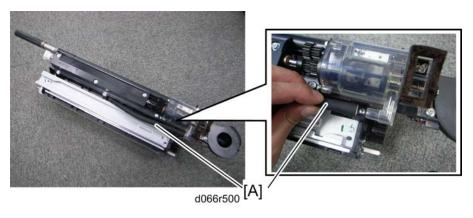
6. Remove the face plate [A] of the development unit (knob x 1, \mathscr{F} x 2).



7. Disconnect the development unit [A] (x 2).

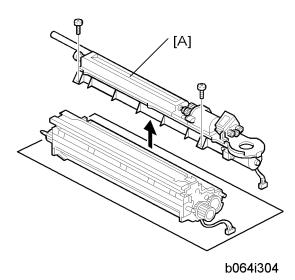


- If the LCT is installed, disconnect it. This lets the front door open far enough for development unit removal.
- 8. Close the supply pipe shutter [B].
- 9. While allowing the development unit [C] to slip to the right, slowly pull it out of the machine.

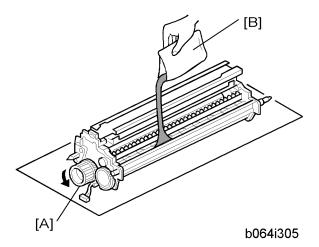


D133 Only

10. Remove the pressure release tube [A].



- 11. Toner hopper [A] Developer Replacement
- 12. Rotate the toner hopper slightly 10° to 20° as you slide it up to remove it.

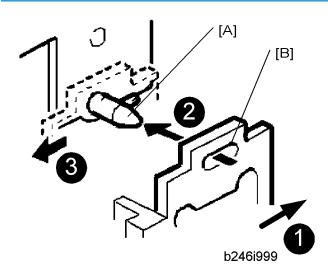


- 13. While turning the knob [A] slowly, pour in one pack of developer [B] from one end of the development unit to the other.
- 14. Make sure that the developer is evenly distributed. Note the developer lot number printed on the top edge of the bag. You will need the lot number when you execute SP2963 (Installation Mode).
- 15. Assemble the development unit, then re-install it in the machine.
- 16. Follow the instructions printed on the inside of the front door to install the toner bottle.



 If the door does not close, make sure that the pipe line shutter is rotated down. (See Step 8 above.)

Re-installing the Development Unit



- 1. Push the development unit to the right **1**.
- 2. While continuing to hold the unit to the right, push it into the machine.
- 3. Confirm that the pin [A] goes into the left side of the oval hole [B] in the development unit plate.
- 4. Push the development unit in completely **2** until it stops, then push it to the left **3**.
- 5. Make sure you can see the horizontal pin in front of the plate as shown below.

Correct

Incorrect





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- If you cannot move the development unit plate behind the horizontal pin, turn the front gear of the unit to the left and try again.
- 6. Make sure the pipeline shutter is rotated down to the open position.
- 7. Reattach all removed parts.

Initializing the Drum Settings

You must do SP2963 (Installation Mode) to 1) Initialize the developer and do a forced toner supply to the development unit, and 2) Initialize the auto process control settings.

- You must open the front door before you switch the machine on. If you do this, the machine does
 not do the short automatic process control procedure, which is usually done after the machine
 power is turned on.
- SP2963 must be done before you do sample copying or test printing.
- If you do not press "Execute" in Step 6, the auto process control items (potential sensor calibration, Vsg, Vref, etc.) will not initialize correctly.
- 1. Open the front door.
- 2. Connect the power cord.
- 3. Turn the main power switch on.
- 4. Ignore the "Cover Open" message. **Do not close the door**.

- 5. Go into the SP mode.
- 6. Close the front door.
- 7. Enter SP2963-002, then enter the lot number of the developer.
 - The lot number should be seven digits.
 - If seven digits are not entered before you do SP2963-001, the LCD shows error messages.
- 8. Do SP2963-001.



- It will take 3 or 4 minutes to initialize toner supply and the auto process control settings.
- 9. When you see the "Completed" message box, touch "Exit" in the box.
- 10. Press "Exit" twice to go out of the SP mode.
- 11. Attach the applicable decals (supplied with the machine) to the paper trays.
- 12. Check the copy quality and machine operation.

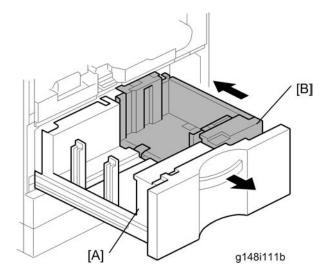


- At installation, use SP2963 to enter the lot number, initialize the developer, and to force toner supply to the toner hopper.
- After you replace developer in a machine that has been already installed, do not use SP2963; use SP2801 (TD Sensor Initial Setting) instead to enter the lot number and initialize the TD sensor.
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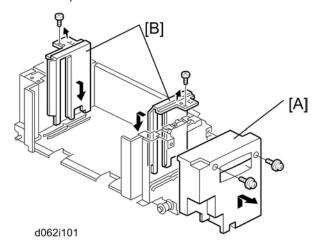
Tandem Tray

Before shipping the machine, the tandem tray is set for A4 or LT LEF and must be adjusted if the customer wants to use the tandem tray for another paper size.

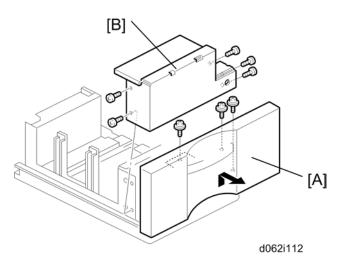
Feed Station	Allowed Size
Tandem Tray (Tray 1)	A4 LEF, LT LEF



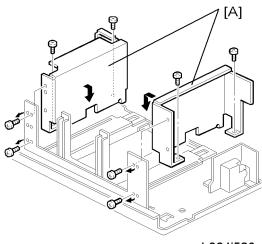
- 1. Open the front cover.
- 2. Completely pull out the tandem feed tray [A] so that the right tandem tray [B] separates from the left tandem tray.



- 3. Remove the right tandem inner cover [A].
- 4. Re-position the side fences [B] ($\mathbb{F} \times 2$). The outer slot position is used when loading A4 size paper.
- 5. Re-install the right tandem inner cover [A].

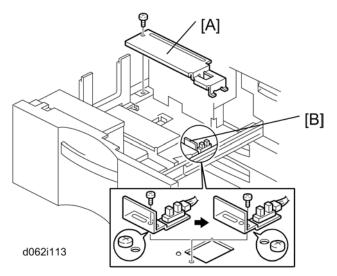


- 6. Remove the tray cover [A] (\mathcal{F} x 3).
- 7. Remove the motor cover [B] (x 5).



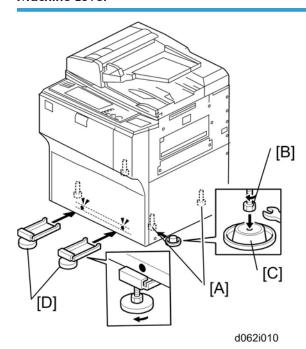
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- 8. Re-position the side fences [A] (\mathscr{F} x 8). The outer slot position is used when loading A4 size paper.
- 9. Re-install the motor cover and the tray cover.



- 10. Remove the rear bottom plate [A] ($\mathscr{F} \times 1$).
- 11. Re-position the return position sensor bracket [B] (x 1). To use the paper tray for A4 size, put the screw in the left hole as shown. (For LT size, the screw should be placed on the right.)
- 12. Re-install the rear bottom plate.
- 13. Change the paper size using SP5959-001 (Paper Size Tray 1). For details, see SP5959 in "Service Tables".

Machine Level



- 1. Set a stand [A] at two front foot of the machine.
- 2. Set the leveling shoes [C] (x2) under the feet [B], then level the machine.
 - Two leveling shoes should be installed at the front side.
- 3. Install two supports [D] at the front side of the machine.
- 4. Check the machine operation. With the customer, determine the best place to attach the cleaning reminder decal.

Date/Time Setting

Use the User Tools menu to set the current date and time.

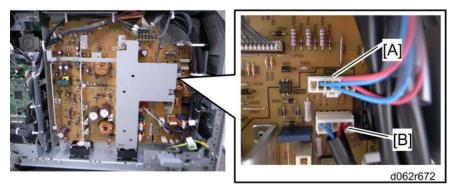
- On the operation panel, press the User Tools key.
- On the touch-panel, press "System Settings".
- Press the "Timer Setting" tab.
- Press "Set Date" to enter the date.
- Press "Set Time" to enter the time.

SP Codes

SP5812-00	Service Telephone Number Settings	Enter the contact number of the customer engineer. This is the number displayed when a service call is issued.
SP5841-00	Supply Name Setting – Toner Name Setting: Black	This name appears when the user presses the Inquiry on the User Tools screen.
SP5853	Stamp Data Download	Do SP 5853 to copy stamp data to the hard disk, then turn the power off/on.

Connecting the Drum Heater Connector and the Tray Heater Connector.

1. Open the rear upper cover and the rear lower cover.



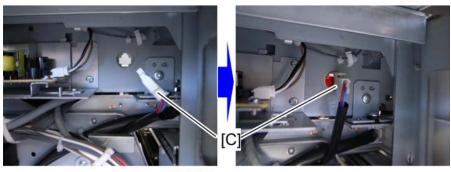
- 2. Connect the tray heater connector to the CN104 connector [A].
- 3. Connect the drum heater connector to the CN103 connector [B].

Installing the Scanner Heater

- 1. Rear upper cover r Rear Covers
- 2. Exposure glass r Exposure Glass
- 3. Operation panel * Operation Panel
- 4. Left stay 🖝 Scanner Wire Replacement



- 5. Install the scanner heater [A] (x 2)
- 6. Fasten the cable with the harness clamps (🛱 x 3).
- 7. Fasten the connector [B] on the rear side of the machine ($\mathbb{Z}^{2} \times 1$).



d062r874

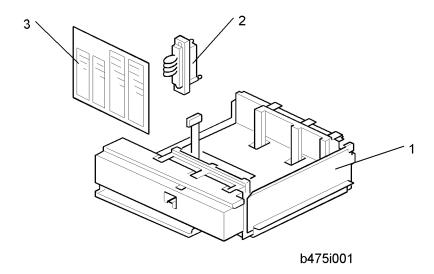
8. Connect the harness [C] to the connector [B] on the rear side of the machine.

A3/11"x17" Tray Type 9001 (D482)

Accessory Check

Check the accessories and their quantities against this list:

No.	Description	Q'ty
1.	A3/DLT Tray	1
2.	Short connector	1
3.	Page size decals	1

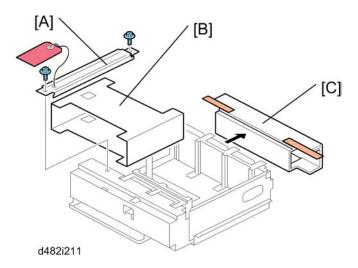


Installation Procedure

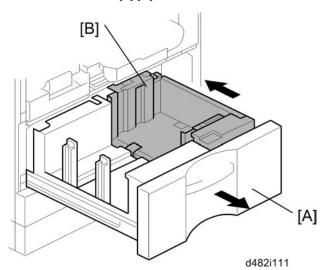
ACAUTION

• Switch the machine off and unplug the machine before starting the following procedure.

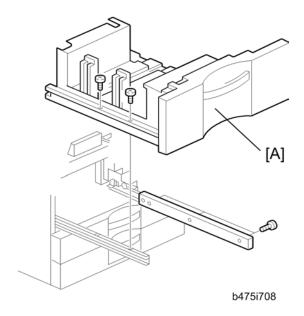
2



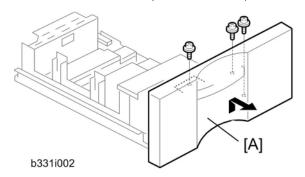
- 1. Remove the stay [A] (🛱 x 2).
- 2. Remove the retainers [B] [C].



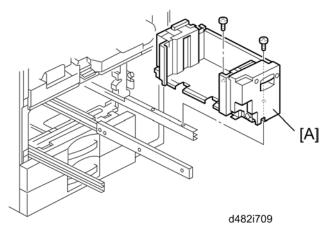
- 3. Draw out the tandem tray [A] completely to separate the left and right sides of the tray.
- 4. Push in the right tandem tray [B].



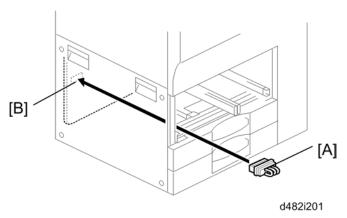
5. Remove the left tandem tray [A] ($\ensuremath{\widehat{\mathcal{F}}} \times 5$). Keep these screws.



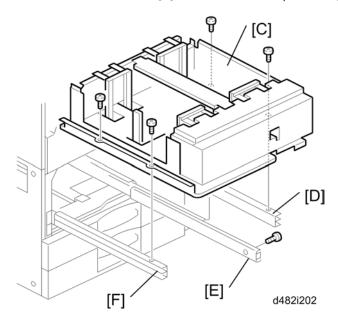
6. Remove the front cover [A] (\mathcal{F} x 3).







8. Connect the short connector [A] to the left tandem tray terminal [B].



9. Install the A3/DLT tray [C] on the right rail [D], center rail [E], and left rail [F]. Use the screws that you removed in Steps 3 and 4.



- You must use the short, silver screws on the left and right rails. If you use one of the longer screws, it will stop the movement of the tray on the rails.
- 10. Re-install the front cover.
- 11. Switch the machine on, enter the SP mode and select the paper size for Tray 1 with SP5959-001 (Paper Size Tray 1). For details, see SP5959 in "Service Tables".
- 12. Attach the appropriate decal for the selected paper size.

LCIT RT4010 (D613)

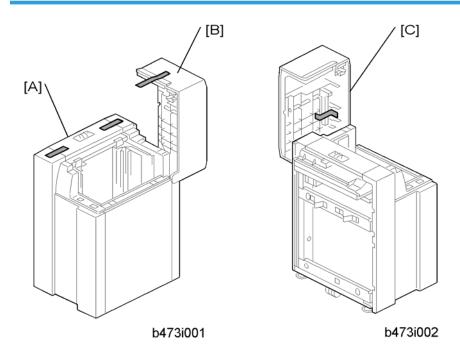
Accessory Check

Check the accessories and their quantities against this list:

No.	Description	Q'ty
1.	Flat-head shoulder screw - M4 x 6	1
2.	Upper docking pins (grooved)	2
3.	Lower docking pin (not grooved)	1
4.	Installation Instructions	1
5.	Paper Set Decal	1

Installation Procedure

Removing Tape



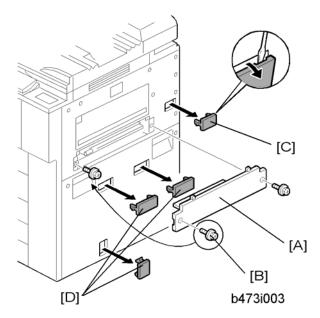
2

- 1. Remove the filament tape from the body [A] and top cover [B] of the LCT.
- 2. Remove the tape under the lid [C] of the LCT.

Preparing the Main Machine

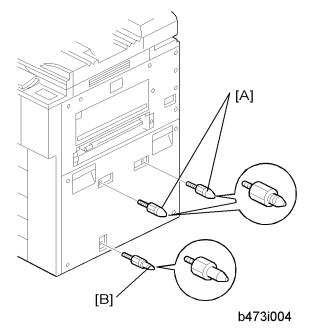
ACAUTION

• Switch the machine off and unplug the machine before starting the following procedure.

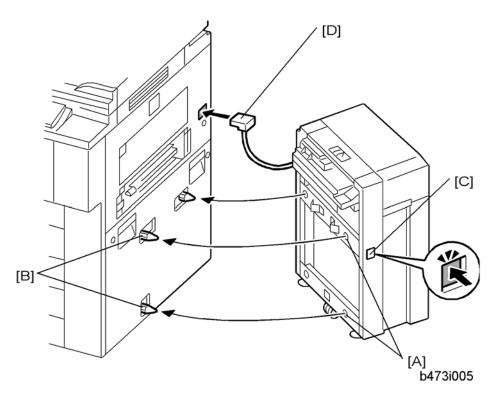


- 1. Remove the LCT installation cover [A] from the right side of the machine (\mathscr{F} x 2).
- 2. Save the screw on the left [B]. You will need it to install the LCT.
- 3. Remove the LCT connector cover [C] (x 1) and the covers over the holes for the docking pins [D]. (x 3)

Installing the LCT



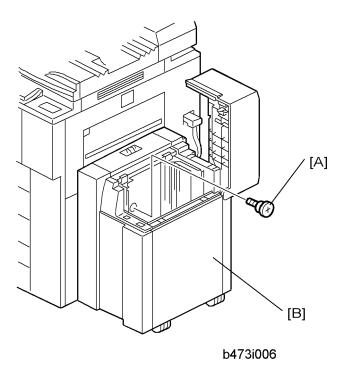
1. Insert the two upper docking pins (grooved) [A] into the upper slots and the lower docking pin [B] into the lower slot.



2. Align the holes on the side of the LCT [A] with the docking pins on the side of the machine [B], then slowly push the LCT onto the pins.



- The release button [C] is used to unlock the LCT so it can be disconnected from the machine.
- 3. Connect the plug [D] of the LCT power cord to the side of the machine.



4. Insert the flat-head shoulder screw [A] into the hole and fasten it to lock the release lever in place.



- For easier access to the hole for the screw [A], you can remove the right panel [B] (x 2).
- 5. Switch the machine on and execute SP5959 005 (Paper Size Tray 4 (LCT)) to select the paper size. For details, see SP5959 in "Service Tables."

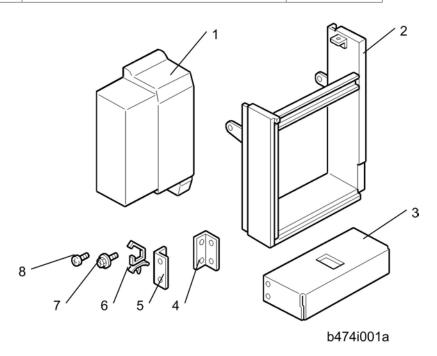
2

8 1/2"x14" Paper Size Tray Type 9002 (B474)

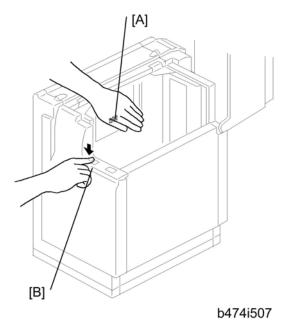
Accessory Check

Check the accessories and their quantities against this list:

No.	Description	Q"ty
1.	Cover	1
2.	B4/LG frame	1
3.	Bottom plate extension	1
4.	Rear bracket	1
5.	Front bracket	1
6.	Harness clamp	1
7.	Tapping hex screws - M4 x 8	6
8.	Tapping screws - M4 x 8	4



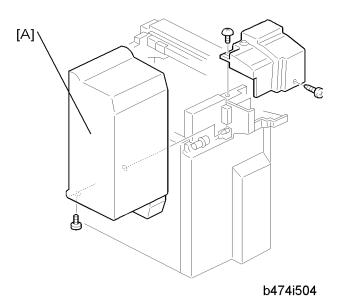
Installation Procedure



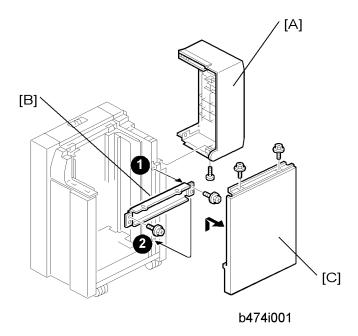
- 1. If the LCT is connected to the machine, open the cover and remove the paper.
- 2. Lower the LCT tray. Cover the near end sensor [A], then press the tray down button [B] to lower the tray bottom plate.

ACAUTION

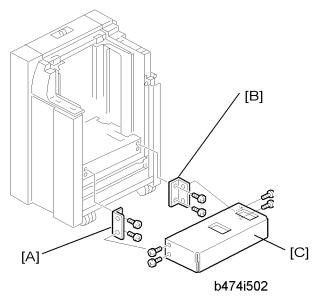
- Switch the machine off and unplug the machine before starting the following procedure.
- 3. Disconnect the LCT from the machine.



4. Remove the LCT upper cover [A].



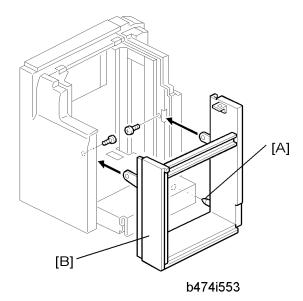
- 5. Remove the LCT cover [A] (\nearrow x 1).
- 6. Remove the right stay [B] at $\mathbf{0}$ and re-attach it below at $\mathbf{2}$ (\mathscr{F} x 2).
- 7. Remove the right cover [C] ($\Re x$ 2).



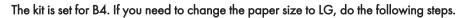
8. Attach the front bracket [A] with the beveled corner down (\mathscr{F} x 2).

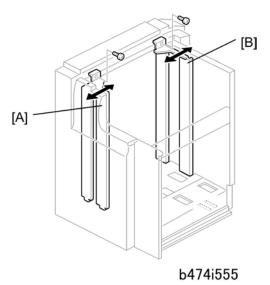


- If the brackets are difficult to install, raise the bottom plate with your hand.
- 9. Attach the rear bracket [B] with the beveled corner down (Fx2).
- 10. Attach the bottom plate extension [C] with the hex nuts ($\mathscr{F} \times 4$).

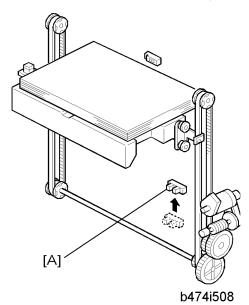


- 11. Align the positioning pin [A].
- 12. Attach the B4/LG frame [B] with the hex nuts (\mathscr{F} x 2).

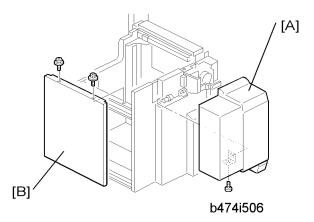




- 13. Move the front side fence [A] to the LG position and fasten (\mathscr{F} x 1).
- 14. Move the rear side fence [B] to the LG position and fasten (F x 1).



- 15. Change the position of the lower limit sensor [A] (x 1).
- 16. Attach the harness (not shown) to the back of the plate and secure the sensor connector wire.



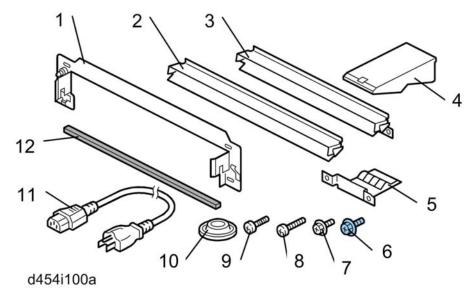
- 17. Attach the LCT cover [A] provided with the kit (*F x 1).
- 18. Re-attach the right cover [B] (x 2).
- 19. Connect the LCT to the machine.
- 20. Switch the machine on, enter the SP mode, then use SP5959 005 (Paper Size Tray 4 (LCT) to select the new paper size. For details, see SP5959 in "Service Tables".

2

Multi-Folding Unit FD4000 (D615)

Accessories

Check the quantity and condition of the accessories in the box against the following illustration and list.



No.	Description	
1.	Joint Bracket	
2.	Paper Guide – Long	
3.	Paper Guide – Short (D131/D132/D133)	
4.	Proof Tray Auxiliary Plate - Bottom	
5.	Ground Plate	1
6.	Screws M3x6	2
7.	Screws M3x6	2
8.	Screws M4x20	4
9.	Screws M4x14	4
10.	Leveling Shoes	

No.	Description	Q'ty
11.	Power Cord* 1	1
12.	Sponge Strip	1

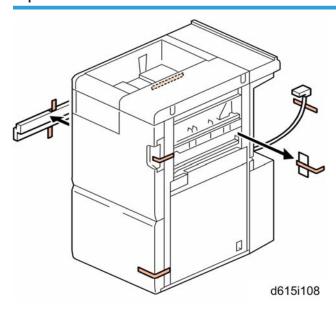
^{*1:} In China, do not use the power cord provided with this unit. Contact your supervisor and use the power cord specified for use in China.

Installation

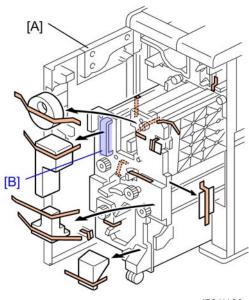


- The unit must be connected to a power source that is close to the unit and easily accessible.
- Make sure that the main machine is switched off and that its power cord is disconnected before doing the following procedures.

Tapes



1. Remove all tape and packing material from the front, left, rear, and right sides.



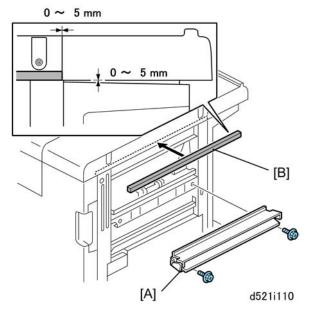
- d521i102
- 2. Open the front door [A].
- 3. Grip handle [B] and slowly pull the fold unit out of the machine.
- 4. Remove all tape and packing material from inside.



d521i103

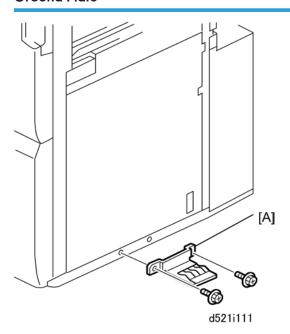
- 5. Remove the tape from the bottom of the door [A].
- 6. Pull out the folding unit [B] and remove the tapes.

Paper Guide, Sponge Strips



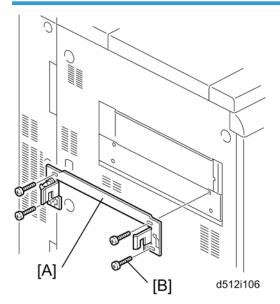
- 1. Select the short paper guide [A] and attach it (Fx2 M3x6).
- 2. Peel the tape from the sponge strip [B] and attach the strip to the top right edge of the unit.

Ground Plate

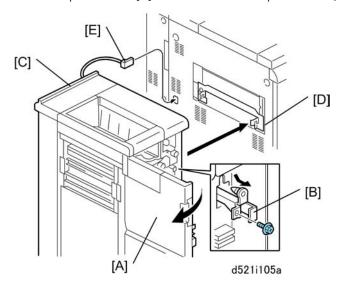


1. Attach the ground plate [A] to the lower right edge of the unit (Fx2 M3x6).

Docking



1. Fasten the joint bracket [A] to the left side of the upstream unit (Fx4 M4x20).



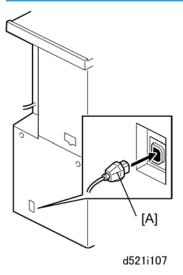
- 2. Open the front door [A].
- 3. At the front right corner, remove the screw of the lock bar [B] (x1 M3x6). Keep this screw.
- 4. Pull out the lock bar.



• If you are docking to the main machine, you must first remove the plastic cap at the I/F cable connection point.

- 5. Slowly push the unit [C] against the left side of the upstream unit (or main machine) so that the lock bar is directly and squarely under the arms of the joint bracket.
- 6. Push in the lock bar so it slides up into the notches in the arms on both ends of the joint bracket [D].
- 7. Fasten the lock bar by re-attaching the screw removed in **Step 3** (\mathcal{F} x1).
- 8. Connect the I/F cable [E] to the upstream unit (or main machine).

Power Cord

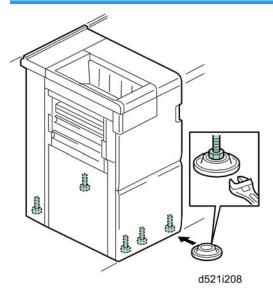


1. Insert the power cord socket [A] into the power connection point.



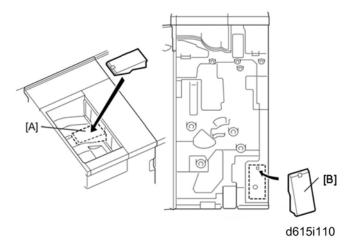
- In China, do not use this power cord provided with this unit. Contact your supervisor and use the power cord specified for use in China.
- 2. Connect the power supply cord plug to a power outlet.

Finishing the Installation



- 1. Set the leveling shoes and adjust the height of the unit.
- 2. Load some B4 paper in the 2nd tray of the main machine, and make several copies.
- 3. Check paper skew and side-to-side registration and correct if necessary.

Proof Tray Auxiliary Plate



- 1. Install the proof tray auxiliary plate.
 - Set the plate [A] in the center aligned with the diagonal groove.
 - The back should be flat against the end fence.

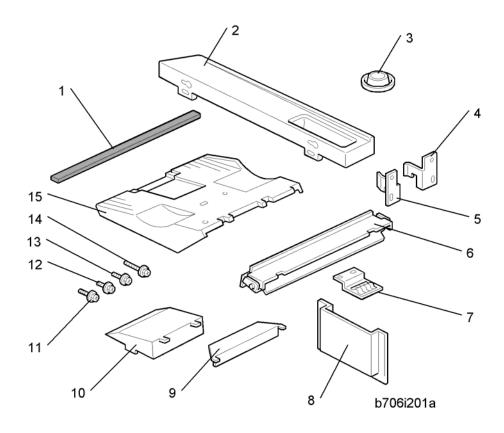
- 2. When the plate is not being used, open the front door and store the plate at [B] inside the inner cover.
 - The plate should be used when Z-folded paper (all sizes) is output to the proof tray.
 - If the plate is not used with Z-folded output, the pages could mix and overlap.

Finisher SR4080 (D610)

Accessory Check

Check the accessories and their quantities against this list:

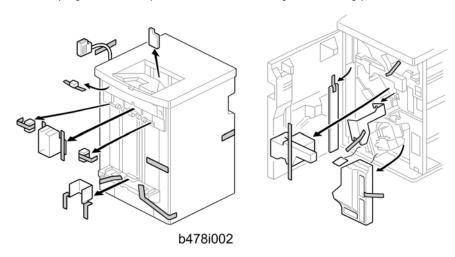
No.	Description	Q"ty
1.	Cushion	1
2.	Table Extension	1
3.	Leveling Shoes	1
4.	Rear Joint Bracket	1
5.	Front Joint Bracket	1
6.	Entrance Guide Plate	1
7.	Grounding Plate	1
8.	Auxiliary Tray Holder	2
9.	Auxiliary Tray - Proof	2
10.	Auxiliary Tray - Shift	2
11.	Tapping Screws - M4 x 8	2
12.	Tapping Screws - M3 x 6	4
13.	13. Tapping Screws - M3 x 8	
14.	14. Phillips Screws w/washer - M4 x 14	
15.	Shift Tray	4

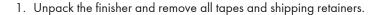


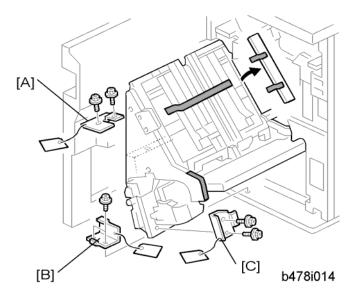
Installation

ACAUTION

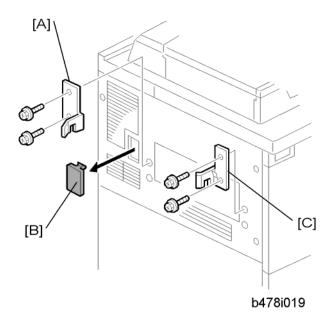
• Unplug the machine power cord before starting the following procedure.



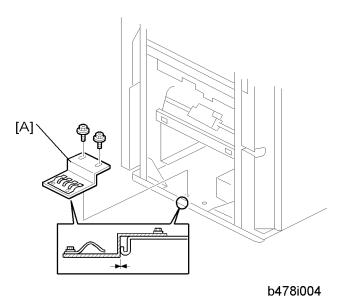




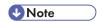
2. Open the front door and remove the shipping retainers. Remove brackets [A], [B], and [C] (x 2 each).



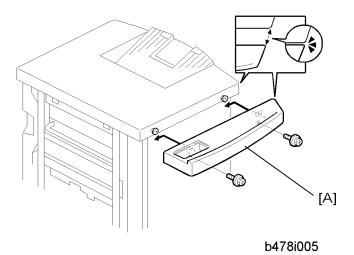
- 3. Install the front rear bracket [A] and front joint bracket [B] (\mathscr{F} x 2 each) (M4 x 14) on the left side of the copier.
- 4. Remove the connector cover [C].



5. Install the grounding plate [A] (\mathscr{F} x 2) (M3 x 6).



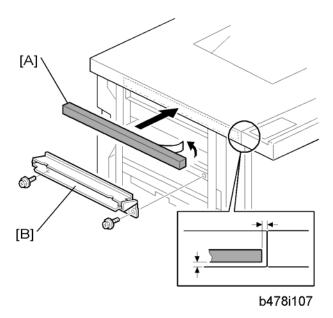
• Set the grounding plate so that there is no gap between the grounding plate and the bottom frame of the finisher (as shown).



6. Install the table extension [A] as shown (\mathscr{F} x 2) (M4 x 8).



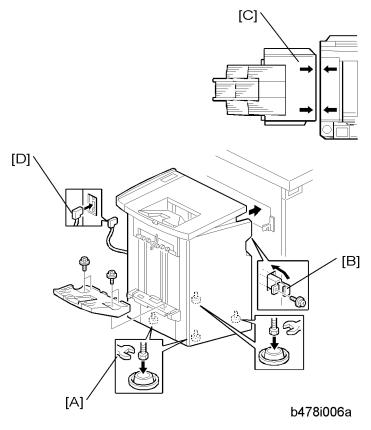
• The edge of the table extension should be aligned with the edge of the finisher (as shown).



7. Attach the cushion [A] to the right side of the upper cover.



- If you are installing the cover interposer tray, do not attach the cushion here. Attach it to the cover interposer tray. The Cover Interposer Tray D614 must be installed before you dock the finisher and tray with the main machine.
- 8. Install the entrance guide plate [B] (\nearrow x 2) (M3 x 6).



- 9. Attach the shift tray [A] ($\mathscr{F} \times 4$) (M3 x 8).
- 10. Open the front door of the finisher, and remove the screw from the locking lever, then pull out the locking lever [B].
- 11. Align the finisher on the joint brackets, and lock it in place by pushing in the locking lever [B].



- Before securing the locking lever, make sure that the top edges of the finisher and the copier are parallel from front to rear as shown [C].
- 12. Secure the locking lever [B] (\mathscr{F} x 1) and close the front door.
- 13. Connect the finisher cable [D] to the copier.
- 14. Set the leveling shoes (x 4) under the feet and level the machine.

2

Punch Units (B531/A812)

This procedure describes installation of these punch units in the Finisher SR4080.:

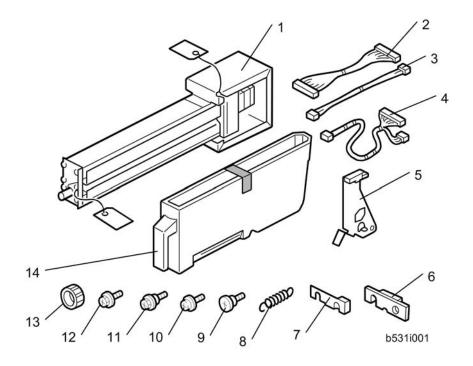
- Punch Unit Type 1075 3/2 (B531)
- Punch Unit Type 1075 EU 2/4 (B531)
- Punch Unit Type 850 SC (A812)

• These punch units can be installed and used with the Finisher SR4080 only.

Accessory Check

Check the accessories and their quantities against this list:

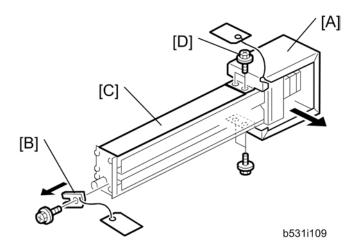
No.	Description	Q"ty
1.	. Punch unit	
2.	Harness Connector Cable - PCB	
3.	Harness Connector Cable - HP Sensor 2	1
4.	Harness Connector Cable - HP Sensor 1, Hopper Full	1
5.	Sensor Arm and Sensor	1
6.	Spacer (2 mm)	
7.	. Spacer (1 mm)	
8.	Spring	
9.	Step Screw (large) (M4 x 11)	
10.	Tapping Screw (M4 x 10)	
11.	Step Screw (small) (M3 x 4)	
12.	Machine Screw, Washer (M4 x 6)	
13.	Knob	1
14.	Punch Waste Hopper	1



Installation

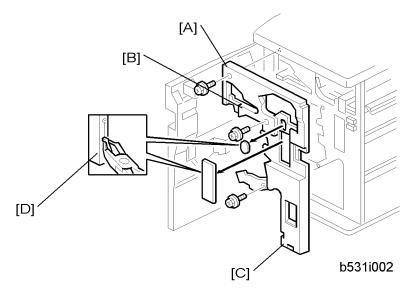
ACAUTION

• Switch the machine off and unplug the machine before starting the following procedure.

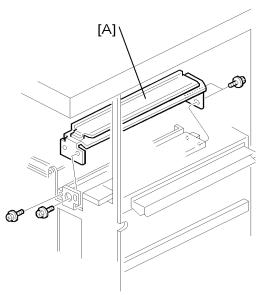


- 1. If the finisher is connected to the machine, disconnect it.
- 2. Open the front door and remove the rear cover ($\ensuremath{\widehat{\mathcal{F}}}$ x 2).

- 3. Unpack the punch unit and remove the motor protector plate [A] ($\mathscr{F} \times 4$) and the cam lock plate [B] ($\mathscr{F} \times 1$).
- 4. Reattach the cover bracket [C] (${\mathfrak F}$ [D] x 2).

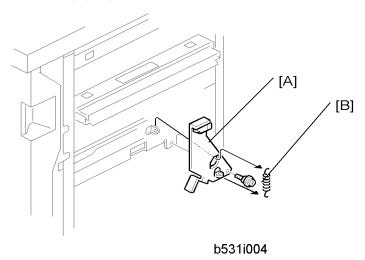


- 5. Remove the inner cover [A] (*x 3).
- 6. Behind the inner cover at [B] and [C], press the lock tab to the right to release the inner cover from the frame.
- 7. Remove the plastic knockouts [D].



b531i003

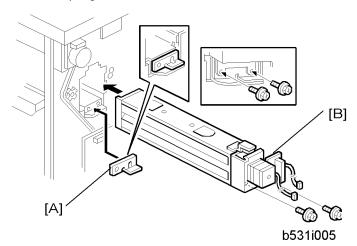
8. Remove the paper guide [A] (*F x 4).



9. Install the sensor arm [A] (\mathscr{F} x 1, small step screw (M3 x 4).



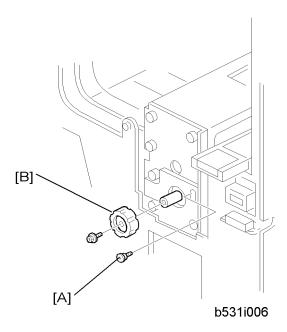
- Make sure that the sensor arm swings freely on the step screw.
- 10. Attach the spring [B].



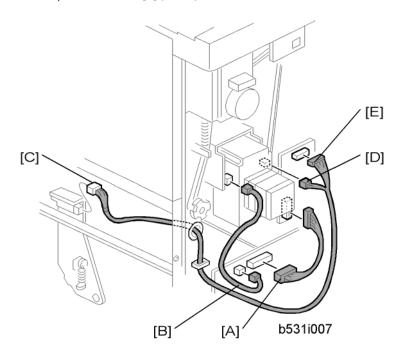
11. At the rear, position the 2 mm spacer [A] and attach the punch unit [B] (\mathscr{F} x 2, M4 x 10).



- At the hole just above the lock lever, use one of the screws from the paper guide removed above to fasten the remaining two spacers to the frame.
- These extra spacers are used to adjust the horizontal position of the punch holes.



- 12. At the front, secure the punch unit [A] with the large step screw (\mathscr{F} x 1, M4 x 10).
- 13. Attach the punch unit knob [B] (\mathscr{F} x 1).

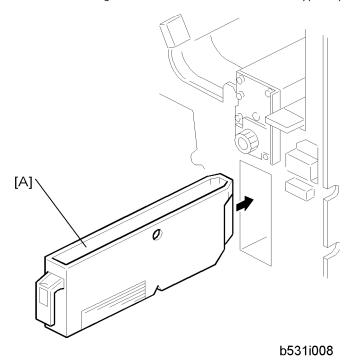


- 14. Connect the PCB harness connector [A] to CN129 of the finisher PCB and to CN600 of the punch unit PCB.
- 15. Connect the HP Sensor 2 harness connector [B] to CN130 of the finisher PCB and to HP Sensor 2.

16. Connect the single end of the hopper full sensor connector cable [C] to the hopper full sensor on the arm (x 1, x 1), then connect the other two connectors to HP Sensor 1 [D] and CN620 [E] of the punch PCB.



No special DIP switch settings are required for this punch unit. The punch unit sends an
identification signal to the machine, so it knows what type of punch unit has been installed.



- 17. Slide the hopper [A] into the finisher.
- 18. Re-attach the inner cover and rear cover.
- 19. Close the front door and re-connect the finisher to the machine.

Output Jogger Unit Type 9002B (B513)

Accessory Check

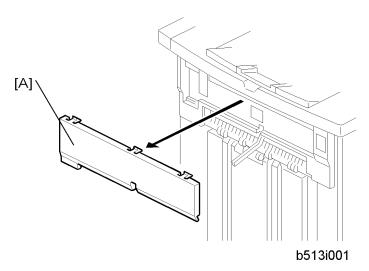
Check the accessories and their quantities against this list:

No.	Description	Q'ty
1.	Jogger Unit B513	1
2.	Tapping Screws - M3 x 6	2
3. Installation Procedure		1

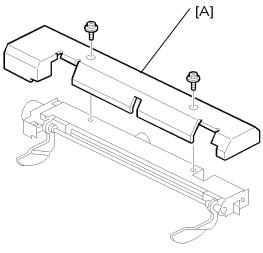
Installation Procedure



- This jogger unit can be installed and used with the Finisher SR4080 only.
- 1. Turn the main machine switch off and disconnect the finisher from the main frame.

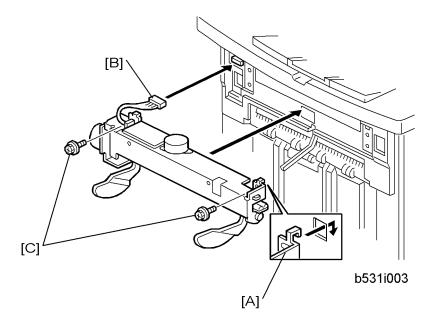


2. Use the flat head of a screwdriver to remove the left upper cover [A] from the finisher and discard it.



b531i002

3. Remove the cover plate [A] from the jogger unit (F x 2). Keep the screws.



- 4. With the jogger unit connector on the left side, hook the frame of the jogger unit [A] into the holes on the left and right side of the finisher frame.
- 5. On the left side, fasten the connector [B] to the socket (x 1).
- 6. On the left and right side, attach the jogger unit frame to the side of the finisher with the screws [C] provided (x 2).
- 7. Re-attach the jogger unit cover to its frame with the screws removed in step 2 (F x 2).

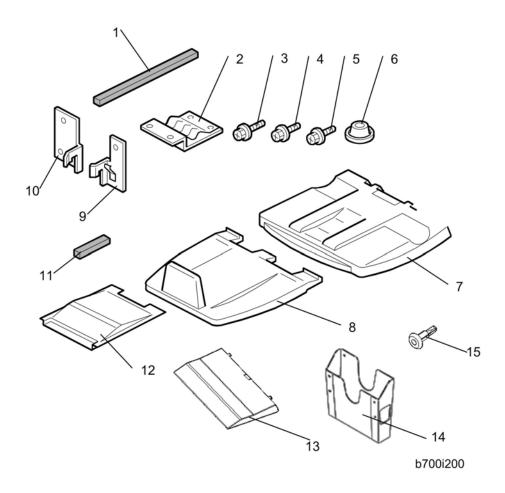
2

Finishers SR4060/SR4070 (D611/D612)

Accessories

Check the accessories from the box against the following list.

No.	Description	Q'ty
1.	Cushion (with double-sided tape)	1
2.	Ground (earth) plate	1
3.	Tapping screws - M4 x14	4
4.	Tapping screws - M3 x 8	1
5.	Tapping Screws M3 x 6	2
6.	Leveling Shoes	3
7	Upper output tray	1
8.	Lower output tray (D612 Only)	1
9.	Front joint bracket	1
10.	Rear joint bracket	1
11.	Gasket Seal	1
12.	Auxiliary Tray-Proof	1
13.	Auxiliary Tray-Shift (D612 only)	1
14.	Auxiliary Pocket (D612 only)	
15	Rivet DIA5 (D612 only)	2



Installation Procedure

This section describes the common installation instructions for two peripheral devices:

- Finisher SR4070 (D612). Does punching, shifting, corner stapling, and booklet (saddle-stitch) stapling.
- Finisher SR4060 (D611). Does punching, shifting, and corner stapling but no booklet (saddle-stitch) stapling.

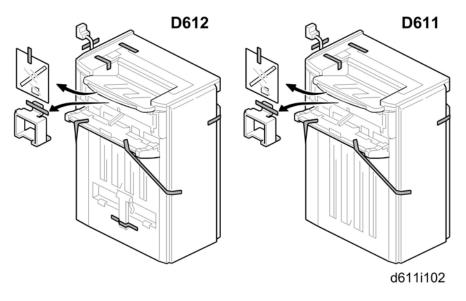


• Differences in the installation procedures are noted as "D611" or "D612".

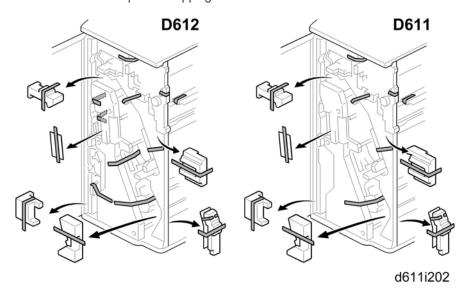
Removing Tapes and Retainers

MARNING

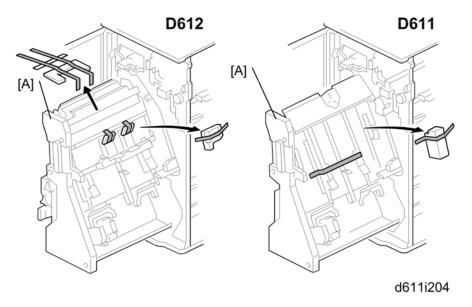
Always turn the machine off and unplug the machine before doing any of the following procedures.



- 1. Unpack the machine and remove all the wrapping.
- 2. Remove all filament tape and shipping retainers from the finisher.

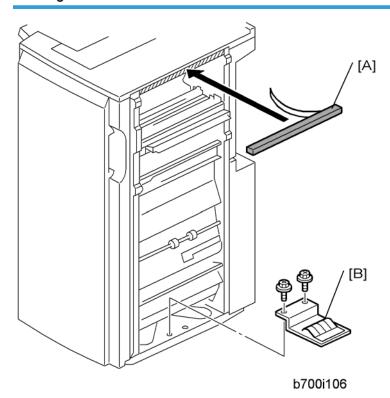


- 3. Open the front door.
- 4. Remove all tapes and shipping retainers inside the finisher.



- 5. Pull out the jogger unit [A].
- 6. Remove the tapes and retainers.

Docking the Finisher

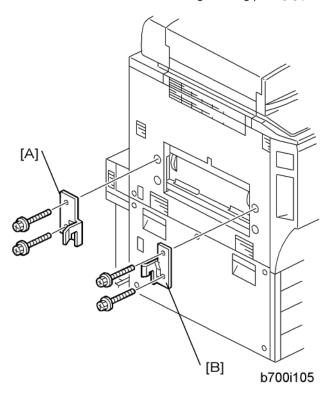


If you are not installing the Cover Interposer (D614):

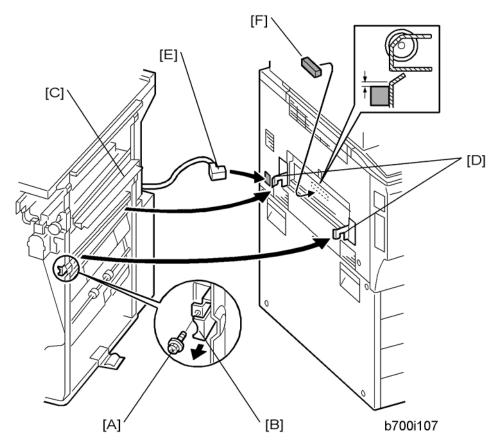
• Peel the strip from the sponge cushion [A] and attach it to the finisher then go to the next step.

If you are installing the Cover Interposer (D614):

- Do not attach the sponge cushion to the finisher. It must be attached to the cover interposer.
- Do not attach the grounding plate [B] to the finisher. It must be attached to the cover interposer.
- Install the interposer now. The cover interposer must be installed before you dock the finisher to the copier.
- 1. Use a short screwdriver to attach the grounding plate [B] (\mathcal{F} x 2, M3 x 6).

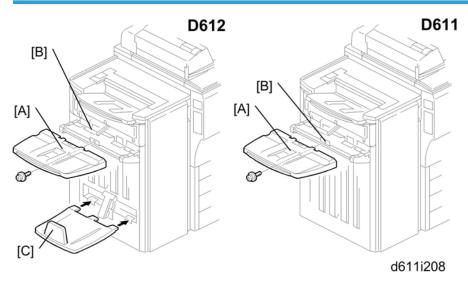


- 2. Attach the rear bracket [A] (\mathscr{F} x 2, M4 x 14).
- 3. Attach the front bracket [B] (x 2, M4 x 14).



- 4. Remove the screw [A] to release the lock lever [B] ($\ensuremath{\widehat{\mathcal{F}}}$ x 1).
- 5. To avoid bending and damaging the paper entrance guide plates [C], slowly push the finisher against the side of the machine until the brackets [D] enter their slots.
- 6. Connect connector [E] to the main frame.
- 7. Attach the gasket seal [F] as shown.
- 8. Push the finisher against the machine.
- 9. Push in lock lever [B] then reattach the screw [A].

Attaching the Trays

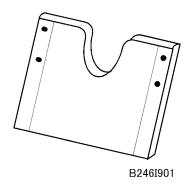


D612

1. Attach the upper output tray [A] (Fx 1, M3 x 8).



- Make sure the metal plate [B] overlaps the tray.
- 2. Attach the lower output tray [C].



- 3. Use the round-head rivet (provided accessory) to fasten the auxiliary tray storage pocket to rear cover of the finisher.
- 4. Place the auxiliary trays for the shift tray and proof tray in the pocket.

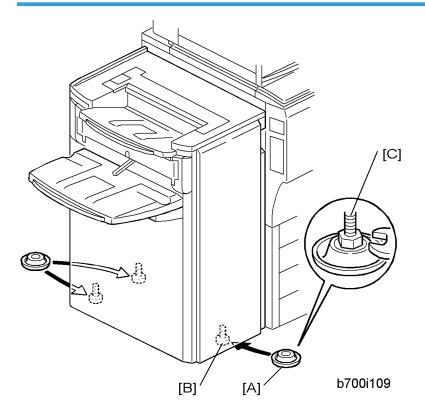
D611

1. Attach the output tray [A].



• Make sure the metal plate [B] overlaps the tray.

Leveling the Finisher



- 1. Set the leveling shoes [A] (x 3) under the feet [B].
- 2. Use a wrench to adjust the height of the screws [C] to level the machine.

Selecting the Staple Supply Name

Enter the SP mode and execute the following information.

5841	Supply Name Setting	These names appear when the user prints the Inquiry List. Press the Counter key, then press 'Print Inquiry List'. Press the Inquiry button on the initial User Tools screen.	
013	Staple Std	Enter the name of the staples in use for normal stapling (not booklet stapling). This setting should be done for both the D611 and D612.	
022	Staple Bind	Enter the name of the staples in use for booklet stapling (saddle-stitching). This setting is required only for the D612.	

Enabling Booklet Binding (D612 Only)

To enable booklet binding (saddle-stitching) for the D612, you must make sure that the center-position stapling option is displayed.

- 1. Press the User Tools key.
- 2. Touch "Copier/Document Server Features".
- 3. Touch the "Input/Output" tab, then touch "Stapling Position".
- 4. Touch any "Stapling Position" button and touch the center (saddle-stitch) stapling symbol.
- Exit the User Tools mode. Specify the number of copies, touch the center stapling symbol on the operation panel, then start the print job.

Auxiliary Trays

The auxiliary trays are stored in the auxiliary tray storage pocket mounted on the back cover of the finisher.

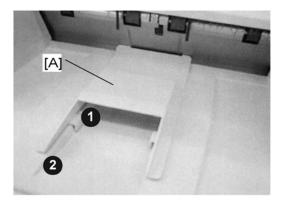
Make sure that the customer understands the following points about these auxiliary trays:

- The trailing edges of excessively curled or Z-folded paper can activate the tray full sensors before
 the tray is actually full.
- Once the "Exit Tray Full" message displays, the job cannot continue until some sheets are removed from the tray which is only partially full. The trays are designed to prevent this problem.
- The auxiliary tray for the shift tray should be installed for Z-folding jobs.
- The auxiliary tray for the proof tray should be installed only when excessively curled paper is triggering early "Exit Tray Full" alerts.
- Normally, both auxiliary trays should be placed in the pocket mounted on the back of the finisher.

Proof Exit Auxiliary Tray

Follow the procedures below to install the auxiliary tray for the proof tray.

1. First, remove the paper from the paper feed tray, turn it upside down, and continue printing. This may solve the problem.

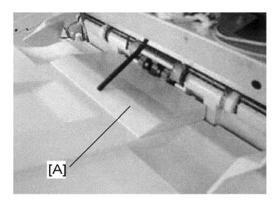


B246I903

- 2. If the "Exit Tray Full" alerts continue, set the proof auxiliary tray [A] on the proof tray on the top of the finisher.
- 3. Make sure that the arms **0** of the auxiliary tray fit tightly over the ridges **2** of the proof tray below.

Shift Auxiliary Tray

- 1. Open and close the front door of the finisher. This initializes the finisher and moves the shift tray to the standby position.
- 2. Open the front door again and leave it open.



B246I902

- 3. Set the shift auxiliary tray [A] on the shift tray as shown.
- 4. Close the front door. This initializes the finisher again and moves the shift tray to the new standby position with the auxiliary tray installed.
- 5. After the Z-folding job is finished, remove the tray and store it in the auxiliary tray storage pocket on the back of the finisher.
- 6. Open and close the front door to re-initialize the finisher and reset the standby position of the shift tray.

Punch Units (B702)

These instructions describe installation of the following punch units for the Finisher SR4060/SR4070:

- Punch Unit Type 3260 SC (B702)
- Punch Unit Type 3260 2/4 EU (B702)
- Punch Unit Type 3260 NA 3/2 (B702)

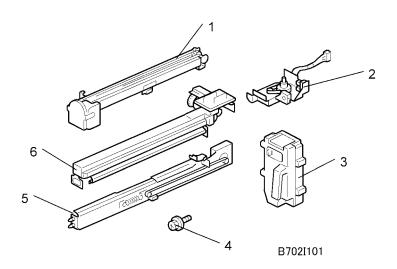
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• These punch units can be installed and used with the Finishers SR4060 and SR4070 only.

Accessories

Check the accessories and their quantities against the following list.

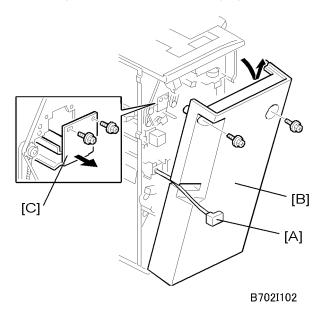
No.	Description	Q'ty
1.	Punchout Waste Unit	1
2.	Slide Drive Unit	1
3.	Punch Waste Hopper	1
4.	Screws (M3 x 6)	5
5.	Side-to-Side Detection Unit	1
6.	Punching Unit	1



Installation Procedure

MARNING

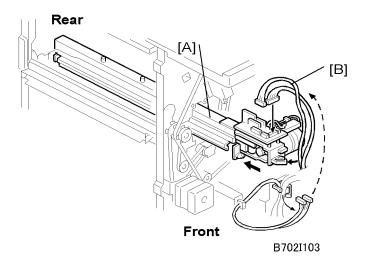
• Always turn the machine off and unplug the machine before doing any of the following procedures.



- 1. If the finisher is connected to the copier, disconnect the power connector [A] and separate the finisher from the copier.
- 2. Remove the rear cover [B] (\mathscr{F} x 2) and open the front door.



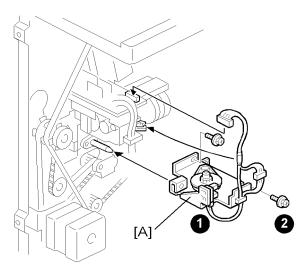
- At the base of the back cover, be sure to disconnect the tabs that fasten the cover to the frame.
- 3. Remove the guide plate [C] (Fx 2).



- 4. Slide the punch unit [A] along its rails into the finisher. Make sure that pin engages correctly at the front and rear.
- 5. Connect and fasten the punch unit [B] (x 2, x 1).

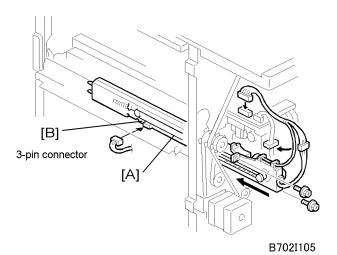


• The connectors are coiled and tied above the PCB on the right.



B702I104

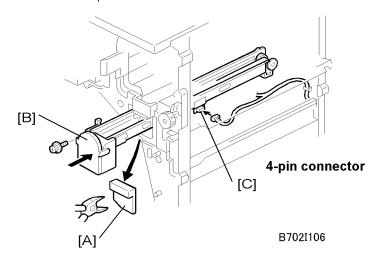
- 6. Fasten the slide drive unit [A] to finisher and connect it to the punch unit (🖫 x 2, 💵 x 1). Press in on the slide drive unit at **1** when you attach screw **2**.
- 7. Make sure that the punch unit moves freely and is not blocked by the screws.



- 8. Insert the side-to-side detection unit [A]. Make sure that the two pins are engaged correctly at the front.
- 9. Confirm that the side-to-side detection slides smoothly on its rails. If it does not, make sure that the rails are aligned with their grooves.
- 10. Fasten the side-to-side detection unit and connect it at the rear (\mathscr{F} x 2, $\overset{\smile}{\Longrightarrow}$ x 1, $\overset{\smile}{\Longrightarrow}$ x 1).
- 11. Pull the short connector out of the connector [B] then connect it ($\mathbb{Z}^2 \times 1$).



• This is the 3-pin connector.



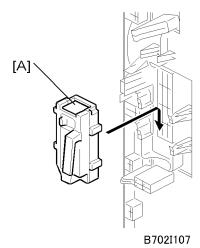
- 12. At the front, use a pair of nippers to remove the knockout [A]
- 13. Insert the punch waste transport unit [B] into the finisher.



- Make sure that the punch waste transport unit slides smoothly on its rails. If it does not, make sure that the rails are aligned with the grooves.
- 14. Remove the short connector from the connector [C].



- This is the 4-pin connector.
- 15. Connect connector and fasten the punch waste transport unit (🖭 x 1, 🗒 x 1, 🗗 x 1).



16. Set the hopper [A] in its holder.

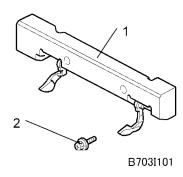
Output Jogger Unit Type 9002A (B703)

• This jogger unit can be installed and used with the Finishers SR4060/SR4070 only

Accessories

Check the accessories and their quantities against the following list.

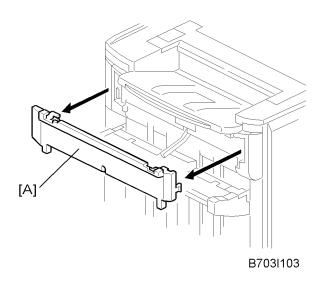
No.	Description	Q'ty
1.	Jogger Unit	1
2.	Tapping Screws - M3 x 6	2



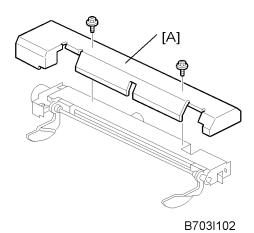
Installation Procedure

WARNING

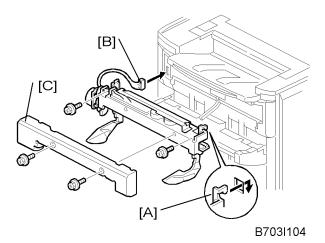
- Always switch the machine off and unplug the machine before doing any of the following procedures.
- 1. Turn the main machine switch off.
- 2. Disconnect the finisher from the main frame.



3. Use the flat head of a screwdriver to remove the left upper cover [A].



4. Remove the cover plate [A] ($\widehat{\mathbb{F}} \times 2$). Keep the screws.



- 5. While you hold the jogger unit with the connector on the left, put the hooks of the frame of the jogger unit [A] into the holes in the left and right side of the finisher frame.
- 6. Fasten connector [B] to the socket (🔎 x 1).
- 7. Attach the jogger unit to the finisher ($\mathcal{F} \times 2$).
- 8. Reattach the jogger unit cover [C] to the jogger unit (x 2).
- 9. Set SP6118 to 1 after you install the jogger unit.

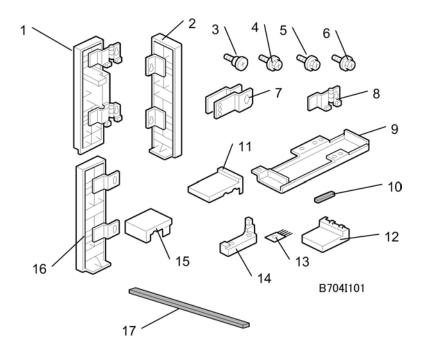
2

Cover Interposer Tray CI4000 (D614)

Accessories

Check the accessories and their quantities against the following list.

No.	Description	Q'ty
1.	Front door extension (top)	1
2.	Rear cover extension (bottom)	1
3.	Shoulder screws	3
4.	Tapping screws – M4 x 8	9
5.	Tapping screws – M3 x 8	2
6.	Tapping screws – M3 x 6	5
7.	Adjuster plates	2
8.	Hinge Bracket	1
9.	Plate Extension (bottom)	1
10.	Gasket Seals	2
11.	Right Rear Cover Plate (D610 only)	1
12.	Spacer	1
13.	Anti-Static Brush	1
14.	Spacer (D610 only)	1
15.	Right front corner plate (D610 only)	2
16.	Front door extension (bottom)	1
17.	Sponge Strip	1



Installation Procedure

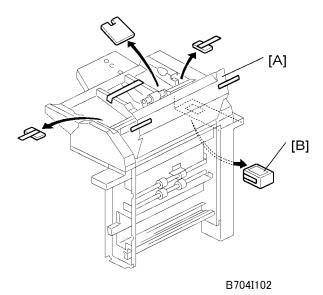
The Cover Interposer Tray must be installed with one of the following finishers:

- Finisher SR4060 (D611)
- Finisher SR4070 (D612)
- Finisher SR4080 (D610)

Removing Tapes and Retainers

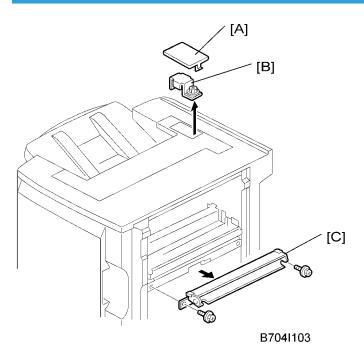
MARNING

• Make sure that the finisher is disconnected from the main machine and that the copier is switched off and unplugged before starting the following procedure.



- 1. If the finisher is connected to the machine, disconnect it.
- 2. Remove all tape and retainers from the cover interposer tray [A].
- 3. Remove the tape and cardboard [B] from the ground connector.

Preparing the Finisher



2

- 1. Remove the cover [A] of the relay connector.
- 2. Loosen the screw of the bracket [B] (\mathscr{F} x 1) then remove the bracket.
- 3. Remove the guide plate [C]. (This guide plate will be attached to the cover interposer; do not discard it.)



• If you are installing the cover interposer tray with a previously installed finisher, remove the sponge strip from the finisher and save it for re-attachment to the interposer tray.

4. Either:

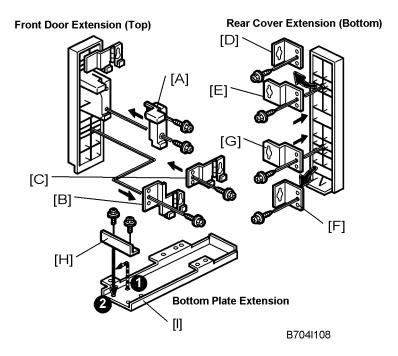
- If you are installing the D611/D612, attach the extensions to the finisher without modification. Go to "Attaching the Extensions for the D611/D612".
- If you are installing the D610, modify the extensions and attach them to the finisher. Go to "Attaching the Extensions for the D610".

Attaching the Extensions for the D610

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- The procedures in this section are for installation of the cover interposer with the D610 only.
- If you are installing the cover interposer with the D611/D612, go to the next section.

Modify the Attachments for the D610



Front Door Extension:

- 1. Attach spacer [A] to the front door extension (top) (\mathscr{F} x 2).
- 2. Remove the lower hinge [B] and replace it with [C] (x 2).

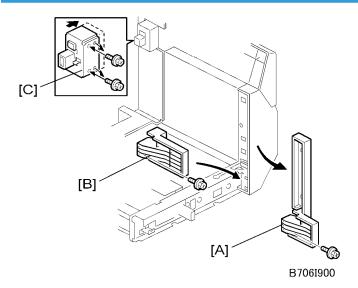
Rear Cover Extension (Bottom):

- 1. Remove [D] and replace it with [E] (Fx 1).
- 2. Remove [F] and replace it with [G] (Fx 1).

Plate Extension (Bottom):

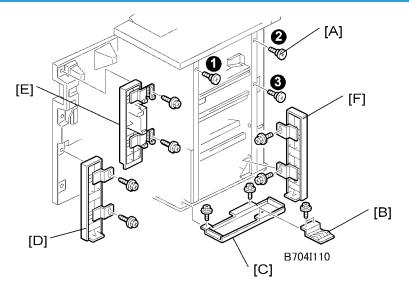
1. Remove bracket [H] from \bullet and attach it to \bullet at the end of the bottom plate extension ($\mathscr{F} \times 2$).

Prepare the Cover Interposer for the D610



- 1. Remove spacer [A] (x 1).
- 2. Attach spacer [B] (x 1).
- 3. Remove the screws from the connector case [C] (\mathscr{F} x 2).
- 4. Push the connector case in the direction of the arrow until the second set of holes is aligned with the holes below, then attach the screws.

Attach the Extensions to the D610



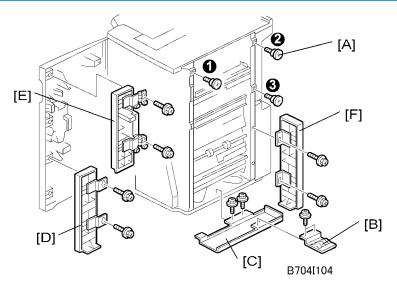
- 1. Attach the three shoulder screws [A] **123** (F x 3).
- 2. If the finisher has been previously installed, remove the ground plate [B] from the finisher and keep the screws.
- 3. Attach the bottom plate [C] (\mathscr{F} x 2, M3 x 6).
- 4. Attach the ground plate to the bottom plate ($\mathcal{F} \times 2$).
- 5. Attach the bottom front cover extension [D] (F x 2, M4 x 8).



- · Attach this cover first.
- 6. Attach the top front cover extension [E] (F x 2, M4 x 8).
- 7. Set two screws into the holes provided for the rear cover extension [F] (\mathscr{F} x 2, M3 x 6).
- 8. Set the keyholes of the rear cover extension over of the heads of the screws.
- 9. Press up on the bottom of the rear cover extension to close the gap at the top of the cover, then tighten the screws.

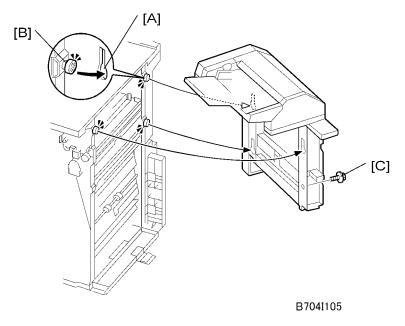
2

Attaching the Extensions for the D611/D612



- 1. Attach the three shoulder screws [A] **1023** (F x 3).
- 2. If the finisher has been previously installed, remove the ground plate [B] from the finisher and save the screws
- 3. Attach the bottom plate [C] (\mathscr{F} x 2, M3 x 6) then attach the ground plate to the bottom plate (\mathscr{F} x 2).
- 4. Attach the bottom front cover extension [D] (x 2, M4 x 8).
- 5. Attach the top front cover extension [E] (\mathscr{F} x 2, M4 x 8).
- 6. Attach the rear cover extension [F] (Fx 2, M3 x 6).

Attaching the Interposer Tray (D610/D611/D612)



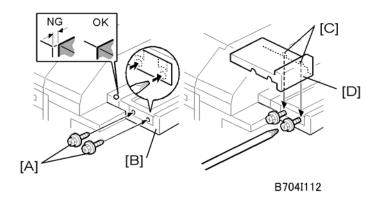
- 1. Pick up the cover interposer tray, align the keyholes [A] with the shoulder screws [B], then slide the cover interposer down onto the screws.
- 2. Secure the cover interposer with the screw [C] (x 1, M3 x 6).
- 3. Either:
 - If you are installing the cover interposer tray on the D611/D612, skip the next section and go directly to "Docking the Finisher and Interposer to the Machine".
 - If you are installing the cover interposer tray on the D610, go to the next section, install the
 corner plates on the D610, then go to "Docking the Finisher and Interposer to the Machine".

Attaching the Corner Plates for the D610



• The corner plates are installed on the D610 only.

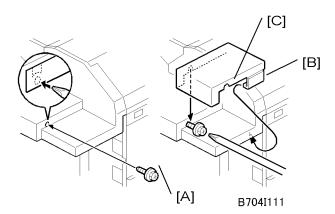
Right Rear Corner Plate (D610 only)



1. Temporarily attach the screws [A] (with about two turns) to the right end of the finisher extension table [B] (x 2, tapping M4 x 8)



- The holes are not visible because they are covered with tape. Just punch the screws through the holes.
- 2. Align the cutouts [C] of the right rear corner plate [D] with the screws and attach the plate.
- 3. With a long screw driver inserted through the cutouts in the right rear corner plate [D], tighten the screws to fasten the right rear corner plate to the table extension [B].

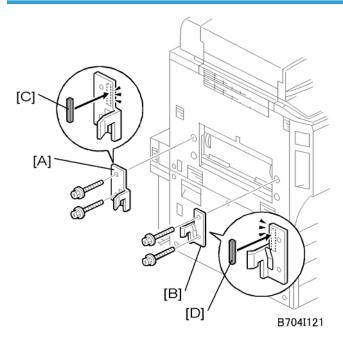


4. Temporarily attach the screw [A] (M4 x 8) with about two turns to fasten to the panel at the right front corner.

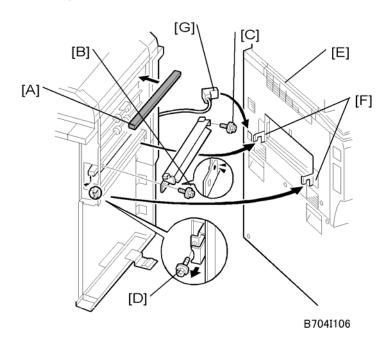


- The hole is not visible because it is covered with tape. Just punch the screw through the hole.
- 5. With the clamp [B] under the edge of the corner, align the cutout [C] in the right front corner plate with the screw, then snap it into position.
- 6. With a long screwdriver inserted into the plate cutout [C], tighten the screw to fasten the right front corner plate.

Docking the Finisher and Interposer to the Machine (D610/D611/D612)



- 1. Attach the rear bracket [A] (\mathscr{F} x 2, M4 x 14).
- 2. Attach the front bracket [B] (\$\beta x 2, M4 x 14).
- 3. Attach the gasket seals [C] and [D].

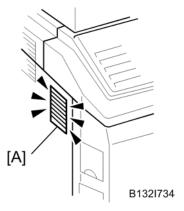


- 4. Attach the sponge strip [A] that is supplied with the finisher.
- 5. Attach the guide plate (removed from the finisher) to the cover interposer.
 - Attach the front end [B] of the plate (F x 1).
 - Attach the rear end of the plate with the anti-static brush [C] (x 1).

Mportant !

- Use the two small tapping screws that are supplied, and not the machine screws removed from the finisher guide plate.
- 6. Release the lock lever [D] (x 1).
- 7. Attach the pad [E]. (This pad is provided with the finisher.)
- 8. Slowly push the finisher against the side of the machine until the brackets [F] go into the slots.

- Move the finisher carefully, or you will bend the entrance guide plates.
- 9. Attach the lock lever [D] (x 1).
- 10. Connect the connector [G] to the copier.



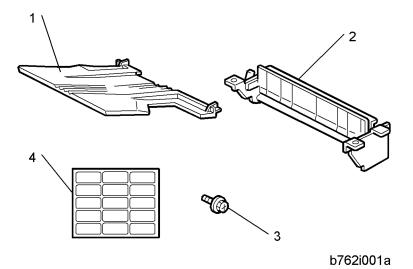
- Check the duct [A] on the left side of the machine.
- Make sure that the sponge does not prevent air flow through this duct.

Accessory Check

Check the accessories and their quantities against the following list.

Mailbox CS4000 (D616)

No.	Description	Q'ty
1.	Trays	9
2.	Guide plate	1
3.	Tapping screws - M3x8	6
4.	Decals (bin display)	1



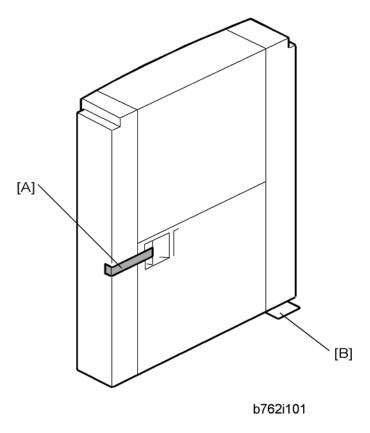
Installation Procedure

Mportant !

- The Mail Box can be installed only in SR4060 (D611) or SR4070 (D612).
- The Mail Box and Cover Interposer tray cannot be installed together.

MARNING

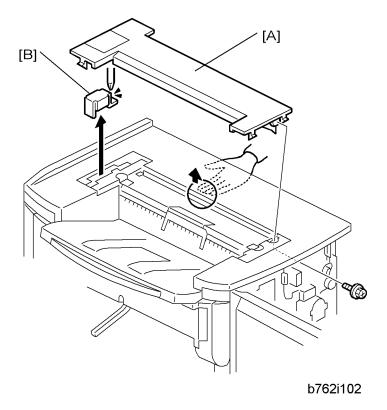
• Switch the machine off and unplug the machine before starting the following procedure.



1. Remove the filament tape [A].



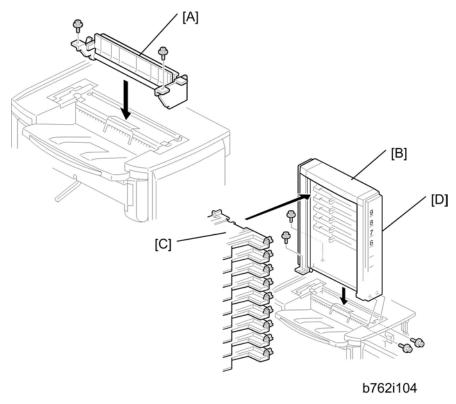
• Handle the mailbox carefully. The corner leaf [B] can be damaged easily.



2. If the Cover Interposer Tray (D614) is installed on the finisher, remove it.



- The cover interposer tray and mailbox cannot be installed on the finisher at the same time.
- 3. Remove the top cover [A] of the finisher ($\mathscr{F} \times 1$).
- 4. Remove the bracket [B] (*x 1).



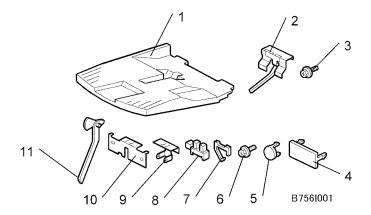
- 5. Attach the guide plate [A] to the top of the finisher (x 2, M3x8).
- 6. Attach the mailbox [B] to the top of the finisher (F x 4, M3x8).
- 7. Attach the 9 trays [C] to the mailbox.
- 8. Give the decals [D] to the customer for notation and attaching at the correct location.

Copy Tray Type 9002 (B756)

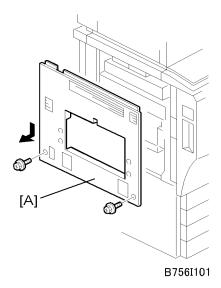
Accessories

Check the accessories and their quantities against the following list.

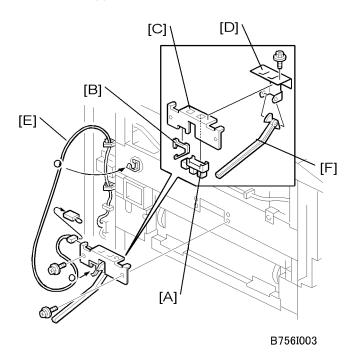
No.	Description	Q'ty
1.	Copy Tray	1
2.	Actuator Arm and Bracket (not used)	1
3.	Tapping Screw (not used)	2
4.	Large Cap	1
5.	Small Cap	4
6.	Tapping Screw (M4 x 8)	1
7.	Harness Clamp	1
8.	Paper Height Sensor	1
9.	Actuator Arm Bracket	1
10.	Sensor Bracket	1
11.	Actuator Arm	1



Installation

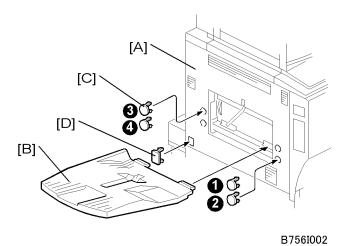


1. Remove the left upper cover [A] (*F x 2).



- 2. Attach the paper height sensor [A] and harness clamp [B] to the sensor bracket [C].
- 3. Attach the sensor bracket and actuator arm bracket [D] to the copier ($\mathscr{F} \times 3$).
- 4. Attach the sensor harness [E] (\P x 1, \backsim x 4).

5. Attach the actuator [F] to the arms of the actuator arm bracket.



- 6. Reattach the left upper cover [A] (\mathscr{F} x 2).
- 7. Attach the tray [B].
- 8. Attach the small caps [C] to the holes $\mathbf{0}$, $\mathbf{2}$, $\mathbf{3}$, $\mathbf{4}$.
- 9. Attach the large cap [D] to cover the finisher power connection point.

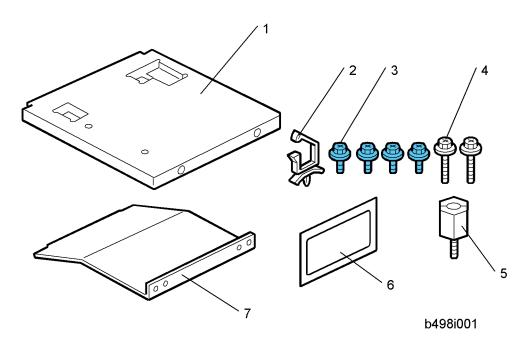
2

Card Reader Bracket (B498), Key Counter Bracket (B452)

Key Card Bracket B498 Accessories

Check the accessories and their quantities against this list.

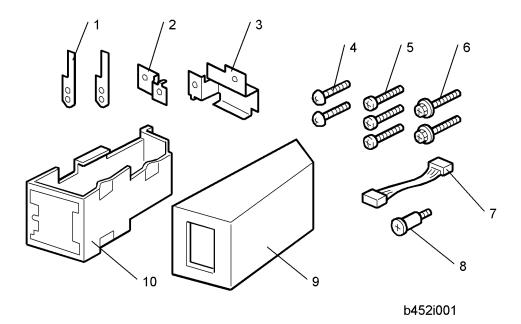
No.	Description	Qty
1.	Key Card Table	1
2.	Harness Clamp	1
3.	Tapping Screws (M3 x 8)	4
4.	Tapping Screws (M4 x 14)	2
5.	Stud	1
6	Decal	1
7.	Key Card Table Support	1



Key Counter Bracket B452 Accessories

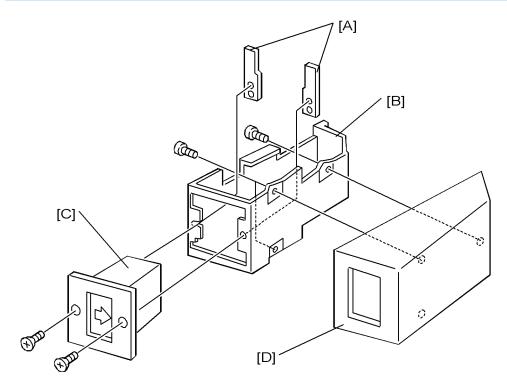
Check the accessories and their quantities against this list.

No.	Description	Qty
1.	Plate nuts	2
2.	Rear Bracket	1
3.	Front Bracket	1
4.	Tapping Screws (M3 x 6)	2
5.	Tapping Screws (M4 x 8)	3
6.	Tapping Screws (M4 x 16)	2
7.	Harness	1
8.	Shoulder Screw	1
9.	Key Counter Bracket Cover	1
10.	Key Counter Bracket	1



Installation

Assemble the Key Counter Bracket



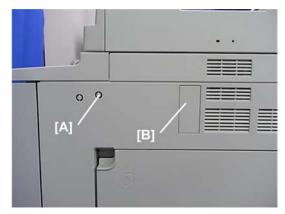
b452i002

- 1. Hold the key counter plate nuts [A] on the inner surface of the key counter bracket [B].
- 2. Attach the key counter holder [C] to the key counter bracket (Fx2).
- 3. Attach the key counter bracket cover [D] (x2).

Install the Key Card Bracket and Assembled Key Counter

MARNING

Make sure that the machine is turned off and unplugged from its power source before you do this
procedure.



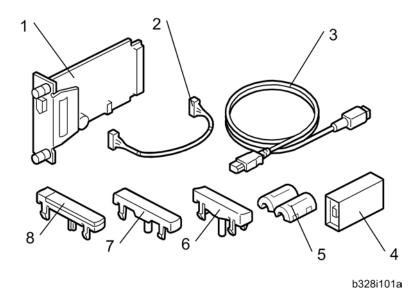
b498i005.vsd

- 1. Use a pair of nippers to remove the screw hole cover [A].
- 2. Use the tip of a small screwdriver to remove plate [B].
- 3. Attach the assembled key counter to the side of the machine at [A] ($\Re x1$ Stepped) and [B] ($\Re x1$, $\Im x1$)

Copy Connector Type 3260 (B328)

Accessories

No.	Description	Q'ty
1.	Copy Connector Board B328	2
2.	Power Repeater Cable	2
3.	Coupling Interface Cable 1394	3
4.	Repeater Hub 1394	2
5.	Ferrite Core	2
6.	Keytop for B-C3 (Not used)	4
7	Keytop (Not Used)	4
8	Keytop for V-C1 (Not used)	8



Preparation

Before you begin the installation procedure:

• Measure the distance between the machines to be connected.

• Confirm that the printer/scanner option is installed on the machines.

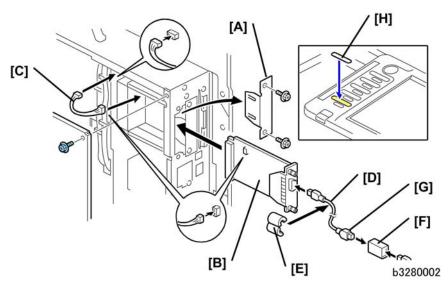
Determine the number of cables and repeater hubs that are necessary based on the distance measured between the machines.

Distance	Power Repeater Hubs Required	Interface Cables Required
Up to 4.5 m (14.8 ft.)	None	1
4.5 to 9.0 m (14.8 to 29.5 ft)	1	2
9.0 to 13.5 m (29.5 to 112.5 ft.)	2	3

- Install the key labeled "Printer/Other Function + Scanner" (or its equivalent symbol key-top for EU) on a machine with the printer/scanner option installed.
- Install the key labeled "Other Function" (or its equivalent symbol key-top for EU) on a machine without the printer/scanner option.

Installation

- 1. Remove these parts:
 - Rear upper cover (x2)
 - Rear lower cover (Fx2)
 - Controller box cover (x 13)



2. Remove the cover [A] of Slot B (\mathscr{F} x 2).

- 3. Install the Copier Connection Kit Board B328 [B] in Slot B and fasten it (x 2).
- 4. Connect the power repeater cable [C] to:
 - CN32 on the controller board
 - CN4 on the copy connector board
- 5. Reattach the controller box cover, rear upper and lower cover.

Repeat Steps 1 to 5 to install the connector kit on the second machine.

- 6. Connect the end of the interface cable [D] to the copy connector board.
- 7. Attach the ferrite cores [E] to both ends of the interface cable.
- 8. If and additional cable is required, connect the repeater hub [F] and cable [G].
- 9. Attach the appropriate decal [H] to each machine.
- 10. Attach the "Printer/Other Function" decal (or its equivalent symbol for EU) if the printer/scanner option is installed.

-or-

Attach the "Other Function" decal (or its equivalent symbol for EU) if the printer/scanner option is not installed.

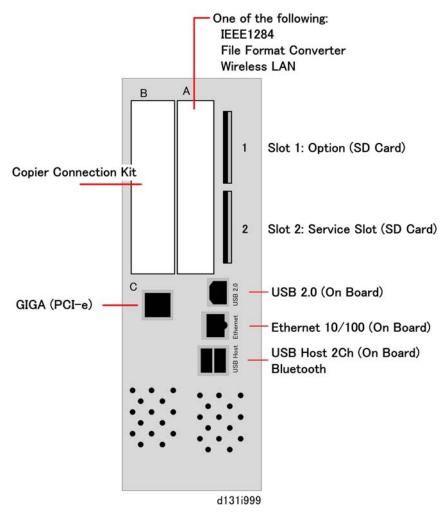
11. Attach the other end of the connection cable to the copy connector board installed in the other machine.

Merging Applications on One SD Card

Overview

2

Two slots for boards and two slots for SD cards are provided on the controller box. Each board or SC card must be inserted into its assigned slot. The slot assignment of each item is listed in the table below.





• If the customer wants to use more than one application on SD cards, applications must be merged on the same SD card.



- The data necessary for authentication is transferred with the application program to the target SD card
- Do not use an SD card if it was used with a computer before this time. Correct operation is not guaranteed if this type of SD card is used.
- The SD card is the only evidence that the customer is licensed to use the application program. Also,
 the service technician may occasionally need to check the SD card and its data to solve problems.
 For these reasons SD cards must be stored with the machine.
- After an SD card has been used to move other applications onto that card, that SD card cannot be
 used for a different function.
- Never remove the System SD Card from Slot 1
- Before uploading to an SD card, always make sure that the write-protect switch is OFF. (It is very
 easy to accidentally turn on the write-protect switch when inserting or removing an SD card.)

Merging Applications

Do this procedure to put more than one application on one SD card.

- 1. Turn off the main machine.
- 2. Remove the SD card slot cover (x 1).
- 3. Put the Source SD card in Slot 2 (service slot). This card contains the application that you want to copy.



- The PS3 SD card cannot be the source card (it cannot be copied).
- 4. Check the target SD card and confirm that its write-protect switch is OFF.
- 5. Insert the Target SD card into the SD card Slot 1.
- 6. Open the front door.
- 7. Turn the main machine on.
- 8. Do SP5873 001.
- 9. Touch "Execute".
- 10. Follow the instructions on the display and touch "Execute" to start copying.
- 11. When the display tells you copying is completed, touch "Exit".
- 12. Turn the main machine off.
- 13. Remove the Source SD card from Slot 2. Leave the target SD card in Slot 1.
- 14. Turn the main machine on.
- 15. Go into the User Tools mode and check that all the applications on the SD card in Slot 1 are enabled:

2

User Tools> System Settings> Administrator Tools> Firmware Version

- 1. Turn the main machine off again.
- 2. Reattach the SD card slot cover.
- 3. Return copied SD cards to the customer for safekeeping, or tape the copied SD cards to the inside of the front door.



• Do not remove copied SD cards from the machine site.

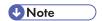


- After an SD card has been copied, it can no longer be used. However, it must be stored in the
 machine to serve as proof of purchase by the customer.
- The original card can also be used to perform an undo procedure (SP 5873 002). Before you
 store an SD card, label it carefully so it can be identified easily if you need to do the undo
 procedure (see below).

Undo Exec

Do this procedure if you moved an option from the original SD card to another card by mistake and you need to restore the original SD card.

- 1. Turn the main switch OFF.
- 2. Put the SD card holding the merged applications in SD Card Slot 1.
- 3. Put the original destination SD card (the one removed from storage) into Slot 2



- The SD card in Slot 2 must be the original SD card of the application you want to move from Slot 1 to Slot 2. You cannot use a blank SD card in Slot 1.
- 4. Turn the main switch ON.
- 5. Do SP5873-002 (Undo Exec).
- 6. Follow the instructions of the operation panel messages.
- 7. Turn the main switch OFF.
- 8. Remove the SD cards from the slots.
- 9. Turn the main switch ON.

Common Procedures

Inserting SD Cards

Insert SD cards with the notched corner down.

The insertion point for the SD cards are offset slightly to the left. Make sure the SD card is inserted correctly before you push it into the slot.

Pushing in the SD Card also releases it for removal. Make sure the SD Card is inserted and locked in place. If it is partially out of the slot, push it in gently until it locks in place.

Storing Copied SD Cards

Copied SD cards cannot be used. However, they must be stored at the site to server as proof of purchase by the customer.

Return copied SD cards to the customer for safekeeping, or tape the copied SD cards to the inside of the front door.

Do not remove copied SD cards from the machine site.

Printer/Scanner Unit Type 9002 (D620)

Accessories

No.	Description	Q'ty
1.	Caution Decal	1
2.	Printer/Scanner SD Card	1
3.	EULA Sheet	1
4.	FCC Decal	1
5.	Memory DIMM 0.5 GB	1

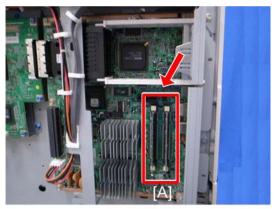
Mportant (

Only one Slot 1 is available for applications on SD cards. If more than one application is will be
used, the applications must be moved onto one SD card with SP5873 -1.

Installation

ACAUTION

Make sure that the main machine is switched off and that its power cord is disconnected before
doing the following procedure.



d062r681b

- 1. Switch the machine off.
- 2. Remove the controller box cover p.303
- 3. Insert the memory DIMM in either slot [A].
- 4. Re-attach the controller box cover.
- 5. Insert the SD Card into Slot 1.

 Make sure the SD Card is inserted and locked in place. If it is partially out of the slot, push it in gently until it locks in place.



d131i018

- 6. On the operation panel, attach the "Printer" keytop [A] and the "Scanner" keytop [B]. Select either the English set or Symbol set for installation.
- 7. Plug in the power cable and turn the main power switch on.
- 8. Change SP5985 -1 and -2 from "0" to "1".
- 9. Turn the main power switch off and on.

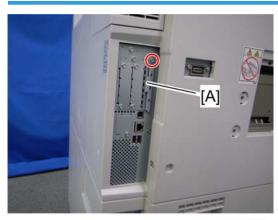
10. Follow the procedures in the Operation Instructions to complete the installation for the printer/scanner option.

PostScript3 Unit Type 9002 (D620)

Accessories

No.	Description	Q'ty
1.	PostScript3 Emulation SD Card	1
2.	Decal	1

• Only Slot 1 is available for applications on SD cards. If more than one application will be used, the applications must be merged onto one SD card with SP5873 -1.



d063i500

- 1. Switch the machine off.
- 2. Remove the SD card slot cover [A] (\mathscr{F} x 1).
- 3. Insert the PS3 SD Card [B] into Slot 1.
- 4. Switch the machine on.

