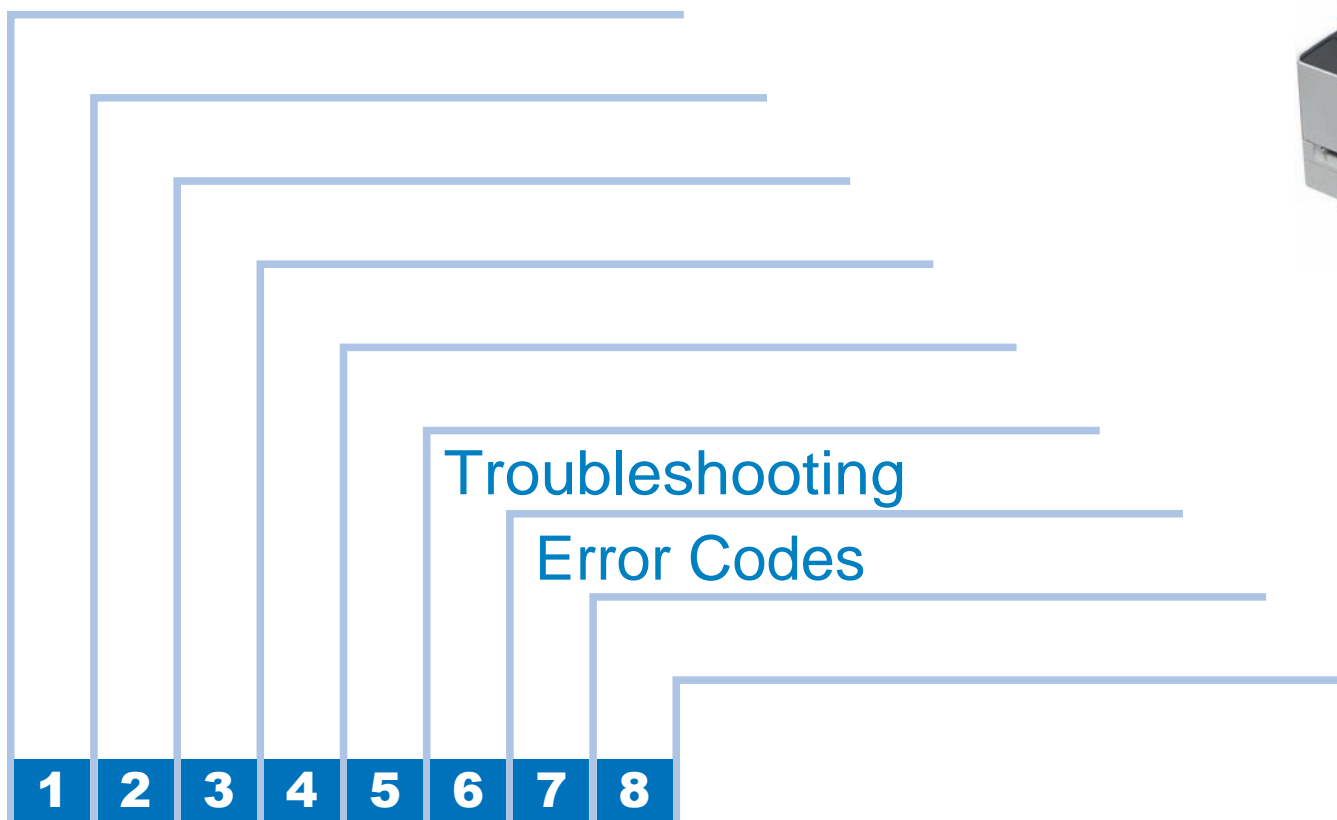


Color imageCLASS MF8580Cdw/MF8280Cw

Service Manual



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.

Corrections

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.

The following paragraph does not apply to any countries where such provisions are inconsistent with local law.

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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
	Used to show permission.			Remove the screw.
	Used to show prohibition.			Tighten the screw.
	Check.			Remove the claw.
	Check visually.			Insert the claw.
	Check the noise.			Use the bundled part.
	Disconnect the connector.			Push the part.
	Connect the connector.			Plug the power cable.
	Remove the cable/wire from the cable guide or wire saddle.			Turn on the power.
	Set the cable/wire to the cable guide or wire saddle.			

T-0-1

The following rules apply throughout this Service Manual:

- 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.
- 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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Safety Precautions

- CDRH Provisions
- Notes When Handling a Lithium Battery
- Laser Safety
- Toner Safety
- Notes on Assembly/Disassembly



CDRH Provisions

Food and Drug CDRH (Center for Devices and Radiological Health) under FDA (Food and Drug Administration) enforced provisions of the section for laser and laser products on August 2, 1976. These provisions are applicable to all laser products manufactured or assembled after August 1, 1976 and allow only products certified their compliance with the provisions to market in the US. Each product shall have affixed the applicable label as shown below to follow the labeling requirements prescribed in CDRH provisions.



Note that the wording included in labels is different depending on laser product classifications.

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.



CAUTION:

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

Laser Safety

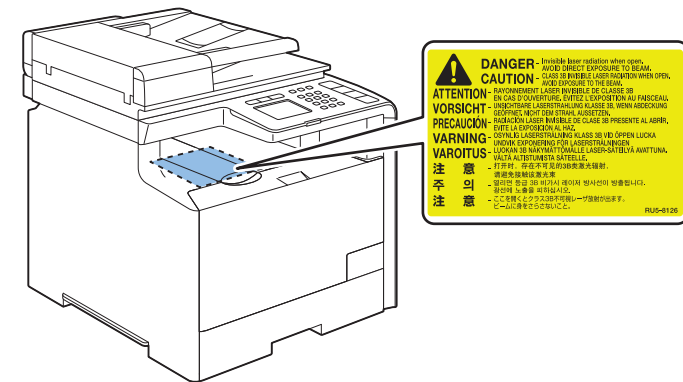
About Laser Beams

Laser radiation may be hazardous to human. The laser scanner unit mounted in this device is sealed in the protective housing and the external cover to prevent laser beams from leaking to the environment. As long as the device is operated under normal conditions, users are safely guarded from laser leaks.

Handling Laser Scanner Unit

Before providing service works for the laser scanner unit and its peripherals, ensure to turn off the power of the device.

Any cover with potential dangers of laser beam reflection has affixed the caution label at the position shown in the figure below.



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Toner Safety

About Toner

Toner is a nontoxic matter composed of plastic, iron and a trace of pigments.



Do not throw toner into fire. Doing so can lead to explosion.

Handling Spilled Toner

- Use dry tissue paper to wipe off toner adhered to skin or clothes, and wash in cold water.
- To prevent toner from being permanently absorbed into fibers, never use warm or hot water to remove toner. Only use cold water.
- Toner particles are reactive with vinyl polymers. Avoid contacting these materials.

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. Unless specifically instructed, use the reverse order of disassembly to reinstall.
3. Be sure to use the correct screw type (length, diameter, etc.) for the location when reassembling.
4. To ensure proper grounding, 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 specifically instructed, do not operate the device with parts removed.
6. Never remove the paint-locked screws when disassembling.

CAUTION
DOUBLE POLE/NEUTRAL FUSING

F-0-3




Product Overview


- Product Lineups
- Product Features
- Specifications
- Name of Parts

Product Lineups

Main Unit

Function	MF8500 Series				
	MF8580Cdw	MF8570Cdw	MF8550Cdn	MF8540Cdn	MF8530Cdn
Appearance					
Copy	Yes	Yes	Yes	F-1-Yes	Yes
Print	Yes	Yes	Yes	Yes	Yes
Fax	Yes	Yes	Yes	-	-
USB Scan	Yes	Yes	Yes	Yes	Yes
Network Scan	Yes	Yes	Yes	Yes	Yes
Wireless LAN	Yes	Yes	-	-	-
SEND	Yes	Yes	Yes	Yes	Yes
Secure Print	Yes	Yes	Yes	Yes	Yes
Remote UI	Yes	Yes	Yes	Yes	Yes
ADF (1-side)	Yes	Yes	Yes	Yes	Yes
ADF (2-side)	Yes	Yes	Yes	Yes	Yes
Automatic 2-sided Print	Yes	Yes	Yes	Yes	Yes

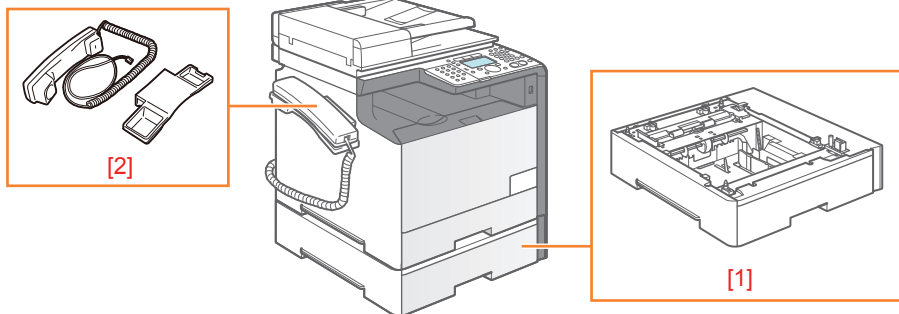
T-1-1

Function	MF8200 Series				
	MF8280Cw	MF8250Cn	MF8240Cw	MF8230Cn	MF8210Cn
Appearance					
Copy	Yes	Yes	Yes	F-1-Yes	Yes
Print	Yes	Yes	Yes	Yes	Yes
Fax	Yes	Yes	-	-	-
USB Scan	Yes	Yes	Yes	Yes	Yes
Network Scan	Yes	Yes	Yes	Yes	Yes
Wireless LAN	Yes	-	Yes	-	-
SEND	-	-	-	-	-
Secure Print	-	-	-	-	-
Remote UI	Yes	Yes	Yes	Yes	Yes
ADF (1-side)	Yes	Yes	Yes	Yes	-
ADF (2-side)	-	-	-	-	-
Automatic 2-sided Print	-	-	-	-	-

T-1-2

Options

MF8500 Series

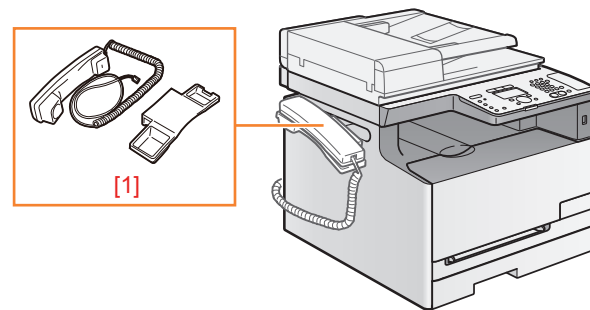


F-1-3

No.	Name	Description	Remarks
1	Cassette Feeding Module-V1	A cassette unit with 250 sheet capacity (for paper of 60-90g/m ²)	
2	TELEPHONE 6 KIT Long cord Cool White	Telephone call is enabled by using the handset.	AUS, EUR
	HANDSET KIT 3 Long cord Cool White		CLA, CSPL, CIPL, CHK, TWN

T-1-3

MF8200 Series



F-1-4

No.	Name	Description	Remarks
1	TELEPHONE 6 KIT Long cord Cool White	Telephone call is enabled by using the handset.	AUS, EUR
	HANDSET KIT 3 Long cord Cool White		CLA, CSPL, CIPL, CHK, TWN

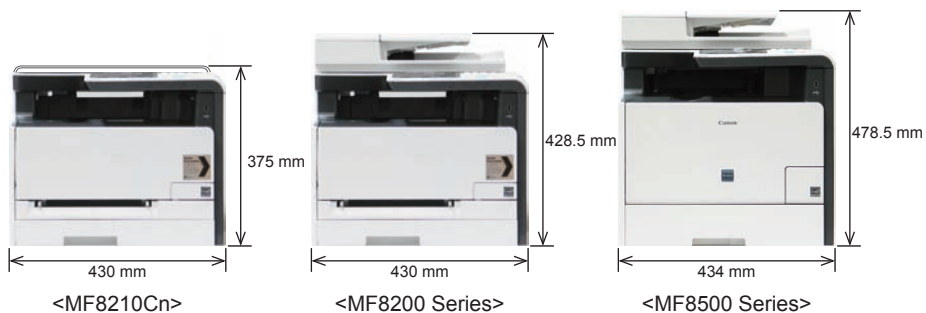
T-1-4

Product Features

Features

MF8500Series / MF8200Series

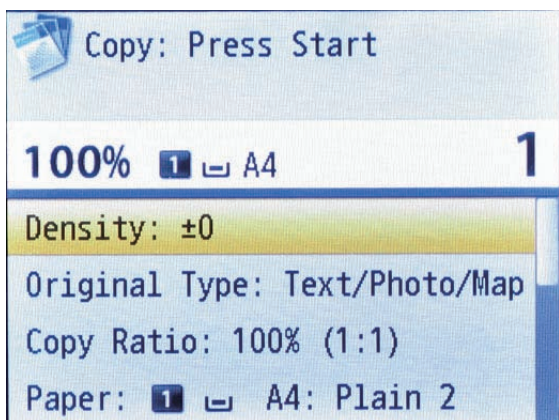
Compact MFP



F-1-5

- Mobile print supported (Apple AirPrint, Google Cloud Print)
- Addition of Scan to PC, Paper Save Copy by supporting Smart Shortcut Key
- Wireless LAN supported (MF8570Cdw, MF8580Cdw, MF8240Cw, MF8280Cw)
- Increased engine speed from 8/12 ppm (CL/BW) to 14/14 ppm (CL/BW) (MF8200 series only)

Improved operability by new color UI



F-1-6

Specifications

Main Unit Specifications

Item	Specification / function	
	MF8500 Series	MF8200 Series
Copyboard	Fixed	
Device Installation	Desktop	
Light source	LED (RGB)	
Photoreceptor	OPC drum (φ24)	
Image scanning	CIS (color)	
Light exposure method	Laser beam exposure	
Charging method	Roller charging	
Developing method	Contact development	
Transfer method	Primary transfer: Sequential 4 colors transfer to Intermediate Transfer Belt Secondary transfer: 4-color batch transfer onto the transfer material by the Transfer Roller	
Separation method	Curvature separation	
Cassette paper feed	Simple separation retard	
Multi-purpose tray paper feed	Pad separation method	Separation roller method
Drum cleaning method	Cleaning blade	
Transfer cleaning method	Cleaning brush and roller	
Fixing method	On-demand fixing	
Paper delivery method	Face-down	
Toner level sensor	Mounted	
Toner type	Non-magnetic one-component toner	
Toner supply method	All-in-one cartridge (drum + toner)	
Toner save mode	N/A	
Document types	Sheet / book	
Maximum document size	Copyboard Glass: 216 mm x 297 mm Feeder: 216 x 356 mm	
Document size sensor	N/A	
Image size magnification	AB series :25.0%, 50.0%, 70.7%, 81.6%, 86.5%, 100.0%, 115.4%, 122.4%, 141.4%, 200.0%, 400.0% Inch series :25.0%, 50.0%, 64.7%, 78.5%, 100.0%, 129.4%, 200.0%, 400.0% A series :25.0%, 50.0%, 70.7%, 100.0%, 141.4%, 200.0%, 400.0% AB series / Inch series :25.0%, 50.0%, 70.7%, 81.6%, 86.5%, 100.0%, 115.4%, 122.4%, 141.4%, 200.0%, 400.0% Zoom :25 to 400% (1% increment)	
Warm-up Time *1	About 23 seconds or less	About 23 seconds or less

Item	Specification / function		
	MF8500 Series	MF8200 Series	
Print area	Cassette	For print jobs (Non-envelope) <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm For print jobs (envelope) <ul style="list-style-type: none"> Leading edge: 10.0 ± 2.0 mm Left Side: 10.0 ± 1.5 mm For copy jobs: <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm FAX / Report <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm 	For print jobs (Non-envelope) <ul style="list-style-type: none"> Leading edge: 5.0 ± 1.5 mm Left Side: 5.0+1.8 mm / -1.2 mm For print jobs (envelope) <ul style="list-style-type: none"> Leading edge: 10.0 ± 1.5 mm Left Side: 10.0+1.8 mm / -1.2 mm For copy jobs: <ul style="list-style-type: none"> Leading edge: 5.0 ± 1.5 mm Left Side: 5.0+1.8 mm / -1.2 mm FAX / Report <ul style="list-style-type: none"> Leading edge: 5.0 ± 1.5 mm Left Side: 5.0+1.8 mm / -1.2 mm
	Multi-purpose Tray	(Non-envelope) For print jobs <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm For copy jobs: <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm FAX / Report <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm (envelope) For print jobs / For copy jobs: <ul style="list-style-type: none"> Leading edge: 10.0 ± 2.5 mm Left Side: 10.0 ± 2.5 mm 	(Non-envelope) For print jobs <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm For copy jobs: <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm FAX / Report <ul style="list-style-type: none"> Leading edge: 5.0 ± 2.0 mm Left Side: 5.0 ± 1.5 mm (envelope) For print jobs / For copy jobs: <ul style="list-style-type: none"> Leading edge: 10.0 ± 3.0 mm Left Side: 10.0 ± 2.5 mm
Reading resolution	Color: 600 x 600 dpi, 300 x 600 dpi, 300 x 300 dpi B&W: 600 x 600 dpi, 300 x 600 dpi		
Reading Speed	Fixed (A4/LTR): N/A Continuous reading, SEND: Color: 10 images / minute (A4/LTR) B&W: 20 images / minute (A4) B&W: 21 images / minute (LTR)		
Copy resolution	600 x 600 dpi		
Print resolution	600 x 600 dpi		
First copy time	Fixed (A4/LTR): Color: 16 seconds or less B&W: 15.3 seconds or less	Fixed (A4/LTR): Color / B&W: 19 seconds or less	
	Continuous reading: (A4/LTR) Color: 16.5 seconds or less B&W: 16.2 seconds or less	Continuous reading (A4/LTR) Color / B&W: 19 seconds or less	
First print time	Color / B&W: 14.3 seconds or less (A4/LTR)	Color / B&W: 18.0 seconds or less (A4/LTR)	

Item	Specification / function	
	MF8500 Series	MF8200 Series
Print Speed	1-sided print (A4/LTR): Color / B&W: 21 ppm (A4/LTR) 2-sided print (A4/LTR): Color / B&W: 10 ppm (A4/LTR) (For details, see "Print Speed".)	Color / B&W: 14 ppm (A4/LTR) (For details, see "Print Speed".)
Available paper type for cassette	Plain paper, Recycled paper, Color paper, Thick paper, Coated paper, Transparency, Label, Postcard, Envelope (For details, see "Paper types / Paper size".)	
Available paper type for multi-purpose tray	Plain paper, Recycled paper, Color paper, Thick paper, Coated paper, Transparency, Label, Postcard, Envelope (For details, see "Paper types / Paper size".)	
Available paper size in cassette	A4, B5, A5, LGL, LTR, STMT, EXEC, OFFICIO, B-OFFICIO, M-OFFICIO, GLTR, GLGL, FLS, K16, Index card, Postcard, Reply Postcard, Envelopes (COM10, Monarch, Nagagata 3, Yougatanaga 3, C5, DL), Custom Paper Size (For details, see "Paper types / Paper size".)	
Multi-purpose Tray / Multi-purpose Tray Pickup Slot paper size	A4, B5, A5, LGL, LTR, STMT, EXEC, OFFICIO, B-OFFICIO, M-OFFICIO, GLTR, GLGL, FLS, K16, Index card, Postcard, Reply Postcard, Envelopes (COM10, Monarch, Nagagata 3, Yougatanaga 3, C5, DL), Custom Paper Size (For details, see "Paper types / Paper size".)	
Cassette capacity	Cassette: 250 sheets (60 to 90 g/m ²) Option: 250 sheets (60 to 90 g/m ²)	Cassette: 150 sheets (60 to 90 g/m ²)
Multi-purpose tray capacity	50 sheets (60 to 90 g/m ²)	1 sheet
Delivery tray stacking capacity *2	125 sheets (60 to 90 g/m ²)	
Continuous copying	1 - 99 sheets	
Automatic 2-sided	Available (A4, B5, LGL, LTR, EXEC)	N/A
Memory capacity	512MB	256MB
Sleep mode	Available	
Allowable environmental temperature	10 - 30 deg C	
Allowable humidity	20 - 80% in relative humidity (no condensation)	
Operational noise	At stand-by: • 43 dB or lower (acoustic power level) During copy jobs: • Color: 67 dB or lower • B&W: 66 dB or lower	At stand-by: • 43 dB or lower (acoustic power level) During copy jobs: • Color: 65.2 dB or lower • B&W: 63.9 dB or lower
Power rating	Rated input voltage : 100-127 V (100V system) / 220-240 V (200V system) Rated input frequency: 50/60 Hz	

Item	Specification / function	
	MF8500 Series	MF8200 Series
Maximum power consumption	100 V: 1200 W or lower / 9.5 A 120 V: 1200 W or lower / 9.0 A 230 V: 1200 W or lower / 6.0 A	100 V: 1200 W or lower / 9.5 A 120 V: 1200 W or lower / 9.0 A 230 V: 1200 W or lower / 6.0 A
Average power at operation	100 V: 550 W or lower / 7.0 A 120 V: 550 W or lower / 6.0 A 230 V: 550 W or lower / 3.0 A	100 V: 400 W or lower / 4.5 A 120 V: 400 W or lower / 4.5 A 230 V: 400 W or lower / 2.5 A
Average power at standby	100 V: 23 Wh 120 V: 23 Wh 230 V: 25 Wh	100 V: 23 Wh 120 V: 23 Wh 230 V: 23 Wh
Average power at sleep mode	100 V: 1 Wh (wired) / 2 Wh (wireless) 120 V: 1 Wh (wired) / 2 Wh (wireless) 230 V: 1 Wh (wired) / 2 Wh (wireless)	100 V: 1 Wh (wired) / 2 Wh (wireless) 120 V: 1 Wh (wired) / 2 Wh (wireless) 230 V: 1 Wh (wired) / 2 Wh (wireless)
Power consumption at Main Power Switch OFF	0.5 W or lower	
Ozone emission	Color: 3.0 mg/hr B&W: 1.5 mg/hr	
Footprint	ADF model: 434 x 484 x 478.5 mm ADF model (with the optional cassette): 434 x 484 x 578.5 mm	ADF model: 430 x 484 x 428.5 mm Copyboard model: 430 x 484 x 375 mm
Weight	Device (including toner cartridges): Approx. 31 kg Optional cassette: Approx. 4 kg	ADF model (including toner cartridges): Approx. 26 kg Copyboard model (including toner cartridges): Approx. 24 kg
Accessories:	See the configuration of options	

*1: Temperature: 20 degC, Humidity: 65%, from when the machine is turned on to when the standby screen is displayed.

*2: The actual stack capacity varies depending on the site environment and the type of paper used.

ADF Specifications

Item	Specification / Function	
	MF8500 Series	MF8200 Series
Document setting direction	Set the document face up (face-up method)	
Document setting position	Center reference	
Document processing mode	1-sided document -> 1-sided copy/2-sided copy 2-sided document -> 1-sided copy/2-sided copy	1-sided document -> 1-sided copy
Document scanning	Continuous reading	
Loadable sheets	A4/LTR 50 sheets (80g/m ²) LGL 30 sheets (80g/m ²)	
Mixed paper reading	Copyboard Glass: 216 mm x 297 mm Feeder: 216 x 356 mm	
Mixed paper	Available	
Document AE sensor	N/A	
Document size sensor	N/A	
Stamp function	N/A	
Allowable environment	Same as device	

T-1-6

Wireless LAN Specifications

Item	Specification / Function
Standard	IEEE802.11g/IEEE802.11b/IEEE 802.11n*
Transmission Scheme	DS-SS System/OFDM System
Frequency Range	2412 to 2472 MHz
Data Transmission Rate	<ul style="list-style-type: none"> • IEEE802.11g 6/9/12/18/24/36/48/54 Mbps • IEEE802.11b 1/2/5.5/11 Mbps • IEEE 802.11n <ul style="list-style-type: none"> - SGI Invalidated 20 MHz : 6.5/13/19.5/26/39/52/58.5/65 Mbps - SGI Validated 20 MHz : 7.2/14.4/21.7/28.9/43.3/57.8/72.2 Mbps - SGI Invalidated 40 MHz : 13.5/27/40.5/81/108/121.5/135 Mbps - SGI Validated 40 MHz : 15/30/45/60/90/120/150 Mbps
Communication Mode	Infrastructure Mode
Security	WEP, WPA-PSK (TKIP/AES-CCMP), WPA2-PSK (TKIP/AES-CCMP)

* WPS (Wi-Fi Protected Setup), Connection can be established by manually setting values!

SEND Specifications

Item	Specification / Function	
	File Server Transmission	E-mail Sending
Communication Protocol	SMB (TCP/IP)	SMTP*
Data Format	PDF (Compact), PDF, JPEG, TIFF	PDF (Compact), PDF
System Environment	<ul style="list-style-type: none"> Windows XP / Vista / 7 / Server 2003 / Server 2008 Solaris Version 2.6 or later Mac OS X (Mac OS X 10.7 and 10.8 are not supported.) Red Hat Linux 7.2 or later 	<ul style="list-style-type: none"> Windows XP / Vista / 7 / Server 2003 / Server 2008 Solaris Version 2.6 or later Mac OS X Red Hat Linux 7.2 or later
Interface	100BASE-TX, 10BASE-T	
Inputted Image	Text, Text/Photo, Photo	
Color Mode	Color, Black/White	
Paper Size	A4, A5, B5	

* POP3 is available to use only when authenticating before sending.

T-1-8

FAX Specifications

Item	Specification/function
Suitable line	Public Switched Telephone Network (PSTN) Up to 33.6Kbps in modem speed is currently available in PSTN. Note that available modem speed is telephone-line dependent. Telephone line connection: 1
Communication Protocol	Super G3, G3
Modulation method	Image modulation: V.34/V.17/V.29/V.27ter Transmission procedure: V.21
Transmission speed	33,600 bps
Coding	Compression method: JBIG, MMR, MR, MH
Error correction	ECM
Minimum receivable input level	V.17, V.27ter, V.29: -6 to -43 dBm V.34: 24.0 k to 28.8 k bps: -43 dBm 28.8 k to 33.6 k bps: -38 dBm 33.6 k bps: -9 dBm
Modem IC	SiliconLabs Si2435
Scanning line density	Normal:8 dots/mm x 3.85 lines/mm Fine:8 dots/mm x 7.7 lines/m,km Super fine:8 dots/mm x 15.4 lines/mm Ultra fine:16 dots/mm x 15.4 lines/mm
Half tone	256 tones
Reproduction resolution	600 x 600 dpi
Receivable reduction setting	Automatic reduction: 75-100% (1% increment)
FAX/TEL switching	Available
Answering machine transfer setting	Available
Remote reception	Available
Auto-dialing	Available
Delayed transmission	N/A
Broadcast transmission	MF8500 Series/MF8200 Series • Destinations: up to 210
Dual access	Up to 10 schedules
Image data backup	Available

T-1-9

Print Speed

MF8500 Series

Unit: page/minute.

Paper type		Cassette		MP Tray	
		1-sided	2-sided	1-sided	2-sided
Plain 1 (60 to 74g/m ²)	A4	20.0	9.9	16.0	9.1
	LTR	21.0	10.2	16.0	9.2
	LGL	17.1	9.2	14.1	8.4
Plain 2 (70 to 84g/m ²)	A4	20.0	9.9	16.0	9.1
	LTR	21.0	10.2	16.0	9.2
Plain 3 (75 to 90g/m ²)	A4	20.0	9.9	16.0	9.1
	LTR	21.0	10.2	16.0	9.2
Recycled (60 to 74g/m ²)	A4	20.0	9.9	16.0	9.1
	LTR	21.0	10.2	16.0	9.2
Color (60 to 74g/m ²)	A4	20.0	9.9	16.0	9.1
	LTR	21.0	10.2	16.0	9.2
Thick 1 (86 to 119g/m ²)	A4	20.0	9.9	16.0	9.1
	LTR	21.0	10.2	16.0	9.2
	LGL	17.1	9.2	14.1	8.4
Thick 2 (120 to 128g/m ²)	A4	11.9	8.8	11.9	8.8
	LTR	12.2	9.0	12.2	9.0
	LGL	10.8	8.0	10.8	8.0
Thick 3 (129 to 163g/m ²)	A4	9.7	5.0	7.6	4.6
	LTR	9.7	5.2	7.6	4.6
	LGL	8.3	5.0	6.7	4.4
Coated 1 (100 to 110g/m ²)	A4	11.9	8.8	11.9	8.8
	LTR	12.2	9.0	12.2	9.0
	LGL	10.8	8.0	10.8	8.0
Coated 2 (120 to 130g/m ²)	A4	6.5	3.0	5.0	3.0
	LTR	6.9	3.0	5.0	3.0
	LGL	5.6	3.0	4.4	2.8
Coated 3 (155 to 163g/m ²)	A4	-	-	5.0	-
	LTR	-	-	5.0	-
	LGL	-	-	4.4	-
Coated 4 (210 to 220g/m ²)	A4	-	-	5.0	-
	LTR	-	-	5.0	-
	LGL	-	-	4.4	-
Transparency		6.5	-	5.0	-
Label		9.7	-	7.6	-
Index card		4.3*	-	4.6*	-
Envelope		7.6*	-	5.4*	-

*: By reducing throughput, print speed becomes approximately 2 pages/min. at a minimum.†1-10

MF8200 Series

Unit: page/minute.

Paper type		Cassette	
		Color Mode	B&W Mode
Plain 1 (60 to 74g/m ²)	A4	14.0	14.0
	LTR	14.0	14.0
	LGL	11.5	11.5
Plain 2 (70 to 84g/m ²)	A4	14.0	14.0
	LTR	14.0	14.0
Plain 3 (75 to 90g/m ²)	A4	14.0	14.0
	LTR	14.0	14.0
Recycled (60 to 74g/m ²)	A4	14.0	14.0
	LTR	14.0	14.0
Color (70 to 84g/m ²)	A4	14.0	14.0
	LTR	14.0	14.0
Thick 1 (85 to 120g/m ²)	A4	6.0	6.0
	LTR	6.0	6.0
	LGL	5.0	5.0
Thick 2 (121 to 163g/m ²)	A4	6.0	6.0
	LTR	6.0	6.0
	LGL	5.0	5.0
Coated 1 (100 to 110g/m ²)	A4	6.0	6.0
	LTR	6.0	6.0
	LGL	5.0	5.0
Coated 2 (120 to 130g/m ²)	A4	6.0	6.0
	LTR	6.0	6.0
	LGL	5.0	5.0
Coated 3 (155 to 165g/m ²)	A4	6.0	6.0
	LTR	6.0	6.0
	LGL	5.0	5.0
Transparency		6.0	6.0
Label		6.0	6.0
Index card		6.0*	6.0*
Envelope		6.0*	6.0*

*: By reducing throughput, print speed becomes approximately 2 pages/min. at a minimum.†1-11

Paper types / Paper size

MF8500 Series

Type	Size	Feeding direction (mm)	Width direction (mm)	Pickup position	
				MP Tray	Cassette
Thin paper (60 g/m ²)	-	-	-	-	-
Recycled (60 to 74g/m ²)*1	A4 ^{*3}	210.0	297.0	YES	YES
Color (60 to 74g/m ²)	B5	182.0	257.0	YES	YES
Plain 1 (60 to 74g/m ²)	A5	148.0	210.0	YES	YES
Plain 2 (70 to 84g/m ²)	LGL	215.9	355.6	YES	YES
Plain 3 (75 to 90g/m ²)	LTR ^{*3}	215.9	279.4	YES	YES
Thick 1 (86 to 119g/m ²)	STMT	139.7	215.9	YES	YES
Thick 2 (120 to 128g/m ²)	EXEC ^{*4}	184.1	266.7	YES	YES
Thick 3 (129 to 163g/m ²)	OFFICIO	317.5	215.9	YES	YES
	B-OFFICIO	355.0	216.0	YES	YES
	M-OFFICIO	341.0	216.0	YES	YES
	GLTR	203.2	266.7	YES	YES
	GLGL	330.2	203.2	YES	YES
	FLS	330.2	215.9	YES	YES
	K16	195.0	270.0	YES	YES
	Custom Paper Size	-	-	YES ^{*5}	YES ^{*6}
Coated 1 (100 to 110g/m ²)	A4 ^{*3}	210.0	297.0	YES	YES
Coated 2 (120 to 130g/m ²)	LTR ^{*3}	215.9	279.4	YES	YES
Coated 3 (155 to 165g/m ²)					
Coated 4 (210 to 220g/m ²)	A4 ^{*3}	210.0	297.0	YES	-
	(100 to 110g/m ²)	215.9	279.4	YES	-
Transparency ^{*2}	A4 ^{*3}	210.0	297.0	YES	YES
	LTR ^{*3}	215.9	279.4	YES	YES
Label	A4 ^{*3}	210.0	297.0	YES	YES
	LTR ^{*3}	215.9	279.4	YES	YES
	Custom Paper Size	-	-	YES ^{*5}	YES ^{*6}
Index card	Postcard ^{*4}	100	148	YES	YES
	Reply Postcard ^{*4}	148	200	YES	YES
Envelope	Envelope COM10	104.7	241.3	YES	YES
	Envelope Monarch	98.4	190.5	YES	-
	N3 ^{*4}	120	235	YES	YES
	Y3 ^{*4}	120	235	YES	YES
	Envelope C5	162	229	YES	YES
	Envelope DL	110	220	YES	YES
	Custom Paper Size ^{*4}	-	-	YES ^{*5}	YES ^{*6}

T-1-12

*1: 100% recycled paper is also usable.

*2: Use transparency sheets for laser printers.

(Canon's genuine transparency sheets are specially recommended.)

*3: Received documents, report and lists can be printed.

*4: You can load paper of the following custom paper sizes.

Width 3" to 8 1/2" (76.2 to 215.9 mm); Length 5" to 14" (127 to 355.6 mm)

*5: You can load paper of the following custom paper sizes.

Width 4" to 8 1/2" (100 to 215.9 mm); Length 5 7/8" to 14" (148 to 355.6 mm)

MF8200 Series

Type	Size	Feeding direction (mm)	Width direction (mm)	Pickup position	
				MP Tray	Cassette
Thin paper (60 g/m ²)	A4 ³	210.0	297.0	YES	YES
Recycled (60 to 74g/m ²) ¹	B5	182.0	257.0	YES	YES
Color (60 to 74g/m ²)	A5	148.0	210.0	YES	YES
Plain 1 (60 to 74g/m ²)	LGL	215.9	355.6	YES	YES
Plain 2 (70 to 84g/m ²)	LTR ³	215.9	279.4	YES	YES
Plain 3 (75 to 90g/m ²)	STMT	139.7	215.9	YES	YES
Thick 1 (85 to 120g/m ²)	EXEC	184.1	266.7	YES	YES
Thick 2 (121 to 163g/m ²)	OFFICIO	317.5	215.9	YES	YES
	B-OFFICIO	355.0	216.0	YES	YES
	M-OFFICIO	341.0	216.0	YES	YES
	GLTR	203.2	266.7	YES	YES
	GLGL	330.2	203.2	YES	YES
	FLS	330.2	215.9	YES	YES
	K16	195.0	270.0	YES	YES
	Index card ⁴	-	-	YES	YES
	Custom Paper Size	-	-	YES ⁵	YES ⁵
Coated 1 (100 to 110g/m ²)	A4 ³	210.0	297.0	YES	YES
Coated 2 (111 to 130g/m ²)	LTR ³	215.9	279.4	YES	YES
Coated 3 (131 to 160g/m ²)					
Coated 4 (161 to 220g/m ²)	A4 ³	210.0	297.0	YES	-
	LTR ³	215.9	279.4	YES	-
Transparency ²	A4 ³	210.0	297.0	YES	YES
Label	LTR ³	215.9	279.4	YES	YES
Index card	Postcard	100	148	YES	YES
	Reply Postcard	148	200	YES	YES
Envelope	Envelope COM10	104.7	241.3	YES	YES
	Envelope Monarch	98.4	190.5	YES	YES
	N3	120	235	YES	YES
	Y3	120	235	YES	YES
	Envelope C5	162	229	YES	YES
	Envelope DL	110	220	YES	YES
	Index card ⁴	-	-	YES	YES
	Custom Paper Size	-	-	YES ⁵	YES ⁵

T-1-13

*1: 100% recycled paper is also usable.

*2: Use transparency sheets for laser printers.

(Canon's genuine transparency sheets are specially recommended.)

*3: Received documents, report and lists can be printed.

*4: You can load paper of the following custom paper sizes.

Width 3" to 8 1/2" (76.2 to 215.9 mm); Length 5" to 14" (127 to 355.6 mm)

*5: You can load paper of the following custom paper sizes.

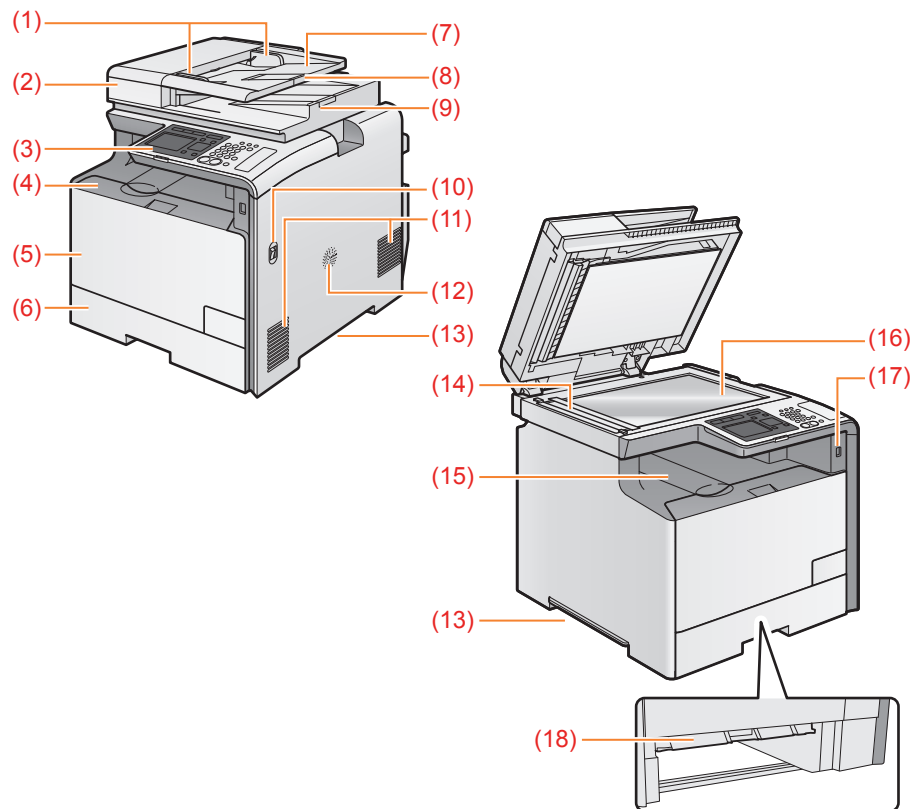
Width 4" to 8 1/2" (100 to 215.9 mm); Length 5 7/8" to 14" (148 to 355.6 mm)

Name of Parts

External View

MF8500 Series

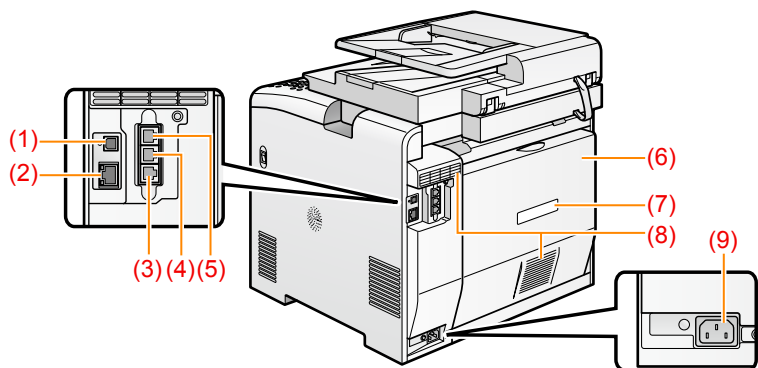
Front Side



F-1-7

- | | |
|--------------------------------|---|
| 1 Document guide | 10 Main power switch |
| 2 Feeder | 11 Vent-hole |
| 3 Control panel | 12 Speaker |
| 4 Front cover | 13 Grip |
| 5 Multi-purpose tray (MP tray) | 14 Paper scanner for document from feeder |
| 6 Paper cassette | 15 Delivery tray |
| 7 Document feed tray | 16 Copyboard glass |
| 8 Extension tray | 17 USB memory port |
| 9 Document delivery tray | 18 Manual feed guide |

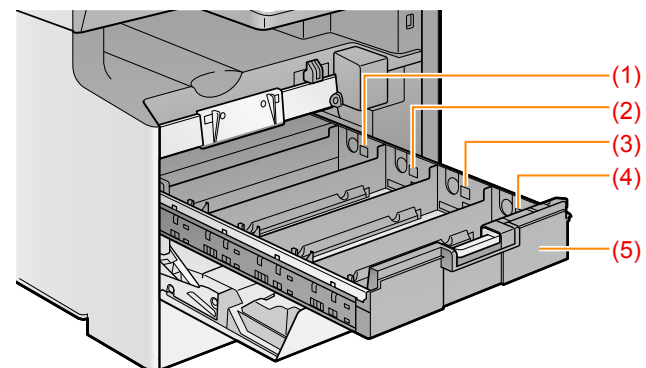
● Rear Side



F-1-8

- | | | | |
|---|-----------------------------|---|--------------|
| 1 | USB port | 6 | Rear cover |
| 2 | LAN port | 7 | Rating plate |
| 3 | Telephone line terminal | 8 | Vent-hole |
| 4 | External telephone terminal | 9 | Power socket |
| 5 | Handset terminal | | |

● Inside

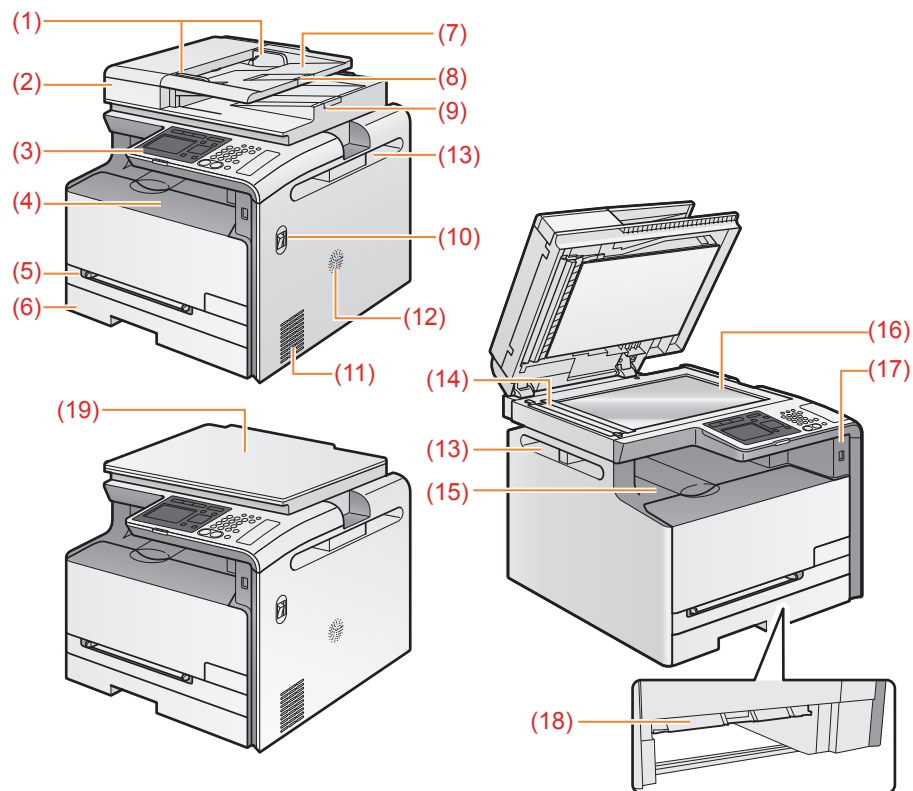


F-1-9

- | | |
|---|-------------------------|
| 1 | Y toner cartridge slot |
| 2 | M toner cartridge slot |
| 3 | C toner cartridge slot |
| 4 | Bk toner cartridge slot |
| 5 | Toner cartridge tray |

MF8200 Series

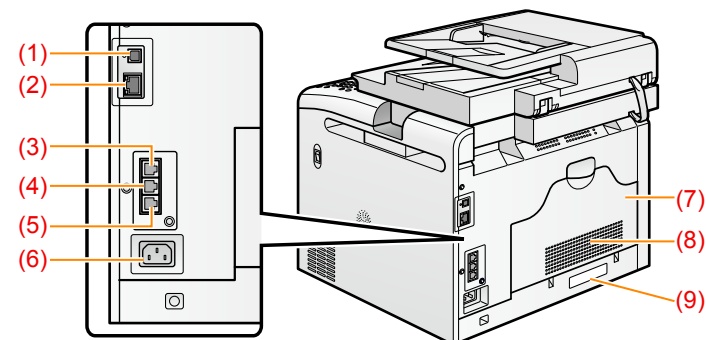
Front Side



F-1-10

- | | |
|--------------------------|--------------------------------------|
| 1 Document guide | 11 Vent-hole |
| 2 Feeder | 12 Speaker |
| 3 Control panel | 13 Grip |
| 4 Front cover | 14 Scanner for documents from feeder |
| 5 Manual feed slot | 15 Delivery tray |
| 6 Cassette | 16 Copyboard glass |
| 7 Document feed tray | 17 USB memory port |
| 8 Extension tray | 18 Manual feed guide |
| 9 Document delivery tray | 19 Platen Cover (for MF8210 only) |
| 10 Main power switch | |

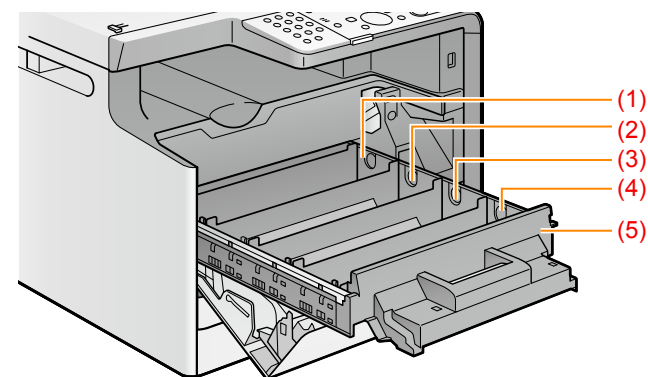
Rear Side



F-1-11

- | | |
|------------------------------------|----------------|
| 1 USB port | 6 Power socket |
| 2 LAN port | 7 Rear cover |
| 3 Handset terminal | 8 Vent-hole |
| 4 External telephone terminal | 9 Rating plate |
| 5 Telephone line terminal (unused) | |

Inside



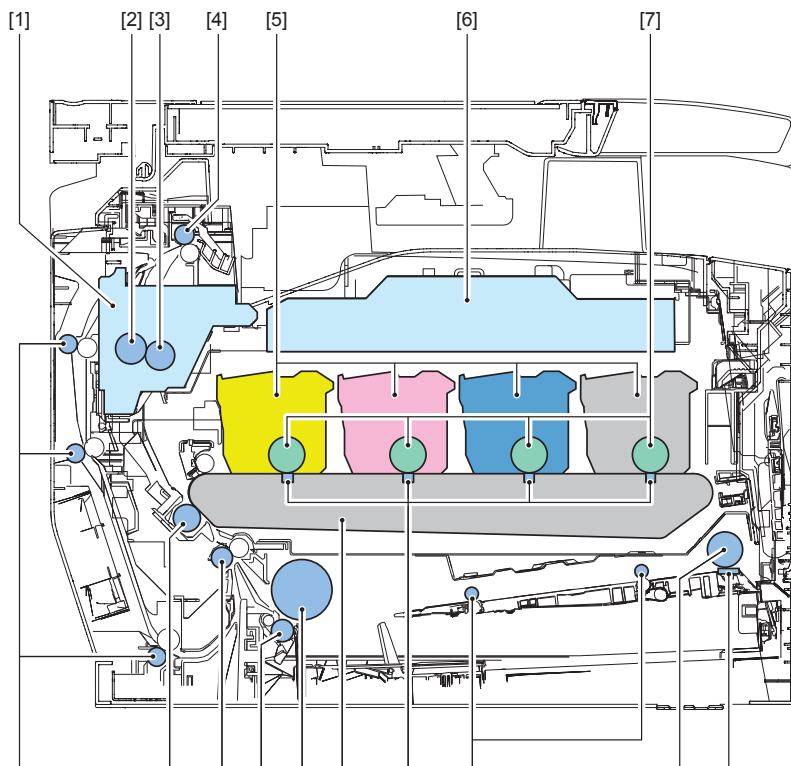
F-1-12

- | |
|---------------------------|
| 1 Y toner cartridge slot |
| 2 M toner cartridge slot |
| 3 C toner cartridge slot |
| 4 Bk toner cartridge slot |
| 5 Toner cartridge tray |

Cross Section View

MF8500 Series

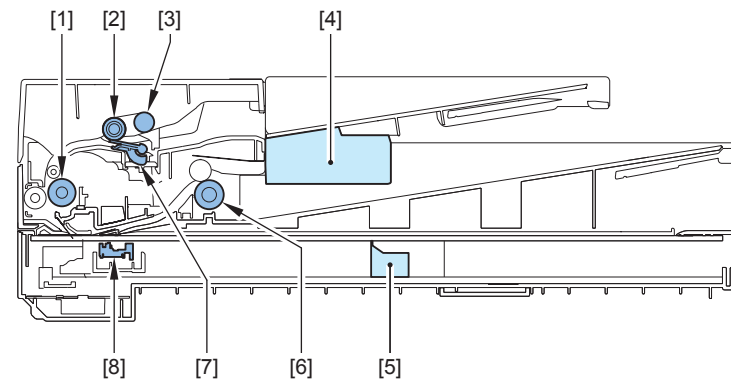
Printer



F-1-13

- | | |
|--------------------------|---------------------------------------|
| 1 Fixing assembly | 10 MP tray feed roller |
| 2 Pressure roller | 11 Primary transfer pad |
| 3 Fixing film unit | 12 ITB unit |
| 4 Delivery roller | 13 Cassette pickup roller |
| 5 Toner cartridge | 14 Cassette separation roller |
| 6 Laser scanner unit | 15 Registration roller |
| 7 Photosensitive drum | 16 Secondary transfer external roller |
| 8 MP tray separation pad | 17 Duplex feed roller |
| 9 MP tray pickup roller | |

Reader/ADF Unit

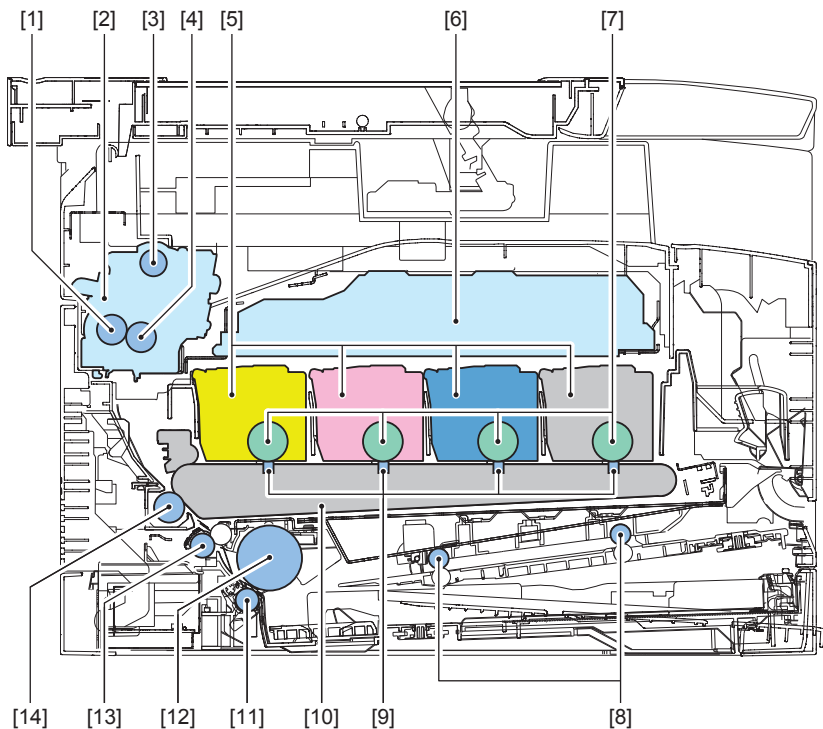


F-1-14

- | |
|---------------------------|
| 1 ADF registration roller |
| 2 ADF separation roller |
| 3 ADF pickup roller |
| 4 ADF unit |
| 5 Reader unit |
| 6 ADF delivery roller |
| 7 ADF separation pad |
| 8 CIS unit |

MF8200 Series

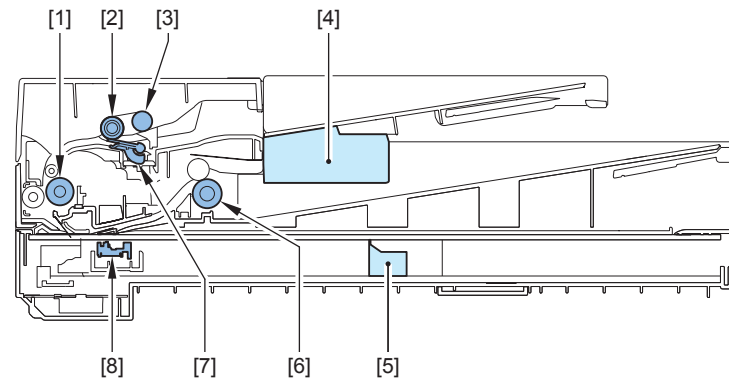
Printer



F-1-15

- | | |
|-----------------------|---------------------------------------|
| 1 Pressure roller | 8 Manual feed roller |
| 2 Fixing assembly | 9 Primary transfer pad |
| 3 Feed roller | 10 ITB unit |
| 4 Fixing film unit | 11 Cassette separation roller |
| 5 Toner cartridge | 12 Cassette pickup roller |
| 6 Laser scanner unit | 13 Registration roller |
| 7 Photosensitive drum | 14 Secondary transfer external roller |

Reader/ADF Unit



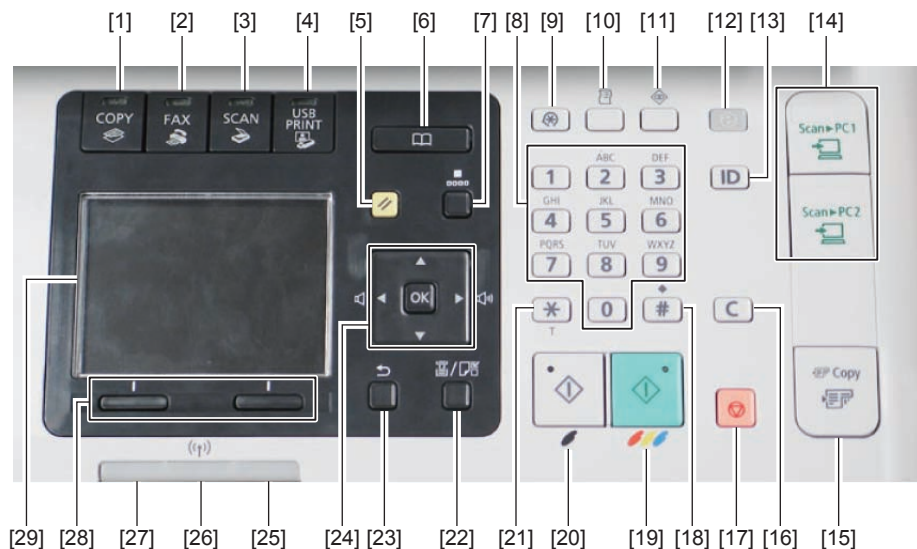
F-1-16

- | |
|---------------------------|
| 1 ADF registration roller |
| 2 ADF separation roller |
| 3 ADF pickup roller |
| 4 ADF unit |
| 5 Reader unit |
| 6 ADF delivery roller |
| 7 ADF separation pad |
| 8 CIS unit |

Control Panel

MF8580 / MF8570 / MF8550 / MF8280 / MF8250 Series

Main Control Panel

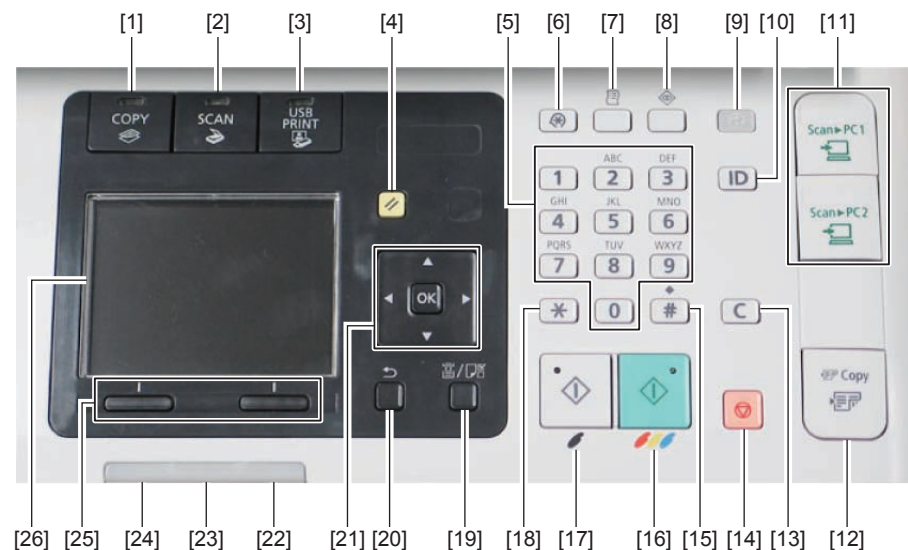


F-1-17

- | | |
|----------------------------------|---|
| 1 [COPY] key | 16 [Clear] key |
| 2 [FAX] key | 17 [Stop] key |
| 3 [SCAN] key | 18 [#] key |
| 4 [USB PRINT] key | 19 [Start (Color)] key |
| 5 [Reset] key | 20 [Start (B&W)] key |
| 6 [Address Book] key | 21 [*] key |
| 7 [Coded Dial] key | 22 [Select Paper/Settings] key |
| 8 Numeric keys | 23 [Back] key |
| 9 [Menu] key | 24 [▲] [▼] [←] [→] [OK] key |
| 10 [Report] key | 25 [Error] indicator |
| 11 [Status Monitor] key | 26 Wi-Fi Lamp (MF8570Cdw/MF8280Cw only) |
| 12 [Energy Saver] key | 27 [Processing/Data] indicator |
| 13 [ID] key | 28 Multi keys (left/right) |
| 14 [Scan > PC1 / Scan > PC2] key | 29 Display |
| 15 [Paper Save Copy] key | |

MF8540 / MF8530 / MF8240 / MF8230 / MF8210 Series

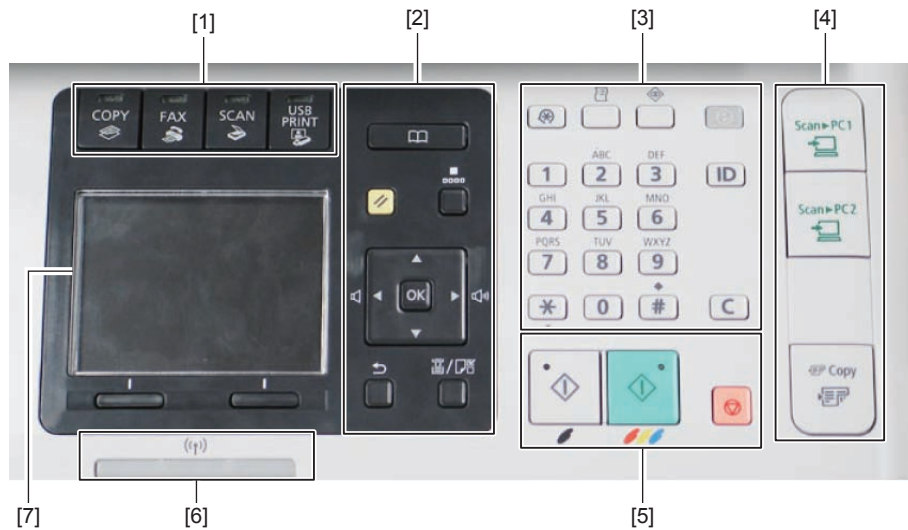
Main Control Panel



F-1-18

- | | |
|----------------------------------|---|
| 1 [COPY] key | 14 [Stop] key |
| 2 [SCAN] key | 15 [#] key |
| 3 [USB PRINT] key | 16 [Start (Color)] key |
| 4 [Reset] key | 17 [Start (B&W)] key |
| 5 Numeric keys | 18 [*] key |
| 6 [Menu] key | 19 [Select Paper/Settings] key |
| 7 [Report] key | 20 [Back] key |
| 8 [Status Monitor] key | 21 [▲] [▼] [←] [→] [OK] key |
| 9 [Energy Saver] key | 22 [Error] indicator |
| 10 [ID] key | 23 Wi-Fi Lamp (MF8570Cdw/MF8280Cw only) |
| 11 [Scan > PC1 / Scan > PC2] key | 24 [Processing/Data] indicator |
| 12 [Paper Save Copy] key | 25 Multi keys (left/right) |
| 13 [Clear] key | 26 Display |

Explanation of the Main Control Panel



F-1-19

Name	Description
(1) Mode switch keys	Press to switch the mode to copy, fax (MF8580 / MF8570 / MF8550 / MF8280 / MF8250 only), scan or USB direct print.
(2) [Address Book] key*	Addresses registered in the address book are called up. It is also used when registering/editing an address in the address book.
[Reset] key	The setting is cancelled and changed back to the original state.
[Coded Dial] key*	This is pressed when using coded dial. Press this key and then enter a 3-digit number to call up the address registered under the number.
[▲] key	Press to scroll up or to increase the value.
[▼] key	Press to scroll down or to decrease the value.
[←] key	Press to return to the previous screen or move the cursor to the left. Press to decrease the sound volume of fax communications.
[→] key	Press to proceed to the next screen or move the cursor to the right. Press to increase the sound volume of fax communications.
[OK] key	Confirms specified or registered settings.
[Back] key	The screen goes back to the screen one layer before. When this key is pressed while making a setting, the screen goes back to the previous screen without applying the setting.
[Select Paper/Settings] key	Select the pickup assembly containing the paper to be used for printing. This is used also when specifying the size and type of the paper set in the pickup assembly.

Name	Description
(3) [Menu] key	Press to specify or register various settings.
[Report] key	A report or a list is printed. You can also make settings related to printing of a report.
[Status Monitor] key	The processing status and usage history of print and fax can be checked. It is also possible to check the status of this equipment such as the paper level, toner level, and occurrence of an error.
[Energy Saver] key	It is used to enter/cancel sleep mode (energy saving mode). It lights up in yellow during sleep mode.
[ID] key	Press to log in/out of the machine when the machine is managed by Department ID management.
Numeric keys ([0]-[9] keys)	Enter characters and numbers.
[*] key	Press to switch the character entry mode. Press to switch between pulse and tone dialing to send a fax.
[#] key	Press to enter symbols.
[Clear] key	The entered character or number is cancelled.
(4) [Scan > PC1] key	Press to send your scans to the computer registered in each key.
[Scan > PC2] key	
[Paper Save Copy] key*	Press to make copies with the preset modes to reduce paper consumption.
(5) [Start (B&W)] key	The original is read in black and white. If this key is pressed when making a copy or printing an image in a USB memory device (memory media print), it is printed in black and white.
[Start (Color)] key	The original is read in color. If this key is pressed when making a copy or printing an image in a USB memory device (memory media print), it is printed in color.
[Stop] key	Press to cancel jobs.
(6) [Processing/Data] indicator	Blinks during transmission and lights up when the machine has waiting jobs.
Wi-Fi Lamp*	It lights up during wireless LAN connection.
[Error] indicator	It blinks or lights when an error has occurred.
(7) Display	Displays messages and operation status. Displays items, texts, and numbers when you are specifying settings.

T-1-14

* MF8580 / MF8570 / MF8550 / MF8280 / MF8250 only

2

Technical Overview

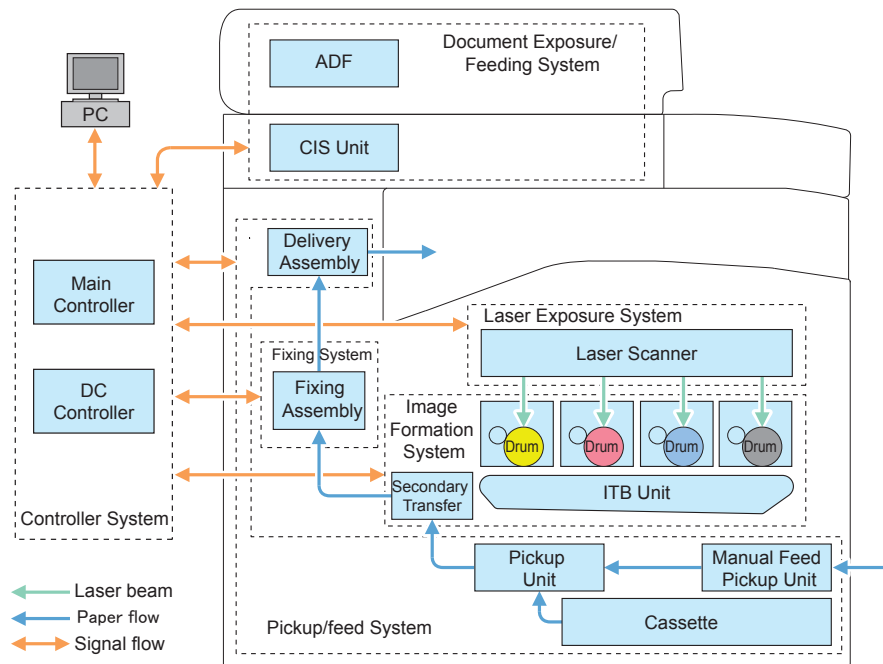
- Basic Configuration
- Document Exposure/Feeder System
- Controller System
- Laser Control System
- Image Formation System
- Fixing System
- Pickup / Feed System

Basic Configuration

Configuration function

This device is roughly composed of the 6 functional blocks as shown in the figure below

- Document exposure/delivery system
- Controller system
- Laser exposure system
- Image formation system
- Fixing system
- Pickup / Feed System



F-2-1

Basic Sequence

Basic Operational Sequence

The CPU on the DC controller PCB controls the operational sequence. The table below shows the operation and the purposes in each status from start-up of the device and to last rotation after print job completion.

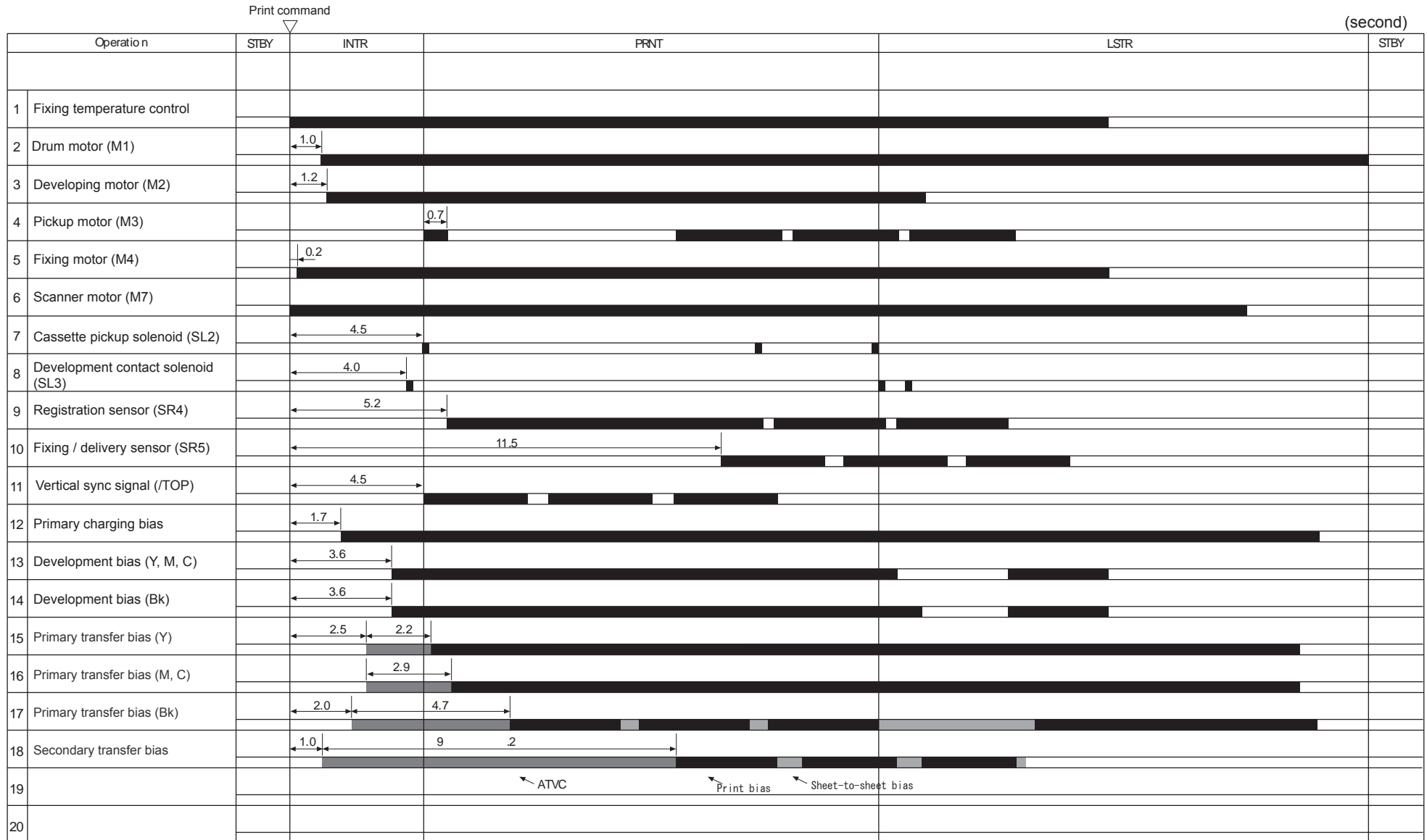
Status	Operation
WAIT (Wait)	Interval from power-ON or reactivation from sleep mode upon shutting the door(s) to entering the print-ready status Activate the printer to be ready for printing. During WAIT time, the following operations are done: pressure is applied to the pressure roller of the fixing assembly; check cartridges and units being in place; move the developing unit to the home position; and, clean the ITB. When needed, color displacement is corrected and the image is stabilized.
STBY (STBY)	Interval from the wait time or the last rotation to issuance of a print command from the main controller during the stand-by status. The printer enters the sleep mode upon receiving a "sleep" command from the main controller or power-OFF. Maintain the print-ready status. The printer enters the sleep mode upon receiving a "sleep" command from the main controller during the stand-by status. The printer executes color displacement correction or image stabilization upon receiving corresponding commands from the main controller.
INTR (IINTR)	Interval from issuance of a print command from the main controller during the stand-by status to warming up the fixing assembly to the target temperature. To make the printer ready for print jobs, activate high-voltage bias PCBs, the laser scanner unit and the fixing assembly.
PRINT (Print)	Interval from the initial rotation to completion of last page fixation. Based on the video signals input from the main controller, form the static latent image on the photosensitive drum to transfer and fix the toner image on paper. When a certain pages are printed after power-ON, the device undergoes color displacement correction and/or image stabilization.
LSTR (Last rotation)	Interval from print job completion to motor deactivation. The last page of the print job is completely delivered. In this status, the laser scanner unit and high-voltage bias PCBs are inactive. The printer starts the initial rotation upon receiving a print command from the main controller during this status.

T-2-1

Print Sequence

MF8500 Series

Full-color print on A4 plain paper (3 pages)



MF8200 Series

Full-color print on A4 plain paper (3 pages)



Print Mode

MF8500 Series

The models of this series switch among 3 print modes to optimize the paper feed speed for printing.

Print mode	Paper feed speed	Paper type	Print speed	Remarks
Normal speed mode	1/1 speed	Plain paper 1 (60 to 74 g/m ²) Plain paper 2 (70 to 84 g/m ²) Plain paper 3 (75 to 90 g/m ²) Recycled paper (60 to 74 g/m ²) Color paper (60 to 74 g/m ²) Thick paper 1 (86 to 119 g/m ²)* ¹ Thick paper 2 (120 to 128 g/m ²)* ² Coated paper 1 (100 to 110 g/m ²)* ⁴	20 ppm* ⁶	Common to color and B&W printing
1/2 speed mode	1/2 speed	Thick paper 1 (91 to 128 g/m ²)* ¹ Thick paper 2 (120 to 128 g/m ²)* ² Thick paper 3 (129 to 163 g/m ²)* ³ Coated paper 1 (100 to 110 g/m ²)* ⁴ Postcards* ⁵	9.7 ppm* ⁶	
1/3 speed mode	1/3 speed	Thick paper 3 (129 to 163 g/m ²)* ² Coated paper 2 (120 to 130 g/m ²) Coated paper 3 (155 to 165 g/m ²) Coated paper 4 (210 to 220 g/m ²) Transparency Labels Postcards* ⁵ Envelopes	7.6 ppm* ⁶	

*1: For Thick Paper 1 (86 to 119 g/m²), switched to normal mode when environment temperature is 20 deg C and above, and switched to 1/2 speed mode when the temperature is lower than 20 deg C. T-2-2

*2: For Thick Paper 2 (120 to 128 g/m²), switched to normal mode when environment temperature is 20 deg C and above, and switched to 1/2 speed mode when the temperature is lower than 20 deg C.

*3: For Thick Paper 3 (129 to 163 g/m²), switched to 1/2 speed mode when environment temperature is 20 deg C and above, and switched to 1/3 speed mode when the temperature is lower than 20 deg C.

*4: For Coated paper 1 (100 to 110 g/m²), switched to normal mode when environment temperature is 20 deg C and above, and switched to 1/2 speed mode when the temperature is lower than 20 deg C.

*5: For Postcard, switched to 1/2 speed mode when environment temperature is 20 deg C and above, and switched to 1/3 speed mode when the temperature is lower than 20 deg C.

*6: The fastest print speed in each mode.

MF8200 Series

The models of this series switch among 3 print modes to optimize the normal print speed each for color and B&W printing.

Print mode	Paper feed speed	Paper type	Print speed	Remarks
B&W normal speed mode	3/2 speed	Plain paper 1 (60 to 74 g/m ²) Plain paper 2 (70 to 90 g/m ²) Recycled paper (60 to 74 g/m ²) Color paper (60 to 74 g/m ²)	12 ppm	for B&W printing
Color normal speed mode	1/1 speed	Plain paper 1 (60 to 74 g/m ²) Plain paper 2 (70 to 90 g/m ²) Recycled paper (60 to 74 g/m ²) Color paper (60 to 74 g/m ²)	8 ppm	for color printing
3/4 speed mode	3/4 speed	Thick paper 1 to 3 (91 to 163 g/m ²) Coated paper 1 to 4 (100 to 220 g/m ²) Transparency Labels Envelopes Postcards	6 ppm	Common to color and B&W printing

T-2-3

Document Exposure/Feeder System

Document Exposure System

Overview

Specifications / Control / Function List

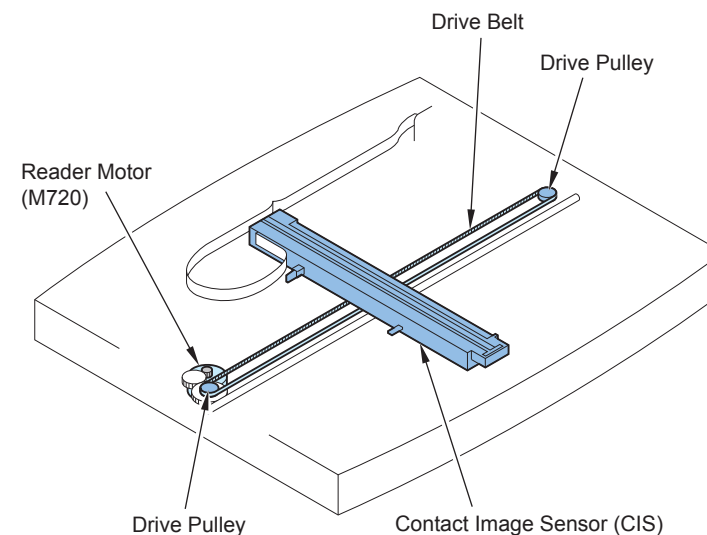
Item	Function / Method
Document Exposure	LED
Document Scan	Book Mode: <ul style="list-style-type: none"> Scan by the shift of the contact sensor (CIS) ADF: <ul style="list-style-type: none"> Document stream reading by fixed contact sensor (CIS)
Scanning Resolution	[CL] 600 dpi (horizontal scanning) x 600 dpi (vertical scanning) 300 dpi (horizontal scanning) x 600 dpi (vertical scanning) 300 dpi (horizontal scanning) x 300 dpi (vertical scanning) [BK] 600 dpi (horizontal scanning) x 600 dpi (vertical scanning) 300 dpi (horizontal scanning) x 600 dpi (vertical scanning)
Number of Gradations	256 Gradations
Magnification	25% to 400% Horizontal scanning direction: Image processing by the Main Controller PCB Vertical scanning direction: The speed at which the carriage moves and image processing by the Main Controller PCB
Lens	CIS/Color
CIS	Number of lines: 1 line Number of pixels: 5184 pixels as total pixels (5107 pixels as effective pixels) Maximum document scanning width: 216mm
CIS Drive Control	Drive Control by Reader Motor (M720)
Document Size Detection	None
Dirt Sensor Detection	Yes

T-2-4

Major Components

Followings are the major components for Document Exposure System.

- The contact sensor to scan document.
- The Reader motor (M720), the drive pulley, the drive belt, to shift the contact sensor in image scanning control, the contact sensor is shifted by rotating the Reader motor based on the drive signal from the Main Controller PCB and scan the original on the copyboard glass. When ADF is in use, image is scanned by feeding the originals by ADF instead of shifting the contact sensor.



F-2-4









Reference Position for Reading/Printing

The reference position for reading/printing from the copyboard or ADF is explained below.

Reference Position for Reading

Upper left alignment is applied when the original is read from the copyboard, and center alignment is applied when the original is read from the ADF.



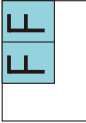
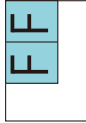
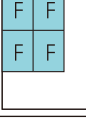
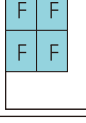
In the case where only a part of the document is read due to the scaling setting, the read area and the output result differ between copyboard reading and ADF reading.

	ADF (center alignment)		Copyboard (upper left alignment)	
Set scaling (original size < recording paper size)	 Original	 Output	 Original	 Output
Set scaling (enlargement)	 Original	 Output	 Original	 Output

F-2-5

Reference Position for Printing

Only when the original is read from ADF without reduction layout setting (1 on 1), it is printed in center alignment. In other cases, upper left alignment is applied for printing.

	ADF (center alignment)	Copyboard (upper left alignment)
1 in 1		
2 in 1		
4 in 1		

F-2-6

Document Feeder System

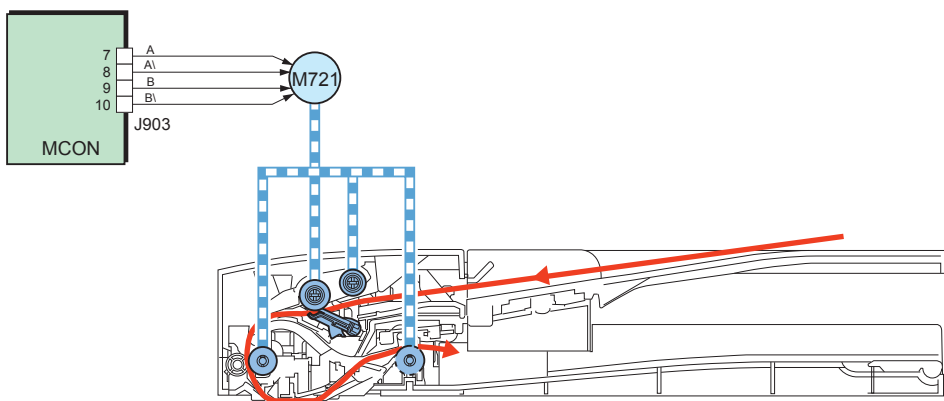
Overview

Pickup/Feed/Delivery Operation

The Auto Document Feeder (ADF) mounted onto this host machine is dedicated to stream-reading.

1 Motor (ADF Motor: M721) is engaged in Pickup/Feeding/Delivery.

At the start of Copy/Fax/Scan, the ADF Motor (M721) is driven by the drive command from the Main Controller PCB to Pickup/Feed the originals set face up on the original tray one by one in order from the top. The original is scanned by the contact sensor when moving through the copyboard glass, and then delivered face down to the original Delivery Assembly.



F-2-7

Various Control

Original Detection

There are two types of Original Detection in this Equipment.

1. Original Presence / Absence Detection

Setting the original onto the original tray pushes up the actuator, activating (light shielded =>light transmitted) the Document Sensor (SR703), and resulting in detection of the presence of original.

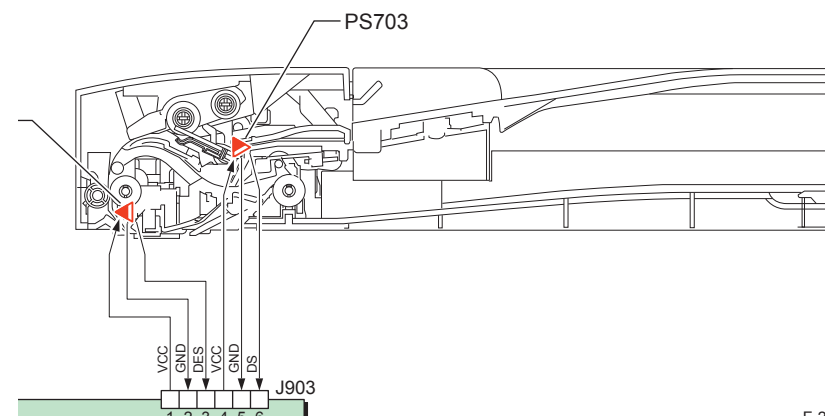
2. Detection of the End of the Original

The leading edge of the original that is fed pushes up the actuator, activating the Document End Sensor (SR702) (light shielded =>light transmitted) and resulting in detection of the reach of the leading edge of original. Furthermore, when the trailing edge of the original passes the actuator position, the actuator returns to the original position, inactivating the Document End Sensor (SR702) (light transmitted => light shielded). The trailing edge of the original is detected by this mechanism.

The original length that can be scanned with this equipment is less than 400 mm. Passing of the original longer than this results in jam stop. The original length is calculated by the time it takes from detection of the leading edge of the original to detection of the trailing edge of the original.

MEMO:

There is no function to detect the original size (original width, length) in this equipment.



F-2-8

● Jam Detection

The following cases are judged as jam.

1. In case of delay in reaching DS/DES or stationary during scanning of original
 2. In case DS/DES is detected as ON at power-on (residual paper jam)
 3. In case of detecting original of which length is 400 mm or longer
- Operation after Detection of Jam
The host machine stops scanning operation and displays "CHECK DOCUMENT" on the control panel. No jam code is displayed.
In case of the model equipped with fax function (with built-in speaker), the warning beep occurs at the detection of jam.
 - How to release Jam.
Remove the jammed paper and open / close the ADF upper cover

● Service Tasks

■ Action for Parts Replacement

Outline of the measures is described in this section. For the detailed procedure, refer to the "Chapter 5 Adjustment".

● After replacing ADF Unit

- 1)Execute the white level adjustment.
- 2)Execute the reading position adjustment.
- 3)Execute the original stop position and feed speed adjustment at stream reading.

● Reader Unit

- 1)Enter the setting value of the Standard White Plate.
- 2)Execute the color/B&W AGC adjustment.
- 3)Execute the reading position adjustment.
- 4)Execute the white level adjustment.
- 5)Enter the value on the label packed with the part in the service mode item.
- 6)Execute the image reading adjustment at ADF reading.

● Reader Unit Upper Cover (Copyboard Glass)

- 1)Enter the value on the label affixed on the glass in the service mode item.
- 2)Execute the reading position adjustment.
- 3)Execute the white level adjustment.

● CIS Unit

- 1)Execute the color/B&W AGC adjustment.
- 2)Execute the auto detection of the reading position at DF stream reading.
- 3)Execute the white level adjustment.
- 4)Execute the image reading position adjustment.
- 5)Execute the image reading adjustment at ADF reading.

■ Maintenance

No periodically replaced parts, durable parts or periodical service is set for this product.

■ Service Notes

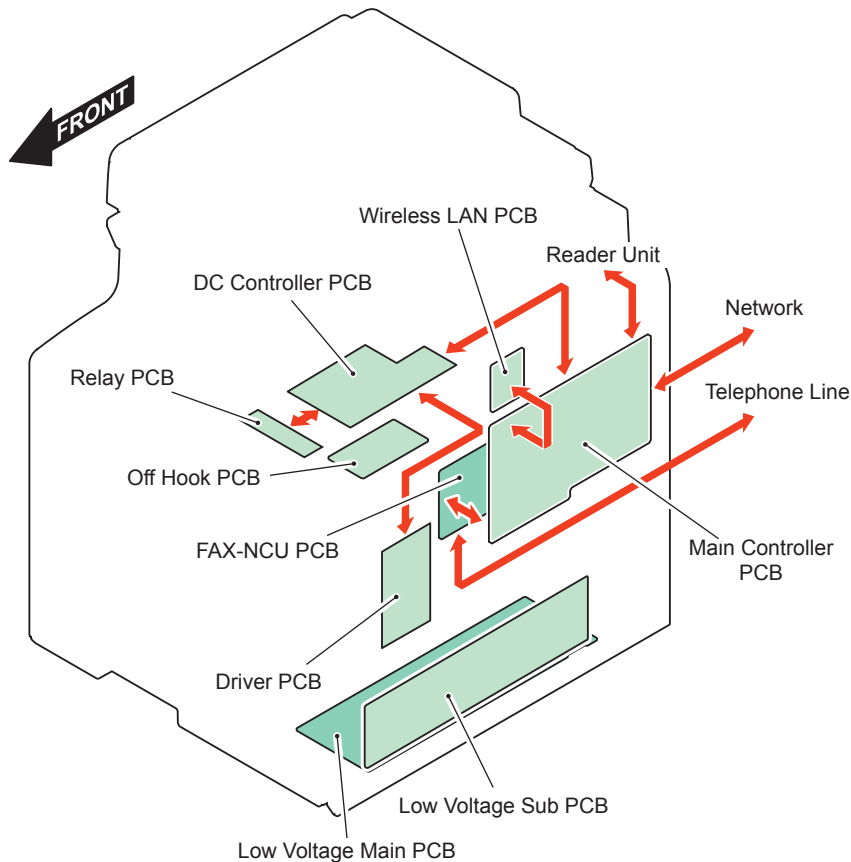
None

Controller System

Overview

This product is mainly controlled by the main and DC controllers.

- MF8500 Series

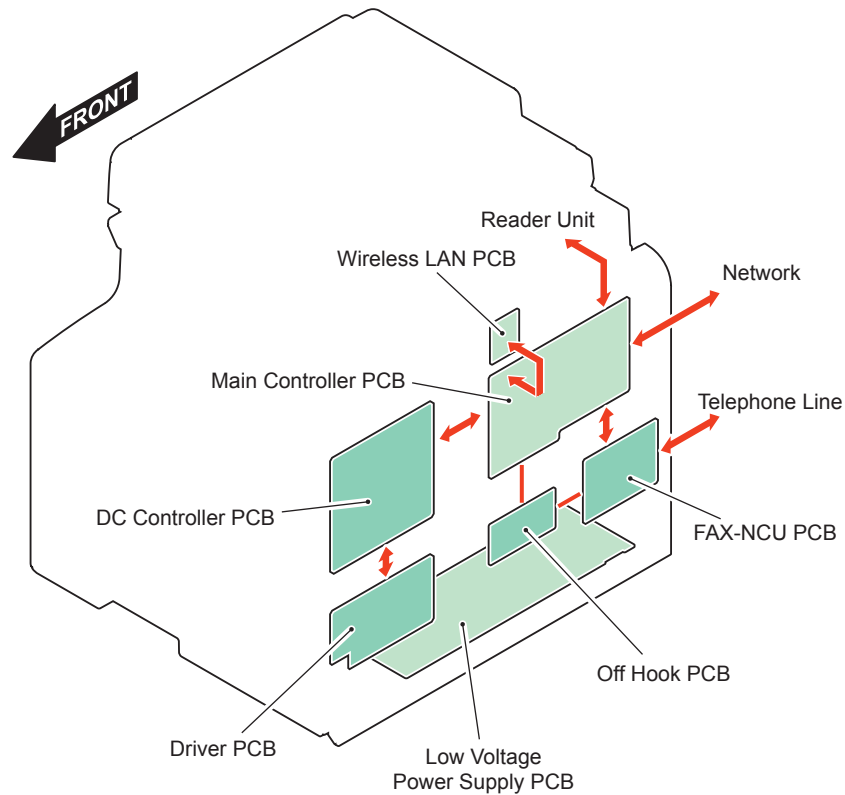


F-2-9

Parts name	Role
Main Controller PCB	Provides controls on the system, image processing, reader / ADF, FAX and network and maintain various setting values.
DC Controller PCB	Provides controls on printer, laser, high-voltage PCBs, I/O, etc. and maintain setting values.

T-2-5

- MF8200 Series



F-2-10

Parts name	Role
Main Controller PCB	Provides controls on the system, image processing, reader / ADF, FAX and network and maintain various setting values.
DC Controller PCB	Provides controls on printer, laser, high-voltage PCBs, I/O, etc. and maintain setting values.

T-2-6

Controls

Motor Controls

This product uses 3 motors for paper feed and image formation.

The tables below show motor specifications used in this product.

- MF8500 Series

Name		Driven parts	Type	Failure detection
Drum Motor	M1	Photosensitive drum, developing cylinder, ITB	DC Motor	Available
Registration Motor	M3	Registration Roller	Stepping Motor	Not Available
Developing Motor	M2	Developing Cylinder	DC Motor	Available
Fixing Motor	M4	Pressure Roller, Delivery Roller, Duplex Feed Roller	Stepping Motor	Not Available
Pickup Motor	M5	Pickup Roller, Multi Manual feed Roller, Multi Purpose Tray Pickup Roller	Stepping Motor	Not Available

T-2-7

- MF8200 Series

Name		Driving parts	Type	Failure detection
Drum Motor	M701	Photosensitive Drum, Developing Cylinder, ITB	DC Motor	Available
Pickup Motor	M702	Pickup Roller, Feed Roller, Registration Roller	Stepping Motor	Not Available
Fixing Motor	M703	Pressure Roller, Delivery Roller	Stepping Motor	Not Available

T-2-8

Open door detection

This product detects door opening by the door open sensor.

Sensor Name	Function
Front Cover Sensor (SR612)	Detect open the Front Cover.
Rear Cover Sensor (SR613)	Detect open the Rear Cover.

T-2-9

When this sensor detects door opening, the DC controller stops driving motors and solenoids.

Low-Voltage Power Supply Control

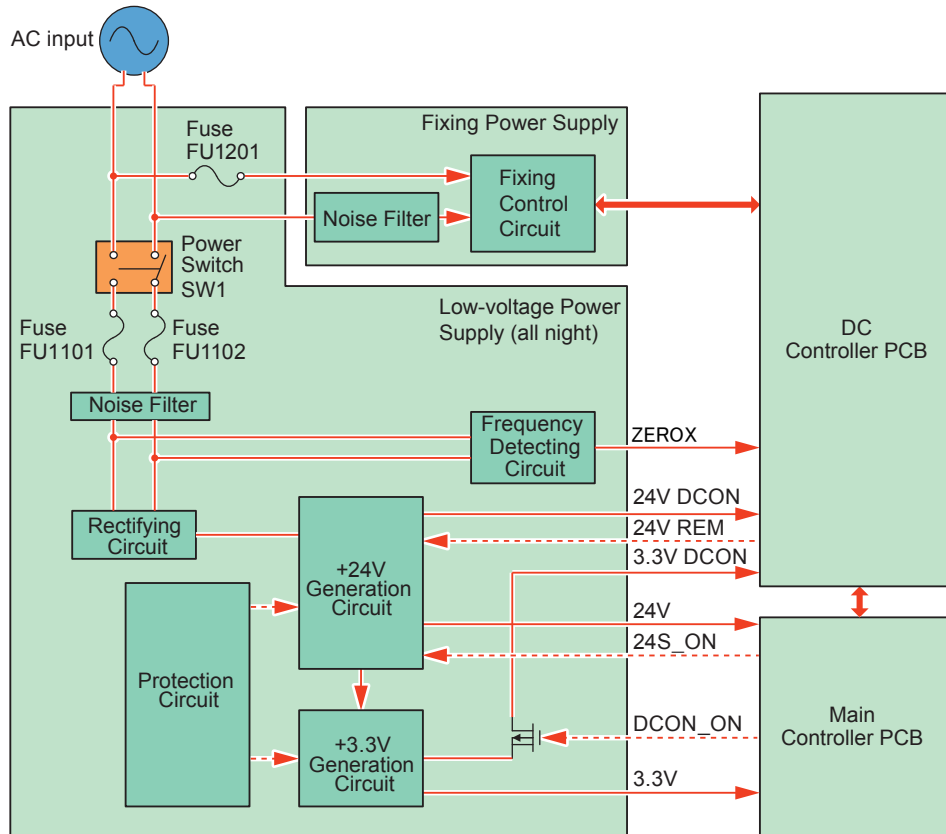
This circuit converts AC voltage input from the power supply receptacle through the fixing power supply into DC power supply and supplies it to each load.

See the figures below for low-voltage / fixing power supply block diagrams.

- Low-voltage power supply: generates DC power supply required in the printer.
- Fixing power supply: supplies AC power supply to the low-voltage power supply and control the fixing heater temperatures.

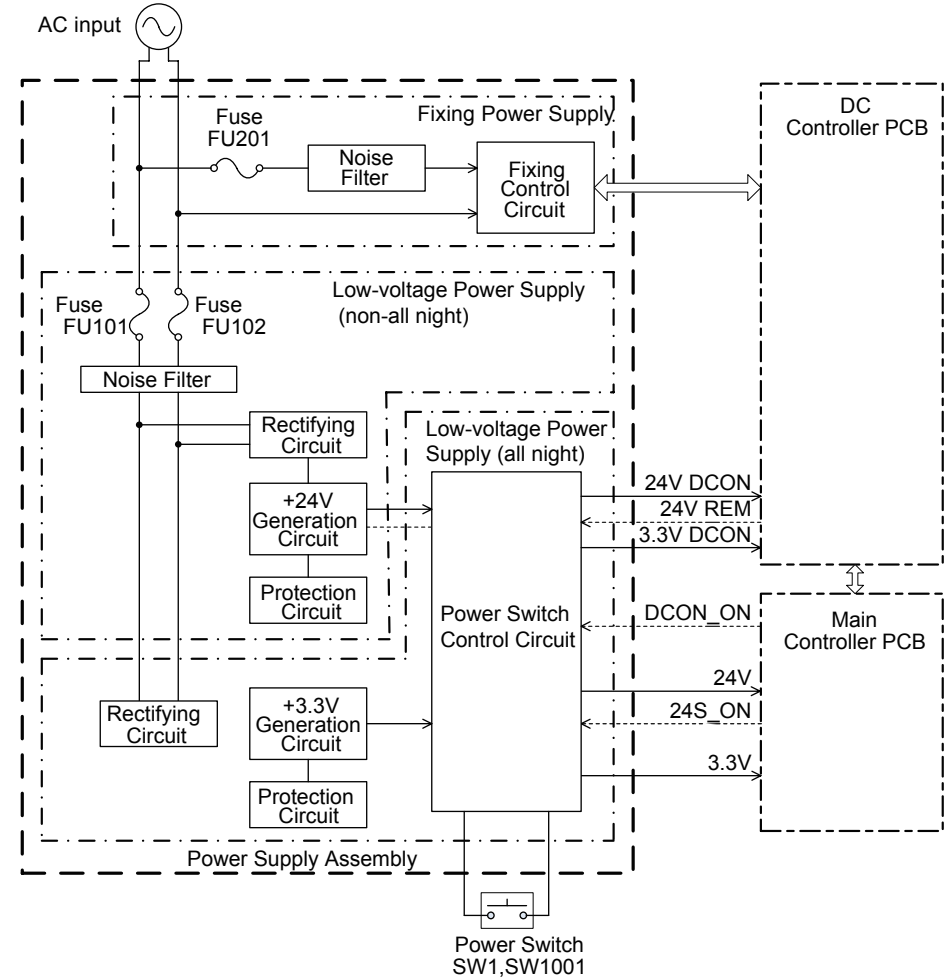
The low-voltage power supply is actuated when the AC power supply is attached to the inlet and the power switch is turned on. The AC power supply supplied through the fixing power supply is converted to + 24V and + 3.3V of the DC power supply in the low-voltage power supply before supplied to the printer engine.

- MF8500 Series



F-2-11

- MF8200 Series



SW1001 : Product supporting automatic shutdown (MF8230)

F-2-12

Service Tasks

Action for Parts Replacement

Outline of the measures is described in this section. For the detailed procedure, refer to the “Chapter 5 Adjustment”.

Main Controller PCB

Before replacing Main Controller PCB

Back up user data (settings / registered data, etc.) and Service mode data for setting / registration after replacing PCBs. Take notes of data unable to back up.

- 1) In Remote UI, export the user data.
- 2) In service mode, export the service mode data.
- 3) Record the default settings shown on the service label.
- 4) Write down the machine's serial number and the data of Settings/Registration > System Settings > Device Information > Location.

After replacing Main Controller PCB

- 1) Setting of destination / paper size groups.
- 2) Clearing setting / registered data.
- 3) Adjustment and input of default values.
- 4) Migrating the serial number
- 5) In Remote UI, import the user data.
- 6) In service mode, import the service mode data.
- 7) Reinstall the drivers.

In the case of a model without fax for EUR (MF8540/MF8230), perform the following works.

8. Setting of automatic shutdown menu display
9. Turn OFF and then ON the main power.
10. Checking the setting of Auto Sleep Time

DC controller PCB

Before replacing the DC Controller PCB

- 1) In service mode, perform the following procedure to store the DC Controller setting values.
COPIER > FUNCTION > VIFFNC > STOR-DCN

After replacing the DC Controller PCB

- 1) In service mode, perform the following procedure to restore the DC Controller setting values.
COPIER > FUINCTION > VIFFNC > RSTR-DCN
- 2) Turn OFF/ON the power.
- 3) Execute the print color displacement correction and the quick correction.
- 4) Turn OFF/ON the power.

Maintenance

No periodically replaced parts, durable parts or periodical service is set for this product.

Service Notes

None

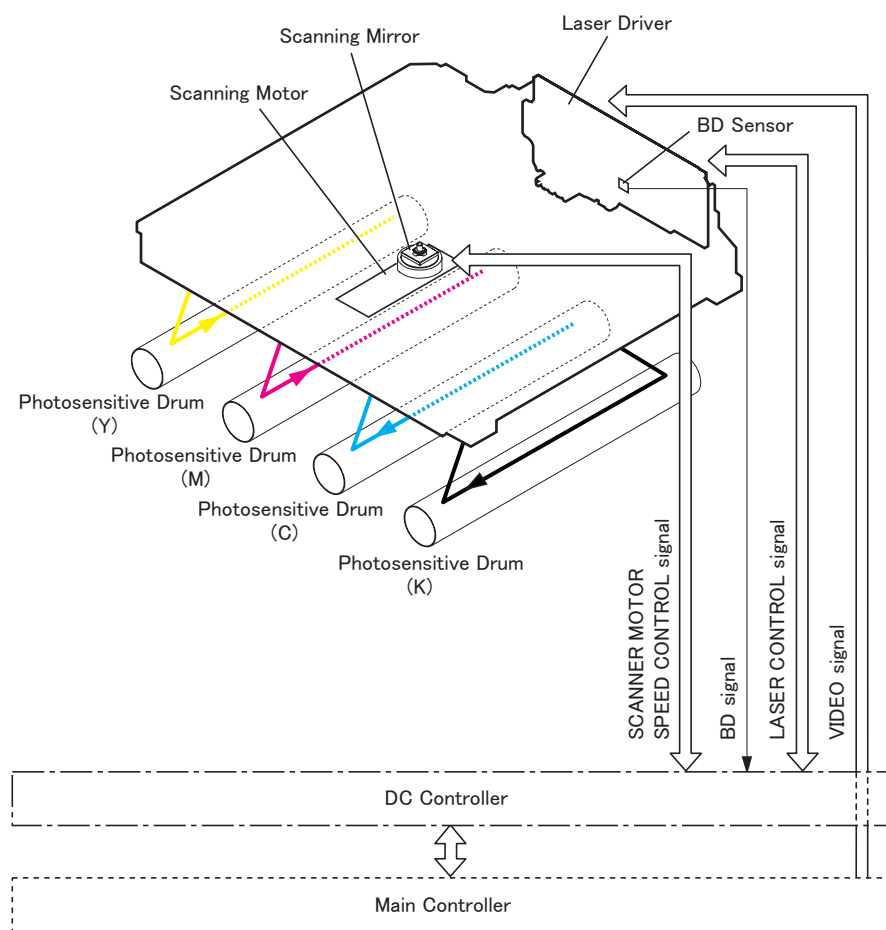
Laser Control System

Overview

The Laser Scanner system is to form a static latent image on the photosensitive drum based on the video signal sent from the Main Controller.

The Laser Scanner Unit is composed of the laser driver, the Scanner Motor Unit and other components, which are controlled based on signals input by the DC Controller.

The figure below shows the Laser Scanner Unit schematically.



F-2-14

Controls

Failure detection

1. Scanner Motor failures

- The rotation does not reach the pre-defined value after a certain time elapsed from the Scanner Motor actuated.
- The rotation failed to meet the tolerable range consecutively within a certain time during the Scanner Motor in drive.

Error Code: E110-0000

2. BD failures

- When out-of-range BD cycle is detected during printing.

Service Tasks

■ Action for Parts Replacement

Outline of the measures is described in this section. For the detailed procedure, refer to the “Chapter 5 Adjustment”.

● After replacing Laser Scanner Unit

- 1) Register the value on the label packed with the Laser Scanner Unit in service mode.
- 2) After the registration, affix the label packed with the unit on the inside of the Right Cover.

■ Maintenance

No periodically replaced parts, durable parts or periodical service is set for this product.

■ Service Notes

● Point to note when replacing the laser scanner unit

Do not disassemble the laser scanner unit in the field because it has been adjusted in the factory.

Otherwise, it may cause image fault such as color displacement. (you need to replace the laser scanner unit in that case.)

Image Formation System

Overview

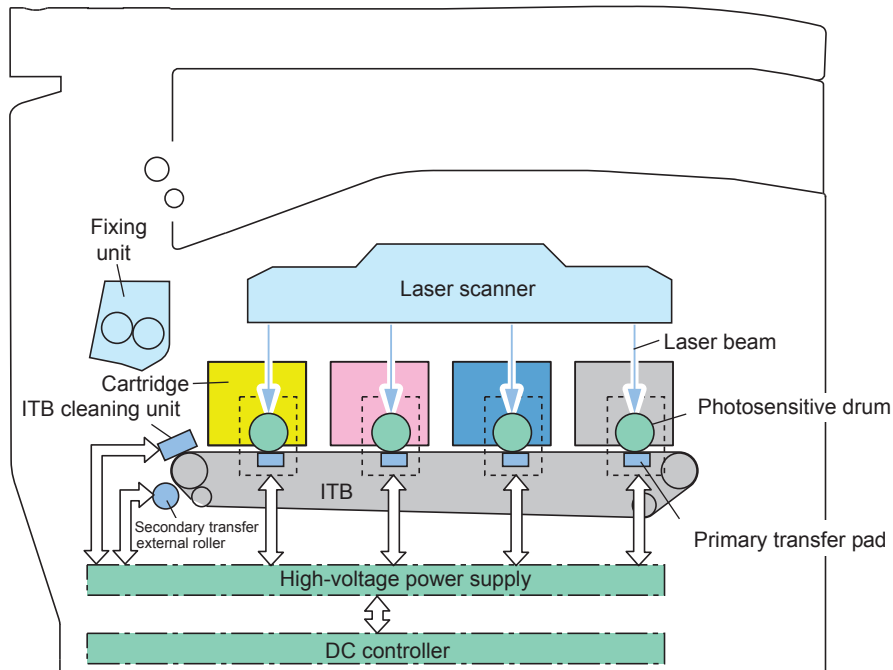
The image formation system holds the core function of this product to form toner images on paper.

To form toner images, the DC controller controls various high-voltage power supply PCBs. This product is a compact and high-speed color printing device that employs the 4-drum and intermediate transfer method.

The image formation system is composed of the following components.

- 4 cartridges
- ITB unit
- Secondary transfer external roller

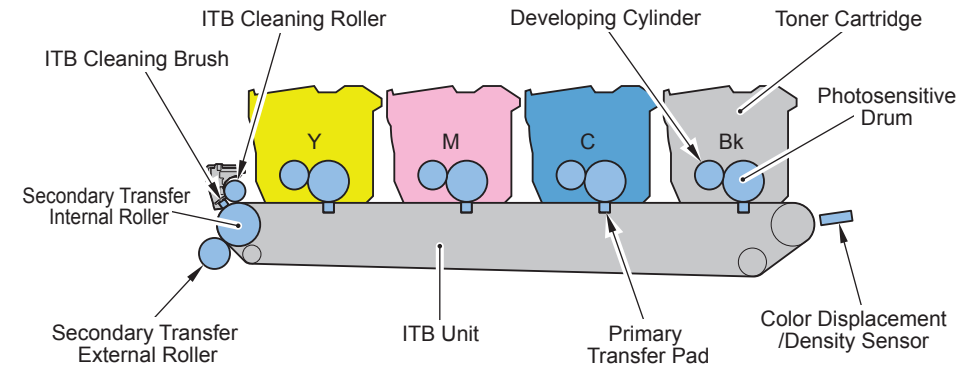
The figure below shows the image formation system schematically.



F-2-15

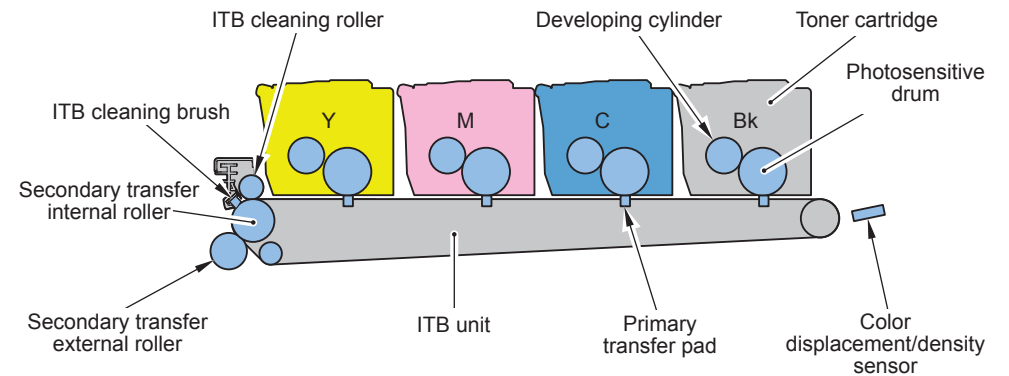
Parts

MF8500 series



F-2-16

MF8200 series



F-2-17

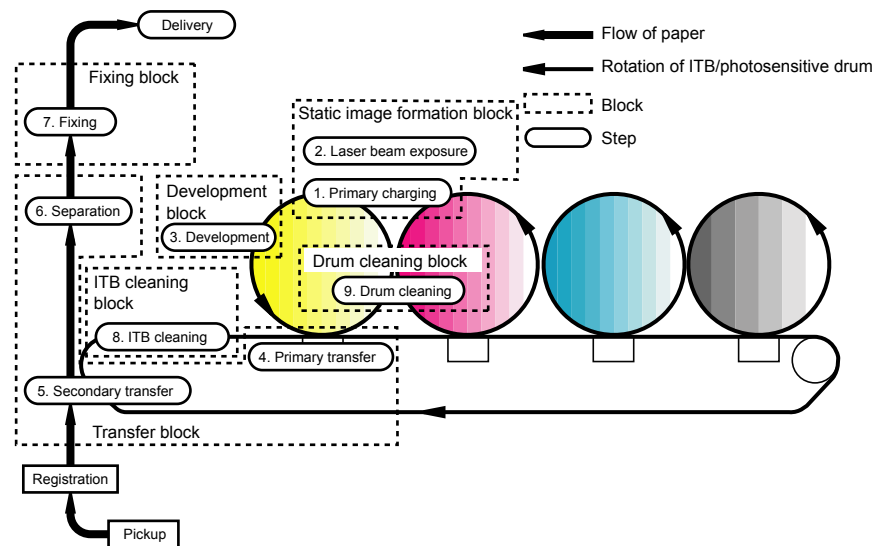
Image Forming Process

Overview

The image forming process of this product is composed roughly of 6 blocks and 9 steps.

Block	Step	Description
Static latent image forming block	1	Primary charging
	2	Laser beam exposure
Development block	3	Development
Transfer block	4	Primary transfer
	5	Secondary transfer
	6	Separation
Fixing block	7	Fixing
ITB cleaning block	8	ITB cleaning
Drum cleaning block	9	Drum cleaning

T-2-11



F-2-18

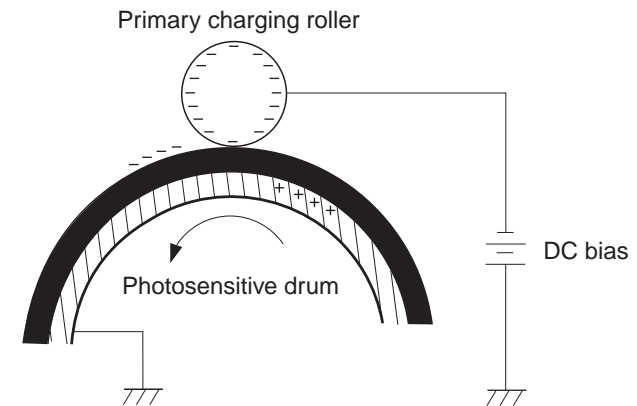
Static latent image forming block

This block consists of 2 steps to form a static latent image on the photosensitive drum.

Step 1: Primary charging

Before forming a static latent image, the photosensitive drum surface should be charged negatively.

This product employs the method to charge the photosensitive drum directly from the primary charging roller, applying the DC negative bias in order to negatively charge the photosensitive drum surface.

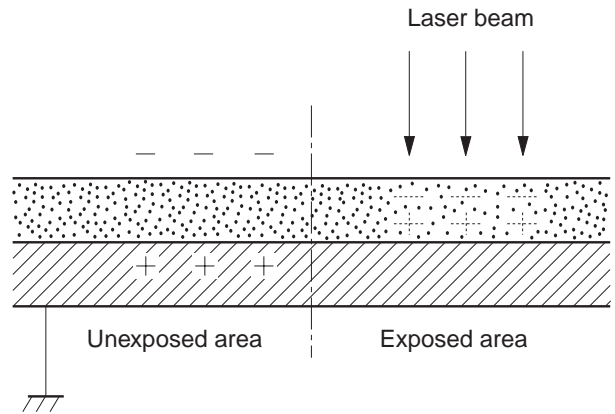


F-2-19

● Step 2: Laser beam exposure

Expose the photosensitive drum with laser beams to form a static latent image.

The static latent image is formed by laser beam scanning that neutralizes or strips negative potentials on the scanned parts.



F-2-20

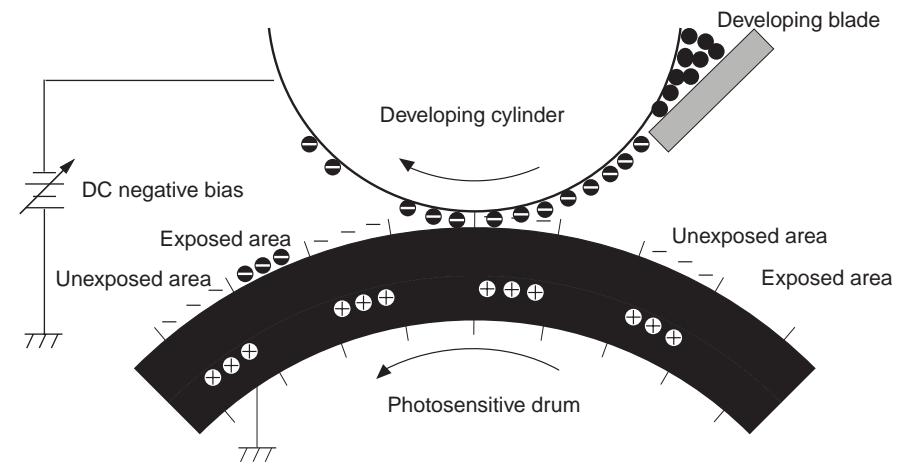
■ Development block

The static latent image formed on the photosensitive drum is visualized by toner deposited in this block.

● Step 3: Development

Toner is deposited on the static latent image formed on the photosensitive drum.

Toner is then charged negatively through friction between the developing cylinder and the developing blade surface. The DC bias is applied to the developing cylinder to generate potential difference from the photosensitive drum. When the negatively charged toner contacts the photosensitive drum, it is deposited on the static latent image due to potential difference between the drum and the developing cylinder.



F-2-21

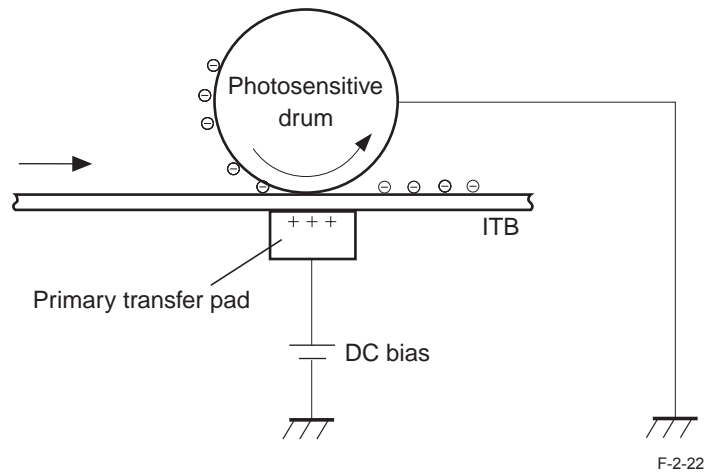
Transfer block

The toner image on the photosensitive drum is transferred to paper through 3 steps in this block.

Step 4: Primary transfer

Transfer the toner image on the photosensitive drum to the ITB.

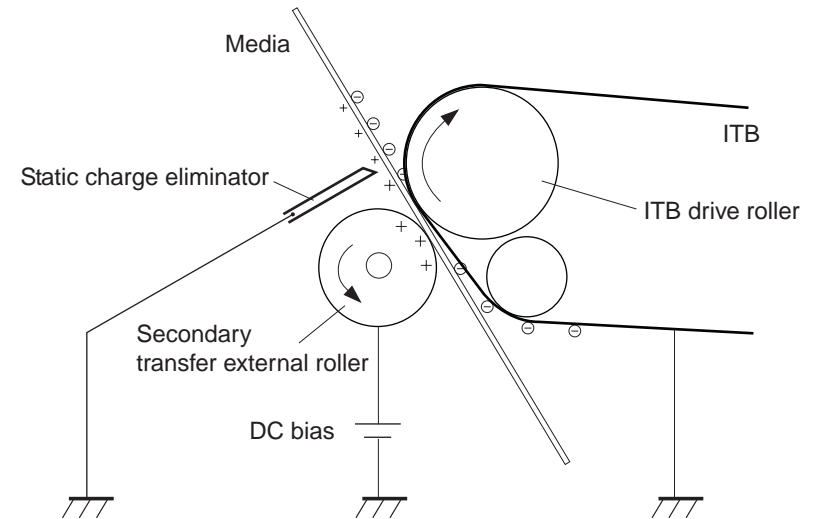
The DC positive bias is applied to the primary transfer pad to charge the ITB positively. By this, the negatively charged toner on the photosensitive drum is transferred to the ITB.



Step 5: Secondary transfer

Transfer the toner image on the ITB to paper.

The DC positive bias is applied to the secondary transfer external roller to charge the paper positively. By this, the negatively charged toner image on the ITB is transferred to the paper.

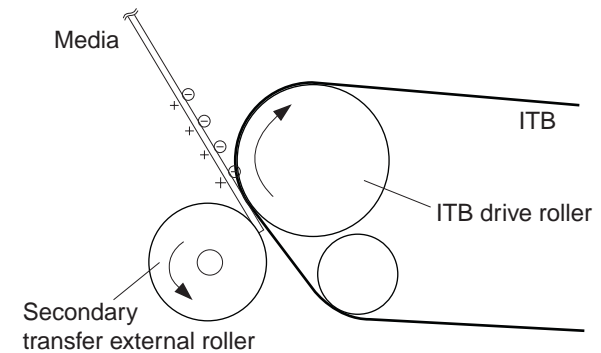


F-2-23

Step 6: Separation

Separate the paper from the ITB using paper elasticity and curvature of the ITB drive motor.

To stabilize the paper delivery and image quality, use the static eliminator to decay the potential on the back of the paper after image transfer.



F-2-24

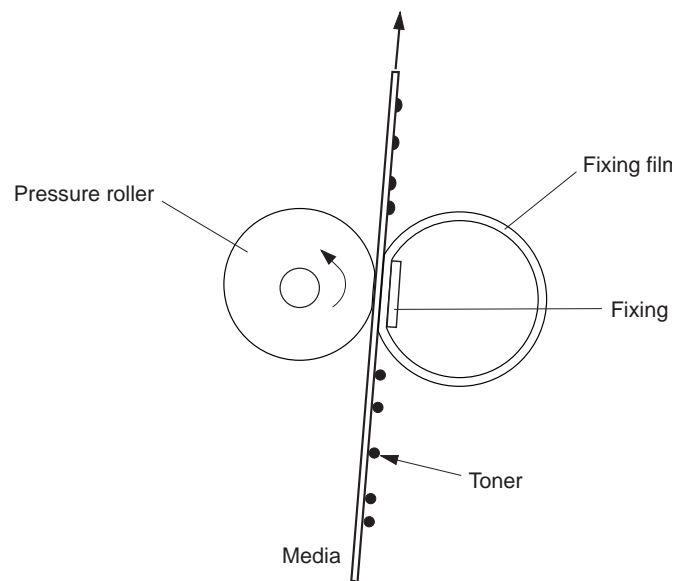
■ Fixing block

The toner image is fixed on the paper in this block.

● Step 7: Fixing

This product employs the on-demand fixing method.

By applying pressure and heat on the paper and the toner image on it, the toner is fused to develop the permanent image.



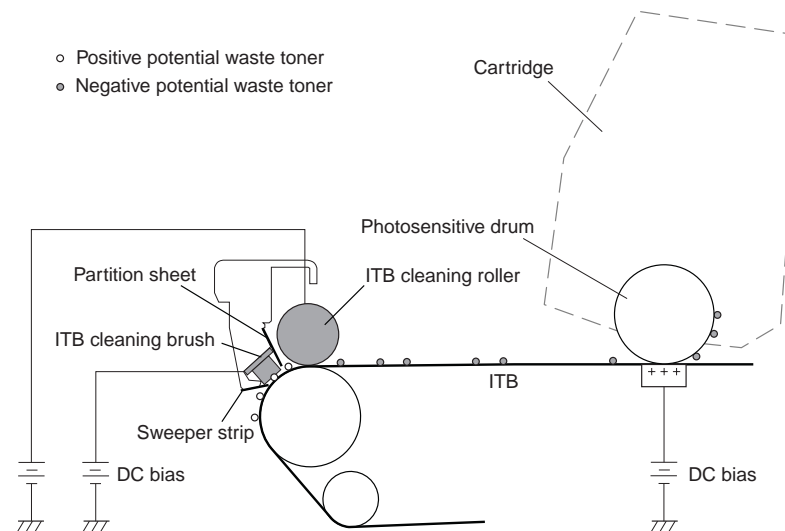
F-2-25

■ Cleaning block

The residual toner on the ITB surface is cleaned in this step.

● Step 8: ITB cleaning

The DC positive bias is applied to the ITB cleaning roller and the ITB cleaning brush to charge the collected toner positively. The positively charged collected toner is reversely transferred from the ITB to the photosensitive drum by the primary transfer pad.



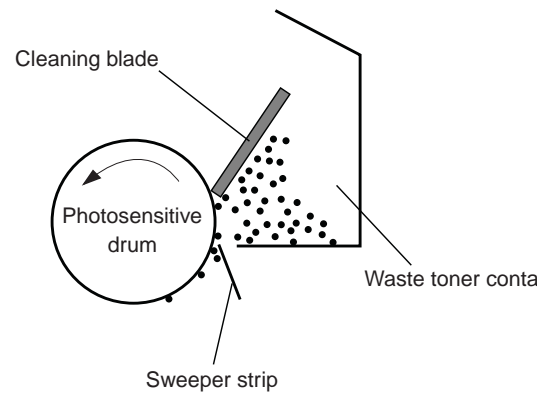
F-2-26

■ Cleaning block

The residual toner on the photosensitive drum is cleaned in this block.

● Step 9: Drum cleaning

The cleaning blade scrapes off the residual toner on the photosensitive drum to collect into the cleaner container. Now the photosensitive drum is cleaned.



F-2-27

Controls

High-voltage power supply control

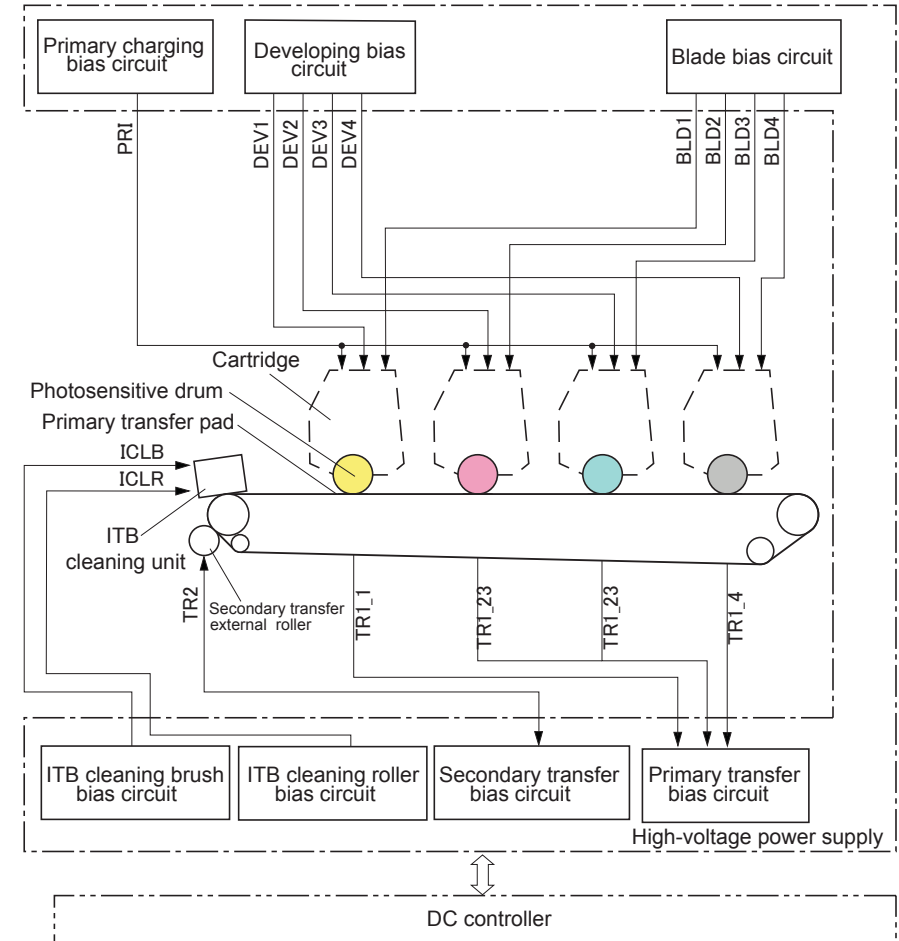
Overview

The high-voltage power supply PCBs are to apply high-voltage bias to the primary charging roller, the primary transfer pad, the secondary transfer external roller, and the ITB cleaning unit. Such high-voltage bias is generated through control by the DC controller on the high-voltage power supply PCBs.

The figure below shows the high-voltage power source schematically.

Type	Bias applied	Purpose	Applied to
Primary charging bias	DC negative	Charge the photosensitive drum surface negatively.	Primary charging roller (cartridge)
Developing bias	DC negative	Deposit toner on the static latent image formed on the photosensitive drum.	Developing cylinder (cartridge)
Blade bias	DC negative	Adjust the charged toner amount on the developing cylinder.	Developing blade (cartridge)
Primary transfer bias	DC negative	Transfer the toner image on the photosensitive drum to the ITB.	Developing blade (cartridge)
Secondary transfer bias	DC positive	Transfer the toner image on the ITB to the paper.	Secondary transfer external roller
	DC negative	Clean the secondary transfer external roller.	
ITB cleaning brush bias	DC positive	Charge the toner on the ITB positively.	ITB cleaning brush
ITB cleaning roller bias	DC positive	Charge the toner on the ITB positively.	ITB cleaning roller

T-2-12



F-2-28

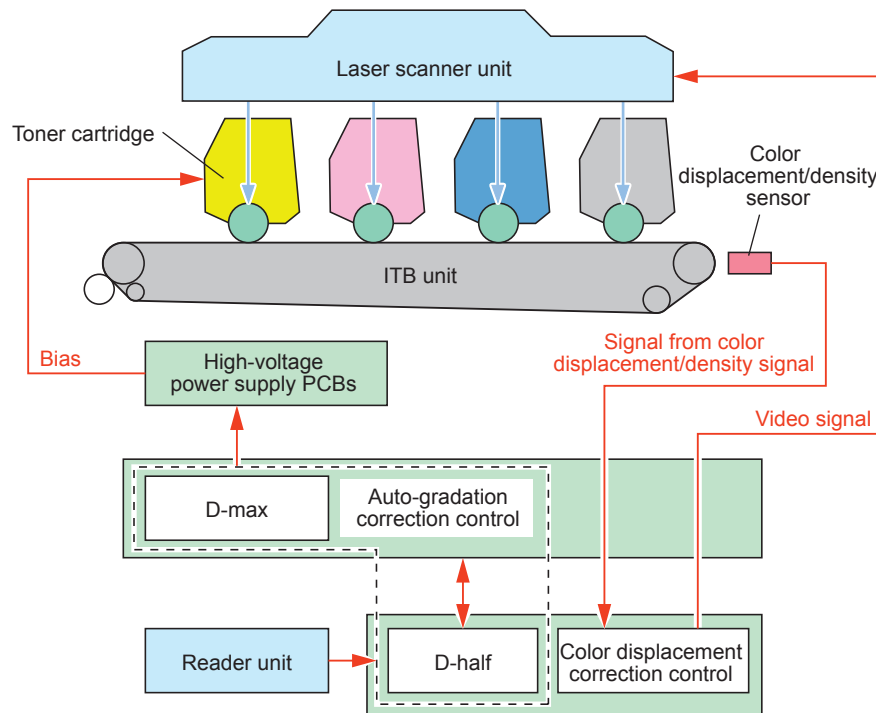
Image stabilization control

Overview

This product controls image stabilization to avoid faulty images due to environmental changes, deteriorated photosensitive drum or toner, etc. The controls listed in the table below are executed when needed to stabilize image quality.

Control	Description
D-max control	Correct values of the primary charging bias and/or developing bias based on signals from the environment sensor.
D-half control	Correct the gradation data in the main controller PCB based on signals from the color displacement / density sensor.
Color displacement correction control	Correct the video signal output timing based on signals from the color displacement / density sensor.
Auto-gradation control	To stabilize the image gradation density characteristics, users execute full or quick correction, or copy image correction.

T-2-13



F-2-29

Execution timing

The table below lists the execution timing and duration of each control.

No.	Execution timing	Duration		D-max	D-half	Color displacement correction	Remarks
		MF8500 series	MF8200 series				
1	Power-ON	Approx.195 seconds	Approx.120 seconds	○	○	○	Executed at initial rotation
2	Toner cartridge replacement	Approx.195 seconds	Approx.120 seconds	○	○	○	Executed at initial rotation
3	Environmental changes	Approx.195 seconds	Approx.120 seconds	○	○	○	Executed after job completion Detected by the environment sensor
4	After the pre-defined counts printed	Approx.195 seconds	Approx.120 seconds	○	○	○	Executed after job completion
5	After the pre-defined time elapsed	Approx.195 seconds	Approx.120 seconds	○	○	○	Executed after job completion
6	Resumed from sleep (after 8 hours or more)	Approx.100 seconds	Approx.60 seconds	○	○	-	Executed after job completion upon resumed
7	Full correction	Approx.100 seconds	Approx.60 seconds	○	○	-	Executed by users
8	Quick correction	Approx.100 seconds	Approx.60 seconds	○	○	-	
9	Copy image correction	Approx.100 seconds	Approx.60 seconds	○	○	-	

T-2-14

● Image density correction control (D-max control)

This control is to stabilize the print image density.

The DC controller PCB triggers D-max control under the pre-defined conditions.

1. Measure the density detection patterns for each color on the ITB.
2. To optimize the density of the measured patterns, control the primary charging bias and the developing bias.

The image density correction control is triggered under the conditions below.

- In the case of Menu > Adjustment/Cleaning > Auto Adjustment Settings > Auto Adjustment Image Regularly: OFF (default)
 - 1) At power ON (When the environmental change is great compared with the condition before turning OFF the power (more than +/-10 degC))
 - 2) When replacing the Toner Cartridge
 - 3) When the environmental change is great while not getting into the sleep state (more than +/-5 degC)
 - 4) After printing the specified number of sheet (every 500 sheets)
 - 5) After printing or after 300 min. since the execution of the image density correction
 - 6) At recovery from the sleep state (When the environmental change is great compared with the condition before getting into the sleep state (more than +/-10 degC))
 - 7) When the user commands execution of the calibration
- In the case of Menu > Adjustment/Cleaning > Auto Adjustment Settings > Auto Adjustment Image Regularly: ON, the operation of (1) and (6) mentioned in the above conditions will be as follow:
 - 1)' Must execute at power ON
 - 6)' Must execute at recovery from the 8-hour (or longer) sleep state

● Image gradation correction control (D-half control)

This control is to correct the gradation by the main controller PCB based on the half-tone density measured by the DC controller PCB.

Upon D-max control completed, the DC controller PCB and the main controller PCB enter the following steps of D-half control.

1. The DC controller PCB measures the density detection patterns on the ITB by applying the primary charging bias and the developing bias optimized through D-max control to send the density data to the main controller PCB.
2. The main controller PCB corrects gradation based on the density data to reproduce the ideal half-tone images.

● Color displacement control

This control is to correct color displacement due to variability of the laser units or toner cartridges.

The following displacements are corrected through this control.

- Horizontal scanning start position
- Horizontal scanning magnification
- Vertical scanning start position

The DC controller PCB controls the color displacement/density sensor and the color displacement sensor under the conditions below.

- In the case of Menu > Adjustment/Cleaning > Auto Adjustment Settings > Correct Color Mismatch when turned ON: OFF (default)
 - 1) When completing the first job after power ON
 - 2) When replacing the Toner Cartridge
 - 3) After printing the specified number of sheet (every 150 sheets)
 - 4) After the specified time has passed
 - MF8200 Series: only twice (100 min, and 300 min)
 - MF8500 Series: 60 min, after that every 240 min
 - 5) When completing the first job after recovering from the 8-hour (or longer) sleep state
 - 6) When the user commands execution of the color displacement correction
- In the case of Menu > Adjustment/Cleaning > Auto Adjustment Settings > Correct Color Mismatch when turned ON: ON, the operation of (1) and (5) mentioned in the above conditions will be as follow:
 - 1)' At power ON, execute before executing a job
 - 5)' At recovery from the 8-hour (or longer) sleep state, execute before executing a job

This control follows the sequence below.

- 1)The DC controller computes the color displacement degree for each color based on the color displacement detection patterns measured on the ITB. The computed color displacement data is sent to the main controller.
- 2)The main controller controls the video signals for each color based on the data received from the DC controller to adjust the horizontal scanning start position, the horizontal scanning magnification and the vertical scanning start position.

In addition to the above, the DC controller PCB on the printer engine controls the scanner motor speed to correct the color displacement in the vertical scanning direction.

Scanning magnification

This refers to the size of the image in the horizontal scanning direction. The laser path length is dependent on the photosensitive drums independently included in each toner cartridge. This causes color displacement at the trailing edge due to cartridge-dependent image area in the horizontal scanning direction.

● Auto-gradation correction control

This control is to stabilize the image gradation density characteristic.

To execute this control, go to “Adjustment / Cleaning > Auto-gradation correction” in User mode.

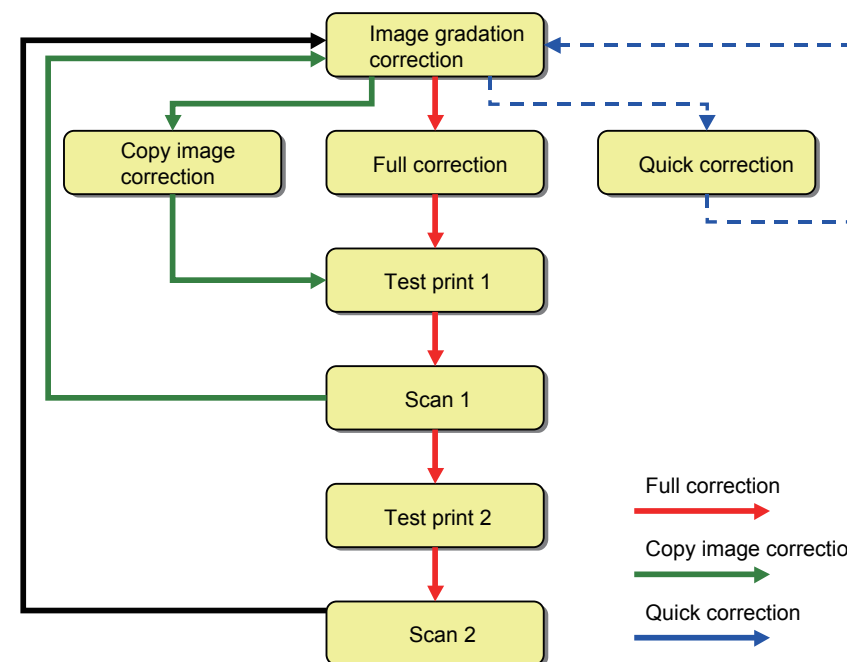
This control is performed in the following 3 approaches.

Item	Description	Test pattern	
		Output sheets	Type
Full correction (PASCAL)	Gradation is corrected based on the gradation density read on output test patterns by the reader.	2 sheets	1: for error diffusion process 2: for screen
Quick correction	Gradation is corrected by D-half control not using output test patterns.	-	-
Copy image correction	Gradation of copy images is corrected based on the gradation density read on output test pattern by the reader.	1 sheet	for for error diffusion process

T-2-15

Operational flow

Gradation is corrected either in the 3 approaches above in the following flow.



F-2-30

■ Toner cartridges

● Developing cylinder contact control

The control makes the developing cylinder engagement / disengagement to the photosensitive drum as required in the specified print mode (full color or monochrome). By controlling the developing cylinder engagement to the photosensitive drum only when needed, this control effectively prevents the photosensitive drums from being deteriorated to maximize the service life.

The DC controller actuates the motor (MF8500: Developing motor, MF8200: Main motor) to switch the direction of the engagement / disengagement cam to contact / separate the developing cylinder to / from the photosensitive drum.

The DC controller controls the developing cylinder (engagement / disengagement) by regulating the main motor rotation upon detecting signals from the development home position sensor.

The state of the Developing Cylinder for each color (engagement / disengagement) differs depending on the condition of the Main Body.

Condition of the Main Body	Y	M	C	Bk
Power OFF/Standby	Disengagement			
Monochrome print	Disengagement			Engagement
full-color print	Engagement			

T-2-16

Related Error Code

- E015-000 (Error in developing roller contact)
Failed to detect changes in developing home position sensor signals within the pre-defined time after actuating motor (MF8500: Developing motor, MF8200: Main motor) to control the developing roller contact.

■ Transfer unit

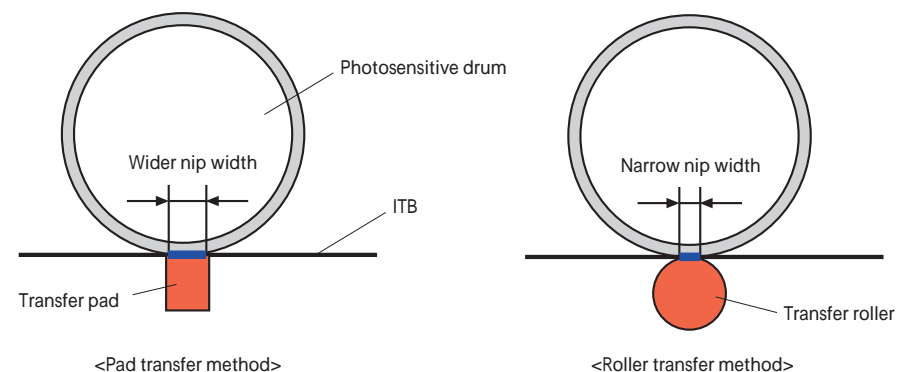
● Pad transfer method

This product employs the pad transfer method in the primary transfer mechanism.

Enhanced image stabilization is achieved by replacing the conventional transfer roller with the transfer pad. The characteristic of the pad transfer method is:

- It maintains the wider nip to the photosensitive drum to increase transferability.

The figures below show the difference between the pad transfer method and the conventional roller transfer method schematically.



F-2-31

Service Tasks

■ Action for Parts Replacement

No work is required at parts replacement of this product.

■ Maintenance

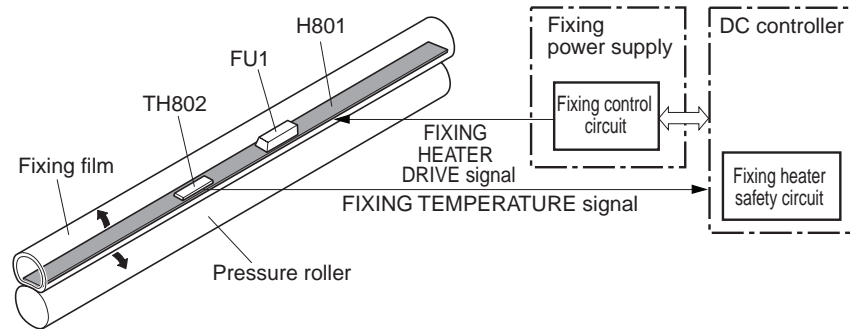
No periodically replaced parts, durable parts or periodical service work is set for this product.

■ Notes on Field Service

Fixing System

Overview

The fixing power supply controls temperatures of the Fixing Assembly. This product employs the on-demand fixing method in the Fixing Assembly. The figure below shows the structure schematically.



F-2-32

Name	MF8500	MF8200	Role
Fixing heater	100V	H100	To heat the fixing film
	120V	H120	
	230V	H220	
Main thermistor	TH801	TH802	To detect the fixing heater temperature (center of the heater, contact thermistor)
Sub thermistor 1	TH802	-	To detect the fixing heater temperature (heater ends, contact thermistor)
Sub thermistor 2	TH803	-	
Temperature fuse	FU1		To prevent abnormal temperature rise in the fixing heater

T-2-17

The temperature fuse is attached to the center of the fixing heater. When the fixing heater comes to be abnormally hot, the temperature fuse is open to shut off the power supply to the fixing heater. The thermistor detects the fixing heater temperature to input the temperature detection signal to the DC controller. Note that temperatures at heater ends are not detected in models of MF8200 series with slower print speed. The temperatures in the whole fixing assembly are controlled by the fixing control circuit and the fixing heater safety circuit based on commands from the DC controller.

Controls

Fixing Speed Control

Reduction of Throughput Based on Detected Temperature of Sub Thermistor

Paper interval extension time is determined based on the detected temperature of the Sub Thermistor.

Paper interval extension time determined by the detected temperature of the Sub Thermistor is added to the paper interval extension time derived from the paper width detection result and paper length detection result.

Detection of temperature by the Sub Thermistor is performed when the Delivery Sensor turns OFF.

When the Paper Width Sensor is ON, reduction of throughput based on the detected temperature of the Sub Thermistor is not executed.

Temperature of Sub Thermistor: Tx	Paper interval (sec)
T1	3
T2	6
T3	9
T4	15

T-2-18

Note :

- With MF8200 series, this control is not executed since detection of temperature by the Sub Thermistor is not performed.
- Temperature of Sub Thermistor: T1 < T2 < T3 < T4

● Reduction of Throughput Based on Environment Temperature

Throughput is reduced according to the detected temperature of the Environment Sensor.

Detected temperature	Paper type	Upper limit of throughput
17 deg C or lower	Heavy paper 1	Upper limit of throughput becomes 5 ppm.
	Heavy paper 2	
13 deg C or lower	Plain paper 1	Upper limit of throughput becomes 12 ppm.
	Thin paper 1	
	Thin paper 2	
	Plain paper 2	Upper limit of throughput becomes 10 ppm.

T-2-19

Note:

In MF8500 series, the thermistor does not detect environment temperature when it exceeds a certain temperature. Thus, this control is executed only in MF8200 series.

● Reduction of Throughput by Feeding Small Size Paper

Note :

When paper size is specified by user, paper interval is increased from the 2nd sheet of the job.

When a sensor detects that the paper size is small, paper interval is increased from 3rd or 4th sheet of the job.

Pre-registration Detection Sensor	Paper length (L)	Paper interval extension time (seconds)		
		(1)	(2)	(3)
ON	-	0 (Not extended)		
OFF	L >= 270 mm	10	8	6
	L < 270mm	8	4	2

T-2-21

MF8200 Series

When small standard size paper other than A4 or LTR or custom paper size which paper width is less than 195 mm is specified, throughput is reduced according to the number of prints.

Paper Type	Print speed				
	1-5 sheets	6-10 Sheets	11-20 sheets	21-50 sheets	50 sheets
Plain paper1 (60 to 74g/m ²) Plain paper2 (75 to 90g/m ²)	8	6	5.5	4	2
Thick paper1 (91 to 120 g/m ²) Thick paper2 (121 to 163 g/m ²)	6	5	5	2	2
Coated paper 1 (100 to 110g/m ²)	5.5	5	5	2	2
Coated paper 2 (120 to 130g/m ²)	5	5	5	2	2
Coated paper 3 (155 to 165g/m ²)	4	4	4	2	2

T-2-22

MF8500 Series

Based on the combination of detection result of the Pre-registration Detection Sensor and detection result of paper length (L), paper interval extension time is determined according to the table shown below.

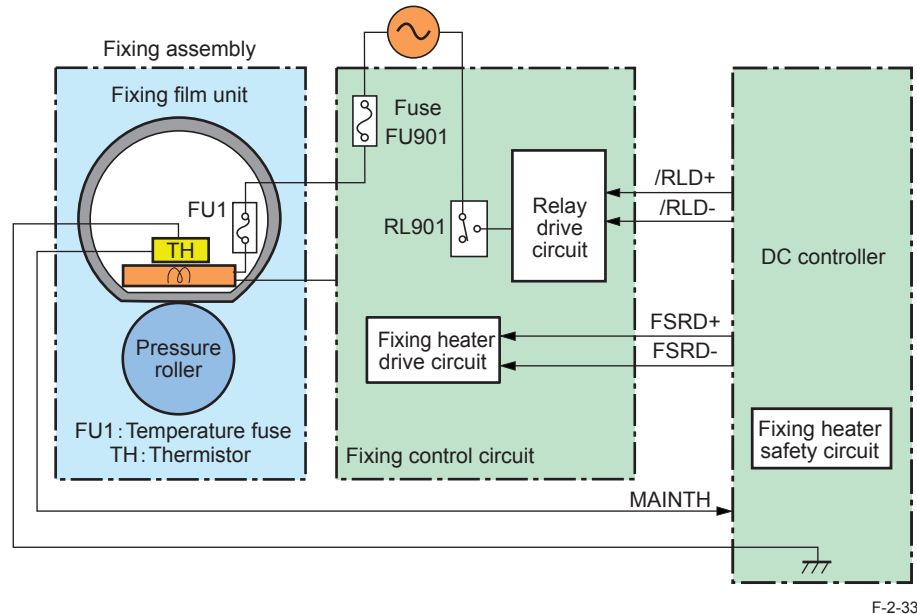
Category	Paper type
(1)	Plain paper (environment temperature is 18 deg C or lower), heavy paper 1, heavy paper 2
(2)	Plain paper (environment temperature is higher than 18 deg C), heavy paper 3, label paper
(3)	Others

T-2-20

Fixing temperature control

The fixing control circuit controls temperatures of the fixing heater to attain the respective target temperatures.

The figure below shows this circuit schematically.



The DC controller monitors the fixing heater temperature detection signal (MAINTH) to output the respective fixing heater drive signals (FSRD+, FSRD-) depending on the detected temperatures. The fixing heater drive circuit controls the fixing heater based on the output signal to attain the target temperature in the fixing heater.

1) Start-up temperature control

This controls the fixing heater warm-up to the target temperature.

Different temperatures are targeted depending on elapsed time after the last print job, paper types or the environment.

2) Printing temperature control

This controls the fixing film temperature during printing to maintain the target.

Different temperatures are set in the fixing film depending on paper types.

3) Sheet-to-sheet temperature control

This control lowers the sheet-to-sheet fixing heater temperature during continuous printing in the low-speed mode to prevent temperature rise on the pressure roller.

Different sheet-to-sheet temperatures are set depending on sheet intervals or paper types.

Protective Control

This control is to detect abnormal temperature rise in the fixing assembly to shut off power supply to the fixing heater.

