Canon

July 13, 2012
Revision 0

imageCLASS MF4890dw / MF4880dw / MF4770n
imageCLASS D530 / FAXPHONE L190

Service Manual

Product Overview
Technical Overview
Periodical Services
Disassembly/Assembly
Adjustment
Troubleshooting
Error Codes
Service Mode

1 2 3 4 5 6 7 8

Appendix

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.

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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
	Check.
	Check visually.
	Check the noise.
	Disconnect the connector.
	Connect the connector.
	Remove the cable/wire from the cable guide or wire saddle.
	Set the cable/wire to the cable guide or wire saddle.
	Remove the screw.
	Tighten the screw.

Symbols	Explanation
	Remove the claw.
	Insert the claw.
	Use the bundled part.
	Push the part.
	Plug the power cable.
	Turn on the power.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.
   In the diagrams, ▮▮▮ represents the path of mechanical drive; where a signal name accompanies the symbol, the arrow ⟶ indicates the direction of the electric signal.
   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1' is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low". (The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.
   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

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

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Safety Precautions

- CDRH Provisions
- Laser Safety
- Toner Safety
- Notes on Handling Lithium Battery
- 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.

CANON INC.
30–2,SHIMOMARUKO,3–CHOME,OHTA–KU,TOKYO, 146.JAPAN
MANUFACTURED :
THIS PRODUCT CONFORMS WITH DHHS RADIATION PERFORMANCE STANDARD 21CFR CHAPTER1 SUBCHAPTER J.

F-0-1

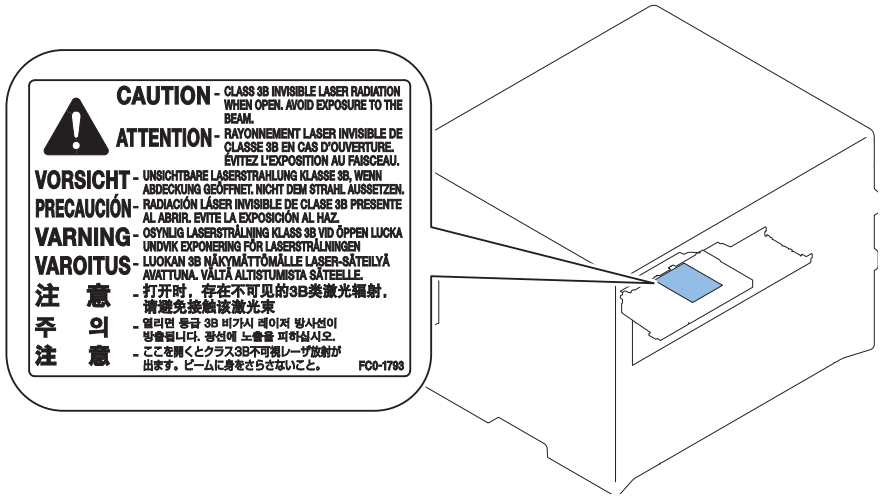
Laser Safety

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.



F-0-2

Toner Safety

About Toner

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

⚠

Never throw toner in flames to avoid explosion.

Handling Adhered Toner

- Use dry tissue paper to wipe off toner adhered to skin or clothes and wash in water.
- Never use warm water for cleaning up toner to prevent toner particles from being able to soak into fibers permanently.
- Toner particles are reactive with vinyl polymers. Avoid contacting these materials.

Notes on Handling Lithium Battery

⚠

Replacing with wrong battery types may cause explosion.

Follow instructions to dispose used batteries properly.

Notes on Assembly/Disassembly

Follow the items below to assemble/disassemble the device.

1. Disconnect the power plug to avoid any potential dangers during assembling/disassembling works.
2. If not specially instructed, reverse the order of disassembly to reinstall.
3. Ensure to use the right screw type (length, diameter, etc.) at the right position when assembling.
4. To keep electric conduction, binding screws with washers are used to attach the grounding wire and the varistor. Ensure to use the right screw type when assembling.
5. Unless it is specially needed, do not operate the device with some parts removed.
6. Never remove the paint-locked screws when disassembling.

Product Overview

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

Product Lineups

Main Unit

Model		MF4890dw	MF4880dw	MF4870dn	MF4830d
Config		4in1 DADF+WN	4in1 SADF+WN	4in1 SADF+N	3in1 SADF
Design					
ADF	DADF	Yes	-	-	-
	SADF	-	Yes	Yes	Yes
	PLATEN	-	-	-	-
Engine	2-Sided	Yes	Yes	Yes	Yes
	1-Sided	-	-	-	-
LAN port		Yes	Yes	Yes	-
Wireless LAN		Yes	Yes	-	-
FAX		Yes	Yes	Yes	-

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Model		MF4820d
Config		3in1 PLATEN
Design		
ADF	DADF	-
	SADF	-
	PLATEN	Yes
Engine	2-Sided	Yes
	1-Sided	-
LAN port		-
Wireless LAN		-
FAX		-

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Model	D530	MF4780w/MF4770n/MF4750/ MF4730
Config	3in1 PLATEN	4in1 SADF+WN(MF4780w) 4in1 SADF+N(MF4770n) 4in1 SADF(MF4750) 3in1 SADF(MF4730)
Design		

Model		D530	MF4780w/MF4770n/MF4750/ MF4730
ADF	DADF		-
	SADF	-	Yes
	PLATEN	Yes	-
Engine	2-Sided	Yes	-
	1-Sided	-	Yes
LAN port		-	Yes(MF4780w/MF4770n/MF4750)
Wireless LAN		-	Yes(MF4780w)
FAX		-	Yes(MF4780w/MF4770n/MF4750)

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Model		MF4720w/MF4712/MF4710	L418S/L410/L190
Config		3in1 PLATEN	4in1 DADF
Design			
ADF	DADF	-	Yes
	SADF	Yes	-
	PLATEN	-	-
Engine	2-Sided	-	Yes
	1-Sided	Yes	-
LAN port		-	-
Wireless LAN		-	-
FAX		-	Yes

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Options

- Hand Set Only FAX Model

Features

Features

1. Small-size, high-speed monochrome printer
   This equipment has a compact body that realizes high-speed print of 25 ppm (A4) / 26 ppm (LTR).

2. Automatic duplex print
   Automatic two-sided printing is available with standard equipped duplex unit.

3. Reduction in standby time and energy consumption
   This equipment employs on-demand fixing where the heater activates only during printing, resulting in a reduction in standby time and energy consumption on this mode.

4. Realization of noise reduction and stable image quality
   This equipment employs a belt drive method for transmitting the drive of the main motor. This enables lower noise and more stable image quality compared to the conventional gear drive method. (See NOTE)

5. Improved Usability
   In this equipment maintenance (jam removal, replacing the cartridge) can be performed by accessing one point of the delivery tray.

Note:
Changing the drive method from gear to belt reduces uneven pitch due to varied rotation speed of the photosensitive drum, which realizes stable image quality.

Product Specifications

Main Unit Specifications

Copyboard	Fixed
Device Installation	Desktop
Light source	LED (RGB)
Image scanning	CIS (color)
Photoreceptor	OPC drum (φ24)
Light exposure method	Laser beam exposure (semiconductor laser)
Charging method	Roller charging
Developing method	Toner projection developing method
Transfer method	Direct transfer to transfer member
Separation method	Curvature separation
Paper feed method	Pickup Tray : Semilunar-shaped Pickup Roller + Pad separation method (pressure release mechanism is not available)
	Multi-purpose Tray : Semilunar-shaped Pickup Roller + Pad separation method (pressure release mechanism is not available)
Paper delivery method	Face-down
Drum cleaning method	Cleaning blade
Fixing method	On-demand method with Ceramic Heater
Toner supply method	All-in-one cartridge with drum
Toner level sensor	Yes (magnetic sensor method) FAX models only
Document types	Sheets, Book, Height of document : 20 mm, Weight: up to 2 Kg
Maximum document size	Fixation : to A4
	ADF : to LGL
Image size magnification	100 % magnification
	A configuration, reduction : A4 -> B5, B5 -> A5, A4 -> A5
	A configuration, enlargement : A5 -> A4, A5 -> B5, B5 -> A4
	Inch configuration, reduction : LGL -> LRT
	Zoom : 25 to 400 % (1 % increment)
Reading resolution	Text/photo : 300 dpi x 300 dpi (default)
	Text/photo : 600 dpi x 600 dpi
	Text : 600 dpi x 600 dpi
	Photo : 600 dpi x 600 dpi
Print resolution	600 dpi x 600 dpi
Warm-up Time	MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4780w/MF4770n/ MF4750/L418S/L410/L190 13.5 seconds or less MF4820d/MF4730/MF4720w/MF4712/MF4710/D530 12 seconds or less
First print time	6 seconds or less (A4)

Print Speed	MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820d/D530/ L418S/L410/L190
	25 ppm (A4)
	MF4780w/MF4770n/MF4750/MF4730/MF4720w/MF4712/MF4710
	23 ppm (A4)
Copy speed	MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820d/D530/ L418S/L410/L190
	25 cpm (A4)
	MF4780w/MF4770n/MF4750/MF4730/MF4720w/MF4712/MF4710
	23 cpm (A4)
Available paper size in Paper Cassette	Fixed size : A4, B5, A5, LGL, LTR, Statement, Executive, Officio, B-officio, M-officio, Government-Letter, Government-Legal, Foolscap, A-foolscap, Envelope COM10, Envelope C5, Envelope B5, Envelope DL
	Custom paper size : Width : 76.2 to 216 mm, Length : 127 to 356 mm
Available paper size in multi-purpose tray	Fixed size : A4, B5, A5, LGL, LTR, Statement, Executive, Officio, B-officio, M-officio, Government-Letter, Government-Legal, Foolscap, A-foolscap, Envelope COM10, Envelope Monarch, Envelope C5, Envelope B5, Envelope DL, Index Card
	Custom paper size : Width : 76.2 to 216 mm, Length : 210 to 356 mm
Paper types for Paper Cassette	Plain paper (60 to 90 g/m^2), Heavy paper (91 to 163 g/m^2), Transparency, Labels, Envelope, Postcard
Multi-Purpose Tray	Plain paper (60 to 90 g/m^2), Heavy paper (91 to 163 g/m^2), Transparency, Labels, Envelope, Postcard
Stack capacity of Paper Cassette	About 250 sheets (60 to 80 g/m^2)
Stack capacity of Multi-purpose Tray	1 sheet
Output tray stacking capacity	About 100 sheets (60 to 80 g/m^2)
Allowable environmental temperature	10 - 30 deg C
Allowable humidity	20 - 80 %
Duplex method	Yes
Interface	Standard : Hi-Speed USB/USB, Option :none
Hard Disk	Standard : none, Option : none
Memory	4MB: MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820d/ D 530/MF4780w/MF4770n/MF4750/MF4730/MF4720w/MF4712/ MF4710 8MB: L418S/L410/L190
Power rating	AC110-127 V, +/-10 % (50, 60 Hz +/-2 Hz)
	AC220-240 V, +/-10 % (50, 60 Hz +/-2 Hz)

Maximum power consumption	MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820d/MF4780w/ MF4770n/MF4750/MF4730/MF4720w/MF4712/MF4710 120 V model : 1110 W or less 230 V model : 1320W or less
	D530/L418S/L410/L190 120 V model : 1110 W or less 230 V model : 1320W or less
Power consumption	Average energy consumption during operation 120V model: 520W or less 230V model: 560W or less Standby 10W or less Sleep mode 2W or less (wired) 3W or less (wireless) Off mode 0.5W or less
Ozone emission	Initial : average 0.01 ppm or less
	After use : average 0.035 ppm
Dimensions (W x D x H)	MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820d/MF4780w/ MF4770n/MF4750/MF4730/MF4720w/MF4712/MF4710 • DADF: 390 x 367.7 x 360 mm • SADF: 390 x 361.9 x 360 mm • Platen: 390 x 361.9 x 301 D530 • DADF: 390 x 442.8 x 357.7 mm • Platen: 390 x 435.1 x 304.4 mm L418S/L410/L190 • DADF: 390 x 444.8 x 357.7 mm
Weight	MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820d/MF4780w/ MF4770n/MF4750/MF4730/MF4720w/MF4712/MF4710 • DADF: 12.8 Kg • SADF: 11.7 Kg • Platen: 9.9 Kg D530 • DADF: 13.2 Kg • Platen: 11.7 Kg L418S/L410/L190 • DADF: 13.3 Kg (excluding toner cartridges)

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Wireless LAN Specifications

Standard	IEEE802.11g/IEEE802.11b/IEEE 802.11n*
Transmission Scheme	DS-SS System/OFDM System
Frequency Range	2412 to 2472 MHz
Data Transmission Rate	• IEEE802.11g
	6/9/12/18/24/36/48/54 Mbps
	• IEEE802.11b
	1/2/5.5/11 Mbps
	• IEEE 802.11n
	- 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)

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

SADF/DADF Specifications

Document setting direction	face-up method	
Document setting position	Center reference	
Document type	Sheet document	
Document size	Size : A4R/B5R/A5/B6 (landscape)/LGL/LTRR	
	2-sided : A4R/B5R/A5/LTRR/LGL/B6 (landscape only)	
	DADF:Feed direction : 127 mm to 356 mm	
	DADF:Width direction : 140 mm to 216 mm	
	SADF:Feed direction : 105 mm to 356 mm	
	SADF:Width direction : 148 mm to 216 mm	
Document processing mode	SADF : 1-sided document -> 1-sided copy, 1-sided document -> 2-sided copy	
	DADF : 1-sided document -> 1-sided copy, 1-sided document -> 2-sided copy, 2-sided document -> 1-sided copy, 2-sided document -> 2-sided copy	
Document weight	Continuous feed	1-sided : 50 to 105 g/m^2
	Continuous reading	2-sided : 60 to 105 g/m^2
Document reading method	Stream reading	
Document stack capacity	DADF Ssize : 50 Sheets/Lsize : 10 Sheets	
	SADF Ssize : 35 Sheets/Lsize : 10 Sheets	
Mixed paper reading	None	
Document AE sensor	None	
Document size sensor	None	
Stamp function	None	
Document feed speed (at reading)	100 % 129.34 mm/s DADF	
	113.38 mm/s SADF	
Document processing speed (At A4, LTR)	1-sided constant speed, 22 ipm (sheets/min), DADF	
	20 ipm (sheets/min), SADF	

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FAX Specifications

(MF4890dw/MF4880dw/MF4870dn/MF4780w/MF4770n/MF4750)

Line Used	Public Switched Telephone Network (PSTN)*1
Communication Mode	Super G3, G3
Compression Method	MH, MR, MMR
Modem Speed	Super G3: 33.6 Kbps, G3: 14.4 Kbps Automatic Fallback
Transmission Speed	Approx. 3 seconds per page*2 (ECM-MMR, transmitting from the memory at 33.6 Kbps)
Sending from Memory/ Receiving in Memory	Maximum approx. 256 pages*2 (Total pages of transmission/ reception) (Maximum number of fax jobs that can be sent from the memory: 10 jobs/ Maximum number of fax jobs that can be received into the memory: 90 jobs)
Fax Resolution	• (Normal): 200 dpi x 100 dpi • (Fine): 200 dpi x 200 dpi • (Photo): 200 dpi x 200 dpi • (Superfine): 200 dpi x 400 dpi
Dialing	• One-touch keys (4 destinations) • Coded dialing (100 destinations) • Group dialing (103 groups, 50 destinations in each group) • Address book dialing • Regular dialing (with numeric keys) • Automatic redialing • Manual redialing • Sequential broadcast (114 destinations)
Receiving	• Automatic reception • Remote reception by telephone (Default ID: 25)
Reports	• TX Results • Communication management report (Auto output every 40 destinations) • RX Results

T-1-8

*1 The Public Switched Telephone Network (PSTN) currently supports 28.8 Kbps modem speed or lower. Note that speeds can vary depending on the telephone line conditions.

*2 Based on ITU-T (ITU Telecommunication Standardization Sector) Standard Chart No. 1, MMR standard mode.

(L418S/L410/L190)

Line Used	Public Switched Telephone Network (PSTN)*1
Communication Mode	Super G3, G3
Compression Method	MH, MR, MMR
Modem Speed	Super G3: 33.6 Kbps, G3: 14.4 Kbps Automatic Fallback
Transmission Speed	Approx. 3 seconds per page*2 (ECM-MMR, transmitting from the memory at 33.6 Kbps)
Sending from Memory/ Receiving in Memory	Maximum approx. 256 pages*2 (Total pages of transmission/ reception) (Maximum number of fax jobs that can be sent from the memory: 10 jobs/ Maximum number of fax jobs that can be received into the memory: 90 jobs)
Fax Resolution	• (Normal): 200 dpi x 100 dpi • (Fine): 200 dpi x 200 dpi • (Photo): 200 dpi x 200 dpi • (Superfine): 200 dpi x 400 dpi
Dialing	• One-touch keys (40 destinations) • Coded dialing (200 destinations) • Group dialing (239 groups, 50 destinations in each group) • Address book dialing • Regular dialing (with numeric keys) • Automatic redialing • Manual redialing • Sequential broadcast (250 destinations)
Receiving	• Automatic reception • Remote reception by telephone (Default ID: 25)
Reports	• TX Results • Communication management report (Auto output every 40 destinations) • RX Results

T-1-9

*1 The Public Switched Telephone Network (PSTN) currently supports 28.8 Kbps modem speed or lower. Note that speeds can vary depending on the telephone line conditions.

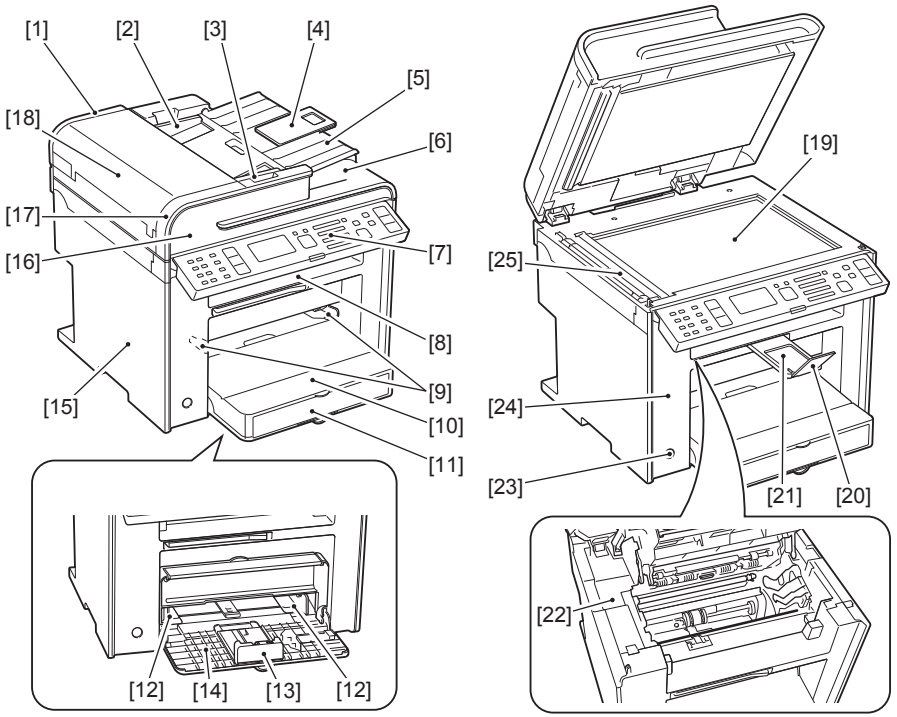
*2 Based on ITU-T (ITU Telecommunication Standardization Sector) Standard Chart No. 1, MMR standard mode.

Name of Parts

External View

MF4890dw/MF4880dw

Front Side



F-1-1

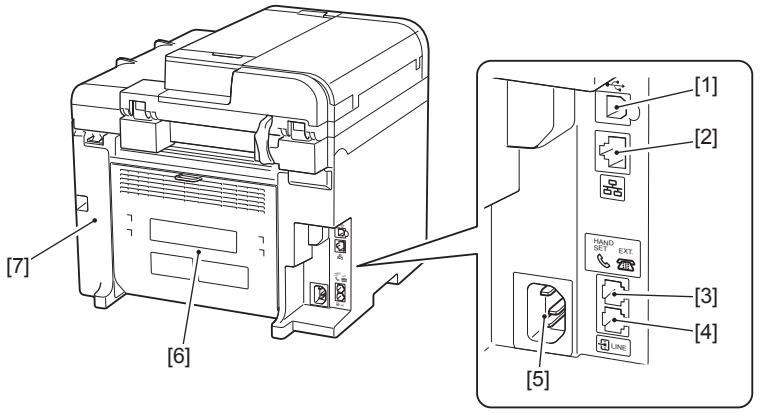
No.	Name
[1]	DADF Rear Cover
[2]	Side Guide Plate (Rear)
[3]	Side Guide Plate (Front)
[4]	Original Feed Auxiliary Tray
[5]	Original Feed Tray
[6]	Original Delivery Tray
[7]	Control Panel Unit
[8]	Delivery Tray
[9]	Multi-Purpose Tray Paper Guides

No.	Name
[14]	Pickup Tray
[15]	Left Cover
[16]	DADF Front Cover
[17]	DADF Front Upper Cover
[18]	DADF Upper Cover
[19]	Copyboard Glass
[20]	Delivery Stopper
[21]	Delivery Auxiliary Tray
[22]	Upper Cover

No.	Name
[10]	Multi-Purpose Tray
[11]	Tray Cover
[12]	Pickup Tray Paper Guides
[13]	Trailing Edge Paper Guides

No.	Name
[23]	Power Switch
[24]	Front Cover Switch
[25]	Copyboard Upper Cover

Rear Side

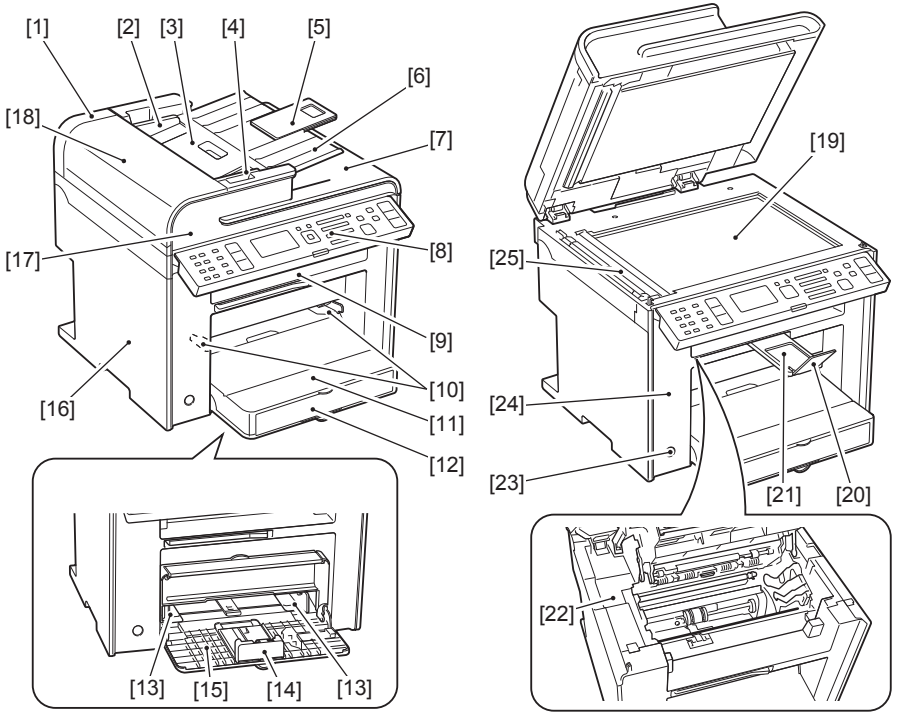


F-1-2

No.	Name
[1]	USB Device Port
[2]	LAN Port
[3]	External Device Jack
[4]	Telephone Line Jack
[5]	Power Supply Cord Slot
[6]	Rear Cover
[7]	Right Cover

MF4870dn/MF4830d/MF4780w/MF4770n/MF4750/MF4730

Front Side

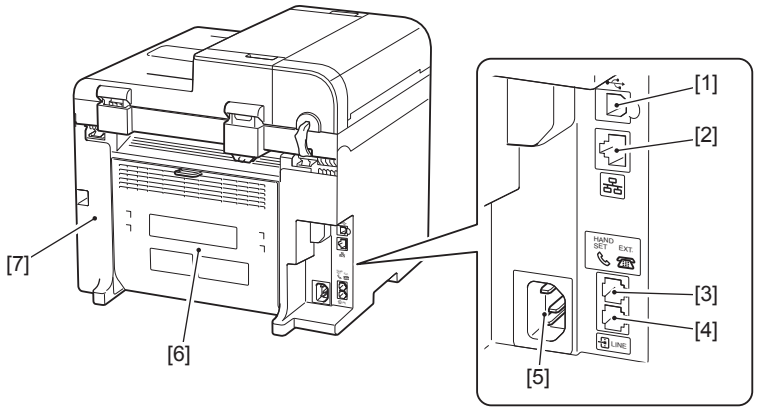


F-1-3

No.	Name
[1]	SADF Rear Cover
[2]	Side Guide Plate (Rear)
[3]	Original Feed Tray
[4]	Side Guide Plate (Front)
[5]	Original Feed Auxiliary Extension Tray
[6]	Original Feed Auxiliary Tray
[7]	Original Delivery Tray
[8]	Control Panel Unit
[9]	Delivery Tray
[10	Multi-Purpose Tray Paper Guides
[11]	Multi-Purpose Tray
[12]	Tray Cover
[13]	Pickup Tray Paper Guides