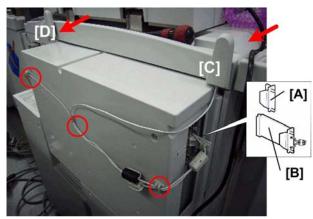
IEEE802.11 Interface Unit (D377)

This procedure describes installation of the wireless LAN for:

- IEEE802.11a/g Interface Unit Type J (D377)
- IEEE 802.11g Interface Unit Type K (D377)

Accessories

No.	Description	Q'ty
1.	Wireless LAN PCB (GW-WLAN)	1
2.	Clamps	8
3.	Velcro Fasteners	2
4.	Wireless LAN Instructions	1



d377i001

- 1. Remove the cover of the interface slot A [A] (F x 2).
- 2. Touch a metal surface to discharge any static electricity from your hands.
- 3. Put the Wireless LAN board [B] in Slot A.
- 4. Confirm that the board is inserted completely, then fasten it (F x 2).
- 5. Pull the antennas away from machine and make sure that they are not tangled.
- 6. Look at the markings on the antenna bracket.

- ANT1. Antenna 1 transmits and receives. The ferrite core on the Antenna 1 cable is black. It
 must be installed on the left rear corner of the main machine where it will not be obstructed by
 the operation panel.
- ANT2. Antenna 2 only receives. The ferrite core on the Antenna 2 cable is white. It is installed
 on the right rear corner of the machine.
- 7. Attach ANT1 [C] to the left rear corner.
- 8. Attach ANT2 [D] to the right rear corner.
- 9. Route the cables and use the clamps to attach them as shown.

User Tool Settings for Wireless LAN

Do the procedure below to perform the initial interface settings for IEEE 802.11 a/g.



- You cannot use the wireless LAN if you use Ethernet.
- The Bluetooth interface unit and the Wireless LAN interface unit can not be used simultaneously.
- 1. Press the "User Tools/Counter" key.
- 2. On the touch panel, press "System Settings".



- The Network I/F (default: Ethernet) must be set for either Ethernet or wireless LAN.
- 3. Select "Interface Settings".
- 4. Press "Wireless LAN". Only the wireless LAN options show.
- 5. Communication Mode. Select either "802.11 Ad hoc" or "Infrastructure".
- 6. SSID Setting. Enter the SSID setting. (The setting is case sensitive.)
- 7. Channel. You need this setting when Ad Hoc Mode is selected.

Region A (mainly Europe and Asia)

Range: 1-13, 36, 40, 44 and 48 channels (default: 11)

Region B (mainly North America)

Range: 1-11, 36, 40, 44 and 48 channels (default: 11)

- Range: 1-11 channels (default: 11)
- In some countries, only the following channels are available:



- The allowed range for the channel settings may vary for different countries.
- 8. WEP (Encryption) Setting. The WEP (Wired Equivalent Privacy) setting is designed to protect wireless data transmission. The same WEP key is required on the receiving side in order to unlock encoded data. There are 64 bit and 128 bit WEP keys.

WEP:

Selects "Active" or "Inactive" ("Inactive" is default.).

Range of Allowed Settings:

- 64 bit: 10 characters
- 128 bit: 26 characters
- 9. Press "Return to Default" to initialize the wireless LAN settings.

Press "Yes" to initialize the following settings:

- Transmission mode
- Channel
- Transmission Speed
- WEP
- SSID
- WEP Key

SP Mode and UP Mode Settings for IEEE 802.11 a/g Wireless LAN

The following SP commands and UP modes can be set for IEEE 802.11 a/g.

SP No.	Name	Function	
		Sets the transmission speed	
5840-008		Auto, 54 Mbps, 48 Mbps, 36 Mbps, 24 Mbps,	
3840-008	Transmission speed	18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps,	
		11 Mbps, 5.5 Mbps, 2 Mbps, 1 Mbps (default: Auto)	
5840-011	WEP Key Select	Used to select the WEP key (Default: 00).	
UP mode	Name	Function	
	SSID	Used to confirm the current SSID setting.	
	WEP Key	Used to confirm the current WEP key setting.	
	WEP Mode	Used to show the maximum length of the string that can be used for the WEP Key entry.	

Bluetooth Interface Unit Type D (D566)

Accessories

Check the quantity and condition of the accessories.



d566i001

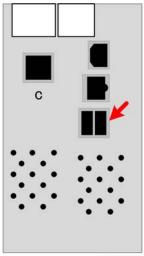
No.	Description	Q'ty
1.	Bluetooth USB Module	1



• An IEEE 802.11 interface unit and Bluetooth interface unit cannot be installed and used together.



- Switch the machine off and unplug it before you do this procedure.
- 1. Turn off the machine and unplug it.



d566i002

- 2. Insert the Bluetooth USB module into the USB slot on the controller faceplate.
- 3. Plug the power plug in and turn the machine on.
- 4. Confirm that Bluetooth is installed correctly:

User Tools> Printer Features> List/Test Print> Configuration Page

File Format Converter Type E (D377)

Accessory Check

Check the accessories and their quantities against this list:

No.	Description	Q'ty
1.	File Format Converter (MLB: Media Link Board)	1

- 1. Switch the machine off.
- 2. Remove the cover of Slot A (x 2).
- 3. Insert the file format converter board into Slot A and fasten it with the screws.
- 4. Switch the machine on.
- 5. Set **SP5836-3** to "1" to enable the print backup feature.
- 6. Confirm or set the following SP codes with the values in the table listed below.

SP No.	Setting	SP No.	Setting
5-836-1	1	5-836-73	0
5-836-2	0	5-836-85	1
5-836-3	1	5-836-86	2
5-836-72	0	5-836-91	50

7. Set the following SP codes according to the customer's needs.

SP No.	Setting	Comment
	2	Selects JPEG2000 file format for documents copied from the document server to Palm2. Note: Files backed up to Palm2 in J2K format cannot be edited by other software applications.
SP5-836-94	0	Selects the TIFF file format for documents copied from the document server to Palm2. Note: Select this so the backed up files can be used with other software applications (editing, OCR, etc.) with only slight loss in image quality.
SP-5836-98	1	Applies dot correction and eliminates ghost images transferred from the back sides of double-sided originals when files are copied to Palm2. This selection also reduces the size of the file. Note: This function is applied to both J2K and TIFF files and is particularly useful for copying large J2K documents quickly with only a slight loss in image quality.
	0	Does not apply the features of the "1" setting when files are copied to Palm2. Note: This setting preserves the quality of the original image, especially with J2K files, but also requires more time for copying and requires more disk space to store the larger files.

HDD Encryption Unit Type A (D377)

Before You Begin the Procedure

1. Make sure that the following settings are not at the factory default settings:

- Supervisor login password
- · Administrator login name
- Administrator login password



- These settings must be set up by the customer before the encryption option can be installed.
- 2. Confirm that "Admin. Authentication" is on:

[User Tools]> "System Settings"> "Administrator Tools"> "Administrator Authentication Management"> "Admin. Authentication"> "On"

If this setting is "Off" tell the customer that this setting must be "On" before you can do the installation procedure.

3. Confirm that "Administrator Tools" is selected and enabled:

[User Tools]> "System Settings"> "Administrator Tools"> "Administrator Authentication Management"> "Available Settings



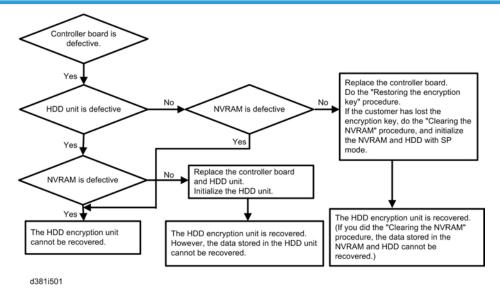
• "Available Settings" is not displayed until "Admin. Authentication" is switched on.

If this setting is not selected tell the customer that this setting must be selected before you can do the installation procedure.

Enabling Encryption

- 1. Turn on the main power switch.
- 2. Enter the SP mode.
- 3. Select SP5878-2 (Option Setup Encryption Option), and then touch [Execute].
- 4. Turn off the main power switch.
- 5. Remove the SD card.
- 6. Attach the slot cover [A] (x 1).
- 7. Switch the machine on.

Recovery from a Device Problem



Restoring the encryption key

When replacing the controller board for a model in which the HDD encryption unit has been installed, updating the encryption key is required.

- 1. Prepare an SD card which is initialized.
- 2. Make the "restore_key" folder in the SD card.
- 3. Make an "nvram_key.txt" file in the "restore_key" folder in the SD card.
- 4. Ask an administrator to input the encryption key (this has been printed out earlier by the user) into the "nvram_key.txt" file.
- 5. Remove only the HDD unit.
- 6. Turn on the main power switch.
- 7. Confirm that the prompt on the LCD tells you to install the SD card (storing the encryption key) in the machine.
- 8. Turn off the main power switch.
- 9. Insert the SD card that contains the encryption key into slot 2.
- 10. Turn on the main power switch, and the machine automatically restores the encryption key in the flash memory on the controller board.
- 11. Turn off the main power switch after the machine has returned to normal status.
- 12. Remove the SD card from slot 2.
- 13. Reinstall the HDD unit.

Clearing the NVRAM

When replacing the controller board for a model in which the HDD encryption unit has been installed and a customer has lost the encryption key, clearing the NVRAM is required to recover the HDD encryption unit.

- 1. Prepare an SD card which is initialized.
- 2. Make the "restore_key" folder in the SD card.
- 3. Make an "nvram_key.txt" file in the "restore_key" folder in the SD card.
- 4. Input "nvclear" into the "nvram_key.txt" file.
- 5. Turn on the main power switch.
- 6. Confirm that the prompt on the LCD tells you to install the SD card (storing the encryption key) in the machine.
- 7. Turn off the main power switch.
- 8. Insert the SD card that contains "nyclear" into slot 2.
- 9. Turn on the main power switch, and the machine automatically restores the encryption key in the flash memory on the controller board.
- 10. Turn off the main power switch after the machine has returned to normal status.
- 11. Remove the SD card from slot 2.
- 12. Turn on the main power switch.
- 13. Initialize the NVRAM (SP5801-1) and HDD unit (SP5832-1) with SP mode.
- 14. The user must enable the HDD encryption unit with a user tool.

Data Overwrite Security Unit Type H (D377)

Before You Begin...

- 1. The SD card for this feature is inserted at the factory and shipped with the machine
- 2. Make sure that the following settings are not at the factory default settings:
 - Supervisor login password
 - Administrator login name
 - Administrator login password

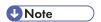
- These settings must be set up by the customer before the Data Overwrite Security unit can be installed.
- 3. Confirm that "Admin. Authentication" is on:

[User Tools]> "System Settings"> "Administrator Tools"> "Administrator Authentication Management"> "Admin. Authentication"> "On"

If this setting is "Off", tell the customer that this setting must be "On" before you can do the installation procedure.

4. Confirm that "Administrator Tools" is selected and enabled:

[User Tools]> "System Settings"> "Administrator Tools"> "Administrator Authentication Management"> "Available Settings



• "Available Settings" is not displayed until Step 2 is done.

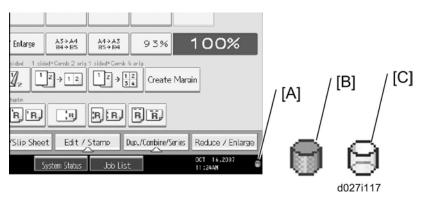
If this setting is not selected, tell the customer that this setting must be selected before you can do the installation procedure.



- The DOS SD card must be inserted in SD card Slot 1. If another SD card option is installed, the
 contents of the DOS SD card must be moved to the SC card in SD card Slot 1 with SP5873-1.
- 1. If the machine is on, turn off the main power switch.
- 2. Disconnect the network cable.
- 3. Turn the main power switch on.
- 4. Turn the operation switch and main power switch off.
- 5. Remove the SD card slot cover (F x 1).
- 6. Insert the SD card into SD card Slot 1.
- 7. Reconnect the network cable.
- 8. Turn the main power switch on.
- 9. Do SP5878-001 and push [EXECUTE].
- 10. Go out of the SP mode.
- 11. Turn the operation switch off, then turn the main power switch off.
- 12. Do SP5990-5 to print an SMC report.
- 13. Make sure the ROM number and firmware version in area [a] of the diagnostic report are the same as those in area [b].
 - Area [a]: "ROM Number/Firmware Version" "HDD Format Option"
 - Area [b]: "Loading Program" "GW4a_zoffyx"

Diagnostic Report:	"ROM No. / Firmware Version" [a]	"Loading Program" [b]
Data Overwrite Security Unit	HDD Format Option: D3775902A / 1.01x	GW4a_zoffyx: D3775902A / 1.01x

- The numbers in the table above may be different for your installation. But the same two numbers must be listed in both sections of the SMC report.
- 14. Turn "Auto Erase Memory Setting" on:
 [User Tools]> "System Settings"> "Administrator Tools"> "Auto Erase Memory Setting"> "On"
- 15. Exit User Tools.



- 16. Check the display and make sure that the overwrite erase icon [A] is displayed.
- 17. Make a Sample Copy.
- 18. Check the overwrite erase icon [A].
 - The icon [B]: This icon is lit when there is temporary data to be overwritten, and blinks during overwriting.
 - The icon [C]: This icon is lit when there is no temporary data to be overwritten.

Browser Unit Type J (D620)

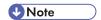
RTB 35

Accessories

New installation procedure for Browser Unit Type J

No.	Description	Q'ty
1.	Browser Unit SD Card	1

- 1. Switch the machine off.
- 2. Remove the SD card slot cover (Fx1).
- 3. Insert the SD card into SD card Slot 2.



- Pushing in the SD Card also releases it for removal.
- Make sure the SD Card is inserted and locked in place.
- If it is partially out of the slot, push it in gently until it locks in place.
- 4. Turn the machine on.
- 5. Push [User Tools].
- 6. Push [Login/Logout] on the operation panel
- 7. Login with the administrator user name and password.
- 8. Touch "Extended Feature Settings".
- 9. Touch "Extended Feature Settings" again.
- 10. Touch "SD Card".
- 11. Touch the "Browser" line.
- 12. Under "Install to:" touch "Machine HDD" and touch "Next"
- 13. When you see "Ready to Install" check the information on the screen to confirm you previous selection.
- 14. Touch "OK". You will see "Installing..." then "Completed".
- 15. Touch "Exit" twice to return to the copy screen.
- 16. Switch the machine off.
- 17. Replace the 6th key slot cover with the "Other Function" key cover.
- 18. Switch the machine on.
- 19. After the Copy screen appears, wait 30 sec. then press the "Other Function" key.
- 20. When you see this message: "The MFP Browser was successfully installed", switch the machine off and remove the SD card.

Accessories

No.	Description	Q'ty
1.	PCB IPU Option	1

Copy Data Security Unit Type F (B829)

Installation

In a new machine, the IPU does not have this application. You must always install a new IPU board when you install the Copy Data Security Unit option.

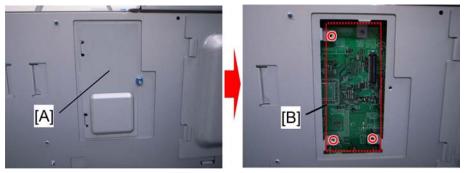
IPU

Remove:

- Rear upper cover (x2)
- Rear lower cover (\$\begin{aligned} x2 \)

Remove:

• Screws and swing open the controller box (\mathscr{F} x 3).



d062r709a

• IPU left cover [A] (x1)

Install:

• Copy Data Security Unit Type C [B] (x 3)

After Replacing the Copy Data Security Unit.

1. Switch the machine on.

2

- 2. Login in as the System Administrator.
- 3. Push [User Tools].
- 4. Touch "System Settings".
- 5. Touch "Administrator Tools".
- 6. Touch next 2 or 3 times until you see "Data Security for Copying".
- 7. Touch "ON".
- 8. Touch "OK" to enable the setting.

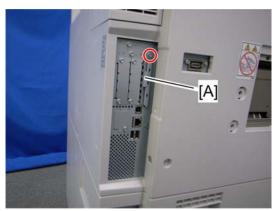
VM Card Type U (D640)

Accessories

No.	Description	Q'ty
1.	VM Card D463 SD Card	1
2.	Decal	1

☆ Important

• Only one slot (SD card slot 2) is available for applications on SD cards. If more than one application is will be used, the applications must be merged onto one SD card with SP5873 001.



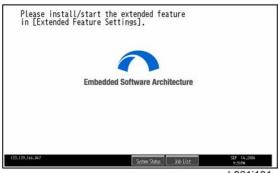
d063i500

- 1. Switch the machine off.
- 2. Remove the SD card slot cover [A] (\mathscr{F} x1).

- 3. Insert the SD card [B] into SD slot 2.
- 4. Switch the machine on. The installation will start automatically.



- The installation will take 5 to 10 minutes.
- 5. Replace the sixth key-slot cover with the "Other function" key.
- 6. Wait five minutes, and then press the "Other function" key. You will hear two beeps.
 - If the screen does not change, this means the installation is not finished yet. Wait a few more minutes and then press the "Other function" key again.
 - When the installation is finished, the following screen will appear.



- 7. Set the heap size and stack size for the application.
- 8. Install the application using the installation procedure provided with the application.

IEEE 1284 Interface Board Type A (B679)

Accessories

No.	Description	Q'ty
1.	IEEE 1284 Centronics Board	1

Only one PCI slot (A) is available for one of these options:

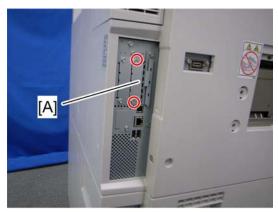
- Centronics 1284
- IEEE 802.11a/g, 11g (Wireless LAN)
- File Format Converter



If another card is installed in A, you must remove it before installing this card.

Installation

1. Switch the machine off.



d063i501

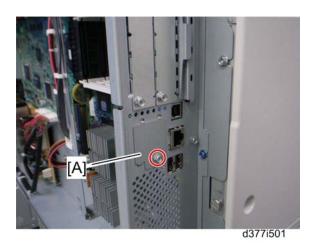
- 2. Remove the cover [A] of Slot A (\mathscr{F} x 2).
- 3. Insert the 1284 Centronics board [B] into Slot A and fasten it with the screws.

Gigabit Ethernet Type B (D377)

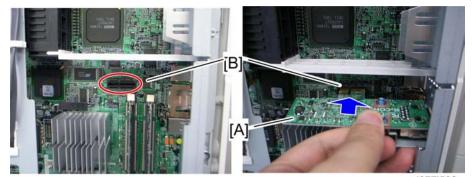
Accessories

No.	Description	Q'ty
1.	Gigabit Ethernet	1
2.	Ferrite Core	1
3.	Screw	2
4.	Cap for Network Slot	1

- 1. Switch the machine off.
- 2. Remove the controller box cover p.303

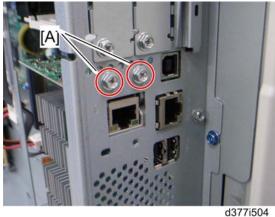


3. Remove the Gigabit Ethernet slot cover [A] ($\hspace{-0.8em}\widehat{\mathscr{F}}\hspace{-0.8em}$



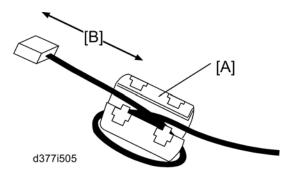
d377i502

 $4. \ \ Insert the Gigabit \ Ethernet \ board \ [A] \ in the \ slot \ [B] \ on \ the \ controller \ board.$



- 5. Fasten it with the screws [A].
- 6. Install the Ethernet connector cover (Cap for Network Slot) included in the Gigabit Ethernet board kit on the 100M bit LAN connector.

7. Reassemble the machine.



- 8. Attach the ferrite core [A] to the network cable. ([B]: 30 mm or more.)
- 9. Connect the network cable to the slot for Gigabit Ethernet.
- Print a configuration page to confirm that the machine recognizes the installed board for USB2.0:
 User Tools > Printer Features > List/Test Print > Configuration Page

3. Preventive Maintenance

PM Tables

The amounts mentioned (K=1,000) as the PM interval indicate the number of prints or copies unless stated otherwise. These numbers are based on the PM counter.

Symbol key: **C**: Clean, **R**: Replace, **L**: Lubricate, **I**: Inspect, **EM**: Emergency Maintenance, **AN**: As necessary, **Exp**.: Expected Life (K)

MARNING

• Turn off the power switch and unplug the power cord before performing any procedure in this section. Laser beams can seriously damage the eyes.

Main Machine

Scanner Optics

	300K	450K	600K	AN	Ехр.	Note
1 st, 2nd, 3rd Mirror				С		Optics cloth
Exposure Glass	С			С		Damp cloth
Scanner Guide Rails				C/L		After cleaning with alcohol, lubricate scanner guide rails with Launa Oil.
Toner Shield Glass	С			С		Optics cloth
Reflector				С		Optics cloth
Dust Filters				С		Blower brush

Around the Drum

	300K	450K	600K	AN	Exp.	Note
Charge Corona Grid	R				300	
Charge Corona Wire	R			С	450	Alcohol cloth

	300K	450K	600K	AN	Ехр.	Note
Charge Wire Cleaning Pad	R				450	
Cleaning Blade	R				500	
Cleaning Brush	R					
Charge Corona Casing	С			С		Damp cloth
Internal Dust Filter				С		Blower brush
ID Sensor	С			С		Blower brush. Do SP 3001 002 after cleaning.
Pick-off Pawls	I			I		Replace if necessary.
Potential Sensor	С			С		Blower brush
OPC Drum					1,200	Replace when an image problem occurs.
Quenching Lamp	С			С		Dry cloth
Transfer Entrance Stay	С			С		Dry cloth
Ozone Filter					4,500	
Cleaning Filter	R					
Cleaning Side Seal				С		Dry cloth
Cleaning Entrance Seal				С		Dry cloth
PTL	С			С		Dry cloth
Toner Collection Bottle				I	1,500	
Toner Pan	С			С		Dry cloth

Development Unit

	300K	450K	600K	AN	Exp.	Note
Developer	R					PM cycle is 350K.
Development Filter	R			I		

	300K	450K	600K	AN	Ехр.	Note
Development Roller	С					Dry cloth
Side Seals	С			С		Blower brush, dry cloth
Entrance Seal	С			С		Blower brush, dry cloth
Toner Hopper	С			С		Dry cloth
Toner Bottle Holder	С			С		Dry cloth
Toner Trap	С			С		Dry cloth
Drive Gears	С			С		Blower brush.
Development Roller Drive Shaft	С			С		Clean with blower brush and dry cloth every time the developer is replaced.
Paddle Roller Shaft	С			С		Blower brush, dry cloth.
Used Toner Separation Unit	I		R			

Paper Feed

	300K	600K	1000K	AN	Ехр.	Note
Registration Rollers	С					Alcohol
Relay Rollers	С					Alcohol
Paper Dust Mylar	С			С		Dry cloth
Registration Sensor	С					Blower brush
Relay Sensor	С					Blower brush
Bypass Paper End Sensor	С					Blower brush
Grip Rollers	С					Dry cloth, blower brush
Vertical Guide Plate	С					Dry cloth
Paper Feed Guide Plate	С					Dry cloth
Vertical Transport Rollers	С	С				Alcohol

	300K	600K	1000K	AN	Exp.	Note
Paper Feed Sensors	С	С				Blower brush
Paper End Sensors	С	С				Blower brush
Feed Rollers			R		1000	See Notes below this
Pick-up Rollers			R		1000	table.
Separation Rollers			R		1000	

Notes:

- Always replace pick-up, feed and separation rollers as a set.
- The target service life of the feed, pick-up, and separation rollers is 1000 K. However, they should be replaced sooner if the machine begins to jam or double-feed.

Transfer Belt Unit

	300K	450K	600K	AN	Ехр.	Note
Transfer Belt			R		750	Use dry cloth to clean
Transfer Roller Cleaning Blade			R		750	transfer belt. Always replace transfer belt and transfer roller cleaning blade together.
Transfer Entrance Guide Plate	С					Dry cloth
Transfer Drive Roller	С					Dry cloth
Transfer Idle Roller	С					Dry cloth
Transfer Bias Roller	С					Dry cloth
Transfer Exit Guide Plate	С					Dry cloth
Discharge Plate	R					
Transfer Belt Unit Casing	С					Dry cloth
Slide Rail Bracket	С					

3

Fusing Unit and Paper Exit

	300K	450K	900K	AN	Ехр.	Note
Fusing Entrance Guide Plate	С					Dry cloth
Fusing Exit Guide Plate	С					Dry cloth
Fusing Lamps	I					
Hot Roller		R			450	
Hot Roller Bearings		R			450	
Pressure Roller		R			450	
Pressure Roller Bearings		R			450	
Pressure Cleaning Roller		R			450	Replace as a set.
Pressure Cleaning Roller Bearings		R			450	
Hot Roller Strippers		R			450	
Thermistors x2		R				
Cleaning Web		R				
Cleaning Web Pressure Roller		R				Replace roller and bushings together.
Cleaning Web Pressure Roller Bearings			R		900	
De-Curler Rollers	С					Alcohol
Exit Static Discharge Brush	I					
Exit Rollers (Top, Bottom)	С					Alcohol
Transport Rollers	С					Alcohol

Duplex

	300K	450K	600K	AN	Ехр.	Note
Entrance Sensor	С			С		Blower brush
Inverter Exit Rollers	С					Alcohol
Reverse Trigger Rollers	С					Dry cloth
Transport Rollers	С					Dry cloth
Inverter Entrance Roller	С					Dry cloth
Entrance Anti-Static Brush	С					Dry cloth
Reverse Junction Gate	С					Dry cloth

ADF

The PM interval is for the number of originals that have been fed.

	300K	400K	600K	AN	Exp.	Note
Pick-up Roller			R			
Separation Roller			R			Alcohol, belt cleaner to clean paper feed belt.
Paper Feed Belt			R			Replace these items together.
ADF Transport Belt			R			logemen.
CIS Glass	С	С	С			Dry cloth
White Guide Plate		R		С		Alcohol or dry cloth
Sensors	С	С	С			Blower brush.
Platen Cover Sheet	С	С	С			Water or alcohol
Drive Gears	L	L	L			Grease G501.
Transport Belt	С	С	С			Water or alcohol
Entrance Roller	С	С	С			
White Platen Roller	С	С	С			

3

	300K	400K	600K	AN	Exp.	Note
Pre-Scanning Roller	С	С	С			
Scanning Roller	С	С	С			
Exit Roller	С	С	С			

Optional Peripheral Devices

LCIT RT4010 (D613)

	300K	450K	1000K	Ехр.	Note
Pick-up Roller			R	1000	Always replace these rollers as a
Feed Roller			R	1000	set. The target service life of the feed, pick-up, and separation
Separation Roller			R	1000	rollers is 1000 K. However, they should be replaced sooner if the machine begins to jam or double- feed

Cover Interposer Tray CI4000 (D614)

The cover interposer tray can be used with the Finisher SR4030 (D374), SR4040 (D373) or Finisher SR4050 (D460). The interposer tray is installed between the main machine and the finisher.

Note: The PM interval is for the number of sheets that have been fed.

	60K	120K	180K	Ехр.	Note
Feed Belt	R	R	R		
Pick-up Roller	R	R	R		Replace as a set.
Separation Roller	R	R	R		
Driver Rollers	С	С	С		Damp clean cloth.
Idle Rollers	С	С	С		Damp clean cloth.
Discharge Brush	С	С	С		Damp clean cloth.
Sensors	С	С	С		Blower brush.

Finisher SR4080 (D610)

	350K	700K	1050K	Ехр.	Note
Drive rollers	I	I	I		
Idle rollers	ı	I	I		Alcohol
Discharge brush	I	I	I		
Bushings	I	I	I		Lubricate with silicone oil if noisy.
Sensors	I	I	I		Blow brush.
Jogger fences	I	I	I		Make sure screws are tight.
Staple waste hopper	С	С	С		Empty staple waste.

Finisher SR4060/SR4070 (D611/D612)

	2400K	3000K	4000K	Ехр.	Note
Covers				I/C	Alcohol or water, dry cloth
Drive Rollers				С	Damp cloth, dry cloth
Idle Rollers				С	Damp cloth, dry cloth
Anti-Static Brush				С	Dry cloth
Sensors				С	Blower brush
Corner Stapler			R		Print an SMC report with SP5990. Replace the unit if the staple count is 500K.
Booklet Stapler			R		Print an SMC report with SP5990. Replace the unit if the staple count is 200K.

Punch Unit Type 3260 (B702) for Finisher SR4060/SR4070 (D611/D612)

	2400K	3000K	4000K	EM	Note
Punch Waste Hopper	I	I	I	I	Remove and empty

	2400K	3000K	4000K	EM	Note
Punch Unit				С	Replace after 1000k punches.

Multi Folding Unit FD4000 (D615)

Part	PM Visit	Notes
Rollers (drive, idle rollers)	I/C	Alashal alasmalash
Anti-static brush	I/C	Alcohol, clean cloth
Shafts	I/C	Lubricate with silicone oil if noisy.
Sensors	I/C	Blower brush
Positioning roller	I/C	Inspect for scratches or nicks
Fold rollers (1st, 2nd, 3rd)	I/C	
Crease rollers (drive, idle roller)	I/C	Alcohol, clean cloth

Related SP Codes

This is a list of the PM related SP codes. For details, refer to "Service Tables" in the "Appendices".

SP7803	PM Counter Display	Displays the PM count since the last PM.
SP7804	PM Counter Reset	Resets the PM count.

4. Replacement and Adjustment

General Cautions

CAUTION

- Never turn off the power switch while the machine is operating.
- If the machine is switched off during operation, the transfer belt, drum, or development unit could be damaged when it is removed or reinstalled in the machine.

Drum

An organic photoconductor (OPC) drum is more sensitive to light and ammonia gas than a selenium drum. Follow the cautions below when handling an OPC drum.

- Never expose the drum to direct sunlight.
- 2. Never expose the drum to direct light of more than 1,000 Lux for more than a minute.
- Never touch the drum surface with bare hands. When the drum surface is touched with a finger or becomes dirty, wipe it with a dry cloth or clean it with wet cotton. Wipe with a dry cloth after cleaning with wet cotton.
- 4. Never use alcohol to clean the drum; alcohol dissolves the drum surface.
- 5. Store the drum in a cool, dry place away from heat.
- 6. Take care not to scratch the drum as the drum layer is thin and is easily damaged.
- 7. Never expose the drum to corrosive gases such as ammonia gas.
- 8. Always keep the drum in the protective sheet when keeping the drum unit, or the drum itself, out of the machine. Doing so avoids exposing it to bright light or direct sunlight, and will protect it from light fatigue.
- 9. Dispose of used drums in accordance with local regulations.
- 10. When installing a new drum, execute SP2962 (Adjustment of Drum Conditions).

Drum Unit

- 1. Before pulling out the drum unit, place a sheet of paper under the drum unit to catch any spilt toner.
- Make sure that the drum unit is set in position and the drum stay is secured with a screw before the
 main switch is turned on. If the drum unit is loose, poor contact of the drum connectors may cause
 electrical noise, resulting in unexpected malfunctions (RAM data change is the worst case).
- 3. To prevent drum scratches, remove the development unit before removing the drum unit.

Transfer Belt Unit

- 1. Never touch the transfer belt surface with bare hands.
- 2. Take care not to scratch the transfer belt, as the surface is easily damaged.
- 3. Before installing the new transfer belt, clean all the rollers and the inner part of the transfer belt with a dry cloth to prevent the belt from slipping.

Scanner Unit

- 1. When installing the exposure glass, make sure that the white paint is at the rear left corner.
- 2. Clean the exposure glass with alcohol or glass cleaner to reduce the amount of static electricity on the glass surface.
- 3. Use a cotton pad with water or a blower brush to clean the mirrors and lens.
- 4. Do not bend or crease the exposure lamp cable.
- 5. Do not disassemble the lens unit. Doing so will throw the lens and the copy image out of focus.
- 6. Do not turn any of the CCD positioning screws. Doing so will throw the CCD out of position.

Laser Unit

- 1. Do not loosen the screws that secure the LD drive board to the laser diode casing. Doing so would throw the LD unit out of adjustment.
- 2. Do not adjust the variable resistors on the LD unit, as they are adjusted in the factory.
- 3. The polygon mirror and F-theta lenses are very sensitive to dust. Do not open the optical housing unit.
- 4. Do not touch the glass surface of the polygon mirror motor unit with bare hands.
- After replacing the LD unit, do the laser beam pitch adjustment. Otherwise, an SC condition will be generated.

Charge Corona

- 1. Clean the corona wires with a dry cloth. Do not use sandpaper or solvent.
- 2. Clean the charge corona casing with water first to remove NOx based compounds. Then clean it with alcohol if any toner still remains on the casing.
- 3. Clean the end block with a blower brush first to remove toner and paper dust. Then clean with alcohol if any toner still remains.

4

- 4. Do not touch the corona wires with bare hands. Oil stains from fingers may cause uneven image density on copies.
- 5. Make sure that the wires are correctly between the cleaner pads and that there is no foreign material (iron filings, etc.) on the casing.
- 6. When installing new corona wires, do not bend or scratch the wire surface. Doing so may cause uneven charge. Also be sure that the corona wires are correctly positioned in the end blocks.
- 7. Clean the grid plate with a blower brush (not with a dry cloth).
- 8. Do not touch the charge grid plate with bare hands. Also, do not bend the charge grid plate or make any dent in it. Doing so may cause uneven charge.

Development

- 1. Be careful not to nick or scratch the development roller.
- 2. Place the development unit on a sheet of paper after removing it from the machine.
- Never disassemble the development roller assembly. The position of the doctor plate is set with special tools and instruments at the factory to ensure the proper gap between the doctor blade and the development roller.
- 4. Clean the drive gears after removing used developer.
- 5. Dispose of used developer in accordance with local regulations.
- 6. Never load types of developer and toner into the development unit other than specified for this model. Doing so will cause poor copy quality and toner scattering.
- 7. Immediately after installing new developer, the TD sensor initial setting procedure should be performed with SP2801 (TD Sensor Initialization) to avoid damage to the machine. Do not perform the TD sensor initial setting with used developer. Do not make any copies before doing the TD sensor initial setting.
- 8. When using a vacuum cleaner to clean the development unit casing, always ground the casing with your fingers to avoid damaging the toner density sensor with static electricity.
- 9. When replacing the TD sensor, replace the developer, then execute SP2801 (TD Sensor Initialization) and SP2962 (Adjustment of Drum Conditions).

Cleaning

- 1. When servicing the cleaning section, be careful not to damage the edge of the cleaning blade.
- 2. Do not touch the cleaning blade with bare hands.
- 3. Before disassembling the cleaning section, place a sheet of paper under it to catch any toner falling from it.

Fusing Unit

- 1. After installing the fusing thermistor, make sure that it is in contact with the hot roller and that it is movable.
- 2. Be careful not to damage the edges of the hot roller strippers or their tension springs.
- 3. Do not touch the fusing lamp and rollers with bare hands.
- 4. Make sure that the fusing lamp is positioned correctly and that it does not touch the inner surface of the hot roller.

Paper Feed

- 1. Do not touch the surface of the pick-up, feed, and separation rollers.
- 2. To avoid paper misfeeds, the side fences and end fence of the paper tray must be positioned correctly to align with the actual paper size.

Used Toner

- 1. We recommend checking the amount of used toner at every EM.
- 2. Dispose of used toner in accordance with local regulations. Never throw toner into an open flame, for toner dust may ignite.

4

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Special Tools and Lubricants

Special Tools

Part No.	Description
A0069104	Scanner Positioning Pin (4 pcs./set)
A2929500	Test Chart – S5S (10 pcs./set)
A0299387	Digital Multimeter – FLUKE 87
VSST9500	Test Chart – S5S – DF (10 Sheets/Set)
G0219350	Loop Back Connector
B6455010	SD (Secure Digital) Card – 64 MB

Lubricants

Part No.	Description
A2579300	Grease Barrierta – JFE 5 5/2
52039502	Silicon Grease G-501
54429101	Setting Powder

Operation Panel and External Covers

Operation Panel



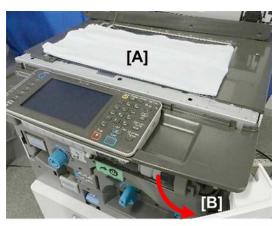
d131r001

- 1. Raise the ADF.
- 2. Remove the edge bracket ($\triangle x3$).



d131r002

3. Disconnect the operation panel (x3).



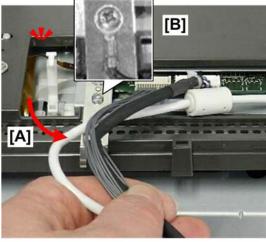
d131r003

- 4. Cover the exposure glass with a cloth [A].
- 5. Open the front door [B].



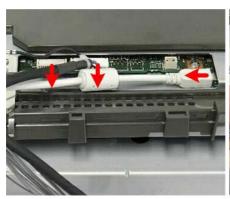
d131r004

6. Raise the operation panel and lay it on the top of the machine.



d131r005







d131r006

9. Disconnect the operation panel (***x3).



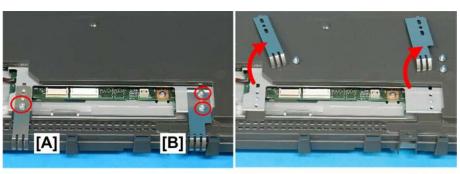
d131r007

10. Lay the operation panel on a flat clean surface.



d131r008

11. Remove screws (Fx4).



d131r009

- 12. Remove ground plate [A] (> x1).
- 13. Remove ground plate [B] (> x1).



d131r010

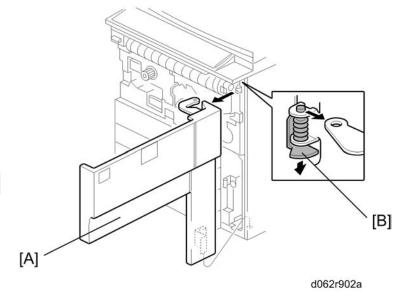
14. Separate the plate and operation panel.





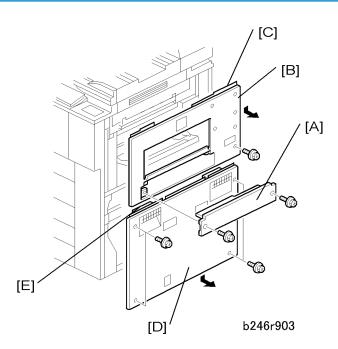
d131r011

Front Door



- 1. While supporting the front door [A] with one hand.
- 2. Press down on the hinge bracket [B], and then raise the door slightly to remove it.

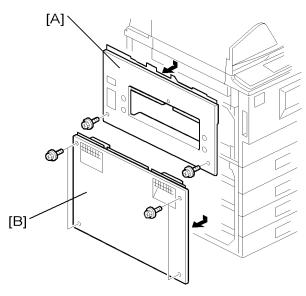
Right Covers



4

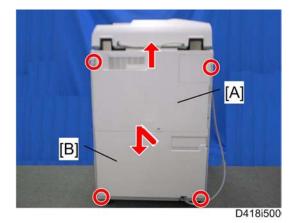
- 1. LCT entrance guide cover [A] (*x 2)
- 2. Right upper cover [B] (x 2)
 - To remove the right cover, remove the LCT entrance guide plate, open the by-pass tray, then slide the right upper cover down to remove it.
 - Before tightening the screws when re-attaching, make sure that 1) the tabs [C] on the cover
 are engaged with the grooves on the machine, and 2) the catches on the cover are engaged
 with the shoulder screws.
- 3. Right lower cover [D] (x 2)
 - After removing the screws, slide the cover down to remove it.
 - When re-attaching, before tightening the screws make sure that the tabs [E] on the cover are engaged with the grooves on the machine.

Left Covers



- b246r904
- 1. Left upper cover [A] (Fx 2)
 - Slide down to remove.
 - When re-attaching, before tightening the screws make sure that 1) the tabs on the cover are
 engaged with the grooves on the machine, and 2) the catches on the cover are engaged with
 the shoulder screws.
- 2. Left lower cover [B] (x 2)
 - Slide down to remove.

Rear Covers



- 1. Rear upper cover [A] (x 2)
 - Slide down to remove.
 - When re-attaching, before tightening the screws make sure that the tabs on the cover are engaged with the shoulder screws.
- 2. Rear lower cover [B] (x 2)
 - When re-attaching, before tightening the screws make sure that the tabs on the cover are engaged with the shoulder screws.

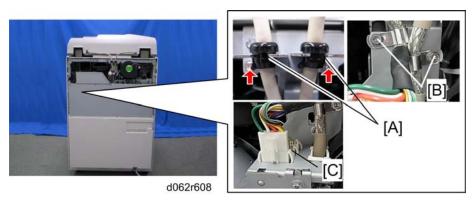
4

Scanner

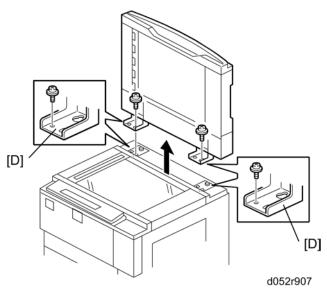
ADF

Remove the following parts:

1. Rear upper cover and rear lower cover p.186



- 2. Cable brackets [A] (each F x 1)
- 3. Nylon clamps [B] (each F x 1)
- 4. Connectors [C] (x 3)



- 5. ADF base left and right plates [D] (> x 2)
 - While holding the ADF firmly, slide the ADF back and lift the large end of the keyholes over the shoulder screws.

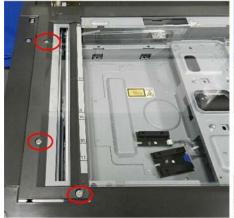
Exposure Glass





d131r101

1. Rear scale (Fx 3)





d131r102

2. Left cover (🗗 x 3)



d131r103

3. Exposure glass



- Lift out the exposure glass and left scale together.
- The left scale is permanently attached to the exposure glass with double-sided tape. Do not separate the left scale and the exposure glass.

When re-installing the exposure glass:

- Set the exposure glass first with the arrow mark in the upper left corner.
- When re-installing the right cover, make sure it is seated correctly at the right upper corner of the exposure glass.

Scanner Original Size Sensors

Original Width Sensors

1. Exposure glass r Exposure Glass





d131r104

2. Original width sensor (one-beam) (Fx1, IIx1)





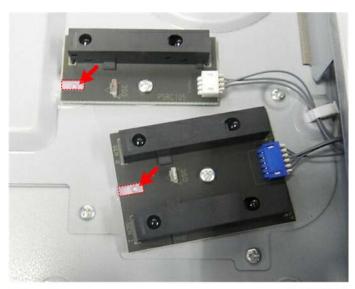
d131r105

3. Original width sensor (two-beam) (Fx1, Fx1)



d131r106

Re-installation



d131r107

1. Make sure that the bosses on the frame fit into the slots as shown. These bosses position the sensors correctly for accurate detection.

Original Length Sensors

These sensors are under the lens block.

1. Lens block Lens Block





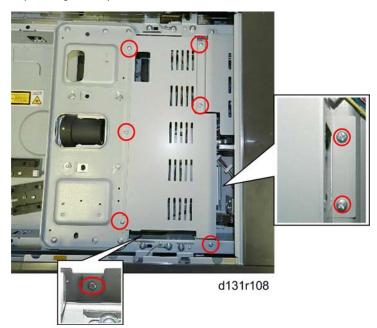
2. Original length sensor bracket (F x 2, 🔎 x 2)



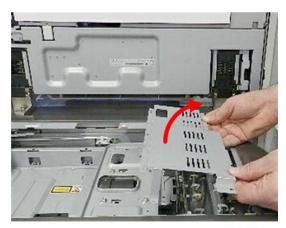
- For EU: Length sensor x 1
- For NA: Length sensor x 2

Lens Block

1. Exposure glass **▶** p.188

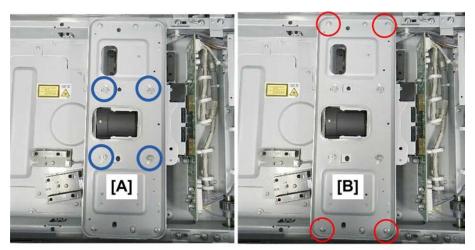


2. SIOB cover screws (Fx9)



d131r109

3. SIOB cover.



d131r110

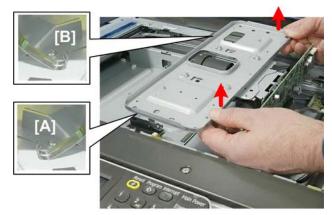


- Never loosen or attempt to remove the four paint-locked screws [A] around the top of the lens.
- 4. Disconnect the lens block [B] at the front and rear (d131r113x4).



d131r111

5. Disconnect the right side of the lens block (x4).



d131r112

6. Remove the lens block carefully. Avoid snagging the front ground spring [A] with sensor harnesses and rear ground spring [B] with the scanner wire.



d131r113

- To avoid damaging the lens block, lay it down as shown above.
- Never lay the lens block down with the PCB on the bottom.
- 7. After you re-assemble the machine, be sure to do the scanner and printer adjustments. In p.338

Exposure Lamp

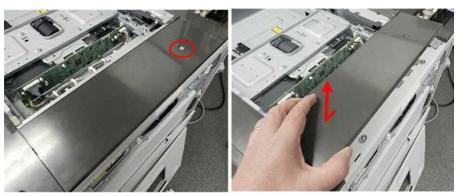
- 1. Exposure glass p.188
- 2. Operation panel p.180
- 3. Push the 1st scanner [B] to the cutout [A] in the scanner frame.
- 4. Exposure lamp [C] (₹ x 1, 1 x 1, 1 x 1,



• Never touch the surface of the exposure lamp with bare fingers.

SIOB

1. Exposure glass 🖝 p.188



d131r114

2. Right flat plate (Fx1)



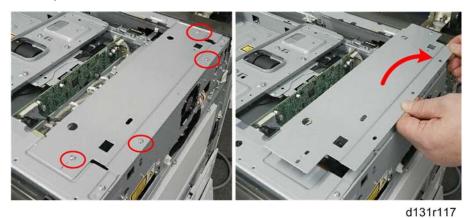
d131r115

3. Grip the right edge plate firmly, push it to the rear 10 and then pull it away 20.

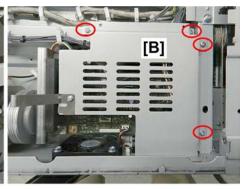


d131r116

4. Front strip (Fx3)



5. Right plate (Fx4)



d131r118

- 6. Right side of SIOB cover [A] (Fx2)
- 7. Top of SIOB cover [B] (Fx2).



d131r119

8. Remove the SIOB cover.

ACAUTION

• Never remove any of the white paint-locked screws around the frame.



d131r120

9. Disconnect the SIOB (كيx3, \$\frac{1}{2}\$x10)





d131r121

10. Remove the SIOB board (Fx4)

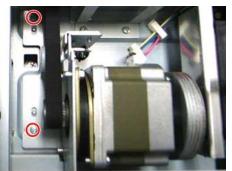


d131r122

Scanner Motor

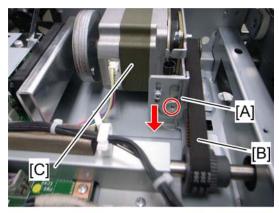
1. SIOB cover **▶** p.194





d062r884

2. Remove three screws.



d062r880

3. Release a screw, move down the bracket [A], release the timing belt [B] and then remove the scanner motor bracket [C] (x 1).



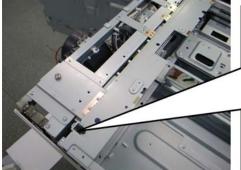


d062r882

4. Scanner motor [D] (x 2).

Scanner HP Sensor

1. ADF **p**.187





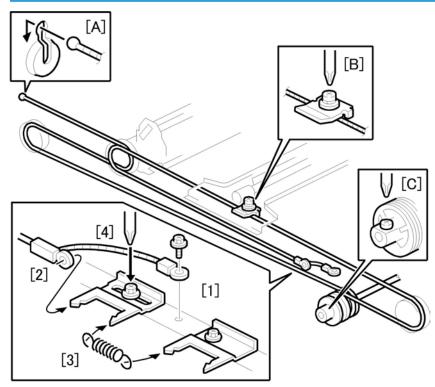
d066r600

4

2. Scanner HP Sensor [A] (🗐 x 1, all hooks)

Scanner Wire Replacement

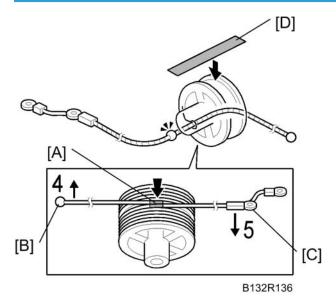
Scanner Wire Removal



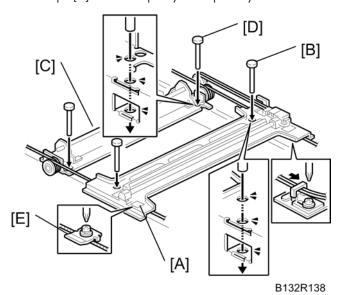
B132R137.WMF

- 1. Disconnect ground wire [1] (x1)
- 2. Disconnect the head of the wire [2] from tension bracket 1.
- 3. Remove spring [3].
- 4. Loosen the screw [4] of tension bracket 1.
- 5. Disconnect the end of the wire at [A].
- 6. Remove lock bracket [B] of the 1st scanner (Fx1).
- 7. Disconnect the wire from the pulley [C] (x1).
- 8. Remove the wire from the scanner.

Scanner Wire Reinstallation and Scanner Position Adjustment



- 1. Place the beads [A] on the middle of the wire in the openings in the pulley.
- 2. Wind the ball end of the wire [B] 4 times.
- 3. Wind the other end of the wire [C] 5 times.
- 4. Attach tape [D] across the pulley to temporarily hold the wires in place.



- 5. Position the 1st scanner [A] so that the holes are aligned, and insert the positioning pins [B] (x4).
- 6. Position the 2nd scanner [C] so that its holes are aligned, and insert the positioning pins [D].
- 7. Attach the lock bracket [E] to fasten the wire to the 1st scanner.

- 8. Tighten the screw of the tension bracket.
- 9. Attach the pulley and tighten its lock screw.
- 10. Remove the positioning pins (x4).
- 11. Remove the tape from the pulley.
- 12. Slowly push the scanner left and right to confirm that the wires are engaged correctly. The 1st and 2nd scanners should move smoothly.

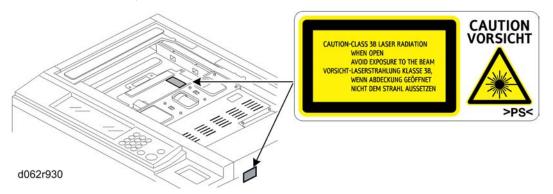
Laser Unit

∴ WARNING

- Turn off the machine and unplug its power cord before performing any procedure in this section. Laser beams can seriously damage the eyes.
- This laser unit uses four laser beams produced by a Class IIIb LDA with a wavelength of 660 nm and intensity of 15 mW. Direct exposure to the eyes could cause permanent blindness.
- Before performing any replacement or adjustment of the laser unit, push the machine power switch
 to switch the machine off. Then unplug the machine from the power source.
- Do not touch the machine for 10 minutes. This allows enough time for the fusing unit to cool and for the polygon motor to stop rotating.
- Never power on the machine with any of these components removed: 1) LD unit, 2) polygon motor cover, 3) synchronization detector.

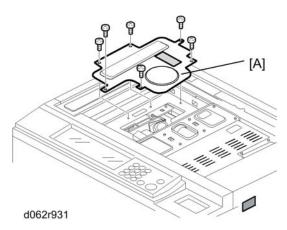
Caution Decals

Two caution decals are provided for the laser section.



LD Unit, Polygon Motor and Polygon Motor Drive Board

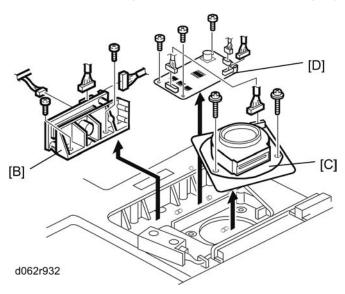
1. Exposure glass p.188



2. Polygon motor cover [A] (F x 6)

ACAUTION

- An accidental static discharge could damage the LDB (Laser Diode Board). Touch a metal surface to discharge any static electricity from your hands.
- The polygon motor rotates at extremely high speed and continues to rotate after switching the
 machine off. To avoid damaging the motor, never remove the polygon motor within three
 minutes of switching off the machine and disconnecting its power plug.



3. Remove;

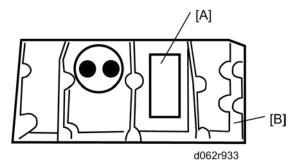
- LD unit [B] (x 2, 3)
- Polygon motor [C] (₹ x 3, 🗐 x 1)
- Polygon motor drive board [D] (F x 3, 🟴 x 3)

ACAUTION

• Before fastening the polygon motor in place (x 3, x 1), make sure that the glass panel of the laser port is facing to the right (toward the mirrors in the optical path).

SP Adjustments

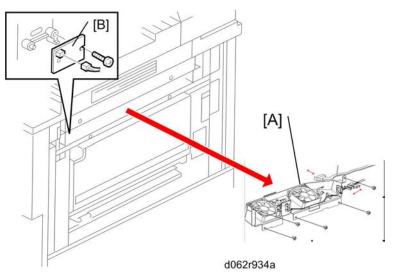
- Execute SP2962 (Automatic Adjustment of Drum Conditions) after replacing the LD unit, but only if SP3901 - Auto Process Control - is on.
- 2. Read the label [A] attached to the LD unit [B]. Execute SP2115 (Main Scan Beam Pitch Adjustment) and enter the numbers printed on the label.



- The first line on the label is the machine number.
- The second line on the label includes three numbers separated by slashes. Reading from left to right, these are the correct settings for SP2115 (Main Scan Beam Pitch Adjustment) 001 to 005.
- Do not remove this label and make sure it is flat against the side of the LD unit.
- 3. Perform the printer adjustments. See "Print Image Adjustment"

Laser Synchronization Detector Replacement

- 1. Right side cover p.184
- 2. If the optional LCT is installed, disconnect it (\mathscr{F} x 1).



- 3. Development unit fans [A] (F x 5, V x 2)
- 4. Synchronization detector [B] (x 1, x 1)
- 5. After replacement, set SP1002-001 to 007 (Side-to-Side Registration) to the defaults.

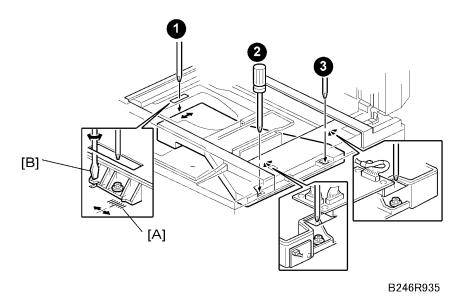
Laser Unit Alignment

MARNING

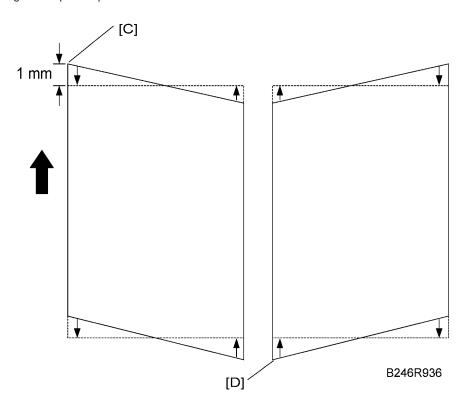
• If you have just disassembled the LD unit, to avoid serious damage to the eyes from accidental exposure to laser beams you must confirm that the machine has been re-assembled completely before operation.

This adjustment corrects the parallelogram pattern to the desired rectangular pattern for printing; it does not correct the skew of scanned images.

- 1. Execute SP2902-003 (Test Pattern Printing Test Pattern) 018 to print the A4 LEF pattern. Check the printed patterns and estimate the angle of adjustment required.
- 2. Remove the exposure glass. p.188
- 3. Remove the polygon motor cover. p.202
- 4. Remove the right cover. p.184



- 5. Loosen the screws of the laser exposure unit (F x 3).
- 6. While watching the scale [A], use a flathead screwdriver [B] to move the laser exposure unit left or right to adjust the position of the unit.



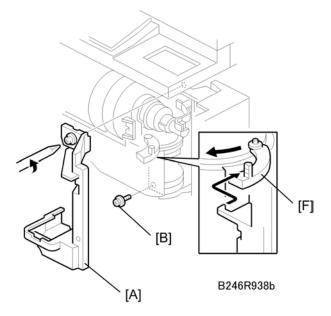
7. Adjust the position of the laser exposure unit.

- If the pattern is skewed at the corner of the leading edge [C], move the unit so it moves the pointer on the scale toward the back.
- If the pattern is skewed at the lower left corner of the trailing edge [D], move the unit so it moves the pointer on the scale toward the front.
- The scale is set for increments of 1 mm.
- 8. After adjustment, tighten the screws on the laser exposure unit, re-assemble the machine and print the pattern again with SP2902-003 No.18.
- 9. Check the pattern. Repeat the procedure if more adjustment is required.

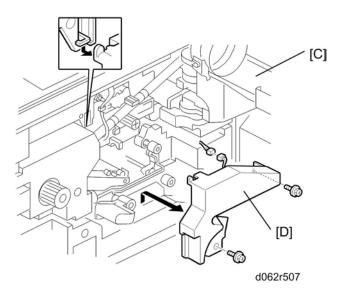
Drum Unit

Development Unit Removal

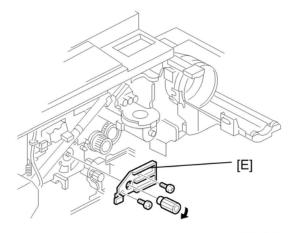
Drum Removal



- 1. Open the front door.
- 2. Shutter cover [A] (x 1)
- 3. Lock screw [B]



- 4. Toner bottle [C]
 - Pull the toner bottle holder out and swing the toner bottle holder to the right.
- 5. PCU inner cover [D] (₹ x 2, x 1)

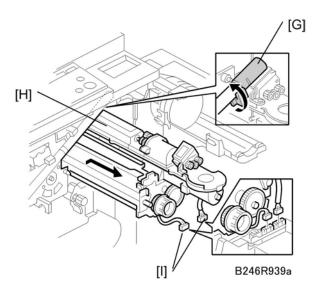


d062r508

6. Face plate (knob x 1, **?** x 2) [E]

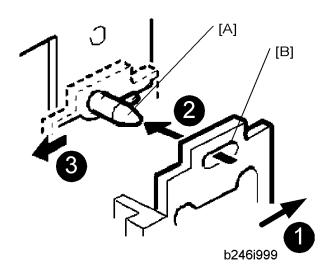


• After re-installation, the tab [F] in the first illustration should be behind the stay and its pin below should be in the open track below.



- 7. Close the supply pipe shutter [G].
- 8. Development unit [H] (x 2 [I])
 - Allow the unit to slip to the right, then slowly pull it out of the machine.
 - If the LCT is installed, you may need to disconnect it so the front door can open far enough to allow removal of the development unit.

Drum Re-installation



- 1. Push the development unit to the right **1**.
- 2. While continuing to hold the unit to the right, push it into the machine.
- 3. Confirm that the pin [A] goes into the left side of the oval hole [B] in the development unit plate.

- 4. Push the development unit in completely **2** until it stops, then push it to the left **3**.
- 5. Make sure you can see the horizontal pin in front of the plate as shown below.

Correct







b246i999a



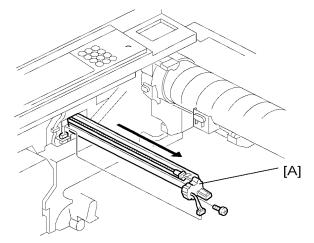
- If you cannot move the development unit plate behind the horizontal pin, turn the front gear of the unit to the left and try again.
- Make sure the pipeline shutter is rotated down to the open position.
- 6. Reattach all removed parts.

Replacement with a Used Development Unit

When using a development unit from another machine for test purposes, execute the following procedure.

- 1. Check the value of SP2220 (Vref Manual Setting) in both the machine containing the test unit and the machine that you are going to move it to.
- 2. Install the test development unit, then input the V_{REF} for this unit into SP2220.
- 3. After the test, reinstall the old development unit, and change SP2220 back to the original value.

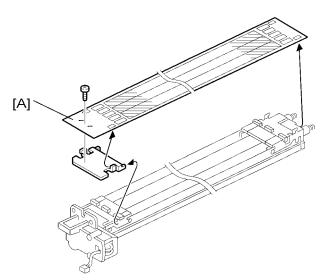
Charge Corona Unit



B246R941

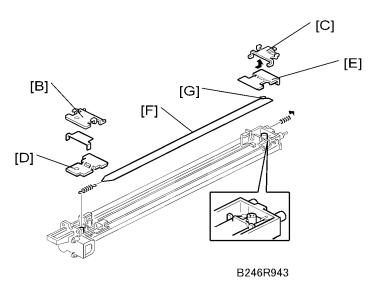
- 1. Pull the toner bottle holder out and swing the bottle to the right.
- 2. Charge corona unit [A] ($\mathscr{F} \times 1$, $\overset{\blacksquare}{} \times 1$)

Charge Corona Wire, Grid, Cleaning Pad



B246R942

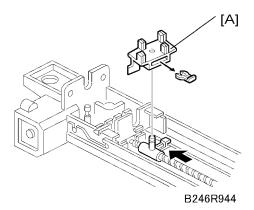
- Remove the charge corona unit. p.212
- 1. Grid [A] (x 1)



- 2. Front bracket [B]
- 3. Rear bracket [C]
- 4. Front block cover [D]
- 5. Rear block cover [E]
- 6. Corona wire [F]
- 7. Disconnect the wire behind the grid bracket.

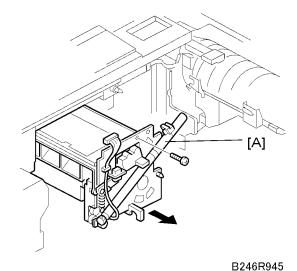
☆ Important

- Never touch the charge corona wire with bare hands. Always protect it from dust, oil, etc.
- Never bend or knot the wire. Charge will not distribute evenly on a bent wire.
- Make sure that the wire seam [G] is as close as possible to the wire hook at the rear.
- At the front and back, make sure that the wire is threaded correctly into the grooves in the end blocks.
- After replacing the charge corona wire, make sure that the wire cleaner pads are engaged correctly with the wires.
- After replacing the wire, set SP2001-001 (Charge Roller Bias Adjustment Applied Voltage for Image Processing) to the default.



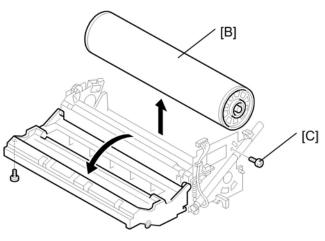
1. Cleaning pad [A] ((() x 1)

OPC Drum Removal



Remove

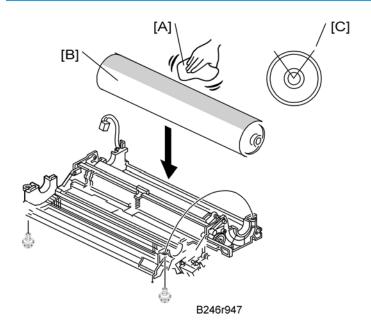
- Development unit r p.208
- Charge corona unit p.212
- 1. Drum unit [A] (x 1, 1 x 2)
 - Grasp the drum unit by the knob to remove it from the machine.



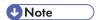
B246R946

- 2. OPC drum [B] (\$\begin{aligned} \text{\$\mathbb{Z}\$} \).
- 3. Toner shield glass cover [C] (x1).
- 4. After replacing the drum, do the following SPs:
 - Set SP2001-001 (Charge Roller Bias Adjustment Applied Voltage for Image Processing) to the default setting.
 - SP2962 (Adjustment of Drum Conditions), only if SP3901 (Auto Process Control) is on.

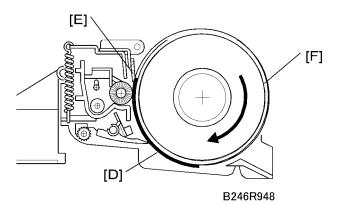
- To avoid fingerprints on the surface of the OPC drum, never touch the surface of the drum with bare fingers.
- Never use alcohol to clean the surface of the OPC drum. Blow dry the OPC drum, then wipe clean with a clean, slightly damp cloth.
- Before installing a new drum, dust the surface of the OPC drum carefully with setting powder. (See below.)



- The surface of a new drum is less smooth, so you must apply Drum Setting Powder (P/N: 54429101) to the drum surface before installation.
- Failure to apply the drum powder before installation could damage the drum cleaning blade or scour the drum surface.
- 1. Apply the setting powder by tapping the powder bag [A] across the surface of the drum [B].
- 2. Cover the entire length of the drum over a 45-90 degree portion [C] (about 1/4 of the total drum surface). Apply enough powder so the area turns white.



• If setting powder is not available, use waste toner instead of drum setting powder. However, this could cause dirty backgrounds on the first copies.

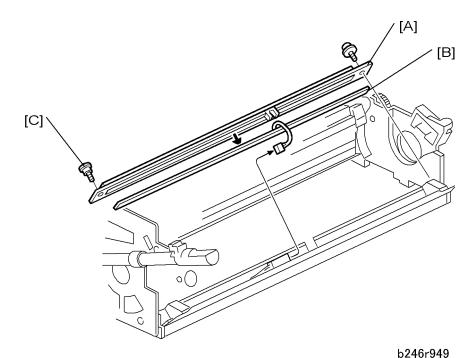


- 3. Install the new drum in the OPC unit so that the powdered surface [D] faces the cleaning blade [E].
- 4. Rotate the drum once clockwise [F] until it stops again at the same position.



• Never rotate the drum anti-clockwise.

PTL



Remove these parts:

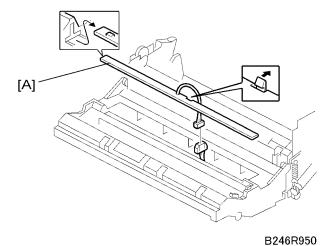
• OPC drum **p**.214

2. PTL[B] (🕮 x 1)

Reinstallation

• The shoulder screw [C] must be attached again at its initial location.

Quenching Lamp



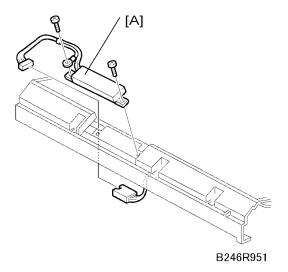
Remove:

- OPC drum **p**.214
- 1. Quenching lamp [A] (x 1)
 - At the center, push back the hook to release the quenching lamp.



• Use only a blower brush to clean the quenching lamp.

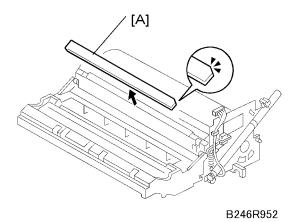
Drum Potential Sensor



Remove:

- OPC drum **p** p.214
- 1. Drum potential sensor [A] (Fx 2, III x 1)
- 2. After replacing the drum potential sensor, do SP2962 (Adjustment of Drum Conditions), only if SP3901 (Auto Process Control) is on).

Cleaning Filter

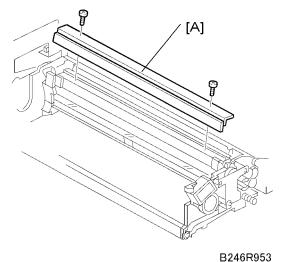


Remove:

• OPC drum **p**.214

1. Cleaning filter [A]

Cleaning Blade

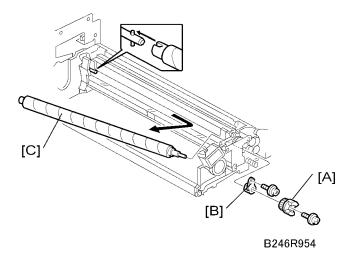


Remove:

- OPC drum p.214
- 1. Drum cleaning blade [A] (* x 2)

- Clean the blade edge carefully with only a soft, clean cloth.
- Handle the blade carefully to avoid nicking its edge.
- New blades are treated with special setting powder, so avoid touching the edge of a new cleaning blade. If the edge of a new blade is accidentally wiped clean, dust it lightly with some toner before installing it.
- Before installing a new blade, make sure that the blade side seals are not pinched by the blade.

Cleaning Brush



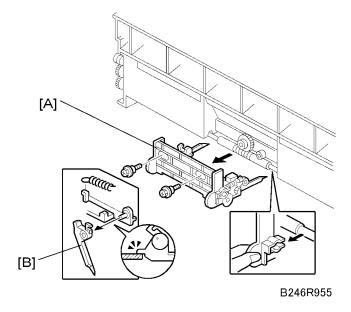
Remove:

- OPC drum **p** p.214
- Drum cleaning blade 📂 p.220
- 1. Coupling [A] (x 1)
- 2. Inner bushing [B] (x 1)
- 3. Cleaning brush [C]



- Pull the shaft toward the rear to disengage the front of the shaft, then pull out.
- After replacing the cleaning brush, clean the ID sensor to make sure that it is clean and free of toner.
- Avoid touching the cleaning brush with bare hands.
- Check the entrance seals and confirm that they are not bent.

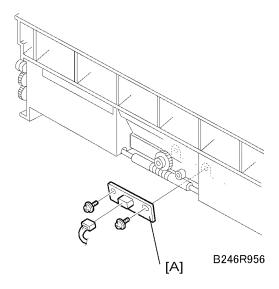
Pick-off Pawls



Remove:

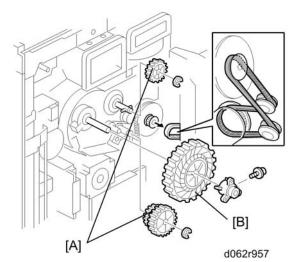
- OPC drum **p** p.214
- 1. Pick-off pawl bracket [A] (F x 2)
- 2. Pick-off pawl [B] (spring x 1)

ID Sensor



Remove:

- OPC drum **p**.214
- Pick-off pawls p.222
- 1. ID sensor [A] (x 2, 1 x 1)
- 2. After replacing the sensor, do the following SPs:
 - SP2962 (Adjustment of Drum Conditions), only if SP3901 (Auto Process Control) is on.
 - SP3001-002 (ID Sensor Initialization Setting).

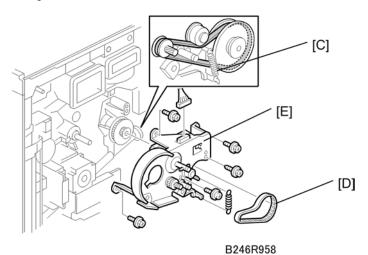


Remove:

- Rear covers p.186
- Controller/IPU panel (x 3) (not shown). The panel swings open like a door. You do not need to remove it.
- Flywheel (F x 3) (not shown)
- 1. Three gears [A] [B](\mathscr{F} x 1, \otimes x 2, Timing belt x 1)

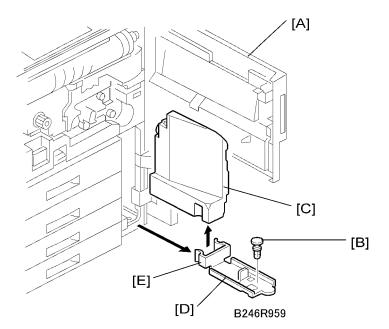


• Gears [A] are different in each model. D131/D132 have black gears, but D133 has white gears.



- 2. Spring [C]
- 3. Timing belt [D]
- 4. Drum motor [E] (■ x 1, x 5)

Toner Collection Bottle

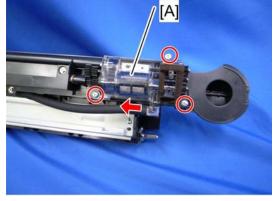


- 1. Open the front door [A].
- 2. Remove the lock pin [B], then pull out the toner collection bottle [C] and its base [D].
- 3. Detach the bottle from the base clamp [E] and replace it.

Toner Separation Unit

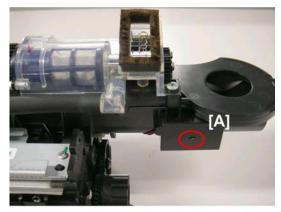
Remove:

- Development unit p.208
- Pressure release tube, only for D133 pp.230



d062r504

1. Toner separation unit [A] (\mathscr{F} x 3, tube x 1)



d062r504a

2. Toner end sensor cover (x1)

Reinstallation



d062r504b

1. When you re-attach the toner end sensor cover, make sure that the toner end sensor harness is not pinched between the cover and the unit.

Ozone Filters





d131r123

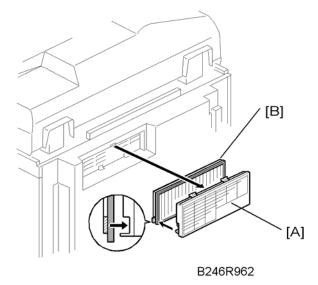
1. On the back of the machine, remove the cover of the ozone filter box (\mathcal{F} x1).



d131r124

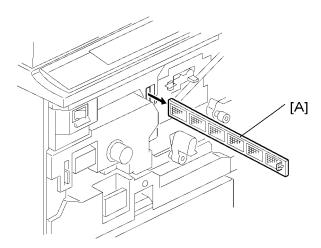
- 2. Lay the box on a flat surface.
- 3. Pull the filter out of the box.

Optics Dust Filter



- 1. Filter cover [A]
- 2. Optics dust filter [B]

Internal Dust Filter



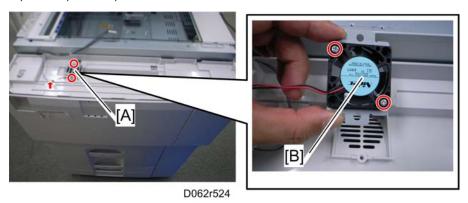
B2246R963

- 1. Open the front door.
- 2. Pull the toner bottle holder out and swing the toner bottle holder to the right.
- 3. Remove the PCU inner cover ($\Re x2$, $\Im x1$).

4. Pull out the internal dust filter [A].

Toner Cooling Fan

1. Operation panel p.180



- 2. Toner cooling fan unit [A] (*x 2, * x 1).
- 3. Toner cooling fan [B] (x 2).



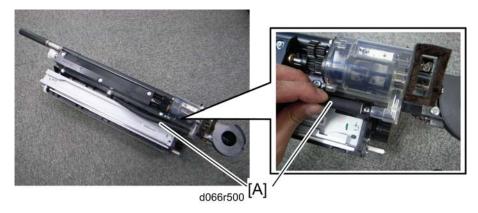
• Make sure the decal is facing down when reinstalled.

Development Unit

Developer Replacement

Preparation

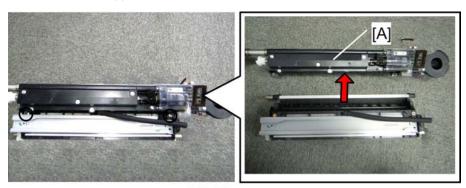
For D133 only, the pressure release tube [A] should be removed before removing the development unit.



- 1. Development unit p.208
- 2. Pressure release tube [A]

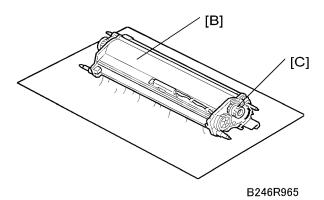
Removal

1. Remove the toner hopper [A] (x 2)

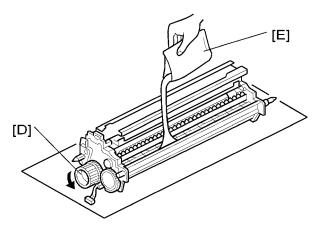


d066r503

2. Rotate the toner hopper very slightly (10° to 20°) as you slide it up to remove it. To avoid toner spill, hold the hopper level as you remove it



- 3. Hold the development [B] unit over a large sheet of paper, then slowly turn it upside down to empty the developer.
- 4. Turn the knob [C] through several complete rotations to empty all the developer in the development unit.
- 5. Clean the development sleeve and its side seals.
- 6. Turn the unit over and set it on another sheet of clean paper.
- Note the developer lot number printed on the top edge of the bag. You will need the lot number when you input SP2801-2.
- 8. Clean the development roller shaft with a clean cloth and blower brush.



B246R966

- 9. While turning the knob [D] slowly, pour in one pack of developer [E] from one end of the development unit to the other.
- 10. Make sure that the developer is evenly distributed.
- 11. Continue to turn the knob several times to prevent clumping in the developer.

Reinstallation

1. Hold the hopper perfectly level when re-attaching it, to prevent toner from entering the rails of the development filter.

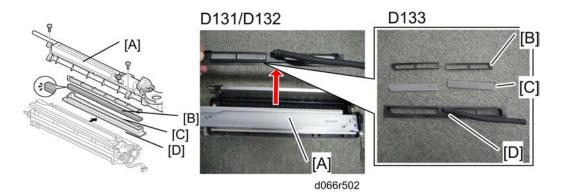


- Automatic process control starts automatically after the machine is switched on, so after replacing the developer, you should enter the SP mode and initialize the developer with SP2801 as soon as possible after switching the machine on.
- 2. Do SP2801 (TD Sensor Initial Setting).
 - Open the front door.
 - Turn the machine on



- If you open the front door, auto process control will not start. SP2801 must be done before auto process control starts.
- Push [Clear Modes]
- Enter the SP mode.
- Close the front door.
- Push "System SP" on the touch-panel.
- Enter 2801-002 to select SP2801-002.
- On the soft keys, enter the lot number from the pack of developer, then push [#].
- Do SP2801-1.

Development Filter



Remove:

Development unit p.214

- Pressure release tube, only for D133 pp.230
- 1. Toner hopper [A]
- 2. Filter bracket top [B]
- 3. Development filter [C]
- 4. Filter bracket [D]

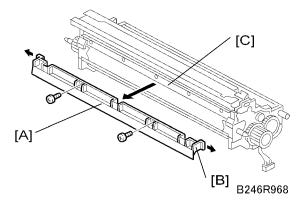
Important

- Make sure that the rails where the development filter bracket [C] connects to the development unit are clean and free of toner. If there is any toner in the rails, wipe them clean.
- When installing a new filter, set the filter snug inside the filter case, and then place the case over the top of the filter bracket [C].
- The filter case seals any gaps at the filter edges to prevent toner scatter.
- After vacuum cleaning, always check the gaps at the ends of the filters to make sure that they are flat and sealed and not open.

Entrance Seal and Side Seals

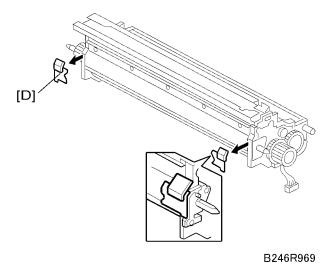
Removal

• Development unit p.208



- 1. Entrance seal bracket [A] (Fx 2)
- 2. After removing the screws, press in the catches on either end [B] to release the entrance seal bracket, then remove it.
 - · Clean the entrance seal bracket before re-installing it.
 - When re-installing, make sure the tabs [C] and notches are engaged at four locations.

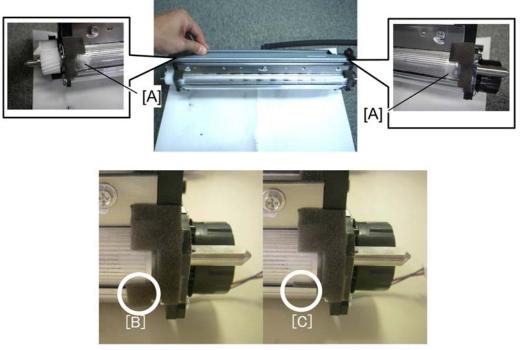




3. Side seals [D]

• Remove the side seals from both ends, clean the area, and replace with new seals.

Reinstalling

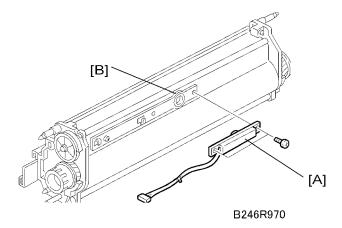


d066r510a

1. Attach the seals [A] as shown in the above diagrams.

- 2. Reinstall the entrance seal bracket.
 - [B] is incorrect.
 - [C] is correct.

TD Sensor



Remove:

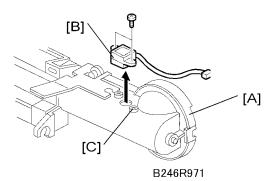
- Development unit p.208
- 1. TD sensor (x 1) [A]
- 2. Before installing a new TD sensor, clean the TD sensor port [B].
- 3. After replacing the TD sensor, do these SPs:
 - SP2801 TD Sensor Initial Setting
 - SP2962 Auto Process Control (only if SP3901 Auto Process Control is on).

Toner End Sensor

1. Development unit p.208

d062r504a

2. Toner end sensor cover [A] (Fx1)



- 3. Toner hopper [A] (** x 2)
- 4. Toner end sensor [B] (x 2)
 - Remove the screws carefully to avoid stripping the holes.
 - Before installing a new toner end sensor, clean the toner end sensor port [C].

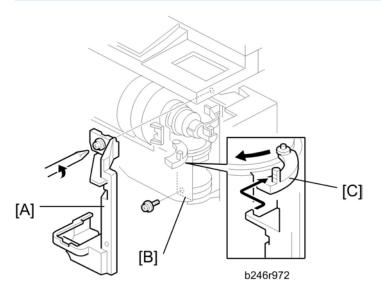
Reinstallation



d062r504b

1. When you re-attach the toner end sensor cover, make sure that the toner end sensor harness is not pinched between the cover and the unit.

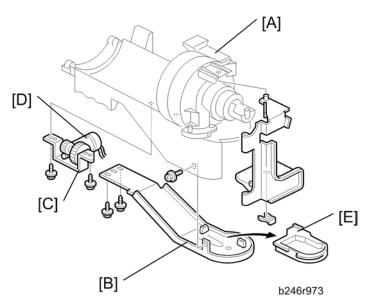
Toner Supply Motor



- 1. Open the front door.
- 2. Swing the toner unit out of the machine and remove the toner bottle.
- 3. Bracket [A] (x 1)
- 4. Lock plate [B] (🗗 x 1)



 After re-installation, the tab [C] should be behind the stay and its pin below should be in the open track below.



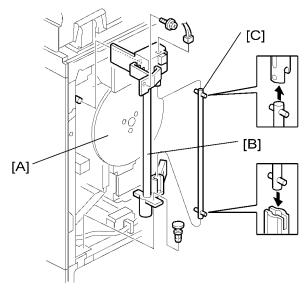
- 5. Toner bottle unit [A] (🔎 x 1, harness x 1, 🖏 x 1)
 - The c-clamp is under the toner unit.
 - Lift the toner bottle unit off the pegs and lay it on a piece of newspaper to avoid toner spill.
- 6. Bottom plate [B] (Fx 3, harnesses x 2)
 - 2 screws on the bottom, 1 screw on the side.
- 7. Toner supply motor bracket [C] (x 2)
- 8. Toner supply motor [D] (Fx 2)

Cleaning Requirement

The toner pan [E] must be cleaned at every PM interval (300 K).

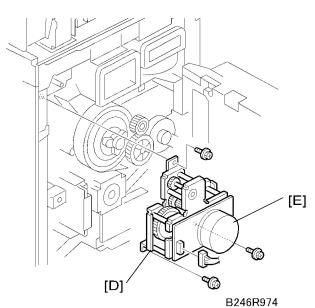
4

Development Motor



B246R975

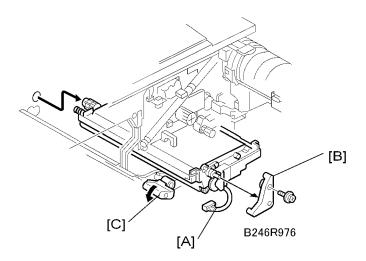
- 1. Flywheel [A] (x 3)
- 2. Waste toner pump tube [B] ($\mathscr{F} \times 1$, $\overset{\blacksquare}{\square} \times 1$)
- 3. Drive rod [C]
 - Lift the toner pump tube to disengage the drive rod, pull out the rod, and push the rubber tube aside.



- 4. Development motor bracket [D] (*\varPi x 3, *\varPi x 1)
- 5. Development motor [E] (x 4)

Transfer Belt Unit

Transfer Belt Unit Removal

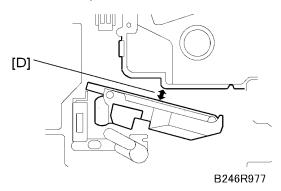


U Note

• Before you begin, spread a mat or some clean paper on the floor where you intend to set the transfer belt unit.

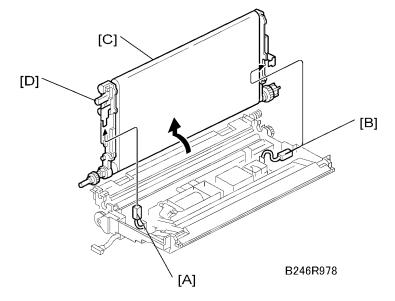
Remove:

- OPC drum unit p.214
- 1. Disconnect the transfer belt unit [A] (x 1).
- 2. Remove the transfer belt unit stay [B] (Fx 1).
- 3. While supporting the transfer belt unit with your hand, turn the release lever [C] counter-clockwise to release it, then pull the transfer belt unit out of the machine.



- The transfer belt unit can be removed without removing the OPC drum unit.
- However, the transfer belt unit must be removed carefully to avoid scratching the surface of the transfer belt on the OPC drum unit [D].
- Avoid touching the belt with bare hands.

Transfer Belt Removal

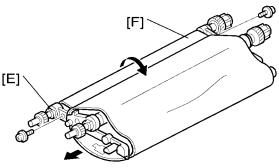


Remove:

- Transfer belt unit p.241
- 1. Disconnect the earth terminal [A] and transfer current terminal [B] (x 2). While doing this, hold the transfer belt unit [C] by its knobs [D].
- 2. Raise and stand the belt perpendicular to the unit and remove it.



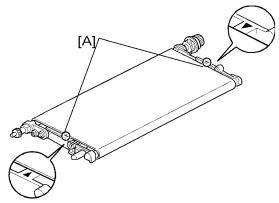
• To avoid scratching the belt on the guide, never rotate the belt unit farther than 90 degrees.



- B246R979
- 3. Release the drive roller [E] (x 2).
- 4. Press in on the drive roller to collapse the unit into a "U" shape [F].
- 5. Remove the belt and replace it.

Re-installation

- Before re-assembling the transfer belt unit, use a clean cloth and alcohol to clean the contact points
 of the drive roller, idle roller, and transfer roller. Make sure these areas are clean and free from
 toner, paper dust, etc.
- Never touch the surface of the belt with bare hands and never apply alcohol to the surface of the belt. Clean it with a blower brush. Check the underside of the transfer belt and clean with the blower brush.

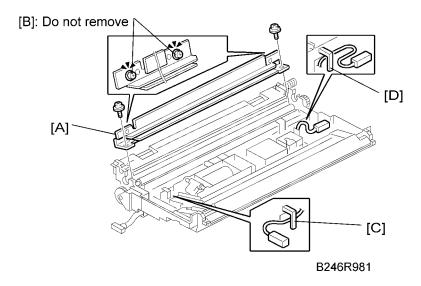


B246R980

- When re-assembling the transfer belt unit, make sure that the transfer belt is centered between the triangular marks [A] on either side of the unit.
- After re-assembly, make sure that the transfer belt is inside the transfer current terminal. The belt could be cut if it is not positioned correctly.

- Confirm that both the ground and transfer current terminal are connected and that the harnesses are not touching the release lever.
- After re-installing the transfer belt unit, turn the belt and confirm that the toner collection coil turns.
- The transfer belt and transfer roller cleaning blade must always be replaced together.

Transfer Roller Cleaning Blade



Remove:

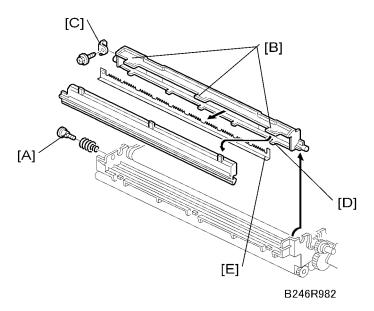
- Transfer belt unit p.241
- Disassemble the transfer belt unit p.241
- 1. Transfer roller cleaning blade [A] (x 2)



- Never remove the inner lock screws [B] of the transfer roller cleaning blade.
- When re-assembling, make sure that the clamps [C] and [D] are arranged as shown above to avoid contact with the release lever.
- The transfer roller cleaning blade should always be replaced when the transfer belt is replaced.
- Never touch the edge of a new transfer roller cleaning blade. The edge of the blade is dusted
 with setting powder. If the setting powder is removed accidentally, dust the edge of the blade
 with toner. This is especially important when only the transfer roller cleaning blade must be
 replaced without replacing the transfer roller.

Work carefully around the transfer power pack located inside the transfer belt unit, especially
when cleaning with a vacuum cleaner, to avoid damaging the power pack with static
electricity.

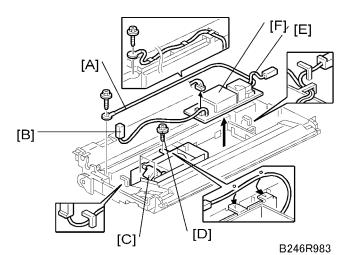
Discharge Plate



- 1. Remove the transfer belt unit p.241
- 2. Remove the shoulder screw and spring [A] ($\Re x1$, Spring x1).
- 3. Rotate the discharge unit up, then lift it straight up to remove it.
- 4. Disconnect the three large tabs [B].
- 5. Remove the bracket [C] (x 1).
- 6. Disconnect the 6 small seal case tabs [D].
- 7. Remove the discharge plate [E].

Reinstallation

- 1. Set the discharge plate and make sure that it is perfectly flat before re-connecting the tabs.
- 2. Before re-attaching the bracket [C], make sure that all the tabs are connected.



Remove:

- Transfer belt unit p.241
- 1. Wire (x 1) [A] (all wire guides)
- 2. Ground terminal wire [B] (wire guide x 1)
 - This terminal wire does not disconnect from the power pack.
 - Loosen the two left screws of the transfer belt lift solenoid [C], and remove the top screw [D] to free the ground terminal wire.
- 3. Transfer current terminal wire [E] (wire guides x 2)
- 4. Transfer power pack [F] (🕮 x 1)
 - Disconnect the two standoffs on the right edge of the power pack and remove.

Re-installation

- Confirm that the left edge of the power pack is below the tabs on the left.
- Confirm that the transfer current terminal wire is below the wire guides on the right.
- Pass the ground terminal wire under the top connector of the solenoid bracket and tighten all the screws of the solenoid bracket.
- Make sure the wire is below all the wire guides at the top.

Fusing Unit

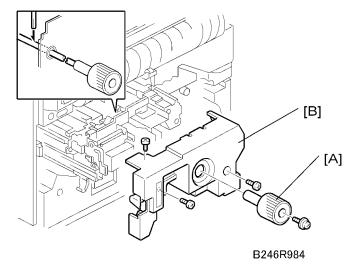
CAUTION

• Switch off the machine, remove the plug from the power source, then allow sufficient time for the fusing unit to cool before you remove it from the machine.

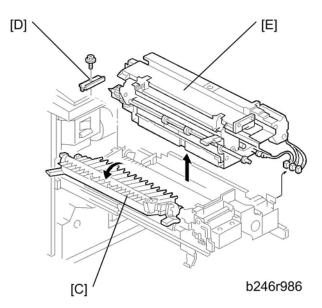
Fusing Unit Removal



Before you begin, spread a mat or some clean paper on the floor where you intend to set the
fusing unit.

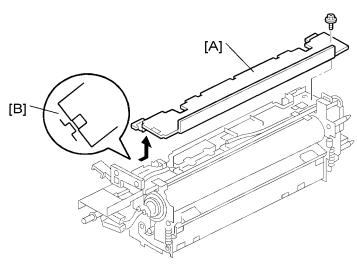


- 1. Open the front door.
- 2. Pull out the transfer unit.
- 3. Knob [A] (x 1)
 - Open D3 and D4 until you can see the hole in the shaft.
 - Insert the tip of a screwdriver into the hole of the shaft to hold it in position as the knob is turned to remove or install it.
- 4. Inner cover [B] (* x 3)
 - Pull the fusing unit release lever, then pull the unit out on the rail supports.
 - At reassembly, make sure that the harness of the web drive motor is not pinched by the inner cover.