This product has the following 3 protective controls to prevent abnormal temperature rise in the fixing assembly.

- DC controller
- Fixing heater safety circuit
- Temperature fuse

The descriptions below are the details of each protective control.

1) DC controller

When DC Controller monitors temperature of the central thermistor of the fixing heater and exceeds the pre-defined temperature, which is thought abnormally high temperature, therefore the drive signal (FSRD+, FSRD-) of the fixing heater is stopped outputting and the relay is turned off and the power distribution to the heater is stopped.

2) Fixing heater safety circuit

This circuit detects abnormal temperatures in the center of the fixing heater to shut off power supply to the heater.

3) Temperature fuse

When the temperature of the fixing heater abnormally rises, the temperature fuse is open to shut off power supply to the heater.

- 226 deg C or higher detected at the temperature fuse.

■ Failure detection

The DC controller determines failures of the fixing assembly under conditions below to stop the fixing heater drive signal output (FSRD+, FSRD-) and shut off relay and power supply to the heater. At the same time, it notifies the failure occurrence to the main controller.

1) Start-up failure detection

- The thermistor temperature does not exceed startup temperature 1 within the pre-defined time after start-up of the heater from the waiting status.
- The thermistor temperature does not exceed startup temperature 2 within the pre-defined time after reaching startup temperature 1 upon start-up of the heater from the waiting status.
- The thermistor temperature does not reach the target temperature within the pre-defined time after heater temperature control during initial rotation.

[Related error code]

E000-0000

2) Abnormally high temperature failure

- The thermistor temperature remains at pre-defined temperature or higher for the pre-defined time.

[Related error code]

E001-0000 main thermistor

E001-0001 sub thermistor (MF8500 Series only)

3) Abnormally low temperature failure

- The thermistor temperature remains at pre-defined temperature or lower within the pre-defined time after heater temperature control during printing.

[Related error code]

E003-0000 main thermistor

E003-0001 sub thermistor (MF8500 Series only)

4) Fixing heater drive circuit failure

- The zero-cross signal has not been detected for a certain times within the pre-defined time after power-ON.
- ned time after power-ON.
- The zero-cross signal is detected after power-ON but has not been detected continuously within the pre-defined time during printing.

[Related error code]

E004-0000

● Service Works

■ At parts replacement

No work is required for this product at parts replacement.

■ Maintenance

No periodically replaced parts, durable parts or periodical service is set for this product.

■ Notes on service works

When removing the fixing assembly, perform the operation after the fixing assembly is surely cooled. The fixing assembly just after printing may cause burn injury.

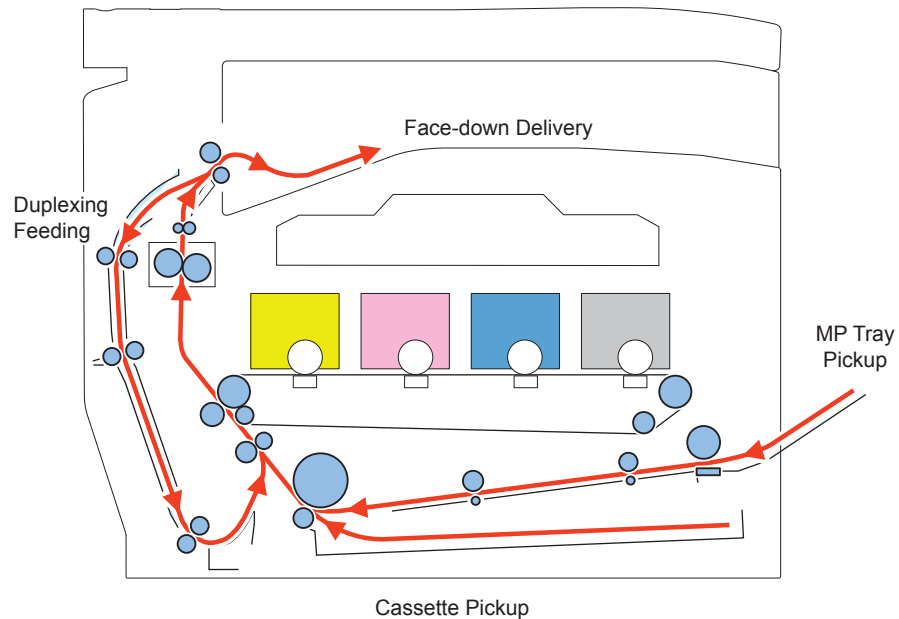
Pickup / Feed System

Overview

The Pickup / Feed System is responsible for paper pickup and delivery, made up with multiple rollers.

The figure below shows the structure of the Pickup/Feed System schematically.

MF8500 Series



<Pickup slot>

- Cassette
- MP tray

<Delivery slot>

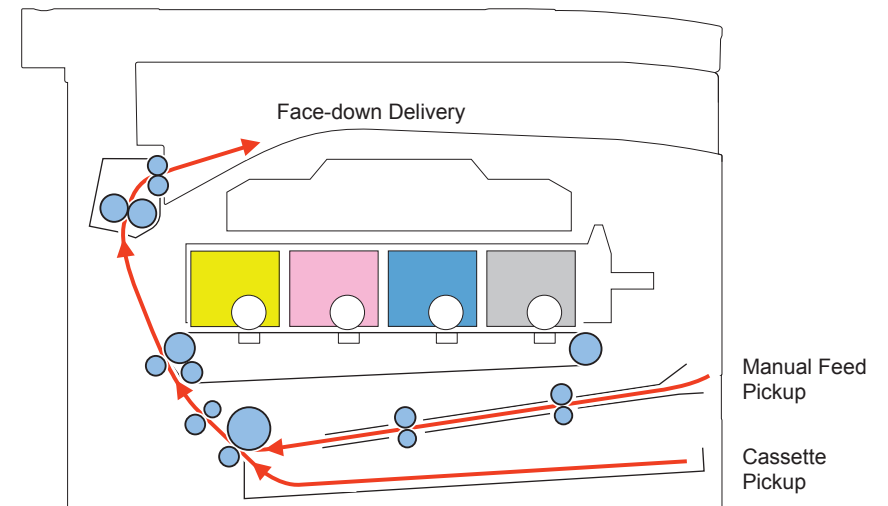
- Face-down tray

<Automatic 2-sided>

- Available

F-2-34

MF8200 Series



<Pickup slot>

- Cassette
- Manual feed slot

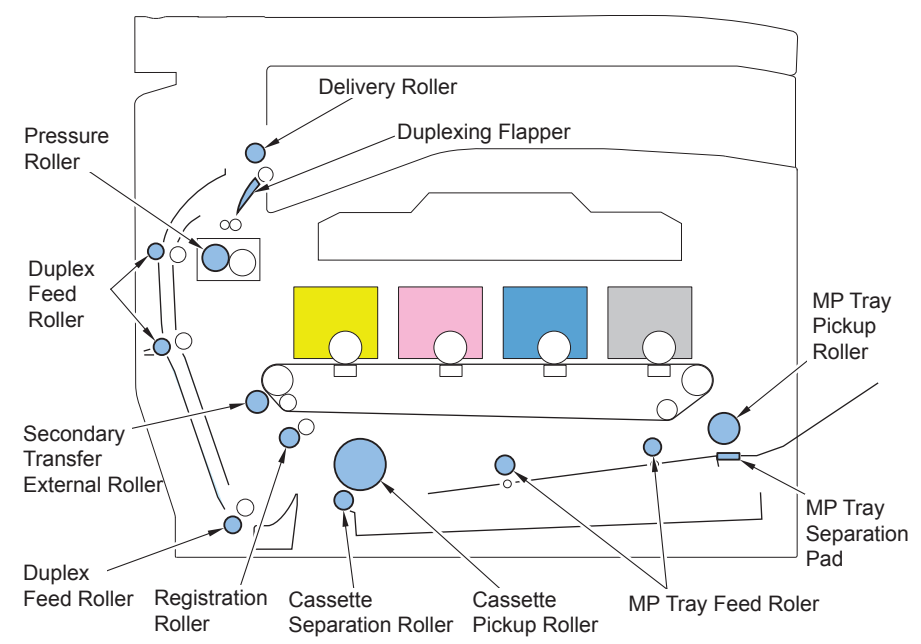
<Delivery slot>

- Face-down tray
- <Automatic 2-sided>
- Not Available

F-2-35

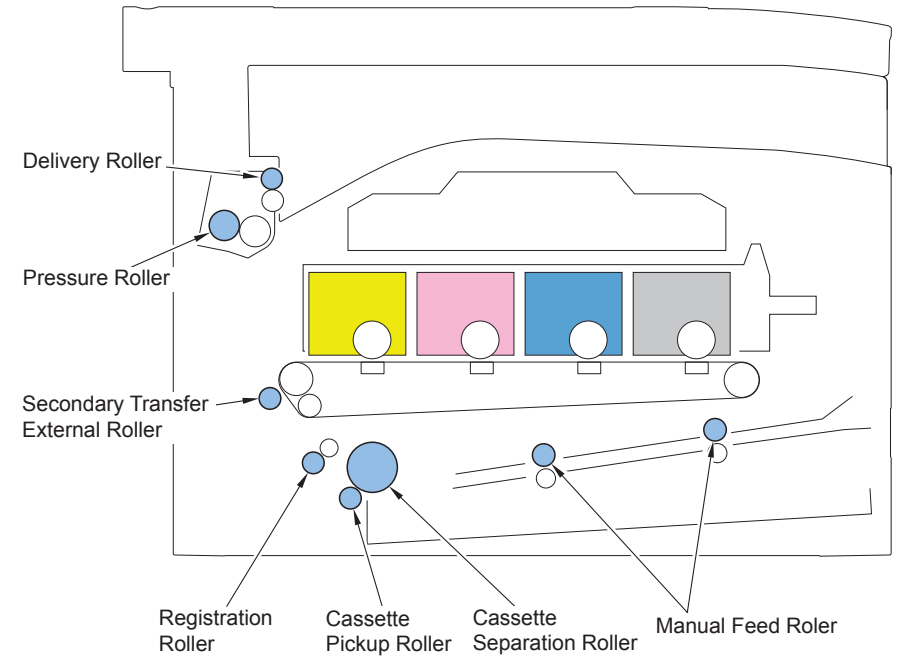
Parts Configuration

MF8500 Series



F-2-36

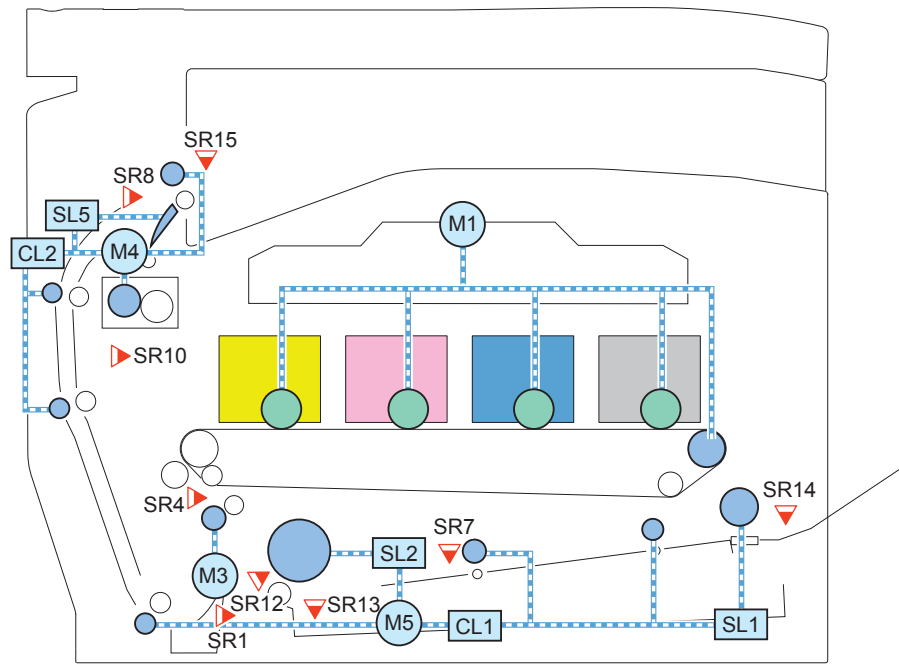
MF8200 Series



F-2-37

Drive Configuration

MF8500 Series

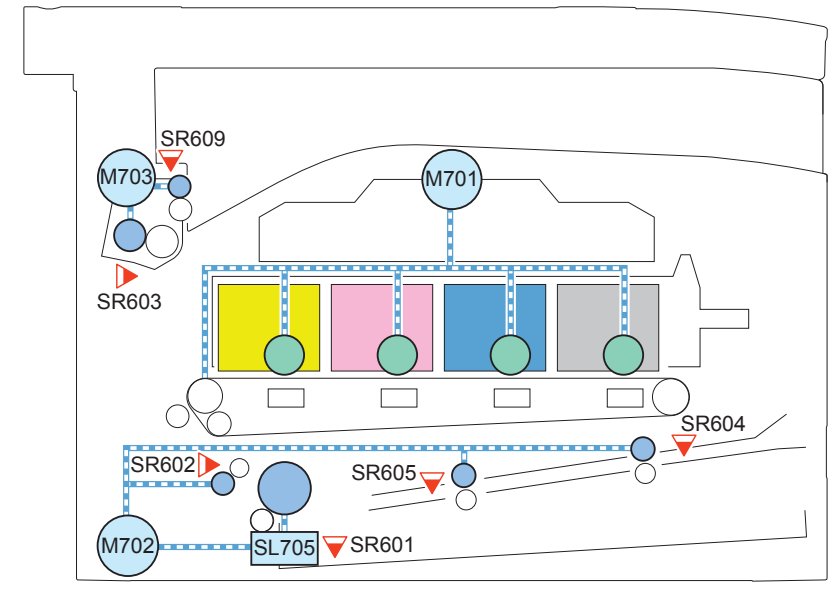


F-2-38

Symbol	Name	Symbol	Name
M1:	Drum Motor	SR1:	Paper feeder pre-registration sensor
M3:	Registration Motor	SR4:	Registration sensor
M4:	Fixing Motor	SR7:	MP tray pre-registration sensor
M5:	Pickup Motor	SR8:	Fixing delivery sensor
SL1:	MP Tray Pickup Solenoid	SR10:	Fixing arch sensor
SL2:	Cassette Pickup solenoid	SR12:	Pre-registration sensor
SL5:	Duplex reversal solenoid	SR13:	Cassette paper sensor
CL1:	MP Tray Feeding Clutch	SR14:	MP tray paper sensor
CL2:	Duplex feeding clutch	SR15:	Delivery full sensor

T-2-23

MF8200 Series



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Symbol	Name	Symbol	Name
M701:	Main Motor	SR601:	Cassette paper sensor
M702:	Pickup Motor	SR602:	Registration sensor
M703:	Fixing Motor	SR603:	Fixing arch sensor
SL705:	Cassette pickup solenoid	SR604:	Manual feed paper sensor
		SR605:	Manual feed pre-registration sensor
		SR609:	Fixing delivery sensor

T-2-24

Controls

■ Cassette paper feed

● Roller separation method

This product employs the separation roller method to avoid multi-feeding.

This method prevents multiple sheets from being fed by the driven separation roller. The separation roller is driven by the pickup roller.

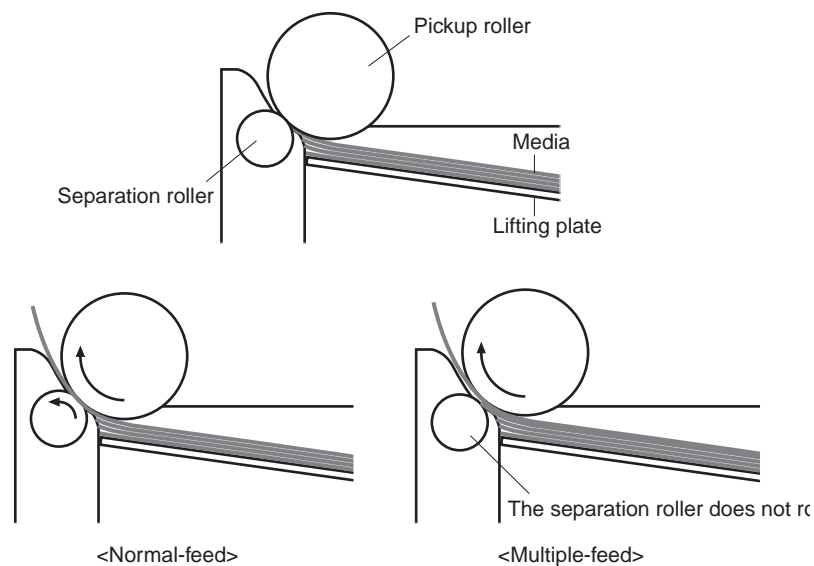
<When normally operated>

The separation roller is driven by the pickup roller to feed paper. By this, the separation roller rotates in the paper feed direction.

<When multiple sheets are fed>

Multiple sheets weaken friction between rollers, decaying the driving force conveyed from the pickup roller to the separation roller. This product has the mechanism to regulate the separation roller rotation, which stops the roller rotation at multi-feeding under weaker driving force conveyed from the pickup roller. This enables to avoid multi-feeding.

The figure below shows the multi-feeding prevention mechanism employed in this product.



F-2-40

■ Jam detection

● Overview

This product has the paper sensors as listed below to detect paper level and paper feed status.

- Registration sensor
- MP tray pre-registration sensor (MF8500 Series only)
- Manual feed pre-registration sensor (MF8200 Series only)
- Fixing delivery sensor
- Fixing arch sensor
- Pre-registration sensor (MF8500 Series only)
- Cassette paper sensor
- MP tray paper sensor (MF8200 Series only)
- Delivery full sensor (MF8500 Series only)
- Paper feeder pre-registration sensor (MF8200 Series only)

The following jams are detected in this product.

1. Pickup delay jam 1
2. Pickup delay jam 2 (MF8500 Series only)
3. Pickup stationary jam
4. Fixing / delivery delay jam
5. Delivery stationary jam
6. Fixing seizure jam
7. Internal paper remaining jam
8. Duplex re-pickup jam (MF8500 Series only)
9. Open door jam

● Delay jams

Pickup delay jam 1

This occurs when the leading edge of the paper is not detected by the registration sensor^{*} from the start of image formation to re-pickup.

^{*}: MF8500: SR4, MF8200: SR602

Pickup delay jam 2 (MF8500 Series only)

This occurs when the leading edge of the paper is not detected by the MP tray pre-registration sensor (SR7) within the pre-defined duration after the paper is fed from the multi-purpose tray.

Fixing / delivery delay jam

This occurs when the leading edge of the paper is not detected by the fixing delivery sensor^{*1} within the pre-defined duration after re-pickup; or when the leading edge of the paper is not detected by the delivery full sensor^{*2} during the pre-defined duration after the trailing edge of the paper is detected by the registration sensor.

^{*1}: MF8500: SR8, MF8200: SR609

^{*2}: MF8500: SR15

● Stationary jams

Pickup stationary jam

This occurs when the trailing edge of the paper is not detected by the registration sensor^{*} within the pre-defined duration after re-pickup.

^{*}: MF8500: SR4, MF8200: SR602

Fixing / delivery stationary jam

This occurs when the trailing edge of the paper is not detected by the fixing delivery sensor^{*2} within the pre-defined duration after the trailing edge of the paper is detected by the registration sensor^{*1}.

^{*1}: MF8500: SR4, MF8200: SR602

^{*2}: MF8500: SR8, MF8200: SR609

● Other jams

Fixing seizure jam

This occurs when the fixing / delivery sensor (SR8) detected the leading edge of the paper but the sensor went off before starting the fixing / delivery stationary detection.

^{*}: MF8500: SR8, MF8200: SR609

Internal paper remaining jam

When the sensor below detects "Paper Sensor" before-and-after Power on, Door close, Print operation.

< MF8500 Series >

- Paper feeder pre-registration sensor (SR1)
- Registration sensor (SR4)
- MP tray pre-registration sensor (SR7)
- Fixing delivery sensor (SR8)
- Fixing arch sensor (SR10)
- Pre-registration sensor (SR12)

< MF8200 Series >

- Registration sensor (SR602)
- Fixing arch sensor (SR603)
- Manual feed pre-registration sensor (SR605)
- Fixing delivery sensor (SR609)

Duplex re-pickup jam (MF8500 Series only)

This occurs when the leading edge of the paper is not detected by the registration sensor (SR4) within the pre-defined duration elapsed from starting reversing.

Open door jam

This occurs when any of sensors detected paper in the device and the door opening is detected during print jobs.

Service Works

■ At parts replacement

No work is accompanied with parts replacement.

■ Maintenance

No periodically replaced parts, durable parts or periodical service is set for this product.

■ Notes on service works

No periodically

3

Periodical Services

- Periodically Replaced Parts
- Durable Parts
- Periodical Services
- Cleaning

Periodically Replaced Parts

No periodically replaced parts is set for this product.

Durable Parts

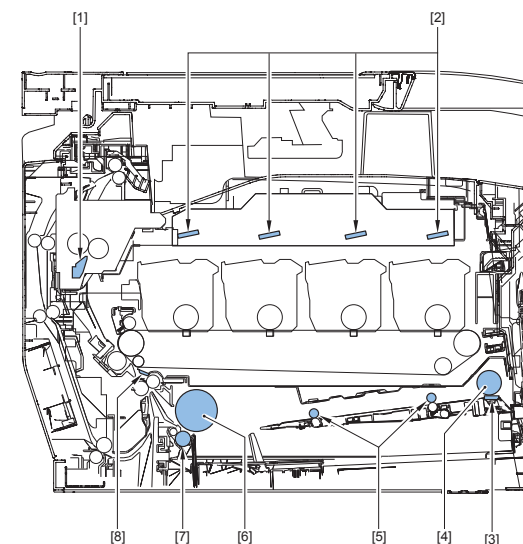
No durable parts is set for this product.

Periodical Services

No periodical service is set for this product.

Cleaning

- MF8500 series

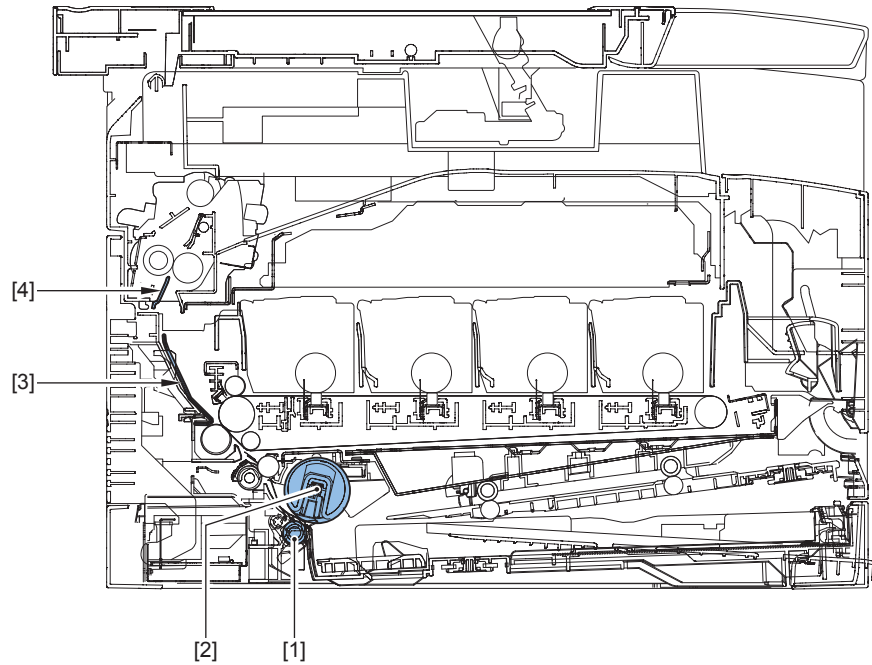


F-3-1

Cleaning parts		Procedure
1	Fixing front guide	Clean with lint-free paper. For heavy soils, use alcohol to wipe off with lint-free paper.
2	Laser beam window glass	Clean with lint-free paper.
3	Multi-purpose tray separation pad	Clean with lint-free paper. For heavy soils, use alcohol to wipe off with lint-free paper.
4	Multi-purpose tray pickup roller	
5	Multi-purpose tray feed roller	
6	Cassette pickup roller	
7	Cassette separation roller	
8	Registration upper guide	Clean with lint-free paper.

T-3-1

- MF8200 series



F-3-2

Cleaning parts		Procedure
1	Pickup roller	Clean with lint-free paper. For heavy soils, use alcohol to wipe off with lint-free paper.
2	Separation roller	
3	Paper feed guide	
4	Fixing front guide	

T-3-2

4

Disassembly/ Assembly

■ MF8500 series

■ List of Parts

■ External Cover, Internal Cover

■ Document Exposure, Feed System

■ Controller System

■ Laser Exposure System

■ Image Formation System

■ Fixing System

■ Pickup Feeder System

■ MF8200 series

■ List of Parts

■ External Cover, Internal Cover

■ Document exposure/ feeder system

■ Controller System

■ Laser Exposure System

■ Image Formation System

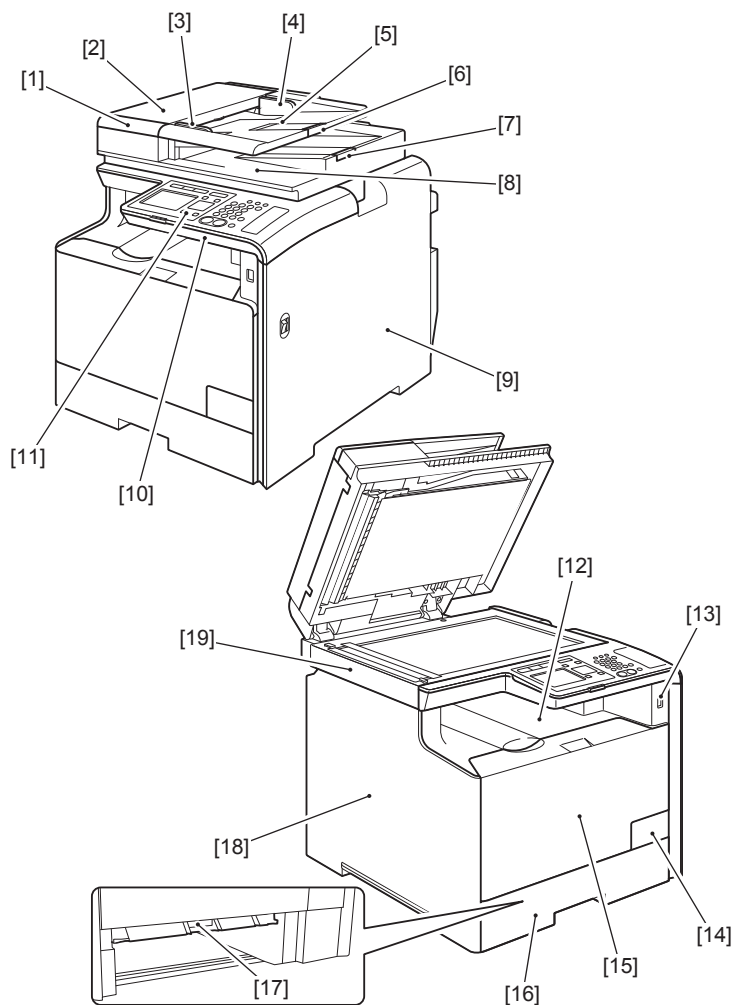
■ Fixing System

■ Pickup Feeder System

List of Parts

List of External/ Internal Cover (MF8500 series)

Front Side

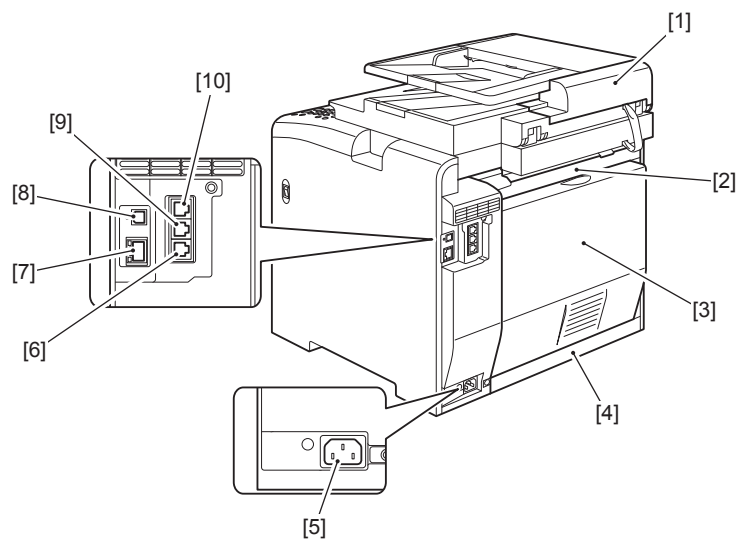


F-4-1

No.	Parts Name	Remarks	Reference
[1]	ADF Front Upper Cover	-	-
[2]	ADF Upper Cover	-	-
[3]	Side Guide (Front)	-	-
[4]	Side Guide (Rear)	-	-
[5]	Document Tray	-	-
[6]	Extension Tray	-	-
[7]	Sub Tray	-	-
[8]	Delivery Tray	-	-
[9]	Right Cover	-	(Refer to page 4-20)
[10]	Control Panel Lower Cover	-	-
[11]	Control Panel	-	(Refer to page 4-70)
[12]	Upper Cover	-	(Refer to page 4-28)
[13]	USB Port	-	-
[14]	Right Front Cover	-	(Refer to page 4-22)
[15]	Front Cover	-	(Refer to page 4-23)
[16]	Cassette	-	-
[17]	Mulyi-Purpose Tray Transport Guide	-	(Refer to page 4-125)
[18]	Left Cover	-	(Refer to page 4-17)
[19]	Reader Cover	-	-

T-4-1

Rear Side



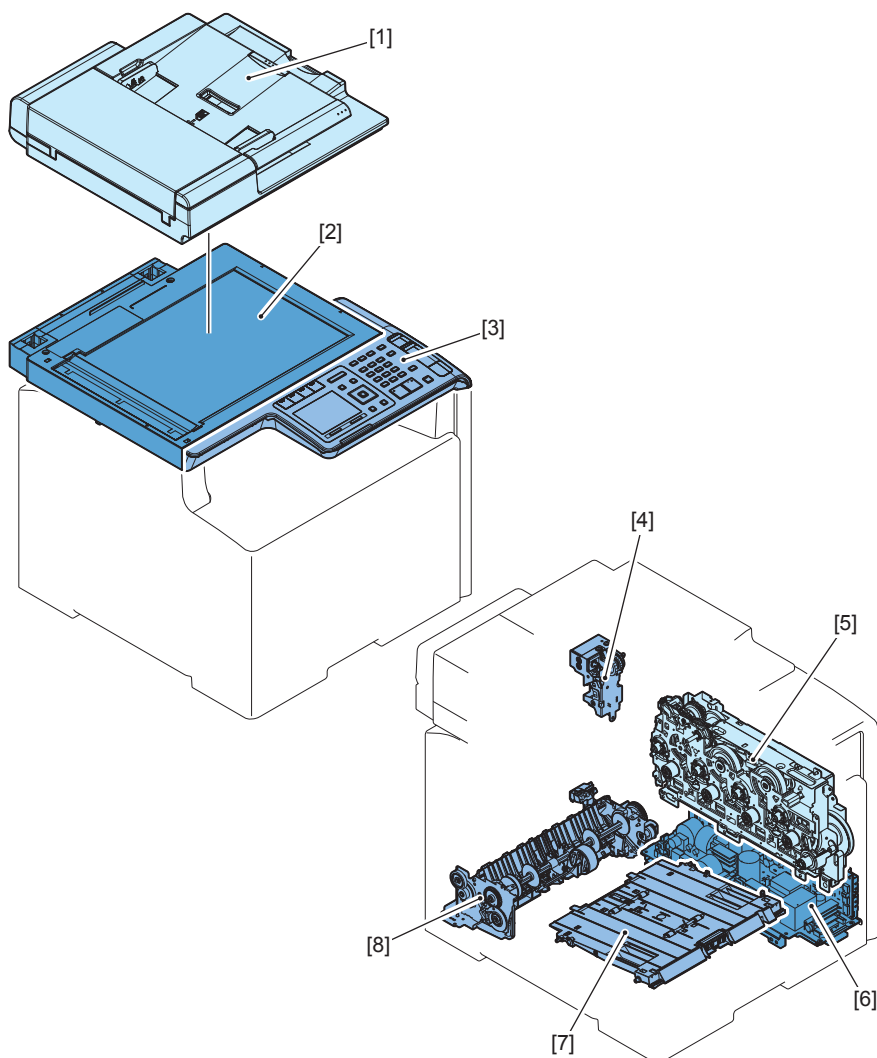
F-4-2

No.	Parts Name	Remarks	Reference
[1]	ADF Rear Cover	-	-
[2]	Rear Upper Cover	-	(Refer to page 4-24)
[3]	Rear Cover	-	(Refer to page 4-24)
[4]	Rear Lower Cover	-	(Refer to page 4-25)
[5]	Power Socket	-	-
[6]	Telephone Line Jack	-	-
[7]	LAN Port	-	-
[8]	USB Port	-	-
[9]	External Device Jack	-	-
[10]	Handset Terminal	-	-

T-4-2

List of Main Unit (MF8500 series)

1/2

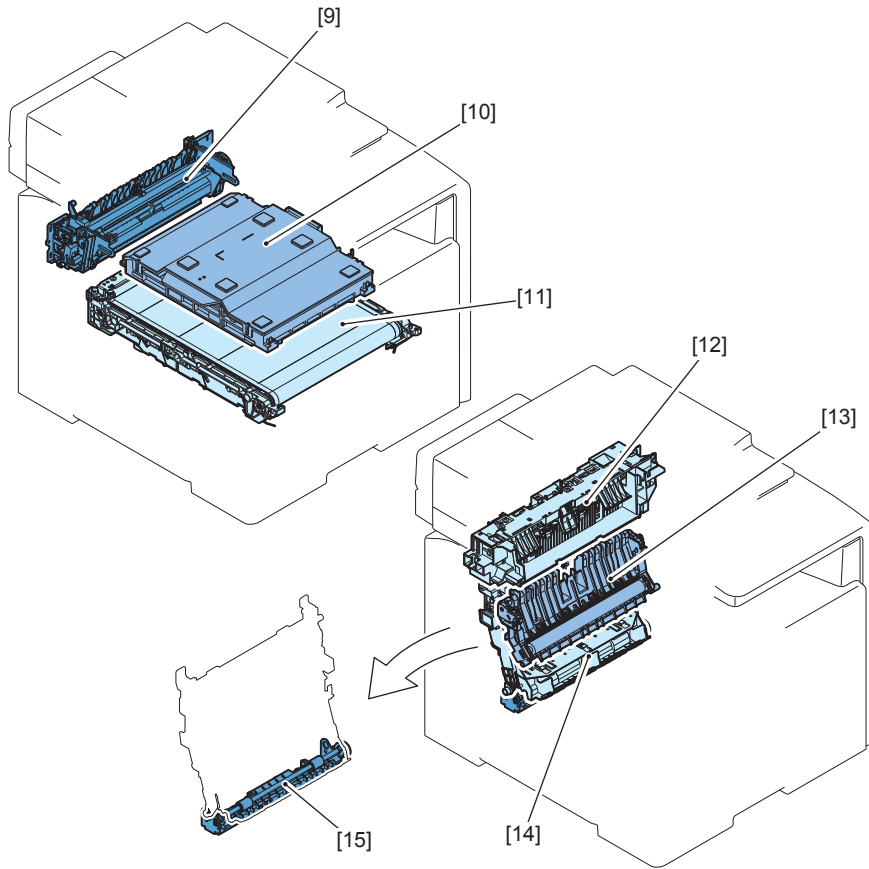


F-4-3

No.	Parts Name	Remarks	Reference	Adjustment during parts replacement
[1]	ADF Unit	-	(Refer to page 4-35)	(Refer to page 4-36)
[2]	Reader Unit	-	(Refer to page 4-35)	(Refer to page 4-37)
[3]	Control Panel Unit	-	(Refer to page 4-70)	-
[4]	Duplexing Reverse Drive Unit	-	(Refer to page 4-85)	-
[5]	Main Drive Unit	-	(Refer to page 4-76)	-
[6]	Low Voltage Power Supply Unit	-	(Refer to page 4-65)	-
[7]	MP Paper Pickup Unit	-	(Refer to page 4-125)	-
[8]	Paper Pickup Unit	-	(Refer to page 4-120)	-

T-4-3

2/2

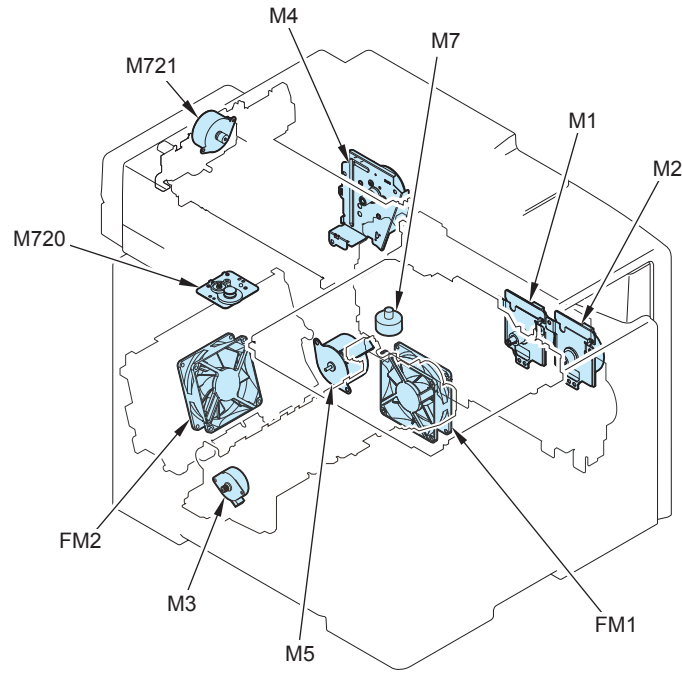


F-4-4

No.	Parts Name	Remarks	Reference	Adjustment during parts replacement
[9]	Fixing Assembly	-	(Refer to page 4-104)	-
[10]	Laser Scanner Unit	-	(Refer to page 4-90)	(Refer to page 4-94)
[11]	ITB Unit	-	(Refer to page 4-95)	-
[12]	Delivery Unit	-	(Refer to page 4-128)	-
[13]	Secondary Transfer Feed Unit	-	(Refer to page 4-127)	-
[14]	Duplex Feed Unit	-	(Refer to page 4-130)	-
[15]	Re-Pickup Guide Unit	-	(Refer to page 4-131)	-

T-4-4

List of Motor/Fan (MF8500 series)

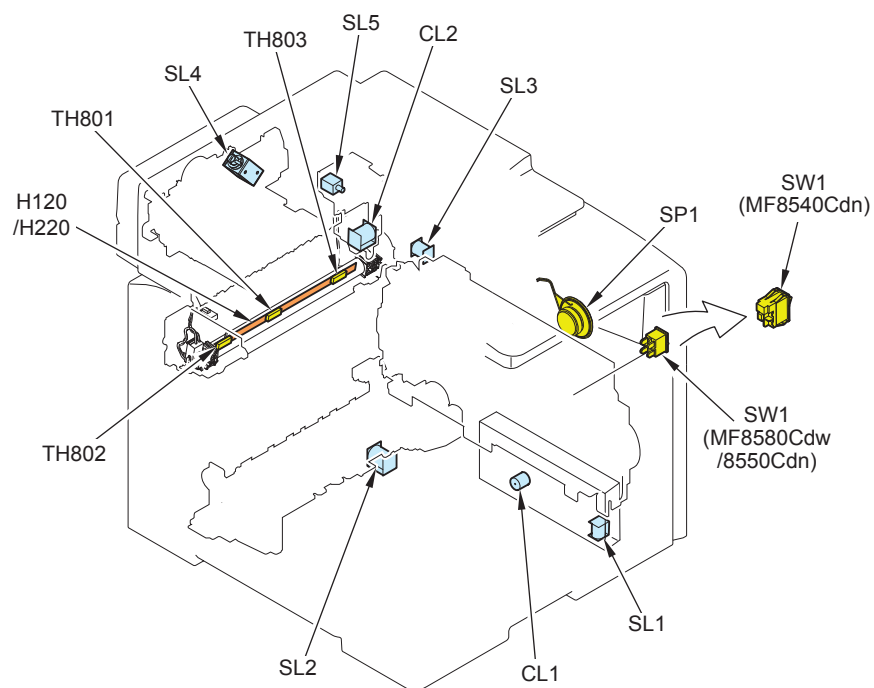


F-4-5

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
FM1	Fixing /Fixing Power Supply Cooling Fan	Product configuration	-	(Refer to page 4-86)	-
FM2	Duplex Feeding Fan	Rear Cover Rib Unit	-	(Refer to page 4-88)	-
M1	Drum Motor	Main Drive Unit	-	(Refer to page 4-102)	-
M2	Developing Motor	Main Drive Unit	-	(Refer to page 4-100)	-
M3	Registration Motor	Pickup Unit	-	-	-
M4	Fixing Motor	Product configuration	-	(Refer to page 4-111)	-
M5	Pickup Motor	Product configuration	-	(Refer to page 4-118)	-
M7	Laser Scanner Motor	Laser Scanner Unit	-	-	-
M720	Reader Motor	Reader Unit	-	(Refer to page 4-52)	-
M721	ADF Motor	ADF Paper Feeder Unit	-	(Refer to page 4-46)	-

T-4-5

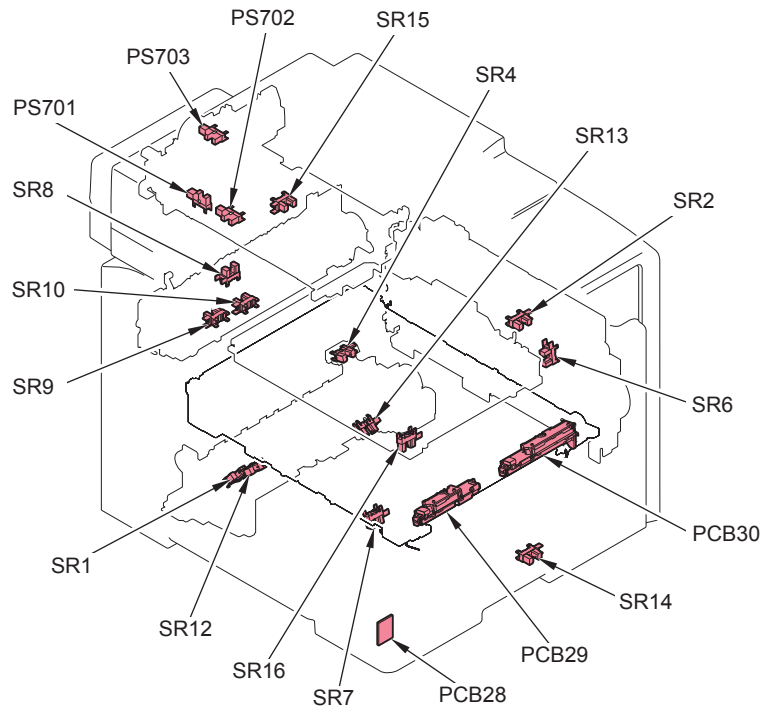
List of Clutch / Solenoid/Heater/Thermistor/Switch/speaker (MF8500 series)



No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
H120	Fixing heater	Fixing Film Unit	120V	-	-
H220	Fixing heater	Fixing Film Unit	220V	-	-
TH801	Main Thermistor	Fixing Film Unit	-	-	-
TH802	Sub Thermistor 1	Fixing Film Unit	-	-	-
TH803	Sub Thermistor 2	Fixing Film Unit	-	-	-
SP1	Speaker	Product configuration	MF8580Cdw /8550Cdn	(Refer to page 4-89)	-
SW1	Main Power Switch	Product configuration	MF8580Cdw /8550Cdn MF8540Cdn	-	-
CL1	MP Tray Feeding Clutch	Product configuration	-	-	-
CL2	Duplex Feeding Clutch	Duplex Reversing Drive Unit	-	-	-
SL1	MP Tray Pickup Solenoid	Product configuration	-	-	-
SL2	Cassette Pickup Solenoid	Pickup Unit	-	-	-
SL3	Developing Separation Solenoid	Main Drive Unit	-	-	-
SL4	ADF Pickup Solenoid	ADF Paper Feeder Unit	-	-	-
SL5	Duplex Reversal Solenoid	Duplex Reversing Drive Unit	-	-	-

T-4-6

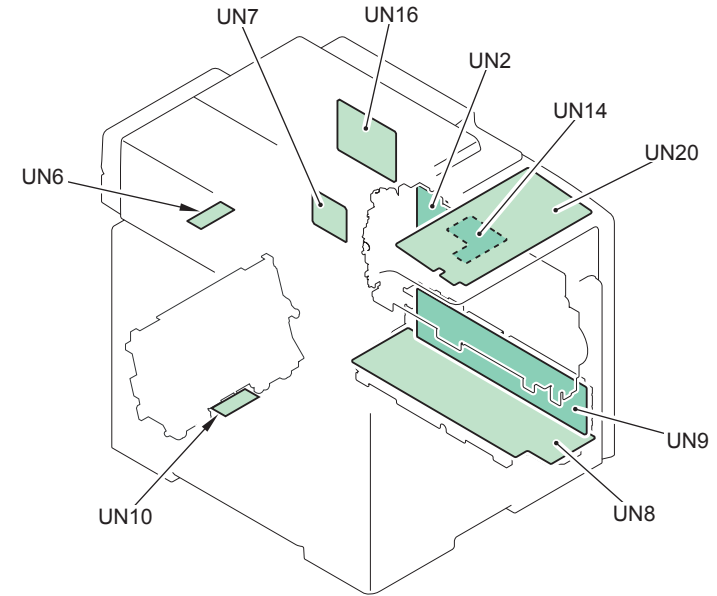
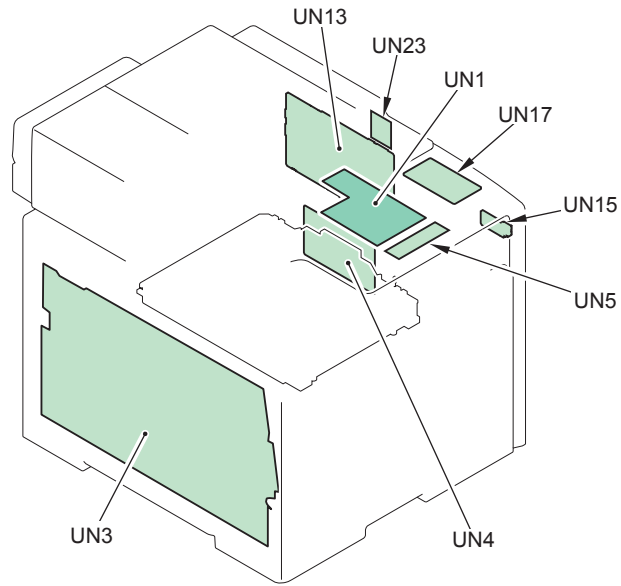
List of Sensor (MF8500 series)



No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
PCB28	Environment Sensor	Product configuration	-	-	-
PCB29	Patch Sensor	Patch Density/Registration Sensor Unit	-	-	-
PCB30	Patch Registration Sensor	Patch Density/Registration Sensor Unit	-	-	-
PS701	CIS Unit Homeposition Sensor	Reader Unit	-	-	-
PS702	Document End Sensor	ADF Paper Feeder Unit	-	-	-
PS703	Document Sensor	ADF Paper Feeder Unit	-	-	-
SR1	Paper Feeder Pre-Registration Detection Sensor	Pickup Unit	-	-	-
SR2	Front Cover Sensor	Product configuration	-	-	-
SR4	Registration Detection Sensor	Pickup Unit	-	-	-
SR6	Developing Homeposition Sensor	Main Drive Unit	-	-	-
SR7	MP Tray Pre-Registration Detection Sensor	Product configuration	-	-	-
SR8	Fixing Delivery Sensor	Fixing Assembly	-	-	-
SR9	Fixing Pressure Release Sensor	Fixing Assembly	-	-	-
SR10	Fixing Loop Sensor	Fixing Assembly	-	-	-
SR12	Pre-registration Detection Sensor	Pickup Unit	-	-	-
SR13	Cassette Paper Detection Sensor	Pickup Unit	-	-	-
SR14	MP Tray Paper Detection Sensor	Product configuration	-	-	-
SR15	Delivery Full Sensor	Delivery Unit	-	-	-
SR16	ITB Pressure Release Sensor	ITB Unit	-	-	-

T-4-7

PCB (MF8500 series)



F-4-6

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
UN1	DC Controller PCB	Product configuration	-	(Refer to page 4-61)	(Refer to page 4-61)
UN3	High Voltage Power Supply PCB	Product configuration	-	(Refer to page 4-63)	-
UN4	Laser Driver PCB	Laser Scanner Unit	-	-	-
UN5	Relay PCB	Product configuration	-	(Refer to page 4-69)	-
UN13	Main Controller PCB	Product configuration	-	(Refer to page 4-58)	(Refer to page 4-58)
UN15	USB Host PCB	Product configuration	-	-	-
UN17	Off Hook PCB	Product configuration	MF8580Cdw /8550Cdn	(Refer to page 4-75)	-
UN23	Wireless LAN PCB	Product configuration	MF8580Cdw	(Refer to page 4-57)	-

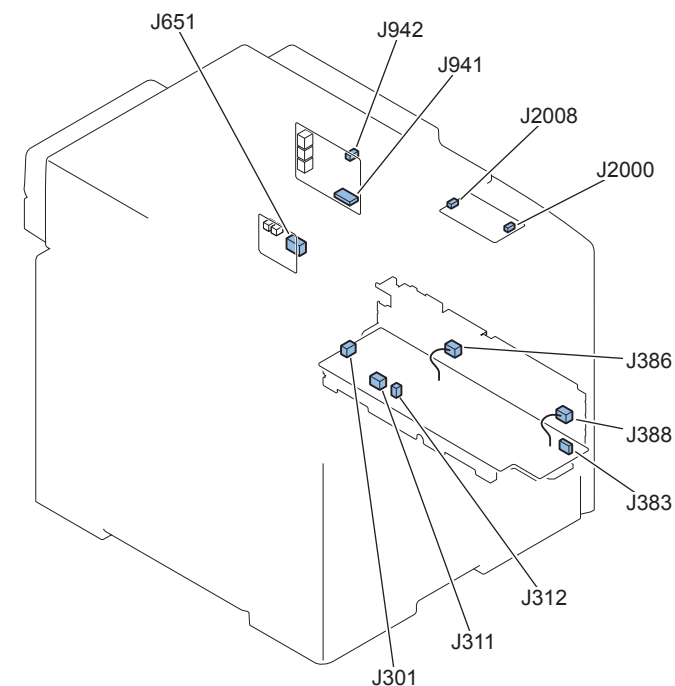
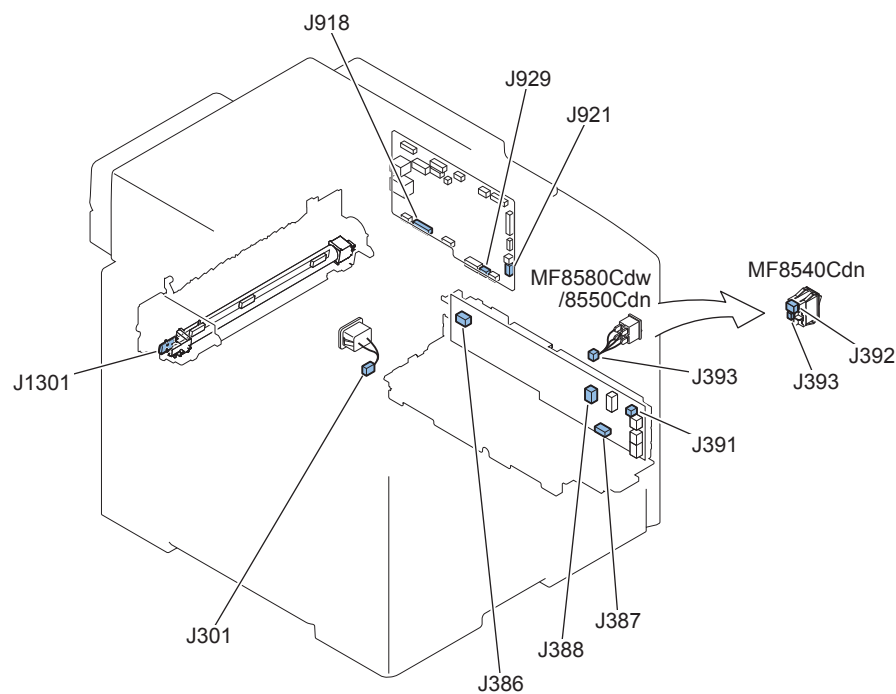
T-4-8

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
UN2	Driver PCB	Product configuration	-	(Refer to page 4-68)	-
UN6	Fixing Relay PCB	Product configuration	-	-	-
UN7	Fixing Sub PCB	Product configuration	-	(Refer to page 4-67)	-
UN8	Low Voltage Main PCB	Low Voltage Power Supply Unit	-	-	-
UN9	Low Voltage Sub PCB	Low Voltage Power Supply Unit	-	-	-
UN10	Duplex Driver PCB	Re-Pickup Guide Unit	-	-	-
UN14	Control Panel LCD PCB	Control Panel Unit	-	(Refer to page 4-73)	-
UN20	Control Panel Key PCB	Control Panel Unit	-	(Refer to page 4-73)	-
UN16	FAX-NCU PCB	Product configuration	MF8580Cdw /8550Cdn	(Refer to page 4-75)	-

T-4-9

List of Connector (MF8500 Series)

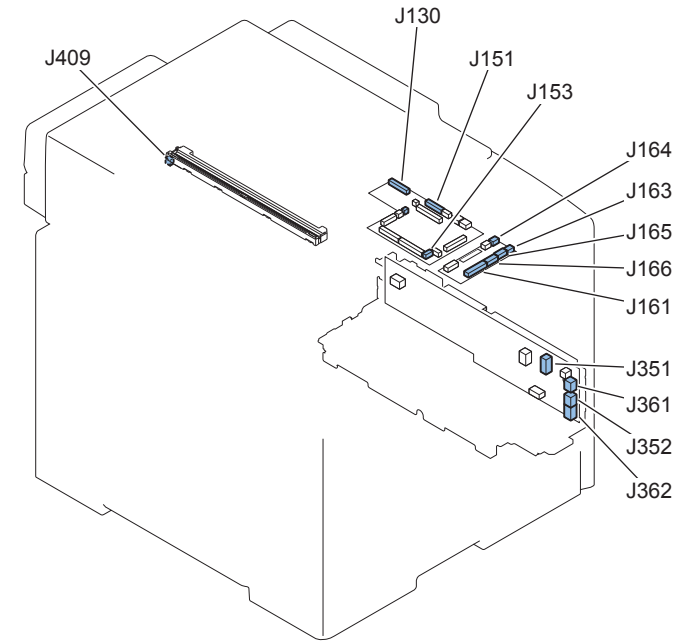
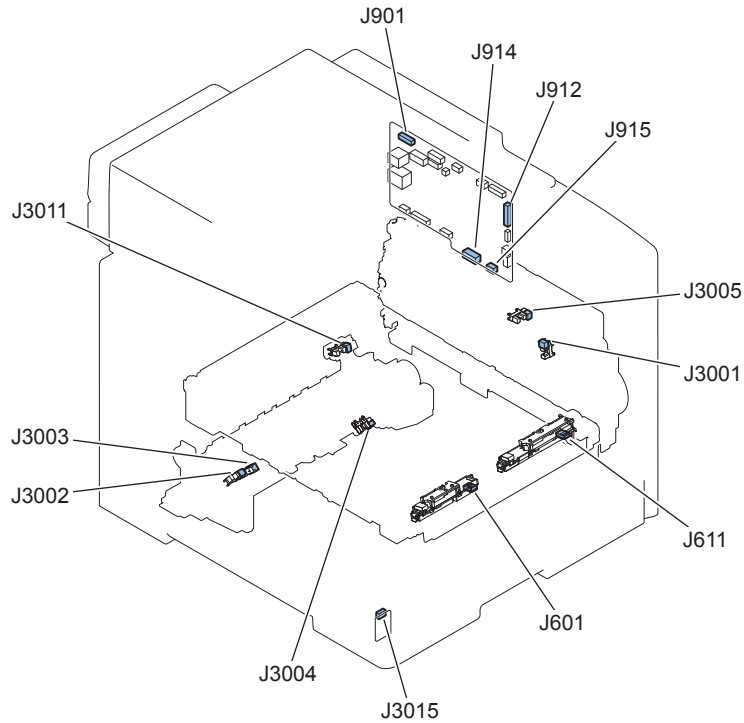
1/5



F-4-7

J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J651	UN7	Fixing Sub PCB	J4003	J1301	H120	Fixing heater	120V
J311	UN8	Low Voltage Main PCB	J4003	J1301	H220	Fixing heater	220V
J651	UN7	Fixing Sub PCB	J4003	J1301	H220	Fixing heater	220V
J311	UN8	Low Voltage Main PCB	J4003	J312	UN8	Low Voltage Main PCB	
J651	UN7	Fixing Sub PCB		J301	-	INLET	
J301	UN8	Low Voltage Main PCB		J386	UN9	Low Voltage Sub PCB	
J386	UN8	Low Voltage Main PCB		J387	UN9	Low Voltage Sub PCB	
J383	UN8	Low Voltage Main PCB		J388	UN9	Low Voltage Sub PCB	
J388	UN8	Low Voltage Main PCB		J393	SW1	Main Power Switch	MF8580Cdw/8550Cdn
J391	UN9	Low Voltage Sub PCB		J392	SW1	Main Power Switch	MF8540Cdn
J929	UN13	Main Controller PCB		J941	UN16	FAX-NCU PCB	MF8580Cdw/8550Cdn
J918	UN13	Main Controller PCB		J2000	UN17	Off Hook PCB	MF8580Cdw/8550Cdn
J921	UN13	Main Controller PCB		J2008	UN17	Off Hook PCB	MF8580Cdw/8550Cdn
J942	UN16	FAX-NCU PCB					

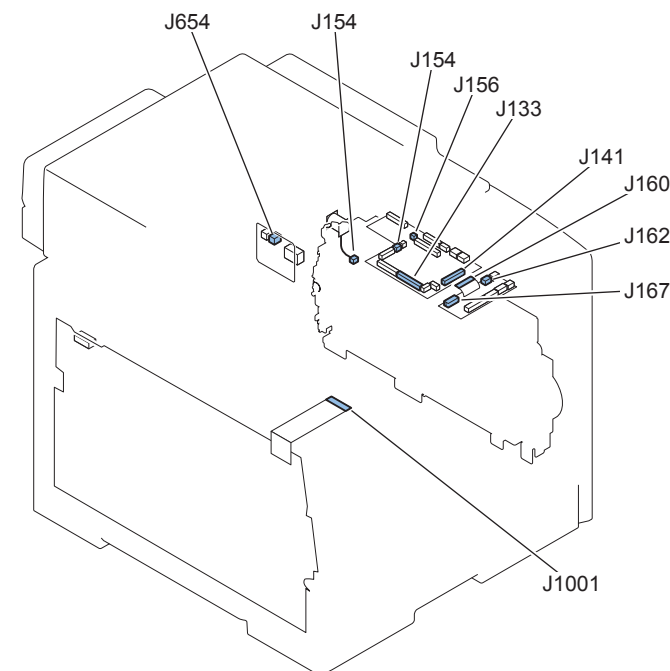
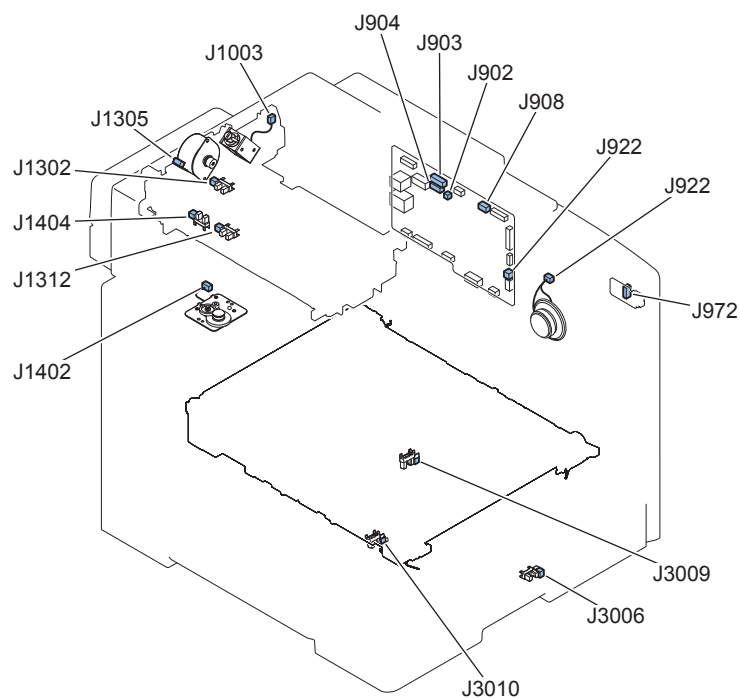
T-4-10



F-4-8

J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J130	UN1	DC Controller PCB		J912	UN13	Main Controller PCB	
J151	UN1	DC Controller PCB		J361	UN9	Low Voltage Sub PCB	
J151	UN1	DC Controller PCB		J362	UN9	Low Voltage Sub PCB	
J153	UN1	DC Controller PCB		J3015	PCB28	Environment Sensor	
J161	UN5	Relay PCB		J601	PCB29	Patch Sensor	
J161	UN5	Relay PCB		J611	PCB30	Patch Registration Sensor	
J163	UN5	Relay PCB		J3011	SR4	Registration Detection Sensor	
J164	UN5	Relay PCB		J3002	SR1	Paper Feeder Pre-Registration Detection Sensor	
J165	UN5	Relay PCB		J3003	SR12	Pre-registration Detection Sensor	
J165	UN5	Relay PCB		J3004	SR13	Cassette Paper Detection Sensor	
J166	UN5	Relay PCB		J3001	SR6	Developing Homeposition Sensor	
J166	UN5	Relay PCB		J3005	SR2	Front Cover Sensor	
J901	UN13	Main Controller PCB		J409	-	CIS Unit	
J914	UN13	Main Controller PCB		J351	UN9	Low Voltage Sub PCB	
J915	UN13	Main Controller PCB		J352	UN9	Low Voltage Sub PCB	

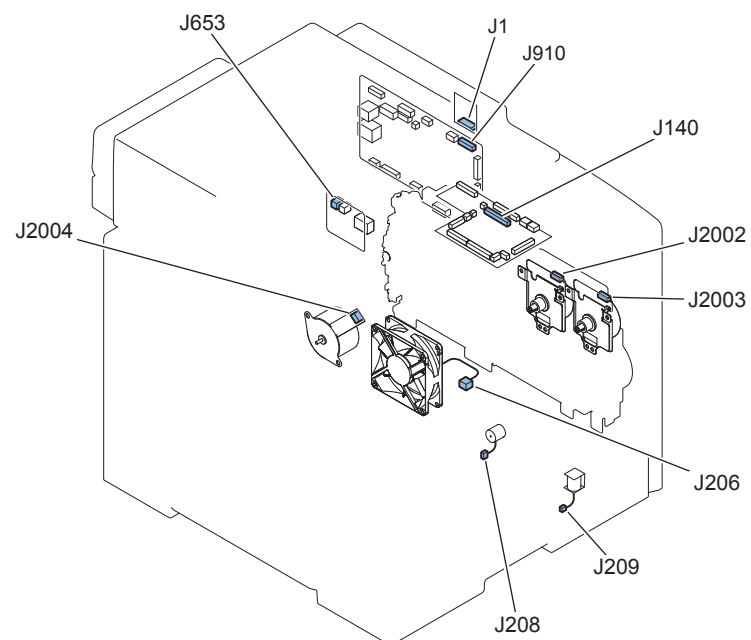
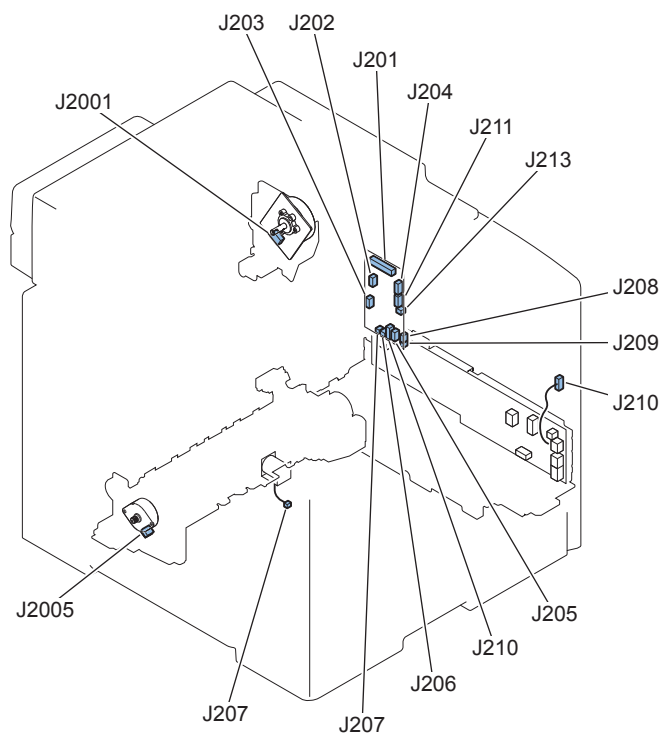
T-4-11



F-4-9

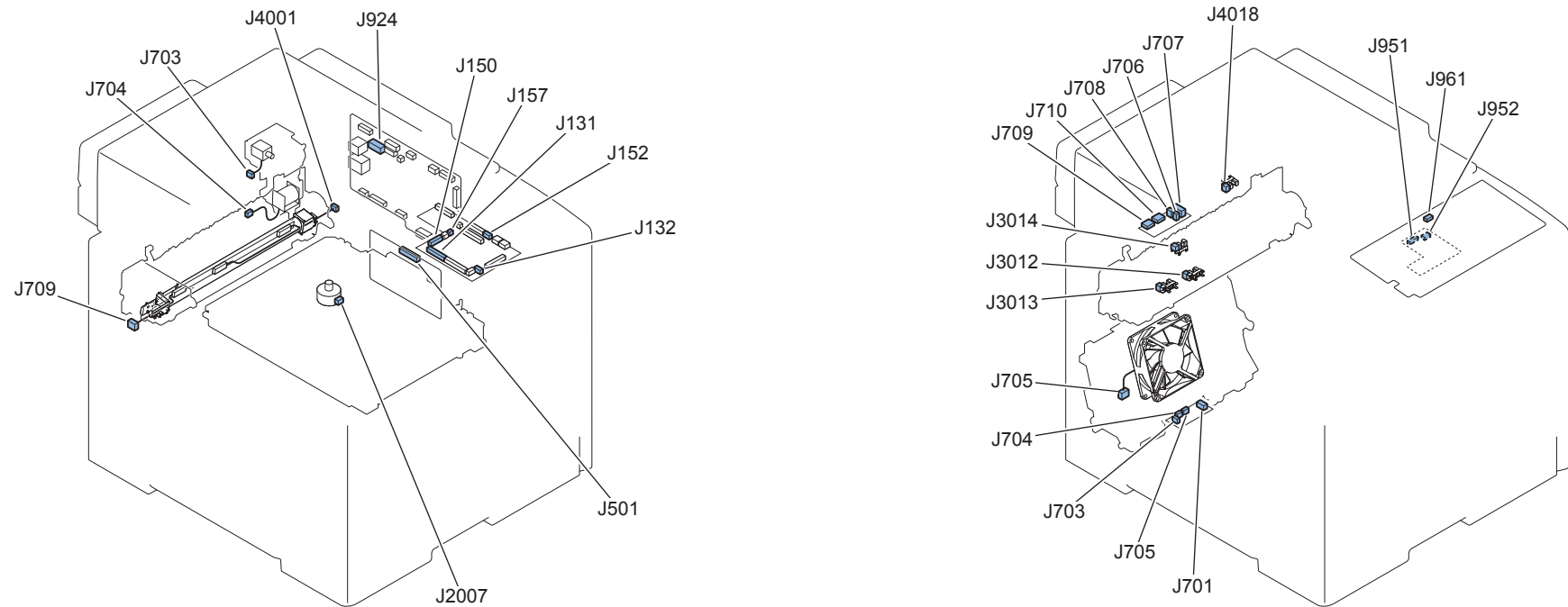
J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J133	UN1	DC Controller PCB		J1001	UN3	High Voltage Power Supply PCB	
J141	UN1	DC Controller PCB		J160	UN5	Relay PCB	
J154	UN1	DC Controller PCB		J154	SL3	Developing Separation Solenoid	
J156	UN1	DC Controller PCB		J654	UN7	Fixing Sub PCB	
J162	UN5	Relay PCB		J3010	SR7	MP Tray Pre-Registration Detection Sensor	
J167	UN5	Relay PCB		J3006	SR14	MP Tray Paper Detection Sensor	
J167	UN5	Relay PCB	J4017	J3009	SR16	ITB Pressure Release Sensor	
J903	UN13	Main Controller PCB		J1302	PS703	Document Sensor	
J903	UN13	Main Controller PCB		J1305	M721	ADF Motor	
J903	UN13	Main Controller PCB	J1310	J1312	PS702	Document End Sensor	
J908	UN13	Main Controller PCB		J972	UN15	USB Host PCB	
J904	UN13	Main Controller PCB	J1402	J1402	M720	Reader Motor	
J904	UN13	Main Controller PCB	J1401	J1404	PS701	CIS Unit Homeposition Sensor	
J922	UN13	Main Controller PCB		J922	SP1	Speaker	MF8580Cdw/8550Cdn
J902	UN13	Main Controller PCB	J1003	J1003	SL4	ADF Pickup Solenoid	

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F-4-10

J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J140	UN1	DC Controller PCB		J201	UN2	Driver PCB	
J202	UN2	Driver PCB		J2004	M5	Pickup Motor	
J203	UN2	Driver PCB		J2005	M3	Registration Motor	
J204	UN2	Driver PCB		J2003	M2	Developing Motor	
J205	UN2	Driver PCB		J2001	M4	Fixing Motor	
J206	UN2	Driver PCB		J206	FM1	Fixing/Fixing Power Supply Cooling Fan	
J207	UN2	Driver PCB		J207	SL2	Cassette Pickup Solenoid	
J208	UN2	Driver PCB		J208	CL1	MP Tray Feeding Clutch	
J209	UN2	Driver PCB		J209	SL1	MP Tray Pickup Solenoid	
J210	UN2	Driver PCB		J210	UN9	Low Voltage Sub PCB	
J211	UN2	Driver PCB		J2002	M1	Drum Motor	
J213	UN2	Driver PCB	J4004	J4004	UN11	Paper Feeder Relay PCB	
J653	UN7	Fixing Sub PCB	J4004	J4004	UN11	Paper Feeder Relay PCB	
J910	UN13	Main Controller PCB		J1	UN23	Wireless LAN PCB	MF8580Cdw



F-4-11

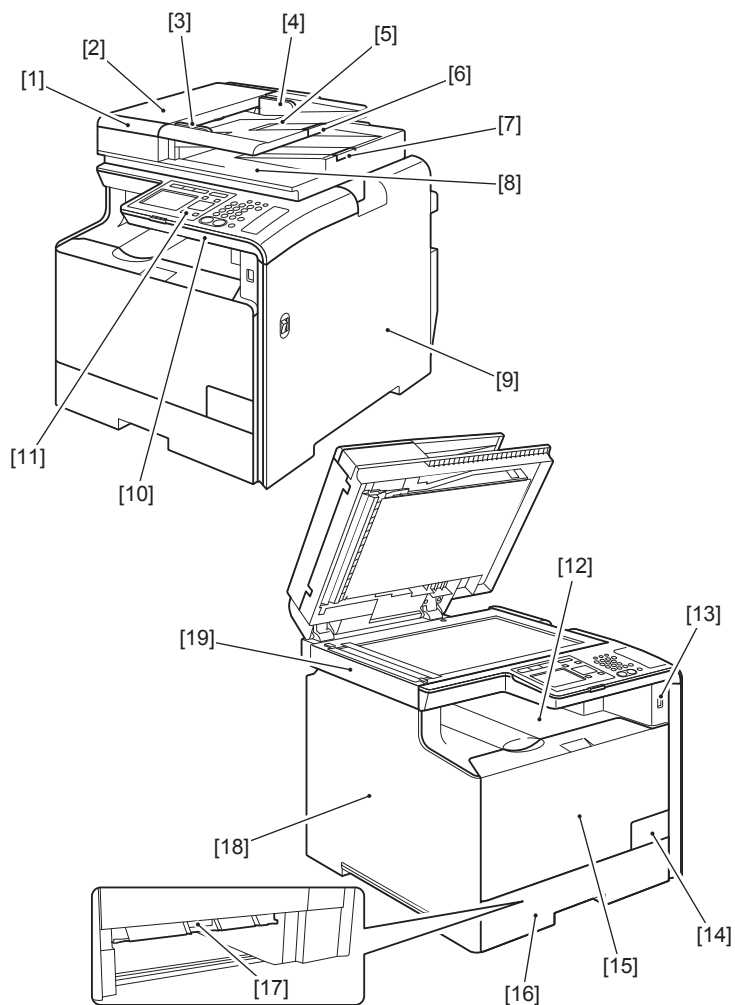
J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J131	UN1	DC Controller PCB		J501	UN4	Laser Driver PCB	
J132	UN1	DC Controller PCB		J2007	M7	Laser Scanner Motor	
J150	UN1	DC Controller PCB	J4001	J4001	TH801, TH802	Main Thermistor, Sub Thermistor 1	
J150	UN1	DC Controller PCB		J707	UN6	Fixing Relay PCB	
J152	UN1	DC Controller PCB		J701	UN10	Duplex Driver PCB	
J157	UN1	DC Controller PCB		J706	UN6	Fixing Relay PCB	
J703	UN10	Duplex Driver PCB		J703	SL5	Duplex Reversal Solenoid	
J704	UN10	Duplex Driver PCB		J704	CL2	Duplex Feeding Clutch	
J705	UN10	Duplex Driver PCB		J705	FM2	Duplex Feeding Fan	
J708	UN6	Fixing Relay PCB		J4018	SR15	Delivery Full Sensor	
J709	UN6	Fixing Relay PCB		J709	TH803	Sub Thermistor 2	
J710	UN6	Fixing Relay PCB		J3012	SR10	Fixing Loop Sensor	
J710	UN6	Fixing Relay PCB		J3013	SR9	Fixing Pressure Release Sensor	
J710	UN6	Fixing Relay PCB		J3014	SR8	Fixing Delivery Sensor	
J924	UN13	Main Controller PCB		J951	UN14	Control Panel LCD PCB	
J961	UN20	Control Panel Key PCB		J952	UN14	Control Panel LCD PCB	

T-4-14

External Cover, Internal Cover

Location

Front Side

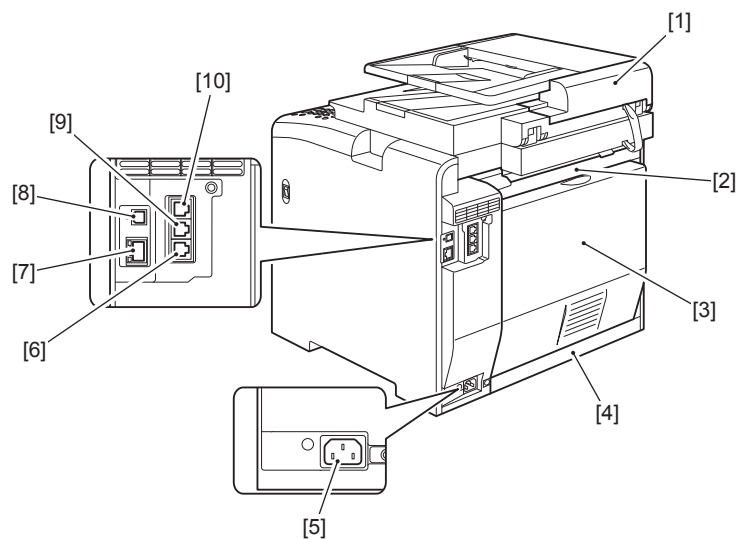


F-4-12

No.	Parts Name	Remarks	Reference
[1]	ADF Front Upper Cover	-	-
[2]	ADF Upper Cover	-	-
[3]	Side Guide (Front)	-	-
[4]	Side Guide (Rear)	-	-
[5]	Document Tray	-	-
[6]	Extension Tray	-	-
[7]	Sub Tray	-	-
[8]	Delivery Tray	-	-
[9]	Right Cover	-	(Refer to page 4-20)
[10]	Control Panel Lower Cover	-	-
[11]	Control Panel	-	(Refer to page 4-70)
[12]	Upper Cover	-	(Refer to page 4-28)
[13]	USB Port	-	-
[14]	Right Front Cover	-	(Refer to page 4-22)
[15]	Front Cover	-	(Refer to page 4-23)
[16]	Cassette	-	-
[17]	Multi-Purpose Tray Transport Guide	-	(Refer to page 4-125)
[18]	Left Cover	-	(Refer to page 4-17)
[19]	Reader Cover	-	-

T-4-15

Rear Side



F-4-13

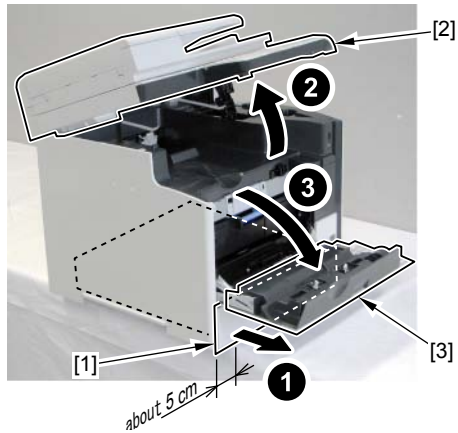
No.	Parts Name	Remarks	Reference
[1]	ADF Rear Cover	-	-
[2]	Rear Upper Cover	-	(Refer to page 4-24)
[3]	Rear Cover	-	(Refer to page 4-24)
[4]	Rear Lower Cover	-	(Refer to page 4-25)
[5]	Power Socket	-	-
[6]	Telephone Line Jack	-	-
[7]	LAN Port	-	-
[8]	USB Port	-	-
[9]	External Device Jack	-	-
[10]	Handset Terminal	-	-

T-4-16

Removing the Left Cover

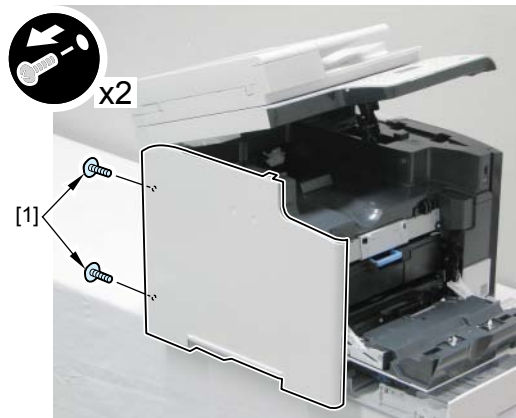
Procedure

- 1) To remove the lower claw of the Left Cover, shift the host machine by 5cm from the base.
- 2) Remove the Cassette [1].
- 3) Open the ADF Unit + Reader Unit [2] and the Front Cover [3].



F-4-14

- 4) Remove the 2 screws [2].

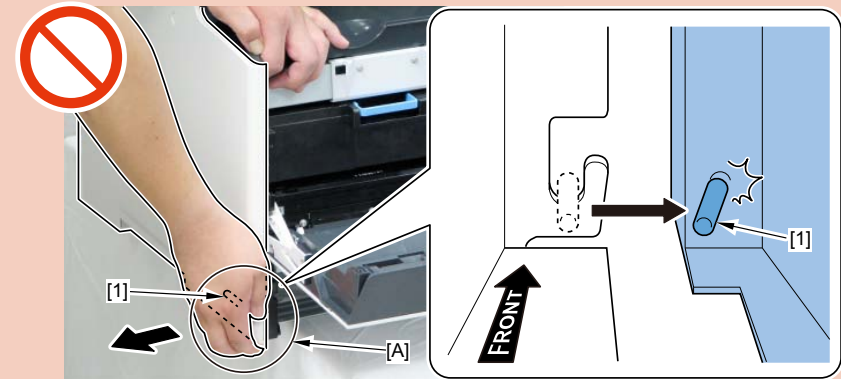


F-4-15

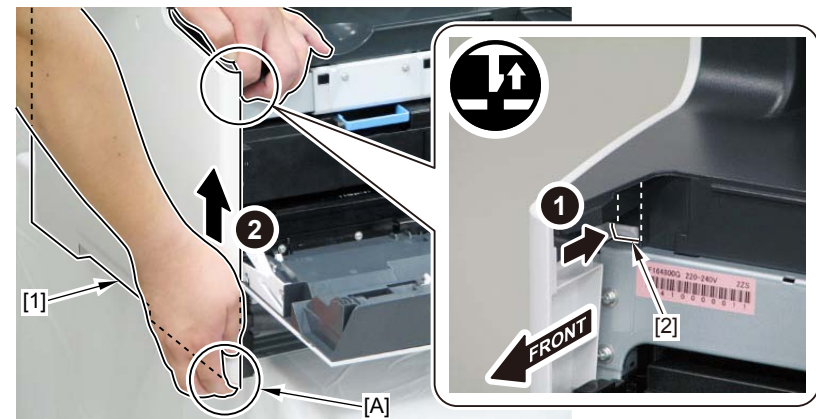
- 5) While pushing the claw [2] of the Left Cover [1], hold the top of the host machine, and push the Left Cover directly upward with your finger on the [A] part of the Left Cover.

CAUTION:

Do not open [A] part of the Left Cover in the direction of the arrow when removing the Left Cover; otherwise, the projection [1] of the Left Cover can be damaged/broken.

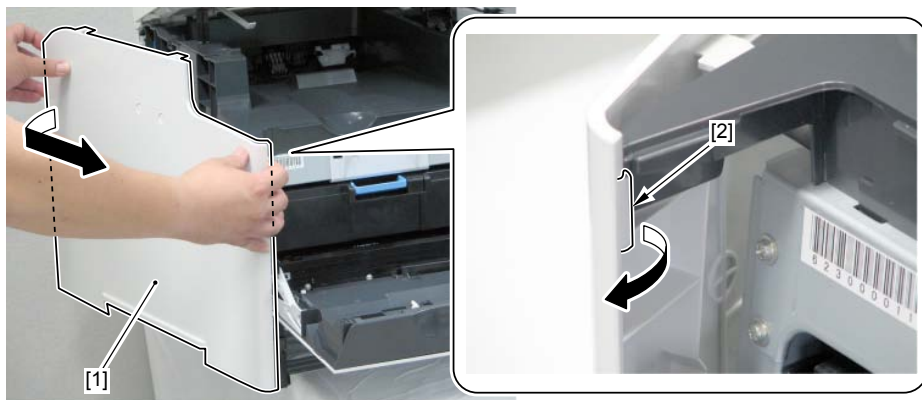


F-4-16



F-4-17

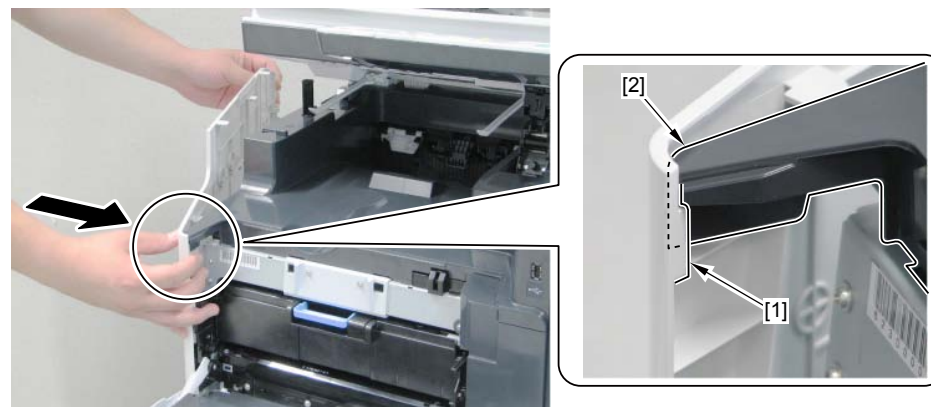
6) Release the hook [2] and remove the Left Cover [1] while opening the rear of the Left Cover [1].



F-4-18

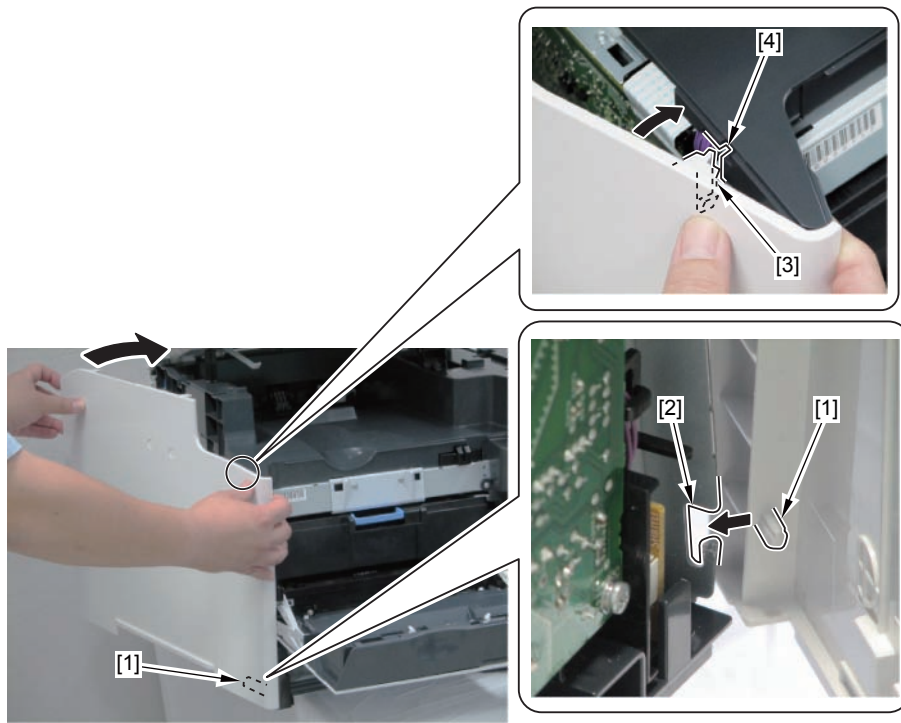
■ Installing the Left Cover

1) Fit the hook [1] at the upper right side of the Left Cover to the upper left area [2] of the Upper Cover.



F-4-19

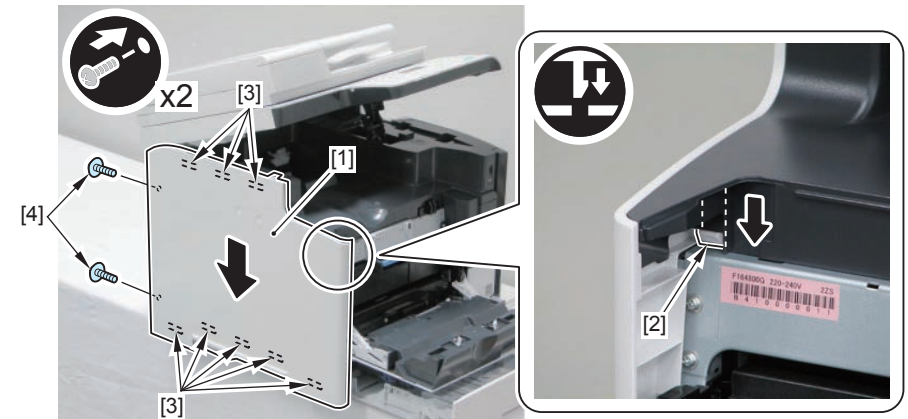
- 2) Fit the protrusion [1] of Left Cover to the groove [2] of the frame.
- 3) Insert the claw [3] of the Left Cover to the groove [4] of the Upper Cover to match the Left Cover to the machine.



F-4-20

- 4) Install the Left Cover [1].

- 1 Claw [2]
- 8 Hooks [3]
- 2 Screws [4]



F-4-21

Removing the Right Cover

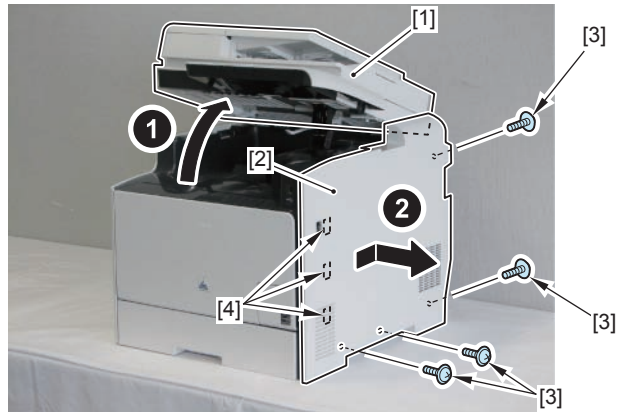
Procedure

1) Open the ADF Unit + Reader Unit [1], and remove the Right Cover [2].

- 4 Screws [3]
- 3 Hooks [4]



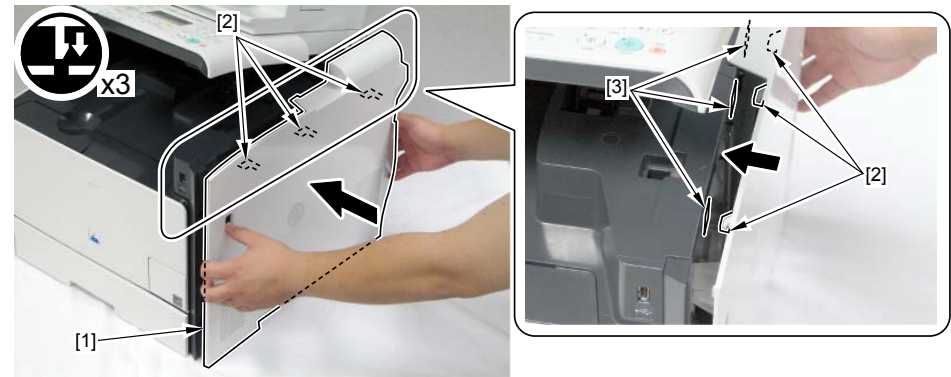
x4



F-4-22

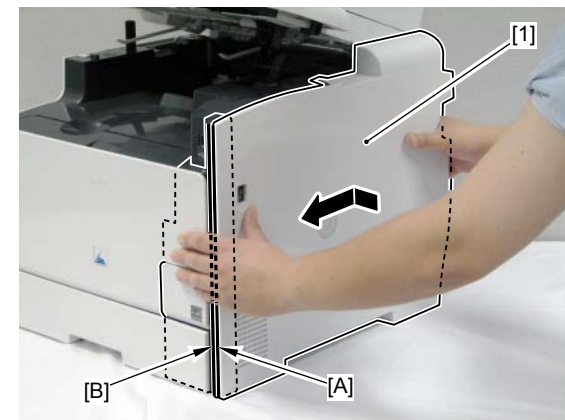
Installing the Right Cover

1) Fit the 3 hooks [2] of the Right Cover into the holes [3] of the Upper Cover



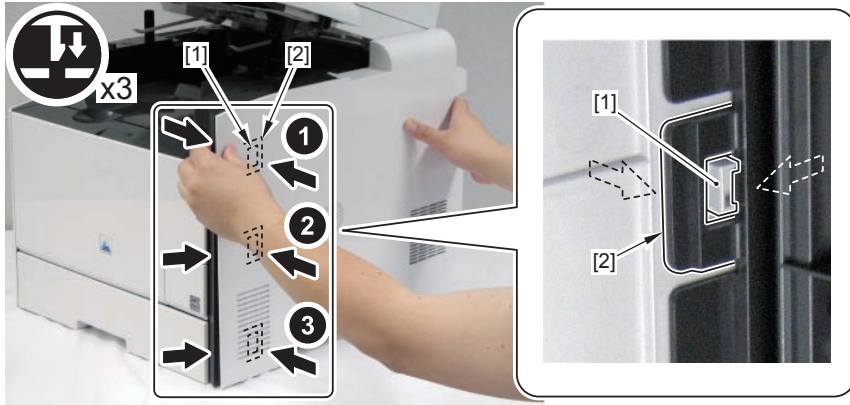
F-4-23

2) While pushing the Right Cover [1] to the Host Machine, fit the left surface [A] of the Right Cover to the right surface [B] of the Right Front Cover.



F-4-24

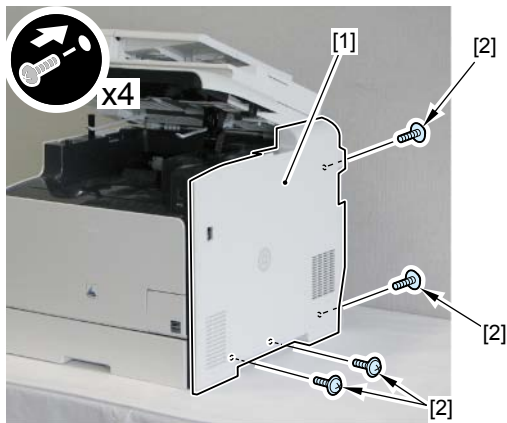
3) Install the 3 hooks [1] at the left side of the Right Cover and the 3 holes [2] of the Right Front Cover.



F-4-25

4) Install the Right Cover [1].

- 4 screws [2]



F-4-26

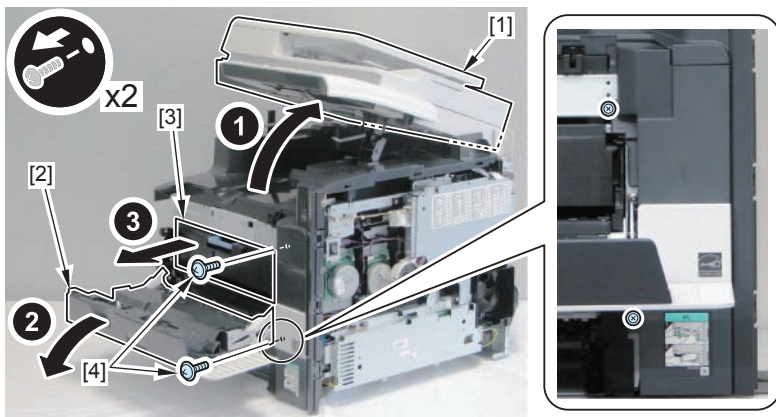
Removing the Right Front Cover

Preparation

1) Remove the Right Cover. Refer to page 4-20.

Procedure

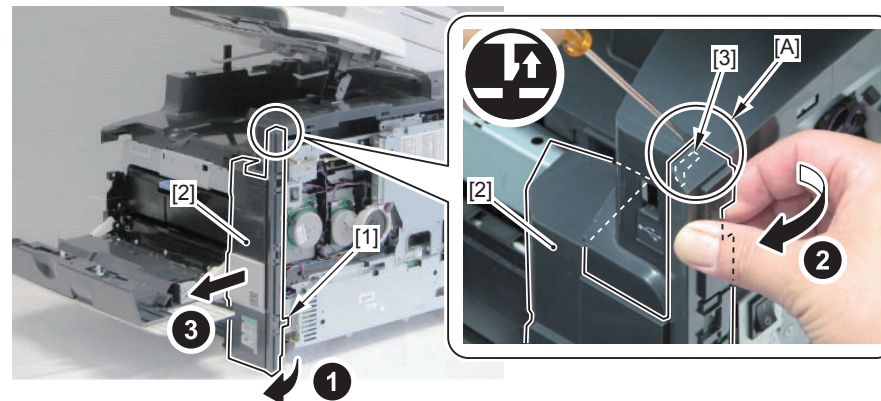
- 1) Remove the Cassette.
- 2) Open the ADF Unit + Reader Unit [1] and the Front Cover [2].
- 3) Draw out the Cartridge Tray.
- 4) Remove the 2 screws [2].



F-4-27

5) Remove the claw [1] at the lower right side of the Right Front Cover.

6) Put a flat-blade screwdriver into the gap [A] between the upper area of the Right Front Cover and the Upper Cover to remove the claw [2] in the direction of the arrow.



F-4-28

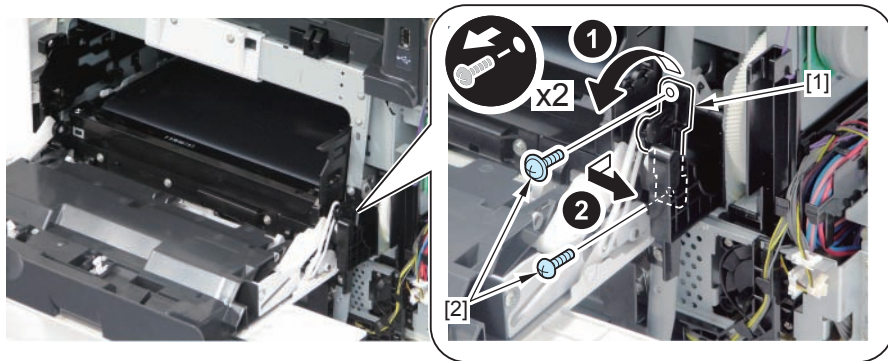
Removing the Front Cover

Preparation

- 1) Remove the Cartridge Tray. Refer to page 4-30.
- 2) Remove the Right Cover. Refer to page 4-20.
- 3) Remove the Left Cover. Refer to page 4-17
- 4) Remove the Right Front Cover. Refer to page 4-22.

Procedure

- 1) Remove the bushing support [1].
 - 2 screws [2]



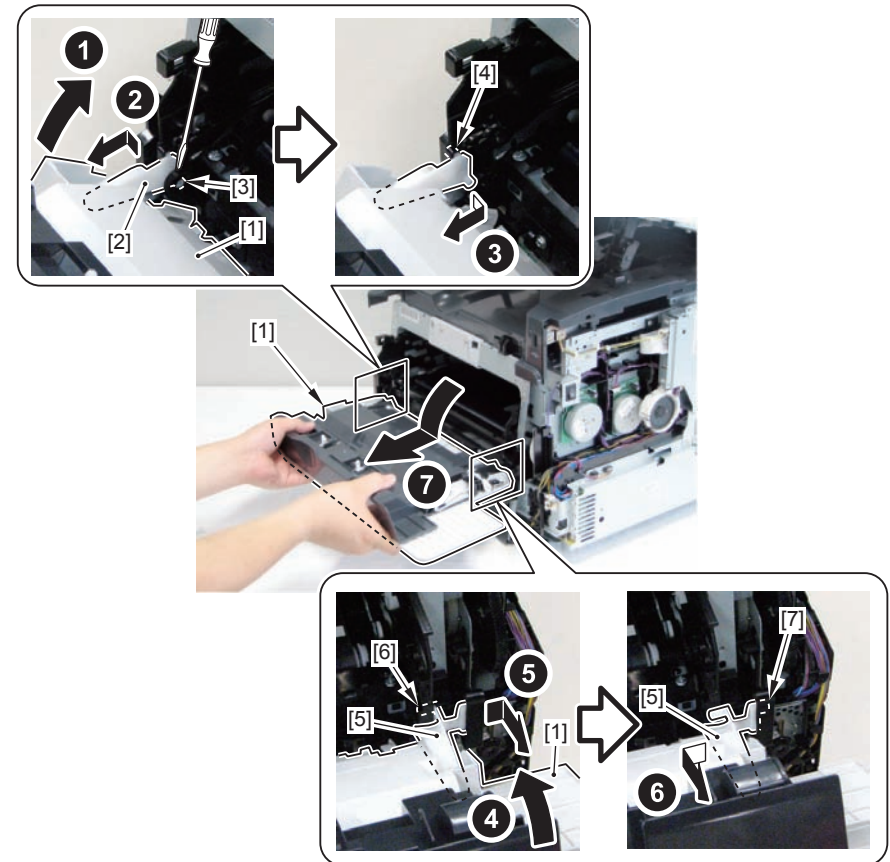
F-4-29

- 2) Remove the 2 pins [1] using a screwdriver.



F-4-30

- 3) While closing the Front Cover [1], release the shaft [3] of the Left Link [2] and the protrusion [4].
- 4) While closing the Front Cover [1], release the shaft [6] of the Right Link [5] and the protrusion [7], and remove the Front Cover [1].



F-4-31

Removing the Rear Upper Cover

Preparation

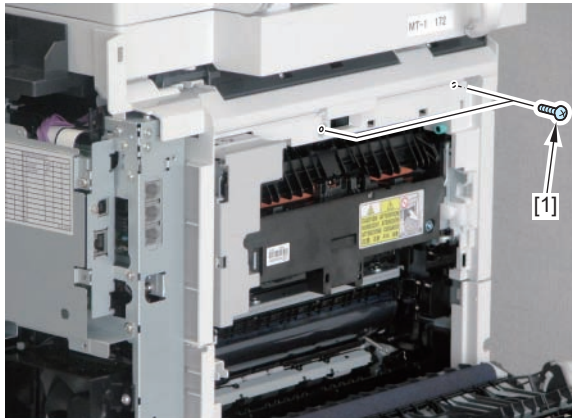
- 1) Remove the Right Cover. Refer to page 4-20
- 2) Remove the Left Cover. Refer to page 4-17.

Procedure

- 1) Close the ADF Unit/Copyboard + Reader Unit.
- 2) Open the Rear Cover.
- 3) Remove the 2 screws [1].



x2



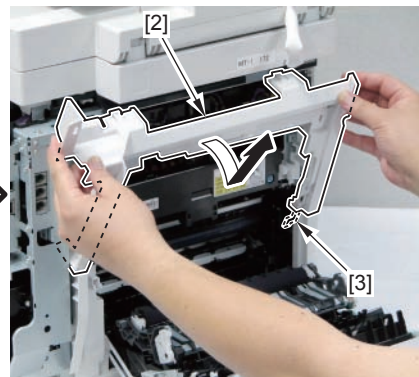
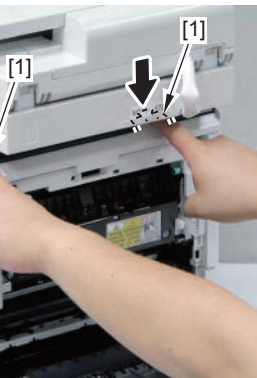
F-4-32

- 4) Push the 2 claws [1] to remove the Rear Upper Cover [2].

- 1 Hook [3]



x2

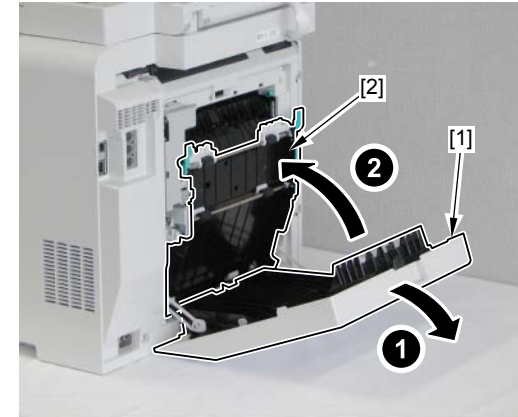


F-4-33

Removing the Rear Cover

Procedure

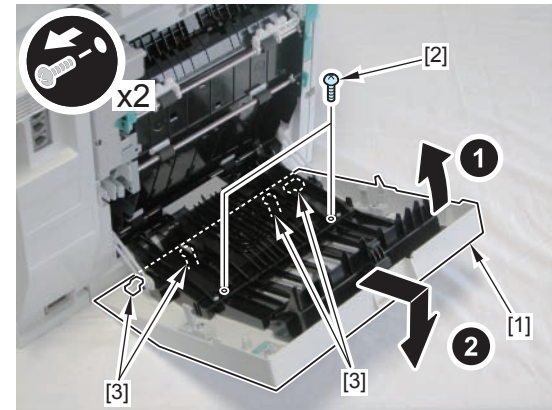
- 1) Open the Rear Cover [1].
- 2) Close the Duplex Feed Unit [2].



F-4-34

- 3) Remove the Rear Cover [1].

- 2 screws [2]
- 4 hooks [3]



F-4-35

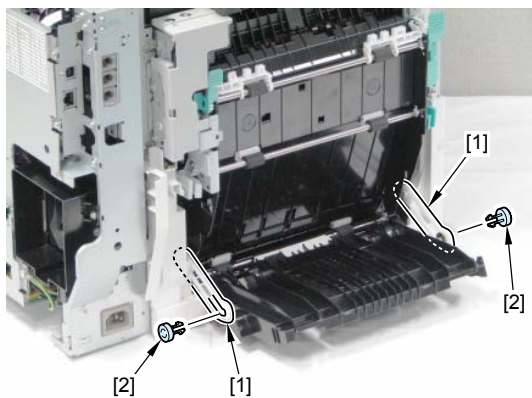
Removing the Rear Lower Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the Rear Upper Cover. Refer to page 4-24.
- 4) Remove the Rear Cover. Refer to page 4-24.

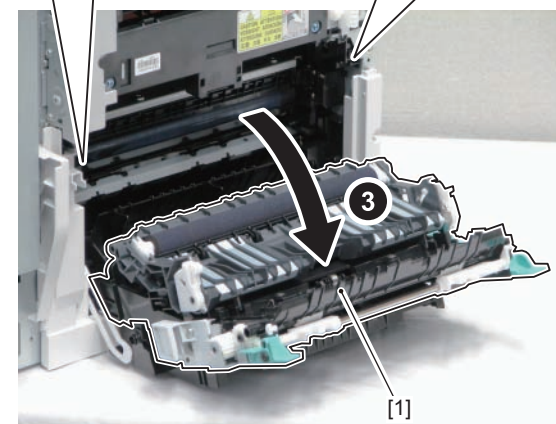
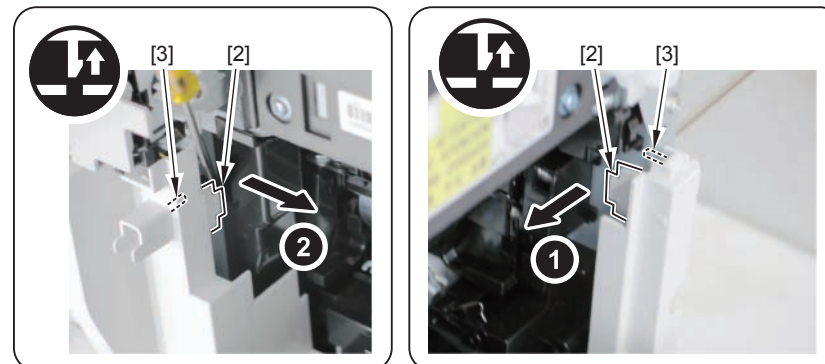
Procedure

- 1) Remove the arm [1].
 - 2 link caps [2]



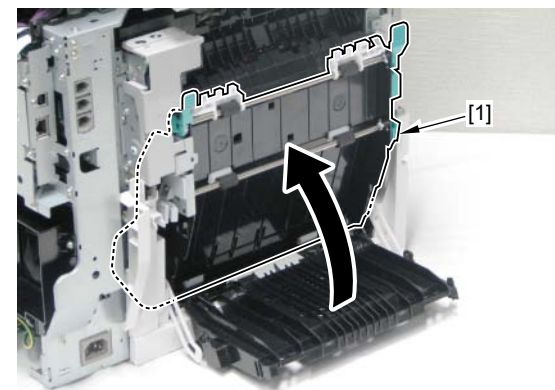
F-4-36

- 2) Open the Duplex Feed Unit [1] and remove the 2 claws [2] and 2 bosses [3].



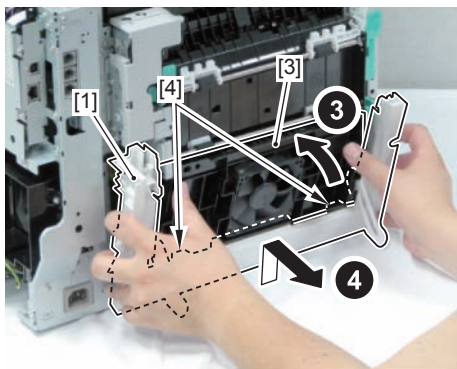
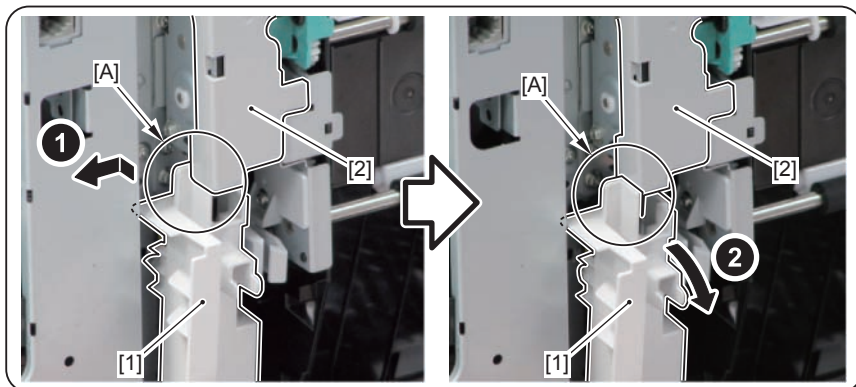
F-4-37

- 3) Close the Duplex Feed Unit [1].



F-4-38

- 4) Move the Rear Lower Cover [1] aside from the [A] part of the Duplex Reverse Drive Unit [2].
- 5) Hold the Rear Cover Rib Unit [3] and remove the Rear Lower Cover [1].
 - 2 Hooks [4]



F-4-39

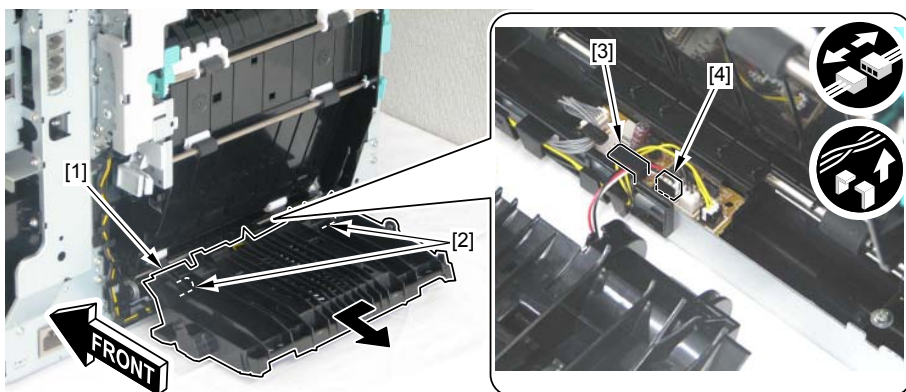
Removing the Rear Cover Rib Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the Rear Upper Cover. Refer to page 4-24.
- 4) Remove the Rear Cover. Refer to page 4-24
- 5) Remove the Rear Lower Cover. Refer to page 4-25

Procedure

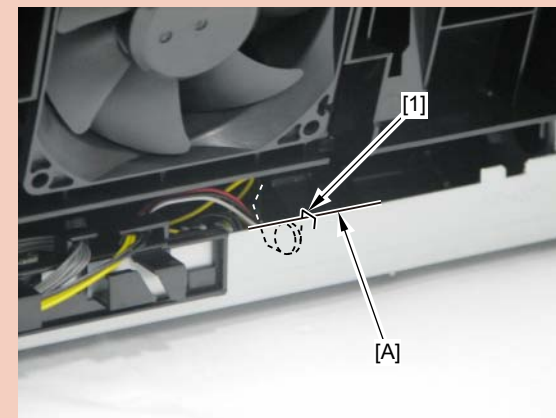
- 1) Remove the Rear Cover Rib Unit [1].
 - 2 bearing holders [2]
 - 1 fixing guide [3]
 - 1 connector [4]



F-4-40

CAUTION:

At installation, make sure that the spring [1] is installed on [A] part before installing the Rear Cover Rib Unit.



F-4-41

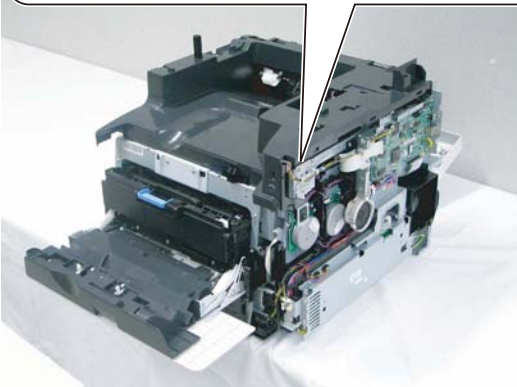
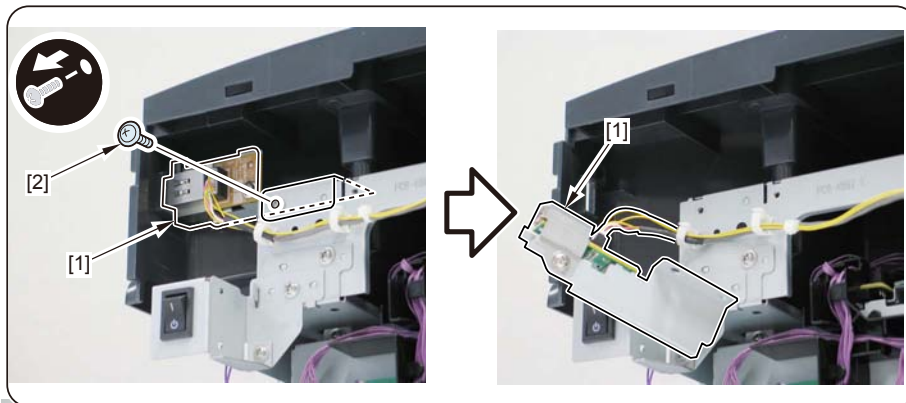
Removing the Upper Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the Right Front Cover. Refer to page 4-22.
- 4) Remove the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Remove the Rear Upper Cover. Refer to page 4-24.

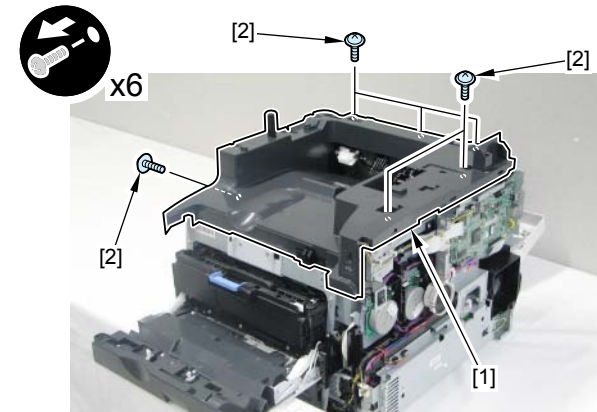
Procedure

- 1) Remove the USB Host PCB Unit [1].
 - 1 screw [2]



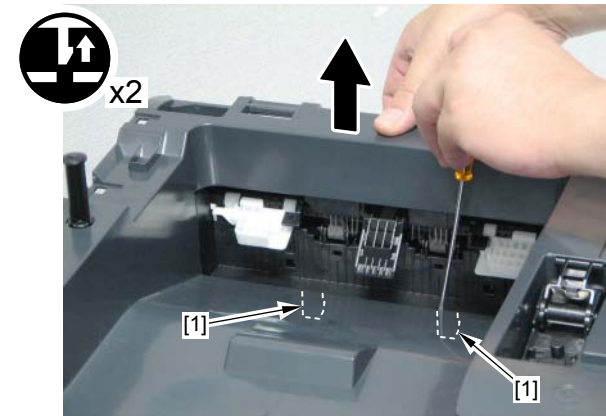
F-4-42

- 2) Remove 6 screws [1].



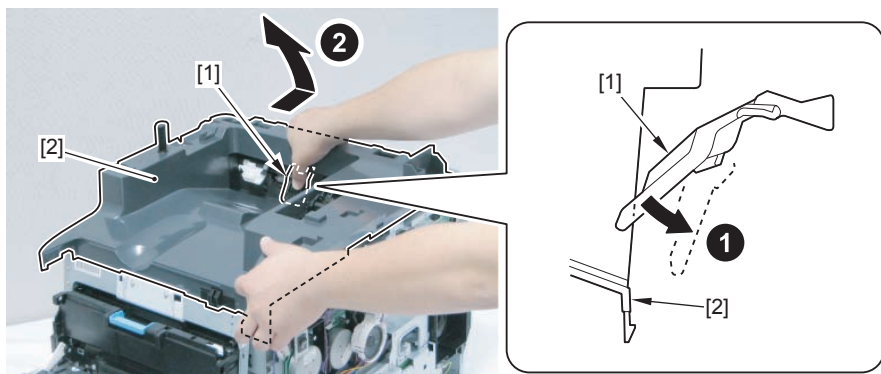
F-4-43

- 3) Release 2 claws [1] of the Upper Cover with a flat-blade screwdriver.



F-4-44

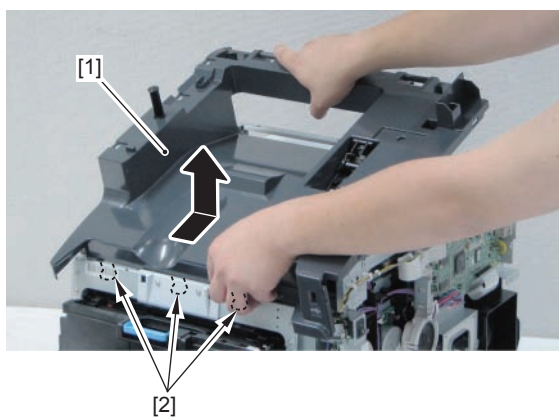
4) Push down the flag [1] and remove the rear side of the Upper Cover [2].



F-4-45

5) Remove the Upper Cover [1].

- 3 Hooks [2]



F-4-46

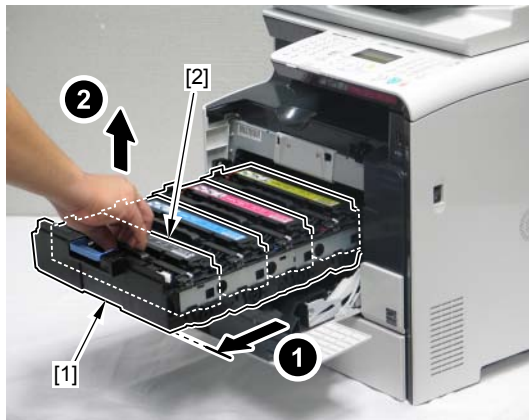
Removing the Cartridge Tray

Procedure

CAUTION:

When removing the Toner Cartridge, be careful not to damage the Photosensitive Drum. Also, be sure to block light from exposing the Photosensitive Drums.

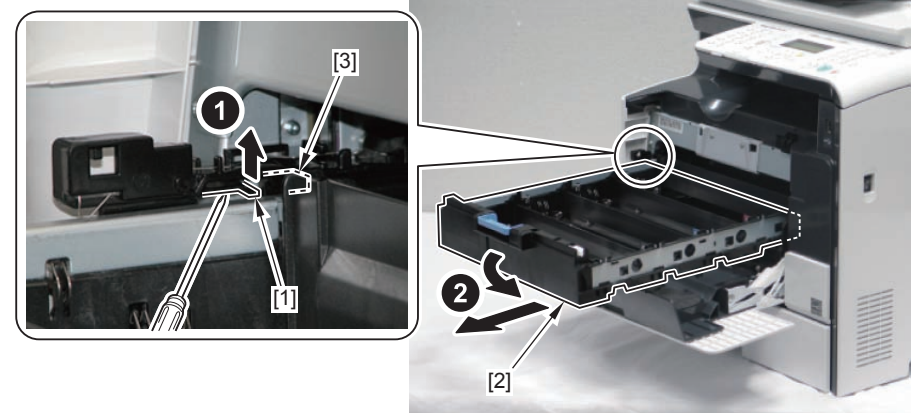
- 1) Open the Front Cover.
- 2) Pull out the Cartridge Tray [1].
- 3) Remove the toner cartridges (Y, M, C, Bk) [2].



F-4-47

- 4) While raising the stopper [1], remove the Cartridge Tray [2].

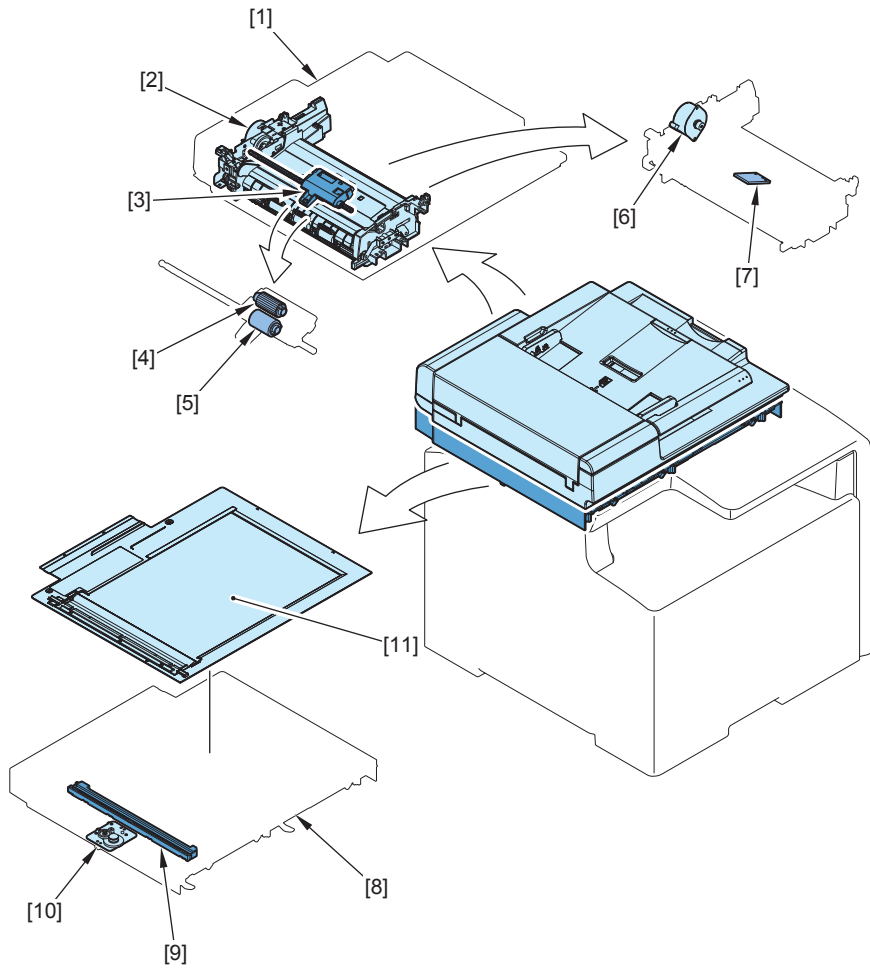
- 1 Protrusion [3]



F-4-48

Document Exposure, Feed System

Location



F-4-49

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	ADF Unit	Product Configuration	-	(Refer to page 4-35)	(Refer to page 4-36)
[2]	ADF Paper Feeder Unit	ADF Unit	-	(Refer to page 4-43)	-
[3]	ADF Roller Unit	ADF Unit	-	(Refer to page 4-38)	-
[4]	ADF Pickup Roller	ADF Roller Unit	-	(Refer to page 4-40)	-
[5]	ADF Separation Roller	ADF Roller Unit	-	(Refer to page 4-41)	-
[6]	ADF Motor	ADF Paper Feeder Unit	M721	(Refer to page 4-46)	-
[7]	ADF Separation Pad	ADF Paper Feeder Unit	-	(Refer to page 4-42)	-
[8]	Reader Unit	Product Configuration	-	(Refer to page 4-35)	(Refer to page 4-37)
[9]	CIS Unit	Reader Unit	-	(Refer to page 4-49)	(Refer to page 4-51)
[10]	Reader Motor	Reader Unit	M720	(Refer to page 4-52)	-
[11]	Reader Unit Upper Cover	Reader Unit	-	(Refer to page 4-47)	(Refer to page 4-48)

T-4-17

Removing the ADF Unit + Reader Unit

Preparation

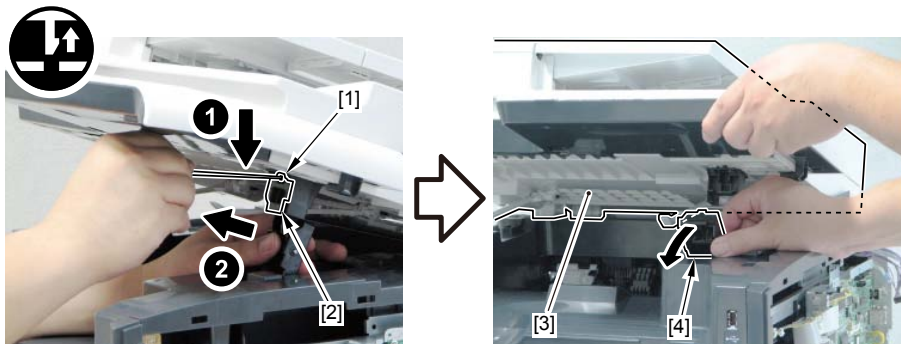
- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.

Procedure

CAUTION:

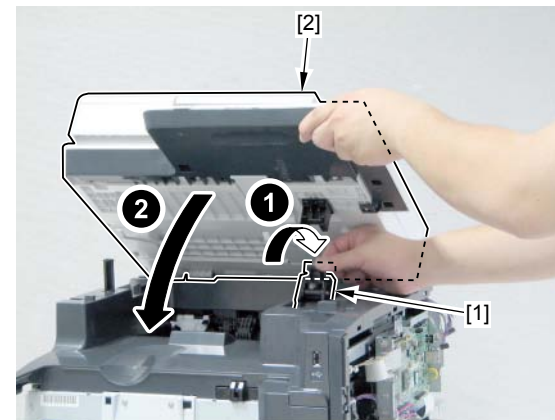
Be sure to perform "After replacing ADF unit (Refer to page 4-36)" and "After replacing reader unit (Refer to page 4-37)" when replacing the ADF Unit and Reader Unit, respectively.

- 1) Open the ADF Unit + Reader Unit.
- 2) Remove the claw [1] to remove the Reader Shaft Retainer [2].
- 3) While supporting the ADF Unit + Reader Unit [3], remove the Reader Support Shaft [4].



F-4-50

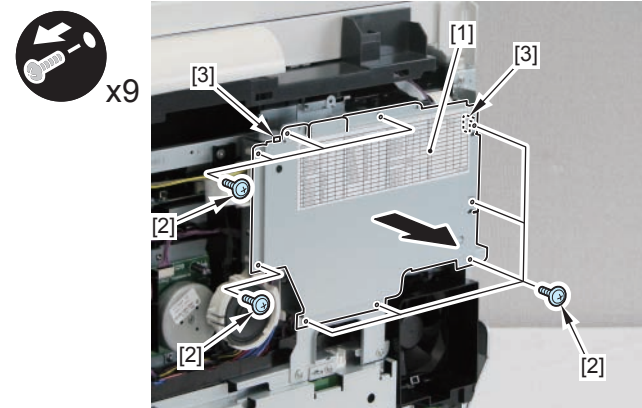
- 4) Bring down the Reader Support Shaft [1] to close the ADF Unit + Reader Unit [2].



F-4-51

- 5) Remove the Controller Cover [1] at the right side of the host machine.

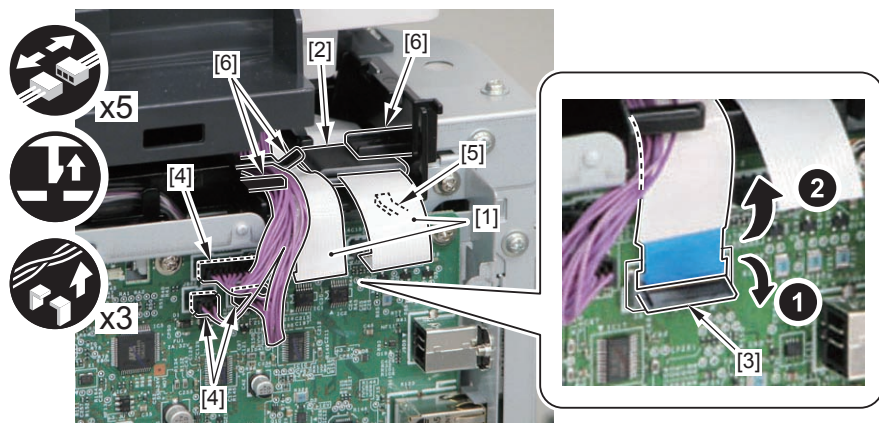
- 9 screws [2]
- 2 Hooks [3]



F-4-52

6) Remove the 2 Flat Cables [1] and the Ferrite Core [2] on the right side of the machine.

- 1 Flat Cable Connector Lock [3]
- 3 Connectors [4]
- 1 Claw [5]
- 3 Harness Guides [6]

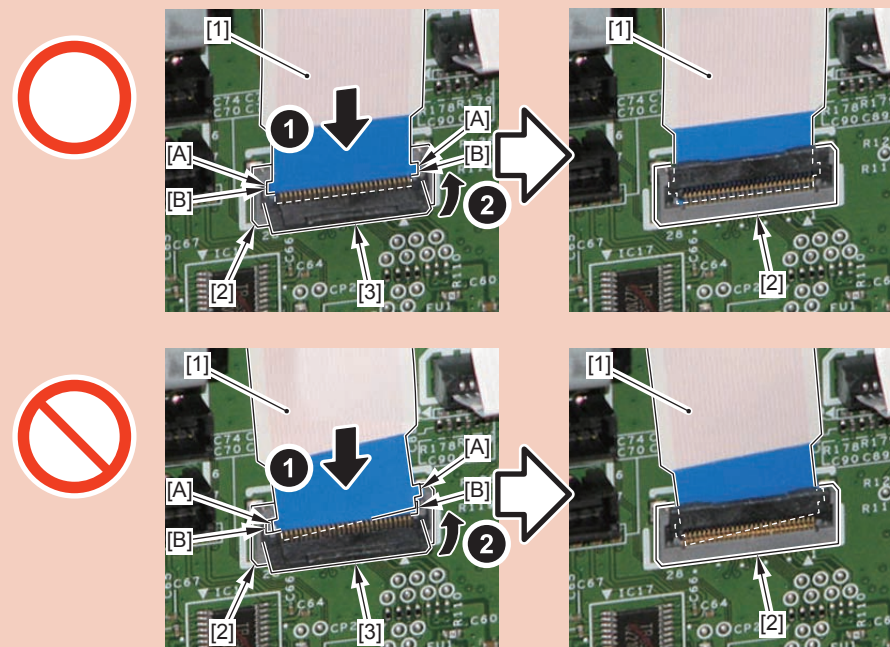


F-4-53

CAUTION:

Be sure to perform the following when connecting the Flat Cable [1] to the connector with a lock [2].

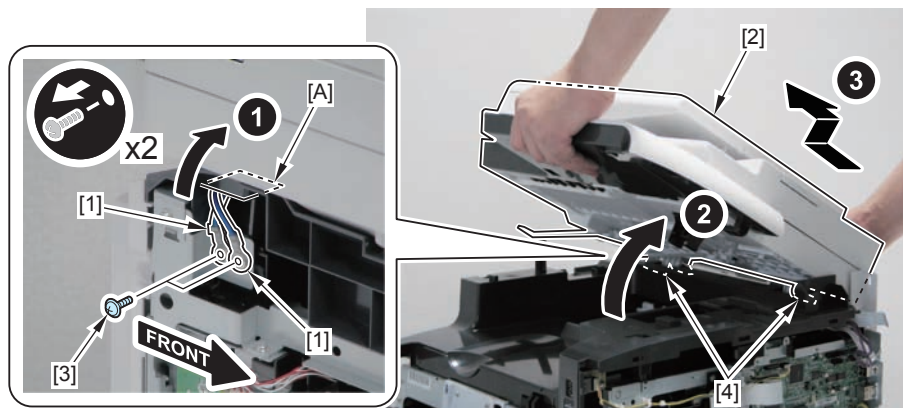
Be sure to insert the Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-54

7) Put the 2 Grounding Wires [1] through the hole [A] and open and remove the ADF Unit + Reader Unit [2].

- 2 Screws [3]
- 2 Hooks [4]



F-4-55

Separating the ADF Unit + Reader Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the ADF Unit + Reader Unit. Refer to page 4-32.

Procedure

CAUTION:

Be sure to perform "After replacing ADF unit (Refer to page 4-36)" and "After replacing reader unit (Refer to page 4-37)" when replacing the ADF Unit and Reader Unit, respectively.

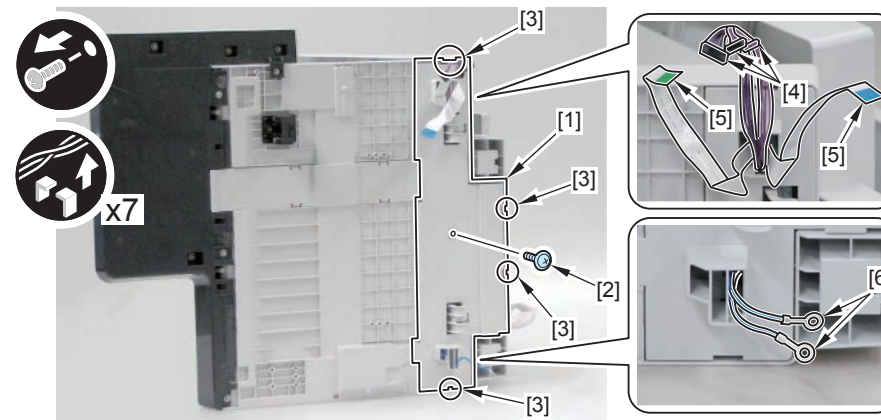
- 1) Place the ADF Unit and Reader Unit in the open status as shown in the figure below.



F-4-56

- 2) Remove the Reader Unit Lower Cover [1].

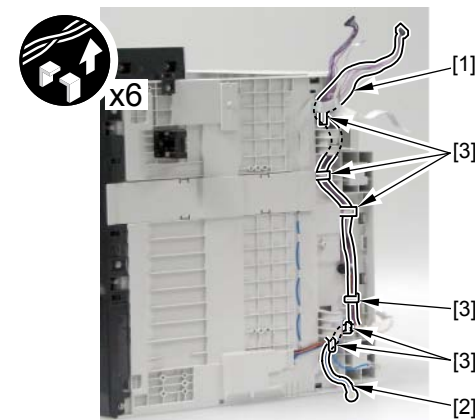
- 1 Screw [2]
- 4 Claws [3]
- 3 Harnesses [4]
- 2 Flat Cables [5]
- 2 Grounding Wires [6]



F-4-57

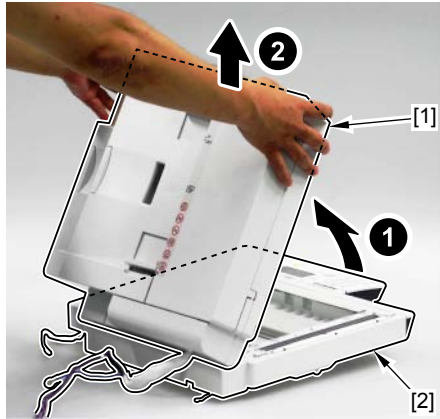
- 3) Remove the harness [1] and the grounding [2].

- 6 harness guides [3]



F-4-58

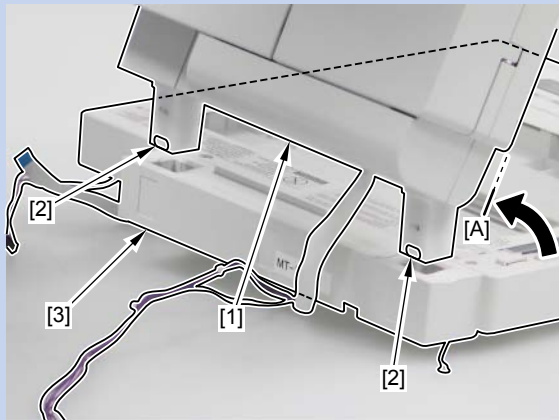
4) Raise the ADF Unit [1] to separate from the Reader Unit [2] in the direction of the arrow.



F-4-59

NOTE:

Be sure to open the ADF Unit [1] to the degree indicated with the direction of the arrow [A]; otherwise, the ADF Unit cannot be separated from the Reader Unit [3] because of the 2 claws [2].



F-4-60

■ After replacing ADF units

1) After executing the white level adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

2. Checking the setting value

- COPIER > ADJUST > CCD > DFTAR-R (RED shading target value when using DF)
- COPIER > ADJUST > CCD > DFTAR-G (GREEN shading target value when using DF)
- COPIER > ADJUST > CCD > DFTAR-B (BLUE shading target value when using DF)
- COPIER > ADJUST > CCD > DFTAR-BW (Monochrome shading target value when using DF)

2) Execute the reading position adjustment with the following service mode.

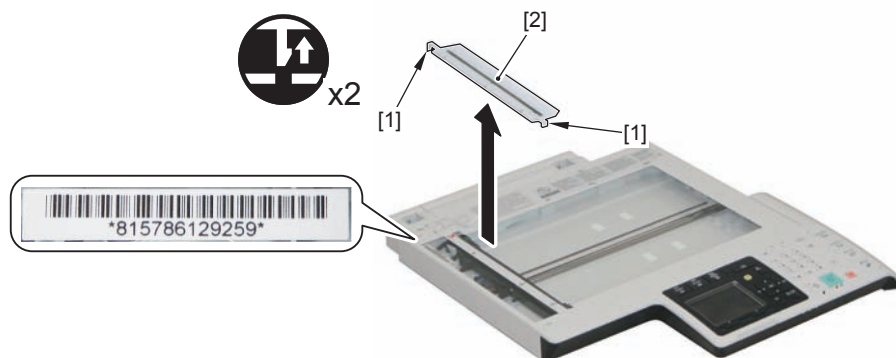
- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)

3) Execute the original stop position and feed speed adjustment at stream reading.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

After replacing reader units

1) Release 2 claws [1] and Remove the Scoopup sheet holder [2], Enter the setting value of the Standard White Plate.



F-4-61

- COPIER > ADJUST > CCD > W-PLT-X (X signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Y (Y signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Z (Z signal data for the standard white plate)

MEMO

The value of W-PLT-X: The first four digits of the value on the label

The value of W-PLT-Y: The four digits in the middle of the value on the label

The value of W-PLT-Z: The last four digits of the value on the label

2) Execute the white level adjustment.

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

3) After executing the reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

4) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

5) Enter the value on the label packed with the part in the following service mode item.

- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)
- COPIER> ADJUST> CCD> 50-RG (Color displacement correction value between RG in the vertical scanning direction (50%))
- COPIER> ADJUST> CCD>50-GB (Color displacement correction value between GB in the vertical scanning direction (50%))
- COPIER> ADJUST> CCD>100-RG (Color displacement correction value between RG in the vertical scanning direction (100%))
- COPIER> ADJUST> CCD>100-GB (Color displacement correction value between GB in the vertical scanning direction (100%))
- COPIER>ADJUST>PASCAL>OFST-P-Y (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-M (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-C (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-K (Adjustment of test chart reading density)

6) Read the image and execute the adjustment with the following service mode.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

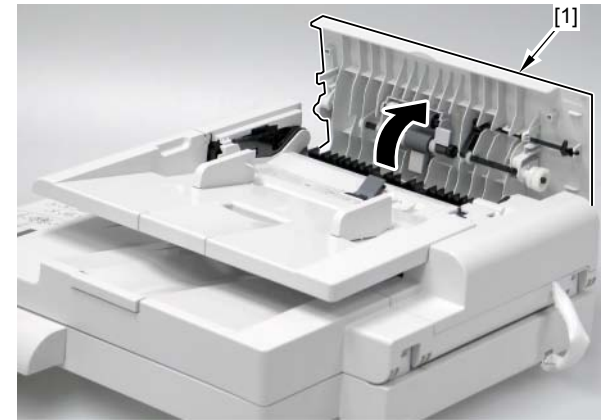
Removing the ADF Roller Unit

Procedure

CAUTION:

Do not touch the surface of the roller.

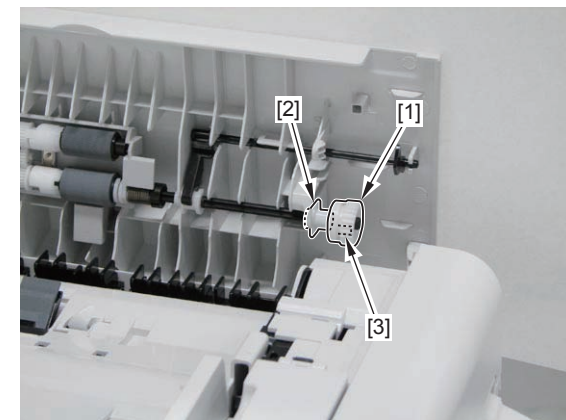
1) Open the ADF Upper Cover [1].



F-4-62

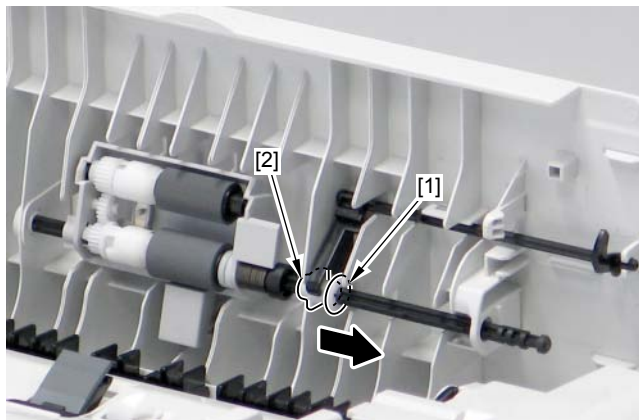
2) Remove the gear [1] and the bushing [2].

- 1 claw [3]



F-4-63

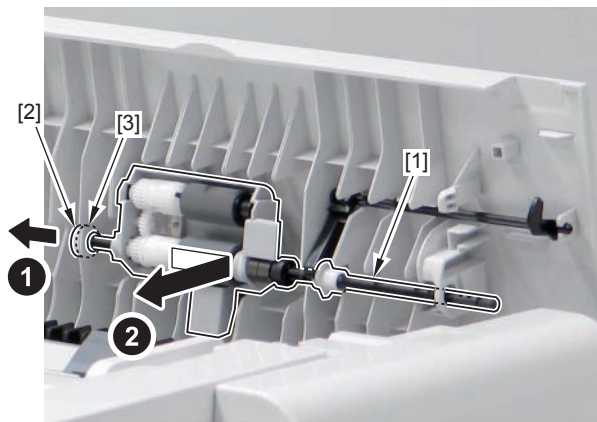
3) Remove the plastic E-ring [1] and slide the bushing [2].



F-4-64

4) Remove the ADF Roller Unit [1].

- 1 plastic E-ring [2]
- 1 bushing [3]



F-4-65

CAUTION:

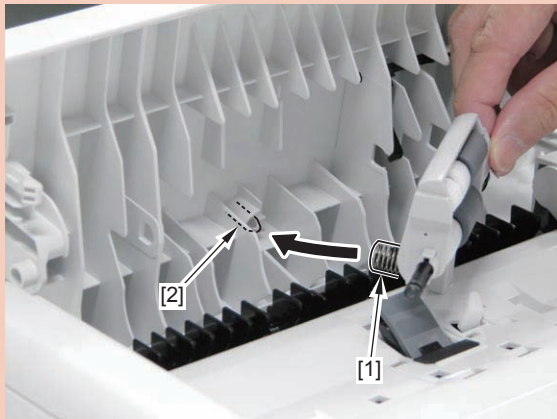
Be careful not to lose the spring [1] attached to the ADF Roller Unit.



F-4-66

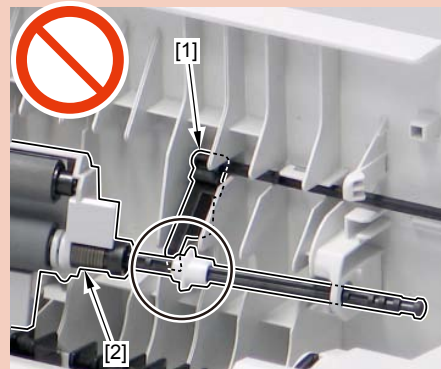
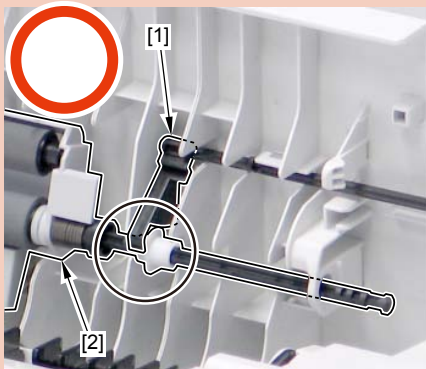
CAUTION:

- When installing, match the spring [1] of the ADF Roller Unit to the boss [2].



F-4-67

- Be sure to put the Sensor Flag [1] above the ADF Roller Unit [2] at installation work.



F-4-68

Removing the ADF Pickup Roller

Preparation

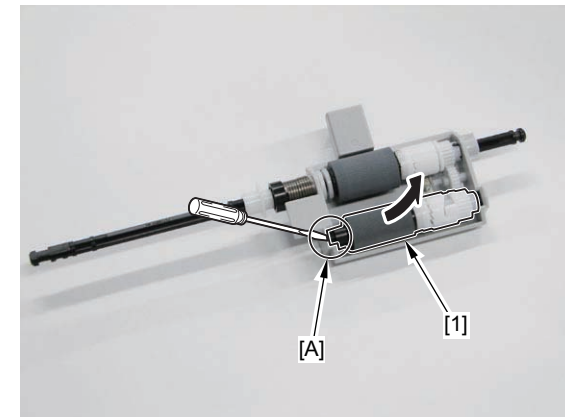
- Remove the ADF Roller Unit. Refer to page 4-38.

Procedure

CAUTION:

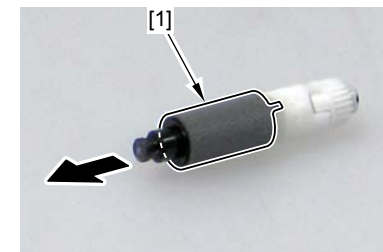
Do not touch the surface of the roller.

- Insert the end of the flat-blade screwdriver into the [A] part to remove the ADF Pickup Roller Unit [1].



