imageRUNNER 2530/2525 Series

SERVICE MANUAL



Canon

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Rev. 9

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Introduction

Important Notices

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products.
This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

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This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products.
When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

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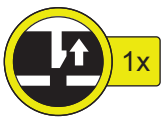
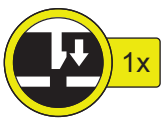
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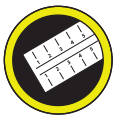
Caution

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

Explanation of Symbols

The following symbols are used throughout this Service Manual.

Symbols	Explanation	Symbols	Explanation
	Check.		Remove the claw.
	Check visually.		Insert the claw.
	Check a sound.		Push the part.

Symbols	Explanation	Symbols	Explanation
	Disconnect the connector.		Connect the power cable.
	Connect the connector.		Disconnect the power cable.
	Remove the cable/wire from the cable guide or wire saddle.		Turn on the power.
	Install the cable/wire to the cable guide or wire saddle.		Turn off the power.
	Remove the screw.		Loosen the screw.
	Install the screw.		Tighten the screw.
	Cleaning is needed.		Measurement is needed.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.
   In the diagrams, represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow indicates the direction of the electric signal.
   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.
2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.
   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.
All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine.

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Laser Safety

Since radiation emitted inside the machine is completely confined within protective housings and external covers, the laser beam cannot escape from the machine during any phase of user operation.
Therefore this machine is classified in Class 1 laser products that are regarded as safe during normal use according to International Standard IEC60825-1.

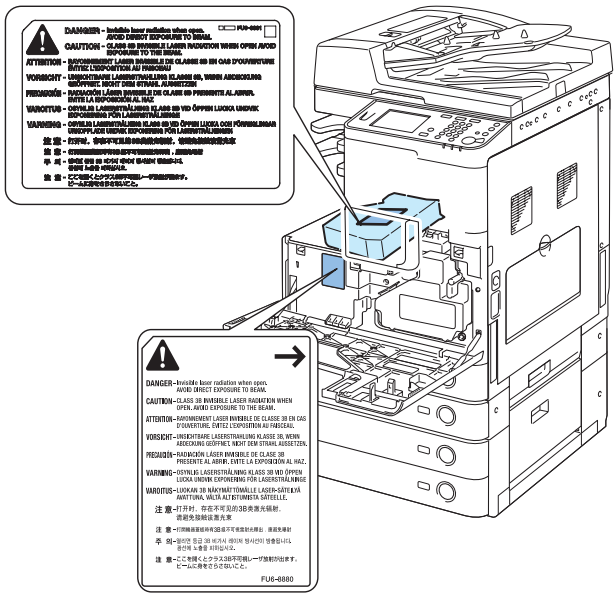
Handling of Laser System

This machine is classified in Class 1 laser products.
However, inside the machine, Class 3B laser beam is emitted and is hazardous when entered into an eye.
When servicing the area around the laser assembly, be sure to turn off the main power.
If you must service while the power is turned on, be sure to keep the followings:
- Do not use a screwdriver or tools that have a high level of reflectance in the laser path.
- Remove watches and rings before starting the work. (They can reflect the laser beam, possibly hitting an eye.)

The machine's covers that confine laser beam radiation are identified by means of warning label (Figure). If you must open the cover, be sure not to enter the laser beam into an eye during the work.
The following warnings are given to comply with Safety Principles (EN60950-1).

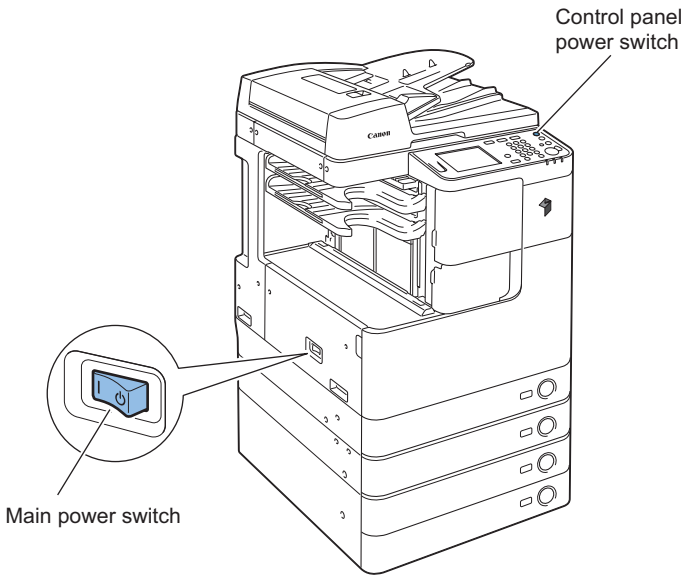
Diese Maschine ist der Klasse 1 der Laserprodukte zugeordnet.
Innerhalb der Maschine wird jedoch ein Laserstrahl der Klasse 3B ausgestrahlt und es ist gefährlich, wenn dieser Strahl in die Augen gerät.
Bei Servicearbeiten am oder in der Nähe des Laserteils zuerst das Hauptgerät abschalten.
Bei Servicearbeiten, die unbedingt bei eingeschaltetem Gerät durchgeführt werden müssen, auf jeden Fall die folgenden Vorsichtsmaßnahmen beachten.
- Keine stark reflektierenden Schraubenzieher oder ähnliche Werkzeuge direkt in den Lichtpfad des Laserstrahls bringen.
- Vor Beginn der Arbeit Uhren, Ringe und ähnliche Gegenstände abnehmen. (Reflektierende Laserstrahlen könnten sonst in die Augen geraten.)

Die Geräte-Abdeckungen, die Laserstrahlen reflektieren können, werden durch einen besonderen Warnaufkleber gekennzeichnet (siehe Bild).
Muss die Abdeckung geöffnet werden, besondere Vorsicht walten lassen, damit der Laserstrahl nicht in die Augen gerät.



Turn Power Switch ON

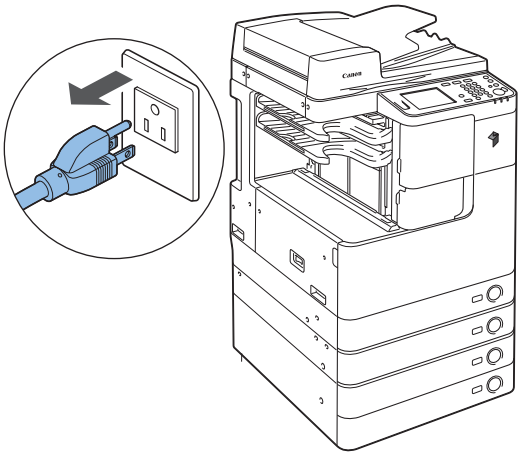
The machine is equipped with 2 power switches: main power switch and control energy saver key.
The machine goes on when the main power switch is turned on (i.e., other than in low power mode, sleep mode).



Power Supply

CAUTION:

1. As a general rule, do not use extension cords. Using an extension cord may result in a fire or electrical shock. If an extension cord must be used, however, use one for local rated voltage and over, untie the cord binding, and insert the power plug completely into the extension cord outlet to ensure a firm connection between the power cord and the extension cord.
2. The socket-outlet shall be installed near the equipment and shall be easily accessible.



Safety of Toner

About Toner

The machine's toner is a non-toxic material made of plastic, iron, and small amounts of dye.

CAUTION:

Do not throw toner into fire. It may cause explosion.

Toner on Clothing or Skin

- If your clothing or skin has come into contact with toner, wipe it off with tissue; then, wash it off with water.
- Do not use warm water, which will cause the toner to jell and fuse permanently with the fibers of the cloth.
- Toner is easy to react with plastic material, avoid contact with plastic.

Notes When Handling a Lithium Battery

CAUTION:
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.
DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

The following warnings are given to comply with Safety Principles (EN60950).

CAUTION:
Wenn mit dem falschen Typ ausgewechselt, besteht Explosionsgefahr.
Gebrauchte Batterien gemäß der Anleitung beseitigen.

警告

如果更換不正確之電池型式會有爆炸的風險

請依製造商說明書處理用過之電池

Notes Before Servicing

CAUTION:
At servicing, be sure to turn off the power source according to the specified steps and disconnect the power plug.

CAUTION:
Do not turn off the power switch when downloading is under way. Turning off the main power switch while downloading is under way can disable the machine.

Points to Note at Cleaning

CAUTION:
When performing cleaning using organic solvent such as alcohol, be sure to check that the component of solvent is vaporized completely before assembling.

Notes On Assembly/Disassembly

Notes on Assembly / Disassembly

Follow the items below to assemble/disassemble the device.

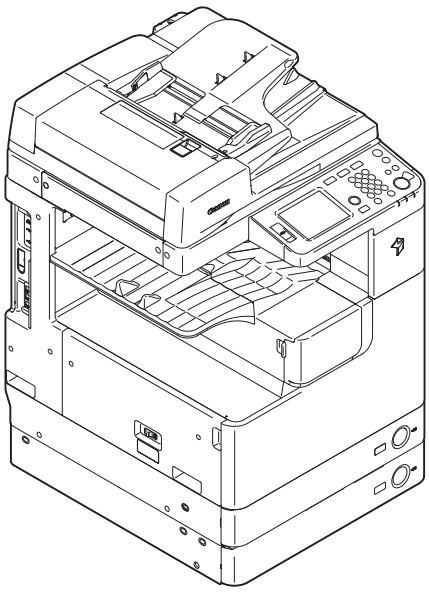
1. Disconnect the power plug to avoid any potential dangers during assembling/disassembling works.
2. If not specially instructed, reverse the order of disassembly to reinstall.
3. Ensure to use the right screw type (length, diameter, etc.) at the right position when assembling.
4. To keep electric conduction, binding screws with washers are used to attach the grounding wire and the varistor. Ensure to use the right screw type when assembling.
5. Unless it is specially needed, do not operate the device with some parts removed.
6. Never remove the paint-locked screws when disassembling.
7. During disassembly, reassembly or transportation of the printer, remove the cartridge if required.
   When the cartridge is out of the printer, put it in a protective bag even in a short period of time to prevent the adverse effect of light.
8. Ground yourself by touching the metal part of the printer before handling the PCB to reduce the possibility of damage caused by static electricity.
9. When you replace the part that the rating plate or the product code label is attached, be sure to remove the rating plate or the product code label and put it to the new part.

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Product Lineup

Host machine



■ Host machine configuration

Host machine configuration
Reader + DADF (standard or optional) + Printer

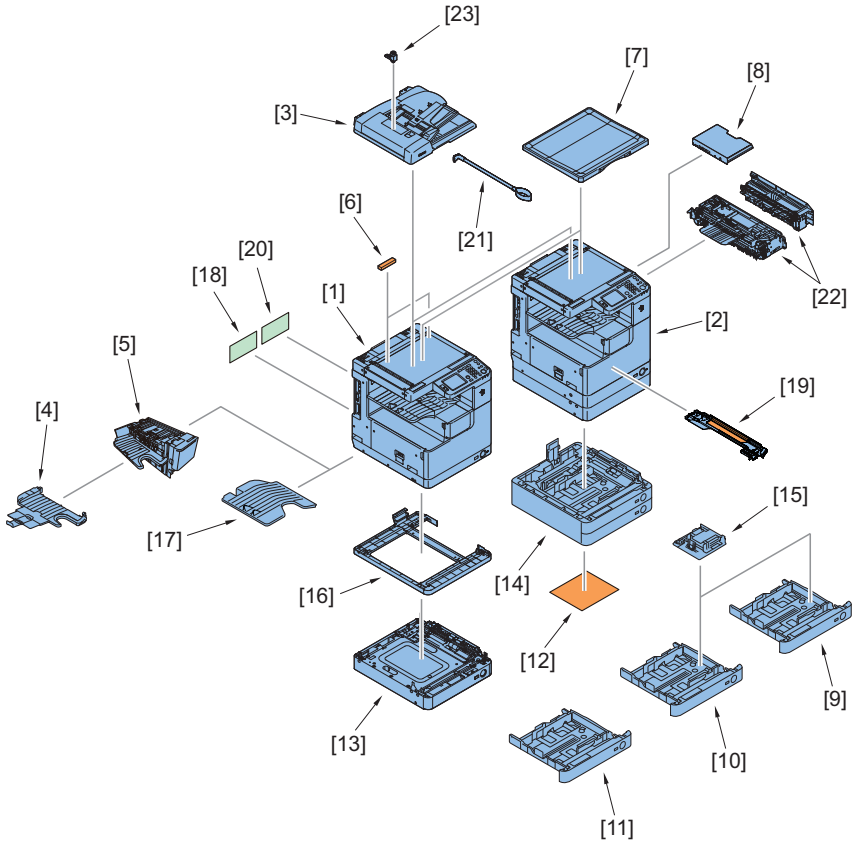
■ Model type

	imageRUNNER 2530	imageRUNNER 2525	imageRUNNER 2520
Print Speed	30ppm	25ppm	20ppm
Positioning	Target machine: imageRUNNER 2025/2022/2018 Series		

imageRUNNER 2530 / 2525 / 2520
Underlined (2-digit) numeric figures indicate print speed (ppm: print per minute).

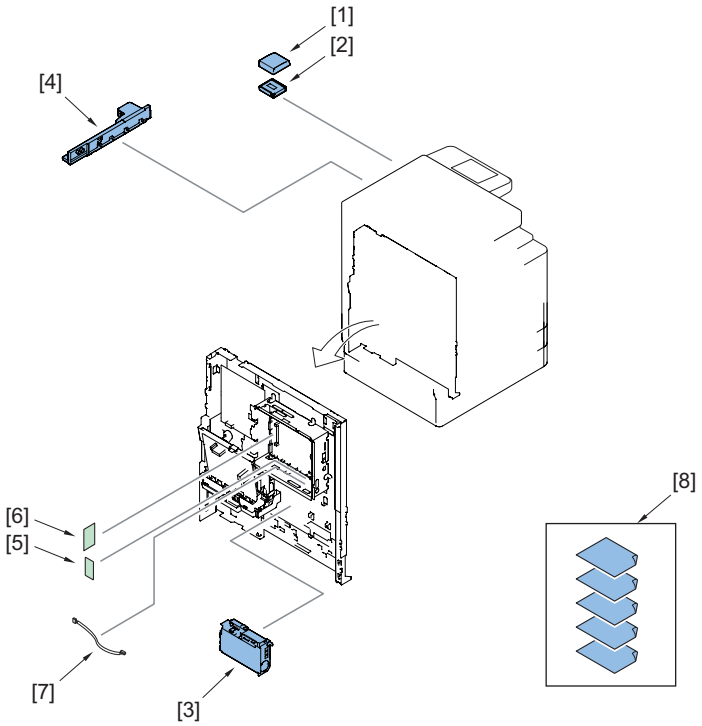
Option

■ Pickup delivery / image reading options



No.	Product name	Remarks and condition
1	imageRUNNER 2530/2525/2520	
2	imageRUNNER 2530/2525	
3	DADF-AB1	
4	Inner Finisher Additional Tray-B1	
5	Inner Finisher-B1	Built-in finisher Power Supply Unit-U1 is required.
6	Reader Heater Unit-H1	Cst Heater Kit-J1 is required.
7	Platen Cover Type P	
8	Document Tray-J1	
9	FL Cassette-AJ1	
10	FL Cassette-AK1	
11	FL Cassette-AL1	
12	Cassette Heater Unit-37	Cst Heater Kit-J1 is required.
13	Cassette Module-W1	Cassette Spacer-A1 is required when installing to 250 Sheets Cassette Model.
14	CST. Feeding Unit-AE1	Cassette Spacer-A1 is required when installing to 250 Sheets Cassette Model.
15	Envelope Feeder Attachment-D1	
16	Cassette Spacer-A1	
17	Inner 2Way Tray-G1	For host machine delivery additional tray.
18	Cst Heater Kit-J1	
19	Drum Heater-C1	Cst Heater Kit-J1 is required.
20	Power Supply Unit-U1	
21	ADF Access Handle-A1	
22	2 Way Unit-B1	
23	Stamp Unit-B1	

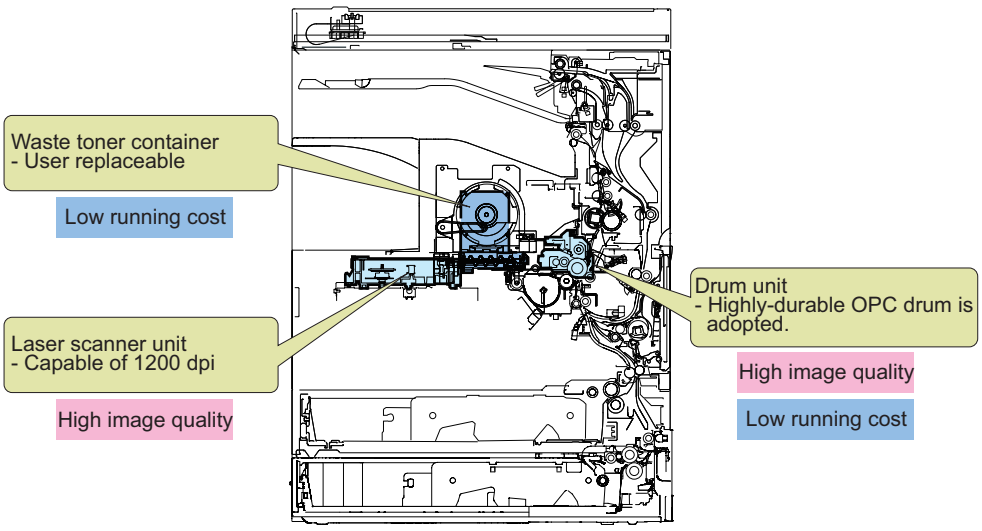
■ Function expanding option



No.	Product name	Remarks and condition
1	Card Reader-E1 or Card Reader-F1	Card Reader Attachment-D3 is required.
2	Card Reader Attachment-D3	
3	Super G3 Fax Board-AG1	
4	USB Application 3-Port Interface Kit-A1	
5	Serial Interface Kit-J2	
6	System Upgrade RAM-C1	
7	Copy Control Interface Cable-A1	
8	Barcode Printing Kit-B1	PCL Printer Kit-AF1 is required.
	PCL Printer Kit-AF1	512MB RAM should be installed. In the case of 256MB, System Upgrade RAM-C1 (512MB) is needed.
	PS Printer Kit-AF1	
	Color Send Kit-Y1	
	Color Send Searchable PDF Kit-C1	

Features

Product feature



Specifications

Specifications

Item	Specifications
Copyboard	Stream reading, original fixed reading
Body	Desktop
Light source type	LED (RGB)
Photosensitive medium	OPC drum (30 mm dia)
Image reading method	CIS
Reproduction method	Indirect electrostatic method
Exposure method	Laser exposure system
Charging method	Roller charge
Development method	Dry single component projection developing
Transfer method	By transfer roller
Separation method	Curvature and static eliminator
Pickup method	550 sheets cassette: Retard separation method 250 sheets cassette: Pad separation method Manual feed pickup tray: Pad separation method
Fixing method	On demand
Delivery method	Face down delivery (in-body delivery)
Reproduction ratio	25% to 400%
Drum cleaning method	By cleaning blade
Toner type	Magnetic negative charge toner
Toner replenish method	Toner cartridge
Toner level detection function	Yes
Top margin	2.5 -/+ 1.5 mm
Left margin	2.5 -/+ 1.5 mm
Non-image width (leading edge)	2.5 -/+ 1.5 mm
Non-image width (left edge)	2.5 -/+ 1.5 mm * Using the feeder: 2.5 -/+ 2.0 mm
Warm-up time	At power ON: 30 sec or less
Number of gradations	256 gradations
Reading resolution	600 dpi x 600 dpi
Writing resolution	1200 dpi x 1200 dpi
First print time	imageRUNNER 2530/2525: 5.4 sec or less imageRUNNER 2520: 6.4 sec or less
Paper type (Cassette 1/3/4)	Weight: 64 g/m^2 to 90 g/m^2 Type: Plain, Recycled, Color (64 g/m^2 to 80 g/m^2), 3-hole punch
Paper type (Cassette 2)	Weight: 64 g/m^2 to 90 g/m^2 Type: Plain, Recycled, Color (64 g/m^2 to 80 g/m^2), 3-hole punch, Envelopes* (No.10 (COM10), ISO-B5, Monarch, ISO-C5, DL) * The optional Envelope Feeder Attachment-D1 is required.
Paper type (Manual feed pickup tray)	Weight: 64 g/m^2 to 128 g/m^2 Type: Plain, Recycled, Color (64 g/m^2 to 80 g/m^2), 3-hole punch, Bond (75 g/m^2 to 90 g/m^2), Heavy Paper 1 (81 g/m^2 to 90 g/ m^2), Heavy Paper 2 (91 g/m^2 to 105 g/m^2), Heavy Paper 3 (106 g/m^2 to 128 g/m^2), Transparencies, Labels, Envelopes (No.10 (COM10), ISO-B5, Monarch, ISO-C5, DL)
Paper size (Cassette 1/3/4)	Standard size (A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LG, 279mmX432mm(11"X17"), STMTR,EXEC,8K,16K,16KR)
Paper size (Cassette 2)	Standard size (A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LG, 279mmX432mm(11"X17"), STMTR) Envelopes* (No.10 (COM10), ISO-B5, Monarch, ISO-C5, DL) * The optional Envelope Feeder Attachment-D1 is required.
Paper size (Manual feed pickup tray)	Standard size (A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LG, 279mmX432mm(11"X17"), STMTR) Free size (99 mm x 297 mm to 148 mm x 432 mm) Envelopes (No.10 (COM10), ISO-B5, Monarch, ISO-C5, DL)
Pickup capacity	550 sheets cassette: 550 sheets (80g/m^2) 550 sheets cassette: 250 sheets (80g/m^2) Manual feed pickup tray: 100 sheets (80g/m^2)

Item	Specifications
Duplex method	Through path duplex
Acoustic noise	imageRUNNER 2530: operation: 69.50 dB or less *1 / stand-by: 43.00 dB or less *2 imageRUNNER 2525: operation: 67.75 dB or less *1 / stand-by: 43.00 dB or less *2 imageRUNNER 2520: operation: 66.00 dB or less / stand-by: 43.00dB or less *2 *1 Except for china model. China model: 66.00 dB or less (operation) *2 Except for china model. China model: 45.00 dB or less (stand- by)
Ozone	Max: 0.035 ppm or less
Dimensions (W x D x H)	imageRUNNER 2530/2525: 565mm x 680mm x 806mm (with the platen cover) 565mm x 693mm x 896mm (with the feeder) imageRUNNER 2520: 565mm × 680mm × 681mm (with the platen cover and single cassette) 565mm × 693mm × 771mm (with the feeder and single cassette) 565mm × 680mm × 806mm (with the platen cover and double cassette) 565mm × 693mm × 896mm (with the feeder and double cassette)
Weight	Max (with the feeder, double cassette and 2 way unit): Approx. 77.5 kg Min (with the platen cover and single cassette): Approx. 50.5 kg

Power consumption

Item	Specifications
Power supply rating	imageRUNNER 2530/2525 (US): 120 - 127 V AC, 50Hz/60Hz, 6.9 A imageRUNNER 2520 (US): 120 - 127 V AC, 50Hz/60Hz, 6.2 A imageRUNNER 2530/2525/2520 (Except US): 220 - 240 V AC, 50Hz/60Hz, 3.3 A
Maximum power consumption	120 - 127 V model imageRUNNER 2530/2525 : Approx 1.473 kW imageRUNNER 2520 : Approx 1.238 kW 220 - 240 V model imageRUNNER 2520 : Approx 1.542 kW imageRUNNER 2530/2525 : Approx 1.345 kW
At the time of printing	120 - 127 V model iR2530/2525 (550-sheet 1st cassette type): Approx.580.1Wh(Reference) iR2530/2525/2520 (250-sheet 1st cassette type): Approx.492.7Wh(Reference) 220 - 240 V model iR2530/2525 (550-sheet 1st cassette type): Approx.643.1Wh(Reference) iR2530/2525/2520 (250-sheet 1st cassette type): Approx.580.3Wh(Reference)
At the time of sleep (Deep Sleep)	120 - 127 V model: Approx.1.0W or less(Reference) 220 - 240 V model: Approx.1.5W or less(Reference)

Weight / Size

Product name	Width (mm)	Depth (mm)	Height (mm)	Weight Approx. (kg)
imageRUNNER 2530/2525 (with the platen cover)	565	680	806	68 * with the single cassette
imageRUNNER 2530/2525 (with the feeder)	565	693	896	77.5 * with the double cassette and 2 way unit
imageRUNNER 2520 (with the platen cover)	565	680	681	50.5 * with the single cassette
imageRUNNER 2520 (with the feeder)	565	693	771	56 * with the double cassette and 2 way unit
DADF-AB1	565	544	126	7
Inner Finisher-B1	416	554	350	12.5
2 Way Unit-B1	444	550	236	2.5

Product name	Width (mm)	Depth (mm)	Height (mm)	Weight Approx. (kg)
Cassette Module-W1	565	680	97	12.8
CST. Feeding Unit-AE1	565	680	248	24
Inner 2Way Tray-G1	426	413	109	0.6
Card Reader-E1	88	100	32	0.295
Copy Card Reader-F1	96	88	40	0.2

Productivity (Print speed)

Size	Mode	Paper type	Paper basis weight (g/m2)	imageRUNNER					
				2530		2525		2520	
				Cassette	Manual feed pick-up tray	Cassette	Manual feed pick-up tray	Cassette	Manual feed pick-up tray
A4	1-sided	Plain paper	64-90	30	30	25	25	20	20
		Heavy Paper	91-105	-	25	-	25	-	20
			106-128	-	7	-	7	-	7
	2-sided (with the 2 way unit)	Plain paper	64-80	28	28	23	23	18	18
		Heavy Paper	81-105	-	-	-	-	-	-
			106-128	-	-	-	-	-	-
	2-sided (without the 2 way unit)	Plain paper	64-80	19	19	16	16	13	13
		Heavy Paper	81-105	-	-	-	-	-	-
			106-128	-	-	-	-	-	-
A3	1-sided	Plain paper	64-90	15	15	15	15	15	15
		Heavy Paper	91-105	-	12	-	12	-	12
			106-128	-	6	-	6	-	6
	2-sided (with the 2 way unit)	Plain paper	64-80	14	14	14	14	14	14
		Heavy Paper	81-105	-	-	-	-	-	-
			106-128	-	-	-	-	-	-
	2-sided (without the 2 way unit)	Plain paper	64-80	9	9	9	9	9	9
		Heavy Paper	81-105	-	-	-	-	-	-
			106-128	-	-	-	-	-	-

Paper type

For free size paper, refer to the table below.

Type	Feeding direction (mm)	Width direction (mm)
Free size	148 to 432	99 to 297

■ Pickup

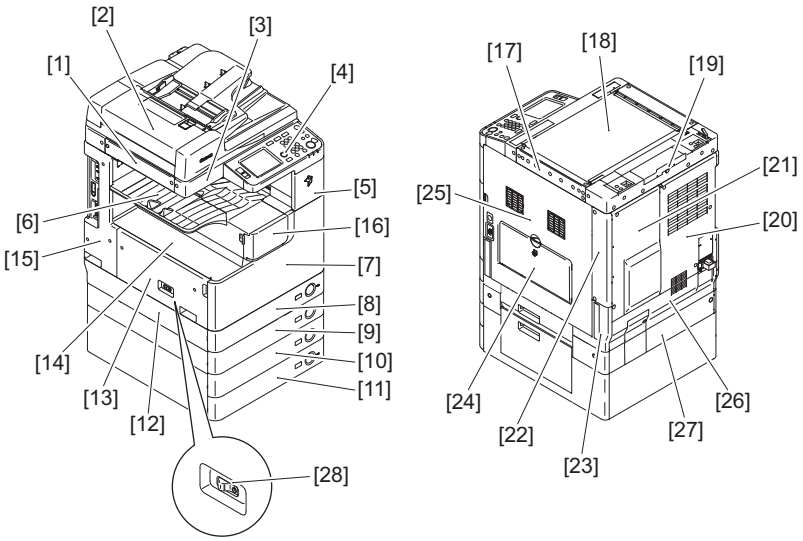
Usable paper types are shown.

Paper type (g/m^2)	Size	Manual feed pick-up tray	Cassette 1	Cassette 2		Cassette 3	Cassette 4
				with the envelope feeder	without the envelope feeder		
Plain (64 to 90) Color (64 to 90) Recycled (64 to 90) Bond (75 to 90)	A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LGL, 279mmX432mm (11"X17"), STMTR	Yes	Yes	No	Yes	Yes	Yes

Paper type (g/m^2)	Size	Manual feed pick-up tray	Cassette 1	Cassette 2		Cassette 3	Cassette 4
				with the envelope feeder	without the envelope feeder		
Heavy Paper (91 to 128)	A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LGL, 279mmX432mm (11"X17"), STMTR	Yes	No	No	No	No	No
Labels	A4, B4, LTR	Yes	No	No	No	No	No
Transparencies	A4, LTR	Yes	No	No	No	No	No
3-hole punch	LTR	Yes	Yes	Yes	Yes	Yes	Yes
Envelopes	No.10 (COM10), ISO-B5, Monarch, ISO-C5, DL	Yes	No	Yes	No	No	No
Free size	99 mm x 297 mm to 148 mm x 432 mm	Yes	No	No	No	No	No

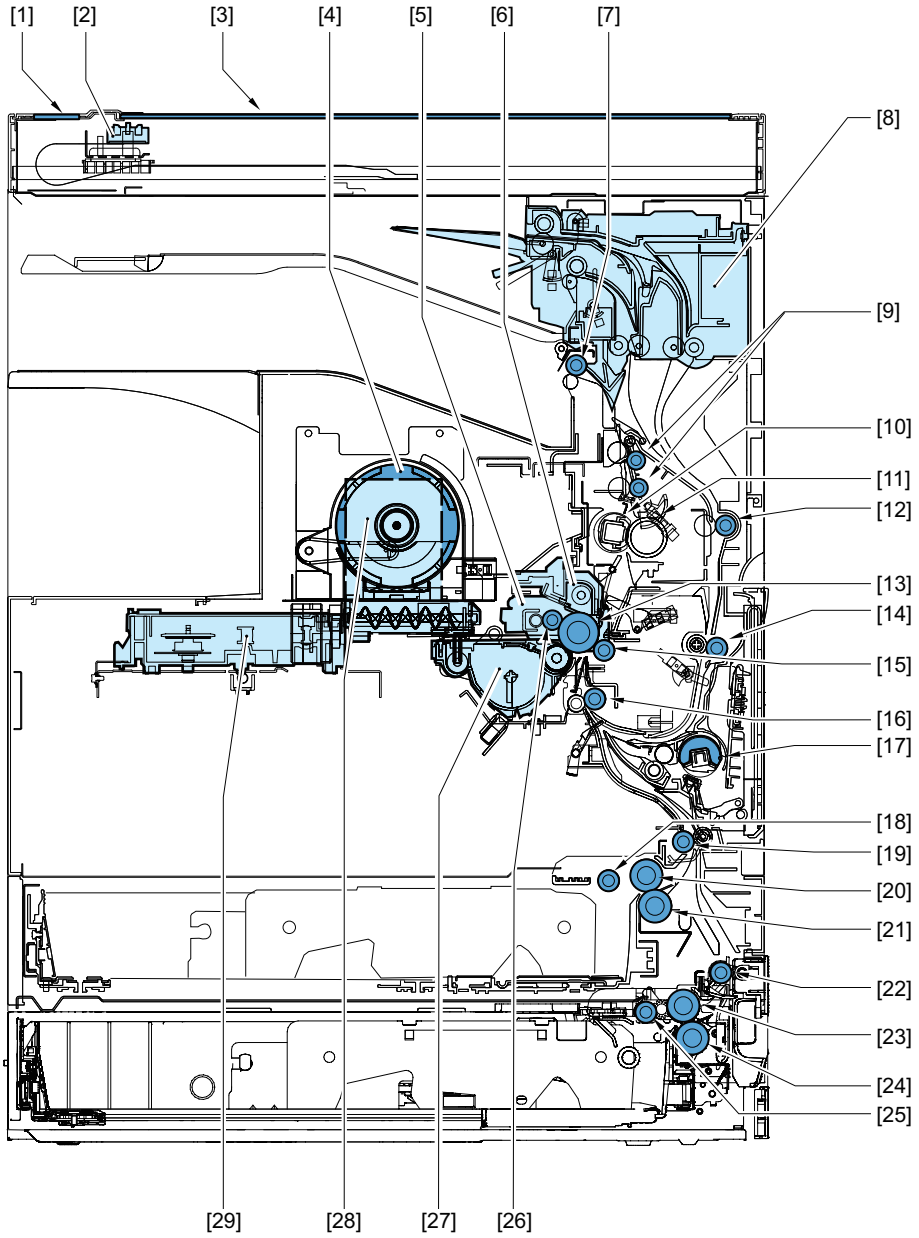
Name of Parts

External View



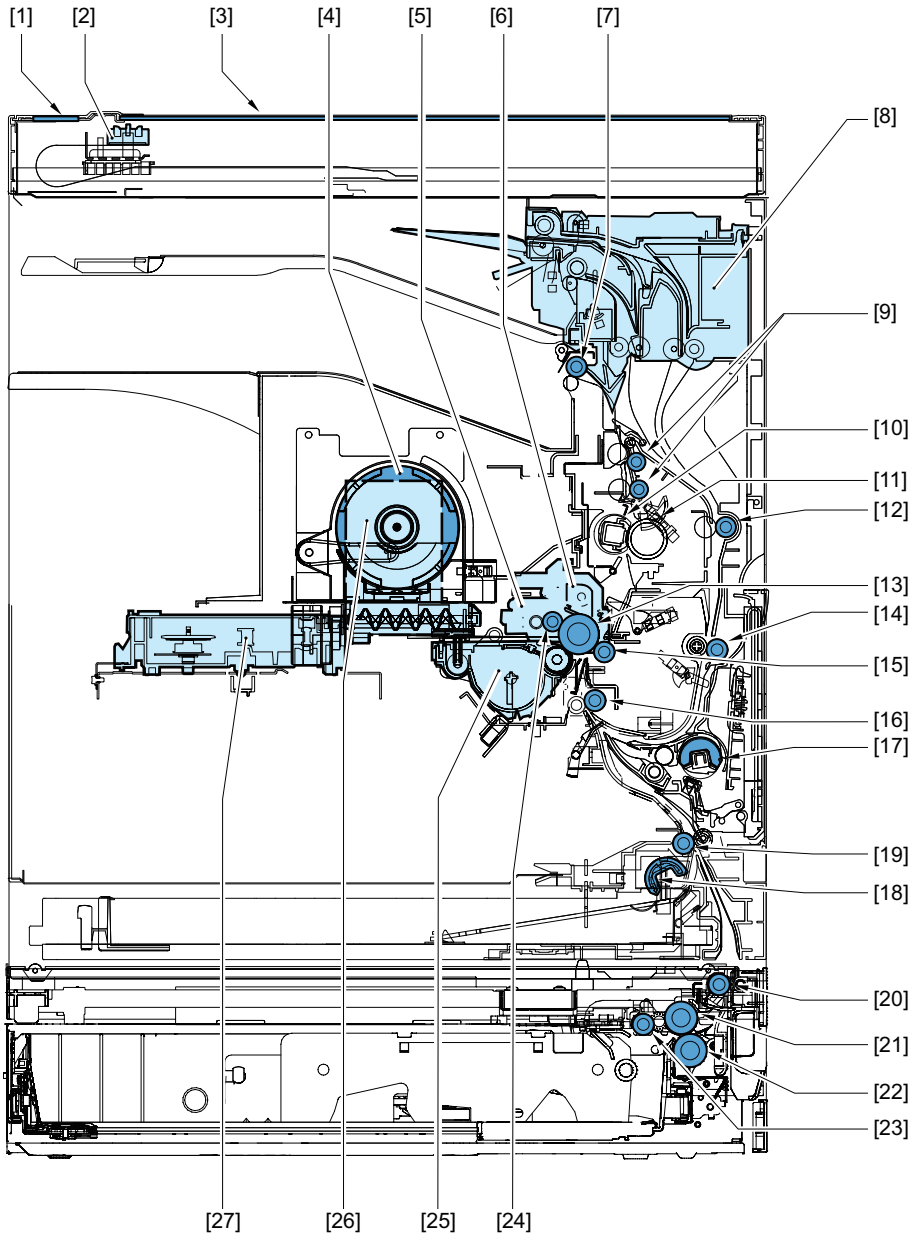
No.	Part name	No.	Part name
[1]	Reader left cover	[15]	Rear left cover
[2]	DADF (standard or optional)	[16]	Toner supply cover
[3]	Reader front cover	[17]	Reader right cover
[4]	Control panel	[18]	Platen glass
[5]	Support cover	[19]	Reader rear cover
[6]	Delivery tray	[20]	Rear cover (right)
[7]	Front cover	[21]	Rear cover (left)
[8]	Cassette 1	[22]	Right cover (upper rear)
[9]	Cassette 2 (standard or optional)	[23]	Right cover (lower rear)
[10]	Cassette 3 (option)	[24]	Manual feed pickup tray
[11]	Cassette 4 (option)	[25]	Right cover
[12]	Lower left cover	[26]	Lower rear cover
[13]	Left cover	[27]	Cassette 2 rear cover
[14]	Inside base cover	[28]	Main power switch

Cross Sectional View (550-sheet 1st cassete model)



No.	Part Name	No.	Part Name
[1]	CIS unit	[16]	Registration roller
[2]	ADF reading glass	[17]	Manual feed pickup roller
[3]	Platen glass	[18]	Pickup roller (cassette 1)
[4]	Toner bottle	[19]	Vertical path roller 1
[5]	Drum unit	[20]	Feed roller (cassette 1)
[6]	Drum cleaning unit	[21]	Separation roller (cassette 1)
[7]	Delivery roller	[22]	Vertical path roller 2
[8]	2 way unit	[23]	Feed roller (cassette 2)
[9]	Fixing outlet roller	[24]	Separation roller (cassette 2)
[10]	Fixing film unit	[25]	Pickup roller (cassette 2)
[11]	Pressure roller	[26]	Primary charging roller
[12]	Duplex feed roller 1	[27]	Developing unit
[13]	Photosensitive drum	[28]	Sub hopper
[14]	Duplex feed roller 2	[29]	Laser scanner unit
[15]	Transfer roller		

Cross Sectional View (250-sheet 1st cassette model)

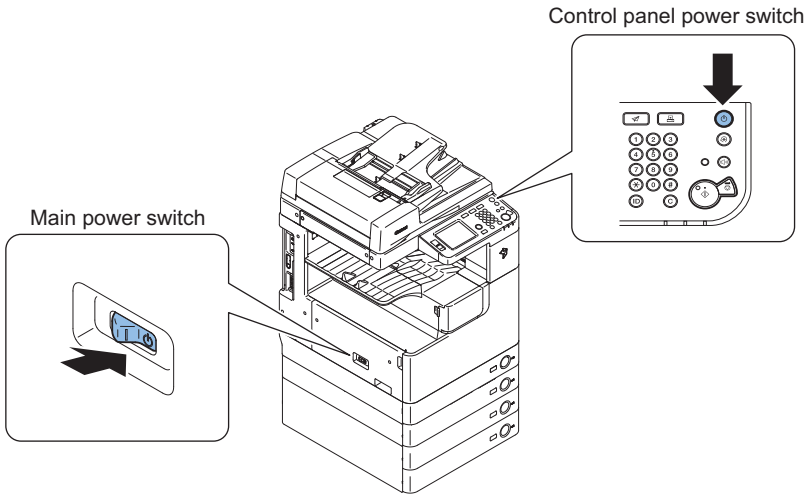


No.	Part Name	No.	Part Name
[1]	CIS unit	[16]	Registration roller
[2]	ADF reading glass	[17]	Manual feed pickup roller
[3]	Platen glass	[18]	Pickup roller (cassette 1)
[4]	Toner bottle	[19]	Vertical path roller 1
[5]	Drum unit	[20]	Vertical path roller 2
[6]	Drum cleaning unit	[21]	Feed roller (cassette 2)
[7]	Delivery roller	[22]	Separation roller (cassette 2)
[8]	2 way unit	[23]	Pickup roller (cassette 2)
[9]	Fixing outlet roller	[24]	Primary charging roller
[10]	Fixing film unit	[25]	Developing unit
[11]	Pressure roller	[26]	Sub hopper
[12]	Duplex feed roller 1	[27]	Laser scanner unit
[13]	Photosensitive drum		
[14]	Duplex feed roller 2		
[15]	Transfer roller		

Operation

Power Switch

■ Types of power switch



This machine is equipped with the Main Power Switch and Control Panel Power Switch.

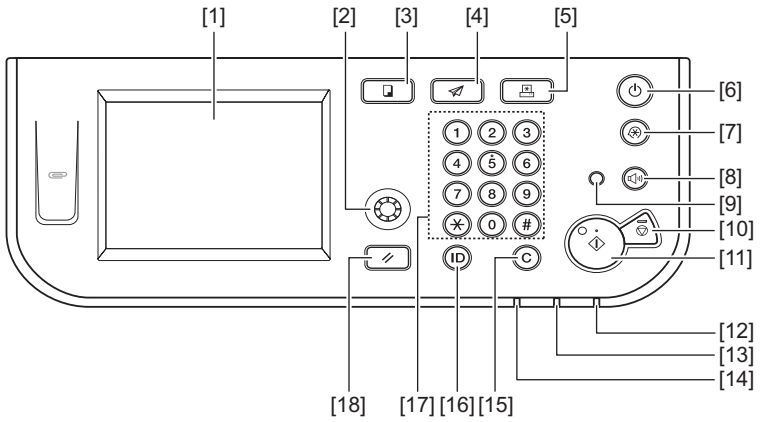
1. Main Power Switch
   This switch is used to turn OFF / ON the power of host machine.

2. Control Panel Power Switch
   This switch is to shift the machine to power-save mode or to restore it to normal mode.

■ How to turn ON / OFF the power and points to note

- To turn off the power, turn off the Main power Switch. (Conventional shutdown sequence operation is not required.)
- After power-off (After the Main power Switch is turned off), do not reactivate the Main power Switch until a screen disappears.
- do not turn off the power while download is processing.

Control Panel



No.	Part name	No.	Part name
[1]	Touch panel display	[10]	Stop key
[2]	Display Contrast dial	[11]	Start key
[3]	COPY key	[12]	Main Power Indicator
[4]	SEND key	[13]	Error Indicator
[5]	SCAN/OPTIONS key	[14]	Processing/Data Indicator
[6]	Control Panel Power Switch (Sub Power Supply)	[15]	Clear key

No.	Part name	No.	Part name
[7]	Additional Function key	[16]	Log in/Out key
[8]	Volume Control key	[17]	Numeric keys
[9]	Counter Check key	[18]	Reset key

■ Main Menu

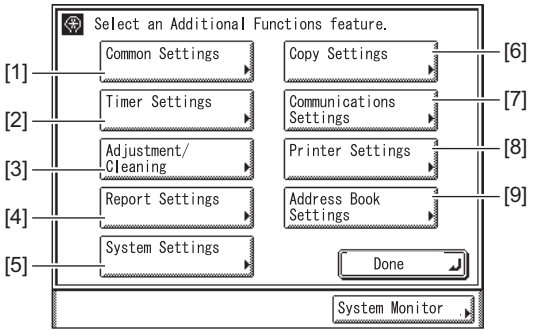
Functions	Key	Location
Copy	COPY key	Control Panel
Send or Fax	SEND key	
Remote Scan	SCAN/OPTIONS key	
System Monitor	[System Monitor]	Touch Panel Display

- The Send function is available only when the Color Send Kit-Y1 is activated.
- The Fax function is available only when the Super G3 Fax Board-AG1 is activated.

● Difference of main menu

imageRUNNER 2030/2025/2022/2018 Series	imageRUNNER 2530/2525/2520 Series
Copy	Copy
Send or Fax	Send or Fax
Scan	Scan or Direct print
System Monitor	System Monitor

■ Settings / Registration menu



[1]	Common Settings	[6]	Copy Settings
[2]	Timer Settings	[7]	Communications Settings
[3]	Adjustment/Cleaning	[8]	Printer Settings
[4]	Report Settings	[9]	Address Book Settings
[5]	System Settings		

● Difference of Settings / Registration menu

imageRUNNER 2030/2025/2022/2018 Series	imageRUNNER 2530/2525/2520 Series
Common Settings	Common Settings
Timer Settings	Timer Settings
Adjustment/Cleaning	Adjustment/Cleaning
Report Settings	Report Settings
System Settings	System Settings
Copy Settings	Copy Settings
Communications Settings	Communications Settings
Printer Settings	Printer Settings
Address Book Settings	Address Book Settings

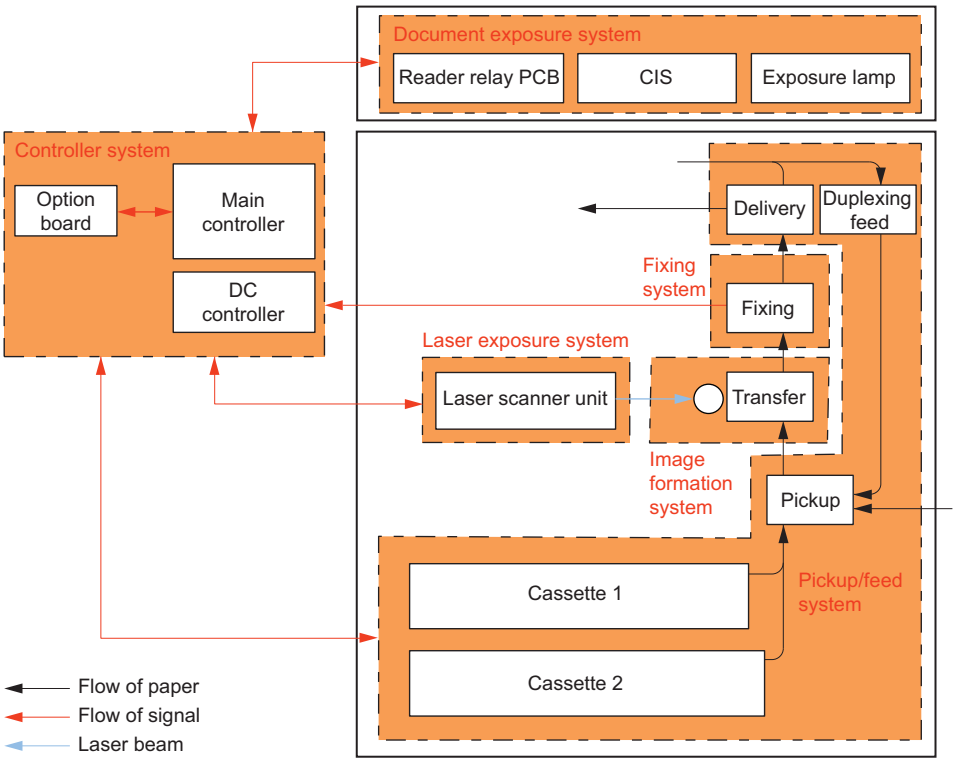
2 Technical Explanation

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Original Exposure System.....23
Controller System.....36
Laser Exposure System.....47
Image Formation System.....53
Fixing System.....66
Pickup/Feed System.....76
Embedded RDS.....97

Basic Configuration

Functional Configuration

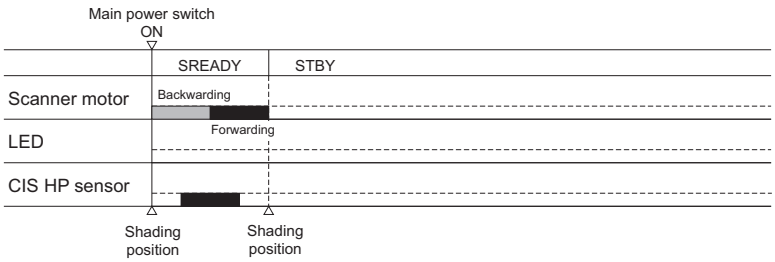
The machine may broadly be divided into the following functional system blocks; document exposure system block, controller system block, laser exposure system block, image formation system block, fixing system block and pickup/feed system block.



Basic Sequence

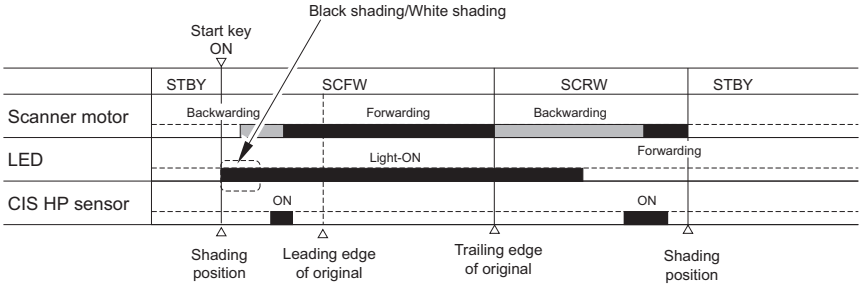
■ Sequence at Power-On

- Reader



■ Print sequence

- Reader (Book mode, 1 original)


Black shading/White shading
Start key ON
STBY
SCFW
SCRW
STBY
Scanner motor
Backwarding
Forwarding
Backwarding
LED
Light-ON
Forwarding
CIS HP sensor
ON
ON
Shading position
Leading edge of original
Trailing edge of original
Shading position

Original Exposure System

Overview

■ Specifications/controls/functions

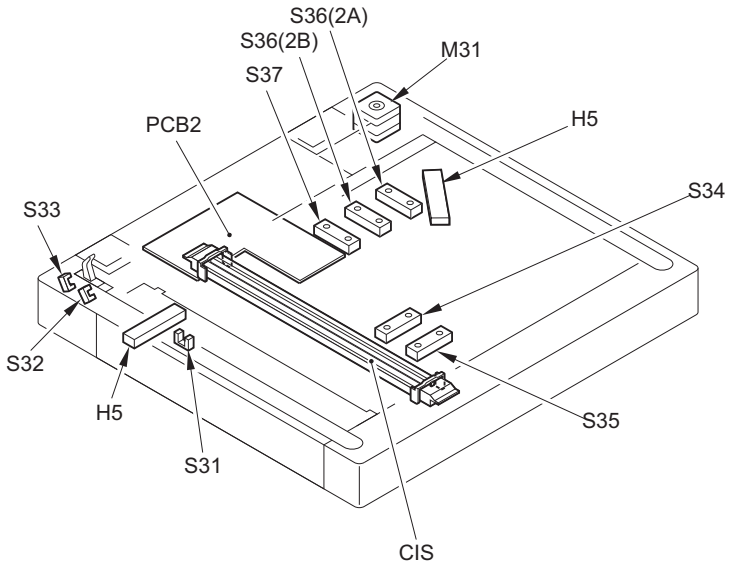
The major specifications, controls and functions of the original exposure system are described below.

Item		Specification/function
Original exposure		LED
Original scan	In book mode	Original scan is performed by moving the contact image sensor (CIS).
	In ADF mode	Original stream reading is performed with the contact image sensor (CIS) fixed.
Read resolution		B/W: 600 dpi (main scanning) x 600 dpi (sub scanning) (Color SEND): 300 dpi (sub scanning)
Gradation		256 gradation
Carriage position detection		Contact image sensor (CIS) HP sensor (S31)
Magnification	Magnification	25% to 200%
	Main scanning direction	Image is processed on main controller PCB
	Sub scanning direction	In book mode: speed change by carriage travel, image process on main controller PCB *1 In ADF mode: original feed speed change, image process on main controller PCB *1
Lens		Rod lens array
CMOS sensor		Number of lines:1 Number of pixels: Total 7488 (incl. 7276 effective pixels) Maximum original scan width: 297mm
CIS drive control		Drive control by reader motor (M31)
Original size detection	In book mode	Main scanning direction: by reflection sensor (AB/INCH) Sub scanning direction: by reflection sensor (AB/INCH)
	In ADF mode	Main scanning direction: by photo interrupter on DADF Sub scanning direction: by photo interrupter on DADF

*1 Controls differ depending on magnifications. Refer to [Magnifications] for more information.

■ Major Components

Following shows major components of document exposure system.

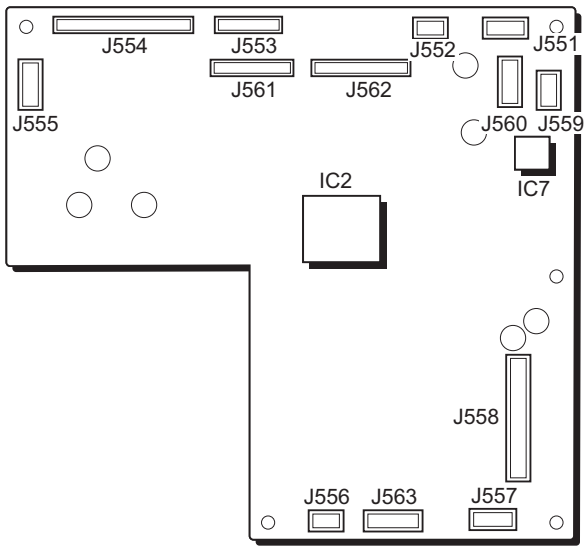


Item	Notation	Specification/function
Scanner motor	M31	Pulse motor: controls the carriage drive

Item	Notation	Specification/function
CIS HP sensor	S31	Detects CIS home position
Copyboard Cover Open/Closed Sensor 0	S32	Ends original size identification with the copy board cover at 5 deg
Copyboard Cover Open/Closed Sensor 1	S33	Detects the copyboard cover open/close. Starts original size identification with the copy board cover at 30 deg.
Original Size Sensor 0	S34	Helps identify original size (AB, INCH/AB/K, INCH/A)
Original Size Sensor 1	S35	Helps identify original size (AB, INCH/AB/K, A)
Original Size Sensor 2A	S36	Helps identify original size (AB, INCH/AB/K, A)
Original Size Sensor 2B	S36	Helps identify original size (INCH/A)
Original Size Sensor 3	S37	Helps identify original size (AB, INCH/AB/K, INCH/A, A)
CIS unit	-	Indirect exposure by LED (LED & photoconductive body)
Reader Heater	H5	Prevents condensation on the copyboard glass
Reader relay PCB	PCB2	Controls the reader unit drive and image process

■ Reader relay PCB

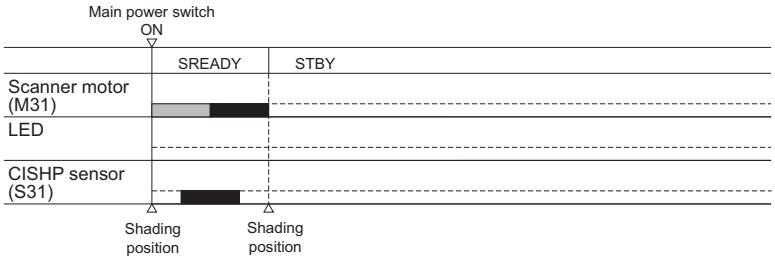
The function configuration of reader relay PCB is described below.

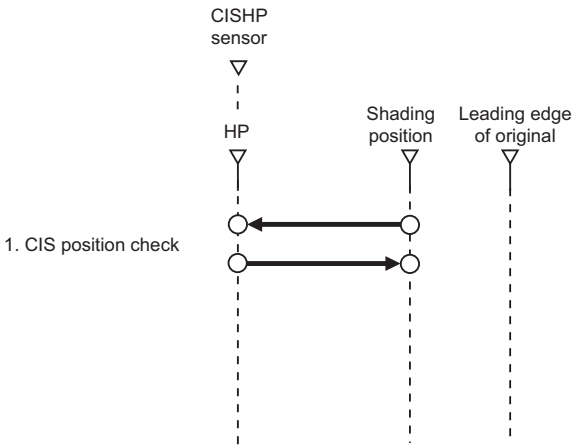


Jack No	Description
J551	Receives power from the machine (printer unit)
J552	Communication with main controller PCB
J553	Communication with main controller PCB
J554	Communication with main controller PCB
J555	Connection to copyboard cover open/close sensor
J556	Connected to the contact image sensor (CIS) HP sensor.
J557	Connection to original size sensor (2A/2B/3)
J558	Connected to the contact image sensor (CIS) sensor.
J559	Connection to Scanner motor
J560	Power supply to DADF
J561	Communication with DADF
J562	Communication with DADF
J563	Connection to original size sensor (0/1)

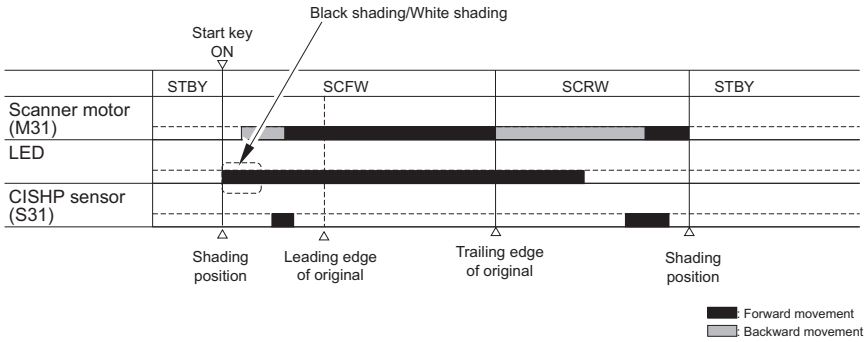
■ Basic Sequence

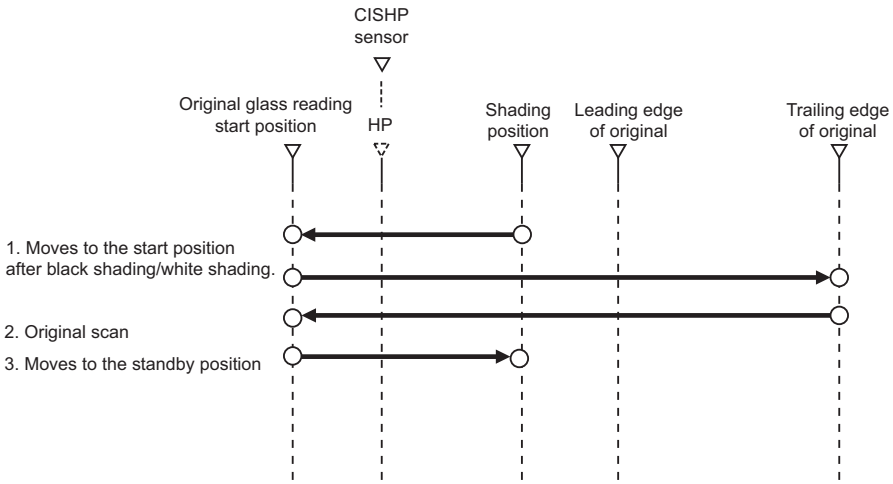
● Basic Sequence at Power-On



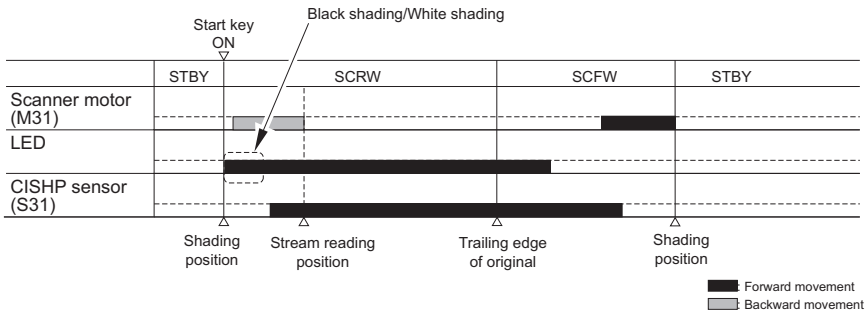


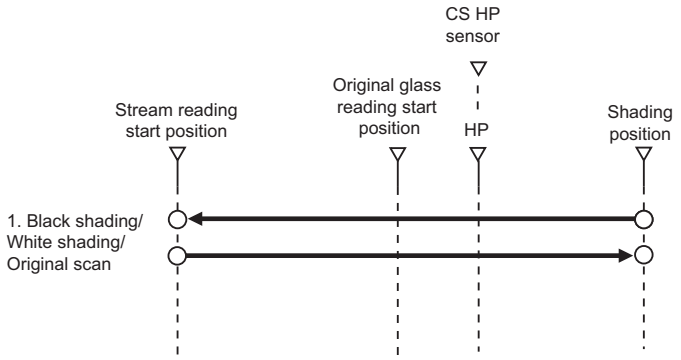
● Basic Sequence at Start Key ON (book mode/1 original)





● Basic Sequence at Start Key ON (ADF mode/1 original)



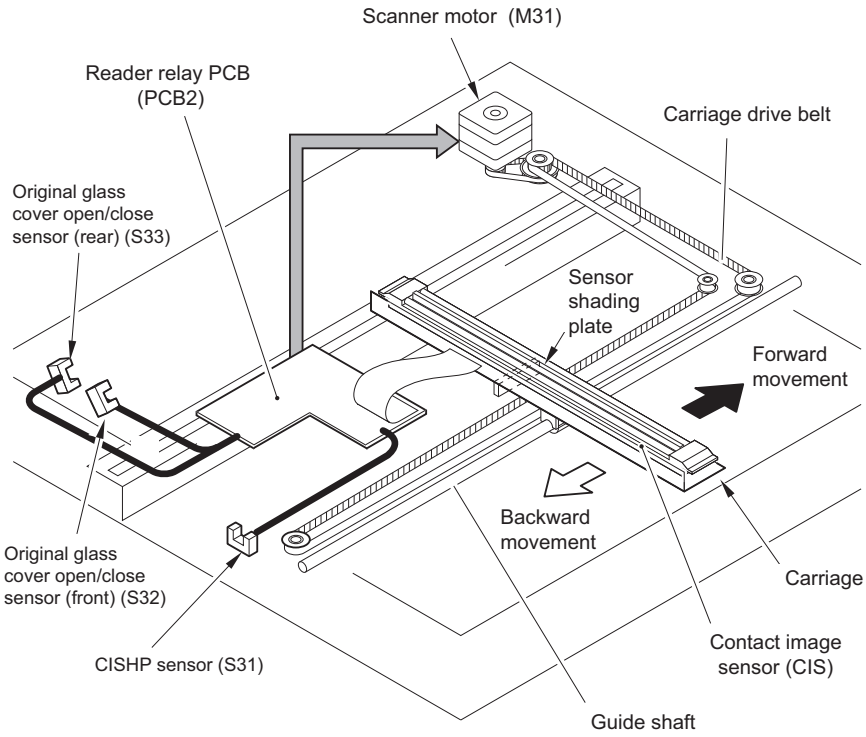


Controls

■ Controlling the Scanner Drive System

● Overview

Parts configuration of scanner drive is described below.

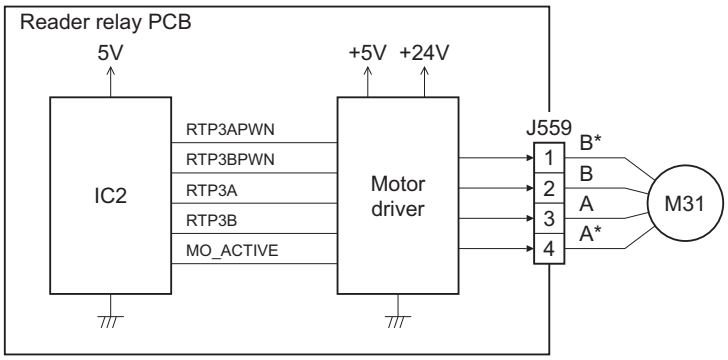


- Scanner motor (M31) drive signal
  Turns on/off the motor and controls its direction/speed of rotation.
- Contact image sensor (CIS) HP sensor (S31) signal
  Detects that the contact image sensor (CIS) is at the home position.

- Copyboard cover open/closed sensor (front: S32/rear: S33) detection signal
  Detects the open/close status of the copyboard cover

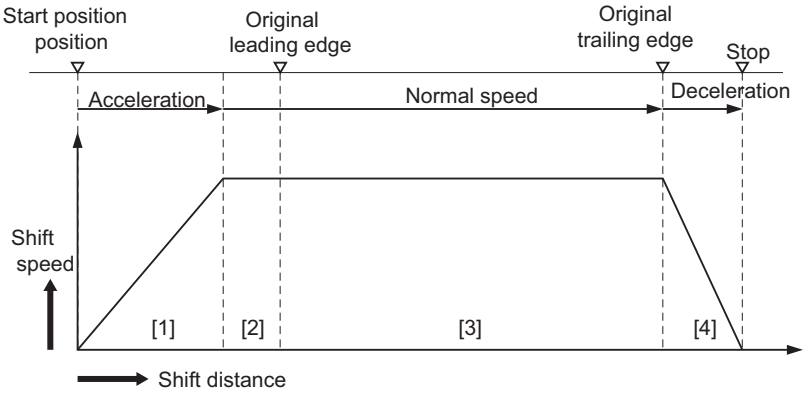
● Scanner Motor Control

Scanner motor driver turns on/off the motor and controls its direction/speed of rotation according to the signals from CPU.



NOTE:
The scan speed of this machine is as follows:
Copy (100%): 123 mm/sec
Color send (300 dpi x 300 dpi): 123 mm/sec or 61.5 mm/sec

1. Forward Movement during Image Scan
   During image scan, operation of the contact image sensor (CIS) is controlled by controlling the motor as shown below.



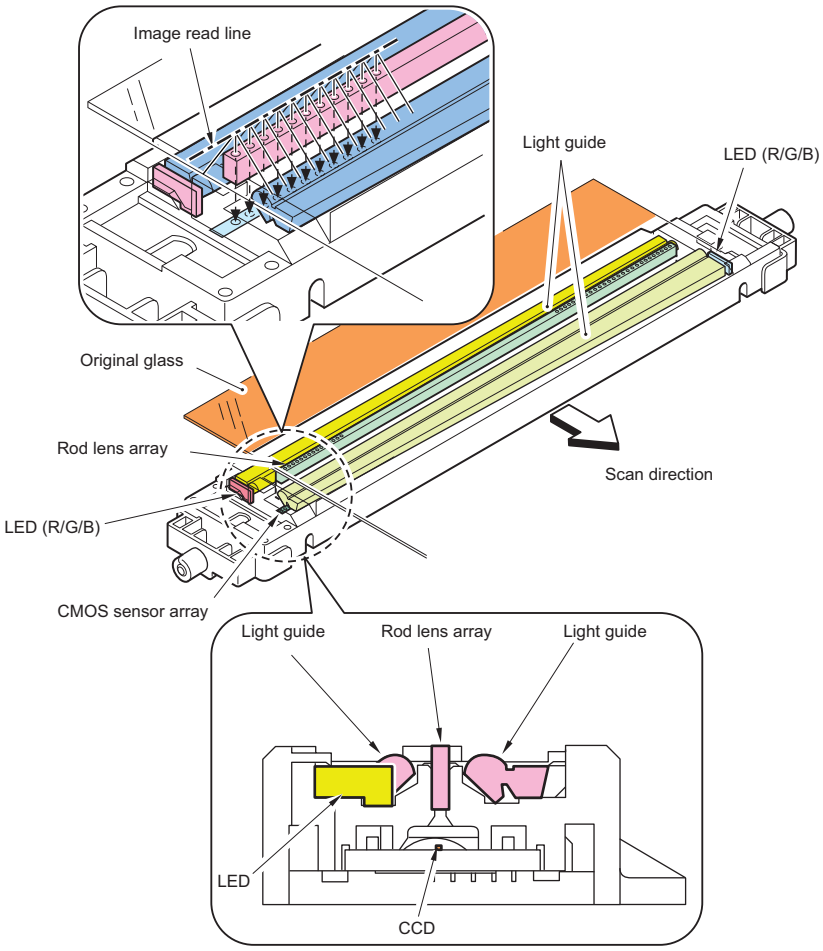
[1]Acceleration area: Accelerates until a speed suited to the selected mode is reached
[2]Run-up speed area: Run-up margin to ensure a stable speed.
[3]Image reading area: Reads an image at a specific speed.
[4]Deceleration area: Decelerates and stops promptly once the image end is reached.

2. Backward Movement after Image Scan
   After image scan, the carriage moves back to the contact image sensor (CIS) shading position at the constant speed (123 mm/sec).

■ Contact Image Sensor (CIS)

● Outline

The original is exposed to light and read using the contact image sensor (CIS) to read the image on a line-by-line basis.



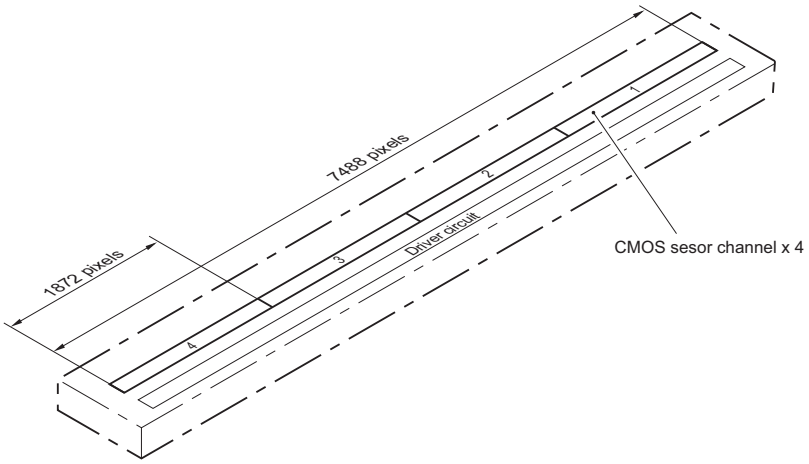
Component	Function
LED	Illuminates the original.
Light guide	Illuminates the entire image line with the LED light.
Rod lens array	Collects the light reflected by the original.
CMOS sensor array	Receives the light that passed through the rod lens array.

● Analog Control Performed by the CIS

The flow of analog image processing performed by the contact image sensor (CIS) is as follows:

1. The light reflected by the original is collected by the rod lens array.
2. The light is received by the CMOS sensor array.
3. The CMOS sensor array converts the received light to an electric signal and outputs it.

The CMOS sensor array consists of four channels (units).
Each channel is provided with an output correction table to output an image signal after performing gain correction for the input brightness signal.



■ Enlargement/Reduction

● Magnifications in Main Scanning Direction

- In book mode/ADF mode
  An image is read at 100% in main scanning direction. Magnification variation and its data process are controlled on main controller PCB.

● Magnification Change in Horizontal Scan Direction

In the horizontal scan direction, magnification is changed as follows depending on the selected magnification rate:

1. When magnification is reduced to 50-99%
   - In the Book mode
     Data is processed on the main controller PCB with the original scan speed held at 61.5 mm/sec or 123 mm/sec.
   - When the ADF is used
     The original feed speed is changed within the range of 61.5 mm/sec or 123 mm/sec to 246 mm/sec depending on the selected magnification rate. Data is not processed on the main controller PCB.
2. When magnification is increased to 100-200%
   The original scan speed (in the Book mode)/original feed speed (when the ADF is used) is changed within the range of 123 mm/sec to 61.5 mm/sec depending on the selected magnification rate. Data is not processed on the main controller PCB.

■ Detecting the Size of Originals

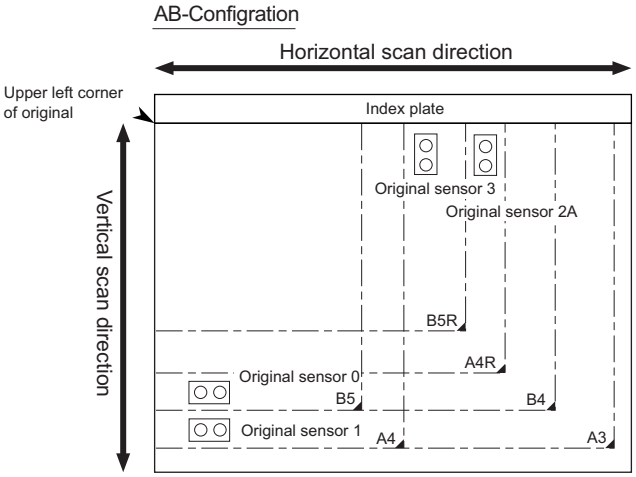
● Overview

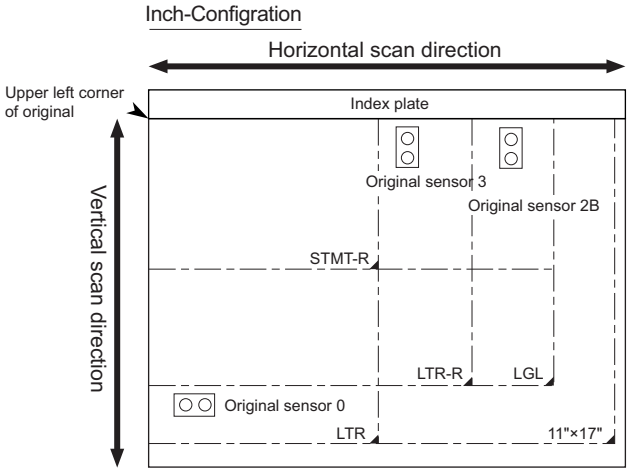
The original size is identified by the combination of presence and absence of output levels of the reflection type sensors as summarized in the tables below.

- Absence of paper: The light reflected from the reflection type sensor changes when the copyboard cover is open/close.
- Presence of paper: The light reflected from the reflection type sensor does not change when the copyboard cover is open/close.

This machine is provided with the following sensors. Locations of the sensors are shown below.

- Vertical scan direction: Reflection type photo sensors (2 locations for AB; 1 location for Inch)
- Horizontal scan direction: Reflection type photo sensors (2 locations for AB; 2 locations for Inch)

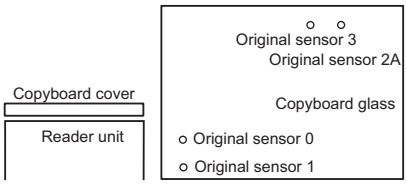




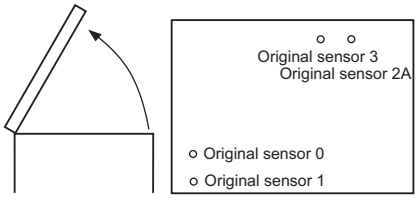
● Outline of Original Size Detection

- In the BOOK mode
  One sheet of original (A4R) is set and the copyboard cover (or ADF) is closed.

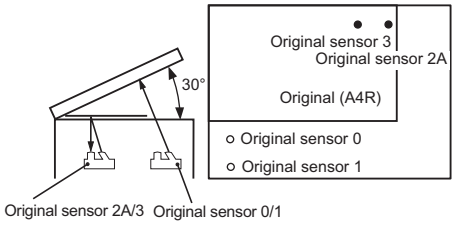
1. Standby state
   Original sensor: Turns off.



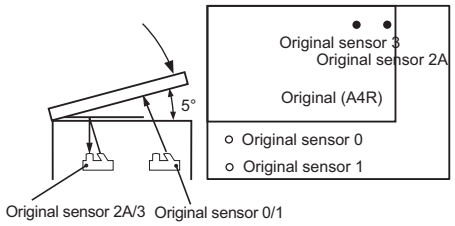
2. The copyboard cover opens (at an angle of more than 30 deg).
   Original sensor: Turns off.



3. The copyboard cover is closed (at an angle of 30 deg).
   Original sensor: Turns on and original size identification process 1 is performed.



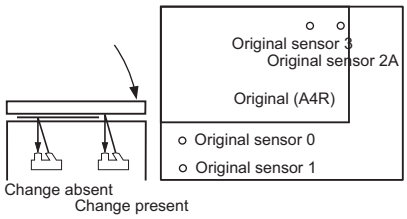
4. The copyboard cover is closed (at an angle of more than 5 deg but less than 30 deg)
   Original sensor: Turns on and original size identification process 2 is performed.



5. The original cover is closed (at an angle of 5 deg or less)
   The original size is identified.
   Original sensor: Turns off.

In identifying the original size, the data obtained in the original size identification process 1 is compared with the data obtained in the original size identification process 2 to check whether these two pieces of data are identical.
Note that a wrong original size may be identified because the sensor output level does not change in the following cases:

- When the original is A3-sized black
- When the original is a book (its thickness does not allow the copyboard cover to close fully, making it difficult to detect the sensor level change).
- When the copyboard cover is not closed fully (the sensor level change is not detected after lapse of the above time-out time)



Before original size identification processes 1 and 2 are performed, the original size is detected with original sensors as follows:

AB-Configration

Original size	Original sensor 0	Original sensor 1	Original sensor 2A	Original sensor 3
A3	○	○	○	○
A4	○	○	●	●
B4(8K)*1	○	●	○	○
B5(16K)*1	●	○	○	○
A4R	●	●	○	○
B5R(16K)*1	●	●	●	○
No original	●	●	●	●

Inch-Configration

Original size	Original sensor 0	Original sensor 2B	Original sensor 3
11"X17"	○	○	○
LTR	○	●	●
LGL	●	○	○
LTR-R	●	●	○
No original	●	●	●

○ :No original
● :Change absent

*1: For Chinese paper, the following sizes are detected:
8K:Equivalent to B4 size
16K:Equivalent to B5 size

NOTE:
Related Service Mode:

- Select the following service mode to determine whether to detect the original size:
  SCAN > READER > OPTION > USER > SIZE-DET
  <Setting value>
  0: The original size is not detected.
  1: The original size is detected.
- Perform the following procedure to switch between AB and inch configuration.
  1. SCAN > SCAN SW > SW06 > Bit2
  Set the value to 1 about the above service mode, and then turn the power switch to off and then on.

  2. SCAN > READER > OPTION > BODY > SENS-CNF
  <Setting value>
  0: AB configuration
  1: Inch configuration
  2: A configuration

  To enable the correct paper selection, change the following setting of the paper size group if necessary.

  3. SYSTEM > SYSTEM Numeric > 057
  <Setting value>
  1: AB configuration
  2: A configuration
  3: Inch configuration
  4: AB / Inch configuration

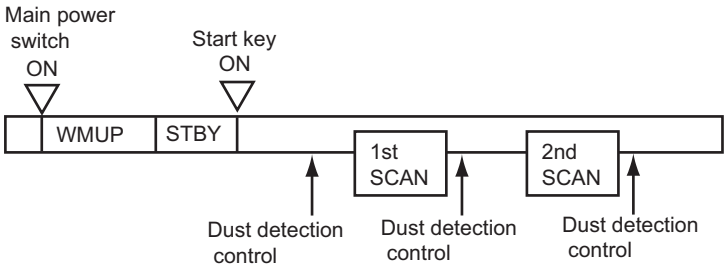
■ Dirt Sensor Control

● Overview

The machine changes the original read position or corrects the read image depending on the presence/absence of dust on the stream reading glass or ADF platen roller, thus preventing dust from showing up in the image. This control is performed only when the ADF is used and it is closed.

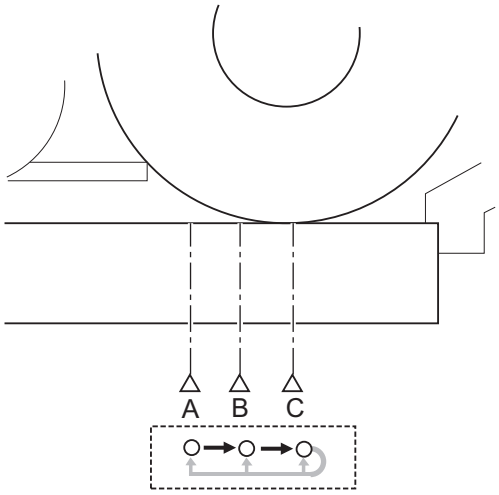
[Control Timing]

- At job end
- Immediately before scanning (one sheet at a time)



[Description of Control]

- At job end (Dust detection)
  The contact image sensor (CIS) checks the light reflected by the ADF platen roller surface at the read position for presence/absence of dust.
  After completion of a job,dust detection is performed in the positions A, B and C without concern of presence/absence of dust.
  1) Dust detection is performed once at position A.
  2) CIS moves to the position B and dust detection is performed once.
  3) CIS moves to the position C and dust detection is performed once.
  4-a) CIS moves to the position where there is no dust, with priority for the detecting position; A>B>C.
  4-b) If dust is detected at all points A, B, and C, move back to position A and the original is scanned at position A.



- Immediately before scanning (one sheet at a time)
  The contact image sensor (CIS) does not move to detect dust.
  The original is read at the position determined at job end or start. If presence of dust is detected there, the read image is corrected.

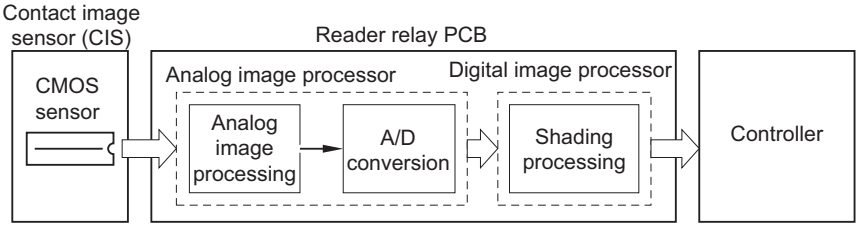
Point	Description
A	Read reference position
B	About 0.5 mm from the reference position to the inside of the roller
C	About 1.0 mm from the reference position to the inside of the roller

■ Image Processing

● Overview

Major specifications and functions of the image processing system are as follows:

- CMOS (image sensor)
  Number of lines: 1
  Number of pixels: Total 7488 (incl. 7176 effective pixels)
  Pixel size: 32 x 46.9 um
- Shading correction
  Shading correction: Made for each job.
  Shading adjustment: Made in the Service mode.

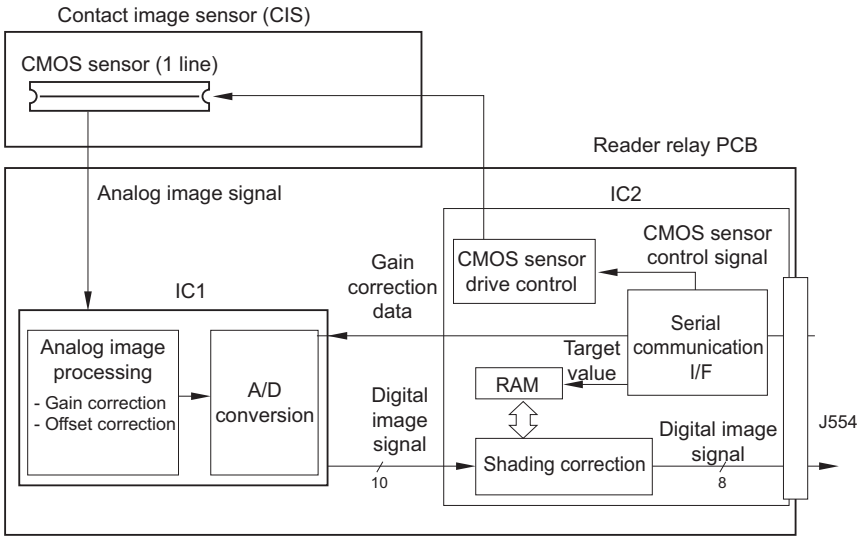


Functions of the image processing system are summarized below.

- Reader relay PCB:CMOS sensor drive, analog image processing, A/D, conversion, and shading correction

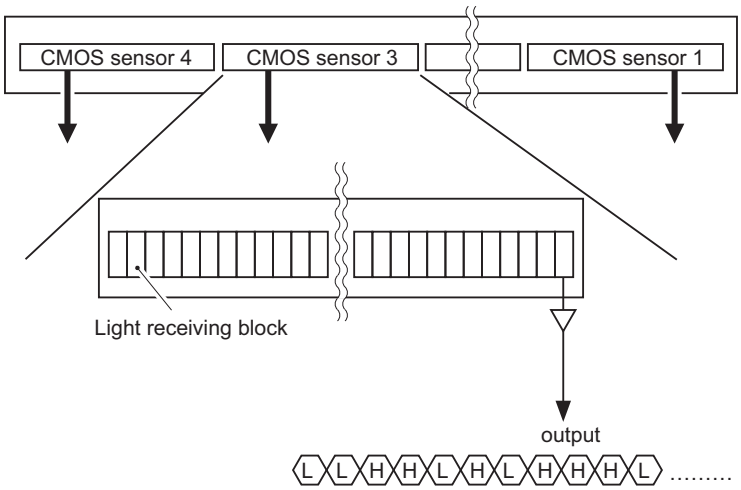
The reader relay PCB is used to process images on a line-by-line basis. Its major functions are as follows:

1. Analog image processing
   - CMOS sensor drive
   - CMOS sensor output gain correction and offset correction
   - CMOS sensor output A/D conversion
2. Digital image processing
   - Shading correction



● CMOS Sensor Drive

The CMOS sensor used in this machine is a 1-line linear image sensor consisting of 7488 photocells. After completion of photoelectric conversion in the lightreceiving block, the signals are output to the AP circuit in the reader relay PCB in parallel for each channel (total four channels) of the CMOS sensor array.



● CMOS Sensor Output Gain Correction and Offset Correction

The analog video signals output from the CMOS sensor are corrected so that they will have a specific gain level (gain correction), and the output voltages generated in the absence of incident light are also corrected so that they it will have a specific offset level (offset correction).

● CMOS Sensor Output A/D Conversion

After completion of the above corrections, the analog video signals are converted to digital signals corresponding to individual pixel voltage levels by the A/D converter.

● Shading Correction (Outline)

The CMOS sensor outputs are necessary even for the following reasons even when the density of the original is uniform:
(1) Variation in sensitivity among CMOS sensor pixels
(2) Variation in light intensity of rod lens array
The machine performs shading correction to even out the CMOS sensor output.

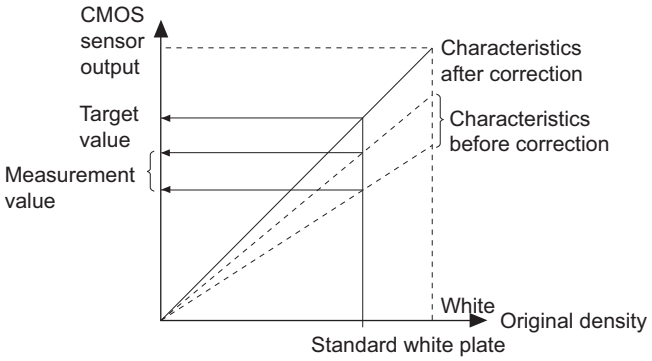
There are two types of shading correction: shading adjustment performed in the Service mode and shading correction performed for each job.

● Shading Adjustment

The machine measures the density of the standard white plate, and stores the measured density data. It then processes the stored data to use it as the target value for shading correction.

● Shading Correction

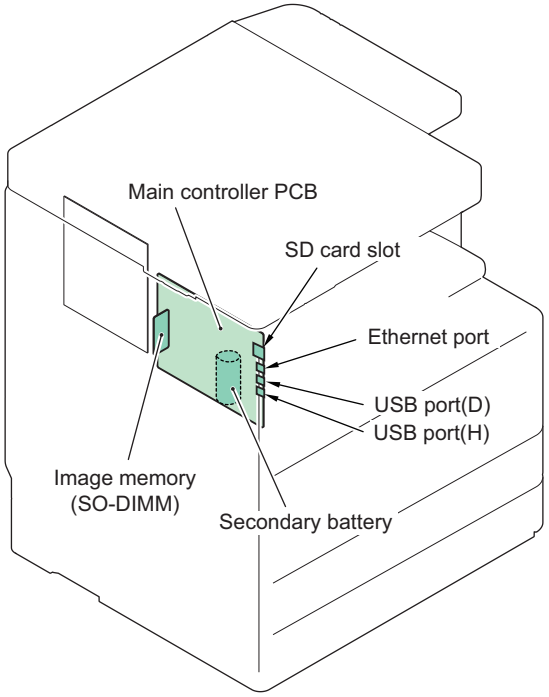
The machine performs shading correction for each scan. It measures the density of the standard white plate, and compares the measured value with the target value stored in the shading correction circuit to use the difference between the two as the shading correction value. The machine uses this shading correction value to correct the variation among CMOS sensor pixels when scanning the original, thus evening out the image density level.



Controller System

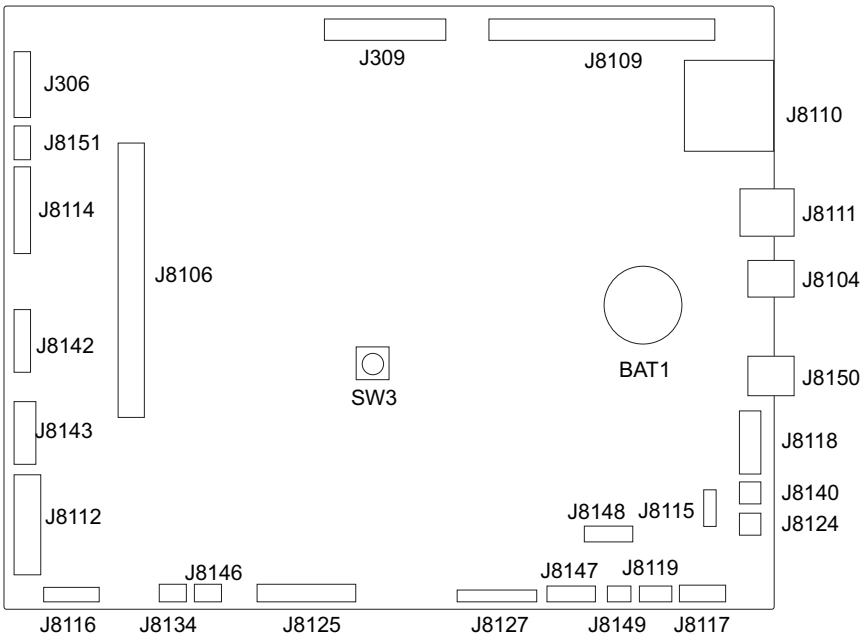
Overview

■ Functional Configuration



Item	Details
Main controller PCB	System control/memory control/printer unit output image processing control, reader unit input image processing, card reader interface, image processing for FAX, USB extension hub interface
Image memory (SO-DIMM)	Temporary saving of image data. Capacity: 256MB (maximum 512 MB)
Flash ROM	Stores system software. Boot ROM: 16 MB Program ROM: 128 MB
SRAM	Stores user data / service data information
USB port	USB2.0 device I/F, USB2.0 host I/F
Ethernet port	Ethernet I/F
SD card slot	SD I/F
Secondary battery	Installed only in the machine supporting the FAX or the SEND function. Secondary battery used for image backup in case of power failure (It lasts one hour when charged for two hours.)

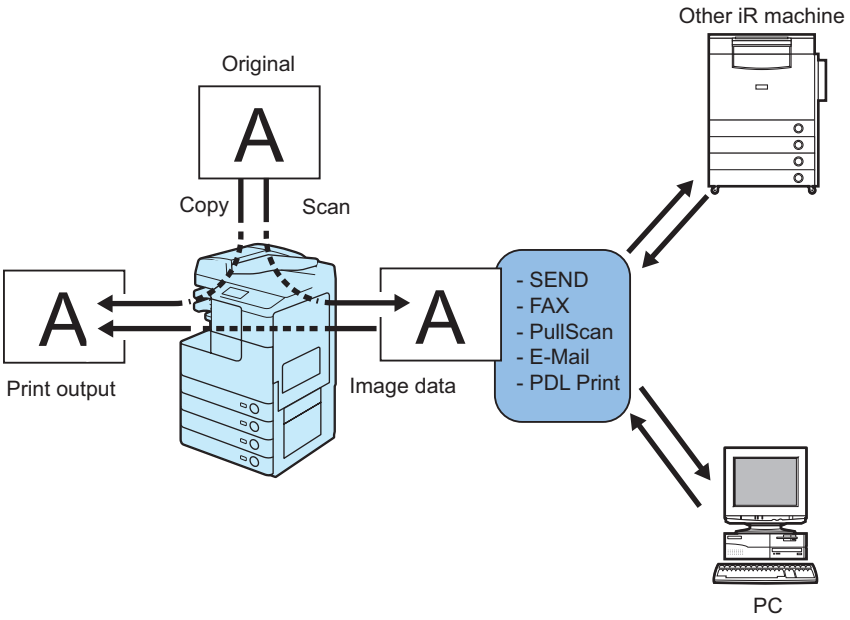
■ Main controller PCB



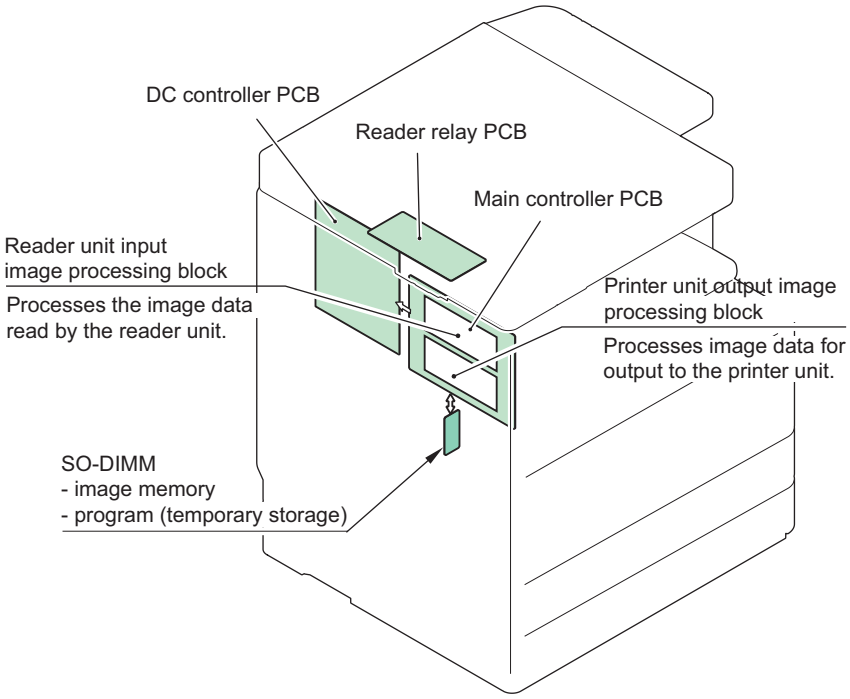
Connector No.	Function
J309	Reader connector
J8104	USB port (device)
J8106	SO-DIMM slot
J8109	ROM board slot (for market-related measures)
J8110	SD card connector
J8111	LAN connector
J8112	DC controller PCB connector
J8114	Control panel connector
J8115	SOFT counter board connector
J8116	SOFT ID board connector
J8117	Control card connector
J8118	Serial interface connector
J8119	Card reader connector
J8124	Secondary battery unit connector
J8125	Power supply connector
J8127	NCU board connector
J8134	Pseudo CI connector
J8140	Serial interface connector
J8142	Laser scanner unit connector
J8143	Laser scanner unit connector
J8146	Pseudo CI connector
J8147	NCU board connector
J8148	Modem board connector
J8149	Speaker connector
J8150	USB (Host) connector USB hub kit connection
J8151	Reader connector
BAT1	Lithium battery for RTC Life: About 10 years
SW3	Used to turn off the power when replacing the SO- DIMM.

Controls

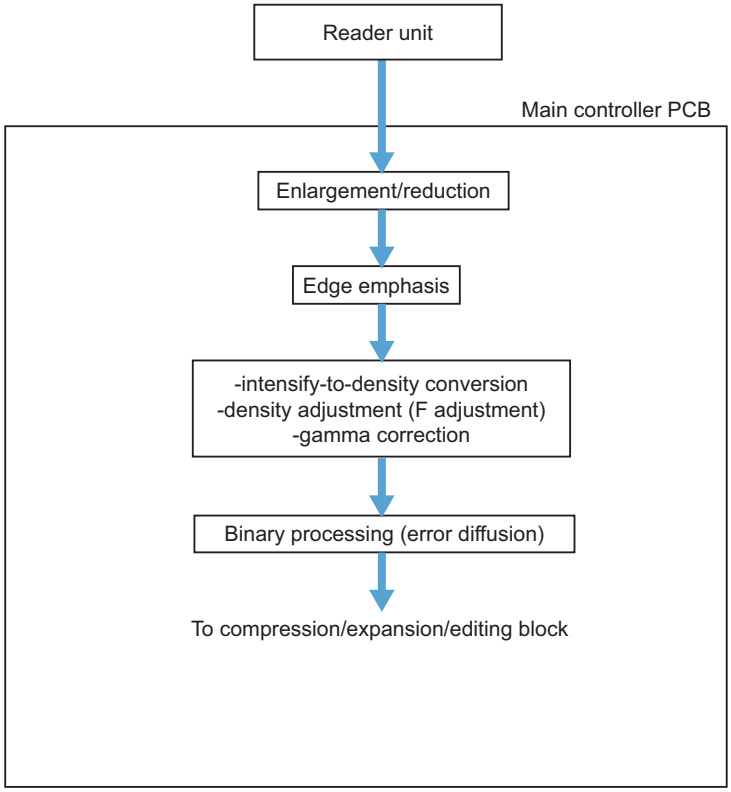
■ Flow of Image Data



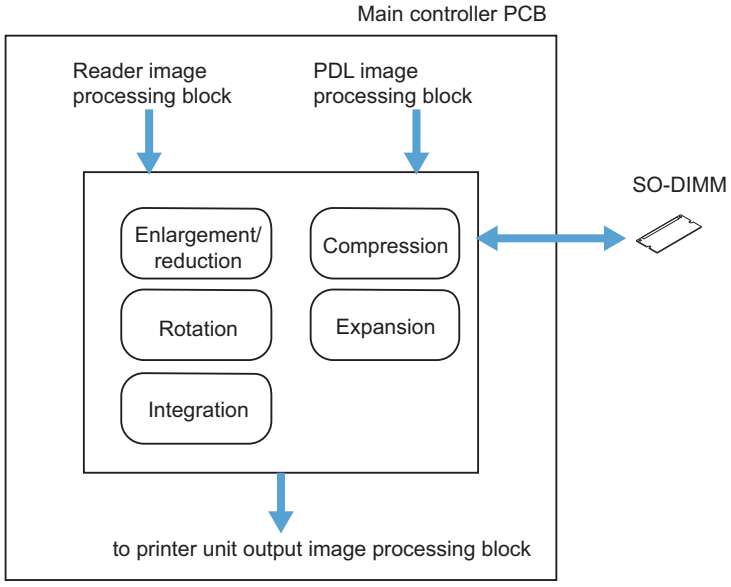
■ Construction of the Image Processing Module



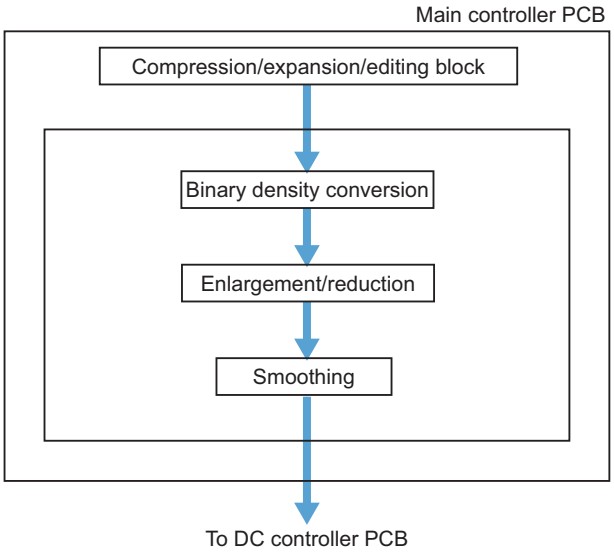
■ Reader Unit Input Image Processing



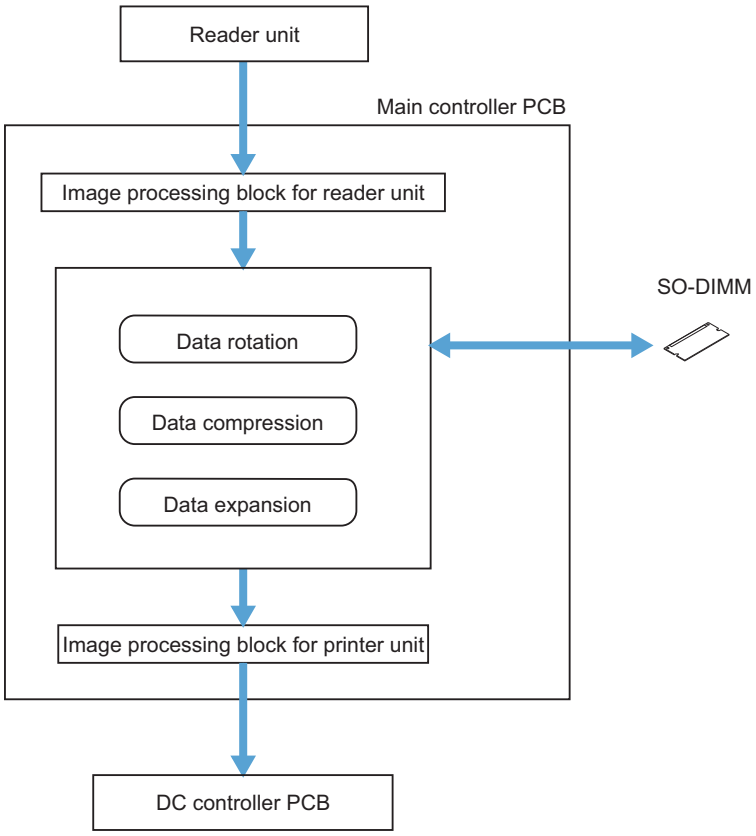
■ Compressio/ Extesion/ Editing Block



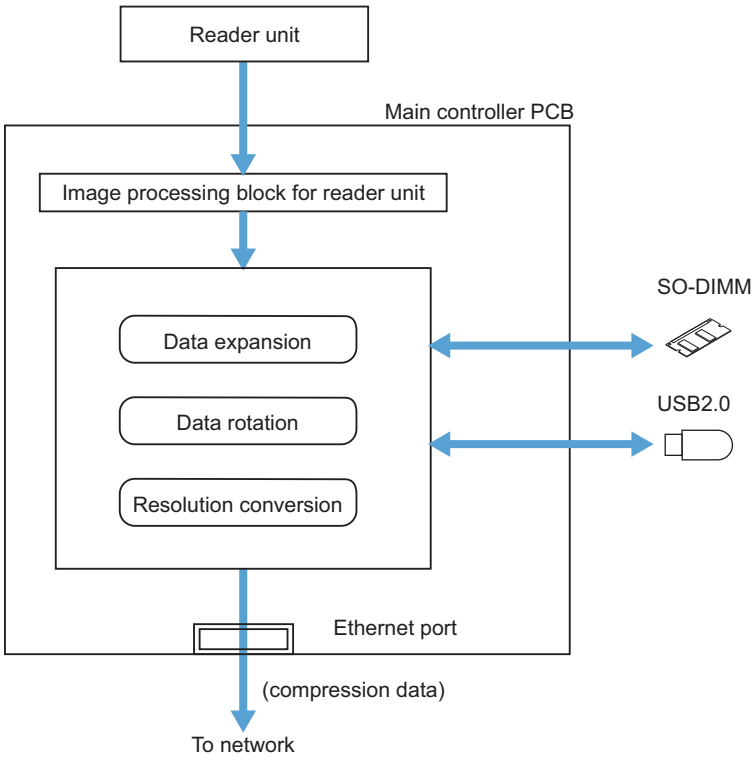
■ Printer unit Output Image Processing



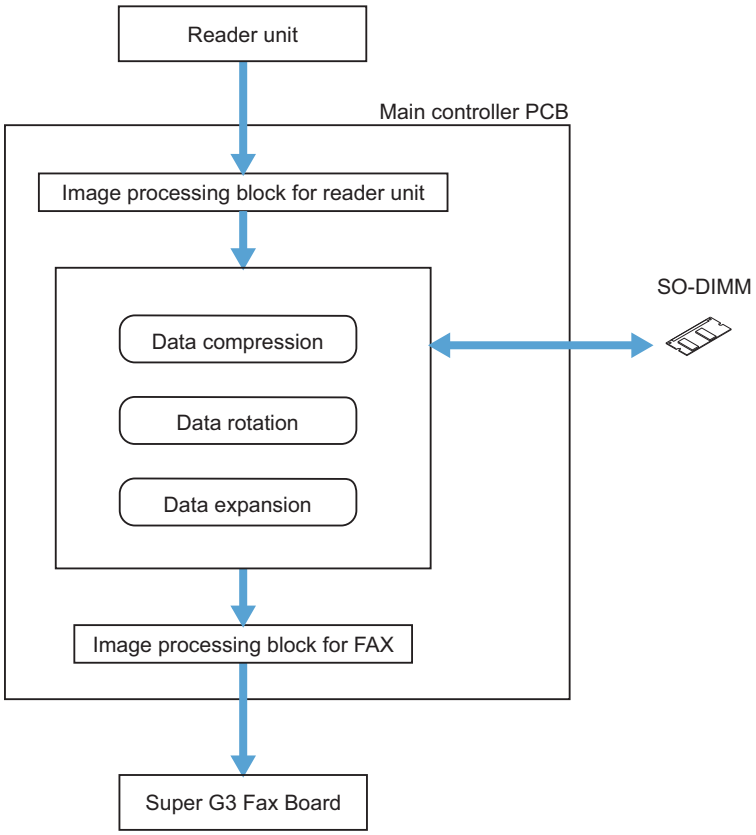
■ Flow of Image Data According to Copy Functions



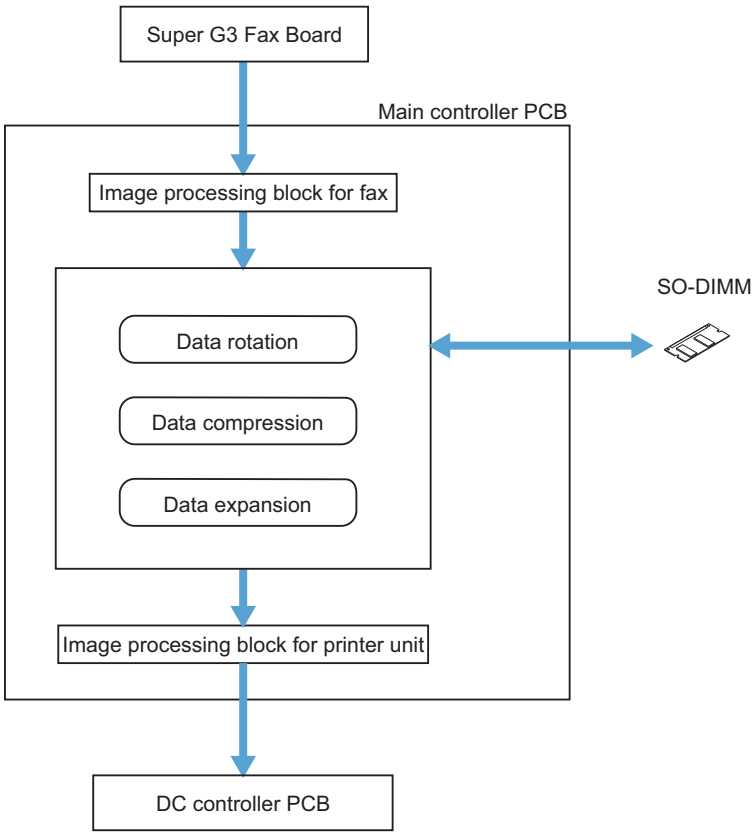
■ Flow of Image Data for the SEND Function



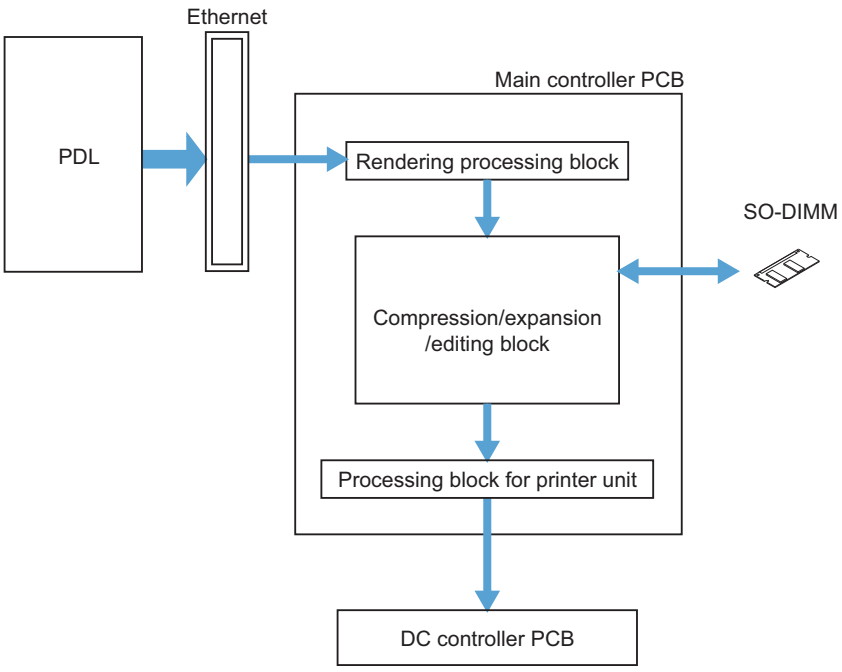
■ Flow of Image Data for the Fax Transmission



■ Flow of Image Data for the Fax Reception Function



■ Flow of Image Data for the PDL Function



■ Software counter

The timing at which the count is incremented differs depending on the following:

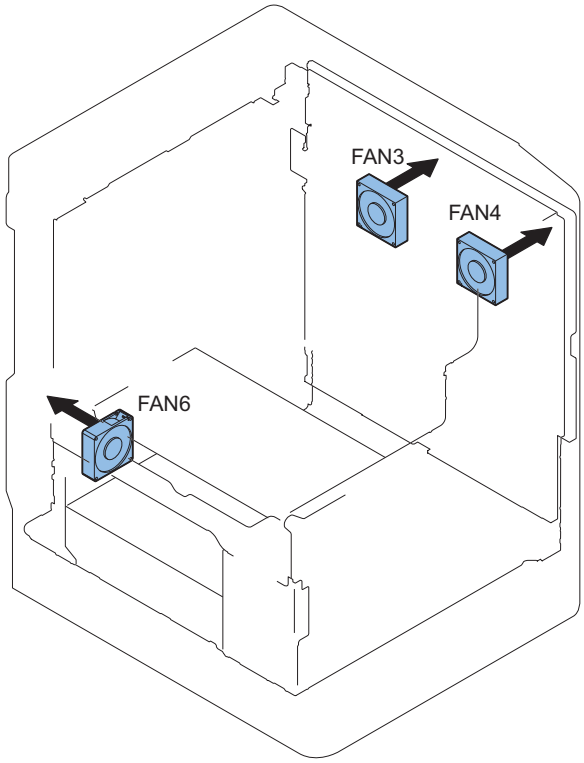
- Printing mode (single-sided/double sided (2nd side) or double sided (1st side))
- Target of delivery (inner finisher)

Target of delivery		Print mode	
		Single-sided/Doublesided (2nd side)	Double-sided (1st side)
		Count-up timing	
Host machine	1st delivery tray	No.1 delivery sensor (S12)	Duplex feed sensor (S7)
	2nd delivery tray	No. 2 delivery sensor (S42)	
Inner finisher		Inner finisher inlet sensor (S1)	

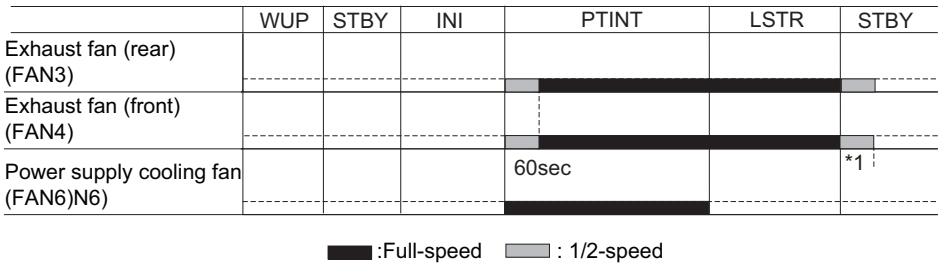
■ Fan

● Overview

Fan layout



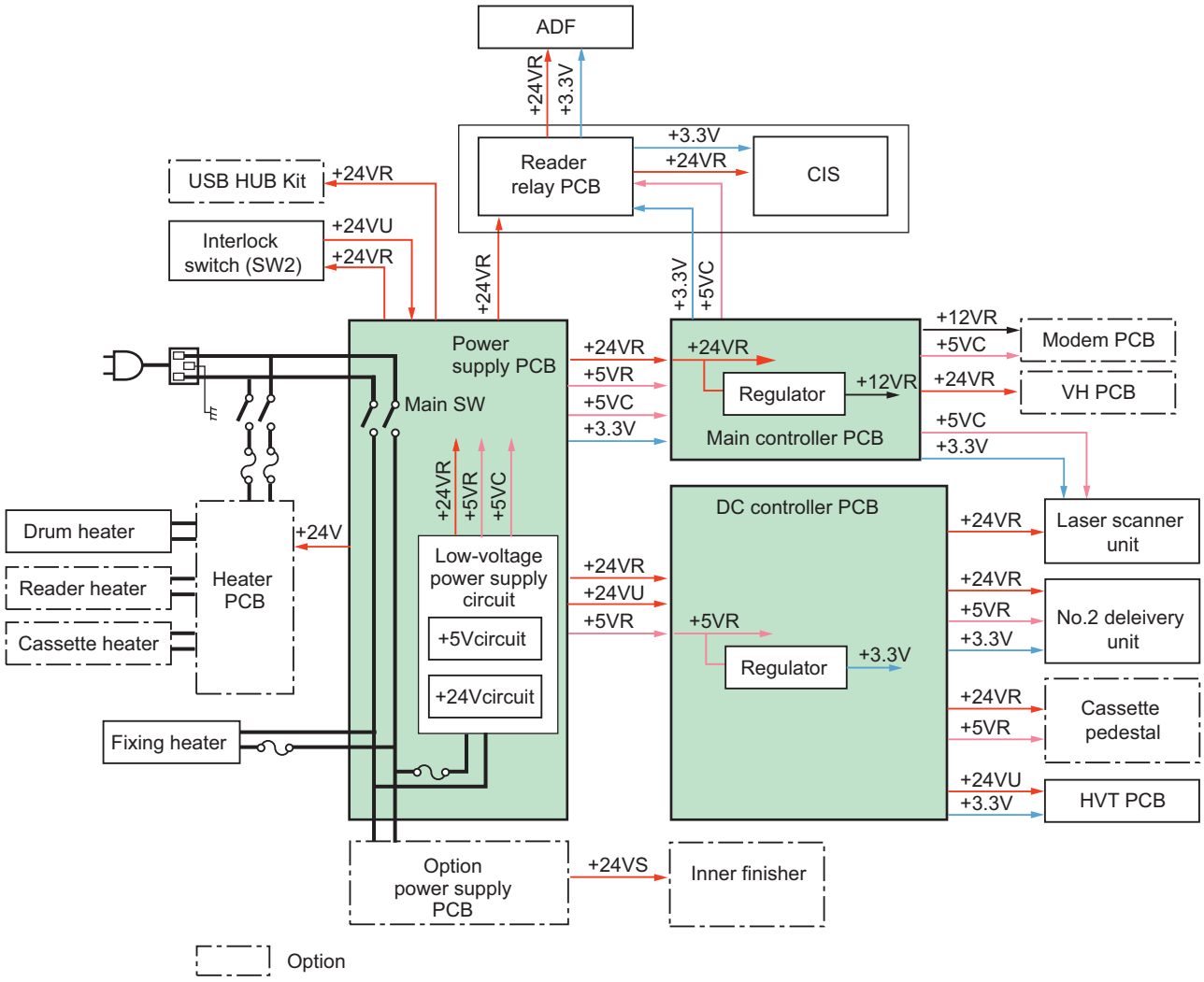
No.	Name	Function	Error code
FAN3	Exhaust fan (rear)	Cools the fixing unit.	E805-0000 E805-0001
FAN4	Exhaust fan (front)	Cools the fixing unit.	E805-0002 E805-0003
FAN6	Power supply cooling fan	Cools the power supply.	E804-0000 E804-0001



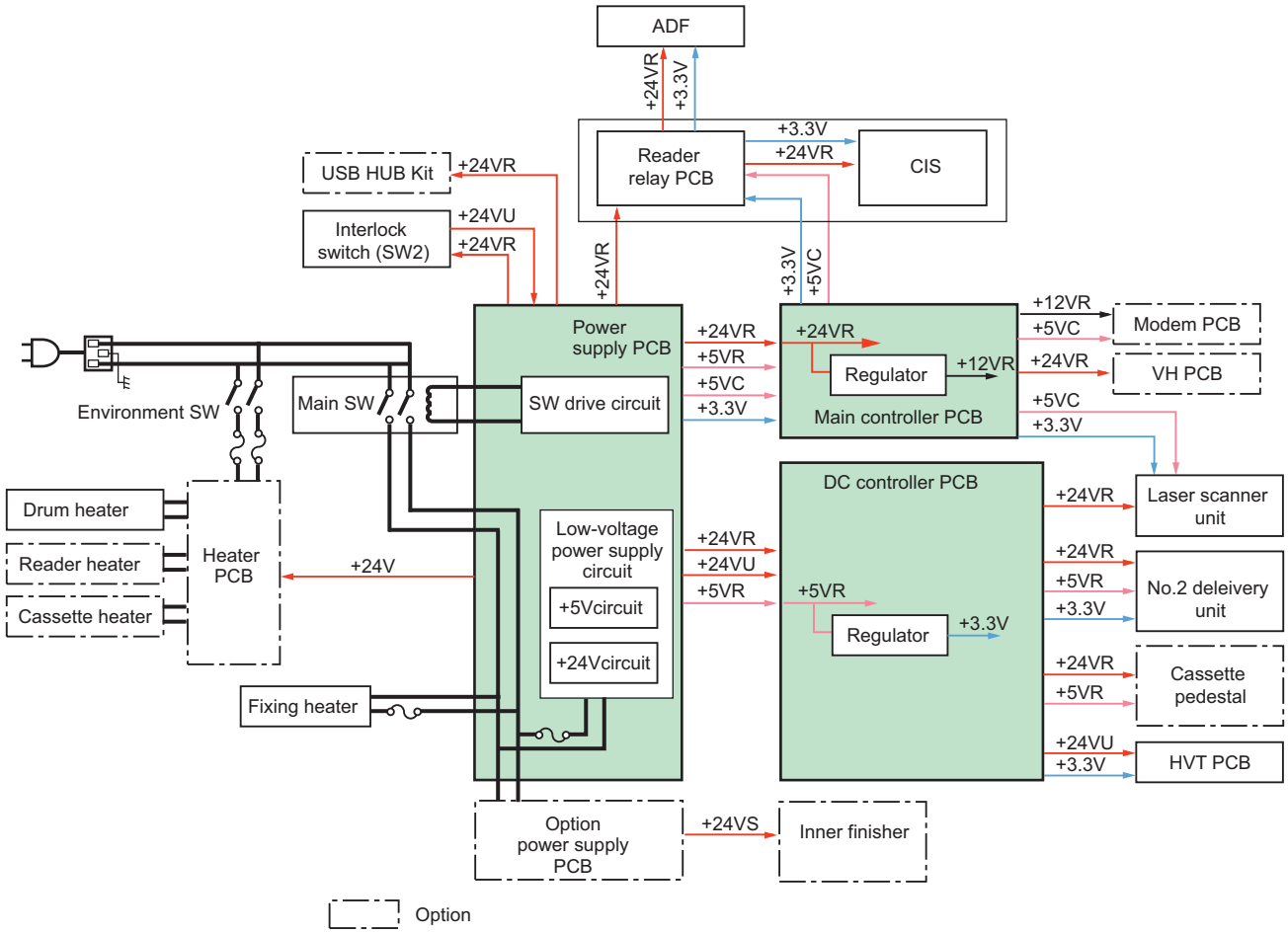
*1: The fan operates at 1/2 speed only when the machine enters the standby mode after running for more than 8 minutes for fixing.

■ Power supply

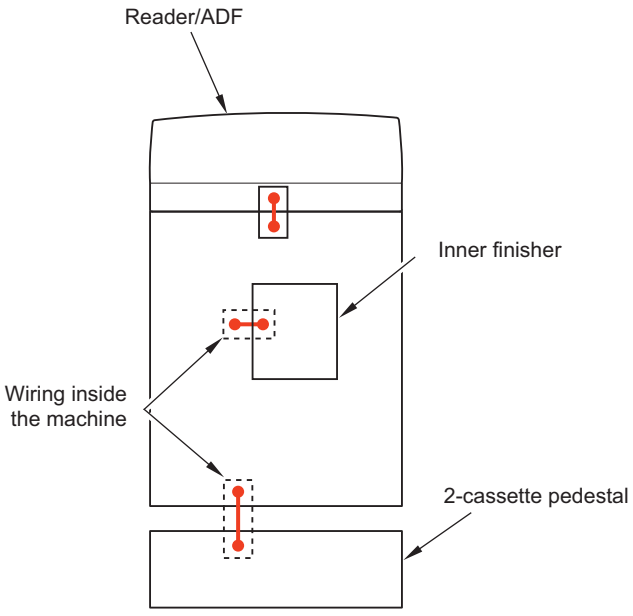
● Internal power supply (except the Europe model)



• Internal power supply (In the case of the Europe model)

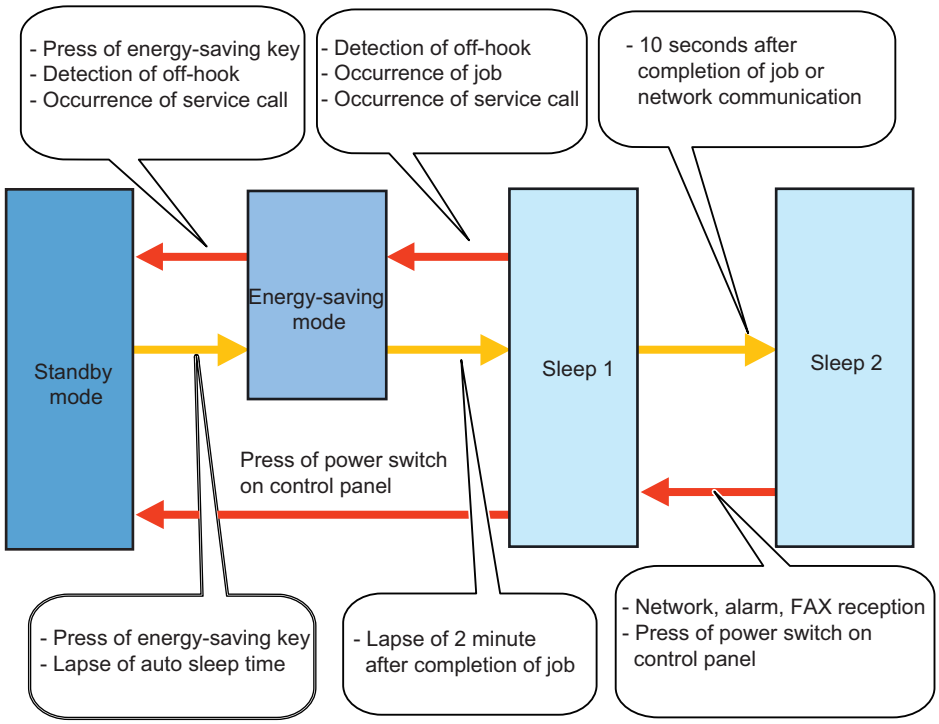


• Connection to Options



The inner finisher is connected to the 2-cassette pedestal with the connectors inside the covers.
It is connected to the ADF with a cable outside the machine.

● Energy-saving Function



Standby mode
The machine is operating or ready to start operating with all power supplies provided.

Energy-saving mode
Only the LCD backlight for the control panel is turned off. The machine enters this mode when auto sleep timer is activated in the user mode or the energy-saving key is pressed.

Sleep 1
The controller is powered but the engine is not powered.

Sleep 2
The controller is not powered.
The sleep 2 mode is transitioned to the sleep 1 mode when the following event occurs:

- Start of print job
- Press of power switch on control panel
- FAX reception

● Heater operating condition

		Cassette heater	Reader heater	Drum heater
Turning on the environment heater switch	Standby mode	ON	OFF	ON
	Printing	ON	OFF	OFF
	Turning off the main power switch	ON	ON	ON
	Sleep mode	ON	ON	ON

Laser Exposure System

Overview

■ Specifications/Controls/Functions

- Laser light

The number of laser light	2
Output	5mW
Wave length	785nm - 800nm (Infrared laser)

- Scanner motor

Motor type	DC brushless motor
The number of rotation	Approx 32000rpm (1-speed control)
Type of bearing	Oil

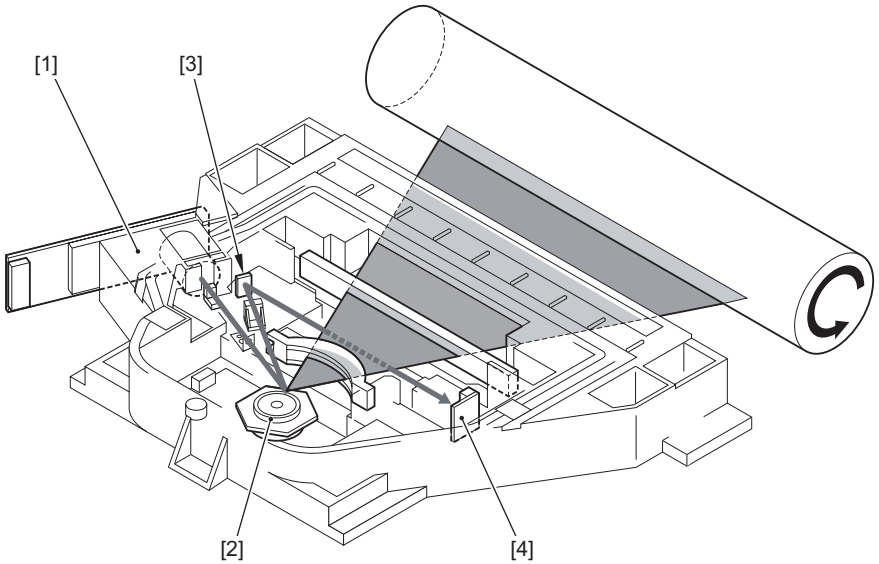
- Polygon mirror

The number of face	6 (Φ40)

- Controls

Synchronous control	Main scanning direction synchronous control
Laser intensity control	APC control
Others	Laser ON/OFF control
	Laser scanner motor control
	Laser shutter control

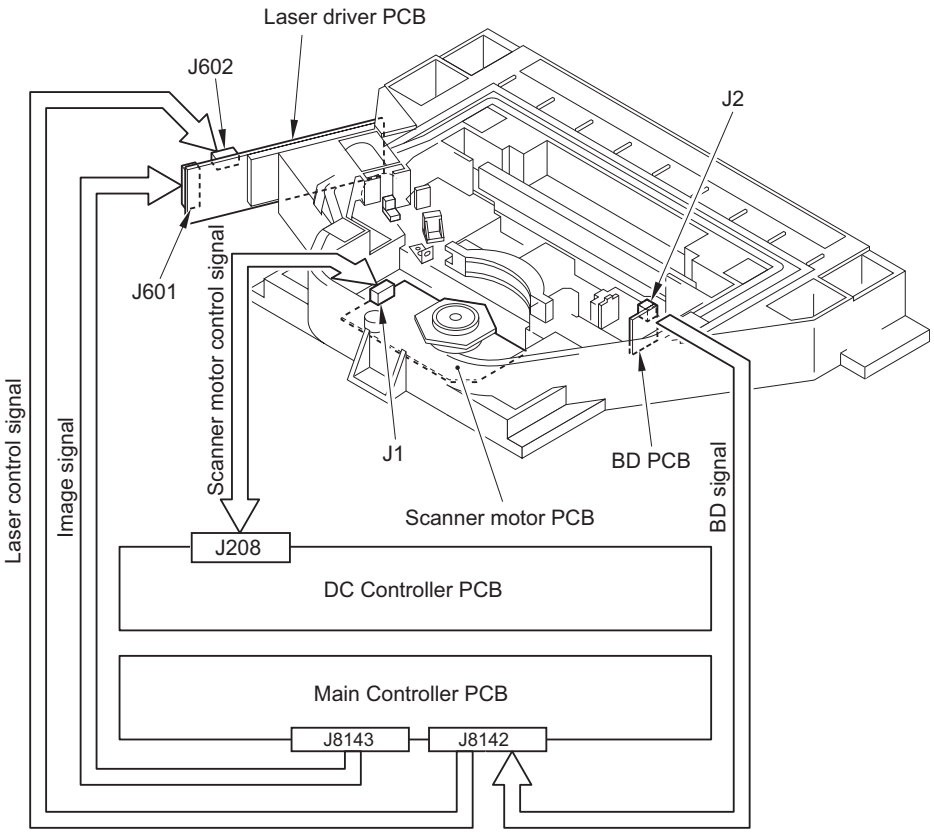
■ Main Configuration Parts



No.	Name	Function
[1]	Laser Unit	Emits laser
[2]	Polygon mirror	Scans the laser light in the main scanning direction
[3]	BD mirror	Reflects the laser light in the BD PCB direction
[4]	BD PCB	Generates the BD signa

■ Control System Configuration

Controls for the laser exposure system are mainly performed by the DC controller PCB and image PCB.



- Image signal

Signal name	Function
DATA C+	C laser image data signal entry
DATA C-	C laser image data signal entry
DATA D+	D laser image data signal entry
DATA D-	D laser image data signal entry

- Laser control signal

Signal name	Function
CTRL0-0	C/D laser control signal
CTRL0-1	C/D laser control signal
CTRL0-2	C/D laser control signal

- Scanner motor control signal

Signal name	Function
POLYGON_M_FG*	FG output signal
POLYGON_M_ACC*	Motor speed-up signal
POLYGON_M_DEC*	Motor speed-down signal

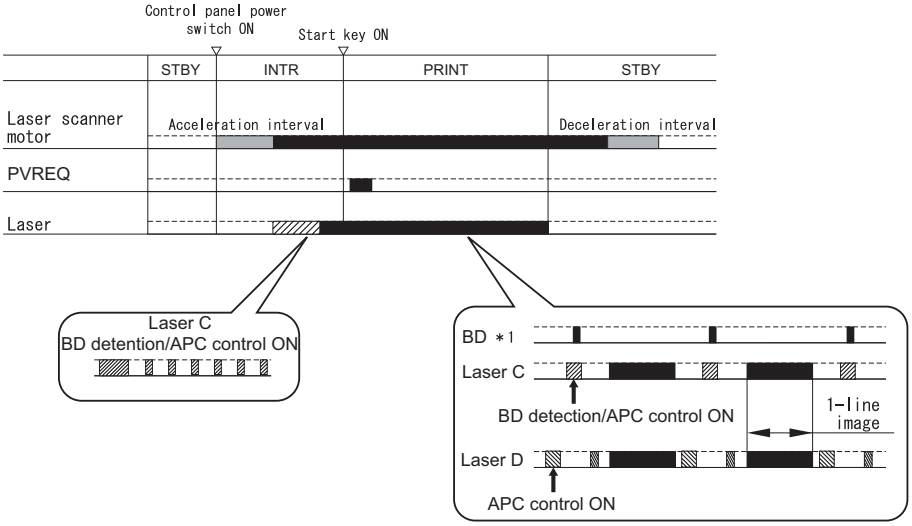
- BD signal

Signal name	Function
BD	BD signal

■ Basic Sequence

When the control panel power switch is turned on, the laser scanner starts to rotate; when the motor rotationreaches its target revolution, the machine turns on the laser unit. Thereafter, when the Start key is turned on, themachine generates the image request signal (PVREQ) on the printer side, and turns on the laser beam withreference to the generated signal.

In the case of A4, 1 sheet



*1: The BD signal is generated in reference to the light from laser C. The BD sensor of the BD PCB receives light from laser C but not light from laser D.

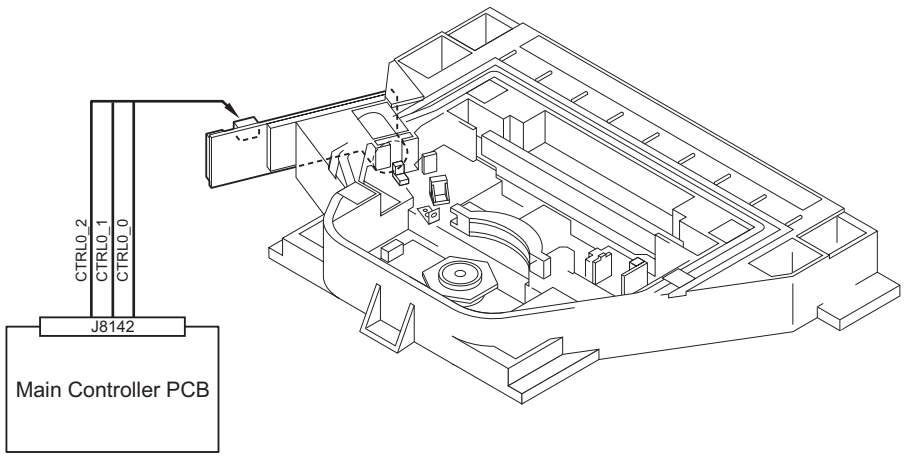
Controls

■ Controlling the Laser Activation Timing

● Laser ON/OFF Control

Laser ON/OFF control is dependent on the combination of the laser control signal (CNT1-0/1-1/1-2) from the image PCB.

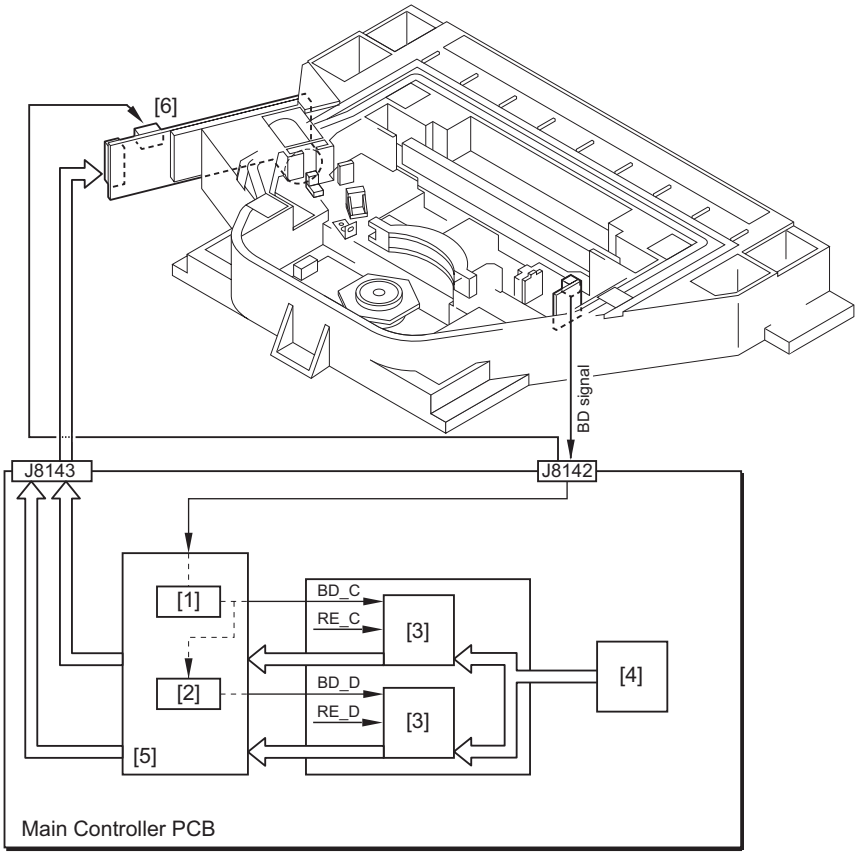
Laser control signal			Laser status	
CNT1-2	CNT1-1	CNT1-0	C Laser	D Laser
0	1	0	ON (For APC control)	OFF
0	1	1	OFF	OFF
0	0	1	OFF	ON (For APC control)
0	1	1	OFF	OFF
1	1	1	Video signal entry arrowed	Video signal entry arrowed
0	1	1	OFF	OFF
0	0	1	OFF	ON (For APC control)
0	1	1	OFF	OFF



● Main Scanning Synchronous Control

The synchronous control in the main scanning direction is performed in the synch circuit based on the BD synchsignal.
Using the BD signal generated based on the light from laser C, the DC controller PCB generates the BD synchsignal for laser C and the BD synch signal for laser D.

The image data written to line memory is read out by the readout enable signal (RE_C, RE_D) generated basedon the BD synch signal (BD_C, BD_D) for output to the laser driver PCB.



No.	Name	No.	Name
[1]	Synchronous PCB	[4]	VDO
[2]	Delay PCB	[5]	VDO signal process unit
[3]	Line memory	[6]	Laser driver PCB
RE_C/D	readout enable signal	BD_C/D	BD synch signal

NOTE:
Regarding BD signal formation
The BD sensor of the BD PCB receives light from laser C only, and is free of light from laser D, i.e., the BDsignal is generated based on the light from laser C.

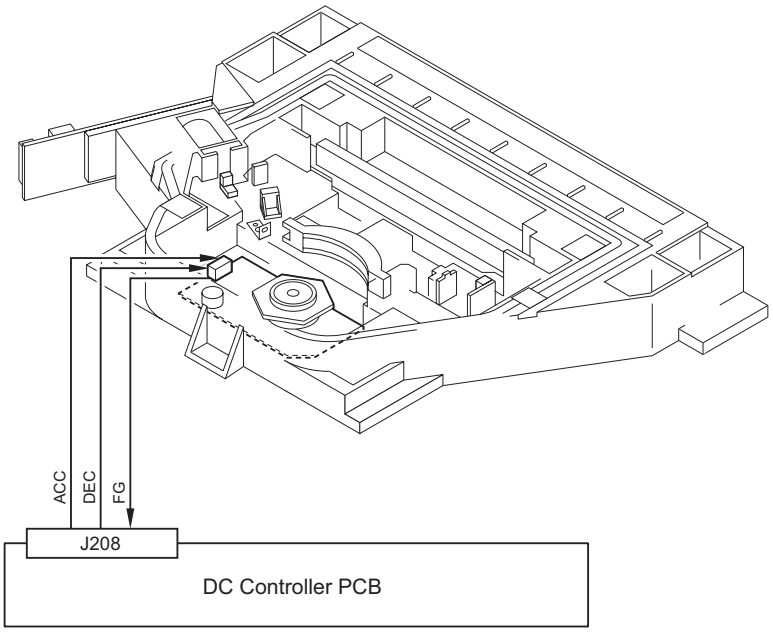
■ Controlling the Intensity of Laser Light

● APC Control

The machine monitors the laser light that is emitted to the built-in photo diode of laser diode and adjusts the laser to appropriate intensity.

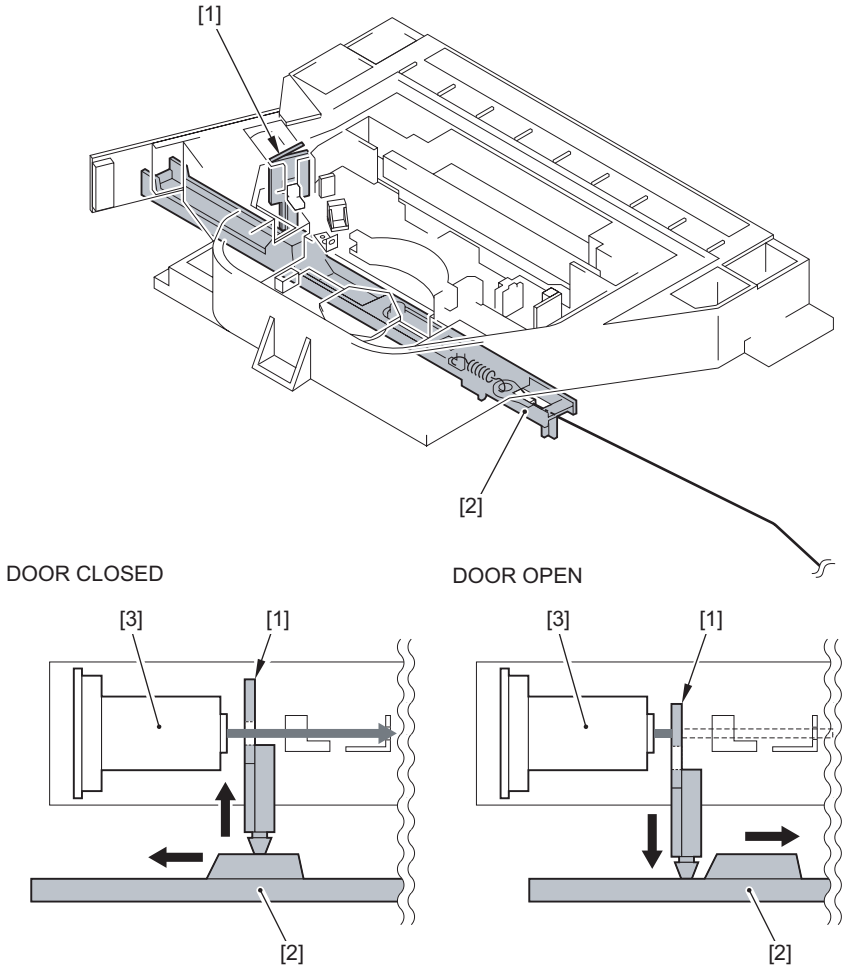
■ Controlling the Laser Scanner Motor

From when the laser scanner motor starts and the laser scanner motor reaches the number of target rotation to before image formation starts, the machine controlsthe rotation speed by referring to the laser scanner motor rotation speed signal (FG signal).
During image formation, it controls the laser scanner motor rotationspeed based on BD signal.
Laser scanner motor rotation speed is controlled by speed-up signal (ACC signal) and speeddown signal (DEC signal).



■ Laser Shutter Control

When the right door opens, laser shutter will be closed by laser shutter link that works in conjunction with the right door and the laser light is blocked. Also, whenthe front door or right door open is detected, laser scanner motor and the laser emission will be turned OFF.