- 5. Open the exit separation pawl assembly [C].
- 6. Stopper bracket [D] (x 1)
- 7. Fusing unit [E] (x 2, 🛱 x 2)
 - - Support the bottom of the fusing unit with your hand as you remove it.

Fusing Unit Thermistors and Thermostats



B246R989

• Remove the fusing unit p.247

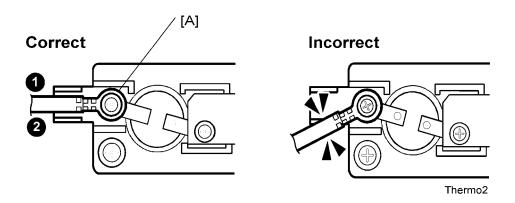
- 1. Upper cover [A] (x 1)
- 2. Press in on the internal pawls [B] to release them then remove them.



• Make sure that the pawls [B] engage correctly when you reinstall the unit.

The thermistor-thermostats are replaced as one unit. A disassembly procedure is not required.

Reinstallation



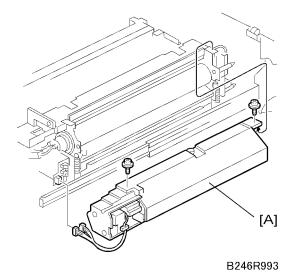
- To prevent damage to a thermostat, never touch its detection surface.
- Place the end of the thermostat harness that has the round lead [A] in between the two ribs ①, ②
 in the bracket.
- Tighten the screw for the round lead [A] as tight as possible without damaging the screw or screw hole.

Mportant ...

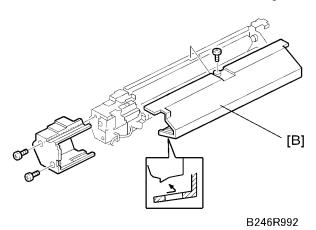
• If the harness is not positioned between the between the bracket ribs **1**, **2** (as shown under "Incorrect" below), this could cause an error (SC542 or SC545).

Web Cleaning Roller

Web Unit Disassembly

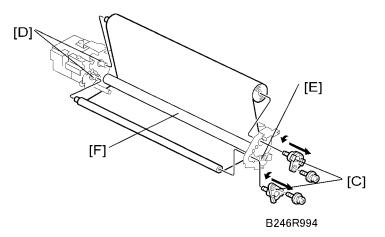


- 1. Open the front door and pull out the fusing unit on its support rails.
- 2. Web unit [A] (x 2, 1 x 2)
 - The web unit can be removed without removing the fusing unit from the machine.



3. Upper cover [B] (x 1)

• Rotate the cover down slightly to remove.

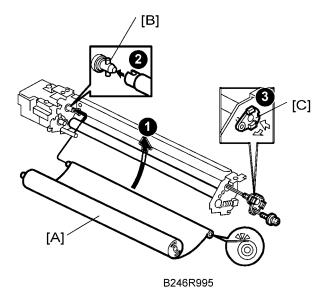


- 4. Web shafts [C] (* x 2)
- 5. Remove the web cleaning rollers from the shaft driver pins [D].
- 6. Web bushing [E] (spring x 1)
- 7. Cleaning roller [F]

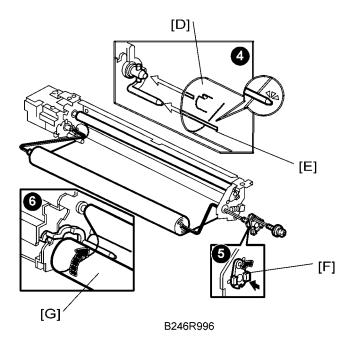
Reinstallation

- After replacing the web with a new one, you must execute SP1902-001 (Fusing Web Used Area Display/Setting) to reset the web consumption count to zero. This SP code must be executed to release SC550.
- Be sure to print an SMC report before executing Memory All Clear (SP5801). After executing SP5801, be sure to re-enter the value recorded for SP1902-001 in the SMC report.

Web Unit Re-assembly

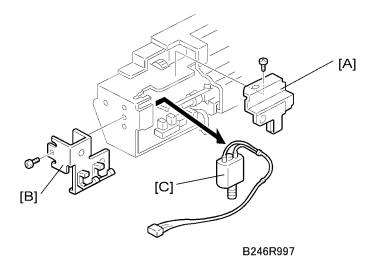


- 1. Attach the cleaning roller [A]
 - Insert the end of the web into the slot **0**.
- 2. Insert the drive pins [B] into the web shaft **2**.
- 3. After installing bushing [C], rotate the shaft right to lock it, then attach the lock screw 3.



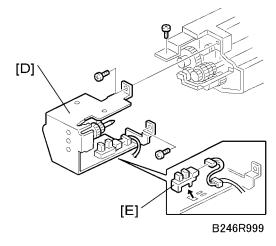
- 4. Set the web [D] under the feeler [E] of the web end sensor **3**.
- 5. Attach bushing 2 [F] **6**.
- 6. Attach the new web roll [G] and wind it tight so no slack remains **6**.
 - - Before reassembling the machine, confirm that 1) there is no slack in the web roll, 2) the web is below the feeler of the web end sensor.
- 7. Attach the upper cover.
- 8. After installing a new web roll, reset SP1902-001 to zero.

Web Motor and Web End Sensor



Remove:

- Web unit and end cover 🖝 p.250
- 1. Bracket [A] (x 1)
- 2. Web motor positioning bracket [B] (\mathscr{F} x 1)
- 3. Web motor [C]

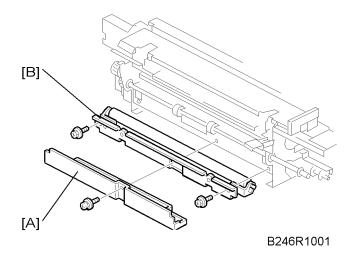


- 4. Web motor/sensor mount [D] (* x 3)
- 5. Web end sensor [E] (🕪 x 1, harness x 1)

Reinstallation

• Make sure that the harness of the web driver motor is not pinched by the fusing inner cover

Pressure Roller Cleaning Unit



Remove:

- Fusing unit p.247
- 1. Cover [A] (x 1)
- 2. Cleaning roller [B] ($F \times 2$)

3. Cleaning roller [C] (x 1)

Reinstallation

- When attaching the lower cover of the pressure roller cleaning roller, make sure that the tab [D] engages with the groove [E].
- If the bushings are noisy after replacement, lubricate them on both ends and the holes where the bushings are attached with Barrierta Grease L553R.

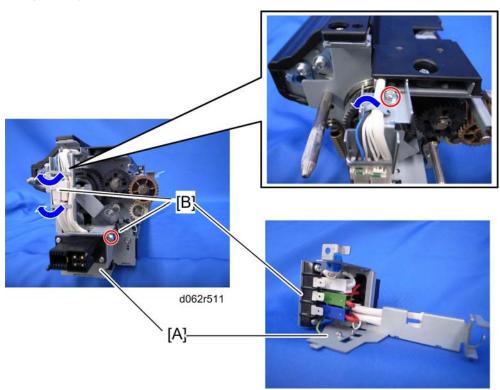
Fusing Lamps, Hot Roller, and Pressure Roller



• If you wish to remove the pressure roller only, without removing the hot roller and fusing lamps, please do not use this procedure. Use the procedure in the next section.

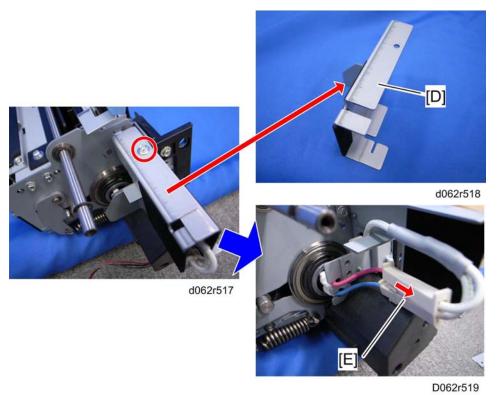
Fusing Lamps

1. Fusing unit p.247

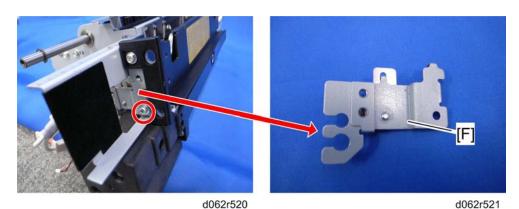


2. Rear terminal connector bracket [A] (\mathscr{F} x 2, metal clamp x 3, \square [B] x 6)

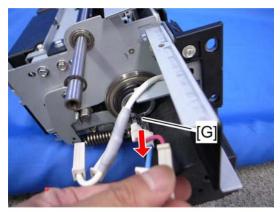
3. Rear fusing lamp holder [C] (x 1)



- 4. Plate [D] (x 1)
- 5. Disconnect two harnesses [E]



6. Front fusing holder [F] (₱ x 1)



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7. Fusing lamps x 2 [G]

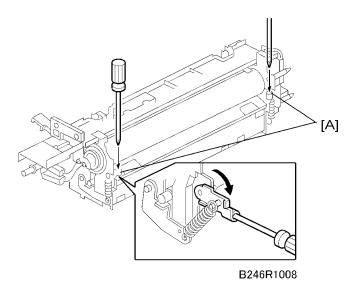


• Be careful when you move the fusing lamps. Do not break them. Do not touch them with bare hands.

Hot Roller and Pressure Roller

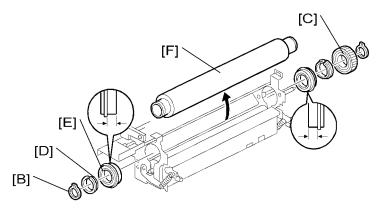
Use this procedure when you want to remove both rollers.

1. Remove the web unit p.250



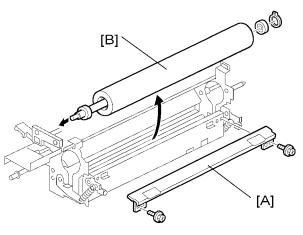
2. Pressure arm [A]

• Insert the tips of two screwdrivers and press down to release.



B246R1009

- 3. C-clamps (both ends) [B]
- 4. Drive gear [C]
- 5. Bushings (both ends) [D]
- 6. Bearings [E]
- 7. Hot roller [F]

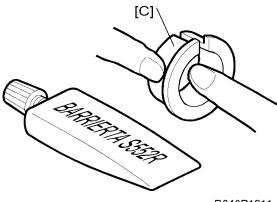


B246R1010

- 8. Entrance guide plate [A] (* x 2)
- 9. Pressure roller [B] (© x 2)



• The pressure roller and pressure roller bearing should always be replaced together.



B246R1011

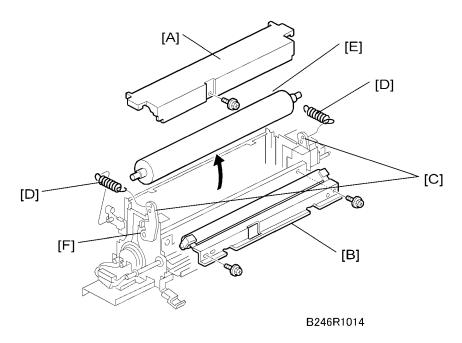
10. Lubricate the inner and outer surfaces [C] of the bushings with Barrierta S552R grease.



• If the bushings are warm, allow them to cool before applying the Barrierta grease. Applying the grease while the bushings are hot could generate gas.

Pressure Roller

Use this procedure if you need to remove only the pressure roller.



Remove:

- Fusing unit p.247
- 1. Turn the fusing unit upside down.
- 2. Lower cover [A] (x 1)
- 3. Pressure roller cleaning unit [B] (Fx 2)
- 4. Release the pressure arms [C]
- 5. Use screw driver to lower the pressure arms on both ends of the pressure roller.
- 6. Pressure roller springs [D]
- 7. Pressure roller [E]



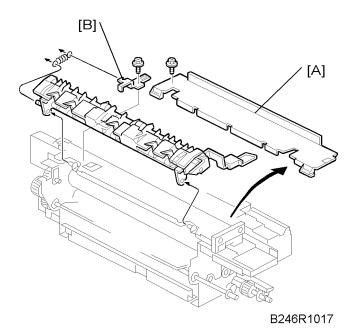
- The fusing lamps are fragile. Work carefully to avoid breaking them.
- During assembly, handle the roller carefully to avoid scratching it on the bracket.
- Make sure the tabs and grooves of the lower cover are engaged correctly before tightening the screw.

Spring Adjustment

- Two holes [F] are provided on each pressure arm for the springs.
- Normally the springs should be attached to the lower holes.

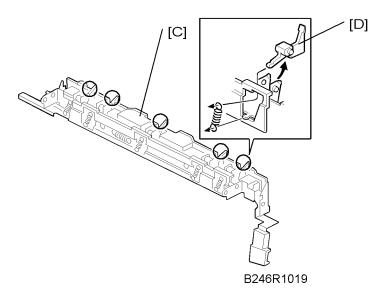
• Attaching the springs to the upper holes exerts less pressure on the hot roller. Attach the springs to the upper holes only for especially thin paper.

Stripper Pawls



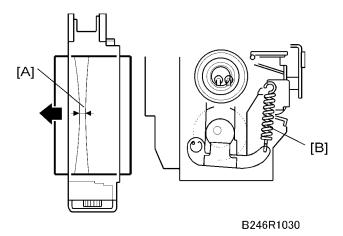
Remove:

- Fusing unit p.247
- 1. Top cover [A]
- 2. Bracket [B] (x 1, spring x 1)

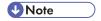


- 3. Inner cover [C] (x 2)
- 4. Stripper pawl [D] (x 1)

Nip Band Width Adjustment



1. After the machine is powered on with the main switch, make an A4/LT LEF copy, then stop the machine while the paper is still in the fusing unit by switching it off.



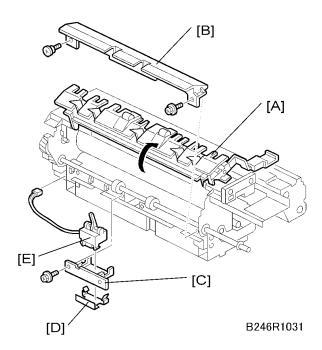
- This is easier with an OHP sheet. Use an OHP sheet if you have one available.
- 2. Open the front door, then turn the fusing knob to feed out the copy.

3. Measure the width of the band on the part of the image where it is particularly black. The band, called the nip band [A], should be 9.0 ± 0.7 mm at the center.



- When the fusing is incorrect (wrinkles, offset, curl), measure the nip band width.
- The nip band width can be adjusted by changing the position of the springs [B] on either end of the pressure roller.
- The fusing temperature can also be adjusted with SP1105 (Fusing Temperature Adjustment) for Normal, OHP, and Thick Paper.

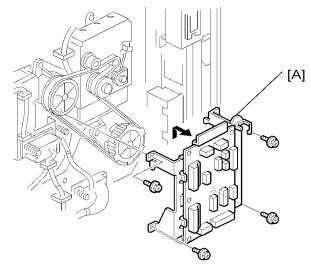
Fusing Unit Exit Sensor



Remove:

- Fusing unit p.247
- 1. Open the hot roller stripper pawl unit [A]
- 2. Exit guide plate [B] (Fx 2)
- 3. Fusing exit sensor holder [C] (Fx 2)
- 4. Plate spring [D]
- 5. Fusing exit sensor [E] (x 1, x 3)

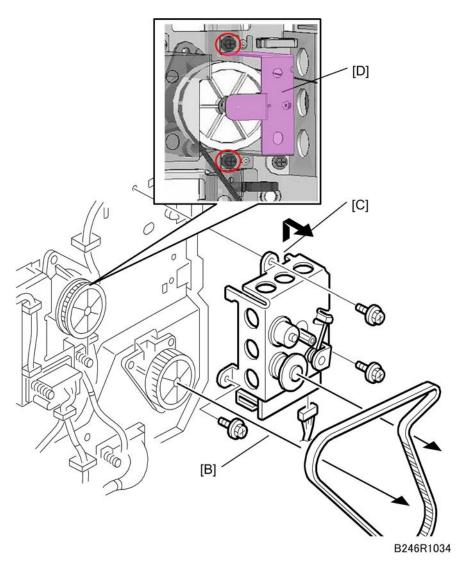
Fusing/Exit Motor



B246R1032

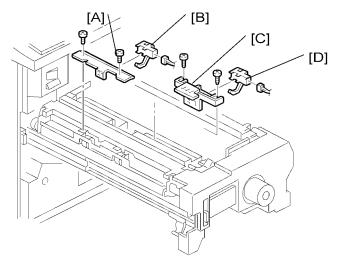
Remove:

- Rear upper cover p.186
- 1. Open the BCU (* x 4)
- 2. CNB bracket [A] (♠x 4, ♣x1, ♣x1)



- 3. Timing belt [B]
- 4. Fusing/exit motor bracket [C] (** x 3)
- 5. Ground plate [D] (x 2)
- 6. Fusing/exit motor (Fx 2) inside the bracket (not shown)

Fusing Exit Sensor and Exit Unit Entrance Sensors

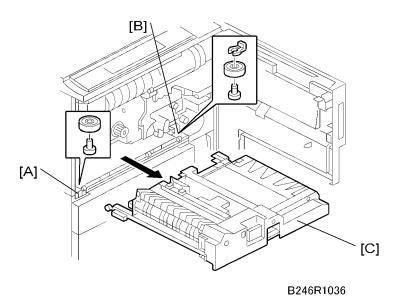


B246R1035

- 1. Open the front door and pull out the exit/inverter unit.
- 2. Fusing exit sensor bracket [A] (Fx 2)
- 3. Fusing exit sensor [B] (x 1)
- 4. Exit unit entrance sensor bracket [C] (x 2)
- 5. Exit unit entrance sensor [D] (x 1)

Duplex Unit

Duplex Unit Removal

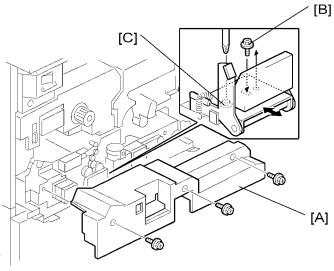


- 1. Open the front door and pull out the duplex unit.
- 2. Remove the slide rail roller on the left [A] and on the right [B] ($\sqrt[n]{x}$ 1).
- 3. Lift out the duplex unit [C].

Reinstallation

- To re-install the duplex unit, insert the duplex unit partially, only until it enters the black guide rail, then re-attach each slide rail roller.
- Next, push the duplex unit into the machine completely. This method prevents interference from the guide plate during installation.

Duplex Unit Side-to-Side Adjustment



B246R1037

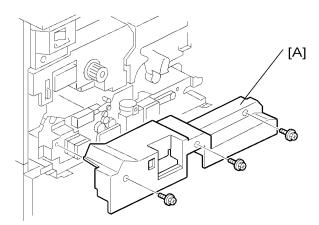
- 1. Remove the inner cover [A] (*x 3)
- 2. Move the handle lock screw [B] from the right to the center.
- 3. Loosen the left lock screw [C], then adjust the position of the duplex unit.

Jogger Fence Adjustment

SP1008	Duplex Fence Adjustment
	Execute this SP to adjust the distance between the jogger fences, if required. A smaller value shortens the distance. If the fences are too far apart, skewing may occur in the duplex tray. If the fences are too close, the paper may be creased in the duplex unit. For details, see "Service Tables".

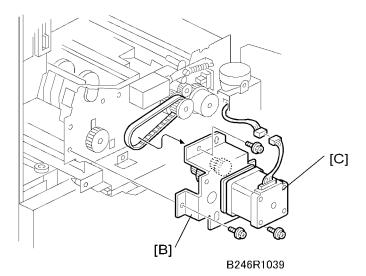
Duplex Motors

Duplex Inverter Motor



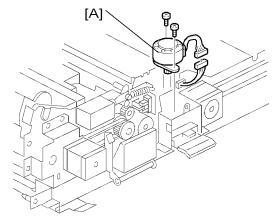
B246R1038

1. Remove the cover [A] (x 3)



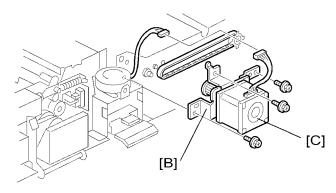
- 2. Inverter motor bracket [B] (x 3)
- 3. Inverter motor [C] (🚉 1, 🕶 x 1, 🎤 x 2, timing belt x 1)

Duplex Jogger and Transport Motors



B246R1040

1. Jogger motor [A] (🕮 x 1, 🎤 x 2)

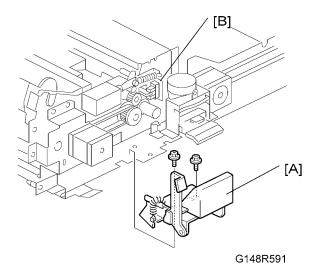


B246R1041

- 2. Transport motor bracket [B] (🚉 1, 🚅 x 1, 🎤 x 3, timing belt x 1)
- 3. Transport motor [C] (x 2)

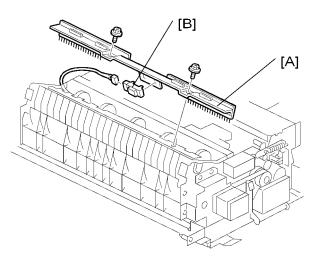
Duplex Sensors

Jogger HP Sensor



- 1. Duplex unit release lever [A] (*\vec{F} \times 2)
- 2. Jogger HP sensor [B] (₹ x 1, x 2, 1)

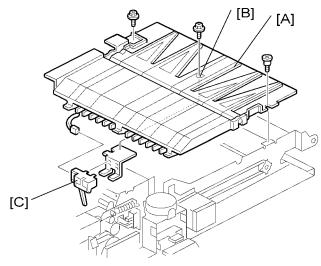
Duplex Entrance Sensor



B246R1043

1. Bracket [A] (x 2)

Duplex Transport Sensor 3

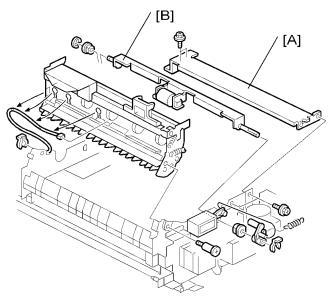


B246R1045

- 1. Right half of table [A] (ℯx 2, 🕬 x 1)
 - The front screw is a shoulder screw. Insert the screws in the correct holes when re-attaching.
- 2. Remove the screw [B] to release the sensor bracket below.
- 3. Transport sensor 3 [C] (x 1)

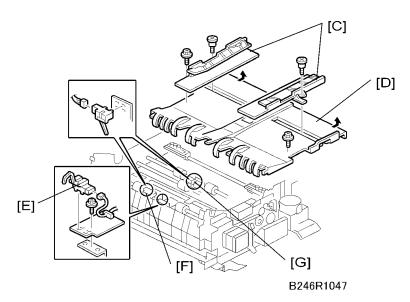
Δ

Inverter Exit Sensor, Transport Sensors 1 & 2



B246R1046

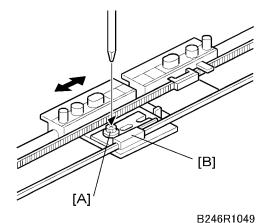
- 1. Cross-stay [A] (x 4)
- 2. Reverse trigger roller shaft [B]



- 3. Jogger fences [C] (x 1 each)
- 4. Left half of table [D] (x 2)
 - The front screw is a shoulder screw. Insert the screws in the correct holes when re-attaching.

- 5. Inverter exit sensor [E] (x 1, x 1, x 1, x 1)
- 6. Transport sensor 1 [F] (♠x 1, ♠ x 1)
- 7. Transport sensor 2 [G] (♠x 1, ♠ x 1)

Duplex Jogger Belt Adjustment



Remove:

- Cross stay p.273
- Reverse trigger roller shaft p.273
- Left half of the table
- Jogger motor bracket

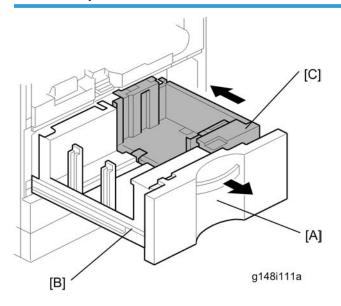


- Slip the one end of the belt around the gear below the jogger motor.
- Slip the other end of the belt around the gear at the other side of the duplex unit.
- 1. If you are replacing the belt, set both jogger fence brackets at the center of the belt and tighten the screw [A].
- 2. If you are adjusting the belt, loosen the screw and slide the plastic piece [B] on the belt to the left or right to adjust the position of the front fence, then tighten the screw.

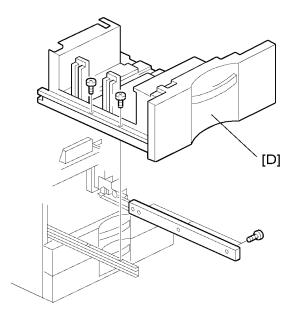
Paper Feed

Paper Tray

Tandem Tray

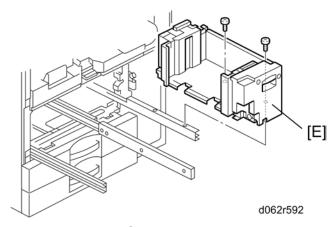


- 1. Open the front door.
- 2. Pull out the tandem tray drawer [A] completely to separate the left [B] and right [C] sides of the tandem tray.



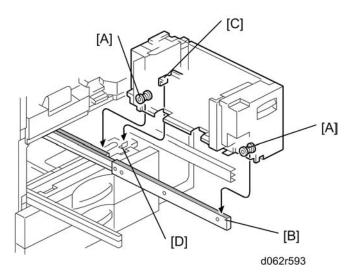
B475i708b

3. Remove the left tandem tray [D] ($\mathscr{F} \times 5$).



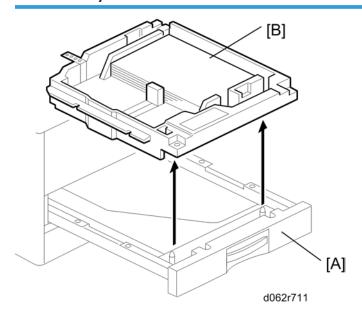
4. Right tandem tray [E] (*x 2).

Reinstallation



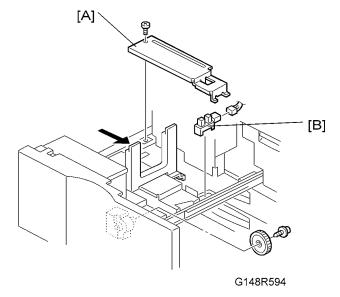
- When re-installing the right tandem tray, make sure that the wheels [A] ride on the slide rail [B].
- When re-installing the right tandem tray, make sure that the tandem tray stopper [C] is set behind the stopper [D] on the frame.

Universal Tray



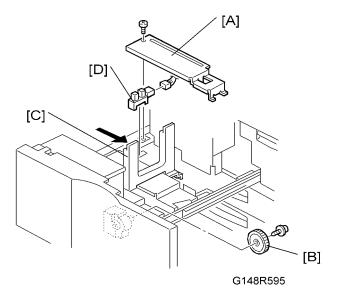
- 1. Pull tray 2 or tray 3 [A].
- 2. Lift the tray [B] out of the drawer.

Rear Fence Return Sensor Replacement



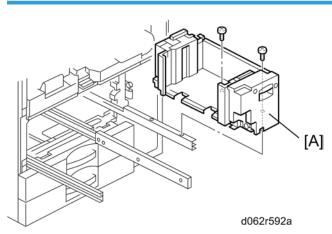
- 1. Turn off the machine.
- 2. Pull out the tandem feed tray.
- 3. Rear bottom plate [A] (Fx 1)
- 4. Return sensor [B] (x 1).

Rear Fence HP Sensor Replacement

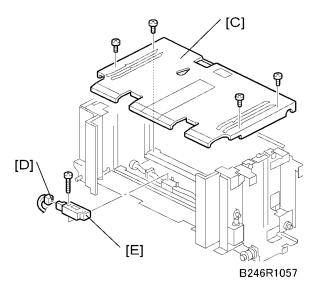


- 1. Turn off the machine.
- 2. Pull out the tandem feed tray.
- 3. Rear bottom plate [A] (x 1).
- 4. Back fence transport gear [B] (x 1)
- 5. Move the back fence [C] to the right.
- 6. Rear HP sensor [D] (x 1)

Tandem Right Tray Paper Sensor Replacement



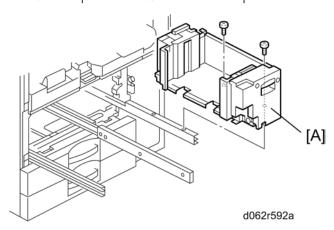
- 2. Remove the right tandem tray p.275
- 3. Inner cover [A] (* x 2)
- 4. Side fences [B] (x 1 each)



- 5. Bottom plate [C] (* x 4)
- 6. Connector [D] (x 1)
- 7. Sensor [E] (x 1)

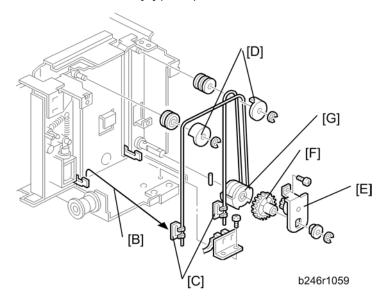
Bottom Plate Lift Wire Replacement

Before replacing the rear bottom plate lift wire, remove the front bottom plate lift wire. The shaft must be removed to replace the lift wire of the bottom plate.



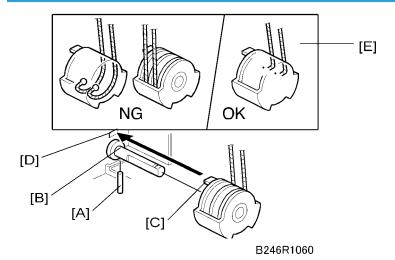
Remove:

- Right tandem tray 🖝 p.275
- 1. Remove the inner cover [A] ($\mathscr{F} \times 2$)



- 2. Remove the left stay [B].
- 3. Wire stoppers [C]
 - Slightly lift the front bottom plate and unhook.
- 4. Wire covers [D] (© x 1 each)
- 5. Bracket [E] (**?** x 1, **©** x 1, bushing x 1)
- 6. Gear [F]
- 7. Bottom plate lift wire [G]

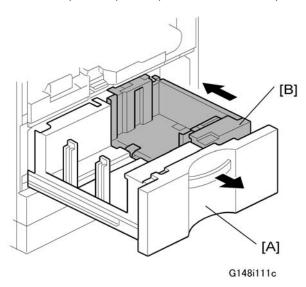
Reinstallation



- 1. Set the positioning pin [A] in the hole [B], and set the projection [C] in the hole [D].
- 2. Position the wire as shown [E].
- 3. Do not cross the wires.

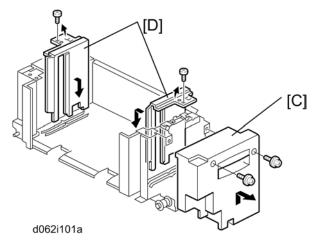
Tandem Tray Paper Size Change

At the factory, this tray is set up for A4 or LT LEF. Only A4 or LT LEF paper can be used for tandem feed.

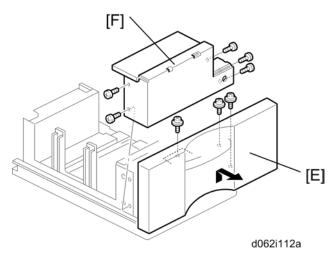


1. Open the front cover.

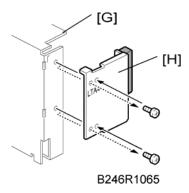
2. Completely pull out the tandem feed tray [A] to separate the right tandem tray [B] from the left tandem tray.



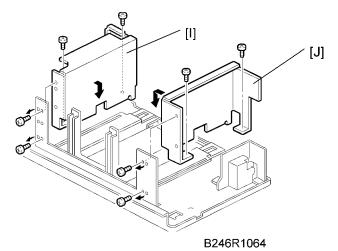
- 3. Remove the right tandem inner cover [C] ($\hspace{-0.5cm} \not\hspace{-0.5cm} F \hspace{-0.5cm} \times 2).$
- 4. Re-position the side fences [D] (x 1 each).
 - A4: Outer slot position
 - LT: Inner slot position
- 5. Re-install the right tandem inner cover.



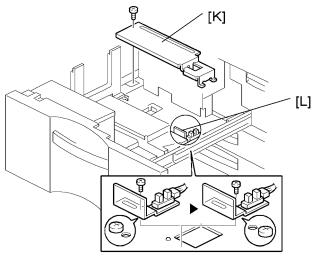
- 6. Remove the tray cover [E] (\nearrow x 3).
- 7. Remove the DC motor cover [F] (*x 5).



8. Remove the rear side fence [G] (\mathscr{F} x 4) and re-position the rear cover [H] (\mathscr{F} x 2).



- 9. Re-position the side fences [I] [J] (*F x 4).
 - A4: Outer slot position
 - LT: Inner slot position
- 10. Re-install the DC motor cover and the tray cover.



G148i113c

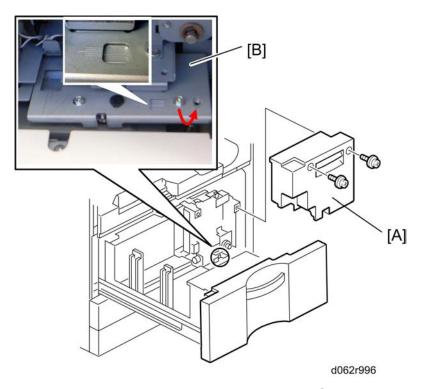
- 11. Remove the rear bottom plate [K] (*x 1).
- 12. Re-position the return position sensor bracket [L] (x 1).

 To use the paper tray for A4 size, set the screw in the left hole as shown. (For LT size, the screw should be placed on the right.)
- 13. Reinstall the rear bottom plate.
- 14. Input the new paper size into SP5959-001 (Paper Size Tray 1).
- 15. Do the printer adjustments. See "Print Image Adjustment" at the end of this section.

Tandem Tray Side Registration

Normally the side registration of the image can be adjusted in the SP mode.

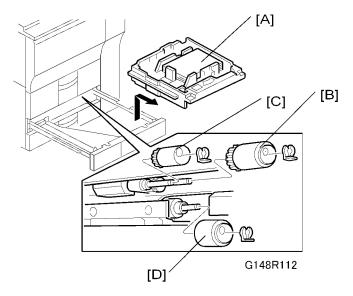
If the punch hole positions are not aligned from a particular feed station, however, you can manually adjust the side registration by changing the tray cover position for that tray, and then adjust the side registration of the image p.338



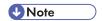
- 1. Pull out the tray and remove the right inner cover [A] (\mathscr{F} x 2).
- 2. Loosen the screws and adjust the position of the plate [B].
 - Adjustment range: 0 ± 2.0 mm adjustment step: 1.0 mm/step

Pick-up, Feed, Separation Roller Replacement

1. Remove the tandem tray or universal tray p.275

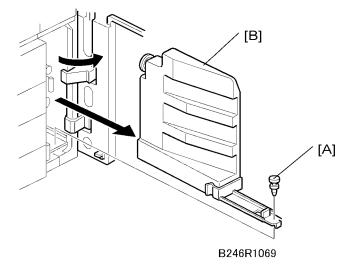


- 2. Feed roller [B] ((() x 1)
- 4. Separation roller [D] (🖾 x 1)



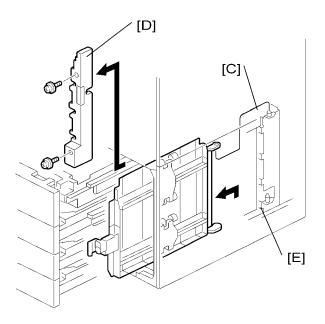
- The operation of the FRR mechanisms for the tandem tray (Tray 1) and universal trays (Tray 2, Tray 3), are similar. These rollers are interchangeable.
- Do not touch the surface of new rollers during replacement.

Feed Unit



Remove:

- Front door p.184
- LCT entrance guide cover and right lower cover p.294
- If the LCT is connected, disconnect it and pull it away from the machine.
- Pull out all three trays (do not remove).
- 1. Nylon peg [A]
- 2. Toner collection bottle [B]

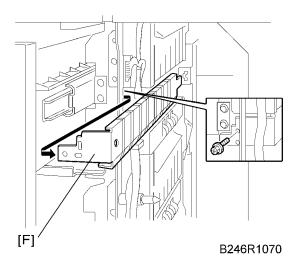


B246R1068

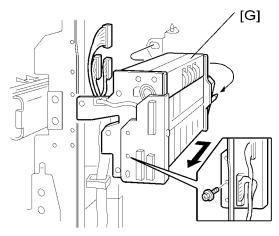
- 3. Vertical transport guide [C]
- 4. Inner cover [D] (x 2)

Reinstallation

• When re-installing the vertical transport guide, remove the lower right cover then insert from [E].



5. Guide plate [F] (\mathscr{F} x 1) (1st feed unit only)



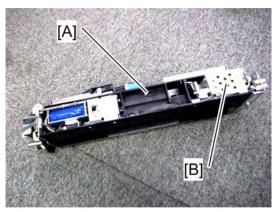
B246R1078

- - Insert your hand from the right and pull the feed unit forward.
 - To avoid hitting the unit on the sides of the machine, remove it carefully and slowly.

Paper Feed Motors

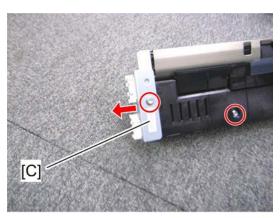
D131 has the paper feed motor in each feed unit. However, D132/D133 have the feed motors at the rear of the machine.

For D131



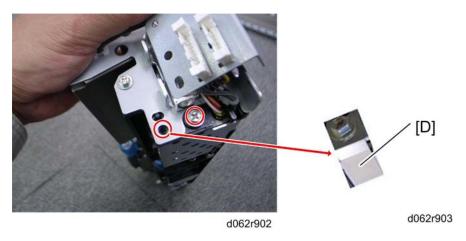
d062r900

- 1. Feed unit [A] p.288
 - Paper feed motor [B]



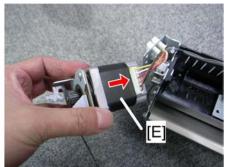
d062r901

2. Remove two screws and the connector bracket [C]. When removing bracket [C], no connectors need to be disconnected.



3. Remove two screws and the bracket [D].



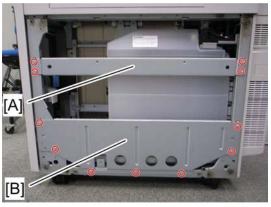


d062r904

4. Remove two screws and a spring, and then remove the paper feed motor [E] (x 1).

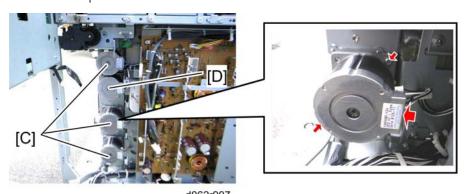
For D132/D133

- 1. Right lower cover p.184
- 2. Feed unit p.288
 - Remove the feed unit corresponding to the motor which will be removed.



d062r906

- 3. Remove the right stay [A] ($\mathscr{F} \times 4$) and bracket [B] ($\mathscr{F} \times 7$).
- 4. Open the controller box **▶** p.311
- 5. PFB bracket p.313



- 6. Paper feed motors [C] (₱ x 2 each, x 1).
- 7. Lower relay motor [D] (x 2, 🕮 x 1).

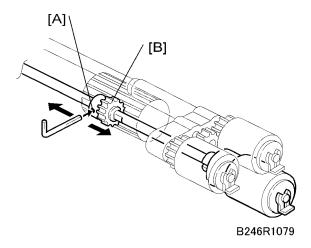


- The positions of the two screws which fasten the paper feed motor are different for each motor.
- Paper feed motor 1: Left upper and right lower.
- Paper feed motor 2 and 3: Right upper and left lower.

Separation Roller Pressure Adjustment

The position of the drive gear for the separation roller can be changed in order to change the amount of pressure exerted by the separation roller. This adjustment can be done:

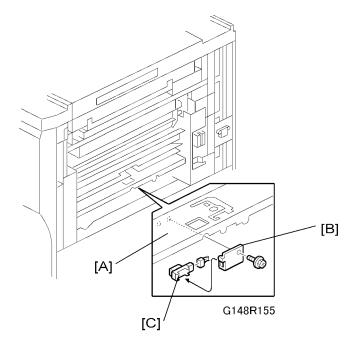
- When feeding special paper, especially thick paper
- When the customer is experiencing feed problems



Remove:

- Feed unit **p**.288
- 1. Loosen the hex screw [A].
- 2. The separation roller gear [B] is positioned at the groove before shipping.
- 3. Do one of the following:
 - To adjust for thick paper, move the separation roller gear [B] to the left to decrease the pressure.
 - To correct misfeeds, move the separation roller gear to the right to increase the pressure.

Relay Sensor

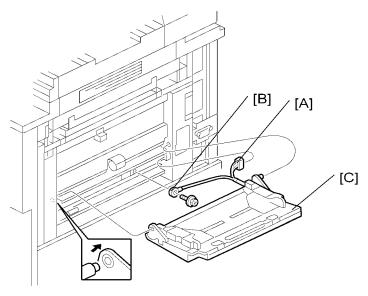


- $1. \ \ \text{Remove the LCT entrance guide cover [A]}.$
- 2. Relay sensor bracket [B] (x 1)
- 3. Relay sensor [C] (x 1)

Δ

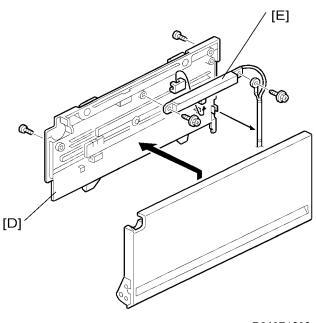
4

By-Pass Paper Size Detection Board



B246R1091

- 1. Registration inner cover (Fx 2)
 - Not shown. This cover is directly below the by-pass tray.
- 2. Connector [A] (x 1)
- 3. Ground wire [B] (x 1)
- 4. By-pass tray [C]
 - Disconnect the by-pass tray from the pins on both sides.



B246R1090

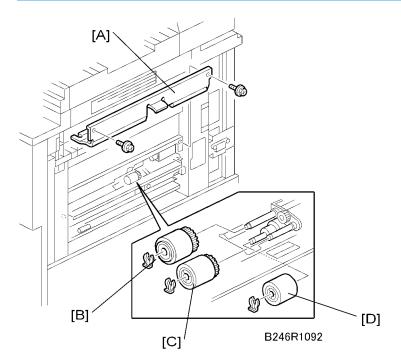
- 5. By-pass table [D] (x 2)
- 6. By-pass paper size detection board [E] (** x 2)

Reinstallation

After installation, execute SP1904 to calibrate the maximum and minimum paper sizes for the side fences:

- SP1904-001 By-pass Tray Paper Size Detection Minimum Size: Move the side fences to the minimum size, then execute this SP.
- SP1904-002 By-pass Tray Paper Size Detection Maximum Size: Move the side fences to the maximum size, then execute this SP.

By-Pass Tray Rollers

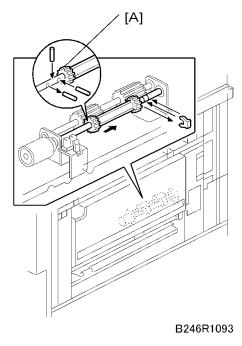


- 1. Right covers p.184
- 2. By-pass tray p.295
- 3. By-pass cover [A] (x 2)
- 4. Feed roller [B] (Ѿ x 1)
- 5. Pick-up roller [C] (Ѿ x 1)
- 6. Separation roller [D] (🖾 x 1)



- Even though the FRR mechanisms for the tandem tray (Tray 1), universal trays (Tray 2, Tray 3) by-pass tray and ADF are similar, the only rollers that are interchangeable are the tandem and universal trays (Trays 1, 2, 3).
- Do not touch the surface of new rollers during replacement.

By-Pass Separation Roller Pressure Adjustment



1. Loosen the separation roller gear [A].

The position of the drive gear for the separation roller can be changed in order to change the amount of pressure exerted by the separation roller. This adjustment can be done:

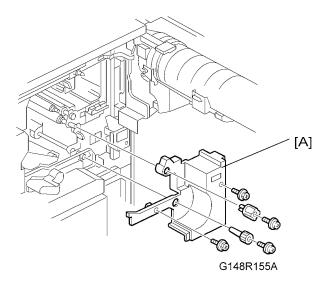
- When feeding special paper, especially thick paper
- When the customer experiences feed problems



- The separation roller gear is positioned at the groove before shipping.
- 2. Move the separation roller gear right to increase the pressure to correct misfeeds.

4

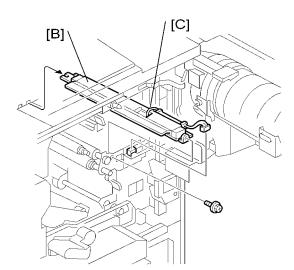
Registration Sensor



1. Inner cover [A] (x 4)

Remove:

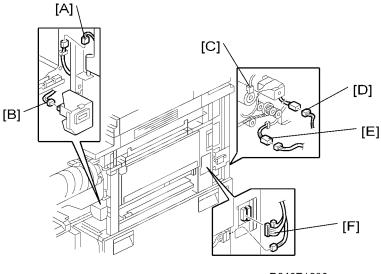
- Development unit r p.208
- Charge corona unit p.212
- OPC drum unit **p**.214



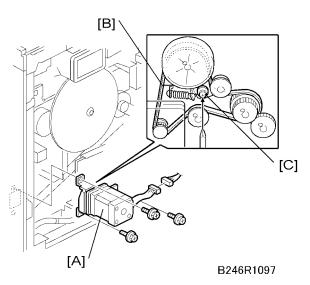
B246R1095

- 2. Paper dust removal unit [B] (x 1, x 1)
- 3. Registration sensor [C]

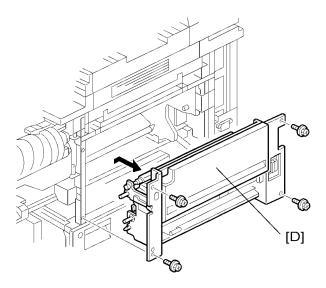
Registration and By-Pass Unit Removal



- B246R1096
- 1. Remove the development unit. p.208
- 2. Remove the inner cover. (F x 4)
- 3. Disconnect the toner bottle holder connector [A] and counter connector [B].
- 4. Pull out the duplex unit about 10 cm.
 - Confirm that the registration roller is separated from the positioning pin.
- 5. Remove the right upper cover. p.184
- 6. Rear upper cover p.186
- 7. Disconnect the following connectors:
 - Relay clutch connector [C]
 - Guide plate solenoid connector [D]
 - Guide plate sensor connector [E]
 - By-pass tray unit connectors [F]



- 8. Remove the by-pass feed motor [A] (x 3, 1 x 1).
 - At re-installation, if the tension of the belt [B] is slack, loosen the screw on the tension bracket [C], move the screw to put more tension on the belt, then tighten the screw at the new position.



B246R1098

9. Remove the by-pass unit [D] (\mathscr{F} x 4).

When removing and installing the by-pass unit:

- Make sure that the unit does not catch on any harnesses.
- On re-installation, make sure that no harnesses are pinched between the unit and the machine frame.

4

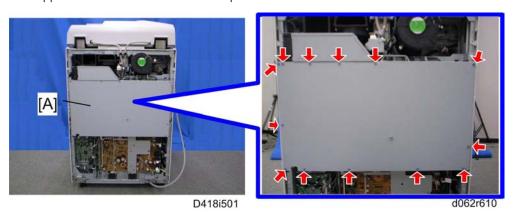
• You must re-install the by-pass unit with the duplex unit open.

Δ

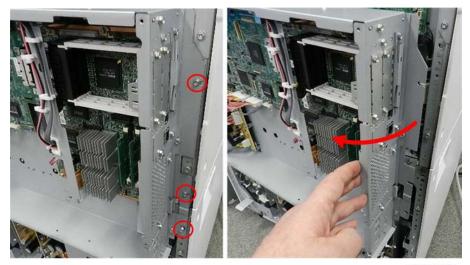
PCBs and HDD

CNT Board (Controller Board)

1. Rear upper cover and rear lower cover p.186



2. Controller box cover [A] (x 13)



d131r125

3. Open the controller box (Fx 3)



d131r126

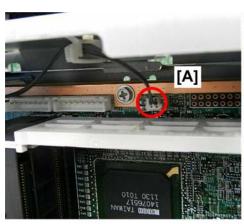
4. Disconnect the controller board (Fx3). The top and bottom screws are marked with a sharp angle bracket "<".

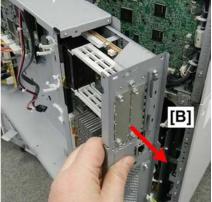




d131r127

5. Disconnect the controller board on the left (-x, x).





d131r128

- 6. Disconnect the board at the top [A] (1).
- 7. Pull the controller board [B] out of the box.

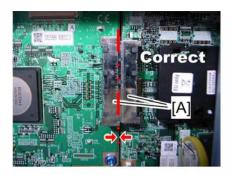


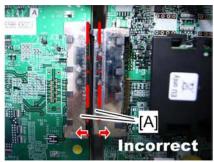
d131r129

8. Lay the board on a flat surface.

Reinstallation of CNT Board

- 1. Remove the NVRAM from the old CNT board, and then install it on the new CNT board.
- 2. Install the new CNT board.





d062r707

3. Make sure the relay connectors [A] are connected securely.



- Each model in this series has a different CNT board.
- If you install the wrong CNT board, the operation panel displays SC955-03.
- In this case, replace the CNT with the correct board.

NVRAM

This machine has an electronic counting device that uses software to monitor the number of copies. In addition to the electronic counter of the NVRAM on the CNT board, the machine is also equipped with a mechanical counter.

NVRAM on the BCU

- 1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
- 2. Output the SMC data (SP5-990-001) if possible.
- 3. Turn the main switch off.
- 4. Install an SD card into SD card slot 2. Then turn the main power on.
- 5. Copy the NVRAM data to an SD card (SP5-824-001) if possible.
- 6. Turn off the main switch. Then unplug the power cord.
- 7. Replace the NVRAM on the BCU and reassemble the machine.
- 8. Plug in the power cord. Then turn the main switch on.
- 9. SC195 occurs.
- 10. Copy the data from the SD card to the NVRAM (SP5-825-001) if you have successfully copied them to the SD card.
- 11. Turn the main switch off. Then remove the SD card from SD card slot 2.
- 12. Turn the main switch on.

- 13. Specify the SP and UP mode settings.
- 14. Do the process control self-check.

NVRAM on the Controller

- 1. Make sure that you have the SMC report (factory settings). This report comes with the machine.
- 2. Output the SMC data (SP5-990-001) if possible.
- 3. Turn the main switch off. Then unplug the power cord.
- 4. Install a New NVRAM on the controller. Then reassemble the machine.
- 5. Turn the main switch on.
- 6. SC995-02 occurs and the machine rewrites SP5-811-005 automatically.
- 7. When the operation panel displays Copy Screen, turn the machine off and on.
- 8. Do the process control self-check.

IPU

- 1. Controller box cover **▶** p.303
- 2. Swing open the controller box (₱ x 3) ₱ p.303





d131r130

3. Behind the IPU on the back of the controller box, remove the IPU connector cover (\mathscr{F} x 2).



d131r131

4. Disconnect all the harnesses on the back of the IPU.



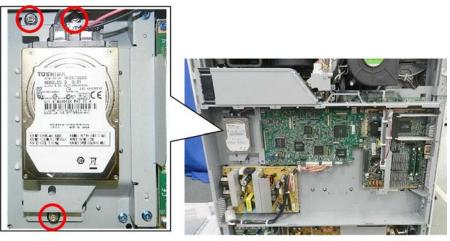


d062r705

- 5. At the front: IPU(x 4, x 3)
- 6. After removing screws and harnesses, pull the IPU to the left and remove it.

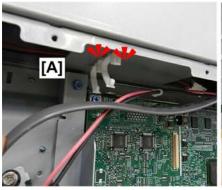
HDD

1. Controller box cover p.303



d131r132

- 2. Disconnect the HDD bracket from the machine frame (\mathcal{F} x3).
 - The screws are held in place by rubber grommets.
 - The screws will not come out; just keeping turning them counter-clockwise until you feel them come off.

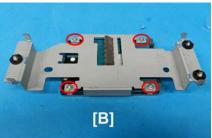




d131r133

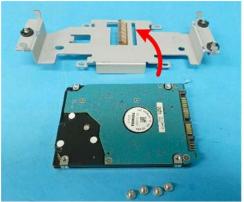
- 3. Free the harnesses at [A] (🚉 x2).
- 4. Disconnect the HDD [B] (**x2).





d131r134

- 5. Lay the HDD bracket [A] on a flat surface.
- 6. Turn the bracket over [B], and then remove the screws (FX4).





d131r135

7. Separate the bracket and HDD.

Reinstallation

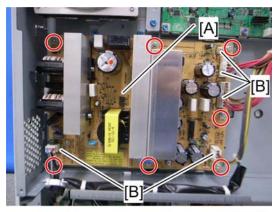


- Explain to the customer that the following information stored on the HDD is lost when the HDD is replaced: (1) Document server documents, (2) Custom-made stamps, (3) Document server address book.
- The address book and document server documents (if needed) must be input again.
- If the customer is using the Data Overwrite Security feature, the DOS function must be set up again. For more, see "Installation".
- The browser unit must also be installed again.
- 1. After reinstalling a HDD, execute SP5832-011 (HDD Format All) to format the hard disk.
- 2. Download the browser. For more details, see the installation instructions for the controller options (in this manual).

CTL-PSU

1. Controller box cover **▶** p.303



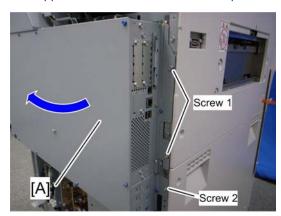


d062r720

2. CTL-PSU [A] (₹ x 7, 1 x 5 [B])

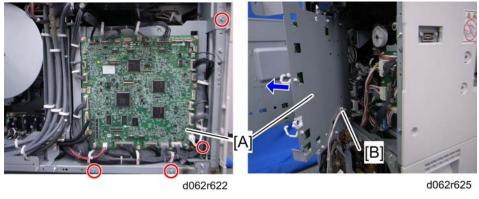
BCU

1. Rear upper cover and rear lower cover p.186

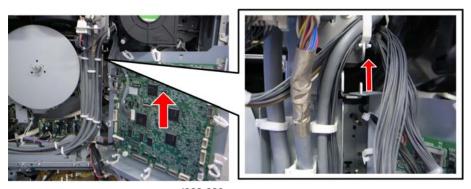


d062r603a

2. Open the controller box [A] (x 3)



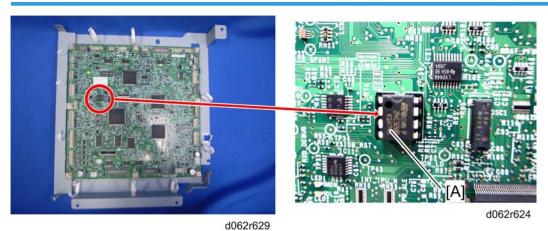
- 3. Open the BCU bracket [A] (*x 4, all * s, all * s)
- 4. Do not forget to release the clamp [B].



d062r626

5. Lift up the BCU bracket and remove it.

Replace the BCU.



1. Remove the NVRAM from the old BCU, and then install it on the new BCU.

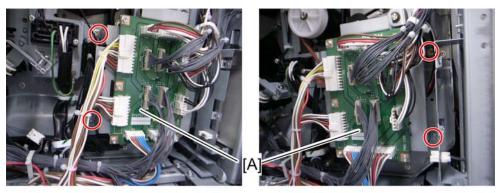
- 2. Install the BCU.
- 3. Turn on the machine, so that SC995-01 occurs.
- 4. Enter the SP mode (SP5-811-004), and then enter the machine code.
- 5. Exit the SP mode, and then reboot the machine.



 When installing a new NVRAM, SC195 occurs. In this case, do SP5-811-001 and input the machine code.

CNB

- 1. Open the BCU bracket. I BCU
 - It is not necessary to release all the clamps and harnesses.

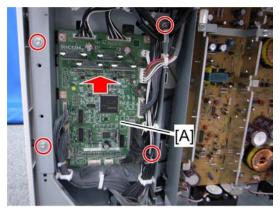


d062r633 d062r632

2. CNB [A] (x 4, all harnesses)

PFB

1. Open the controller box **▶** p.303

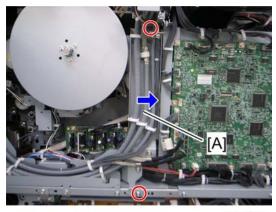


d062r650

2. PFB bracket [A] (x 4, all s)

DRB

1. Open the controller box 🖝 p.303



d062r641

2. Move the stay [A] slightly to the right ($\ensuremath{\ensuremath{\mathscr{F}}} \times 2)$



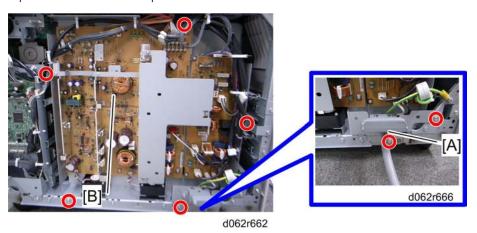


d062r640

3. DRB bracket [A] (x 3, all s)

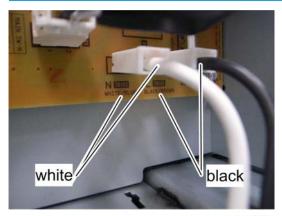
PSU

1. Open the controller box 🖝 p.303



- 2. Power cord bracket [A] (x 2)
- 3. PSU assembly [B] (*\bar{\bar{\rho}} \times 5)

Reinstallation of PSU



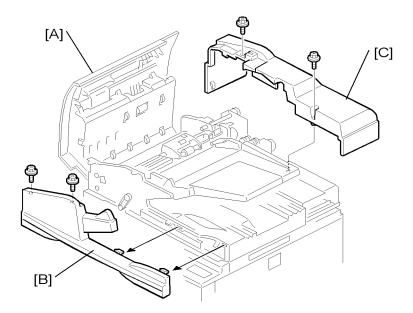
d062r670

Make sure the white cable and black cables are connected correctly.

4

ADF

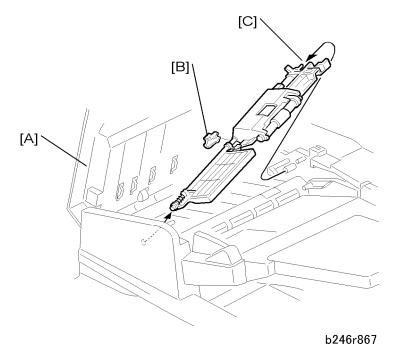
ADF Covers



b246r866

- 1. Feed cover [A] (\mathscr{F} x 2, all $^{\square J}$ s, ground wire x 1).
- 2. Front cover [B] (x 2)
 - Press down on the tabs to remove.
- 3. Rear cover [C] (x 2)
 - Press down on the tabs to remove.

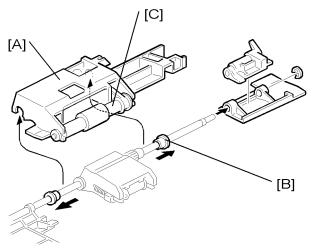
Feed Unit



- 1. Open the feed cover [A].
- 2. Remove the snap fitting [B].
- 3. Push the feed unit slowly to the left to disengage the shaft [C] on the right, then lift it out.

1

Feed Belt and Pick-Up Roller

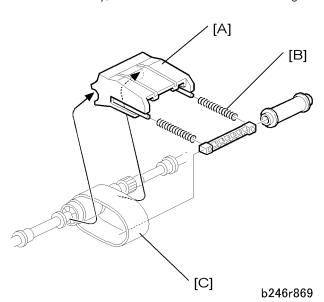


b246r868

- 1. Remove the feed unit. p.318
- 2. Remove the pick-up roller unit [A].
- 3. Remove the bushings [B].
- 4. Remove the pick-up roller [C].



• At re-assembly, make sure that the tab on the front guide plate is above the pick-up roller.

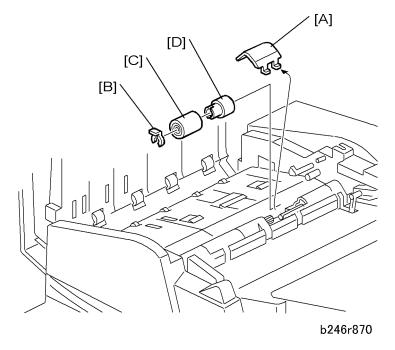


- 5. Hold the feed belt holder [A] by the left and right sides, then carefully pull it off the bushing. Do not let the springs [B] fall.
- 6. Remove the feed belt [C].



• When re-assembling, set the pick-up roller springs first, then follow this procedure in reverse.

Separation Roller



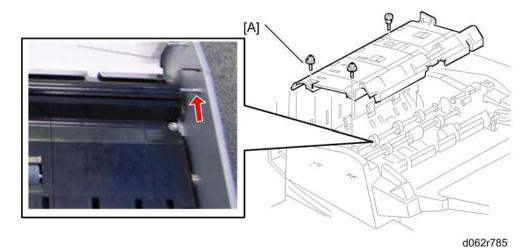
- 1. Open the feed cover.
- 2. Remove the feed unit. p.318
- 3. Separation roller cover [A]
 - Use the tip of a screwdriver to push up the cover.
- 4. Clip [B] ((() x 1)
- 5. Separation roller [C]
- 6. Torque limiter clutch [D]

Registration Sensor

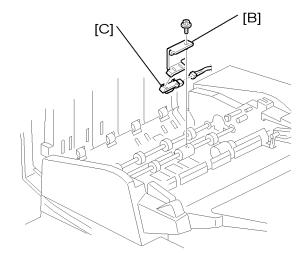
1. Open the feed cover.

4

2. Remove the feed unit p.318



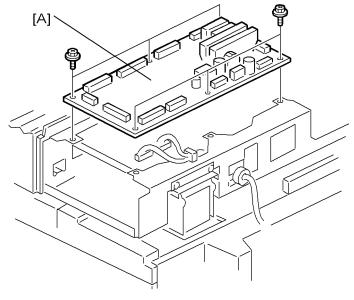
- 3. Remove the screw indicated above by a red arrow.
- 4. Guide plate [A] (🗗 x 3)



b246r871

- 5. Registration sensor bracket [B] (\mathscr{F} x 1)
- 6. Registration sensor [C] (🚅 x 1)

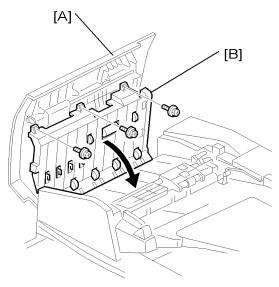
ADF Control Board



b246r873

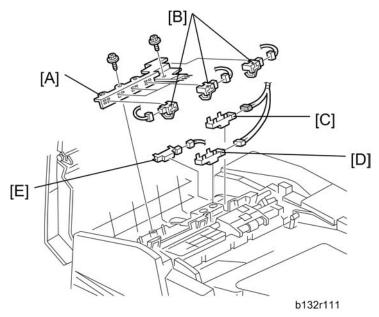
- 1. ADF rear cover **▶** p.317
- 2. ADF board [A] (** x 4, all **)

Original Width, Interval, Separation and Skew Correction Sensors



b246r874

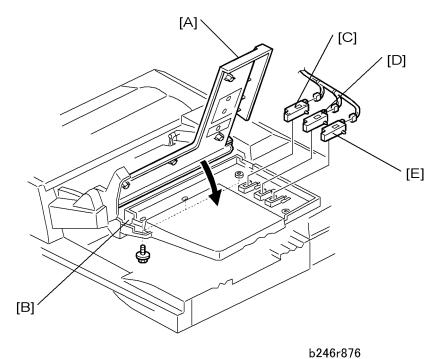
- 1. Open the feed cover [A].
- 2. Guide plate [B] (x 3)



- 3. Width sensor guide plate [A] (Fx 2)
- 4. Original width sensors [B] (x 5, 📫 x 5)

- 5. Separation sensor [C] (x 1)
- 6. Skew correction sensor [D] (🔎 x 1)
- 7. Interval sensor [E] (x 1)

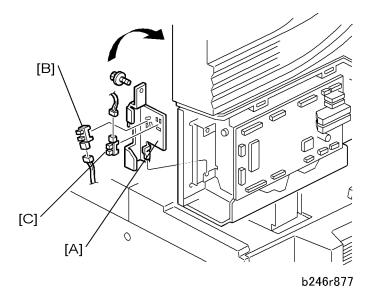
Original Length Sensors



- ---
- 1. Open the original tray [A].
- 2. Lower cover [B] (x 4)
- 3. Original length sensor 1 − B5 [C] (🗐 x 1)
- 4. Original length sensor 2 A4 [D] (🕮 x 1)
- 5. Original length sensor 3 LG [E] (🗐 x 1)

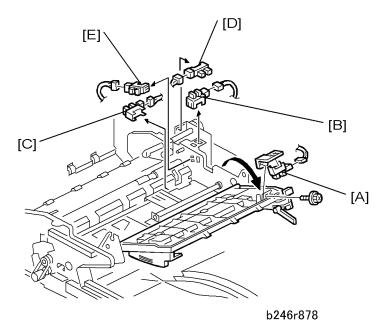
Λ

DF Position and APS Sensors

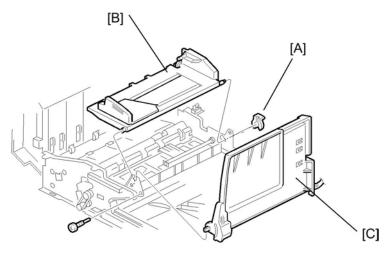


- 1. Open the ADF.
- 2. ADF rear cover **▶** p.317
- 3. Bracket [A] (x 1)
- 4. ADF position sensor [B] (x 1)
- 5. APS sensor [C] (x 1)

Other ADF Sensors

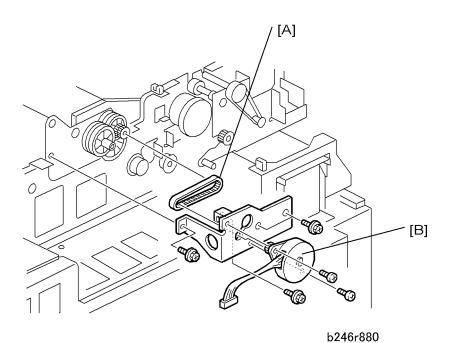


- 1. Open the feed cover.
- 2. Open the front door
- 3. Rear covers (x 4) p.186
- 4. Clips [A] (Ѿx 1)
- 5. Original tray [B] (x 1)
- 6. Bottom plate [C] (x 1)
- 7. Original set sensor [D] (x 1)
- 8. Feed cover sensor [E] (🚅 x 1)



- b246r879
- 9. Bottom plate HP sensor [A] (🔎 x 1)
- 10. Pick-up roller HP sensor [B] (🕮 x 1)
- 11. Bottom plate position sensor [C] (🗐 x 1)

Bottom Plate Lift Motor

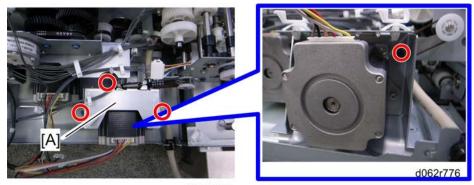


1. Open the feed cover.

- 2. Rear cover **p**.186
- 4. Bottom plate lift motor [B] (*x 2)

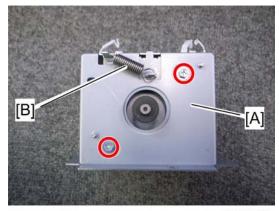
Feed Motor

1. Rear cover **▶** p.186



d062r775

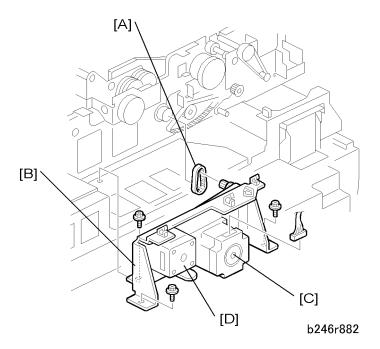
2. Feed motor bracket [A] ($\mathscr{F} \times 4$, $\mathbb{P} \times 1$, belt $\times 1$)



d062r777

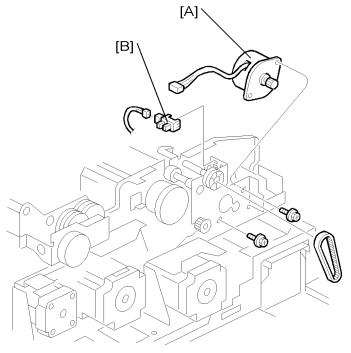
3. Feed motor (₱ x 2, № [B] x 1)

Exit Motor and Transport Motor



- 1. Open the feed cover.
- 2. ADF rear cover **▶** p.317
- 3. Bottom plate lift motor **▶** p.327
- 4. Timing belt [A]
- 5. Exit/transport motor unit [B] (x 3, v 2)
- 6. Transport motor [C] (x 2)
- 7. Exit motor [D] (x 2)

Pick-Up Roller Motor and HP Sensor



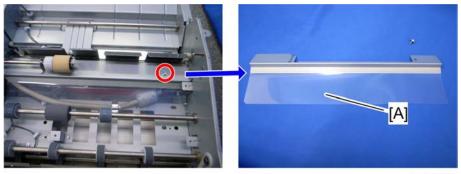
b246r883

- 1. Open the feed cover.
- 2. ADF rear cover **▶** p.317
- 3. Pick-up roller lift motor [A] (x 2, 💷 x 1)
- 4. Pick-up roller HP sensor [B] (🗐 x 1)

CIS Unit

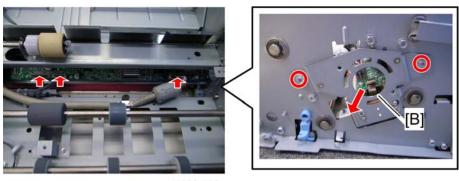
MARNING

- Turn off the main power switch and unplug the machine before performing this procedure.
- 1. Open the feed cover.
- 2. Feed unit p.318
- 3. Guide plate 🖝 p.320



d062r778

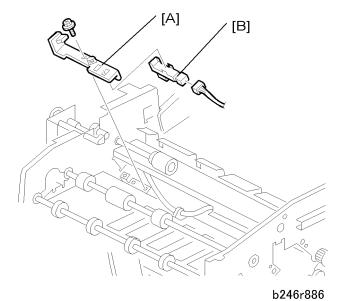
4. Guide plate mylar [A] (** x 1)



d062r780

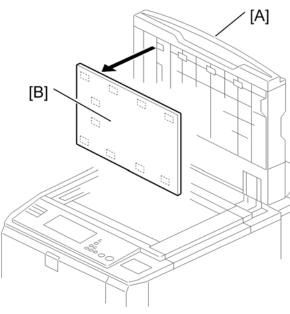
- 5. CIS unit [B] (x 2, 1 x 3)
 - Pull out the CIS unit carefully to avoid scratching the glass.

ADF Exit Sensor



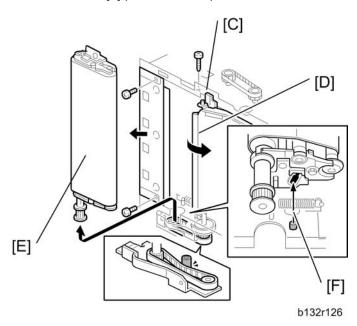
- 1. CIS Power Supply Board
- 2. Exit sensor bracket [A] (Fx 1)
- 3. Exit sensor [B] (🕮 x 1)

ADF Transport Belt Assembly



B132R102

- 1. Open the ADF.
- 2. Raise the ADF [A] to the vertical position.
- 3. Pull off the white cover [B] (Velcro fasteners)

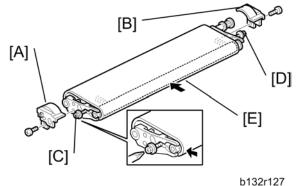


- 4. Release the stopper pin [C] of the transport guide [D].
- 5. Remove the transport belt unit [E] (Pin screw F x1, Timing belt x1)

Reinstallation

• Attach the timing belt as shown, then insert the pin screw [F] as shown.

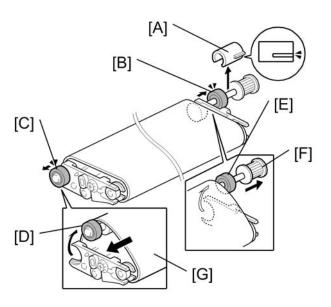
Removing the Belt



- 1. Remove the front plastic cover [A] (x1)
- 2. Remove the rear plastic cover [B] (x1)
- 3. Loosen front lock screw [C]. Do not remove.
- 4. Loosen rear lock screw [D]. Do not remove. This releases the spring-loaded tension on the belt.
- 5. Grip the roller in the center [E], then squeeze the belt to bring the rollers together.
- 6. While squeezing the belt and rollers together in the center, tighten screws [C] and [D]. This compresses the spring and releases tension on the belt.

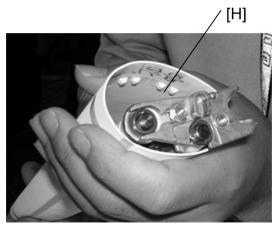
Important: To avoid stripping the threads of the screws, do not apply excessive torque to these screws!

7. Release the belt and make sure that the belt is loose and that the rollers do not move. Repeat Steps 5 and 6 if the rollers expand and tighten the belt.



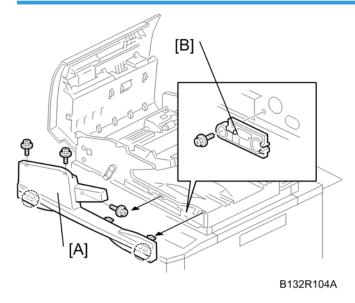
b132r139

- 8. Remove the Teflon sleeve [A].
- 9. Push the rear shaft bearing [B] out of its bracket.
- 10. Push the front shaft bearing [C] out of its bracket.
- 11. Push the front end of the shaft [D] over the top of the bracket.
- 12. Push the rear end of the shaft [E] over the top of the bracket.
- 13. Pull the shaft [F] out of the belt.
- 14. Pull the belt [G] toward the front to remove it.
- 15. Slide the new belt over the assembly.
- 16. Insert the shaft [F] into the new belt, snap the shaft into its brackets, and push in the shaft bearings.

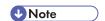


OrgB536

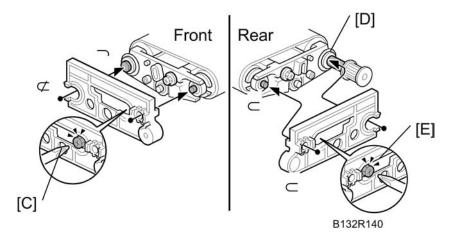
Reinstalling the Belt



- 1. Remove the ADF front cover [A]
- 2. Take out the special tool [B].



• The special tool [B] is attached to the front side plate. It is used to adjust the tension on the belt on both ends of the shaft.



3. Fit the special tool onto the front (see "FRONT" in the above diagram).

4. Slowly loosen the front lock screw [C] until you see the tip of the shaft **1** aligned with the hole **2**, then tighten the screw.

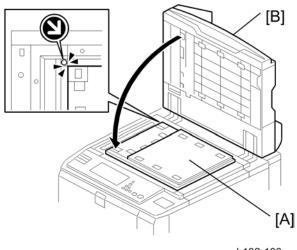


- To avoid stripping the threads of the screws, do not apply excessive torque.
- 5. Remove the special tool and fit it onto the rear (see "REAR" in the above diagram).



- If the Teflon sleeve has been reattached at [D], remove it. Do not reattach the sleeve until after
 adjusting the belt tension. (The special tool does not fit over the rear end with the Teflon sleeve
 attached.)
- 6. Slowly loosen the rear lock screw [E] until you see the tip of the shaft 3 aligned with the hole 4, then tighten the screw.
- 7. Re-install the Teflon sleeve.
- 8. Re-install the front and rear plastic cover.
- 9. Reinstall the transport belt assembly in the ADF.

Reattaching the White Cover



- b132r103
- 1. With its white side down, set the cover [A] on the exposure glass.
- 2. Make sure the upper left corner is aligned with the arrow at the corner of the exposure glass.
- 3. Close the ADF [B] on top of the cover.

Copy Image Adjustments: Printing/Scanning

These adjustments must be performed after replacing any of the following parts:

- Scanner wires
- Lens block
- Scanner motor
- Polygon motor
- Tandem tray side fences
- Memory All Clear

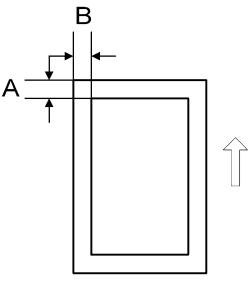
Image Adjustments: Printing

Preparation

- 1. Make sure paper is installed correctly in each paper tray before you start these adjustments.
- 2. Use the Trimming Area Pattern (SP2-902-3, No. 18 to print the test pattern for the following procedures.
- 3. After completing these printing adjustments, be sure to set SP 2-902-3 to 0 again.

Registration - Leading Edge/Side-to-Side

- Check the leading edge registration, and adjust it using SP1-001.
 Specification: 4± 2mm.
- 2. Check side-to-side registration for each paper feed station, and adjust with the following SP modes.



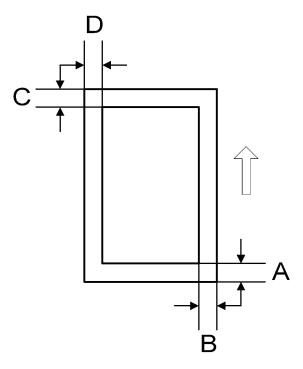
B140r887

	SP mode	Specification
Tray 1 (Tandem Tray)	SP1002-001	
Tray 2 (Universal Tray)	SP1002-002	0 ±1.5
Tray 3 (Universal Tray)	SP1002-003	
Tray 4	SP1002-004	Japan Only
LCT	SP1002-006	0±1.5
Duplex Tray	SP1002-007	0±1.5

Blank Margin

If the leading edge/side-to-side registration cannot be adjusted within specifications, adjust the leading/left side edge blank margin.

1. Check the trailing edge and right edge blank margins, and adjust them with the following SP modes.



B140R888

Letter	What It Means
А	Trailing edge blank margin
В	Right edge blank margin
С	Leading edge blank margin
D	Left edge blank margin

SP2101 Print Erase Margin

	SP mode	Specification
Leading Edge	SP2101-001	2.5±2 mm
Trailing Edge	SP2101-002	Z.J±Z mm
Left edge	SP2101-003	0.11.5
Right edge	SP2101-004	2±1.5 mm

Registration Buckle Adjustment

When the customer is using special paper, buckle adjustment may be required if paper feed problems arise.

- If the buckle is too large, this can cause wrinkling, creasing, or jams caused by sheets overtaking the sheets ahead of them in the paper path.
- If the buckle is too small, this can cause jams at the registration roller or skew during paper feed.
- 1. Enter the SP mode.
- 2. Open SP1003.
 - To prevent wrinkling, creasing, or jams, set a smaller value.
 - To prevent jams at the registration roller or to eliminate skew, set a larger value.

SP1003-001	Registration Buckle Adjustment – Tray, LCT
SP1003-002	Registration Buckle Adjustment – Duplex Tray
SP1003-003	Registration Buckle Adjustment – Bypass Tray
Adjustment range	-9 mm → +9 mm (small → large buckle)
Initial value	0 mm (Buckle = 10 mm)

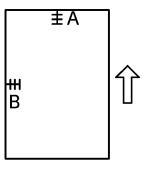
Image Adjustments: Scanning

Before doing the following scanner adjustments, perform or check the printing registration/side-to-side adjustment and the blank margin adjustment.



• Use an S-5-S test chart to perform the following adjustments.

Registration: Platen Mode



b140r889

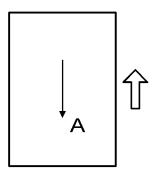
- 1. Place the test chart on the exposure glass and make a copy from one of the feed stations.
- 2. Check the leading edge and side-to-side registration, and adjust them with the following SP modes if necessary.

SP No.	Name	Initial	Comment
SP4010	Scanner Leading Edge Registration	0	A positive value shifts the image away from the leading edge, a negative value shifts it toward the leading edge.
SP4011	Scanner Side-to-Side Registration	0	A positive value shifts the image toward the right edge, a negative value shifts it toward the left edge.

Magnification

Use an S-5-S test chart to perform the following adjustment.

Main Scan Magnification



b140r890

1. Place the test chart on the exposure glass and make a copy from one of the feed stations.

 Check magnification, and then SP2909-001 (Main Scan Magnification - Copy) to adjust magnification if required. Specification: ±2%.

Sub Scan Magnification

- 1. Place the test chart on the exposure glass and make a copy from one of the feed stations.
- 2. Check the magnification ratio. Use SP4008 (Scanner Sub Scan Magnification) to adjust if necessary. Specification: ±0.9%.

ADF Scanning Adjustments

RTB 36 Corrected

Vertical Black Lines

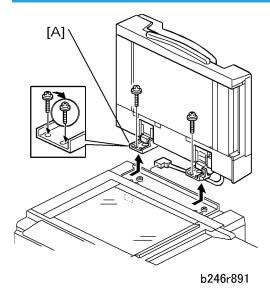
Vertical black lines in scanned images may be caused by dust or scratches on the ADF exposure glass. If the problem cannot be solved by cleaning the ADF exposure glass, execute SP4018 (Scanner Optical Axis Adjustment).

- 1. Adjust the scanner stopping position with SP4018-003 (just input a new value).
- 2. Store this value in the machine with SP4018-004.
- 3. Adjust the ADF registration for the front side scan with SP6006-003.
- 4. Make a test copy to check that the problem has been solved.

DIP Switch Settings (ADF Main Board)

	SW	101		Operation Mode
1	2	3	4	
OFF	OFF	OFF	OFF	I/F Operation
ON	OFF	OFF	OFF	Free run (Simplex: each sheet stopped for registration)
OFF	ON	OFF	OFF	Free run (Simplex: continuous scanning)
ON	ON	OFF	OFF	Free run (Duplex: no registration) SP6009 (ADF Free Run)
ON	OFF	ON	OFF	Not used.
OFF	ON	ON	OFF	
ON	ON	ON	OFF	
OFF	OFF	OFF	ON	
ON	OFF	OFF	ON	Free run (Entrance mode * 1, simplex, no registration)

ADF Skew Correction



If the skew with A4 SEF paper is more than 0.5/200 mm in the main scan direction, you can adjust the position of the ADF hinge [A] or adjust the appropriate SP codes below.

6006*	ADF Registration Adjustment
001	ADF Horizontal Registration (Front) Adjusts the side-to-side registration for the front in ADF mode. [-3 to +3/0.1 mm]
002	ADF Horizontal Registration (Back) Adjusts the side-to-side registration for the back in ADF mode. [-3 to +3/0.1 mm]

Δ

^{* 1:} The entrance mode disregards paper size. Skew correction is performed at the scanning roller.

	ADEV : 10 : : : (F :)
	ADF Vertical Registration (Front)
000	Adjusts the vertical registration for the front in ADF mode.
003	[-30 to +24/1 mm]
	-30 = -5.1 mm
	+24 = +4.1 mm
	ADF Vertical Registration (Back)
	Adjusts the vertical registration for the back in ADF mode.
004	[-30 to +30/1 mm]
	-30 = -5.1 mm
	+30 = +5.1 mm
	ADF Buckle Adjustment 1
	Adjusts the roller timing at the skew correction sensor/entrance roller. A larger setting
005	causes more buckling.
	[-12.0 to +12/1 mm]
	-12 = -3.0 mm
	+12 = +3.0 mm
	ADF Buckle Adjustment 2
	Adjusts the roller timing at the interval sensor/scanning roller. A larger setting causes more buckling.
006	[-8.0 to +8/1 mm]
	-8 = -2 mm
	+8 = +2 mm
	ADF Trailing Edge Erase Margin (Front)
	These settings adjust the erase margin for the trailing edges for the front.
007	[-20 to +20/1 mm]
	-20 = -10 mm
	+20 = +10 mm
	ADF Trailing Edge Erase Margin (Back)
	These settings adjust the erase margin for the trailing edges for the back.
008	[-20 to +20/1 mm]
	-20 = -10 mm
	+20 = +10 mm

● Note

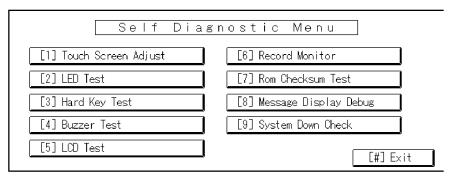
• Normally, the interval sensor detects the leading edge of small originals (B6, A5, HLT), or originals for duplex copying, and delays the start of the scanning roller for the prescribed number of pulses to buckle the paper and correct skew. This feature can be switched on for all paper sizes with SP6020 (ADF Contact Mode In/Out). However, switching this feature on for all sizes reduces scanning speed slightly.

Touch Screen Calibration

After clearing the memory, or if the touch screen detection function is not working correctly, follow this procedure to calibrate the touch screen.

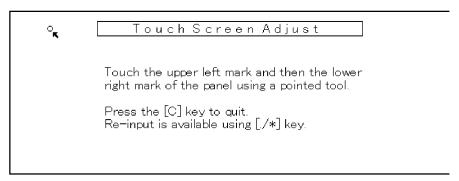


- Do not attempt to use items [2] to [9] on the Self-Diagnostic Menu. These items are for design use only. To avoid causing an error, do not touch the Reset key while doing this procedure.
- 1. Press [Reset], press [1] [9] [9] [3], and then press [Clear/Stop] 5 times to open the Self-Diagnostics menu.



b140r892

2. On the touch screen press "Touch Screen Adjust" (or press [1]).



b140r893

- 3. Use a pointed (not sharp!) tool to press the upper left mark .
- 4. Press the lower right mark oafter it appears.
- 5. Touch a few spots on the touch screen to confirm that the marker (+) appears exactly where the screen is touched.
 - If the + mark does not appear where the screen is touched, press Cancel and repeat from Step 2.
- 6. When you are finished, press [#] OK on the screen (or press [#]).
- 7. Touch [#] Exit on the screen to close the Self-Diagnostic menu and save the calibration settings.

5. System Maintenance

Resets

Memory All Clear: SP5801

Before shipping, the SP mode data settings are printed in an SMC Report and attached to the exposure glass of the machine for your reference. Store this report in a safe place (next to the toner collection bottle, for example). It is a list of all the SP initial settings. Refer to this list if you need to initialize one or more SPs. The initial SP settings are also written in the SP mode tables at the end of this section.

As a rule, you should always print an SMC Report before initializing or adjusting the SP settings. The SMC Report provides a concise list of all the SP commands and their current settings. The report can be used for reference if the service manual is not available.

Executing Memory All Clear resets all the settings stored in the NVRAM to their default settings except the following:

SP5811-001	Machine serial number
SP5907	Plug & Play Brand Name and Production Name Setting

- 1. Execute SP5990 to print out all SMC Data Lists.
- 2. Open SP mode 5801.
- 3. Press the number for the item that you want to initialize. The number you select determines which application is initialized. For example, press 1 if you want to initialize all modules.

	Memory Clear		
5801	Resets NVRAM data to the default settings. Before executing any of these SP codes, print an SMC Report.		
001	All Clear	Initializes items 2 to 15 below.	
002	Engine Clear	Initializes all registration settings for the engine and copy process settings.	
003	SCS	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.	
004	IMH Memory Clear	Initializes the image file system. (IMH: Image Memory Handler)	

MCS	Initializes the automatic delete time setting for stored documents. (MCS: Memory Control Service)
Copier application	Initializes all copier application settings.
Fax application	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.
Printer application	Initializes the printer defaults, programs registered, the printer SP bit switches, and the printer CSS counter.
Scanner application	Initializes the defaults for the scanner and all the scanner SP modes.
Web Service/ Network application	Deletes the Netfile (NFA) management files and thumbnails, and initializes the Job login ID. Netfiles: Jobs to be printed from the document server using a PC and the DeskTopBinder software
NCS	Initializes the system defaults and interface settings (IP addresses also), the SmartNetMonitor for Admin settings, WebStatusMonitor settings, and the TELNET settings. (NCS: Network Control Service)
R-FAX	Initializes the job login ID, SmartNetMonitor for Admin, job history, and local storage file numbers.
Clear DCS Setting	Initializes the DCS (Delivery Control Service) settings.
Clear UCS Setting	Initializes the UCS (User Information Control Service) settings.
MIRS Setting	Initializes the MIRS (Machine Information Report Service) settings.
CCS	Initializes the CCS (Certification and Charge-control Service) settings.
SRM Clear	Initializes the SRM (System Resource Manager) settings.
LCS Clear	Initializes the LCS (Log Count Service) settings.
	Copier application Fax application Printer application Scanner application Web Service/ Network application NCS R-FAX Clear DCS Setting Clear UCS Setting MIRS Setting CCS SRM Clear

- 4. Press Execute, then follow the prompts on the display to complete the procedure.
- 5. Make sure that you perform the following settings:
 - Execute SP2115 Laser Beam Pitch Adjustment
 - Do the printer and scanner registration and magnification adjustments (See "Replacement and Adjustment Copy Image Adjustments: Printing/Scanning").

- Do the touch screen calibration (See "Replacement and Adjustment Touch Screen Calibration").
- Referring to the SMC data lists, re-enter any values, which had been changed from their factory settings.
- Execute SP3001-002 ID Sensor Initial Setting
- Make sure that SP 5112 is set to 'enabled', or the user will not be able to use non-standard paper sizes.
- Set SP 1902 001 (amount of fusing unit web used so far) to the most recent setting (see the SMC list).
- 6. Check the copy quality and the paper path, and do any necessary adjustments.

Software and Setting Reset

Software Reset

The software can be rebooted when the machine hangs up. Do one of these two steps.

Turn the main power switch off and on.

-or-

Push and hold down [./*][#] together for over 10 seconds. When the machine beeps once, release both buttons. After "Now loading. Please wait" is displayed for a few seconds, the copy window will open. The machine is ready for operation.

Resetting the System

The system settings in the UP mode can be reset to their defaults with this procedure.

- 1. Make sure that the machine is in the copier standby mode.
- 2. Press the User Tools key.
- 3. Hold down [#] and touch the "System Setting" key.
- 4. A confirmation message will be displayed, then press "Yes".

Resetting Copy/Document Server Features Only

The copy/document server settings in the UP mode can be reset to their defaults with this procedure.

- 1. Make sure that the machine is in the copier standby mode.
- 2. Push the User Tools key.
- 3. Hold down [#] and touch the "Copy/Document Server Features" key.

4. A message will be displayed, then press "Yes".

Resetting Scanner Features Only

The scanner settings in the UP mode can be reset to their defaults with this procedure

- 1. Make sure that the machine is in the copier standby mode.
- 2. Push the User Tools key.
- 3. Hold down [#] and touch "Scanner Features" key.
- 4. A message will be displayed, then press "Yes"

Service Program Mode

General Notes

The service program (SP) mode is used to check electrical data, change modes, and adjust values.

ACAUTION

Never turn off the main power switch when the power LED is lit or flashing. To avoid damaging the
hard disk or memory, press the operation power switch to switch the power off, wait for the power
LED to go off, and then switch the main power switch off.

Service Mode Lock/Unlock

At locations where the machine contains sensitive data, the customer engineer cannot operate the machine until the Administrator turns the service mode lock off. This function makes sure that work on the machine is always done with the permission of the Administrator.

- 1. If you cannot go into the SP mode, ask the Administrator to log in with the User Tool and then set "Service Mode Lock" to OFF. After he or she logs in:
 - User Tools > System Settings > Administrator Tools > Service Mode Lock > OFF
 - This unlocks the machine and lets you get access to all the SP codes.
 - The CE can do servicing on the machine and turn the machine off and on. It is not necessary to
 ask the Administrator to log in again each time the machine is turned on.
- 2. If you must use the printer bit switches, go into the SP mode and set SP 5169 to "1".
- 3. After machine servicing is completed:
 - Change SP 5169 from "1" to "0".
 - Turn the machine off and on. Tell the administrator that you completed servicing the machine.
 - The Administrator will then set the "Service Mode Lock" to ON.