No.	Name
[14]	Trailing Edge Paper Guides
[15]	Pickup Tray
[16]	Left Cover
[17]	SADF Front Cover
[18]	SADF Upper Cover
[19]	Copyboard Glass
[20]	Delivery Stopper
[21]	Delivery Auxiliary Tray
[22]	Upper Cover
[23]	Power Switch
[24]	Front Cover Switch
[25]	Copyboard Upper Cover

● Rear Side

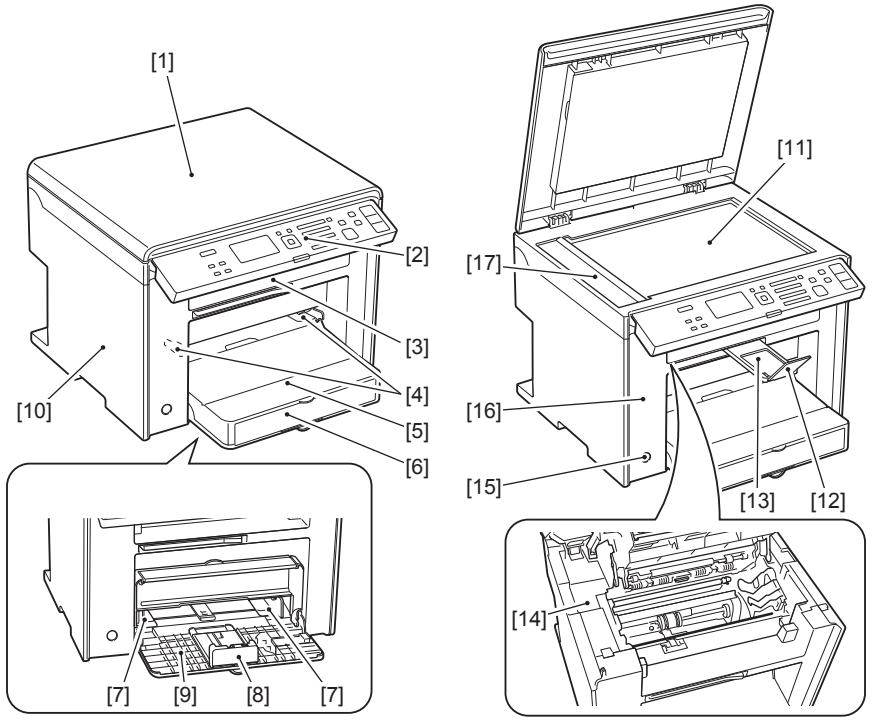


F-1-4

No.	Name
[1]	USB Device Port
[2]	LAN Port
[3]	External Device Jack
[4]	Telephone Line Jack
[5]	Power Supply Cord Slot
[6]	Rear Cover
[7]	Right Cover

■ MF4820d/MF4720w/MF4712/MF4710

● Front Side

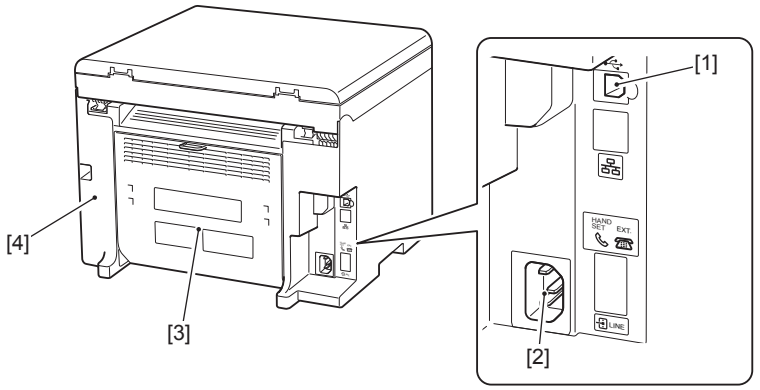


F-1-5

No.	Name
[1]	Copyboard Cover
[2]	Control Panel Unit
[3]	Delivery Tray
[4]	Multi-Purpose Tray Paper Guides
[5]	Multi-Purpose Tray
[6]	Tray Cover
[7]	Pickup Tray Paper Guides
[8]	Trailing Edge Paper Guides
[9]	Pickup Tray

No.	Name
[10]	Left Cover
[11]	Copyboard Glass
[12]	Delivery Stopper
[13]	Delivery Auxiliary Tray
[14]	Upper Cover
[15]	Power Switch
[16]	Front Cover Unit
[17]	Copyboard Upper Cover

● Rear Side

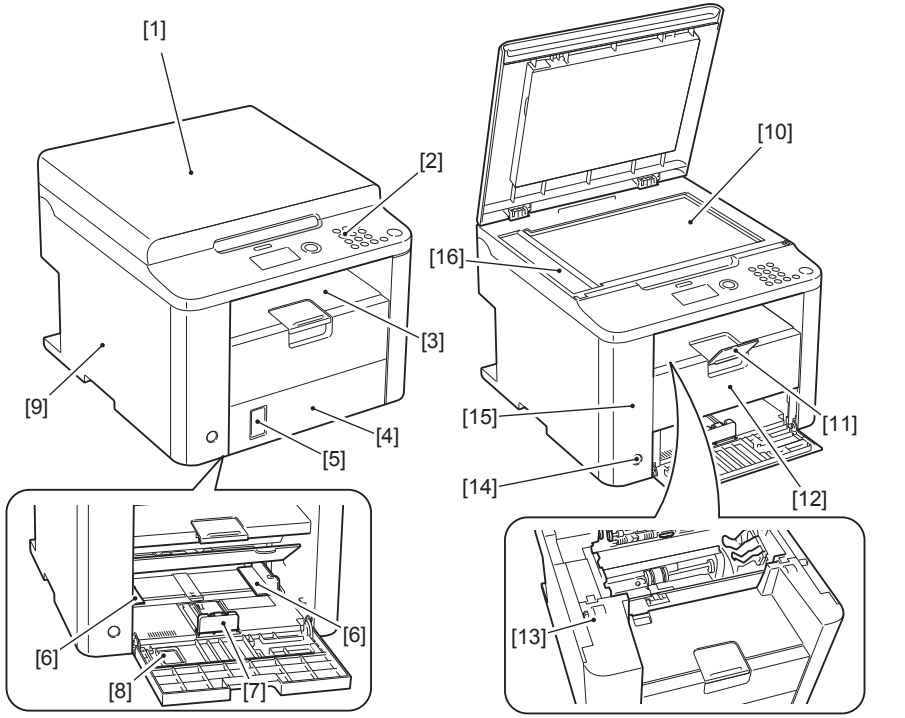


F-1-6

No.	Name
[1]	USB Device Port
[2]	Power Supply Cord Slot
[3]	Rear Cover
[4]	Right Cover

■ D530

● Front Side

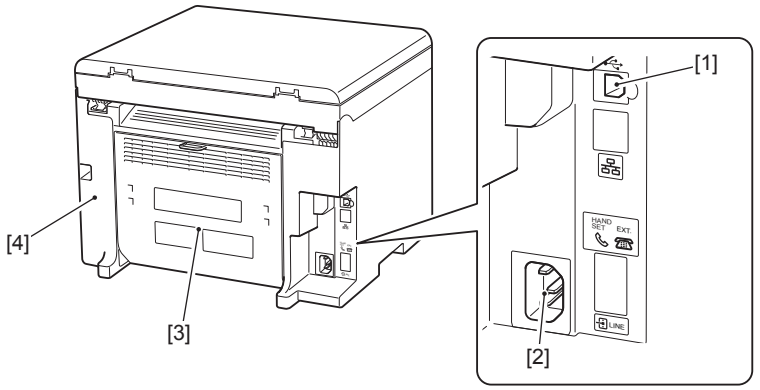


F-1-7

No.	Name
[1]	Copyboard Cover
[2]	Control Panel Unit
[3]	Delivery Tray
[4]	Front Under Cover
[5]	Paper Level Display
[6]	Pickup Tray Paper Guides
[7]	Trailing Edge Paper Guides
[8]	Pickup Tray

No.	Name
[9]	Left Cover
[10]	Copyboard Glass
[11]	Delivery Auxiliary Tray
[12]	Delivery Stopper
[13]	Upper Cover
[14]	Power Switch
[15]	Front Cover Switch
[16]	Copyboard Upper Cover

● Rear Side

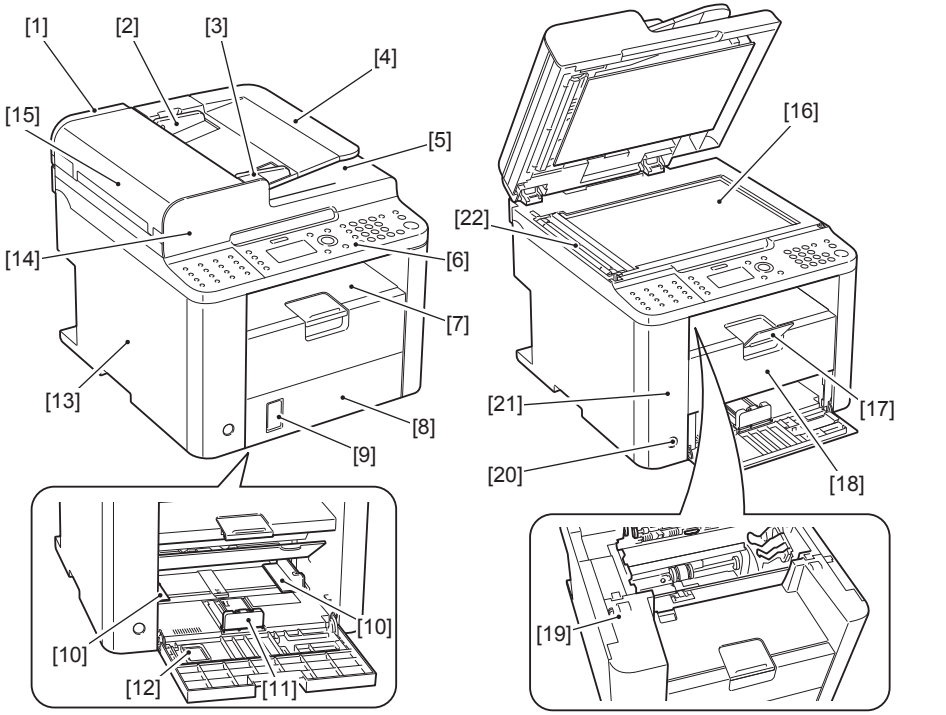


F-1-8

No.	Name
[1]	USB Device Port
[2]	Power Supply Cord Slot
[3]	Rear Cover
[4]	Right Cover

■ L418S/L410/L190

● Front Side

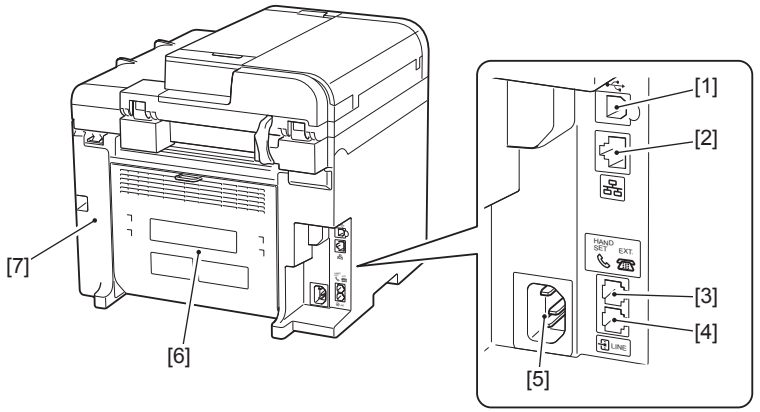


F-1-9

No.	Name
[1]	DADF Rear Cover
[2]	Side Guide Plate (Rear)
[3]	Side Guide Plate (Front)
[4]	Original Feed Tray
[5]	Original Delivery Tray
[6]	Control Panel Unit
[7]	Delivery Tray
[8]	Front Under Cover
[9]	Paper Level Display
[10]	Pickup Tray Paper Guides
[11]	Trailing Edge Paper Guides
[12]	Pickup Tray
[13]	Left Cover

No.	Name
[14]	DADF Front Cover
[15]	DADF Upper Cover
[16]	Copyboard Glass
[17]	Delivery Stopper
[18]	Delivery Auxiliary Tray
[19]	Upper Cover
[20]	Power Switch
[21]	Front Cover Switch
[22]	Copyboard Upper Cover

Rear Side

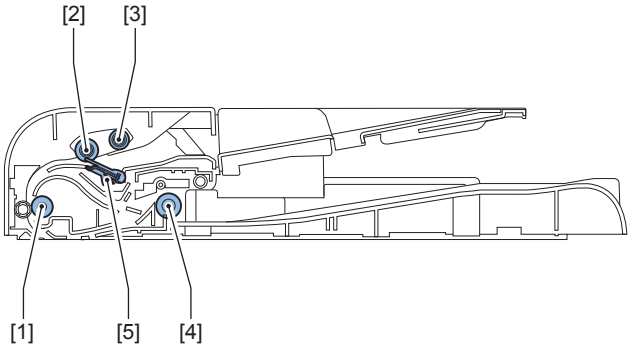


F-1-10

No.	Name
[1]	USB Device Port
[2]	LAN Port
[3]	External Device Jack
[4]	Telephone Line Jack
[5]	Power Supply Cord Slot
[6]	Rear Cover
[7]	Right Cover

Cross Section

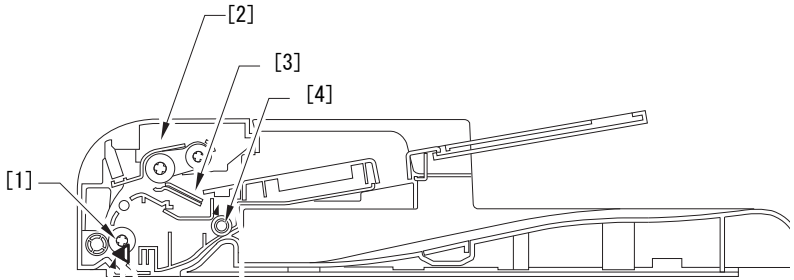
DADF



F-1-11

No.	Name
[1]	Registration roller
[2]	Pickup roller
[3]	Separation pad
[4]	Delivery roller
[5]	Separation roller

SADF



F-1-12

No.	Name
[1]	Registration roller
[2]	Pickup roller
[3]	Separation pad
[4]	Delivery roller

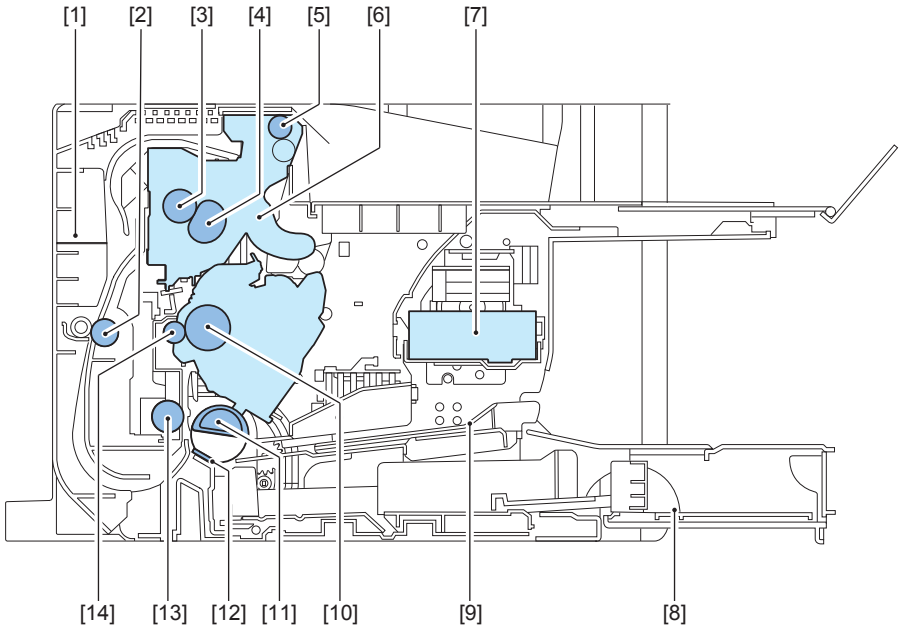
READER

F-1-13

No.	Name
[1]	CIS UNIT

Printer

MF4890dw/MF4880dw/MF4870dn/MF4830d/MF4820/D530/L418S/L410/L190

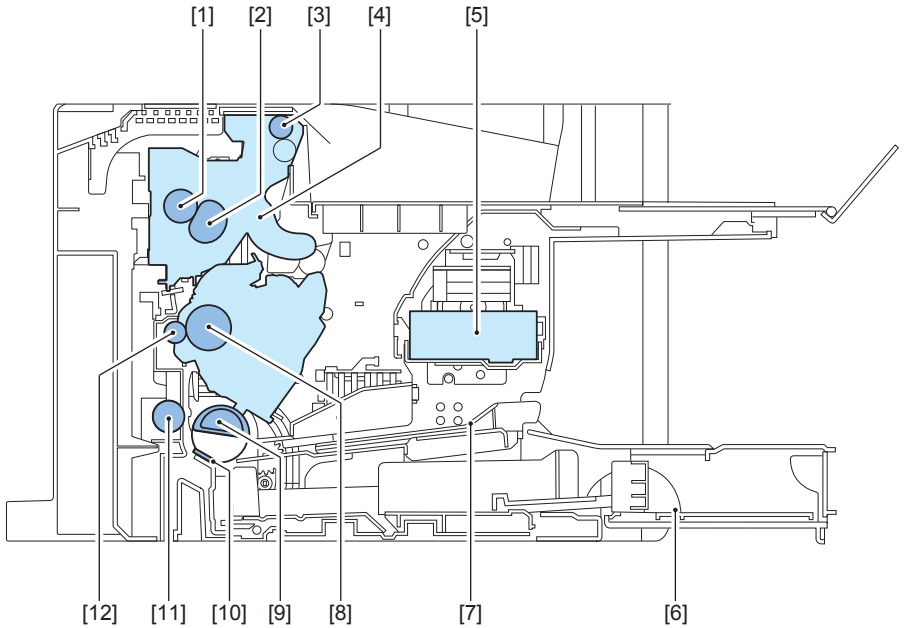


F-1-14

No.	Name	No.	Name
[1]	Duplex Feed Unit	[8]	Pickup Tray
[2]	Duplex Feed Roller	[9]	Multi-Purpose Tray
[3]	Fixing Pressure Roller	[10]	Photosensitive Drum
[4]	Fixing Film Unit	[11]	Pickup Roller
[5]	Delivery Roller	[12]	Separation Pad
[6]	Fixing Assembly	[13]	Feed Roller
[7]	Laser Scanner Unit	[14]	Transfer Roller

Printer

MF4780w/MF4770n/MF4750/MF4730/MF4720w/MF4712/MF4710

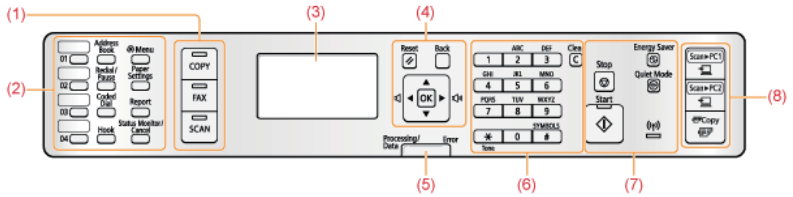


F-1-15

No.	Name	No.	Name
[1]	Fixing Pressure Roller	[7]	Multi-Purpose Tray
[2]	Fixing Film Unit	[8]	Photosensitive Drum
[3]	Delivery Roller	[9]	Pickup Roller
[4]	Fixing Assembly	[10]	Separation Pad
[5]	Laser Scanner Unit	[11]	Feed Roller
[6]	Pickup Tray	[12]	Transfer Roller

Control Panel

MF4890dw/MF4880dw/MF4830d/MF4820d



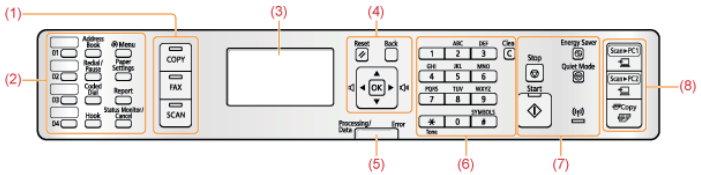
F-1-16

(1)	Mode switching keys	Press to switch the mode to copy, fax, or scan
(2)	[One-touch Speed Dial] keys	Press to select destinations registered in one-touch keys.
	[Address Book] key	Press to search for recipients who are registered under one-touch keys or coded dial codes.
	[Redial/Pause] key	When faxing, press to redial the last three numbers called or insert a pause in a fax number.
	[Coded Dial] key	Press to specify and enter a recipient's code for coded speed dialing.
	[Hook] key	Press when you want to dial without lifting up the handset of the external telephone.
	[Menu] key	Press to specify or register various settings.
	[Paper Settings] key	Press to specify paper size and type for the paper cassette.
	[Report] key	Press to manually print reports and lists. You can also specify whether to print a report automatically.
	[Status Monitor/Cancel] key	Press to view the status of jobs or cancel jobs. You can also check the status of the machine.
(3)	LCD	During normal operation, displays messages and prompts. When adjusting the settings, displays your selections, text, and numbers.
(4)	[Back] key	Press to return to the previous screen.
	[Reset] key	Press to reset the settings.
	[▲] 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 volume while the fax ring tone sounds.
	[►] key	Press to proceed to the next screen, or move the cursor to the right. Press to increase the volume while the fax ring tone sounds.
	[OK] key	Press to confirm an action or setting.
(5)	[Processing/Data] indicator	Blinks during transmission and turns on when the machine has waiting jobs.
	[Error] indicator	Blinks when an error occurs.
(6)	Numeric keys ([0]-[9])	Press to enter characters and numbers.
	[*] key	Press to switch the character entry mode, and switch between pulse and tone dialing to send a fax.
	[#] key	Press to enter symbols.
	[Clear] key	Press to delete entered characters and numbers.
(7)	[Stop] key	Press to cancel jobs.
	[Start] key	Press to start copying or sending a fax.
	[Energy Saver] key	Press to manually set or cancel the Sleep mode. The Energy Saver indicator lights green while in the Sleep mode.
	[Quiet Mode] key	Press to reduce the noise when performing job. This does not affect the speaker or the key volume.
	[Wi-Fi] indicator*	Turns on when the machine is connected to Wireless LAN.
(8)	[Scan>PC1] key/ [Scan>PC2] key	Press to send the scanned documents to the registered computer for each key. "[Scan>PC1] key/[Scan>PC2] key"
	[Paper Save Copy] key	Press to copy with a preset setting to save paper. "[Paper Save Copy] key"

T-1-10

* This function is available only for MF4890dw/MF4880dw.