No.	Part name
[1]	Laser shutter
[2]	Laser shutter link (works in conjunction with the right door)

No.	Part name
[3]	Laser unit

Image Formation System

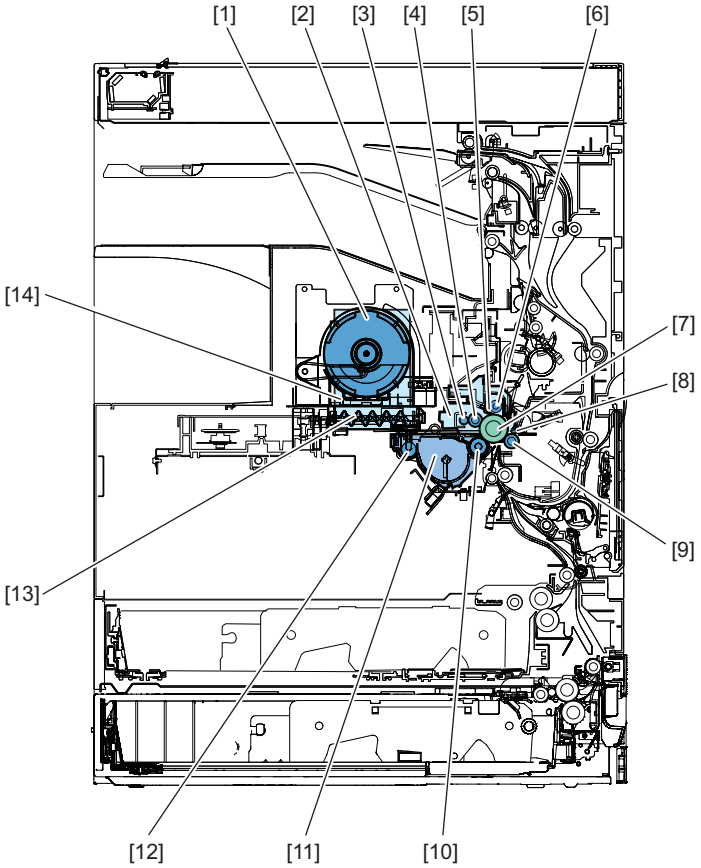
Overview

■ Specifications of Image Formation System

tem		Specifications/Mechanism/Method
Photosensi-tive drum	Material	OPC high durability drum (E-drum)
	Drum diameter	φ30
	Cleaning method	Cleaning blade
	Process speed	230mm/sec (at cassette pickup) 137mm/sec (at manual feeder pickup)
Primary charging	Charging method	Primary charging roller AC bias constant voltage control: approx. 550 to 2600Vp-p DC bias constant voltage control: approx. -400 to -800V DC bias switch control (variable according to environment sensor detection)
	roller diameter	φ14
	Charging method	Brush roller (φ10)
Developing	Developing method	Dry one-component jumping development AC bias constant voltage control: approx. 800Vp-p DC bias control: approx. -300 to -700V DC bias switch control (variable according to density setting, environment sensor detection)
	Developing cylinder diam-eter	φ20
	Toner	Magnetic negative toner
	Toner level detection	Toner detection by toner level sensor (inside sub hopper and developing unit)
Transfer	Transfer method	Transfer roller DC constant current control: approx. 20 μA Cleaning bias control: -2700V (DC constant voltage control) DC current level control (variable according to environment sensor detection, paper type, paper width, source of paper)
	Roller diameter	Φ16
	Charging method	Cleaning bias application
Separation	Separation method	Static separation (Static eliminator) + Curvature separation DC constant voltage control: -2800V (high bias), -2300 (low bias)
Waste toner		Collected into waste toner box Waste toner box capacity: approx. 750g

■ Major Components of Image Formation System

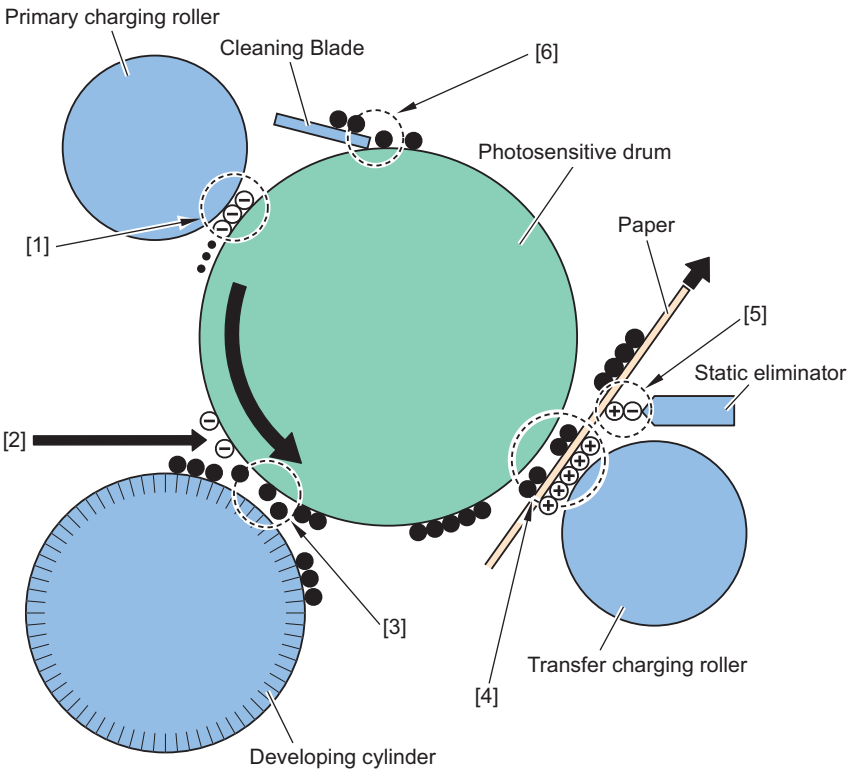
The major components of image formation system are described below.



No.	Name	Function
[1]	Toner cartridge	Cartridge filled with the toner for supply
[2]	Drum unit	Unit consisting of the photosensitive drum, primary charging roller, etc.
[3]	Brush roller	Rotates in connection with the primary charging roller to clean its surface.
[4]	Primary charging roller	Rotates in connection with the photosensitive drum to cause it negatively charged.
[5]	Cleaning blade	Scrapes off the residual toner on the photosensitive drum.
[6]	Waste toner feed screw	Feeds the toner scraped off by the cleaning blade to the waste toner box.
[7]	Photosensitive drum	Forms images on the surface of the photosensitive drum.
[8]	Static eliminator	Applies negative charge to the back of paper to cause it separated from the photo-sensitive drum.
[9]	Transfer roller	Applies positive charge to the back of a paper to cause the toner to be transferred to it.
[10]	Developing cylinder	Transfers the toner in the developing unit to the photosensitive drum.
[11]	Developing unit	Unit consisting of the developing cylinder, developing blade, etc.
[12]	Toner feed screw (Inside developing unit)	Feeds the toner supplied from the sub hopper into the developing unit.
[13]	Toner feed screw (Inside sub hopper)	Feeds the toner supplied from the toner cartridge to the developing unit.
[14]	Sub hopper	Stores the toner supplied from the toner cartridge.

■ Image Formation Process

The image formation system of the machine mainly consists of the photosensitive drum, primary charging roller, developing cylinder, transfer charging roller, static eliminator, and cleaning blade. The image formation process around the drum unit contains the six blocks.



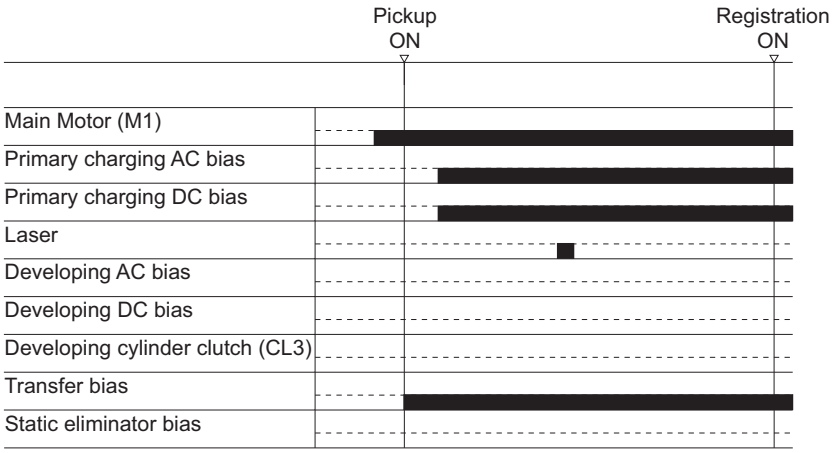
No.	Image Formation Process	Description
[1]	Primary charging block	Charges the surface of the photosensitive drum to a uniform negative potential.
[2]	Laser exposure block	Exposes laser beam on the surface of the drum for charge neutralization to form the latent image formation.
[3]	Developing block	Causes the negatively-charged toner on the developing cylinder to adhere to the latent image formation on the surface of the photosensitive drum to form a visible image.
[4]	Transfer block	Applies positive charge to the back of a paper to transfer the toner on the drum to the paper.
[5]	Separation block	Separates a paper from the photosensitive drum with its elastic force and at the same time applies negative charge to the back of paper to facilitate paper separation.
[6]	Drum cleaning block	Scrapes off the residual toner on the surface of the drum using the cleaning blade and feeds it to the waste toner box.

■ Basic Sequence

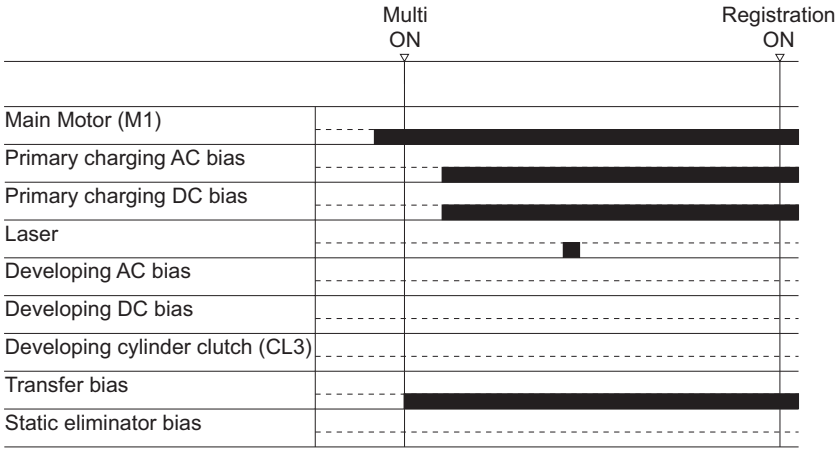
The basic sequence is as follows.

● Sequence of Operation (initial rotation)

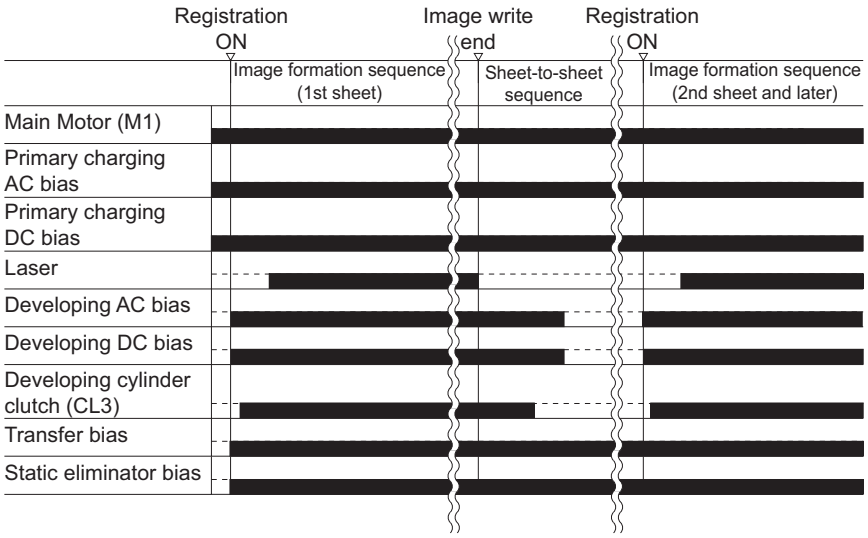
- Pickup from cassette



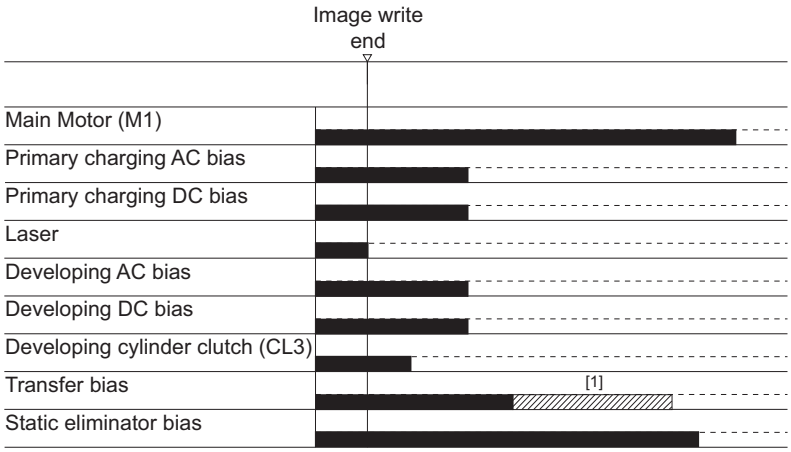
- Pickup from manual feeder



● Sequence of Operation (printing)



● Sequence of Operation (last rotation)



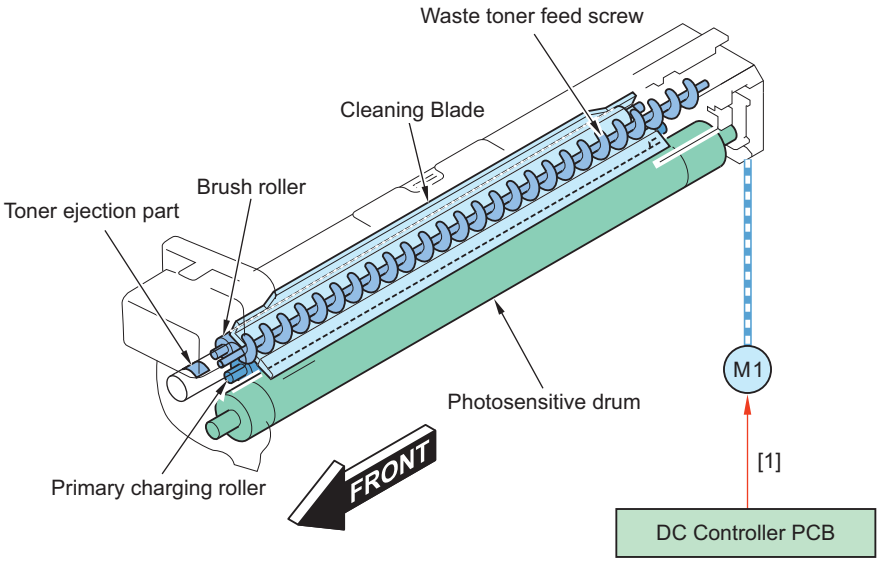
In [1] above, a cleaning bias (-2700V) is applied.

Controls

■ Drum Unit

The drum unit mainly consists of the photosensitive drum, primary charging roller, brush roller, cleaning blade, and waste toner feed screw, and is driven by the main motor (M1).

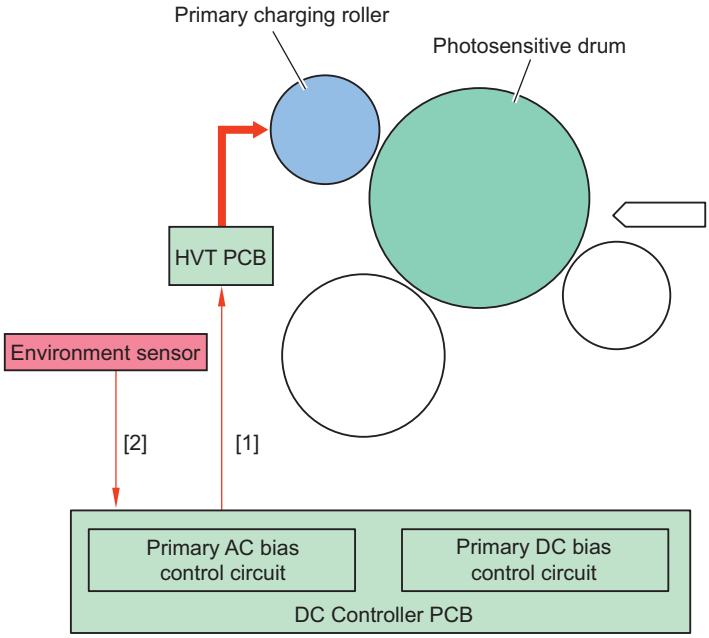
Cleaning blade in contact with the photosensitive drum scrapes off the residual toner on its surface without being transferred to a paper. The residual toner scraped off by the cleaning blade is fed from the toner ejection part into the waste toner box by the waste toner feed screw. The primary charging roller is cleaned by the brush roller in contact with it.



No.	Part name
M1	Main motor
[1]	Main motor drive signal

● Primary Charging Bias Control

The machine is directly charged by the charging roller. DC bias and AC bias that stabilized the charge is applied to the primary charging roller.



No.	Part name
[1]	Primary charging bias control signal
[2]	Environment sensor detection signal

● Constant voltage control of DC bias and AC bias

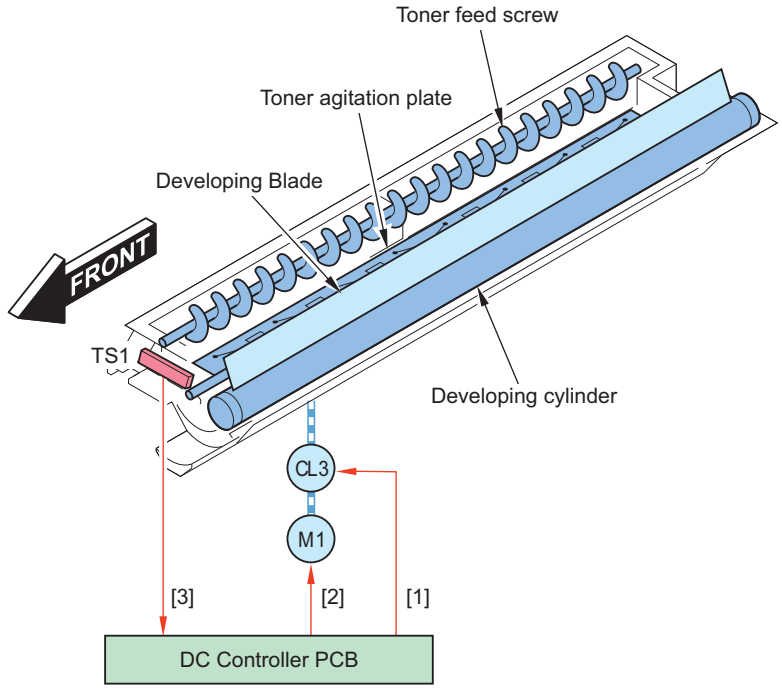
The DC bias and AC bias control circuits on the DC controller PCB control the DC bias and AC bias applied to the primary charging roller to keep their voltage at the fixed level.

● DC bias switch control

The DC bias output varies according to the environment detected by the environment sensor (HU1).

■ Developing Unit

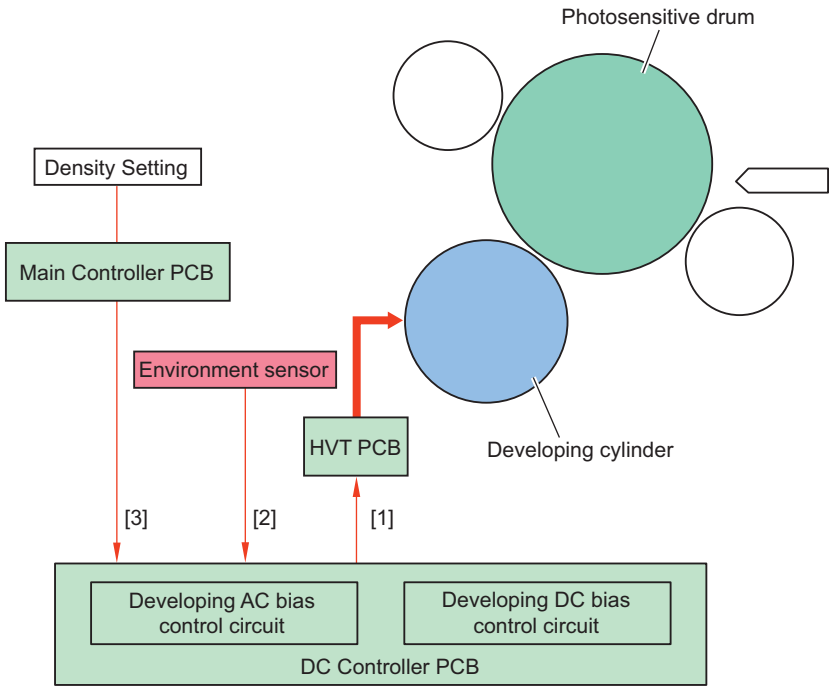
The developing unit mainly consists of the developing cylinder, developing blade, toner agitation plate, and toner feed screw, and driven by the main motor (M1) and developing cylinder clutch (CL3).
The toner supplied from the toner cartridge is fed into the drum unit by the toner feed screw and toner agitation plate. The toner presence/absence in the drum unit is detected by the developing unit toner sensor (TS1) which is a magnetic permeability sensor.



No.	Part name	No.	Part name
TS1	Developing unit toner sensor	[1]	Developing cylinder clutch drive signal
CL3	Developing cylinder clutch	[2]	Main motor drive signal
M1	Main motor	[3]	Developing unit toner sensor detection signal

● Developing Bias Control

The DC bias and AC bias are applied to the developing cylinder.



No.	Part name
[1]	Developing bias control signal
[2]	Environment sensor detection signal
[3]	Density setting signal

● Constant voltage control of DC bias and AC bias

The DC bias and AC bias control circuits on the DC controller PCB control the DC bias and AC bias applied to the developing cylinder to keep their voltage at the fixed level.

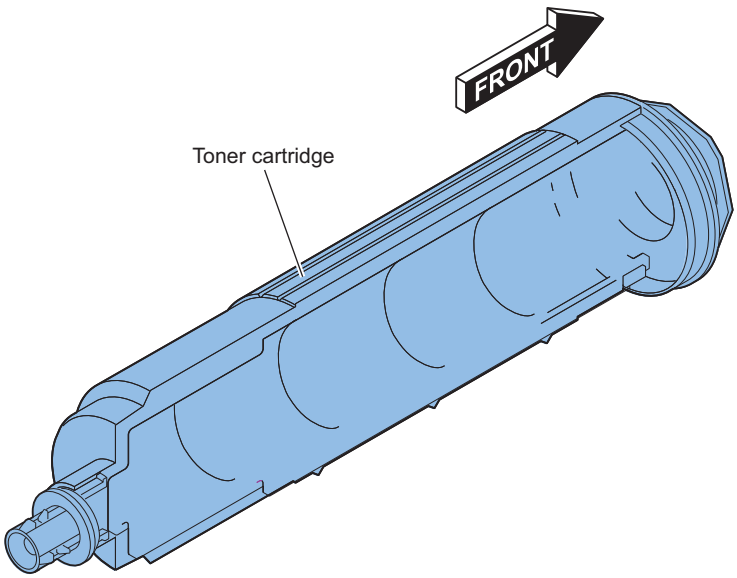
● DC bias switch control

The DC bias output varies according to the environment or density setting detected by the environment sensor (HU1).

■ Toner Container

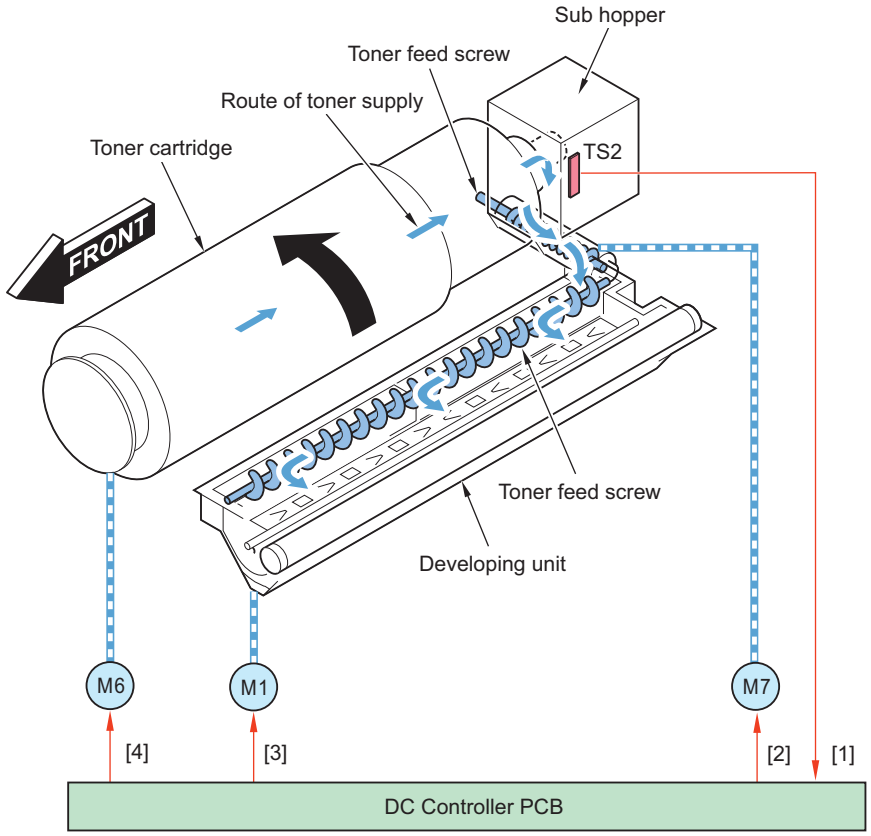
● Outline

Toner cartridge is filled with toner and supplies to the drum unit.



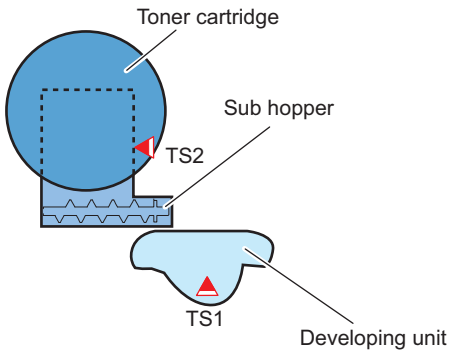
The toner in the toner cartridge is fed to the sub hopper and then to the developing unit by the toner feed screw. The toner presence/absence in the sub hopper is detected by the sub hopper toner sensor (TS2) which is a magnetic permeability sensor.

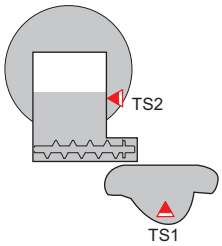
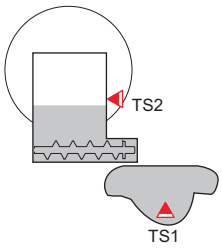
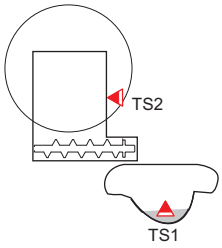
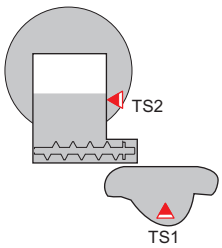
If the developing unit toner sensor (TS1) detects the absence of the toner in the developing unit, the hopper motor (M7) drives to rotate the toner feed screw to feed toner in the sub hopper to the developing unit. Also, if the sub hopper toner sensor (TS2) detects the absence of the toner in the sub hopper, the bottle motor (M7) drives to rotate the toner cartridge to feed the toner in the toner cartridge to the sub hopper.
If the sub hopper toner sensor (TS2) keeps detecting the absence of the toner for more than the specified period of time, no toner in the toner cartridge is assumed and the message to replace the toner cartridge will be displayed. Also, if the developing unit toner sensor (TS1) keeps detecting the absence of the toner for more than the specified period of time, no toner in the developing unit is assumed and a "No Toner" error message will be displayed.



No.	Part name	No.	Part name
TS2	Sub hopper toner sensor	[1]	Sub hopper toner sensor detection signal
M1	Main motor	[2]	Bottle motor drive signal
M6	Hopper motor	[3]	Main motor drive signal
M7	Bottle motor	[4]	Hopper motor drive signal

● Toner Level Detection



Toner level	Status	Message	Alarm	Operation
100 to 11%		No	No	When the sub hopper toner sensor (TS2) detects absence of toner, the bottle motor (M6) is driven. Once the sub hopper toner sensor (TS2) detects presence of toner, the bottle motor (M6) is stopped (to prevent toner leak).
10 to 1%		Replace the toner cartridge. (Continuous printing is enabled.)*1	10- 0020*2	If the sub hopper toner sensor (TS2) keeps detecting the absence of the toner for more than 90 seconds after the drive of the bottle motor (M6) has been started, a message is displayed in the bottom of control panel because the system determines that there is no toner in the toner cartridge. This state continues during printing and the toner cartridge can be replaced during printing. After the Toner cartridge is replaced, the toner level returns to 100%. NOTE: After "Replace the toner cartridge." message is displayed, and approx. 2,000 sheets* are printed, *A4 6% image
0%		Replace the toner cartridge. (Job is stopped.)	No	If the developing unit toner sensor (TS1) keeps detecting the absence of the toner for more than 40 sec after the drive of the hopper motor (M7) has been started, a message is displayed in the bottom of control panel because the system determines that there is no toner in the toner cartridge. The print operation stops. After the toner cartridge is replaced, the toner level returns to 100%.
After exchange.		No	10- 0100*3	When detected a toner with hopper toner sensor (TS2) and developing unit toner sensor (TS1) after the exchange of the toner container, a signal is notified of. In addition, a toner residual quantity counter is initialized automatically.

*1 Toner cartridge replacement warning
Whether or not to display the replacement warning message of the toner cartridge on the status area of LUI can be set in the following service mode.

- #SSSW> SW34> bit4
  <Setting value>
  0: Not display
  1: Display [Default: 1]

*2 Prior delivery alarm
There are two kinds of following detection methods. The alarm is notified at the timing detected earlier.
Detection method 1

- Set a detection timing. (Service mode> #PRINT> #PRINT NUMERIC> 171)
  Detect it at a toner residual quantity counter (total of rotary time of the Hopper motor).
  Set it at toner residual quantity 40-0%.

Detection method 2

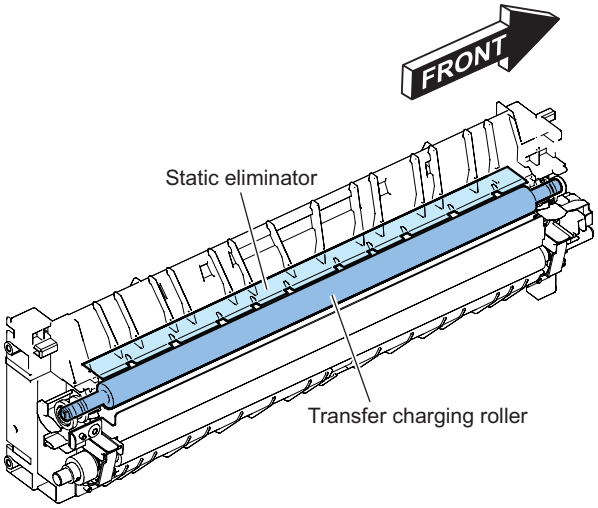
- Detect it in sub hopper toner sensor (TS2).
  If the sub hopper toner sensor (TS2) keeps detecting the absence of the toner for more than 90 sec after the drive of the bottle motor (M6) has been started, the detect.
  (Toner residual quantity 10-1%)

*3 Exchange completion alarm
When detected a toner with two sensors (TS1/TS2) after the exchange of the toner container, a signal is notified of.

<Related error code>
E020-0000: The path between the sub hopper and the developing unit is clogged with toner.
E024-0000: The connector (J207) of developing unit toner sensor (TS1) is disconnected.
E024-0001: The developing unit toner sensor (TS1) is disconnected.
E025-0000: The connector (J207) of sub hopper toner sensor (TS2) is disconnected.
E025-0001: Failure of the bottle motor (M6)

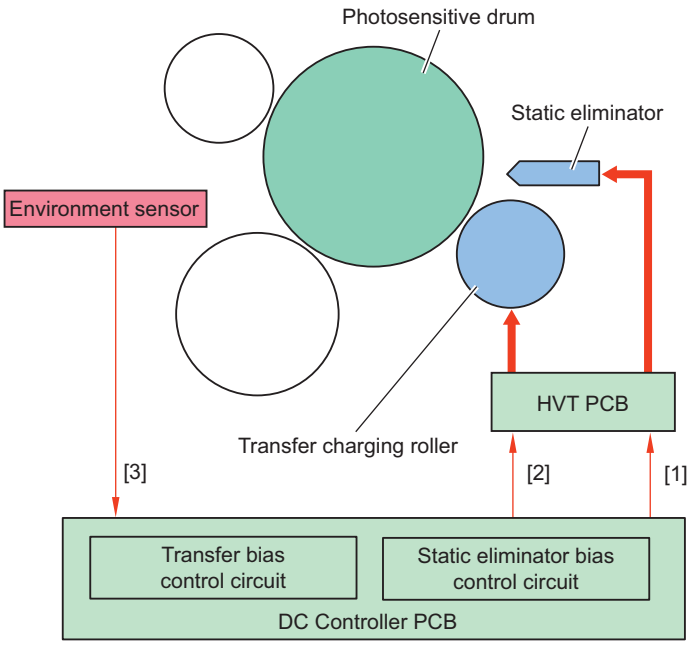
■ Transfer Unit

The transfer unit mainly consists of the static eliminator and transfer roller which rotates in connection with the drum unit.



● Transfer Bias/Separation Static Eliminator Bias Control

DC bias is applied to the transfer roller and static eliminator.



No.	Part name
[1]	Separation static eliminator bias control signal
[2]	Transfer bias control signal
[3]	Environment sensor detection signal

● Transfer Bias Constant Current Control

The transfer bias control circuit on the DC controller PCB controls the transfer bias applied to the transfer roller to keep the constant current.

● Transfer bias level control

The transfer bias output varies according to the environment, paper type, paper width, and/or source of paper detected by the environment sensor (HU1).

● Cleaning Bias Control

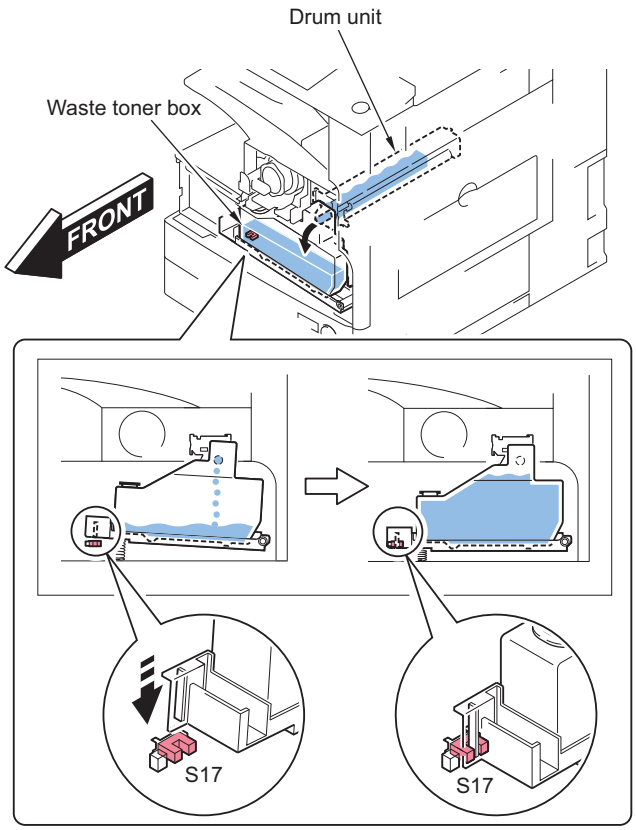
To return the toner adhered on the transfer roller to the photosensitive drum, negative voltage is applied at the last rotation.

● Separation Static Eliminator Bias Control

Either of the two types of negative voltage (low bias or high bias) is applied to the static eliminator depending on the print mode and sequence for reducing electrostatic suction to facilitate separation of paper from the photosensitive drum.

■ Waste Toner Box

Outline
Residual toner adhered on the photosensitive drum without being transferred to a paper is scraped off by the cleaning blade in contact with the photosensitive drum, then fed into the waste toner box by the waste toner feed screw.
The waste toner box is supported by a spring. If the waste toner box sinks down lower than specified with the weight of collected toner, the waste toner full sensor (S17) detects the waste toner box full.



No.	Part name
S17	Waste toner full sensor

● Waste Toner Full Level Detection

Status	Detection timing	Detecting to (location)	Alarm	Message (Operation)
Warning for full level of waste toner (Approx. 99% of the full criterion)	When the Switch is pressed and the total counter value exceeds 50,000 sheets. *2	Waste toner full sensor (S17)	11-0010	Waste toner is near full. Printing is still possible. (Continuous printing is enabled. Prepare a waste toner container.)*1
Full level of waste toner (Full criterion)	When 2,000 sheets are printed since the full level warning.	The number of prints	11-0001	Waste toner is full. (Host machine is stopped. Replace the waste toner container.)
	When the Switch is pressed and the total counter value fails 50,000 sheets *3	Waste toner full		

When replacing it for a new waste toner container after the waste toner full sensor detected presence of a waste toner container, the internal counter for full detection is cleared automatically.
And the warning/indication message on the operation panel disappears.
When changed a collection toner container, the collection toner container part counter (service mode:WST-TNR)is reset automatically.

- #COUNTER > DRBL-1 > WST-TNR

*1. Warning for full level of waste toner
Whether or not to display the preparation warning message of the waste toner container on the status area of LUI can be set in the following service mode.

- #SSSW > SW34 > bit3
  <Setting value>
  0: Not display
  1 : Display [Default: 1]

*2. Prior delivery alarm
When detected waste toner full level detection condition (The sensor detects full level of waste toner and the total counter value exceeds 50,000 sheets), notify of warning for full level of waste toner (message) and prior delivery alarm.

*3. Special full level detection
When attaching a waste toner container that has been used by the other machine, or the counter information is lost for some reason, it is necessary to notify full level before an alert is given. (The counter shows less than 50,000 although the sensor detects full level of waste toner) In such a case, it is determined as full level without an alert and the machine cannot continue printing.

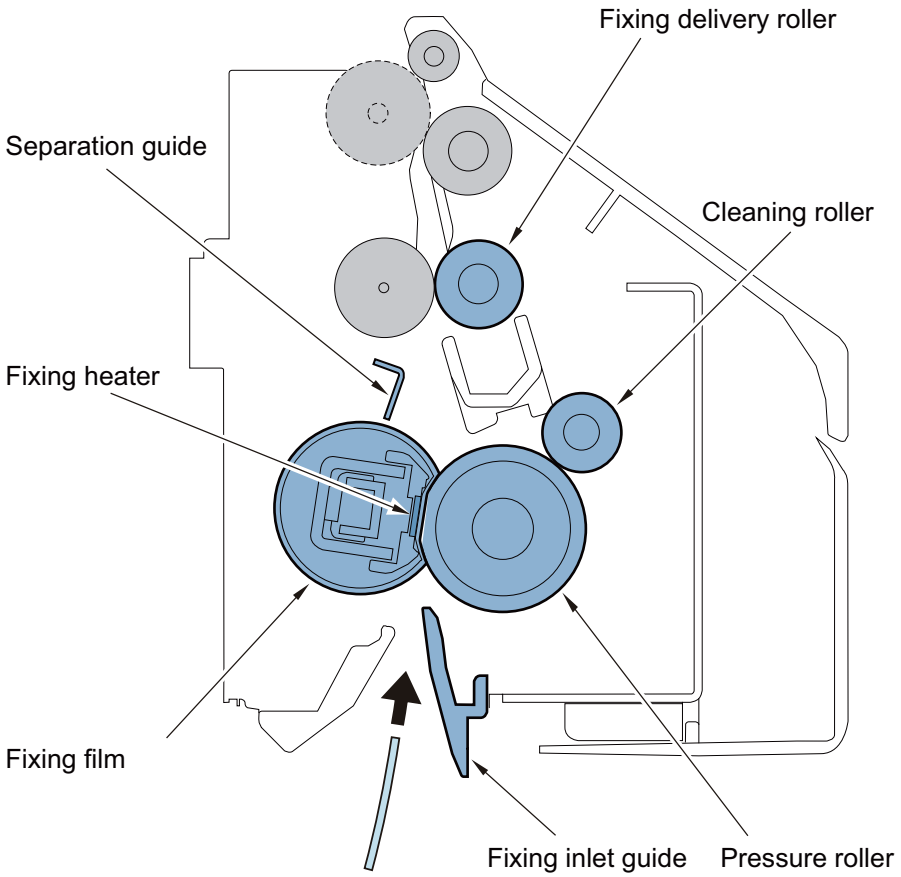
Explain the user that there will be no alert when any of the above is executed.

Fixing System

Overview

■ Features

This machine introduces the on-demand fixing method.

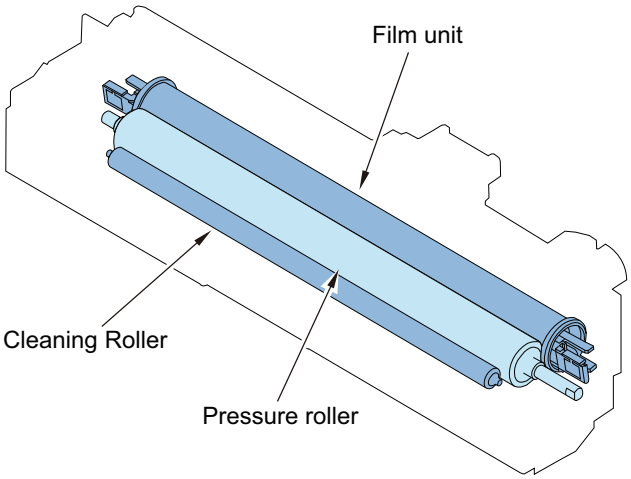


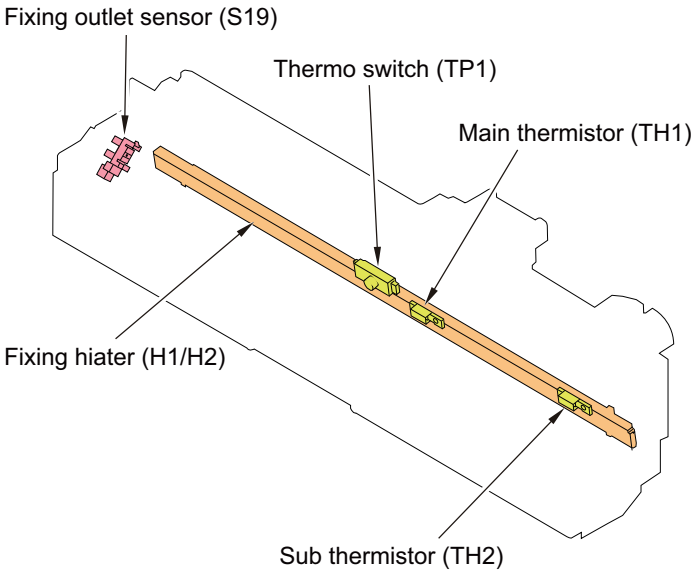
■ Specifications

Item	Function/method
Fixing method	On-demand fixing
Fixing speed	139 mm/sec (1/1-high speed: 0.8% speed-up)
	137 mm/sec (1/1-speed)
	131.5 mm/sec (1/1-slow speed: 3.1% speed-down)
Fixing heater	Ceramic heater
Control temperature	208 deg C (plain paper) *1
Temperature detection	By the main thermistor and the sub thermistor
Cleaning mechanism	Cleaning roller
Edge heat rising prevention control	Down sequence control
Fixing loop control	Loop sensor
Protective Function	Main thermistor and Sub thermistor Thermo Switch (operating temperature: 250 deg C)

*1. Target temperature is specified depending on the fixing mode and the fixing temperature at the start of warm-up control.

■ Major parts configuration

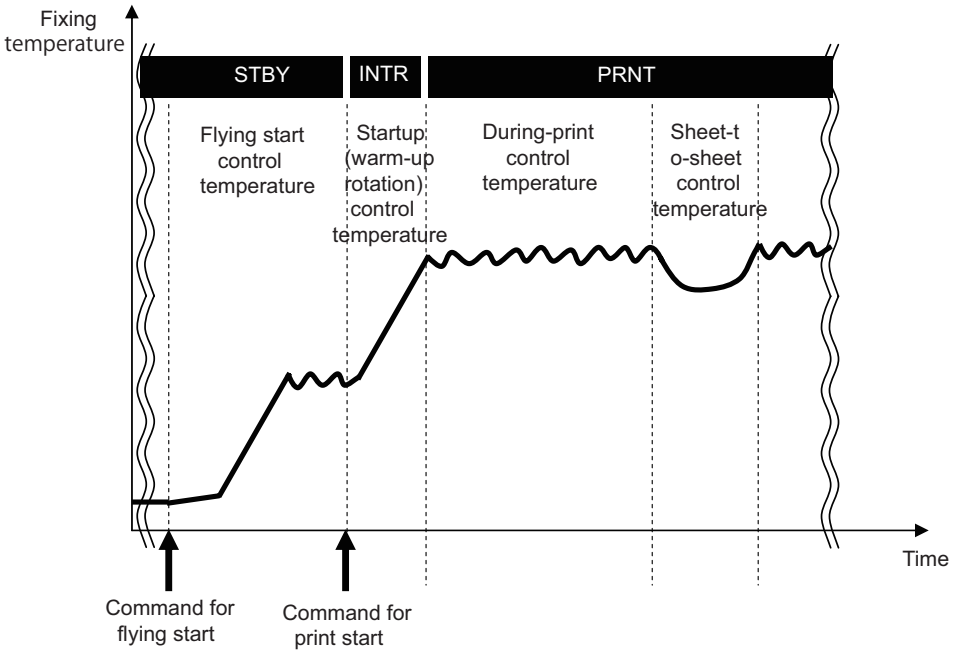




Part name		Function / method
---	Film unit	Applying heat and pressure makes the toner image on paper fixed (fused).
---	Pressure roller	
H1/H2	Fixing heater	Ceramic heater
TH1	Main thermistor	To be in contact with the heater Temperature control, detection of abnormal temperature rise
TH2	Sub thermistor (rear)	To be in contact with the heater (non-feeding area) Temperature control, detection of abnormal temperature rise, temperature detection/cooling control on the edges
TP1	Thermo Switch	To be in contact with the heater (non-feeding area) Temperature control, detection of abnormal temperature rise, temperature detection/cooling control on the edges
S19	Fixing outlet sensor	Jam detection

Controls

■ Fixing temperature control: overview



● Standby temperature control

To preheat the fixing assembly to reduce time for starting print.

- Flying start temperature control

● Print temperature control

To increase temperature to meet the fixing target temperature and keep the target temperature during printing.

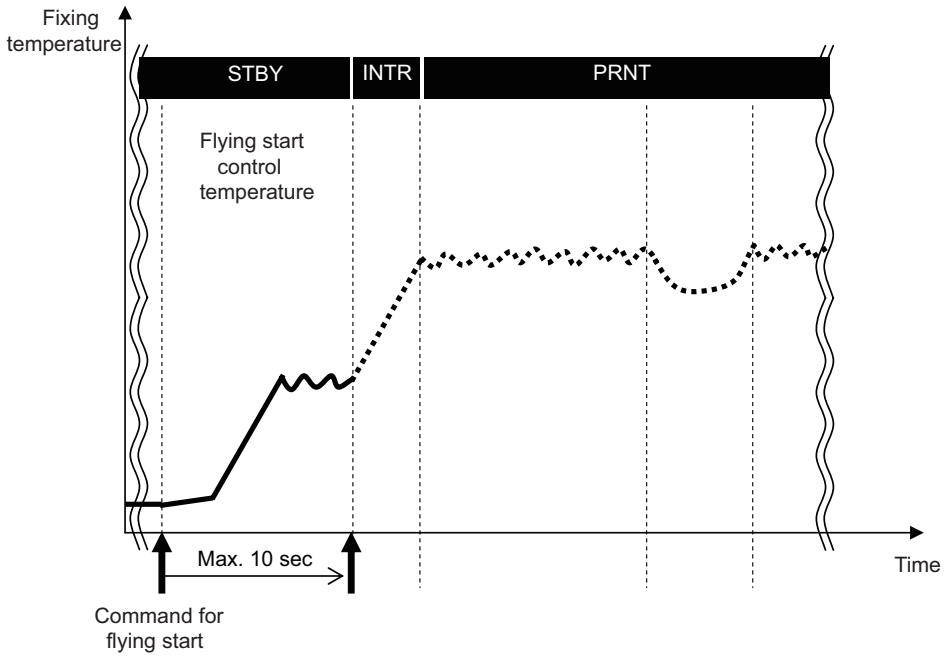
- Startup (warm-up rotation) temperature control
- Print temperature control
- Sheet-to-sheet temperature control

● Down sequence control

To prevent fixing failure due to rising temperature at the edge or fall in temperature. This control causes reduced the productivity (through-put).

- Down sequence when feeding small size paper
- Down sequence when switching paper size

■ Standby temperature control



● Flying start temperature control

Purpose:

- To reduce the print time (FPOT) of the 1st sheet

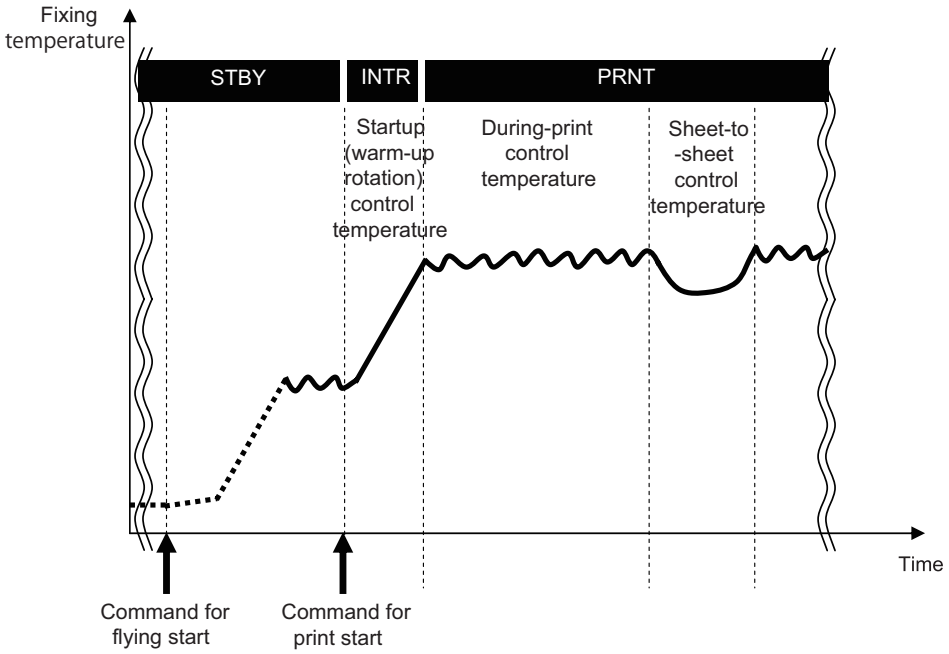
Starting conditions:

- When opening the copyboard cover or ADF, and also the detection temperature of the main thermistor is less than 100 deg C.
- When the original sheet is set on the ADF tray, and also the detection temperature of the main thermistor is less than 100 deg C.
- When the main power switch is turned ON or the machine condition is shift from the sleep mode to standby, and also the detection temperature of the main thermistor is less than 155 deg C.

Control description:

- The target control temperature is set to 165 deg C and the fixing motor starts to rotate with a half speed. The control continues for maximum 10 seconds.

■ Print temperature control



● Startup (warm-up rotation) temperature control

To increase fixing temperature to be ready for printing after receiving the print-start command

● Print temperature control

To set optimal target temperature to prevent fixing failure or offset, and keep the specified target temperature during printing

1. Setting target temperature
   Target temperature is specified depending on the paper type, paper size, elapsed time since the last control (including the standby control) of fixing temperature and fixing temperature at the start of warm-up control.
2. Temperature control during printing
   When the paper passes in the fixing unit, the fixing temperature is controlled to keep the target value (see the table on the next page) according to the detection result of main thermistor.
3. Sheet-to-sheet distance temperature control
   To prevent the excessive temperature rise and to save the power consumption, the target temperature is set 5 deg C low (in case of plain paper *1) from the printing temperature.

   *1. Set to 5, 15 or 20 deg C low according paper type

Target temperature during printing

- The control temperature is determined according to the fixing mode or to the fixing temperature at the start of warm-up control. The 12 modes are provided as the fixing mode for the selected feed table and paper type.
  The following table is the control temperature when the fixing temperature is less than 55 deg C at the start of warm-up control.

Fixing mode	Setting	Target temperature (deg C)	
		1-sided/first of 2-sided	Second of 2-sided
Plain paper	Paper type	208	203
Thin paper		198	193
S-thin paper		188	183
Heavy paper		223	223
Heavy paper-H		223	223
Bond paper		223	223
OHP		198	198
Postcard		223	---
S-Postcard		223	---
Envelope		223	---
N1		165	165
N3		155	155

NOTE:
<Related Service Mode>
Offset of fixing control temperature (High and low of control temperature)
- PRINT > SW > 62
  Control temperature during cassette feeding
- PRINT > SW > 63
  Control temperature in Heavy/Heavy-H/Bond paper modes
- PRINT > SW > 166
  Control temperature for the second side of 2-sided copying
- PRINT > SW > 173
  Control temperature for the second side of 2-sided copying
- PRINT > SW > 179
  Control temperature in Postcard/S-Postcard/Envelope modes)

<Setting value>
0 to 2: +15 deg C
3 to 11: +12 to -15 deg C (each 3 deg C) [Default: 7]
12 to 14: -15 deg C

■ Down sequence control

● Down sequence when feeding small size paper

Purpose:
- To prevent temperature rise of non-feeding area in the case of continuous print of small size paper (less than A4 of length in width direction), fixing offset or deterioration of fixing film.

Starting conditions:
- The down sequence is performed step by step. When the detected temperature of sub thermistor reaches the following temperature or higher for 430 msec continuously, the productivity decreases every one step.

Step	Normal	1st step	2nd step	3rd step
Shift temp (deg C)	235	245	255	275

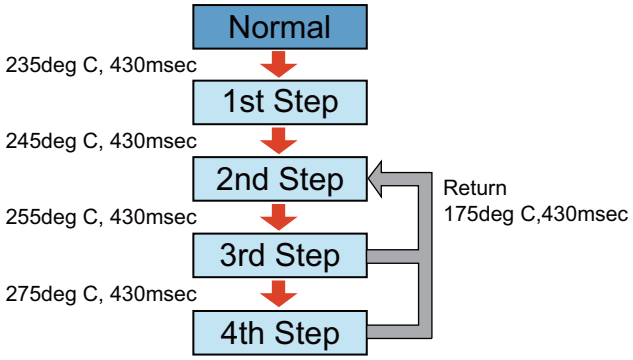
Operation:

- Temperature is reduced by making wider sheet-to-sheet distance with the maximum 4 steps to control the temperature at lower than the target temperature for normal print.

Fixing mode	Step	B4 LGL	B5 EXE	A4R LTRR	A5R B5R EXE-R	Free size	Post card	Enve-lope
Plain paper Thin paper S-thin paper	Normal	13	27/25/20	17	17	13	---	---
	1	13	27/25/20	17	17	13	---	---
	2	10	27/25/20	14	14	10	---	---
	3	8	10	10	10	8	---	---
	4	4	4	4	4	4	---	---
Heavy paper Heavy-H pa-per	Normal	11	23/20	13	13	4	---	---
	1	11	23/20	13	13	4	---	---
	2	10	23/20	13	13	4	---	---
	3	8	10	10	10	4	---	---
	4	4	4	4	4	4	---	---
Bond paper	Normal	8	8	8	8	8	---	---
	1	8	8	8	8	8	---	---
	2	8	8	8	8	8	---	---
	3	8	8	8	8	8	---	---
	4	4	4	4	4	4	---	---
OHP	Normal	13	27/25/20	17	17	13	---	---
	1	13	27/25/20	17	17	13	---	---
	2	10	27/25/20	14	14	10	---	---
	3	8	10	10	10	8	---	---
	4	4	4	4	4	4	---	---
Postcard	Normal	---	---	---	---	---	12	---
	1	---	---	---	---	---	10	---
	2	---	---	---	---	---	8	---
	3	---	---	---	---	---	8	---
	4	---	---	---	---	---	4	---
S-Postcard	Normal	---	---	---	---	---	6	---
	1	---	---	---	---	---	5	---
	2	---	---	---	---	---	4	---
	3	---	---	---	---	---	4	---
	4	---	---	---	---	---	2	---
Envelope	Normal	---	---	---	---	---	---	10
	1	---	---	---	---	---	---	8
	2	---	---	---	---	---	---	6
	3	---	---	---	---	---	---	6
	4	---	---	---	---	---	---	3

Completion conditions:

- When the fixing temperature reaches 175 deg C and lower for 430 msec continuously after shifting to the third or fourth step, the productivity returns to the second step.

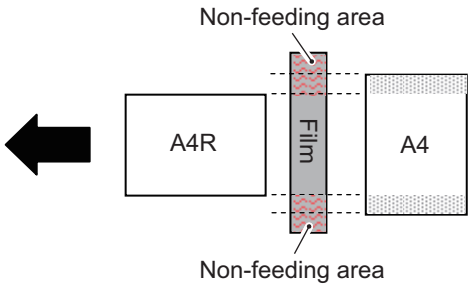


CAUTION:
<Related Service Mode>
- PRINT > SW > 64
  Setting for down sequence start temperature when feeding small size paper

<Setting value>
0: +20 deg C
1: +10 deg C
2: 0 deg C [Default: 2]
3: -10 deg C
4: -20 deg C

● Down sequence when switching paper size

Purpose:
- This down sequence prevents temperature rise of non-feeding area: there can be possible fixing offset or wrinkle of the succeeding paper due to increased temperature of non-feeding area of the preceding paper when continuously making prints or feeding wider length of paper than the preceding paper.



Starting conditions:
- If the detected temperature of the sub thermistor reaches more than 210 deg C (*1) when switching to the paper which has longer width than the preceding paper.

Operation:
- Pickup of the succeeding paper and power distribution to the heater are stopped as well to decrease the fixing temperature.

Completion conditions:
- When the detected temperature of the sub thermistor reaches 170 deg C and less (*1)

*1. It is different according to setting value of the user mode (Special mode S or Rotation/collation adjustment)

■ User mode related to fixing grade

The fixing grade is affected by some special modes in user mode which change the control temperature or productivity. The related modes are as follows.

User mode	Summary	Setting value	Temperature control/productivity
Special Mode N (To prevent a curl and jam in high humidity)	The fixing mode is changed when either of the plain/ recycled/ color/ 3-hole paper is selected in the control panel. The productivity is reduced and fixing grade is improved.	Off (Default)	Normal temperature control (Plain paper mode)
		Auto (Fixing grade is improved)	Fixing mode (plain paper mode and N1 mode (*1)) is changed automatically according to the environment (temperature/ humidity).
		Manual (Medium) (Fixing grade is improved)	N1 mode temperature control
		Manual (High) (Fixing grade is improved)	N3 mode (*3) temperature control

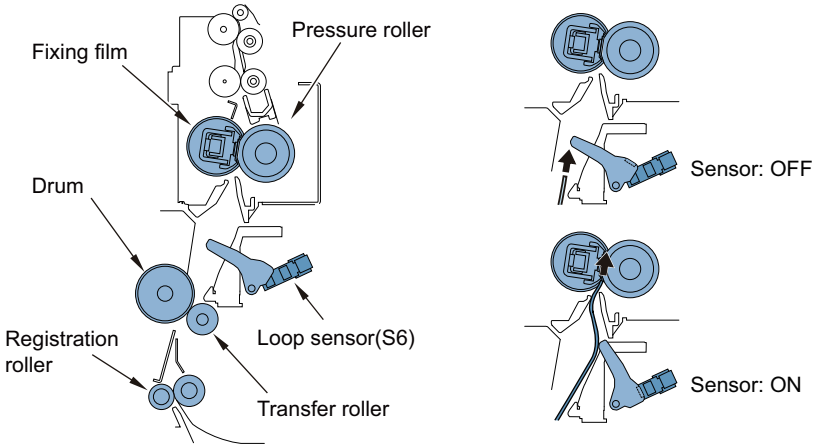
User mode	Summary	Setting value	Temperature control/productivity
Special Mode P (To prevent a curl of thin paper/ recycle paper)	The fixing mode is changed when either of the plain/ recycled/ color/ 3-hole paper is selected in the control panel. The productivity is reduced and fixing grade is improved.	Off (Default)	Normal temperature control (Plain paper mode)
		Medium (Fixing grade is improved)	Thin paper mode temperature control
		High (Fixing grade is improved)	S-thin paper mode temperature control
Special Mode G (To increase the fixing grade for heavy paper)	The productivity is reduced and fixing grade is improved.	Off (Default)	Normal control
		On (Fixing grade is improved)	The productivity is reduced by 4 sheets or 5 sheets.
Special Mode G (To increase the productivity during down sequence)	The down sequence time is reduced when switching the paper size. The fixing grade is reduced and productivity is improved. (*3)	Off (Default)	Temperature difference between the main and sub thermistors to start the paper feeding: 20 deg C
		On (Productivity is improved)	Temperature difference between the main and sub thermistors to start the paper feeding: 30 deg C
Special Mode F (To reduce the wait time during rotation/ collation adjustment mode)	The down sequence time is reduced in the collation adjustment mode. The fixing grade is reduced and productivity is improved.	Image Priority (Default)	Temperature difference between the main and sub thermistors to start the paper feeding: 20 deg C
		Speed Priority 1 (Productivity is improved)	Temperature difference between the main and sub thermistors to start the paper feeding: 40 deg C
		Speed Priority 2 (Productivity is improved more)	Temperature difference between the main and sub thermistors to start the paper feeding: 60 deg C

*1. N1 mode: "Normal temperature control" -24 deg C (when the cassette feeding, and the fixing temperature is 100 deg C or more at the start of warm-up control.)
*2. N3 mode: "Normal temperature control" -48 deg C (when the cassette feeding, and the fixing temperature is 100 deg C or more at the start of warm-up control.)
*3. The setting of rotation/collation mode is given priority to over this setting.

■ Paper loop amount control before fixing

Purpose:

- To get a proper image by avoiding a shock when the trailing edge of paper comes out of the registration roles, an appropriate paper loop is formed between transfer roller and fixing roller.



Starting conditions:

- This control is performed at every paper feeding.

Operation:

- The fixing motor drive speed is controlled as follows by detecting the paper loop between transfer roller and fixing roller with the loop sensor.
  1. The fixing motor drive speed is reduced by 3.1% when the reading edge of paper is fed 35mm from the transfer roller. The reduced speed is kept until the loop sensor is turned on by the formed paper loop.
  2. After detecting the ON condition of the loop sensor for 50 msec continuously, the fixing motor drive speed is increased by 0.8% compared with the process speed. The increased speed is kept until the loop sensor is turned off by the deleted paper loop.
  3. After detecting the OFF condition of the loop sensor for 50 msec continuously, the fixing motor drive speed is reduced by 3.1% compared with the process speed. The reduced speed is kept until the loop sensor is turned on by the formed paper loop.
  4. Repeat steps 2) and 3). The fixing motor drive speed is increased by 0.8% compared with the process speed when the trailing edge of paper reaches 65 mm before coming out of the registration roller.
  5. When continuously making prints, return to step 1). When making a single print, shift to the last rotation.

■ Protection features

Code		Description	Error Clear
E000	Fixing temperature abnormal rise		
	0001	The temperature detected by the main thermistor does not rise to the specified value during startup control.	Yes
E001	Fixing unit temperature rise detection		
	0000	The reading of the main thermistor is 250 deg C or more continuously for 200 msec.	Yes
	0001	The hardware circuit detects overheating of the main or sub thermistor for 200 msec.	Yes
	0002	The reading of the sub thermistor is 295 deg C or more continuously for 200 msec.	Yes
E002	Fixing unit temperature insufficient rise		
	0000	1.The reading of the main thermistor is less than 115 deg C continuously for 400 msec 1.3 sec after it has indicated 100 deg C. 2.The reading of the main thermistor is less than 150 deg C continuously for 400 msec 1.3 sec after it has indicated 140 deg C.	Yes
E003	Low fixing temperature detection after standby		
	0000	The reading of the main thermistor is less than 140 deg C continuously for 400 msec or more.	Yes
E004	Thermistor disconnection detection error		
	0000	When disconnection is detected with connector (J214) for 30 sec continuously.	No
E014	Unstable rotation of the Fixing Motor (M2)		
	0001	Detection is executed every 100 msec after the start of motor rotation; however, the drive detection signal is absent for 2 sec.	
	0002	During motor rotation, detection is executed every 100 msec; however, the drive signal is absent 5 times in sequence.	No
E261	Error in Zero Cross		
	0000	Zero Cross failed to be detected for 500ms or more while the relay was ON. * The same condition is detected after the error retry is performed.	No

CAUTION:
<Related Service Mode>
- CLEAR > ENGIN > ERRCLR
  Error code clear

Pickup/Feed System

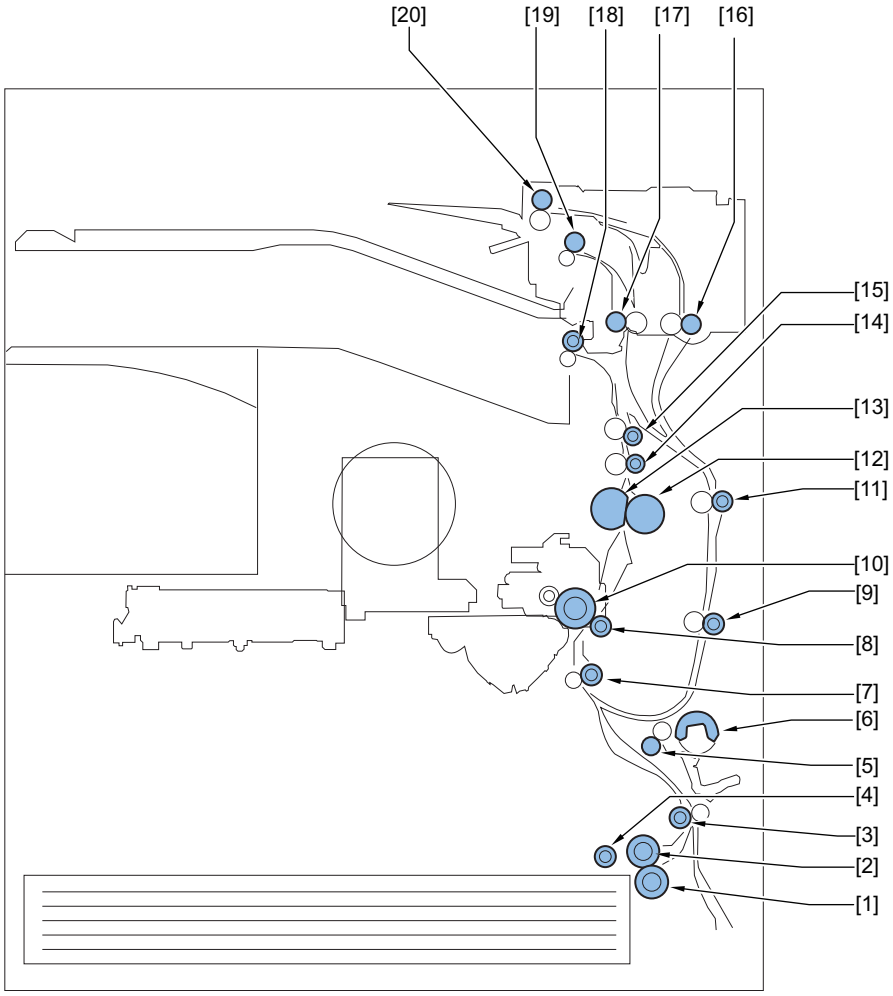
Overview

■ Specification

Item		Description
Paper storage method		Front loading method
Pickup method	Cassette 1 (550 sheets cassette)	Retard separation method
	Cassette 1 (250 sheets cassette)	Pad separation method
	Cassette 2/3/4	Retard separation method
	Manual feed pickup tray	Pad separation method
Paper stack capacity	Cassette 1 (550 sheets cassette)	550 sheets (80 g/m2), 650 sheets (64 g/m2)
	Cassette 1 (250 sheets cassette)	250 sheets (80 g/m2), 300 sheets (64 g/m2)
	Cassette 2/3/4	550 sheets (80 g/m2), 650 sheets (64 g/m2)
	Manual feed pickup tray	100 sheets (80 g/m2), 100 sheets (64 g/m2)
Paper feed reference		Center reference
Paper size	Cassette 1/3/4	A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LG, 11" x 17", STMTR
	Cassette 2	A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LG, 11"" x 17"", STMTR, Envelopes* (No.10 (COM10), ISO-B5, Monarch, ISO-C5, DL) * The optional Envelope Feeder Attachment-D1 is required.
	Manual feed pickup tray	A4, A4R, A3, A5R, B4, B5, B5R, LTR, LTTR, LG, 11" x 17", STMTR, Free size (99 mm x 297 mm to 148 mm x 432 mm), Envelopes (No. 10 (COM10), ISO-B5, Monarch, ISO-C5, DL)
Paper grammage	Cassette	64 g/m2 to 90 g/m2
	Manual feed pickup tray	64 g/m2 to 128 g/m2
Paper size switch	Cassette	By the user
	Manual feed pickup tray	By the user
Duplexing method		Through path

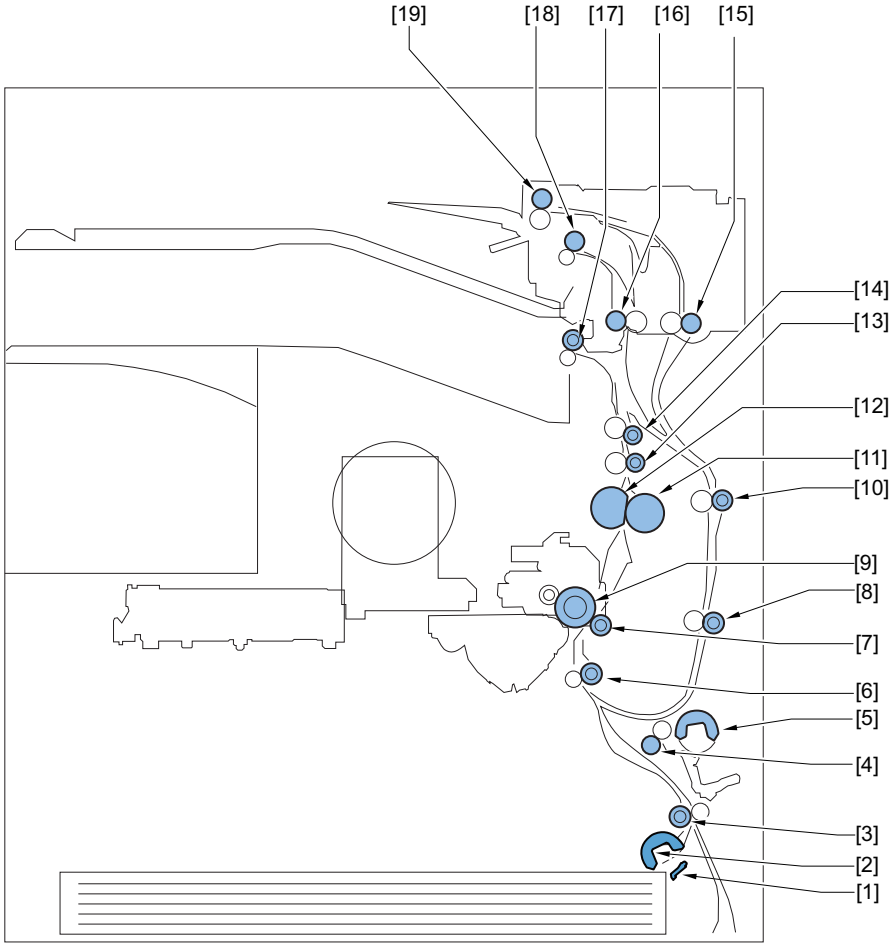
■ Parts Configuration

● Arrangement of Rollers (550-sheet 1st cassette model)



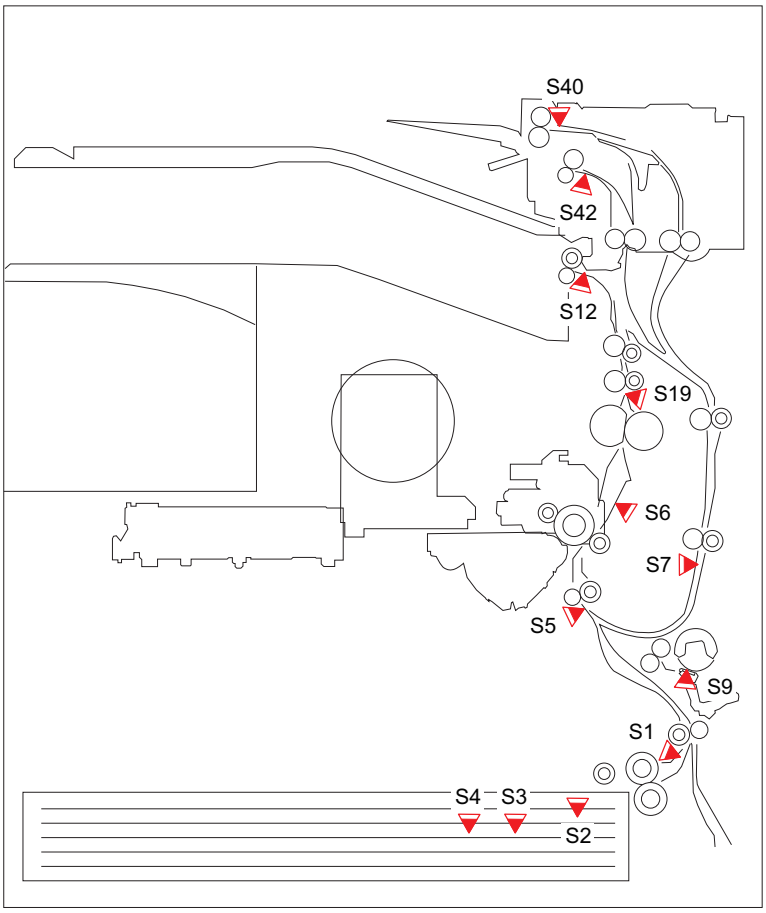
No.	Part Name	No.	Part Name
[1]	Separation roller (cassette 1)	[11]	Duplexing/feeding roller 1
[2]	Feed roller (cassette 1)	[12]	Fixing pressure roller
[3]	Vertical path slave roller 1	[13]	Fixing film
[4]	Pickup roller (cassette 1)	[14]	Fixing outlet roll 1
[5]	Manual feed pull-up roller	[15]	Fixing outlet roll 2
[6]	Manual feed pickup roller	[16]	Duplexing inlet roller
[7]	Registration roller	[17]	Vertical path slave roller 2
[8]	Transfer roller	[18]	Tray 1 delivery roller
[9]	Duplexing/feeding roller 2	[19]	Tray 2 delivery roller
[10]	Drum	[20]	Reversing roller

● Arrangement of Rollers (250-sheet 1st cassette model)



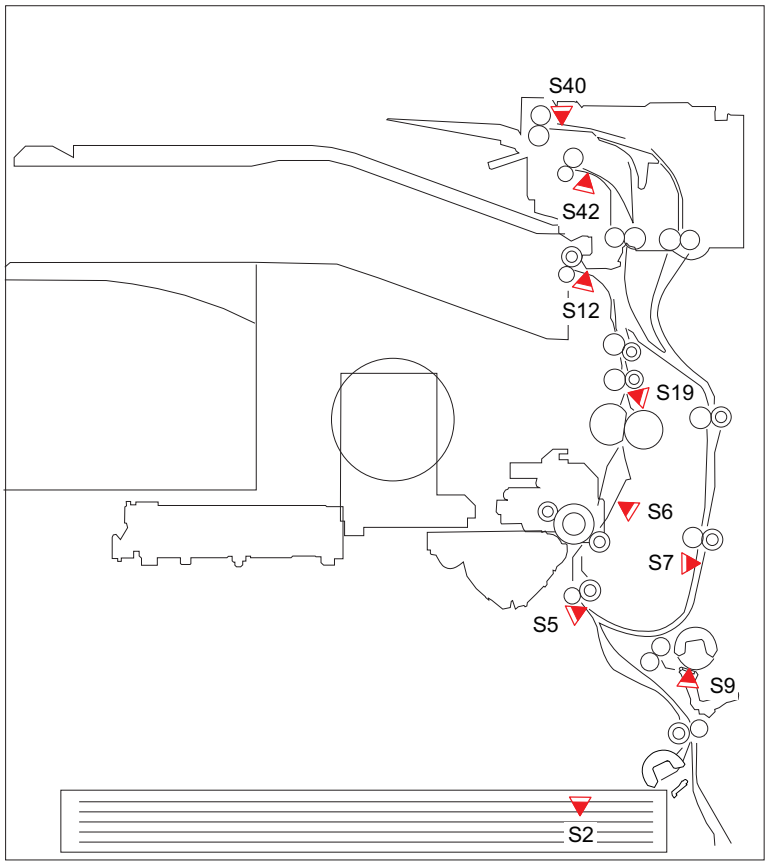
No.	Part Name	No.	Part Name
[1]	Separation pad (cassette 1)	[11]	Fixing pressure roller
[2]	Pickup roller (cassette 1)	[12]	Fixing film
[3]	Vertical path slave roller 1	[13]	Fixing outlet roll 1
[4]	Manual feed pull-up roller	[14]	Fixing outlet roll 2
[5]	Manual feed pickup roller	[15]	Duplexing inlet roller
[6]	Registration roller	[16]	Vertical path slave roller 2
[7]	Transfer roller	[17]	Tray 1 delivery roller
[8]	Duplexing/feeding roller 2	[18]	Tray 2 delivery roller
[9]	Drum	[19]	Reversing roller
[10]	Duplexing/feeding roller 1		

● Arrangement of Sensors (550-sheet 1st cassette model)



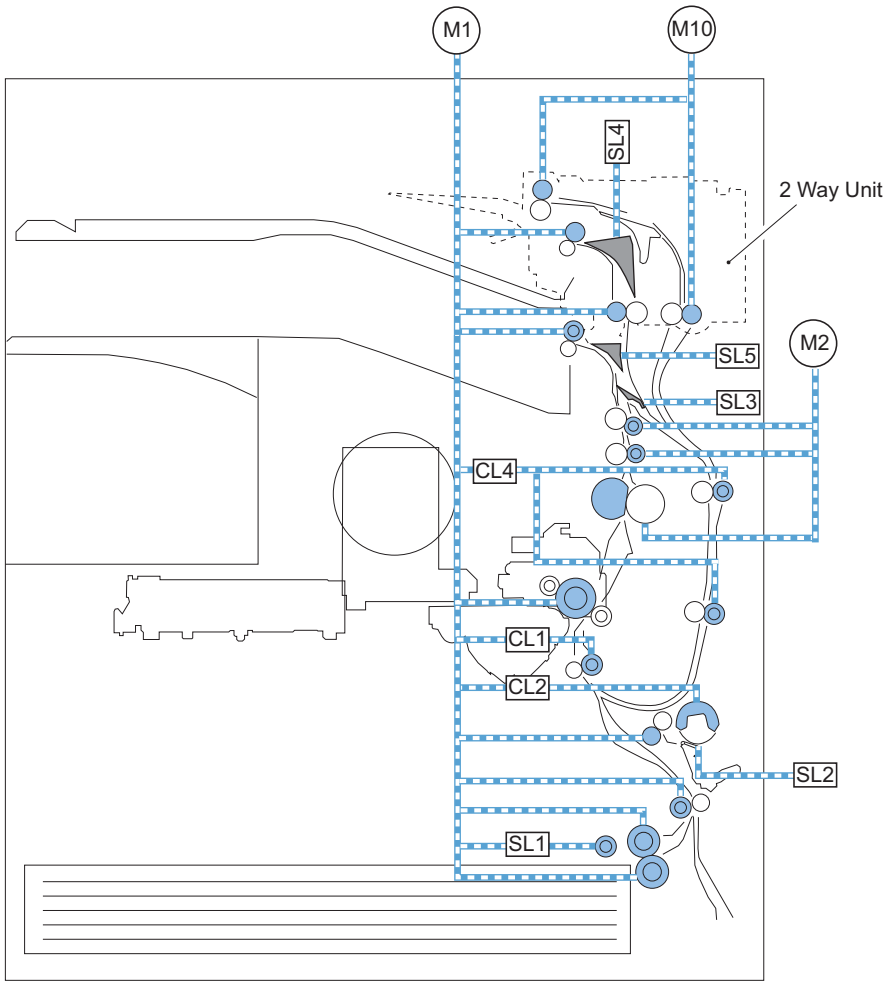
No.	Part Name	No.	Part Name
S1	Cassette 1 pickup sensor	S7	Duplex feed sensor
S2	Cassette 1 paper sensor	S9	Manual feeder paper sensor
S3	Cassette 1 paper level sensor A	S12	No.1 delivery sensor
S4	Cassette 1 paper level sensor B	S19	Fixing outlet sensor
S5	Pre-registration sensor	S40	Reversal sensor
S6	Loop sensor	S42	No. 2 delivery sensor

● Arrangement of Sensors (250-sheet 1st cassette model)



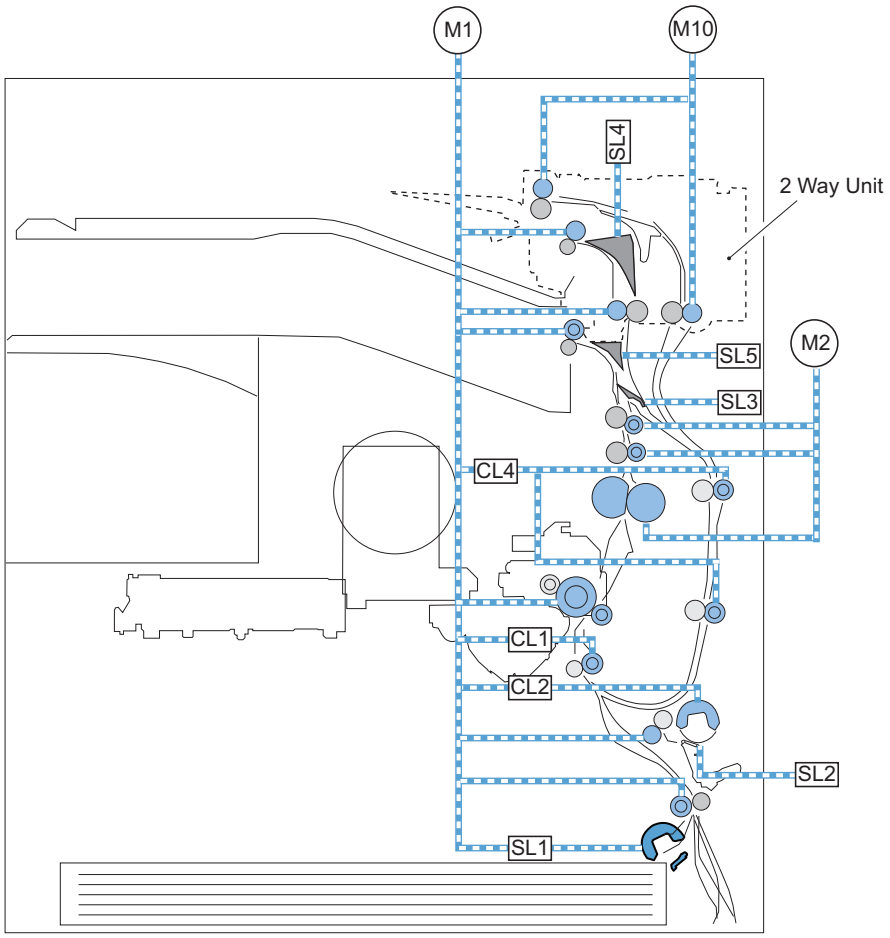
No.	Part Name	No.	Part Name
S2	Cassette 1 paper sensor	S12	No.1 delivery sensor
S5	Pre-registration sensor	S19	Fixing outlet sensor
S6	Loop sensor	S40	Reversal sensor
S7	Duplex feed sensor	S42	No. 2 delivery sensor
S9	Manual feeder paper sensor		

● Route of Drive (550-sheet 1st cassette model)



No.	Part Name	No.	Part Name
M1	Main motor	SL4	Reversal solenoid
M2	Fixing motor	SL5	No.2 delivery solenoid
M10	Reversal motor	CL1	Registration clutch
SL1	Pickup solenoid	CL2	Manual feed pickup clutch
SL2	Manual feed pickup solenoid	CL4	Duplex feed clutch
SL3	No.1 delivery reversal solenoid		

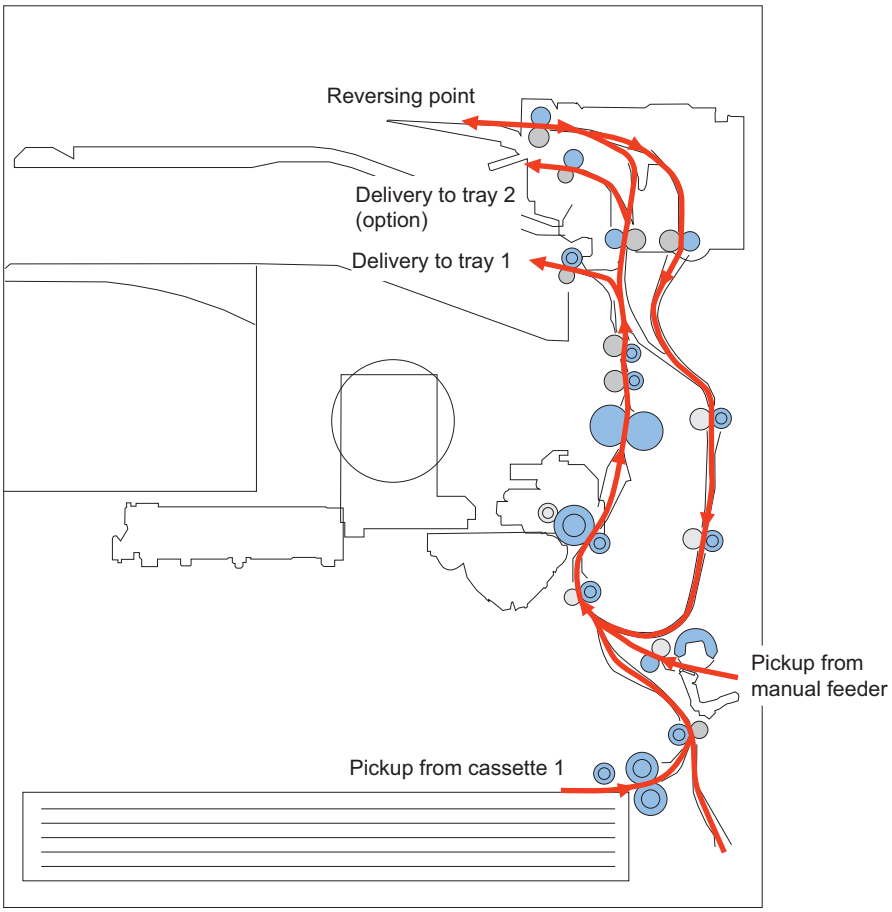
● Route of Drive (250-sheet 1st cassette model)



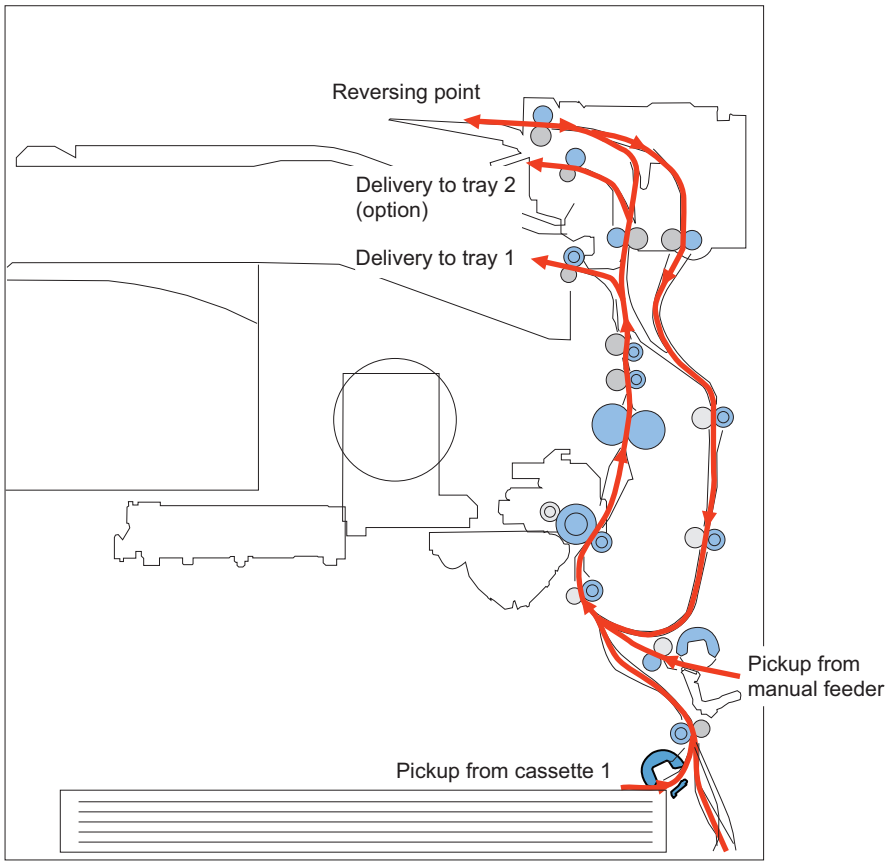
No.	Part Name	No.	Part Name
M1	Main motor	SL4	Reversal solenoid
M2	Fixing motor	SL5	No.2 delivery solenoid
M10	Reversal motor	CL1	Registration clutch
SL1	Pickup solenoid	CL2	Manual feed pickup clutch
SL2	Manual feed pickup solenoid	CL4	Duplex feed clutch
SL3	No.1 delivery reversal solenoid		

■ Diagram of Paper Paths (w/ 2 Way Unit/ inaner 2 way tray)

● 550-sheet 1st cassette model

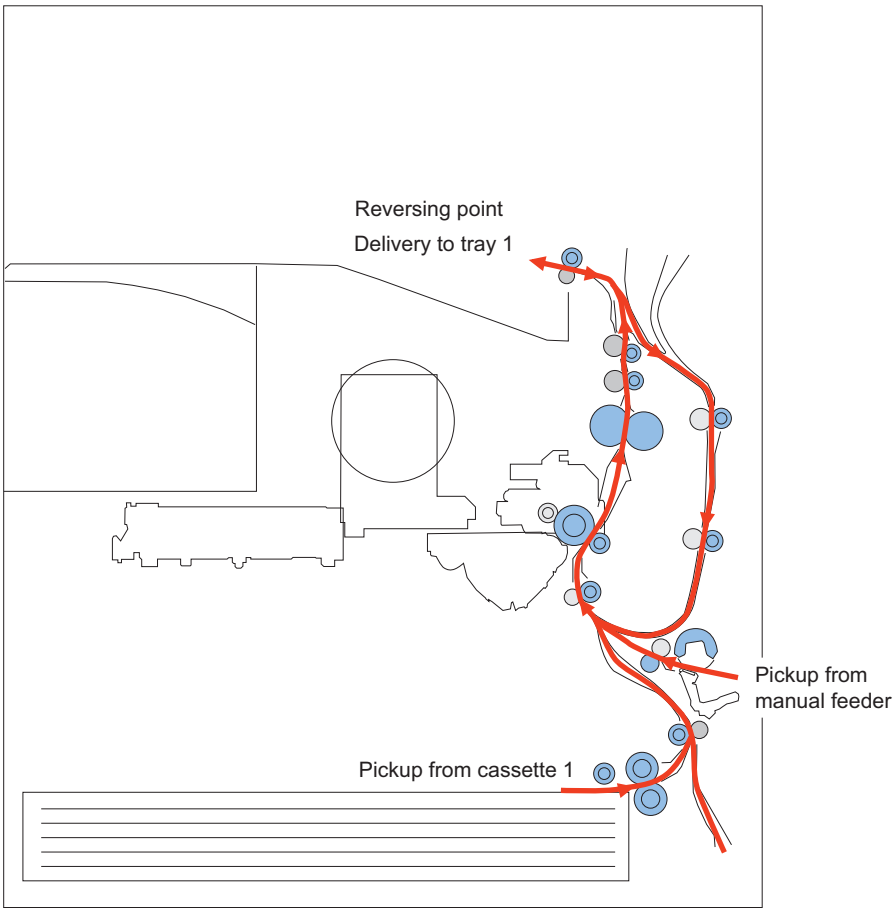


• 250-sheet 1st cassette model

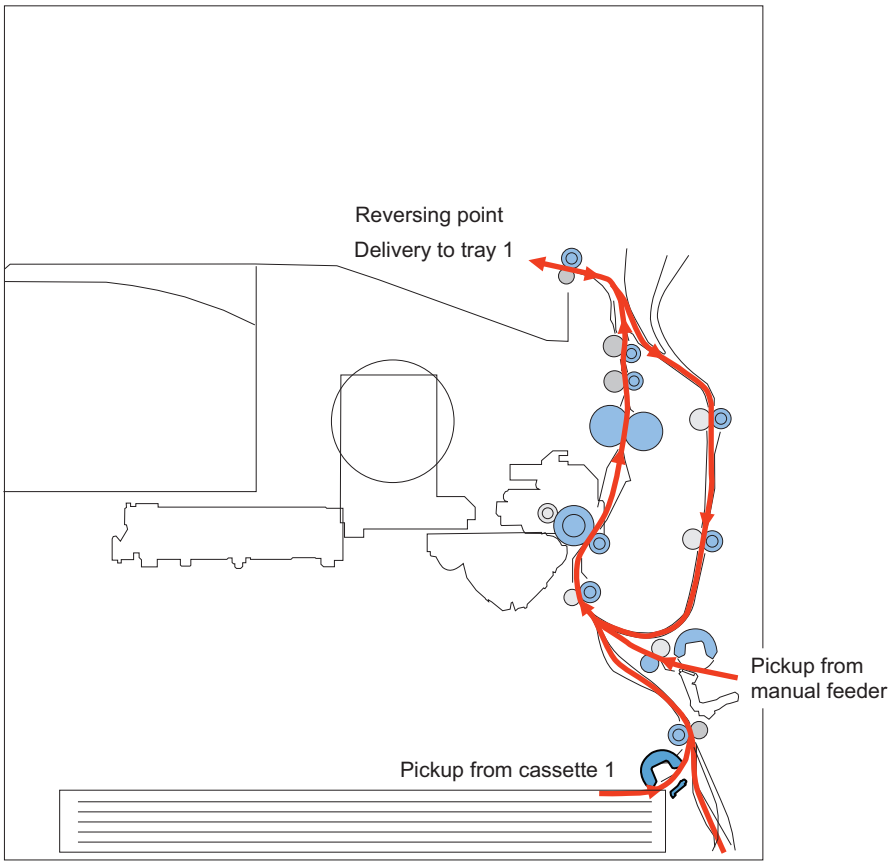


■ Diagram of Paper Paths (w/o 2 Way Unit)

● 550-sheet 1st cassette model

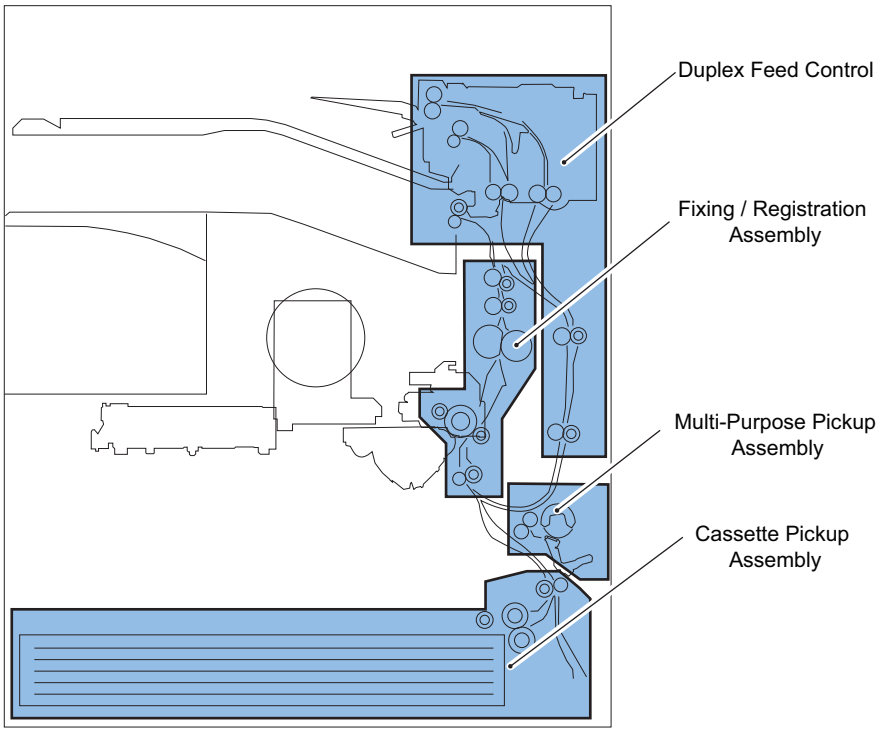


● 250-sheet 1st cassette model



Controls

■ Overview



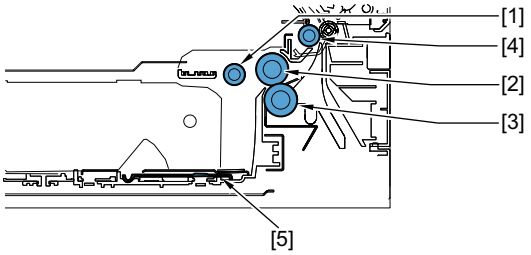
Area	Detection, Control
Cassette Pickup Assembly	Outline
	Paper Level / Presence Detection

Area	Detection, Control
Cassette Pickup Assembly	Paper Size / Cassette Presence Detection
Multi-Purpose Pickup Assembly	Outline
	Paper Presence Detection
	Paper Size Detection
Fixing / Registration Assembly	Registration Control
Duplex / Delivery Assembly	Duplex Feed Control
JAM Detection	JAM Detection

■ Cassette Pickup Assembly (550-sheet 1st cassette model)

● Overview

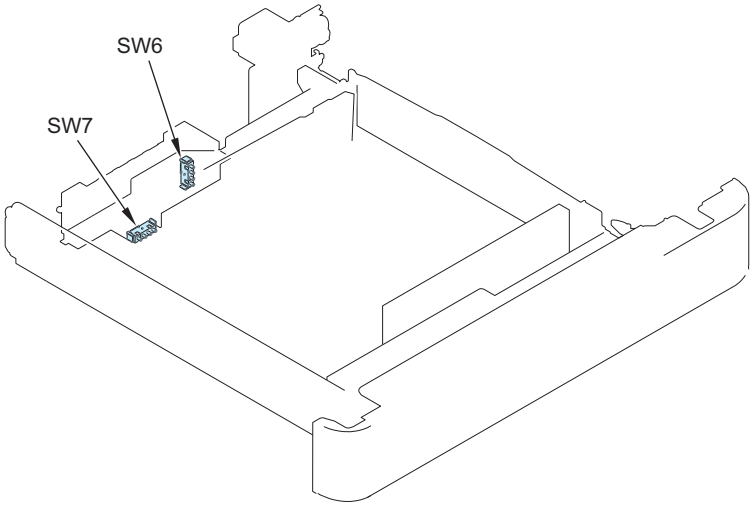
The paper inside the cassette is held up by the lifter plate.
When pickup takes place, the pickup solenoid (SL1) is turned on, and the pickup roller is moved down. When the pickup roller comes into contact with the surface of paper, the sheet is picked up by rotation of the roller.
Only a single sheet of paper picked up is moved to the feed path by the feed roller and the separation roller, and moved as far as the registration roller by the pickup vertical path roller.
The pickup vertical path roller, pickup roller, feed roller, and separation roller are driven by the cassette pickup motor (M1).

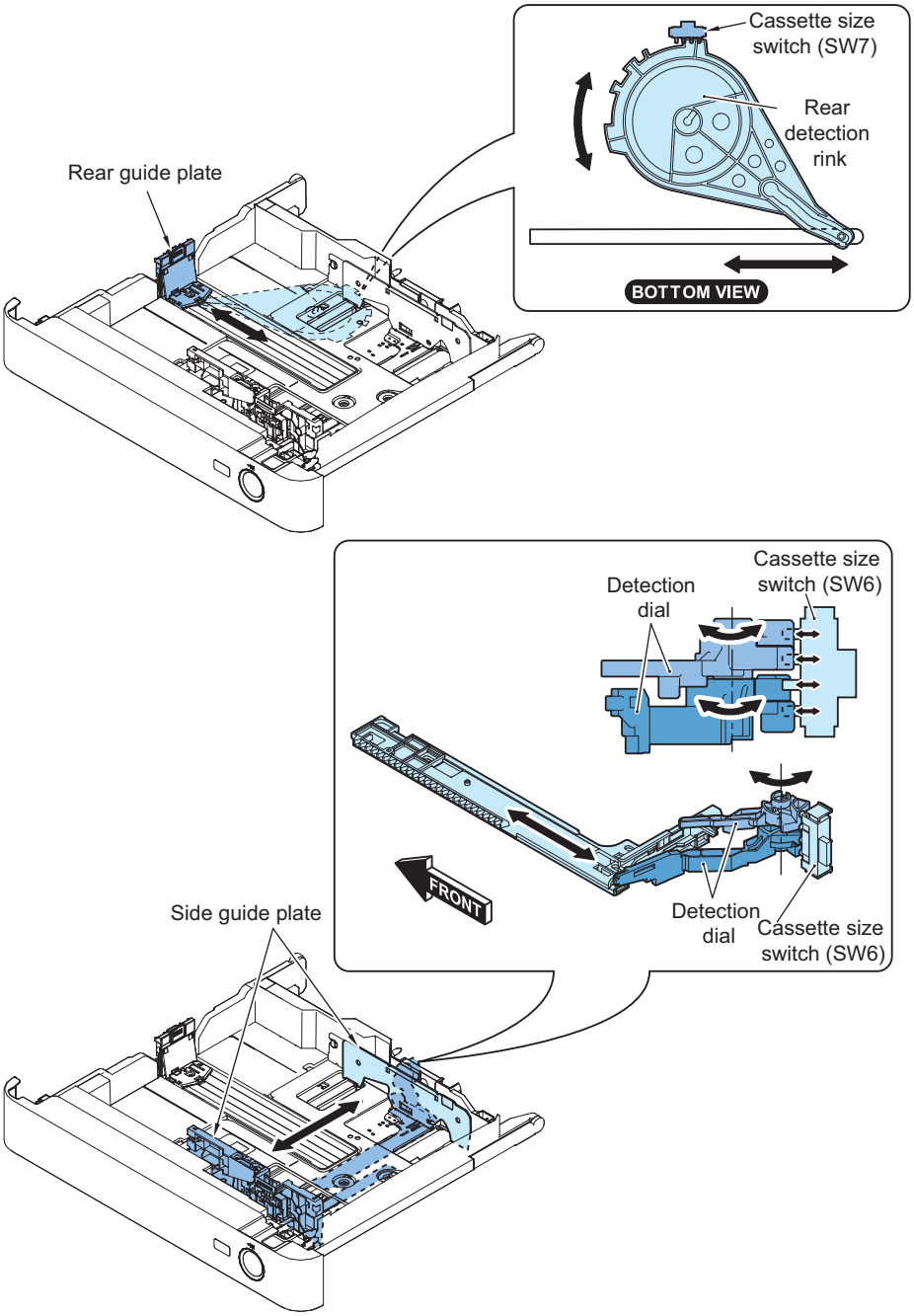


No.	Part name	No.	Part name
[1]	Pickup roller	[4]	Pickup vertical path roller
[2]	Feed roller	[5]	Lifter plate
[3]	Separation roller		

● Paper Size Detection

Paper size of the cassette can be automatically detected by adjusting the position of the guide plate.
Concavo-convex area of the cassette dial is switched when the guide plate is shifted and two Size Switches on a printer are switched. Length and width are detected according to the ON / OFF combination of switches. As long as standard paper, both AB type and inch type can be used. However, size should be found manually on the check screen for the combination of A5-Rand STMT-R or the combination of B5-R and EXEC.





	Width	Length	Width detection				Length detection			
			1	2	3	4	1	2	3	4
B5	257.0	182.0	0	ON	ON	0	0	0	0	0
EXEC	267.0	184.0	0	ON	ON	0	0	0	0	0
16K	270.0	195.0	0	ON	ON	0	ON	0	0	0
A5-R	148.5	210.0	ON	0	ON	0	ON	ON	0	0
A4	297.0	210.0	0	ON	0	0	ON	ON	0	0
STMT-R	139.7	215.9	ON	0	ON	0	ON	ON	0	0
LTR	279.4	215.9	0	ON	ON	0	ON	ON	0	0
B5-R	182.0	257.0	ON	0	ON	0	0	ON	ON	ON
LTR-R	215.9	279.4	0	0	ON	0	ON	0	0	ON
A4-R	210.0	297.0	0	0	ON	0	0	ON	ON	0
LGL	215.9	355.6	0	0	ON	0	ON	ON	0	ON
B4	257.0	364.0	0	ON	ON	0	ON	ON	ON	0
8K	270.0	390.0	0	ON	ON	0	ON	ON	ON	ON
A3	297.0	420.0	0	ON	0	0	0	0	ON	ON

	Width	Length	Width detection				Length detection			
			1	2	3	4	1	2	3	4
LDR	279.4	431.8	0	ON	ON	0	0	0	ON	ON

Also, the cassette presence is detected when the size switch is pushed. (If no switch is pushed, it is determined as no cassette.)

Setting method when the size detection patterns are overlapped

ASize should be found manually on the check screen for the combination of A5-Rand STMT-R or the combination of B5-R and EXEC.
Specify the ecognition method for the special paper with user setting.
The setting size is indicated below.

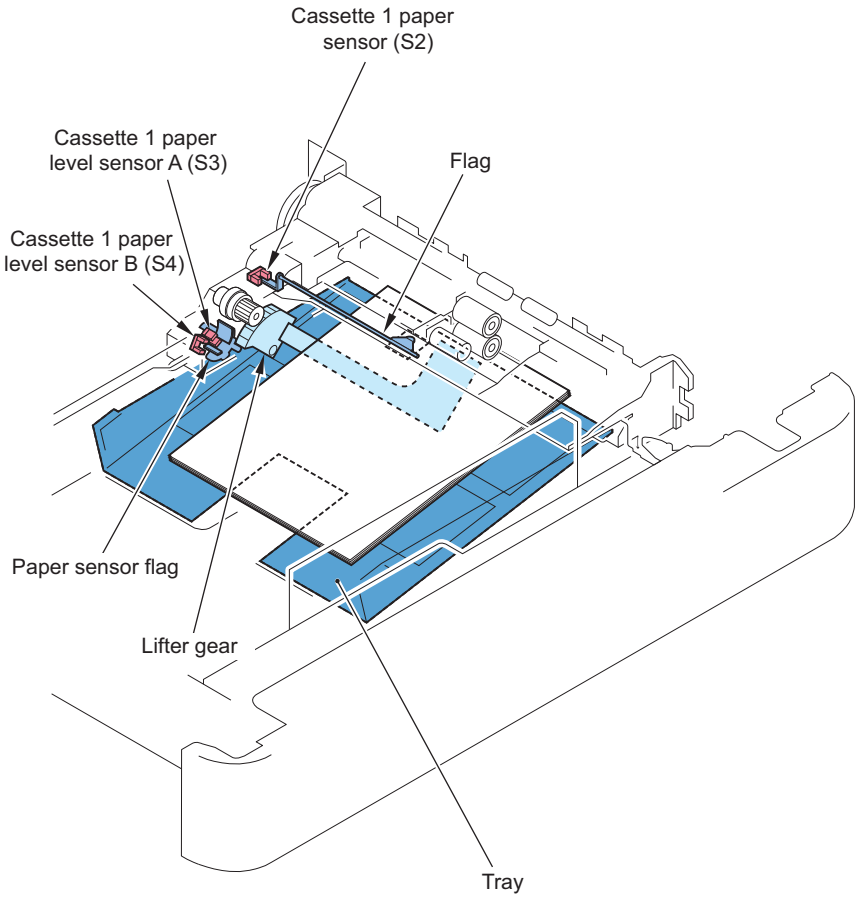
<Related Service Mode>

- PRINT> CST> CASX> CSTX-UY> Number
  X shows Cassette Number. Y shows size category. (X, Y is one of the number 1/2/3/4.)

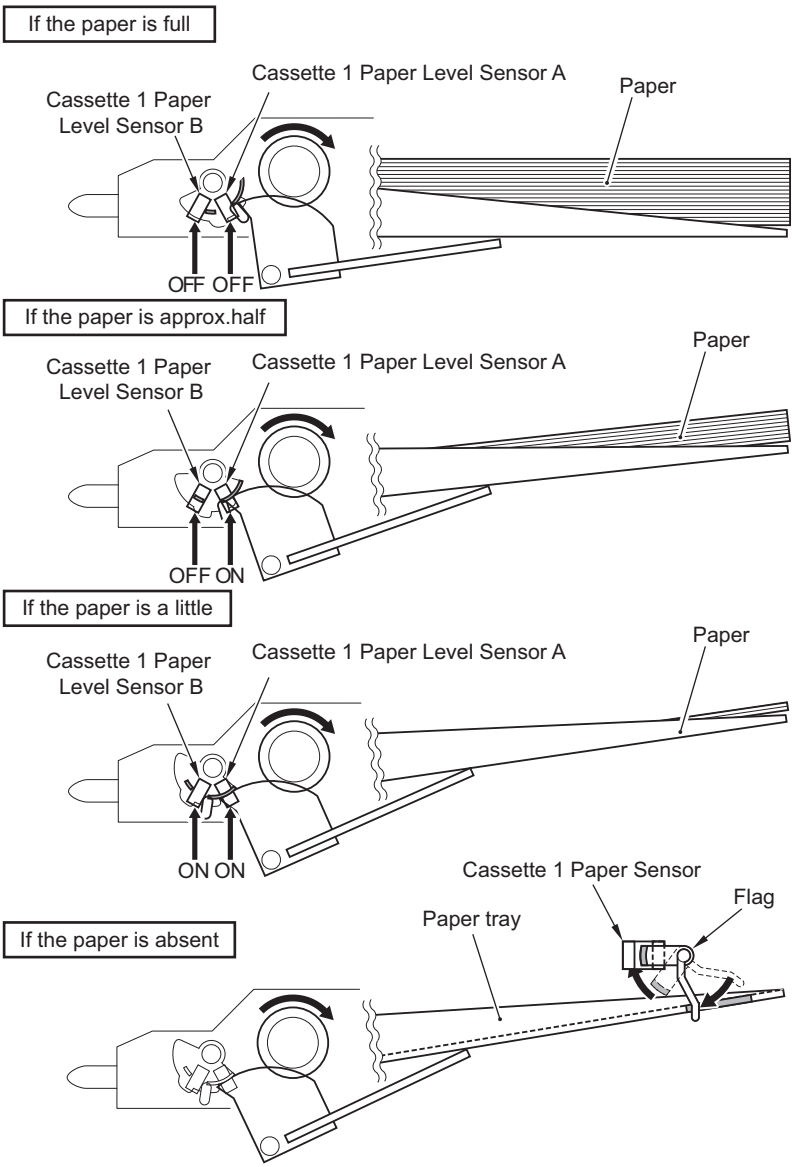
U-size.	Size
U1	26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL 0: default
U2	32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default
U3	22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default
U4	28: B-OFI, 0: default

● Paper level sensor

Paper level in a cassette is detected with the sensor indicated below.



No.	Part name
S2	Cassette 1 paper sensor
S3	Cassette 1 paper level sensor A
S4	Cassette 1 paper level sensor B

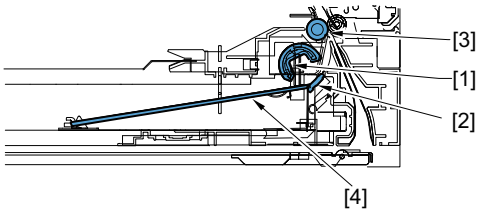


Cassette 1 paper level sensor A	Cassette 1 paper level sensor B	Cassette 1 paper sensor	Paper level	Display
OFF	OFF	OFF	100% to 50%	
ON	OFF	OFF	50% to 50 sheets	
ON	ON	OFF	50 sheet or less	
---	---	ON	no paper	

■ Cassette Pickup Assembly (250-sheet 1st cassette model)

● Overview

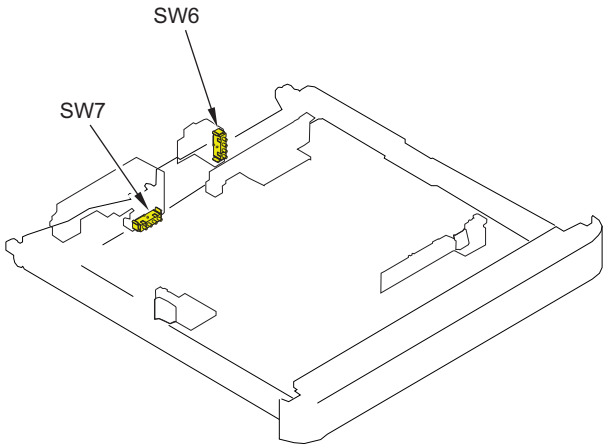
The paper inside the cassette is held up by the lifter plate.
When pickup takes place, the pickup solenoid (SL1) is turned on, and the pickup roller rotates once. When the pickup roller comes into contact with the surface of paper, the sheet is picked up by rotation of the roller.
Only a single sheet of paper picked up is moved to the feed path by the separation pad, and moved as far as the registration roller by the pickup vertical path roller.
The pickup vertical path roller and pickup roller are driven by the cassette pickup motor (M1).

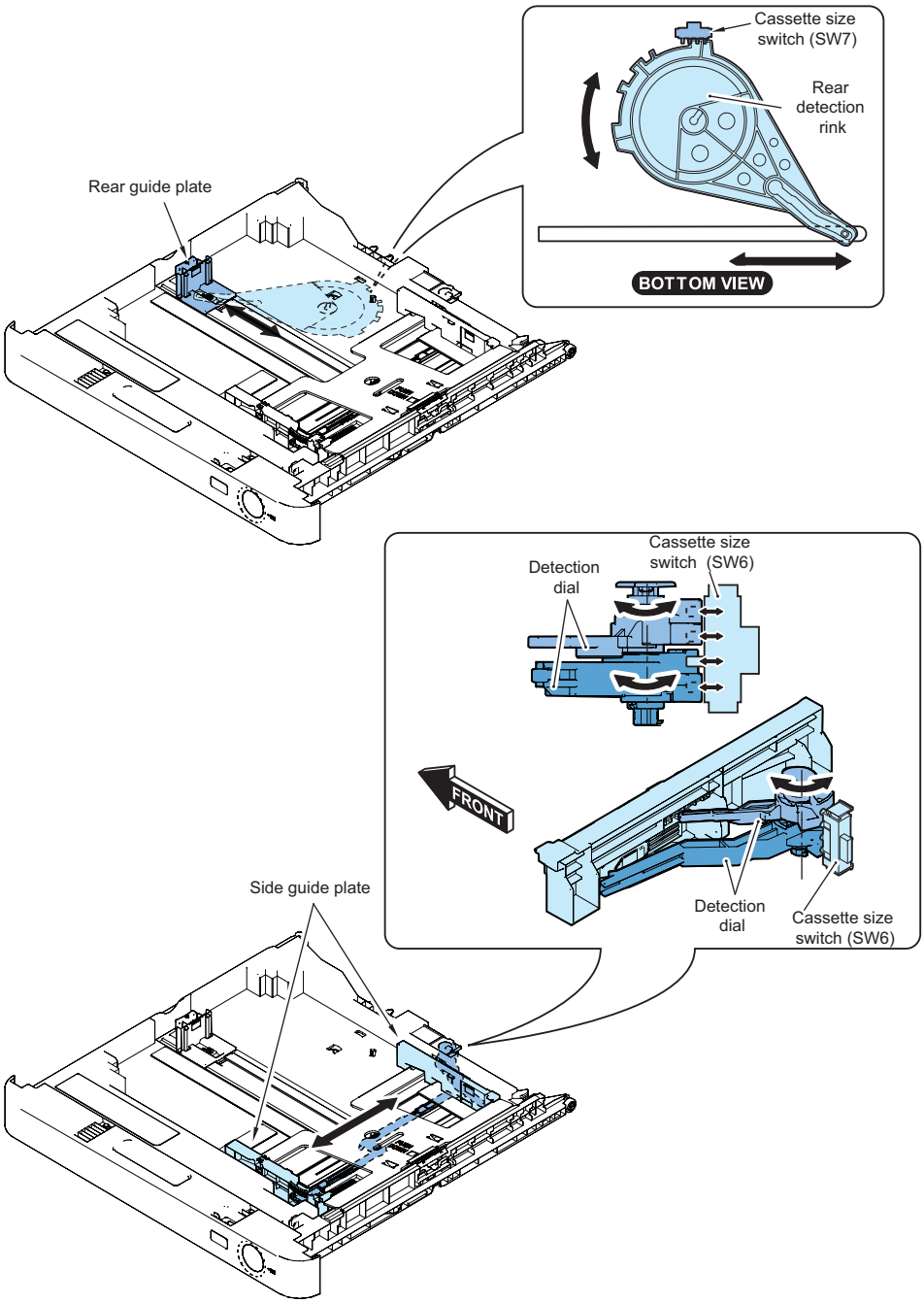


No.	Part Name
[1]	Pickup roller
[2]	Separation roller
[3]	Pickup vertical path roller
[4]	Lifter plate

● Paper Size Detection

Paper size of the cassette can be automatically detected by adjusting the position of the guide plate.
Concavo-convex area of the cassette dial is switched when the guide plate is shifted and two Size Switches on a printer are switched. Length and width are detected according to the ON / OFF combination of switches. As long as standard paper, both AB type and inch type can be used. However, size should be found manually on the check screen for the combination of A5-Rand STMT-R or the combination of B5-R and EXEC.





	Width	Length	Width detection				Length detection			
			①	②	③	④	①	②	③	④
B5	257.0	182.0	0	ON	ON	0	0	0	0	0
EXEC	267.0	184.0	0	ON	ON	0	0	0	0	0
16K	270.0	195.0	0	ON	ON	0	ON	0	0	0
A5-R	148.5	210.0	ON	0	ON	0	ON	ON	0	0
A4	297.0	210.0	0	ON	0	0	ON	ON	0	0
STMT-R	139.7	215.9	ON	0	ON	0	ON	ON	0	0
LTR	279.4	215.9	0	ON	ON	0	ON	ON	0	0
B5-R	182.0	257.0	ON	0	ON	0	0	ON	ON	ON
LTR-R	215.9	279.4	0	0	ON	0	ON	0	0	ON
A4-R	210.0	297.0	0	0	ON	0	0	ON	ON	0
LGL	215.9	355.6	0	0	ON	0	ON	ON	0	ON
B4	257.0	364.0	0	ON	ON	0	ON	ON	ON	0
8K	270.0	390.0	0	ON	ON	0	ON	ON	ON	ON
A3	297.0	420.0	0	ON	0	0	0	0	ON	ON

	Width	Length	Width detection				Length detection			
			①	②	③	④	①	②	③	④
LDR	279.4	431.8	0	ON	ON	0	0	0	ON	ON

Also, the cassette presence is detected when the size switch is pushed. (If no switch is pushed, it is determined as no cassette.)

Setting method when the size detection patterns are overlapped

Size should be found manually on the check screen for the combination of A5-Rand STMT-R or the combination of B5-R and EXEC.
Specify the ecognition method for the special paper with user setting.
The setting size is indicated below.

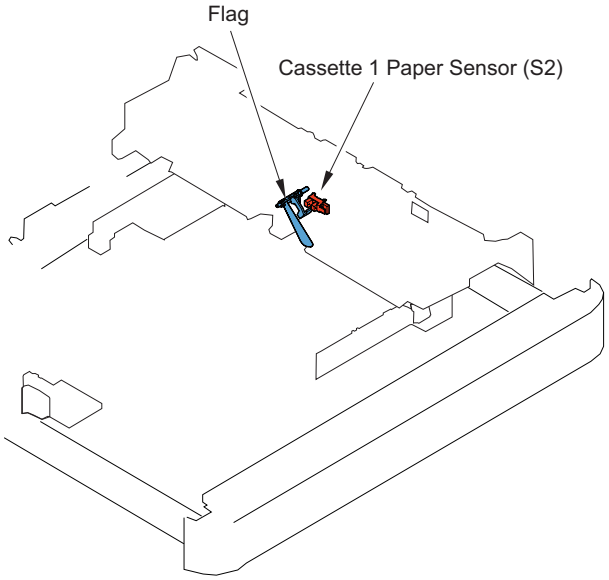
<Related Service Mode>

- PRINT> CST> CASX> CSTX-UY> Number
  X shows Cassette Number. Y shows size category. (X, Y is one of the number 1/2/3/4.)

U-size.	Size
U1	26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL 0: default
U2	32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default
U3	22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default
U4	28: B-OFI, 0: default

● Paper level sensor

This machine does not have the paper level sensor in the cassette.
This machine has the cassette 1 paper sensor (S2) to detect the paper.

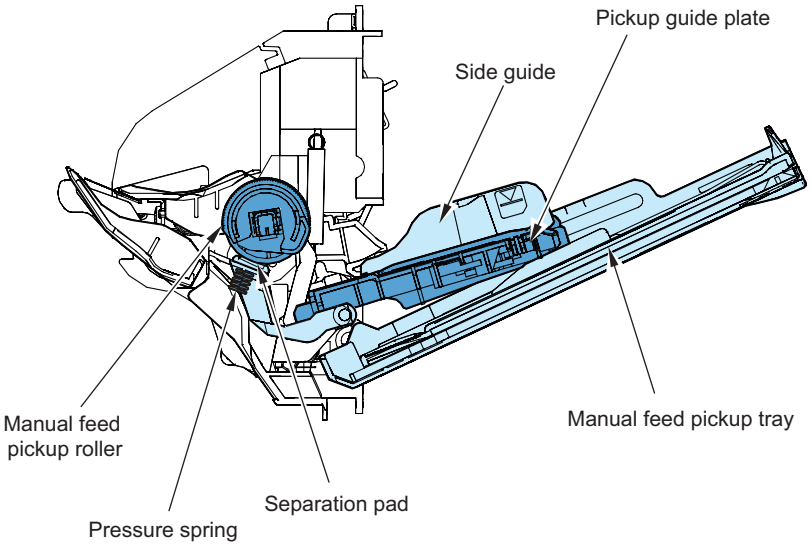


Cassette paper sensor	Paper level	Display
OFF	paper presence	▭
ON	paper absent	▭

■ Multi-Purpose Pickup Assembly

● Overview

The paper in the tray of the manual feed pickup unit is forced against the manual feed pickup roller by the work of the pickup guide plate, and only a single sheet of paper is separated and moved into the machine by the work of the manual feed pickup roller and the separation pad.



● Paper Presence Detection

The paper presence is detected by the Multi-Purpose Tray Paper Presence Sensor.
When the paper absence is detected, if there is the same size & same type paper exists in other cassette, auto cassette change is executed.

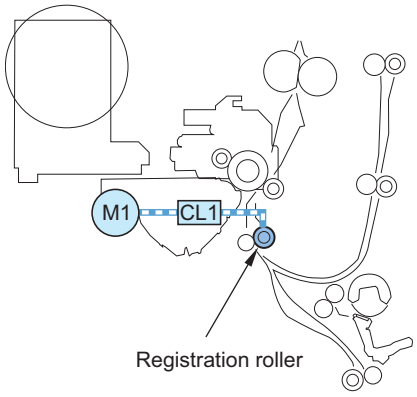
● Paper Size Detection

This machine does not have the paper size detection detection function. The user must set the size of the paper in the multi manual feed tray using the operation panel, or the user must register a fixed size in the user mode.Image masking area is regulated based on the result of paper width detection so that the image to be reproduced does not beyond the paper width.

■ Fixing / Registration Assembly

● Registration Control

The registration roller is driven by the main motor (M1).
In between the registration roller and the main motor is the registration clutch (CL1), servicing to turn on and off the registration roller so that the paper will be matched in relation to the image on the drum at correct registration.



■ Duplex / Delivery Assembly

● Duplex Feed Control

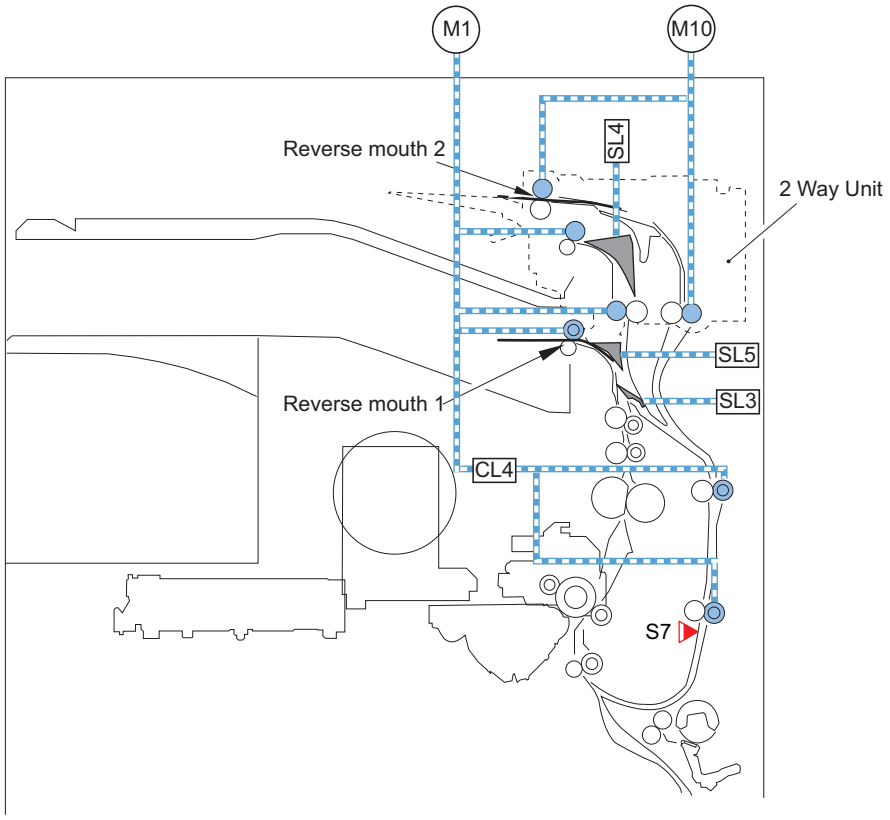
On this machine, the paper is revered outside the machine with using the reverse mouth.
Active reverse mouth is determined depending on whether or not the 2 way unit is installed.
Installing the 2 way unit makes the entire paper path longer resulting in higher productivity as the number of sheet circulation is increased.
Following is the number of sheet circulation by size.
Without 2 way unit

	No.1 delivery tray
Besides A4	1

A4	3

With 2 way unit

	No.1 delivery tray	No.2 delivery tray
All size	3	3



Reverse mouth 1	with 2 way unit
Reverse mouth 2	without 2 way unit

■ Detecting Jams

Jam Code	Type	Sensor Name	Sensor ID
0101	Delay jam	Cassette 1 pickup sensor	S1
0105	Delay jam	Pre-registration sensor	S5
0107	Delay jam	Fixing outlet sensor	S19
0108	Delay jam	No. 1 delivery sensor	S12
0109	Delay jam	No. 2 delivery sensor	S42
010A	Delay jam	Reversal sensor	S40
010D	Delay jam	Duplex feed sensor	S7
0201	Stationary jam	Cassette 1 pickup sensor	S1
0205	Stationary jam	Pre-registration sensor	S5
0207	Stationary jam	Fixing outlet sensor	S19
0208	Stationary jam	No. 1 delivery sensor	S12
0209	Stationary jam	No. 2 delivery sensor	S42
020A	Stationary jam	Reversal sensor	S40
020D	Stationary jam	Duplex feed sensor	S7
0A01	Power-on jam	Cassette 1 pickup sensor	S1
0A05	Power-on jam	Pre-registration sensor	S5
0A07	Power-on jam	Fixing outlet sensor	S19
0A08	Power-on jam	No. 1 delivery sensor	S12

Jam Code	Type	Sensor Name	Sensor ID
0A09	Power-on jam	No. 2 delivery sensor	S42
0A0A	Power-on jam	Reversal sensor	S40
0A0D	Power-on jam	Duplex feed sensor	S7
0D91	Wrong size specified	Pre-registration sensor	S5

Embedded RDS

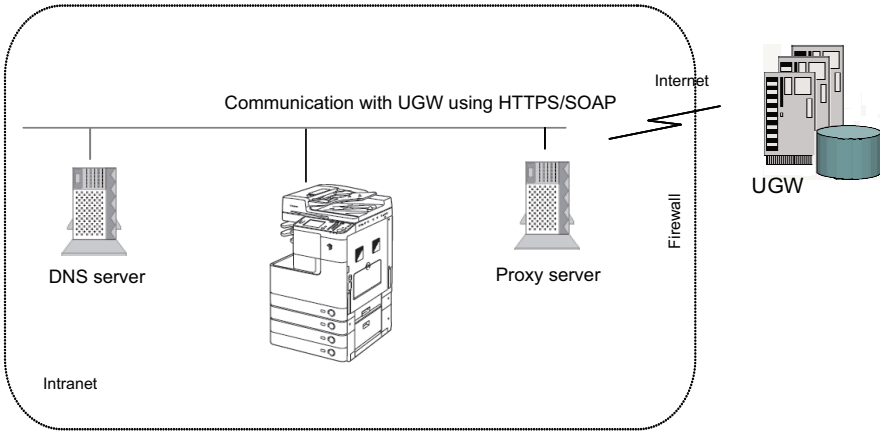
Product Overview

■ Overview

EMBEDDED RDS(hereafter, referred to as E-RDS) is a network module embedded with customer's device, and enables e-Maintenance/ imageWARE Remote (Remote Diagnosis System), which can collects and transmits status changes, counter values, error log and consumable information such as toner low/ out of the device to UGW via Internet.

The following device information / status can be monitored.

- Service Mode Counter (Billing counts)
- Parts Counter
- Mode Counter
- Firmware Info.
- Device Condition log
- Service Call Error log
- Jam log
- Status changes (Toner low/ out, etc.)



■ Features and benefits

Since high confidentiality is required for the information shown above, it performs communication between a device and a server using HTTPS/SOAP protocol.
E-RDS embedded with a network module in advance can realize a front-end processing of e-Maintenance/ imageWARE Remote system without attaching any extra hardware equipment.

E-RDS Setup

To monitor a Copier/ MFP with e-Maintenance/ imageWARE Remote, the following settings are required.

■ Advance preparations

1. Advance confirmation
   Confirm with the UGW administrator that the device to be monitored with e-Maintenance/ imageWARE Remote is registered in the UGW.
2. Advance preparations
   Interview the user's system administrator in advance to find out the following information about the network.

Information item 1
IP address settings

- Automatic setting (DHCP, RARP, BOOTP)
- Manual setting IP address, subnet mask and gateway address to be set

Information item 2
Is there a DNS server in use?
If there is a DNS server in use, find out the following.
- Primary DNS server address
- Secondary DNS server address

Information item 3
Is there a proxy server?
If there is a proxy server in use, find out the following.
- Proxy server address
- Port No. for proxy server

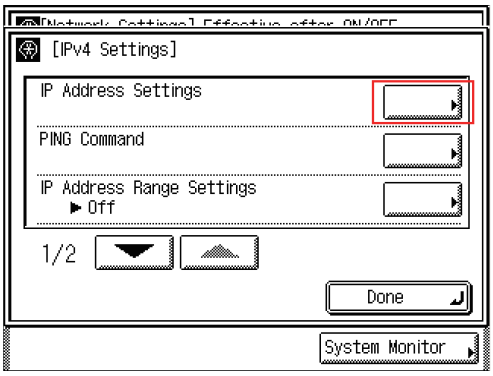
Information item 4
Is proxy server authentication required?
If proxy server authentication is required, find out the following.
- User name and password required for proxy authentication

■ Network settings

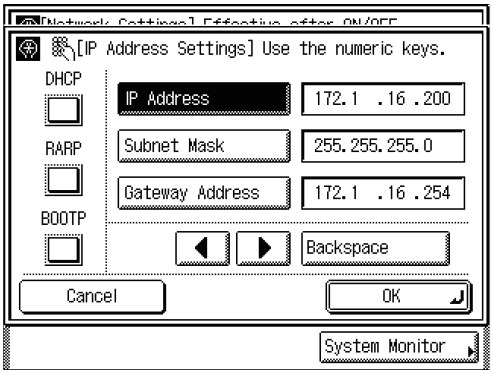
Based on the results of the information obtained in (2) Advance preparations, make the iR device network related settings in accordance with the following procedures.

● IP Address Settings

a. Move on to Settings/ Registration > System Settings > Network Settings > TCP/IP Settings > IPv4 Settings > IP Address Settings.



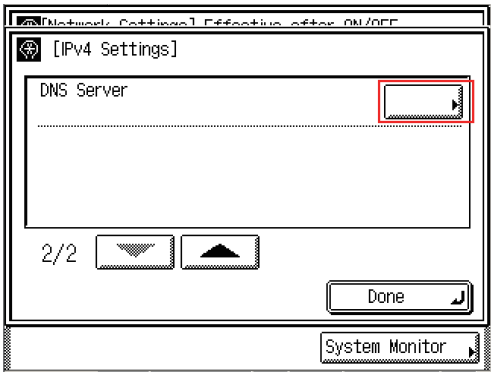
b. Set the IP address, based on the information obtained under (2) Advance preparations, Information item 1, described above.
- For automatic acquisition, select from [DHCP], [RARP], [BOOTP].
- For manual setting, set the following by numeric keys.
  - IP Address Example) 172. 001. 016. 200
  - Subnet Mask Example) 255. 255. 255. 0
  - Gateway Address Example) 172. 001. 016. 254



c. Press [OK].
d. Press [Done].

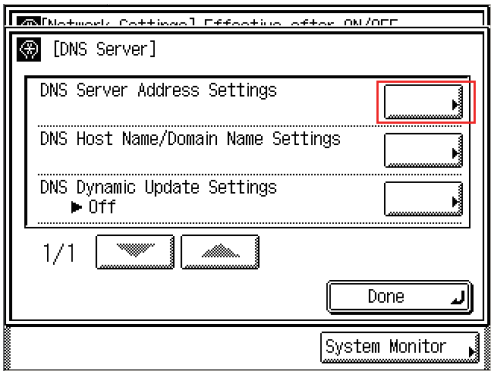
● DNS Settings

e. Move on to Settings/ Registration > System Settings > Network Settings > TCP/IP Settings > IPv4 Settings > DNS Server.

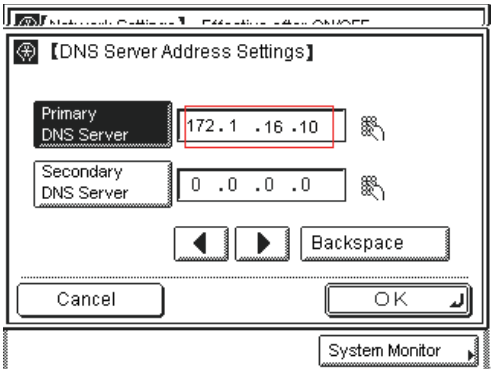


f. Set the DNS settings, based on the information obtained under (2) Advance preparations, Information item 2, described above.

- Select DNS Server Address Settings, if IP addresses are specified directly.



1) Select Primary DNS Server, and then set the DNS server address.
Example) 172. 001.016. 010



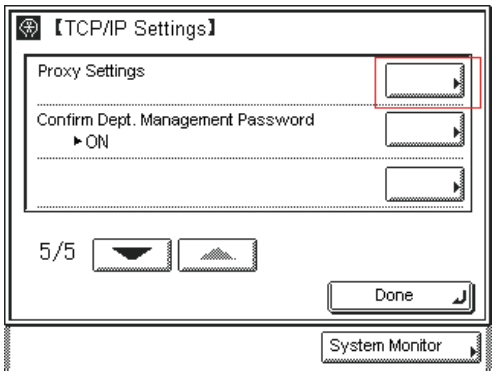
2) If secondary DNS server is set, select and set Secondary DNS Server address.
3) press [OK].

- If DNS host name is used, select DNS Host Name/Domain Name Settings, and then specify the host name.
- If a DHCP server is established and DNS Dynamic Update Settings is not applied, reserve the fix IP address to said device.

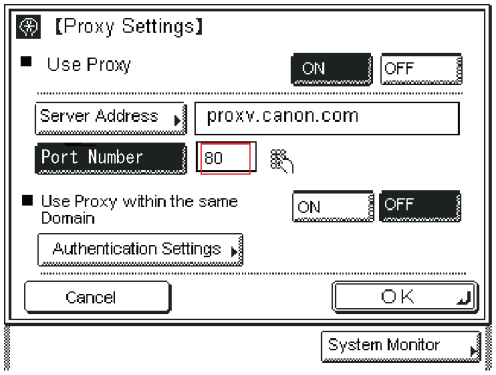
g. Press [Done].

● Proxy Settings

h. If proxy server is set, move on to Setting/ Registration > System Settings > Network Settings > TCP/IP Settings > Proxy Settings.

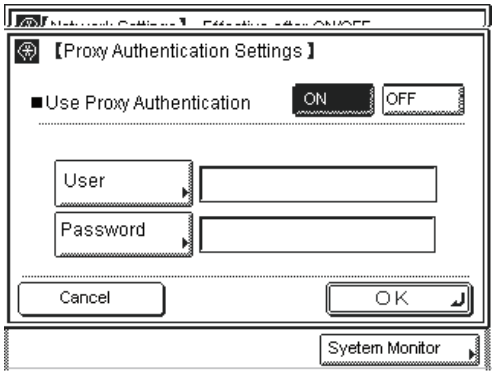


i. Set the Proxy Settings, based on the information obtained under (2) Advance preparations, Information item 3, described above.
1) Select [ON] in Use Proxy.
2) Select Server Address, and then set the Proxy server address.
Example) proxy.canon.com
3) Enter Port Number.
Example) 80 (1- 65535)



4) If proxy authentication is required, press [Authentication Settings].
5) Set the Proxy Authentication Settings, based on the information obtained under (2) Advance preparations, Information item 4, described above.

- Select [ON] in Use Proxy Authentication.
- Enter User name and Password, and then press [OK].



6) Press [OK].
j. Press [Done].
k. Press Reset button to quit the Setting/ Registration.
l. Turn the device power OFF/ ON.

■ Steps to E-RDS Settings

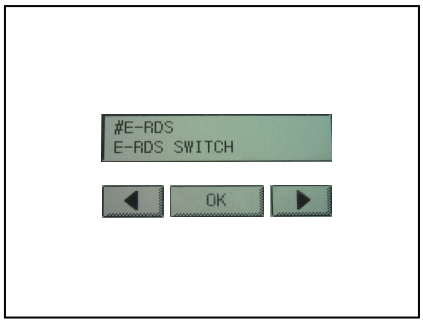
Locations of the user interface which performs E-RDS Settings from the servicemode is as follows.

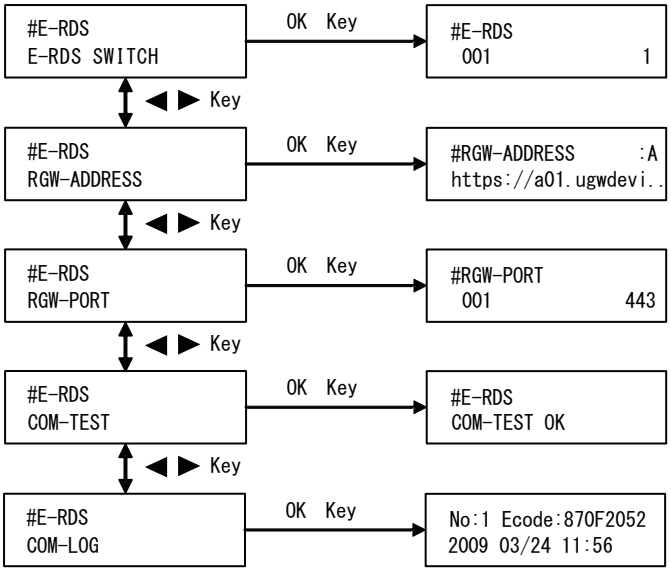
- #E-RDS > E-RDS SWITCH
- #E-RDS > RGW-ADDRESS
- #E-RDS > RGW-PORT
- #E-RDS > COM-TEST

- #E-RDS > COM-LOG
- #CLEAR > ERDS-DAT
- #CLEAR > CA-KEY

Item	String format	Description
#E-RDS > E-RDS SWITCH	1 byte	0: Disable/ 1:Enable e-Maintenance/ imageWARE Remote system to send device information, counter data, error statuses to the UGW. Default value is 0 (not in use)
#E-RDS > RGW-ADDRESS	129 bytes (SJIS not allowed)	URL of UGW (default) : https://a01.ugwdevice.net/ugw/agentif010
#E-RDS > RGW-PORT	2 bytes	The UGW Port Number by default : 443 Validation: 1~ 65,535
#E-RDS > COM-TEST		Perform Communication test with UGW and set "OK"/ "NG" as the result
#E-RDS > COM-LOG		Detailed communication log displays the last 5 error information, consisting of data, error code, and error reasons up to now Max 5 latest loggings retained Max 128 characters for Error information.
#CLEAR > ERDS-DAT		Reset E-RDS settings
#CLEAR > CA-KEY		After executing #CLEAR > CA-KEY, if the power is turned OFF and then ON, CA certificate file is automatically installed.