To Enter and Exit the Service Program Mode

Ask your supervisor how to enter and/or exit the service program mode.

To Switch to the Copy Window for Test Printing

 In the SP mode display, press Copy Window to switch to the copy operation screen when you need to select paper for a test print.

- Use the copy window (copier mode) to select the appropriate settings (paper size, etc.) for the test print.
- 3. Press [Start] to execute the test print.
- 4. Press SP Mode (highlighted) to return to the SP mode screen and repeat from step 1.

Using the SP Mode

SP command numbers can be entered directly (if you know the entire number) or the command can be selected from the menus.

Direct Entry

SP5831 (Initial Setting Clear) an executable SP that initializes the User Tools settings, can be executed immediately by just entering the numbers.

- 1. Press [5] [8] [3] [1]
- 2. Press [#].
- 3. Press "Execute" on the touch panel.

If you know all seven digits of the SP code, enter the seven numbers and press Execute. However, if you do not know all the numbers, enter only the first four numbers of the seven-digit SP and press [#]. The display goes immediately to the first SP of that group. Then you can use the buttons to browse to the desired selection.

Button Selection Entry

- 1. Refer to the SP Mode Tables at the end of this section to find the SP that you want to adjust.
- 2. Press the Group number on the left side SP Mode window that contains the SP that you want to adjust.
- 3. Use the scrolling buttons in the center of the SP mode window to display the SP number that you want to open, then press that number to expand the list.
- 4. Use the center touch-panel buttons to scroll to the number and title of the item that you want to set, and press [#]. The small entry box on the right is activated and displays the default or the current setting below.
- 5. To enter a setting
 - Press [./*] to enter a minus sign. Then use the keypad to enter the appropriate number. The
 number you enter will write over the previous setting.
 - Press [#] to enter the setting. (If you enter a number that is out of range, the key press is ignored.)
 - When you are prompted to complete the selection, press Yes.

- 6. If you need to perform a test print, press Copy Window to open the copy window and select the settings for the test print. Press [Start] twice, then press SP Mode (highlighted) in the copy window to return to the SP mode display.
- 7. When you are finished, press Exit twice to return to the copy window.

SP Mode Print (SMC Print)

You can print an SMC Report to check the machine's condition. The SMC Report gives a list of the SP commands and their settings.

	SP Print Mode (SMC Print)			
5990	In the SP mode, push "Copy Window" to move to the copy screen, select the paper size, then push Start. Select A4/LT (Sideways) or larger to make sure that all the information is printed. Push "SP Window" to go back to the SP mode, select the necessary SP Print Mode, and push Execute.			
001	All (Data List)			
002	SP (Mode Data List)			
003	User Program Data			
004	Logging Data			
005	Self-Diagnostic Report			
006	Non-Default (Prints only SPs that are set to values other than defaults.)			
007	NIB Summary (Configuration, Systemlog, Nvramlog)			
008	Capture Log			
021	Copier User Program (Copy Management Report)			
022	Scanner SP			
023	Scanner User Program (Scanner Management Report)			

Test Pattern Printing

Printing Test Pattern: SP2902-003

Some of these test patterns are used for copy image adjustments but most are used primarily for design testing. These test patterns do not use the IPU.



- Do not operate the machine until the test pattern is printed out completely. Otherwise, an SC may
 occur.
- 1. Enter the SP mode and select SP2902-003.
- 2. Enter the number for the test pattern that you want to print and press [#]. (See the table below.)
- 3. When you are prompted to confirm your selection, press Yes to select the test pattern for printing.
- 4. Press Copy Window to open the copy window, then select the settings for the test print (paper size, etc.)
- 5. Press [Start] twice (ignore the "Place Original" messages) to start the test print.
- 6. After checking the test pattern, press SP Mode (highlighted) to return to the SP mode display.
- 7. Exit the SP mode.

Test Pattern Table

These patterns can be selected for SP2902-003

No.	Test Pattern
0	None
1	Alternating Dot Pattern (1-dot)
2	Alternating Dot Pattern (2-dot)
3	Alternating Dot Pattern (4-dot)
4	Alternating Dot Pattern (1024-dot)
5	Grid Pattern (1-dot): Och
6	Grid Pattern (1-dot): 1ch
7	Grid Pattern (1-dot): 2ch
8	Grid Pattern (1-dot): 3ch

No.	Test Pattern
9	Grid Pattern (1-dot pair)
10	Checkered Flag Pattern
11	Horizontal Line (2-dot)
12	Vertical Line (2-dot)
13	Horizontal Line (1-dot)
14	Vertical Line (1-dot)
15	Cross Stitch (Horizontal)
16	Cross Stitch (Vertical)
17	Argyle Pattern
18	Trimming Area
19	Full Dot Pattern
20	Black Band (Vertical)
21	Black Band (Horizontal)
22	Stair
23	Blank Image
24	Grid Pattern (1-dot): Och (with external data)
25	Trimming Area (with external data)
26	Argyle Pattern (with external data)
27	Outside Data

IPU Front/Back Test Patterns: SP2902-001,002

- Front side pattern (SP2902-001). Generated by the IPU in place of data scanned from the front side of an original (CCD > SBU). Generated in the scanner image correction circuit.
- Back side pattern. (SP2902-002. Generated by the IPU in place of data scanner from the back side of an original (CIS > SBU). Generated in the scanner image correction circuit.

The IPU test patterns are primarily used for design purposes. However, they can be used as follows:

- To confirm that the IPU is processing images correctly.
- To fine tune the image processing parameters
- To help trace the causes of poor images. For example, if the IPU test patterns are normal when the machine is producing poor quality images, then the problem must be after the IPU.
- 1. Enter the SP mode, select SP2902.
- 2. Select 001 to print a test pattern for the front side, or select 002 to print a test pattern for the back side.
- 3. Scroll then select the number of the test pattern that you want to print (see the table below).
- 4. Press [#].
- 5. Press Copy Window to open the copy window, then select the settings for the test print (paper size, etc.)
- 6. Press [Start] to start the test print.
- 7. Press SP Mode (highlighted) to return to the SP mode display.



 Patterns 6, 8, 9, and 11 are the best choices for testing and confirming the operation of the IPLI

Test Pattern Table

These patterns can be selected for both SP2902-001 and 002.

No.	Test Pattern
0	None
1	Vertical Line (1-dot)
2	Vertical Line (2-dot)
3	Horizontal Line (1-dot)
4	Horizontal Line (2-dot)
5	Independent Dot (1-dot)
6	Grid Pattern (1-dot)
7	Vertical Stripes
8	Grayscale Horizontal (16-level)
9	Grayscale Vertical) 16-level)

No.	Test Pattern
10	Grayscale Vertical-Horizontal (16-level)
11	Cross Pattern
12	Argyle Pattern
13	Density Patch (256-level)
14	Density Patch (64-level)
15	Trimming Area
16	Bandwidth (Vertical)
17	Bandwidth (Horizontal)
18	Auto Create Vertical 1-dot Line (Main Scan)
19	Auto Create Horizontal 1-dot Line (Sub Scan)
20	Auto Create Vertical 2-dot Line (Main Scan)
21	Auto Create Horizontal 2-dot Line (Sub Scan)
22	Auto Create 1-dot Independent Dots
23	Auto Create Grid 1-dot Line
24	Auto Create Vertical Stripes
25	Auto Create Horizontal Stripes
26	Auto Create Grayscale Horizontal (20 mm)
27	Auto Create Grayscale Horizontal (40 mm)
28	Auto Create Grayscale Vertical (20 mm)
29	Auto Create Grayscale Vertical (40 mm)
30	Auto Create Argyle

IPU Printing Test Pattern: SP2902-004

This test pattern is generated in the application input processing circuit in the IPU. The operation path is as follows:

This test pattern is primarily used for design purposes, but it can also be used to trace the source of problems beyond the IPU (in the application input) which are causing poor print quality.

- 1. Enter the SP mode and select SP2902-004.
- 2. Enter the number for the test pattern that you want to print and press [#]. (See the table below.)

No.	Pattern
0	Off
1	Vertical Grayscale 20
2	Horizontal Grayscale 40
3	Horizontal Grayscale 20
4	Horizontal Grayscale 25
5	Caterpillar

- 3. When you are prompted to confirm your selection, press Yes to select the test pattern for printing.
- 4. Press Copy Window to open the copy window, then select the settings for the test print (paper size, etc.)
- 5. Press [Start] twice (ignore the "Place Original" messages) to start the test print.
- 6. Press SP Mode (highlighted) to return to the SP mode display.
- 7. Switch the machine off and on.

5

Updating the Firmware

Software Update

Software Update Procedure

SD cards are used to update the software and to back up important data. Here is a list of the firmware modules that can be updated or restored from an SD card:

- GW controller software
- BCU software
- LCDC (operation panel) software
- Network Sys (network) software
- Web Sys (Web Image Monitor)
- Document Server software
- NFA (Net File) software
- Printer application software
- Scanner application software
- DESS (encryption module) software

Mportant 🕽

- Never connect or remove an IC card or SD card with the machine power turned on.
- Never turn the power off while the machine is downloading data from an IC card or SD card.
- The IC cards and SD card are precision items. Use them carefully.
- Never store IC cards or SD cards in a location where they are exposed to high temperature, high humidity, or direct sunlight.
- Never bend an IC card or SD card, scratch it, or expose it to strong vibration.
- Before uploading data to an SD card, always confirm that its write-protect switch is off.

Doing the Software Update Procedure

An SD card with the software downloaded to it is necessary for this procedure.

- 1. Turn the main switch off.
- 2. Remove the SD card slot cover (x 1).
- 3. Hold the SD card (the surface with printing must be away from the front of the machine), and install the SD card in slot 2.

5

- 4. Turn the main power switch on.
- 5. Stop until the version update screen is displayed. If the SD card contains more than one software application, the screen will be almost the same as the one below. The screen below shows that the SC card contains two applications: "Engine" and "Printer".



b246s903

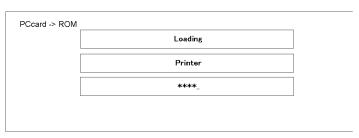
6. To select the item for upgrade, touch the selection on the touch panel, or push the corresponding key on the 10-key pad (1 to 5) of the operation panel. The number in parentheses tells you which key to push. When you make a selection, the [Verify(./*)] and [Update(#)] buttons come on the screen.



b246s904

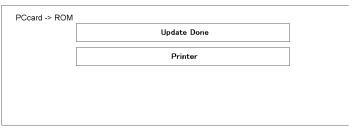
- If you push [Exit] (or the [0] key), you go back to the usual operation screen.
- Push the [Start] key on the operation panel to select and download all the options shown on the screen.
- Push the [Clear] key on the operation panel if you want to cancel your selections and make new ones.
- "ROM": This is the number and other version information of the ROM firmware installed in the machine at this time.
- "NEW": This is the number and other version information of the firmware on the SD card.
- 7. With the selected items shown in reverse color, push the [Update] button or the [#] key on the operation panel to start the update.

After you push [Update]:



b246s905

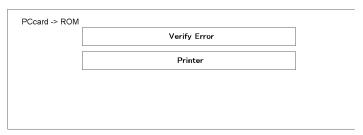
- The middle bar shows the name of the module that the machine updates at this time. (The example above shows that the machine updates the "Printer" module at this time.)
- The bottom bar is a progress bar. The "_" marks in the progress bar are replaced by "*" marks. This progress bar cannot be displayed during the firmware update for the operation panel. But, the LED of the [Start] key on the operation panel changes from red to green to show that the update of the operation panel firmware continues.
- When the update is completed, you will see this screen.



b246s906

After the firmware update, you will see "Update Done" in the first bar. The name of the module in the bottom bar is the name of the last module that was updated (only the name of the last module is shown, if several modules were been updated).

- 8. Turn the power off and on. Then, select the items that you updated, and then push the [Verify] button. This is to check that the modules were updated correctly.
- 9. If you see "Verify Error" in the first bar on the screen, then you must do the procedure again for the module shown in the bottom bar.

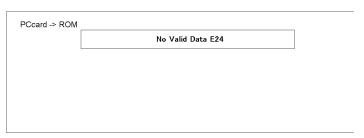


b246s907



- The "Verify" procedure is not necessary but it is strongly recommended.
- 10. After the firmware is correctly updated, turn the main power switch off.
- 11. Push the SD card in a small distance to release it, then pull it out of the slot.
- 12. Turn the main power switch on, and check that the machine operates correctly.

Errors During Firmware Update



b246s908

If an error occurs during a download, an error message will appear. The error code consists of the letter "E" and a number ("E20", for example).

Error Message Table

No.	meaning	Solution
20	Cannot map logical address	Make sure the SD card is installed correctly, or use a different SD card.
21	Cannot access memory	HDD connection not correct, or replace hard disk.
22	Cannot decompress compressed data	The ROM data on the SD card is not correct, or data is damaged.
23	Error occurred when ROM update program started	Controller program defective. If the second attempt fails, replace the controller board.
24	SD card access error Make sure the SD card is installed correctly, or u different SD card.	
30	No HDD available for stamp data download	HDD connection not correct or replace hard disks.
31	Data incorrect for continuous download	Install the SD card with the remaining data necessary for the download, then re-start the procedure.

32	Data incorrect after download interrupted	Do the recovery procedure for the module, then repeat the installation procedure.
33	Incorrect SD card version	The ROM data on the SD card is not correct, or data is damaged.
34	Module mismatch - Correct module is not on the SD card	The data on the SD is not correct. Get the correct data (Japan, Overseas, OEM, etc.) then install again.
35	Module mismatch – Module on SD card is not for this machine	SD update data is not correct. The data on the SD card is for a different machine. Get the correct data then install again.
36	Cannot write module – Cause other than E34, E35	SD update data is not correct. The data on the SD card is for a different machine. Get the correct data then install again.
40	Engine module download failed	Replace the data for the module on the SD card and try again, or replace the BCU board.
42	Operation panel module download failed	Replace the data for the module on the SD card and try again, or replace the LCDC.
43	Stamp data module download failed	Replace the data for the module on the SD card and try again, or replace the hard disk.
44	Controller module download failed	Replace the data for the module on the SD card and tray again, or replace the controller board.
50	Electronic confirmation check failed	SD update data is not correct. The data on the SD card is for a different machine. Get the correct data then install again.

Updating the LCDC for the Operation Panel

- 1. Use this procedure to update the LCDC (LCD Control Board).
- 2. Turn the copier main switch off.
- 3. Put the SD card into slot 2.
- 4. Turn the copier main switch on.
- Stop until the card utility screen is displayed.
 After approximately 10 seconds, the initial screen opens in English.
- 6. Touch [Opepanel.DOM].
- 7. Touch [UpDate(#)] to start the update.

While the data downloads, the operation panel goes off.

The LED on the [Start] key flashes red at 1/2 second intervals for approximately 6 minutes.

When the update is completed, the [Start] key starts to flash at 1-second intervals.

8. Turn the copier main power switch off, remove the SD card, then turn the copier on again.

Downloading Stamp Data

After you replace or format the HDD, download the stamp data from the controller firmware to the hard disk.

- 1. Go into the SP mode.
- 2. Select SP5853 then press "Execute".
- 3. Obey the instructions on the screen to complete the procedure.

Uploading/Downloading NVRAM Data

Uploading Content of NVRAM to an SD card

Do this procedure to upload SP code settings from NVRAM to an SD card.



- Always upload this data to an SD card before you replace the NVRAM.
- Before you turn the machine off, do SP5990 001 (SMC Print). This gives you a record of the NVRAM settings if the upload fails.
- 2. Turn the copier main power switch off.
- 3. Put the SD card into slot 2, then turn the copier on.
- 4. Do SP5824 001 (NVRAM Data Upload) then push the "Execute" key

When uploading is completed, a file is coped to the NVRAM folder on the SD card. The file is saved to this path and filename:

NVRAM\<serial number>.NV

Here is an example for Serial Number "B0700017":

NVRAM\B0700017.NV

5. To prevent an error during the download, write the serial number of the machine on the SD card.



 This is necessary because NVRAM data from more than one machine can be uploaded to the same SD card.

5

Downloading an SD Card to NVRAM

Do this procedure to download SP data from an SD card to the NVRAM in the machine.

- If the SD card with the NVRAM data is damaged, or if the connection between the controller and BCU is defective, the NVRAM data download will not complete correctly.
- If the download does not complete correctly, do the download procedure again.
- If this does not complete correctly, input the NVRAM data manually from the SMC print that you
 made before you uploaded the NVRAM data.
- 1. Turn the copier main power switch off.
- 2. Put the SD card with the NVRAM data into slot 2.
- 3. Turn the copier main power switch on.
- 4. Do SP5825-001 (NVRAM Data Download) and push the "Execute" key.



- This procedure also downloads the C/O, P/O Count data to the NVRAM:
- The serial number of the file on the SD card must match the serial number of the machine. If the serial numbers do not match, the download will not complete correctly.

Service Program Mode Tables

SP Tables

See "Appendices" for the following information:

- System SP Tables
- Printer SP Tables
- Scanner SP Tables

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Input/Output Check

See "Appendices" for the following information:

• Input/Output Check

Using the Debug Log

This machine provides a debug log feature that allows the service technician to save and retrieve error information for analysis.

Every time an error occurs, debug information is recorded in RAM but this information is lost when the machine is switched off and on.

To capture this debug information, the Save Debug Log feature provides two main features:

- Switching on the debug feature so error information is saved directly to the HDD for later retrieval.
- Copying the error information from the HDD to an SD card.
- When a user is experiencing problems with the machine, follow the procedures below to set up the
 machine so the error information is saved automatically to the HDD. Then attempt to duplicate the
 problem so the error data will be stored.

Setting Up "Save Debug Log"

The debug information cannot be saved until the "Save Debug Log" function is switched on and a target is selected.

To Switch Debug Log On

- 1. To enter the SP mode, press $\Delta \nabla$ together (5s), release, then press [#Enter].
- 2. Select SP5857.

SP5857 >> Save Debug Log

3. Push [#Enter].

SP5857-001 On/Off

4. Push [#Enter].

<On/Off>
*OFF

5. Push ∇ .

<On/Off>

6. Push [#Enter].

<On/Off>
*ON

7. Push [Esc].

SP5857-001 On/Off

Do the next procedure to select the target.

To Select the Target for the Debug Log File

You can select either the HDD (default) or the SD card as the target. This procedure shows you how to select the SD card.

1. Push ∇ .

SP587-002 Target

2. Push [#Enter].

<Target>
*2:HDD

3. Push ∇ .

<Target>
3:SD

4. Push [#Enter].

<Target>
*3:SD

5. Push [Esc] twic.

SP5857 >>

Save Debug Log

6. Do the next procedure to select the events that you want to record in the debug log file.

To Select Events

1. Push ∇ .

SP5858 >>

DebugSaveWhen

2. Push [#Enter].

SP5858-001

EngineSC Error

Here is a list of the events that you can select. Any number of events can be selected.

SP No.	Name	What It Does
SP5858-001	EngineSC Error	Saves error data when an engine-related SC code occurs.
SP5858-002	SystemSC Error	Saves error data when a controller-related SC Code occurs.
SP5858-003	Any SC Error	Saves error data only for the SC code that you specify by manually entering the SC code number.
SP5858-004	Jam	Saves error data for jams.

Example 1: To Select Items 001, 002, or 004

1. Push Δ or ∇ to select 001, 002, or 003. This example shows the selection of 001.

SP5858-001 EngineSC Error

2. Push [#Enter].

<EngineSC Error>

*OFF

Push \(\overline{\nabla} \).

<EngineSC Error>

4. Push [#Enter].

<EngineSC Error>
*ON

5. Push [Esc].

SP5858-001 EngineSC Error

6. Repeat this procedure to select either 002 or 004.

Example 2: To set an SC code with 003

This example shows you how to enter "672" for SC672.



- For details about SC code numbers, please refer to the SC tables in Section "4. Troubleshooting".
- 1. Select "SP5858-003".

SP5858-003 Any SC Code

2. Push [#Enter].

0000000

3. Push [#Enter] to toggle the on the number display in the 2nd line.

0000000

4. Push Δ or $\overline{\mathbf{V}}$ to display "2".

0000000

5. Push [#Enter] to enter the "2" in the line above.

6. Push Δ or ∇ to move the cursor to the next digit.

. 0000002

7. Repeat Steps 2 to 6 to enter the "7".

. 0000072

8. Repeat Steps 2 to 6 to enter the "6".

. 0000672

9. Push [Esc] twice.

SP5858 >> DebugSaveWhen

10. Do the next procedure to select one or more memory modules for the debug error data recording.

To select one or more memory modules for recording in the debug log file

1. Select SP5859.

SP5859 >> LogSaveKey No.

2. Push [#Enter].

SP5859 Key 1

3. Push [#Enter].

0000000



- The default settings for Keys 1 to 10 are all zero ("0").
- 4. Select the number from the table below, then use these key presses to enter the number.

0002222

Key Press	What It Does		
Δ or ∇	Moves the cursor to select the digit in the line above.		
[#Enter]	nters the number entry mode (displays a "0" at the cursor).		
Δ or ∇	Selects the number to enter at the digit position in the line above.		
[#Enter]	Enters the selected number in the line above and exits the entry mode you can select the next position with Δ or \overline{V}		

5. Refer to the table below for the 4-digit numbers to enter for each key. (The acronyms in parentheses indicate the names of the modules.)

4-Digit Entries for Keys 1 to 10

Key No.	Printer	Web
1	2222 (SCS)	
2	2223 (SRM)	
3	256 (IMH)	
4	1000 (ECS)	
5	1025 (MCS)	
6	4400 (GPS)	5682 (NFA)
7	4500 (PDL)	6600 (WebDB)
8	4600 (GPS-PM)	3300 (PTS)
9	2000 (NCS)	6666 (WebSys)
10	2224 (BCU)	2000 (NCS)

Key to Acronyms

Acronym	Meaning
ECS	Engine Control Service
GPS	GW Print Service
GSP-PM	GW Print Service – Print Module
IMH	Image Memory Handler
MCS	Memory Control Service
NCS	Network Control Service
NFA	Net File Application
PDL	Printer Design Language
PTS	Print Server
SCS	System Control Service
SRM	System Resource Management
WebDB	Web Document Box (Document Server)

The machine is now set to record the debugging information automatically on the SD card or HDD (the target selected with SP5857-002) for the events that you selected SP5858 and the memory modules selected with SP5859.

Please keep the following important points in mind when you are doing this setting:

- The initial settings are all zero.
- These settings remain in effect until you change them. Be sure to check all the settings, especially the settings for Keys 6 to 10. To switch off a key setting, enter a zero for that key.
- You can select any number of keys from 1 to 10 (or all) by entering the corresponding 4-digit numbers from the table.
- One area of the disk is reserved to store the debug log. The size of this area is limited to 4 MB.

Retrieving the Debug Log from the HDD

- 1. Insert the SD card into SD slot 2.
- 2. Enter the SP mode and execute SP5857-009 (HDD for SD (4MB)) to write the debugging data to the SD card.
- 3. Use a card reader to copy the file and send it for analysis to your local Ricoh representative by email, or just send the SD card by mail.

More About Debug Log

SP5857-015: SD to SD (Any)

This SP copies the log on an SD card (the file that contains the information written directly from shared memory) to a log specified by key number. The copy operation is executed in the log directory of the SD card inserted in the same slot. (This function does not copy from one slot to another.)

- Each SD card can hold up to 4 MB of file data. Unique file names are created for the data during
 the copy operation to prevent overwriting files of the same name. This means that log data from
 more than one machine can be copied onto the same SC card.
- This command does not execute if there is no log on the HDD for the name of the specified key.

SP5857-016: Make HDD LogFile

This SP creates a 32 MB file to store a log on the HDD. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information.

- Even if this SP is not executed, a file is created on the HDD when the first log is stored on the HDD, but this operation takes time. This creates the possibility that the machine may be switched off and on before the log can be created completely.
- If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time
 required to acquire the log information and save onto the HDD. With the file already created on
 the HDD for the log file, the data only needs to be recorded; a new log file does not require
 creation.
- To create a new log file, execute SP5857-011 to delete the debug log data from the HDD and then execute this SP (SP5857-016).

SP5857-017: Make SD Log File

This SP creates a 4 MB file to store a log on an SD card. However, this is not a completely empty file. The created file will hold the number "2225" as the SCS key number and other non-volatile information.

- Even if this SP is not executed, a file is created on the SD card when the first log is stored on the SD card, but this operation takes time. This creates the possibility that the machine may be switched off and on before the log can be created completely.
- If you execute this SP to create the log file beforehand, this will greatly reduce the amount of time
 required to acquire the log information and save onto the SD card. With the file already created on
 the SD card for the log file, the data only needs to be recorded; a new log file does not require
 creation.
- To create a new log file, execute SP5857-012 to delete the debug log data from the SD card and then execute this SP (SP5857-017).

6. Troubleshooting

Service Call Conditions

For "Service Call Conditions" information, see "Appendices".

- SC Code Descriptions: SC100: Scanning
- SC Code Descriptions: SC200: Exposure
- SC Code Descriptions: SC300: Image Development 1
- SC Code Descriptions: SC400: Image Development 2
- SC Code Descriptions: SC500: Feed, Transport, Duplex, and Fusing
- SC Code Descriptions: SC600: Data Communication
- SC Code Descriptions: SC700: Peripherals
- SC Code Descriptions: SC800: Overall System
- SC Code Descriptions: SC900: Miscellaneous

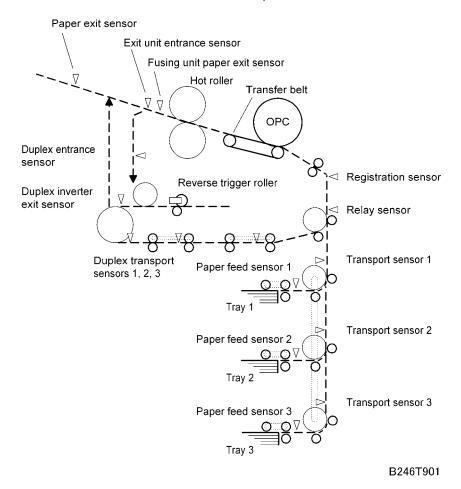


• For more information about these and other SP codes, see "Service Tables".

Jam Detection

Sensor Locations

The illustration below shows the locations of the jam sensors.



Frequent Paper Jams

If there are frequent paper jams, check SP7504 in "Service Tables". If these locations have frequent jams, do the procedures described below.

Symptom 1: Jams when paper is fed from a by-pass tray that is not used frequently

If the customer does not use the by-pass tray frequently, the rollers can become worn.

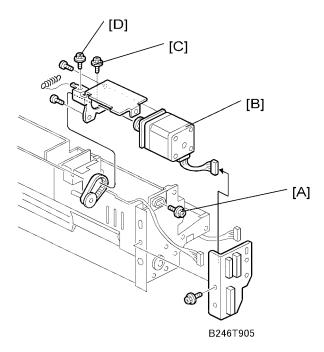
1. Visually check the by-pass tray pick-up, feed, and separation rollers.

2. If these rollers are paler than the rollers in paper trays that are more frequently used, replace the rollers in the by-pass tray.



• For more details, see Replacement and Adjustment - By-Pass Tray Rollers.

Symptom 2: Jams with noise from the paper feed unit



- 1. Remove the paper feed unit.
- 2. Loosen screw [A].
- 3. Push the motor [B] toward the tray side, then tighten the screw [A].
- 4. Loosen screws [C] and [D], let the spring move the unit to the correct position, then tighten the screws.

Symptom 3: Other

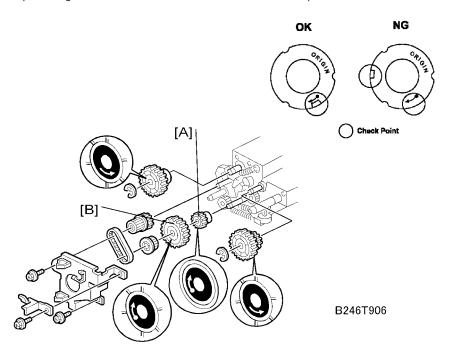
If none of the two symptoms 1 or 2 applies, do this procedure.

- 1. Use SP7504 to check the jam counts and find which SPs have high counts.
- From the table and illustration below, find which gears must be replaced.
 Example: For tray 1, if SP7504-012 is high, replace gear A, or if SP7504-008 is high, replace gear B.

Tray	SP7504 12	SP7504 8	SP7504 9	SP7504 10	SP7504 11
Tray 1	Gear [A]	Gear [B]			

Tray	SP7504 12	SP7504 8	SP7504 9	SP7504 10	SP7504 11
Tray 2		Gear [A]	Gear [B]		
Tray 3			Gear [A]	Gear [B]	
Tray 4				Gear [A]	Gear [B]

- 3. Clean the shafts and replace the necessary gears.
- 4. Replace a gear if its cutout and arrow are not in the same position.



- 5. When you replace Gear [A] or Gear [B], be sure to put the metal face on the outer side, and the arrow must be in view.
- 6. If a replacement gear is not available, do this as a temporary procedure:
 - Remove the paper feed unit.
 - Remove the gear.
 - Clean the gear shaft and inside the gear.
 - Attach the gear.
 - Install the paper feed unit.

Jam Codes

Here are lists of SC codes that are printed in the SMC report; they do not appear on the operation panel display.

ADF: Paper Jam Errors

No.	Location	Position Code
003	Separation Sensor: On	P1
004	Skew Correction Sensor: On	P1
005	Interval Sensor: On	P2
006	Registration Sensor: On	P2
007	Exit Sensor: On	P2
053	Separation Sensor: Off	P1
054	Skew Correction Sensor: Off	P1
055	Interval Sensor: Off	P2
056	Registration Sensor: Off	P2
057	Exit Sensor: Off	P2

Main Unit and LCIT RT4010 (D613): Paper Jam Errors

No.	Location	Position Code
1	Initial Jam (Power On)	A1
3	1st Paper Feed SN: Late	A1
4	2nd Paper Feed SN: Late	A1
5	3rd Paper Feed SN: Late	A1
6	4th Paper Feed SN: Late (Japan Only)	A1
7	LCT Feed SN: Late	U
8	1st Vertical Transport SN: Late	A1

No.	Location	Position Code
9	2nd Vertical Transport SN: Late	A1
10	3rd Vertical Transport SN: Late	A1
11	4th Vertical Transport SN: Late (Japan Only)	A1
12	Relay SN: Late	В
13	Registration SN: Late	B/C
14	Fusing Exit SN: Late	D
15	Exit Unit Entrance SN: Late	Е
16	Paper Exit SN: Late	Е
19	Duplex Entrance SN: Late	Е
20	Duplex Transport SN 1: Late	F
21	Duplex Transport SN 2: Late	F
22	Duplex Transport SN 3: Late	F
23	Duplex Exit SN: Late	E
24	LCT Relay SN: Late	U
34	By-pass Paper Feed SN: Late	A2
45	Sort Tray: Paper Exit SN: Late	R
46	Sort Tray: Tray Lift Motor	R
47	Sort Tray: Shift Tray Motor	R
53	1st Paper Feed SN: Lag	A1
54	2nd Paper Feed SN: Lag	A1
55	3rd Paper Feed SN: Lag	A1
56	4th Paper Feed SN: Lag (Japan Only)	A1
57	LCT Feed SN: Lag	U
58	1st Vertical Transport SN: Lag	A1
59	2nd Vertical Transport SN: Lag	A1

No.	Location	Position Code
60	3rd Vertical Transport SN: Lag	A1
61	4th Vertical Transport SN: Lag (Japan Only)	A1
62	Relay SN: Lag	В
63	Registration SN: Lag	B/C
-	-	-
66	Paper Exit SN: Lag	E
69	Duplex Entrance SN: Lag	E
-	-	-
71	Duplex Transport SN 2: Lag	F
72	Duplex Transport SN 3: Lag	F
-	-	-
74	LCT Relay SN: Lag	В
84	By-pass Paper Feed SN: Lag	A2

Finisher SR4060 (D611): Paper Jam Errors

No.	Location	Position Code	SC Code
109	Tray 1 Lift Motor Error	R1 to 4	SC720-70
110	Jogger Motor Error	R5 to 8	SC720-30
111	Exit Guide Motor Error	R1 to 4	SC720-24
111	Front Shift Jogger Motor Error	R1 to 4	SC720-72
111	Rear Shift Jogger Motor Error	R1 to 4	SC720-73
111	Shift jogger retraction motor Error	R1 to 4	SC720-73
111	Return Roller Motor Error	R1 to 4	SC720-74
111	Shift Motor Error	R1 to 4	SC720-71

No.	Location	Position Code	SC Code
112	Corner Stapler Rotation Motor Error	R5 to 8	SC720-43
112	Stapler Movement Motor Error	R5 to 8	SC720-42
113	Corner Stapler Motor Error	R5 to 8	SC720-44
113	Booklet Stapler Motor Error 1	R5 to 8	SC720-60
113	Booklet Stapler Motor Error 2	R5 to 8	SC720-61
115	Feed-Out Belt Motor Error	R5 to 8	SC720-41
116	Punch Motor Error	R1 to 4	SC720-87
116	Punch Movement Motor Error	R1 to 4	SC720-80
116	Paper Position Sensor Slide Motor Error	R1 to 4	SC720-81

Finisher SR4070 (D612): Paper Jam Errors

No.	Location	Position Code	SC Code
129	Tray 1 Lift Motor Error	R1 to 4	SC720-70
129	Tray 1 Lift Motor Error	R1 to 4	SC720-70
130	Jogger Motor Error	R8 to 12	SC720-30
131	Exit Guide Motor Error	R1 to 4	SC720-24
131	Front Shift Jogger Motor Error	R1 to 4	SC720-72
131	Rear Shift Jogger Motor Error	R1 to 4	SC720-73
131	Shift jogger retraction motor Error	R1 to 4	SC720-73
131	Return Roller Motor Error	R1 to 4	SC720-74
131	Shift Motor Error	R1 to 4	SC720-71
132	Corner Stapler Rotation Motor Error	R8 to 12	SC720-43
132	Stapler Movement Motor Error	R8 to 12	SC720-42
133	Corner Stapler Motor Error	R8 to 12	SC720-44

No.	Location	Position Code	SC Code
133	Booklet Stapler Motor Error 1	R8 to 12	SC720-60
133	Booklet Stapler Motor Error 2	R8 to 12	SC720-61
134	Folder Plate Motor Error	R8 to 12	SC720-41
134	Bottom Fence Lift Motor	R8 to 12	SC720-53
134	Clamp Roller Retraction Motor Error	R8 to 12	SC720-55
134	Stack Junction Gate Motor Error	R8 to 12	SC720-57
135	Feed-Out Belt Motor Error	R8 to 12	SC720-41
136	Punch Motor Error	R1 to 4	SC720-87
136	Punch Movement Motor Error	R1 to 4	SC720-80
136	Paper Position Sensor Slide Motor Error	R1 to 4	SC720-81

Finisher SR4080 (D610): Paper Jam Errors

No.	Location	Position Code
158	Punch Motor Error	R1 to 3
159	Tray 1 (Upper Tray Lift) Motor Error	R1 to 3
160	Shift Motor Error	R4 to 7
161	Jogger Motor Error	R4 to 7
162	Stack Plate Motor Error 1: Front Motor Error	R4 to 7
163	Stack Plate Motor Error 2: Center Motor Error	R4 to 7
164	Stack Plate Motor Error 3: Rear Motor Error	R4 to 7
165	Shift Motor Error	R1 to 3
166	Return Roller Motor Error	R1 to 3
167	Front Shift Jogger Motor Error	R1 to 3
168	Shift Jogger Retraction Motor Error	R1 to 3

No.	Location	Position Code
169	Downstream Finisher Communication Error	R4 to 7
170	Corner Stapler Motor Error	R4 to 7
171	Stapler Movement Motor Error	R4 to 7
172	Corner Stapler Rotation Motor Error	R4 to 7
173	Feed-Out Belt Motor Error	R4 to 7
174	Punch Motor Error	R1 to 3
175	Jogger Top Fence Motor Error	R4 to 7
176	Jogger Bottom Fence Motor Error	R4 to 7
-	Staple Trimming Hopper Full	R4 to 7

Mailbox CS4000 (D616): Paper Jam Errors

No.	Location	Position Code
201	Vertical Transport Sensor 1	W
202	Vertical Transport Sensor 2	W
203	Vertical Transport Sensor 3	W
204	Vertical Transport Sensor 4	W
205	Vertical Transport Sensor 5	W

Cover Interposer Tray CI4000 (D614): Paper Jam Errors

No.	Location	Position Code
251	Paper Feed Sensor	Q
252	Vertical Transport Path	Q1 to Q3
253	Bottom Plate Position Sensor	Q

Multi Folding Unit FD4000 (D615): Paper Jam Errors

No.	Location	Position Code
351	Entrance SN: Late	N1 to N5
352	Entrance SN: Lag	N1 to N5
353	Top Tray Exit SN: Late	N1 to N5
354	Top Tray Exit SN: Lag	N1 to N5
355	Horizontal Path Exit SN: Late	N1 to N5
356	Horizontal Path Exit SN: Lag	N1 to N5
357	1 st Stopper HP SN: Late	N6 to N22
358	1 st Stopper HP SN: Lag	N6 to N22
359	2nd Stopper HP SN: Late	N6 to N22
360	2nd Stopper HP SN: Lag	N6 to N22
361	3rd Stopper HP SN: Late	N6 to N22
362	3rd Stopper HP SN: Lag	N6 to N22
363	Skew Correction Jam	N6 to N22
364	Folded Paper Path Jam	N1 to N5
366	Entrance JG Motor Jam	N1 to N5
367	Fold JG Motor Jam	N1 to N5
368	1 st Stopper Motor Jam	N6 to N22
369	2nd Stopper Motor Jam	N6 to N22
370	3rd Stopper Motor Jam	N6 to N22
371	Dynamic Roller Trans. Motor Jam	N6 to N22
372	Registration Roller Release Motor Jam	N6 to N22
373	Fold Plate Motor Jam	N6 to N22
374	Jogger Fence Motor Jam	N6 to N22

No.	Location	Position Code
375	Positioning Roller Motor Jam	N6 to N22
376	Direct-Send JG Motor Jam	N6 to N22
377	FM6 Pawl Motor Jam	N6 to N22
399	Main Machine Set. Incorrect	N1 to N5 / N6 to N22

Program Download

Here are some important points to keep in mind when downloading software:

- If an error interrupts download processing, the machine cannot operate normally with the program software only partially downloaded.
- When download processing execution starts, a progress bar ("***____") is displayed until the download completes successfully.
- If the download is interrupted while the asterisks are displayed, the machine does not attempt a retry.
- The program that downloads firmware from an SD card is part of the GW controller software. If downloading this software is interrupted, the program stored in the machine may become corrupted. If this occurs, it may not be possible to restart the downloading program.
- If the GW controller software cannot be downloaded, software on other SD cards cannot be downloaded as well.
- If such problems occur, it may be possible to restart the program without replacing the controller board by setting controller DIP SW 1 to ON and then re-starting.

Recovery Methods

When an error occurs during downloading, an error code is displayed on the operation panel.

- If the download procedure can be re-started, re-start the download procedure.
- If the download procedure cannot be downloaded for other than the GW controller, replace the board where the downloaded program is stored.
- If the download procedure cannot be downloaded for the GW controller, set DIP SW 1 to ON.
 Power the machine off and on to start the downloading program. After downloading has completed, set the DIP SW to OFF then power the machine off and on again.

Download Error Codes

	Display	Details	Recovery
01	Reboot after card insert E01 Module ID Card No. xx/xx	Controller ROM update error 1 When the update break data is stored in NVRAM, the break module information and the decompression module capable of writing do not match.	Use the correct card

	Display	Details	Recovery
02	Download Error E02 Power off/on	Controller ROM update error 2.	Turn the machine off/on to rewrite
		Error occurs during ROM update program initialization.	
03	Download Error E03 Power off/on	Controller ROM update error 3	 Turn the machine off/on Install the missing ROM DIMM
		The ROM for the write operation does not exist.	
04	Download Error E04 Power off/on	Controller ROM update error 4	Turn the machine off/on
		GZIP data confirmation fails. (CRC value check)	Set DIP SW 1 to ON and retry
			Replace RAM DIMM
			Replace controller board
05	Download Error E05 Power off/on	Controller ROM update error 5	Turn the machine off/on
		Error occurs when writing to the device.	Set DIP SW 1 to ON and retry
			Replace RAM DIMM
			Replace controller board
06	Download Error E06 Power off/on	Controller ROM update error 6	 Turn the machine power off/on. Set controller DIPSW-1 to ON to force the machine to write to ROM. If you cannot force the machine to write, replace the controller board.
		CPU clock error.	

	Display	Details	Recovery
19	Download Error E19 Power off/on	Controller ROM update error 7	Software defective
		Schedule data is unclear.	
20	Down Error E20 Power Off/On	System error 1 (+SC991)	 Turn the machine off/on and re-try Replace controller board
		The physical address cannot be mapped. Software/hardware is defective	
21	Download Error E21 Power Off/On	System error 2 (+SC991)	 Turn the machine off/on and re-try. Replace RAM Replace the controller board
		There is not sufficient memory to download.	
	Download Error E22 Module ID Card No xx/xx	System error 3 (+SC991)	 Turn the machine off/on and re-try. Replace card Replace controller board
		Data fails to decompress. Card defective.	
22	SC991	System error 4	• Turn the machine
		"Selfupdate" does not execute. Software defective.	off/on and re-try Set DIP SW 1 to ON and re-try Replace the controller board
23	Download Error E24 Power Off/On	System error 5	Turn the machine off/on and re-try Replace the card Replace the controller board
		Card read/write error. Software or card defective.	
30	No Valid Data E30	Download dysfunction 1	HDD defective HDD harness disconnected, defective
		Print download is not possible. Cannot download to HDD because HDD not installed or defective.	

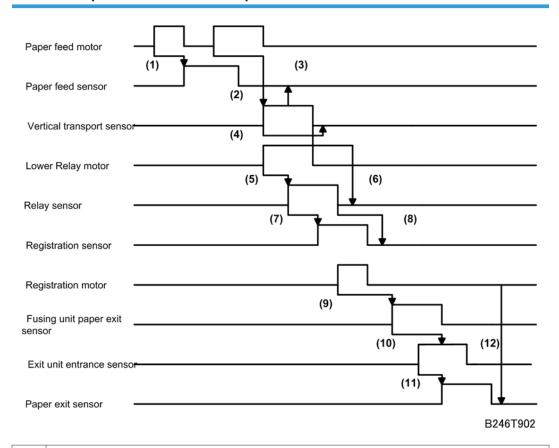
	Display	Details	Recovery	
	Reboot After Card Insert E31 Module ID Card No. xx/xx	Download dysfunction 2	Set the correct cards in the correct order	
31		Download continuity error with more than one card. The second or later card is not compatible.		
		Download dysfunction 3	Use the correct card	
32	Reboot After Card Insert E32 Module ID Card No. xx/xx	Download interrupted because card is not correct, or power failure interrupted download.	If power failure caused the failure, remove the card and insert another.	
		Download dysfunction 4		
33	No Valid Data E33	Card version error. Attempted to download program using a card with the wrong version number.	Use the correct card	
	No Valid Data E34	Download dysfunction 5		
34		Specification error. DOM card set in EXP machine, or vice versa.	Use the correct card	
	No Valid Data E35	Download dysfunction 6		
35		Wrong model. The inserted card is for another model.	Use the correct card	
		Download dysfunction 7	Use the correct card,	
36	No Valid Data E36	Module error. The program that you are attempting to download does not exist on the machine, or the contact points at the card and the machine slot are not connected.	inserted correctly Install a ROM DIMM if none is installed	
	No Valid Data E37	Download dysfunction 8		
37		Edit option card error. You attempted to employ a used card.	Use an unused card	
4.5	Download Error E40	Download result failure 1	Turn the machine	
40	Module ID Card No.	Engine download failure.	off/on and re-try	

	Display	Details	Recovery	
	Download Error E41	Download result failure 2	Turn the machine off/on and re-try	
41	Module ID Card No.	Fax download failure.		
	Download Error E42	Download result failure 3		
42	Module ID Card No.	Operation panel or language download failed. For this error, sometimes the message may not be displayed.	 Turn the machine off/on and re-try 	
	Download Error E43	Download result failure 4	Turn the machine	
43	Module ID Card No.	Print download failed.	off/on and re-try	
		Download result failure 5	Turn the machine power off/on.	
44	Download Error E44 Module ID Card No.	The data targeted for the write operation could not be accessed.	 Set controller DIPSW-1 to ON to force the machine to write If you cannot force the machine to write, replace the controller board. 	
	No Valid Data E50	Download invalid	Use the correct SD	
50		The source data for the update could not be authenticated.	card.	
		Remote ROM update failure 1		
51	(no display)	The source data for the ROM update is corrupted because the machine is operating and an SC code has been issued.	Turn the machine power off/on and try again.	
		Remote ROM update failure 2		
52	(no display)	The source data received for the ROM update is corrupted; it failed a SUM check due to its abnormal length.	Try again with the correct data.	

		Display	Details	Recovery
	53		Download result failure 6	Do the download
			The previous download in progress was cancelled.	procedure again.

Timing Charts

Feed, Transport, Feed Out: Face-up

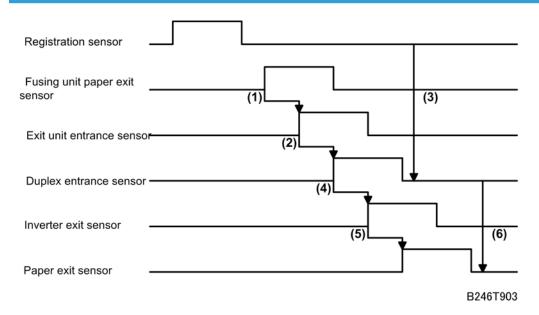


(1):	Paper feed motor ON > Paper feed sensor does not switch ON at the correct time.
(2):	Paper feed motor ON > Vertical transport sensor does not switch ON at the correct time.
(3):	Vertical transport sensor ON> Paper feed sensor does not switch OFF at the correct time.
(4):	Vertical transport sensor ON > Vertical transport sensor does not switch OFF at the correct time.
(5):	Lower relay motor ON> Relay sensor does not switch ON at the correct time.
(6):	Vertical transport sensor OFF > Relay sensor does not switch OFF at the correct time.
(7):	Relay sensor ON > Registration sensor does not switch ON at the correct time.
(8):	Relay sensor OFF> Registration sensor does not switch OFF at the correct time.

6

(9):	Registration motor ON > Fusing unit paper exit sensor does not switch ON at the correct time.
(10):	Fusing unit paper exit sensor ON > Exit unit entrance sensor does not switch ON at the correct time.
(11):	Exit unit entrance sensor ON> Paper exit sensor does not switch ON at the correct time.
(12):	Registration motor OFF > Paper exit sensor does not switch OFF at the correct time.

Transport, Inverter, Feed Out: Face-down



(1):	From the registration sensor to the fusing unit exit, jam detection is the same as face-up feed out.
(2):	Exit unit entrance sensor ON > Duplex entrance sensor does not switch OFF at the correct time.
(3):	Registration sensor OFF > Duplex entrance sensor does not switch OFF at the correct time.
(4):	Duplex entrance sensor ON > Inverter exit sensor does not switch OFF at the correct time.
(5):	Inverter exit sensor ON > Paper exit sensor does not switch ON at the correct time.
(6):	Duplex entrance sensor OFF > Paper exit sensor does not switch OFF at the correct time. (Paper remains at the duplex unit exit.)

B

(1):	Duplex entrance sensor ON > Inverter exit sensor does not switch ON at the correct time.
(2):	Inverter exit sensor ON > Duplex transport sensor 1 does not switch on at the correct time.
(3):	Duplex transport sensor 1 ON> Duplex transport sensor 2 does not switch on at the correct time.
(4):	Duplex entrance sensor ON > Duplex transport sensor 2 does not switch OFF at the correct time.
(5):	Duplex transport sensor 2 ON > Duplex transport sensor 3 does not switch ON at the correct time.
(6):	Duplex transport sensor 2 OFF > Duplex transport sensor 3 does not switch OFF at the correct time.
(7):	Duplex transport sensor 3 ON > Relay sensor does not switch on at the correct time.

Other Problems

Blown Fuse Conditions

-	Rating		S	
Fuse	115 V	210~230V	Symptom at Power On	
FU1	2A/125V		Anti-condensation heater does not operate.	
		8A/250V	Machine does not operate	
FU101	12A/125V	5V/250V	Machine does not operate	
FU103	6.3A/125V	6.3A/250V	"Please Wait" then halts.	
FU104	6.3A/125V	6.3A/250V	SC569-00	
FU105	6.3A/125V	6.3A/250V	"Door Open" is displayed.	
FU106	6.3A/125V	6.3A/250V	ADF does not operate.	
FU107	6.3A/125V	6.3A/250V	SC569-00	
FU108	6.3A/125V	6.3A/250V	Finisher does not work.	
FU109	6.3A/125V	6.3A/250V	"Door Open" is displayed.	
FU110	6.3A/125V	6.3A/250V	SC324-01	
FU111	6.3A/125V	6.3A/250V	SC530-00	
FU113	2A/125V		Fax unit does not operate	
FU115	8A/125V		Japan only	
FU116	8A/125V		Japan only	

Common Problems

Problem Check		Inspect, Clean, Replace		
Dirty Copies	Fusing Unit	Pressure roller		
Jam – Fusing Unit	Fusing Unit	Hot roller		

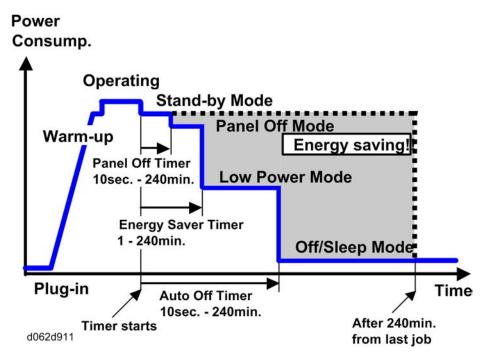
Jam – Fusing Unit	Fusing Unit	Hot roller strippers		
Jam – Original	ADF	Pick-up, paper feed, separation rollers		
Lines (black or white) Around the Drum		Cleaning blade, cleaning brush		
Misfeed – Fusing Unit Fusing Unit		Hot roller		
Offset Fusing Unit		Hot roller		
Poor separation	Transfer Belt Unit	Transfer belt, transfer belt cleaning blade		
SC300 ~ SC306 Around the Drum		Charge corona wire, charge corona grid, charge corona wire cleaner.		
Skew – Original	ADF	Pick-up, paper feed, separation rollers		
Toner on transfer belt	Transfer Belt Unit	Transfer belt, transfer belt cleaning blade		
Wrinkling	Fusing Unit	Pressure roller		

7. Energy Save

Energy Save

Energy Saver Modes

Customers should use energy saver modes properly, to save energy and protect the environment.



The area shaded grey in this diagram represents the amount of energy that is saved when the timers are at the default settings. If the timers are changed, then the energy saved will be different. For example, if the timers are all set to 240 min., the grey area will disappear, and no energy is saved before 240 min. expires.

Timer Settings

The user can set these timers with User Tools (System settings > Timer setting)

- Energy saver timer (1 240 min): Low Power Mode. Default setting: 1 to 240 minute
- Sleep Mode (1 to 240 min.): Default setting 1 min.
- Auto off timer (1 240 min): Off/Sleep Mode Default settings:

D131	1 min.
D132	1 min.
D133	15 min.

Normally, Energy Saver timer < Auto Off timer. But, for example, if Auto Off timer < or = Energy Saver timer, the machine goes immediately to Off mode when the Auto Off timer expires. It skips the Panel Off and Energy Saver modes.

Example

• Panel off: 1 min.

• Low power: 15 min.

• Auto Off: 1 min.

• The machine goes to Off mode after 1 minute. Panel Off and Low Power modes are not used.

Return to Stand-by Mode

Low Power Mode

The recovery time depends on the model and the region.

• MT-C5 a/c: 10 sec.

• MT-C5e: 30 sec.

Off/Sleep Mode

Recovery time.

MT-C5 a/c: Max. 30 sec.

MT-C5e: Max 300 sec.

Recommendation

We recommend that the default settings should be kept.

- If the customer requests that these settings should be changed, please explain that their energy
 costs could increase, and that they should consider the effects on the environment of extra energy
 use.
- If it is necessary to change the settings, please try to make sure that the Auto Off timer is not too
 long. Try with a shorter setting first, such as 30 min., then go to a longer one (such as 60 min.) if the
 customer is not satisfied.
- If the timers are all set to the maximum value, the machine will not begin saving energy until 240
 minutes has expired after the last job. This means that after the customer has finished using the
 machine for the day, energy will be consumed that could otherwise be saved.

7

 If you change the settings, the energy consumed can be measured using SP8941, as explained below.

Energy Save Effectiveness

SP 8941 (Machine Status) keeps a record of the amount of time that the machine spends in each mode.

- 8941-001: Operating mode
- 8941-002: Standby mode
- 8941-004: Low power mode
- 8941-005: Off/sleep mode

With this data, and the power consumption values from the specifications, we can estimate the amount of energy that is used by the machine.

This should only be used as a reference value, because the power consumption specifications are measured in a controlled environment with a constant power supply.

To get an exact measurement at the customers site, a watt meter must be used to measure the actual energy consumed.

To use SP8941 to calculate the energy consumed:

- At the start of the measurement period, read the values of SP8941 001 to 005.
- At the end of the measurement period, read the values of SP8941 001 to 005 again.
- Find the amount of time spent in each mode (subtract the earlier measurement from the later measurement).
- Multiply this by the power consumption spec for each mode.
- Convert the result to kWh (kilowatt hours)

Here is an example calculation.

Machine Date	Power Consumpt ion (W): Data: a	SP8941: Machine Status	Start Time: (min.) Data: b	End Time: (min.) Data: c	Time Differences (Data:b - Data: c) (min.) Data: d	Power Consumption (Data:a x Data:d) (Wmin.) Data: e
①		001:				
Operating mode	1081.8	Operatin g Time	21089.0	21386.0	297.0	321294.6

2						
Ready		002:				
mode		Standby				
(stand by)	214.0	Time	306163.0	308046.0	1883.0	402962.0
3		003:				
Energy		Energy				
mode		Save				
(Panel off)	214.0	Time	71386.0	<i>7</i> 5111.0	3725.0	797150.0
4		004:				
Low power		Low				
mode		power				
	153.0	Time	154084.0	156340.0	2256.0	345168.0
5		005:				
Off/Sleep		Off mode				
mode	7.0	Time	508776.0	520377.0	11601.0	81207.0
Total Time of						
Total Time of Data: d/60min. (Hour) 329.37						
Total Power Consumption of Data: e (Wmin.)						1947781.60
Total Power Consumption of Data: e /60min./1000W (KWH)						32.46

7

Paper Save

Effectiveness of Duplex/Combine Function

Duplexing and the combine functions reduce the amount of paper used. This means that less energy overall is used for paper production, which improves the environment.

1. Duplex:

Reduce paper volume in half!



d062d102

2. Combine mode:

Reduce paper volume in half!

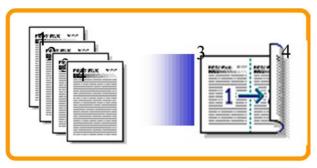


d062d100

3. Duplex + Combine:

Using both features together can further reduce paper volume by 3/4!





d062d101

To check the paper consumption, look at the total counter and the duplex counter.

The total counter counts all pages printed.

- For one duplex page, the total counter goes up by 2.
- For a duplex job of a three-page original, the total counter goes up by 3.

The duplex counter counts pages that have images on both sides.

- For one duplex page, the duplex counter goes up by 1.
- For a duplex job of a three-page original, the duplex counter will only increase by 1, even though two sheets are used.

These Machines (D131/D132/D133)

• Total counter: SP 8581-001

• Duplex counter: SP 8411-001

• Single-sided with combine mode: SP 8421-004

• Duplex with combine mode: SP 8421-005

The following table shows paper savings and how the counters increase for some simple examples of single-sided and duplex jobs

Duplex mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
1	1	1	0	1	0
2	2	1	1	2	1
3	3	2	1	3	1
4	4	2	2	4	2

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8411-001
5	5	3	2	5	2
10	10	5	5	10	5
20	20	10	10	20	10

If combine mode is used, the total and duplex counters work in the same way as explained previously. The following table shows paper savings and how the counters increase for some simple examples of duplex/combine jobs.

2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8421-004
1	1	1	0	1	1
2	2	1	1	1	1
3	3	2	1	2	2
4	4	2	2	2	2
5	5	3	2	3	2
10	10	5	5	5	5
20	20	10	10	10	10

Duplex + 2 in 1 mode:

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8421-005
1	1	1	0	1	1
2	2	1	1	1	1
3	3	1	2	2	2
4	4	1	3	2	2
5	5	2	3	3	3

Originals	Simplex Sheet used	Duplex Sheets used	Paper Saved	Total counter SP8501-001	Duplex counter SP8421-005
6	6	2	4	3	3
7	7	2	5	4	4
8	8	2	6	4	4
9	9	3	6	5	5
10	10	3	7	5	5
11	11	3	8	6	6
12	12	3	9	6	6

Model MT-C5 Machine Codes: D131/D132/D133 Appendices

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1. Appendix: General Specifications

General Specifications

Copier

Engine

Configuration	Console		
	Original: Sheet/Book/Objects Original Size		
	Max. A3/11" x 17"		
	Min. B6 SEF/5.5" x 8.5" (us	ing ADF)	
	Original Alignment: Rear left	corner	
	Paper tray, Duplex	A3/11" x 17" – A5/ 5.5" x 8.5"	
	Bypass tray	A3/11" x 17" – A6 SEF/5.5" x 8.5"	
Copy Paper Size	Non-standard sizes	Width: 139.7 – 297 mm (5.5" x 11.7")	
		Length: 139.7 – 432 mm (5.5" x 17")	
	Paper Tray	52.3 to 127.9 g/m ² (14 to 34 lb.)	
	Duplex	64 to 127.9 g/m² (17 to 34 lb.)	
Copy Paper Weight		By-pass • Standard: 52.3 to 157 g/m² (14 to 43 lb.) • Thick Paper mode: 52.3 to 216 g/m² (14 to 58 lb.)	

	7 reduction ratios, 5 enlargement ratios				
Daniel Datie	Metric (%): 400, 200, 141, 122, 115, 93, 82, 75, 71, 65, 50,				
Reproduction Ratios	25				
	Inch (%): 4	400, 200, 155	, 129, 121, 93, 85, 78, 73, 65, 50, 25		
	D131: 60	ppm			
Copying Speed	D132: 75	ppm			
	D133: 90 ppm (A4, LT LEF)				
	D131	3.9 s			
First Copy Time	D132	3.2 s	(Tray 1, A4/LT LEF face-up, contact glass mode, APS off)		
	D133	2.9 s			
	D131: < 3	30 seconds			
	D132: < 3	30 seconds			
Warm-up Time	D133: < 300 seconds				
	From power on at 23°C (73.4°F)				
	< 30 sec. at return from power off mode				
Continuous Copying	1 to 999 ((Operation pan	nel entry)		
	Tray 1 (tandem tray)		3100 sheets (1550 x2)		
Dans and Carra mailtin	Tray 2		550 sheets		
Paper Capacity	Tray 3		550 sheets		
	Bypass tro	ıy	100 sheets (80 g/m², 20 lb.)		
Paper Output	A4/8.5" x 11" and smaller		500 sheets		
	B4 and la	rger	250 sheets		
	N A		D132: 120V, 60Hz, 20A		
	North Am	erica	D133: 208-240, 60Hz, 12A		
Power Source	Europe/A	sia/China	220-240V/10A 50/60Hz		
	T		D132: 110V/20A 60Hz		
	Taiwan		D133: 220V/12A 60Hz		
	1	l l			

Power Consumption	Full System	NA	D131/D132: <1.8 KW D133: <1.9 KW
		EU	D131/D132: < 1.9 KW
			D133: < 1.9 KW
Energy Start	Implemented		
Memory	1 GB (Base) 1.5 GB (SP)	
HDD Capacity	250 GB		
Allowed voltage fluctuation	10%		
Dimensions (wxdxh)	690 x 799 x 1171 mm (27.2 x 31.1 x 46.1 in.)		
Weight	Approx. 214 kg (471 lb.)		
Resolution	1200 dpi (printing) 600 dpi (scanning)		
Gradation	256 levels (scanning and printing)		
Toner Replenishment	Cartridge exchange (1100 g)		
Total Counter	Electric Counter		

ADF

Original Size	Simplex: A3/11" x 17" – B6/5.5" x 8.5" Duplex: A3/11" x 17" – B5/5.5" x 8.5"
Original Weight	Simplex: 40 to 128 g/m ² (11 to 34 lb.) Duplex: 52 to 128 g/m ² (14 to 34 lb.)
Table Capacity	250 sheets: 69g/m ² (150 sheets: 80g/m ² , 20 lb. Bond)
Original Standard Position	Rear left corner
Separation	Feed belt and separation roller
Original Transport	Roller transport
Original Feed Order	From top original
Reproduction Range	100%

Ш

Power Source	DC 24 V from the main machine
Power Consumption	< 110 W
Rated Voltage of Output Connector	Max. DC 24 V
Permissible voltage fluctuation	±10%
Dimensions (w x d x h)	680 x 560 x 180 mm (26.8" x 22.0" x 7.1")
Weight	18 kg (39.6 lb.)

Power Consumption

NA

Operation Mode	D131	D132	D133
Main unit only			
Warm Up	1380W	1400W	1720W
Stand-by	269W	269W	299W
During printing	1230W	1250W	1480W
Maximum	1620W	1640W	1750W
Complete system*1			
Warm Up	1410W	1420W	1740W
Stand-by	289W	289W	320W
During printing	1330W	1350W	1610W
Maximum	1720W	1740W	1880W

^{*1} Main Machine + Finisher + Cover Interposer Tray + LCT

EU/AA

Operation Mode	D131	D132	D133
Main unit only			
Warm Up	1500W	1510W	1730W

Operation Mode	D131	D132	D133
Stand-by	279W	279W	299W
During printing	1260W	1280W	1490W
Maximum	1 <i>7</i> 30W	1760W	1790W
Complete system* 1			
Warm Up	1520W	1530W	1740W
Stand-by	310W	310W	320W
During printing	1330W	1360W	1540W
Maximum	1800W	1830W	1840W

^{*1} Main Machine + Finisher + Cover Interposer Tray + LCT

Noise Emission

No.	Test Mode dB (A)	Noise Power Level	Operator Position	Bystander Position Max.
	Standby OFF Mode: MFP, CTL FAN ON	49.3	37.5	36.6
D121	Book Mode	67.0	51.9	53.9
D131	System: LCT Feed DF Simplex, Punch Sort	74.3	62.4	59.8
	System: Standby Engine OFF	50.1	35.7	37.5
	Standby OFF Mode: MFP, CTL FAN ON	49.4	37.7	36.9
D132	Book Mode	69.7	55.2	58.8
DISZ	System: LCT Feed DF Simplex, Punch Sort	74.3	62.1	59.9
	System: Standby Engine OFF	50.0	35.7	37.5

No.	Test Mode dB (A)	Noise Power Level	Operator Position	Bystander Position Max.
	Standby OFF Mode: MFP, CTL FAN ON	50.4	38.2	37.7
D122	Book Mode	71.0	56.4	58.3
D133	System: LCT Feed DF Simplex, Punch Sort	75.0	62.4	60.5
	System: Standby Engine OFF	52.3	36.9	39.5

^{* 1} System: Main Machine + Finisher + Multi Folder +LCT



• The above measurements were made in accordance with ISO 7779. Full system measurements include the Mainframe + Finisher + LCT + Cover Interposer + Punch.

Peripheral Specifications

A3/11" x 17" Tray Type 9001 (D482)

Paper Size	A3, B4, 11" x 17", 8.5" x 14", A4 SEF, A4 LEF, 8.5" x 11" SEF, 11" x 8.5" LEF
	52 to 163 g/m ²
Paper Weight	16 to 40 lb. Bond
	50 to 60 lb. Cover
	90 lb. Index (no Tab)
Tray Capacity	1,000 sheets (80 g/m², 20lb)

LCIT RT4010 (D613)

Paper capacity	4,000 sheets
Paper Sizes	A4 LEF, B5 LEF, 8.5" x 11" LEF *1
Paper Weight	52 to 128 g/m² (14 to 34 lb)
Pick-up and Feed	FRR (Feed and Reverse Roller)
Power Consumption	Less than 50 W (Max.)
Power Supply	DC24 V, 5V (powered by the main unit)
Rated Voltage of Output Connector	Max. DC 24 V
Dimensions (W x D x H)	314 x 458 x 659 mm (12.4" x 18.1" x 25.9")
Weight	20.0 kg (44 lb.)

^{* 1:} In platen mode, APS (Auto Paper Select) with the original length and original width sensors are not used.

Finisher SR4080 (D610)

Upper Tray

Paper Capacity	500 sheets (A4, 8.5" x 11" and smaller)
(80 g/m^2)	250 sheets (B4, 8.5" x 14" and larger)
Paper Size	A3 to A6 SEF, 11" x 17" to 5.5" x 8.5", 12" x 18"
Paper Weight	52 to 216 g/m ² (14 to 58 lb)
Upper Tray Full Detection	Provided

Shift Tray

	3000 sheets (A4 LEF, B5 LEF, 8.5" x 11" LEF)
Paper Capacity (80 g/m²)	1500 sheets (A3, A4 SEF, B4 and B5 SEF, 11" x 17", 8.5" x 14", 8.5" x 11" SEF, 12" x 18")
	500 sheets (A5 LEF, 5.5" x 8.5" LEF)
	100 sheets (A5 SEF, 5.5" x 8.5" SEF)
Paper Size	A3 to A5, 11" x 17" to 5.5" x 8.5", 12" x 18" (including tab paper)
Paper Weight	52 to 216 g/m ² (14 to 58 lb)
Shift Tray Full Detection	Provided

Stapler

Stapling Stack Size	A4, B5, 8.5" x 11" (Max. 100 Sheets) A3, B4, 11" x 17", 8.5" x 14" (Max. 50 sheets)
Stapling Paper Size	A3 to B5 11" x 17" to 8.5" x 11"
Stapling Paper Weight	64 to 80 g/m² (17 to 20 lb)

1

Staple Position	4 Modes • 1 Staple: Front, Rear, Rear-Oblique • 2 Stapes: 2 locations			
Staple Capacity	5000 staples/cartridge			
Staple Supply	Cartridge or Staple Replacement			
	Sheets	Sets	Sizes	
Stapled Stack Size	10 to 100	200 to 30	A4 SEF, B5 SEF, 8.5" x 11" SEF	
	2 to 9	150	A4 LEF, B5 LEF, 8.5" x 11" LEF	
	10 to 50	150 to 30	AO DA 111 171 O 51 141	
	2 to 9	150	– A3, B4, 11" x 17", 8.5" x 14"	
Trim Waste Staple Capacity	30,000 or more			
Waste Staple Hopper Full Detection	Provided			
Power Consumption	Less than 100 W			
Power Source	DC 24 V (From Mainframe)			
Size (W x D x H)	800 x 730 x 980 mm (31.5" x 28.7" x 38.6")			
Weight	Less than 65 kg (143 lb.)			

Punch Unit Type 1075 (B531)

This punch unit is installed in the Finisher SR4080.

Punch Hole Positions	2/3-hole (North America) 2/4-hole (Europe)
Punch Paper Size	
2-Hole (NA)	A5 to A3 SEF, 11" x 17" to 5.5" x 8.5" SEF A5 to A4 LEF, 8.5" x 11" LEF, 5.5" x 8.5" LEF
3-Hole (NA)	A3 SEF, B4 SEF, 11" x 17" SEF A4 LEF, B5 LEF, 8.5" x11" LEF

4-Hole (EUR/A)	A3 SEF, 11" x 17" SEF		
4-Hole (EOK/ A)	A4 LEF, 8.5" x 11" LEF		
Paper Weight			
2-Hole (NA)	52 g/m ² to 163 g/m ² (14 to 43 lb)		
3-Hole (NA)	52 g/m ² to 163 g/m ² (14 to 43 lb)		
4-Hole (EUR/A)	52 g/m ² to 128 g/m ² (14 to 34 lb)		
Punch Waste Hopper Capacity			
2-Hole (NA)	10K		
3-Hole (NA)	15K		
4-Hole (EUR/A)	15K		
Operation Modes	All (Shift, Proof, Staple)		

DIP SW Settings

The correct DIP SW settings of the Punch Unit 531 are provided in the table below for your reference only. The DIP switches of these punch units do not need to be changed at installation, or adjusted for operation.

Punch Unit	Unit No.	DIP SW Settings			
runch Onli	Unit INO.	1	2	3	4
2/3-Hole (NA)	B531-17	1	0	1	0
2/4-Hole (EUR/A)	B531-27	1	0	0	1

0: OFF, 1: ON

Punch Unit Type 850 SC (A812)

This punch unit is installed in the Finisher SR4080..

	2-hole, 3-hole (NA)
Punch Hole Positions	4-hole (EUR/A)
	4-hole (North Europe)

Punch Paper Size		
2-Hole	A5 to A3 SEF, 11" x 17" to 8.5" x 11" SEF A5 to A4 LEF, 8.5" x 11" LEF	
3-Hole (NA)	A3 SEF, B4 SEF, 11" x 17" SEF A4 LEF, B5 LEF, 8.5" x 11" LEF	
4-Hole (EUR/A)	A3 SEF, 11" x 17" SEF A4 LEF, 11" x 17" LEF	
4-Hole (North Europe)	B5 to A3 SEF, 8.5" x 11" to 11" x 17" SEF A5 to A4 LEF, 8.5" x 11" LEF, 5.5" x 8.5" LEF	
Paper Weight		
2-Hole, 3-Hole (NA)	52 g/m ² to 163 g/m ² (14 to 43 lb)	
4-Hole (Europe/North Europe)	52 g/m ² to 128 g/m ² (14 to 34 lb)	
Punch Waste Hopper Capacity		
2-Hole	40K	
3-Hole (NA)	15K	
4-Hole (EUR/A)	15K	
4-Hole (North Europe)	15K	
Power Supply	DC 24 V (From Finisher)	
Power Consumption	60 W	
Weight	Less than 2.4 K (5.3 lb.)	
Operation Modes	All (Shift, Proof, Staple)	

DIP SW Settings

The correct DIP SW settings of the Punch Unit A812 are provided in the table below for your reference only. The DIP switches of these punch units do not need to be changed at installation, or adjusted for operation.

Punch Unit	Unit No.	DIP SW Settings				
ronen omi	Offil No.	1	2	3	4	
2-Hole (EUR/A)	A812-40/A812-67	0	0	0	0	
3-Hole (NA)	A812-57	1	0	0	0	
4-Hole EUR/A)	A812-30	0	1	0	0	
4-Hole (North Europe)	A812-31	0	0	1	0	
2-Hole (NA)	A812-32	0	0	0	1	

0: OFF, 1: ON

Output Jogger Unit Type 9002B (B513)

This jogger unit is installed above the shift tray of the Finisher SR4080.

Paper Size	A3 SEF, B4 SEF, 11" x 17" SEF A4 LEF, B5 LEF, 8.5" x 11" LEF	
Paper Weight	52 g/m ² to 216 g/m ² (14 to 58 lb)	
Weight	Less than 1.7 kg (3.7 lb.)	
Dimensions (W x D x H)	125 mm x 450 mm x 100 mm (5" x 17.7" x 4")	
Power Supply	DC 24 V, DC 5V (From Finisher)	
Power Consumption	24 W	

8 1/2"x14" Paper Size Tray Type 9002 (B474)

Paper Size B4, 8.5" x 14", A4 SEF, 8.5" x 11" SEF	
Paper Weight 52 to 128 g/m² (14 to 34 lb)	
Tray Capacity 1,000 sheets (80 g/m², 20lb)	

1

Finisher SR4060 (D611)

This finisher provides corner stapling only.

Finisher

Dimensions (W x D x H)	657 x 613 x 960 mm			
Weight	Less than 54 kg Less than 56 kg with Punch Unit			
Power Consumption	Less than 96 W			
Noise	Less than 75 db			
Configuration	Console type attached base-unit			
Power Source	From base-unit			
	Stack	250 sheets	A4, 8.5"x11" or smaller	
	Capacity*	50 sheets	B4, 8.5"x14" or larger	
Proof Tray A5-A3 SEF, A6 SEF, A6 SEF 5.5"x8.5"-11"x17"SEF, 12"x18" SEF				
	Paper Weight	52 g/m²-163 g/m² 14 lb Bond- 43 lb Bond / 90 lb Index / 60 lb Cover		

Shift Tray	Stack Capacity*	3,000 sheets	A4 LEF, 1/2" x11" LEF	
		1,500 sheets	A3 SEF, A4 SEF, B4 SEF, B5, 11"x17" SEF, 8 _{1/2} " x14" SEF, 8 _{1/2} " x 11" SEF, 12"x18" SEF	
		500 sheets	A5 LEF**	
		100 sheets	A5 SEF, B6 SEF, A6 SEF, 5 _{1/2} " x 8 _{1/2} ",SEF	
	Paper Size	A5 - A3 SEF, A6 SEF, B6 SEF, $5_{1/2}$ " x $8_{1/2}$ " - 11"x17" SEF, 12" 18" SEF		
	Paper Weight	52 g/m²-256 g/m² 14 lb Bond- 68 lb Bond / 140 lb Index / 90 lb Cover		

Stapler

Paper Size	B5-A3 8.5"x11"-11"x17", 12"x18"		
Paper Weight	64 g/m²-90 g/m² 17 lb Bond-28 lb Bond		
Staple Position	Top, Bottom, 2 Staple, Top-slant		
Stapling Capacity	Same Paper Size	50 sheets	A4, _{1/2} " x11" or smaller
		30 sheets	B4, _{1/2} " x14" or larger
	Mixed Paper Size	30 sheets	A4 LEF + A3 SEF, B5 LEF + B4 SEF, 8 _{1/2} " x11" LEF + 11" x17" SEF
Staple Replenishment	Cartridge exchange / 5000 pins per cartridge		

	Paper Size	Pages/Set	Sets	
	A 4 EE O 5 1	20-50 pages	150-60 sets	
Stapled Stack	A4 LEF, 8.5"x11" LEF	2-19 pages	150 sets	
Capacity (same	A 4 CEE D 5 0 5 11.11 11 CEE	15-50 pages	100-30 sets	
size)	A4 SEF, B5, 8.5"x11" SEF	2-14 pages 100 sets		
	Others	15-30 pages	100-33 sets	
	Omers	2-14 pages	100 sets	
	A4 LEF & A3 SEF,			
Stapled Stack Capacity (mixed sizes)	B5 LEF & B4 SEF, 8.5"x11" LEF,	2-30 pages	50 set	
0,200	11" x17" SEF			

Finisher SR4070 (D612)

This finisher provides booklet as well as corner stapling. Equipped with two trays, the upper tray holds stapled and shifted copies, and the lower tray holds booklet stapled and folded copies.

Finisher

Dimensions (W x D x H)	657 x 613 x 960 mm (25.9 x 24.1 x 37.8")
Weight	Less than 63 kg (138.6 lb.) (no punch unit) Less than 65 kg (143 lb.) (with punch unit)
Power Consumption	Less than 96 W
Noise	Less than 75 db
Configuration	Console type attached base-unit
Power Source	From base-unit

	Stack Capacity*	250 sheets A4, 8.5"x11" or smaller 50 sheets B4, 8.5"x14 or larger		
Proof Tray	Paper Size	A5-A3 SEF, A6 SEF, A6 LEF 5 _{1/2} " x8 _{1/2} " to 11" x 17" SEF, 12"x18" SEF		
	Paper Weight	52 g/m²-163 g/m² 14 lb Bond- 43 lb Bond / 90 lb Index / 60 lb Cover		
	Stack Capacity*	2,000 sheets	A4 LEF, 8.5"x11" LEF	
		1,000 sheets	A3 SEF, A4 SEF, B4 SEF, B5 11"x17" SEF, 8 _{1/2} " x14" SEF, 8 _{1/2} " x 11" SEF, 12"x18" SEF	
Shift Tray		500 sheets	A5 LEF	
		100 sheets	A5 SEF, B6 SEF, A6 SEF, 5 _{1/2} " x8 _{1/2} " SEF	
	Paper Size	A5 - A3 SEF, A6 SEF, B6 SEF 5 _{1/2} " x8 _{1/2} " to 11" x 17" SEF, 12" x 18" SEF		
	Paper Weight	52 g/m²-256 g/m² 14 lb Bond- 68 lb Bond / 140 lb Index / 90 lb Cover		

Stapler

Paper Size	B5-A3, 8.5"x11"-11"x17", 12"x18"
Paper Weight	64 g/m²-90 g/m², 17 lb Bond-28 lb Bond
Staple Position	Top, Bottom, 2 Staple, Top-slant

		50 sheets	A4, 8 _{1/2} " x 11" or smaller	
Staples Capacity*	Same Paper Size	30 sheets	B4, 8 _{1/2} " x 14" or larger	
	Mixed Paper Size	30 sheets	A4 LEF & A3 SEF, B5 LEF & B4 SEF, 8 _{1/2} "x11" LEF & 11" x17" SEF	
	Booklet Stapling	15 sheets	A4 SEF, A3 SEF, B5 SEF, B4 SEF, 8.5"x11" SEF, 8.5"x14" SEF, 11"x17" SEF, 12"x18" SEF	
Staple	Corner staple	5,000 staples per	cartridge	
Replenishment	Booklet staple	2,000 staples per cartridge		
	Same Size	A4 LEF, 8.5"x11" LEF	13-50 pages 2-12 pages	
		A4 SEF, B5, 8.5"x11" SEF	10-50 pages 2-9 pages	
Corner Staple Capacity		Others	10-30 pages 2-9 pages	
	Mixed Size	A4 LEF + A3 SEF B5 LEF + B4 SEF 8.5"x11" LEF + 11" x17" SEF	2-30 pages	
Booklet Staple Capacity	A4 SEF, A3 SEF, B5 SEF, B4 SEF 8.5"x11" SEF, 8.5"x14" SEF, 11"x17" SEF 12"x18" SEF	2-5 pages 6-10 pages 11-15 pages	,	

SR4060/SR4070 Paper Specifications

	Plain Paper		Pa	per Type	
Paper Size	Copier PPC	Used Paper	Recycled Paper	Colored Paper	Translucent Blueprint
A3 SEF	•	_	•	•	A
B4 SEF	•	A	•	•	A
A4 SEF	•	A	•	•	A
A4 LEF	•	A	•	*	A
B5 SEF	•	A	•	•	A
B5 LEF	•	A	•	*	A
A5 SEF	0	_	_	_	_
A5 LEF	0	_	_	_	_
B6 SEF	A	_	_	_	_
B6 LEF	A	_	_	_	_
12" x 18" SEF	•	_	•	•	_
11" x 17" SEF	•	_	•	•	A
8 _{1/2} " x 14"	•	_	•	•	A
8 _{1/2} " x 11" SEF	•	_	•	•	•
8 _{1/2} " x 11" LEF	•	•	•	•	A
5 _{1/2} " x 8 _{1/2} "	0	_	_	0	_
5 _{1/2} " x 8 _{1/2} "	0	_		0	_

- ◆: Corner stapling, Shift, YES
- •: Booklet stapling/folding, Shift, YES
- O: Shift ONLY
- ▲: Shift NO

1

-: Not available

Punch Unit Type 3260 (B702)

This punch unit is designed for use with the Finisher SR4060 and Finisher SR4070. There are three variations of this punch unit:

- Punch Unit Type 3260 SC (B702)
- Punch Unit Type 3260 2/4 EU (B702)
- Punch Unit Type 3260 NA 3/2 (B702)

	NA	2/3 hole switchable	
Available Punch Units	EU	2/4 holes switchable	
	Scandinavia	4 holes	
	NA 2-hole	Up to 5,000 sheets	
	NA 3-hole	Up to 5,000 sheets	
Punch Waste Replenishment	EU 2-hole	Up to 14,000 sheets	
	EU 4-hole	Up to 7,000 sheets	
	Scandinavia 4-hole Up to 7,000 sheets		
Paper Weight	52 g/m²-163 g/m², 14 lb Bond to 43 lb Bond / 90 lb Index / 60 l Cover		

	NA 2-hole	SEF	A5 to A3, 5 _{1/2} " x8 _{1/2} " to 11"x17"
	NA 2-110le	LEF	A5 - A4, 5 _{1/2} " x 8 _{1/2} ", 8 _{1/2} " x 11"
	NA 3-hole	SEF	A3, B4, 11"x17"
		LEF	A4, B5, 8 _{1/2} " x 11"
	EU 2-hole	SEF	A5 - A3, 5 _{1/2} " x 8 _{1/2} " to 11" x 17"
Paper Sizes		LEF	A5 to A4, 5 _{1/2} " x 8 _{1/2} ", 8 _{1/2} " x 11"
	EU 4-hole	SEF	A3, B4, 11"x17"
		LEF	A4, B5, 8 _{1/2} " x 11"
		SEF	A5 to A3, 5 _{1/2} " x 8 _{1/2} " to 11" x 17"
	Scandinavia 4-hole	LEF	A5 - A4, 5 _{1/2} "x8 _{1/2} ", 8 _{1/2} " x 11"

Mailbox CS4000 (D616)

The mailbox can be installed on top of the Finisher SR4060, SR4070, or SR4080.

540 x 600 x 660 mm (21.3 x 23.6 x 26 in.)		
Less than 15 kg (33 lb.)		
Less than 48 W		
Less than 74 dB		
9 bins		
100 sheets*		
A5. A4, A3		
5 _{1/2} " x 8 _{1/2} ", 8 _{1/2} " x11", 8 _{1/2} " x14", 11"x17"		
52 - 128g/m²		
14 lb – 34 lb Bond		

Cover Interposer Tray CI4000 (D614)

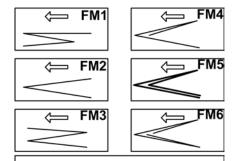
Dimension (W x D x H)		500 x 600 x 600 mm (19.7 x 23.6 x 23.6 in.)		
Weight		Less than 12 Kg (26.4 lb.)		
Power Consumption		Less than 43 W		
Noise		Less than 65 db		
Stack Capability	·*	200 Sheets		
Paper Size		A5-A3, 5 _{1/2} " x 8 _{1/2} " - 11" x 17"		
Paper Weight		64 g/m ² -216 g/m ² 17 lb. Bond- 80 lb. b Cover		
Original Set Position		Center		
Original Set	Normal Feed	Face-up		
	Booklet Feed	Face-down		

Multi Folding Unit FD4000 (D615)

General

Dimensions (W × D × H)	470 × 980 × 730 mm (18.6 × 38.6 × 28.8 in.)		
Weight	Approx. 92 kg (202.9 lb.)		
Power Consumption	Maximum 270 W (A separate power source is required.)		
Power Source	220 - 240 V, 50/60 Hz, 1.2 A		
Operating Environment	Temperature and humidity ranges: Same as main machine.		
Paper Weight	Single sheet mode: 64 to 103 g/m² (17 lb. Bond - 28 lb. Bond) Multiple sheets mode: 64 to 80 g/m² (17 lb. Bond - 20 lb. Bond)		
Folding Methods	6 (see below)		

Speed	Straight-Through		100 to 700 mm/s
	Folding		270 to 700 mm/s
Straight-Through Feed	Size Postcard to 1		13x19.2"
	Type OHP: A4, B.		A3, A4, B4, B5 5 A4 LEF, LT LEF
Folding Methods	6 (FM1 to FM6)		



FM1: Z-Folding FM2: Half Fold FM3: Letter Fold-out FM4: Letter Fold-in

FM5: Double Parallel Fold

FM6: Gate Fold

d454v900

Paper Sizes (Folding)	FM1	A3, B4, DLT, LG, A4, LT, 12x18", 8-kai
	FM2	A3, B4, DLT, LG, A4, B5, LT 12x18", 12.6x18.5", 12.6x19.2", 13x18", 13x19", 13x19.2", 226x310 mm, 310x432 mm, SRA3, SRA4, 8-kai
	FM3	
	FM4	A2 D4 DIT IC A4 IT D5 1210" 0 l:
	FM5	A3, B4, DLT, LG, A4, LT, B5, 12x18", 8-kai
	FM6	

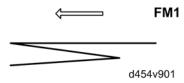
Paper Weights (Folding)		FM1		
		FM2		
		FM3	1 105 / 2	
		FM4	64 to 105 g/m ²	
		FM5		
		FM6		
Multiple Foldi	ng	FM1	Not allowed	
		FM2	Max. 3 (64 to 80 g/m ² only)	
		FM3	Max. 3 (64 to 80 g/m ² only)	
		FM4	Max. 3 (64 to 80 g/m² , B4, A4, LT, B5 only)	
		FM5	Not allowed	
		FM6	Not allowed	
Line Speed (C	Line Speed (Only FM1 Z-Folded paper can exit downstream)			
No Fold	350 mm/sec. to top tray To downstream: Same as main machine.		machine.	
	700 mm/sec. to top tray (paper ≤ 355.6 mm long)		er ≦ 355.6 mm long)	
FM1	450 mm/sec. to top tray (paper < 355.6 mm long)		-	
	To downstream: Sa			
	1 Sheet: Same as m		e	
FM2	2-3 Sheets: 454 mm/sec. FM2 700 mm/sec. to top tray (paper ≤ 355.6 mm long)			
			per ≤ 279.4 <355.6 mm long)	
	250 mm/sec. to top tray (paper < 279.4 mm long)			
	1 Sheet: Same as main machine			
FM3	2-3 Sheets: 454 mm/sec. to top tray			
FM4	350 mm/sec. to top tray (paper ≤ 420 mm long)			
	250 mm/sec. to top tray (paper < 420 mm long)			

FM5	1 Sheet: Same as main machine 350 mm/sec. to top tray (paper ≤ 420 mm long) 250 mm/sec. to top tray (paper < 420 mm long)				
FM6	1 Sheet: Same as main machine as far as 3rd Stopper. At 3rd stopper feeds 50 mm at 100 mm/sec. 350 mm/sec. to top tray (paper ≤ 420 mm long) 250 mm/sec. to top tray (paper < 420 mm long)				
Power Supply	NA AC 120V 60 Hz, 15A				
	EU AC 220 to 240V		o 240V, 50/60 Hz 10	0V, 50/60 Hz 10A	
Power Consur	ower Consumption 270 W				
Size (w x d x h) 466 x 98		466 x 980) x 730 mm	n (18.4 x 38.6 x 28.7 i	n.)
Level	Less		Less than 5 mm deviation at front/back, left/right		
Weight	92 kg (203 lb)				
Noise Level (dB A)		Mode		Alone	System
	No Folding		9	< 76 dB	
		Folding < 78 dB < 83 dB		< 83 dB	

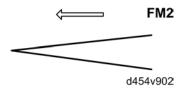
Tray Capacity

The capacity of the tray on top of the unit for folded paper is determined by these variables:

- Folding Methods (FM1 to FM6)
- Paper size
- Paper weight

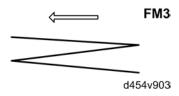


Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
8-kai	35	20
12x18"	35	20
A3 SEF	35	20
DLT	35	20
B4 SEF	35	20
LG SEF	35	20
A4 SEF	30	20
LT SEF	30	20



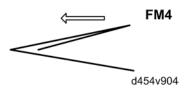
Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
13x19.2"	40	25
13x19"	40	25
12.6x19.2"	40	25
12.6x18.5"	40	25
13x18"	40	25
SRA3 (320x450 mm)	40	25
SRA4 (225x320 mm)	40	25
226x310 mm	40	25
310x432 mm	40	25

Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
8-kai	40	25
12x18"	40	25
A3 SEF	40	25
DLT	40	25
B4 SEF	40	25
LG SEF	40	25
A4 SEF	50	50
LT SEF	50	50
B5 SEF	50	50

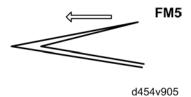


Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
8-kai	30	20
12x18"	30	20
A3 SEF	30	20
DLT	30	20
B4 SEF	30	20
LG SEF	30	20
A4 SEF	40	30
LT SEF	40	30

Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
B5 SEF	40	30

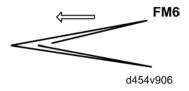


Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
8-kai	40	20
12x18"	40	20
A3 SEF	40	20
DLT	40	20
B4 SEF	40	20
LG SEF	40	20
A4 SEF	50	40
LT SEF	50	40
B5 SEF	50	40



Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
8-kai	30	20

Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
12x18"	30	20
A3 SEF	30	20
DLT	30	20
B4 SEF	30	20
LG SEF	30	20
A4 SEF	30	30
LT SEF	30	30
B5 SEF	30	30



Size	Weight (Standard) 64 to 80 g/m ²	Weight (Heavy) 64 to 80 g/m ²
8-kai	50	20
12x18"	50	20
A3 SEF	50	20
DLT	50	20
B4 SEF	50	20
LG SEF	50	20
A4 SEF	30	30
LT SEF	30	30
B5 SEF	30	30

2. Appendix: Service Call Conditions

Service Call Conditions

Service Mode Lock/Unlock

At locations where the machine contains sensitive data, the customer engineer cannot operate the machine until the Administrator turns the service mode lock off. This function makes sure that work on the machine is always done with the permission of the Administrator.

- If you cannot go into the SP mode, ask the Administrator to log in with the User Tool and then set "Service Mode Lock" to OFF. After he or she logs in:
 - User Tools > System Settings > Administrator Tools > Service Mode Lock > OFF
 - This unlocks the machine and lets you get access to all the SP codes.
 - The CE can do servicing on the machine and turn the machine off and on. It is not necessary to
 ask the Administrator to log in again each time the machine is turned on.
- 2. If you must use the printer bit switches, go into the SP mode and set SP 5169 to "1".
- 3. After machine servicing is completed:
 - Change SP 5169 from "1" to "0".
 - Turn the machine off and on. Tell the administrator that you completed servicing the machine.
 - The Administrator will then set the "Service Mode Lock" to ON.

Service Call Conditions

There are 4 levels of service call conditions.

Level	Definition	Reset Procedure
A	Fusing unit SCs displayed on the operation panel. The machine is disabled. The user cannot reset the SC.	This is a fatal error. The machine cannot be used until the service technician releases it for servicing with SP5810, solves the problem, and then cycles the machine off/on.

Level	Definition	Reset Procedure
В	SCs that disable only the features that use the defective item. Although these SCs are not shown to the user under normal conditions, they are displayed on the operation panel only when the defective feature is selected.	Turn the main power switch off/on.
С	SCs that are not shown on the operation panel. They are internally logged.	Logging only
D	Turning the operation switch or the main power switch off/on resets SCs Displayed on the operation panel. These are re-displayed if the error occurs again.	Turn the operation switch or main power switch off/on.

Before You Use the Tables

The following notations are used to identify which finisher the SC codes refer to.

Notation	Finisher
D610	Finisher SR4080 (D610)
D611	Finisher SR4060 (D611)
D612	Finisher SR4070 (D612)
D615	Multi Folding Unit FD4000 (D615)

Only one of these finishers can be installed in the system. Many of the SC codes apply to more than one finisher because they have nearly identical parts and part names.

Example'

		Exit guide motor (D610/D611/D612)
725	В	The status of the exit guide sensor did not change at the prescribed time during operation of the exit guide.
		Exit guide open sensor loose, broken, defective.
		Exit guide motor defective
		Finisher main board defective

SC725 applies to the exit guide motor of whichever finisher is installed: The SR4080, the SR4060, or the SR4070

- If a problem concerns electrical circuit boards, always disconnect then reconnect the connectors before replacing the PCBs.
- If a motor lock error occurs, first check the mechanical load before replacing motors or sensors.
- When a Level "A" or "B" SC occurs while in an SP mode, the display does not display the SC number. If this occurs, check the SC number after leaving the SP mode.

SC100: Scanning

SC100

D At trigger on, the lamp	was not detected on.
SBU board defect SIOB board defect IPU board defect BCU board defect Exposure lamp de Lamp stabilizer de Lamp stabilizer he Standard white pl DF white belt dirty DF glass dirty or he	ctive ive ctive efective efective arness damaged, disconnected late dirty, disconnected or has condensation v nas condensation rty, out of position or has condensation

		Scanner home position error 1
	D	The scanner HP sensor does not detect the OFF condition during initialization or copying.
		BCU, SIOB defective
SC120		Scanner motor defective
	_	Scanner HP sensor defective.
	_	Harness between BCU, SIOB, scanner motor disconnected.
		Harness between scanner HP sensor and BCU disconnected.
		Scanner wire, timing belt, pulley, or carriage installed incorrectly.