MF4780w/MF4770n/MF4750/MF4730/MF4720/MF4712/MF4710



F-1-17

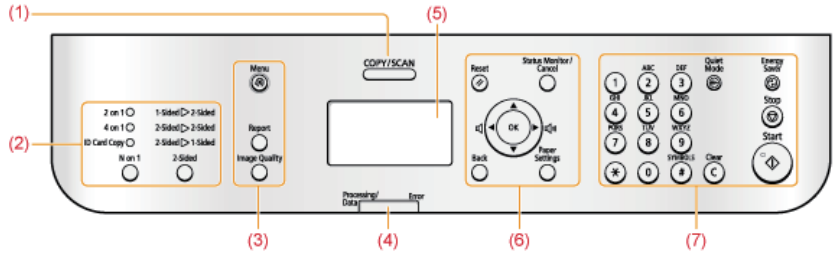
(1)	Mode switching keys	Press to switch the mode to copy, fax, or scan
(2)	[One-touch Speed Dial] keys	Press to select destinations registered in one-touch keys.
	[Address Book] key	Press to search for recipients who are registered under one-touch keys or coded dial codes.
	[Redial/Pause] key	When faxing, press to redial the last three numbers called or insert a pause in a fax number.
	[Coded Dial] key	Press to specify and enter a recipient's code for coded speed dialing.
	[Hook] key	Press when you want to dial without lifting up the handset of the external telephone.
	[Menu] key	Press to specify or register various settings.
	[Paper Settings] key	Press to specify paper size and type for the paper cassette.
	[Report] key	Press to manually print reports and lists. You can also specify whether to print a report automatically.
	[Status Monitor/Cancel] key	Press to view the status of jobs or cancel jobs. You can also check the status of the machine.
(3)	LCD	During normal operation, displays messages and prompts. When adjusting the settings, displays your selections, text, and numbers.
(4)	[Back] key	Press to return to the previous screen.
	[Reset] key	Press to reset the settings.
	[▲] 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 volume while the fax ring tone sounds.
	[►] key	Press to proceed to the next screen, or move the cursor to the right. Press to increase the volume while the fax ring tone sounds.
	[OK] key	Press to confirm an action or setting.
(5)	[Processing/Data] indicator	Blinks during transmission and turns on when the machine has waiting jobs.
	[Error] indicator	Blinks when an error occurs.
(6)	Numeric keys ([0]-[9])	Press to enter characters and numbers.
	[*] key	Press to switch the character entry mode, and switch between pulse and tone dialing to send a fax.
	[#] key	Press to enter symbols.
	[Clear] key	Press to delete entered characters and numbers.
(7)	[Stop] key	Press to cancel jobs.
	[Start] key	Press to start copying or sending a fax.
	[Energy Saver] key	Press to manually set or cancel the Sleep mode. The Energy Saver indicator lights green while in the Sleep mode.
	[Quiet Mode] key	Press to reduce the noise when performing job. This does not affect the speaker or the key volume.
	[Wi-Fi] indicator*	Turns on when the machine is connected to Wireless LAN.

(8)	[Scan>PC1] key/ [Scan>PC2] key	Press to send the scanned documents to the registered computer for each key. "[Scan>PC1] key/[Scan>PC2] key"
	[Paper Save Copy] key	Press to copy with a preset setting to save paper. "[Paper Save Copy] key"

T-1-11

* The function may not be available depending on model.

D530

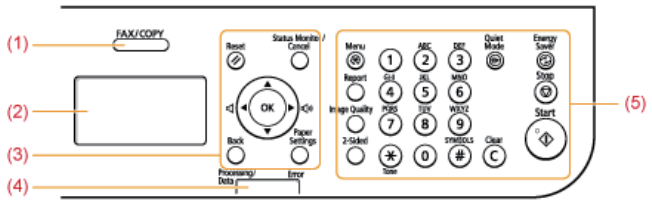


F-1-18

(1)	Mode switching keys	Press to switch the mode to copy or scan.
(2)	[N on 1] key	Press to select the setting for printing multiple documents onto one sheet. The indicator of selected setting will be lit up and also the item will be displayed on the LCD.
	[2-Sided] key	Press to select the setting for printing on both sides of paper. The indicator of selected setting will be lit up and also the item will be displayed on the LCD.
(3)	[Menu] key	Press to specify or register various settings.
	[Report] key	Press to manually print reports and lists. You can also specify whether to report automatically.
	[Image Quality] key	Press to select the image quality for copy.
(4)	[Processing/Data] indicator	Blinks during transmission and turns on when the machine has waiting jobs.
	[Error] indicator	Blinks when an error occurs.
(5)	LCD	During normal operation, displays messages and prompts. When adjusting the settings, displays your selections, text, and numbers.
	[Reset] key	Resets the settings.
	[Back] key	Press to return to the previous screen.
(6)	[▲] 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.
	►] key	Press to proceed to the next screen, or move the cursor to the right.
	[OK] key	Press to confirm an action or setting.
	[Status Monitor/Cancel] key	Press to view the status of jobs or cancel jobs. You can also check the status of the machine.
	[Paper Settings] key	Press to specify paper size and type for the paper cassette.
(7)	Numeric keys ([0]-[9])	Press to enter characters and numbers.
	[*] key	Press to switch the character entry mode.
	[#] key	Press to enter symbols.
	[Quiet Mode] key	Press to reduce noise from the engine of the machine.
	[Clear] key	Press to delete entered characters and numbers.
	[Energy Saver] key	Press to manually set or cancel the Sleep mode. The Energy Saver indicator lights green while in the sleep mode.
	[Stop] key	Press to cancel jobs.
	[Start] key	Press to start copying or scanning.

T-1-12

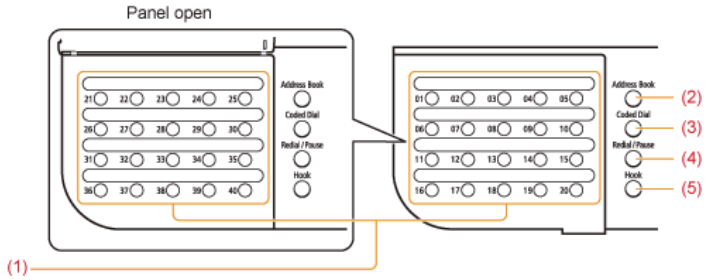
L418S/L410/L190



F-1-19

(1)	[FAX/COPY] key	Press to switch the mode to copy or fax.
(2)	LCD	During normal operation, displays messages and prompts. When adjusting the settings, displays your selections, text, and numbers.
(3)	[Reset] key	Resets the settings.
	[Back] key	Press to return to the previous screen.
	[▲] 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 volume while the fax ring tone sounds.
	[►] key	Press to proceed to the next screen, or move the cursor to the right. Press to increase the volume while the fax ring tone sounds.
	[OK] key	Press to confirm an action or setting.
	[Status Monitor/Cancel] key	Press to view the status of jobs or cancel jobs. You can also check the status of the machine.
	[Paper Settings] key	Press to specify paper size and type for the paper cassette.
(4)	[Processing/Data] indicator	Blinks during transmission and turns on when the machine has waiting jobs.
	[Error] indicator	Blinks when an error occurs.
(5)	[Menu] key	Press to specify or register various settings.
	[Report] key	Press to manually print reports and lists. You can also specify whether to report automatically.
	[Image Quality] key	Press to select the image quality for copy or the scanning resolution for the sending document.
	[2-Sided] key	Press to print on both sides of paper.
	Numeric keys ([0]-[9])	Press to enter characters and numbers.
	[*] key	Press to switch the character entry mode, and switch between pulse and tone dialing to send a fax.
	[#] key	Press to enter symbols.
	[Quiet Mode] key	Press to reduce the noise when performing job. This does not affect the speaker or the key volume.
	[Clear] key	Press to delete entered characters and numbers.
	[Energy Saver] key	Press to manually set or cancel the Sleep mode. The Energy Saver indicator lights green while in the sleep mode.
	[Stop] key	Press to cancel jobs.
	[Start] key	Press to start copying or send a fax.

T-1-13



F-1-20

(1)	[One-touch Speed Dial] keys	Press to select destinations registered in one-touch keys.
(2)	[Address Book] key	Press to search for recipients who are registered under one-touch keys or coded dial codes.
(3)	[Coded Dial] key	Press to specify and enter a recipient's code for coded speed dialing.
(4)	[Redial/Pause] key	When faxing, press to redial the last three numbers called or insert a pause in a fax number.
(5)	[Hook] key	Press when you want to dial without lifting up the handset of the external telephone or the handset.

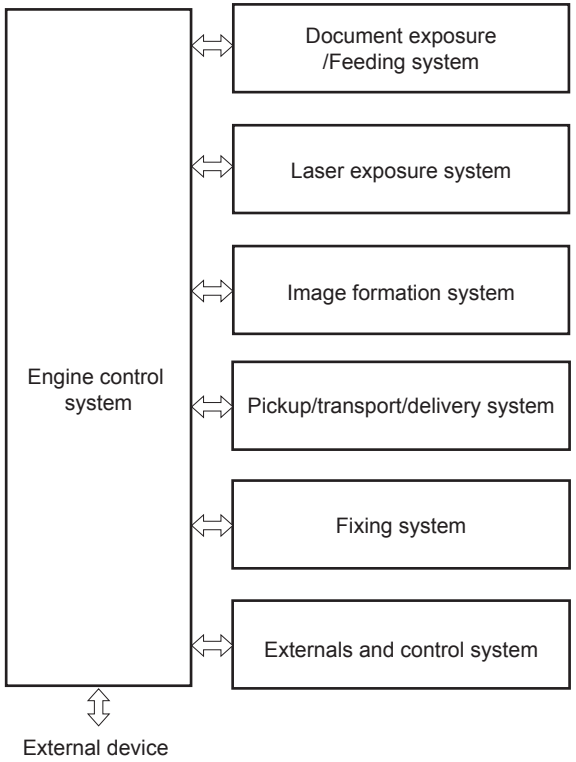
2 Technical Overview

- Basic Configuration
- Controller System
- Document Exposure/Feeder System
- Laser Exposure System
- Image Formation System
- Fixing System
- Pickup And Feeding System
- External And Controls System

Basic Configuration

Configuration function

The machine may be broadly divided into the following 7 functional blocks: engine control system, document exposure/feeding system, laser exposure system, image formation system, pickup/transport/delivery system, fixing system, and externals/auxiliary control system.



F-2-1

Basic Sequence

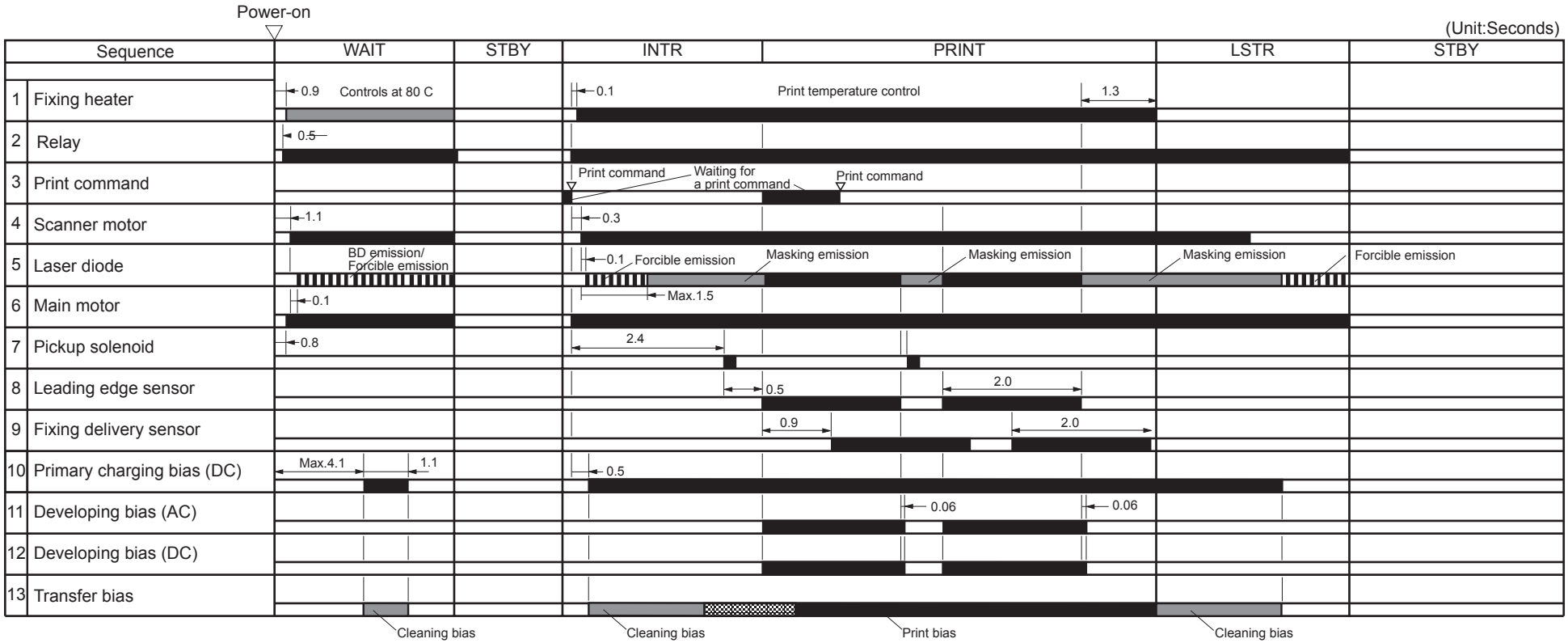
Basic Sequence of Operation

The engine controller controls the operation sequence. The following table provides an outline of machine operation occurring from when the power switch is turned on to when printing ends and motors stop, indicating the purposes of intervals and engine operation. For details of various loads, see the timing chart.

Interval		Purpose	Remarks
WAIT (Wait)	From power-ON until initial drive for main motor is completed.	To clear potential from the drum surface and to clean the transfer roller. Also to bring the heater temperature up to the targeted temperature.	Detect whether the Toner cartridge is installed or not.
STBY (Standby)	From the end of the WAIT period or the LSTR period until the print command is sent from the main controller. Or, from the end of the LSTR period until power switch is turned OFF.	To keep the printer ready to print.	
INTR (initial rotation)	From the input of the print command from the main controller until the pick-up solenoid is turned ON.	To stabilize the photosensitive drum sensitivity in preparation for printing. Also to clean the transfer roller.	
PRINT (print)	From the end of the INTR period until the top of page sensor detects the trailing edge of paper.	To form image on the photosensitive drum based on the VIDEO (/VD01, /VD02, VD01, VD02) signals input from the main controller, and to transfer the toner image onto paper.	
LSTR (last rotation)	From the end of PRINT period until the Main motor stops.	To deliver the last paper completely out of the printer.	Return to the INTR period as soon as another print command is sent from the main controller.

T-2-1

■ Print Sequence



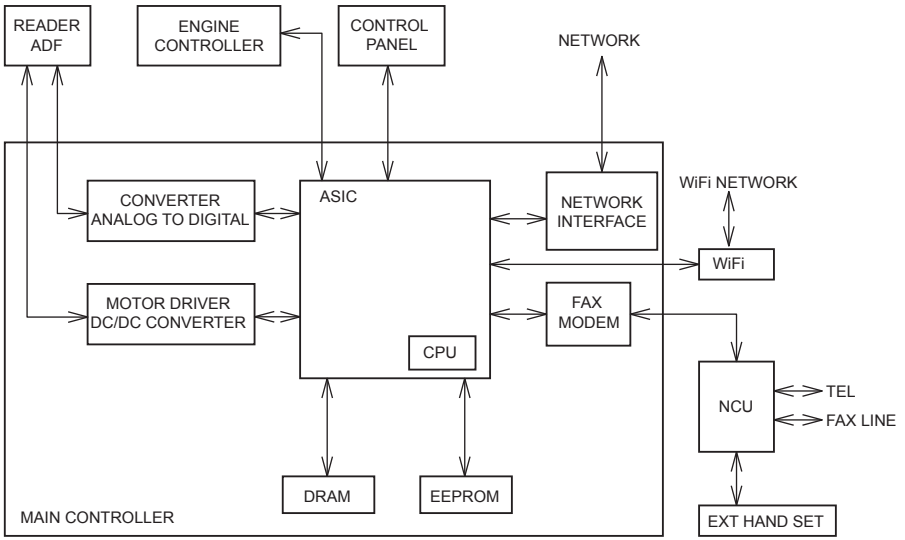
F-2-2

Controller System

Main Controller

General description

The Main Controller receives print information from the Reader and ADF, Fax, and network.
Video data is created from the received print information and is sent to the Engine Controller.

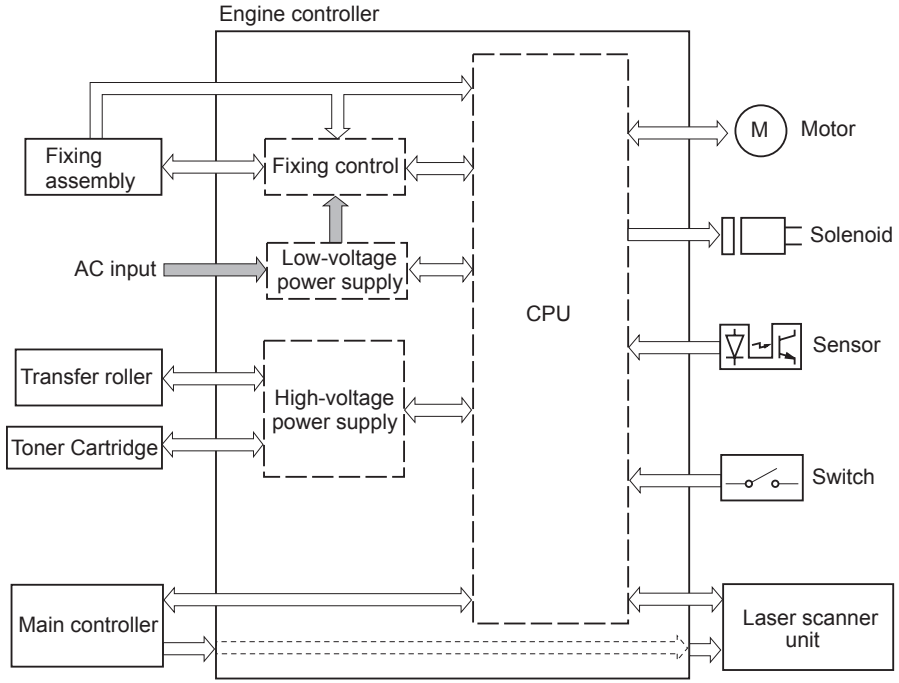


F-2-3

Engine Controller

General description

Engine controller is the circuit to control the operation sequence of the host machine and it is controlled by the CPU inside the engine controller.
When the power is turned ON and DC power is supplied through the low voltage power inside engine controller, CPU starts the printer operation control.
Then, CPU drives the loads such as laser diode, motors and solenoids etc. according to the image data that is input by the main controller when status becomes stand-by mode.
The following is the block diagram of this circuit.



F-2-4

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

None.

Document Exposure/Feeder System

Document Exposure System

Overview

item	function / method
document exposure	LED
document scan	Book mode: scan by the shift of the contact Book mode: scan by the shift of the contact sensor (CS) SADF/DADF: document stream reading by fixed contact sensor (CS)
scanning resolution	600 dpi (horizontal scanner) X 600 dpi (vertical scanner)
number of gradations	256 gradations
magnification	50% to 200% horizontal: image processing by Main controller PCB vertical: change of carriage shift speed, image processing by Main controller PCB
lens	rod lens array
CMOS sensor	number of lines: 1 line number of pixels: 5148 pixels as total pixels (5107 pixels as effective pixels) maximum document scanning width: 216 mm
CS drive control	drive control by Reader motor
document size detection	none

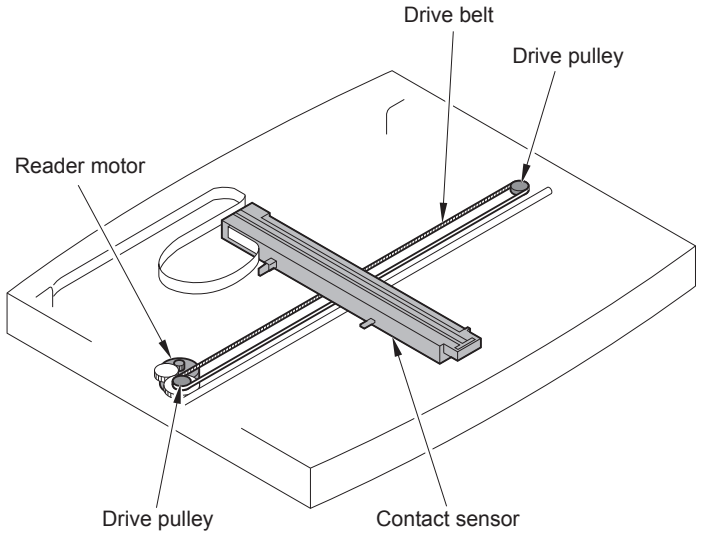
T-2-2

Major Components

Followings are the major components for Document Exposure System.

- The contact sensor to scan document
- The Reader motor, 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 SCNT 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-2-5

Document Feeder System

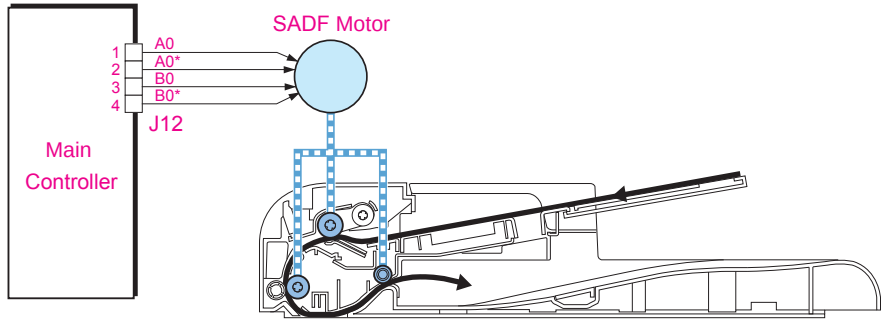
Overview

SADF

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

1 motor (SADF motor) is engaged in pickup/feeding/delivery.

At the start of copy/fax/scan, the SADF motor is driven by the drive command from the Main controller 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-2-6

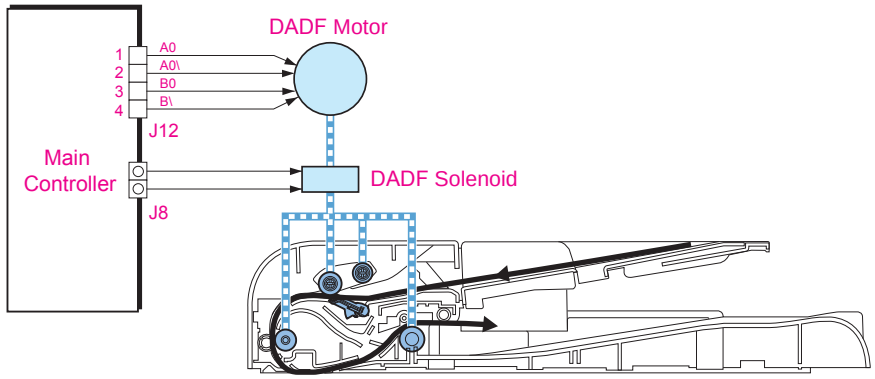
DADF

Pickup/Feed/Delivery Operation

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

1 motor (DADF motor) is engaged in pickup/feeding/delivery.

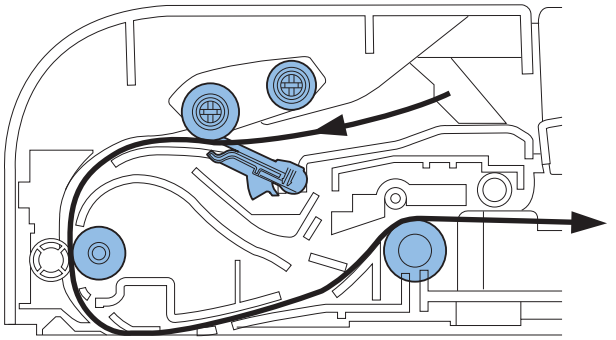
At the start of copy/fax/scan, the DADF motor is driven by the drive command from the Main controller to pickup/feed the originals set face up on the original tray one by one in order from the top. The original is scanned by the contact sensor when moving through the copyboard glass, and then delivered face down to the original delivery assembly.