The example of the service mode indication screen





Hereafter, the procedure of enabling E-RDS application is shown.

a. Enter servicemode and select #CLEAR > ERDS-DAT, and then touch [OK].
After executing the procedure a. (#CLEAR > ERDS-DAT), install or delete the CA certificate file as necessary, and then turn OFF and then ON the power.

- Installation of CA certificate file: Use SST to install.
- Deletion of CA certificate file: Execute #CLEAR > CA-KEY. (CA certificate file is automatically installed.)

b. Select #E-RDS SWITCH,and set value "1" then touch [OK].
The communication with UGW is enabled by the above setting.
- 0 : OFF(initial value): e-Maintenance/ imageWARE Remote is disabled.
- 1 : ON: e-Maintenance/ imageWARE Remote is enabled

CAUTION:
The following settings i.e. RGW-PORT and RGW-ADR in servicemode must not be change unless there are specific instructions to do so. Changing these values will cause error in communication with UGW.

c. Select COM-TEST and then touch [OK]. This initiates the communication test between the device and the UGW. If the communication is successful, OK is displayed. If NG (failed) appears, refer to the troubleshooting guide and repeat until OK! is displayed.

NOTE:
The communication results with UGW can be distinguished by referring to the communication log. By performing the communication test with UGW, E-RDS acquires schedule information and starts monitoring and meter reads operation.

■ Communication log

(1) COM-LOG
- #E-RDS COM-LOG
  Move on to COM-TEST by using Left/ Right allow key.

  The maximum 5 records logged
  Only for the head portion of the error details written on COM-LOG is displayed.

(2) Details of communication log
You can use communication log to verify that a detailed error code SOAP method name, etc. are displayed at the time of communication test failure.
- By pressing ? key or OK key, progressive information (generating date/ time of error) is displayed.
- Error details will be displayed when OK key is again pressed in the state line where generating time is displayed.

Error information: within maximum 128 character strings (NULL is not included).
Refer to the error list for the message strings displayed on the COM-LOG.

■ Initializing E-RDS settings

It is possible to return E-RDS Settings to factory-shipments value.

1) Select #CLEAR ERDS-DAT by using Left/ Right allow key.
2) When [OK] is touched, a confirmation message "OK?" is displayed.
3) If agree upon initialization, following E-RDS settings, internal data, and Alarm filtering information will be purged.
- #E-RDS > E-RDS SWITCH
- #E-RDS > RGW-ADDRESS
- #E-RDS > RGW-PORT
- #E-RDS > COM-LOG

CAUTION:
In case of replacing the CA certificate file, even #CLEAR is executed, the status is not returned to the factory default. When installing the certificate file other than the factory default CA certificate file, it is required to delete the certificate file after E-RDS initialization and install the factory default CA certificate file.

FAQ

Q1: Registration information of an E-RDS is once deleted from the UGW server, and is reregistered after that. If a communication test is not carried out, then device information on the UGW becomes invalid.
A1: When registration of the E-RDS is deleted from the UGW, the status will be changed to that the communication test has not completed because related information has lost from a database. So, device information will also become invalid if that condition will be left for seven days without carrying out the communication test.

Q2: A communication test with the UGW results NG!
A2: On the conditions which have not changed a server's address or port number, the following cases can be considered in the case where a communication test serves as NG.

1. Name resolution was failed due to an incorrect host name or DNS server has been halted.
2. Network cable is blocked off.
3. Proxy server settings is not correct.

Q3: Let me know the interval of data transmitting from E-RDS to the UGW, and what data size is sent to the UGW?
A3: The schedule of data transmitting, the start time are determined by settings in the UGW side. The timing is once per 16 hours by default, and counter data volume could be maximum 250 bytes.

Q4: Does error-retry carry out at the time of a communication error with the UGW?
A4: The retry of SOAP communication is performed as follows. As for postAlert data, three times of data which failed transmitting to the UGW by some external causes can be stored in RAMDISK, and will be resent at the predetermined intervals. Moreover, the data which failed in transmission is resent at the predetermined intervals at the time of SOAP transmitting error generating at the time of a jam log and service call log transmission.

Q5: How many log-data can be stored?
A5: Up to 5 log records can be accumulated. The data size of error information is maximum 128 bytes.

Q6: Although Microsoft ISA as a proxy server is introduced, the authentication check is failed. Can E-RDS adopt with Microsoft ISA?
A6: "Integrated" authentication is used for Microsoft ISA though, E-RDS must comply with "Basic." Therefore if you can change to "Basic" authentication on the server, the authentication with E-RDS can be done.

Q7: Can I turn the device power off during the e-Maintenance/ imageWARE Remote system operation?
A7: While operating the e-Maintenance/ imageWARE Remote system, the power of the device must be ON. If power OFF is needed, do not leave the device power OFF for long time. It will become "Device is busy, try later" errors if the power supply of network equipment such as HUB is made prolonged OFF.

Q8: Describe about the behavior of E-RDS while enabling the Real Deep Sleep functionality.
A8: While being in Real Deep Sleep, and if data to be sent is in E-RDS, the system wakes up asleep, then starts to send the data to the UGW. The system also waits for completion of data transmission and let the device to shift to asleep status again. However, transition time to the Real Deep Sleep depends on the device, and the transition to sleep won't be done if the next data transmission will be done within 10 minutes.

Q9: Is E-RDS compatible with Section counter (Department counter)?
A9: No, E-RDS does not support Section counter.

Q10: Is E-RDS operation possible to a device which used IPv6?
A10: It depends on UGW side, however IPv6 has not been supported by UGW3.0.

Troubleshooting

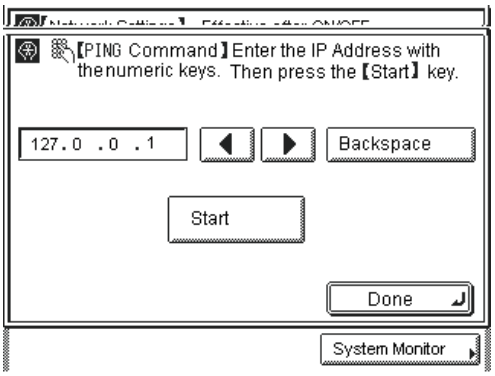
When the communication test with UGW is NG, trouble shooting is performed according to the following steps.

No.1 A communication test (COM-TEST) results NG

Causes: Initial settings or network conditions is incomplete.
Remedy1:

1. Check network connections
   Is the status indicator LED for the HUB port to which the main unit is connected ON?
   YES: Proceed to Step 2).
   NO: Check that the network cable is properly connected.

2. Confirm loop back address
   a) Settings/ Registration > System Settings > Network Settings > TCP/ IP Settings > IPv4 Settings > PING Command. Input 127.0.0.1, and touch the Start button.



   Is the response from the host displayed?
   YES: Proceed to Step 3).
   NO: There is a possibility that the main unit's network settings are wrong. Check the details of the IPv4 settings once more.

3. Confirmation from another PC connected to same network.
   a) Request the user to ping the main unit from a PC connected to same network.
   Does the main unit respond?
   YES: Proceed to Step 4).
   NO: Confirm the details of the main unit's IP address and subnet mask settings.

4. Confirm DNS connection
   a) Settings/ Registration > System Settings > Network Settings > TCP/ IP Settings > IPv4 Settings > DNS Server > DNS Server Address Settings, and note down both the primary and secondary DNS server addresses.

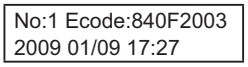
   b) Press Reset key.

   c) Settings/ Registration > System Settings > Network Settings > TCP/ IP Settings > IPv4 Settings > PING command. Input the primary DNS server noted down in step a) as the IP address, and then touch Start.

   Is the response from the host displayed?
   YES: Proceed to Remedy2.
   NO: Input the secondary DNS server noted down in step a) as the IP address, and then touch Start.

   Is the response from the host displayed?
   YES: Proceed to Remedy2.
   NO: There is a possibility that the DNS server address is wrong. Reconfirm the address with the user's system administrator.

Remedy2: Troubleshooting using communication log
a) Enter Servicemode > #E-RDS > COM-LOG, and the following communication log will be displayed. Maximum 5 records are logged.



b) Select a log line and touch OK, then move on to log details.

*Network is not rea
dy , try later : get

No.2 A communication test results NG! even if network setting is set properly.
Cause: No proper firmware has been installed, or E-RDS settings have not been completed.
Remedy: The following points should be checked.

1. Check the firmware compatibility of device.
2. Check network conditions such as proxy server settings and so on.
3. Check E-RDS setting.
   a) Check the communication log from COM-LOG.
   b) If RGW-ADR or RGW-PORT setting has changed, restore default value by Servicemode > #CLEAR > ERDS-DAT.
   c) If CA certificate file has changed, restore the original certificate file installed at the factory shipment to the device by using a service support tool.

No.3 There was a log, indicating "Network is not ready, try later (No.22)" in error details of COM-LOG list.
Causes: A certain problem occurred in networking.
Remedy: Check and take actions mentioned below.

1. Check networking conditions and connections.
2. Turn on the power supply of a device and perform a communication test (Servicemode > #E-RDS > COM-TEST about 60 seconds later.

No.4 "Unknown error" is displayed though a communication test has done successfully.
Causes: A certain problem was in the server side, or possibly a network load has been added.
Remedy: The following points should be checked.

1. Change data transmission schedules, and then see how things going.
2. Try again after a period of time. If the same error persists, check the UGW status with a network and UGW administrator.

■ Error code and strings

The error information appeared to a communication test log is as follows. (Here, "server" means UGW)

By error list, error No.1 and No.2 display only an error character strings.
Error No 3 henceforth, these are displayed in the following form.
[*][Error character strings] : [Method name] [Server side detailed error]
: Error character strings head "" is added to the error generated by the communication test.

No.	Code	Error character strings	Causes	Remedy
1	0500 0003	SUSPEND: Communication test is not performed.	The communication test had not been performed, though E-RDS is enabled.	Select and perform Servicemode > #E-RDS > COM-TEST.
2	0xxx 00f2	Event Registration is Failed	Processing (event processing) within the device has failed.	Turn the device OFF/ ON. If the error persists, replace the device system software. (Upgrade)
3	8xxx 2001	URL Scheme error(not https)	The header of the URL of the registered UGW is not in https format.	Check that the value of Service mode > #E-RDS > RGW-ADR is https://a01. ugwdevice.net/ugw/agentif010.
4	8xxx 200A	Server connection error	Displayed in the event of a TCP/IP communication fault. Also displayed when an attempt is made at communication with the device IP address not set.	Check the network connection, as per the initial procedures described in the troubleshooting.
5	8xxx 2002	URL server specified is illegal	A URL different to that specified by the UGW has been set.	Check that the value of Service mode > #E-RDS > RGW-ADR can be https:// a01.ugwdevice.net/ugw/agentif010.
6	8xxx 2014	Proxy connection error	Could not connect to proxy server due to improper address.	Check proxy server address and re- enter as needed.
7	8xxx 201E	Proxy authentication error	Proxy authentication is failed.	Check the user name and password required in order to login to the proxy, and re-enter as needed.

No.	Code	Error character strings	Causes	Remedy
8	8xxx 2015	Proxy address resolution error	Could not connect to proxy server due to name resolution error.	Check that the proxy server name is correct. If the proxy server name is correct, check the DNS connection, as per the troubleshooting initial procedures.
9	8xxx 2028	Server certificate error	No route certificate installed in device. - Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device	Install the latest device system software. (Upgrade)
10	8xxx 2029	Server certificate verify error	The server certificate verification error occurred. (URL check error)	Check that Service mode > #E-RDS > RGW-ADDRESS can be https:// a01.ugwdevice.net/ugw/ agentif010.is correct.
11	8xxx 2046	Server certificate expired	The device time and date is outside of the certificated period.-T he route certificate registered with the device has expired. Certificate other than that initially registered in the user's operating environment is being used, but has not been registered with the device.	Check that the device time and date are correctly set. If the device time and date are correct, upgrade to the latest system software.
12	8xxx 2000	Unknown error	Some other kind of communication error has occurred.	Try again after a period of time. If persists, check the UGW status with the UGW administrator.
13	8xxx 2063	SOAP Fault	SOAP communication error has occurred.	Check that the value of Service mode > #E-RDS > RGW-PORT can be 443.
14	8xxx 2004	Server response error (NULL)	Displayed when communication with UGW has been successful, but an error of some sort has prevented UGW from responding. When (Null) is displayed at the end of the message, this indicates that there has been an error in the HTTPS communication method.	Try again after a period of time. If the same error occurs again, check the UGW status with the UGW administrator.
15	8xxx 2004	Server response error (Hexadecimal]) [Error details in UGW] *1	Displayed when communication with UGW has been successful, but an error of some sort has prevented UGW from responding.(Hexadecimal) displayed at the end of the message is an error code returned by UGW. In the case of this kind of error only, [Server detailed error] is displayed at the end of the error information.	Try again after a period of time and also check detailed error code (hexadecimal) from UGW displayed after the message.
16	8xxx 0101 - 0A01	Device internal error	An internal error, such as memory unavailable, etc., has occurred during a device internal error phase.	Switch the device power OFF/ ON or replace the device system software. (Upgrade)
17	8xxx 0201- 0204, 0206	Server schedule is invalid	During the communication test, there has been some kind of error in the schedule values passed from UGW.	When the error occurs, report the details to the support section, then, after the UGW side has responded, try the communication test again.
18	8xxx 2047	Server response time out	Due to network congestion, etc., the response from UGW does not come within the specified time. (HTTPS level time out)	If this error occurs when the communication test is being run, wait some time and run the test again.
19	8xxx 2048	Service not found	There is a mistake in the UGW URL, and UGW cannot be accessed. (Path is wrong)	Check that the value of Service mode > Function > Install > RGW-ADDRESS can be https:// a01.ugwdevice.net/ugw/ agentif010
20	8xxx 0003	E-RDS switch is set OFF	A communication test has been attempted with the E-RDS switch being OFF	Set Service mode > #E-RDS > E-RDS SWITCH to 1, and then run Service mode > Function > Install > COM- TEST.

No.	Code	Error character strings	Causes	Remedy
21	8xxx 0003	Server schedule is not exist	Blank schedule data have been received from UGW.	Check the device settings status with the UGW administrator.
22	8xxx 2003	Network is not ready, try later	Communication attempted without confirming network connection, just after booting up a device in which the network preparations are not ready. (Network connection not established within 60 seconds of device boot up.)	Check the network connection, as per the troubleshooting initial procedures. Run Service mode > #E-RDS > COM- TEST about 60 seconds after turn on the device.
23	8xxx 2052	URL error	The data which is not URL is inputted into URL field.	Check Servicemode > #E-RDS RGW-ADDRESS can be https:// a01. ugwdevice.net/ugw/agentif010. If not, enter the correct URL strings in URL description field.
24	8xxx 200B	Server address resolution error	Server address name resolution has failed.	Check Servicemode > #E-RDS > RGW-ADDRESS can be https:// a01. ugwdevice.net/ugw/agentif010.
25	0xxx 0003	Communication test is not performed	Communication test has not completed	Perform and complete a communication test.
26	8xxx 0221	Server specified list is too big	Alert filtering error: The number of elements of the list specified by the server is over restriction value.	The number of elements of alert filtering is specified correctly.
27	8xxx 0222	Server specified list is wrong	Alert filtering error: Unjust value is included in the element of the list specified by the server.	The element of alert filtering is specified with the right value.
28	xxxx xxxx	SUSPEND: Initialize Failure!	Internal error occurred at the initiating E-RDS.	Turn the device power OFF/ ON.
29	8300 0306	SRAM version unmatched!	Improper value is written in at the head of SRAM domain of E-RDS.	Turn the device power OFF/ ON.
30	8xxx 0304	Device is busy, try later	The semaphore consumption error at the time of a communication test.	Wait a while then rerun the test.
31	8xxx 0207 - 0208	Internal Schedule is broken	The schedule data in the inside of E-RDS is not right.	Perform a communication test.
32	8xxx 0004	Operation is not supported	Method which E-RDS is not supporting attempted.	Contact help desk

*1. [Hexadecimal] indicates an error code returned from UGW.
[Error strings]: indicates error details returned from UGW.

■ Com-Log Report

The report output of the communication error logging information on five affairs can be carried out.
#REPORT > #REPORT OUTPUT > ERDS COM LOG LIST
Output sample

```
01/17 2009 10:14
                                    **********************
                                    *** E-RDS-COM-LOG ***
                                    **********************

No.01  DATE 05 18 2009 TIME 03:21 CODE 05000003
     Information    SUSPEND: Communication test is not performed.

No.02  DATE 05 18 2009 TIME 03:21 CODE 00000000
     Information    SUNSEND: mode changed.

No.03  DATE 05 18 2009 TIME 03:18 CODE 05000003
     Information    SUSPEND: Communication test is not performed.

No.04  DATE 05 18 2009 TIME 03:18 CODE 00000000
     Information    SUNSEND: mode changed.

No.05  DATE 05 18 2009 TIME 01:56 CODE 05000003
     Information    SUSPEND: Communication test is not performed.
```

Service cautions

After performing the following service activities it is necessary to perform Service mode #CLEAR > ERDS-DAT and #E-RDS.
Failure to do so will result that the counter transmitting value to the UGW may become unusual.

- System upgrade
- HDD format and system installation
- COPIER > Function > Clear > MN-CONT

Also, after replacing the main controller board, all settings must be reprogrammed.

The following settings in service mode must not be change unless there are specific instructions to do so. Changing these values will cause error in communication with UGW.

Service mode	Default
#E-RDS > RGW-PORT	443
#E-RDS > RGW-ADDRESS	https://a01.ugwdevice.net/ugw/agentif010



Periodical Service

Consumable Parts and Cleaning Parts..... 110
Cleaning Parts.....115

Consumable Parts and Cleaning Parts

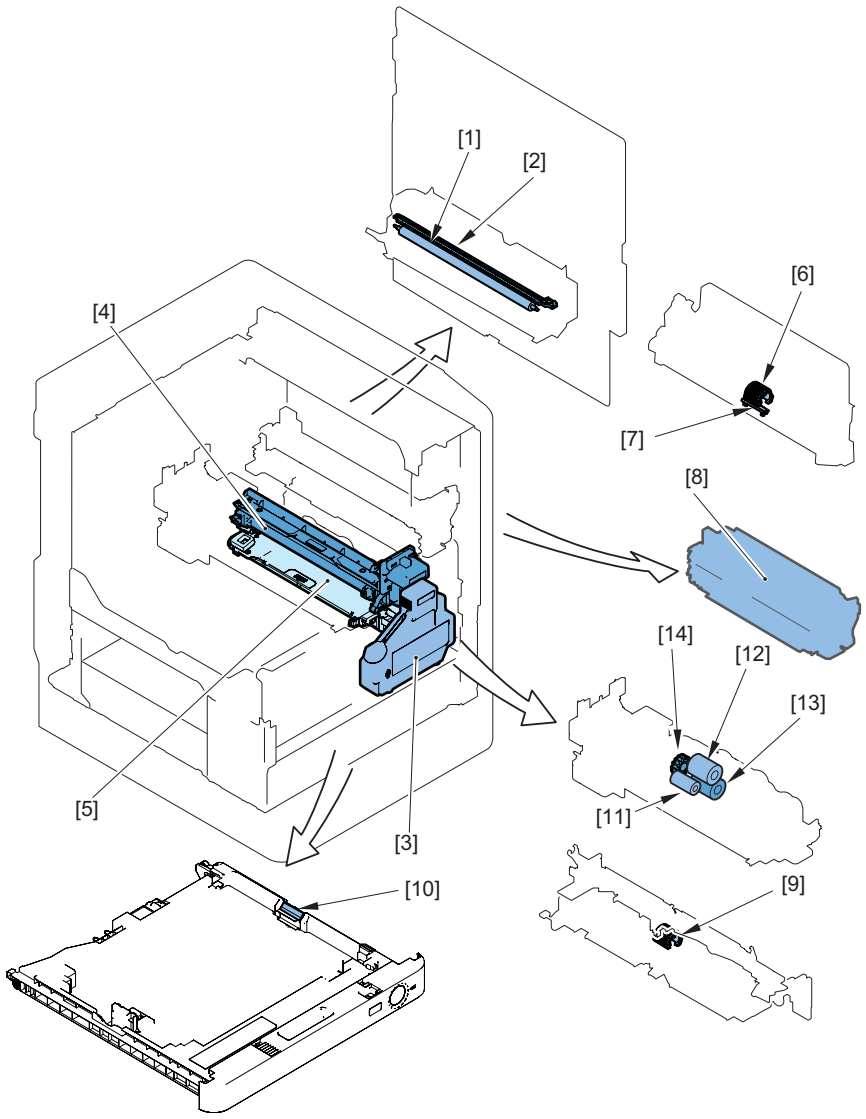
●: Replaced (consumables) Δ: Cleaned

No.	System	Items	Parts No.		Q'ty	Life	Interval					Counter of consumables		Remarks	Reference
			iR2530/2525 (550-sheet 1st cassette type)	iR2530/2525/2520 (250-sheet 1st cassette type)			80,000 sheets	120,000 sheets	150,000 sheets	240,000 sheets	500,000 sheets				
1	Image formation system	Waste toner container	FM3-9276		1	80,000 sheets	●					DRBL-1	WST-TNR	Defined by 6% document	"Removing the Waste Toner Container" on page 150
2		Transfer guide	-		1	120,000 sheets		Δ				-	-	Wipe with dry cloth.	
3		Transfer roller	FC9-0693		1	240,000 sheets				●		DRBL-1	TR-ROLL		"Removing the Transfer Roller" on page 150
4		Separation static charge eliminator	FM3-9296		1	240,000 sheets				●		DRBL-1	SP-SC-EL		"Removing the Separation Static Charge Eliminator" on page 150
5		Developing Assembly	FM3-9263		1	500,000 sheets					●	DRBL-1	DVG-CYL		"Removing the Developing Assembly" on page 151
6	Fixing system	Fixing inlet guide	-		1	120,000 sheets		Δ				-	-	Wipe with dry cloth. If dirt cannot come off, wipe it with alcohol.	

No.	System	Items	Parts No.		Q'ty	Life	Interval					Counter of consumables		Remarks	Reference
			iR2530/2525 (550-sheet 1st cassette type)	iR2530/2525/2520 (250-sheet 1st cassette type)			80,000 sheets	120,000 sheets	150,000 sheets	240,000 sheets	500,000 sheets				
7	Fixing system	Fixing unit	120V for US: FM4-3367 120V for TW: FM4-8443 230V for KR/EU: FM3-9381 230V for except for KR/EU: FM4-8445		1	150,000 sheets			●			DRBL-1	FX-UNIT		"Removing the Fixing Unit" on page 153
8	Pickup feed system	Cassette pickup roller (For 550-sheet cassette)	FB6-3405 FC7-9381 (For CHN)		*1or 2	120,000 sheets		●				DRBL-1	C1-PU-RL, C2-PU-RL, C3-PU-RL, C4-PU-RL	*: Quantity indicates number of 550 sheets cassette.	"Removing the Cassette Pickup Roller (550-sheet 1st cassette Model)" on page 154
9		Cassette feed roller (For 550-sheet cassette)	FC6-7083 FC7-9502 (For CHN)		*1or 2	120,000 sheets		●				DRBL-1	-	Replace with cassette separation pad. *: Quantity indicates number of 550 sheets cassette.	"Removing the Cassette Feed Roller (550-sheet 1st cassette Model)" on page 154
10		Cassette separation roller (For 550-sheet cassette)	FC6-6661		*1or 2	120,000 sheets		●				DRBL-1	C1-SP-RL, C2-SP-RL, C3-SP-RL, C4-SP-RL	*: Quantity indicates number of 550 sheets cassette.	"Removing the Cassette Separation Roller (550-sheet 1st cassette Model)" on page 154

No.	System	Items	Parts No.		Q'ty	Life	Interval					Counter of consumables		Remarks	Reference
			iR2530/2525 (550-sheet 1st cassette type)	iR2530/2525/2520 (250-sheet 1st cassette type)			80,000 sheets	120,000 sheets	150,000 sheets	240,000 sheets	500,000 sheets				
11	Pickup feed system	Cassette idler gear (Only for 550-sheet cassette for China)	FU3-0280		*1or 2	120,000 sheets		●				DRBL-1	-	*: Quantity indicates number of 550 sheets cassette.	"Removing the Idler Gear (Only for 550-sheet 1st cassette Model for China)" on page 154
12		Cassette pickup roller (For 250-sheet cassette)	-	FL3-1352	1	150,000 sheets			●			DRBL-1	C1-PU-RL		"Removing the Cassette Pickup Roller (250-sheet 1st cassette Model)" on page 153
13		Cassette separation pad (For 250-sheet cassette)	-	FL3-1447	1	150,000 sheets			●			DRBL-1	C1-SP-PD		"Removing the Roller Cassette Separation Pad(250-sheet 1st cassette Model)" on page 153
14		Manual feed pick-up roller	FL3-1352		1	150,000 sheets			●			DRBL-1	M-PU-RL		"Removing the Manual Feed Pickup Roller" on page 152

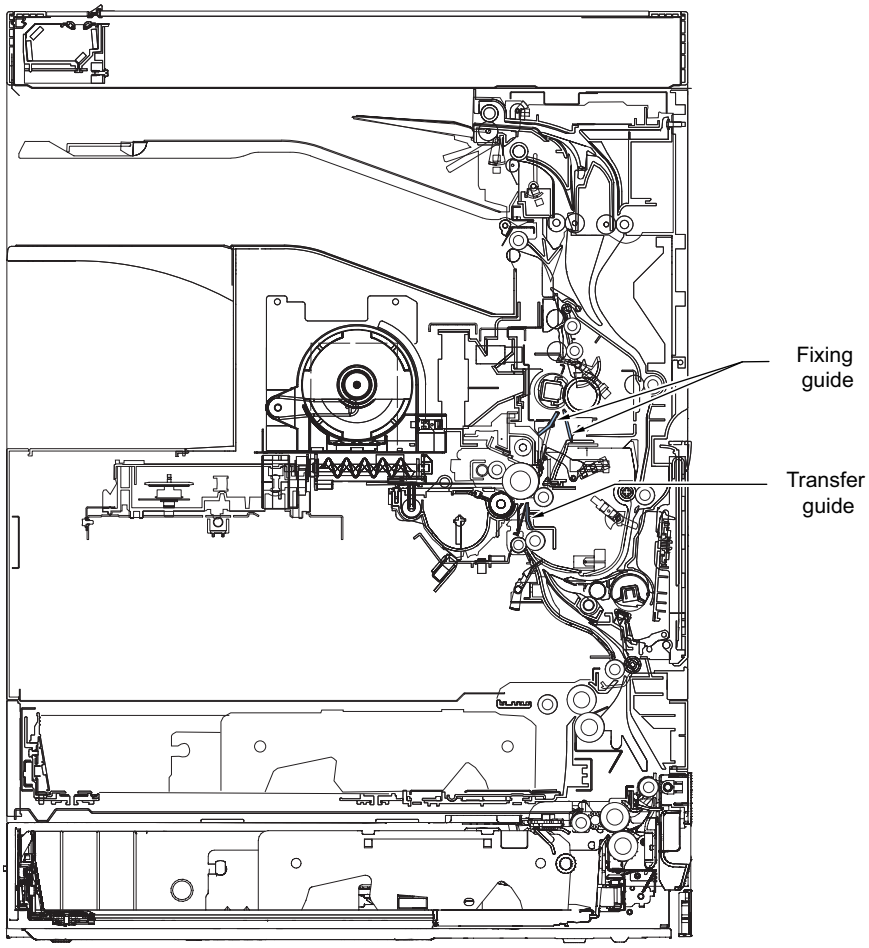
No.	System	Items	Parts No.		Q'ty	Life	Interval					Counter of consumables		Remarks	Reference
			iR2530/2525 (550-sheet 1st cassette type)	iR2530/2525/2520 (250-sheet 1st cassette type)			80,000 sheets	120,000 sheets	150,000 sheets	240,000 sheets	500,000 sheets				
15	Pickup feed system	Manual feed separation pad	FL3-3469		1	150,000 sheets			•			DRBL-1	M-SP-PD		"Removing the Manual Feed Separation Pad" on page 152



No.	Part Name	No.	Part Name
[1]	Transfer roller	[8]	Fixing unit
[2]	Separation static eliminator	[9]	Cassette pickup roller (250-sheet 1st cassette model)
[3]	Waste toner container	[10]	Cassette separation pad (250-sheet 1st cassette model)
[4]	Drum unit	[11]	Cassette pickup roller (550-sheet 1st cassette model)

No.	Part Name	No.	Part Name
[5]	Developing assembly	[12]	Cassette feed roller (550-sheet 1st cassette model)
[6]	Manual feed pickup roller	[13]	Cassette separation roller (550-sheet 1st cassette model)
[7]	Manual feed separation pad	[14]	Idler gear (for China)

Cleaning Parts

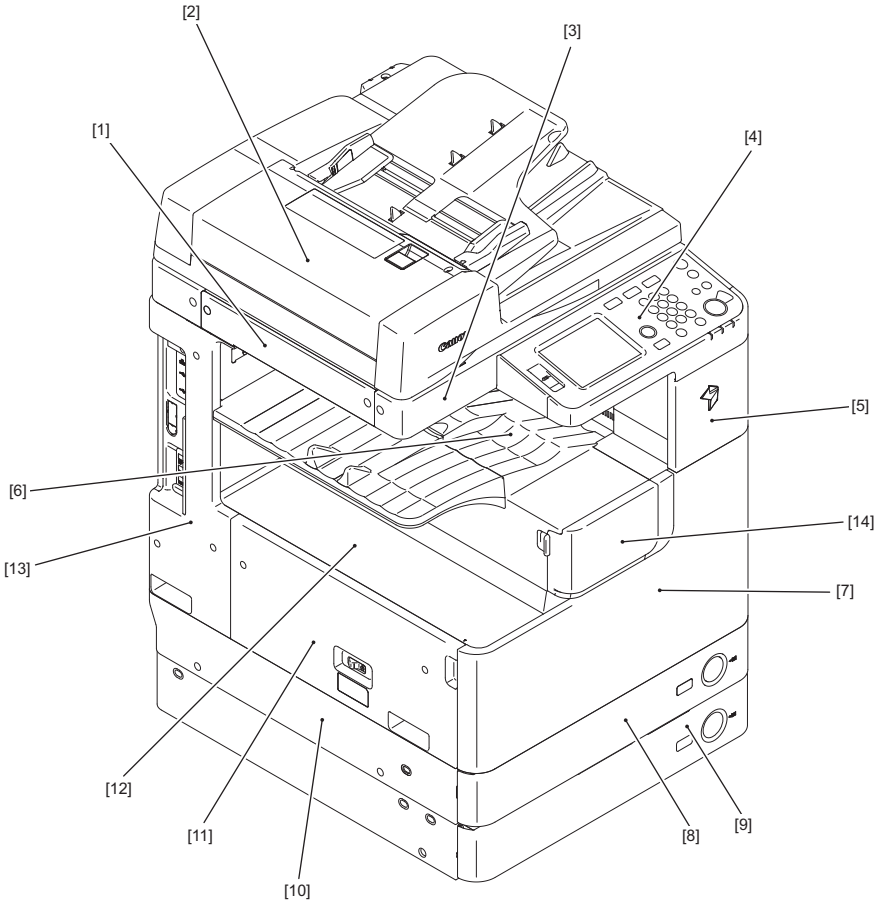


4 Disassembly/ Assembly

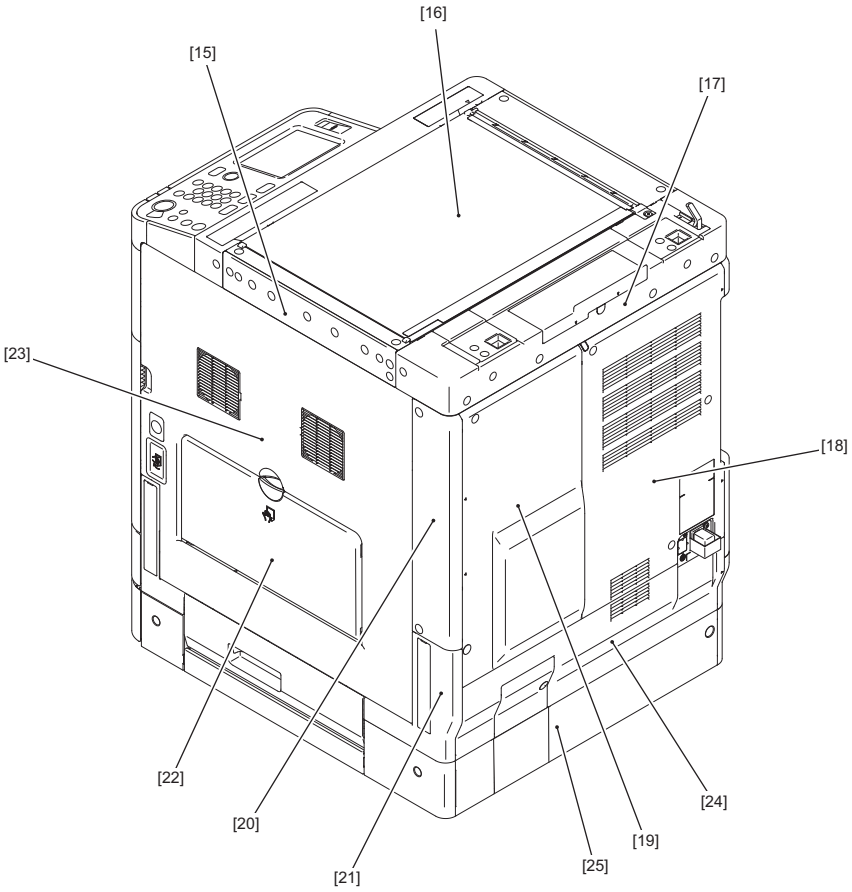
List of Parts..... 117
External / Internal Cover..... 130
Main Unit..... 139
Periodic Replacing Parts,Durable Parts,Cleaning Parts.....150
Clutch / Solenoid..... 156
Motor..... 159
Fan..... 163
Switch.....164
Lamp,Heater,others..... 167
PCB.....171

List of Parts

List of Covers

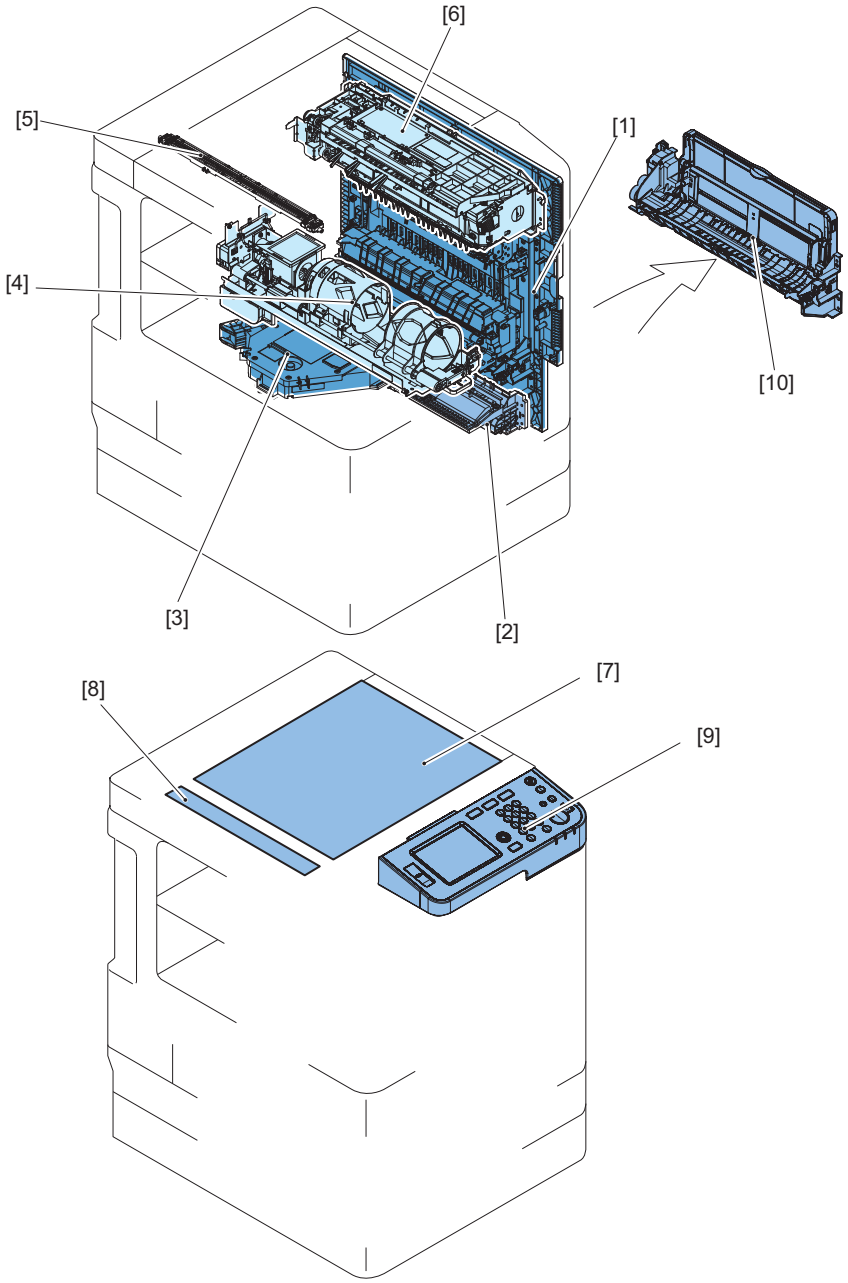


Symbol	Part name	Reference
[1]	Reader Left Cover	“Removing the Reader Left Cover” on page 130
[2]	DADF (Optional or Standard)	-
[3]	Reader Front Cover	“Removing the Reader Front Cover” on page 130
[4]	Control Panel	-
[5]	Support Cover	“Removing the Support Cover” on page 130
[6]	Delivery Tray	“Removing the Delivery Tray” on page 130
[7]	Front Cover	“Removing the Front Cover” on page 131
[8]	Cassette 1	-
[9]	Cassette 2 (Only for the Cassette 2 standard model)	-
[10]	Lower Left Cover	“Removing the Lower Left Cover” on page 131
[11]	Left Cover	“Removing the Left Cover” on page 132
[12]	Inside Base Cover	“Removing the Inside Base Cover” on page 133
[13]	Rear Left Cover	“Removing the Left Rear Cover” on page 134
[14]	Toner Supply Cover	“Removing the Toner Supply Cover” on page 134



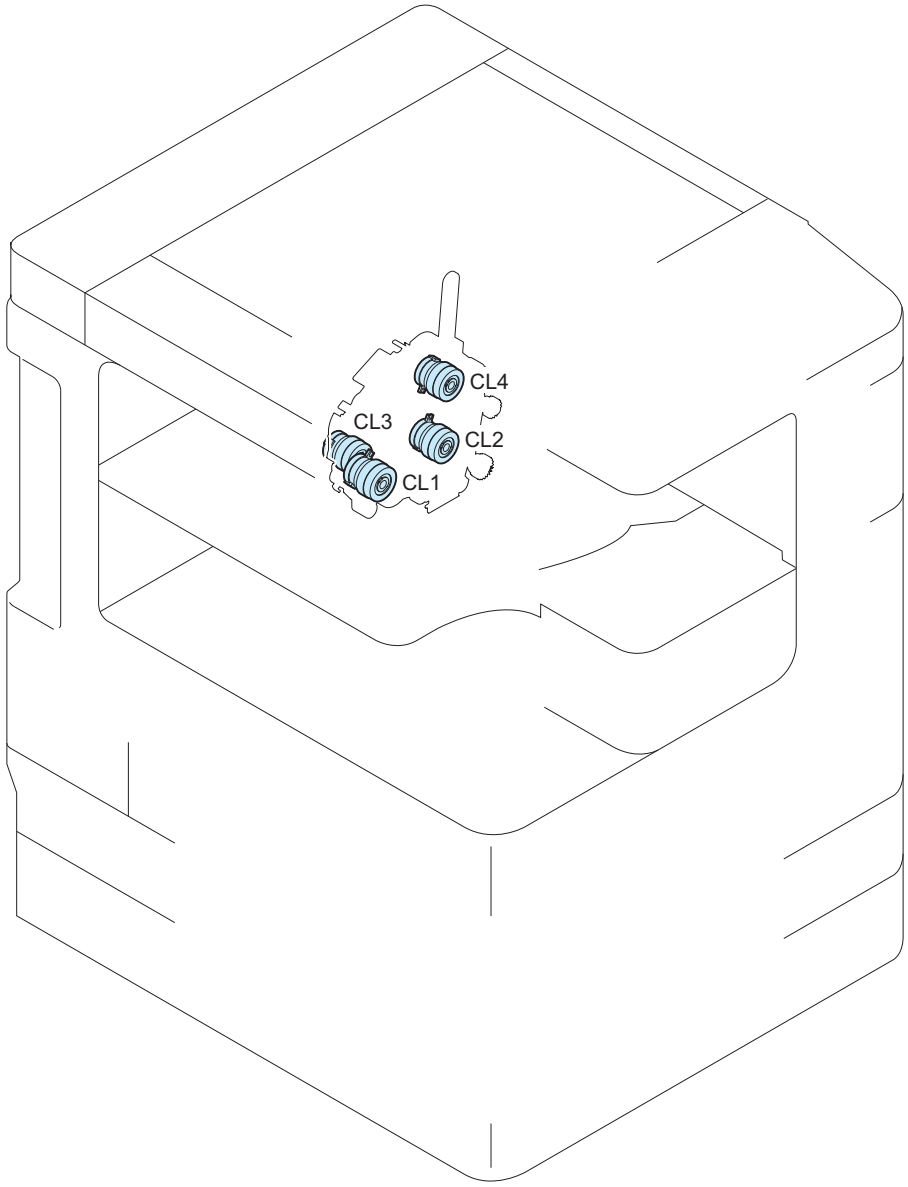
Symbol	Part name	Reference
[15]	Reader Right Cover	“Removing the Reader Right Cover” on page 135
[16]	Platen Glass	“Removing the Platen Glass” on page 135
[17]	Reader Rear Cover	“Removing the Reader Rear Cover” on page 136
[18]	Rear Cover (Right)	“Removing the Rear Cover (Right)” on page 136
[19]	Rear Cover (Left)	“Removing the Rear Cover (Left)” on page 137
[20]	Right Cover (Upper Rear)	“Removing the Rear Right Cover (Upper)” on page 137
[21]	Right Cover (Lower Rear)	“Removing the Rear Right Cover (Lower)” on page 137
[22]	Multi Pickup Assembly	-
[23]	Right Cover	“Removing the Right Cover Assembly” on page 139
[24]	Lower Rear Cover	“Removing the Lower Rear Cover” on page 138
[25]	Cassette 2 Rear Cover	“Removing the Cassette 2 Rear Cover” on page 138

List of Main Units / Parts

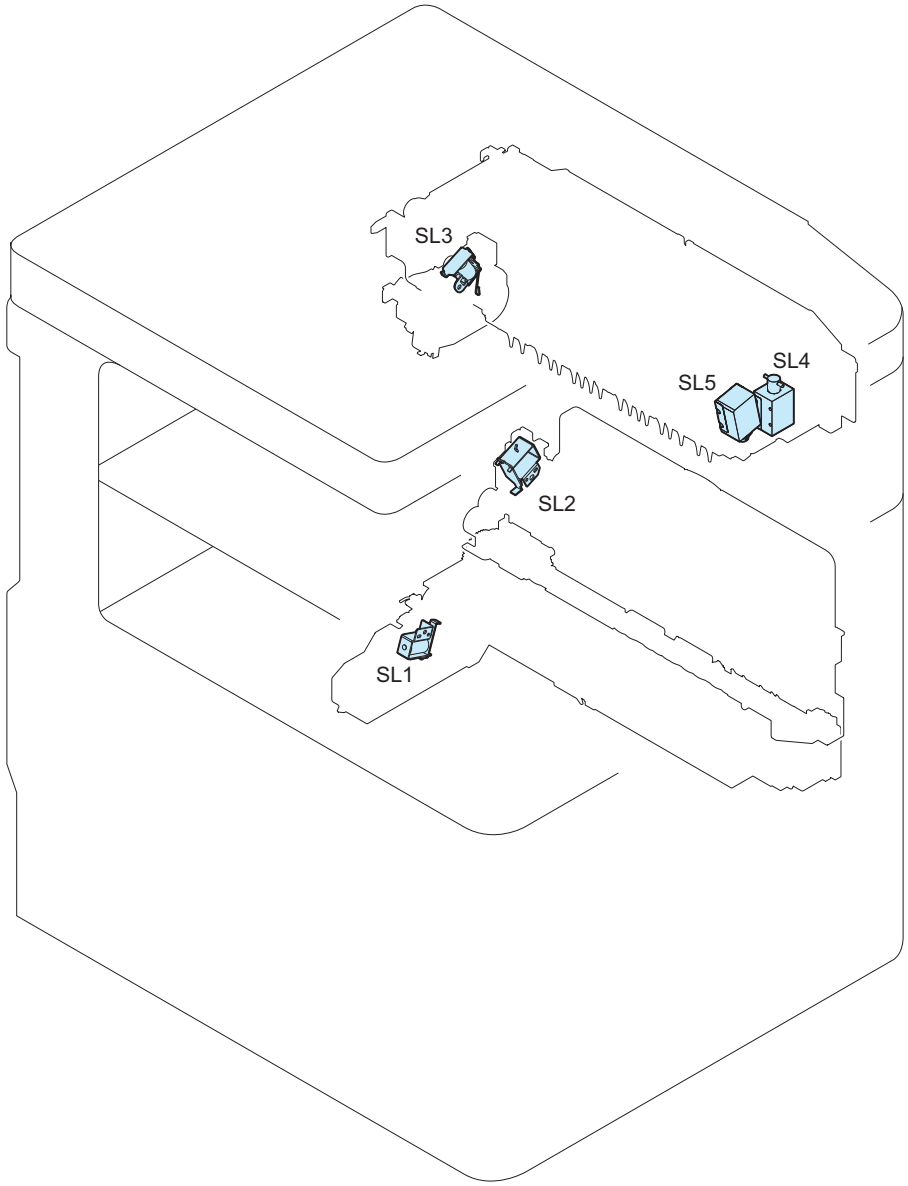


Symbol	Part Name	Reference
[1]	Right Cover Assembly	“Removing the Right Cover Assembly” on page 139
[2]	Casstte Pickup Assembly	“Removing the Cassette Pickup Assembly (550-sheet 1st Cassette Model)” on page 140 “Removing the Cassette Pickup Assembly 1 (250-sheet 1st cassette Model)” on page 141
[3]	Laser Scanner Unit	“Removing the Laser Scanner Unit” on page 142
[4]	Toner Supply Assembly	“Removing the Toner Supply Assembly” on page 143
[5]	CIS Unit	“Removing the CIS Unit” on page 145
[6]	No.2 Deleivery Assembly	
[7]	Platen Glass	“Removing the Platen Glass” on page 146
[8]	ADF scan glass	“Removing the ADF Scan Glass” on page 147
[9]	Control Panel Assembly	“Removing the Control Panel Assembly” on page 148
[10]	Multi Pickup Assembly	“Removing the Multi Pickup Assembly” on page 148

List of Clutches/Solenoids

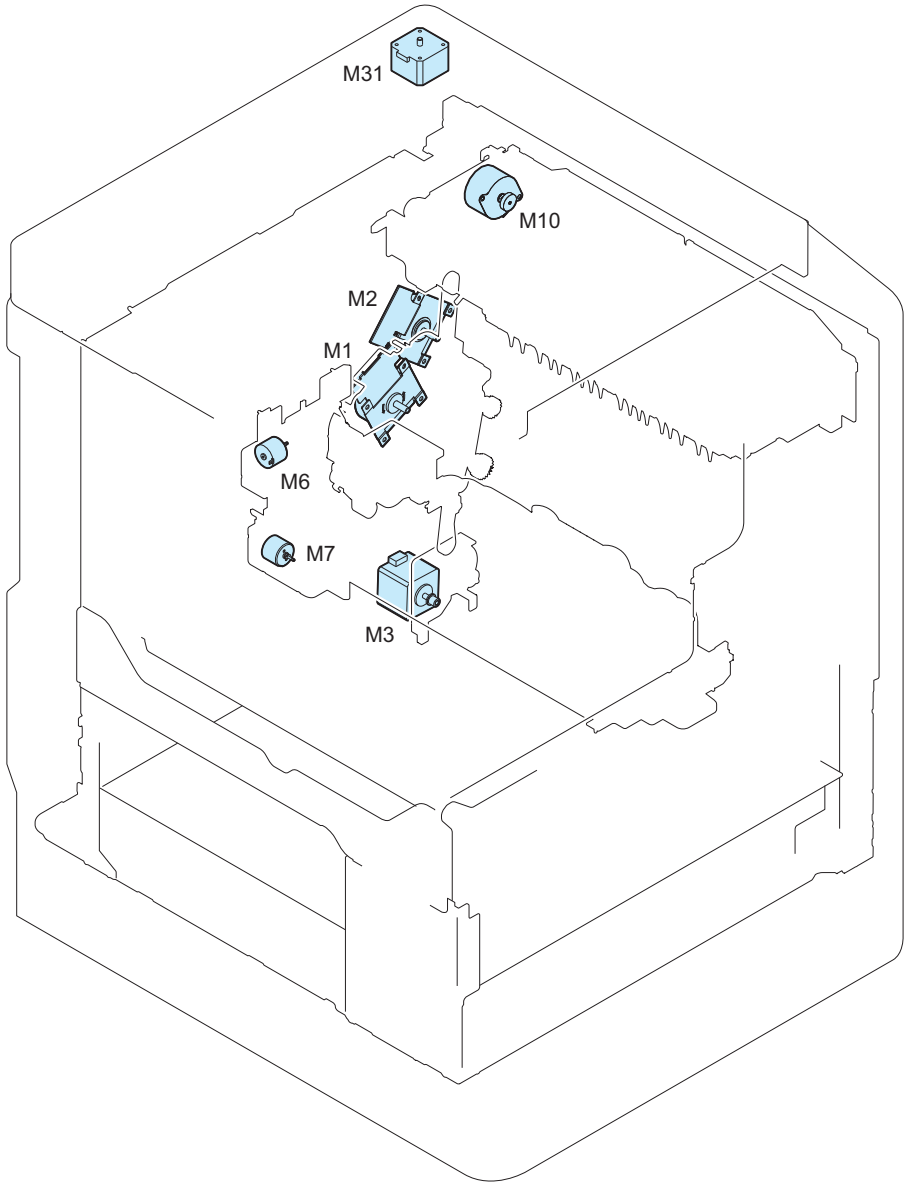


Sym-bol	Part name		Main unit	Reference
	iR2530/2525 (550-sheet 1st cassette type)	iR2530/2525/2520 (250-sheet 1st cassette type)		
CL1	Registration Clutch		-	“Removing the Clutch (CL1/CL2/CL3/CL4)” on page 156
CL2	Manual Feed Pickup Clutch	Cassette / Manual Feed Pickup Clutch	-	“Removing the Clutch (CL1/CL2/CL3/CL4)” on page 156
CL3	Developing Cylinder Clutch		-	“Removing the Clutch (CL1/CL2/CL3/CL4)” on page 156
CL4	Duplex Feed Clutch		-	“Removing the Clutch (CL1/CL2/CL3/CL4)” on page 156



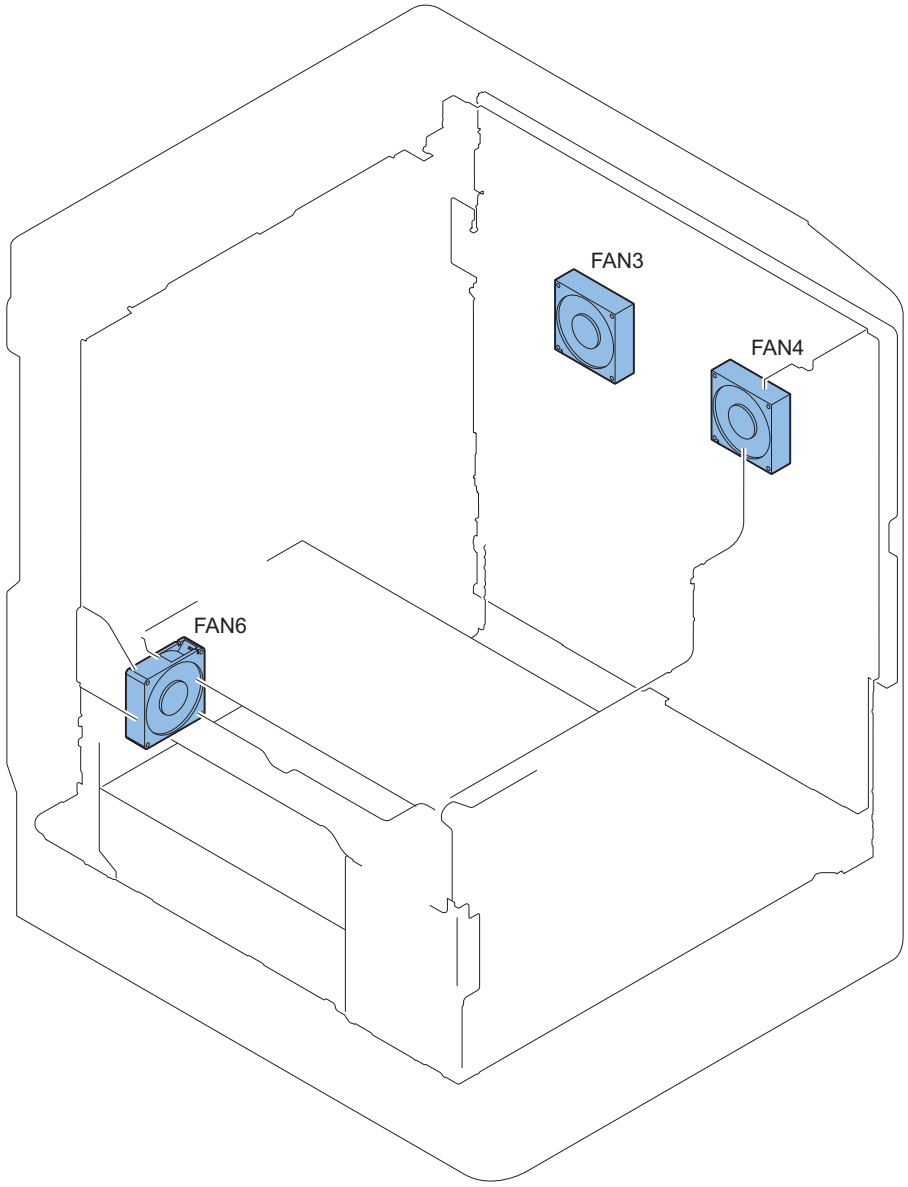
Symbol	Part name	Main unit	Reference
SL1	Pickup Solenoid	Casstte Pickup Assembly	-
SL2	Manual Feed Pickup Solenoid	Multi Pick-up Assembly	-
SL3	No. 1 Delivery Reversal Solenoid	-	“Removing the No. 1 Delivery Reversal Solenoid (SL3)” on page 156
SL4	Reversal Solenoid	No.2 Deleivery Assembly	-
SL5	No. 2 Delivery Solenoid	No.2 Deleivery Assembly	-

List of Motors



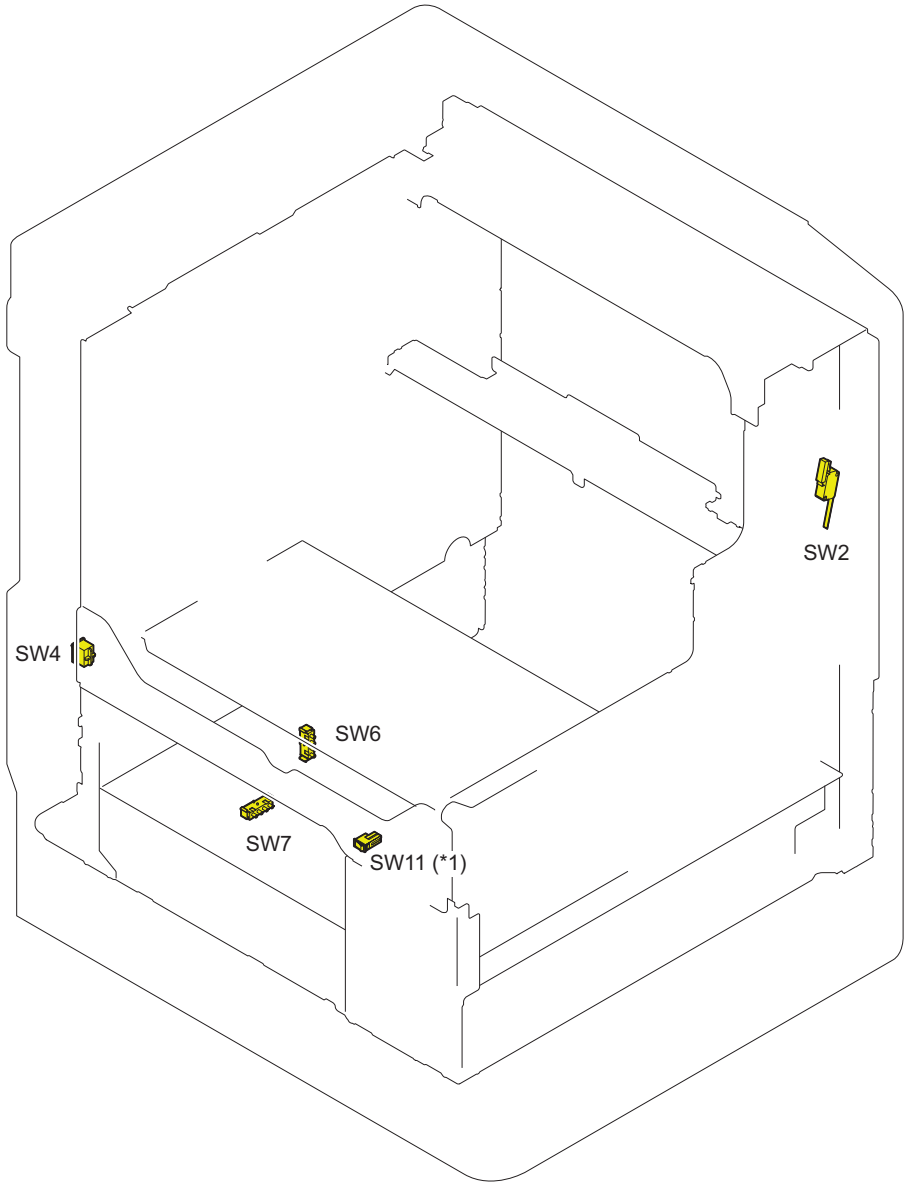
Symbol	Part name	Main unit	Reference
M1	Main Motor	-	“Removing the Main Motor (M1)” on page 159
M2	Fixing Motor	-	“Removing the Fixing Motor (M2)” on page 159
M3	Cassette 1 Pickup Motor	-	“Removing the Cassette 1 Pickup Motor (M3)” on page 160
M6	Bottle Motor	Toner Supply Assembly	
M7	Hopper Motor	Toner Supply Assembly	
M10	Reversal Motor	No.2 Deleivery Assembly	“Removing the Reversal Motor (M10)” on page 161
M31	Scanner Motor	-	“Removing the Scanner Motor (M31)” on page 161

List of Fans



Symbol	Part name	Main unit	Reference
FAN3	Exhaust Fan (Rear)	Right Cover Assembly	
FAN4	Exhaust Fan (Front)	Right Cover Assembly	
FAN6	Power Supply Cooling Fan	-	“Removing the Power Supply Cooling Fan (FAN6)” on page 163

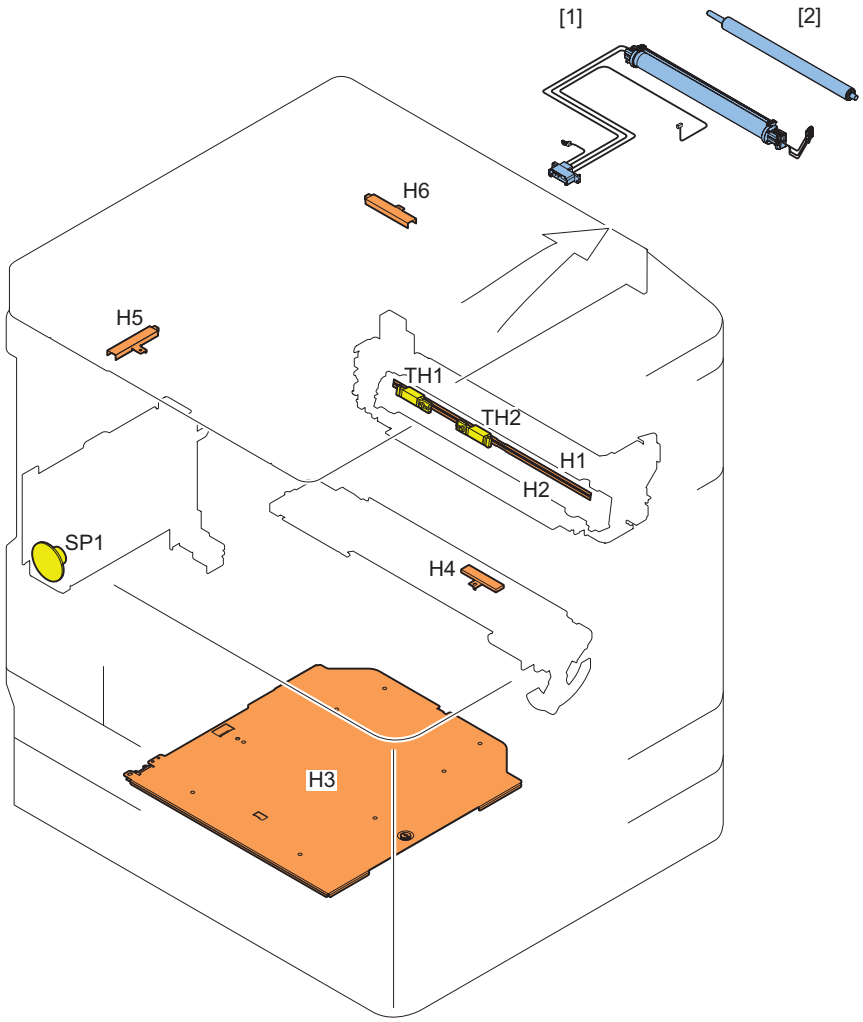
List of Switches



Symbol	Part name	Main unit	Reference
SW2	Front Door Switch	-	“Removing the Front Door Switch (SW2)” on page 164
SW4	Environment Switch	-	-
SW6	Cassette Size Detection Switch 1	-	“Removing the Cassette Size Detection Switch (SW6/SW7)” on page 165
SW7	Cassette Size Detection Switch 2	-	“Removing the Cassette Size Detection Switch (SW6/SW7)” on page 165
SW11 (*1)	Main Power Switch	-	-

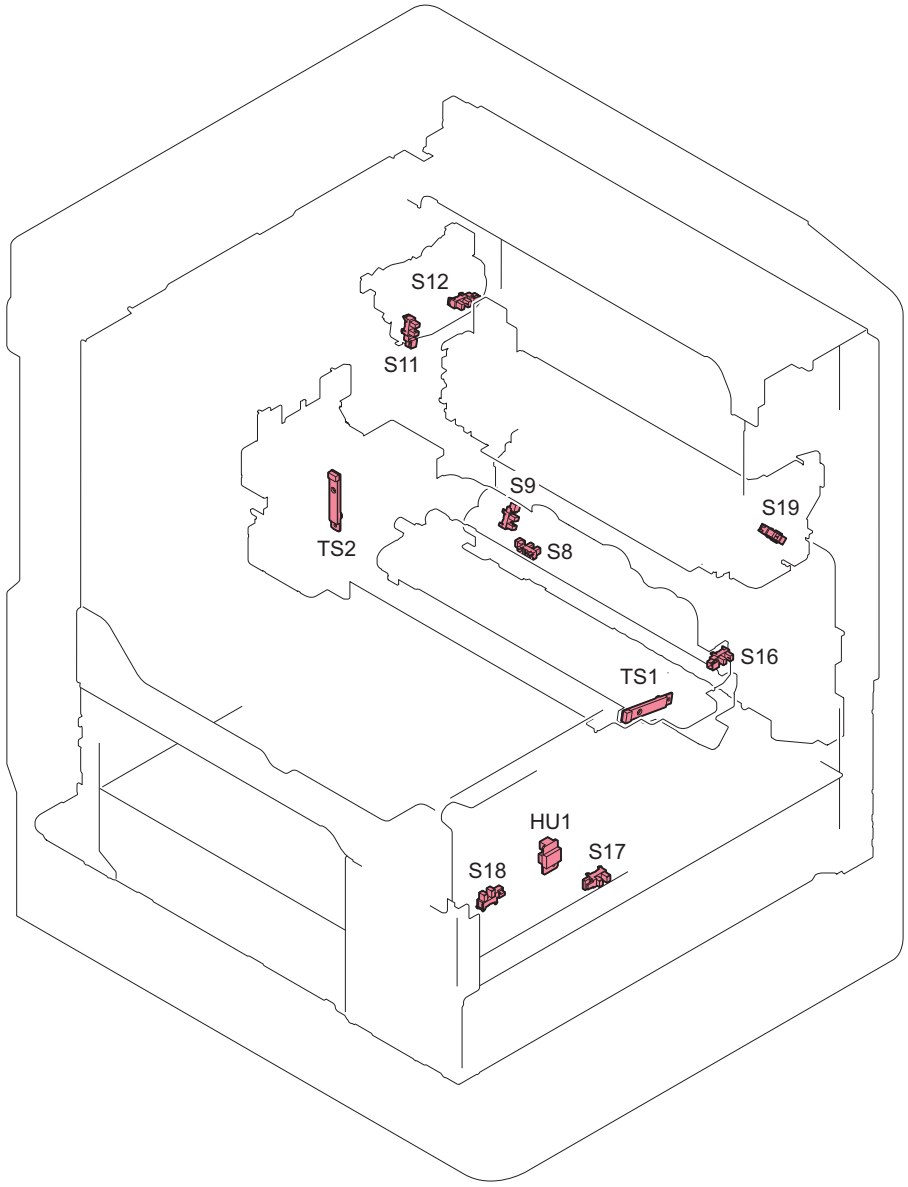
*1: Only the Europe Model

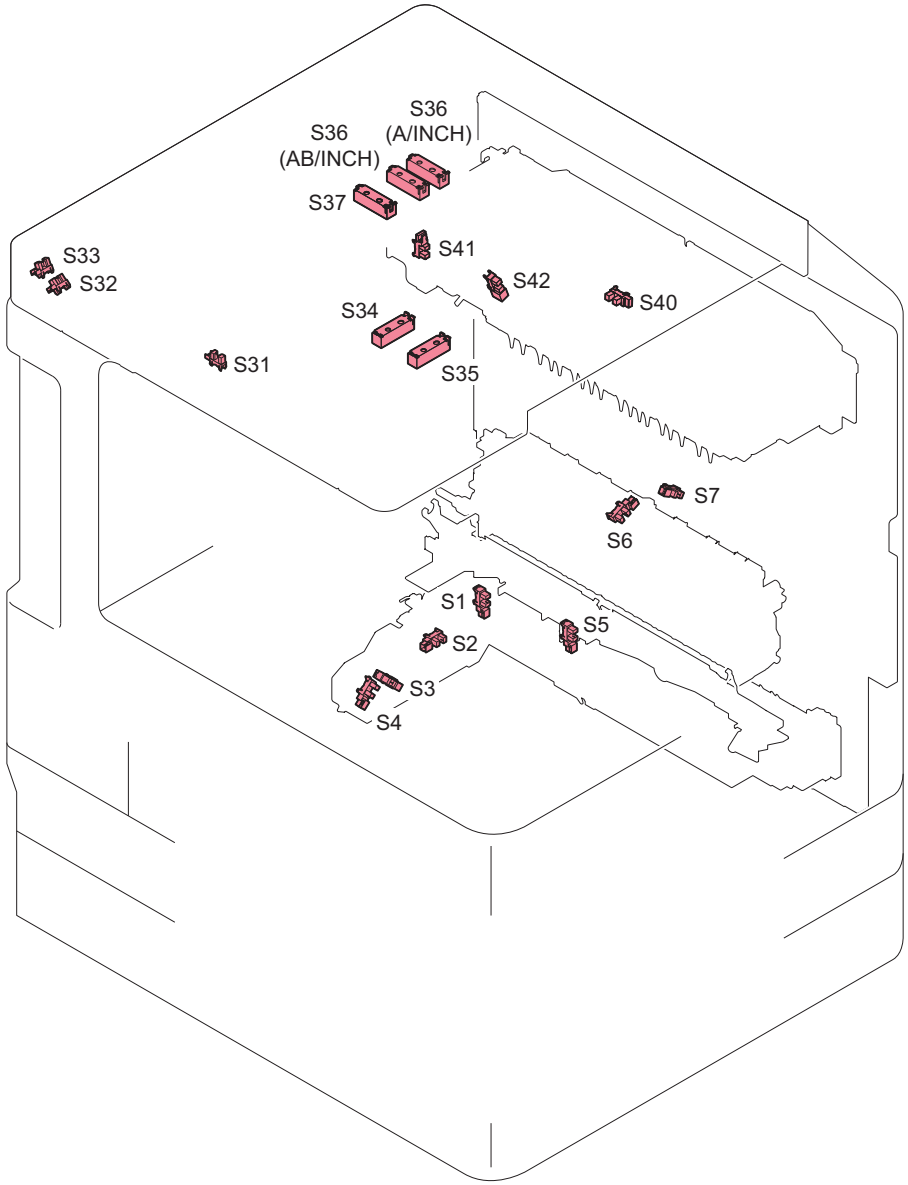
List of Lamp,Heater,Others



Symbol	Part name	Main unit	Reference
TH1	Fixing Main Thermistor	Fixing Assembly	
TH2	Fixing Sub Thermistor	Fixing Assembly	
H1	Fixing Heater 1	Fixing Assembly	
H2	Fixing Heater 2	Fixing Assembly	
SP1	Speaker (Option)	-	
H3	Cassette Heater (Option)	-	
H4	Drum Heater (Option)	-	
H5	Reader Heater (Option)	-	
[1]	Fixing Film Unit	Fixing Assembly	“Removing the Fixing Film Unit” on page 167
[2]	Pressure Roller	Fixing Assembly	“Removing the Pressure Roller” on page 170

List of Sensors

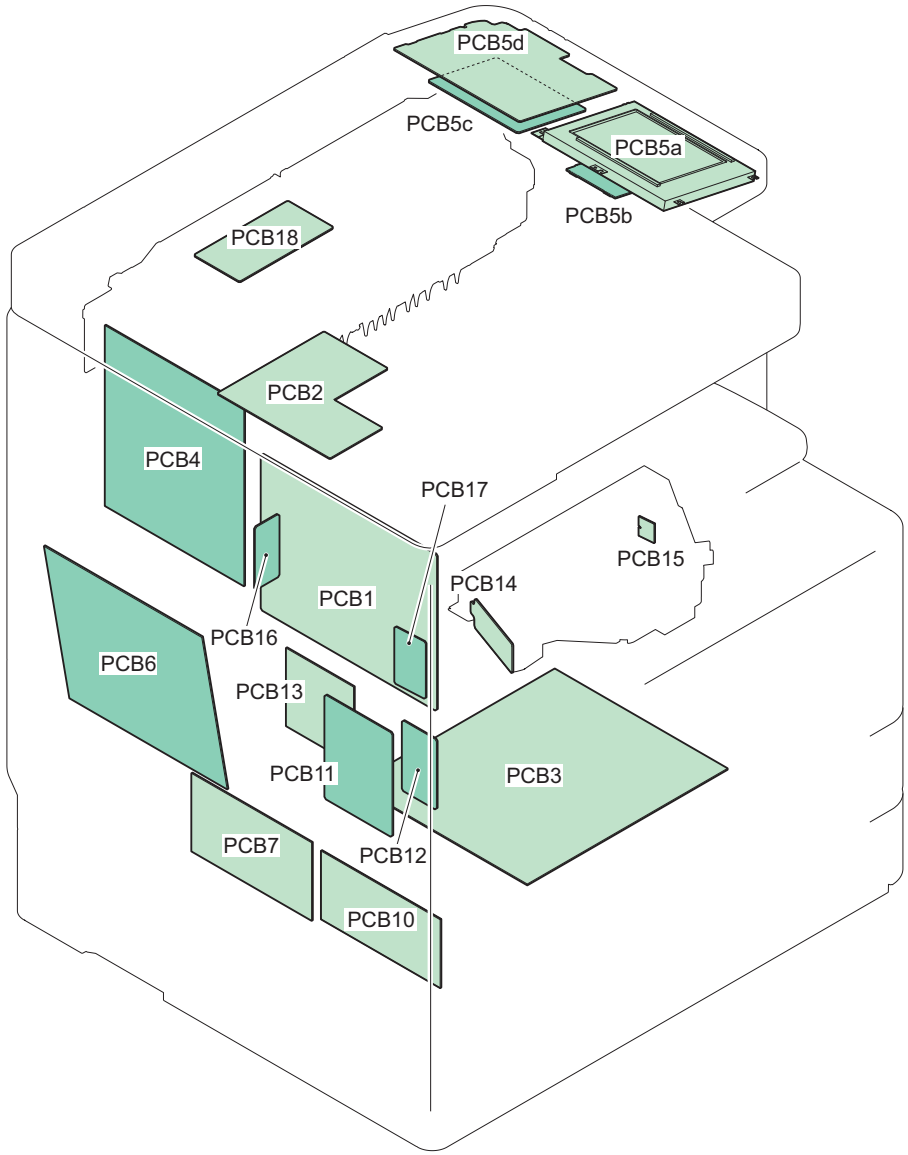




Symbol	Part name		Main unit	Reference
	iR2530/2525 (550-sheet 1st cassette type)	iR2530/2525/2520 (250-sheet 1st cassette type)		
S1	Cassette 1 Pickup Sensor	-	Casstte Pickup Assembly	-
S2	Cassette 1 Paper Sensor		Casstte Pickup Assembly	-
S3	Cassette 1 Paper Level Sensor A	-	Cassette pick-up assembly	-
S4	Cassette 1 Paper Level Sensor B	-	Cassette pick-up assembly	-
S5	Pre-Registration Sensor		-	-
S6	Loop Sensor		-	-
S7	Duplex Feed Sensor		-	-
S8	Manual Feeder Paper Size Sensor		Multi Pick-up Assembly	-
S9	Manual Feeder Paper Sensor		Multi Pick-up Assembly	-
S11	No.1 Delivery Full Sensor		-	-
S12	No.1 Delivery Sensor		-	-
S16	Toner Cover Open/Closed Sensor		-	-
S17	Waste Toner Full Sensor		-	-
S18	Front Cover Open/Closed Sensor		-	-
S19	Fixing Outlet Sensor		Fixing Assembly	-
S31	CIS Hp Sensor		-	-
S32	Copyboard Cover Open/Closed Sensor 0		-	-

Sym-bol	Part name		Main unit	Reference
	iR2530/2525 (550-sheet 1st cas-sette type)	iR2530/2525/2520 (250-sheet 1st cassette type)		
S33	Copyboard Cover Open/Closed Sensor 1		-	-
S34	Original Size Sensor 0		-	-
S35	Original Size Sensor 1		-	-
S36	Original Size Sensor 2		-	-
S37	Original Size Sensor 3		-	-
S40	Reversal Sensor		No.2 Deleivery Assembly	-
S41	No. 2 Delivery Full Sensor		No.2 Deleivery Assembly	-
S42	No. 2 Delivery Sensor		No.2 Deleivery Assembly	-
HU1	Environment Sensor		-	-
TS1	Developing Unit Toner Sensor		Developing Assembly	-
TS2	Sub Hopper Toner Sensor		Developing Assembly	-

List of PCBs



Symbol	Part name	Main unit	Reference
PCB1	Main Controller PCB	-	“Removing the Main Controller PCB” on page 171

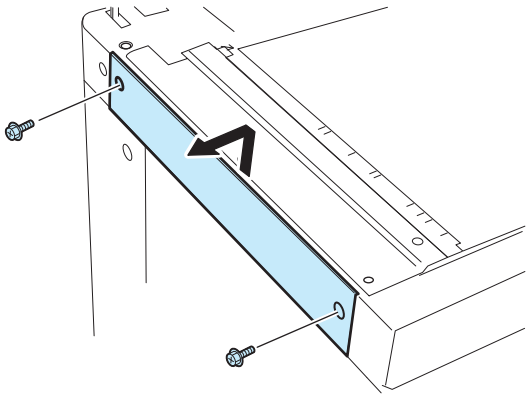
Symbol	Part name	Main unit	Reference
PCB2	Reader Relay PCB	-	“Removing the Reader Relay PCB” on page 171
PCB3	Power Supply PCB	-	“Removing the Power Supply PCB” on page 172
PCB4	DC Controller PCB	-	“Removing the DC Controller PCB” on page 172
PCB5a	LCD Unit	Control Panel Assembly	-
PCB5b	1/4 Inverter PCB	Control Panel Assembly	-
PCB5c	Control Panel CPU PCB	Control Panel Assembly	-
PCB5d	Key Top PCB Assembly	Control Panel Assembly	-
PCB6	HVT PCB	-	“Removing the HVT PCB” on page 173
PCB7	Option Power Supply PCB	-	“Removing the Option Power Supply PCB” on page 173
PCB10	Heater PCB	-	“Removing the Heater PCB” on page 174
PCB11	NCU PCB	FAX Assembly	-
PCB12	Modular PCB	FAX Assembly	-
PCB13	Pseudo-CI PCB	FAX Assembly	-
PCB14	Laser Driver PCB	Laser Scanner Unit	-
PCB15	BD PCB	Laser Scanner Unit	-
PCB16	RAM PCB	Main Controller PCB	“Removing the RAM PCB” on page 174
PCB17	Modem PCB	Main Controller PCB	-
PCB18	No.2 Delivery Reversal PCB	-	-

External / Internal Cover

Removing the Reader Left Cover

1. **Remove the reader left cover.**
   - 2 screws (RS tightening; M3)

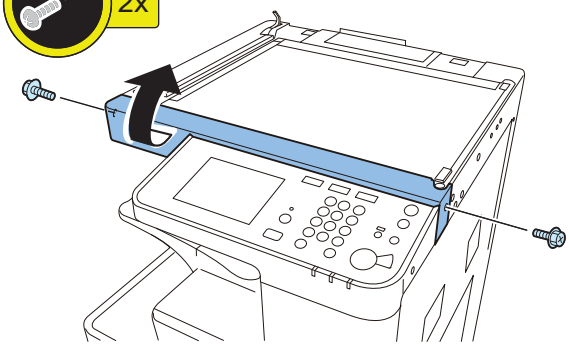




Removing the Reader Front Cover

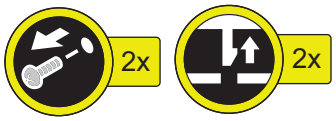
1. **Open the platen cover (ADF/platen board cover).**
2. **Remove the reader front cover.**
   - 2 screws (RS tightening; M3)

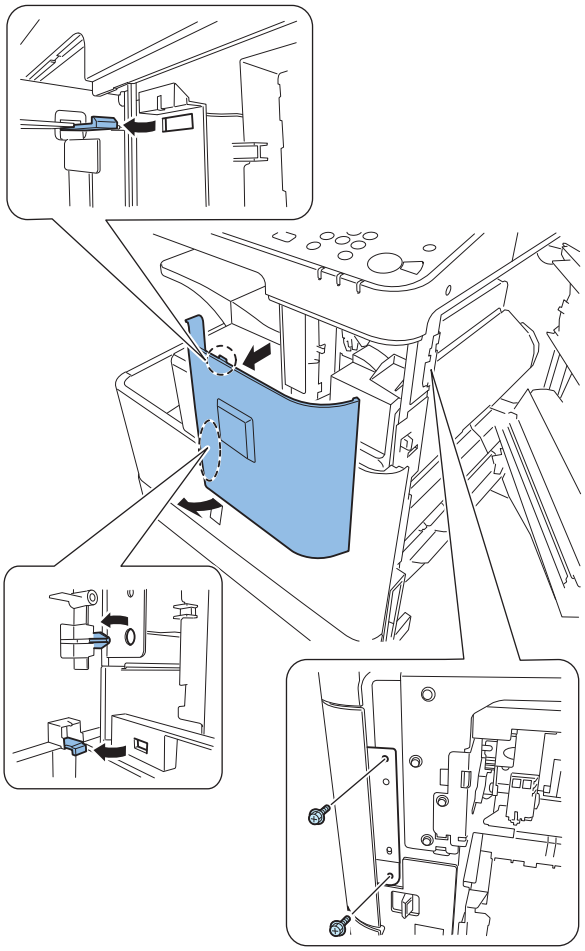




Removing the Support Cover

1. **Open the right cover.**
2. **Remove the support cover.**
   - 2 screws (RS tightening; M3)
   - 2 claws
   - 1 boss





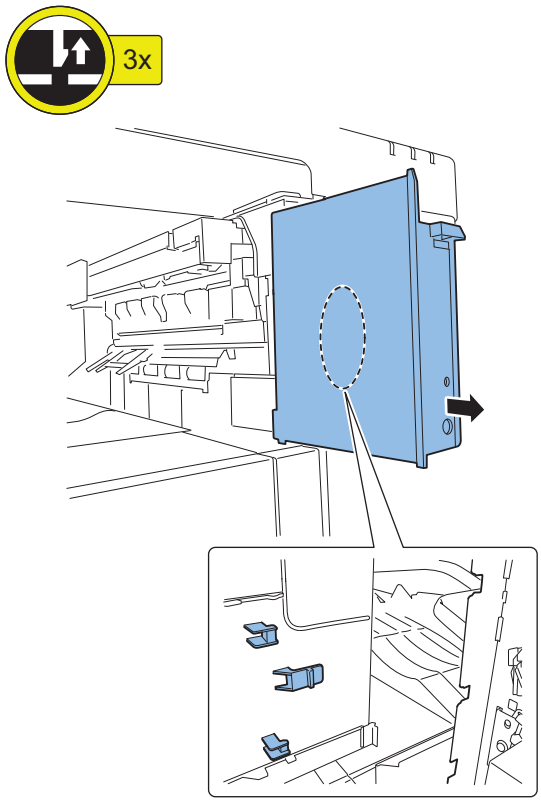
Removing the Delivery Tray

■ Preparation

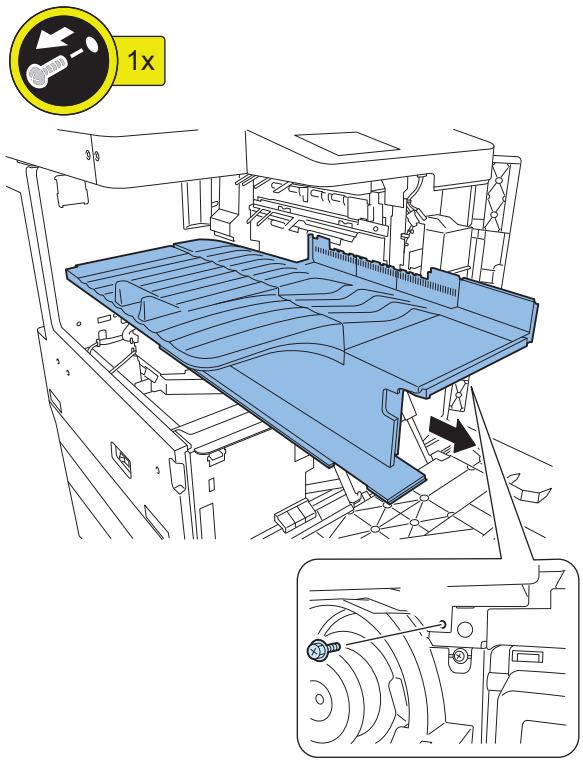
1. **Remove the support cover.****"Removing the Support Cover" on page 130**
2. **Remove the toner supply cover.****"Removing the Toner Supply Cover" on page 134**
3. **Remove the inside base cover.****"Removing the Inside Base Cover" on page 133**

■ Procedure

1. **Remove the support cover (left).**

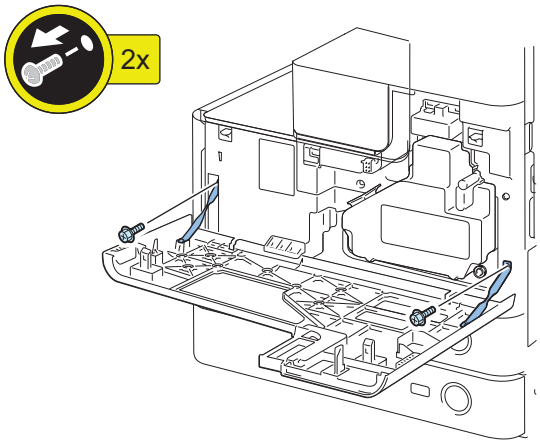


2. **Remove the delivery tray.**
   - 1 screw (RS tightening; M3)

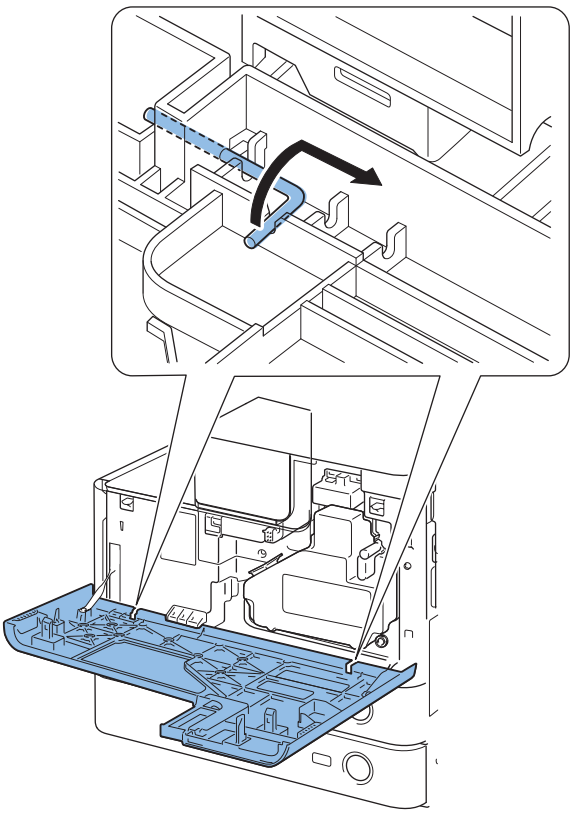


Removing the Front Cover

1. **Open the front cover.**
2. **Remove the front cover belt.**
   - 2 screws (RS tightening; M3)



3. **Remove the front cover.**
   - 2 hinge pins

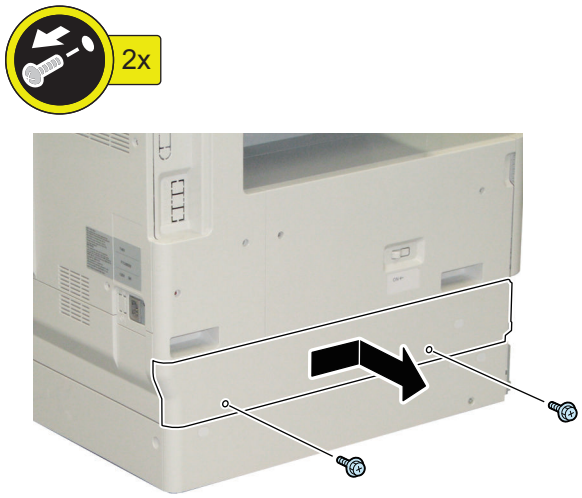


Removing the Lower Left Cover

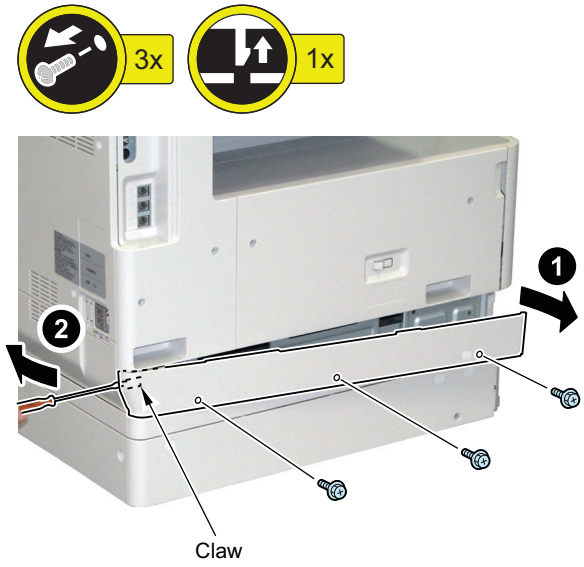
1. **Remove the cassette.**

2. **Remove the lower left cover.**

<For 550-sheet cassette model>
- 2 screws



<For 250-sheet cassette model>
- 3 screws
- 1 claw



Removing the Left Cover

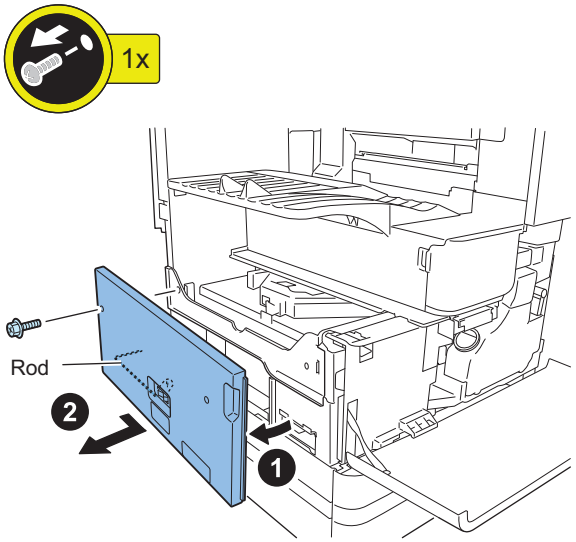
■ Preparation

1. **Draw out the cassette.**
2. **Remove the lower left cover.****"Removing the Lower Left Cover" on page 131**
3. **Remove the inside base cover.****"Removing the Inside Base Cover" on page 133**

■ Procedure

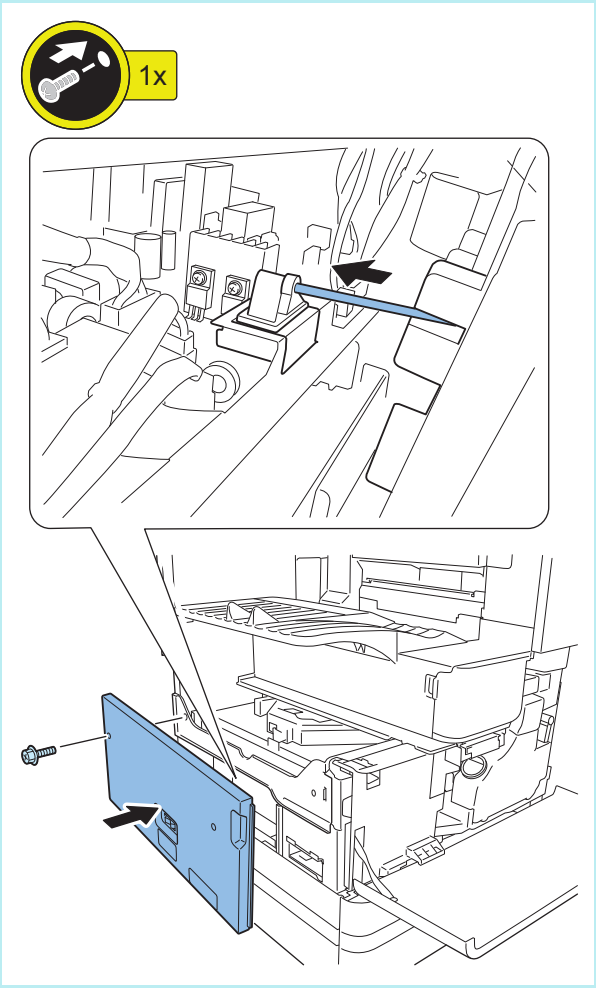
1. **Remove the left cover. (except the Europe model)**
   - 1 screw

NOTE:
In the case of the Europe model, refer to step 2.).

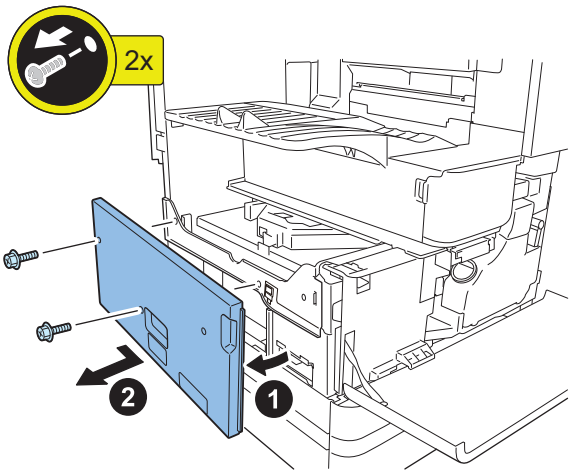


CAUTION:
The left cover has a rod interlocked with the switch on the power supply PCB.
Remove the left cover without applying load on it.

NOTE:
When reassembling the left cover, insert the rod of the left cover switch into the main power switch securely.



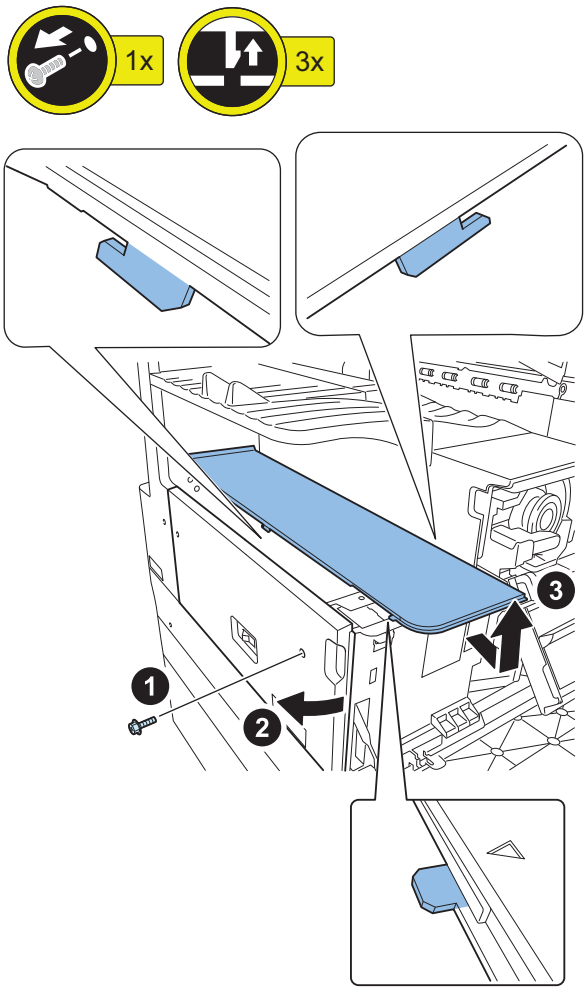
2. **Remove the left cover. (In the case of the Europe model)**
   - 2 screws



Removing the Inside Base Cover

1. **Open the front cover**

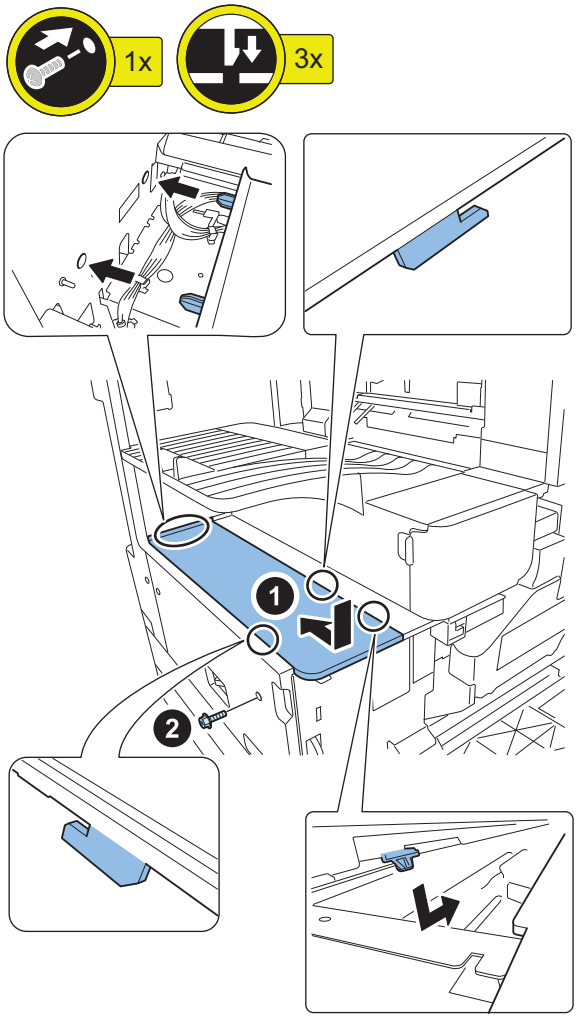
2. **Bend the left cover and remove the inside base cover.**
   - 1 screw



Installing the Inside Base Cover

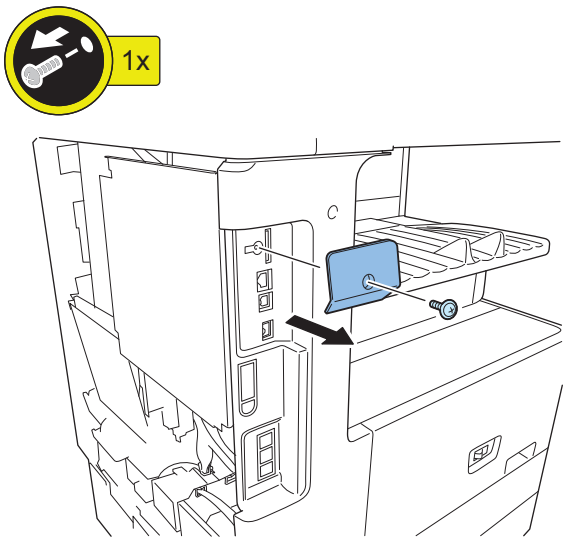
1. **Install the inside base cover.**

2. **Secure it with one screw.**

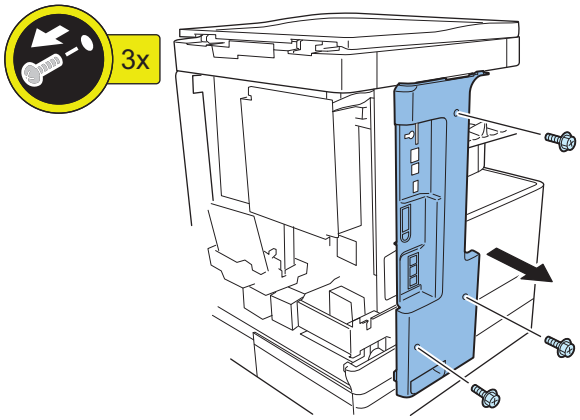


Removing the Left Rear Cover

1. **Remove the face cover.**
   - 1 screw (TP binding; M3)



2. **Remove the left rear cover.**
   - 3 screws (RS tightening; M3)



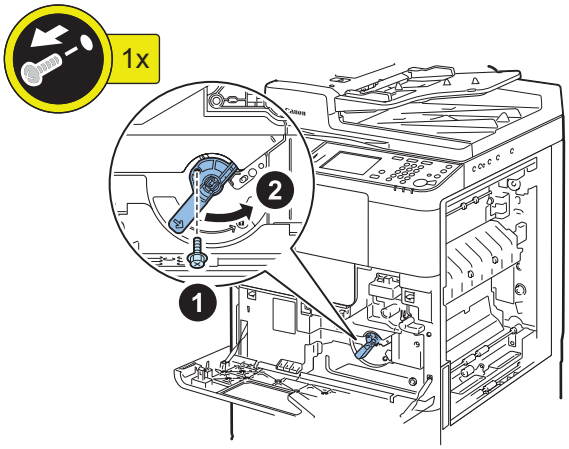
Removing the Toner Supply Cover

■ Preparation

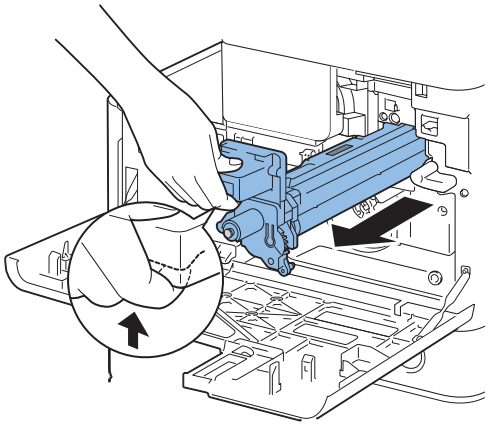
1. **Open the front cover.**
2. **Remove the support cover.****"Removing the Support Cover" on page 130**
3. **Remove the inside base cover.****"Removing the Inside Base Cover" on page 133**

■ Procedure

1. **Remove the screw securing the developing assembly pressure lever.**
2. **Turn the lever in the direction of the arrow to release the drum unit lock.**

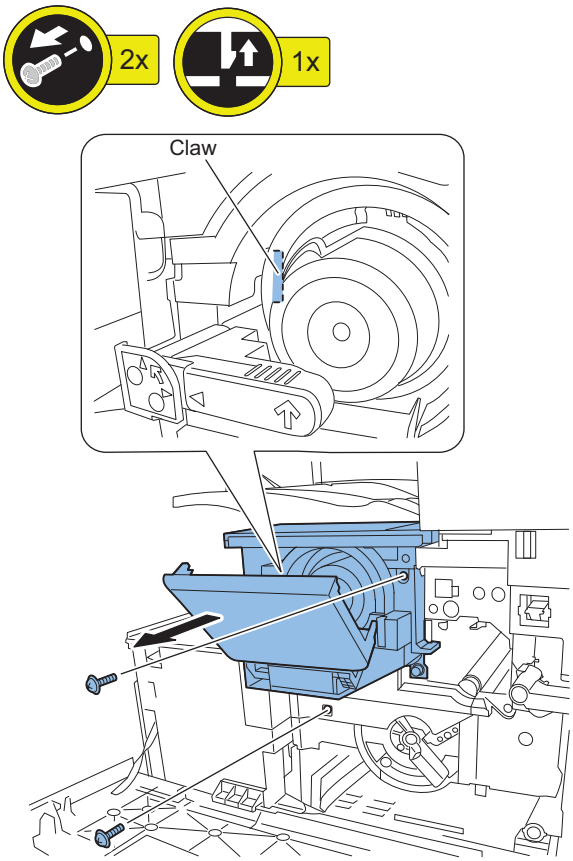


3. **Remove the drum cartridge.**



4. **Open the toner supply cover.**

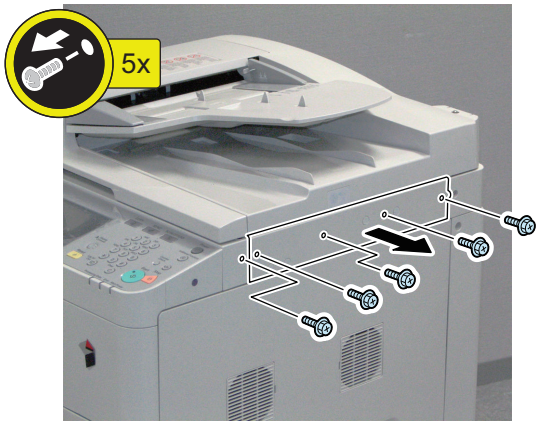
5. **Remove the toner supply cover.**
   - 2 screws (RS tightening; M3)
   - 1 claw



Removing the Reader Right Cover

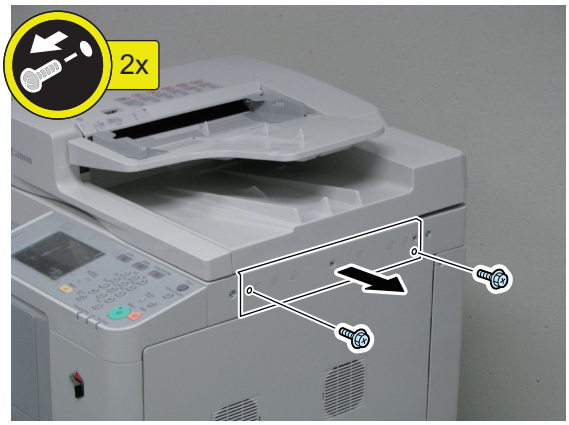
<For iR 2530/2525/2520>

1. **Remove the reader right cover by removing four screws, and then remove one screw from the reader front cover.**



<For iR 2545/2535>

1. Remove the reader right cover.
   - 2 screws

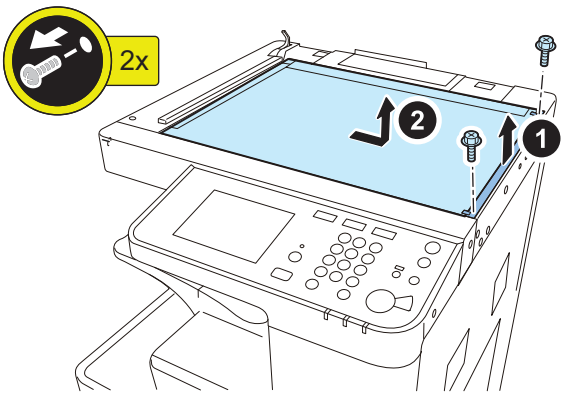


Removing the Platen Glass

1. **Open the ADF or platen cover.**

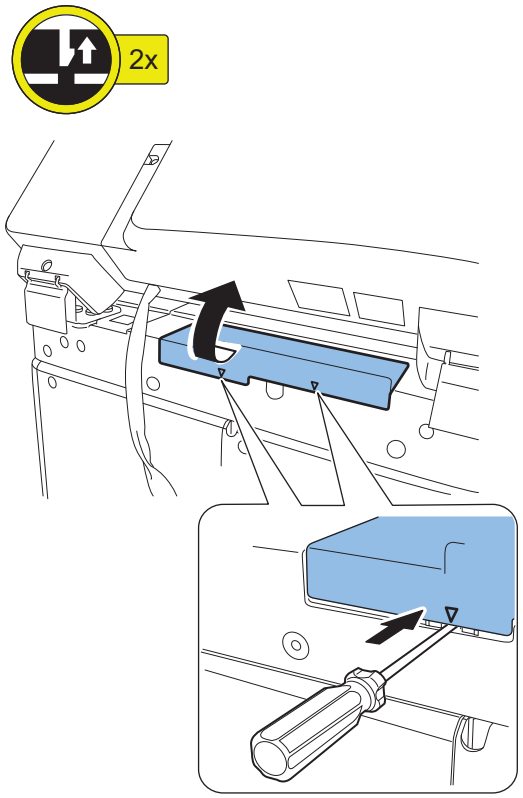
2. **Remove the glass retainer (right).**
   - 2 screws

3. **Remove the platen glass.**

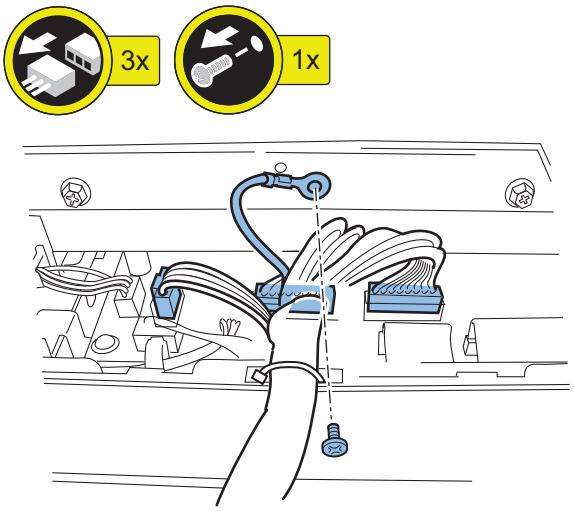


Removing the Reader Rear Cover

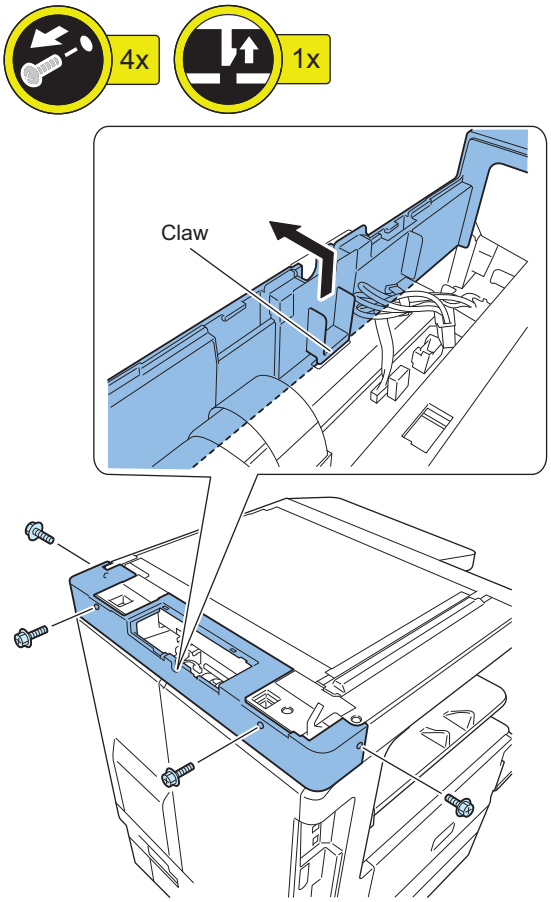
1. **Open the platen cover (ADF/platen board cover).**
2. **Remove the reader rear (small) cover.**
   - 2 claws



3. **Remove the ADF power cable.**
   - 3 connectors
   - 1 screw (RS tightening; M3)

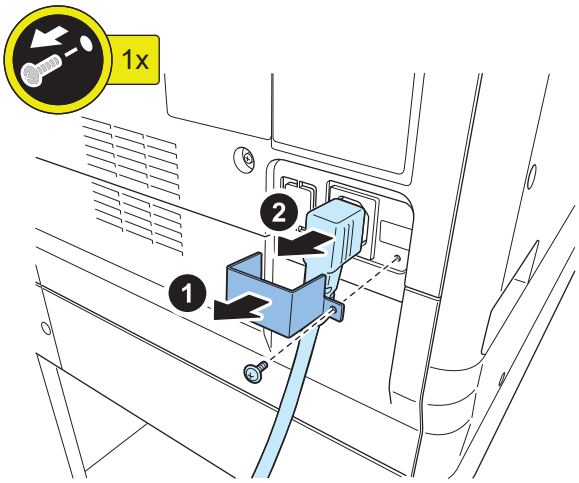


4. **Remove the reader rear cover.**
   - 4 screws (RS tightening; M3)
   - 1 claw

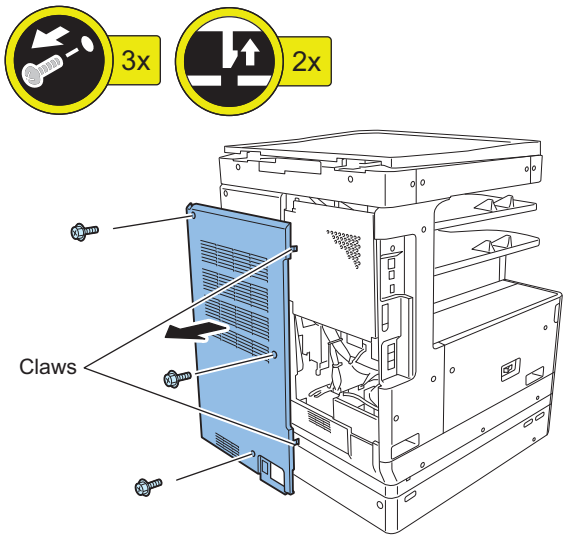


Removing the Rear Cover (Right)

1. **Remove the power supply retaining cover.**
   - 1 screw
2. **Remove the power cord.**

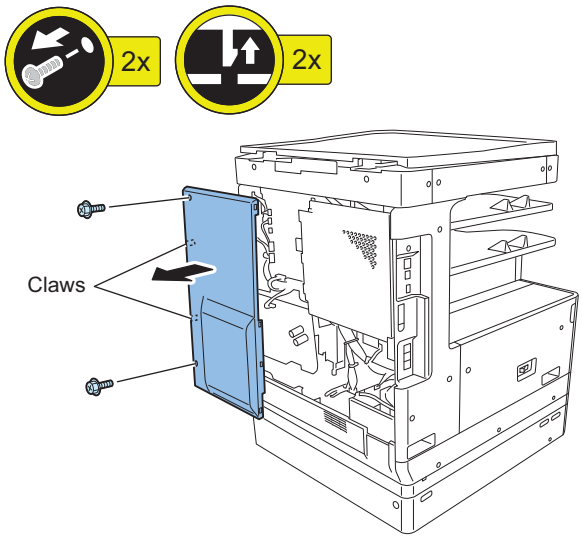


3. **Remove the rear cover (right).**
   - 3 screws
   - 2 claws



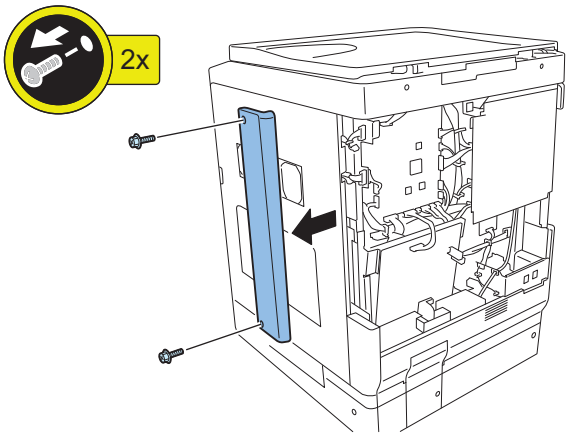
Removing the Rear Cover (Left)

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left).**
   - 2 screws
   - 2 claws



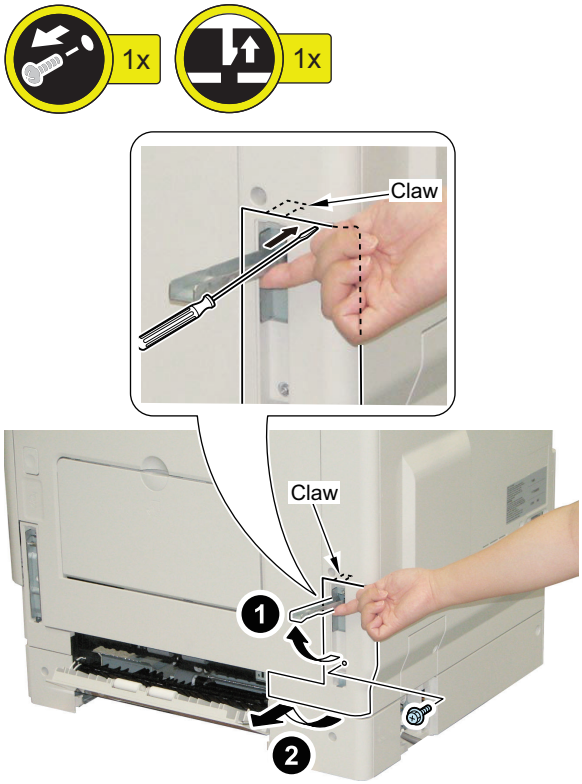
Removing the Rear Right Cover (Upper)

1. **Remove the rear right cover (upper).**
   - 2 screws (RS tightening; M3)



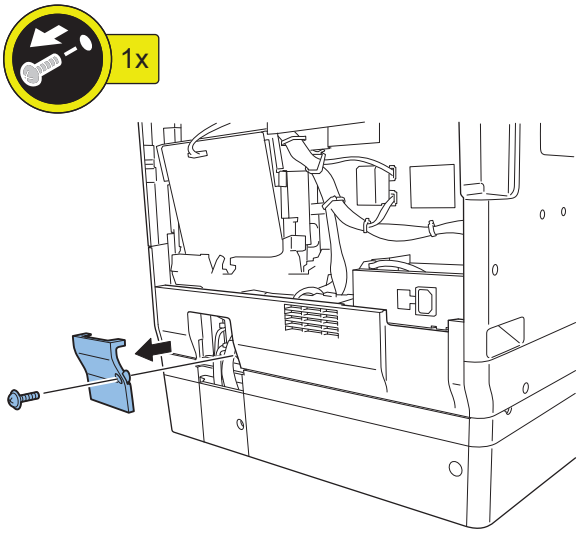
Removing the Rear Right Cover (Lower)

1. **Raise the handle at the rear right, and then remove one screw.**
2. **Release one claw with a flat-blade screwdriver, and then remove the rear right cover (lower) of the main unit.**

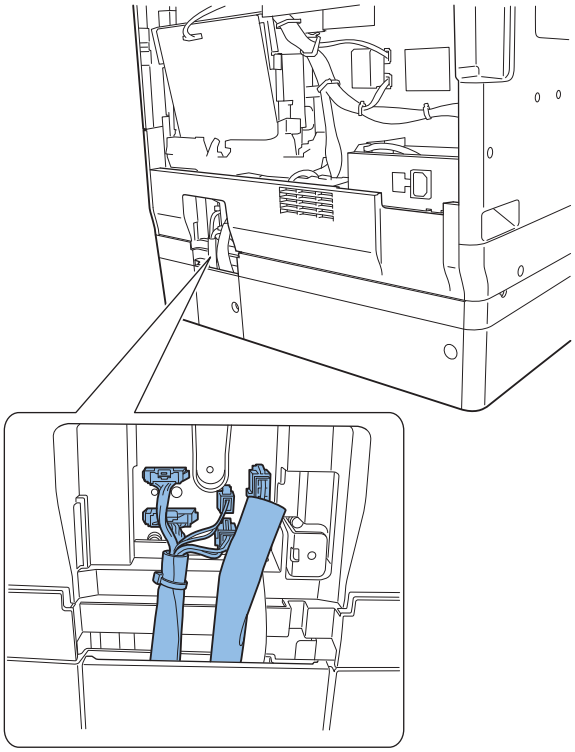


Removing the Lower Rear Cover

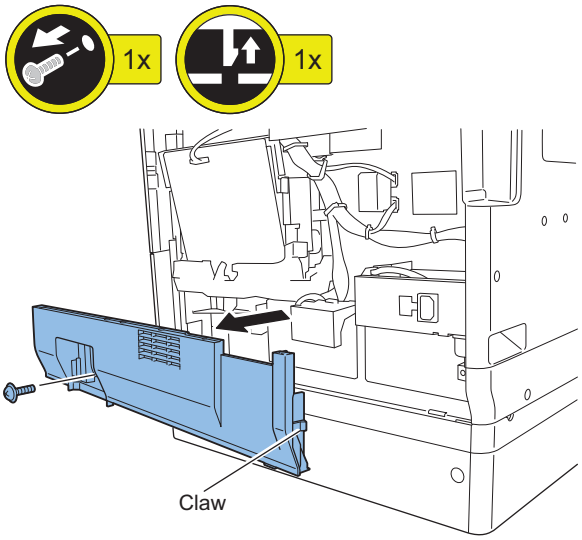
1. **Remove the connector cover.**
   - 1 screw (W-sems binding; M3)



2. **Disconnect all connectors (only for the machine with an optional cassette).**



3. **Remove the lower rear cover.**
   - 1 screw (RS tightening; M3)
   - 1 claw



Removing the Cassette 2 Rear Cover

Perform the same procedure as the lower rear cover.
“Removing the Lower Rear Cover” on page 138

Main Unit

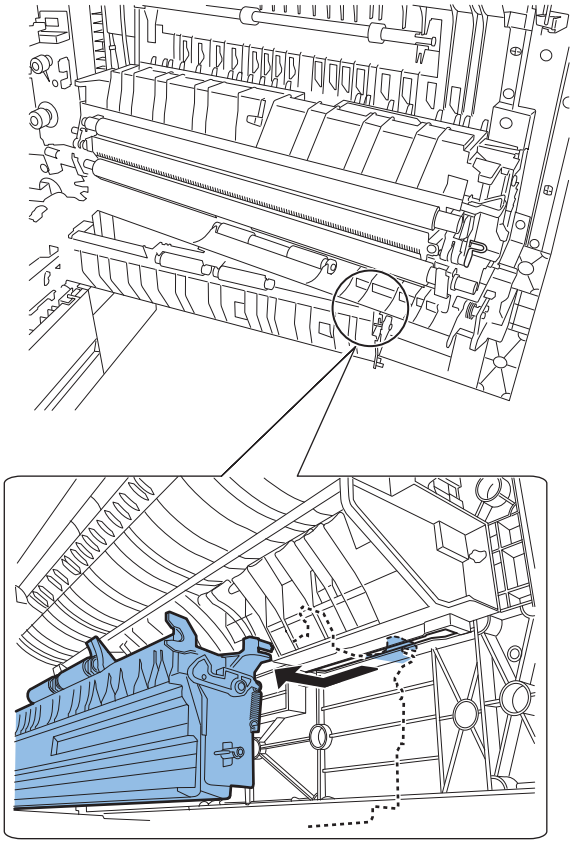
Removing the Right Cover Assembly

■ Preparation

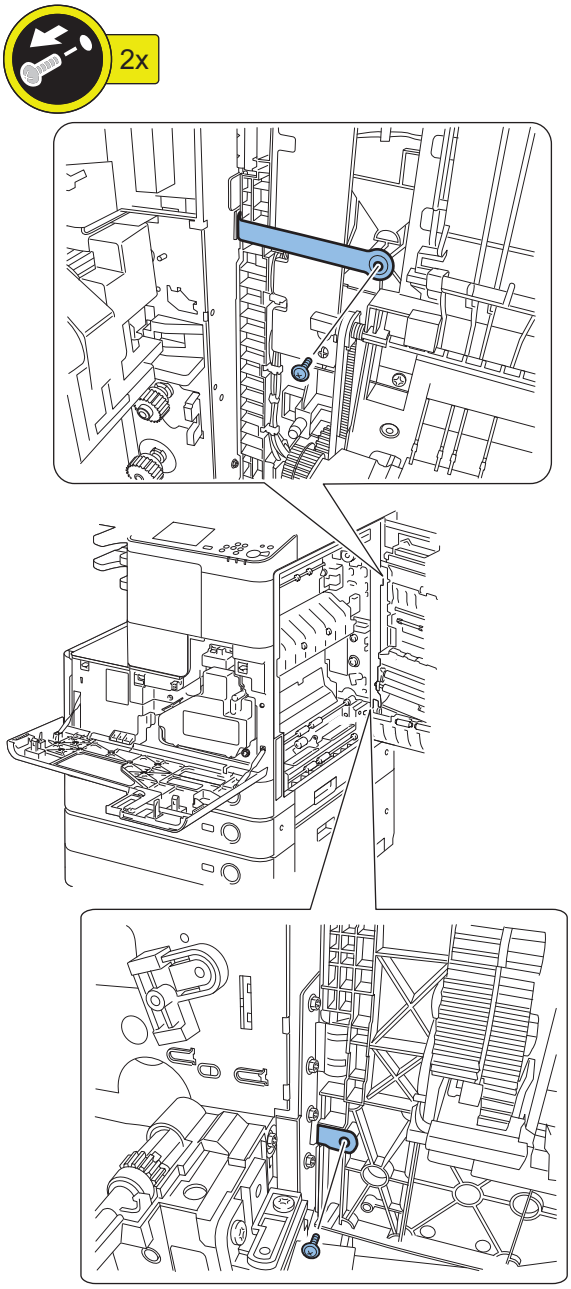
1. Remove the reader right cover."Removing the Reader Right Cover" on page 135
2. Remove the reader rear cover."Removing the Reader Rear Cover" on page 136
3. Remove the rear right cover (upper)."Removing the Rear Right Cover (Upper)" on page 137

■ Procedure

1. Open the right cover.
2. Remove the link between the right cover and pickup unit.

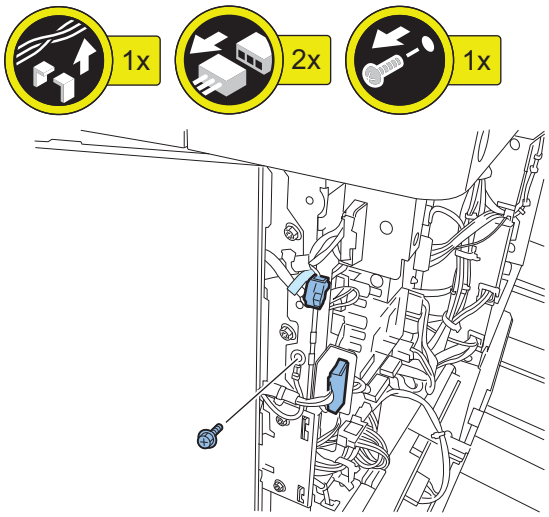


3. Remove the belt.
   - 2 screws

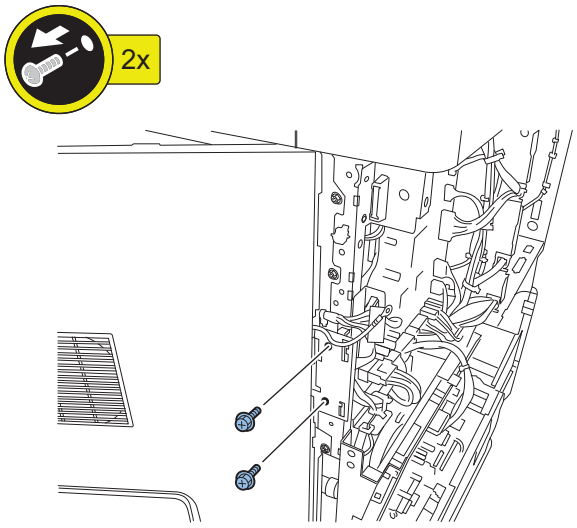


4. Remove one screw.
   Remove the connection cable.
   2 connectors (The machine without the No.2 delivery unit does not have the upper connector.)

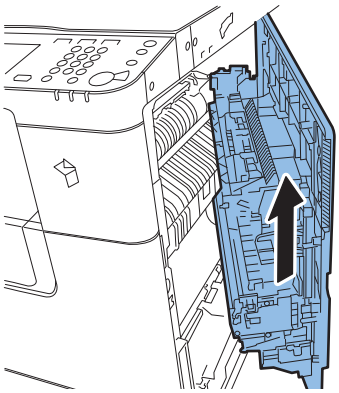
CAUTION:
Be sure to disconnect the upper connector after releasing the harness from the clamp to prevent breaking of wire



5. **Remove two screws.**



6. **Remove the right cover assembly.**



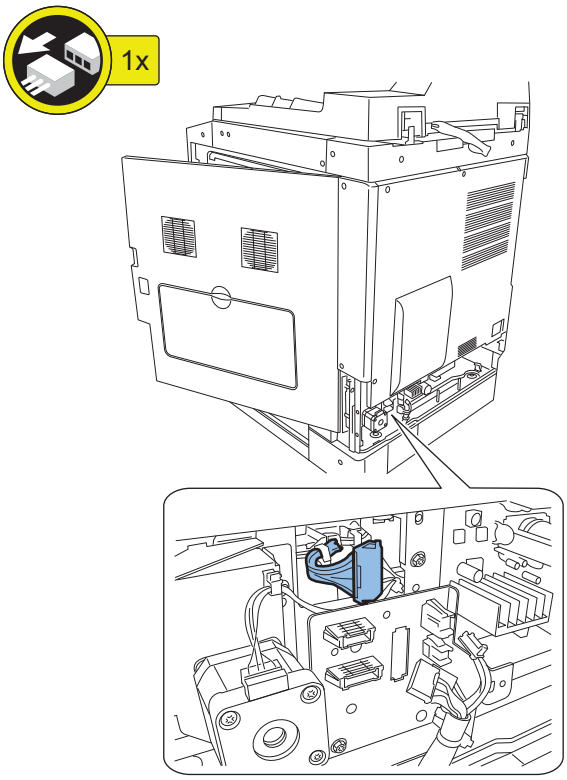
Removing the Cassette Pickup Assembly (550-sheet 1st Cassette Model)

■ Preparation

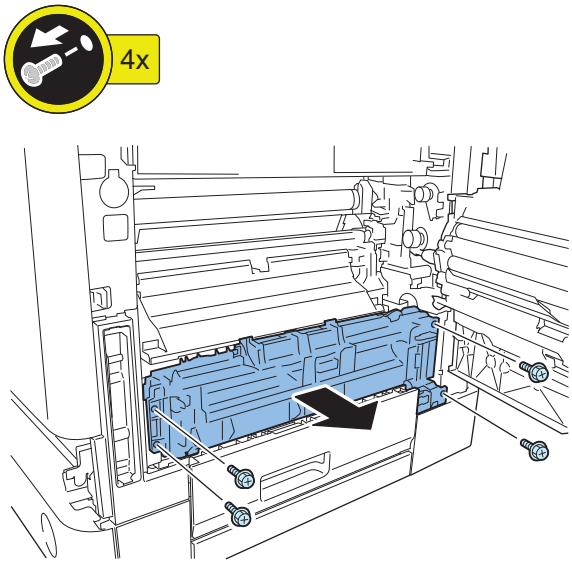
1. **Draw out the cassette.**
2. **Open the right cover.**
3. **Remove the connector cover.**
4. **Remove the lower rear cover.****"Removing the Lower Rear Cover" on page 138**
5. **Remove the rear right cover (lower).****"Removing the Rear Right Cover (Lower)" on page 137**

■ Procedure

1. **Remove the connection cable.**
   - 1 connector



2. **Remove the link between the right cover and pickup assembly.**
3. **Remove the cassette pickup assembly.**
   - 4 screws (RS tightening; M3)



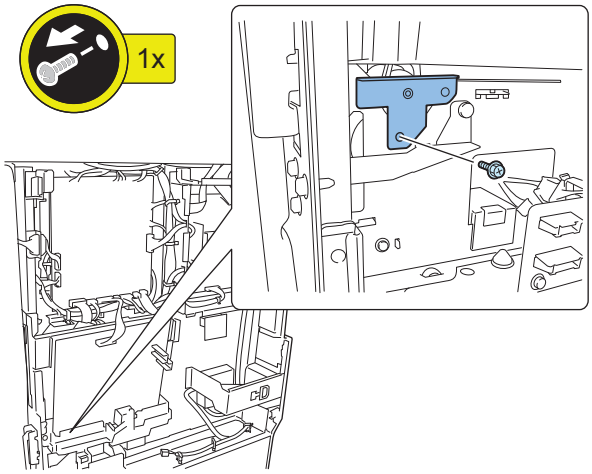
Removing the Cassette Pickup Assembly 1 (250-sheet 1st cassette Model)

■ Preparation

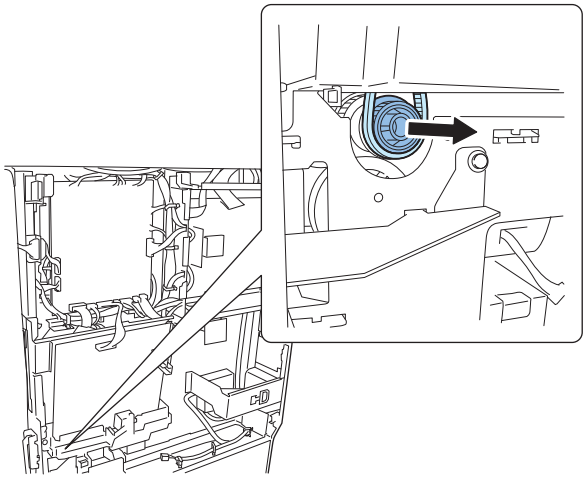
1. Draw out the cassette.
2. Open the right cover.
3. Remove the rear cover (right).“Removing the Rear Cover (Right)” on page 136
4. Remove the rear cover (left). “Removing the Rear Cover (Left)” on page 137
5. Remove the connector cover.
6. Remove the lower rear cover. “Removing the Lower Rear Cover” on page 138
7. Remove the rear right cover (lower). “Removing the Rear Right Cover (Lower)” on page 137

■ Procedure

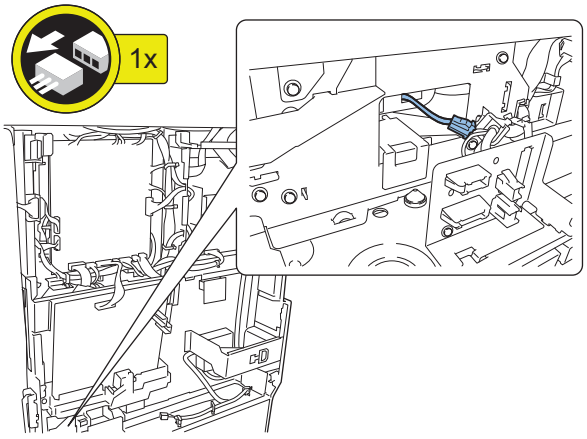
1. Remove the pulley shaft.
   - 1 screw



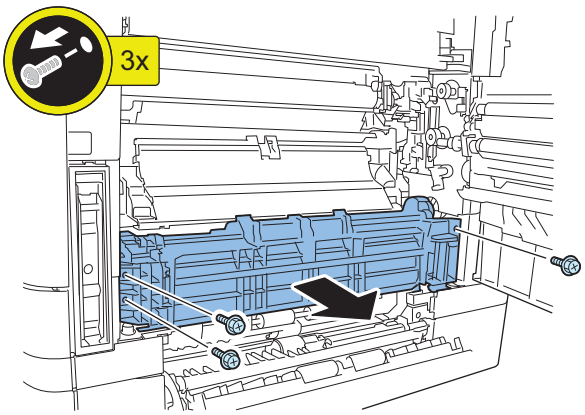
2. Remove the pulley.
   - 1 belt



3. Remove the connection cable.
   - 1 connector

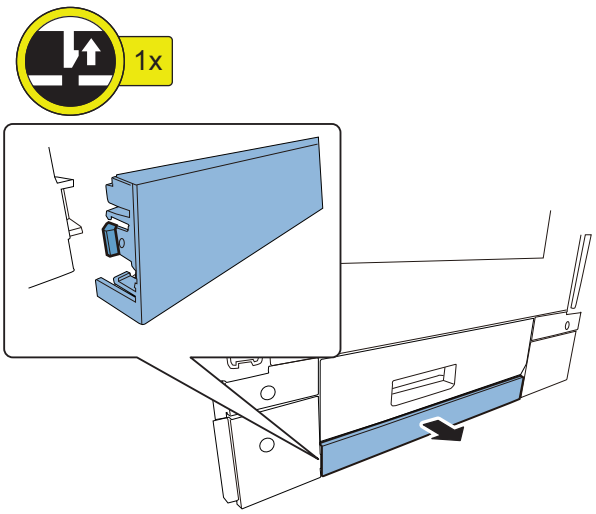


4. Remove the link between the right cover and cassette pickup assembly.
5. Remove the cassette pickup assembly.
   - 3 screws



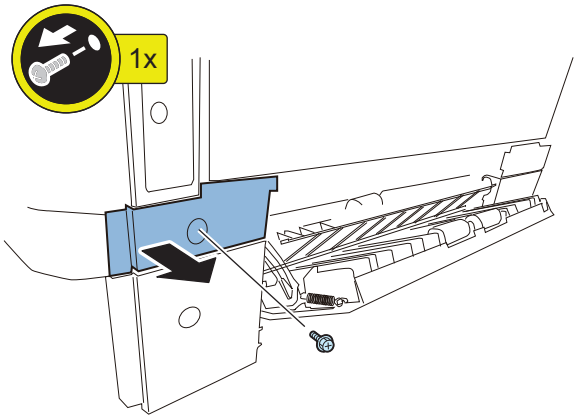
Removing the Cassette Pickup Assembly 2 (250-sheet 1st cassette Model)

1. Draw out the cassette 2.
2. Remove the right lower cover.
   - 1 Claw

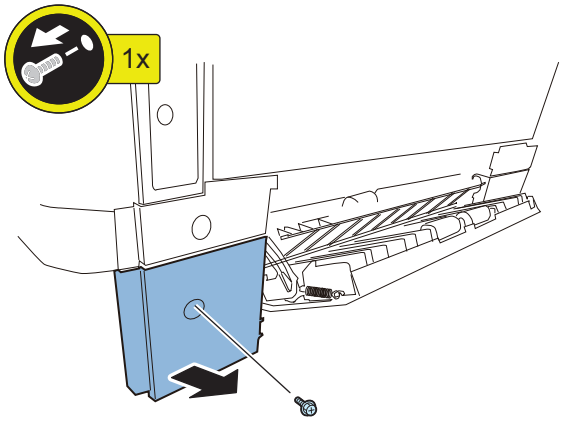


3. Open the cassette right lower cover.

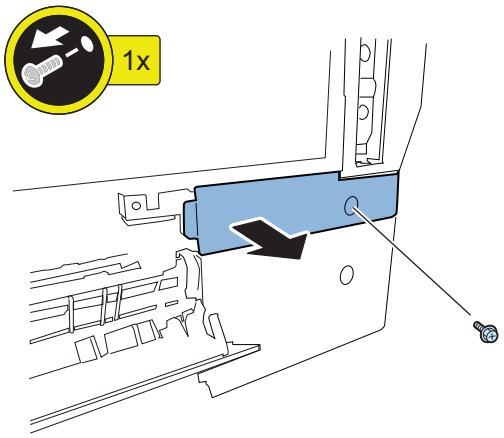
4. Remove the spacer cover (front).
   - 1 screw



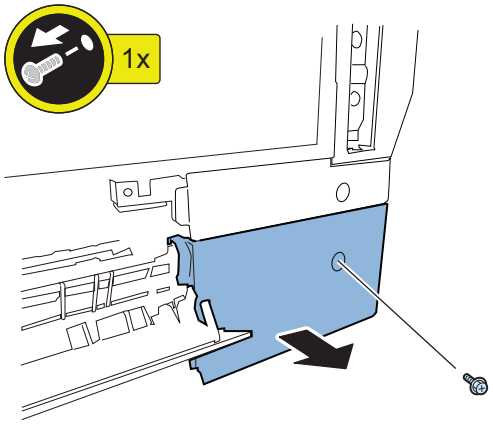
5. Remove the cassette 2 right cover (front).
   - 1 Screw



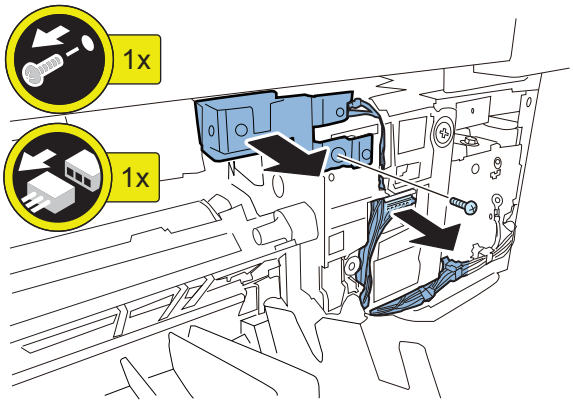
6. Remove the spacer cover (rear).
   - 1 screw



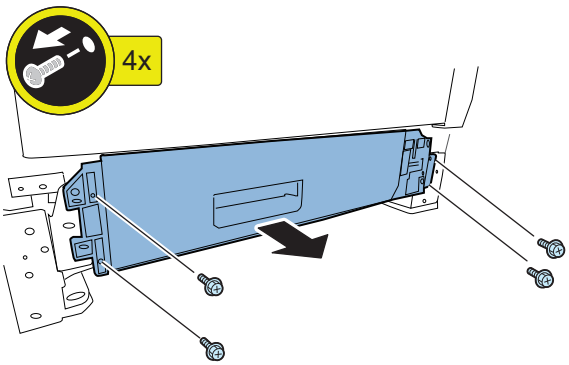
7. Remove the cassette 2 right cover (rear).
   - 1 Screw



8. Remove the sensor assembly, and then remove the harness from the guide.
   - 1 Screw
   - 1 Connector



9. Remove the cassette pickup assembly 2.
   - 4 screws



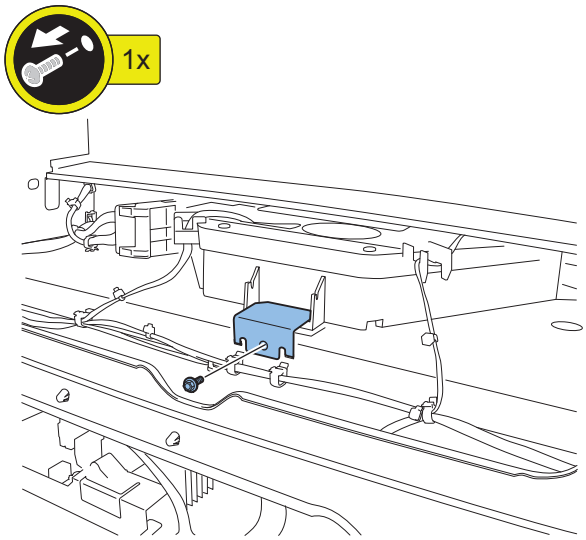
Removing the Laser Scanner Unit

■ Preparation

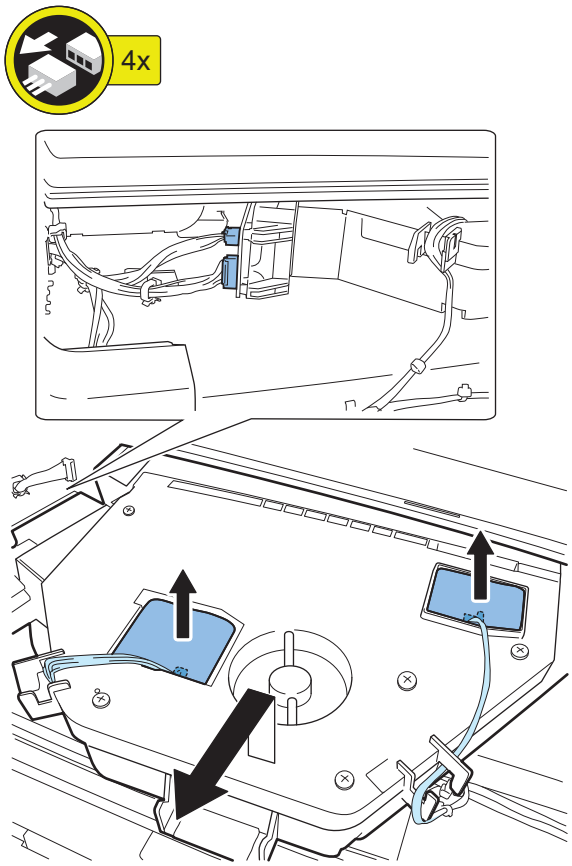
1. **Remove the inside base cover.****"Removing the Inside Base Cover" on page 133**
2. **Remove the left cover.****"Removing the Left Cover" on page 132**

■ Procedure

1. **Remove the scanner retaining plate.**
   - 1 screw



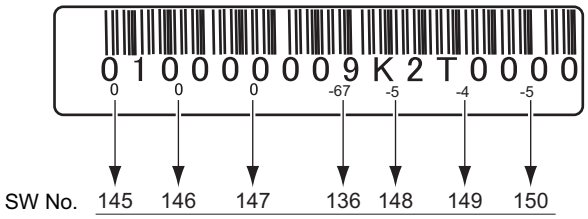
2. **Remove the laser scanner unit.**
   - 2 pieces of sponge
   - 4 connectors



CAUTION:
When pulling out the laser scanner, take care not to touch the PCB installed on the laser scanner unit. (The PCB is equipped with a laser intensity adjusting volume resistor and so touching the PCB can change the adjustment setting.)