2

	D	Scanner home position error 2
		The scanner HP sensor does not detect the ON condition during initialization or copying.
		BCU, SIOB defective
SC121	-	Scanner motor defective
		Scanner HP sensor defective
		Harness between BCU, SIOB, scanner motor disconnected
		Harness between scanner HP sensor and BCU disconnected
		Scanner wire, timing belt, pulley or carriage installed incorrectly.

	D	Black level detection error
		The black level cannot be adjusted within the target during auto gain control.
		Harness between SBU – SIOB is disconnected.
		Harness between SIOB – BCU is disconnected.
SC141		Defective SBU
		Defective BCU
		Check the SBU-SIOB/SIOB-BCU harness connections or replace these harnesses.
		Replace the SBU.
		Replace the BCU

	White level detection error
D	The white level cannot be adjusted to the second target level within the target during auto gain control.
SC142	 Dirty exposure lamp or optics section SBU board defective SIOB defective IPU board defective BCU board defective Harnesses are disconnected. Exposure lamp defective Lamp stabilizer defective Scanner motor defective Clean the exposure glass, white plate, mirrors, and lens. Check if the exposure lamp is lit during initialization. Check the harness connection. Replace the exposure lamp. Replace the scanner motor. Replace the SBU board, SIOB, IPU board or BCU board.

	D	SBU transmission error
		After the SBU switches on, the BCU detects one of the following conditions on the SBU:
		1 s after power on, the SYDO signal does not go high, even after 1 retry.
		1 s after power on, the SYDO signal goes high, but the SBU ID could not be read after 3 attempts.
SC144		SBU defective
	-	SIOB defective
		BCU defective
		Harness between the SBU - SIOB is disconnected
		Harness between the SIOB - BCU is disconnected
		Harness between the SIOB – PSU is disconnected

	i	1
SC161-01	D	IPU error (LSYNC abnormal)
		The error result of self-diagnostic by the ASIC on the BICU is detected.
		Defective BICU
		Defective connection between BICU and SBU
		Check the connection between BICU and SBU.
		Replace the BICU.
SC161-02	D	IPU error (Ri response abnormal)
		The machine detects an error during an access to the Ri.
		Defective BICU board
		Replace the BICU board.
SC161-03	D	IPU error (Aruru operation abnormal)
		The IPU fails to configure or initialize the DRAM.
		Defective BICU board
		Replace the BICU board.

SC165	D	Copy data security unit error
		The copy data security option is installed by not operating correctly.
	-	Copy data security card corrupted
		The board is not installed or the board is defective

	D	Inverter Fan Error
		When the exposure lamp is triggered on, the inverter fan motor does not rotate.
SC181		SIOB defective
	-	BCU defective
		Inverter fan motor defective
		Harness between the inverter fan motor - SIOB is disconnected
		Harness between the SIOB – BCU is disconnected
		Harness between the SIOB – PSU is disconnected

SC182	D	Scanner Fan Error: Right Side
		The fan located on the right side of the exposure unit is not rotating.
		Check the fan connections
	-	Fan defective
		Check SBU connection
		SBU defective

SC185	D	CIS transmission error
		Error caused during ASIC register's automatic initialization on the CIS, or during transmission between the CIS – DF.
	-	Harness between the CIS – DF is disconnected CIS defective

	D	CIS LED error
SC186		LED on the CIS causes error
		 During initializing, the ration of the average between leading-edge area and rear-edge is beyond the permissible level (0.7 – 1.43).
		During scanning, the shading data peak is under 32(8bit).
		Harness CN210 and CN220 on ADF are disconnected.
		Otherwise, replace CIS.

		CIS BK level error
		The BK level scanned by CIS is abnormal.
		The BK level average of R, G or B is/are not from 2 to 62.
SC187	D	0 < Calibrated BK data level < 255(10bit).
		Turn off the machine.
		Make sure CN210 and CN220 are connected firmly.
		Turn on the machine.

SC188	D	CIS white level error
		The shading data peak detected from the CIS is abnormal.
		CIS defective
	-	Make sure CN210 and CN220 are connected firmly. Replace the CIS.

		CIS gray balance adjustment error
		The adjustment error occurs during the test after adjusting the gray balance.
		Retry the gray balance adjustment.
SC189	D	If the machine does not recover, do the following steps.
		1. Turn off the machine.
		2. Make sure CN210 and CN220 are connected firmly.
		3. Turn on the machine.
		If the machine does not recover, replace the CIS.

56105	D	Machine serial number error	
30193		The number registered for the machine serial number does not match.	
		Confirm the correct serial number of the machine in the specifications.	
	-	Important: When SC195 occurs, the serial number must be input. Contact your technical supervisor.	
	SC195	SC195 D	The number registered for the machine serial number does not match. Confirm the correct serial number of the machine in the specifications. Important: When SC195 occurs, the serial number must be input. Contact your

SC200: Exposure

SC200

		Polygon mirror motor error 1: Timeout at ON
	D	The polygon mirror motor unit did not enter "Ready" status within 20 sec. after the motor was turned on,
SC202		The polygon mirror motor PCB connector is loose, broken, or defective
	-	Polygon mirror motor PCB defective
		Polygon mirror motor defective
		IPU defective

		Polygon mirror motor error 2: Timeout at OFF	
	D	The polygon mirror motor did not leave "Ready" within 3 sec. after the motor was switched off. (The XSCRDY signal did not go HIGH (inactive) within 3 sec.)	
SC203		The polygon mirror motor PCB connector is loose, broken, or defective	
		Polygon mirror motor PCB defective	
	-	Polygon mirror motor defective	
		IPU defective	

SC204	D	Polygon mirror motor error 3: XSCRDY signal error
		The polygon mirror motor "Ready" signal goes inactive (HIGH) while images are being produced or the synchronization signal is being output.
		Polygon mirror motor PCB connector loose, broken, defective
	-	Polygon mirror motor PCB defective
		Polygon mirror motor defective

SC220	D	Laser synchronization detection error
		The 1st laser synchronization detection unit could not detect the line synchronization signal (DETPO) within 500 ms while the polygon mirror motor was operating at normal speed.
		Note: The unit polls for the signal every 50 ms. This SC is issued after the 10th attempt fails to detect the signal.
		Laser synchronization board connector loose, broken, defective Laser synchronization detection board is not installed correctly (out of
	-	alignment)
		Laser synchronization board defective
		IPU defective

		Laser Synchronization Detector Error: K Leading Edge (LD1)
	D	While the polygon motor is rotating normally, no synchronizing detection signal is output for black, leading edge for any LD other than LDO.
SC221		Harness between the laser synchronizing detector and I/F unit is disconnected, defective
		Check all connections between LD unit, LDB, IPU
	-	• LD unit
		LDB defective
		IPU defective

		FGATE ON error: K		
		The PFGATE ON signal does not assert within 5 seconds after processing the image in normal job or MUSIC for start position [K].		
		Defective ASIC		
SC230	D	Poor connection between controller and BICU.		
		Defective BICU		
		Check the connection between the controller board and the BICU.		
		Replace the BICU.		
		Replace the controller board.		

LD error

	D	FGATE OFF Error: K		
SC231		 The PFGATE ON signal still asserts within 5 seconds after processing the image in normal job or MUSIC for end position [K]. The PFGATE ON signal still asserts when the next job starts. 		
		See SC 230 for troubleshooting details.		

		The BICU detects LDB error a few times consecutively when LDB unit turns on after LDB initialization.
SC240	С	Worn-out LD
3C240		Disconnected or broken harness of the LD
		Replace the harness of the LD.
		Replace the laser optics housing unit.
		Replace the BICU.
		GAVD communication error
		A problem occurred in the GAVD or eSOC.
66070		Check connection points on the BCU, IPU for loose, broken, or defective
SC270	D	harness or connector
		IPU defective
		BCU defective
		LDU effective

2

SC300: Image Development 1

SC300

	D	Charge corona output error			
56300 00		The feedback voltage from the charge corona unit is detected too high 9 times.			
SC300-00	_	Charge corona power pack defective Charge corona harness disconnected			
		Poor charge corona unit connection			
		Charge corona wire cleaner error 1			
	D	The charge cleaner pad does not arrive at the home position:			
SC305-00		Motor locked within 4 s after switching on, or does not lock within 30 s.			
30303-00		Motor locked within 10 s after reversing, or does not lock within 30 s.			
	-	Charge corona wire cleaner motor defective			
		Motor driver defective			
	С	Charge corona wire cleaner error 2			
SC306-00		Charge corona motor is disconnected. (The current at the charge corona motor is detected less than 83 mA.)			
	_	Charge corona wire cleaner motor connector is defective or disconnected.			

SC307-00		Charge grid circuit open
	D	When high voltage goes to the corona grid, feedback voltage is more than the set value 9 times. This feedback voltage is used to update PWM for output control.
	-	 Charge corona unit defective or disconnected Charge corona harness defective Charge corona power pack is defective.

SC320-01	D	Development output abnormal The high voltage applied to the development unit is detected 10 times higher than the upper limit (45%) of PWM.
	-	Development power pack defective Development bias leak due to poor connection, defective connector

SC324-01		Development motor lock
		The development motor lock signal remains high for 2 seconds while the development motor is on.
	D	If this SC is returned on a machine in the field, inspect the toner supply unit coil. If the gear is not damaged, replace the coil. If the gear is damaged, the gear shaft is probably deformed, so replace the entire unit.
		Drive mechanism overloaded due to toner clumping in the wasted toner path
		Motor driver board defective

		TD sensor adjustment error: Adjustment output abnormal
	D	During the TD sensor auto adjustment, the TD sensor output voltage (Vt) is 2.5 volts or higher even though the control voltage is set to the minimum value (PWM = 0). When this error occurs, SP2-906-1 reads 0.00V.
		Note: This SC is released only after correct adjustment of the TD sensor has been achieved. Switching the machine off and on will cancel the SC display, but does not release ID sensor toner supply.
SC360-01	-	TD sensor defective
		TD sensor harness disconnected
		TD sensor connector disconnected or defective
		IOB defective
		Toner bottle motor defective
		Note: When the TD sensor is defective, the toner supply is controlled using pixel count and the ID sensor.

		TD sensor adjustment error: Timeout Error
	D	During the TD sensor auto adjustment, the TD sensor output voltage (Vt) does not enter the target range (3.0 \pm 0.1V) within 20 s. When this error occurs, the display of SP2-906-1 reads 0.00V.
		Note:
SC360-11		This SC is released only after correct adjustment of the TD sensor has been achieved. Switching the machine off and on will cancel the SC display, but does not release ID sensor toner supply.
		TD sensor defective
		TD sensor harness disconnected
	_	TD sensor connector disconnected or defective
		IOB defective

		TD sensor output error: Upper Limit
	С	TD sensor output voltage (Vt), measured during each copy cycle, is detected higher than 4V for 10 prints.
SC361-00	-	 TD sensor defective TD sensor harness disconnected TD sensor connector disconnected or defective IOB defective Toner bottle motor defective Note: When the TD sensor is defective, the toner supply is controlled using pixel count and the ID sensor.

		TD sensor output error: Lower limit
	С	TD sensor output voltage (Vt), measured during each copy cycle, is detected 10 times lower than 0.5V.
SC362-00	-	 TD sensor defective TD sensor harness disconnected TD sensor connector disconnected or defective IOB defective Toner bottle motor defective Note: When the TD sensor is defective, the toner supply is controlled using pixel count and the ID sensor.

		ID sensor adjustment error: LED output abnormal
	С	One of the following ID sensor output voltages is detected at ID sensor initialization.
		 Vsg less than 4.0V when the maximum PWM input (255) is applied to the ID sensor.
		Vsg greater than or equal to 4.0V when the minimum PWM input (0) is applied to the ID sensor.
SC370-01		ID sensor defective
		ID sensor harness disconnected
		ID sensor connector defective
	_	IOB defective
	_	ID sensor pattern not written correctly
		Incorrect image density
		Charge power pack defective
		ID sensor dirty

		ID sensor adjustment error: Timeout error
	С	Vsg falls out of the adjustment target (4.0 ±0.2V) during Vsg checking within 20 sec.
SC370-11	-	 ID sensor defective ID sensor harness disconnected ID sensor connector defective IOB defective ID sensor pattern not written correctly Incorrect image density Charge power pack defective ID sensor dirty

	С	ID sensor error: Drum surface voltage error
		The ID sensor output voltage is 5.0V and the PWM signal input to the ID sensor is 0 when checking the ID sensor pattern.
SC375-00	-	 ID sensor defective ID sensor harness disconnected ID sensor connector defective IOB defective ID sensor pattern not written correctly Incorrect image density Charge power pack defective
		ID sensor dirty

	С	ID sensor error: Pattern edge detection failed
		For 2 s during the ID sensor pattern check, the ID sensor pattern edge voltage is not 2.5V or the pattern edge is not detected within 800 ms.
SC376-00	-	 ID sensor defective ID sensor harness disconnected ID sensor connector defective IOB defective ID sensor pattern not written correctly
		 Incorrect image density Charge power pack defective ID sensor dirty

	С	ID sensor error: Potential surface reading error
		The Vp value, which measures the reflectivity of the ID sensor pattern, was not in the range of -70V to -400V.
SC377-00	-	 Potential sensor defective Potential sensor harness defective Potential sensor disconnected IOB defective OPC unit connector defective Charge corona power pack defective Charge corona wire dirty, broken

		ID sensor pattern error
		One of the following ID sensor output voltages was detected twice consecutively when checking the ID sensor pattern.
	С	Vsp greater than or equals 2.5V
		Vsg less than 2.5
		• Vsp = 0V
		• Vsg = 0
SC378-00		ID sensor defective
		ID sensor harness disconnected
		ID sensor connector defective
		IOB defective
	-	ID sensor pattern not written correctly
		Incorrect image density
		Charge power pack defective
		ID sensor dirty

	С	Potential sensor calibration error (VM100)
		During drum potential sensor calibration, when -100V is applied to the drum, the output value is out of the prescribed range.
SC380-01	-	 Potential sensor defective Potential sensor harness disconnected Potential sensor connector defective or disconnected IOB defective OPC connector defective Development power pack defective

		Potential sensor calibration error (VM800)
	С	During drum potential sensor calibration, when -800V is applied to the drum, the output value is out of the prescribed range.
SC380-11	-	 Potential sensor defective Potential sensor harness disconnected Potential sensor connector defective or disconnected IOB defective OPC connector defective Development power pack defective
		Potential sensor calibration error (skew)
	С	During drum potential sensor calibration, the drum potential sensor output voltage does not meet specification when test voltages (-100V, -800V) are applied to the drum.
SC380-21	-	 Potential sensor defective Potential sensor harness disconnected Potential sensor connector defective or disconnected IOB defective OPC connector defective Development power pack defective
		Potential sensor calibration error (cut off)
	С	During drum potential sensor calibration, the drum potential sensor output voltage did not meet specification when test voltages (-100V, -800V) are applied to the drum.
SC380-31	-	 Potential sensor defective Potential sensor harness disconnected Potential sensor connector defective or disconnected IOB defective

• OPC connector defective

• Development power pack defective

	С	Potential sensor calibration error (VD)
		During drum potential sensor calibration when adjusting the drum potential (VD), the drum potential sensor detects VD higher than VG (grid voltage).
		-or-
		When adjusting VD (drum surface potential of black areas after exposure), even after 5 adjustments of VG (charge corona grid potential), VD could not be set in the target range (-800±20+ VL + 130V)
SC380-41		Potential sensor defective
		Potential sensor harness disconnected
		Potential sensor connector defective or disconnected
	-	IOB defective
		OPC connector defective
		Development power pack defective
		Charge corona unit worn out, dirty

	С	Potential sensor calibration (VL)
		During drum potential sensor calibration, when VL is adjusted, the pattern surface potential VL pattern is not within range OV to -400V. (VL is the potential after exposing a white pattern.)
		Potential sensor defective
SC380-51		Potential sensor harness disconnected
		Potential sensor connector defective or disconnected
	-	IOB defective
		OPC connector defective
		Charge corona power pack defective
		Development power pack defective

		Main motor error
SC396-01	D	The main motor lock signal remains low for 2 seconds while the main motor is on.
		Drive mechanism overloaded Motor driver board defective

SC400: Image Development 2

SC400

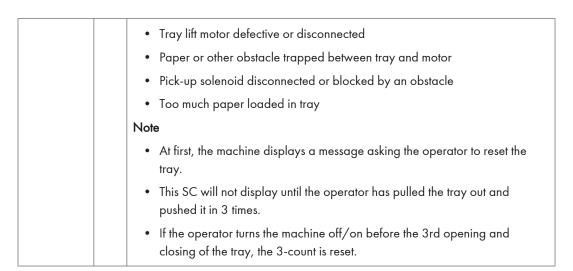
		Quenching lamp error
SC410-00	С	At the completion of auto process control initialization, the potential of the drum surface detected by the potential sensor is more than -400V, the prescribed value.
		Quenching lamp defective
		Quenching lamp harness disconnected
		Quenching lamp connector loose, defective
		Transfer output abnormal (voltage leak detected)
SC440-01	D	When the transfer is output, the feedback voltage remains higher than 4V for 60 ms.
3C440-01		Transfer power pack defective
	-	Transfer current terminal, transfer power pack disconnected, damaged connector
		Transfer output abnormal release detection
SC440-02	D	When the transfer is output, there is hardly any feedback voltage within 60 ms even with application of 24% PWM.
3C440-02		Transfer power pack defective
	-	Transfer unit harness disconnected
		Transfer connector loose, defective
		Topor recycling unit error
SC495-00	D	Toner recycling unit error
		Encoder pulse does not change for 3 s after the main motor switches on.
		Waste toner transport has stopped due to motor overload
		Toner end sensor detective, disconnected

		Toner collection bottle error
SC496-00	D	The toner collection bottle set switch remains off when the front door is closed.
		No toner collection bottle set Poor connection of the switch connector

SC500: Feed, Transport, Duplex, and Fusing

SC500

		Tray 1 lift malfunction
SC501	D	The lift sensor is not activated within 10 s after the tray lift motor starts lifting the bottom plate.
SC501	В	When the tray lowers, the tray lift sensor does not go off within 1.5 s.
		Tray overload detected when the tray is set.
		The lower limit sensor of the LCT does not detect the lower limit within 10 s.
		Tray lift motor defective, disconnected
		Paper or other obstacle trapped between tray and motor
		Pick-up solenoid disconnected, blocked by an obstacle
		Too much paper loaded in tray
		Note
		At first, the machine displays a message asking the operator to reset the tray.
		 This SC will not display until the operator has pulled the tray out and pushed it in 3 times.
		If the operator turns the machine off/on before the 3rd opening and closing of the tray, the 3-count is reset.
		Tray 2 lift malfunction
SC502	В	The lift sensor is not activated within 10 s after the tray lift motor starts lifting the bottom plate.
		When the tray lowers, the tray lift sensor does not go off within 1.5 s.
		Tray overload detected when the tray is set.



		Tray 3 lift malfunction
SC503	В	The lift sensor is not activated within 10 s after the tray lift motor starts lifting the bottom plate.
		When the tray lowers, the tray lift sensor does not go off within 1.5 s.
		Tray overload detected when the tray is set.
		Tray lift motor defective or disconnected
		Paper or other obstacle trapped between tray and motor
		Pick-up solenoid disconnected or blocked by an obstacle
		Too much paper loaded in tray
		Note
		At first, the machine displays a message asking the operator to reset the tray.
		This SC will not display until the operator has pulled the tray out and pushed it in 3 times.
		If the operator turns the machine off/on before the 3rd opening and closing of the tray, the 3-count is reset.

		Tray 4 lift malfunction
SC504	В	The lift sensor is not activated within 10 s after the tray lift motor starts lifting the bottom plate.
		When the tray lowers, the tray lift sensor does not go off within 1.5 s.
		Tray overload detected when the tray is set.

Tray lift motor defective or disconnected
Paper or other obstacle trapped between tray and motor
Pick-up solenoid disconnected or blocked by an obstacle
Too much paper loaded in tray
Note
 At first, the machine displays a message asking the operator to reset the tray.
 This SC will not display until the operator has pulled the tray out and pushed it in 3 times.
 If the operator turns the machine off/on before the 3rd opening and closing of the tray, the 3-count is reset.

		LCT tray malfunction
		One of the following conditions is detected:
		When the bottom plate is lifted, the upper limit sensor does not come on for 18 s.
SC510	В	When the bottom plate is lowered, the lower limit sensor does not come on for 18 s.
		 After lift begins, the upper limit sensor does not switch on before the pick-up solenoid switches on.
		The paper end sensor switches on during lift and the upper limit sensor does not switch on for 2.5 s, and a message prompts user to reset paper.
		Tray lift motor defective or connector disconnected
		Lift sensor defective or disconnected
		Pick-up solenoid defective or disconnected
		Paper end sensor defective

		Duplex jogger motor error 1
SC515-00	С	When the jogger fence moves to the home position, the jogger HP sensor does not turn on even if the jogger fence motor has moved the jogger fence 153.5 mm.
		 Paper or other obstacle has jammed mechanism Sensor connector disconnected or defective Sensor defective

		Duplex jogger motor error 2
SC516-00	С	When the jogger fence moves from the home position, the jogger fence HP sensor does not turn off even if the jogger motor has moved the jogger fence 153.5 mm.
		 Paper or other obstacle has jammed mechanism Sensor connector disconnected or defective Sensor defective

SC530-00	_	Main fan error
	D	The main fan motor lock signal goes high for 5 s while the fan is on.
		Fan motor overloaded due to obstruction Fan connector disconnected

SC540 RTB 39

SC540-01	D	Fusing exit motor error
3C340-01		The PLL lock signal was low for 2 s during motor operation.
		Motor lock caused by physical overload Motor drive PCB defective

		Fusing web motor error 1
SC540-02	D	The amount of current detected during operation of the web motor exceeded 350 mA in 5 successive samples.
3C340-02		Motor connection loose, broken, defective
		Motor disconnected
		Motor lock or short

SC540-03	А	Fusing web motor error 2
		SC540-02 has occurred three times and the machine has shut down automatically due to failure of the web motor.
		Web motor harness loose, broken, defective
		Web motor disconnected
		Web motor defective

SC540-04	A	Fusing web motor error 3
		SC540-02 has occurred at total of 10 times and the machine has shut down automatically due to failure of the web motor.
		Web motor harness loose, broken, defective
		Web motor disconnected
		Web motor defective

SC541		Fusing thermistor open
	A	The fusing temperature detected by the center thermistor was below 0°C for 7 s.
		Thermistor open
		Thermistor connector defective
		Thermistor damaged, or out of position
		Fusing temperature – 15% less than the standard input voltage

SC542 RTB 42

		Fusing temperature warm-up error 1: Center themistor
SC542-001	A	The center thermistor that touches the hot roller determined that the hot roller failed to reach the warm-up temperature within the prescribed time.
		Fusing lamp disconnected
		Thermistor warped, out of position
		Thermostat has opened

		Fusing temperature warm-up error 2: Center themistor
SC542-002	A	The center thermistor that touches the hot roller determined that the hot roller failed to reach 100° within the prescribed time.
		Fusing lamp disconnected
		Thermistor warped, out of position
		Thermostat has opened

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SC542 RTB 42

		Fusing temperature warm-up error 3: Center themistor
SC542-003	A	The center thermistor that touches the hot roller determined that the hot roller failed to reach 100° within the prescribed time.
		Fusing lamp disconnected
		Thermistor warped, out of position
		Thermostat has opened
		Fusing lamp overheat error 1 (software)
SC543	A	Central thermistor detected a temperature of 240°C at the center of the hot roller. Fusing temperature control software error
		PSU defective
		IOB defective
		BICU defective
		Fusing lamp overheat error 1: Hardware
SC544	A	The center thermistor or an end thermistor detected a temperature of 250°C on the hot roller.
		PSU defective
		IOB defective
		BICU defective
		Fusing lamp overheat error 2: Center lamp
SC545	A	After hot roller reaches warm-up temperature, the fusing lamps remained on at full capacity for 11 samplings (1.8 s. duration) while the hot roller was no rotating.
		Thermistor damaged, or out of position
		Fusing lamp disconnected
		Zero cross signal error 1: Fusing relay
SC547-01	D	At power on and with the fusing relay off, 3 samplings detected that the zero
		Ai power on and with the rusing relay off, a samplings defected that the zero

cross was not normal.

		Fusing relay short
		Fusing relay drive circuit defective
	T	
		Zero cross signal error 2: Fusing relay
SC547-02	D	No zero cross signal was detected within 3 sec. after power on or after closing the front door.
		Fusing relay short
		Fusing relay drive circuit defective
		Zero cross signal error 2: Unstable power supply
SC547-03	D	After 11 samplings the power supply was not within 50 to 60 Hz, indicating that the power supply is not stable.
		Check power source with local supplier
		Fusing thermistor error 1: End thermistor
SC551	A	The end thermistor (contact type) was less than OC (32F) for more than 7 seconds.
		Thermistor connector loose, broken, defective
		Thermistor incorrectly installed or loose
		Fusing reload temperature error 1: End thermistor
		The end thermistor (contact type) could not detect:
SC552-01	A	• 100°C 25 seconds after the start of the warm-up cycle.
	'	A change in temperature more than 16 degrees for 5 seconds.
		The reload temperature with 56 seconds after the start of the fusing temperature control cycle.
		Fusing lamp disconnected
		,
		Thermistor connector loose, broken, defective
		Thermistor out of position, installed incorrectly
		Thermostat open

SC552-02	A	Fusing reload temperature error 2: End thermistor
3C332-02		The hot roller did not reach 100°C within the prescribed time.
		 Fusing lamp disconnected Thermistor connector loose, broken, defective Thermistor out of position, installed incorrectly Thermostat open

SC552-03	A	Fusing reload temperature error 3: End thermistor
		The hot roller did not reach the prescribed temperature within 3 sec, after the start of the fusing temperature control cycle.
		Fusing lamp disconnected
		Thermistor connector loose, broken, defective
		Thermistor out of position, installed incorrectly
		Thermostat open

		Fusing thermistor error 4: End thermistor (software)
SC553	Α	The end thermistor (contact type) was at 240°C (464°F) for more than 1 second. The temperature is read 10 times every second. (at 0.1 s intervals).
		PSU defective
		IOB control board defective
		BICU control board defective

SC555 RTB 33

		Fusing lamp error
SC555	A	After the start of the warmup cycle, a fusing lamp was at full power for 1.8 s but the hot roller did not turn.
		Thermistor bent, out of position
		Fusing lamp disconnected
		Circuit breaker opened

		Zero cross signal error
SC557	С	High frequency noise was detected on the powe
		r line.
		 No action required. The SC code is logged and the operation of the machine is not affected.

		Fusing jam: 3 counts
SC559	A	At the fusing exit sensor the paper was detected late for three pulse counts (lag error), and SP1159 was on.
		If this SC occurs, the machine cannot be used until the service technician cancels the SC code.
		This SC occurs only if SP1159 has been set to "1" (On). (Default: 0 (Off)).

SC569	D	Fusing pressure release motor error
		During copying, the HP sensor could not detect the actuator, tried again 3 times and could not detect.
		 Motor lock because of too much load Motor driver defective HP sensor defective, disconnected, connector defective, harness damaged

SC590-00	D	Toner collection motor error		
		The toner collection motor sensor output does not change for 3 s while the toner collection motor is on.		
		Motor lock due to obstruction		
		Motor driver board defective		
		Motor connection loose, defective		
		Toner collection motor sensor disconnected, sensor defective		
		Rotational transmission shaft (dia. x 30) missing		

SC600: Data Communication

SC600

SC620-01	D	BCU-ADF Communication Error: Break RX abnormal
		A BREAK was detected after connection.
		ADF I/F cable connection loose, broken, defective
		ADF control board defective
		BCU defective
		Serial line level unstable
		External noise on the line

SC620-2	D	BCU-ADF Communication Error: Timeout
		 ADF I/F cable connection loose, broken, defective ADF control board defective BCU defective Serial line level unstable External noise on the line

	D	BICU/Finisher communication error: Break error	
SC621-01		During communication with the finisher MBX, the BICU received a break (Low) signal from the finisher.	
		 Connection between main machine loose, broken, defective Breaker switch defective Power cord loose, broken, defective Peripheral unit control board defective 	

		BCU/Finisher communication error: Timeout error
SC621-02	D	During communication between the finisher MBX and the BCU, no ACK signal was detected for 100 ms, even after three attempts.

Connection between main machine loose, broken, defective
Breaker switch defective
Power cord loose, broken, defective
 Peripheral unit control board defective
BCU defective
Serial line level unstable, external noise on the line

	D	BCU-PFB communication error
SC623		More than 2 in communication errors between the BCU and PFB were detected after startup, or more than 3 errors were detected after settings were initialized.
		Harness connectors between BCU and PFB loose, broken, disconnected
		Serial line connection unstable
		External noise on the line
		BCU defective
		PFB defective

SC626-01	D	BICU, LCT communication error: Break reception error	
		During communication with the LCT, the BICU received a break (Low) signal.	
		 LCT connection to main machine loose, broken, defective LCT control board defective BCU defective Serial line connection unstable External noise on the line 	

		BICU, LCT communication error: Timeout error
SC626-02	D	After 1 data frame is sent to the LCT, an ACK signal is not received within 100 ms, and is not received after 3 retries.

 LCT connection to main machine loose, broken, defective
 LCT control board defective
BCU defective
Serial line connection unstable
External noise on the line

SC632	В	Counter device error 1	CTL
		After 3 attempts to send a data frame to the optional counter device via the serial communication line, no ACK signal was received within 100 ms.	
		 Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged. Make sure that SP5113 is set to enable the optional counter device. 	
		 Check if the setting of the SP5113 is correctly set. Check the connection between the main machine and optional counter device. 	

	(Counter device error 2	CTL	
		After communication was established, the controller receivee the briftom the accounting device.	rake signal	
SC633	В	 Serial line between the optional counter device, the relay board and copier control board is disconnected or damaged. Make sure that SP5113 is set to enable the optional counter device. 		
		 Confirm that the setting of SP5113 is correct. Check the connection between the main machine and optional device. 	ıl counter	

		CTL				
			A backup RAM error was returned by the counter device.			
	SC634	В	Counter device control board defective			
		Backup battery of counter device defective Replace the counter device.				
			Replace the counter device.			

		Counter device error 4	CTL
		A backup battery error was returned by the counter device.	
SC635	В	Counter device control board defective Backup battery of counter device defective	
		Replace the counter device.	

SC636	D	SD Card Error	CTL
01		Expanded authentication module error	
		There is no expanded authentication module in the machine.	
		The SD card or the file of the expanded authentication module is broken. There is no DESS module in the machine.	
		No expanded authentication module	
		Defective SD card	
		Defective file in the authentication module	
		No DESS module	
		Install the expanded authentication module.	
		2. Install the SD card.	
3. Install the DESS module.		3. Install the DESS module.	
	4. In the SSP mode set SP5-401-160 to 0.		
		5. In the SSP mode, set SP5-401-161 to 0.	
		6. Cycle the machine off/on.	
		7. Execute SP5-876-1 (security all clear).	
		8. If this is a mass-produced machine, replace the NV.	
02		Version error	
		The version of the expanded authentication module is not correct.	
		Incorrect module version	
		Install the correct file of the expanded authentication module.	
11		OSM user code file error	

The correct "usercode" file could not be found in the root folder of the SD card because the file is not present, or the existing file is corrupted or the wrong type file.	
Create the usercode files with the User Setting Tool "IDissuer.exe".	
Store the files in the root folder of the SD card.	
Note: Make sure the eccm.mod file is in the root folder of the SD card.	

SC637	D	Tracking information notification error	CTL
		Ttracking application error	
01		Tracking information was lost. The machine failed to give notice of the information to the tracking SDK application.	tracking
	Cycle the machine off/on		
		Management server error	
02		The machine failed to give notice of the tracking information to the management server. Tracking information was lost, and the machine c count correctly.	ould not
		Cycle the machine off/on	

SC640		Engine-to-Controller Communication Error	CTL
		Engine-to-Controller Communication Error CTI This is a checksum error. PCI hardware error Cycle the machine off/on	
	D		

SC641		Engine serial communication error An error occurs in serial communication with engine. • SC641-1: Timeout error • SC641-2: Retry over				
		An error occurs in serial communication with engine.				
	D	SC641-2: Retry over				
		SC641-3: Download error				
		SC641-4: UART error				
	•	Cycle the machine off/on				

SC650	В	@Remote communication error (Cumin-M)	
		The authentication for the Cumin-M fails failed at a dial up connection due or more of the following:	to one
		Incorrect SP settings	
		Disconnected telephone line	
	01	Disconnected modem board	
		Disconnected wireless LAN card	
		• Check and set the correct user name (SP5-816-156) and password (SP5-816-157).	
		Communication line error	
		The supplied voltage is not sufficient due to the defective communication lindefective connection.	ne or
		The authentication for the Cumin-M fails failed at a dial up connection due or more of the following:	to one
	04	Incorrect SP settings	
		Disconnected telephone line	
		Disconnected modem board	
		Disconnected wireless LAN card	
		• Check and set the correct user name (SP5-816-156) and password (SP5-816-157).	
		No modem board	
		Modem board is not installed even though the setting at Cumin-M (During operation)	the
		The authentication for the Cumin-M fails failed at a dial up connection due or more of the following:	to one
	05	Incorrect SP settings	
		Disconnected telephone line	
		Disconnected modem board	
		Disconnected wireless LAN card	
		• Check and set the correct user name (SP5-816-156) and password (SP5-816-157).	

	Modem board error 1
	Modem board not installed or the board is defective.
13	Install the modem board.
	 Check correct setting value for modem driver (SP5-816-160, SP5-816-165 to 171, SP5-816-188 and 189).
	Replace the modem board.
	Modem board error 2
14	Modem board not installed or the board is defective.
	Uninstall the modem board if it is installed.
	Check that the wired/wireless LAN is working properly.

For more details about this SC code error, execute SP5990 to print an SMC report so you can read the error code. The error code is not displayed on the operation panel. Here is a list of error codes:

Error	Problem	Solution
1	Failure to certify dial-up	In the User Tools, check the dial-up user and dial-up password settings
4	Illegal modem setting	Check the setting of SP5816 160 to determine whether the setting for the AT command is correct. If this SP setting is correct, then the problem is a bug in the software.
5	Poor connection due to low power supply on the line.	The problem is on the external power supply line, so there is no corrective action on the machine.
11	Data in the NVRAM became corrupted when the network enable switch and Cumin-M were enabled at the same time.	Use SP5985 1 and set the NIC to "0" (Disable) to disable the network board.
12	The modem board could not enable the NIB.	Replace the modem board.

SC651-01		Illegal Remote Service Dial-up An expected error occurred when Cumin-M dialed up the NRS Center.			
	C				
	Software bug No action is required because only the count is logged				
		No action is required because only the count is logged			

SC651	С	C Incorrect dial up connection	
01	-	Chat program parameter error	
02	-	- Chat program execution error	
		An unexpected error occurs when the modem (Cumin-M) tries to ca with a dial up connection.	ll the center
		Caused by a software bug	
		No action required	
		This SC does not interfere with operation of the machine.	

		Remote service ID2 mismatching			
SC652		There was an authentication mismatch between ID2 for @Remote, the controller board, and NVRAM.			
	D	Used controller board installed Used NVRAM installed			
		An unexpected error occurs when the modem (Embedded RCG-M) tries to call the center with a dial up connection.			
		Install the correct controller board or anew controller board			
		Install the correct NVRAM or new NVRAM.			

	_			
		Incorrect remote service ID2	CTL	
		ID2 stored in the NVRAM is incorrect.		
		Used NVRAM installed		
SC653	D	An unexpected error occured when the modem (Embedded Find call the center with a dial up connection	RCG-M) tries to	
		Clear the ID2 in the NVRAM		
		Input the correct ID2.		
		Engine start up error	CTL	
SC670		The BCU failed to respond within the prescribed time when the machine was turned on.		
	D	Connections between BCU and controller board are loose, damaged.	isconnected, or	
		Replace the BCU		
		Replace the controller board		
		Illegal Engine Board	CTL	
SC671	D	An illegal engine board was detected by the firmware at power or	٦.	
		Replace BICU		

		Controller start up error	CTL
		After the machine was powered on, communication between the and the operation panel was not established, or communication controller was interrupted after a normal startup.	
		 After startup reset of the operation panel, the attention code (FI attention acknowledge code (FEH) was not sent from the control sec 	
SC672	D	After the controller issued a command to check the communica the controller at 30-second intervals, the controller failed to res	
		Controller stalled	
		Controller board installed incorrectly	
		Controller board defective	
		Operation panel connector loose, broken, or defective	
		The controller did not completely shut down when the switch w	as turned off.
		Check the setting of SP5-875-001.	
		If this SP is set to "1 (OFF)", change it to "0 (ON)"	

SC700: Peripherals

SC700: Peripherals

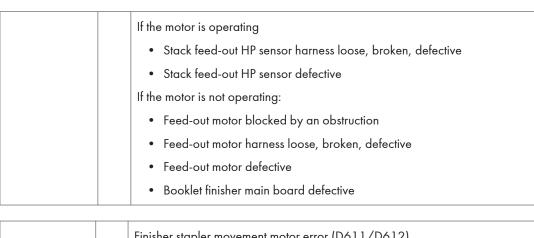
	D	ARDF bottom plate lift motor			
		The bottom plate HP sensor does not detect the home position of the bottom plate after the bottom plate lift motor switches on and lowers the bottom plate.			
SC700-01		The bottom plate position sensor does not detect the position of the plate after the lift motor switches on and raises the bottom plate.			
		ARDF feed motor disconnected, defective			
		Bottom plate HP sensor disconnected, defective			
		ARDF main board defective			
		ADF bottom plate motor error			
		Bottom plate position sensor does not detect the plate after the bottom plate lift motor switches on to lift the plate.			
SC700-02	D	Bottom plate HP sensor does not detect the plate after the bottom plate motor reverses to lower the plate.			
		Bottom plate position sensor defective			
		Bottom plate HP sensor defective			
		Bottom plate motor defective			
		ADF main board defective			
		Downstream finisher communication error			
SC720-01	D	No response signal was received from the downstream finisher (D611/D612) after 3 attempts			
		Finisher I/F cable loose, broken defective			
		Finisher control board defective			

	В	Exit guide motor (D611/D612)
SC720-24		The status of the exit guide sensor did not change at the prescribed time during operation of the exit guide.
		Exit guide open sensor loose, broken, defective.
		Exit guide motor defective
		Finisher main board defective

SC720-25	Punch motor error (D611/D612)
	After the punch operation, the punch HP sensor did not detect the punch unit at the home position.
	Punch motor connection loose, broken, defective.
	Punch overload (blocked by obstruction)
	Home position sensor connection loose, broken, defective
	HP sensor defective

		Finisher jogger motor error (D611/D612)
SC720-30	В	The finisher jogger HP sensor remains de-activated for more 1,000 pulses when returning to home position.
		The finisher jogger HP sensor remains activated for more than 1,000 pulses when moving away from home position.
		Jogger HP sensor defective
		Jogger mechanism overload
		Jogger motor defective (not rotating)
		Finisher main board defective
		Harness disconnected or defective

SC720-41 D The stack feed-out belt HP sensor does not activate within the specified time after the stack feed-out belt motor turns on. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.



		Finisher stapler movement motor error (D611/D612)
SC720-42	В	The stapler HP sensor is not activated within the specified time after the stapler motor turned on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Stapler movement motor disconnected, defective Stapler movement motor overloaded due to obstruction Stapler HP sensor disconnected, defective

SC720-43		Finisher corner stapler rotation motor error (D611/D612)
	В	The stapler does not return to its home position within the specified time after stapling. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Stapler rotation motor disconnected, defective Stapler rotation motor overloaded due to obstruction Stapler rotation HP sensor disconnected, defective

		Finisher corner stapler motor error (D611/D612)
SC720-44	В	The stapler motor does not switch off within the prescribed time after operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Staple jam Number of sheets in the stack exceeds the limit for stapling Stapler motor disconnected, defective

		Finisher folder plate motor error (D612)
SC720-52	В	The folder plate moves but is not detected at the home position within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Folder plate HP sensor disconnected, defective
		Folder plate motor disconnected, defective
		Folder plate motor overloaded due to obstruction.
		Folding unit bottom fence lift motor (D612)
SC720-53	В	The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective
		Motor defective
		Clamp roller retraction motor error (D612)
SC720-55	В	The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective Motor defective
		Stack junction gate motor error (D612)
SC720-57	В	Occurs during operation of the punch unit. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective
		Motor overload
		Motor defective
		Booklet stapler motor error 1 (D612)
		·
SC720-60	В	The front stapler unit saddle-stitch motor does not start operation within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.

Front motor disconnected, defective Front motor overloaded due to obstruction Booklet stapler motor error 2 (D611/D612) The rear stapler unit saddle-stitch motor does not start operation within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. Rear motor disconnected, defective Rear motor overloaded due to obstruction Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. Tray lift motor disconnected, defective Tray paper height sensor disconnected, defective Upper tray paper height sensor disconnected, defective Finisher main board connection to motor loose Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating			
SC720-61 B Booklet stapler motor error 2 (D611/D612) The rear stapler unit saddle-stitch motor does not start operation within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Rear motor disconnected, defective Rear motor overloaded due to obstruction Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612)			Front motor disconnected, defective
SC720-61 B The rear stapler unit saddle-stitch motor does not start operation within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Rear motor disconnected, defective Rear motor overloaded due to obstruction Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified time. -or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Front motor overloaded due to obstruction
SC720-61 B The rear stapler unit saddle-stitch motor does not start operation within the specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Rear motor disconnected, defective Rear motor overloaded due to obstruction Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified time. -or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			
specified time. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Rear motor disconnected, defective Rear motor overloaded due to obstruction Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Sc720-71 Sc720-71 D Sc7			Booklet stapler motor error 2 (D611/D612)
Rear motor overloaded due to obstruction Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. Tray lift motor disconnected, defective Upper tray paper height sensor disconnected, defective Finisher main board connection to motor loose Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating	SC720-61	В	specified time. The 1st detection failure issues a jam error, and the 2nd
Finisher tray 1 (upper tray lift) motor error (D611/D612) The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Rear motor disconnected, defective
SC720-70 B The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified time. -or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Rear motor overloaded due to obstruction
SC720-70 B The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified time. -or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			
specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Tray lift motor disconnected, defective • Upper tray paper height sensor disconnected, defective • Finisher main board connection to motor loose • Finisher main board defective Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Finisher tray 1 (upper tray lift) motor error (D611/D612)
Upper tray paper height sensor disconnected, defective Finisher main board connection to motor loose Finisher main board defective Shift Motor Error (D611/D612)	SC720-70	В	specified time after the tray raises or lowers. The 1st detection failure issues a
Finisher main board connection to motor loose Finisher main board defective Shift Motor Error (D611/D612)			Tray lift motor disconnected, defective
Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified time. -or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Upper tray paper height sensor disconnected, defective
Shift Motor Error (D611/D612) The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified time. -or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Finisher main board connection to motor loose
SC720-71 D The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Finisher main board defective
SC720-71 D The shift tray half-turn sensors: Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating			
SC720-71 D Failed twice to detect the shift tray at the home position at the specified timeor- Failed twice to detect that the shift tray had left the home position. If the motor is operating			Shift Motor Error (D611/D612)
-or- Failed twice to detect that the shift tray had left the home position. If the motor is operating			The shift tray half-turn sensors:
Failed twice to detect that the shift tray had left the home position. If the motor is operating	SC720-71	D	Failed twice to detect the shift tray at the home position at the specified time.
If the motor is operating			-or-
			Failed twice to detect that the shift tray had left the home position.
2			If the motor is operating
 Half-turn sensor 1, 2 harnesses loose, broken, defective 			Half-turn sensor 1, 2 harnesses loose, broken, defective
One of the half-turn sensors is defective			One of the half-turn sensors is defective
If the motor is not operating:			If the motor is not operating:
Motor blocked by an obstruction			Motor blocked by an obstruction
Motor harness loose, broken, defective			Motor harness loose, broken, defective
Motor defective			Motor defective
Finisher main board defective		1	. Fred and Life

SC720-72 B The sides fences do not retract within the prescribed time after the shift jogger motor switches on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code. • Shift jogger motor disconnected, defective • Shift jogger motor overloaded due to obstruction • Shift jogger HP sensor disconnected, defective			Front shift jogger motor error (D611/D612)
Shift jogger motor overloaded due to obstruction	SC720-72	В	jogger motor switches on. The 1st detection failure issues a jam error, and
			Shift jogger motor overloaded due to obstruction

		Rear shift jogger motor (D611/D612)
SC720-73	В	The side fences do not retract within the prescribed time after the shift jogger motor switches on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Motor harness disconnected, loose, defective Motor defective Motor overload HP defective

SC720-74	В	Shift jogger retraction motor error (D611/D612)
		The side fences do not retract within the prescribed time after the retraction motor switches on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Motor harness disconnected, loose, defective Motor defective
		Motor overload
		HP defective

SC720 75	В	Return roller motor error (D611/D612)
SC720-75		Occurs during the operation of the lower tray pressure motor.
		Motor harness disconnected, loose, defective Motor overloaded
		Home position sensor harness disconnected, loose, defective Home position defective

	Punch movement motor error (D611/D612)
D	Occurs during operation of the punch unit. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
	Motor harness disconnected, loose, defective
	Motor defective
	Paper position sensor slide motor error (D611/D612)
D	Occurs during operation of the punch unit. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
	Motor harness disconnected, loose, defective
	Motor defective
	First and the second (D411 /D410)
	Finisher punch motor error (D611/D612)
D	The punch HP sensor is not activated within the specified time after the punch motor turned on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
	Punch HP sensor disconnected, defective
	Punch motor disconnected, defective
	Punch motor overload due to obstruction
	Downstream finisher communication error
	Downsheam misner communication error
D	No response signal was received from the downstream finisher (D610) after 3 attempts
	Finisher I/F cable loose, broken defective
	Finisher control board defective
	D

SC722-10		Transport motor error (D610)
	В	A pulse signal from the transport motor could not be detected within the prescribed time. The first detection triggers a jam code, and the second detection triggers this SC.
		 Motor overload due to an obstruction Motor harness connector loose, broken, defective Motor defective
		Evit quide motor (D610)

SC722-24		Exit guide motor (D610)
	В	The status of the exit guide sensor did not change at the prescribed time during operation of the exit guide.
		Exit guide open sensor loose, broken, defective.
		Exit guide motor defective
		Finisher main board defective

	Punch motor error (D610)
	After the punch operation, the punch HP sensor did not detect the punch unit at the home position.
SC722-25	Punch motor connection loose, broken, defective.
	Punch overload (blocked by obstruction)
	Home position sensor connection loose, broken, defective
	HP sensor defective

			Finisher jogger motor error (D610)
	SC722-30	В	The finisher jogger HP sensor remains de-activated for more 1,000 pulses when returning to home position.
			The finisher jogger HP sensor remains activated for more than 1,000 pulses when moving away from home position.

		Jogger HP sensor defective
		Jogger mechanism overload
		 Jogger motor defective (not rotating)
		Finisher main board defective
		Harness disconnected or defective
		Finisher staple hammer motor error (D610)
		The staple hammer motor did not return to the home position within the prescribed time (340 ms).
SC722-33	В	Staple hammer HP sensor loose, broken, defective
		Electrical overload on the stapler drive PCB elect
		Staple hammer motor defective
		Finisher main board defective
		Stack Plate Motor Error 1: Front Motor(D610)
SC722-35		The stack plate HP sensor (front) does not activate within 500 ms after the motor turns on. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		If the motor is operating
		Front stack plate HP sensor harness loose, broken, defective
		Front stack plate HP sensor defective
		If the motor is not operating:
		Motor blocked by an obstruction
		Motor harness loose, broken, defective
		Motor defective
		Booklet finisher main board defective
		Standa Dlasta Adadasa Essasa 20 Cantan Adadasa ID 4100
		Stack Plate Motor Error 2: Center Motor (D610)
SC722-36		The stack plate HP sensor (center) does not activate within 500 ms after the motor turns on. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.

If the motor is operating Center stack plate HP sensor harness loose, broken, defective Center stack plate HP sensor defective If the motor is not operating: Motor blocked by an obstruction Motor harness loose, broken, defective Motor defective Booklet finisher main board defective

SC722-37		Stack Plate Motor Error 3: Rear Motor (D610)
	D	The stack plate HP sensor (rear) does not activate within 500 ms after the motor turns on. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.
		If the motor is operating
		Rear stack plate HP sensor harness loose, broken, defective
		Rear stack plate HP sensor defective
		If the motor is not operating:
		Motor blocked by an obstruction
		Motor harness loose, broken, defective
		Motor defective
		Booklet finisher main board defective

		Jogger Top Fence Motor (D610)	
		The top fence HP sensor detected that:	
SC722-39	В	The top fence did not arrive at the home position within the specified number of pulses.	
		-or-	
		The top fence failed to leave the home position within the specified number of pulses.	

	If the jogger top fence motor is operating:
	Top fence HP sensor harness loose, broken, defective
	Top fence HP sensor defective
	If the jogger top fence motor is not operating:
	Motor blocked by an obstruction
	Motor harness loose, broken, defective
	Motor defective
	Finisher main board defective
	Jogger Bottom Fence Motor (D610)
В	The bottom fence HP sensor detected that:
	The bottom fence did not arrive at the home position at the specified time.
	-or-
	The bottom fence failed to leave the home position at the specified time.
	If the jogger bottom fence motor is operating:
	Bottom fence HP sensor harness loose, broken, defective
	Bottom fence HP sensor defective
	If the jogger bottom fence motor is not operating:
	Motor blocked by an obstruction
	Motor harness loose, broken, defective
	В

		Feed-Out Belt Motor Error (D610)
SC722-41	D	The stack feed-out belt HP sensor does not activate within the specified time after the stack feed-out belt motor turns on. The 1st detection failure causes a jam error, and the 2nd failure causes this SC code.

• Motor defective

• Finisher main board defective

If the motor is operating
Stack feed-out HP sensor harness loose, broken, defective
Stack feed-out HP sensor defective
If the motor is not operating:
Feed-out motor blocked by an obstruction
Feed-out motor harness loose, broken, defective
Feed-out motor defective
Booklet finisher main board defective

SC722-42		Finisher stapler movement motor error (D610)
	В	The stapler HP sensor is not activated within the specified time after the stapler motor turned on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Stapler movement motor disconnected, defective Stapler movement motor overloaded due to obstruction Stapler HP sensor disconnected, defective

		Finisher corner stapler rotation motor error (D610)
SC722-43	В	The stapler does not return to its home position within the specified time after stapling. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Stapler rotation motor disconnected, defective Stapler rotation motor overloaded due to obstruction Stapler rotation HP sensor disconnected, defective

SC722-44	В	Finisher corner stapler motor error (D610)
		The stapler motor does not switch off within the prescribed time after operating. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		Staple jam Number of sheets in the stack exceeds the limit for stapling Stapler motor disconnected, defective

SC722-70	В	Finisher tray 1 (upper tray lift) motor error (D610)
		The upper tray paper height sensor does not change its status with the specified time after the tray raises or lowers. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Tray lift motor disconnected, defective Upper tray paper height sensor disconnected, defective Finisher main board connection to motor loose Finisher main board defective

		Shift Motor Error (D610)
		The shift tray half-turn sensors:
SC722-71	D	Failed twice to detect the shift tray at the home position at the specified time.
		-or-
		Failed twice to detect that the shift tray had left the home position.
		If the motor is operating
		Half-turn sensor 1, 2 harnesses loose, broken, defective
		One of the half-turn sensors is defective
		If the motor is not operating:
		Motor blocked by an obstruction
		Motor harness loose, broken, defective
		Motor defective
		Finisher main board defective

		Front shift jogger motor error (D610)
SC722-72	В	The sides fences do not retract within the prescribed time after the shift jogger motor switches on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Shift jogger motor disconnected, defective Shift jogger motor overloaded due to obstruction Shift jogger HP sensor disconnected, defective

		Shift jogger retraction motor error (D610)
SC722-74	В	The side fences do not retract within the prescribed time after the retraction motor switches on. The 1st detection failure issues a jam error, and the 2nd failure issues this SC code.
		 Motor harness disconnected, loose, defective Motor defective Motor overload HP defective
		Return roller motor error (D610)
SC722-75	В	Occurs during the operation of the lower tray pressure motor.

00700.75		Return roller motor error (D610)
SC722-75	В	Occurs during the operation of the lower tray pressure motor.
		Motor harness disconnected, loose, defective Motor overloaded
		Home position sensor harness disconnected, loose, defective Home position defective
		Finisher staple trimming hopper full (D610)

SC722-80	В	Finisher staple trimming hopper full (D610)	
		The staple waste hopper is full of cut staples.	
	 If the hopper is full, empty the hopper If the hopper is not full, the hopper full sensor is disconnected, 		

		Finisher transport motor error (D610)	
		The encoder pulse of the finisher transport motor does not change state (high/low) within 600 ms and does not change after 2 retries.	
		Finisher transport motor defective	
Transport motor harness disconnected, or defective		Transport motor harness disconnected, or defective	
		Finisher main board defective	

		Finisher punch motor error (D610)
SC722-83	The punch HP sensor is not activated within the specified time after motor turned on. The 1st detection failure issues a jam error, and the failure issues this SC code.	
Punch HP sensor disconnected, defective Punch motor disconnected, defective Punch motor overload due to obstruction		Punch motor disconnected, defective

	-or-	Shift Motor Error	
		The shift tray half-turn sensors:	
SC724-71		Failed twice to detect the shift tray at the home position at the specified time.	
		-or-	
		Failed twice to detect that the shift tray had left the home position.	
		If the motor is operating	
 Half-turn sensor 1, 2 harnesses loose, broken, defective One of the half-turn sensors is defective 		Half-turn sensor 1, 2 harnesses loose, broken, defective	
		One of the half-turn sensors is defective	
		If the motor is not operating:	
		Motor blocked by an obstruction	
		Motor harness loose, broken, defective	
Motor defective Finisher main board defective		Motor defective	
		Finisher main board defective	

		Downstream finisher communication error (D615)	
SC725-01	D	No response signal was received from the downstream finisher (D615) after 3 attempts	
		Finisher I/F cable loose, broken defective	
		Finisher control board defective	

		Reg. Roller Transport Motor Error	Multi Folder (D615)
SC725-12	В	The motor drive PCB detected an error at the motor.	
		Motor harness or connector loose, broken, defective	
		Motor or motor drive board defective	
		Dynamic Roller Transport Motor Error	Multi Folder (D615)
		,	
SC725-13	В	The motor drive PCB detected an error at the motor.	
		Motor harness or connector loose, broken, defective	
		Motor or motor drive board defective	
SC725-14	В	Z-fold top tray exit motor error	
3C/23-14	D	The motor driver detects an error.	
		Motor over current	
		Motor driver overheat	
		Z-fold stopper 1 Motor error	
		The bottom fence HP sensor detected that:	
SC725-30	В	The bottom fence did not arrive at the home position at the specified time.	
		-or-	
		The bottom fence failed to leave the home positio	n at the specified time.
		Motor over-current	
Motor driver overheat			
		Motor harness loose	

		2nd Stopper Motor Error	Multi Folder (D615)	
		The 2nd stopper HP sensor did not detect the 2nd stopper in (or out of) its home position within the prescribed time. The 1st occurrence causes a jam, and the 2nd occurrence causes this SC code.		
SC725-31	В	2nd stopper HP sensor dirty		
		Sensor harness or connector loose, broke	en, defective	
		2nd stopper motor harness or connector l	oose, broken, defective	
		Sensor defective		
		Motor or motor drive board defective		
		3rd Stopper Motor Error	Multi Folder (D615)	
		The 3rd stopper HP sensor did not detect the 3rd stopper in (or out of) its home position within the prescribed time. The 1st occurrence causes a jam, and the 2nd occurrence causes this SC code.		
SC725-32	В	3rd stopper HP sensor dirty		
		Sensor harness or connector loose, broke	en, defective	
		3rd stopper motor harness or connector le	oose, broken, defective	
		Sensor defective		
		Motor or motor drive board defective		
		Jogger Fence Motor	Multi Folder (D615)	
SC725-33			The jogger fence HP sensor did not detect the home position within the prescribed time. The and the 2nd occurrence causes this SC code	1st occurrence causes a jam,
	В	Jogger fence HP sensor dirty		
		Sensor harness or connector loose, brol	ken, defective	
		Jogger fence motor harness or connector	or loose, broken, defective	
		Sensor defective		
		Motor or motor drive board defective		

		Dynamic Roller Lift Motor Error	Multi Folder (D615)		
		The dynamic roller HP sensor did not detect the its home position within the prescribed time. The jam, and the 2nd occurrence causes this SC co	ne 1st occurrence causes a		
SC725-34	В	Dynamic roller HP sensor dirty			
		Sensor harness or connector loose, broken, defective			
		Dynamic roller lift motor harness or conne defective	ector loose, broken,		
		Sensor defective			
		Motor or motor drive board defective			
		Registration Roller Release Motor Error	Multi Folder (D615)		
		The registration roller HP sensor did not detect the registration roller in (or out of) its home position within the prescribed time. The 1st occurrence causes a jam, and the 2nd occurrence causes this SC code.			
SC725-35	В	Registration roller HP sensor dirty			
007 23 03		Sensor harness or connector loose, broken, defective			
		Registration roller release motor harness of defective	or connector loose, broken,		
		Sensor defective			
		Motor or motor drive board defective			
		FM2 Direct-Send JG Motor	Multi Folder (D615)		
		The direct-send JG HP sensor did not detect the its home position within the prescribed time. The jam, and the 2nd occurrence causes this SC co	e 1st occurrence causes a		
SC725-36	В	FM2 direct-send JG HP sensor dirty			
30/23-30	В	Sensor harness or connector loose, broken, defective			
		FM2 direct-send JG motor harness or condefective	nnector loose, broken,		
		Sensor defective			
		Motor or motor drive board defective			

		FM6 Pawl Motor	Multi Folder (D615)	
		The FM6 pawl HP sensor did not detect the FM6 pawl in (or out of) its home position. The 1st occurrence causes a jam, and the 2nd occurrence causes this SC code.		
SC725-37	В	 FM6 pawl HP sensor dirty Sensor harness or connector lo FM6 pawl motor harness or co 	pose, broken, defective pnnector loose, broken, defective	
		Sensor defective Motor or motor drive board defective	efective	
		Fold Plate Motor Error	Multi Folder (D615)	
		The fold plate HP sensor did not detect the fold plate in (or out of) its home position within the prescribed time. The 1st occurrence causes a jam, and the 2nd occurrence causes this SC code.		
SC725-38	В	 Fold plate HP sensor dirty Sensor harness or connector loose, broken, defective Fold plate motor harness or connector loose, broken, defective Sensor defective 		
		Motor or motor drive board de-	efective	
		1 st Fold Motor Error	Multi Folder (D615)	
SC703 3	В	The motor drive PCB detected an err	or at the motor.	
SC783-3	В	Motor harness or connector loc Motor or motor drive board de		
		2nd Fold Motor Error	Multi Folder (D615)	
SC783-4	В	The motor drive PCB detected an err	or at the motor.	
SC/83-4		Motor harness or connector loc Motor or motor drive board de		

		Crease Motor Error	Multi Folder (D615)	
SC725-41	В	The motor drive PCB detected an error at the motor.		
00/25 41		Motor harness or connector loo	se, broken, defective	
		Motor or motor drive board def	ective	
		Horizontal Transport Motor Error	Multi Folder (D615)	
		The motor drive PCB detected an error		
SC725-71	D			
		Motor harness or connector loos Motor or motor drive board defo		
		- Molor of filolor drive bodia deli		
		Horizontal exit motor error		
SC725-72	D	An error occurred on the motor drive board.		
3C/23-/2		Motor current overload		
		Motor drive board defective (replant)	ce motor)	
		Top Tray Exit Motor	Multi Folder (D615)	
SC725-73	D	The motor drive PCB detected an erro	or at the motor.	
		Motor harness or connector loos	se, broken, defective	
		Motor or motor drive board defe	ective	
		Entrance JG Motor	Multi Folder (D615)	
		The entrance junction gate HP sensor did not detect the entrance junction gate at (or out of) its home position. The 1st occurrence causes a jam, and		
		the 2nd occurrence causes this SC co	de.	
SC725-74	D	Entrance JG HP sensor dirty		
		Sensor harness or connector loc		
		Entrance JG motor harness or co Sensor defective	onnector loose, broken, defective	
		Motor or motor drive board defo	ective	
		Tricion of military board deli		

SC740-10		Cover interposer tray bottom plate motor error	
	В	After the motor starts to raise the bottom plate, the bottom plate position sensor does not detect the plate at the specified time (3 s).	
		After the motor starts to lower the bottom plate, the bottom plate HP sensor does not detect the bottom plate.	
		Bottom plate position sensor, disconnected, defective Bottom plate HP sensor disconnected, defective	

SC800: Overall System

SC800:

SC816	D	Energy save I/O subsystem error The energy save I/O subsystem is defective or this system detected a controller board error.
		Reboot the machine.Replace the controller board.

SC817		Monitor error	GW			
	D	This is a file detection and electronic file signature check error when the boot loader attempts to read the self-diagnostic module, system kernel, or root system files from the OS Flash ROM, or the items on the SD card in the controller slot are false or corrupted.				
	_	OS Flash ROM data defectiveSD card data defective	S Flash ROM data defective			
	_	 Change the controller firmware. Use another SD card. 				

Error Codes

Code	Meaning
0x0000 0000	BIOS boot error
0x0000 0001	Primary boot start load error
0x0000 0002	Secondary boot load error (Boot3.Elf)
0x0000 0003	Self-diagnostic module error (Diag.Elf)
0x0000 0004	Kernel start error (Netbsd)
0x0000 0005	Root file system file read error (Rootfs)
Oxffff ffff	Other error

2

Example: Data in the self-diagnostic module, system kernel, or root system files are corrupted or do not exist in OS flash ROM or on the SD card

Files in the self-diagnostic module, kernel, or root file system on the SD card have been falsified or altered

- Before discarding the SD card, try to update the data on the card. If the error occurs again, the card may be defective.
- Be sure to use an SD card that contains the correct electronic signature.

	Fatal kernel erre	or	
			l error, a RAM overflow occurred during system processing. One messages was displayed on the operation panel.
		0x5032	HAIC-P2 error
		0x5245	Link-up fail
SC819	D	0x5355	L2 Status Time Out
		0x696e	gwinit died
		0x766d	Vm_pageout: VM is full
		554C	USB loader defect
		Other	
			System program defective
			Controller board defective
			Optional board defective
			Replace controller firmware

		0008	Solf diagnostic Error CDI I. System Call Evention	GW		
		0008	Self-diagnostic Error: CPU: System Call Exception	GW		
		0612	Self-diagnostic Error: CPU: ASIC Interrupt Error	GW		
		• Syst	rem program defective			
SC820	D	Controller board defective				
30020		Optional board defective				
		• Rep	lace controller firmware			
			r more details about this SC code error, execute SP5990 to print an S you can read the error code. The error code is not displayed on the n panel.	MC		



• For more details about this SC code error, execute SP5990 to print an SMC report so you can read the error code. The error code is not displayed on the operation panel.

SC821	D Self-diagnostics error: ASIC GV		GW
		ASIC register check error	
101	0001	A write-verify check occurred in the ASIC.	
Į (Ot	300]	ASIC device	
		Controller board defective	
		ASIC detection error	
		The I/O ASIC for system control was not detected.	
JO]	306]	Defective ASIC	
		Defective North Bridge and PCII/F	
		Controller board defective	



• For more details about this SC code error, execute SP5990 to print an SMC report so you can read the error code. The error code is not displayed on the operation panel.

SC822	В	Self-diagnostics error: HDD GV				
		HDD timeout				
		Check performed only when HDD is installed:				
		HDD device was busy for over 31 seconds.				
		 A diagnostic command was set for the HDD, but the device busy for over 6 seconds. 	e remained			
	[3003]	Defective HDD device Defective HDD connector				
		Defective ASIC device				
		Replace or uninstall the HDD device.				
		Replace the HDD connector.				
		Replace the controller board.				

	Diagnostics command error
[2004]	Diagnostic command issued an error.
[3004]	Defective HDD device
	Replace or remove the HDD device.
	HDD timeout (First machine)
	HDD device was busy for over 31 seconds, or Mandolin was not detected. A diagnostic command is set for the HDD, but the device remains was busy for over 6 seconds.
[2012]	Defective HDD device
[3013]	Defective HDD connector
	Defective ASIC device
	Replace or remove the HDD device.
	Replace the HDD connector
	Replace the controller board
	Diagnostics command error (First machine)
[3014]	Diagnostic command issued an error because Mandolin was not detected, or there was a w/r/c error in the HDD register
	Defective HDD device
	Replace the HDD device.

SC823	В	Self-diagnostics error: NIC	
		MAC address check sum error	
		The result of the MAC address check sum did not match the check sum stored in ROM.	
[6	[6101]	Defective SEEP ROM Defective I2C bus (connection)	
		Replace the controller board	

		PHY IC error		
		The PHY IC on the controller was not recognized.		
[6104]	Defective PHY chip		
		Defective ASIC MII I/F		
		Replace the controller board		
		PHY IC loop-back error		
		An error occurred during the loop-back test for the PHY IC on the contro	ller.	
		Defective PHY chip		
[6105]	Defective MAC of ASIC (SIMAC/COMIC/CELLO)		
		Defective I/F with the PHY board		
		Defective soldered connection on the PHY board		
		Replace the controller board		
SC824	D	Self-diagnostics error: NVRAM (resident)	GW	
		NVRAM verify error		
		No NVRAM installed or NVRAM is damaged.		
		No NVRAM device		
[1401]	Damaged NVRAM device		
		NVRAM backup battery exhausted		
		NVRAM socket damaged		
		Replace the NVRAM		
		Self-diagnostic Error: Optional RAM		

SC829	D	Self-diagnostic Error: Optional RAM
30829		The optional RAM returned an error during the self-diagnostic test.
		Replace the optional memory board
		Controller board defective



• For more details about SC 833, SC834 and other errors, execute SP5990 to print an SMC report so you can read the error code. The error code is not displayed on the operation panel. The additional error codes (0F30, 0F31, etc. are listed in the SMC report.

SC833	D	Self-diagnostic error: Engine I/F ASIC	GW
[OF30]		ASIC (Mandolin) for engine control could not be detected. After the configured, the device ID for the ASIC could not be checked.	ne PCI was
		Defective ASIC (Mandolin) for system control Defective North Bridge and AGPI/F	
		Replace the motherboard (engine I/F board).	
		Could not initialize or read the bus connection.	
[50B1]		Defective connection bus Defective SSCG	
		Replace the motherboard (engine I/F board).	
[50B2]		SSCG register value was incorrect.	
		Defective connection bus Defective SSCG	
		Replace the motherboard (engine I/F board).	
SC834	D	Self-diagnostic error: optional memory	GW
	'	An error occurred after write/verify check for optional RAM on the	e motherboard

SC834 D	Self-diagnostic error: optional memory	GW	
	An error occurred after write/verify check for optional RAM on the motherboard		
[5101]	Defective memory device		
	Replace the motherboard (engine I/F board).		

SC838	D	Self-diagnostic error: Clock generator	GW
-------	---	--	----

		A verify error occurred when setting data was read from the clock the I2C bus	generator via
		Defective clock generator	
[27	701]	Defective I2C bus	
		Defective I2C port on the CPU	
		Replace the controller board.	
		EEPROM access error	GW
SC840	D	A read error occurred during I/O processing. The failure of the 3r read caused this error.	d attempt to
		Defective EEPROM	
		Replace the EEPROM.	
		EEPROM read error	GW
		Mirrored data of the EEPROM is different from the original data in	
SC841	D		LLI KOWI.
		Data in the EEPROM was overwritten for some reason.	
		Cycle the machine off/on	
	С	Nand-Flash updating verification error	GW
SC842		A write error for the module written in Nand-Flash occurred while ROM and ROM were being updated.	the remote
		Damaged Nand-Flash	
		Cycle the machine off/on	
			0)44
		Network I/F error	GW
SC850	В	Network not operating.	
		Cycle the machine off/on	

		IEEE 1394 I/F error	
SC851	В	Driver setting incorrect and cannot be used by the 1394 I/F.	
30031		NIB (PHY), LINK module defective; change the Interface	Board
		Controller board defective	
		Bluetooth device connection error	GW
		The Bluetooth interface unit was installed while the machine was	turned on.
SC853	В	Cycle the machine off/on	
		Confirm that the Bluetooth interface unit was installed correct	ctly.
		Cycle the machine off/on again.	
		Bluetooth device removed	GW
		The Bluetooth interface unit was removed while the machine was	turned on.
SC854	В	Cycle the machine off/on	
		Confirm that the Bluetooth interface unit was installed correct	ctly.
		Cycle the machine off/on again.	
		Hardware Problem:wireless LAN board	GW
		The wireless LAN board can be accessed, but an error was dete	cted.
SC855	В	Loose connection	
SC855	D	Defective wireless LAN board	
		Check wireless LAN card connection	
		Replace wireless LAN board	
		USB I/F Error 1	GW
SC857	D	The USB driver is unstable and caused an error. The USB I/F ca	nnot be used.
		USB board or controller board defective	

SC858	В	Data encryption conversion error	GW
30000	Ь	These are errors of the HDD Data Encryption Option D377.	
00		Key Acquisition	
		Key could be acquired.	
		Replace the controller board	
01		HDD Key Setting Error	
		The key was acquired but the HDD could not be set.	
		Turn the machine power off/on several times.	
		Replace the controller board.	
02		NVRAM Read Error	
		NVRAM data conversion failed (mismatch with nvram.conf)	
		Replace the NVRAM	
30		NVRAM Before Replace Error DFU	
		May occur during development.	
		Turn the machine power off/on several times.	
		Replace the controller board.	
31		Other Error	
		An unexpected error occurred while data was being converted. This error same as SC991. See SC991 below.	is the
		Data encryption conversion errors	GW
SC859	В		GVV
		Data encryption on the HDD failed.	
01		HDD encrypted data restoration error	

SC859	В	D	Data encryption conversion errors	GW
30039		Data encryption on the HDD failed.		
01		HDD encrypted data restoration error		
		Data could not be restored after encryption.		
		HDD connection loose, broken, defective		
		Format HDD		
		HDD defective		

02	Power interrupt error
	Power supply was interrupted during data encryption.
	Cycle the machine off/on
08	HDD Check Error
	Data conversion was attempted with no HDD unit present.
	Confirm that HDD unit installed correctly
	Initialize HDD with SP5832-1
	Note: After installation, a new HDD should be formatted with SP5832-1
09	Power Loss During Data Conversion
	Data conversion stopped before NVRAM/HDD data was converted.
	Format HDD with SP5832-1
10	Data Read Command Error
	More than two illegal DMAC communications were returned.
	HDD defective
	Format HDD with SP5832-1
	Replace HDD

		HDD startup error at power on	GW
SC860	В	HDD is connected but a driver error is detected. The driver did not respon the status of the HDD within 30 sec.	d with
		HDD is not initialized	
		Level data is corrupted	
		Initialize the HDD with SP5-832-001.	
		HDD is defective	

		HDD Error 2: HDD Startup	GW	
		The hard disks were detected at power on, but the disks were not de 30s after recovery from the energy conservation mode.	etected within	
SC861	В	 Cable between the hard disks and controller board disconnect Hard disk power connector loose One of the hard disks is defective 	ed or loose	
		Controller defective		
		Bad sector overflow	GW	
SC862	D	There more 100 bad sectors in image storage area of the HDD.	1	
		Format HDD with SP4911-2		
		HDD defective		
		HDD data read failure	GW	
SC863	D	The data written to the HDD cannot be read normally, due to bad so generated during operation.	ectors	
		HDD defective		
		Controller defective		
		Note: If the bad sectors are generated at the image partition, the bad sector information is written to NVRAM, and the next time the HDD is accessed, these bad sectors will not be accessed for read/write operation.		
		HDD data CRC error	GW	
SC864	D	During HDD operation, the HDD cannot respond to a CRC error quitransfer did not execute normally while data was being written to the	•	
		Format HDD		
		HDD defective		
		HDD access error	GW	
SC865	D	An error was detected during operation of the HDD.	1	
		HDD defective.		
		I .		

866	В	SD card authentication error	GW
		A correct license was not found in the SD card.	
		Wrong type of SD card	
		SD card data is corrupted.	
		Used correct SD card	
		Replace SD card	

50047	D	No SD card
SC867		When the machine was turned on, there was no SD card in the boot slot.
		Insert the SD card Cycle the machine off/on

SC868	D	SD card access error	GW	
30808	D	An error occurred while an SD card was used.		
		SD card not inserted correctly		
		SD card defective		
		Controller board defective		

		Address book error	GW
		Address book data stored on the hard disk was detected as abnowas accessed from either the operation panel or the network.	rmal when it
		Defective software program	
		Defective HDD	
		Incorrect path to the server	
SC870	В	Incorrect encryption setting or encryption key	
		Damaged address book data	
		Mount the media that stores the address book data	
		Cycle the machine off/on.	
		 Initialize the address book data with SP5-846-050. 	
		 Cycle machine off/on, and then do SP5-832-006. 	
		Replace the HDD.	
		HDD mail RX data error	GW
		An HDD error was detected immediately after power on.	
SC872	D	 The HDD may be defective or the machine was accidentally power while the HDD was being accessed. 	owered off
		Cycle the machine off/on	
		Reformat the HDD with SP5832-7 (Mail RX Data)	
		Replace the HDD	
		HDD mail TX error	GW
SC873	D	An error was detected on the HDD immediately after the machine was repower was turned of while the machine used the HDD.	as turned on,
		• Do SP5832-007 to format the HDD.	
		HDD defective.	

SC874	D	Delete all error 1 (DOS)	GW	
		A data error was detected for the HDD/NVRAM after the "Delete All" option was used.		
		Note : The source of this error is the Data Overwrite Security Unit running from an SD card.		
		Cycle the machine off/on.		
		Confirm that DOS has been enabled with SP5878		
		HDD defective.		

SC875	D	Delete al error 2: Data area	GW
		An error occurred while the machine deleted data from the HDD Note : The source of this error is the Data Overwrite Security Unit rur SD card.	nning from an
		Cycle the machine off/on	

		Log Data Error	GW
SC876	D	An error was detected in the handling of the log data at power on or comachine operation. This can be caused by switching the machine off woperating.	•
		Log Data Error 1	
	01	Damaged log data file in the HDD	
		Initialize the HDD with SP5-832-004.	
		Log Data Error 2	
	02	An encryption module not installed	
		Replace or set again the encryption module.	
		Disable the log encryption setting with SP9-730-004 ("0" is off.).	
		Log Data Error 3	
	03	Invalid log encryption key due to defective NVRAM data	
		Initialize the HDD with SP5-832-004.	
		Disable the log encryption setting with SP9-730-004 ("0" is off.)	

	Log Data Error 4
04	Unusual log encryption function due to defective NVRAM data
	Initialize the HDD with SP5-832-004.
	Log Data Error 5
05	Installed NVRAM or HDD which is used in another machine.
	Reinstall the previous NVRAM or HDD.
	Initialize the HDD with SP5-832-004.
	Log Data Error 99
99	Other than the above causes
	Ask your supervisor.

		Data Overwrite Security error	GW
SC877	В	An error occurred, preventing successful execution of the Data Overwrite Security function, even though it has been enabled with SP5898	
		Cycle the machine off/on	
		Replace NVRAM	

SC878	D	Chip errors	GW
00		TPM electronic recognition error	
01		USB flash error	
02		TPM error	
03		TCSD error	
		Incorrect updating for the system firmware Incorrect operating of the USB flash	
		Defective flash ROM on the controller board	
		Replace the controller board.	

SC880		File Format Converter Error (MLB)	GW
	D	A request for access to the file format converter board (MLB) was not a within the specified time.	answered
		Board defective	
		Authentication area error	GW
SC881	D	Authentication application error is detected.	
30001		Error data in an authentication application reaches the management limit	
		Turn the main power switch off and on.	
SC899		Software performance error	GW
		If the processing program shows abnormal performance and the program abnormally ended, this SC is issued.	m is
	D	Controller board defective Software defective	
		Replace the controller board.	
		Turn the main switch off and on.	
		Update the firmware on the controller.	

SC900

SC900	D	Electric counter error	GW
		The total count contains something that is not a number.	
		NVRAM incorrect type	
		NVRAM defective	
		NVRAM data scrambled	
		Unexpected error from external source	
		Check the connection between the NVRAM and controller.	
		Replace the NVRAM.	
			Replace the controller board.

		Mechanical total counter error
SC901	D	The mechanical counter is not connected.
00701		Mechanical total counter defective
		Mechanical total counter connector not connected

HDD Status Codes Displayed on Debug Console

Display	Meaning
(-1)	HDD not connected
(-2)	HDD not ready
(-3)	No level
(-4)	Partition type incorrect
(-5)	Error returned during level read or check
(-6)	Error returned during level read or check
(-7)	"filesystem" repair failed
(-8)	"filesystem" mount failed

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(-9)	Drive does not answer command
(-10)	Internal kernel error
(-11)	Size of drive is too small
(-12)	Specified partition does not exist
(-13)	Device file does not exist

Recovery Procedure 1

If the machine returns SC codes for HDD errors (SC860 $^{\sim}$ SC865), please follow the recovery procedures described for these SC codes.

Recovery Procedure 2

If the machine does not return one of the five HDD errors (SC865), turn the machine off and on. If this does not solve the problem, then initialize the NetFile partition on the HDD with SP5832 011 (HDD Formatting – Ridoc I/F).

NetFiles: Jobs printed from the document server using a PC and DeskTopBinder

Before initializing the NetFile partition on the HDD please inform the client that:

- 1. Received faxes on the delivery server will be lost
- 2. All captured documents will be lost
- 3. DeskTopBinder/Print Job Manager/Desk Top Editor job history will be cleared
- 4. Documents stored on the document server will not be lost.
- 5. The first time the network accesses the machine, the management information must be reconfigured (this will require a significant amount of time).
- 6. Execute SP5832 011 then turn the machine off and on.

Recovery Procedure 3

If "Procedure 2" does not solve the problem, execute SP5832 001 (HDD Formatting - All), then turn the machine off and on.

Executing SP5832 001 erases all document and address book data stored on the hard disks. Be sure to consult with the customer before executing this SP code.

Recovery Procedure 4

If "Recovery Procedures 1 to 3" fail to correct the problem, replace the HDD.

SC910		External Controller Error 1	
SC911		External Controller Error 2	
SC912		External Controller Error 3	
SC913	В	External Controller Error 4	
SC914		External Controller Error 5	
		The external controller alerted the machine about an error.	
		For more, refer to the instructions for the external controller.	
		External Controller Error 6	
SC915	A	Egret board error	
30713		The external controller alerted the machine about an error.	
		Replace the Egret controller board.	
		External Controller Error 6	GW
SC919	В	While EAC (External Application Converter), the conversion module, operating normally, the receipt of a power line interrupt signal from the serial driver was detected, of BREAK signal from the other station was detected.	ne FLUTE
		Power outage at the EFI controller. EFI controller was rebooted.	

• Connection to EFI controller loose.

• Cycle the machine off/on

SC920		Printer application error		GW
00		No response when PM started u	p	
01		Timeout error during PM operat	on	
02		Working memory error		
03		Cannot start filter process		
04	В	Abnormal exit from filter process	3	
		An error was detected in the prince cannot continue.	nter application program and operation	
		Defective software		
		Unexpected hardware reso	ource (e.g., memory shortage)	
		1. Software err, cycle the ma	chine off/on	
		2. Insufficient memory, add m	ore memory	

SC921	В	Printer font error	GW
		A necessary font is not found when starting up the printer application.	
		A requested font is not found in the SD card.	
			Cycle the machine off/on

SC925	В	NetFile function error	GW
00		HDD is defective	
01		NetFile management file is broken	
		The NetFile file management on the HDD cannot be used, or a NetFile management file is corrupted and operation cannot continue.	
		The HDDs are defective and they cannot be debugged or partitioned, so Scan Router functions (delivery of received faxes, document capture, etc. services, and other network functions cannot be used.	
		HDD status codes are displayed below the SC code.	
		Refer to the four procedures below (Recovery from SC925).	

Here is a list of HDD status codes:

Display	Meaning
(-1)	HDD not connected
(-2)	HDD not ready
(-3)	No label
(-4)	Partition type incorrect
(-5)	Error returned during label read or check
(-6)	Error returned during label read or check
(-7)	"filesystem" repair failed
(-8)	"filesystem" mount failed
(-9)	Drive does not answer command
(-10)	Internal kernel error
(-11)	Size of drive is too small
(-12)	Specified partition does not exist
(-13)	Device file does not exist

Recovery from SC 925

Procedure 1

If the machine shows SC codes for HDD errors (SC860 to SC865) with SC 925, do the recovery procedures for SC860 to SC865.

Procedure 2

If the machine does not show one of the five HDD errors (SC860 to SC865), turn the machine power off and on. If this is not the solution for the problem, then initialize the NetFile partition on the HDD with SP5832-011 (HDD Formatting – Ridoc I/F).

NetFiles: Jobs printed from the document server using a PC and DeskTopBinder

- Before you initialize the NetFile partition on the HDD, tell the customer that:
- · Received faxes on the delivery server will be erased
- All captured documents will be erased
- DeskTopBinder/Print Job Manager/Desk Top Editor job history will be erased
- Documents on the document server, and scanned documents, will not be erased.

• The first time that the network gets access to the machine, the management information must be configured again (this will use a lot of time).

Before you initialize the Netfile partition with SP5832-011, do these steps:

- 1. Go into the User Tools mode and do "Delivery Settings" to print all received fax documents that are scheduled for delivery. Then erase them.
- 2. In the User Tools mode, do Document Management> Batch Delete Transfer Documents.
- 3. Do SP5832-011, then turn the machine power off and on.

Procedure 3

If "Procedure 2" is not the solution for the problem, do SP5832-001 (HDD Formatting – All), then turn the machine power off and on.

SP5832-001 erases all document and address book data on the hard disks. Ask the customer before you do this SP code.

Procedure 4

If "Procedure 3" is not the solution for the problem, replace the HDD.

		Scanner image setting error
SC953	D	The settings required for image processing using the scanner are not sent from the IPU.
		Software defective

		Printer image setting error
SC954	D	The settings required for image processing using the printer controller are not sent from the IPU.
		Software defective

		Memory setting error	
SC955	D	The settings that are required for image processing using the memory are not sent from the IPU.	
		Software defective	

		Printer ready error	
SC964	D	The print ready signal is not generated for more than 17 seconds after the IPU received the print start signal.	

		Software defective
		Print Start Error
SC965	В	During print processing, another command to start printing was received.
		Software bug
		Print image data transfer error
SC984	D	After a data transfer begins from the controller to the engine via the PCI bus, the transfer does not end within 15 s.
		Controller (SIMAC) board defective
		BICU defective
		BICU/controller disconnected
	D	Scanned image data transmission error
SC985		After a data transfer begins from the engine to the controller via the PCI bus, the transfer does not end within 3 s.
		Controller (SIMAC) board defective
		BICU defective
		BICU/controller disconnected
		Software error 1
SC986	D	The write parameter received by the write module at the beginning of the setting table is NULL.
		Controller (SIMAC) board defective
		BICU defective

• BICU/controller disconnected

	D	Software performance error	GW
		The software makes an unexpected operation.	
		Defective software	
SC990		Defective controller	
		Software error	
		Cycle the machine off/on.	
		Reinstall the controller firmware	
		Reinstall the main firmware	

	Software continuity error The software has attempted to perform an unexpected operation. How unlike SC 990, the object of the error is continuity of the software.	Software continuity error	GW
		ever,	
SC991 C		Software program error	
	Internal parameter incorrectInsufficient working memory	Internal parameter incorrect	
		Insufficient working memory	
This SC is not displayed		This SC is not displayed on the LCD (logging only).	

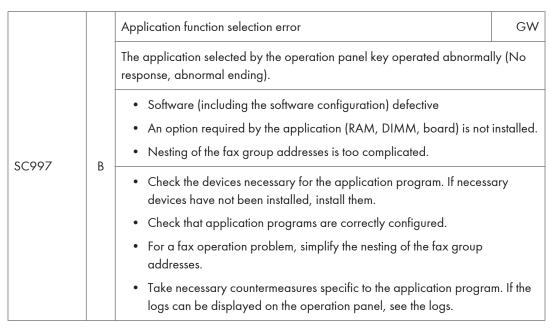
For more details about SC991:

- 1. Execute SP7403 or print an SMC Report (SP5990) to read the history of the 10 most recent logged errors.
- 2. If you press the zero key on the operation panel with the SP selection menu displayed, you will see detailed information about the recently logged SC991, including the software file name, line number, and so on. Of these two methods, 1) is the recommended method, because another SC could write over the information for the previous SC.

		Undefined Error (No SC Code)	GW
		An error not controlled by the system occurred (the error does not come usiny other SC code).	
SC992	С	Software defective	
		 Turn the machine power off and on. The machine cannot be used error is corrected. 	d until this
		Re-install firmware	

		Operation Panel Management Records Exceeded	GW
SC994	С	An error occurred because the number of records exceeded the limit for images managed in the service layer of the firmware. This can occur if there are too many application screens open on the operation panel.	
		No action required because this SC does not interfere with operation of machine.	the

SC995	D	CPM setting error	GW
		Defective BCU NVRAM Replacement error	
01		 Install the previous NVRAM. Input the serial number with SP5-811-004, and turn the main pooff and on. 	ower switch
	2	Defective NVRAM Defective controller	
02		 Update the controller firmware. Install a new NVRAM, and turn off and on the main power switch SC995-002 has occurred. 	ch after
03		Incorrect type controller installed Defective controller	
		Replace the controller with the correct type.	
04		Incorrect model controller installed.	
04		Replace the controller with the correct model.	



	D	Application start error	GW
		No applications start within a specified time after the power is turned on.	
		Loose connection of RAM-DIMM, ROM-DIMM	
		Defective controller	
SC998		Software problem	
		 Check the setting of SP5-875-001. If the setting is set to "1 (OFF)", of it to "0 (ON)". 	change
		Check if the RAM-DIMM and ROM-DIMM are correctly connected.	l.
		Reinstall the controller system firmware.	
		Replace the controller board.	

Note 1

If a problem always occurs in a specific condition (for example, printer driver setting, image file), the problem may be caused by a software error. In such a case, the following data and information need to be sent back to your product specialist. Please understand that it may take some time to get a reply on how to solve the problem, because in some cases the design staff in Japan must analyze the data.

- Symptom / Possible Causes / Action taken
- Summary sheet (SP mode "Printer SP", SP1-004 [Print Summary])
- SMC All (SP5-990-001)

- SMC Logging (SP5-990-004)
- Printer driver settings used when the problem occurs
- All data displayed on the screen (SC code, error code, and program address where the problem is logged.)
- Image file which causes the problem, if possible

Additional SC Codes Printed in SMC Report

These codes are also used in the SMC report. Codes that have the same number in this series are identified by an additional 4-digit hexadecimal number.

820	0001	TLB conversion (store) exception error	
820	0002	TLB miss (load) exception error	
820	0003	TLB miss (store) exception error	
820	0004	Read address exception error	
820	0005	Write address exception error	
820	0006	Command bus exception error	
820	0007	Data bus exception error	
820	0008	System call exception error	
820	0009	Break exception error	Unexpected error in CPU device:
820	000A	Illegal command exception error	Controller board defective
820	000B	Potential sensor exception error	Boot monitor or self-diagnostic program corrupted
820	000C	Overflow exception error	program correpted
820	000D	UTLB miss exception error	
820	0010	Allocation 0 error	
820	0011	Allocation 1 error	
820	0012	Allocation 2 error	
820	0013	Allocation 3 error	
820	0014	Allocation 4 error	
820	0015	Allocation 5 error	
820	OOFF	Non-initialization allocation error	 CPU defective Local bus defective Controller board defective

820	0601	Read address exception error	
820	0602	Write address exception error	
820	0605	System call exception error	CPU device error Controller board defective
820	0606	Break point exception error	• Controller board defective
820	0607	Illegal command exception error	
820	060A	Allocation 0 mask exception error	
820	060B	Allocation 1 mask exception error	CPU device error
820	060C	Allocation 2 mask exception error	ASIC device error
820	060D	Allocation 3 mask exception error	Controller board defective
820	060E	Allocation 4 mask exception error	
820	0610	CPU timer 2 allocation set error	CPU device error Controller board defective
820	0612	ASIC allocation error	ASIC device error Controller board defective Peripheral device defective
820	O6FF	CPU master clock error	 CPU device error Error in CPU initialization data (ASIC error) Controller board defective
820	0702	Command cache error	 CPU cache defective Controller board defective Memory error (insufficient speed)
820	0709	Data cache error	CPU device error
820	070A	Data cache clear error	Boot mode setting for CPU error Controller defective Insufficient memory

820	0801	TLB virtual address error	
820	0804	TLB global error	
820	0807	UTLB miss error	CPU device defective
820	0808	TLB read miss error	(controller board defective)
820	0809	TLB write miss error	
820	080A	TLB mode file error	
820	4002	Single-precision calculation error	
820	4003	Double-precision calculation error	CPU error (controller board)
820	4004	Exception error	defective)
820	4005	Exception mask error	
822	3003	HDD timeout	 HDD defective HDD connector disconnected, defective ASIC device error (controller board defective)
822	3004	Self-diagnostic command error	HDD defective
823	6101	MAC address SUM error	
823	6104	PHY chip ID illegal	NIB (PHY) board defective Controller board defective
823	6105	PHY loopback error	Commoner podra delective
824	1401	NVRAM verify error	NVRAM defective
826	1501	Clock error	Optional NVRAM defective
826	15FF	RTC non-detection error	Incompatible NVRAM installed NVRAM battery defective
826	0201	Resident memory verify error	Memory on controller board defective RAM DIMM defective

828	0101	Boost trap code (CODE) error	Software storage error (re- install software) Controller board defective
828	0104	ROM FS error	ROM device error
828	0105	Forgery prevention error	Forgery prevention chip defective Forgery prevention chip error
020	0103	Torgery prevention error	Replace the controller, ROM, or RAM DIMM
829	0301	Option memory 0 verify error	Controller board internal memory error RAM DIMM defective
829	0302	Option memory 0 configuration information error	

835	1102	Verify error	Loopback connector error (controller board defective)
835	110	DMA verify error	Loopback connector error
	С		Controller board defective
835	1120	Loopback connector non- detection	Loopback connector not set
			Loopback connector error
			Controller board defective
836	1601	Font ROM 0 error	
837	1602	Font ROM 1 error	
838	2701	Verify error	
856	D	IEEE802 11b card connection board error	Not used.

	В	Address book data error
		The address book in the hard disk is accessed. An error is detected in the address book data; address book data is not read; or data is not written into the address book.
		To recover from the error, do any of the following countermeasures:
SC870		 Format the address book by using SP5-832-008 (all data in the address book-including the user codes and counters-is initialized)
		 Initialize the user data by using SP5-832-006 and -007 (the user codes and counters are recovered when the main switch is turned on).
		Replace the hard disk (the user codes and counters are recovered when the main switch is turned on).
		Data corruption
		Defective hard disk
		Defective software

		Electrical Total Counter Error
		The total counter contains data that is not a number.
SC900	С	NVRAM disturbed unexpectedly
		NVRAM defective
		NVRAM data corrupted

SC920	D	Printer error
3C920	D	The printer program cannot be continued.
		Defective hardware
		Data corruption
		Defective software

	SC925	D	Net file error
			The management file for net files is corrupted; net files are not normally read.
			Note: Netfile are jobs to be printed from the document server using a PC and the
			Desk Top Binder software

Defective hardware
Data corruption
Defective software

SC992	Other system SCs
3C992	The controller received an unknown SC code from the engine.
	Contact your product specialist.