F-4-69

- Remove the ADF Pickup Roller [1].



F-4-70

Removing the ADF Separation Roller

Preparation

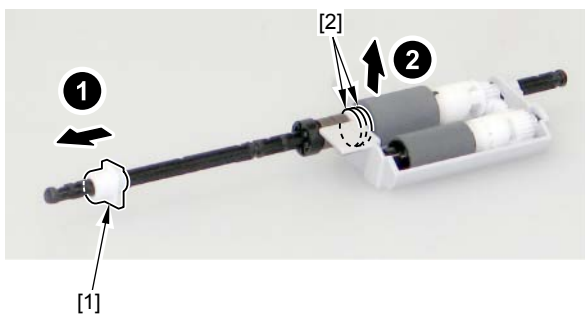
1) Remove the ADF Roller Unit. Refer to page 4-38.

Procedure

CAUTION:

Do not touch the surface of the roller.

1) Remove the bushing [1] and the 2 plastic E-rings [2].

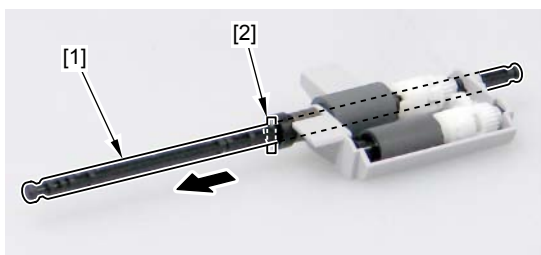


F-4-71

2) Slide the Roller Shaft [1] to remove the parallel pin [2] and the bushing [3].

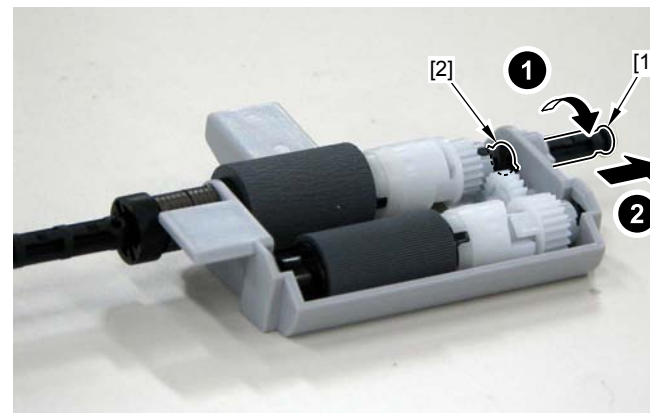
CAUTION:

Be careful not to lose the parallel pin [2] at assembly/disassembly.



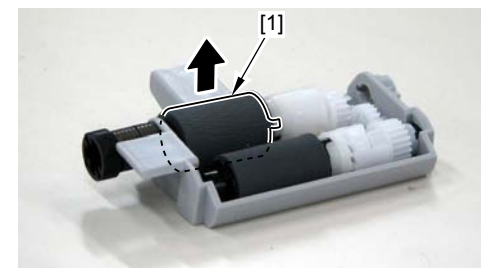
F-4-72

3) Turn the Roller Shaft [1] in the direction of the arrow and fit the projection [2] to the hole of the Roller Holder to remove.



F-4-73

4) Remove the ADF Separation Roller [1].



F-4-74

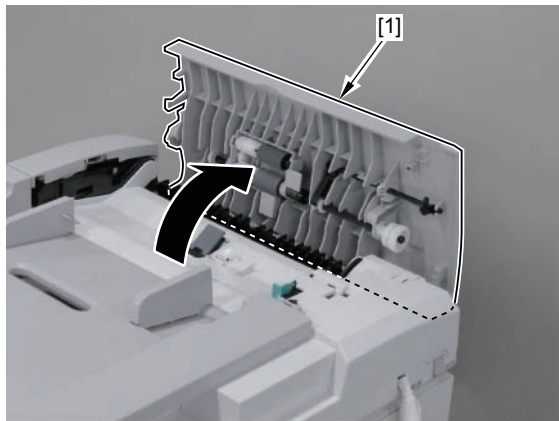
Removing the ADF Separation Pad

Procedure

CAUTION:

Do not touch the surface of the roller or pad.

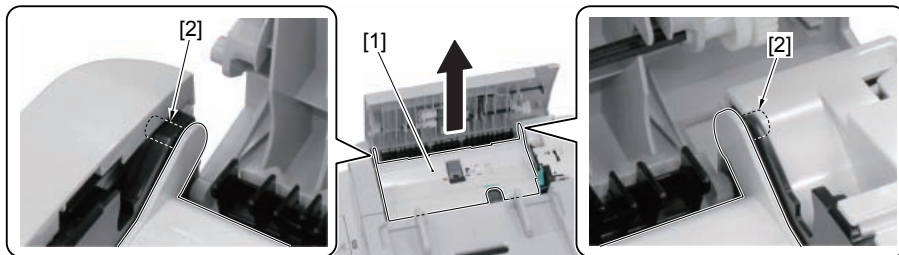
1) Open the ADF Upper Cover [1].



F-4-75

2) Remove the Feed Guide [1].

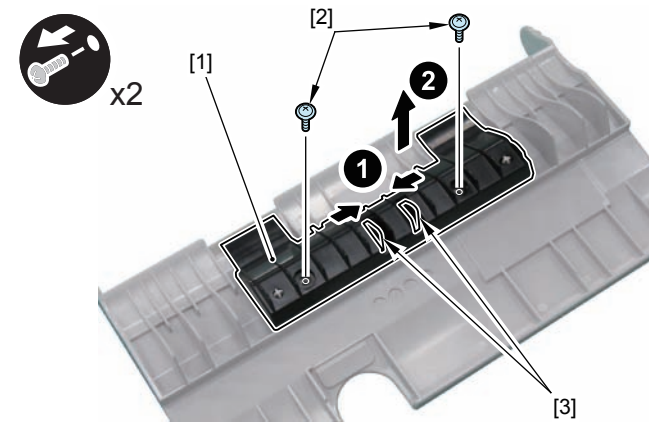
- 2 Bosses [2]



F-4-76

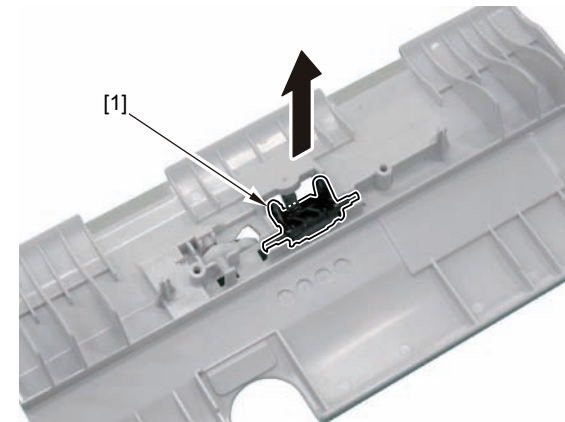
3) Remove the Retaining Plate [1] On the Back of the Feed Guide.

- 2 Screws [2]
- 2 Tabs [3] of the Separation Pad Holder



F-4-77

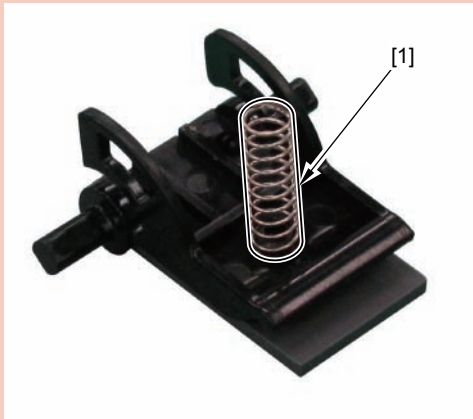
4) Remove the Separation Pad Holder [1].



F-4-78

CAUTION:

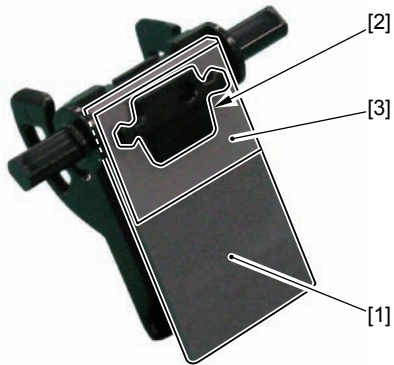
Be careful not to lose the Spring [1] on the Separation Pad Holder.



F-4-79

5) Remove the ADF Separation Pad [1].

- Pad Retainer [2]
- Sheet [3]

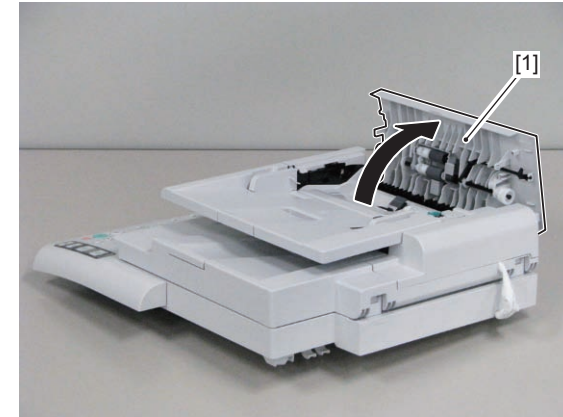


F-4-80

Removing the ADF Pickup Feed Unit

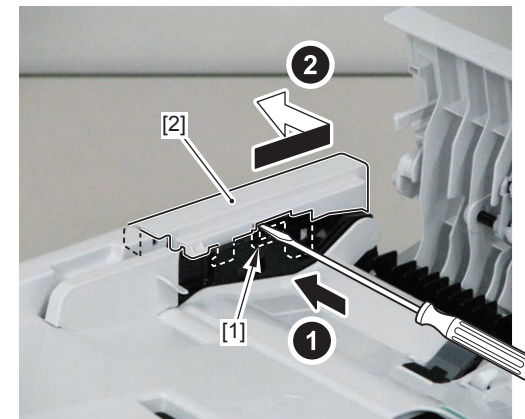
Procedure

1) Open the ADF Upper Cover [1].



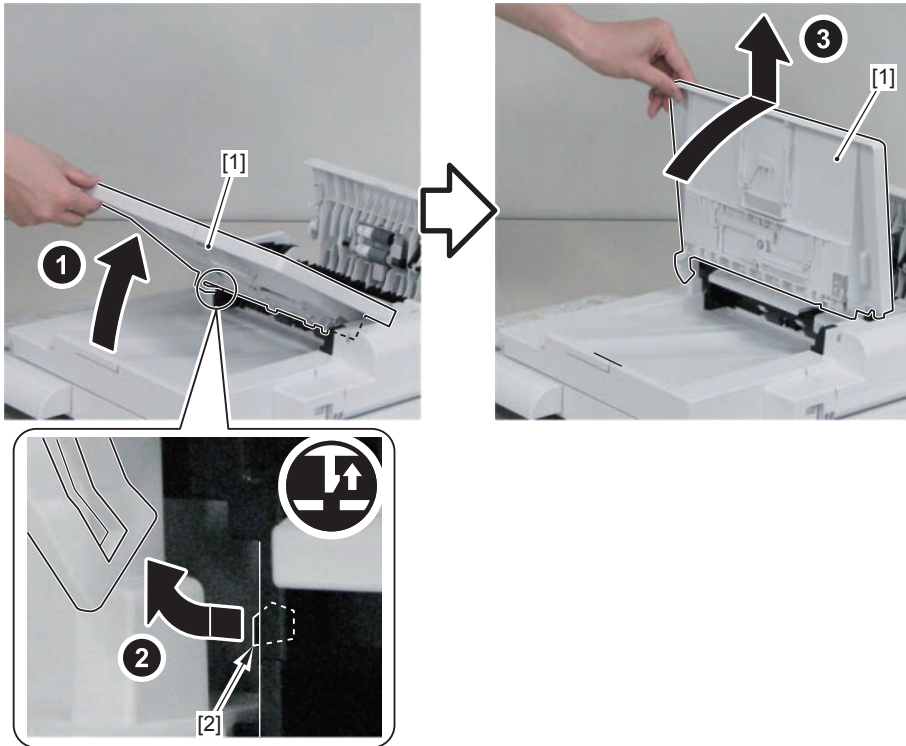
F-4-81

2) Remove the hook [1] using flat-head driver, and remove the ADF Front Cover [2] in the direction of the arrow.



F-4-82

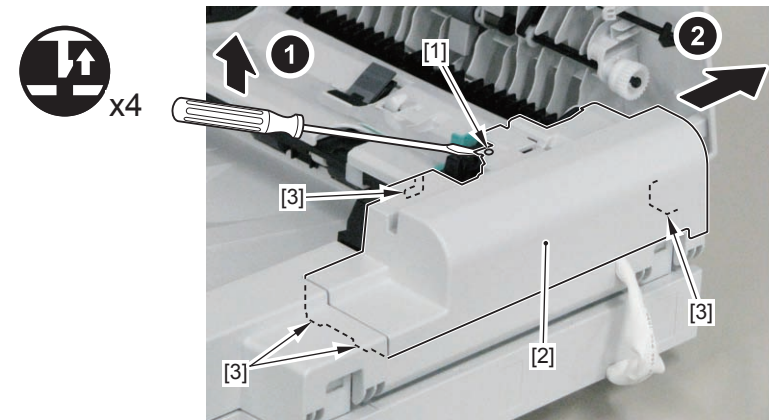
3) Lift the ADF Tray [1] until it stops and release the hook [2] to tip the tray into the perpendicular position and remove by pulling upward.



F-4-83

4) Remove the boss [1] to remove the ADF Rear Cover [2] in the direction of the arrow.

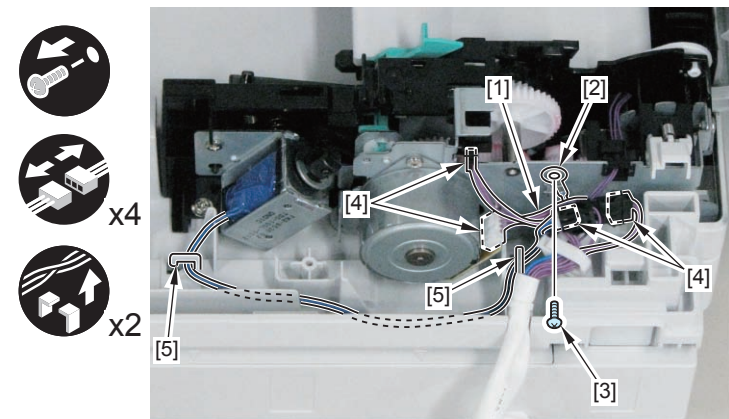
- 4 claws [3]



F-4-84

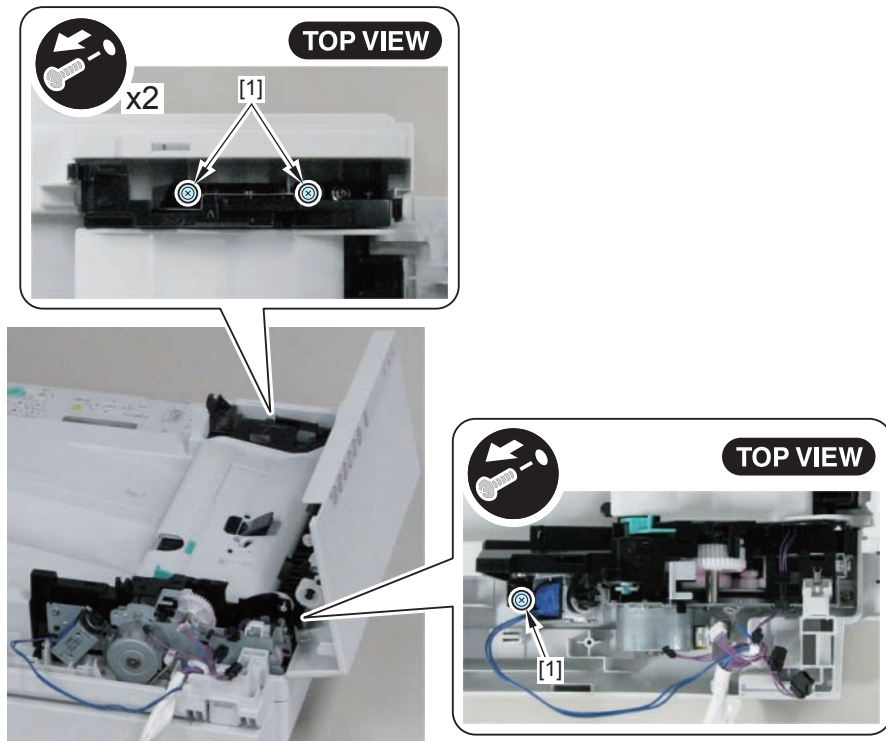
5) Remove the harness [1] and the grounding cord [2].

- 1 screw (binding) [3]
- 4 connectors [4]
- 2 Harness Guide [5]



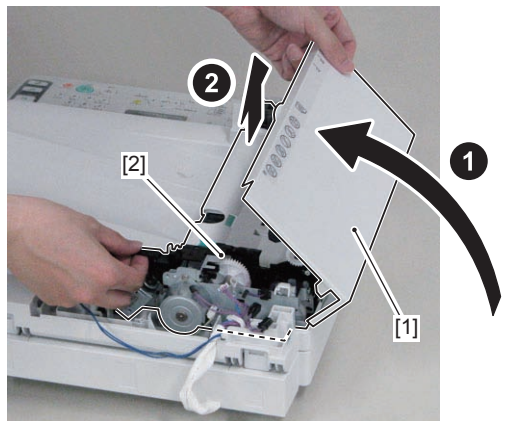
F-4-85

6) Remove the 3 screws [1] of the ADF Pickup Feed Unit.



F-4-86

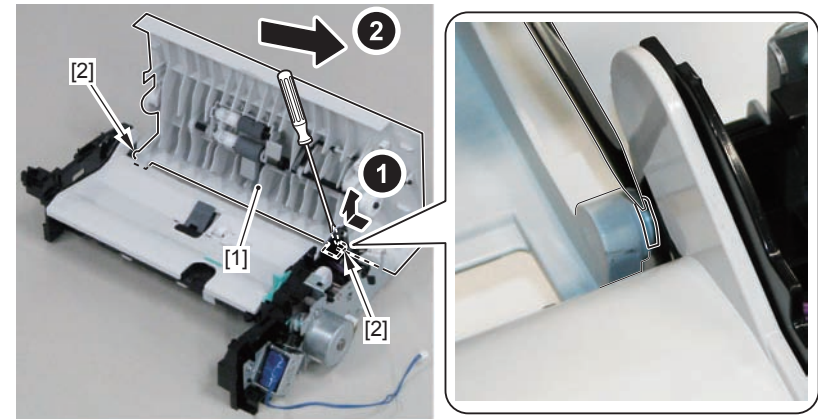
7) Close the ADF Upper Cover [1] to remove the ADF Pickup Feed Unit [2].



F-4-87

8) Remove the ADF Upper Cover Unit [1].

- 2 bosses [2]



F-4-88

Removing the ADF Pickup Motor

Preparation

1) Remove the ADF Pickup Feed Unit. Refer to page 4-43

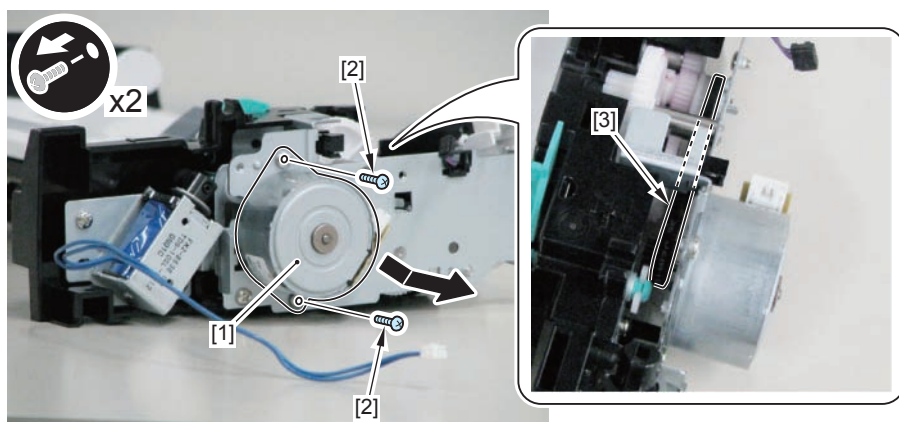
Procedure

NOTE:

When removing the ADF Pickup Motor, it is not necessary to remove the ADF Upper Cover Unit described in the previous step.

1) Remove the ADF Motor [1] in the direction of the arrow.

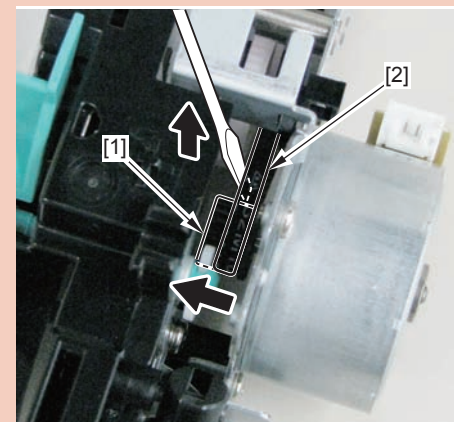
- 2 screws [2]
- 1 belt [3]



F-4-89

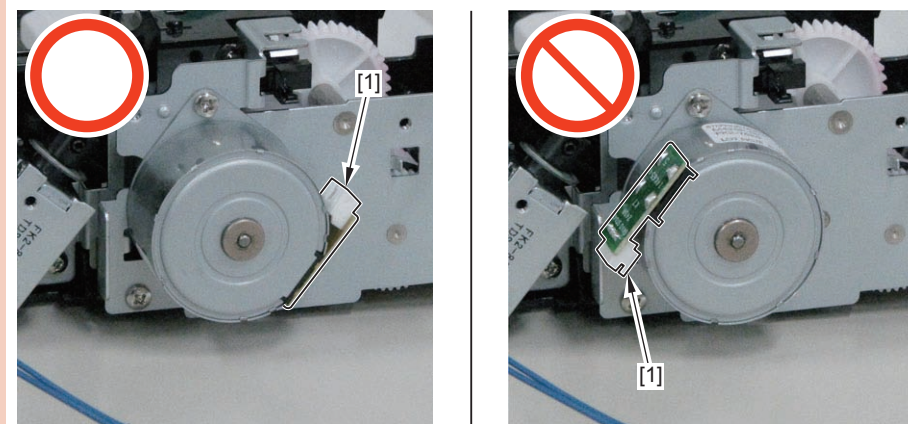
CAUTION:

- When installing the ADF Pickup Motor, be sure to hook the gear [1] of the motor on the belt [2].



F-4-90

- When installing the ADF Pickup Motor, be sure to install with the connector [1] on the right side.



F-4-91

Removing the Reader Unit Upper Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the ADF Unit + Reader Unit. Refer to page 4-32.
- 4) Separate the ADF Unit from the Reader Unit. Refer to page 4-35.

Procedure

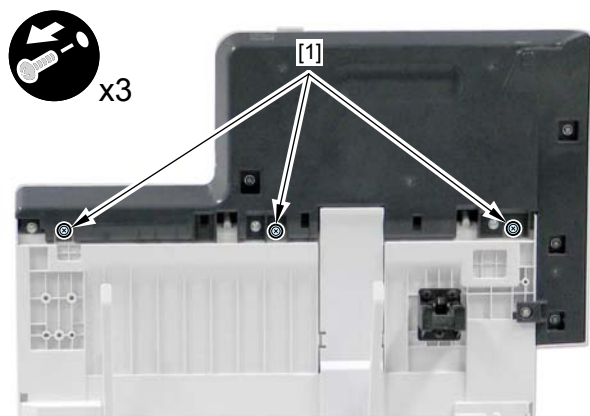
CAUTION:

Be sure to perform "After Replacing the Reader Upper Cover Unit (Refer to page 4-48)" when replacing the Reader Upper Cover Unit, respectively.

CAUTION:

To replace the Copyboard Glass, be sure to replace the Copyboard Glass together with the Reader Unit Upper Cover.

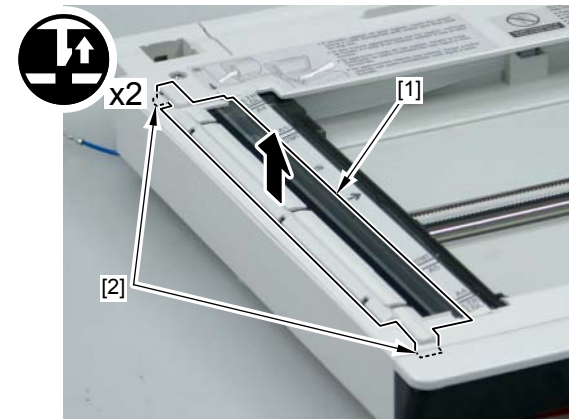
- 1) Remove the 3 screws [1] at the bottom of the Reader Unit.



F-4-92

- 2) Remove the Scoopup sheet holder [1].

- 2 claws [2]



F-4-93

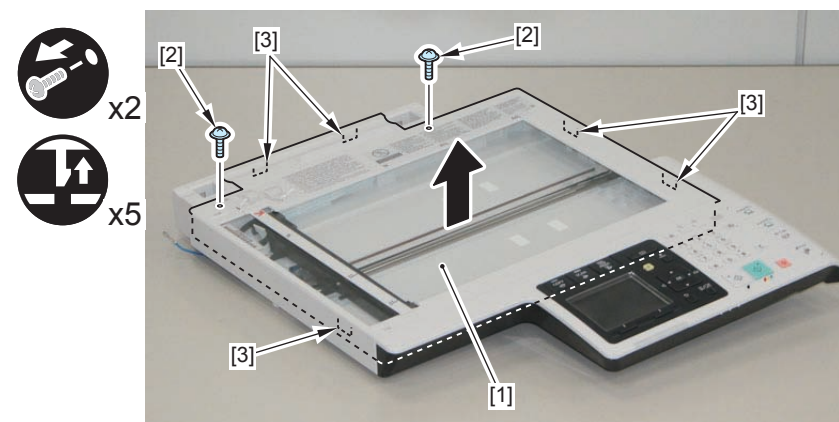
- 3) Remove the Reader Unit Upper Cover [1].

- 2 screws [2]

- 5 claws [3]

CAUTION:

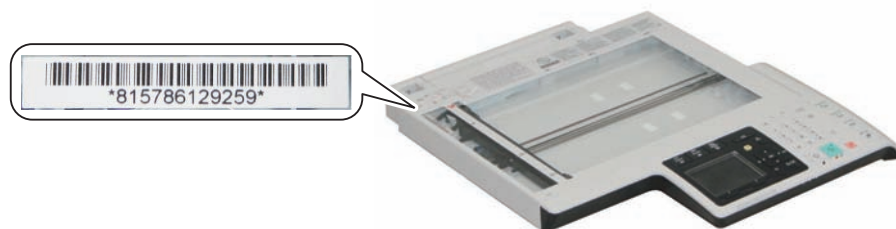
Because the Copyboard Glass [2] is attached to the Upper Cover [1], be careful not to drop or damage the Upper Cover.



F-4-94

After Replacing the Reader Upper Cover Unit

1) Enter the setting value of the Standard White Plate.



F-4-95

- COPIER > ADJUST > CCD > W-PLT-X (X signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Y (Y signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Z (Z signal data for the standard white plate)

MEMO

The value of W-PLT-X: The first four digits of the value on the label

The value of W-PLT-Y: The four digits in the middle of the value on the label

The value of W-PLT-Z: The last four digits of the value on the label

2) After executing the CCD reading position adjustment with the following service mode, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

3) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

Removing the CIS Unit

Preparation

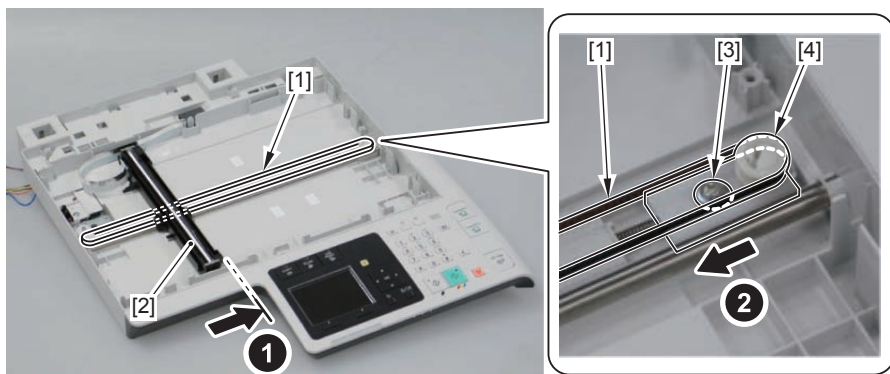
- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the ADF Unit + Reader Unit. Refer to page 4-32.
- 4) Separate the ADF Unit from the Reader Unit. Refer to page 4-35.
- 5) Remove the Reader Unit Upper Cover Unit. Refer to page 4-47.

Procedure

CAUTION:

Be sure to perform "After replacing CIS unit(Refer to page 4-51)" when replacing the CIS unit, respectively.

- 1) Pull the Drive Belt [1] to move the CIS Unit [2].
- 2) Loosen the screw [3] and move the Pulley Holder [4] in the direction of the arrow to remove the Drive Belt [1].

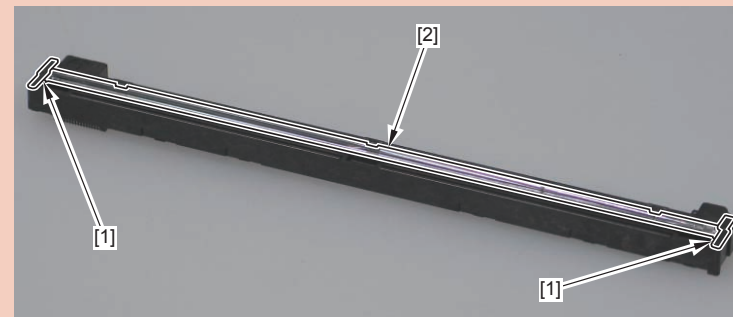


F-4-96

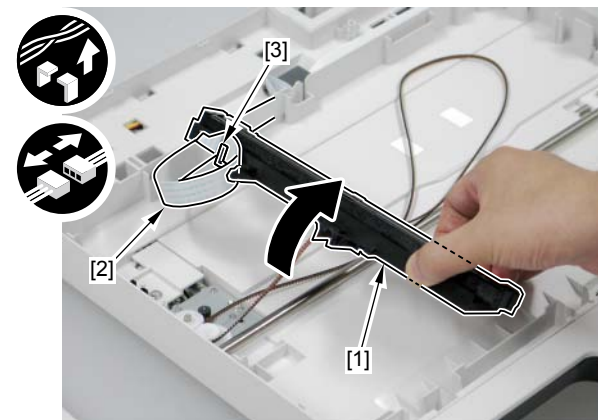
- 3) Remove the CIS Unit Mount [1] and remove the flat cable [2].
 - 1 guide [3]

CAUTION:

- When assembling/disassembling the copyboard glass, take care not to lose the 2 CIS unit spacers [1].
- When assembling/disassembling the copyboard glass, do not touch the copy reading area [2] of the CIS unit.

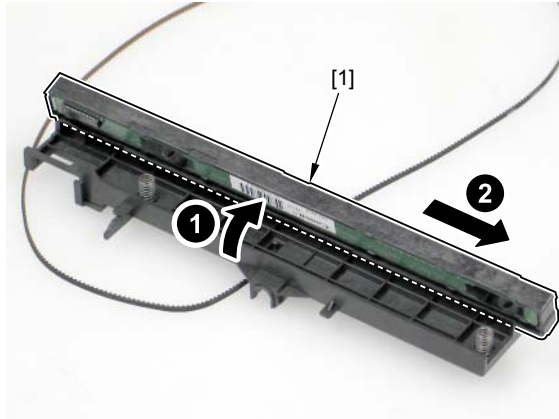


F-4-97



F-4-98

4) Bring up the CIS Unit [1] to remove in the direction of the arrow.

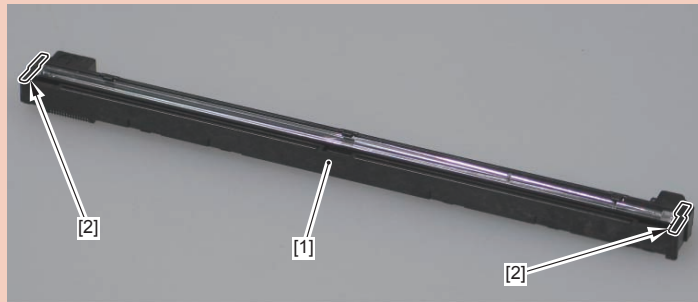


F-4-99

CAUTION:

When replacing the CIS Unit [1], be sure to replace the CIS Unit [1] and the CIS Spacer [2], which are included in the package of the service part, at the same time.

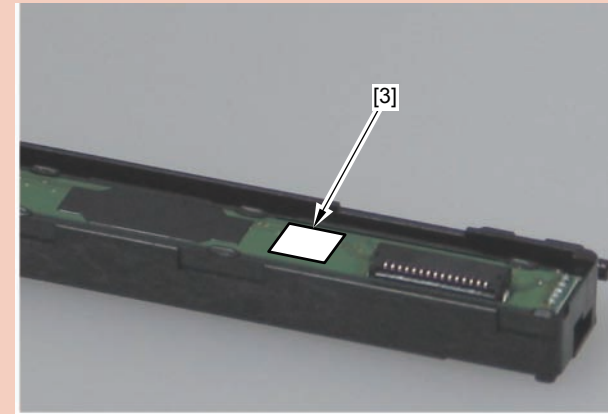
If a different spacer is used, image reading error may occur.



F-4-100

CAUTION:

- When installing the CIS Unit [1], be sure to replace the CIS Spacer [2] together with the CIS Unit [1] (included in the package of the Service Parts).



F-4-101

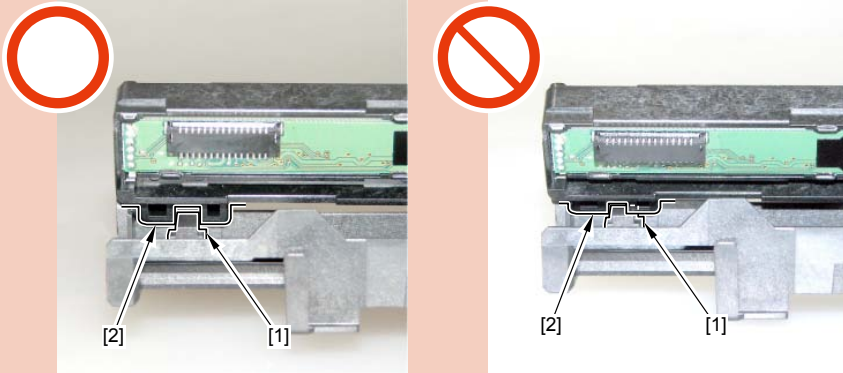
- When the CIS Spacers are mixed up or lost, check the CIS Rank Label [3] to use, and use the appropriate CIS Spacer that fits the rank of the CIS Unit.

Rank	Color of spacer	Dimension (Height of spacer)
rank A	light gray	1.17 mm
rank B	dark gray	1.27 mm
rank C	brown	1.37 mm

T-4-18

CAUTION:

When installing the CIS Unit, be sure to check that the projection [1] is fitted to the dent [2] to install.



F-4-102

■ After replacing CIS units

- 1) Execute the white level adjustment. If it fails, turn OFF/ON the power and execute the operation again.
 - COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
 - COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

- 2) After executing the reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.
 1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
 2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

- 3) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.
 1. White level adjustment
 - COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
 - COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])
 Then, set a blank paper on the DF, and execute the following service mode.
 - COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
 - COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])
 If it fails, turn OFF/ON the power and execute the operation again.
 2. Checking the setting value
 - COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
 - COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
 - COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
 - COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

- 4) Execute the reading position adjustment with the following service mode.
 - COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
 - COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
 - COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)
- 5) Execute the original stop position and feed speed adjustment at stream reading.
 - FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
 - FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

Removing the Reader Scanner Motor

Preparation

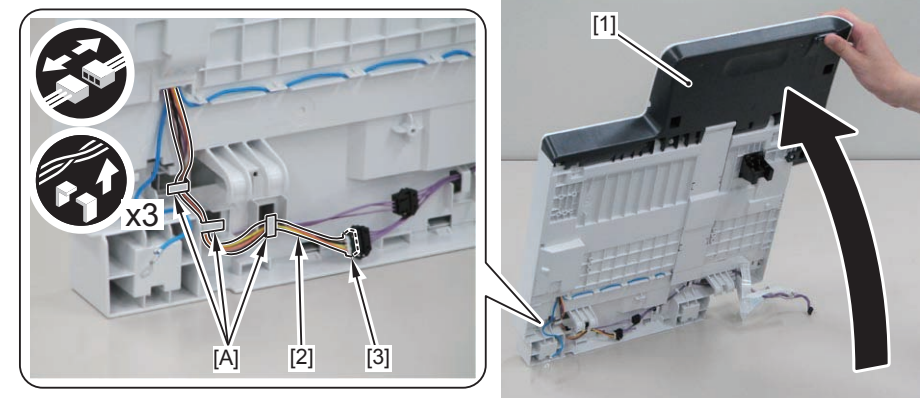
- 1) Remove the Right Cover. Refer to page 4-20.
- 2) Remove the Left Cover. Refer to page 4-17.
- 3) Remove the ADF Unit + Reader Unit. Refer to page 4-32.
- 4) Separate the ADF Unit from the Reader Unit. Refer to page 4-35.
- 5) Remove the Reader Unit Upper Cover Unit. Refer to page 4-47.

Procedure

- 1) Free the harness [2] while holding the Reader Unit [1].
 - 1 Connector [3]
 - 3 Harness Guides at the [A] location

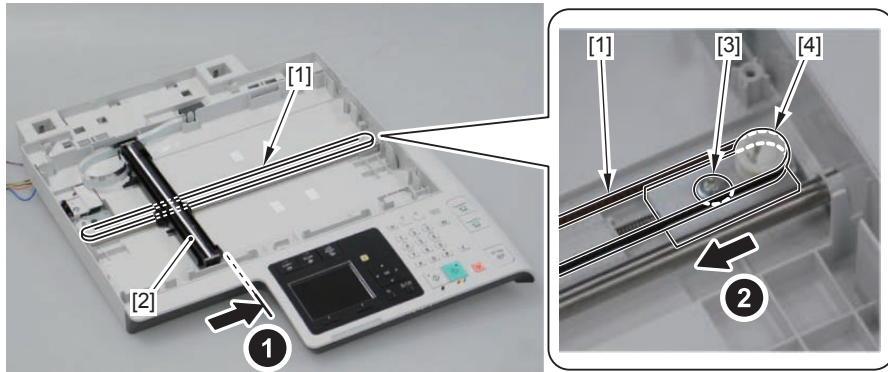
CAUTION:

To prevent parts on the top side of the Reader Unit, do not tip the Reader Unit [1] into the perpendicular position.



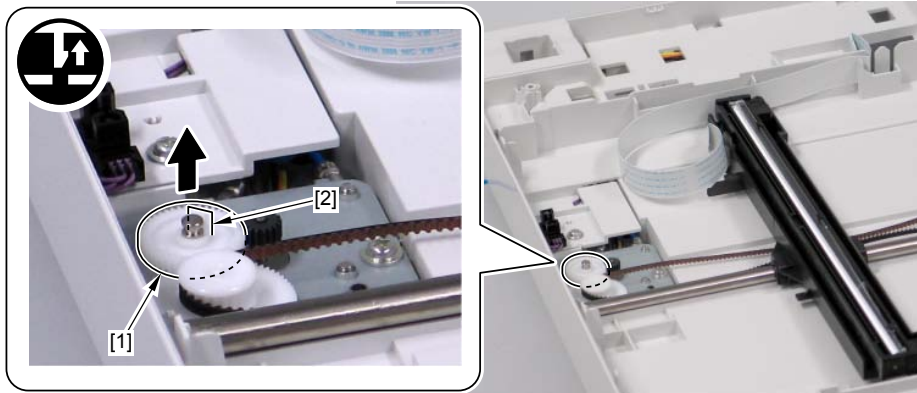
F-4-103

- 2) Pull the Drive Belt [1] to move the CIS Unit [2].
 3) Loosen the screw [3] and move the Pulley Holder [4] in the direction of the arrow to remove the Drive Belt [1].



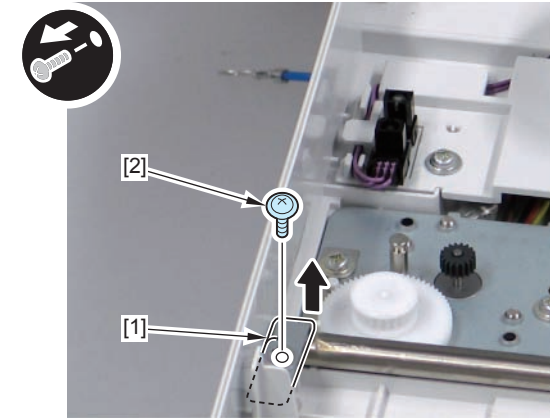
F-4-104

- 4) Remove the gear [1].
 • 1 claw [2]



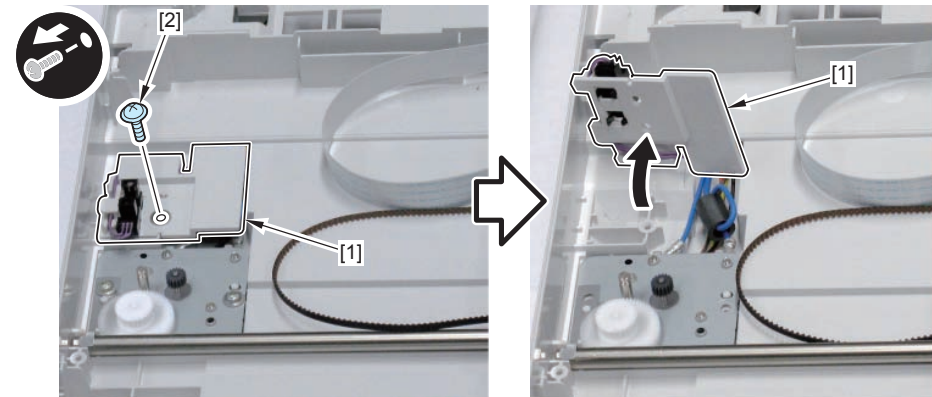
F-4-105

- 5) Remove the Shaft Retaining Plate [1].
 • 1 screw [2]



F-4-106

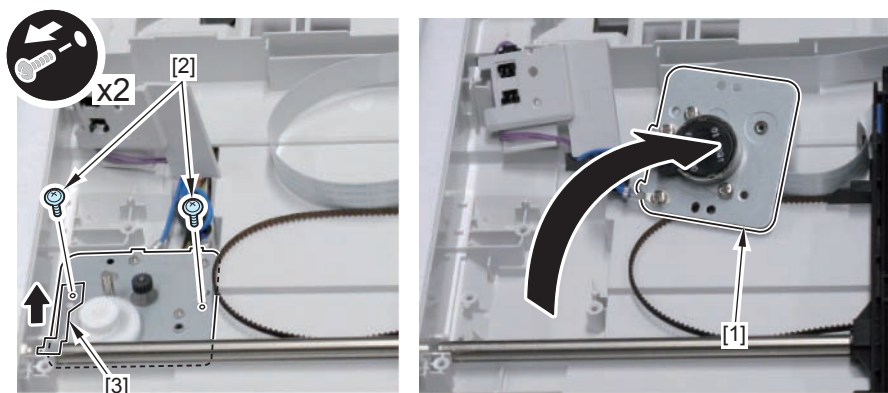
- 6) Move the Sensor Mount [1].
 • 1 screw [2]



F-4-107

7) Move the Motor Mounting Plate [1] and turn it over.

- 2 screws [2]
- 1 Grounding Plate [3]

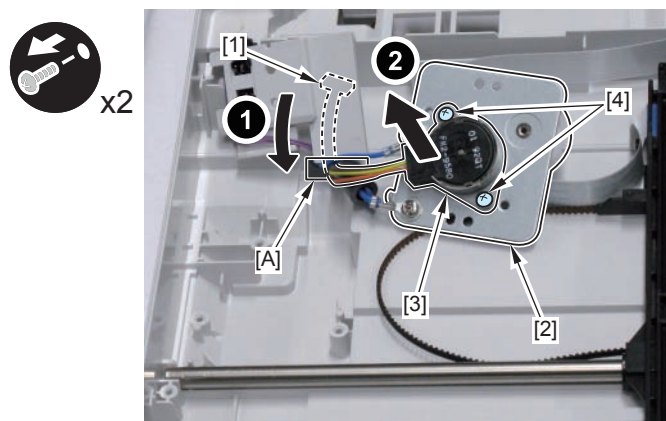


F-4-108

8) Pass the connector [1] through the hole [A].

9) Remove the Reader Scanner Motor [3] from the Motor Mounting Plate [2].

- 2 screws [4]

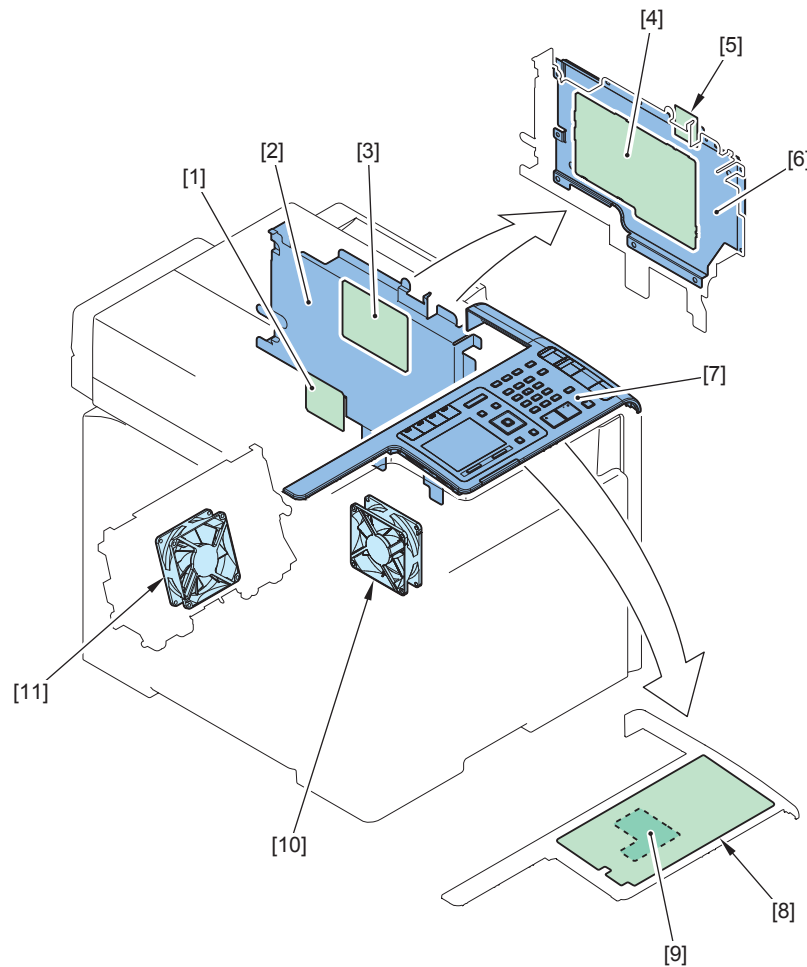


F-4-109

Controller System

Location

(1/2)

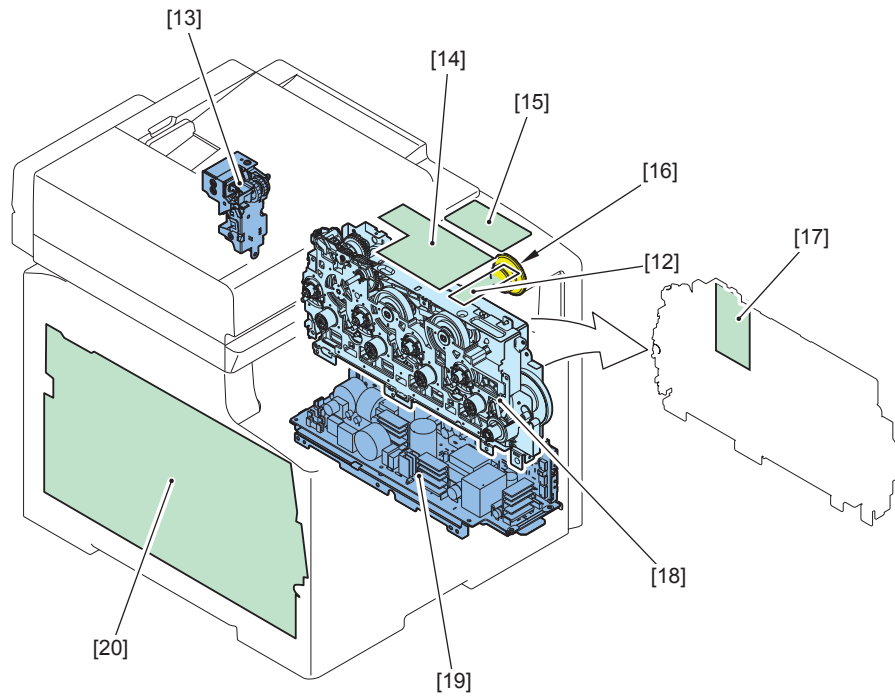


F-4-110

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Fixing Sub PCB	Product Configuration	UN7	(Refer to page 4-67)	-
[2]	Main Controller Support Plate	Product Configuration	-	(Refer to page 4-61)	-
[3]	FAX-NCU PCB	Product Configuration	MF8580Cdw /8550Cdn UN16	(Refer to page 4-75)	-
[4]	Main Controller PCB	Product Configuration	UN13	(Refer to page 4-58)	(Refer to page 4-58)
[5]	Wireless LAN PCB	Product Configuration	MF8580Cdw UN23	(Refer to page 4-57)	-
[6]	Controller Cover	Product Configuration	-	(Refer to page 4-57)	-
[7]	Control Panel Unit	Product Configuration	-	(Refer to page 4-70)	-
[8]	Control Panel Key PCB	Control Panel Unit	UN20	(Refer to page 4-73)	-
[9]	Control Panel LCD PCB	Control Panel Unit	UN14	(Refer to page 4-73)	-
[10]	Fixing/Fixing Power Supply Cooling Fan	Product Configuration	FM1	(Refer to page 4-86)	-
[11]	Duplex Feeding Fan	Rear Cover Rib Unit	FM2	(Refer to page 4-88)	-

T-4-19

(2/2)



F-4-111

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[12]	Relay PCB	Product Configuration	UN5	(Refer to page 4-69)	-
[13]	Duplex Reverse Drive Unit	Product Configuration	-	(Refer to page 4-85)	-
[14]	DC Controller PCB	Product Configuration	UN1	(Refer to page 4-61)	(Refer to page 4-61)
[15]	Off Hook PCB	Product Configuration	MF8580Cdw /8550Cdn UN17	(Refer to page 4-75)	-
[16]	Speaker	Product Configuration	MF8580Cdw /8550Cdn SP1	(Refer to page 4-89)	-
[17]	Driver PCB	Product Configuration	UN2	(Refer to page 4-68)	-
[18]	Main Drive Unit	Product Configuration	-	(Refer to page 4-76)	-
[19]	Low Voltage Power Supply Unit	Product Configuration	-	(Refer to page 4-65)	-
[20]	High Voltage Power Supply PCB	Product Configuration	UN3	(Refer to page 4-63)	-

T-4-20

Removing the Controller Cover

Preparation

1) Removing the Right Cover. Refer to page 4-20.

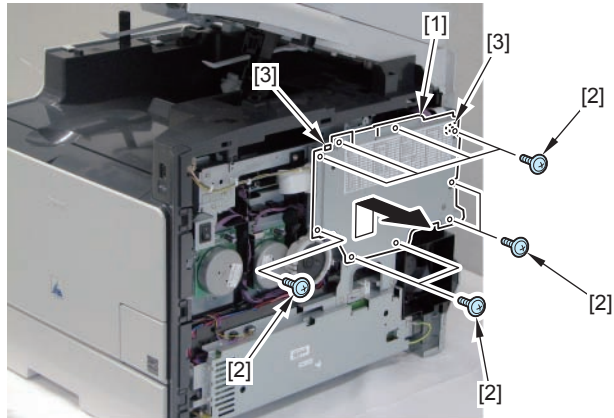
Procedure

1) Remove the Controller Cover [1].

- 9 Screws [2]
- 2 Hooks [3]



x9



F-4-112

Removing the Wireless LAN PCB (MF8580Cdw)

Preparation

1) Removing the Right Cover. Refer to page 4-20.

2) Removing the Controller Cover. Refer to page 4-57.

Procedure

1) Remove the Wireless LAN PCB [1].

- 1 Screw [2]
- 1 Flat Cable [3]

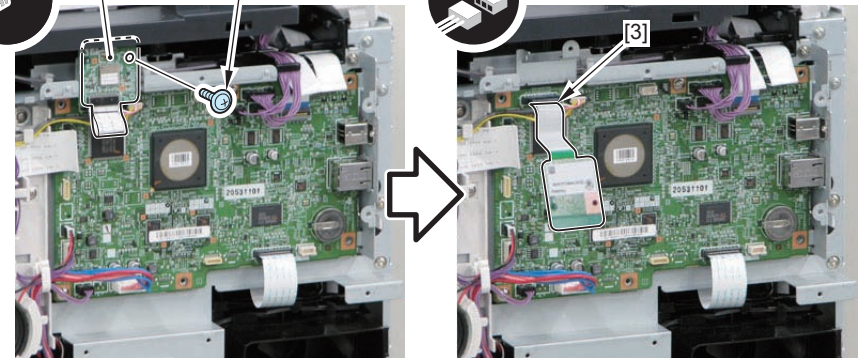


[1]

[2]



[3]



F-4-113

Removing the Main Controller PCB

CAUTION:

Be sure to perform "Before Replacing the Main Controller PCB (Refer to page 4-58)" when replacing the Main Controller PCB, respectively.

Before Replacing the Main Controller PCB

Back up user data (settings, registered data, etc.) and service mode data for setting and registration after PCB replacement. Take notes if data is unable to back up.

- 1) In Remote UI, perform the following procedure to export the user data (login in administrator mode).
In Setting/Registration > Import/Export > Menu > Export, select an item and then start export.
- 2) In service mode, perform the following procedure to export the service mode data (and then import it after replacement).
FUNCTION > SYSTEM > EXPORT
- 3) Record the default settings shown on the service label [1] (these are entered after replacement).
- 4) Write down the machine's serial number and the data of Settings/Registration > System Settings > Device Information > Location (these are entered after replacement).



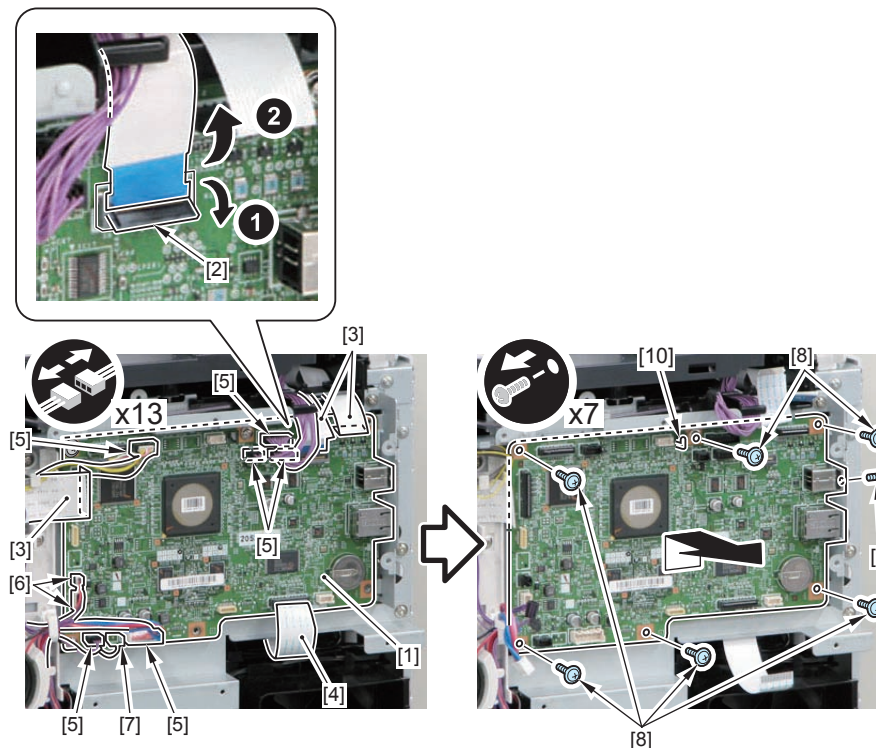
F-4-114

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.
- 3) Removing the Wireless LAN PCB. (MF8580Cdw only) Refer to page 4-57.

Procedure

- 1) Remove the Main Controller PCB [1].
 - 1 Flat Cable Connector Lock [2]
 - 3 Flat Cables [3]
 - 1 Flat Cable [4] (FAX model only)
 - 6 Connectors [5]
 - 2 Connectors [6] (FAX model only)
 - 1 Connector [7] (MF8540Cdn only)
 - 6 Screws [8] (TP)
 - 1 Screw [9] (Binding)
 - 1 Hook [10]

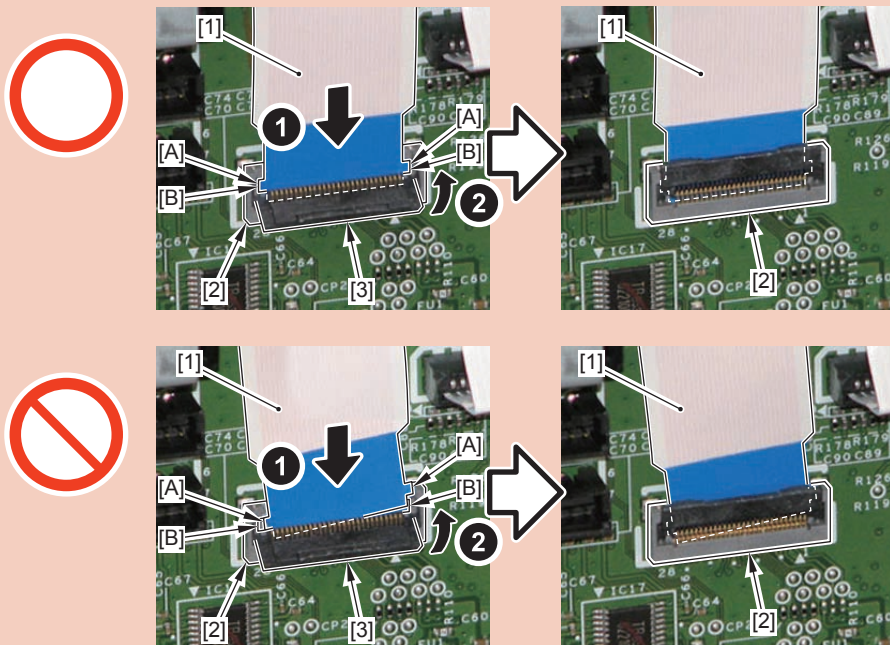


F-4-115

CAUTION:

Be sure to perform the following when connecting the Flat Cable [1] to the connector with a lock [2].

Be sure to insert the Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-116

■ After replacing main controller PCB

1. Setting of destination/paper size group

1) COPIER > OPTION > BODY > LOCALE (to set destination groups)

[Settings]

1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia, 8: Oceania

2) COPIER > OPTION > BODY > SIZE-LC (to set paper size groups)

[Settings]

1: AB series, 2: Inch series, 3: A series, 4: AB/Inch series

2. Clearing Setting/Registration data

1) COPIER > FUNCTION > CLEAR > ALL (to clear all data)

Once executed, the following data are cleared according to the values of LOCALE and SIZE-LC set in step 1.

- Setting / Registration data (the default value for each destination is set).
- Service mode data (the default value for each destination is set).
- Job IDs
- Log data
- Dates

2) COPIER > FUNCTION > CLEAR > R-CON (to clear default setting values for the reader/DF)

3. Adjustment, input of default setting values

1) Close the ADF.

2) COPIER > FUNCTION > CCD > CL-AGC, BW-AGC (to adjust white levels)

The white level is adjusted.

3) Enter default setting values indicated on the service label in the corresponding service mode items.

4) COPIER > FUNCTION > VIFFNC > STOR-DCN (to back up DC controller setting values)

Purpose: to be prepared for replacing DC controller PCBs

5) Turn off and on the power.

6) Start in the initial installation mode. Follow instructions shown on the screen for setup. (setting of date/time, auto-gradation correction)

4. Migrating the serial number

- 1) Enter the serial number (8-digit alphanumeric) in Settings/Registration > System Settings > Device Information > Location.
- 2) Select COPIER > OPTION > SERIAL > SN-MAIN. Then, press the OK key to write the serial number entered in step 1 in the Main Controller PCB. After it has been written, the serial number entered in "Location" in step 1 is deleted.
- 3) Turn OFF and then ON the main power.
- 4) Execute COPIER > FUNCTION > MISC-P > SPEC to output the spec report to check the serial number BODY.No..
- 5) Enter the data of the installation location (which was written down in "Before replacing the Main Controller PCB") in Settings/Registration > System Settings > Device Information > Location.

5. Migrating user data

In Remote UI, perform the following procedure to import the user data (login in administrator mode).

In Setting/Registration > Import/Export > Menu > Import, select an item and then start import.

6. Migrating service mode data

In service mode, perform the following procedure to import the service mode data.

FUNCTION > SYSTEM > IMPORT

7. Reinstall the drivers.

1) Uninstalling Old Drivers.

- Printer Driver
- FAX Driver
- Scanner Driver
- Network Scan Utility. (for machines with network connection)

* As for the procedure, refer to "Uninstalling the Software" in the Starter Guide.

2) Install the drivers which have been uninstalled in step 1.

* As for the procedure, refer to the following items in the Starter Guide.

- In case of network connection: "Installing via Network Connection"
- In case of USB connection: "Installing with USB Connection"

MEMO

MAC address information is changed after replacement of the Main Controller PCB. Therefore, when the PC and the machine are connected by the network, the PC will not be able to recognize the machine on the network. When the PC and the machine are connected by the USB memory device, the PC will not be able to recognize the machine if the USB ID is changed. It becomes therefore necessary to reinstall the driver.

In the case of a model without fax for EUR (MF8540/MF8230), perform the following works.

MEMO

After replacing the Main Controller PCB, the value of the service mode (SDTM-DSP) to set whether to display or hide the automatic shutdown menu becomes "0" (default value).

In that case, the automatic shutdown menu is not displayed on the LUI of the machine. To display the automatic shutdown menu on the LUI of the machine, it is necessary to execute this process.

8. Setting of automatic shutdown menu display

Set 1 for automatic shutdown menu display in service mode (default: 0).

COPIER > OPTION > BODY > SDTM-DSP

9. Turn OFF and then ON the main power.

10. Checking the setting of Auto Sleep Time

In setting menu, check that the setting value of Auto Sleep Time is 1. (If the setting value is 0, automatic shutdown does not work.)

Menu > Timer Settings > Auto Shutdown Time

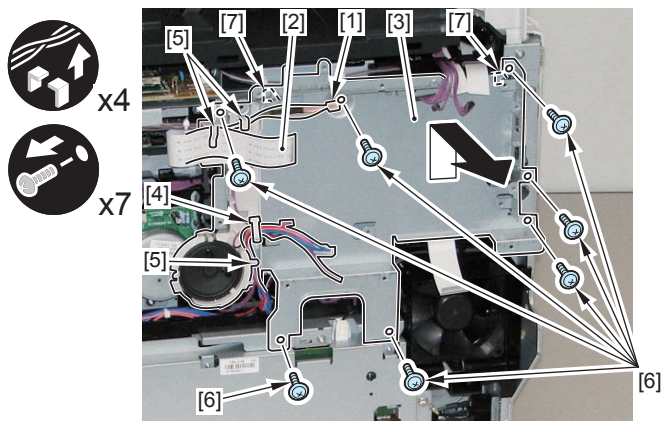
Removing the Main Controller Support Plate

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.
- 3) Removing the Wireless LAN PCB. (MF8580Cdw only) Refer to page 4-57.
- 4) Removing the Main Controller PCB. Refer to page 4-58.

Procedure

- 1) Free the harness [1] and Flat Cable [2], remove the Main Controller Support Plate [3].
 - 1 Wire Saddle [4]
 - 3 Harness Guides [5]
 - 7 Screws [6]
 - 2 Hooks [7]



F-4-117

Removing the DC Controller PCB

CAUTION:

Be sure to perform "Before Replacing the DC Controller PCB (Refer to page 4-61)" when replacing the DC Controller PCB, respectively.

Before replacing the DC Controller PCB

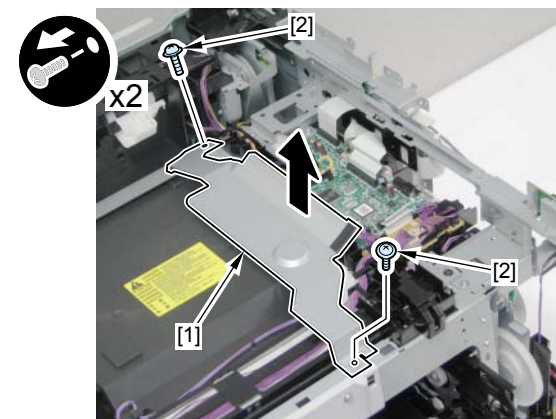
- 1) In service mode, perform the following procedure to store the DC Controller setting values.
COPIER > FUNCTION > VIFFNC > STOR-DCN

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Right Front Cover. Refer to page 4-22.
- 6) Removing the Upper Cover. Refer to page 4-28.

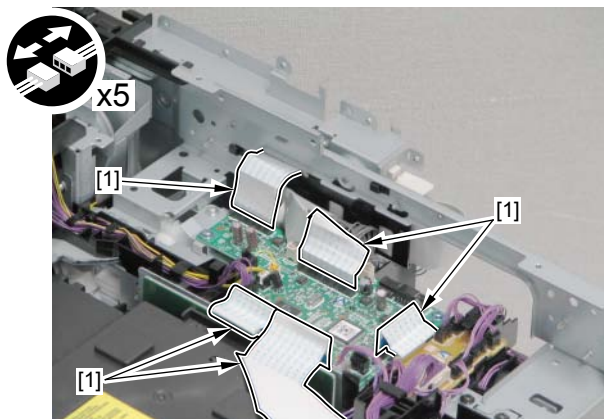
Procedure

- 1) Remove the Harness Cover Plate [1].
 - 2 screws [2]



F-4-118

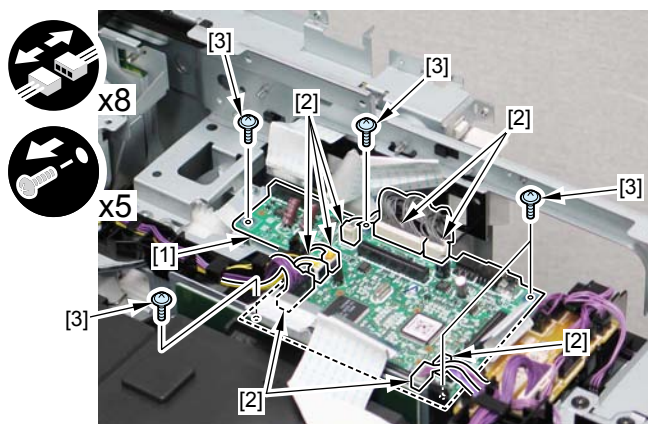
2) Disconnect the 5 flat cables [1].



F-4-119

3) Remove the DC Controller PCB [1].

- 8 connectors [2]
- 5 screws [3]



F-4-120

After replacing DC Controller PCB

1) In service mode, perform the following procedure to restore the DC Controller setting values.

COPIER > FUICTION > VIFFNC > RSTR-DCN

MEMO

After executing the Printer Recovery Setting, be sure to wait for about 15 seconds because of internal process/operation.

2) Turn OFF and then ON the power.

3)* Execute the following: Menu > Adjustment/Maintenance > Print Color Displacement Correction

4)* Execute the following: Menu > Adjustment/Maintenance > Auto Gradation Correction > Quick Correction

5) Turn OFF and then ON the power.

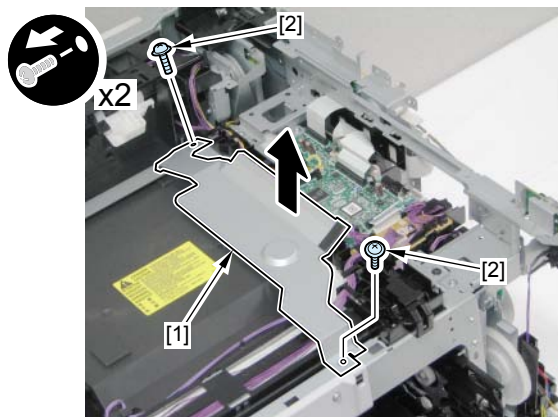
Removing the High Voltage Power Supply PCB

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Right Front Cover. Refer to page 4-22.
- 6) Removing the Upper Cover. Refer to page 4-28.

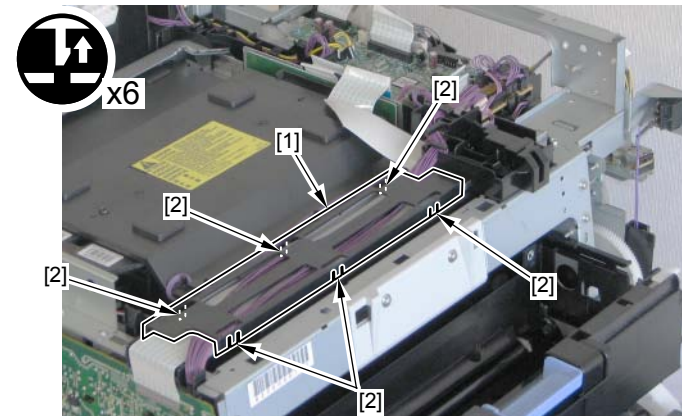
Procedure

- 1) Remove the Harness Cover Plate [1].
 - 2 screws [2]



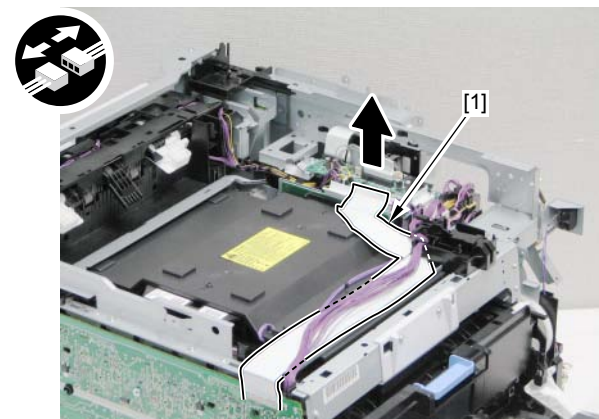
F-4-121

- 2) Remove the harness guide [1].
 - 6 claws [2]



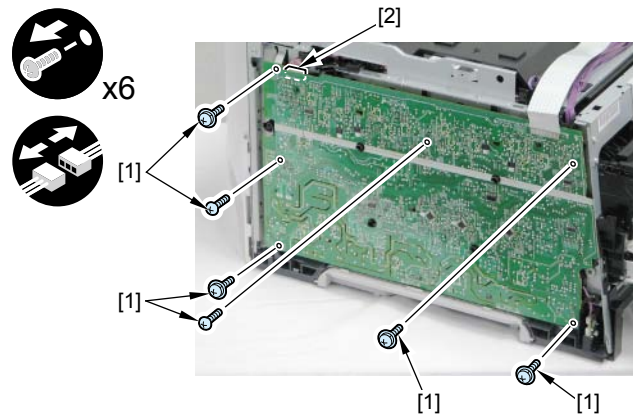
F-4-122

- 3) Disconnect the flat cable [1].



F-4-123

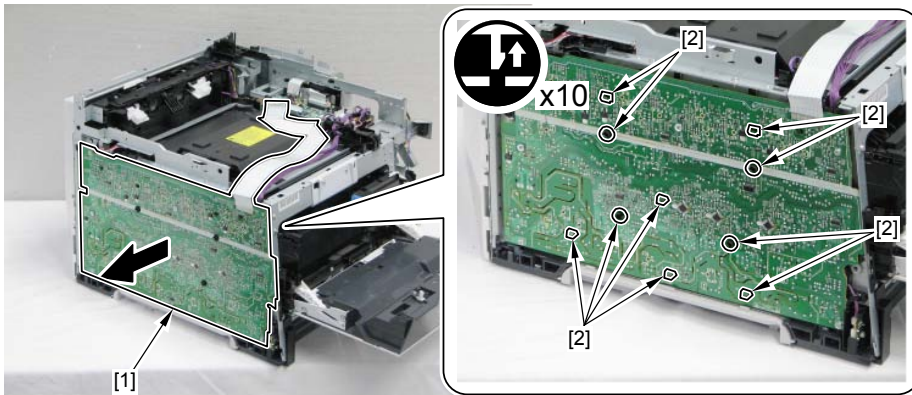
4) Remove the 6 screws [1] and disconnect the connector [2].



F-4-124

5) Remove the High Voltage Power Supply PCB [1].

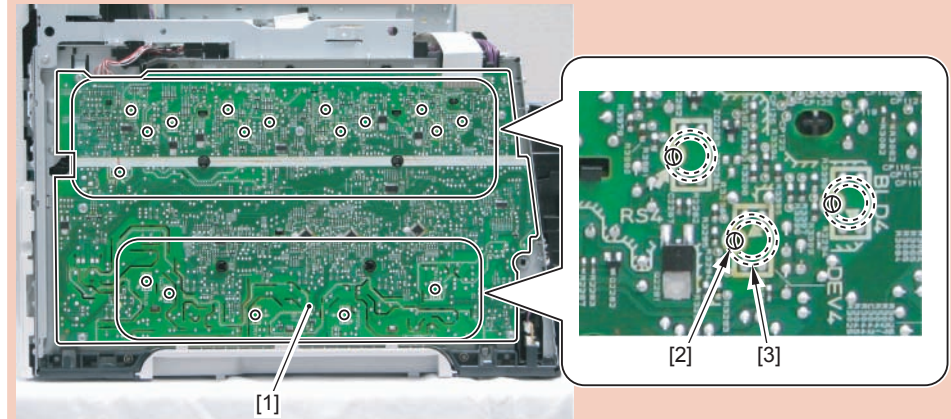
- 9 claws [2]



F-4-125

CAUTION:

When installing the High-voltage Power PCB [1] to the host machine, make sure that the contact spring [3] is connected from the 18 round holes [2].



F-4-126

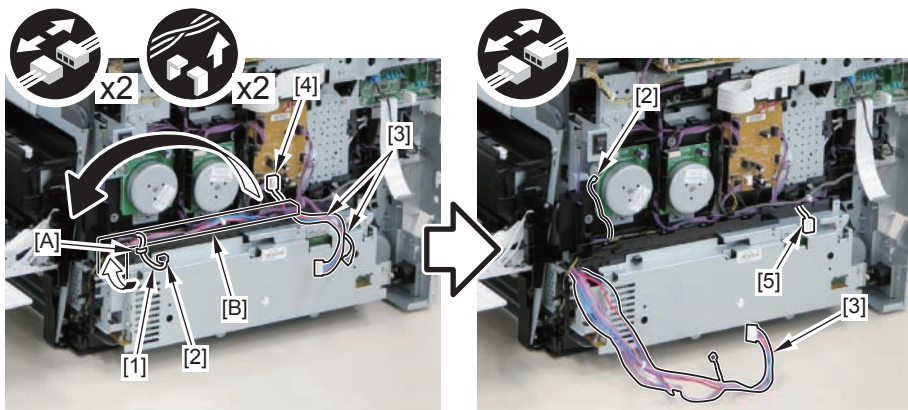
Removing the Low Voltage Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-17.
- 2) Removing the Right Front Cover. Refer to page 4-22.
- 3) Removing the Controller Cover. Refer to page 4-57.
- 4) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 5) Removing the Main Controller PCB. Refer to page 4-58.
- 6) Removing the Main Controller Support Plate. Refer to page 4-61.
- 7) Removing the Fixing/Fixing Power Supply Cooling Fan Unit. Refer to page 4-86.

Procedure

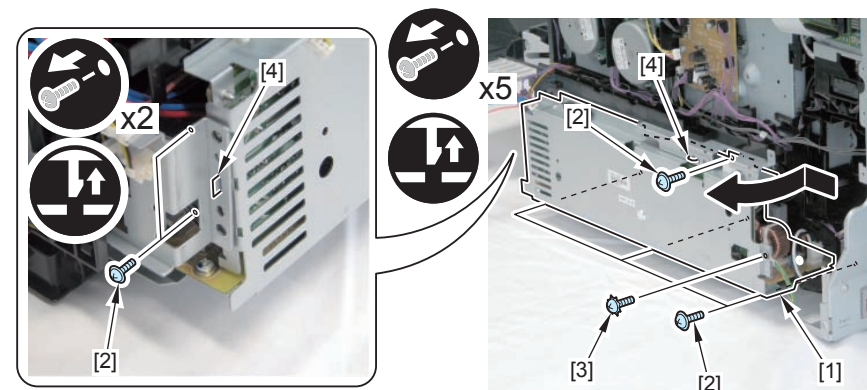
- 1) Free the harness [1] from the guide [A].
 - 1 Connector [2]
- 2) Free the harness [3] from the guide [B].
 - 1 Connector [4]
- 3) Disconnect the connector [5] (FAX model only).



F-4-127

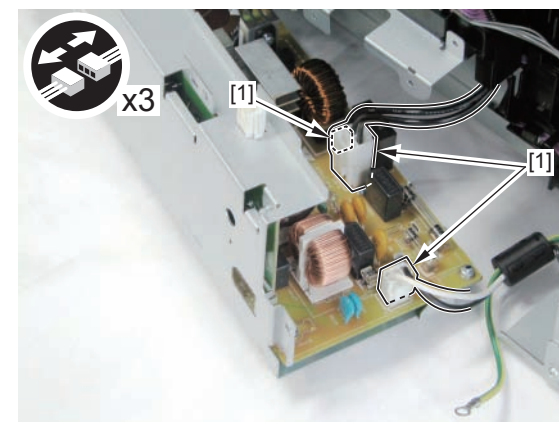
- 3) Slide and open the Power Supply Unit [1] in the direction of the arrow.

- 6 Screws [2]
- 1 Screw [3] (Toothed washer screw)
- 2 Claws [4]



F-4-128

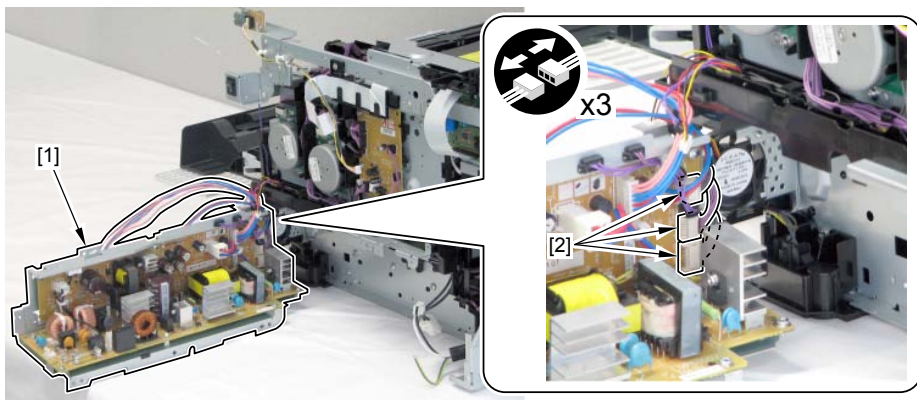
- 4) Remove 3 connectors [1].



F-4-129

5) Remove the Low Voltage Unit [1]

- 3 connectors [2]



F-4-130

Removing the Fixing Sub PCB

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.
- 3) Removing the Wireless LAN PCB. (MF8580Cdw only) Refer to page 4-57.
- 4) Removing the Main Controller PCB. Refer to page 4-58.
- 5) Removing the Main Controller Support Plate. Refer to page 4-61.
- 6) Removing the FAX PCB. Refer to page 4-75.
- 7) Removing the Fixing/Fixing Power Supply Cooling Fan Unit. Refer to page 4-86.

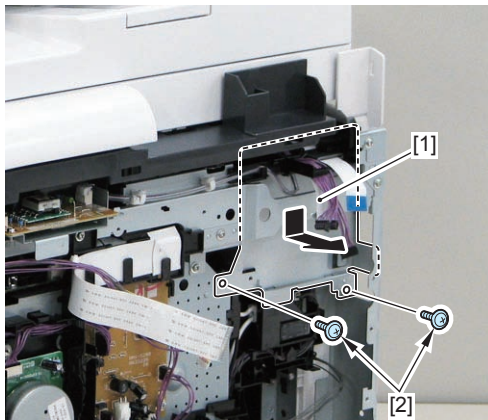
Procedure

- 1) Remove the PCB Fixation Plate [1] (FAX model only).

- 2 Screws [2]



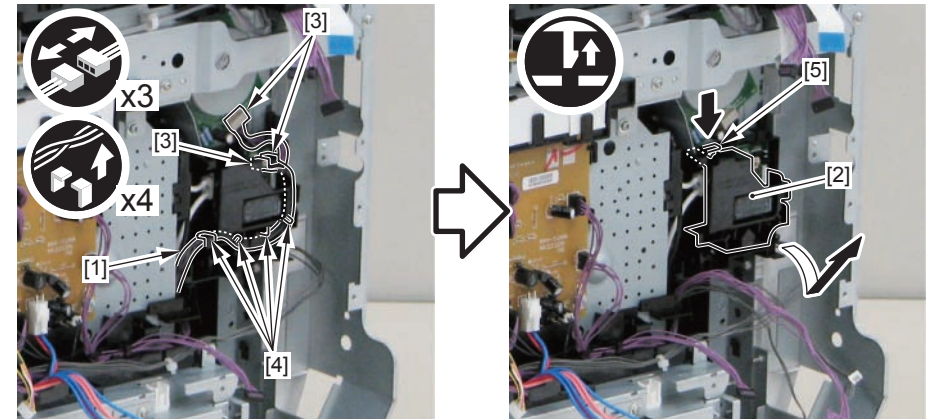
x2



F-4-131

- 2) Remove the wire harness [1], and remove the wire harness guide [2].

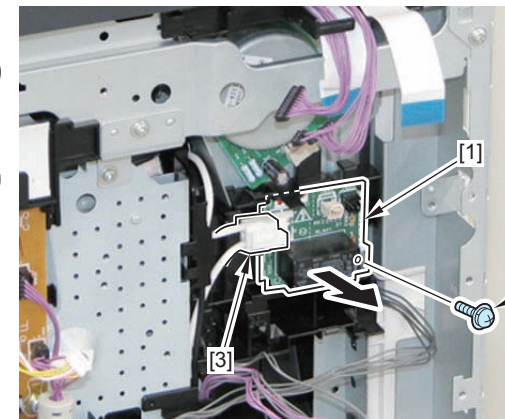
- 3 connectors [3]
- 4 fixing guides [4]
- 1 claw [5]



F-4-132

- 3) Remove the Fixing Sub PCB [1].

- 1 screw [2]
- 1 connector [3]



F-4-133

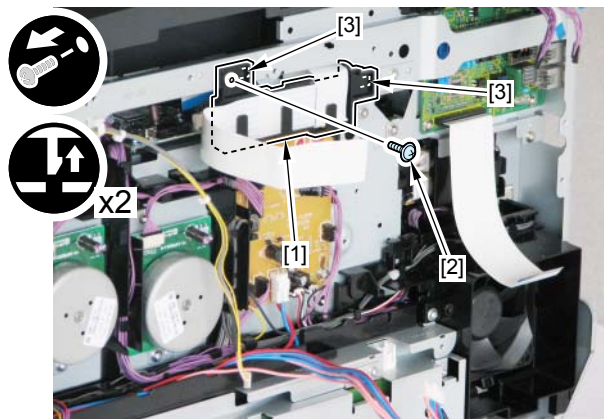
Removing the Driver PCB

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 8) Removing the Main Controller PCB. Refer to page 4-58.
- 9) Removing the Main Controller Support Plate. Refer to page 4-61.

Procedure

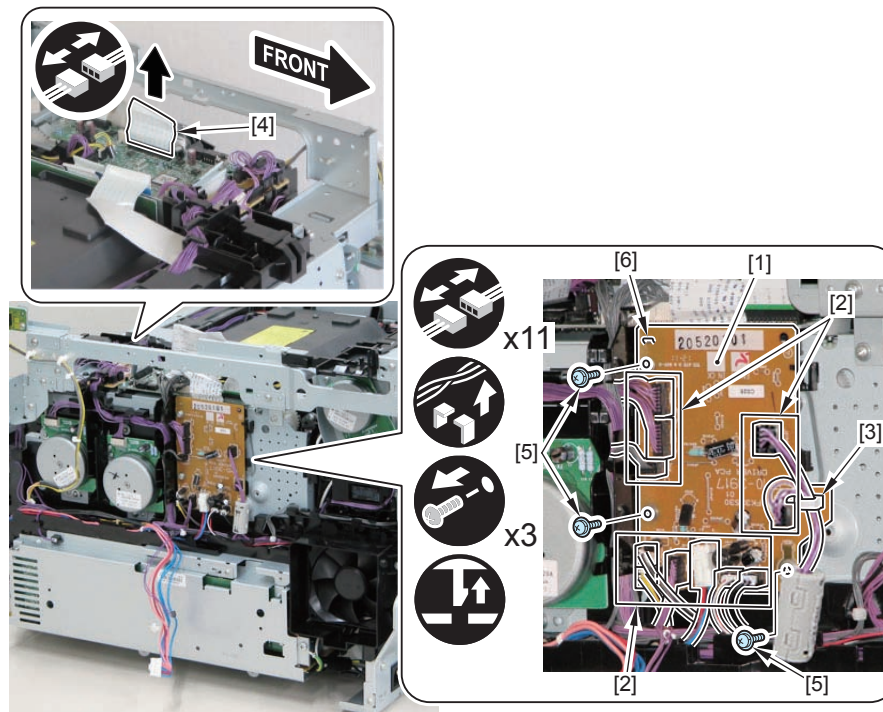
- 1) Remove the flat cable guide case [1].
 - 1 screw [2]
 - 2 claws [3]



F-4-134

- 2) Remove the Driver PCB [1].

- 11 connectors [2]
- 1 Wire Saddle [3]
- 1 flat cable [4]
- 3 screws [5]
- 1 claw [6]



F-4-135

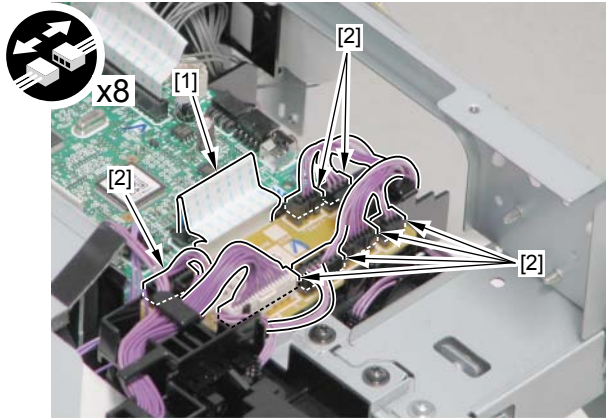
Removing the Relay PCB

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Right Front Cover. Refer to page 4-22.
- 6) Removing the Upper Cover. Refer to page 4-28.

Procedure

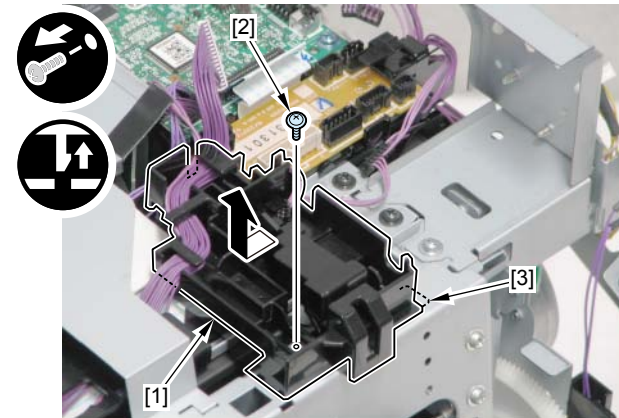
- 1) Disconnect the flat cable [1] and the 7 connectors [2].



F-4-136

- 2) Remove the harness guide [1].

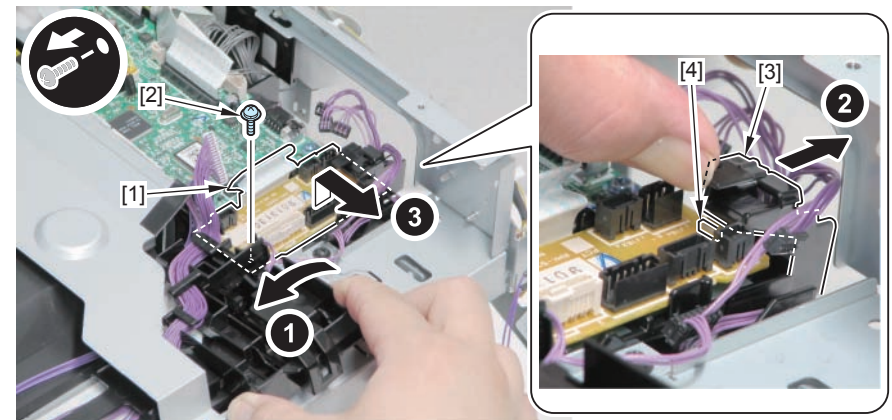
- 1 screw [2]
- 1 hook [3]



F-4-137

- 3) Remove the Relay PCB [1].

- 1 screw [2]
- 1 harness guide [3]
- 1 protrusions [4]



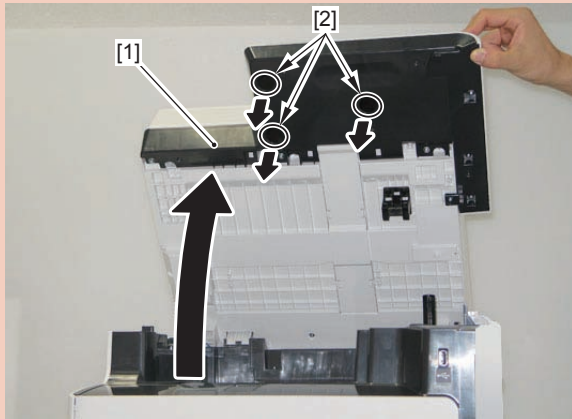
F-4-138

Removing the Control Panel Unit

Procedure

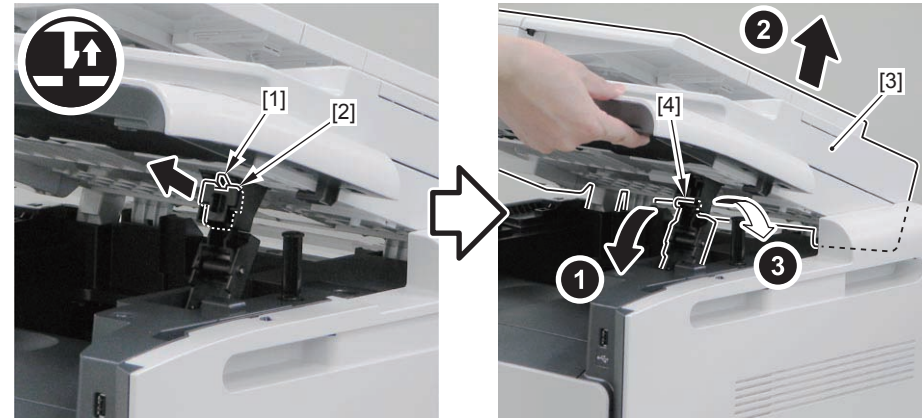
CAUTION:

When removing the Control Panel Unit, the Screw Face Seal [2] on the back side of the Reader Unit [1] needs to be removed. Be sure to prepare a new Screw Face Seal to reattach it later. When reattaching, be sure to use a new Screw Face Seal. Do not reuse the removed Screw Cover Seal.



F-4-139

- 1) Remove the claw [1] to remove the Reader Shaft Retainer [2].
- 2) While supporting the ADF Unit/Copyboard + Reader Unit [3], remove the Reader Support Shaft [4].
- 3) Bring down the Reader Support Shaft [4] to close the ADF Unit/Copyboard + Reader Unit [3].

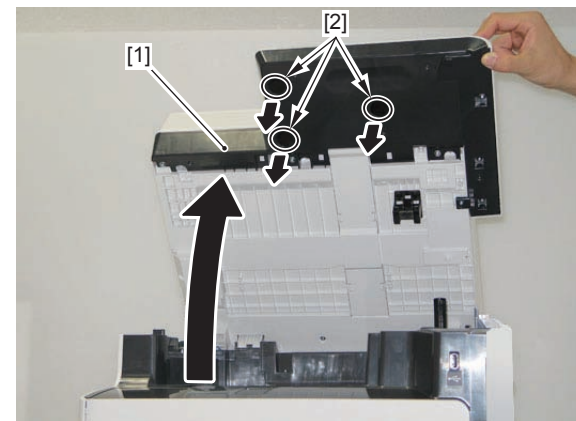


F-4-140

- 4) ADF+Open the ADF+Reader Unit [1], and remove the 3 Screw Face Seals [2] at the bottom of the Reader Unit.

CAUTION:

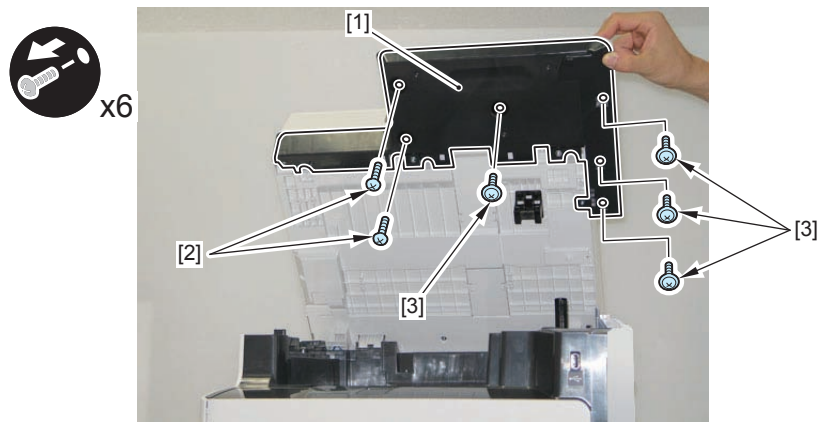
Do not reuse the removed Screw Cover Seal [2].



F-4-141

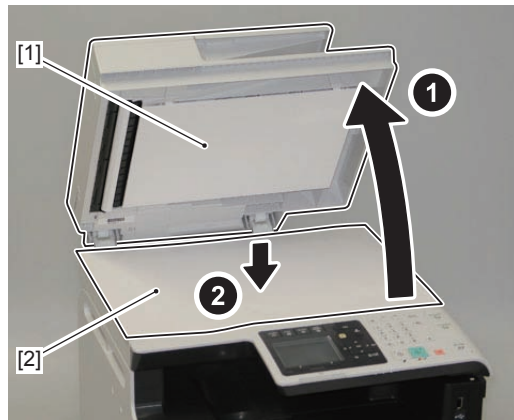
5) Remove the screws at the bottom of the Reader Unit [1].

- 2 Binding Screw [2]
- 4 Screws [3]



F-4-142

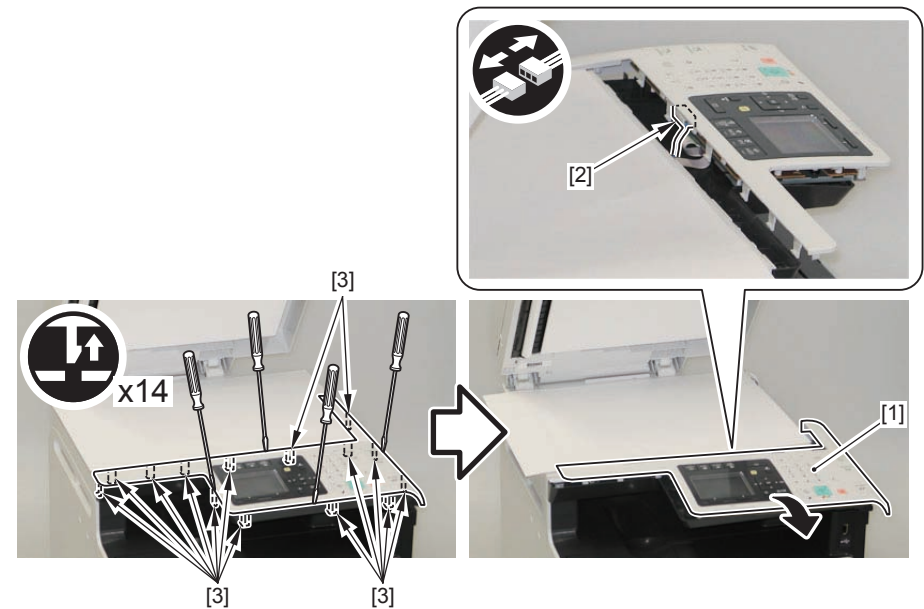
6) Open the ADF Unit/Copyboard [1] and place a sheet of paper [2] on the copyboard.



F-4-143

7) Shift the Control Panel Unit [1], and disconnect the Faston Connector [2].

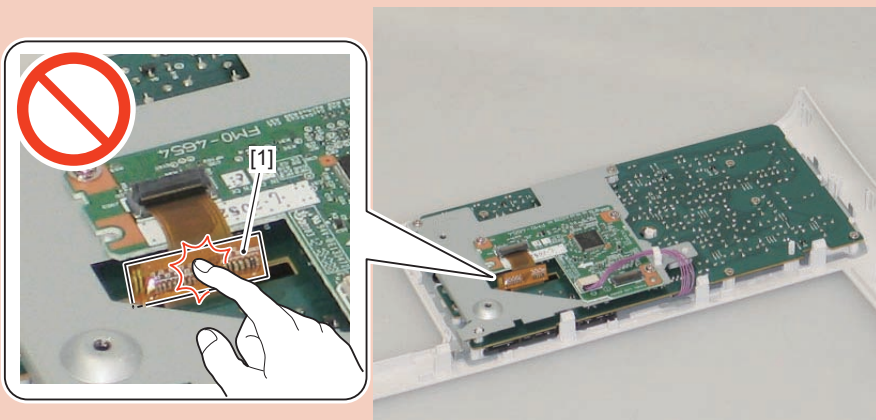
- 14 Claws [3]



F-4-144

CAUTION:

Do not touch the IC part [A] of the LCD Flat Cable [1].

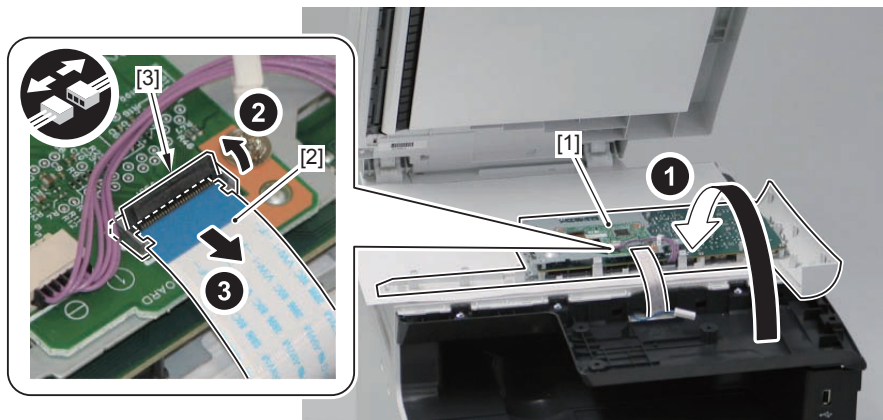


F-4-145

8) Turn the Control Panel Unit [1] over, and disconnect the Flat Cable [2].

CAUTION:

Do not damage and cut the Flat Cable [2].

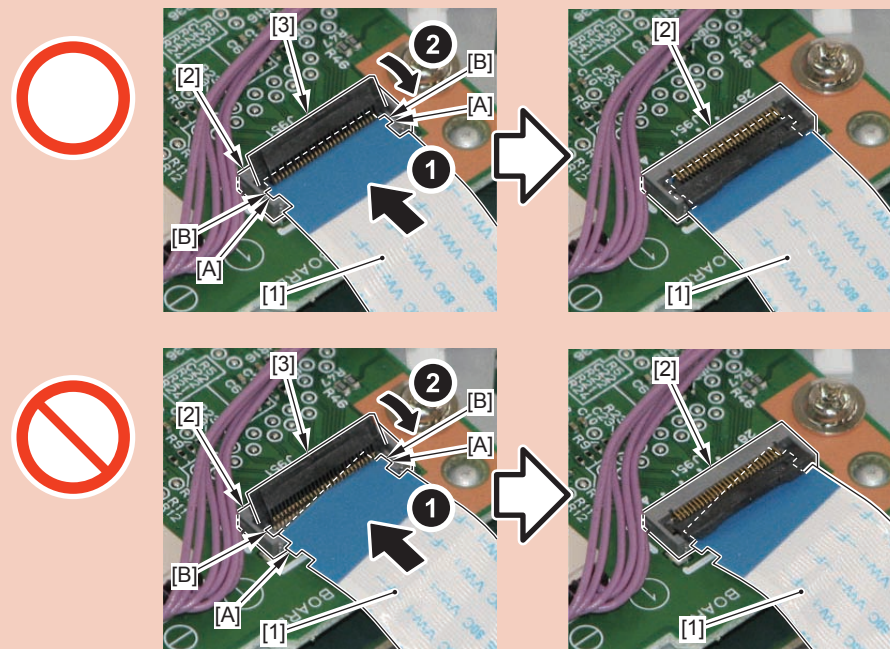


F-4-146

CAUTION:

Be sure to perform the following when connecting the Flat Cable [1] to the connector with a lock [2].

Be sure to insert the Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-147

Removing the Control Panel LCD PCB and Control Panel Key PCB

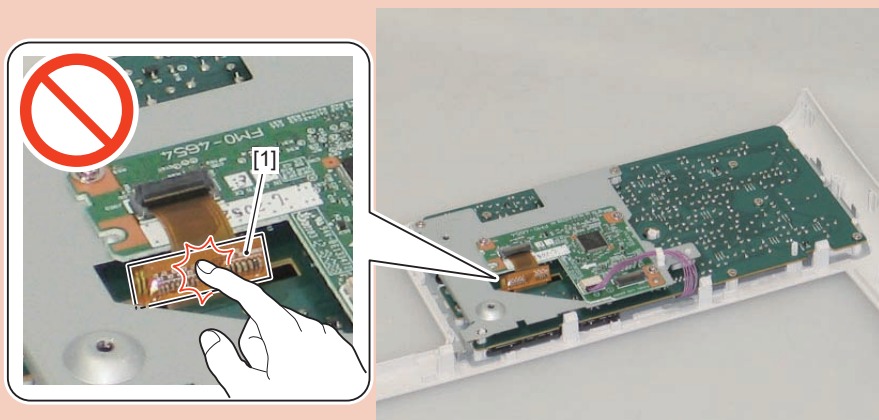
Preparation

1) Remove the the Control Panel Unit. Refer to page 4-70

Procedure

CAUTION:

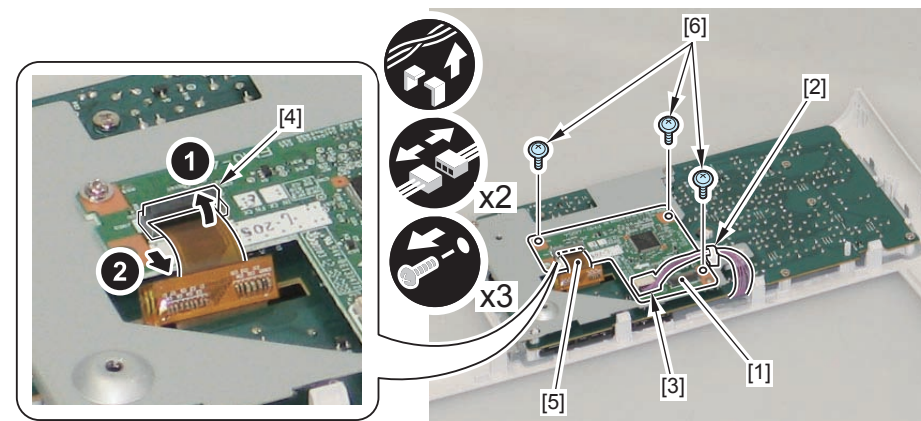
Do not touch the IC part [A] of the LCD Flat Cable [1].



F-4-148

1) Remove the Control Panel LCD PCB [1].

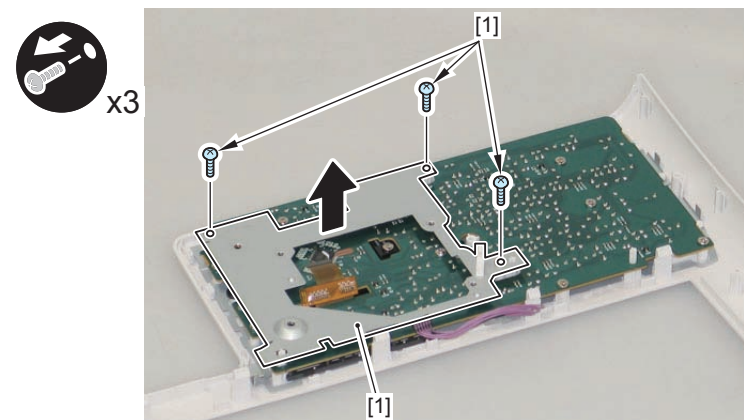
- 1 Wire Saddle [2]
- 1 Connector [3]
- 1 Flat Cable Connector Lock [4]
- 1 LCD Flat Cable [5]
- 3 Screws [6]



F-4-149

2) Remove the Control Panel LCD PCB Mounting Plate [1].

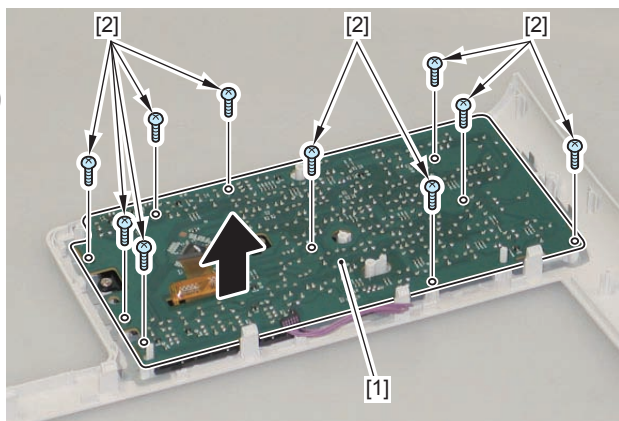
- 3 Screws [2] (Binding)



F-4-150

3) Remove the Control Panel Key PCB [1].

- 10 Screws [2] (Binding)

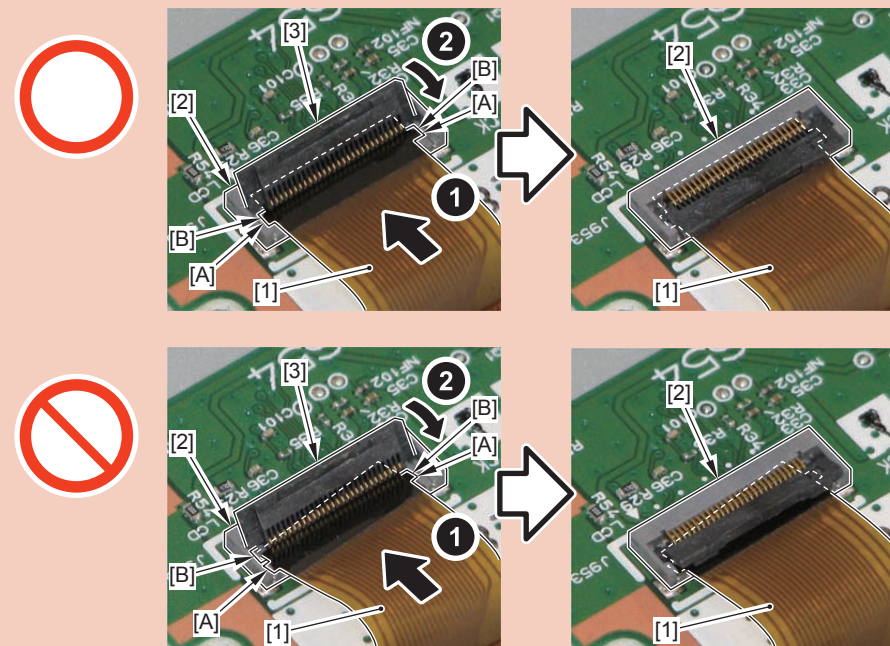


F-4-151

CAUTION:

Be sure to perform the following when connecting the LCD Flat Cable [1] to the connector with a lock [2].

Be sure to insert the LCD Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the LCD Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-152

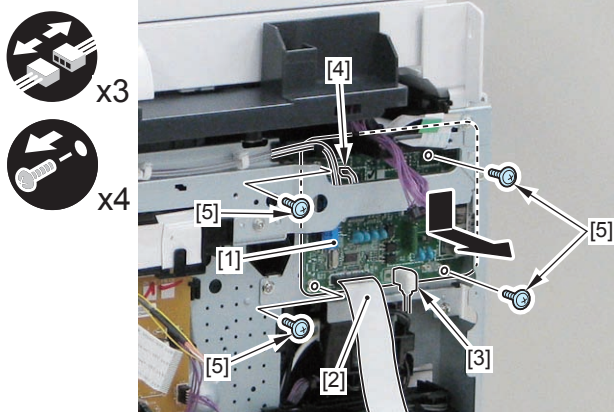
Removing the FAX PCB (MF8580Cdw/8550Cdn)

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.
- 3) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 4) Removing the Main Controller PCB. Refer to page 4-58.
- 5) Removing the Main Controller Support Plate. Refer to page 4-61.

Procedure

- 1) Remove the Fax PCB [1].
 - 1 Flat Cable [2]
 - 1 Grounding Wire [3]
 - 1 Connector [4]
 - 4 Screws [5]



F-4-153

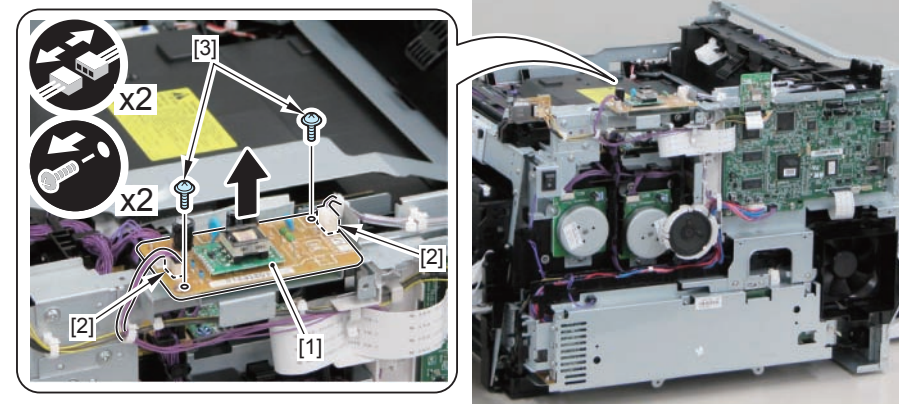
Removing the Off Hook PCB (MF8580Cdw/8550Cdn)

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.

Procedure

- 1) Remove the Off Hook PCB [1].
 - 2 Connector [2]
 - 2 Screws [3]



F-4-154

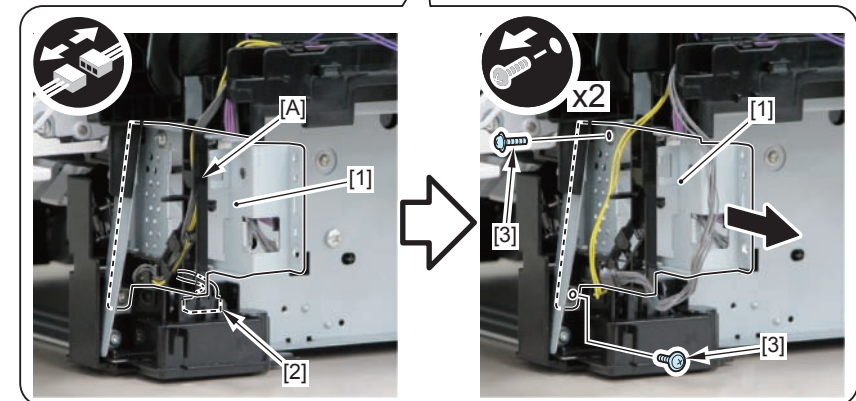
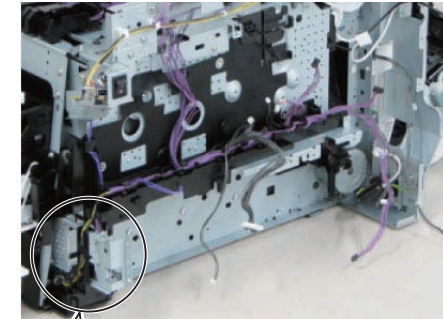
Removing the Main Drive Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 8) Removing the Main Controller PCB. Refer to page 4-58.
- 9) Removing the Main Controller Support Plate. Refer to page 4-61.
- 10) Removing the Drum Motor. Refer to page 4-102.
- 11) Removing the Developing Motor. Refer to page 4-100
- 12) Removing the Driver PCB. Refer to page 4-10.
- 13) Removing the FAX PCB. (FAX model only)Refer to page 4-75.
- 14) Removing the Fixing/Fixing Power Supply Cooling Fan Unit. Refer to page 4-86.
- 15) Removing the Fixing Sub PCB. Refer to page 4-67.
- 16) Removing the Fixing Motor Unit. Refer to page 4-111
- 17) Removing the Low Voltage Unit. Refer to page 4-65.
- 18) Removing the DC Controller PCB. Refer to page 4-61
- 19) Removing the Relay PCB. Refer to page 4-69
- 20) Removing the Off Hook PCB.(FAX model only)Refer to page 4-75

Procedure

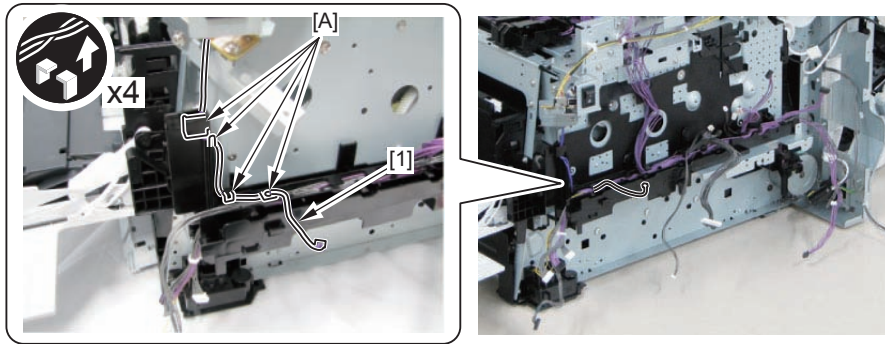
- 1) Remove the Harness Guide and plate [1].
 - 1 Connector [2]
 - 1 Harness Guide [A]
 - 2 Screws [3]



F-4-155

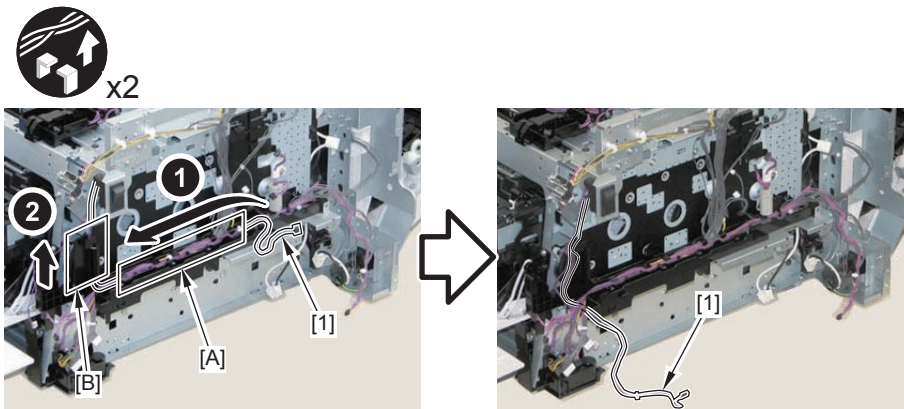
2) Free the harness [1].

- 4 Harness Guides [A]



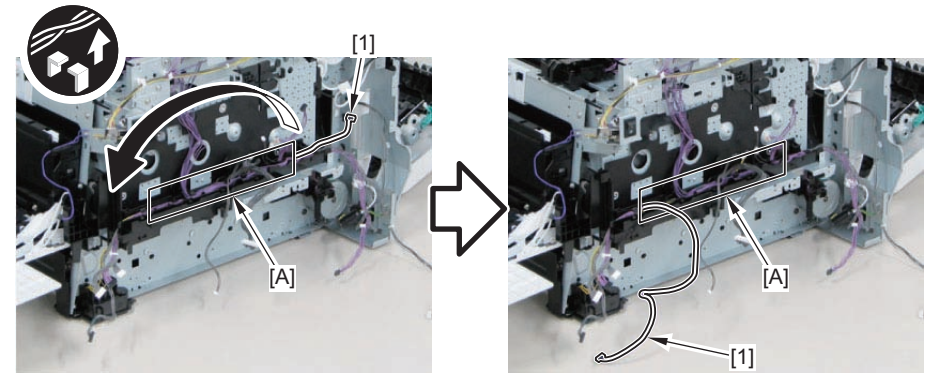
F-4-156

3) Free the harness [1] from the guides [A] and [B] (MF8540Cdn only).



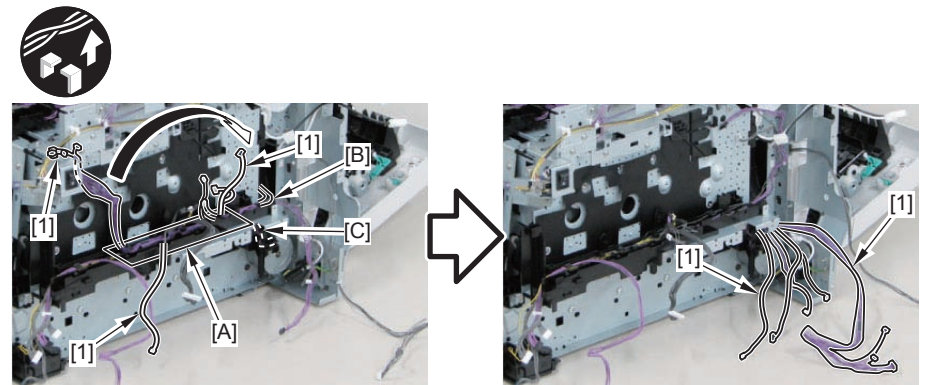
F-4-157

4) Free the harness [1] from the Harness Guide [A].



F-4-158

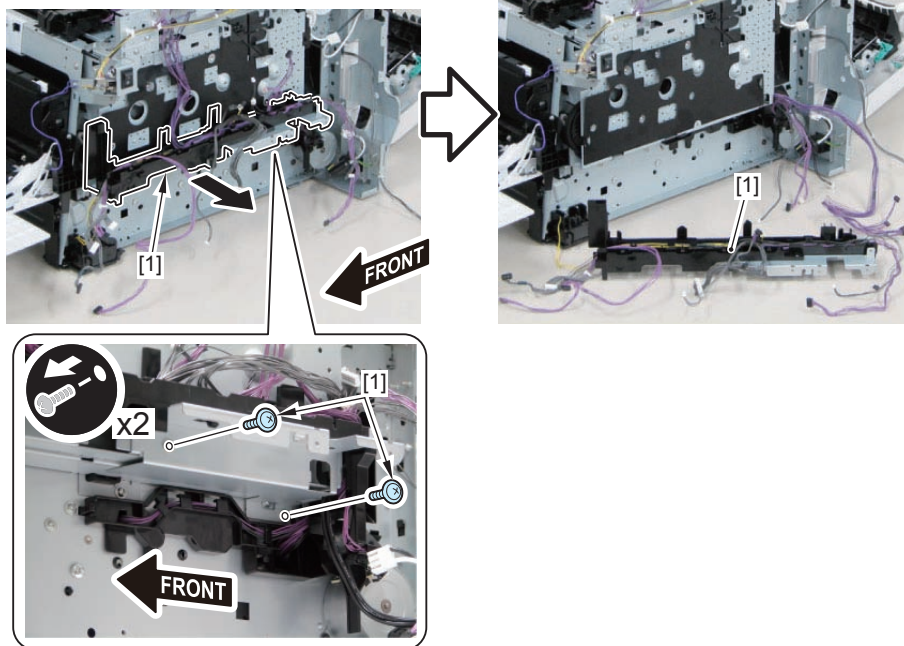
5) Free the harness [1] extruding out of the rear side [B] and [C] of the machine from the Harness Guide [A].



F-4-159

6) Remove the Harness Guide and Power Auxiliary Plate [1].

- 2 Screws [2]



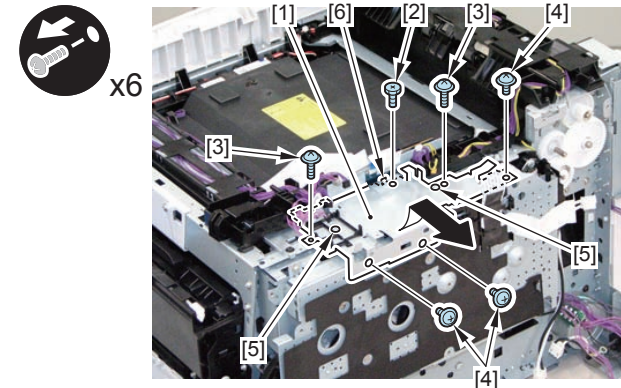
F-4-160

7) Remove the DC Controller Support Plate [1].

- 1 Special Flat-head Screw [2]
- 2 Black Screws [3]
- 3 Screws [4]
- 2 Bosses [5]
- 1 Protrusion [6]

CAUTION:

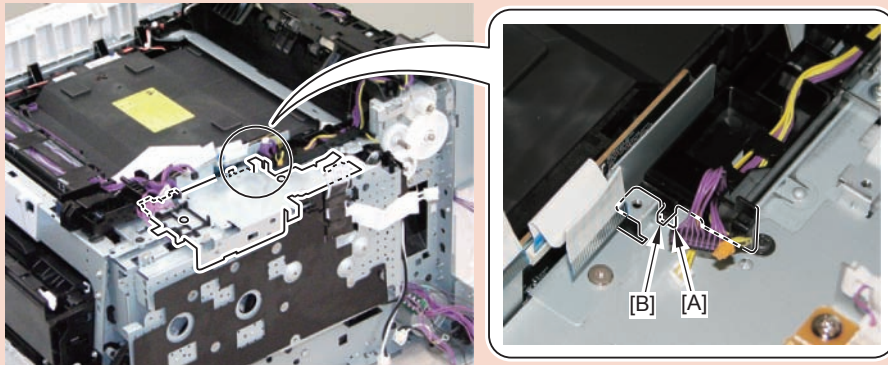
Since the Special Flat-head Screw [2] adjusts the interval between the plate [1] and parts in the vicinity, be sure to install the Special Flat-head Screw [2] in the location it was in before removal.



F-4-161

CAUTION:

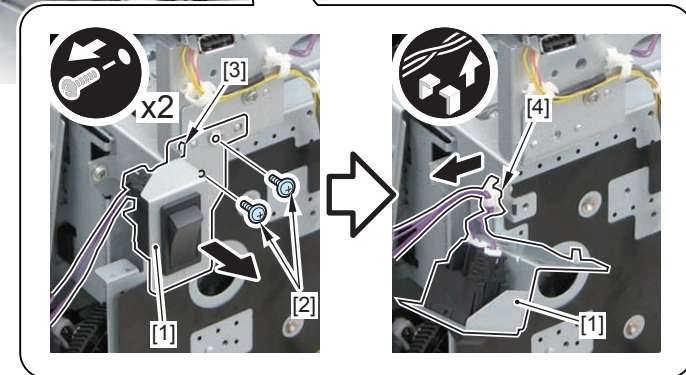
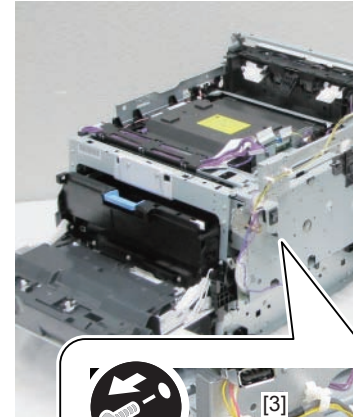
When installing, be sure to place the [A] part of DC Controller Support Plate under the [B] part of the Harness Guide.



F-4-162

8) Remove the Main Switch Unit [1].

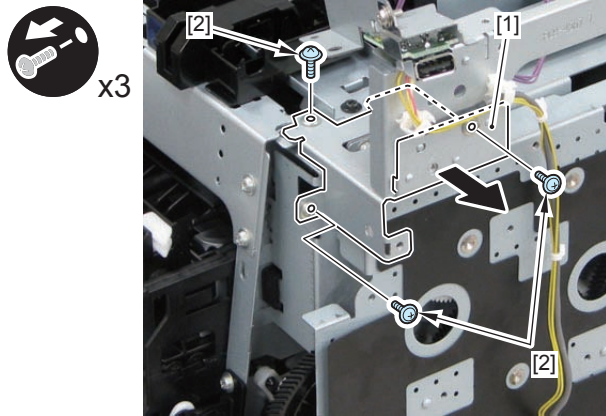
- 2 Screws [2]
- 1 Hook [3]
- 1 Reuse Band [4]



F-4-163

9) Remove the Main Switch Unit Connecting Plate [1].

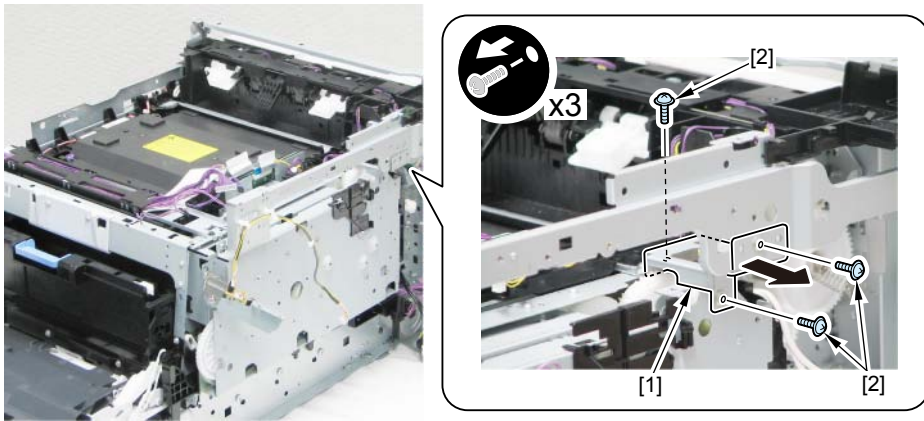
- 3 Screws [2]



F-4-164

10) Remove the Right Frame Supporting Plate [1].

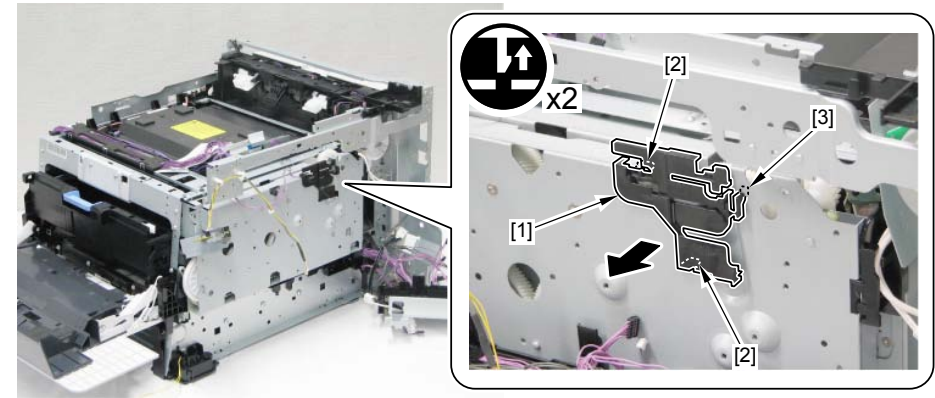
- 3 screws [2]



F-4-165

11) Remove the wire harness guide [1].

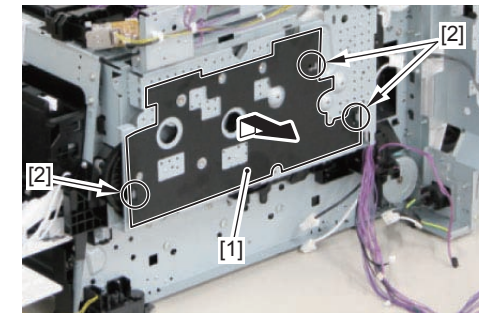
- 2 claws [2]
- 1 hook [3]



F-4-166

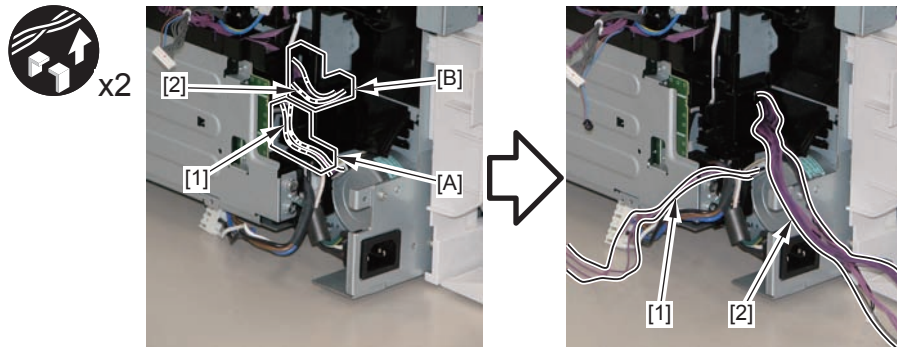
12) Remove the sheet [1].

- 3 Hooks [2]



F-4-167

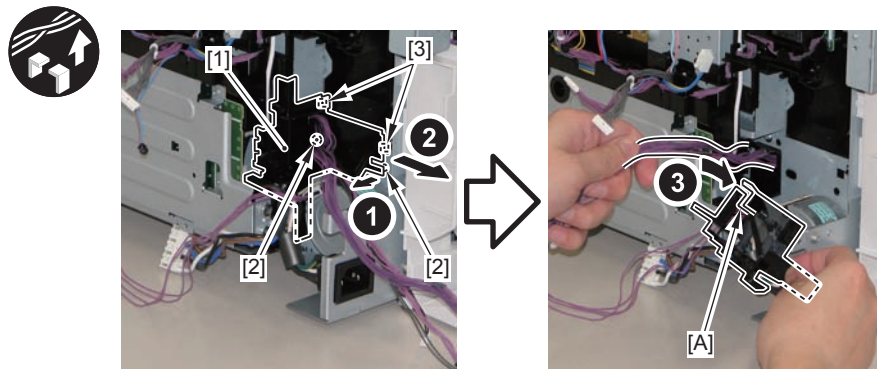
13) Free the harness [1] and [2] from the Harness Guide [A] and [B].



F-4-168

14) Remove the Harness Guide [1].

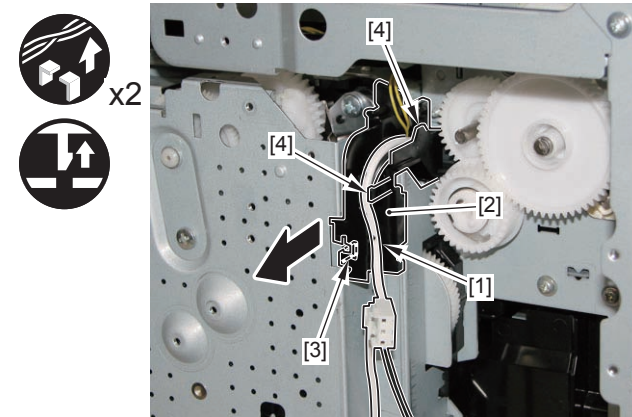
- Harness Guide [A]
- 2 Boss [2]
- 2 Hooks [3]



F-4-169

15) Remove the wire harness [1] from the wire harness guide [2], and remove the wire harness guide [2] in the arrow direction.

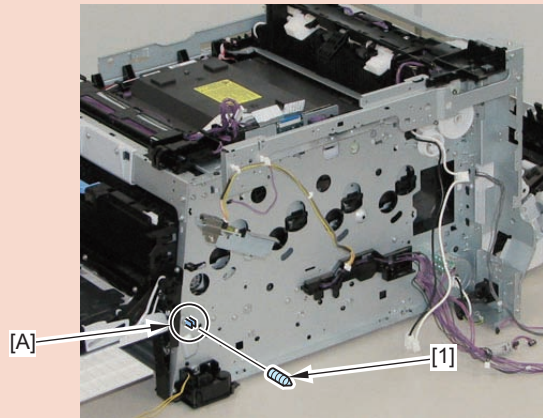
- 1 claw [3]
- 2 fixing guides [4]



F-4-170

CAUTION:

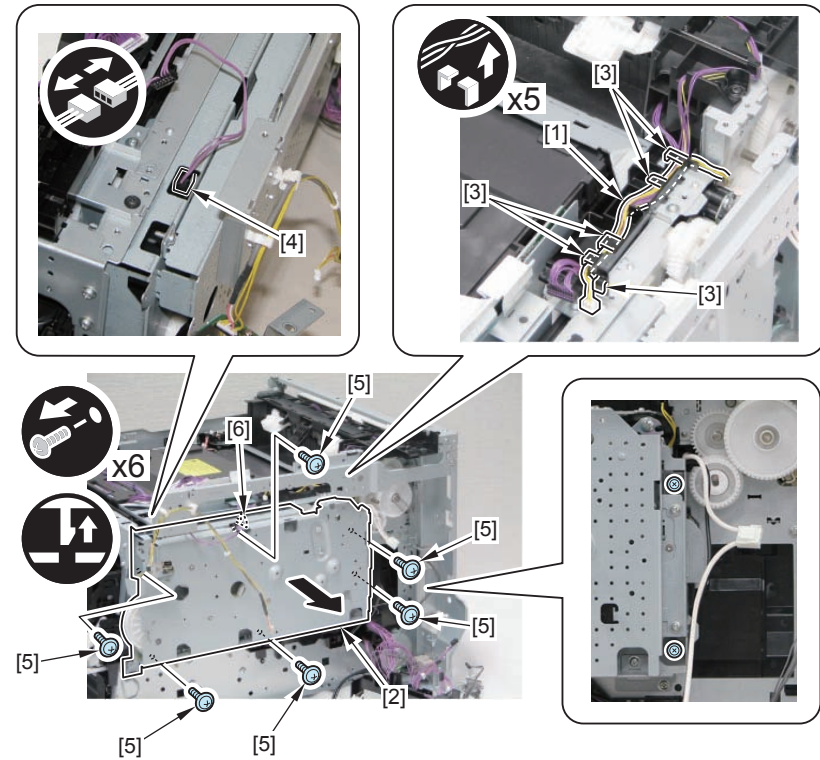
When removing the Main Drive Unit, the Contact Spring [1] may come off so be sure not to lose it. When it comes off, attach it on the protrusion [A] on the plate at the right side of the host machine.



F-4-171

16) Remove the wire harness [1], and remove the Drive Unit [2].

- 5 fixing guides [3]
- 1 Connector [4]
- 6 screws [5]
- 1 claw [6]



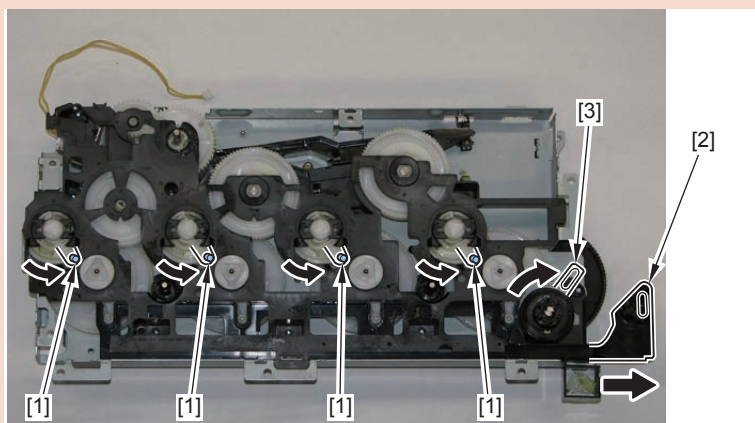
F-4-172

CAUTION: Installing the Main Drive Unit

1. Before installing it, be sure that the [Main Drive Unit side] is in the state of steps 1 through 4, while the [Host machine side] is in the state of steps 5 and 6.

[Main Drive Unit side]

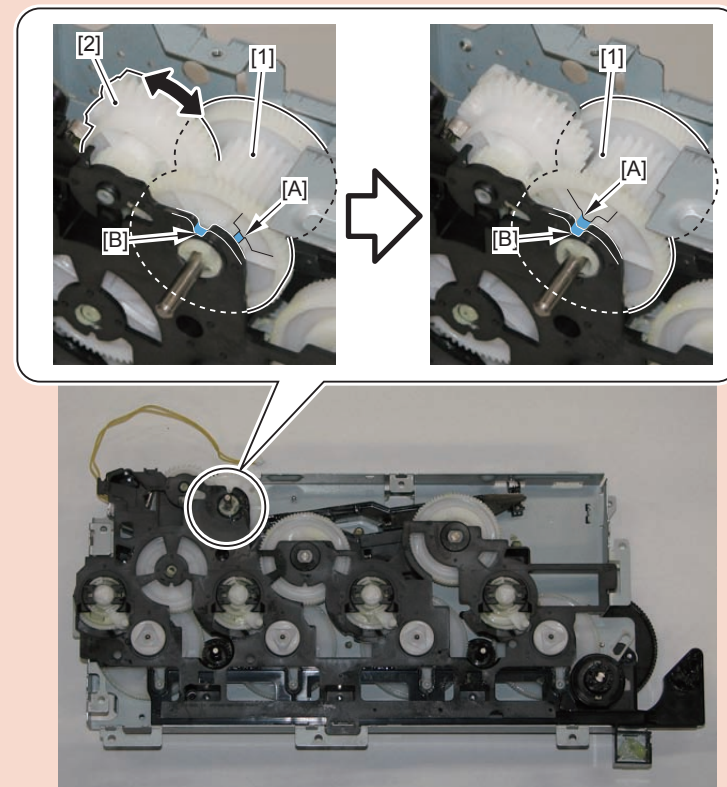
- 1) 4 Arm Shafts [1] are on the right side.
- 2) 1 Front Door Arm [2] is pulled out.
- 3) 1 link [3] is on the right side.



F-4-173

- 4) The directions of the groove [A] of the gear [1] of the Main Drive Unit and the groove [B] of the Gear Cover of the Main Drive Unit are aligned.

If the directions are not aligned, rotate the gear [2] to align the directions of the groove [A] of the gear and groove [B] of the Gear Cover.

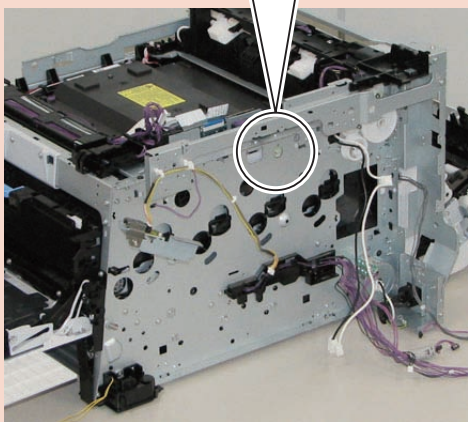
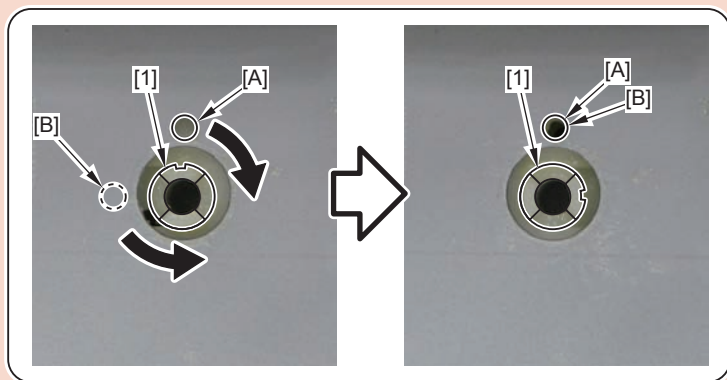


F-4-174

[Host machine side]

5) The direction of the joint [1] on the host machine side is as shown in the figure below (at this time, the hole [A] of the plate and hole [B] of the joint [1] are aligned in a straight line).

If the direction is not correct, rotate the joint [1] to the direction as shown in the figure below.

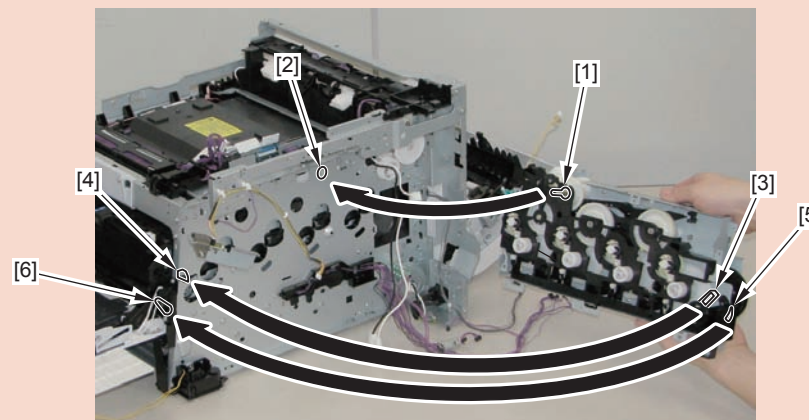


F-4-175

6) The Front Cover is open.

2. Be sure to keep the following in mind when installing.

- Fit the joint [1] of the gear of the Main Drive Unit with the joint [2] of the host machine.
- Fit the hole [3] of the link with the shaft [4] of the host machine.
- Fit the hole [5] of the Front Door Arm with the shaft [6] of the host machine.



F-4-176

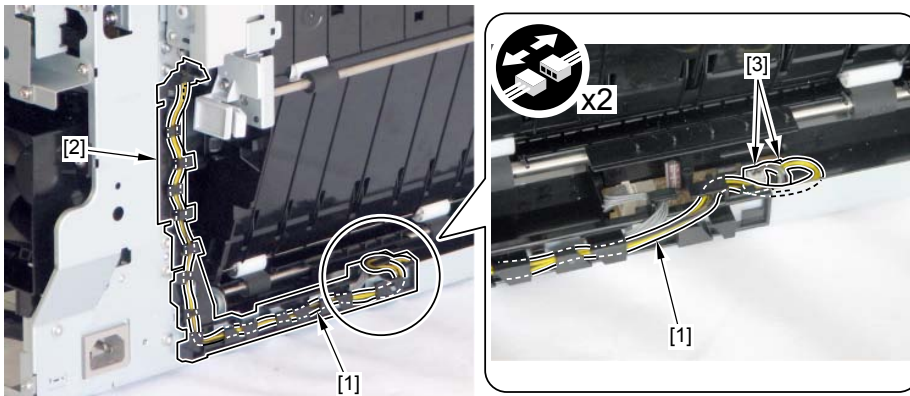
Removing the Duplex Reverse Drive Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the Rear Cover. Refer to page 4-24.
- 5) Removing the Rear Lower Cover. Refer to page 4-25.
- 6) Removing the Rear Cover Rib Unit. Refer to page 4-27.

Procedure

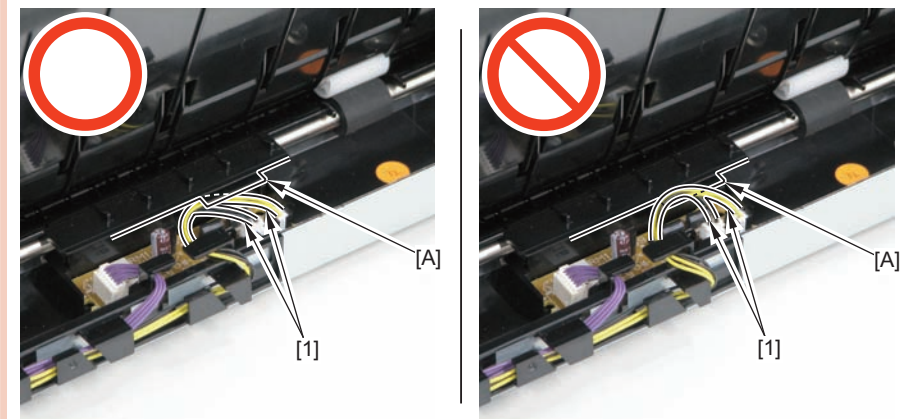
- 1) Remove the wire harness [1] from the wire harness cover [2].
 - 2 connectors [3]



F-4-177

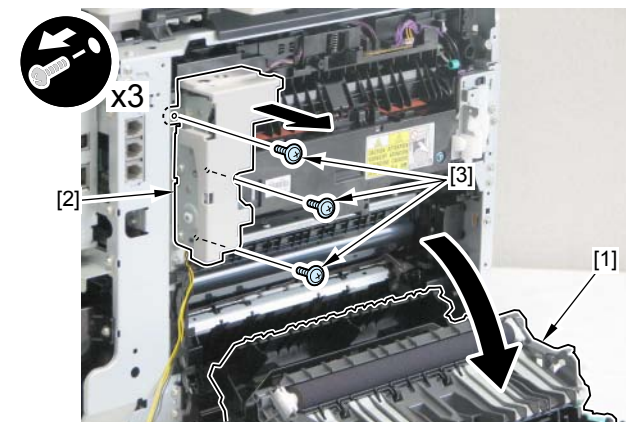
CAUTION:

Be sure to insert the 2 harnesses [1] at the bottom of the Guide [A] when installing.