■ Action to Take after Replacing the Laser Scanner Unit

1. **When replacing the Laser Unit, enter the value obtained by adding 1,000 to the number shown on the label affixed to the side of the newly replaced Laser Unit in the corresponding service mode as shown below.**
   (Examples: If the number on the service label is 3, enter 1,003. If the number on the service label is -1, enter 999.)



- PRINT > Bitswitch > 136 Laser horizontal scanning direction write position adjustment(A)
- PRINT > Bitswitch > 145 Laser horizontal scanning direction magnification ratio adjustment(A-B)
- PRINT > Bitswitch > 146 Laser horizontal scanning direction magnification ratio adjustment(A-C)
- PRINT > Bitswitch > 147 Laser horizontal scanning direction magnification ratio adjustment(A-D)
- PRINT > Bitswitch > 148 Laser horizontal scanning direction write position adjustment(A-B)
- PRINT > Bitswitch > 149 Laser horizontal scanning direction write position adjustment(A-C)
- PRINT > Bitswitch > 150 Laser horizontal scanning direction write position adjustment(A-D)

Removing the Toner Supply Assembly

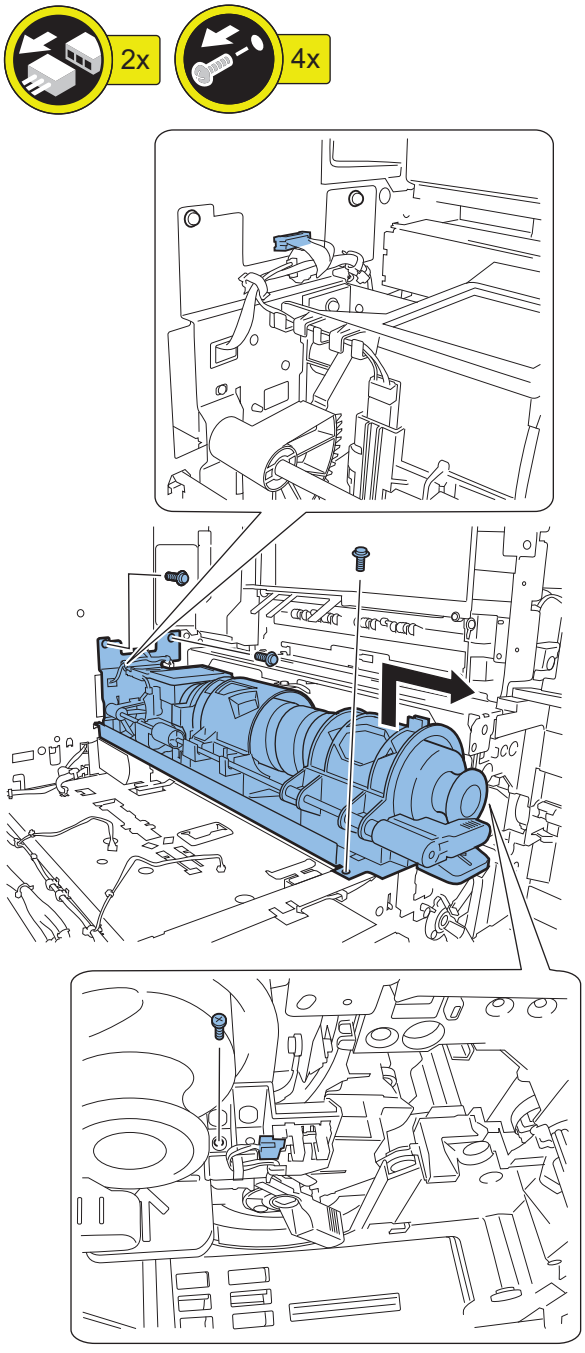
■ Preparation

1. **Remove the inside base cover.****"Removing the Inside Base Cover" on page 133**
2. **Remove the left cover.****"Removing the Left Cover" on page 132**
3. **Remove the waste toner container.****"Removing the Waste Toner Container" on page 150**
4. **Remove the drum unit.****"Removing the Drum Unit" on page 151**
5. **Remove the toner bottle.**
6. **Remove the toner supply cover.****"Removing the Toner Supply Cover" on page 134**
7. **Remove the delivery tray.****"Removing the Delivery Tray" on page 130**
8. **Remove the laser scanner unit.****"Removing the Laser Scanner Unit" on page 142**

■ Procedure

1. **Remove the toner supply assembly.**
   - Remove the power cable.
   - 2 connectors
   - 4 screws

CAUTION:
When removing the toner supply unit, do not incline it to shed toner.

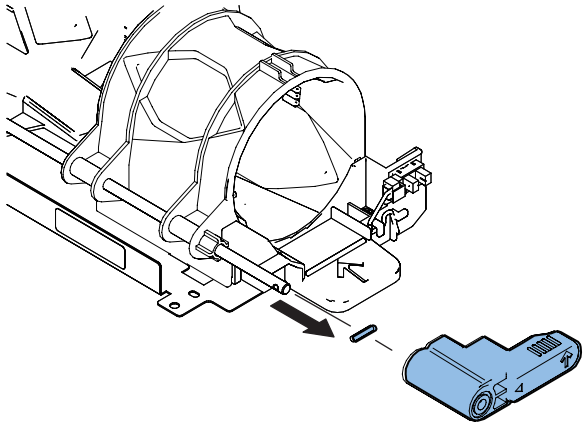


■ Action to Take after Replacement

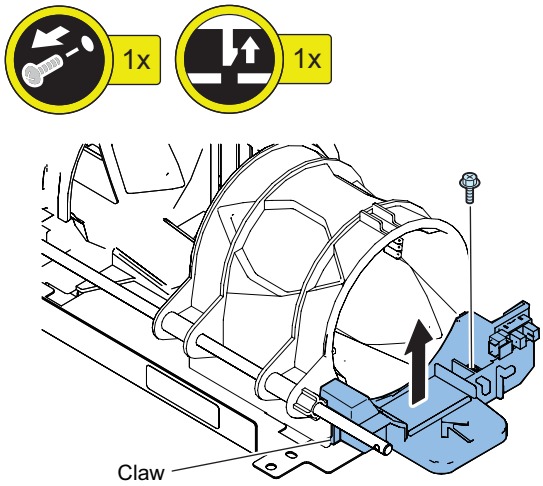
NOTE:
The service parts for toner supply unit do not come with a bottle ring. Remove the bottle ring from the old toner supply unit and attach it to the new one.

The procedure is as follows:

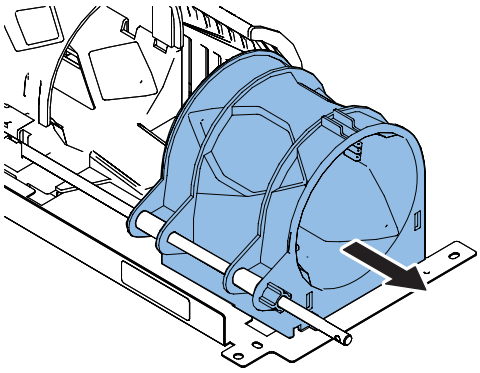
1. **Remove the toner bottle set lever.**
   - 1 parallel pin



2. **Remove the bottle base.**
   - 1 screw
   - 1 claw



3. **Remove the bottle ring.**



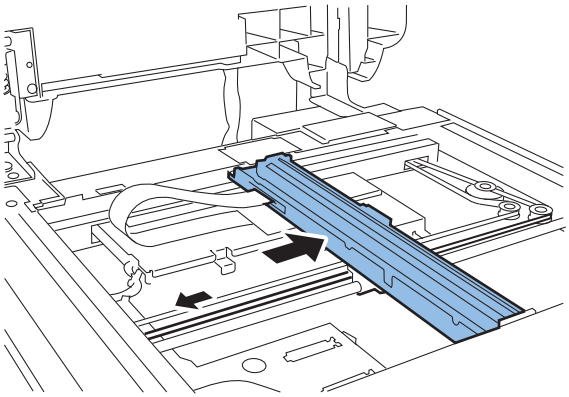
Removing the CIS Unit

■ Preparation

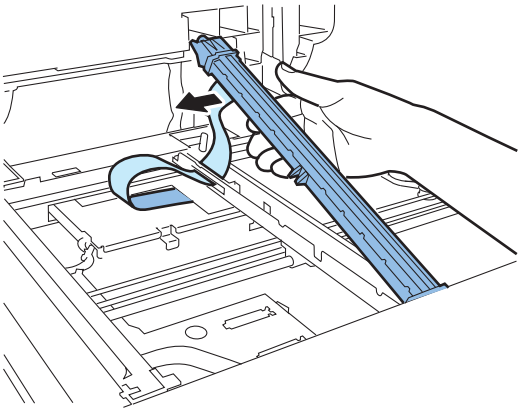
1. Open the platen (ADF/platen board cover).
2. Remove the reader rear cover. “Removing the Reader Rear Cover” on page 136
3. Remove the right glass retainer.
4. Remove the platen glass. “Removing the Platen Glass” on page 135

■ Procedure

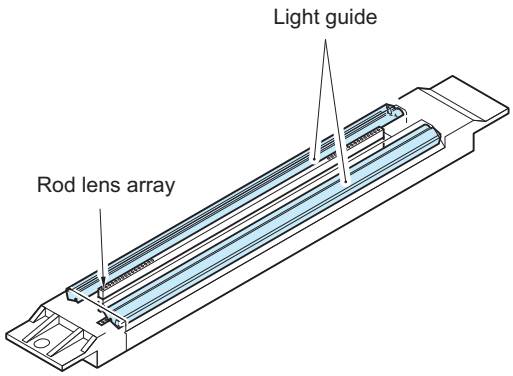
1. Move the belt in the arrow direction and then the CIS unit to the groove position of the frame.



2. Remove the CIS unit.
   - Flexible cable



CAUTION:
When installing or removing the contact sensor unit, do not touch the light guide and rod lens array.



■ Action to Take When Replacing the CIS Unit

After replacing the CIS unit, make the following adjustments:

● CIS white level automatic adjustment

1. Enter the service mode.
   - SCAN> READER> FUNCTION> CCD> CCD-ADJ
2. Click the [OK] button.
   When this step is complete, the contact sensor output is adjusted and parameters are set automatically.
3. After completion of automatic adjustment, “OK” is displayed.

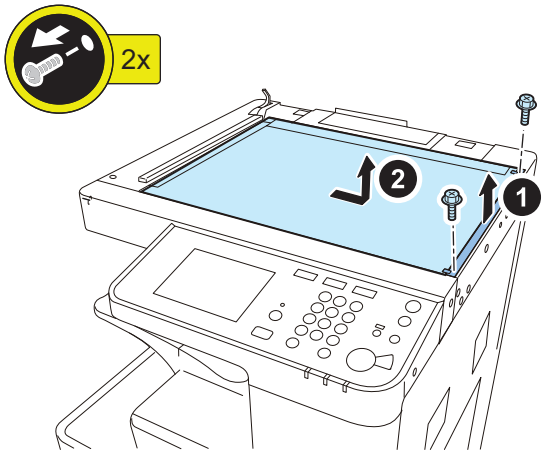
● DF white level adjustment (platen board cover scan/stream reading scan)

CAUTION:
Make this adjustment when the DADF is installed.

1. Place a sheet of paper that the user usually uses on the platen glass, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL1.
   Read the white level in the BOOK mode. (Check the transparency of the glass for BOOK mode.)
2. Place a sheet of paper that the user usually uses on the DF, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL2.
   Read the white level in the DF mode (stream reading). (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)
3. Place a sheet of paper that the user usually uses on the platen glass, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL3.
   Read the white level in the BOOK mode. (Check the transparency of the glass for BOOK mode.)
4. Place a sheet of paper that the user usually uses on the DF, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL4.
   Read the white level in the DF mode (stream reading). (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)

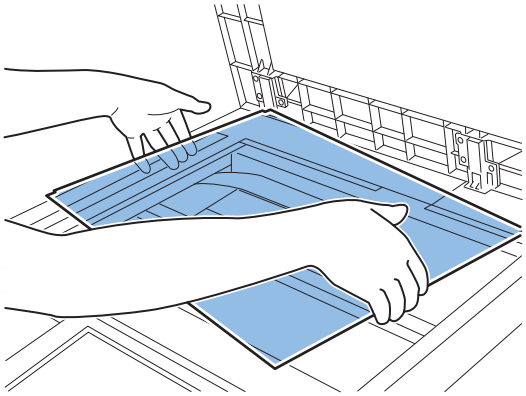
Removing the Platen Glass

1. **Open the platen cover (platen board cover/ADF).**
2. **Remove the glass retainer.**
   - 2 screws



CAUTION:
When removing the platen glass, take care not to touch the following parts with your fingers:
- Glass surface
- Standard white plate

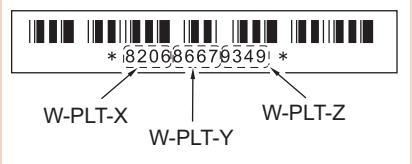
Soils on these parts may cause white/black lines on images.
If they are soiled, clean them with a lint-free paper moistened with alcohol.



■ Action to Take after Replacing the Platen Glass

Take the action stated below in the service mode.

CAUTION:
Be sure to make the white plate data adjustment before ADF white level adjustment.

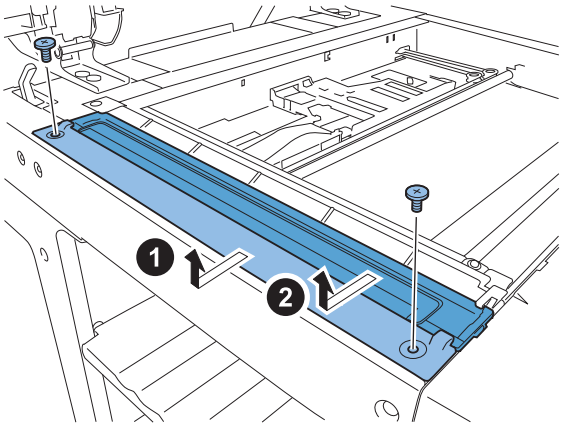


1. **Enter the value indicated on the platen glass in the following service mode:**
   SCAN > READER > ADJUST > CCD > W-PLT-X/Y/Z
   (Input of standard white plate data)
2. **Enter the service mode, and then select the following:**
   SCAN > READER > FUNCTION > CCD > DF-WLVL1/2/3/4 (DF white level adjustment)
   1. Place a sheet of paper that the user usually uses on the platen glass,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL1.
      Read the white level in the BOOK mode.
      (Check the transparency of the glass for BOOK mode.)
   2. Place a sheet of paper that the user usually uses on the DF,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL2.
      Read the white level in the DF mode (stream reading).
      (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)
   3. Place a sheet of paper that the user usually uses on the platen glass,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL3.
      Read the white level in the BOOK mode.
      (Check the transparency of the glass for BOOK mode.)
   4. Place a sheet of paper that the user usually uses on the DF,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL4.
      Read the white level in the DF mode (stream reading).
      (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)

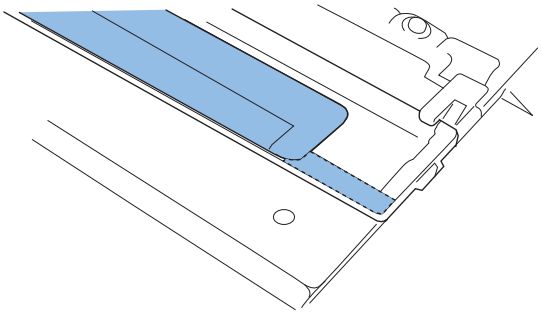
Removing the ADF Scan Glass

1. **Open the platen cover (platen board cover/ADF).**
2. **Remove the glass retainer.**
   - 2 screws
3. **Remove the ADF scan glass.**





CAUTION:
- When removing the ADF scan glass, take care not to touch the glass surface with your fingers.
- Soils on the glass surface may cause white/black lines on images.
- If the glass surface is soiled, clean them with a lint-free paper moistened with alcohol.
- Be sure to install the ADF scan glass with its seat facing front left.



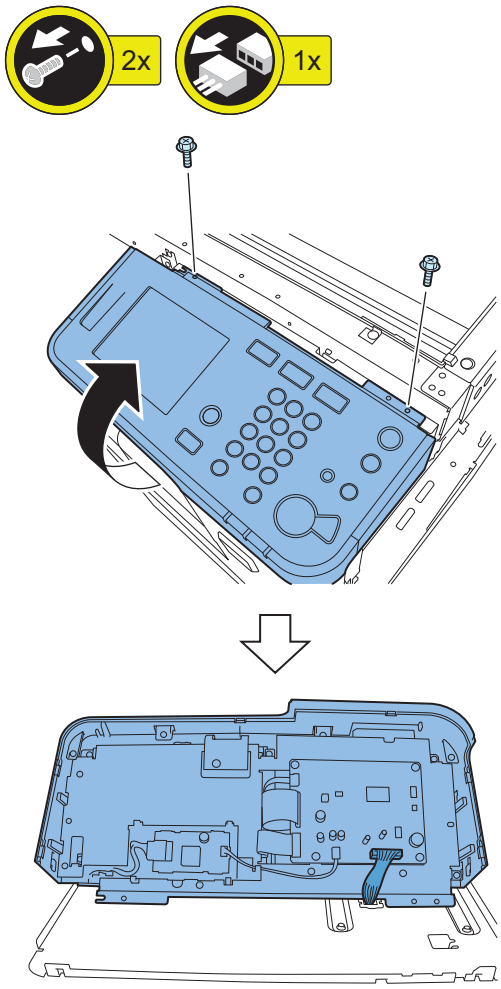
■ Action to Take after Replacing the ADF Scan Glass

1. **Enter the service mode, and then select the following:**
   SCAN > READER > FUNCTION > CCD > DF-WLVL1/2/3/4 (DF white level adjustment)

   1. Place a sheet of paper that the user usually uses on the platen glass,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL1.
      Read the white level in the BOOK mode.
      (Check the transparency of the glass for BOOK mode.)
   2. Place a sheet of paper that the user usually uses on the DF,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL2.
      Read the white level in the DF mode (stream reading).
      (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)
   3. Place a sheet of paper that the user usually uses on the platen glass,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL3.
      Read the white level in the BOOK mode.
      (Check the transparency of the glass for BOOK mode.)
   4. Place a sheet of paper that the user usually uses on the DF,
      enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL4.
      Read the white level in the DF mode (stream reading).
      (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)

Removing the Control Panel Assembly

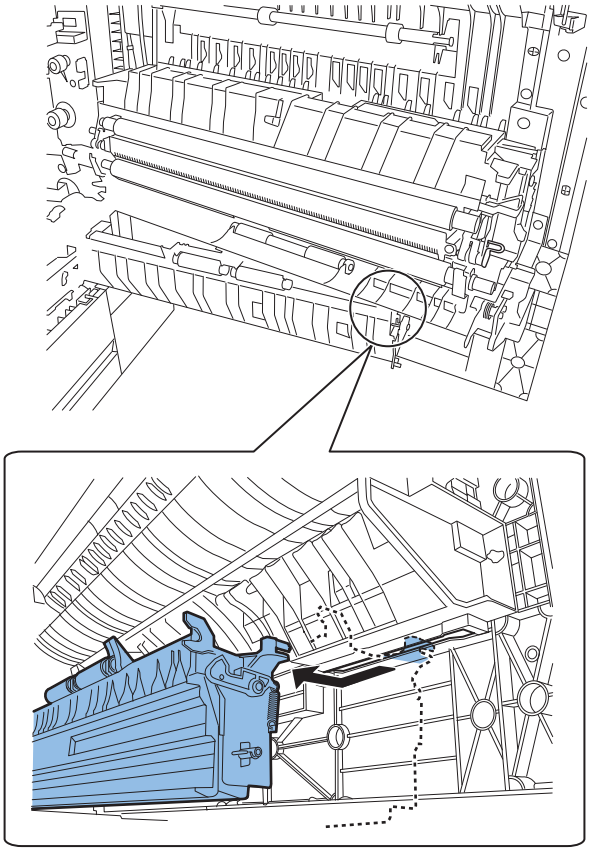
1. **Remove the reader front cover.****"Removing the Reader Front Cover" on page 130**
2. **Remove the control panel assembly.**
   - 2 screw
   - 1 connector



Removing the Multi Pickup Assembly

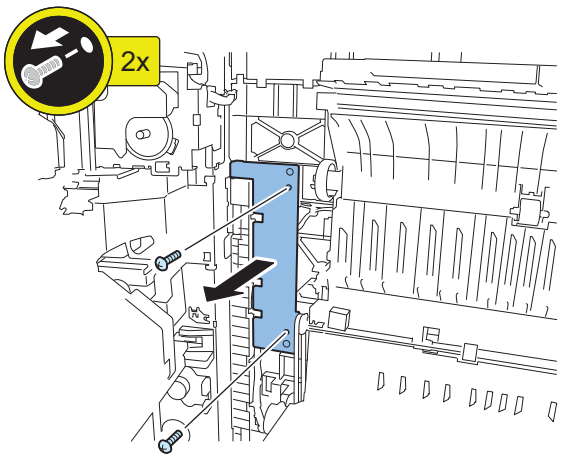
1. **Open the right cover assembly.**

2. **Remove the link between the right cover and pickup assembly.**



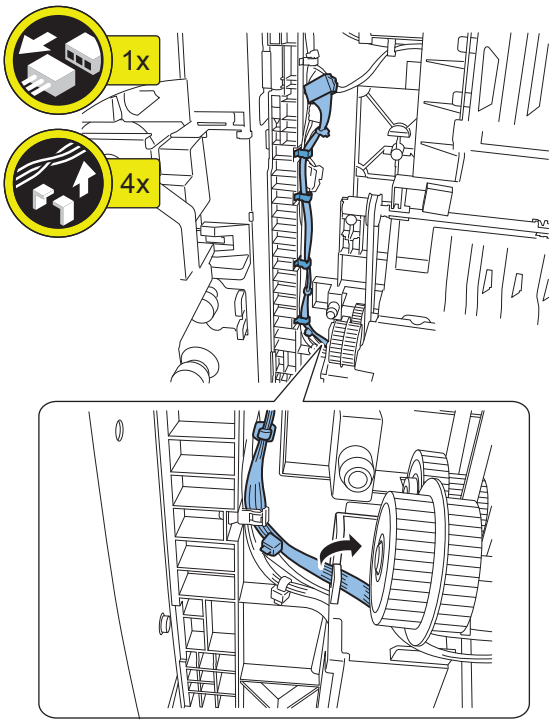
3. **Remove the connector cover.**

2 screws



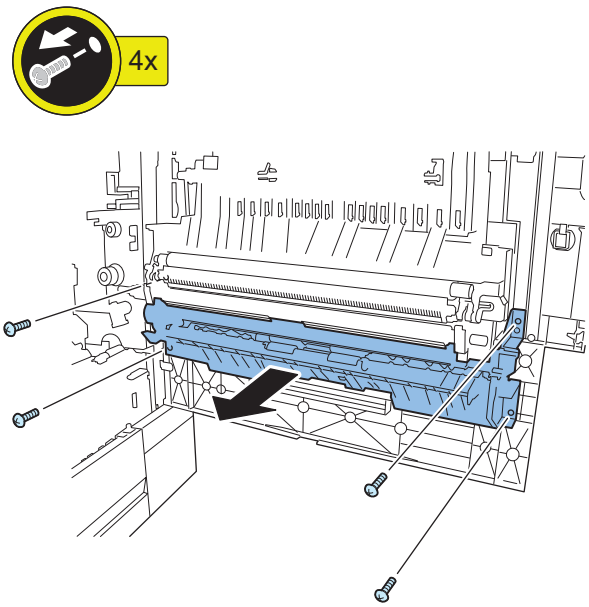
4. **Remove the harness.**

- 1 connector
- 4 clamps



5. **Remove the multi pickup assembly.**

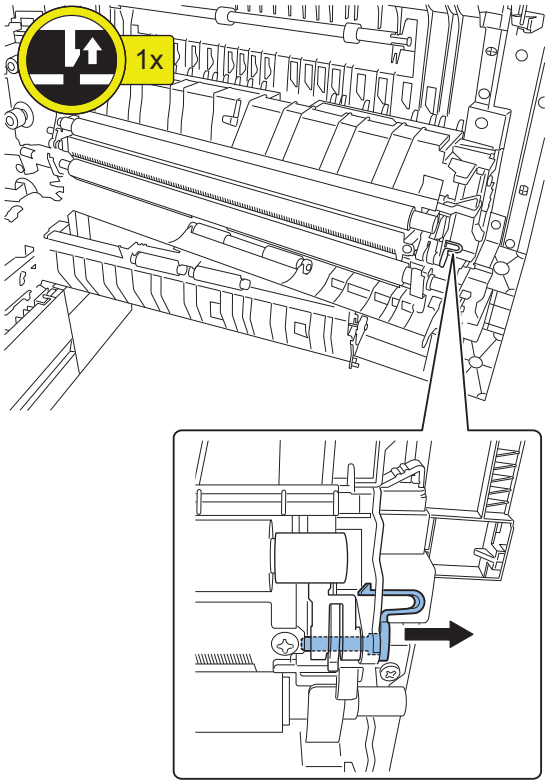
- 4 screws



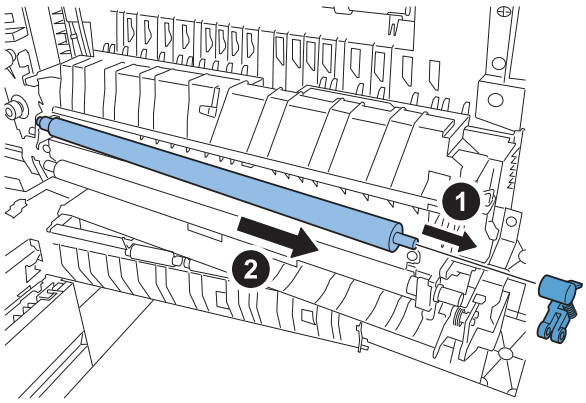
Periodic Replacing Parts,Durable Parts,Cleaning Parts

Removing the Transfer Roller

1. **Open the right cover.**
2. **Remove the transfer roller.**
   - 1 stopper (front)
   - 1 claw

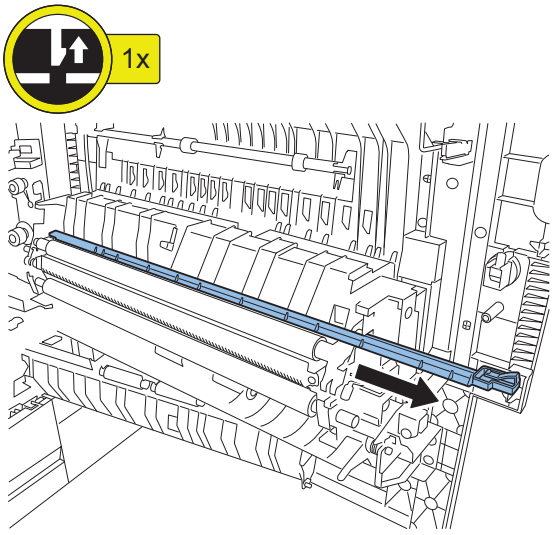


3. **Remove the transfer roller.**
   - 1 bearing (front)



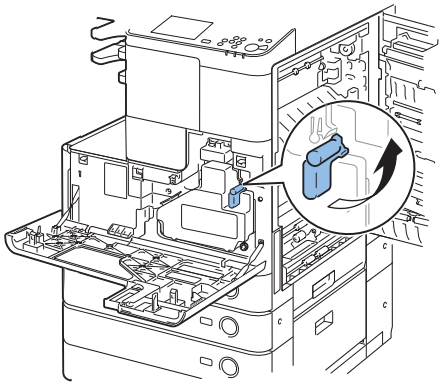
Removing the Separation Static Charge Eliminator

1. **Open the right cover.**
2. **Remove the separation static charge eliminator.**
   - 1 claw

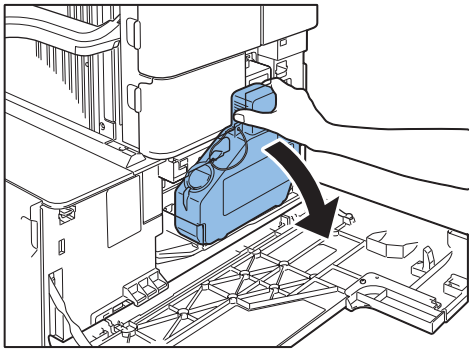


Removing the Waste Toner Container

1. **Open the front cover.**
2. **Turn the lock lever as shown to release the lock of the waste toner container.**

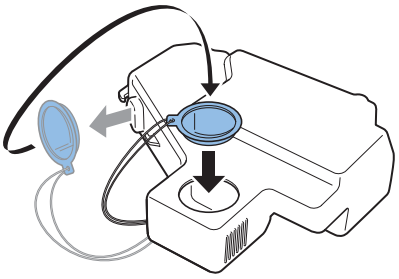


3. **Remove the waste toner container.**



4. **Remove the lid attached at the front of the waste toner container, and then cover the opening of the**

container with it so that the waste toner does not spill out.



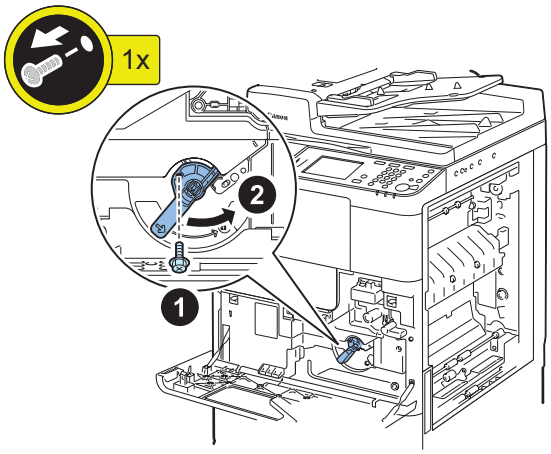
Removing the Drum Unit

■ Preparation

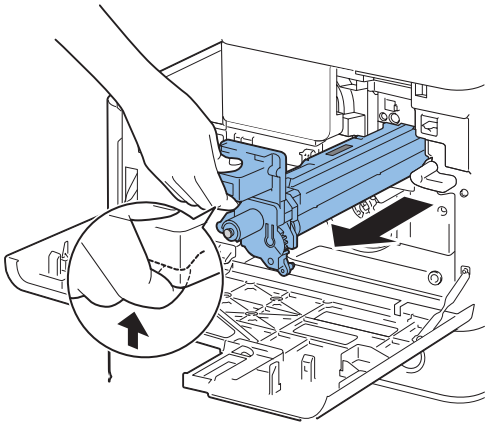
1. Open the right cover.
2. Open the front cover.
3. Remove the waste toner container."Removing the Waste Toner Container" on page 150

■ Procedure

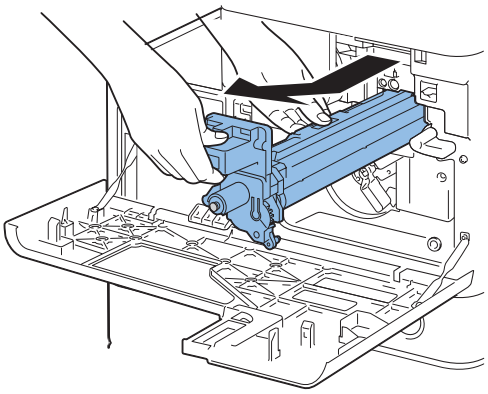
1. Remove the screw securing the developing assembly pressure lever. (Models for some destinations do not have this screw.)
2. Turn the lever in the direction of the arrow to release the lock of the drum unit.



3. While raising the lever under the handle of the drum unit, slowly pull out the drum unit to the position shown below.



4. Pull out the drum unit slightly upward.



CAUTION:
Do not touch the drum surface during the work.

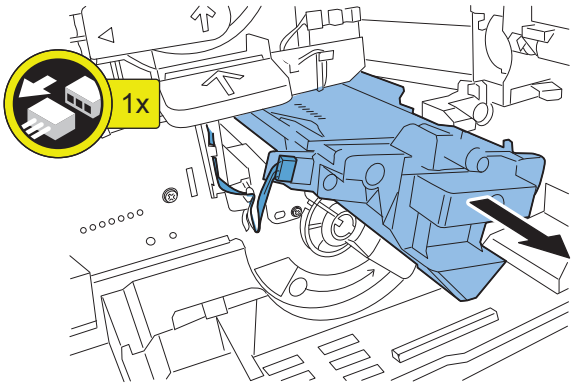
Removing the Developing Assembly

■ Preparation

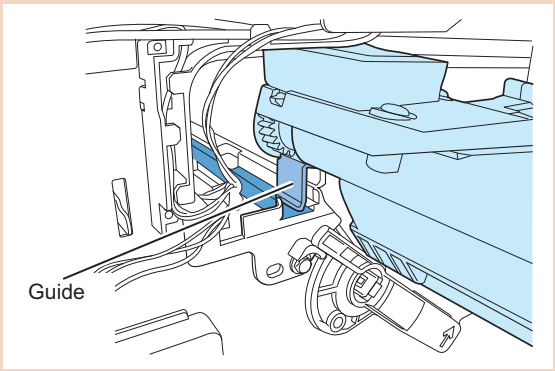
1. Open the right cover.
2. Open the front cover.
3. Remove the waste toner container."Removing the Waste Toner Container" on page 150
4. Remove the drum unit."Removing the Drum Unit" on page 151
5. Remove the toner supply cover."Removing the Toner Supply Cover" on page 134

■ Procedure

1. **Remove the developing assembly**
   - 1 connector

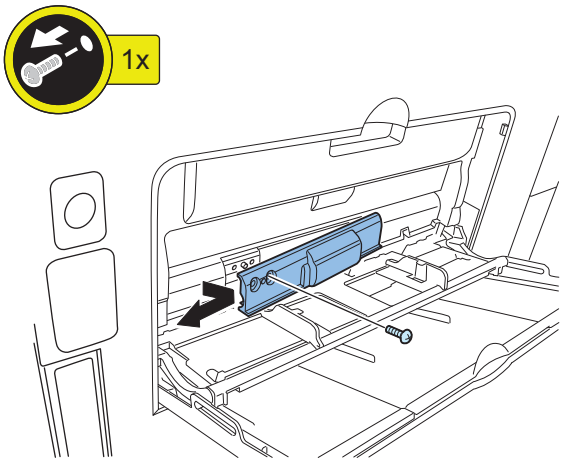


CAUTION:
When installing the toner supply unit, insert a guide of the developing unit to the ditch of the host machine.

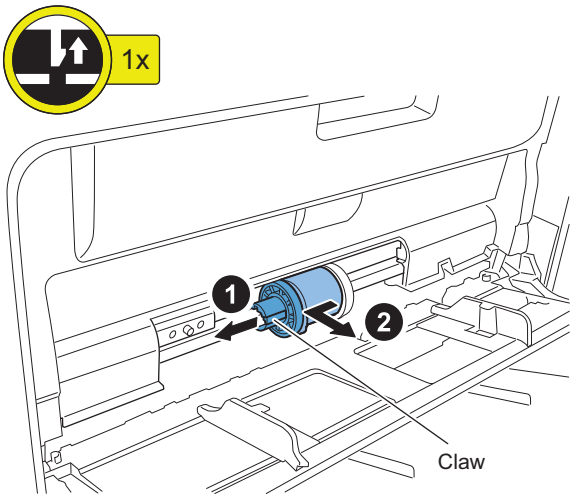


Removing the Manual Feed Pickup Roller

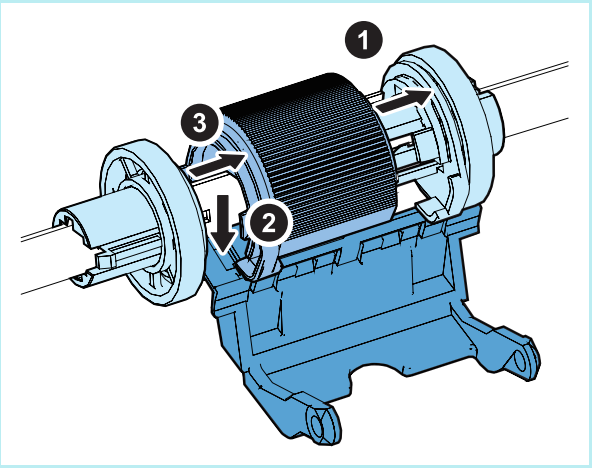
1. **Remove the manual feed pickup roller cover.**
   - 1 screw



2. **Release the claws, and then slide the bearing (front).**
3. **Remove the manual feed pickup roller.**
   - 1 claw

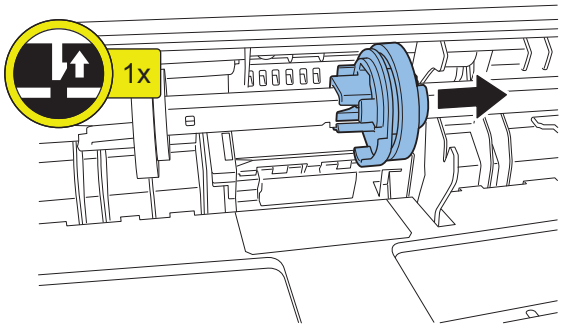


NOTE:
Reassemble the manual feed pickup roller as shown.
1. Fit the hole of the manual feed pickup roller to the projection of the bushing (rear) and attach it.
2. Press down the separation pad.
3. Attach the bushing (front) to the manual feed pickup roller.

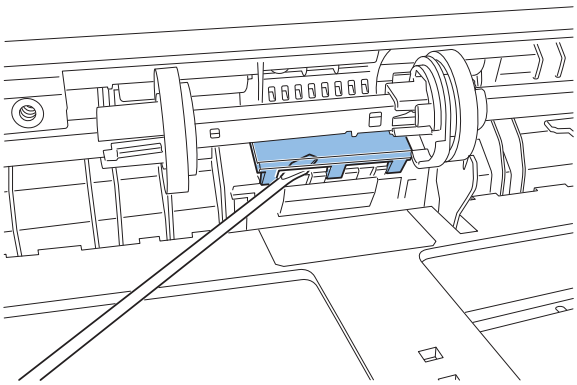


Removing the Manual Feed Separation Pad

1. **Remove the manual feed pickup roller.** **“Removing the Manual Feed Pickup Roller” on page 152**
2. **Slide the bearing (rear) backward.**
   - 1 claw

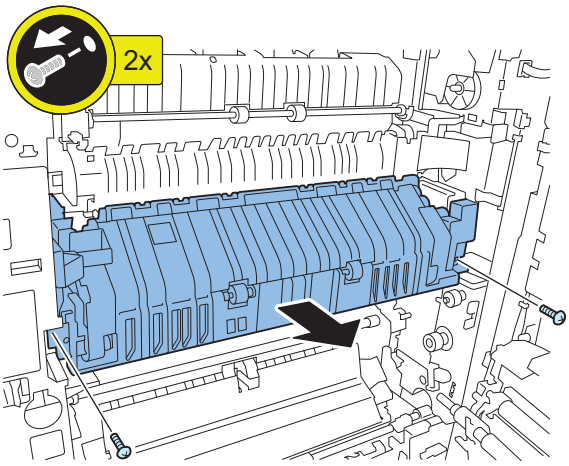


3. **Remove the separation pad with a flat-blade screwdriver.**

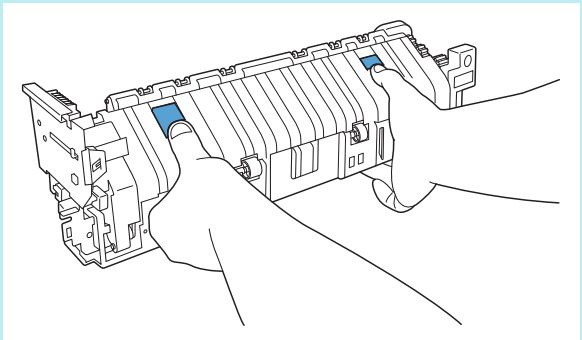


Removing the Fixing Unit

1. **Open the right cover.**
2. **Remove the fixing unit.**
   - 2 screws

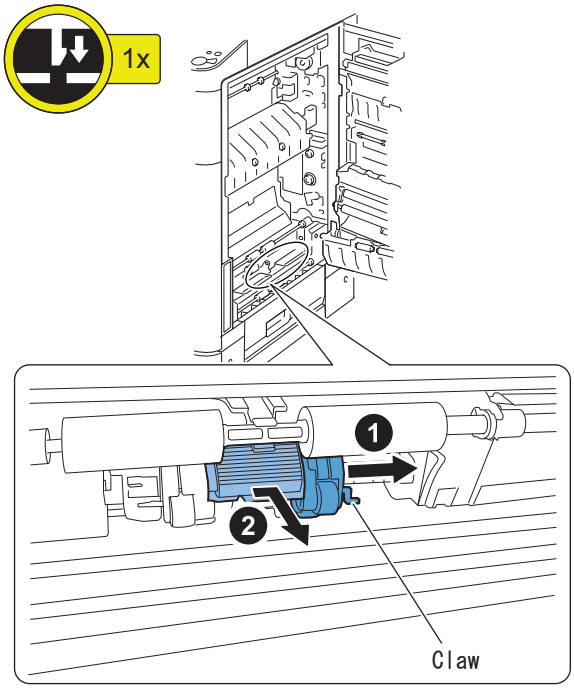


NOTE:
Hold the fixing unit at the position shown below.

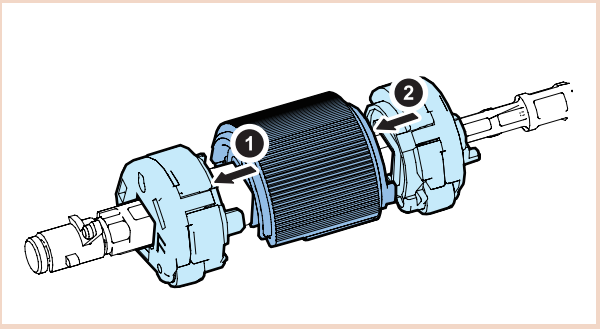


Removing the Cassette Pickup Roller (250-sheet 1st cassette Model)

1. Remove the cassette from the main unit.
2. Open the right cover.
3. Release the claws and slide the rear bearing.
4. Remove the cassette pickup roller.



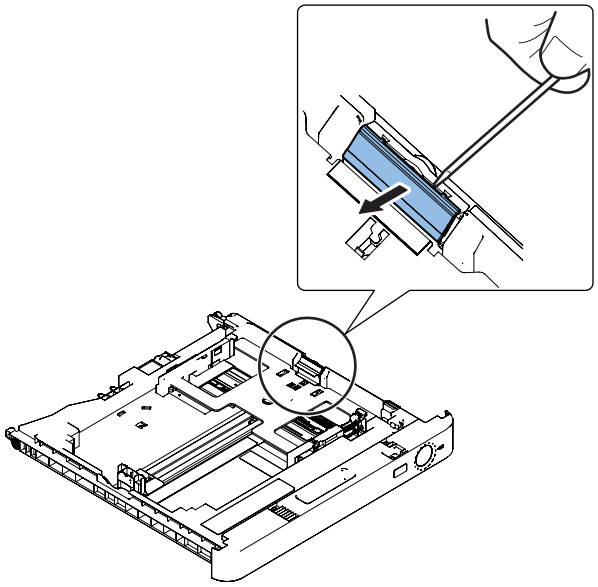
CAUTION:
Reassemble the parts as shown below.



Removing the Roller Cassette Separation Pad(250-sheet 1st cassette Model)

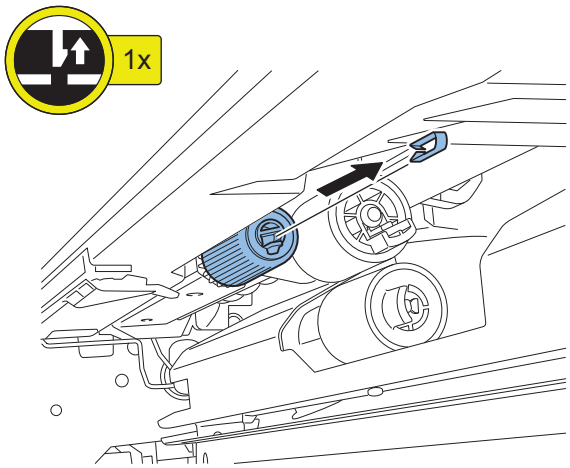
1. Remove the cassette from the main unit.

2. Remove the cassette separation pad with a flat-blade screwdriver.



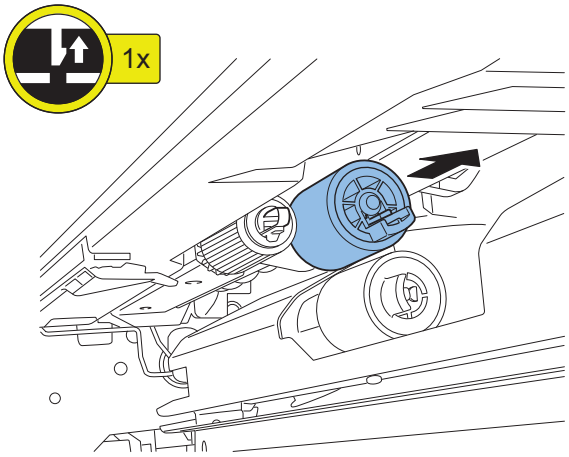
Removing the Cassette Pickup Roller (550-sheet 1st cassette Model)

1. Draw out the cassette from the main unit.
2. Open the right cover.
3. Remove the leaf spring with your fingers.
4. Remove the cassette pickup roller.
   - 1 claw



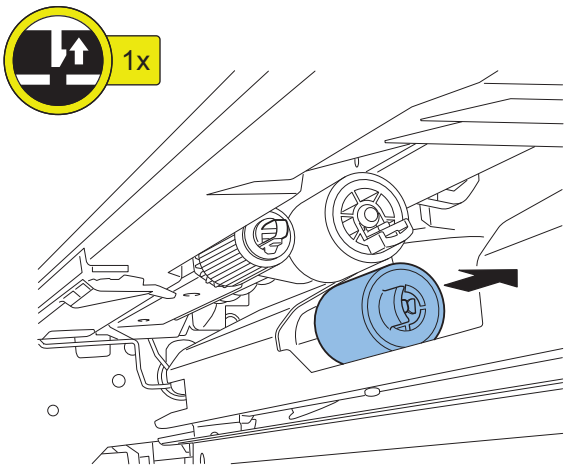
Removing the Cassette Feed Roller (550-sheet 1st cassette Model)

1. Draw out the cassette from the main unit.
2. Open the right cover.
3. Remove the cassette feed roller.
   - 1 claw



Removing the Cassette Separation Roller (550-sheet 1st cassette Model)

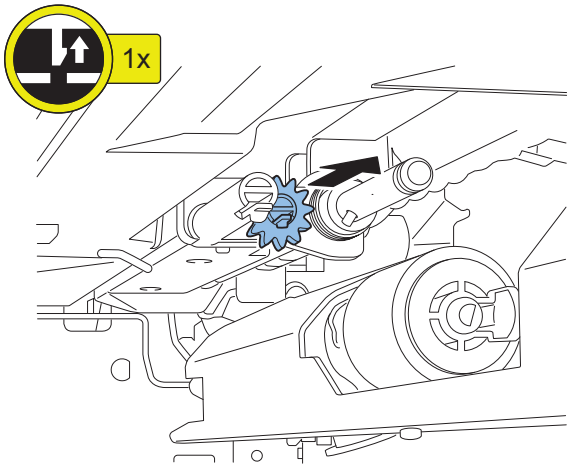
1. Draw out the cassette from the main unit.
2. Open the right cover.
3. Remove the cassette separation roller.
   - 1 claw



Removing the Idler Gear (Only for 550-sheet 1st cassette Model for China)

1. Draw out the cassette from the main unit.
2. Open the right cover.
3. Remove the cassette pickup roller.“Removing the Cassette Pickup Roller (550-sheet 1st cassette Model)” on page 154
4. Remove the cassette feed roller.“Removing the Cassette Feed Roller (550-sheet 1st cassette Model)” on page 154

5. Remove the idler gear.
   - 1 claw



Clutch / Solenoid

Removing the Clutch (CL1/CL2/CL3/CL4)

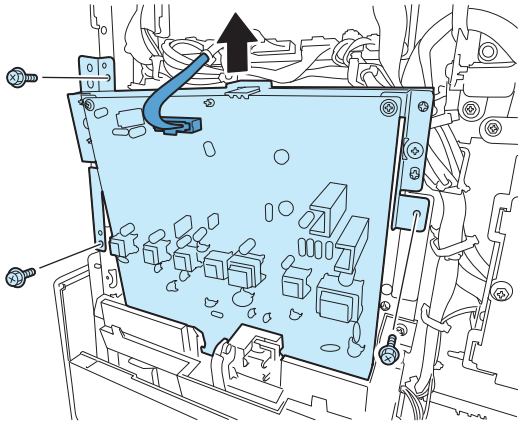
■ Preparation

1. **Remove the rear cover (right)."Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left)."Removing the Rear Cover (Left)" on page 137**
3. **Remove the right cover (upper rear)."Removing the Rear Right Cover (Upper)" on page 137**

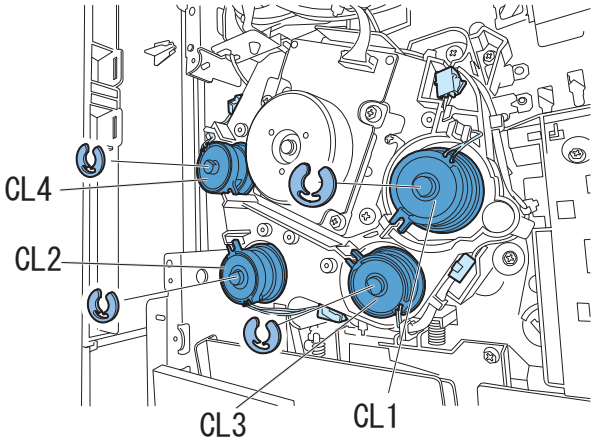
■ Procedure

1. Remove the HVT PCB assembly."Removing the HVT PCB" on page 173
   - 1 connector
   - 1 claw
   - 3 screws



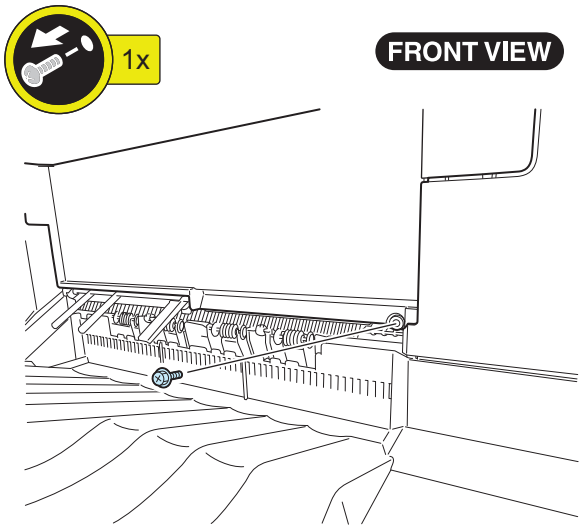


2. Remove the clutch.
   - 1 connector
   - 1 resin E-ring

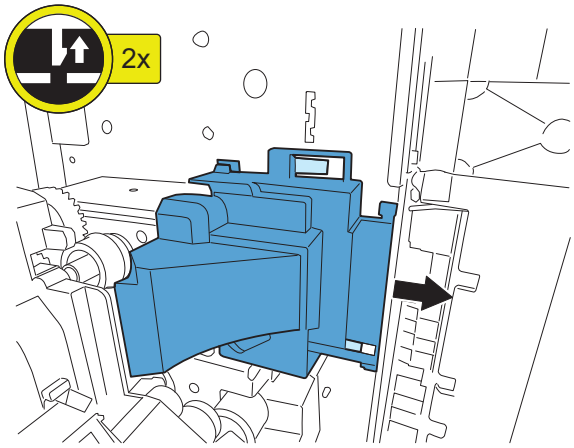


Removing the No. 1 Delivery Reversal Solenoid (SL3)

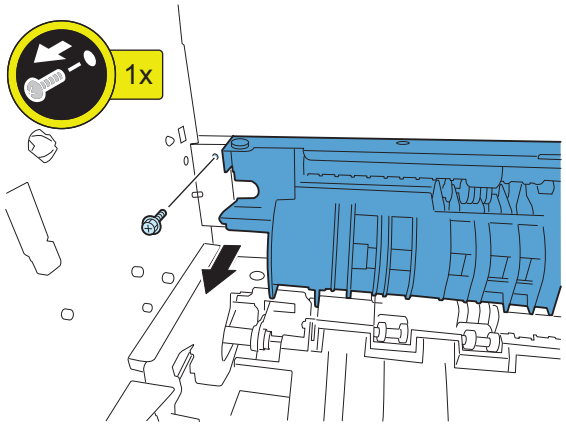
1. Remove 1 screw of the inside center cover (right).
   - 1 screw

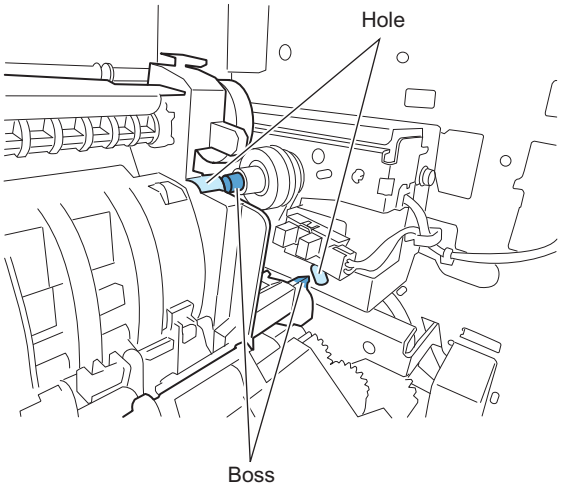


2. Open a door(right).
3. Remove the deleivery drive inner cover.
   - 2 claws



4. Remove the No.1 deleivery unit.
   - 1 screw

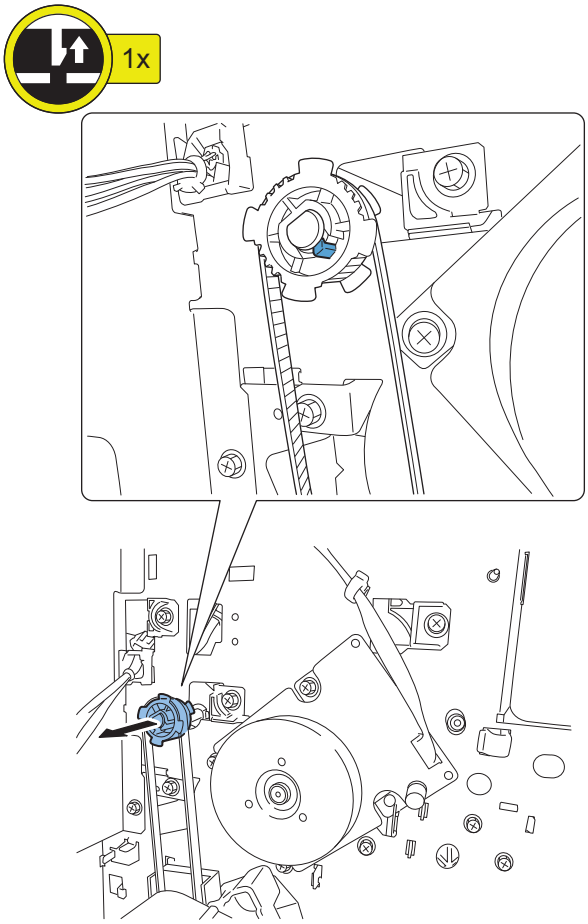




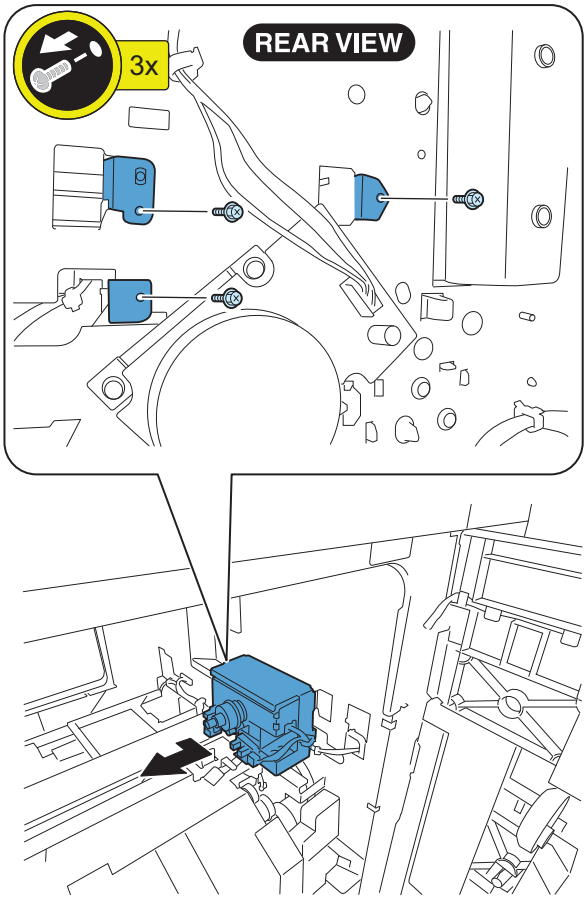
NOTE:
When reinstalling the No.1 deleivery unit, insert the positioning boss in the hole.

5. Remove the rear cover (right).“Removing the Rear Cover (Right)” on page 136
6. Remove the rear cover (left).“Removing the Rear Cover (Left)” on page 137
7. Remove the right cover (upper rear).“Removing the Rear Right Cover (Upper)” on page 137
8. Remove the support plate.
9. Disconnect all connectors on the DC controller PCB. “Removing the DC Controller PCB” on page 172

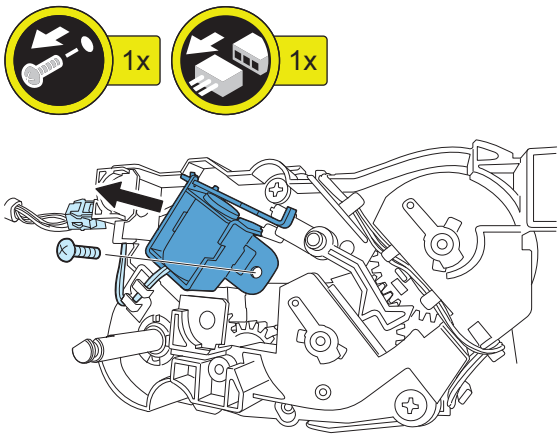
10. Remove the gear.
    - 1 claw



11. Remove the No.1 deleivery drive unit.
    - 3 screws



12. Remove the solenoid from the drive assembly.
    - 1 screw
    - 1 connector



Motor

Removing the Main Motor (M1)

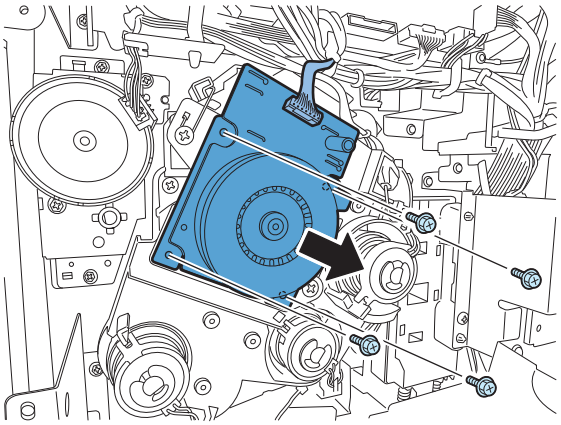
■ Preparation

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left).****"Removing the Rear Cover (Left)" on page 137**
3. **Remove the right cover (upper rear).****"Removing the Rear Right Cover (Upper)" on page 137**
4. **Remove the HVT PCB.****"Removing the HVT PCB" on page 173**

■ Procedure

1. **Remove the main motor.**
   - 4 screws
   - 1 connector





Removing the Fixing Motor (M2)

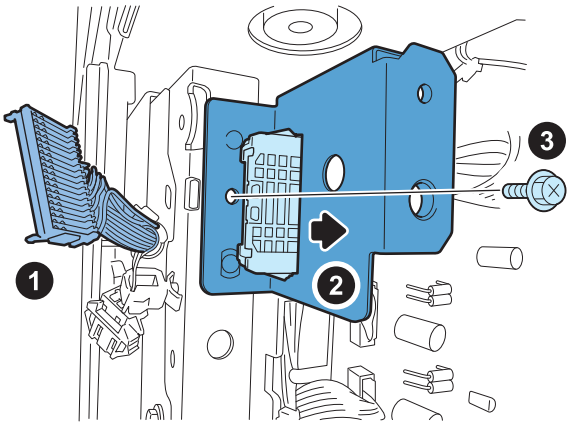
■ Preparation

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left).****"Removing the Rear Cover (Left)" on page 137**
3. **Remove the right cover (upper rear).****"Removing the Rear Right Cover (Upper)" on page 137**

■ Procedure

1. **Remove the support plate.**
   - 1 relay connector
   - 1 connector
   - 1 screw

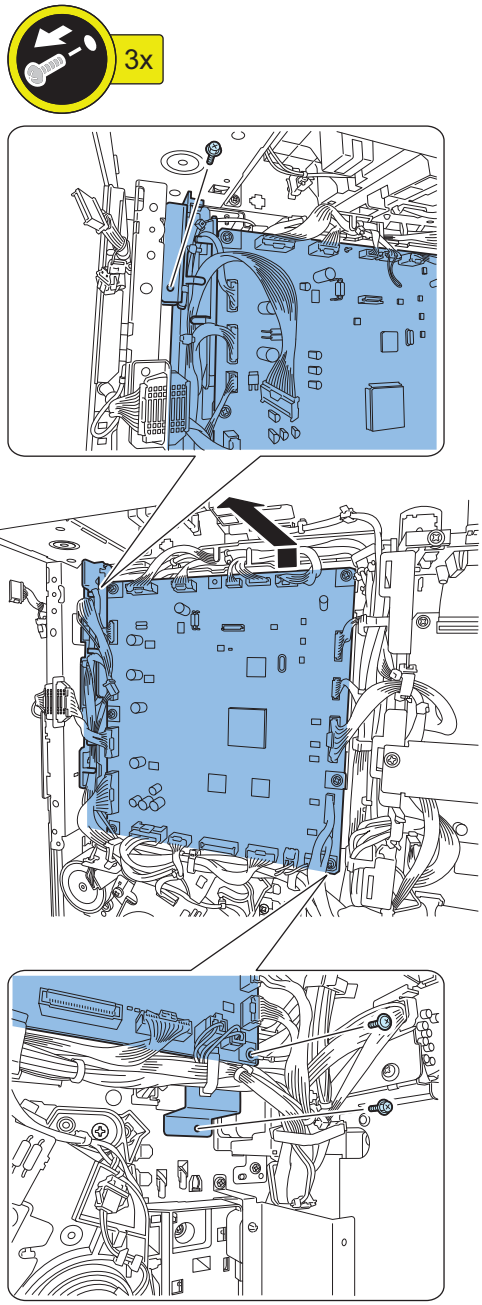




NOTE:
Because there is a screw on the backside of the relay connector, remove the relay connector earlier.

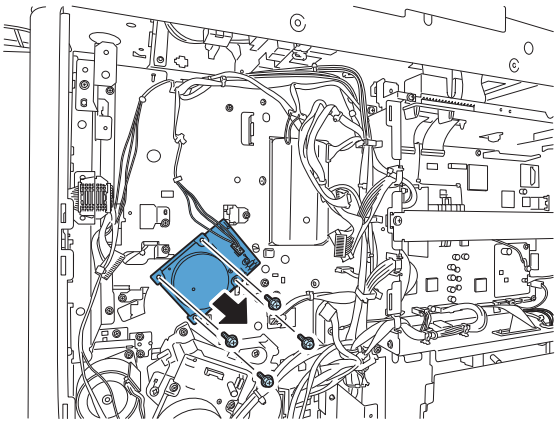
2. **Disconnect all connectors on the DC controller PCB.**

3. **Remove the DC controller PCB assembly.**
   - 3 screws



4. **Remove the fixing motor.**
   - 1 connector
   - 4 screws





Removing the Cassette 1 Pickup Motor (M3)

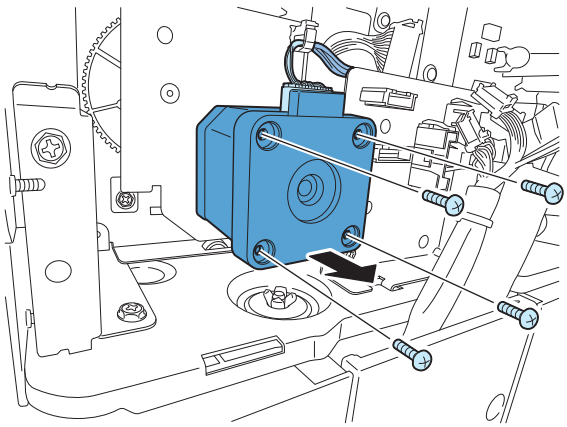
■ Preparation

1. **Remove the lower rear cover.****"Removing the Lower Rear Cover" on page 138**

■ Procedure

1. **Remove the cassette 1 pickup motorr.**
   - 1 connector
   - 4 screws

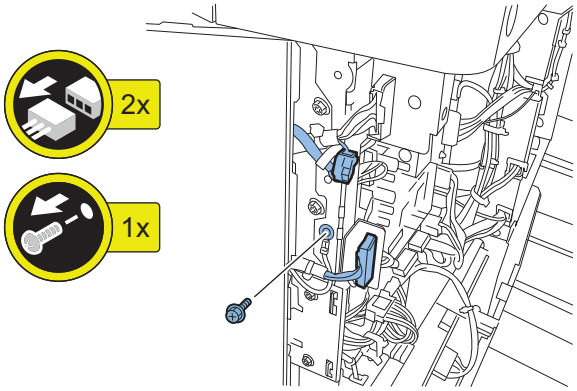




Removing the Reversal Motor (M10)

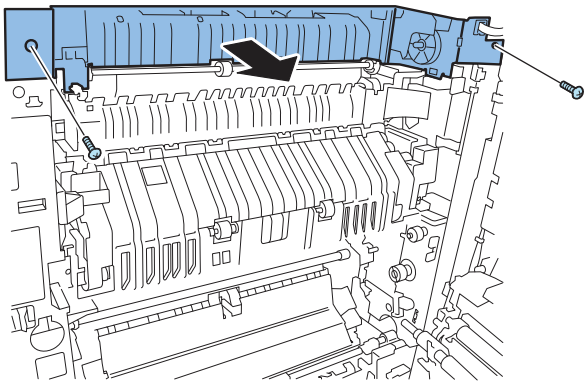
■ Preparation

1. **Remove the No.2 deleivery unit.**
   - 2 connectors
   - 1 screw



   - 2 screws



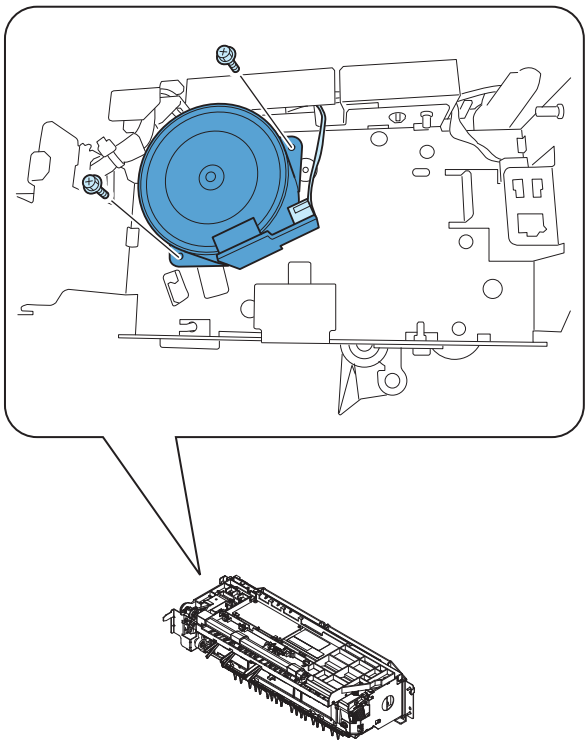


2.

■ Procedure

1. **Remove the reversal motor.**
   - 1 connector
   - 2 screws





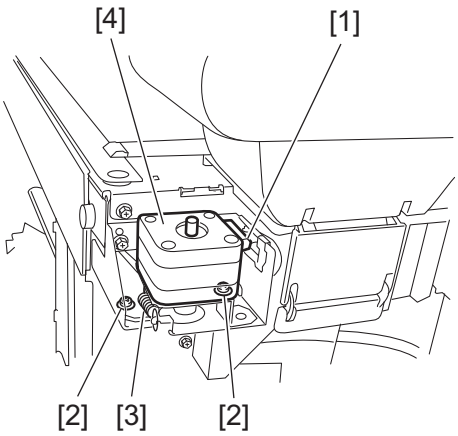
Removing the Scanner Motor (M31)

■ Preparation

1. **Remove the ADF communication cable (only machines with ADF installed).**
2. **Open the platen board cover or the ADF.**
3. **Remove the reader rear cover.****"Removing the Reader Rear Cover" on page 136**

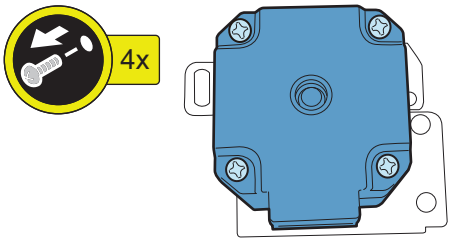
■ Remove the pressure roller.

1. **Remove the scanner motor assembly.**
   - 1 connector
   - 1 spring
   - 2 screws



2. Remove the scanner motor.

- 4 screws



Fan

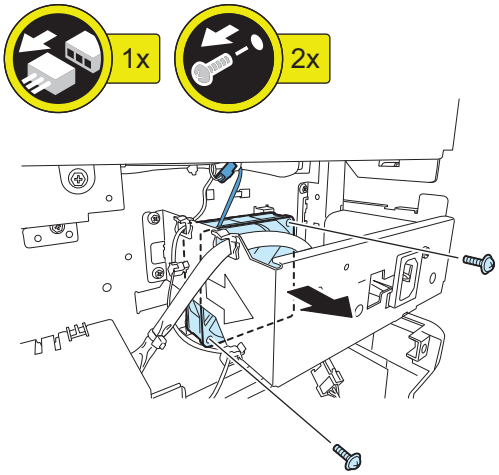
Removing the Power Supply Cooling Fan (FAN6)

■ Preparation

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the lower rear cover.****"Removing the Lower Rear Cover" on page 138**
3. **If equipped with the heater PCB, remove the heater PCB.**

■ Procedure

1. **Remove the power supply cooling fan.**
   - 1 connector
   - 2 claws



Switch

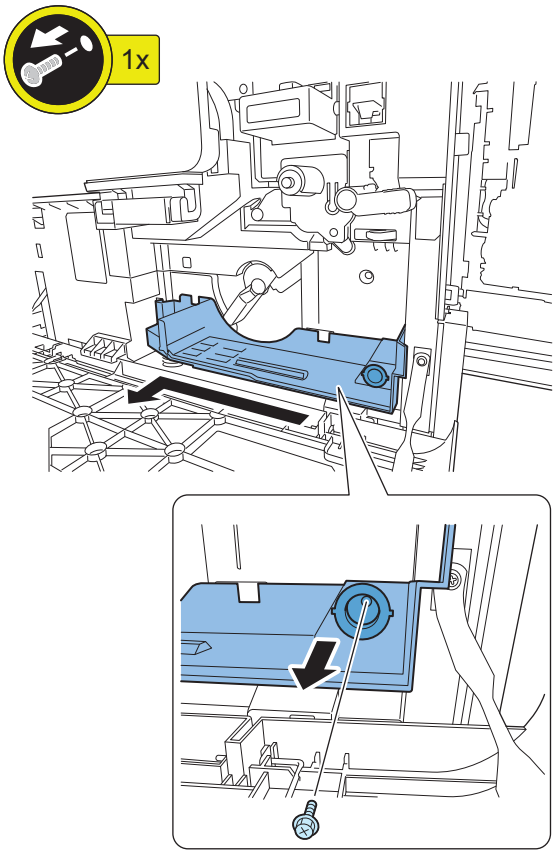
Removing the Front Door Switch (SW2)

■ Preparation

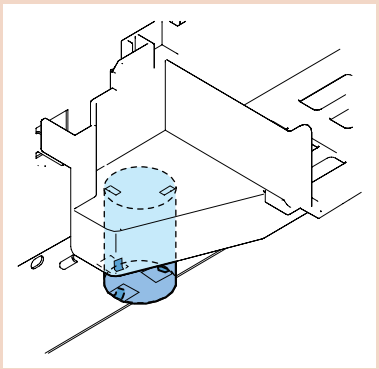
1. Remove the support cover.“Removing the Support Cover” on page 130
2. Remove the tonner supply cover.“Removing the Toner Supply Cover” on page 134
3. Remove the waste toner container.“Removing the Waste Toner Container” on page 150

■ Procedure

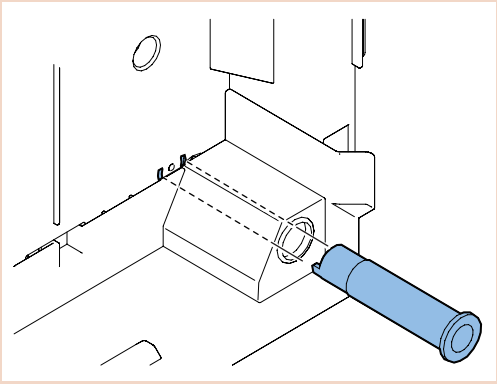
1. **Remove the box tray.**
   - 1 box tray shaft
   - 1 screw



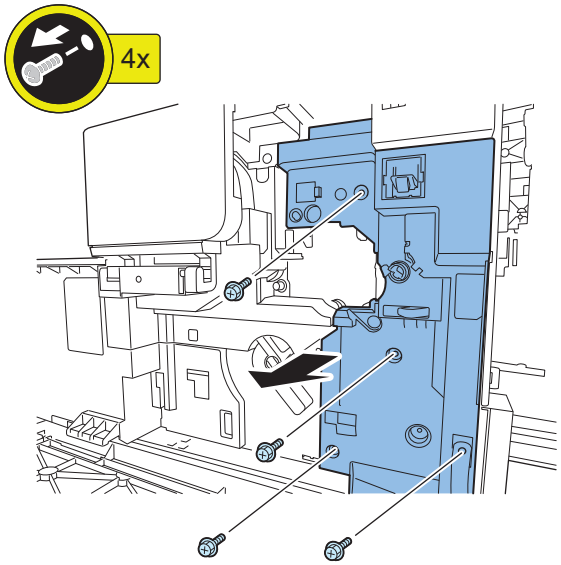
CAUTION:
When reinstalling the box tray, installation so that the positioning boss is satisfied in a spring.



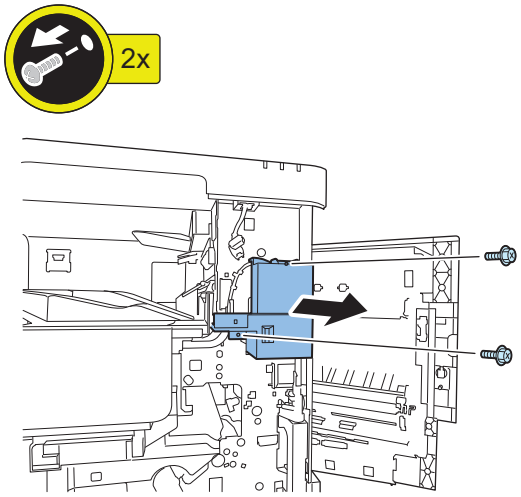
CAUTION:
When reinstalling the box tray shaft, fit the insertion part into the hole.



2. **Remove the waste toner release lever.**
3. **Remove the internal cover (right).**
   - 4 screws



4. **Remove the internal cover (right upper).**
   - 2 screws



5. **Remove the front door switch.**
   - 2 terminals
   - 1 screw



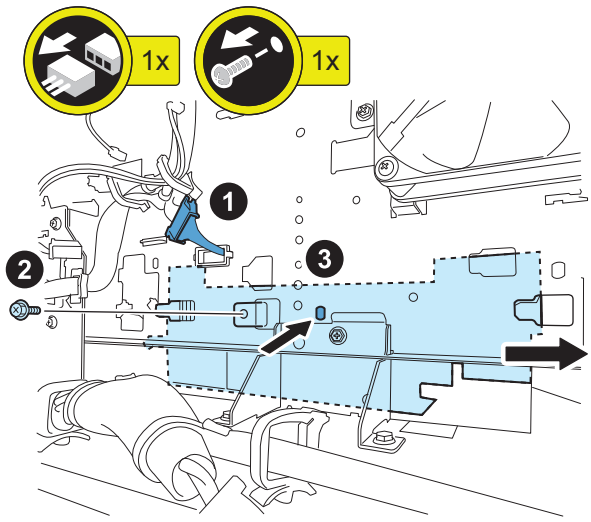
Removing the Cassette Size Detection Switch (SW6/ SW7)

■ Preparation

1. **Remove the cassette.**
2. **Remove the lower rear cover.****"Removing the Lower Rear Cover" on page 138**
3. **Remove the option power supply PCB.****"Removing the Option Power Supply PCB" on page 173**

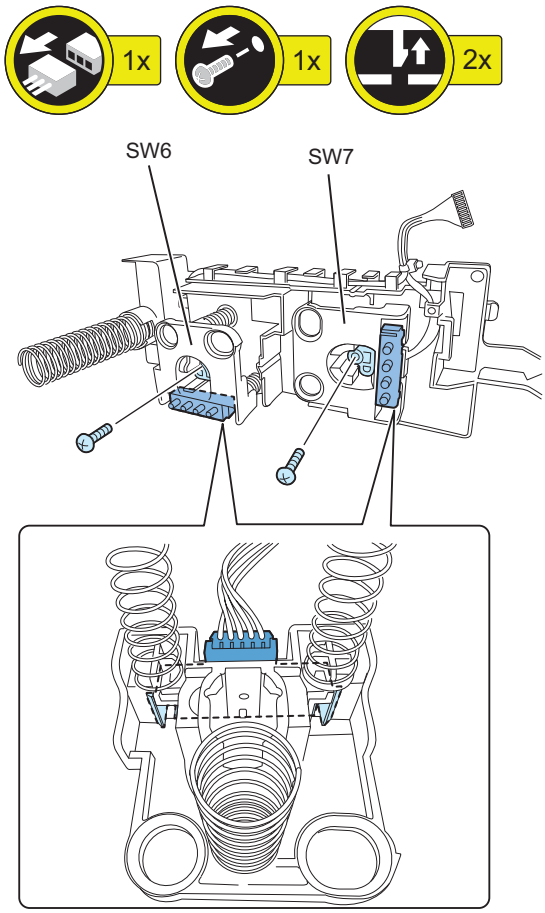
■ Procedure

1. **Remove the cassette size detection assembly.**
   - 1 connector
   - 1 screw
   - 1 boss



NOTE:
Remove the connector and the screw from the rear, but the cassette size detection assembly removes it from the front side.

2. **Remove the cassette size detection switch.**
   - 1 connector
   - 1 screw
   - 2 claws



Lamp,Heater,others

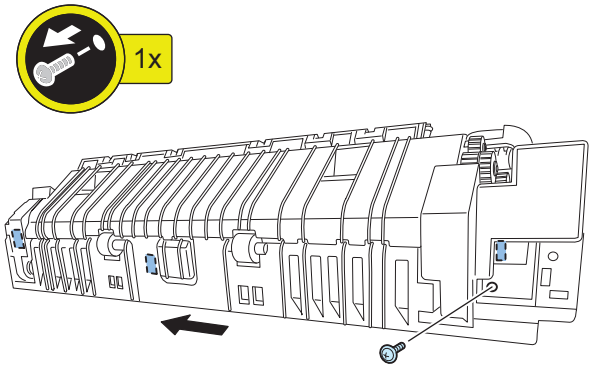
Removing the Fixing Film Unit

■ Preparation

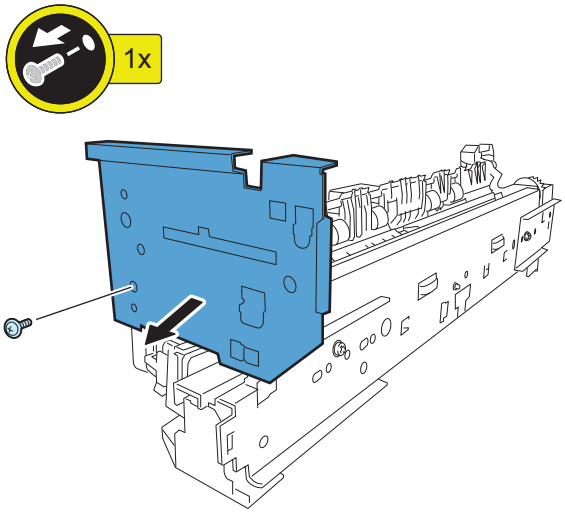
1. **Open the right cover.**
2. **Remove the fixing assembly.****"Removing the Fixing Unit" on page 153**

■ Procedure

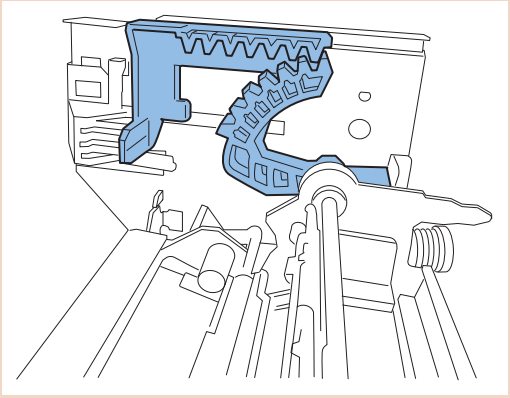
1. Remove the internal delivery cover unit.
   - 1 screw
   - 3 claws (slide)



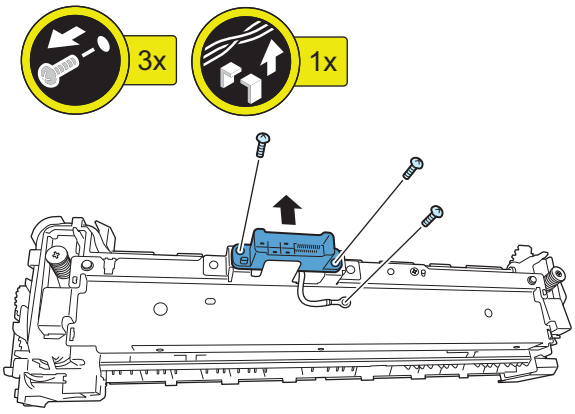
2. Remove the left side plate.
   - 1 screw



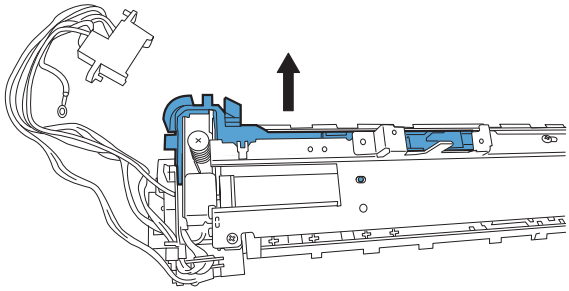
CAUTION:
When installing the left side plate, install it to engage the teeth with the locking lever at the position shown in the figure.



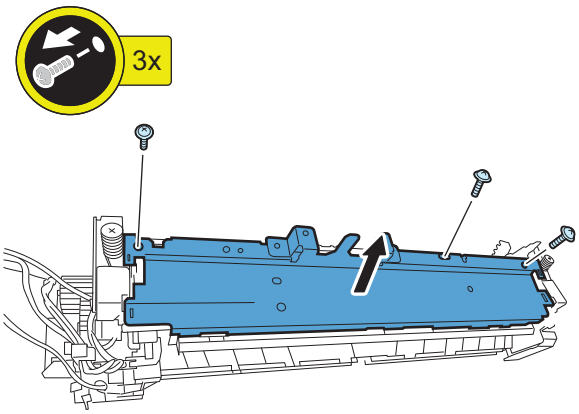
3. Remove the drawer connector.
   - 3 screw



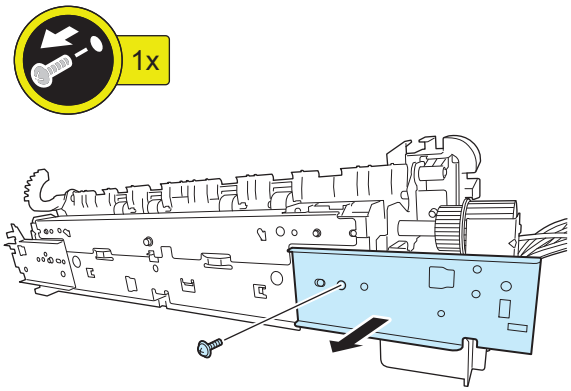
4. Remove the cable guide.
   - 1 boss



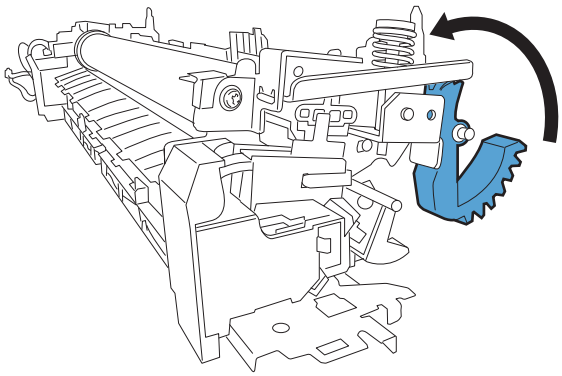
5. Remove the fixing film cover.
   - 3 screws



6. Remove the support plate.
   - 1 screws

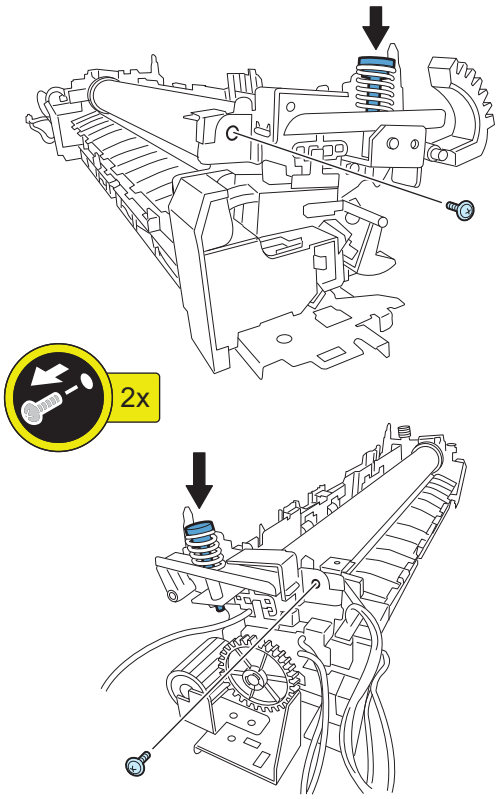


7. Turn the pressure unit and release the pressure unit.

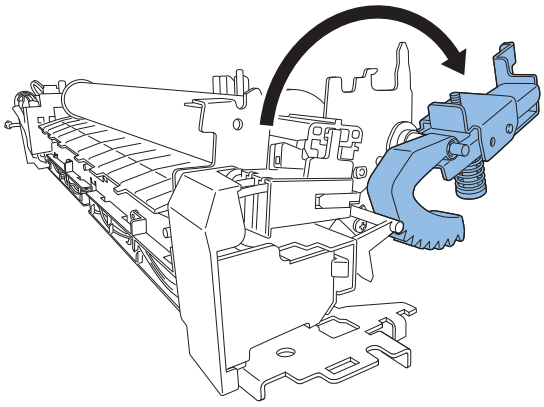


8. Remove the 2 screws.

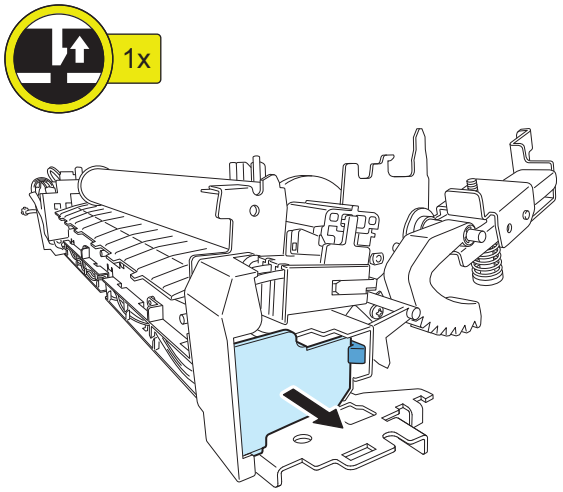
CAUTION:
Never turn the screw (arrow part) pressurizing the fixing assembly.
Turning this screw causes to change the pressure of the fixing assembly and results in the replacement of the fixing assembly because the pressure adjustment cannot be performed in the field.



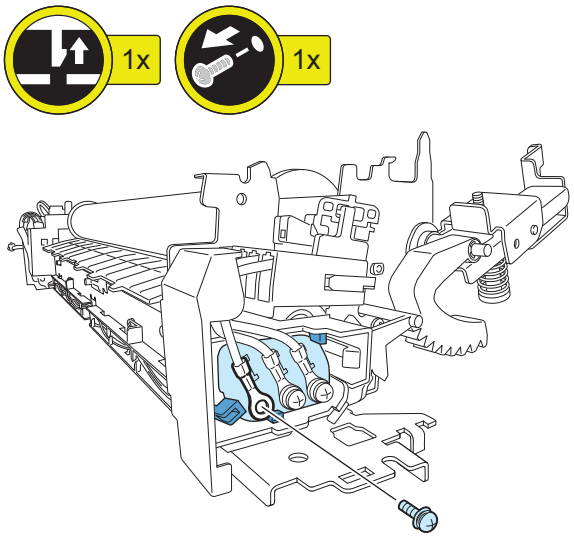
9. Turn the pressure unit and release the pressure unit.



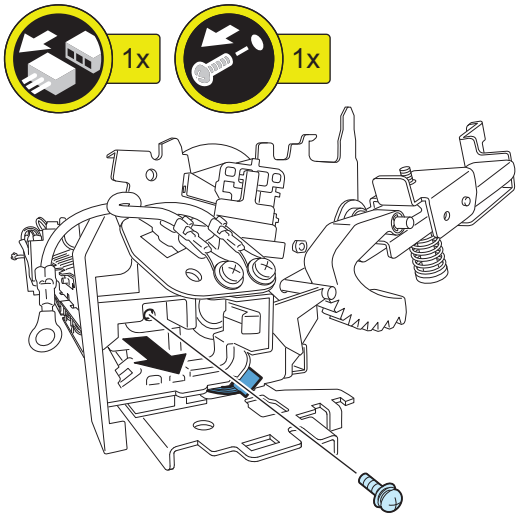
10. Remove the connector cover.
    - 1 claw



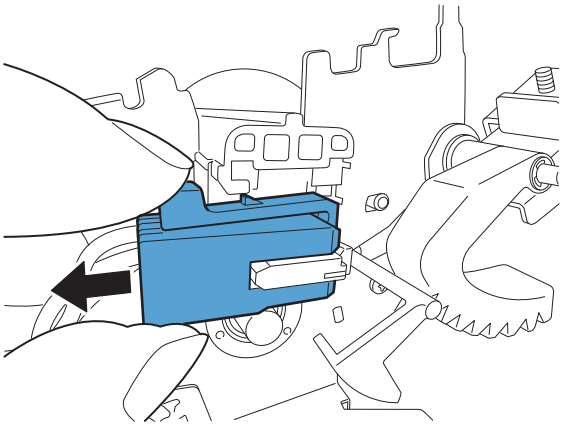
11. Remove the conductive plate.
    - 1 screw
    - 1 claw



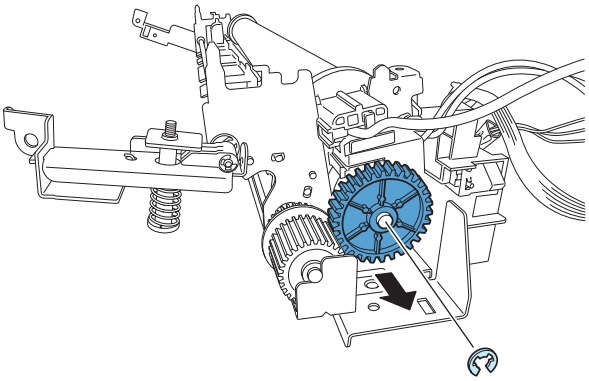
12. Remove the fixing cable guide (right).
    - 1 screw
    - 1 connector



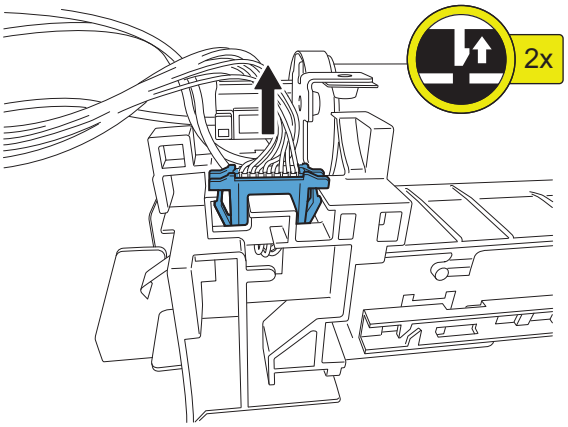
13. Remove the heater contact connector.



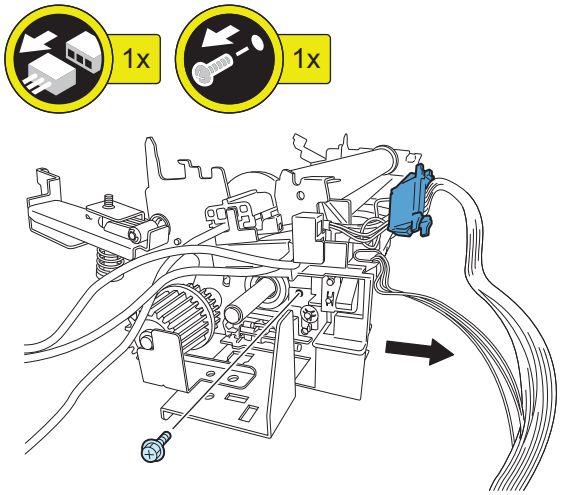
14. Remove the gear.
    - 1 E-ring



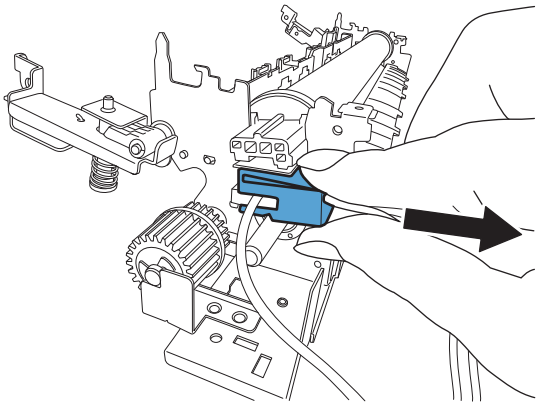
15. Remove the relay connector from the cable guide.
    - 2 claws



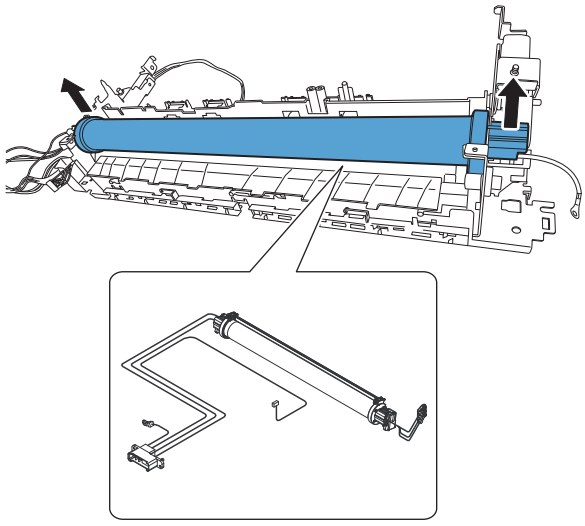
16. Remove the fixing cable guide (left).
    - 1 screw
    - 1 connector



17. Remove the heater contact connector.



18. Remove the fixing film unit.



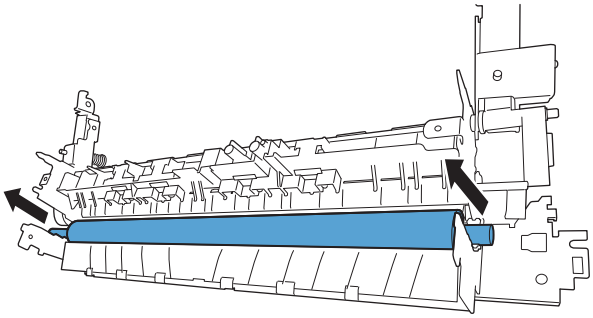
Removing the Pressure Roller

■ Preparation

1. **Remove the fixing film unit.****"Removing the Fixing Film Unit" on page 167**

■ Procedure

1. Remove the pressure roller.



PCB

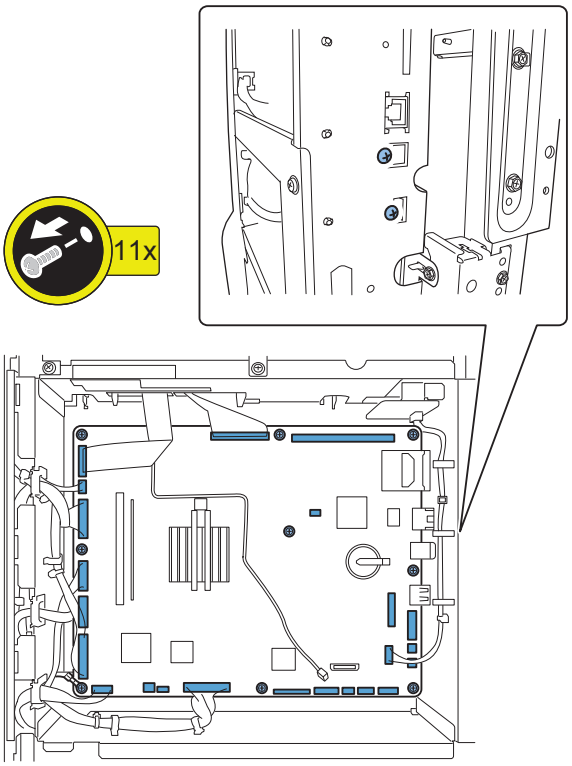
Removing the Main Controller PCB

■ Preparation

1. **Remove the left cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the left rear cover.** **"Removing the Left Rear Cover" on page 134**
3. **Remove the RAM PCB.****"Removing the RAM PCB" on page 174**
4. **Remove the modem PCB (for the model with a FAX function).**

■ Procedure

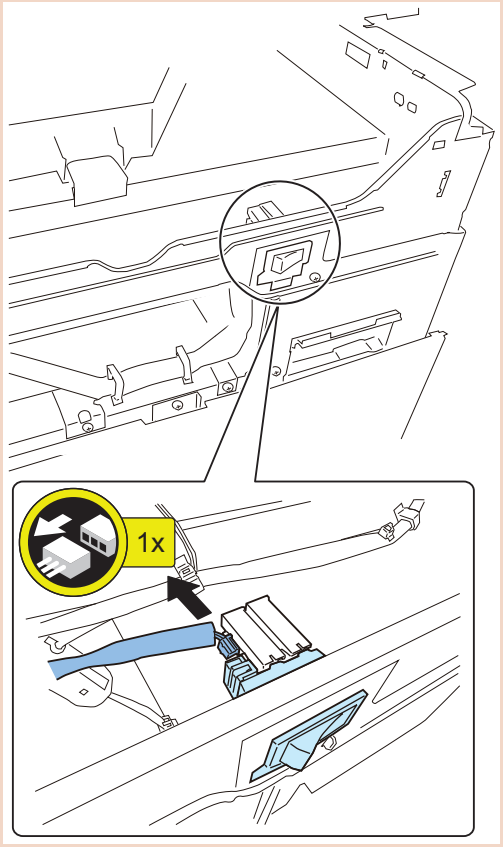
1. **Disconnect all connectors and flexible cables on the main controller PCB.**
2. **Remove the main controller PCB.**
   - 11 screws



■ Action to Take after Replacement

1. **After replacing the image processor PCB with a new one, take the following action:**
   - Download the latest firmware with the UST.
   - Enter all values recorded on the service label affixed to the rear cover.

CAUTION:
In the case of the Europe model:
If the firmware of the DC Controller PCB or the Main Controller PCB is not correct, the main power switch becomes OFF automatically.
Therefore, when update of the firmware is not possible, turn on the main power switch after disconnect the connector of the main power switch, and update the correct firmware which matched the model.
After the update the firmware, install the removed connector by necessity.



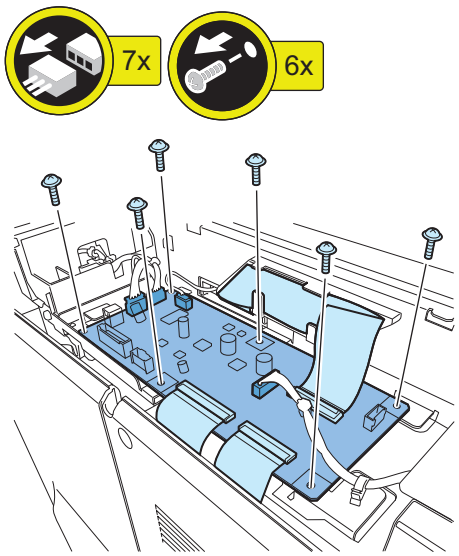
Removing the Reader Relay PCB

■ Preparation

1. **Remove the reader rear cover.****"Removing the Reader Rear Cover" on page 136**

■ Procedure

1. **Remove the reader relay PCB.**
   - 3 flexible cables
   - 4 connectors
   - 6 screws



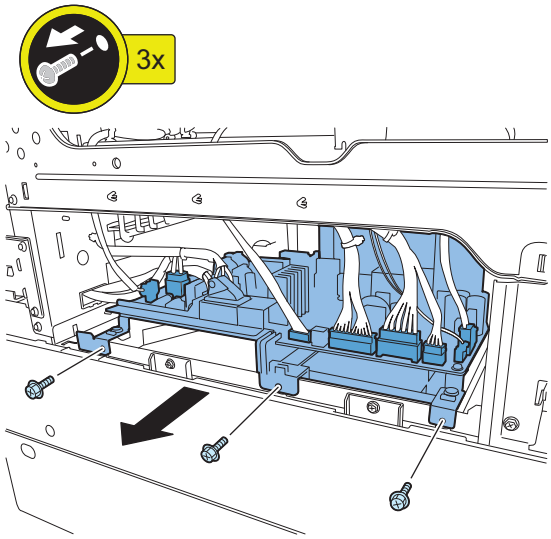
Removing the Power Supply PCB

■ Preparation

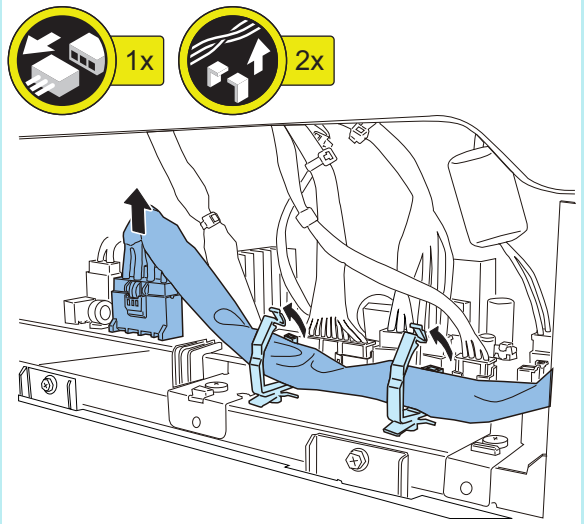
1. **Remove the inside base cover.****"Removing the Inside Base Cover" on page 133**
2. **Remove the left rear cover.****"Removing the Left Rear Cover" on page 134**
3. **Remove the left cover.****"Removing the Left Cover" on page 132**

■ Procedure

1. **Disconnect all connectors on the power supply PCB.**
2. **Remove the power supply PCB.**
   - 3 screws



NOTE:
In the case of the Europe model, the following procedure is necessary.
- 1 connector
- 2 clamps



Removing the DC Controller PCB

■ Before Replacement/RAM Clearing

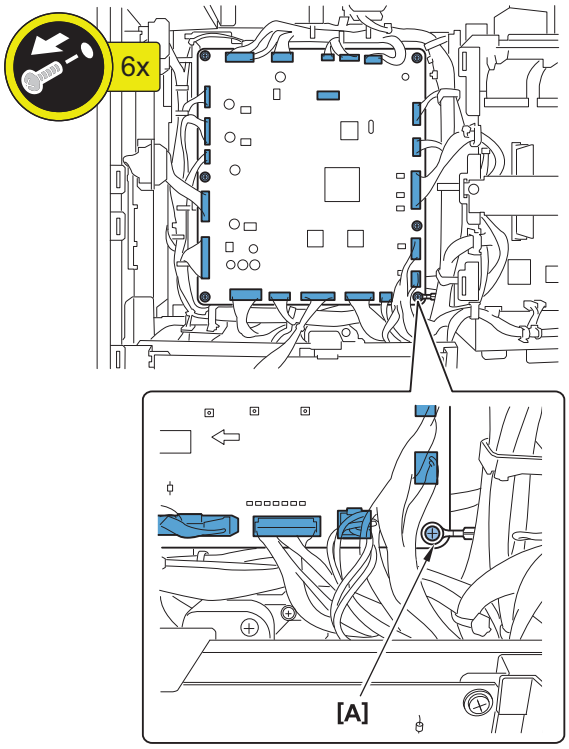
Print the service data list in the service mode.
- REPORT > REPORT OUTPUT > SERVICE DATA LIST

■ Preparation

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left).****"Removing the Rear Cover (Left)" on page 137**

■ Procedure

1. **Disconnect all connectors on the DC controller PCB.**
2. **Remove the DC controller PCB.**
   - 6 screws (Screw A is tightened together with the earth cable.)



■ Action to Take after Replacement/RAM Clearing

1. **Clear the DC controller settings and counters.**
   Enter the service mode, and Then select the following:
   - CLEAR > ENGINE > ENGINE BKRAMCLK (Clearing of the RAM on the DC controller PCB)
2. **Turn OFF and then ON the main power switch. (Turning OFF/ON the main power switch clears the RAM.)**
3. **If uploading of backup data fails before replacement due to the damage to the DC controller PCB, enter the values of service mode items recorded on the service label. Since the values recorded on the service label may be outdated, check the service mode item list (#SERVICE DATA LIST) printed out in advance, and then enter the latest values.**
4. **Turn OFF and then ON the main power switch. (Turning OFF/ON the main power switch allows the values entered for the service mode items to take effect.)**

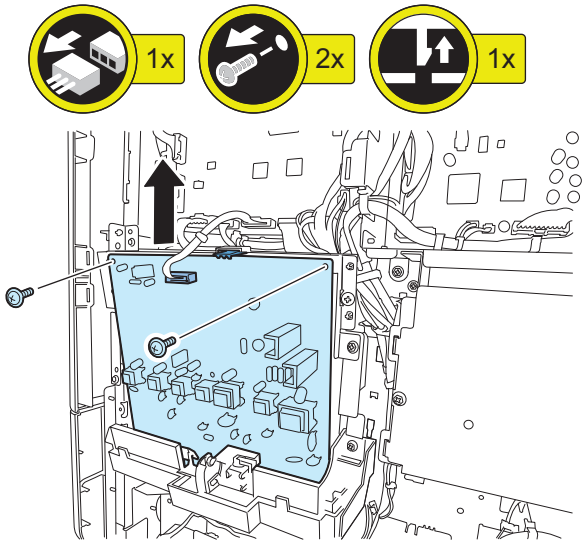
Removing the HVT PCB

■ Preparation

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left).****"Removing the Rear Cover (Left)" on page 137**

■ Procedure

1. **Remove the HVT PCB.**
   - 1 connector
   - 2 screws
   - 1 claw



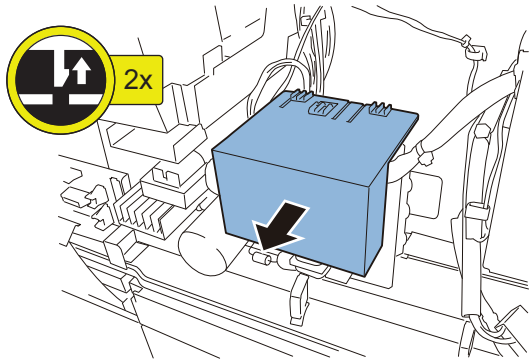
Removing the Option Power Supply PCB

■ Preparation

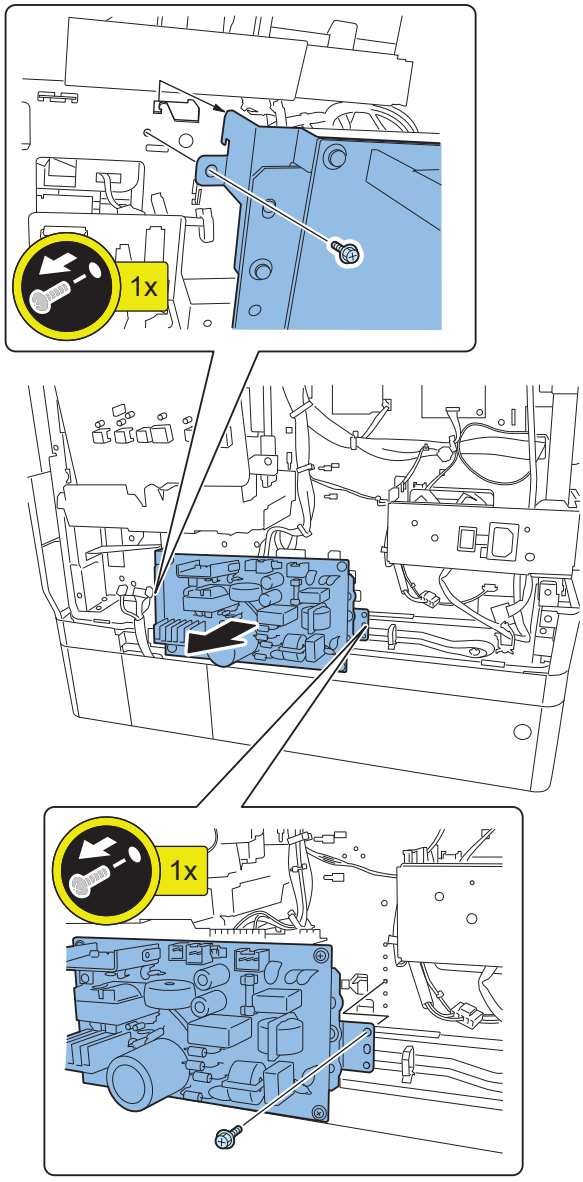
1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the rear cover (left).****"Removing the Rear Cover (Left)" on page 137**
3. **Remove the lower rear cover.****"Removing the Lower Rear Cover" on page 138**

■ Procedure

1. **Remove the option power supply cover.**
   - 2 claws



2. **Disconnect all connectors on the option power supply PCB.**
3. **Remove the option power supply PCB.**
   - 2 screws



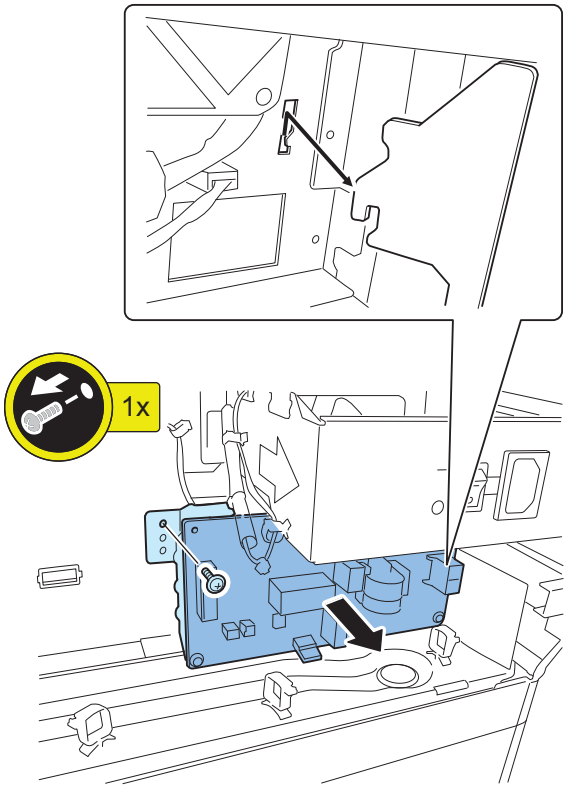
Removing the Heater PCB

■ Preparation

1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**
2. **Remove the lower rear cover.****"Removing the Lower Rear Cover" on page 138**

■ Procedure

1. **Disconnect all connectors on the heater PCB.**
2. **Remove the heater PCB.**
   - 1 screw



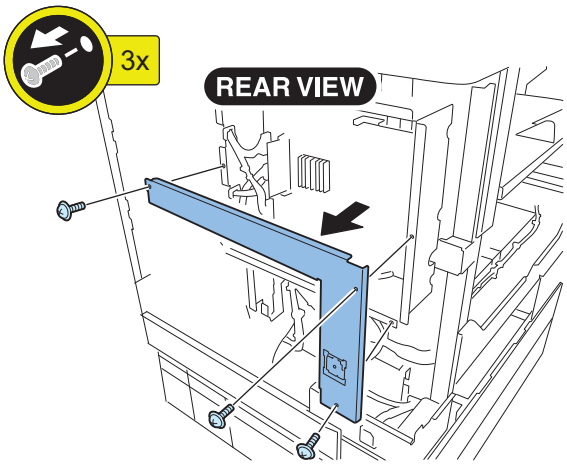
Removing the RAM PCB

■ Preparation

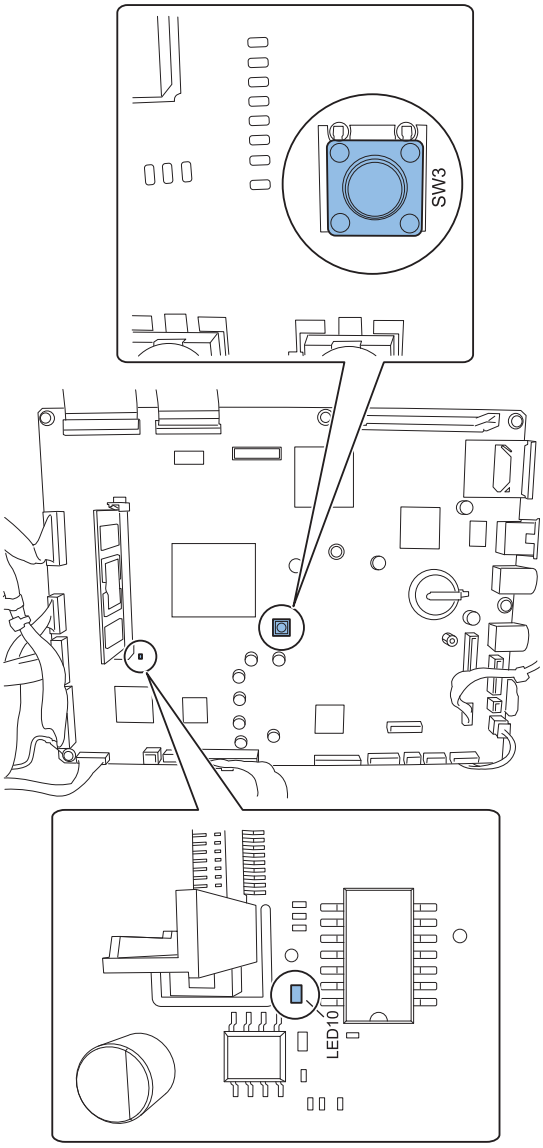
1. **Remove the rear cover (right).****"Removing the Rear Cover (Right)" on page 136**

■ Procedure

1. **Remove the controller plate. (Remove 3 screws.)**

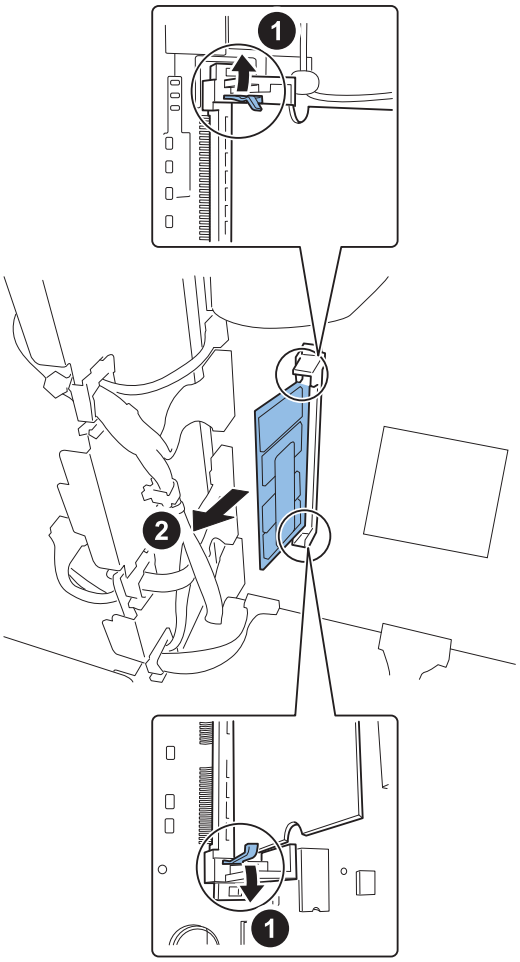


2. **For the model with a FAX and SEND function, press the SW3 on the main controller to check that LED10 goes out. (Secondary power cutoff)**



CAUTION:
The ADRAM is powered from the secondary battery unit to back up the image memory even after the main power switch is turned OFF and the power plug is removed from the outlet.
If the SW3 on the main controller PCB is pressed with the image backed up, the entire data stored in the memory is cleared. Be sure to output the data stored in the memory before pressing the SW3.

3. **Remove the RAM PCB. (Release the hook.)**





Adjustment

Overview..... 178
Basic Adjustment..... 180
Adjustment when Replacing the Parts
.....182

Overview

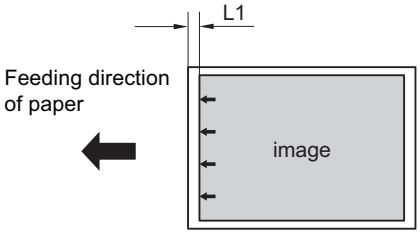
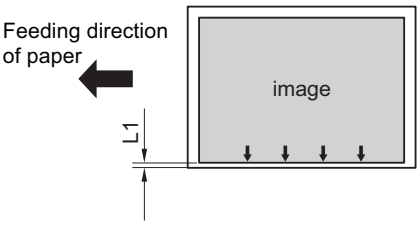
Adjustment when replacing parts

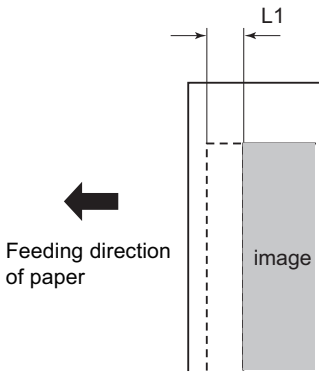
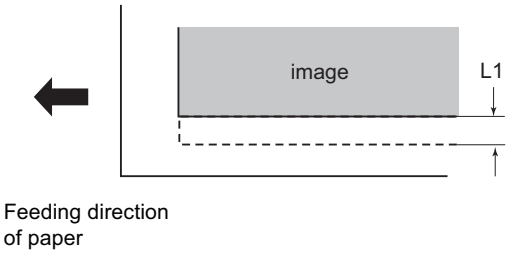
This section describes adjustment required in field service works when replacing parts.
The parts are classified by function into the following 3 blocks.

Category	Replacing parts	Reference
Scanning System	CIS Unit	“Action to Take after Replacing the CIS Unit” on page 182
	Copyboard glass	“Action to Take after Replacing the Platen Glass” on page 182
	ADF reading glass	“Action to Take after Replacing the ADF Scan Glass” on page 183
Controller System	Main controller PCB	“Action to Take after Replacing theMain Controller PCB” on page 183
	DC controller PCB	“Action to Take when Replacing the DC Controller PCB” on page 183
	RAM PCB	“Action to Take after Replacing the RAM” on page 184
Laser Exposure System	Laser scanner unit	“Action to Take after Replacing the Laser Scanner Unit” on page 184

Image position adjustment

This section describes procedures when adjusting basic image position (image margins, nonimage area, etc).

Category	Item	Reference
Margin Along the Leading Edge	L1: Single-sided copy: 2.5 ± 1.5 (mm) Double-sided copy: 2.5 ± 2.0 (mm) 	“Margin Along the Leading Edge” on page 180
Left Image Margin	L1: Single-sided copy: 2.5 ± 1.5 (mm) Double-sided copy: 2.5 ± 2.0 (mm) 	“Left Image Margin” on page 180

Category	Item	Reference
Leading Edge Non-Image Width	L1: Single-sided copy: 2.5 ± 1.5 (mm) Double-sided copy: 2.5 ± 1.5(mm) 	“Leading Edge Non-Image Width” on page 180
Left Non-Image Width	L1: Single-sided copy: 2.5 ± 1.5 (mm) Double-sided copy: 2.5 ± 1.5 (mm) 	“Left Non-Image Width” on page 181

Basic Adjustment

Image position adjustment

Copy 10 sheets from each pickup position to check that the image margin and non-image area is within the standard.

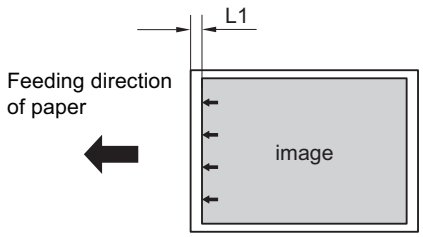
- Each cassette
- Pickup tray

If it is not within the standard, go through the following procedures to adjust it.

CAUTION:
If changing the value of service mode item in this adjustment, enter the changed value in the service label.

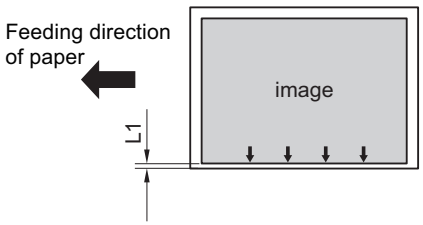
■ Margin Along the Leading Edge

Service mode> PRINT> PRINT NUMERIC> 053
An increase of '1' will increase the margin by 0.1 mm.
<range>
0 to 9999 (default: 25)



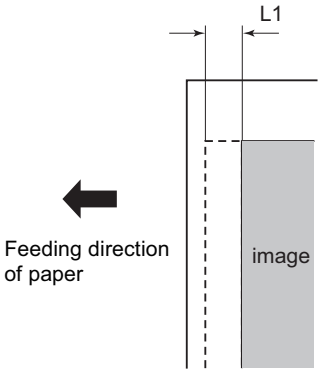
■ Left Image Margin

Service mode> PRINT> PRINT NUMERIC> 056
An increase of '1' will increase the margin width by 0.1 mm.
<range>
0 to 9999 (default: 25)



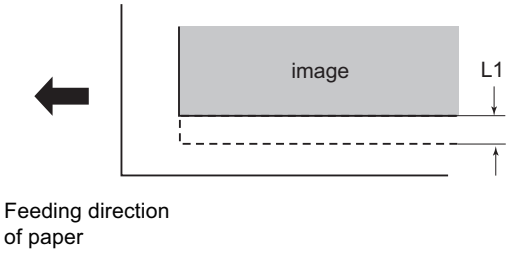
■ Leading Edge Non-Image Width

Service mode> SCAN> READER> ADJUST> ADJ-XY> ADJ-X
An increase of '1' will increase the non-image width by 0.1 mm.
<range>
1 to 211 (default: 20)



■ Left Non-Image Width

Service mode> SCAN> READER> ADJUST> ADJ-XY> ADJ-Y
An increase of '1' will increase the non-image width by 0.1 mm.
<range>
iR2545/2535 series: 1 to 254 (default: 79)
iR2530/2525/2520 series: -25 to +25 (default: 0)



Adjustment when Replacing the Parts

Original Exposure

■ Action to Take after Replacing the CIS Unit

After replacing the CIS unit, make the following adjustments:

● CIS white level automatic adjustment

1. **Enter the service mode.**
   - SCAN > READER > FUNCTION > CCD > CCD-ADJ
2. **Click the [OK] button.**
   When this step is complete, the contact sensor output is adjusted and parameters are set automatically.
3. **After completion of automatic adjustment, “OK” is displayed.**

● DF white level adjustment (platen board cover scan/stream reading scan)

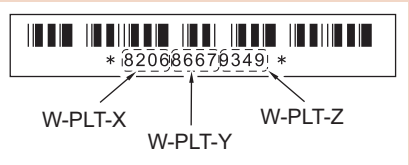
CAUTION:
Make this adjustment when the DADF is installed.

1. **Place a sheet of paper that the user usually uses on the platen glass, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL1.**
   Read the white level in the BOOK mode. (Check the transparency of the glass for BOOK mode.)
2. **Place a sheet of paper that the user usually uses on the DF, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL2.**
   Read the white level in the DF mode (stream reading). (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)
3. **Place a sheet of paper that the user usually uses on the platen glass, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL3.**
   Read the white level in the BOOK mode. (Check the transparency of the glass for BOOK mode.)
4. **Place a sheet of paper that the user usually uses on the DF, enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL4.**
   Read the white level in the DF mode (stream reading). (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)

■ Action to Take after Replacing the Platen Glass

Enter the service mode, and then select the following:

CAUTION:
Be sure to make the white plate data adjustment before ADF white level adjustment.



1. **Enter the value indicated on the platen glass in the following service mode:**
   - SCAN > READER > ADJUST > CCD > W-PLT-X/Y/Z (Input of standard white plate data)

2. **Enter the service mode, and then select the following:**
   - SCAN > READER > FUNCTION > CCD > DF-WLVL1/2/3/4 (DF white level adjustment)

1. Place a sheet of paper that the user usually uses on the platen glass,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL1.
   Read the white level in the BOOK mode.
   (Check the transparency of the glass for BOOK mode.)
2. Place a sheet of paper that the user usually uses on the DF,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL2.
   Read the white level in the DF mode (stream reading).
   (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)
3. Place a sheet of paper that the user usually uses on the platen glass,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL3.
   Read the white level in the BOOK mode.
   (Check the transparency of the glass for BOOK mode.)
4. Place a sheet of paper that the user usually uses on the DF,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL4.
   Read the white level in the DF mode (stream reading).
   (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)

■ Action to Take after Replacing the ADF Scan Glass

1. **Enter the service mode, and then select the following:**
   - SCAN > READER > FUNCTION > CCD > DF-WLVL1/2/3/4 (DF white level adjustment)

1. Place a sheet of paper that the user usually uses on the platen glass,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL1.
   Read the white level in the BOOK mode.
   (Check the transparency of the glass for BOOK mode.)
2. Place a sheet of paper that the user usually uses on the DF,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL2.
   Read the white level in the DF mode (stream reading).
   (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)
3. Place a sheet of paper that the user usually uses on the platen glass,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DFWLVL3.
   Read the white level in the BOOK mode.
   (Check the transparency of the glass for BOOK mode.)
4. Place a sheet of paper that the user usually uses on the DF,
   enter the service mode, and then select SCAN > READER > FUNCTION > CCD > DF-WLVL4.
   Read the white level in the DF mode (stream reading).
   (Check the transparency of the glass for stream reading.)(Read both sides of the chart.)

Main Controller

■ Action to Take after Replacing theMain Controller PCB

After replacing the main controller PCB with a new one, take the following action:
- Download the latest firmware with the UST.
- Enter all values recorded on the service label affixed to the rear cover.

■ Action to Take when Replacing the DC Controller PCB

Before Replacement/RAM Clearing
Print the service data list in the service mode.
REPORT > REPORT OUTPUT > SERVICE DATA LIST

Action to Take after Replacement/RAM Clearing

1. **Clear the DC controller settings and counters.**
   Enter the service mode, and Then select the following:
   CLEAR > ENGINE > ENGINE BKRAMCLK (Clearing of the RAM on the DC controller PCB)
2. **Turn OFF and then ON the main power switch. (Turning OFF/ON the main power switch clears the RAM.)**
3. **If uploading of backup data fails before replacement due to the damage to the DC controller PCB, enter the values of service mode items recorded on the service label. Since the values recorded on the service label may be outdated, check the service mode item list (#SERVICE DATA LIST) printed out in advance, and then enter the latest values.**
4. **Turn OFF and then ON the main power switch. (Turning OFF/ON the main power switch allows the values entered for the service mode items to take effect.)**

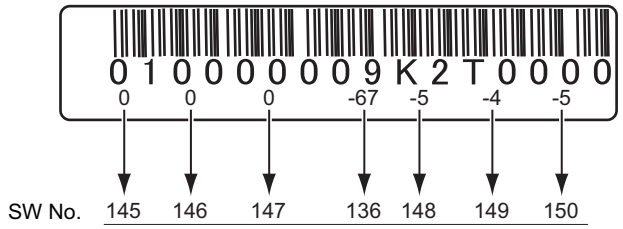
■ Action to Take after Replacing the RAM

CAUTION:
The ADRAM is powered from the secondary battery unit to back up the image memory even after the main power switch is turned OFF and the power plug is removed from the outlet.
If the SW3 on the main controller PCB is pressed with the image backed up, the entire data stored in the memory is cleared. Be sure to output the data stored in the memory before pressing the SW3.

Laser Exposure System

■ Action to Take after Replacing the Laser Scanner Unit

When replacing the Laser Unit, enter the value obtained by adding 1,000 to the number shown on the label affixed to the side of the newly replaced Laser Unit in the corresponding service mode as shown below.
(Examples: If the number on the service label is 3, enter 1,003. If the number on the service label is -1, enter 999.)



- PRINT > Bitswitch > 136 Laser horizontal scanning direction write position adjustment(A)
- PRINT > Bitswitch > 145 Laser horizontal scanning direction magnification ratio adjustment(A-B)
- PRINT > Bitswitch > 146 Laser horizontal scanning direction magnification ratio adjustment(A-C)
- PRINT > Bitswitch > 147 Laser horizontal scanning direction magnification ratio adjustment(A-D)
- PRINT > Bitswitch > 148 Laser horizontal scanning direction write position adjustment(A-B)
- PRINT > Bitswitch > 149 Laser horizontal scanning direction write position adjustment(A-C)
- PRINT > Bitswitch > 150 Laser horizontal scanning direction write position adjustment(A-D)

6 Troubleshooting

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Initial Check

Initial check items list

Item	No.	Detail	Check
Site Environment	1	The voltage of the power supply is as rated (+/-10%).	
	2	The site is not a high temperature / humidity environment (near a water faucet, water boiler, humidifi er), and it is not in a cold place. The machine is not near a source of fi re or dust.	
	3	The site is not subject to ammonium gas.	
	4	The site is not exposed to direct rays of the sun. (Otherwise, provide curtains.)	
	5	The site is well ventilated, and the floor keeps the machine level.	
	6	The machine's power plug remains connected to the power outlet.	
Checking the Paper	1	The paper is of a recommended type.	
	2	The paper is not moist. Try paper fresh out of package.	
Checking the Placement of Paper	1	Check the cassette and the manual feed tray to see if the paper is not in excess of a specific level.	
	2	If a transparency is used, check to make sure that it is placed in the correct orientation in the manual feed tray.	
Checking the Durables	1	Check the table of durables to see if any has reached the end of its life.	
Checking the Periodically Replaced Parts	2	Check the scheduled servicing table and the periodically replaced parts table, and replace any part that has reached the time of replacement.	

Checking Each Unit/Each Function System

Item	No.	Detail	Check
Reader	1	Check that there is no cut, dirt or any foreign particle on the scanner system parts.	
	2	Check that the CIS/CCD unit moves smoothly and there is no dirt on the rail.	
	3	Check that the lump light does not blink.	
	4	Check that there is no dew condensation found on the scanning	
Image formation system	1	roperly installed.	
	2	Check that there is no cut and dirt on the photosensitive drum.	
	3	Check that the transfer roller is not worn and deformed and has no	
Fixing system	1	e fixing film and pressure roller is not worn and deformed and has no cut/dirt.	
	2	Check that the fixing thermistor wire is not cut.	
	3	Check that there is electrical conductivity among thermoswitch.	
Pickup feed system	1	Check that there is no foreign particle such as paper dust etc.	
	2	Check that the pickup/feed/separation roller does not accumulate the paper dust. Check that these rollers are not worn and deformed and have no cut/dirt.	
	3	Check that the registration roller/paper path roller is not worn and deformed and has no cut/dirt.	
	4	Check that the feed guide is not worn and deformed and has no cut/ dirt.	
	5	Check that there is no edge fold/curl/wave/moisture absorption occurred on the paper.	
	6	Check if using Canon recommended paper/transparency makes it	
Drive system	1	ck that the drive system does not get heavy load.	
	2	hat the gear is not worn and not get chipped.	
Cassette	1	and the paper size is configured properly. Check if the symptom appears or not after re-placing the cassette with the cassette that works normally.	
	2	Check that the cassette middle plate moves smoothly and is not deformed.	
	3	Check that the cassette side guide plate/ trailing edge guide plate is properly set.	
	4	Check that the cassette heater switch is ON (When the cassette heater is installed.).	
General	1	Check that the sensor/clutch/motor/solenoid works properly (Make sure to check the power source and signal transmission route with the general circuit diagram.).	
	2	Check that there is no wire wedged/screw loosened.	
	3	Check that all the external covers are installed.	
	4	Check that the main power switch/control panel power switch is ON.	

Item	No.	Detail	Check
General	5	Check that the wiring of power cable/signal cable to each option is properly installed.	
	6	Check that the fuse on each PCB does not burn out.	
	7	Check that there is no error in customer's usage method.	
Others	1	If moving the machine from the cold place such as storage etc to a warm place abruptly, dew condensation is generated inside machine and it may cause various troubles. • E100 occurs due to dew condensation on BD sensor. • Low image density in the vertical scanning direction due to dew condensation on the dust-proof glass. • Low image density due to dew condensation on the reader CCD and copyboard glass. • Paper feed failure due to dew condensation on the pickup, feed guide.	
	2	If the symptom d appears, wipe the pickup/feed unit with dry cloth. Moreover, if storing the toner container/developing assembly/drum unit in the cold place and unpacking them abruptly in warm place, dew condensation may be generated. To prevent dew condensation, place them in warm place sufficiently (for 1 to 2 hours) before unpacking.	

Test Print

Overview

This machine have the following test print TYPE and you can judge the image failure that is checked as “Yes” in the following image check items with each test print.
If the image failure occurred on normal output does not reappear on the test print, it may be caused by the PDL input or reader side.

Select the test print TYPE

NO.	TYPE Pattern	Items								
		Grada-tion	Fogging	Transfer Fault	Black line	White line	Uneven Density	Uneven Density at the Front/ Rear	Right An-gle	Straight Lines
SELECT NO.01	Grid								Yes	Yes
SELECT NO.02	Half-tone			Yes	Yes	Yes	Yes	Yes		
SELECT NO.03	All-black			Yes		Yes	Yes	Yes		
SELECT NO.04	---(For R&D)				Yes					
SELECT NO.05	---(For R&D)									
SELECT NO.06	4dot-6space (ver-tical)						Yes			
SELECT NO.07	4dot-6space (hori-zontal)				Yes	Yes		Yes		
SELECT NO.08	---(For R&D)									
SELECT NO.09	16 gray levels (monochromatic)	Yes	Yes							

Procedure

1. Enter the PG number with numeric keys, then press the START key.
2. Select single-sided (SGL: 0) or double-sided (DBL: 1), then press the START key.
3. Enter the number of prints to be output (PG COUNT), then press the START key.
4. Specify the paper drawer (main unit), then press the START key.
   Main unit cassette (ST_C: 0), 2nd cassette (OP_C: 1), Manual feed tray (MLT: 2)
5. Specify the paper eject slot, then press the START key.
   Tray 1 (1_OUT: 0), Tray2 (2_OUT: 1)
6. Select a paper type, then press the OK key.
   Plain paper (PLN: 0), Thick paper (TCK: 1),Thin paper (OHP: 2)
7. A test pattern is output.

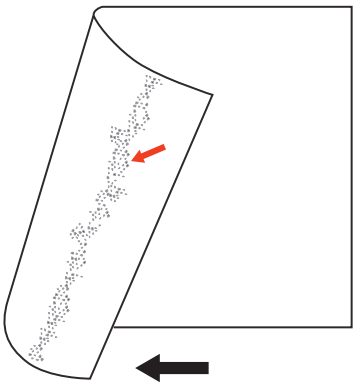
Troubleshooting Items

Troubleshooting items list

Category		Item	Reference
Image failure	Dirt	Paper reverse side stained with toner	“Paper Reverse Side Stained with Toner” on page 189
		Stained leading/trailing edge of paper	“Stained Leading/Trailing Edge of Paper” on page 190
	Blur/Void	Image transfer wrong/text void	“Image Transfer Wrong/Text Void” on page 190
		Image deletion/blur/dew condensation	“Image Deletion/Blur/Dew Condensation” on page 191
Operation failure	Paper jam	Too large curl	“Too Large Curl” on page 191
		Thin paper jam (63g/cm2 or less)	“Thin Paper Jam (63g/cm2 or Less)” on page 192
		Paper jam due to solid image printed on paper with small leading-edge margin (1-4 mm)	“Paper Jam due to Solid Image Printed on Paper with Small Leading-Edge Margin (1-4 mm)” on page 191
	Cannot set toner bottle	Cannot turn the toner bottle set lever or hard to turn it	“Cannot Turn the Toner Bottle Set Lever or Hard to Turn it” on page 192
	Abnormal noise	Abnormal noise during multi-feed operation	“Abnormal Noise During Multi-Feed Peration” on page 192

Image Faults

■ Paper Reverse Side Stained with Toner



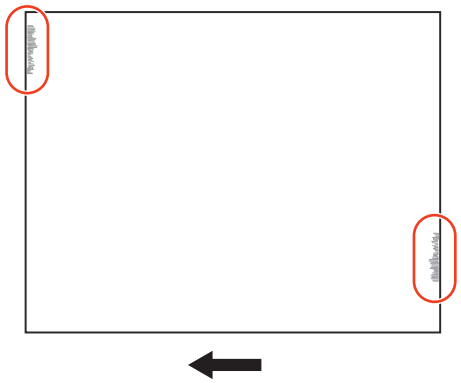
[Occurrence area]
Fixing assembly (circumference of the roller: iR2545/2535; 94mm, iR2530/2525/2520; 78.5mm)
Transfer roller (circumference: 50mm)

[Cause]
Fixing assembly: Toner came off the paper sticks to the pressure roller, and then the toner sticks to the reverse side of the paper.
Transfer roller: Toner remained on the drum that had stopped at occurrence of a jam. During the recovery operation performed later, the toner sticks to the transfer roller.

[Occurrence condition]
Fixing assembly: When fixing ability is poor due to low temperature, a halftone image has been printed on a lot of sheets of paper, or the time for replacement of the transfer unit is near
Transfer roller: When a paper jam has occurred or the time for replacement of the transfer roller is near.

[Remedy]
Fixing assembly: USER MODE> Adjustment/ Cleaning> Fixing Unit Cleaning
Transfer Roller: USER MODE> Adjustment/ Cleaning> Transfer Roller Cleaning

■ Stained Leading/Trailing Edge of Paper



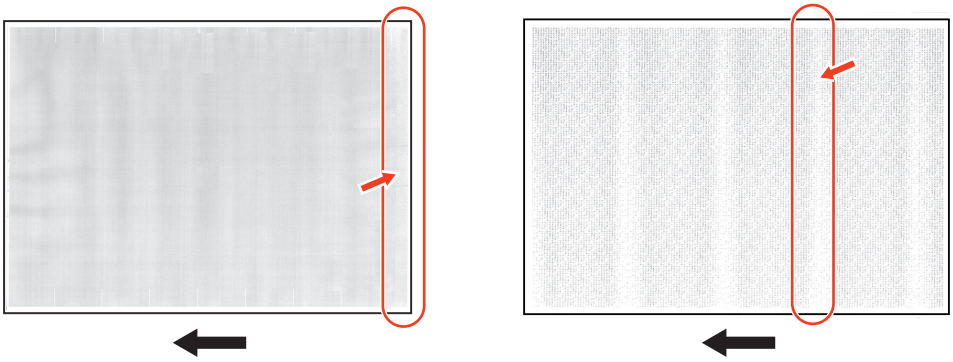
[Occurrence area]
Transfer front guide
Fixing inlet guide

[Cause]
Transfer front guide: The leading or trailing edge of paper touches the toner stuck to the transfer front upper guide.
Fixing inlet guide: The leading or trailing edge of paper touches the toner stuck to the fixing inlet guide.