SC993	D	Network error
30993		The ASIC program of GW controller cannot be continued.
		Defective ASIC
		Defective GW controller

3. Appendix: Service Program Mode Tables

Service Table Key

Notation	What it means
[range/step]	Example: [-9 to +9/0.1 mm]
[9-,[-]	The default setting can be adjusted in 0.1 mm steps in the range ±9.
Italics	Comments added for reference.
*	An asterisk marks the SP's that are reset to their factory default settings after an NVRAM reset.
DFU	Denotes "Design or Factory Use". Do not change this value.
Japan Only	The feature or item is for Japan only. Do not change this value.
SEF	Short Edge Feed
LEF	Long Edge Feed

SP1000 Feed

1001	Leading Edge Registration
	Adjusts the printing leading edge registration using the trimming area pattern
	(SP2902-003, No.18).
	[-9 to +9/ 0 /0.1 mm]
	Specification: 3±2mm

1002	Side-to-Side Registration			
	Adjusts printing side-to-side registration for each feed station, using test pattern (SP2902-003, No.18). These SP's should be adjusted after replacing the laser synchronization detector or the laser optical unit.			
1	Tray-1			
2	Tray-2			
3	Tray-3			
4	Tray-4 (Japan Only)	[-9 to +9/ 0 /0.1 mm]		
5	By-pass Tray			
6	LCT			
7	Duplex Tray			

1003	Registration Buckle Adjustment
	Adjusts the registration motor timing. This timing determines the amount of paper buckle at registration. (A higher setting causes more buckling.)
	[-9 to +9/0/1 mm]
1	Tray LCT
2	Duplex Tray
3	By-pass Tray
4	Thick Paper Tray

3

5	Thick Paper Duplex Tray
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1007	By-pass Feed Paper Size Display
	Use this SP to confirm the size of the paper detected in the by-pass tray if paper is skewing during feeding.

1008	Duplex Fence Adjustment	
	Adjusts the distance between front and rear fences. A smaller value shortens the distance. If the fences are too far apart, skewing may occur in the duplex tray. If the fences are too close, the paper may be creased in the duplex unit.	
	[-5 to +5/ 0 /0.1 mm]	

1102	Fusing Temperature Adjustment
	Adjusts the temperature of the fusing units.
1	Duplex Actual Temperature [0 to 1 /0/1]
2	Duplex Balance Temp (Center Thermistor) [-30 to 0/-15/1]
3	Duplex Balance Temp (End Thermistor) [-30 to 0/-15/1]

1103	Fusing Idling
	IdlingTime (Normal)
	D131: [0 to 300 / 0 /1sec] For only TWN [0 to 300/ 8 /1sec]
1	D132: [0 to 300 /26/1sec] For only TWN [0 to 300/28/1sec]
	D133: [0 to 300 /160/1sec]
	IdlingTime (Low)
	D131: [0 to 300 /66 /1 sec] For only TWN [0 to 300 /68 /1 sec]
2	D132: [0 to 300 /86/1 sec] For only TWN [0 to 300 /88 / 1 sec]
	D133: [0 to 300 /200/1sec]

	IdlingTime (LowPower)
3	D131/D133: [0 to 300 / 0 /1sec] D133: [0 to 300 / 15 /1sec]
4	IdlingTime (LowVoltage) Japan only
	For only (DOM): [0 to 300 /8/1 sec]
5	IdlingTime (CapacitatorLowVoltage) Japan only
	For only (DOM): [0 to 300 /90/1 sec]

1105	Fusing Temperature Adjustment
	Adjusts the fusing temperature of the hot roller for plain paper, OHP or thick paper.
1	Normal Time (Center Thermistor)
	Fusing temperature during the ready condition and during printing. D131/D132: [180 to 205/190/1 degree C] D133: [180 to 205/185/1 degree C]
2	Normal Time (End Thermistor)
	Fusing temperature during the ready condition D131/D132: [150 to 205/190/1 degree C] D133: [150 to 200/185/1 degree C]
3	OHP (Center Thermistor)
	Fusing temperature during printing: D131/D132: [150 to 205/190/1 degree C] D133: [150 to 200/170/1 degree C]
4	OHP (End Thermistor)
	Fusing temperature during printing: D131/D132: [150 to 205/190/1 degree C] D133: [150 to 200/170/1 degree C]
5	Thick Paper (Center Thermistor)

	Fusing temperature during printing:
	D131/D132: [180 to 205/ 200 /1 degree C]
	D133: [150 to 200/ 195 /1 degree C]
6	Thick Paper (End Thermistors)
	Fusing temperature during printing:
	D131/D132: [180 to 205/ 200 /1 degree C]
	D133: [150 to 200/ 195 /1 degree C]
7	Normal Paper (Center Thermistor)
	Fusing temperature during printing:
	D131/D132: [150 to 230/ 190 /1 degree C]
	D133: [150 to 200/ 185 /1 degree C]
8	Normal Paper (End Thermistor)
	Fusing temperature during printing:
	D131/D132: [150 to 205/ 190 /1 degree C]
	D133: [150 to 200/ 185 /1degree C]
9	Small Size – Normal Paper (Center)
	Fusing temperature at center of hot roller when printing on normal paper:
	D131/D132: [150 to 205/ 190 /1 degree C]
	D133: [150 to 200/185/1 degree C]
10	Small Size – Thick Paper (Center)
	Fusing temperature at center of hot roller when printing on thick paper:
	D131/D132: [150 to 205/ 190 /1 degree C]
	D133: [150 to 200/ 195 /1 degree C]
11	Label (Center Thermistor)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
12	Label (End Thermistor)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]

13	Tab Sheet (Center Thermistor)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
14	Tab Sheet (End Thermistor)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]

1106	Fusing Temperature Display
1	Center Temperature
	Shows the temperature of the hot roller detected by the thermistor at the center of the hot roller.
2	End Temperature
	Shows the temperature of the hot roller detected by the thermistors at the ends of the hot roller.
3	Pressure Roller Temperature
	Shows the temperature of the hot roller detected by the thermistors at the pressure roller.

1107	Start Fusing Temp. Time Ad.
	This SP allows you to set when to start the fusing temperature adjustment for the center and end heating lamps.
1	Center Lamp Temperature
	D131/D132: [150 to 205/ 205 /1 deg C] D133: [150 to 190/190/1 deg C]
2	End Lamp Temperature
	D131/D132: [150 to 205/ 205 /1 deg C] D133: [150 to 190/190/1 deg C]
3	Center Lamp Actual Time
	D131/D132: [0 to 120/ 60 /1 sec.] D133: [0 to 60/10/1 sec.]

4	End Lamp Actual Time
4	
	D131/D132: [0 to 120/ 55 /1 sec]
	For Only TWN [0 to 120/ 60 /1 sec]
	D133: [0 to 60/10/1 sec]
5	Center Lamp Temp (Small Size Paper)
	D131/D132: [180 to 205/ 205 /1 deg C]
	D133: [175 to 190/ 190 /1 deg C]
6	End Lamp Actual Time (Small Size Paper)
	D131/D132: [0 to 120/ 60 /1 sec.]
	D133: [0 to 60/ 10 /1 sec]
7	Center Lamp Temp (Thick Paper)
	D131/D132: [180 to 205/ 205 /1 deg C]
	D133: [175 to 200/ 200 /1 deg C]
8	End Lamp Actual Time (Thick Paper)
	D131: [0 to 120/ 0 /1 sec.]
	D132: [0 to 120/ 5 /1 sec.]
	D133: [0 to 120/ 10 /1 sec.]
9	Capapcitor Heater Temperature Japan only
	Capacitator for Check Start Fusing Temperature
	[170 to 205/ 200 /1 deg C]
10	Capacitor Heater Actual time Japan only
	Capacitator for Check Start Fusing Lamp ON Time
	[0 to 120/ 0 /1 sec.]
11	Center Lamp Temp (Label)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
12	Center Lamp Actual Time

	[0 to 120/ 0 /1 degree C]
13	End Lamp Temp (Label)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
14	Center Lamp Actual Time (Label)
	[0 to 120/ 0 /1 degree C]
15	Center Lamp Temp (Tab Sheet)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
16	Center Lamp Actual Time (Tab Sheet)
	[0 to 120/ 0 /1 degree C]
17	End Lamp Temp (Tab Sheet)
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
18	End Lamp Actual Time (Tab Sheet)
	[0 to 120/ 0 /1 degree C]
19	Center Lamp Temperature
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
20	End Lamp Temperature
	D131/D132: [150 to 205/ 200 /1 degree C]
	D133: [150 to 205/ 195 /1 degree C]
21	Center Lamp Actual Time
	[0 to 120/ 60 /1 degree C]
22	End Lamp Actual Time
	[0 to 120/ 60 /1 degree C]
23	Capacitor Heater Temperature

	D131: [170 to 205/ 200 /1 degree C]
	D132: [190 to 205/ 195 /1 degree C]
	D133: [150 to 205/ 200 /1 degree C]
24	Capacitor Heater Actual Time
	[0 to 120/ 0 /1 degree C]

1109	Measure Nip Width	
1	Execute	0 or 1
2	Adjust Value	[200 to 400/ 300 /10mm]

1112	Auto Process Control
	Sets the temperature of the hot roller for auto process control to start.
	[70 to 150/ 140 /1°C] DFU

1159	Fusing Jam: SC Setting
	This SP determines what the machine does if paper jams occur in the fusing unit for three consecutive sheets of paper.
	O: (default): A jam alert is shown on the screen. The customer can remove the jam and the machine works normally after that.
	1: SC559 occurs. The technician must remove the jam.

1802	CPM Setting DFU
	[0 to 255/ 80/ 1 Step]

1901	CPM Down Setting for Special Paper
	Selects the speed (copies per minute) for copying on thick paper or tab sheets. A slower speed makes fusing better. This setting has no effect on fusing temperature.
1	Thick Paper CPM
	D131/D132: [0 to 4/2/1 step] D133: [0 to 4/3/1 step] 0: 25 cpm 1: 35 cpm 2: 40 cpm 3: 45 cpm 4: 55 cpm

2	Tab Sheet CPM
	[0 to 4/0/1 step]
	0: 25 cpm 1: 35 cpm 2: 40 cpm 3: 45 cpm 4: 55 cpm
3	Label CPM (0:25/1:35/2:40/3:45/4:55)
	[0 to 4/0/1 step]
	0: 25 cpm 1: 35 cpm 2: 40 cpm 3: 45 cpm 4: 55 cpm
4	Special Paper CPM (0:25/1:35/2:40/3:45/4:55)
	[0 to 4/0/1 step]
	0: 25 cpm 1: 35 cpm 2: 40 cpm 3: 45 cpm 4: 55 cpm

1902	Fusing Web Motor Control
1	Fusing Web Used Area Display/Setting
	Displays the percentage of the web consumption in 1% steps (0% to 100%). This setting must be reset to zero after the web is replaced. [0 to 120/ 0 /1 %]
2	Fusing Web Motor Operation Interval
	Adjusts the interval of copy operation time (seconds) after which the web motor is driven. D131: [5 to 50/18/1 s] D132: [5 to 50/15/1 s] D133: [5 to 50/14/1 s]
4	Web Near End Value
	Adjusts the timing of the web near end alert by changing the amount of web that has been used before the alert is triggered. [0 to 100/80/1 %]
5	Web Roll Coefficient
	Determines the coefficient of the web take-up time from cleaning toner from the roller while taking into consideration the take-up time for web buckle. DFU [10 to 20/9/1]
6	Web Length (0: 20m 1: 22.7m 2:28.5m 3:32m)

	Set the length of web.
	[0 to 3 / x / 1]
	D131/b/d: x = 3, D133: x = 2
7	Web Motor Counter: Continuous
	[0 to 255/ 0 /1 Step]
8	Web Motor Counter: Total
	[0 to 255/ 0 /1 Step]

1903	Web Job End
1	Yes/No
	This determines whether the web motor is driven at the end of a job. [0 to 1/1] 0: Off 1: On Enable when too much paper dust is causing copies to blacken.
2	Job End Condition (Continuous PPC Time)
	At the end of a job, the web motor is driven if the job lasted longer than the value of this SP mode. Only valid if SP1903-001 is set to 'On'. [1 to 99/7/1s]
3	Job End Frequency
	If the web motor is driven at the end of a job, this SP determines how many times the web motor operation is executed. [1 to 5/2/1]

1904	By-pass Tray Paper Size Correction	
	Minimum Size	
1	Calibrates the minimum paper width position of the sensor (100 mm). Move the side fences to the 100 mm position then press Execute.	

Maximum Size

Calibrates the maximum paper width position of the sensor (A3). Move the side fences to the A3 position then press Execute.

Thick Paper – By-pass Tray

Adjusts the by-pass feed clutch operation for thick paper.

[0 to 1/1/1]

1: On: 30 ms

0: Off:

This setting switches the by-pass feed clutch on for 30 ms when the registration motor turns on. It only happens when thick paper is selected, to help this paper pass through the registration rollers.

1906	Temperature/Humidity Sensor
	Temperature Sensor

1907	Pre-Fusing Idling On/Off	
	Pre-fusing idling: The hot roller turns freely to increase its temperature before thick paper or OHP goes through the fusing unit.	
	[0 to 1/1/1]	
	O: Pre-fusing idling is not done.	
	1: The fusing motor turns the hot roller with no paper in the fusing unit. This ensures the hot roller reaches the correct temperature. It is only done for thick paper or OHP this mode, the paper stops at the registration roller, then roller resumes its rotation af the hot roller reaches the correct temperature.	
1	Thick Mode (1:ON/0:OFF)	
	Thick Paper Normal Size	
2	Thick Mode: Small Paper Size (1:ON/0:OFF)	
	Thick Paper Small Size	
3	Normal Mode (1:ON/0:OFF)	
	Normal Paper Normal Size	

4	Normal Mode: Small Paper Size (1:ON/0:OFF)		
	Normal Paper Small Size		
5	Middle Thick (1:ON/0:OFF)		
	Middle Thick Paper Normal Size		
6	Middle Thick: Small Paper Size (1:ON/0:OFF)		
	Middle Thick Paper Small Size		
7	Label (1:ON/0:OFF)		
	Label		
8	Envelope (1:ON/0:OFF)		
	Envelope		

1908	Pre-Fusing Idling
1	1:ON/0:OFF
2	Low Temp. Standby (Pre-Idling) D133 Only
	[0 to 180 / 0 / 1sec]
3	Low Temp. Sleep Mode (Pre-Idling) D133 Only
	[0 to 180/ 60 / 1sec]

1909	LowSpeedMode
1	LowSpeedMode (Not used)
2	LowSpeedMode ProcessControl(Not used)

1910	Capacitator Status: Japan only
1	Latest Capacity
2	Current Voltage
3	Charge Time
4	Worn-out Counter

5	Charged Power
1911	Capacitor Discharge Stop Voltage Japan Only
	[1 to 20/ 7 /1 Step]
1912	Capacitor Worn-out Detection Japan Only
1	AC Input Voltage Display
	[0 to 50/ 100 /1 Step]
2	Worn-out Counter
	[30 to 255/ 30 /1]
3	AC Input Voltage
	[80 to 100/ 99 /1 Step]
4	Capacitor Capacity
	[50 to 150/ 70 /1 Step]
1920	Capacitator Charge Setting: Japan only
1921	Not Used
1922	Not Used
1923	HV Fusing Temp Cont
	0: OFF/1: ON
1924	10 Sec. Recovery Temperature: Japan only
	Temperature Sensor [15 to 25/ 20 /1]
1925	Idling Setting: Japan only

	1	Power On Middle Thick
		0 or 1
	2	Power On Thick
		0 or 1
1926		Capacitator Discharge: S-Size: Japan only
1927		Capacitator Discharge Setting: Japan only
1927		Capacitation Discharge Selling. Japan only
1928		Heater OFF During Feeding Heater OFF Time
		[5 to 60/ 60/ 1]
1929		Capacitor OFF: Feeding 1:ON 0:OFF Japan Only
		[0 to 1/1/1]
1930		Web Operation
	1	Fusing Idling 1:ON 0:OFF
		[0 to 1/ 0 /1]
	2	Fusing Idling Operation Times
		[1 to 5/ 2 /1]

1931

Normal Paper Setting Control

1:ON 0:OFF

[0 to 1/**0**/1]

2 Capacitor Voltage

[15 to 25/**22**/1 Step]

SP2000 Drum

2001	Charge Roller Bias Adjustment		
1	Applied Voltage for Image Processing		
	Adjusts the voltage applied to the grid plate during copying when auto process control i off.		
	[600 to 1500/ 900 /10 V]		
	After replacing the charge corona wire or the drum, reset to the factory default setting.		
2	ID Sensor Pattern: Adjustment of Applied Voltage		
	Adjusts the voltage applied to the grid plate when the ID sensor pattern is created.		
	[600 to 1500/ 800 /10 V]		
3	Setting for Total Bias Current		
	Adjusts the total current applied to the charge corona wire. DFU		
	[900 to 1500/ 1300 /10 µA]		
4	Setting for Total Bias Current of Grid		
	Adjusts the voltage applied to the grid plate during copying when auto process control is on.		
	[600 to 1500/ 900 /10 V]		
	This voltage changes every time auto process control starts up (every time the machine is switched on).		
5	Total Bias Grid Voltage: OHP Total		
Adjusts the voltage applied to the grid plate when OHP mode is selected.			
	[600 to 1500/ 650 /10 V]		
	Use this if there is a copy quality problem when making OHP's.		
6	Total Bias Grid Current: Photo Mode Total		
	Adjusts the voltage applied to the grid plate when Photo mode is selected.		
	[1400 to 2800/ 1500 /10 µ A]		

2101	Printing Erase Margin	
	These settings adjust the erase margin for the leading, trailing, left, and right edges.	

1	Leading Edge
	[0 to 9/ 2.5 /0.1 mm], Specification: 3±2 mm
2	Trailing Edge
	[0 to 9/ 2 /0.1 mm], Specification: 3±2 mm
3	Left Edge
	[0 to 9/ 2 /0.1 mm], Specification: 2±1.5 mm
4	Right Edge
	[0 to 9/ 2 /0.1 mm], Specification: 2±1.5 mm

2104	Small Pitch Banding Reduction		
1	Reduction Mode 0		
	Switches on/off the setting that corrects uneven images generated during 1200 dpi printing.		
	[0 to 1/1]		
	1: On		
	O: Off		
	Unevenness may appear in dot patterns or narrowly spaced horizontal lines, i.e. some areas may appear lighter or darker than others.		
2	Reduction Mode 0		
	Adjusts the amount of correction for uneven images generated during 1200 dpi printing. $[-20 \text{ to } +10/0/1]$		
3	Reduction Mode 0		
	Switches on/off the setting that corrects uneven images generated during 1200 dpi copying.		
	[0 to 1/0/1]		
	1: On		
	O: Off		
4	Reduction Mode 0		

Adjusts the amount of correction of uneven image generated during 1200 dpi copying. [-20 to +10/0/1]

2111	FCI Shade Detection	
	Allows shading detection if FCI (Fine Character Adjustment) smoothing is on. With this SP switched on, photos and painted areas are detected, and FCI is not applied in these areas. FCI is used for outputs in printer mode.	
1	Matrix Size (>600 dpi)	[0 to 128/ 18 /1]
2	Threshold Value (>600 dpi)	[0 to 128/ 4 /1]
3	Matrix Size (<400 dpi)	[0 to 128/18/1]
4	Threshold Value (<400 dpi)	[0 to 128/ 4 /1]

2114	Binary Edge Pro	
	Allows setting a parameter for binary edge processing for the printer application with FCI switched off. The value for this SP is enabled only when the printer is initialized. In all other cases, the data registered in the software are enabled. This SP allows adjustment of image quality if the desired effect cannot be achieved with the default settings for edge processing. However, some settings could cause defective images on white paper.	
1	Leading Edge Pixel (Level - 1200 dpi)	[2 to 15/ 7 /1]
2	Trailing Edge Pixel (Level - 1200 dpi)	[2 to 15/ 14 /1]
3	Continuous Pixel (Level - 1200 dpi)	[2 to 15/ 15 /1]
4	Independent Dot Pixel (Level - 1200 dpi)	[2 to 15/ 15 /1]
5	Leading Edge Pixel (Level - 600 dpi)	[2 to 15/ 7 /1]
6	Trailing Edge Pixel (Level - 600 dpi)	
7	Continuous Pixel (Level - 600 dpi)	[2 to 15/ 15 /1]
8	Independent Dot Pixel (Level - 600 dpi)	

2115	Main Scan Beam Pitch Adjustment	
	A label attached to the LD unit service part lists the correct settings. Refer to these settings when adjusting the beam pitch for LD0 to LD3.	

1	Pitch Adjustment Between LDO and LD2	[-100 to 100/ 0 /1 um]
2	Pitch Adjustment Between LD1 and LD3	[-100 to 100/ 0 /1 um]
3	Pitch Adjustment Between LDO and LD1	[-999 to 999/ 0 /1 um]
4	Main Scan: Front Between LDO and LD1	[-100 to 100/ 0 /1 um]
5	Main Scan: Rear Between LDO and LD1	[-100 to 100/ 0 /1 um]

2201	Development Bias
1	Dev. Bias (Image)
	Adjusts the development bias for copying when process control is off [100 to 800/550/10 V] Adjust as a temporary measure to compensate for an aging drum until the old drum can be replaced.
2	ID Sensor Pattern
	Adjusts the development bias used to create the ID sensor pattern. DFU [100 to 800/360/10 V] This SP and SP2201-004 must be changed together by the same amount.
3	OHP
	Adjusts the development bias for copying with OHP sheets. [100 to 800/300/10 V]
4	ID Sensor Pattern (Dev. Potential)
	Adjusts the development potential to create the ID sensor pattern. DFU [140 to 380/240/10 V] This SP and SP2201-002 must be changed together by the same amount.
5	Vb Target Voltage
	Sets the Vb target development bias voltage (Vb). DFU [100 to 800/550/1 V]

2207	Forced Toner Supply
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Rotates the toner bottle to supply toner to the toner supply unit. Press Execute to force toner supply.

Use to determine if toner supply is operating correctly. If forcing toner supply with this SP does not darken the image, then toner supply is not operating correctly.

2208	Toner Supply Mode
	Selects the toner supply mode: Sensor Control or Image Pixel Count.
	[0 to 1/0/1] 0: Sensor Control
	0: Sensor Control
	1: Pixel Count
	Select Image Pixel Count only if the TD sensor has failed and cannot be replaced immediately, so that the customer can use the machine. Return the setting to Sensor Control after replacing the sensor.

2209	Toner Supply Rate
	Adjusts the toner supply rate.
	[50 to 2000/ 850 /5 mg per sec] Increasing this value reduces the time the toner supply clutch remains on. Use a lower
	value if the user tends to make many copies that have large areas of black.

2210	ID Sensor Pattern Interval
	Adjusts the time interval between making ID sensor patterns onto the drum for Vsp/Vsg detection.
	[0 to 200/10/1]
	Reduce the interval for copies that contain a high proportion of black.

	Vref Manual Setting
	Adjusts the TD sensor reference voltage (Vref) manually.
	[1 to 4/2.5/0.01 V]
2220	Change this value after replacing the development unit with another one that already contains toner. For example, when using a development unit from another machine for test purposes, do the following:
	 Check the value of SP2220 in both the machine containing the test unit and the machine that you are going to move it to.
	 Install the test development unit, then input the VREF for this unit into SP2220.
	 After the test, put back the old development unit, and change SP2220 back to the original value.

2223	Vt Display
	Displays the current TD sensor output voltage.
	[0 to 5 / 4 / 0.02 V]

2301	Trans Current Adj
	Adjusts the current applied to the transfer belt during copying.
	Note: If this SP is too high, toner on the paper can go back to the drum.
1	Main Area: Image: Front Side
	D131: [10 to 200/ 50 /1 µA]
	D132: [10 to 200/ 65 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
2	Main Area: Image: Back Side
	D131: [10 to 200/ 50 /1 µA]
	D132: [10 to 200/ 65 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
3	By-pass Image Area: Front Side
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
4	Postcard (Japan Only)

	[10 to 200/ 165 /1 µ A]
5	Paper Interval
	[10 to 200/ 15 /1 µA]
6	Tab Paper
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
7	Thick Paper: Front Side
	[10 to 200/ 120 /1 µ A]
8	Thick Paper: Back Side
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
9	OHP: Front Side
	[10 to 200/ 120 /1 µ A]
10	Tracing Paper: Front Side
	D131: [10 to 200/ 50 /1 #A]
	D132: [10 to 200/ 65 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
11	Image Leading Edge: Front
	D131: [10 to 200/ 50 /1 µA]
	D132: [10 to 200/ 65 /1 µA]
	D133: [10 to 200/ 80 /1 #A]
12	Image Trailing Edge: Front
	D131: [10 to 200/ 50 /1 #A]
	D132: [10 to 200/ 65 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
13	Image Leading Edge: Back

	D131: [10 to 200/ 50 /1 µA]
	D132: [10 to 200/ 65 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
14	Image Trailing Edge: Back
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
15	Bypass: Image Leading Edge
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
16	Bypass: Image Trailing Edge
	[10 to 200/ 165 /1 µA]
17	Leading Edge: Postcard
	[10 to 200/ 165 /1 µA]
18	Image Trailing Edge: Postcard
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
19	Image Leading Edge: Tab Paper
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
20	Trailing Edge: Tab Paper
	[10 to 200/ 120 /1 µA]
21	Image Leading Edge: Thick Paper
	[10 to 200/ 120 /1 µA]
22	Image Trailing Edge: Thick Paper
	D131/D132: [10 to 200/ 75 /1 #A]
	D133: [10 to 200/ 80 /1 µA]
23	Image Leading Edge: OHP

	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
24	Image Trailing Edge: OHP
	D131/D132: [10 to 200/ 75 /1 µA]
	D133: [10 to 200/ 80 /1 µA]
25	Image Leading Edge: Tracing Paper
	[10 to 200/ 120 /1 µA]
26	ImageTrailing Edge: Tracing Paper
	[10 to 200/ 120 /1µA]
27	Label
	D131: [10 to 200/ 50 /1#A]
	D132: [10 to 200/ 65 /1µA]
	D133: [10 to 200/ 80 /1µA]
28	Image Leading Edge: Label
	D131: [10 to 200/ 50 /1#A]
	D132: [10 to 200/ 65 /1#A]
	D133: [10 to 200/ 80 /1 A]
29	Image Trailing Edge: Label
	D131: [10 to 200/ 50 /1#A]
	D132: [10 to 200/ 65 /1µA]
	D133: [10 to 200/ 80 /1µA]
30	Envelope
	D131: [10 to 200/ 50 /1#A]
	D132: [10 to 200/ 65 /1#A]
	D133: [10 to 200/ 80 /1µA]
31	Image Leading Edge: Envelope

	D131: [10 to 200/ 50 /1µA]
	D132: [10 to 200/ 65 /1µA]
	D133: [10 to 200/ 80 /1µA]
32	Image Trailing Edge: Envelope
	D131: [10 to 200/ 50 /1µA]
	D132: [10 to 200/ 65 /1µA]
	D133: [10 to 200/ 80 /1µA]

2506	Cont. Op. Time Cleaning Setting
1	Operation Setting
	Determines whether multiple copy jobs are stopped at regular intervals for: 0) Stopping and reversing the drum motor to clean the cleaning blade edge, and 1) creating an ID sensor pattern to correct toner density control.
	[0 to 1/1]
	0: No
	1: Yes
	The interval is set with SP2506-002. Use if the drum gets dirty or images get too pale or too dark during a long job.
2	Time Setting
	Selects the interval at which multi-copy jobs are stopped.
	[1 to 100/15/1 min.]

2507	ID Sen Patt Du
1	Operation Setting
	Determines whether an ID sensor pattern is created during copy jobs. [0 to 1/0/1] 0: Off 1: On
2	No. of Sheets

3

Selects the interval (number of copies) between ID sensor patterns when 1 is selected for SP2507-001
[1 to 10,000/100/1]

2602	PTL Setting (1st /2nd Copy Side)
	Turns the PTL off and on. The PTL (Pre-Transfer Lamp) decreases the charge on the drum to make better separation of the paper from the drum, and prevents stripper pawl marks on the leading edges of copies.
	Note:
	 The PTL operates only when copying with plain paper or translucent paper. It does not operate when copying with OHP, index sheets, or thick paper.
	 If blurring occurs in images at the leading edges of copies, switch SP2602-001 off (set to "0").
1	1 st Side ON/OFF Setting
	Turns the PTL lamp on/off during transfer to the front side of the paper at normal speed. This setting is always off when thick paper or OHPs are fed.
	[0 to 1/1]
	0: Off
	1: On
	The timing can be adjusted with SP2602-002.
2	1 st Side OFF Timing
	Adjusts the length of the space from the leading edge where PTL quenching is applied to the front side at normal speed. For example, if you select +3, then quenching will be done 3 mm from the leading edge on the front side. [-10 to 20/3/1 mm]
3	2nd Side ON/OFF Setting
	Turns the PTL lamp on/off during transfer to the front side of the paper at normal speed. [0 to 1/1] 0: Off 1: On
4	2nd Side OFF Timing

Adjusts the length of the space from the leading edge where PTL quenching is applied to the back side at normal speed. For example, if you select +3, then quenching will be done 3 mm from the leading edge on the back side.

[-10 to 20/3/1 mm]

2801	TD Sensor Initial Setting
1	Press the EXECUTE button to do the TD sensor initial setting. This SP mode controls the voltage applied to the TD sensor to make the TD sensor output about 3.0 V. When SP2967 is on, the TD sensor output is set to about 2.5 V. Note: Execute this SP only after replacing the TD sensor or developer.
2	Developer Lot No. Input
	Use this SP to enter the developer lot number embossed on the developer package when installing developer in a new machine, or replacing developer in a used machine.

2803	Charge Cleaner Start Time
1	Press EXECUTE button to clean the charge corona wire manually. When copy density across the paper is uneven, clean the wire with this mode.

2804	Charge Cleaner
1	Operation Mode
	Determines whether the charge corona wire is cleaned at regular intervals.
	[0 to 1/1]
	0: No
	1: Yes
	The time interval between cleaning is set with SP2804-002.
2	Number of Sheets
	Sets the interval (number of sheets printed) between charge corona wire cleanings.
	[100 to 10,000/ 5000 /100]

Humidity Control

1	0: OFF 1:ON
	[0 or 1/0/-]
2	Humidity Thresh: Trans. Bias
	[0 to 100 / 70 / 1%]

2902	Test Pattern Printing
	Test Pattern
	Produces the printer test patterns. (See "Test Pattern Printing" in the Main Chapters.)
	[0 to 26 / 0 / 1]

2906	TD Sensor Ctrl Voltage and Check
1	TD Sensor Ctrl Voltage Setting
	Adjustment mode for production. DFU
	[4.0 to 12.0/ 9.7 /0.1 V]
2	Automatic Adjustment Setting
	Displays the TD sensor data stored when SP2801 (TD Sensor Initial Settings) is executed.
	[4.0 to 12.0/ 9.7 /0.1 V]

2909	Main Scan Magnification
	Adjusts magnification in the main scan direction for copying.
	[-2.0 to +2.0/ 0 /0.1%]

2910	Writing Sub Scan Magnification
	Adjusts magnification in the main scan direction for copying.
	[-1.0 to +1.0/ 0 /0.1%]

2912	Drum Reverse Rotation – Reverse Interval
	Determines the frequency of drum reverse rotation for blade cleaning. [0 to 6/0/1 min.]

2913	Temperature & Humidity Display
	Displays the internal temperature of the machine.
	[-128 to 127/ 0 / 1°C]

2920	LD Off Check
	Checks if the LD turns off or on when the front door is opened. DFU
	[0 to 1/1]
	0: On
	1: Off

2930	Transfer Idle Cleaning
	When resolution changes from 400 to 600 dpi, the LD writes a pattern on the drum. Toner is applied, and this must be cleaned off the belt. This SP mode determines whether bias is applied to the transfer belt cleaning bias roller at this time. DFU
	[0 to 1/1] 0: Off 1: On
	Switching this function on adds 3 s to the job time.

2931	Transfer Current On/Off Timing: LCT
1	On Timing: La1 (Front)
	Adjusts on transfer current ON timing for front side copying. [-30 to +30/20/1 mm]
2	Lalf (Front)
	Adjusts the area where the transfer is applied for the leading edge during front side copying. [0 to +20/0/1 mm]
3	Lc1r (Front)
	Adjusts the area where the transfer current is applied for the trailing edge during front side copying. [0 to +20/0/1 mm]
4	Off Timing: Lc1 (Front)

	Adjusts the transfer current OFF timing for front side copying.
	[-30 to +30/ 20 /1 mm]
5	On Timing: La2 (Back)
	Adjusts on transfer current ON timing for back side copying.
	[-30 to +30/ 0 /1 mm]
6	Leading Edge: La2f (Back)
	Adjusts the area where the transfer current is applied for the leading edge during back side copying.
	[0 to +20/ 0 /1 mm]
7	Trailing Edge: Lc2r (Back)
	Adjusts the area where the transfer current is applied for the trailing edge during back side copying.
	[0 to +20/ 0 /1 mm]
8	On Timing: Lc2 (Back)
	Adjusts the transfer current ON timing for back side copying.
	[-30 to +30/ 20 /1 mm]
9	On Timing: Thick Paper
	Adjusts on transfer current ON timing for copying thick paper from the LCT.
	[-30 to +30/ 0 /1 mm]
10	Leading Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the leading edge during copying with thick paper from the LCT.
	[0 to +20/ 0 /1 mm]
11	Trailing Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the trailing edge during copying with thick paper from the LCT.
	[0 to +20/ 0 /1 mm]
12	Timing: Thick Paper Lc

	Adjusts the transfer current OFF timing for copying thick paper from the LCT.
	[-30 to +30/ 15 /1 mm]
13	On Timing: M-Thick
	Adjusts the transfer current ON timing for copying with M-thick paper from the LCT.
	[-30 to +30/ 0 /1 mm]
14	Leading Edge: M-Thick
	Adjusts the area where the transfer current is applied for the leading edge during copying with M-thick paper from the LCT. [0 to +20/0/1 mm]
15	Trailing Edge:M-Thick
	Adjusts the area where the transfer current is applied for the trailing edge during copying with M-thick paper from the LCT.
	[0 to +20/ 0 /1 mm]
16	Off Timing: M-Thick
	Adjusts the transfer current OFF timing for copying with M-thick paper from the LCT.
	[-30 to +30/15/1 mm]
17	On Timing: After Punch
	Adjusts the transfer current ON timing for copying with punch from the LCT.
	[-30 to +30/ 20 /1 mm]
18	Leading Edge: After Punch
	Adjusts the area where transfer current is applied for the leading edge during copying with punch.
	[0 to +20/ 0 /1 mm]
19	Trailing Edge: After Punch
	Adjusts the area where transfer current is applied for the trailing edge during copying with punch.
	[0 to +20/ 0 /1 mm]
20	Off Timing: After Punch

	Adjusts the transfer current OFF timing for copying with punch from the LCT.	
	[-30 to +30/ -16 /1 mm]	

2932	Transfer Current On/Off Timing: Tray 1
1	On Timing: La1 (Front)
	Adjusts on transfer current ON timing for front side copying. [-30 to +30/20/1 mm]
2	Lalf (Front)
	Adjusts the area where the transfer is applied for the leading edge during front side copying. [0 to +20/0/1 mm]
3	Lc1r (Front)
	Adjusts the area where the transfer current is applied for the trailing edge during front side copying. [0 to +20/0/1 mm]
4	Off Timing: Lc1 (Front)
	Adjusts the transfer current OFF timing for front side copying. [-30 to +30/20/1 mm]
5	On Timing: La2 (Back)
	Adjusts on transfer current ON timing for back side copying. [-30 to +30/0/1 mm]
6	Leading Edge: La2f (Back)
	Adjusts the area where the transfer current is applied for the leading edge during back side copying. [0 to +20/0/1 mm]
7	Trailing Edge: Lc2r (Back)
	Adjusts the area where the transfer current is applied for the trailing edge during back side copying. [0 to +20/0/1 mm]

8	On Timing: Lc2 (Back)
	Adjusts the transfer current ON timing for back side copying.
	[-30 to +30/ 20 /1 mm]
9	On Timing: Thick Paper
	Adjusts on transfer current ON timing for copying thick paper f.
	[-30 to +30/ 0 /1 mm]
10	Leading Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the leading edge during copying with thick paper.
	[0 to +20/ 0 /1 mm]
11	Trailing Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the trailing edge during copying with thick paper
	[0 to +20/ 0 /1 mm]
12	Timing: Thick Paper Lc
	Adjusts the transfer current OFF timing for copying thick paper.
	[-30 to +30/ 15 /1 mm]
13	On Timing: M-Thick
	Adjusts the transfer current ON timing for copying with M-thick paper.
	[-30 to +30/ 0 /1 mm]
14	Leading Edge: M-Thick
	Adjusts the area where the transfer current is applied for the leading edge during copying with M-thick paper.
	[0 to +20/ 0 /1 mm]
15	Trailing Edge:M-Thick
	Adjusts the area where the transfer current is applied for the trailing edge during copying with M-thick paper.
	[0 to +20/ 0 /1 mm]
16	Off Timing: M-Thick

	Adjusts the transfer current OFF timing for copying with M-thick paper. [-30 to +30/15/1 mm]
17	On Timing: After Punch
	Adjusts the transfer current ON timing for copying with punch. [-30 to +30/20/1 mm]
18	Leading Edge: After Punch
	Adjusts the area where transfer current is applied for the leading edge during copying with punch. [0 to +20/0/1 mm]
19	Trailing Edge: After Punch
	Adjusts the area where transfer current is applied for the trailing edge during copying with punch. [0 to +20/0/1 mm]
20	Off Timing: After Punch
	Adjusts the transfer current OFF timing for copying with punch. [-30 to +30/-16/1 mm]

2933	Transfer Current On/Off Timing: Tray2
1	On Timing: La1 (Front)
	Adjusts on transfer current ON timing for front side copying. [-30 to +30/20/1 mm]
2	Lalf (Front)
	Adjusts the area where the transfer is applied for the leading edge during front side copying. [0 to +20/0/1 mm]
3	Lc1r (Front)
	Adjusts the area where the transfer current is applied for the trailing edge during front side copying. [0 to +20/0/1 mm]

4	Off Timing: Lc1 (Front)
	Adjusts the transfer current OFF timing for front side copying.
	[-30 to +30/ 20 /1 mm]
5	On Timing: La2 (Back)
	Adjusts on transfer current ON timing for back side copying.
	[-30 to +30/ 0 /1 mm]
6	Leading Edge: La2f (Back)
	Adjusts the area where the transfer current is applied for the leading edge during back side copying.
	[0 to +20/ 0 /1 mm]
7	Trailing Edge: Lc2r (Back)
	Adjusts the area where the transfer current is applied for the trailing edge during back side copying.
	[0 to +20/ 0 /1 mm]
8	On Timing: Lc2 (Back)
	Adjusts the transfer current ON timing for back side copying.
	[-30 to +30/ 20 /1 mm]
9	On Timing: Thick Paper
	Adjusts on transfer current ON timing for copying thick paper f.
	[-30 to +30/ 0 /1 mm]
10	Leading Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the leading edge during copying with thick paper.
	[0 to +20/ 0 /1 mm]
11	Trailing Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the trailing edge during copying with thick paper
	[0 to +20/ 0 /1 mm]
12	Timing: Thick Paper Lc

20	Off Timing: After Punch
	punch. [0 to +20/ 0 /1 mm]
19	Trailing Edge: After Punch Adjusts the area where transfer current is applied for the trailing edge during copying with
	Adjusts the area where transfer current is applied for the leading edge during copying with punch. [0 to +20/0/1 mm]
18	Leading Edge: After Punch
	Adjusts the transfer current ON timing for copying with punch. [-30 to +30/20/1 mm]
17	On Timing: After Punch
	Adjusts the transfer current OFF timing for copying with M-thick paper. [-30 to +30/15/1 mm]
16	Off Timing: M-Thick
	with M-thick paper. [0 to +20/ 0 /1 mm]
	Adjusts the area where the transfer current is applied for the trailing edge during copying
15	Trailing Edge:M-Thick
	Adjusts the area where the transfer current is applied for the leading edge during copying with M-thick paper. [0 to +20/0/1 mm]
14	Leading Edge: M-Thick
	Adjusts the transfer current ON timing for copying with M-thick paper. $[-30 \text{ to } +30/0/1 \text{ mm}]$
13	On Timing: M-Thick
	[-30 to +30/15/1 mm]
	Adjusts the transfer current OFF timing for copying thick paper.

Adjusts the transfer current OFF timing for copying with punch.
[-30 to +30/-16/1 mm]

2934	Transfer Current On/Off Timing: Tray3
1	On Timing: La 1 (Front)
	Adjusts on transfer current ON timing for front side copying.
	[-30 to +30/ 20 /1 mm]
2	Lalf (Front)
	Adjusts the area where the transfer is applied for the leading edge during front side
	copying.
	[0 to +20/ 0 /1 mm]
3	Lc 1 r (Front)
	Adjusts the area where the transfer current is applied for the trailing edge during front side
	copying.
	[0 to +20/ 0 /1 mm]
4	Off Timing: Lc1 (Front)
	Adjusts the transfer current OFF timing for front side copying.
	[-30 to +30/ 20 /1 mm]
5	On Timing: La2 (Back)
	Adjusts on transfer current ON timing for back side copying.
	[-30 to +30/ 0 /1 mm]
6	Leading Edge: La2f (Back)
	Adjusts the area where the transfer current is applied for the leading edge during back
	side copying.
	[0 to +20/ 0 /1 mm]
7	Trailing Edge: Lc2r (Back)
	Adjusts the area where the transfer current is applied for the trailing edge during back side
	copying.
	[0 to +20/ 0 /1 mm]

8	On Timing: Lc2 (Back)
	Adjusts the transfer current OFF timing for back side copying. [-30 to +30/20/1 mm]
9	On Timing: Thick Paper
	Adjusts on transfer current ON timing for copying thick paper f.
	[-30 to +30/ 0 /1 mm]
10	Leading Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the leading edge during copying with thick paper.
	[0 to +20/ 0 /1 mm]
11	Trailing Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the trailing edge during copying with thick paper
	[0 to +20/ 0 /1 mm]
12	Timing: Thick Paper Lc
	Adjusts the transfer current OFF timing for copying thick paper.
	[-30 to +30/15/1 mm]
13	On Timing: M-Thick
	Adjusts the transfer current ON timing for copying with M-thick paper.
	[-30 to +30/ 0 /1 mm]
14	Leading Edge: M-Thick
	Adjusts the area where the transfer current is applied for the leading edge during copying with M-thick paper.
	[0 to +20/ 0 /1 mm]
15	Trailing Edge:M-Thick
	Adjusts the area where the transfer current is applied for the trailing edge during copying with M-thick paper.
	[0 to +20/ 0 /1 mm]
16	Off Timing: M-Thick

	Adjusts the transfer current OFF timing for copying with M-thick paper. [-30 to +30/15/1 mm]
17	On Timing: After Punch
	Adjusts the transfer current ON timing for copying with punch. [-30 to +30/20/1 mm]
18	Leading Edge: After Punch
	Adjusts the area where transfer current is applied for the leading edge during copying with punch. [0 to +20/0/1 mm]
19	Trailing Edge: After Punch
	Adjusts the area where transfer current is applied for the trailing edge during copying with punch. [0 to +20/0/1 mm]
20	Off Timing: After Punch
	Adjusts the transfer current OFF timing for copying with punch. [-30 to +30/-16/1 mm]

|--|

2936	Transfer Current On/Off Timing: Bypass Tray
1	On Timing: La1 (Front)
	Adjusts on transfer current ON timing for front side copying. [-30 to +30/20/1 mm]
2	Lalf (Front)
	Adjusts the area where the transfer is applied for the leading edge during front side copying. [0 to +20/0/1 mm]
3	Lc1r (Front)

	Adjusts the area where the transfer current is applied for the trailing edge during front side
	copying. [0 to +20/ 0 /1 mm]
4	Off Timing: Lc1 (Front)
	Adjusts the transfer current OFF timing for front side copying. [-30 to +30/20/1 mm]
5	On Timing: La2 (Back)
	Adjusts on transfer current ON timing for back side copying. [-30 to +30/0/1 mm]
6	Leading Edge: La2f (Back)
	Adjusts the area where the transfer current is applied for the leading edge during back side copying.
	[0 to +20/ 0 /1 mm]
7	Trailing Edge: Lc2r (Back)
	Adjusts the area where the transfer current is applied for the trailing edge during back side copying.
	[0 to +20/ 0 /1 mm]
8	On Timing: Lc2 (Back)
	Adjusts the transfer current ON timing for back side copying. [-30 to +30/20/1 mm]
9	On Timing: Thick Paper
	Adjusts on transfer current ON timing for copying thick paper f. [-30 to +30/0/1 mm]
10	Leading Edge: Thick Paper
	Adjusts the area where the transfer current is applied for the leading edge during copying with thick paper.
	[0 to +20/ 0 /1 mm]
11	Trailing Edge: Thick Paper

	Adjusts the area where the transfer current is applied for the trailing edge during copying with thick paper [0 to +20/0/1 mm]
12	Off Timing: Thick Paper Lc
12	
	Adjusts the transfer current OFF timing for copying thick paper.
	[-30 to +30/ 20 /1 mm]
13	On Timing: OHP
	Adjusts on transfer current ON timing for copying with OHP.
	[-30 to +30/ 0 /1 mm]
14	Leading Edge: OHP
	Adjusts the area where the transfer current is applied for the leading edge during copying with OHP.
	[0 to +20/ 0 /1 mm]
15	Trailing Edge: OHP
	Adjusts the area where the transfer current is applied for the trailing edge during copying with OHP.
	[0 to +20/ 0 /1 mm]
16	Off Timing: OHP
	Adjusts the transfer current OFF timing for copying with OHP.
	[-30 to +30/ 20 /1 mm]
17	On Timing: M-Thick
	Adjusts the transfer current ON timing for copying with M-thick paper.
	[-30 to +30/ 0 /1 mm]
18	Leading Edge: M-Thick
	Adjusts the area where the transfer current is applied for the leading edge during copying with M-thick paper.
	[0 to +20/ 0 /1 mm]
19	Trailing Edge: M-Thick

	Adjusts the area where the transfer current is applied for the trailing edge during copying with M-thick paper.
	[0 to +20/ 0 /1 mm]
20	Off Timing: M-Thick
	Adjusts the transfer current OFF timing for copying with M-thick paper.
	[-30 to +30/15/1 mm]
21	On Timing: After Punch
	Adjusts the transfer current ON timing for copying with punch.
	[-30 to +30/ 20 /1 mm]
22	Leading Edge: After Punch
	Adjusts the area where transfer current is applied for the leading edge during copying with punch.
	[0 to +20/ 0 /1 mm]
23	Trailing Edge: After Punch
	Adjusts the area where transfer current is applied for the trailing edge during copying with punch.
	[0 to +20/ 0 /1 mm]
24	Off Timing: After Punch
	Adjusts the transfer current OFF timing for copying with punch.
	[-30 to +30/-16/1 mm]
25	ON Timing: Label La 1
	[-30 to 30/ 20 /1]
26	Label La 1
	[0 to 20/ 0 /1]
27	Bypass Label Lc1
	[0 to 20/ 0 /1]
28	OFF Timing: Label Lc 1
	[-30 to 30/ 20 /1]

29	ON Timing: Envelope La 1
	[-30 to 30/ 20 /1]
30	Envelope La 1
	[0 to 20/ 0 /1]
31	Envelope Lc1
	[0 to 20/ 0 /1]
32	OFF Timing: Envelope Lc1
	[-30 to 30/ 20 /1]

2940	Reface Mode
	Determines if a blade bend prevention pattern is made when the ID sensor pattern is made. This setting controls the pattern count. DFU
	[0 to 100/ 0 /1]
	Increase the setting if the rotation of the drum is not smooth, that is, when drum rotation is making noise.

2950	Vh Pattern Creation Setting DFU
	Creates the Vh pattern (standard drum potential for half-tone) on the drum during process control.
1	Exposure Level
	[0 to 15/ 7 /1]
2	Offset Light Amount
	[-100 to 0/ -45 /1]

2960	Process Interval DFU	
2900	[0 to 7/ 0 /1 sec]	

2961	Developer Adjust Mode DFU
2962	Automatic Adjustment of Drum Conditions

Push [Execute] to execute the process control cycle manually.
Note: This SP executes only if SP3901 is enabled.

2963	Installation Mode
	Use the keyboard display to enter the lot number of the developer. (The lot number is embossed on the top edge of the developer pack.)
	Press "Execute" to initialize the developer and force toner supply to the toner hopper at machine installation.
	Important: After you replace developer in a machine that has been already installed, do not use SP2963 to initialize the developer. Use SP2801 (TD Sensor Initial Setting) to initialize the TD sensor.
1	Execute
2	Developer Lot Number Input

2966	Drum Conditions: Periodic Adjustment
	Sets the time interval between automatic adjustments. [1 to 24/24/1 hour]

2967	Developer Density Adjustment Mode
	Determines whether the amount of toner is checked during auto process control with only the TD sensor. With this feature on, the machine uses the TD sensor only.
	[0 to 1/0/1]
	O: Off
	1: On
	During auto process control execution after the main switch is turned on, the toner amount in the development unit is normally checked and adjusted using the ID sensor. However, in some environments, such as where there could be traces ammonia in the air, copies could appear dirty or too dark because the ID sensor reading is not reliable.

2968	Toner Exit Mode
	Press Execute to force used toner into the toner collection bottle. The moving components of the cleaning and toner collection areas will rotate for about 60 sec. with the transfer belt released.

2969	Toner Bottle Revolution Count
1	Copy Count Setting
	Sets the standard number of copies by using the number of toner bottle rotations. DFU
	[500 to 112/ 100 /1]
2	Count Reset
	Press "Execute" to reset the toner bottle rotation count. DFU
3	Copy Count Display
	Used to check the number of toner bottle rotations.
	[0 to 0xFFFF/ 0 /0]
4	Copy Count History 1
	[0 to 0xFFFF/ 0 /0]
5	Copy Count History 2
	[0 to 0xFFFF/ 0 /0]
6	Copy Count History 3
	[0 to 0xFFFF/ 0 /0]
7	Copy Count History 4
	[0 to 0xFFFF/ 0 /0]
8	Copy Count History 5
	[0 to 0xFFFF/ 0 /0]
9	Copy Count History 6
	[0 to 0xFFFF/ 0 /0]
10	Copy Count History 7
	[0 to 0xFFFF/ 0 /0]

2970	Transfer Belt Resistance: Display DFU	
2970	[0 to 0xFFFF/ 0 /0 Mohm]	

2971	Trans. Interval Output DFU
1	Voltage
	[0 to 0xFFFF/ 0 /0 V]
2	Current
	[0 to 0xFFFF/ 0 /0 µ A]

2972	Toner Bottle Cool. Fan Drive Control
	Switches fan control On/Off.
	[0 to 1/1]
	0: Off. The toner bottle fan switches off when the machine's operation switch is turned off and when the machine enters the night mode.
	1: On: Toner bottle fan remains on.
	Switch on in an extremely hot environment to prevent the toner from overheating and clumping.

297	73	Development Motor Speed Setting
		[0 to 3/ 0 /1]

2974	PCU Cool Fan Drive Ctrl	
	[0 to 1/0/1]	

2975	Main Intake Fan Drive Ctrl	
	[0 to 1/0/1]	

2976	Development Fan Drive Ctrl	
	[0 to 1/ 0 /1]	

2977	7	Main Exhaust Fan Drive Setting
		[0 to 2/1/1]

2980 Paper Interval Trans Curr ON Timing

[80 to 500/**170**/10]

2986	Refresh Mode
	Use these SPs configure how refresh mode operates.
1	Interval
	Sets the number of prints between refresh mode executions (even during a job). If set to "O" refresh mode does not execute. [0 to 25/0/1]
2	Level
	Sets the toner consumption level. [0 to 4/2/1]
3	Repetitions
	Sets the number of times toner is consumed during refresh mode execution. [1 to 3/2/1]
4	Execute Mode
	Applies the settings of SP2986-2 and SP2986-3 for execution of the refresh mode. These settings do not take effect until this SP code is set. [0 to 4/2/1]

SP3000 Processing

3001	ID Sensor Initial Setting
1	ID Sensor PWM Setting
	Recovers the machine when an SC is logged because the ID Sensor Initial Setting is not done after doing an NVRAM Clear or replacing the NVRAM. Reset this SP to the factory setting in this case.
	[0 to 255/ 70 /1]
2	ID Sensor Initialization
	Performs the ID sensor initial setting. The ID sensor output for the bare drum (VSG) is adjusted to 4.0 ± 0.2 V.
	Press "Execute".
	This SP mode should be performed after:
	(1) Replacing or cleaning the ID sensor, (2) Replacing the NVRAM, (3) Clearing NVRAM, (4) Replacing the BICU board.

3103	ID Sensor Output Display
1	Vsg
	Displays the current value of the ID sensor output after checking the bare drum surface. [0 to 5/ 0 /0.01 V]
2	Vsp
	Displays the current value of the ID sensor output after checking the ID sensor pattern image. [0 to 5/ 0 /0.01 V]
3	Vpdp
	Displays the current value of the ID sensor output immediately after Vsp is output when the charge potential drops. This reading is used to test and determine characteristics for design.
	[0 to 5/ 0 /0.01 V]
	If the ID sensor output is abnormal, an SC is logged:
	SC378-00 logged: Vsp/Vsg/Vsdp = 0.00/0.00/0.00, or 5.00/5.00/5.00

3901	Auto Process Control On/Off Setting
	Determines whether the machine checks and corrects the drum potential (Vd) and LD power when the fusing temperature is lower than 100°C at power-on.
	[0 to 1/1/1]
	0: Off
	1: On
	This setting attempts to change the Vd setting consistent with the OPC, the charge corona unit, and environment to improve the reliability of the system.

3902	Drum Condition Display
1	Auto Process Control On/Off
	Displays whether auto process control is switched on or off (0:Off, 1:On)
	When auto processing control is turned on, displays only when the potential sensor is calibrated correctly. Auto process control is not executed when this SP is switched off.
	[0 to 1/1/1]
	0: Off
	1: On
2	Vd
	Displays drum dark potential, the standard potential, electrical potential of the black areas after exposure.
	[100 to 970/ 800 /1]
3	Vh
	Displays standard halftone drum potential, used for laser power adjustment.
	[100 to 500/ 300 /1]
4	Vg
	Displays the charge grid voltage resulting from the latest Vd adjustment.
	[0 to 0xFFFF/ 0 /1]
5	LD Level
	Displays the LD power correction value as a result of the latest Vh adjustment.
	[-127 to 127/ 0 /3]

6	ID Sensor Pattern Potential
	Displays Vid, the latest drum surface voltage measured on the ID sensor pattern. [0 to 0xFFFF/0/1]
	[te to extra y ey 1]
7	Vql
	Displays the drum potential after quenching. [0 to 0xFFFF/0/1]
8	VI
	Shows the standard electrical potential of white areas on the drum after exposure. [-32767 to 32768/0/1]

3903	Drum Rotation Time Extension Mode
1	(0:OFF/1:ON)
	Turns on the drum rotation mode. This increases the time that the drum turns freely after the machine is turned on. After this function is turned on with this SP, it will be enabled only when SP3904 001 is set to "2". If SP3904 001 is set to "0" or "1", the extra drum rotation mode will not be enabled.
	[0 to 1/0/1]
	0: Extra drum rotation mode is off (default)
	1: After auto process control, the drum continues to turn until the fusing unit gets to its operation temperature. Use this setting to decrease out-of-focus copy images when the machine is used immediately after power-on.
2	Drum Rotation Time
	Sets the amount of time the drum turns in the drum rotation mode before the first copy after the machine is turned on. SP3903-001 must be on or this setting has no effect. [120 to 600/240/1]

3904	Warm Up Short Mode
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Controls when corona wire cleaning is done to adjust the length of time that is necessary for startup.

D131/D132: [0 to 2/0/1]

D133: [0 to 2/2/1]

0: Charge corona wire not cleaned when the machine is turned on.

Warmup Time: 30 sec. (Short Process Control is done)

1: Charge corona wire cleaned only when the machine is turned on.

Warmup Time: 30 sec. + 40 sec. (for cleaning) = 70 sec. (Short Process Control is done)

2: Normal startup procedure at power on:

Warmup Time: 240 sec. (Full process control is done)

- Potential sensor calibrated
- Drum starts to turn when fusing unit gets to the warmup temperature (not done during Short Process Control)
- Potential sensor readings are used to adjust development bias, grid voltage, laser diode.
- ID sensor calibrated (not done during Short Process Control)
- TD sensor calibrated (not done during Short Process Control)

3905	Exclusion Time (90 cpm): Interval Setting	
	Sets the length of time for the machine to wait before executing process control after the the machine recovers from the Off Mode	
	[0 to 24/ 2 /1]	

SP3990-1 RTB 18c

SP4000 Scanner

	Sub Scan Magnification Adj
	Fine adjusts the magnification in the sub scan direction for scanning by changing the speed of the scanner motor.
4008	[-1.0 to +1.0/0.1 %]
	Setting a lower value reduces the speed of the motor and lengthens the image in the sub scan direction (direction of paper feed).
	Setting a higher value increases the speed of the motor speed and shortens the image in the sub scan direction.
	Sub Scan Registration Adj
	Adjust the registration of the leading edge for scanning in the sub scan direction.
	[-3.0 to +3.0/0.1 mm]
4010	This setting ensures that the point where the original strikes the registration roller matches the point where the F-GATE signal will trigger the start of scanning in the main scan direction.
	Setting a larger value shifts the image away from the leading edge, and a smaller value shifts the image toward the leading edge.
	Main Scan Registration Adj
	Adjusts the side-to-side registration for scanning in the main scan direction across the page.
4011	[-2.5 to 2.5/0.1 mm]
	Setting a negative value shifts the image toward the left edge, and setting a positive value shifts the image toward the right edge.
	Set Scale Mask
4012	These settings adjust the margins (erase margins) of the scanned area on the sheet. The leading, trailing, right, and left margins can be set independently.

1	Book: Sub Scan: Leading Edge			
2	2 Book: Sub Scan: Trailing Edge			
3	Book: Main Scan: Leading Edge (Rear)			
4	4 Book: Main Scan: Trailing Edge (Front) [0 to 3/0.1 mm]			
5	5 ADF: Sub Scan: Leading Edge			
7	ADF: Main Scan: Leading Edge (Rear)			
8	ADF: Main Scan: Trailing Edge (Front)			

	Scanner Free Run	
4013	Switches on/off a scanner free run. The scanning area is A3. Press "On" or "Off".	
1	Book Mode: Lamp Off	
	Performs a scanner free run with the exposure lamp off.	
2	Book Mode: Lamp On	
	Performs a scanner free run with the exposure lamp on.	

4014	4014 Scan	
	Execute 1 scan with HP detection On.	

	DF Dust Check
4020	This feature checks the ADF exposure glass for dust that can cause black lines in copies. If dust is detected, a message is displayed, but the process does not stop.

Dust Detect: On/Off: Front

Issues a warning if there is dust on the narrow scanning glass of the ADF when the original size is detected before a job starts. This function can detect dust on the white plate above the scanning glass, as well as dust on the glass. Sensitivity of the level of detection is adjusted with SP4020-2.

[0 to 1/1]

0: Off. No dust warning.

1: On. Dust warning. This warning does not stop the job.

Note: Before switching this setting on, clean the ADF scanning glass and the white plate above the scanning glass.

Detect Level: Front

Adjusts the sensitivity for dust detection on the ADF scanning glass. This SP is available only after SP4020-1 is switched on.

[0 to 8/1]

2

- If you see black streaks in copies and no warning has been issued, raise the setting to increase the level of sensitivity.
 - If warnings were issued and you see no black streaks in copies, lower the setting.
 - Dust that triggers a warning could move be removed from the glass by the originals in the feed path. If the dust is removed by passing originals, this is not detected and the warning remains on.

Correction Level: Front

Sets the level for vertical line correction (the black vertical lines caused by dust on the ADF exposure glass).

3 | [0 to 4/1]

0: No vertical line correction.

1-7: Enables and sets the level for vertical line correction. If you select a higher number, this can decrease the unwanted lines caused by dust. But, it can also erase thin vertical lines of the original.

Dust Detect: On/Off: Rear Adjusts the sensitivity for dust detection on the ADF scanning glass. This SP is available only after SP4020-2 is switched on.

[0 to 1/1]

11

- If you see black streaks in copies when no warning has been issued, raise the setting to increase the level of sensitivity.
- If warnings are issued when you see no black streaks in copies, lower the setting.

Dust that triggers a warning could move be removed from the glass by the originals in the feed path. If the dust is removed by passing originals, this is not detected and the warning remains on.

12 Detect Level: Rear

Sets the level for vertical line correction (the black vertical lines caused by dust on the ADF exposure glass).

[0 to 8/1]

0: No vertical line correction.

1-7: Enables and sets the level for vertical line correction. If you select a higher number, this can decrease the unwanted lines caused by dust. But, it can also erase thin vertical lines of the original.

Operation Check APS Sensor

4301

Displays the APS sensor output signals when an original is placed on the exposure glass. If a non-standard size is placed on the glass, asterisks (*) are displayed.

Min Size for APS

Selects whether or not the copier determines that the original is A5/HLT size when the APS sensor does not detect the size.

4303

[0 to 1/1]

0: Not detected

1: A5 SEF (5 1/2" x 8 1/2")

If "1" is selected, paper sizes that cannot be detected by the APS sensors are detected as A5 SEF. If "0" is selected, "Cannot detect original size" will be shown.

4305 8K/16K Detection

Changes APS size detection

[0 to 3 / 0 / 1]

0 : Normal

1: A4-LEF LT-SEF

If the paper is LEF, detects A4, if SEF detects LT

2: LT-LEF A4 SEF

If paper is LEF, detects LT, if SEF detects A4.

3: 8-kai, 16-kai

- A3, B4 > 8-kai SEF
- A4 SEF, B5 SEF, A5 SEF > 16-kai SEF
- A4 LEF, B5 LEF, A5 LEF > 16-kai LEF

	Original Edge Mask Setting			
4400	This SP sets the mask area to remove shadows when scanning originals from the exposure glass in Book mode. Note: "LE" denotes "leading edge" and "TE" denotes "trailing edge".			
1	Book:Sub Scan:Leading Edge			
2	2 Book:Sub Scan:Trailing Edge [0 to 3/0/0.1 mm]			
3	Book:Main Scan:Leading Edge (Rear)	[0 10 37 07 0.1 111111]		
4	Book:Main Scan:Trailing Edge (Front)			
5	ADF: Sub Scan: Leading Edge	[0 to 3/2/0.1 mm]		
7	ADF: Main Scan: Leading Edge (Rear)	[0 to 3/0/0.1 mm]		
8	ADF: Main Scan: Trailing Edge (Front)	[O 10 3/ O/ O. 1 mm]		

4417	IPU Test	IPU Test Pattern Setting	
	0	Scanned Image	
	1	Gradation: Main Scan A	
	2	Gradation: Main Scan B	
	3	Gradation: Main Scan C	

4	Gradation: Main Scan D
5	Gradation: Sub Scan (1)
6	Grid Pattern (1)
7	Slant Grid Pattern
8	Gradation K
9	Check Pattern 16
10	Gray Patch 16 (1)
11	Gray Patch 16 (2)
12	Gray Patch 64
13	Grid Pattern (2)
14	Color Patch K
15	Gray Pattern (1)
16	Gray Pattern (2)
17	Gray Pattern (3)
18	Shading Pattern
19	Thin Line Pattern
20	Scanned + Grid Pattern
21	Scanned + Gray Scale
22	Scanned + Color Patch
23	Scanned + Slant Grid C
24	Scanned + Slant Grid D
25	Gray Scale 18 Text
26	Gray Scale 18 Photo
27	Gray Scale 256 Text
28	Gray Scale 256 Photo

4429	Select Copy Data Security			
Copying [0 to 3/3/1]				
2 Scanning [0 to 3/3/1]				
3	Fax Operation [0 to 3/3/1]			

4450	Scan Image Pass Selection
	This SP controls black subtraction and shading correction in scanned images.
1	Black Subtraction ON/OFF
	Determines whether black subtraction is done.
	[0 to 1/1/1] 0: Black subraction OFF 1: Black subtraction ON
2	SH ON/OFF
	Determines whether shading correction is done.
	[0 to 1/1/1] 0: Shading correction OFF 1: Shading correction ON

4460	Digital AE	
	This SP sets the lower limit and level for background removal when background removal is selected with a scanner application.	
1	Low Limit Value	[0 to 1023/ 364 /1]
2	Background level	[0 to 1023/ 512 /1]

4550	Scanning: Text/Drawing
4551	Scanning: Text
4552	Scanning: Test Dropout Color
4553	Scanning: Text/Photo
4554	Scanning: Photo

4565	Scanning: Grayscale
4570	Scanning: Color Text/Photo
4571	Scanning: Color Gloss Photo
4572	Scanning: Auto Color
5	MTF: O(Off) 1-15 (Weak – Strong)
	Sets the MTF level (Modulation Transfer Function) designed to improve image contrast. Set higher for stronger effect, lower for weaker effect. [0 to 15/8/1]
6	Smoothing: 0(x1) 1 - 7 (Weak - Strong)
	Use to remove "jaggies" if they appear. Set higher for smoother. [0 to 7/4/1]
7	Brightness: 1-255
	Set higher for darker, set lower for lighter. [1 to 255/128/1]
8	Contrast: 1-255
	Set higher for more contrast, set lower for less contrast. [1 to 255/128/1]
9	Ind Dot Erase: O(Off) 1-7 (Weak – Strong)
	This SP sets the level for removing dots when a color original is scanned with a scanner software application. The higher the setting, the greater the effect applied for removing background dots.
	[0 to 7/0/1]

4580	FAX Application: Text/Chart
4581	FAX Application: Text
4582	FAX Application: Text/Photo
4583	FAX Application: Photo
4584	FAX Application: Original 1

4585	FAX Application: Original 2
5	MTF: O(Off) 1-15 (Weak – Strong)
	Sets the MTF level (Modulation Transfer Function) designed to improve image contrast. Set higher for stronger effect, lower for weaker effect. [0 to 15/8/1]
6	Smoothing: O(x1) 1 - 7 (Weak - Strong)
	Use to remove "jaggies" if they appear. Set higher for smoother. [0 to 7/4/1]
7	Brightness: 1-255
	Set higher for darker, set lower for lighter. [1 to 255/128/1]
8	Contrast: 1-255
	Set higher for more contrast, set lower for less contrast. [1 to 255/128/1]
9	Ind Dot Erase: O(Off) 1-7 (Weak – Strong)
	This SP sets the level for removing dots when a color original is scanned with a scanner software application. The higher the setting, the greater the effect applied for removing background dots.
	[0 to 7/0/1]

4600	
1	SBU_ID
	Displays the SBU ID code confirmed by reading the SBU after the SBU adjusts automatically at power on. [0 to FFh/1]
2	GASBU_N_ID
	Displays the GASBU_N ID code confirmed by reading the SBU after the SBU adjusts automatically at power on. [O to FFh/1]
3	VSP_F_ID

	Displays the VSB5100_F ID code confirmed by reading the SBU after the SBU adjusts automatically at power on. [O to FFh/1]
4	VSP_L_ID
	Displays the VSB5100_L ID code confirmed by reading the SBU after the SBU adjusts automatically at power on. [O to FFh/1]

4602	Scanner Memory Access
	[0 to 0xFFF/ 0 /1]

4607	Gray Balance Adjust (Both Sides
	This SP affects gray balance adjustment for both sides of the paper.
1	Execute
	Select "1" to execute gray balance adjustment. [1 to 0/0/1] 0:OFF 1:ON
2	Confirm
	Select "1" to confirm whether gray balance adjustment was done., [1 to 0/0/1] 0:OFF 1:ON

4608	GB Ad Detection Level DFU
	[0 to 1023/ 512 /1]
1	SBU:R
2	SBU:G
3	SBU:B
4	CIS:R
5	CIS:G
6	CIS:B

4609	Gray Balance Adj Value: R DFU
	Displays the reference voltage for Red adjusted by gray balance adjustment.
4610	Gray Balance Adj Value: G DFU
	Displays the reference voltage for Green adjusted by gray balance adjustment.
4611	Gray Balance Adj Value: B DFU
	Displays the reference voltage for Blue adjusted by gray balance adjustment.
1	Book Scan
2	DF Scan

4623	Black Level Ad Value DFU
	[0 to 16383/ 0 /1]
1	R:FE
2	R:FO
3	R:LE
4	R:LO

4624	Black Level Ad Value DFU
	[0 to 16383/ 0 /1]
1	G:FE
2	G:FO
3	G:LE
4	G:LO

4625	Black Level Adj Value DFU
	[0 to 16383/ 0 /1]
1	B:FE
2	B:FO

3	B:LE	
4	B:LO	

4628	Analog Gain Range Adj Value (R) DFU
1	R:F
2	R:L

4629	Analog Gain Range Adj Value (G) DFU
1	G:F
2	G:L

4630	Analog Gain Range Adj Value (B) DFU
1	B:K
2	B:L

4631	Analog Gain Adj Value (R) DFU
1	R:FE
2	R:FO
3	R:LE
4	R:LO

4632	Digital Gain Adj Value (G) DFU
1	R:FE
2	R:FO
3	R:LE
4	R:LO

|--|

1	B:FE
2	B:FO
3	B:LE
4	B:LO

4635	SSCG Noise Cancel
1	Correction ON/OFF
2	Ad ON/OFF

4636	SSCG Correction
1	Execution
2	Error Flag
3	SSCG Result Apply Execution
4	SSCG Result Apply Execution

4637	SSCG Correction Adj Value
1	R:FE
2	R:FO
3	G:FE
4	G:FO
5	B:FE
6	B:FO
7	R:LE
8	R:LO
9	G:LE
10	G:LO
11	B:LE

12	B:LO
. —	

4638	SSCG Correction Adj Value
1	Last: R:FE
2	Last: R:FO
3	Last: G:FE
4	Last: G:FO
5	Last: B:FE
6	Last: B:FO
7	Last: R:LE
8	Last: R:LO
9	Last: G:LE
10	Last: G:LO
11	Last: B:LE
12	Last: B:LO

4639	SSCG Correction Adj Value
1	Factory Setting: R:FE
2	Factory Setting: R:FO
3	Factory Setting: G:FE
4	Factory Setting: G:FO
5	Factory Setting: B:FE
6	Factory Setting: B:FO
7	Factory Setting: R:LE
8	Factory Setting: R:LO
9	Factory Setting: G:LE
10	Factory Setting: G:LO

11	Factory Setting: B:LE
12	Factory Setting: B:LO

4640	SSCG Correction Adj Value
1	Before Adj: R:FE
2	Before Adj: R:FO
3	Before Adj: G:FE
4	Before Adj: G:FO
5	Before Adj: B:FE
6	Before Adj: B:FO
7	Before Adj: R:LE
8	Before Adj: R:LO
9	Before Adj: G:LE
10	Before Adj: G:LO
11	Before Adj: B:LE
12	Before Adj: B:LO
13	After Adj: R:FE
14	After Adj: R:FO
15	After Adj: G:FE
16	After Adj: G:FO
17	After Adj: B:FE
18	After Adj: B:FO
19	After Adj: R:LE
20	After Adj: R:LO
21	After Adj: G:LE
22	After Adj: G:LO

23	After Adj: B:LE
24	After Adj: B:LO

4646	Scan Adjust Error DFU
1	White Level: F
2	White Level: L
3	Black Level: F
4	Black Level: L
5	FL Correction

4647	Error Flag: Scanner Hardware DFU
	[0 to 1023/ 0 /1]

4673	Black Level Adj Value DFU
	[0 to 16383/ 0 /1]
1	Factory Setting: R:FE
2	Factory Setting: R:FO
3	Factory Setting: R:LE
4	Factory Setting: R:LO

4674	Black Level Adj Value DFU
	[0 to 16383/ 0 /1]
1	Factory Setting: G:FE
2	Factory Setting: G:FO
3	Factory Setting: G:LE
4	Factory Setting: G:LO

Black Level Adj Value DFU

	[0 to 16383/ 0 /1]
1	Factory Setting: B:FE
2	Factory Setting: B:FO
3	Factory Setting: B:LE
4	Factory Setting: B:LO

4677	Analog Gain Range Adj Value DFU
1	Factory Setting: R:F
2	Factory Setting: R:L

4678	Analog Gain Range Adj Value DFU
1	Factory Setting: G:F
2	Factory Setting: G:L

4679	Analog Gain Range Adj Value DFU
1	Factory Setting: B:F
2	Factory Setting: B:L

4680	Digital Gain Range Adj Value DFU
1	Factory Setting: R:FE
2	Factory Setting: R:FO
3	Factory Setting: R:LE
4	Factory Setting: R:Lo

4681	Digital Gain Range Adj Value DFU
1	Factory Setting: G:FE
2	Factory Setting: G:FO
3	Factory Setting: G:LE

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4682	Digital Gain Range Adj Value DFU
1	Factory Setting: B:FE
2	Factory Setting: B:FO
3	Factory Setting: B:LE
4	Factory Setting: B:Lo

4690	White Level Peak Data DFU
1	R:FE
2	R:FO
3	R:LE
4	R:LO

4691	White Level Peak Data DFU
1	G:FE
2	G:FO
3	G:LE
4	G:LO

4692	White Level Peak Data DFU
1	B:FE
2	B:FO
3	B:LE
4	B:LO

4693	Black Level Data DFU	
1	R:FE	

2	R:FO
3	R:LE
4	R:LO

4694	Black Level Data DFU
1	G:FE
2	G:FO
3	G:LE
4	G:LO

4695	Black Level Data DFU
1	B:FE
2	B:FO
3	B:LE
4	B:LO

4700	CIS ID Display
4700	Reads and displays the ID of the CIS board at power.

4709	CIS GB Chart Level R
	Displays the GB chart level for Red signal: [0 to 1023 / - / 1 digit]
4710	CIS GB Chart Level G
	Displays the GB chart level for Green signal: [0 to 1023 / - / 1 digit]
4711	CIS GB Chart Level B
	Displays the GB chart level for Blue signal: [0 to 1023 / - / 1 digit]

4712	CIS GB Adj Value R DFU
4713	CIS GB Adj Value G DFU
4714	CIS GB Adj Value B DFU
	[-512 to 512 / 0 / -]

4745	CIS Image Level ErrorFlag
	Displays the image error flag.
4746	CIS GB Adj ErrorFlag
	Displays the GB adjustment error flag.
4747	CIS Hardware Error Flag
	Displays the CIS error flag.

4748	CIS M-Scan White Level: Avg. R
	Leading Edge
1	Displays the average level of the main scan white for the leading edge of Red signal. [0 to 255 / - / 1 digit]
	Trailing Edge
2	Displays the average level of the main scan white for the trailing edge of Red signal. [0 to 255 / - / 1 digit]

4749	CIS M-Scan White Level: Avg. G
	Leading Edge
1	Displays the average level of the main scan white for the leading edge of Green signal. [0 to 255 / - / 1 digit]
	Trailing Edge
2	Displays the average level of the main scan white for the trailing edge of Green signal. [0 to 255 / - / 1 digit]

4750	CIS M-Scan White Level: Avg. B
	Leading Edge
1	Displays the average level of the main scan white for the leading edge of Blue signal. [0 to 255 / - / 1 digit]
	Trailing Edge
2	Displays the average level of the main scan white for the trailing edge of Blue signal. [0 to 255 / - / 1 digit]

4760	CIS Pixel Interporlation DFU
	Pattern Cycle
	[0 to 127/47/1]
4761	CIS Pixel Interporlation DFU
	Halftone Area Threshold Level
	[0 to 1023/ 120 /1]
4762	CIS Pixel Interporlation DFU
	Pixel Accuracy Matchine
	[0 to 1023/ 120 /1]
4763	CIS Pixel Interporlation DFU
	Brightness Adj Weight
	[0 to 1023/ 120 /1]
4764	CIS Pixel Interporlation DFU
	Threshold Value Area A
	[0 to 1023/ 120 /1]

CIS Pixel Interporlation **DFU**

	Threshold Value Area B
	[0 to 1023/ 120 /1]
4766	CIS Pixel Interporlation DFU
	One Dimension Matching
	[0 to 1023/120/1]
4767	CIS Pixel Interporlation DFU
	Right and Left Pixel Weight
	[0 to 15/8/1]
4768	CIS Pixel Interporlation DFU
	Substitution Pixel Count
	[0 to 3/ 2 /1]
4787	CIS White Level Peak Data R DFU
	Factory Setting
	[0 to 255/ 0 /1]
4788	CIS White Level Peak Data G DFU
	Factory Setting
	[0 to 255/ 0 /1]
4789	CIS White Level Peak Data B DFU
	Factory Setting
	[0 to 255/ 0 /1]
4790	CIS White Level Peak Data R DFU
	[0 to 255/ 0 /1]

4791	CIS White Level Peak Data G DFU
	[0 to 255/ 0 /1]

4792	CIS White Level Peak Data G DFU
	[0 to 255/ 0 /1]

4793	Black Level Data R
4794	Black Level Data G
4795	Black Level Data B
Chip 1 to 24	Displays the current red data of black level for each color signal and chip. [0 to 255 / - / 1 digit]

4797	Digital AE: Rear Side DFU
1	Low Limit Value [0 to 1023/364 / 1 digit]
2	Background level [0 to 1023/512 / 1 digit]

4798	CIS LED Duty DFU		
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4799	CIS TEST Pattern
1	Select
	[0 to 4 / 0 / 1]
2	Even Output Level Setting
	[0 to 1023 / 512 / 1 digit]
3	Odd Output Level Setting
	[0 to 4095/ 0 /1]

4800	DF Density Adj Value DFU
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1	RED [0 to 255 / 94 / 1 digit]
2	GREEN [0 to 255 / 91 / 1 digit]
3	BLUE [0 to 255 / 85 / 1 digit]

4802	Scanner Free run
1	DF mode :Lamp Off
	Execute the scanner free run with the lamp off.
2	DF mode :Lamp On
	Execute the scanner free run with the lamp on.

4804	Home Position Operation
	Executes the homing movement of the scanner carriage unit.

	FL Correction ON/OFF
4806	Turns on or off the FL correction for each color [0 or 1 / 0 / 1] 0: OFF, 1: ON
1	RED
2	GREEN
3	BLUE

4903	Filter Settings
	These SP codes adjust the sharpness and granularity of printed images.
1	Ind Dot Erase: Text
	[0 to 7 / 0 / 1] 0:Softest 1:Soft Mode 4:Normal 6:Sharp Mode 7: Sharpest
2	Ind Dot Erase: Copy/Original

[0 to 7 / 0 / 1]
0:Softest 1:Soft Mode 4:Normal 6:Sharp Mode 7:Sharpest

4905	Select Gradation Level DFU	
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4907	SBU Test Pattern
1	Select Test Pattern
	0: Normal 1: Fixed Value 2: Main Scan Grayscale 3: Sub Scan Grayscale 4: Checked Pattern
2	Set Output Level
	Output level in case of setting SP4-907-1 to 1. [0 to 1023/512/1]

4918	Man Gamma Adj DFU

4991	IPU Image Pass Selection DFU
4991	[0 to 11/2/1]

4993	High Light Correction DFU
4993	[0 to 9/ 4 /1]
1	Sensitivity Selection
2	Range Selection

4994	Text/Photo Detect Level Ad.
4994	[0 to 2/1/1]

4996	White Paper Detect Level
	Sets the detection level for blank paper. The higher the setting that you enter, the greater the sensitivity of detection.
	[0 to 6/3/1]

SP5000 Mode: SP5024 to SP5816

	mm/inch Display Selection
	Selects whether mm or inches are used in the display.
5024	Note: After selecting the number, you must turn the main power switch off and on.
	Europe/Asia model: [0 = mm / 1 = inch]
	American model: [0 = mm / 1 = inch]

5	037	Status Lamp Mode Not Used
		0: OFF / 1: ON

	Accounting Counter
	Selects the counting method if the meter charge mode is enabled with SP5-930-1.
5045	Note: You can change the setting only one time.
0040	[0 to 1/1]
	0: Development counter. Shows the total counts for color (Y, M, C) and black (K).
	1: Paper counter. Shows the total page counts for: Black Total, Black Copies, Black Prints.

	Display IP Address
5055	Switches the banner display of MFP device display on and off. [0 to 1 / 0 / 1]
	[OFF] ON

5071	Set Bypass Paper Size Display	
	When this SP is enabled, a pop-up will appear and tell the operator whether the size of the paper in the bypass tray matches the size of the paper selected on the operation panel display.	
	[0 to 1/ 0 /1] 0:Disabled 1:Enables	

5074	Home Screen for User DFU	
2	Home Screen Login Setting	

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91	(0:OFF 1:SDK 2:Reserve)
	[0 to 2/ 0 /1] 0:Disabled 1:SDK app 2:Legacy app (reserved)
92	Product ID
	Enter the type of application registered under SP5075-1. This registers the SDK product ID or the legacy ID.
93	Application Screen ID
	Enter the ID to be displayed for SP5075-1, -2 [0 to 255/0/1]

5075	USB Keyboard
	Enables use of an external keyboard equipped with a USB connector.
	[0 to 1/ 0 /1] 0:Disabled 1:Enabled

	Non-Std. Paper Sel
	Determines whether a non-standard paper size can be input for the universal cassette trays (Tray 2, Tray 3)
5112	[0 to 1/1]
	0: No
	1: Yes. If "1" is selected, the customer will be able to input a non-standard paper size using the UP mode.

5113	Optional Counter Type

	Default Optional Counter Type
	Selects the type of counter:
	0: None
	1: Key Card (RK3, 4)
	2: Key Card Down
1	3: Pre-paid Card
	4: Coin Lock
	5: MF Key Card
	11: Exp Key Card (Add)
	12: Exp Key Card (Deduct)
	Note: Items 1, 2, 3, 5, 5 are for Japan Only
	External Optional Counter Type
	Enables the SDK application. This lets you select a number for the external device for user access control.
	Note: "SDK" refers to software on an SD card.
2	[0 to 3/1]
	0: None
	1: Expansion Device 1
	2: Expansion Device 2
	3: Expansion Device 3

5114	Optional Counter I/F
	This SP sets the machine for the MF Key Card Extension.
	0: OFF, 1: ON

	Disable Copying	
		Temporarily denies access to the machine. Japan Only
5118	[0 to 1/1]	
		0: Release for normal operation
		1: Prohibit access to machine

	Mode Clear Opt. Counter Removal
	Do not change. Japan Only
5120	[0 to 2/0/1]
3120	0: Yes. Normal reset
	1: Standby. Resets before job start/after completion
	2: No. Normally no reset

Counter Up Timing SSP

Determines whether the optional key counter counts up at paper feed-in or at paper exit.

[0 to 1/1]

0: Feed count, 1: No feed count

Set F-size Document

Sets the original size that the machine detects for F sizes.

[0 to 2/1]

0: 8hf x 13

1: 8hf x 13qr

2: 8 x 13

Note: hf = 1/2, qr = 1/4

APS OFF Mode

This SP can be used to switch APS (Auto Paper Select) off when a coin lock or pre-paid key card device is connected to the machine.

[0 to 1/1]
0: On, 1: Off

5129 F Paper Size Selection

Sets the paper size that the machine detects when the 8 \times 13 dial setting on a paper cassette is used (LT/DLT version).

[0 to 2/1]

0: 8 x 13

1:8hf x 13

2: 8qr x 13

Note: hf = 1/2, qr = 1/4

5131	Paper Size Type Selection
	Selects the paper size type (for originals and copy paper). (Only needs to be adjusted if the optional printer controller is installed)
	[0 to 3/1]
	O: JP
	1: NA
	2: EU, AA, TWN, KOR
	3: CH (China)
	After changing the value, turn the power switch off and on.

5150 Bypass Length Setting

	App. Switch Method
5162	Controls if the application screen is changed with a hardware switch or a software switch.
0102	[0 to 1/1]
	0: Soft Key Set, 1: Hard Key Set

5165	Z-Fold Position
	Adjusts how paper is Z-folded.
	Note: In the notations below, "T" denotes "SEF". For example, "A3T" is "A3 SEF".
1	A3T
	NA: [2.5 to 25.4/ 2.5 /1 mm]
	Other: [2 to 25/ 2 /1 mm]
2	В4Т

	NA: [2.5 to 40.6/ 2.5 /1 mm]
	Other: [2 to 40/ 2 /1 mm]
3	A4T
	NA: [2.5 to 10.2/ 2.5 /1 mm]
	Other: [2 to 10/ 2 /1 mm]
4	DLTT
	NA: [2.5 to 20.3/ 2.5 /1 mm]
	Other: [2 to 20/ 2 / 1 mm]
5	LGT
	NA: [25. to 30.6/ 2.5 /1 mm]
	Other: [2 to 35/ 2 /1 mm]
6	LTT
	NA: [2.5 to 2.5/ 2.5 /1 mm]
	Other: [2 to 2/ 2 /1 mm]
7	12x18
	NA: [2.5 to 5.1/ 2.5 /1 mm]
	Other: [2 to 5/ 2 /1 mm]
8	Other
	NA: [2.5 to 2.5/ 2.5 / 1 mm]
	Other: [2 to 2/ 2 /1 mm]

	Fax Printing Mode at Optional Counter Off
5167	Determines the Fax print mode when the optional counter is off.
	O: Print automatically.
	1: Not do auto-print.

	CE Login
5169	If you will change the printer bit switches, you must 'log in' to service mode with this SP before you go into the printer SP mode.
3107	[0 to 1/1]
	0: Off. Printer bit switches cannot be adjusted.
	1: On. Printer bit switches can be adjusted.

5179	By-pass tray paper size error display
	Set the by-pass tray paper size error display to ON/OFF.
	0: OFF / 1: ON

5188	Copy NV Version
Copies NV version to another NVRAM.	
	Note: NVRAM version management automatically initializes the NV for each machine.

5191	Mode Set	
This setting determines whether the machine is allowed to move into energy save mod		
	1: Allowed	
	0: Not allowed	

5195	Limitless SW	
Selects the paper feed mode priority (productivity or tray). This is activated only customer selects the "Auto paper Select".		
	 Productivity priority. Changes the feed station as soon as the machine detects the priority tray even the paper still remains in the current tray. 	
	 Tray priority. This changes the feeding tray after the paper in the tray where the machine has been feeding paper has run out of paper. 	
	[0 to 1/0/1]	
	0: Productivity priority	
	1: Tray priority	

5196	90 Degree Rotation (Copy)

5199	Paper Set After Staple End	
	Enables or disables feeding out of the finisher without stapling. [0: OFF] [1:ON]	
	0: OFF	
	Paper feeds out with stapling at the maximum number of the finishing stapling when the machine gets a multiple printing job (over maximum number).	
	1: ON	
	Paper feeds out without stapling at the maximum number of the finisher stapling when the machine gets a multiple printing job (over maximum number)	

5212	Page Numbering		
3	3 Duplex Printout Left/Right Position		
	Horizontally positions the page numbers printed on both sides during duplexing. [-10 to +10/1 mm] O is center, minus is left, + is right.		
4 Duplex Printout High/Low Position			
	Vertically positions the page numbers printed on both sides during duplexing. [-10 to +10/1 mm] 0 is center, minus is down, + is up.		

5227	Page Numbering (Bates Stamp)	
201 Allow Page No. Entry		
	This SP specifies the number of digits to display for the entry of the starting page number [2 to $9/9/1$]	
202	Zero Surplus Setting	
	This setting determines whether page numbers are prefixed with excess zeros when the number is smaller than the number of assigned digits. For example, with this setting on and 3 digits have been specified, the number "3" appears as "003". With this setting off, the number "3" will appear as a "3" without the zeros. [0 to 1/0/1] 0:No zero surplus 1:Zero surplus allowed	

Set Time DFU

Sets the time clock for the local time. This setting is done at the factory before delivery. The setting is GMT expressed in minutes.

[-1440 to 1440/1 min.]

JA: +540 (Tokyo)

NA: -300 (NY)

EU: +6- (Paris)

CH: +480 (Peking)

TW: +480 (Taipei)

AS: +480 (Hong Kong)

SP 5305 RTB 11e

Summer Time			
Lets you set the machine to adjust its date and time automatically with the change to Daylight Savings time in the spring and back to normal time in the fall. This SP lets you set these items:			
Day and time to g	o forward automatically in April.		
Day and time to g	o back automatically in October.		
Set the length of ti	Set the length of time to go forward and back automatically.		
The settings for 00	02 and 003 are done with 8-digit numbers:		
Digits	Meaning		
1st, 2nd	Month. 4: April, 10: October (for months 1 to 9, the first digit of 0 cannot be input, so the eight-digit setting for 002 or 003 becomes a seven-digit setting)		
3rd	Day of the week. 0: Sunday, 1: Monday		
4th	The number of the week for the day selected at the 3rd digit. If "O" is selected for "Sunday", for example, and the selected Sunday is the start of the 2nd week, then input a "2" for this digit.		
5th, 6th	The time when the change occurs (24-hour as hex code). Example: 00:00 (Midnight) = 00, 01:00 (1 a.m.) = 01, and so on.		
7th	The number of hours to change the time. 1 hour: 1		
8th	If the time change is not a whole number (1.5 hours for example), digit 8 should be 3 (30 minutes).		
	Lets you set the mode Daylight Savings of these items: Day and time to go Day and time to go Set the length of time to go Set the settings for OC Digits 1st, 2nd 3rd 4th 5th, 6th		

1	Setting	Enables/disables the settings for 002 and 003. [0 to 1/1] 0: Disable, 1: Enable
3	Rule Set (Start)	The start of summer time.
4	Rule Set (End)	The end of summer time.

	Access Control DFU
5401	This SP adjusts the settings below when installing and SDK application.
	Note: "SDK" is the "Software Development Kit". This data can be converted from SAS (VAS) when installed or uninstalled.
103	Default Document ACL
	Used to assign the default access user access privileges to their own documents on the document server.
104	Authentication Time
	Standard setting "0" equals 60 sec.
[0 to 255/0/1 sec.]	
162 Extend Certification Detail	
	Logout without an IC card.
	[0 to 1/0/1]
	0: Not allowed (default)
1: Allowed	
200 SDK1 Unique ID	
201 SDK1 Certification Method	
210 SDK2 Unique ID	
211 SDK2 Certification Method	
220 SDK3 Unique ID	
221	SDK3 Certification Method
230	SDK(Type TF) Unique ID

240 Detail Option: Unique ID

5402	Access Control Not Used
101-170	SDJK1 Limit Settings

		User Code Count Clear	
5404	5404	Clears the counts for the user codes assigned by the key operator to restrict the use of the machine. Press [Execute] to clear.	

5411	DAP Certification			
4	Simplified Certification			
	Determines whether easy LDAP certification is done. [0 or 1 / 1 / 1] 1: On, 0: Off			
5	Password Null Not Permit			
	Enabled only when SP5411-4 is set to "1" (On). [O or 1 / 0 / -] O: Password NULL not permitted. 1: Password NULL permitted.			
6	Detail Option			

5412	Krb Certification
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5413	Lockout Setting	
1	Lockout On/Off	
	Switches the local address book account lock on/off.	
	[0 or 1 / 0 / -]	
	0: Off, 1: On	
2	2 Lockout Threshold	
Sets a limit on the frequency of lockouts for account lockouts. [1 to 10 / 5 / 1/step]		

3	Cancellation On/Off		
3	Curicellation Only On		
Determines whether the system waits the prescribed time for input of a correct user password after an account lockout has occurred.			
[0 or 1 / 0 / -]			
0: Off (no wait time, lockout not cancelled)			
	1: On (system waits, cancels lockout if correct user ID and password are entered.		
4	Cancellation Time		
	Determines the length of time that the system waits for correct input of the user ID and password after a lockout has occurred. This setting is used only if SP5413-3 is set to "1" (on).		
	[1 to 999 / 60 / 1 min./step]		

5414	Access Mitigation			
1	Mitigation On/Off			
	Switches on/off masking of continuously used IDs and passwords that are identical. [0 or 1 / 0 / -] 0: Off, 1: On			
2	Mitigation Time			
Sets the length of time for excluding continuous access for identical user IDs and passwords. [0 to 60 / 15 / 1 min./step]				

5415	Password Attack	
1	Permissible Number	
Sets limit on the number of attacks on the system with random passwords to gain illegal access to the system.		
	[0 to 100 / 30 / 1 attempt/step]	
2 Detect Time		
	Sets the time limit to stop a password attack once such an attack has been detected. [1 to 10 / 5 / 1 sec./step]	

5416	Access Information			
1	1 Access Use Max Num			
	Limits the number of users used by the access exclusion and password attack detection functions.			
	[50 to 200 / 200 / 1 users/step]			
2 Access Password Max Num				
	Limits the number of passwords used by the access exclusion and password attack detection functions. [50 to 200 / 200 / 1 password/step]			
3 Monitor Interval				
Sets the processing time interval for referencing user ID and password inform [1 to 10 / 3 / 1 sec./step]				

5417	Access Attack			
1	Access Permissible Number			
	Sets a limit on access attempts when an excessive number of attempts are detected for MFP features. [0 to 500 / 100 / 1/step]			
2	Attack Detect Time			
	Sets the length of time when the frequency of access to MFP features are monitored. [10 to 30 / 10 / 1 sec./step]			
3 Productivity Fall Wait				
	Sets the wait time to slow down the speed of certification when an excessive number of access attempts have been detected. [0 to 9 / 3 / 1 sec./step]			
4	Attack Max Number			
	Sets a limit on the number of requests received for certification in order to slow down the certification speed when an excessive number of access attempts have been detected. [50 to 200 / 200 / 1 attempt/step]			

5420	User Authentication		
	These settings should be done with the System Administrator.		
	Note: These functions are enabled only after the user access feature has been enabled.		
1	Сору		
	Determines whe	ether certification is required before a user can use the copy applications.	
	[0 or 1/0/1]		
	0: On, 1: Off		
11	Document Server		
	Determines whe	ether certification is required before a user can use the document server.	
	[0 or 1/0/1]		
	0: On, 1: Off		
21	FAX		
	Switches fax authentication off and on.		
	[0 to 1/0/1] 0:Authenticate 1:Do not authenticate		
31	Scanner		
	Determines whether certification is required before a user can use the scanner applications.		
	[0 or 1/0/1]		
	0: On, 1: Off		
41	Printer		
	Determines whether certification is required before a user can use the printer applications.		
	[0 or 1/0/1]		
	0: On, 1: Off		
51	SDK1	Determines whether certification is required before a user can use the	
61	SDK2	SDK application.	
71	SDK3	[0 or 1 / 0 / 1] 0: ON. 1: OFF	
81	81 Browser		

Switches browser authentication off and on.