F-2-7

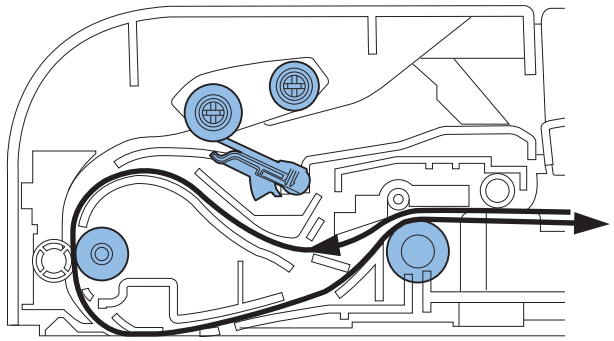
Operation at duplex reading

- Pickup to Reading of the 1st side



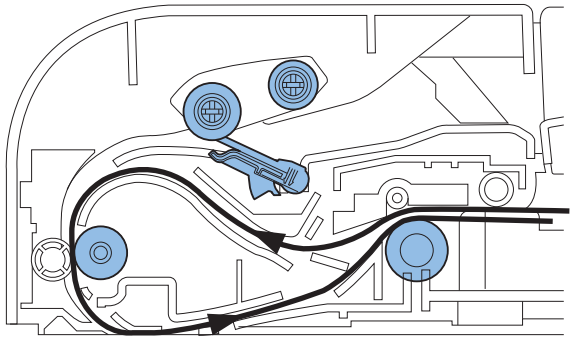
F-2-8

- Reverse to Reading of the 2nd side



F-2-9

- Delivery



F-2-10

Various Control

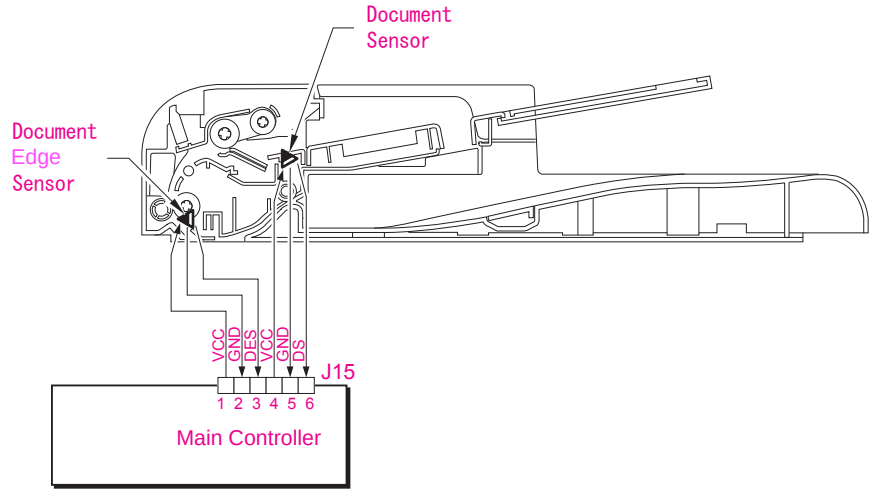
Original Detection

There are two types of original detection in this equipment.

1. Original Presence / Absence Detection
   Detected by DS (Document Sensor)
   As the actuator is pushed up by placing an original on the Original Tray, DS of SADF is turned ON(light is blocked =>light is transmitted) and DS of DADF is turned OFF (light is transmitted => light is blocked) so that presence of an original is detected.
2. Detection of the End of the Original
   Detected by the DES (Document End Sensor)
   The leading edge of the original that is fed pushes up the actuator, activating the DES (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 DES (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.

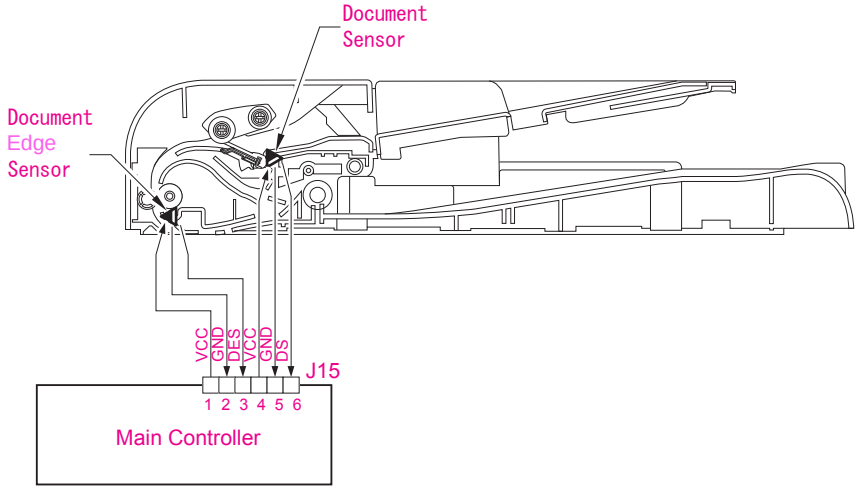
Note:
There is no function to detect the original size (original width, length) in this equipment.

In the case of SADF



F-2-11

In the case of DADF



F-2-12

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 SADF/DADF upper cover

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

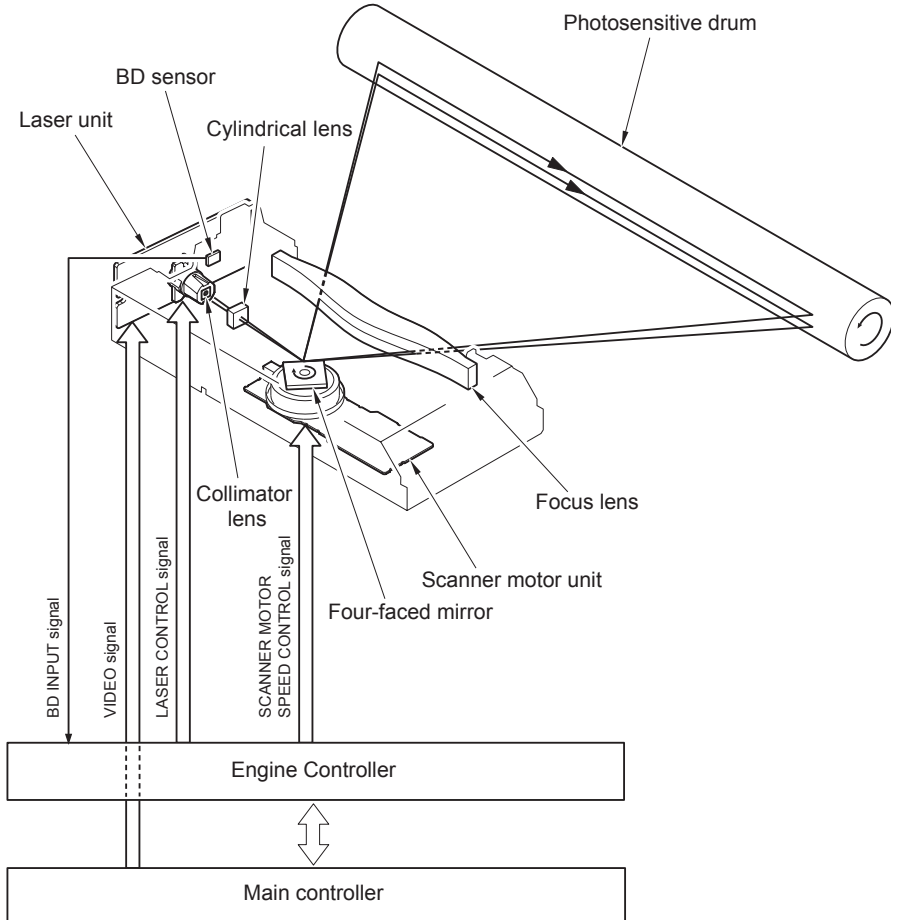
None.

Laser Exposure System

Overview

Overview

The laser exposure system forms static latent images on the photosensitive drum according to the VIDEO signals sent from the main controller, and is comprised of the laser driver and scanner motor, etc. These are controlled by the engine controller. The following is the outline.



F-2-13

The operational sequence of the laser scanner unit is described below.

1) When the Main controller sends print instruction command, the Engine controller rotates the Four-faced mirror, causing the Scanner motor to rotate.

2) When the Scanner motor starts to rotate, the Engine controller emits the laser forcibly using the Laser control signal, causing the Engine controller to start rotation control for the Scanner motor.

3) The Engine controller controls to keep a constant speed of rotation of the Scanner motor using the Scanner motor speed control signal.

4) After the rotation speed of the Scanner motor reaches its target, the Main controller sends VIDEO signals to the Laser driver PCB.

5) The Laser driver emits laser diode according to these signals.

6) The laser beam passes through the collimator lens and the cylindrical lens and enters the Four-faced mirror rotating at a constant speed.

7) The laser beam reflected by the Four-faced mirror is focused on the Photosensitive drum via the image-forming lens at the front of the Four-faced mirror.

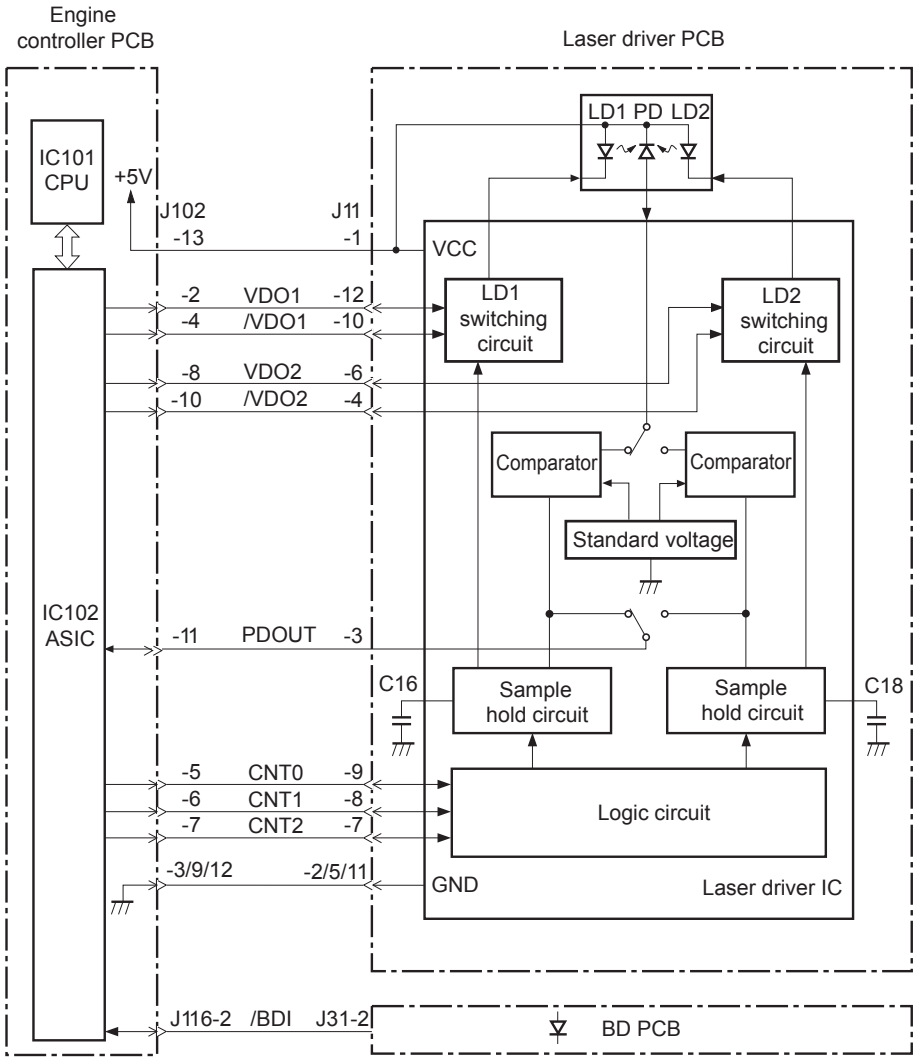
8) When the Four-faced mirror rotates at a constant speed, the laser beam on the Photosensitive drum is scanned on the Photosensitive drum at a constant speed.

9) When the Photosensitive drum rotates at a constant speed and the laser beam is scanned on the Photosensitive drum at a constant speed, latent images are formed on the Photosensitive drum.

Controlling the Laser Activation Timing

Laser ON/OFF Control

In this control, the laser driver turns on/off the 2 laser diodes (LD1, LD2) according to the laser control signal sent from the engine controller.
The following is the circuit diagram of the laser control.



F-2-14

The engine controller sends the laser control signals (CNT0, CNT1, CNT2) for changing the operation mode of the laser to the logic circuit in the laser driver IC, as well as the video signals (VDO1, /VDO1, VDO2, /VDO2) for image formation.
The laser driver IC executes laser control according to the combination of the CNT0, CNT1, CNT2 signals.
The following is the combination of the laser control signal (CNT0, CNT1, CNT2).

Operation mode	CNT0	CNT1	CNT2	Details
Standby	L	L	L	Laser control OFF
Print	H	H	H	Can emit the laser according to the video signal
LD1 forced ON	L	H	L	LD1 forcibly turned ON
LD2 forced ON	H	L	L	LD2 forcibly turned ON
LD forced OFF	H	H	L	LD1, LD2 forcibly turned OFF

T-2-3

Horizontal Sync Control

This is the control to adjust the writing position in the image horizontal direction.
The following is the details of control procedure.

1) The engine controller controls the laser control signal during unblanking (*) to emit the laser diode (LD) forcibly.

2) The BD PCB exists on the scanning route of the laser beam, which is sent to the BD PCB.

3) The BD PCB detects this laser beam, creates BD input signal (/BDI) and sends it to the engine controller.

4) The engine controller creates horizontal sync signals (/BD) based on /BDI signal and sends the /BD signal to the main controller.

5) When /BD signal is input, the main controller outputs the video signal (VD0, /VD0) to the engine controller to adjust the writing position in image horizontal direction.

*: Unblanking period
The period during which the laser diode is emitted in non-image area.

Laser Control

Auto Power Control (APC)

This is the control to emit a constant level of laser diode.
There are two types of APC; initial APC (note 1), and line space APC (note 2). The laser driver executes the same procedure for both controls. The following is the details of the control procedure.

1) When the laser control signal enters LD1 forced ON mode (CNT0, CNT1, CNT2), the laser driver emits LD1 forcibly.

2) The emission level of LD1 is detected with photo diode (PD), converted from current output to voltage, and compared with the standard voltage (voltage equivalent to the target laser level) with the comparator.

3) The laser driver controls the laser current to achieve the voltage of LD1 target level.

4) When the laser control signal enters LD forced OFF mode, the LD1 is forcibly turned off. The laser driver saves the adjusted laser intensity of the capacitor (C16).

5) When the adjustment of LD1 laser intensity is completed, the laser control signal enters LD2 forced ON mode; the laser driver emits LD2 forcibly.
The laser driver adjusts the LD2 laser intensity as in the case of LD1 and saves the adjusted laser intensity to the capacitor (C18).

1. Initial APC

APC that is executed during initial rotation. APC adjusts laser intensity and detects faults in the laser.

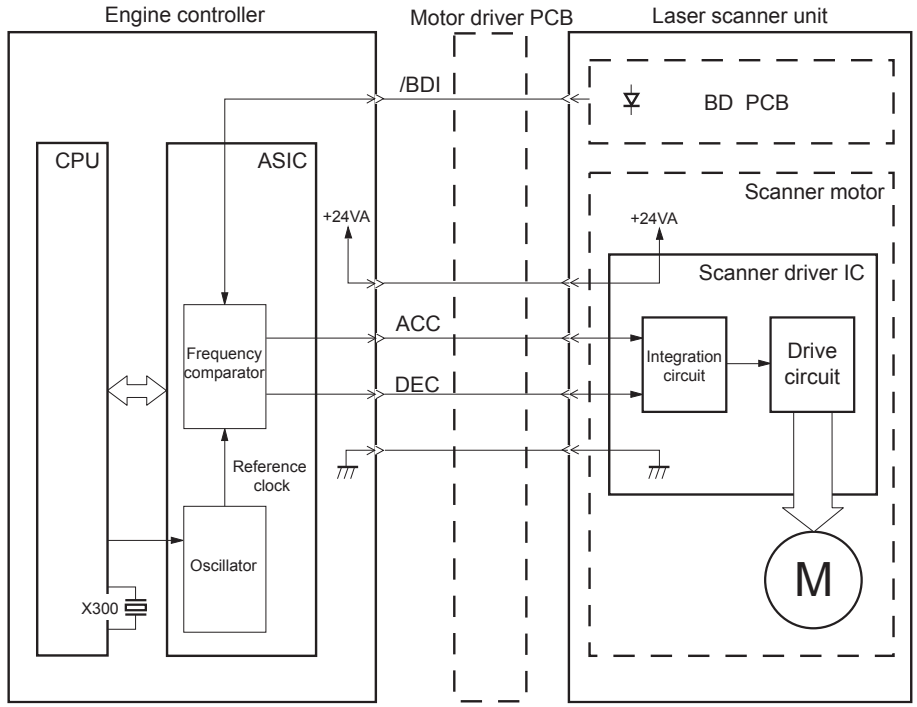
2. Line space APC

APC that is executed during printing. Laser intensity for one line is adjusted before writing one line.

Laser Scanner Motor Control

Overview

This is the control to rotate the scanner motor at a constant speed to emit the laser beam on the correct position on the photosensitive drum.
The following is the control circuit of the scanner motor.



F-2-15

The engine controller creates standard clock based on oscillation frequency of the oscillator (X300); the cycles of the standard clock is compared with that of BD input signal (/BDI) with a frequency comparator and the rotations of the scanner motor is monitored.
The engine controller sends the scanner motor acceleration signal (ACC) and scanner motor deceleration signal (DEC) to the scanner motor driver according to the detected rotation speed to control the rotation speed.

Scanner Motor Fault Detection

This is the detection of faults in the laser scanner unit.
When the laser scanner unit falls into either of the following status, the engine controller judges it as a fault in the laser scanner unit system and notices the status of fault to the main controller.
The operations of the host machine are stopped.

1. Fault in BD input
   At startup of the scanner, /BDI signal cannot be detected within 0.1 sec from the completion of forced acceleration of the scanner motor.
2. Fault in startup
   During activating the scanner motor at startup of the scanner, the motor rotation exceeds the specified range (98.3 to 101.7%).
3. Fault in control
   After startup of the scanner completes correctly, /BDI signal exceeds the specified value of cycle 2000 msec consecutive times.

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

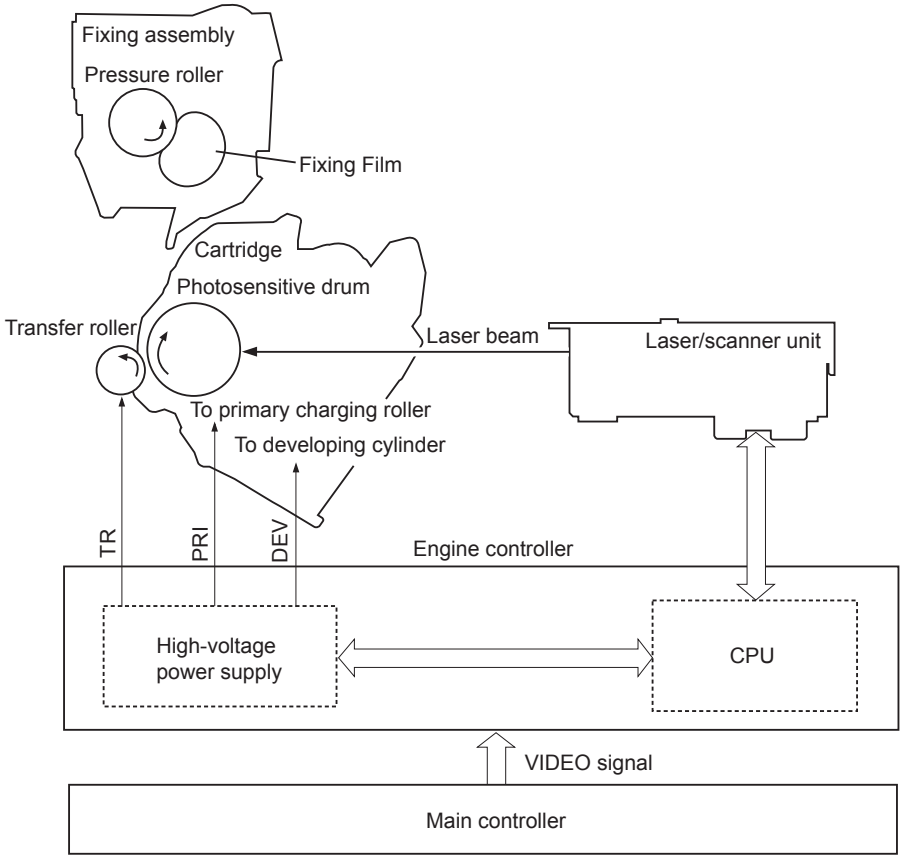
None.

Image Formation System

Overview/Configuration

Overview

The image formation system is the core of this equipment; it forms toner images on papers.
The image formation system is comprised of the following components.
The engine controller controls the laser scanner unit and high-voltage power supply circuit and forms images based on the video signals on papers.
The following are the details of print process for this equipment and the functions of image formation.

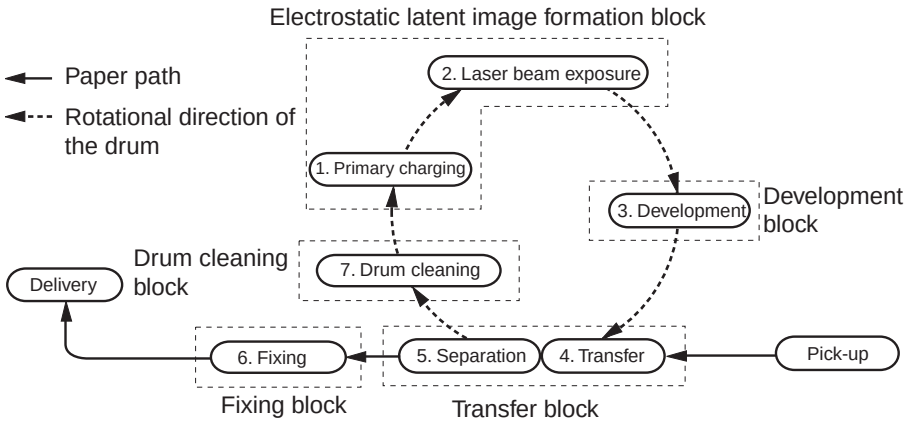


F-2-16

Print Process

This explains the basic process of the operations that a printer executes for image formation.
The print process of this equipment is divided largely into 5 blocks, 7 steps.
Toner images are formed on papers by executing the steps of each block in order.
The following are the blocks of print process and the steps.

1. Static latent image formation block
   Step 1: Primary charging
   Step 2: Laser beam exposure
2. Development block
   Step 3: Development
3. Transfer block
   Step 4: Transfer
   Step 5: Separation
4. Fixing block
   Step 6: Fixing
5. Drum cleaning block
   Step 7: Drum cleaning

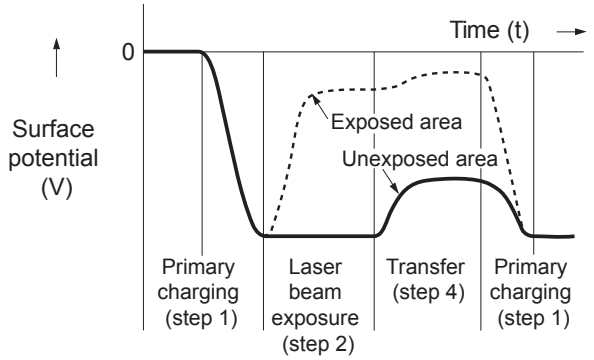


F-2-17

Static Latent Image Formation Block

This block is comprised of two steps and forms static latent images on the photosensitive drum.

When the final step of this block completes, negative charge remains at dark areas on the drum surface where laser beam has not been exposed, and negative charge is eliminated from bright areas on the drum surface with laser beam exposed. The images on the drum with negative charge are called static latent images because human eyes cannot detect them.

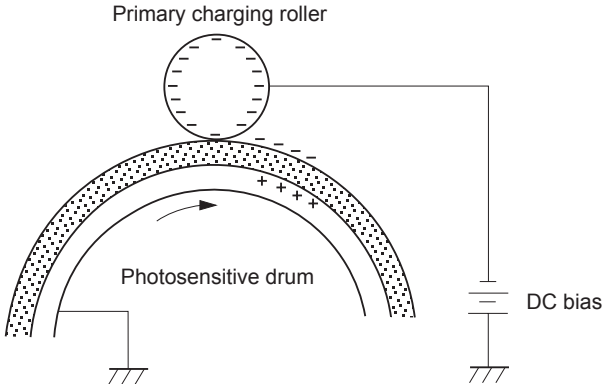


F-2-18

Step 1: Primary charging

For preparation of latent image formation, the surface of photosensitive drum is charged with even negative potential. In this primary charging, the charge is applied from the primary charging roller directly to the photosensitive drum.

DC bias is applied to the primary charging roller to maintain an even potential on the surface of the photosensitive drum.

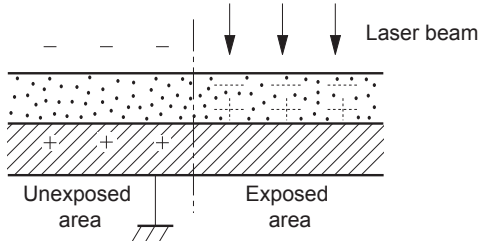


F-2-19

Step 2: Laser beam exposure

In this step, static latent images are formed on the photosensitive drum with laser beam.

When laser beams are scanned on the photosensitive drum negatively charged, bright areas lose their charges, eliminating negative potential on the surface of the photosensitive drum; on those portions, static latent images are formed.