F-4-178

- 2) Open [1] the Duplex Feed Unit, and remove the Duplex Reverse Drive Unit [2].
 - 3 screws [3]



F-4-179

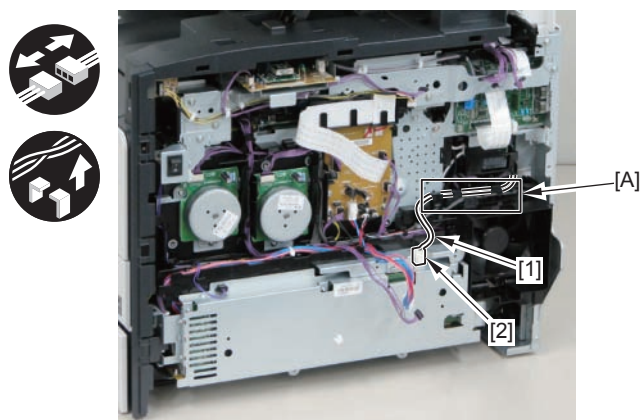
Removing the Fixing/Fixing Power Supply Cooling Fan Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.
- 3) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 4) Removing the Main Controller PCB. Refer to page 4-58.
- 5) Removing the Main Controller Support Plate. Refer to page 4-61.

Procedure

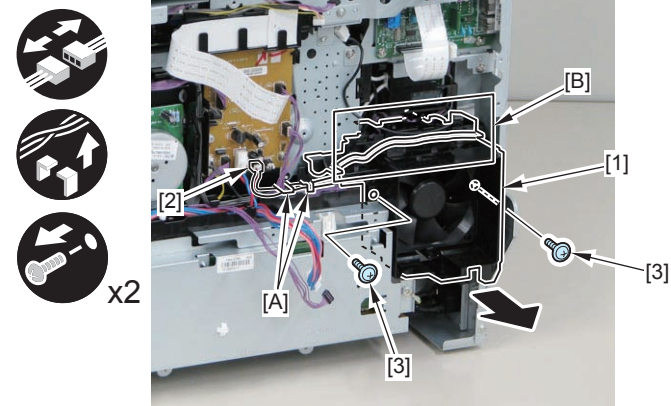
- 1) Free the Grounding Wire [1] from the Harness Guide [A]. (Fax model only)
 - 1 Connector [2]



F-4-180

- 2) Remove the Cooling Fan Unit [1].

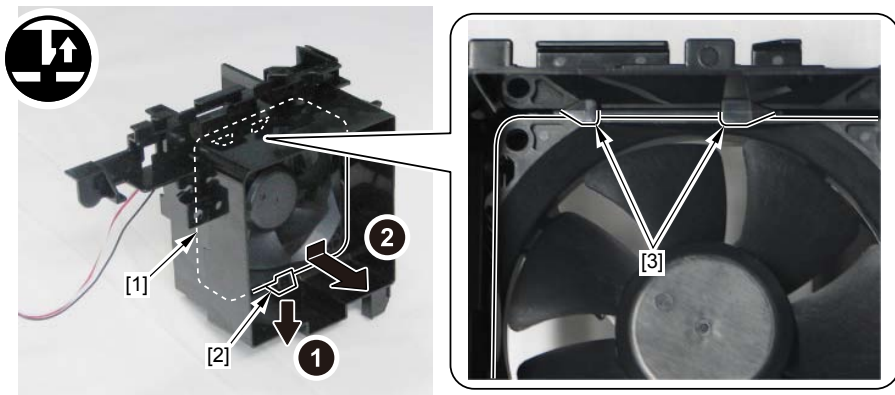
- 1 Connector [2]
- 2 Screws [3]
- 2 Harness Guides [A]
- 1 Harness Guide [B]



F-4-181

3) Remove the Fixing/Fixing Power Supply Cooling Fan [1].

- 1 claw [2]
- 2 protrusions [3]

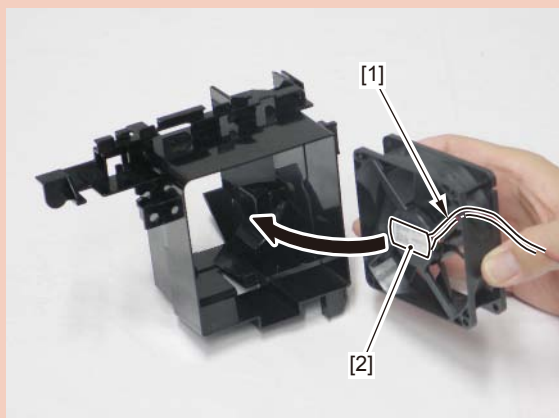


F-4-182

CAUTION:

When installing the Cooling Fan, be careful of the installation direction.

- Place the Fan Cable [1] in the indicated position.
- Make sure that the fan label [2] faces to the inside of the host machine.



F-4-183

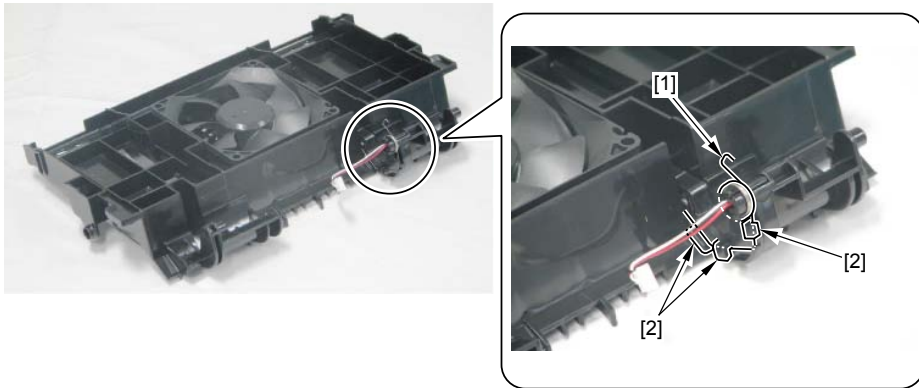
Removing the Duplex Feeding Fan

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the Rear Cover. Refer to page 4-25.
- 5) Removing the Rear Lower Cover. Refer to page 4-25.
- 6) Removing the Rear Cover Rib Unit. Refer to page 4-27.

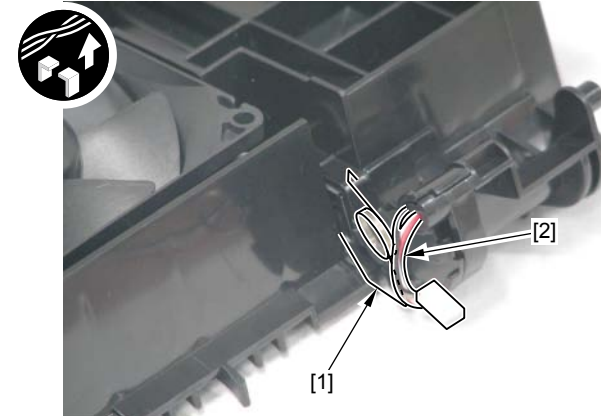
Procedure

- 1) Remove the spring [1].
 - 3 bosses [2]



F-4-184

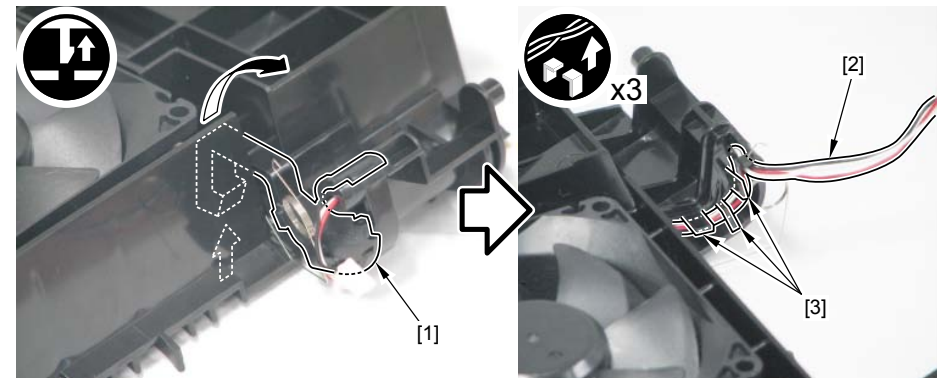
- 2) Free the harness [2] from the spring [1].



F-4-185

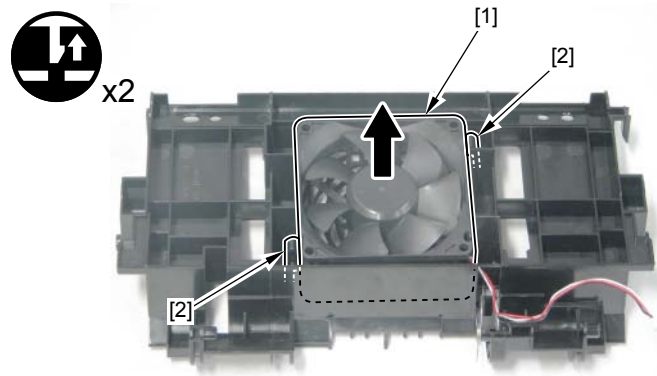
- 3) Remove the fixing guide [1] and free the harness [2] from the harness guide.

- 3 fixing guides [3]



F-4-186

4) Remove the 2 claws [1] to remove the Duplex Feeding Fan [2].

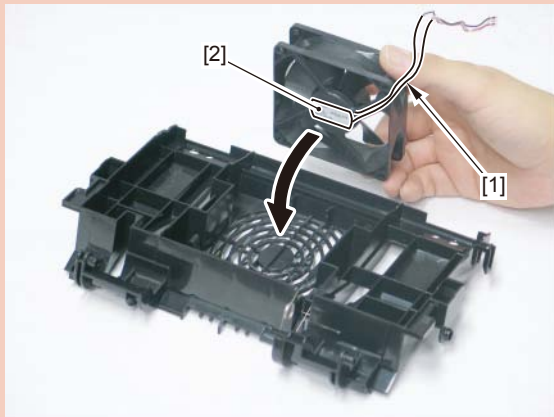


F-4-187

CAUTION:

When installing the Duplex Feeding Fan, be careful of the installation direction.

- Place the Fan Cable [1] in the indicated position.
- Make sure that the fan label [2] faces to the Duplex Feeding Unit side.



F-4-188

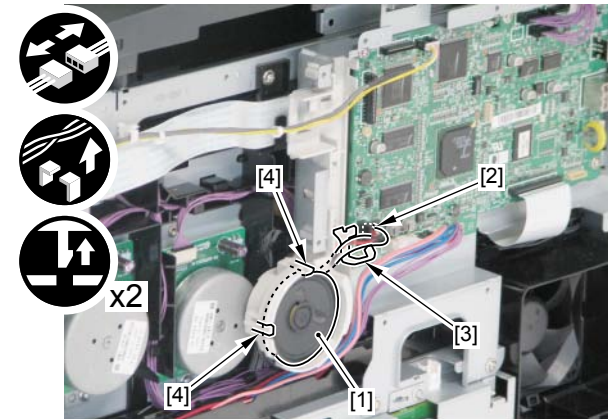
Removing the Speaker (MF8580Cdw/8550Cdn)

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.

Procedure

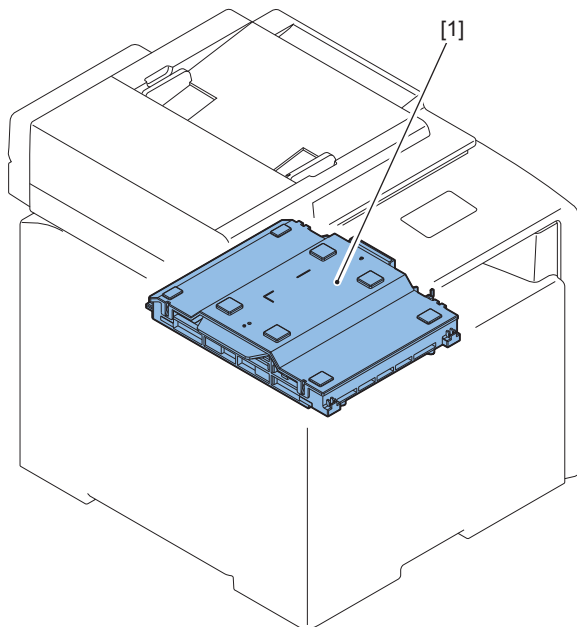
- 1) Remove the Speaker [1].
 - 1 connector [2]
 - 1 wire saddle [3]
 - 2 claws [4]



F-4-189

Laser Exposure System

Location



F-4-190

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Laser Scanner Unit	Product Configuration	-	(Refer to page 4-90)	(Refer to page 4-94)

T-4-21

Removing the Laser Scanner Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Rear Cover. Refer to page 4-24.
- 8) Removing the Rear Lower Cover. Refer to page 4-25.
- 9) Removing the Rear Cover Rib Unit. Refer to page 4-27.
- 10) Removing the Duplex Printing Reverse Drive Unit. Refer to page 4-85.
- 11) Removing the Fixing Assembly. Refer to page 4-104.
- 12) Removing the Delivery Unit. Refer to page 4-128.

Procedure

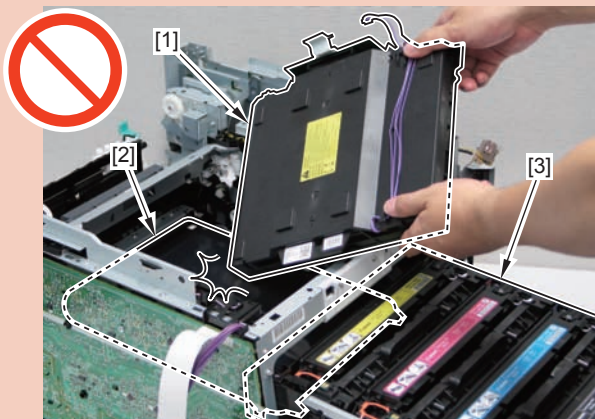
CAUTION:

When replacing the Laser Scanner Unit, be sure to perform the following procedure.

- After Replacing the Laser Scanner Unit (Refer to page 4-94)

CAUTION:

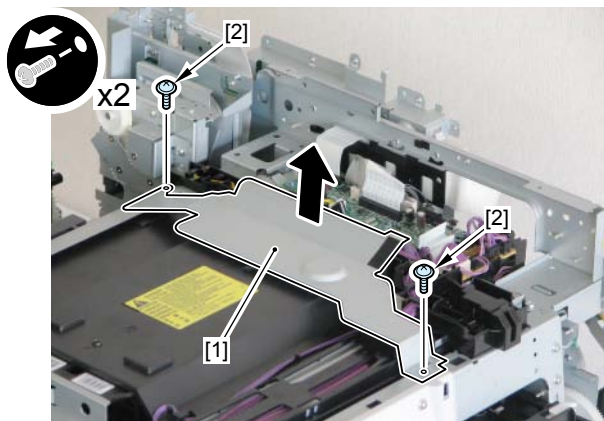
The ITB Unit is under the Laser Scanner Unit. Ensure to close a Cartridge Tray when performing this procedure, because there is a possibility that the ITB Unit might be damaged when the Laser Scanner Unit is mistakenly dropped during installation/removal.



F-4-191

1) Remove the wire harness cover plate [1].

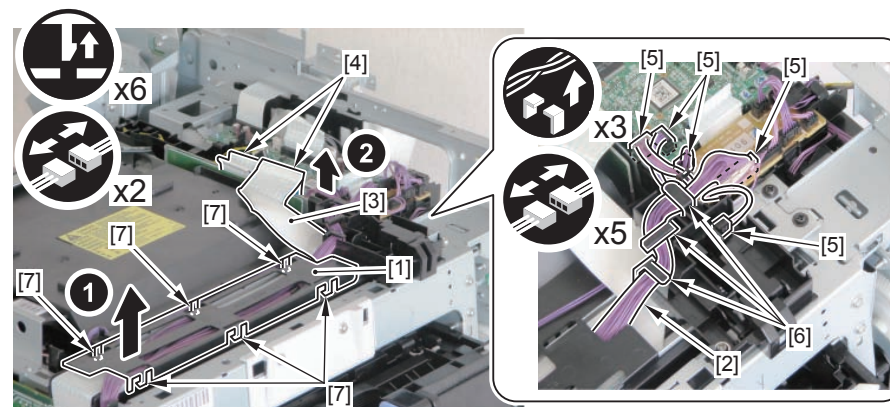
- 2 screws [2]



F-4-192

2) Remove the Harness Guide [1] and free the harness [2] and the Flat Cable [3].

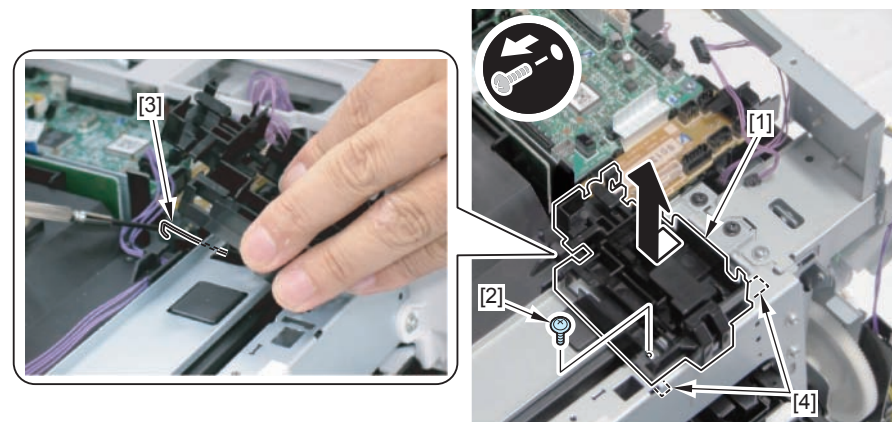
- 2 Flat Cables [4]
- 5 Connectors [5]
- 3 Fixation Guides [6]
- 6 Claws [7]



F-4-193

3) Remove the Harness Guide [1].

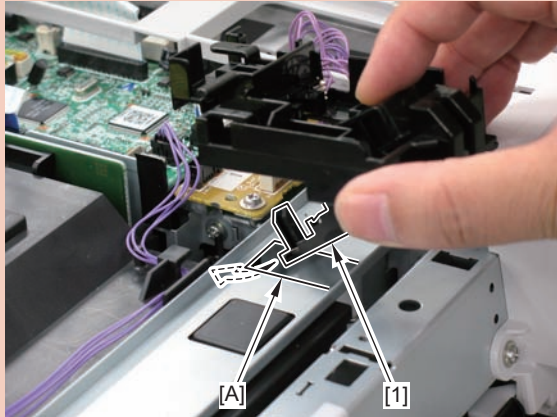
- 1 Screw [2]
- 1 Spring [3]
- 2 Hooks [4]



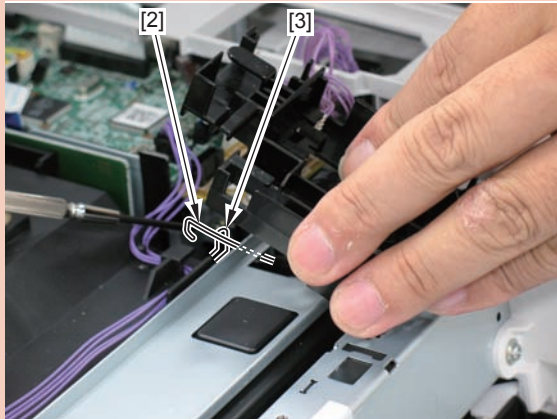
F-4-194

CAUTION:

Be sure to put the flag [1] of the Harness Guide through the hole [A] of the plate, and hook the spring [2] on the flag [3] of the Laser Scanner Unit when installing.



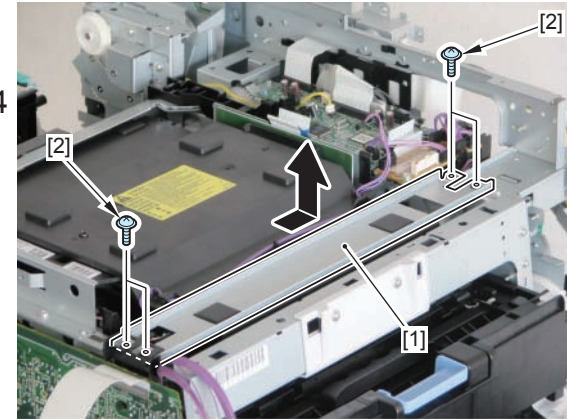
F-4-195



F-4-196

4) Remove the Upper Front Supporting Plate [1].

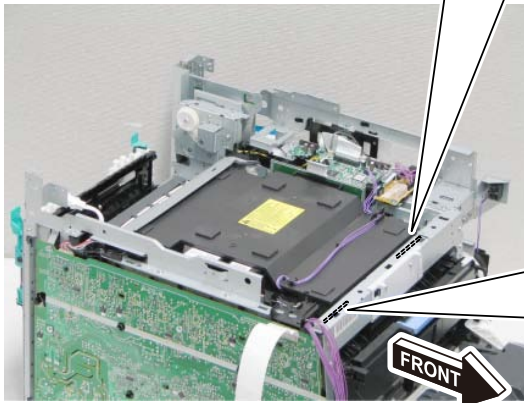
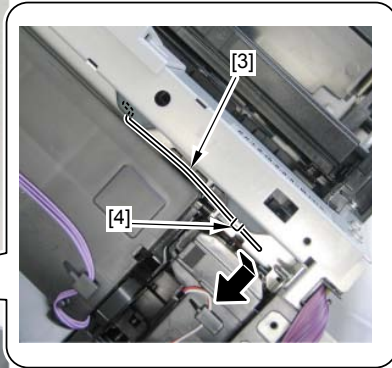
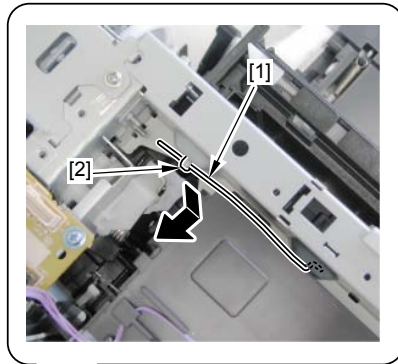
- 4 screws [2]



F-4-197

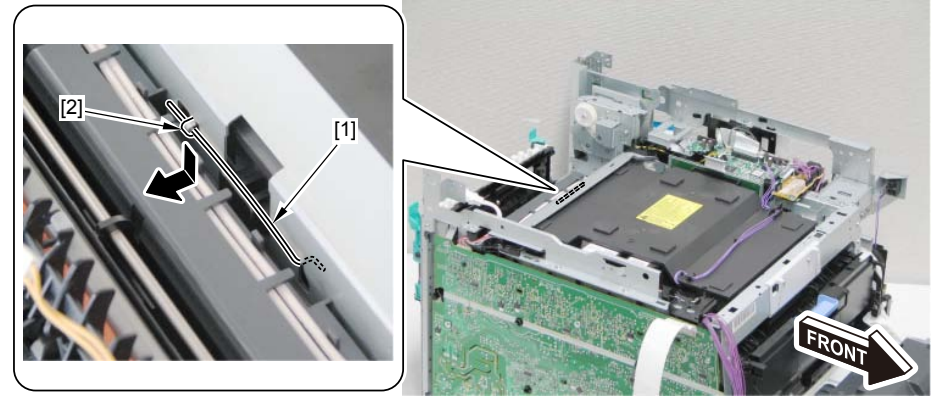
5) Remove the Scanner Fixing Spring [1] on the right side from 1 hook [2].

6) Remove the Scanner Fixing Spring [3] on the left from the 1 hook [4].



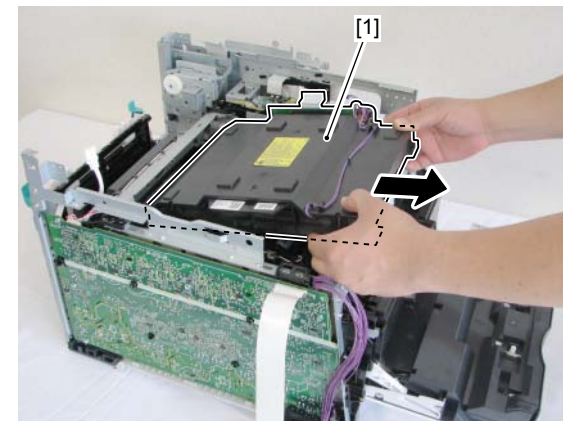
F-4-198

7) Remove the Scanner Fixing Spring [1] in the rear from 1 hook [2].



F-4-199

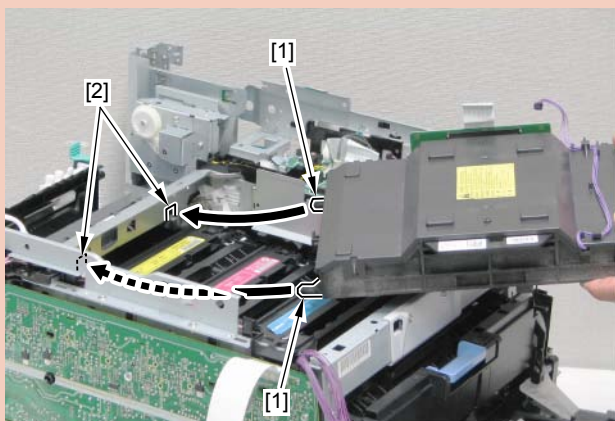
8) Remove the Laser Scanner Unit [1].



F-4-200

CAUTION::

Insert 2 bosses [1] into 2 boss holes [2] when installing.

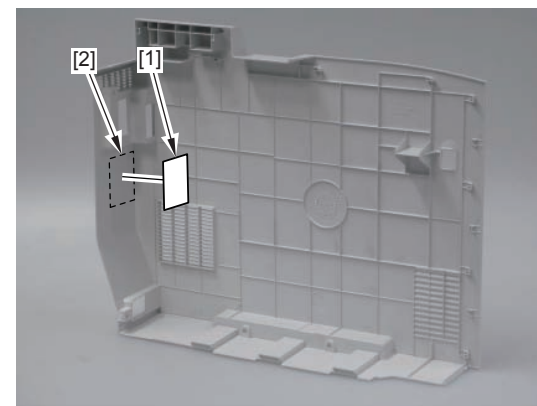


F-4-201

MAI-S-K0(Laser output correction value, horizontal scanning irradiation position0 K)
 MAI-S-Y1(Laser output correction value, horizontal scanning irradiation position1 Y)
 MAI-S-M1(Laser output correction value, horizontal scanning irradiation position1 M)
 MAI-S-C1(Laser output correction value, horizontal scanning irradiation position1 C)
 MAI-S-K1(Laser output correction value, horizontal scanning irradiation position1 K)
 MAI-S-Y2(Laser output correction value, horizontal scanning irradiation position2 Y)
 MAI-S-M2(Laser output correction value, horizontal scanning irradiation position2 M)
 MAI-S-C2(Laser output correction value, horizontal scanning irradiation position2 C)
 MAI-S-K2(Laser output correction value, horizontal scanning irradiation position2 K)

2) After values are registered, affix the label [1] packaged with the unit on the inside [2] of the right cover.

- MF8500 series



F-4-202

■ After replacing laser exposure units

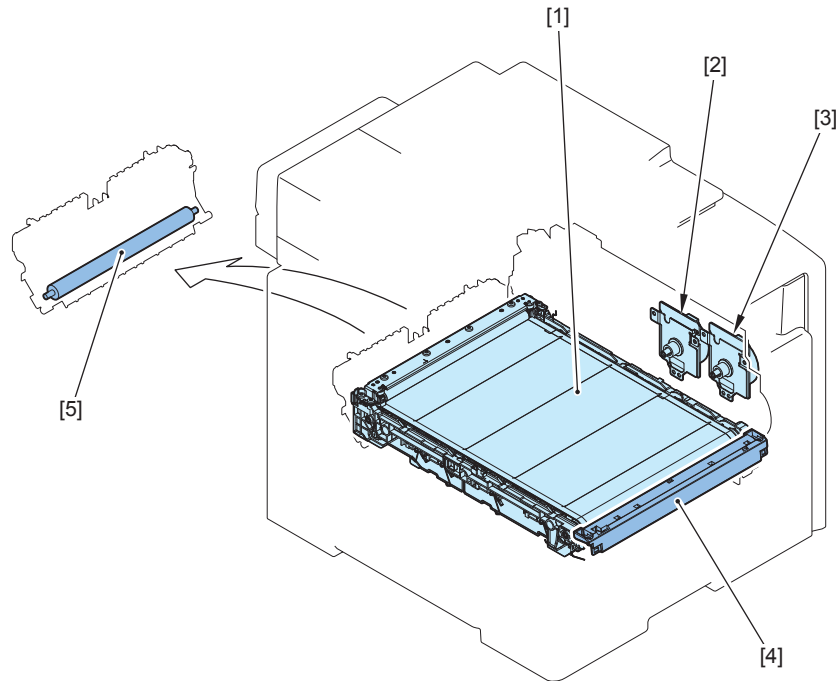
1) Register values indicated on the label packaged with the Laser Scanner Unit in the following service mode items.

COPIER>ADJUST>SCNR>

SUB-S-Y0(Laser output correction value, vertical scanning irradiation position0 Y)
 SUB-S-M0(Laser output correction value, vertical scanning irradiation position0 M)
 SUB-S-C0(Laser output correction value, vertical scanning irradiation position0 C)
 SUB-S-K0(Laser output correction value, vertical scanning irradiation position0 K)
 SUB-S-Y1(Laser output correction value, vertical scanning irradiation position1 Y)
 SUB-S-M1(Laser output correction value, vertical scanning irradiation position1 M)
 SUB-S-C1(Laser output correction value, vertical scanning irradiation position1 C)
 SUB-S-K1(Laser output correction value, vertical scanning irradiation position1 K)
 SUB-S-Y2(Laser output correction value, vertical scanning irradiation position2 Y)
 SUB-S-M2(Laser output correction value, vertical scanning irradiation position2 M)
 SUB-S-C2(Laser output correction value, vertical scanning irradiation position2 C)
 SUB-S-K2(Laser output correction value, vertical scanning irradiation position2 K)
 MAI-S-Y0(Laser output correction value, horizontal scanning irradiation position0 Y)
 MAI-S-M0(Laser output correction value, horizontal scanning irradiation position0 M)
 MAI-S-C0(Laser output correction value, horizontal scanning irradiation position0 C)

Image Formation System

Location



F-4-203

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	ITB Unit	Product Configuration	-	(Refer to page 4-95)	-
[2]	Drum Motor	Main Drive Unit	M1	(Refer to page 4-102)	-
[3]	Developing Motor	Main Drive Unit	M2	(Refer to page 4-100)	-
[4]	Patch Density/Registration Sensor Unit	Product Configuration	-	(Refer to page 4-98)	-
[5]	Secondary Transfer Outer Roller	Secondary Transfer Feed Unit	-	(Refer to page 4-103)	-

T-4-22

Removing the ITB Unit

Preparation

1) Removing the Cartridge Tray. Refer to page 4-30.

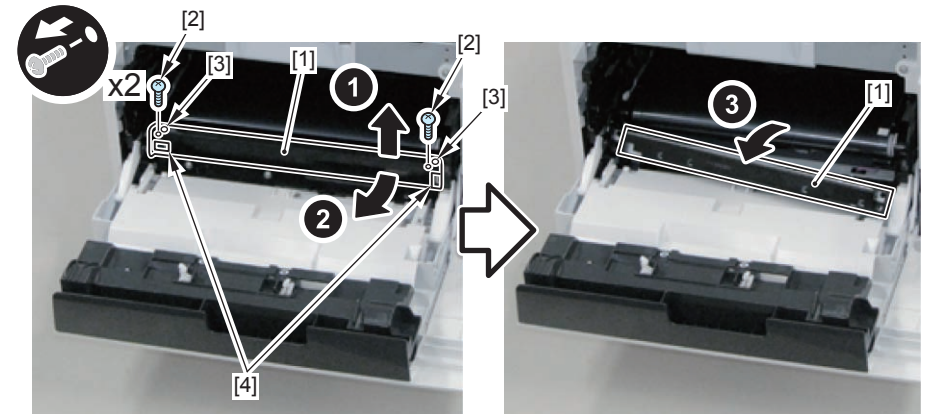
Procedure

CAUTION:

Be sure not to touch the surface of the ITB and the Secondary Transfer Roller when disassembling/assembling.

1) Pull out the Patch Density/Registration Sensor Unit [1] toward the front.

- 2 Screws [2]
- 2 Bosses [3]
- 2 Protrusions [4]

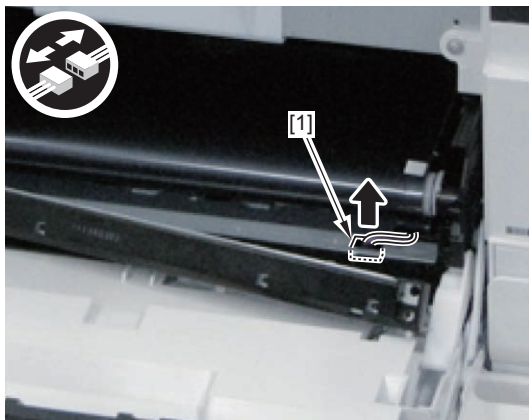


F-4-204

NOTE:

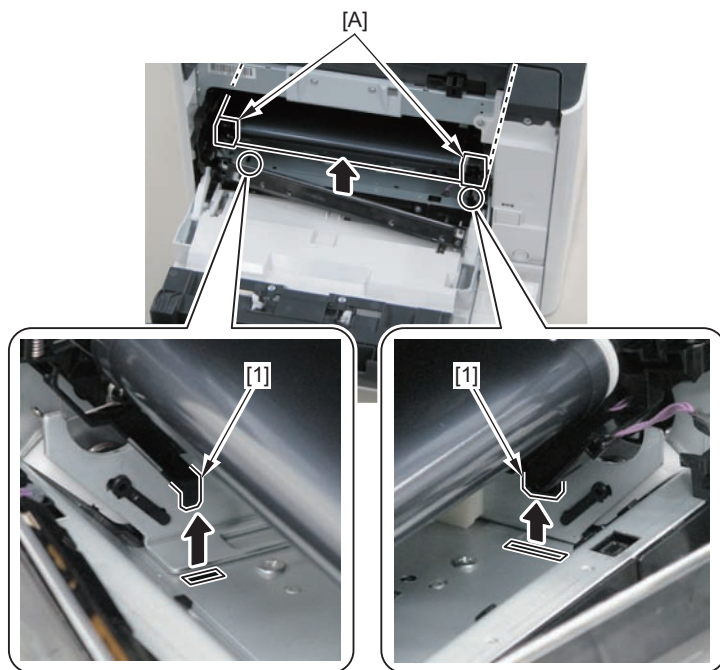
When it is difficult to pull out the Patch Density/Registration Sensor Unit toward the front and there is a risk of contact with the ITB, refer to "Removing the Patch Density and Registration Sensor Unit" so that the Patch Density/Registration Sensor Unit [1] can be further pulled out. (Refer to page 4-98)

2) Disconnect the connector [1].



F-4-205

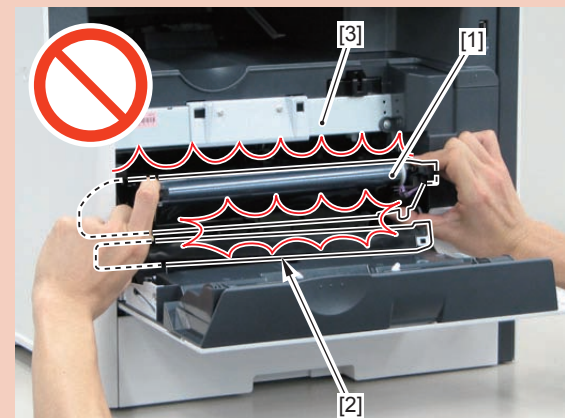
3) Lift the 2 parts [A] at the front side of the ITB Unit to release the 2 protrusions [1].



F-4-206

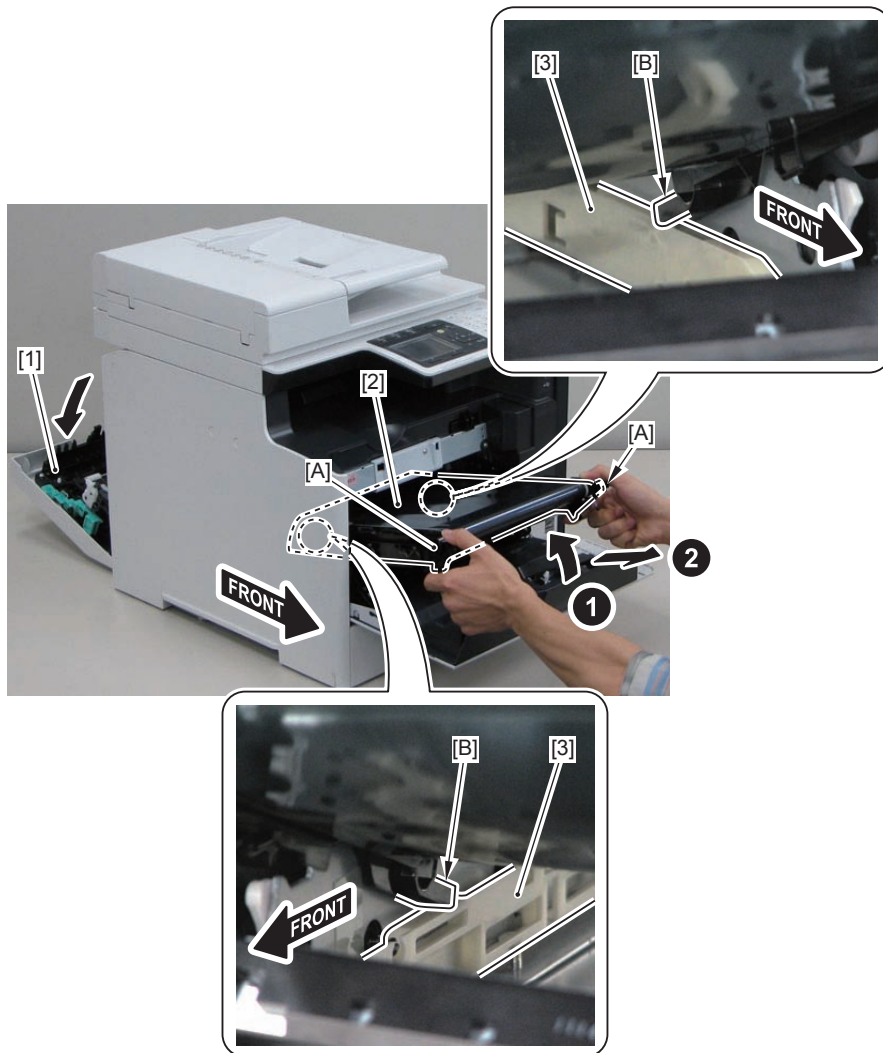
CAUTION:

Be careful not to hit the ITB [1] against the Patch Density/Registration Sensor Unit [2] at the lower side and the frame [3] at the upper side when installing/removing.



F-4-207

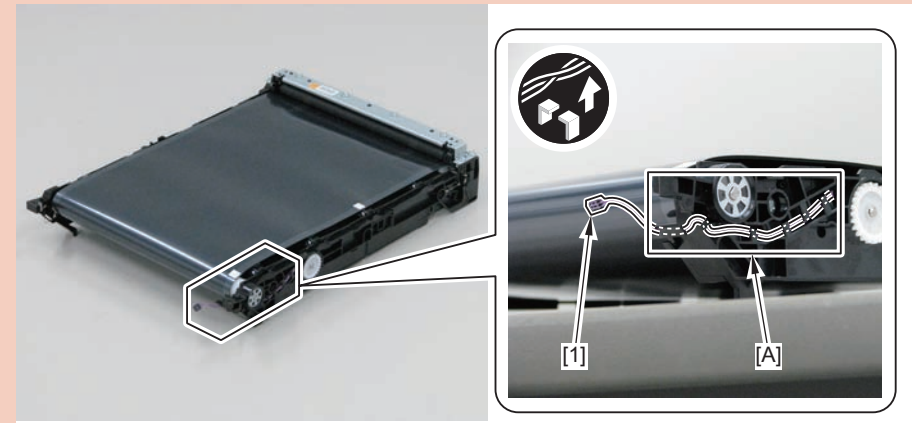
- 4) Open the Rear Cover [1].
- 5) Hold the 2 parts [A] at the front side of the ITB Unit to tilt the ITB Unit [2].
- 6) Slide the 2 parts [B] at the rear side of the ITB Unit along the rails [3], and remove the ITB Unit [2] by pulling it out.



F-4-208

CAUTION:

Be sure to install the harness [1] to the guide [A] of the ITB Unit when installing.



F-4-209

Removing the Patch Density and Registration Sensor unit

Preparation

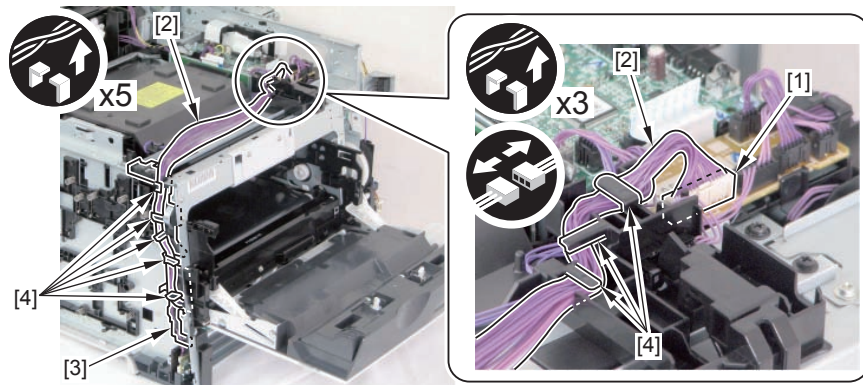
- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Right Front Cover. Refer to page 4-22.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the High Voltage Power Supply PCB. Refer to page 4-63.
- 8) Removing the Cartridge Tray. Refer to page 4-30.

Procedure

CAUTION:

Be sure not to touch the surface of the ITB and the Secondary Transfer Roller when disassembling/assembling.

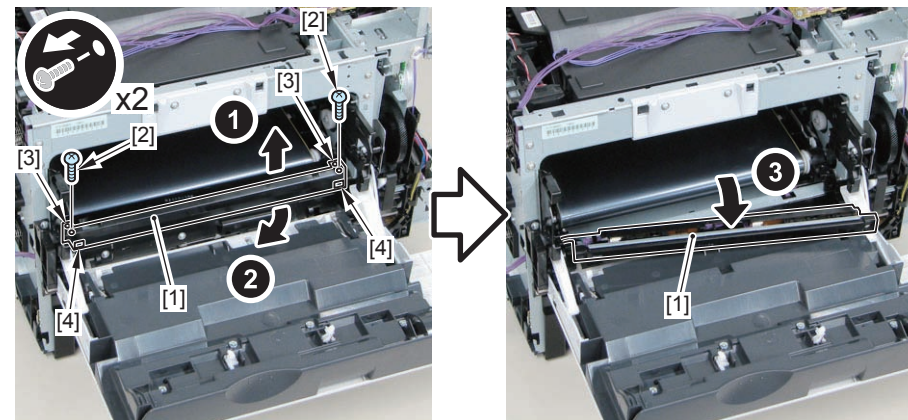
- 1) Remove 1 connector [1], and remove the wire harness [2] from the wire harness guide [3].
- 8 fixing guides [4]



F-4-210

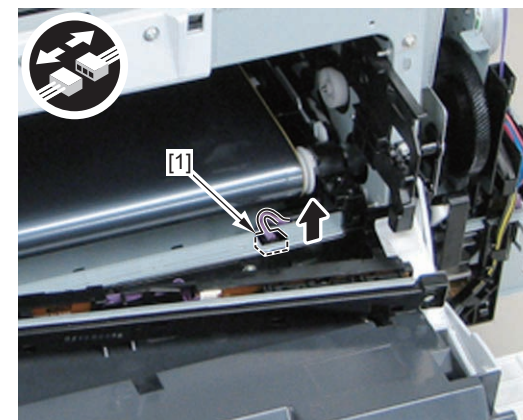
- 2) Move the Patch Density and Registration Sensor Unit [1].

- 2 Screws [2]
- 2 Bosses [3]
- 2 Protrusions [4]



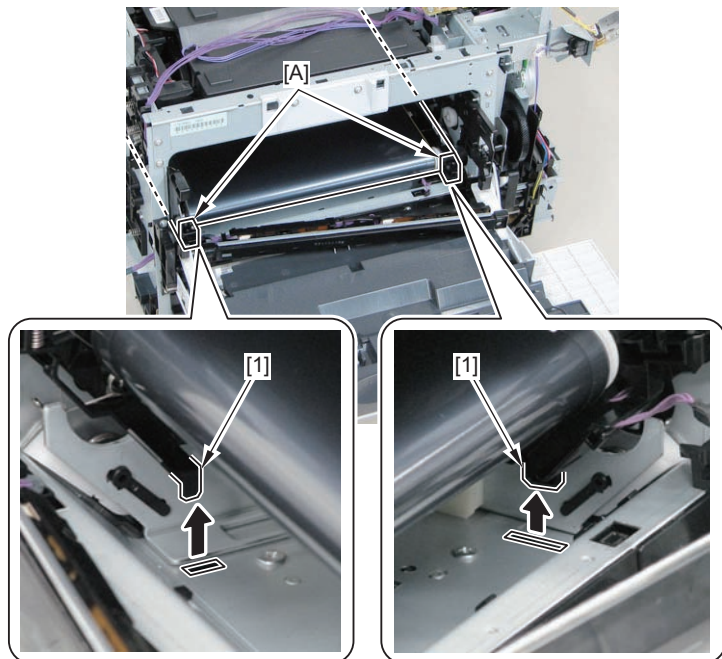
F-4-211

- 3) Disconnect the connector [1].



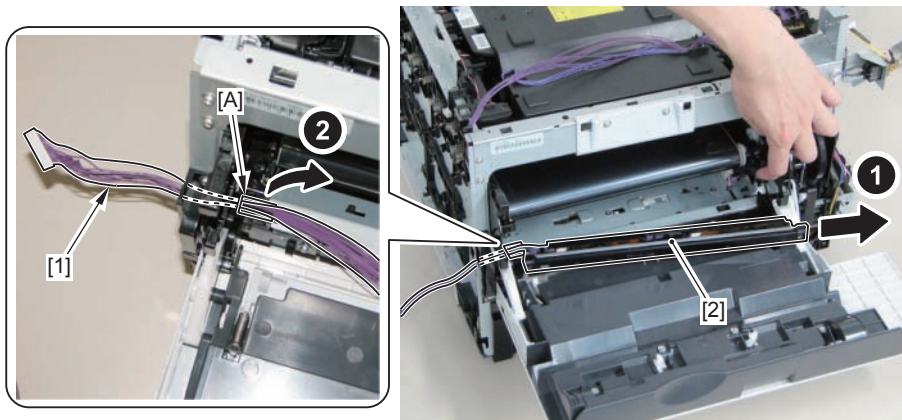
F-4-212

4) Lift the 2 parts [A] at the front side of the ITB Unit to release the 2 protrusions [1].



F-4-213

5) Put the connector [1] through the hole [A] and remove the Patch Density/Registration Patch Sensor Unit [2].



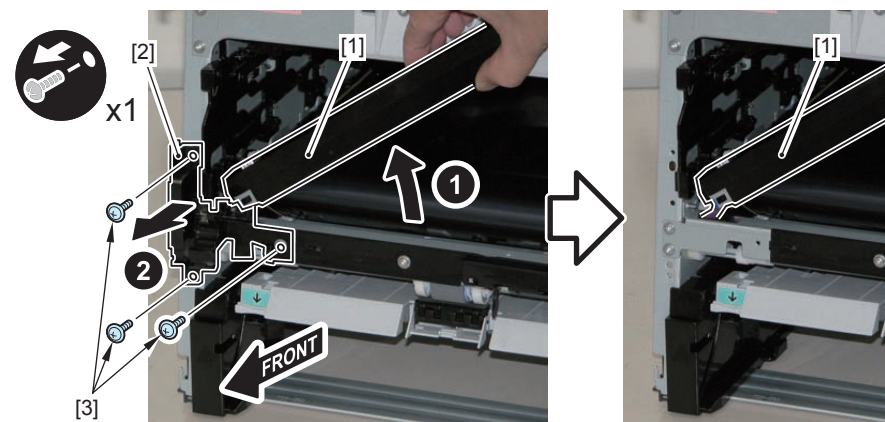
F-4-214

NOTE:

When it is difficult to put the connector [1] of the Patch Density/Registration Sensor Unit [2] through the hole [A], refer to the following steps to remove the Front Cover Link Arm (Left) so that the connector [1] can be put through the hole [A] more easily.

● **Removing the Front Cover Link Arm (Left)**

- 1) Remove the Front Cover. (Refer to page 4-23)
 - 2) Lift the Patch Density/Registration Sensor Unit [1] to remove the Front Cover Link Arm (Left) [2].
- 3 Screws [3]



F-4-215

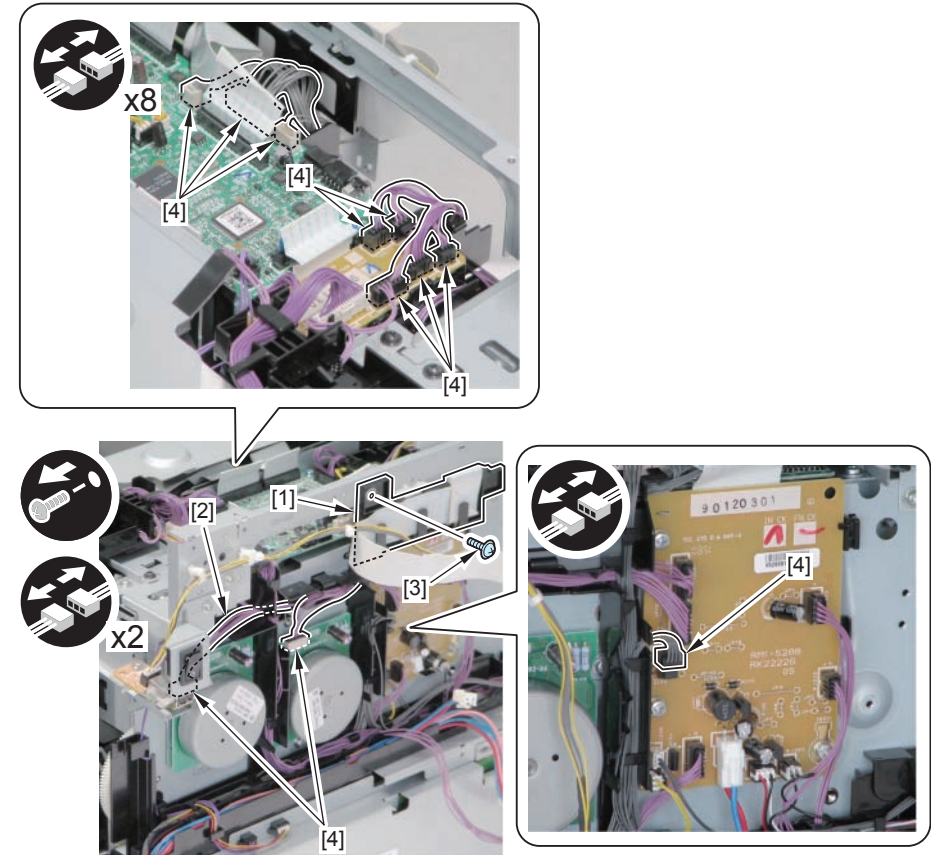
Removing the Developing Motor

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Wireless LAN PCB (MF8580Cdw only). Refer to page 4-57.
- 8) Removing the Main Controller PCB. Refer to page 4-58.
- 9) Removing the Main Controller Support Plate. Refer to page 4-61.

Procedure

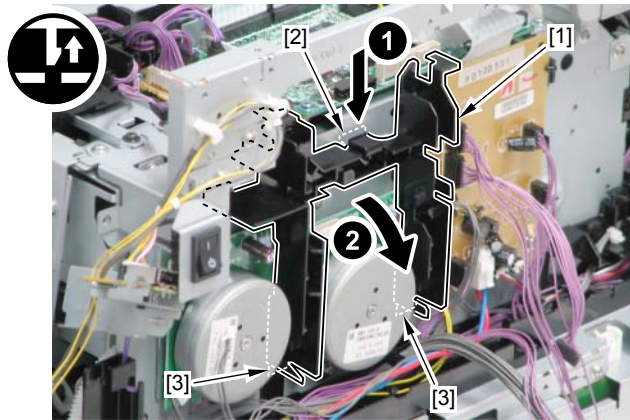
- 1) Remove the fixing guide [1] and the wire harness [2].
 - 1 screw [3]
 - 11 connectors [4]



F-4-216

2) Remove the wire harness guide [1].

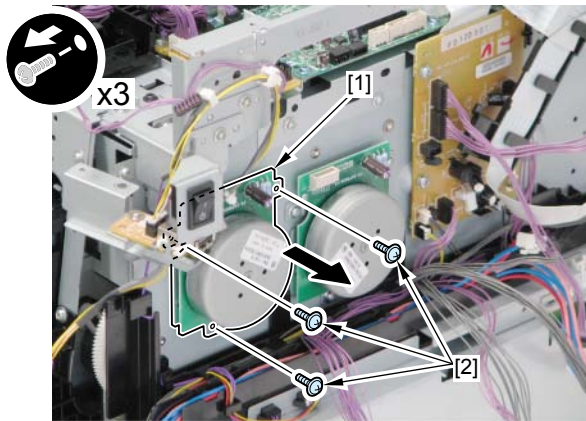
- 1 claw [2]
- 2 hooks [3]



F-4-217

3) Remove the Developing Motor [1].

- 3 screws [2]

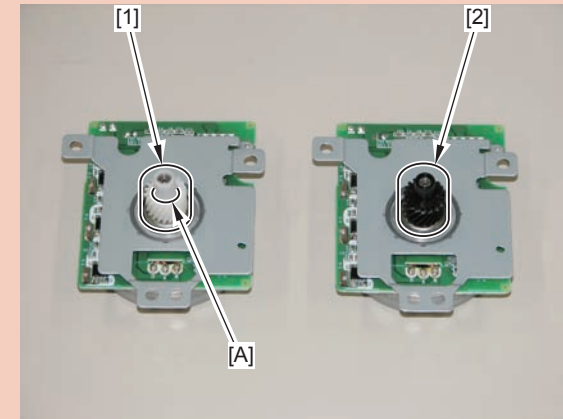


F-4-218

CAUTION:

Be sure to identify the Drum Motor and the Developing Motor by the difference in gears.

- Gear [1] of the Drum Motor: White, with a groove [A] on its side
- Gear [2] of the Developing Motor: Black, with no groove



F-4-219

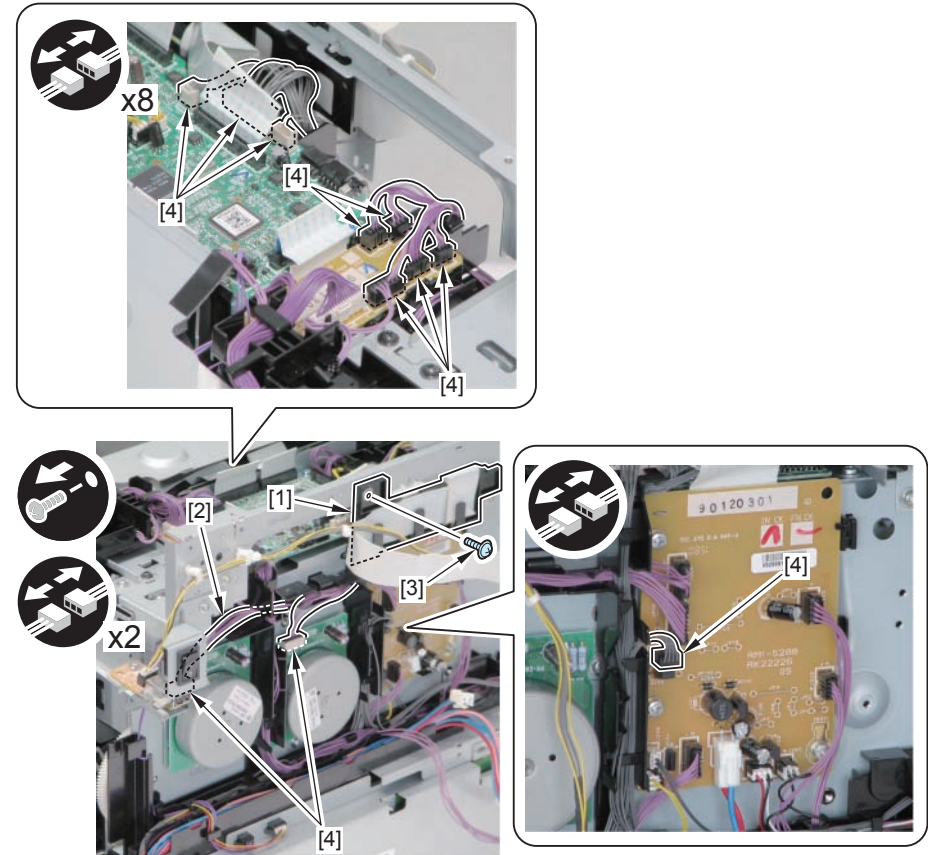
Removing the Drum Motor

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Wireless LAN PCB (MF8580Cdw only). Refer to page 4-57.
- 8) Removing the Main Controller PCB. Refer to page 4-58.
- 9) Removing the Main Controller Support Plate. Refer to page 4-61.

Procedure

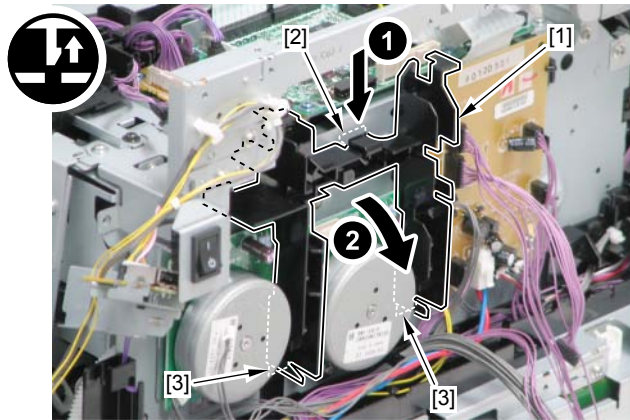
- 1) Remove the fixing guide [1] and the wire harness [2].
 - 1 screw [3]
 - 11 connectors [4]



F-4-220

2) Remove the wire harness guide [1].

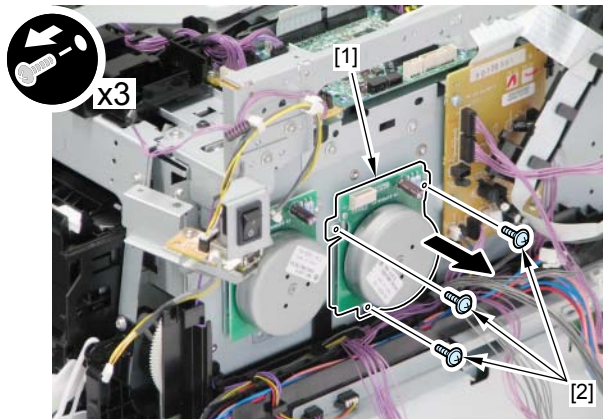
- 1 claw [2]
- 2 hooks [3]



F-4-221

3) Remove the Drum Motor [1].

- 3 screws [2]

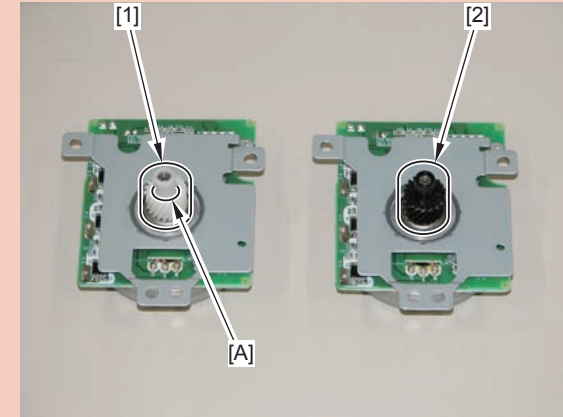


F-4-222

CAUTION:

Be sure to identify the Drum Motor and the Developing Motor by the difference in gears.

- Gear [1] of the Drum Motor: White, with a groove [A] on its side
- Gear [2] of the Developing Motor: Black, with no groove



F-4-223

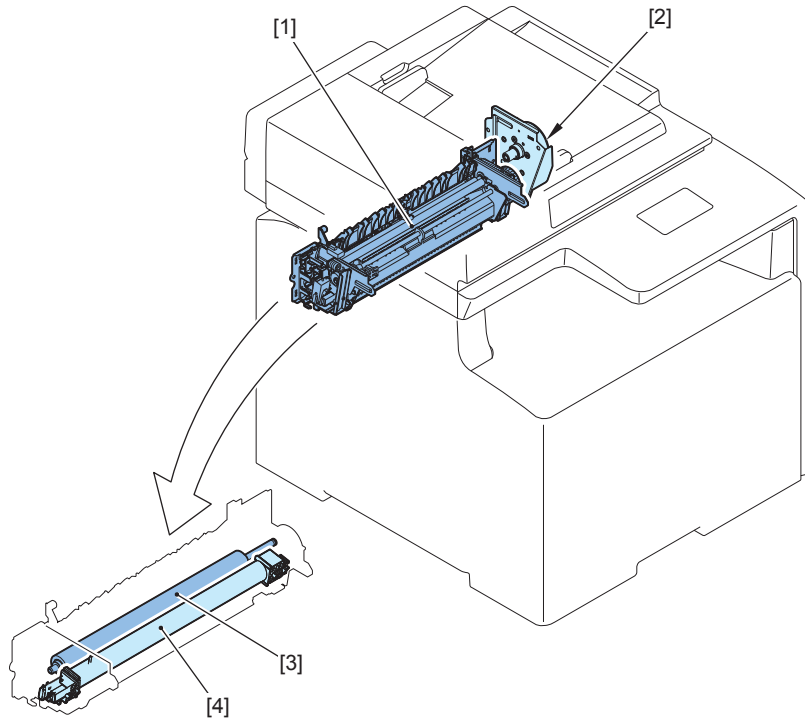
■ Removing the Secondary Transfer Outer Roller

CAUTION:

Secondary Transfer Outer Roller is included in Secondary Transfer Feed Unit so when replacing the Secondary Transfer Outer Roller, be sure to replace the Secondary Transfer Feed Unit itself. Refer to page 4-127.

Fixing System

Location



F-4-224

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Fixing Assembly	Product Configuration	-	(Refer to page 4-104)	-
[2]	Fixing Motor Unit	Product Configuration	M4	(Refer to page 4-111)	-
[3]	Fixing Pressure Roller	Fixing Assembly	-	(Refer to page 4-110)	-
[4]	Fixing Film Unit	Fixing Assembly	-	(Refer to page 4-106)	-

T-4-23

Removing the Fixing Assembly

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the Rear Cover. Refer to page 4-24.
- 5) Removing the Rear Lower Cover. Refer to page 4-25.
- 6) Removing the Rear Cover Rib Unit. Refer to page 4-27.
- 7) Removing the Duplex Printing Reverse Drive Unit. Refer to page 4-85.

Procedure

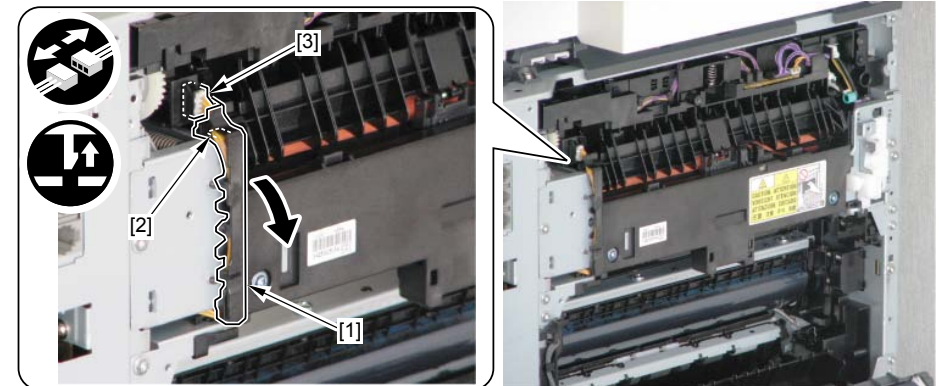
CAUTION:

When removing the fixing unit, be sure to turn OFF the power.

Since the fixing assembly is extremely hot just after the printing, do not handle it unless it cools down completely.

If you touch the high-temperature assembly, it may cause a burn.

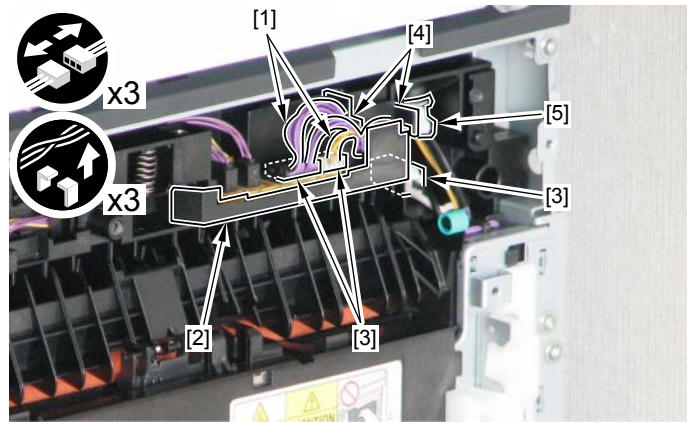
- 1) Remove the claw [2] of the harness guide [1] and disconnect the connector [3].



F-4-225

2) Free the harness [1] from the harness guide [2].

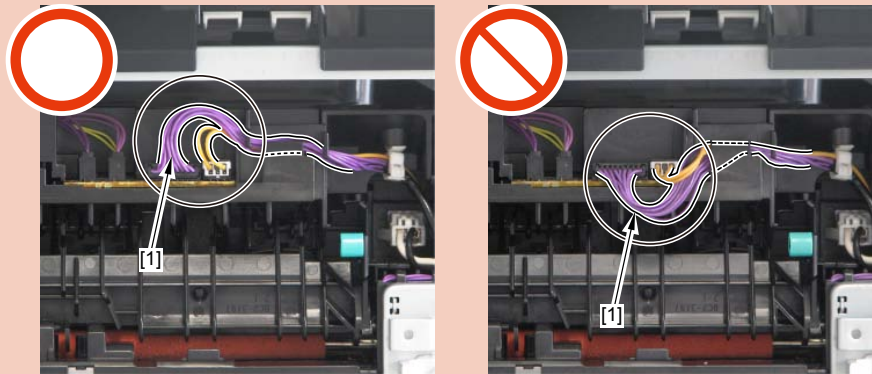
- 3 connectors [3]
- 2 fixing guides [4]
- 1 wire saddle [5]



F-4-226

CAUTION:

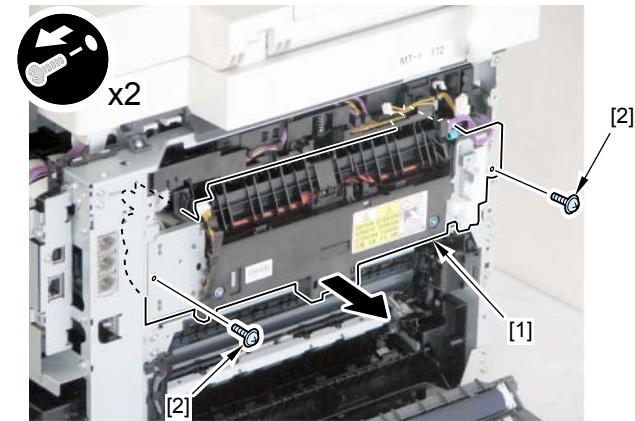
When the fixing assembly is installed, handle the harness [1] like the figure to prevent papers from the interference at the transit



F-4-227

3) Remove the Fixing Assembly [1].

- 2 screws [2]



F-4-228

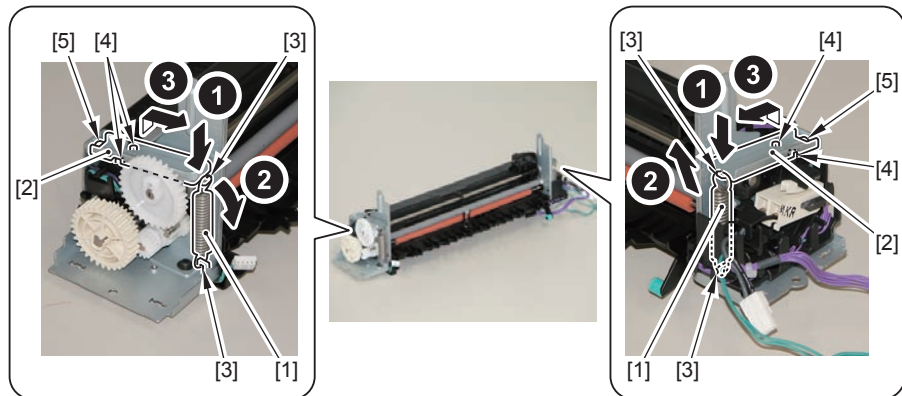
Removing the Fixing Film Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the Rear Cover. Refer to page 4-24.
- 5) Removing the Rear Lower Cover. Refer to page 4-25.
- 6) Removing the Rear Cover Rib Unit. Refer to page 4-27.
- 7) Removing the Duplex Printing Reverse Drive Unit. Refer to page 4-85.
- 8) Removing the Fixing Assembly. Refer to page 4-104.

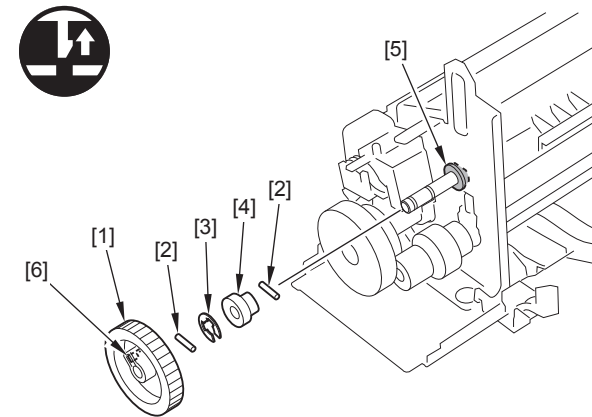
Procedure

- 1) Remove the 2 Pressure Springs [1] on the right and left and the 2 Pressure Plates [2].
 - 4 Hooks [3]
 - 4 Bosses [4]
 - 2 Protrusions [5]



F-4-229

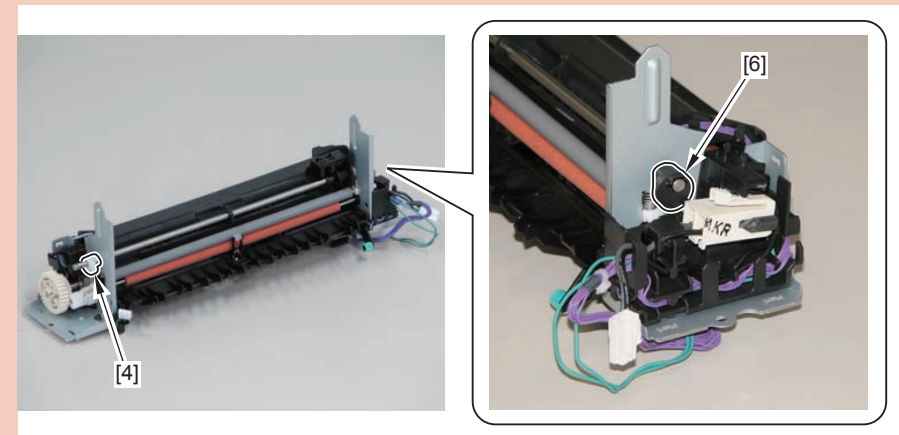
- 2) Remove the gear [1], 2 Parallel Pins [2], E-Ring [3], cam [4], and bushing [5].
 - 1 Claws [6]



F-4-230

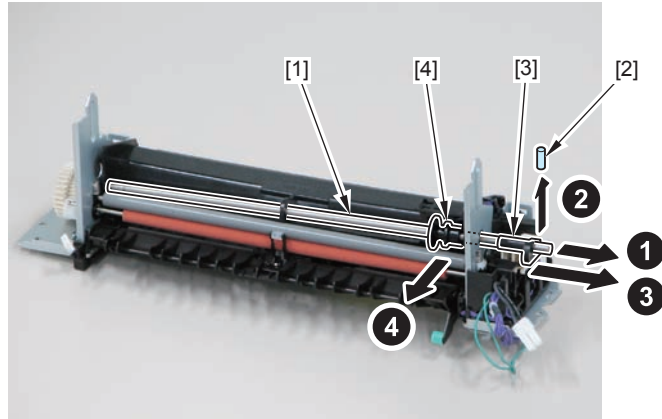
CAUTION:

At installation, be sure to match the direction of the cam [4] with that of the cam [6] on the other side of the Fixing Assembly.



F-4-231

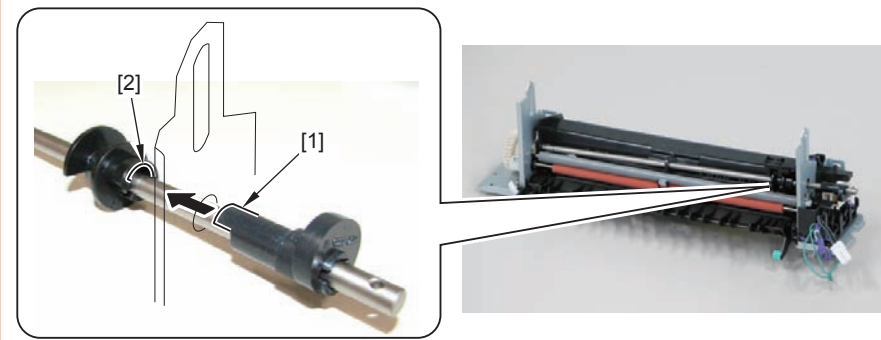
3) After sliding the shaft [1] to remove the Parallel Pins [2] and the cam [3], remove the shaft [1] and the Sensor Flag [4].



F-4-232

CAUTION:

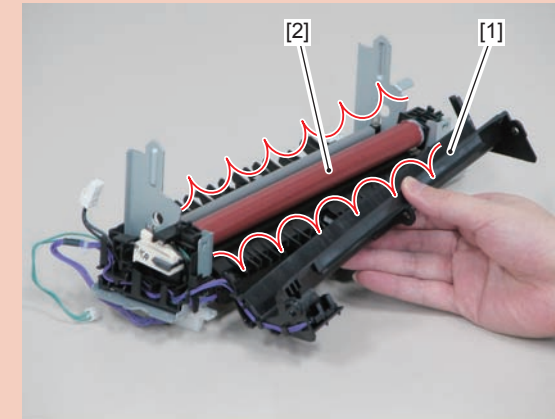
At installation, be sure to align the protrusion of the cam [1] with the groove of the Sensor Flag [2].



F-4-233

CAUTION:

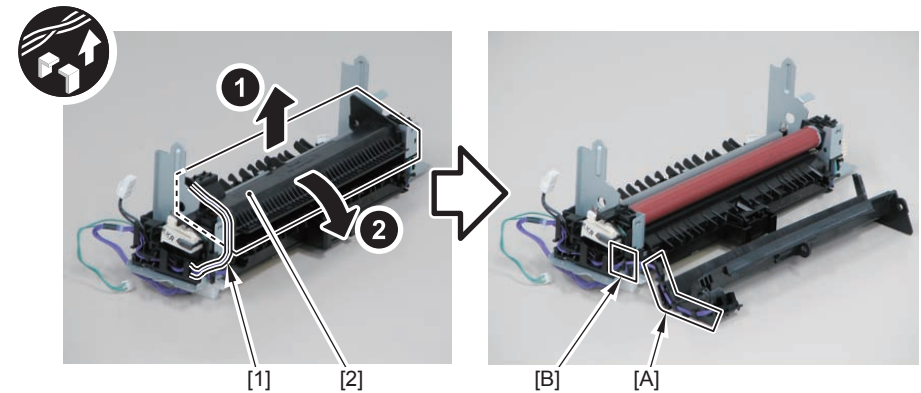
Be sure to prevent the guide [1] from hitting against the Fixing Film Unit [2] when installing/removing.



F-4-234

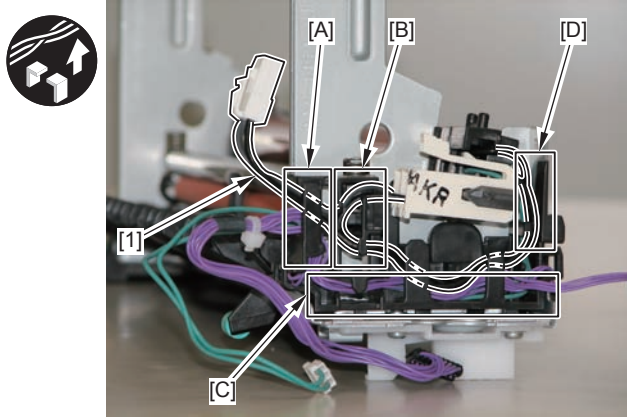
4) While securing the harness [1] to the guide [A], remove the harness [1] and the guide [2].

- Harness Guide [B]



F-4-235

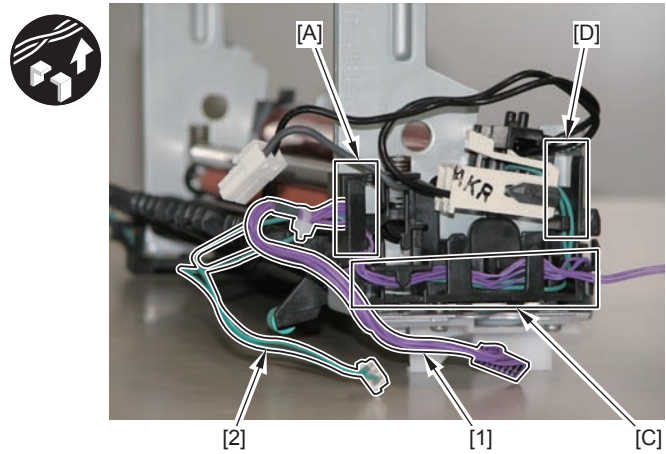
5) Free the harness (black) [1] from the Harness Guide [A], [B], [C] and [D].



F-4-236

6) Free the harness (purple) [1] from the Harness Guide [A] and [C].

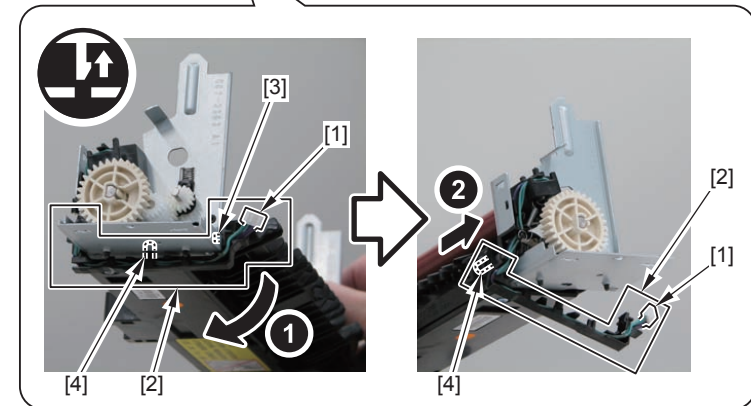
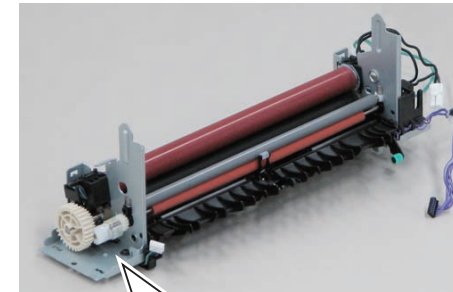
7) Free the harness (green) [2] from the Harness Guide [A], [C] and [D].



F-4-237

8) Remove the harness [1] and the guide [2].

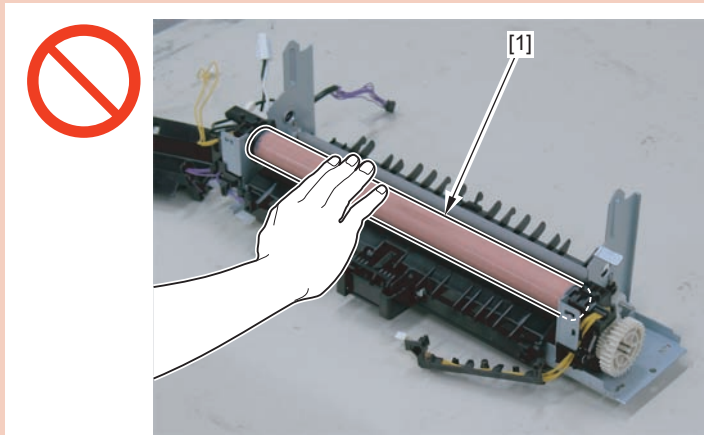
- 1 Claws [3]
- 2 Bosses [4]



F-4-238

CAUTION:

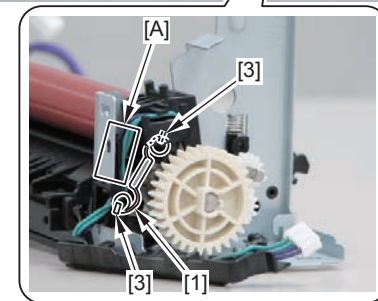
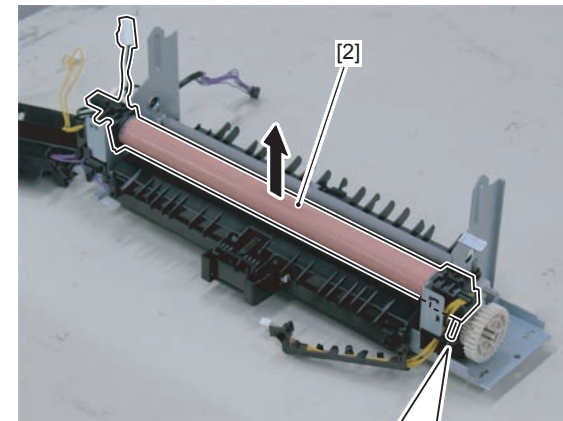
When installing/removing the Fixing Film Unit, be sure not to touch the Fixing Film [1].



F-4-239

9) Remove the spring [1] and the Fixing Film Unit [2].

- 2 Hooks [3]
- Harness Guide [A]



F-4-240

CAUTION:

Be careful not to lose the spring because the spring is small.

Removing the Fixing Pressure Roller

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the Rear Cover. Refer to page 4-24.
- 5) Removing the Rear Lower Cover. Refer to page 4-25.
- 6) Removing the Rear Cover Rib Unit. Refer to page 4-27.
- 7) Removing the Duplex Printing Reverse Drive Unit. Refer to page 4-85.
- 8) Removing the Fixing Assembly. Refer to page 4-104.
- 9) Removing the Fixing Film Unit. Refer to page 4-106.

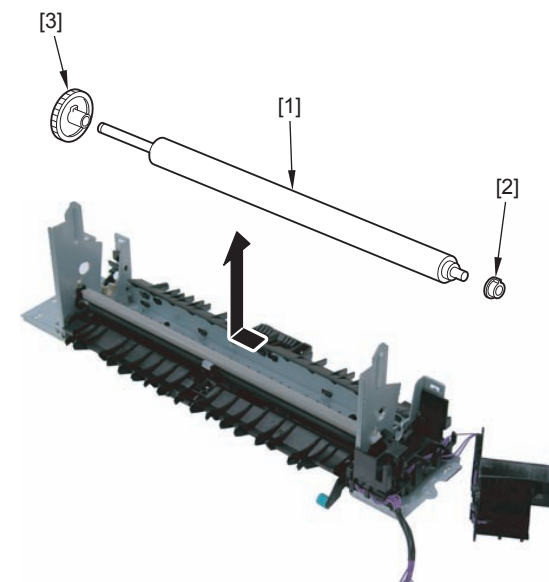
Procedure

CAUTION:

Be sure not to touch the surface of the Fixing Pressure Roller.

- 1) Remove the Fixing Pressure Roller [1].

- 2 Bushings [2]
- 1 Gear [3]



F-4-241

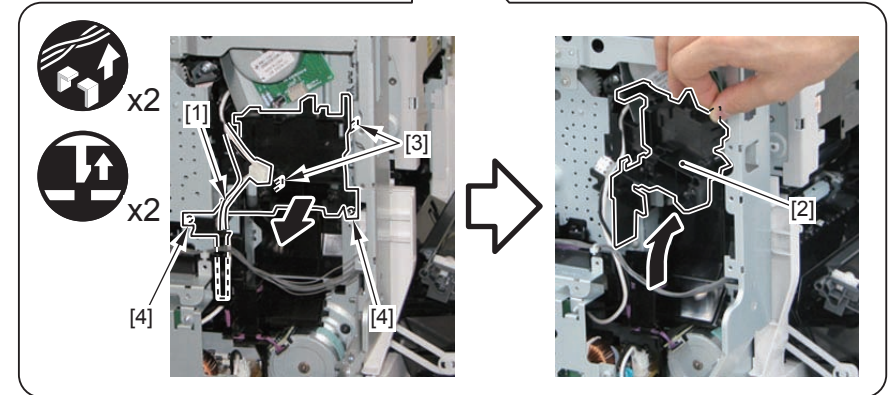
Removing the Fixing Motor Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Controller Cover. Refer to page 4-57.
- 3) Removing the Wireless LAN PCB. (MF8580Cdw only) Refer to page 4-57.
- 4) Removing the Main Controller PCB. Refer to page 4-58.
- 5) Removing the Main Controller Support Plate. Refer to page 4-61.
- 6) Removing the FAX PCB. Refer to page 4-75.
- 7) Removing the Fixing/Fixing Power Supply Cooling Fan Unit. Refer to page 4-86.
- 8) Removing the Fixing Sub PCB. Refer to page 4-67.

Procedure

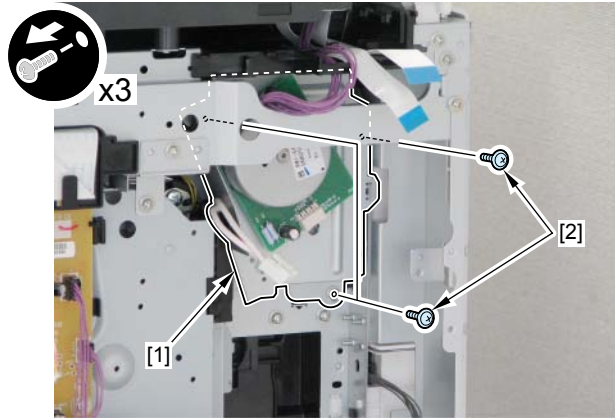
- 1) Free the harness [1] to remove the Sub Power Supply PCB Holder [2].
 - 2 Claws [3]
 - 2 Bosses [4]



F-4-242

2) Remove the Fixing Motor unit [1].

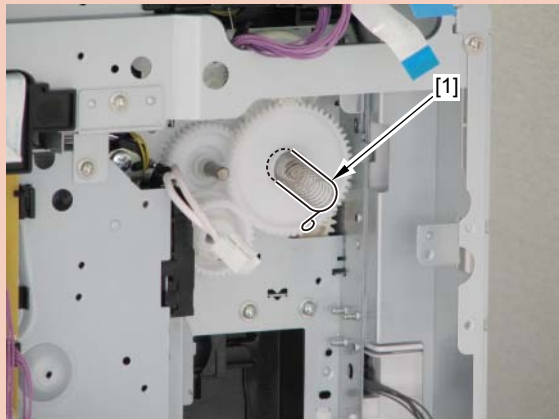
- 3 screws [2]



F-4-243

CAUTION:

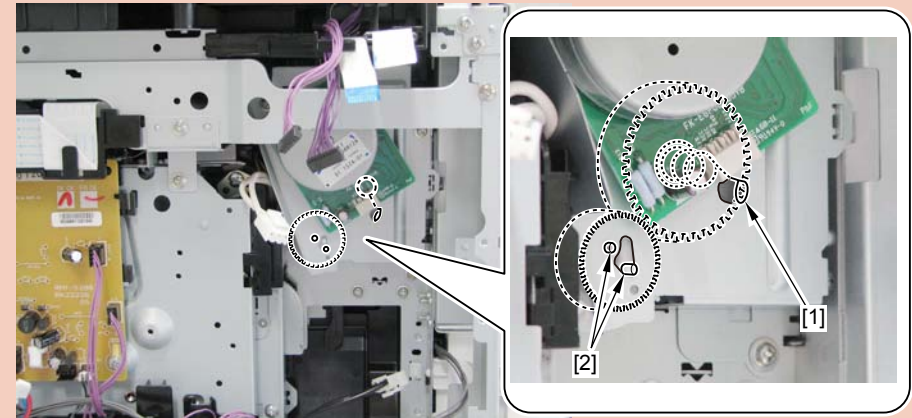
When removing the Fixing Motor Unit, do not lose the spring [1] in the backside.



F-4-244

CAUTION:

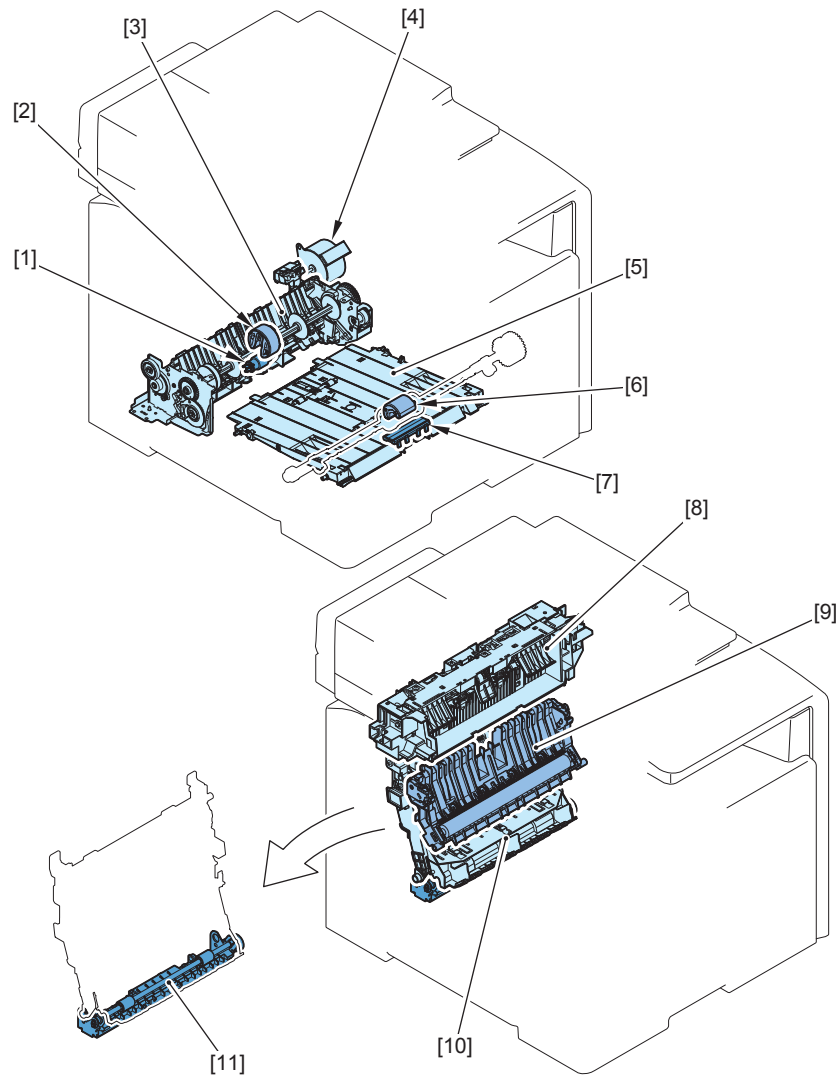
In installation, put the edge of the spring [1] and the projection [2] of the gear into the hole on the sheet metal.



F-4-245

Pickup Feeder System

Location



F-4-246

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Cassette Separation Roller	Paper Pickup Unit	-	(Refer to page 4-115)	-
[2]	Cassette Pickup Roller	Paper Pickup Unit	-	(Refer to page 4-114)	-
[3]	Paper Pickup Unit	Product Configuration	-	(Refer to page 4-120)	-
[4]	Pickup Motor	Product Configuration	M5	(Refer to page 4-118)	-
[5]	MP Paper Pickup Unit	Product Configuration	-	(Refer to page 4-125)	-
[6]	MP Paper Pickup Roller	MP Paper Pickup Roller Unit	-	(Refer to page 4-117)	-
[7]	MP Separation Pad	MP Paper Pickup Unit	-	(Refer to page 4-117)	-
[8]	Delivery Unit	Product Configuration	-	(Refer to page 4-128)	-
[9]	Secondary Transfer Feed Unit	Product Configuration	-	(Refer to page 4-127)	-
[10]	Duplex Feed Unit	Product Configuration	-	(Refer to page 4-130)	-
[11]	Re-Pickup Guide Unit	Product Configuration	-	(Refer to page 4-131)	-

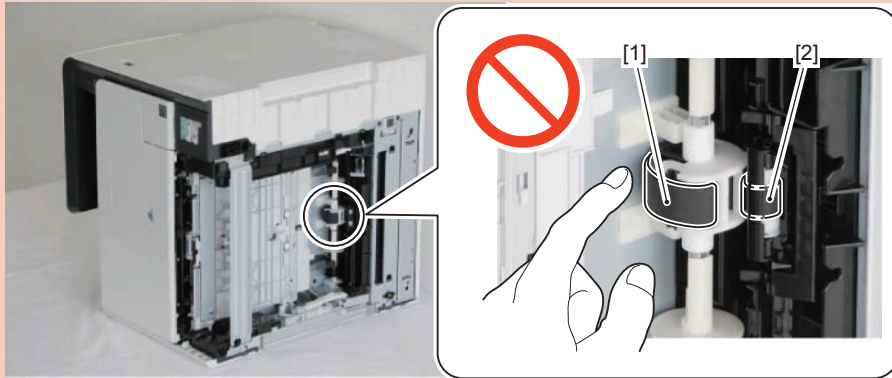
T-4-24

Removing the Cassette Pickup Roller

Procedure

CAUTION:

Be sure not to touch the surface of the Cassette Pickup Roller [1] and the Cassette Separation Roller [2].



F-4-247

- 1) Turn ON the power switch.
- 2) Execute the following items in Service mode.
COPIER > FUNCTION > VIFFNC > FD-R-CHG
- 3) The Pickup Roller rotates and stops at the replacement position.
- 4) Disconnect the Inlet Connector.
- 5) Remove the cassette.

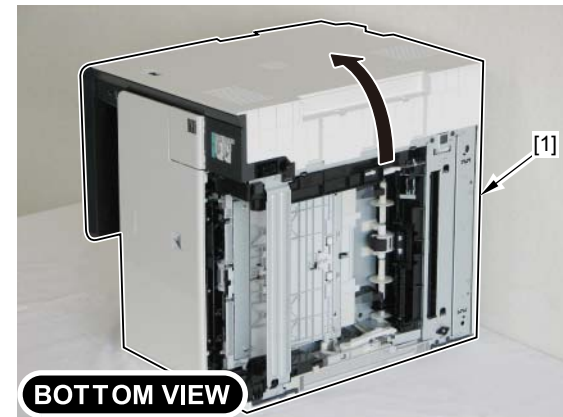
CAUTION:

Before tilting a host machine, remove toner cartridges (Y, M, C, Bk).

- 6) Place a host machine [1] as the Left Cover faces to the bottom.

CAUTION:

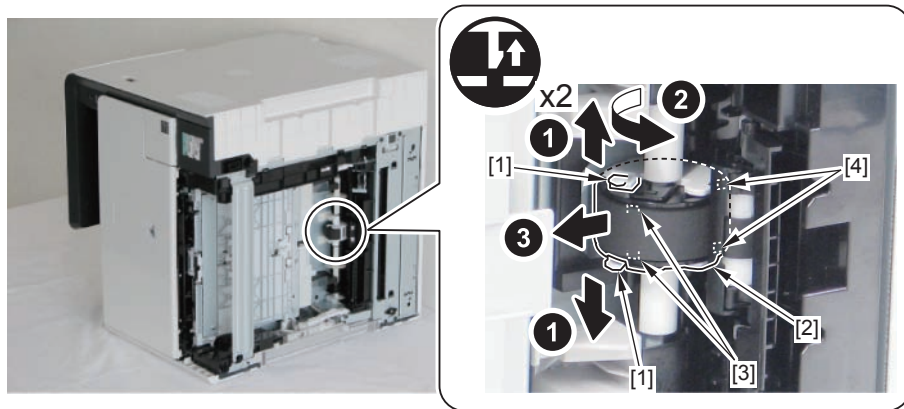
When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening. In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.



F-4-248

7) Open 2 projections [1], and remove the Pickup Roller [2].

- 2 Claws [3]
- 2 Hooks [4]



F-4-249

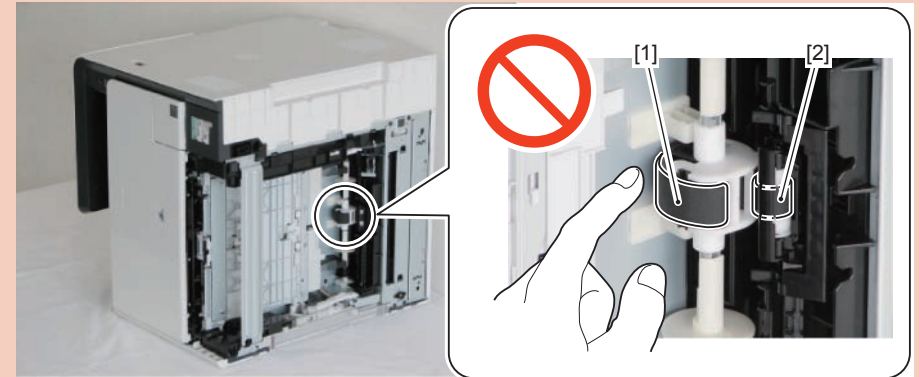
8) After replacing the Pickup Roller, turn ON the power, and return it to its original position from the replacement position.

Removing the Cassette Separation Roller

Procedure

CAUTION:

Be sure not to touch the surface of the Cassette Pickup Roller [1] and the Cassette Separation Roller [2].



F-4-250

CAUTION:

When tilting the host machine, remove the Toner Cartridge (Y, M, C, Bk) beforehand.

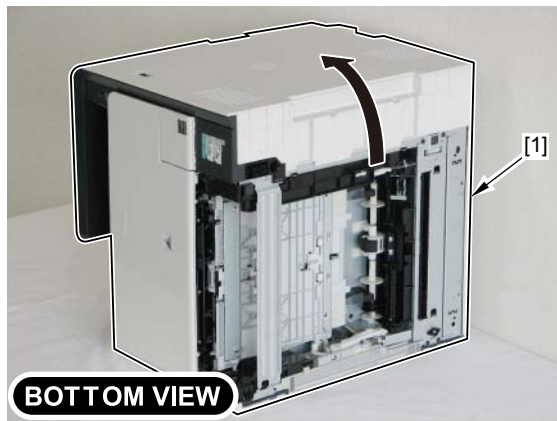
1) Remove the cassette.

2) Make the Left Cover face down and place the host machine [1].

CAUTION:

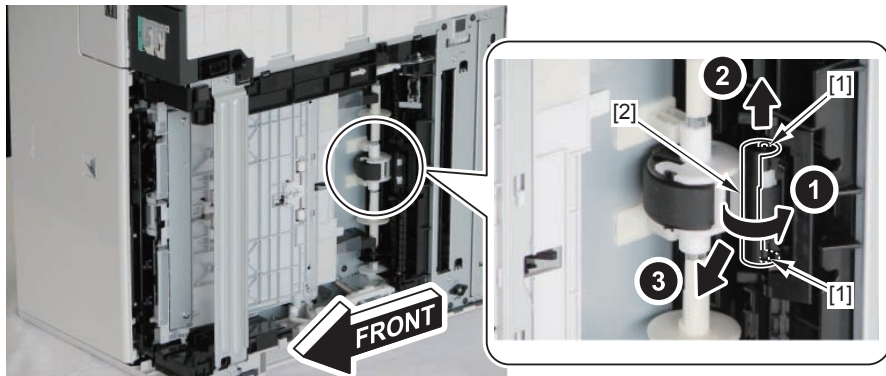
When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening.

In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.



F-4-251

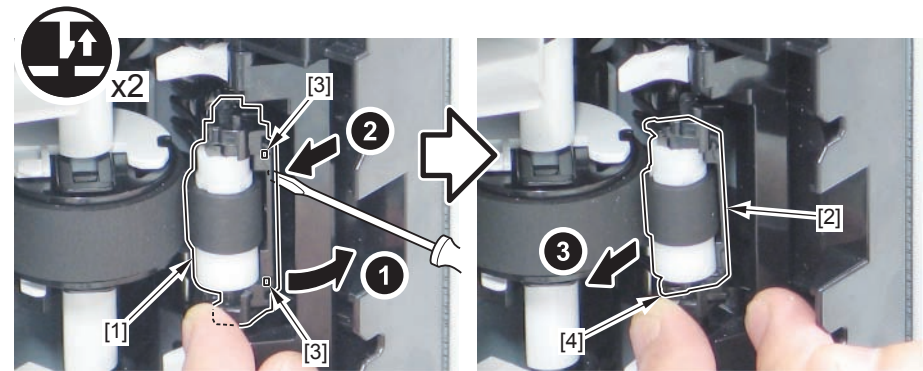
3) Remove the 2 projections [1] to remove the Cover [2].



F-4-252

4) Open the Holder [1] remove the Cassette Separation Roller [2].

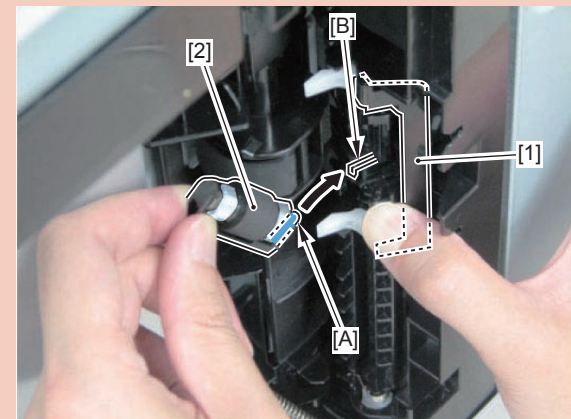
- 2 Claws [3]
- 1 projection [4]



F-4-253

CAUTION:

At installation, be sure to align the protrusion [A] of the Cassette Separation Roller [2] with the groove [B] of the holder while opening the holder [1].



F-4-254

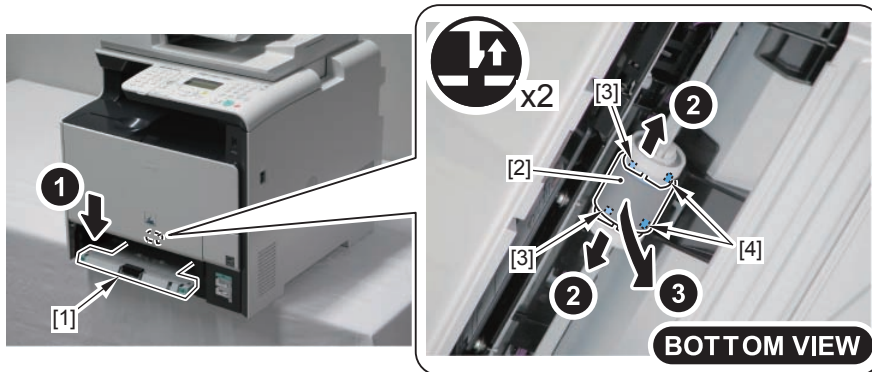
Removing the MP Tray Pickup Roller

Procedure

CAUTION:

Do not touch the surface of the Multi-purpose Tray Pickup Roller.

- 1) Turn ON the power switch.
- 2) Execute the following items in Service mode.
COPIER > FUNCTION > VIFFNC > FD-R-CHG
- 3) The Multi-purpose Tray Pickup Roller rotates to the replacement position.
- 4) Remove the cassette.
- 5) Lower the Multi-purpose Tray [1].
- 6) Remove the Multi-purpose Tray Pickup Roller [2].
 - 2 Claws [3]
 - 2 Shafts [4]



F-4-255

- 7) After replacing the Multi-purpose Tray Pickup Roller, turn OFF and then ON the power, and then return it to its original position from the replacement position.

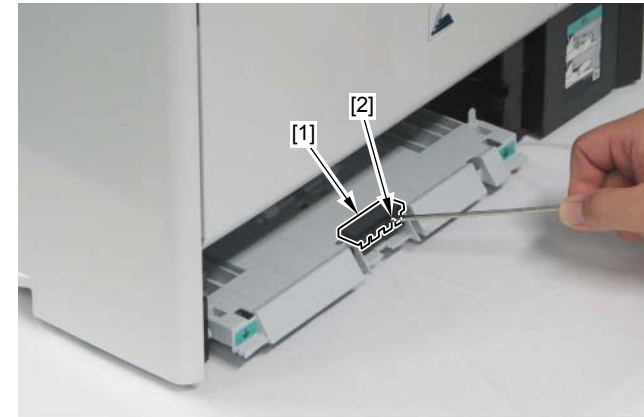
Removing the MP Tray Separation Pad

Procedure

CAUTION:

Do not touch the surface of the Multi-purpose Tray Separation Pad.

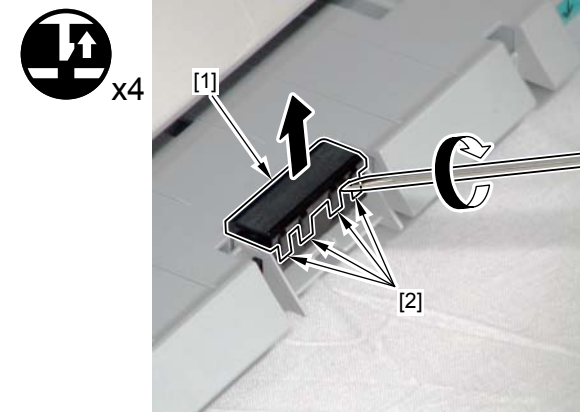
- 1) Put a Screwdriver into the gap [2] between the MP Tray Separation Pad [1] and the Pad Holder.



F-4-256

- 2) Turn the Screwdriver in the direction of the arrow to remove the MP Tray Separation Pad [1].

- 4 claws [2]



F-4-257

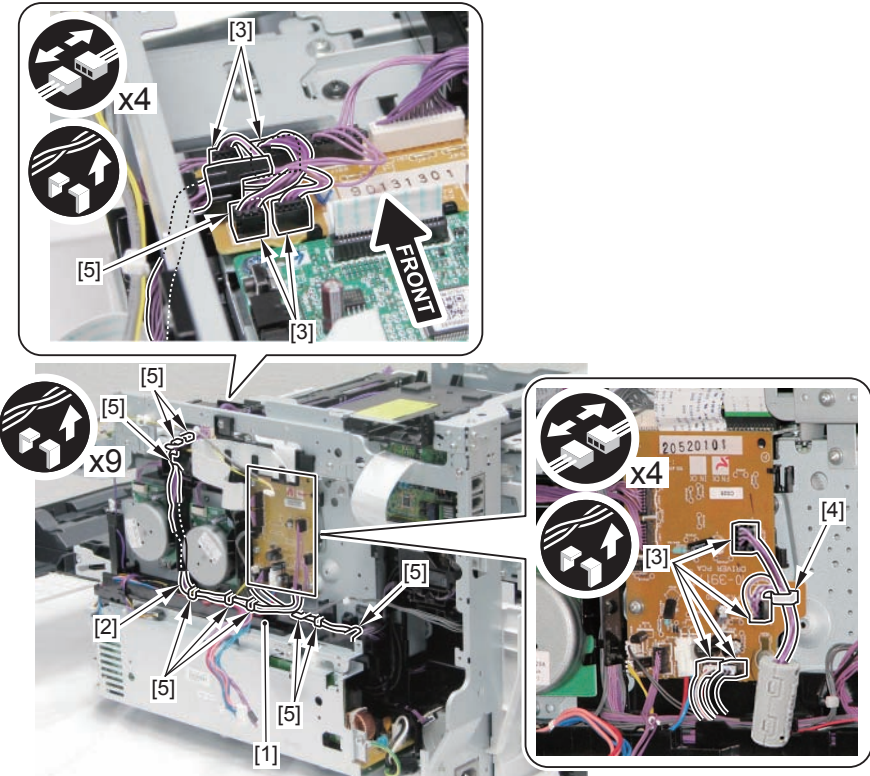
Removing the Pickup Motor

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 8) Removing the Main Controller PCB. Refer to page 4-58.
- 9) Removing the Main Controller Support Plate. Refer to page 4-61.
- 10) Removing the Fixing/Fixing Power Supply Cooling Fan Unit. Refer to page 4-86

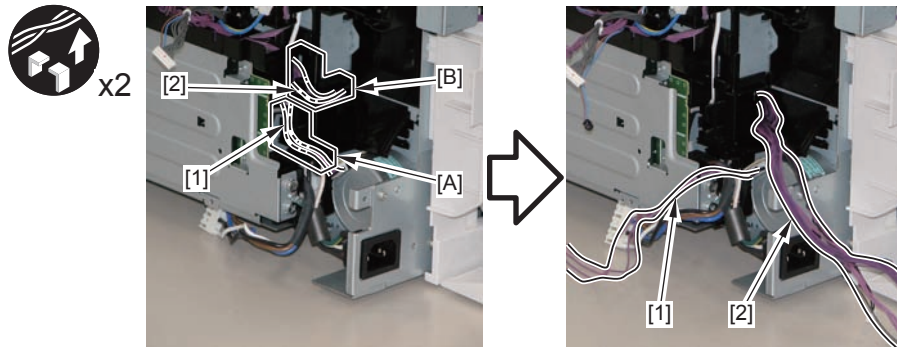
Procedure

- 1) Remove the wire harness [2] from the wire harness guide [1].
 - 8 connectors [3]
 - 1 Wire Saddle [4]
 - 10 fixing guides [5]



F-4-258

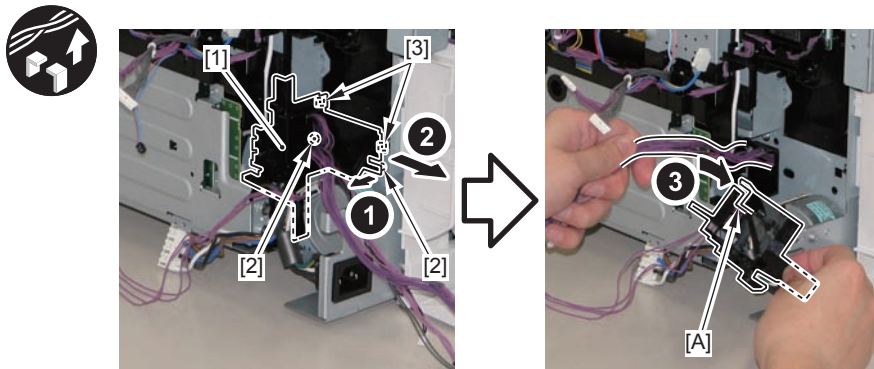
2) Free the harness [1] and [2] from the Harness Guide [A] and [B].



F-4-259

3) Remove the Harness Guide [1].

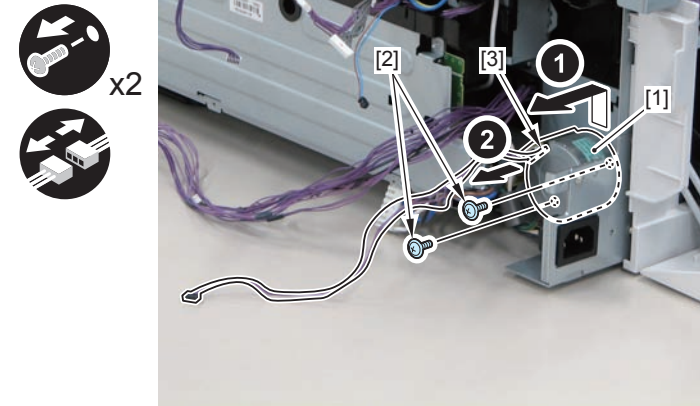
- Harness Guide [A]
- 2 Boss [2]
- 2 Hooks [3]



F-4-260

4) Remove the Pickup Motor [1].

- 2 Screws [2]
- 1 Connector [3]



F-4-261

Removing the Pickup Unit

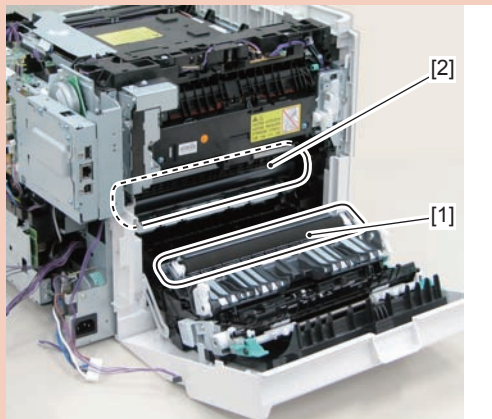
Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Right Front Cover. Refer to page 4-22.
- 4) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 5) Removing the Rear Upper Cover. Refer to page 4-24.
- 6) Removing the Upper Cover. Refer to page 4-28.
- 7) Removing the Wireless LAN PCB.(MF8580Cdw only) Refer to page 4-57.
- 8) Removing the Main Controller PCB. Refer to page 4-58.
- 9) Removing the Main Controller Support Plate. Refer to page 4-61.
- 10) Removing the Fixing/Fixing Power Supply Cooling Fan Unit. Refer to page 4-86

Procedure

CAUTION:

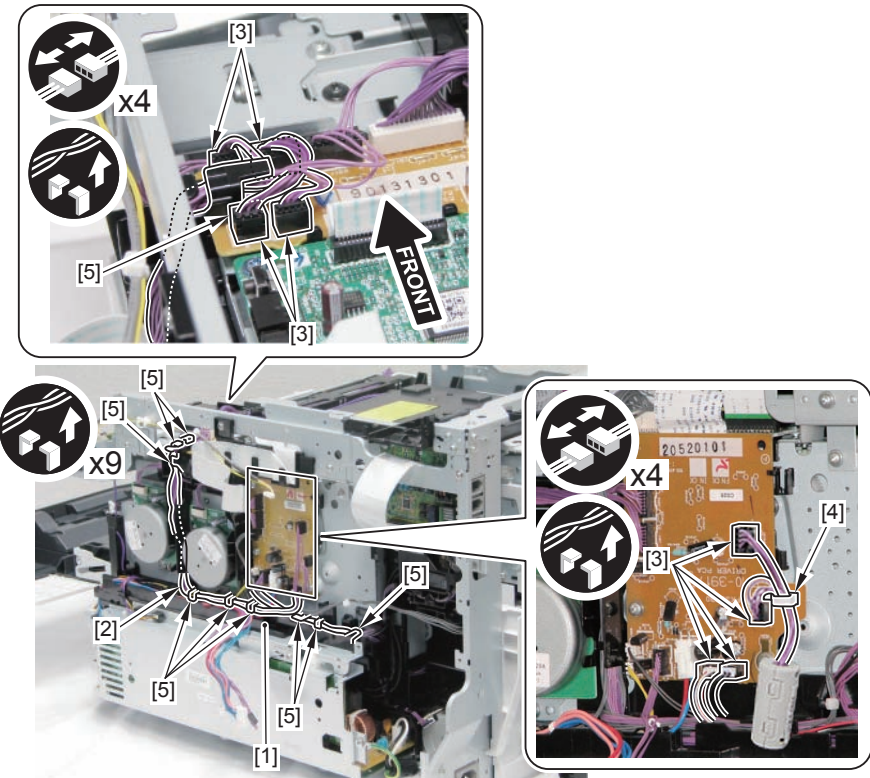
Be sure not to touch the Secondary Transfer Roller [1] and the ITB [2].



F-4-262

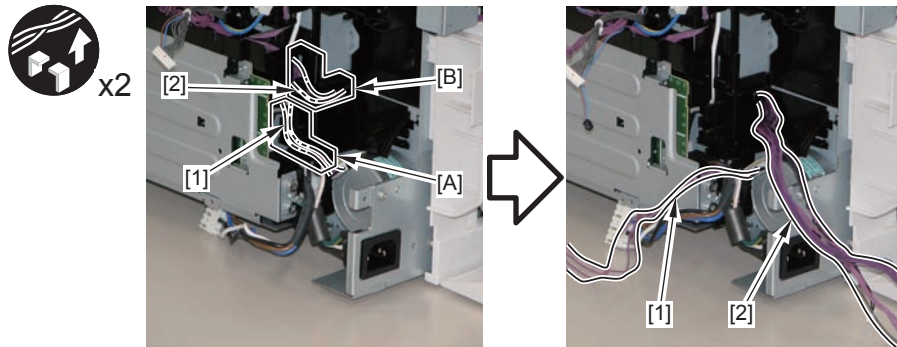
- 1) Remove the wire harness [2] from the wire harness guide [1].

- 8 connectors [3]
- 1 Wire Saddle [4]
- 10 fixing guides [5]



F-4-263

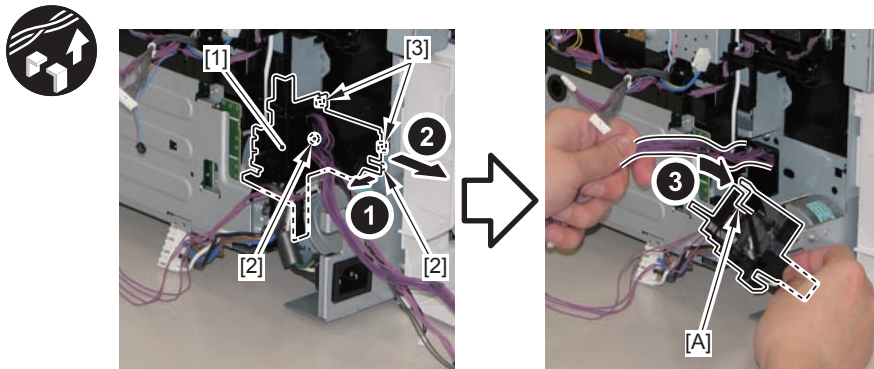
2) Free the harness [1] and [2] from the Harness Guide [A] and [B].



F-4-264

3) Remove the Harness Guide [1].

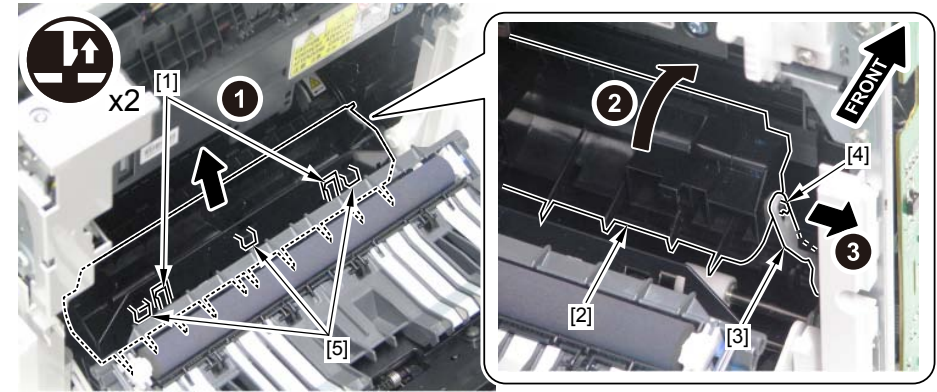
- Harness Guide [A]
- 2 Boss [2]
- 2 Hooks [3]



F-4-265

4) Release 2 claws [1], and turn the guide [2] to align the hook [4] with the hole on the arm [3], and remove the arm [3].

- 3 hooks [5]

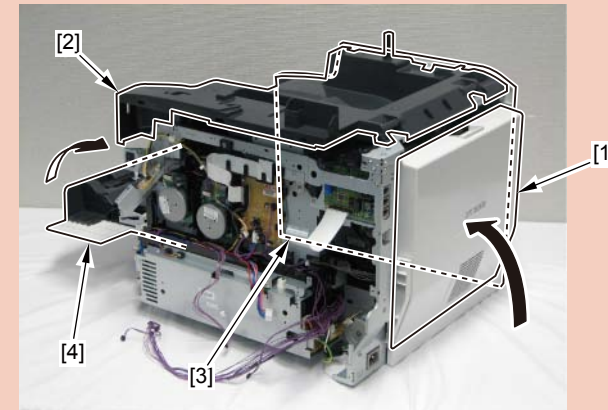


F-4-266

CAUTION:

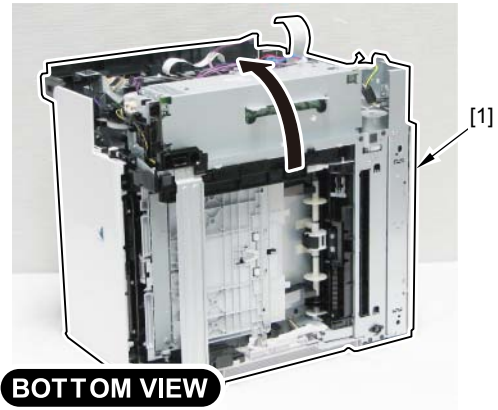
For protection, install each cover before tilting the machine.

- Close the Rear Cover [1].
- Install the Upper Cover [2].
- Install the Left Cover [3].
- Close the Front Cover [4].



F-4-267

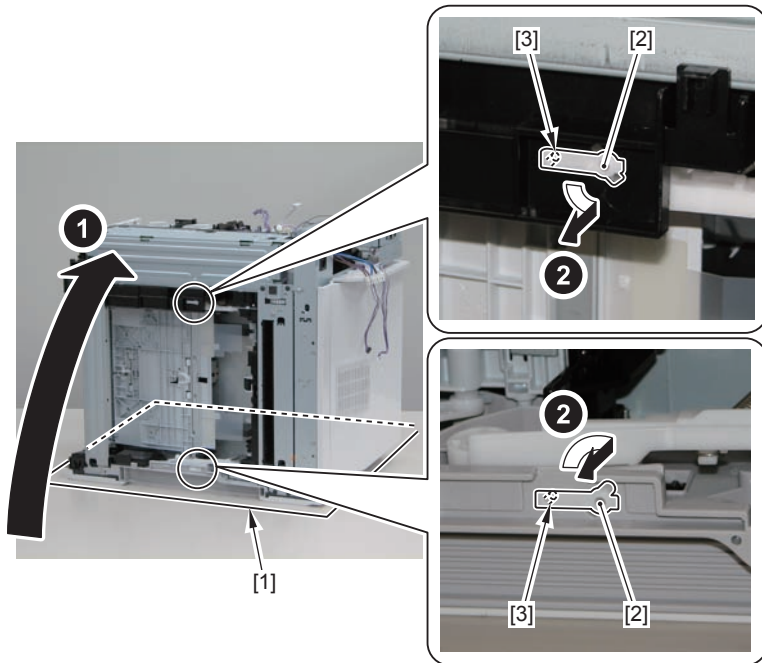
5) Please the machine as the Left Cover faces to the bottom.



F-4-268

6) Remove the 2 stoppers [2].

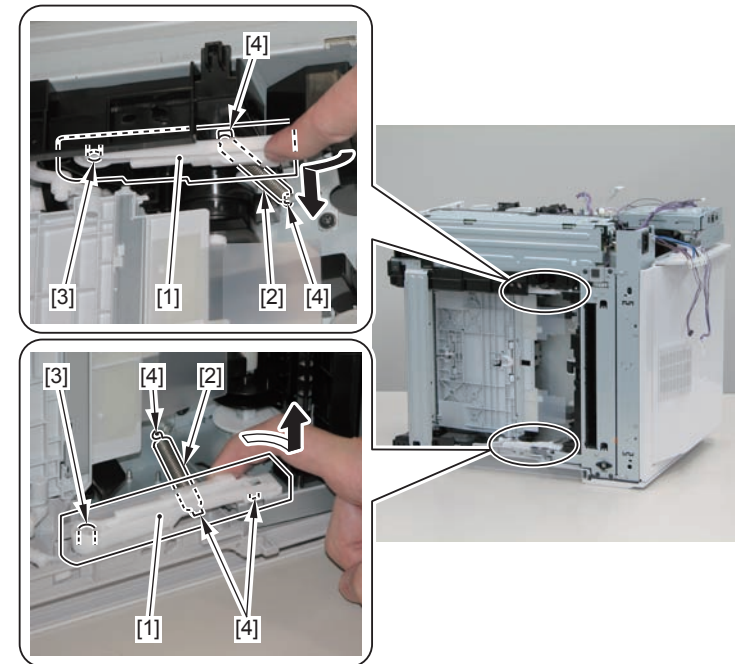
- 2 Bosses [3]



F-4-269

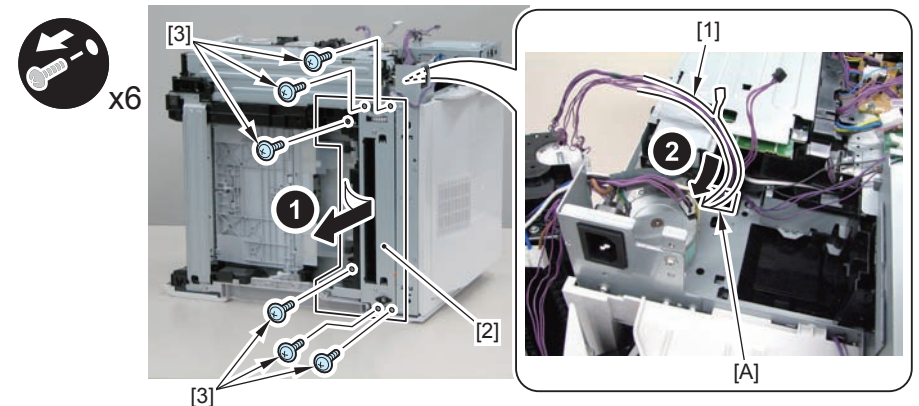
7) Remove the 2 arms [1] and the 2 springs [2].

- 2 Shafts [3]
- 5 Hooks [4]



8) Put the harness [1] through the hole [A] of the Side Plate, and remove the Pickup Unit [2].

- 6 Screws [3]

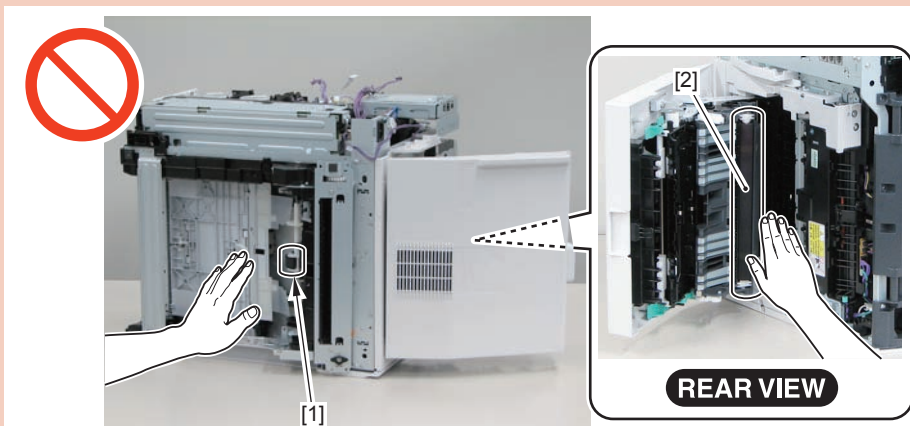


F-4-271

Installation Method

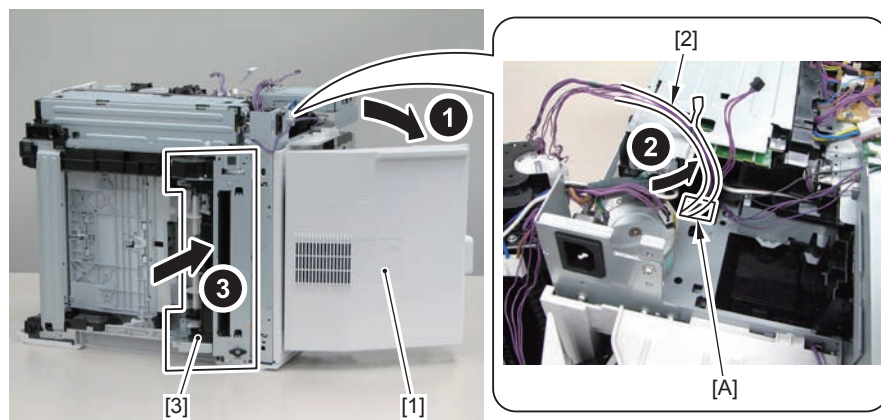
CAUTION:

Be sure not to touch the Pickup Roller [1] and the Secondary Transfer Roller [2].



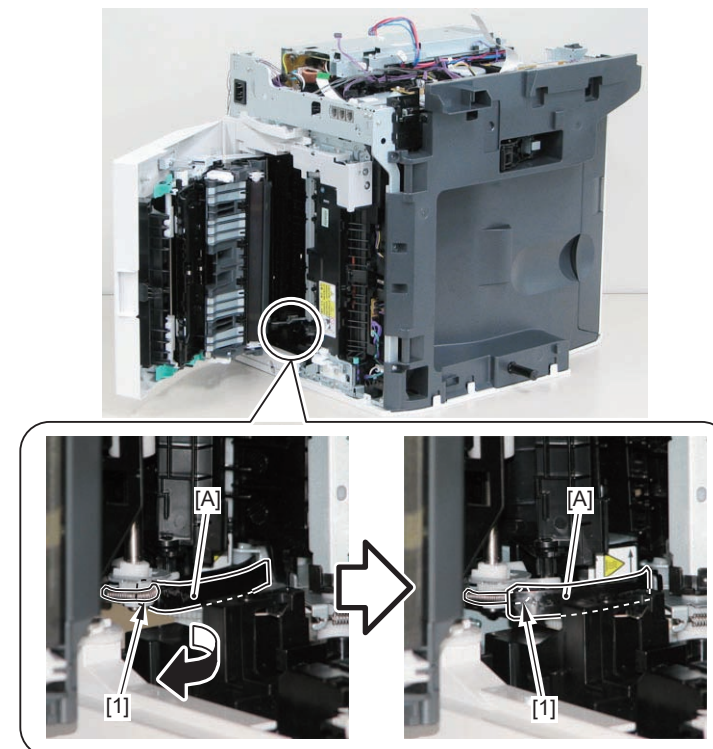
F-4-272

1) Open the Rear Cover [1], Put the harness [2] through the hole [A] of the Side Plate, and Install the Pickup Unit [3] to the host machine.



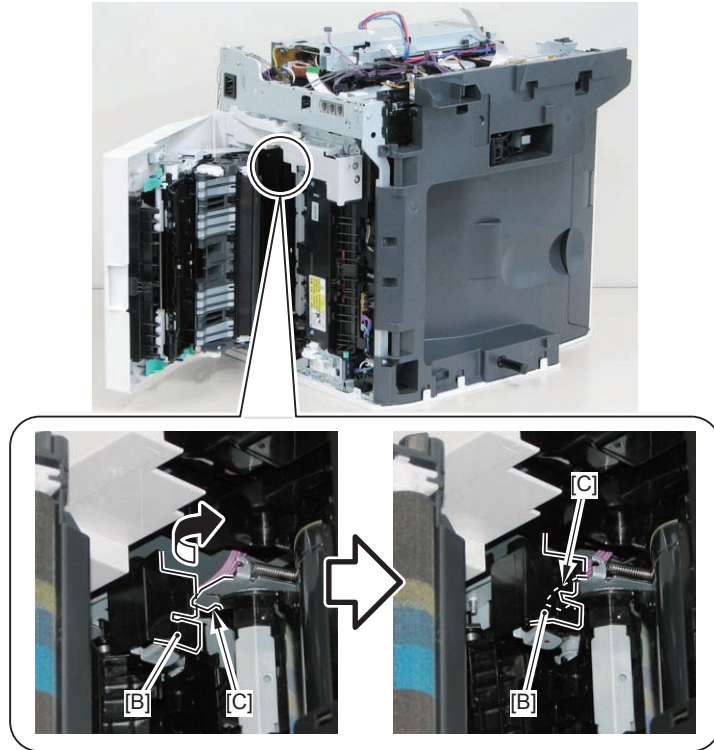
F-4-273

2) Place the edge [A] of the guide of the Pickup Unit over the spring [1] of the host machine.



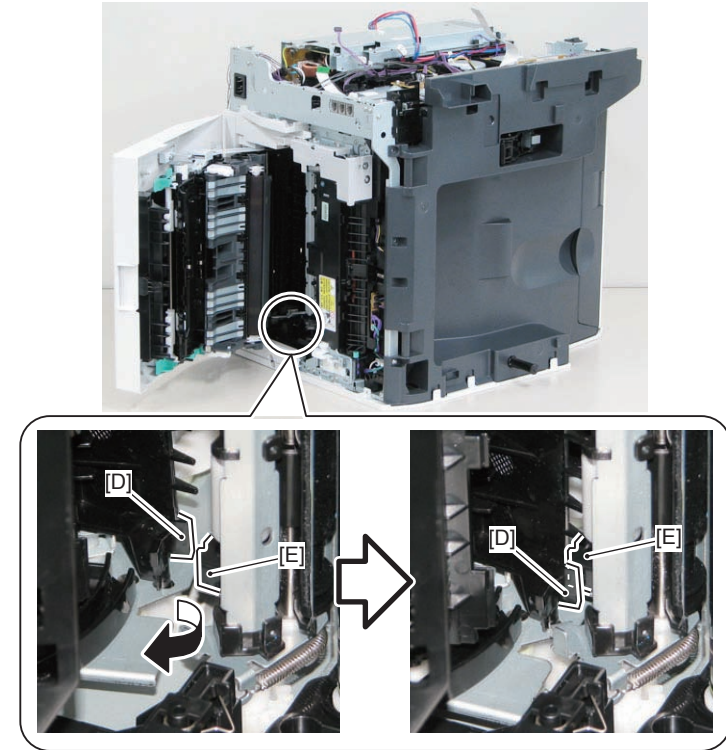
F-4-274

3) Place the Sensor Flag Cover [B] of the Pickup Unit over the plate [C] of the Roller Unit of the host machine.



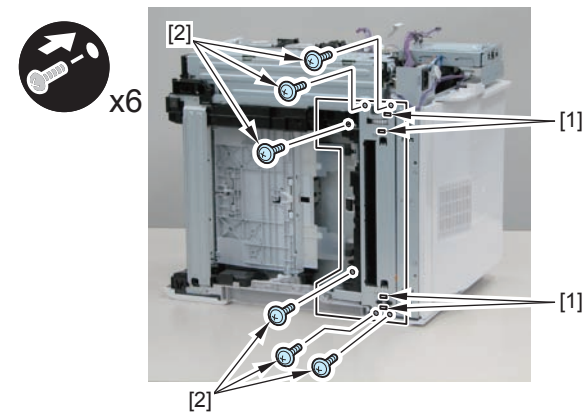
F-4-275

4) Place the edge [D] of the Feed Guide of the Pickup Unit over the edge [E] of the Roller Unit of the host machine.



F-4-276

5) Align the 4 protrusions [1], and secure the Pickup Unit with the 6 screws [2].



F-4-277

Removing the MP Tray Pickup Unit

Procedure

CAUTION:

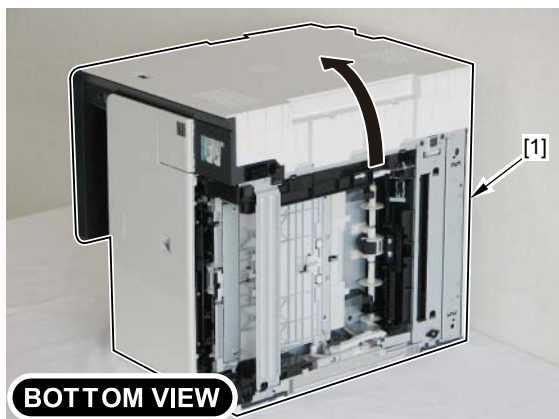
When tilting the host machine, make sure to remove the Toner Cartridge (Y, M, C, Bk) beforehand.

- 1) Remove the cassette.
- 2) Make the Left Cover face down and place the host machine [1].

CAUTION:

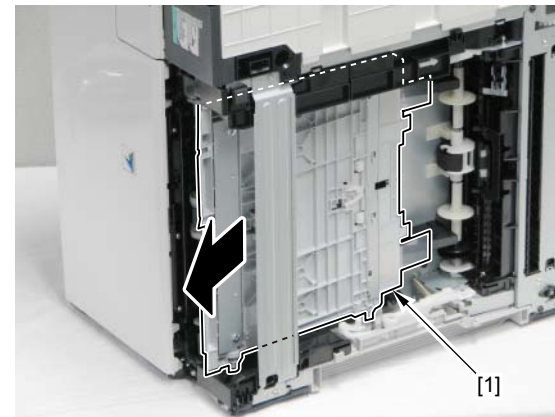
When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening.

In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.



F-4-278

- 3) Move the MP Tray Pickup Unit [1] in the direction of the arrow.

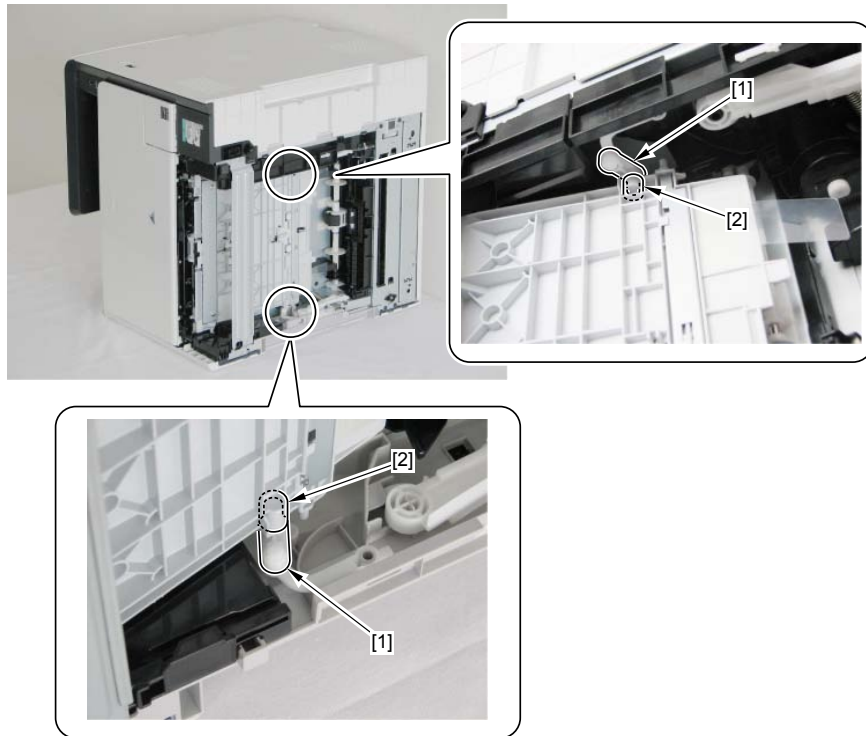


F-4-279

4) Remove the 2 Links [1] (left and right) from the bushings [2] of the MP Tray Pickup Unit.

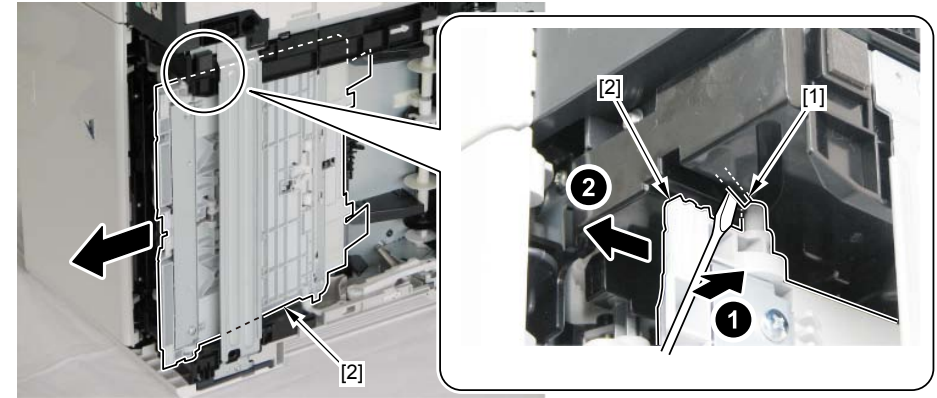
CAUTION:

When removing the MP Tray Pickup Unit, be careful not to lose the link.



F-4-280

5) Push a flat-blade screwdriver to the stopper [1] and remove the MP Tray Pickup Unit [2] in the direction of the arrow.



F-4-281

Removing the Secondary Transfer Feed Unit

CAUTION:

Secondary Transfer Outer Roller is included in Secondary Transfer Feed Unit so when replacing the Secondary Transfer Outer Roller, be sure to replace the Secondary Transfer Feed Unit itself.

Procedure

1) Open the Rear Cover [1].



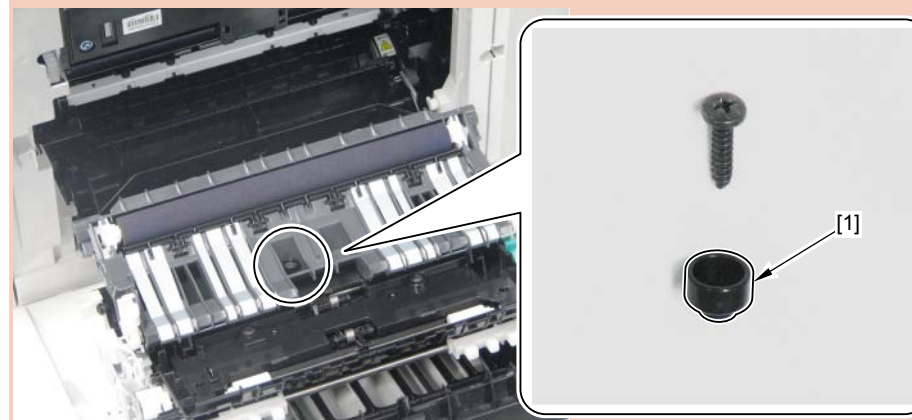
F-4-282

2) Remove the Secondary Transfer Feed Unit [1].

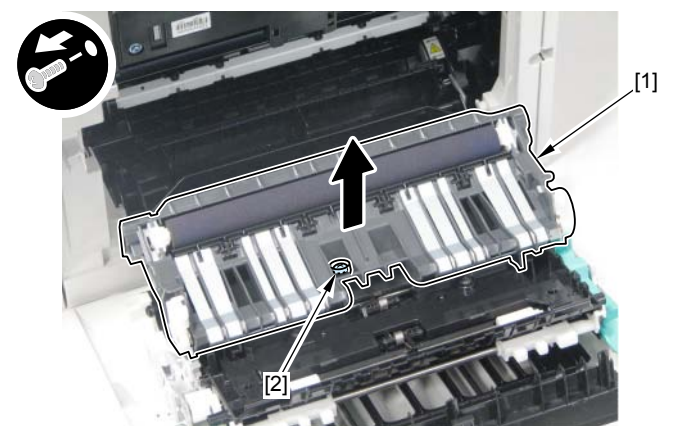
- 1 screw [2]

CAUTION:

When removing the screw, be careful not to lose the guide cap [1] because the guide cap is removed together with the



F-4-283



F-4-284

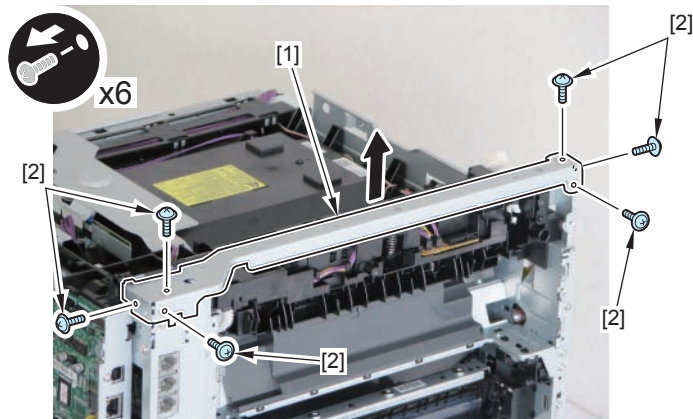
Removing the Delivery Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Rear Upper Cover. Refer to page 4-24.
- 4) Removing the Rear Cover. Refer to page 4-24.
- 5) Removing the Rear Lower Cover. Refer to page 4-25.
- 6) Removing the Rear Cover Rib Unit. Refer to page 4-27
- 7) Removing the Duplex Printing Reverse Drive Unit. Refer to page 4-85.
- 8) Removing the Fixing Assembly. Refer to page 4-104.
- 9) Removing the ADF Unit + Reader Unit. Refer to page 4-32.
- 10) Removing the Upper Cover. Refer to page 4-28.