[0 to 1/0/1] 0:Authenticate 1:Do not authenticate

5430	Auth Dialog Message Change
1	Message Change On/Off
2	Message Text Download
3	Message Text ID
	[0 to 1/0/1
	0: OFF
	1: ON

5431	External Auth User Preset		
	Allows or does not allow the copying for each data.		
	[0 or 1 / 1 / -]		
	0: Not allowed copying, 1: Allowed copying		
10	Tag		
11	Entry		
12	Group		
20	Mail		
30	Fax		
31	FaxSub		
32	Folder		
33	ProtectCode		
34	SmtpAuth		
35	LdapAuth		
36	Smb Ftp Fldr Auth		
37	AcntAcl		
38	Document Acl		

40	CertCrypt
50	User Limit Count

5481	Authentication Error Code	
	These SP codes determine how the authentication failures are displayed.	
1	System Log Disp	
	Determines whether an error code appears in the system log after a user authentication failure occurs.	
	[0 or 1/0/1]	
	0: Off, 1: On	
2	Panel Disp	
	Determines whether an error code appears on the operation panel after a user authentication failure occurs.	
	[0 or 1/0/1]	
	0: Off, 1: On	

5490	MF Key Card	
	Sets operation of the MF key card.	
	[0 to 1/0/1]	
	1: Allowed	
	0: Not allowed	
	1: Certification executes with a user code (9999 9999). Printing executes and the counter increments for the user code.	
	0: Certification executes without a user code but printing is cancelled.	

5491	Optional Counter Not Used
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	PM Alarm
	Sets the count level for the PM alarm.
5501	[0 to 9999 / 0 / 1]
	0: Alarm disabled
	The PM alarm goes off when the print count reaches this value multiplied by 1,000.

5504	Jam Alarm Japan Only
	Sets the alarm to sound for the specified jam level (document misfeeds are not included). RSS use only
	[0 to 3 / 3 / 1 step]
	0: Zero (Off)
	1: Low (2.5K jams)
	2: Medium (3K jams)
	3: High (6K jams)

5505	Error Alarm
	Sets the error alarm level. Japan only DFU
	[0 to 255 / 50 / 100 copies per step]

5507	Supply Alarm	
1	Paper Supply Alarm	
	Switches the control call on/off for the paper supply. DFU	
	0: Off, 1: On	
	0: No alarm.	
	1: Sets the alarm to sound for the specified number transfer sheets for each paper size (A3, A4, B4, B5, DLT, LG, LT, HLT)	
2	Staple Supply Alarm	
	Switches the control call on/off for the stapler installed in the finisher. DFU	
	0: Off, 1: On	
	0: No alarm	
	1: Alarm goes off for every 1K of staples used.	

3	Toner Supply Alarm		
	Switches the control call on/off for the toner end. DFU 0: Off, 1: On		
	If you select "1" the alarm will sound when the copier detects toner end.		
80	Toner Call Timing		
	Changes the timing of the "Toner Supply Call" via the NRS, when the following conditions occur.		
	0: Toner is replaced (default)		
	1: Toner near end or End		
128	Interval: Others		
132	Interval: A3		
133	Interval: A4		
134	Interval: A5		
141	Interval: B4	The "Paper Supply Call Level: nn" SPs specify the paper control call interval for the referenced paper sizes.	
142	Interval: B5	[00250 to 10000 / 1000 / 1 Step]	
160	Interval: DLT		
164	Interval: LG		
166	Interval: LT		
172	Interval: HLT		

5508	CC Call Japan Only	
1	Jam Remains	Enables/disables initiating a call.
2	Continuous Jams	[0 to 1/1]
3	Continuous Door Open	0: Disabled, 1: Enabled
11	Jam Detection: Time Length	
	Sets the length of time to determine the length of an unattended paper jam. [03 to 30/1] This setting is enabled only when SP5508-4 is enabled (set to 1).	

12	Jam Detection Continuous Count	
	Sets the number of continuous paper jams required to initiate a call. [02 to 10/1] This setting is enabled only when SP5508-4 is enabled (set to 1).	
13	Door Open: Time Length	
	Sets the length of time the remains opens to determine when to initiate a call. [03 to 30/1] This setting is enabled only when SP5508-4 is enabled (set to 1).	

5513	Parts Alarm Level Count Japan Only	
Normal		
1	Sets the parts replacement alarm counter to sound for the number of copies. [1 to 9999 / 350 / 1]	
	DF	
2	Sets the parts replacement alarm counter to sound for the number of scanned originals. [1 to 9999 / 350 / 1]	

	SC/Alarm Setting	
5515	With NRS (New Remote Service) in use, these SP codes of when an SC error occurs. If this SP is switched off, the SC error occurs.	
1	SC Call	
2	Service Parts Near End Call	[0 to 1/1/1]
3	Service Parts End Call	0: Off, 1: On
4	User Call	
6	Communication Test Call	[0 or 1 / 1 / -]
7	Machine Information Notice	0: Off
8	Alarm Notice	1: On

10	Supply Automatic Ordering Call	[0 to 1/0/1]
11	Supply Management Report Call	[0 10 17 07 1]
12	Jam/Door Open Call	[0 to 1/1/1]

5730	Extended Function Setting Not Used
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5734	PDF Setting	
	This SP limits the types of files that can be used with Scan-to-File, Scan-to-Fax, and Web Download.	
	[0 to 1/ 0/ 1] 0:Setting not fixed 1:Setting fixed	
	O: Allows setting clear write PDF, PDF/A, or encoded PDF on the application screen.	
	1: PDF/A can be selected on the application screen, but PDF, Clear Write PDF, or encoded PDF are grayed-out and cannot be selected.	

5741 Node Authentication Timeout	
	This is the SP that sets the length of time that the machine waits for a response from NCS after the machine sends a request for authentication from its hook-up module.
	[1 to 255/60/1 sec.]

5743	Network Security Level
101	Main Reference
	Returns the current setting for the network security level. Returns one of the following five possible levels:
	• Custom
	• Level 0
	• Level 1
	• FIPS
	• Level 2
102	Main: Setting

Returns the current setting for the network system security level. Returns one of the following five possible levels: • Custom (default) • Level 0

- Level 1
- FIPS

Level 2

5745	Eco Count Time DFU
	Counter used for debugging.
	00:00 (Min.:Sec.)

5749	Import/Export
1	Export
101	Import
251	Export Result Print (SP)
252	Import Result Print (SP)

5792	MCS Debug SW DFU	
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ECS Debug SW DFU	
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5795 SRM Debug SW **DFU**

	Memory Clear
5801	Resets NVRAM data to the default settings. Before executing any of these SP codes, print an SMC Report.
1	All Clear
	Initializes items 2 to 15 below.
2	Engine
	Initializes all registration settings for the engine and copy process settings.

3	SCS
	Initializes default system settings, SCS (System Control Service) settings, operation display coordinates, and ROM update information.
4	IMH
	Clears Image Memory Handler which manages memory and HDD access.
5	MCS
	Initializes the automatic delete time setting for stored documents. (MCS: Memory Control Service)
6	Copier application
	Initializes all copier application settings.
7	Fax application
	Initializes the fax reset time, job login ID, all TX/RX settings, local storage file numbers, and off-hook timer.
8	Printer application
	Initializes the printer defaults, programs registered, the printer SP bit switches, and the printer CSS counter.
9	Scanner application
	Initializes the defaults for the scanner and all the scanner SP modes.
10	Web Service
	Deletes the Netfile (NFA) management files and thumbnails, and initializes the Job login ID. Netfiles are jobs to be printed from the document server using a PC and the DeskTopBinder software
11	NCS (Network Control Service)
	Initializes the system defaults and interface settings (IP addresses also), the SmartNetMonitor for Admin settings, WebStatusMonitor settings, and the TELNET settings.
12	R-FAX
	Initializes the job login ID, SmartDeviceMonitor for Admin, job history, and local storage file numbers.

14	Clear DCS Setting
	Initializes the DCS (Delivery Control Service) settings.
15	Clear UCS Setting
	Initializes the UCS (User Information Control Service) settings.
16	MIRS Setting
	Initializes the MIRS (Machine Information Report Service) settings.
17	CCS
	Initializes the CCS (Certification and Charge-control Service) settings.
18	Memory Clr
	Initializes the SRM (System Resource Manager) settings.
19	LCS
	Initializes the LCS (Log Count Service) settings.
20	Web Uapl
	Clears Web application utlity settings.
21	ECS
	Initializes the ECS settings.
23	ACIS
	Initializes ACIS settings.
24	Browser
	Initializes browser settings.

5802	Printer Free Run	
		Make a base engine free run.
	[0 to 1/ 0 /1]	
	_	0: Release free run mode, 1:Enable free run mode
		Return this setting to off (0) after testing is completed.
	Finisher connectors should be disconnected and duplex mode should be off.	

5803	Input Check ▼ p.377
5804	Output Check p.385
5807	Area Selection
	[1 to 7/1/1 Step]
	1:Japan 2:NA 3:EU 4:China 5:Taiwan 6:Asia 7:Korea

5810	Fusing SC Clear
	When the machine detects a serious problem in the fusing unit, it will issue a Level A (fatal error) SC code. The machine is disabled and the operator cannot reset the SC until the machine has been released from the error with this SC code. Touch [EXECUTE] to release the machine for servicing.

5811	Machine Serial Number Set SSP
	Use this SP to the serial number for the machine and BICU, and to display the ID number for Novita.
1	Set (machine)
	[0 to 255/ 0 /1]
4	Set BICU
	[0 to 255/ 0 /1]
5	Display: Novita
	[0 to 255/ 0 /1]

5812	Service Tel. No. Setting
1	Service
	Inputs the telephone number of the CE (displayed when a service call condition occurs.)
2	Facsimile
	Use this to input the fax number of the CE printed on the Counter Report (UP mode).
3	Supply

	Displayed on the initial SP screen.
4	Operation
	Sales representative telephone number.

5816	Remote Service	CTL
1	I/F Setting	
	Selects the remote service setting. [0 to 2 / 2 / 1 / step]	
	0: Remote service off	
	1: CSS remote service on	
	2: @Remote service on	
	CE Call	
	Performs the CE Call at the start or end of the service.	
2	[0 or 1 / 0 / 1 /step]	
_	0: Start of the service	
	1: End of the service	
	Note: This SP is activated only when SP 5816-1 is set to "2".	
	Function Flag	
	Enables or disables the remote service function.	
3	[0 to 1 / 0 / 1 /step]	
	0: Disabled, 1: Enabled	
	Note: This SP setting is changed to "1" after @Remote registor has been	completed.
4	Communication Test Call	
	This executes a test call from the machine to the service center after all th settings have been completed.	e @Remote
5	Device Information Call	
	Passes all the information about internal settings of the machine to the @facenter.	Remote service

7	SSL Disable
	Uses or does not use the RCG certification by SSL when calling the RCG.
	[0 to 1 / 0 / 1 /step]
	0: Uses the RCG certification
	1: Does no use the RCG certification
	RCG Connect Timeout
8	Specifies the connect timeout interval when calling the RCG.
	[1 to 90 / 10 / 1 second /step]
	RCG Write Timeout
9	Specifies the write timeout interval when calling the RCG.
	[1 to 100 / 60 / 1 second /step]
	RCG Read Timeout
10	Specifies the read timeout interval when calling the RCG.
	[1 to 100 / 60 / 1 second /step]
	Port 80 Enable
11	Enables/disables access via port 80 to the SOAP method.
	[0 or 1 / 0 / -]
	0: Disabled, 1: Enabled
12	@Remote Communication Permission Setting
	This SP code is designed to allow the operator to disable @Remote communication the printer function manually before copying confidential or sensitive documents. This prevents the contents of the copied documents from inadvertently being printed or leaked over the network to an outside destination.
	[0 to 2/1/1]
	0: Disabled. Machine is not temporarily disconnected from network.
	1: Enabled. Machine is temporarily disconnected from network and the machine will not print while confidential or sensitive documents are being copied.
	2: Control mode. Only some SP codes can be used to acquire or write data.

	RFU (Remote Frimware Update) Timing
	Selects the RFU timing.
13	[0 or 1 / 1 / –]
	O: RFU is executed whenever update request is received.
	1: RFU is executed only when the machine is in the sleep mode.
14	RCG Error Cause
	Displays the cause of an RCG error. Where Cumin is used, normally displays "0".
	[0 to 1/ 0 /1] 0:Normal condition 1:Error
	If "1" is displayed, this means that the authentication from client to server failed when the network re-booted. To restore normal operation, cycle the machine off/on to return a "0" (normal condition).
	RCG – C Registed
21	This SP displays the Embedded RC Gate installation end flag.
21	0: Installation not completed
	1: Installation completed
	RCG – C Regist Detail
	This SP displays the Embedded RC Gate installation status.
22	0: RCG device not registered
	1: RCG device registered
	2: Device registered
	Connect Type (N/M)
	This SP displays and selects the Embedded RC Gate connection method.
23	[0 or 1 / 0 / 1 /step
	0: Internet connection
	1: Dial-up connection
61	Cert. Expire Timing DFU
01	Proximity of the expiration of the certification.
	Use Proxy
62	This SP setting determines if the proxy server is used when the machine communicates with the service center.

Proxy Host This SP sets the address of the proxy server used for communication between Embedded RC Gate-N and the gateway. Use this SP to set up or display the customer proxy server address. The address is necessary to set up Embedded RC Gate-N. Note: The address display is limited to 128 characters. Characters beyond the 128 character are ignored. This address is customer information and is not printed in the SMC report. Proxy Port Number This SP sets the port number of the proxy server used for communication between Embedded RC Gate-N and the gateway. This setting is necessary to set up Embedded RC Note: This port number is customer information and is not printed in the SMC report. Proxy User Name This SP sets the HTTP proxy certification user name. 65 Note: The length of the name is limited to 31 characters. Any character beyond the 31st character is ignored. This name is customer information and is not printed in the SMC report. Proxy Password This SP sets the HTTP proxy certification password. Note: 66 • The length of the password is limited to 31 characters. Any character beyond the 31st character is ignored. • This name is customer information and is not printed in the SMC report.

67	CERT: Up State		
	Displays the status of the certification update.		
	0	The certification used by Embedded RC Gate is set correctly.	
	1	The certification request (setAuthKey) for update has been received from the GW URL and certification is presently being updated.	
	2	The certification update is completed and the GW URL is being notified of the successful update.	
	3	The certification update failed, and the GW URL is being notified of the failed update.	
	4	The period of the certification has expired and new request for an update is being sent to the GW URL.	
	11	A rescue update for certification has been issued and a rescue certification setting is in progress for the rescue GW connection.	
	12	The rescue certification setting is completed and the GW URL is being notified of the certification update request.	
	13	The notification of the request for certification update has completed successfully, and the system is waiting for the certification update request from the rescue GW URL.	
	14	The notification of the certification request has been received from the rescue GW controller, and the certification is being stored.	
	15	The certification has been stored, and the GW URL is being notified of the successful completion of this event.	
	16	The storing of the certification has failed, and the GW URL is being notified of the failure of this event.	
	1 <i>7</i>	The certification update request has been received from the GW URL, the GW URL was notified of the results of the update after it was completed, but a certification error has been received, and the rescue certification is being recorded.	
	18	The rescue certification of No. 17 has been recorded, and the GW URL is being notified of the failure of the certification update.	

	Displays a number code that describes the reason for the request for update of the certification.		
	0	Normal. There is no request for certification update in progress.	
	1	Request for certification update in progress. The current certification has expired.	
68	2	An SSL error notification has been issued. Issued after the certification has expired.	
	3	Notification of shift from a common authentication to an individual certification.	
	4	Notification of a common certification without ID2.	
	5	Notification that no certification was issued.	
	6	Notification that GW URL does not exist.	
69	CERT: Up ID		
	The ID of the request for certification.		
83	Firmware Up Status		
	Displa	ys the status of the firmware update.	
85	Firm Up User Check		
	This SP setting determines if the operator can confirm the previous version of the firmware before the firmware update execution. If the option to confirm the previous version is selected, a notification is sent to the system manager and the firmware update is done with the firmware files from the URL.		
86	Firmware Size		
	Allows the service technician to confirm the size of the firmware data files during the firmware update execution.		
87	CERT: Macro Ver.		
	Displays the macro version of the @Remote certification.		
88	CERT: PAC Ver.		
	Displays the PAC version of the @Remote certification.		
89	CERT: ID2 Code		

	Displays ID2 for the @Remote certification. Spaces are displayed as underscores (_). Asteriskes (*) indicate that no @Remote certification exists. "000000" indicates "Common certification".
90	CERT: Subject
	Displays the common name of the @Remote certification subject. CN = the following 17 bytes. Spaces are displayed as underscores (_). Asterisks (*) indicate that no @Remote certification exists. "000000" indicates "Common certification".
91	CERT: Serial No.
	Displays serial number for the @Remote certification. Asterisks (*) indicate that no @Remote certification exists.
92	CERT: Issuer
	Displays the common name of the issuer of the @Remote certification. CN = the following 30 bytes. Asteriskes () indicate that no @Remote certification exists.
93	CERT: Valid Start
	Displays the start time of the period for which the current @Remote certification is enabled.
94	CERT: Valid End
	Displays the end time of the period for which the current @Remote certification is enabled.
95	Server ON Check
	Determines how the Server On Check is conducted.
	[0 to 1/ 0 /1] 0: Precision check 1: Mitigation check
	Note : "0" is used for GW/NRS connection ands "1" is used for GW/Emulator connection.
96	GW Host DFU
	A debug tool.
97	GW URL Path DFU
	A debug tool.
99	Debug Rescue/WURL Set DFU
	A debug tool.
102	CERT: Encrypt Level

	Displays the strength of encryption used for NRS authentication. The displayed value is not the value acquired from the authentication domain, rather it is the value stored in NVRAM when authentication is written. When NRS starts up, if there is a mismatch between this SP setting and the authentication encryption, then the SP value is updated. [1 to 2/1/1]
150	Selection Country
130	Not used
151	Line Type Automatic Judgment
131	Not used
152	Line Type Judgment Result
132	Not used
153	Selection Dial/Push
133	Not used
154	Outside Line/Outgoing Number
134	Not used
156	Dial Up User Name
130	Not used
157	Dial Up Password
137	Not used
161	Local Phone Number
101	Not used
162	Connection Timing Adjustment: Incoming
102	Not used
140	Access Point
163	Not used
1//	Line Connecting
164	Not used

173	Modem Serial Number		
1/3	Not used		
174	Retransmission Limit		
174	Not used		
186	RCG-CM Debug Bit SW DFU		
	A debug tool.		
187	FAX TX Priorit		
107	Not used		
200	Manual Polling		
	Not used		
	Regist: Status		
	Displays a number that indicates the status of the @Remote service device.		
	0: Neither the @Remote device nor Embedded RCG Gate is set.		
201	1: The Embedded RCG Gate is being set. Only Box registration is completed. In this status, @Remote device cannot communicate with this device.		
	2: The Embedded RCG Gate is set. In this status, the @Remote device cannot communicate with this device.		
	3: The @Remote device is being set. In this status the Embedded RCG Gate cannot be set.		
	4: The @Remote module has not started.		
202	Letter Number		
	Allows entry of the request number needed for the Embedded RCG Gate.		
203	Confirm Execute		
	Executes the confirmation request to the @Remote Gateway.		
204	Confirm Result		

	Displays a number that indicates the result of the confirmation executed with SP5816-203.
	0: Succeeded
	1: Confirmation number error
	2: Registration in progress
	3: Proxy error (proxy enabled)
	4: Proxy error (proxy disabled)
	5: Proxy error (Illegal user name or password)
	6: Communication error
	7: Certification update error
	8: Other error
	9: Confirmation executing
	Confirm Place
205	Displays the result of the notification sent to the device from the Gateway in answer to the confirmation request. Displayed only when the result is registered at the Gateway.
206	Register Execute
	Executes "Embedded RCG Registration".
	Register Result
	Displays a number that indicates the registration result.
	0: Succeeded
	2: Registration in progress
	3: Proxy error (proxy enabled)
207	4: Proxy error (proxy disabled)
	5: Proxy error (Illegal user name or password)
	6: Communication error
	7: Certification update error
	8: Other error
	9: Registration executing
	Error Code
208	Displays a number that describes the error code that was issued when either SP5816-204 or SP5816-207 was executed.

	Cause	Code	Meaning
	Illegal Modem	-11001	Chat parameter error
		-11002	Chat execution error
		-11003	Unexpected error
	Operation Error, Incorrect Setting	-12002	Inquiry, registration attempted without acquiring device status.
		-12003	Attempted registration without execution of an inquiry and no previous registration.
		-12004	Attempted setting with illegal entries for certification and ID2.
	-	-12005	@Remote communication is prohibited. The device has an Embedded RC gate-related problem.
		-12006	A confirmation request was made after the confirmation had been already completed.
		-12007	The request number used at registration was different from the one used at confirmation.
		-12008	Update certification failed because mainframe was in use.
	Error Caused by Response from GW URL	-2385	Attempted dial up overseas without the correct international prefix for the telephone number.
		-2387	Not supported at the Service Center
		-2389	Database out of service
		-2390	Program out of service
		-2391	Two registrations for same device
		-2392	Parameter error

		-2393	RCG device not managed
		-2394	Device not managed
		-2395	Box ID for RCG device is illegal
	-	-2396	Device ID for RCG device is illegal
		-2397	Incorrect ID2 format
		-2398	Incorrect request number format
209	Instl Clear		
	Releases the setting on a machine that has been set for use with Cumin.		
250	CommLog Print Prints the communication log.		

3

SP5000 Mode: SP5821 to SP5990

5821	Remote Service Address	CTL
2	RCG IP Address	
	Sets the IP address of the RCG (Remote Communication Gate) destination for call processing at the remote service center.	
3	RCG Port Number	
	Sets the RCG port number of the destination for processing calls to the @ center.	Remote service
	[0 to 65 535/443/1]	
4	RCG URL Path	
	Sets the URL path of the destination for processing calls to the @Remote s 17 Numeric characters allowed (0 to 17)	ervice center.

5824	NVRAM Data Upload
	Uploads the UP and SP mode data (except for counters and the serial number) from NVRAM on the control board to an SD card.
	Note: While using this SP mode, always keep the front cover open. This prevents a software module accessing the NVRAM during the upload.

	NVRAM Data Download
5825	Downloads data from an SD card to the NVRAM in the machine. After downloading is completed, remove the SD card and turn the machine power off and on.

5828	Network Setting	
1	1 IPv4 Address (Ethernet/IEEE 802.11)	
	Allows you to confirm and reset the IPv4 address for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd	
2	Subnet Mask (Ethernet/IEEE 802.11)	
	Allows you to confirm and reset the IPv4 subnet mask for Ethernet and wi (802.11): aaa.bbb.ccc.ddd	ireless LAN

3	Default Gatewary (Ethernet/IEEE 802.11)			
	Allows you to confirm and reset the IPv4 default gateway used by the network for Ethernet and wireless LAN (802.11): aaa.bbb.ccc.ddd			
6	DHCP (Ethernet/IEEE 802.11)			
	Allows you confirm and change the setting that determines whether the IP address is used with DHCP on an Ethernet or wireless (802.11) LAN network. [0 to 1 / 1 / 1] 0: Not used (manual setting) 1: Used			
21	Active IPv4 Address			
	Allows you to confirm the IPv4 address that was used when the machine started up with DHCP.			
22	Active IPv4 Subnet Mask			
	Allows you to confirm the IPv4 subnet mask setting that was used when the machine started up with DHCP.			
23	Active IPv4 Gateway Address			
	Allows you to confirm the IPv4 default gateway setting that was used when the machine started up with DHCP.			
50	1284 Compatibility (Centro)			
	Enables or disables 1284 Compatibility.			
	[0 or 1 / 1 / 1 / step]			
	0: Disabled, 1: Enabled			
52	ECP (Centro)			
	Enables or disables ECP Compatibility.			
	[0 or 1 / 1 / 1 / step]			
	0: Disabled, 1: Enabled			
	Note: This SP is activated only when SP5-828-50 is set to "1".			
65	Job Spooling			
	Enables/disables Job Spooling.			
	[0 or 1 / 0 / 1 / step]			
	0: Disabled, 1: Enabled			

66	Job Spooling Clear: Start Time
	Treatment of the job when a spooled job exists at power on.
	0: ON (Data is cleared)
	1: OFF (Automatically printed)
69	Job Spooling (Protocol)
	Validates or invalidates the job spooling function for each protocol.
	0: Validates
	1: Invalidates
	bitO: LPR
	bit1: FTP
	bit2: IPP
	bit3: SMB
	bit4: BMLinkS
	bit5: DIPRINT
	bitó: sftp
	bit7: (Reserved)
87	@Remote Protocol Cnt
90	TELNET (0: OFF 1: ON)
	Enables or disables the Telnet protocol.
	[0 or 1 / 1 / -]
	0: Disable, 1: Enable
91	Web (0: OFF 1: ON)
	Enables or disables the Web operation.
	[0 or 1 / 1 / -]
	0: Disable, 1: Enable
145	Active IPv6 Link Local Address
	This is the IPv6 local address link referenced on the Ethernet or wireless LAN in the format:
	"Link Local Address" + "Prefix Length"
	The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.

147	Active IPv6 Stateless Address 1
149	Active IPv6 Stateless Address 2
151	Active IPv6 Stateless Address 3
153	Active IPv6 Stateless Address 4
155	Active IPv6 Stateless Address 5
	SP codes 147 to 155 are the IPv6 status addresses (1 to 5) referenced on the Ethernet or wireless LAN in the format:
	"Status Address" + "Prefix Length"
	The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
156	IPv6 Manual Address
	This SP is the IPv6 manually set address referenced on the Ethernet or wireless LAN in the format:
	"Manual Set Address" + "Prefix Length"
	The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
158	IPv6 Gateway Address
	This SP is the IPv6 gateway address referenced on the Ethernet or wireless LAN. The IPv6 address consists of a total 128 bits configured in 8 blocks of 16 bits each.
161	IPv6 Stateless Auto Setting
	Enables or disables the automatic setting for IPv6 stateless.
	[0 or 1 / 1 / 1 /step]
	0: Disable, 1: Enable
236	Web Item Visible
	Displays or does not display the Web system items.
	[0 x 0000 to 0 x ffff / 0 x ffff] 0: Not displayed, 1: Displayed
	bit0: Net RICOH
	bit1: Consumable Supplier
	bit2-15: Reserved (all)
237	Web shopping Link Visible

		e link to Net RICOH on the top page and link page of the
	web system.	
	[0 to 1 / 1 / 1]	
	0: Not display, 1:Display	
238	Web Supplies Link visible	
	page of the web system.	e link to Consumable Supplier on the top page and link
	[0 to 1 / 1 / 1]	
	0: Not display, 1:Display	
239	Web Link 1 Name	
	This SP confirms or changes the maximum characters for the UR	URL1 name on the link page of the web system. The L name are 31 characters.
240	Web Link 1 URL	
	This SP confirms or changes the link to URL1 on the link page of the web system. The maximum characters for the URL are 127 characters.	
241	Web Link 1 visible	
	Displays or does not display the link to URL1 on the top page of the web system. [0 to $1/1/1$]	
	0: Not display, 1:Display	
	. , , ,	
242	Web Link 2 Name	Same as "-239"
243	Web Link 2 URL	Same as "-240"
244	Web Link 2 visible	Same as "-241"
249	DHCPv6 DUID	

5831	Initial Setting Mode Clear
	Press [EXECUTE] to restore the inisial settings of all SP codes to their initial (factory) settings.
	Note: This SP does not reset time settings or user tool settings.

5832	HDD
	Enter the SP number for the partition to initialize, then press #. When the execution ends, cycle the machine power off and on.
1	HDD Formatting (All)
2	HDD Formatting (IMH)
3	HDD Formatting (Thumbnail)
4	HDD Formatting (Job Log)
5	HDD Formatting (Printer Fonts)
6	HDD Formatting (User Info)
7	Mail RX Data
8	Mail TX Data
9	HDD Formatting (Data for Design)
10	HDD Formatting (Log)
11	HDD Formatting (Ridoc I/F) (for Ridoc Desk Top Binder)

5836	Capture Setting
	Capture Function (0:Off 1:On)
1	With this function disabled, the settings related to the capture feature cannot be initialized, displayed, or selected. [0 to 1/1]
	0: Disable, 1: Enable
	Panel Setting
2	Determines whether each capture related setting can be selected or updated from the initial system screen.
	[0 to 1/1]
	0: Disable, 1: Enable
	The setting for SP5836-001 has priority.
70	Reduction for Copy B&W Text
72	[0 to 6/1] 0: 1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3

73	Reduction for Copy B&W Other
	[0 to 6/1] 0: 1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
75	Reduction for Printer B&W
	[0 to 6/1] 0: 1, 1: 1/2, 2: 1/3, 3: 1/4, 6: 2/3
	Format for Copy B&W Text
82	[0 to 3/1]
	0:JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
	Format for Copy B&W Other
83	[0 to 3/1]
	0:JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
	Format for Printer B&W
85	[0 to 3/1]
	0:JFIF/JPEG, 1: TIFF/MMR, 2: TIFF/MH, 3: TIFF/MR
	Default for JPEG
	[5 to 95/1]
91	Sets the JPEG format default for documents sent to the document management server with the MLB, with JPEG selected as the format.
	Enabled only when optional File Format Converter (MLB: Media Link Board) is installed.
	Primary srv IP address
101	Sets the IP address of the PC designated to operate as the primary capture server (CS).
	[000.000.000]
	Primary srv scheme
102	Sets the IO device of the primary CS remotely.
	Max. characters: 6
	Primary svr port number
103	Use to set the IO device for the primary CS remotely.
	[1 to 65535/80/1]

	Primary srv URL path
104	Use to set the IO device for the primary CS remotely.
	Max. characters: 16
	Secondary srv IP address
111	Sets the IP address of the PC designated to operate as the secondary capture server (CS).
	[000.000.000]
	Secondary srv scheme
112	Sets the IO device of the secondary CS remotely. Max. characters: 6
	Secondary srv port number
113	Sets the IO device of the secondary CS remotely. Max. characters: 6
	Secondary srv URL path
114	Sets the IO device of the secondary CS remotely.
	Max. characters: 6
	Default Reso Rate Switch
120	Sets the IO device of the CS remotely.
	[0 to 1/0/1]
	Reso: Copy (Mono)
122	Sets the IO device of the CS remotely: [0 to 6/3/1]
	0: 600dpi, 1: 400dpi, 2: 300dpi, 3: 200dpi,
	4: 150dpi, 5: 100dpi, 6: 75dpi
	Reso: Print (Mono)
124	Sets the IO device of the CS remotely: [0 to 6/3/1]
	0: 600dpi, 1: 400dpi, 2: 300dpi, 3: 200dpi, 4: 150dpi, 5: 100dpi, 6: 75dpi

126	Reso: Fax (Mono)
	0: 600dpi, 1: 400dpi, 2: 300dpi, 3: 200dpi, 4: 150dpi, 5: 100dpi, 6: 75dpi
	Reso: Scan (Color)
127	0: 600dpi, 1: 400dpi, 2: 300dpi, 3: 200dpi, 4: 150dpi, 5: 100dpi, 6: 75dpi
	Reso: Scan (Mono)
128	0: 600dpi, 1: 400dpi, 2: 300dpi, 3: 200dpi, 4: 150dpi, 5: 100dpi, 6: 75dpi
	All addr Info Switch
141	Expands the scope of used resources and performance. Switch this off if this feature is not being used. [0 to 1/1/1] 1: ON 0: OFF
142	Stand-by Doc Max Number
	Expands the scope of used resources and performance. Switch this off if this feature is not being used. [0 to 1/1/1] 1: ON 2: OFF

5840	[IEEE 802.11]	CTL
6	Channel Max	
	Sets the maximum number of channels available for data transmission via to LAN. The number of channels available varies according to location. The consettings are set for the maximum end of the range for each area. Adjust the to set the maximum number of channels. DFU	lefault
	Note: Do not change the setting.	
	[1 to 11 or 13 / 11 or 13 / 1 /step]	
	Europe/Asia: 1 to 13	
	NA/ Asia: 1 to 11	

3

Channel Min Sets the minimum number of channels available for data transmission via the wireless LAN. The number of channels available varies according to location. The default settings are set for the minimum end of the range for each area. Adjust the lower 4 bits $_{7}\mid$ to set the minimum number of channels. **DFU** Note: Do not change the setting. [1 to 11 or 13 / 1 / 1 / step] Europe: 1 to 13 NA/Asia: 1 to 11 8 Transmission Speed 0×00 to $0 \times FF / 0 \times FF$ to Auto / -] 0 x FF to Auto [Default] 0 x 11 - 55M Fix 0 x 10 - 48M Fix 0 x 0F - 36M Fix 0 x 0E - 18M Fix 0 x 0D - 12M Fix $0 \times 0B - 9M Fix$ 0 x 0A - 6M Fix 0 x 07 - 11M Fix 0 x 05 - 5.5M Fix 0 x 08 - 1M Fix $0 \times 13 - 0 \times FE$ (reserved) 0 x 12 - 72M (reserved) 0 x 09 - 22M (reserved) 11 WEP key Select Selects the WEP key. [00 to 11 / **00** / 1 binary] 00: Key #1 01: Key #2 (Reserved) 10: Key #3 (Reserved) 11: Key #4 (Reserved)

42	Fragment Thresh
	Adjusts the fragment threshold for the IEEE802.11 card. [256 to 2346 / 2346 / 1] This SP is displayed only when the IEEE802.11 card is installed.
43	11g CTS to Self
	Determines whether the CTS self function is turned on or off. [0 to 1 / 1 / 1] 0: Off, 1: On This SP is displayed only when the IEEE802.11 card is installed.
44	1 1g Slot Time
	Selects the slot time for IEEE802.11. [0 to 1 / 0 / 1] 0: 20 µm, 1: 9 µm
45	WPA Debug Lvl
	Selects the debug level for WPA authentication application. [1 to 3 / 3 / 1] 1: Info, 2: warning, 3: error This SP is displayed only when the IEEE802.11 card is installed.

5841	Supply Name Setting
	Press the [User Tools] key. These names appear when the user presses the Inquiry button on the User Tools screen.
1	Toner Name Setting: Black
7	Org Stamp
11	Staple Std 1
12	Staple Std 2
13	Staple Std 3
14	Staple Std 4
21	Staple Bind 1
22	Staple Bind 2
23	Staple Bind 3

5842	GWS Analysis Setting DFU
	This settings select the output mode for debugging information as each network file is processed.
1	Setting 1
	Default: 0000000 Do not change Netfiles: Jobs to be printed from the document server using a PC and the DeskTopBinder software
2	Setting 2
	Adjusts the debug program modesetting. Bit7: 5682 mmseg-log setting O: Date/Hour/Minute/Second 1: Minute/Second/Msec. O to 6: Not used

5844	USB
	Transfer Rate
1	Sets the speed for USB data transmission. [Full Speed] [Auto Change]
	Vendor ID
2	Sets the vendor ID: Initial Setting: 0x05A Ricoh Company [0x0000 to 0xFFFF/1] DFU
3	Product ID Sets the product ID. [0x0000 to 0xFFFF/1] DFU
4	Device Release No. Sets the device release number of the BCD (binary coded decimal) display. [0000 to 9999/1] Enter as a decimal number. NCS converts the number to hexadecimal number recognized as the BCD.

5	Fixed USB Port
	Selects the PnP name standardization mode.
	[0 to 2 / 0 / 1/step]
	0: Disable
	1: Level 1
	2: Level 2
6	PnP Model Name
	Specifies PnP name for USB device.
7	PnP Serial Number
	Specifies PnP serial number for USB device.
100	Notify Unsupport
	Displays or does not display USB unsupport message.
	[0 or 1 / 1 / -]
	0: Not displayed,

E0.45	Delivery Server Setting	CTL
5845	Provides items for delivery server settings.	
	FTP Port No.	
1	Sets the FTP port number used when image files to the Scan Router Serve [0 to 65535 / 3670 / 1 /step]	Pr.
2	IP Address (Primary)	
	Use this SP to set the Scan Router Server address. The IP address under to can be referenced by the initial system setting. Range: 000.000.000.000 to 255.255.255.	he transfer tab
	Delivery Error Display Time	
6	Use this setting to determine the length of time the prompt message is distest error occurs during document transfer with the NetFile application at device.	•
	[0 to 999 / 300 / 1 second /step]	

	IP Address (Secondary)
8	Specifies the IP address assigned to the computer designated to function as the secondary delivery server of Scan Router. This SP allows only the setting of the IP address without reference to the DNS setting. Range: 000.000.000.000 to 255.255.255.255
	Delivery Server Model
0	Allows changing the model of the delivery server registered by the I/O device. [0 to 4/0/1/step] 0: Unknown
	1: SG1 Provided
	2: SG1 Package
	3: SG2 Provided
	4: SG2 Package
	Delivery Svr Capability
	Changes the capability of the registered that the I/O device registered. [0 to 255 / 0 / 1 /step]
	Bit7 = 1 Comment information exits
	Bit6 = 1 Direct specification of mail address possible
10	Bit5 = 1 Mail RX confirmation setting possible
	Bit4 = 1 Address book automatic update function exists
	Bit3 = 1 Fax RX delivery function exists
	Bit2 = 1 Sender password function exists
	Bit1 = 1 Function to link MK-1 user and Sender exists
	BitO = 1 Sender specification required (if set to 1, Bit6 is set to "0")

11	Delivery Svr Capability (Ext)
	Changes the capability of the registered that the I/O device registered. [0 to 255 / 0 / 1 /step]
	Bit $7 = 1$ Address book usage limitation (Limitation for each authorized user)
	Bit6 = 1 RDH authorization link
	Bit5 to 0: Not used
13	Server Scheme (Primary) DFU
	This is used for the scan router program.
14	Server Port Number (Primary) DFU
14	This is used for the scan router program.
15	Server URL Path (Primary) DFU
15	This is used for the scan router program.
16	Server Scheme (Secondary) DFU
	This is used for the scan router program.
17	Server Port Number (Secondary) DFU
17	This is used for the scan router program.
18	Server URL Path (Secondary) DFU
10	This is used for the scan router program.
	Rapid Sending Control
22	Enables or disables the prevention function for the continuous data sending error.
	[0 to 1 / 0 / -]
	0: Disable, 1: Enable

5846	UCS Settings	CTL
	Machine ID (For Delivery Server)	
1	Displays the unique device ID in use by the delivery server directory. The displayed and cannot be changed. This ID is created from the NIC MAC EUI. The ID is displayed as either 6-byle or 8-byte binary.	,

	Machine ID Clear (For Delivery Server)
2	Clears the unique ID of the device used as the name in the file transfer directory. Execute this SP if the connection of the device to the delivery server is unstable. After clearing the ID, the ID will be established again automatically by cycling the machine off and on.
	Maximum Entries
3	Changes the maximum number of entries that UCS can handle. If a value smaller than the present value is set, the UCS managed data is cleared, and the data (excluding user code information) is displayed. [2000 to 20000/ 2000 / 1 / step]
	Delivery Server Retry Timer
6	Sets the interval for retry attempts when the delivery server fails to acquire the delivery server address book. [0 to 255 / 0 / 1 /step]
	Delivery Server Retry Times
7	Sets the number of retry attempts when the delivery server fails to acquire the delivery server address book. [0 to 255 / 0 / 1 /step]
	Delivery Server Maximum Entries
8	Sets the maximum number account entries of the delivery server user information managed by UCS. [2000 to 50000 / 2000 / 1/step]
	LDAP Search Timeout
10	Sets the length of the timeout for the search of the LDAP server. [1 to 255 / 60 / 1 /step]
20	WSD Maximum Entries
21	Fold Auth Change
22	Initial Value of Upper Limit Count
40	Addr Book Migration (SD => HDD) Not Used
40	Fill Addr Acl Info.

	This SP must be executed immediately after installation of an HDD unit in a basic machine that previously had no HDD. The first time the machine is powered on with the new HDD installed, the system automatically takes the address book from the NVRAM and writes it onto the new HDD. However, the new address book on the HDD can be accessed only by the system administrator at this stage. Executing this SP by the service technician immediately after power on grants full address book access to all users.
	Procedure
	1. Turn the machine off.
41	2. Install a new HDD.
	3. Turn the machine on.
	4. The address book and its initial data are created on the HDD automatically.
	5. However, at this point the address book can be accessed by only the system administrator or key operator.
	6. Enter the SP mode and do SP5846-041. After this SP executes successfully, any user can access the address book.
	Addr Book Media
	Displays the slot number where an address book data is in.
	[0 to 30 / - /1]
	0: Unconfirmed
43	1: SD Slot 1
43	2: SD Slot 2
	4: USB Flash ROM
	20: HDD
	30: Nothing
	Initialize Local Addr Book
47	Clears the local address book information, including the user code.
	Initialize Delivery Addr Book
48	Clears the distribution address book information, except the user code.
	Initialize LDAP Addr Book
49	Clears the LDAP address book information, except the user code.
	Initialize All Addr Book

50	Clears all directory information managed by UCS, including all user codes.
	Backup All Addr Book
51	Uploads all directory information to the SD card.
	Restore All Addr Book
52	Downloads all directory information from the SD card.
	Clear Backup Info
	Deletes the address book data from the SD card in the service slot.
	Deletes only the files that were uploaded from this machine.
53	This feature does not work if the card is write-protected.
	Note: After you do this SP, go out of the SP mode, and then turn the power off.
	Do not remove the SD card until the Power LED stops flashing.
	· · · ·
	Search Option
	This SP uses bit switches to set up the fuzzy search options for the UCS local address book.
	Bit: Meaning
	0: Checks both upper/lower case characters
60	1: Japan Only
	2: Japan Only
	3: Japan Only
	4 to 7: Not Used
	Complexity Option 1
	Use this SP to set the conditions for password entry to access the local address book. Specifically, this SP limits the password entry to upper case and sets the length of the password.
	[0 to 32 / 0 / 1 /step]
62	Note: This SP does not normally require adjustment.
	This SP is enabled only after the system administrator has set up a group password policy to control access to the address book.
	Complexity Option 2 DFU
63	Complexity Option 3 DFU

64	Complexity Option 4 DFU
65	FTP Auth Port Setting
91	Specifies the FTP port for getting a distribution server address book that is used in the identification mode. [0 to 65535 / 3671 / 1 / step]
	Encryption Stat
94	Shows the status of the encryption function for the address book data.

5847	Resolution Reduction
	5847-002 through 5847-006 changes the default settings of image data sent externally by the Net File page reference function. [0 to 2/1]
3047	5847 21 sets the default for JPEG image quality of image files controlled by NetFile.
	"Repository" refers to jobs to be printed from the document server with a PC and the DeskTopBinder software.
2	Rate for Copy B&W Text
3	Rate for Copy B&W Other
5	Rate for Printer B&W
7	Rate for Printer B&W 1200dpi
	For SP5847-2 to -7:
	[0 to 6/1]
	0: 1x 1: 1/2x 2: 1/3x 3: 1/4x 4: 1/6x 5: 1/8x 6: 2/3x1
	"6: 2/3x" applies to -3, -5 only.
	Network Quality Default for JPEG
21	Sets the default value for the quality of JPEG images sent as NetFile pages. This function is available only with the MLB (Media Link Board) option installed. [5 to 95/1]

Web Service
5847 2 sets the 4-bit switch assignment for the access control setting. Setting of 0001 has no effect on access and delivery from Scan Router.
5847 100 sets the maximum size of images that can be downloaded. The default is equal to 1 gigabyte.
Acc. Ctrl.: Repository (only Lower 4 Bits)
0000: No access control
0001: Denies access to DeskTop Binder.
Acc. Ctrl.: Doc. Svr. Print (Lower 4 Bits)
Switches access control on/off.
0000: OFF, 0001: ON
Acc. Ctrl.: User Directory (Lower 4 Bits)
Switches access control on/off.
0000: OFF, 0001: ON
Access Ctrl: Comm. Log Fax (Lower 4bits)
Switches access control on/off.
0000: OFF, 0001: ON
Acc. Ctrl.: Job Control (Lower 4 Bits)
Switches access control on/off.
0000: OFF, 0001: ON
Acc. Ctrl: Device Management (Lower 4 Bits)
Switches access control on/off.
0000: OFF, 0001: ON
Acc. Ctrl: Delivery (Lower 4 Bits)
Switches access control on/off.
0000: OFF, 0001: ON
Acc. Ctrl: User Administration (Lower 4 Bits)

	Switches access control on/off.		
	0000: OFF, 0001: ON		
99	Repository: Download Image Setting		
100	Repository: Download Image Max. Size		
	[1 to 1024/1 K]		
210	Setting: Log Type: Job 1		
	Switches access control on/off.		
	0000: OFF, 0001: ON		
211	Setting: Log Type: Job 2		
	Switches access control on/off.		
	0000: OFF, 0001: ON		
212	Setting: LogType Access		
	Switches access control on/off.		
	0000: OFF, 0001: ON		
213	Setting: Primary Srv DFU		
214	Setting: Secondary Srv		
	Specifies the maximum size of the image data that the machine can download.		
	[1 to 1024 / 1024 / 1 MB /step]		
215	Setting: Start Time		
216	Setting: Interval Time		
217	Setting: Timing		

	Installation Date
5849	Installation Date
	Displays or prints the installation date of the machine.
1	Display
	The "Counter Clear Day" has been changed to "Installation Date" or "Inst. Date".
2	Switch to Print

	Determines whether the installation date is printed on the printout for the total counter. [0 to 1/1] 0: No Print, 1: Print
3	Total Counter
	Displays the total count from the day set with SP5849-001. [0 to 9999 9999]

5850	Address Book Function
3630	Not used

	Bluetooth Mode	
5851	Sets the operation mode for the Bluetooth unit. Press either key.	
	[0: Public] [1: Private]	

	Stamp Data Download	
5853	Push [Execute] to download the fixed stamp data from the machine ROM onto the hard disk. Then these stamps can be used by the system. If this is not done, the user will not have access to the fixed stamps ("Confidential", "Secret", etc.).	
	You must always execute this SP after replacing the HDD or after formatting the HDD. Always switch the machine off and on after executing this SP.	

	5856	Remote ROM Update
		When set to "1" allows reception of firmware data via the local port (IEEE 1284) during a remote ROM update. This setting is reset to zero after the machine is cycled off and on. Allows the technician to upgrade the firmware using a parallel cable.
		[0 to 1/1]
		0: Not allowed, 1: Allowed

5857	Save Debug Log	CTL
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	On/Off (1:ON 0:OFF)
1	Switches the debug log feature on and off. The debug log cannot be captured until this feature is switched on. 0: OFF, 1: ON
	Target (2: HDD 3: SD)
2	Selects the storage device to save debug logs information when the conditions set with SP5-858 are satisfied. [2 to 3 / 2 / 1 / step] 2: HDD, 3: SD Card
	Save to HDD
5	Saves the debug log of the input SC number in memory to the HDD. A unique file name is generated to avoid overwriting existing file names on the SD Card. Up to 4MB can be copied to an SD Card. 4 MB segments can be copied one by one to each SD Card.
	Save to SD Card
6	Saves the debug log of the input SC number in memory to the SD card.
9	Copy HDD to SD Card (Latest 4 MB)
10	Copy HDD to SD Card (Latest 4 MB Any Key)
11	Erase HDD Debug Data
12 Erase SD Card Debug Data 13 Free Space on SD Card	
15	Copy SD to SD (Latest 4 MB Any Key)
16	Make HDD Debug
17	Make SD Debug

	Debug Save When	
5858	These SPs select the content of the debugging information to be saved to the destination selected by SP5857-002.	
	SP5858-003 stores one SC specified by number.	
1	Engine SC Error (0:OFF 1:ON)	
	Stores SC codes generated by copier engine errors.	
2	Controller SC Error (0:OFF 1:ON)	
Stores SC codes generated by GW controller errors.		
3	Any SC Error (0:OFF 1:ON)	
	[0 to 65535 / 0 / 1]	
4	Jam (0:OFF 1:ON)	
	Stores jam errors.	

5859	Debug Log Save F	unction
1	Key 1	
2	Key 2	
3	Key 3	
4	Key 4	
5	Key 5	These SPs allow you to set up to 10 keys for log files for functions that use common memory on the controller board. [-9999999 to 9999999/1]
6	Key 6	
7	Key 7	
8	Key 8	
9	Key 9	
10	Key 10	

5860	SMTP/POP3/IMAP4
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	Partial Mail Receive Timeout
	[1 to 168/72/1]
20	Sets the amount of time to wait before saving a mail that breaks up during reception. The received mail is discarded if the remaining portion of the mail is not received during this prescribed time.
	MDN Response RFC2298Compliance
21	Determines whether RFC2298compliance is switched on for MDN reply mail. [0 to 1/1] 0: No, 1: Yes
	SMTP Auth. From Field Replacement
22	Determines whether the FROM item of the mail header is switched to the validated account after the SMTP server is validated.
22	[0 to 1/1]
	0: No. "From" item not switched.
	1: Yes. "From" item switched.
	SMTP Auth Direct Sending
25	Occasionally, all SMTP certifications may fail with SP5860 006 set to "2" to enable encryption during SMTP certification for the SMTP server. This can occur if the SMTP server does not meet RFC standards. In such cases you can use this SP to set the SMTP certification method directly. However, this SP can be used only after SP5860 003 has been set to "1" (On).
20	Bit0: LOGIN
	Bit1: PLAIN
	Bit2: CRAM_MD5
	Bit3: DIGEST_MD5
	Bit4 to Bit 7: Not Used
	S/MIME: MIME Header Settings
26	Selects the MIME header type of an e-mail sent by S/MIME. [0 to 2 / 0 / 1]
	0: Microsoft Outlook Express standard
	1: Internet Draft standard
	2: RFC standard

	28	S/MIME: Authentication Check
		Determines whether the destination is authenticated for sending S/MIME mail.
		[0 to 1/ 0/ 1] 0: No Checking 1: Checking

5866	E-Mail Report
3800	This SP controls operation of the email notification function.
1	Report Validity
	Enables or disables the e-mail notification to @Remote.
	[0 or 1 / 0 / 1]
	0: Enable, 1: Disable
5 Add Date Field	
Disables and re-enables the addition of a date field to the email notification.	
	[0 to 1/0/1]

5870	Common Key Info Writing Not Used
3870	Writes to flash ROM the common proof for validating the device for NRS specifications.
1 Writing	
3	Initialize
	Initializes the set certification.
	When the GW controller board is replaced with a new one for repair, you must execute the "Initiralize (-003)" and "Writing (-001)" just after the new board replacement.
	NOTE: Turn off and on the main power switch after the "Initiralize (-003)" and "Writing (-001)" have been done.
4	Common KeyInfo Writing (2048 bit)
Wrties the authentication data used for @Remote into the flash ROM.	

5873		SD Card Appli Move
36/3	36/3	Allows you to move applications from one SD card another.
1 Move Exec		Move Exec

	Executes the move from one SD card to another.
2	Undo Exec
	This is an undo function. It cancels the previous execution.

	SC Auto Reboot
5875	This SP determines whether the machine reboots automatically when an SC error occurs.
	Note: The reboot does not occur for Type A and C SC codes.
1	Reboot Setting
	[0 to 1/0/1]
	0: On, 1: Off
	On: default: 0 (Reboots automatically) The machine reboots automatically when the machine issues an SC error and logs the SC error code. If the same SC occurs again, the machine does not reboot.
OFF: 1 (Does not reboot automatically. Changing this setting to "0" sets the reboot automatically after an SC occurs.	
2	Reboot Type
	This setting determines how the machine reboots after an SC code is issued.
	[0 to 1/0/1]
	0: Allows manual reboot, 1: Automatic reboot

5876 Security Clear	
	This SP clears all security settings, security settings for NCS only, or security settings for UCS only.
1	All Clear
11	Clear NCS Security Setting
15	Clear UCS Security Setting

	Option Setup
5878	This SP enables the DOS application (Data Overwrite Security). Do this SP after installing Data Overwrite Security Unit.)

1	Data Overwrite Security
Enables the Data Overwrite Security unit.	
	Touch [EXECUTE] on the operation panel. Then cycle the machine off/on.
2	HDD Encryption
Enables the Copy Data Security unit.	
Touch [EXECUTE] on the operation panel. Then cycle the machine off/on.	

E001	Fixed Phase Block Erasing	
5881	Touch [EXECUTE] on the operation panel. Then erase all the fixed phase block.	

5885	Set WIM Function DFU		
20	Doc Sv	r Acc Ctrl	
	Bit	Meaning	
	0	Forbid all document server access (1)	
	1	Forbid user mode access (1)	
	2	Forbid print function (1)	
	3	Forbid fax TX (1)	
	4	Forbid scan sending (1)	
	5	Forbid downloading (1)	
	6	Forbid delete (1)	
	7	Reserved	
50	Doc Sv	r Format	
51	Doc Sv	r Trans	
100	Set Sig	nature	

ت

101	Set Encryption
	Determines whether the scanned documents with the WIM are encrypted when they are transmitted by an e-mail.
	[0 or 1 / 0 / -]
	0: Not encrypted, 1: Encrypted
200	Detect Memory Leak
201	Doc Server Timeout

	SD Get Counter	CTL
	This SP determines whether the ROM can be updated.	
5887	This SP sends a text file to an SD card inserted in SD card Slot 2 (lower slot). The operation stores. The file is stored in a folder created in the root directory of the SD card called SD_COUNTER. The file is saved as a text file (*.txt) prefixed with the number of the machine.	
	1. Insert the SD card in SD card Slot 2 (lower slot).	
	2. Select SP5887 then touch [EXECUTE].	
	3. Touch [Execute] in the message when you are prompted.	

5888	Personal Information Protect
	Selects the protection level for logs.
	[0 to 1 / 0 / 1}
	0: No authentication, No protection for logs
	1: No authentication, Protected logs (only an administrator can see the logs)

5893	SDK Application Counter DFU
3693	Displays the counter name of each SDK application.
1	SDK-1
2	SDK-2
3	SDK-3
4	SDK-4

5	SDK-5
6	SDK-6

5894	External Charge Unit Setting Switch Charge Mode
3094	[0 to 2/0/1]

	PM Double Count
	This SP sets the PM counter to count double for paper longer than 420 mm.
5899	[0 to 1/0/1]
	0: OFF
	1: PM registers a double-count for paper longer than 420 mm in the sub scan direction.

5907	Plug & Play Maker/Model Name		
	5907	Selects the brand name and the production name for Windows Plug & Play. This information is stored in the NVRAM. If the NVRAM is defective, these names should be registered again.	
	After selecting, press the "Original Type" key and "#" key at the same time. When the setting is completed, the beeper sounds five times.		

5913		Switchover Permission Time
	5913	If no key is pressed when there is an application with display control rights, these SP settings allow the system to shift to the application standing by after the specified time as elapse. This SP switches the switchover permission timer on/off.
		[0 to 1/1/1]
		0: OFF
		1: ON

	Mechanical Counter Detection
	Displays whether the mechanical counter is installed in the machine.
5915	[0 to 2]
0710	0: Not detected
	1: Detected
	2: Unknown

5952 Fact Adjust Mode

5959	Paper Size	
1	1 Tray 1	
Select a paper size for the tray 1.		
[0 or 1 / NA: 1, Others: 0 / 1]		
	0: A4, 1: 8 _{1/2} x11	
5	Tray 4 (LCT) Japan only	
6	Cover Sheet	

5967	Copy Server: Set Function
	Enables and disables the document server. This is a security measure that prevents image data from being left in the temporary area of the HDD. After changing this setting, you must switch the main switch off and on to enable the new setting.
	[0 to 1/1]
	0: ON, 1: OFF

		Cherry Server
	5974	Selects which version of the Scan Router application program, "Light" or "Full (Professional)", is installed.
3774	3774	[0 to 1 / 0 / 1 /step]
		0: Light version (supplied with this machine)
		1: Full version (optional)

	Device Setting		
5985	The NIC and USB support features are built into the GW controller. Use this SP to and disable these features. In order to use the NIC and USB functions built into the controller board, these SP codes must be set to "1".		
1	On Board NIC	O. Disable 1. Feeble	
2	On Board USB	O: Disable, 1: Enable	

	SP Print Mode	
5990	Prints the SMC report. In the SP mode, press Copy Window to move to the copy screen, select the paper size, then press Start. Select A4/LT (Sideways) or larger to ensure that all the information prints. Press SP Window to return to the SP mode, select the desired print, and press Execute.	
1	All (Data List)	
2	SP (Mode Data List)	
3	User Program Data	
4	Logging Data	
5	Diagnostic Report	
6	Non-Default (Prints only SPs set to values other than defaults.)	
7	NIB Summary	
8	Capture Log	
21	Copier User Program	
22	Scanner SP	
23	Scanner User Program	
24	SDK/J Summary	
25	SDK/J Application Info	
26	Printer SP	

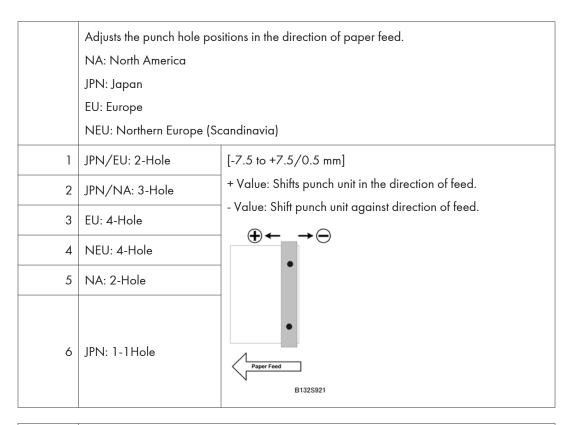
	SP Text Mode			
5992	Prints the SMC report to a file on an SD card inserted into the SD card slot onr the right side of the machine operation panel.			
1	All (Data List)			
2	SP (Mode Data List)			
3	User Program Data			
4	Logging Data			
5	Diagnostic Report			
6	Non-Default (Prints only SPs set to values other than defaults.)			
7	NIB Summary			
8	Capture Log			
21	Copier User Program			
22	Scanner SP			
23	Scanner User Program			
24	SDK/J Summary			
25	SDK/J Application Info			
26	Printer SP			

SP6000 Peripherals

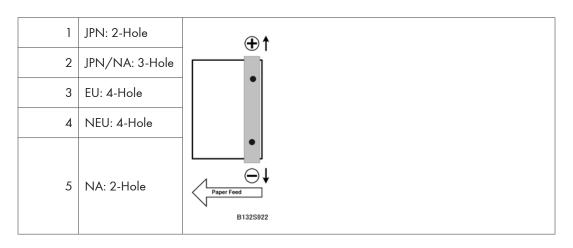
6006	ADF Reg. Ad.		
1	ADF Main Reg. Adj:Front Adjusts the side-to-side registration for the front in ADF mode. [-3 to +3/0/0.1 mm]		
2	ADF Main Reg. Adjusts the side-to-side registration for the back in ADF mode. [-3 to +3/0/0.1 mm]		
3	ADF L-Edge Registration (Front) Adjusts the vertical registration for the front in ADF mode. [-5 to +5/0/0.1 mm]		
4	ADF L-Edge Registration (Back) Adjusts the vertical registration for the back in ADF mode. [-5 to +5/0/0.1 mm]		
5	ADF Buckle Adjustment 1 Adjusts the roller timing at the skew correction sensor/entrance roller. A higher setting causes more buckling. [-3 to +3/0/0.1 mm]		
6	ADF Buckle Adjustment 2 Adjusts the roller timing at the interval sensor/scanning roller. A higher setting causes more buckling. [3 to -2/0/0.1 mm]		
7	ADF Trailing Edge Erase Margin (Front) These settings adjust the erase margin for the trailing edges for the front. [-5 to +5/-1/0.1 mm]		
8	ADF Trailing Edge Erase Margin (Back) These settings adjust the erase margin for the trailing edges for the back. [-5 to +5/-1/0.1 mm]		

6007	ADF Input Chk p.388
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6008	ADF Output Check p .389		
6009	DF Free Run		
0009	Performs an ADF free run in duplex original mode.		
1	Simplex		
2	Simplex (Stamp)		
	Stamp Position Adj.		
6010	Adjust the position of "Finished" stamp.		
	[-5 to 5 / 0 / 0.1 mm]		
	ADF Org Size Priority		
6016	Allows selection of alternate settings for automatic original size detection.		
	[0 to 255/ 0 /1]		
	ADF Mag. Ad.		
6017	Allows settings for the speed of the sheet through.		
	[-5 to 5/ 0 /0.1]		
	ADF Mag Adj		
6020	If the original is small (B6, A5, HLT), the delay sensor detects the leading edge of the sheet and delays the original at the entrance roller for the prescribed number of pulses to buckle the leading edge and correct skew.		
	[0 to 1/1]		
	0: Delay skew correction only for small originals		
	1: Delay skew correction for all originals, regardless of size. (May reduce the scanning speed of the ADF)		
6101	Punch Hole Position Adjustment		



6102	Punch Hole Position Adjustment	
	Adjusts the punch position perpendicular to the direction of feed.	
	[-2 to +2/ 0 /0.4 mm]	
	+ Value: Shifts punch unit toward back of the finisher.	
	- Value: Shift punch unit toward front of the finisher.	
	NA: North America	
	JPN: Japan	
	EU: Europe	
	NEU: Northern Europe (Scandinavia)	



6103	Skew Correction: Buckle Adj.		
	This SP corrects punch hole alignment by correcting the skew of each sheet. To do this, it adjusts the amount of time the finisher entrance roller remains off while the exit roller of the machine remains on. This buckles the leading edge of the sheet slightly against the finisher entrance roller while it remains off.		
1	A3 SEF	[-5 to +5/ 0 /0.25 mm]	
2	B4 SEF		
3	A4 SEF		
4	A4 LEF		
5	B5 SEF		
6	B5 LEF	+ Value: Increases the time that the finisher entrance roller remains	
7	DLT SEF	off. - Value: Descreases the time that the finisher entrance roller remains	
8	LG SEF	off.	
9	LT SEF		
10	LT LEF		
11	12*18		
12	Other		

6104	Skew Correction Control
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	This SP determines whether the finisher entrance roller stops to correct skew when paper enters the finisher.		
1	A3 SEF		
2	B4 SEF		
3	A4 SEF		
4	A4 LEF		
5	B5 SEF	[0 to 1/ 0 /1]	
6	B5 LEF	0: No adjustment. Quickly restores the default setting if you forget what the other settings do.	
7	DLT SEF	0: Paper stops for skew correction 1: Paper does not stop	
8	LG SEF		
9	LT SEF		
10	LT LEF		
11	12*18		
12	Other		

6105	Jogger Fence Fine Adjust	
	This SP adjusts the distance between the jogger fences and the sides of the stack on the finisher stapling tray. The adjustment is done perpendicular to the direction of paper feed.	

1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	A4 LEF	
5	B5 SEF	[-1.5 to +1.5/0/0.5 mm]
6	B5 LEF	+ Value: Increases the distance between jogger fences and
7	DLT SEF	the sides of the stack. - Value: Decreases the distance between the jogger fences
8	LG SEF	and the sides of the stack.
9	LT SEF	
10	LT LEF	
11	12*18	
12	Other	

6106	Adjust Output Jog Position		
	Use this SP code to adjust the positions of the jogger fences when the pages are aligned (jogged) horizontally in the optional output jogger unit. The jogger fences close in on the sides of the stack on the paper tray. These side fences move in and out perpendicular to the direction of paper feed.		
	[-1.5 to +1.5 / 0 / 0.5 mm]		
	 The higher the setting, the narrower the jogger span and the smaller the gaps between the fences and the edges of the paper. Stacking is tighter. 		
	The lower the setting, the wider the jogger span and the wider the gaps between the fences and the edges of the paper. Stacking is not as tight.		

1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	A4 LEF	
5	B5 LEF	
6	A5 LEF	The settings are done for each paper size. SEF denotes "Short Edge Feed". LEF denotes "Long Edge Feed".
7	DLT SEF	
8	LG SEF	
9	LT SEF	
10	LT LEF	
11	HLT LEF	
12	Other	

6109	Staple Position Adjustment		
	Use this SP to shift the position of the stapling done by the corner stapler of the finisher. This SP shifts the staple position forward and back across the direction of paper feed.		
	 Use the "●" key to toggle between + and –. 		
	A larger value shifts the stapling position to shift forward.		
	A smaller value shifts the stapling position backward.		
	The settings are done for each paper size.		
	[-3.5 to +3.5 / 0 / 0.5 mm]		

1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	A4 LEF	
5	B5 SEF	
6	B5 LEF	The settings are done for each paper size. SEF denotes "Short Edge Feed". LEF denotes "Long Edge Feed".
7	DLT SEF	
8	LG SEF	
9	LT SEF	
10	LT LEF	
11	12*18	
12	Other	

6113	Folder Position Adj. (Sub-Scan)		
	This SP corrects the	e folding postion when paper is stapled and folded.	
1	A3 SEF		
2	B4 SEF	[-3 to +3/0.2 mm]	
3	A4 SEF	+ Value: Shifts staple position toward the crease. - Value: Shifts staple position away from the crease.	
4	B5 SEF		
5	DLT SEF	Feed Out	
6	LG SEF	$\oplus \leftarrow_{\lambda} \rightarrow \stackrel{\frown}{\ominus}$	
7	LT SEF		
8	12*18	B132S924	
9	Other		

6114

1	A3 SEF	
2	B4 SEF	This SP sets the number of times the folding rollers are driven forward
3	A4 SEF	and reverse to sharpen the crease of a folded booklet before it exits the folding unit of the Booklet Finisher. When set at the default (0):
4	B5 SEF	The folding blade pushes the center of the stack into the nip of the folding roller.
5	DLT SEF	the folding roller. • The folding rollers rotate ccw to crease the booklet, reverse cw, then rotate ccw again to crease the booklet fold twice before feeding to the folding unit exit rollers. [1 to 6/0/1]
6	LG SEF	
7	LT SEF	
8	12*18	0:2, 1:5, 2:10, 3:15, 4:20, 5:25, 6:30 (passes)
9	Other	

6115	Pre-stack Number		
1	A4 LEF	This SP sets the number of sheets sent to the pre-stack tray. With this	
2	LT LEF	SP set to the default (3): 3 sheets are sent to the pre-stack tray.	
3	B5 LEF	When the 4th sheet feeds, the 4th sheet and 3 sheets from the pre-	
4	10.5"x7.25"	stack tray are sent to the stapling tray together.	
5	A4 SEF	Note : You may need to adjust this setting or switch it off when feeding thick or slick paper.	
6	LT SEF	[0 to 4/3/1]	
7	B5 SEF	0: None	
8	10.5*7.25	2: 2 sheets	
9	Other	3: 3 sheets 4: 4 sheets	

er Off/On

1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	A4 LEF	
5	LT LEF	This SP switches the jogging operation of the output jogger unit
6	B5 LEF	attached to the side of the finisher off and on.
7	DLT SEF	[0 to 1/0/1] 0: Off, 1: On Note: After installation of the Output Jogger Unit B703, this SP must
8	LG SEF	be set to "1" for the jogging motor to operate the jogging fences.
9	LT SEF	
10	LT LEF	
11	HLT LEF	
12	Other	

6120	Finisher Free Run
	Selects the free run mode during testing.
1	Free Run 1 VIC (D610)
	Stapling Mode: Stapling only
2	Free Run 2 VIC (D610)
	All Modes: All finisher operations tested
3	Free Run 3 VIC (D610)
	Packing Mode: Before you move the finisher to a new location, do this SP. When you switch on the machine after you moved it, the finisher automatically goes to the ready condition

6121	Finisher Input Check: Fin 1 (D612/D611) ▶ p.390
6122	Finisher Input Check: Fin 2 (D610) p.394

6124	Finisher Output Check: Fin 1 (D612/D611) p.392
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, , , ,		6125	Finisher Output Check: Fin 2 (D610) p.396
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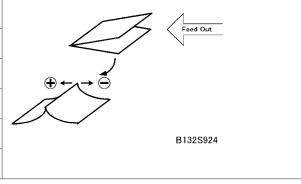
6126	Fold Position Setting (D612	2)
	This SP corrects the folding D612Booklet Finisher.	р
1	A3 SEF	
2	B4 SEF	[-
3	A4 SEF	
4	B5 SEF	
5	DLT SEF	
6	LG SEF	
7	LT SEF	
8	12*18 SEF	4
9	Custom Size	

[-3 to +3/0/0.2 mm]

• + Value: Shifts staple position toward the crease.

position when paper is stapled and folded in the

• - Value: Shifts staple position away from the crease.



6127	Staple Jogging Time	es Fin 2 (D610)	
		e time to align the	r fences press against the sides of the stack on the stack for corner stapling.
1	A3 SEF	7	DLT SEF
2	B4 SEF	8	LG SEF
3	A4 SEF	9	LT SEF
4	A4 LEF	10	LT LEF
5	B5 SEF	11	Other
6	B5 LEF		

6250	Input Check: Sort Tray	
	These SP codes turn on the electrical components of the finisher individually for testing.	
1	SortTray Transport Sensor	
2	SortTray Shift Sensor	
3	SortTray Lower Limit Sensor	
4	4 SortTray Paper Height Sensor	
5	SortTray Door Switch	

6251	Output Check: Sort Tray
	Turn on the electrical components of the finisher individually for test purposes.
1	SortTray Transport Motor: Continuous
2	SortTray Transport Motor: 1 Operation
3	SortTray Shift Tray Motor: 1 Operation
4	SortTray Tray Lift Motor: Up
5	SortTray Tray Lift Motor: Down
6	SortTray Tray Lift Motor: 1 Operation

6252	Free Run: SortTray	
Turn on the electrical components of the finisher individually for test purposes.		

6301	Fine Adjust Z-Fold 1 (D615)
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1	1st Fold A3 SEF	
2	1 st Fold B4 SEF	
3	1 st Fold A4 SEF	
4	1 st Fold DLT SEF	
5	1 st Fold LG SEF	
6	1 st Fold LT SEF	
7	1st Fold 12*18	
8	1 st Fold Other	[-4 to 4 / 0 / 0.2 mm]
9	2nd Fold A3 SEF	[-4 10 4 / 0 / 0.2 mm]
10	2nd Fold B4 SEF	
11	2nd Fold A4 SEF	
12	2nd Fold DLT SEF	
13	2nd Fold LG SEF	
14	2nd Fold LT SEF	
15	2nd Fold 12*18	
16	2nd Fold Other	
6309	Input Check: Folder (D615) ₽ p.397	
6310	Output Check: Folder (D615) 🖝 p.39	99
6311	FM1 Z-Fold: Fine Ad 1st Fld (D615)	
1	Free Run 1	
2	Free Run 2	
3	Free Run 3	
4	Free Run 4	

6312	FM1 Z-Fold: Fine Ad 1st Fld (D615)	
1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	
7	12*18	
8	8-Kai	
19	Other	

6313	FM1 Z-Fold: Fine Ad 2nd Fld (D615)	
1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	
7	12*18	
8	8-Kai	
19	Other	

6314	FM2 Equal 1/2:Fine Ad Fld (D615)	
1	A3 SEF	[-4 to 4 / 0 / 0.2 mm]
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	

LT SEF	5	LG SEF	
8 8-Kai 9 85 SEF 11 13"x19" 12 12.6"x19.2" 13 12.6"x18.5" 14 13"x18" SRA3 16 SRA4 17 226x310 18 310x432 19 Other 21 A3 SEF (Multi Sheet) 22 84 SEF (Multi Sheet) 24 DLT SEF (Multi Sheet) 25 LG SEF (Multi Sheet) 26 LT SEF (Multi Sheet) 27 12x18 (Multi Sheet) 28 8-Kai (Multi Sheet) 29 85 SEF (Multi Sheet) 29 85 SEF (Multi Sheet) 29 85 SEF (Multi Sheet) 29 85 SEF (Multi Sheet) 29 85 SEF (Multi Sheet) 29 85 SEF (Multi Sheet)	6	LT SEF	
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17 226x310 18 310x432 19 Other 21 A3 SEF (Multi Sheet) 22 B4 SEF (Multi Sheet) 23 A4 SEF (Multi Sheet) 24 DLT SEF (Multi Sheet) 25 LG SEF (Multi Sheet) 26 LT SEF (Multi Sheet) 27 12x18 (Multi Sheet) 28 8-Kai (Multi Sheet) 29 B5 SEF (Multi Sheet) 31 13x19 (Multi Sheet)	15	SRA3	
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25 LG SEF (Multi Sheet) 26 LT SEF (Multi Sheet) 27 12×18 (Multi Sheet) 28 8-Kai (Multi Sheet) 29 B5 SEF (Multi Sheet) 31 13×19 (Multi Sheet)	23	A4 SEF (Multi Sheet)	
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27 12x18 (Multi Sheet) 28 8-Kai (Multi Sheet) 29 B5 SEF (Multi Sheet) 31 13x19 (Multi Sheet)	25	LG SEF (Multi Sheet)	
28 8-Kai (Multi Sheet) 29 B5 SEF (Multi Sheet) 31 13x19 (Multi Sheet)	26	LT SEF (Multi Sheet)	
29 B5 SEF (Multi Sheet) 31 13x19 (Multi Sheet)	27	12x18 (Multi Sheet)	
31 13x19 (Multi Sheet)	28	8-Kai (Multi Sheet)	
	29	B5 SEF (Multi Sheet)	
39 Custom (Multi Sheet)	31	13x19 (Multi Sheet)	
	39	Custom (Multi Sheet)	

6315	FM3 Equal 3rds: Fine Ad 1st (D615)	
1	A3 SEF	[-4 to 4 / 0 / 0.2 mm]
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	
6	LT SEF	
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	
22	B4 SEF (Multi Sheet)	
23	A4 SEF (Multi Sheet)	
25	LG SEF (Multi Sheet)	
26	LT SEF (Multi Sheet)	
29	B5 SEF (Multi Sheet)	
39	Custom (Multi Sheet)	

6316	FM3 Equal 3rds: Fine Ad 2nd (D615)	
1	A3 SEF	[-4 to 4 / 0 / 0.2 mm]
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	
6	LT SEF	
7	12*18	

8	8-Kai	
9	B5 SEF	
19	Other	
22	B4 SEF (Multi Sheet)	
23	A4 SEF (Multi Sheet)	
25	LG SEF (Multi Sheet)	
26	LT SEF (Multi Sheet)	
29	B5 SEF (Multi Sheet)	
39	Custom (Multi Sheet)	

6317	FM4 3rds 1 Flap: Fine Ad 1st (D615)	
1	A3 SEF	[-4 to 4 / 0 / 0.2 mm]
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	
6	LT SEF	
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	
21	A3 SEF (Multi Sheet)	
22	B4 SEF (Multi Sheet)	
23	A4 SEF (Multi Sheet)	
25	LG SEF (Multi Sheet)	
26	LT SEF (Multi Sheet)	

29	B5 SEF (Multi Sheet)	
39	Custom (Multi Sheet)	

6318	FM4 3rds 1 Flap: Fine Ad 2nd (D615)	
1	A3 SEF	[-4 to 4 / 0 / 0.2 mm]
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	
6	LT SEF	
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	
21	A3 SEF (Multi Sheet)	
22	B4 SEF (Multi Sheet)	
23	A4 SEF (Multi Sheet)	
24	DLT SEF (Multi Sheet)	
25	LG SEF (Multi Sheet)	
26	LT SEF (Multi Sheet)	
29	B5 SEF (Multi Sheet)	
39	Custom (Multi Sheet)	

6319	FM5 4ths V: Fine Adj 1st (D615)	
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1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	[-4 10 4 / 0 / 0.2 mm]
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	

6320	FM5 4ths V: Fine Adj 2nd (Do	615)
1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	[-4 10 4 / 0 / 0.2 mm]
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	

6321	FM6 4ths 2 Flap: Fine Adj 1st (D615)	
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1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	
8	8-Kai	
9	B5 SEF	
19	Other	

6322	FM6 4ths 2 Flap: Fine Adj 2n	d (D615)
1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	
8	8-Kai	
9	B5 SEF	
19	Other	

6323 FM6 4ths 2 Flap: Fine Adj 3rd (D615)

1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 4 / 0 / 0.2 mm]
6	LT SEF	[-4 10 4 / 0 / 0.2 mm]
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	

6324	Jogger Fence Position Adjust	(D615)
1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[2, 2, 4, 4, 6, 5, 5, 5]
6	LT SEF	[-2 to 2 / 0 / 0.5 mm]
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	

6325	Registration Buckle Adjust (D615)	
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1	A3 SEF	
2	B4 SEF	
3	A4 SEF	
4	DLT SEF	
5	LG SEF	[-4 to 2 / 0 / 1 mm]
6	LT SEF	[-4 10 2 / 0 / 1 mm]
7	12*18	
8	8-Kai	
9	B5 SEF	
19	Other	

6326	Registration Buckle Adjust Select	
	Adjusts the registration motor timing. This timing determines the amount of paper buckle at registration. (A higher setting causes more buckling.)	

6327	Top Tray Full Set: Enable	
Switches to the top tray full sensor off/on		
[0 to 1/0/1] 0:Full Detect ON 1:Full Detect OFF		

6328	Top Tray Full Set: Limit Output
	Limits the number of pages to be on the top tray to trigger the the tray full alert. [0 to 250/0/1]
	- ' ' -

6350 Mail Box Input Check	
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1	Paper Detect Sn 1	
2	Vertical Transport Sn 1: Bin1	
3	Paper Overflow Sn 1	
4	Paper Detect Sn 2	
5	Vertical Transport Sn2: Bin3	
6	Paper Overflow Sn 2	Turn on the electrical components of the
7	Paper Detect Sn 3	finisher individually for testing.
8	Paper Overflow Sn 3	
9	Paper Detect Sn 4	
10	Vertical Transport Sn3: Bin5	
11	Paper Overflow Sn 4	
12	Paper Detect Sn 5	
13	Paper Overflow Sn 5	
14	Paper Detect Sn 6	
15	Vertical Transport Sn4: Bin7	
16	Paper Overflow Sn 6	
17	Paper Detect Sn 7	
18	Paper Overflow Sn 7	Turn on the electrical components of the
19	Paper Detect Sn 8	finisher individually for testing.
20	Vertical Transport Sn 5:Bin9	
21	Paper Overflow Sn 8	
22	Paper Detect Sn 9	
23	Paper Overflow Sn 9	
24	Door Open Switch	

1	Vertical Transport Motor	
2	Junction Gate SOL 1	
3	Turn Gate SOL 1	
4	Turn Gate SOL 2	
5	Turn Gate SOL 3	Turn on the electrical compo
6	Turn Gate SOL 4	finisher individually for testin
7	Turn Gate SOL 5	
8	Turn Gate SOL 6	
9	Turn Gate SOL 7	
10	Turn Gate SOL 8	

onents of the ng.

6352	Mail Box Free Run	
	Free Run 1	

6450	Cover Feeder Size Change	
1	All A3	[0 to 1 / 0 / 1]
2	EU, CHN: 8.5x13	[0 to 2 / 0 / 1]
3	NA: 8.5x14	[0 to 1 / 0 / 1]
4	NA: 11x8.5	[0 to 1 / 0 / 1]
5	NA: 8.5x11	[0 to 1 / 0 / 1]
6	EU, CHN: 8K	[0 to 1 / 0 / 1]
7	EU, CHN: 16K (267x195)	[0 to 1 / 0 / 1]
8	EU, CHN: 16K (195x267)	[0 to 1 / 0 / 1]

6451	Cover Feeder Input Check	
1	Paper Feed Cover Sensor	[0 to 1 / 0 / 1]
2	Bottom Plate HP Sensor	[0 to 1 / 0 / 1]

3	Paper Near End Sensor	[0 to 1 / 0 / 1]
4	Paper Set Sensor	[0 to 1 / 0 / 1]
5	Bottom Plate HP Sensor	[0 to 1 / 0 / 1]
6	Grip Sensor	[0 to 1 / 0 / 1]
7	Guide Plate Set Sensor	[0 to 1 / 0 / 1]
8	Exit Sensor	[0 to 1 / 0 / 1]
9	Paper Set Sensor	[0 to 1 / 0 / 1]
10	Width Sensor 1	[0 to 1 / 0 / 1]
11	Width Sensor 2	[0 to 1 / 0 / 1]
12	Width Sensor 3	[0 to 1 / 0 / 1]
13	Length Sensor 1	[0 to 1 / 0 / 1]
14	Length Sensor 2	[0 to 1 / 0 / 1]
15	Length Sensor 3	[0 to 1 / 0 / 1]

6801		Stamp Unit
	Sets the stamp unit to set or unset.	
		[0 to 1/1]
		O: set, 1: unset

	Extra Staples
	More than the standard number of corner staples can be loaded.
	This SP recognizes the maximum number of staples (This Setting + Standard Number).
6830	 If the number of the maximum for staples is increased, and the mechanical warranty of the unit can be guaranteed, then the setting can take effect without changing the controller software.
	 However, assurance that mechanical performance can be guaranteed is required before changing the setting to increase the staple load for more than the maximum in the feed / exit specifications. Raising this setting without quality assurance could damage the machine.

1	0 to 50 (Initial: 0) [0 to 50 /0/1]
2	0 to 50 (Initial: 0) [0 to 50 /0/1]

	Punch Function Enabled Z-Fold
6890	Switches punchin off/on.
	[0 to 1/1/0] 0:Punch Off 1:Punch On

	ADF Bottom Lift
6900	Sets the timing for raising and lowering the bottom plate of the ADF.
0,00	[0 to 1/1]
	0: Original set, 1: Copy start

6910	Intermittent Shading
1	ON/OFF
	Select ON or OFF of the intermittent shading in running the copy app. 0: OFF (do shading every time) / 1: ON
2	Interval
	Set the interval 1 to the shading in doing intermittent shading. [0 to 60 / 5 / 1]

SP7000 Data Logs

7001	Main Motor Operation Time
	Displays the total drum rotation time.

7401	7401	Total SC Counter	
		Displays the total number of SCs logged.	
	1	SC Counter	
	2	Total SC Counter	

7403	SC History
7403	Displays the latest 10 service call codes
1	Latest
2	Latest 1
3	Latest 2
4	Latest 3
5	Latest 4
6	Latest 5
7	Latest 6
8	Latest 7
9	Latest 8
10	Latest 9

7404	SC991 History
	Displays the latest 10 service call codes

7500	Total Paper Jam	
/302	Displays the total number of copy jams.	

1	Jam Counter
2	Total Jam Counter

	7503	Total Original Jam
	/303	Displays the total number of copy jams.
	1	Original Jam Counter
	2	Total Original Jam Counter

7504 Paper Jam Loc

Displays the list of possible locations where a jam could have occurred. These jams are caused by the failure of a sensor to activate. These are jams when the paper does not activate the sensor.

- Paper late error: Paper failed to arrive at prescribed time.
- Paper lag error: Paper failed to leave at prescribed time.

1	At Power On
3	1st Paper Feed SN: Late
4	2nd Paper Feed SN: Late
5	3rd Paper Feed SN: Late
6	4th Paper Feed SN: Late
7	LCT Paper Feed SN: Late
8	1 st Vertical Transport SN: Late
9	2nd Vertical Transport SN: Late
10	3rd Vertical Transport SN: Late
11	4th Vertical Transport SN: Late
12	Relay SN: Late
13	Registration SN: Late
14	Fusing Exit SN: Late
15	Exit Unit Entrance SN: Late

16	Paper Exit SN: Late
17	LCT Paper Feed SN: Late
18	LCT Relay SN: Late
19	Duplex Entrance SN: Late
20	Duplex Transport SN 1: Late
21	Duplex Transport SN 2: Late
22	Duplex Transport SN 3: Late
23	Duplex Exit SN: Late
24	LCT Relay SN: Late3
34	By-pass Paper Feed SN: Late
45	Sort Tray: Paper Exit SN: Late
46	Sort Tray: Tray Lift Motor
47	Sort Tray: Shift Tray Motor
53	1st Paper Feed SN: Lag
54	2nd Paper Feed SN: Lag
55	3rd Paper Feed SN: Lag
56	4th Paper Feed SN: Lag
58	1st Vertical Transport SN: Lag
59	2nd Vertical Transport SN: Lag
60	3rd Vertical Transport SN: Lag
61	4th Vertical Transport SN: Lag
62	Relay SN: Lag
63	Registration SN: Lag
66	Paper Exit SN: Lag
69	Duplex Entrance SN: Lag
71	Duplex Transport SN 2: Lag

72	Duplex Transport SN 3: Lag
74	LCT Relay SN: Lag
84	By-pass Paper Feed SN: Lag
101	Finisher: Entrance Sensor
102	Finisher: Proof Tray Exit Sensor
103	Finisher: Exit Sensor
104	Finisher: Staple Entrance Sensor
105	Finisher: Exit After Jogging
109	Finisher: Shift Tray Motor
110	Finisher: Jogger Fence Motor
111	Finisher: Shift Roller Motor
112	Finisher: Stapler Shift Motor
115	Finisher: Feed Out Belt Motor
116	Finisher: Paper Punch Motor
119	Finisher: Main Machine Setting Incorrect
121	Finisher: Entrance Jam
122	Finisher: Proof Tray Exit
123	Finisher: Shift Tray Exit
124	Finisher: Stapler Exit
125	Finisher: Exit After Jogging
128	Finisher: Paper Folding
129	Finisher: Shift Tray Motor
130	Finisher: Jogger Fence Motor
131	Finisher: Shift Roller Motor
132	Finisher: Stapler Shift Motor
133	Finisher: Stapler Motor

134	Finisher: Folder Plate Motor			
136	Finisher: Paper Punch Motor			
139	Finisher: Main Machine Setting Incorrect			
151	Fin: Entrance Sensor			
152	Fin: Proof Tray Exit Sn			
153	Fin: Shift Exit Sn			
154	Fin: Stapler Exit			
155	Fin: Pre-Stack			
156	Fin: Feed Out			
158	Fin: Upper Trans Motor			
159	Fin: Shift Tray Motor			
160	Fin: Positioning Roller Motor			
161	Fin: Jogger Fence Motor			
162	Fin: Stack Plate Motor (Center)			
163	Fin: Stack Plate Motor (Front)			
164	Fin: Stack Plate Motor (Rear)			
165	Fin: Shift Motor			
166	Fin: Drag Drive Motor			
167	Fin: Shift Tray Jogger Motor			
168	Fin: Shift Tray Jogger Retraction Motor			
169	Fin: Exit Guide Motor			
170	Fin: Staple Hammer Motor			
171	Fin: Stapler Movement Motor			
172	Fin: Stapler Rotation Motor			
173	Fin: Stack Feed-Out Belt Motor			
174	Fin: Punch Motor			

175	Fin: Top Fence Motor		
176	Fin: Bottom Fence Motor		
197	Fin: Main Machine Setting Incorrect		
198	Plocmatic Jam		
199	GBC Jam		
201	Mail Bin: Vertical Transport Sn 1		
202	Mail Bin: Vertical Transport Sn 2		
203	Mail Bin: Vertical Transport Sn 3		
204	4 Mail Bin: Vertical Transport Sn 4		
205	Mail Bin: Vertical Transport Sn 5		
251	Cover Interposer: Paper Feed Sn		
252	Cover Interposer: V-Transport Path		
253	Cover Interposer: Bottom Plate Pos. Sn		

7505	Original Jam Detection		
	Displays the list of possible locations where an original jam could have occurred. These jams are caused by the failure of a sensor to activate.		
1 At Power On			
3 Separation Sensor: Off 4 Skew Correction Sensor: Off 5 Interval Sensor: Off			
		6	Registration Sensor: Off
		7	Original Exit Sensor: Off
53	Skew Correction Sensor: On		
54	Registration Sensor: On		
55	Interval Sensor: On		

56	Registration Sensor: Off
57	Original Exit Sensor: On

7506	Jam Count by Paper	Size
7300	Displays the total nu	mber of jams by paper size.
5	A4 LEF	
6	A5 LEF	Displays the total number of jams by paper size.
14	B5 LEF	
38	LT LEF	
44	HLT LEF	
132	A3	
133	A4 SEF	
134	A5 SEF	Displays the total number of jams by paper size.
141	B4 SEF	
142	B5 SEF	
160	DLT SEF	
164	LG SEF	
166	LT SEF	Displays the total number of jams by paper size.
172	HLT SEF	
255	Others	

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1	Last	
2	Latest 1	Displays the copy jam history (the most recent 10 jams) Sample Display:
3	Latest 2	CODE:007
4	Latest 3	SIZE:05h
5	Latest 4	TOTAL:0000334
6	Latest 5	DATE:Mon Mar 15 11:44:50 2000 where:
7	Latest 6	CODE is the SP7504-* number (see above).
8	Latest 7	SIZE is the ASAP paper size code in hex.
9	Latest 8	TOTAL is the total jam error count DATE is the date the jams occurred.
10	Latest 9	57 (12 to the date the juine occorred.

Size	Code	Size	Code	Size	Code
A4 (S)	05	A3 (L)	84	DLT (L)	AO
A5 (S)	06	A4 (L)	85	LG (L)	A4
B5 (S)	OE	A5 (L)	86	LT (L)	A6
LT (S)	26	B4 (L)	8D	HLT (L)	AC
HLT (S)	2C	B5 (L)	8E	Others	FF

	Original Jam History
	Displays the original jam history of the transfer unit in groups of 10, starting with the most recent 10 jams. Display contents are as follows:
7508	CODE is the SP7-505-* number.
	SIZE is the paper size code in hex. (See "Paper Size Hex Codes" below.)
	TOTAL is the total jam error count (SP7003)
	DATE is the date the previous jam occurred

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1	Last	
2	Latest 1	
3	Latest 2	
4	Latest 3	Sample Display:
5	Latest 4	CODE: 007
6	Latest 5	SIZE: 05h TOTAL: 0000334
7	Latest 6	DATE: Mon Mar 15 11:44:50 2000
8	Latest 7	
9	Latest 8	
10	Latest 9	

Paper Size Hex Codes

These codes are displayed by SP7507 and SP7508.