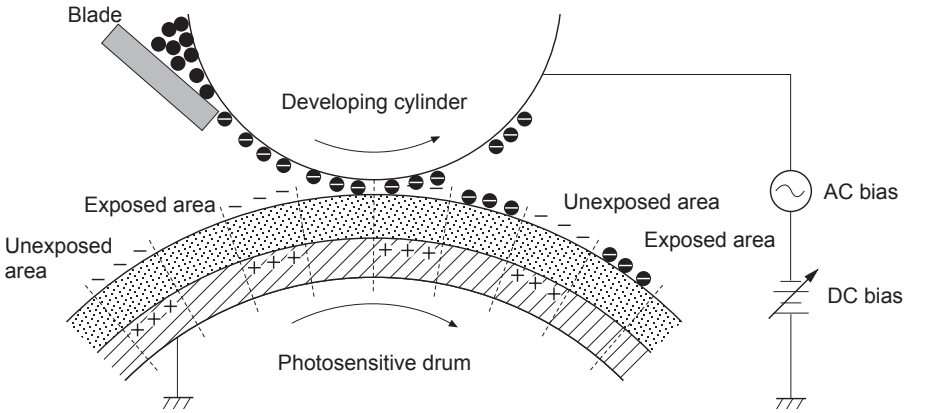
F-2-20

Development Block

This block is comprised of one step; it puts toners to the static latent images on the surface of the photosensitive drum and visualizes the images using toner projection development. The toner projection development makes the toner jump on the surface of the photosensitive drum and develops the images.
The toner (developer) used for this equipment is a one-component toner that comprises magnetic body and resin, etc.

Step 3: Development

Toner is affixed to static latent images on the surface of the photosensitive drum.
The toner is charged negatively by friction between the developing cylinder and the surface of the developing blade.
An area on the photosensitive drum exposed with laser beam has higher potential than the developing cylinder; the potential difference between the drum surface and the cylinder enables the toner to jump on the drum surface and makes them visible images.
AC bias superimposed with the development DC negative bias is applied to the developing cylinder.



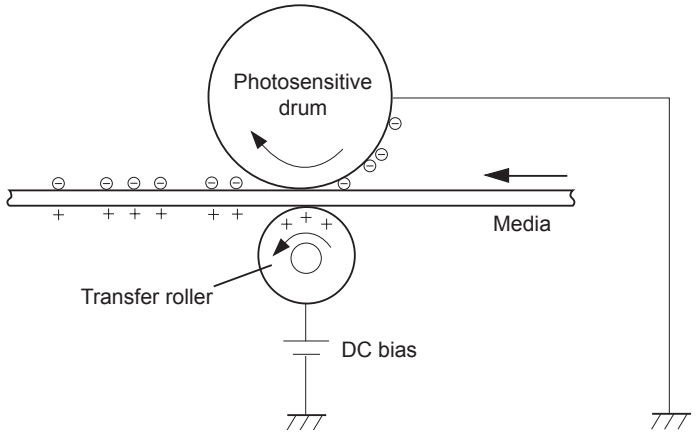
F-2-21

Transfer Block

This block is comprised of two steps; it transfers toner images on the surface of the photosensitive drum to papers.

Step 4: Transfer

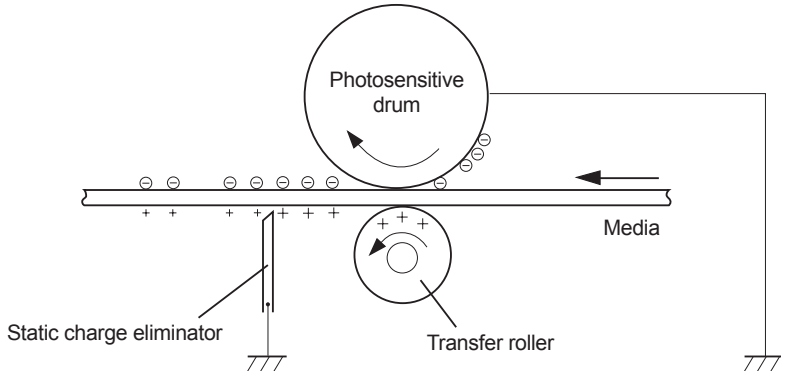
In this step, toner images on the photosensitive drum are transferred to papers.
This equipment applies DC positive bias to the transfer roller facing the photosensitive drum and charges papers positively. This enables toner negatively charged on the surface of the photosensitive drum to be transferred to papers.



F-2-22

Step 5: Separation

In this step, DC negative bias is applied to the static eliminator according to the elasticity of papers to separate the papers from the photosensitive drum. The static eliminator is used to stabilize the paper feed system (prevention of toner stray that appears as polka-dots on print images in a low-temperature, low-humidity environment), and neutralizes the electric charge at the back of papers.



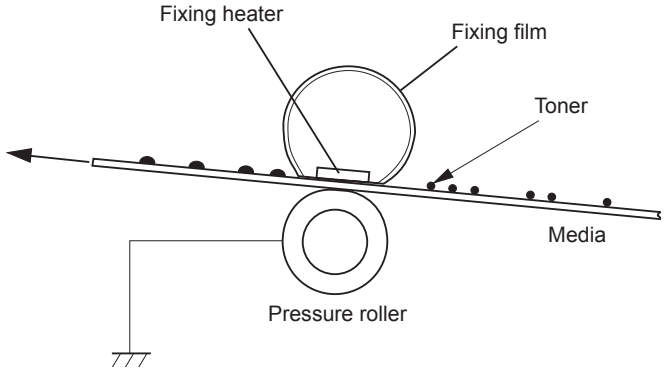
F-2-23

Fixing Block

This block applies pressure and heat to papers and the toner on them to fix toner images to the papers.

Step 6: Fixing

This step employs on-demand fixing that fixes toner images transferred to papers on the papers.



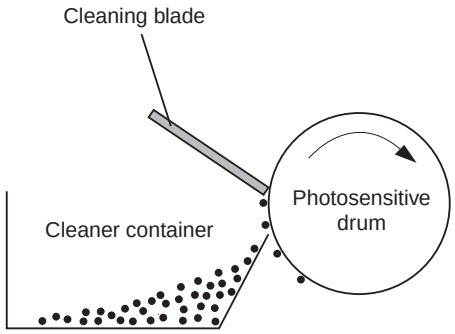
F-2-24

Drum Cleaning Block

The drum cleaning block removes the toner remained on the photosensitive drum.

Step 7: Drum cleaning

In this step, toner remained on the photosensitive drum is removed.
The cleaning blade scrapes the leftover toner on the surface of the photosensitive drum; the toner is collected into the cleaner container.
By implementing the above step, the surface of the photosensitive drum is cleaned.

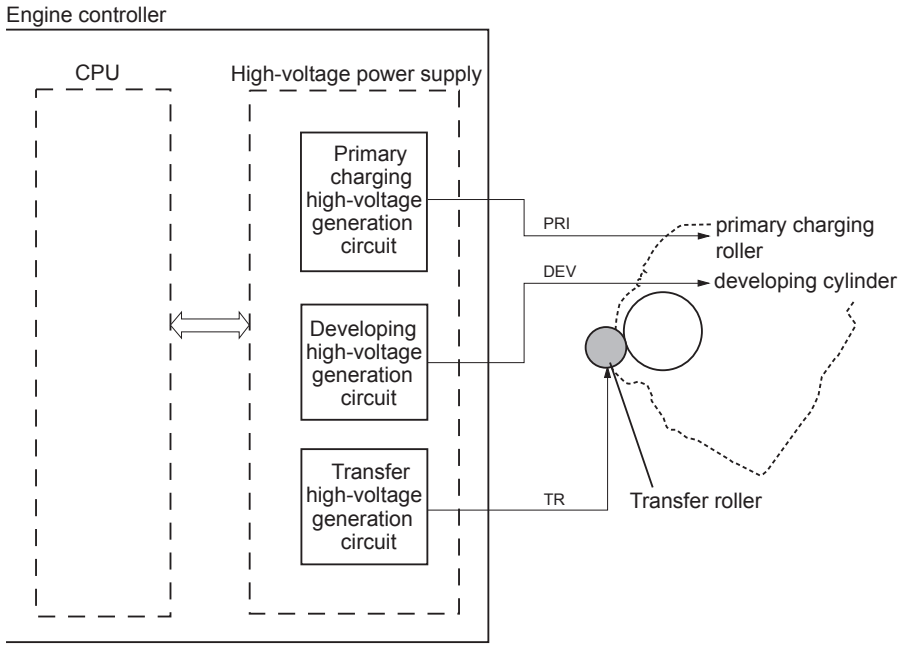


F-2-25

High-Voltage Control

Overview

This circuit is comprised of the circuits that apply biases to the primary charging roller, developing cylinder, transfer roller, and the fixing control circuit. The CPU of the engine controller controls the high-voltage power supply circuit to generate these biases. The fixing control circuit executes heater control of the fixing assembly according to the instruction by the CPU of the engine controller.
The following is the block diagram of this circuit.



F-2-26

Generating Primary Charging Bias

The primary charging bias (PRI) is a DC negative bias that is output to apply an even negative potential to the surface of the photosensitive drum. The primary charging high-voltage generating circuit in the high-voltage power supply circuit generates this bias.
The high-voltage power supply circuit applies the generated primary charging bias to the primary charging roller at a specified timing.
The primary charging bias varies in conjunction with the developing bias according to the information of image density sent from the main controller.

Generating Developing Bias

The developing bias is a DC negative bias that is output to affix toner to the static latent images formed on the photosensitive drum. This bias is a development DC and AC superimposed bias and generated by the development high-voltage generating circuit in the high-voltage power supply circuit.
The high-voltage power supply circuit applies the generated developing bias to the developing cylinder at a specified timing.
The developing bias varies in conjunction with the primary charging bias according to the information of image density sent from the main controller.

Generating Transfer Bias

Transfer bias (TR) is a bias that is output to transfer toner to papers. There are two types of bias; DC positive bias and DC negative bias, and generated by the transfer high-voltage generating circuit in the high-voltage power supply circuit. The DC positive bias is output at the time of toner transfer, and the DC negative bias at the time of cleaning the photosensitive drum.
The high-voltage power supply circuit applies the generated transfer bias to the transfer roller according to each print sequence.
Each print sequence is described below.

- Cleaning bias:
  The bias to move (clean) the toner attached to the transfer roller to the photosensitive drum at the time of warming up or last rotation sequence.
  The transfer negative bias is applied to the transfer roller.

- Paper intervals bias:
  The bias to prevent the toner remained on the photosensitive drum from attaching to the transfer roller at paper intervals during continuous printing. A minor transfer positive bias is applied to the transfer roller.

- Print bias:
  The bias to transfer the toner on the surface of the photosensitive drum to papers at the time of print sequence. The transfer positive bias is applied to the transfer roller.

Toner Cartridge

Toner Level Detection

MF4890dw/MF4880dw/MF4870dn/MF4780w/MF4770n/MF4750/L418S/L410/L190

Toner level is detected by the Toner Sensor (Magnetic Sensor). When a Toner Cartridge is installed, the Toner Sensor contacts with the lower side of the cartridge and it converts the magnetic changes in the cartridge into voltage.
Then, CPU of engine controller PCB compares the output voltage of the Toner Sensor with the reference value to detect the toner level.
Toner level detection is performed at startup of the Main Motor.
The toner level detection sequence starts after the Main Motor is started up and stabilization time (200msec) has passed. The toner level detection sequence continues until the Main Motor stops. There are following 2 types of toner level detection sequence: sequence at warm-up rotation when opening door or turning ON the power, and sequence at normal rotation.

1)Sequence at normal rotation

From the start of detection, detection value of magnetic toner is sampled for every 5 msec. Remaining toner level is judged based on the average value and ripple value (V Peak to Peak) of the Magnetic Sensor output while the Stirring Stick makes a full turn.

Time the Stirring Stick makes a full turn and number of samples
In case the process speed is 150mm/sec, time is 1.9 sec (380 samples).
In case the process speed is 75mm/sec, time is 3.8 sec (760 samples).

2)Sequence at warm-up rotation

Conditions of sampling and remaining toner level judgment are the same as those mentioned above.
However, in the case that toner Low is detected even at once during warm-up rotation sequence, toner Low is remained to be displayed.

MF4830d/MF4820d/D530/MF4730/MF4720w/MF4712/MF4710

This equipment has no function of toner level detection.

Specification of Toner level display

Toner level can be checked by pressing Status Monitor/Cancel key and selecting toner level. Display patterns are as follows: OK, Low, and Nearly Out. See the table below for the display pattern.

1)OK: Toner level** status is 10% or higher and 100% or less, or toner level unidentified** status

2)Low: Toner level** status is 5% or higher and less than 10%.

3)Nearly Out: Toner level** status is less than 5%.

* Toner level unidentified: Status until the engine determines the toner level.
** Toner level: Reference value (%) (which varies depending on the stirring condition of toner) is displayed.

As for the toner stop processing according to job types, follow the list of stop processing according to toner level.

In the following cases, status of toner level is considered as unidentified, and OK (100%) is displayed on the panel.

- After power-on
- Right after recovery from engine sleep mode
- During opening/closing the door
- When the cartridge is not installed

Operation when toner level is Low/Nearly Out

Operation when toner level is Low or Nearly Out is as follows. If another job which can be processed is introduced while there is a job which is stopped due to "Nearly Out", the job is output by overtaking the preceding job.

List of stop processing according to toner level

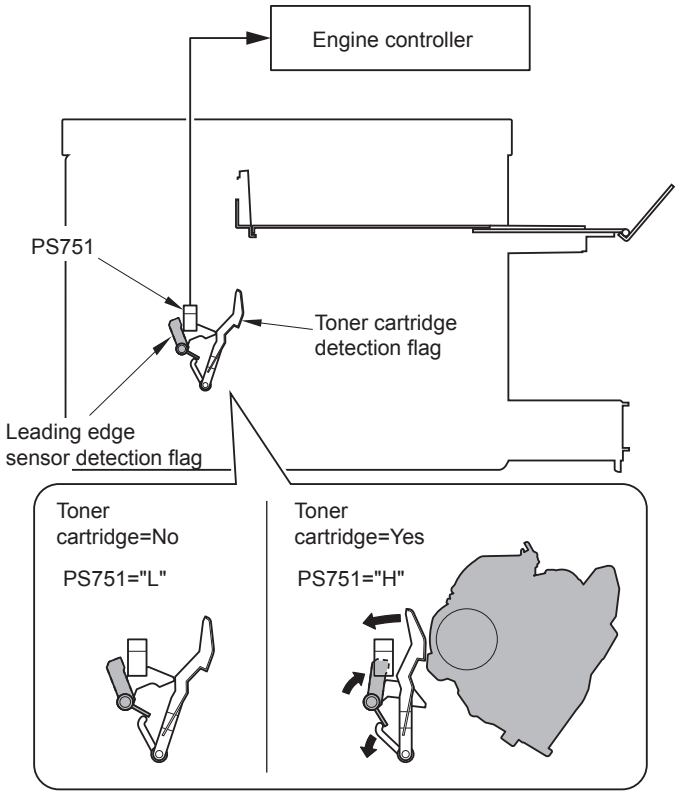
Copy		PDL		Receive print		Manual report		Auto report	
Low	Nearly Out	Low	Nearly Out	Low	Nearly Out	Low	Nearly Out	Low	Nearly Out
○	○	○	○	○	-	○	○	○	-

T-2-4

○: Continues
-: Page output is stopped immediately after detection, but it can be continued by user mode.

Toner Cartridge Absence/Presence Detection

The engine controller detects the position of the Toner cartridge detection flag to judge the absence/presence of the Toner cartridge.
At the time of turning on the power or closing the upper cover, the engine controller judges the position of the Toner cartridge flag based on the output result of the leading edge sensor (PS751).
When the output result of the leading edge sensor (PS751) is L, it is judged that the Toner cartridge is absent; If being H, it is judged that the Toner cartridge is present.



F-2-27

The leading edge sensor performs both this detection and paper feed detection. Therefore, the engine controller cannot make a judgment of 'Toner cartridge absent' or 'jam occurrence' when jam occurs.
The engine controller judges this case as 'Toner cartridge absent' and notifies it to the main controller.

If jam occurs when 'Toner cartridge absent' is detected, check if there is a fault in the leading edge sensor and the detection flag.

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

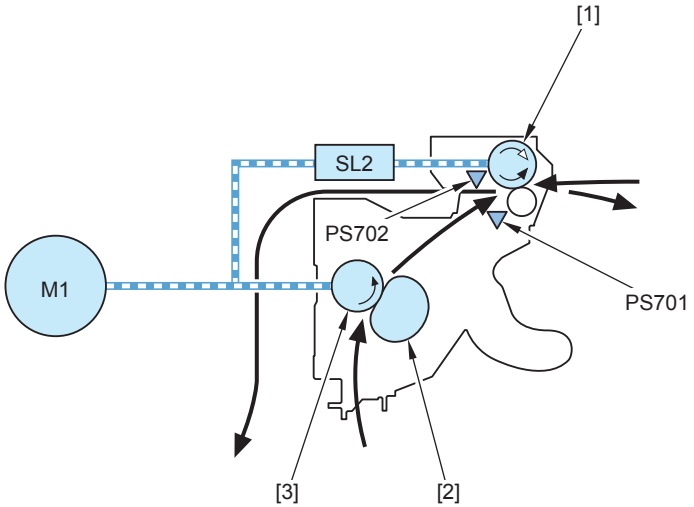
None.

Fixing System

Overview/Configuration

Overview

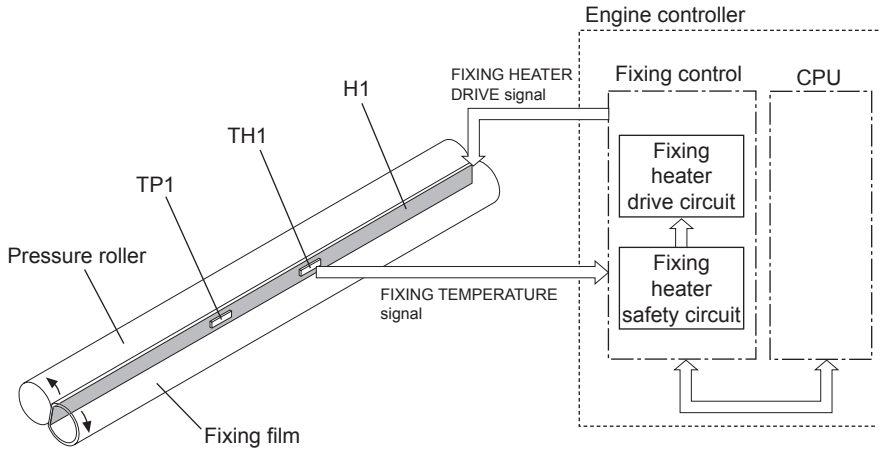
Fixing/delivery system consists of the fixing film unit, pressure roller and delivery roller etc.
These rollers are driven by the main motor (M1).
The paper that toner is transferred to are heated by the fixing heater of the fixing film unit and pressured by the pressure roller.
The paper that toner is fused on is delivered from the fixing assembly, detected by the fixing delivery sensor (PS701) and the paper width sensor (PS702), and then delivered to the delivery tray by the delivery roller.



F-2-28

[1]	Delivery Roller
[2]	Fixing Film Unit
[3]	Fixing Pressure Roller
PS701	Fixing delivery sensor
PS702	Paper width sensor
M1	Main motor

Main Parts of Fixing assembly



F-2-29

H1	: Fixing heater	For heating the fixing film (ceramic heater)	1 pc
TH1	: Main thermistor	For controlling the fixing heater temperature (contact type thermistor)	1 pc
TP1	: Temperature fuse	For detecting the fixing heater overheat (non-contact type fuse) When the heater overheats, the fuse melts to cut the power supply to the heater.	1 pc

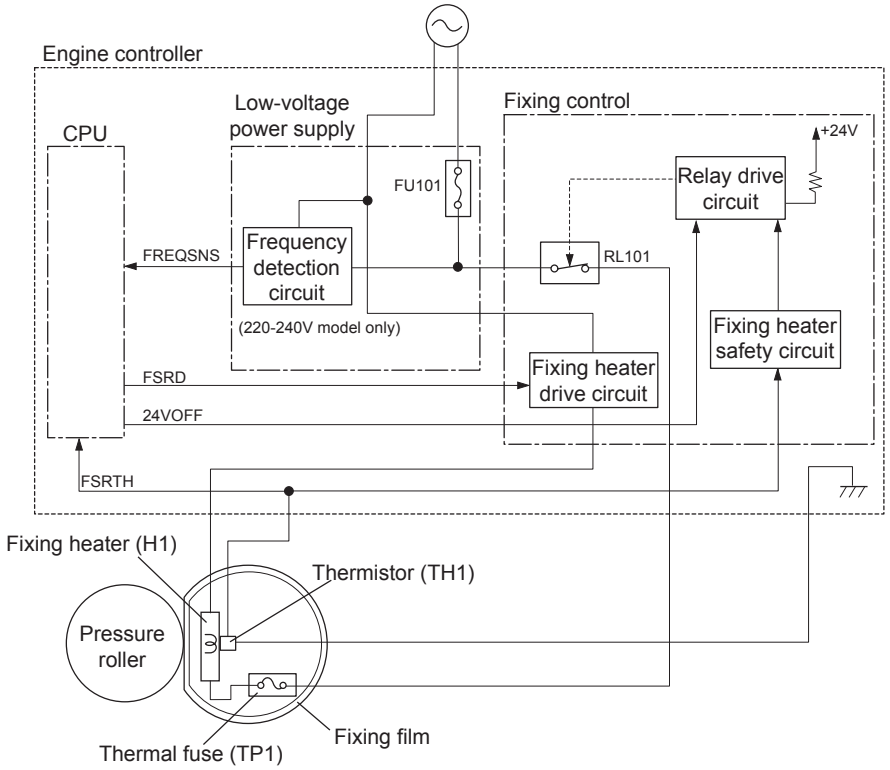
T-2-5

Various Control Mechanisms

Fixing Temperature Control

Heater Temperature Control

The heater temperature control is to keep the fixing heater in the fixing film unit to the specified temperature.
The engine controller monitors the fixing heater temperature detection signal (FSRTH) and outputs the fixing heater drive signal (FSRD) according to the detected temperature.
The fixing heater drive PCB controls the fixing heater according to this signal to keep the fixing heater temperature within the target values.



F-2-30

There are 11 types of target fixing temperature depending on the fixing mode.
These types are according to the paper type settings and resolution settings on a driver.

Protective Functions

Protective Function of fixing assembly

Host machine carries the following 3 functions to prevent the fixing heater from overheating.

1) Protective function by CPU
CPU of engine controller monitors the thermistor (TH1) temperature consistently.
When TH1 reaches approx 220 deg C, CPU determines that the fixing heater is overheating and stops the fixing heater drive signal (FSRD) output and also turns OFF relays to shut the power supply to fixing heater.

2) Protection function by fixing heater safety circuit
Fixing heater safety circuit monitors the thermistor (TH1) temperature consistently.
When TH1 reaches approx 235 deg C, it determines that the fixing heater is overheating and the fixing heater safety circuit turns OFF the relay drive circuit to shut the power supply to the fixing heater.

3) Protection function by temperature fuse (TP1)
When the fixing heater temperature rises abnormally and temperature fuse (TP1) temperature reaches approx 226 deg C, TP1 opens to shut the power supply to the fixing heater.

Failure detection

With this machine, 8 types of failure detection are available.

1) Initial startup failure detection
When temperature of the Fixing Assembly does not exceed 50 deg C within 1.48 sec after the start of temperature control performed at initial rotation, it is judged as initial startup failure.

2) Initial Thermistor open detection
When temperature of the Fixing Assembly does not exceed 35 deg C within 1.48 sec after the start of temperature control at warm-up rotation temperature control or at cleaning mode, it is judged as Thermistor open failure.

3) Short circuit of Thermistor/abnormal high temperature detection
When temperature of the Fixing Assembly is 220 deg C or higher for 30 consecutive times

by monitoring the temperature for every 5 msec, it is judged as Thermistor short circuit failure. In addition, this function also doubles as abnormal high temperature detection function of the Fixing Assembly.

4) Abnormal low temperature detection
After temperature of the Fixing Assembly exceeds 50 deg C at least once, monitor temperature of the Thermistor for every 5 msec. It is judged as heater abnormal low temperature when the following condition is detected 240 consecutive times: the temperature is 100 deg C or lower while paper is at fixing nip, or it is 55 deg C or lower during paper interval temperature control or at cleaning mode.

5) Thermistor open detection
After temperature of the Fixing Assembly exceeds 50 deg C, monitor temperature of the Thermistor for every 5 msec. When it is detected that the temperature is lower than 20 deg C for 6 consecutive times, it is judged as Thermistor open failure.

6) Startup failure detection
If temperature of the Fixing Assembly is 100 deg C or higher when the machine becomes in pickup enabled state after entering fixing low voltage inlet sequence, it is judged as startup failure.

7) Thermistor low temperature detection 2)
Temperature of the Thermistor is monitored for every 200 msec when paper is at fixing nip during the Fixing Assembly control. When the temperature is lower than 135 deg C (120 deg C), increase the value of low temperature detection counter by 1 (+1). When it is 135 deg C (120 deg C) or higher, decrease the value by 1 (-1). When the value of low temperature counter becomes +150, it is judged as Thermistor low temperature failure. The default and minimum value of low temperature detection counter is 0.