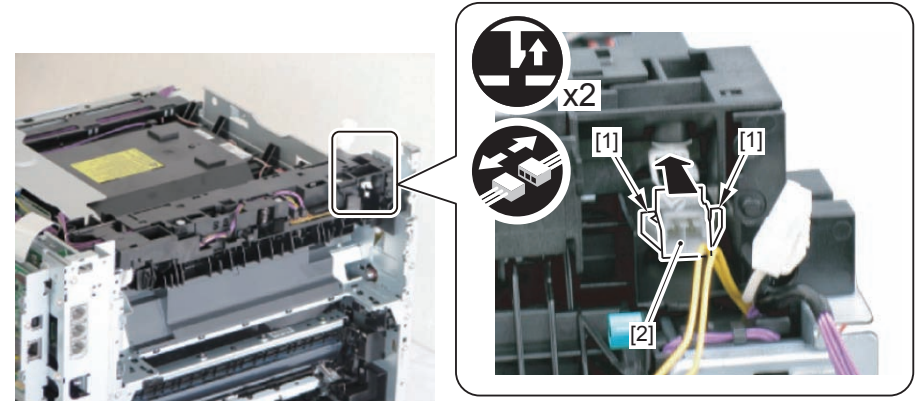
Procedure

- 1) Remove the frame [1].
 - 6 screws [2]



F-4-285

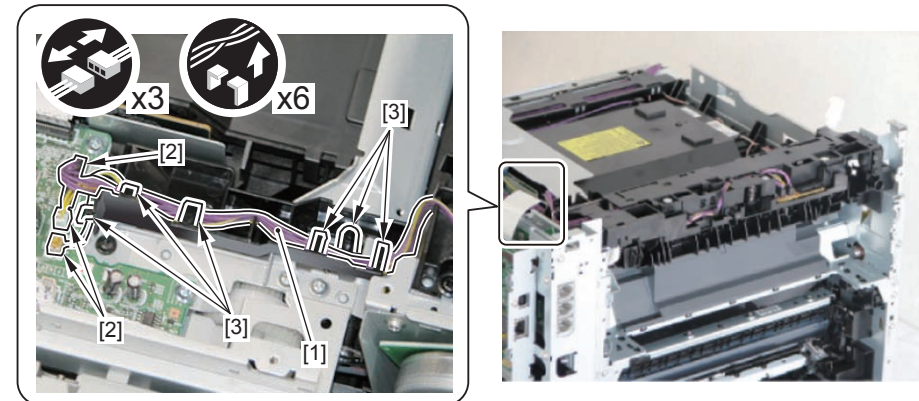
- 2) Release the 2 claws [1], and disconnect the connector [2].



F-4-286

- 3) Remove the wire harness [1] from the wire harness guide.

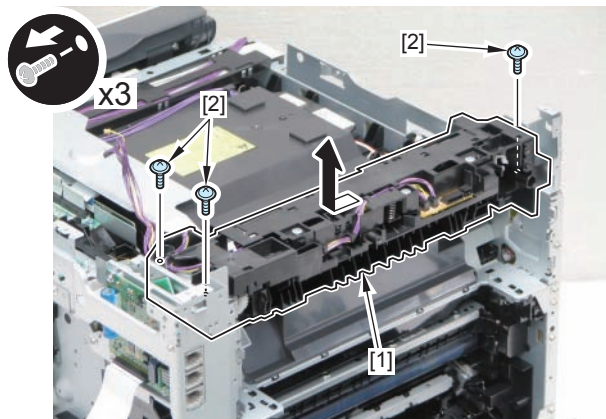
- 3 connectors [2]
- 6 fixing guides [3]



F-4-287

4) Remove the Delivery Unit [1].

- 3 screws [2]



F-4-288

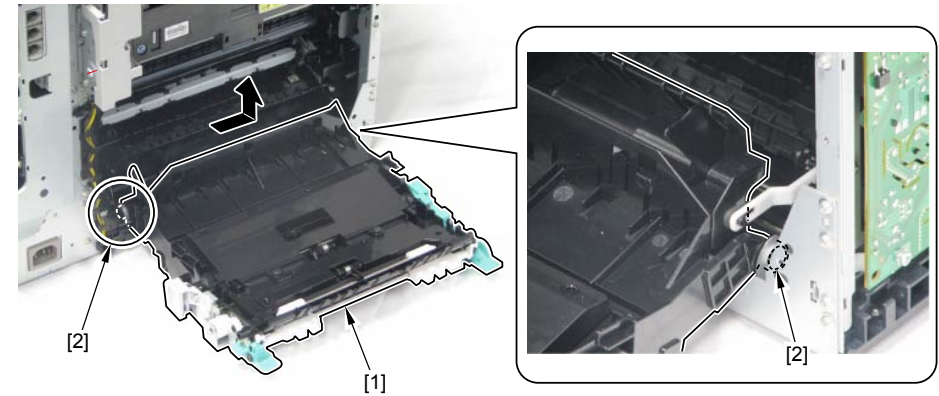
Removing the Duplex Feed Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Secondary Transfer Feed Unit. Refer to page 4-127.
- 4) Removing the Rear Upper Cover. Refer to page 4-24.
- 5) Removing the Rear Cover. Refer to page 4-24.
- 6) Removing the Rear Lower Cover. Refer to page 4-25.

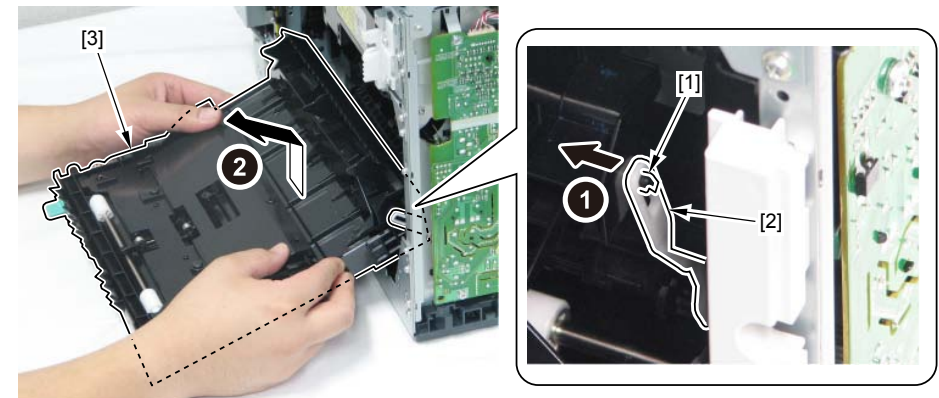
Procedure

- 1) Shift the Duplex Feed Unit [1] in the direction of the arrow and remove the 2 bearings [2].



F-4-289

- 2) Align the claw [1] with the hole of the link [2] and remove the Duplex Feed Unit [3] in the direction of the arrow.



F-4-290

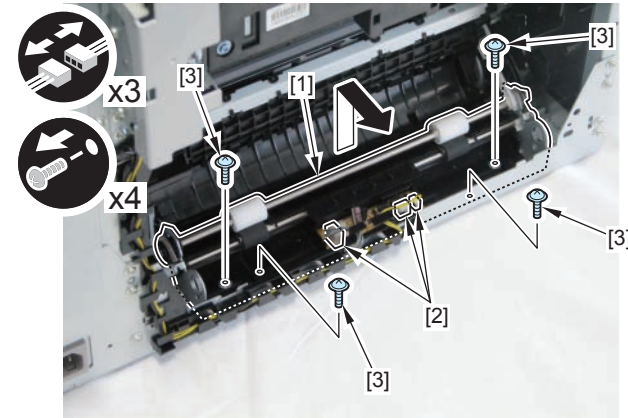
Removing the Re-pickup Guide Unit

Preparation

- 1) Removing the Right Cover. Refer to page 4-20.
- 2) Removing the Left Cover. Refer to page 4-17.
- 3) Removing the Secondary Transfer Feed Unit. Refer to page 4-127.
- 4) Removing the Rear Upper Cover. Refer to page 4-24.
- 5) Removing the Rear Cover. Refer to page 4-24.
- 6) Removing the Rear Lower Cover. Refer to page 4-25.
- 7) Removing the Rear Cover Rib Unit. Refer to page 4-27.
- 8) Removing the Duplex Feed Unit. Refer to page 4-130.

Procedure

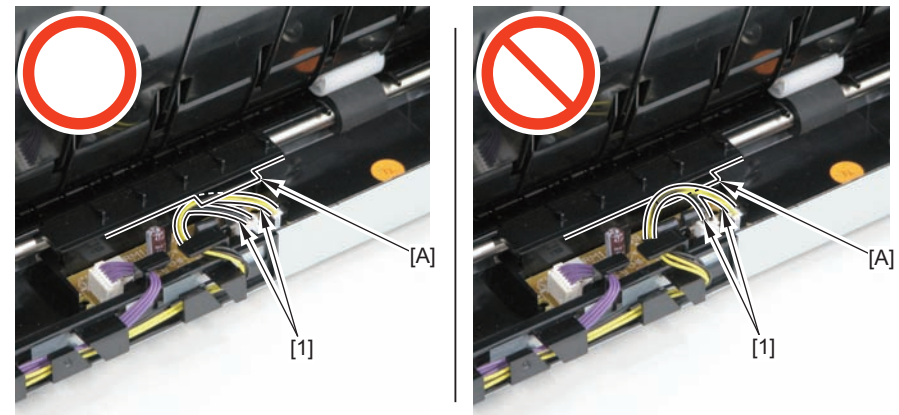
- 1) Remove the Re-pickup Guide Unit [1].
 - 3 connectors [2]
 - 4 screws [3]



F-4-291

CAUTION:

Be sure to insert the 2 harnesses [1] at the bottom of the Guide [A] when installing.

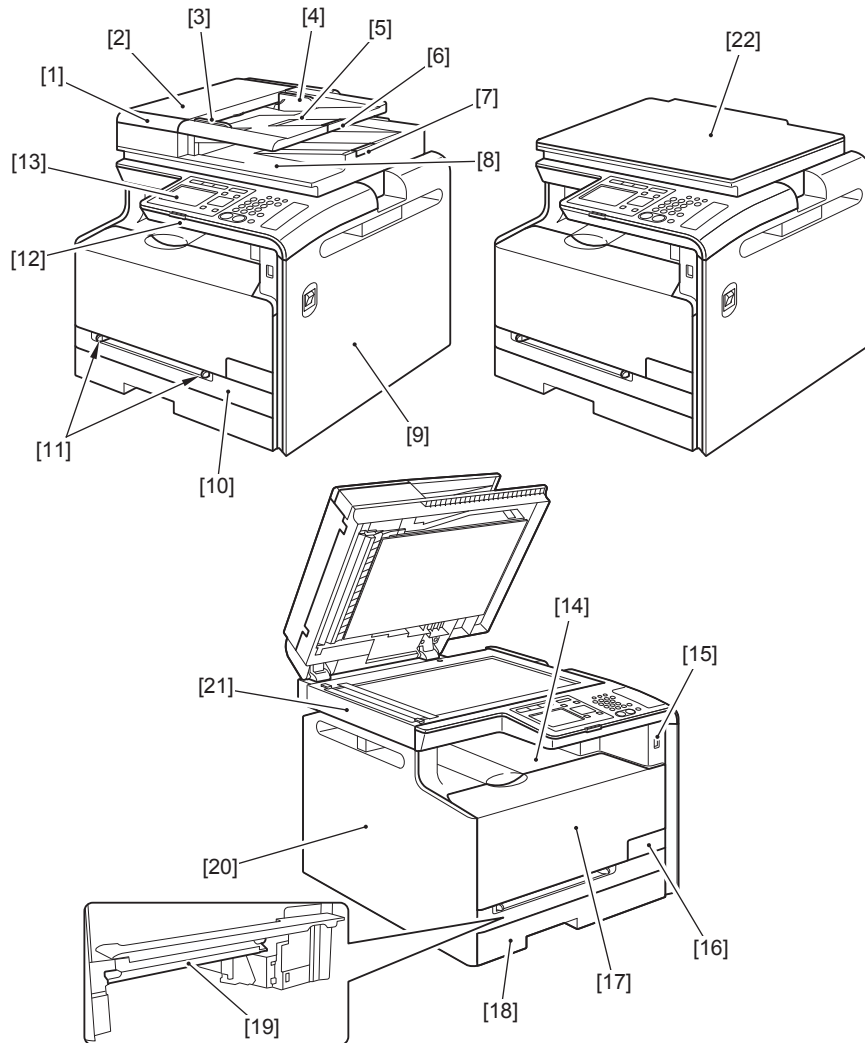


F-4-292

List of Parts

List of External / Internal Cover(MF8200 series)

Front Side

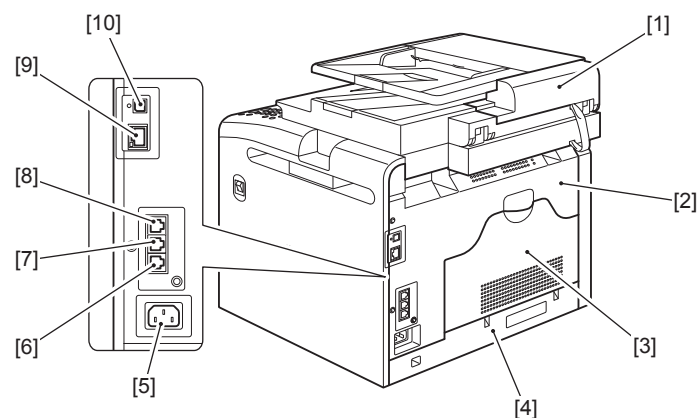


No.	Parts Name	Remarks	Reference
[1]	ADF Front Upper Cover	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[2]	ADF Upper Cover	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[3]	Side Guide (Front)	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[4]	Side Guide (Rear)	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[5]	Document Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[6]	Extension Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[7]	Sub Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[8]	Delivery Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[9]	Right Cover	-	(Refer to page 4-147)
[10]	Multi-Purpose Tray Pickup Cover	-	-
[11]	Paper Guide	-	-
[12]	Control Panel Lower Cover	-	-
[13]	Control Panel	-	(Refer to page 4-196)
[14]	Upper Cover	-	(Refer to page 4-156)
[15]	USB Port	-	-
[16]	Right Front Cover	-	-
[17]	Front Cover	-	(Refer to page 4-150)
[18]	Cassette	-	-
[19]	Mulyi-Purpose Tray Transport Guide	-	(Refer to page 4-237)
[20]	Left Cover	-	(Refer to page 4-144)
[21]	Reader Cover	-	-
[22]	Platen Cover	MF8210Cn	-

T-4-25

F-4-293

Rear Side



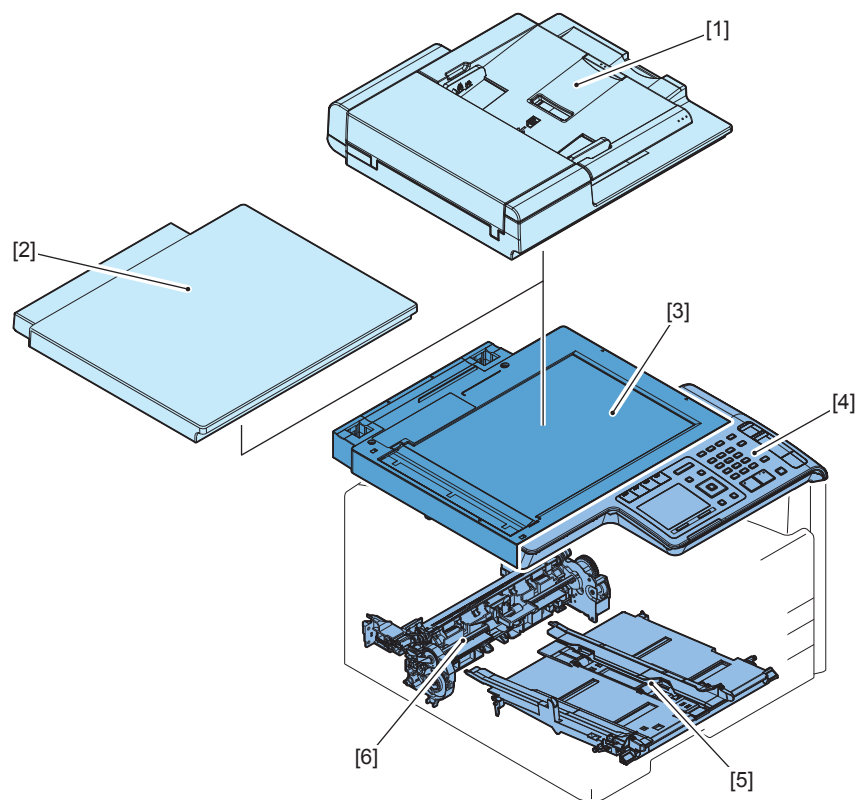
F-4-294

No.	Parts Name	Remarks	Reference
[1]	ADF Rear Cover	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[2]	Rear Upper Cover	-	(Refer to page 4-153)
[3]	Rear Cover	-	(Refer to page 4-155)
[4]	Rear Lower Cover	-	(Refer to page 4-154)
[5]	Power Socket	-	-
[6]	Telephone Line Jack	-	-
[7]	External Device Jack	-	-
[8]	Handset Terminal	-	-
[9]	LAN Port	-	-
[10]	USB Port	-	-

T-4-26

List of Main Unit (MF8200 series)

1/2

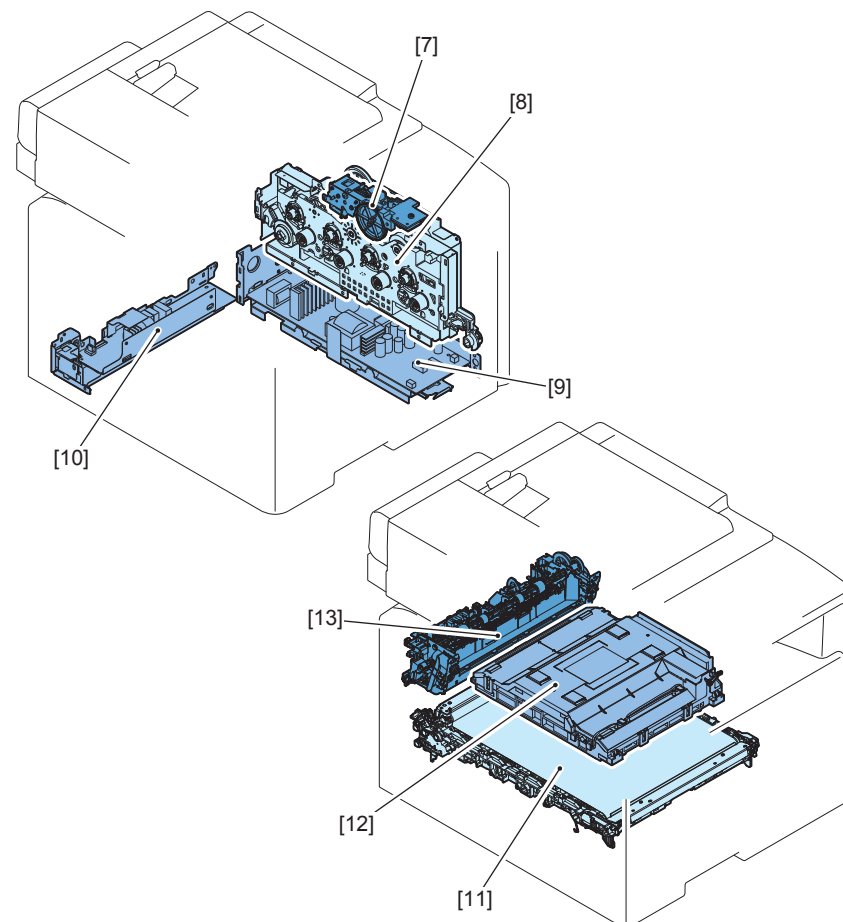


F-4-295

No.	Parts Name	Remarks	Reference	Adjustment during parts replacement
[1]	ADF Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-160)	(Refer to page 4-36)
[2]	Platen Cover	MF8210Cn	-	-
[3]	Reader Unit	-	(Refer to page 4-160)	(Refer to page 4-37)
[4]	Control Panel Unit	-	(Refer to page 4-196)	-
[5]	Multi-purpose Tray Unit	-	(Refer to page 4-237)	-
[6]	Pickup Unit	-	(Refer to page 4-242)	-

T-4-27

2/2

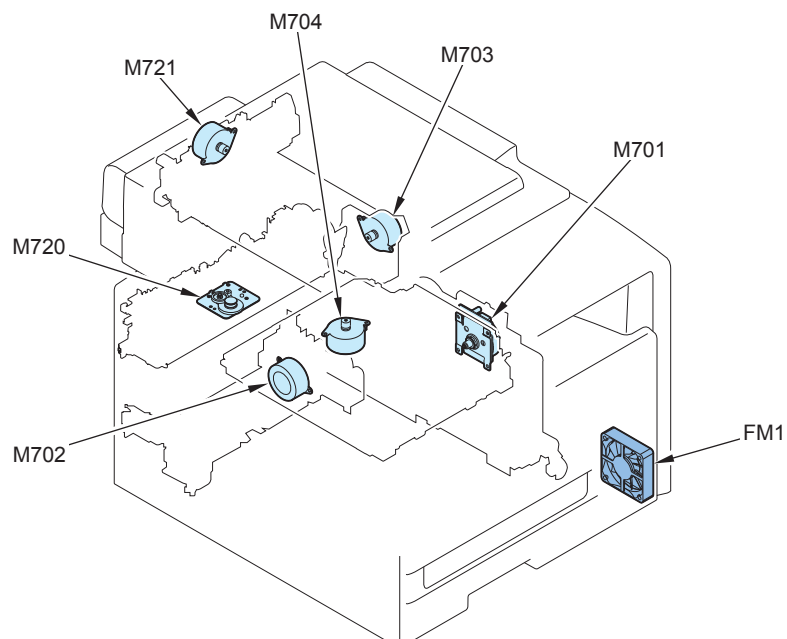


F-4-296

No.	Parts Name	Remarks	Reference	Adjustment during parts replacement
[7]	Sub Drive Unit	-	(Refer to page 4-209)	-
[8]	Main Drive Unit	-	(Refer to page 4-202)	-
[9]	Low Voltage Power Supply Unit	-	(Refer to page 4-190)	-
[10]	Fixing Power Supply Unit	-	(Refer to page 4-195)	-
[11]	ITB Unit	-	(Refer to page 4-218)	-
[12]	Laser Scanner Unit	-	(Refer to page 4-213)	(Refer to page 4-94)
[13]	Fixing Assembly	-	(Refer to page 4-225)	-

T-4-28

List of Motor/Fan (MF8200 series)

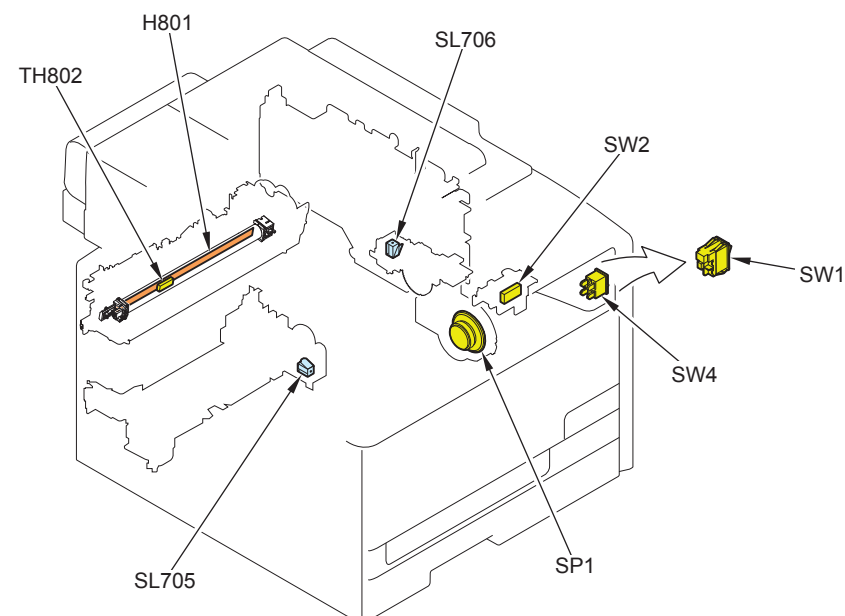


F-4-297

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
M701	Main Motor	Main Drive Unit	-	(Refer to page 4-210)	-
M702	Pickup Motor	Pickup Unit	-	-	-
M703	Fixing Motor	Product configuration	-	(Refer to page 4-232)	-
M704	Laser Scanner Motor	Laser Scanner Unit	-	-	-
M720	Reader Motor	Reader Unit	-	(Refer to page 4-178)	-
M721	ADF Motor	ADF Paper Feeder Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-172)	-
FM1	Fan	Product configuration	-	(Refer to page 4-211)	-

T-4-29

List of Clutch / Solenoid/Heater/Thermistor/Switch/speaker (MF8200 series)

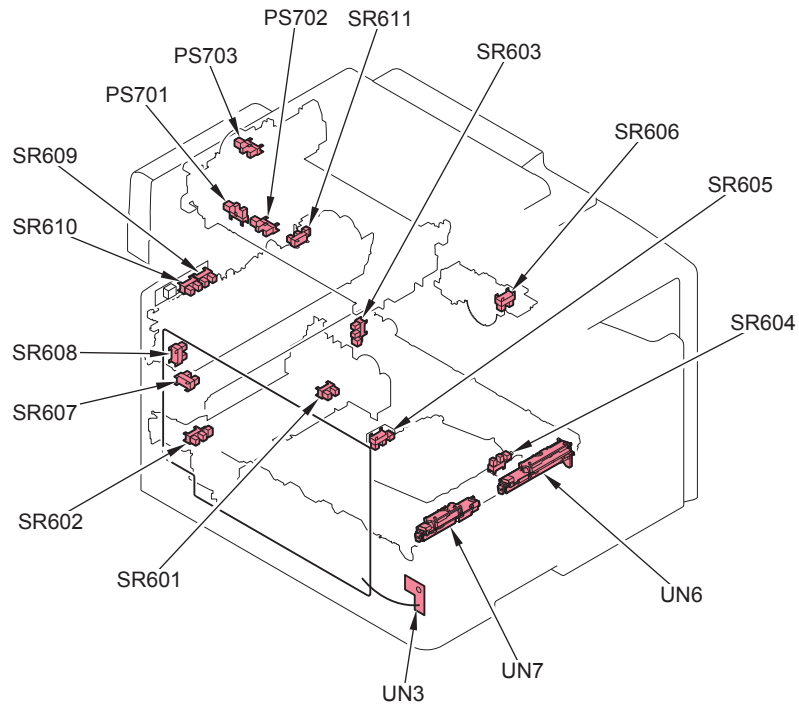


F-4-298

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
H801	Fixing Heater	Fixing Film Unit	-	-	-
TH802	Thermistor	Fixing Film Unit	-	-	-
SP1	Speaker	Product configuration	MF8280Cw/8250Cn	(Refer to page 4-212)	-
SL706	Developing Separation Solenoid	Sub Drive Unit	-	-	-
SL705	Cassette Pickup Solenoid	Pickup Unit	-	-	-
SW2	Front Cover Sensor	Product configuration	-	-	-
SW4	Main Power Switch	Product configuration	MF8280Cw/8250Cn /8240Cw/8210Cn	-	-
SW1	Main Power Switch	Product configuration	MF8230Cn	-	-

T-4-30

List of Sensor (MF8200 series)

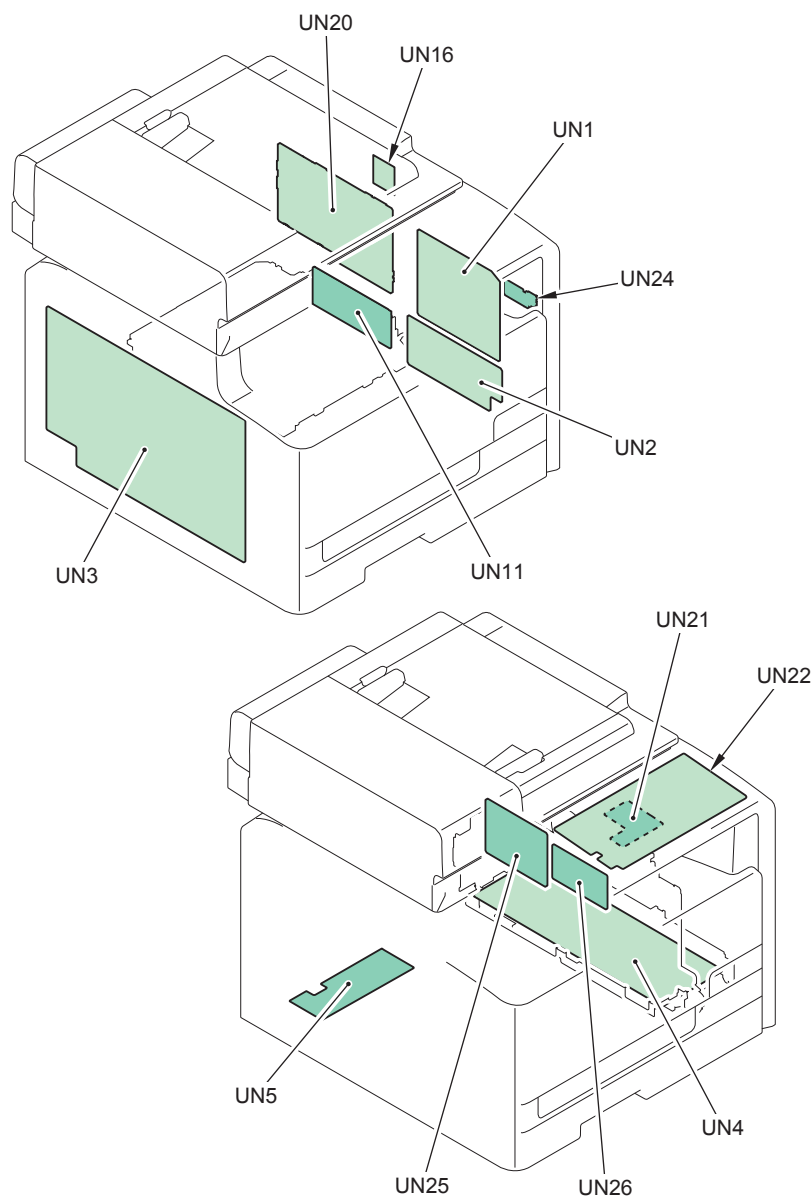


F-4-299

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
PS701	CIS Unit Homeposition Sensor	Reader Unit	-	-	-
PS702	Document End Sensor	ADF Paper Feeder Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	-	-
PS703	Document Sensor	ADF Paper Feeder Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	-	-
SR601	Cassette Paper Detection Sensor	Pickup Unit	-	-	-
SR602	Registration Detection Sensor	Pickup Unit	-	-	-
SR603	Fixing Loop Sensor	Product configuration	-	-	-
SR604	MP Tray Paper Detection Sensor	Multi-purpose Tray Unit	-	-	-
SR605	MP Tray Pre-Registration Detection Sensor	Multi-purpose Tray Unit	-	-	-
SR606	Developing Homeposition Sensor	Product configuration	-	-	-
SR607	Rear Cover Sensor	Product configuration	-	-	-
SR608	Fixing Pressure Release Sensor	Product configuration	-	-	-
SR609	Fixing Delivery Sensor	Fixing Assembly	-	-	-
SR610	Media Width Sensor (L)	Fixing Assembly	-	-	-
SR611	Media Width Sensor (R)	Fixing Assembly	-	-	-
UN6	Patch Registration Sensor	ITB Unit	-	-	-
UN7	Patch Sensor	ITB Unit	-	-	-
UN3	Environment Sensor	High Voltage Power Supply PCB	-	-	-

T-4-31

PCB (MF8200 series)



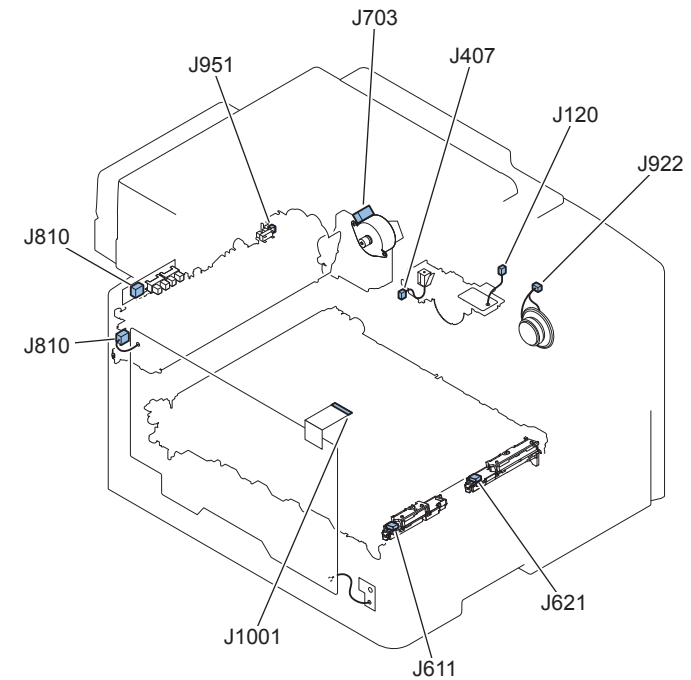
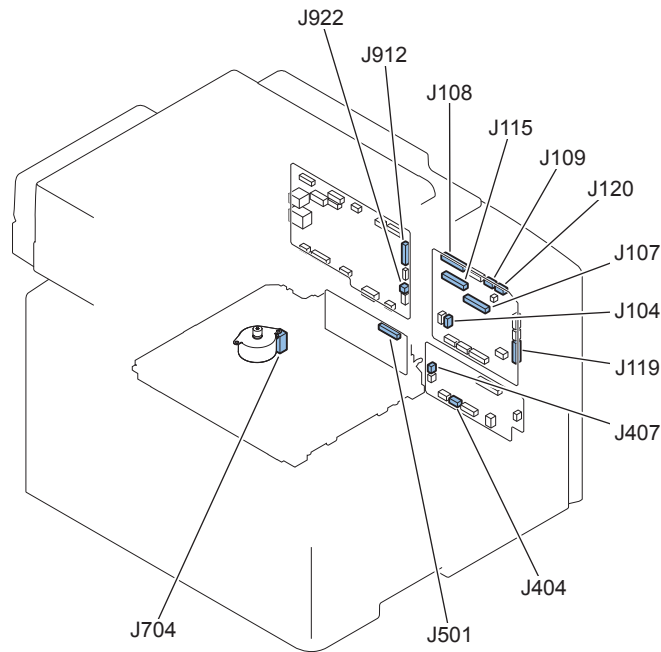
F-4-300

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
UN1	DC Controller PCB	Product configuration	-	(Refer to page 4-186)	(Refer to page 4-61)
UN2	Driver PCB	Product configuration	-	(Refer to page 4-187)	-
UN3	High Voltage Power Supply PCB	Product configuration	-	(Refer to page 4-193)	-
UN4	Low Voltage Power Supply PCB	Low Voltage Power Supply Unit	-	-	-
UN5	Fixing Power Supply PCB	Fixing Power Supply Unit	-	-	-
UN11	Laser Driver PCB	Laser Scanner Unit	-	-	-
UN20	Main Controller PCB	Product configuration	-	(Refer to page 4-183)	(Refer to page 4-58)
UN21	Control Panel LCD PCB	Control Panel Unit	-	(Refer to page 4-199)	-
UN22	Control Panel Key PCB	Control Panel Unit	-	(Refer to page 4-199)	-
UN16	Wireless LAN PCB	Product configuration	MF8280Cw /8240Cw	(Refer to page 4-182)	-
UN24	USB Host PCB	Product configuration	-	-	-
UN25	FAX-NCU PCB	Product configuration	MF8280Cw /8250Cn	(Refer to page 4-201)	-
UN26	Off Hook PCB	Product configuration	MF8280Cw /8250Cn	(Refer to page 4-201)	-

T-4-32

List of connector (MF8200 Series)

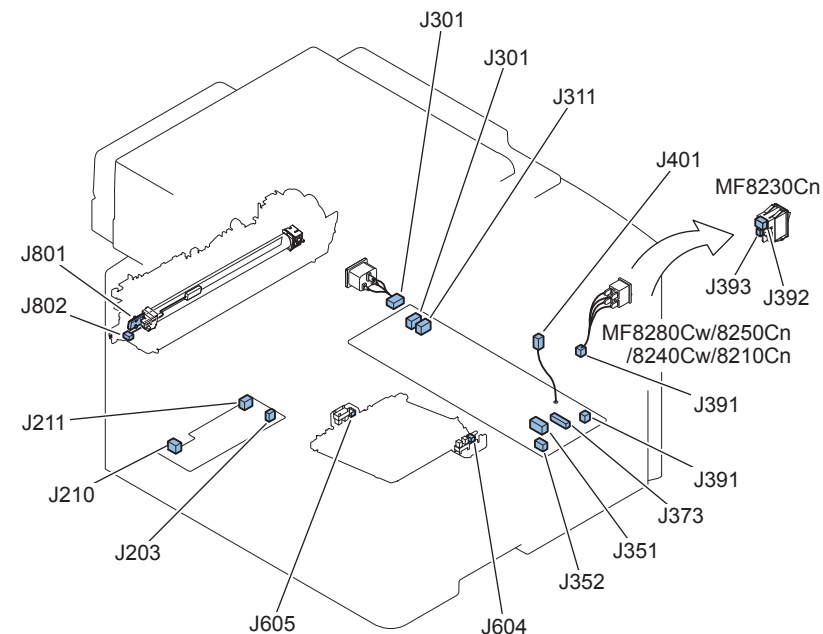
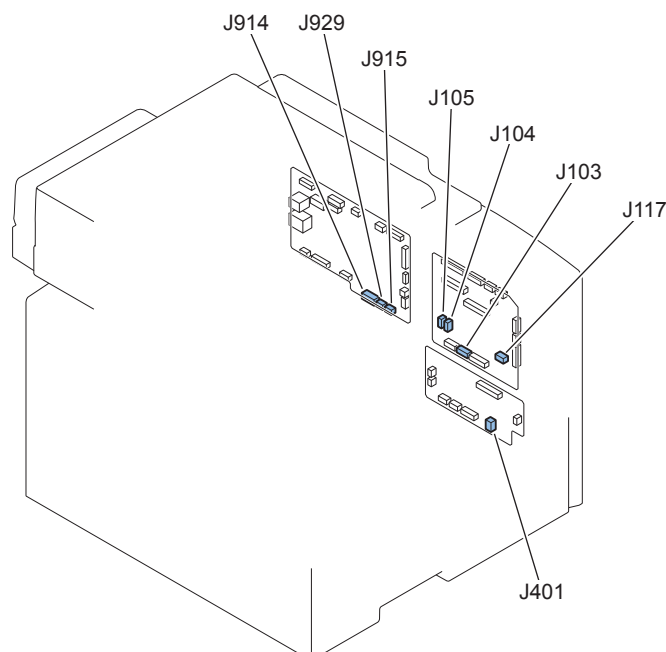
1/4



F-4-301

J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J107	UN1	DC Controller PCB		J912	UN20	Main Controller PCB	
J108	UN1	DC Controller PCB		J501	UN11	Laser Driver PCB	
J109	UN1	DC Controller PCB		J704	M704	Laser Scanner Motor	
J404	UN2	Driver PCB		J703	M703	Fixing Motor	
J407	UN2	Driver PCB		J407	SL706	Developing Separation Solenoid	
J115	UN1	DC Controller PCB		J1001	UN3	High Voltage Power Supply PCB	
J104	UN1	DC Controller PCB		J951	SR611	Media Width Sensor (R)	
J119	UN1	DC Controller PCB		J611	UN7	Patch Sensor	
J119	UN1	DC Controller PCB		J621	UN6	Patch Registration Sensor	
J120	UN1	DC Controller PCB		J120	SR606	Developing Homeposition Sensor	
J810	UN3	High Voltage Power Supply PCB		J810	-	Fixing Unit Sensor	
J922	UN20	Main Controller PCB		J922	SP1	Speaker	MF8280Cw/8250Cn

T-4-33

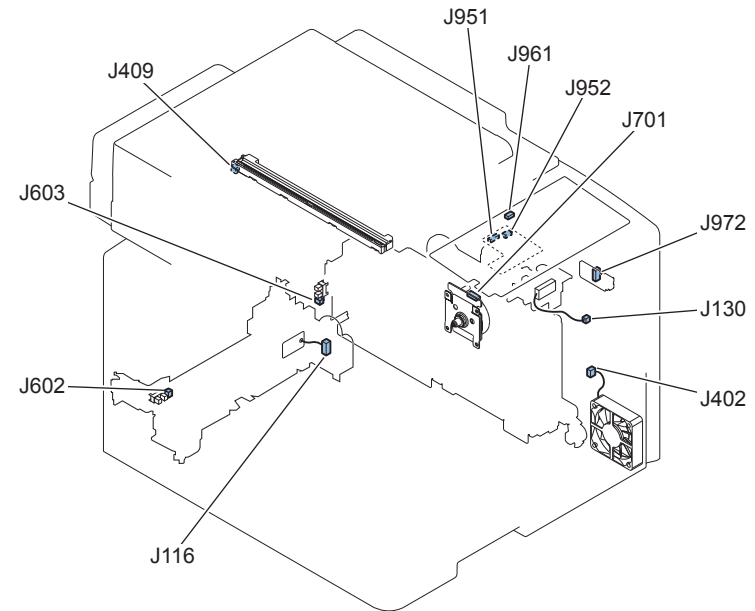
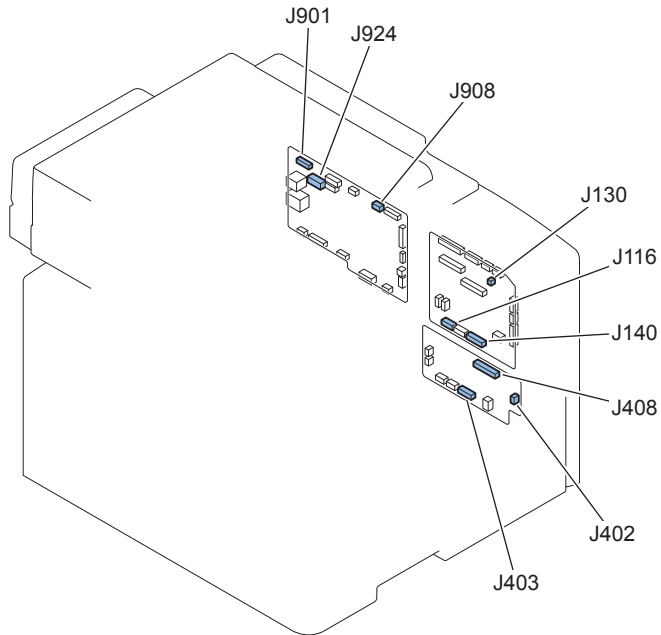


F-4-302

J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J103	UN1	DC Controller PCB		J373	UN4	Low Voltage Power Supply PCB	
J104	UN1	DC Controller PCB	J802	J802	TH802	Thermistor	
J105	UN1	DC Controller PCB		J203	UN5	Fixing Power Supply PCB	
J117	UN1	DC Controller PCB		J604	SR604	MP Tray Paper Detection Sensor	
J117	UN1	DC Controller PCB		J605	SR605	MP Tray Pre-Registration Detection Sensor	
J301	UN4	Low Voltage Power Supply PCB		J301	-	INLET	200V
J391	UN4	Low Voltage Power Supply PCB		J393	SW1	Main Power Switch	MF8230Cn
J929	UN20	Main Controller PCB		J392	SW1	Main Power Switch	MF8230Cn
J391	UN4	Low Voltage Power Supply PCB		J391	SW4	Main Power Switch	MF8280Cw/8250Cn /8240Cw/8210Cn
J311	UN4	Low Voltage Power Supply PCB		J211	UN5	Fixing Power Supply PCB	
J351	UN4	Low Voltage Power Supply PCB		J914	UN20	Main Controller PCB	
J352	UN4	Low Voltage Power Supply PCB		J915	UN20	Main Controller PCB	
J401	UN4	Low Voltage Power Supply PCB		J401	UN2	Driver PCB	
J210	UN5	Fixing Power Supply PCB		J801	H801	Fixing Heater	

T-4-34

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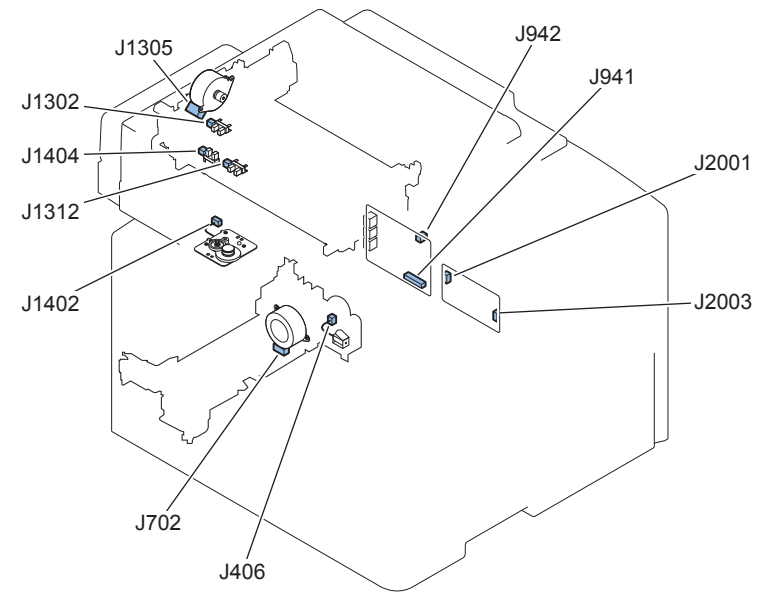
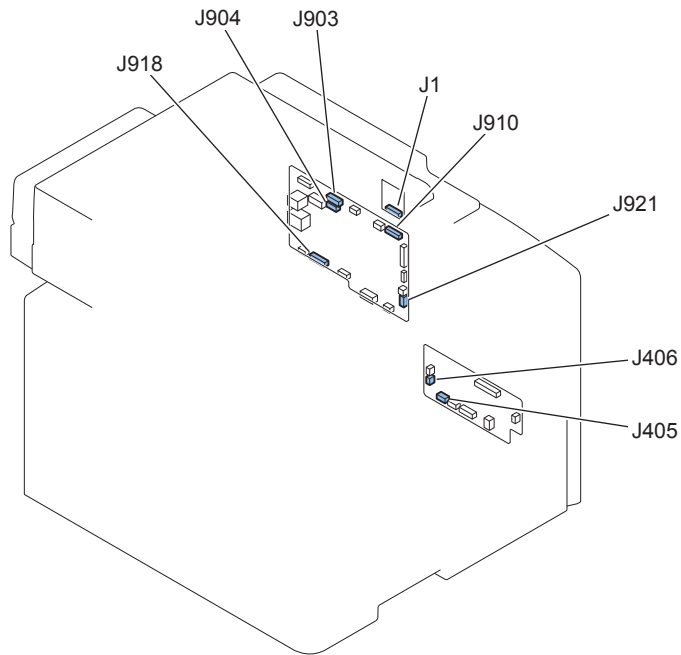


F-4-303

J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J116	UN1	DC Controller PCB		J116	SR601	Cassette Paper Detection Sensor	
J116	UN1	DC Controller PCB		J602	SR602	Registration Detection Sensor	
J116	UN1	DC Controller PCB		J603	SR603	Fixing Loop Sensor	
J130	UN1	DC Controller PCB		J130	SW2	Front Cover Sensor	
J140	UN1	DC Controller PCB		J408	UN2	Driver PCB	
J402	UN2	Driver PCB		J402	FM1	Fan	
J403	UN2	Driver PCB		J701	M701	Main Motor	
J901	UN20	Main Controller PCB		J409	-	CIS Unit	
J908	UN20	Main Controller PCB		J972	UN24	USB Host PCB	
J924	UN20	Main Controller PCB		J951	UN21	Control Panel LCD PCB	
J961	UN22	Control Panel Key PCB		J952	UN21	Control Panel LCD PCB	

T-4-35

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F-4-304

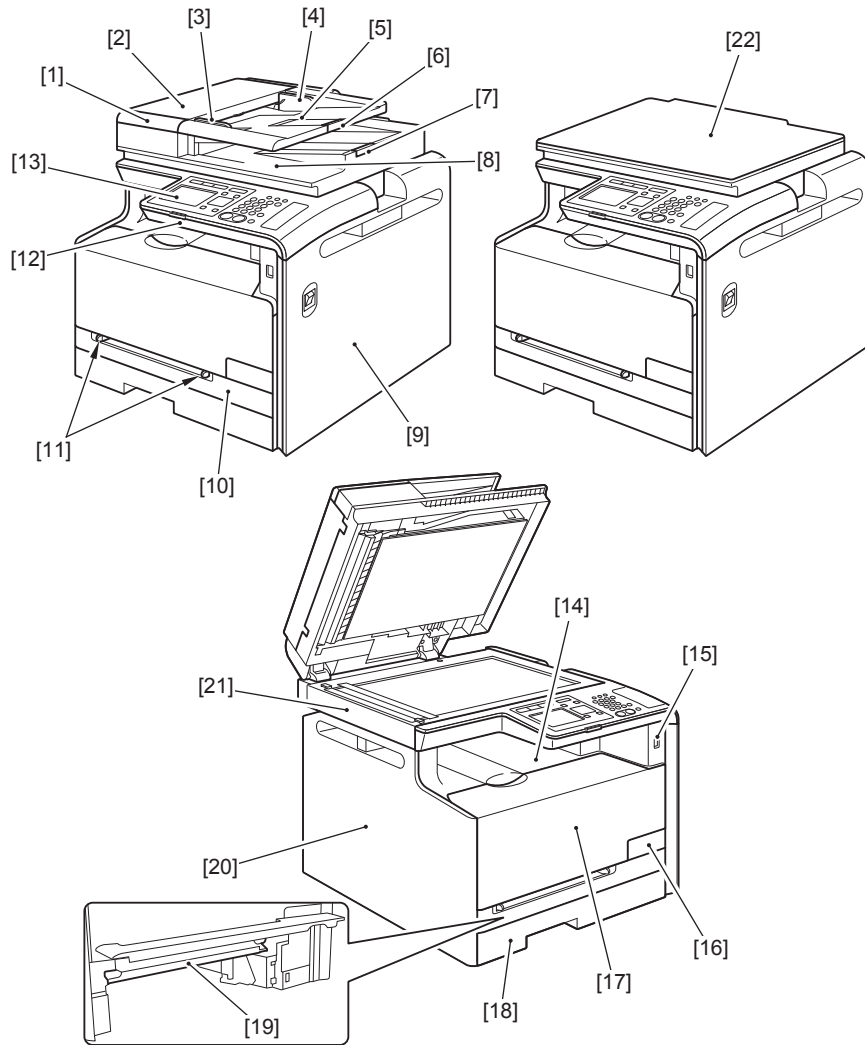
J No.	Symbol	Name	Relay connector	J No.	Symbol	Name	Remarks
J405	UN2	Driver PCB		J702	M702	Pickup Motor	
J406	UN2	Driver PCB		J406	SL705	Cassette Pickup Solenoid	
J903	UN20	Main Controller PCB		J1302	PS703	Document Sensor	MF8280Cw/8250Cn /8240Cw/8230Cn
J903	UN20	Main Controller PCB		J1305	M721	ADF Motor	MF8280Cw/8250Cn /8240Cw/8230Cn
J903	UN20	Main Controller PCB	J1310	J1312	PS702	Document End Sensor	MF8280Cw/8250Cn /8240Cw/8230Cn
J904	UN20	Main Controller PCB	J1402	J1402	M720	Reader Motor	
J904	UN20	Main Controller PCB	J1401	J1404	PS701	CIS Unit Homeposition Sensor	
J918	UN20	Main Controller PCB		J941	UN25	FAX-NCU PCB	MF8280Cw/8250Cn
J921	UN20	Main Controller PCB		J2003	UN26	Off Hook PCB	MF8280Cw/8250Cn
J942	UN25	FAX-NCU PCB		J2001	UN26	Off Hook PCB	MF8280Cw/8250Cn
J910	UN20	Main Controller PCB		J1	UN16	Wireless LAN PCB	MF8280Cw/8240Cw

T-4-36

External Cover, Internal Cover

Location

Front Side

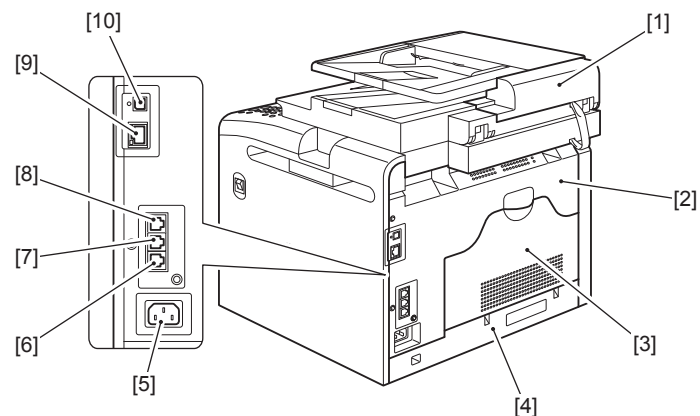


F-4-305

No.	Parts Name	Remarks	Reference
[1]	ADF Front Upper Cover	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[2]	ADF Upper Cover	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[3]	Side Guide (Front)	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[4]	Side Guide (Rear)	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[5]	Document Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[6]	Extension Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[7]	Sub Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[8]	Delivery Tray	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[9]	Right Cover	-	(Refer to page 4-147)
[10]	Multi-Purpose Tray Pickup Cover	-	-
[11]	Paper Guide	-	-
[12]	Control Panel Lower Cover	-	-
[13]	Control Panel	-	(Refer to page 4-196)
[14]	Upper Cover	-	(Refer to page 4-156)
[15]	USB Port	-	-
[16]	Right Front Cover	-	-
[17]	Front Cover	-	(Refer to page 4-150)
[18]	Cassette	-	-
[19]	Multi-Purpose Tray Transport Guide	-	(Refer to page 4-237)
[20]	Left Cover	-	(Refer to page 4-144)
[21]	Reader Cover	-	-
[22]	Platen Cover	MF8210Cn	-

T-4-37

Rear Side



F-4-306

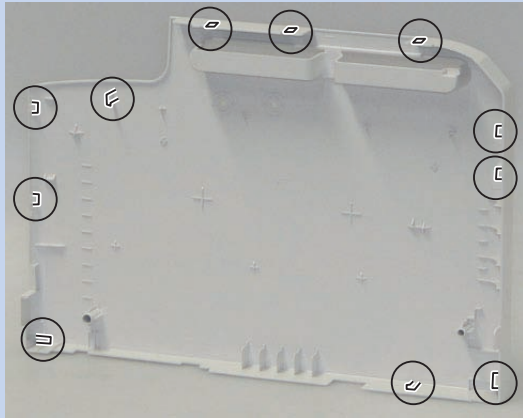
No.	Parts Name	Remarks	Reference
[1]	ADF Rear Cover	MF8280Cw/8250Cn /8240Cw/8230Cn	-
[2]	Rear Upper Cover	-	(Refer to page 4-153)
[3]	Rear Cover	-	(Refer to page 4-155)
[4]	Rear Lower Cover	-	(Refer to page 4-154)
[5]	Power Socket	-	-
[6]	Telephone Line Jack	-	-
[7]	External Device Jack	-	-
[8]	Handset Terminal	-	-
[9]	LAN Port	-	-
[10]	USB Port	-	-

T-4-38

Removing the Left Cover

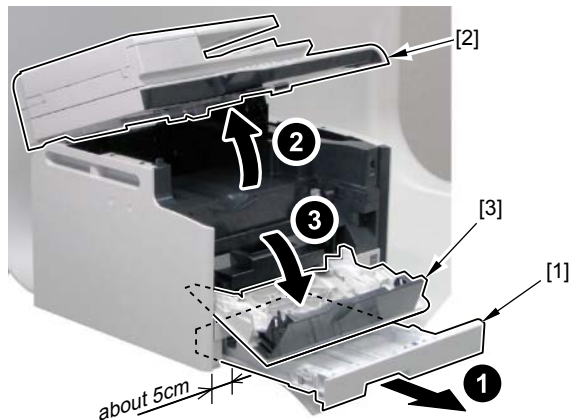
Procedure

NOTE::
The following shows the 11 claws of the Left Cover.



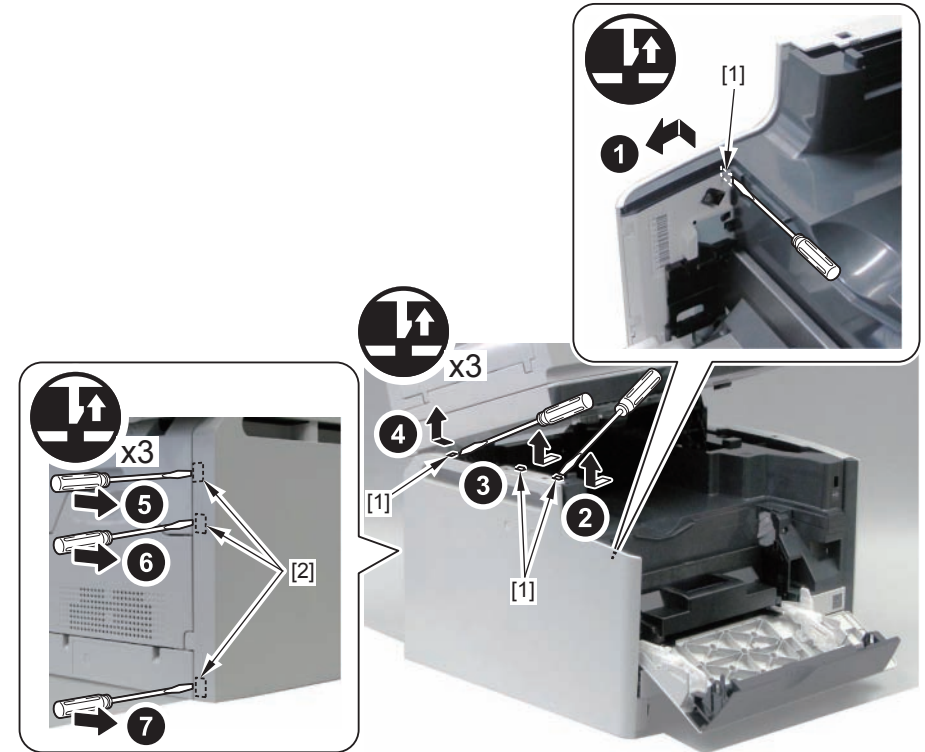
F-4-307

- 1) Remove the Cassette [1].
- 2) To remove the claw at the lower side of the Left Cover, move the Host Machine for about 5cm from the base.
- 3) Open the Reader Unit [2].
- 4) Open the Front Cover [3].



F-4-308

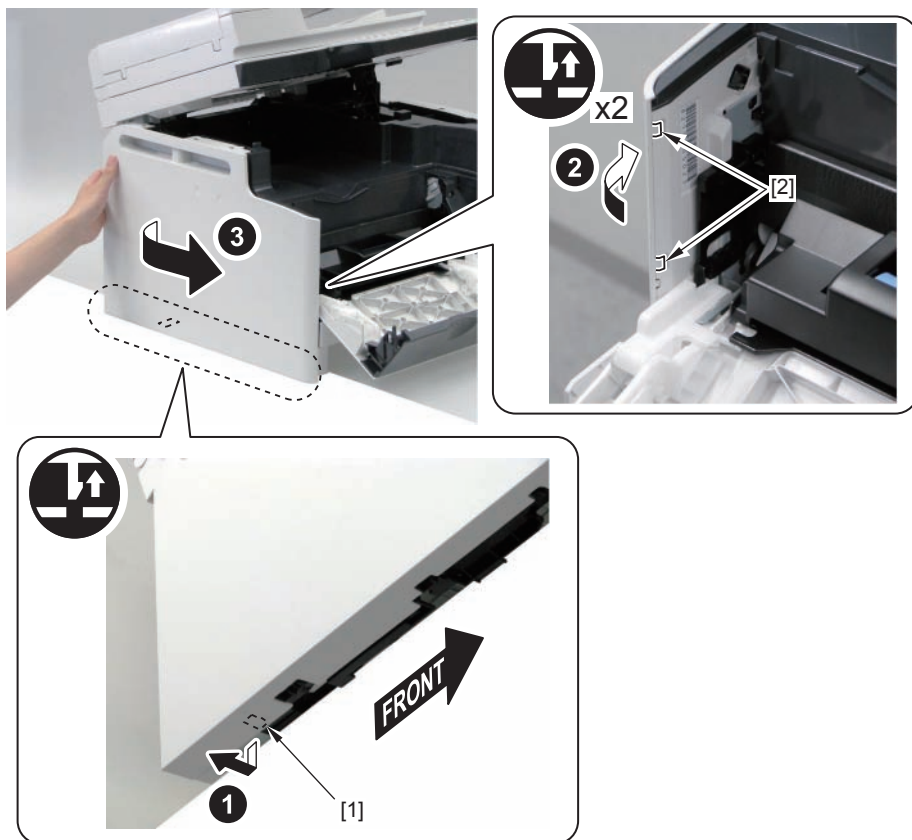
- 5) Remove the 4 claws [1] at the upper side of the Left Cover.
- 6) Remove the 3 claws at the rear side of the Left Cover.



F-4-309

7) Remove the claw [1] at the lower side of the Left Cover.

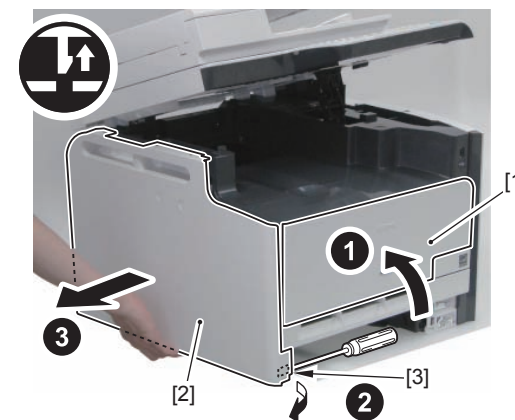
8) While supporting the Left Cover, remove the 2 claws [2] at the upper front side of the Left Cover.



F-4-310

9) Close the Front Cover [1], and then hold the Left Cover [2] to remove.

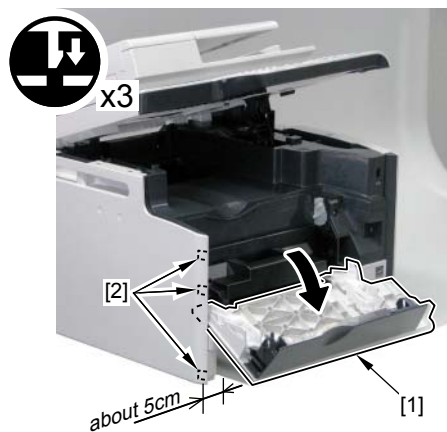
- 1 claw [3]



F-4-311

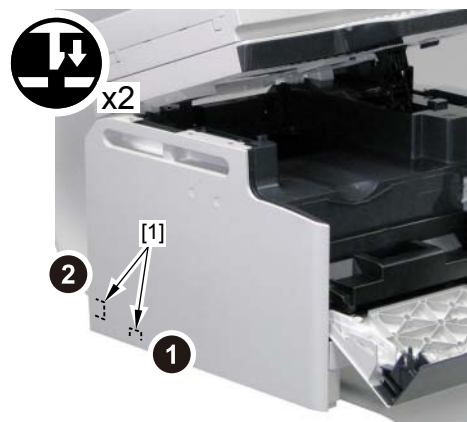
■ Installing the Left Cover

- 1) To remove the claw at the lower side of the Left Cover, move the Host Machine for about 5cm from the base.
- 2) Open the Front Cover [1].
- 3) Install the 3 claws [2] at the front side of the Left Cover.



F-4-312

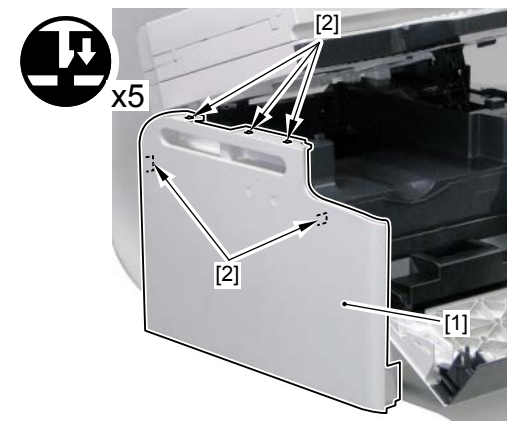
- 4) Fit in the claw [1] at the lower side of the Left Cover.



F-4-313

- 5) Install the Left Cover [1].

- 5 claws [2]

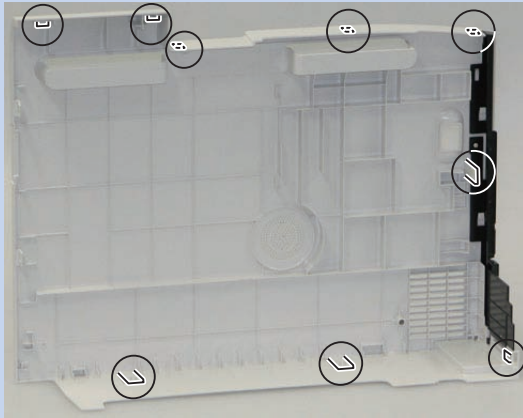


F-4-314

Removing the Right Cover

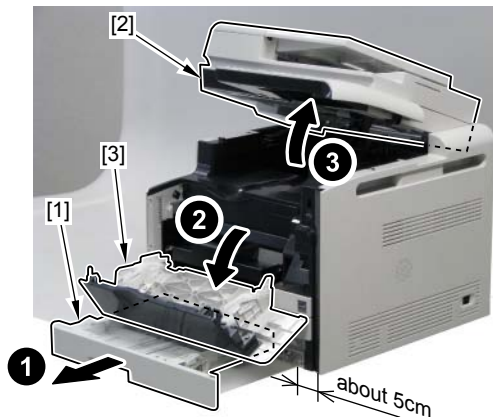
Procedure

NOTE::
The following shows the 9 claws of the Right Cover.



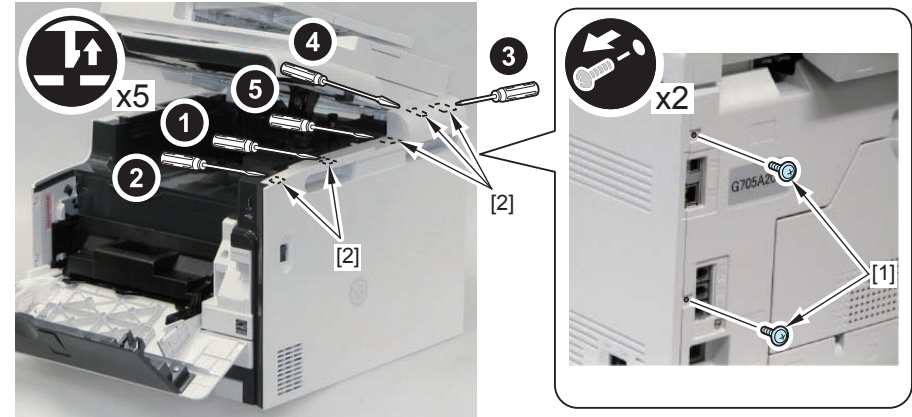
F-4-315

- 1) Remove the Cassette [1].
- 2) To remove the claw at the lower side of the Right Cover, move the Host Machine for about 5cm from the base.
- 3) Open the Reader Unit [2].
- 4) Open the Front Cover [3].



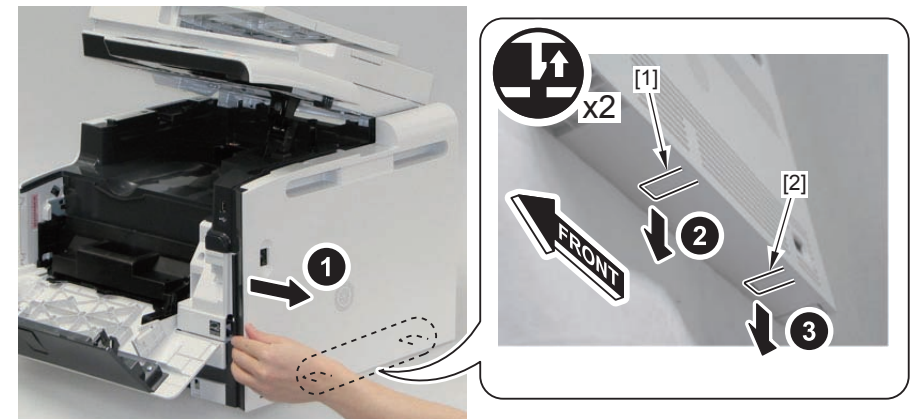
F-4-316

- 5) Remove the 2 screws [1], and release the 5 claws [2].



F-4-317

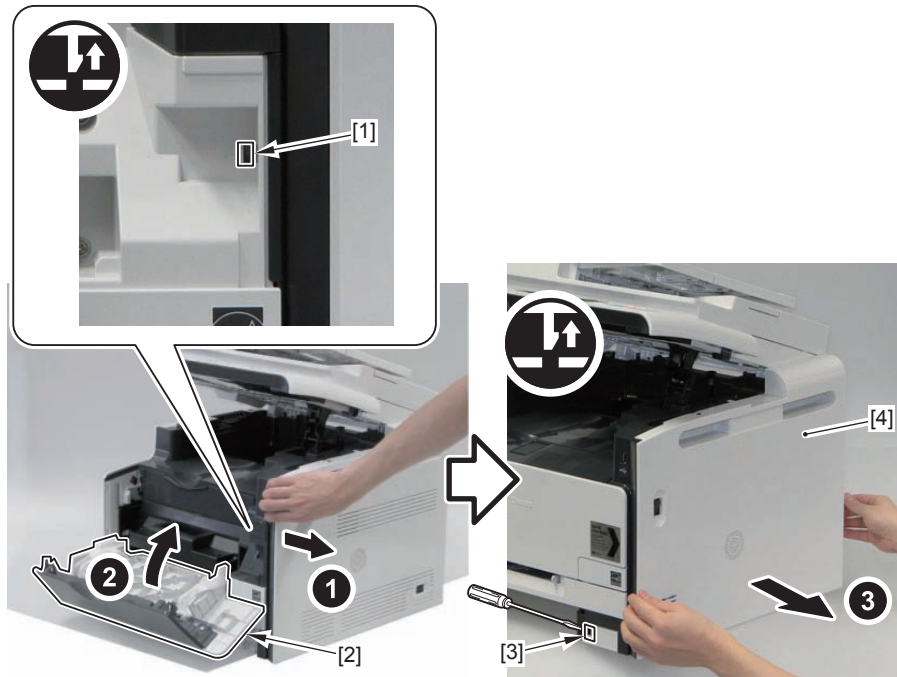
- 6) Release the claw [1] and claw [2] while opening the Right Cover.



F-4-318

7) Release the claw [1] while opening the Right Cover.

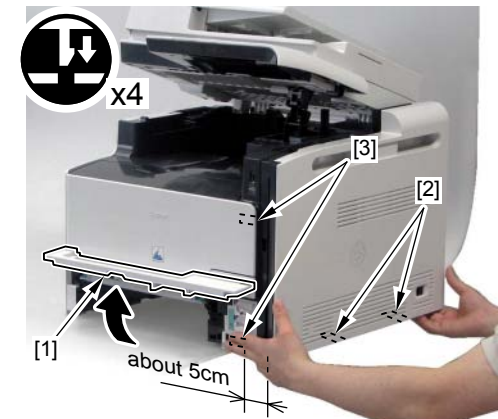
8) Close the Front Cover [2], release the claw [3], and then remove the Right Cover [4].



F-4-319

■ Installing the Right Cover

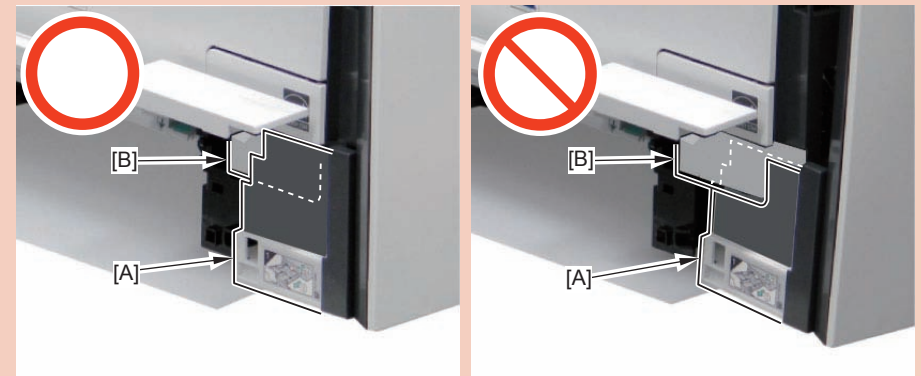
1) Open the Multi-purpose Tray Pickup Cover [1] and attach the 2 claws [2] on the lower side and 2 claws [3] on the front side of the Right Cover.



F-4-320

CAUTION:

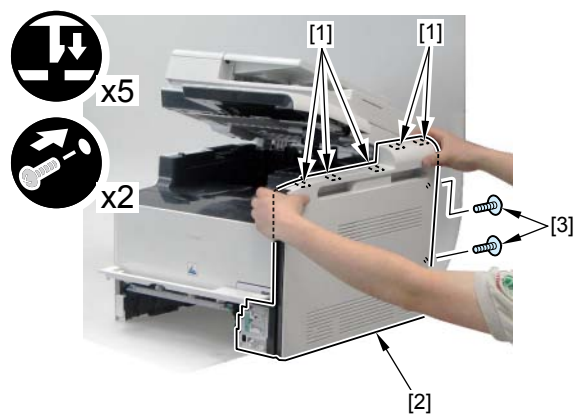
To install the Right Cover to the Host Machine, be sure to install [A] part of the Right Cover to be attached outside of [B] part.



F-4-321

2) Insert the 5 claws [1] on the upper side of the Right Cover and install the Right Cover [2].

- 2 screws [3]

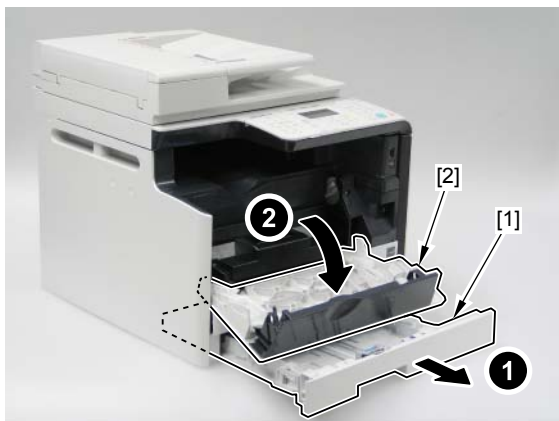


F-4-322

Removing the Front Cover

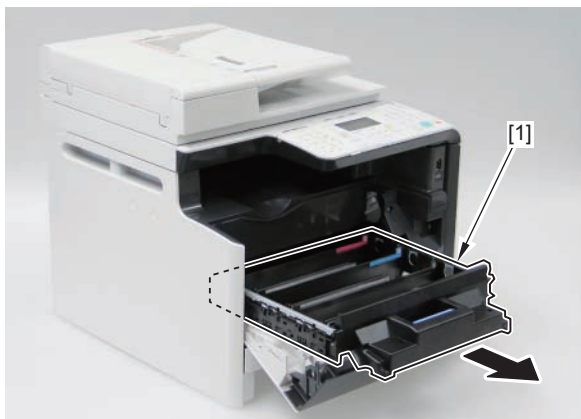
Procedure

- 1) Remove the Cassette [1].
- 2) Open the Front Cover [2].



F-4-323

- 3) Pull the Cartridge Tray [1].



F-4-324

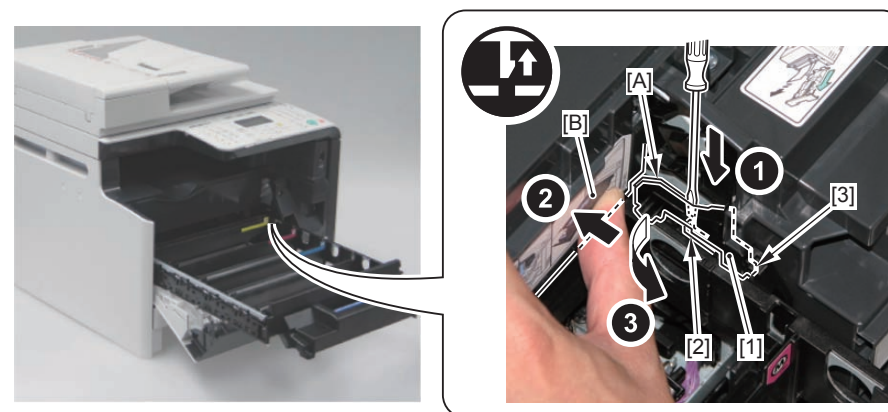
- 4) Remove the cartridges

CAUTION:

Since the Cartridge Tray interferes with the stopper when removing the stopper, do not pull out the Cartridge Tray until it hits the end.

- 5) Insert a flat-blade screwdriver into the clearance [A] between the Right Stopper [1] and rail.
- 6) Remove the Right Stopper [1] while pushing the [B] part.

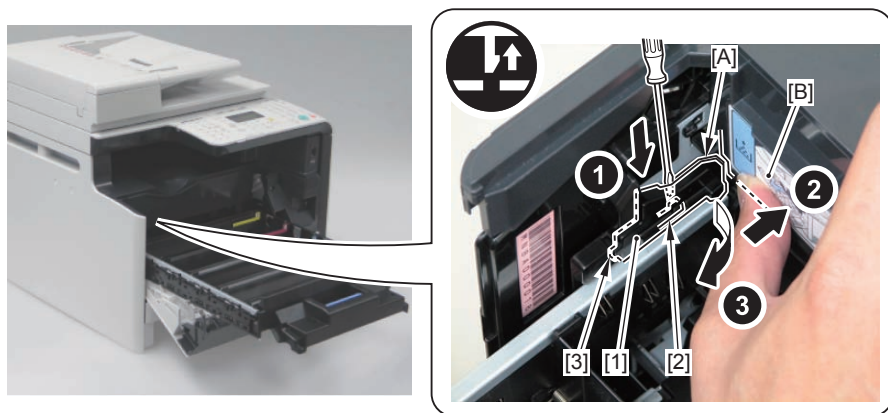
- 1 Claws [2]
- 1 Protrusion [3]



F-4-325

- 7) Insert a flat-blade screwdriver into the clearance [A] between the Left Stopper [1] and rail.
 8) Remove the Left Stopper [1] while pushing the [B] part.

- 1 Claws [2]
- 1 Protrusion [3]



F-4-326

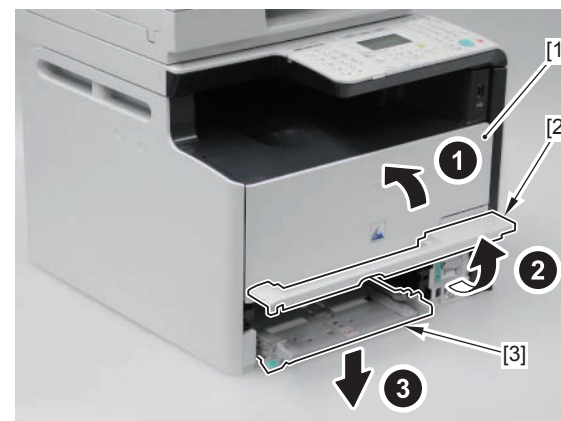
- 9) Remove the Cartridge Tray [1].



F-4-327

- 10) Close the Front Cover [1].

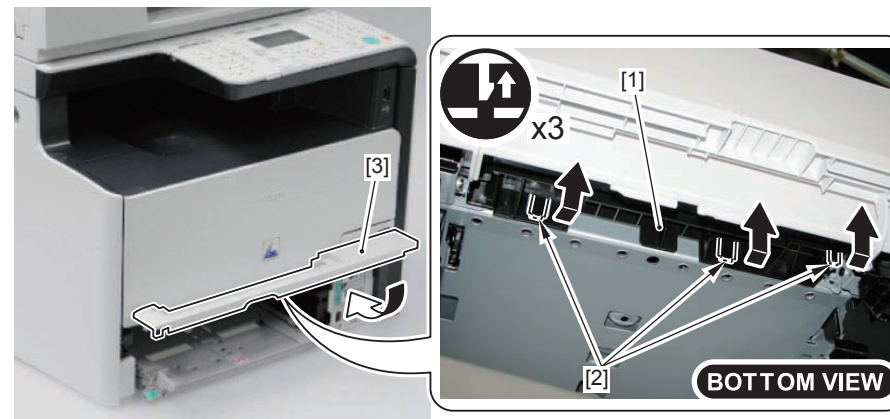
- 11) Open the Multi-purpose Tray Pickup Slot Cover [2] and Multi-purpose Tray Pickup Tray [3].



F-4-328

- 12) While lifting the Feeding Guide [1], remove the 3 claws [2].

- 13) Close the Multi-purpose Tray Pickup Slot Cover [3]



F-4-329

14) Open the Front Cover [1] to remove the Feeding Guide [2].

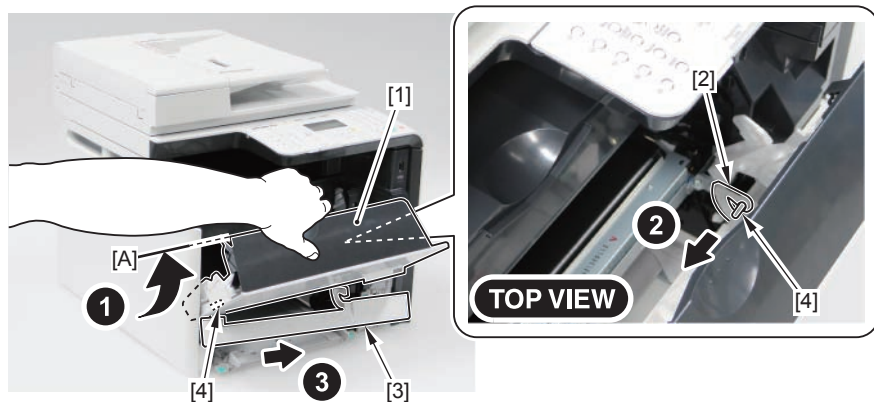


F-4-330

15) Put the Front Cover [1] back to position A.

16) Remove the Right Arm [2] of the Multi-purpose Tray Pickup Slot Cover to remove the Multi-purpose Tray Pickup Slot Cover [3].

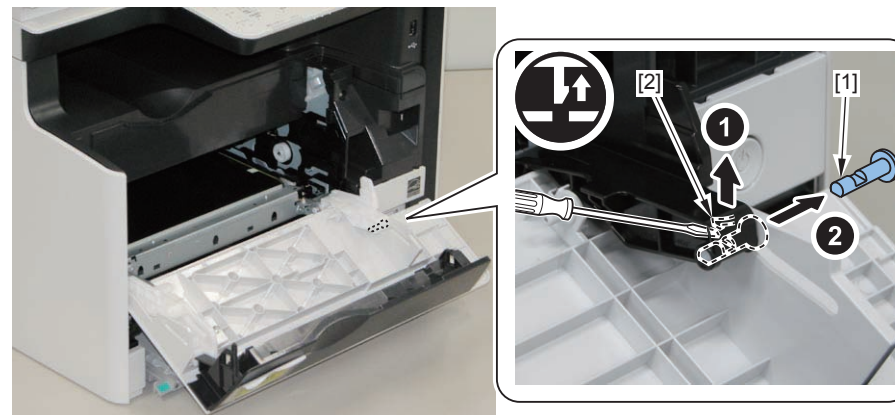
- 2 Shafts [4]



F-4-331

17) Remove the Fixation Pin [1] of the Right Arm.

- 1 Claw [2]

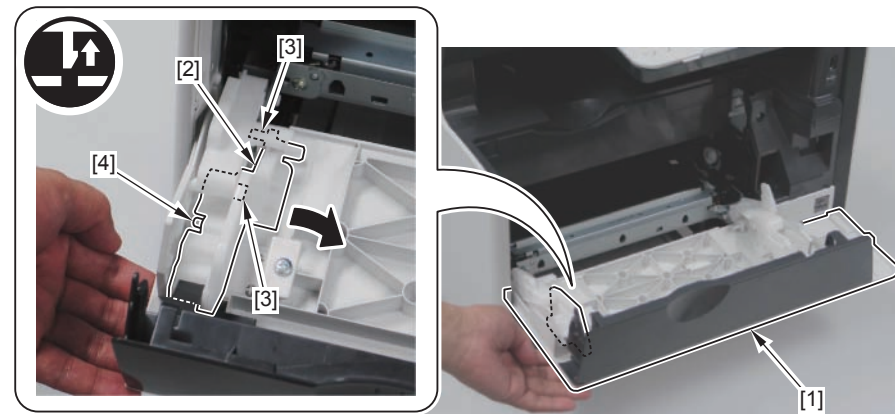


F-4-332

18) Remove the Left Holder [2] while holding the Front Cover [1].

- 2 Shafts [3]

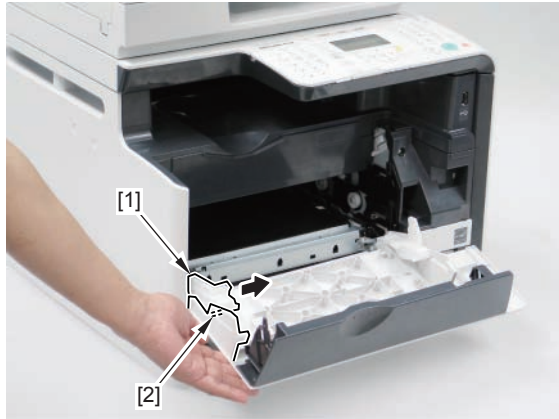
- 1 Claw [4]



F-4-333

19) Push and remove the Left Arm [1].

- 1 Shaft [2]



F-4-334

20) Remove the Front Cover [1].

- 1 Shaft [2]



F-4-335

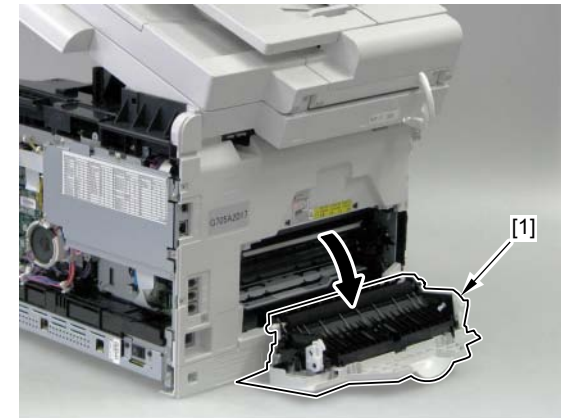
Removing the Rear Upper Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.

Procedure

- 1) Open the Rear Cover [1].



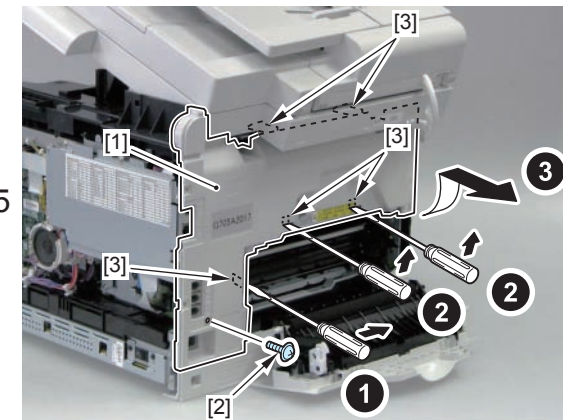
F-4-336

- 2) Remove the Rear Upper Cover [1].

- 1 screw [2]
- 5 claws [3]



x5



F-4-337

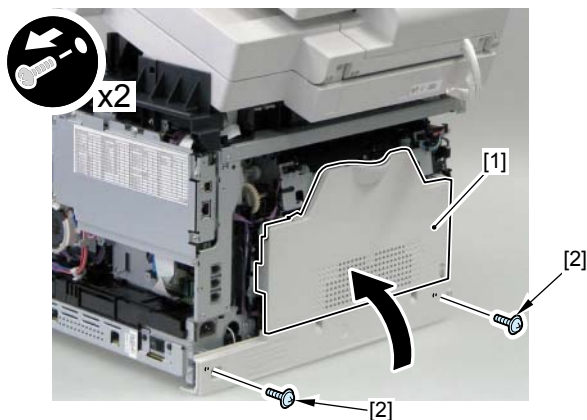
Removing the Rear Lower Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.

Procedure

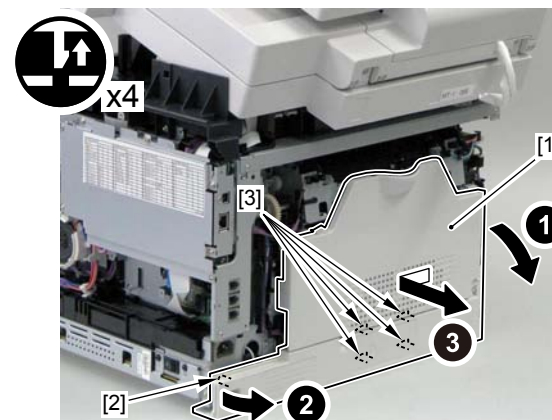
- 1) Close the Rear Cover [1] and remove the 2 screws [2].



F-4-338

- 2) Open the Rear Cover and remove the Rear Lower Cover [1] in the direction of the arrow.

- 1 boss [2]
- 4 claws [3]



F-4-339

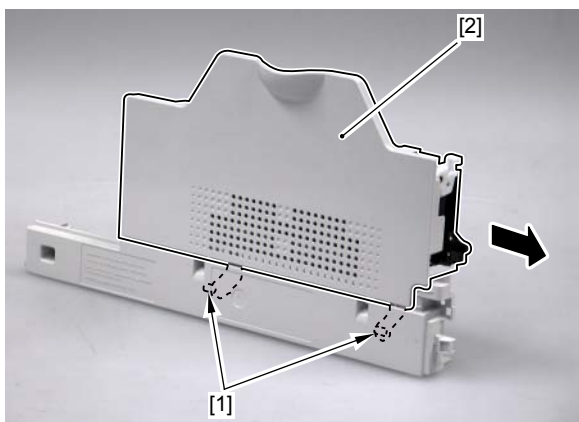
Removing the Rear Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the Rear Lower Cover. Refer to page 4-154.

Procedure

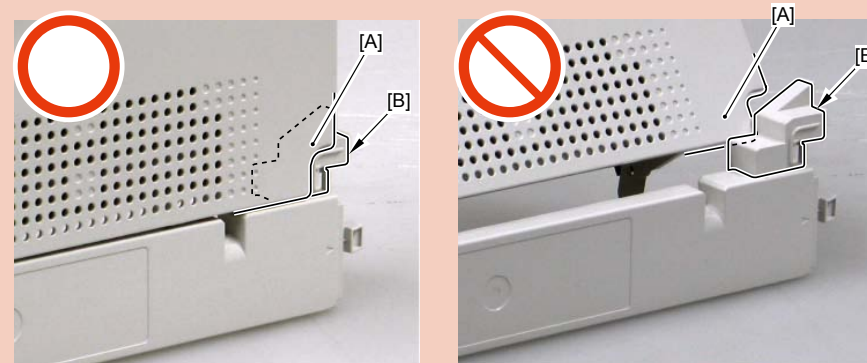
- 1) Remove the Rear Cover [2] from the shafts [1] of the Rear Lower Cover.



F-4-340

CAUTION:

When installing the Rear Door, be sure to install [A] part to be attached outside of [B] part.



F-4-341

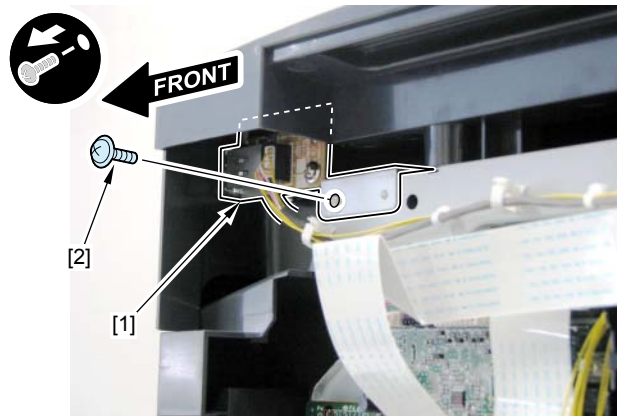
Removing the Upper Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158

Procedure

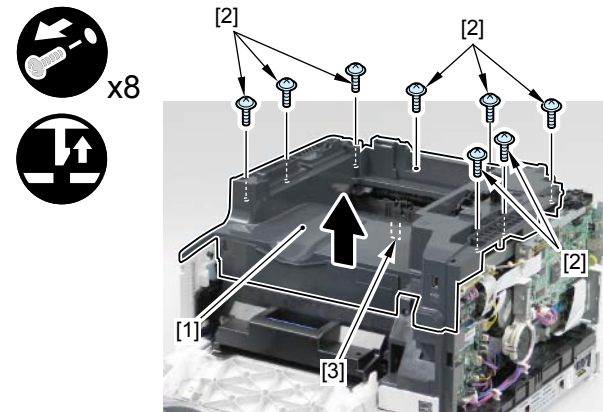
- 1) Open the Front Cover.
- 2) Remove the USB Host PCB [1].
 - 1 screw [2]



F-4-342

- 3) Remove the Upper Cover [1].

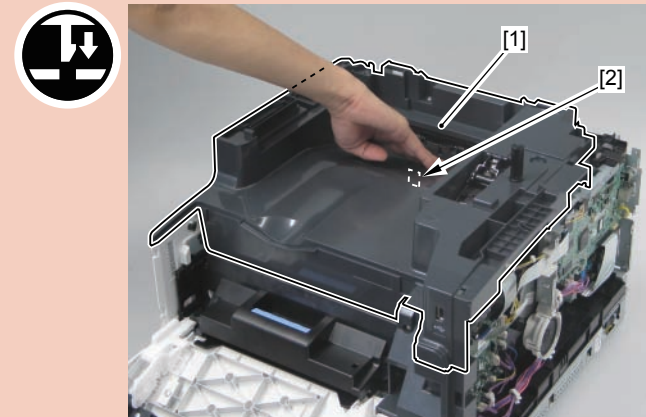
- 8 screws [2]
- 1 claw [3]



F-4-343

CAUTION:

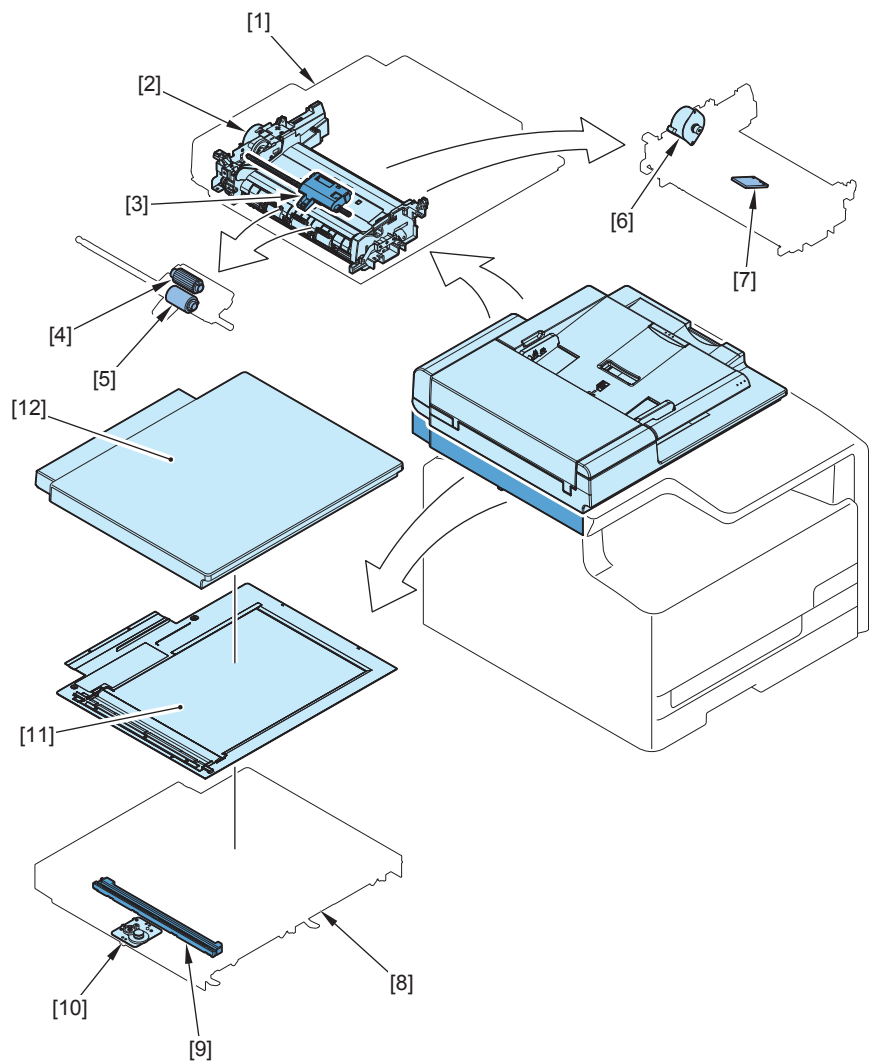
When installing the Upper Cover [1], make sure that the claw [2] is surely fitted.



F-4-344

Document exposure/feeder system

Location



F-4-345

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	ADF Unit	Product Configuration	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-160)	(Refer to page 4-36)
[2]	ADF Paper Feeder Unit	ADF Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-169)	-
[3]	ADF Roller Unit	ADF Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-164)	-
[4]	ADF Pickup Roller	ADF Roller Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-166)	-
[5]	ADF Separation Roller	ADF Roller Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-166)	-
[6]	ADF Motor	ADF Paper Feeder Unit	MF8280Cw/8250Cn /8240Cw/8230Cn M721	(Refer to page 4-172)	-
[7]	ADF Separation Pad	ADF Paper Feeder Unit	MF8280Cw/8250Cn /8240Cw/8230Cn	(Refer to page 4-167)	-
[8]	Reader Unit	Product Configuration	-	(Refer to page 4-160)	(Refer to page 4-37)
[9]	CIS Unit	Reader Unit	-	(Refer to page 4-175)	(Refer to page 4-51)
[10]	Reader Motor	Reader Unit	M720	(Refer to page 4-178)	-
[11]	Reader Unit Upper Cover	Reader Unit	-	(Refer to page 4-173)	(Refer to page 4-48)
[12]	Platen Cover	Product Configuration	MF8210Cn	-	-

T-4-39

Removing the ADF Unit/Copyboard + Reader Unit

Preparation

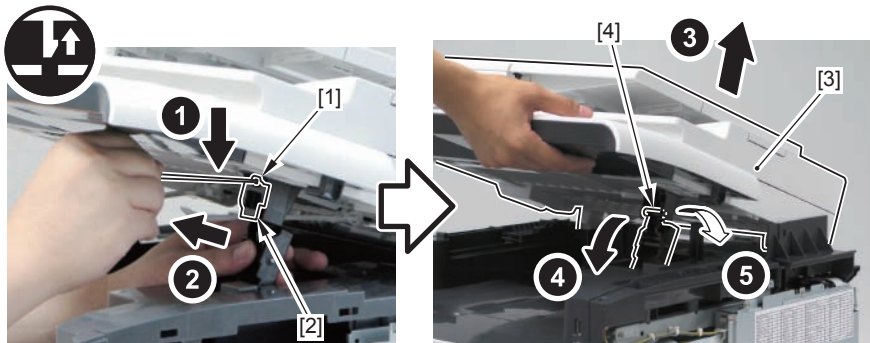
- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153

Procedure

CAUTION:

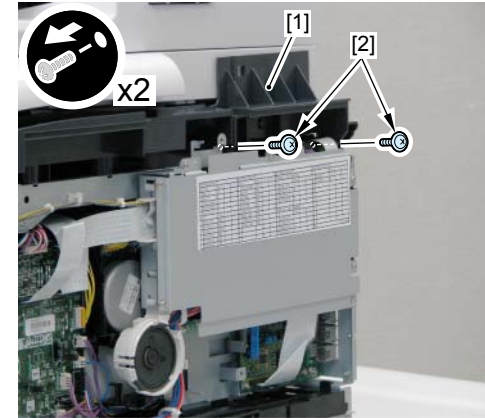
Be sure to perform "After replacing ADF unit (Refer to page 4-36)" and "After replacing reader unit (Refer to page 4-37)" when replacing the ADF Unit and Reader Unit, respectively.

- 1) Remove the claw [1] to remove the Reader Shaft Retainer [2].
- 2) While supporting the ADF Unit/Copyboard + Reader Unit [3], remove the Reader Support Shaft [4].
- 3) Bring down the Reader Support Shaft [4] to close the ADF Unit/Copyboard + Reader Unit [3].



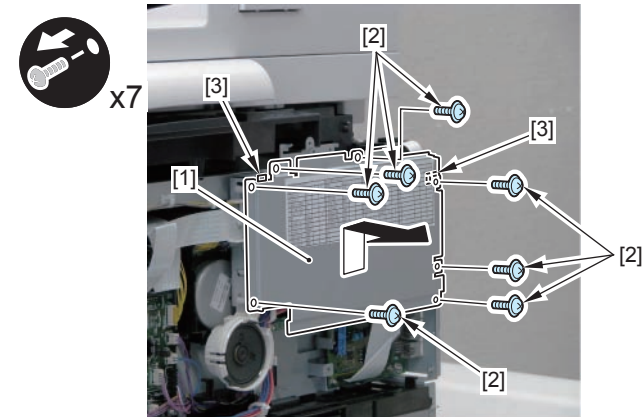
F-4-346

- 4) Remove the handle [1].
 - 2 screws [2]



F-4-347

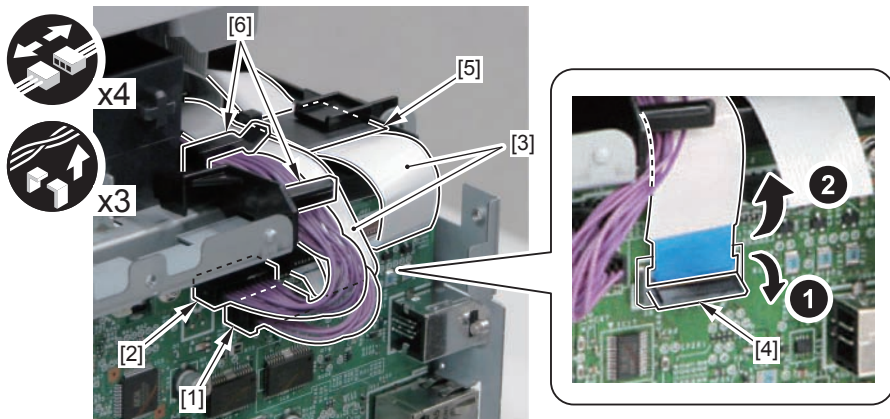
- 5) Remove the Controller Cover [1].
 - 7 screws [2]
 - 2 hooks [3]



F-4-348

6) Disconnect the connector [1], connector (only for models with ADF) [2], and 2 Flat Cables [3].

- 1 Flat Cable Connector Lock [4]
- 1 Ferrite Core [5]
- 2 Harness Guides [6]

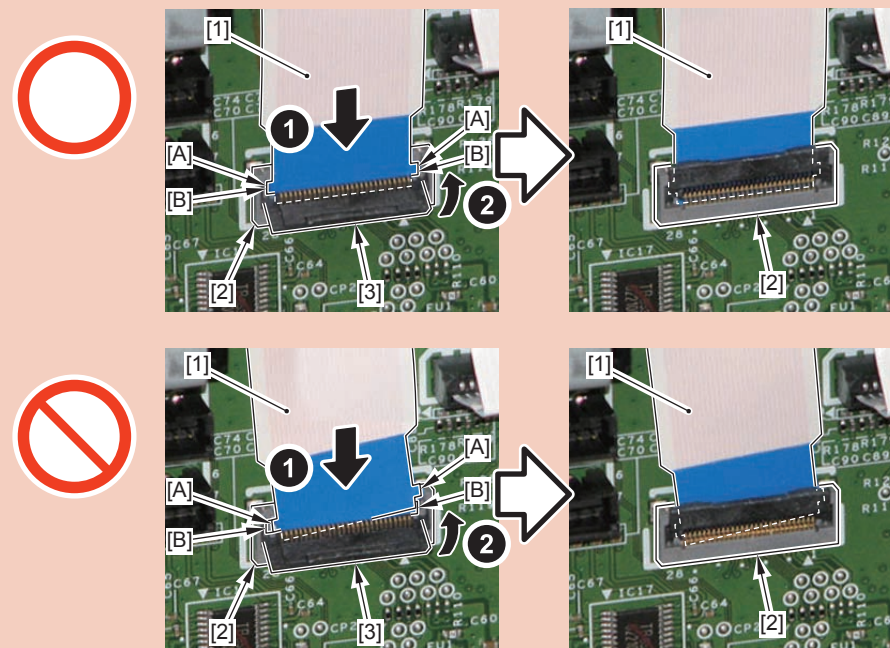


F-4-349

CAUTION:

Be sure to perform the following when connecting the Flat Cable [1] to the connector with a lock [2].

Be sure to insert the Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



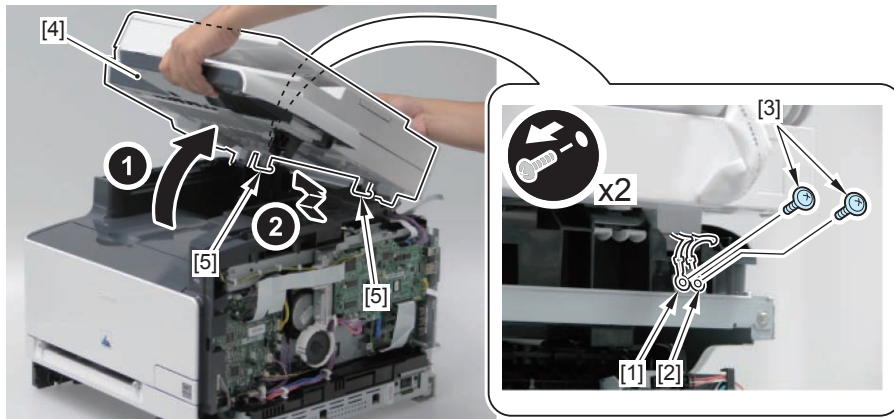
F-4-350

7) Disconnect the grounding [1] and grounding [2] (only for models with ADF).

- 2 Screws [3]

8) Open and remove the ADF Unit/Copyboard + Reader Unit [4].

- 2 Hooks [5]



F-4-351

Separating the ADF Unit/Copyboard + Reader Unit

Preparation

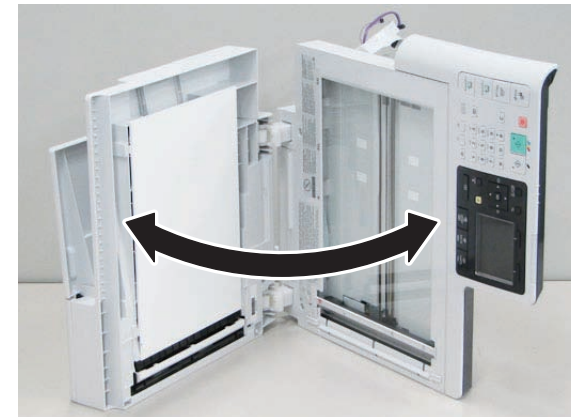
- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158

Procedure

CAUTION:

Be sure to perform "After replacing ADF unit (Refer to page 4-36)" and "After replacing reader unit (Refer to page 4-37)" when replacing the ADF Unit and Reader Unit, respectively.

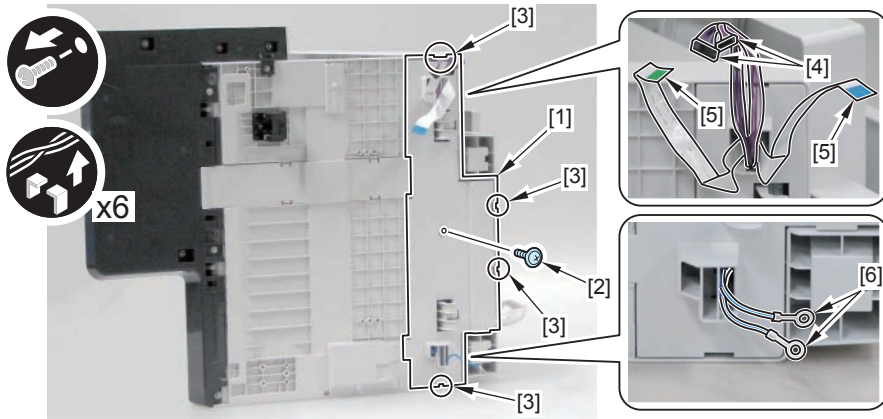
- 1) Place the ADF Unit and Reader Unit in the open status as shown in the figure below (only for models with ADF).



F-4-352

2) Remove the Reader Unit Lower Cover [1] (only for models with ADF).

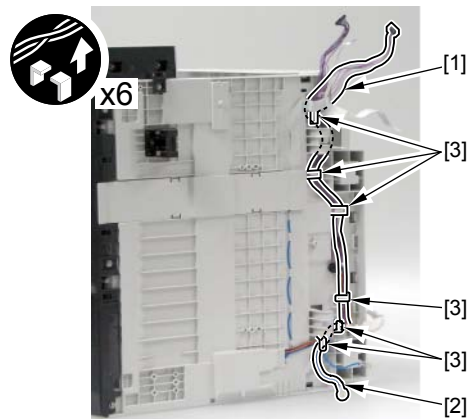
- 1 Screw [2]
- 4 Claws [3]
- 2 Harnesses [4]
- 2 Flat Cables [5]
- 2 Grounding Wires [6]



F-4-353

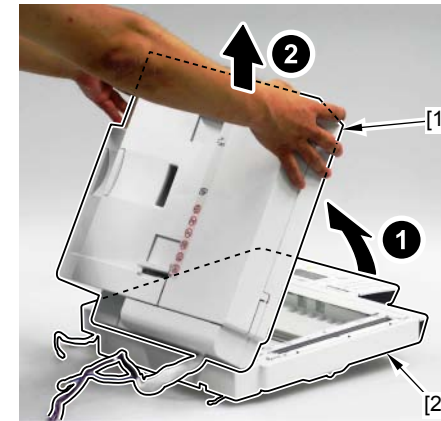
3) Remove the cable [1] and the grounding wire [2] (only for models with ADF).

- 6 wire guides [3]



F-4-354

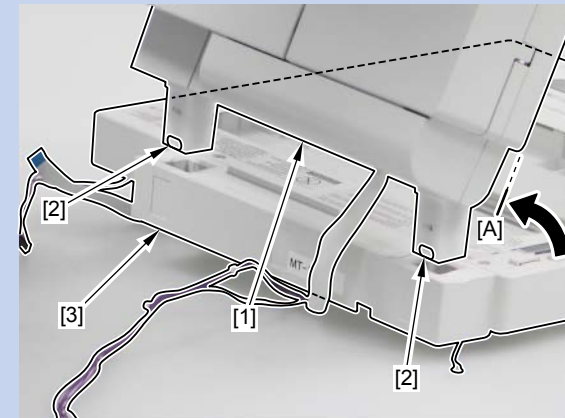
4) Open the ADF Unit/Copyboard and separate it to the direction of the arrow from the Reader Unit [2].



F-4-355

NOTE:

If ADF Unit/Copyboard [1] is not opened to the position [A], it cannot be separated from the Reader Unit, because of the 2 claws [2].



F-4-356

■ After replacing ADF units

1) After executing the white level adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

2) Execute the reading position adjustment with the following service mode.

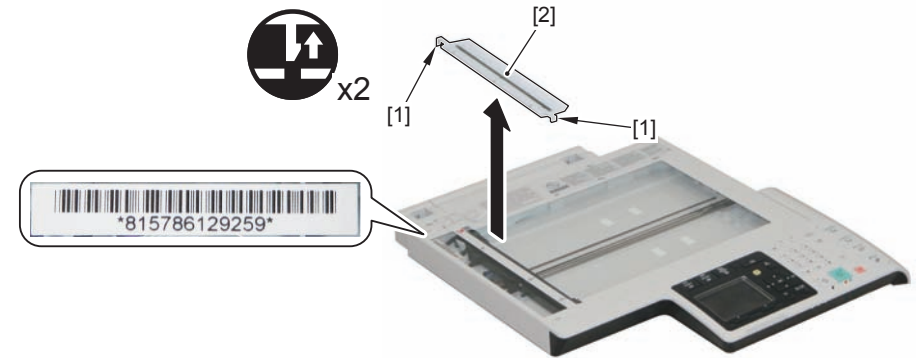
- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)

3) Execute the original stop position and feed speed adjustment at stream reading.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

■ After replacing reader units

1) Release 2 claws [1] and Remove the Scoopup sheet holder [2], Enter the setting value of the Standard White Plate.



F-4-357

- COPIER > ADJUST > CCD > W-PLT-X (X signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Y (Y signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Z (Z signal data for the standard white plate)

MEMO

The value of W-PLT-X: The first four digits of the value on the label

The value of W-PLT-Y: The four digits in the middle of the value on the label

The value of W-PLT-Z: The last four digits of the value on the label

2) Execute the white level adjustment.

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

3) After executing the reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

4) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

5) Enter the value on the label packed with the part in the following service mode item.

- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)
- COPIER> ADJUST> CCD> 50-RG (Color displacement correction value between RG in the vertical scanning direction (50%))
- COPIER> ADJUST> CCD>50-GB (Color displacement correction value between GB in the vertical scanning direction (50%))
- COPIER> ADJUST> CCD>100-RG (Color displacement correction value between RG in the vertical scanning direction (100%))
- COPIER> ADJUST> CCD>100-GB (Color displacement correction value between GB in the vertical scanning direction (100%))
- COPIER>ADJUST>PASCAL>OFST-P-Y (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-M (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-C (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-K (Adjustment of test chart reading density)

6) Read the image and execute the adjustment with the following service mode.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

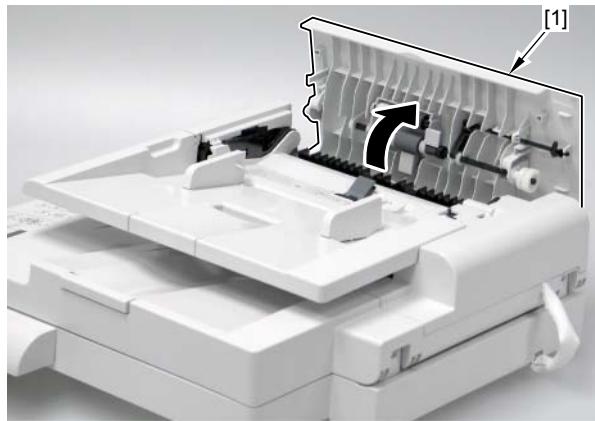
Removing the ADF Roller Unit (MF8280Cw/8250Cn/8240Cw/8230Cn)

Procedure

CAUTION:

Do not touch the surface of the roller.

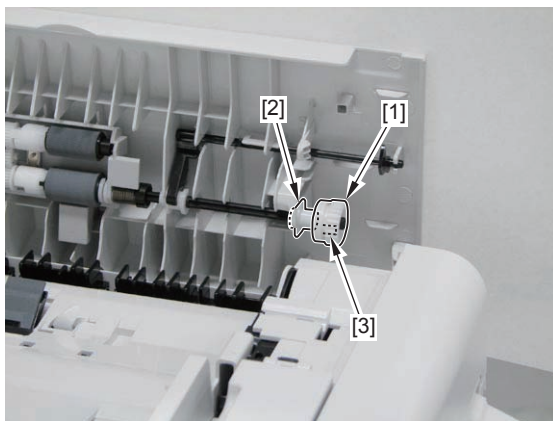
1) Open the ADF Upper Cover [1].



F-4-358

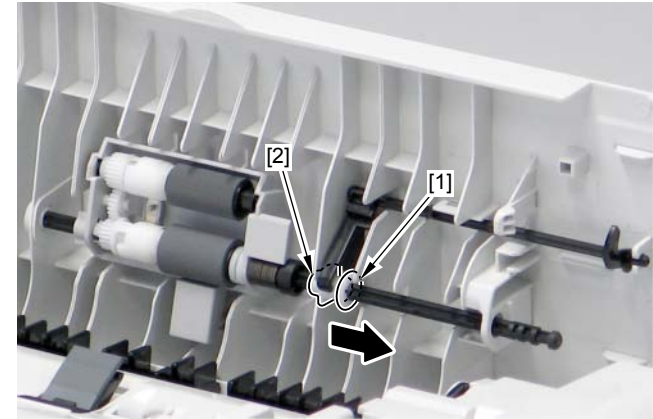
2) Remove the gear [1] and the bushing [2].

- 1 claw [3]



F-4-359

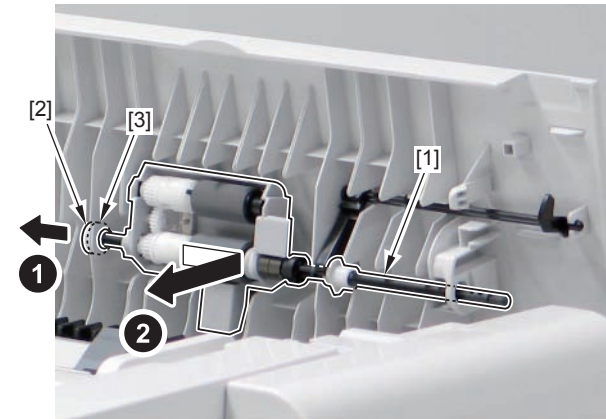
3) Remove the plastic E-ring [1] and slide the bushing [2].



F-4-360

4) Remove the ADF Roller Unit [1].

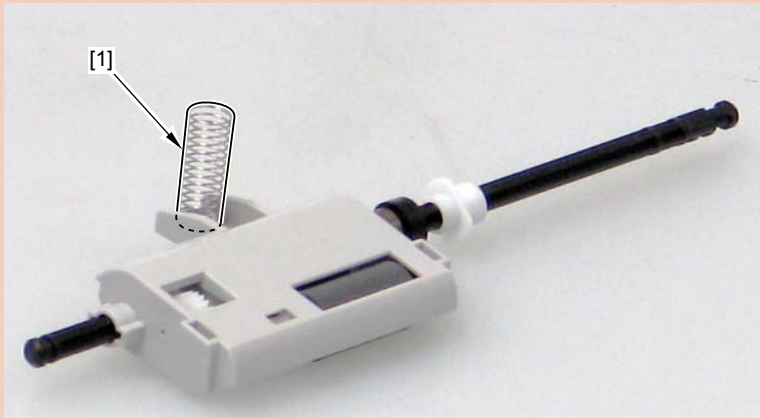
- 1 plastic E-ring [2]
- 1 bushing [3]



F-4-361

CAUTION:

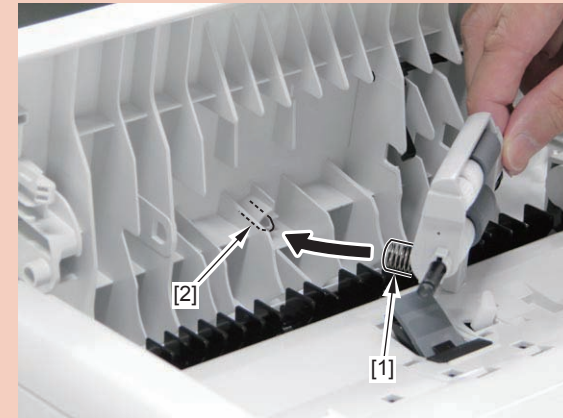
Be careful not to lose the spring [1] attached to the ADF Roller Unit.



F-4-362

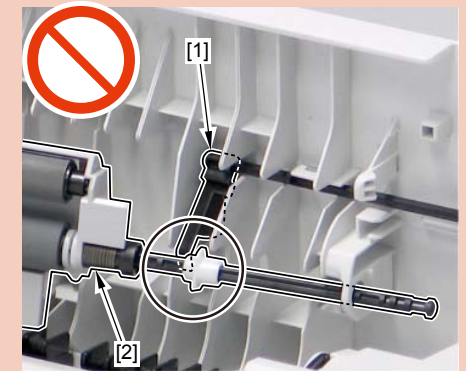
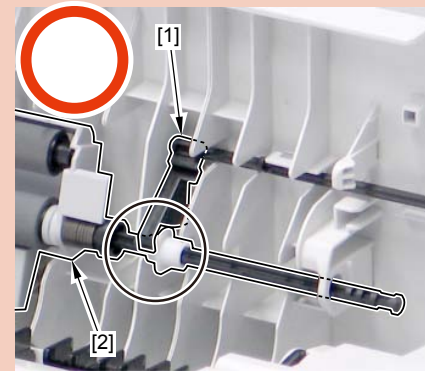
CAUTION:

- When installing, match the spring [1] of the ADF Roller Unit to the boss [2].



F-4-363

- Be sure to put the Sensor Flag [1] above the ADF Roller Unit [2] at installation work.



F-4-364

Removing the ADF Pickup Roller (MF8280Cw/8250Cn/8240Cw/8230Cn)

Preparation

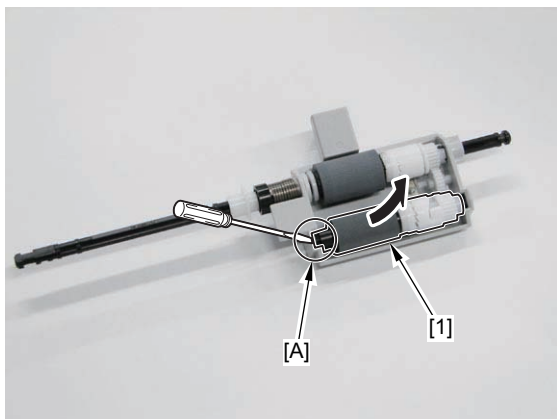
1) Remove the ADF roller unit. Refer to page 4-164.

Procedure

CAUTION:

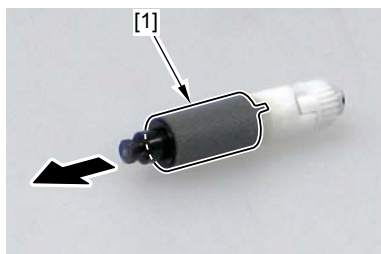
Do not touch the surface of the roller.

1) Insert the end of the flat-blade screwdriver into the [A] part to remove the ADF Pickup Roller Unit [1].



F-4-365

2) Remove the ADF Pickup Roller [1].



F-4-366

Removing the ADF separation roller (MF8280Cw/8250Cn/8240Cw/8230Cn)

Preparation

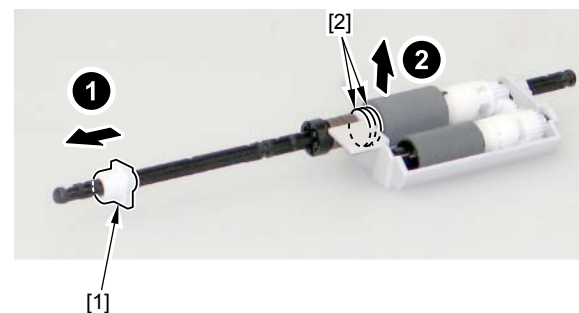
1) Remove the ADF roller unit. Refer to page 4-164.

Procedure

CAUTION:

Do not touch the surface of the roller.

1) Remove the bushing [1] and 2 plastic e-rings [2].

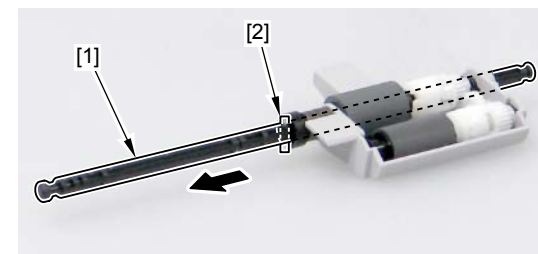


F-4-367

2) Slide the Roller Shaft [1] to remove the parallel pin [2].

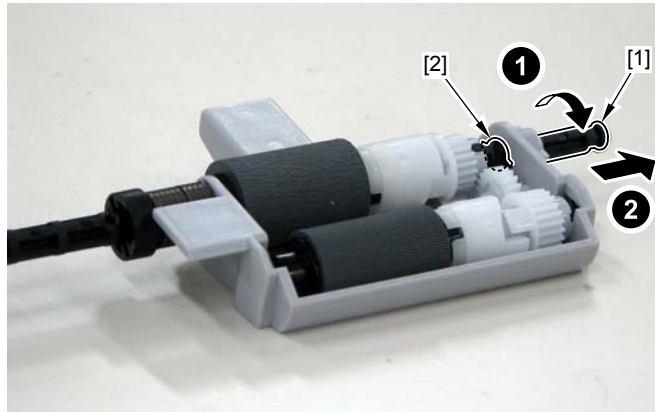
CAUTION:

Be careful not to lose the parallel pin [2] at assembly/disassembly.



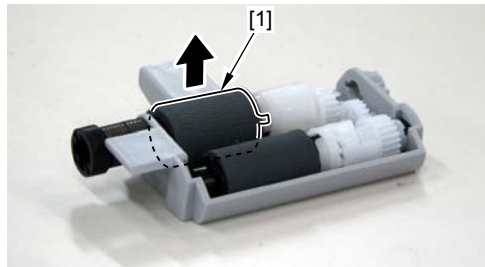
F-4-368

- 3) Turn the Roller Shaft [1] in the direction of the arrow and fit the projection [2] to the hole of the Roller Holder to remove.



F-4-369

- 4) Remove the ADF Separation Roller [1].



F-4-370

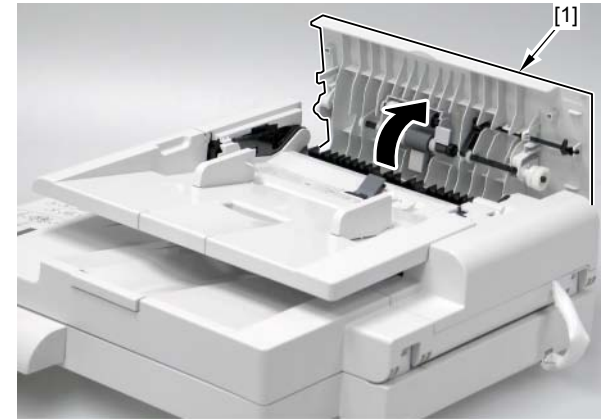
Removing the ADF Separation Pad (MF8280Cw/8250Cn/8240Cw/8230Cn)

Procedure

CAUTION:

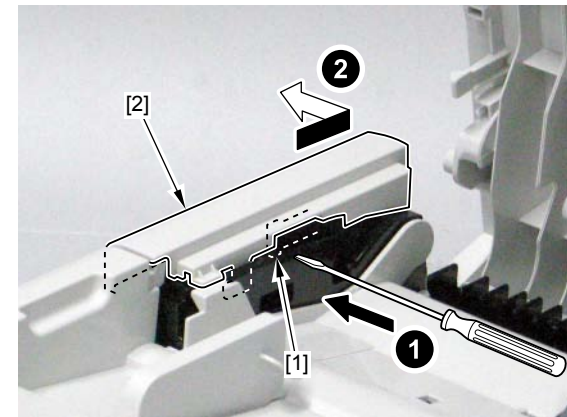
Do not touch the surface of the roller or pad.

- 1) Open the ADF Upper Cover [1].



F-4-371

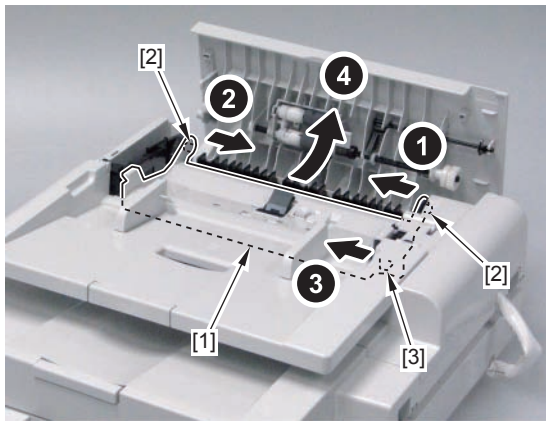
- 2) Unhook the hook [1] using the flat-head screw driver and remove the ADF Front Cover [1] in the direction of the arrow.



F-4-372

3) Remove the Feed Guide [1] in the direction of the arrow.

- 2 bosses [2]
- 1 claw [3]

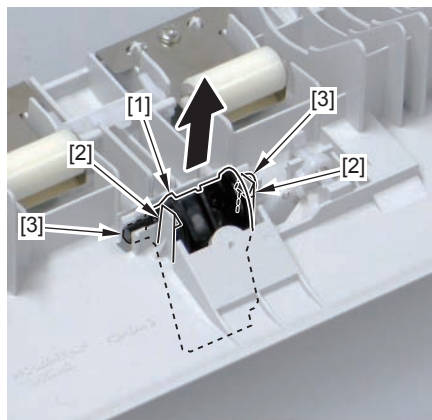


F-4-373

4) Reverse the Feed Guide.

5) Remove the Separation Pad Holder [1].

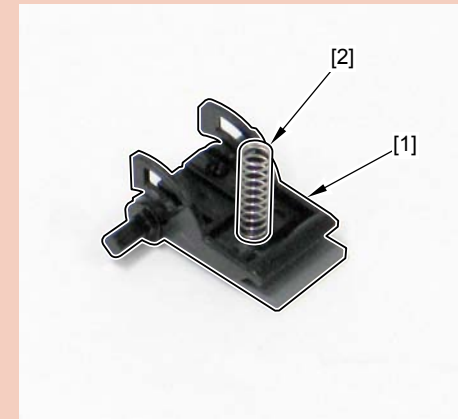
- 2 Claws [2]
- 2 Shafts [3]



F-4-374

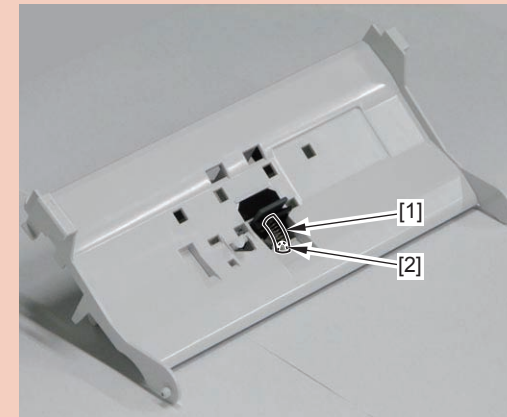
CAUTION:

- Be careful not to lose the spring [2] attached to the Separation Pad Holder [1].



F-4-375

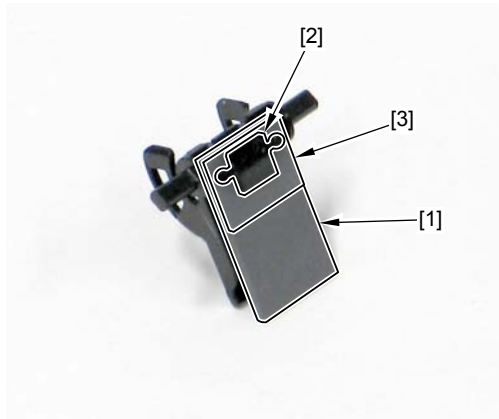
- When installing, match the spring [1] to the boss [2] of the Feed Guide.



F-4-376

6) Remove the Separation Pad [1].

- Pad retainer [2]
- Sheet [3]

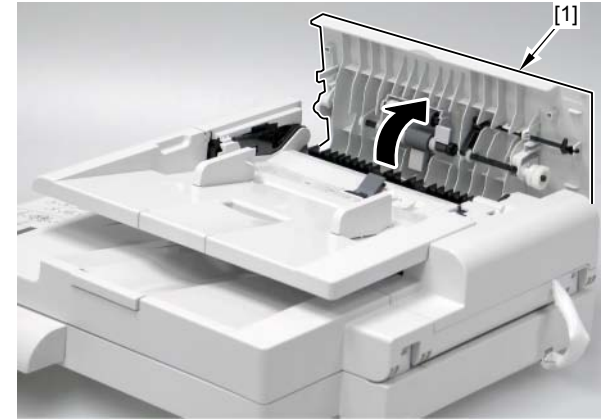


F-4-377

Removing the ADF Pickup Feed Unit (MF8280Cw/8250Cn/8240Cw/8230Cn)

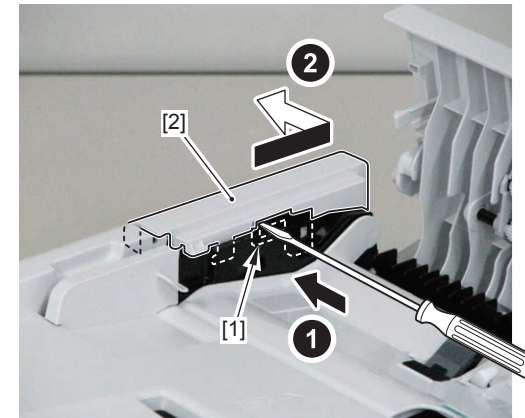
Procedure

1) Open the ADF Upper Cover [1].



F-4-378

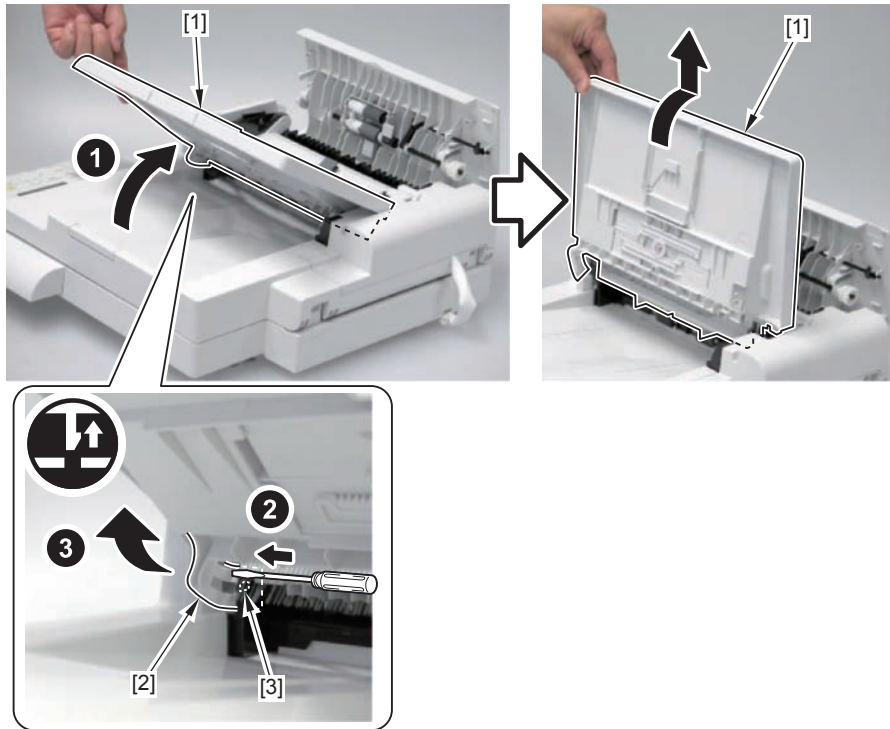
2) Remove the hook [1] using flat-head driver, and remove the ADF Front Cover [2] in the direction of the arrow.



F-4-379

3) Lift the ADF Tray [1] until it stops and release the hook [2] to tip the tray into the perpendicular position and remove by pulling upward.

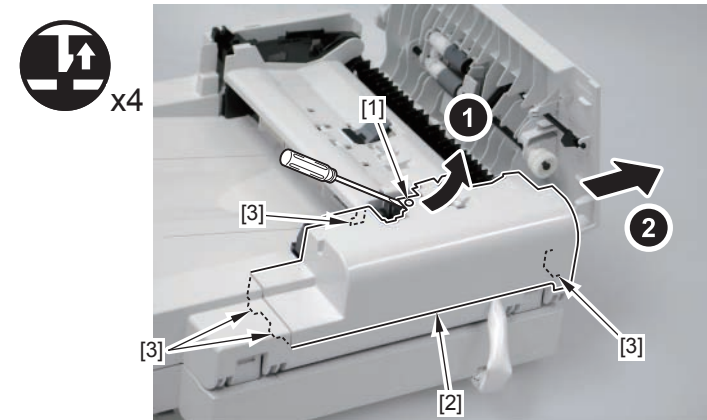
- 1 Claw [3]



F-4-380

4) Remove the boss [1] to remove the ADF Rear Cover [2] in the direction of the arrow.

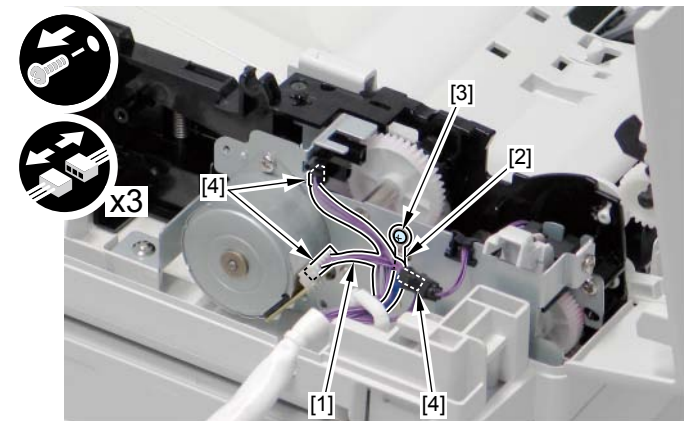
- 4 claws [3]



F-4-381

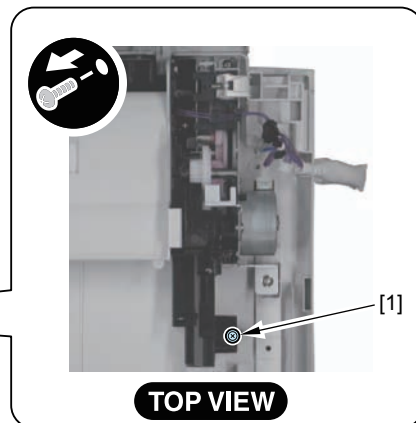
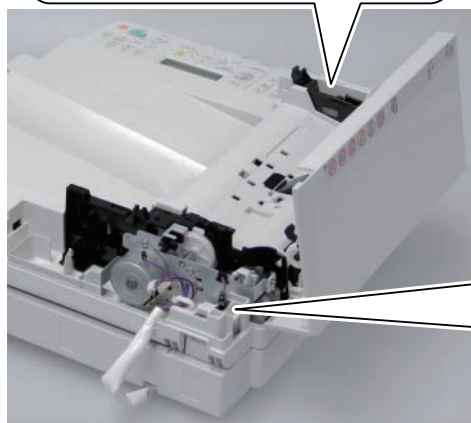
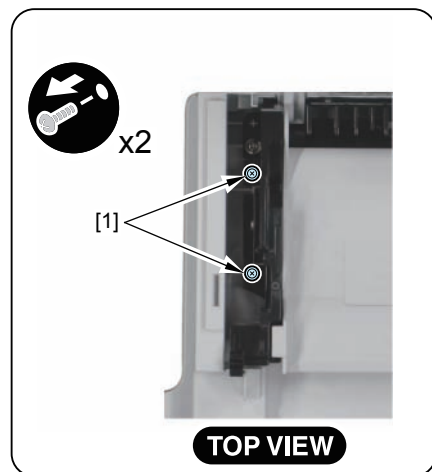
5) Remove the harness [1] and the grounding cord [2].

- 1 screw (binding) [3]
- 3 connectors [4]



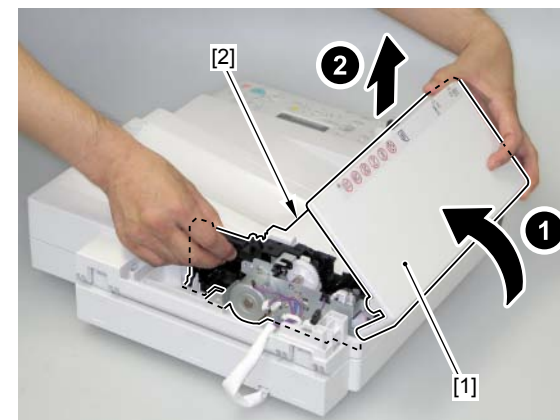
F-4-382

6) Remove the 3 screws [1] of the ADF Pickup Feed Unit.



F-4-383

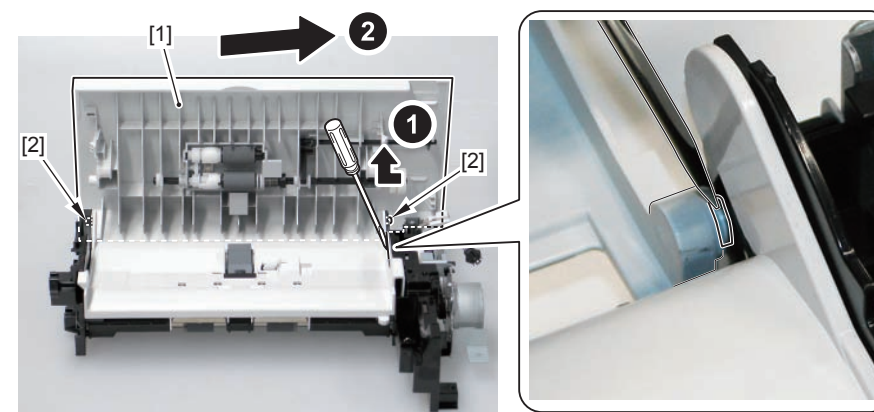
7) Close the ADF Upper Cover [1] to remove the ADF Pickup Feed Unit [2].



F-4-384

8) Remove the ADF Upper Cover Unit [1].

- 2 bosses [2]



F-4-385

Removing the ADF Pickup Motor (MF8280Cw/8250Cn/8240Cw/8230Cn)

Preparation

1) Remove the ADF Pickup Feed Unit. Refer to page 4-169

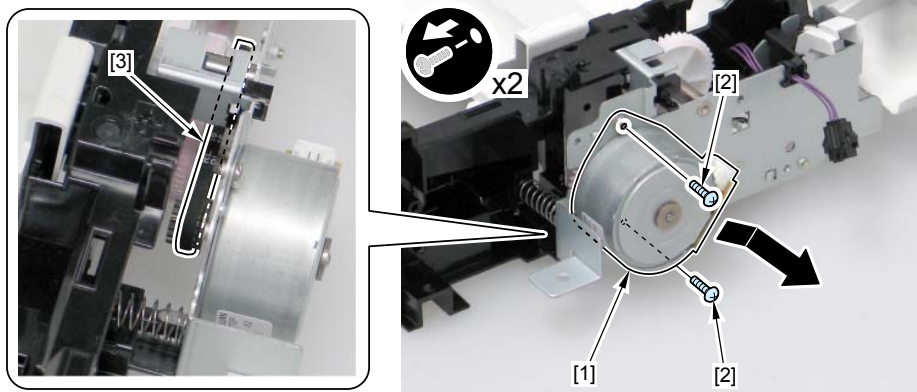
Procedure

NOTE:

When removing the ADF Pickup Motor, it is not necessary to remove the ADF Upper Cover Unit described in the previous step.

1) Remove the ADF Motor [1] in the direction of the arrow.

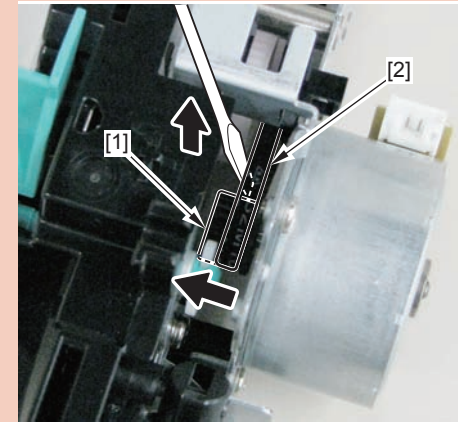
- 2 screws [2]
- 1 belt [3]



F-4-386

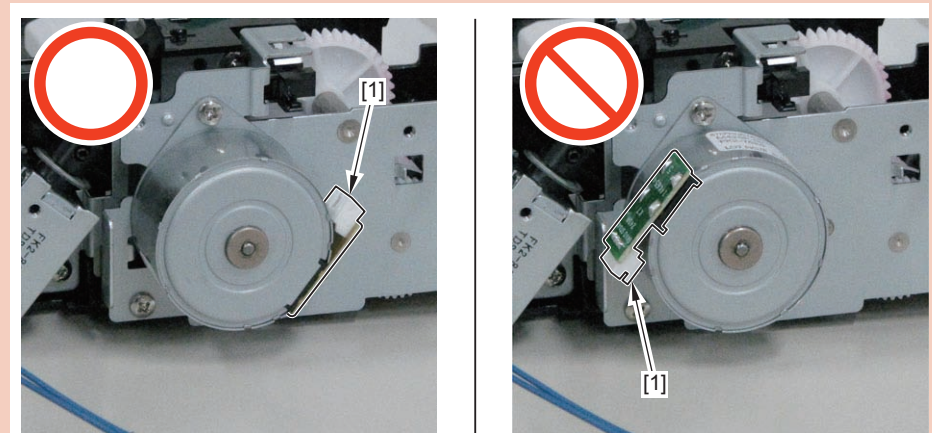
CAUTION:

- When installing the ADF Pickup Motor, be sure to hook the gear [1] of the motor on the belt [2].



F-4-387

- When installing the ADF Pickup Motor, be sure to install with the connector [1] on the right side.



F-4-388

Removing the Reader Unit Upper Cover

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Separate the ADF Unit/Copyboard + Reader Unit. Refer to page 4-160

Procedure

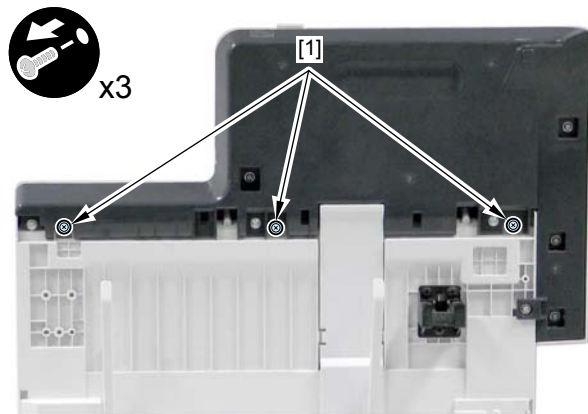
CAUTION:

Be sure to perform "After Replacing the Reader Upper Cover Unit (Refer to page 4-48)" when replacing the Reader Upper Cover Unit, respectively.

CAUTION:

To replace the Copyboard Glass, be sure to replace the Copyboard Glass together with the Reader Unit Upper Cover.

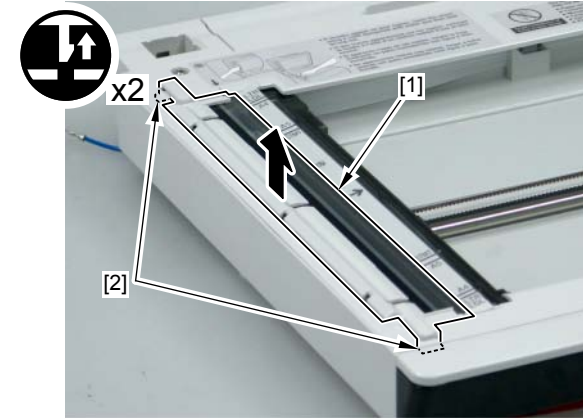
- 1) Remove the 3 screws [1] at the bottom of the Reader Unit..