Paper Size	Code (hex)	Paper Size	Code (hex)
A4 LEF	05	B4 SEF	8D
A5 LEF	06	B5 SEF	8E
B5 LEF	OE	DLT SEF	A0
LT LEF	26	LG SEF	A4
HLT LEF	2C	LT SEF	A6
A3 SEF	84	HLT SEF	AC
A4 SEF	85	Others	FF
A5 SEF	86		

7509	Paper Jam Loc: Fold Unit
46	Paper Feed: Late
47	Paper Feed: Lag
48	Pressure Timing SN: Late

49	Pressure Timing SN: Lag
	Contact Timing SN: Late
	*
	Contact Timing SN: Lag
52	2nd Stopper Motor: Late
53	2nd Stopper Motor: Lag
54	Paper Exit Sensor 1: Late
55	Paper Exit Sensor 1: Lag
58	Paper Exit Sensor 3: Late
59	Paper Exit Sensor 3: Lag
60	Brushless Motor
61	Lower Stopper Motor Jam
62	Upper Stopper Motor Jam
64	Main Machine Setting Incorrect
96	Entrance SN: Late
97	Entrance SN: Lag
98	Top Tray Exit SN: Late
99	Top Tray Exit SN: Lag
100	Horizontal Path Exit SN: Late
101	Horizontal Path Exit SN: Lag
102	1 st Stopper HP SN: Late
103	1 st Stopper HP SN: Lag
104	2nd Stopper HP SN: Late
105	2nd Stopper HP SN: Lag
106	3rd Stopper HP SN: Late
107	3rd Stopper HP SN: Lag
108	Skew Correction Jam

109	Folded Paper Path Jam
111	Entrance JG Motor Jam
112	Fold JG Motor Jam
113	1st Stopper Motor Jam
114	2nd Stopper Motor Jam
115	3rd Stopper Motor Jam
116	Dynamic Roller Trans. M Jam
117	Regist. Roller Release M Jam
118	Fold Plate Motor Jam
119	Jogger Fence Motor Jam
120	Positioning Roller Motor Jam
121	Direct-Send JG Motor Jam
122	FM6 Pawl Motor Jam
144	Fold Unit: Main Machine Setting Incorrect

7617	Parts PM Counter Display
1	Normal
2	DF

<i>7</i> 618	Parts PM Counter Reset Japan Only
1	Normal
	Clears the counter of SP7617- 1.
2	DF
	Clears the counter of SP7617- 2

7401	Display PM Count	
7621	0 to 9999999	

7400	Clear PM Count	
7622	This SP clears the PM counts for the components below.	
7623	Unit PM Target	
	0 to 9999999	
7624	Part Replacement Operation ON/OFF	
7625	Pg Count History: Latest 1	
	0 to 9999999	
7626	Pg Count History: Latest 2	
	0 to 9999999	
7627	Pg Count History: Latest 3	
	0 to 9999999	
1	Developer	
2	Hot Roller	
3	Pressure Roller	
4	Hot Roller Bearings	
5	Pressure Roller Bearings	
6	Hot Roller Strippers	
7	Cleaning Roller	
8	Cleaning Roller Bearings	
9	Web Roll	
10	Web Cleaning Roller	
11	Web Bushings	
12	Development Filter	
13	Toner Recycling Unit	
14	Pressure Release Filter	
15	Charge Corona Wire	

16	Grid Plate
17	Cleaning Pad
18	Cleaning Blade
19	Cleaning Brush
20	Transfer Belt
21	Transfer Belt Cleaning Blade
22	Ozone Filter
23	ADF Pick-up Roller
24	ADF Feed Belt
25	ADF Separation Roller
26	Feed Roller-Tray1
27	Pick-up Roller-Tray 1
28	Separation Roller-Tray 1
29	Feed Roller-Tray2
30	Pick-up Roller-Tray2
31	Separation Roller-Tray2
32	Feed Roller-Tray3
33	Pick-up Roller-Tray3
34	Separation Roller-Tray3
35	Feed Roller-Tray4
36	Pick-up Roller-Tray4
37	Separation Roller-Tray4
38	Feed Roller-LCT
39	Pick-up Roller-LCT
40	Separation Roller-LCT
41	Feed Belt Cover Feeder

42	Pick-up Roller Cover Feeder
43	Separation Roller Cover Feeder
44	ADF Transport Belt
45	Thermistor Fusing Unit Rear
46	Thermistor Fusing Unit Center
47	Dust Filter
48	Custom 1
49	Custom 2
50	Custom 3
51	Custom 4
52	Custom Tray 1 1
53	Custom Tray 1 2
54	Custom Tray 2 1
55	Custom Tray 2 2
56	Custom Tray 3 1
57	Custom Tray 3 2
58	Custom Tray 4 1
59	Custom Tray 4 2
60	Custom Tray LCT 1
61	Custom Tray LCT 2
62	Custom ADF 1
63	Custom ADF 2
64	Custom Cover Feeder 1
65	Custom Cover Feeder 2

7628	Clear PM Counter Clear Exceeded Counts
7020	Clear the PM counter of all the PM parts that exceed the timing of exchanging.
1	Clear Exceeded Counts
'	Clears only the exceeded counts.
0	Reset All Counts
2	Clears all counts.

7801	ROM No./Firmware Version
	Displays firmware information for main machine and all other connected devices.

7803	PM Counter Display
7803	Displays the PM counter since the last PM.

780	24	PM Counter Reset
780	<i>J</i> 4	Resets the PM counter.

7807	SC/Jam Counter Reset
7807	Resets the SC and jam counters. To reset, press [1].
	This SP does not reset the jam history counters: SP7-507, SP7-508.

70	7826	MF Error Counter Japan Only
/ 0		Displays the number of counts requested of the card/key counter.
	1	Error Total
		A request for the count total failed at power on. This error will occur if the device is installed but disconnected.
	2	Error Staple
		The request for a staple count failed at power on. This error will occur if the device is installed but disconnected.

7827	MF Error Counter Clear
/ 62/	Press [Execute] to reset to 0 the values of SP7826. Japan Only

	7832	Self-Diagnose Result Display	
	/ 032	Push [#] to display a list of error codes. Nothing is displayed if no errors have occurred.	

7834	Clear Pixel Coverage Data.
7634	Push [EXECUTE] to clear the coverage data.
1	Last & Average
2	Toner Bottles In Use
3	Page Counts (2 Prev. Toner Bottles)
4	Pixel Coverage Clear
255	All Clear

7024	Total Memory Size
7836	Displays the contents of the memory on the controller board.

7852	ADF Glass Dust Check	
1	Dust Detection Counter [0 to 65535/ 0 /1]	
2	Dust Counter Clear Counter [0 to 65535/ 0 /1]	
Dust Detection Counter: Back [0 to 65536/ 0 /1]		

7901	Assert Info.
1	File Name
2	Number of Lines
3	Location

7954	Consumption Rate Counter	
	Shows the consumption rate, expressed as a percentage (%).	
1	Developer	
2	Hot Roller	
3	Pressure Roller	
4	Hot Roller Bearings	
5	Pressure Roller Bearings	
6	Hot Roller Srippers	
7	Cleaning Roller	
8	Cleaning Roller Bearings	
9	Web Roll	
10	Web Cleaning Roller	
11	Web Bushings	
12	Development Filter	
13	Toner Recycling Unit	
14	Pressure Release Filter	
15	Charge Corona Wire	
16	Grid Plate	
17	Cleaning Pad	
18	Cleaning Blade	
19	Cleaning Brush	
20	Transfer Belt	
21	Transfer Belt Cleaning Blade	
22	Ozone Filter	
23	ADF Pick-up Roller	
24	ADF Feed Belt	

25	ADF Separation Roller
26	Feed Roller – Tray 1
27	Pick – up Roller – Tray 1
28	Separation Roller – Tray 1
29	Feed Roller – Tray 1
30	Pick - up Roller – Tray 2
31	Separation Roller – Tray 2
32	Feed Roller – Tray 3
33	Pick-up Roller – Tray 3
34	Separation Roller – Tray 3
35	Feed Roller Tray 4
36	Pick - up Roller – Tray 4
37	Separation Roller – Tray 4
38	Feed Roller – LCT
39	Pick – up Roller - LCT
40	Separation Roller - LCT
41	Feed Belt Cover Feeder
42	Pick – up Roller Cover Feeder
43	Separation Roller Cover Feeder
44	ADF Transport Belt
45	Thermistor Fusing Unit Rear
46	Thermistor Fusing Unit Center
47	Dust Filter
48	Custom 1
49	Custom 2
50	Custom 3

51	Custom 4
52	Custom Tray 1 1
53	Custom Tray 1 2
54	Custom Tray 2 1
55	Custom Tray 2 2
56	Custom Tray 3 1
57	Custom Tray 3 2
58	Custom Tray 4 1
59	Custom Tray 4 2
60	Custom Tray LCT 1
61	Custom Tray LCT 2
62	Custom ADF 1
63	Custom ADF 2
64	Custom Cover Feeder 1
65	Custom Cover Feeder 2

SP8000 Data Log2

Many of these counters are provided for features that are currently not available, such as sending color faxes, and so on. However, here are some Group 8 codes that when used in combination with others, can provide useful information.

SP Numbers	What They Do
SP8211 to SP8216	The number of pages scanned to the document server.
SP8401 to SP8406	The number of pages printed from the document server
SP8691 to SP8696	The number of pages sent from the document server

Specifically, the following questions can be answered:

- How is the document server actually being used?
- What application is using the document server most frequently?
- What data in the document server is being reused?

Most of the SPs in this group are prefixed with a letter that indicates the mode of operation (the mode of operation is referred to as an 'application'). Before reading the Group 8 Service Table, make sure that you understand what these prefixes mean.

PREFIX	WHAT IT MEANS	
T:	Total: (Grand Total).	Grand total of the items counted for all applications (C, F, P, etc.)
C:	Copy application.	Totals (pages, jobs, etc.) executed for each application when the job was not stored on the document server.
P:	Print application.	
S:	Scan application.	
L:	Local storage (document server)	Totals (jobs, pages, etc.) for the document server. The L: counters work differently case by case. Sometimes, they count jobs/pages stored on the document server; this can be in document server mode (from the document server window), or from another mode, such as from a printer driver or by pressing the Store File button in the Copy mode window. Sometimes, they include occasions when the user uses a file that is already on the document server. Each counter will be discussed case by case.

PREFIX	WHAT IT MEANS	
O:	Other applications (external network applications, for example)	Refers to network applications such as Web Image Monitor. Utilities developed with the SDK (Software Development Kit) will also be counted with this group in the future.

The Group 8 SP codes are limited to 17 characters, forced by the necessity of displaying them on the small LCDs of printers and faxes that also use these SPs. Read over the list of abbreviations below and refer to it again if you see the name of an SP that you do not understand.

Key for Abbreviations

ABBREVIATIO N	WHAT IT MEANS	
/	"By", e.g. "T:Jobs/ApI" = Total Jobs "by" Application	
>	More (2> "2 or more", 4> "4 or more"	
AddBook	Address Book	
Apl	Application	
B/W	Black & White	
Bk	Black	
С	Cyan	
ColCr	Color Create	
ColMode	Color Mode	
Comb	Combine	
Comp	Compression	
Deliv	Delivery	
DesApl	Designated Application. The application (Copy, Fax, Scan, Print) used to store the job on the document server, for example.	
Dev Counter	Development Count, no. of pages developed.	
Dup, Duplex	Duplex, printing on both sides	
Emul	Emulation	

ABBREVIATIO N	WHAT IT MEANS	
FC	Full Color	
FIN	Post-print processing, i.e. finishing (punching, stapling, etc.)	
Full Bleed	No Margins	
GenCopy	Generation Copy Mode	
GPC	Get Print Counter. For jobs 10 pages or less, this counter does not count up. For jobs larger than 10 pages, this counter counts up by the number that is in excess of 10 (e.g., for an 11-page job, the counter counts up 11-10 = 1)	
IFax	Internet Fax	
ImgEdt	Image Edit performed on the original with the copier GUI, e.g. border removal, adding stamps, page numbers, etc.	
K	Black (YMCK)	
LS	Local Storage. Refers to the document server.	
LSize	Large (paper) Size	
Mag	Magnification	
МС	One color (monochrome)	
NRS	New Remote Service, which allows a service center to monitor machines remotely. "NRS" is used overseas, "CSS" is used in Japan.	
Org	Original for scanning	
OrgJam	Original Jam	
Palm 2	Print Job Manager/Desk Top Editor: A pair of utilities that allows print jobs to be distributed evenly among the printers on the network, and allows files to moved around, combined, and converted to different formats	
PC	Personal Computer	
PGS	Pages. A page is the total scanned surface of the original. Duplex pages count as two pages, and A3 simplex count as two pages if the A3/DLT counter SP is switched ON.	
PJob	Print Jobs	

ABBREVIATIO N	WHAT IT MEANS	
Ppr	Paper	
PrtJam	Printer (plotter) Jam	
PrtPGS	Print Pages	
R	Red (Toner Remaining). Applies to the wide format model A2 only. This machine is under development and currently not available.	
Rez	Resolution	
SC	Service Code (Error SC code displayed)	
Scn	Scan	
Sim, Simplex	Simplex, printing on 1 side.	
S-to-Email	Scan-to-E-mail	
SMC	SMC report printed with SP5990. All of the Group 8 counters are recorded in the SMC report.	
Svr	Server	
TonEnd	Toner End	
TonSave	Toner Save	
TXJob	Send, Transmission	
WSD	Web Services Devices	
YMC	Yellow, Magenta, Cyan	
YMCK	Yellow, Magenta, Cyan, Black	



• All of the Group 8 SPs are reset with SP5 801 1 Memory All Clear, or the Counter Reset SP7 808.

8001	T:Total Jobs	
8002	C:Total Jobs	These SPs count the number of times each application is used to do a job. [0 to 9999999/0 / 1] Note: The L: counter is the total number of times the other applications are used to send a job to the document server, plus the number of times a file already on the document server is used.
8003	F:Total Jobs	
8004	P:Total Jobs	
8005	S:Total Jobs	
8006	L:Total Jobs	

- These SPs reveal the number of times an application is used, not the number of pages processed.
- When an application is opened for image input or output, this counts as one job.
- Interrupted jobs (paper jams, etc.) are counted, even though they do not finish.
- Only jobs executed by the customer are counted. Jobs executed by the customer engineer using the SP modes are not counted.
- When using secure printing (when a password is required to start the print job), the job is counted at the time when either "Delete Data" or "Specify Output" is specified.
- When a copy job on the document server is printed, SP8022 also increments, and when a print job stored on the document server is printed, SP8024 also increments.
- When an original is both copied and stored on the document server, the C: and L: counters both increment.
- When a print job is stored on the document server, only the L: counter increments.
- When the user presses the Document Server button to store the job on the document server, only
 the L: counter increments.
- When the user enters document server mode and prints data stored on the document server, only
 the L: counter increments.
- When an image received from Palm 2 is received and stored, the L: counter increments.
- When the customer prints a report (user code list, for example), the O: counter increments.

8011	T:Jobs/LS	
8012	C:Jobs/LS	
8013	F:Jobs/LS	These SPs count the number of jobs stored to the document server by each application, to reveal how local storage is being used for input.
8014	P:Jobs/LS	[0 to 9999999/ 0 / 1]
8015	S:Jobs/LS	The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8016	L:Jobs/LS	
8017	O:Jobs/LS	

- When a scan job is sent to the document server, the S: counter increments. When you enter document server mode and then scan an original, the L: counter increments.
- When a print job is sent to the document server, the P: counter increments.
- When a network application sends data to the document server, the O: counter increments.
- When an image from Palm 2 is stored on the document server, the O: counter increments.

8021	T:Pjob/LS	
8022	C:Pjob/LS	
8023	F:Pjob/LS	These SPs reveal how files printed from the document server were stored on the document server originally.
8024	P:Pjob/LS	[0 to 9999999/ 0 / 1]
8025	S:Pjob/LS	The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.
8026	L:Pjob/LS	a soomon sorror mous coron armo speranon panen
8027	O:Pjob/LS	

- When a copy job stored on the document server is printed with another application, the C: counter increments.
- When an application like DeskTopBinder merges a copy job that was stored on the document server with a print job that was stored on the document server, the C: and P: counters both increment
- When a job already on the document server is printed with another application, the L: counter increments.
- When a scanner job stored on the document server is printed with another application, the S: counter increments. If the original was scanned from within document server mode, then the L: counter increments.

- When images stored on the document server by a network application (including Palm 2), are printed with another application, the O: counter increments.
- When a copy job stored on the document server is printed with a network application (Web Image Monitor, for example), the C: counter increments.

8031	T:Pjob/DesApl
8032	C:Pjob/DesApl
8033	F:Pjob/DesApl
8034	P:Pjob/DesApl
8035	S:Pjob/DesApl
8036	L:Pjob/DesApl
8037	O:Pjob/DesApl
	These SPs reveal what applications were used to output documents from the document server. [0 to 9999999 / 0 / 1]
	The L: counter counts the number of jobs printed from within the document server mode screen at the operation panel.

- When documents already stored on the document server are printed, the count for the application that started the print job is incremented.
- When the print job is started from a network application (Desk Top Binder, Web Image Monitor, etc.) the L: counter increments.

8041	T:TX Jobs/LS
8042	C:TX Jobs/LS
8043	F:TX Jobs/LS
8044	P:TX Jobs/LS
8045	S:TX Jobs/LS
8046	L:TX Jobs/LS
8047	O:TX Jobs/LS

3

These SPs count the applications that stored files on the document server that were later accessed for transmission over the telephone line or over a network (attached to an email).

[0 to 9999999/ 0 / 1]

Note: Jobs merged for sending are counted separately.

The L: counter counts the number of jobs scanned from within the document server mode screen at the operation panel.

- When a stored copy job is sent from the document server, the C: counter increments.
- When images stored on the document server by a network application or Palm2 are sent as an email, the O: counter increments.

8051	T:TX Jobs/DesApl	
8052	C:TX Jobs/DesApl	
8053	F:TX Jobs/DesApl	
8054	P:TX Jobs/DesApl	
8055	S:TX Jobs/DesApl	
8056	L:TX Jobs/DesApl	
8057	O:TX Jobs/DesApl	
These SPs count the applications used to send files from the document server over the telephone line or over a network (attached to an e-mail). Jobs merged for sending are counted separately.		
[0 to 9999999/ 0 / 1]		
	The L: counter counts the number of jobs sent from within the document server mode screen at the operation panel.	

• If the send is started from Desk Top Binder or Web Image Monitor, for example, then the O: counter increments.

	T:FIN Jobs
8061	[0 to 9999999/ 0 / 1]
	These SPs total the finishing methods. The finishing method is specified by the application.

	C:FIN Jobs			
8062	[0 to 9999999/ 0 / 1] These SPs total finishing methods for copy jobs only. The finishing method is specified by the application.			
	F:FIN Jobs			
8063	[0 to 9999999/1]			
	These SPs total finishing methods for fax jobs only. The finishing method is specified by the application.			
	P:FIN Jobs			
8064	[0 to 9999999/ 0 / 1]			
	These SPs total finishing methods for print jobs only. The finishing method is specified by the application.			
	S:FIN Jobs			
	[0 to 9999999/ 0 / 1]			
8065	These SPs total finishing methods for scan jobs only. The finishing method is specified by the application.			
	Note: Finishing features for scan jobs are not available at this time.			
	L:FIN Jobs			
	[0 to 9999999/ 0 / 1]			
8066		ethods for jobs output from within the document server mode anel. The finishing method is specified from the print window ode.		
	O:FIN Jobs			
8067	[0 to 9999999/ 0 / 1]			
	These SPs total finishing methods for jobs executed by an external application, over the network. The finishing method is specified by the application.			
1	Number of jobs started in Sort mode. When a stored of is set for Sort and then stored on the document server, counter increments. (See SP8066 1)			
2	2 Stack Number of jobs started out of Sort mode.			
3 Staple Number of jobs started in Staple mode.		Number of jobs started in Staple mode.		

4	Booklet	Number of jobs started in Booklet mode. If the machine is in staple mode, the Staple counter also increments.
5	Z-Fold	Number of jobs started In any mode other than the Booklet mode and set for folding (Z-fold).
6	Punch	Number of jobs started in Punch mode. When Punch is set for a print job, the P: counter increments. (See SP8064 6.)
7	Other	Reserved. Not used.
8	Inside-Fold	
9	Three-in-Fold	
10	Three-Out-Fold	
11	Four-Fold	
12	Kannon-Fold	
13	Perfect Bind	
14	Ring Bind	

8071	T:Jobs/PGS
	[0 to 9999999/ 0 / 1]
	These SPs count the number of jobs broken down by the number of pages in the job, regardless of which application was used.
	C:Jobs/PGS
8072	[0 to 9999999/ 0 / 1]
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.
8073	F:Jobs/PGS
	[0 to 9999999/ 0 / 1]
	These SPs count and calculate the number of copy jobs by size based on the number of pages in the job.

	P:Jobs/PGS			
8074	[0 to 9999999/ 0 / 1]			
	These SPs count and calculate the number of print jobs by s pages in the job.	ize bo	ased on the number of	
	S:Jobs/PGS			
8075	[0 to 9999999/ 0 / 1]			
	These SPs count and calculate the number of scan jobs by size based on the number of pages in the job.			
	L:Jobs/PGS			
8076	[0 to 9999999/ 0 / 1]			
	These SPs count and calculate the number of jobs printed from within the document server mode window at the operation panel, by the number of pages in the job.			
	O:Jobs/PGS			
8077	[0 to 9999999/ 0 / 1]			
	These SPs count and calculate the number of "Other" application jobs (Web Image Monitor, Palm 2, etc.) by size based on the number of pages in the job.			
1	1 Page	8	21 to 50 Pages	
2	2 Pages	9	51 to 100 Pages	
3	3 Pages	10	101 to 300 Pages	
4	4 Pages	11	301 to 500 Pages	
5	5 Pages	12	501 to 700 Pages	
6	6 to 10 Pages	13	701 to 1000 Pages	
7	11 to 20 Pages	14	1001 to Pages	

- For example: When a copy job stored on the document server is printed in document server mode, the appropriate L: counter (SP8076 0xx) increments.
- Interrupted jobs (paper jam, etc.) are counted, even though they do not finish.
- If a job is paused and re-started, it counts as one job.
- If the finisher runs out of staples during a print and staple job, then the job is counted at the time the error occurs.

- For copy jobs (SP 8072) and scan jobs (SP 8075), the total is calculated by multiplying the number of sets of copies by the number of pages scanned. (One duplex page counts as 2.)
- The first test print and subsequent test prints to adjust settings are added to the number of pages of the copy job (SP 8072).
- When printing the first page of a job from within the document server screen, the page is counted.

	T:FAX TX Jobs	
8111	[0 to 9999999/ 0 / 1]	
	These SPs count the total number of jobs (color or black-and-white) sent by fax, either directly or using a file stored on the document server, on a telephone line.	
	F:FAX TX Jobs	
8113	[0 to 9999999/ 0 / 1] These SPs count the total number of jobs (color or black-and-white) sent by fax directly on a telephone line.	
1	1 B/W	
2	Color	

- These counters count jobs, not pages.
- This SP counts fax jobs sent over a telephone line with a fax application, including documents stored on the document server.
- If the mode is changed during the job, the job will count with the mode set when the job started.
- If the same document is faxed to both a public fax line and an I-Fax at a destination where both are available, then this counter increments, and the I-Fax counter (812x) also increments.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

	T:IFAX TX Jobs
8121	[0 to 9999999/ 0 / 1]
	These SPs count the total number of jobs (color or black-and-white) sent, either directly or using a file stored on the document server, as fax images using I-Fax.
	F:IFAX TX Jobs
8123	[0 to 9999999/ 0 / 1]
	These SPs count the number of jobs (color or black-and-white) sent (not stored on the document server), as fax images using I-Fax.
1 B/W	

2 Color

- The counters for color are provided for future use; the color fax feature is not available at this time.
- The fax job is counted when the job is scanned for sending, not when the job is sent.

	T:S-to-Email Jobs		
8131	[0 to 9999999/ 0 / 1]		
	These SPs count the total number of jobs scanned and attached to an e-mail, regardless of whether the document server was used or not.		
	S:S-to-Email Jobs		
8135	These SPs count the number of jobs scanned and attached to an e-mail, without storing the original on the document server.		
1	B/W	Count for the number of jobs with black-and-white.	
2	Color	Count for the number of jobs with color.	
3	ACS	Count for the number of jobs using ACS mode.	

- These counters count jobs, not pages.
- If the job is stored on the document server, after the job is stored it is determined to be color or black-and-white then counted.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- If several jobs are combined for sending to the Scan Router, Scan-to-Email, or Scan-to-PC, or if
 one job is sent to more than one destination. each send is counted separately. For example, if the
 same document is sent by Scan-to-Email as well as Scan-to-PC, then it is counted twice (once for
 Scan-to-Email and once for Scan-to-PC).

	T:Deliv Jobs/Svr
8141	[0 to 9999999/ 0 / 1] These SPs count the total number of jobs scanned and sent to a Scan Router server.
	S:Deliv Jobs/Svr
8145	These SPs count the number of jobs scanned in scanner mode and sent to a Scan Router server.

1	B/W	Count for the number of jobs with black-and-white.
2	Color	Count for the number of jobs with color.
3	ACS	Count for the number of jobs using ACS mode.

- These counters count jobs, not pages.
- The jobs are counted even though the arrival and reception of the jobs at the Scan Router server cannot be confirmed.
- If even one color image is mixed with black-and-white images, then the job is counted as a "Color" job.
- If the job is cancelled during scanning, or if the job is cancelled while the document is waiting to be delivered, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

	T:Deliv Jobs/PC		
	[0 to 9999999/ 0 / 1]		
8151	These SPs count the total number of jobs scanned and sent to a folder on a PC (Scan-to-PC).		
	Note: At the present time, 8151 and 8155 perform identical counts.		
8155	S:Deliv Jobs/PC		
8133	These SPs count	the total number of jobs scanned and sent with Scan-to-PC.	
1	B/W	Count for the number of jobs with black-and-white.	
2	Color	Count for the number of jobs with color.	
3	ACS	Count for the number of jobs using ACS mode.	

- These counters count jobs, not pages.
- If the job is cancelled during scanning, it is not counted.
- If the job is cancelled while it is waiting to be sent, the job is not counted.
- If the job is cancelled during sending, it may or may not be counted, depending on what stage of the process had been reached when the job was cancelled.
- Even if several files are combined for sending, the transmission counts as one job.

8161	T: PC FAX TX Jobs
8163	F: PC FAX TX Jobs

8171	T: Deliv Jobs/WSD		
	Total jo	Total jobs for WSD (WS-Scanner for Web Services Devices).	
8175	S: Deliv	S: Deliv Jobs/WSD	
8181	T: Scan to Media Jobs		
8185	S: Scan to Media Jobs		
	Total number of jobs scanned for WSD.		
	001	B/W	
	002	Color	
	003	ACS	

8191	T:Total Scan PGS	
8192 C:Total Scan PGS		
8193	F:Total Scan PGS	
8195	S:Total Scan PGS	
8196	L:Total Scan PGS	
	These SPs count the pages scanned by each application that uses the scanner to scan images. [0 to 9999999/0/1]	

- SP 8191 to 8196 count the number of scanned sides of pages, not the number of physical pages.
- These counters do not count reading user stamp data, or reading color charts to adjust color.
- Previews done with a scanner driver are not counted.
- A count is done only after all images of a job have been scanned.
- Scans made in SP mode are not counted.

Examples:

• If 3 B5 pages and 1 A3 page are scanned with the scanner application but not stored, the S: count is 4.

- If both sides of 3 A4 sheets are copied and stored to the document server using the Store File button in the Copy mode window, the C: count is 6 and the L: count is 6.
- If both sides of 3 A4 sheets are copied but not stored, the C: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

8201	T:LSize Scan PGS	
	[0 to 9999999/ 0 / 1]	
	These SPs count the total number of large pages input with the scanner for scan and copy jobs.	
	Note: These counters are displayed in the SMC Report, and in the User Tools display.	
8203	F:LSize Scan PGS	
	This SP counts the total number of large pages input with the scanner for fax jobs only.	
	Note: These counters are displayed in the SMC Report, and in the User Tools display.	
8205	S:LSize Scan PGS	
	[0 to 9999999/ 0 / 1]	
	These SPs count the total number of large pages input with the scanner for scan jobs only.	
	Note: These counters are displayed in the SMC Report, and in the User Tools display.	

8211	T:Scan PGS/LS
8212	C:Scan PGS/LS
8213	F:Scan PGS/LS
8215	S:Scan PGS/LS
8216	L:Scan PGS/LS
	These SPs count the number of pages scanned into the document server. [0 to 9999999 / 0 / 1] The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen

- Reading user stamp data is not counted.
- If a job is cancelled, the pages output as far as the cancellation are counted.
- If the scanner application scans and stores 3 B5 sheets and 1 A4 sheet, the S: count is 4.

- If pages are copied but not stored on the document server, these counters do not change.
- If both sides of 3 A4 sheets are copied and stored to the document server, the C: count is 6 and the L: count is 6.
- If you enter document server mode then scan 6 pages, the L: count is 6.

	ADF Org Feeds
8221	[0 to 9999999 / 0 / 1] These SPs count the number of pages fed through the ADF for front and back side
	scanning.
1	Front
	Number of front sides fed for scanning:
	With an ADF that can scan both sides simultaneously, the Front side count is the same as the number of pages fed for either simplex or duplex scanning.
	With an ADF that cannot scan both sides simultaneously, the Front side count is the same as the number of pages fed for duplex front side scanning. (The front side is determined by which side the user loads face up.)
2	Back
	Number of rear sides fed for scanning:
	With an ADF that can scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex scanning.
	With an ADF that cannot scan both sides simultaneously, the Back count is the same as the number of pages fed for duplex rear-side scanning.

- When 1 sheet is fed for duplex scanning the Front count is 1 and the Back count is 1.
- If a jam occurs during the job, recovery processing is not counted to avoid double counting. Also, the pages are not counted if the jam occurs before the first sheet is output.

		Scan PGS/Mode
82	231	[0 to 9999999/ 0 / 1]
		These SPs count the number of pages scanned by each ADF mode to determine the work load on the ADF.
	1	Large Volume
		Selectable. Large copy jobs that cannot be loaded in the ADF at one time.

2	SADF
	Selectable. Feeding pages one by one through the ADF.
3	Mixed Size
	Selectable. Select "Mixed Sizes" on the operation panel.
4	Custom Size
	Selectable. Originals of non-standard size.
5	Platen
	Book mode. Raising the ADF and placing the original directly on the platen.

- If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.
- If the user selects "Mixed Sizes" for copying in the platen mode, the Mixed Size count is enabled.
- In the SADF mode if the user copies 1 page in platen mode and then copies 2 pages with SADF, the Platen count is 1 and the SADF count is 3.

8241	T:Scan PGS/Org
	[0 to 9999999/ 0 / 1]
	These SPs count the total number of scanned pages by original type for all jobs, regardless of which application was used.
8242	C:Scan PGS/Org
	[0 to 9999999/ 0 / 1]
	These SPs count the number of pages scanned by original type for Copy jobs.
8243	F:Scan PGS/Org
	[0 to 9999999/ 0 / 1]
	These SPs count the number of pages scanned by original type for Fax jobs.
8245	S:Scan PGS/Org
	[0 to 9999999/ 0 / 1]
	These SPs count the number of pages scanned by original type for Scan jobs.
8246	L:Scan PGS/Org

[0 to 9999999/ 0 / 1]

These SPs count the number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen

	8241	8242	8243	8245	8246
1: Text	Yes	Yes	Yes	Yes	Yes
2: Text/Photo	Yes	Yes	Yes	Yes	Yes
3: Photo	Yes	Yes	Yes	Yes	Yes
4: GenCopy, Pale	Yes	Yes	No	Yes	Yes
5: Map	Yes	Yes	No	Yes	Yes
6: Normal/Detail	Yes	No	Yes	No	No
7: Fine/Super Fine	Yes	No	Yes	No	No
8: Binary	Yes	No	No	Yes	No
9: Grayscale	Yes	No	No	Yes	No
11: Other	Yes	Yes	Yes	Yes	Yes

• If the scan mode is changed during the job, for example, if the user switches from ADF to Platen mode, the count is done for the last selected mode.

8251	T:Scan PGS/ImgEdt
8252	C:Scan PGS/ImgEdt
8255	S:Scan PGS/ImgEdt
8256	L:Scan PGS/ImgEdt
8257	O:Scan PGS/ImgEdt

These SPs show how many times Image Edit features have been selected at the operation panel for each application. Some examples of these editing features are:

- Erase> Border
- Erase> Center
- Image Repeat
- Centering
- Positive/Negative

[0 to 9999999/ 0 / 1]

Note: The count totals the number of times the edit features have been used. A detailed breakdown of exactly which features have been used is not given.

• The L: counter counts the number of pages stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen.

8281	T:Scan PGS/TWAIN
8285	S:Scan PGS/TWAIN
	These SPs count the number of pages scanned using a TWAIN driver. These counters reveal how the TWAIN driver is used for delivery functions.
	[0 to 9999999/ 0 / 1]
	Note: At the present time, these counters perform identical counts.

8291	T:Scan PGS/Stamp
8293	F:Scan PGS/Stamp
8295	S:Scan PGS/Stamp

	T:Scan PGS/Size	
		[0 to 9999999/ 0 / 1]
	8301	These SPs count by size the total number of pages scanned by all applications. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-441].

C:Scan PGS/Size [0 to 9999999 / 0 / 1] These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size [SP 8-442]. F:Scan PGS/Size [0 to 9999999 / 0 / 1] These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443]. S:Scan PGS/Size [0 to 9999999 / 0 / 1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999 / 0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT 9 HLT		
These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size (SP 8-442). F:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443]. S:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		C:Scan PGS/Size
These SPs count by size the total number of pages scanned by the Copy application. Use these totals to compare original page size (scanning) and output (printing) page size (SP 8-442). F:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443]. S:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. A3 A5 AB B4 B4 5 B5 6 DLT 7 LG 8 LT	0000	[0 to 9999999/ 0 / 1]
[0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443]. S:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT	8302	these totals to compare original page size (scanning) and output (printing) page size [SP
These SPs count by size the total number of pages scanned by the Fax application. Use these totals to compare original page size (scanning) and output page size [SP 8-443]. S:Scan PGS/Size [0 to 9999999/0/1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/0/1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		F:Scan PGS/Size
these totals to compare original page size (scanning) and output page size [SP 8-443]. S:Scan PGS/Size [0 to 9999999/ 0 / 1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/ 0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT	8303	[0 to 9999999/ 0 / 1]
8305 [O to 9999999/ O / 1] These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [O to 9999999/ O / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		, , , , , , , , , , , , , , , , , , , ,
These SPs count by size the total number of pages scanned by the Scan application. Use these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/ 0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		S:Scan PGS/Size
these totals to compare original page size (scanning) and output page size [SP 8-445]. L:Scan PGS/Size [0 to 9999999/ 0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT	8305	[0 to 9999999/ 0 / 1]
[0 to 9999999/ 0 / 1] These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		, , , , , , , , , , , , , , , , , , , ,
These SPs count by size the total number of pages scanned and stored from within the document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		L:Scan PGS/Size
document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning) and output page size [SP 8-446]. 1 A3 2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT		[0 to 9999999/ 0 / 1]
2 A4 3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT	8306	document server mode screen at the operation panel, and with the Store File button from within the Copy mode screen. Use these totals to compare original page size (scanning)
3 A5 4 B4 5 B5 6 DLT 7 LG 8 LT	1	A3
4 B4 5 B5 6 DLT 7 LG 8 LT	2	A4
5 B5 6 DLT 7 LG 8 LT	3	A5
6 DLT 7 LG 8 LT	4	B4
7 LG 8 LT	5	B5
8 LT	6	DLT
	7	LG
9 HLT	8	LT
	9	НІТ
10 Full Bleed	10	Full Bleed

254	Other (Standard)
255	Other (Custom)

	T:Scan PGS/Rez
8311	[0 to 9999999/ 0 / 1]
	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.
	S:Scan PGS/Rez
	[0 to 9999999/ 0 / 1]
8315	These SPs count by resolution setting the total number of pages scanned by applications that can specify resolution settings.
	Note: At the present time, 8311 and 8315 perform identical counts.
1	1200dpi to
2	600dpi to 1199dpi
3	400dpi to 599dpi
4	200dpi to 399dpi
5	to 199dpi

• Copy resolution settings are fixed so they are not counted.

8381	T:Total PrtPGS
8382	C:Total PrtPGS
8383	F:Total PrtPGS
8384	P:Total PrtPGS
8385	S:Total PrtPGS
8386	L:Total PrtPGS
8387	O:Total PrtPGS

These SPs count the number of pages printed by the customer. The counter for the application used for storing the pages increments.

[0 to 9999999/ 0 / 1]

The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.

- When the A3/DLT double count function is switched on with SP5104, 1 A3/DLT page is counted as 2.
- When several documents are merged for a print job, the number of pages stored are counted for the application that stored them.
- These counters are used primarily to calculate charges on use of the machine, so the following pages are not counted as printed pages:
- Blank pages in a duplex printing job.
- Blank pages inserted as document covers, chapter title sheets, and slip sheets.
- Reports printed to confirm counts.
- All reports done in the service mode (service summaries, engine maintenance reports, etc.)
- Test prints for machine image adjustment.
- Error notification reports.
- Partially printed pages as the result of a copier jam.

8391	LSize PrtPGS
	[0 to 9999999/ 0 / 1] These SPs count pages printed on paper sizes A3/DLT and larger.
	Note: In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.

8401	T:PrtPGS/LS
8402	C:PrtPGS/LS
8403	F:PrtPGS/LS
8404	P:PrtPGS/LS
8405	S:PrtPGS/LS
8406	L:PrtPGS/LS

These SPs count the number of pages printed from the document server. The counter for the application used to print the pages is incremented.

The L: counter counts the number of jobs stored from within the document server mode screen at the operation panel.

[0 to 9999999/ 0 / 1]

• Print jobs done with Web Image Monitor and Desk Top Binder are added to the L: count.

8411	Prints/Duplex
	This SP counts the amount of paper (front/back counted as 1 page) used for duplex printing. Last pages printed only on one side are not counted. [0 to 9999999/0/1]

8421	T:PrtPGS/Dup Comb
	[0 to 9999999/ 0 / 1]
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing. This is the total for all applications.
8422	C:PrtPGS/Dup Comb
	[0 to 9999999 / 0 / 1] These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the copier application.
	F:PrtPGS/Dup Comb
8423	[0 to 9999999/ 0 / 1] These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the fax application.
	P:PrtPGS/Dup Comb
8424	[0 to 9999999 / 0 / 1] These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the printer application.

	S:PrtPGS/Dup Comb		
8425	[0 to 9999999/ 0 / 1]		
	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing by the scanner application.		
	L:PrtPGS/Dup Comb		
0.407	[0 to 9999999/ 0 / 1]		
8426	These SPs count by binding and combine, and n-Up settings the number of pages processed for printing from within the document server mode window at the operation panel.		
	O:PrtPGS/Dup Comb		
8427	[0 to 9999999/ 0 / 1]		
	These SPs count by binding and country processed for printing by Other a	ombine, and n-Up settings the number of pages oplications	
1	Simplex> Duplex		
2	Duplex> Duplex		
3	Book> Duplex		
4	Simplex Combine		
5	Duplex Combine		
6	2-in-1	2 pages on 1 side (2-Up)	
7	4-in-1	4 pages on 1 side (4-Up)	
8	6-in-1	6 pages on 1 side (6-Up)	
9	8-in-1	8 pages on 1 side (8-Up)	
10	9-in-1	9 pages on 1 side (9-Up)	
11	2-in-1	16 pages on 1 side (16-Up)	
12	Booklet		
13	Magazine		
14	2-in-1 + Booklet		
15	4-in-1 + Booklet		

16	6-in-1 + Booklet	
17	8-in-1 + Booklet	
18	9-in-1 + Booklet	
19	2-in-1 + Magazine	
20	4-in-1 + Magazine	
21	6-in-1 + Magazine	
22	8-in-1 + Magazine	
23	9-in-1 + Magazine	
24	16-in-1 + Magazine	

- These counts (SP8421 to SP8427) are especially useful for customers who need to improve their compliance with ISO standards for the reduction of paper consumption.
- Pages that are only partially printed with the n-Up functions are counted as 1 page.

Here is a summary of how the counters work for Booklet and Magazine modes:

Booklet		Magazine	
Original Pages	Count	Original Pages	Count
1	1	1	1
2	2	2	2
3	2	3	2
4	2	4	2
5	3	5	4
6	4	6	4
7	4	7	4
8	4	8	4

	T:PrtPGS/ImgEdt
8431	[0 to 9999999/ 0 / 1]
	These SPs count the total number of pages output with the three features below, regardless of which application was used.
	C:PrtPGS/ImgEdt
8432	[0 to 9999999/ 0 / 1]
	These SPs count the total number of pages output with the three features below with the copy application.
	P:PrtPGS/ImgEdt
8434	[0 to 9999999/ 0 / 1]
	These SPs count the total number of pages output with the three features below with the print application.
	L:PrtPGS/ImgEdt
8436	[0 to 9999999/ 0 / 1]
	These SPs count the total number of pages output from within the document server mode window at the operation panel with the three features below.
	O:PrtPGS/ImgEdt
8437	[0 to 9999999/ 0 / 1]
	These SPs count the total number of pages output with the three features below with Other applications.
1	Cover/Slip Sheet
	Total number of covers or slip sheets inserted. The count for a cover printed on both sides counts 2.
2	Series/Book
	The number of pages printed in series (one side) or printed as a book with booklet right/left pagination.
3	User Stamp
	The number of pages printed where stamps were applied, including page numbering and date stamping.

	T:PrtPGS/Ppr Size
8441	[0 to 9999999/ 0 / 1]
	These SPs count by print paper size the number of pages printed by all applications.
8442	C:PrtPGS/Ppr Size
	[0 to 9999999 / 0 / 1]
	These SPs count by print paper size the number of pages printed by the copy application.
	F:PrtPGS/Ppr Size
8443	[0 to 9999999 / 0 / 1]
	These SPs count by print paper size the number of pages printed by the fax application.
	P:PrtPGS/Ppr Size
8444	[0 to 9999999 / 0 / 1]
	These SPs count by print paper size the number of pages printed by the printer application.
	S:PrtPGS/Ppr Size
8445	[0 to 9999999/ 0 / 1]
	These SPs count by print paper size the number of pages printed by the scanner application.
	L:PrtPGS/Ppr Size
8446	[0 to 9999999 / 0 / 1]
	These SPs count by print paper size the number of pages printed from within the document server mode window at the operation panel.
	O:PrtPGS/Ppr Size
8447	[0 to 9999999/ 0 / 1]
	These SPs count by print paper size the number of pages printed by other applications.
1	A3
2	A4
3	A5
4	B4

1	
5 1	B5
6 1	DLT
7 1	lG
8 1	LT
9 1	HLT
10 1	Full Bleed
254	Other (Standard)
255	Other (Custom)

• These counters do not distinguish between LEF and SEF.

	PrtPGS/Ppr Tray	
8451	[0 to 9999999/ 0 / 1]	
	These SPs count the number of sheets fed from each paper feed station.	
1	Bypass	Bypass Tray
2	Tray 1	Copier
3	Tray 2	Copier
4	Tray 3	Paper Tray Unit (Option)
5	Tray 4	Paper Tray Unit (Option)
6	Tray 5	LCT (Option)
7	Tray 6	Currently not used.
8	Tray 7	Currently not used.
9	Tray 8	Currently not used.
10	Tray 9	Currently not used.
11	Tray 10	Currently not used.
12	Tray 11	Currently not used.
13	Tray 12	Currently not used.

14	Tray 13	Currently not used.
15	Tray 14	Currently not used.
16	Tray 15	Currently not used.

	T:PrtPGS/Ppr Type
8461	[0 to 9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by all applications.
	 These counters are not the same as the PM counter. The PM counter is based on feed timing to accurately measure the service life of the feed rollers. However, these counts are based on output timing.
	Blank sheets (covers, chapter covers, slip sheets) are also counted.
	During duplex printing, pages printed on both sides count as 1, and a page printed on one side counts as 1.
	C:PrtPGS/Ppr Type
8462	[0 to 9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by the copy application.
	F:PrtPGS/Ppr Type
8463	[0 to 9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by the fax application.
	P:PrtPGS/Ppr Type
8464	[0 to 9999999/ 0 / 1]
	These SPs count by paper type the number pages printed by the printer application.
	L:PrtPGS/Ppr Type
8466	[0 to 9999999/ 0 / 1]
	These SPs count by paper type the number pages printed from within the document server mode window at the operation panel.
1	Normal
2	Recycled
3	Special

4	Thick
5	Normal (Back)
6	Thick (Back)
7	OHP
8	Other

	PrtPGS/Mag
8471	[0 to 9999999 / 0 / 1] These SPs count by magnification rate the number of pages printed.
1	- 49%
2	50% to 99%
3	100%
4	101% to 200%
5	201% -

- Counts are done for magnification adjusted for pages, not only on the operation panel but performed remotely with an external network application capable of performing magnification adjustment as well.
- Magnification adjustments done with printer drivers with PC applications such as Excel are also counted.
- Magnification adjustments done for adjustments after they have been stored on the document server are not counted.
- Magnification adjustments performed automatically during Auto Reduce/Enlarge copying are counted.
- The magnification rates of blank cover sheets, slip sheets, etc. are automatically assigned a rate of 100%.

8481	T:PrtPGS/TonSave	
8484	P:PrtPGS/TonSave	

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These SPs count the number of pages printed with the Toner Save feature switched on.

Note: These SPs return the same results as this SP is limited to the Print application.

[0 to 9999999/ 0 / 1]

	T:PrtPGS/Emul	
8511	These SPs count by printer emulation [0 to 9999999/ 0 / 1]	mode the total number of pages printed.
	P:PrtPGS/Emul	
8514	These SPs count by printer emulation mode the total number of pages printed. [0 to 9999999 / 0 / 1]	
1	RPCS	
2	RPDL	
3	PS3	
4	R98	
5	R16	
6	GL/GL2	
7	R55	
8	RTIFF	
9	PDF	
10	PCL5e/5c	
11	PCL XL	
12	IPDL-C	
13	BM-Links	Japan Only
14	Other	
15	IPDS	

- SP8511 and SP8514 return the same results as they are both limited to the Print application.
- Print jobs output to the document server are not counted.

	T:PrtPGS/FIN
8521	These SPs count by finishing mode the total number of pages printed by all applications. [0 to 9999999 0 / 1]
	C:PrtPGS/FIN
These SPs count by finishing mode the total number of pages printed by the Coapplication. [0 to 9999999/0/1]	
	F:PrtPGS/FIN
8523	[0 to 9999999/ 1]
	These SPs count by finishing mode the total number of pages printed by the Fax application.
	P:PrtPGS/FIN
8524	These SPs count by finishing mode the total number of pages printed by the Print application. [0 to 9999999 / 0 / 1]
	S:PrtPGS/FIN
8525	These SPs count by finishing mode the total number of pages printed by the Scanner application. [0 to 9999999 / 0 / 1]
	L:PrtPGS/FIN
8526	These SPs count by finishing mode the total number of pages printed from within the document server mode window at the operation panel. [0 to 9999999/ 0 / 1]
1	Sort
2	Stack
3	Staple
4	Booklet
5	Z-Fold
6	Punch

7	Other	
8	Inside Fold	Half-Fold (FM2) (Multi Fold Unit)
9	Three-IN-Fold	Letter Fold-in (FM4) (Multi Fold Unit)
10	Three-OUT-Fold	Letter Fold-out (FM3) (Multi Fold Unit)
11	Four Fold	Double Parallel Fold (FM5) (Multi Fold Unit)
12	KANNON-Fold	Gate Fold (FM6) (Multi Fold Unit)
13	Perfect-Bind	Perfect Binder D391 Not Used
14	Ring-Bind	Ring Binder D392 Not used



- If stapling is selected for finishing and the stack is too large for stapling, the unstapled pages are still counted.
- The counts for staple finishing are based on output to the staple tray, so jam recoveries are counted.

8531	Staples
	This SP counts the amount of staples used by the machine.
	[0 to 9999999/ 0 / 1]

8541	T: GPC Counter Japan Only
8542	C: GPC Counter Japan Only

	P: GPC Counter Japan Only	8544	
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8551	T: PrtBooks/FIN Not Used	
8552	O: PrtBooks/FIN Not Used	
8554	P: PrtBooks/FIN Not Used	
8556	L: PrtBooks/FIN Not Used	
1	Perfect-Bind	

2	Ring-Bind	

8561	T: A Sheet of Paper
8562	C: A Sheet of Paper
8563	F: A Sheet of Paper
8564	P: A Sheet of Paper
8566	L: A Sheet of Paper
8567	O: A Sheet of Paper
	Provide statistics on the usage of large paper sizes and duplexing.
1	Total: Over A3/DLT
2	Total: UnderA3/DLT
3	Duplex: OverA3/DLT
4	Duplex: Under A3/DLT

	T:Counter
	[0 to 9999999/ 0 / 1]
8581	These SPs count the total output broken down by color output, regardless of the application used. In addition to being displayed in the SMC Report, these counters are also displayed in the User Tools display on the copy machine.
	Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.

	O:Counter
8591	[0 to 9999999/ 0 / 1]
	These SPs count the totals for A3/DLT paper use, number of duplex pages printed, and the number of staples used. These totals are for Other (O:) applications only.
1	A3/DLT
2	Duplex

8601

8602	D: Coverage Counter	
8603	F: Coverage Counter	
8604	P: Coverage Counter	
8606	L: Coverage Counter	
	Provide a breakdown about coverage.	
1	B/W	
2	B/W Printed Pgs	

8617	SDK Apli Counter DFU
8017	SDK 1 to 6

8621	Func Use Counter Not Used
	001 to 064: Function 001 to 064

	T:FAX TX PGS
8631	[0 to 9999999/ $0/1$] These SPs count by color mode the number of pages sent by fax to a telephone number.
	F:FAX TX PGS
8633	[0 to 9999999/ 0 / 1] These SPs count by color mode the number of pages sent by fax to a telephone number.
1	BW
2	Color

- If a document has color and black-and-white pages mixed, the pages are counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8631 and SP8633 are the same.
- The counts include error pages.

- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

	T:FAX TX PGS
8641	[0 to 9999999/ 0 / 1] These SPs count by color mode the number of pages sent by fax to as fax images using I-Fax.
	F:FAX TX PGS
8643	[0 to 9999999/ 0 / 1] These SPs count by color mode the number of pages sent by Fax as fax images using I-Fax.
1	BW
2	Color

- Pages counted separately as B/W or Color.
- At the present time, this feature is provided for the Fax application only so SP8641 and SP8643 are the same.
- The counts include error pages.
- If a document is sent to more than one destination with a Group transmission, the count is done for each destination.
- Polling transmissions are counted but polling RX are not.
- Relay, memory, and confidential mailbox transmissions and are counted for each destination.

8651	T:S-to-Email PGS
	[0 to 9999999/ 0 / 1]
	These SPs count by color mode the total number of pages attached to an e-mail for both the Scan and document server applications.
	Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.

8655

		[0 to 999999 These SPs co Scan applica	unt by color mode the total number of pages attached to an e-mail for the
			of is expanded for color MFP and color LP machines. For this machine, the for black only.
	1	B/W	
	2	Color	Color MFP machines only

- For SP8651 and SP8655 the count for B/W and Color pages is done after the document is stored
 on the HDD. If the job is cancelled before it is stored, the pages are not counted.
- If Scan-to-Email is used to send a 10-page document to 5 addresses, the count is 10 (the pages are sent to the same SMTP server together).
- If Scan-to-PC is used to send a 10-page document to 5 folders, the count is 50 (the document is sent to each destination of the SMB/FTP server).
- Due to restrictions on some devices, if Scan-to-Email is used to send a 10-page document to a large number of destinations, the count may be divided and counted separately. For example, if a 10-page document is sent to 200 addresses, the count is 10 for the first 100 destinations and the count is also 10 for the second 100 destinations, for a total of 20.).

	T:Deliv PGS/Svr
	[0 to 9999999/ 0 / 1]
8661	These SPs count by color mode the total number of pages sent to a Scan Router server by both Scan and LS applications.
	Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.
	S:Deliv PGS/Svr
	[0 to 9999999/ 0 / 1]
8665	These SPs count by color mode the total number of pages sent to a Scan Router server by the Scan application.
	Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.

- The B/W and Color counts are done after the document is stored on the HDD of the Scan Router server.
- If the job is canceled before storage on the Scan Router server finishes, the counts are not done.
- The count is executed even if regardless of confirmation of the arrival at the Scan Router server.

8671 T:Deliv PGS/PC	
	[0 to 9999999/ 0 / 1]
	These SPs count by color mode the total number of pages sent to a folder on a PC (Scan-to-PC) with the Scan and LS applications.
	Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.
8675	S:Deliv PGS/PC
	[0 to 9999999 / 0 / 1] These SPs count by color mode the total number of pages sent with Scan-to-PC with the Scan application.
	Note: This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only.
1	B/W
2	Color

8681	T:PCFAX TXPGS
8683	F:PCFAX TXPGS
	[0 to 9999999/ 0 / 1] These SPs count the number of pages sent by PC Fax. These SPs are provided for the Fax application only, so the counts for SP8681 and SP8683 are the same.

- This counts pages sent from a PC using a PC fax application, from the PC through the copier to the destination.
- When sending the same message to more than one place using broadcasting, the pages are only counted once. (For example, a 10-page fax is sent to location A and location B. The counter goes up by 10, not 20.)

8691	T:TX PGS/LS
8692	C:TX PGS/LS
8693	F:TX PGS/LS
8694	P:TX PGS/LS
8695	S:TX PGS/LS

	8696	L:TX PGS/LS	
		These SPs count the number of pages sent from the document server. The counter for the application that was used to store the pages is incremented.	
[0 to 9999999/ 0 / 1]		[0 to 9999999/ 0 / 1]	
		The L: counter counts the number of pages stored from within the document server mode screen at the operation panel. Pages stored with the Store File button from within the Copy mode screen go to the C: counter.	

- Print jobs done with Web Image Monitor and Desk Top Binder are added to the count.
- If several documents are merged for sending, the number of pages stored is counted for the application that stored them.

8701	TX PGS/Port			
) to 9999999/ 0 / 1]			
	These SPs count the number of pages sent by the physical port used to send them. For example, if a 3-page original is sent to 4 destinations via ISDN G4, the count for ISDN (G3, G4) is 12.			
1	PSTN-1			
2	PSTN-2			
3	PSTN-3			
4	ISDN (G3,G4)			
5	Network			

8711	T:Scan PGS/Comp	
	[0 to 9999999/1] These SPs count the number of compressed pages scanned into the document server, counted by the formats listed below.	
1	JPEG/JPEG2000	
2	TIFF (Multi/Single)	
3	PDF	
4	Other	

5	PDF/Comp	
6	PDF/A	

8715	S:Scan PGS/Comp	
	[0 to 9999999/ 1] These SPs count the number of compressed pages scanned by the scan application, counted by the formats listed below.	
1	PEG/JPEG2000	
2	TIFF (Multi/Single)	
3	PDF	
4	Other	

8721	T: Deliv: PC	T: Deliv: PGS/WSD Total number of pages sent via WSD (WS-Scanner for Web Services Devices).		
	Total numb			
	001	B/W		
	002	Color		

8725	S: Deliv PGS/WSD			
	Total numb	Total number of pages sent via WSD (WS-Scanner for Web Services Devices).		
	001	B/W		
	002	Color		

8721	T: Deliv PGS/WSD		
8725	S: Deliv PGS/WSD		
8731	T: Scan PGS/Media		
8735	S: Scan PGS/Media		
1	B/W		
2	Color		

	RX PGS/Port
8741	[0 to 9999999 / 0 / 1] These SPs count the number of pages received by the physical port used to receive them.
	· · · · · · · · · · · · · · · · · · ·
1	PSTN-1
2 PSTN-2	
3	PSTN-3
4	ISDN (G3,G4)
5	Network

8771	Dev Counter
	[0 to 9999999/ 0 / 1] These SPs count the frequency of use (number of rotations of the development rollers) for black and other color toners. Note: For machines that do not support color, the Black toner count is the same as the Total count.

	Pixel Coverage Ratio
8781	This SP displays the number of toner bottles used. The count is done based on the equivalent of 1,000 pages per bottle.

87		LS Memory Remain	
	8791	This SP displays the percent of space available on the document server for storing documents.	
		[0 to 100/0/1]	

8801	Toner Remain
	This SP displays the percent of toner remaining for each color. This SP allows the user to check the toner supply at any time.
	[0 to 100/0/1]

• This precise method of measuring remaining toner supply (1% steps) is better than other machines in the market that can only measure in increments of 10 (10% steps).

• This SP is expanded for color MFP and color LP machines. For this machine, the count is done for black only

8811	Eco Counter
1	Eco Total
4	Duplex
5	Combine
8	Duplex (%)
9	Combine (%)
10	Paper Cnt (%)
101	Eco Total: Last
104	Duplex: Last
105	Combine: Last
108	Duplex (%): Last
109	Combine (%): Last
110	Paper Cnt (%): Last

8851	Cvr Cnt: 0 - 10%			
8861	0%			
8871	Cvr Cnt: 21 – 30%			
8881	Cvr Cnt: 31%			
	[0 to 9999999]			
	These SPs count the percentage of dot coverage for black.			
11	0 – 2%	0 – 2% Bk		
21	3 – 4% Bk			
31	5 – 7% Bk			
41	Bk			

8861	Toner Coverage 11-20%	
	[0 to 9999999]	
	These SPs count the percentage of dot coverage for black and other color toners	

8871	Toner	Toner Coverage 21-30%		
	[0 to 9	[0 to 9999999]		
	These	SPs count the percentage	of dot coverage for black and other color toners.	
1	K	Black toner		
2	М	Magenta toner		
3	С	Cyan toner	Not Used	
4	Υ	Yellow toner		

8881	oner (oner Coverage 31 -%		
	[0 to 9999999]			
	Inese	SPs count the percentage	of dot coverage for black and other color toners.	
1	K	Black toner		
2	М	Magenta toner		
3	С	Cyan toner	Not Used	
4	Υ	Yellow toner		

8891	Page/Toner Bottle	Total number of pages per toner bottle.	
8901	Coverage Display (Ton	er Bottle: Previous) DFU	
8911	Coverage Display (Toner Bottle: Before Previous) DFU		
8921	Cvr Cnt/Total	Total number of pages to date.	

	14 11 C				
	Machine Status				
0041	[0 to 9999999/ 0 / 1]				
8941	These SPs count the amount of time the machine spends in each operation mode. These SPs are useful for customers who need to investigate machine operation for improvement in their compliance with ISO Standards.				
1	Operation Time				
	Engine operation time. Does not include time while controller is saving data to HDD (while engine is not operating).				
2	Standby Time				
	Engine not operating. Includes time while controller saves data to HDD. Does not include time spent in Energy Save, Low Power, or Off modes.				
3	Energy Save Time				
	Includes time while the machine is performing background printing.				
4	Low Power Time				
	Includes time in Energy Save mode with Engine on. Includes time while machine is performing background printing.				
5	Off Mode Time				
	Includes time while machine is performing background printing. Does not include time machine remains powered off with the power switches.				
6	SC				
	Total down time due to SC errors.				
7	PrtJam				
	Total down time due to paper jams during printing.				
8	OrgJam				
	Total down time due to original jams during scanning.				
9	Supply PM Wait End				
	Total down time due to toner end.				

8951	AddBook Register
6931	These SPs count the number of events when the machine manages data registration.
1	User Code
	User code registrations. [0 to 9999999/ 0 / 1]
2	Mail Address
	Mail address registrations. [0 to 9999999/ 0 / 1]
4	Group
	Group destination registrations. [0 to 9999999 / 0 / 1]
6	F-Code
	F-Code box registrations. [0 to 9999999 / 0 / 1]
7	Copy Program
	Copy application registrations with the Program (job settings) feature. [0 to 255 / 0 / 255]
9	Printer Program
	Printer application registrations with the Program (job settings) feature. [0 to 255 / 0 / 255]
10	Scanner Program
	Scanner application registrations with the Program (job settings) feature. [0 to 255 / 0 / 255]

8961	Electry Status
1	Ctrl Standby Time
2 STR Time	
3	Main Power Off Time

4	Reading and Printing Time	
5	Printing Time	
6	Reading Time	
7	Eng Wait Time	
8	Low Power Time	
9	Silent State Time	

8999	Admin Counter List
1	Total
2	Copy: Full Color
3	Copy: BW
4	Copy: Single Color
5	Copy: Two Color
6	Printer: Full Color
7	Printer: BW
8	Printer: Single Color
9	Printer: Two Color
10	Fax Print: BW
11	Fax Print: Single Color
12	A3/DLT
13	Duplex
14	Coverage: Color (%)
15	Coverage: BW (%)
16	Coverage: Color Print Page
17	Coverage: BW Print Page
20	Full Color: GPC

101	Transmission Total: Color	
102	Transmission Total: BW	
103	Fax Transmission	
104	Scanner Transmission: Color	
105	Scanner Transmission: BW	

3

Printer SP Tables

1001	Bit Swi	Bit Switch			
1	Bit Swi	tch 1 Settings	0	1	
	bit 0	DFU	-	-	
	bit 1	DFU	-	-	
	bit 2	DFU	-	-	
	bit 3	No I/O Timeout	0: Disable	1: Enable	
		Enable: The MFP I/O Timeout setting will have no el occur.	ffect. I/O Timed	outs will never	
	bit 4	SD Card Save Mode	0: Disable	1: Enable	
Enable: Print jobs will be saved to an SD Card in the GW SD sl			GW SD slot.		
	bit 5	DFU	-	-	
	bit 6	DFU	-	-	
	bit 7	[RPCS,PCL]: Printable area frame border	0: Disable	1: Enable	
		Enable: The machine prints all RPCS and PCL jobs w printable area.	ith a border on	the edges of the	

1001

2	Bit Swit	tch 2 Settings	0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	Applying a collation Type	Shift Collate	Normal Collate
		A collation type (shift or normal) will be applied to a a "Collate Type" configured.	ll jobs that do r	not already have
		Note: If #5-0 is enabled, this Bit Switch has no effec	t.	
	bit 3	[PCL5e/c,PS]: PDL Auto Switching	0: Enable	1: Disable
		Disable: The MFPs ability to change the PDL process Some host systems submit jobs that contain both PS of switching is disabled, these jobs will not be printed p	and PCL5e/c. I	f Auto PDL
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	Bit Switch				
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3	Bit Switch 3 Settings		0	1	
	bit 0	DFU	-	-	
	bit 1	DFU	-	-	
	bit 2	[PCL5e/c]: Legacy HP compatibility	0: Disable	1: Enable	
		Enable: Uses the same left margin as older HP models such as HP4000/HP8000. In other words, the left margin defined in the job (usually " <esc>*rOA") will be changed to "<esc>*r1A"</esc></esc>			
	bit 3	DFU	-	-	
	bit 4	DFU	-	-	
	bit 5	DFU	-	-	
	bit 6	DFU	-	-	
	bit 7	DFU	-	-	

1001	Bit Switch		
4	Bit Switch 4 Settings DFU	-	-

1001	Bit Swit	Bit Switch				
5	Bit Switch 5 Settings 0 1			1		
		Show "Collate Type", "Staple Type" and "Punch Type" buttons on the operation panel.	Disable	Enable		
	If enabled, users will be able to configure a Collate Type, Staple Type, and Punch Type from the operation panel. The available types will depend on the device and configured options. After enabling the function, the settings will appear under: "User Tools > Printer Features > System"			•		
	bit 1	DFU	-	-		
	bit 2	DFU	-	-		

bit 3	[PS] PS Criteria	Pattern3	Pattern 1		
	Change the number of PS criterion used by the PS interpreter to determine whether a job is PS data or not.				
Pattern3: includes most PS commands.					
	Pattern 1: A small number of PS tags and headers				
bit 4	Increase max number of the stored jobs to 1000 jobs.	Disable (100)	Enable (1000)		
	Enable: Changes the maximum number of jobs that Job Type settings to 1000. The default is 100.	t can be store	d on the HDD via		
bit 5	Face-up output	Disable	Enable		
	Enable: All print jobs will be output face-up in the destination tray.				
bit 6	Method for determining the image rotation for the edge to bind on.	Disable	Enable		
	Enable: the image rotation will be performed as they were in the specifications older models for the binding of pages of mixed orientation jobs.				
	The old models are below:				
	- PCL: Pre-04A models				
	- PS/PDF/RPCS: Pre-05S models				
bit 7	Lattack and made printing	Disable	Enable		
	Letterhead mode printing	Disable	(Duplex)		
	Routes all pages through the duplex unit.				
	Disable: Simplex pages or the last page of an odd-paged duplex job, are not routed through the duplex unit. This could result in problems with letterhead/pre-printed pages.				
	Only affects pages specified as Letterhead paper.				

1001	Bit Switch		
6	Bit Switch 6 Settings DFU	-	-

1001	Bit Switch
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7	Bit Switch 7 Settings		0	1
		Print path	Disable	Enable
	bit 0	Enable: Simplex pages (in mixed simplex/duplex PS/PCL5 jobs only) and the last page of an odd paged duplex job (PS, PCL5, PCL6), are always routed through the duplex unit. Not having to switch paper paths increases the print speed slightly.		
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	DFU	-	-
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	1 Bit Switch			
8	Bit Switch 8 Settings		0	1
	bit 0	DFU	-	-
	bit 1	DFU	-	-
	bit 2	DFU	-	-
	bit 3	[PCL,PS]: Allow BW jobs to print without requiring User Code	Disable	Enable
		Enable: BW jobs submitted without a user code will be printed even if usercode authentication is enabled. Note: Color jobs will not be printed without a valid user code.		
	bit 4	DFU	-	-
	bit 5	DFU	-	-
	bit 6	DFU	-	-
	bit 7	DFU	-	-

1001	Bit Switch		
9	Bit Switch 9 Settings DFU	-	-
10	Bit Switch A Settings DFU	-	-
11	Bit Switch B Settings DFU	-	-
12	Bit Switch C Settings DFU	-	-

1003	Clear setting
1	Initialize Printer System Initializes the settings in the printer feature settings of UP mode.
3	Delete Program DFU

1004	Print Summary
1004	Touch [Execute] to print the printer summary sheets.

1005	Display Version.
	Printer Application Version
	Displays the version of the controller firmware.

	Sample/Locked Print
	This SP disables/enables use of the document server.
1006	[0 or 1/ 0 /1]
	0: Enabled. Document server can be used.
	1: Disabled. Document server cannot be used.

1110	Media Print Device Setting
	Sets which tray given priority for paper feed
	The bypass tray is "O".
	[0 to 4/1/1] 0: Bypass 1:Tray 1 2:Tray 2 3:Tray 3 4:LCT

1111	All Jobs Delete Mode
	This switch determines whether all SCS jobs in progress are included in the SMC report when SP5990 is executed.
	[0 to 1/1/1] 1:Jobs included 0:Jobs not included

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Scanner SP Tables

SP-1XXX System and Others

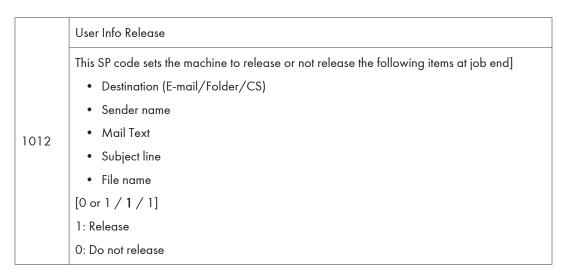
10	001	Scan Nv Version
		Displays the scanner firmware version stored in NVRAM in a 9-digit format: Func. Name_Model Name_History No.

		Erase Margin (Remote Scan)
	1005	Creates an erase margin for all edges of the scanned image.
		If the machine has scanned the edge of the original, create a margin.
		[0 to 5/0/1 mm]

	Remote Scan Disable
1000	This SP switches the TWAIN scanner function on/off. This is one of the scanner application functions.
1009	[0 or 1 / 0 / 1]
	0: ON (enabled-
	1: OFF (disabled)

		Non Display Clear Light PDF
		This SP switches the Clear Light PDF display off/on.
1010	010	[0 or 1 / 0 / 1]
		0: Display ON
		1: Display OFF

	Org Count Display
1011	This SP codes switches the original count display on/off.
1011	[0 or 1 / 0 / 1]
	0: OFF (no display)
	1: ON (count displays)



	Scan to Media Device Setting
	This SP code enables/disables the multi-media function.
1013	[0 or 1 / 0 / 1]
	0: Disable
	1: Enable

1015	Add Date/Time to File Name
	Determnes whether the date and time are added to the ends of he names of files sent by email.
	[0 to 1/1/1] 0:Disable adding 1:Enable adding

SP1-XXX Scanning Image Quality

2021	Compression Level (Grayscale)
1	Comp 1: 5-95
	[5 to 95 / 20 / 1]
2	Comp 2: 5-95
	[5 to 95 / 40 / 1]
3	Comp 3: 5-95

	[5 to 95 / 65 / 1]
4	Comp 4: 5-95
	[5 to 95 / 80 / 1]
5	Comp 5: 5-95
	[5 to 95 / 95 / 1]

	Compression ratio of Clear Light PDF		CTL
2024	Selects the compression ratio for clearlight PDF for the two settings that can be selected at the operation panel.		
1	Compression Ratio (Normal)	[5 to 95 / 25 / 1 /step]	
2	Compression Ratio (High)	[5 to 95 / 20 / 1 /step]	

2025	Compression Level of Clear Light PDF JPEG2000
1	Compression Ratio (Normal) JPEG2000
2	Compression Ratio (High) JPEG2000

3

Input/Output Check

Copier Input Check: SP5803

This procedure allows you to test sensors and other components of the machine. After you select one of the categories below by number, you will see a small 8-bit table with the number of the bit and its current setting (0 or 1). The bits are numbered 0 to 7, reading right to left.

- 1. Enter the SP mode and select SP5803.
- 2. Enter the number (1 to 13) for the item that you want to check. A small box will be displayed on the SP mode screen with a series of 0's and 1's.

The meaning of the display is as follows.

Bit	76543210
Setting	11001010

3. Check the status of each item against the corresponding bit numbers listed in the table below.

5-803-001 BCU-eIO1-PORTA

Bit	Description	0	1
7	Duplex. entrance sensor.	Paper	No Paper
6	Duplex. exit sensor.	Paper	No Paper
5	Duplex. jogger HP sensor.	Feeler	No feeler
4	Duplex. transport sensor. 1	Paper	No Paper
3	Duplex. transport sensor. 2	Paper	No Paper
2	Duplex. transport sensor. 3	Paper	No Paper
1	Duplex. unit set sensor.	Set	Not set
0	Fusing release sensor.		Released

5-803-002 BCU-eIO1-PORTB

Bit	Description	0	1
7	Exit Unit Entrance Sensor	Paper	No Paper
6	Feed out exit sensor	Paper	No Paper

Bit	Description	0	1
5	Exit unit set sensor	Set	Not set
4	Web end sensor		Web end
3	-	-	-
2	-	-	-
1	-	-	-
0	-	-	-

5-803-003 BCU-elO1-PORTE

Bit	Description	0	1
7	Toner collection lock sensor	Locked	
6	-	-	-
5	Door open	Open	Closed
4	-	-	-
3	-	-	-
2	Drum motor lock	-	Locked
1	Fusing/exit motor lock	Locked	-
0	Development motor lock	-	Locked

5-803-004 BCU-eIO2-PORTB

Bit	Description	0	1
7	-	-	-
6	Bypass paper end sensor	Paper	No Paper
5	-	-	-
4	Exit tray full sensor		Full
3	Guide plate open sensor	Closed	Open
2	Cooling box fan lock	Locked	-

Bit	Description	0	1
1	Toner collection bottle motor lock	Locked	-
0	Charge power pack leak	Prevention operating	-

5-803-005 BCU-elO2-PORTC

Bit	Description	0	1
7	Key car: copy possible	Сору	No сору
6	Total counter set sensor	Not set	Set
5	Toner end sensor	No toner	Toner
4	60 cpm unit set	Set	Not set
3	Capacitor set	Set	Not set
2	-	-	-
1	Grid power pack leak	Short prevention operating	
0	-	-	-

5-803-006 BCU-elO3-PORTC

Bit	Description	0	1
7	Aux. fan lock	Locked	
6	Key counter set 2	Not set	Set
5	Aux. input	-	-
4	Backlight	ON	OFF
3	Key counter set sensor	Set	Not set
2	Fusing/exit jam sensor	No Paper	Paper
1	Fusing unit set sensor	Set	-
0	Copy/printer model detect	-	Сору

5-803-007 BCU-elO3-PORTD

Bit	Description	0	1
7	Paper sensor 1	Paper	No Paper
6	Paper sensor 2	Paper	No Paper
5	Paper sensor 3	Paper	No Paper
4	Paper sensor 4	Paper	No Paper
3	Vertical transport sensor 1	Paper	No Paper
2	Vertical transport sensor 2	Paper	No Paper
1	Vertical transport sensor 3	Paper	No Paper
0	Vertical transport sensor 4	Paper	No Paper

5-803-008 BCU-eIO3-PORTE

Bit	Description	0	1
7	DIP SW 1	ON	OFF
6	DIP SW2	ON	OFF
5	DIP SW3	ON	OFF
4	DIP SW4	ON	OFF
3	DIP SW5	ON	OFF
2	DIP SW6	ON	OFF
1	DIP SW7	ON	OFF
0	DIP SW8	ON	OFF

5-803-009 BCU-elO3-PORTF,P

Bit	Description	0	1
7	Scanner fan 1 lock detect	-	Locked
6	Scanner fan 3 lock detect	-	Locked
5	Scanner fan 4 lock detect	-	Locked

Bit	Description	0	1
4	-	-	-
3	-	-	-
2	BCU ID3	-	-
1	BCU ID2	-	-
0	BCU ID1	-	-

5-803-010 BCU-eIO2-IMON

Bit	Description	0	1
7	-	-	-
6	-	-	-
5	-	-	-
4	-	-	-
3	Registration sensor	Paper	No Paper
2	Relay sensor	Paper	No Paper
1	-	-	-
0	-	-	-

5-803-011 PFB-eIO1-PORTB

Bit	Description	0	1
7	Paper height sensor: Tray 1	-	30-50% remains
6	Paper height sensor: Tray 2	-	30-50% remains
5	Paper height sensor: Tray 3	-	30-50% remains
4	Paper height sensor: Tray 4	-	30-50% remains
3	Near end sensor: Tray 1	-	< 30% remains
2	Near end sensor: Tray 2	-	< 30% remains
1	Near end sensor: Tray 3	-	< 30% remains

Bit	Description	0	1
0	Near end sensor: Tray 4	-	< 30% remains

5-803-012 PFB-eIO1-PORTC

Bit	Description	0	1
7	Paper size sensor 5: Tray 3	Sensor E On	
6	Paper size sensor 4: Tray 3	Sensor D On	
5	Paper size sensor 3: Tray 3	Sensor C On	
4	Paper size sensor 2: Tray 3	Sensor B on	
3	Paper size sensor 1: Tray 3	Sensor A on	
2	Toner collection motor lock	Locked	
1	Rear fence HP sensor		HP
0	Rear fence open sensor	Open	Closed

5-803-013 PFB-eIO1-PORTD

Bit	Description	0	1
7	Paper size sensor 5: Tray 4	Sensor E On	
6	Paper size sensor 4: Tray 4	Sensor D On	
5	Paper size sensor 3: Tray 4	Sensor C On	
4	Paper size sensor 2: Tray 4	Sensor B on	
3	Paper size sensor 1: Tray 4	Sensor A on	
2	Tray set sensor (right)	Set	Not set
1	Tandem set sensor (left)	Set	Not set
0	Tandem set sensor (right)		Down

5-803-014 PFB-eIO1-PORTE

Bit	Description	0	1
7	Paper size sensor 5: Tray 2	Sensor E On	
6	Paper size sensor 4: Tray 2	Sensor D On	
5	Paper size sensor 3: Tray 2	Sensor C On	
4	Paper size sensor 2: Tray 2	Sensor B on	
3	Paper size sensor 1: Tray 2	Sensor A on	
2	Tray type detect	Tray 3	Tray 4
1	LCT low right door open	Open	
0	-		

5-803-015 PFB-eIO1-PORTF

Bit	Description	0	1
7	Used toner bottle set	Set	Not set
6	User toner bottle full		Full
5	-		
4	-		
3	-		
2	-		
1	-		
0	-		

5-803-016 PFB-eIO1-PORTG

Bit	Description	0	1
7	Near end (tandem LCT)	-	< 25% remains
6	Paper height sensor 1 (tandem LCT)	-	< 50% remains
5	Paper height sensor 2 (tandem LCT)	-	< 75% remains
4	Paper height sensor 3 (tandem LCT)	-	about 75% over

Bit	Description	0	1
3	-	-	-
2	-	-	-
1	-	-	-
0	-	-	-

5-803-017 PFB-eIO1-PORTM

Bit	Description	0	1
7	Paper end sensor: Tray 1	Paper	-
6	Paper end sensor: Tray 2	Paper	-
5	Paper end sensor: Tray 3	Paper	-
4	Paper end sensor: Tray 4	Paper	-
3	1 st lift sensor: Tray 1	Up	-
2	1 st lift sensor: Tray 2	Up	-
1	1 st lift sensor: Tray 3	Up	-
0	1 st lift sensor: Tray 4	Up	-

5-803-018 PFB-eIO1-PORTP

Bit	Description	0	1
7	Rear fence closed (tandem LCT)		Closed
6	Rear fence open (tandem LCT)		Open
5	Front fence closed (tandem LCT)		Closed
4	Front fence open (tandem LCT)		Open
3	Rear fence postion sensor		Down
2	Right tray paper sensor (tandem LCT)	Paper	No Paper
1	Left tray paper end sensor	Paper	No Paper
0	Rear fence HP sensor		HP

Copier Output Check: SP5804



- Motors keep turning in this mode regardless of upper or lower limit sensor signals. To prevent mechanical or electrical damage, do not keep an electrical component on for a long time.
- 1. Open SP mode 5804.
- 2. Select the SP number that corresponds to the component you wish to check. (Refer to the table on the next page.)
- 3. Press On then press Off to test the selected item.



• You cannot exit and close this display until you press off to switch off the output check currently executing. Do not keep an electrical component switched on for a long time.

SP5804 Output Check Table

5804	Output Check
	Turns on the electrical components individually for testing. This is the output check for the main machine.
1	Feed Motor 1
2	Feed Motor 2
3	Feed Motor 3
4	Feed Motor 4
5	By-pass Feed Clutch
6	LCT Feed Motor
9	Pick-up SOL 1
10	Pick-up SOL 2
11	Pick-up SOL 3
12	Pick-up SOL 4
13	By-pass Pick-up SOL
14	LCT Pick-up SOL

17	Reverse Release SOL 1
18	Reverse Release SOL 2
19	Reverse Release SOL 3
20	Reverse Release SOL 4
22	Tandem Connection Release SOL
23	Left Tandem Lock SOL
24	Tandem Transport Motor
27	Relay Motor
28	Main Motor
31	Fusing Exit Motor
32	Fusing Removal Motor
39	Registration Motor
40	Guide Plate Release SOL
41	Exit Junction SOL
43	Inverter Duplex Motor
44	Duplex Transport Motor
45	Duplex Entrance Gate SOL
46	Inverter Jogger SOL
47	Duplex Transport CL
48	Duplex Jogger
52	Toner Supply CL
53	Development Motor
54	Used Toner Motor
55	Web Motor
56	Toner Bottle Motor
57	Transfer/Separation SOL

62	Quenching Lamp
63	Charge Corona
64	Grid Wire
67	Development Bias
69	Transfer Bias
70	ID Sensor LED
73	Toner Bottle Fan
74	Development Unit Fan
75	Duplex Unit Fan
76	Main Ventilation Fan
77	Main Suction Fan
78	Main Vacuum Fan
79	OPC Fan
80	FIN Juction SOL (Proof)
81	FIN Juction SOL (Stapler)
82	FIN End Roller SOL
84	Total Counter
85	FIN Main Motor 1
86	FIN Main Motor 2
87	FIN Exit Motor
88	FIN Staple Motor
89	FIN Punch Motor
90	LD DC Lamp
92	FIN Tray Lift Motor
93	FIN Jogger Motor
94	FIN Staple Transport Motor

95	FIN Exhaust Motor
96	FIN Shift Motor
97	FIN Staple Slant Motor
98	Status Lamp (Green)
99	Status Lamp (Red)
100	PTL
200	Scanner Fanmotor
202	Scanner Lamp
203	Scanner Motor

ADF Input Check: SP6007

- 1. Open SP mode SP6007.
- 2. Select the SP number that corresponds to the component you wish to check. (Refer to the table below.)
- 3. Press On then press Off to test the selected item. You cannot exit and close this display until you click Off to switch off the output check currently executing.

6007	ADF Input Check		
	Description	Reading	
		0	1
1	Original Length Sensor 1 (B5)	No paper	Paper detected
2	Original Length Sensor 2 (A4)	No paper	Paper detected
3	Original Length Sensor 3 (LG)	No paper	Paper detected
4	Original Width Sensor 1	No paper	Paper detected
5	Original Width Sensor 2	No paper	Paper detected
6	Original Width Sensor 3	No paper	Paper detected
7	Original Width Sensor 4	No paper	Paper detected
8	Original Width Sensor 5	No paper	Paper detected

9	Original Set Sensor	No paper	Paper detected
10	Separation Sensor	No paper	Paper detected
11	Skew Correction Sensor	No paper	Paper detected
12	Interval Sensor	No paper	Paper detected
13	Registration Sensor	No paper	Paper detected
14	Exit Sensor	No paper	Paper detected
15	Feed Cover Sensor	Open	Close
16	DF Position Sensor	Open	Close
18	Pick-up Roller HP Sensor	Not HP	НР
20	APS Start Sensor	Not Start	Start
21	Bottom Plate HP Sensor	Not HP	НР
22	Bottom Plate Posirion Sensor	Not Correct Position	Correct Position

ADF Output Check: SP6008

- 1. Open SP mode SP6008.
- 2. Select the SP number that corresponds to the component you wish to check. (Refer to the table below.)
- 3. Press On then press Off to test the selected item. You cannot exit and close this display until you click Off to switch off the output check currently executing.

6008	ADF Output Check
	Turns on the ADF electrical components individually for testing.
1	Feed Motor: Forward
2	Feed Motor: Reverse
3	Transport Motor: Forward
4	Exit Motor: Forward
8	Stamp Solenoid
9	Pick-up Motor: Forward

Bottom Plate Motor: Reverse

Finisher 1 Input Check: SP6121

Finisher 1: D611/D612

4101	D::	Reading		
6121	Bit	Description	0	1
1	Entra	nce Sensor	Paper not detected	Paper detected
2	Proo	Exit Sensor	Paper not detected	Paper detected
3	Proo	Full Detection Sensor	Not Full	Full
4	Traili	ng Edge Detection: Shift	Paper not detected*1	Paper detected* 1
5	Stap	e Exit Sensor	Paper not detected	Paper detected
6	Shift	HP Sensor	Not HP	HP
7	Shift	Exit Sensor	Paper not detected	Paper detected
8	Exit (Guide Plate HP Sensor	Not HP	HP
9	Pape	r Detection Sensor: Staple	Paper not detected	Paper detected
10	Pape	r Detection Sensor: Shift	Paper not detected	Paper detected
11	Pape	r Full Sensor: 2000-Sheet	Not Full	Full
12	Osci	llating Back Roller HP Sensor	Not HP	HP
13	Jogg	er HP Sensor	Not HP	HP
14	Exit J	unction Gate HP Sensor	НР	Not HP
15	Stap	e Tray Paper Sensor	Paper not detected	Paper detected
16	Stap	le Moving HP Sensor	Not HP	HP
17	Skew	HP Sensor	Not HP	HP
18	Limit	SW	Not Limit	Limit
19	DOC	DR SW	Closed	Open

3

/101		Reading		
6121	Bit	Description	0	1
20	Stap	er 1 Rotation	Not HP	HP
21	Stap	e Detection	Staple not detected	Staple detected
22	Stap	le Leading Edge Detection	Staple not detected	Staple detected
23	Punc	h Moving HP Sensor	Not HP	HP
24	Punc	h Registration HP Sensor	Not HP	HP
25	Punc	h Registratioin Detection Sensor	Paper not detected	Paper detected
26	Punc	h Chad Full Sensor	Not Full	Full
27	Punc	h HP	Not HP	HP
28	Punc	h Selection DIPSW 1	See	*]
29	Punc	h Selection DIPSW 2	See	*]
30	Stack Sens	k Junction Gate Open/Closed HP or	Not HP	НР
31	Lead	ing Edge Detection Sensor	Paper not detected	Paper detected
32	Drive	Roller HP Sensor	Not HP	HP
33	Arriv	al Sensor	Paper not detected	Paper detected
34	Rear	Edge Fence HP Sensor	Not HP	HP
35	Folde	er Cam HP Sensor	Not HP	HP
36	Folde	er Plate HP Sensor	Not HP	HP
37	Folde	er Pass Sensor	Paper not detected	Paper detected
38	Sado	lle Full Sensor: Front	Paper not detected* ²	Paper detected* ²
39	Sado	lle Full Sensor: Rear	Paper not detected* ²	Paper detected*2
40	Sado	lle Stitch Stapler 1 Rotation: Front	Not HP	HP
41	Sado	lle Stitch Detection: Front	Staple not detected	Staple detected

4101	P's December of	Reading		
6121	Bit	Description	0	1
42	Sado Front	lle Stitch Leading Edge Detection:	Staple not detected	Staple detected
43	Sado	lle Stitch Stapler 1 Rotation: Rear	Not HP	HP
44	Sado	lle Stitch Detection: Rear	Staple not detected	Staple detected
45	Sado Rear	lle Stitch Leading Edge Detection:	Staple not detected	Staple detected
46	Full S	Sensor: 3000-Sheet	Not Full	Full
47	Exit J	ogger HP Sensor: Front	Not used in th	ne machine
48	Exit J	ogger HP Sensor: Rear	Not used in th	ne machine
49	Exit J	ogger HP Sensor: Upper	Not used in th	ne machine

* 1: Combination of DIP SW 1 and SW 2

DIP SW 1	DIP SW 2	Punch Type
0	0	Japan
1	0	Europe
0	1	North America
1	1	North Europe

 $^{^*}$ 2: Please refer to "Lower Tray (B804 Only)" in the Service Manual for the "2000/3000 (Booklet) Finisher".

Finisher 1 Output Check: SP6124

6124	Finisher Output Check: Finisher 1 (Finisher D611/D612)
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1	Entrance Motor	Turn on the electrical components of the
2	Upper Feed Motor	finisher individually for test purposes.
3	Lower Feed Motor	
4	Exit Motor	
5	Knock Roller Motor	
6	Shift Motor	
7	Exit Guide Plate Open / Close Motor	
8	Tray Lift Motor	
9	Stack Roller Motor	
10	Jogger Motor	
11	Stack Feed-out Motor	Turn on the electrical components of the
12	Staple Moving Motor	finisher individually for test purposes.
13	Staple Skew Motor	
14	End Stapler Motor	
15	Upper Junction Gate Solenoid	
16	Lower Junction Gate Solenoid	
17	Knock Solenoid	
18	Trailing Edge Hold Solenoid	
19	Saddle Stitch Hold Solenoid	
20	Stack Junction Gate Open / Close	

21	Trailing Edge Fence Moving Motor	Turn on the electrical components of the
22	Saddle Stitch Staple Motor: Front	finisher individually for test purposes.
23	Saddle Stitch Staple Motor: Rear	
24	Folder Plate Motor	
25	Folder Roller Motor	
26	Clamp Roller Motor	
27	Punch Motor	
28	Punch Moving Motor	
29	Punch Registration Detection Motor	
30	Exit Jogger Motor: Front	
31	Exit Jogger Motor: Rear	
32	Exit Jogger Release Motor	

Finisher 2 Input Check: SP6122

6122	Finisher Input Check: Finisher 2 (Finisher D610)		
1	Entrance Sensor		
2	Proof Exit Sensor		
3	Shift Exit Sensor		
4	Staple Exit Sensor		
5	Tray Lower Sensor		
6	Tray Near Lower Sensor		
7	Stack Feed-out HP Sensor		
8	Jogger HP Sensor		
9	Shift HP Sensor		
10	Stapler Moving HP Sensor		

11	Staple HP Sensor	
12	Staple Cartfidge Sensor	
13	Staple Tray Paper Sensor	
14	Door Sensor	
15	Punch Unit Sensor	
16	Punch HP1 Sensor	
17	Punch Chad Full Sensor	
18	Paper Detection Sensor: Staple	
19	Paper Detection Sensor: Shift	
20	Stapler Cartridge Set Sensor	
21	Proof Full Sensor	
22	Staple Moving HP Sensor	
23	Stape Waste Hopper Sensor	
24	Pre-stack Tray Paper Sensor	
25	Hold HP Sensor	
26	Exit Guide HP Sensor	
27	Stapler Reverse Sensor	
28	Stapler Sensor	
29	Front Hold HP Sensor	
30	Rear Hold HP Sensor	
31	Knock Hold HP Sensor	
32	Reverse Drive HP Sensor	
33	Paper Sensor	
34	Tray Lower Sensor	
35	Punch HP 2 Sensor	
36	Shift Jogger Sensor	

37	Shift Jogger HP Sensor	
38	Shift Jogger Release HP Sensor	
39	Front Door Safety Switch	
40	Top Fence HP Sensor	
41	Bottom Fence HP Sensor	
42	Lower Tray Full Sn (Z-Folded Paper)	

Finisher 2 Output Check: SP6125

6125	Finisher Output Check: Finisher 2 (Finisher D610)		
1	Main Motor		
2	Shift Tray Exit Motor		
3	Proof Junction Gate SOL		
4	Shift Relay Motor		
5	Jogger Motor	Turn on the electrical components of the	
6	Stapler Moving Motor	finisher individually for test purposes. See " Finisher 2 Output Check: SP6125"	
7	Stapler Motor		
8	Punch Motor		
9	Stapler Solenoid		
10	Knock Roller Motor		

11	Stack Feed-out Motor	
12	Shift Motor	Turn on the electrical components of the finisher individually for test purposes. See "Finisher 2 Output Check: SP6125"
13	Staple Lift Motor	
14	Staple Exit Motor	
15	Exit Motor	
16	Hold Motor	
17	Pre-stack Solenoid	
18	Guide Solenoid	
19	Stapler Release Solenoid	
20	Front Hold Motor	
21	Rear Hold Motor	
22	Reverse Drive Motor	
23	Reverse Feed Motor	Turn on the electrical components of the finisher individually for test purposes. See "Finisher 2 Output Check: SP6125"
24	Exit Jogger Motor	
25	Exit Jogger Release Motor	
26	Jogger Top Fence Motor	
27	Jogger Bottom Fence Motor	

Folder Input Check: SP6309

6309	Fold Unit (D615) Input Check	
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1	Entrance Sensor	
2	Entrance JG HP Sensor	
4	Registration Sensor	
5	Dynamic Roller HP Sensor	
6	Registration Roller HP Sensor	
7	Fold Plate HP Sensor	
8	Jogger Fence HP Sensorr	
9	Positioning Roller HP Sensor	
10	1st Stopper Paper Sensor	
11	1st Stopper HP Sensor	
12	2nd Stopper Paper Sensor	
13	2nd Stopper HP Sensor	
14	3rd Stopper Paper Sensor	Turn on the electrical components of the finisher individually for test purposes.
15	3rd Stopper HP Sensor	
16	Direct-Send JG HP Sensor	
17	FM6 Pawl HP Sensor	
18	Top Tray Paper Path Sensor	
19	Top Tray Exit Sensor	
20	Horizontal Path Exit Sensor	
21	Top Ttay Full Sensor	
23	Door Open Switch	
24	Horizontal Path Paper Sensor	
25	Vertical Path Paper Sensor	
26	Bypass Entrance Paper Sensor	
27	Bypass Exit Paper Sensor	

Folder Output Check: SP6310

6310	Fold Unit (D615) Output Check	
1	Horizontal Transport Motor	
2	Top Tray Transport Motor	Turn on the electrical components of the finisher individually for test purposes.
3	Top Tray Exit Motor	
4	Dynamic Roller Transport Motor	
5	Registration Roller Transport Motor	
7	Entrance JG Motor	
8	1st Stopper Motor	
9	2nd Sopper Motor	
10	3rd Stopper Motor	
11	Dynamic roller Lift Motor	
12	Registration Roller Release Motor	
13	Fold Plate Motor	

14	Jogger Fence Motor	
15	Positioning Roller Motor	
16	Direct-Send JG Motor	
17	FM6 Pawl Motor	
18	1 st Fold Motor	
19	2nd Fold Motor	Turn on the electrical components of the finisher individually for test purposes.
20	Crease Motor	
21	Bypass JG Solenoid	
22	Exit JG Solenoid	
23	Top Tray JG Solenoid	
24	LE Stop Pawl Solenoid	
25	Reverse JG Solenoid	