8) Frequency detection circuit error (230V models only)
When frequency measurement is not completed within 3255 msec after the completion of previous frequency measurement, it is judged as frequency detection circuit error.

Processing after failure detection

If the Main Motor is in driving state when Fixing Assembly failure is detected, rotation of the motor is maintained for 300 msec after the machine moves in Fixing Assembly failure state. Then, drive systems (Main Motor system, Laser/Scanner system, high voltage system, and fixing system) are stopped immediately and the machine moves in failure state.
If the Main Motor is not in driving state, drive systems are stopped immediately and the machine moves in failure state.

Other Functions

Throughput Down Control

This machine performs the throughput down control that extends the paper interval and lower the printing speed to prevent the edge of the fixing heater from overheating at continuous printing of small paper (the paper with narrow width) and to prevent the fixing heater unit from overheating at high-volume continuous printing.
An extended paper interval lowers the fixing heater temperature between the papers, preventing the edge of the roller of fixing assembly and the delivery unit from overheating.
This control has the following 6 modes and the operation sequence differs depending on each modes.

	Paper Size				
Paper Type	Large-sized	Small-sized or Narrow	Long and Narrow		16K
	Length: 271 mm or more Width: 190 mm or more	Length: less than 271 mm (Width: less than 190 mm)	Length: less than 313 mm Width: less than 190 mm	Length: 313 mm or more Width: less than 190 mm	Length: 270 +/- 15 mm
Plain Paper	25 (Full speed) -> 12 (Half speed) *1	(2)	3 ppm (half speed)	1 ppm (half speed) *2	(5)
Plain Paper L	25 (Full speed) -> 12 (Half speed) *1	(2)	3 ppm (half speed)	1 ppm (half speed) *2	(5)
Heavy Paper	-	(1)	3 ppm (half speed)	1 ppm (half speed) *2	(6)
Rough Paper 1	-	(1)	3 ppm (half speed)	1 ppm (half speed) *2	(6)
Rough Paper 2	-	(1)	3 ppm (half speed)	1 ppm (half speed) *2	(6)
Label Paper	-	-	-	-	-
Transparency	-	-	-	-	-
Postcard	(4)	(4)	-	-	-
Envelope	-	(1)	-	-	-

T-2-6

*1 : When the number of fed paper reaches 270 after starting from Cold state, the speed changes from full speed to half speed, and the throughput changes from 25ppm to 12ppm. The number of fed paper at which the throughput changes from full speed to half speed may vary according to temperature control of the Fixing Assembly.
*2 : Measures against wrinkle and curl.

Number of Fed Sheets	(1)	(2)	(3)	(4)
	Half speed	Half speed	Half speed	Half speed
1 to 2	11 ppm	12 ppm	—	7 ppm
3	9 ppm	12 ppm	—	7 ppm
4 to 5	9 ppm	12 ppm	—	5 ppm
6 to 10	8 ppm	11 ppm	—	4 ppm
11 to 15	6 ppm	11 ppm	—	4 ppm
16 to 20	6 ppm	8 ppm	—	4 ppm
21 to 30	6 ppm	8 ppm	—	4 ppm
31 to 40	4 ppm	7 ppm	—	4 ppm
41 to 75	4 ppm	6 ppm	—	4 ppm
From 76	4 ppm	6 ppm	—	4 ppm

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Number of Fed Sheets	(5)	(6)
	Full speed	Half speed
1 to 55	20 ppm	—
56 to 110	16 ppm	—
111 to 120	13 ppm	—
121 to 150	11 ppm	12 ppm
151 to 250	10 ppm	10 ppm
From 251	8 ppm	8 ppm

T-2-8

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

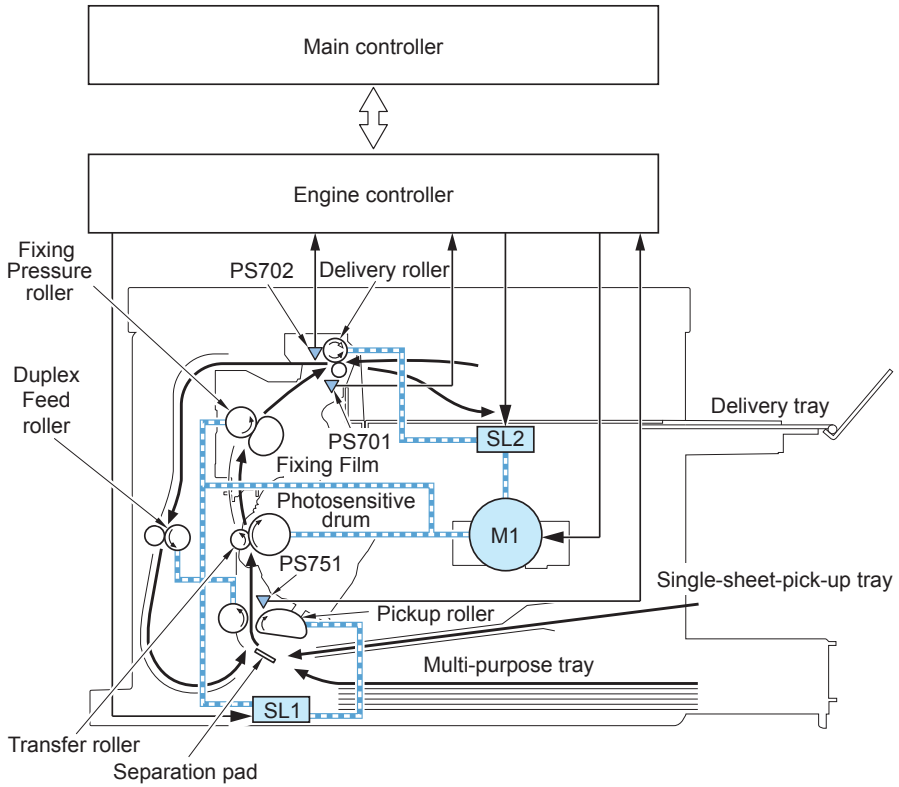
None.

Pickup And Feeding System

Overview

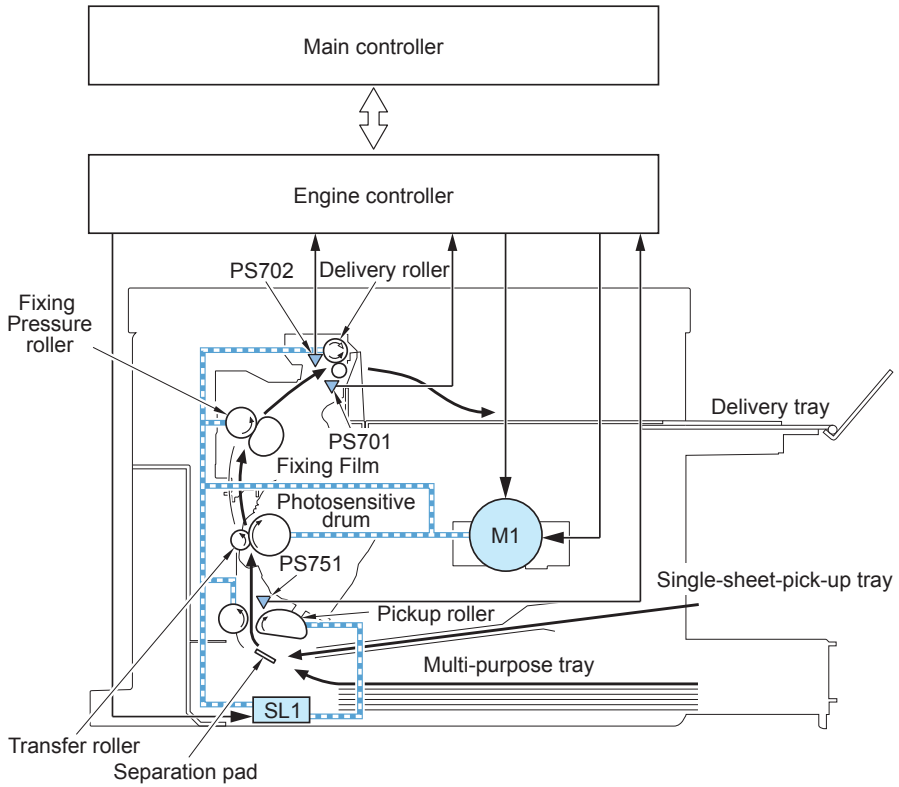
Overview

Duplex Feed



F-2-31

Single Feed



F-2-32

The pickup and feeding system executes pickup and feeding of papers and is composed of the main motor, solenoid, and rollers.
In this equipment, pickup from the pickup tray and manual feed tray is available. There is only a face-down delivery.
Papers set on the pickup tray and manual feed tray are fed by the same pickup roller. The papers are fed to the photosensitive drum, the transfer charging roller, the fixing sleeve unit, the pressure roller and then to delivery roller in this order; and then they are delivered to the delivery tray.
The feeding route of papers has three photointerrupters; the leading edge sensor (PS801), the fixing delivery sensor (PS701), the paper width sensor (PS702). They detect arrival and passing of papers.
If a paper does not reach or pass through each sensor within a specified time, the engine controller judges this status as jam and notices the jam occurrence to the main controller.

PS701: Fixing delivery sensor
PS702: Paper width sensor
PS801: Leading edge sensor
M1: Main motor
SL1: Pickup solenoid
SL2: Duplex Reverse solenoid

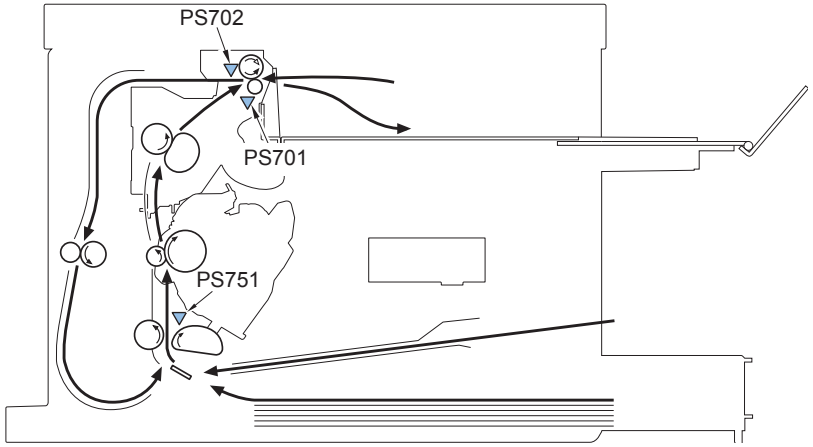
Detecting Jams

Jam Detection Outline

Overview

The following sensors are installed to detect absence/presence of papers and whether papers are correctly fed.

- Fixing delivery sensor (PS701)
- Paper width sensor (PS702)
- Leading edge sensor (PS751)



F-2-33

Whether jam occurs or not is judged according to whether a paper is absent/present on the sensor at the check timing that has been stored in the CPU of the engine controller.
When the engine controller judged that jam has occurred, print operation is stopped and jam occurrence is noticed to the main controller.

Delay Jams

Delivery Delay Jam

There are 3 types of delivery delay jam detections as follows:

A. When there is no preceding paper

B. When there is a preceding paper 1

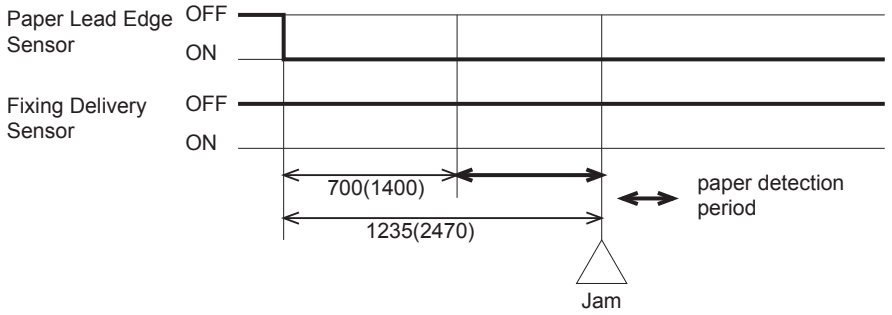
In the case of narrow paper interval with the preceding paper

C. When there is a preceding paper 2

In the case of wide paper interval with the preceding paper

A. When there is no preceding paper

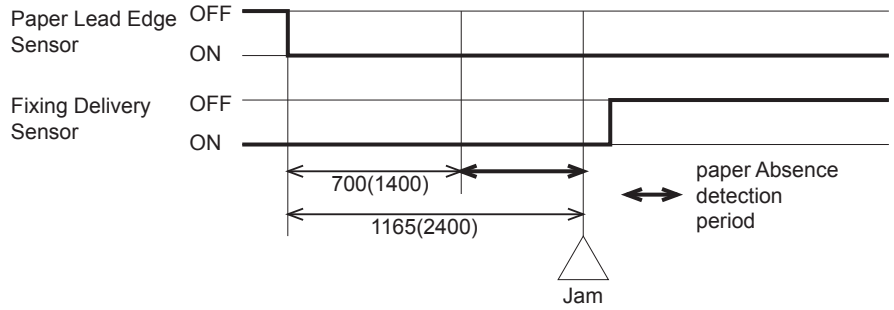
If the delivery sensor (PS701)detects no paper from 700 (1400) ms to 1235 (2470) ms after detection by the TOP sensor (PS751), a delivery delay jam is determined.



F-2-34

Note :
"700 (1400) ms" was calculated from the distance of 104.8 mm from the leading edge of the TOP sensor (PS751) to the fixing nip. "1235 (2470) ms" was calculated from the distance of 135.5 mm from the leading edge of the TOP sensor (PS751) to that of the delivery sensor (PS701) and the delivery delay jam margin of 50 mm. Since the distance from the fixing nip to the delivery sensor (PS701) is 30.7 mm, the length of wrapping from the leading edge will be 80.7 mm. Since one lap of the film is 18.2π (57.2) mm, the length of wrapping is more than one lap. Considering paper looping, sensor accuracy, and thick-paper delivery, however, the value cannot be made smaller.

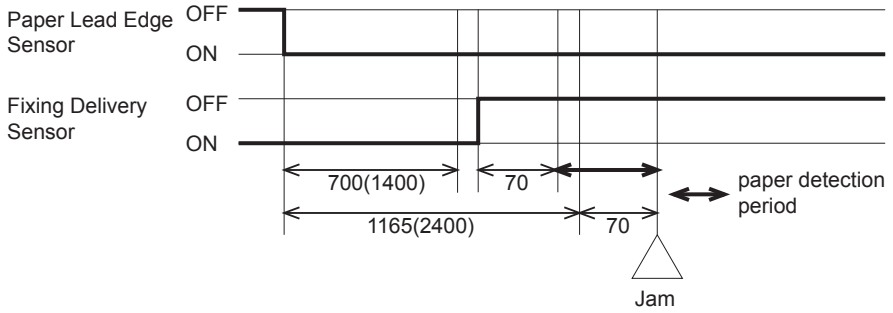
B. When there is a preceding paper 1



F-2-35

When there is preceding paper at the delivery sensor (PS701) 700 (1400) ms after paper detection by the TOP sensor (PS751) and the delivery sensor (PS701) does not detect the no-paper status until 1165 (2400) ms later, a delivery delay jam is determined.

C. When there is a preceding paper 2



F-2-36

When there is preceding paper at the delivery sensor (PS701) 700 (1400) ms after paper detection by the TOP sensor (PS751) and the delivery sensor (PS701) detects the no-paper status by 1165 (2400) ms later, a delivery delay jam is determined only if the delivery sensor (PS701) does not detect paper in the period from 70 ms after no paper detection by the delivery sensor (PS701) until 1235 (2470) ms after paper detection by the TOP sensor (PS751).

Note :
"1165 (2400) ms" is the balance of subtracting a margin of 70 ms from the delivery delay jam detection end time of 1235 (2470) ms by considering chattering from the trailing edge of the preceding paper is at the delivery sensor until the leading edge of the next paper is detected.

Reversal Delay Jam

A reversal delay jam is determined when the Fixing Delivery Sensor (PS701) detects absence of paper at the time of 440 msec elapsed after the start of reversal operation.

Note :
The jam margin is 30 mm.
The sum of the distance from the reversing position to the leading edge detection position of the delivery sensor (PS701) plus the jam margin of 30 mm is equal to 520 ms at full speed and 1040 ms at half speed in terms of time. From the times, the delivery sensor (PS701) detection time of 30 ms is subtracted to calculate the jam judgment time.

Re-pickup Delay Jam

After the start of reversal, if the TOP sensor (PS751) does not detect paper within 2445 (4895) ms after paper detection by the delivery sensor (PS701), a re-pickup delay jam is determined.

Note :
The jam margin is 90 mm. This margin is set long because the paper path after reversal between paper detection by the delivery sensor (PS701) and that by the TOP sensor (PS751) is long, the paper path length depends on the paper quality, and the stop time at the registration shutter prepared on the path for skew correction depends on the delivered paper.

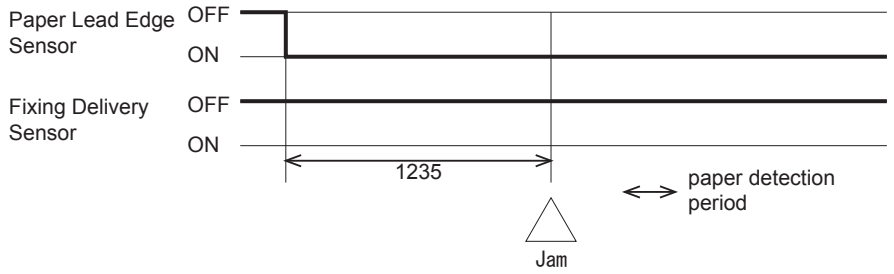
Delivery Delay Jam during auto delivery

A delivery delay jam is determined if the Paper Lead Edge Sensor (PS751) detects presence of paper and the Fixing Delivery Sensor (PS701) detects absence of paper at the time of 1115 msec elapsed after the start of auto delivery.

Note :
The auto delivery start timing is when the scanner stops.

Delivery Delay during cleaning

A delivery delay jam is determined if the Fixing Delivery Sensor (PS701) fails to detect presence of paper within 1235 msec since the Paper Lead Edge Sensor (PS751) detected presence of paper.



F-2-37

Multi-purpose tray pickup delay jam

When the multi-purpose tray (MPT) is specified as the paper source and paper is at the multi-purpose tray sensor, a feed delay jam is determined if the TOP sensor (PS751) does not detect fed paper with 1370 ms after the start of paper feed from the multi-purpose tray.
When the specified paper source is MPT, no jam status is output but the MPT no-paper status of the video interface.

Stationary Jams

Pickup Stationary Jam

Without pre-feed, a feed stationary jam is determined if the TOP sensor (PS751) cannot detect the trailing edge of paper within 3960 (7920) ms after the leading edge is detected by the TOP sensor (PS751).
With pre-feed, a feed stationary jam is determined if the TOP sensor (PS751) cannot detect the trailing edge of paper within 4740 (9480) ms after the leading edge is detected by the TOP sensor (PS751).

Note :
"4740 ms" is the time equivalent of two LGL sheets. If LGL sheets are fed after A4-size standard continuous printing at pre-feed, the second LGL sheet may be fed as an A4-size standard sheet and therefore two LGL sheets may be fed almost with no break. To prevent this from stopping the machine by a jam, the feed stationary jam detection time during pre-feed is set to 4740 ms at full speed.

Delivery Stationary Jam

The delivery sensor (PS701) is monitored for 265 (530) ms from 715 (1430) ms after no-paper detection by the TOP sensor (PS751), a delivery stationary jam is determined.

Note :
The margin is set to 20 mm because paper may spring up.

Reversal Stationary Jam

After the start of reversal, if the delivery sensor (PS701) does not detect the no-paper status within 2570 (5140) ms after paper detection, a reverse stationary jam is determined.

Note :
This jam is determined if the delivery sensor (PS701) keeps detecting sensor for the time of delivering LEGAL + 30 mm.

Pickup Stationary Jam during auto delivery

A pickup stationary jam is determined if the Paper Lead Edge Sensor (PS751) detects presence of paper at the time of 1115 msec elapsed after the start of auto delivery and then the Paper Lead Edge Sensor (PS751) detects presence of paper after the paper continued to be fed for 2730 msec.

Delivery Stationary Jam during auto delivery

If there is no paper at the TOP sensor (PS751) 1235 (2470) ms after the start of auto delivery and there is paper at the delivery sensor (PS701) after further paper delivery of 980 (1965) ms, a delivery stationary jam is determined.
If there is paper at the TOP sensor (PS751) 1235 (2470) ms after the start of auto delivery and there is paper at the delivery sensor (PS701) after further paper delivery of 3075 (7410) ms, a delivery stationary jam is determined.

Delivery Stationary Jam during cleaning

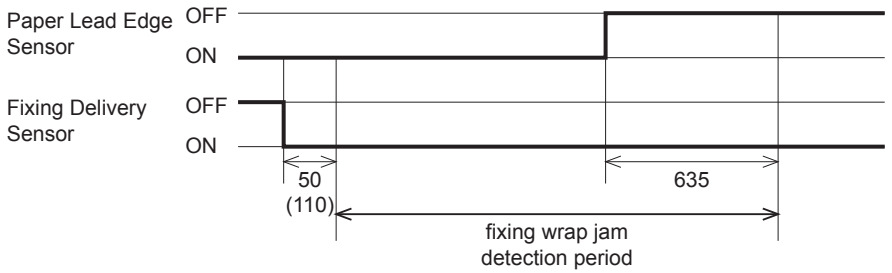
A delivery stationary jam is determined if the Fixing Delivery Sensor (PS701) fails to detect absence of paper within 2535 msec since the Main Motor started rotating after the cleaning step.

Delivery Stationary Jam during warm-up rotation

If the delivery sensor (PS701) detects paper during warm-up rotation, a delivery stationary jam is determined.

Other Jams

Fixing Wrap Jam



F-2-38

A fixing wrap jam is determined if the Fixing Delivery Sensor (PS701) detects absence of paper between the time of 50 msec after the Fixing Delivery Sensor (PS701) detected presence of paper and the time of 635 msec after the Paper Lead Edge Sensor (PS751) detected absence of paper.

Note :
The leading edge detection margin is 8 mm and the trailing edge detection margin is 20 mm. The leading edge margin is set to prevent the erroneous detection of a wrapping jam during chattering at paper entry. The trailing edge margin is set long because the detection time is not stable due to paper springing or other.

Initial Paper Jam during printing

An initial paper jam is determined if either the Fixing Delivery Sensor (PS701) or the Paper Width Sensor (PS702) detects presence of paper immediately before the Print Main Motor started its rotation.

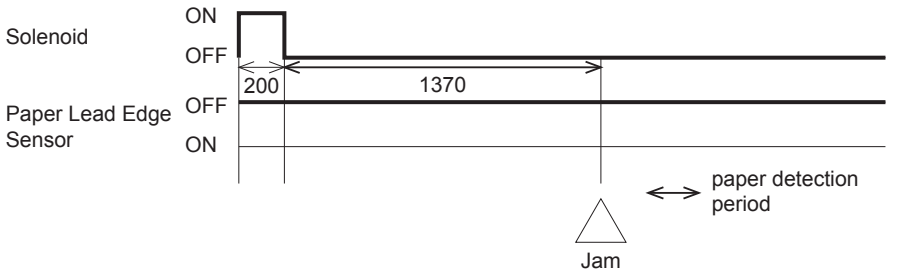
Door Open Jam

A door open jam is determined when printing is interrupted due to the door open detection during printing while there is paper at the Paper Lead Edge Sensor (PS751) or the Fixing Delivery Sensor (PS702). The status value is retained if any jam has been already reported to the jam status.

Initial paper presence Jam during warm-up rotation

If either the delivery sensor (PS701) or the paper width sensor (PS702) detects paper at the start of warm-up rotation, an initial paper presence jam is determined.

No-paper detection during cleaning



F-2-39

If the TOP sensor (PS751) does not detect paper for 1370 ms from 200 ms after the start of paper feed, the no-paper status is determined.

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.