F-4-389

- 2) Remove the Scoopup sheet holder [1].

- 2 claws [2]



F-4-390

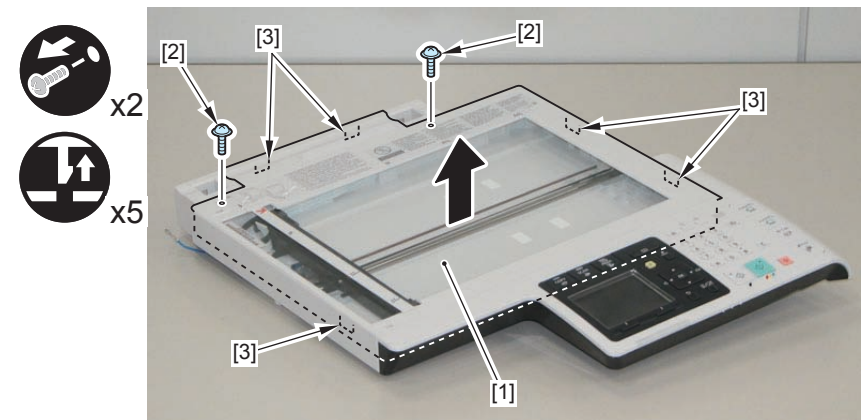
- 3) Remove the Reader Unit Upper Cover [1].

- 2 screw [2]

- 5 claws [3]

CAUTION:

Because the Copyboard Glass [2] is attached to the Upper Cover [1], be careful not to drop or damage the Upper Cover.



F-4-391

After Replacing the Reader Upper Cover Unit

1) Enter the setting value of the Standard White Plate.



F-4-392

- COPIER > ADJUST > CCD > W-PLT-X (X signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Y (Y signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Z (Z signal data for the standard white plate)

MEMO

The value of W-PLT-X: The first four digits of the value on the label

The value of W-PLT-Y: The four digits in the middle of the value on the label

The value of W-PLT-Z: The last four digits of the value on the label

2) After executing the CCD reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

3) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

Removing the CIS Unit

Preparation

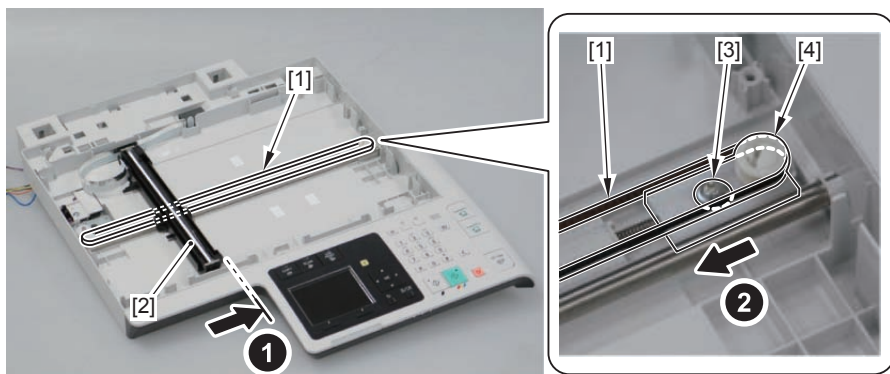
- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Separate the ADF Unit/Copyboard + Reader Unit. Refer to page 4-160
- 6) Remove the Reader Unit Upper Cover Unit. Refer to page 4-173.

Procedure

CAUTION:

Be sure to perform "After replacing CIS unit (Refer to page 4-51)" when replacing the CIS unit, respectively.

- 1) Pull the Drive Belt [1] to move the CIS Unit [2].
- 2) Loosen the screw [3] and move the Pulley Holder [4] in the direction of the arrow to remove the Drive Belt [1].

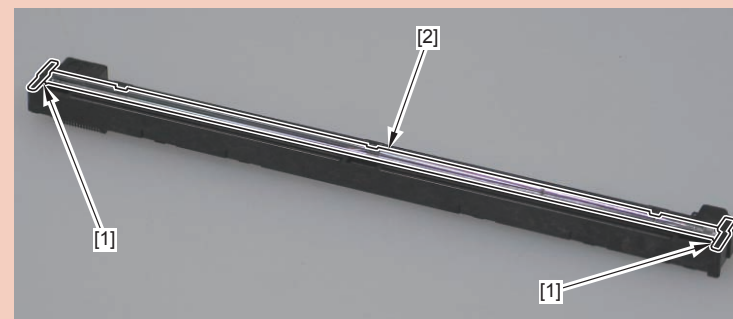


F-4-393

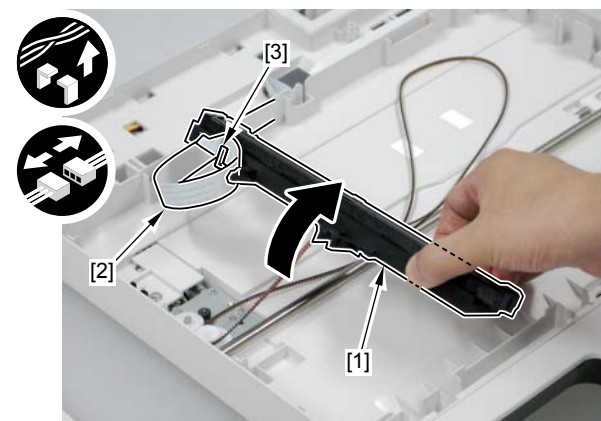
- 3) Remove the CIS Unit Mount [1] and remove the flat cable [2].
 - 1 guide [3]

CAUTION:

- When assembling/disassembling the copyboard glass, take care not to lose the 2 CIS unit spacers [1].
- When assembling/disassembling the copyboard glass, do not touch the copy reading area [2] of the CIS unit.

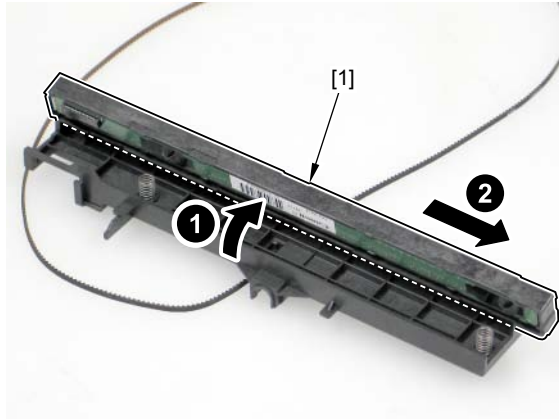


F-4-394



F-4-395

4) Bring up the CIS Unit [1] to remove in the direction of the arrow.

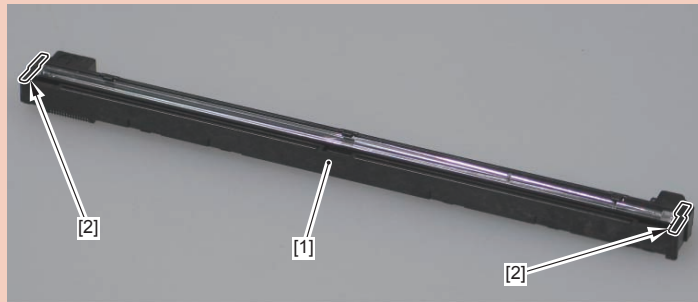


F-4-396

CAUTION:

When replacing the CIS Unit [1], be sure to replace the CIS Unit [1] and the CIS Spacer [2], which are included in the package of the service part, at the same time.

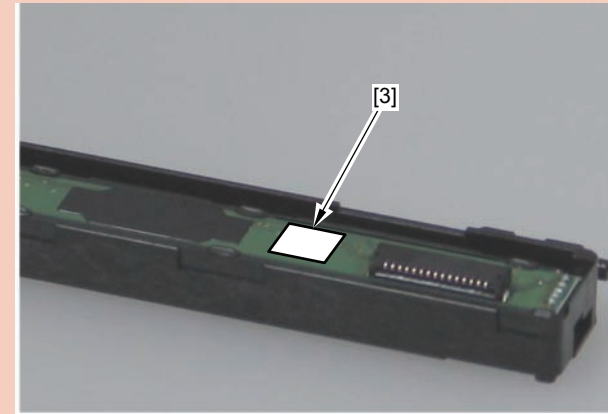
If a different spacer is used, image reading error may occur.



F-4-397

CAUTION:

- When installing the CIS Unit [1], be sure to replace the CIS Spacer [2] together with the CIS Unit [1] (included in the package of the Service Parts).



F-4-398

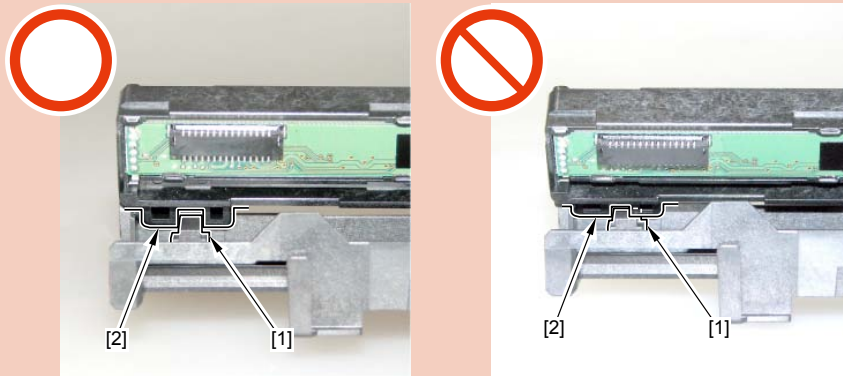
- When the CIS Spacers are mixed up or lost, check the CIS Rank Label [3] to use, and use the appropriate CIS Spacer that fits the rank of the CIS Unit.

Rank	Color of spacer	Dimension (Height of spacer)
rank A	light gray	1.17 mm
rank B	dark gray	1.27 mm
rank C	brown	1.37 mm

T-4-40

CAUTION:

When installing the CIS Unit, be sure to check that the projection [1] is fitted to the dent [2] to install.



F-4-399

■ After replacing CIS units

1) Execute the white level adjustment. If it fails, turn OFF/ON the power and execute the operation again.

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

2) After executing the reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

3) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

4) Execute the reading position adjustment with the following service mode.

- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)

5) Execute the original stop position and feed speed adjustment at stream reading.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

Removing the Reader Scanner Motor

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Separate the ADF Unit/Copyboard + Reader Unit. Refer to page 4-160
- 6) Remove the Reader Unit Upper Cover. Refer to page 4-173.

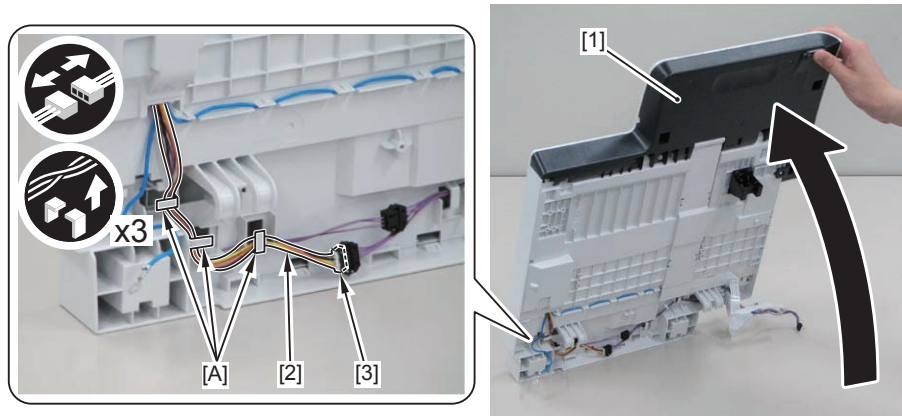
Procedure

- 1) Free the harness [2] while holding the Reader Unit [1].

- 1 Connector [3]
- 3 Harness Guides at the [A] location

CAUTION:

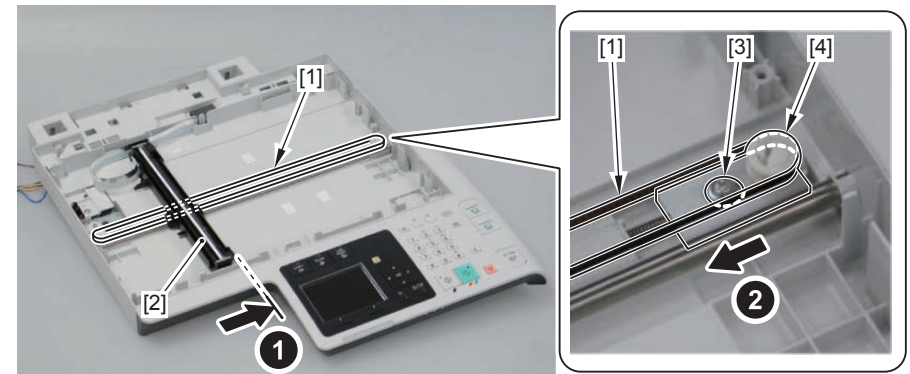
To prevent parts on the top side of the Reader Unit, do not tip the Reader Unit [1] into the perpendicular position.



F-4-400

- 2) Pull the Drive Belt [1] to move the CIS Unit [2].

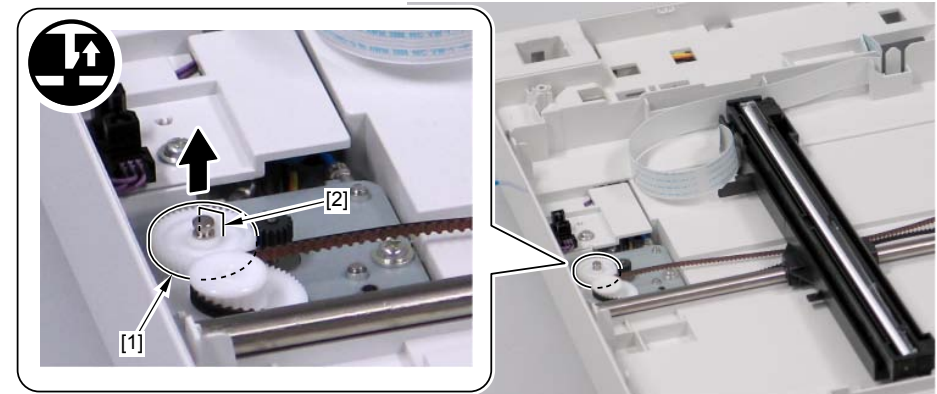
- 3) Loosen the screw [3] and move the Pulley Holder [4] in the direction of the arrow to remove the Drive Belt [1].



F-4-401

- 4) Remove the gear [1].

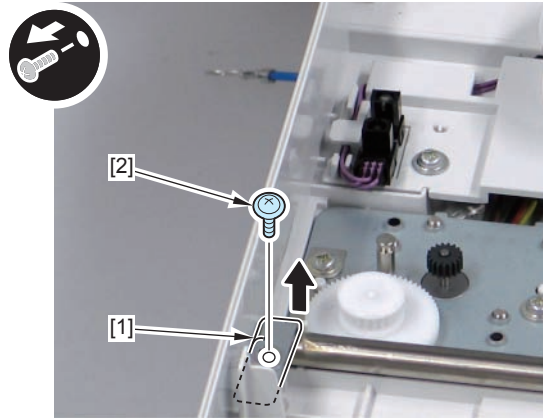
- 1 claw [2]



F-4-402

5) Remove the Shaft Retaining Plate [1].

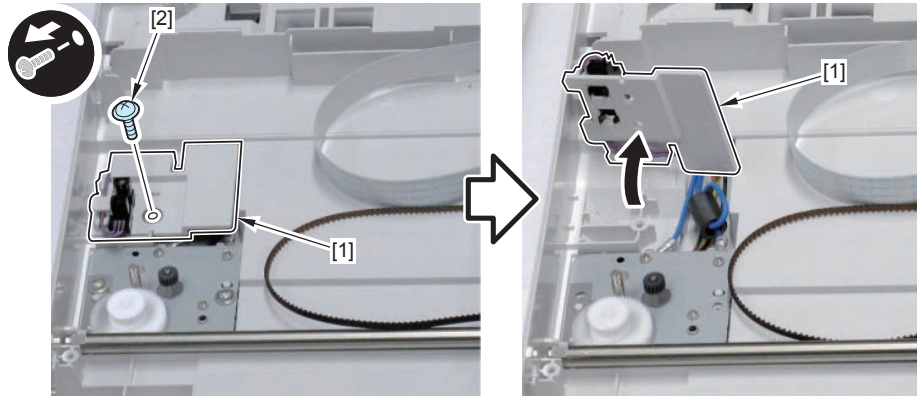
- 1 screw [2]



F-4-403

6) Move the Sensor Mount [1].

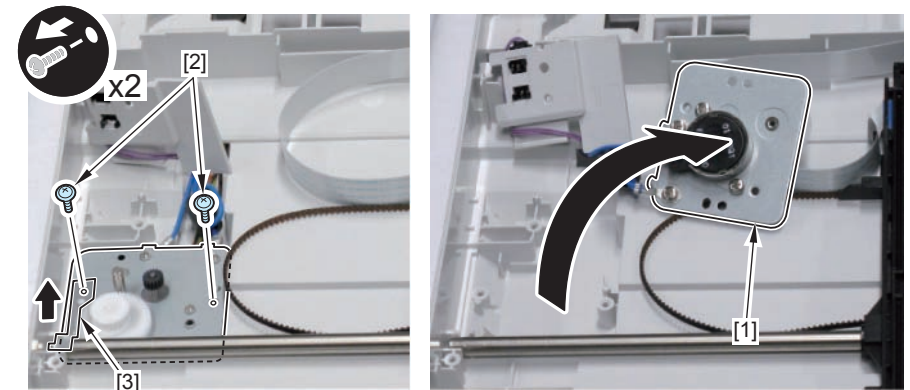
- 1 screw [2]



F-4-404

7) Move the Motor Mounting Plate [1] and turn it over.

- 2 screws [2]
- 1 Grounding Plate [3]

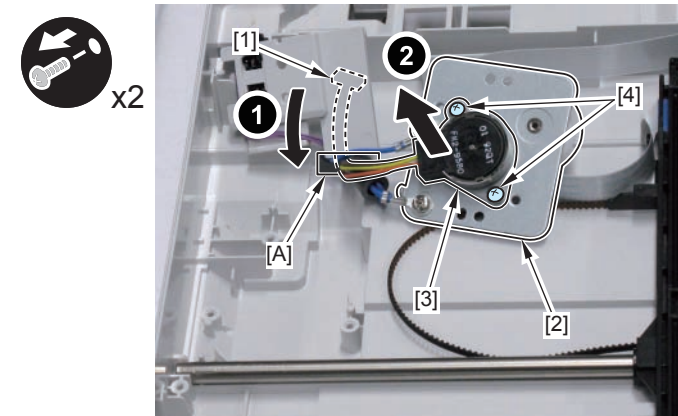


F-4-405

8) Pass the connector [1] through the hole [A].

9) Remove the Reader Scanner Motor [3] from the Motor Mounting Plate [2].

- 2 screws [4]

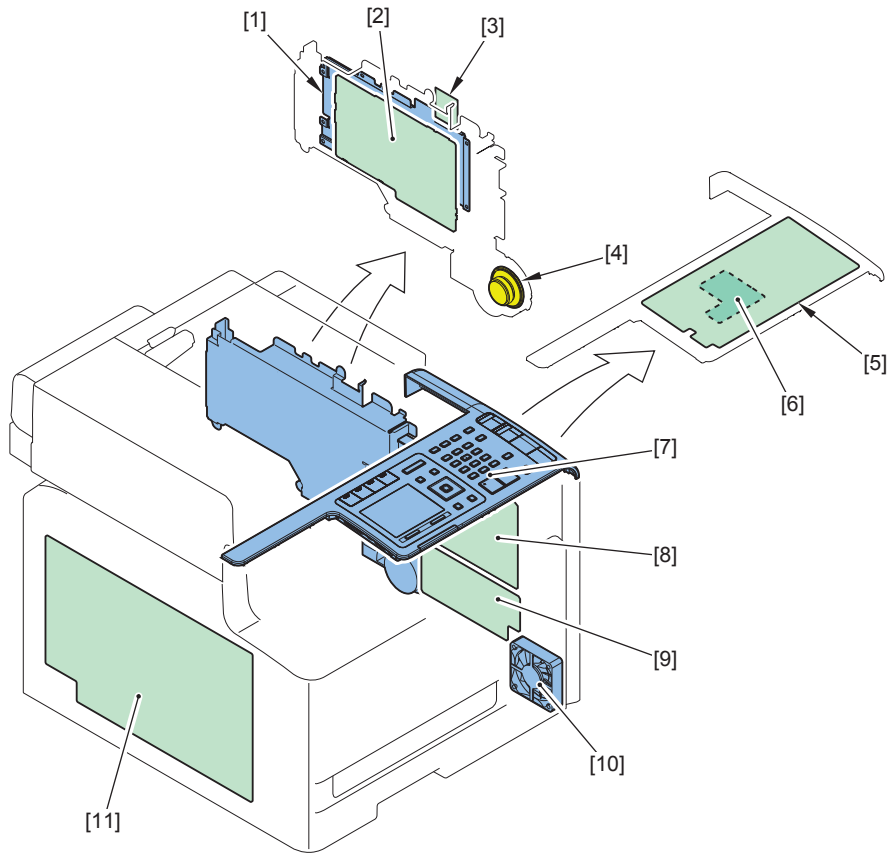


F-4-406

Controller System

Location

(1/2)

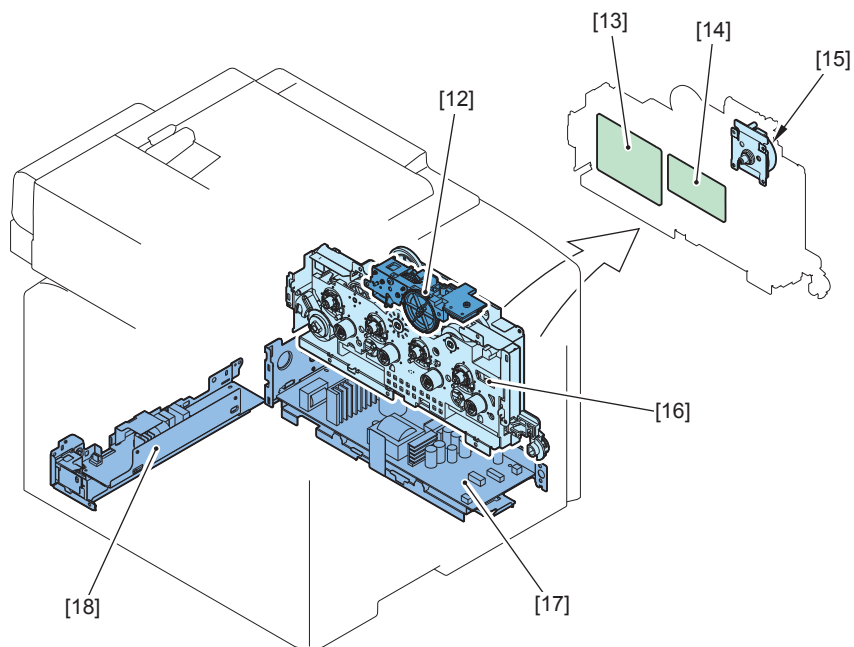


F-4-407

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Controller Cover	Product Configuration	-	(Refer to page 4-182)	-
[2]	Main Controller PCB	Product Configuration	UN20	(Refer to page 4-183)	(Refer to page 4-58)
[3]	Wireless LAN PCB	Product Configuration	MF8280Cw /8240Cw UN16	(Refer to page 4-182)	-
[4]	Speaker	Product Configuration	MF8280Cw /8250Cn SP1	(Refer to page 4-212)	-
[5]	Control Panel Key PCB	Control Panel Unit	UN22	(Refer to page 4-199)	-
[6]	Control Panel LCD PCB	Control Panel Unit	UN21	(Refer to page 4-199)	-
[7]	Control Panel Unit	Product Configuration	-	(Refer to page 4-196)	-
[8]	DC Controller PCB	Product Configuration	UN1	(Refer to page 4-186)	(Refer to page 4-61)
[9]	Driver PCB	Product Configuration	UN2	(Refer to page 4-187)	-
[10]	Fan	Product Configuration	FM1	(Refer to page 4-211)	-
[11]	High Voltage Power Supply PCB	Product Configuration	UN3	(Refer to page 4-193)	-

T-4-41

(2/2)



F-4-408

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[12]	Sub Drive Unit	Product Configuration	-	(Refer to page 4-209)	-
[13]	FAX-NCU PCB	Product Configuration	MF8280Cw /8250Cn UN25	(Refer to page 4-201)	-
[14]	Off Hook PCB	Product Configuration	MF8280Cw /8250Cn UN26	(Refer to page 4-201)	-
[15]	Main Motor	Product Configuration	M701	(Refer to page 4-210)	-
[16]	Main Drive Unit	Main Drive Unit	-	(Refer to page 4-202)	-
[17]	Low Voltage Power Supply Unit	Product Configuration	-	(Refer to page 4-190)	-
[18]	Fixing Power Supply Unit	Product Configuration	-	(Refer to page 4-195)	-

T-4-42

Removing the Controller Cover

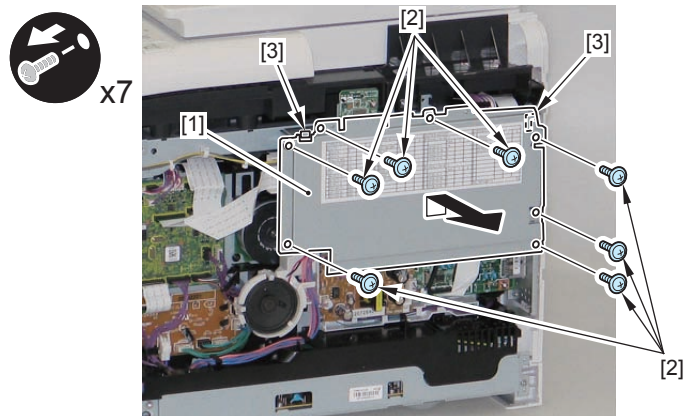
Preparation

1) Remove the Right Cover. Refer to page 4-147.

Procedure

1) Remove the Controller Cover [1].

- 7 Screws [2]
- 2 Hooks [3]



F-4-409

Removing the Wireless LAN PCB (MF8280Cw/8240Cw)

Preparation

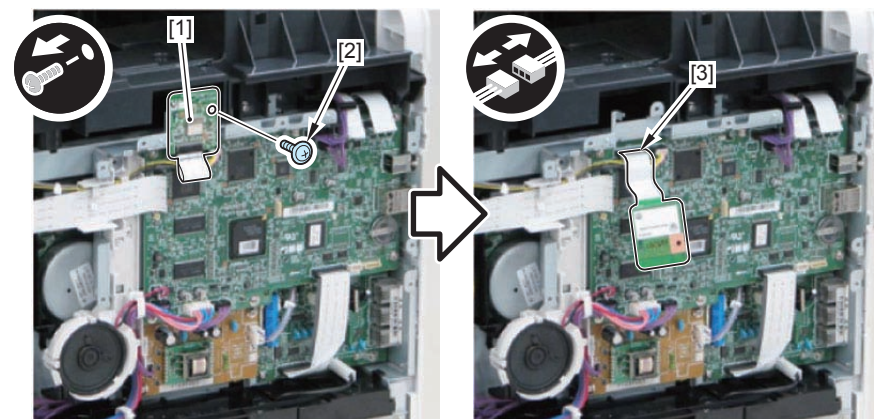
1) Remove the Right Cover. Refer to page 4-147.

2) Remove the Controller Cover. Refer to page 4-182.

Procedure

1) Remove the Wireless LAN PCB [1].

- 1 Screw [2]
- 1 Flat Cable [3]



F-4-410

Removing the Main Controller PCB

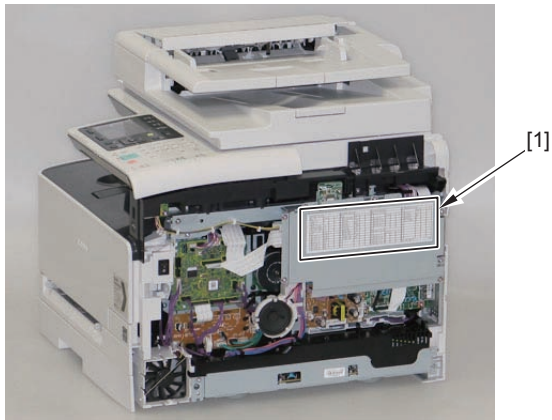
CAUTION:

Be sure to perform "Before Replacing the Main Controller PCB (Refer to page 4-58)" when replacing the Main Controller PCB, respectively.

Before Replacing the Main Controller PCB

Back up user data (settings, registered data, etc.) and service mode data for setting and registration after PCB replacement. Take notes if data is unable to back up.

- 1) In Remote UI, perform the following procedure to export the user data (login in administrator mode).
In Setting/Registration > Import/Export > Menu > Export, select an item and then start export.
- 2) In service mode, perform the following procedure to export the service mode data (and then import it after replacement).
FUNCTION > SYSTEM > EXPORT
- 3) Record the default settings shown on the service label [1] (these are entered after replacement).
- 4) Write down the machine's serial number and the data of Settings/Registration > System Settings > Device Information > Location (these are entered after replacement).



F-4-411

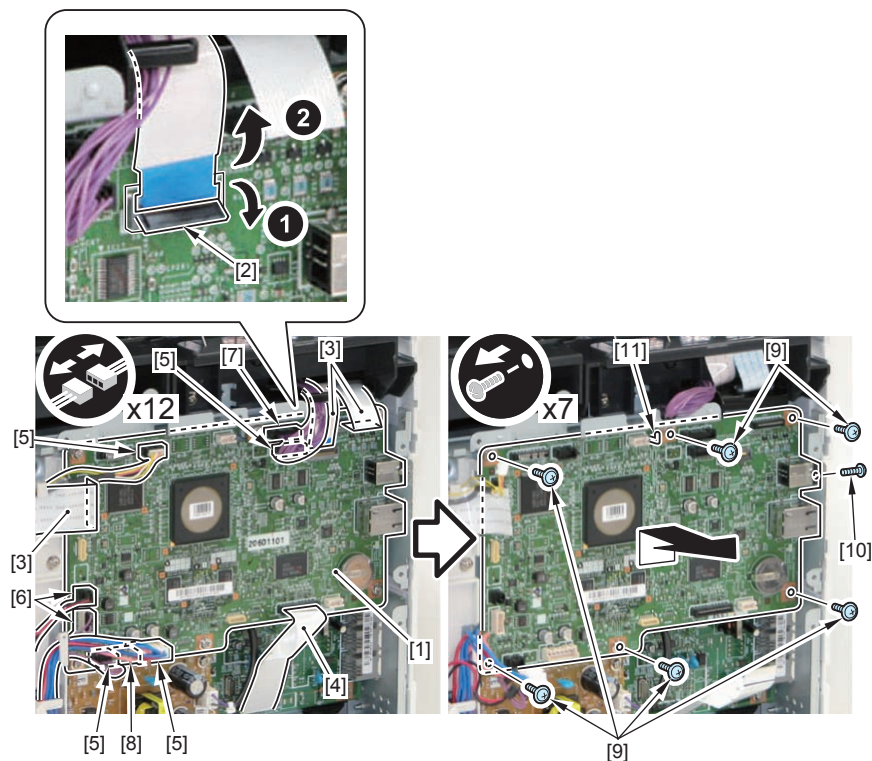
Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Controller Cover. Refer to page 4-182.
- 3) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.

Procedure

1) Remove the Main Controller PCB [1].

- 1 Flat Cable Connector Lock [2]
- 3 Flat Cables [3]
- 1 Flat Cables [4] (Fax model only)
- 4 Connectors [5]
- 2 Connectors [6] (Fax model only)
- 1 Connector [7] (ADF model only)
- 1 Connector [8] (MF8230Cn only)
- 6 Screws [9] (TP)
- 1 Screw [10] (Binding)
- 1 Hook [11]

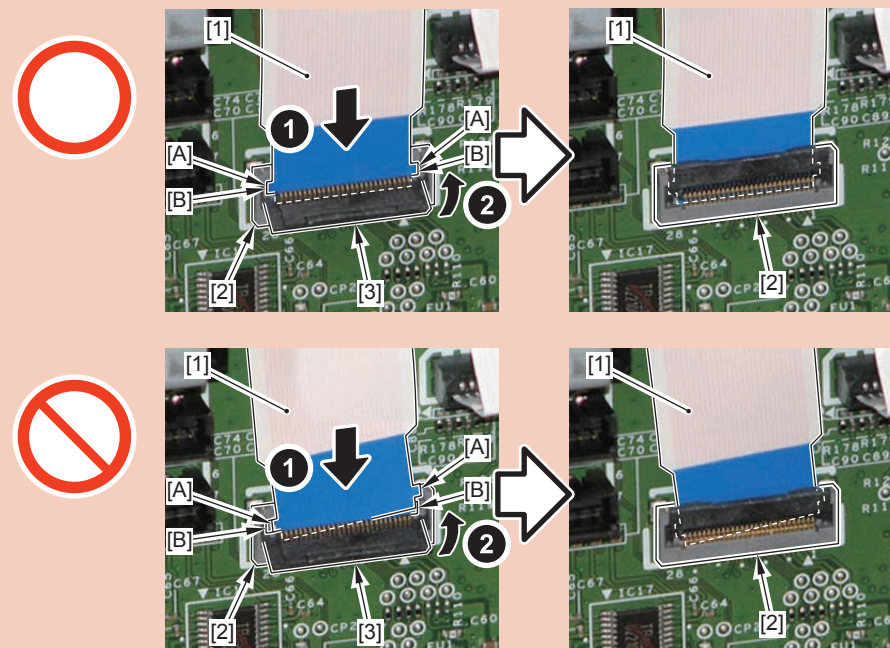


F-4-412

CAUTION:

Be sure to perform the following when connecting the Flat Cable [1] to the connector with a lock [2].

Be sure to insert the Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-413

■ After replacing main controller PCBs

1. Setting of destination/paper size group

1) COPIER > OPTION > BODY > LOCALE (to set destination groups)

[Settings]

1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia,
8: Oceania

2) COPIER > OPTION > BODY > SIZE-LC (to set paper size groups)

[Settings]

1: AB series, 2: Inch series, 3: A series, 4: AB/Inch series

2. Clearing Setting/Registration data

1) COPIER > FUNCTION > CLEAR > ALL (to clear all data)

Once executed, the following data are cleared according to the values of LOCALE and SIZE-LC set in step 1.

- Setting / Registration data (the default value for each destination is set).
- Service mode data (the default value for each destination is set).
- Job IDs
- Log data
- Dates

2) COPIER > FUNCTION > CLEAR > R-CON (to clear default setting values for the reader/DF)

3. Adjustment, input of default setting values

1) Close the ADF.

2) COPIER > FUNCTION > CCD > CL-AGC, BW-AGC (to adjust white levels)

The white level is adjusted.

3) Enter default setting values indicated on the service label in the corresponding service mode items.

4) COPIER > FUNCTION > VIFFNC > STOR-DCN (to back up DC controller setting values)

Purpose: to be prepared for replacing DC controller PCBs

5) Turn off and on the power.

6) Start in the initial installation mode. Follow instructions shown on the screen for setup. (setting of date/time, auto-gradation correction)

4. Migrating the serial number

1) Enter the serial number (8-digit alphanumeric) in Settings/Registration > System Settings > Device Information > Location.

2) Select COPIER > OPTION > SERIAL > SN-MAIN. Then, press the OK key to write the serial number entered in step 1 in the Main Controller PCB. After it has been written, the serial number entered in "Location" in step 1 is deleted.

3) Turn OFF and then ON the main power.

4) Execute COPIER > FUNCTION > MISC-P > SPEC to output the spec report to check the serial number BODY.No..

5) Enter the data of the installation location (which was written down in "Before replacing the Main Controller PCB") in Settings/Registration > System Settings > Device Information > Location.

5. Migrating user data

In Remote UI, perform the following procedure to import the user data (login in administrator mode).

In Setting/Registration > Import/Export > Menu > Import, select an item and then start import.

6. Migrating service mode data

In service mode, perform the following procedure to import the service mode data.

FUNCTION > SYSTEM > IMPORT

7. Reinstall the drivers.

1) Uninstalling Old Drivers.

- Printer Driver
- FAX Driver
- Scanner Driver
- Network Scan Utility. (for machines with network connection)

* As for the procedure, refer to "Uninstalling the Software" in the Starter Guide.

2) Install the drivers which have been uninstalled in step 1.

* As for the procedure, refer to the following items in the Starter Guide.

- In case of network connection: "Installing via Network Connection"
- In case of USB connection: "Installing with USB Connection"

MEMO

MAC address information is changed after replacement of the Main Controller PCB. Therefore, when the PC and the machine are connected by the network, the PC will not be able to recognize the machine on the network. When the PC and the machine are connected by the USB memory device, the PC will not be able to recognize the machine if the USB ID is changed. It becomes therefore necessary to reinstall the driver.

In the case of a model without fax for EUR (MF8540/MF8230), perform the following works.

MEMO

After replacing the Main Controller PCB, the value of the service mode (SDTM-DSP) to set whether to display or hide the automatic shutdown menu becomes "0" (default value). In that case, the automatic shutdown menu is not displayed on the LUI of the machine. To display the automatic shutdown menu on the LUI of the machine, it is necessary to execute this process.

8. Setting of automatic shutdown menu display

Set 1 for automatic shutdown menu display in service mode (default: 0).

COPIER > OPTION > BODY > SDTM-DSP

9. Turn OFF and then ON the main power.

10. Checking the setting of Auto Sleep Time

In setting menu, check that the setting value of Auto Sleep Time is 1. (If the setting value is 0, automatic shutdown does not work.)

Menu > Timer Settings > Auto Shutdown Time

Removing the DC Controller PCB

CAUTION:

Be sure to perform "Before Replacing the DC Controller PCB (Refer to page 4-61)" when replacing the DC Controller PCB, respectively.

Before replacing the DC Controller PCB

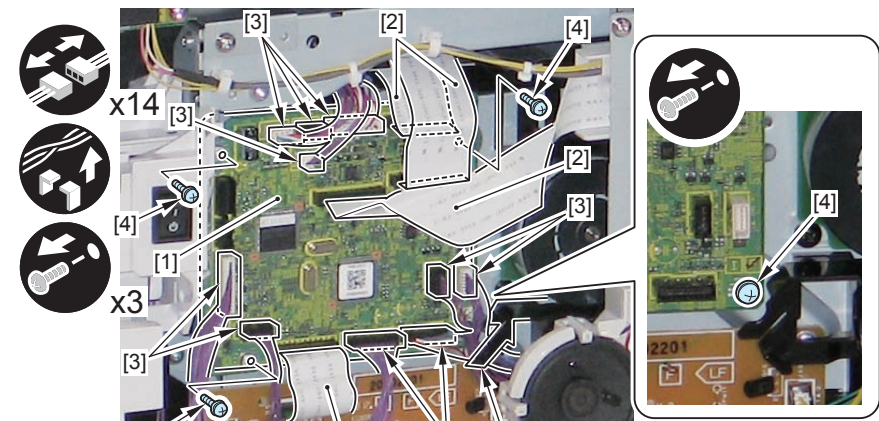
- 1) In service mode, perform the following procedure to store the DC Controller setting values.
COPIER > FUNCTION > VIFFNC > STOR-DCN

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.

Procedure

- 1) Remove the DC Controller PCB [1].
 - 4 Flat Cables [2]
 - 10 Connectors [3]
 - Harness Guide [A]
 - 4 Screws [4]



F-4-414

■ After replacing the DC Controller PCB

1) In service mode, perform the following procedure to restore the DC Controller setting values.

COPIER > FUINCTION > VIFFNC > RSTR-DCN

MEMO

After executing the Printer Recovery Setting, be sure to wait for about 15 seconds because of internal process/operation.

2) Turn OFF and then ON the power.

3)* Execute the following: Menu > Adjustment/Maintenance > Print Color Displacement Correction

4)* Execute the following: Menu > Adjustment/Maintenance > Auto Gradation Correction > Quick Correction

5) Turn OFF and then ON the power.

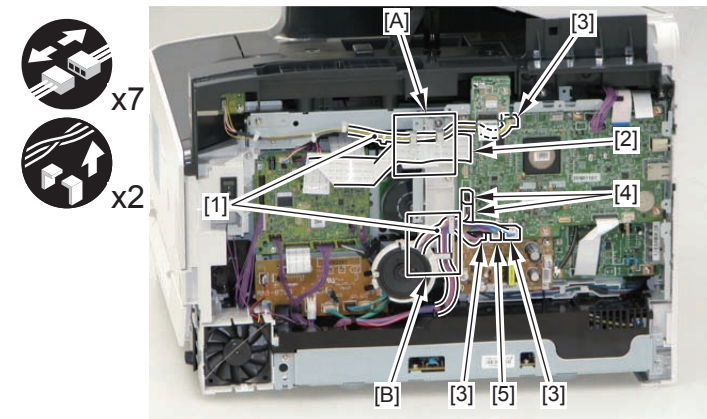
● Removing the Driver PCB

■ Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Controller Cover. Refer to page 4-182.

■ Procedure

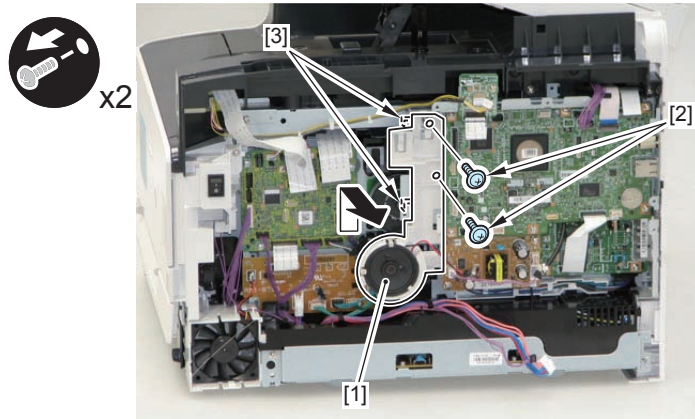
- 1) Free the harness [1] and 1 Flat Cable [2].
 - 3 Connectors [3]
 - 2 Connectors [4] (Fax model only)
 - 1 Connectors [5] (MF8230Cn only)
 - 1 Harness Guide [A]
 - 1 Harness Guide [B]



F-4-415

2) Remove the Speaker Holder [1].

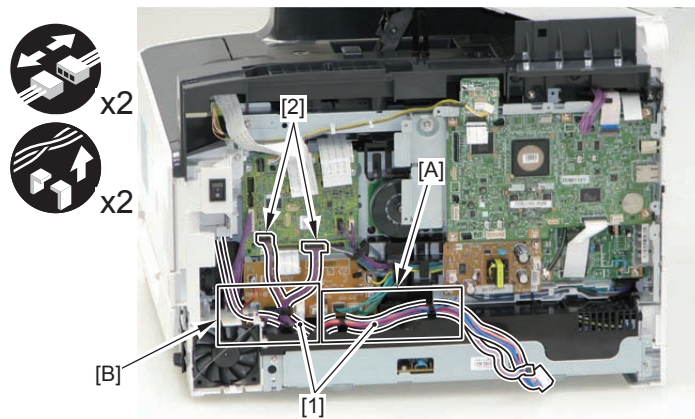
- 2 Screws [2]
- 2 Hooks [3]



F-4-416

3) Free the harness [1].

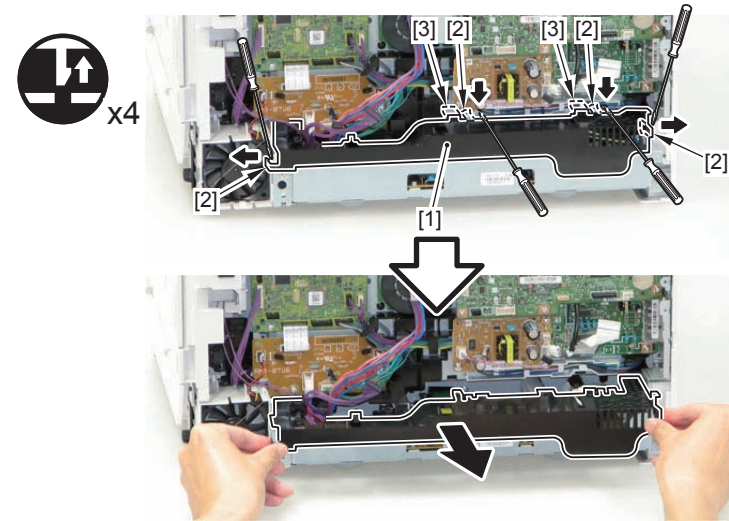
- 2 Connectors [2]
- 1 Harness Guide [A]
- 1 Harness Guide [B]



F-4-417

4) Remove the Low Voltage Power Supply Unit Cover [1].

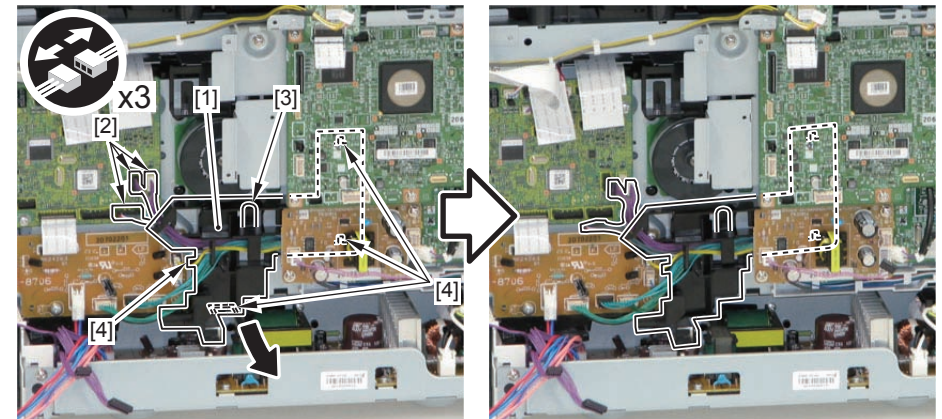
- 4 Claws [2]
- 2 Protrusions [3]



F-4-418

5) Shift the Harness Guide [1].

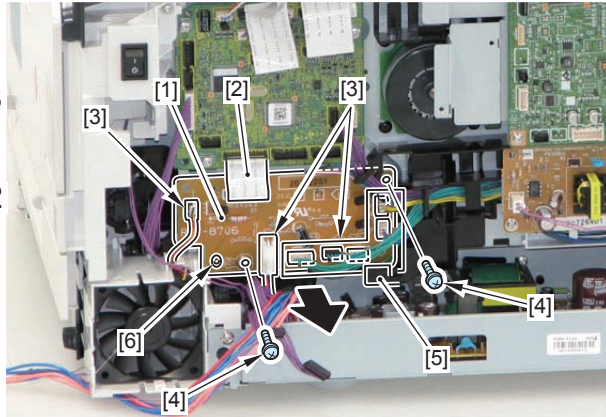
- 3 Connectors [2]
- 1 Boss [3]
- 4 Hooks [4]



F-4-419

6) Remove the Driver PCB [1].

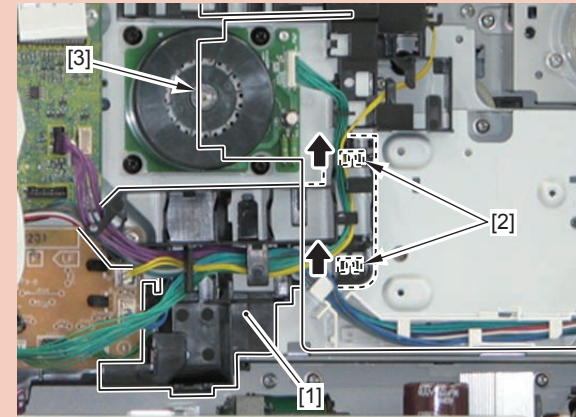
- 1 Flat Cable [2]
- 7 Connectors [3]
- 2 Screws [4]
- 1 Claw [5]
- 1 Hook [6]



F-4-420

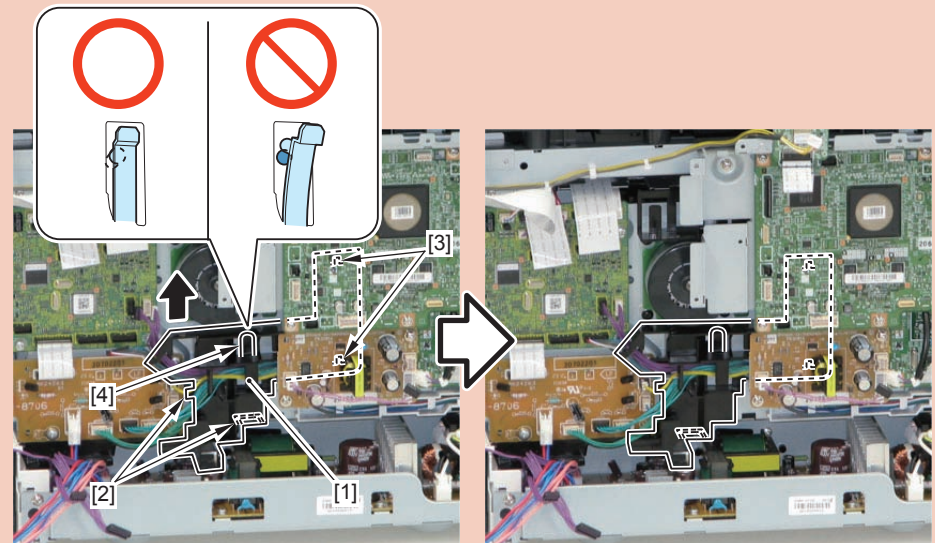
CAUTION:

When installing the Harness Guide [1] shifted in step 5 to the plate of the host machine, be sure to install it as shown in the figure below because the 2 hooks [2] are hidden under the Main Controller Support Plate [3].



F-4-421

After moving the Harness Guide [1] in the direction of the arrow and hooking the 2 hooks [2] and the 2 hooks [3], insert the boss [4].



F-4-422

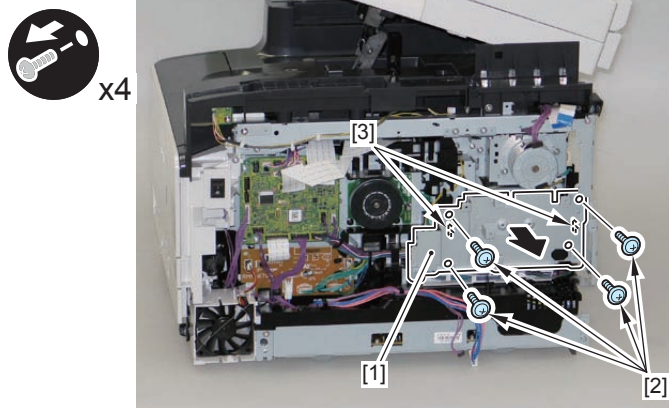
Removing the Low Voltage Power Supply Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the Rear Lower Cover. Refer to page 4-154.
- 5) Remove the Controller Cover. Refer to page 4-182.
- 6) Remove the Wireless LAN PCB.(MF8280Cw/8240Cw only) Refer to page 4-182.
- 7) Remove the Main Controller PCB.Refer to page 4-183
- 8) Remove the Off Hook PCB.(Fax model only) Refer to page 4-201
- 9) Remove the Fax PCB.(Fax model only) Refer to page 4-201

Procedure

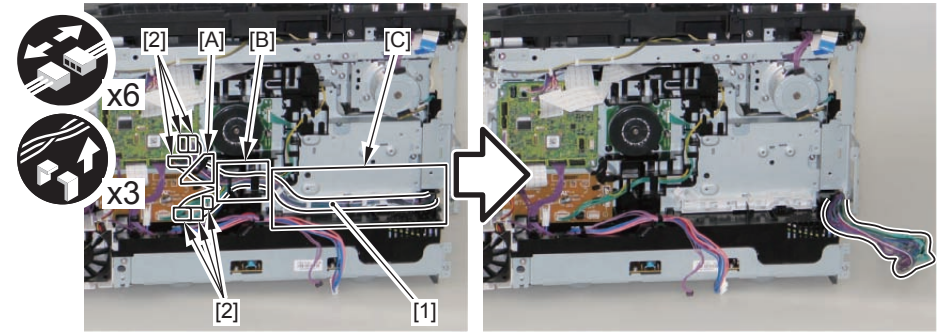
- 1) Remove the Fax PCB Mounting Plate [1].
 - 4 Screws [2]
 - 2 Hooks [3]



F-4-423

- 2) Free the harness [1] from the guides [A], [B], and [C].

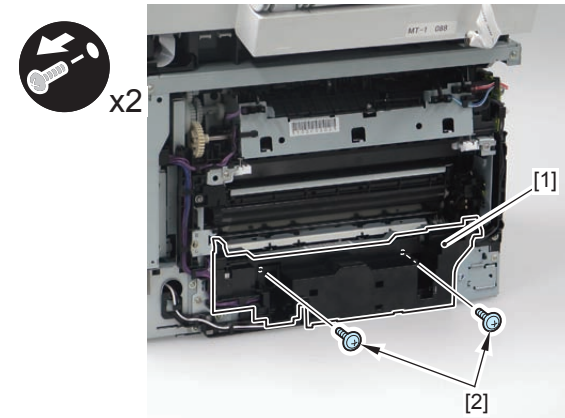
- 6 Connectors [2]



F-4-424

- 3) Remove the Fixing Power Supply Cover [1].

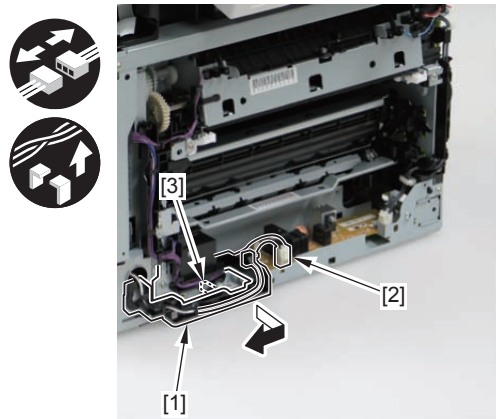
- 2 Screws [2]



F-4-425

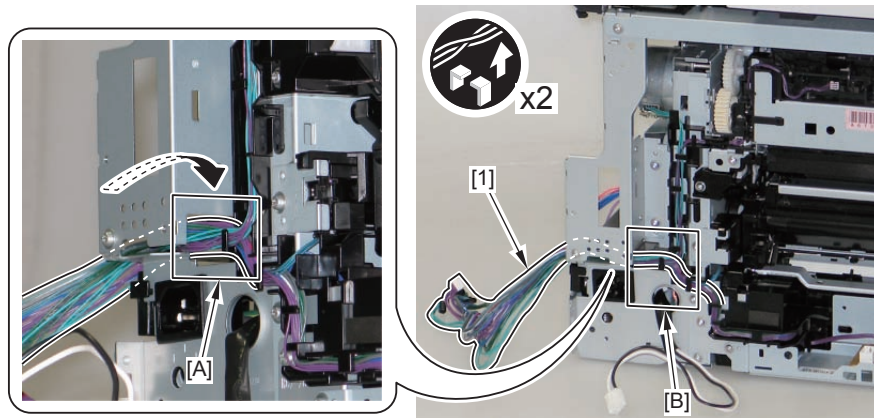
4) Remove the Harness Guide [1].

- 1 Connector [2]
- 1 Hook [3]



F-4-426

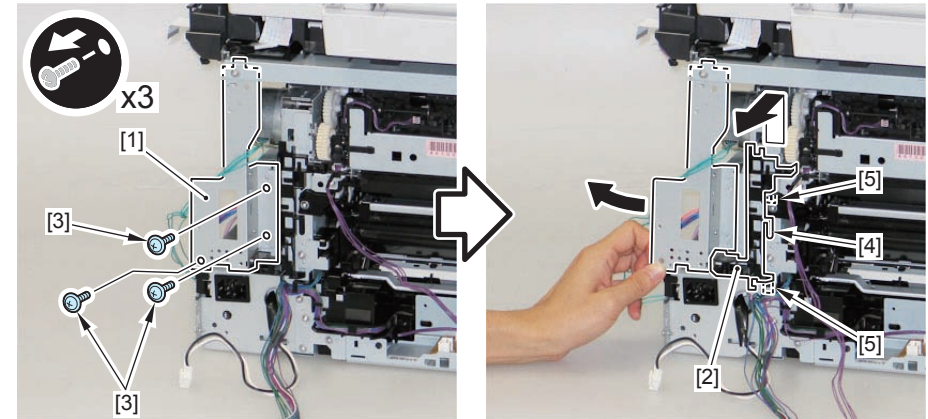
5) Free the harness [1] from the guide [B] by putting it through the hole [A] of the plate.



F-4-427

6) Shift the Fax Cover Plate [1], and remove the Harness Guide [2].

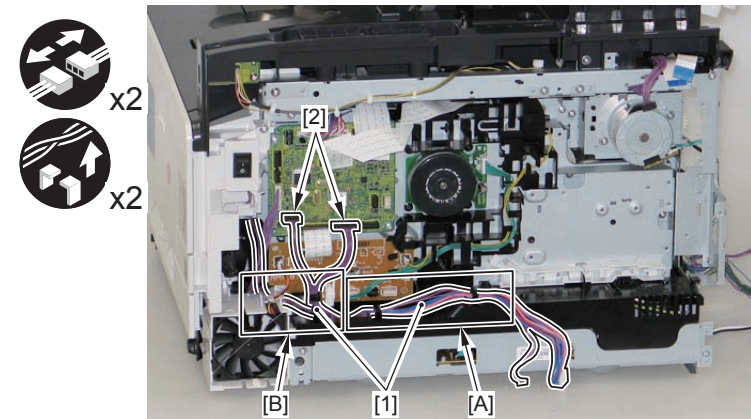
- 3 Screws [3]
- 1 Boss [4]
- 2 Hooks [5]



F-4-428

7) Free the harness [1].

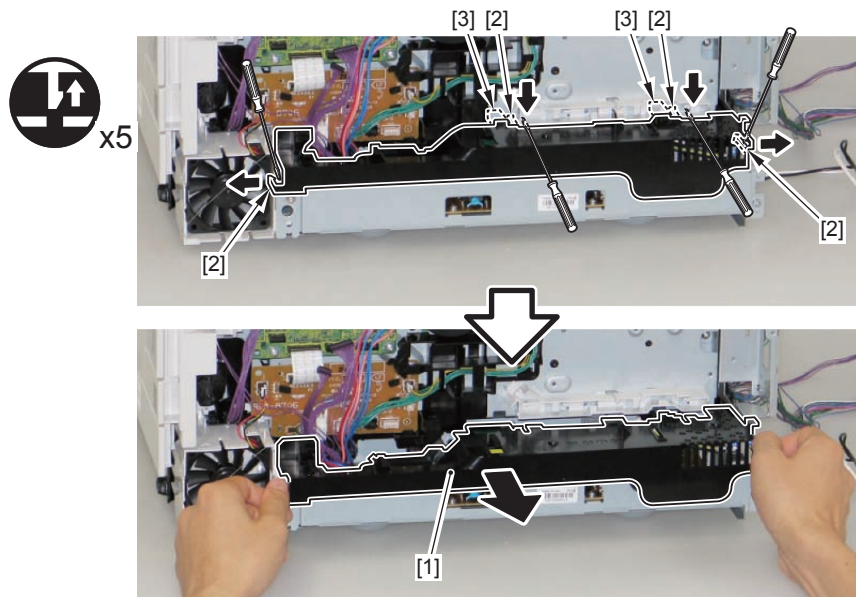
- 2 Connectors [2]
- 1 Harness Guide [A]
- 1 Harness Guide [B]



F-4-429

8) Remove the Low Voltage Power Supply Unit Cover [1].

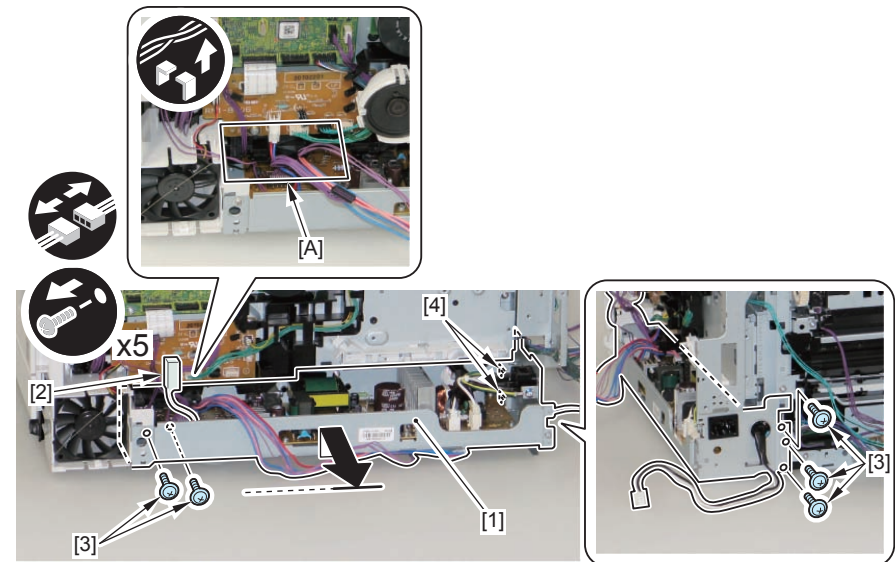
- 4 Claws [2]
- 2 Protrusions [3]



F-4-430

9) Pull out the Low Voltage Power Supply Unit [1] for about 2 cm.

- 1 Connector [2]
- Harness Guide [A]
- 5 Screws [3]
- 2 Hooks [4]



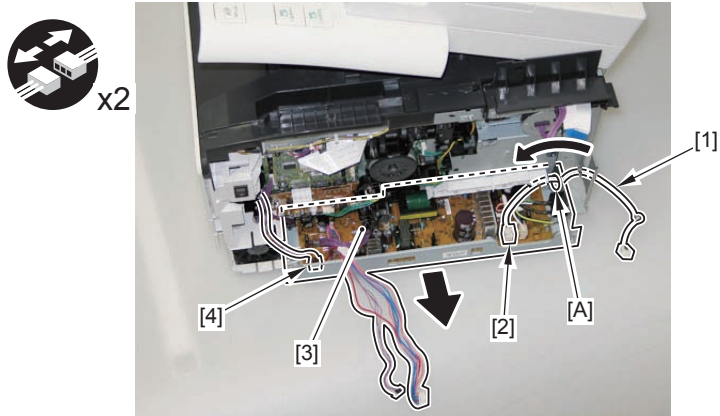
F-4-431

10) Free the Power Supply Harness [1] by putting it through the hole [A] of the plate.

- 1 Connector [2]

11) Remove the Low Voltage Power Supply Unit [3].

- 1 Connector [4]



F-4-432

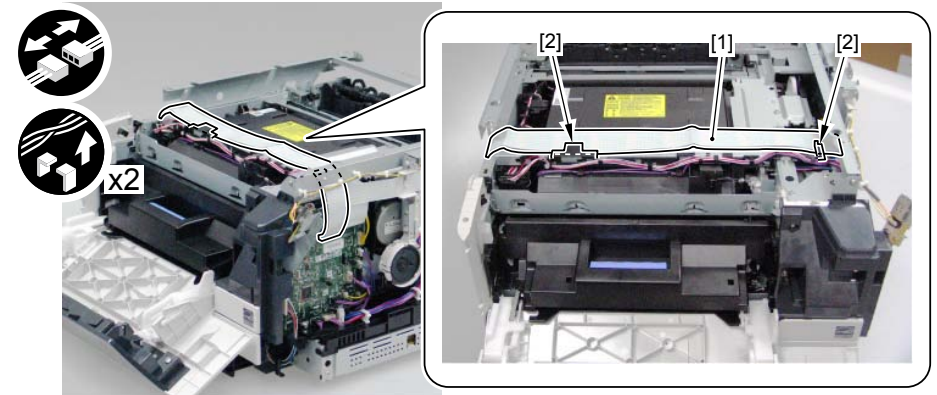
Removing the High Voltage Power Supply PCB

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Remove the Upper Cover. Refer to page 4-156

Procedure

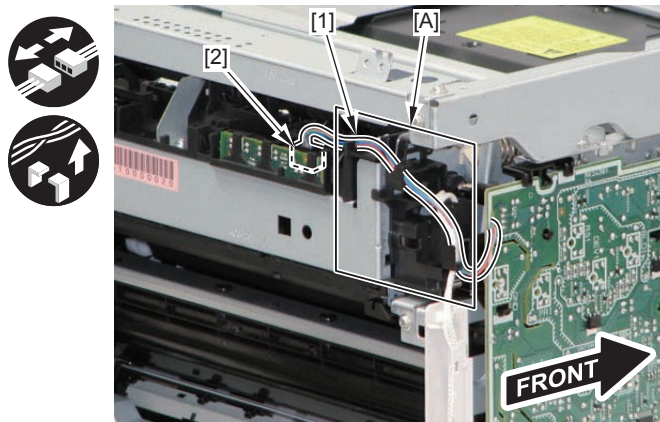
- 1) Disconnect the flat cable [1].
 - 1 guide [2]



F-4-433

2) Remove the Harness [1].

- 1 Connector [2]
- Harness Guide [A]

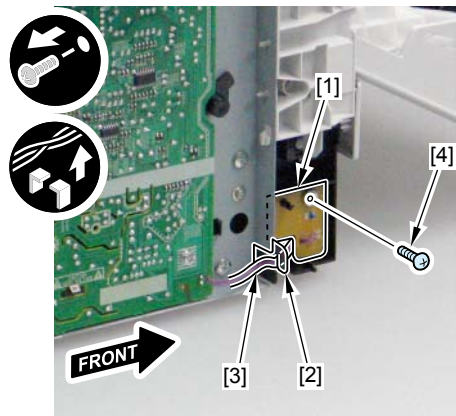


F-4-434

3) Remove the Sub PCB [1].

4) Free the harness [3] from the harness guide [2].

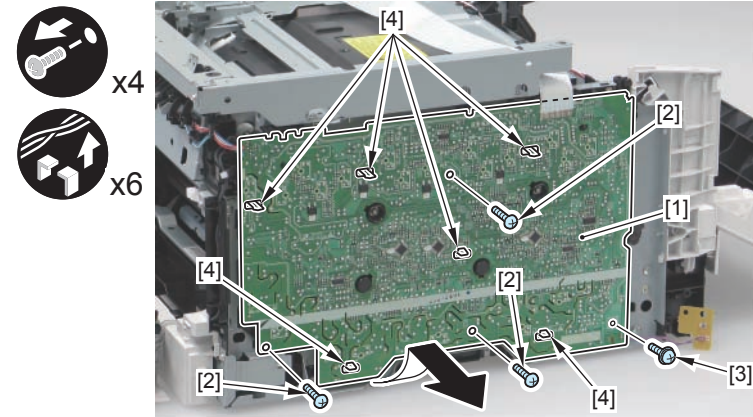
- 1 screw [4]



F-4-435

5) Remove the High Voltage Power Supply PCB [1].

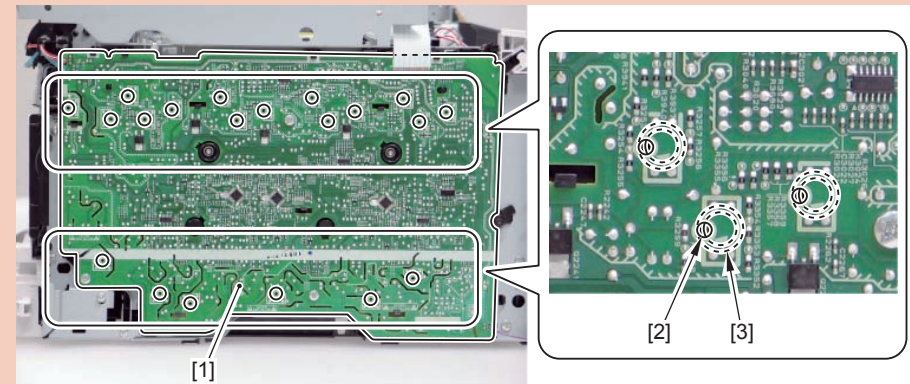
- 3 screws (binding) [2]
- 1 screw (W SEMS) [3]
- 6 claws [4]



F-4-436

CAUTION:

When installing the High Voltage Power Supply PCB [1], be sure to check that the contact springs [3] are in contact with the 20 round holes.



F-4-437

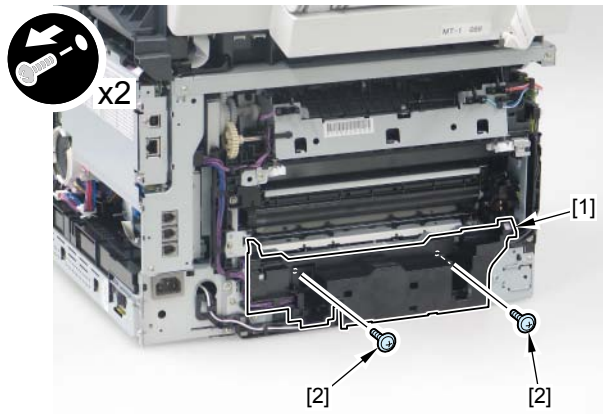
Removing the Fixing Power Supply Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the Rear Lower Cover. Refer to page 4-154.

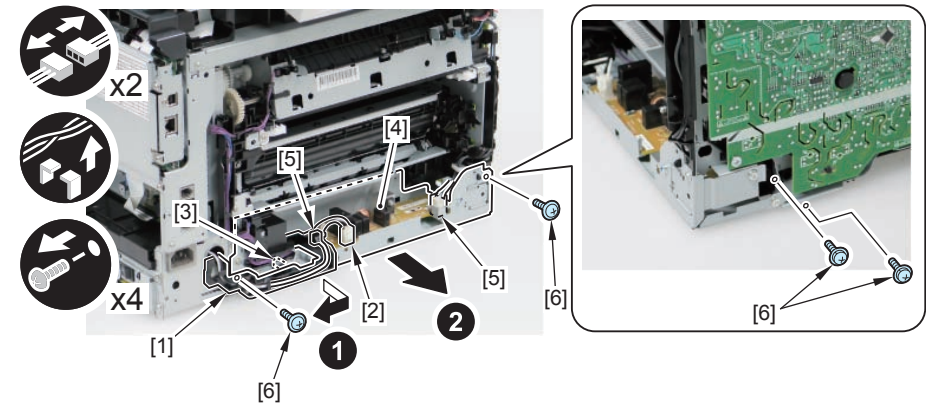
Procedure

- 1) Remove the Fixing Power Supply Cover [1].
 - 2 screws [2]



F-4-438

- 2) Remove the Harness Guide [1].
 - 1 Connector [2]
 - 1 Hook [3]
- 3) Remove the Fixing Power Supply Unit [4].
 - 2 Connectors [5]
 - 4 Screws [6]



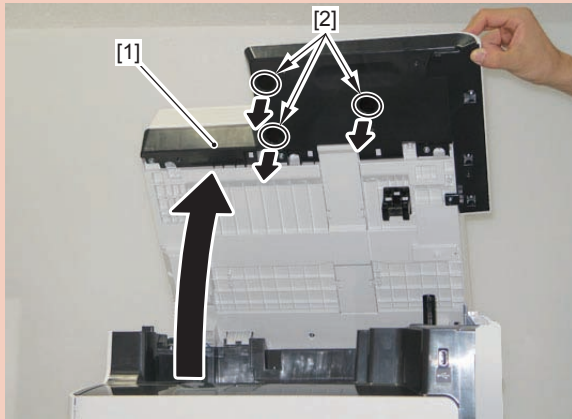
F-4-439

Removing the Control Panel Unit

Procedure

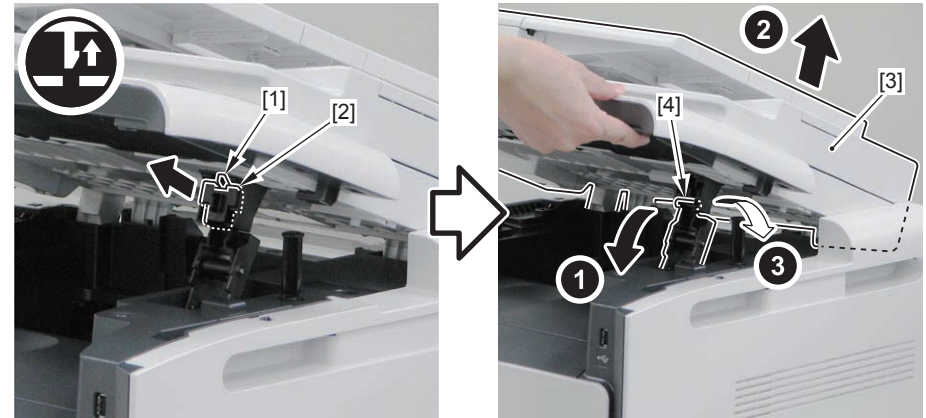
CAUTION:

When removing the Control Panel Unit, the Screw Face Seal [2] on the back side of the Reader Unit [1] needs to be removed. Be sure to prepare a new Screw Face Seal to reattach it later. When reattaching, be sure to use a new Screw Face Seal. Do not reuse the removed Screw Cover Seal.



F-4-440

- 1) Remove the claw [1] to remove the Reader Shaft Retainer [2].
- 2) While supporting the ADF Unit/Copyboard + Reader Unit [3], remove the Reader Support Shaft [4].
- 3) Bring down the Reader Support Shaft [4] to close the ADF Unit/Copyboard + Reader Unit [3].

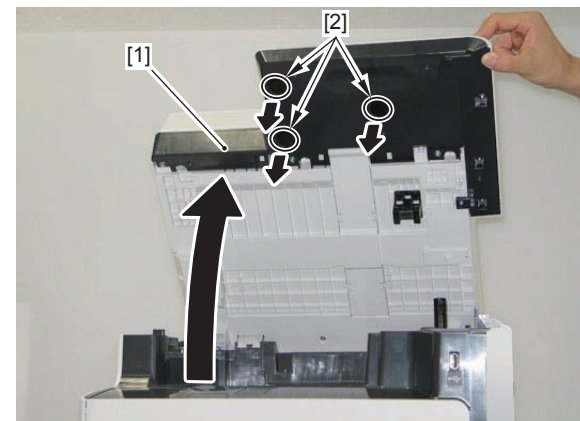


F-4-441

- 4) ADF+Open the ADF+Reader Unit [1], and remove the 3 Screw Face Seals [2] at the bottom of the Reader Unit.

CAUTION:

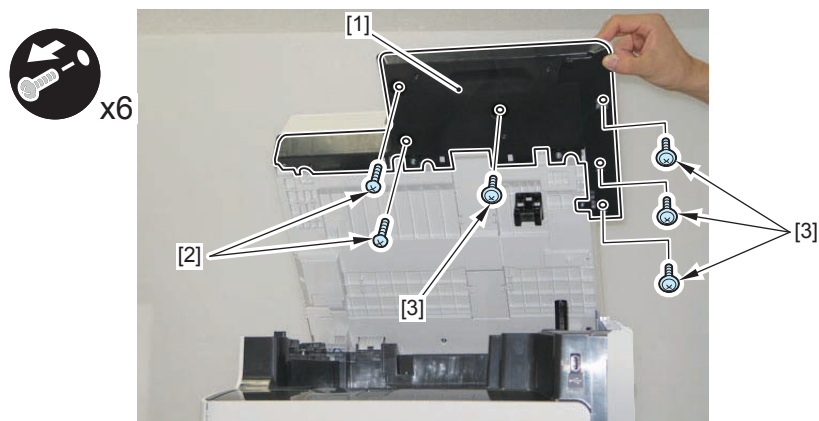
Do not reuse the removed Screw Cover Seal [2].



F-4-442

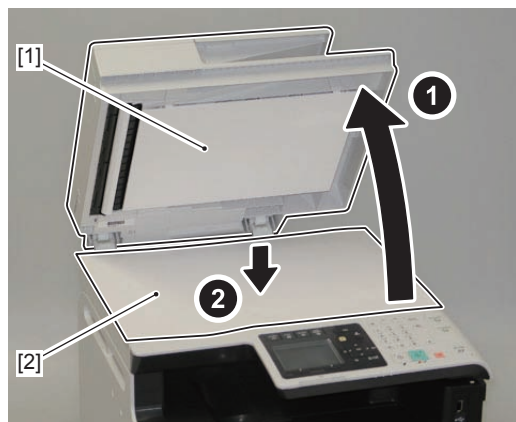
5) Remove the screws at the bottom of the Reader Unit [1].

- 1 Binding Screw [2]
- 8 Screws [3]



F-4-443

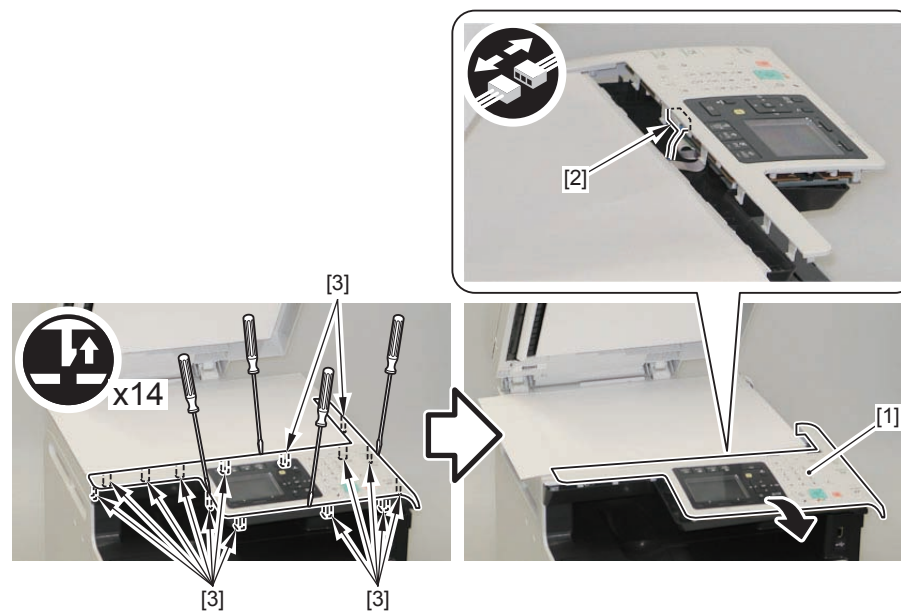
6) Open the ADF Unit/Copyboard [1] and place a sheet of paper [2] on the copyboard.



F-4-444

7) Shift the Control Panel Unit [1], and disconnect the Faston Connector [2].

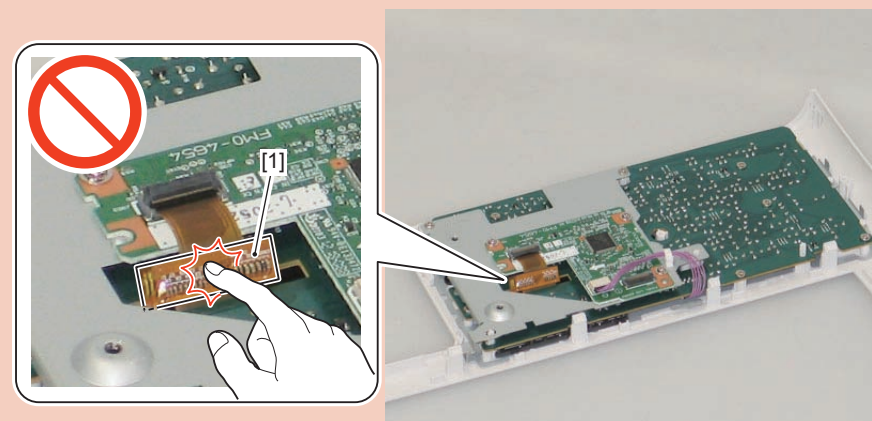
- 14 Claws [3]



F-4-445

CAUTION:

Do not touch the IC part [A] of the LCD Flat Cable [1].



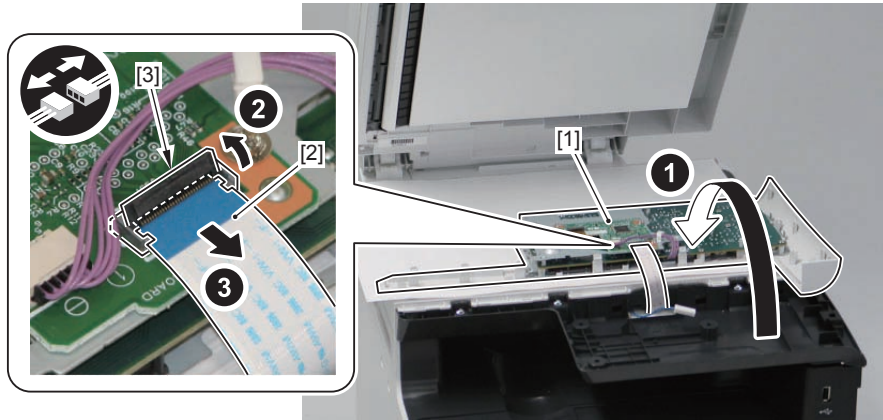
F-4-446

8) Turn the Control Panel Unit [1] over, and disconnect the Flat Cable [2].

- 1 Flat Cable Connector Lock [3]

CAUTION:

Do not damage and cut the Flat Cable [2].

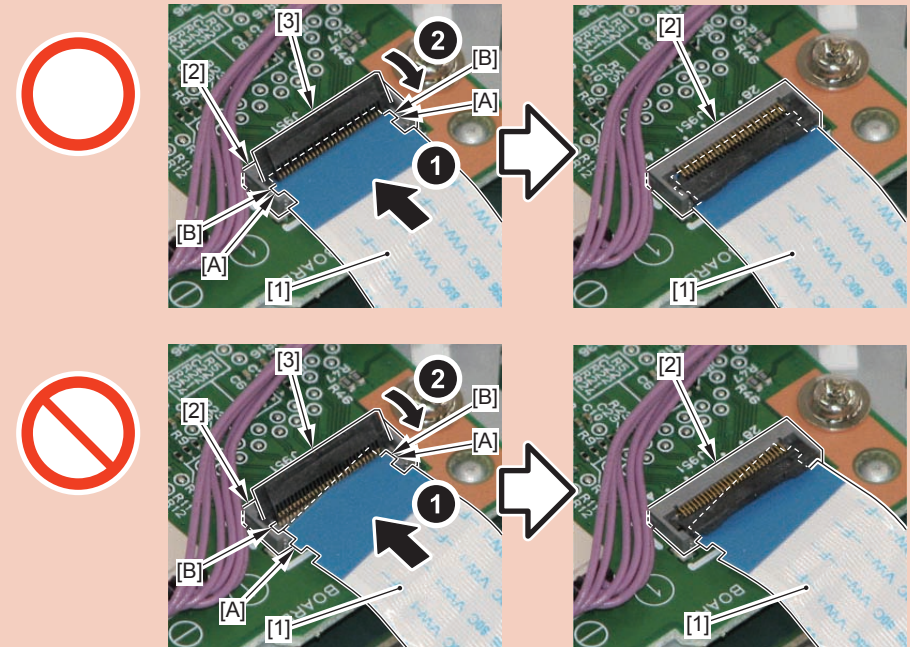


F-4-447

CAUTION:

Be sure to perform the following when connecting the Flat Cable [1] to the connector with a lock [2].

Be sure to insert the Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-448

Removing the Control Panel LCD PCB and Control Panel Key PCB

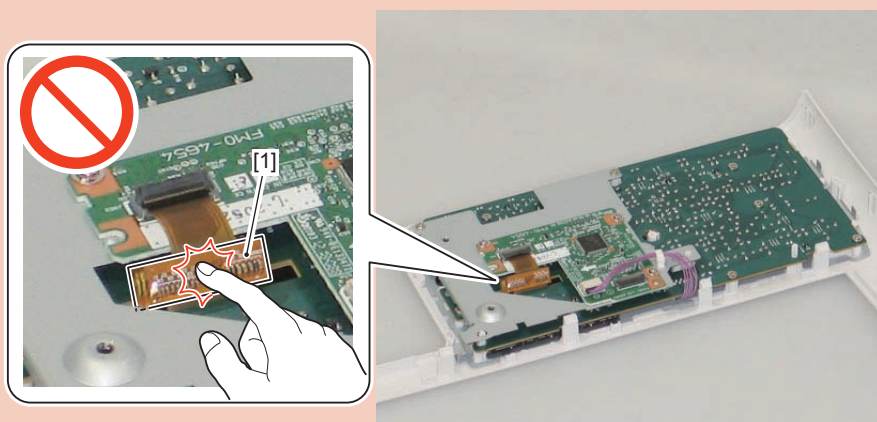
Preparation

1) Remove the the Control Panel Unit. Refer to page 4-196

Procedure

CAUTION:

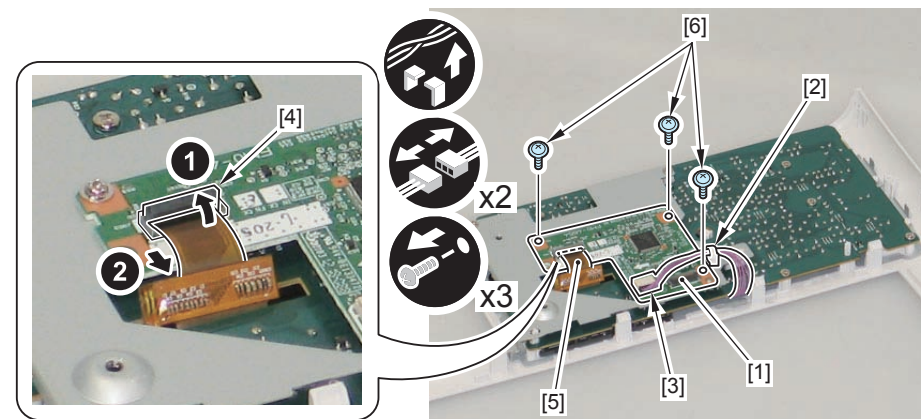
Do not touch the IC part [A] of the LCD Flat Cable [1].



F-4-449

1) Remove the Control Panel LCD PCB [1].

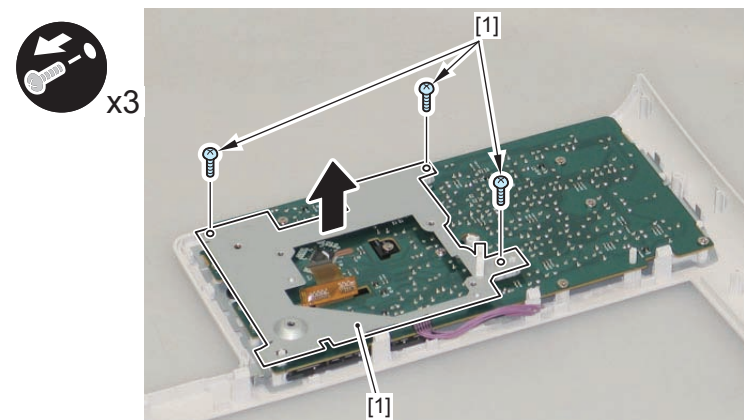
- 1 Wire Saddle [2]
- 1 Connector [3]
- 1 Flat Cable Connector Lock [4]
- 1 LCD Flat Cable [5]
- 3 Screws [6]



F-4-450

2) Remove the Control Panel LCD PCB Mounting Plate [1].

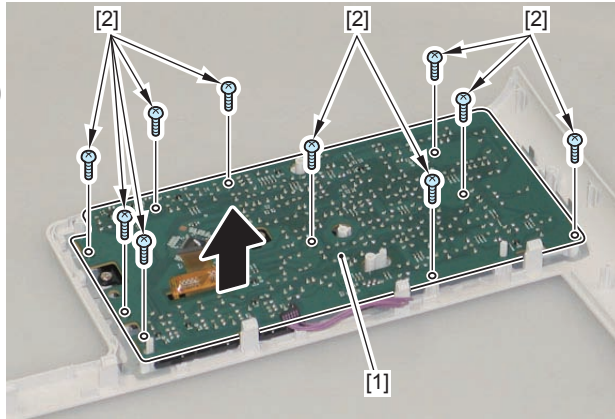
- 3 Screws [2] (Binding)



F-4-451

3) Remove the Control Panel Key PCB [1].

- 10 Screws [2] (Binding)

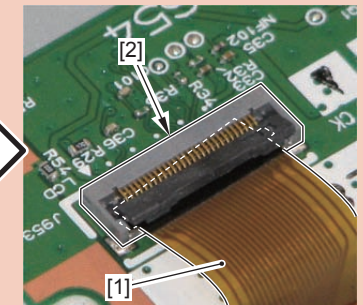
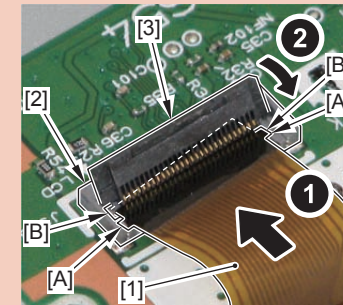
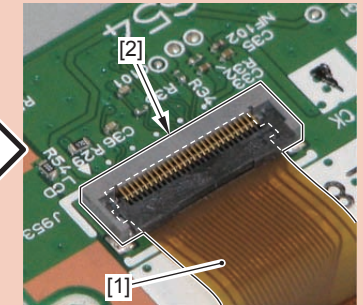
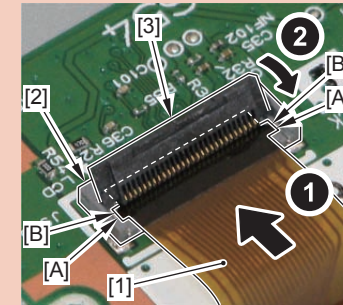


F-4-452

CAUTION:

Be sure to perform the following when connecting the LCD Flat Cable [1] to the connector with a lock [2].

Be sure to insert the LCD Flat Cable [1] into the connector with a lock [2], and after checking that both sides (edges) [A] of the LCD Flat Cable [1] are fitted in the 2 grooves [B] of the connector with a lock [2], lock the Flat Cable Connector Lock [3].



F-4-453

Removing the FAX PCB (MF8280Cw/8250Cn)

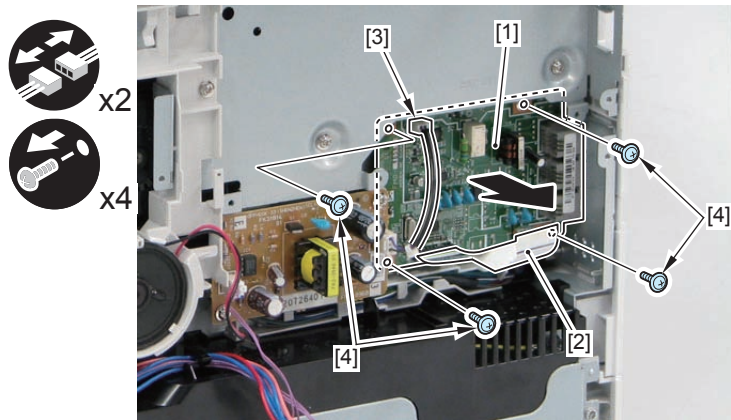
Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Controller Cover. Refer to page 4-182.
- 3) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.
- 4) Remove the Main Controller PCB. Refer to page 4-183.

Procedure

- 1) Remove the Fax PCB [1].

- 1 Flat Cable [2]
- 1 Connector [3]
- 4 Screws [4]



F-4-454

Removing the Off Hook PCB (MF8280Cw/8250Cn)

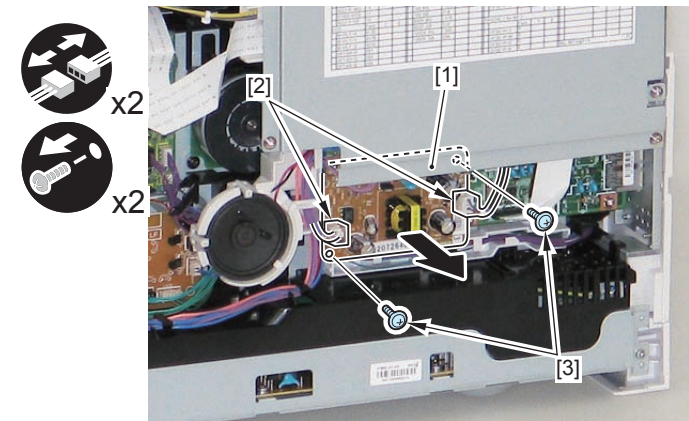
Preparation

- 1) Remove the Right Cover. Refer to page 4-147.

Procedure

- 1) Remove the Off Hook PCB [1].

- 2 Connectors [2]
- 2 Screws [3]



F-4-455

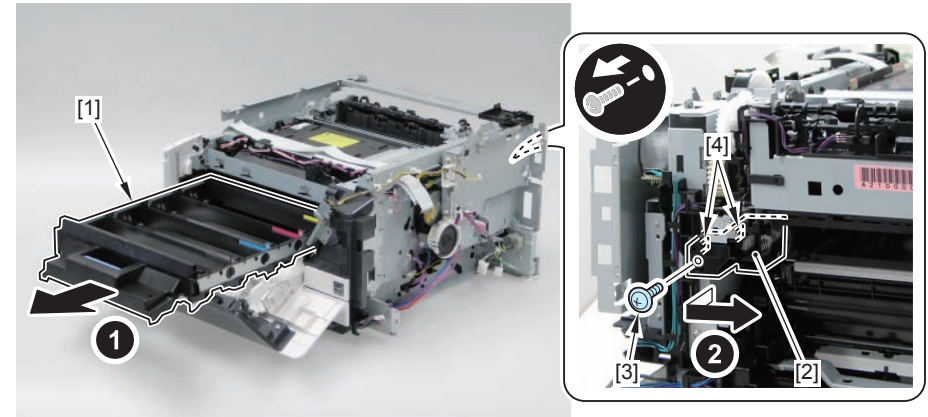
Removing the Main Drive Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Remove the Upper Cover. Refer to page 4-156
- 6) Remove the DC Controller PCB. Refer to page 4-186.
- 7) Remove the Driver PCB. Refer to page 4-187
- 8) Remove the Low Voltage Power Supply Unit. Refer to page 4-190.
- 9) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.
- 10) Remove the Main Controller PCB. Refer to page 4-183.
- 11) Remove the Off Hook PCB. (Fax model only) Refer to page 4-201
- 12) Remove the Fax PCB. (Fax model only) Refer to page 4-201

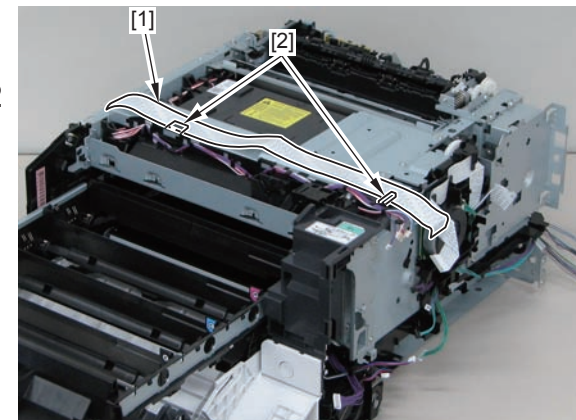
Procedure

- 1) Pull out the Cartridge Tray [1].
- 2) Remove the ITB Fixing Holder [2].
 - 1 Screw [3]
 - 2 Hooks [4]



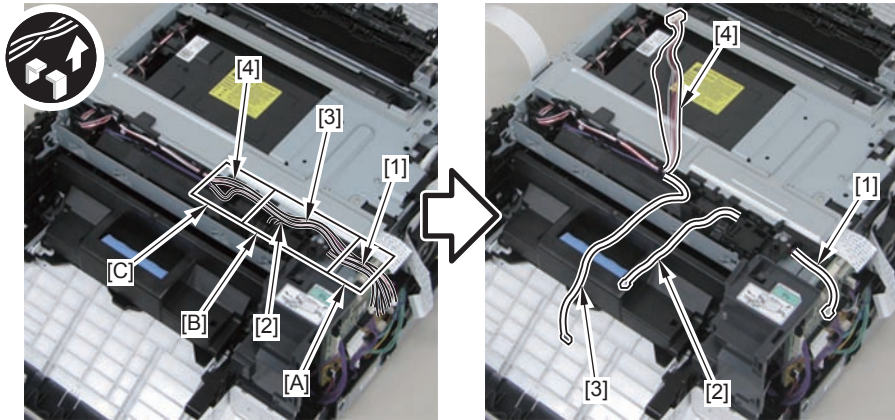
F-4-456

- 3) Disconnect the Flat Cable [1].
 - 2 Guides [2]



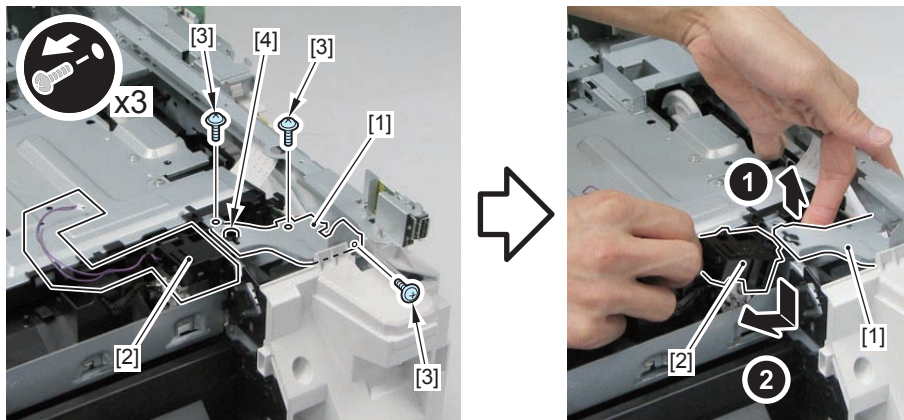
F-4-457

- 4) Free the harness [1] from the guide [A].
- 5) Free the harness [2] from the guides [A], and [B].
- 6) Free the harnesses [3] and [4] from the guides [A], [B], and [C].



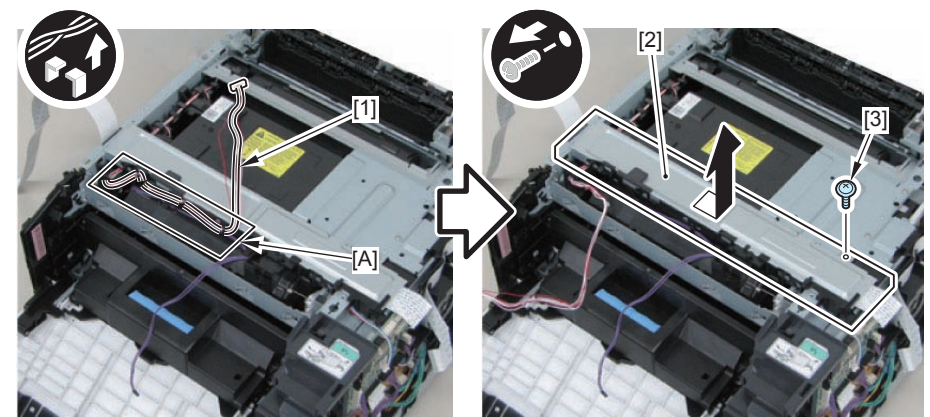
F-4-458

- 7) While lifting the Connecting Plate [1], remove the Flag Unit [2].
- 3 Screws [3]
- 1 Boss [3]



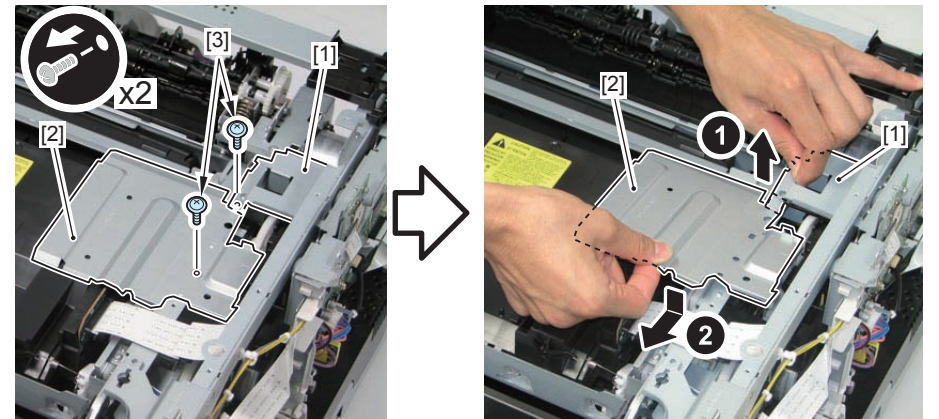
F-4-459

- 8) Free the harness [1] from the guide [A].
- 9) Remove the Harness Support Plate [2].
- 1 Screw [3]



F-4-460

- 10) While lifting the Connecting Plate [1], remove the Sub Drive Unit Cover [2].
- 2 Screws [3]



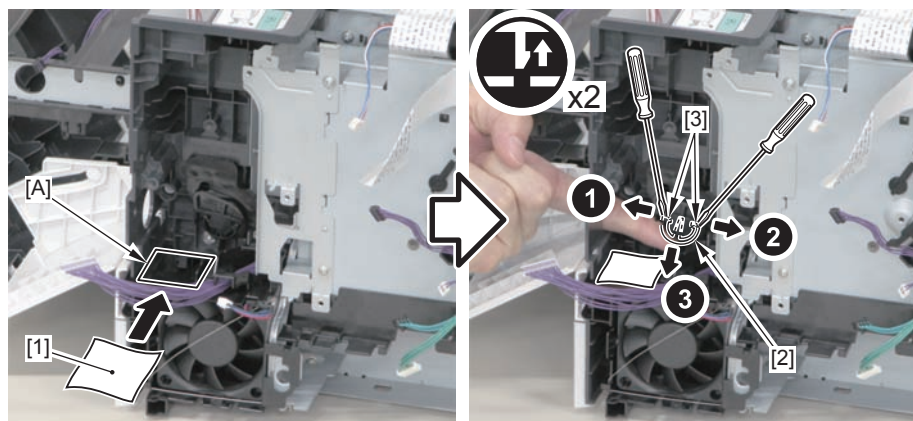
F-4-461

11) Place a sheet of paper [1] over the hole [A], and remove the Link Shaft Stopper [2].

- 2 Claws [3]

NOTE:

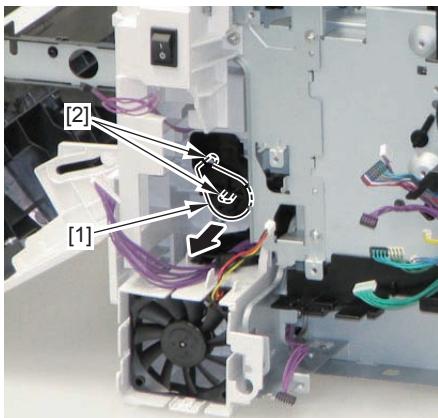
The reason a sheet of paper [1] is placed over the hole [A] is to prevent the Link Shaft Stopper [2] from falling in the machine.



F-4-462

12) Remove the Link Shaft [1].

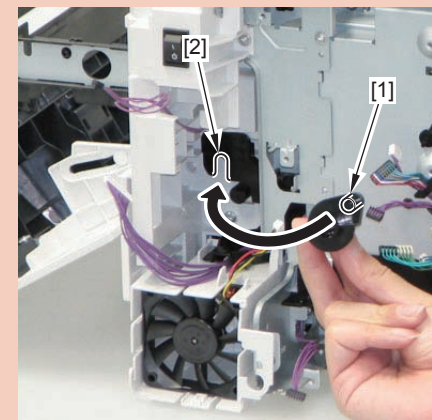
- 2 Bosses [2]



F-4-463

CAUTION:

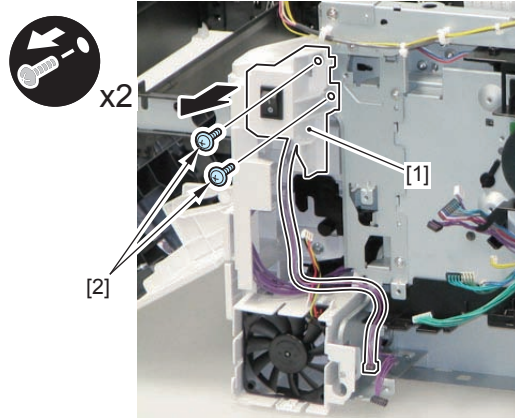
When installing the Link Shaft, be sure to fit the boss [1] of the Link Shaft to the groove [2] of the arm of the Main Drive Unit.



F-4-464

13) Remove the Main Switch Unit [1].

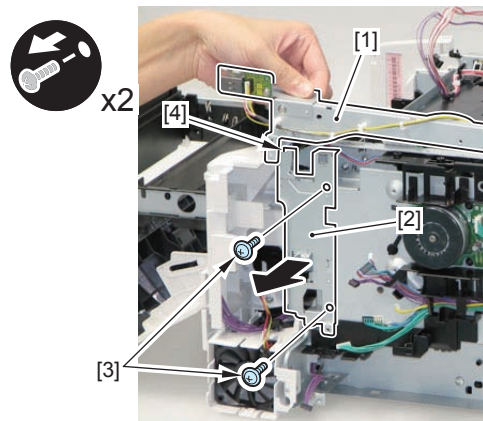
- 2 Screws [2]



F-4-465

14) While lifting the Frame Plate [1], remove the DC Controller Support Plate [2].

- 2 Screws [3]
- 1 Protrusion [4]



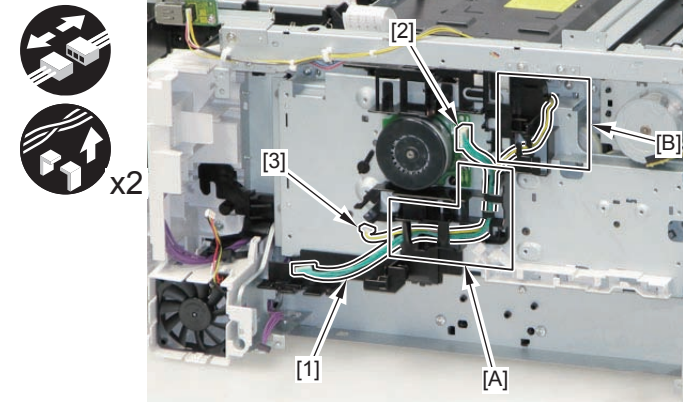
F-4-466

15) Free the harness [1].

- 1 Connector [2]
- Guide [A]

16) Free the harness [3].

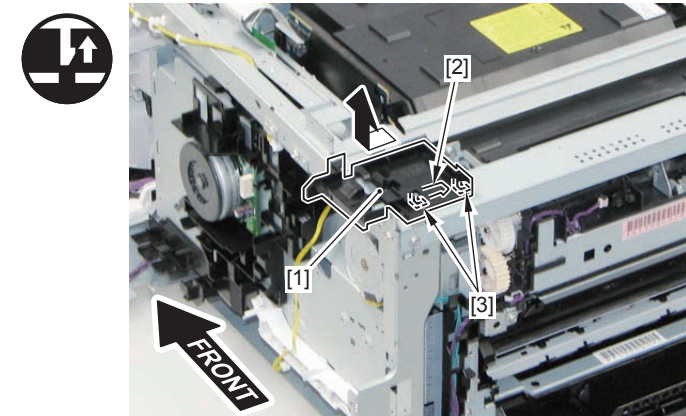
- Guides [A] and [B]



F-4-467

17) Remove the Harness Guide [1].

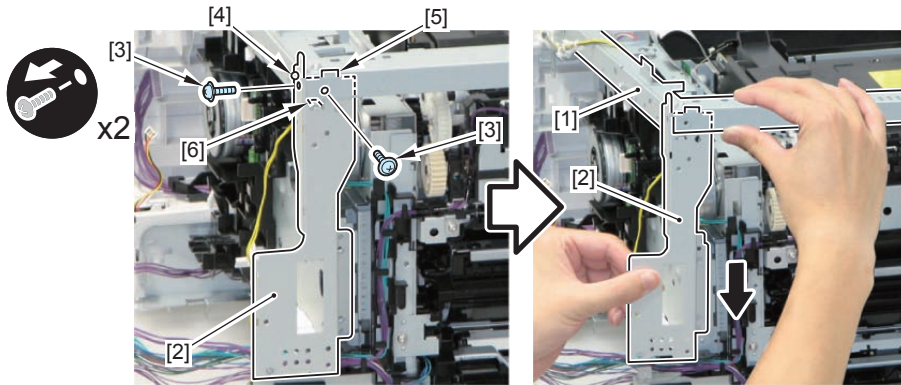
- 1 Claw [2]
- 2 Hooks [3]



F-4-468

18) While lifting the Frame Plate [1], remove the Fax Cover Plate [2].

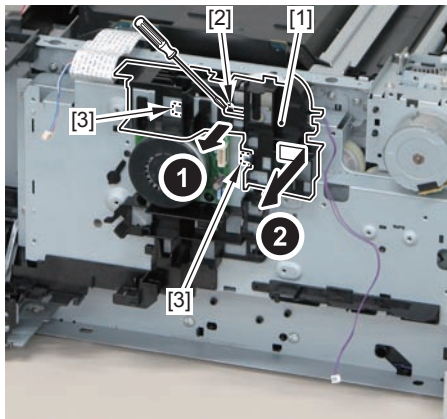
- 2 Screws [3]
- 1 Boss [4]
- 1 Protrusion [5]
- 1 Hook [6]



F-4-469

19) Remove the Harness Guide [1].

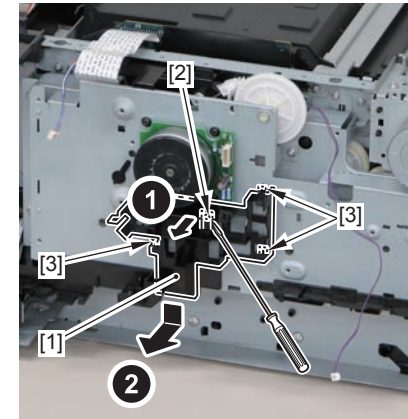
- 1 Boss [2]
- 2 Hooks [3]



F-4-470

20) Remove the Harness Guide [1].

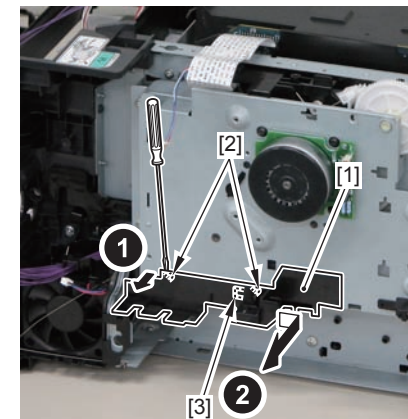
- 1 Boss [2]
- 3 Hooks [3]



F-4-471

21) Remove the Harness Guide [1].

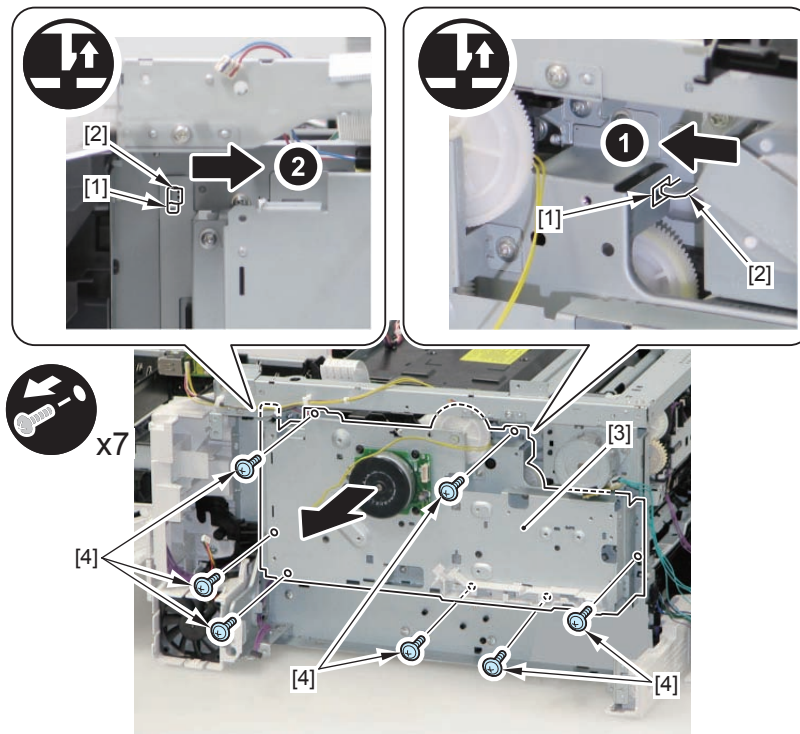
- 2 Bosses [2]
- 1 Hook [3]



F-4-472

22) Release the 2 hooks [1] of the Main Drive Unit from the claw [2] in the direction of the arrow, and remove the Main Drive Unit [3].

- 7 Screws [4]

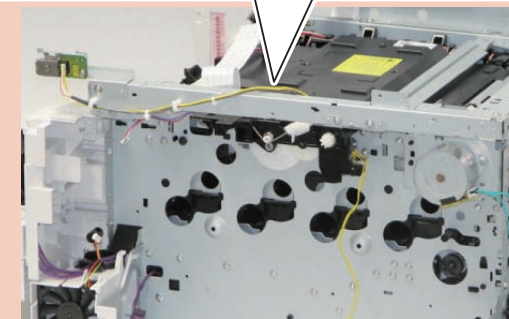
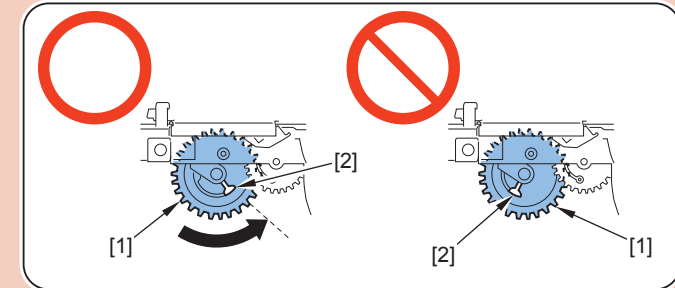


F-4-473

CAUTION:

At installation, check that the hook [2] of the gear [1] of the Sub Drive Unit is in the correct position as shown in the figure below.

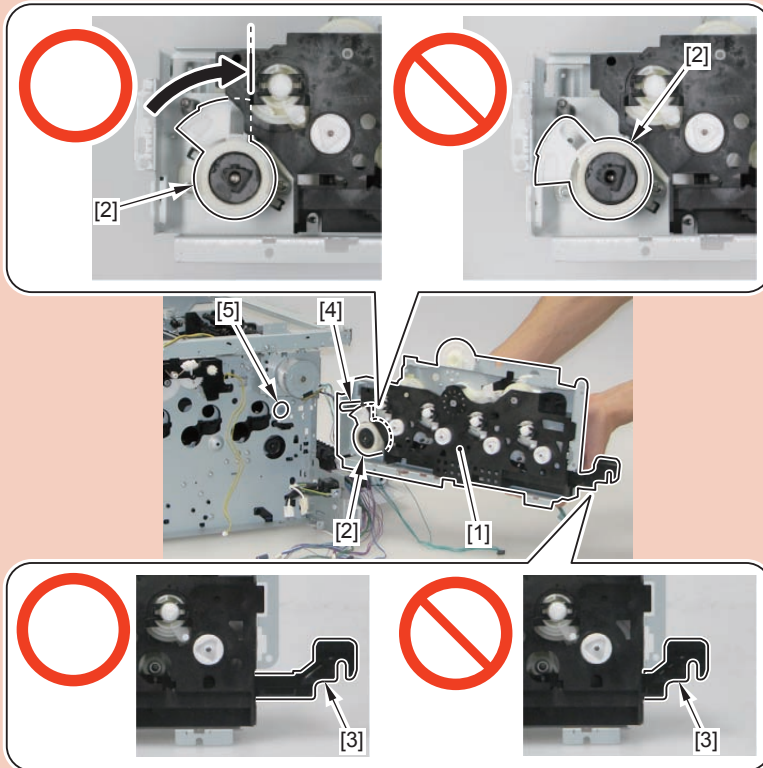
If not, rotate the gear [1] in the direction of the arrow to set the hook [2] in the correct position.



F-4-474

CAUTION:

- Be sure to check that the ITB Link [2] of the Main Drive Unit [1] is set at the correct position as shown in the figure below. If not, turn the ITB Link [2] in the direction of the arrow to be set at the correct position.
- Be sure to check that the Cartridge Cover Link [3] of the Main Drive Unit [1] is set at the correct position as shown in the figure below. If not, pull out the Cartridge Cover Link [3].
- Be sure to install the shaft [4] of the Main Drive Unit by fitting it in the hole [5] of the Side Plate.



F-4-475

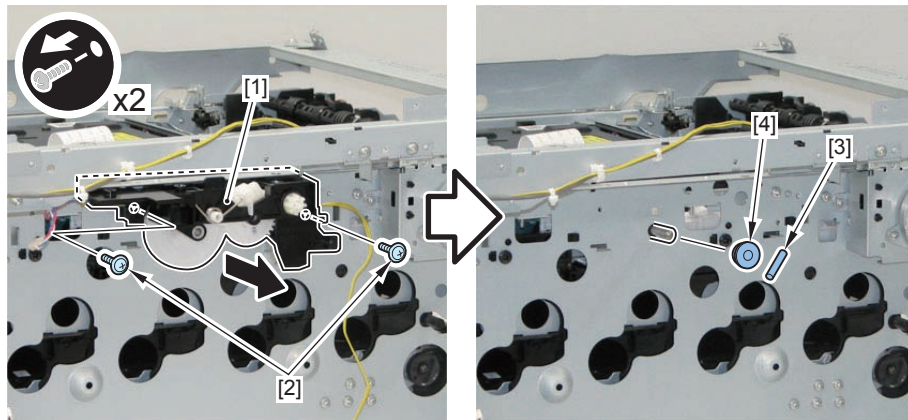
Removing the Sub Drive Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Remove the Upper Cover. Refer to page 4-156
- 6) Remove the DC Controller PCB. Refer to page 4-186.
- 7) Remove the Driver PCB. Refer to page 4-187
- 8) Remove the Low Voltage Power Supply Unit. Refer to page 4-190.
- 9) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.
- 10) Remove the Main Controller PCB. Refer to page 4-183.
- 11) Remove the Off Hook PCB. (Fax model only) Refer to page 4-201
- 12) Remove the Fax PCB. (Fax model only) Refer to page 4-201
- 13) Remove the the Main Drive Unit. Refer to page 4-202

Procedure

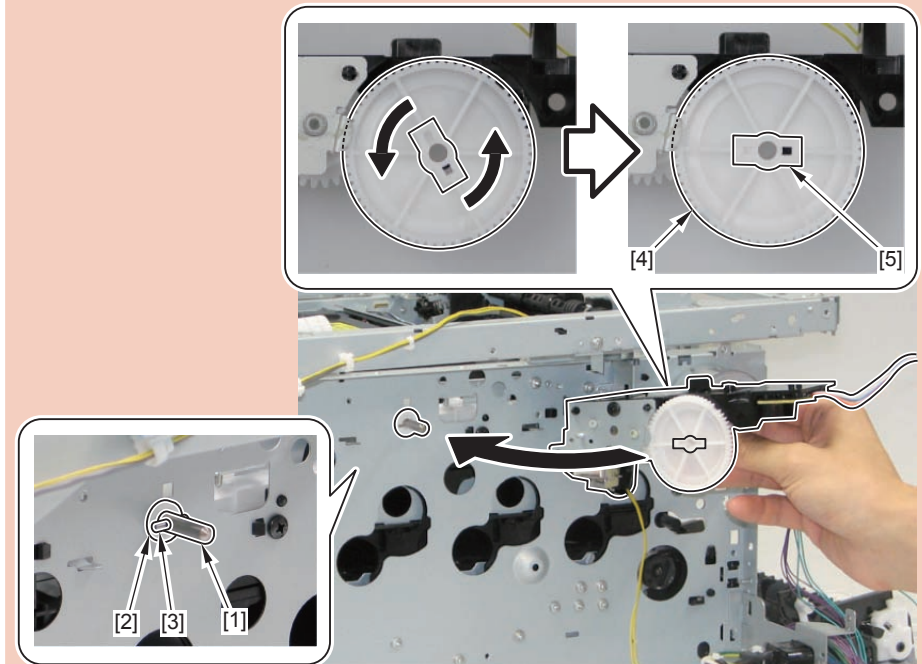
- 1) Remove the Sub Drive Unit [1].
 - 2 Screws [2]
 - 1 Parallel Pin [3]
 - 1 Bushing [4]



F-4-476

CAUTION:

- When installing the Sub Drive Unit, go through the following steps.
 - 1) Install the bushing [2] and the Parallel Pin [3] to the shaft [1].
 - 2) At installation, rotate the shaft [1] and the gear [4] to make the directions of the Parallel Pin [3] and the pin reception horizontally-aligned.
- Depending on the direction of the shaft [1], the Parallel Pin [3] may fall. Be careful not to drop or lose it.



F-4-477

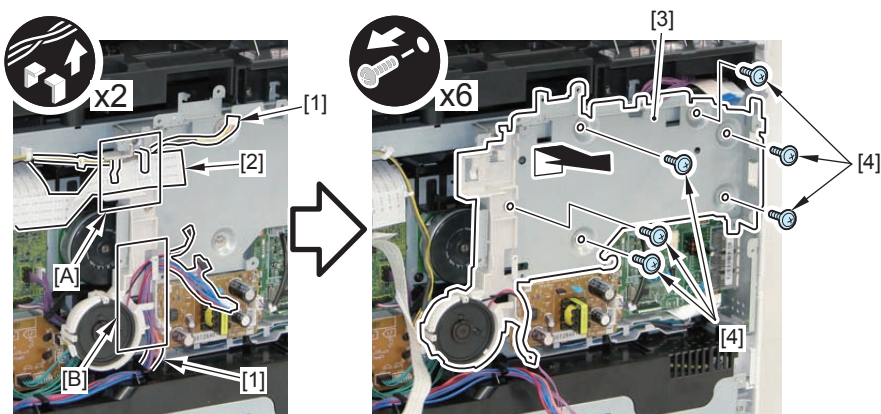
Removing the Main Motor

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Controller Cover. Refer to page 4-182.
- 3) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.
- 4) Remove the Main Controller PCB. Refer to page 4-183.

Procedure

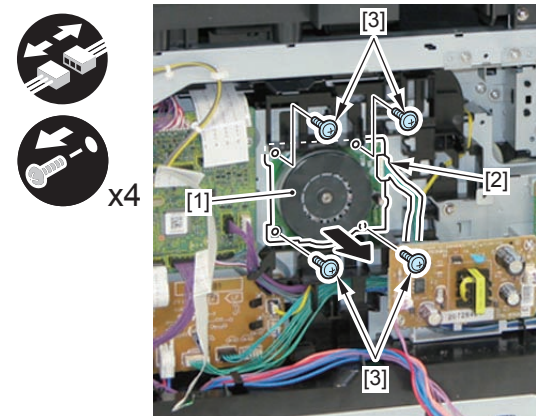
- 1) Free the harness [1], Flat Cable [2] and remove the Main Controller Support Plate [3].
 - Guide [A]
 - Guide [B]
 - 6 Screws [4]



F-4-478

- 2) Remove the Main Motor [1].

- 1 Connector [2]
- 4 Screws [3]



F-4-479

Removing the Fan

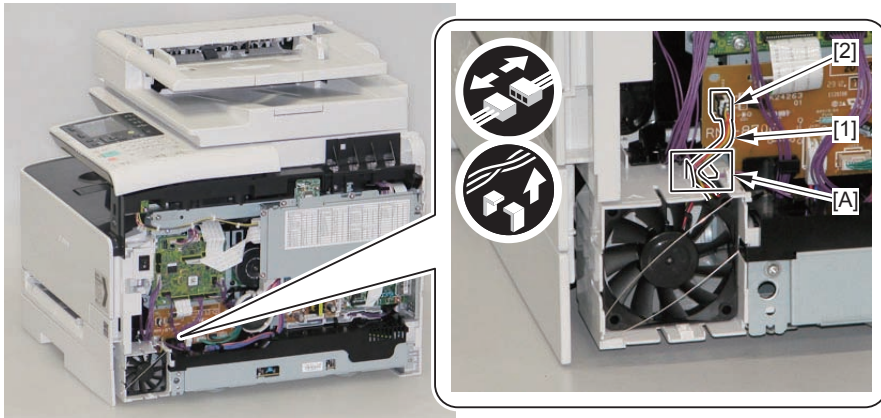
Preparation

1) Remove the Right Cover. Refer to page 4-147.

Procedure

1) Free the harness [1].

- 1 Connector [2]
- Guide [A]

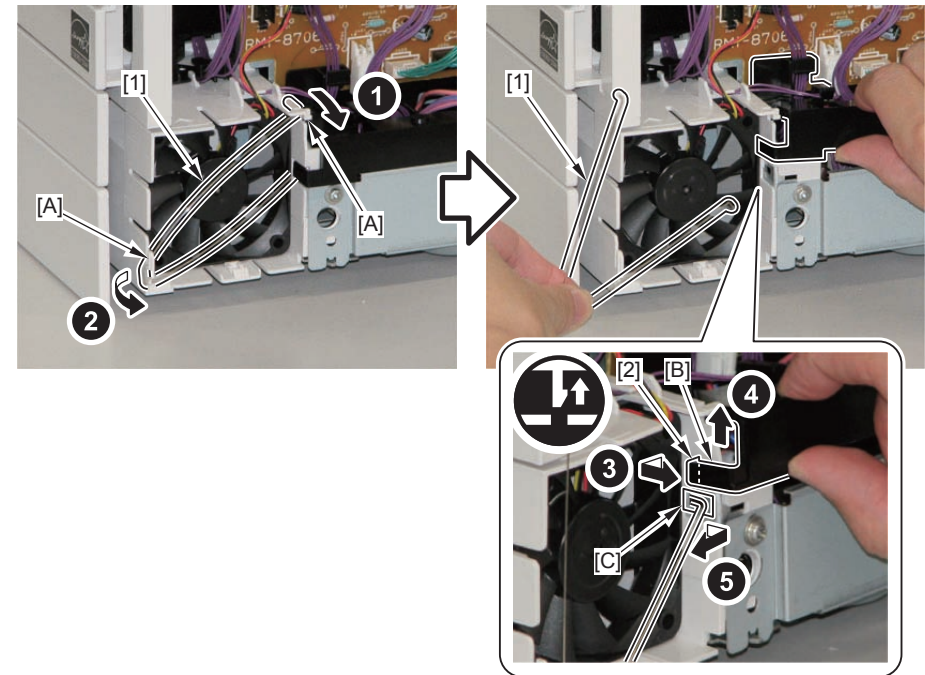


F-4-480

2) Free the Fan Retainer Spring [1] from the 2 guides [A] of the Fan Duct.

3) While lifting the edge [B] of the Low Voltage Power Supply Unit Cover, free the Fan Retainer Spring [1] from the hole [C] of the plate.

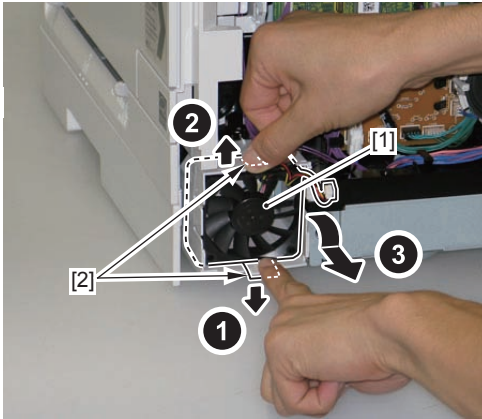
- 1 Claw [3]



F-4-481

4) Remove the fan [1].

- 2 Claws [2]

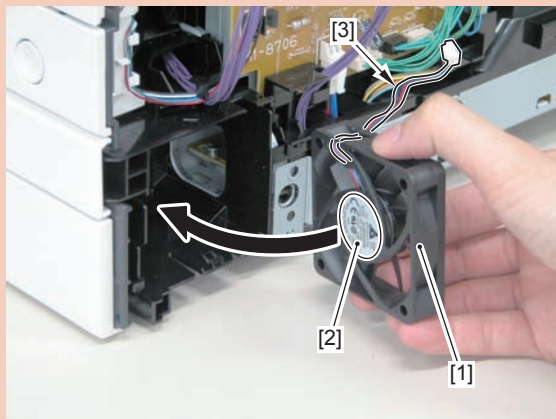


F-4-482

CAUTION:

When installing the fan [1], be sure to set its orientation as shown in the figure below.

- Face the label [2] inside.
- Face the harness [3] upward.



F-4-483

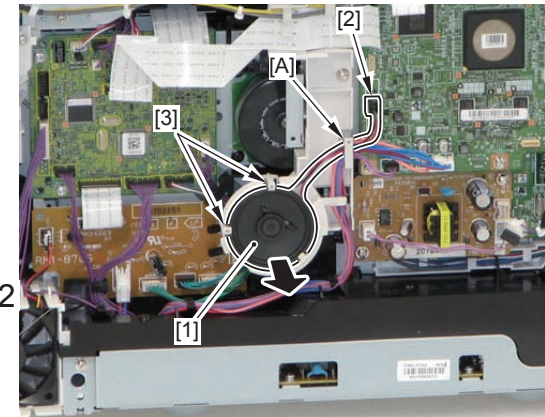
Removing the Speaker (MF8280Cw/8250Cn)

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Controller Cover. Refer to page 4-182.

Procedure

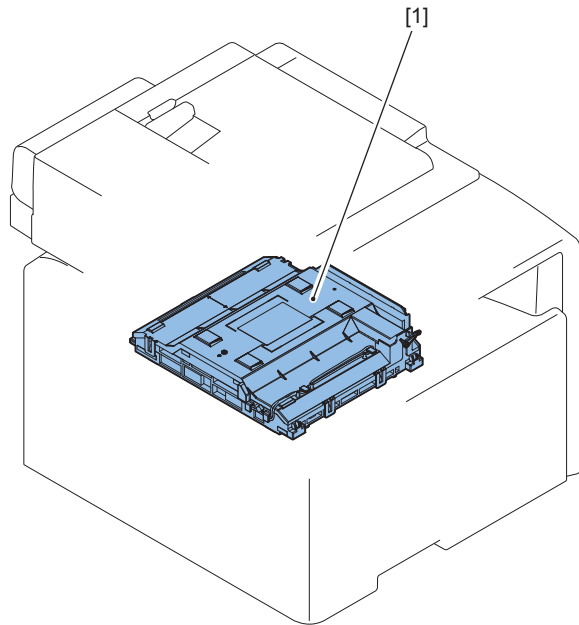
- 1) Remove the Speaker [1].
 - 1 Connector [2]
 - Guide [A]
 - 2 Claws [3]



F-4-484

Laser Exposure System

Location



F-4-485

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Laser Scanner Unit	Product Configuration	-	(Refer to page 4-213)	(Refer to page 4-94)

T-4-43

Removing the Laser Scanner Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153
- 4) Remove the ADF Unit/Copyboard + Reader Unit. Refer to page 4-158
- 5) Remove the Upper Cover. Refer to page 4-156

Procedure

CAUTION:

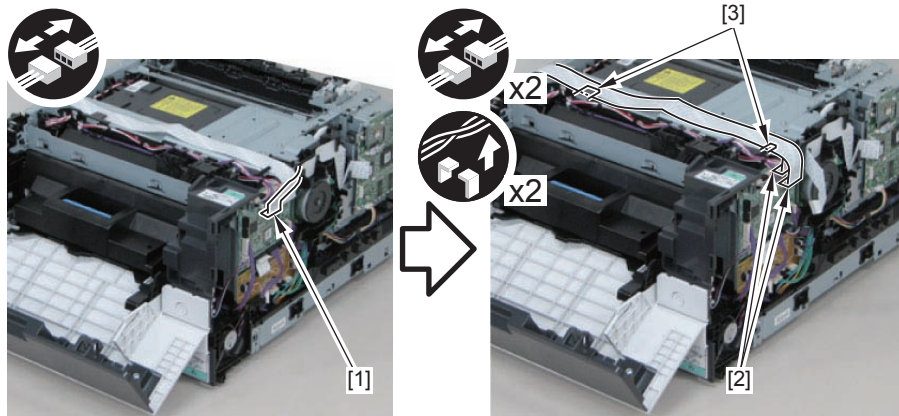
When replacing the Laser Scanner Unit, be sure to perform the following procedure.

- After Replacing the Laser Scanner Unit (Refer to page 4-94)

CAUTION:

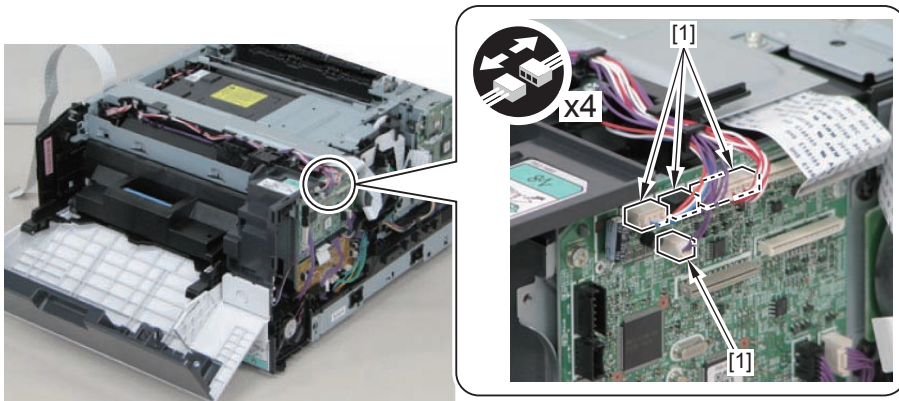
- The ITB Unit is under the Laser Scanner Unit. Ensure to close a Cartridge Tray when performing this procedure, because there is a possibility that the ITB Unit might be damaged when the Laser Scanner Unit is mistakenly dropped during installation/removal.
- Be sure not to disassemble the Laser Scanner Unit because it requires adjustment.

- 1) Disconnect the Flat Cable [1].
 - 2) Disconnect the 2 Flat Cables [2].
- 2 Guides [3]



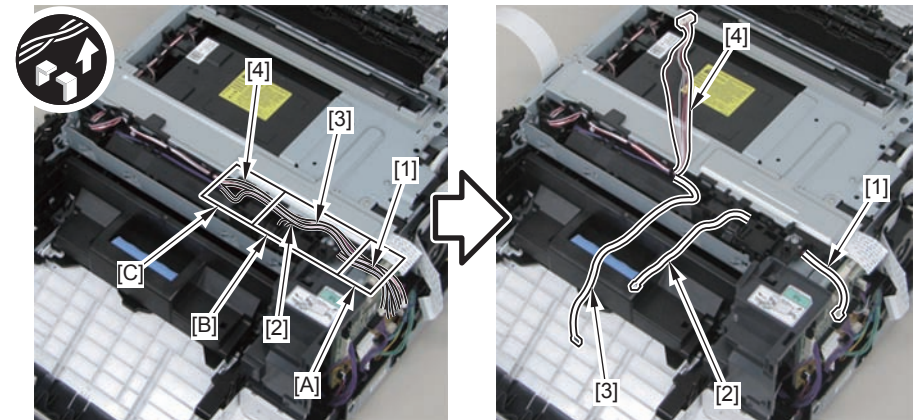
F-4-486

- 3) Disconnect the 4 connectors [1].



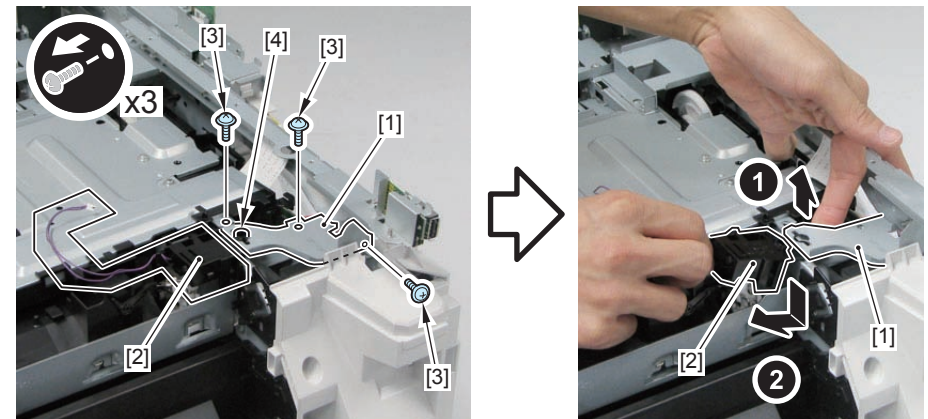
F-4-487

- 4) Free the harness [1] from the guide [A].
- 5) Free the harness [2] from the guide [A] and [B].
- 6) Free the harness [3] and [4] from the guide [A], [B], and [C].



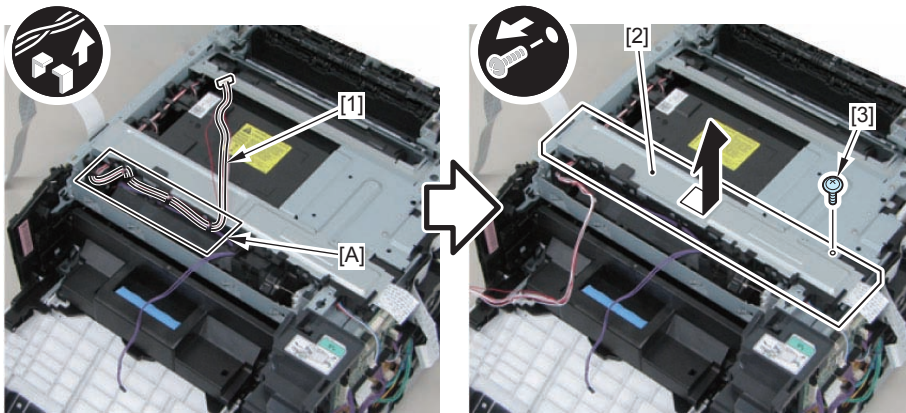
F-4-488

- 7) While lifting the Connecting Plate [1], remove the Flag Unit [2].
- 3 Screws [2]
 - 1 Boss [3]



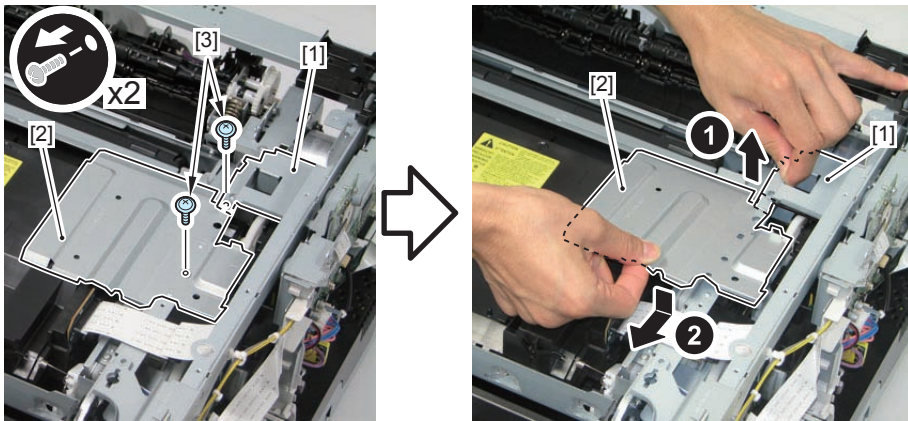
F-4-489

- 8) Free the harness [1] from the guide [A].
 9) Remove the Harness Support Plate [2].
 • 1 Screw [3]



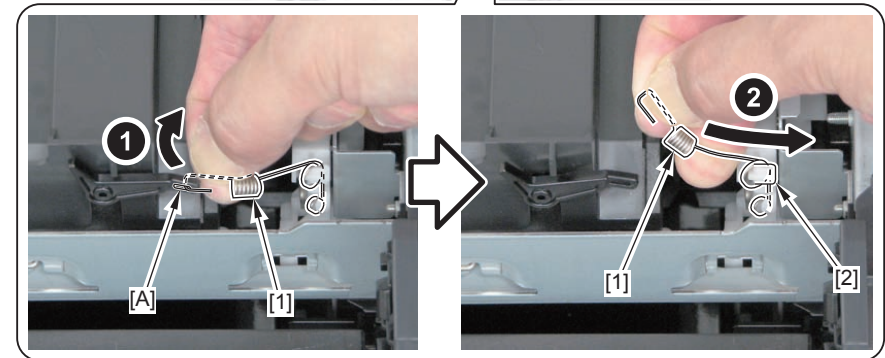
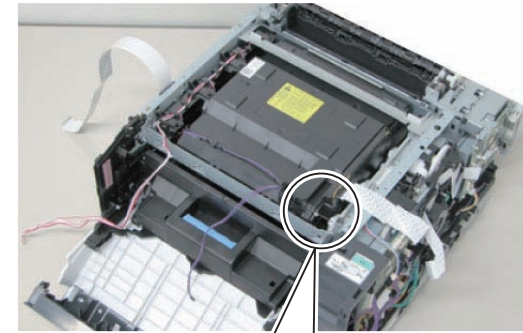
F-4-490

- 10) While lifting the Connecting Plate [1], remove the Sub Drive Unit Cover [2].
 • 2 Screws [3]



F-4-491

- 11) Remove the spring [1].
 • 1 Hole [A] of the Sensor Arm
 • 1 Hook [2]



F-4-492

12) Remove the Scanner Fixation Spring [1] on the right side.

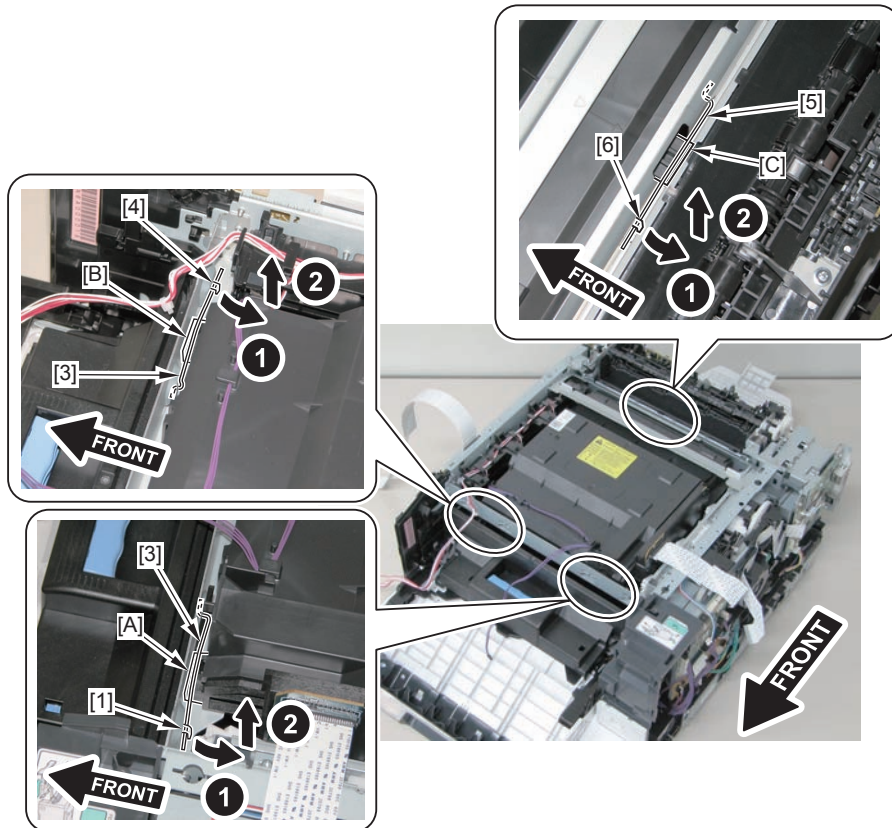
- 1 Hook [2]
- 1 Groove [A]

13) Remove the Scanner Fixation Spring [3] on the left side.

- 1 Hook [4]
- 1 Groove [B]

14) Remove the Scanner Fixation Spring [5] on the rear side.

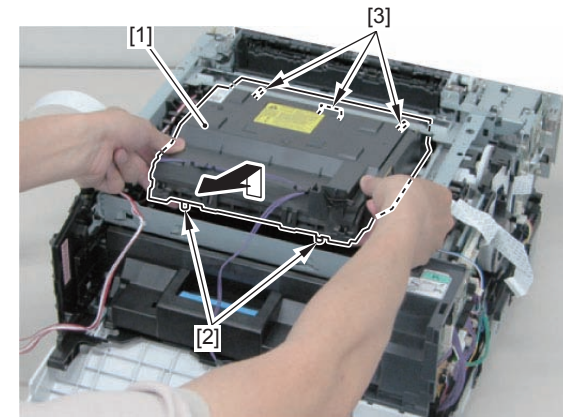
- 1 Hook [6]
- 1 Groove [C]



F-4-493

15) Remove the Laser Scanner Unit [1].

- 2 Bosses [2]
- 3 Protrusions [3]



F-4-494

After replacing laser exposure units

1) Register values indicated on the label packaged with the Laser Scanner Unit in the following service mode items.