[Occurrence condition]
When halftone or solid-black images are printed in succession

[Remedy]
Using lens-cleaning paper or the like, clean the guide stained with toner.

■ Image Transfer Wrong/Text Void



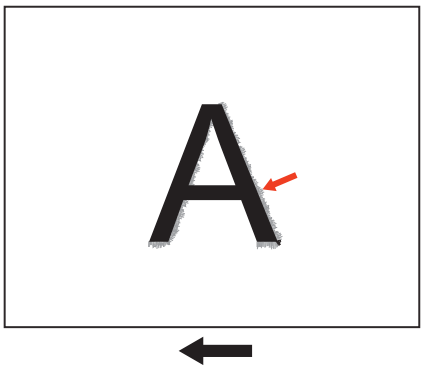
[Occurrence area]
Transfer roller (circumference: 50mm)

[Cause]
Resistance of paper increases due to reduction in paper water content, resulting in insufficient transfer output.
Resistance of paper decreases due to increase in paper water content, resulting in excessive transfer output.

[Occurrence condition]
Paper left alone in a low-humidity environment
Paper left alone in a high-humidity environment

[Remedy]
- USER MODE> Adjustment/ Cleaning> Special Mode M> Low or High

■ Image Deletion/Blur/Dew Condensation



[Occurrence area]
Drum (circumference: 94mm)

[Cause]
Corona products generated on the charging roller stick to the drum, and then water molecules adsorb onto them, resulting in reduction in resistance.
Therefore, a desired latent image cannot be formed, resulting in a blurred image.

[Occurrence condition]
When the machine is operated first in the morning under the high-temperature and highhumidity environment.

[Remedy]
USER MODE> Adjustment/ Cleaning> Special Mode F> Low, Meduium, or High Install the optional drum heater.

■ Too Large Curl

[Occurrence area]
Fixing assembly

[Cause]
The water content on the front surface of paper becomes different from that on the reverse side of paper, making the curl larger.

[Occurrence condition]
When the paper has been left alone in a high-humidity environment.

[Remedy]
USER MODE> Adjustment/ Cleaning> Manual> Special Mode N> Medium or High
*Normally, select "Low". Selecting "High" will reduce productivity.
Machine shipped with cassette heater: Turn on the heater.
Install an optional cassette heater.

■ Paper Jam due to Solid Image Printed on Paper with Small Leading-Edge Margin (1-4 mm)

[Occurrence area]
Fixing assembly

[Cause]
When a solid image is printed on the paper with a small leading-edge margin (1-4 mm), paper cannot be easily separated from the fixing film, causing a paper jam.

[Occurrence condition]
When the paper has been left alone in a high-humidity environment or when a solid image is printed on the paper with a small leading-edge margin.

[Remedy]
USER MODE> Adjustment/ Cleaning> Manual> Special Mode O> Medium or High
USER MODE> Adjustment/ Cleaning> Manual> Special Mode N> High
*Selecting "Special Mode O" or "Special Mode N>High" will increase the leading-edge margin and consequently prevent a paper jam due to improper separation.
*Selecting "Special Mode N>High" will make the curl smaller but reduce the productivity.

■ Thin Paper Jam (63g/cm2 or Less)

[Occurrence area]
Drum
Fixing assembly

[Cause]
The separation power reduces due to low elasticity of paper, causing a jam in the drum assembly or fixing assembly.

[Occurrence condition]
When paper thinner than 64g/cm^2 paper is used.

[Remedy]
USER MODE> Adjustment/ Cleaning> Manual> Special Mode P> Medium or High
* When 52g/cm^2 paper is used, "High" must be selected.

■ Cannot Turn the Toner Bottle Set Lever or Hard to Turn it

[Occurrence area]
Toner bottle set lever

[Cause]
When the toner bottle cap is largish while it is sealed to the specification, more power may be required to turn the lever for opening/ closing the cap.
The toner bottle is not pushed until it clicks.

[Occurrence condition]
When the newly opened toner bottle cap is largish while it is sealed to the specification.
When an attempt to set the bottle containing toner has been repeated unnecessarily.

[Remedy]
After turning the toner bottle set lever about 45 degrees, turn the set ON lever while pulling out the toner bottle. This is the way to set the toner bottle easily.
Push the toner bottle all the way in, and then turn the lever.

■ Abnormal Noise During Multi-Feed Peration

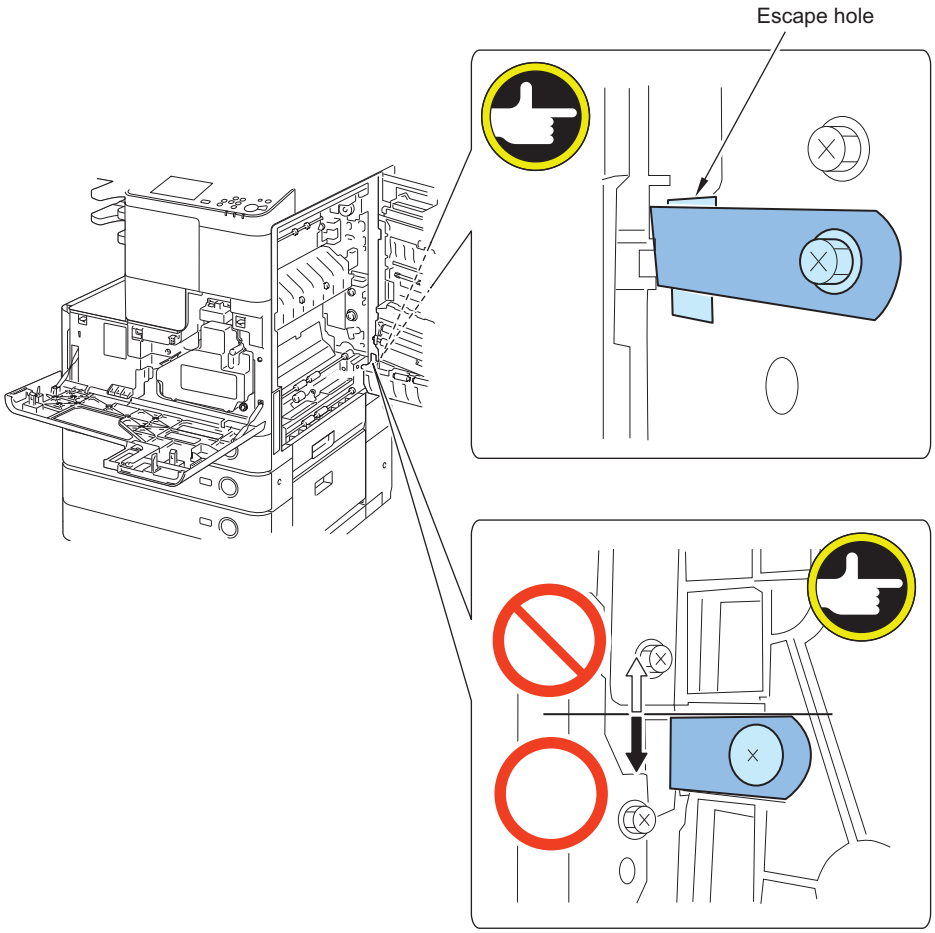
[Occurrence area]
Gear of right cover unit

[Cause]
When the right cover unit is closed, the belt cannot enter the clearance groove depending on the lower belt securing position and therefore the belt is Z-folded. As a result, the right cover unit is pushed out and consequently the gear on the right cover unit side meshes with the gear on the host machine side loosely, generating abnormal noise.

[Occurrence condition]
When the belt of the right cover unit is reinstalled

[Remedy]

Secure the belt to the right cover unit in such a manner that it does not turn along with the screw (i.e., it is secured horizontally or it faces slightly down).

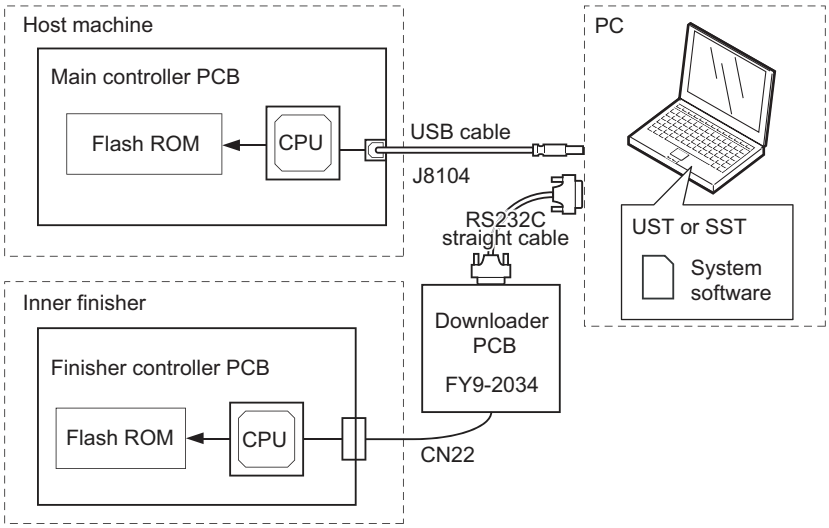


Version Upgrade

Overview

The following 2 methods are available to upgrade system software:

1. Upgrading the host machine: Use a PC (UST)
2. Upgrading the Inner Finisher: Use a PC (SST) + Downloader PCB



NOTE:
Multiple system software of the host machine can be collectively upgraded in conjunction with iW EMC/MC, DFU Plug-in and Local CDS. For the details, refer to documents for iW EMC/MC and DFU Plug-in.

Host machine

Target PCB	Category	Target system software	File type	Remarks
Main Controller PCB	iR2545/iR2535	Boot	USTUPDATE_iR2545_35_ BOOT_ vXXXX	There are 2 types of Main Controllers. **CAUTION:** When upgrading the system software of Boot and Bootable lang, be sure to first upgrade Boot.
		Program	USTUPDATE_iR2545_35_ bootable_lang_WLaaXXXX	
	iR2530/2525/2520	Boot	USTUPDATE_ iR2530_25_20_ BOOT_ vXXXX	
		Program	USTUPDATE_ iR2530_25_20_bootable_ lang_WLaaXXXX	
DC Controller PCB	iR2545/iR2535	DCON	USTUPDATE_iR2545_35_ DCON_ vXXXX	There are 3 types of DC Controllers.
	iR2530/2525 Cassette 1 550 sheets type		USTUPDATE_iR2530_25_ DCON_ vXXXX	
	iR2530/2525/2520 Cassette 1 250 sheets type		USTUPDATE_ iR2530_25_20_ DCON_ vXXXX	

Inner Finisher

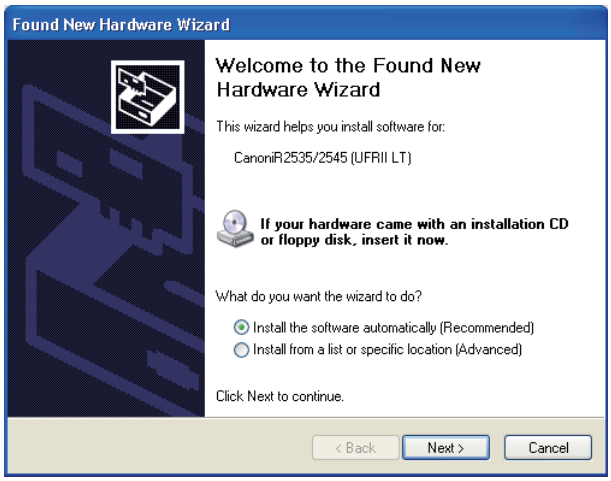
Target PCB	Target system software	SST display name	Remarks
Finisher Controller PCB	FIN_CON	IFN_B1	Refer to the Service Manual of the Inner Finisher for detailed procedures.

Procedure

NOTE:
The following describes the procedure to upgrade Boot as an example: For upgrading the other firmware, follow the same procedure as Boot.

CAUTION:
When upgrading the system software of Boot and Bootable lang, be sure to first upgrade Boot.

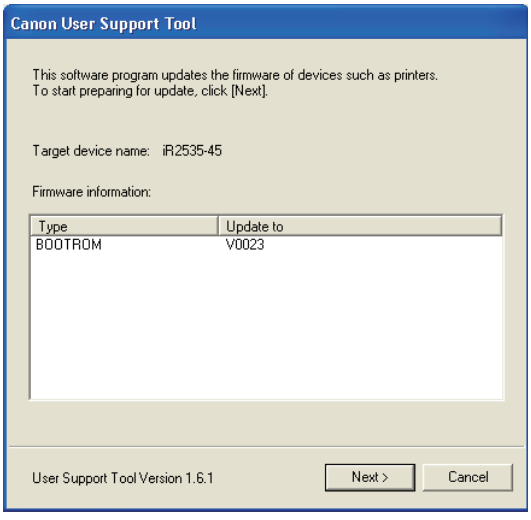
1. Turn ON the Power Switch of the PC and start UST.
2. When turning On the Power Switch, a wizard is displayed to add a new hardware, and click "Cancel".



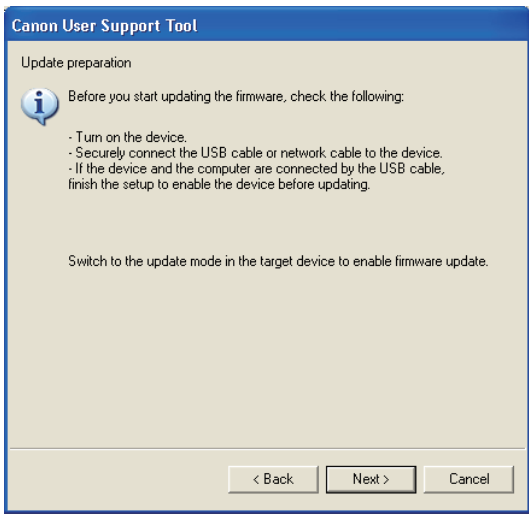
3. Enter service mode.
4. Press the arrow key and select "DOWNLOAD", and then press the OK key.

NOTE:
Download Mode is also available from the following user mode:
> System Settings > Update Firmware > Yes

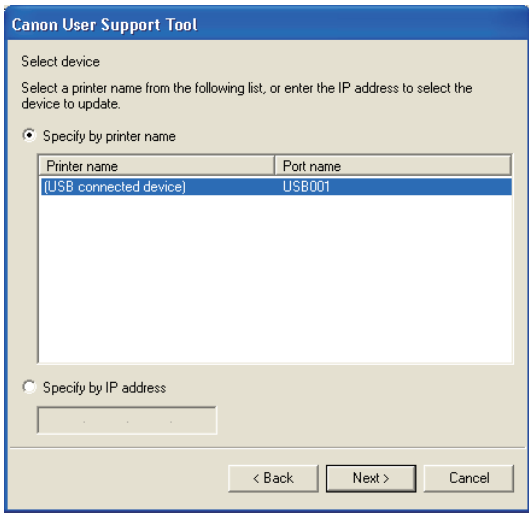
5. Start UST once "USB DOWNLOAD AVAILABLE" is displayed.
6. Following the instruction on the screen, select "Next".



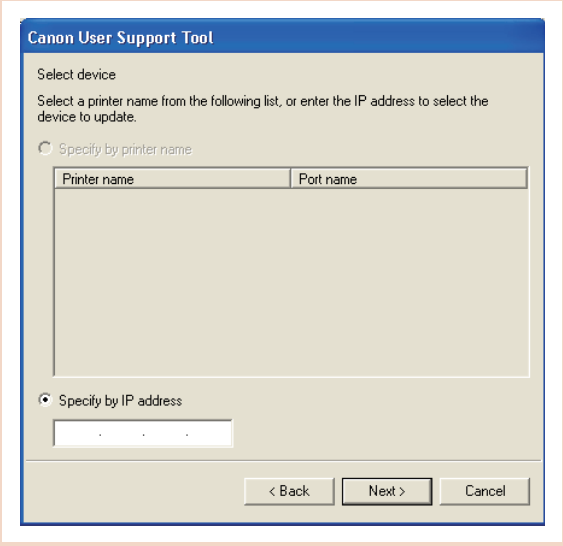
7. Following the instruction on the screen, select "Next".



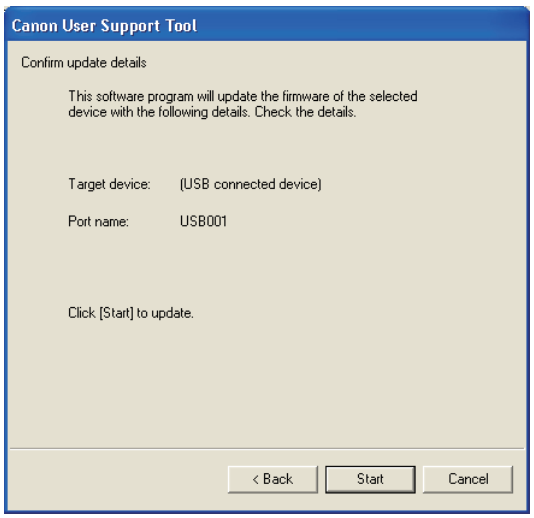
8. Following the instruction on the screen, select "Next".



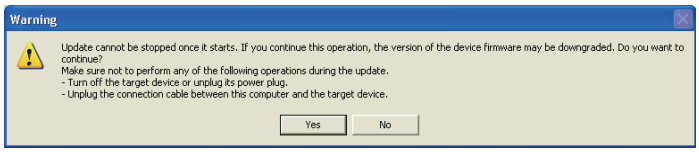
CAUTION:
Selecting firmware of a wrong model does not display "Select by printer name".



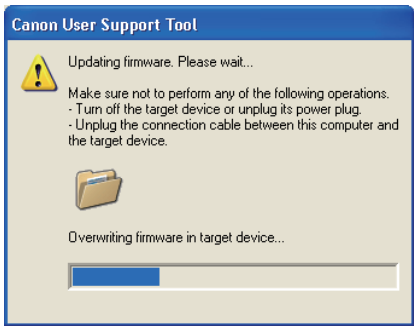
9. Following the instruction on the screen, select "Start".



10. Following the instruction on the screen, select "Yes".

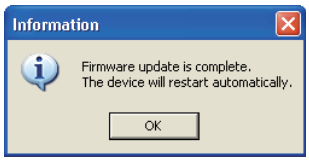


11. The following screen is displayed. "UPDATING FIRMWARE" is displayed on the Control Panel of this machine.



CAUTION:
Do not turn OFF the power during the download/writing process
Do not turn OFF the power supply during the download/writing process of system software.
It can cause faulty startup after turning ON the power.

12. As the following screen is displayed when upgrading is completed, turn OFF and then ON the power switch to complete.



Service Call Request Function

This machine has a function that allows users to request service call easily.
Service call can be easily requested by pressing the Check Counter key on the Control Panel and then the [Service Call] button.
This function is disabled by default and the [Service Call] button is not displayed. To enable the button, it is necessary to make settings in service mode.
The flow of basic operations is shown below.

1. A service technician enables the Service Call button.
2. When a problem that requires service call request occurs, the user makes a service call request on the Service Call Request screen.
3. The E-RDS function of this machine sends the service call request notification to the UGW server based on the service call request made by the user.
4. Service Center analyzes the notification which the UGW has received, and provide customer support (support by telephone, dispatch of service technician, etc.).
5. A service technician who visits the user site performs repair work and then performs the repair completion process after the work is completed.

Enabling of the Service Call Request Function (Display of the Button)

In order to enable the service call request function and display the Service Call Request button, set "1 (Enabled)" for the following service mode. (The default setting value is "0".)

- Service Mode > #SSSW > SW35 Bit1

NOTE:
In the case of a model for USA, the Service Call Request button will not be displayed even this setting is enabled (setting value "1").

For the details on how to use the service call request function, refer to e-Manual > [Top] > [Troubleshooting] > [Service Call Message] .

Service Call Request Completion Process

A service technician executes the following service mode to send the completion notification to the UGW server when the repair work is completed.

- Service Mode > #E-RDS > SCALLCMP

7 Error/Jam/Alarm

Outline.....200
Error Code.....201
Jam Code.....213
Alarm Code.....219

Outline

This chapter describes various codes which are displayed when a failure occurs on the product. These are classified into 3 codes as follows.

Code type	Explanation	Reference
Error code	This code is displayed when an error occurs on the machine.	“Error Code Details” on page 201
Jam code	This code is displayed when a jam occurs inside the machine.	“Main Unit” on page 213
Alarm code	This code is displayed when a function of the machine is malfunctioned.	“Alarm Code Details” on page 219

Error Code

Error Code Details

Ecode	Detail Code	Item	Description
E000	0001	Title	Fixing temperature abnormal rise
		Description	The temperature detected by the main thermistor does not rise to the specified value during startup control.
		Remedy	1.Go through the following to clear the error: CLEAR > ENGIN > ERRCLR; and then turn OFF and then ON the power. 2.Check connection of the Connectors (Thermistor Connector and AC Connector). 3.Replace the Fixing Main Thermistor (Film Unit). 4.Replace the Fixing Assembly. 5.Replace the DC Controller PCB (PCB4).
E001	0000	Title	Fixing unit temperature rise detection
		Description	The reading of the main thermistor is 250 deg C or more continuously for 200 msec.
		Remedy	1.Go through the following to clear the error: CLEAR > ENGIN > ERRCLR; and then turn OFF and then ON the power. 2.Check connection of the Connectors (Thermistor Connector and AC Connector). 3.Replace the Fixing Main Thermistor (Film Unit). 4.Replace the Fixing Assembly. 5.Replace the DC Controller PCB (PCB4).
E001	0001	Title	Fixing unit temperature rise detection
		Description	The hardware circuit detects overheating of the main or sub thermistor for 200 msec.
		Remedy	1.Go through the following to clear the error: CLEAR > ENGIN > ERRCLR; and then turn OFF and then ON the power. 2.Replace the DC Controller PCB (PCB4).
E001	0002	Title	Fixing unit temperature rise detection
		Description	The reading of the sub thermistor is 295 deg C or more continuously for 200 msec.
		Remedy	1.Go through the following to clear the error: CLEAR > ENGIN > ERRCLR; and then turn OFF and then ON the power. 2.Check connection of the Connectors (Thermistor Connector and AC Connector). 3.Replace the Fixing Main Thermistor (Film Unit). 4.Replace the Fixing Assembly. 5.Replace the DC Controller PCB (PCB4).
E002	0000	Title	Fixing unit temperature insufficient rise
		Description	1.The reading of the main thermistor is less than 115 deg C continuously for 400 msec 1.3 sec after it has indicated 100 deg C. 2.The reading of the main thermistor is less than 150 deg C continuously for 400 msec 1.3 sec after it has indicated 140 deg C.
		Remedy	1.Go through the following to clear the error: CLEAR > ENGIN > ERRCLR; and then turn OFF and then ON the power. 2.Check connection of the Connectors (Thermistor Connector and AC Connector). 3.Replace the Fixing Main Thermistor (Film Unit). 4.Replace the Fixing Assembly. 5.Replace the DC Controller PCB (PCB4).
E003	0000	Title	Low fixing temperature detection after standby
		Description	The reading of the main thermistor is less than 140 deg C continuously for 400 msec or more.

Ecode	Detail Code	Item	Description
E003	0000	Remedy	1.Go through the following to clear the error: CLEAR > ENGIN > ERRCLR; and then turn OFF and then ON the power. 2.Check connection of the Connectors (Thermistor Connector and AC Connector). 3.Replace the Fixing Main Thermistor (Film Unit). 4.Replace the Fixing Assembly. 5.Replace the DC Controller PCB (PCB4).
E004	0000	Title	Thermistor disconnection detection error
		Description	When disconnection is detected with connector (J214) for 30 sec continuously.
		Remedy	1.Check connection of the Connector (J214). 2.Replace the Film Unit. 3.Replace the Fixing Assembly. 4.Replace the DC Controller PCB (PCB4).
E010	0001	Title	Unstable rotation of the Main Motor (M1)
		Description	Detection is executed every 100 msec after the start of motor rotation; however, the drive detection signal is absent for 2 sec.
		Remedy	1.Replace the Main Motor (M1). 2.Replace the DC Controller PCB (PCB4).
E010	0002	Title	Unstable rotation of the Main Motor (M1)
		Description	During motor rotation, detection is executed every 100 msec; however, the drive signal is absent 5 times in sequence.
		Remedy	1.Replace the Main Motor (M1). 2.Replace the DC Controller PCB (PCB4).
E014	0001	Title	Unstable rotation of the Fixing Motor (M2)
		Description	Detection is executed every 100 msec after the start of motor rotation; however, the drive detection signal is absent for 2 sec.
		Remedy	1.Replace the Fixing Motor (M2). 2.Replace the DC Controller PCB (PCB4).
E014	0002	Title	Unstable rotation of the Fixing Motor (M2)
		Description	During motor rotation, detection is executed every 100 msec; however, the drive signal is absent 5 times in sequence.
		Remedy	"1.Replace the Fixing Motor (M2). 2.Replace the DC Controller PCB (PCB4)."
E020	0000	Title	The path between the sub hopper and the developing assembly is clogged with toner.
		Description	The Developing Assembly Toner Sensor (TS1) detects the absence of toner,while the Sub Hopper Toner Sensor (TS2) detects the presence of toner. With the Developing Cylinder Clutch (CL3) turned on, the hopper feedscrew motor (M7) is rotated for 1 sec intermittently 194 times; still, theDeveloping Assembly Toner Sensor (TS1) does not detect the presence of toner. * Error occurs after the delivery if a paper in passage exists.
		Remedy	1.Replace the Developing Assembly Toner Sensor (TS1). 2.Replace the Sub Hopper Toner Sensor (TS2). 3.Replace the Toner Supply Assembly . 4.Replace the DC Controller PCB (PCB4).
E024	0000	Title	The connector (J207) of Developing Assembly Toner Sensor (TS1) is disconnected.
		Description	The Developing Assembly Toner Sensor (TS1) connection detection signal is absent for 100 msec 10 times in sequence. * Error occurs after the delivery if a paper in passage exists.
		Remedy	1.Check connection of the Connector (J207). 2.Replace the Developing Assembly Toner Sensor (TS1). 3.Replace the DC Controller PCB (PCB4).
E024	0001	Title	The Developing Assembly Toner Sensor (TS1) is disconnected.

Ecode	Detail Code	Item	Description
E024	0001	Description	<At LOW SPEED> - The developing assembly toner sensor (TS1) ON counter is checked every 2.5 seconds, and the counter increments 1 count every 25 times when the sensor goes on, and 300 counts are reached. <At HIGH SPEED> - The developing assembly toner sensor (TS1) ON counter is checked every 1.5 seconds, and the counter increments 1 count every 15 times when the sensor goes on, and 300 counts are reached.
		Remedy	1.Check connection of the Connector (J207). 2.Correct the cable. 3.Replace the Developing Assembly Toner Sensor (TS1).
E025	0000	Title	The connector (J207) of Sub Hopper Toner Sensor (TS2) is disconnected.
		Description	The Sub Hopper Toner Sensor (TS2) connection detection signal is absent for 100 msec 10 times in sequence. * Error occurs after the delivery if a paper in passage exists.
		Remedy	1.Check connection of the Connector (J207). 2.Replace the Sub Hopper Toner Sensor (TS2). 3.Replace the DC Controller PCB (PCB4).
E025	0001	Title	Failure of the Bottle Motor (M6)
		Description	The bottle motor (M6) is unlocked when it goes on for 12 consecutive times at 0.1 sec. intervals. * Error occurs after the delivery if a paper in passage exists.
		Remedy	1.Replace the Bottle Motor (M6). 2.Replace the DC Controller PCB (PCB4).
E110	0001	Title	Failure of the Scanner Motor (M21)
		Description	The Scanner Motor (M21) speed lock signal does not indicate a locked state a specific period of time after the Scanner Motor (M21) has been started. * The same condition is detected after the error retry is performed.
		Remedy	1.Check the cable. 2.Replace the Laser Scanner Unit. 3.Replace the DC Controller PCB (PCB4).
E110	0002	Title	Failure of the Scanner Motor (M21)
		Description	The speed lock signal indicates a deviation 10 times in sequence at intervals of 100 msec after the signal has indicated a locked state. * The same condition is detected after the error retry is performed.
		Remedy	1.Check the cable. 2.Replace the Laser Scanner Unit. 3.Replace the DC Controller PCB (PCB4).
E110	0003	Title	Failure of the Scanner Motor (M21)
		Description	The scanner motor (M21) speed lock signal does not indicate a locked state for 6.5 sec. after a switchover is made from low to normal speed or for 8 sec. after a switchover is made from normal to low speed. * The same condition is detected after the error retry is performed.
		Remedy	1.Check the cable. 2.Replace the Laser Scanner Unit. 3.Replace the DC Controller PCB (PCB4).
E196	0000	Title	Error in EEPROM access
		Description	20 retries failed after error occurred during communication with EEPROM. * Error occurs after the delivery if a paper in passage exists.
		Remedy	1.Replace the DC Controller PCB (PCB4).
E197	0000	Title	Error in communication of Laser Driver PCB (PCB14)
		Description	Communication error with Laser Driver PCB (communication data failure)
		Remedy	1.Check the cable. 2.Replace the Laser Scanner Unit. 3.Replace the DC Controller PCB (PCB4). 4.Replace the Main Controller PCB (PCB1).

Ecode	Detail Code	Item	Description
E197	0001	Title	Error in communication of Laser Driver PCB (PCB14)
		Description	Communication error with Laser Driver PCB (serial communication failure)
		Remedy	1.Check the cable. 2.Replace the Laser Scanner Unit. 3.Replace the DC Controller PCB (PCB4). 4.Replace the Main Controller PCB (PCB1).
E202	0001	Title	There is an error in the detection of the CCD home position.
		Description	The attempt to detect the home position fails when the CCD is moved forward.
		Remedy	1.Disconnect and then connect the flexible cable(Relay PCB (PCB2)-Main Controller PCB (PCB1) 64pin). 2.Replace the flexible cable. 3.Replace the CCD HP sensor (S22). 4.Replace the Scanner Motor (M21). 5.Replace the Relay PCB (PCB2). 6.Replace the Main Controller PCB (PCB1).
E202	0002	Title	There is an error in the detection of the CCD home position.
		Description	The attempt to detect the home position fails when the CCD is moved back.
		Remedy	1.Disconnect and then connect the flexible cable(Relay PCB (PCB2)-Main Controller PCB (PCB1) 64pin). 2.Replace the flexible cable. 3.Replace the CCD HP sensor (S22). 4.Replace the Scanner Motor (M21). 5.Replace the Relay PCB (PCB2). 6.Replace the Main Controller PCB (PCB1).
E240	0000	Title	Error in controller communication
		Description	The serial communication error such as parity error or overrun error is constantly detected.
		Remedy	1.Check the Connectors. 2.Replace the DC Controller PCB (PCB4).
E240	0001	Title	Error in controller communication
		Description	The serial communication error such as parity error or overrun error is detected while printing.
		Remedy	1.Check the Connectors. 2.Replace the DC Controller PCB (PCB4).
E261	0000	Title	Error in Zero Cross
		Description	Zero Cross failed to be detected for 500ms or more while the relay was ON. * The same condition is detected after the error retry is performed.
		Remedy	1.Check the Connectors. 2.Replace the DC Controller PCB (PCB4).
E500	0000	Title	Communication error
		Description	The communication with the host machine is interrupted.
		Remedy	1.Check the cable. 2.Replace the Finisher Controller PCB (PCB1). 3.Replace the DC Controller PCB.
E505	0001	Title	EEPROM error
		Description	The checksum for the EEPROM data has an error.
		Remedy	1.Replace the Finisher Controller PCB (PCB1).
E520	0001	Title	Shift Motor (M4) error
		Description	The shift roller does not leave the shift roller home position when the Shift Motor (M4) has been driven for 1.2 seconds.
		Remedy	1.Replace the Shift Roller HP Sensor (S2). 2.Replace the Shift Motor (M4). 3.Replace the Finisher Controller PCB (PCB1).
E520	0002	Title	Shift Motor (M4) error
		Description	The shift roller does not return to the shift roller home position when the Shift Motor (M4) has been driven for 1.2 seconds.

Ecode	Detail Code	Item	Description
E520	0002	Remedy	1.Replace the Shift Roller HP Sensor (S2). 2.Replace the Shift Motor (M4). 3.Replace the Finisher Controller PCB (PCB1).
E531	8001	Title	Stapler Motor (M10) error
		Description	The stapler does not leave the staple home position when the Staple Motor (M10) has been driven for 0.5 sec.
		Remedy	1.Check the wiring between the Finisher Controller PCB and Stapler. 2.Replace the Stapler. 3.Replace the Finisher Controller PCB (PCB1).
E531	8002	Title	Stapler Motor (M10) error
		Description	The stapler does not return to the staple home position when the Stapler Motor (M10) has been driven for 0.5 sec.
		Remedy	1.Check the wiring between the Finisher Controller PCB and Stapler. 2.Replace the Stapler. 3.Replace the Finisher Controller PCB (PCB1).
E532	0001	Title	STP Move Motor (M1) error
		Description	The stapler does not leave the stapler move home position when the STP Move Motor (M1) has been driven for 0.25 sec.
		Remedy	1.Replace the Stapler Move HP Sensor (S10). 2.Check the wiring between the Finisher Controller PCB and the STP Move Motor. 3.Check the stapler shift base. 4.Replace the STP Move Motor (M1). 5.Replace the Finisher Controller PCB (PCB1).
E532	0002	Title	STP Move Motor (M1) error
		Description	The stapler does not return to the stapler move home position when the STP Move Motor (M1) has been driven for 2.8 sec.
		Remedy	1.Replace the Stapler Move HP Sensor (S10). 2.Check the wiring between the Finisher Controller PCB and the STP Move Motor. 3.Check the stapler shift base. 4.Replace the STP Move Motor (M1). 5.Replace the Finisher Controller PCB (PCB1).
E540	0001	Title	Tray Lift Motor (M11) time out error
		Description	The stack tray does not move within a specified time period.
		Remedy	1.Replace the Tray Lift Motor (M11). 2.Replace the Finisher Controller PCB (PCB1).
E540	0005	Title	Tray Lift Motor (M11) closing detect switch error
		Description	The FG input cannot be detected when the Tray Lift Motor (M11) has been driven for 0.1 second.
		Remedy	1.Replace the Stack Tray Clock Sensor (S13). 2.Replace the Tray Lift Motor (M11). 3.Replace the Finisher Controller PCB (PCB1).
E542	0001	Title	Additional Tray Lift Motor (M12) time out error
		Description	The stack tray does not move within a specified time period.
		Remedy	1.Replace the Additional Tray Lift Motor (M12). 2.Replace the Finisher Controller PCB (PCB1).
E542	0005	Title	Additional Tray Lift Motor (M12) closing detect switch error
		Description	The FG input cannot be detected when the Additional Tray Lift Motor (M12) has been driven for 0.1 second.
		Remedy	1.Replace the Additional Tray Clock Sensor (S23). 2.Replace the Additional Tray Lift Motor (M12). 3.Replace the Finisher Controller PCB (PCB1).
E567	0001	Title	Shift Roller Release Motor (M5) error
		Description	The shift roller does not leave the shift roller release home position when the Shift Roller Release Motor (M5) has been driven for 0.1 sec.

Ecode	Detail Code	Item	Description
E567	0001	Remedy	1.Replace the Shift Roller Release Sensor (S3). 2.Replace the Shift Roller Release Motor (M5). 3.Replace the Finisher Controller PCB (PCB1).
E567	0002	Title	Shift Roller Release Motor (M5) error
		Description	The shift roller does not return to the shift roller release home position when the Shift Roller Release Motor (M5) has been driven for 0.06 sec.
		Remedy	1.Replace the Shift Roller Release Sensor (S3). 2.Replace the Shift Roller Release Motor (M5). 3.Replace the Finisher Controller PCB (PCB1).
E56F	0001	Title	Entrance Roller Release/Stopper HP Motor fails to move from HP
		Description	At initial rotation, when the Motor rotates for specified period of time and cannot move from HP, it is detected as an error if the same symptom occurs again after the first retry.
		Remedy	1. Check if the Motor (M6) Connector is physically removed. 2. Replace the Motor. 3. Check if the Entrance Roller Release/Stopper HP Sensor (S5) Connector is physically removed. 4. Replace the Entrance Roller Release/Stopper HP Sensor (S5).
E56F	0002	Title	Entrance Roller Release/Stopper HP Motor fails to return to HP
		Description	At initial rotation, when the Motor rotates for specified period of time and cannot return to HP, it is detected as an error if the same symptom occurs again after the first retry.
		Remedy	1. Check if the Motor (M6) Connector is physically removed. 2. Replace the Motor. 3. Check if the Entrance Roller Release/Stopper HP Sensor (S5) Connector is physically removed. 4. Replace the Entrance Roller Release/Stopper HP Sensor (S5).
E571	0001	Title	Gripper Open/Close Motor (M7) error
		Description	The gripper unit does not leave the gripper unit home position when the Gripper Open/Close Motor (M7) has been driven for 0.25 seconds.
		Remedy	1.Replace the Grip Arm Sensor (S13). 2.Replace the Gripper Open/Close Motor (M7). 3.Replace the Finisher Controller PCB (PCB1).
E571	0002	Title	Gripper Open/Close Motor (M7) error
		Description	The gripper unit does not return to the gripper unit home position when the Gripper Open/Close Motor (M7) has been driven for 0.15 seconds.
		Remedy	1.Replace the Grip Arm Sensor (S13). 2.Replace the Gripper Open/Close Motor (M7). 3.Replace the Finisher Controller PCB (PCB1).
E575	0001	Title	Gripper Unit Move Motor (M2) error
		Description	The gripper unit does not leave the gripper unit home position when the Gripper Unit Move Motor (M2) has been driven for 3.8 seconds.
		Remedy	1.Replace the Gripper Unit HP Sensor (S7). 2.Replace the Gripper Unit Move Motor (M2). 3.Replace the Finisher Controller PCB (PCB1).
E575	0002	Title	Gripper Unit Move Motor (M2) error
		Description	The gripper unit does not return to the gripper unit home position when the Gripper Unit Move Motor (M2) has been driven for 0.1 seconds.
		Remedy	1.Replace the Gripper Unit HP Sensor (S7). 2.Replace the Gripper Unit Move Motor (M2). 3.Replace the Finisher Controller PCB (PCB1).
E602	0001	Title	The built-in SD card is not detected
		Description	-
		Remedy	-
E602	1105	Title	Access to the built-in SD card failed
		Description	-

Ecode	Detail Code	Item	Description
E602	1105	Remedy	-
E711	0001	Title	Error in UFDI communication
		Description	The communication system error (such as reception timeout or checksum error) occurred.
		Remedy	1.Check and Replace the cable. 2.Replace the DC Controller PCB (PCB4). 3.Replace the Finisher Controller PCB.
E713	0000	Title	Erroneous communication with finisher
		Description	The communication does not restart by the error retry after the communication failure with the finisher.
		Remedy	1.Check the cable. 2.Replace the DC Controller PCB (PCB4). 3.Replace the Finisher Controller PCB.
E716	0000	Title	Erroneous communication with optional cassette pedestal
		Description	After the presence of a cassette pedestal has been detected, the communication fails to be normal for 5 sec.
		Remedy	1.Check the cable. 2.Replace the DC Controller PCB (PCB4). 3.Replace the Cassette Pedestal Driver PCB.
E716	0010	Title	Failure of the communication with the 2-way unit
		Description	When the communication with the 2-way unit is faulty after detecting the connection with the finisher.
		Remedy	1.Install the 2-way unit. 2.Check the cable. 3.Replace the DC Controller PCB (PCB4). 4.Replace the 2-way unit driver PCB.
E719	0000	Title	Erroneous communication with New Card Reader (serial communication)
		Description	-
		Remedy	-
E719	0002	Title	Erroneous communication with Coin Vendor (serial communication)
		Description	-
		Remedy	-
E736	0000	Title	Erroneous communication between CCU and controller.
		Description	-
		Remedy	-
E743	0000	Title	DDI communication error
		Description	The communication error is detected between the Main Controller PCB and the Reader Relay PCB.
		Remedy	1. Connection error between the Main Controller PCB and the Reader Relay PCB. 2. Failure of the Reader Relay PCB (PCB2). 3. Failure of the Main Controller PCB (PCB1).
E744	0001	Title	Mismatched version between the language file and the Bootable
		Description	-
		Remedy	-
E744	0002	Title	Oversized language file in HDD
		Description	-
		Remedy	-
E744	0003	Title	Mismatched version between the language file and the Bootable
		Description	-
		Remedy	-
E744	0004	Title	Language file reading error
		Description	-
		Remedy	-
E750	0100	Title	The combination error of the DC Controller PCB (PCB4) and the Main Controller PCB (PCB1).

Ecode	Detail Code	Item	Description
E750	0100	Description	When the combination of the hardware of the DC Controller PCB (PCB4) and the Main Controller PCB (PCB1) or the firmware of these is not correct.
		Remedy	1. Update the correct firmware which matched the model. 2. Replace the Power Supply PCB (PCB3). 3. Replace the DC Controller PCB (PCB4). 4. Replace the Main Controller PCB (PCB1).
E750	0200	Title	The combination error of the DC Controller PCB (PCB4) and the Main Controller PCB (PCB1). (In the case of the different country model)
		Description	When the combination of the hardware of the DC Controller PCB (PCB4) and the Main Controller PCB (PCB1) or the firmware of these is not correct.
		Remedy	1. Update the correct firmware which matched the model. 2. Replace the Power Supply PCB (PCB3). 3. Replace the DC Controller PCB (PCB4). 4. Replace the Main Controller PCB (PCB1).
E804	0000	Title	Failure of the Power Supply Cooloing Fan (FAN6)
		Description	When lock signal is detected for 5 sec while the Power Supply Cooloing Fan (FAN6) is stopped. * The same condition is detected after the error retry is performed.
		Remedy	1.Disconnect and then connect the connector (J205) on the DC Controller PCB (PCB4). 2.Replace the Power Supply Cooloing Fan (FAN6). 3.Replace the DC Controller PCB (PCB4).
E804	0001	Title	Unstable rotation of the Power Supply Cooloing Fan (FAN6)
		Description	When lock signal failed to be detected for 5 sec while the Power Supply Cooloing Fan (FAN6) is driven. * The same condition is detected after the error retry is performed.
		Remedy	1.Disconnect and then connect the connector (J205) on the DC Controller PCB (PCB4). 2.Replace the Power Supply Cooloing Fan (FAN6). 3.Replace the DC Controller PCB (PCB4).
E805	0000	Title	Failure of the Exhaust Fan (Rear) (FAN3)
		Description	When lock signal is detected for 5 sec while the Exhaust Fan (Rear) (FAN3) is stopped. * The same condition is detected after the error retry is performed.
		Remedy	1.Disconnect and then connect the connector (J206) on the DC Controller PCB (PCB4). 2.Replace the Exhaust Fan (Rear) (FAN3). 3.Replace the DC Controller PCB (PCB4).
E805	0001	Title	Unstable rotation of the Exhaust Fan (Rear) (FAN3) or Finisher Fan 1 (M8) or Finisher Fan 2 (M9)
		Description	1.When lock signal failed to be detected for 5 sec while the Exhaust Fan (Rear) (FAN3) is driven. 2.When lock signal failed to be detected for 5 sec while the Finisher Fan 1 (M8) is driven. 3.When lock signal failed to be detected for 5 sec while the Finisher Fan 2 (M9) is driven. * The same condition is detected after the error retry is performed.
		Remedy	1.Disconnect and then connect the connector (J206) on the DC Controller PCB (PCB4). 2.Replace the Exhaust Fan (Rear) (FAN3). 3.Replace the Finisher Fan 1 (M8). 4.Replace the Finisher Fan 2 (M9). 5.Replace the DC Controller PCB (PCB4).
E805	0002	Title	Failure of the Exhaust Fan (Front) (FAN4)
		Description	When lock signal is detected for 5 sec while the Exhaust Fan (Front) (FAN4) is stopped. * The same condition is detected after the error retry is performed.

Ecode	Detail Code	Item	Description
E805	0002	Remedy	1.Disconnect and then connect the connector (J206) on the DC Controller PCB (PCB4). 2.Replace the Exhaust Fan (Front) (FAN4). 3.Replace the DC Controller PCB (PCB4).
E805	0003	Title	Unstable rotation of the Exhaust Fan (Front) (FAN4)
		Description	When lock signal failed to be detected for 5 sec while the Exhaust Fan (Front) (FAN4) is driven. * The same condition is detected after the error retry is performed.
		Remedy	1.Disconnect and then connect the connector (J206) on the DC Controller PCB (PCB4). 2.Replace the Exhaust Fan (Front) (FAN4). 3.Replace the DC Controller PCB (PCB4).

FAX Error Code

■ Outline

● Error Code Outline

An error code is used to indicate a fault in a machine, and is indicated in the machine's LCD or reports, showing the nature (symptoms) of the fault. Using the errorcode, the user or the service man can readily find out how to correct the fault by simply referring to the User's Manual or service manual.
An error code may be either of the following two types:

- User Error Codes
  A fault indicated as a user error code is one that can easily be corrected by the user, as by operating the machine. It takes the form of "# + number."

- Service Error Codes
  If a fault calls for a service man for correction, it is indicated as a service man error code in the form of "## + number" or "SYSTEM ERROR E + number."

NOTE:
- A service error code expressed in the form of "## + number" will not appear on the LCD, Error Tx Report, or Activity Report while the machine remainsin factory default state. To check a service error code, shift bit 0 of service soft switch #1 SSSW SW01 to '1'.
- For the causes and countermeasures of error codes, refer to the separate G3/G4 Facsimile Error Code List.

■ User Error Code

● User Error Code

No.	Description
#0001	An original has jammed.
#0003	Time-out for copying or sending/receiving a single page has occurred.
#0005	Time-out for initial identification (T0/T1) has occurred.
#0009	Recording paper has jammed or is absent.
#0012	Recording paper is absent at the other party.
#0018	Auto call initiation has failed.
#0022	Documents could not be forwarded to the specified destination because there is insufficient memory available. The machine can store up to total of 71 jobs of send and transmission report in memory.
#0037	Image memory overflow at time of reception has occurred.
#0059	The number you dial and connected number (CSI) does not match.
#0099	A job was canceled during transmission to a USB memory media device. A secured print job was automatically canceled after the timeout period elapsed.
#0401	The USB memory media device is full or the maximum number of files that can be stored in the root directory (the top level of the directory tree in the USB memory media device) has been reached.

No.	Description
#0403	The job failed because a file with the same name already exists. Generally, if a file with the same name exists, a number ranging from 1 to 999 is added to the tail of the name to prevent naming conflicts. However, this error occurred because a file with the same number added to its file name already exists.
#0404	The job failed because the write protect switch of the USB memory media device was on.
#0406	The job failed because the USB memory media device was pulled out during transmission. An error occurred while data, such as image data, was being transferred to the USB memory media device. (The connected device may be formatted with a file system that is not supported by the machine.)
#0407	The length of the full path to the specified file (or folder) exceeded the supported limit. The transmission to the USB memory media device was not properly performed because the length of the full path including the root and file name exceeded the limit.
#0701	The specified Department ID does not exist, or the password has changed.
#0703	The memory for image data is full when sending color documents.
#0705	The send operation was interrupted because the size of the image data is larger than that specified in <Maximum TX Data Size> in E-mail/I-Fax Settings.
#0749	You could not execute the job because a service call message is being displayed.
#0751	The file server is not functioning. The network is down (the server is unable to connect to the network or was disconnected).
#0752	The SMTP server name and e-mail address are incorrect. The domain name is incorrect. The SMTP server is not functioning. The network is down.
#0753	A TCP/IP error occurred while sending an e-mail. (Socket, Select error, etc.)
#0755	Jobs cannot be sent because TCP/IP is not functioning correctly. The IP address is not set. When the machine was turned ON, an IP address was not assigned to the machine by the DHCP, RARP, or BOOTP server.
#0801	A timeout error occurred while the machine was communicating with the SMTP server to send an e-mail or send/receive an I-fax. The SMTP server returned an error while trying to connect. The destination is not correct. An error occurred on the server side during transmission to a file server.
#0802	The name of the SMTP server is incorrect. The DNS server address settings are incorrect. The domain name is incorrect. Connection to the DNS server failed.
#0804	You do not have permission to access the folder.
#0806	An incorrect user name or password was specified when sending documents to a file server. An incorrect destination was specified when sending an e-mail or I-fax.
#0808	A timeout error occurred while the machine was communicating with the FTP server. The FTP server returned an error while trying to connect. The destination is not correct. An error occurred on the server during transmission.
#0810	A POP server connection error occurred while receiving an I-fax. The POP server returned an error during the connection. A timeout error occurred on the server while connecting to the POP server.
#0813	The login name or password for access to the POP server is incorrect.
#0816	You have reached the quota for the number of pages you can scan.
#0818	You have received data that cannot be processed (the attached file cannot be printed).
#0819	You have received data that cannot be processed (MIME information is incorrect).
#0820	You have received data that cannot be processed (BASE 64 or uuencode is incorrect).
#0821	You have received data that cannot be processed (TIFF analysis error). When you are using the Media Print function, printing cannot be performed because you have selected a JPEG or TIFF file with unsupported file formats or a corrupted image file.
#0827	You have received data that cannot be processed (contains MIME information that is not supported).
#0828	You have received HTML data.
#0829	Data consisting of more than approximately 1,000 pages is received.
#0839	The user name or password for the SMTP Authentication is incorrect.
#0852	An error occurred because the main power switch was turned OFF while a job was being processed.
#0853	A print job sent from a computer via a printer driver is canceled since <Only allow secure print jobs> is set to 'On'.

No.	Description
#0995	The communication reservation was canceled.

■ Service Error Code

● Service Error Code

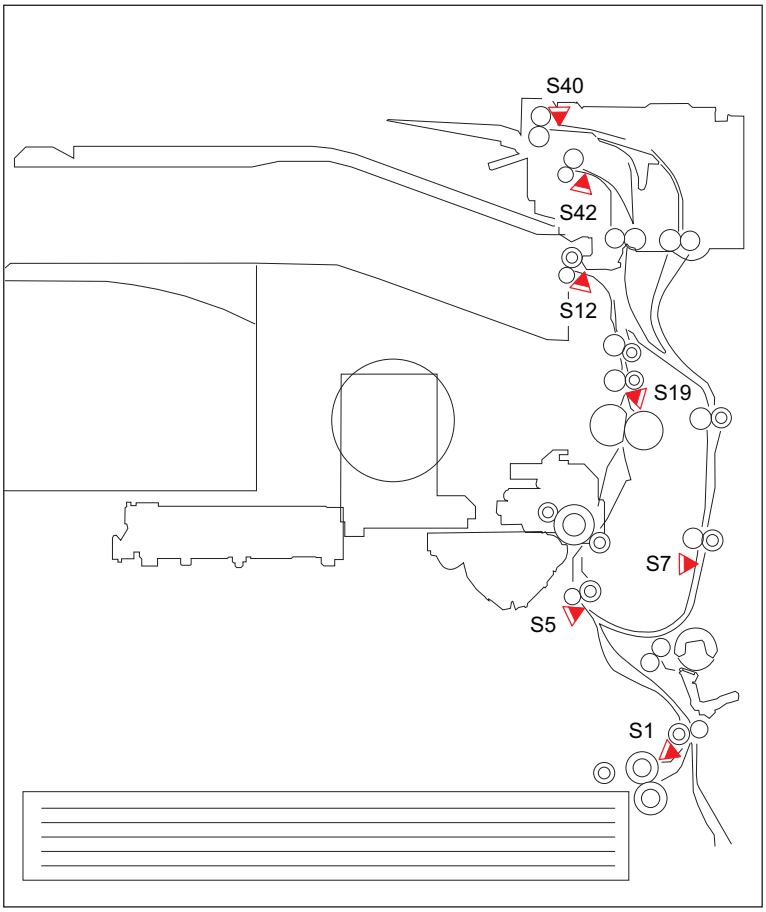
No.	Tx/Rx	Description
##0100	[Tx]	At time of transmission, the procedural signal has been transmitted more than specified.
##0101	[Tx/Rx]	The modem speed does not match that of the other party.
##0102	[Tx]	At time of transmission, fall-back cannot be used.
##0103	[Rx]	At time of reception, EOL cannot be detected for 5 sec (15 sec if CBT).
##0104	[Tx]	At time of transmission, RTN or PIN is received.
##0106	[Rx]	At time of reception, the procedural signal is received for 6 sec while in wait for the signal.
##0107	[Rx]	At time of reception, the transmitting party cannot use fall-back.
##0109	[Tx]	At time of transmission, a signal other than DIS, DTC, FTT, CFR, or CRP is received, and the procedural signal has been sent more than specified.
##0111	[Tx/Rx]	Memory error has occurred.
##0114	[Rx]	At time of reception, RTN is transmitted.
##0200	[Rx]	At time of reception, no image carrier is detected for 5 sec.
##0201	[Tx/Rx]	DCN is received outside the normal parity procedure.
##0224	[Tx]	Communication protocol signal error.
##0228	[Rx]	Abnormal management information of image data.
##0232	[Tx]	Encoding error has occurred.
##0237	[Rx]	Decoding error has occurred.
##0261	[Tx/Rx]	System error has occurred.
##0280	[Tx]	At time of transmission, the procedural signal has been transmitted more than specified.
##0281	[Tx]	At time of transmission, the procedural signal has been transmitted more than specified.
##0282	[Tx]	At time of transmission, the procedural signal has been transmitted more than specified.
##0283	[Tx]	At time of transmission, the procedural signal has been transmitted more than specified.
##0284	[Tx]	At time of transmission, DCN is received after transmission of TCF.
##0285	[Tx]	At time of transmission, DCN is received after transmission of EOP.
##0286	[Tx]	At time of transmission, DCN is received after transmission of EOM.
##0287	[Tx]	At time of transmission, DCN is received after transmission of MPS.
##0288	[Tx]	After transmission of EOP, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0289	[Tx]	After transmission of EOM, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0290	[Tx]	After transmission of MPS, a signal other than PIN, PIP, MCF, RTP, or RTN has been received.
##0670	[Tx]	At time of V.8 lAte start, the V.8 ability of DIS front the receiving party is expected to be detected, and the CI signal is expected to be transmitted in response; however, the procedure fails to advance, and the line is released because of T1 time-out.
##0671	[Rx]	At time of V.8 arrival, procedure fails to move to phase 2 after detection of CM signal from caller, causing T1 time-out and releasing line.
##0672	[Tx]	At time of V.34 transmission, a shift in procedure from phase 2 to phase 3 and the reafter stops, causing the machine to release the line and suffer T1 timeout.
##0673	[Rx]	At time of V.34 reception, a shift in procedure from phase 2 to phase 3 and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0674	[Tx]	At time of V.34 transmission, a shift in procedure from phase 3 and phase 4 to the control channel and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0675	[Rx]	At time of V.34 reception, a shift in procedure from phase 3 and phase 4 to the control channel and thereafter stops, causing the machine to release the line and suffer T1 timeout.
##0750	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of PPS-NULL, causing the procedural signal to be transmitted more than specified.
##0752	[Tx]	At time of ECM transmission, DCN is received after transmission of PPS- NULL.
##0753	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-NULL, or T5 time-out (60 sec) has occurred.
##0754	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-NULL..

No.	Tx/Rx	Description
##0755	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of PPS-MPS, causing the procedural signal to be transmitted more than specified.
##0757	[Tx]	At time of ECM transmission, DCN is received after retransmission of PPS- MPS.
##0758	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS, or T5 time-out (60 sec) has occurred.
##0759	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS.
##0762	[Tx]	At time of ECM transmission, DCN is received after transmission of PPS- EOM.
##0763	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-MPS, or T5 time-out (60 sec) has occurred.
##0764	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOM.
##0765	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of PPS-EOP, causing the procedural signal to be transmitted more than specified.
##0767	[Tx]	At time of ECM transmission, DCN is received after transmission of PPS-EOP.
##0768	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOP, or T5 time-out (60 sec) has occurred.
##0769	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of PPS-EOP, or T5 time-out (60 sec) has occurred.
##0770	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of EOR-NULL, causing the procedural signal to be transmitted more than specified.
##0772	[Tx]	At time of ECM transmission, DCN is received after transmission of EOR- NULL..
##0773	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-NULL, or T5 time-out (60 sec) has occurred.
##0774	[Tx]	At time of ECM transmission, ERR is received after transmission of EOR- NULL..
##0775	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of EOR-MPS, causing the procedural signal to be transmitted more than specified.
##0778	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission EOR-MPS, or T5 time-out (60 sec) has occurred.
##0779	[Tx]	At time of ECM transmission, ERR is received after transmission of EOR- MPS.
##0780	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of EOR-EOM, causing the procedural signal to be transmitted more than specified.
##0782	[Tx]	At time of ECM transmission, DCN is received after transmission of EOR- EOM.
##0783	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-EOM, or T5 time-out (60 sec) has occurred.
##0784	[Tx]	At time of ECM transmission, no meaningful signal is received after transmission of EOR-EOP, causing the procedural signal to be transmitted more than specified.
##0787	[Tx]	At time of ECM transmission, DCN is received after transmission of EOR-EOP.
##0788	[Tx]	At time of ECM transmission, the procedural signal has been transmitted more than specified after transmission of EOR-EOP, or T5 time-out (60 sec) has occurred.
##0789	[Tx]	At time of ECM transmission, ERR is received after transmission of EOR-EOP.
##0790	[Rx]	At time of ECM reception, ERR is transmitted after transmission of EOR-Q.
##0791	[Tx]	While ECM mode procedure is under way, a signal other than a meaningful signal is received.
##0792	[Rx]	At time of ECM reception, PPS-NULL cannot be detected over partial page processing.
##0793	[Rx]	At time of ECM reception, no effective frame is received while high-speed signal reception is under way, thus causing time-out.
##0794	[Tx]	At time of ECM reception, PPR with all 0s is received.
##0795	[Tx/Rx]	A fault has occurred in code processing for communication.

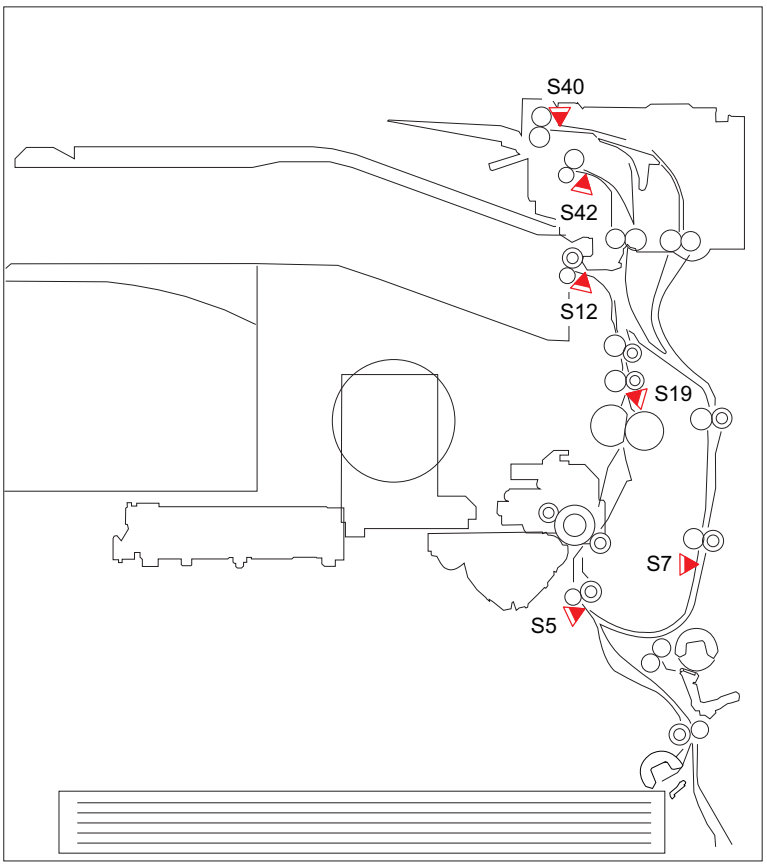
Jam Code

Main Unit

- 550-sheet 1st cassette model



- 250-sheet 1st cassette model



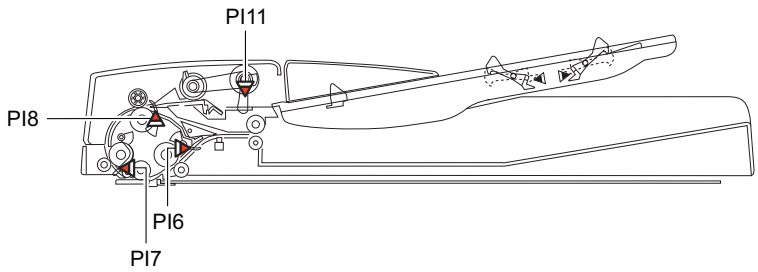
ACC ID	Jam Code	Type	Sensor Name	Sensor ID
3	0101	Delay jam	Cassette 1 pickup sensor	S1
3	0102	Delay jam	Cassette 2 pickup sensor	SR2
3	0103	Delay jam	Cassette 3 pickup sensor	SR4
3	0104	Delay jam	Cassette 4 pickup sensor	SR8
3	0105	Delay jam	Pre-registration sensor	S5
3	0107	Delay jam	Fixing outlet sensor	S19
3	0108	Delay jam	No. 1 delivery sensor	S12
3	0109	Delay jam	No. 2 delivery sensor	S42
3	010A	Delay jam	Reversal sensor	S40
3	010D	Delay jam	Duplex feed sensor	S7

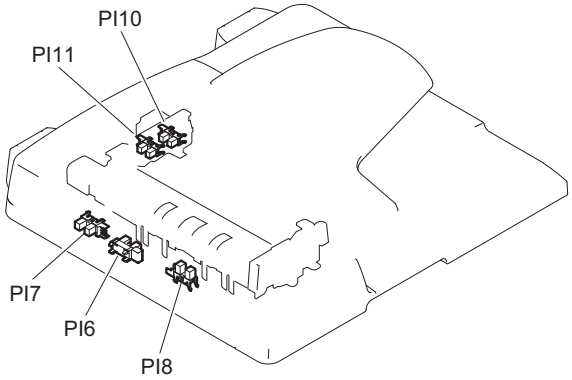
ACC ID	Jam Code	Type	Sensor Name	Sensor ID
3	0201	Stationary jam	Cassette 1 pickup sensor	S1
3	0202	Stationary jam	Cassette 2 pickup sensor	SR2
3	0203	Stationary jam	Cassette 3 pickup sensor	SR4
3	0204	Stationary jam	Cassette 4 pickup sensor	SR8
3	0205	Stationary jam	Pre-registration sensor	S5
3	0207	Stationary jam	Fixing outlet sensor	S19
3	0208	Stationary jam	No. 1 delivery sensor	S12
3	0209	Stationary jam	No. 2 delivery sensor	S42
3	020A	Stationary jam	Reversal sensor	S40
3	020D	Stationary jam	Duplex feed sensor	S7
3	0A01	Power-on jam	Cassette 1 pickup sensor	S1
3	0A02	Power-on jam	Cassette 2 pickup sensor	SR2
3	0A03	Power-on jam	Cassette 3 pickup sensor	SR4
3	0A04	Power-on jam	Cassette 4 pickup sensor	SR8
3	0A05	Power-on jam	Pre-registration sensor	S5
3	0A07	Power-on jam	Fixing outlet sensor	S19
3	0A08	Power-on jam	No. 1 delivery sensor	S12
3	0A09	Power-on jam	No. 2 delivery sensor	S42
3	0A0A	Power-on jam	Reversal sensor	S40
3	0A0D	Power-on jam	Duplex feed sensor	S7
3	0B00	Door open jam	-	-
3	0CA0	Sequence jam (*1)	-	-

ACC ID	Jam Code	Type	Sensor Name	Sensor ID
3	0CF1	Other jams	-	-
3	0D91	Wrong size specified	Pre-registration sensor	S5
3	9901	Sequence jam (*1)	-	-
3	9902	Sequence jam (*1)	-	-
3	9903	Sequence jam (*1)	-	-
3	9904	Sequence jam (*1)	-	-
3	9905	Sequence jam (*1)	-	-
3	9906	Sequence jam (*1)	-	-
3	9907	Sequence jam (*1)	-	-
3	9908	Sequence jam (*1)	-	-
3	9909	Sequence jam (*1)	-	-
3	FF00	Unknown jam	-	-
3	FF01	Unknown jam	-	-
3	FF02	Unknown jam	-	-
3	FF03	Unknown jam	-	-
3	FF04	Unknown jam	-	-
3	FF05	Unknown jam	-	-
3	FF07	Unknown jam	-	-
3	FF08	Unknown jam	-	-
3	FF09	Unknown jam	-	-
3	FF0A	Unknown jam	-	-
3	FF0D	Unknown jam	-	-
3	FF91	Unknown jam	-	-
3	FFF1	Unknown jam	-	-

*1: The state is recovered by opening and closing the Door or turning OFF and then ON the power supply.

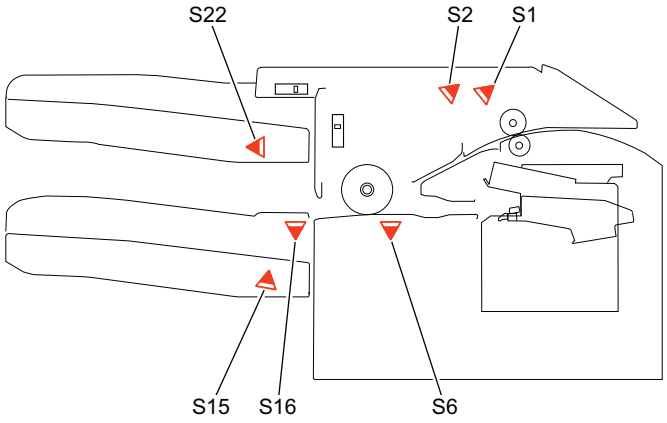
DADF-AB1

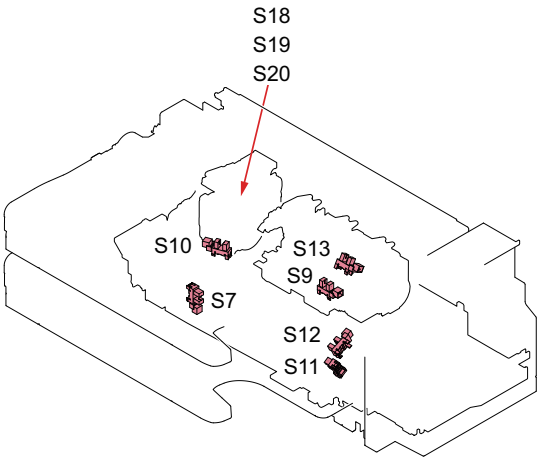




ACC ID	Jam Code	Type	Sensor Name	Sensor ID
4	0003	Delay jam	Registration sensor	PI8
4	0004	Stationary jam	Registration sensor	PI8
4	0005	Delay jam	Read sensor	PI7
4	0006	Stationary jam	Read sensor	PI7
4	0007	Delay jam	Delivery reversal sensor	PI6
4	0008	Stationary jam	Delivery reversal sensor	PI6
4	0044	Stationary jam (first document)	Registration sensor	PI8
4	0045	Delay jam (first document)	Read sensor	PI7
4	0046	Stationary jam (first document)	Read sensor	PI7
4	0047	Delay jam (first document)	Delivery reversal sensor	PI6
4	0048	Stationary jam (first document)	Delivery reversal sensor	PI6
4	0071	Timing error	-	-
4	0090	ADF open jam	Copyboard cover open/closed Sensor 0	S21
4	0091	User ADF open jam	Copyboard cover open/closed Sensor 0	S21
4	0092	ADF cover open jam	Cover open/closed sensor	PI10
4	0093	User cover open jam	Cover open/closed sensor	PI10
4	0094	Initial stationary jam	Registration sensor or Read sensor or Delivery reversal sensor	PI6, PI7, PI8
4	0095	Pickup NG	Document set sensor	PI11

Inner Finisher-B1





ACC ID	Jam Code	Type	Sensor Name	Sensor ID
5	1001	Delay jam	Entrance sensor	S1
5	1101	Stationary jam	Entrance sensor	S1
5	1102	Stationary jam	Processing tray sensor	S6
5	1300	Power-on jam	Entrance sensor, Processing tray sensor	S1, S6
5	1400	Door open jam	Front cover switch	SW1
5	1500	STP jam	Stapler HP sensor, Stapler edging sensor	S18, S19
5	1701	Initial rotation jam	Entrance sensor	S1
5	1C20	Error jam	Shift roller HP sensor	S2
5	1C32	Error jam	Stapler move HP sensor	S10
5	1C40	Error jam	Stack tray clock sensor	S14
5	1C42	Error jam	Additional tray clock sensor	S23
5	1C67	Error jam	Shift roller release sensor	S3
5	1C6F	Error jam	Entrance roller release /stopper HP sensor	S5
5	1C71	Error jam	Grip arm sensor	S13
5	1C75	Error jam	Gripper unit HP sensor	S7
5	1F00	Other jams	Entrance sensor	S1

Alarm Code

Alarm Code Details

Alarm Code			Title	A. Movement /B. Cause /C. Measures
04	-	0011	Cassette 1 Paper Feed Retry error	Movement: No change. CAUSE: The paper does not picked up even if the paper feed retry operation is carried out 4 times. MEASURE: Check the pick-up/paper feed/separation rollers. -> Check whether a scrap of paper remains around the paper feed area or not.
04	-	0012	Cassette 2 Paper Feed Retry error	Movement: No change. CAUSE: The paper does not picked up even if the paper feed retry operation is carried out 4 times. MEASURE: Check the pick-up/paper feed/separation rollers. -> Check whether a scrap of paper remains around the paper feed area or not.
04	-	0013	Cassette 3 Paper Feed Retry error	Movement: No change. CAUSE: The paper does not picked up even if the paper feed retry operation is carried out 4 times. MEASURE: Check the pick-up/paper feed/separation rollers. -> Check whether a scrap of paper remains around the paper feed area or not.
04	-	0014	Cassette 4 Paper Feed Retry error	Movement: No change. CAUSE: The paper does not picked up even if the paper feed retry operation is carried out 4 times. MEASURE: Check the pick-up/paper feed/separation rollers. -> Check whether a scrap of paper remains around the paper feed area or not.
04	-	0017	Manual Feeder Paper Feed Retry error	Movement: No change. CAUSE: The paper does not picked up even if the paper feed retry operation is carried out 4 times. MEASURE: Check the paper feed roller and the separation pad. -> Check whether a scrap of paper remains around the paper feed area or not.
10	-	0020	Toner (Bk) prior delivery alarm	Movement: No change. CAUSE: The remaining quantity of the toner became the specific level or less. MEASURE: Replace the toner Cartridge.
10	-	0100	Toner cartridge replacement completion alarm	The replacement of the Toner Cartridge was detected.
11	-	0001	Waste Toner Container full	Movement: A message "The waste toner container is full." is displayed on the Control Panel, and the machine is stopped. Cause: The Waste Toner Container becomes full. eplace the Waste Toner Container.
11	-	0010	Waste Toner Container prior delivery alarm	Movement: A message is displayed on the Control Panel. (Continuous printing is enabled.) Cause: Display of Waste Toner Container preparation alarm Measures: Replace the Waste Toner Container.
31	-	0005	Environment Sensor reading alarm	Movement: It becomes as follow: environment temperature= 0 degC, environment humidity= 0%. Cause: Connection of the Environment Sensor cannot be detected. Measures: 1) Check the connection of the Environment Sensor (HU1). 2) Replace the Environment Sensor (HU1).
37	-	0001	Repair Request (Corrupt Image)	-
37	-	0002	Repair Request (Paper Jam)	-
37	-	0003	Repair Request (Corrupt Image/Paper Jam)	-
37	-	0004	Repair Request (Other Problems)	-

Alarm Code			Title	A. Movement /B. Cause /C. Measures
37	-	0005	Repair Request (Corrupt Image/Other Problems)	-
37	-	0006	Repair Request (Paper Jam/Other Problems)	-
37	-	0007	Repair Request (Corrupt Image/Paper Jam/Other Problems)	-
37	-	1000	Repair Request Cancel	-
37	-	2000	Repair Completed	-
50	-	0010	Alarm due to original separation failure	Movement: Nothing in particular. Cause: Condition unable to separate 1st sheet of original from the ADF occurs 3 times. Measures: Check rotation of the Pickup Motor (M1) -> Check the life of the Pickup Roller -> Check if paper lint is at the Pickup Slot.
50	-	0012	Feed Motor Fan alarm	Movement: No change. CAUSE: Disconnection of the ADF Exhaust Fan (FM1) or the failure of ADF Exhaust Fan (FM1) Measures: Check the connector -> Replace the ADF Exhaust Fan (FM1)
85	-	0001	System error clear	-
85	-	0002	Auto-restore caused by service replacement	-
85	-	0003	Auto-restore caused by service replacement	-
85	-	0004	Auto-restore caused by service replacement	-
85	-	0005	Auto-restore caused by service replacement	-



Service Mode

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Overview

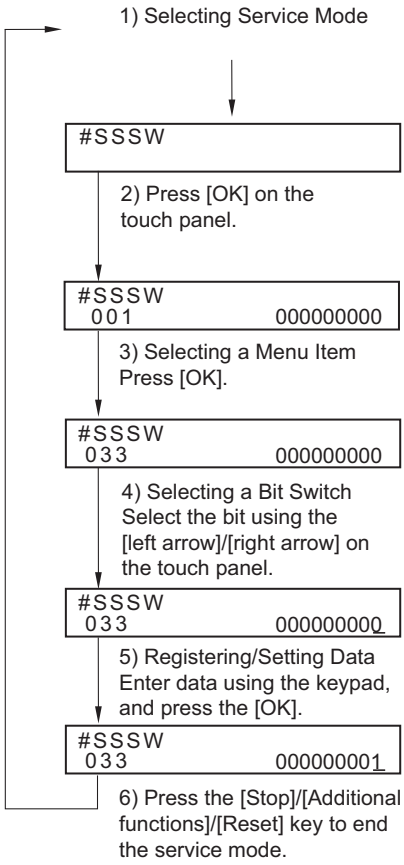
Outline of Service Mode

The items that follow may be checked/set using the machine's service mode, which is designed the way the service mode used in fax machines is designed in terms of contents and operation.

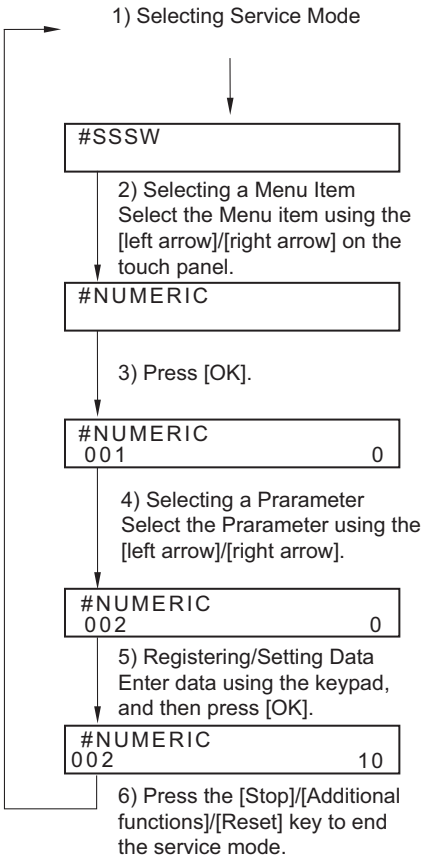
Service data item	Discription
#SSSW	Use it to register/set basic fax functions (e.g., error control, echo remedy, communication error correction). Use it to make settings related counter functions.
#MENU	Use it to register/set items related to functions needed at time of installation (e.g., NL equalizer, transmission level).
#NUMERIC	These setting items are for inputting numeric parameters such as the various conditions for the RTN signal transmission.
#SPECIAL	These setting items are for telephone network control functions. Do not use.
#NCU	These setting items are for telephone network control functions such as the selection signal transmission conditions and the detection conditions, for the control signals sent from the exchange.
#FAX	Do not use.
#SCAN	These setting items are for image adjustment in scanning.
#PRINT	These setting items are for image adjustment in printer assembly and for special mode for the field-related measures.
#NETWORK	Use it to confirm the contents of the installed CA certificates. Then this is a setting items related to NETWORK.
#CODEC	This is a setting items related to CODEC.
#SYSTEM	This is a setting items related to SYSTEM.
#ACC	Register the accessories.
#COUNTER	Use it to check estimates for maintenance/parts replacement.
#LMS	Use it to set the inactivity of the transmitted license and the license inactivity without transmitting.
#E-RDS	This is a setting items related to e-RDS (Embedded RDS).
#REPORT	Use it to generate reports on various service data.
#DOWNLOAD	Use it to download firmware to the ROM of a PCB in question.
#CLEAR	Use it to reset various data to initial settings.
#DISPLAY	The error and detailed code which have happened now are displayed. Display the engine speed of the main controller PCB.
#ROM	Displays ROM information, such as version numbers and checksums.
#TEST MODE	Makes various status checks, such as contact sensor, sensor and print status.

Using the Mode

<Operation at the time of Bit SW>



<Operation at the time of Parameter>



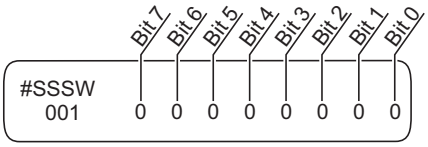
NOTE:
Push the (*) key when inputting the minus(-).
Therefore, (+) and (-) is changed.

Setting of Bit Switch

■ Outline

● Bit Switch Composition

The items registered and set by each of these switches comprise 8-bit switches.
The figure below shows which numbers are assigned to which bits. Each bit has a value of either 0 or 1.

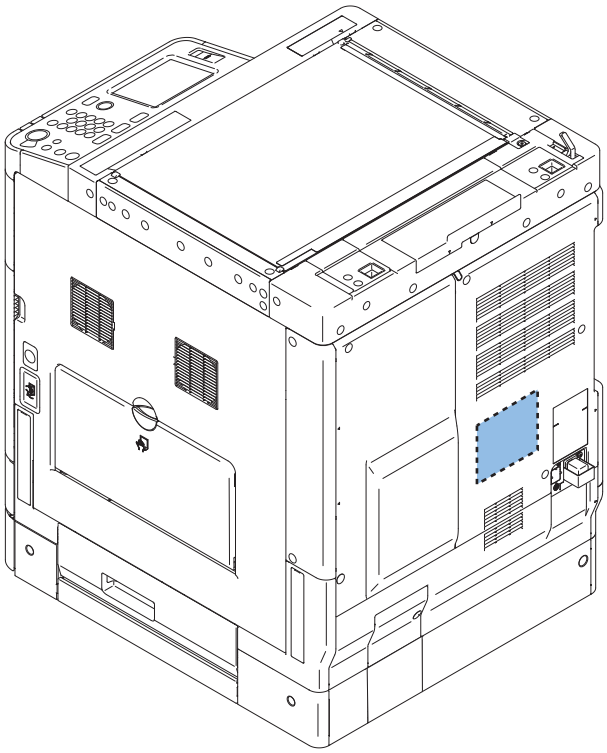


CAUTION:
Do not change service data identified as "not used"; they are set as initial settings.

Back-Up

At time of shipment from the factory, all machines are adjusted individually, and adjustment values are recorded in their respective service labels.
If you have replaced the CCD/CIS unit or the DC controller PCB, or if you have initialized the RAM, the adjustment values will return to their default settings. If there has been any change in a service mode item, be sure to update its setting indicated on the service label.
As necessary, make use of the space in the service label (as when recording an item not found on the label).

Service Label: behind the rear cover (right)



Service Label

The item of service kabel is described below.
In this machine, the output of the service label does not support.

	FACTORY	1	2	3
#PRINT> #PRINT NUMERIC>				
034	xxx			
035	xxx			
036	xxx			
037	xxx			
038	xxx			
054	xxx			
136	xxx			
140	xxx			
141	xxx			
142	xxx			
143	xxx			
145	xxx			
146	xxx			
147	xxx			
148	xxx			
149	xxx			
150	xxx			
#SCAN> READER> ADJUST> ADJ-XY>				
ADJ-X	xxx			
ADJ-Y	xxx			
ADJ-S	xxx			
ADJ-Y-DF	xxx			
STRD-POS	xxx			
Body No :				

	FACTORY	1	2	3
#SCAN> READER> ADJUST> ADJ-XY>				
ADJ-X-MG	xxx			
#SCAN> READER> ADJUST> CCD>				
W-PLT-X	xxx			
W-PLT-Y	xxx			
W-PLT-Z	xxx			
50_RG	xxx			
50_GB	xxx			
100_RG	xxx			
100_GB	xxx			
MTF3-M1	xxx			
MTF3-M2	xxx			
MTF3-M3	xxx			
MTF3-M4	xxx			
MTF3-M5	xxx			
MTF3-M6	xxx			
MTF3-M7	xxx			
MTF3-M8	xxx			
MTF3-M9	xxx			
#SCAN> READER> ADJUST> PASCAL>				
OFST-P-K	xxx			
#SCAN> FEEDER> ADJUST>				
DOCST	xxx			
LA-SPEED	xxx			
DOC-LNGH	xxx			

Details of Service Mode

#SSSW

■ SSSW Composition

NOTE:
This document describes the default settings for the system for USA.
The default settings used in the service mode vary depending on the shipping destination and model.

No.	Initial setting	Function
SW01	00000000	error/copy control
SW02	00010000	network connection setting
SW03	00000000	echo remedy setting
SW04	00000000	communication fault remedy setting
SW05	00000000	standard function (DIS signal) setting
SW06	10010000	read condition setting
SW7-SW11		not used
SW12	00000010	page timer setting
SW13	00000000	meter/inch resolution setting
SW14	00000001	inch/meter resolution setting
SW15	00000000	dial-in FAX/TEL switch-over function
SW16-17		not used
SW18	00000000	remedies for communication faults (2)
SW19-21		not used
SW22	00000000	fault remedy setting
SW23-24		not used
SW25	00000000	report indication resolution setting
SW26-27		not used
SW28	00000000	V.8/V.34 protocol settings
SW29		not used
SW30	00000000	Assigning a New Dial Tone Detection Method
SW31		not used
SW32	00000000	NCU version setting
SW33	00000000	counter function settings
SW34	00011011	waste toner container/toner cartridge/drum unit display settings
SW35	00001000	e-RDS function settings
SW36 - SW50		not used

■ Details

● SSSW-SW01

List of Functions

Bit	Function	1	0
0	service error code	output	not output
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
Selects whether or not service error codes are output. When output is selected, service error codes is report.

● SSSW-SW02

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	V34 CCRTN OFF	Disable	Not disable
5	not used	-	-
6	not used	-	-
7	F network silent termination service	Compatible	Not compatible

Detailed Discussions of Bit 4
V.34 control channel retrain can be disabled. When "1" is set, control channel retrain is not started by the own machine.

Detailed Discussions of Bit 7
Select whether or not the machine is compatible with the F network (facsimile communication network) silent termination service. When "Compatible" is selected, the machine automatically receives a fax upon detection of the FC signal (1300 Hz tonal signal) without generating a ringtone.

● SSSW-SW03

List of Functions

Bit	Function	1	0
0	TCF criteria	Loose	Normal
1	Echo protect tone for high-speed transmission	Transmitted	Not transmitted
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	Tonal signal before CED signal transmission	Transmitted	Not transmitted

Detailed Discussions of Bit 0
Select whether to make the TCF criteria loose when the system with a V.34 modem receives an image using the V.17 protocol. When "Loose" is selected, fallback hardly occurs when an image is received using the V.17 protocol.
However, since the transmission speed is fast, erroneous lines can be generated after start of image reception or the communication time can become long due to retransmission of erroneous frames.

Detailed Discussions of Bit 1

Selects whether or not the echo protect tone is transmitted for high-speed transmission (9600 or 7200 bps).
If errors due to line conditions occur frequently during fax transmission, select “Transmitted”.
When “Transmitted” is selected, a non-modulated carrier is transmitted as a synchronization signal before the image transmission.

NOTE:
Codes for errors that can occur during transmission because of line conditions:
##100, ##104, ##281, ##282, ##283, ##750, ##755, ##760,##765

Detailed Discussions of Bit 7
Use it to enable/disable transmission of a 1080-Hz tonal signal before transmission of the CED signal.
Select 'transmit' if errors occur frequently because of an echo when reception is from overseas.

NOTE:
Any of the following error code may be indicated because of an echo at time of reception
##0005, ##0101, ##0106, ##0107, ##0114, ##0200, ##0201, ##0790

• SSSW-SW04

List of Functions

Bit	Function	1	0
0	not used	-	-
1	Check CI frequency	Yes	No
2	the number of final flag sequences of protocol signals	2	1
3	Reception mode after CFR signal transmission	high speed	high speed/low speed
4	the length of the period of ignoring low speed signals after CFR output	1500ms	700ms
5	Frequency of CI signal is checked when PBX is set.	Yes	No
6	CNG signal for manual transmission	Not transmitted	Transmitted
7	CED signal for manual reception	Not transmitted	Transmitted

Detailed Discussions of Bit 1
In automatic recieving, CI frequency check can be selected. If ‘Yes’ is selected, the upper and lower limits of the CI frequency are checked, and automatic recieving can only go ahead if both values meet German regulations.

Detailed Discussions of Bit 2
Use it to select the number of last flag sequences for a protocol signal (transmission speed at 300 bps). Select '2' if the other party fails to receive the protocol signal properly.

NOTE:
Any of the following error codes may be indicated at time of transmission
##0100, ##0280, ##0281, ##0750, ##0753, ##0754, ##0755, ##0758, ##0759, ##0760, ##0763 ##0764, ##0765, ##0768, ##0769,##0770, ##0773, ##0775, ##0778, ##0780, ##0783, ##0785, ##0788

Detailed Discussions of Bit 3
Use it to select an appropriate reception mode after transmission of the CFR signal.
If errors occur frequently at time of reception because of the condition of the line, select 'high speed' for reception mode and, at the same time, selects 'do not receive' for 'ECM reception.'

NOTE:
Any of the following error codes may be indicated at time of reception because of line condition
##0107, ##0114, ##0201
Be sure to change bit 4 before changing this bit; if errors still occur, change this bit.
When 'high speed' is selected, only high-speed signals (images) will be received after transmission of the CFR signal.

Detailed Discussions of Bit 4
Use it to select the time length during which low-speed signals are ignored after transmission of the CFR signal.
If the condition of the line is not good and, therefore, the reception of image signals is difficult, select '1500 ms.'

Detailed Discussions of Bit 5
In the countries that need approval of CI signal frequency check, no checking on frequency set at PBX when changing the frequency to PSTN setting and PBX setting for frequency checks.

Detailed Discussions of Bit 6
Selects whether or not to transmit CNG signal during manual transmission.
In manual transmitting to a fax with the FAX/TEL switching mode, if there are frequent errors due to failure to switch to fax mode, select "Transmitted" for the CNG signal.

Detailed Discussions of Bit 7
Selects whether or not to transmit CED signals during manual reception.
If the other fax does not transmit even when you start manual reception, select "Transmitted" for the CED signal.

● SSSW-SW05

List of Functions

Bit	Function	1	0
0	not used	-	-
1	Conversion from mm to inch (text mode)	execute	do not execute
2	Conversion from mm to inch (text/photo mode)	execute	do not execute
3	transmit bit 33 and thereafter for DIS signal	prohibit	do not prohibit
4	Recording paper length availability declared in DIS signal	A4 /B4 size	Arbitrary size
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 1
Use it to enable/disable millimeter/inch conversion in sub scanning direction for images read in text mode.
Scanning direction in conversion follows the Bit 2 setting of SW14.

Detailed Discussions of Bit 2
Use it to enable/disable millimeter/inch conversion in sub scanning direction for images read in text/photo mode while bit 1 is set to '1'.
Scanning direction in conversion follows the Bit 2 setting of SW14.

Detailed Discussions of Bit 3
Use it specify whether or not to transmit bit 33 and thereafter for the DIS signal.
If 'prohibit' is selected, Super Fine reception from a non-Canon machine can no longer be used.

CAUTION:
If 'prohibit' is selected, Super Fine reception from a non-Canon machine can no longer be used.

Detailed Discussions of Bit 4
Selects whether or not the recording paper length declared in the DIS signal is A4 size.
When receiving documents made up of long pages, to have the document divided into two pages at the transmitting fax, select "A4 size".

NOTE:
When "A4 size" is selected, this fax uses the DIS signal to tell the transmitting fax that it is equipped with A4 size recording paper. The transmitting fax that receives this DIS signal divides long pages into A4 size pages before transmitting it to the receiving fax. Some fax models do not so divide long documents.

● SSSW-SW06

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	FAX stamp display setting	Displayed	Not displayed
4	original read width	LTR	A4
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 3
Select whether to display the stamp menu in the user menu after installation of the optional stamp unit.

Detailed Discussions of Bit 4
Use it to select a read width for originals.
If 'LTR' is selected, the machine will read LTR originals at LTR width (214mm).

● SSSW-SW012

List of Functions

Bit	Function	1	0
0	1-page time-out length for transmission	*	*
1		*	*
2	1-page time-out length for transmission (HT transmission)	*	*
3		*	*
4	1-page time-out length for reception	*	*

Bit	Function	1	0
5	1-page time-out length for reception	*	*
6	not used	-	-
7	page timer setting by transmission/reception	set	do not set

The machine will stop the ongoing communication if the transmission/reception of a single original page takes 32 min or more. To use the timer for a purpose other than this function, refer to the tables that follow, and select an appropriate time length. When 'do not enable' is selected using bit 7, the time-out length for a single page for all modes will depend on the setting of bit 0 and bit 1.

Time-Out Length for Transmission/reception

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8min.	0	*	*	*	*	*	0	0
16min.	0	*	*	*	*	*	0	1
32min.	0	*	*	*	*	*	1	0
64min.	0	*	*	*	*	*	1	1

Time-Out Length for Transmission (text mode)

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8min.	1	*	*	*	*	*	0	0
16min.	1	*	*	*	*	*	0	1
32min.	1	*	*	*	*	*	1	0
64min.	1	*	*	*	*	*	1	1

Time-Out Length for Transmission (image mode other than text mode)

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8min.	1	*	*	*	0	0	*	*
16min.	1	*	*	*	0	1	*	*
32min.	1	*	*	*	1	0	*	*
64min.	1	*	*	*	1	1	*	*

Time-Out Length for Reception

	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
8min.	1	*	0	0	*	*	*	*
16min.	1	*	0	1	*	*	*	*
32min.	1	*	1	0	*	*	*	*
64min.	1	*	1	1	*	*	*	*

• SSSW-SW013

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	Convert "inch" into "mm" when transmitting the received image data	convert	do not convert
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 2
It converts "inch" into "mm" when transmitting the received image data.
Scanning direction in conversion follows the Bit 2 setting of SW14.

● SSSW-SW014

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	direction of scanning for inch/mm conversion	both main and sub scanning directions	sub scanning direction only
3	not used	-	-
4	inch-configuration resolution declaration	declare	do not declare
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 2
Use it to specify whether to convert or not convert an inch-configuration resolution into a millimeter-configuration resolution for image read in G3 transmission:
either in sub scanning direction only or in both main and sub scanning directions. The setting is valid only when bit 1 of SW05 of #SSSW is set to '1'.

Detailed Discussions of Bit 4
Use it to specify whether to declare or not declare an inch-configuration resolution to the other machine for G3 communication: if 'declare' is selected, the machine will indicate that it reads and records at an inch-configuration resolution using the DIS, DCS, or DTC signal.

● SSSW-SW15

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	Reception of call through caller ID display line (main unit line)	Yes	No
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	Detection of continuous signal at fax/tel switchover	Yes	No
7	not used	-	-

Detailed Discussions of Bit 2
When a machine which is not compatible with the caller ID display/modem dial-in service is connected to the subscriber line which is compatible with that service, the "main unit line" is made ready for receiving the incoming call.

Detailed Discussions of Bit 6
Select whether to detect a continuous ROT signal at FAX/TEL switchover.

● SSSW-SW18

List of Functions

Bit	Function	1	0
0	detection of carrier between DCS and TCF	detect	do not detect
1	wait time for carrier between DCS and TCF	600msec	300msec
2	To disable communication control for IP network.	Yes	No

Bit	Function	1	0
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
For reception, the absence of the carrier between DCS and TCF may be detected.
If the machine returns FTT while the other party (PC-FAX in particular) is sending TCF to cause a reception error, be sure to set the bit to '1'.
If the error still occurs, set bit 1 of #1 SSSW SW18 to '1'.
This function is valid only when the machine uses an R288F modem.

Detailed Discussions of Bit 1
For reception, the length of time during which the absence of the carrier is detected between DCS and TCF may be set.
This bit is valid when '1' is set to bit 0 of #1 SSSW SW18.

Detailed Discussions of Bit 2
You can change the parameter relating to communication control for IP network (SSSW-SW02 bit4) to the existing control in a batch process.
The parameter value is handled as a fixed value.

● SSSW-SW22

List of Functions

Bit	Function	1	0
0	To disable NSX transmission.	Yes	No
1	not used	-	-
2	not used	-	-
3	Prohibit manual polling	Yes	No
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
Nonstandard protocol (own company mode) can be disabled.

Detailed Discussions of Bit 3
Selects whether to prohibit by manual polling (off hook key + start key).

● SSSW-SW25

List of Functions

Bit	Function	1	0
0	Transmission telephone numbers displayed on reports from CSI	Other fax number	Called number
1	not used	-	-
2	If void CSI has been received, handle as non-received CSI.	Yes	No
3	Menu display of message language	Display	Do not display
4	not used	-	-
5	not used	-	-
6	not used	-	-

Bit	Function	1	0
7	not used	-	-

Detailed Discussions of Bit 0
Selects the transmission telephone number displayed on reports after the completion of transmission.
When “Called number” is selected, the telephone number the fax called is displayed on reports.
When “Other fax number” is selected, the telephone number sent from the other fax (the CSI signal data) is displayed on reports.

Detailed Discussions of Bit 2
At "1" on this Bit, ignore the void CSI if received and if the dial has been made at this point, the dialed number will be indicated on the LCD/ Report screen.
At "0" on this Bit, even though the dialed number is acknowledged, LCD/Report screen will indicate nothing.

Detailed Discussions of Bit 3
When “Display” is selected, adds a Message Language menu to the user data “System Setting”.
This allows selecting different languages which to show displays and reports.

● SSSW-SW28

List of Functions

Bit	Function	1	0
0	Caller V.8 protocol	No	Yes
1	Called party V.8 protocol	No	Yes
2	Caller V.8 protocol late start	No	Yes
3	Called party V.8 protocol late start	No	Yes
4	V.34 reception fallback	Prohibited	Not prohibited
5	V.34 transmission fallback	Prohibited	Not prohibited
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
Select whether to use the V.8 protocol when calling.
If NO is selected, the V.8 protocol is inhibited at calling and the V.21 protocol is used

Detailed Discussions of Bit 1
Select whether to use the V.8 protocol when called.
If NO is selected, the V8 protocol is inhibited when called and the V.21 protocol is used.

Detailed Discussions of Bit 2
If ANSam signal is not received during transmission, select whether to use the V.8 protocol when the other fax machine declares the V.8 protocol in DIS signal.
If NO is selected, the CI signal is not transmitted and the V.8 protocol is not used even if the DIS that specifies the V.8 protocol is received.
The V.8 late start is not executed during manual transmission regardless of this setting.

Detailed Discussions of Bit 3
Select whether to declare the V.8 protocol in DIS signal for reception.
If NO is selected, the V.8 protocol cannot be used because it is not declared in DIS signal.
The V.8 late start is not executed during manual reception regardless of this setting.

Detailed Discussions of Bit 4
Select whether the receiver falls back during V.34 reception.
If 'Prohibit' is selected, the receiver does not fall back.

Detailed Discussions of Bit 5

Select whether the transmitter falls beck during V.34 transmission.
If 'Prohibit' is selected, teh transmitter does not fall back.

● SSSW-SW30

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	New dial tone detection method	Detect with the new method.	Detect with the existing method.
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 5
When "Detect with the new method" is selected, tone is detected for 3.5 seconds before call origination in order to discriminate between dial tone and voice. If dial tone is detected and
the time since line seizure is 3.5 seconds or longer, call origination takes place immediately. If the time since line seizure is less than 3.5 seconds,
call origination takes place after waiting for 1 second. (If the time since line seizure reaches 3.5 seconds during the 1-second waiting period, call origination takes place immediately. By default, "Detect with a new method" is assigned for this SW.

● SSSW-SW32

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	NCU version	NCU2002	NCU2004
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 5
NCU (Network Control Unit) version can be selected.

● SSSW-SW33

List of Functions

Bit	Function	1	0
0	count B4 (Print) as large size	Yes	No
1	not used	-	-
2	count B4 (Scan) as large size	Yes	No
3	the counter display type change in Japan and USA	*	*
4		*	*
5	Toner cartridge replacement counter display	Yes	No
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
Use it to specify whether B4 paper (Print) should be counted as large-size paper.
If 'yes' is selected, B4 paper will be counted as large-size paper.
If 'no' is selected, on the other hand, B4 paper will be counted as small-size paper.

Detailed Discussions of Bit 2
Use it to specify whether B4 paper (Scan) should be counted as large-size paper.
If 'yes' is selected, B4 paper will be counted as large-size paper.
If 'no' is selected, on the other hand, B4 paper will be counted as small-size paper.

Detailed Discussions of Bit 3/4
Select whether to switch the counter display type in effect in Japan and USA to the conventional or new type.
Select "Yes" to display counters in the new type.
Select "No" to display counters in the conventional type.

	Bit4	Bit3
Conventional type(type1)	0	0
New type(type2)	0	1
New type(type3)	1	0
New type(type4)	1	1

Detailed Discussions of Bit 5
Select whether to display the toner cartridge replacement counter.
When "1" is selected, the counter is displayed.
When "0" is selected, the counter is not displayed.

● SSSW-SW34

List of Functions

Bit	Function	1	0
0	Display the waste toner full warning	Yes	No
1	Switch the waste toner full warning	Drum replacement required message displayed on an operator call	E019 displayed on an service call
2	User drum replacement menu display	Yes	No
3	Display the preparation warning message of the waste toner container	Display	Not display
4	Display the replacement warning message of the toner cartridge	Display	Not display
5	not used	-	-
6	not used	-	-
7	not used	-	-

Details of [Bit 0]
You can select whether to display waste toner full warning.
Selecting "1" notifies waste toner full warning. (Initial value)
Selecting "0" does not notify waste toner full warning.

Details of [Bit 1]
Regarding the waste toner full warning, you can select display of drum replacement by an operator call or display of E019 by a service call.
Selecting "1" displays drum replacement by an operator call. (Initial value)
Selecting "0" displays E019 by a service call.

Details of [Bit 2]
You can select whether to display the menu of drum replacement by the user.
Selecting "1" displays the menu.
Selecting "0" does not display the menu.
Initial value:
For Europe: 1
For locations other than Europe: 0

Details of [Bit 3]
To set whether to display the Waste Toner Container preparation warning message in the status area of LUI.
Selecting "1" displays the warning. (Initial value)
Selecting "0" does not display the warning.

Details of [Bit 4]
To set whether to display the Toner Bottle replacement warning message in the status area of LUI.
Selecting "1" displays the warning. (Initial value)
Selecting "0" does not display the warning.

NOTE:
To notify the waste toner full warning in the status line of the Control Panel, set "1" for Bit 0 and Bit 3 of SW34.

• SSSW-SW35

Not used

Bit	Function	1	0
0	e-RDS function ON/OFF	Yes	No
1	Call button function ON/OFF	Yes	No
2	ScanToMedia function enable/disable Default: 0	enable	disable
3	MediaPrint function enable/disable	enable	disable
4	IC card authentication management function ON/OFF	Yes	No
5	Handling of a scan job at device logout Default: 0	Stop a scan job	Not stop a scan job
6	Handling of display of the stop confirmation screen when the stop key is pressed during a scan job, except remote scan	Not display the stop confirmation screen (same specification as that of the existing models)	Display the stop confirmation screen (the display specification following that of the iR series)
7	Switching to display/hide the start button of the counter print (known as billing counter report) Default: 1	Display the counter print button	Hide the counter print button

Detailed Discussions of Bit 0
Select whether to set the e-RDS function.
When "1" is selected, the function is set.
When "0" is selected, the function is not set.

Detailed Discussions of Bit 1
Select whether to enable the service call request function and display the Service Call Request button.
When "1" is selected, the function is enabled and the button is displayed.
When "0" is selected, the function is disabled and the button is not displayed.

CAUTION:
In the case of a model for USA, the button will not be displayed even if "1" (enabled) is selected.

Detailed Discussions of Bit 2
Select whether to enable or disable the ScanToMedia function.
When "1" is selected, the function is enabled.
When "0" is selected, the function is disabled.

Detailed Discussions of Bit 3
Select whether to enable the MediaPrint function.
When "1" is selected, the function is enabled.
When "0" is selected, the function is disabled.

Detailed Discussions of Bit 4
Select whether to set the IC card authentication function.
When "1" is selected, the function is set.
When "0" is selected, the function is not set.

Detailed Discussions of Bit 5
You can select whether to stop the scan job at the time of device log logout.
Selecting "1" stops the scan job.
Selecting "0" does not stop the scan job.

Detailed Discussions of Bit 6
This is the setting to display the stop confirmation screen when the stop key is pressed during a scan job, except remote scan.
Selecting "1" hides the stop confirmation screen.
Selecting "0" displays the stop confirmation screen.

Detailed Discussions of Bit 7
You can set to display/hide the start button of the counter print (known as billing counter report).
Selecting "1" displays the counter print button.
Selecting "0" hides the counter print button.

● SSSW-SW36

List of Functions

Bit	Function	1	0
0	Service switch to disable auSend Default: 0	Disable auSend. You can hide the setting item of auSend in RUI/LUI.	Enabling/disabling of auSend follows the RUI setting. auSend display in RUI/LUI is not affected.
1	Switch to display/hide the automatic shutdown time setting screen	Display the automatic shutdown time setting screen (Enable the automatic shutdown function)	Not display the automatic shutdown time setting screen (Disable the automatic shutdown function)
2	Change of [User Management Settings] after import of DCM file	No change	Forced OFF
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
You can select whether to disable the auSend function.
Selecting "1" disables auSend. You can hide the setting item of auSend in RUI/LUI.
Selecting "0" follows the RUI setting to enable/disable auSend. auSend display in RUI/LUI is not affected.

Details of [Bit 1]
Set whether to display the automatic shutdown time setting screen.
Selecting "1" displays the setting screen.
Selecting "0" does not display the setting screen.
Initial value:
For Europe: 1
For locations other than Europe: 0

Details of [Bit 2]
When setting information of [Settings/Registration] menu is imported using DCM function, the user management settings are forcibly disabled. However, it is not forcibly disabled by setting this item to "1".
Selecting "1" does not change the user management settings.
Selecting "0" forcibly disable the user management settings.
Initial value: 0

#MENU

■ Menu Switch Composition

No.	Function	Range of settings
005	NL equalizer	0: OFF 1: ON
006	Telephone line monitor	0: DIAL 1: SERVICEMAN [1] 2: SERVICEMAN [2] 3: OFF
007	Transmission level (ATT)	From 0 to 15 (ex: 15= -15 dBm)
008	V.34 modulation speed upper limit	0: 3429 1: 3200 2: 3000 3: 2800 4: 2743 5: 2400
009	V34 data speed upper limit	0: 33.6kbs 1: 31.2kbs 2: 28.8kbs 3: 26.4kbs 4: 24.0kbs 5: 21.6kbs 6: 19.2kbs 7: 16.8kbs 8: 14.4kbs 9: 12.0kbs 10: 9.6kbs 11: 7.2kbs 12: 4.8kbs 13: 2.4kbs
010	Frequency of pseudoring signal	0: 50Hz 1: 25Hz 2: 17Hz

■ Deatails

● 005: NL equalizer

Use it to enable-disable the NL equalizer.
If errors occur often during communication because of the condition of the line, enable (ON) the NL equalizer.

NOTE:
Any of the following error codes may be indicated at time of transmission because of the line condition:
##100, ##101, ##102, ##104, ##201, ##281, ##282, ##283, ##750, ##755, ##765, ##774, ##779, ##784, ##789
Any of the following error codes may be indicated at time of transmission because of the line condition:
##103, ##107, ##114, ##201, ##790, ##793

● 006: Telephone line monitor

Use it to s the telephone line monitor function:
DIAL: generate the monitor sound of the telephone line using the speaker from the start of transmission to DIS.
SERVICEMAN [1]: generate the monitor sound of the telephone line using the speaker from the start of communication to the end of it.
SERVICEMAN [2]: generate the monitor sound of the telephone line2 (Option).
OFF: do not generate the monitor sound of the telephone line using the speaker

● 007: ATT transmission level

Use it to set the transmission level (ATT).
Raise the transmission level if errors occur frequently at time of communication because of the condition of the line. (It means close to 8)

NOTE:
Any of the following error codes may be indicated at time of transmission because of the line condition:
##100, ##101, ##102, ##104, ##201, ##280, ##281, ##282, ##283, ##284, ##750,
##752, ##754, ##755, ##757, ##759, ##760, ##762, ##764, ##765,
##767, ##769, ##770, ##772, ##774, ##775, ##777, ##779, ##780, ##782, ##784,
##785, ##787, ##789

Any of the following error codes may be indicated at time of reception because of the line condition:
##103, ##106, ##107, ##201, ##793
##103, ##106, ##107, ##201, ##793

● 008: V.34 modulation speed upper limit

Use it to set an upper limit to the modulation speed (baud rate) for the V.34 primary channel.

● 009: V.34 data speed upper limit

Use it to set an upper limit to the data transmission speed for the V.34 primary channel between 2.4K and 33.6K bps in increments of 2400 bps. (0: 2.4K to 13:33.6K bps).

● 010: Frequency of the pseudo CI signal

You may select a frequency for the pseudo CI signal.
Some types of external telephones do not ring when the fax/tel switch-over function is ON.
To sound the ring, change the pseudo CI signal

#NUMERIC

■ Numerical Parameter Composition

No.	Item	Range of settings
002	RTN transmission condition(1)	1% to 99%
003	RTN transmission condition (2)	2 to 99 item
004	RTN transmission condition (3)	1 to 99 lines
005	NCC pause time length (pre-ID code)	1 to 60 sec
006	NCC pause time length (post-ID code)	1 to 60 sec
008	Time from Right After Dialing by Auto-dialing to Start of Communication	1 to 65 sec
010	line condition identification time length	0 to 9999 (10 msec)
011	T.30T1 timer (for reception)	0 to 9999 (10 msec)
012	The maximum number of received lines	0 to 65535 (line) * Unlimited in the case of 0
013	T.30 EOL timer	500 to 3000 (10 msec)
015	hooking detection time length	0 to 999
016	time length to first response at time of fax/tel switchover	0 to 9
017	pseudo RBT signal pattern ON time length	0 to 999
018	pseudo RBT signal pattern OFF time length (short)	0 to 999
019	pseudo RBT signal pattern OFF time length (long)	0 to 999
020	pseudo CI signal pattern ON time length	0 to 999
021	pseudo CI signal pattern OFF time length (short)	0 to 999
022	pseudo CI signal pattern OFF time length (long)	0 to 999
023	CNG detection level at time of fax/tel switchover	0 to 7
024	pseudo RBT transmission level at time of fax/tel switchover	10 to 20
		0 to 20 (120/230V)
025	Answering machine connection function signal detection time	0 to 999
027	preamble detection time length for V21 low-speed flag	20 (x 10ms)
051	Hooking detection threshold	0 to 655035
053	Setting of DTMF call origination count at remote reception of fax	0 to 65535 (25 counts)
054	Setting of busy tone output time when handset is used	0 to 480 (60min) (0: no data acquisition)
055	acquisition period of environmental log data	0 to 480 (60min)
056	display the type of soft counter 1	101 (Fixed)

No.	Item	Range of settings
057	Display the type of soft counter 2	0 to 999
058	Display the type of soft counter 3	0 to 999
059	Display the type of soft counter 4	0 to 999
060	Display the type of soft counter 5	0 to 999
061	Display the type of soft counter 6	0 to 999
062	Communication termination timer at SMTP transmission protocol level	0 to 65535 sec
063	Communication termination timer at SMTP reception protocol level	0 to 65535 sec
064	Communication termination timer at POP reception protocol level	0 to 65535 sec
065	Communication termination timer at FTP transmission protocol level	0 to 65535 sec
066	Communication termination timer from start to completion of the transmission of SMTP transmission data	0 to 65535 sec
067	Communication termination timer from start to completion of the reception of SMTP reception data	0 to 65535 sec
068	Communication termination timer from start to completion of the reception of POP reception data	0 to 65535 sec
069	Communication termination timer from start to completion of the transmission of FTP transmission data	0 to 65535 sec
074	e-RDS RGW port number	1 to 65535 default: 443
075	Interval of transmission for e-RDS 3rd party	1 to 168 (hours) default: 24

■ Details

● <002:RTN transmission condition (1)><003: RTN transmission condition (2)><004: RTN transmission condition (3)>

Use it to set RTN signal transmission conditions. Raise these parameters for more lenient conditions if errors occur frequently at time of reception because of transmission of the RTN signal.

NOTE:
Any of the following error codes may be indicated at time of reception because of RTN signal transmission
##0104, ##0107, ##0114, ##0201
RTN signal transmission condition (1) affects the ratio of error lines to the total number of lines per single page of received images.
RTN signal transmission condition (2) affects the standard value (*2) of burst errors (*1).
RTN signal condition (3) affects the number of errors not reaching the standard value of burst errors.
*1: transmission error occurring cover several lines.
*2: for instance, if '15' is set, a single burst error will represent an error occurring continuously cover 15 lines.
If any of these lines is detected while an image signal is being received, the RTN signal will be transmitted after receiving the protocol signal of the transmitting party. Higher parameters restrict the transmission of the RTN signal.

● 005:NCC pause length (pre-ID code)

Use it to set the length of the pause automatically entered between access code and ID code when the NCC (New Common Carrier) line is used for dialing.

● 006:NCC pause length (post-ID code)

Use it to set the length of the pause automatically entered between ID code and telephone number of the other party when the NCC (New Common Carrier) line is used for dialing.

● 008: Time from Right After Dialing by Auto-dialing to Start of Communication

The time to shift to transmission after automatic dialing can be set. The timing to start communication after connecting to the other party is delayed by the specified period of time.

● 010: line connection identification length

Use it to set the time for identifying the line connection.
Raise this parameter if errors occur frequently at time of communication because of the condition of the line

NOTE:
Any of the following error codes may be indicated because of the condition of the line ##0005, ##0018
The line condition identification time is between when the dial signal is transmitted and when the line condition is cut for the transmitting party, while it is between when the DIS signal is transmitted and when the line is cut for the receiving party.

● 011: T.30 T1 timer (for reception)

Set the T1 timer for the receiver (wait time after DIS transmission starts until a significant signal is received).

● 012: The maximum number of received lines

The number of lines at reception can be limited.

● 013:T.30 EOL timer

Set it so that the 1-line transmission time is longer for reception to prevent reception errors caused by a long data length per line (e.g., computer FAX).

● 016: time length to first response at time of fax/tel switchover

Allows setting of the time from seizing the line till pseudo RBT is sent, when the Fax/ Tel switching function is operating.

● 017:pseudo RBT signal pattern ON time length/018: pseudo RBT signal pattern OFF time length (short)/019: pseudo RBT signal pattern OFF time length (long)

Use it to set the pseudo CI signal pattern transmitted at time of a fax/tel switchover.
017: pseudo RBT signal pattern ON time length/018: pseudo RBT signal pattern OFF time length (short)/019: pseudo RBT signal pattern OFF time length (long)

● 020: pseudo CI signal pattern ON time length/021: pseudo CI signal pattern OFF time length (short)/022: pseudo CI signal pattern OFF time length (long)

Use it to set the pseudo CI signal pattern transmitted at time of a fax/tel switchover.

● 023:CNG detention level for fax/tel switchover

Use it to set the CNG detention level for a fax/tel switchover.

● 024:pseudo RBT transmission level at time of fax/tel switchover

Use it to set the pseudo transmission level for a fax/tel switchover.

● 025: Answering machine connection function signal detection time

Sets the signal detection time for the answering machine connection function operation.
When the answering machine connection function is operating, if the function does not operate normally because the fax does not detect CNG signal sent from the line, raise this parameter to increase the signal detection time.

● 027:V.21 low-speed flag preamble identification length

Use it to detect the time of detection after which command analysis is started after detecting V.21 low-speed command preambles continuously for a specific period of time.

● 056 - 061: Count type select

Use it to confirm the count type indicated on the Counter Check screen, which appears in response to a press on the Counter key.
When '0' is selected, count type will not be indicated.
056: Use it to indicate the type of software counter 1 of the control panel. The type of soft counter 1 cannot be changed.
057: Use it to change the type of soft counter 2* of the control panel to suit the needs of the user.
058: Use it to change the type of soft counter 3* of the control panel to suit the needs of the user.
059: Use it to change the type of soft counter 4* of the control panel to suit the needs of the user.
060: Use it to change the type of soft counter 5* of the control panel to suit the needs of the user.
061: Use it to change the type of soft counter 6* of the control panel to suit the needs of the user.
*:The default type settings of soft counter is different from models.

<Soft Counter Specifications>
The soft counters are classified a follows in terms of input numbers:
100s: total

200s: copy
300s: print
400s: copy + print
500s: scan
700s: received file print
800s: report pint
900s: transmitted scan

Guide to the Table

- 1: Count sheets of all sizes by one.
- 2: Count sheets of the large size by two.
- C: full color
- Bk: black mono
- L: large size (larger than A4/LTR)
- S: small size (A4/LTR or smaller)

NOTE:
To make a change so that B4 papers (for print) will be counted as large-size, use service mode: make the following selections, and change bit 0 to '1': #SSSW>SW33.

To make a change so that B4 papers (for scan) will be counted as large-size, use service mode: make the following selections, and change bit 2 to '1': #SSSW>SW33.

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
101	Total1	1	1	1	1	1	1	1	1								
102	Total2	2	2	2	2	1	1	1	1								
103	Total (L)	1	1	1	1												
104	Total (S)					1	1	1	1								
108	Total (Bk1)	1	1	1	1	1	1	1	1								
109	Total (Bk2)	2	2	2	2	1	1	1	1								
112	Total (Bk/L)	1	1	1	1												
113	Total (Bk/S)					1	1	1	1								
114	Total1 (2-sided)									1	1	1	1	1	1	1	1
115	Total2 (2-sided)									2	2	2	2	1	1	1	1
116	L (2-sided)									1	1	1	1				
117	S (2-sided)													1	1	1	1
126	TotalA1		1	1	1		1	1	1								
127	TotalA2		2	2	2		1	1	1								
128	TotalA (L)		1	1	1												
129	TotalA (S)						1	1	1								
132	TotalA (Bk1)		1	1	1		1	1	1								
133	TotalA (Bk2)		2	2	2		1	1	1								
136	TotalA (Bk/L)		1	1	1												
137	TotalA (Bk/S)						1	1	1								
138	TotalA1 (2-sided)										1	1	1		1	1	1
139	TotalA2 (2-sided)										2	2	2		1	1	1
140	L A (2-sided)										1	1	1				
141	S A (2-sided)														1	1	1
150	TotalB1		1	1	1		1	1	1								

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
151	TotalB2		2	2	2		1	1	1								
152	TotalB (L)		1	1	1												
153	TotalB (S)						1	1	1								
156	TotalB (Bk1)		1	1	1		1	1	1								
157	TotalB (Bk2)		2	2	2		1	1	1								
160	TotalB (Bk/L)		1	1	1												
161	TotalB (Bk/S)						1	1	1								
162	TotalB1 (2-sided)										1	1	1		1	1	1
163	TotalB2 (2-sided)										2	2	2		1	1	1
164	LB (2-sided)										1	1	1				
165	SB (2-sided)														1	1	1
201	Copy(Total1)	1				1											
202	Copy(Total2)	2				1											
203	Copy(L)	1															
204	Copy(S)					1											
205	CopyA (Total1)	1				1											
206	CopyA (Total2)	2				1											
207	CopyA (L)	1															
208	CopyA (S)					1											
209	Local copy(Total1)	1				1											
210	Local copy(Total2)	2				1											
211	Local copy(L)	1															
212	Local copy(S)					1											
221	Copy(Bk1)	1				1											
222	Copy(Bk2)	2				1											
227	Copy(Bk/L)	1															
228	Copy(Bk/S)					1											
237	Copy(Bk/L/2-sided)									1							
238	Copy(Bk/S/2-sided)													1			
249	CopyA (Bk1)	1				1											
250	CopyA (Bk2)	2				1											
255	CopyA (Bk/L)	1															
256	CopyA (Bk/S)					1											
265	CopyA (Bk/L/2-sided)									1							
266	CopyA (Bk/S/2-sided)													1			
277	Local copy(Bk1)	1				1											
278	Local copy(Bk2)	2				1											
283	Local copy(Bk/L)	1															
284	Local copy(Bk/S)					1											

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
293	Local copy(Bk/L/2-sided)									1							
294	Local copy(Bk/S/2-sided)													1			
301	Print (Total1)		1		1		1		1								
302	Print (Total2)		2		2		1		1								
303	Print (L)		1		1												
304	Print (S)						1		1								
305	PrintA (Total1)		1		1		1		1								
306	PrintA (Total2)		2		2		1		1								
307	PrintA (L)		1		1												
308	PrintA (S)						1		1								
313	Print (Bk1)		1		1		1		1								
314	Print (Bk2)		2		2		1		1								
319	Print (Bk/L)		1		1												
320	Print (Bk/S)						1		1								
329	Print (Bk/L										1		1				
330	Print (Bk/S/2-sided)														1		1
331	PDLprint (Total1)		1				1										
332	PDL print (Total2)		2				1										
333	PDL print (L)		1														
334	PDL print (S)						1										
339	PDL print (Bk1)		1				1										
340	PDL print (Bk2)		2				1										
345	PDL print (Bk/L)		1														
346	PDL print (Bk/S)						1										
355	PDL print (Bk/L/2- sided)										1						
356	PDL print (Bk/S)														1		
403	Copy+Print (Bk/L)	1	1		1												
404	Copy+Print (Bk/S)					1	1		1								
405	Copy+Print (Bk2)	2	2		2	1	1		1								
406	Copy+Print (Bk1)	1	1		1	1	1		1								
411	Copy+Print (L)	1	1		1												
412	Copy+Print (S)					1	1		1								
413	Copy+Print (2)	2	2		2	1	1		1								
414	Copy+Print (1)	1	1		1	1	1		1								

Serial No. on counter check screen	Counter type	Print system															
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S			
		Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print	Local copy	PDL print	FAX print	Report print
421	Copy+Print (Bk/L)									1	1		1				
422	Copy+Print (Bk/S)													1	1		1
701	Recieved print (Total1)																
702	Recieved print (Total2)																
703	Recieved print (L)																
704	Recieved print (S)																
709	Recieved print (Bk1)																
710	Recieved print (Bk2)																
715	Recieved print (Bk/L)																
716	Recieved print (Bk/S)																
725	Recieved print (Bk/L/2- si-ded)											1					
726	Recieved print (Bk/ S/2-si-ded)															1	
801	Report print (Total1)																
802	Report print (Total2)																
803	Report print (L)																
804	Report print (S)																
809	Report print (Bk1)																
810	Report print (Bk2)																
815	Report print (Bk/L)																
816	Report print (Bk/S)																
825	Report print (Bk/L)												1				
826	Report print (Bk/S)																1

Serial No. on counter check screen	Counter type	Scan system													
		Bk 1-sided L				Bk 1-sided S				Bk 2-sided L				Bk 2-sided S	
		Total scan	E-mail scan	File-Share DBscan	E-mail File-Share DB scan	File-Share DB BoxFscan	E-mail File-Share DB Box	Total scan	Total scan	E-mail scan	File-Share DB scan	E-mail File-Share DB scan	File-Share DB scan	E-mail File-Share DB BOX scan	Total scan
501	Scan (Total1)	1							1						
505	Bk scan (Total1)	1						1							
506	Bk scan (Total2)	2						1							
507	Bk scan (L)	1													
508	Bk scan (S)							1							
509	C scanTotal (1)								1						1
510	C scanTotal (2)								2						1
511	C scan (L)								1						
512	C scan (S)														1
915	Transmission scan total2 (C)													1	
916	Transmission scan total2 (Bk)						1								
917	Transmission scan total3 (C)											1			
918	Transmission scanTotal3 (Bk)				1										
921	Transmission scanTotal5 (C)										1				
922	Transmission scanTotal5 (Bk)			1											
929	Transmission scanTotal6 (C)												1		
930	Transmission scanTotal6 (Bk)					1									
945	Transmission scan/ E-mail (C)									1					

● 062: Communication termination timer at SMTP transmission protocol level

Communication termination timer at SMTP transmission protocol level can be set.

● 063: Communication termination timer at SMTP reception protocol level

Communication termination timer at SMTP reception protocol level can be set.

● 064: Communication termination timer at POP reception protocol level

Communication termination timer at POP reception protocol level can be set.

● 065: Communication termination timer at FTP transmission protocol level

Communication termination timer at FTP transmission protocol level can be set.

● 066: Communication termination timer from start to completion of the transmission of SMTP transmission data

Communication termination timer from start to completion of the transmission of SMTP transmission data can be set.

● 067: Communication termination timer from start to completion of the reception of SMTP reception data

Communication termination timer from start to completion of the reception of SMTP reception data can be set.

● 068: Communication termination timer from start to completion of the reception of POP reception data

Communication termination timer from start to completion of the reception of POP reception data can be set.

● 069: Communication termination timer from start to completion of the transmission of FTP transmission data

Communication termination timer from start to completion of the transmission of FTP transmission data can be set.

#SCAN

■ Setting of Scanner Functions (SCANNER)

Item1	No.	Initial setting	Appropriate guideline	Description
#SCAN SW	SW01 - 04			Not used
	SW05		Differs according to the location.	Changes "AB configuration/Inch configuration" of the original size detection
	SW06			Allows to change the configuration of the original size detection in the book mode.
#SCAN NUMERIC	001: - 032:			Not used
	033:	50		Vertical scan magnification correction (scanning on BOOK)
	034:	50		Horizontal scan magnification correction (scanning on BOOK)
	035: - 046:			Not used
	047:	50		Vertical scan magnification correction (scanning on ADF)
	048:	50		Horizontal scan magnification correction (scanning on ADF)
	049: - 134:			Not used
	135:	30		Leading edge trimming length when performing fax operation using the Copyboard (0.1 mm)
	136: - 137:			Not used
	138:	15		Leading edge frame length when performing copy operation using the Copyboard (0.1 mm)
	139: - 144:			Not used
	145:	30		Leading edge trimming length when performing fax operation using the ADF (0.1 mm)
	146:	30		Trailing edge trimming length when performing fax operation using the ADF (0.1 mm)
	147:	10		Left-right frame length when performing fax operation using the ADF (0.1 mm)
	148:	25		Leading edge frame length when performing copy operation using the ADF (0.1 mm)
	149: - 164:			Not used
	165:	4		Leading edge frame length when performing SEND SCAN using the Copyboard (0.1 mm)
	166: - 167:			Not used
	168:	0		Leading edge frame length when performing SEND SCAN using the ADF (0.1 mm)
	169: - 192:			Not used

Item1	No.	Initial setting	Appropriate guideline	Description
#SCAN NUMERIC	193:	0	0: LEGAL 1: FOOLSCAP 2: M_OFICIO 3: A_ FOOLSCAP 4: Not used 5: G_LEGAL 6: A_OFICIO 7: B_OFICIO 8: OFICIO 9: E_OFICIO 10: F4A 11: Indian-LGL (For customization)	ADF special paper, standardized size: LGL misidentification-ready
	194:	0	0: LTR/B5 1: G_LTR 2: A_LTR 3: K_LGL 4: EXE	ADF special paper, standardized size: LTR misidentification-ready
	195:	0	0: LTR_R/B5R/A4R 1: FOOLSCAP 2: OFFICIO 3: E_OFFICIO 4: G_LTR_R 5: A_LTR_R 6: K_LGL_R 7: EXE_R	ADF special paper, standardized size: LTR_R misidentification-ready
	196: - 250:			Not used

Item1	Item2	Item3	Item4	Initial setting	Appropriate guideline	Description
READER	DISPLAY	CCD	TARGET-B			Target value of shading for blue
			TARGET-G			Target value of shading for green
			TARGET-R			Target value of shading for red
			OFST			Adjustment value of offset level on CIS
			OFST-B			not used
			OFST-G			not used
			OFST-R			not used
			OFST-O			not used
			OFST-E			not used
			GAIN			Adjustment value of gain level on CIS
			GAIN-B			not used
			GAIN-G			not used
			GAIN-R			not used
			GAIN-O			not used
			GAIN-E			not used
		IO	R-CON			Firmware version of reader controller PCB
			FEEDER			ROM version of DADF controller PCB
	ADJUST	ADJ-XY	ADJ-X	20	1 to 211, 1=0.1mm	Adjustment of scanning system image lead edge position (image's scan-start position in vertical scanning direction)

Item1	Item2	Item3	Item4	Initial setting	Appropriate guideline	Description
READER	ADJUST	ADJ-XY	ADJ-Y	0	-25 to +25, 1=0.1mm	Adjustment value of image scan-start position <Y-direction>
			ADJ-S	75	25 to 500, 1=0.1mm	Adjustment of CCD/CIS scan- start cell position (image scan- start position in horizontal scanning direction)
			ADJ-Y-DF	0	-25 to +25, 1=0.1mm	Adjustment of horizontal scanning position at feeder mode
			STRD-POS	100	1 to 200	Adjustment of CCD/CIS scan position at stream-reading mode with DF
			ADJ-X-MG	0	-10 to +10, 1=0.1%	Fine adjustment of magnification ration in vertical scanning when scanning with reader copyboard
		CCD	W-PLT-X	8273	1 to 9999	White label data entry with standard white plate
			W-PLT-Y	8737	1 to 9999	White label data (Y) entry with standard white plate
			W-PLT-Z	9427	1 to 9999	White label data (Z) entry with standard white plate
			SH-TRGT	272	1 to 2047	Shading target value of the standard white plate (backup)
			50_RG			not used
			50_GB			not used
			100_RG			not used
			100_GB			not used
			50DF_RG			not used
			50DF_GB			not used
			100DF_RG			not used
			100DF_GB			not used
			DFTAR-R	292	1 to 2047	Shading target value (RED) entry when using DF (normal document scanning position)
			DFTAR-G	297	1 to 2047	Shading target value (GREEN) entry when using DF (normal document scanning position)
			DFTAR-B	294	1 to 2047	Shading target value (BLUE) entry when using DF (normal document scanning position)
			CCD-CHNG			not used
			DFTAR-K	293	1 to 2047	Black shading target value when using DF
			MTF3-M1			not used
			MTF3-M2			not used
			MTF3-M3			not used
			MTF3-M4			not used
			MTF3-M5			not used
			MTF3-M6			not used

Item1	Item2	Item3	Item4	Initial setting	Appropriate guideline	Description
READER	ADJUST	CCD	MTF3-M7			not used
			MTF3-M8			not used
			MTF3-M9			not used
			MTF3-M10			not used
			MTF3-M11			not used
			MTF3-M12			not used
			MTF3-S1			not used
			MTF3-S2			not used
			MTF3-S3			not used
			MTF3-S4			not used
			MTF3-S5			not used
			MTF3-S6			not used
			MTF3-S7			not used
			MTF3-S8			not used
			MTF3-S9			not used
			MTF3-S10			not used
			MTF3-S11			not used
			MTF3-S12			not used
			MTF4-M1			not used
			MTF4-M2			not used
			MTF4-M3			not used
			MTF4-M4			not used
			MTF4-M5			not used
			MTF4-M6			not used
			MTF4-M7			not used
			MTF4-M8			not used
			MTF4-M9			not used
			MTF4-M10			not used
			MTF4-M11			not used
			MTF4-M12			not used
			MTF4-S1			not used
			MTF4-S2			not used
			MTF4-S3			not used
			MTF4-S4			not used
			MTF4-S5			not used
			MTF4-S6			not used
			MTF4-S7			not used
			MTF4-S8			not used
			MTF4-S9			not used
			MTF4-S10			not used
			MTF4-S11			not used
			MTF4-S12			not used
		PASCAL	OFST-P-K	0	-128 to 128	Density adjustment at test print scanning
	FUNCTION	INSTALL	STRD-POS			Auto adjustment of CCD/CIS reading position in stream reading
		CCD	CCD-ADJ			Gain adjustment of analog processor block.
			DF-WLVL1			ADF white level adjustment (platen board cover scan/stream reading scan)

Item1	Item2	Item3	Item4	Initial setting	Appropriate guideline	Description
READER	FUNCTION	CCD	DF-WLVL2			ADF white level adjustment (platen board cover scan/stream reading scan)
			MTF-CLC			not used
			DF-WLVL3			ADF white level adjustment (platen board cover scan)
			DF-WLVL4			ADF white level adjustment (DF scan)
		CLEAR	R-CON			Clearing of the backup area for the reader in the main controller.
		MISC-R	SCANLAMP			Executing activation of the scanning lamp
	OPTION	BODY	SENS-CNF			Setting of the document detection sensor placement
			MODELSZ2			not used
			SZDT-SW			not used
			DFDST-L1	215	0 to 255	Dirt detection level adjustment (between documents) during ADF use
			DFDST-L2			not used
			KSIZE-SW			not used
		USER	SIZE-DET			not used
FEEDER	ADJUST	DOCST			-50 to 50	Adjusting the original stop position for ADF pickup (original tray pick-up)
		LA- SPEED			-30 to 30	Adjusting the original feeding speed in stream reading
		DOC- LNGH				Correcting the paper length in extra length/ indeterminate mode with ADF
	FUNCTION	FEED- CHK				Checking the passage of paper for ADF
		CL-CHK				not used
		CL-ON				not used
		FAN-CHK				Checking the ADF cooling fan
		FAN-ON				Starting the fan operation
		SL-CHK				Checking the ADF solenoid
		SL-ON				Starting the solenoid operation
		MTR-ON				Starting the motor operation
		ROLL- CLN				ADF roller cleaning mode
		FEED- ON				Checking the passage of paper with ADF

■ SCAN SW

● SW05

Paper size type setting for DF

Bit	Function	1	0
0	A configuration (same as AB configuration)	Enable	Disable
1	AB configuration	Enable	Disable
2	Inch configuration	Enable	Disable
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

■ SCAN NUMERIC

● 033: Vertical scan magnification correction

Correct the magnification of vertical scanning of a book. The larger the adjustment value, the more the image stretches in the vertical scanning direction.

● 034: Horizontal scan magnification correction

Correct the magnification of horizontal scanning of a book. The larger the adjustment value, the more the image stretches in the horizontal scanning direction.

● 047: Vertical scan magnification correction (when scanning on a document fed from ADF)

Correct the magnification of vertical scanning of a document fed from the ADF. The larger the adjustment value, the more the image stretches in the vertical scanning direction.

● 048: Horizontal scan magnification correction (when scanning on a document fed from ADF)

Correct the magnification of horizontal scanning of a document fed from the ADF. The smaller the adjustment value, the more the image stretches in the horizontal scanning direction.

● 135: Leading edge trimming length when performing fax operation using the Copyboard (0.1 mm)

As the value is incremented by "1", the leading edge non-image width is increased by 0.1mm.

● 138: Leading edge frame length when performing copy operation using the Copyboard (0.1 mm)

As the value is incremented by 1, the image position moves to the trailing edge side by 0.1mm.

● 145: Leading edge trimming length when performing fax operation using the ADF (0.1 mm)

As the value is incremented by "1", the leading edge non-image width is increased by 0.1mm.

● 146: Trailing edge trimming length when performing fax operation using the ADF (0.1 mm)

As the value is incremented by "1", the trailing edge non-image width is increased by 0.1mm.

● 147: Left-right frame length when performing fax operation using the ADF (0.1 mm)

As the value is incremented by 1, the image position moves to the right edge side by 0.1mm.

● 148: Leading edge frame length when performing copy operation using the ADF (0.1 mm)

As the value is incremented by 1, the image position moves to the trailing edge side by 0.1mm.

● 165: Leading edge frame length when performing SEND SCAN using the Copyboard (0.1 mm)

As the value is incremented by 1, the image position moves to the trailing edge side by 0.1mm.

● 168: Leading edge frame length when performing SEND SCAN using the ADF (0.1 mm)

As the value is incremented by 1, the image position moves to the trailing edge side by 0.1mm.

● 193: ADF special paper standard size: to prevent false recognition of LGL

This setting is used when using a standard size of special paper that cannot be recognized by ADF. (When the paper is recognized incorrectly as LEGAL)
0: LEGAL /B4R
1: FOOLSCAP
2: M_OFICIO
3: A_FOOLSCAP
4: Not used
5: G_LEGAL
6: A_OFICIO
7: B_OFICIO
8: OFICIO
9: E_OFICIO
10: F4A
11: Indian-LGL (For customization)

NOTE:
- Papers from "No.1: FOOLSCAP" to "No.9: E_OFICIO" are supported only when inch configuration is set for the original size detection, and LGLR is replaced with any of them.
- "No.10: F4A" is supported only when AB configuration or AB/Inch configuration is set for the original size detection, and B4R and LGLR are replaced with it.
- Operation of the original size detection of custom paper differs depending on whether special papers are supported or not.
- Mixed stacking of special papers is not supported.
- Special papers are not supported when using the Copyboard.
- APS is not supported.
- When the setting is switched, it is necessary to turn OFF and then ON the power.

<Related Service Mode>
- #SCAN > #SCAN SW > SW05
  Changes "AB configuration/Inch configuration" of the original size detection
- #SYSTEM > #SYSTEM SW > SW57
  Setting of paper size group

● 194: ADF special paper standard size: to prevent false recognition of LTR

This setting is used when using a standard size of special paper that is incorrectly recognized as LTR by ADF.
0: LTR /B5
1: G_LTR
2: A_LTR
3: K_LGL
4: EXE

NOTE:
- Papers from "No.1: G_LTR" to "No.2: A_LTR" are supported only when inch configuration is set for the original size detection, and LTR is replaced with any of them.
- "No.3: K_LGL" is supported only when AB configuration or AB/Inch configuration is set for the original size detection, and B5 and LTR are replaced with it.
- "No.4: EXE" is supported only when inch configuration is set for the original size detection, and B5 and LTR are replaced with it.
- Operation of the original size detection of custom paper differs depending on whether special papers are supported or not.
- Mixed stacking of special papers is not supported.
- Special papers are not supported when using the Copyboard.
- APS is not supported.
- When the setting is switched, it is necessary to turn OFF and then ON the power.

<Related Service Mode>
- #SCAN > #SCAN SW > SW05
  Changes "AB configuration/Inch configuration" of the original size detection
- #SYSTEM > #SYSTEM SW > SW57
  Setting of paper size group

● 195: ADF special paper standard size: to prevent false recognition of LTRR

This setting is used when using a standard size of special paper that cannot be recognized by ADF. (When the paper is incorrectly recognized as LTRR)
0: LTR_R / B5R / A4R
1: FOOLSCAP
2: OFFICIO
3: E_OFFICIO
4: G_LTR_R
5: A_LTR_R
6: K_LGL_R
7: EXE_R

NOTE:
- Papers from "No.1: FOOLSCAP" to "No.5: A_LTR_R" are supported only when inch configuration is set for the original size detection, and LTR_R is replaced with any of them.
- When A configuration or AB configuration is set for the original size detection, A4R is replaced with "No.5: A_LTR_R".
- "No.6: K_LGL_R" is supported only when AB configuration or AB/Inch configuration is set for the original size detection, and B5_R and LTR_R are replaced with it.
- "No.7: EXE_R" is supported only when inch configuration is set for the original size detection, and B5_R and LTR_R are replaced with it.
- Operation of the original size detection of custom paper differs depending on whether special papers are supported or not.
- Mixed stacking of special papers is not supported.
- Non-Japanese special papers are not supported when using the Copyboard.
- APS is not supported.
- When the setting is switched, it is necessary to turn OFF and then ON the power.

<Related Service Mode>
- #SCAN > #SCAN SW > SW05
  Changes "AB configuration/Inch configuration" of the original size detection
- #SYSTEM > #SYSTEM SW > SW57
  Setting of paper size group

■ READER

● #SCAN> READER> DISPLAY> CCD> TARGET-B

Target value of shading for blue
If the scanned image has some failure, check the target value of shading for blue.
If the machine continues to display 0 (minimum) or FFFF (maximum), there may be some problem on main controller PCB.
Appropriate guideline :1 to 2047

● #SCAN> READER> DISPLAY> CCD> TARGET-G

Target value of shading for green
If the scanned image has some failure, check the target value of shading for green.
If the machine continues to display 0 (minimum) or FFFF (maximum), there may be some problem on main controller PCB.
Appropriate guideline :1 to 2047

● #SCAN> READER> DISPLAY> CCD> TARGET-R

Target value of shading for red
If the scanned image has some failure, check the target value of shading for red.
If the machine continues to display 0 (minimum) or FFFF (maximum), there may be some problem on main controller PCB.
Appropriate guideline :1 to 2047

● #SCAN> READER> DISPLAY> CCD> OFST

Adjustment value of offset level on CCD/CIS
To judge if this adjustment value is correct when an image fault attributed to CCD occurs.
Appropriate guideline :0 to 255

● #SCAN> READER> DISPLAY> CCD> GAIN

Adjustment value of gain level on CCD/CIS
To judge if this adjustment value is correct when an image fault attributed to CCD/CIS occurs.
Appropriate guideline :0 to 255

● #SCAN> READER> I/O> R-CON> P001

The P001 port indication of the reader relay PCB
Display the I/O state of the sensor of the reader unit.

Bit	Name	Display contents	Remarks
Bit0	Copyboard cover open/closed sensor (rear) (S32)	1: Open	ADF open angle: 5 degrees
Bit1	CCD HP sensor (S31)	1: HP	
Bit2	Not used.	1: Open	
Bit3	Copyboard cover open/closed sensor (front) (S33)	1: Document present	ADF open angle: 25 degrees
Bit4	Document size snsor 0 (S34)	1: Document present	
Bit5	Document size snsor 1 (S35)	1: Document present	
Bit6	Document size snsor 2 (S36)	1: Document present	
Bit7	Document size snsor 3 (S37)	1: Document present	
Bit8-15	Not used.		

● #SCAN> READER> I/O> FEEDER> P001

The P001 port indication of the ADF driver PCB
Display the I/O state of the sensor of the ADF unit.

Bit	Name	Display contents	Remarks
Bit0	Document tray width sensor 2 (PI2)	1: Document present	
Bit1	Document tray width sensor 1 (PI1)	1: Document present	
Bit2	Not used.		
Bit3	Not used.		
Bit4	Delivery reversal sensor (PI6)	1: Document present	
Bit5	Read sensor (PI7)	0: Document present	
Bit6	Not used.		
Bit7	Registration sensor (PI8)	0: Document present	
Bit8	Document length sensor 2 (PI5)	1: Document present	
Bit9	Document length sensor 1 (PI4)	1: Document present	
Bit10	Not used.		
Bit11	Cover open/closed sensor (PI10)	1: Open	
Bit12	Last document detection sensor (PI3)	1: Document present	
Bit13	Document set sensor (PI11)	1: Document present	

● #SCAN> READER> ADJUST> ADJ-XY> ADJ-X

Adjustment of scanning system image lead edge position (image's scan-start position in vertical scanning direction)
0.1mm shift of image scan-start position toward the trail edge direction by 1-increment in the setting.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
If changing the setting value of this item, be sure to Note the changed value on the service label.

● #SCAN> READER> ADJUST> ADJ-XY> ADJ-Y

Adjustment value of image scan-start position <Y-direction>
0.1mm shift of image scan-start position toward the trail edge direction by 1-increment in the setting.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
If changing the setting value of this item, be sure to Note the changed value on the service label.

● #SCAN> READER> ADJUST> ADJ-XY> ADJ-S

Adjustment of CCD/CIS scan-start cell position (image scan-start position in horizontal scanning direction)
Adjust the position to measure data for shading correction with standard white plate. This item must not be normally used.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
If changing the setting value of this item, be sure to Note the changed value on the service label.

● #SCAN> READER> ADJUST> ADJ-XY> ADJ-Y-DF

Adjustment of horizontal scanning position at feeder mode.
0.1mm shift of image scan-start position toward the front direction by 1-increment in the setting value.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
If changing the setting value of this item, be sure to Note the changed value on the service label.

● #SCAN> READER> ADJUST> ADJ-XY> ADJ-Y-POS

Adjustment of CCD/CIS scan position at stream-reading mode with DF.
This item must not be normally used.

NOTE:
Be sure to enter the value on service label when executing RAM clear of the reader controller PCB/ replacing the reader controller PCB.
If changing the setting value of this item, be sure to Note the changed value on the reader's service label.

● #SCAN> READER> ADJUST> ADJ-XY> ADJ-X-MG

Fine adjustment of magnification ration in vertical scanning when scanning with reader copyboard
Execute fine adjustment of vertical scanning magnification ratio when scanning with reader copyboard.
0.1mm shift of image scan-start position toward the front direction by 1-increment in the setting value.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
If changing the setting value of this item, be sure to Note the changed value on the service label.

● #SCAN> READER> ADJUST> CCD> W-PLT-X

White label data entry with standard white plate
This item must not be normally used.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
Be sure to enter the numeric value on copyboard glass when replacing the copyboard glass.
If changing the setting value of this item, be sure to write down the changed value on the service label.

● #SCAN> READER> ADJUST> CCD> W-PLT-Y

White label data (Y) entry with standard white plate
This item must not be normally used.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
Be sure to enter the numeric value on copyboard glass when replacing the copyboard glass.
If changing the setting value of this item, be sure to write down the changed value on the service label.

● #SCAN> READER> ADJUST> CCD> W-PLT-Z

White label data (Z) entry with standard white plate.
Execute this mode only when necessary. Do not execute it when unnecessary.