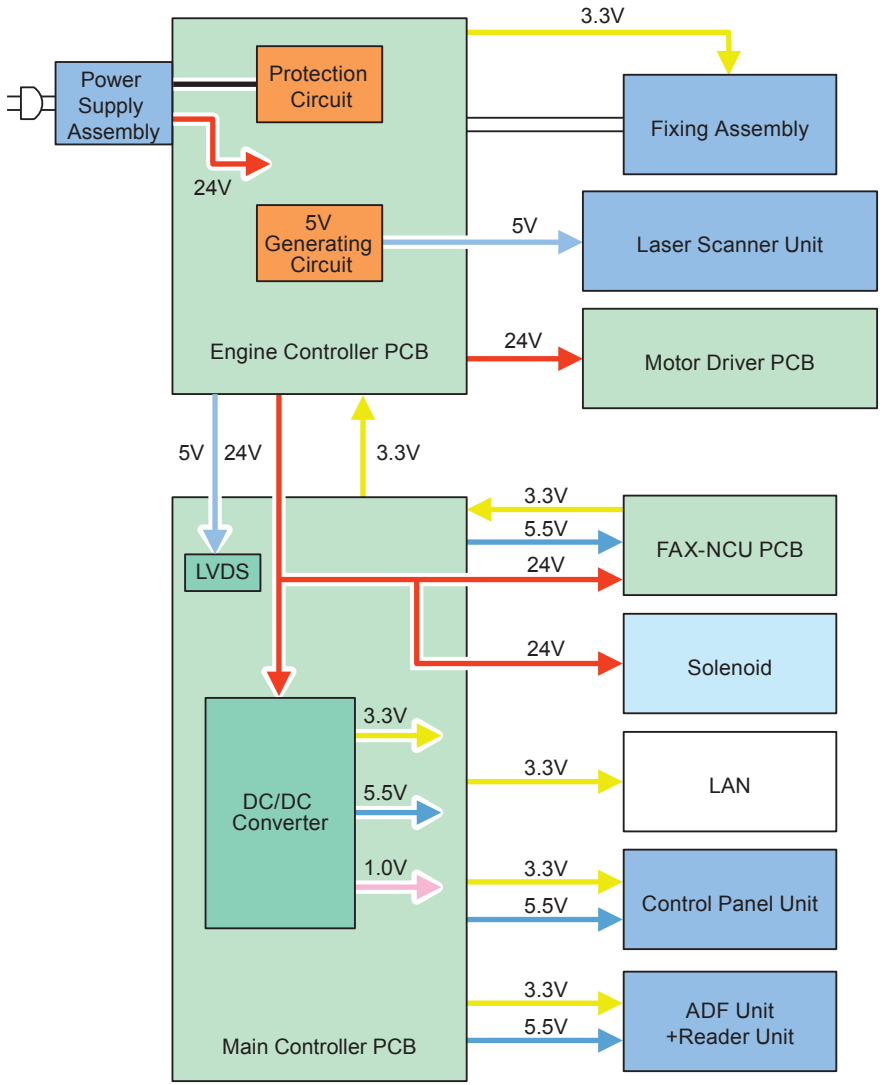
Notes on service works

None.

External And Controls System

Power Supply

Power Supply



F-2-40

Protective Functions

Power protective function

Low voltage power circuit carries the overcurrent preventive function against and overvoltage preventive function that block the voltage output automatically to prevent the power circuit brokerage when the overcurrent or overvoltage occur due to load errors such as short circuit etc.

Thus, when the DC power cannot be output from the low voltage circuit, the protective function against overcurrent or overvoltage may be working. Since the secondary SW is used as the power SW, the power supply cord needs to be disconnected when fixing a trouble on the load side.

Also the circuit carries the 2 fuses (FU201, FU202) as a preventive function (see note 2). The fuses blow to block the power supply when overcurrent occurs in AC line.

⚠

To reset the power supply after protective function activation, leave it unplugged for 2 minutes before plugging it in and turning it on.

Safety function

The host machine equips the function of stopping 24V of fixing assembly and the high voltage power unit to avoid users and engineers from getting burned or electric shock.

When the cartridge door is opened, the interlock switch (SW501) is turned off and 24V supplied to fixing assembly and the high voltage power unit is shut.

Engine controller CPU determines the door open when each interlock switch is turned OFF.

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

None.

Periodical Services

- Periodically Replaced Parts
- Consumables
- Periodical Service
- Cleaning

Periodically Replaced Parts

Periodically Replaced Parts

There is no periodically replaced part with this machine.

Consumables

Consumables

There is no consumable with this machine.

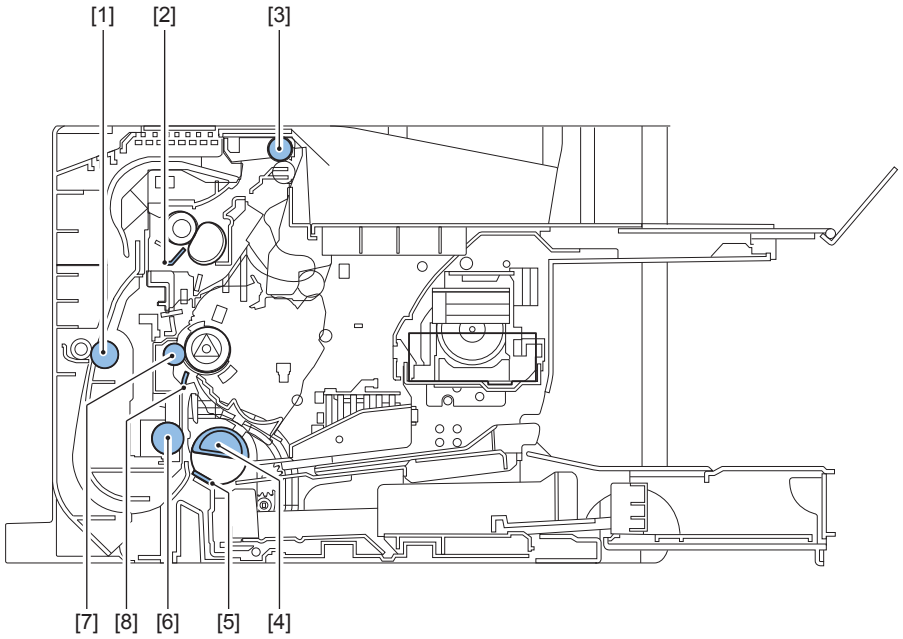
Periodical Service

Scheduled Servicing

There is no portion that requires schedule servicing in this equipment.

Cleaning

Printer



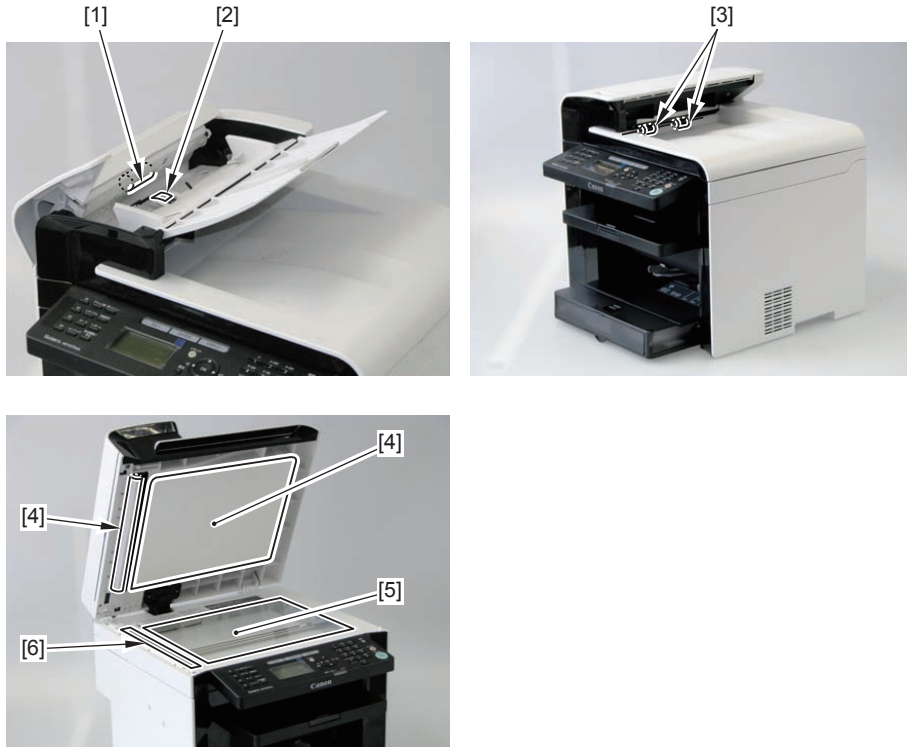
F-3-1

Cleaning parts		Procedure
1	Duplex Feed Roller	Clean it with a dry lint-free paper.
2	Fixing inlet guide	Clean it with a dry lint-free paper.
3	Delivery Roller	Clean it with a dry lint-free paper.
4	Pickup Roller	Clean it with a dry lint-free paper.
5	Separation Pad	Clean the rubber part with a lint-free paper.
6	Feed Roller	Clean it with a dry lint-free paper.
7	Transfer Roller	Basically, do not touch it with your hands or clean it. When cleaning is absolutely necessary, clean with a dry lint-free paper. Take care not to touch the roller and let solvents or oils be removed.
8	Static eliminator	Clean it with a dry lint-free paper.

T-3-1

Reader ADF

SADF

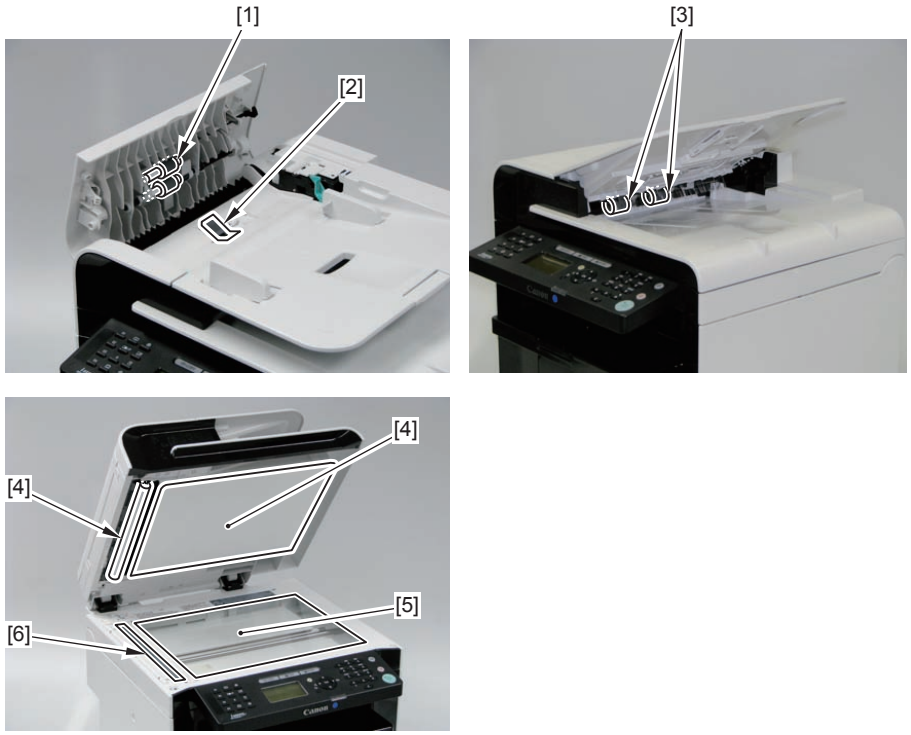


F-3-2

	Cleaning parts	Procedure
1	SADF Pickup Roller	Open the ADF and wipe off the smudge with the soft dry cloth.
2	SADF Separation Pad	Open the ADF and wipe off the smudge with the soft dry cloth.
3	Delivery Roller	Wipe off the smudge with the soft dry cloth.
4	Backside of copyboard cover	Open the copyboard cover and wipe off the smudge with the soft dry cloth.
5	Copyboard glass	Open the copyboard cover and wipe off the smudge with the soft dry cloth.
6	ADF reading area	Open the copyboard cover and wipe off the smudge with the soft dry cloth.

T-3-2

DADF



F-3-3

	Cleaning parts	Procedure
1	DADF Pickup Roller Unit	Open the ADF and wipe off the smudge with the soft dry cloth.
2	DADF Separation Pad	Open the ADF and wipe off the smudge with the soft dry cloth.
3	Delivery Roller	Wipe off the smudge with the soft dry cloth.
4	Backside of copyboard cover	Open the copyboard cover and wipe off the smudge with the soft dry cloth.
5	Copyboard glass	Open the copyboard cover and wipe off the smudge with the soft dry cloth.
6	ADF reading area	Open the copyboard cover and wipe off the smudge with the soft dry cloth.

T-3-3

Disassembly/Assembly

- List of Parts
- List of Connectors
- External Cover, Interior
- Document Exposure/Feeder System
- Controller System
- Laser Exposure System
- Image Formation System
- Fixing System
- Pickup And Feeding System

Outline

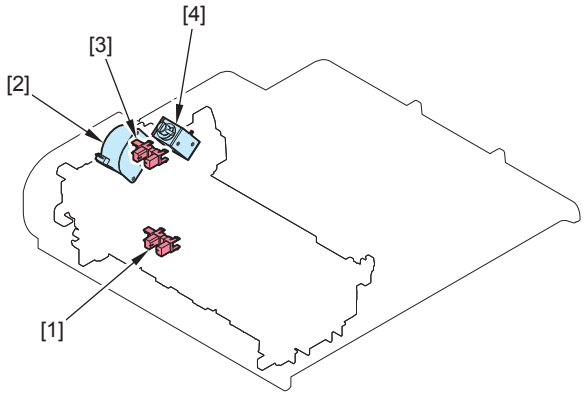
This chapter describes disassembling/assembling procedure of this equipment.
The service technician is to identify the cause of the failures according to "Chapter 6 Troubleshooting" and to replace the faulty parts by following the disassembling procedure. In addition, replace the consumable parts by following the same disassembling procedure.
Note the following precautions when working.

1. CAUTION: Be sure to disconnect the power plug before disassembling/assembling for safety.
2. When disassembling/assembling or transporting the machine, be sure to remove the cartridge beforehand as needed. However, when the cartridge is removed from the machine, be sure to put the Photosensitive Drum in a protective bag even in a short period of time to prevent the adverse effect of light.
3. When assembling, perform the disassembling procedure in reverse order unless otherwise specified.
4. When assembling, be sure to tighten the screws to their appropriate locations according to the screw types (length, diameter).
5. Do not run the machine with any parts removed as a general rule.
6. When handling the PCB, be sure to touch the metal part of the printer to ground yourself to prevent damaging the PCB by static electricity.
7. When replacing the part with the rating name plate, be sure to affix it to the new part.

List of Parts

Main Unit

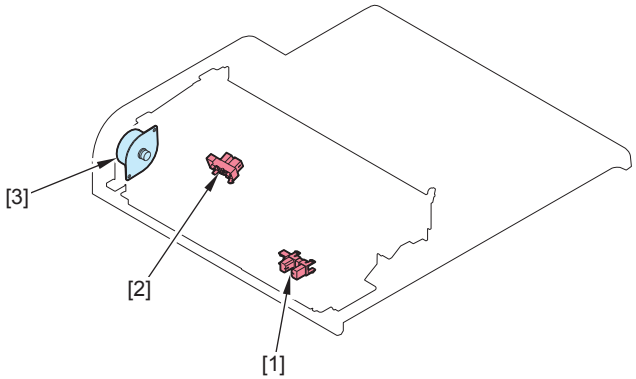
Lists of DADF Unit



F-4-1

No.	Name	Reference	Remarks
[1]	Original Sensor		-
[2]	DADF Motor		-
[3]	Original Edge Sensor		-
[4]	DADF Solenoid		

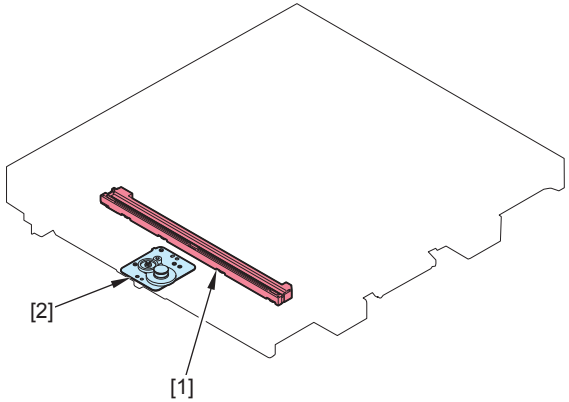
Lists of SADF Unit



F-4-2

No.	Name	Reference	Remarks
[1]	Original Sensor		-
[2]	Original Edge Sensor		-
[3]	SADF Motor		-

■ Lists of Reader Unit

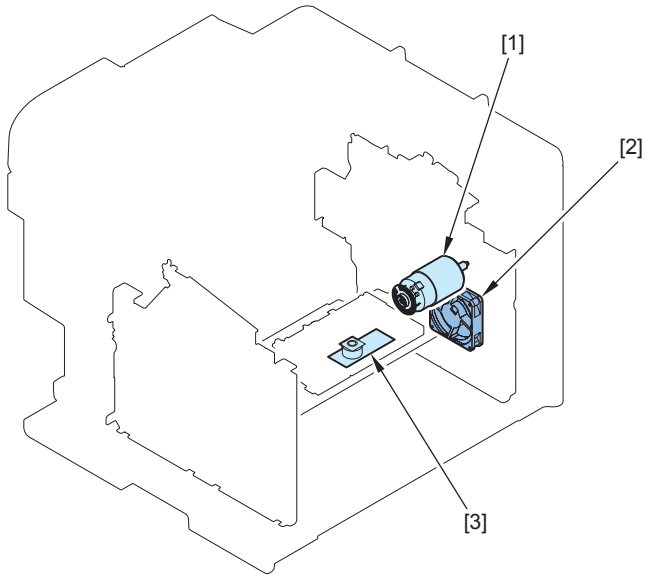


F-4-3

No.	Name	Reference	Remarks
[1]	CIS Sensor		-
[2]	Reader Motor		-

Duplex Printer Unit

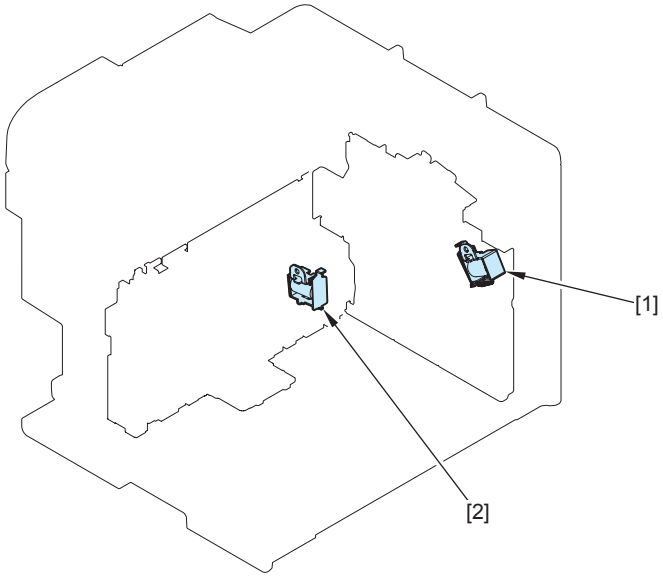
■ Lists of Motor/Fan



F-4-4

No.	Name	Reference	Remarks
[1]	Main Motor		-
[2]	Main Fan Unit		-
[3]	Laser Scanner Unit		-

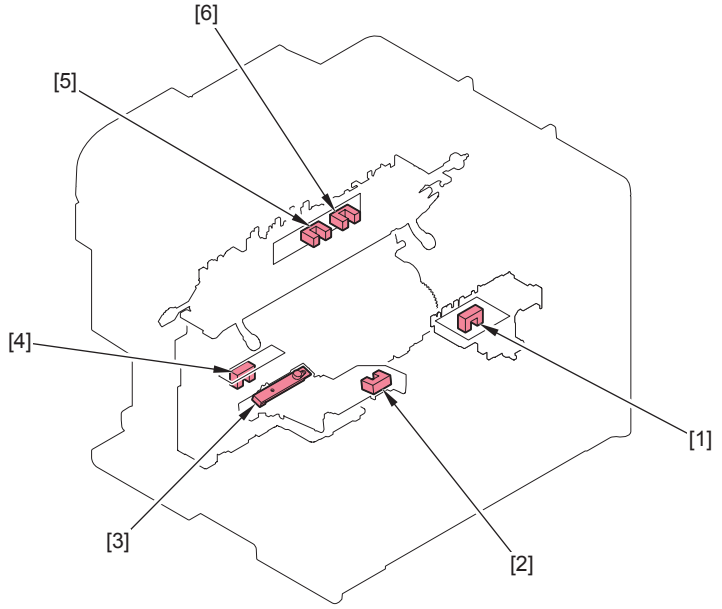
Lists of Solenoid



F-4-5

No.	Name	Reference	Remarks
[1]	Duplex Solenoid	-	-
[2]	Pickup Solenoid		-

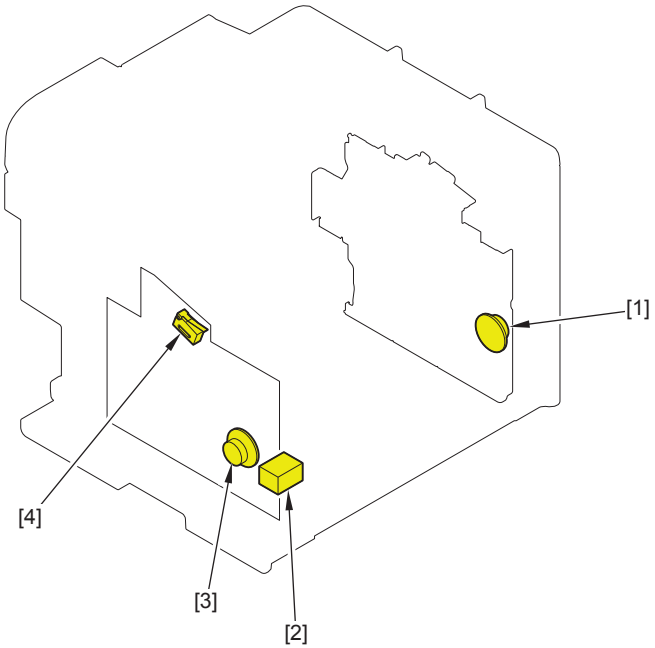
List of Sensor



F-4-6

No.	Name	Reference	Remarks
[1]	Encoder Sensor		-
[2]	Multi Pickup Sensor		-
[3]	Toner Sensor		-
[4]	Paper Leading Edge Sensor		-
[5]	Paper Width Sensor		-
[6]	Fixing Delivery Sensor		-

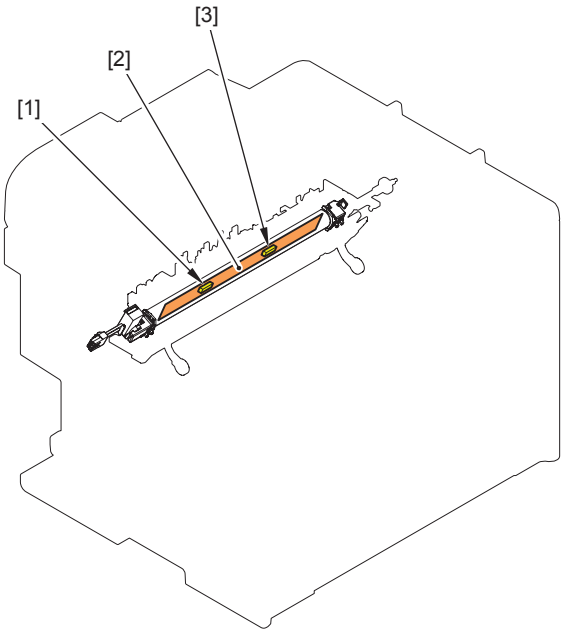
List of Switch and Speaker



F-4-7

No.	Name	Reference	Remarks
[1]	Speaker		-
[2]	Power Switch		-
[3]	Speaker		L418S/L410/L190
[4]	Door Switch		-

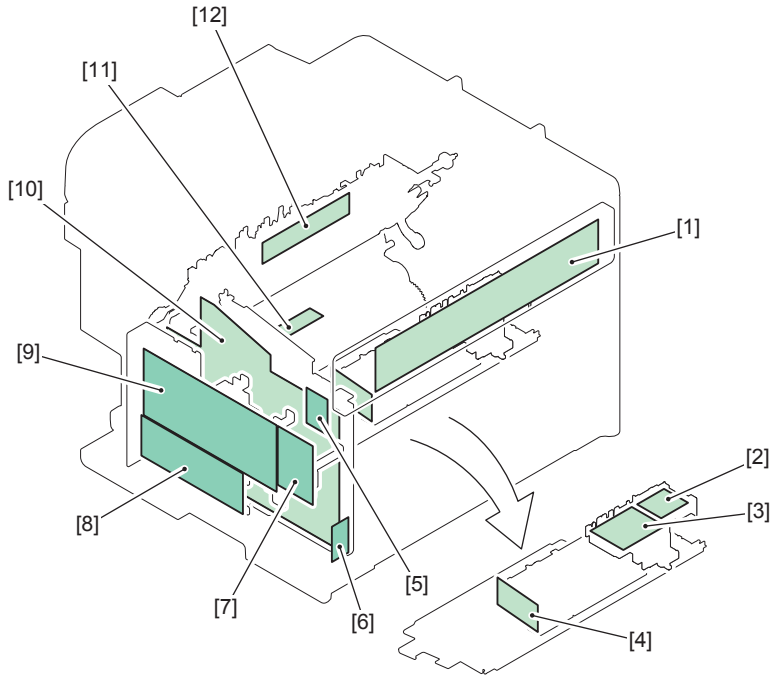
List of Heater/Thermoswitch/Thermistor



F-4-8

No.	Name	Reference	Remarks
[1]	Thermoswitch	-	-
[2]	Fixing Heater		-
[3]	Thermistor	-	-