COPIER>ADJUST>SCNR>

SUB-S-Y0(Laser output correction value, vertical scanning irradiation position0 Y)

SUB-S-M0(Laser output correction value, vertical scanning irradiation position0 M)

SUB-S-C0(Laser output correction value, vertical scanning irradiation position0 C)

SUB-S-K0(Laser output correction value, vertical scanning irradiation position0 K)

SUB-S-Y1(Laser output correction value, vertical scanning irradiation position1 Y)

SUB-S-M1(Laser output correction value, vertical scanning irradiation position1 M)

SUB-S-C1(Laser output correction value, vertical scanning irradiation position1 C)

SUB-S-K1(Laser output correction value, vertical scanning irradiation position1 K)

SUB-S-Y2(Laser output correction value, vertical scanning irradiation position2 Y)

SUB-S-M2(Laser output correction value, vertical scanning irradiation position2 M)

SUB-S-C2(Laser output correction value, vertical scanning irradiation position2 C)

SUB-S-K2(Laser output correction value, vertical scanning irradiation position2 K)

MAI-S-Y0(Laser output correction value, horizontal scanning irradiation position0 Y)

MAI-S-M0(Laser output correction value, horizontal scanning irradiation position0 M)

MAI-S-C0(Laser output correction value, horizontal scanning irradiation position0 C)

MAI-S-K0(Laser output correction value, horizontal scanning irradiation position0 K)

MAI-S-Y1(Laser output correction value, horizontal scanning irradiation position1 Y)

MAI-S-M1(Laser output correction value, horizontal scanning irradiation position1 M)

MAI-S-C1(Laser output correction value, horizontal scanning irradiation position1 C)

MAI-S-K1(Laser output correction value, horizontal scanning irradiation position1 K)

MAI-S-Y2(Laser output correction value, horizontal scanning irradiation position2 Y)

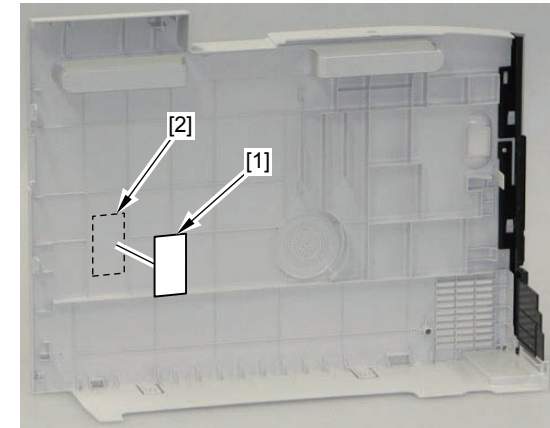
MAI-S-M2(Laser output correction value, horizontal scanning irradiation position2 M)

MAI-S-C2(Laser output correction value, horizontal scanning irradiation position2 C)

MAI-S-K2(Laser output correction value, horizontal scanning irradiation position2 K)

2) After values are registered, affix the label [1] packaged with the unit on the inside [2] of the right cover.

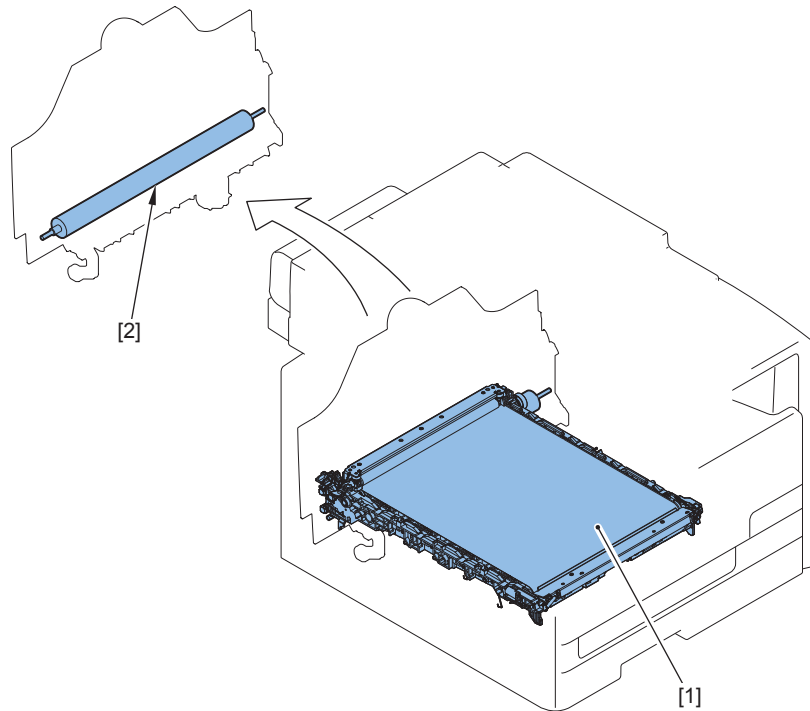
- MF8200 series



F-4-495

Image Formation System

Location



F-4-496

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	ITB Unit	Product Configuration	-	(Refer to page 4-218)	-
[2]	Secondary Transfer Outer Roller	Product Configuration	-	(Refer to page 4-223)	-

T-4-44

Removing the ITB Unit

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-156.

Procedure

CAUTION:

Do not touch the ITB.

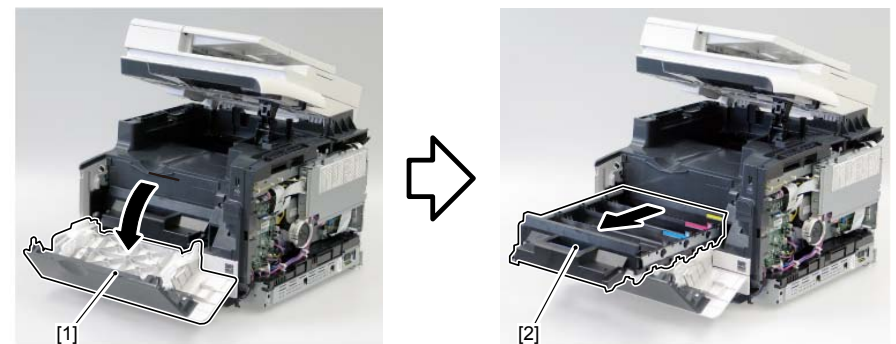
CAUTION:

While removing the cartridges, be sure not to scratch the drum surface. And cover the drum surface.

- 1) Open the Front Cover [1].
- 2) Pull out the Cartridge Tray [1].

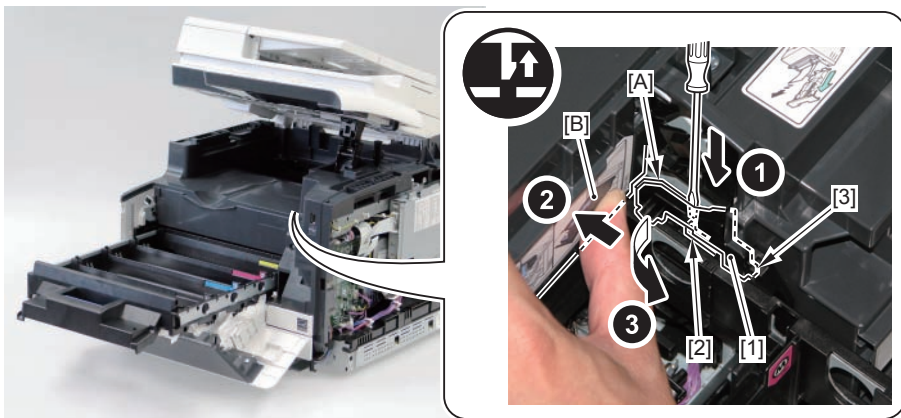
CAUTION:

Since the Cartridge Tray interferes with the stopper when removing the stopper, do not pull out the Cartridge Tray until it hits the end.



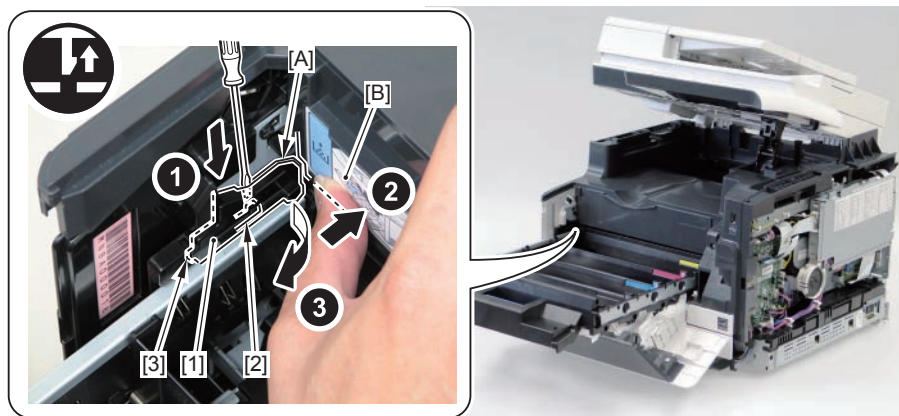
F-4-497

- 3) Remove the cartridges
- 4) Insert a flat-blade screwdriver into the clearance [A] between the Right Stopper [1] and rail.
- 5) Remove the Right Stopper [1] while pushing the [B] part.
 - 2 Claws [2]
 - 1 Protrusion [3]



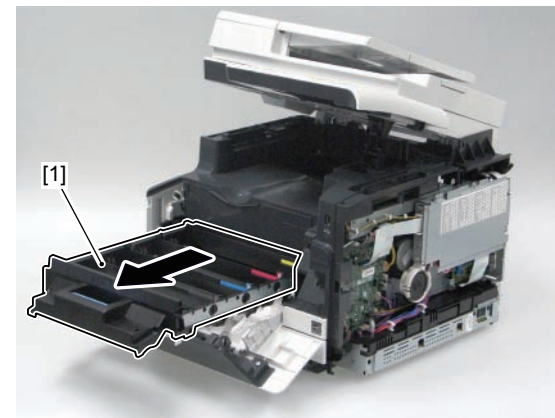
F-4-498

- 6) Insert a flat-blade screwdriver into the clearance [A] between the Left Stopper [1] and rail.
- 7) Remove the Left Stopper [1] while pushing the [B] part.
 - 2 Claws [2]
 - 1 Protrusion [3]



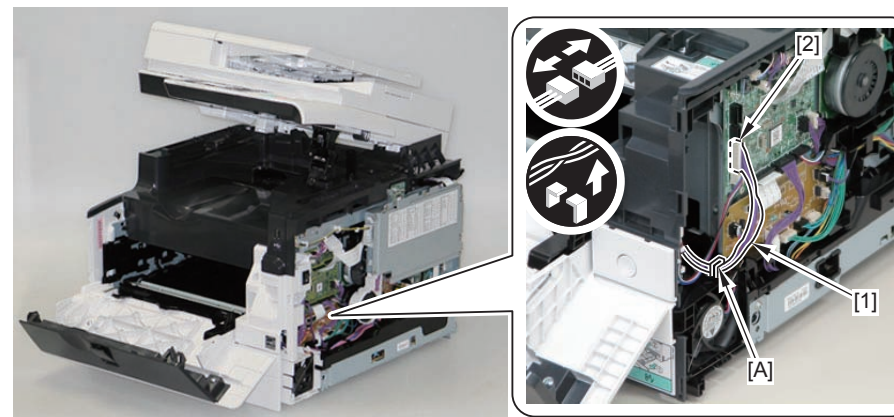
F-4-499

- 8) Remove the Cartridge Tray [1].



F-4-500

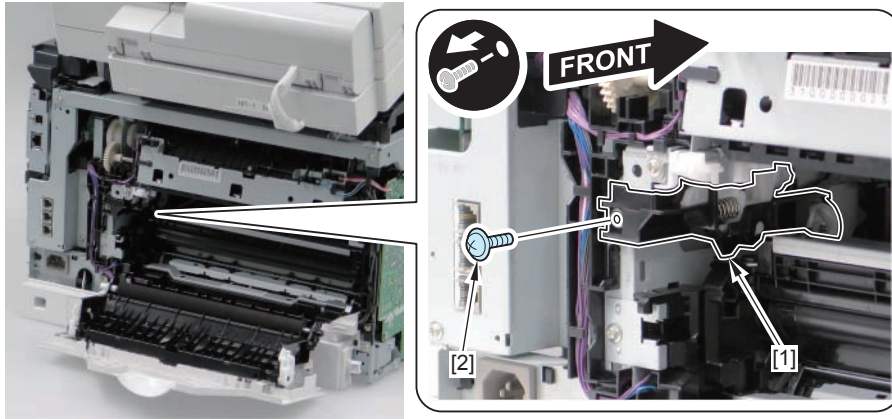
- 9) Free the harness [1].
 - 1 Connector [2]
 - 1 Harness Guide [A]



F-4-501

10) Remove the ITB Fixing Holder [1].

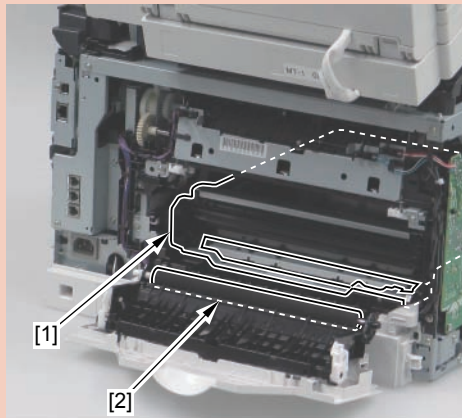
- 1 screw [2]



F-4-502

CAUTION:

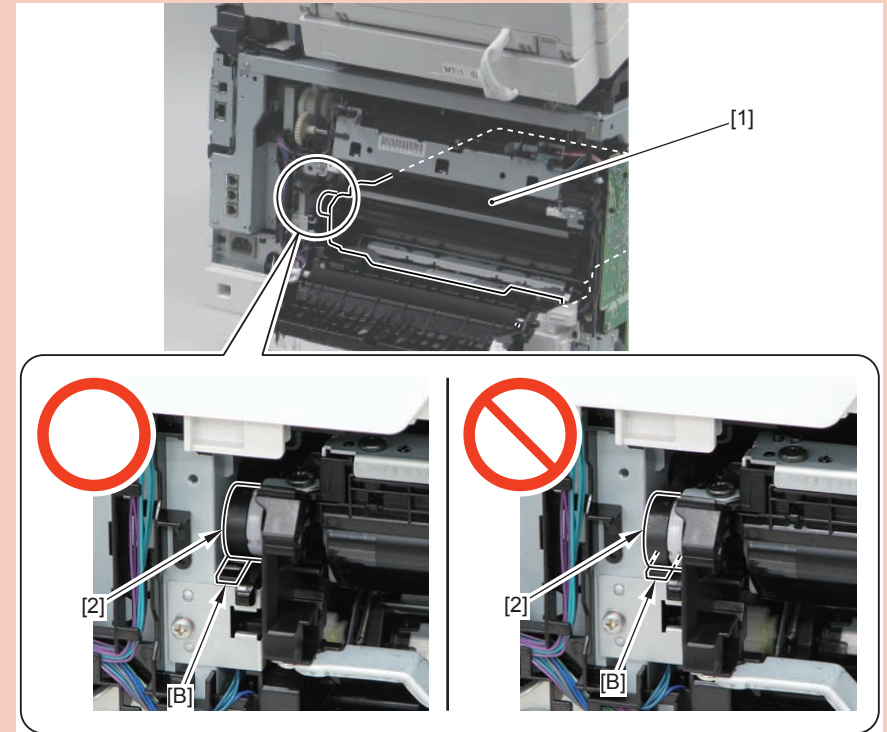
When removing the ITB Unit [1], do not touch the Secondary Transfer Outer Roller [2].



F-4-503

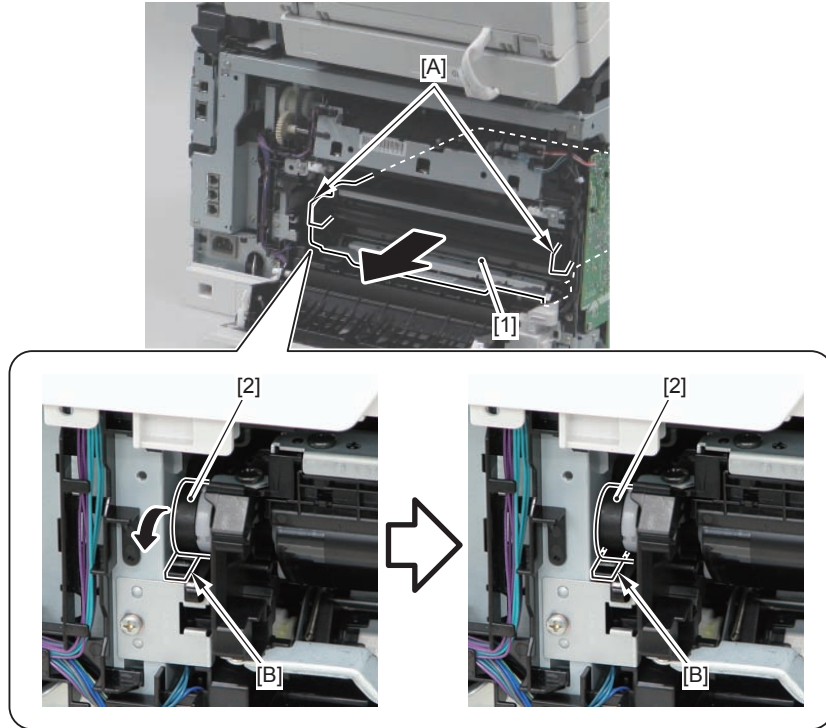
CAUTION:

Do not place the Drive Link [2] of the ITB Unit on the edge of the rail [B]; otherwise, the ITB Unit [1] falls.



F-4-504

- 11) Hold the 2 parts [A] of the ITB Unit to pull out the ITB Unit [1]. Then, place the ITB Drive Link [2] at the center of the rail [B].

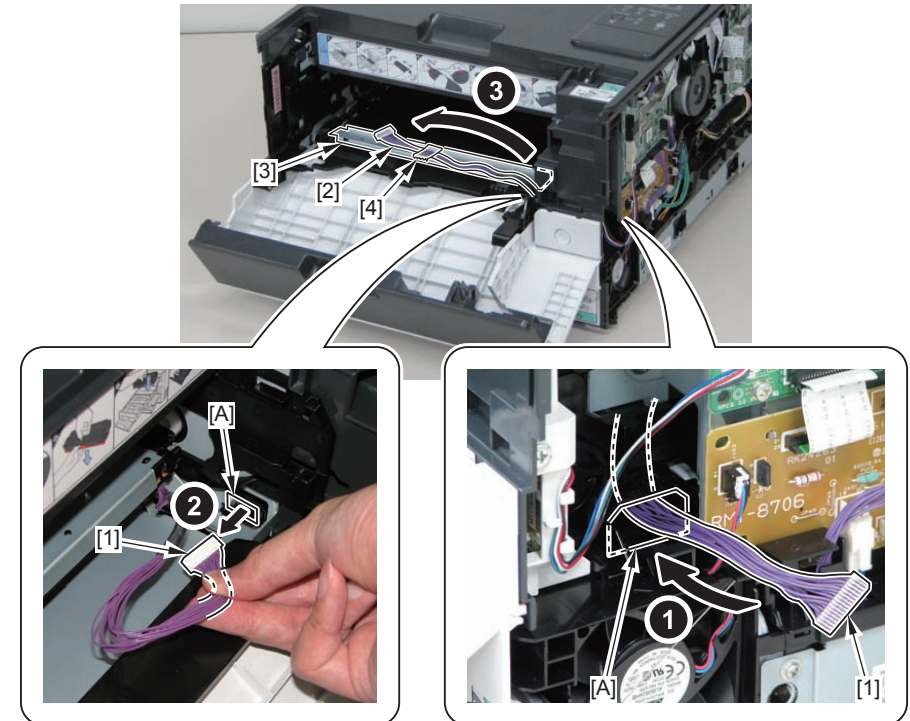


F-4-505

- 12) Put the connector [1] through the hole [A] of the guide, and secure the harness [2] to the plate [3] of the ITB Unit using tapes [4].

CAUTION:

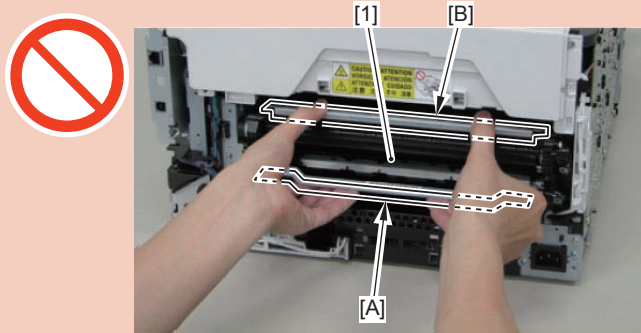
When installing/removing the ITB Unit, be sure to secure the harness [2] using tapes to prevent it from being caught inside the host machine.



F-4-506

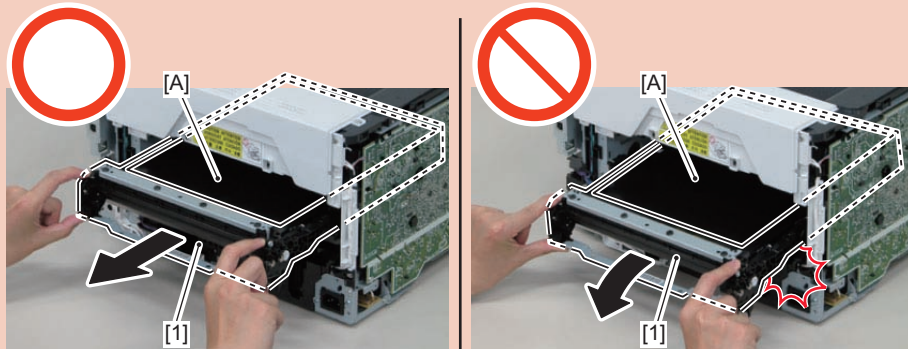
CAUTION:

- When holding the ITB Unit [1], be sure not to hold the plate [A] and [B]; otherwise, the plate [A] may be deformed.



F-4-507

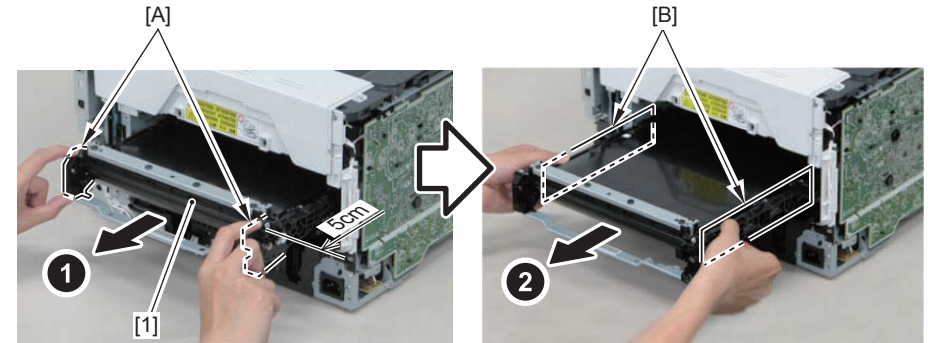
- When installing/removing the ITB Unit [1], be sure not to tilt it; otherwise, the surface [A] of the ITB may be damaged.



F-4-508

13) Hold the 2 parts [A] of the ITB Unit and pull out the ITB Unit [1] horizontally by approx. 5 cm.

14) Hold the 2 guides [B] at the both ends of the ITB Unit, and remove the ITB Unit [1].



Removing the Secondary Transfer Outer Roller

Procedure

1) Open the Rear Cover [1].

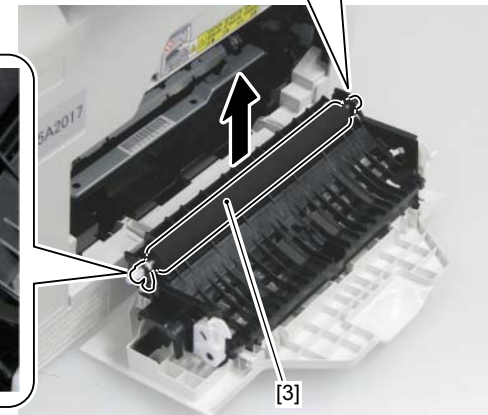
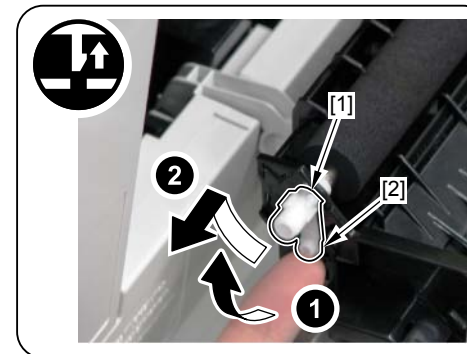
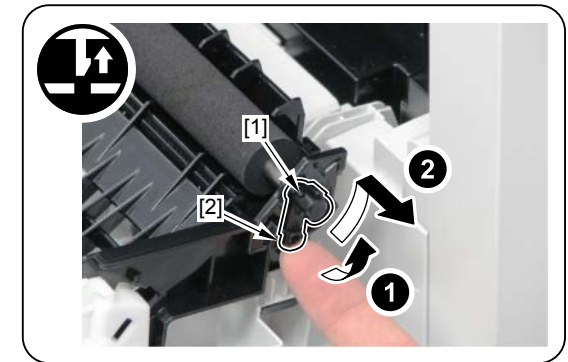


F-4-509

2) Remove the 2 stoppers [1].

- 2 claws [2]

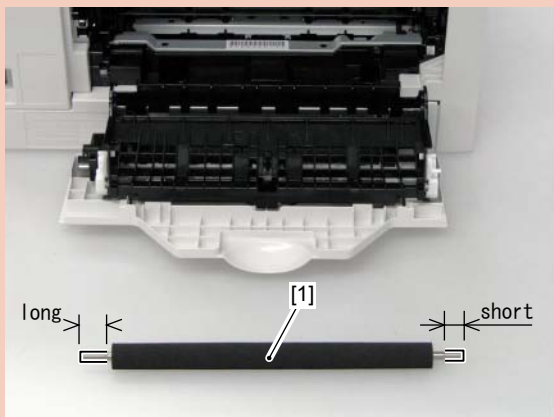
3) Remove the Secondary Transfer Outer Roller [3].



F-4-510

CAUTION:

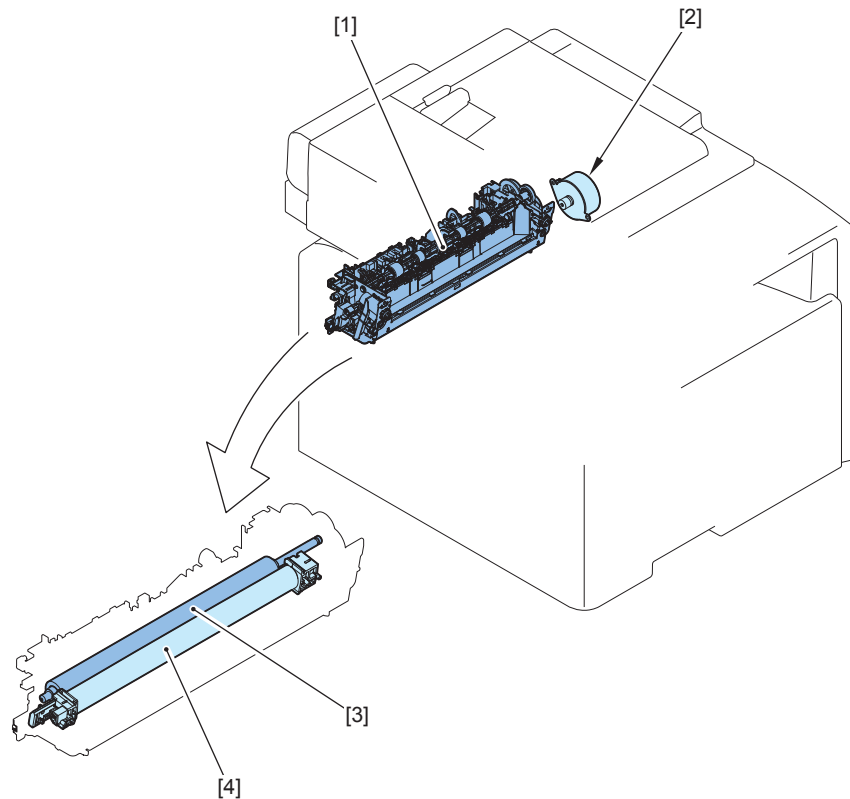
When installing the Secondary Transfer External Roller, take note of the direction of the Secondary Transfer Roller [1].



F-4-511

Fixing System

Location



F-4-512

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Fixing Assembly	Product Configuration	-	(Refer to page 4-225)	-
[2]	Fixing Motor	Product Configuration	M703	(Refer to page 4-232)	-
[3]	Fixing Pressure Roller	Fixing Assembly	-	(Refer to page 4-231)	-
[4]	Fixing Film Unit	Fixing Assembly	-	(Refer to page 4-228)	-

T-4-45

Removing the Fixing Assembly

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the Rear Lower Cover. Refer to page 4-154.

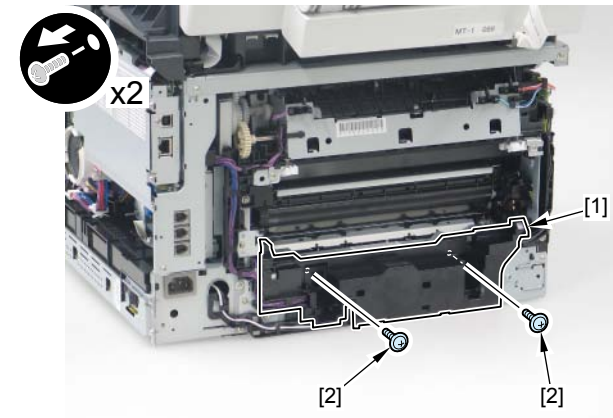
Procedure

CAUTION:

Take some time until the fixing assembly gets cooler and then remove it because the fixing assembly right after the power supply is turned off is at high heat

- 1) Remove the Fixing Power Supply Cover [1].

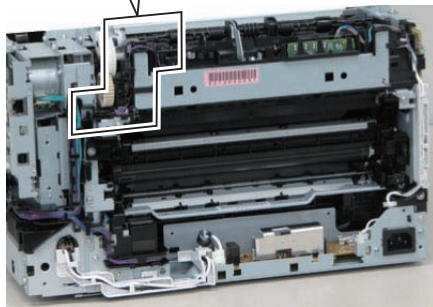
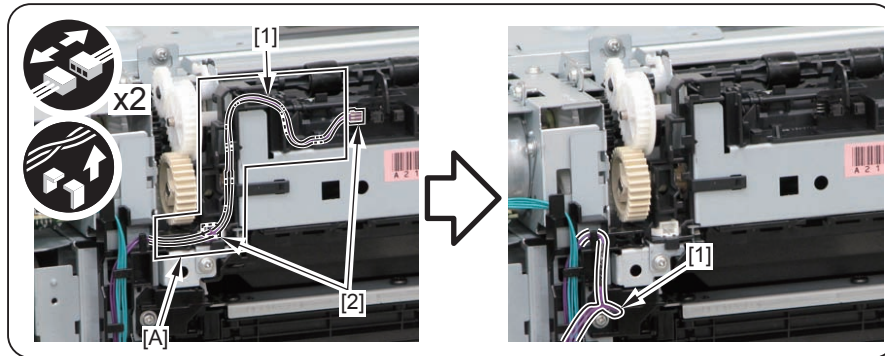
- 2 screws [2]



F-4-513

2) Free the 1 harness [1].

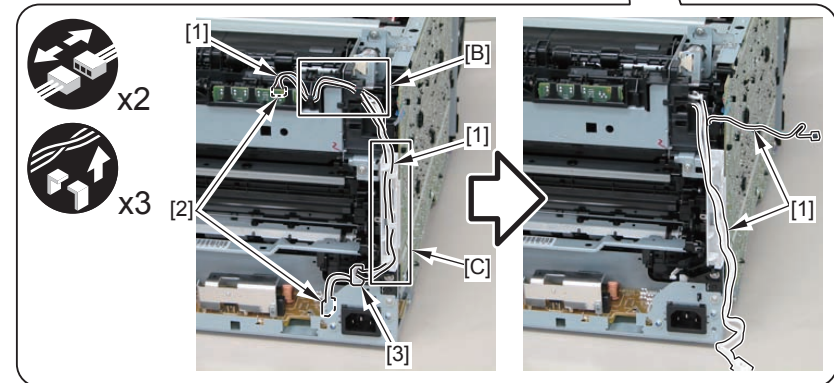
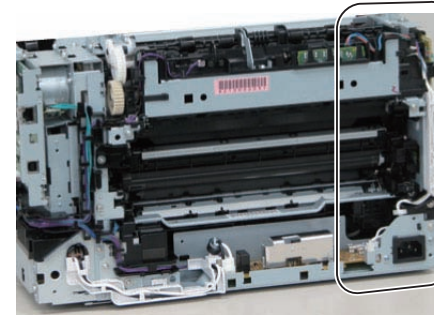
- 2 connectors [2]
- Harness guide [A]



F-4-514

3) Free the 2 harnesses [1].

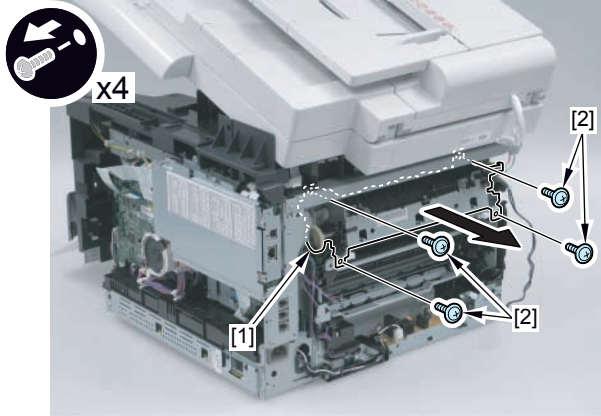
- 2 connectors [2]
- Guide [B]
- Guide [C]
- 1 Wire Saddle [3]



F-4-515

4) Remove the Fixing Assembly [1].

- 4 screws [2]



F-4-516

Replacing the Fixing Film Unit

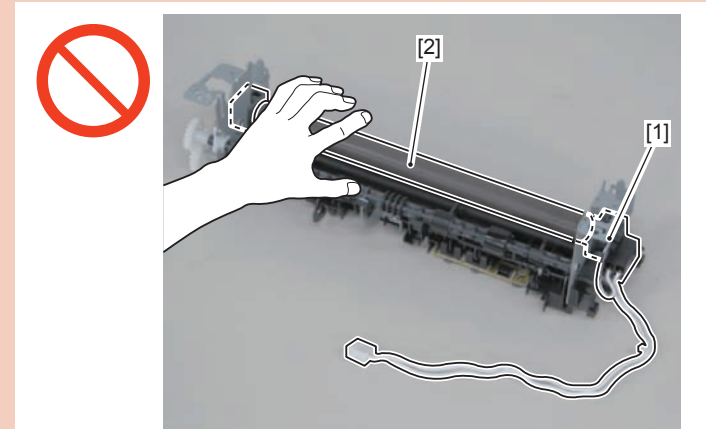
Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the Rear Lower Cover. Refer to page 4-154.
- 5) Remove the Fixing Assembly. Refer to page 4-225.

Procedure

CAUTION:

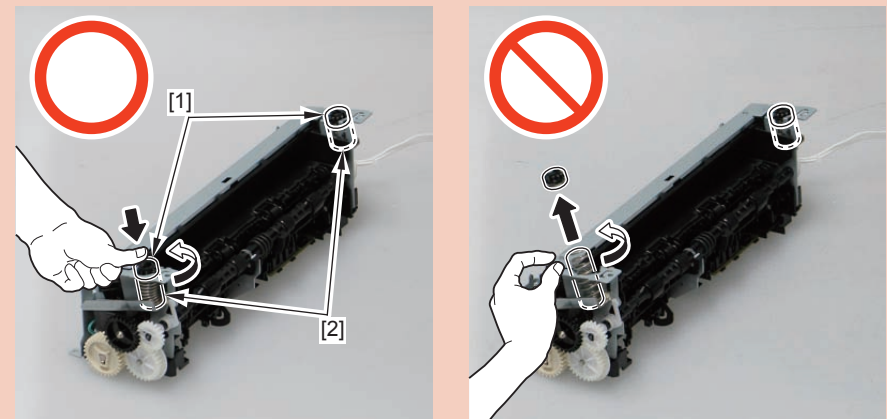
When installing/removing the Fixing Film Unit [1], be sure not to touch the Fixing Film [2].



F-4-517

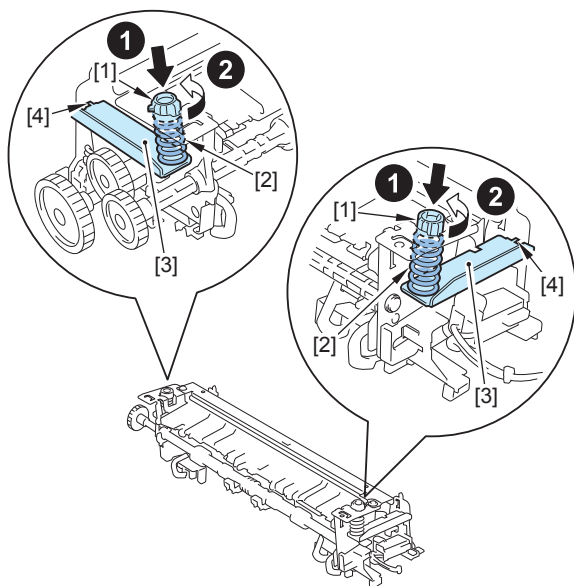
CAUTION:

When removing the Spring Retainer Holders [1] and the springs [2], be sure to hold them to prevent them from coming off because pressure is applied to them.



F-4-518

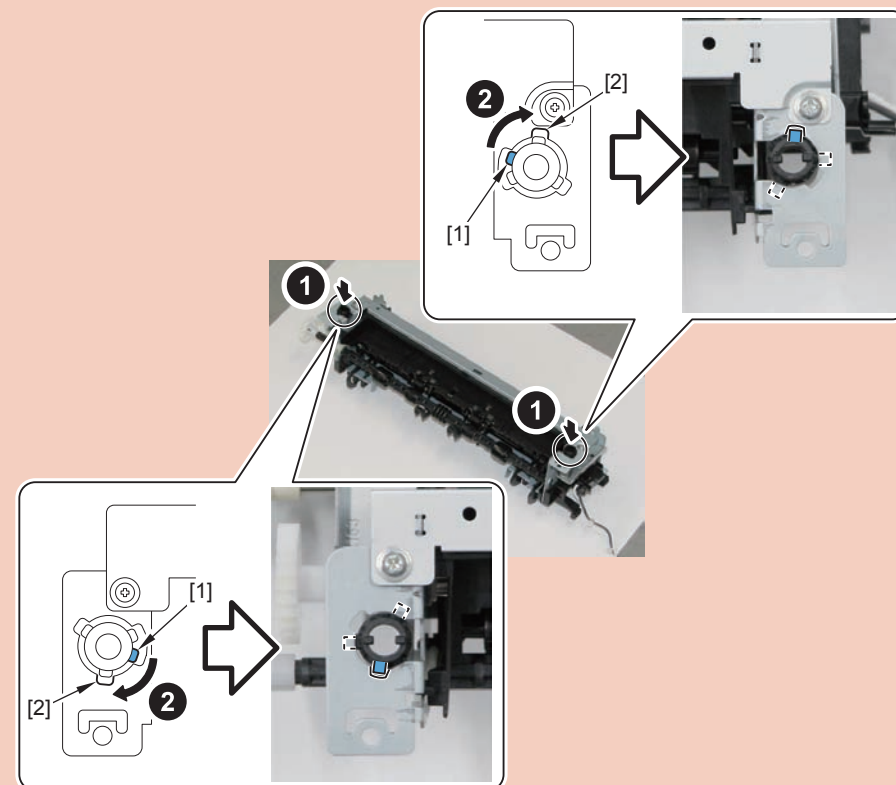
- 1) Remove the 2 Spring Retainer Holders [1] (right and left) and the 2 springs [2].
 - 2) Remove the 2 Pressure Plates [3] (right and left).
- 2 Protrusions [4]



F-4-519

CAUTION:

At installation, be sure to match the protrusion [1] of the Spring Retainer Holder with the cut-off parts [2] of the Fixing Frame.

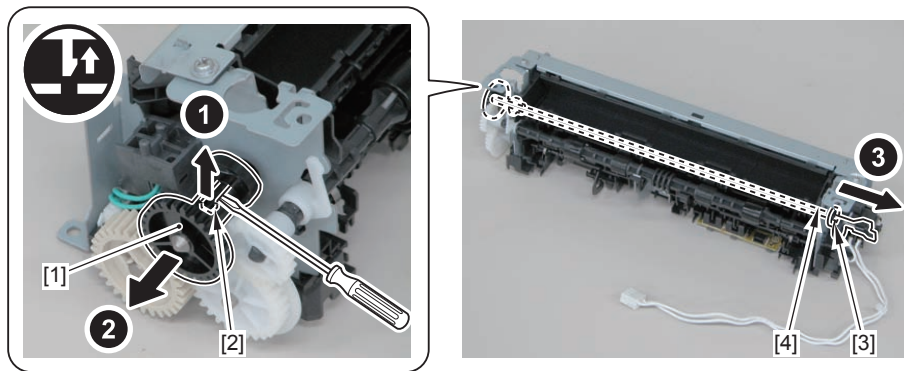


F-4-520

3) Remove the gear [1].

- 1 Claw [2]

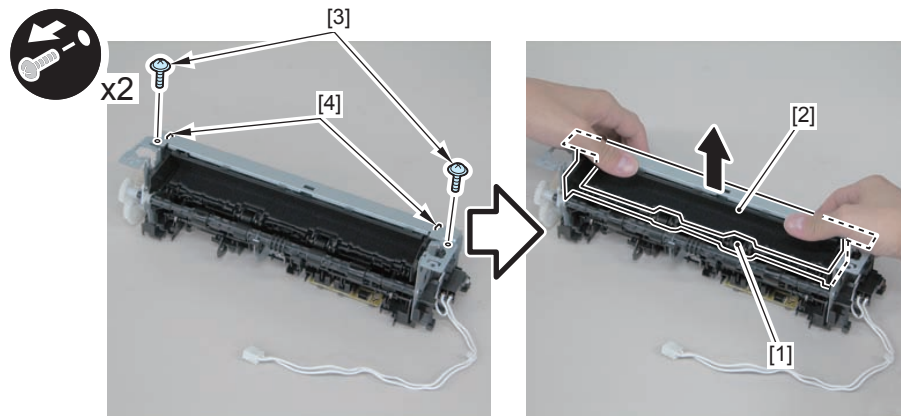
4) Remove the Shaft Unit [3] and the bushing [4].



F-4-521

5) Remove the Guide Retainer Plate [1] and the Fixing Guide (Upper) [2].

- 2 Screws [3]
- 2 Protrusions [4]

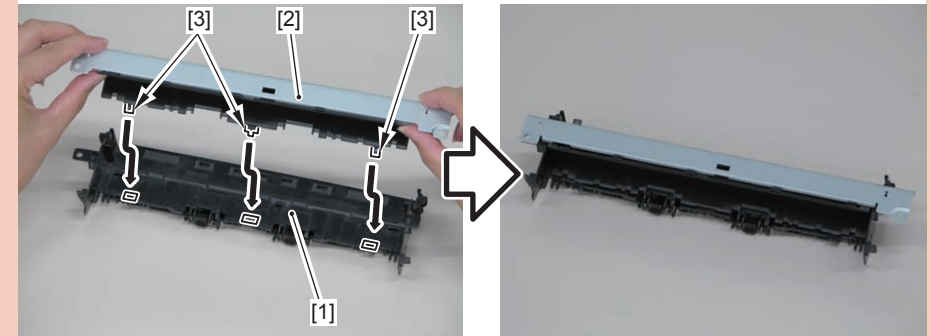


F-4-522

CAUTION:

At installation, be sure to combine the Guide Retainer Plate [1] with the Fixing Guide (Upper) [2] before installing them to the Fixing Assembly.

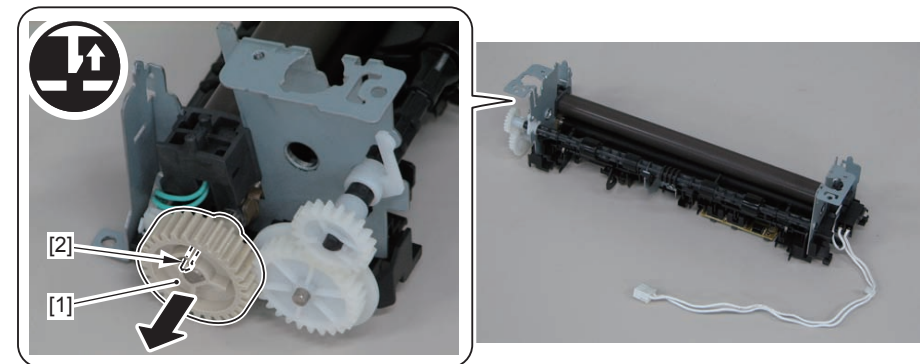
- 3 Protrusions [3]



F-4-523

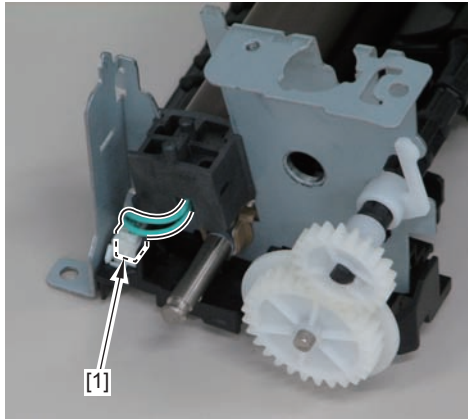
6) Remove the gear [1].

- 1 Claw [2]



F-4-524

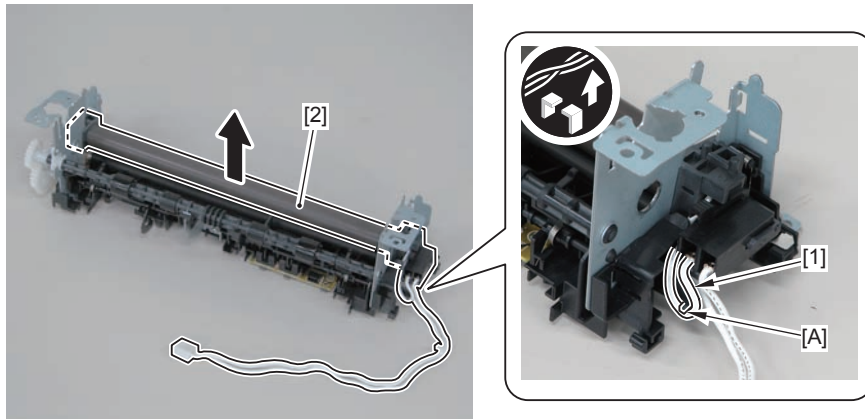
7) Disconnect the connector [1].



F-4-525

8) Free the harness [1] from the guide [A].

9) Remove the Fixing Film Unit [2].



F-4-526

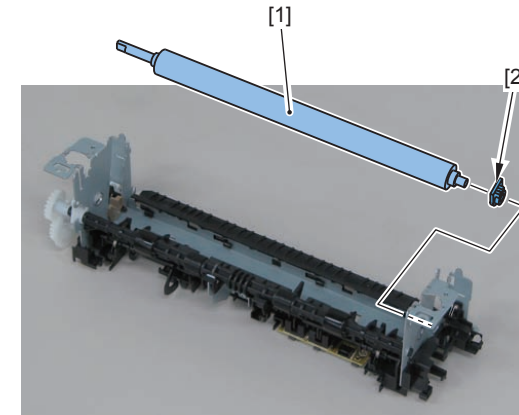
Removing the Fixing Pressure Roller

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Left Cover. Refer to page 4-144.
- 3) Remove the Rear Upper Cover. Refer to page 4-153.
- 4) Remove the Rear Lower Cover. Refer to page 4-154.
- 5) Remove the Fixing Assembly. Refer to page 4-225.
- 6) Remove the Fixing Film Unit. Refer to page 4-228.

Procedure

- 1) Remove the Fixing Pressure Roller [1].
 - 1 Bushing [2]



F-4-527

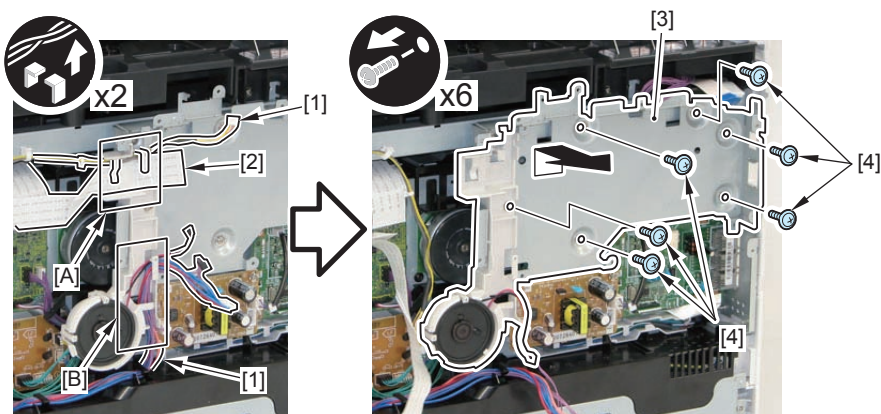
Removing the Fixing Motor

Preparation

- 1) Remove the Right Cover. Refer to page 4-147.
- 2) Remove the Controller Cover. Refer to page 4-182.
- 3) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.
- 4) Remove the Main Controller PCB. Refer to page 4-183.

Procedure

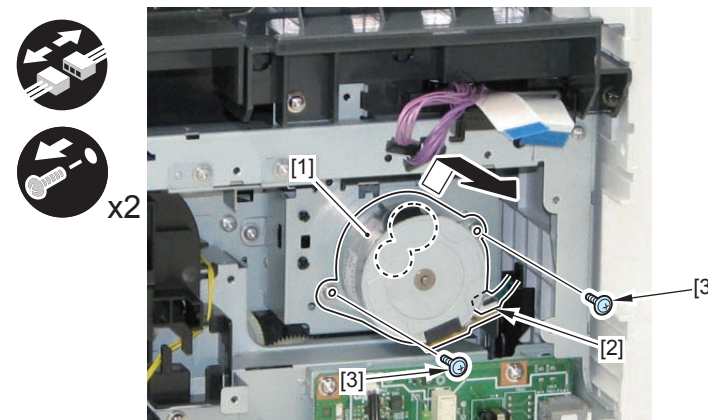
- 1) Free the harness [1], Flat Cable [2] and remove the Main Controller Support Plate [3].
 - Guide [A]
 - Guide [B]
 - 6 Screws [4]



F-4-528

- 2) Slide the Fixing Motor [1] in the upper right direction to remove.

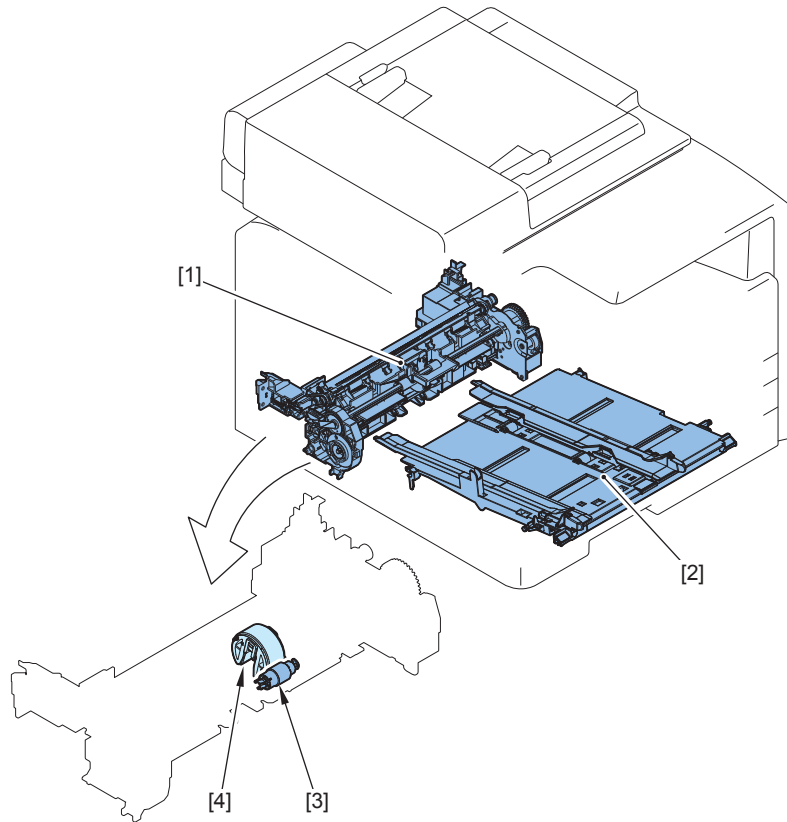
- 1 connector [2]
- 2 screws [3]



F-4-529

Pickup Feeder System

Location



F-4-530

No.	Parts Name	Main Unit	Remarks	Reference	Adjustment during parts replacement
[1]	Pickup Unit	Product Configuration	-	(Refer to page 4-242)	-
[2]	Multi-purpose Tray Unit	Product Configuration	-	(Refer to page 4-237)	-
[3]	Cassette Separation Roller	Pickup Unit	-	(Refer to page 4-235)	-
[4]	Cassette Pickup Roller	Pickup Unit	-	(Refer to page 4-233)	-

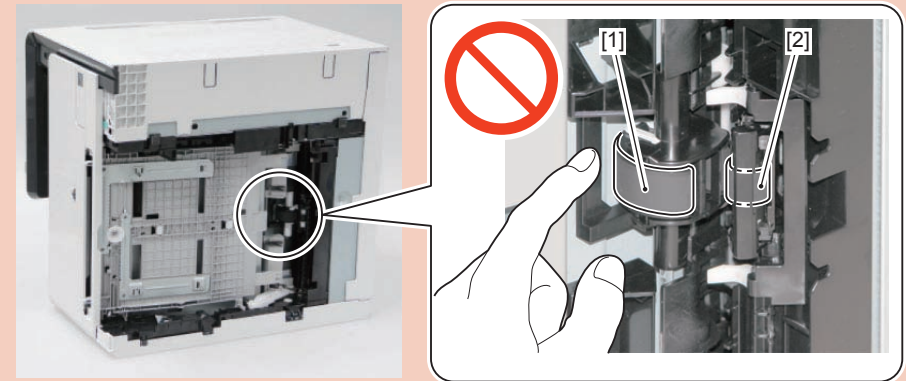
T-4-46

Removing the Cassette Pickup Roller

Procedure

CAUTION:

Be sure not to touch the surface of the Cassette Pickup Roller [1] and the Cassette Separation Roller [2].



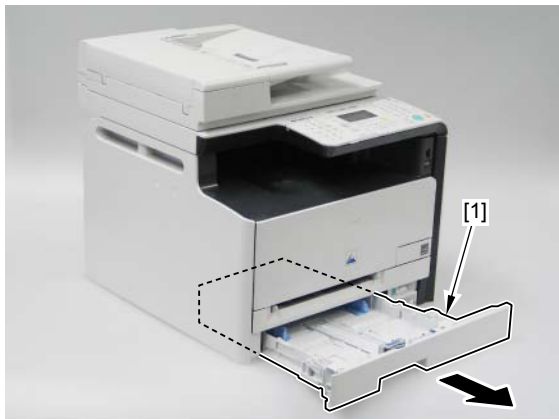
F-4-531

- 1) Turn ON the power switch.
- 2) Execute the following items in Service mode.
COPIER > FUNCTION > VIFFNC > FD-R-CHG
- 3) The Pickup Roller rotates and stops at the replacement position.
- 4) Turn OFF the power.

CAUTION:

Before tilting a host machine, remove toner cartridges (Y, M, C, Bk).

5) Remove the cassette [1].



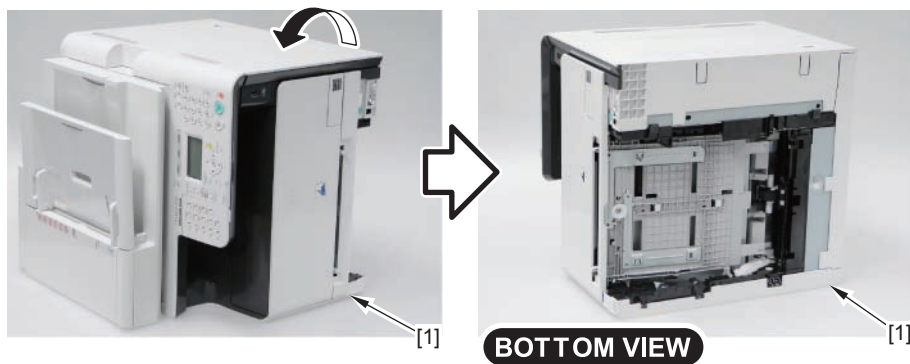
F-4-532

6) Place a host machine [1] as the Left Cover faces to the bottom.

CAUTION:

When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening.

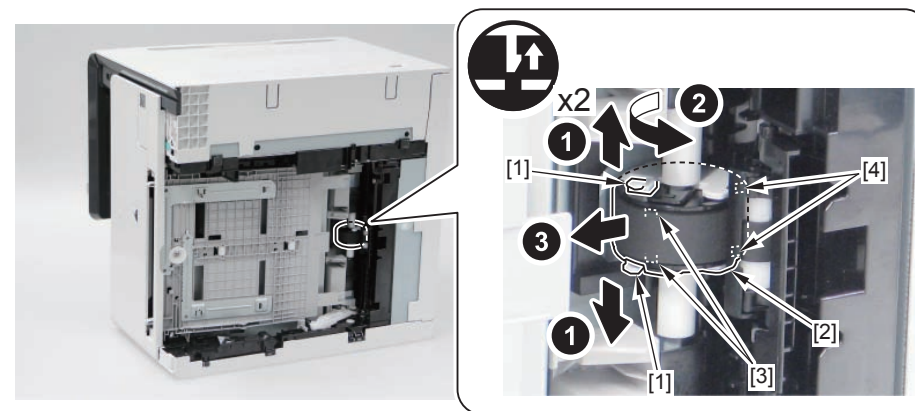
In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.



F-4-533

7) Open 2 projections [1] of the holder in the arrow direction, and remove the cassette Pickup Roller [2].

- 2 Claws [3]
- 2 Hooks [4]



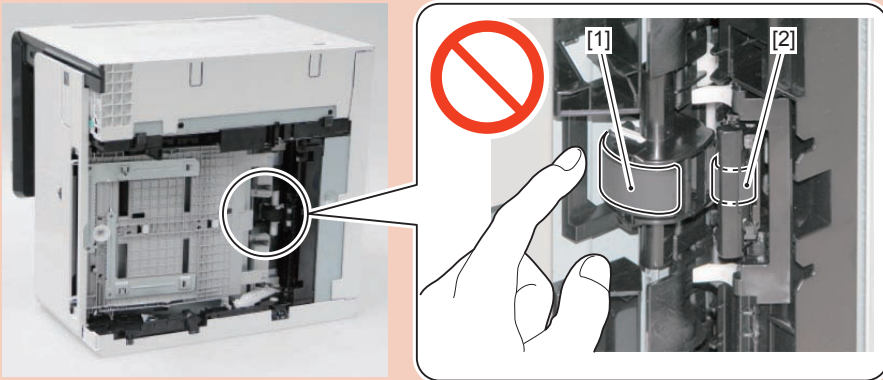
F-4-534

Removing the Cassette Separation Roller

Procedure

CAUTION:

Be sure not to touch the surface of the Cassette Pickup Roller [1] and the Cassette Separation Roller [2].

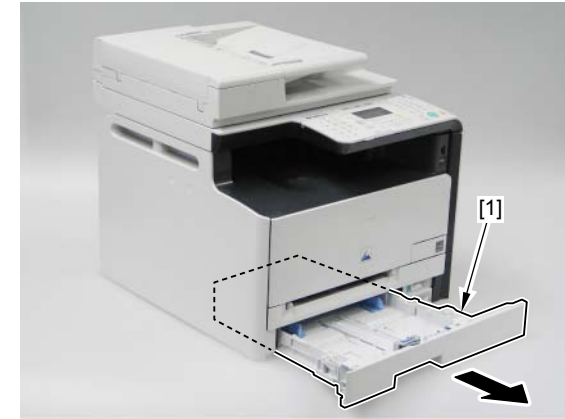


F-4-535

CAUTION:

Before tilting a host machine, remove toner cartridges (Y, M, C, Bk).

1) Remove the cassette [1].



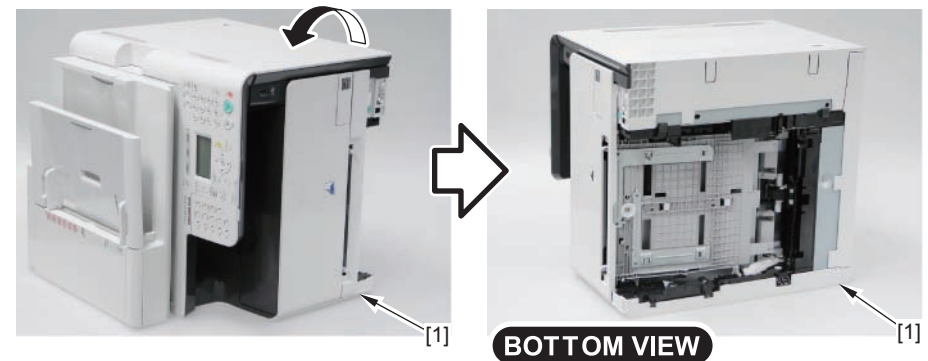
F-4-536

2) Make the Left Cover face down and place the host machine [1].

CAUTION:

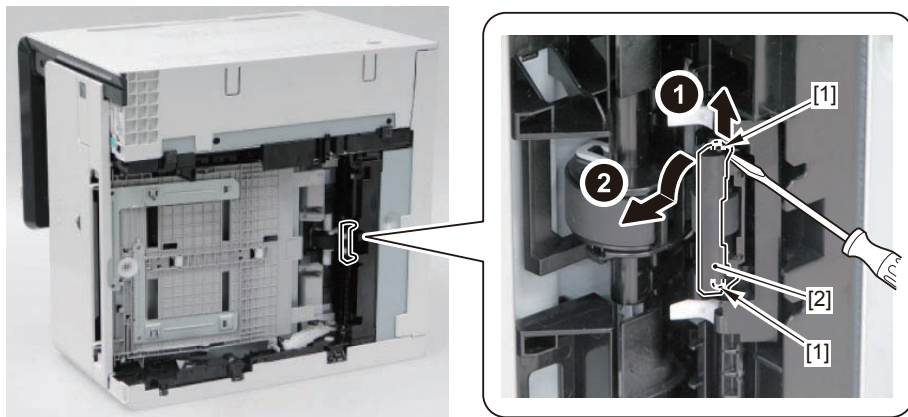
When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening.

In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.



F-4-537

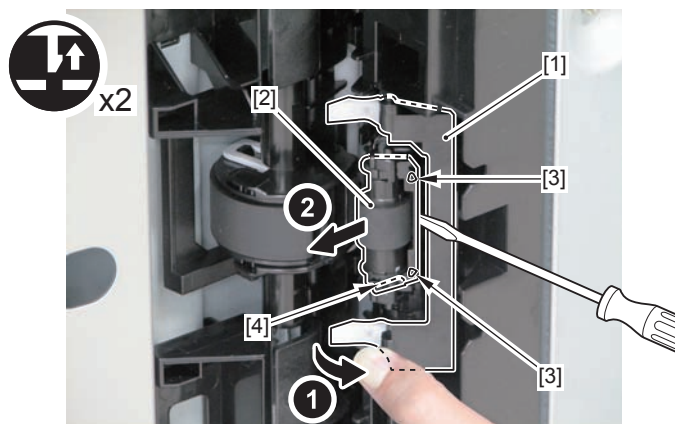
3) Remove the 2 projections [1] to remove the Cover [2].



F-4-538

4) While opening the holder [1], remove the Cassette Separation Roller [2].

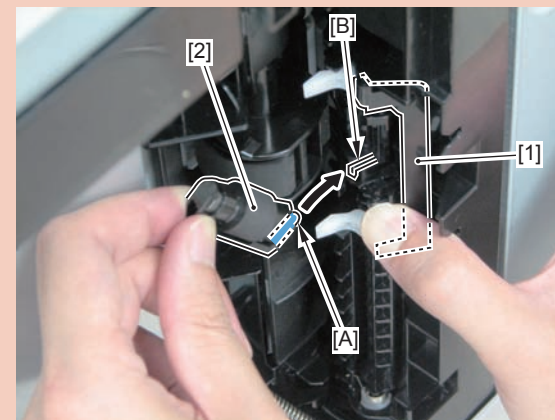
- 2 Claws [3]
- 1 Protrusion [4]



F-4-539

CAUTION:

At installation, be sure to align the protrusion [A] of the Cassette Separation Roller [2] with the groove [B] of the holder [1].



F-4-540

Removing the Multi-purpose Tray Unit

Preparation

- 1) Remove the Toner Cartridges (Bk, C, M and Y).

CAUTION:

When installing/removing the Toner Cartridge, be careful not to damage the Photosensitive Drum because it is exposed. Also, be sure to block light.

- 2) Remove the cassette.

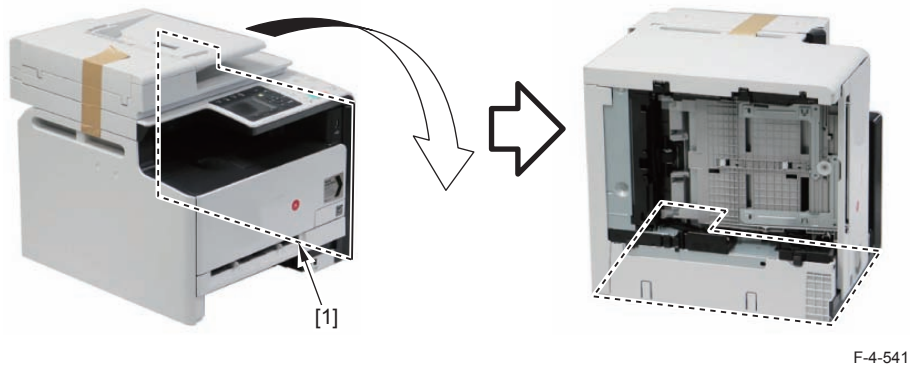
Procedure

- 1) Place the host machine with the Left Cover [1] down.

CAUTION:

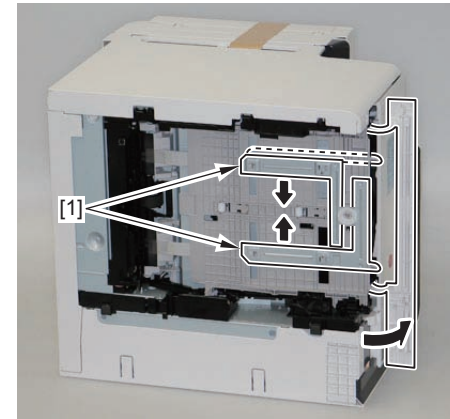
When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening.

In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.

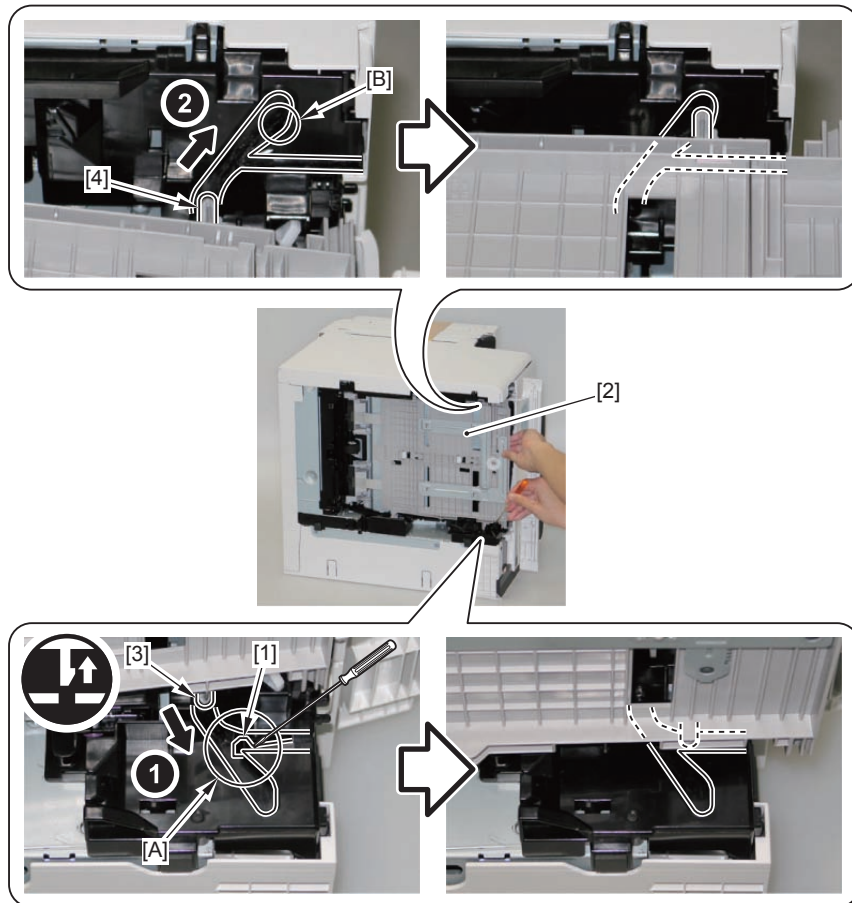


- 2) Open the Multi-purpose Tray Pickup Cover.

- 3) Move the 2 Multi-purpose Tray Paper Width Guide Plates [1] to the center as shown in the figure below.

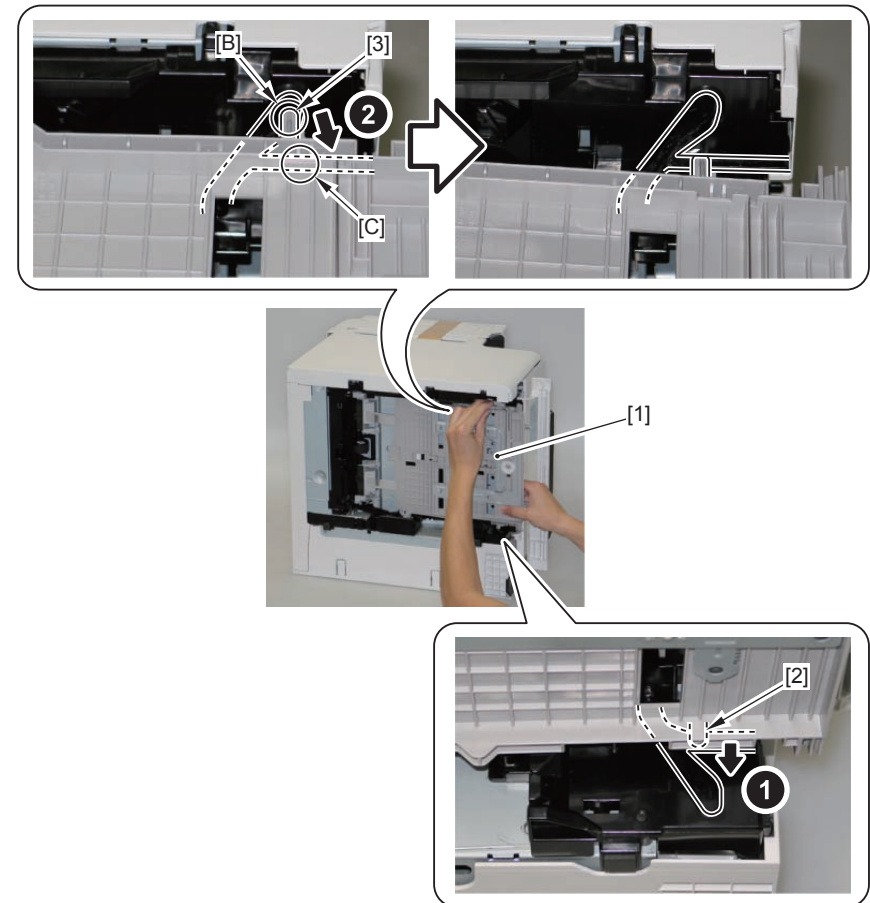


- 4) Lower the claw [1], move the shaft [3] at the lower side of the Multi-purpose Tray Unit [2] to the leading edge [A] of the claw [1], and then push the shaft [4] at the upper side of the Multi-purpose Tray Unit all the way to the groove [B].



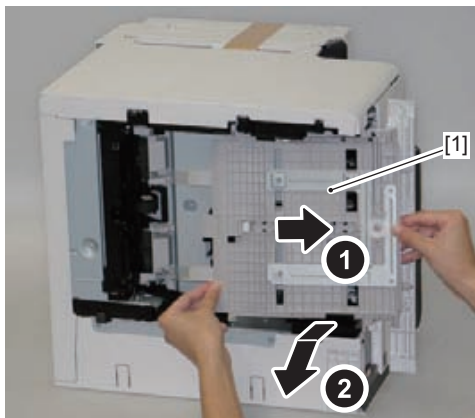
F-4-543

- 5) While pushing the shaft [2] at the lower side of the Multi-purpose Tray Unit [1] down, remove the shaft [3] at the upper side of the Multi-purpose Tray Unit from the groove [B], and insert it into [C] part.



F-4-544

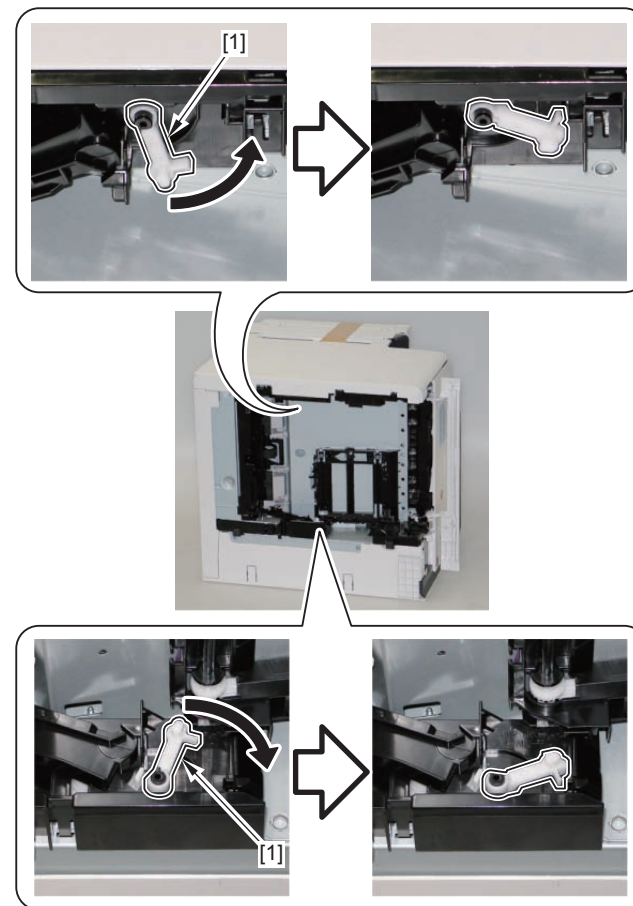
6) Remove the Multi-purpose Tray Unit [1].



F-4-545

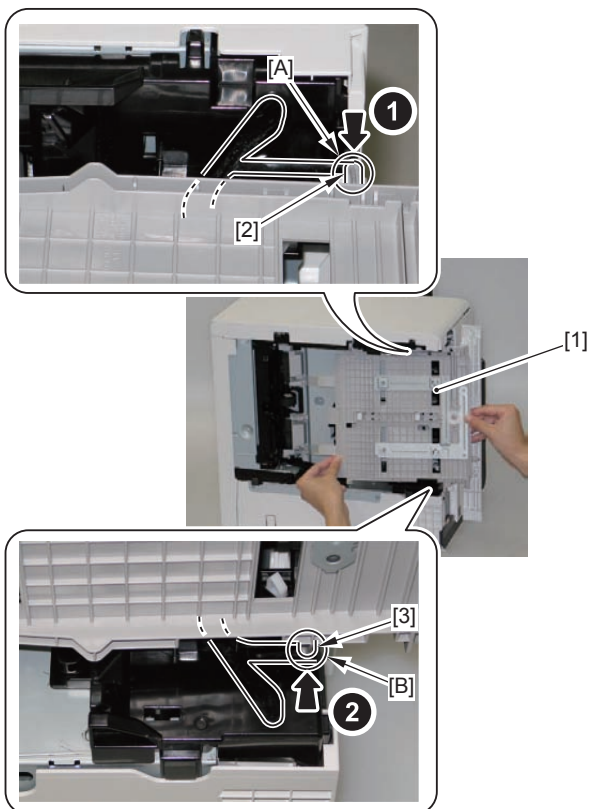
Installation Method

1) Set the 2 links [1] of the Multi-purpose Tray Unit as shown in the figure below.



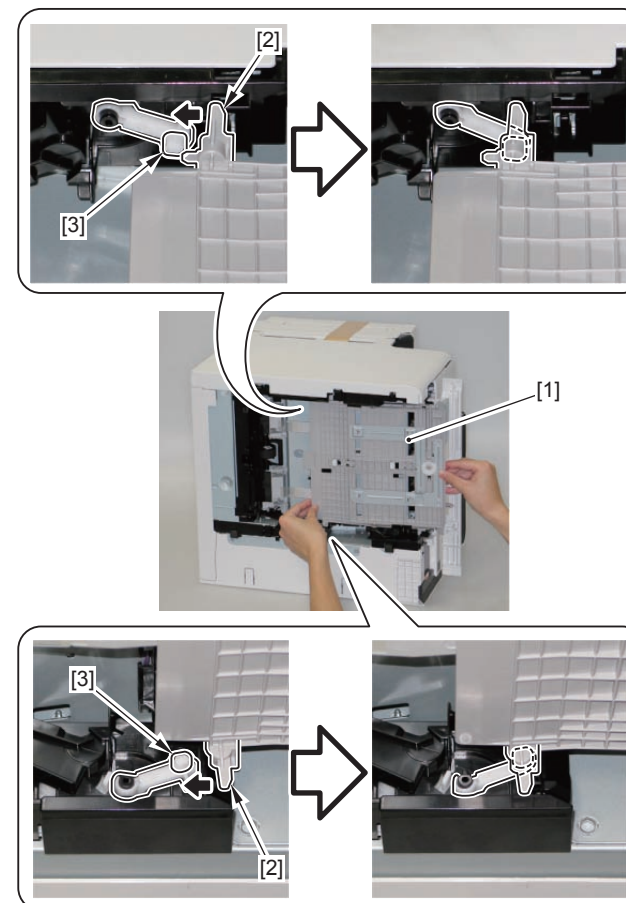
F-4-546

- 2) Insert the shaft [2] at the upper side of the Multi-purpose Tray Unit [1] into the groove [A], and the shaft [3] at the lower side of the Multi-purpose Tray Unit into the groove [B].



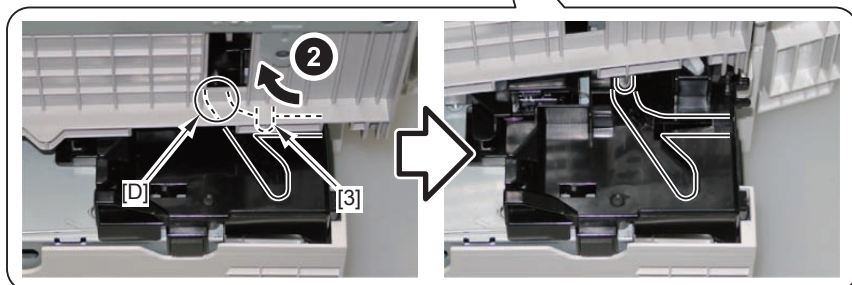
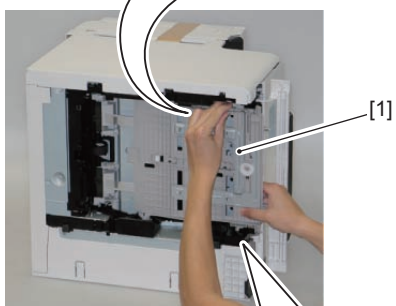
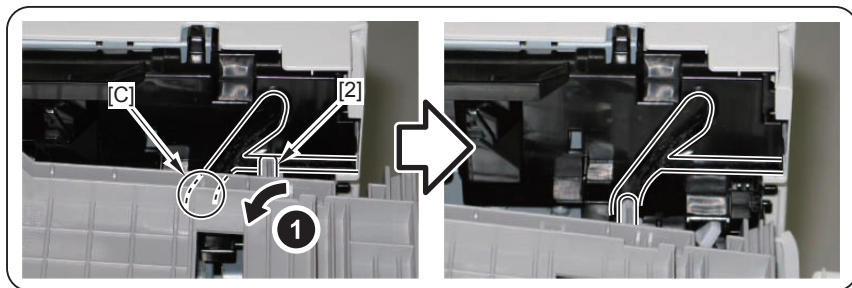
F-4-547

- 3) Fit the 2 grooves [2] of the Multi-purpose Tray Unit [1] to the 2 protrusions [3] of the links of the Multi-purpose Tray Unit.



F-4-548

- 4) Move the shaft [2] at the upper side of the Multi-purpose Tray Unit [1] to the groove [C], and the shaft [3] at the lower side of the Multi-purpose Tray Unit to the groove [D].



F-4-549

- 5) Perform the step 3 and earlier steps of the Removing Procedure in reverse order.

Removing the Pickup Unit

Preparation

1) Remove the Toner Cartridges (Bk, C, M and Y).

CAUTION:

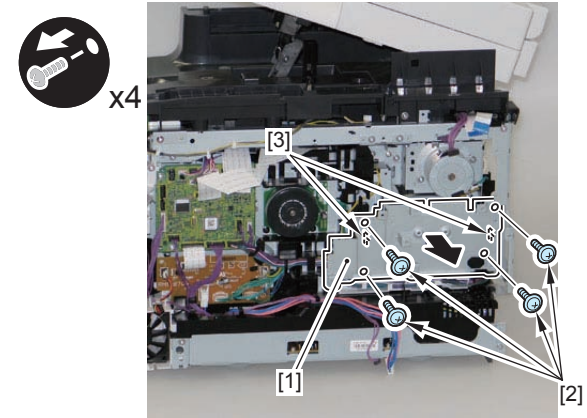
When installing/removing the Toner Cartridge, be careful not to damage the Photosensitive Drum because it is exposed. Also, be sure to block light.

- 2) Remove the cassette.
- 3) Remove the Right Cover. Refer to page 4-147.
- 4) Remove the Left Cover. Refer to page 4-144.
- 5) Remove the Rear Upper Cover. Refer to page 4-153.
- 6) Remove the Rear Lower Cover. Refer to page 4-154.
- 7) Remove the ITB Unit. Refer to page 4-218
- 8) Remove the Fixing Power Supply Unit. Refer to page 4-195
- 9) Remove the Controller Cover. Refer to page 4-182
- 10) Remove the Wireless LAN PCB. (MF8280Cw/8240Cw only) Refer to page 4-182.
- 11) Remove the Main Controller PCB. Refer to page 4-183
- 12) Remove the Off Hook PCB. (Fax model only) Refer to page 4-201
- 13) Remove the Fax PCB. (Fax model only) Refer to page 4-201

Procedure

1) Remove the Fax PCB Mounting Plate [1].

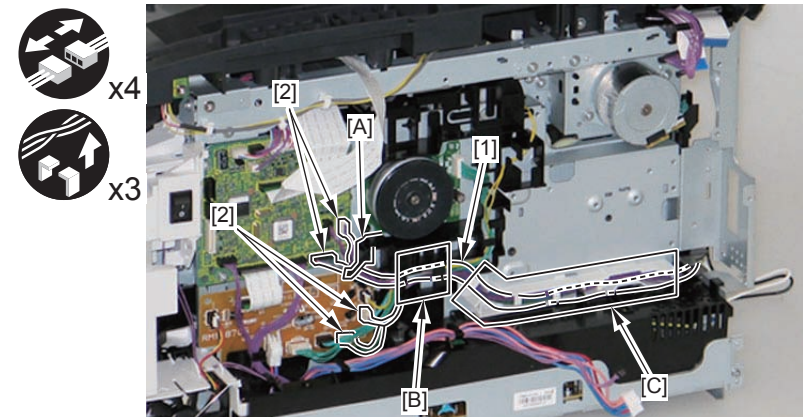
- 4 Screws [2]
- 2 Hooks [3]



F-4-550

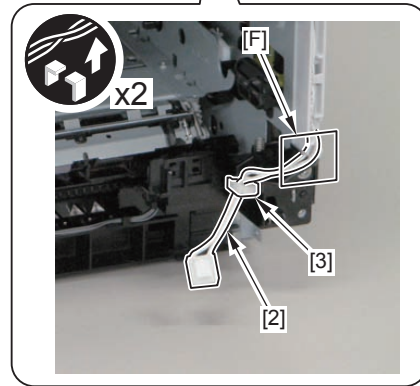
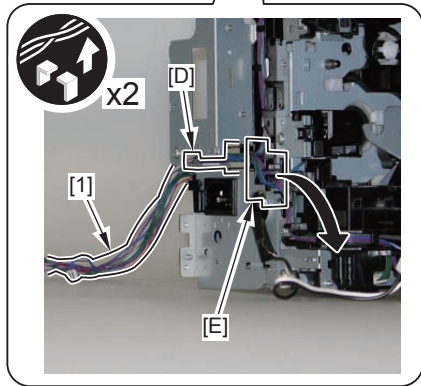
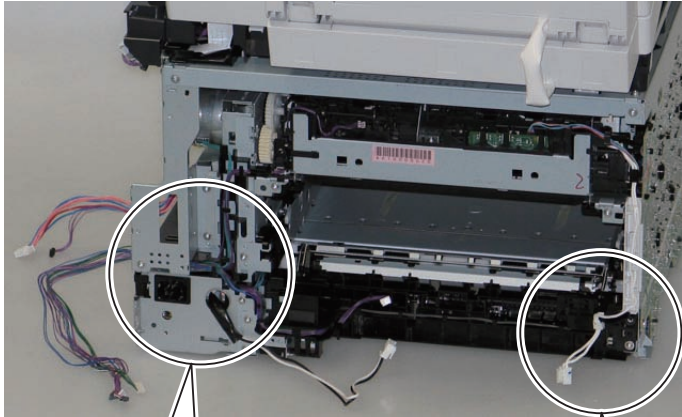
2) Free the harness [1] from the guides [A], [B], and [C].

- 4 Connectors [2]



F-4-551

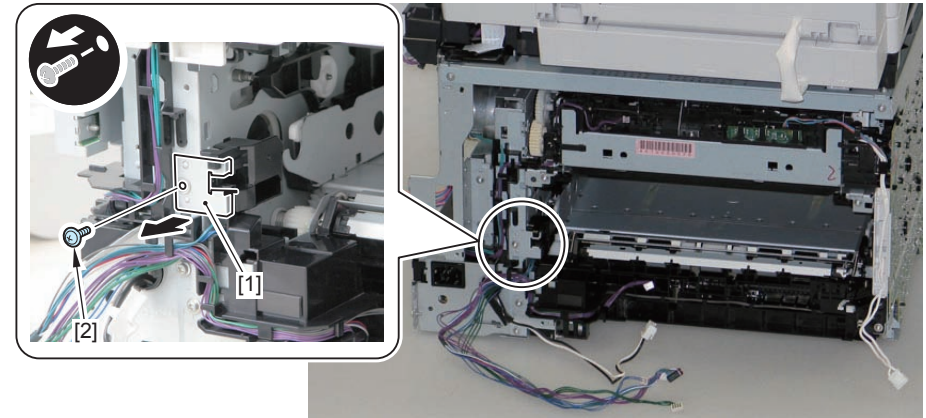
- 3) Free the harness [1] from the guide [E] by putting it through the hole [D] of the plate.
 - 4) Free the harness [2] from the guide [F].
- 1 Wire Saddle [3]



F-4-552

- 5) Remove the Sensor Cover Plate [1].

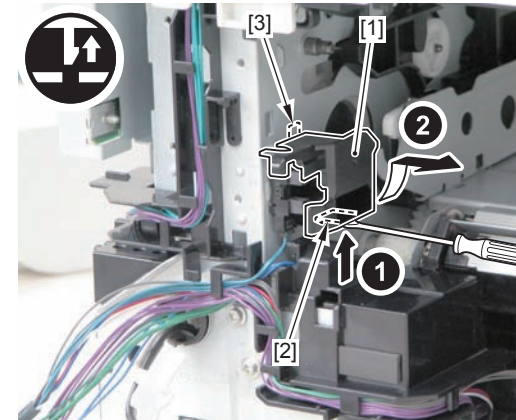
- 1 Screw [2]



F-4-553

- 6) Remove the Sensor Cover [1].

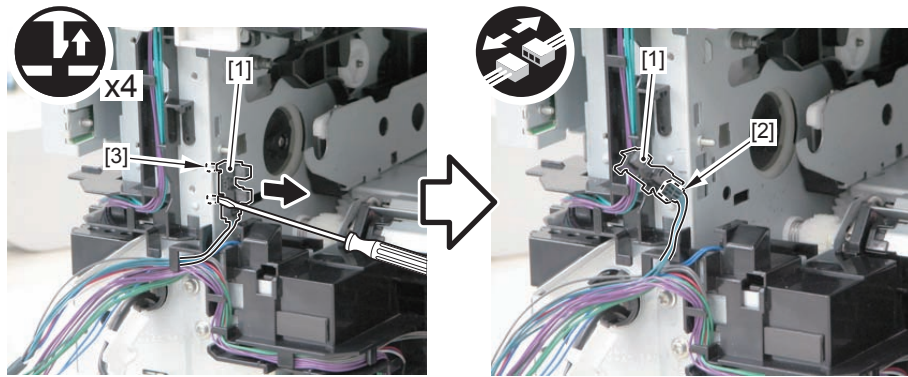
- 1 Claw [2]
- 1 Hook [3]



F-4-554

7) Disconnect the connector [2] of the sensor [1].

- 4 Claws [3]



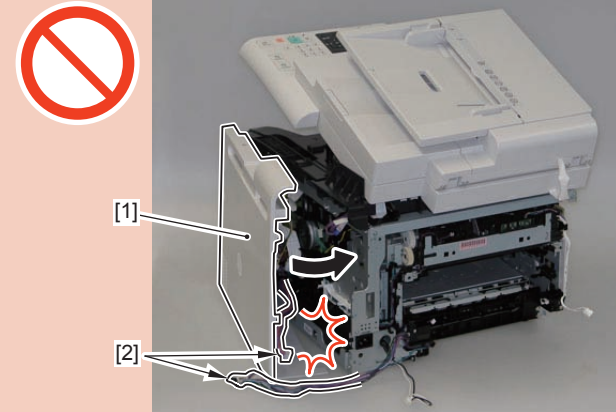
F-4-555

8) Install the Right Cover [1], and close the Front Cover [2].

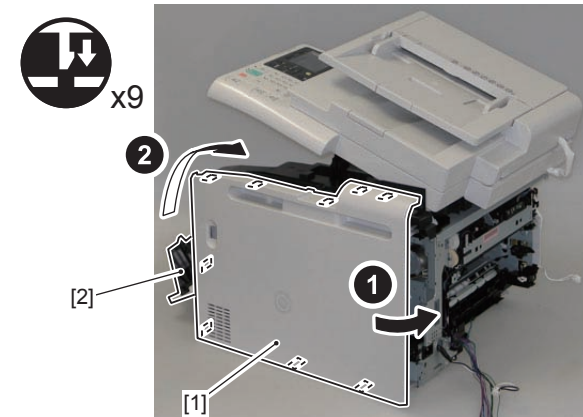
- 9 Claws

CAUTION:

When installing the Right Cover [1], be careful not to trap the harness [2].



F-4-556



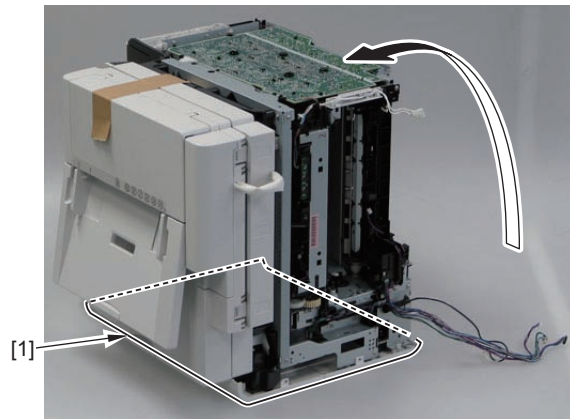
F-4-557

9) Place the host machine with the Right Cover [1] down.

CAUTION:

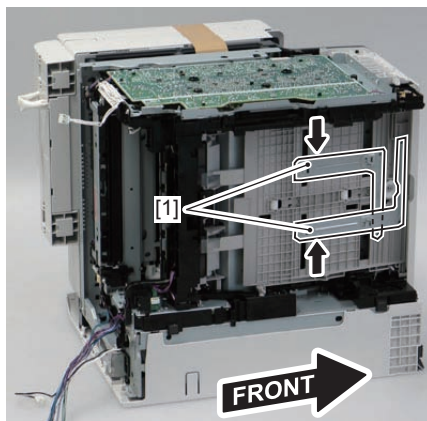
When laying down the main body, be sure to secure the ADF Unit with tape to prevent from opening.

In case that the ADF Unit is not secured with tape, when returning the main body to its original position, the ADF Unit is closed swiftly, so this might cause damage on the main body or injuries by catching the fingers.



F-4-558

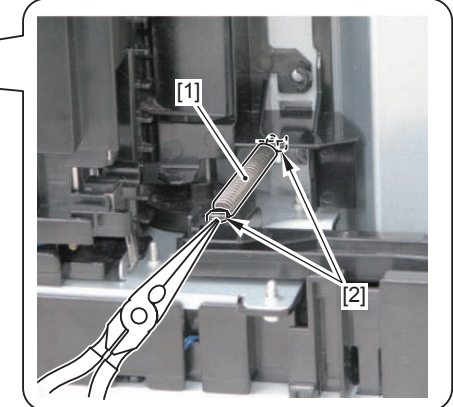
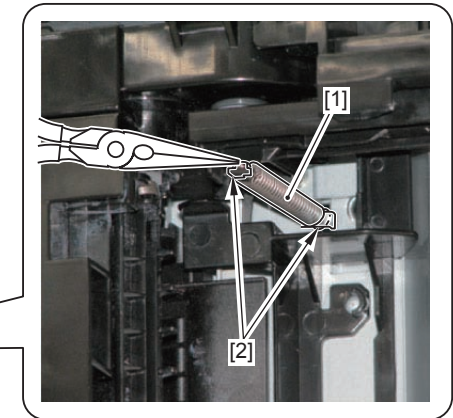
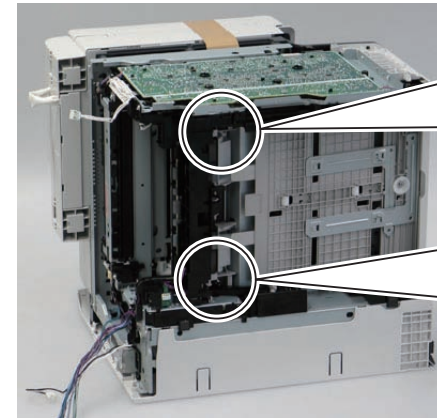
10) Move the 2 Multi-purpose Tray Paper Width Guide Plates [1] to the inside as shown in the figure below.



F-4-559

11) Remove the 2 springs [1] using a pair of needlenose pliers.

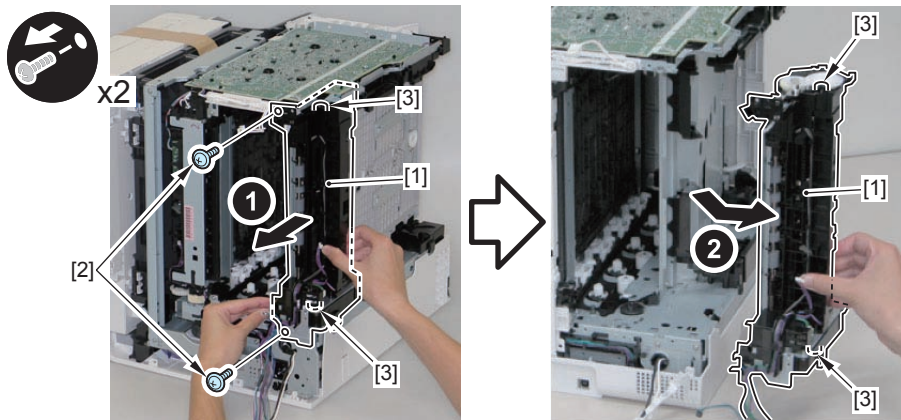
- 4 Hooks [2]



F-4-560

12) Remove the Pickup Unit [1].

- 2 Screws [2]
- 2 Bosses [3]

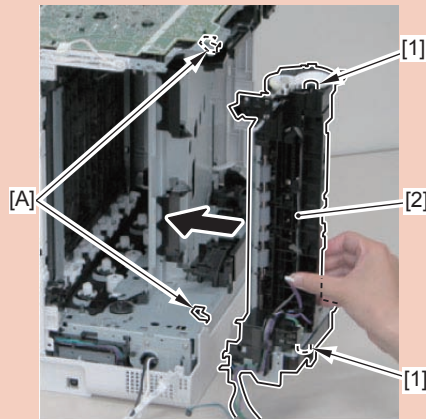


F-4-561

CAUTION:

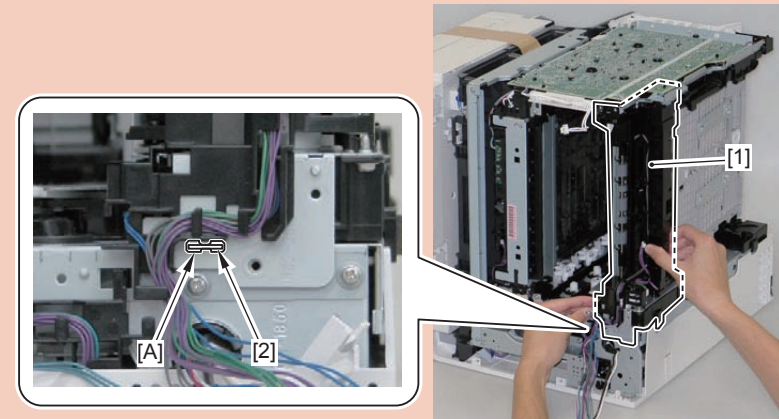
When installing the Pickup Unit, go through the following steps.

- 1) Align the 2 bosses [1] of the Pickup Unit with the 2 edges [A] of the cut-off of the host machine, and install the Pickup Unit [2] on the host machine.



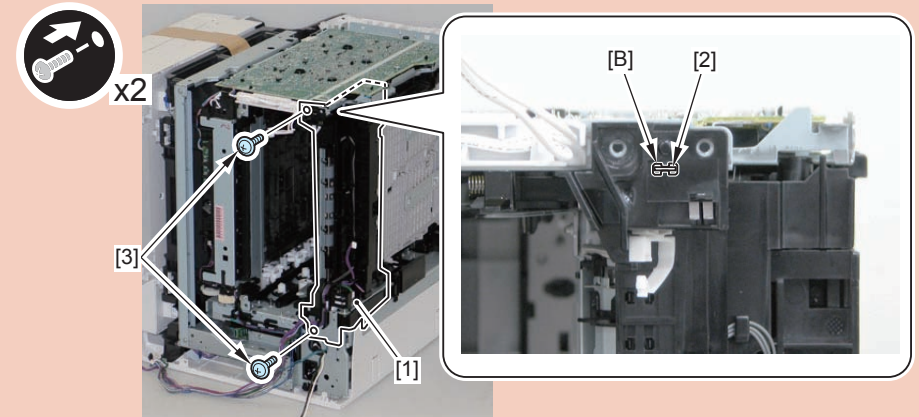
F-4-562

- 2) Push the lower side of the Pickup Unit [1], and fit the protrusion [2] of the host machine into the hole [A] of the plate.



F-4-563

- 3) Push the upper side of the Pickup Unit [1] to fit the protrusion [2] of the host machine into the hole [B] of the plate, and secure with the 2 screws [3] removed previously.



F-4-564



Adjustment

- Overview
- Adjustment at Parts Replacement

Overview

Category	Parts replacement	Reference
Controller System	Main Controller PCB	
Laser Exposure System	Laser Scanner Unit	
Image Formation System	Developing Assembly, Developing Sleeve Unit	
	Drum Unit	
	ITB	
	Patch Sensor	

T-5-1

Adjustment at Parts Replacement

Document Exposure / Feed System

After replacing ADF units

1) After executing the white level adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

2. Checking the setting value

- COPIER > ADJUST > CCD > DFTAR-R (RED shading target value when using DF)
- COPIER > ADJUST > CCD > DFTAR-G (GREEN shading target value when using DF)
- COPIER > ADJUST > CCD > DFTAR-B (BLUE shading target value when using DF)
- COPIER > ADJUST > CCD > DFTAR-BW (Monochrome shading target value when using DF)

2) Execute the reading position adjustment with the following service mode.

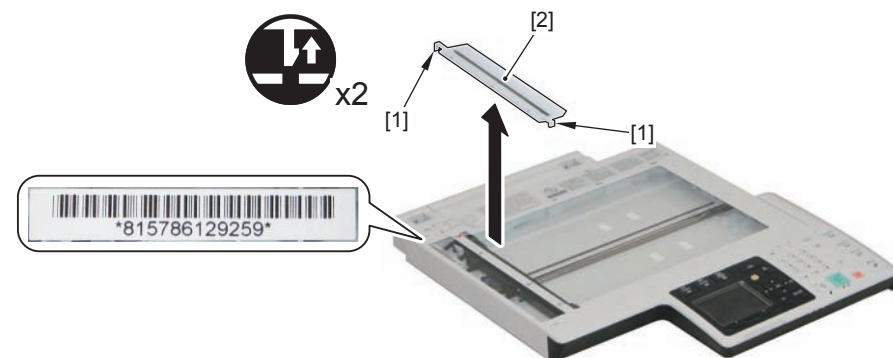
- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)

3) Execute the original stop position and feed speed adjustment at stream reading.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

After replacing reader units

1) Release 2 claws [1] and Remove the Scoopup sheet holder [2], Enter the setting value of the Standard White Plate.



F-5-1

- COPIER > ADJUST > CCD > W-PLT-X (X signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Y (Y signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Z (Z signal data for the standard white plate)

MEMO

The value of W-PLT-X: The first four digits of the value on the label

The value of W-PLT-Y: The four digits in the middle of the value on the label

The value of W-PLT-Z: The last four digits of the value on the label

2) Execute the white level adjustment.

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

3) After executing the reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER > FUNCTION > INSTALL > STRD-POS (reading position adjustment auto execution)
2. COPIER > ADJUST > ADJ-XY > STRD-POS (reading position adjustment value reference)

4) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

5) Enter the value on the label packed with the part in the following service mode item.

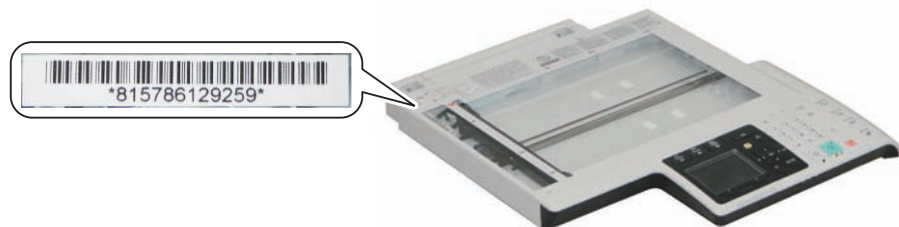
- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)
- COPIER> ADJUST> CCD> 50-RG (Color displacement correction value between RG in the vertical scanning direction (50%))
- COPIER> ADJUST> CCD>50-GB (Color displacement correction value between GB in the vertical scanning direction (50%))
- COPIER> ADJUST> CCD>100-RG (Color displacement correction value between RG in the vertical scanning direction (100%))
- COPIER> ADJUST> CCD>100-GB (Color displacement correction value between GB in the vertical scanning direction (100%))
- COPIER>ADJUST>PASCAL>OFST-P-Y (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-M (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-C (Adjustment of test chart reading density)
- COPIER>ADJUST>PASCAL> OFST-P-K (Adjustment of test chart reading density)

6) Read the image and execute the adjustment with the following service mode.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

After Replacing the Reader Upper Cover Unit

1) Enter the setting value of the Standard White Plate.



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- COPIER > ADJUST > CCD > W-PLT-X (X signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Y (Y signal data for the standard white plate)
- COPIER > ADJUST > CCD > W-PLT-Z (Z signal data for the standard white plate)

MEMO

The value of W-PLT-X: The first four digits of the value on the label

The value of W-PLT-Y: The four digits in the middle of the value on the label

The value of W-PLT-Z: The last four digits of the value on the label

2) After executing the CCD reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

3) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

After replacing CIS units

1) Execute the white level adjustment. If it fails, turn OFF/ON the power and execute the operation again.

- COPIER > FUNCTION > CCD > CL-AGC (Color AGC adjustment)
- COPIER > FUNCTION > CCD > BW-AGC (B&W AGC adjustment)

2) After executing the reading position adjustment with the following service mode 1, check the auto setting value with the following service mode 2 and write the value in the service label.

1. COPIER> FUNCTION> INSTALL> STRD-POS (reading position adjustment auto execution)
2. COPIER> ADJUST> ADJ-XY> STRD-POS (reading position adjustment value reference)

3) Set a blank paper on the Copyboard Glass, and execute the white level adjustment with the following service mode 1. Then, check the auto setting value with the following service mode 2 and write the value in the service label.

1. White level adjustment

- COPIER > FUNCTION > CCD > DF-WLVL1 (White level adjustment [copyboard scanning])
- COPIER > FUNCTION > CCD > DF-WLVL3 (White level adjustment BW [copyboard scanning])

Then, set a blank paper on the DF, and execute the following service mode.

- COPIER > FUNCTION > CCD > DF-WLVL2 (White level adjustment [DF scanning])
- COPIER > FUNCTION > CCD > DF-WLVL4 (White level adjustment BW [DF scanning])

If it fails, turn OFF/ON the power and execute the operation again.

2. Checking the setting value

- COPIER> ADJUST> CCD> DFTAR-R (RED shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-G (GREEN shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-B (BLUE shading target value when using DF)
- COPIER> ADJUST> CCD> DFTAR-BW (Monochrome shading target value when using DF)

4) Execute the reading position adjustment with the following service mode.

- COPIER > ADJUST > ADJ-XY > ADJ-Y (Value adjustment for image reading start position [vertical scanning direction] <X-axis direction>)
- COPIER > ADJUST > ADJ-XY > ADJ-Y-DF (Adjustment of surface horizontal scanning position in FEEDER mode)
- COPIER > ADJUST > ADJ-XY > ADJ-X-MG (Fine-adjustment of optical motor speed)

5) Execute the original stop position and feed speed adjustment at stream reading.

- FEEDER > ADJUST > DOCST (Image reading start position adjustment at ADF reading)
- FEEDER > ADJUST > LA-SPEED (Original feed speed adjustment)

Controller System

Main controller PCBs

Before Replacing the Main Controller PCB

Back up user data (settings, registered data, etc.) and service mode data for setting and registration after PCB replacement. Take notes if data is unable to back up.

- 1) In Remote UI, perform the following procedure to export the user data (login in administrator mode).
In Setting/Registration > Import/Export > Menu > Export, select an item and then start export.
- 2) In service mode, perform the following procedure to export the service mode data (and then import it after replacement).
FUNCTION > SYSTEM > EXPORT
- 3) Record the default settings shown on the service label [1] (these are entered after replacement).
- 4) Write down the machine's serial number and the data of Settings/Registration > System Settings > Device Information > Location (these are entered after replacement).



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After Replacing the Main Controller PCB

1. Setting of destination/paper size group

1) COPIER > OPTION > BODY > LOCALE (to set destination groups)

[Settings]

1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia,
8: Oceania

2) COPIER > OPTION > BODY > SIZE-LC (to set paper size groups)

[Settings]

1: AB series, 2: Inch series, 3: A series, 4: AB/Inch series

2. Clearing Setting/Registration data

1) COPIER > FUNCTION > CLEAR > ALL (to clear all data)

Once executed, the following data are cleared according to the values of LOCALE and SIZE-LC set in step 1.

- Setting / Registration data (the default value for each destination is set).
- Service mode data (the default value for each destination is set).
- Job IDs
- Log data
- Dates

2) COPIER > FUNCTION > CLEAR > R-CON (to clear default setting values for the reader/DF)

3. Adjustment, input of default setting values

1) Close the ADF.

2) COPIER > FUNCTION > CCD > CL-AGC, BW-AGC (to adjust white levels)

The white level is adjusted.

3) Enter default setting values indicated on the service label in the corresponding service mode items.

4) COPIER > FUNCTION > VIFFNC > STOR-DCN (to back up DC controller setting values)

Purpose: to be prepared for replacing DC controller PCBs

5) Turn off and on the power.

6) Start in the initial installation mode. Follow instructions shown on the screen for setup. (setting of date/time, auto-gradation correction)

4. Migrating the serial number

1) Enter the serial number (8-digit alphanumeric) in Settings/Registration > System Settings > Device Information > Location.

2) Select COPIER > OPTION > SERIAL > SN-MAIN. Then, press the OK key to write the serial number entered in step 1 in the Main Controller PCB. After it has been written, the serial number entered in "Location" in step 1 is deleted.

3) Turn OFF and then ON the main power.

4) Execute COPIER > FUNCTION > MISC-P > SPEC to output the spec report to check the serial number BODY.No..

5) Enter the data of the installation location (which was written down in "Before replacing the Main Controller PCB") in Settings/Registration > System Settings > Device Information > Location.

5. Migrating user data

In Remote UI, perform the following procedure to import the user data (login in administrator mode).

In Setting/Registration > Import/Export > Menu > Import, select an item and then start import.

6. Migrating service mode data

In service mode, perform the following procedure to import the service mode data.

FUNCTION > SYSTEM > IMPORT

7. Reinstall the drivers.

1) Uninstalling Old Drivers.

- Printer Driver
- FAX Driver
- Scanner Driver
- Network Scan Utility. (for machines with network connection)

* As for the procedure, refer to "Uninstalling the Software" in the Starter Guide.

2) Install the drivers which have been uninstalled in step 1.

* As for the procedure, refer to the following items in the Starter Guide.

- In case of network connection: "Installing via Network Connection"
- In case of USB connection: "Installing with USB Connection"

MEMO

MAC address information is changed after replacement of the Main Controller PCB. Therefore, when the PC and the machine are connected by the network, the PC will not be able to recognize the machine on the network. When the PC and the machine are connected by the USB memory device, the PC will not be able to recognize the machine if the USB ID is changed. It becomes therefore necessary to reinstall the driver.

In the case of a model without fax for EUR (MF8540/MF8230), perform the following works.

MEMO

After replacing the Main Controller PCB, the value of the service mode (SDTM-DSP) to set whether to display or hide the automatic shutdown menu becomes "0" (default value). In that case, the automatic shutdown menu is not displayed on the LUI of the machine. To display the automatic shutdown menu on the LUI of the machine, it is necessary to execute this process.

8. Setting of automatic shutdown menu display

Set 1 for automatic shutdown menu display in service mode (default: 0).

COPIER > OPTION > BODY > SDTM-DSP

9. Turn OFF and then ON the main power.

10. Checking the setting of Auto Sleep Time

In setting menu, check that the setting value of Auto Sleep Time is 1. (If the setting value is 0, automatic shutdown does not work.)

Menu > Timer Settings > Auto Shutdown Time

■ DC Controller PCB

Before replacing the DC Controller PCB

- 1) In service mode, perform the following procedure to store the DC Controller setting values.
COPIER > FUNCTION > VIFFNC > STOR-DCN

After replacing the DC Controller PCB

- 1) In service mode, perform the following procedure to restore the DC Controller setting values.
COPIER > FUNCTION > VIFFNC > RSTR-DCN

MEMO

After executing the Printer Recovery Setting, be sure to wait for about 15 seconds because of internal process/operation.

- 2) Turn OFF and then ON the power.
- 3)* Execute the following: Menu > Adjustment/Maintenance > Print Color Displacement Correction
- 4)* Execute the following: Menu > Adjustment/Maintenance > Auto Gradation Correction > Quick Correction
- 5) Turn OFF and then ON the power.

Laser Exposure System

After replacing Laser Scanner Unit

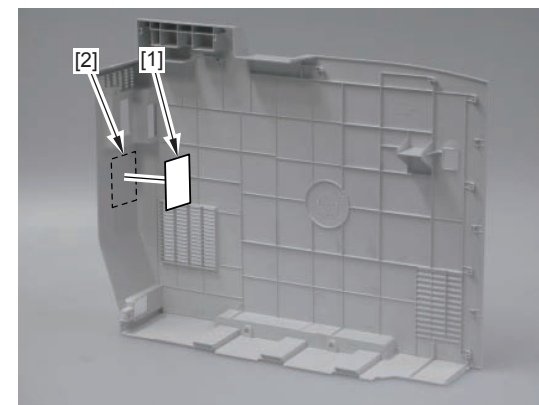
1) Register values indicated on the label packaged with the Laser Scanner Unit in the following service mode items.

COPIER>ADJUST>SCNR>

- SUB-S-Y0 (Laser output correction value, vertical scanning irradiation position0 Y)
- SUB-S-M0 (Laser output correction value, vertical scanning irradiation position0 M)
- SUB-S-C0 (Laser output correction value, vertical scanning irradiation position0 C)
- SUB-S-K0 (Laser output correction value, vertical scanning irradiation position0 K)
- SUB-S-Y1 (Laser output correction value, vertical scanning irradiation position1 Y)
- SUB-S-M1 (Laser output correction value, vertical scanning irradiation position1 M)
- SUB-S-C1 (Laser output correction value, vertical scanning irradiation position1 C)
- SUB-S-K1 (Laser output correction value, vertical scanning irradiation position1 K)
- SUB-S-Y2 (Laser output correction value, vertical scanning irradiation position2 Y)
- SUB-S-M2 (Laser output correction value, vertical scanning irradiation position2 M)
- SUB-S-C2 (Laser output correction value, vertical scanning irradiation position2 C)
- SUB-S-K2 (Laser output correction value, vertical scanning irradiation position2 K)
- MAI-S-Y0 (Laser output correction value, horizontal scanning irradiation position0 Y)
- MAI-S-M0 (Laser output correction value, horizontal scanning irradiation position0 M)
- MAI-S-C0 (Laser output correction value, horizontal scanning irradiation position0 C)
- MAI-S-K0 (Laser output correction value, horizontal scanning irradiation position0 K)
- MAI-S-Y1 (Laser output correction value, horizontal scanning irradiation position1 Y)
- MAI-S-M1 (Laser output correction value, horizontal scanning irradiation position1 M)
- MAI-S-C1 (Laser output correction value, horizontal scanning irradiation position1 C)
- MAI-S-K1 (Laser output correction value, horizontal scanning irradiation position1 K)
- MAI-S-Y2 (Laser output correction value, horizontal scanning irradiation position2 Y)
- MAI-S-M2 (Laser output correction value, horizontal scanning irradiation position2 M)
- MAI-S-C2 (Laser output correction value, horizontal scanning irradiation position2 C)
- MAI-S-K2 (Laser output correction value, horizontal scanning irradiation position2 K)

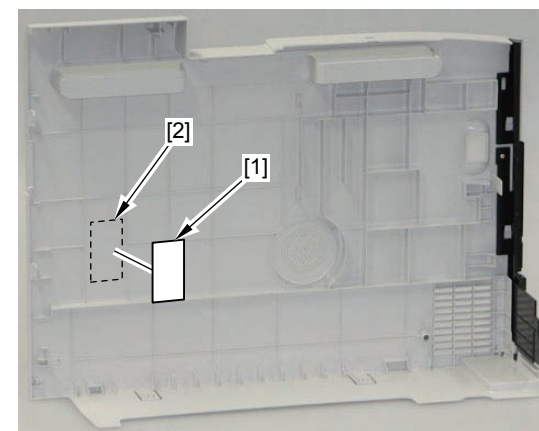
2) After values are registered, affix the label [1] packaged with the unit on the inside [2] of the right cover.

- MF8500 series



F-5-4

- MF8200 series



F-5-5

6

Troubleshooting

- Test Print
- Troubleshooting items
- Special Management Mode
- Version Upgrade

Test Print

Engine test print

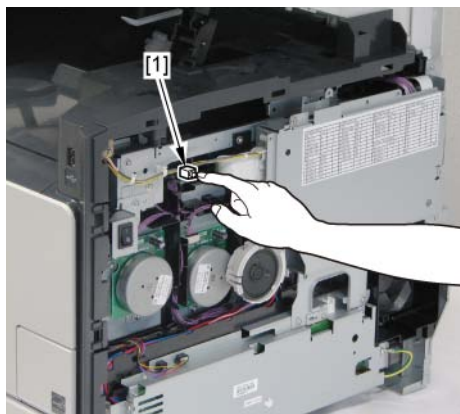
The engine test print is to check normal operation of the device.

Print the engine test chart in the following steps.

- MF8500 series

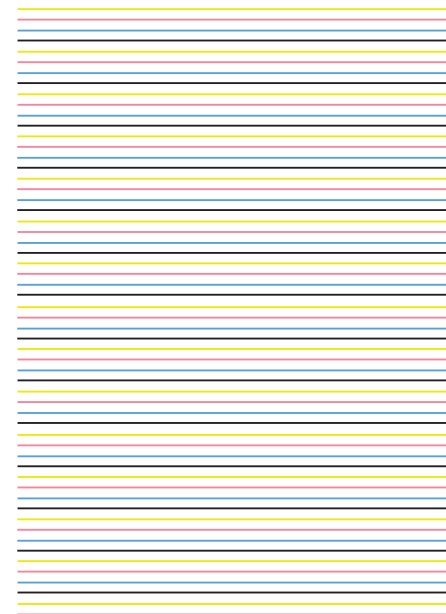
1) Detach the right cover. Refer to page 4-20.

2) Turn on the device on standby to press the test print switch [1] on the right side of the device.



F-6-1

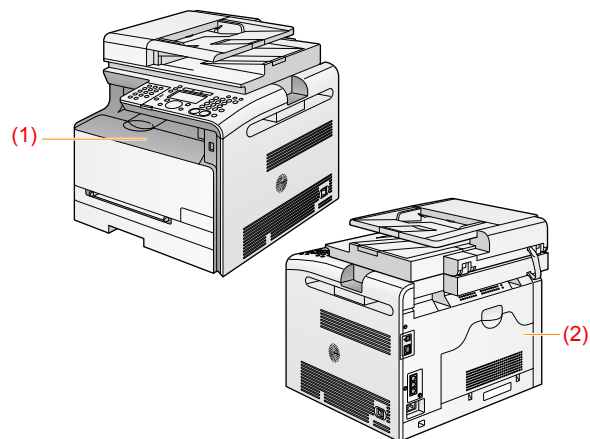
3) The engine test chart is printed in the horizontal line patterns on a sheet as shown below.



F-6-2

- MF8200 series

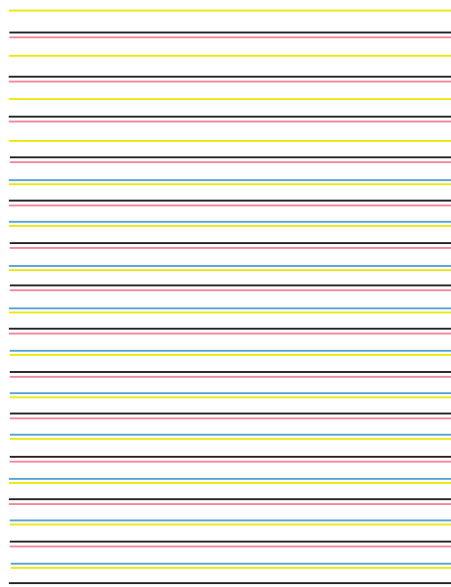
1) Leave the front cover(1) and the rear cover(2) open to turn on the power.



F-6-3

2) Close the Front Cover (1) and the Rear Cover (2) within 5 seconds since the Control Panel lights up white.

3) The engine test chart is printed in the horizontal line patterns on a sheet as shown below.



F-6-4

Controller test print

Overview

This product provides the following 6 test chart types to determine causes of faulty images.

The data for test charts are created in the main controller. If no problem is found on the output test charts, the cause may lie in the PDL input or the reader.

TYPE NO.	Test chart type	Purpose
0	Pascal correction chart 1	For checking density characteristic (Error diffusion)
1	Pascal correction chart 2	For checking density characteristic (Screen)
2	Color chart	For checking color reproduction characteristic
3	Color displacement correction chart	For checking color displacement correction
4	Rainbow chart (vertical scanning direction)	For checking color displacement (Vertical scanning)
5	Rainbow chart (horizontal scanning direction)	For checking color displacement (Horizontal scanning)
6	Grid Bk	For checking geometric characteristics and thin lines

T-6-1

Selecting test chart

- 1) Select TESTMODE>PRINT>PG-TYPE in Service mode.
- 2) Enter TYPE NO from the numeric keypad and press [OK] key.
- 3) Go to the following Service mode to set up for test print. If no setting is made in Service mode, the test chart is output based on the default value of each Service mode item.

TESTMODE > PRINT		
Item	Description	Default value
COUNT	Enter the number of sheets to output. Settings: 1-99	1
PHASE [MF8500 series only]	Select [1-side] or [2-side]. [2-side] selected for 1-side devices is invalid. Settings: 0=1-side, 1=2-side	0
MODE	Specify how to form the image to be output. Regardless of PG-TYPE settings (0 or 1), the image is processed in the fixed method. Settings: 0: T-MIC 1: High LPI screen 2: Low LPI screen 3: T-BIC	0
THRU	Select ON or OFF for gamma correction. Setting: 0: Normal gamma 1: Through (linear) gamma	0
NRKE	Flag to switch the color displacement correction processing 1 0: Adopt without processing 1: Adopt with processing	0
BLND	Flag to switch the color displacement correction processing 2 0: Adopt without processing 1: Adopt with processing	0
FEED	Select the paper source and press [Start] key to output in the specified settings as set in above steps. When the multi-purpose tray is selected, the sheet is fed only when paper in the specified size is set in the tray. When Cassette 2 is selected but the device has only a cassette, paper is fed from Cassette 1. *Any paper source with color paper is invalid for printing. Setting: 0: MPTray 1: Cassette 1 2: Cassette 2	1

T-6-2

- 4) Select TESTMODE>PRINT>PG-TYPE>START.

Troubleshooting items

Recurring faulty image

Foreign matters or lines on rollers along the paper feed path may cause faulty images in the vertical scanning direction.

Field action

See the roller pitches listed in the tables below to clean and/or replace the corresponding parts.

MF8500 series

Roller pitch	Parts
about 44 mm	Registration roller
about 58 mm	Secondary transfer external roller
about 75 mm	Photosensitive drum
about 22 mm	Developing cylinder
about 58 mm	Fixing film
about 63 mm	Pressure roller
about 78 mm	ITB (drive roller, secondary transfer internal roller)

T-6-3

MF8200 series

Roller pitch	Parts
about 44 mm	Registration roller
about 57 mm	Secondary transfer external roller
about 27 mm	Primary transfer roller
about 76 mm	Photosensitive drum
about 22 mm	Developing cylinder
about 57 mm	Fixing film
about 57 mm	Pressure roller
about 634 mm	ITB

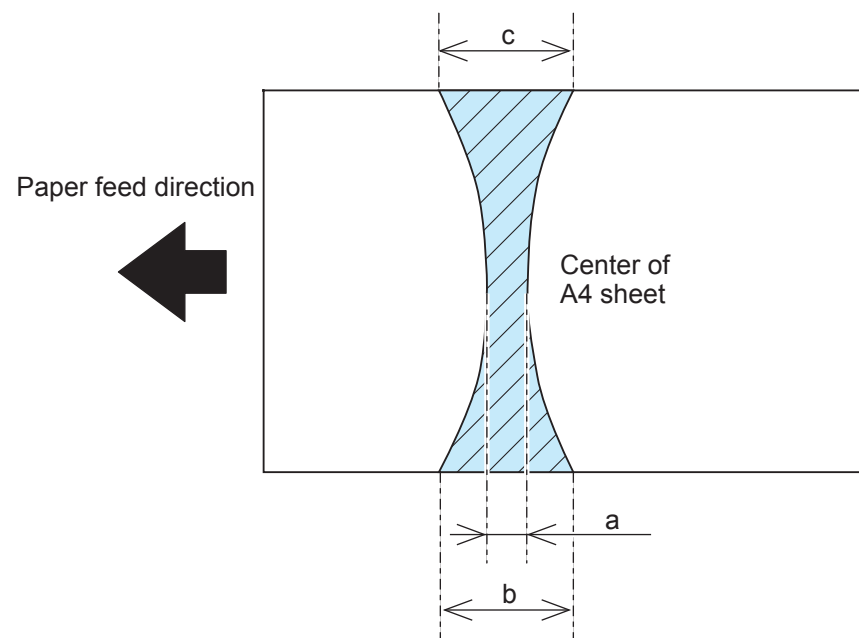
T-6-4

Confirming nip width

This product does not provide the function to adjust nip width. Improper nip width, however, may cause faulty fixing.

To avoid potential faults, confirm the nip width of the fixing assembly in the following steps.

- 1) Output a A4 sheet printed in solid black using the cartridges for this product and bring it to the customer site.
- 2) Set the solid black sheet face-down to the cassette of this product.
- 3) Use an external device to print out a solid white image on the sheet.
- 4) Open the front door after about 25 seconds from the step above and leave it for 10 seconds or more in the device to take out the printed sheet.
- 5) Measure the glossy part on the printed sheet as shown in the figure below to confirm if the width is in the tolerable ranges.
 - Center (a): 6.0±1mm
 - Sides (b), (c): 5.0-7.5mm
 - Difference (b-c): 1.0mm or less



F-6-5

Special Management Mode

Overview

The Special Management Mode is the mode for taking a measure and solving the occurred problem by a user. However, information about this mode is not disclosed to users. Basically, if a problem is not solved when using the target item or when printing with a condition differs from the target item, be sure to return the setting to its original value. Otherwise, errors such as image error may occur.

MEMO:

- Items of the Special Management Mode can be set in service mode.
COPIER > FUNCTION > SPLMAN
- When entering special management mode, if the "right key" is pressed for a specified period of time (0.2 seconds) or more, the machine does not enter the mode.

Supported models

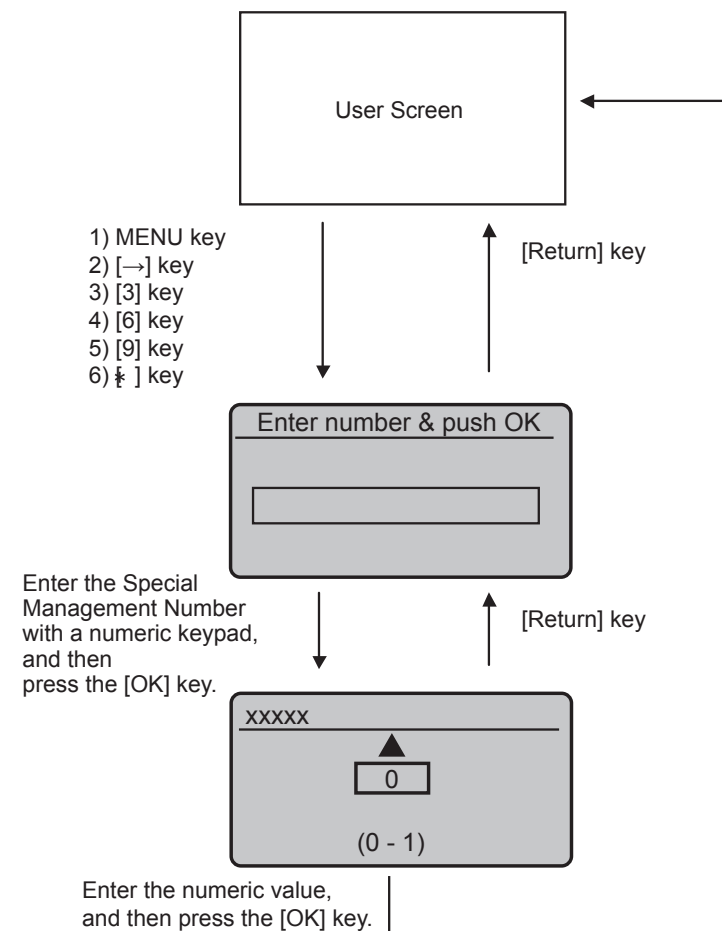
The following table shows availability of service mode by model using the following symbols.

○	Supported
▲	Supported by model with FAX only
–	Not supported

T-6-5

Operational Description

Operational procedure of this mode is indicated below.



F-6-6

 Menu List

Item Name	Description	M82	M85
14159	Fixing of USB device ID		
Details	To fix the USB device ID to "000000000000". Driver for each machine is installed to a PC. However, by fixing the serial number, the PC considers that any connected machine to be the same machine; thus, there will be no need to install the drivers many times.	○	○
Adj/set/operate method	1) Enter the value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
27767	Setting of highly-resistive paper		
Details	To increase the secondary transfer bias.		
Use case	When a trace which looks like toner scattering occurs around the text or print pattern depending on the paper type or environment (especially in a low humidity environment)	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
89793	Execution of re-transfer prevention mode		
Details	To lower the primary transfer bias.		
Use case	When re-transfer occurs due to strong primary transfer bias	-	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
23846	Setting of moist paper		
Details	To increase the secondary transfer bias.		
Use case	When color text or pattern using 2 or more colors of toner becomes lighter depending on the paper type or environment (especially in a high humidity environment)	○	-
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

Item Name	Description	M82	M85
26433	Execution of drum idle rotation mode		
Details	To execute idle rotation of the drum.		
Use case	When thin, sharp horizontal lines appear in halftone images after a long downtime	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
14682	Execution of image fogging prevention mode 1		
Details	To change the developing bias.		
Use case	When toner is lightly transferred to the white area in case of printing an image with large white area using glossy paper	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
83279	Setting of Chinese paper		
Details	To change the transfer bias.		
Use case	When a trace which looks like toner scattering occurs around the text or print pattern in case of using Chinese paper	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
50288	Execution of ITB cleaning failure prevention 2		
Details	MF8200 To alleviate cleaning failure by increasing the current (bias) applied to the Cleaning Blade and Primary Transfer Roller. MF8500 To execute cleaning for one round of the ITB after printing 2 sheets. (It becomes 2 sheets intermittent mode.) It is more effective than ICL-IMP.	○	○
Use case	When an image that was on 2 sheets before appears lightly depending on paper type and print pattern (especially high printing ratio) When the trailing edge of paper is soiled		
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

Item Name	Description	M82	M85
41971	Execution of curl prevention mode 1		
Details	To extend the initial rotation time and paper interval, and lower the control temperature.		
Use case	When paper which has been printed is curled toward the printed side depending on the paper type, environment (especially in a low humidity environment) or print pattern (especially high printing ratio)	-	o
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
35607	Execution of down sequence prevention mode		
Details	To lower the control temperature of the Fixing Assembly without exception.		
Use case	When down sequence occurs		
Adj/set/operate method	Select the item, and then press OK key.		
Caution	Be sure to get approval from the user in advance by explaining that there is a possibility that fixing failure may occur depending on the paper type by lowering the fixing control temperature.	-	o
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
37510	ON/OFF of ITB cleaning at paper size mismatch		
Details	Normally, when paper other than that of the specified size is fed, ITB cleaning is executed to remove toner. When 1 is set, ITB cleaning is not executed even if paper size is mismatched. Productivity improves, but toner soiling may occur.		
Use case	When paper size is mismatched	o	o
Adj/set/operate method	Enter the value, and then press OK key.		
Caution	Be sure to get approval from the user by telling that toner soiling may occur to improve productivity.		
Display/adj/set range	0 to 1 0: ON, 1: OFF		
Default value	0		

Item Name	Description	M82	M85
65677	Increase of paper leading edge margin		
Details	To increase the margin on the leading edge of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. If the setting is incompatible with 68676 (decrease of margin), the setting is disabled (the margin will be standard).	o	o
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
68676	Decrease of paper leading edge margin		
Details	To decrease the margin on the leading edge of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. If the setting is incompatible with 65677 (increase of margin), the setting is disabled (the margin will be standard).	o	o
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
68677	Increase of paper right and left margins		
Details	To increase the margins on the right and left edges of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. If the setting is incompatible with 25607 (decrease of margins), the setting is disabled (the margins will be standard).	o	o
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		

Item Name	Description	M82	M85
25607	Decrease of paper right and left margins		
Details	To decrease the margins on the right and left edges of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. If the setting is incompatible with 68677 (increase of margins), the setting is disabled (the margins will be standard).	○	○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
93822	Setting of department ID count all clear		
Details	To set whether to disable clearing of all department ID counts.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.		
Display/adj/set range	0 to 1 0: Enabled, 1: Disabled		
Default value	0		
78788	Setting of department ID count clear		
Details	To set whether to disable clearing of department ID count.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.		
Display/adj/set range	0 to 1 0: Enabled, 1: Disabled		
Default value	0		
41250	Reset of calibration		
Details	When the user allows printing at absence of toner, calibration using toner is disabled. As a remedy, calibration reset is executed by this switch.	○	○
Use case	When the user allows printing after absence of toner is displayed.		
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

Item Name	Description	M82	M85
15176	Extension of detection on absence of toner		
Details	Error occurs when the drum running distance reaches a certain point in the case of toner absence. Turning this switch ON delays the occurrence of error (threshold value is changed).		
Use case	When delaying the display of "absence of toner" message	○	-
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
89821	Shop demonstration mode		
Details	To display image data on color UI repeatedly to appeal the product features to potential users.		
Use case	When appealing the product features to users at shops	○	○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	When the setting value is 1 at startup, the shop demonstration mode is enabled.		
58122	Wrinkle prevention mode		
Details	To prevent envelope from getting wrinkles by keeping the speed of the Fixing Motor constant and feeding an envelope with a little pulling tension applied to it.	○	-
Use case	When preventing envelope from getting wrinkles		
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
71100	Setting of the duty of Off-hook PCB		
Details	This is the mode to make handsets of particular manufacturers to be rung when fax reception mode is set to "FAX/TEL switching".		
Use case	When fax reception mode is set to FAX/TEL switching	▲	▲
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	1 to 99		
Default value	50		
Supplement/memo	When receiving a call, a handset connected to the host machine is rung. However, if the connected handset is manufactured by a particular manufacturer (e.g., SANYO, Model No.: TEL-DH5, etc.), it may not be rung. To solve the problem, set the value so that the handset can be rung correctly.		

Item Name	Description	M82	M85
00171	Change of the maximum value of auto sleep shift time		
Details	To change the maximum value of auto sleep shift time in Settings/Registration> Timer Settings> Auto Sleep Time.		
Use case	When changing the setting time to shift to auto sleep mode		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.	○	○
Display/adj/set range	0 to 1 0: 0 to 60, 1: 0 to 240		
Default value	0 (For Europe) 1 (For locations other than Europe)		
80100	Mask setting at copyboard scanning		
Details	To cancel the image mask occurs on the left edge at copyboard scanning.		
Use case	Upon request from user who does not satisfy with the mask on the left edge	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0: Mask value according to the specifications of each job 1: No mask (0 mm)		
Default value	0		
27354	For R&D use		
Details	For R&D use	○	○
Default value	Default value is not changed.		

T-6-6

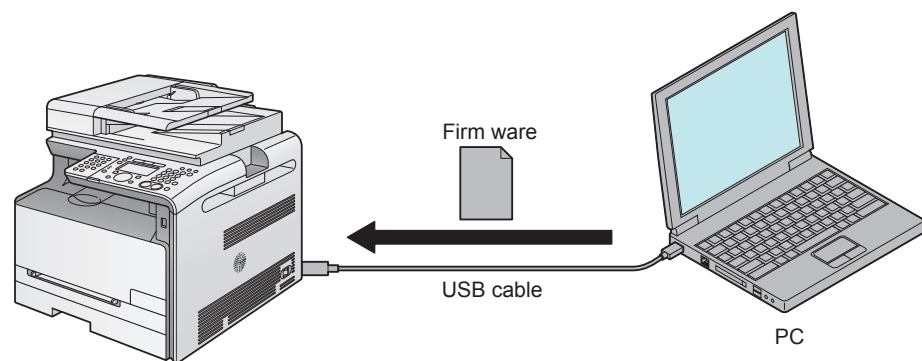
Version Upgrade

Overview

This machine supports the following two methods for upgrading the firmware.

1. User Support Tool (UST)
2. Via Internet

UST



F-6-7

Firmware configuration

Firmware	Function	Stored in
Boot ROM	Start the main controller.	Main controller PCB
Main Controller	Control overall performance.	Main controller PCB
LANGUAGE	Manage languages used in panel / Remote UI and font data.	Main controller PCB
DEMO PRINT	Manage data for demo printing.	Main controller PCB
DCON	Control the printer unit.	DC controller PCB

T-6-7

Some UST versions meet less numbers of firmware than those listed above.

Preparation

System Requirements

- OS (one of the following)
 - Microsoft Windows 2000 Server/Professional
 - Microsoft Windows XP Professional/Home Edition
 - Microsoft Windows Server 2003
 - Microsoft Windows Vista
 - Microsoft Windows Server 2008
 - Microsoft Windows 7
 - Microsoft Windows Server 2012 Japanese version
 - Microsoft Windows 8 Japanese version
- PC
 - Compatible to the selected OS
 - Memory (RAM): 32MB or more free space
 - Hard Disk: 100MB or more free space
 - Display: 640x480 pixels or more in resolution, 256 tones or more
 - With USB ports
- UST file for this product*
 - *: Download the corresponding file from the system CD or the service site (ask the service technician in charge for details)
- USB cable (USB1.1/2.0)

Preparation

- 1) Start the PC.
- 2) Connect the device to the PC with the USB cable.
- 3) Turn on the device on standby.
- 4) Press [Menu] key to upgrade firmware in User mode.
 - System Settings > Update Firmware
 - The message, "Will you restart the device to upgrade firmware?", is shown on the display. Select Yes.
- 5) Press OK to automatically restart the device. "****DOWNLOAD MODE****" is shown on the display.
- 6) Wait for the motor of the host machine to stop.

MEMO :
Press STOP key to cancel Download mode and return to the normal operation.

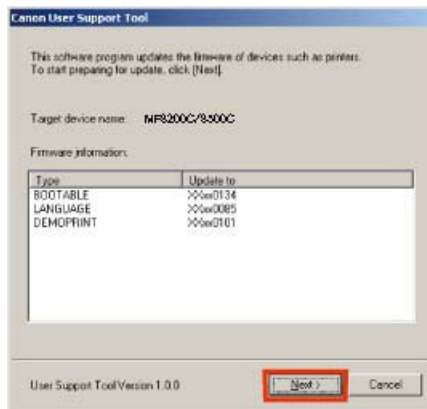
Downloading System Software

1) Open UST.



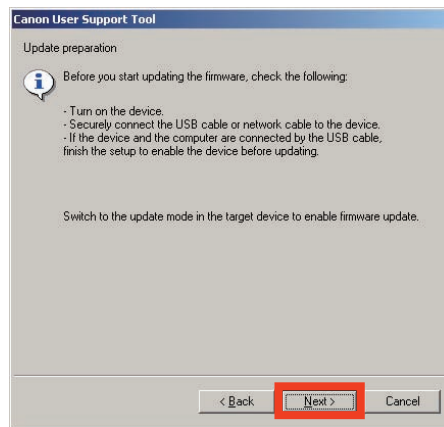
F-6-8

2) Take a note of the firmware version to upgrade and click [Next] button.



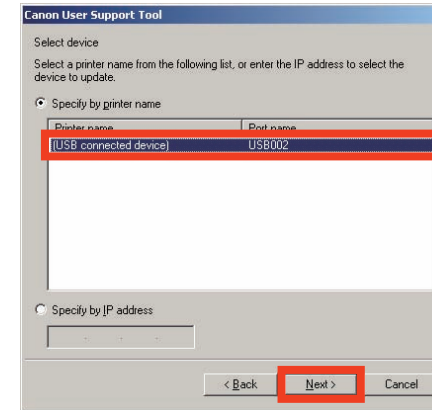
F-6-9

3) Click [Next] button.



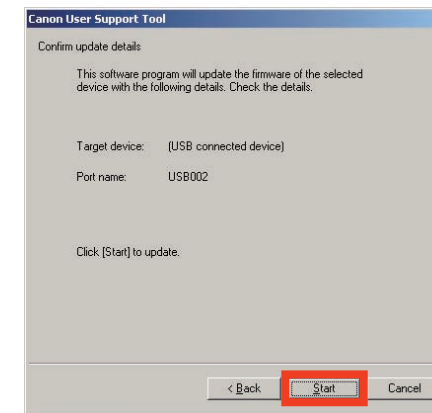
F-6-10

4) Select [USB Device] and click [Next] button.



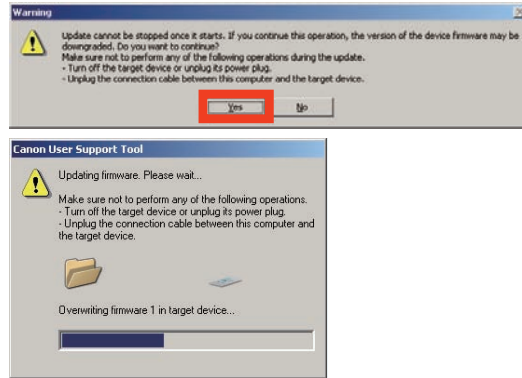
F-6-11

5) Click [Start] button.



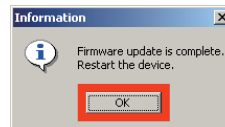
F-6-12

6) Click [Yes] button for the warning message to start download.



F-6-13

7) Click [OK] button when download is completed.



F-6-14

8) Turn off and on the power to restart the device.

9) Output the spec report from Service mode to confirm if the firmware version is the same as that on the note taken in Step 2).

COPIER> FUNCTION> MISC-P> SPEC

Upgrading via Internet

Overview

The firmware of the host machine can be upgraded via Internet without using PC by selecting "Via Internet" in LUI.

Menu > System Management Settings > Update Firmware > Via Internet

MEMO :

- Refer to the User's Manual of the device for how to connect the device to the external network.
- This is applicable either in a wired LAN environment or a wireless LAN environment.

Preparation

- 1) Check that there are no other jobs being executed.
- 2) In an environment where access is obtained via a proxy server, the proxy setting is made from the remote UI.
- 3) Check that the serial number of the host machine is shown on the Main Controller PCB.

MEMO :

To upgrade the firmware of the host machine via Internet, the serial number of the machine need to be written on the Main Controller PCB.
Execute COPIER > FUNCTION > MISC-P> SPEC, and check that the BODY No. is registered.
If the BODY No. has not been registered, register the serial number according to "registration of the serial number of the host machine" in "After replacing main controller PCBs".

Messages

The message displayed on the device LUI is as follows.

No.	Error message	The timing of occurrence	Remedy
1	Job in progress... Wait a moment, then try again.	If there is a job being executed:	1. Wait until the job is completed. 2. Cancel the job.
2	Cannot check the firmware version. (Server communication error.)	Network error	1. Check whether the device can be connected to the external network. 2. Check whether the proxy setting has been made (in case of access via a proxy server).
3	Cannot download the firmware. (Error during download.)		1. Check whether the device can be connected to the external network. 2. Check whether the proxy setting has been made (in case of access via a proxy server). 3. Check that the serial number of the host machine is shown on the Main Controller PCB.
4	***DOWNLOAD MODE*** NETWORK AVAILABLE IP ADDRESS IP address of the machine PRESS STOP KEY TO EXIT	If update (writing) of the firmware has ended in failure:	1. Update the firmware again using UST.
5	***DOWNLOAD MODE*** FAILED TO UPDATE		
6	***DOWNLOAD MODE*** UPDATE IS COMPLETE	If the update of the firmware is successful	-

T-6-8



Error Codes

- Overview
- Error Codes
- Jam Code

Overview

Outline

Outline

This section describes codes shown in case any problem is occurred.

Since this product does not collect logs for jams and alarms, no alarm code is shown.

Code type	Description	Reference
Error code	Shown for any problem occurred in the device.	List of error codes
Jam code	This code is displayed when a jam occurs inside the machine.	List of jam codes
Alarm code	N/A	-

T-7-1

Jam Code

Location Code

Location information is displayed as 1-digit number as follows.

Device	Location code
Host machine	3
ADF	4

T-7-2

Position Code

When jam occurs, pickup location is indicated with the following pickup position code.

Device	Location code
ADF	-
MP Tray	0
Cassette 1	1
Option Cassette (Cassette Feeding Module-V1 MF8500)	2
Duplex (MF8500)	7

T-7-3

Error Codes

Whenever an error occurs, firstly turn off and on the power to check if the error is persistent.
(Controller-related errors tend to recover by power-OFF/ON.)