NOTE:
Be sure to enter the value on service label when replacing the CCD unit.
Be sure to enter the numeric value on copyboard glass when replacing the copyboard glass.
If changing the setting value of this item, be sure to Note the changed value on the service label.

● #SCAN> READER> ADJUST> CCD> SH-TRGT

Shading target value of the standard white plate (backup)
This item must not be normally used.

● #SCAN> READER> ADJUST> CCD> DFTAR-R

Shading target value (RED) entry when using DF (normal document scanning position)
This item must not be normally used.

● #SCAN> READER> ADJUST> CCD> DFTAR-G

Shading target value (GREEN) entry when using DF (normal document scanning position)
This item must not be normally used.

● #SCAN> READER> ADJUST> CCD> DFTAR-B

Shading target value (BLUE) entry when using DF (normal document scanning position)
This item must not be normally used.

● #SCAN> READER> ADJUST> CCD> DFTAR-K

Black shading target value when using DF
This item must not be normally used.
In case of image fault (due to chart soil, etc) after executing:
SCAN > READER > FUNCTION > CCD > DFWLVL1/ DF-WLVL2; enter the factory measurement value using this mode.

● #SCAN > READER > ADJUST > PASCAL > OFST-P-K

Density adjustment at test print scanning
Execute offset adjustment for test print scanning signal in PASCAL control at auto gradation correction. (full correction)

● #SCAN> READER> FUNCTION> INSTALL> STRD-POS

Auto adjustment of CCD/CIS reading position in stream reading
When installing the DF, or removing the ADF and reinstalling it.

● #SCAN> READER> FUNCTION> CCD> CCD-ADJ

Gain adjustment of analog processor block
When installing the DF, or removing the ADF and reinstalling it.
Reflect the LED lamp beam on the standard white plate to correct CCD shading.

Execute this after replacing the CCD unit.

● #SCAN> READER> FUNCTION> CCD> DF-WLVL1

ADF white level adjustment (platen board cover scan/stream reading scan)

1. Place a paper that users normally use on the copyboard glass and execute the following item;
   SCAN > READER > FUNCTION > CCD > DFWLVL1
   : Read the white level in BOOK mode. (Check the transparency of the glass for BOOK mode.)
2. Set a paper that users normally use and execute the following item;
   SCAN > READER > FUNCTION > CCD > DFWLVL2
   : Read the white level in DF mode (stream reading).
   (Check the transparency of the glass for stream reading.)
   (Read the both sides of chart.)
   Reading the face: Calculate DFTAR-R

NOTE:
Be sure to execute these two items (DF-WLVL1/DF-WLVL2) simultaneously.

● #SCAN> READER> FUNCTION> CCD> DF-WLVL2

ADF white level adjustment (platen board cover scan/stream reading scan)

1. Place a paper that users normally use on the copyboard glass and execute the following item;
   SCAN > READER > FUNCTION > CCD > DFWLVL1
   : Read the white level in BOOK mode. (Check the transparency of the glass for BOOK mode.)
2. Set a paper that users normally use and execute the following item;
   SCAN > READER > FUNCTION > CCD > DFWLVL2
   : Read the white level in DF mode (stream reading).
   (Check the transparency of the glass for stream reading.)
   (Read the both sides of chart.)
   Reading the face: Calculate DFTAR-R

NOTE:
Be sure to execute these two items (DF-WLVL1/DF-WLVL2) simultaneously.

● #SCAN> READER> FUNCTION> CCD> DF-WLVL3

ADF white level adjustment (platen board cover scan)

NOTE:
Scan a blank sheet on the platen and adjust the white level.

● #SCAN> READER> FUNCTION> CCD> DF-WLVL4

ADF white level adjustment. (DF scan)

NOTE:
Scan a blank sheet in stream reading mode and adjust the white. level.

● #SCAN> READER> FUNCTION> CLEAR> R-CON

Clearing of the backup area for the reader in the main controller.
Clear the backup area for the reader in the main controller.

● #SCAN> READER> FUNCTION> MISC-R> SCANLAMP

The test checks to see if the scanning lamp is on or not.
Execute the when replacing the scanning lamp.

● #SCAN> READER> OPTION> BODY> SENS-CNF

Setting of the document detection sensor placement.
The setting of original detection size is selected between AB and inch configuration in the book mode.
0: AB configuration

1: Inch configuration

To allow to change the setting of this service mode, set the value to 1 in the following service mode.
SCAN > SCAN SW > SW06 > Bit2

And, to enable the correct paper selection, change the following setting of the paper size group.
SYSTEM > SYSTEM Numeric > 057

<Setting value>
1: AB configuration
2: A configuration
3: Inch configuration
4: AB / Inch configuration

● #SCAN> READER> OPTION> BODY> DFDST-L1

ADirt detection level adjustment (between documents) during ADF use.
Increase the value when dirt fails to be detected, resulting in black streaks.
However, if the value is increased too much, even small-sized dirt of the kind which does not appear on the image will also be detected, and the cleaning instruction screen may appear frequently.
Reduce the value if users complain because the cleaning instruction screen which appears when dirt is detected is displayed frequently.
Conversely, if the value is reduced too much, black streaks may appear on the images.

■ FEEDER

● #SCAN> FEEDER> ADJUST> DOCST

Adjusting the original stop position for ADF pickup (original tray pickup)
Delivering the original enables the setting. Be sure to press the OK key to deliver the original.
When changing the setting, input the setting on the main station service label.
The larger the value, the smaller the leading edge margin.

● #SCAN> FEEDER> ADJUST> LA-SPEED

Adjusting the original feeding speed in stream reading
Use this mode to adjust the original feeding speed in stream reading mode.
The larger the setting, the faster the speed (the image reduced).

● #SCAN> FEEDER> FUNCTION> MTR-CHK

Operation check for the ADF motor, etc.
Specify a paper feed mode to check passage of paper by the DF. Select #SCAN> FEEDER> FUNCTION> FEED-ON to execute this.
0:Feed motor(M1)
1:Pickup motor(M2)

● #SCAN> FEEDER> FUNCTION> FEED-CHK

Checking passage of paper by the ADF
Specify a paper feed mode to check the DF for paper passage.
Select #SCAN> FEEDER> FUNCTION> FEED-ON to execute this.
0:1-sided
1:2-sided

● #SCAN> FEEDER> FUNCTION> FAN-CHK

Checking the ADF cooling fan
Specify a fan to perform a fan check.
Select #SCAN> FEEDER> FUNCTION> FAN-ON to execute this.

● #SCAN> FEEDER> FUNCTION> FAN-ON

Starting the fan operation
Selecting 1 starts fan operation.

● #SCAN> FEEDER> FUNCTION> SL-CHK

Checking the ADF solenoid
Specify a solenoid to perform a solenoid check.
Select #SCAN>FEEDER > FUNCTION > SLON to execute this.
0: Pressure solenoid (SL1)
1: Stamp solenoid (SL2)

● #SCAN> FEEDER> FUNCTION> MTR-ON

Starting the motor operation
Selecting 1 starts motor operation.

● #SCAN> FEEDER> FUNCTION> ROLL-ON

ADF roller cleaning mode
Rotate the roller with the motor and attach a lint-free paper moistened with alcohol to the roller to clean it.

● #SCAN> FEEDER> FUNCTION> FEED-ON

Checking the passage of paper with ADF
Selecting 1 starts checking passage of paper by the ADF.

#PRINT

■ Setting of Printer Functions

Item	No.	Default	Setting range	Function
#PRINT SW	SW01- 13			Not used
	SW14:	00000100		Special mode setting
	SW15:	00000000		Interruption of staple job when there is no staple
	SW16: - 17			Not used
	SW18:	00000100		Special mode setting
	SW19: - 50			Not used

Item	No.	Default	Setting range	Function
#PRINT NUMERIC	01: - 30			Not used
	34:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (manual feed tray)
	35:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (cassette 1)
	36:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (cassette 2)
	37:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (cassette 3)
	38:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (cassette 4)
	39: - 52:			Not used
	53:	25	0 to 9999, one unit = 0.1 mm	Adjustment of margin at leading edge of copy
	54:	30	0 to 9999, one unit = 0.1 mm	Adjustment of margin at trailing edge of copy
	55:	25	0 to 9999, one unit = 0.1 mm	Adjustment of margin at right edge of copy
	56:	25	0 to 9999, one unit = 0.1 mm	Adjustment of margin at left edge of copy
	57:			Not used
	58:	145	0 to 227, one unit = 0.1 mm	Adjustment of the registration loop volume (Manual tray)
	59:	163	0 to 227, one unit = 0.1 mm	Adjustment of the registration loop volume (Cassette)
	60:			Not used

Item	No.	Default	Setting range	Function
#PRINT NUMERIC	61:	145	0 to 227, one unit = 0.1 mm	Adjustment of the registration loop volume (Duplex unit)
	62:	7	0 to 14	Temperature adjustment UP/DOWN mode (For normal paper)
	63:	7	0 to 14	Temperature adjustment UP/DOWN mode. (For thick paper)
	64:	2	0 to 4	Mode for preventing the end temperature rise
	65:	0	0 to 2	Mode for reducing sand image
	66:	0	0 to 3	Temperature/ Humidity sensor fixed mode
	67:- 135:			Not used
	136:	1000	488 to 1511	Adjustment of the point to start writing in main scanning direction (A)
	137:- 139:			Not used
	140:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (double- sided small)
	141:	100	0 to 227, one unit = 0.1 mm	Left-end registration adjustment (double- sided large)
	142:	100	0 to 227, one unit = 0.1 mm	Adjustment of margin at leading edge at normal speed (230mm/sec)
	143:	100	0 to 227, one unit = 0.1 mm	Adjustment of margin at leading edge at half speed (137mm/sec)
	144:	100	0 to 227, one unit = 0.1 mm	Laser trail edge OFF adjustment
	145:	1000	488 to 1511	Adjustment of the magnification to write image in main scanning direction (A-B)
	146:	1000	488 to 1511	djustment of the magnification to write image in main scanning direction (A-C)
	147:	1000	488 to 1511	djustment of the magnification to write image in main scanning direction (A-D)
	148:	1000	488 to 1511	Adjustment of the point to start writing in main scanning direction (A-B)
	149:	1000	488 to 1511	Adjustment of the point to start writing in main scanning direction (A-C)
	150:	1000	488 to 1511	Adjustment of the point to start writing in main scanning direction (A-D)
	151:	100	0 to 227	Developing bias offset for DC
	152:	100	0 to 227	Primary charge offset for DC
	153:	100	0 to 227	Primary charge offset for AC
	154:	100	0 to 227, one unit = 0.1 mm	Adjustment of the registration loop volume (Thick paper)
	155:	100	0 to 227, one unit = 0.1 mm	Adjustment of the registration loop volume (Special pa-per)
	156:	100	0 to 227, one unit = 0.1 mm	Adjustment of the registration loop volume (Envelop cassette pickup)
	157:	7	0 to 14	Pickup timing adjustment
	158:-164:			Not used
	165:	0	0 to 3	Fixing auto cleaning frequency setting
	166:	7	0 to 14	Temperature adjustment UP/DOWN mode (Plain paper, manual feed tray)
	167: 170:			Not used
	171:	EUR:0 OTHER:33	0 to 40	Set Bk pre-toner low alarm notice timing
	172:			Not used
	173:	7	0 to 14	Temperature adjustment UP/DOWN mode (2nd page of double-sided printing)
	174:	0	0 to 1	Reduction in FCOT
	175:-177:			Not used
	178:			Not used

Item	No.	Default	Setting range	Function
#PRINT NUMERIC	179:	7	0 to 14	Temperature adjustment UP/DOWN mode (Envelop/ Postcard)
	180:	7	0 to 14	Temperature adjustment UP/DOWN mode (Special mode N)

Item1	Item2	Item3	De-fault	Setting range	Function
#PRINT CST	CAS1	CAS1-U1	0	26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL, 47: Indian-LGL (For customization), 0: default	Cassette 1paper size group special, standard-size paper entry
		CAS1-U2	0	32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default	
		CAS1-U3	0	22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default	
		CAS1-U4	0	28: B-OFI, 0: default	
	CAS2	CAS2-U1	0	26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL, 47: Indian-LGL (For customization), 0: default	Cassette 2 paper size group special, standard-size paper entry
		CAS2-U2	0	32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default	
		CAS2-U3	0	22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default	
		CAS2-U4	0	28: B-OFI, 0: default	
	CAS3	CAS3-U1	0	26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL, 47: Indian-LGL (For customization), 0: default	Cassette 3paper size group special, standard-size paper entry
		CAS3-U2	0	32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default	
		CAS3-U3	0	22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default	
		CAS3-U4	0	28: B-OFI, 0: default	
	CAS4	CAS4-U1	0	26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL, 47: Indian-LGL (For customization), 0: default	Cassette 4 paper size group special, standard-size paper entry
		CAS4-U2	0	32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default	
		CAS4-U3	0	22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default	
		CAS4-U4	0	28: B-OFI, 0: default	

■ PRINT SW

● SSSW-SW14

List of Functions

Bit	Function	1	0
0	Transfer bias pressure reduction mode	Enable	Disable
1	not used	-	-
2	Black belt addition mode	Enable	Disable
3	Post-rotation reduction mode	Enable	Disable
4	Flicker reduction mode	Enable	Disable
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 0
Select whether to enable or disable transfer bias pressure reduction mode.

Select "Enable" to avoid image defects (black spots) produced by transfer bias leaks occurring in a low-pressure region, such as one at a high altitude. This setting regulates the transfer bias to keep it from exceeding a predetermined level during printing.

Detailed Discussions of Bit 2
Select whether to enable or disable black belt addition mode. If the user uses paper that causes fixed toner on paper to be fused and adhered to drum, selecting "Yes" will clean the drum by forming a black band on the drum surface during the reverse rotation which is performed after printing on 50 sheets.

CAUTION:
Implementation of this mode could result in a drum life falling short of its life expectancy.

Detailed Discussions of Bit 3
Select whether to enable or disable post-rotation reduction mode. Selecting "Enable" will reduce the noise caused by the polygon motor by stopping the motor immediately after postrotation.

Discussions of Bit 4
Select whether to enable or disable flicker reduction mode. Select "Enable" and enter a count to modify fusing temperature control to cancel fluorescent flicking during printing.

CAUTION:
Implementation of this mode would degrade the throughput.

• SSSW-SW15

List of Functions

Bit	Function	1	0
0	not used	-	-
1	Interruption of staple job when there is no staple	Interrupted	Printing continued
2	not used	-	-
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 1
The operation when there is no staple during staple job processing can be set.

• SSSW-SW18

List of Functions

Bit	Function	1	0
0	not used	-	-
1	not used	-	-
2	Thin postcard mode	Enable	Disable
3	not used	-	-
4	not used	-	-
5	not used	-	-
6	not used	-	-
7	not used	-	-

Detailed Discussions of Bit 2
When the postcard size is selected, "Thin postcard" can be selected in addition to "Postcard", "Return postcard", and "4 on 1card". Selecting "Enable" allows you to specify "Thin postcard".

■ PRINT NUMERIC

● 034: Left-end registration adjustment (manual feed tray)

Adjust the left-end registration margin of paper picked from a manual feed tray.
The larger the adjustment value, the wider the left-end margin of the image becomes.

● 035: Left-end registration adjustment (cassette 1)

Adjust the left-end registration margin of paper picked from cassette 1.
The larger the adjustment value, the wider the left-end margin of the image becomes.

● 036: Left-end registration adjustment (cassette 2)

Adjust the left-end registration margin of paper picked from cassette 2.
The larger the adjustment value, the wider the left-end margin of the image becomes.

● 037: Left-end registration adjustment (cassette 3)

Adjust the left-end registration margin of paper picked from cassette 3.
The larger the adjustment value, the wider the left-end margin of the image becomes.

● 038: Left-end registration adjustment (cassette 4)

Adjust the left-end registration margin of paper picked from cassette 4.
The larger the adjustment value, the wider the left-end margin of the image becomes.

● 053: Margin adjustment at the leading edge of the copy

Adjust the margin at the leading edge of the copy.
Increasing the value makes the margin at the leading edge larger.

● 054: Margin adjustment at the trailing edge of the copy

Adjust the margin at the trailing edge of the copy.
Increasing the value makes the margin at the trailing edge larger.

● 055: Margin adjustment at the right edge of the copy

Adjust the margin at the right edge of the copy.
Increasing the value makes the margin at the right edge larger.

● 056: Margin adjustment at the left edge of the copy

Adjust the margin at the left edge of the copy. Increasing the value makes the margin at the left edge larger.

● 058: Adjustment of the registration loop volume (Manual feed tray)

If there is a registration loop noise and abrasion while feeding the paper from the manual feed tray, registration loop noise and abrasion could be reduced by adjusting the volume of the registration loop.
By making the value larger, loop volume will become bigger.

● 059: Adjustment of the registration loop volume. (Cassette)

If there is a registration loop noise and abrasion while feeding the paper from the cassette, registration loop noise and abrasion could be reduced by adjusting the volume of the registration loop.
By making the value larger, loop volume will become bigger.

● 061: Adjustment of the registration loop volume. (Duplex unit)

If there is a registration loop noise and abrasion while feeding the paper from the duplex unit, registration loop noise and abrasion could be reduced by adjusting the volume of the registration loop.
By making the value larger, loop volume will become bigger.

● 062:Temperature adjustment UP/DOWN mode. (For plain paper)

The temperature adjustment offset relative to the target fixing temperature of plain paper can be changed in steps of 3˚C. Use this parameter when the fixing performance is low or when it is necessary to prevent the paper from slipping or being curled.
Plain paper: Plain paper mode, thin paper mode, S thin paper mode, OHP mode
0 - 2: +15˚C
3 - 11: +12 to -15˚C (in steps of 3˚C)
12- 14: -15˚C

● 063: Temperature adjustment UP/DOWN mode. (For rough paper)

The temperature adjustment offset relative to the target fixing temperature of thick paper can be changed in steps of 3˚C. Use this parameter when the fixing performance is low or when it is necessary to prevent the paper from slipping or being curled.
Thick paper: Thick paper mode, thick paper H mode, bond mode
0 - 2: +15˚C
3 - 11: +12 to -15˚C (in steps of 3˚C)
12 - 14: -15˚C

● 064: Mode for preventing the temperature rise of the end

User this parameter to reduce the frequency of entering the throughput down mode, suppress edge temperature rise, or prevent soiling due to the high temperature offset.
Add/subtract the threshold of the difference in detection temperature between the sub thermistor 1 (2) that starts the full speed operation of the end cooling fan and the sub thermistor 1 (2) that starts the down sequence to/from default threshold temperature.
0 - 4: +20 to -20˚C (in steps of 10˚C)

● 065: Mode for reducing sand image

Set when sand image *1 has occurred on the print image.
Restraining the scatter of the toner by increasing the electric current of the AC electrification; the sand image could be reduced.
Sand image *1: Multiple black dots and white dots appear on half tone. Or multiple black dots appear on white background.
0: Normal.
1 to 3: Reducing mode. (Same operation to set 1 to 3)
2: Make the print density lower. Set the initial rotation time for fixing to 3 seconds. Does not do it if the initial rotation elongation time has been set to 3 seconds or longer in another service mode.

● 066:Temperature/ Humidity sensor fixed mode

Changing to high-pressure environment by using the temperature/ humidity sensor.
But when there is an image trouble at the point of changing the environment, fix the temperature and the humidity and do not allow the change of the high-pressure output.
0: Normal.
1: Fixed environment of LL. (Temperature of 18 deg C and humidity of 20%)
2. Fixed environment of NN. (Temperature of 18-28 deg C and humidity of 20-75%)
3. Fixed environment of HH. (Temperature of 28 deg C and humidity of 80%)

● 136: Adjustment of the point to start writing in laser's main scanning direction (A)

When replacing the laser unit, enter the unit-specific delay value shown on the label affixed to the unit.

● 140: Left-end registration adjustment (double-sided small)

Adjust the left-end registration margin needed when the duplex feeding unit picks up paper (small paper). Incrementing the value by 1 increases the left-end margin of the image by 0.1 mm.

● 141: Left-end registration adjustment (double-sided large)

Adjust the left-end registration margin needed when the duplex feeding unit picks up paper (large paper). Incrementing the value by 1 increases the left-end margin of the image by 0.1 mm.

● 142: Adjustment of margin at leading edge at normal speed (230mm/ sec)

Adjust the margin at the leading edge (registration roller clutch ON timing) at normal speed.
Adjust the leading-edge registration margin needed at pickup. Increasing the value makes the margin at the leading edge of the copy larger.

● 143: Adjustment of margin at leading edge at half speed (137mm/sec)

Adjust the margin at the leading edge (registration roller clutch ON timing) at half speed.
Adjust the leading-edge registration margin needed at pickup (large paper).
Increasing the value makes the margin at the leading edge of the copy larger.
*This mode is effective only when paper is fed from the manual feed tray of iR2545/2535.

● 144: Laser trail edge OFF adjustment

Laser trail edge OFF adjustment (input only).

● 145: Adjustment of the magnification to write image in laser's main scanning direction (A-B)

Magnification between lasers A and B
Amount of adjustment of the magnification of laser B of the laser scanner unit.
Adjust the magnification of laser B with reference to that of laser A.
If the input value is inappropriate, the image quality is degraded.

● 148: Adjustment of the point to start writing in main scanning direction (A-B)

When replacing the laser, enter the delay value (laser main scanning adjustment).

● 151: Developing bias offset for DC

Enter the developing bias offset for DC.
When a fault in image occurs (foggy image or light density), enter the developing bias offset for DC.
Increasing the value makes the image darker.

● 152: Primary charge offset for DC

Enter the value to adjust the primary offset 1 for DC.

● 153: Primary charge offset for AC

Enter the value to adjust the primary offset 1 for AC.

● 154: Adjustment of the registration loop volume (Thick paper)

Incrementing the value by 1 feeds the paper 0.1 mm further and increases the registration loop volume.

● 155: Adjustment of the registration loop volume (Special paper)

Incrementing the value by 1 feeds the paper 0.1 mm further and increases the registration loop volume.

● 156: Adjustment of the registration loop volume (Envelop cassette pickup)

Incrementing the value by 1 feeds the paper 0.1 mm further and increases the registration loop volume.

● 157: Pickup timing adjustment

This setting is applied to the pickup permission temperature at job start irrespective of the fixing mode.
The pickup permission temperature is raised or lowered from the default temperature according to the setting value.
Use this parameter to reduce the FCOT or warm-up time.
0 - 2˚C+15˚C
3 - 11: 12 to -15˚C (in steps of 3˚C)
12 - 14: -15˚C

● 165: Fixing auto cleaning frequency setting

Use this parameter to increase the fixing auto cleaning frequency.
Incrementing the value increases the fixing auto cleaning frequency.
0: Not cleaned.
1: Cleaning control temperature: 225˚C, Cleaning time: 60 sec, Cleaning interval: 500 sheets
2: Cleaning control temperature: 225˚C, Cleaning time: 60 sec, Cleaning interval: 200 sheets
3: Cleaning control temperature: 225˚C, Cleaning time: 60 sec, Cleaning interval: 100 sheets

● 166: Temperature adjustment UP/DOWN mode (Plain paper, manual feed tray)

The temperature adjustment offset relative to the target fixing temperature of plain paper fed from the manual feed paper can be changed in steps of 3˚C. Use this parameter when the fixing performance is low or when it is necessary to prevent the paper from slipping or being curled.
Plain paper: Plain paper mode, thin paper mode, S thin paper mode, OHP mode
0 - 2: +15˚C
3 - 11: 12 to -15˚C (in steps of 3˚C)
12 - 14: -15˚C

● 171: Set Bk pre-toner low alarm notice timing

Set the timing (toner level) to notify the pre-toner low alarm for Bk-color.
When the toner level in the Toner Container reaches the setting value (%), the alarm (10-0020 (Bk)) is notified. Since toner level is calculated based on the developing supply count, some errors may occur.

0 - 40 (Default value EUR:0, OTHER:33)

● 173: Temperature adjustment UP/DOWN mode (Second of 2-sided)

The temperature adjustment offset relative to the target fixing temperature in second of 2-sided can be changed in steps of 3˚C. Use this parameter when the fixing performance is low or when it is necessary to prevent the paper from slipping or being curled.
Plain paper: Plain paper mode, thin paper mode, S thin paper mode, OHP mode
0 - 2: +15˚C
3 - 11: 12 to -15˚C (in steps of 3˚C)
12 - 14: -15˚C

● 174: Reduction in FCOT

Set the pickup permission temperature (temperature adjustment for the fist page of printing) to -40˚C before fixing.
Use this parameter to reduce the FCOT.
0:OFF
1:ON

● 179: Temperature adjustment UP/DOWN mode (Envelop/Postcard)

The temperature adjustment offset relative to the target fixing temperature of the envelope/ postcard can be changed in steps of 3˚C. Use this parameter when the fixing performance is low or when it is necessary to prevent the paper from slipping or being curled.
Envelop/postcard: Postcard mode, S postcard mode, Envelop mode
0 - 2: +15˚C
3 - 11: 12 to -15˚C (in steps of 3˚C)
12 - 14: -15˚C

● 180: Temperature adjustment UP/DOWN mode (Special mode N)

The temperature adjustment offset relative to the target temperature of fixing in special mode N can be changed in steps of 3˚C. Use this parameter when the fixing performance is low or when it is necessary to prevent the paper from slipping or being curled.
0 - 2: +15˚C
3 - 11: 12 to -15˚C (in steps of 3˚C)
12 - 14: -15˚C

■ List of Functions(PRINT CST)

● <#CST> CAS1> CAS1-U1>,<#CST> CAS2> CAS1-U1>,<#CST> CAS3> CAS1-U1>,<#CST> CAS4> CAS1-U1>

Setting of paper name used for paper size group 'U1'
When setting the following special size paper for U1, U2, U3, and U4 which are specified for the paper name to be used in paper size group, it becomes possible to treat the paper size in U1, U2, U3, and U4 as special size paper in universal size cassettes.
Settings 26: OFI, 27: E-OFI, 37: M-OFI, 36: A-OFI, 24: FLSP, 25: A-FLSP, 30: A-LTRR, 42: FA4, 34: G-LGL, 47: Indian-LGL (For customization), 0: default

● <#CST> CAS1> CAS1-U2>,<#CST> CAS2> CAS1-U2>,<#CST> CAS3> CAS1-U2>,<#CST> CAS4> CAS1-U2>

Setting of paper name used for paper size group 'U2'
When setting the following special size paper for U1, U2, U3, and U4 which are specified for the paper name to be used in paper size group, it becomes possible to treat the paper size in U1, U2, U3, and U4 as special size paper in universal size cassettes.
Settings 32: G-LTR-R, 34: G-LGL, 23: K-LGL-R, 0: default

● <#CST> CAS1> CAS1-U3>,<#CST> CAS2> CAS1-U3>,<#CST> CAS3> CAS1-U3>,<#CST> CAS4> CAS1-U3>

Setting of paper name used for paper size group 'U3'
When setting the following special size paper for U1, U2, U3, and U4 which are specified for the paper name to be used in paper size group, it becomes possible to treat the paper size in U1, U2, U3, and U4 as special size paper in universal size cassettes.
Settings 22: K-LGL, 31: G-LTR, 29: A-LTR, 0: default

● <#CST> CAS1> CAS1-U4>,<#CST> CAS2> CAS1-U4>,<#CST> CAS3> CAS1-U4>,<#CST> CAS4> CAS1-U4>

Setting of paper name used for paper size group 'U4'

When setting the following special size paper for U1, U2, U3, and U4 which are specified for the paper name to be used in paper size group, it becomes possible to treat the paper size in U1, U2, U3, and U4 as special size paper in universal size cassettes.
Settings 228: B-OFI, 0: defaul

#NETWORK

Configuration

Item	SW No.	Bit	Setting ranges	Default value	Description
#NETWORK SW	1	-	-		Not used
	2	SEND 1			
		0-2	-		Not used
		3	0 or 1	0 (Disabled)	Flag to enable mail header printing When "1" is set, mail header is added to the print data at the time of e-mail reception. 0: Disabled 1: Enabled
		4-7	-		Not used
	3	SEND 2			
		0-2	-		Not used
		3	0 or 1	1 (Not rotated)	Rotation transmission "No" flag 0: Rotated 1: Not rotated
		4-6	-		Not used
		7	0 or 1	0 (Not deleted)	Deletion of an error e-mail from the server at the time of POP reception 0: Not deleted 1: Deleted
	4	SEND 3			
		0	0 or 1	1 (Enabled)	Flag to enable SMTP authentication algorithm (CRAM-MD5) 0: Disabled 1: Enabled
		1	0 or 1	1 (Enabled)	Flag to enable SMTP authentication algorithm (PLAIN) 0: Disabled 1: Enabled
		2	0 or 1	1 (Enabled)	Flag to enable SMTP authentication algorithm (LOGIN) 0: Disabled 1: Enabled
	5	3-7	-		Not used
		MIB/SNMP			
		0	0 or 1	00 (Enabled to obtain all the billing counter values)	Billing counter MIB function flag bit0=0, bit1=0: Enabled to obtain all the billing counter values bit0=0, bit1=1: Enabled to obtain only the billing counter values displayed on UI bit0=1, bit1=0: Disabled to obtain all the billing counter values
		1	0 or 1		
		2	0 or 1	00 (RW)	SNMP (canon_admin) access rights bit2=0, bit3=0: RW bit2=0, bit3=1: RO bit2=1, bit3=0: Disabled bit2=1, bit3=1: OFF
		3	0 or 1		
		4	0 or 1	00 (RW)	SNMP (canon_user) access rights bit4=0, bit5=0: RW bit4=0, bit5=1: RO bit4=1, bit5=0: Disabled bit4=1, bit5=1: OFF
		5	0 or 1		
		6-7	-	-	Not used
		-	-	-	Not used

Item	SW No.	Bit	Setting rang-es	Default value	Description
#NETWORK SW	8	SEND 4			
		0	0 or 1	1 (Rotation specifications of fax)	Rotation specifications of I-Fax transmission 0: Comply with rotation specifications of e-mail 1: Comply with rotation specifications of fax
		1-7	-	-	Not used
	9	-	-	-	Not used
	10	Network Configuration			
		0-2	-	-	Not used
		3	0 or 1	0 (Enabled)	Acquisition of host name by DHCP (Option 12) 0: Enabled 1: Disabled
		4	0 or 1	0 (Enabled)	Registration of host name by DHCP (Option 81) 0: Enabled 1: Disabled
		5-7	-	-	Not used
	11	Network Configuration (IPv6)			
		0	0 or 1	0 (IPv6)	DNS inquiry priority transport 0: IPv6 1: IPv4
		1-7	-	-	Not used
	12	SEND 6 (Destination specified transmission)			
		0	0 or 1	000 (TIFF)	B/W image format at the time of destination specified transmission 000 (all values are "0"): TIFF 001 (only the value of bit2 is "1"): PDF
		1	0 or 1		
		2	0 or 1		
		3	0 or 1	000 (JPEG)	Color image format at the time of destination specified transmis-sion 000 (all values are "0"): JPEG 001 (only the value of bit5 is "1"): PDF
		4	0 or 1		
		5	0 or 1		
		6-7	-	-	Not used
	13	SEND 7 (Re-transfer after transfer error)			
		0	0 or 1	000 (TIFF)	B/W image format when performing transfer again after transfer error 000 (all values are "0"): TIFF 001 (only the value of bit2 is "1"): PDF
		1	0 or 1		
		2	0 or 1		
		3	0 or 1	000 (JPEG)	Color image format when performing transfer again after transfer error 000 (all values are "0"): JPEG 001 (only the value of bit5 is "1"): PDF
		4	0 or 1		
		5	0 or 1		
		6-7	-	-	Not used
	14-40	-	-	-	Not used
	41	Network debug switch			
		0	-	-	Not used
		1	0 or 1	0 (Hour)	NTP polling interval When "1" is set, the unit of NTP polling time set on UI is handled as minute. 0: Hour 1: Minute
		2-7	-	-	Not used
	42-50	-	-	-	Not used

Item	No.	Setting range	Default value	Description
#NETWORK NUMERIC	1-7	-	-	Not used
	8	0-255	0	Number of auto line feeds for text To set the number of bytes for auto line feed when sending data with no line feed via e-mail. 0: 60 bytes 1 to 19: 20 bytes 20 and above: "setting value - 2" bytes
	9-10	-	-	Not used
	11	0-65535	0	To set the time from after POP before SMTP authentication to data transmission. (Unit: 100msec) When the setting value is "0", 300msec is set.
	12	0-65535	600	To set the termination timer when there is no reception data at the time of POP reception/SMTP reception. (Unit: sec)
	13-29	-	-	Not used
	30	0-65535	80	To set wait time when buffer failed to be obtained with network print. (Unit: msec)
	31	0-65535	1000	To set the e-mail reception interval with POP when there are 2 or more e-mails in the mail server.(Unit: msec)
	32-33	-	-	Not used
	34	0, 10-120	0	To set the timeout value at IEEE802.1X authentication. (Unit: sec) When the setting value is "0", 30msec is set.
	35-50	-	-	Not used

■ Confirmation of contents of CA certificate

Selecting the service mode "#NETWORK>#CERTIFICATE>#CA-CERTIFICATE" enables confirmation of the contents of the installed CA certificate.

#CODEC

■ Configuration

Item	No.	Default	Setting range	Description
# BitSwitch	SW01- SW09			Not used
# Numeric	01: - 05:			Not used
	06:	2	0-3	Control of attribute flag addition function at reception and printing of color JPEG or E-mail image
	07:	4	1-7	Adjustment of black color recognition level at black text processing
	08: - 50:			Not used

■ Details

● 06: Control of attribute flag addition function at reception and printing of color JPEG or E-mail image

Set the type of the attribute flag to be added at reception of a color JPEG or E-mail image.
0: For PDL_text mode
1: For PDL_photo mode
2: For scan_text mode
3: For scan_photo mode

● 07: Adjustment of black color recognition level at black text processing

Adjust the black color recognition level at black text processing.
To improve chanses that the text color is judged as black, increase the setting value.

#SYSTEM

■ Configuration

Item	No.	Initial setting	Description
#SYSTEM SW	SW01		Not used
	SW02	00000000	Import/export via USB
	SW03 - SW04		Not used
	SW05	11001000	Prohibition of export of PWD in address book
	SW06- SW08		Not used
	SW09	00000000	Forcibly disabling of uniFLOW
	SW10		Not used
	SW11	00000000	Item relating to secured print
	SW12 - SW50		Not used

Item	No.	Initial setting	Setting range	Description
#SYSTEM NUMERIC	01: - 38:			Not used
	39:	4	0-5	Switching of the default of LDAP detailed search condition
	40:	1	0 or 1	eLA card touch sound
	41:	0	0-60	PS mode 1 (8bit)
	42:	0	0-60	PS mode 2 (8bit)
	43: - 56:			Not used
	57:	0	0-4	Setting of paper size group
	58: - 100:			Not used

Item	Initial setting	Setting range	Description
#RMT-SW	0	0-1	Switch for enabling the remote UI service mode function

Item	Initial setting	Setting range	Description
#PSWD-SW	0	0-2	Switch for initializing the system administrator password

Item	Initial setting	Setting range	Description
#SM-PSWD	0	0-99999999	Switch for initializing the service mode password

■ Details of Bit Switch

● SW02

List of Functions

Bit	Function	1	0
0		-	-
1		-	-
2		-	-
3		-	-
4		-	-
5		-	-
6	To import/export via USB	Startup in USB import/export mode	Normal startup
7		-	-

- Detailed Discussions of Bit 6
  When "1" is set, startup is executed in USB import/export mode.

● SW05

List of Functions

Bit	Function	1	0
0		-	-
1		-	-
2		-	-
3		-	-
4		-	-
5		-	-
6		-	-
7	Inhibition of export of password in address book	Inhibited	Not inhibited

- Detailed Discussions of Bit 7
  Select whether to inhibit export of the password in the address book.

● SW09

List of Functions

Bit	Function	1	0
0	PS > Display/hide data protocol menu	Displayed	Hide
1	Long length setting	ON	OFF
2		-	-
3	Forced invalidity of uniFLOW	ON	OFF
4		-	-
5		-	-
6		-	-
7		-	-

- Detailed Discussions of Bit 0
  You can select whether to disable export of PWD in the address book.
  Default: 0

- Detailed Discussions of Bit 1
  You can select whether to enable long length setting (to extend the range of user-defined size).
  Default: 0

- Detailed Discussions of Bit 3
  Select whether to set the forced invalidity of uniFLOW.

● SW11

List of functions

Bit	Function	1	0
0	Secured print setting	Disabled	Enabled
1	To set operation when secured print is disabled.	Handled as a normal job	Resulting in #0853 error
2	Operation setting of secured print when the uniFLOW is enabled	Disable the secured print	Follow the secured print setting (SYSTEM>SW11 Bit0)
3	Operation setting when a secured print job is canceled	Display the password entry screen	Not display the password entry screen
4	Display setting of Arabic	Displayed	Not displayed
5	Switching of sublog output of memory alloc/free log	Enabled	Disabled

Bit	Function	1	0
6	The flag generated when the setting values of [Settings/Registration] menu and service mode are initialized	Initialized	Not initialized
7	Not used	-	-

Details of [Bit 0]
You can select whether to enable the secured print.
Selecting "1" disables the setting.
Selecting "0" enables the setting. (Default)

Details of [Bit 1]
Select an operation when a secured print job is sent while secured print is disabled.
Selecting "1" handles it as a normal job.
Selecting "0" results in #0853 error. (Default)

Details of [Bit 2]
Select an operation of a secured print when uniFLOW is enabled.
Selecting "1" disables the secured print. (Default)
Selecting "0" follows the secured print setting (SYSTEM>SW11 Bit0).

Details of [Bit 3]
Select whether to allow canceling of a secured job without password entry
when canceling a secured job waiting for password entry.
Selecting "1" displays the password entry screen. (Default)
Selecting "1" does not display the password entry screen.

Details of [Bit 4]
Set whether to display in Arabic.
Selecting "1" displays in Arabic.
Selecting "0" does not display in Arabic.

Details of [Bit 5]
Switch sublog output of memory alloc/free log.
Selecting "1" performs the output.
Selecting "0" does not perform the output. (Default)

Details of [Bit 6]
The flag generated when the setting values of [Settings/Registration] menu and service mode are initialized.
"1" means that the setting values are initialized.
"0" means that the settings values are not initialized.

● SW12

List of functions

Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	Not used	-	-
3	Not used	-	-
4	Display of ON/OFF settings of auto sleep time to support Blue Angel*1	Not displayed	Displayed
5	The flag generated when the setting values of [Settings/Registration] menu and service mode that have been added to support Blue Angel are initialized*1	Initialized	Not initialized
6	The flag generated when the setting values of service mode that have been added to support Lot26 are initialized*2	Initialized	Not initialized

1. An ecolable system initiated by German

2. An EU directive obligating to design environmentally-friendly products (eco design) to facilitate energy saving

Bit	Function	1	0
7	Not used	-	-

Details of [Bit 4]

It is a function supporting Blue Angel.*1 When this function is enabled, ON/OFF setting of auto sleep time is hidden so auto sleep cannot be disabled (OFF).
When "1" is selected, it is not displayed (Auto sleep is forcibly enabled (ON)).
When "0" is selected, it is displayed. (ON/OFF of auto sleep can be selected.) (Initial value)

Details of [Bit 5]

The flag generated when the setting values of [Settings/Registration] menu and service mode that have been added to support Blue Angel are initialized*1
"1" means that the setting values are initialized.
"0" means that the settings values are not initialized.

Details of [Bit 6]

The flag generated when the setting values of service mode that have been added to support Lot26 are initialized*2
"1" means that the setting values are initialized.
"0" means that the settings values are not initialized.

● SW17

List of functions

Bit	Function	1	0
0	Set whether to display/hide the menu to check connection of LADP server.	Displayed	Not displayed
1	To set ON/OFF of Pull Host From DNS function.	ON	OFF
2	Display setting of SSL setting for Kerberos authentication of "LDAP Authentication Server Setting" in remote UI	Gray out SSL	Display SSL
	Wording for selecting "login information" on "Register LDAP Server (For Authentication)" page in remote UI	Simple/Anonymous Binding / Kerberos Binding	Use / Use (Security Authentication)
3	Set whether to display/hide "Auto Reset Time" menu on the Control Panel.	Not displayed	Displayed
	Set the location to display "Auto Reset Time" menu in remote UI	Display under "Timer Settings"	Display under "System Settings"
4	Set whether to display/hide "Restart Device" menu in remote UI	Displayed	Not displayed
5	Set whether to preset the e-mail address of login user to the destination when logging in by auSend	Preset	Not preset
6	Not used	-	-
7	Not used	-	-

Details of [Bit 0]

To set whether to display the menu to check connection of LADP server.
Selecting "0" does not display the menu. (Initial value)
Selecting "1" displays the menu.

Details of [Bit 1]

To set whether to enable the Pull Host From DNS function.
When "0" is selected, the function is disabled. (Initial value)
When "1" is selected, the function is enabled.

1. An ecolable system initiated by German

2. An EU directive obligating to design environmentally-friendly products (eco design) to facilitate energy saving

Details of [Bit 2]
To set whether to display SSL setting for Kerberos authentication of "LDAP Authentication Server Setting" in remote UI and set the wording for selecting "login information".
When "0" is selected, SSL setting is displayed for Kerberos authentication and "Use / Use (Security Authentication)" is set for the wording for selecting "login information".
When "1" is selected, SSL is grayed out for Kerberos authentication and "Simple/Anonymous Binding / Kerberos Binding" is set for the wording for selecting "login information". (Initial value)

Details of [Bit 3]
To set whether to display "Auto Reset Time" menu on the Control Panel and set the location to display "Auto Reset Time" menu in remote UI.
When "0" is selected, "Auto Reset Time" menu is displayed on the Control Panel, and "Auto Reset Time" menu in remote UI is displayed under "Timer Settings". (The same as the conventional specification) (Initial value)
When "1" is selected, "Auto Reset Time" menu is not displayed on the Control Panel, and "Auto Reset Time" menu in remote UI is displayed under "System Settings".

Details of [Bit 4]
To set whether to display "Restart Device" menu in remote UI.
Selecting "0" does not display the menu. (The same as the conventional specification) (Initial value)
Selecting "1" displays the menu.

Details of [Bit 5]
To set whether to preset the e-mail address of login user to the destination when logging in by auSend.
When "0" is selected, it is not preset. (The same as the conventional specification) (Initial value)
When "1" is selected, it is preset.

● SW18

List of functions

Bit	Function	1	0
0	Not used	-	-
1	Not used	-	-
2	IC card authentication mode initialization judgment switch	Initialized	Not initialized
3	Waste Toner Container parts counter initialization judgment switch	Initialized	Not initialized
4	Initialization judgment switch for "Setup Guide", "FTP print", "DCM support", "remote access protection support", and "DFU support"	Initialized	Not initialized
5	Not used	-	-
6	Not used	-	-
7	Not used	-	-

Details of [Bit 2]
This switch is used to judge whether or not initialization of IC card authentication mode has been performed.
"0" means that the setting values are not initialized.
"1" means that the setting values are initialized.

Details of [Bit 3]
This switch is used to judge whether or not initialization of the Waste Toner Container parts counter has been performed.
"0" means that the setting values are not initialized.
"1" means that the setting values are initialized.

Details of [Bit 4]

This switch is used to judge whether or not initialization has been performed for the "Setup Guide", "FTP print", "DCM support", "remote access protection support", and "DFU support" screens.
"0" means that the setting values are not initialized.
"1" means that the setting values are initialized.

● SW19

List of functions

Bit	Function	1	0
0	Setting for enabling/disabling DFU function	OFF (Initial value)	ON
1		-	-
2		-	-
3		-	-
4		-	-
5		-	-
6		-	-
7		-	-

Details of [Bit 0]
Whether to enable the DFU function that realizes upgrading of system software in conjunction with iW EMC/MC DFU Plug-in can be selected.
When "0" is selected, the function is disabled. (Default)
When "1" is selected, the function is enabled.

● SW20

List of functions

Bit	Function	1	0
Bit 0	-	-	-
Bit 1	-	-	-
Bit 2	-	-	-
Bit 3	-	-	-
Bit 4	-	-	-
Bit 5	Setting of display/hide of FTP print	Displayed	Not displayed
Bit 6	FTP print initialization judgment flag	Not initialized	Initialized
Bit 7	-	-	-

Details of [Bit 5]

Whether or not to display FTP print can be set.
Hidden when "0" is set (default)
Displayed when "1" is set

Details of [Bit 6]

FTP print initialization judgment flag
"0" means that the setting values are not initialized.
"1" means that the setting values are initialized.

■ Details of numeric parameter

No.	Function	Setting range
10	Set the reboot time monitoring time for 2 a.m. reset (at power-on). (Unit: time)	0 to 9999 (Default: 6)
15	Set the shift timer from energy saver mode to sleep. (Unit: second)	0 to 9999 (Default: 5)
16	Set the cool down timer. (Unit: second)	0 to 9999 (Default: 5)
19	Set the sleep 2 shift timer. (Unit: second)	0 to 9999 (Default: 5)
20	Set display/hide of Setup Guide (other settings).	0: Display, 1: Hide (Default: 0)
24	Set the print-related warning (no paper) alert wait timer. (Unit: second)	0 to 9999 (Default: 20)

No.	Function	Setting range
25	Set the IMG1L initialization wait timer. (Unit: millisecond)	0 to 9999 (Default: 100)
26	Set the IMG1L mask setting wait timer. (Unit: millisecond)	0 to 9999 (Default: 10)
39	Set switching of the default of LDAP detailed search condition.	0: Contain 1: Not contain 2: Equal 3: Not equal 4: Begin with (Default) 5: End with
40	Set the eLA card touch sound.	0: OFF, 1: ON (Default)
41	Set the PS mode 1 (8bit).	0 to 60 (Default: 0)
42	Set the PS mode 2 (8bit).	0 to 60 (Default: 0)
57	Set the paper size group.	Setting values and groups are as follow: 1: AB configuration (PAPER_SIZE_GROUP_AB) 2: A configuration (PAPER_SIZE_GROUP_A) 3: INCH configuration (PAPER_SIZE_GROUP_INCH) 4: AB/INCH configuration (PAPER_SIZE_GROUP_AB_INCH) The timing of initialization is as follows. • CLEAR > ALL • CLEAR >TYPE • CLEAR > SERVICE DATA • CLEAR > TEL&USER DATA (because of synchronizing the values of ATT_ID and SYSTEM NUMERIC) • Select country at startup
58	Set the engine sleep (PPOWER HI) wait timer. (Unit: millisecond) 300 msec when the value is 0	0 to 9999 (Default: 0)
59	Set the timer to delay the press/waiting state of the software switch key until the PPowerOn-enabled judgment flag is turned ON. (Unit: millisecond) 500 msec when the value is 0	0 to 9999 (Default: 0)
60	Set the Secondary Battery charging completion wait timer. (Unit: minute) 120 minutes when the value is 0.	0 to 9999 (Default: 0)
61	Set the pulse trickle charge set timer. (Unit: minute) 300 minutes when the value is 0	0 to 9999 (Default: 0)
65	Set the inquiry wait time at the time of A/D checking (tick).	0 to 9999 (Default: 3)
66	Set the RUI access delay timer. (Unit: second) 60 seconds when the value is 0	0 to 9999 (Default: 0)
67	Set the sleep 2 shift timer. (Unit: second) 12 seconds when the value is 0	0 to 9999 (Default: 0)
76	Set the wait time after a cancellation (E853) processing by the secured print condition. Wait for 500 msec when the setting value is 0 (default), and wait for [setting value] msec when the setting value is other than 0.	0 to 9999 (Default: 0)
77	Set the initial value of the redial interval. (Unit: minute) Setting value when the clear key is pressed	0 to 9999
78	Set the initial value of the pause time. (Unit: minute) Setting value when the clear key is pressed	0 to 9999
79	Set the ring start time of FAX/TEL switch (detailed setting). (Unit: second) Setting value when the clear key is pressed	0 to 9999
80	Set the ring start time of FAX/TEL switch (detailed setting). (Unit: second) Setting value when the clear key is pressed	0 to 9999
81	Set the shift time until automatic shutdown. (Unit: second)	0 to 9999
82	120 minutes when the value of the Secondary Battery charging completion wait timer (Unit: minute) for compliance with Lot26 is 0*1	0 to 9999 (Default: 0)
83	180 minutes when the value of the pulse trickle charge set timer (unit: minute) for compliance with Lot26 is 0*1	0 to 9999 (Default: 0)

*1. An EU directive obligating to design environment-friendly products (eco-design) to facilitate energy saving

No.	Function	Setting range
84	500 when the value of the recovery notification wait time at the time of recovery from sleep [notification of recovery from SuperVisor to UI] (unit: msec) is 0	0 to 9999 (Default: 0)
85	Allow/prohibit access to remote UI service mode	1: Allow, 0: Prohibit (Default: 0)
86	Password level of remote UI service mode	Login level: 0 to 2 (Default: 0)

● 39: Change of default of LDAP advanced search condition

Change of the default of the LDAP advanced search condition can be set.

● 40: eLA card touch sound

The eLA card touch sound can be set.

● 41: PS mode 1(8bit)

The PS mode 1 (8bit) can be set.

● 42: ePS mode 1(8bit)

The PS mde 2 (8bit) can be set.

● 57: Setting of paper size group

A paper size group can be set.
1: AB (PAPER_SIZE_GROUP_AB)
2: A (PAPER_SIZE_GROUP_A)
3: INCH (PAPER_SIZE_GROUP_INCH)
4: AB/INCH (PAPER_SIZE_GROUP_AB_INCH)

Initialization takes place when the following service mode is executed:
(CLEAR>ALL, TYPE, SERVICE DATA, TEL & USER DATA)

#ACC

■ Configuration

The table below gives summary description of the accessories available.

Item1	Item2	Explanation
#ACC	CARD	Card reader installation setting Enter a card number to use. (0 to 9999. One hundred cards are registered with the department ID beginning from the input card number in sequence.) *1:1,000 cards if option ROM is mounted. When a card number is entered, the following kinds of management information are initialized: - Card name (department ID), beginning from the input card number. - Password associated with the card
	CC-SPSW	Control card I/F support setting Set whether to support the control card I/F (CC-V) or not. 0: Do not support. 1: Support.
	COIN	Coin vendor change Set the control card set display appearing on the operator station for vendor use. 0: Control card use 1: Coin vendor use
	CONTROL	Set the PDL printer output control where the control card I/F (CC-V) is supported. 0: Enable printing without a card mounted. 1: Enable printing with a card mounted in position.

#COUNTER

■ Counters

This copier is furnished with a maintenance/supplies counter set (DRBL-1), which can be used to gain rough measures of when to replace supplies. The counter set increments by one on counting each sheet of small-sized paper (up to A4/LTR) and by two on counting each sheet of large-sized paper (larger than A4/LTR).

Maintenance counter list

Item	Counter	Explanation
TOTAL (Total counter)	SERVICE1	Service total counter 1
	SERVICE2	Service total counter 2
	TTL	Total counter
	COPY	Total copy counter
	PDL-PRT	PDL print counter
	FAX-PRT	Fax print counter
	MEDIA-PRT	Media print counter
	RPT-PRT	Report print counter
	2-SIDE	Double-sided copy/print counter
	SCAN	Scan counter
PICK-UP (Paper pickup counter)	C1	Cassette 1 jam counter
	C2	Cassette 2 jam counter
	C3	Cassette 3 jam counter
	C4	Cassette 4 jam counter
	MF	Manual feed tray pickup total counter
	2-SIDE	Double-sided paper pickup total counter
FEEDER (Feeder related counters)	FEED	Feeder pickup total counter
	DFOP-CNT	ADF open/close hinge counter
SORTER (Finisher related counters)	SORT	Finisher sort path counter
	SADDLE	Finisher saddle operation counter
	SDL-STPL	Finisher saddle staple operation counter
JAM (Jam counters)	TTL	Unit total jam count
	FEEDER	Feeder total jam count
	SORTER	Finisher total jam count
	2-SIDE	Duplex unit jam counter
	MF	Manual feed tray jam counter
	C1	Cassette 1 jam counter
	C2	Cassette 2 jam counter
	C3	Cassette 3 jam counter
	C4	Cassette 4 jam counter
MISC (Other required counter)	WST-TNR	Waste toner counter

Parts counter list

Item	Counter	Explanation	Service life
DRBL-1 (Unit supplies)	TR-ROLL	Transfer roller high-voltage ON count	150,000
	SP_SC_EL	Separation static charge eliminator high-voltage ON count	150,000
	DV-UNT-C	Developing assembly rotation count	500,000
	M-PU-RL	Manual feed tray pickup roller paper pass count	150,000
	M-SP-PD	Manual tray separation pad paper pass count	150,000
	FX-UNIT	Fixing assembly paper pass count	iR2545/2535: 240,000 iR2530/2525/2520: 150,000"

Item	Counter	Explanation	Service life
DRBL-1 (Unit supplies)	PT-DRM	Photosensitive drum rotation count	
	WST-TNR	Waste toner count	80,000
	C1-PU-RL	Cassette1 pickup roller paper pass count	250-sheet 1st cassette type: 150,000 250-sheet 1st cassette type: 120,000
	C2-PU-RL	Cassette2 pickup roller paper pass count	150,000
	C1-SP-RL	Cassette1 separation roller paper pass count	120,000
	C1-SP-PD	Cassette1 separation pad paper pass count	120,000 (250-sheet 1st cassette type only)
	C2-SP-RL	Cassette2 separation roller paper pass count	120,000
	OZ-FIL1	not used	-
DRBL-2 (Unit supplies)	DF-PU-RL	ADF pickup roller paper pass count	80,000
	DF-SP-PD	ADF separation pad paper pass count	80,000
	C3-PU-RL	Cassette3 pickup roller paper pass count	120,000
	C4-PU-RL	Cassette4 pickup roller paper pass count	120,000
	C3-SP-RL	Cassette3 separation roller paper pass count	120,000
	C4-SP-RL	Cassette4 separation roller paper pass count	120,000
	FIN-STPR	Stapler assembly drive count	500,000

■ Clearing Counters

- Maintenance/parts counter all clear
  Execute service mode > CLEAR > COUNTER to clear all maintenance/parts counters.
- Counter clear on parts replacement
  Press the numeric keypad key 0 after displaying the counter for a part just replaced, and the counter will be cleared individually.

#LMS

■ Configuration

Group	Item	Default	Setting range	Description
INACTIVE	ST-SEND	0	0 - 1	To display installation state of SEND function when transfer is displayed.
	TR-SEND			The 24 digits of license transfer numbers are displayed.
	ST-BRDIM	0	0 - 1	To display installation state of BarDIMM when transfer is disabled.
	TR-BRDIM			The 24 digits of license transfer numbers are displayed.
	ST-ERDS	0	0 - 1	To display installation state of third party expansion function of E-RDS when transfer is disabled.
	TR-ERDS			The 24 digits of license transfer numbers are displayed.
	ST-PCL	0	0 - 1	To display installation state of PCL function when transfer is disabled.
	TR-PCL			The 24 digits of license transfer numbers are displayed.
	ST-EAM	0	0 - 1	To display installation state of EAM function when transfer is disabled.
	TR-EAM			The 24 digits of license transfer numbers are displayed.
	ST-ELA	0	0 - 1	To display installation state of ELA function when transfer is disabled.
	TR-ELA			The 24 digits of license transfer numbers are displayed.
	ST-SPDF	0	0 - 1	To display installation state of transmission function for SEND searchable PDF when transfer is disabled.
	TR-SPDF			The 24 digits of license transfer numbers are displayed.
	ST-PS	0	0 - 1	To display installation state of PS function when transfer is disabled
	TR-PS			The 24 digits of license transfer numbers are displayed.
ERASE	SEND	0	0 - 1	To display installation state of SEND function when non-transfer is displayed.
	BRDIM	0	0 - 1	To display installation state of BarDIMM when non-transfer is disabled.

Group	Item	Default	Setting range	Description
ERASE	ERDS	0	0 - 1	To display installation state of third party expansion function of E-RDS when non-transfer is disabled.
	PCL	0	0 - 1	To display installation state of PCL function when non-transfer is disabled.
	EAM	0	0 - 1	To display installation state of EAM function when non-transfer is disabled.
	ELA	0	0 - 1	To display installation state of ELA function when non-transfer is disabled.
	SPDF	0	0 - 1	To display installation state of transmission function for SEND searchable PDF when non- transfer is disabled.
	PS	0	0 - 1	To display installation state of PS function when non-transfer is disabled

■ Outline

1. Validate an optional function which has been installed but has not been validated based on the license key issued by a license issue server (hereinafter called "LMS").
2. Invalidate the function for which a license has been already set up.

■ Details

1. Validate a license by entering the license issued by LMS via the local UI.
2. The license key issued by LMS cannot be entered via the remote UI.
3. Invalidate a license (Set the function to OFF) via the service mode.
4. Validate a license via the service mode.
5. A license with restriction (with an expiration date, restriction in the number of licenses) is not supported. (Restriction information is not read.)
6. Some optional functions installed are in dependent relationship with each other.
   For example, when using [Function A], [Function B] should be available.
   In this case, [Function B] is called a slave option of [Function A].
   Installation of the slave option fails when it is found that the master option is not validated as a result of verification of the dependent relationship.
7. Decoding and verifying a license key
   Decode an entered license key and examine the validity of the license information obtained.
   When an error occurs during verification, the error information is sent back to the local UI, which displays an error message based on the information.Verification errors are assumed to occur in the following cases.
   - When a license is installed in a non-licensed device
   - When an optional function included in the license does not exist in the target device
   - When an optional function included in the license is a slave option and a master option is not validated
   - When an incorrect license key is entered
   - When a license key is illegally altered

■ Method of confirming license option

Confirmation could be made whether the license option is active or not in the SACTIBAT FUNCTION item by outputting the SPEC REPORT from the service mode.

Output method:

1. Enter the service mode.
   Push [Additional Functions] Key > push 2, 8 Key > push [Additional Functions] Key.
2. Push cursors, and display [#REPORT].
   Then press [OK].
3. Push cursors, and display [#REPORT OUT PUT].
   Then press [OK].
4. Push cursors, and display [#SPEC LIST].
   Then press [OK].
5. Check the items displayed under ACTIBAT FUNCTION in SPEC REPORT.
   ACTIBAT FUNCTION >
   - BW-SEND
   - CL-SEND

Items for which ON/ON is displayed are validated.

A license option confirmation example
To check the validation of license option, see the SPEC REPORT. The details according to the list shown below.

Item Name	License Name	Status/Optional Setting
Color Universal SEND KIT	BW-SEND	ON/ON
	CL-SEND	ON/ON

■ Inactivity of the transmitted license

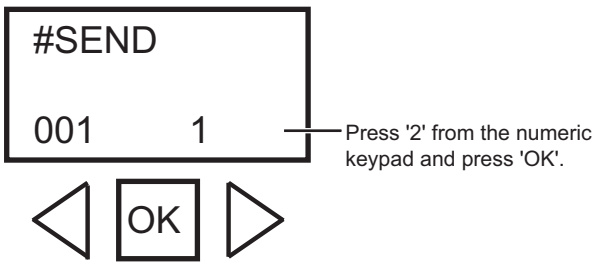
Inactivity of the transmitted license

Situation of using this service mode
This service mode is used to invalidate a license under the assumption that, when a device is exceptionally replaced with another one due to a trouble (caused by the device), the license is transferred to another device. This operation is called "invalidating transfer of a license".
Since it is possible to select the same device as a destination of the transfer, this service mode can be also used to invalidate a function on a temporary basis. Careful attention, however, is required because, if you invalidate a function by mistake, you need to contact a sales company for recovery.

Take utmost precaution when inactivating the license
When invalidating transfer of a license, it is necessary to invalidate the license by entering the service mode and issue a function invalidation certificate key, which certifies that the license has been invalidated. This operation can be executed for each optional function. At the point when a function invalidation certificate key is issued, the function is invalidated and becomes unavailable. When you report this function invalidation certificate key, the serial number of the transfer origination device, the serial number of the transfer destination device, and the reason why you need to perform the transfer to a sales company, a new license key is issued for installation for the transfer destination device. Be sure to write down the new license key when you receive it and, when it is registered in the transfer destination device successfully, inform the user of the new license key and explain him/her to keep it at hand.

Operation Procedure

1. Enter the service mode and display the following service mode.
   (Press one key at once to enter the service mode in the order of "Main, 2, 8, Main".)
   When you have entered the service mode, use the left and right arrow keys to display items,and press the OK key to fix the setting.
2. Display [#LMS].
3. Press the OK key and display [#LMS INACTIVE].
4. Display [ST-SEND].
5. Press the OK key.



6. Press 2 using the numeric key and press the OK key.

> **CAUTION:**
> The 24 digits of license transfer numbers are displayed, so you take the memo.
> Because it cannot maintain the number displaying with the thing of this place limit.
> If you do not take the memo, the indication contents are not held when you do OFF of the main power, it is impossible for license transfer.
> Even if you push the reset key and clear the indication, the indication is never display again.

License transfer example:



7. Turn OFF/ON the power of the main unit.

For Reference:
When a license option is displayed in Procedure (4), 001 1 is displayed. The last "1" shows that the license is validated by license authentication.
After the license is transferred, the last number is changed to "2".
When the option is standard, the last number shows "3" which means disable for license transfer.

Details about the last number:
1: The function is validated.
2: The function is invalidated, or the license is transferred.
3: The function is invalidated, or the license does not exist.

8. When you contact the contact section of the sales company and report a function invalidation certificate key required for license transfer, the serial number of the transfer origination device, and the serial number of the transfer destination device, a new license key that can be registered to the transfer destination device is issued.
9. Register the new license key to the transfer destination device and make sure that the function is validated.

■ Erasing a License

Erasing a License
When you invalidate a license option on a temporary basis or when you do not use it for a long period of time, you can invalidate the function by erasing the license.
The license can be validated by registering the license number again.

Procedure to erase a license
You can erase a license by entering the service mode.

Operation Procedure:
1. Enter the service mode and display the following service mode.
   When you have entered the service mode, use the right and left arrow keys to display items,and press the OK key to fix the setting.
2. Display [#LMS].
3. Press the OK key and display [#LMS ERASE].
4. Display [SEND].
5. Press the OK key.
6. Turn OFF/ON the power of the main unit.

For Reference:

There is no function to display the license registration numbers in the main unit.
Therefore, when there is a possibility to restore the license after erasing it, make sure that a user has written down the license registration number.
When a license option is displayed in Procedure (4), 001 1 is displayed.
The last "1" shows that the license is validated by license authentication.
After the license is erased, the last number is changed to "2".

When the option is standard, the last number shows "3" which means disable for license transfer.

Details about the last number:

1. The function is validated.
2. The function is invalidated, or a license is transferred.
3. The function is invalidated, or the license does not exist.

#E-RDS

■ Configuration

Settings related to e-RDS are described below.

Item	Default	Setting range	Description
E-RDS SWITCH	0	0 or 1	e-RDS OFF/ON setting (0:OFF / 1:ON)When used (ON), the counter information and error information are sent to UGW.Default: 0 (OFF)
RGW- ADDRESS	URL of UGW	Character string length: 129byte (including NULL, one-byte codes only)	URL of UGWDefault: URL of actual UGWCharacter string length: 129 bytes (including NULL, one-byte codes only)
RGW-PORT	443	1-65535	Port No. of UGW Default: 443Setting range: 1 to 65535
CNT-DATE			Setting of the date of sending the counter information to the server (Valid after input of license). Set the start date of the schedule to send the counter information to the server using a third party expansion function of E-RDS. Refer to the user mode date setting. (12 digits: YYYYMMDDHHMM) YYYY: Year MM: Month DD: Day HH: Hour MM: Minute
CNT-INTV	24	1-168 (on a weekly basis)	Setting of the interval of sending the counter information to the server (Valid after input of license). Set the interval of sending the counter information to the server using a third party expansion function of E-RDS.
COM-TEST			Execution of communication test An attempt is made to connect to UGW, judges whether connection is successful, and displays "COM- TEST OK" or "COMTEST NG" as the judgment result.
COM-LOG			Details of communication test result. The log of errors in communication with UGW is displayed. The error information includes the error occurrence time, error code, and details of the error.Maximum log count: 5Error information length: Max. 128 characters (excluding NULL)
SCALLCMP			Repair completion process (call button function) Used when the service personnel has completed the requested repair.

#REPORT

■ Configuration

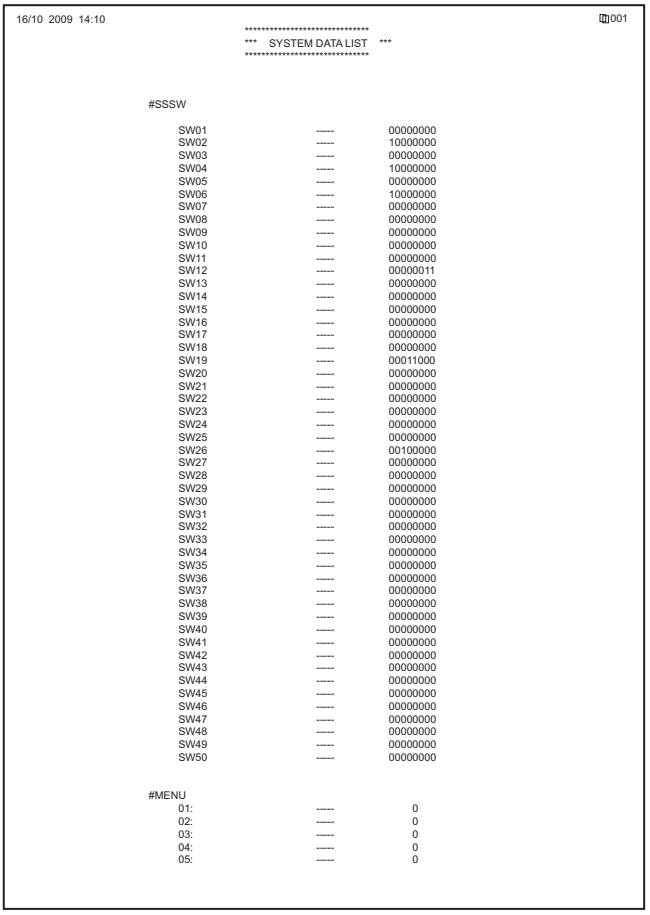
The table below lists the kinds of reports that are supported.

Item	Explanation
SERVICE DATA LIST	"Service mode service soft switch output (SSSW, MENU, NUMERIC Param., SPECIAL, NCU, SCAN, PRINT, SYSTEM, ROM, start date)"
SYSTEM DATA LIST	"Service mode service soft switch output (SSSW, MENU, NUMERIC Param., SPECIAL, NCU, SCAN, PRINT, SYSTEM, ROM, start date) System dump list output"
SYSTEM DUMP LIST	Transmission count, reception count, record chart count, error count and other outputs
COUNTER LIST	Counter output
ERROR LOG LIST	Jam and error history output
SPEC LIST	Type setting, print speed, memory size, ROM indication, adjustment data and other outputs
SERVICE LABEL	Not used.
ERDS COM LOG LIST	Output of communication error log information related to e-RDS

■ Details

● System Data List

Use it to check the settings associated with the service soft switch and service parameters.



16/10 2009 14:10 001

****
*** SYSTEM DATA LIST ***
****

#SSSW

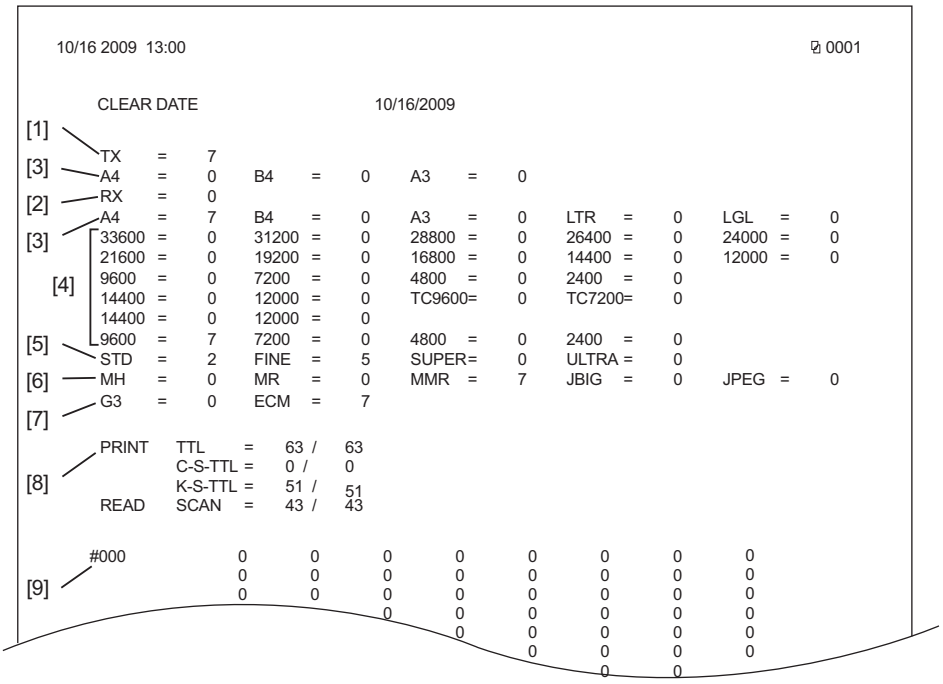
SW01	-----	00000000
SW02	-----	10000000
SW03	-----	00000000
SW04	-----	10000000
SW05	-----	00000000
SW06	-----	10000000
SW07	-----	00000000
SW08	-----	00000000
SW09	-----	00000000
SW10	-----	00000000
SW11	-----	00000000
SW12	-----	00000011
SW13	-----	00000000
SW14	-----	00000000
SW15	-----	00000000
SW16	-----	00000000
SW17	-----	00000000
SW18	-----	00000000
SW19	-----	00011000
SW20	-----	00000000
SW21	-----	00000000
SW22	-----	00000000
SW23	-----	00000000
SW24	-----	00000000
SW25	-----	00000000
SW26	-----	00100000
SW27	-----	00000000
SW28	-----	00000000
SW29	-----	00000000
SW30	-----	00000000
SW31	-----	00000000
SW32	-----	00000000
SW33	-----	00000000
SW34	-----	00000000
SW35	-----	00000000
SW36	-----	00000000
SW37	-----	00000000
SW38	-----	00000000
SW39	-----	00000000
SW40	-----	00000000
SW41	-----	00000000
SW42	-----	00000000
SW43	-----	00000000
SW44	-----	00000000
SW45	-----	00000000
SW46	-----	00000000
SW47	-----	00000000
SW48	-----	00000000
SW49	-----	00000000
SW50	-----	00000000

#MENU

01:	-----	0
02:	-----	0
03:	-----	0
04:	-----	0
05:	-----	0

● System Dump List

Use it to check the history of communications, both successful and error.

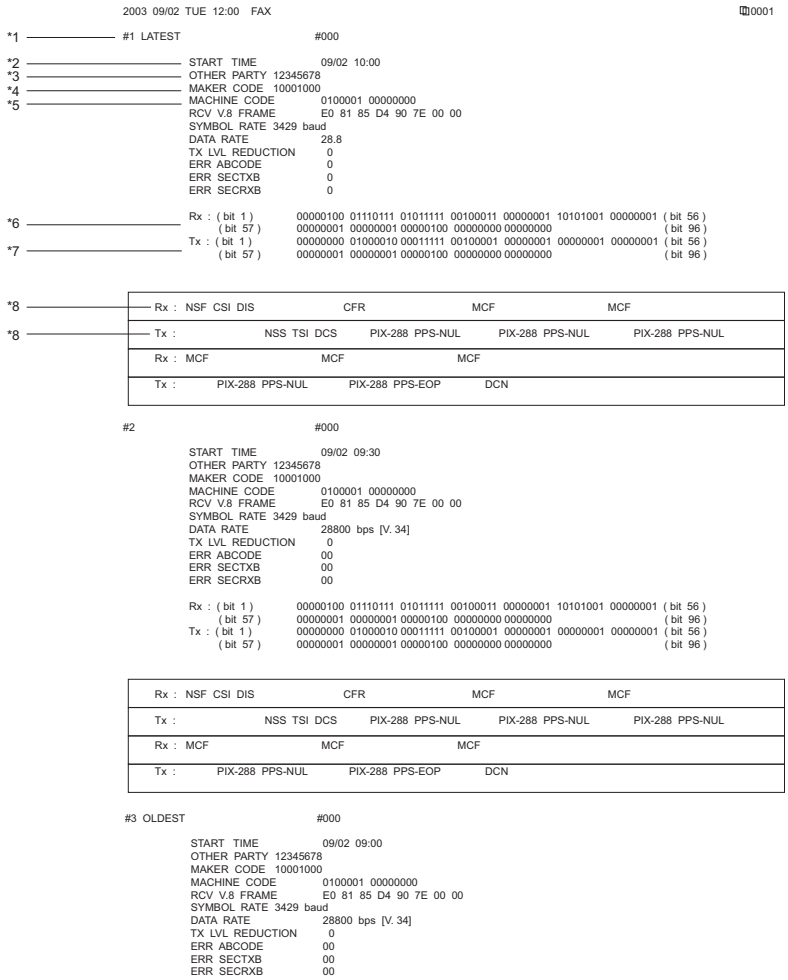


*1: TX, number of total pages transmission.
*2: Total number of pages transmitted/received according to original size.
*3: RX, number of total pages reception.
*4: Total number of pages transmitted and received for each modem speed.
*5: Total number of pages transmitted/received in connection with different modem speeds (Standard, Fine, Super Fine, Ultra Fine).
*6: Total number of pages transmitted and received for each coding method.
*7: Total number of pages transmitted and received in each mode .
*8: Total number of pages printed/scanned.
*9: Total number of occurrences for error code .

Indication sample

##280	1	7	3	0	0
	##280number of errors	##280number of errors	##280number of errors		

It provides error information on the 3 most recent communications.

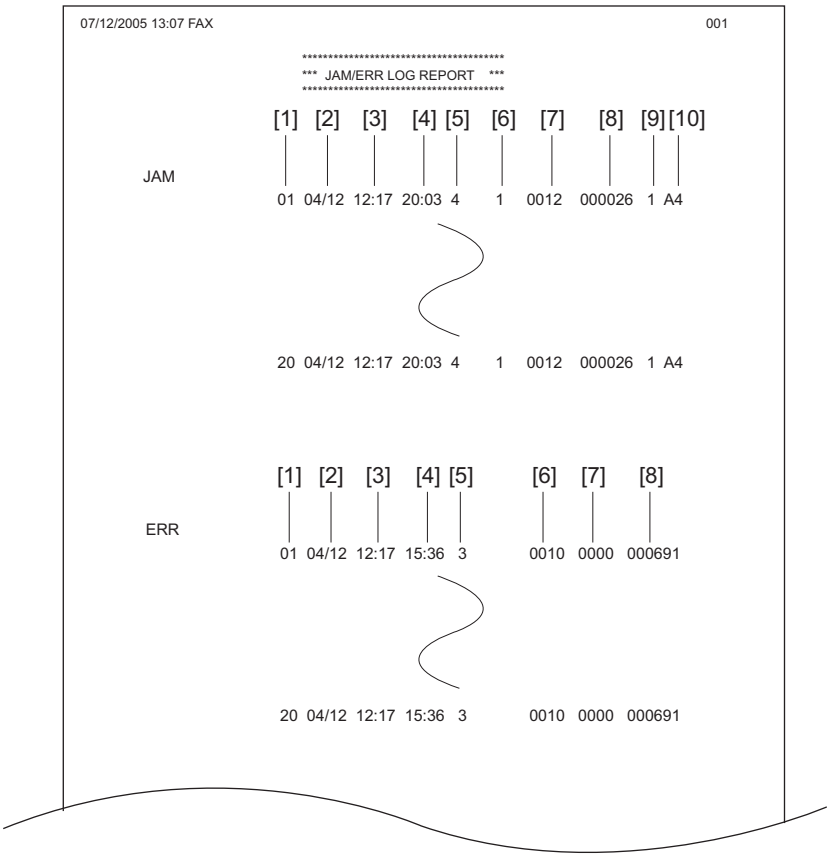


*1: service error code.
*2: START TIME, date and time (in 24-hr notation).
*3: OTHER PARTY, telephone number sent by the other party.
*4: MAKER CODE, manufacturer code.
*5: MACHINE CODE, model code.
*6: bit 1 through bit 96 of DIS, DCS, or DTC that has been received.
*7: bit 1 through bit 96 of DIS, DCS, or DTC that has been transmitted.
*8: RX, procedural signal received; TX, procedural signal transmitted.

● Counter List

Explanation: Maintenance/supplies counter output.
(For more detailed information about the maintenance/supplies counter output, refer to “#COUNTER” on page 279)

● Error Log List



Jam history description (JAM)

No.	Item	Explanation
[1]	Number	The larger the number of a jam, the more recently it has occurred.
[2]	Jam date	Date of jam occurrence
[3]	Jam time	
[4]	Jam recovery time	
[5]	Location	3: Host machine, 4: ADF, 5: Finisher
[6]	Occurrence category	0: Host machine, 1: ADF, 2: Finisher
[7]	Jam code	For a definition of the code, see the “Main Unit” on page 213
[8]	Total counter display	
[9]	Pickup stage position	0: Manual feed tray, 1: Cassette 1, 2: Cassette 2, 3: Cassette 3, 4: Cassette 4, 7: Duplex unit
[10]	Paper size	

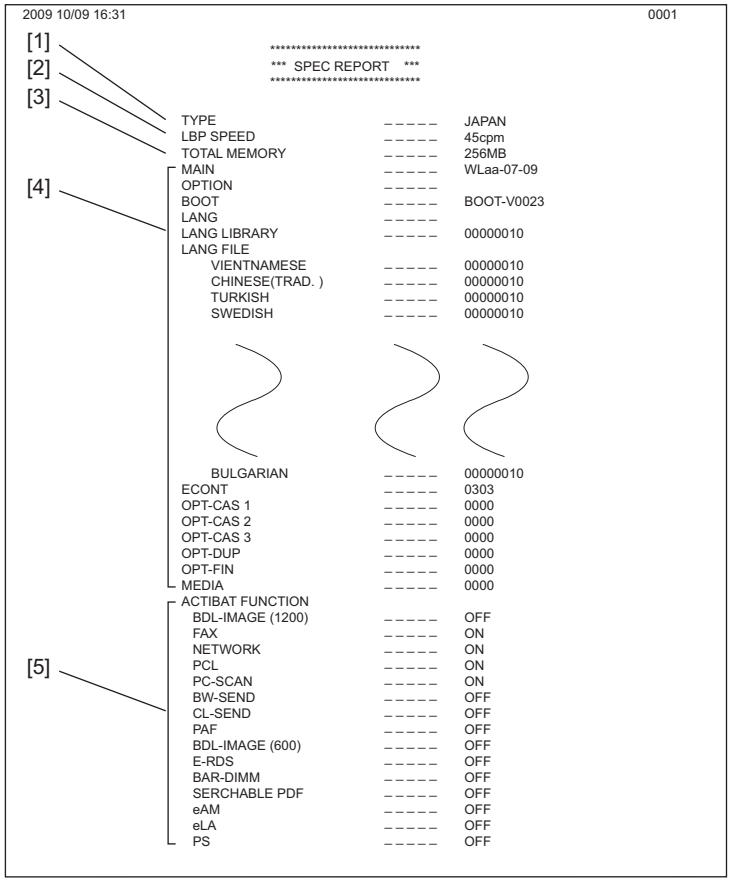
Error history description (ERR)

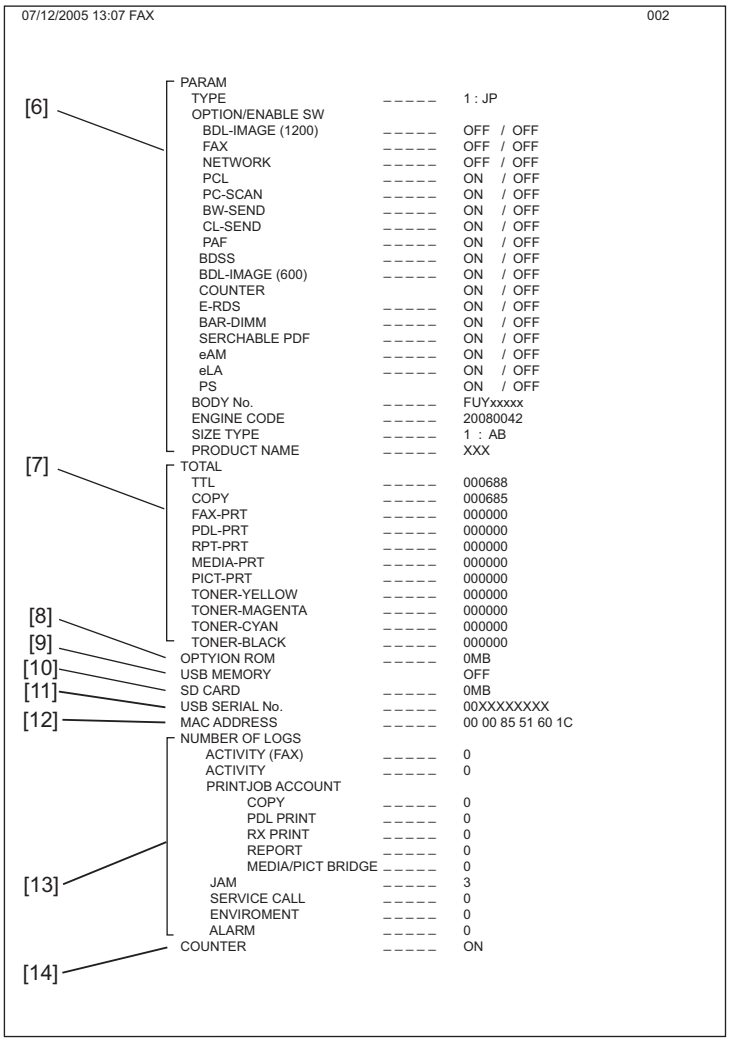
No.	Item	Explanation
[1]	Number	The larger the number of an error, the more recently it has occurred.
[2]	Error date	Date of error occurrence
[3]	Error time	
[4]	Error recovery time	
[5]	Location	3: Main unit, 5: Finisher
[6]	Error code	Error code (4-digit code; for a definition of the code, “Error Code Details” on page 201)
[7]	Detail code	Detail code of the error code (4-digit code; for a definition of the code, see the "Error Code" Chapter.)
[8]	Total counter display	

Alarm history description(ALARM)

No.	Item	Explanation
[1]	Number	The larger the number of a alarm, the more recently it has occurred.
[2]	Alarm date	Date of alarm occurrence
[3]	Alarm time	
[4]	Alarm recovery time	
[5]	Location	
[6]	Alarm code	Alarm code (4-digit code; for a definition of the code, see the "Alarm Code""Alarm Code Details" on page 219)
[7]	Detail code	Detail code of the alarm code (8-digit code; for a definition of the code, see the "Error Code" Chapter.)

● Spec List





[1] Type setting
[2] Print speed
[3] Memory size
[4] ROM version (MAIN/BOOT/LANG*1(language liblary/language file version)ECONT/option cassette/duplex unit/finisher)
[5] Activation function ON/OFF
[6] Not used
[7] Total counter (TOTAL/COPY/FAX/PDL/REPORT record counts)
[8] Option ROM availability
[9] USB memory availability
[10] SD card volume
[11] USB serial number
[12] MAC address
[13] output the number of histories (communication history, copy/print/report/JOB history of the reception print, jam history, E code history, humidity log)
[14] Counter ON/OFF

#DOWNLOAD

■ Download

The following parts of this unit can be upgraded by executing download mode using the service support tool (UST)
(for more information, see the "“Overview” on page 194

Main unit

ROM mounted on the main controller PCB (BOOT+PROGRAM)
ROM mounted on the DC controller PCB (DCON)

Accessory
ROM mounted on the finisher controller PCB(FIN_CON)

#CLEAR

■ Configuration

Item	Small Item	Description
TEL & USER DATA		To clear the entire area registered/set by the user. TEL registration data and user data are cleared. (TEL registration refers to registration of one-touch dialing, coded dialing and group dialing.)
SERVICE DATA		To clear service data. User data is not cleared.
COUNTER		To clear the maintenance and parts counters and counter for each mode. Counter (numerator) on the system dump list is cleared.
SOFT-CNT		Not used
TYPE		To initialize user data and service data according to the country setting.
HST	ACTIVITY	To clear description of communication management report.
	ACCOUNT	To clear each print log.
	JAM	To clear jam log description.
	ERR	To clear error (error code) log description.
	ALARM	To clear alarm log description.
	ENVIROMENT	To clear environment log description.
CARD		To clear the department management information kept in the controller when removing the Card Reader.
ERR	E719	To clear errors of the Card Reader.
PWD		To clear the password of the system administrator.
FILE SYSTEM		Not used
FORMAT	USB MEMORY	To format a USB flash drive. (Perform formatting at occurrence of E744 due to a damaged USB flash drive.)
	LICENSE DRIVE	To clear the drive for license files.
FMT-SD	512	To format 512MB SD card.
	1024	To format 1204MB SD card.
	2048	To format 2048MB SD card.
CA-KEY		To initialize the installed CA certificate. (To be displayed only after activating the e-RDS function)
ERDS-DAT		To clear the setting relating to e-RDS to return to the setting at factory shipment. (To be displayed only after activating the e-RDS function)
DEPT_USER_CLEAR		To turn OFF the Dept ID management and user management.
SYSTEM_INFO_ CLEAR		To clear the password of the system administrator.
ENGIN	ERRCLR	To clear an engine error.
	BKRAMCLR	To clear backup RAM of the engine.
	TNRINST	To send toner to the Developing Assembly from the Toner Bottle at installation.
EAM-DAT		To initialize Flash/SRAM data for EAM.
ELA-DAT		To initialize Flash/SRAM data for ELA.
TONER-INSTALLED	ON	To set the flag generated when the toner stirring is done. (When this service mode is executed, the machine is automatically restarted.)
	OFF	To clear the flag generated when toner stirring is done. (When this service mode is executed, the machine is automatically restarted.)
ALL		To clear Settings/Registration data of counters except the counters for user data, service data (excluding some of SCAN/PRINT parameters) and the number of prints on the system dump list.

#DISPLAY

■ Configuration

An error code is displayed when a service error has occurred.
The E code is displayed in the upper step, and the detail code is displayed the bottom step.

Group	Item	Description
DISPLAY	ERR	The E code and detail code of the current system error are displayed. (Multiple codes can be displayed with the left and right buttons.) <Display example> SYSTEM ERROR xxx: Eyyy-zzzz Example) 001:E602-1105 xxx: History number yyy: E Code zzzz: Detail code
	JAM	The current JAM code is displayed. (Multiple JAM codes can be displayed with the left and right buttons.) <Display example> JAM ERROR xxx:y-z-vvvv-wwww xxx: History number y: Description of position (3: Main unit (including the pickup assembly), 4: ADF, 5: Finisher) z: Cassette level (01: Manual feed tray, 1: Cassette 1, 2: Cassette 2, 3; Cassette 3,4: Cassette 4, 7: Double-sided) vvvv: JAM code wwww: paper size
	SPDTYPE	Display of engine speed type on controller PCB <Display example> SPDTYPE (Line 1) 45cpm (Line 2)

#ROM

■ Configuration

The table below lists the items of ROM display mode that are supported.

Group	Item	Description
ROM	MAIN (Bootable)	Displays the version number of the PROGRAM ROM mounted on the main controller PCB.
	MAIN2 (Boot)	Displays the version of the ROM (BOOT) mounted on the main controller PCB.
	OPROM	Not used
	ECONT	Displays the version number of the ROM mounted on the DC controller PCB.
	OPTION CAS1	Not used
	OPTION CAS2	Not used
	OPTION CAS3	Not used
	DUPLEX	Not used
	FINISHER	Displays the version number of the Inner finisher
	READER	Not used

#TEST MODE

■ Outline

Test mode must be executed by keeping track the flow of menu items appearing on the LCD.
Menu items in test mode are organized into seven blocks as described below.
Numerals enclosed in parentheses denote a numeric keypad key to be pressed each.

1. D-RAM test <(1) D-RAM TEST>
   Checks to see if data can be correctly written to and read from D-RAM.

2. PG output <(3) PG>
   Used to generate service test patterns.

3. MODEM test <(4) MODEM TEST>
   Performs relay actuation, modem DTMF and tonal signal transmission/reception tests.

4. FUNCTION test <(6) FUNCTION TEST>
   Used to verify the operations of microswitches, sensors, speakers and ADF functions.

■ Configuration

Numerals enclosed in parentheses denote a numeric keypad key to be pressed each.

Group	subgroup	Item 1	Explanation
TEST MODE [1] - [9]			
(1) DRAM [1] - [2]			D-RAM data check
	(1) D-RAM TEST		Write/read check
	(2) D-RAM TEST		Read check
(3) PG			
	SELECT NO.01		Grid
	SELECT NO.02		HT
	SELECT NO.03		All-black output
	SELECT NO.04		---(For R&D)
	SELECT NO.05		---(For R&D)
	SELECT NO.06		4dot-6space (vertical)
	SELECT NO.07		dot-6space (horizontal)
	SELECT NO.08		---(For R&D)
	SELECT NO.09		16 gray levels (monochromatic)
(4) MODEM TEST [1] - [9]			
	(1) RELAY TEST [1] - [2]		
		(1) RELAY TEST 1	NCU relay (and switch) ON/OFF test
		(2) RELAY TEST 2	230 V common NCU test
	(2) FREQ TEST [0] - [6]		Frequency test
		(0) FREQ TEST 462Hz	
		(1) FREQ TEST 1100Hz	
		(2) FREQ TEST 1300Hz	
		(3) FREQ TEST 1500Hz	
		(4) FREQ TSST 1650Hz	
		(5) FREQ TEST 1850Hz	
		(6) FREQ TEST 2100Hz	
	(4) G3 SIGNAL TX TEST [0] - [8]		G3 signal transmission test
		(0) G3 SIGNAL TX TEST 300bps	
		(1) G3 SIGNAL TX TEST 2400bps	
		(2) G3 SIGNAL TX TEST 4800bps	
		(3) G3 SIGNAL TX TEST 7200bps	
		(4) G3 SIGNAL TX TEST 9600bps	
		(5) G3 SIGNAL TX TEST TC7200bps	
		(6) G3 SIGNAL TX TEST TC9600bps	
		(7) G3 SIGNAL TX TEST 12000bps	
		(8) G3 SIGNAL TX TEST 14400bps	
	(5) DTMF TEST [0] - [9], * , #		DTMF transmission test
		(0) G3 SIGNAL TX TEST 300bps	

Group	subgroup	Item 1	Explanation
		(1) G3 SIGNAL TX TEST 2400bps	
		(2) G3 SIGNAL TX TEST 4800bps	
		(3) G3 SIGNAL TX TEST 7200bps	
		(4) G3 SIGNAL TX TEST 9600bps	
		(5) G3 SIGNAL TX TEST TC7200bps	
		(6) G3 SIGNAL TX TEST TC9600bps	
		(7) G3 SIGNAL TX TEST 12000bps	
		(8) G3 SIGNAL TX TEST 14400bps	
		(9) G3 SIGNAL TX TEST TC9600bps	
		(*) G3 SIGNAL TX TEST 12000bps	
		(#) G3 SIGNAL TX TEST 14400bps	
	(6) MODEM TEST		Tonal sign reception test
	(8) G3 V.34 Tx TEST		V34 G3 signal transmission test
(6) FUNCTION TEST [1] - [9]			
	(1) FUNCTION TEST G3 4800bps		G3 4800 bps signal transmission test
	(2) SENS/SW CHECK		Sensor checks
		FLAG	Sensor check with flag
		CST	Cassette check
		READER	Reader sensor check
		A/D	Analog/digital computation output sensor
		COPY	Copy confirmation sensor
		ADF	ADF sensor check
	(3) NCR sts		cardreader test
	(9) LINE TEST [1] - [3]		Line signal reception test

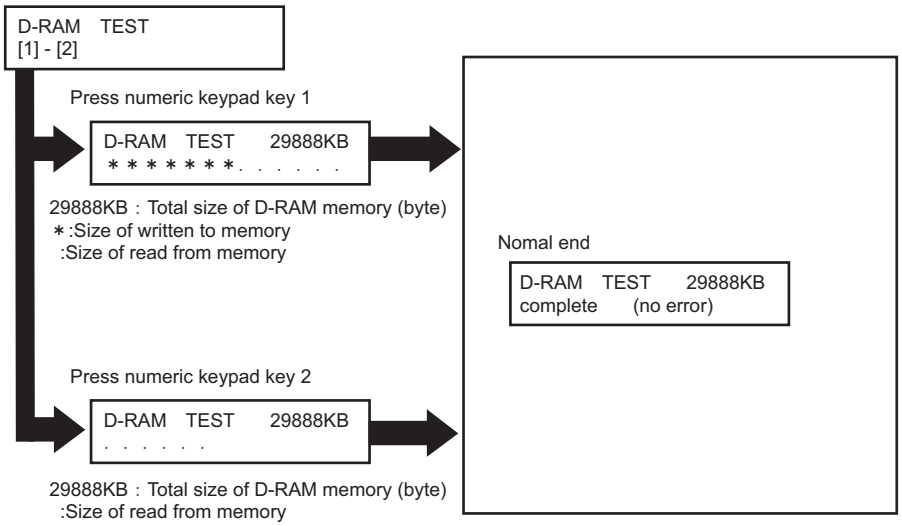
■ Details

● D-RAM Test <(1) D-RAM>

Press the numeric keypad key 1 on the test mode menu to select the D-RAM test.
Press numeric keypad keys 1 and 2 during the D-RAM test to carry out the individual tests described below.

Numeric keypad key 1
Checks to see if data can be correctly written to and read from all areas of D-RAM (SDRAM).
If an error occurs making this check, the test is aborted, with an error appearing on the touch panel (LCD).

Numeric keypad key 2
Checks to see if data can be correctly read from all areas of D-RAM (SDRAM).
If an error occurs making this check, the test is aborted, with an error appearing on the touch panel (LCD).



● PG Output <(3) PG>

Press the numeric keypad key 3 on the test mode menu to select the PG output.
Press numeric keypad keys during the print test to generate test patterns as described below.
Nine kinds of service test patterns are available. Other test patterns are reserved for factory/ development purposes.

No.	Test pattern
SELECT NO.01	Grid
SELECT NO.02	HT
SELECT NO.03	All-black output
SELECT NO.04	---(For R&D)
SELECT NO.05	---(For R&D)
SELECT NO.06	4dot-6space (vertical)
SELECT NO.07	dot-6space (horizontal)
SELECT NO.08	---(For R&D)
SELECT NO.09	16 gray levels (monochromatic)

Procedure

1. Enter the PG number with numeric keys, then press the START key.
2. Select single-sided (SGL: 0) or double-sided (DBL: 1), then press the START key.
3. Enter the number of prints to be output (PG COUNT), then press the START key.
4. Specify the paper drawer (main unit), then press the START key.
   Main unit cassette (ST_C: 0), 2nd cassette (OP_C: 1), Manual feed tray (MLT: 2)
5. Specify the paper eject slot, then press the START key.
   Tray 1 (1_OUT: 0), Tray2 (2_OUT: 1)
6. Select a paper type, then press the OK key.
   Plain paper (PLN: 0), Thick paper (TCK: 1),Thin paper (OHP: 2)
7. A test pattern is output.

● MODEM Test <(4) MODEM TEST>

These tests test modem and NCU transmission and reception.
The modem tests check whether signals are sent correctly from the modem by comparing the sound of the signals from the speaker with the sounds from a normal modem.
End this test by pressing the Stop key.

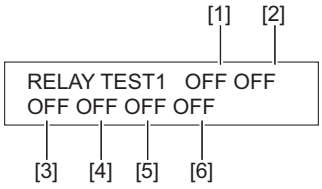
Keypad	Type	Description
1	Relay Test	Use it to turn on/off a selected relay to execute a switch- over test.
2	Frequency test	The modem sends tonal signals from the modular jack and the speaker.
4	G3 signal transmission test	The modem sends G3 signals from the modular jack and the speaker.
5	DTMF signal reception test	Use it to generate the DTMF signal coming from the modem using the telephone line terminal and the speaker.

Keypad	Type	Description
6	Tonal signal reception test	Use it to monitor a specific frequency and the DTMF signal received from the telephone line terminal by causing them to be indicated on the LCD (i.e., the presence/absence as detected). The reception signal is generated by the speaker.
8	V.34 G3 signal transmission test	The modem sends V.34 G3 signals from the modular jack and the speaker.

Relay Test

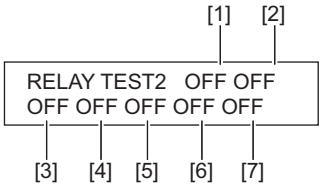
Press '1'or '2' on the keypad on the Modem test menu to select relay test mode.
Use the keypad to operate the various relays of the NCU. '2' on the keypad is used for 230V machine.

Numeric keypad key 1
The input key and relay are shown below:



	[1]	[2]	[3]	[4]	[5]	[6]
Relay	CML	P	S	H	D	R
Keypad	0	1	2	3	4	5

Numeric keypad key 2
The input key and relay are shown below:



	[1]	[2]	[3]	[4]	[5]	[6]	[7]
Relay	CITS2	C1	NORG	DCSEL	DCLIM	IPSEL1	IPSEL2
Keypad	0	1	2	3	4	5	6

CAUTION:
The touch panel (LCD) is turned on or off in relation to the transmission of the relay operation signal as is operated on the keypad; for this reason, you cannot use the touch panel (LCD) to check a fault on a single relay.

Frequency Test

A press on '2' on the keypad from the MODEM test menu selects the frequency test.
In this test, signals of the following frequencies from the modem are transmitted using the telephone line terminal and the speaker.
To select a different frequency,

Keypad	Frequency
1	462Hz
2	1100Hz
3	1300Hz
4	1500Hz
5	1650Hz
6	1850Hz
7	2100Hz

NOTE:
The frequency and the output level of individual frequencies are in keeping with the output level set in service mode.

G3 Signal Transmission Test
A press on '4' on the keypad from the MODEM test menu selects the G3 signal transmission test.
In this test, the following G3 signals from the modem are transmitted using the telephone line terminal and the speaker.
To select a different transmission speed, use the keypad.

Keypad	Transmission speed
0	300bps
1	2400bps
2	4800bps
3	7200bps
4	9600bps
5	TC7200bps
6	TC9600bps
7	12000bps
8	14400bps

NOTE:
The output level of individual signals is in keeping with the setting made in service mode.

A press on '5' on the MODEM test menu selects the DTMF signal transmission test. In the test, the following DTMF signals from the modem are transmitted using the telephone line terminal and the speaker. The number pressed on the keypad selects a specific DTMF signal.

NOTE:
The output level of individual signals is in keeping with the setting made in service mode.

Tonal/DTMF Signal Reception Test
A press on '6' on the keypad from the MODEM test menu selects the tonal signal/DTMF signal reception 0 test. In this signal, the tonal signal/DTMF signal received from the telephone line terminal can be checked to find out if it was detected by the modem.

Tonal signal reception test

```
MODEM TEST
OFF OFF OFF
```

```
OFF OFF OFF
          └─ changes from '0' to '1' in response to detection of a signal of 462±25Hz.
       └──── changes from '0' to '1' in response to detection of a signal of 1100±30Hz.
    └─────── changes from '0' to '1' in response to detection of a signal of 2100±25Hz.
```

DTMF signal reception test

```
MODEM TEST
OFF OFF OFF  5
```

The received DTMF signals are indicated starting from the right using the 2nd character of the display.

V.34 G3 Signal Transmission Test
A press on '8' on the keypad from the MODEM test menu selectes the V.34 G3 signal transmission test.
The V.34 G3 signals below are sent from the modem using the modular jack and the speaker by pressing the start key.
The Baud rate can be changed with the keypad, and the Speed can be changed with the left/right arrow key.

Keypad	Baud rate
0	3429baud
1	3200baud
2	3000baud
3	2800baud
4	2743baud
5	2400baud

Left/right arrow key	Transmission speed
< >	2400bps
	4800bps
	7200bps
	9600bps
	12000bps
	14400bps
	16800bps
	19200bps
	21600bps
	24000bps
	26400bps
	28800bps
	31200bps
	33600bps

● FUNCTION Test <(6) FUNCTION TEST>

Press the numeric keypad key 6 on the test mode menu to select the function test.
Press numeric keypad keys 1 to 4 and 9 during the function test to enter the menus listed below.

Keypad	Type	Description
1	G3 signal transmission test	Transmits 4800-bps G3 signals to a telephone line and speaker
2	Sensor test	Sensor actuation test
3	Accessory	
4	ADF test	ADF operation test
5	Not used	
6	Not used	
7	Not used	
8	Not used	
9	Line signal reception test	NCU board signal sensor and frequency counter operation test

G3 signal transmission test (6-1: G3 480 bps Tx)
Press numeric keypad key 1 on the FUNCTION TEST menu to select the G3 signal transmission test.
This test transmits 4800-bps G3 signals from the telephone line connection terminal and speaker.

Sensor test (6-2: SENSOR)
This mode is used to verify the status of the unit sensors from the touch panel (LCD) indications.
Press numeric keypad key 3 on the FUNCTION TEST menu to select the sensor test.
To select a minor item, press the START key.
The touch panel (LCD) indications change as the associated sensors turn on and off.

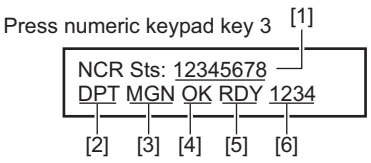
Group	Item	Description		Detail
(2) SENS/ SW CHECK	FLAG	Sensor check with flag (manual check)	CT: Waste Toner Full Sensor(S17)	0/Full 1/Available
			TC: Toner Cover Open/Closed Sensor (S16)	1/Cover open 0/Cover closed
			MW: Manual Feeder Paper Size Sensor (S8)	0/Document presence 1/Document absenc

Group	Item	Description		Detail
(2) SENS/ SW CHECK	FLAG	Sensor check with flag (manual check)	DO: Front Cover Open/Closed Sensor (S18)	1/Cover open 0/Cover closed
			F1: No.1 Delivery Full Sensor (S11)	0/Document presence 1/Document absenc
			F2: No. 2 Delivery Full Sensor (S41)	0/Document presence 1/Document absenc
	CST	Cassette check	S: Cassette 1 Pickup Sensor (S1)	0/Document presence 1/Document absenc
			SU: Cassette 1 Paper Sensor (S2)	0/Document presence 1/Document absenc
			PE: Cassette 1 Paper Level Sensor A (S3)	0/Document presence 1/Document absenc
			ZA: Cassette 1 Paper Level Sensor B(S4)	0/Document presence 1/Document absenc
			S1: Cassette Size Detection Switch 1 (Width) (SW6)	0/Document presence 1/Document absenc
			S2: Cassette Size Detection Switch 2 (Length) (SW7)	0/Document presence 1/Document absenc
	READER	Reader sensor check	C0: Copyboard Cover Open/Closed Sensor 0 (S21)	0/Document presence 1/Document absenc
			C1: Copyboard Cover Open/Closed Sensor 11 (S26)	0/Document presence 1/Document absenc
			HP: iR2545/2535: CCD Hp Sensor (S22) iR2530/2525/2520: CIS Hp Sensor (S31)	0/besides HP 1/HP
			SIZE: Document size: Paper size indicated in a mix of document size sensors	
			Document size sensor 0/1/2/3	0/Document presence 1/Document absenc
	A/D	Analog/digital computation output sensor	HOP: Developing unit toner sensor (TS1) output value	
			DEV: Sub hopper toner sensor (TS2) output value	
	A/D	Analog/digital computation output sensor	TEP: Temperature output value	
			HUM: Humidity output value	
			MTH: Fixing main thermistor (TH3) output value	
			STH1: Fixing sub Thermistor (rear) (TH1) output value	
			STH2: Fixing sub thermistor (front) (TH2) output value	
	COPY	Copy confirmation sensor	MP: Manual Feeder Paper Sensor (S9)	0/Document presence 1/Document absenc
			RE: Pre-Registration Sensor (S5)	0/Document presence 1/Document absenc
			RP: Loop Sensor (S6)	0/Document presence 1/Document absenc
			FX: Fixing Outlet Sensor (S19)	0/Document presence 1/Document absenc
			D1/2:No.1 Delivery Sensor(S12)/No. 2 Delivery Sensor(S42)	0/Document presence 1/Document absenc
			TU: Reversal Sensor (S40)	0/Document presence 1/Document absenc
			DL: Duplex Feed Sensor (S7)	0/Document presence 1/Document absenc
	ADF	ADF sensor check	W1: Document width sensor 1	0/Document presence 1/Document absenc
			W2: Document width sensor 2	0/Document presence 1/Document absenc
			L1: Document length sensor 1	0/Document presence 1/Document absenc

Group	Item	Description		Detail
(2) SENS/ SW CHECK	ADF	ADF sensor check	L2: Document length sensor 2	0/Document presence 1/Document absenc
			LT: Last document detection sensor	0/Document presence 1/Document absenc
			EX: Delivery reversal sensor	0/Document presence 1/Document absenc
			DR: Read sensor	0/Document presence 1/Document absenc
			RG: Registration paper sensor	0/Document presence 1/Document absenc
			CV: Cover open/close sensor	0/Cover closed 1/Cover open
			DS: Document set snsor	0/Document presence 1/Document absenc
			RK: Release motor HP sensor	0/besides HP 1/HP
			TM: Timing sensor	0/Document presence 1/Document absenc

Card reader test <6-3: NCR sts>

Press numeric keypad key 3 on the FACULTY menu to select the card reader test.
In this test, verify the successful operations of the card reader.



[1] Card reader and card availability indication
Card available: Eight-digit card ID
No card: Card None
No card reader available: NCR None

[2] Card type and card reader status indication
DPT: Department card
PRC: Unit pricing card
MAX: Upper limit setting card
ERS: Erased card
SRV: Service card
(No indication): No card

[3] Card type
MGN: Magnetic card
OPT: Optical card

[4] Can status
OK: Normal scan
ERR: Scan error
NG: Nonstandard error
(No indication): No card

[5] Equipment status
IN: Initialization in progress
RDY: Ready

[6] Card reader version indication
Four-digit number

Line signal reception test <6-9: LINE DETECT>

Press numeric keypad key 9 on the FACULTY menu to select the line signal reception test.
In this test, verify the successful operations of the NCU signal sensor and the frequency counter.
Menu 1 detects the CI state, while menu 3 detects the CNG signal.

Test menu 1

Press numeric keypad key 1 on the LINE DETECT menu to select test menu 1. When CI is detected on the telephone line connection terminal, the touch panel (LCD) display changes from OFF to ON, indicating the received frequency. The touch panel (LCD) also displays the on-hook or off-hook state of an external telephone set as detected. The touch panel (LCD) displays, from left to right, CI, CI frequency, hook port and FC with indications of 1:ON and 0:OFF.

Test menu 2

Press numeric keypad key 2 on the LINE DETECT menu to select test menu 2. When the CNG signal is detected on the telephone line connection terminal, the touch panel (LCD) display changes from OFF to ON, indicating the received frequency. The touch panel (LCD) displays the status of CML, CNG and FED detection, from left to right, with ON/OFF indications. Numeric keypad key 2 turns on the CML relay to detect CNG.

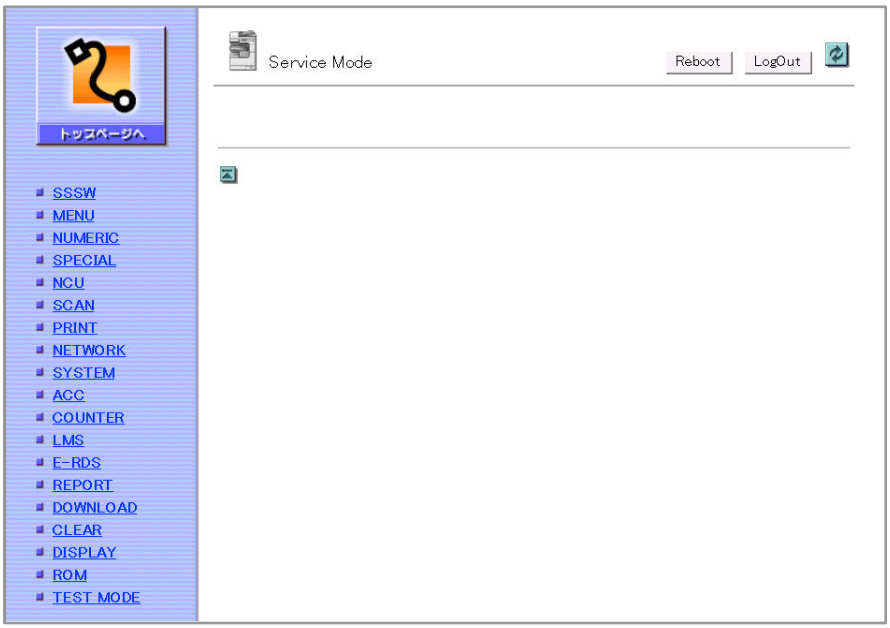
Test menu 3

Press numeric keypad key 3 on the LINE DETECT menu to select test menu 3. When the CNG signal is detected on the telephone line connection terminal, the touch panel (LCD) display changes from OFF to ON, indicating the received frequency. The touch panel (LCD) displays the status of CML, CNG and FED detection, from left to right, with ON/OFF indications. Numeric keypad key 3 turns off the CML relay to detect CNG

Remote UI Service Mode

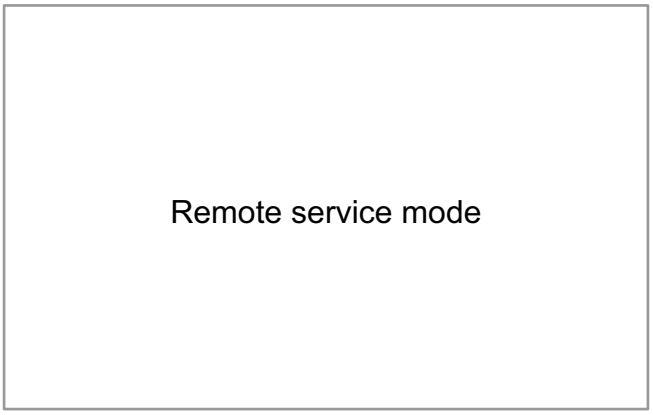
Function Overview

It is possible to display, configure, and execute various service mode modes as well as restart the host machine by using remote UI.



Main Specifications

- Only English is available as the display language regardless of the language setting.
- The screen design remains remote UI.
- The following screen is displayed while accessing service mode from remote UI. When a user logs out from service mode, it returns to the normal screen.



- The normal screen of remote UI can be accessed/used even while accessing service mode from the Control Panel or remote UI.
- Cache and favicon of the browser are disabled.
- The session information to be retained when logging in service mode from remote UI is discarded in the following cases.
  - If the user logs out from service mode
    If the user restarts the host machine
    If the fixed time (3 minutes) has passed from the last access

  If the browser is closed without logging out, the session information is not discarded. In that case, the user needs to wait for a fixed time to let the session information is discarded.
- Clicking [REBOOT] button restarts the machine.

Operating conditions

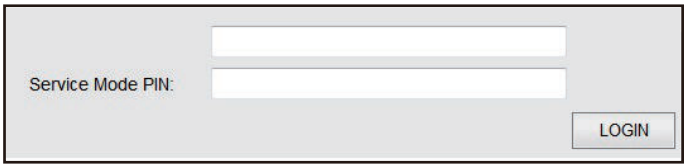
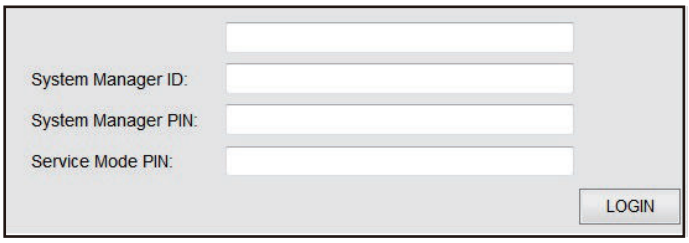
In order to operate service mode using remote UI, the following conditions must be met.

- Service mode is not accessed from the Control Panel
- The remote UI is enabled in the settings on the Control Panel
  [Settings/Registration] > [System Settings] > [Remote UI Settings] > [Use Remote UI] > [ON]
- The RMT-SW (remote UI service mode function) setting is enabled (set to 1) in service mode
  - SERVICE MODE > SYSTEM > RMT-SW
    0: OFF, 1: ON (default)

How to Use

1. **Activate the Web browser, and access the following URL:**
   http://<Host machine's IP address or host name>/servicemode.html
2. **Enter the password, and click [LOGIN].**
   * Password required for authentication differs depending on the following service mode setting:
     - SERVICE MODE > OPTION GR. > PSWD-SW

Combinations of PSWD-SW setting value and password required for authentication

PSWD-SW setting value	Password required for authentication	Authentication screen
0	• Password of remote UI service mode	
1	• Password of remote UI service mode • Service mode password	
2	• Password of remote UI service mode • User's system administrator ID • Password of system administrator • Service mode password	

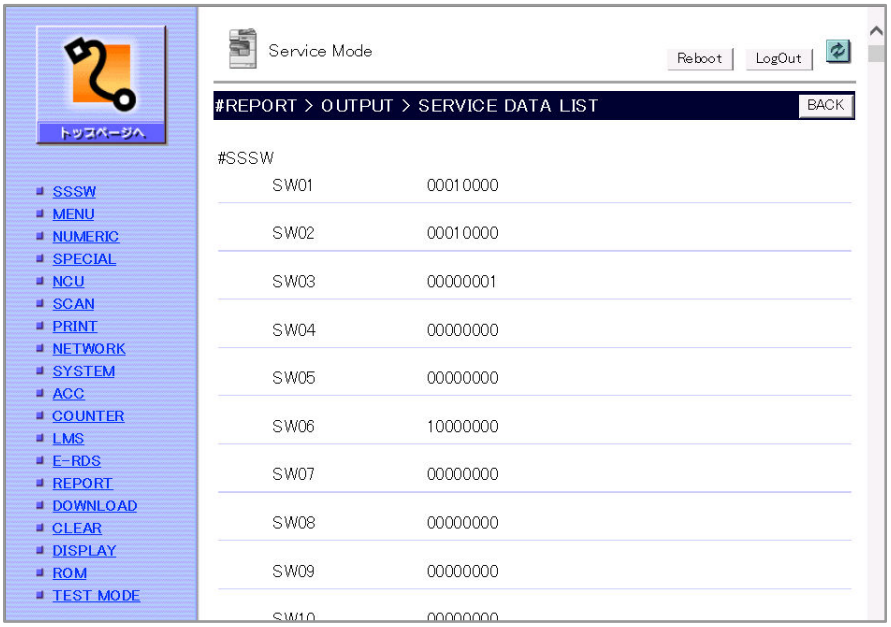
3. **When finishing the operation, click [LOGOUT].**

NOTE:
If the user logged in and then closed the browser without logging out, connection status remains as "logged in". If the user attempts to log in to service mode while being logged in, exclusive control is executed so that the user cannot access service mode. In that case, wait for a fixed time (3 minutes) from the last access to let the user be automatically logged out, or turn OFF/ON the power of the machine to be forcibly logged off.

Report Display Function

In remote UI service mode, various reports that are usually checked from printouts can be checked by displaying them on screen if the user access service mode from the Control Panel.
Reports that can be checked using this function are as follow:

- Service Mode > SERVICE REPORT > OUTPUT > SERVICE DATA LIST
- Service Mode > SERVICE REPORT > OUTPUT > SYSTEM DATA LIST
- Service Mode > SERVICE REPORT > OUTPUT > SYSTEM DUMP LIST
- Service Mode > SERVICE REPORT > OUTPUT > COUNTER LIST
- Service Mode > SERVICE REPORT > OUTPUT > ERROR LOG LIST
- Service Mode > SERVICE REPORT > OUTPUT > SPEC LIST
- Service Mode > SERVICE REPORT > OUTPUT > ERDS COM LOG LIST



Example of report display

9 Installation

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System Upgrade RAM-C1.....338
Cst Heater Kit-J1.....341
Reader Heater Unit.....348
Cassette Heater Unit-37.....355
Drum Heater-C1.....368

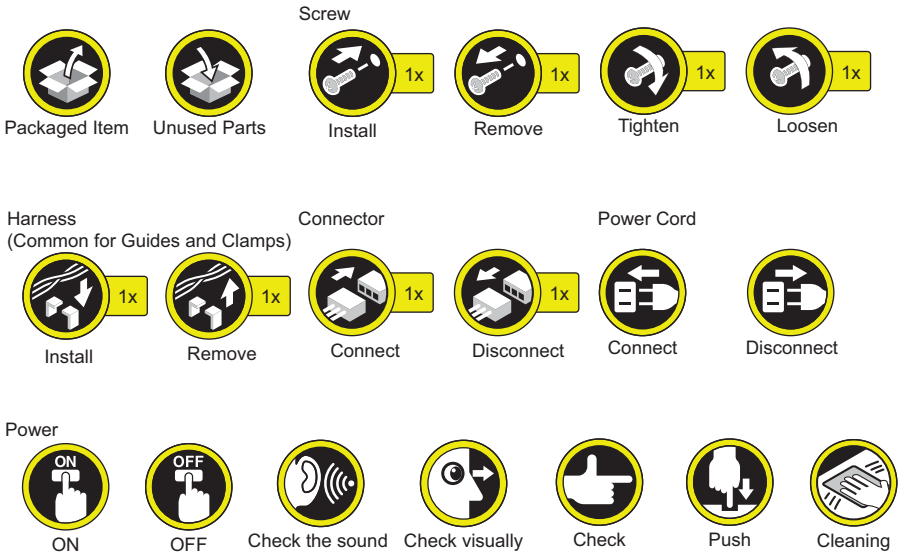
How to check this Installation Procedure

Illustrations Used in This Procedure

Illustrations used in this procedure are those of ADF standard 2Cassette model unless otherwise specified.

Symbols in the Illustration

The frequently-performed operations are described with symbols in this procedure.



Checking before Installation

Following shows requirements for the installation site. Therefore, it is desirable to see the installation site in advance before bringing in this equipment to the user's site.

Checking Power Supply

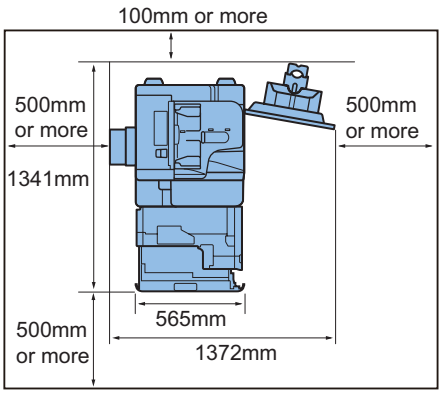
1. The host machine can singly connect to the outlet of rated +/-10V, 15A or more.
2. Install the Host Machine near the power outlet and leave sufficient space around the power plug so that it can be unplugged easily in an emergency.

Checking the Installation Environment

1. The installation site must be in the following environment. Especially, avoid installing the machine near the faucet, water boiler, humidifier, or refrigerator.
   Operating environment: Temperature: 10.0 to 30.0oC Humidity: 20 to 80%
2. Avoid installing the machine near fire, in an area subject to dust or ammonia gas. When installing the machine in a place exposed to direct rays of the sun, it is recommended that curtains be hung over the windows.
3. The amount of ozone generated during use of the machine is below the harmful level. However, if the machine is used for a long time in a poor-ventilated room, ozone may smell. To keep the work environment comfortable, the room must be well-ventilated properly.
4. None of the machine feet should float. The machine must be held level constantly.
5. The machine must be installed at least 10 cm away from the surrounding walls and there must be an adequate space for operating the machine.

Checking Installation Space

The space required for installation and maintenance work is shown below.



Points to Make Before Installation

Be sure to go through the following before starting the work.

1. Imaging faults can result due to dew condensation that occurs when the machine is moved from a cold place to a warm place. Leave the unpacked machine as it is for at least two hours before installing it.
   (Dew condensation: When a metallic object is brought from a low-temperature place to a high-temperature place, water vapor around it is cooled abruptly and consequently water drops stick to the surface of the metallic object.)
2. The maximum weight of the machine is approx. 78.8 kg (double-cassette model supplied with a DADF). Accordingly, two or more persons are required to lift the machine. Be sure to with a DADF). Accordingly, two or more persons are required to lift the machine. Be sure to keep the machine in a horizontal position when lifting it.
3. This product was designed considering the potential connection to the Norwegian IT power distribution system.

Option Installation Sequence

When installing the options for this machine, keep the following in mind:

1. When installing the Card Reader-F1, Document Tray-J1, and USB Application 3-Port Interface Kit-A1 together, be sure to install the USB Application 3-Port Interface Kit-A1 first.
2. When installing the Inner Finisher-B1 and 2 Way Unit-B1 together, be sure to install the 2 Way Unit-B1 first.
3. When installing the Inner Finisher-B1 and Drum Heater-C1 together, be sure to install the Drum Heater-C1 first.
4. iR2530/2525/2520 with 250-sheet cassette 1
   When installing the Inner Finisher-B1 and the Cassette Heater Unit-37 for cassette 1 together, be sure to install the Cassette Heater Unit-37 first.

Unpacking

Unpacking the Machine and Removing the Packaging Materials

NOTE:
When installing a cassette pedestal, be sure to place the machine on the cassette pedestal. (For the procedure for installing the cassette pedestal, refer to the Cassette Pedestal Installation Procedure.)

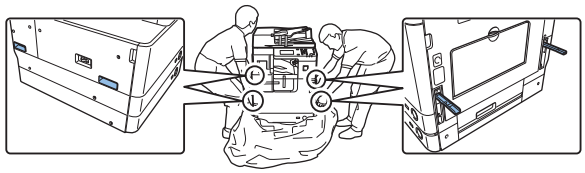
☐

1. **Unpack the machine and remove the vinyl cover.**

☐

2. **While holding four handles on the left and right sides of the machine, lift the machine to take it down from the palette.**

CAUTION:
The maximum weight of the machine is approx. 78.8 kg (double-cassette model with a DADF). Two or more persons are required to lift the machine.

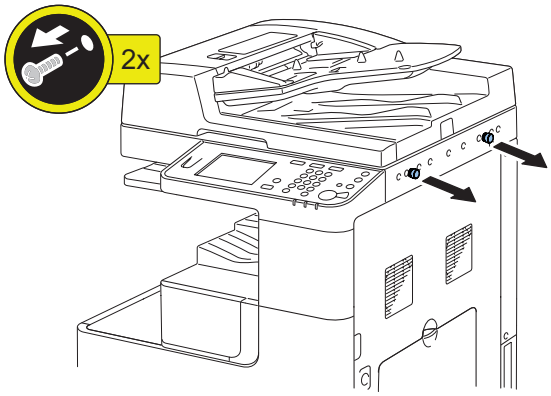


☐

3. **Remove all pieces of fixing tapes and cushioning materials.**

☐

4. **For the iR2545/2535 Series, remove two optical system fixing screws on the right side of the reader. (Keep the removed screws because they may be used later for machine relocation.)**



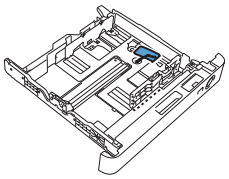
☐

5. **Press the cassette release button to draw out the cassette forward.**

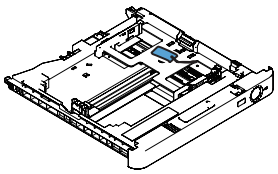
☐

6. **Remove the wire that secures the intermediate plate of the cassette.**

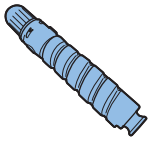
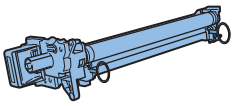
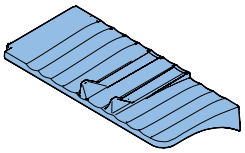
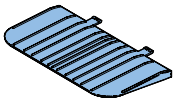
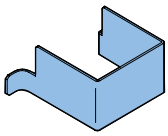
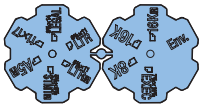
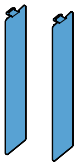
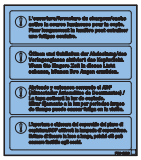
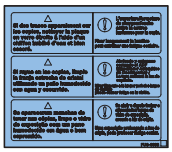
<550 sheets cassette>

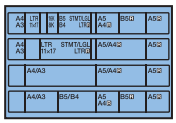
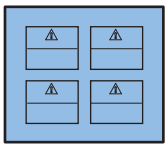
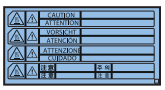


<250 sheets cassette>



Checking the Contents

☐ [1] Toner bottle x 1 (excluding the models for EU,US, Latin America, HK, SP, and India) 	☐ [2] Drum unit x 1 	☐ [3] Subtray x 1 
☐ [4] Reverse tray x 1 (only for the model with a 2 way unit) 	☐ [5] Power cord x 1 	☐ [6] Power cord clamp x 1 (Besides India model) 
☐ [7] TP screw (M3 x 6) x 1 (Besides Australia model and India model) 	☐ [8] Cassette size label x 1 (for the model with one 550-sheet cassette) or x 2 (for the model with two 550-sheet cassettes) 	☐ [9] Cassette size plate (for 250-sheet cassette) x 1 (only for the model with 250-sheet cassette 1) 
☐ [10] Cassette size label (for 250-sheet cassette)x 1 (only for the model with 250-sheet cassette 1) 	☐ [11] Handle cover x 2 	☐ [12] Copy inhibition label For the model for US x 3 For the model for EU x 4 For the model for Australia, Latin America, HK, SP, and India x 1 
☐ [13] Lamp caution label x 1 (for iR2545/2535 for Latin America, HK, SP, and India) 	☐ [14] Lamp caution label x 1 (for iR2545/2535 for EU) 	☐ [15] Glass cleaning/lamp caution label x 1 (for iR2545/2545i/2535/ 2535i for US) 

☐ [16] Glass cleaning/lamp caution label x 1 (for Australia and EU supplied with an ADF <A type>) 	☐ [17] Glass cleaning/lamp caution label x 1 (for Australia and EU supplied with an ADF <AB/INCH type>) 	☐ [18] Document size label x 1 (only for iR2530/2525/ 2520 supplied with an ADF) 
☐ [19] Finger pinch caution label 1 x 1 (only for the model for EU with an ADF) 	☐ [20] Finger pinch caution label 1:x 1 (only for the model for US with an ADF) 	☐ [21] Finger pinch caution label 2 x 1 (only for the model for EU with an ADF) 
☐ [22] Finger pinch caution label 2 x 1 (only for the model for US with an ADF) 	☐ [23] TP screw (M3 x 6) x 1 (only for Australia model) 	☐ [24] High temperature caution label x 1 (only for the model for CN and with 250-sheet cassette 1 and 550-sheet cassette 2) 
☐ [25] Connecting Fixture x 1 (only for the model with 250-sheet cassette 1 and 550-sheet cassette 2)*1 	☐ [26] RS tightening screw (M3x8.5) x 1 (only for the model with 250-sheet cassette 1 and 550-sheet cassette 2)*1 	

*1: The connecting fixture is used for the following case. For attaching the fixture, see the CST. Feeding Unit-AE1 installation procedure.

- When the CST. Feeding Unit-AE1 is installed to the host machine after removing the lower cassette (550-sheet cassette) from the host model which is equipped with the 250-sheet cassette, cassette spacer and 550-sheet cassette.

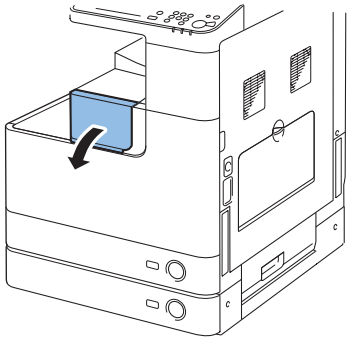
<Others>
Including guides

Installation Procedure

Installing the Toner Bottle

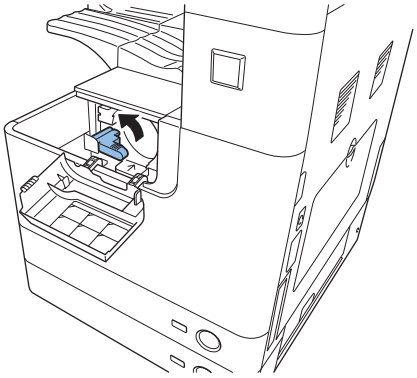
☐

1. **Open the toner supply cover.**



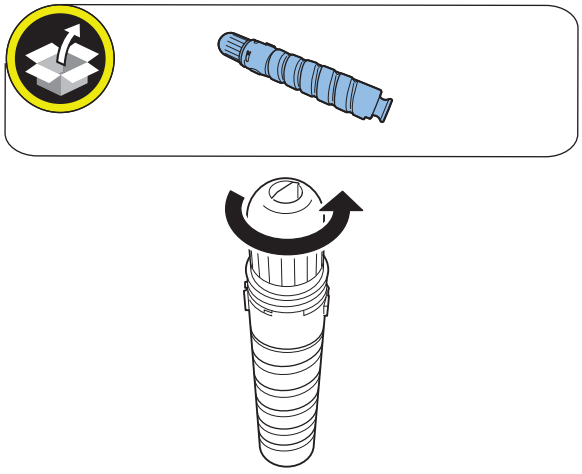
☐

2. **Raise the lock lever.**



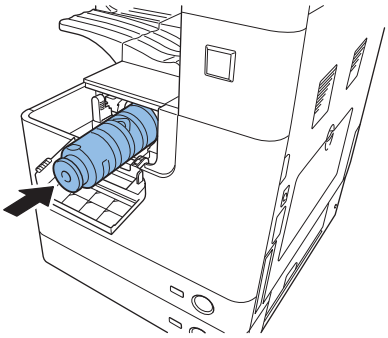
☐

3. **Unpack the new toner bottle, and then remove the cap.**



☐

4. **Insert the toner bottle into the machine.**



☐

5. **Lower the lock lever to secure the toner bottle.**

CAUTION:
Turn the lock lever until it becomes level. If the lock lever is stopped in the middle, toner cannot be supplied normally.

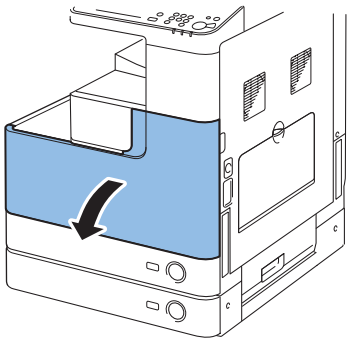
☐

6. **Close the toner supply cover.**

Installing the Drum Unit

☐

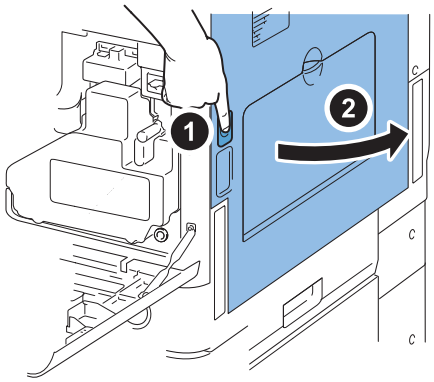
1. **Open the front cover.**



☐

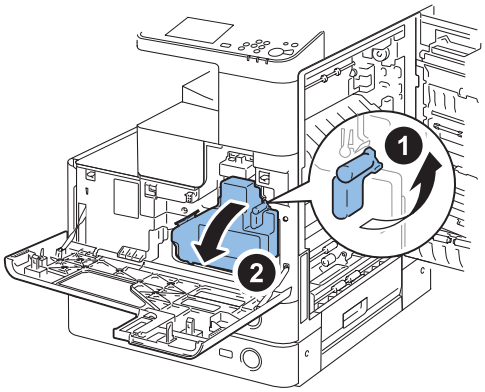
2. **Press the button on the right cover to open the right cover.**

CAUTION:
To prevent the drum unit from being damaged, keep the right cover open at least 5 cm during the installation procedure.



☐

3. **Turn the lock lever as shown below to release the collected toner container. And then take out the collected toner container.**

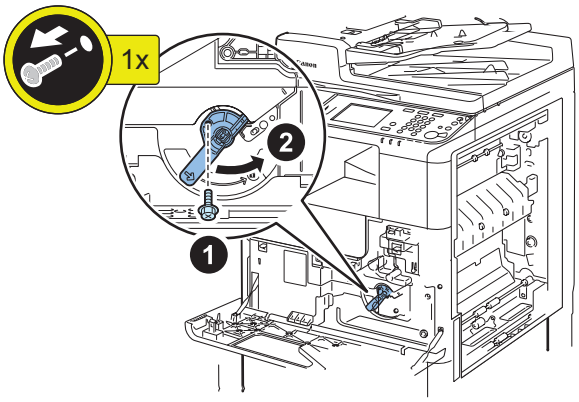


☐

4. **Remove one screw from the developer pressure lever. The screw does not exist in some machine versions by destination.**

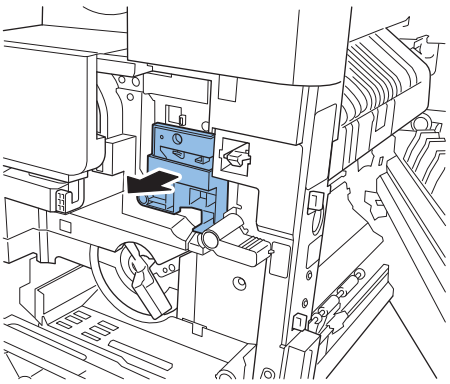
☐

5. **Turn the lever as shown below to release the drum unit.**



☐

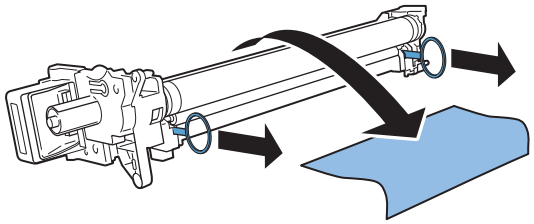
6. **Remove the drum cover. (Keep the drum cover because it may be used later for machine relocation.)**



☐

7. **Unpack the new drum unit, remove packaging materials, and then pull two orange rings to remove the protective cover**

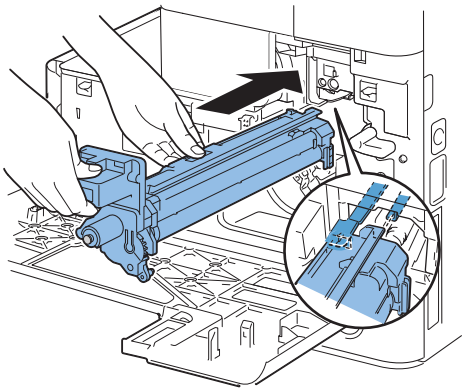
CAUTION:
- Do not touch the drum surface while at work.
- Do not expose the drum surface to light for a long period of time.



☐

8. **While holding the drum unit at the handle and the position shown below, insert it into the body slowly until it stops.**

CAUTION:
When inserting the drum unit, check that the drum unit fits precisely with the rail of the host machine.

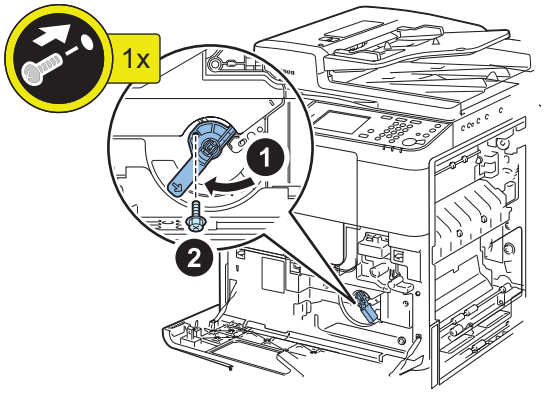


☐

9. **Turn the lever as shown below to lock the drum unit.**

☐

10. **Secure the developer pressure lever with the screw.**

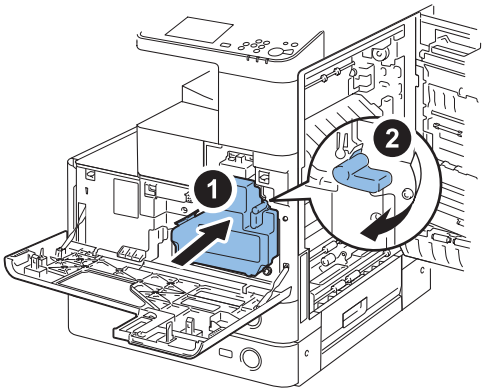


☐

11. **Place the collected toner container in the machine.**

☐

12. **Lower the lock lever to lock the collected toner container.**



☐

13. **Close the front cover.**

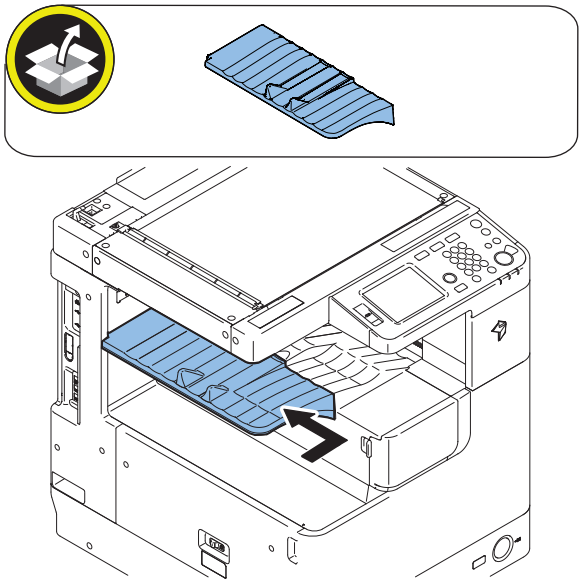
☐

14. **Close the right cover**

Installing Trays

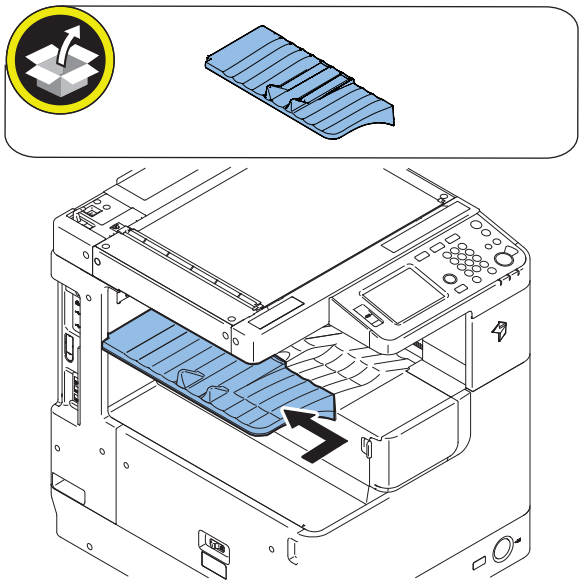
☐

1. **Install the supplied subtray.**



☐

2. **Install the supplied reverse tray.**



Setting the Cassettes

NOTE:
For the procedure for installing the cassette pedestal, refer to the Cassette Pedestal Installation Procedure.

☐

1. **Press the cassette release button to draw out the cassette forward.**

☐

2. **Confirm the type of paper used by the customer.**

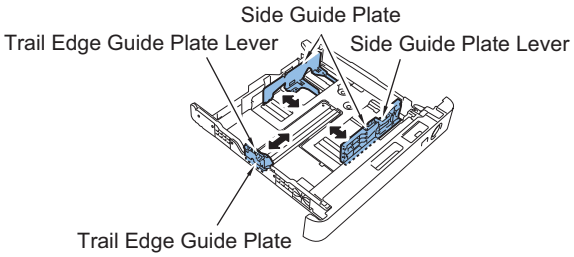
☐

3. **While nipping the trailing edge guide lever, slide the trailing edge guide to the position corresponding to the prescribed paper size.**

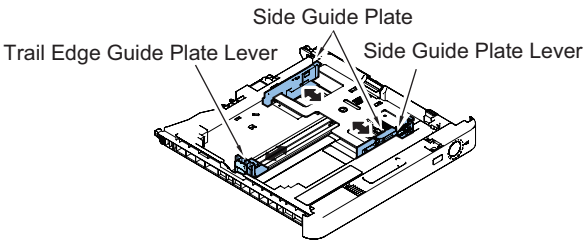
☐

4. **While nipping the side guide lever, slide the side guide to the position corresponding to the prescribed paper size.**

<550 sheets cassette>



<250 sheets cassette>

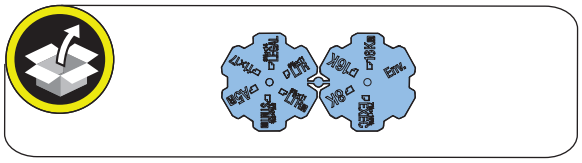


☐

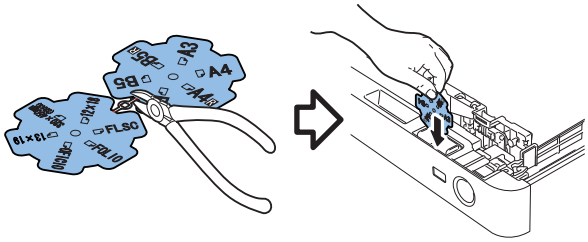
5. **Set the supplied paper size label.**

<500-sheet cassette:>

Set the supplied paper size label as shown below so that the indication of the label can be the size of the paper loaded in the cassette.



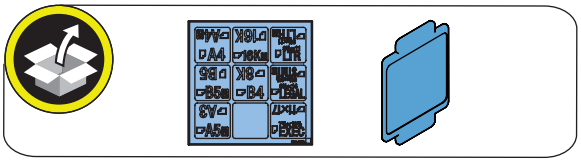
<550 sheets cassette>



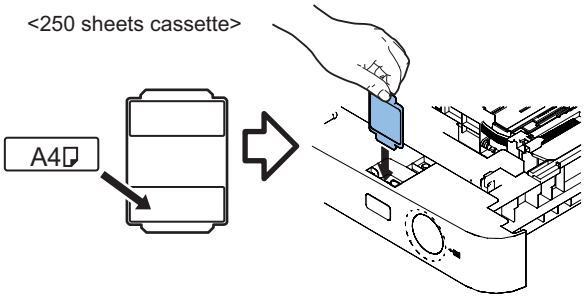
<250-sheet cassette>

Affix the cassette size label corresponding to the size of the paper to be loaded in the cassette to the cassette size plate. Insert the cassette size plate into the cassette as shown.

CAUTION:
For the double-cassette (standard) model, load paper in the other 550-sheet cassette and push in the cassette in the same manner as for the first cassette.



<250 sheets cassette>



☐

6. **Load paper in the cassette, and then push in the cassette.**

☐

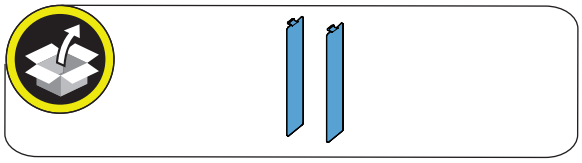
7. **When a cassette pedestal is used, set up the cassettes with reference to the Cassette Pedestal Installation Procedure.**

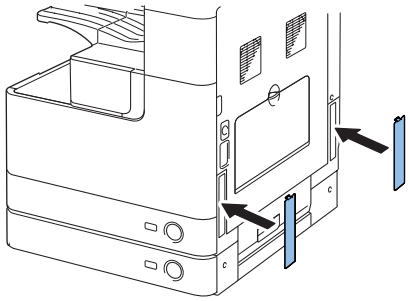
Installing Other Parts

■ Attaching Handle Covers

☐

1. **Attach the two supplied handle covers.**





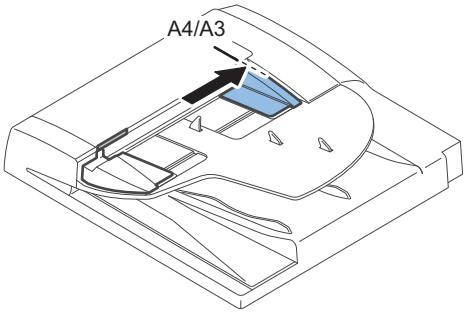
■ Affixing the ADF Label (only for the standard model with an ADF)

☐

1. **If the following labels are supplied, go through the steps described below.**
   - Document size label
   - Finger pinch caution label 1
   - Finger pinch caution label 2

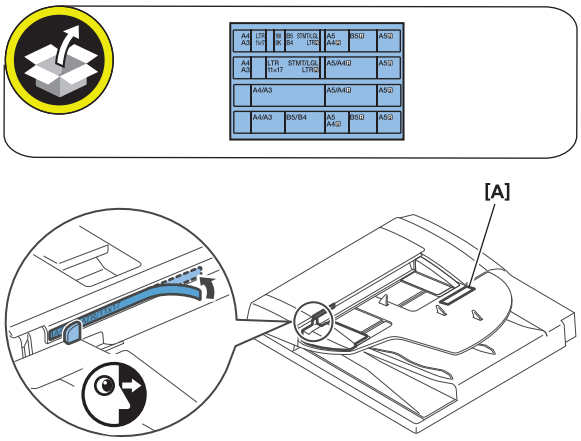
☐

2. **Align the side guide (rear) with the A4/A3 mark.**



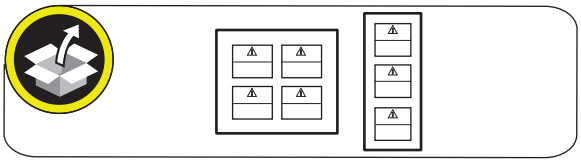
☐

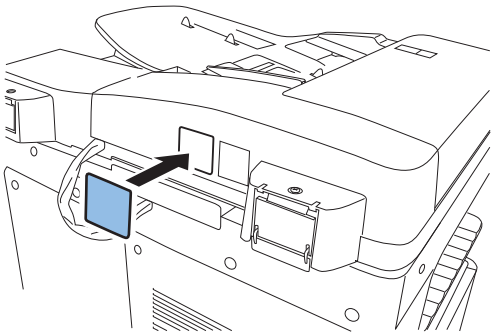
3. **Affix the document size label [A] of the suitable paper size series to the feeder cover in such a manner that the marks on the side guide (front) are aligned with the corresponding marks on the document size label when viewed by the user.**



☐

4. **Affix the supplied finger pinch caution label 1 written in an appropriate language.**



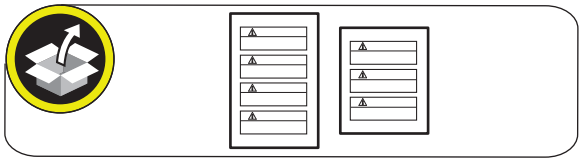


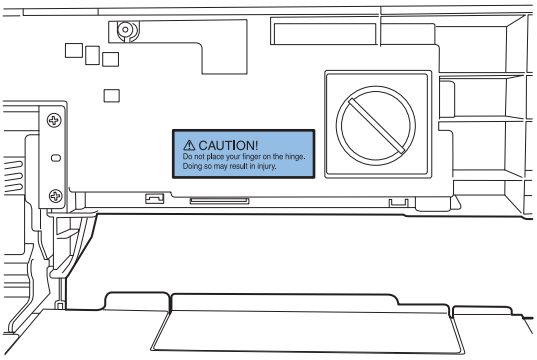
☐

5. **Open the DADF.**

☐

6. **Affix the supplied finger pinch caution label 2 written in an appropriate language.**





■ Affixing Labels to the Reader

☐

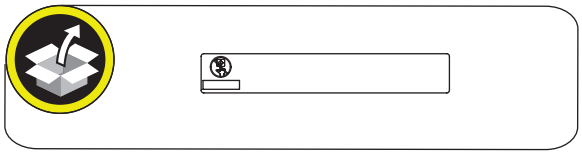
1. **If the following labels are supplied, go through the steps described below.**
   - Copy inhibition label
   - Glass cleaning/lamp caution label
   - Lamp caution label

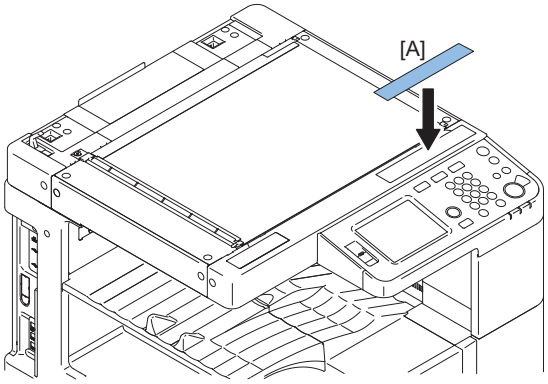
☐

2. **Open the platen cover or DADF.**

☐

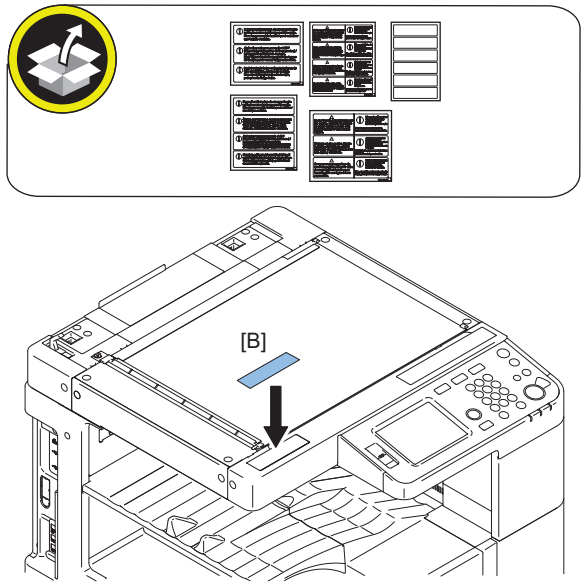
3. **Affix the copy inhibition label [A] (written in an appropriate language) to the existing label.**





☐

4. **Affix the glass cleaning/lamp caution label or lamp caution label [B] written in an appropriate language to the existing label. (The label written in English is factory-affixed.)**



■ Affixing a high temperature caution label (only for CN and the model with 250-sheet cassette 1)

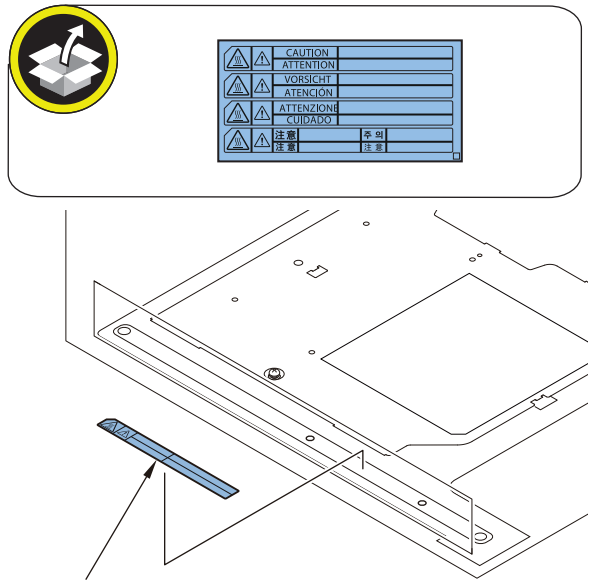
☐

1. **Press the cassette release button to draw out the cassette forward.**

☐

2. **Affix the High Temperature Caution Label to the specified area. (area between screw holes on the Base Plate)**

CAUTION:
The High Temperature Caution Label uses a label corresponding to the language.



High temperature Caution label

☐

3. **Install the removed Cassettes.**

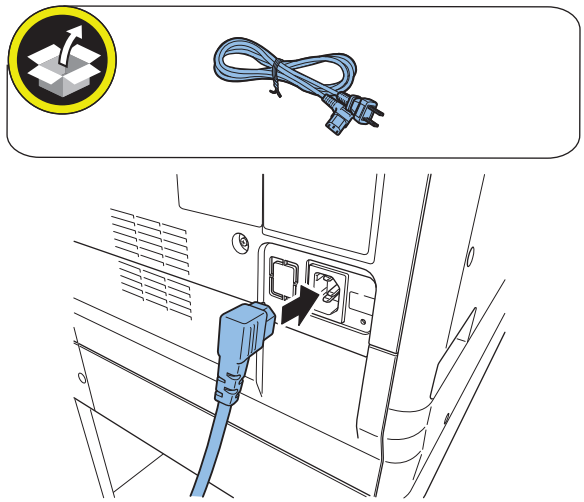
Connecting the Cord

CAUTION:
The specified power must be supplied from outlet.
(Rated voltage ±10% at the rated current)

NOTE:
Install an optionally available document glass cover or the DADF on the machine. If the model is the one without the DADF, install a document cover glass. For how to install the DADF, refer to the DADF Installation Procedure.

☐

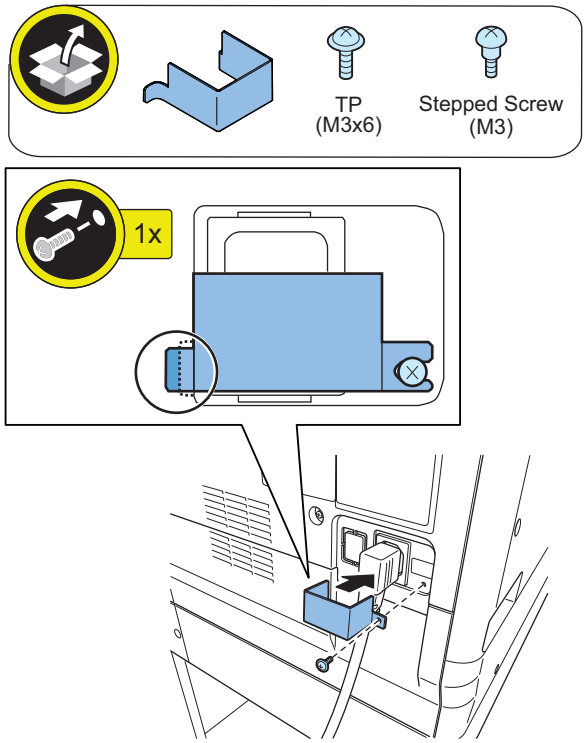
1. **Insert the connector of the supplied Power cord into the AC inlet.**



☐

2. **Install the supplied power cord clamp with the supplied screw except for India model. Insert the left leg of the power cord clamp into the machine frame.**

NOTE:
Besides Australia model, use the TP screw (M3 x 6). For Australia model, use the stepped screw.



☐

3. **Plug the supplied Power cord in the wall outlet.**

☐

4. **Peel off the protective seal from the operation panel.**

Initial Settings (Start Setup Guide)

The Start Setup Guide screen appears when the power is turned ON for the first time after the machine is installed. Follow the instructions displayed on the display to configure the settings of the Host Machine.

☐

1. **Turn ON the main power switch.**

☐

2. **Perform the following basic setup items according to the instructions displayed on the display.**
   - Language and country / region
   - Mixing the toner
   - Date & Time settings
   - Fax settings
   - IP address settings

NOTE:
The fax settings appear only when the optional Fax Board is attached.

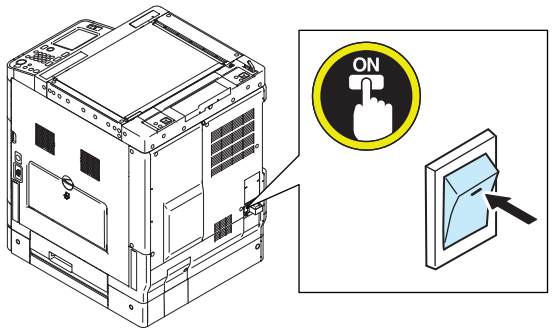
Checking the Print Image

1. **Place a document on the document glass, copy it by feeding paper from the cassette or manual-feed tray, and then check the resultant print image.**
   - Check that no abnormal noise is heard.
   - Check the image quality at respective magnifications.
   - Check that the document is copied normally on the specified number of sheets.

Setting the Cassette Heater (if equipping with the cassette heater)

□

1. **Depending on the customers request, turn the cassette heater ON according to the climate condition.**



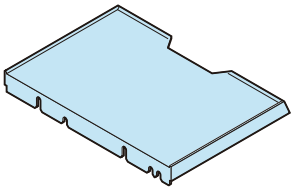
Document Tray-J1

Points to Note before Installation

CAUTION:
When installing this equipment and “USB Application 3-Port Interface Kit-A1 simultaneously, install the “USB Application 3-Port Interface Kit-A1” first.

Checking the Contents

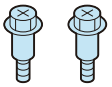
☐ [1] Document Tray x 1



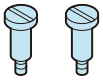
☐ * [2] Washer x 1



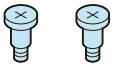
☐ [3] Stepped Screw
(RS tightening; M4x18) x 2



☐ * [4] Stepped Screw (M4x17.6) x 2



☐ [5] Stepped Screw (M4x10.8) x 2



* Not used with this procedure.

Installation Procedure

■ In case of iR 2545/2535 Series

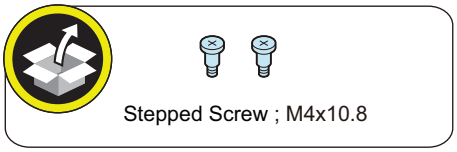
☐

1. **Remove the 2 Face Seals.**



☐

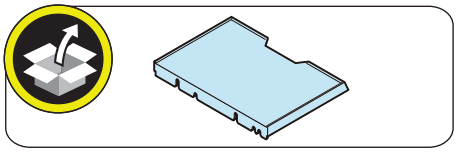
2. **Tighten the 2 stepped screws (M4X10.8) to the Reader Right Cover.**

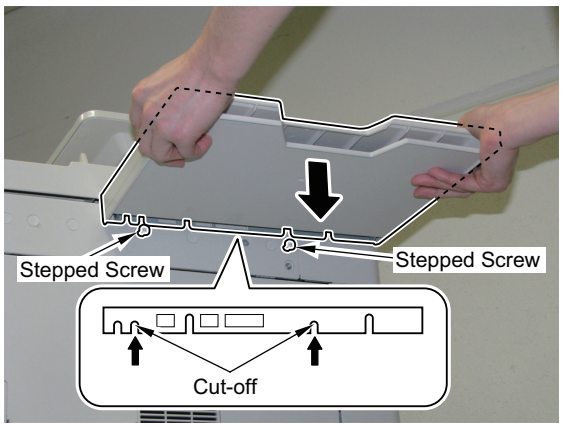




☐

3. **Hook the cut-off of the Document Tray (Reinforcing Plate) to the stepped screws tightened in the step 2).**





■ In case of iR 2530/2525/2520 Series

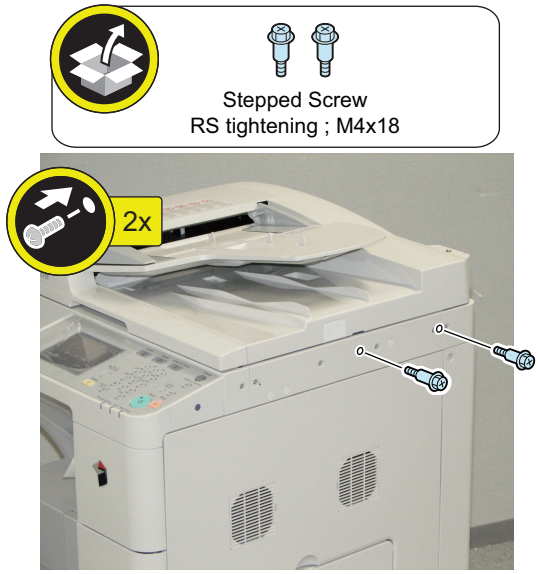
☐

1. **Remove the 2 Face Seals.**



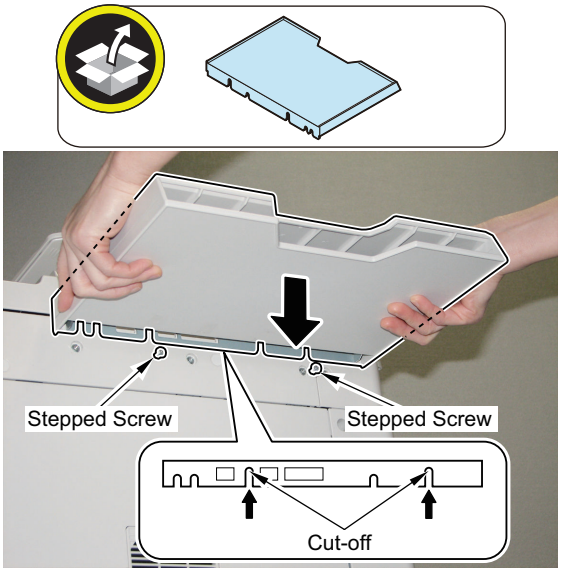
☐

2. **Tighten the 2 stepped screws (RS tightening; M4X18) to the Reader Right Cover.**



☐

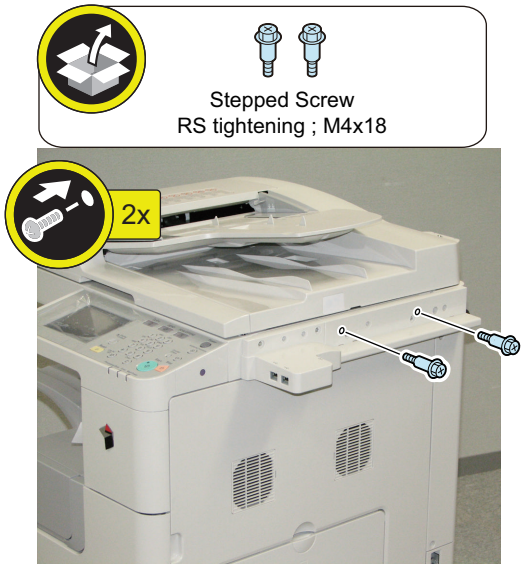
3. **Hook the cut-off of the Document Tray (Reinforcing Plate) to the stepped screws tightened in the step 2).**



■ When installing with “USB Application 3-Port Interface Kit-A1” simultaneously

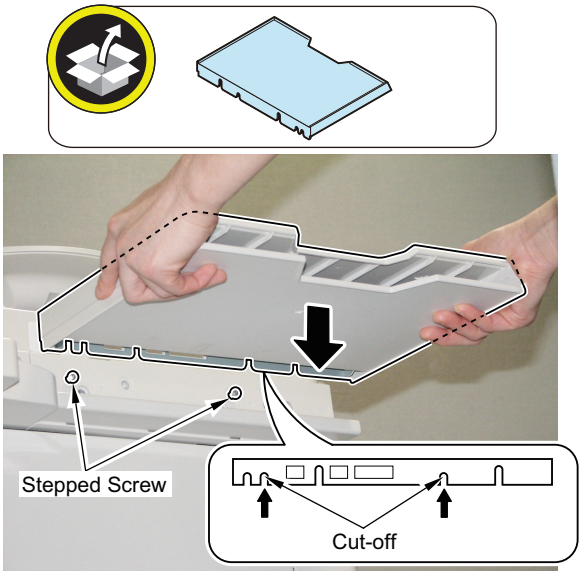
☐

1. **Tighten the 2 stepped screws (RS tightening; M4X18) to the USB Application 3-Port Interface Kit.**



☐

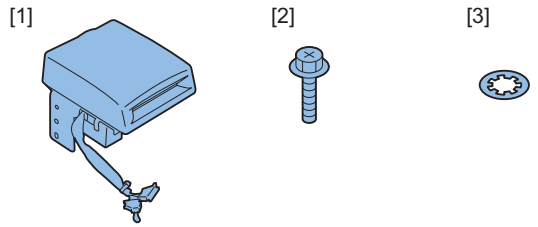
2. **Hook the cut-off of the Document Tray (Reinforcing Plate) to the stepped screws tightened in the step 1).**



Card Reader-F1

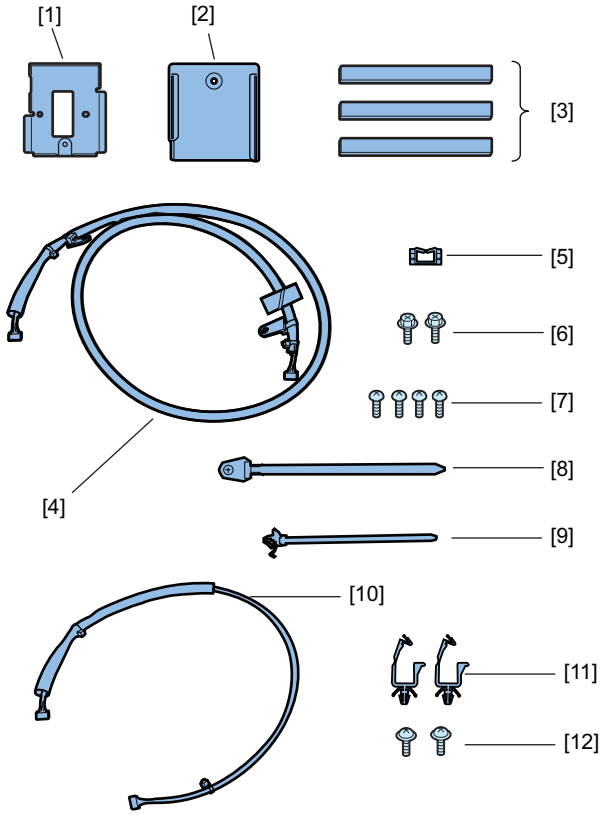
Checking the Contents

<Card Reader-F1>



[1]Card readerx1
[2]Screw (RS Tightening; M4x10) x1 *1
[3]Toothed washerx1*1
*1 Not used in this host machine.

<Card reader attachment-D3>



[1]Card reader mountx1
[2]Card reader cover x1
[3]Harness cover (base + lid))x3*4
[4]Relay harness Bx1
[5]Edge saddlex1
[6]Screw(TP ; M4X16) x2*3
[7]Screw(Binding ; M4X6) x4
[8]Cord retainerx1*1
[9]Reuse bandx1*1
[10]Relay harness Cx1
[11]Wire Saddlex1
[12]Screw(TP ; M4X6) x2*2
*1 Not used in this host machine.

*2 Use only for iR2545/2535.
*3 Use for iR2530/2525/2520 or use for the installation of the Card Reader-F1 and the USB.
*4 The 2 Harness covers are not used in this host machine.

Checking before Installation

■ Check Items when turning OFF the Main Power

Check that the main power switch is OFF.

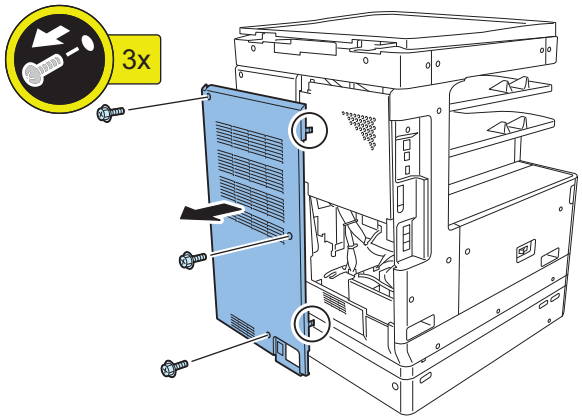
1. Turn OFF the main power switch of the host machine.
2. Be sure that control panel display and main power lamp are both turned OFF, and then disconnect the power plug.

Installation Procedure

■ a. When Installing the card reader in a simple substance

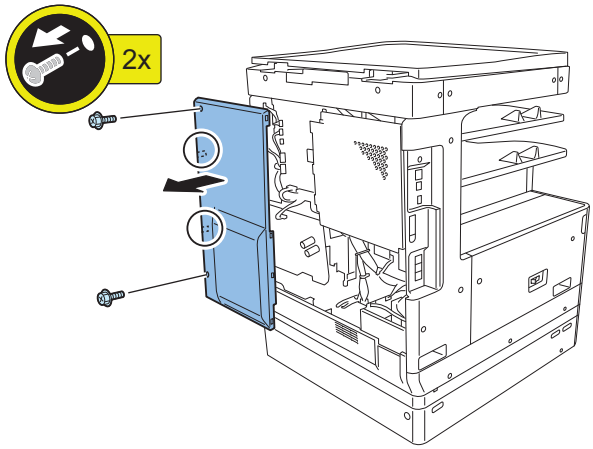
□

1. **Remove the rear cover (right).**
   - 3 Screws
   - 2 Claws



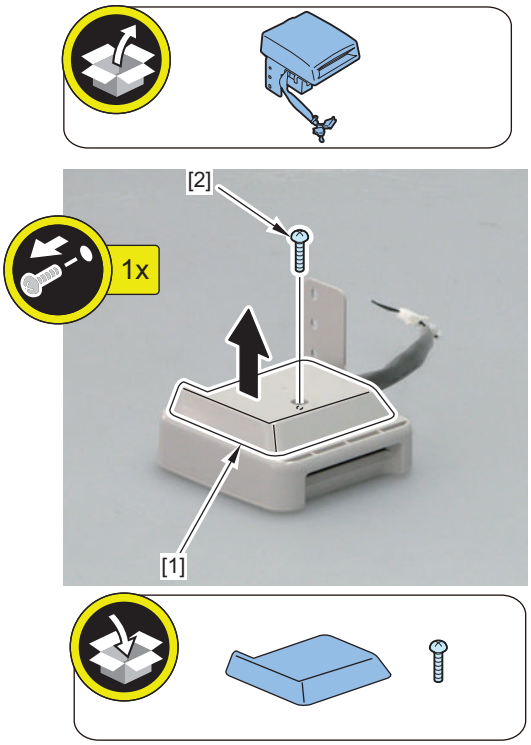
☐

2. **Remove the rear cover (left).**
   - 2 Screws
   - 2 Claws



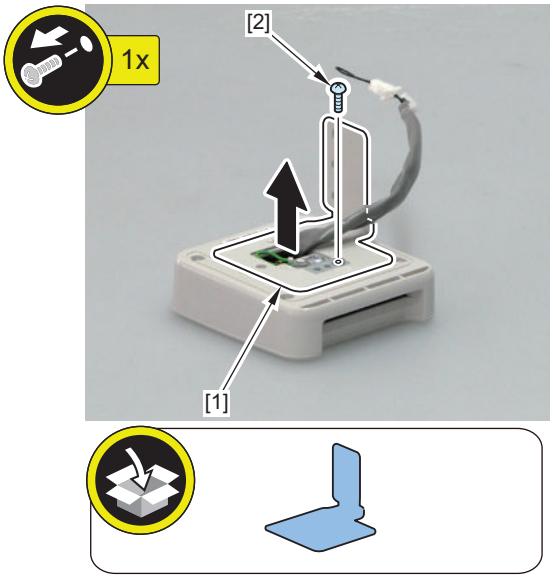
☐

3. **Remove the Card Reader Lower Cover [1] from the Card Reader Unit.**
   - 1 Screw [2]



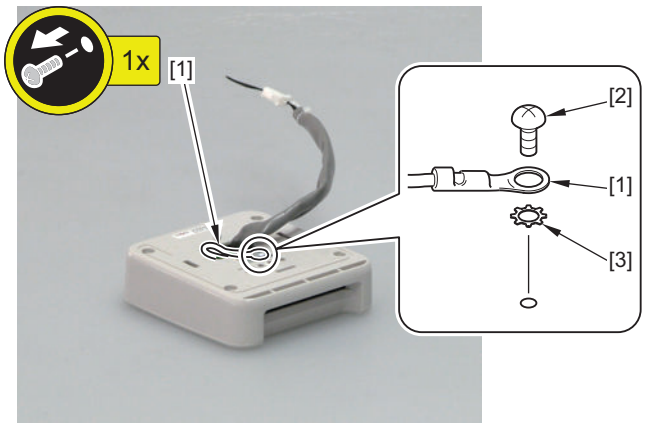
☐

4. **Remove the Card Reader Fixation Plate [1] from the Card Reader Unit.**
   - 1 Screw [2] (The removed screw will be used in step 6.)



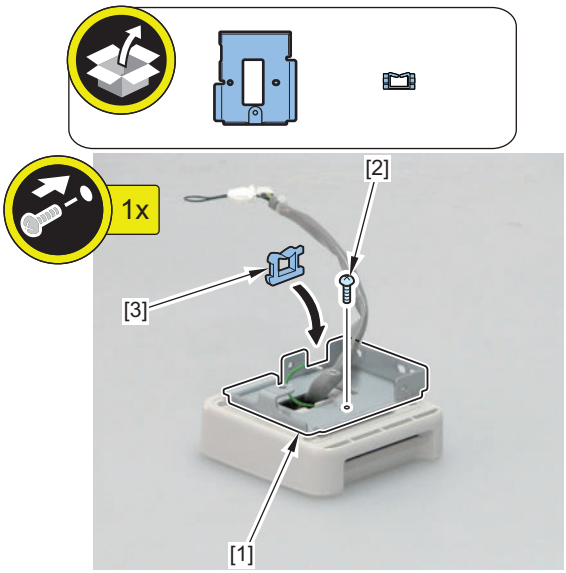
☐

5. **Free the Grounding Wire [1] from the Card Reader Unit. (The removed screw and toothed washer will be used in step 7.)**
   - 1 Screw [2]
   - 1 Toothed Washer [3]



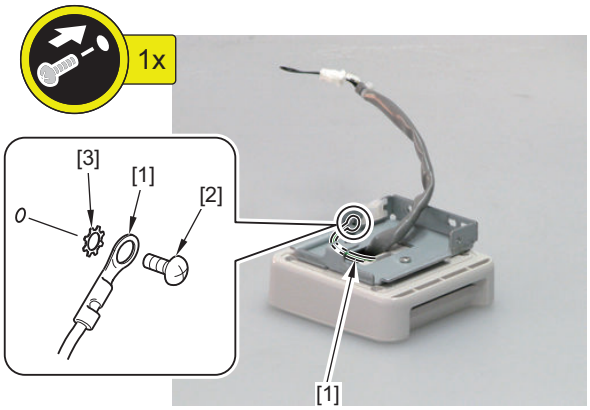
☐

6. **Install the Card Reader Lower Mounting Plate [1] on the Card Reader Unit.**
   - 1 Screw [2] (Use the screw removed in step 4.)
   - 1 Edge Saddle [3]



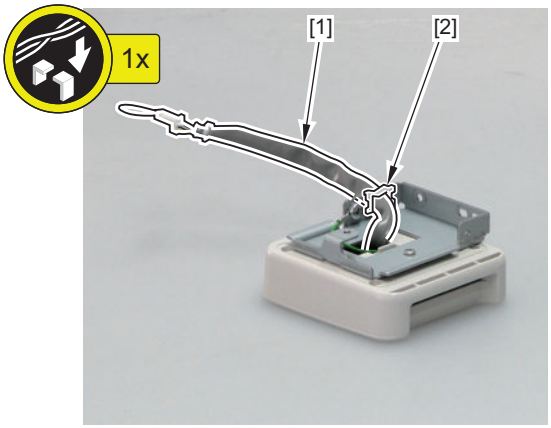
☐

7. **Install the Grounding Wire [1] on the Card Reader Unit.**
   - 1 Screw [2] (Use the screw removed in step 5.)
   - 1 Toothed Washer [3] (Use the toothed washer removed in step 5.)



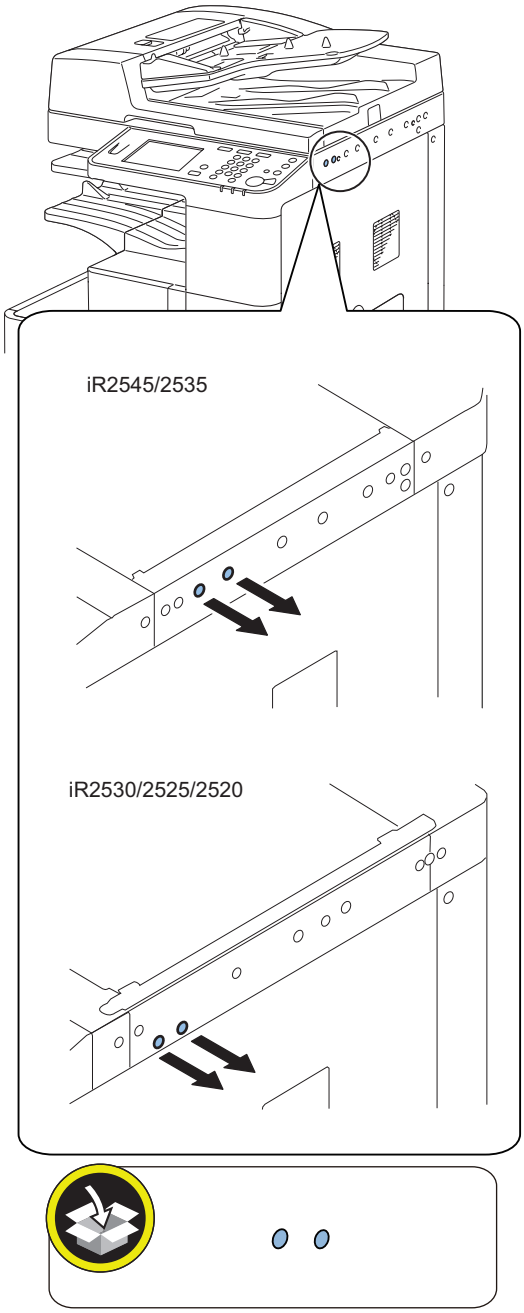
☐

8. **Pass the Card Reader Harness [1] through the Edge Saddle [2].**



☐

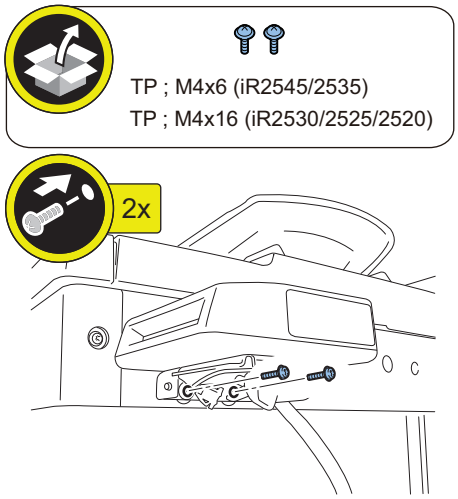
9. Remove the two face seals from the reader left cover.



☐

10. Attach the card reader to the reader.

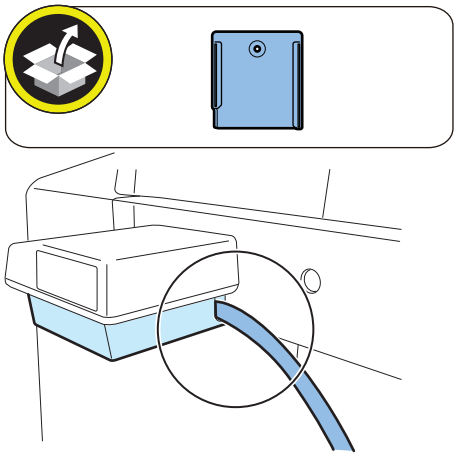
- If iR2545/2535 series : Screw (TP ; M4X6)x2
- If iR2535/2530/2525 series : Screw (TP ; M4X16) x2



☐

11. Slide the card reader cover to attach it to the card reader mount.

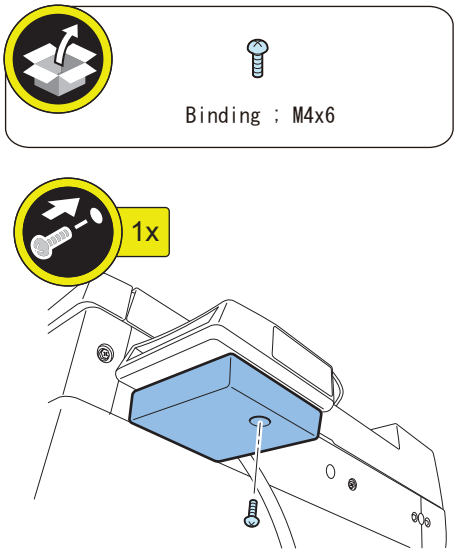
CAUTION:
Route the card reader harness as shown below.



☐

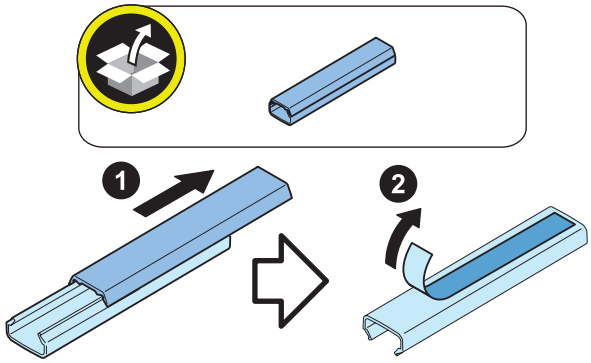
12. Secure the card reader cover.

- 1 Screw (Binding ; M4x6)



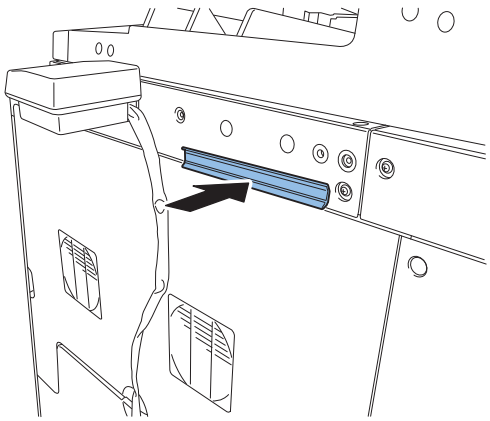
☐

13. Remove the cover of Harness cover and then remove the release paper.



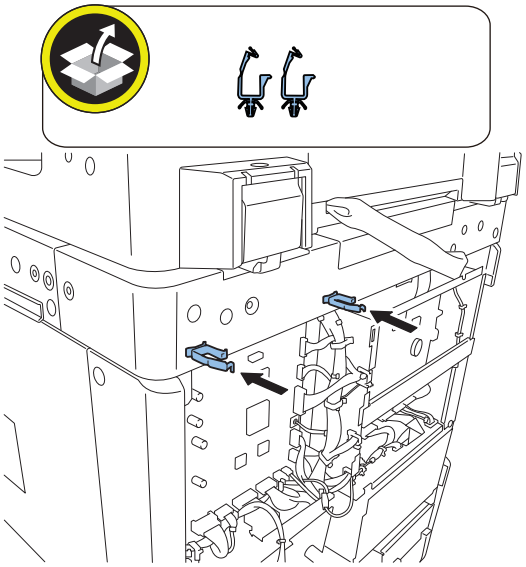
☐

14. Affix the Harness Cover (bases) at the right rear of the machine with it aligned with the bottom line of the reader as the figure below.



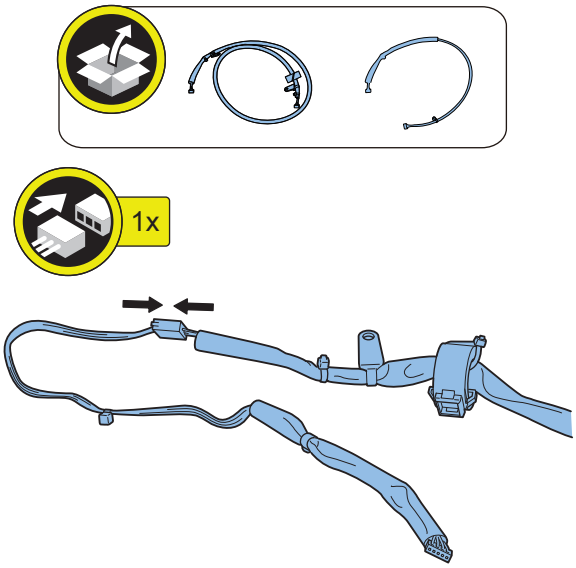
☐

15. Attach the 2 Wire Saddle at the position shown in the figure.



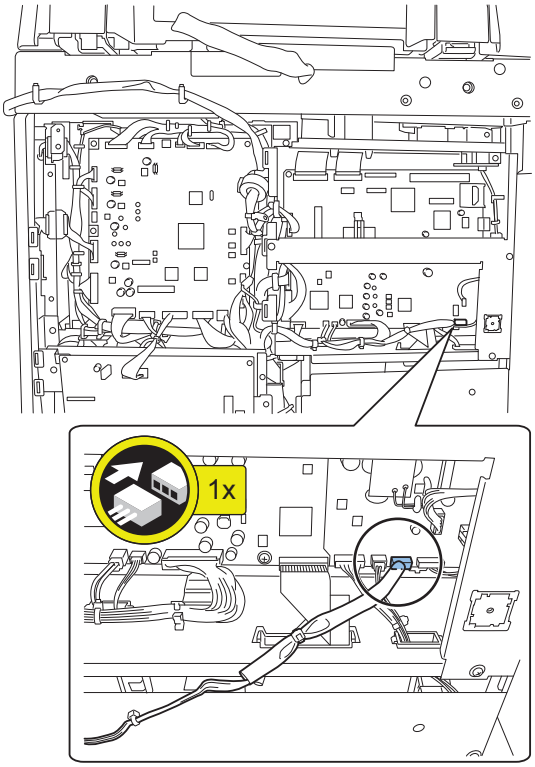
☐

16. Connect the relay harness B to the card reader harness, and then connect the connector of the relay harness B to the relay harness C so that the connector without the protective tube of the relay harness B can be connected.



☐

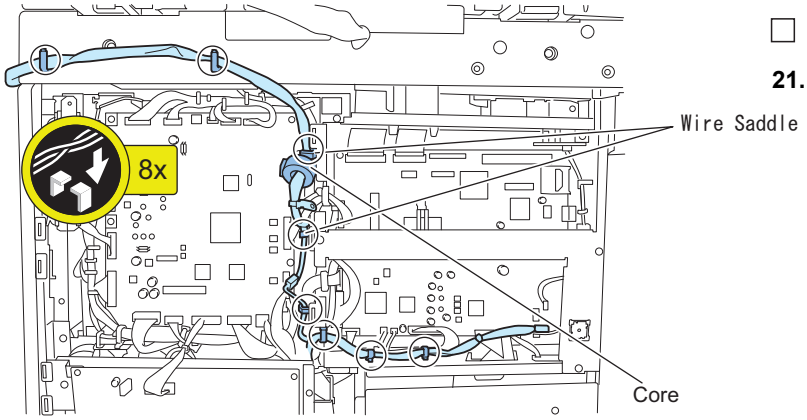
17. Connect the connector of the relay harness C to the connector J8119 on the main controller PCB.



☐

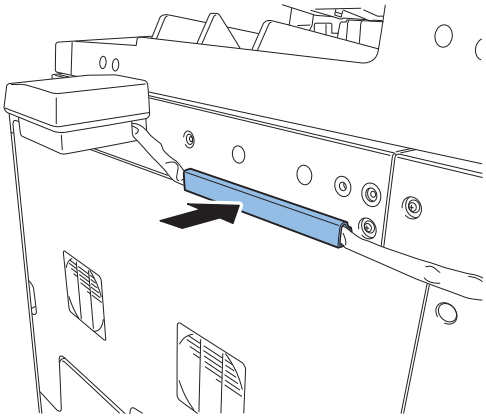
18. Secure the relay harness C to the 8 Wire Saddles from the reader side, and route the relay harness C shown in the figure.

CAUTION:
Put the core between Wire Saddles shown in the Figure.



☐

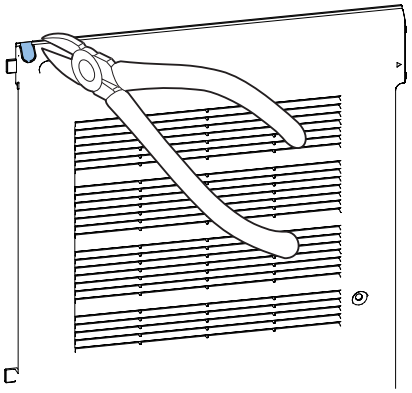
19. Using the harness cover (lids), secure the relay harness B to the harness covers (bases).



☐

20. Using a side cutters, remove the precut portion of the rear cover (left) as shown below.

CAUTION:
When cutting off the part, be sure not to make burrs.



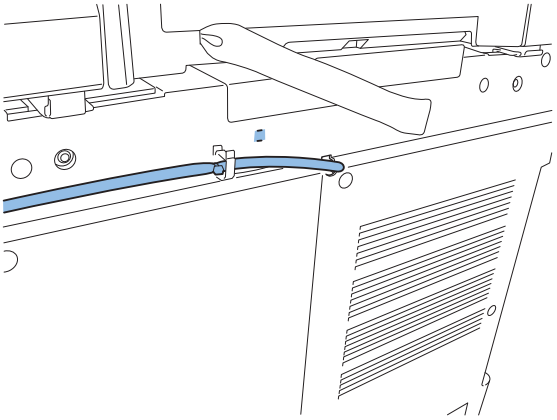
☐

21. Attach the rear cover(left). (2 Screws)

☐

22. Attach the rear cover(left). (3 Screws)

CAUTION:
Put the relay harness through the cut portion of the rear cover(right).



■ b. When Installing the Card Reader and the USB Application 3-Port Interface Kit-A1 at the same time.

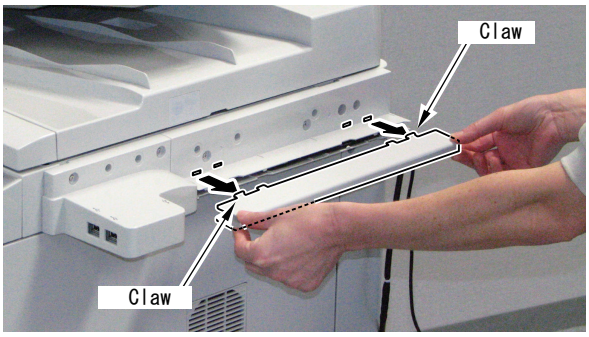
☐

1. Install the USB Application 3-Port Interface Kit-A1.

☐

2. Remove the harness cover of the USB Application 3-Port Interface Kit-A1.

- 2 Claws



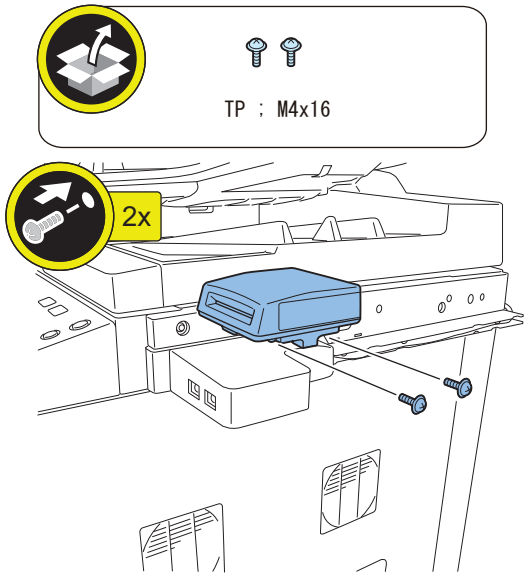
☐

3. Perform steps 1) to 9) of "a. When installing the card reader in a simple substance ".

☐

4. Attach the card reader.

- 2 Screws (TP ; M4x16)

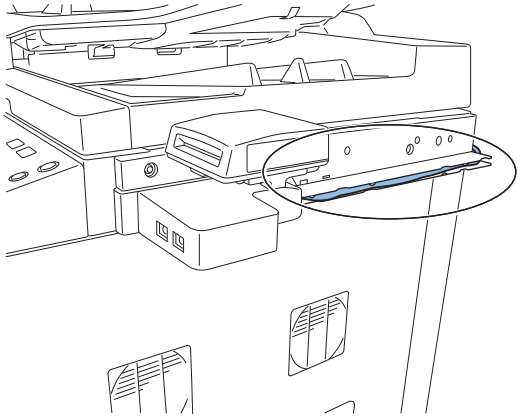


☐

5. Perform steps 11) to 12) of " a. When installing the card reader in a simple substance ".

☐

6. Route the cable to the USB cable guide.



☐

7. Perform steps 15) to 18) and steps 20) to 22) of " a. When installing the card reader in a simple substance ".

☐

8. Attach the cable cover of USB Application 3-Port Interface Kit-A1.

Registering the Card IDs

After installing the Card Reader, register the card numbers to be used in the service mode of the host machine.
If they are not registered, cards will not be recognized when inserted.

1)Plug the power cord into the outlet.
2)Turn on the main power switch.
3)Enter the Service Mode.
4)Get in Service Mode (# ACC> CARD) and enter the card number to use (1 to 2000).
Enter the smallest card number of the cards used by the user. From the entered number, up to 1000 cards can be used.
5)Turn main power switch off and on again.
6)Press Additional Functions to enter user mode.
7)Select System Settings > Department ID Management > ON, and perform various settings.
8) Insert the card with registered valid number to check it's at standby state.

Serial Interface Kit-J2

Checking before Installation

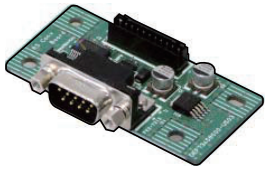
■ Check Items When Turning OFF the Main Power

Check that the main power switch is OFF.

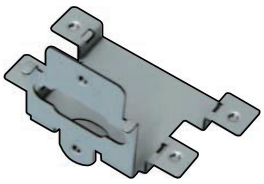
1. Turn OFF the main power switch of the host machine.
2. Be sure that the control panel display and the main power lamp are both turned OFF and then disconnect the power plug.

Checking the Contents

☐ [1] RS Conversion PCB x 1



☐ [2] RS232C Support Plate x 1



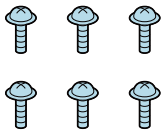
☐ [3] CV-Serial Relay Cable x 1



☐ * [4] NCU-MJB Cable (CV accessory) x 1



☐ [5] TP Screws (M3X6) x 6



* NCU-MJB Cable (CV accessory) is not used with this equipment.

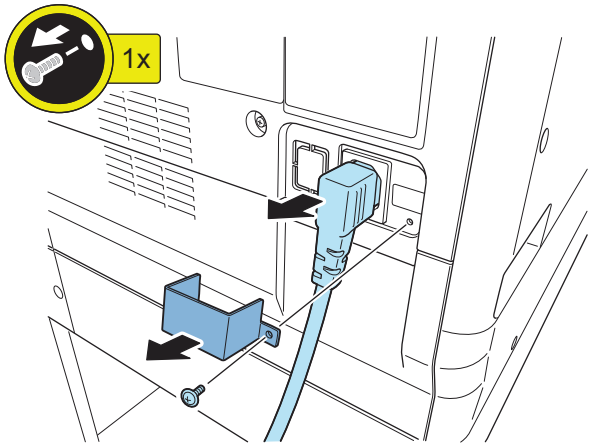
Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

NOTE:
Keep the removed fixing materials as they are used to transport for relocation.

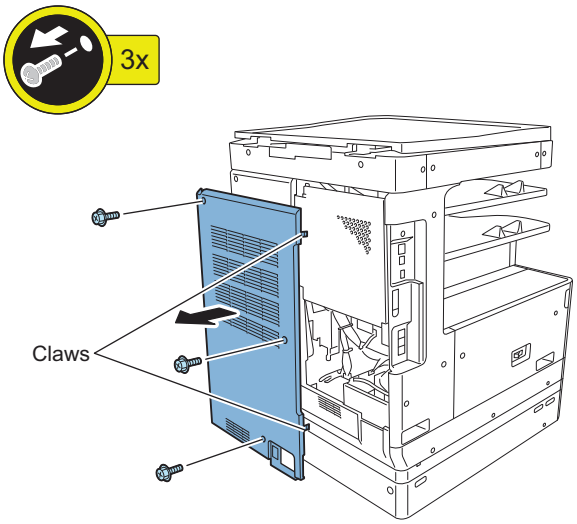
☐

1. **Remove the Power Supply Retainer and Power plug.**
   - 1 Screw



☐

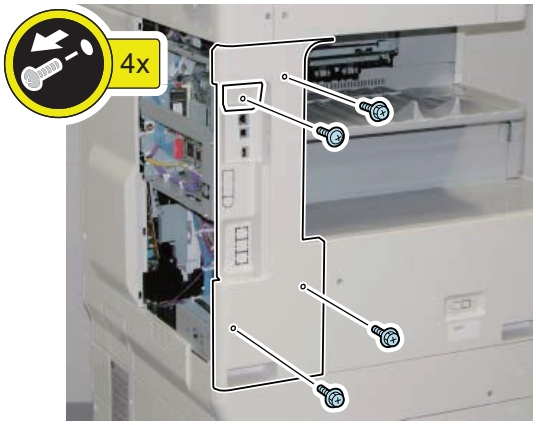
2. **Remove the Rear Cover (right).**
   - 3 Screws
   - 2 Claws

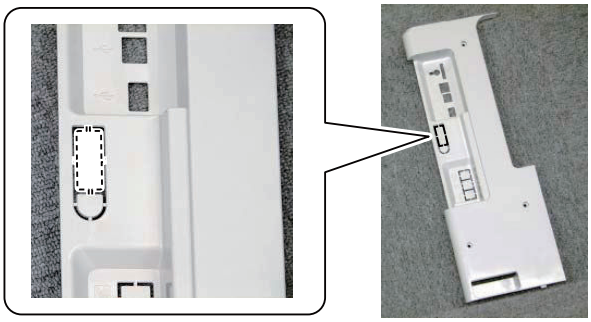


☐

3. **Remove the Left Rear Cover, and cut off the part of the Left Rear Cover indicated in the figure below with side cutters.**
   - 4 Screws

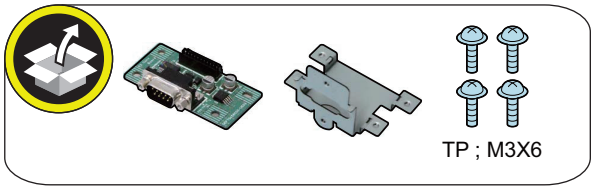
CAUTION:
When cutting off with side cutters, be sure to cut it off fully.

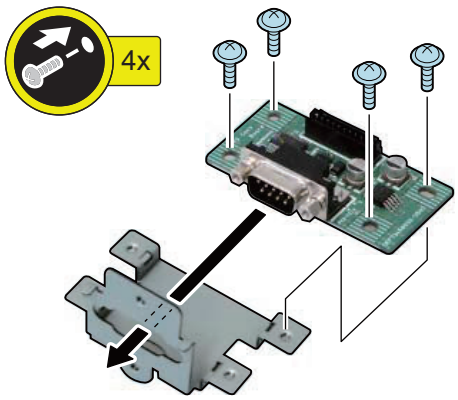




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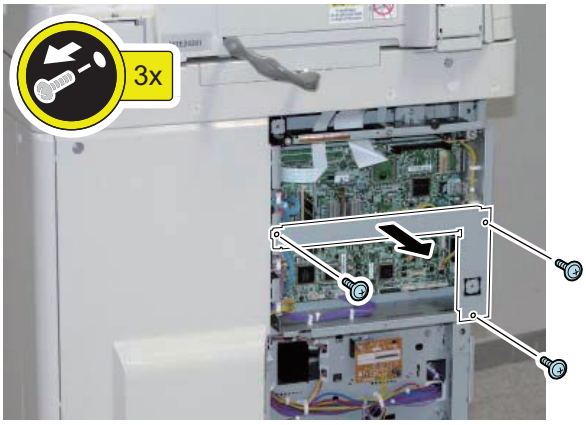
4. **Install the RS Conversion PCB on the RS232C Support Plate.**
   - 4 Screws (TP; M3x6)





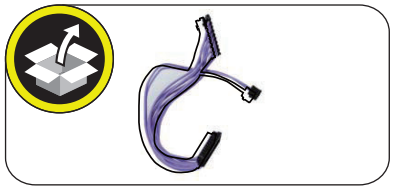
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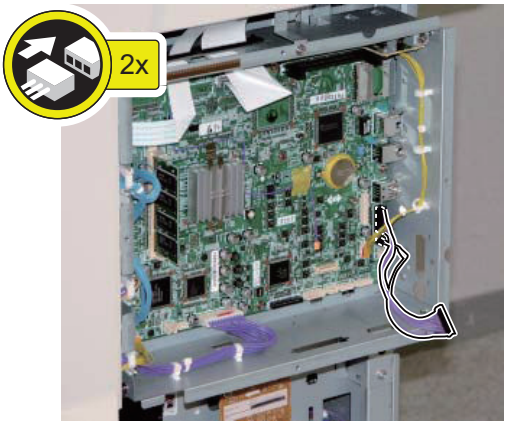
5. **Remove the Controller Cover.**
   - 3 Screws



☐

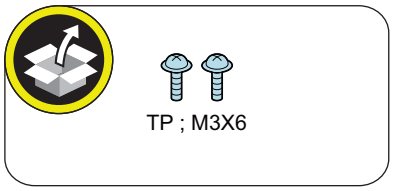
6. **Insert the CV-Serial Relay Cable included in the package to the 2 connectors on the PCB of the host machine.**

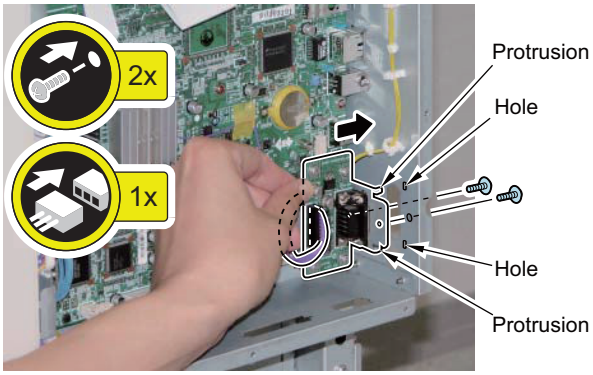




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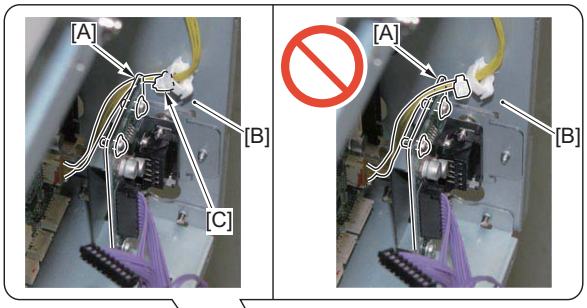
7. **Connect the RS Conversion PCB and the CV-Serial Relay Cable, and install the RS232C Support Plate by aligning the 2 Protrusions on the plate with the holes on the host machine.**
   - 2 Screws (TP; M3x6)
   - 2 Protrusions
   - 2 Holes

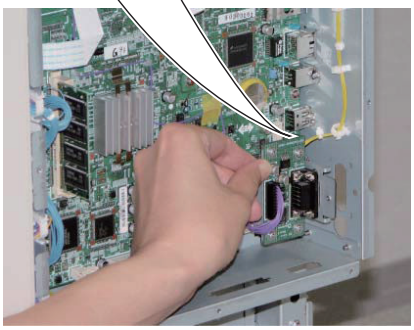




☐

8. **Be sure to put the harness [A] between the RS Conversion PCB and the plate [B] with the tie-wrap [C] of it on the front side.**





☐

9. **Install the Controller Cover.**

☐

10. **Install the Rear Cover (Right).**

☐

11. **Install the Power Plug.**

☐

12. **Install the Power Supply Retainer.**

☐

13. **Turn ON the main power switch.**

Copy Control Interface Cable-A1

Checking before Installation

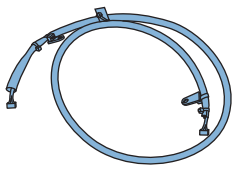
■ Check Items When Turning OFF the Main Power

Check that the main power switch is OFF.

1. Turn OFF the main power switch of the host machine.
2. Be sure that the control panel display and the main power lamp are both turned OFF and then disconnect the power plug.

Checking the Contents

☐ [1] Control card cable x1



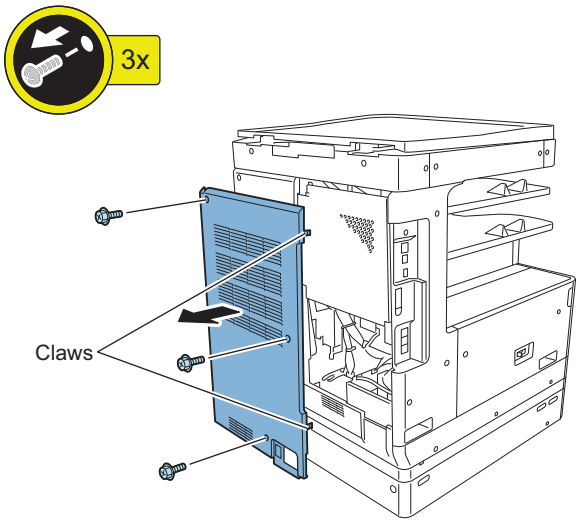
Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

NOTE:
Keep the removed fixing materials as they are used to transport for relocation.

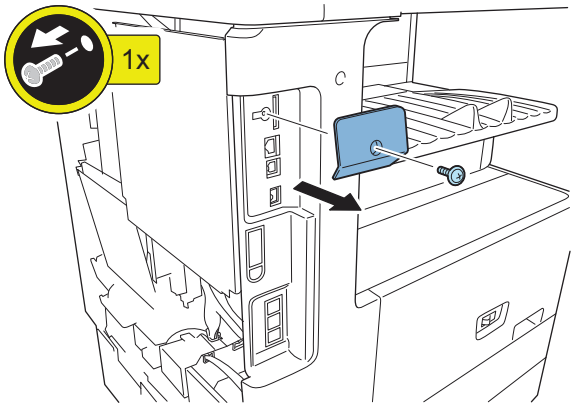
☐

1. **Remove the rear cover (right).**
   - 3 Screws
   - 2 Claws



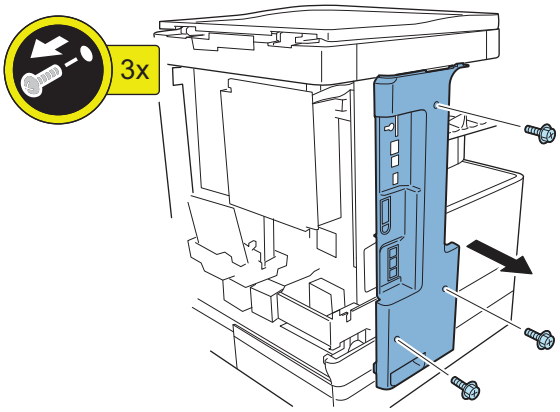
☐

2. **Remove the left rear face cover.**
   - 1 Screw



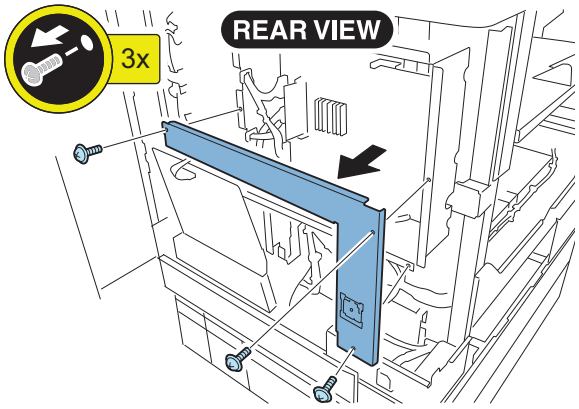
☐

3. **Remove the left rear cover.**
   - 3 Screws



☐

4. **Remove the controller cover.**
   - 3 Screws

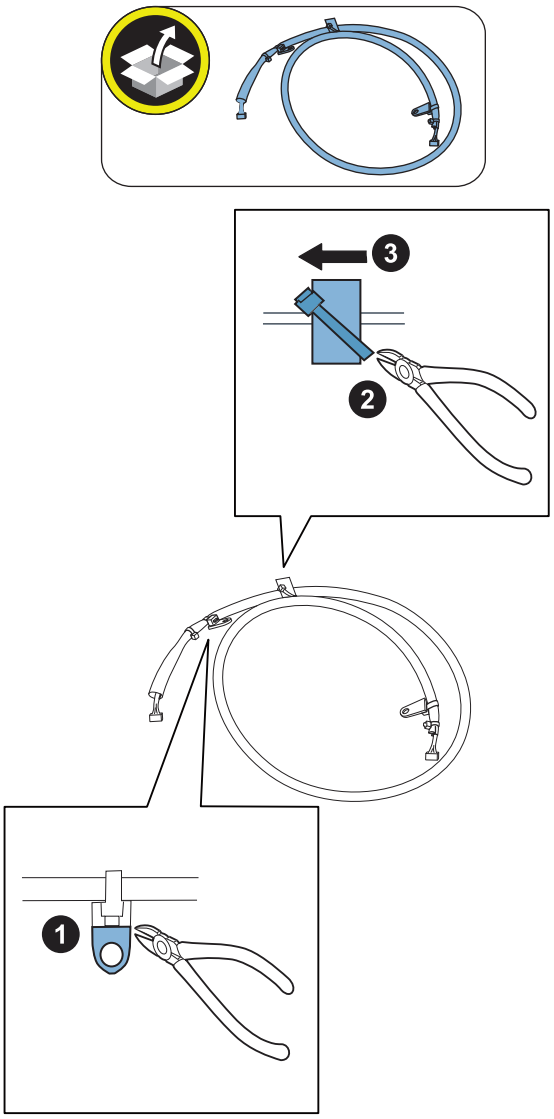


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5. **To remove the core, cut the cable holder at the position shown below using the side cutters.**

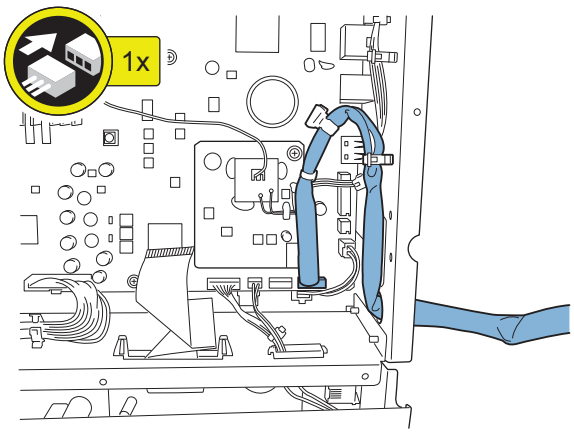
☐

6. **Cut the cable ties, and then remove the core of the control card cable.**



☐

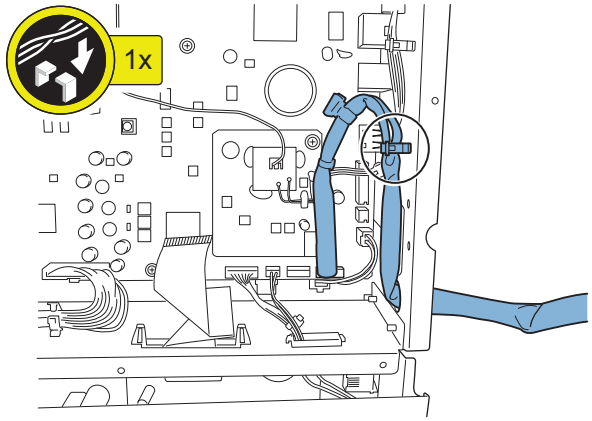
7. **Connect the connector of the control card cable to the connector on the image processor PCB as shown in the figure.**



☐

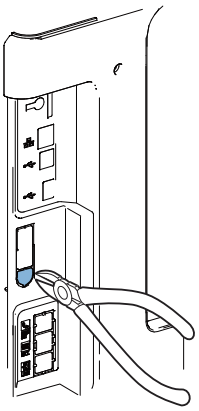
8. Route the harness as shown in the figure.

- 1 Clamp



☐

9. Cut the face cover from the left rear cover using the side cutters.



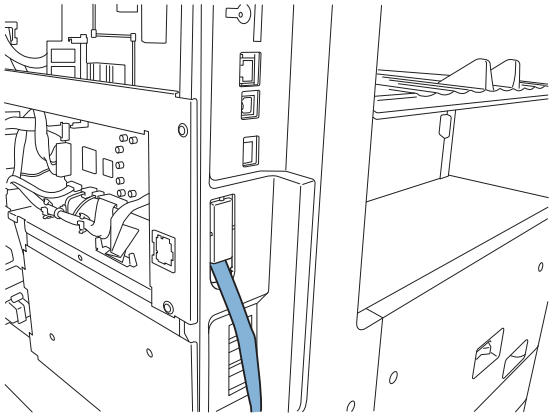
CAUTION:
Be sure to remove the remaining edges with care not to damage the harness.

☐

10. Install the controller cover.

☐

11. Pass the control card cable through the hole made in the step 9, and then install the left rear cover.



☐

12. Install the removed cover.

- Left rear face cover
- Rear cover (right)

System Upgrade RAM-C1

Checking before Installation

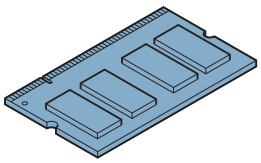
■ Check Items When Turning OFF the Main Power

Check that the main power switch is OFF.

1. Turn OFF the main power switch of the host machine.
2. Be sure that the control panel display and the main power lamp are both turned OFF and then disconnect the power plug.

Checking the Contents

☐ [1] 512MB RAM x1



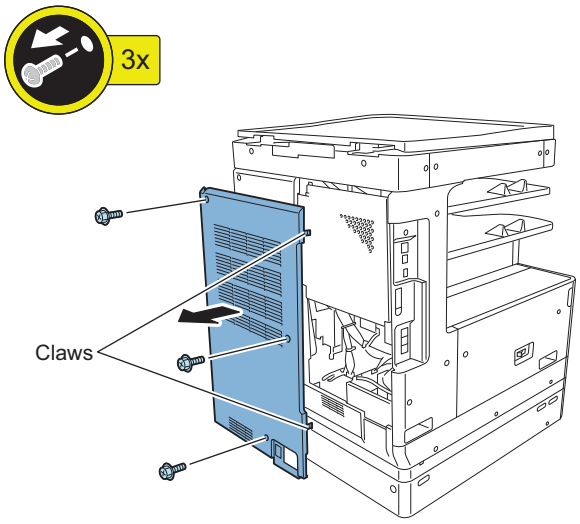
Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

NOTE:
Keep the removed fixing materials as they are used to transport for relocation.

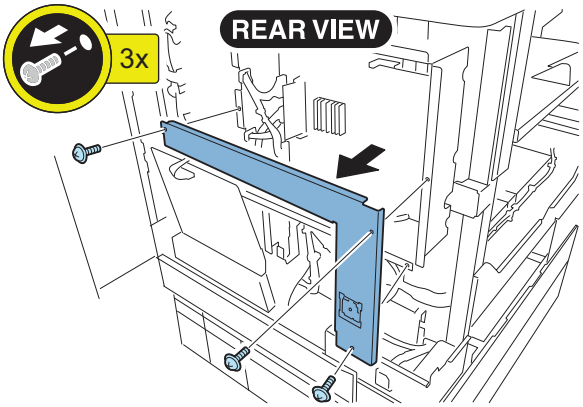
☐

1. **Remove the rear cover (right).**
   - 3 Screws
   - 2 Claws



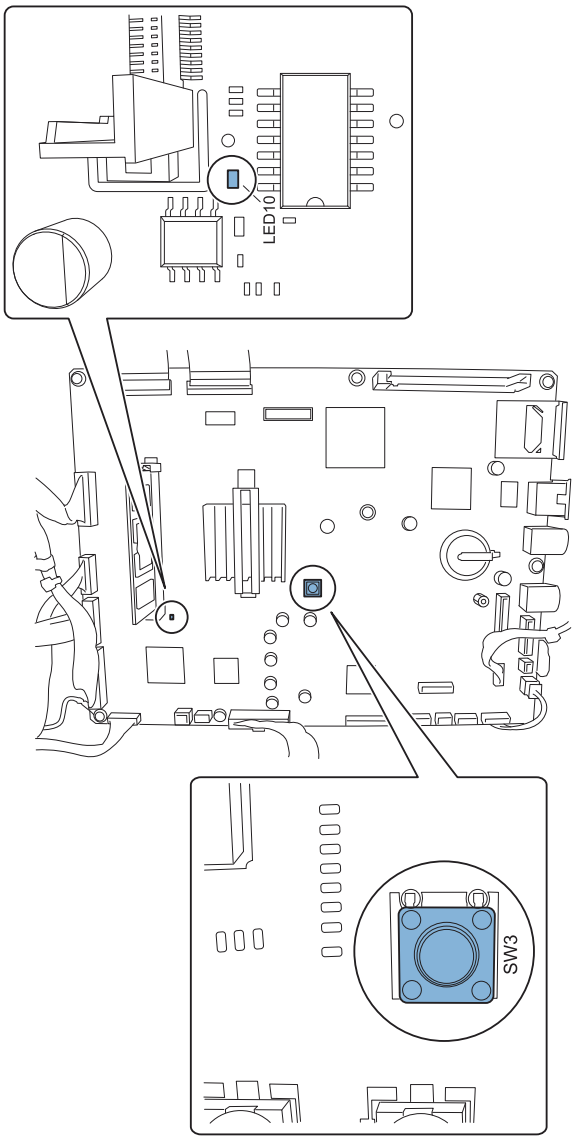
☐

2. **Remove the controller cover.**
   - 3 Screws



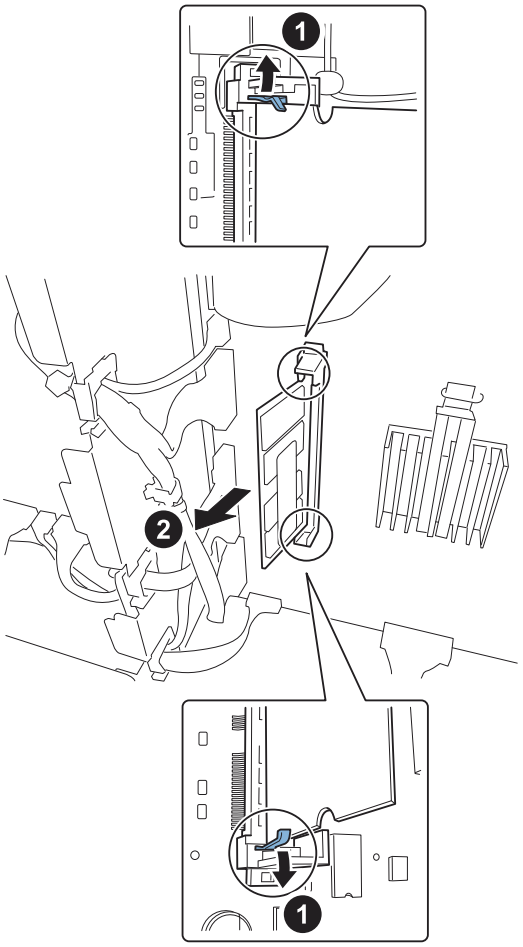
☐

3. **Push the SW3 on the controller PCB and confirm LED10 has gone OFF (This action is to cut the secondary power OFF).**



☐

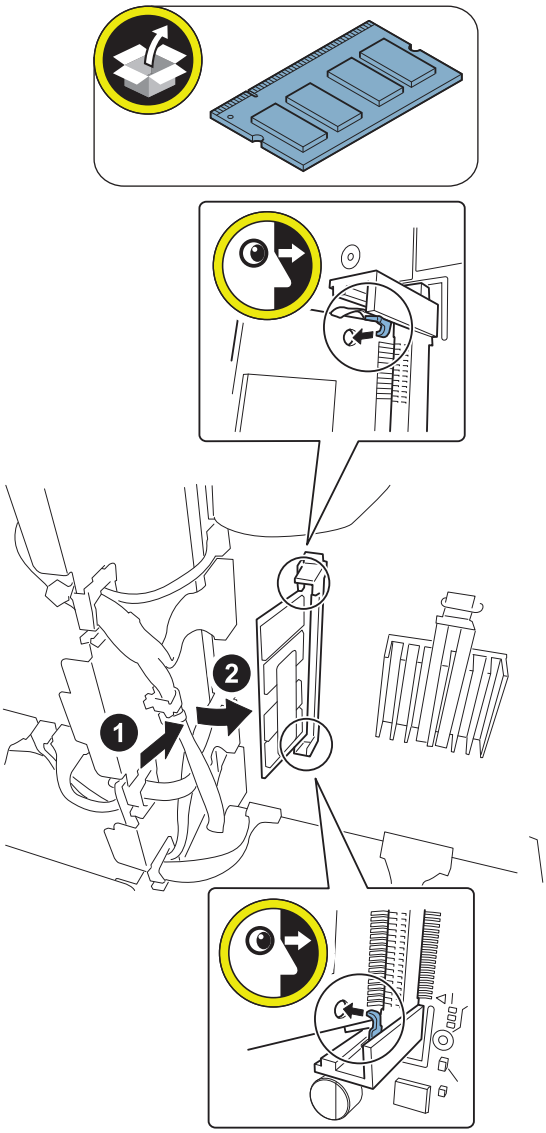
4. **Release the 2 hooks to detach the 256MB RAM.**



☐

5. **Insert the system upgrade RAM in the slot where the 256MB RAM has been detached.**

NOTE:
Be sure the upgrade memory has firmly been inserted and the hooks are in the hole of the memory as shown in the figure.



☐

6. **Install the controller cover.**
   - 3 Screws (TP; M3x6)

☐

7. **Install the rear cover (right).**
   - 3 Screws (RS tightening; M3x8)

☐

8. **Connect the power plug of the host machine to the power outlet and turn its main power switch ON.**

☐

9. **Checking the Connection.**

☐

10. **Enter the service mode.**

☐

11. **Use left or right cursor [< / >] key and press [OK] when [REPORT] has appeared.**

☐

12. **Use left or right cursor [< / >] key and press [OK] when [REPORT OUTPUT] has appeared.**

☐

13. **Use left or right cursor [< / >] key and press [OK] when [SPEC LIST] has appeared.**

☐

14. **SPEC REPORT is printed out. Confirm TOTAL MEMORY is [512MB] on the report.**

Cst Heater Kit-J1

Checking Before Installation

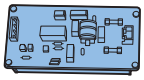
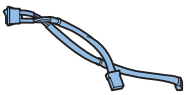
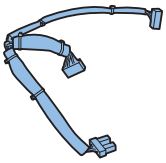
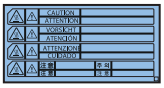
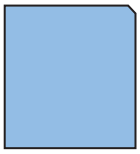
■ Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.

1. Turn OFF the main power switch of the host machine.
2. Be sure that Control Panel Display and Main Power Lamp are both turned OFF, and then disconnect the power plug from the outlet.

Checking the Contents

Make sure that none of the following parts are missing.

☐[1] Heater PCB x1 	☐[2] Heater SW Harness x1 
☐[3] Heater AC Harness x1 	☐[4] Heater DC Harness x1 
☐[5] High Temperature Caution Label x1 *1 	☐[6] Cassette Heater Sheet x1 *1 
☐[7] Screw (RS Tightening; M3x8) x1	

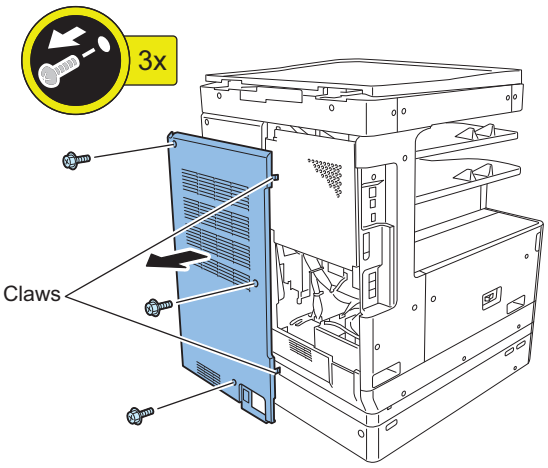
*1: These items are used only when install the cassette heater to the 250 sheets cassette. Also, save these even when the cassette heater is not installed.

Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

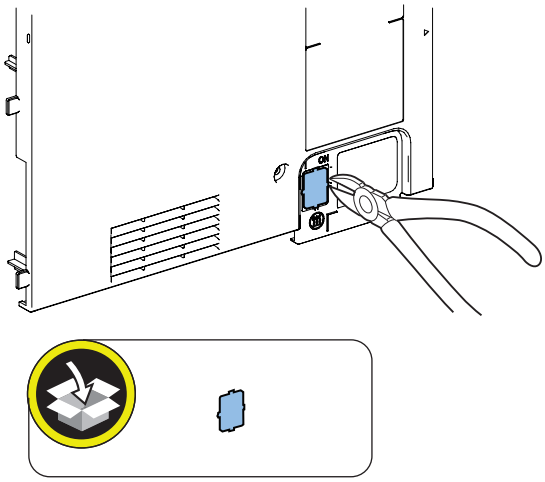
☐

1. **Remove the rear cover (right).**
   - 3 Screws
   - 2 Claws



☐

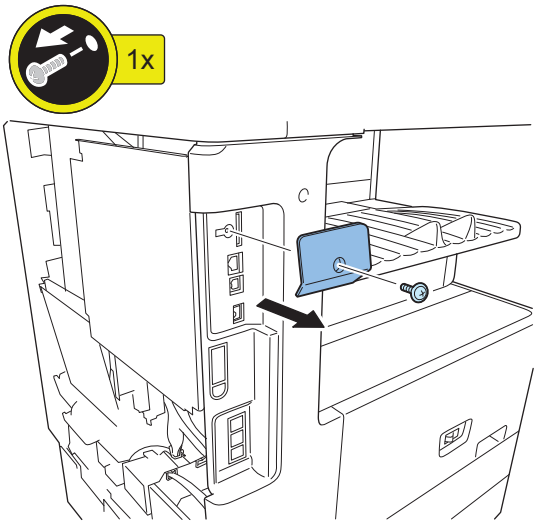
2. **Cut off the face cover of the rear cover (right) by a side cutters as shown in the figure.**



CAUTION:
Be sure to remove the face cover properly so that no burr is formed.

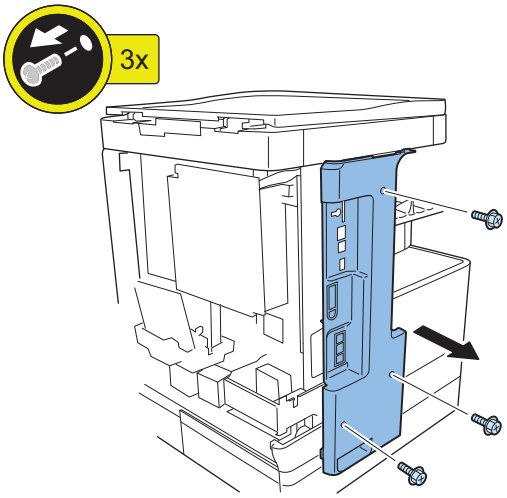
☐

3. **Remove the left rear face cover.**
   - 1 Screw



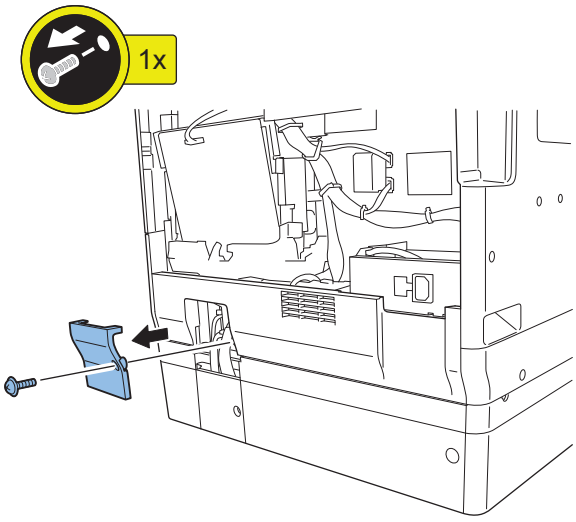
☐

4. **Remove the left rear cover.**
   - 3 Screws



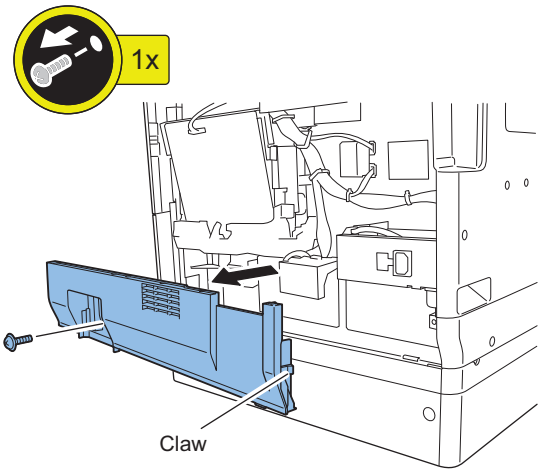
☐

5. **Remove the connector cover.**
   - 1 Screw



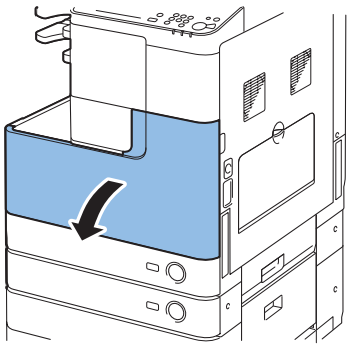
☐

6. **Remove the rear lower cover.**
   - 1 Screw
   - 1 Claw



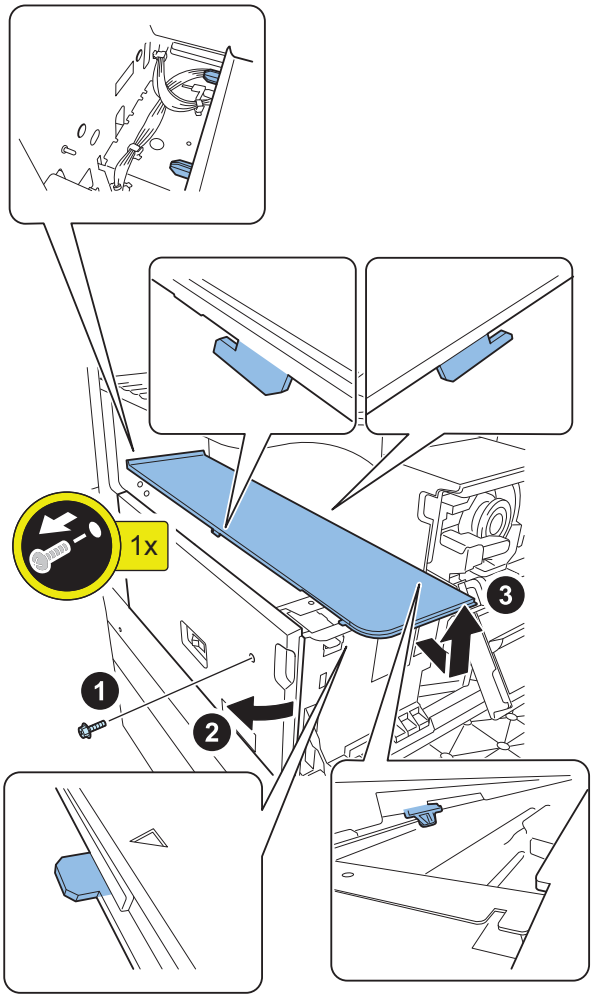
☐

7. **Open the front cover.**



☐

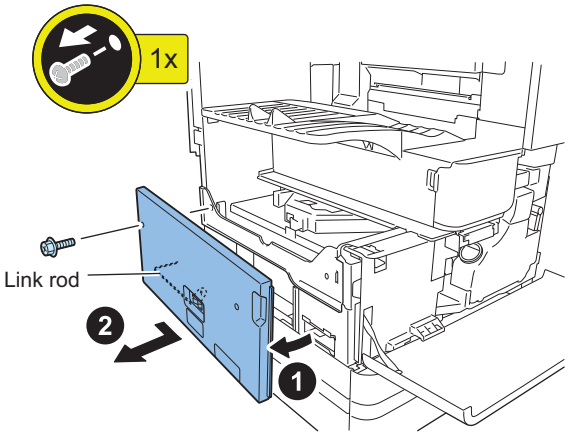
8. **Remove the screw of the left cover, and then distort it to remove the inside base cover.**
   - 1 Screw
   - 2 Bosses
   - 2 Hooks
   - 2 Protrusions



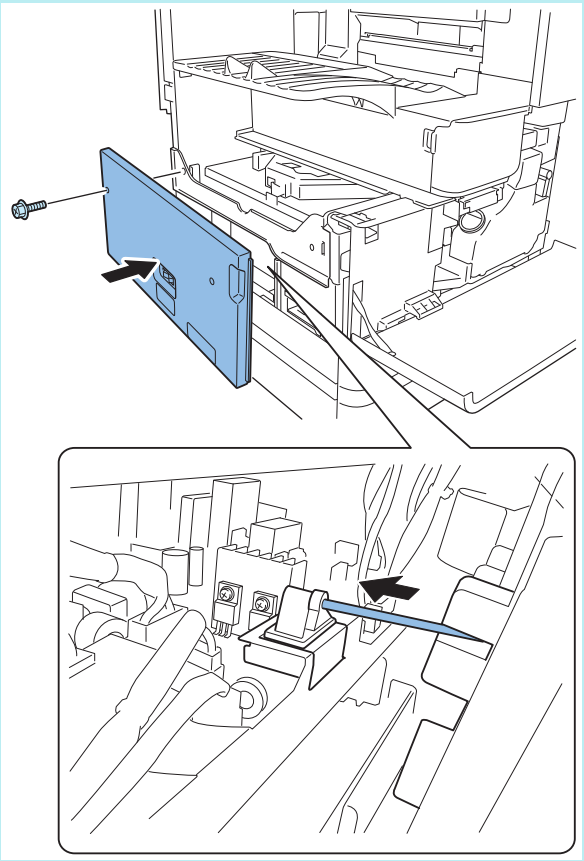
☐

9. **Remove the left cover.**
   1. Except for Europe model
      - 1 Screw

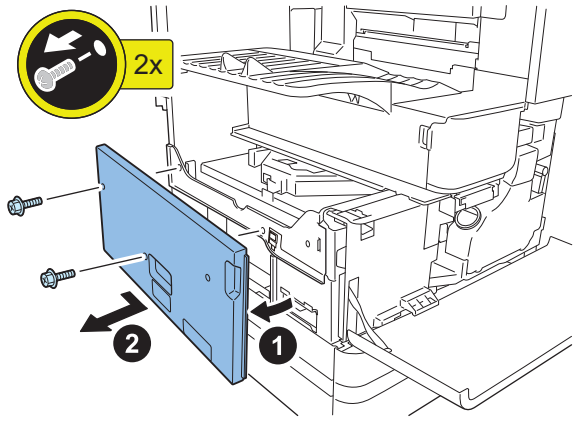
CAUTION:
There is the link rod behind the left cover, which is engaged to the switch on the power supply unit. So carefully remove the left cover not to give an excessive load on the link rod.



NOTE:
When reinstalling the left cover, surely insert the link rod in the switch on the power supply unit so that the switch can link to the main power switch of the host machine.

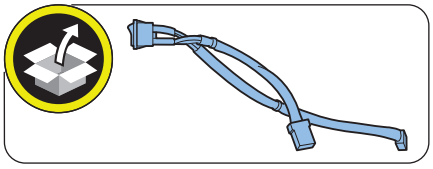


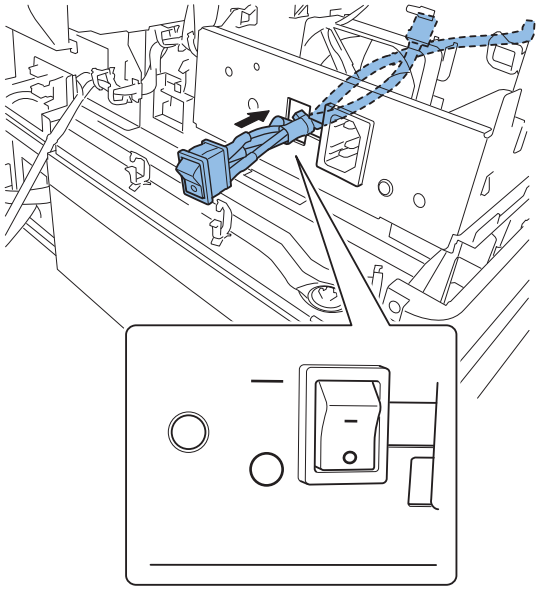
2. Only for Europe model
   - 2 Screws



☐

10. Install the Heater SW Harness firmly in the power cord bracket.

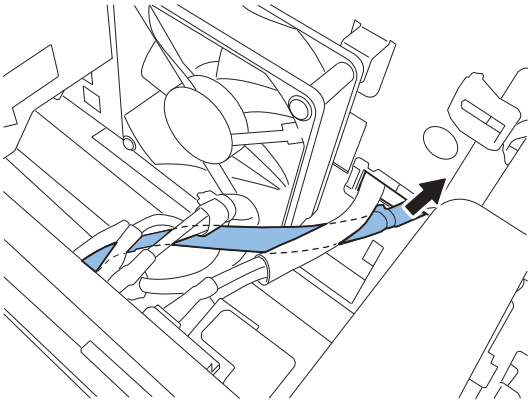




NOTE:
Install the Heater SW harness in the correct direction referring to the figure in the power cord bracket.

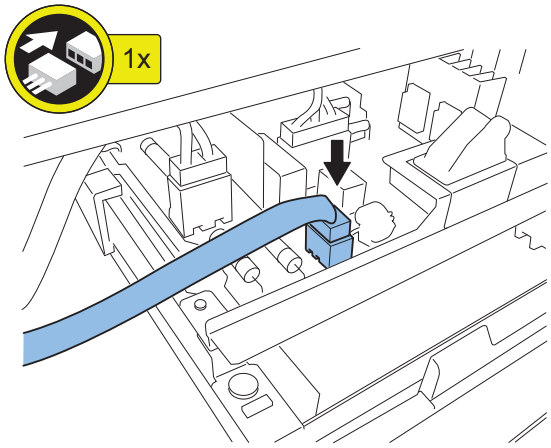
☐

11. Put the longer harness of the Heater SW Harness out of two through the hole of the rear frame.



☐

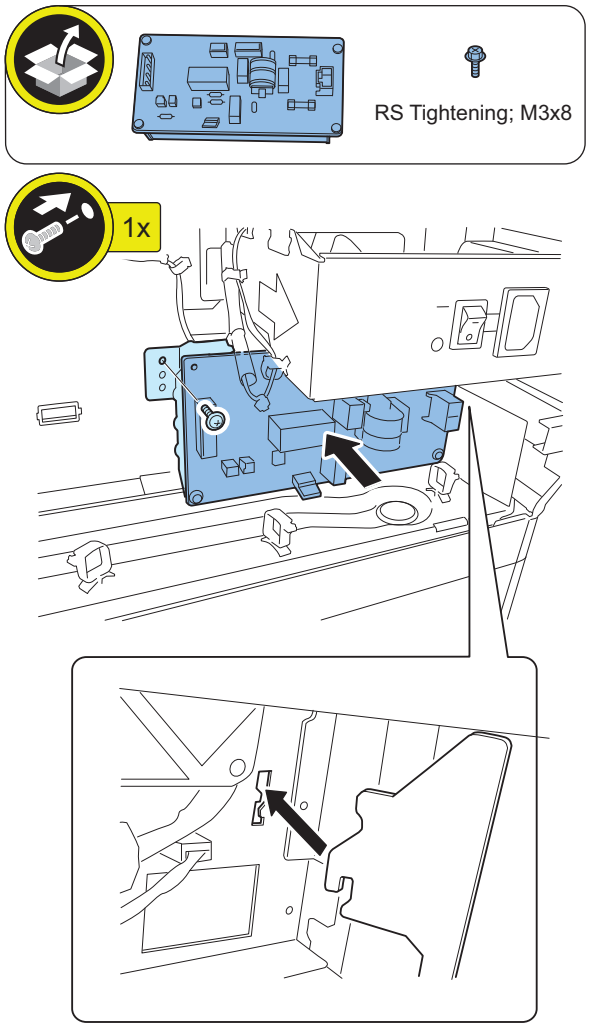
12. Connect the connector of the longer harness of the Heater SW Harness to J108 of the power supply unit.
   - 1 Connector



☐

13. Install the Heater PCB.

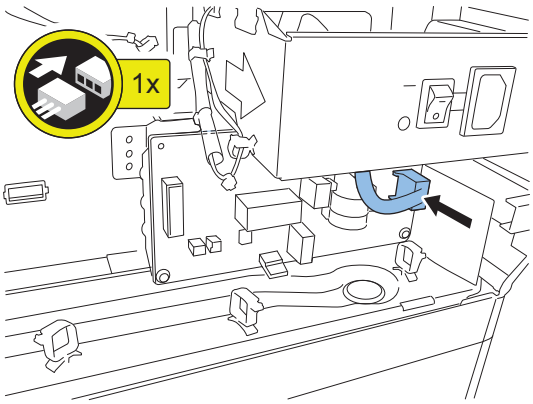
- 1 Screw (RS Tightening; M3x8)



☐

14. Connect the connector of the shorter harness of the Heater SW Harness to the Heater PCB.

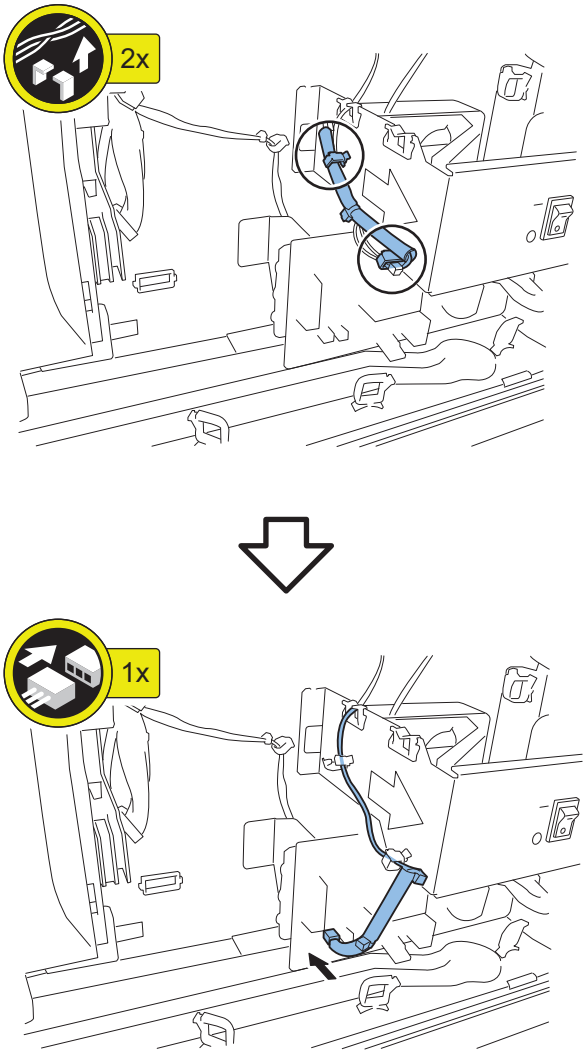
- 1 Connector



☐

15. Unlock the wire saddles and stretch the folded harness as shown in the figure. Then connect the connector to the Heater PCB.

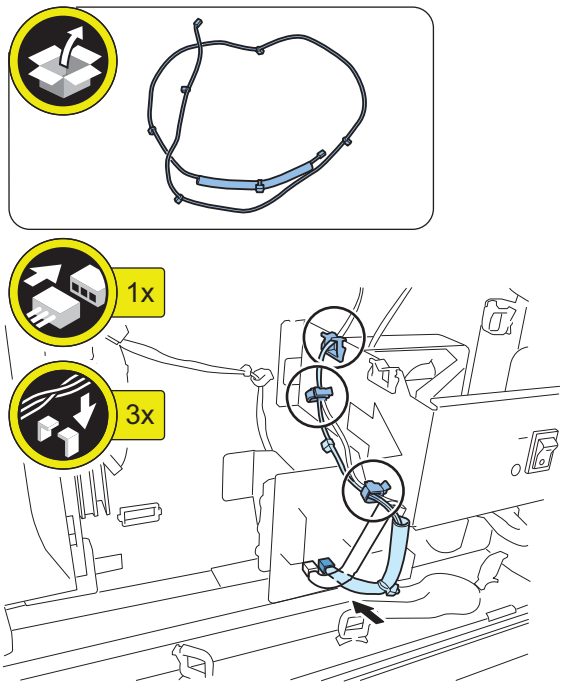
- 2 Wire saddles
- 1 Connector



☐

16. **Connect the connector of the Heater DC Harness, which is closer to the protective tube of the harness to J1102 of the Heater PCB. Clamp the 3 harnesses as shown in the figure.**
    - 1 Connector
    - 1 Edge Saddle
    - 2 Wire saddles

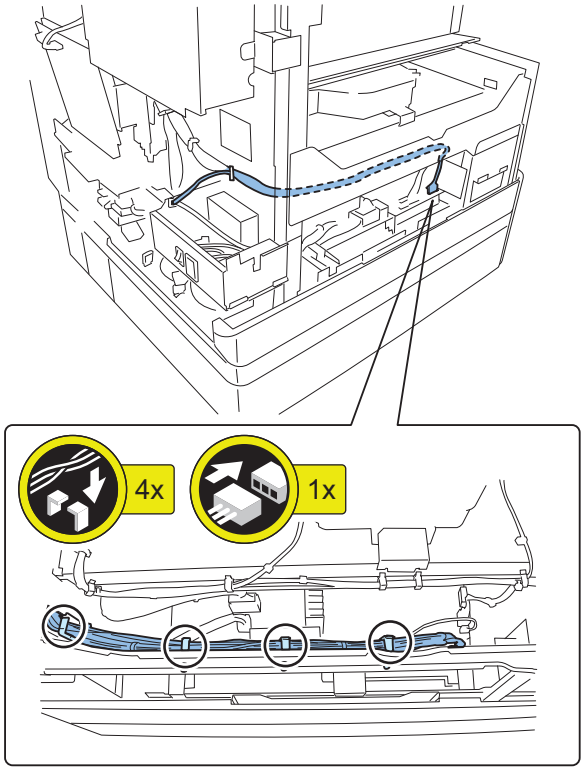
CAUTION:
Scatter the slack of the harness and confirm that the harness do not touch the part of the primary circuit.



☐

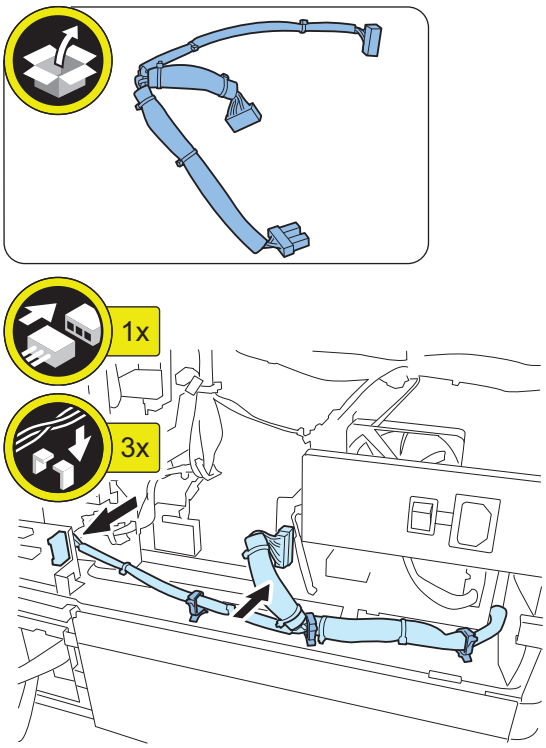
17. **Clamp the Heater DC Harness in the 4 wire saddles, and then connect the connector of the Heater DC harness to J113B on the power supply unit.**
    - 4 Wire saddles
    - 1 Connector

CAUTION:
Scatter the slack of the harness and confirm that the harness do not touch the part of the primary circuit.



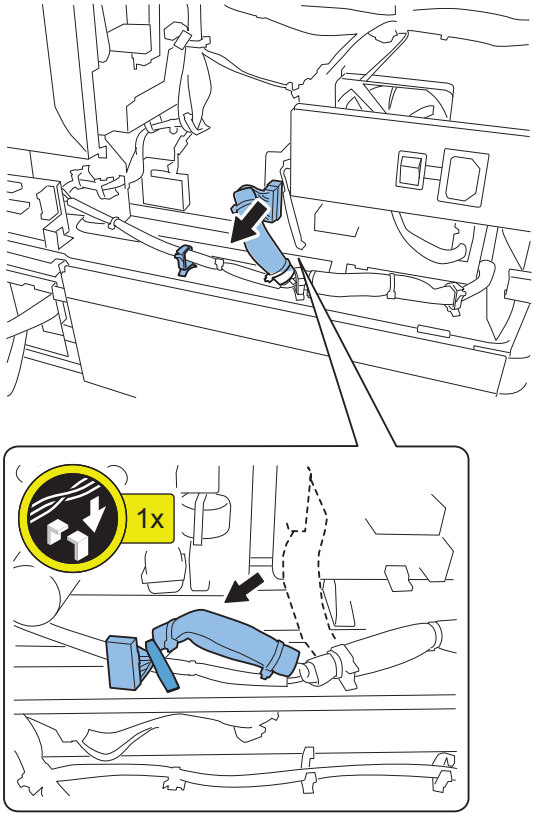
☐

18. **Install the Heater AC Harness as shown in the figure. Attach the connector of the longest branch of the Heater AC Harness to the cassette junction bracket and connect the shortest branch of the Heater AC Harness to J1106 of the Heater PCB.**
    - 1 Connectors
    - 3 Wire saddles



☐

19. **In case the Cassette Heater is not installed, disconnect the connector of the Heater AC Harness from the Heater PCB and clamp it as shown in the figure.**
    - 1 Wire saddle



☐

20. **Install each heater.**

NOTE:
After installing each heater, attach the followings;
☐ Left cover (1 Screw) (Except for Europe model)
☐ Left cover (2 Screws) (Only for Europe model)
☐ Inside base cover (1 Screw (Attach it to the left cover.))
☐ Rear lower cover (1 Screw)
☐ Connector cover (1 Screw)
☐ Left rear cover (3 Screws)
☐ Left rear face cover (1 Screw)
☐ Rear cover (right) (3 Screws)

Checking after Installation

■ Disposal Parts Check

1. **Following disposal parts are remained after installation procedure.**
   ☐[1] Removed face cover 1pc.

Reader Heater Unit

Checking Before Installation

■ Check Items When Turning OFF the Main Power

Check that the main power switch is OFF.

1. Turn OFF the main power switch of the host machine.
2. Be sure that the control panel display and the main power lamp are both turned OFF and then disconnect the power plug.

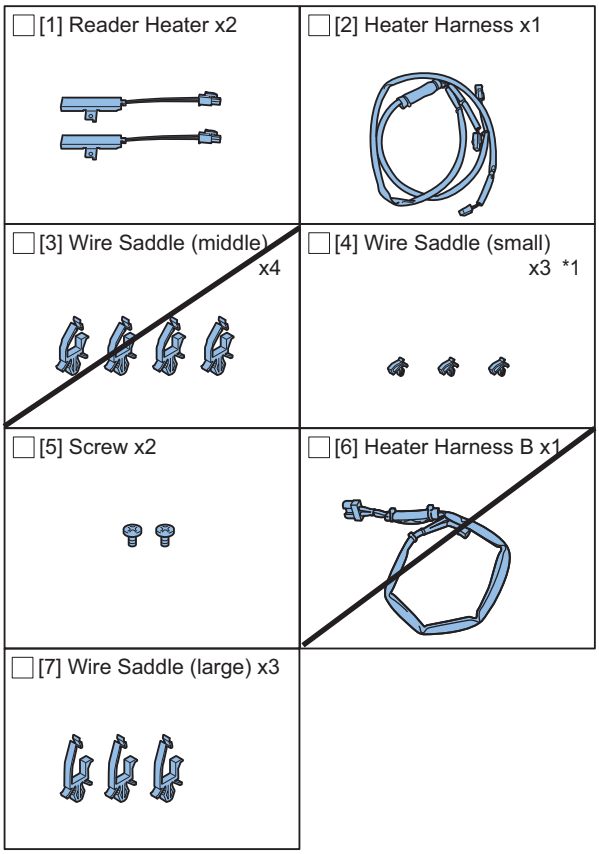
■ Points to Note on Installation

The Heater Kit must be installed before installing the Reader Heater Unit.

Checking the Contents (For 230V)

■ Reader Heater Unit-H1

Make sure that none of the following parts are missing.



*1: Only for use in iR2545/2535 series model.

Checking the Parts to be Installed (For 120V)

Each parts of the Reader Heater Unit are provided as service parts, order as necessary to prepare the parts below.

No.	Parts name	Parts Number.	Q'ty
1	Reader Heater (120V)	FK2-9468	2 pcs.
2	Heater harness	FM4-2929	1 pc.
3	Wire saddle (small)	WT2-0507	3 pcs.
4	Screw (Binding; M4x6) *1	XB2-8400-609	2 pcs.
5	Wire saddle (large)	WT2-5719	3 pcs.

*1; Only for use in iR2545/2535 series model.

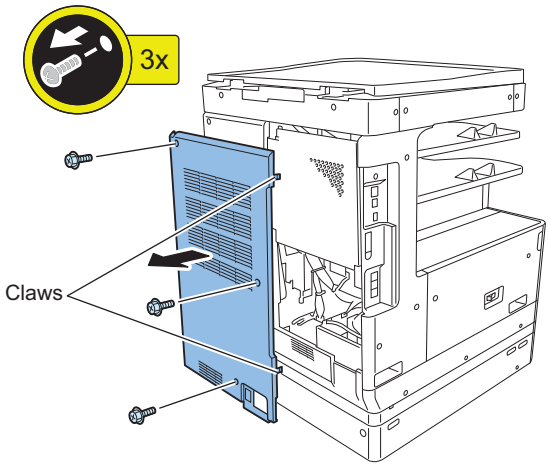
Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

■ Installation of Heater Harness

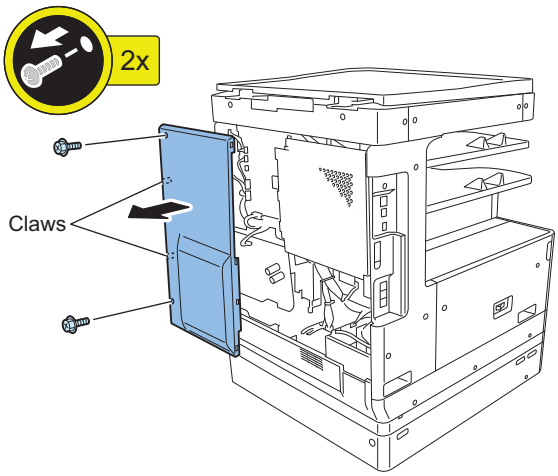
☐

1. **Remove the rear cover (right).**
   - 3 Screws
   - 2 Claws



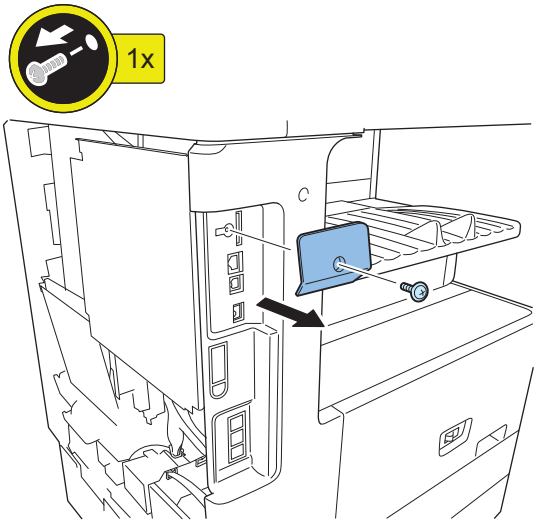
☐

2. **Remove the rear cover (left).**
   - 2 Screws
   - 2 Claws



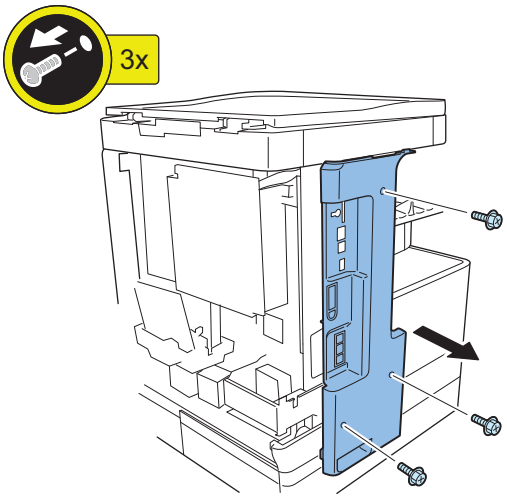
☐

3. **Remove the left rear face cover.**
   - 1 Screw



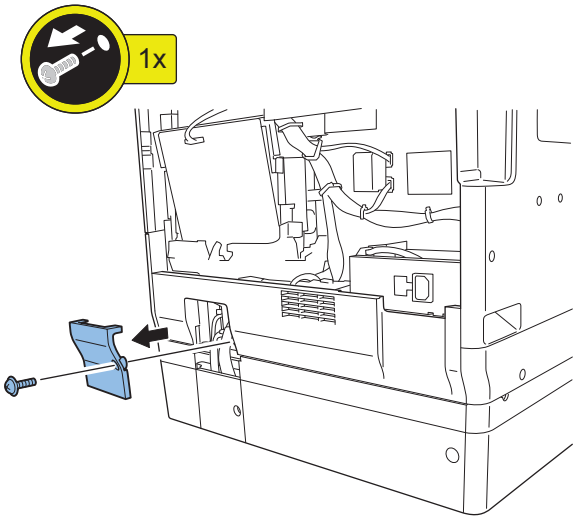
☐

4. **Remove the left rear cover.**
   - 3 Screws



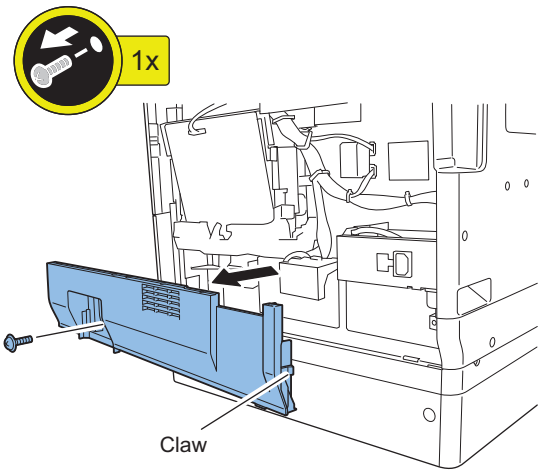
☐

5. **Remove the connector cover.**
   - 1 Screw



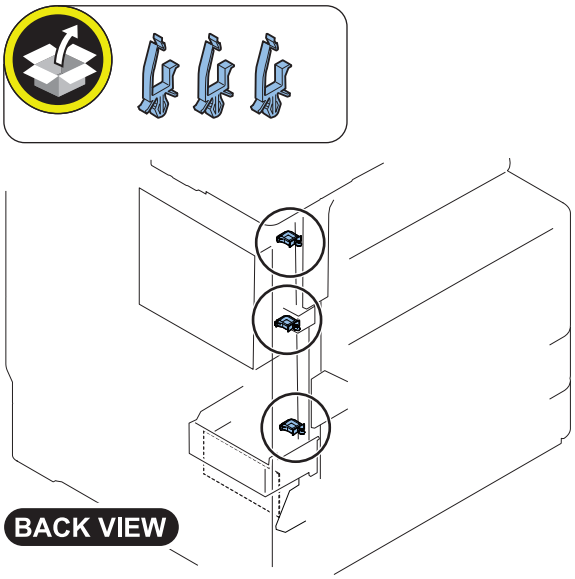
☐

6. **Remove the rear lower cover.**
   - 1 Screw
   - 1 Claw



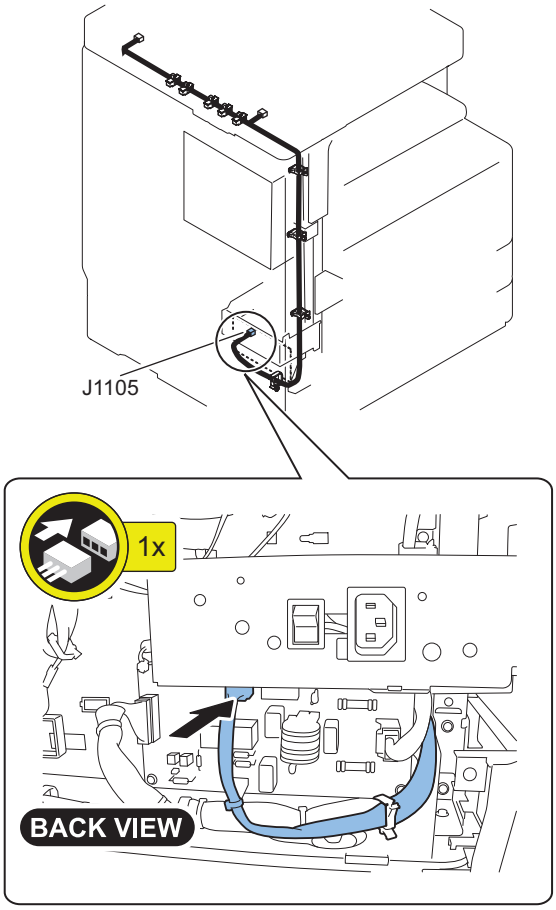
☐

7. **Install the 3 Wire Saddle (large) in the frame at rear left side.**



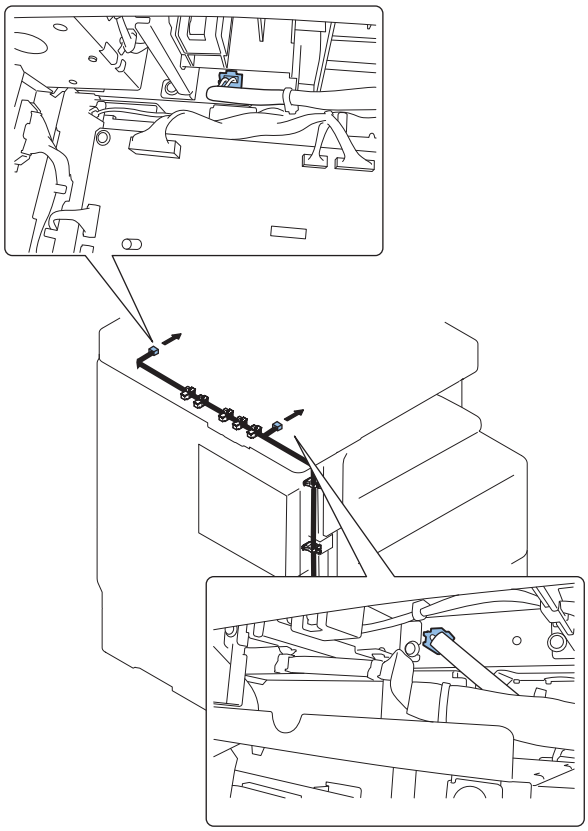
☐

8. **Connect the connector of the Heater Harness to J1105 of the Heater PCB.**
   - 1 Connector



☐

9. Put 2 connectors through each hole as shown in the figure.

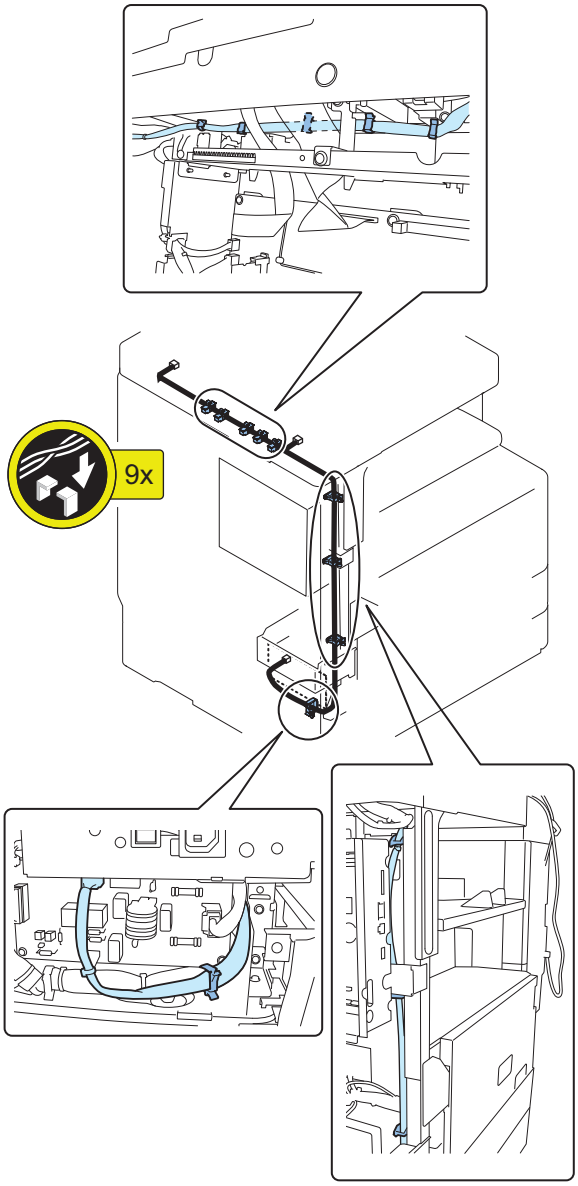


☐

10. Clamp the harness as shown in the figure.

- 9 Wire saddles

CAUTION:
Pay attention not to give damages on the flexible cable.



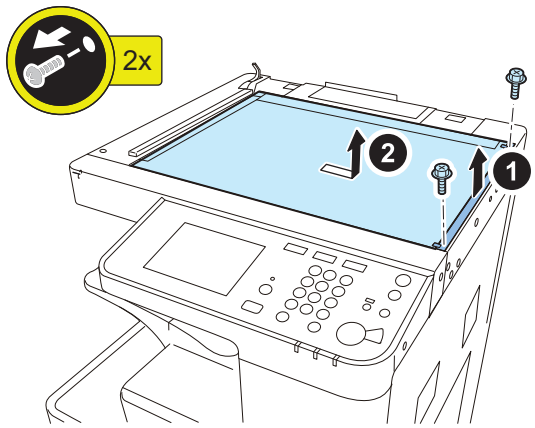
■ Removing the Parts from Reader

☐

1. Open the ADF (or platen cover).

☐

2. **Remove the glass retainer (right), and then remove the platen glass.**
   - 2 Screws



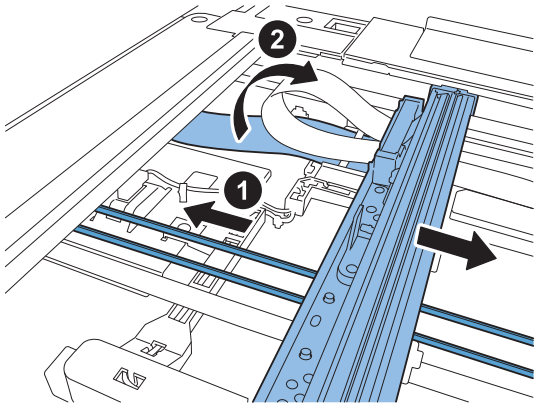
■ Installation of Reader Heater (For iR2530/2525/2520 series)

☐

1. **Move the drive belt in the arrow direction to shift the CIS unit to the center.**

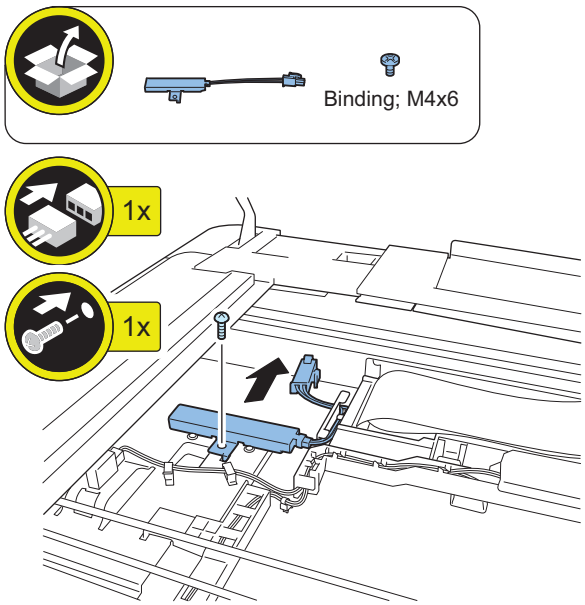
☐

2. **Turn up the sheet.**



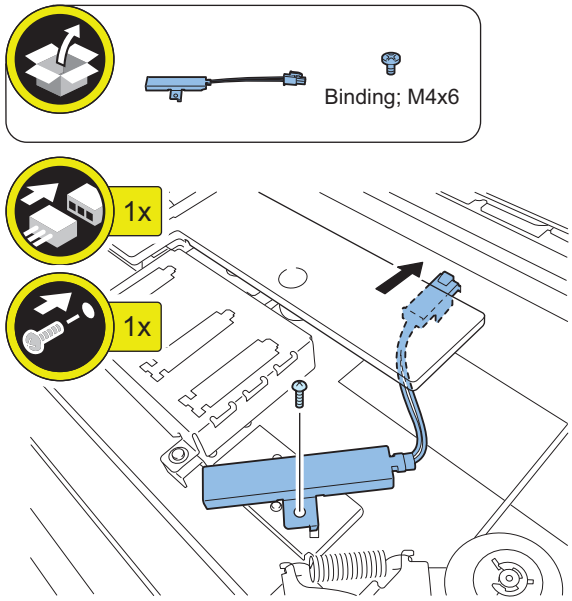
☐

3. **Install the Reader Heater (left side).**
   - 1 Connector
   - 1 Screw



☐

4. **Install the Reader Heater (right side).**
   - 1 Connector
   - 1 Screw



☐

5. **Attach the following removed parts.**
   - ☐ Platen glass
   - ☐ Glass retainer (right) (2 Screws)
   - ☐ Rear lower cover (1 Screw)
   - ☐ Connector cover (1 Screw)
   - ☐ Left rear cover (3 Screws)
   - ☐ Left face cover (1 Screw)
   - ☐ Rear cover (left) (2 Screws)
   - ☐ Rear cover (right) (3 Screws)

☐

6. **Connect the power plug of the host machine to the outlet.**

☐

7. **Turn ON the main power switch.**

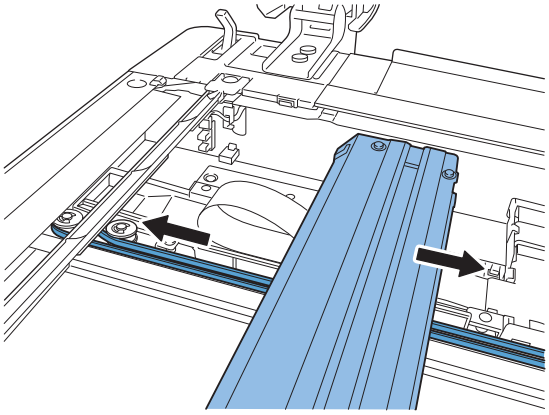
☐

8. **Turn ON the heater switch.**

■ Installation of Reader Heater (For iR2545/2535 series)

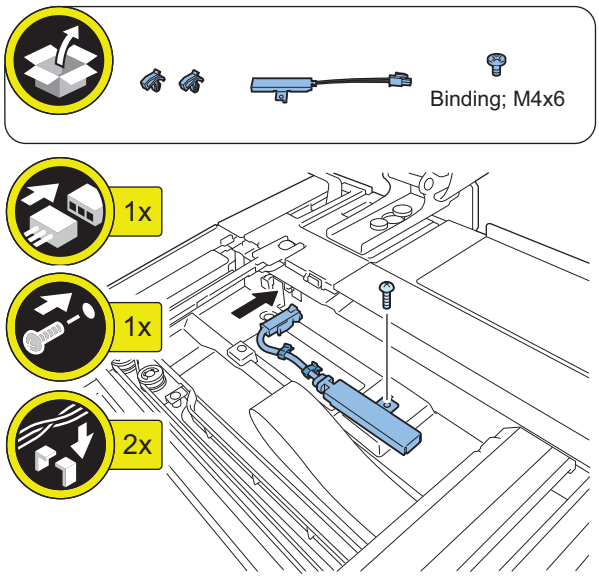
☐

1. **Move the drive belt in the arrow direction to shift the CCD unit to the center.**



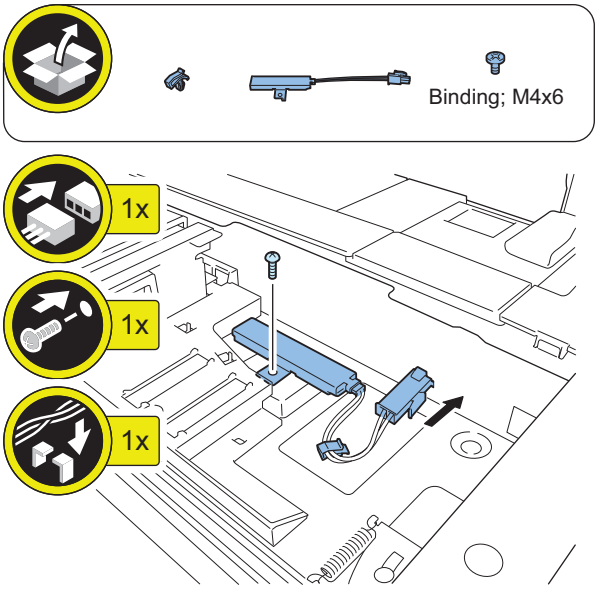
☐

2. **Install the 2 Wire Saddles (small), and then install the Reader Heater (left side).**
   - 1 Connector
   - 1 Screw
   - 2 Wire saddles



☐

3. **Install the 1 Wire Saddle (small), and then install the Reader Heater (right side).**
   - 1 Connector
   - 1 Screw
   - 1 Wire saddle



☐

4. **Attach the following removed parts.**
   - ☐ Platen glass
   - ☐ Glass retainer (right) (2 Screws)
   - ☐ Rear lower cover (1 Screw)
   - ☐ Connector cover (1 Screw)
   - ☐ Left rear cover (3 Screws)
   - ☐ Left face cover (1 Screw)
   - ☐ Rear cover (left) (2 Screws)
   - ☐ Rear cover (right) (3 Screws)

☐

5. **Connect the power plug of the host machine to the outlet.**

☐

6. **Turn ON the main power switch.**

☐

7. **Turn ON the heater switch.**

Checking after Installation

■ Disposal Parts Check

1. **Following disposal parts are remained after installation procedure.**

   ☐[1] Wire saddle (middle) 4pcs. (For Reader Heater Unit-H1)

   ☐[2] Heater harness B 1pc. (For Reader Heater Unit-H1)

Cassette Heater Unit-37

Checking Before Installation

■ Check Items when Turning OFF the Main Power

Check that the main power switch is OFF.

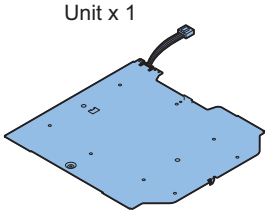
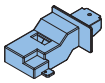
1. Turn OFF the main power switch of the host machine.
2. Be sure that Control Panel Display and Main Power Lamp are both turned OFF, and then disconnect the power plug from the outlet.

■ Points to Note on Installation

The Heater Kit must be installed before installing the Cassette Heater Unit.

Checking the Contents

Make sure that none of the following parts are missing.

☐ [1] Cassette Heater Unit x 1 	☐ [2] Heater Connector Cover x 1 *1 
☐ [3] Wire Saddle x 1 *1 	☐ [4] Screw (W Sems Round End; M3X6) x 1 
☐ [5] Screw (P Tightening; M3x8) x 1 *1 	

*1: These items are not used for CST. Feeding Unit.

NOTE:
When installing the cassette heater to the 250 sheets cassette, prepare the Cassette Heater Sheet and High Temperature Caution Label included to Cst Heater Kit-J1.

Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

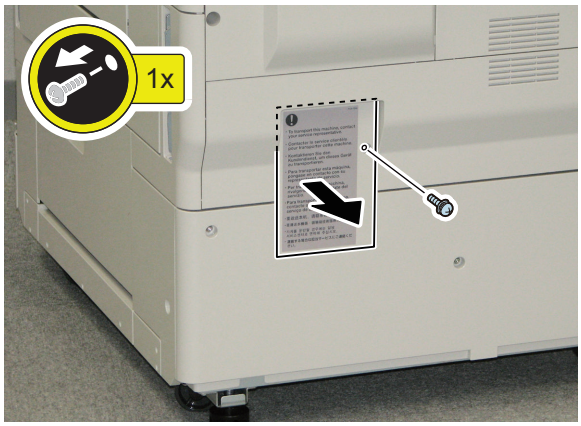
■ In case of Upper Cassette for 550 Sheets Cassette

☐

1. **Draw out the cassette.**

☐

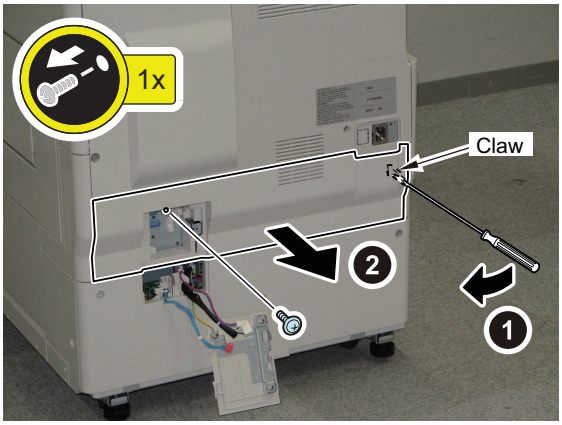
2. **Remove the connector cover.**
   - 1 Screw
   - 3 Connectors





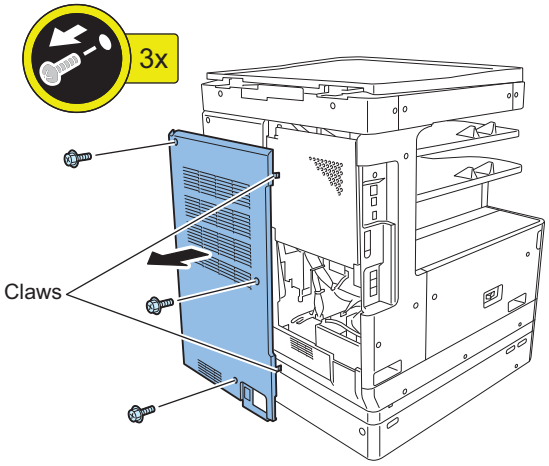
☐

3. **Remove the lower rear cover.**
   - 1 Screw
   - 1 Claw



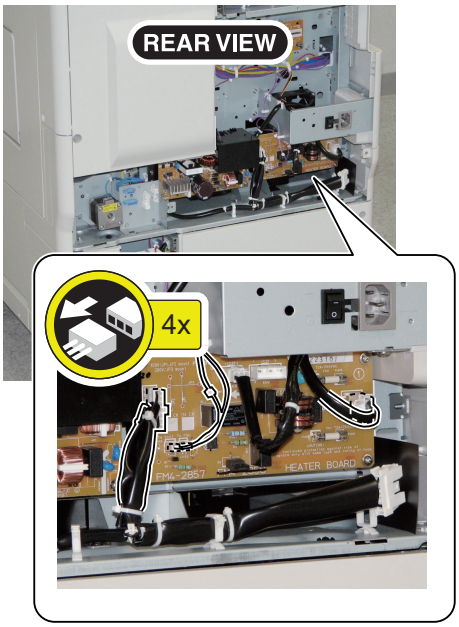
☐

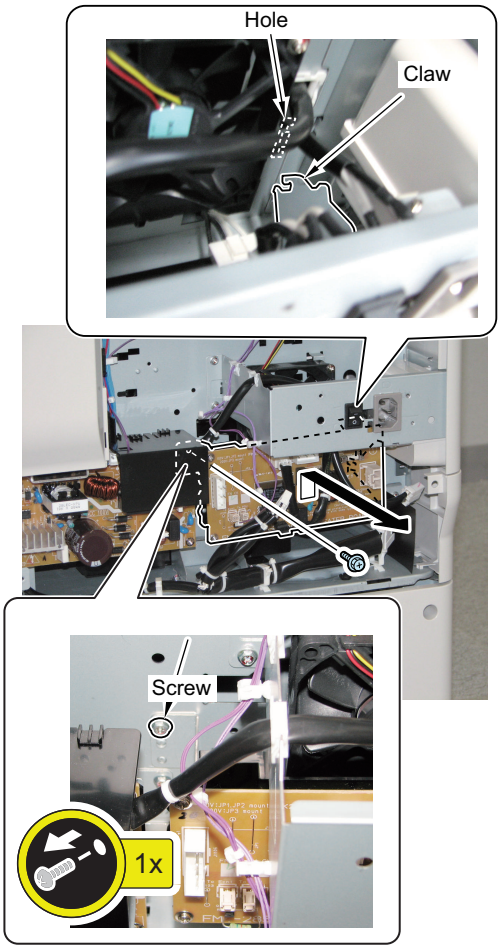
4. **Remove the rear cover (left).**
   - 3 Screws
   - 2 Claws



☐

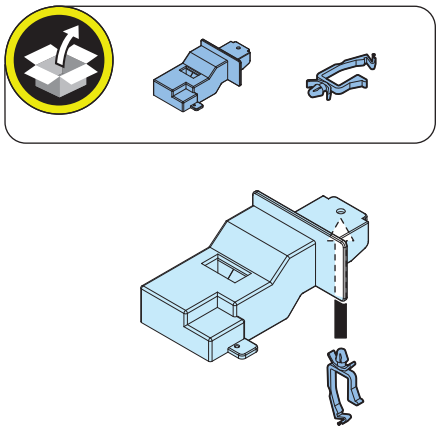
5. **Remove the Heater PCB.**
   - 4 Connectors
   - 1 Screw
   - 1 Claw





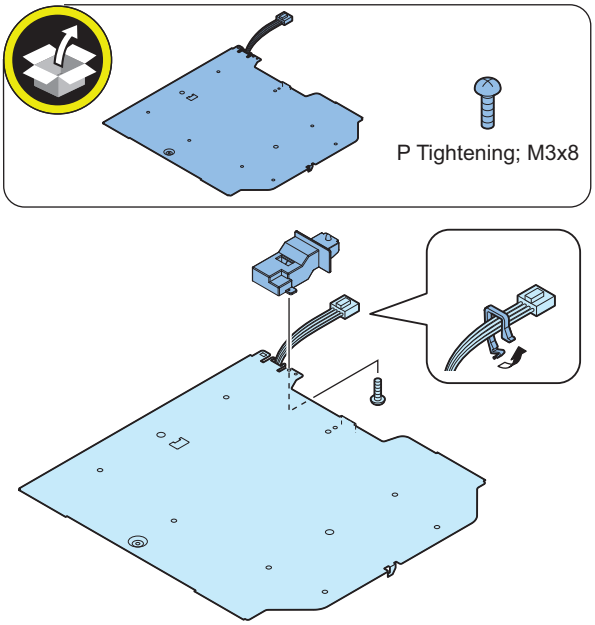
☐

6. **Install the Wire Saddle to Heater Connector Cover.**



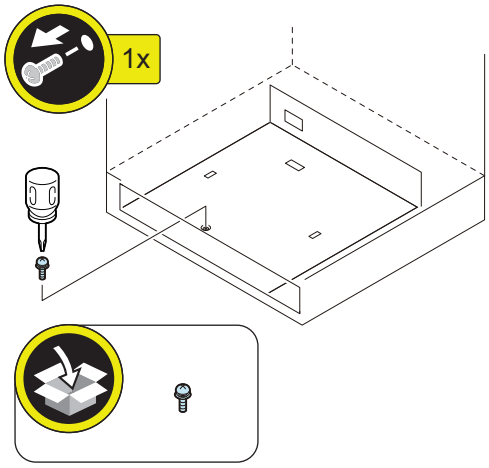
☐

7. **Install the Heater Connector Cover to the connector of Cassette Heater Unit.**
   - 1 Wire saddle
   - 1 Screw (P Tightening; M3x8)



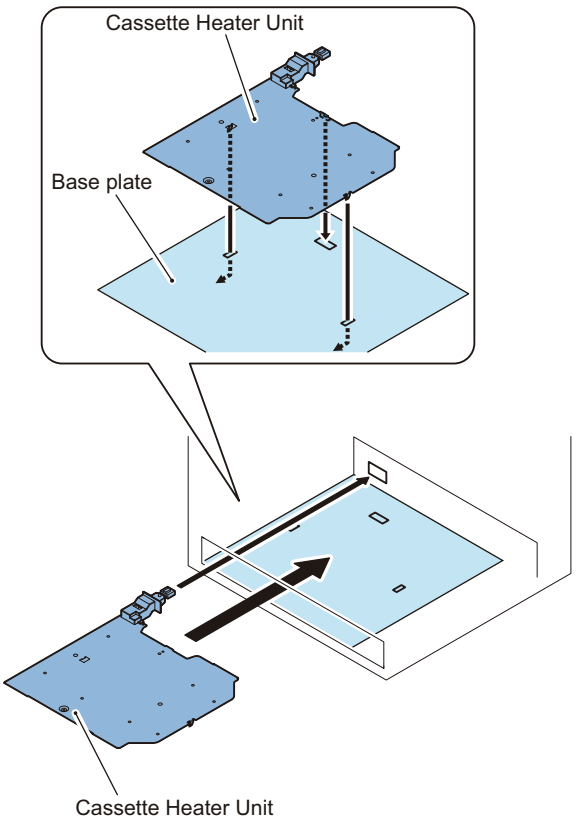
☐

8. **If a screw has been fixed to the bottom of the Cassette Base, remove the screw. (The removed screw will not be used.)**



☐

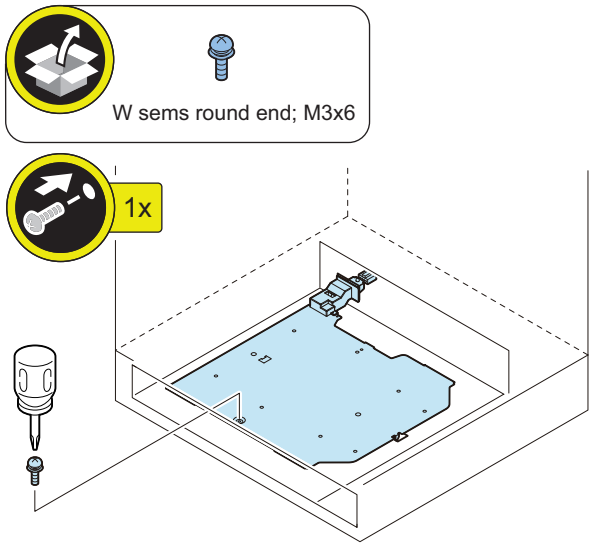
9. **Install the Cassette Heater Unit by fitting the 3 hooks to the holes of base plate. At that time, put the connector through the square hole.**



☐

10. Attach the screw with the stubby driver.

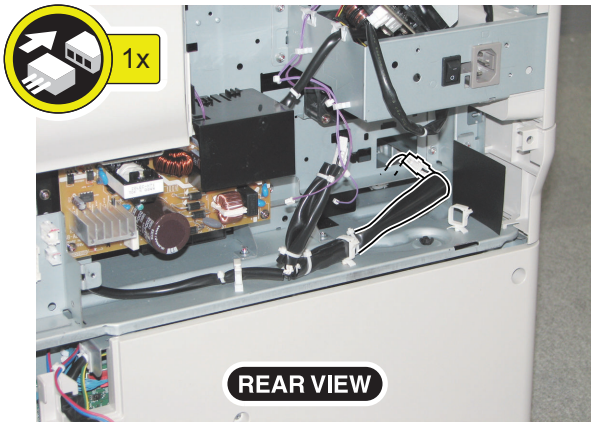
- 1 Screw (W sems round end; M3x6)



☐

11. Connect the connector of Cassette Heater Unit to the Heater AC Harness.

- 1 Connector



☐

12. Install the Heater PCB.

- 1 Claw
- 1 Screw
- 4 Connectors

☐

13. Attach the following removed parts.

☐ Rear cover (left) (3 Screws)
☐ Rear lower cover (1 Screw)
☐ Connector cover (3 Connectors, 1 Screw)

☐

14. Attach the cassette.

☐

15. Connect the power plug of the host machine to the outlet.

☐

16. Turn ON the main power switch.

☐

17. Turn ON the heater switch.

■ In case of 250 Sheets Cassette

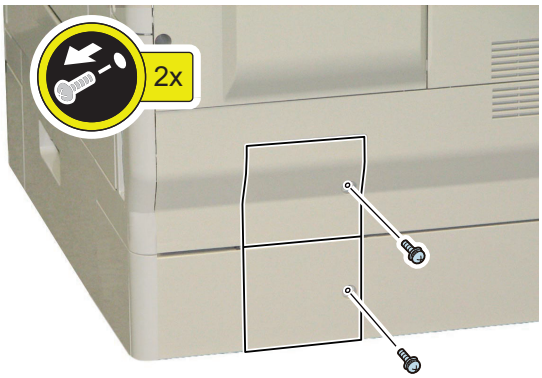
☐

1. Draw out the cassette.

☐

2. Remove the connector cover.

- 2 Screws
- 4 Connectors

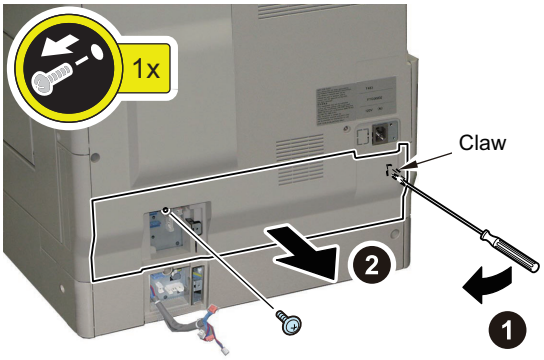




☐

3. Remove the lower rear cover.

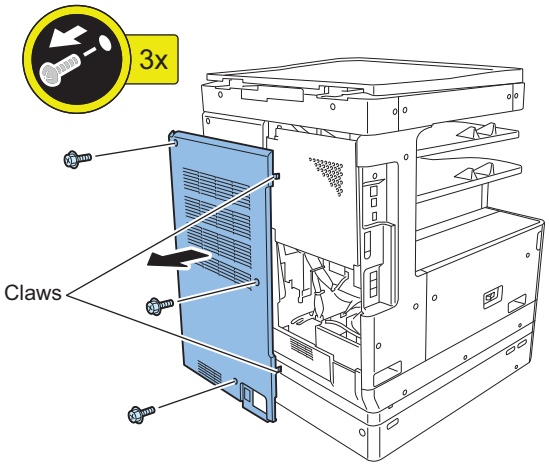
- 1 Screw
- 1 Claw



☐

4. Remove the rear cover (left).

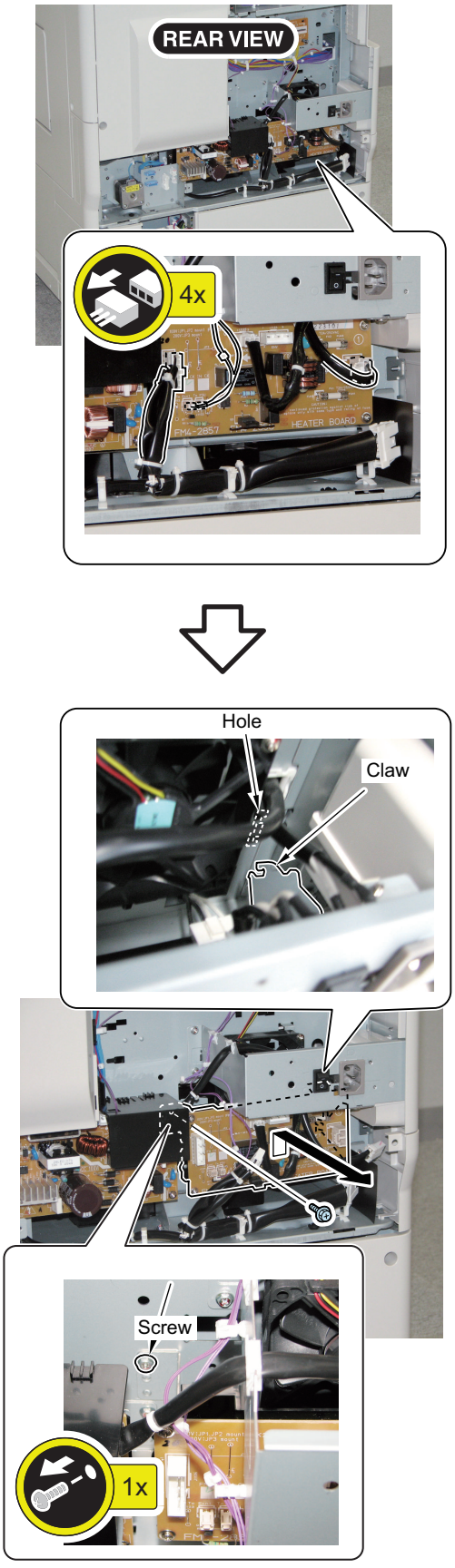
- 3 Screws
- 2 Claws



☐

5. Remove the Heater PCB.

- 4 Connectors
- 1 Screw
- 1 Claw



☐

6. **Open the Front cover.**

☐

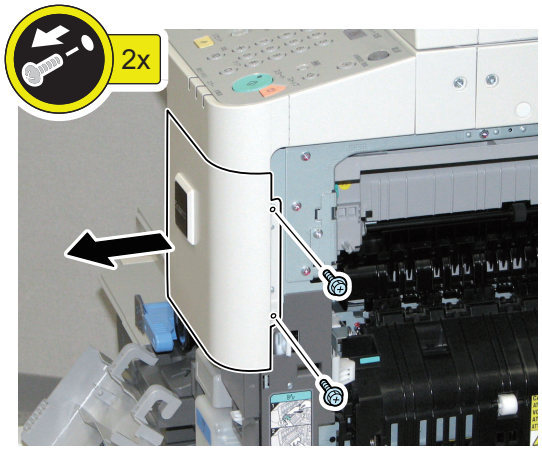
7. **Open the Toner supply cover.**

☐

8. **Open the Right cover.**

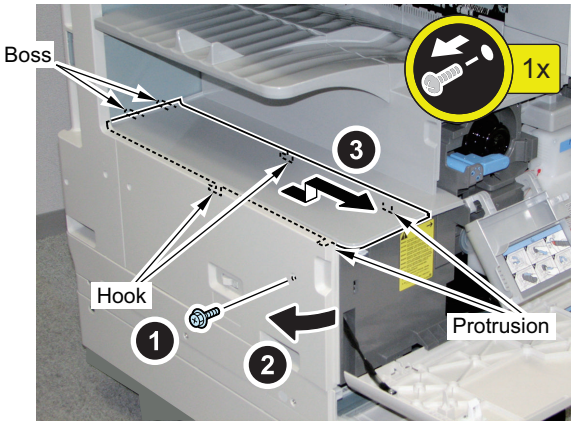
☐

9. **Remove the support cover.**
   - 2 Screws



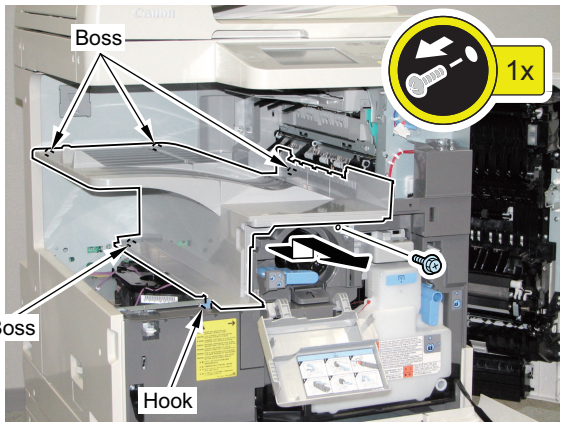
☐

10. **Remove the screw of the left cover, and then distort it to remove the inside base cover.**
    - 1 Screw
    - 2 Bosses
    - 2 Hooks
    - 2 Protrusions



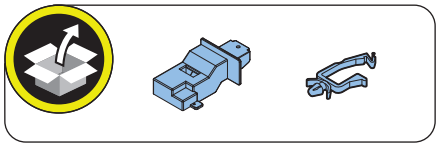
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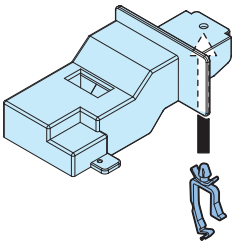
11. **Remove the delivery tray.**
    - 1 Screw
    - 4 Bosses
    - 1 Hook



☐

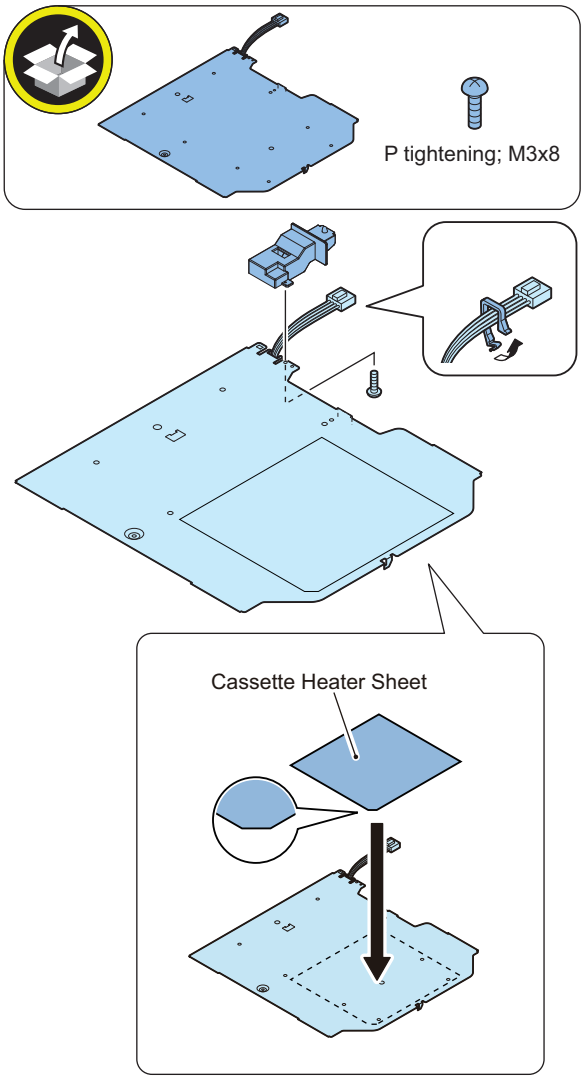
12. **Install the Wire Saddle to Heater Connector Cover.**





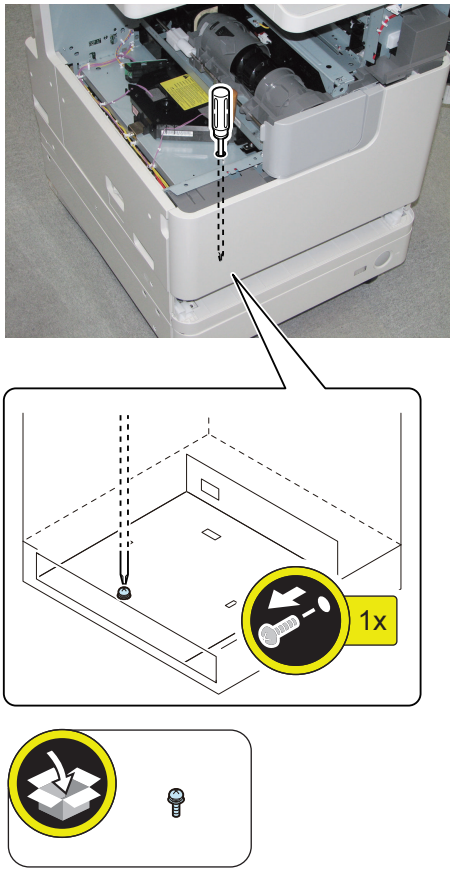
☐

13. **Affix the Cassette Heater Sheet (supplied with the Heater Kit-J1) on the cassette heater, and then install the CST Heater Connector Cover to the connector of Cassette Heater Unit.**
    - 1 Wire saddle
    - 1 Screw (P Tightening; M3x8)



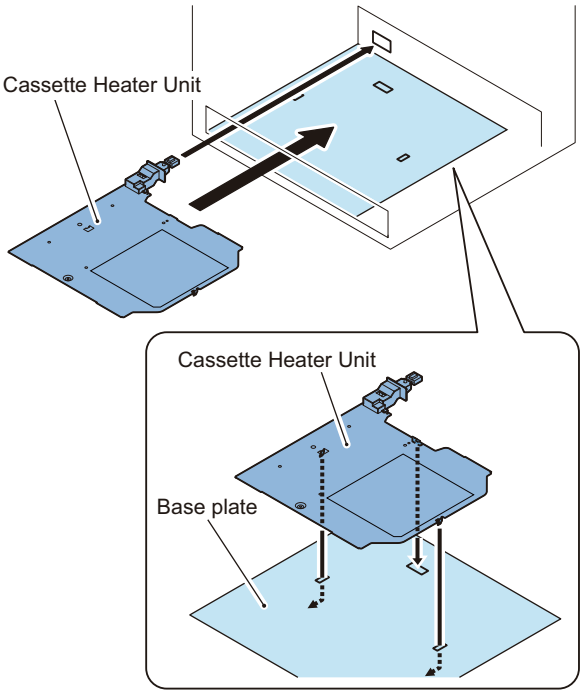
☐

14. **If a screw has been fixed to the bottom of the Cassette Base, put a long screwdriver through the hole on the plate and remove the screw. (The removed screw will not be used.)**



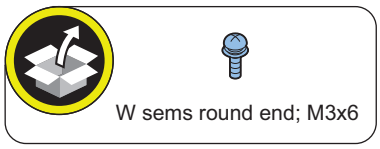
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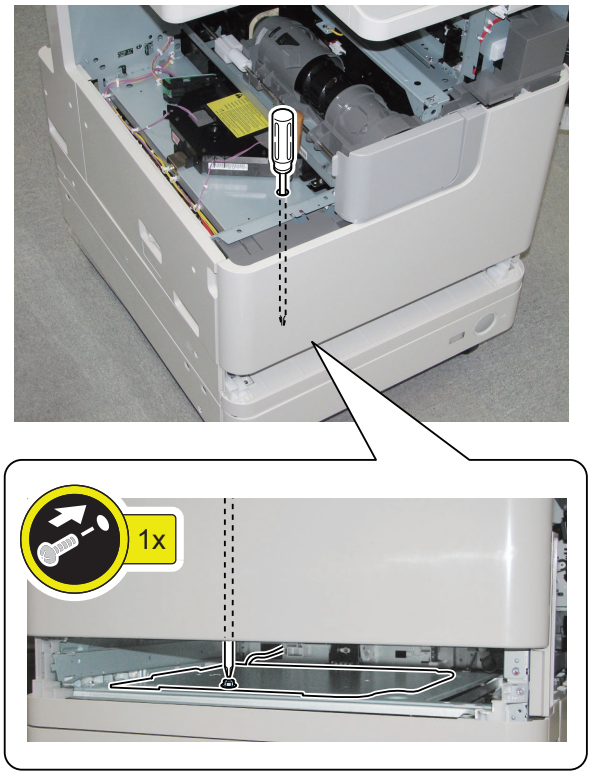
15. **Install the Cassette Heater Unit by fitting the 3 hooks to the holes of base plate. At that time, put the connector through the square hole.**



☐

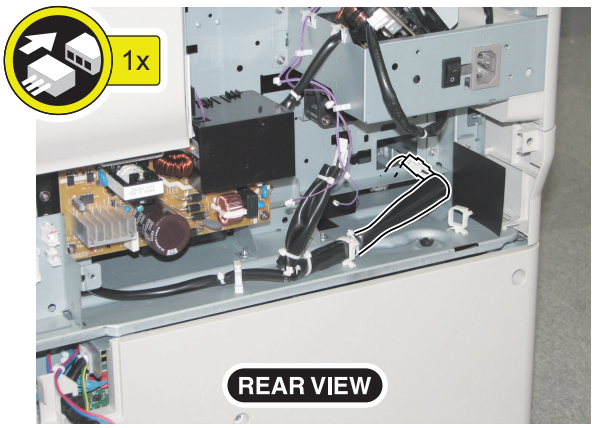
16. **Attach the screw with a long screwdriver by putting it through a hole on the plate.**
    - 1 Screw (W sems round end; M3x6)





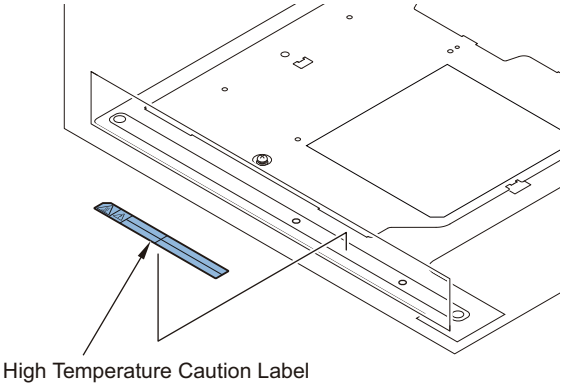
☐

17. **Connect the connector of Cassette Heater Unit to the Heater AC Harness.**
    - 1 Connector



☐

18. **Affix the High Temperature Caution Label (supplied with the CST Heater Kit-J1) in the appropriate language to the specified area. (area between screw holes on the Base Plate)**



☐

19. **Install the Heater PCB.**
    - 1 Claw
    - 1 Screw
    - 4 Connectors

☐

20. **Attach the following removed parts.**
    - ☐ Rear cover (left) (3 Screws)
    - ☐ Rear lower cover (1 Screw)
    - ☐ Connector cover (4 Connectors, 1 Screw)
    - ☐ Delivery tray (1 Screw)
    - ☐ Inside base cover (1 Screw (Attach it to the left cover.))
    - ☐ Support cover (2 Screws)

☐

21. **Close all the covers.**

☐

22. **Attach the cassette.**

☐

23. **Connect the power plug of the host machine to the outlet.**

☐

24. **Turn ON the main power switch.**

☐

25. **Turn ON the heater switch.**

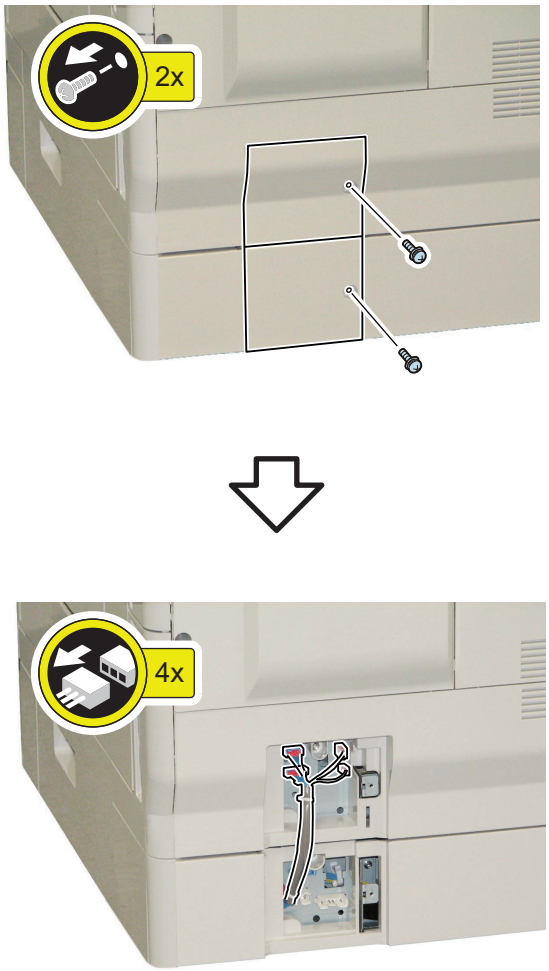
■ In case of Cassette Module or Lower Cassette for 550 Sheets Cassette

☐

1. **Draw out the cassette.**

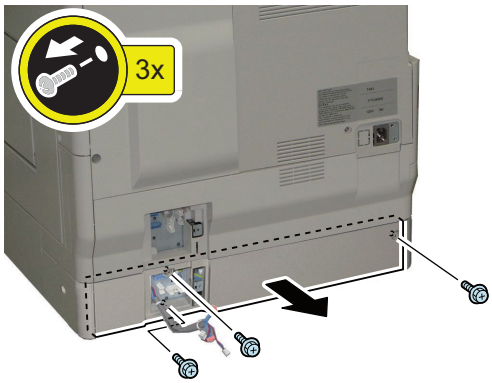
☐

2. **Remove the connector cover and then disconnect the connector.**
   - 2 Screws
   - 4 Connectors



☐

3. **Remove the lower rear cover of the Cassette Module.**
   - 3 Screws

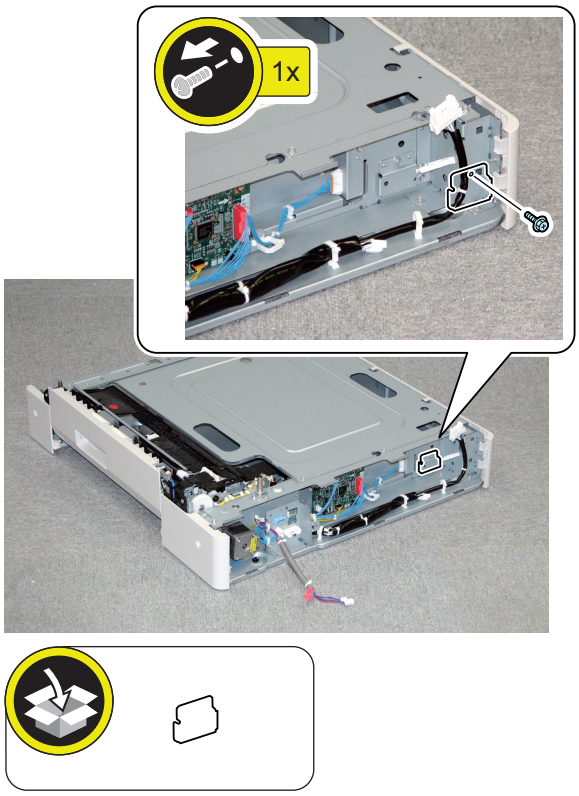


☐

4. **If the heater plate has been installed at rear side of the Cassette Module, remove it. (The removed heater connector plate will not be used.)**

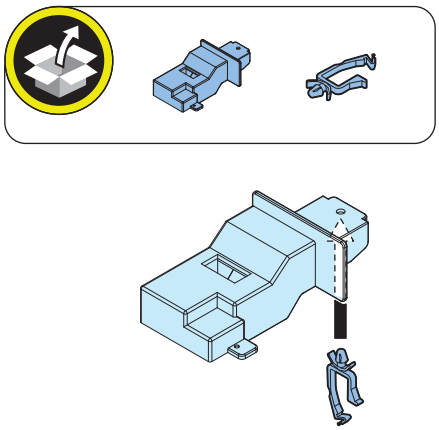
NOTE:
When performing this procedure, it is not necessary to remove the Host Machine. However, the following figure shows the condition without the Host Machine to show clearly.

- 1 Screw



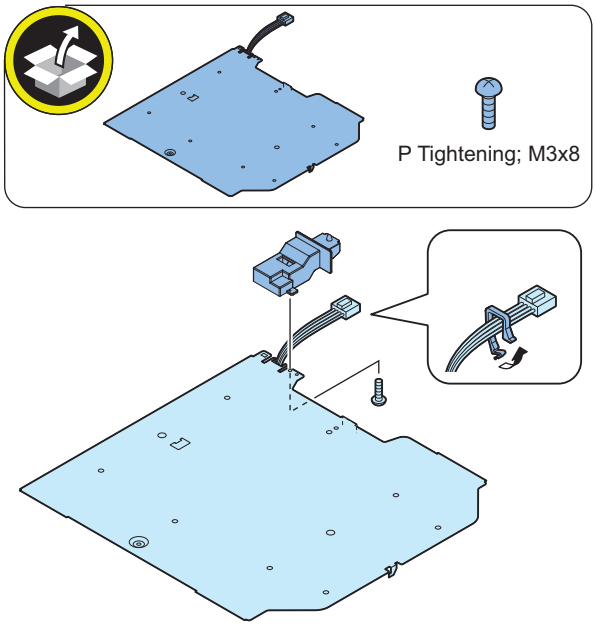
☐

5. **Install the Wire Saddle to Heater Connector Cover.**



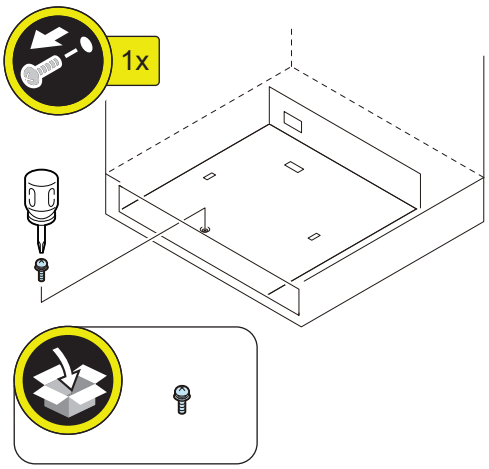
☐

6. **Install the Heater Connector Cover to the connector of Cassette Heater Unit.**
   - 1 Wire saddle
   - 1 Screw (P Tightening; M3x8)



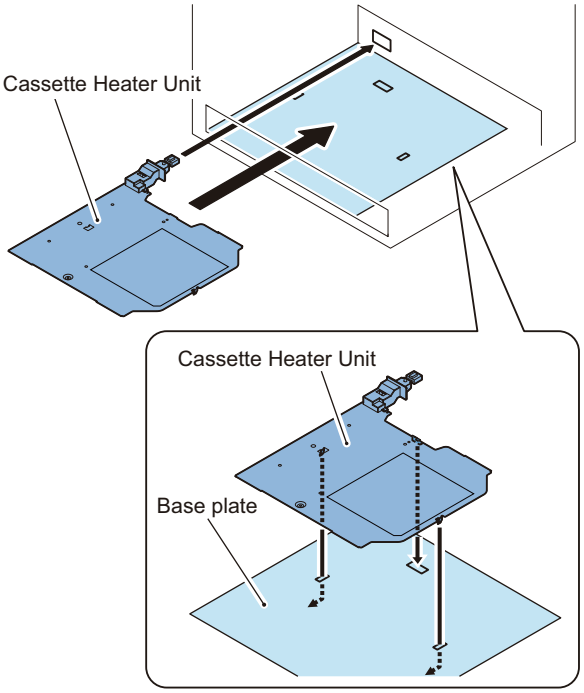
☐

7. **If a screw has been fixed to the bottom of the Cassette Base, remove the screw. (The removed screw will not be used.)**



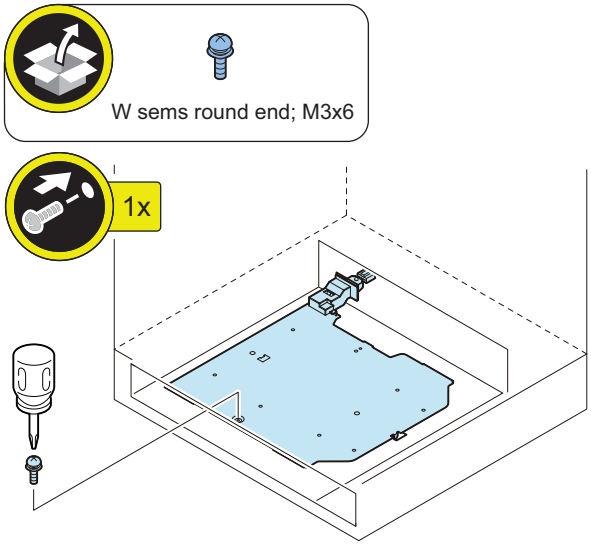
☐

8. **Install the Cassette Heater Unit by fitting the 3 hooks to the holes of base plate. At that time, put the connector through the square hole.**



☐

9. **Attach the screw with the stubby driver.**
   - 1 Screw (W sems round end; M3x6)

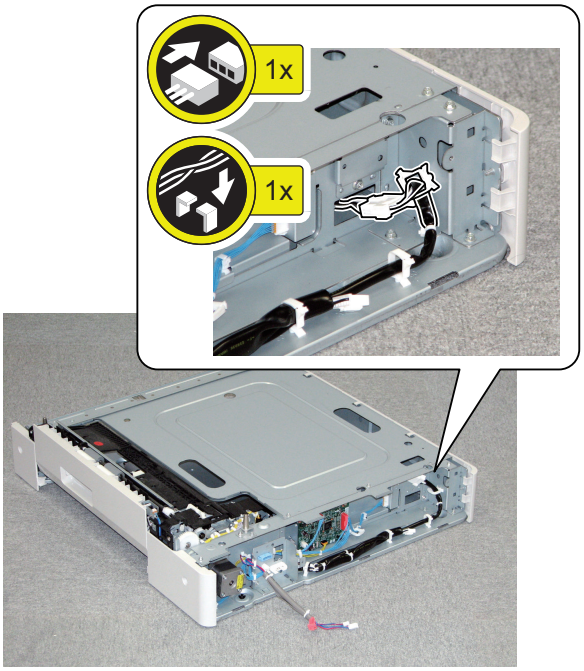


☐

10. Connect the connector of Cassette Heater Unit to the cable of the heater.

NOTE:
When performing this procedure, it is not necessary to remove the Host Machine. However, the following figure shows the condition without the Host Machine to show clearly.

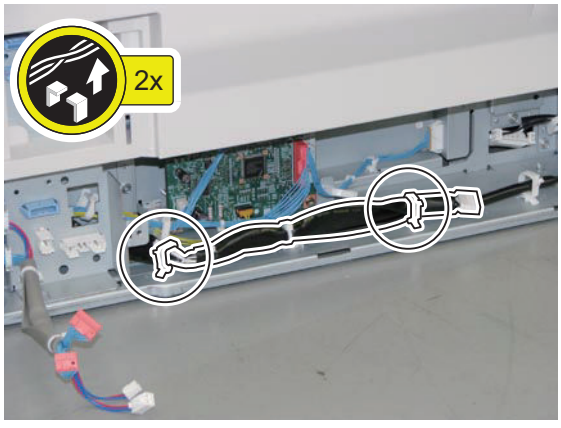
- 1 Connector
- 1 Wire saddle



☐

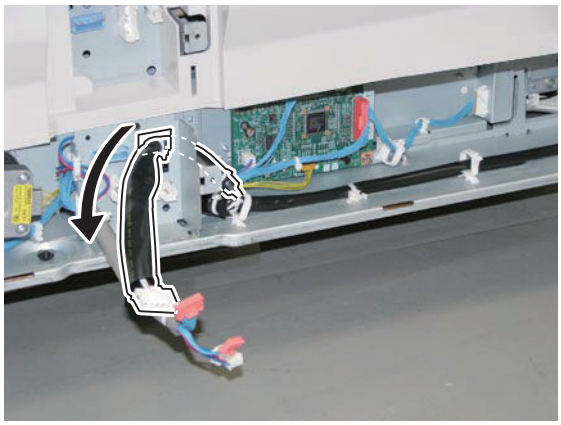
11. Unlock the wire saddles to free the harness.

- 2 Wire saddles



☐

12. Put the cable of the heater through a hole of the plate.



☐

13. Install the lower rear cover of the Cassette Module.

☐

14. Connect the connector on the heater to the host machine.

- 1 Connector



☐

15. Install the Connector Cover.

- 4 Connectors
- 1 Screw

☐

16. Attach the cassette.

☐

17. Connect the power plug of the host machine to the outlet.

☐

18. Turn ON the main power switch.

☐

19. Turn ON the heater switch.

■ In case of CST. Feeding Unit

☐

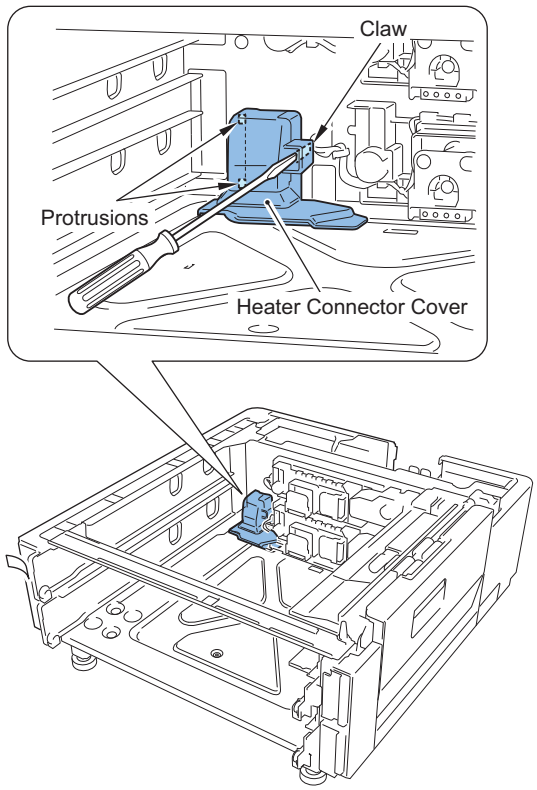
1. **Draw out the 2 cassettes.**

☐

2. **Remove the Heater Connector Cover using a flat head screwdriver.**

NOTE:
When performing this procedure, it is not necessary to remove the Host Machine. However, the following figure shows the condition without the Host Machine to show clearly.

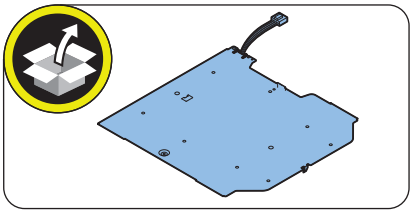
- 1 Claw
- 2 Protrusions

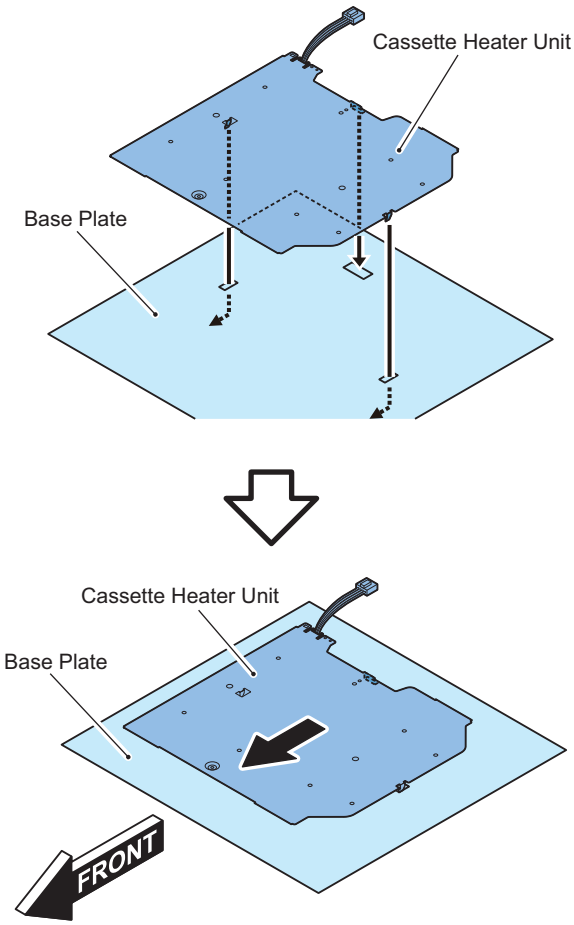


☐

3. **Fit the claws on the Cassette Heater Unit into the holes on the Base Plate, and then move it toward the front.**
   - 3 Claws

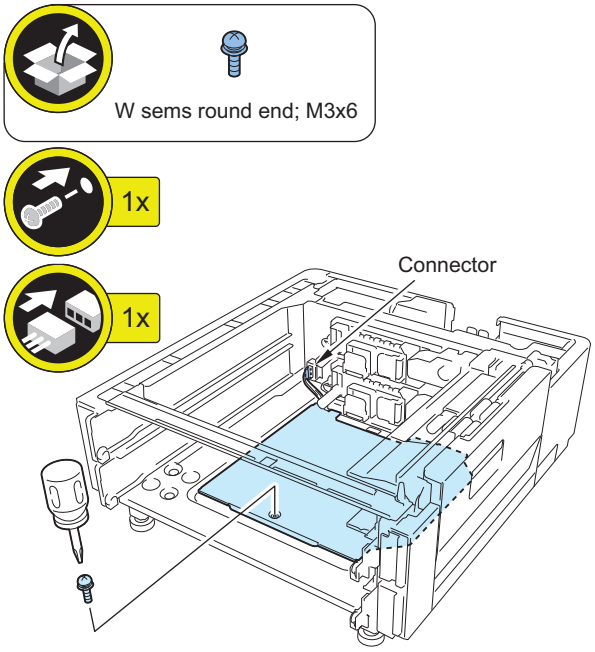
CAUTION:
Be sure that the claws are fit into the holes of the Base Plate properly.





☐

4. **Attach the screw with the stubby driver, and then connect the connector of Cassette Heater Unit to the Connector of CST. Feeding Unit.**
   - 1 Screw (W sems round end; M3x6)



☐

5. **Attach the Heater Connector Cover**

☐

6. **Attach the 2 cassettes.**

☐

7. **Connect the power plug of the host machine to the outlet.**

☐

8. **Turn ON the main power switch.**

☐

9. **Turn ON the heater switch.**

Checking after Installation

■ Disposal Parts Check

1. **Following disposal parts are remained after installation procedure.**
   - In case of Upper Cassette for 550 Sheets Cassette or 250 Sheets Cassette
     ☐[1] Screw 1pc. (When removing the screw from the Cassette Base.)
   - In case of Cassette Module or Upper Cassette for 550 Sheets
     ☐[1] Screw 1pc. (When removing the screw from the Cassette Base.)
     ☐[2] Heater connector plate
   - In case of CST. Feeding Unit
     ☐[1] Heater Connector Cover
     ☐[2] Wire Saddle

Drum Heater-C1

Checking before Installation

■ Check Items When Turning OFF the Main Power

Check that the main power switch is OFF.

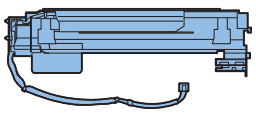
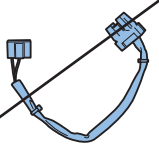
1. Turn OFF the main power switch of the host machine.
2. Be sure that Control Panel Display and Main Power Lamp are both turned OFF, and then disconnect the power plug from the outlet.

■ Points to Note on Installation

The Heater Kit must be installed before installing the Drum Heater.

Checking the Contents

Make sure that none of the following parts are missing.

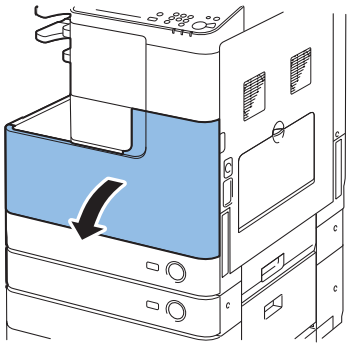
☐ [1] Drum Heater Unit x1 	☐ [2] Wire Saddle x 2 
☐ [3] Edge Saddle x 1 	☐ [4] Relay Cable x 1 

Installation Procedure

CAUTION:
Check that the main power switch is OFF and the power plug is disconnected from the outlet.

☐

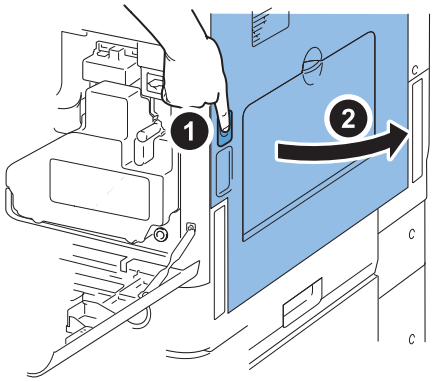
1. **Open the front cover.**



☐

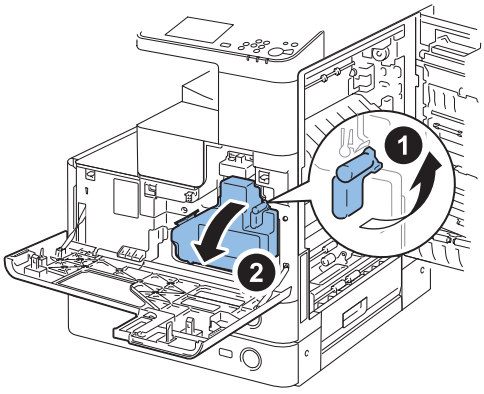
2. **Push the button to open the right cover.**

CAUTION:
To avoid any damage on the drum unit, keep the right cover opening by 5 cm or more during installation.



☐

3. **Turn the lock lever as shown in the figure and remove the waste toner container.**

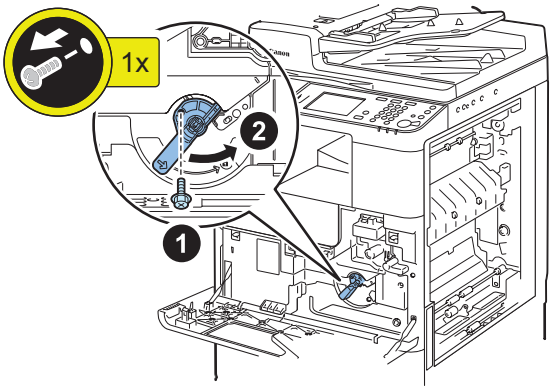


☐

4. **Remove 1 screw from the developing pressure lever. (The screw does not exist in some machine versions by destination.)**
   - 1 Screw

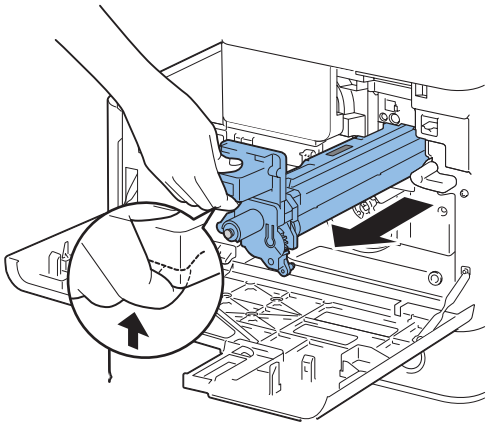
☐

5. **Turn the developing pressure lever as shown in the figure to release the developing unit.**



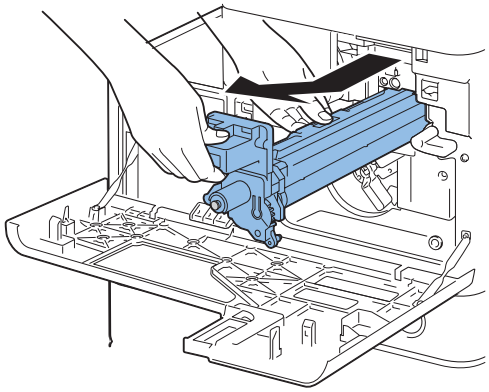
☐

6. **Slowly draw out the drum unit by half as shown in the figure while gripping the lever beneath the drum unit handle.**



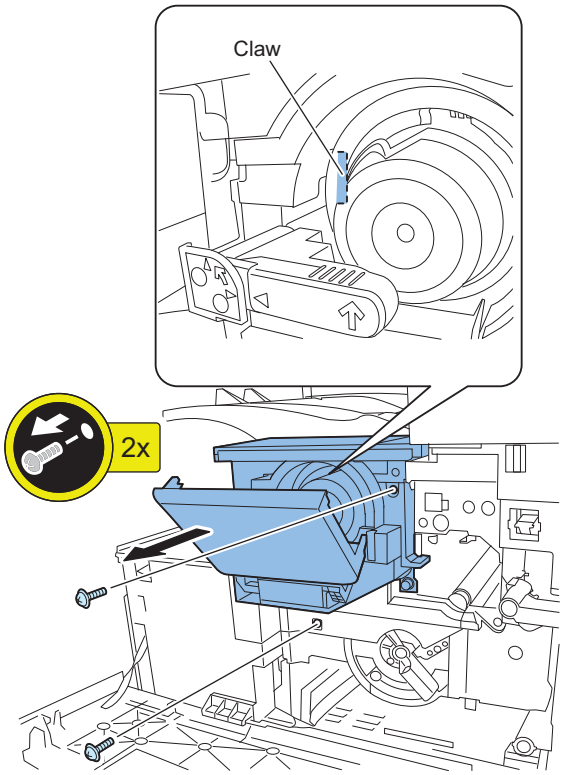
☐

7. **Hold the drum unit as shown in the figure. Pull up the unit a little and draw it out completely.**



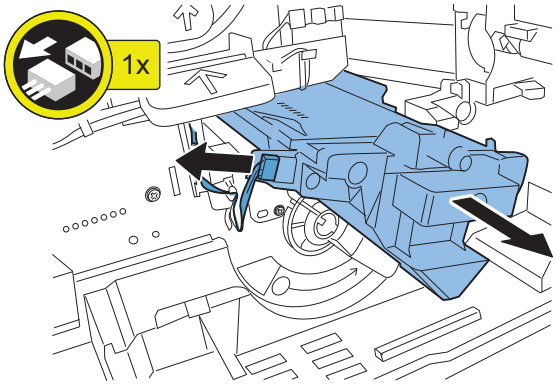
☐

8. **Remove the toner replenish cover.**
   - 2 Screws
   - 1 Claw



☐

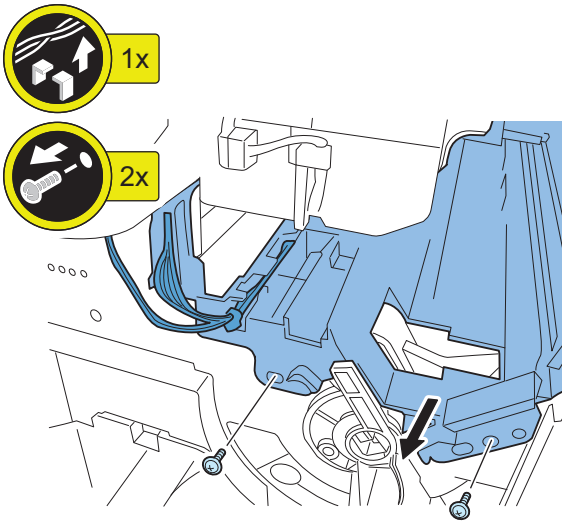
9. **Draw the developing unit out.**
   - 1 Connector

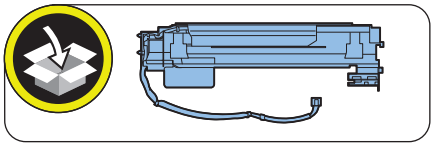


☐

10. Remove the developing stay. (Removed developing stay is no longer used.)

- 1 Wire saddle
- 2 Screws

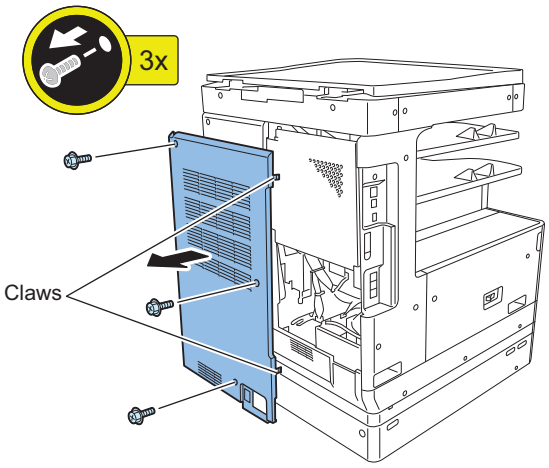




☐

11. Remove the rear cover (right).

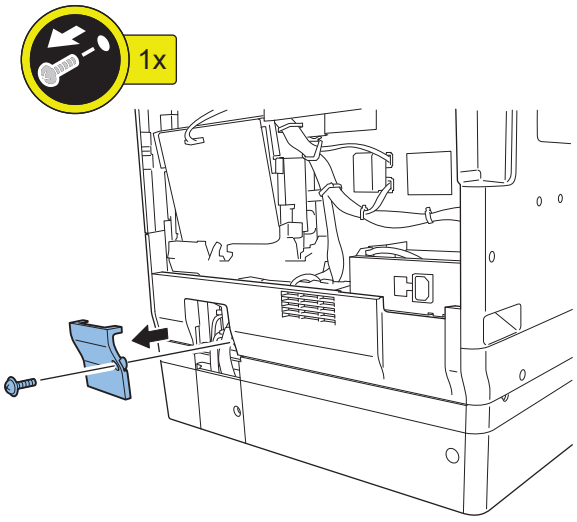
- 3 Screws
- 2 Claws



☐

12. Remove the connector cover.

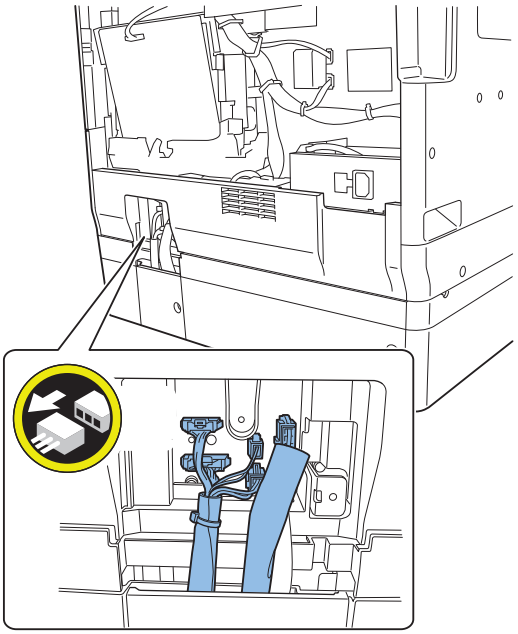
- 1 Screw



☐

13. Disconnect all the connectors at the place shown in the figure. (This is performed only when the optional cassette unit is installed.)

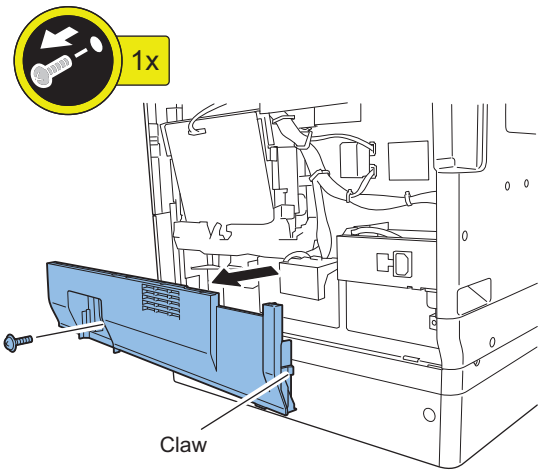
- Connectors (All)



☐

14. Remove the lower rear cover.

- 1 Screw
- 1 Claw



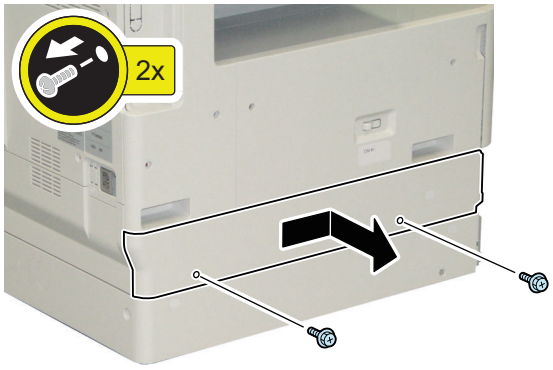
☐

15. Draw out the cassette(s).

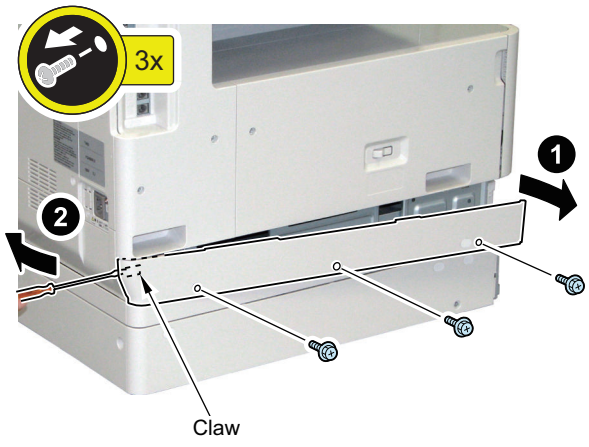
☐

16. Remove the left cover (lower).

1. For 550sheets cassette
   - 2 Screws



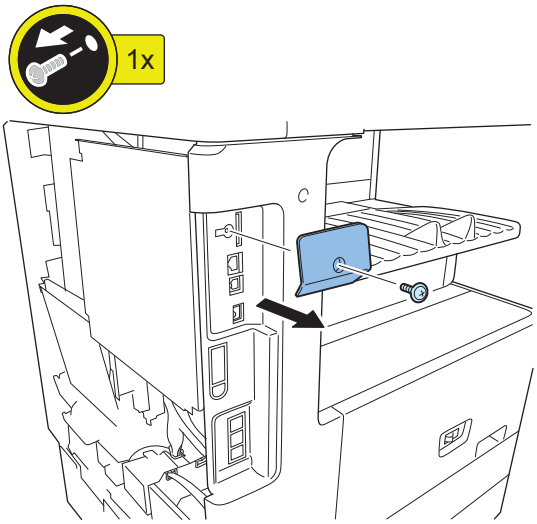
2. For 250sheets cassette
   - 3 Screws
   - 1 Claw



☐

17. Remove the Left rear face cover.

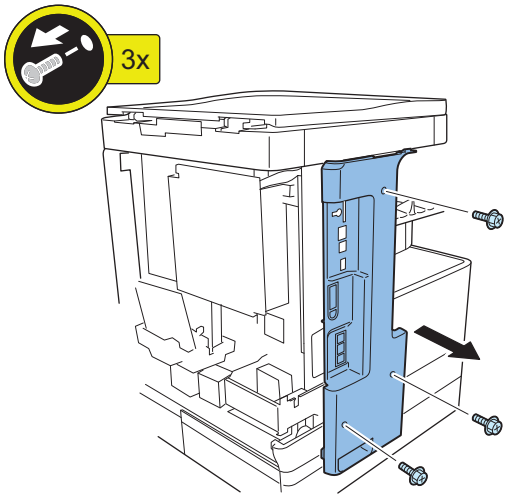
- 1 Screw



☐

18. Remove the left rear cover.

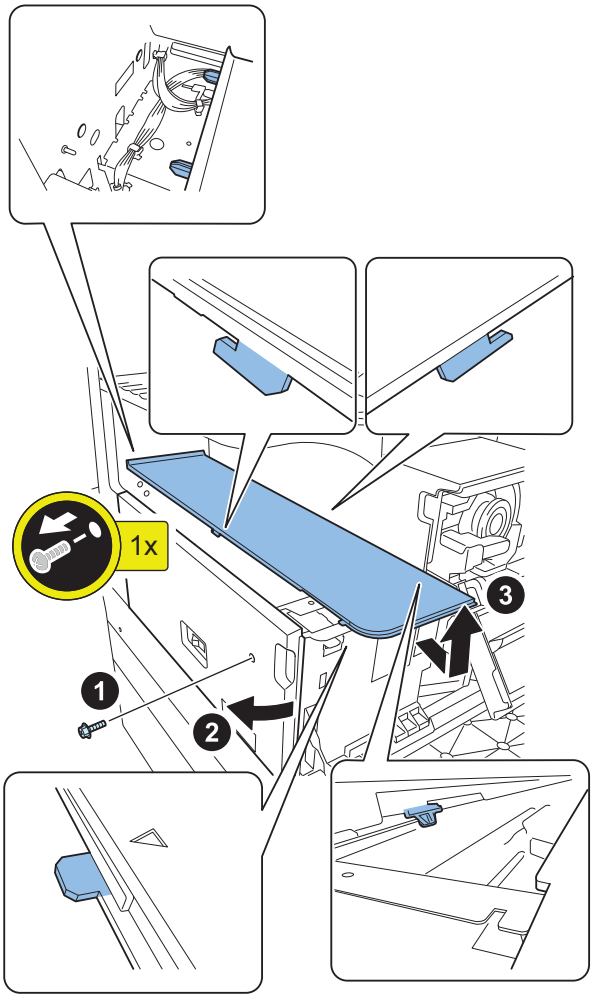
- 3 Screws



☐

19. Remove the screw of the left cover, and then distort it to remove the inside base cover.

- 1 Screw
- 2 Bosses
- 2 Hooks
- 2 Protrusions

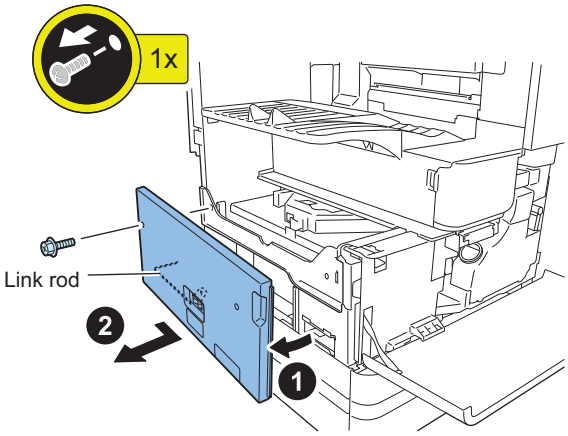


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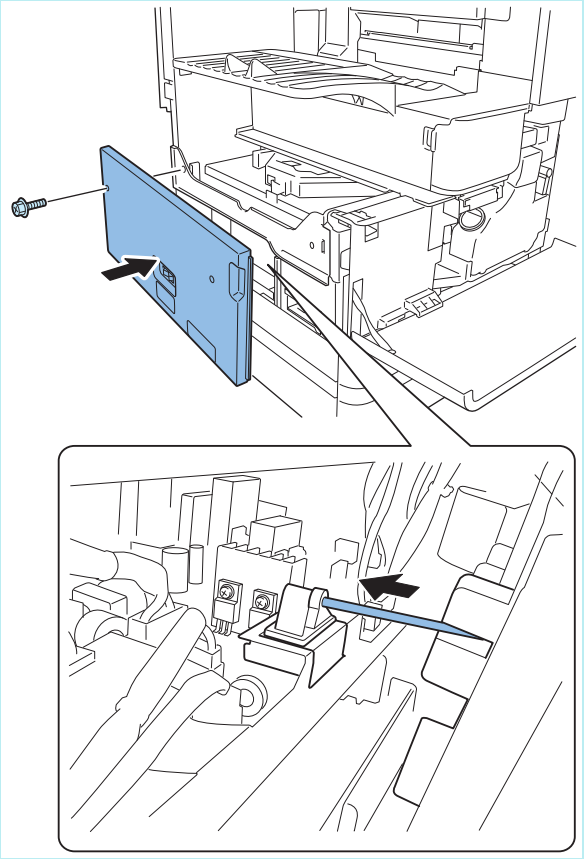
20. Remove the left cover.

1. Except for Europe model
   - 1 Screw

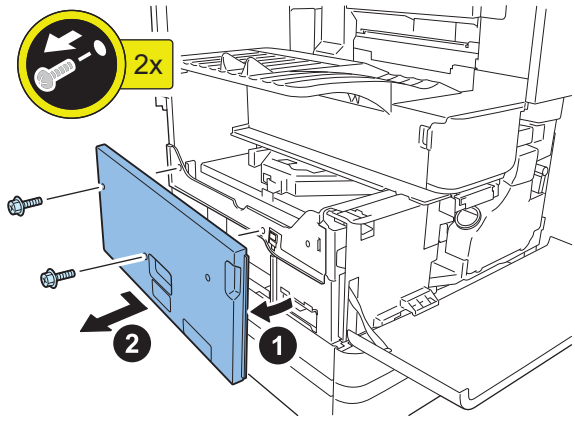
CAUTION:
There is the link rod behind the left cover, which is engaged to the switch on the power supply unit. So carefully remove the left cover not to give an excessive load on the link rod.



NOTE:
When reinstalling the left cover, surely insert the link rod in the switch on the power supply unit so that the switch can link to the main power switch of the host machine.



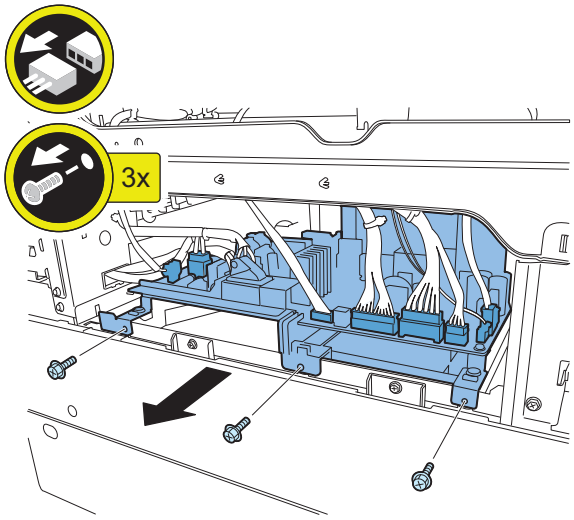
2. Only for Europe model
   - 2 Screws



☐

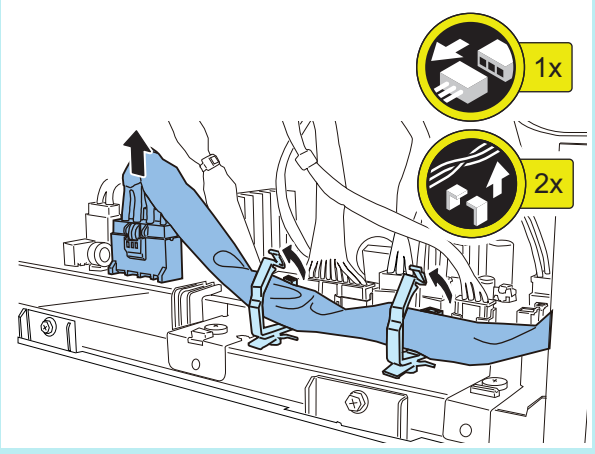
21. Disconnect all the connectors on the power supply unit and then remove power supply unit.

- Connectors (All)
- 3 Screws



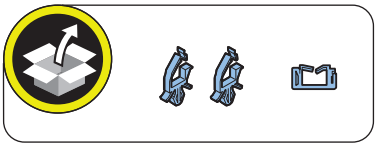
NOTE:
In case of the Europe model, the following procedure is necessary.

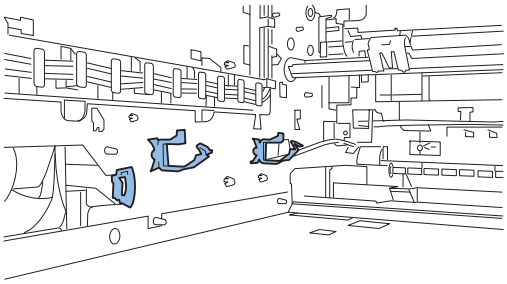
- 1 Connector
- 2 Wire saddles



☐

22. Install 2 Wire Saddles and 1 Edge Saddle on the rear frame.



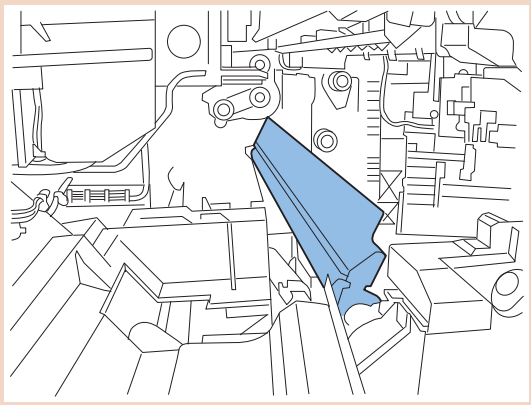


☐

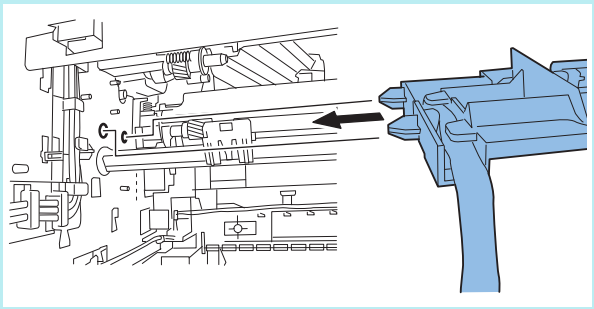
23. Install the drum heater unit in the host machine.

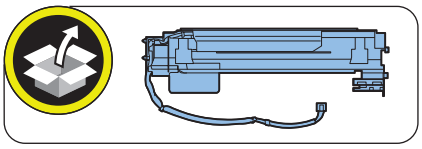
- 2 Protrusions
- 2 Screws

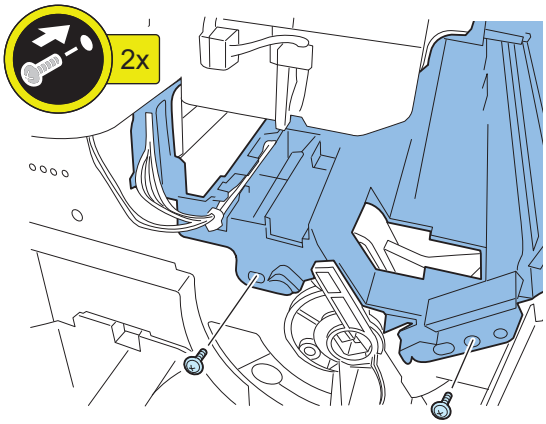
CAUTION:
Do not damage the pre-transfer guide when installing the drum heater unit.



NOTE:
Insert the positioning pins of the drum heater unit to the holes of rear frame.



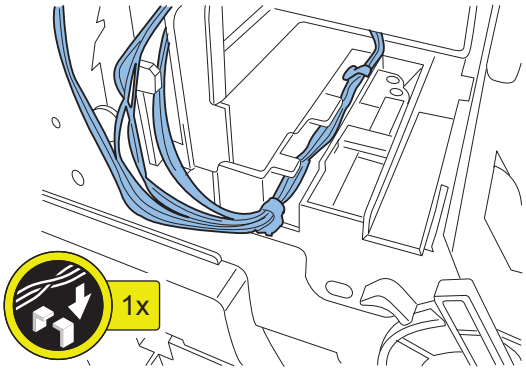




☐

24. Fix the harness on the harness guide of the drum heater unit as shown in the figure.

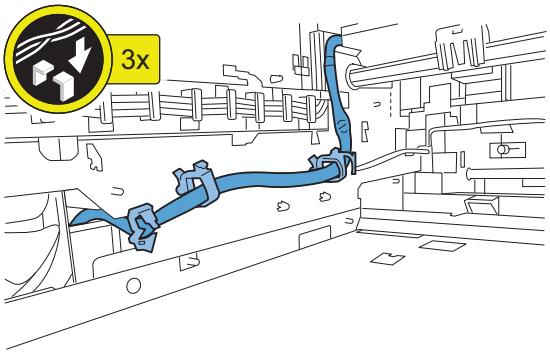
- 1 Wire saddle



☐

25. Fix the drum heater harness.

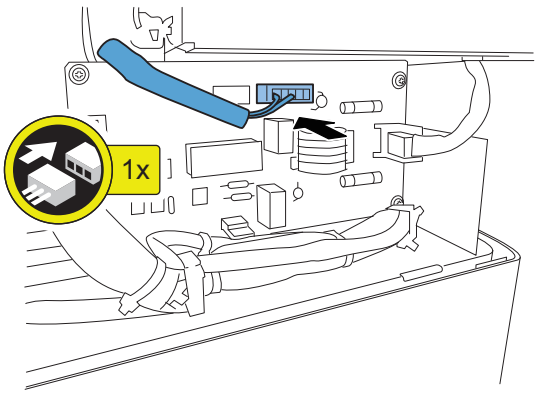
- 2 Wire saddles
- 1 Edge saddle



☐

26. Connect the connector of the drum heater harness to J1104 on the Heater PCB.

- 1 Connector



☐

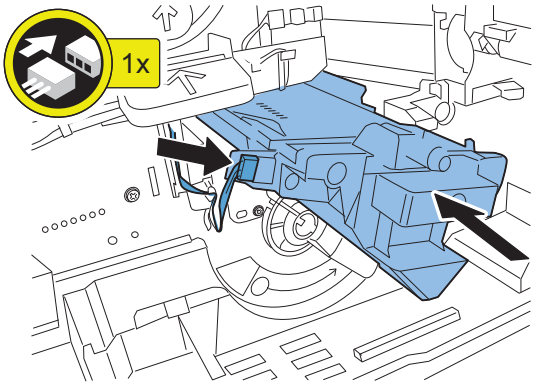
27. Attach the following removed parts.

- ☐ Power supply unit (2 Screws, Connectors (ALL))
- ☐ Left cover (1 Screw) (Except for Europe model)
- ☐ Left cover (2 Screws) (Only for Europe model)
- ☐ Inside base cover (1 Screw (Attach it to the left cover.))
- ☐ Left rear cover (3 Screws)
- ☐ Left rear face cover (1 Screw)
- ☐ Left cover (lower) (2 Screws) (For 550 sheets cassette model)
- ☐ Left cover (lower) (3 Screws) (For 250 sheets cassette model)
- ☐ Rear lower cover (1 Screw)
- ☐ Connector cover (1 Screw)
- ☐ Rear cover (right) (3 Screws)
- ☐ Toner replenish cover (2 Screws)

☐

28. Insert the developing unit.

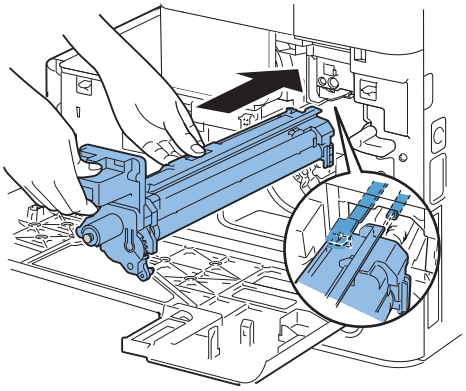
- 1 Connector



☐

29. Hold the drum unit handle and the part shown in the figure. Slowly insert it until it stops.

CAUTION:
Confirm that the drum unit engages to the rail of the host machine.

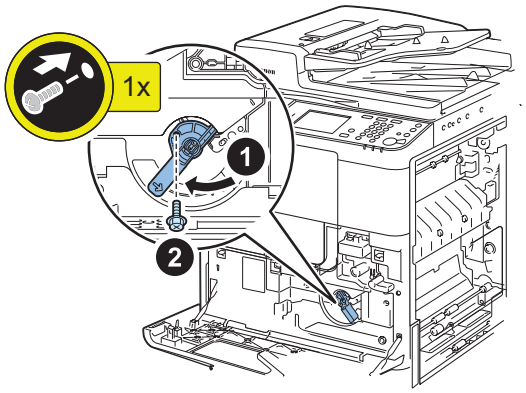


☐

30. Turn the developing pressure lever to set the developing unit.

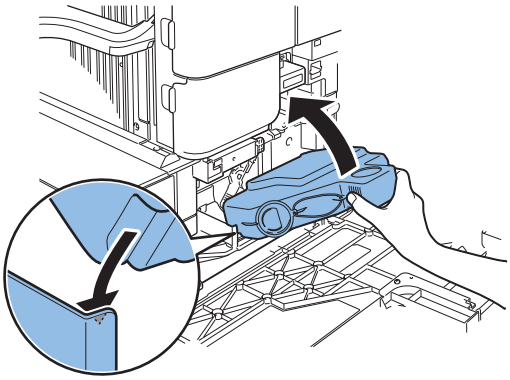
☐

31. The screw is not necessary if it is not removed at the step 4.



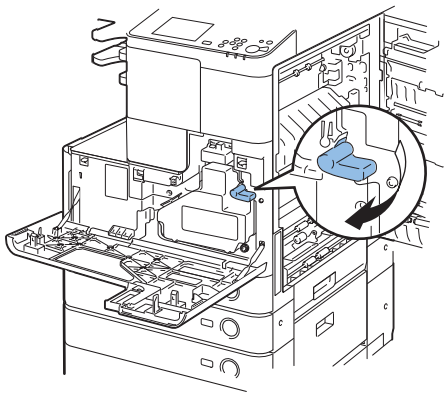
☐

32. Attach the waste toner container.



☐

33. Turn the lock lever to fix the container.



☐

34. Close all the covers.

☐

35. Connect the power plug of the host machine to the outlet.

☐

36. Turn ON the main power switch.

☐

37. Turn ON the heater switch.

Checking after Installation

■ Disposal Parts Check

1. Following disposal part is remained after installation procedure.

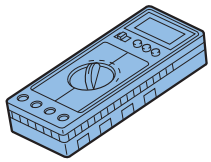
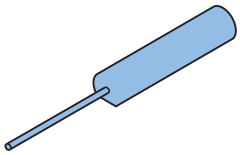
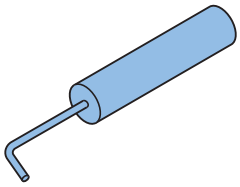
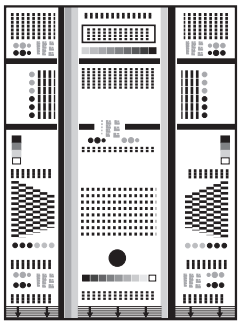
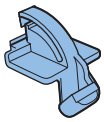
☐[1] Relay Cable 1pc.

APPENDICES

Service Tools..... 378
General Circuit Diagram.....379

Service Tools

Special Tools

Tool name	Tool No.	Rank (*)	Shape	Uses
Digital multimeter	FY9-2002	A		For making electrical checks.
Tester extension pin	FY9-3038	A		As an addition when making an electrical check.
Tester extension pin (L-shipped)	FY9-3039	A		As an addition when making an electrical check.
NA-3 Test Chart	FY9-9196	A		For checking and adjusting images.
Mirror cleaning tool	FL2-9842	--		Used for cleaning the mirror in the CCD unit. This part is installed in the reader unit. (Not a service tool)

*

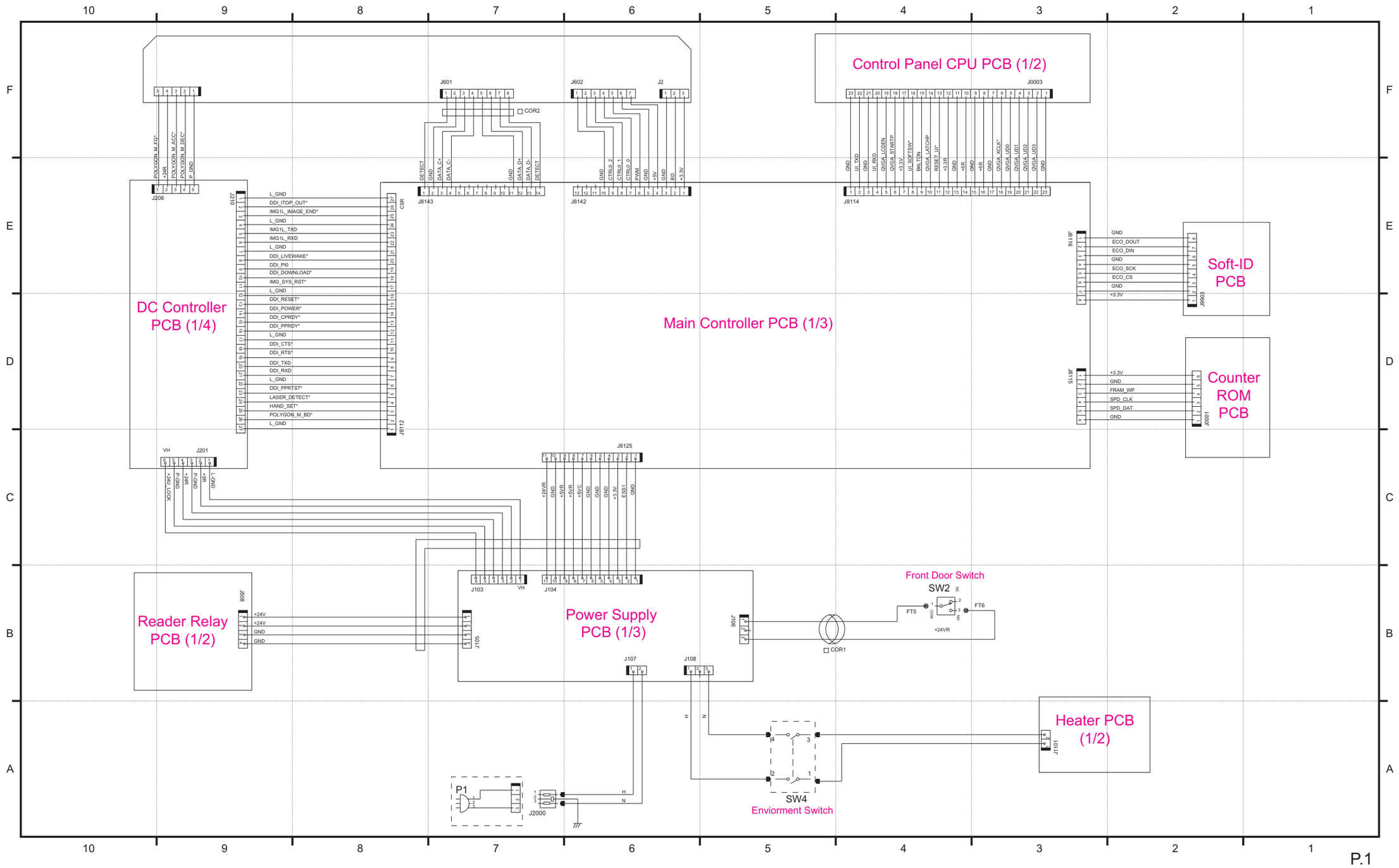
A: each service engineer is expected to carry one.
B: each group of 5 service engineers is expected to carry one.
C: each workshop is expected to carry one.

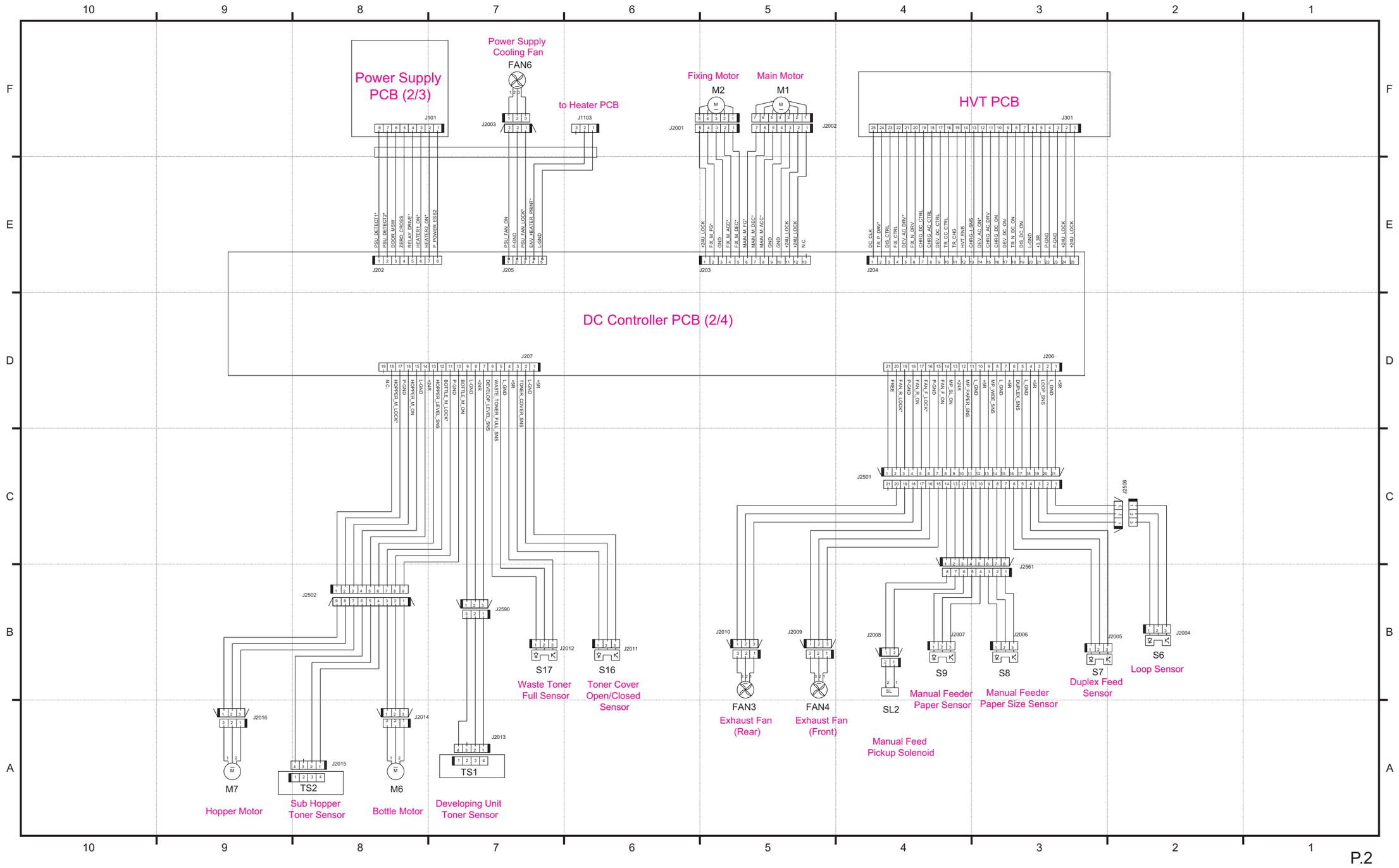
Oils and Solvents

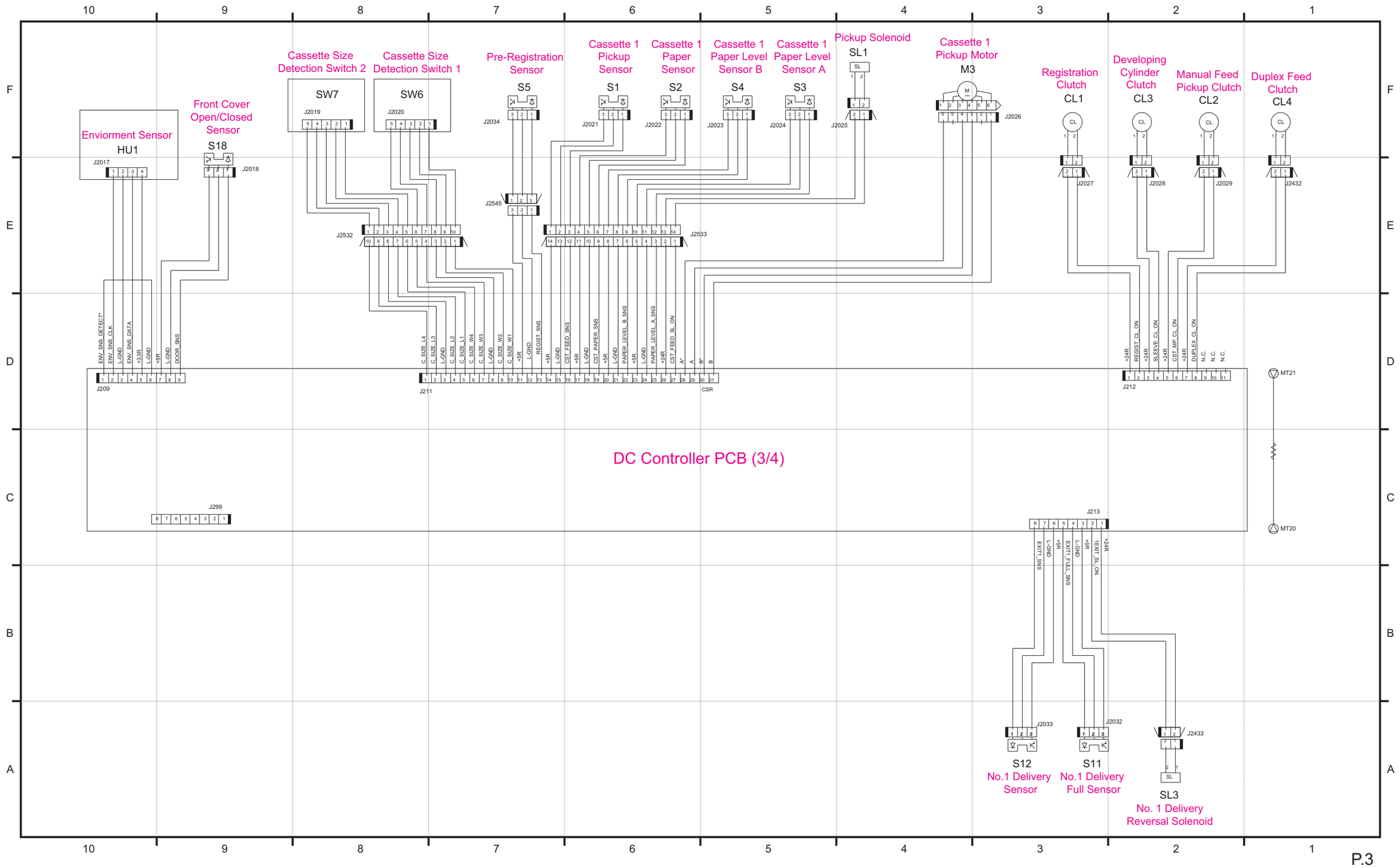
Name	Uses	Composition	Remarks
Alcohol	cleaning; e.g., glass, plastic, rubber; external covers	fluoride-family hydrocarbon alcohol surface activating agent water	Do not bring near fire. Procure locally. IPA (isopropyl alcohol) may be substituted.
Lubricant	scanner rail stream reading glass	silicone oil	KF96SS (300CS) FY9-6011 (50 cc)

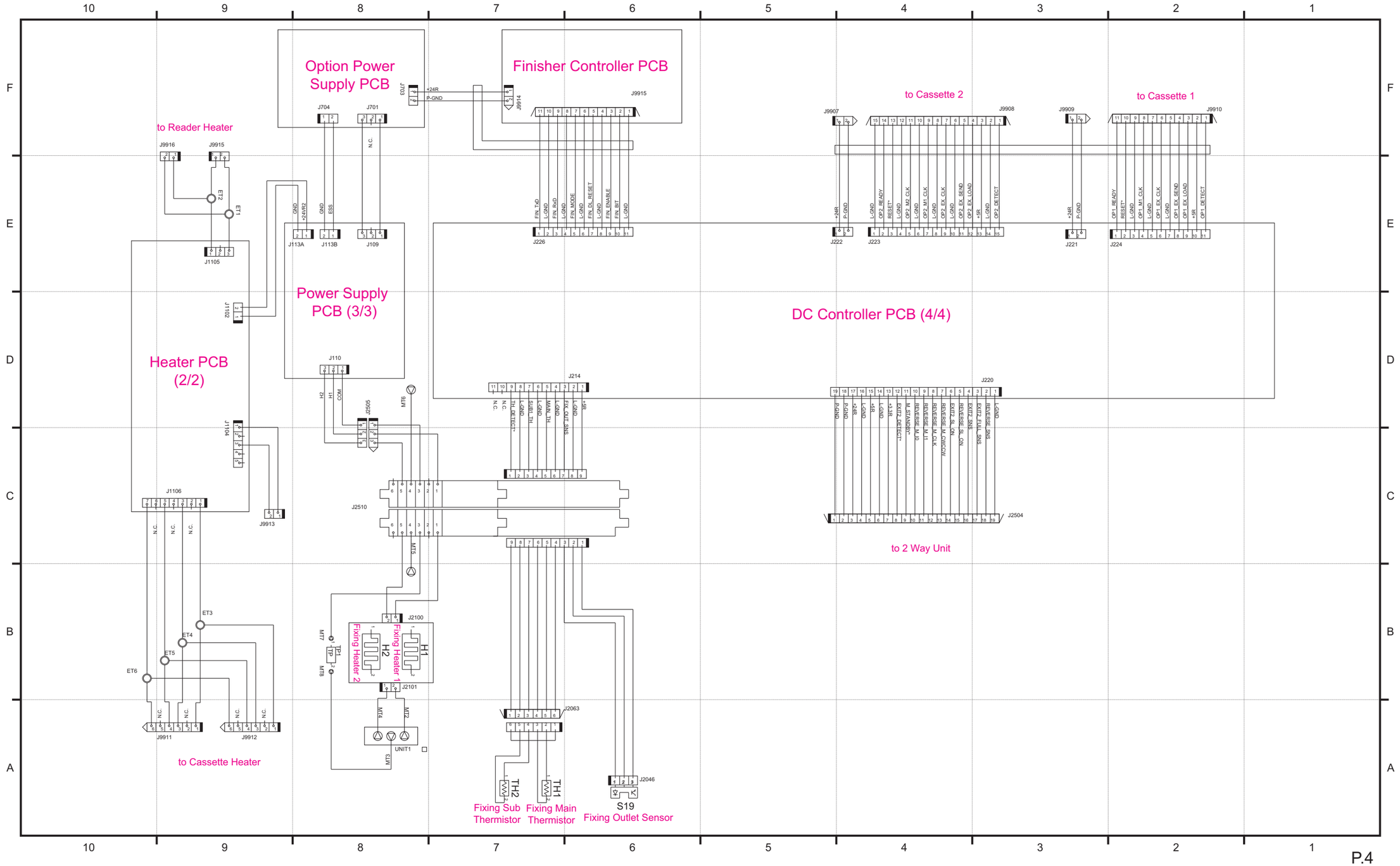
General Circuit Diagram

General Circuit Diagram (550-sheet 1st cassette type)




Power Supply PCB (2/3)
Power Supply Cooling Fan
FAN6
to Heater PCB
Fixing Motor
M2
Main Motor
M1
HVT PCB
DC Controller PCB (2/4)
M7
Hopper Motor
Sub Hopper Toner Sensor
M6
Bottle Motor
Developing Unit Toner Sensor
S17
Waste Toner Full Sensor
S16
Toner Cover Open/Closed Sensor
FAN3
Exhaust Fan (Rear)
FAN4
Exhaust Fan (Front)
SL2
Manual Feed Pickup Solenoid
S9
Manual Feeder Paper Sensor
S8
Manual Feeder Paper Size Sensor
S7
Duplex Feed Sensor
S6
Loop Sensor
P.2


Enviorment Sensor
HU1
Front Cover Open/Closed Sensor
S18
Cassette Size Detection Switch 2
SW7
Cassette Size Detection Switch 1
SW6
Pre-Registration Sensor
S5
Cassette 1 Pickup Sensor
S1
Cassette 1 Paper Sensor
S2
Cassette 1 Paper Level Sensor B
S4
Cassette 1 Paper Level Sensor A
S3
Pickup Solenoid
SL1
Cassette 1 Pickup Motor
M3
Registration Clutch
CL1
Developing Cylinder Clutch
CL3
Manual Feed Pickup Clutch
CL2
Duplex Feed Clutch
CL4
DC Controller PCB (3/4)
S12
No.1 Delivery Sensor
S11
No.1 Delivery Full Sensor
SL3
No. 1 Delivery Reversal Solenoid
P.3


Option Power Supply PCB
Finisher Controller PCB
to Reader Heater
to Cassette 2
to Cassette 1
Power Supply PCB (3/3)
Heater PCB (2/2)
DC Controller PCB (4/4)
to 2 Way Unit
to Cassette Heater
Fixing Heater 2
Fixing Heater 1
Fixing Sub Thermistor
Fixing Main Thermistor
S19
Fixing Outlet Sensor
P.4

Main Controller PCB (2/3)

J309 J308 J8151

J554 J553 J552

Copyboard Cover Open/Closed Sensor (Front) S33 J575 CVR_SENS1 GND +3.3V

Copyboard Cover Open/Closed Sensor (Rear) S32 J585 CVR_SENS0 GND +3.3V J555

Original Size Sensor 1 (INCH, AB/K, AB) S35 J573 GND SIZE1 +5V

Original Size Sensor 0 (INCH, AB/K, AB) S34 J583 GND SIZE0 +5V J563

Original Size Sensor 0 (INCH/A) S34 J0583 GND SIZE0 +5V J0563

Original Size Sensor 1 (A) S35 J0573 GND SIZE1 +5V J0563 J604 J0563

Reader Relay PCB (2/2)

M31 Scanner Motor /B B A /A J579

Original Size Sensor 2 (INCH/AB, AB/K, AB, INCH/A) S36 J587 +5V SIZE2 GND

Original Size Sensor 3 S37 J577 +5V SIZE3 GND

Original Size Sensor 2 (A) S36 J0587 +5V SIZE2 GND J557 J0557 J505

J558

J556 J562 J561 J560 J564

J576

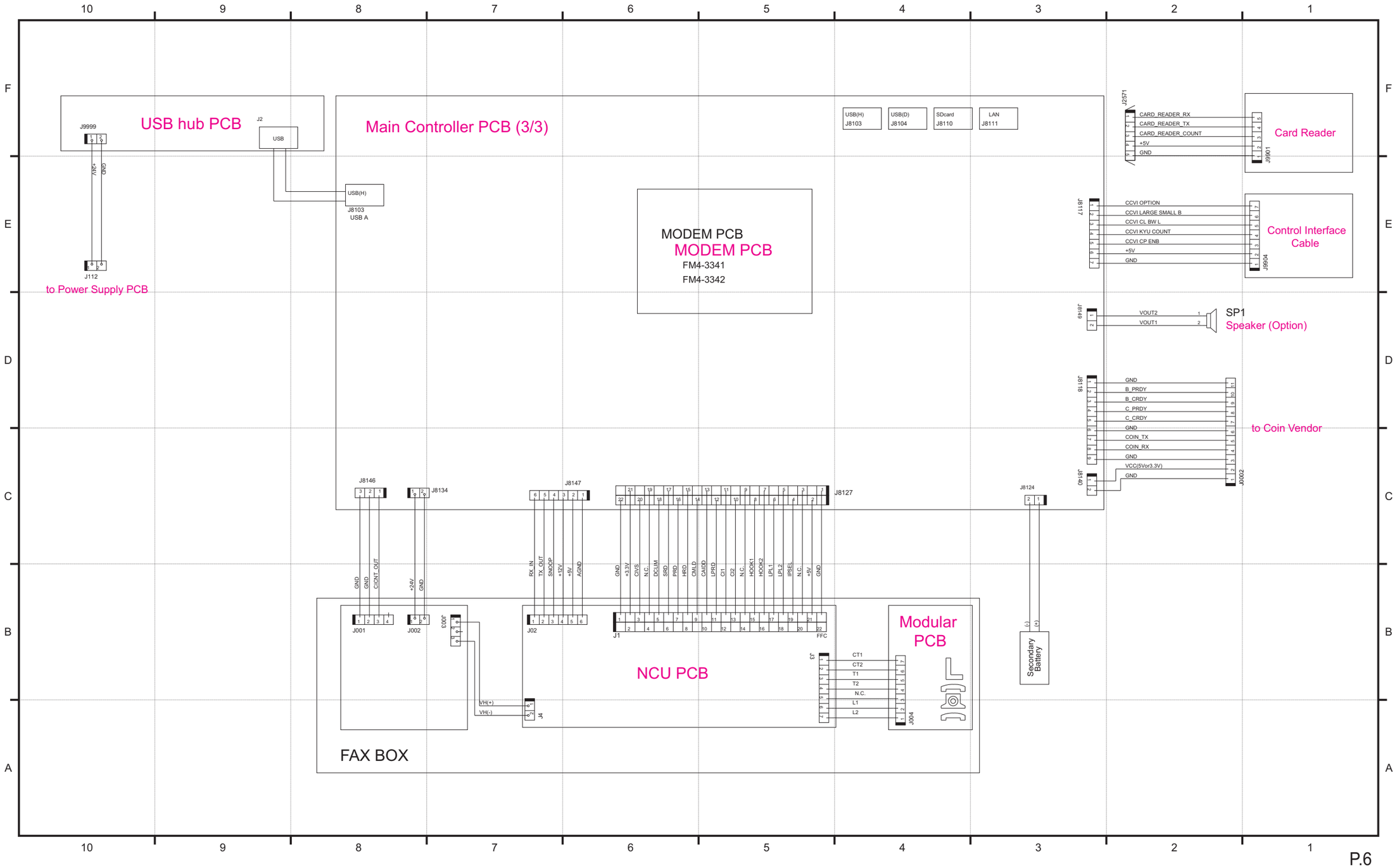
S31 CIS HP Sensor

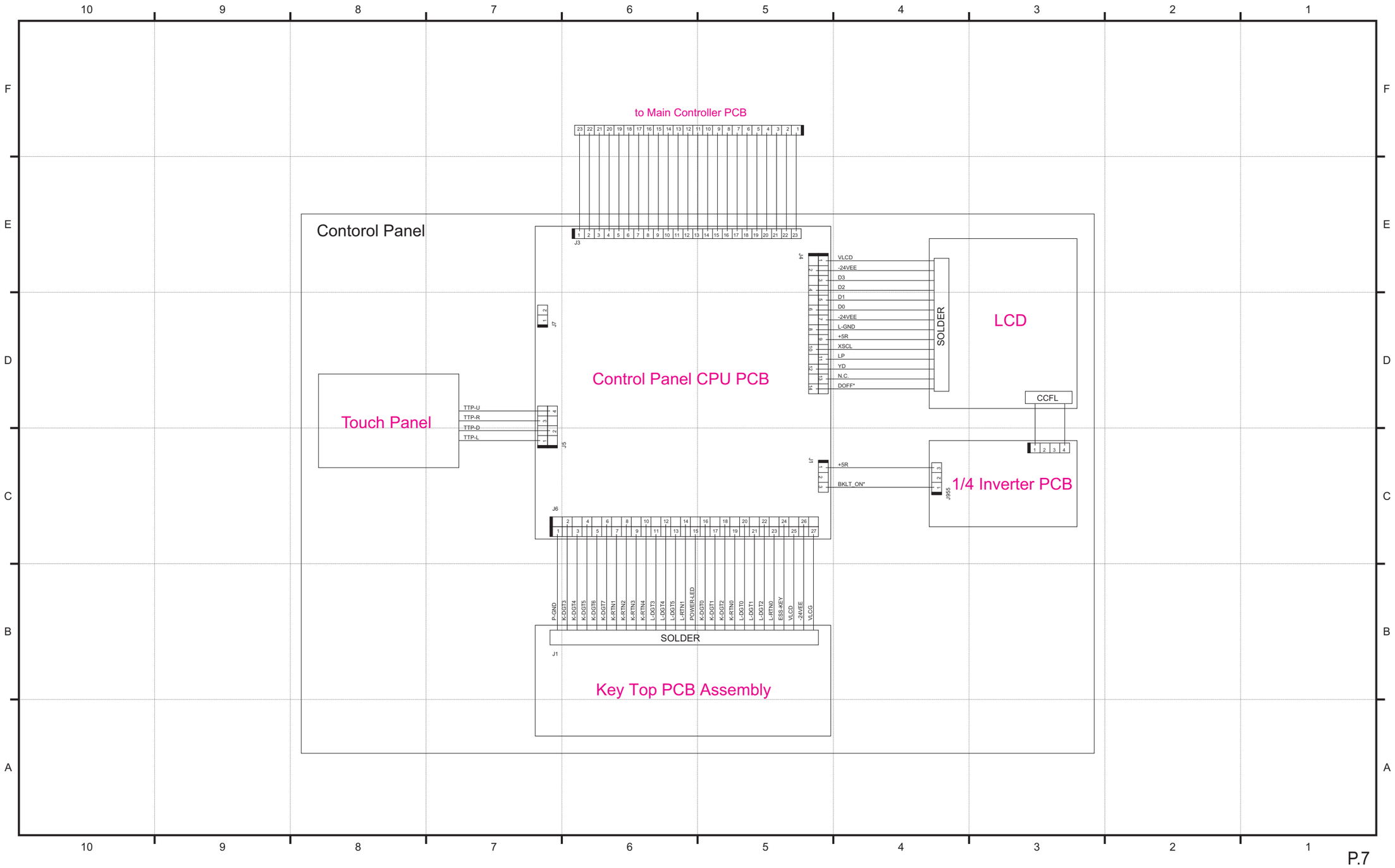
J582 (CN1) J581 (CN2) J580 (CN10) J584 (CN12)

ADF Driver PCB

J588

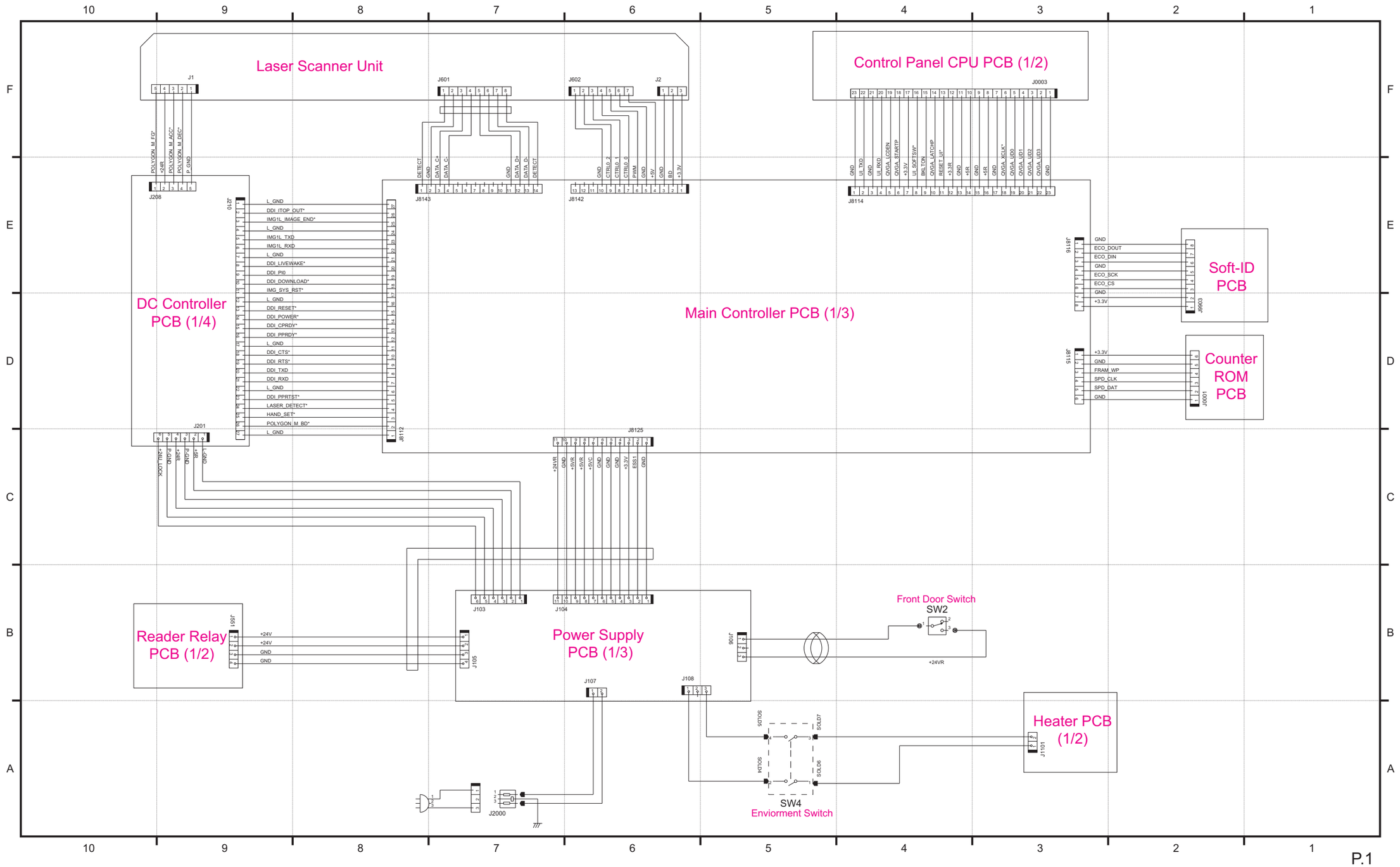
CIS

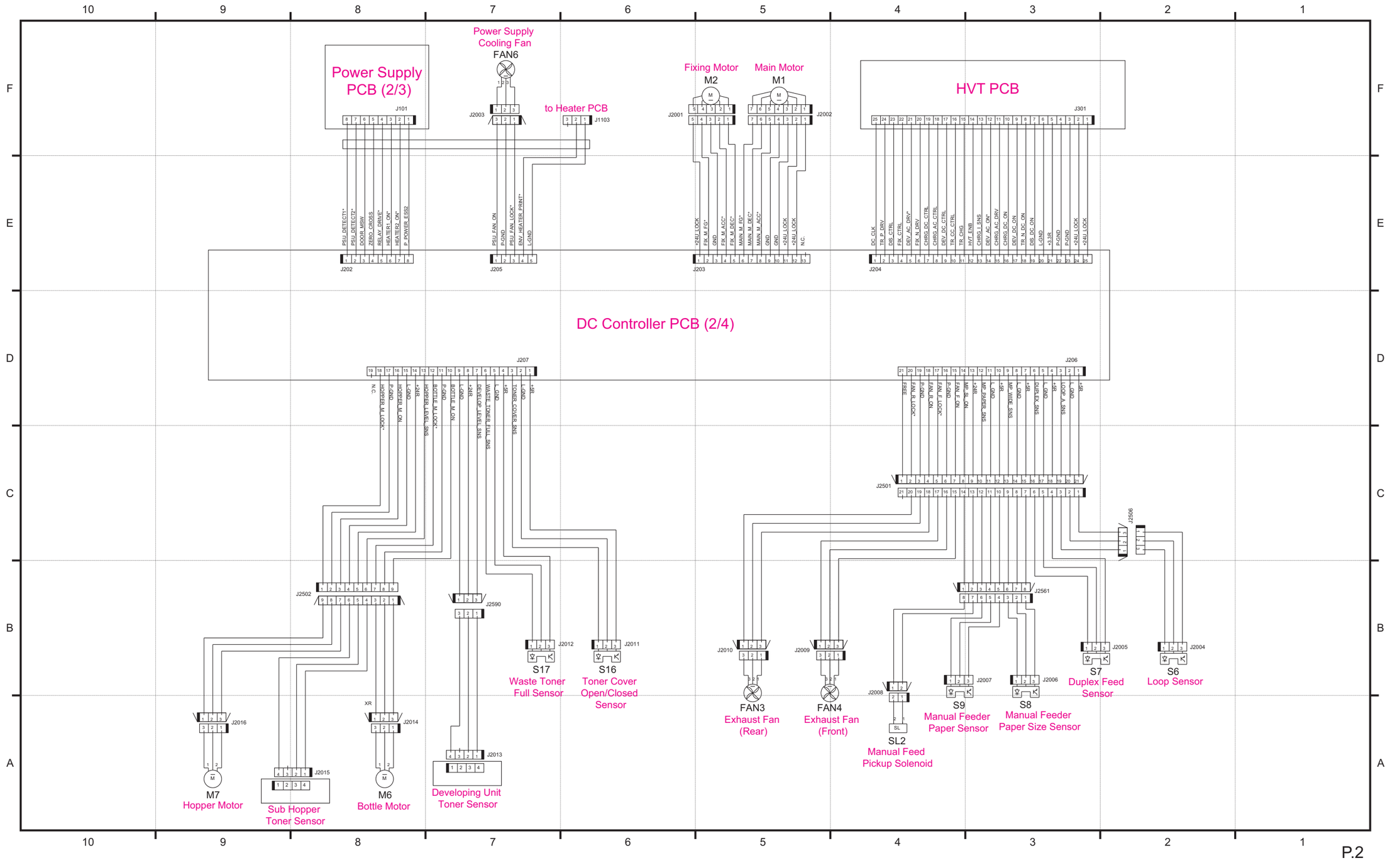

USB hub PCB
J9999
J2
USB
+5V
GND
J112
to Power Supply PCB
USB(H)
J8103
USB A
Main Controller PCB (3/3)
MODEM PCB
MODEM PCB
FM4-3341
FM4-3342
USB(H) J8103
USB(D) J8104
SDcard J8110
LAN J8111
J2571
CARD_READER_RX
CARD_READER_TX
CARD_READER_COUNT
+5V
GND
J9901
Card Reader
J8117
CCVI OPTION
CCVI LARGE SMALL B
CCVI CL BW L
CCVI KYU COUNT
CCVI CP ENB
+5V
GND
J9904
Control Interface Cable
J8149
VOUT2
VOUT1
SP1
Speaker (Option)
J8118
GND
B_PRDY
B_CRDY
C_PRDY
C_CRDY
GND
COIN_TX
COIN_RX
GND
VCC(5Vor3.3V)
GND
J8140
J0002
to Coin Vendor
J8146
J8134
J8147
J8127
J8124
GND GND CICNT OUT
+24V GND
RX_IN TX_OUT SNOOP +12V +5V AGND
GND +3.3V CIVS N.C. DCLIM SRD PRD HRD CMLED CAIDD LPRD CI1 CI2 N.C. HOOK1 HOOK2 LPL1 LPL2 IPSEL N.C. +5V GND
J001
J002
J003
J02
J1
FFC
NCU PCB
VH(+)
VH(-)
J4
J5
CT1
CT2
T1
T2
N.C.
L1
L2
J004
Modular PCB
Secondary Battery
FAX BOX

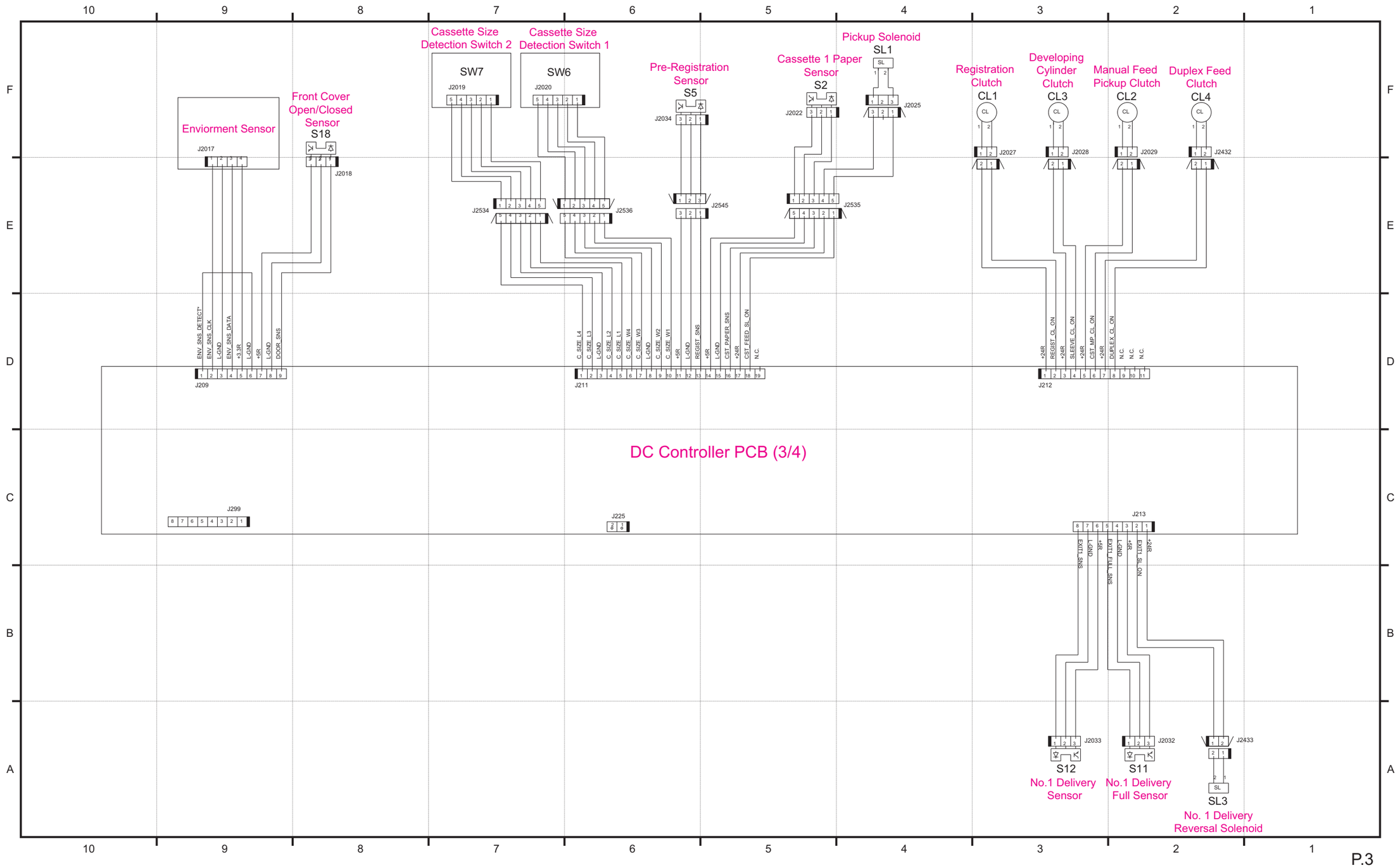

to Main Controller PCB
Contorol Panel
J3
Control Panel CPU PCB
J7
J4
VLCD
-24VEE
D3
D2
D1
D0
-24VEE
L-GND
+5R
XSCL
LP
YD
N.C.
DOFF*
SOLDER
LCD
CCFL
Touch Panel
TTP-U
TTP-R
TTP-D
TTP-L
J5
J1
+5R
BKLT_ON*
J955
1/4 Inverter PCB
J6
P-GND
K-DGT3
K-DGT4
K-DGT5
K-DGT6
K-DGT7
K-RTN1
K-RTN2
K-RTN3
K-RTN4
L-DGT3
L-DGT4
L-DGT5
L-RTN1
POWER-LED
K-DGT0
K-DGT1
K-DGT2
K-RTN0
L-DGT0
L-DGT1
L-DGT2
L-RTN0
ESS-KEY
VLCD
-24VEE
VLCG
SOLDER
J1
Key Top PCB Assembly

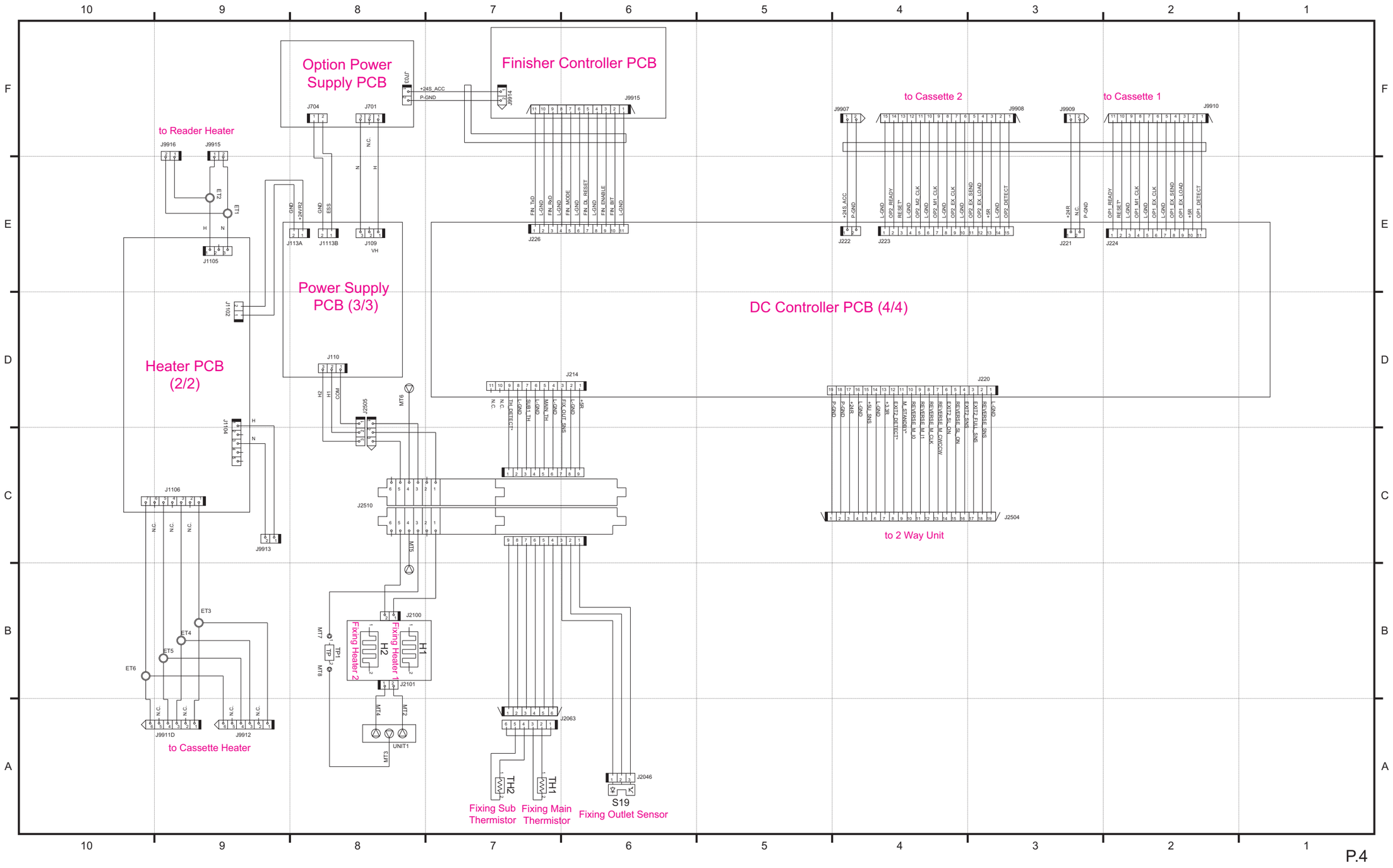
P.7

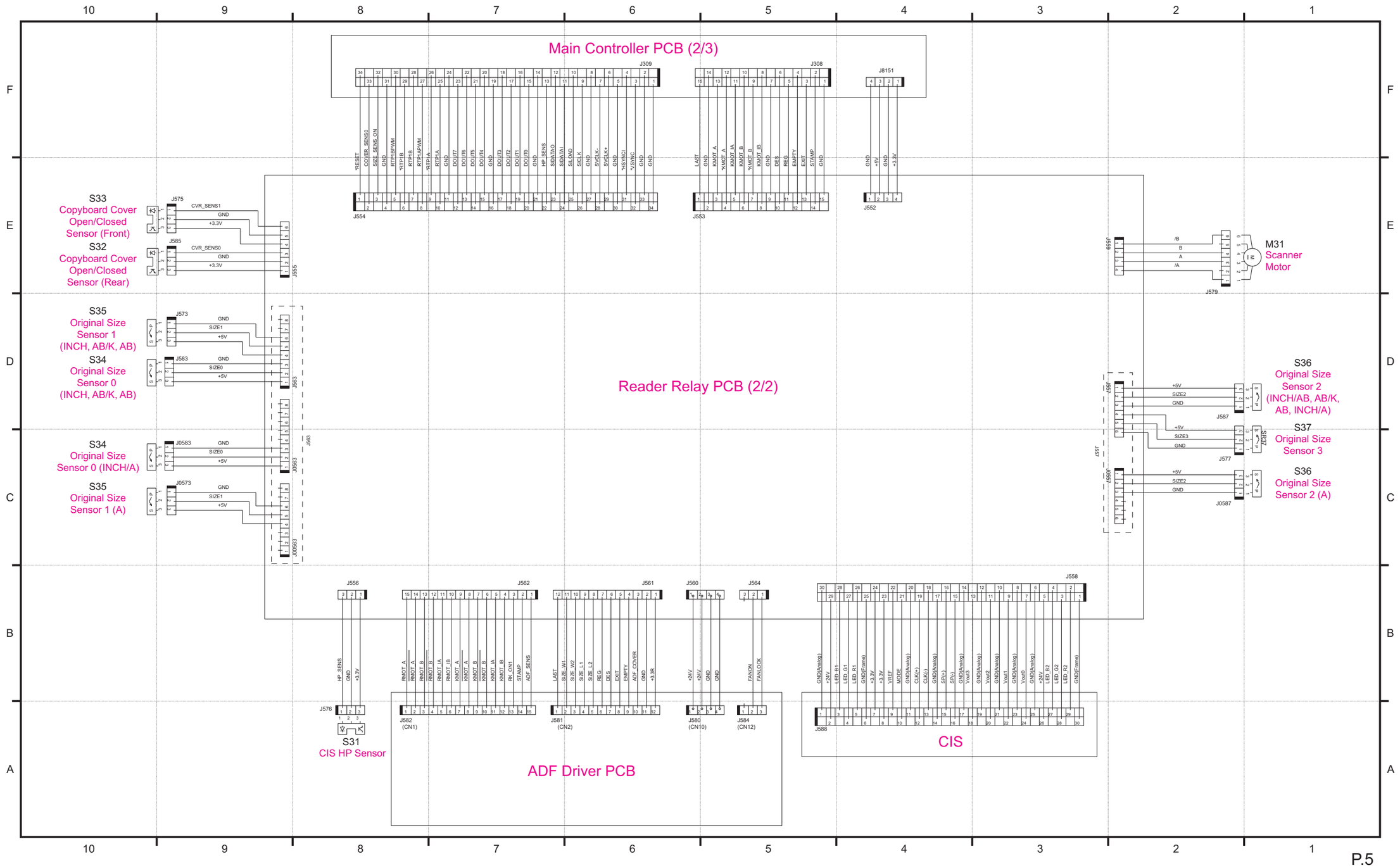
General Circuit Diagram (250-sheet 1st cassette type)

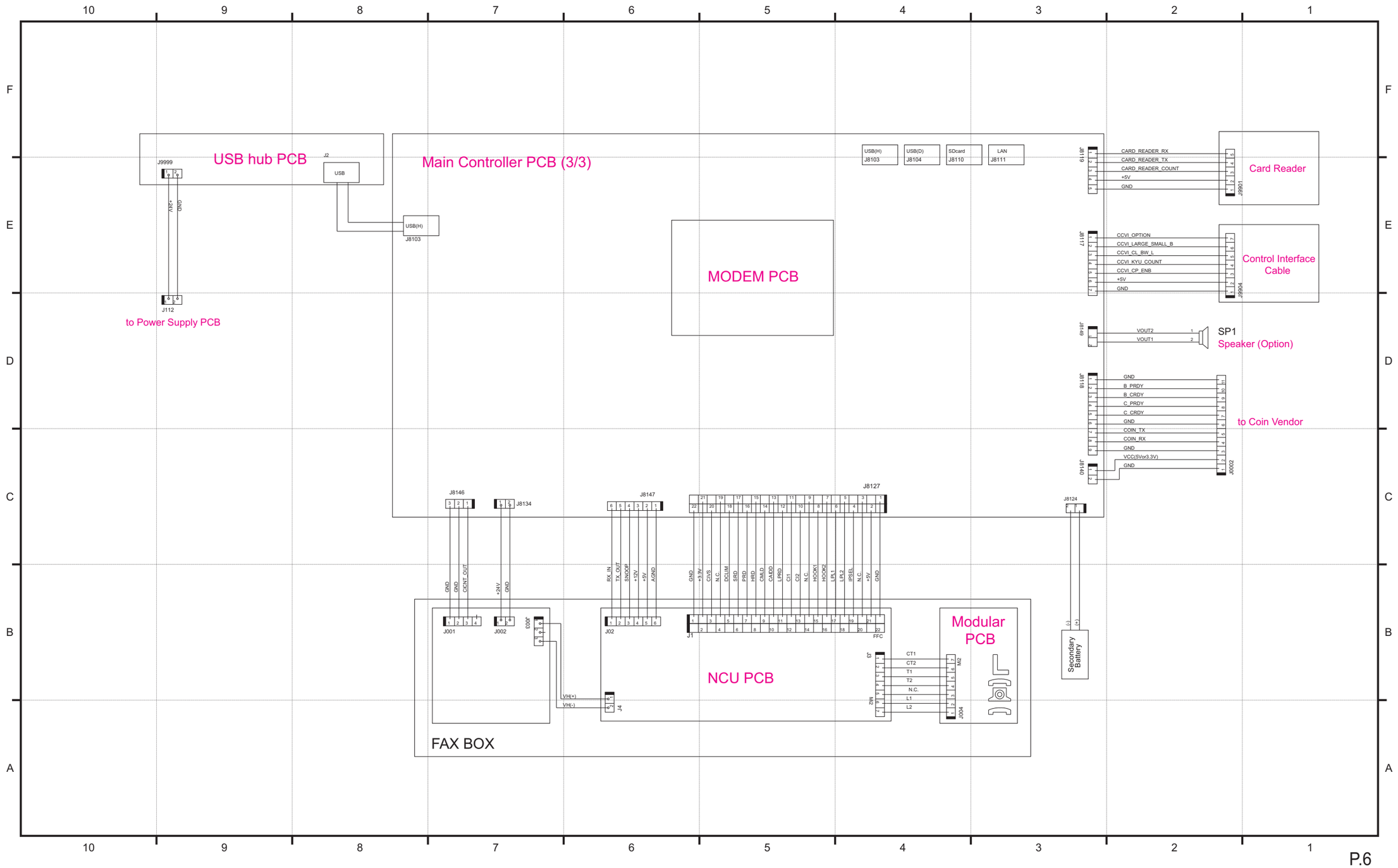


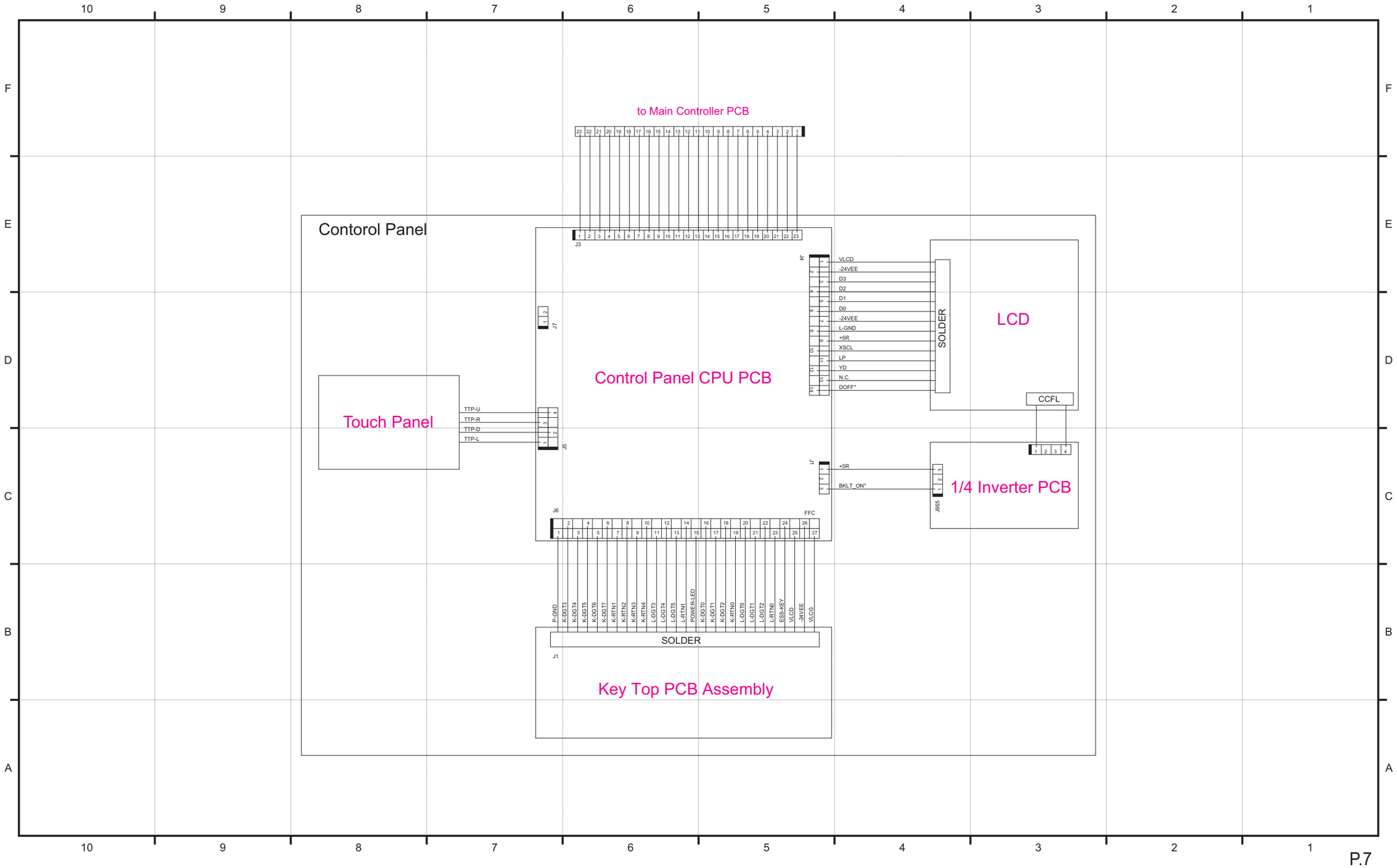

Power Supply PCB (2/3)
J101
PSU_DETECT1*
PSU_DETECT2*
DOOR_MSW
ZERO_CROSS
RELAY_DRIVE*
HEATER1_ON*
HEATER2_ON*
P_POWER_ESS2
J202
Power Supply Cooling Fan
FAN6
J2003
PSU_FAN_ON
P-GND
PSU_FAN_LOCK*
ENV_HEATER_PWM*
L-GND
J205
to Heater PCB
J1103
Fixing Motor
M2
Main Motor
M1
J2001
J2002
+24U_LOCK
FIX_M_FG*
GND
FIX_M_ACC*
FIX_M_DEC*
MAIN_M_FG*
MAIN_M_DEC*
MAIN_M_ACC*
GND
GND
+24U_LOCK
+24U_LOCK
N.C.
J203
HVT PCB
J301
DC_CLK
TR_P_DRV
DIS_CTRL
FIX_CTRL
DEV_AC_DRV*
FIX_N_DRV
CHRG_DC_CTRL
CHRG_AC_CTRL
DEV_DC_CTRL
TR_CC_CTRL
TR_CHG
HVT_ENB
CHRG_I_SNS
DEV_AC_ON*
CHRG_AC_DRV
CHRG_DC_ON
DEV_DC_ON
TR_N_DC_ON
DIS_DC_ON
L-GND
+3.3R
P-GND
P-GND
+24U_LOCK
+24U_LOCK
J204
DC Controller PCB (2/4)
J207
N.C.
HOPPER_M_LOCK*
P-GND
HOPPER_M_ON
L-GND
+24R
HOPPER_LEVEL_SNS
BOTTLE_M_LOCK*
P-GND
BOTTLE_M_ON
L-GND
+24R
DEVELOP_LEVEL_SNS
L-GND
WASTE_TONER_FULL_SNS
+5R
L-GND
TONER_COVER_SNS
L-GND
+5R
J206
FREE
FAN_R_LOCK*
P-GND
FAN_R_ON
P-GND
FAN_F_LOCK*
P-GND
FAN_F_ON
MP_SL_ON
+24R
MP_PAPER_SNS
L-GND
+5R
MP_WIDE_SNS
L-GND
+5R
DUP_EX_SNS
L-GND
+5R
LOOP_A_SNS
L-GND
+5R
J2501
J2506
J2502
J2590
J2561
J2012
J2011
J2010
J2009
J2008
J2007
J2006
J2005
J2004
J2016
J2014
J2015
J2013
S17
Waste Toner Full Sensor
S16
Toner Cover Open/Closed Sensor
FAN3
Exhaust Fan (Rear)
FAN4
Exhaust Fan (Front)
SL2
Manual Feed Pickup Solenoid
S9
Manual Feeder Paper Sensor
S8
Manual Feeder Paper Size Sensor
S7
Duplex Feed Sensor
S6
Loop Sensor
M7
Hopper Motor
Sub Hopper Toner Sensor
M6
Bottle Motor
Developing Unit Toner Sensor
P.2


Enviorment Sensor
J2017
Front Cover Open/Closed Sensor
S18
J2018
Cassette Size Detection Switch 2
SW7
J2019
Cassette Size Detection Switch 1
SW6
J2020
Pre-Registration Sensor
S5
J2034
Cassette 1 Paper Sensor
S2
J2022
Pickup Solenoid
SL1
J2025
Registration Clutch
CL1
J2027
Developing Cylinder Clutch
CL3
J2028
Manual Feed Pickup Clutch
CL2
J2029
Duplex Feed Clutch
CL4
J2432
J2534
J2536
J2545
J2535
J209
J211
J212
ENV_SNS_DETECT
ENV_SNS_CLK
L-GND
ENV_SNS_DATA
+3.3R
L-GND
+5R
L-GND
DOOR_SNS
C_SIZE_L4
C_SIZE_L3
L-GND
C_SIZE_L2
C_SIZE_L1
C_SIZE_W4
C_SIZE_W3
L-GND
C_SIZE_W2
C_SIZE_W1
+5R
L-GND
REGIST_SNS
+5R
L-GND
CST_PAPER_SNS
+24R
CST_FEED_SL_ON
N.C.
+24R
REGIST_CL_ON
+24R
SLEEVE_CL_ON
+24R
CST_MP_CL_ON
+24R
DUPLEX_CL_ON
N.C.
N.C.
N.C.
DC Controller PCB (3/4)
J299
J225
J213
EXIT1_SNS
L-GND
+5R
EXIT1_FULL_SNS
L-GND
+5R
EXIT1_SL_ON
+24R
J2033
J2032
J2433
S12
No.1 Delivery Sensor
S11
No.1 Delivery Full Sensor
SL3
No. 1 Delivery Reversal Solenoid
P.3


Option Power Supply PCB
Finisher Controller PCB
J703
J704
J701
J9914
J9915
+24S_ACC
P-GND
FN_TxD
FN_RxD
FN_MODE
FN_CL_RESET
FN_ENABLE
FN_BIT
L-GND
J226
to Reader Heater
J9916
J9915
ET2
ET1
J1105
H
N
GND
+24V/+2
GND
ESS
N.C.
J113A
J1113B
J109
VH
Power Supply PCB (3/3)
J702
Heater PCB (2/2)
J110
H2
H1
COM
J2505
MT6
J1104
J1106
J9913
N.C.
ET3
ET4
ET5
ET6
J9911D
J9912
to Cassette Heater
J214
N.C.
THM_DETECT*
L-GND
SUB_TH
L-GND
MAIN_TH
L-GND
FIX_OUT_SNS
L-GND
+5B
J2510
MT5
J2100
Fixing Heater 2
Fixing Heater 1
H2
H1
MT7
TP1
MT8
J2101
MT4
MT2
UNIT1
MT3
J2063
TH2
TH1
Fixing Sub Thermistor
Fixing Main Thermistor
J2046
S19
Fixing Outlet Sensor
DC Controller PCB (4/4)
J220
J2504
to 2 Way Unit
to Cassette 2
J9907
J9908
+24S_ACC
P-GND
L-GND
OP2_READY
RESET*
L-GND
OP2_M1_CLK
L-GND
OP2_EX_CLK
L-GND
OP2_EX_SEND
OP2_EX_LOAD
+5R
L-GND
OP2_DETECT
J222
J223
to Cassette 1
J9909
J9910
+24R
N.C.
P-GND
OP1_READY
RESET*
L-GND
OP1_M1_CLK
L-GND
OP1_EX_CLK
L-GND
OP1_EX_SEND
OP1_EX_LOAD
+5R
OP1_DETECT
J221
J224


Main Controller PCB (2/3)
J309
J308
J8151
J554
J553
J552
Reader Relay PCB (2/2)
S33
Copyboard Cover Open/Closed Sensor (Front)
S32
Copyboard Cover Open/Closed Sensor (Rear)
J575
J585
J555
CVR_SENS1
CVR_SENS0
GND
+3.3V
S35
Original Size Sensor 1 (INCH, AB/K, AB)
S34
Original Size Sensor 0 (INCH, AB/K, AB)
J573
J583
J563
J00563
SIZE1
SIZE0
+5V
S34
Original Size Sensor 0 (INCH/A)
S35
Original Size Sensor 1 (A)
J0583
J0573
J0563
M31
Scanner Motor
J559
J579
/B
B
A
/A
S36
Original Size Sensor 2 (INCH/AB, AB/K, AB, INCH/A)
S37
Original Size Sensor 3
S36
Original Size Sensor 2 (A)
J587
J577
J0587
SIZE2
SIZE3
J558
J556
J562
J561
J560
J564
J576
J582 (CN1)
J581 (CN2)
J580 (CN10)
J584 (CN12)
J588
S31
CIS HP Sensor
ADF Driver PCB
CIS
P.5


USB hub PCB
J2
USB
J9999
+24V
GND
J112
to Power Supply PCB
USB(H)
J8103
Main Controller PCB (3/3)
MODEM PCB
USB(H) J8103
USB(D) J8104
SDcard J8110
LAN J8111
J8119
CARD_READER_RX
CARD_READER_TX
CARD_READER_COUNT
+5V
GND
Card Reader
J9501
J8117
CCVI_OPTION
CCVI_LARGE_SMALL_B
CCVI_CL_BW_L
CCVI_KYU_COUNT
CCVI_CP_ENB
+5V
GND
Control Interface Cable
J9504
J8149
VOUT2
VOUT1
SP1
Speaker (Option)
J8118
GND
B_PRDY
B_CRDY
C_PRDY
C_CRDY
GND
COIN_TX
COIN_RX
GND
VCC(5Vor3.3V)
GND
J8140
J002
to Coin Vendor
J8124
Secondary Battery
J8146
J8134
J8147
J8127
GND
GND
CICNT_OUT
+24V
GND
RX_IN
TX_OUT
SNOOP
+12V
+5V
AGND
GND
+3.3V
CI1/S
KI_C
DCLIM
SND
PRD
HRD
CMD
CMD3
LPRD
CI11
CI2
KI_C
HOOK1
HOOK2
LPK1
LPK2
IPSEL
N.C.
+5V
GND
J001
J002
J003
J02
J1
FFC
J4
VH(+)
VH(-)
NCU PCB
J3
NS2
CT1
CT2
T1
T2
N.C.
L1
L2
M2
J004
Modular PCB
FAX BOX


to Main Controller PCB
Contorol Panel
J3
Control Panel CPU PCB
J4
VLCD
-24VEE
D3
D2
D1
D0
-24VEE
L-GND
+5R
XSCL
LP
YD
N.C.
DOFF*
SOLDER
LCD
CCFL
J7
Touch Panel
TTP-U
TTP-R
TTP-D
TTP-L
J5
J7
+5R
BKLT_ON*
J8/5
1/4 Inverter PCB
J6
FFC
P-GND
K-DGT3
K-DGT4
K-DGT5
K-DGT6
K-DGT7
K-RTN1
K-RTN2
K-RTN3
K-RTN4
L-DGT3
L-DGT4
L-DGT5
L-RTN1
POWER-LED
K-DGT0
K-DGT1
K-DGT2
K-RTN0
L-DGT0
L-DGT1
L-DGT2
L-RTN0
ESS-KEY
VLCD
-24VEE
VLCG
SOLDER
J1
Key Top PCB Assembly
P.7