- M82=MF8200 series
- M85=MF8500 series

E Code	Detail Code	Item	Description	M82	M85
E000	0000	Title	Error in the fixing assembly start-up	○	○
		Description	Insufficient temperature rise detected by thermistor even after applying bias to the heater		
		Remedy	1.Check connectors of fixing assembly, DC controller PCB, fixing power supply unit, etc. 2.Replace fixing film units 3.Replace fixing power supply units 4.Replace DC controller PCBs		
E001	0000	Title	Abnormally high temperature detected in fixing assembly	○	○
		Description	Abnormally high temperature detected by main thermistor		
		Remedy	1.Check connectors of fixing assembly / DC controller PCB 2.Replace fixing film units 3.Replace fixing power supply units 4.Replace DC controller PCB		
E001	0001	Title	Abnormally high temperature detected in fixing assembly (sub thermistor triggered)	-	○
		Description	Abnormally high temperature detected by sub thermistor (sub thermistor triggered)		
		Remedy	1.Check connectors of fixing assembly / DC controller PCB 2.Replace fixing film units 3.Replace fixing power supply units 4.Replace DC controller PCBs		
E003	0000	Title	Abnormally low temperature detected in fixing assembly	○	○
		Description	Temperature drop detected by main thermistor after attaining the target temperature		
		Remedy	1.Check connectors of fixing assembly / DC controller PCB 2.Replace fixing film/fixing power supply units 3.Replace DC controller PCBs		

E Code	Detail Code	Item	Description	M82	M85
E003	0001	Title	Abnormally low temperature detected in fixing assembly (sub thermistor triggered)	-	○
		Description	Temperature drop detected by sub thermistor after attaining the target temperature (sub thermistor triggered)		
		Remedy	1.Check connectors of fixing assembly / DC controller PCB 2.Replace fixing film units 3.Replace fixing power supply units 4.Replace DC controller PCBs		
E004	0000	Title	Error in fixing power supply drive circuit	○	○
		Description	Error in zero-cross signal detection for the pre-defined duration		
		Remedy	1.Check connectors of fixing assembly / DC controller PCB 2.Replace fixing power supply units		
E012	0000	Title	Error in ITB motor startup	○	○
		Description	Error in attaining the target ITB motor rotation detected based on ITB motor speed detection signal after ITB motor is actuated.		
		Remedy	1.Check connectors of ITB motor / DC controller PCB 2.Replace ITB motors 3.Replace DC controller PCBs		
E012	0001	Title	Error in ITB motor startup	○	○
		Description	Error in ITB motor rotation after attaining the target rotation detected based on ITB motor speed detection signal.		
		Remedy	1.Check connectors of ITB motor / DC controller PCB 2.Replace ITB motors 3.Replace DC controller PCBs		
E014	0000	Title	Error in fixing motor startup	-	○
		Description	Error in attaining the target fixing motor rotation detected based on fixing motor speed detection signal after fixing motor is actuated.		
		Remedy	1.Check connectors of ITB motor / DC controller PCB 2.Replace ITB motors 3.Replace DC controller PCBs		
E014	0001	Title	Error in fixing motor startup	-	○
		Description	Error in fixing motor rotation after attaining the target rotation detected based on fixing motor speed detection signal.		
		Remedy	1.Check connectors of ITB motor / DC controller PCB 2.Replace ITB motors 3.Replace DC controller PCBs		

E Code	Detail Code	Item	Description	M82	M85
E015	0001	Title	Error in developing roller contact	○	○
		Description	Failed to detect changes in developing home position sensor signals within the pre-defined time after actuating main motor to control the developing roller contact.		
		Remedy	1.Check connectors of developing home position sensor, main motor and DC controller PCB. 2.Replace developing home position sensors 3.Replace main motors 4.Replace DC controller PCBs		
E020	0000	Title	Error in density sensor	○	○
		Description	Failed to receive sufficient light to detect image density		
		Remedy	1.Check DC controller PCB onnectors. 2.Replace ITB units 3.Replace DC controller PCBs 4.Replace toner cartridges		
E021	1003	Title	Error in developing motor	—	○
		Description	Cause of developing motor rotation error: problem in developing motor / DC controller PCB		
		Remedy	1.Check connectors of developing motor and DC controller PCB. 2.Replace developing motor 3.Replace DC controller PCB		
E021	2003	Title	Error in developing motor	—	○
		Description	Error in attaining the target developing motor rotation detected based on developing motor speed detection signal after developing motor is actuated.		
		Remedy	1.Check connectors of developing motor and DC controller PCB. 2.Replace developing motor 3.Replace DC controller PCBs		
E024	0000	Title	Error in toner level sensor	—	—
		Description	Abnormal output of toner level sensor (Yellow)		
		Remedy	1.Replace toner cartridges 2.Replace high-voltage power supply PCBs 3.Replace DC controller PCBs		
E024	0001	Title	Error in toner level sensor	—	—
		Description	Abnormal output of toner level sensor (Magenta)		
		Remedy	1.Replace toner cartridges 2.Replace high-voltage power supply PCBs 3.Replace DC controller PCBs		
E024	0002	Title	Error in toner level sensor	—	—
		Description	Abnormal output of toner level sensor (Cyan)		
		Remedy	1.Replace toner cartridges 2.Replace high-voltage power supply PCBs 3.Replace DC controller PCBs		

E Code	Detail Code	Item	Description	M82	M85
E024	0003	Title	Error in toner level sensor	—	—
		Description	Abnormal output of toner level sensor (Black)		
		Remedy	1.Replace toner cartridges 2.Replace high-voltage power supply PCBs 3.Replace DC controller PCBs		
E052	0000	Title	Error in 2-sided unit detection	—	○
		Description	Failed to detect 2-sided unit		
		Remedy	1.Check connectors of 2-sided unit and DC controller PCB 2.Replace DC controller PCBs		
E066	0000	Title	Error in environment sensor	○	○
		Description	Error in environment sensor		
		Remedy	1.Check connectors of environment sensor and DC controller PCB. 2.Replace environment sensor 3.Replace DC controller PCBs		
E070	0000	Title	Error in ITB / TOP sensor	○	○
		Description	Error in ITB / TOP sensor		
		Remedy	1.Check connectors of ITB unit and DC controller PCB. 2.Replace ITB units 3.Replace DC controller PCBs		
E078	0000	Title	Error in primary transfer roller contact	—	○
		Description	Primary transfer roller contact mechanism does not normally function		
		Remedy	1.Check contact mechanism 2.Check connectors of ITB tension sensor, pickup motor and DC controller PCB. 3.Replace ITB tension sensors 4.Replace pickup motors / DC controller PCBs		
E100	0000	Title	Error in scanner motor/laser unit/BD	○	○
		Description	Failure in Yellow optical unit		
		Remedy	1.Check connectors of laser scanner unit and DC controller PCB 2.Replace laser scanner units 3.Replace DC controller PCBs		
E100	0001	Title	Error in scanner motor/laser unit/BD	○	○
		Description	Failure in Magenta optical unit		
		Remedy	1.Check connectors of laser scanner unit and DC controller PCB 2.Replace laser scanner units 3.Replace DC controller PCBs		
E100	0002	Title	Error in scanner motor/laser unit/BD	○	○
		Description	Failure in Cyan optical unit		
		Remedy	1.Check connectors of laser scanner unit and DC controller PCB 2.Replace laser scanner units 3.Replace DC controller PCBs		

E Code	Detail Code	Item	Description	M82	M85
E100	0003	Title	Error in scanner motor/laser unit/BD	○	○
		Description	Failure in Black optical unit		
		Remedy	1.Check connectors of laser scanner unit and DC controller PCB 2.Replace laser scanner units 3.Replace DC controller PCBs		
E110	0000	Title	Error in primary pseudo-BD correction	○	○
		Description	Scanner failed to be ready after starting up pseudo-BD control		
		Remedy	1.Replace laser scanner units 2.Replace DC controller PCBs		
E194	0000	Title	Error in Patch Sensor	-	○
		Description	Patch Sensor does not function normally		
		Remedy	1.Check DC controller PCB connectors 2.Replace ITB units 3.Replace DC controller PCBs 4.Replace toner cartridges		
E196	0000	Title	Error in DCON ROM	○	○
		Description	Failed to update ROM of DC controller PCB		
		Remedy	1.Update the set of main controller firmware 2.Replace DC controller PCB		
E196	1000	Title	Error in DCON ROM	○	○
		Description	Error in writing in / reading from ROM (main)		
		Remedy	1.Update the set of main controller firmware 2.Replace DC controller PCBs		
E196	2000	Title	Error in DCON ROM	○	○
		Description	Error in writing in/reading from ROM (storing settings)		
		Remedy	1.Update the set of main controller firmware 2.Replace DC controller PCBs		
E198	0000	Title	Failure in DC controller memory	○	○
		Description	Failure in DC controller memory		
		Remedy	Replace DC controller PCBs		
E202	0001	Title	Error in reader HP sensor	○	○
		Description	Error in reader HP outward Failed to move to HP even when CIS unit moves backward.		
		Remedy	1.Replace reader HP sensors 2.Replace reader motors 3.Replace reader units		
E202	0002	Title	Error in reader HP sensor	○	○
		Description	Error in reader HP homeward Failed to move to HP even when CIS unit moves forward.		
		Remedy	1.Replace reader HP sensors 2.Replace reader motors 3.Replace reader units		

E Code	Detail Code	Item	Description	M82	M85
E246	0000	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E247	0000	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E248	0001	Title	Error in access to backup data for Reader (reading error at power-on)	-	-
		Description	The Reader-related adjustment values could not be read.		
		Remedy	1. Clear the backup RAM of RCON. Execute COPIER>FUNCTION>CLEAR>RCON. 2. Enter all the values written on the service label in service mode again. 3. Turn OFF and then ON the main power.		
E350	0000	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E351	0000	Title	System error	○	○
		Description	System error		
		Remedy	1.Turn OFF and then ON the main power. 2.Replace main controller PCBs		
E354	0000	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E355	0000	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E355	0004	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E355	0005	Title	System error	-	-
		Description	System error		
		Remedy	Contact to the sales companies.		
E719	0000	Title	Card Reader communication error (serial communication)	-	-
		Description	Communication with the Card Reader could not be started at startup.		
		Remedy	1. Check the connection of the Card Reader-F1, and turn OFF and then ON the main power switch. 2. Remove the Card Reader-F1. NOTE: After performing the remedy work above, go through the following to clear the error: COPIER>FUNCTION> CLEAR> E719-CLR.		

E Code	Detail Code	Item	Description	M82	M85
E733	0000	Title	Error in printer communication	○	○
		Description	Failure between DC controller PCB and controller PCB		
		Remedy	1.Check connectors of DC controller PCB and main controller PCB 2.Replace DC controller PCBs 3.Replace main controller PCBs		
E736	0000	Title	Error in CCU communication	▲	▲
		Description	Error in CCU-modem communication		
		Remedy	1.Update the set of main controller firmware 2.Replace FAX-NCU PCBs 3.Replace main controller PCBs		
E736	0001	Title	Error in ROM for backing up fax data	▲	▲
		Description	An error occurred in ROM for backing up fax data		
		Remedy	1. Install the set of the controller firmware. 2. Replace the Main Controller PCB.		
E744	0001	Title	Error in language file/BootRom/USB memory	-	-
		Description	Error in language file version The version of language file does not match to Bootable		
		Remedy	Update the set of main controller firmware		
E744	0002	Title	Error in language file/BootRom/USB memory	-	-
		Description	Error in language file size Language file exceeds allowable size		
		Remedy	Update the set of main controller firmware		
E744	1001	Title	Error in language file/BootRom/USB memory	-	-
		Description	Versions of Bootable and BootRom do not match		
		Remedy	Update the set of main controller firmware		
E744	4000	Title	Error in language file/BootRom/USB memory	○	○
		Description	Error in engine ID Detected illegal engine connection		
		Remedy	1.Check DC controller 2.Update DC controller firmware 3.Update the set of main controller firmware		
E744	5000	Title	Error in language file/BootRom/USB memory	○	○
		Description	Error in panel microcomputer		
		Remedy	1.Check panel microcomputer to upgrade the version 2.Update the set of main controller firmware 3.Replace main controller PCBs		
E744	6000	Title	Communication error with the Wireless LAN PCB	○	○
		Description	Unable to communicate with the Wireless LAN.		
		Remedy	1. Turn OFF and then ON the main power. 2. Check the connection of the Wireless LAN. 3. Install the set of the controller firmware. 4. Replace the Main Controller PCB.		

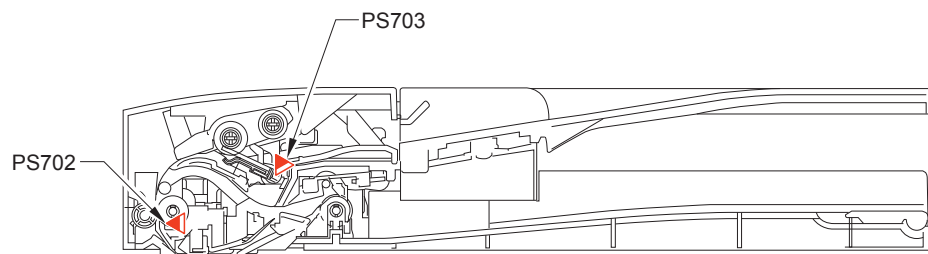
E Code	Detail Code	Item	Description	M82	M85
E744	7000	Title	Main Controller PCB error	○	○
		Description	An error in the microcomputer which retains fax job information of the Main Controller PCB.		
		Remedy	1. Install the firmware of BKUP. 2. Install the set of the controller firmware. 3. Replace the Main Controller PCB.		
E746	0000	Title	Error in main controller PCBs	○	○
		Description	Communication error occurred in main controller PCB (other than scanner-related)		
		Remedy	Replace main controller PCBs		
E766	xxxx*1	Title	Error in firmware	○	○
		Description	Error in connection occurred due to main controller software *: xxxx Task number related to Exception is shown in decimal		
		Remedy	1.Power off/on 2.Update firmware		
E766	8000	Title	Error in firmware	○	○
		Description	Incorrect digital registration 3 point information		
		Remedy	1.Power off/on 2.Update firmware		
E766	9000	Title	Error in firmware	○	○
		Description	Error in laser scanner unit power supply		
		Remedy	1.Power off/on 2.Update firmware		
E804	0004	Title	Error in power supply cooling fan	-	-
		Description	Power supply cooling fan does not rotate in the specified rotation speed.		
		Remedy	1.Check connectors of power supply cooling fan / DC controller PCB 2.Replace power supply cooling fans 3.Replace DC controller PCBs		
E805	0000	Title	Main Fan error	-	-
		Description	The Main Fan was locked for a specified consecutive period of time.		
		Remedy	1. Check the connection of the Main Fan. 2. Replace the Main Fan.		
E805	0005	Title	Error in 2-sided cooling fan	-	○
		Description	2-sided cooling fan does not rotate in the specified rotation speed.		
		Remedy	1.Check connectors of 2-sided cooling fan / DC controller PCB 2.Replace 2-sided cooling fans 3.Replace DC controller PCBs		

E Code	Detail Code	Item	Description	M82	M85
E806	0000	Title	Error in fixing / fixing power supply cooling fan	○	○
		Description	Fixing / fixing power supply cooling fan does not rotate in the specified rotation speed.		
		Remedy	1.Check connectors of fixing/fixing power supply cooling fan and DC controller PCB 2.Replace fixing / fixing power supply cooling fans 3.Replace DC controller PCBs		
E808	0000	Title	Error in low-voltage power supply	—	○
		Description	Printer detected failure in low-voltage power supply		
		Remedy	1.Check connectors of power supply unit and DC controller PCB 2.Replace power supply units 3.Replace DC controller PCBs		
E840	0000	Title	Error in pressure release mechanism	○	○
		Description	Failed to control in home position (under pressure) after starting home position control		
		Remedy	1.Replace fixing drive units 2.Replace fixing pressure release cams		

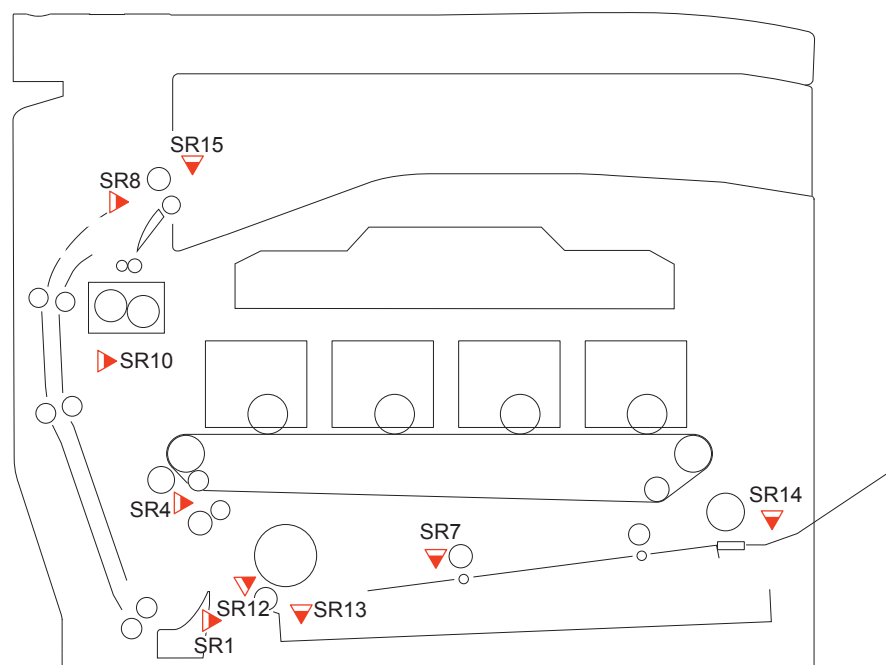
T-7-4

Jam Code

MF8500 Series



F-7-1

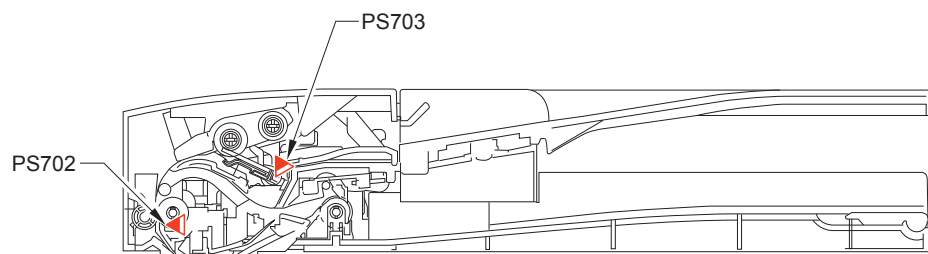


F-7-2

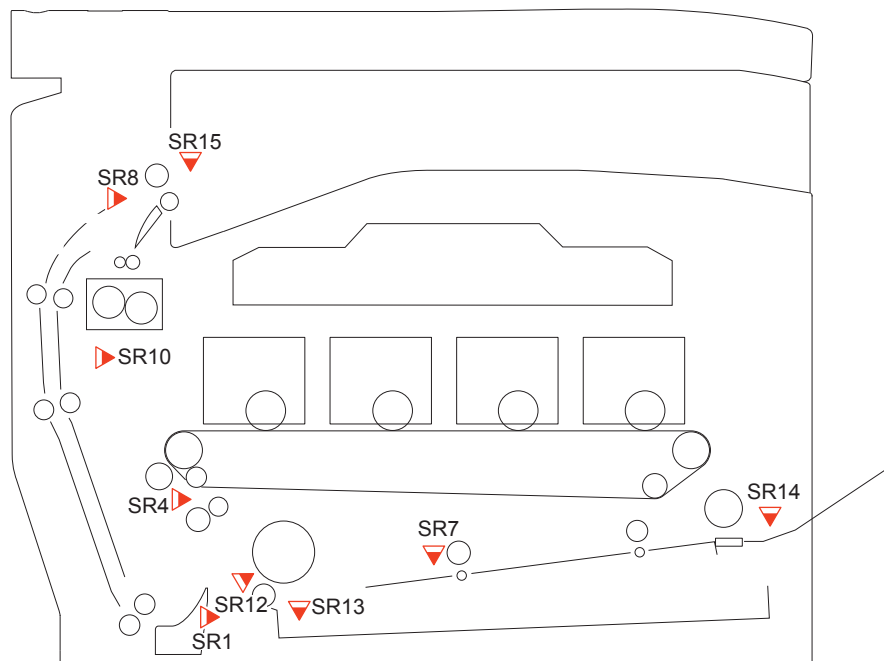
ACC ID	Jam Code	Type	Sensor Name/Detection Contents	Sensor ID	
04	0001	Delay	Document End Sensor Delay	PS702	
04	0002	Stationary	Document End Sensor	PS702	
04	0004	Delay	Document End Sensor Delay (2nd side)	PS702	
04	0005	Stationary	Document End Sensor (2nd side)	PS702	
03	0040	Size error	Size error	-	
03	0060	Size error	Size error	-	
04	0071	Sequence Error	Sequence Error	-	
04	0094	Power ON	Document End Sensor / Document Sensor	PS702/PS703	
03	0104	Delay	Registration Detection Sensor	SR4	
03	0105		MP Tray Pre-Registration Detection Sensor	SR7	
03	010C		Fixing Delivery Sensor	SR8	
03	014C		Delivery Full Sensor	SR15	
03	0184		Registration Detection Sensor	SR4	
03	0208	Stationary	Registration Detection Sensor	SR4	
03	0210		Fixing Delivery Sensor	SR8	
03	0217		Registration Detection Sensor Fixing Delivery Sensor Fixing Loop Sensor MP Tray Pre-Registration Detection Sensor Paper Feeder Pre-Registration Detection Sensor	SR1/SR4/SR7/ SR8/SR10	
03	021C	Wrap	Fixing Delivery Sensor	SR8	
03	0248	Stationary	Registration Detection Sensor	SR4	
03	0250		Fixing Delivery Sensor	SR8	
03	0257	Wrap	Registration Detection Sensor Fixing Delivery Sensor Fixing Loop Sensor MP Tray Pre-Registration Detection Sensor Paper Feeder Pre-Registration Detection Sensor	SR1/SR4/SR7/ SR8/SR10	
03	025C		Fixing Delivery Sensor	SR8	
03	02A4		Duplex revers	Registration Detection Sensor	SR4
03	1014		Power ON	Registration Detection Sensor	SR1/SR4/SR7/ SR8/SR10
03	1054	Fixing Delivery Sensor			
03	1094	Fixing Loop Sensor			
03	10D4	MP Tray Pre-Registration Detection Sensor Paper Feeder Pre-Registration Detection Sensor			
03	1118	Door Open	Front Cover Sensor	SR2/SR4/SR8/ SR12	
03	1158		Registration Detection Sensor		
03	1198		Pre-registration Detection Sensor		
03	11D8		Fixing Delivery Sensor		

T-7-5

MF8200 Series



F-7-3



F-7-4

ACC ID	Jam Code	Type	Sensor Name/Detection Contents	Sensor ID
04	0001	Delay	Document End Sensor Delay	PS702
04	0002	Stationary	Document End Sensor	PS702
03	0040	Size error	Size error	-
03	0060	Size error	Size error	-
04	0071	Sequence	Sequence Error	-
04	0094	Power ON	Document End Sensor / Document Sensor	PS702/PS703
03	0104	Delay	Registration Detection Sensor	SR602
03	010C		Fixing Delivery Sensor	SR609
03	014C			
03	0184		Registration Detection Sensor	SR602
03	0208	Stationary	Registration Detection Sensor	SR602
03	0210		Fixing Delivery Sensor	SR609
03	0217		Registration Detection Sensor Fixing Delivery Sensor MP Tray Pre-Registration Detection Sensor	SR602/SR605/ SR609
03	021C	Wrap	Fixing Delivery Sensor	SR609
03	0248	Stationary	Registration Detection Sensor	SR602
03	0250		Fixing Delivery Sensor	SR609
03	0257		Registration Detection Sensor Fixing Delivery Sensor MP Tray Pre-Registration Detection Sensor	SR602/SR605/ SR609
03	025C	Wrap	Fixing Delivery Sensor	SR602
03	1014	Power ON	Registration Detection Sensor	SR602/SR603/ SR609
03	1054		Fixing Delivery Sensor	
03	1094		Fixing Loop Sensor	
03	10D4			
03	1118	Door Open	Registration Detection Sensor	SR602/SR609/ SR612/SR613
03	1158		Fixing Delivery Sensor	
03	1198		Front Cover Sensor	
03	11D8		Rear Cover Sensor	

T-7-6

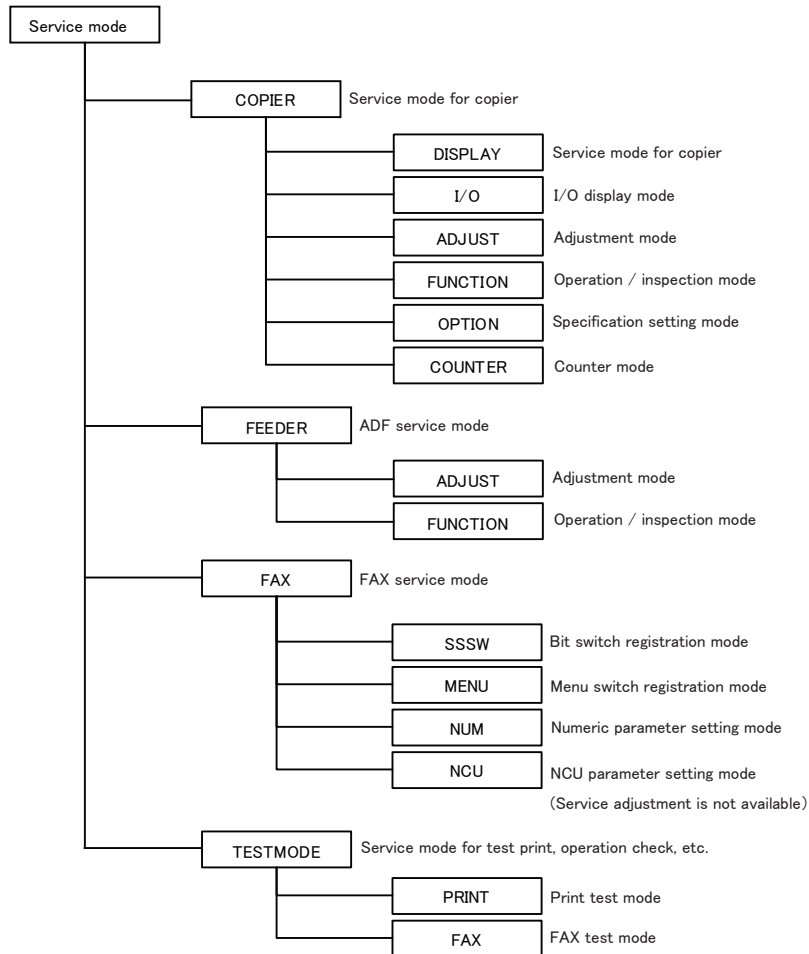


Service Mode

- Overview
- COPIER
- FEEDER
- FAX
- TEST MODE

Overview

Service Mode Menu



F-8-1

Backing up Service Mode

Each device is tuned at the time of shipment and the tuned values are written on the service label.

However, when replacing the main controller PCBs / DC controller PCBs or clearing RAM, tuned ADJUST and OPTION values are reset to defaults. Each service technician should adjust these values in field and ensure to write values after changes in the service label. If the corresponding item is not found on the service label, enter the value in the blank space.

- Service label position (MF8500 series)



F-8-2

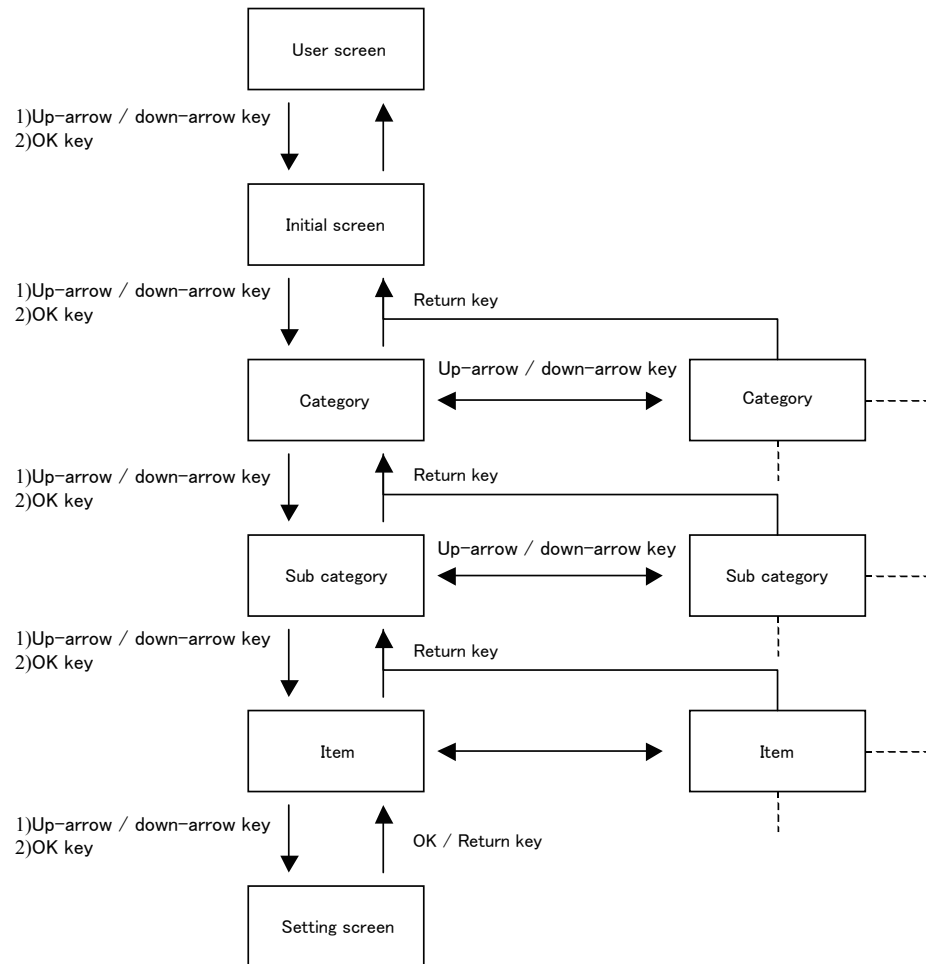
- Service label position (MF8200 series)



F-8-3

Screen flow of Service Mode

Service mode structure

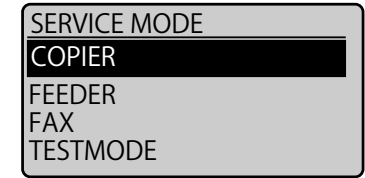


F-8-4

Screen flow of Service mode

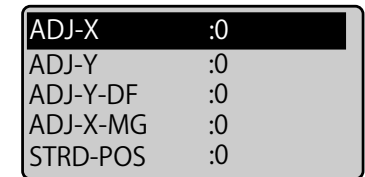
- Initial / Category / Sub category screen

Select the item : Up-arrow / down-arrow key
 Go to Sub category screen : OK key
 Go to Initial screen : Return key



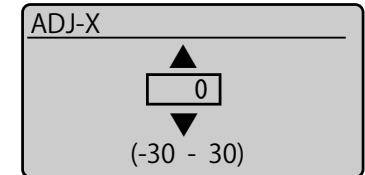
- Item selection screen

Select the item : Up-arrow / down-arrow key
 Go to Setting screen : OK key
 Go to Sub category screen : Return key



- Input value screen

Enter the setting value : numeric keypad
 Switch the sign (+/-) of the value. : "*" Key
 Increment the setting value one by one : Up-arrow key
 Decrease the setting value one by one : Down-arrow key
 Change the setting : OK key
 Maintain the setting : Return key



- Method to display the setting value of switch

- On decimal display format, display is left aligned. (Comma is put every 3 digits.)
- On binary display format, the most significant bit is placed at the leftmost position and the least significant bit is placed at the rightmost position.

Remote UI service mode

Function Overview

Remote UI can be used to display, set and implement various service mode in addition to rebooting the machine. In this case, machine's UI displays "Remote service mode".

Operating condition

Operation of service mode using remote UI becomes possible in the following cases:

- Service mode is not used on LUI.
- There is no user who has been logged in to the remote UI service mode (this function).
- Remote UI is enabled in the setting of LUI.
Setting Menu > System Management Settings > Remote UI On/Off
- "RMT-SW" is enabled in service mode (Enabled when the setting value is "1").
COPIER > OPTION > BODY > RMT-SW (remote UI service mode function)
0: OFF, 1: ON (default)

Usage method

1. Activate the Web browser.
2. Enter the following URL in the address input field.
http://<IP address of the machine or host name>/servicemode.html
3. Enter the password and click "Log In".

* Password required for authentication differs depending on the service mode setting.

COPIER > OPTION > BODY > PSWD-SW

PSWD-SW	Password required for authentication
0	1. Password of RUI service mode
1	1. Password of RUI service mode 2. Password of service mode
2	1. Password of RUI service mode 2. User's system administrator ID 3. Password of system administrator 4. Password of service mode

* Password of service mode can be changed in COPIER > OPTION > BODY > SM-PSWD.

Authentication screen

1)PSWD-SW: 0

F-8-5

2)PSWD-SW: 1

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3)PSWD-SW: 2

F-8-7

4)Click "Logout" to end the operation.

MEMO :

After login, if you close the browser without "logout", it is recognized that you have been "logged in". Therefore, in order to log in to service mode again, you must wait for a certain period of time (3 minutes) from the last access to make the system timeout or turn OFF/ON the power.

Supported models

The following table shows availability of service mode by model using the following symbols.

○	Supported
▲	Supported by model with FAX only
—	Not supported

T-8-2

COPIER

 DISPLAY

 VERSION

COPIER > DISPLAY > VERSION		M82	M85
MAIN	Display of MAIN (main program) version		
Details	To display the firmware version of Main Controller PCB.		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	00.00 to 99.99		
Default value	0		
BOOT	Boot ROM version		
Details	To display the version of Boot ROM (BOOT program).		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	00.01 to 99.99		
Default value	0		
LANG	Language pack version		
Details	To display the version of language pack.		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	00.00 to 99.99		
Default value	0		
DEMODATA	Demo print data version		
Details	To display the version of demo print data. Since this machine does not have demo print function, "FF.FF" is displayed.		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	--,--		
Default value	0		
ECONT	ECONT version		
Details	To display the version of Engine Controller PCB.		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	00.00 to 99.99		
Default value	0		

COPIER > DISPLAY > VERSION		M82	M85
PANEL	PANEL version		
Details	To display the version of PANEL.		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	00.00 to 99.99		
Default value	0		
Related service mode	COPIER> FUNCTION> SYSTEM> PANEL-UP		
ECO	ECO version		
Details	To display the version of ECO.		
Use case	When upgrading the firmware	○	○
Adj/set/operate method	N/A (Display only)		
Display/adj/set range	00.00 to 99.99		
Default value	0		
DEMOMODE	Version of data for shop demonstration		
Details	To display the version of data for shop demonstration.		
Use case	When checking the version of data for shop demonstration	○	○
Display/adj/set range	00.00 to 99.99		
Default value	0		

T-8-3

 ERR

Error code display screen

Up to 10 E codes and detailed codes for system errors can be shown.

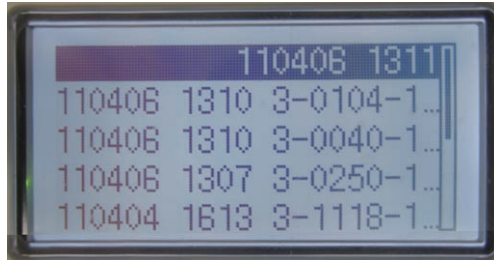
110508	2310	E100-0000
110507	1024	E001-0000
110506	2310	E196-2000
110503	2310	E001-0000
110501	0913	E001-0000

F-8-8

JAM

Jam code display screen

Up to 10 Jam codes and detailed codes for system errors can be shown.



F-8-9

CCD

COPIER > DISPLAY > CCD			M82	M85
TARGET-B		Shading target value (B)		
Details	To display the shading target value of Blue. Continuous display of 128 (minimum) or 384 (maximum) is considered a failure of the CIS Unit.			
Use case	At scanned image failure		○	○
Adj/set/operate method	N/A (Display only)			
Display/adj/set range	128 to 384			
Default value	269			
Related service mode	COPIER> ADJUST> CCD> DFTAR-B			
TARGET-G		Shading target value (G)		
Details	To display the shading target value of Green. Continuous display of 128 (minimum) or 384 (maximum) is considered a failure of the CIS Unit.			
Use case	At scanned image failure		○	○
Adj/set/operate method	N/A (Display only)			
Display/adj/set range	128 to 384			
Default value	270			
Related service mode	COPIER> ADJUST> CCD> DFTAR-G			
TARGET-R		Shading target value (R)		
Details	To display the shading target value of Red. Continuous display of 128 (minimum) or 384 (maximum) is considered a failure of the CIS Unit.			
Use case	At scanned image failure		○	○
Adj/set/operate method	N/A (Display only)			
Display/adj/set range	128 to 384			
Default value	263			
Related service mode	COPIER> ADJUST> CCD> DFTAR-R			
TARGETBW		Shading target value (B&W)		
Details	To display the shading target value at B&W jobs. Continuous display of 128 (minimum) or 384 (maximum) is considered a failure of the Main Controller PCB.			
Use case	At scanned image failure		○	○
Adj/set/operate method	N/A (Display only)			
Display/adj/set range	128 to 384			
Default value	276			
Related service mode	COPIER> ADJUST> CCD> DFTAR-BW			

T-8-4



R-CON

COPIER>IO>R-CON				M82	M85
Address	BIT	Description	Remarks		
P001	0	Display sensor status (Document end sensor)	While the screen is open, the values are updated periodically (with an interval of 1 second).	○	○
	1	Display sensor status (Document sensor)			
	2	Display sensor status (HPS)			
P002	-	No sensor allocated; 0 is always shown	While the screen is open, the values are updated periodically (with an interval of 1 second).	○	○

T-8-5



ADJUST

ADJ-XY

COPIER > ADJUST > ADJ-XY			M82	M85
ADJ-X	Adj of img pstrn in book mode: vert scan		○	○
Details	To adjust the image reading start position (image leading edge position) in the vertical scanning direction at copyboard reading. When replacing the Engine Controller PCB/clearing the RAM data, enter the value of service label. When the non-image width is larger than the standard value, set the smaller value. When out of original area is copied, set the larger value. As the value is incremented by 1, the image position moves to the trailing edge side by 0.1 mm.			
Use case	<ul style="list-style-type: none"> When replacing the Reader Unit When replacing the CIS Unit 			
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.			
Caution	After the setting value is changed, write the changed value in the service label.			
Display/adj/set range	-30 to 30			
Unit	0.1 mm			
Default value	0			
ADJ-Y	Adj of img pstrn in book mode: horz scan		○	○
Details	To adjust the image reading start position in the horizontal scanning direction at copyboard reading. When replacing the Engine Controller PCB/clearing the RAM data, enter the value of service label. When the non-image width is larger than the standard value, set the smaller value. When out of original area is copied, set the larger value. As the value is incremented by 1, the image position moves to the rear side by 0.1 mm.			
Use case	<ul style="list-style-type: none"> When replacing the Reader Unit When replacing the CIS Unit 			
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.			
Caution	After the setting value is changed, write the changed value in the service label.			
Display/adj/set range	-10 to 10			
Unit	0.1 mm			
Default value	0			

COPIER > ADJUST > ADJ-XY		M82	M85
ADJ-Y-DF	Adj img pstn in ADF mode:horz scan		
Details	To adjust the image reading start position in the horizontal scanning direction at ADF reading. When replacing the Engine Controller PCB/clearing the RAM data, enter the value of service label. As the value is incremented by 1, the image position moves to the trailing edge side by 0.1 mm.		
Use case	<ul style="list-style-type: none"> When replacing the Reader Unit When replacing the CIS Unit 	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-10 to 10		
Unit	0.1 mm		
Default value	0		
ADJ-X-MG	Fine adjustment of image magnification ratio (vertical scanning direction)		
Details	To make a fine adjustment of image magnification ratio in the vertical scanning direction by changing the reading cycle of CIS. When replacing the Engine Controller PCB/clearing the RAM data, enter the value of service label. As the value is incremented by 1, the image magnification changes by 0.01 %. +: Reduce -: Enlarge		
Use case	When replacing the Engine Controller PCB/clearing RAM data	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-200 to 200		
Unit	0.01 %		
Default value	0		

COPIER > ADJUST > ADJ-XY		M82	M85
STRD-POS	Adjustment of reading position at ADF stream reading		
Details	To adjust the reading position at ADF stream reading. When replacing the Engine Controller PCB/clearing the RAM data, enter the value of service label.		
Use case	When replacing the Engine Controller PCB/clearing RAM data	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-20 to 20		
Unit	0.1 mm		
Default value	0		
Related service mode	COPIER> FUNCTION> INSTALL> STRD-POS		

T-8-6

■ CCD

COPIER > ADJUST > CCD		M82	M85
W-PLT-X	White level data(X) entry of white plate		
Details	To enter the white level data (X) for the Standard White Plate. When replacing the ADF/Reader Unit, enter the value of service label. When replacing the Reader Upper Cover Unit, enter the value of barcode label which is affixed on the glass. When replacing the Main Controller PCB, enter the value of service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	7000 to 9999		
Default value	8273		
Related service mode	COPIER.> ADJUST> CCD> W-PLT-Y, W-PLT-Z		
W-PLT-Y	White level data(Y) entry of white plate		
Details	To enter the white level data (Y) for the Standard White Plate. When replacing the ADF/Reader Unit, enter the value of service label. When replacing the Reader Upper Cover Unit, enter the value of barcode label which is affixed on the glass. When replacing the Main Controller PCB, enter the value of service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	7000 to 9999		
Default value	8737		
Related service mode	COPIER.> ADJUST> CCD> W-PLT-X, W-PLT-Z		

COPIER > ADJUST > CCD		M82	M85
W-PLT-Z	White level data(Z) entry of white plate		
Details	To enter the white level data (Z) for the Standard White Plate. When replacing the ADF/Reader Unit, enter the value of service label. When replacing the Reader Upper Cover Unit, enter the value of barcode label which is affixed on the glass. When replacing the Main Controller PCB, enter the value of service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	7000 to 9999		
Default value	9427		
Related service mode	COPIER.> ADJUST> CCD> W-PLT-X, W-PLT-Y		
DFTAR-R	Adjustment of shading target value (R) at ADF reading		
Details	To adjust the shading target value of Red at ADF reading. When replacing the Main Controller PCB, enter the value of service label. After executing COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2, write the value which is automatically set in the service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the CIS Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	128 to 384		
Default value	299		
Related service mode	COPIER> DISPLAY> CCD> TARGET-R COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2		

COPIER > ADJUST > CCD		M82	M85
DFTAR-G	Adjustment of shading target value (G) at ADF reading		
Details	To adjust the shading target value of Green at ADF reading. When replacing the Main Controller PCB, enter the value of service label. After executing COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2, write the value which is automatically set in the service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the CIS Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	128 to 384		
Default value	309		
Related service mode	COPIER> DISPLAY> CCD> TARGET-G COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2		
DFTAR-B	Adjustment of shading target value (B) at ADF reading		
Details	To adjust the shading target value of Blue at ADF reading. When replacing the Main Controller PCB, enter the value of service label. After executing COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2, write the value which is automatically set in the service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the CIS Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	128 to 384		
Default value	307		
Related service mode	COPIER> DISPLAY> CCD> TARGET-B COPIER> FUNCTION> CCD> DF-WLVL1, DF-WLVL2		

COPIER > ADJUST > CCD		M82	M85
DFTAR-BW	Adjustment of shading target value (B&W) at ADF reading		
Details	When replacing the Main Controller PCB, enter the value of service label. After executing COPIER> FUNCTION> CCD> DF-WLVL3, DF-WLVL4, write the value which is automatically set in the service label.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the CIS Unit When replacing the Reader Upper Cover Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	128 to 384		
Default value	315		
Related service mode	COPIER> DISPLAY> CCD> TARGETBW COPIER> FUNCTION> CCD> DF-WLVL3, DF-WLVL4		
50-RG	Color displacement (R and G lines) correction value in the vertical scanning direction (50%)		
Details	To correct the color displacement (R and G lines) in the vertical scanning direction at 50% copyboard reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	-333		
Supplement/memo	50% reading: 300 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		
50-GB	Color displacement (G and B lines) correction value in the vertical scanning direction (50%)		
Details	To correct the color displacement (G and B lines) in the vertical scanning direction at 50% copyboard reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	333		
Supplement/memo	50% reading: 300 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		

COPIER > ADJUST > CCD		M82	M85
100-RG	Color displacement (R and G lines) correction value in the vertical scanning direction (100%)		
Details	To correct the color displacement (R and G lines) in the vertical scanning direction at 100% copyboard reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	-333		
Supplement/memo	100% reading: 600 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		
100-GB	Color displacement (G and B lines) correction value in the vertical scanning direction (100%)		
Details	To correct the color displacement (G and B lines) in the vertical scanning direction at 100% copyboard reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	333		
Supplement/memo	100% reading: 600 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		

COPIER > ADJUST > CCD		M82	M85
50DF-RG	Color displacement (R and G lines) correction value in the vertical scanning direction at ADF reading (50%)		
Details	To correct the color displacement (R and G lines) in the vertical scanning direction at 50% ADF reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	-333		
Supplement/memo	50% reading: 300 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		
50DF-GB	Color displacement (G and B lines) correction value in the vertical scanning direction at ADF reading (50%)		
Details	To correct the color displacement (G and B lines) in the vertical scanning direction at 50% ADF reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	333		
Supplement/memo	50% reading: 300 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		

COPIER > ADJUST > CCD		M82	M85
100DF-RG	Color displacement (R and G lines) correction value in the vertical scanning direction at ADF reading (100%)		
Details	To correct the color displacement (R and G lines) in the vertical scanning direction at 100% ADF reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	-333		
Supplement/memo	100% reading: 600 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		
100DF-GB	Color displacement (G and B lines) correction value in the vertical scanning direction at ADF reading (100%)		
Details	To correct the color displacement (G and B lines) in the vertical scanning direction at 100% ADF reading. When replacing the Main Controller PCB, enter the value of service label.		
Use case	When replacing the Main Controller PCB		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-512 to 512		
Unit	0.001 line		
Default value	333		
Supplement/memo	100% reading: 600 dpi in horizontal scanning direction x 600 dpi in vertical scanning direction reading mode.		
OFST-BW0	Adjustment of CIS (Rear) at B&W reading		
Details	To adjust the offset of the CIS (Rear) when reading B&W original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 255		
Default value	8		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		

COPIER > ADJUST > CCD		M82	M85
OFST-BW1	Adjustment of CIS (Center) at B&W reading		
Details	To adjust the offset of the CIS (Center) when reading B&W original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 255		
Default value	8		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		
OFST-BW2	Adjustment of CIS (Front) at B&W reading		
Details	To adjust the offset of the CIS (Front) when reading B&W original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 255		
Default value	8		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		
OFST-CL0	Adjustment of CIS (Rear) at color reading		
Details	To adjust the offset of the CIS (Rear) when reading color original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 255		
Default value	8		
Related service mode	COPIER>FUNCTION>CCD>CL-AGC		
OFST-CL1	Adjustment of CIS (Center) at color reading		
Details	To adjust the offset of the CIS (Center) when reading color original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 255		
Default value	8		
Related service mode	COPIER>FUNCTION>CCD>CL-AGC		
OFST-CL2	Adjustment of CIS (Front) at color reading		
Details	To adjust the offset of the CIS (Front) when reading color original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 255		
Default value	8		
Related service mode	COPIER>FUNCTION>CCD>CL-AGC		

COPIER > ADJUST > CCD		M82	M85
GAIN-BW0	Adjustment of gain at B&W reading		
Details	To adjust the gain when reading B&W original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	1 to 255		
Default value	64		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		
GAIN-CL0	Adjustment of gain at color reading		
Details	To adjust the gain when reading color original.		
Use case	When replacing the CIS Unit		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	1 to 255		
Default value	64		
Related service mode	COPIER>FUNCTION>CCD>CL-AGC		
LED-BW-R	Adjustment of LED light-up time (R) at B&W reading		
Details	To adjust the red color LED light-up time when reading B&W original.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 2432		
Default value	1000		
Related service mode	COPIER>FUNCTION>CCD>CL-AGC		
LED-BW-G	Adjustment of LED light-up time (G) at B&W reading		
Details	To adjust the green color LED light-up time when reading B&W original.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 2432		
Default value	1000		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		
LED-BW-B	Adjustment of LED light-up time (B) at B&W reading		
Details	To adjust the blue color LED light-up time when reading B&W original.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 2432		
Default value	1000		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		
LED-CL-R	Adjustment of LED light-up time (R) at color reading		
Details	To adjust the red color LED light-up time when reading color original.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 2168		
Default value	1200		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		

COPIER > ADJUST > CCD		M82	M85
LED-CL-G	Adjustment of LED light-up time (G) at color reading		
Details	To adjust the green color LED light-up time when reading color original.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 2168		
Default value	1200		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		
LED-CL-B	Adjustment of LED light-up time (B) at color reading		
Details	To adjust the blue color LED light-up time when reading color original.		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 2168		
Default value	1200		
Related service mode	COPIER>FUNCTION>CCD>BW-AGC		

T-8-7

PASCAL

COPIER > ADJUST > PASCAL		M82	M85
OFST-P-Y	Y density adj at test print reading		
Details	To adjust the offset of Y color test print reading signal at Auto Adjust Gradation (Full Adjust). When replacing the Main Controller PCB, enter the value of service label. As the greater value is set, the image after adjustment gets darker.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-32 to 32		
Default value	0		
OFST-P-M	M density adj at test print reading		
Details	To adjust the offset of M color test print reading signal at Auto Adjust Gradation (Full Adjust). When replacing the Main Controller PCB, enter the value of service label. As the greater value is set, the image after adjustment gets darker.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-32 to 32		
Default value	0		
OFST-P-C	C density adj at test print reading		
Details	To adjust the offset of C color test print reading signal at Auto Adjust Gradation (Full Adjust). When replacing the Main Controller PCB, enter the value of service label. As the greater value is set, the image after adjustment gets darker.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-32 to 32		
Default value	0		

COPIER > ADJUST > PASCAL		M82	M85
OFST-P-K	Bk density adj at test print reading		
Details	To adjust the offset of Bk color test print reading signal at Auto Adjust Gradation (Full Adjust). When replacing the Main Controller PCB, enter the value of service label. As the greater value is set, the image after adjustment gets darker.		
Use case	<ul style="list-style-type: none"> When replacing the ADF/Reader Unit When replacing the Main Controller PCB 	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Caution	After the setting value is changed, write the changed value in the service label.		
Display/adj/set range	-32 to 32		
Default value	0		

T-8-8

VIFADJ

COPIER > ADJUST > VIFADJ		M82	M85
DEV-HV-Y	Adjustment of developing bias setting value (Y)		
Details	To adjust the setting value of Y-color developing bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> DEV-HV-M, DEV-HV-C, DEV-HV-K		
DEV-HV-M	Adjustment of developing bias setting value (M)		
Details	To adjust the setting value of M-color developing bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> DEV-HV-Y, DEV-HV-C, DEV-HV-K		
DEV-HV-C	Adjustment of developing bias setting value (C)		
Details	To adjust the setting value of C-color developing bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> DEV-HV-Y, DEV-HV-M, DEV-HV-K		
DEV-HV-K	Adjustment of developing bias setting value (Bk)		
Details	To adjust the setting value of Bk-color developing bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> DEV-HV-Y, DEV-HV-M, DEV-HV-C		

COPIER > ADJUST > VIFADJ		M82	M85
TR1-HV-Y	Adjustment of primary transfer bias setting value (Y)		
Details	To adjust the setting value of Y-color primary transfer bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> TR1-HV-M, TR1-HV-C, TR1-HV-K		
TR1-HV-M	Adjustment of primary transfer bias setting value (M)		
Details	To adjust the setting value of M-color primary transfer bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> TR1-HV-Y, TR1-HV-C, TR1-HV-K		
TR1-HV-C	Adjustment of primary transfer bias setting value (C)		
Details	To adjust the setting value of C-color primary transfer bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> TR1-HV-Y, TR1-HV-M, TR1-HV-K		
TR1-HV-K	Adjustment of primary transfer bias setting value (Bk)		
Details	To adjust the setting value of Bk-color primary transfer bias.		
Use case	When an image failure occurs		
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.	○	○
Display/adj/set range	-5 to 5		
Default value	0		
Related service mode	COPIER> ADJUST> VIFADJ> TR1-HV-Y, TR1-HV-M, TR1-HV-C		

COPIER > ADJUST > VIFADJ			M82	M85
TR2SF-HV		Adjustment of secondary transfer bias setting value (front side)		
	Details	To adjust the setting value of secondary transfer bias (front side).		
	Use case	When an image failure occurs		
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.	○	○
	Display/adj/set range	-5 to 5		
	Default value	0		
	Related service mode	COPIER> ADJUST> VIFADJ> TR2BK-HV		
TR2BK-HV		Adjustment of secondary transfer bias setting value (back side)		
	Details	To adjust the setting value of secondary transfer bias (back side).		
	Use case	When an image failure occurs		
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.	○	○
	Display/adj/set range	-5 to 5		
	Default value	0		
	Related service mode	COPIER> ADJUST> VIFADJ> TR2SF-HV		
ICL-HV		Adjustment of bias setting value for ITB cleaning		
	Details	To adjust the bias setting value to be used for ITB cleaning.		
	Use case	When an image failure occurs		
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.	○	○
	Display/adj/set range	-5 to 5		
	Default value	0		
FU-TMP		Adjustment of setting value of Fixing Roller surface temperature		
	Details	To adjust the setting value of the surface temperature of the Fixing Roller.		
	Use case	When an image failure occurs		
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.	○	○
	Display/adj/set range	-2 to 2		
	Default value	0		

T-8-9

■ SCNR

COPIER > ADJUST > SCNR			M82	M85
SUB-S-Y0		Adjustment of emitting position 1 (Y) in the vertical scanning direction		
	Details	To adjust the Y-color emitting position 1 in the vertical scanning position.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-1023 to 1023		
	Default value	0		
SUB-S-M0		Adjustment of emitting position 1 (M) in the vertical scanning direction		
	Details	To adjust the M-color emitting position 1 in the vertical scanning position.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-1023 to 1023		
	Default value	0		
SUB-S-C0		Adjustment of emitting position 1 (C) in the vertical scanning direction		
	Details	To adjust the C-color emitting position 1 in the vertical scanning position.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-1023 to 1023		
	Default value	0		
SUB-S-K0		Adjustment of emitting position 1 (Bk) in the vertical scanning direction		
	Details	To adjust the Bk-color emitting position 1 in the vertical scanning position.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-1023 to 1023		
	Default value	0		

COPIER > ADJUST > SCNR		M82	M85
SUB-S-Y1			
Adjustment of emitting position 2 (Y) in the vertical scanning direction			
Details	To adjust the Y-color emitting position 2 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		
SUB-S-M1			
Adjustment of emitting position 2 (M) in the vertical scanning direction			
Details	To adjust the M-color emitting position 2 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		
SUB-S-C1			
Adjustment of emitting position 2 (C) in the vertical scanning direction			
Details	To adjust the C-color emitting position 2 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		
SUB-S-K1			
Adjustment of emitting position 2 (K) in the vertical scanning direction			
Details	To adjust the K-color emitting position 2 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		

COPIER > ADJUST > SCNR		M82	M85
SUB-S-Y2			
Adjustment of emitting position 3 (Y) in the vertical scanning direction			
Details	To adjust the Y-color emitting position 3 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		
SUB-S-M2			
Adjustment of emitting position 3 (M) in the vertical scanning direction			
Details	To adjust the M-color emitting position 3 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		
SUB-S-C2			
Adjustment of emitting position 3 (C) in the vertical scanning direction			
Details	To adjust the C-color emitting position 3 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		
SUB-S-K2			
Adjustment of emitting position 3 (K) in the vertical scanning direction			
Details	To adjust the K-color emitting position 3 in the vertical scanning position.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
Display/adj/set range	-1023 to 1023		
Default value	0		

COPIER > ADJUST > SCNR			M82	M85
MAI-S-Y0		Adjustment of scan time 1 (Y) in the horizontal scanning direction		
	Details	To adjust the Y-color scan time 1 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		
MAI-S-M0		Adjustment of scan time 1 (M) in the horizontal scanning direction		
	Details	To adjust the M-color scan time 1 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		
MAI-S-C0		Adjustment of scan time 1 (C) in the horizontal scanning direction		
	Details	To adjust the C-color scan time 1 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		
MAI-S-K0		Adjustment of scan time 1 (Bk) in the horizontal scanning direction		
	Details	To adjust the Bk-color scan time 1 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		

COPIER > ADJUST > SCNR			M82	M85
MAI-S-Y1		Adjustment of scan time 2 (Y) in the horizontal scanning direction		
	Details	To adjust the Y-color scan time 2 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		
MAI-S-M1		Adjustment of scan time 2 (M) in the horizontal scanning direction		
	Details	To adjust the M-color scan time 2 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		
MAI-S-C1		Adjustment of scan time 2 (C) in the horizontal scanning direction		
	Details	To adjust the C-color scan time 2 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		
MAI-S-K1		Adjustment of scan time 2 (Bk) in the horizontal scanning direction		
	Details	To adjust the Bk-color scan time 2 in the horizontal scanning direction.		
	Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
	Adj/set/operate method	Enter the setting value (switch negative/positive by -/+ key) and press OK key.		
	Display/adj/set range	-511 to 511		
	Default value	0		

COPIER > ADJUST > SCNR		M82	M85
MAI-S-Y2	Adjustment of scan time 3 (Y) in the horizontal scanning direction		
Details	To adjust the Y-color scan time 3 in the horizontal scanning direction.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Display/adj/set range	-127 to 127		
Default value	0		
MAI-S-M2	Adjustment of scan time 3 (M) in the horizontal scanning direction		
Details	To adjust the M-color scan time 3 in the horizontal scanning direction.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Display/adj/set range	-127 to 127		
Default value	0		
MAI-S-C2	Adjustment of scan time 3 (C) in the horizontal scanning direction		
Details	To adjust the C-color scan time 3 in the horizontal scanning direction.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Display/adj/set range	-127 to 127		
Default value	0		
MAI-S-K2	Adjustment of scan time 3 (Bk) in the horizontal scanning direction		
Details	To adjust the Bk-color scan time 3 in the horizontal scanning direction.		
Use case	When replacing the Laser Scanner Unit, enter the value written on the label included in the package of the Laser Scanner Unit	○	○
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.		
Display/adj/set range	-127 to 127		
Default value	0		

T-8-10

FUNCTION

CCD

COPIER > FUNCTION > CCD		M82	M85
DF-WLVL1	White level adj in book mode: color		
Details	To adjust the white level for copyboard scanning automatically by setting the paper which is usually used by the user on the Copyboard Glass.		
Use case	<ul style="list-style-type: none"> When replacing the Reader Upper Cover Unit When replacing the CIS Unit When replacing the ADF/Reader Unit 	○	○
Adj/set/operate method	1) Set paper on the Copyboard Glass. 2) Select the item, and then press OK key.		
Caution	Be sure to execute DF-WLVL2 in a row.		
Related service mode	COPIER> ADJUST> CCD> DFTAR-R, DFTAR-G, DFTAR-B COPIER> FUNCTION> CCD> DF-WLVL2		
DF-WLVL2	White level adj in ADF mode: color		
Details	To adjust the white level for ADF scanning automatically by setting the paper which is usually used by the user on the ADF.		
Use case	<ul style="list-style-type: none"> When replacing the Reader Upper Cover Unit When replacing the CIS Unit When replacing the ADF/Reader Unit 	○	○
Adj/set/operate method	1) Set paper on the ADF. 2) Select the item, and then press OK key.		
Caution	Be sure to execute this item after DF-WLVL1.		
Related service mode	COPIER> ADJUST> CCD> DFTAR-R, DFTAR-G, DFTAR-B COPIER> FUNCTION> CCD> DF-WLVL1		
DF-WLVL3	White level adj in book mode (B&W)		
Details	To adjust the white level for copyboard scanning automatically by setting the paper which is usually used by the user on the Copyboard Glass.		
Use case	<ul style="list-style-type: none"> When replacing the Reader Upper Cover Unit When replacing the CIS Unit When replacing the ADF/Reader Unit 	○	○
Adj/set/operate method	1) Set paper on the Copyboard Glass. 2) Select the item, and then press OK key.		
Caution	Be sure to execute DF-WLVL4 in a row.		
Related service mode	COPIER> ADJUST> CCD> DFTAR-BW COPIER> FUNCTION> CCD> DF-WLVL4		

COPIER > FUNCTION > CCD		M82	M85
DF-WLVL4	White level adj in ADF mode (B&W)		
Details	To adjust the white level for ADF scanning automatically by setting the paper which is usually used by the user on the DADF.		
Use case	<ul style="list-style-type: none"> When replacing the Reader Upper Cover Unit When replacing the CIS Unit When replacing the ADF/Reader Unit 	○	○
Adj/set/operate method	1) Set paper on the ADF. 2) Select the item, and then press OK key.		
Caution	Be sure to execute this item after DF-WLVL3.		
Related service mode	COPIER> ADJUST> CCD> DFTAR-BW COPIER> FUNCTION> CCD> DF-WLVL3		
CL-AGC	CIS light intensity adj in ADF (color)		
Details	To adjust the black/white level of the CIS for ADF scanning automatically by setting the paper which is usually used by the user on the ADF. (For color scanning)		
Use case	<ul style="list-style-type: none"> When replacing the Reader Unit When replacing the CIS Unit 	○	○
Adj/set/operate method	1) Set paper on the ADF. 2) Select the item, and then press OK key.		
Related service mode	COPIER> FUNCTION> CCD> BW-AGC		
BW-AGC	CIS light intensity adj in ADF (B&W)		
Details	To adjust the black/white level of the CIS for ADF scanning automatically by setting the paper which is usually used by the user on the ADF. (For B&W scanning) Setting values of the following service modes are automatically calculated: COPIER > ADJUST > CCD > OFST-BW0/1/2, GAIN-BW0, LED-BW-R/G/B.		
Use case	<ul style="list-style-type: none"> When replacing the Reader Unit When replacing the CIS Unit 	○	○
Adj/set/operate method	1) Set paper on the ADF. 2) Select the item, and then press OK key.		
Related service mode	COPIER> FUNCTION> CCD> CL-AGC COPIER > ADJUST > CCD > OFST-BW0 COPIER > ADJUST > CCD > OFST-BW1 COPIER > ADJUST > CCD > OFST-BW2 COPIER > ADJUST > CCD > GAIN-BW0 COPIER > ADJUST > CCD > LED-BW-R COPIER > ADJUST > CCD > LED-BW-G COPIER > ADJUST > CCD > LED-BW-B		

T-8-11

■ CLEAR

COPIER > FUNCTION > CLEAR		M82	M85
R-CON	Initialization of Reader/ADF		
Details	To initialize the factory adjustment values of the Reader/ADF.	○	○
Use case	When clearing RAM data of the Main Controller PCB		
Adj/set/operate method	Select the item, and then press OK key.		
SRVC-DAT	Clearing service mode setting value		
Details	To clear the service mode setting values. The user mode setting values are not cleared. The factory adjustment values of the Reader/ADF are not initialized.	○	○
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.		
COUNTER	Clearing service counter		
Details	To clear the counter by maintenance/part/mode. The numerator printed on a system dump list becomes 0.	○	○
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.		
HIST	Clear of logs		
Details	To clear the communication management/print/jam/error log.	○	○
Use case	When clearing logs		
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.		
ALL	Clearing setting information		
Details	<ul style="list-style-type: none"> User mode setting values Service mode setting values (excluding the service counter) ID and password of the system administrator Communication management/print/jam/error log E719 error (counter meter-installed models only) The following items are not cleared/initialized. <ul style="list-style-type: none"> Service counter Factory adjustment values of the Reader/ADF 	○	○
Use case	At installation		
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.		
Related service mode	COPIER> OPTION> BODY> LOCALE, SIZE-LC		

T-8-12

■ MISC-R

COPIER > FUNCTION > MISC-R		M82	M85
SCANLAMP	Light-up check of CIS Unit LED		
Details	To light up CIS Unit LED for 3 seconds. Light up in the following order: R->G->B->R->G-B.		
Use case	When replacing the CIS Unit LED	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Required time	3 seconds		
SCAN-ON	Execution of copyboard reading		
Details	To execute reading of the original on the Copyboard Glass.	○	○
Adj/set/operate method	1) Set paper on the Copyboard Glass. 2) Select the item, and then press OK key.		

T-8-13

■ MISC-P

COPIER > FUNCTION > MISC-P		M82	M85
SRVC-DAT	Output of system data list/system dump list		
Details	To execute report output of the system data list and the system dump list. System data list: The service software switches and parameters used in FAX function System dump list: The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc.	▲	▲
Adj/set/operate method	Select the item, and then press OK key.		
SYS-DAT	Output of system data list		
Details	To execute report output of the system data list. The service software switches and parameters used in FAX function are output.	▲	▲
Adj/set/operate method	Select the item, and then press OK key.		
SYS-DMP	Output of system dump list		
Details	To execute report output of the system dump list. The number of sends/receives, the number of pages sent/received, the number of sheets printed/read, the number of errors, etc. are output.	▲	▲
Adj/set/operate method	Select the item, and then press OK key.		
CNTR	Output of counter report		
Details	To output the counter report. The usage of functions (reading, recording, communication and copy) is output.	○	○
Adj/set/operate method	Select the item, and then press OK key.		
ERR-LOG	Output of error log report		
Details	To output the error log report.	○	○
Adj/set/operate method	Select the item, and then press OK key.		
SPEC	Output of spec report		
Details	To output the spec report. The current device specifications such as the location, model information, and ROM version are output.	○	○
Adj/set/operate method	Select the item, and then press OK key.		

T-8-14

SYSTEM

COPIER > FUNCTION > SYSTEM			M82	M85
PANEL-UP		Download from USB memory (PANEL)		
	Details	To perform downloading when PANEL exists in the root directory of the USB memory.		
	Use case	At upgrade		
	Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key. 3) Turn OFF/ON the main power switch.	○	○
	Caution	Do not turn OFF/ON the power before "Executing..." disappears.		
	Related service mode	COPIER> FUNCTION> SYSTEM> DOWNLOAD, BKUP-UP		
LOGWRITE		Writing sublog to USB memory		
	Details	To write sublog that includes the following information to the USB memory. <ul style="list-style-type: none"> • Job list (job names, user names, and destinations) • Communications log (destinations and user names) • Job log (user names and job names) 	○	○
	Use case	When analyzing the cause of a problem		
	Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key. 3) Turn OFF/ON the main power switch.		
	Caution	Do not turn OFF/ON the power before "Executing..." disappears.		
IMPORT		Reading of service mode setting value from USB memory		
	Details	To write the service mode setting values (excluding those related to Reader/ADF) to the USB memory.		
	Use case	When replacing the Main Controller PCB as a measure against failures		
	Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key. 3) Turn OFF/ON the main power switch.	○	○
	Caution	Do not turn OFF/ON the power before "Executing..." disappears.		
EXPORT		Writing service mode setting value to USB memory		
	Details	To write the service mode setting values (excluding those related to Reader/ADF) to the USB memory.		
	Use case	When replacing the Main Controller PCB as a measure against failures		
	Adj/set/operate method	1) Install the USB memory. 2) Select the item, and then press OK key.	○	○
	Caution	"Executing..." disappears when writing is completed.		

T-8-15

VIFFNC

COPIER > FUNCTION > VIFFNC			M82	M85
SMEAR-PV		Execution of image smear prevention mode		
	Details	To execute the image smear prevention mode. Depending on the paper type or environment (especially in a high humidity environment), thin line or fine halftone may become lighter. In this case, execute the image smear prevention mode (rotate the drum for 60 seconds after toner ejection of all colors).	○	○
	Use case	When thin line or fine halftone becomes lighter		
	Adj/set/operate method	Enter the value, and then press OK key.		
	Display/adj/set range	0: OFF, 1: ON		
	Default value	0		
	FEED-IMP		Execution of pickup jam prevention mode	
	Details	When using paper with which double feed is more likely to occur, pickup operation cannot be performed at the appropriate timing because of double feed. As a result of that, pickup delay jam may occur. In this case, extend the pickup interval. Jam occurrence can be prevented, but productivity decreases.	○	○
	Use case	When pickup jam occurs with paper with which double feed is more likely to occur		
	Adj/set/operate method	Enter the value, and then press OK key.		
	Caution	Be sure to get approval from the user by telling that the productivity decreases to prevent jam occurrence.		
	Display/adj/set range	0: OFF, 1: ON		
Default value	0			
FOG-PV		Execution of image fogging prevention mode 2		
	Details	To execute the image fogging prevention mode 2 (the following 4 processing) when fogging which looks like fine vertical lines occurs on the image. <ul style="list-style-type: none"> • Toner ejection of all colors • Rotation of the drum for 60 seconds • Offset of charging • Cleaning sequence for talc paper 	-	○
	Use case	When fogging which looks like fine vertical lines occurs		
	Adj/set/operate method	Enter the value, and then press OK key.		
	Display/adj/set range	0: OFF, 1: ON		
	Default value	0		
	Related service mode	COPIER> FUNCTION> SPLMAN> SPL14682		

COPIER > FUNCTION > VIFFNC		M82	M85
ICL-IMP	Execution of ITB cleaning failure prevention 1		
Details	MF8200 To alleviate cleaning failure by increasing the current (bias) applied to the Cleaning Blade and Primary Transfer Roller. MF8500 To execute cleaning for one round of the ITB after printing 2 sheets. (It becomes 2 sheets intermittent mode.)	○	○
Use case	When an image that was on 2 sheets before appears lightly depending on paper type and print pattern (especially high printing ratio)		
Adj/set/operate method	Enter the value, and then press OK key.		
Display/adj/set range	0: OFF, 1: ON		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL50288		
FD-R-CHG	Execution of Pickup Roller replacement mode		
Details	To move the Pickup Roller to the replacement position by executing this mode.	○	○
Use case	When replacing the Pickup Roller		
Adj/set/operate method	Select the item, and then press OK key.		
STOR-DCN	Backup of Engine Controller PCB NVRAM		
Details	To back up the setting data in NVRAM of the Engine Controller PCB to NVRAM of the Main Controller PCB.		
Use case	Before replacing the Engine Controller PCB		
Adj/set/operate method	Select the item, and then press OK key.	○	○
Caution	During operation, the setting data changes by manual or automatic adjustment. When backup data which has been left for a long period of time is restored, it is overwritten with new setting data and the old data is deleted.		
Related service mode	COPIER> FUNCTION> SYSTEM> RSTR-DCN		
RSTR-DCN	Restoration of Engine Controller PCB NVRAM		
Details	To restore backup information of the Engine Controller PCB NVRAM stored in the Main Controller PCB NVRAM to the Engine Controller PCB NVRAM.		
Use case	After replacing the Engine Controller PCB		
Adj/set/operate method	1) Select the item, and then press OK key. 2) Turn OFF/ON the main power switch.	○	○
Caution	During operation, the setting data changes by manual or automatic adjustment. When backup data which has been left for a long period of time is restored, it is overwritten with new setting data and the old data is deleted.		
Related service mode	COPIER> FUNCTION> SYSTEM> STOR-DCN		

T-8-16

■ SPLMAN

COPIER > FUNCTION > SPLMAN		M82	M85
SPL14159	Fixing of USB device ID		
Details	To fix the USB device ID to "000000000000". Driver for each machine is installed to a PC. However, by fixing the serial number, the PC considers that any connected machine to be the same machine; thus, there will be no need to install the drivers many times.	○	○
Adj/set/operate method	1) Enter the value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL27767	Setting of highly-resistive paper		
Details	To increase the secondary transfer bias.		
Use case	When a trace which looks like toner scattering occurs around the text or print pattern depending on the paper type or environment (especially in a low humidity environment)	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Related service mode	COPIER> FUNCTION> SPL26535		
SPL89793	Execution of re-transfer prevention mode		
Details	To lower the primary transfer bias.		
Use case	When re-transfer occurs due to strong primary transfer bias	-	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL23846	Setting of moist paper		
Details	To increase the secondary transfer bias.		
Use case	When color text or pattern using 2 or more colors of toner becomes lighter depending on the paper type or environment (especially in a high humidity environment)	○	-
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

COPIER > FUNCTION > SPLMAN		M82	M85
SPL26433	Execution of drum idle rotation mode		
Details	To execute idle rotation of the drum.		
Use case	When thin, sharp horizontal lines appear in halftone images after a long downtime		
Adj/set/operate method	Select the item, and then press OK key.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL14682	Execution of image fogging prevention mode 1		
Details	To change the developing bias.		
Use case	When toner is lightly transferred to the white area in case of printing an image with large white area using glossy paper		
Adj/set/operate method	Select the item, and then press OK key.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Related service mode	COPIER> FUNCTION> VIFFNC> FOG-PV		
SPL83279	Setting of Chinese paper		
Details	To change the transfer bias.		
Use case	When a trace which looks like toner scattering occurs around the text or print pattern in case of using Chinese paper		
Adj/set/operate method	Select the item, and then press OK key.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL50288	Execution of ITB cleaning failure prevention 2		
Details	MF8200 To alleviate cleaning failure by increasing the current (bias) applied to the Cleaning Blade and Primary Transfer Roller. MF8500 To execute cleaning for one round of the ITB after printing 2 sheets. (It becomes 2 sheets intermittent mode.) It is more effective than ICL-IMP.		
Use case	When an image that was on 2 sheets before appears lightly depending on paper type and print pattern (especially high printing ratio) When the trailing edge of paper is soiled		
Adj/set/operate method	Select the item, and then press OK key.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

COPIER > FUNCTION > SPLMAN		M82	M85
SPL41971	Execution of curl prevention mode 1		
Details	To extend the initial rotation time and paper interval, and lower the control temperature.		
Use case	When paper which has been printed is curled toward the printed side depending on the paper type, environment (especially in a low humidity environment) or print pattern (especially high printing ratio)	-	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL69399		
SPL35607	Execution of down sequence prevention mode		
Details	To lower the control temperature of the Fixing Assembly without exception.		
Use case	When down sequence occurs		
Adj/set/operate method	Select the item, and then press OK key.		
Caution	Be sure to get approval from the user in advance by explaining that there is a possibility that fixing failure may occur depending on the paper type by lowering the fixing control temperature.	-	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL37510	ON/OFF of ITB cleaning at paper size mismatch		
Details	Normally, when paper other than that of the specified size is fed, ITB cleaning is executed to remove toner. When 1 is set, ITB cleaning is not executed even if paper size is mismatched. Productivity improves, but toner soiling may occur.		
Use case	When paper size is mismatched	○	○
Adj/set/operate method	Enter the value, and then press OK key.		
Caution	Be sure to get approval from the user by telling that toner soiling may occur to improve productivity.		
Display/adj/set range	0 to 1 0: ON, 1: OFF		
Default value	0		

COPIER > FUNCTION > SPLMAN		M82	M85
SPL65677	Increase of paper leading edge margin		
Details	To increase the margin on the leading edge of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. If the setting is incompatible with SPL68676 (decrease of margin), the setting is disabled (the margin will be standard).	○	○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL68676		
SPL68676	Decrease of paper leading edge margin		
Details	To decrease the margin on the leading edge of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. If the setting is incompatible with SPL65677(increase of margin), the setting is disabled (the margin will be standard).	○	○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL65677		
SPL68677	Increase of paper right and left margins		
Details	To increase the margins on the right and left edges of paper. As the value is incremented by 1, the margin is increased by 0.1 mm. If the setting is incompatible with SPL25607 (decrease of margins), the setting is disabled (the margins will be standard).	○	○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL25607		

COPIER > FUNCTION > SPLMAN		M82	M85
SPL25607	Decrease of paper right and left margins		
Details	To decrease the margins on the right and left edges of paper. As the value is incremented by 1, the margin is decreased by 0.1 mm. If the setting is incompatible with SPL68677 (increase of margins), the setting is disabled (the margins will be standard).	○	○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 20		
Unit	0.1 mm		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL68677		
SPL93822	Setting of department ID count all clear		
Details	To set whether to disable clearing of all department ID counts.		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.	○	○
Display/adj/set range	0 to 1 0: Enabled, 1: Disabled		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL78788		
SPL78788	Setting of department ID count clear		
Details	To set whether to disable clearing of department ID count.		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to perform this mode after consulting with the system administrator at user's site.	○	○
Display/adj/set range	0 to 1 0: Enabled, 1: Disabled		
Default value	0		
Related service mode	COPIER> FUNCTION> SPLMAN> SPL93822		
SPL41250	Reset of calibration		
Details	When the user allows printing at absence of toner, calibration using toner is disabled. As a remedy, calibration reset is executed by this switch.		
Use case	When the user allows printing after absence of toner is displayed.	○	○
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

COPIER > FUNCTION > SPLMAN		M82	M85
SPL15176			
Extension of detection on absence of toner			
Details	Error occurs when the drum running distance reaches a certain point in the case of toner absence. Turning this switch ON delays the occurrence of error (threshold value is changed).		
Use case	When delaying the display of "absence of toner" message	○	-
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL89821			
Shop demonstration mode			
Details	To display image data on color UI repeatedly to appeal the product features to potential users.		
Use case	When appealing the product features to users at shops		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	When the setting value is 1 at startup, the shop demonstration mode is enabled.		
SPL58122			
Wrinkle prevention mode			
Details	To prevent envelope from getting wrinkles by keeping the speed of the Fixing Motor constant and feeding an envelope with a little pulling tension applied to it.		
Use case	When preventing envelope from getting wrinkles	○	-
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
SPL71100			
Setting of the duty of Off-hook PCB			
Details	This is the mode to make handsets of particular manufacturers to be rung when fax reception mode is set to "FAX/TEL switching".		
Use case	When fax reception mode is set to FAX/TEL switching		
Adj/set/operate method	Select the item, and then press OK key.		
Display/adj/set range	1 to 99	▲	▲
Default value	50		
Supplement/memo	When receiving a call, a handset connected to the host machine is rung. However, if the connected handset is manufactured by a particular manufacturer (e.g., SANYO, Model No.: TEL-DH5, etc.), it may not be rung. To solve the problem, set the value so that the handset can be rung correctly.		

COPIER > FUNCTION > SPLMAN		M82	M85
SPL00171			
Change of the maximum value of auto sleep shift time			
Details	To change the maximum value of auto sleep shift time in Settings/Registration> Timer Settings> Auto Sleep Time.		
Use case	When changing the setting time to shift to auto sleep mode		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.	○	○
Display/adj/set range	0 to 1 0: 0 to 60, 1: 0 to 240		
Default value	0 (For Europe) 1 (For locations other than Europe)		
SPL80100			
Mask setting at copyboard scanning			
Details	To cancel the image mask occurs on the left edge at copyboard scanning.		
Use case	Upon request from user who does not satisfy with the mask on the left edge	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0: Mask value according to the specifications of each job 1: No mask (0 mm)		
Default value	0		
SPL27354			
For R&D use			
Details	For R&D use	○	○
Default value	Default value is not changed.		

T-8-17

■ INSTALL

COPIER > FUNCTION > INSTALL		M82	M85
STRD-POS	Scan position auto adj in ADF mode		
Details	To adjust the ADF scanning position automatically.		
Use case	At ADF installation/uninstallation		
Adj/set/operate method	1) Set a paper for stream reading position adjustment, and then close the ADF. 2) Select the item, and then press OK key. The operation automatically stops after the adjustment. 3) Write the value displayed by COPIER>ADJUST>ADJ-XY>STRD-POS in the service label.	○	○
Caution	Write the adjusted value in the service label.		
Related service mode	COPIER> ADJUST> ADJ-XY> STRD-POS		

T-8-18

● OPTION

■ BODY

COPIER > OPTION > BODY		M82	M85
TMIC-BK	ON/OFF of TMIC Bk PASCAL gamma LUT trailing edge correction		
Details	To set ON/OFF of the trailing edge correction of Bk color PASCAL gamma LUT used by TMIC. When 1 is set, the density of the high density area is high. Therefore, while text and thin lines are clear, gradation of photos may become unnatural. When 0 is set, the density of the high density area becomes low. Therefore, while the gradation is improved, thin lines may be partly missing or characters may be faded.	○	○
Use case	<ul style="list-style-type: none"> When gradation of photos become unnatural When thin lines are partly missing or characters are faded 		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	1		
Supplement/memo	TMIC: Error diffusion correction of photo/high image quality.		
TMIC-CMY	ON/OFF of TMIC Y/M/C PASCAL gamma LUT trailing edge correction		
Details	To set ON/OFF of the trailing edge correction of Y/M/C color PASCAL gamma LUT used by TMIC. When 1 is set, the density of the high density area is high. Therefore, while text and thin lines are clear, the hue of gradation area of photos may change. When 0 is set, the density of the high density area becomes low. Therefore, while the gradation is improved, thin lines may be partly missing or characters may be faded.	○	○
Use case	<ul style="list-style-type: none"> When gradation of photos become unnatural When thin lines are partly missing or characters are faded 		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	1		
Supplement/memo	TMIC: Error diffusion correction of photo/high image quality.		

COPIER > OPTION > BODY		M82	M85
LOCALE	Setting of location		
Details	To set the location. At installation in areas other than Japan, perform the following procedure to match the setting information with that of the location.		
Use case	<ul style="list-style-type: none"> At installation When changing the location information 		
Adj/set/operate method	1) Enter the setting value under LOCALE, and then press OK key. 2) Set the paper size configuration under SIZE-LC. 3) Execute COPIER> FUNCTION> CLEAR> ALL. 4) Turn OFF/ON the main power switch.	○	○
Caution	Since COPIER> FUNCTION> CLEAR> ALL is executed when changing the location, the setting information of user mode, service mode, etc. is initialized. The setting information of this item is not initialized.		
Display/adj/set range	1 to 8 1: Japan, 2: North America, 3: Korea, 4: China, 5: Taiwan, 6: Europe, 7: Asia, 8: Oceania		
Default value	1		
Related service mode	COPIER> FUNCTION> CLEAR> ALL COPIER> OPTION> BODY> SIZE-LC		
SIZE-LC	Setting of paper size configuration		
Details	To set the paper size configuration. At installation in areas other than Japan, perform the following procedure to match the setting information with that of the location.		
Use case	<ul style="list-style-type: none"> At installation Upon user's request 		
Adj/set/operate method	1) Set the location under LOCALE. 2) Enter the setting value under SIZE-LC, and then press OK key. 3) Execute COPIER> FUNCTION> CLEAR> ALL. 4) Turn OFF/ON the main power switch.	○	○
Caution	Since COPIER> FUNCTION> CLEAR> ALL is executed when changing the location, the setting information of user mode, service mode, etc. is initialized. The setting information of this item is not initialized.		
Display/adj/set range	1 to 4 1: AB configuration, 2: Inch configuration, 3: A configuration, 4: AB/Inch configuration		
Related service mode	COPIER> FUNCTION> CLEAR> ALL COPIER> OPTION> BODY> LOCALE		

COPIER > OPTION > BODY		M82	M85
NS-CMD5	Setting of CRAM-MD5 authentication method at SMTP authentication		
Details	To restrict use of CRAM-MD5 authentication method at the time of SMTP authentication. When 1 is set, CRAM-MD5 authentication method is not used.		
Use case	Upon user's request		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: Used (SMTP server-dependent), 1: Not used	○	○
Default value	0		
Supplement/memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.		
NS-PLN	Setting of plaintext authentication at SMTP authentication		
Details	To restrict use of PLAIN/LOGIN authentication, which is plaintext authentication, at the time of SMTP authentication under the environment where the communication packet is not encrypted. When 1 is set, plaintext authentication is not used.		
Use case	Upon user's request		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: Used (SMTP server-dependent), 1: Not used	○	○
Default value	0		
Supplement/memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.		

COPIER > OPTION > BODY		M82	M85
NS-LGN	Setting of LOGIN authentication at SMTP authentication		
Details	To restrict use of LOGIN authentication at the time of SMTP authentication. When 1 is set, LOGIN authentication is not used.		
Use case	Upon user's request		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: Used (SMTP server-dependent), 1: Not used		○ ○
Default value	0		
Supplement/memo	SMTP authentication: Protocol in which user authentication function is added to SMTP, which is the protocol to be used for e-mail transmission. At the time of e-mail transmission, this protocol executes authentication of the user account and the password between the SMTP server and the user to approve e-mail transmission only when it's authenticated.		
SLPMODE	Setting of shift to sleep mode		
Details	To restrict shift to sleep mode 1/sleep mode 3. When 1 is set, the machine does not shift to sleep mode.		
Use case	When sleep failure occurs		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: Shift is available., 1: Shift is not available.		○ ○
Default value	0		
SDTM-DSP	Setting of automatic shutdown menu display		
Details	When setting COPIER> OPTION> BODY> SDTM-DSP to 1, menu is displayed. When 0 is set, menu is hidden.		
Use case	When setting the automatic shutdown menu display		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 1 0: Menu is hidden., 1: Menu is displayed.		○ ○
Default value	0		
Supplement/memo	Even with the fax model for locations other than Europe, the service mode is displayed. However, the menu will not be displayed on UI even 1 is set.		
RMT-SW	ON/OFF setting of RUI service mode function		
Details	To set ON/OFF of RUI service mode function.		
Use case	When setting ON/OFF of RUI service mode function		
Adj/set/operate method	1) Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		○ ○
Default value	1		

COPIER > OPTION > BODY		M82	M85
PSWD-SW	Setting of service mode password level		
Details	To set the password level required to get into service mode.		
Use case	When getting into service mode		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	0 to 2 0: Password is not required (RUI service mode password only) 1: Password for service engineer is required 2: Passwords for service engineer and system administrator at user's site are required		○ ○
Default value	0		
SM-PSWD	Password setting for service technician		
Details	To set the password required to enter when the level is set to 1 or 2 in PSWD-SW at the time of getting into service mode.		
Use case	When the level is set to 1 or 2 in PSWD-SW at the time of getting into service mode		○ ○
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		
Display/adj/set range	1 to 99999999		
Default value	11111111		

T-8-19

ACC

COPIER > OPTION > ACC		M82	M85
WLANMODE	Setting of IEEE802.11n		
Details	To set whether to enable IEEE802.11n which is the wireless LAN standard.		
Use case	Upon user's request		
Adj/set/operate method	1) Enter the setting value, and then press OK key. 2) Turn OFF/ON the main power switch.		○ ○
Display/adj/set range	0 to 1 0: Disabled, 1: Enabled		
Default value	1 (Not depend on the location)		

T-8-20

SERIAL

COPIER > OPTION > SERIAL		M82	M85
SN-MAIN	Entry of serial number		
Details	To write the serial number of this machine in the Main Controller PCB. When this item is executed, the 8-digit alphanumeric entered in System Settings > Device Information > Location in user mode is written in the Main Controller PCB. When replacing the Main Controller PCB, be sure to write the serial number in the new PBC to prepare for trouble since the serial number of the device is not succeeded.		
Use case	- When replacing the Main Controller PCB		
Adj/set/operate method	1) Write down the current data in System Settings > Device Information > Location in user mode. 2) Replace the Main Controller PCB after turning OFF the main power switch. 3) Enter the serial number (8-digit alphanumeric) in "Location" of step 1. 4) Select SN-MAIN, and then press OK key to write in the Main Controller PCB. After writing, the serial number entered in step 3 is deleted. 5) Turn OFF/ON the main power switch. 6) Output the spec report from COPIER> FUNCTION> MISC-P> SPEC to check the serial number (Body No.). 7) Enter the data backed up in step 1 in "Location".	○	○
Caution	Since the above "Location" is only temporarily used to store data, back up the data before input and enter it again after writing is completed.		
Related service mode	COPIER> FUNCTION> MISC-P> DHALF		
Related user mode	System Settings > Device Information> Location		

T-8-21

COUNTER

TOTAL

COPIER > COUNTER > TOTAL		M82	M85
SERVICE1	Service-purposed total counter 1		
Details	To count up when the paper is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
SERVICE2	Service-purposed total counter 2		
Details	To count up when the paper is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
TTL	Total counter		
Details	To display the total of counters of copy, PDL print, FAX, report print and media print. (Total of COPY, PDL-PRT, FAX-PRT, RPT-PRT and MD-PRT in service mode described below)	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
Related service mode	COPIER> COUNTER> TOTAL> COPY, PDL-PRT, FAX-PRT, RPT-PRT, MD-PRT		
COPY	Total copy counter		
Details	To count up when the copy is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
Related service mode	COPIER> COUNTER> TOTAL> TTL		

COPIER > COUNTER > TOTAL		M82	M85
PDL-PRT	PDL print counter		
Details	To count up when the PDL print is delivered outside the machine/2-sided printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
Related service mode	COPIER> COUNTER> TOTAL> TTL		
FAX-PRT	FAX reception print counter		
Details	To count up when the FAX reception print is delivered outside the machine/2-sided printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.	▲	▲
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
Related service mode	COPIER> COUNTER> TOTAL> TTL		
RPT-PRT	Report print counter		
Details	To count up when the report print is delivered outside the machine/2-sided printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Related service mode	COPIER> COUNTER> TOTAL> TTL		
MD-PRT	Media print counter		
Details	To count up when the media print is delivered outside the machine. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
Related service mode	COPIER> COUNTER> TOTAL> TTL		

COPIER > COUNTER > TOTAL		M82	M85
2-SIDE	2-sided copy/print counter		
Details	To count up the number of 2-sided copies/prints when the copy/printout is delivered outside the machine/2-sided copy/printout is stacked. The counter is advanced regardless of the original size. The counter is not advanced by blank paper or delivery in service mode.	-	○
Display/adj/set range	0 to 99999999		
Unit	Number of times		
Default value	0		
SCAN	Scan counter		
Details	To count up the number of scan operations when the scanning operation is complete. The counter is advanced regardless of the original size. The counter is not advanced by delivery in service mode.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of times		
Default value	0		

T-8-22

PICK-UP

COPIER > COUNTER > PICK-UP			M82	M85
C1		Cassette 1 pickup total counter		
	Details	To count up the number of sheets picked up from the Cassette 1 (standard Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.	○	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of sheets		
	Default value	0		
C2		Cassette 2 pickup total counter		
	Details	To count up the number of sheets picked up from the Cassette 2 (option Pickup Cassette). The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.	-	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of sheets		
	Default value	0		
MF		Multi-purpose Tray pickup total counter		
	Details	To count up the number of sheets picked up from the Multi-purpose Tray Pickup Unit. The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.	○	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of sheets		
	Default value	0		
2-SIDE		2-sided pickup total counter		
	Details	To count up the number of sheets picked up in duplex mode. The counter is advanced regardless of the original size. The counter is advanced by printout in service mode.	-	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of sheets		
	Default value	0		

T-8-23

FEEDER

COPIER > COUNTER > FEEDER			M82	M85
FEED		ADF original pickup total counter		
	Details	To count up the number of originals picked up from the ADF. The counter is advanced regardless of the original size.		
	Use case	When checking the total counter of original pickup by ADF	○	○
	Display/adj/set range	0 to 429496725		
	Unit	Number of sheets		
	Default value	0		

T-8-24

JAM

COPIER > COUNTER > JAM			M82	M85
TOTAL		Printer total jam counter		
	Details	To count up the number of total jam occurrences.		
	Use case	When checking the total jam counter of printer	○	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of times		
	Default value	0		
FEEDER		ADF total jam counter		
	Details	When checking the total jam counter of ADF		
	Display/adj/set range	0 to 99999999	○	○
	Unit	Number of times		
	Default value	0		
2-SIDE		Duplex Unit jam counter		
	Details	To count up the number of jam occurrences in the Duplex Unit.		
	Use case	When checking the jam counter of Duplex Unit	-	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of times		
	Default value	0		
MF		Multi-purpose Pickup Tray jam counter		
	Details	To count up the number of jam occurrences in the Multi-purpose Tray Pickup Unit. The counter is advanced by paper size mismatch or misprint.		
	Use case	When checking the jam counter of Multi-purpose Pickup Tray	○	○
	Display/adj/set range	0 to 99999999		
	Unit	Number of times		
	Default value	0		

COPIER > COUNTER > JAM		M82	M85
C1	Cassette 1 pickup jam counter		
Details	To count up the number of jam occurrences in the Cassette 1 (standard Pickup Cassette). The counter is advanced by paper size mismatch or misprint.	○	○
Display/adj/set range	0 to 99999999		
Unit	Number of times		
Default value	0		
C2	Cassette 2 pickup jam counter		
Details	To count up the number of jam occurrences in the Cassette 2 (option Pickup Cassette). The counter is advanced by paper size mismatch or misprint.	-	○
Display/adj/set range	0 to 99999999		
Unit	Number of times		
Default value	0		

T-8-25

■ DRBL-2

COPIER > COUNTER > DRBL-2		M82	M85
DF-SP-PD	Separation Pad parts counter: ADF		
Details	To count up the number of sheets to be fed regardless of 1-sided/2-sided mode. Accumulated counter value		
Use case	When checking the consumption level of parts/replacing the parts	○	○
Adj/set/operate method	To clear the counter value: Select the item, and then enter 0.		
Caution	Clear the counter value after replacement.		
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		
DF-SP-RL	ADF Pickup Roller parts counter		
Details	To count up the number of sheets to be fed regardless of 1-sided/2-sided mode. Accumulated counter value		
Use case	When checking the consumption level of parts/replacing the parts	○	○
Adj/set/operate method	To clear the counter value: Select the item, and then enter 0.		
Caution	Clear the counter value after replacement.		
Display/adj/set range	0 to 99999999		
Unit	Number of sheets		
Default value	0		

T-8-26

FEEDER

 ADJUST

FEEDER > ADJUST	
DOCST	Fine adjustment of VSYNC timing at ADF reading [front side]
Details	To make a fine adjustment of VSYNC timing when reading the front side of original with ADF. Execute when the output image after ADF installation is displaced. When replacing the Main Controller PCB, enter the value of service label. As the value is incremented by 1, the margin at the leading edge of the image is decreased by 0.1mm. (The image moves in the direction of the leading edge of the sheet.)
Use case	<ul style="list-style-type: none"> When installing ADF When replacing the Main Controller PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.
Display/adj/set range	-30 to 30
Unit	0.1 mm
Default value	0
LA-SPD	Fine adjustment of magnification ratio in vertical scanning direction at ADF stream reading [front side]
Details	To make a fine adjustment of the image magnification ratio in vertical scanning direction when stream reading the front side of original with ADF. As the value is incremented by 1, the image is reduced by 0.01% in vertical scanning direction. (The feeding speed increases, and the image is reduced.)
Use case	<ul style="list-style-type: none"> When installing ADF When replacing the Main Controller PCB
Adj/set/operate method	Enter the value, and then press OK key.
Display/adj/set range	-200 to 200
Unit	0.01%
Default value	0

FEEDER > ADJUST	
DOCST2	Fine adjustment of VSYNC timing at ADF reading [back side]
Details	To make a fine adjustment of VSYNC timing when reading the back side of original with ADF. Execute when the output image after ADF installation is displaced. When replacing the Main Controller PCB, enter the value of service label. As the value is incremented by 1, the margin at the leading edge of the image is decreased by 0.1mm. (The image moves in the direction of the leading edge of the sheet.)
Use case	<ul style="list-style-type: none"> When installing ADF When replacing the Main Controller PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.
Display/adj/set range	-30 to 30
Unit	0.1 mm
Default value	0
DOCST-R	Fine adjustment of trailing edge at ADF reading
Details	To make a fine adjustment of trailing edge when reading original with ADF. Execute when the output image after ADF installation is displaced. When replacing the Main Controller PCB, enter the value of service label. As the value is incremented by 1, the margin at the trailing edge of the image is decreased by 0.1mm. (The image moves in the direction of the trailing edge of the sheet.)
Use case	<ul style="list-style-type: none"> When installing ADF When replacing the Main Controller PCB
Adj/set/operate method	Enter the setting value (switch negative/positive by +/- key) and press OK key.
Display/adj/set range	-30 to 30
Unit	0.1 mm
Default value	0
LA-SPD2	Fine adjustment of magnification ratio in vertical scanning direction at ADF stream reading [back side]
Details	To make a fine adjustment of the image magnification ratio in vertical scanning direction when stream reading the back side of original with ADF. As the value is incremented by 1, the image is reduced by 0.01% in vertical scanning direction. (The feeding speed increases, and the image is reduced.)
Use case	When replacing the Main Controller PCB
Adj/set/operate method	Enter the value, and then press OK key.
Display/adj/set range	-200 to 200
Unit	0.01%
Default value	0

T-8-27



FEEDER > FUNCTION	
MTR-ON	Operation check of ADF Motor
Details	To start operation check of ADF Motor (M702).
Use case	At operation check
Adj/set/operate method	1) Select the item, and then press OK key. The unit operates for approximately 5 seconds and automatically stops. 2) Press OK key. The operation check is completed.
Caution	Be sure to press the OK key again after execution. The operation automatically stops after approximately 5 seconds, but is not completed unless the OK key is pressed (STOP is not displayed).
Required time	Approx. 5 seconds
FEED-ON	Operation check of ADF individual feed
Details	To start operation check of the ADF individual feed in the mode specified by FEED-CHK.
Use case	At operation check
Adj/set/operate method	Select the item, and then press OK key.
Related service mode	FEEDER> FUNCTION> FEED-CHK
FEED-CHK	Setting of ADF individual feed mode
Details	To set the ADF feed mode. Feed operation is activated in the specified feed mode by executing FEED-ON.
Use case	At operation check
Adj/set/operate method	Enter the value, and then press OK key.
Display/adj/set range	0 to 1 0: 1-sided, 1: 2-sided
Default value	0
Related service mode	FEEDER> FUNCTION> FEED-ON

T-8-28

FAX

 List of SSSW

FAX > SSSW			M82	M85
SSSW No.	Bit No.	Function		
SW 01	(Switch relating to error and copy)			
	Bit 0	Output of error code for service technician	○	○
	Bit 1	Error memory dump	○	○
	Bit 2	Entry of password at transfer of confidential received image	-	-
	Bit 3	Prohibition of copy	-	-
	Bit 4	-	-	-
	Bit 5	-	-	-
	Bit 6	Prohibition of date/time settings by user	-	-
SW 02	(Switch relating to settings for network connection condition)			
	Bit 0	Prohibition of startup when memory clear list cannot be output	-	-
	Bit 1	-	-	-
	Bit 2	-	-	-
	Bit 3	-	-	-
	Bit 4	V34 CCR TN OFF	-	-
	Bit 5	-	-	-
	Bit 6	-	-	-
SW 03	(Switch relating to echo prevention)			
	Bit 0	TCF EQM check	○	○
	Bit 1	-	-	-
	Bit 2	-	-	-
	Bit 3	-	-	-
	Bit 4	-	-	-
	Bit 5	-	-	-
	Bit 6	-	-	-
SW 04	(Switch relating to prevention of communication problems)			
	Bit 0	Monitoring of LC	-	-
	Bit 1	Frequency check of CI signal	○	○
	Bit 2	V.21 end flag	-	-
	Bit 3	Prohibit T.30 node F kept by both parties	○	○
	Bit 4	T.30 node F echo timer	○	○
	Bit 5	Frequency check of CI signal at PBX settings	○	○
	Bit 6	No CNG transmission at the time of manual transmission	○	○
Bit 7	No CED transmission at the time of manual transmission	○	○	

FAX > SSSW			M82	M85
SSSW No.	Bit No.	Function		
SW 05	(Switch relating to standard functions and DIS signal settings)			
	Bit 0	-	-	-
	Bit 1	mm/inch conversion (text mode)	-	-
	Bit 2	mm/inch conversion (text/photo mode / photo mode)	○	○
	Bit 3	Prohibition of bit transmission after DIS bit 33	○	○
	Bit 4	Declaration of cut paper	○	○
	Bit 5	Declaration of LTR/LGL by DIS	-	-
	Bit 6	Prohibition of ECM transmission	-	-
SW 06	(Switch relating to settings for reading condition)			
	Bit 0	Shifting from DES to pre-scan position	-	-
	Bit 1	Pre-scan at times other than power-on	-	-
	Bit 2	Limitation on original length	-	-
	Bit 3	Stamp option	-	-
	Bit 4	Scan width 0: A4, 1: LTR	○	○
	Bit 5	Recording by dividing data into multiple files at the time of memory copy	-	-
	Bit 6	Variability of resolution at the time of copy	-	-
Bit 7	Halftone + Super fine	-	-	
SW 07 - SW 11	Not in use			
SW 12	(Switch relating to settings for page timer)			
	Bit 0	Timeout period for 1 page (transmission)	○	○
	Bit 1	Timeout period for 1 page (transmission)	○	○
	Bit 2	Timeout period for 1 page (Halftone transmission)	○	○
	Bit 3	Timeout period for 1 page (Halftone transmission)	○	○
	Bit 4	Timeout period for 1 page (Reception)	○	○
	Bit 5	Timeout period for 1 page (Reception)	○	○
	Bit 6	-	-	-
Bit 7	Timeout period for 1 page	○	○	
SW 13	(Switch relating to settings for relay/forwarding)			
	Bit 0	Prohibition of relay broadcasting/forwarding at the time of relay/forwarding reception	-	-
	Bit 1	Response in case of image failure at the time of relay/forwarding reception	-	-
	Bit 2	Execution of mm/inch conversion when sending the received image	○	○
	Bit 3	-	-	-
	Bit 4	-	-	-
	Bit 5	-	-	-
	Bit 6	-	-	-
Bit 7	-	-	-	

FAX > SSSW			M82	M85
SSSW No.	Bit No.	Function		
SW 14				
	Bit 0	-	-	-
	Bit 1	-	-	-
	Bit 2	Setting whether to execute inch to mm conversion in horizontal and vertical scanning directions or in vertical scanning direction only	○	○
	Bit 3	Execution of inch to mm conversion only when performing OCR transmission	-	-
	Bit 4	Declaration of inch-configuration resolution	○	○
	Bit 5	-	-	-
	Bit 6	-	-	-
	Bit 7	-	-	-
SW 15				
	Bit 0	-	-	-
	Bit 1	-	-	-
	Bit 2	Acceptance of reception of a line with caller ID: the machine line	-	-
	Bit 3	-	-	-
	Bit 4	-	-	-
	Bit 5	-	-	-
	Bit 6	Detection of sequential signal at FAX/TEL switching	-	-
Bit 7	-	-	-	
SW 16 - SW 17	Not in use			
SW 18				
	Bit 0	Detection of carrier disconnection between DCS and TCF	○	○
	Bit 1	Time to wait for carrier disconnection between DCS and TCF	○	○
	Bit 2	Prohibition of communication control for IP network	○	○
	Bit 3	-	-	-
	Bit 4	-	-	-
	Bit 5	-	-	-
	Bit 6	-	-	-
	Bit 7	-	-	-
SW 19 - SW 21	Not in use			
SW 22				
	Bit 0	Prohibition of NSX transmission	-	-
	Bit 1	Prohibition of recording by splitting data into A4	-	-
	Bit 2	Prohibition of sequential broadcast	-	-
	Bit 3	Prohibition of manual polling operation	○	○
	Bit 4	Prohibition of manual transmission at archive transmission	-	-
	Bit 5	-	-	-
	Bit 6	Archive transmission function available	-	-
Bit 7	-	-	-	
SW 23 - SW 24	Not in use			

FAX > SSSW			M82	M85	
SSSW No.	Bit No.	Function			
SW 25	(Setting for report display function)				
	Bit 0	Prioritize the received abbreviated name to the dialed abbreviated name	○	○	
	Bit 1	-	-	-	
	Bit 2	-	-	-	
	Bit 3	-	-	-	
	Bit 4	-	-	-	
	Bit 5	-	-	-	
	Bit 6	-	-	-	
	Bit 7	-	-	-	
SW 26 - SW 27	Not in use				
SW 28					
	Bit 0	Prohibit calling party for V8 procedure	○	○	
	Bit 1	Prohibit called party from V8 procedure	○	○	
	Bit 2	Prohibit calling party from V8 late-start	○	○	
	Bit 3	Prohibit called party from V8 late-start	○	○	
	Bit 4	Prohibit V.34 called party from starting fallback	○	○	
	Bit 5	Prohibit V.34 calling party from starting fallback	○	○	
	Bit 6	-	-	-	
Bit 7	-	-	-		
SW 29 - SW 35	Not in use				

T-8-29

List of MENU

Menu switch registration mode			M82	M85
No.	Parameter	Selection		
01 - 04	Not in use		-	-
05	-	-	-	-
06	Telephone line monitor	0 - 3 0: DIAL, 1: SERVICEMAN1, 2: SERVICEMAN2, 3: OFF	○	○
07	Transmission level (ATT)	0 - 15	○	○
08	Upper limit of V.34 modulation speed	0 - 5 0: 3429 BAUD, 1: 3200 BAUD, 2: 3000 BAUD, 3: 2800 BAUD, 4: 2743 BAUD, 5: 2400 BAUD	○	○
09	Upper limit of V.34 data speed	0-13 0: 33.6 kbps, 1: 31.2 kbps, 2: 28.8 kbps, 3: 26.4 kbps, 4: 24.0 kbps, 5: 21.6 kbps, 6: 19.2 kbps, 7: 16.8 kbps, 8: 14.4 kbps, 9: 12.0 kbps, 10: 9.6 kbps, 11: 7.2 kbps, 12: 4.8 kbps, 13: 2.4 kbps	○	○
10	OFF Hook signal frequency	0-2 0: 50 Hz, 1: 25 Hz, 2: 17 Hz	○	○
11 - 20	Not in use		-	-

T-8-30

List of NUM

Numeric parameter setting mode			M82	M85
No.	Parameter	Allowable setting range		
01	Not in use		-	-
02	RTN transmission criteria X	1 to 99 %	○	○
03	RTN transmission criteria n	2 to 99 times	○	○
04	RTN transmission criteria m	1 to 99 lines	○	○
05	NCC pause (before ID code)	1 to 60 sec	○	○
06	NCC pause (after ID code)	1 to 60 sec	○	○
07	Spare		-	-
08	STORED_DIAL_MODE wait timer	0 to 65 sec	○	○
09	Not in use		-	-
10	T.30 T0 timer	55 sec principally	○	○
11	T.30 T1 timer (for incoming transmission)	0 to 9999 (France: 3500, Others: 3000)	○	○
12	Maximum incoming lines	0 to 65535 (line) 0: without limitation	○	○
13	T.30 EOL timer	500 to 3000 (set to 55 sec by default)	○	○
14	Not in use		-	-
15	Threshold between hokking nad on-hook	0 to 999	○	○
16	Lead time to the first response when switching between FAX and TEL	0 to 9	○	○
17	Duration to activate pseudo-RBT cadence	0 to 999	○	○
18	Duration to deactivate pseudo-RBT cadence (short)	0 to 999	○	○
19	Duration to deactivate pseudo-RBT cadence (long)	0 to 999	○	○
20	Duration to activate pseudo-ring cadence	0 to 999	○	○
21	Duration to deactivate OFF Hook cadence (short)	0 to 999	○	○
22	Duration to deactivate OFF Hook cadence (long)	0 to 7	○	○
23	-	-	-	-
24	-	-	-	-
25	CNG monitor duration while the answering device is activated	0 to 999	○	○
26	-	-	-	-
27	-	-	-	-
28	Not in use		-	-
29	Off-hook PCB duty settings (For NAC, setting can be made with SPL71100 in special management mode.)	20 (*10ms)	○	○
30 - 48	Not in use		-	-
49	NSX MODEL ID	0 to 4095	○	○
50	Not in use		-	-
51	Threshold to detect hook	10 to 9999	○	○
52	Not in use		-	-

Numeric parameter setting mode			M82	M85
No.	Parameter	Allowable setting range		
53	Set DTMF calling counts when receiving FAX remotely	10 to 9999 (default 25)	○	○
54	Set Busy Tone outgoing duration when using handset		○	○
55 - 80	Not in use		-	-

T-8-31

Setting of NCU Parameters

TONE/PULSE

Operation Method

1) Setting of Tone Parameters

While "#NCU" is displayed, press "OK" key -> Select "#TONE" and press "OK" key so that it becomes tone parameter setting mode.

2) Setting of Pulse Parameters

While "#NCU" is displayed, press "OK" key -> Select "#PULSE" and press "OK" key so that it becomes pulse parameter setting mode.

Item		Function	Setting range	M82	M85
TONE	01;	Tone signal sending time (PSTN)	10 to 9999 (msec)	○	○
	02;	Minimum pause time (PSTN)	10 to 9999 (msec)	○	○
PULSE	PULSE FORM	Pulse digit format	0 -> DP (N)	○	○
			1 -> DP (N+1)		
			2 -> DP (10-N)		
	PULSE NUM	01;	-	-	-
02;		-	-	-	-
03;		Pulse dial make ratio	10 to 90 (%)	○	○
04;		Minimum pause time	10 to 9999 (msec)	○	○

T-8-32

■ DIAL TONE

● Bit Switch

Bit No.	Function	1	0	M82	M85
Bit 0	Frequency detection method	Modem	Tonal counter	-	-
Bit 1	Cadence pattern check	Not detected	Detected	○	○
Bit 2	Signal frequency	Changed	Not changed	○	○
Bit 3	-	-	-	-	-
Bit 4	Judgment of intermittent signal	start from valid ON signal	start from either valid ON signal or OFF signal	○	○
Bit 5	-	-	-	-	-
Bit 6	Signal form	Continuous	Intermittent	○	○
Bit 7	Signal detection	Detected	Not detected	○	○

T-8-33

● Numeric value parameter

Parameter No.	Function	Setting range	M82	M85
01;	T0 timer	0 to 9999 (x 10 msec)	○	○
02;	T1 timer	0 to 9999 (x 10 msec)	○	○
03;	T2 timer	0 to 9999 (x 10 msec)	○	○
04;	T3 timer	0 to 9999 (x 10 msec)	○	○
05;	T4 timer	0 to 9999 (x 10 msec)	○	○
06;	Signal detection table	0 to 16	○	○
07;	Signal detection level	0 to 7	○	○
08;	Number of signal frequency	0 to 9999	○	○

T-8-34

■ 2nd DIAL TONE

Not in use

■ BUSY TONE 0

● Bit Switch

Bit No.	Function	1	0	M82	M85
Bit 0	-	-	-	-	-
Bit 1	-	-	-	-	-
Bit 2	Signal frequency	Changed	Not changed	-	-
Bit 3	-	-	-	-	-
Bit 4	Judgment of intermittent signal	start from valid ON signal	start from either valid ON signal or OFF signal	-	-
Bit 5	-	-	-	-	-
Bit 6	Signal form	Continuous	Intermittent	-	-
Bit 7	Signal detection	Detected	Not detected	○	○

T-8-35

● Numeric value parameter

Not in use

BUSY TONE 1

Bit Switch

Bit No.	Function	1	0	M82	M85
Bit 0	-	-	-	-	-
Bit 1	-	-	-	-	-
Bit 2	Signal frequency	Changed	Not changed	-	-
Bit 3	RBT signal detection	Yes	No	-	-
Bit 4	Judgment of intermittent signal	Start from valid ON signal	Start from either valid ON signal or OFF signal	-	-
Bit 5	RBT signal check cycle	1 cycle	1/2 cycle	-	-
Bit 6	Signal form	Continuous	Intermittent	-	-
Bit 7	Signal detection	Detected	Not detected	○	○

T-8-36

Numeric value parameter

Parameter No.	Function	Setting range	M82	M85
01;	-	-	-	-
02;	T1 timer	0 to 9999 (x 10 msec)	○	○
03;	T2 timer	0 to 9999 (x 10 msec)	○	○
04;	T3 timer	0 to 9999 (x 10 msec)	○	○
05;	T4 timer	0 to 9999 (x 10 msec)	○	○
06;	Signal detection table	0 to 16	○	○
07;	Signal detection level	0 to 7	○	○
08;	Number of signal frequency	0 to 9999	○	○

T-8-37

REORDER TONE

Bit Switch

Bit No.	Function	1	0	M82	M85
Bit 0	-	-	-	-	-
Bit 1	Signal detection method	FED	FR3	-	-
Bit 2	Signal frequency	Changed	Not changed	-	-
Bit 3	-	-	-	-	-
Bit 4	Judgment of intermittent signal	start from valid ON signal	start from either valid ON signal or OFF signal	-	-
Bit 5	-	-	-	-	-
Bit 6	Signal form	Continuous	Intermittent	-	-
Bit 7	Signal detection	Detected	Not detected	○	○

T-8-38

Numeric value parameter

Parameter No.	Function	Setting range	M82	M85
01;	-	-	-	-
02;	T1 timer	0 to 9999 (x 10 msec)	○	○
03;	T2 timer	0 to 9999 (x 10 msec)	○	○
04;	T3 timer	0 to 9999 (x 10 msec)	○	○
05;	T4 timer	0 to 9999 (x 10 msec)	○	○
06;	Signal detection table	0 to 16	○	○
07;	Signal detection level	0 to 7	○	○
08;	Number of signal frequency	0 to 9999	○	○

T-8-39

MULTI

Not in use

AUTO RX

Numeric value parameter

Parameter No.	Function	Setting range	M82	M85
01;	CI ON time	0 to 9999 (x 10 msec)	○	○
02;	CI LONG ON time	0 to 9999 (x 10 msec)	○	○
03;	CI OFF time	0 to 9999 (x 10 msec)	○	○
04;	CI LONG OFF time	0 to 9999 (x 10 msec)	○	○
05;	CI MAX OFF time	0 to 9999 (x 10 msec)	○	○
06;	CI WAIT time	0 to 9999 (x 10 msec)	○	○
07;	CI frequency	0 to 9999 (cycle)	○	○
08;	CI frequency lower limit	0 to 9999 (Hz)	○	○
09;	CI frequency upper limit	0 to 9999 (Hz)	○	○

T-8-40

CNG DETECT

Numeric value parameter

Parameter No.	Description	Setting range	M82	M85	
01;	At F/T switching	CNG mIN ON time	0 to 9999 (x 10 msec)	○	○
02;		CNG mAX ON time	0 to 9999 (x 10 msec)	○	○
03;		Tolerable time of instantaneous interruption	0 to 9999 (x 10 msec)	-	-
04;		CNG OFF time	0 to 9999 (x 10 msec)	-	-
05;		Number of detection	0 to 9999 (times)	-	-
06;		Hit ratio	0 to 9999 (%)	-	-
07;	At direct connecting to answering phone	CNG MIN ON time	0 to 9999 (x 10 msec)	○	○
08;		CNG MAX ON time	0 to 9999 (x 10 msec)	○	○
09;		Tolerable time of instantaneous interruption	0 to 9999 (x 10 msec)	○	○
10;		-	-	-	-
11;		Number of detection	0 to 9999 (times)	○	○
12;		Hit ratio	0 to 9999 (%)	○	○

T-8-41

RKEY

Numeric value parameter

Parameter No.	Function	Setting range	M82	M85
01;	Connection time of flash	0 to 9999 (x 10 msec)	○	○
02;	Connection time of grounding wire	0 to 9999 (x 10 msec)	○	○
03;	-	-	-	-

T-8-42

PBX DIAL TONE 1

Not in use

PBX BUSY TONE

Not in use

FTSW OGM

Not in use

DAM

Not in use

TEST MODE

PRINT

TESTMODE > PRINT		M82	M85
PG-TYPE	Setting of PG number		
Details	To set the PG number of the test print.		
Use case	At trouble analysis		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 6 0: Full correction chart 1 1: Full correction chart 2 2: Color chart 3: Color displacement correction chart 4: Rainbow chart (vertical scanning direction) 5: Rainbow chart (horizontal scanning direction) 6: Grid Bk	○	○
Default value	0		
COUNT	Setting of PG output quantity		
Details	To set the number of sheets for PG output.		
Use case	At trouble analysis		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	1 to 99		
Unit	1 sheet		
Default value	1		
PHASE	Setting of PG 2-sided mode		
Details	To set 1-sided/2-sided print for PG output. Even if 2-sided print is set for a machine that only supports 1-sided print, the setting is disabled.		
Use case	At trouble analysis		○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 1 0: 1-sided, 1: 2-sided		
Default value	0		
MODE	Setting of test print image formation method		
Details	To set the image formation method for the test print. If PG-TYPE is 0/1, this setting is disabled because a specific image formation method is applied.		
Use case	At trouble analysis		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 3 0: T-MIC (T-MIC), 1: High screen ruling (SCA), 2: Low screen ruling (SCB), 3: TBIC		
Default value	0		

TESTMODE > PRINT		M82	M85
THRU	Setting of image correction table at test print		
Details	It is possible to check the density characteristics due to the density correction process when normal gamma LUT is used, and the density characteristics of the engine when the linear gamma LUT is used.		
Use case	At trouble analysis	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 1 0: Normal gamma LUT, 1: Through (linear) gamma LUT		
Default value	0		
Supplement/memo	Gamma LUT: Density gradation characteristic table		
NRKE	ON/OFF of laser scanning transfer process of test print		
Details	To perform line transfer process for skew correction of test print engine's laser scanning.		
Use case	At trouble analysis		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	Transfer process: A process to correct skew of laser scanning in vertical scanning direction		
BLND	ON/OFF of interpolation process at test print		
Details	To set ON/OFF of interpolation process at test print (linked with NSC). When 1 is set, interpolation process is performed (no phase shift).		
Use case	At trouble analysis		
Adj/set/operate method	Enter the setting value, and then press OK key.	○	○
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	Interpolation process: A process to predict, for pixels holding no color information, color based on the surrounding pixels, and then set up the color information.		
FEED	Setting of paper source at test print		
Details	To set the paper sources at the time of test print output. If this mode is set when there is no Cassette 2 (option Pickup Cassette), output is from Cassette 1 (standard Pickup Cassette). If color paper is loaded in the specified paper source, there is no output because the setting is disabled.		
Use case	When outputting a test print	○	○
Adj/set/operate method	Enter the setting value, and then press OK key.		
Display/adj/set range	0 to 2 0: Multi-purpose Tray, 1: Cassette 1, 2: Cassette 2		
Default value	1		

TESTMODE > PRINT		M82	M85
START	Output of test print		
Details	To output a test print with the PG pattern set in PG-TYPE, MODE, etc.	○	○
Use case	At trouble analysis		
Adj/set/operate method	Press OK key.		

T-8-43



MODEM

TESTMODE > FAX > MODEM		M82	M85
RELAY-1	NCU relay test 1		
Details	To test ON/OFF of relay and port switch of NCU. This mode is disabled for an NCU with no relay and port switch.		
Use case	When analyzing the cause of a problem		
Adj/set/operate method	Enter the setting value, and then press OK key.	▲	▲
Caution	Be sure to set the value back to 0 after the test.		
Display/adj/set range	0 to 6 0: All OFF, 1: CML ON/OFF, 2: P ON/OFF, 3: S ON/OFF, 4: H ON/OFF, 5: HD ON/OFF, 6: R ON/OFF		
Default value	0		
Related service mode	TESTMODE> FAX> MODEM> RELAY-2		
RELAY-2	NCU relay test 2		
Details	To test ON/OFF of relay and port switch of NCU. This mode is disabled for an NCU with no relay and port switch.		
Use case	When analyzing the cause of a problem		
Adj/set/operate method	Enter the setting value, and then press OK key.	▲	▲
Caution	Be sure to set the value back to 0 after the test.		
Display/adj/set range	0 to 7 0: All OFF, 1: CIST2 ON/OFF, 2: C1 ON/OFF, 3: NORG ON/OFF, 4: DCSEL ON/OFF, 5: DCLIM ON/OFF, 6: IPSEL1 ON/OFF, 7: IPSEL2 ON/OFF		
Default value	0		
Related service mode	TESTMODE> FAX> MODEM> RELAY-1		

TESTMODE > FAX > MODEM		M82	M85
FREQ	Frequency test		
Details	To test whether the specified frequency is oscillated. By closing or opening the DC circuit in accordance with the setting value, the specified frequency is oscillated by the tone transmission function of the modem. Check this with the speaker.		
Use case	When analyzing the cause of a problem	▲	▲
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to set the value back to 0 after the test.		
Display/adj/set range	0 to 7 0: OFF, 1: 462 Hz, 2: 1100 Hz, 3: 1300 Hz, 4: 1500 Hz, 5: 1650 Hz, 6: 1850 Hz, 7: 2100 Hz		
Default value	0		
G3TX	G3 signal transmission test		
Details	To test whether the specified G3 signal is transmitted. By closing or opening the DC circuit in accordance with the setting value, the specific G3 signal pattern is transmitted at the specified transmission speed by the G3 signal transmission function of the modem. Check this with the speaker.		
Adj/set/operate method	Enter the setting value, and then press OK key.	▲	▲
Caution	Be sure to set the value back to 0 after the test.		
Display/adj/set range	0 to 9 0: OFF, 1: 300 bps, 2: 2400 bps, 3: 4800 bps, 4: 7200 bps, 5: 9600 bps, 6: TC7200 bps, 7: TC9600 bps, 8: 12000 bps, 9: 14400 bps		
Default value	0		
DTMFTX	DTMF transmission test		
Details	To test whether the specified DTMF signal is transmitted. By closing or opening the DC circuit in accordance with the setting value, the specified DTMF signal is transmitted by the DTMF transmission function of the modem. Check this with the speaker.		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to set the value back to 0 after the test.	▲	▲
Display/adj/set range	0 to 12 0: OFF, 1: 1, 2: 2, 3: 3, 4: 4, 5: 5, 6: 6, 7: 7, 8: 8, 9: 9, 10: 0, 11: *, 12: #		
Default value	0		
Supplement/memo	DTMF (Dual Tone Multi Frequency): Signal method combining two specific frequencies like a push-tone phone.		

TESTMODE > FAX > MODEM		M82	M85
V34G3TX	V.34 G3 signal transmission test		
Details	To test whether the specified V.34 G3 signal is transmitted. By closing or opening the DC circuit in accordance with the setting value, the specific G3 signal pattern is transmitted at the specified transmission speed and modulation speed by the G3 signal transmission function (V.34) of the modem. Check this with the speaker. A setting value other than 0 is indicated as a 3-digit integer (1st digit: modulation speed, last 2 digits: transmission speed). A value other than the specified numerical value is invalid.		
Adj/set/operate method	Enter the setting value, and then press OK key.	▲	▲
Caution	Be sure to set the value back to 0 after the test.		
Display/adj/set range	0 to 614 0: OFF • First digit (Modulation speed/baud rate) 1: 2400 baud, 2: 2743 baud, 3: 2800 baud, 4: 3000 baud, 5: 3200 baud, 6: 3429 baud • Last 2 digits (Transmission speed) 01: 2400 bps, 02: 4800 bps, 03: 7200 bps, 04: 9600 bps, 05: 12000 bps, 06: 14400 bps, 07: 16800 bps, 08: 19200 bps, 09: 21600 bps, 10: 24000 bps, 11: 26400 bps, 12: 28800 bps, 13: 31200 bps, 14: 33600 bps		
Default value	0		

T-8-44

FACULTY

TESTMODE > PRINT		M82	M85
G34800TX	G3 4800 bps signal transmission test		
Details	To test whether the G3 signal is transmitted at 4800 bps. By closing or opening the DC circuit, the specific G3 signal pattern is transmitted at 4800 bps by the G3 signal transmission function. Check this with the speaker.		
Adj/set/operate method	Enter the setting value, and then press OK key.	▲	▲
Caution	Be sure to set the value back to 0 after the test.		
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		

TESTMODE > PRINT		M82	M85
DETECT1	Ring detection		
Details	To check the ON/OFF state of CI, FC, and hook from the line. The detection results are displayed on the console (UART).		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to set the value back to 0 after the test.	▲	▲
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	CI (Calling Identification): Ring signal UART (Universal Asynchronous Receiver Transmitter): Console		
DETECT2	Calling tone detection test 1		
Details	To check calling tone signal and FED. Set the CML relay to ON and detect the calling tone. The detection results are displayed on the console (UART).		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to set the value back to 0 after the test.	▲	▲
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	CML (Connect Modem to Line) relay: Relay installed at the NCU (Network Control Unit) Board to switch between the telephone and fax.		
DETECT3	Calling tone detection test 2		
Details	To check calling tone signal and FED. Set the CML relay to OFF and detect the calling tone. The detection results are displayed on the console (UART).		
Adj/set/operate method	Enter the setting value, and then press OK key.		
Caution	Be sure to set the value back to 0 after the test.	▲	▲
Display/adj/set range	0 to 1 0: OFF, 1: ON		
Default value	0		
Supplement/memo	CML (Connect Modem to Line) relay: Relay installed at the NCU (Network Control Unit) Board to switch between the telephone and fax.		

T-8-45

Appendix

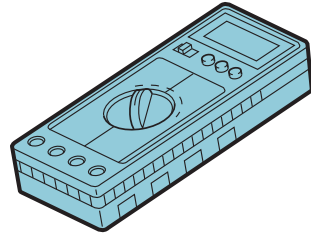
- Special Tools
- Solvents and Oils
- General Circuit Diagram
- Backup Data

Service Tools

Special Tools

In addition to the standard tools set, the following special tools are required when servicing the machine:

Name of Tool	Parts.No	Use
Digital Multimeter	FY9-2002	Used as a probe extension when making electrical checks.



F-9-1

T-9-1

Solvents and Oils

The table below lists the standard tools required in service works for this product.

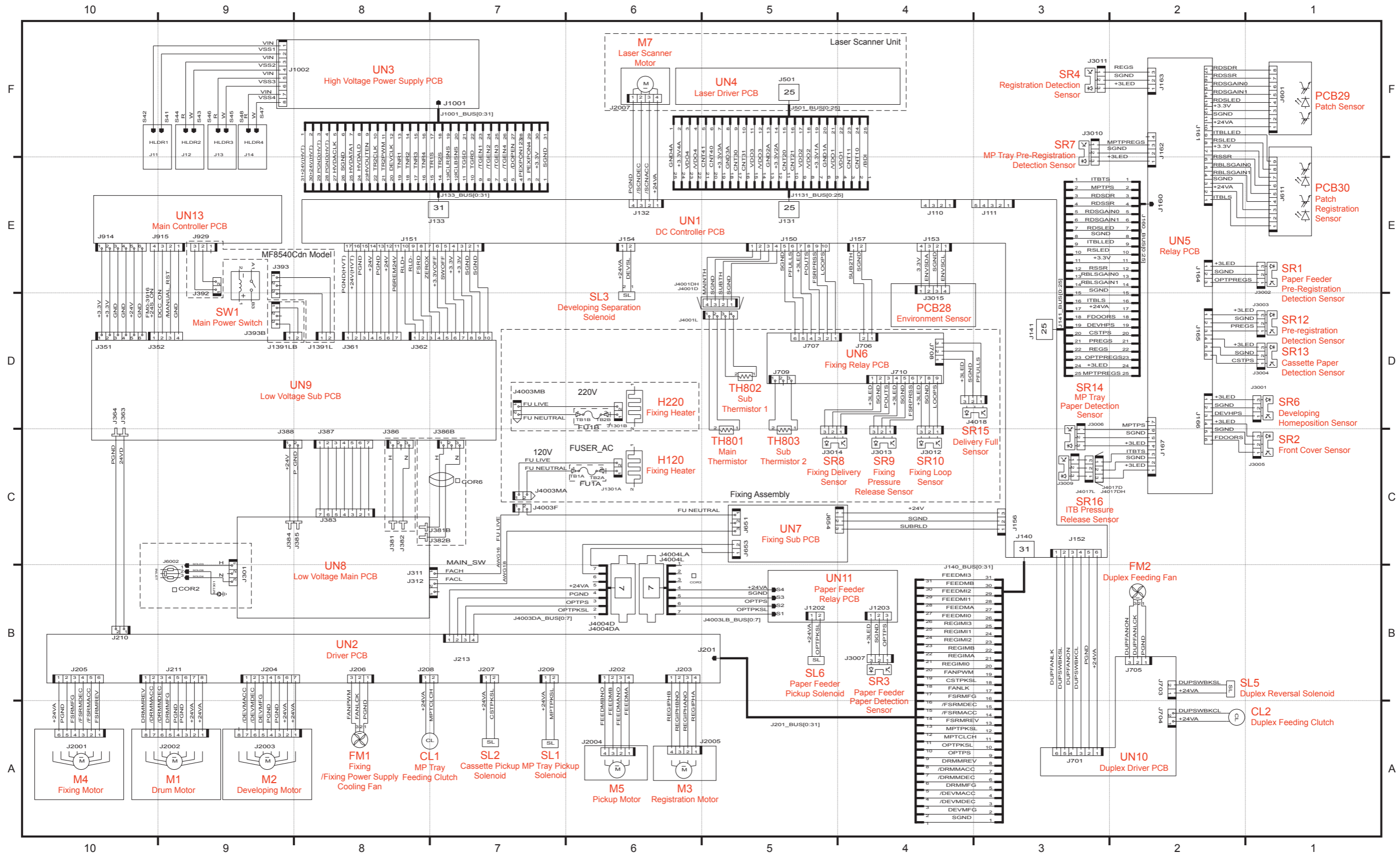
No.	Name of Tool	Use	Remarks
1	Alcohol	Cleaning: Plastic Rubber Metal part Oil stain Toner stain	<ul style="list-style-type: none"> Keep away from flame Purchase locally
2	Lubricant	Apply to gear	<ul style="list-style-type: none"> HY9-0007 (MOLYCOTE EM-50L)
3	Lubricant	Apply to ADF scanning area	<ul style="list-style-type: none"> FY9-6020(Oil glass cleaner)

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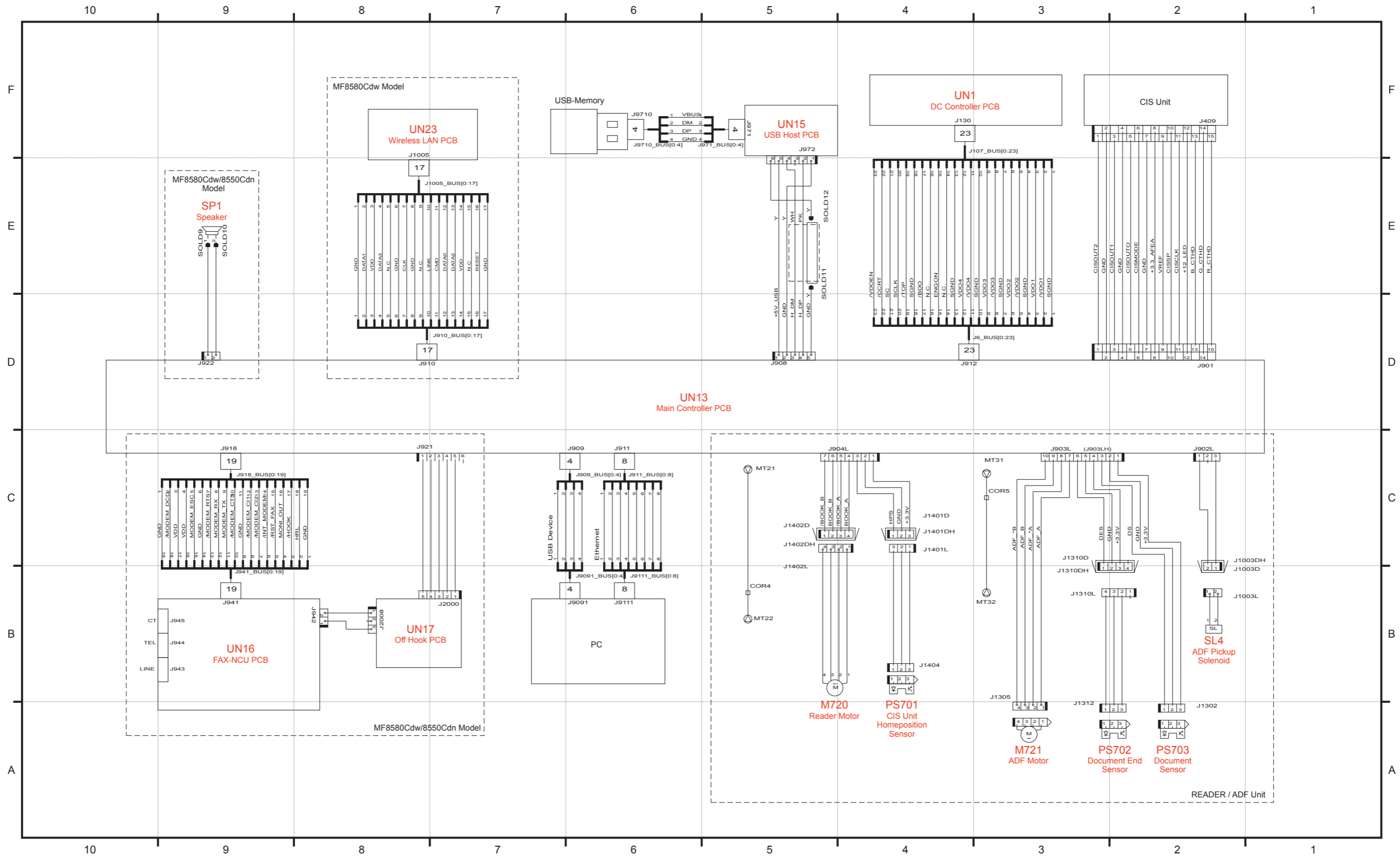
General Circuit Diagram

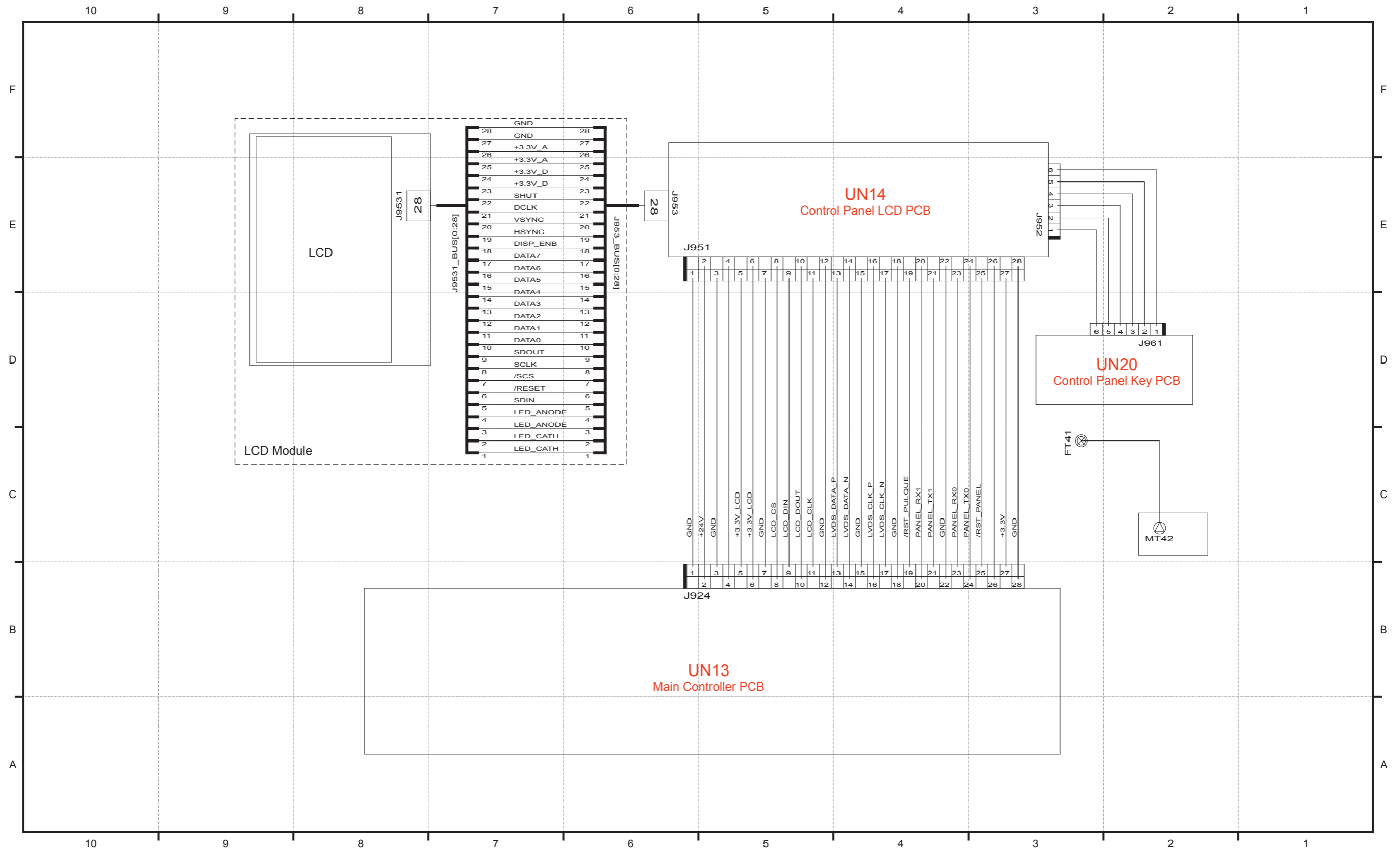
General Circuit Diagram (MF8500)

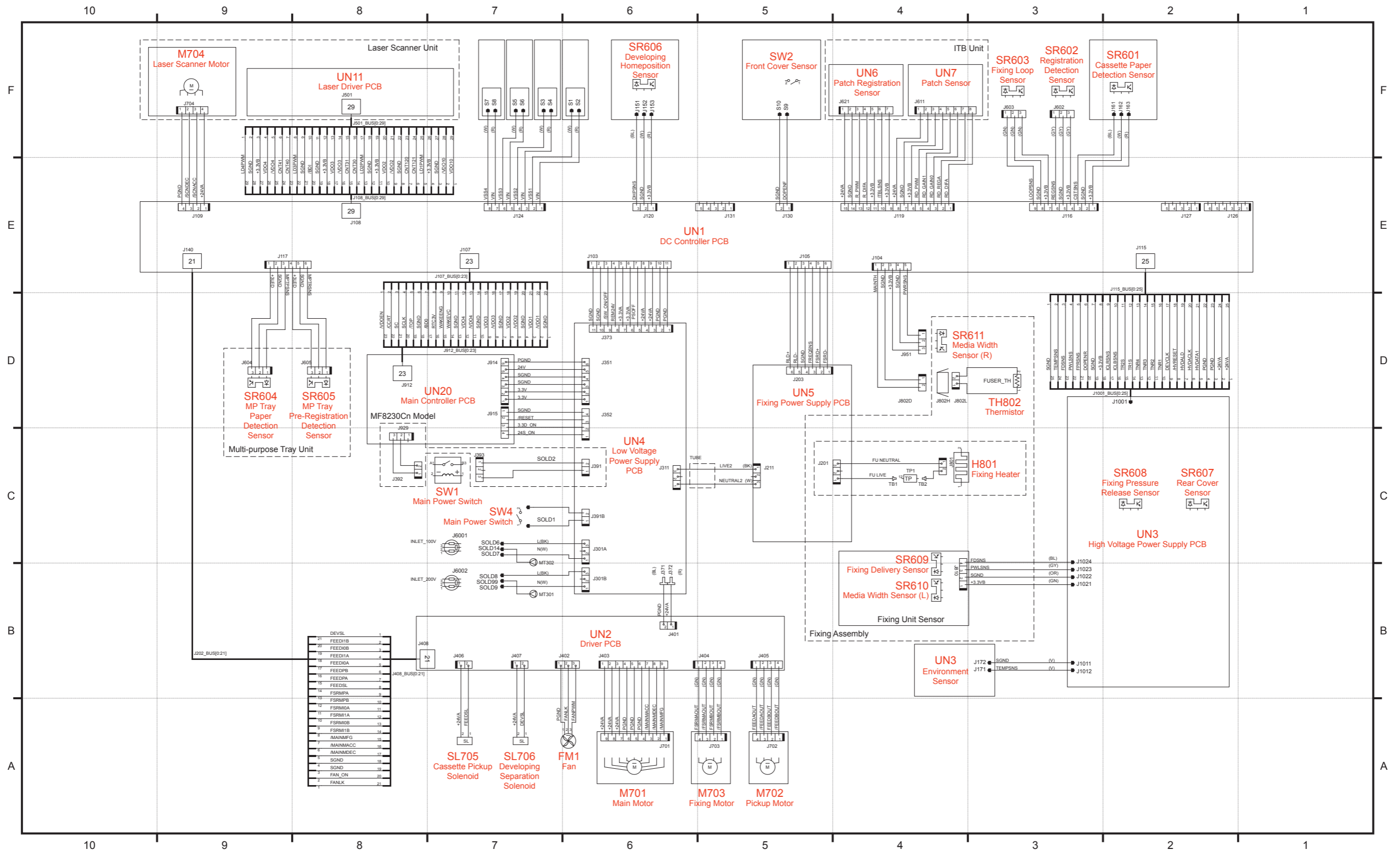
MF8500 (1/3)



P.1

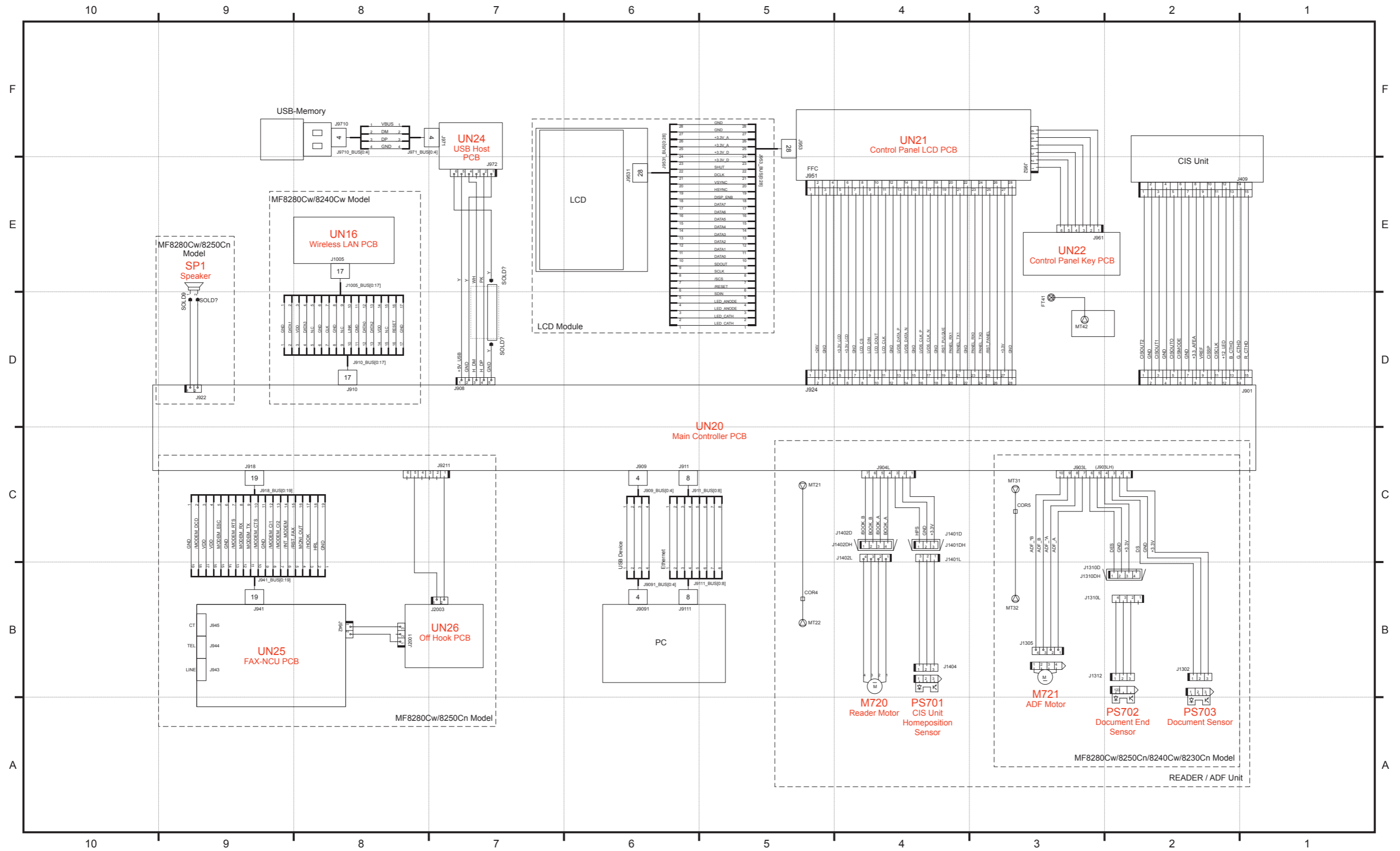






Appendix > General Circuit Diagram > General Circuit Diagram (MF8200) > MF8200 (1/2)

Appendix > General Circuit Diagram > General Circuit Diagram (MF8200) > MF8200 (1/2)



Backup Data

Data	Location	Replace		Delete																Backup by User			Backup by Service		
				User function > Initialize Menu												Service function									
		Initialize Menu												Other				Yes/No	Method	Location to be stored	Yes/No	Method	Location to be stored		
		DC Controller PCB	Main Controller PCB *1	Preferences	Timer Settings	Common Settings	Copy Settings	Fax Settings	Scan Settings	USB Direct Print Settings	Printer Settings	Initialize All	Initializing the Address Book	Initializing the Key and Certificate	Initializing the System Management Settings	R-CON *2	SRVC-DAT *3							HIST *4	ALL *5
Address Book	Flash ROM		Clear																Clear	Yes	Remote UI	PC	No		
Menu																									
Preferences	Flash ROM		Clear	Clear															Clear	Yes	Remote UI	PC	No		
Timer Settings	Flash ROM		Clear		Clear														Clear	Yes	Remote UI	PC	No		
Common Settings	Flash ROM		Clear			Clear													Clear	Yes	Remote UI	PC	No		
Copy Settings	Flash ROM		Clear				Clear												Clear	Yes	Remote UI	PC	No		
Fax Settings	Flash ROM		Clear					Clear											Clear	Yes *6	Remote UI	PC	No		
Scan Settings	Flash ROM		Clear						Clear										Clear	Yes *7	Remote UI	PC	No		
USB Direct Print Settings	Flash ROM		Clear							Clear									Clear	Yes	Remote UI	PC	No		
Printer Settings	Flash ROM		Clear								Clear	Clear							Clear	Yes	Remote UI	PC	No		
Key and Certificate	Flash ROM		Clear																Clear *10	No			No		
System Management Settings	Flash ROM		Clear																Clear *12	Yes *13	Remote UI	PC	No		
Serial Number	Flash ROM		Clear *11																	No			No		
Job History	Flash ROM		Clear																Clear	Clear	No		No		
Service mode	Service mode setting values (R-CON)	RCON																	Clear	No			No		
	Service mode setting values (MN-CON)	Flash ROM		Clear															Clear	Clear	No		Yes	Service mode *8	USB memory
	Service mode setting values (DC-CON)	Flash ROM	Clear																	No			Yes	Service mode *9	Flash ROM

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*1. Log data such as Mac address, USB serial number, printer-related setting values, scanner-related setting values, user data, and logs are initialized.

*2. The factory adjustment values of the Reader and ADF are initialized.

*3. Service data is cleared. User data is not cleared. The factory adjustment values of the Reader and ADF are not initialized.

*4. The logs (communication management, print, jam, error, and alarm) are cleared.

*5. The user data, service data, logs, and system administrator are initialized. (The system manager ID and password are changed back to the default values.) The factory adjustment values of the Reader and ADF are not initialized.

*6. Excluding Fax Setup Guide

*7. Excluding the shortcut key

*8. FUNCTION > SYSTEM > IMPORT / FUNCTION > SYSTEM > EXPORT

*9. FUNCTION > VIFFNC > STOR-DCN / FUNCTION > VIFFNC > RSTR-DCN

*10. When the key and certificate are initialized, TLS authentication of IEEE802.1X and the SSL setting are changed to "OFF".

*11. Only devices without counter meter are supported. After replacement of the PCB, resetting is required. OPTION > SERIAL > SN-MAIN

*12. The system administrator ID and the password are changed back to the default values. <Counter meter-installed model> ID: 7654321 / PWD: 7654321 <Model without counter meter> ID: 0 / PWD: 0

*13. Excluding [Forwarding Settings], [Remote UI On/Off], [Update Firmware], [Initialize Key and Certificate], [Initialize Address Book], and [Initialize System Management Settings]