List of PCB

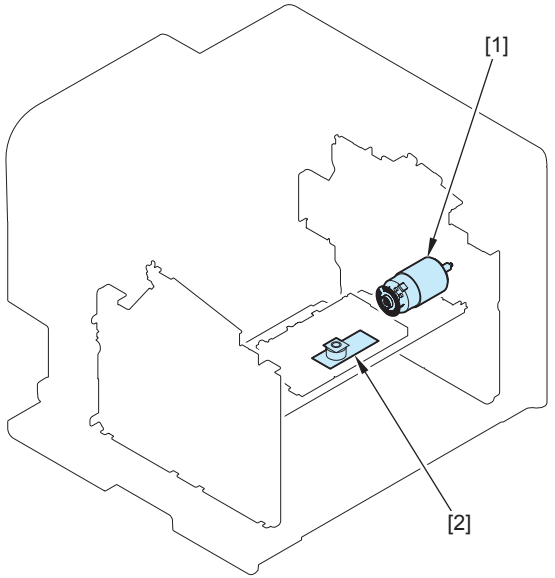


F-4-9

No.	Name	Reference	Remarks
[1]	Control Panel PCB	-	-
[2]	Duplex Driver PCB	-	-
[3]	Motor Driver PCB		-
[4]	Laser Driver PCB		
[5]	WiFi Module		
[6]	Switch PCB		
[7]	Off Hook PCB		100V Model Only
[8]	FAX NCU PCB		
[9]	Main controller PCB		
[10]	Engine Controller PCB		
[11]	Paper Leading Edge Sensor PCB		
[12]	Fixing Delivery/Paper Width Sensor PCB		

Single-sided Printer Unit

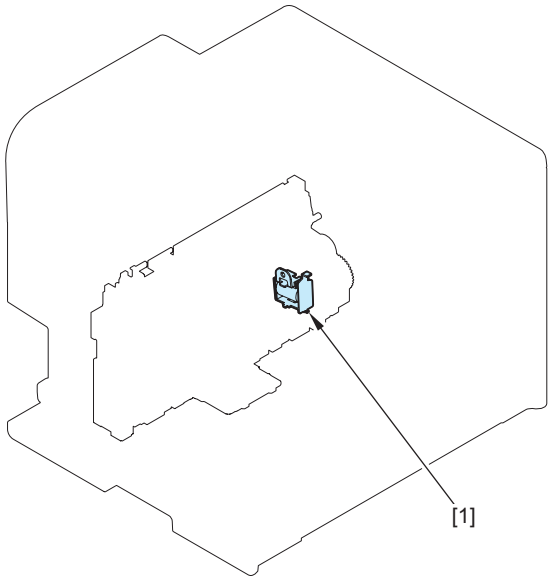
List of Motor/Fan



F-4-10

No.	Name	Reference	Remarks
[1]	Main Motor		
[2]	Laser Scanner Motor		-

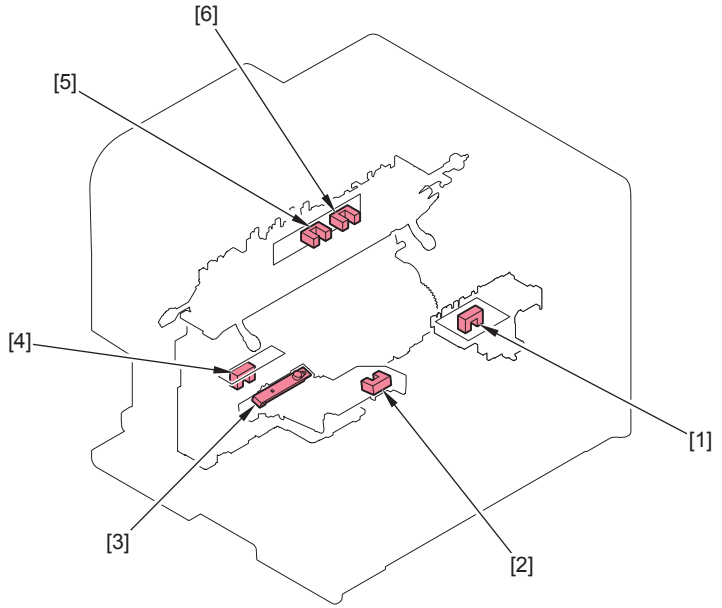
List of Solenoid



F-4-11

No.	Name	Reference	Remarks
[1]	Pickup Solenoid		-

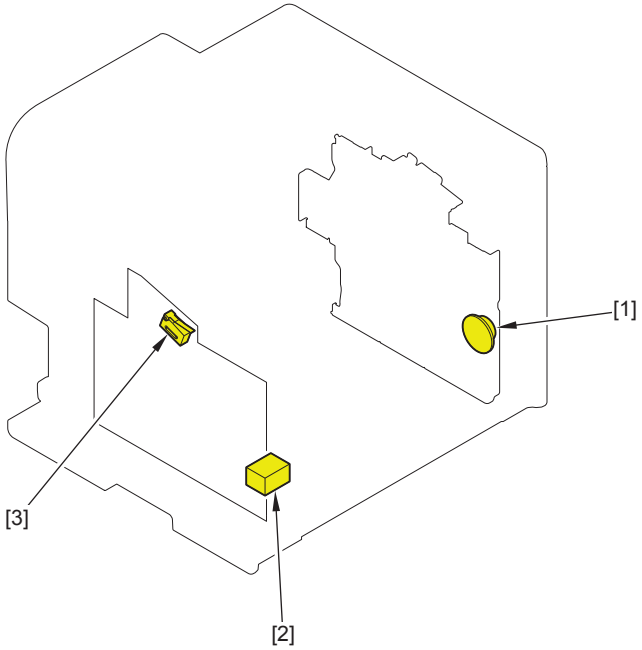
List of Sensor



F-4-12

No.	Name	Reference	Remarks
[1]	Encoder Sensor		-
[2]	Multi Pickup Sensor		-
[3]	Toner Sensor		
[4]	Paper Leading Edge Sensor		
[5]	Paper Width Sensor		
[6]	Fixing Delivery Sensor		

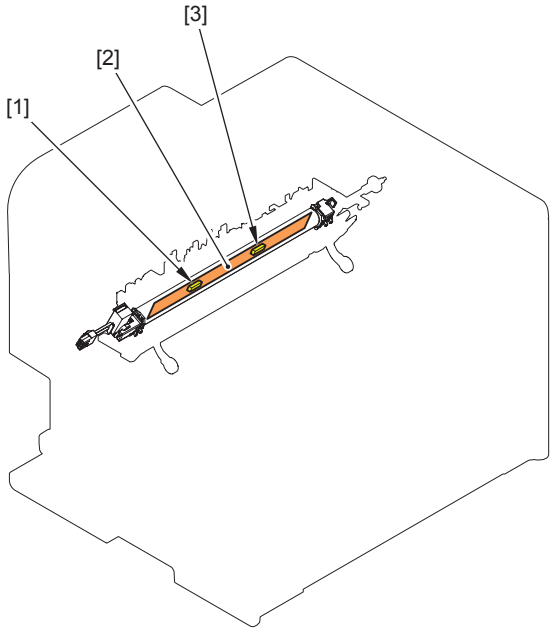
List of Switch and Speaker



F-4-13

No.	Name	Reference	Remarks
[1]	Speaker		
[2]	Power Switch		
[3]	Door switch		

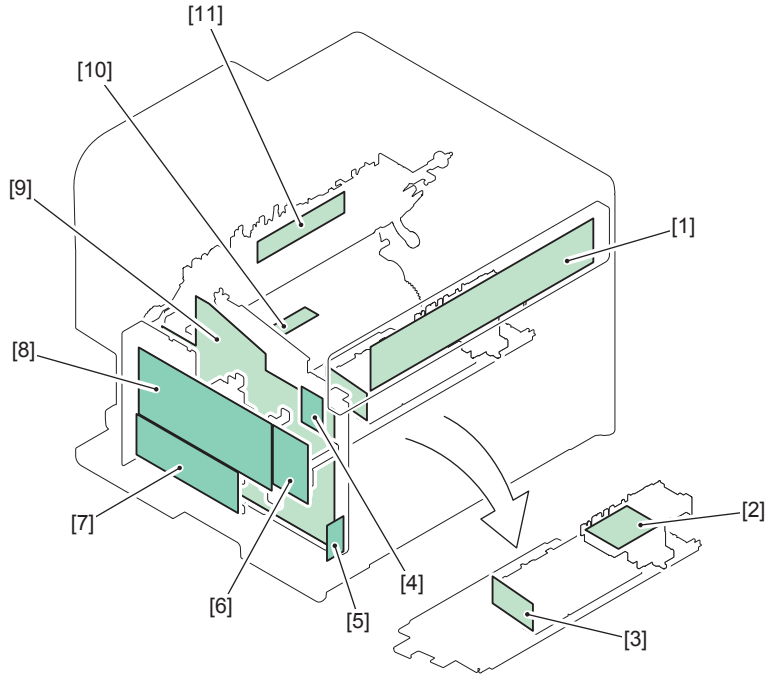
List of Heater/Thermoswitch/Thermistor



F-4-14

No.	Name	Reference	Remarks
[1]	Thermoswitch		
[2]	Fixing Heater	-	-
[3]	Thermistor	-	-

List of PCB

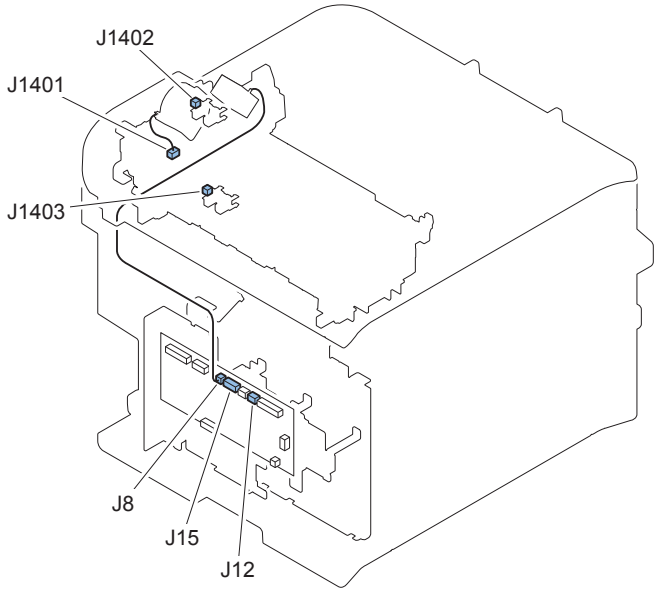


F-4-15

No.	Name	Reference	Remarks
[1]	Control Panel PCB	-	-
[2]	Motor Driver PCB	-	-
[3]	Laser Driver PCB	-	-
[4]	WiFi Module PCB		
[5]	Switch PCB		
[6]	Off Hook PCB		100V Model Only
[7]	FAX-NCU PCB		
[8]	Main Controller PCB		
[9]	Engine Controller PCB		
[10]	Paper Leading Edge Sensor PCB		
[11]	Fixing Delivery/Paper Width Sensor PCB		

List of Connectors

DADF Unit

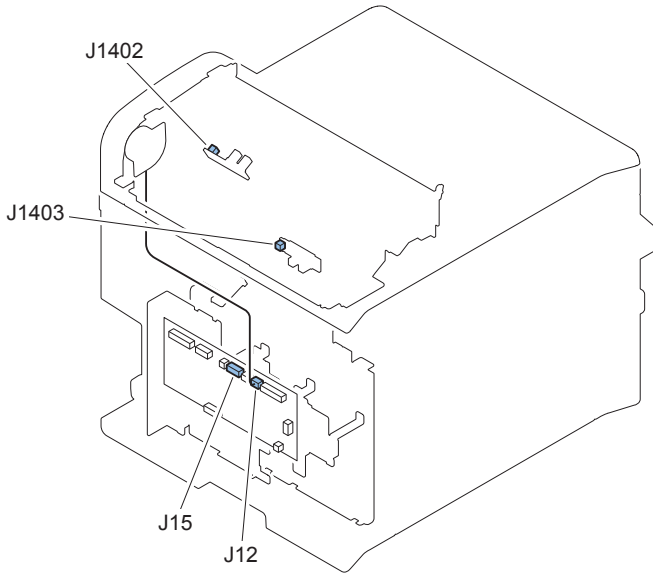


F-4-16

J No.	Name	Relay Connector	J No.	Name	Remarks
J15	Main Controller PCB	-	J1402	DES Sensor	-
J15	Main Controller PCB	-	J1403	DS Sensor	-
J12	Main Controller PCB	-	J1401	DADF Motor	-
J8	Main Controller PCB	-	J8	DADF Solenoid	-

T-4-1

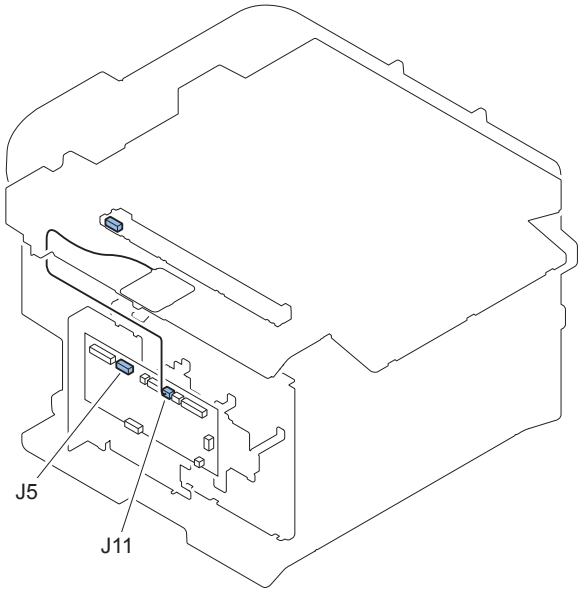
SADF Unit



J No.	Name	Relay Connector	J No.	Name	Remarks
J15	Main Controller PCB	-	J1402	DES Sensor	-
J15	Main Controller PCB	-	J1403	DS Sensor	-
J12	Main Controller PCB	-	J12	SADF Motor	-

T-4-2

Reader Unit

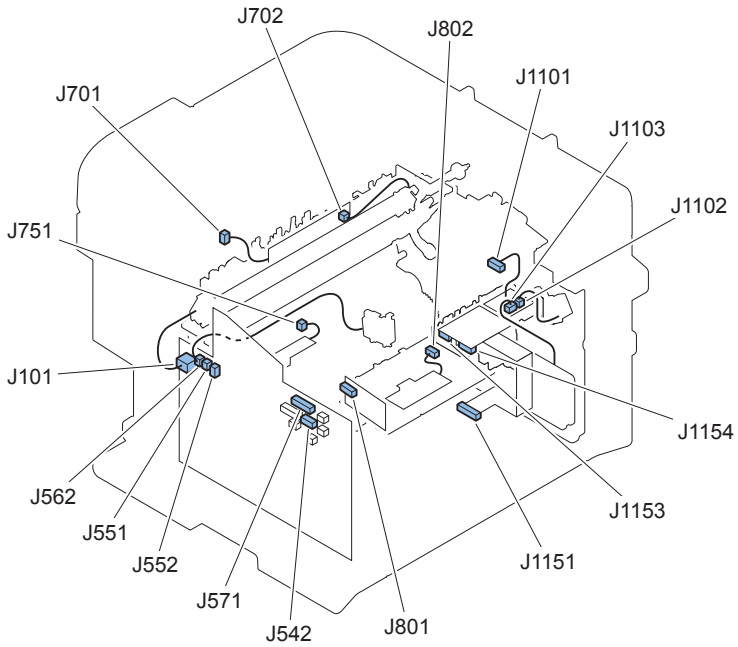


F-4-17

J No.	Name	Relay Connector	J No.	Name	Remarks
J5	Main Controller PCB	-	-	CIS UNIT	-
J11	Main Controller PCB	-	J11	Reader Motor	-

T-4-3

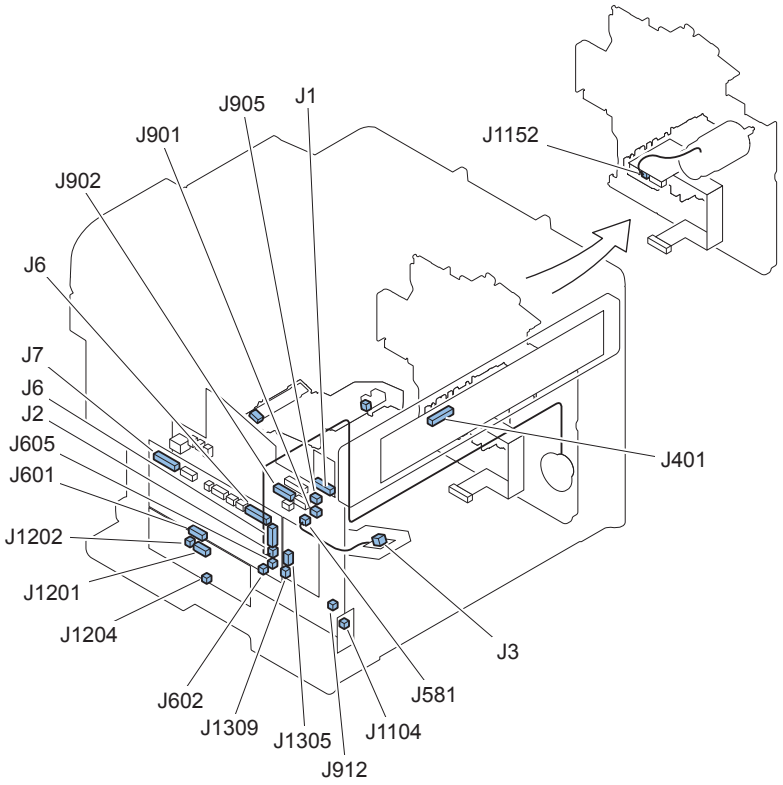
Duplex Printer Unit



F-4-18

J No.	Name	Relay Connector	J No.	Name	Remarks
J1101	Duplex Driver PCB	-	J1154	Motor Driver PCB	-
J1102	Duplex Driver PCB	-	J1102	Duplex Solenoid	-
J1103	Duplex Driver PCB	-	J1103	Main Fan Unit	-
J1151	Motor Driver PCB	-	J571	Engine Controller PCB	-
J1153	Motor Driver PCB	-	J802	Laser Scanner Motor	-
J801	Laser Driver PCB	-	J542	Engine Controller PCB	-
J101	Engine Controller PCB	-	-	Fixing Film Unit	-
J551	Engine Controller PCB	-	J751	Paper Leading Edge Sensor	-
J552	Engine Controller PCB	-	J701	Fixing Delivery/Paper Width Sensor PCB	-
J562	Engine Controller PCB	-	J562	Pickup Solenoid	-
J702	Fixing Delivery/Paper Width Sensor PCB	-	-	Fixing Film Unit	-

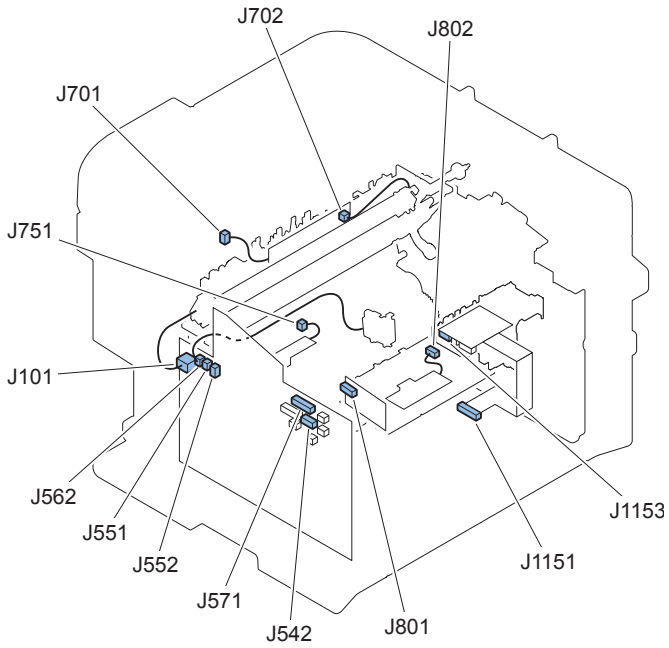
T-4-4



J No.	Name	Relay Connector	J No.	Name	Remarks
J1152	Motor Driver PCB	-	J1152	Main Motor	-
J581	Engine Controller PCB	-	-	Memory Tag	-
J901	Engine Controller PCB	-	-	Toner Sensor	Model with FAX (MF4890dw/MF4880dw/ MF4870dn/L418S/L410/ L190)
J902	Engine Controller PCB	-	J6	Main Controller PCB	-
J905	Engine Controller PCB	-	-	Multi Pickup Sensor	-
J3	Memory Tag	-	-	Cartridge	-
J605	Main Controller PCB	-	J1305	Pseudo CI PCB	Model with FAX (100V)
J602	Main Controller PCB	-	J1204	FAX-NCU PCB	Model with FAX (MF4890dw/MF4880dw/ MF4870dn/L418S/L410/ L190)
J601	Main Controller PCB	-	J1201	FAX-NCU PCB	Model with FAX (MF4890dw/MF4880dw/ MF4870dn/L418S/L410/ L190)
J7	Main Controller PCB	-	J401	Control Panel PCB	-
J6	Main Controller PCB	-	J1	Wireless LAN PCB	Model with Wireless LAN (MF4890dw)
J1202	FAX-NCU PCB	-	J1309	Pseudo CI PCB	Model with FAX (100V)
J1202	FAX-NCU PCB	-	J1202	Speaker	Model with FAX (MF4890dw/MF4880dw/ MF4870dn/L418S/L410/ L190)

T-4-5

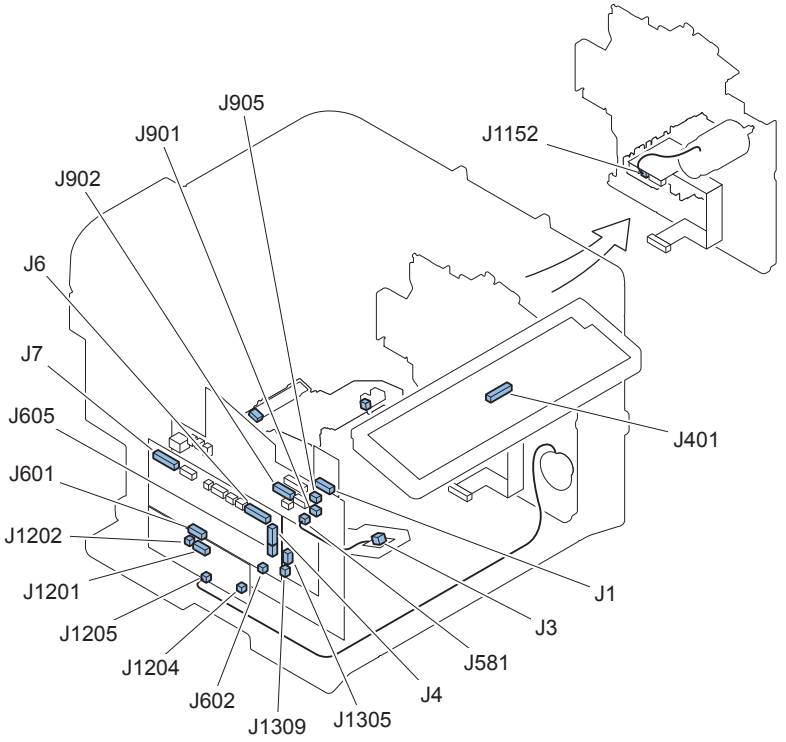
Single-sided Printer Unit



F-4-19

J No.	Name	Relay Connector	J No.	Name	Remarks
J1151	Motor Driver PCB	-	J571	Engine Controller PCB	-
J1153	Motor Driver PCB	-	J802	Laser Scanner Motor	-
J801	Laser Driver PCB	-	J542	Engine Controller PCB	-
J101	Engine Controller PCB	-	-	Fixing Film Unit	-
J551	Engine Controller PCB	-	J751	Paper Leading Edge Sensor	-
J552	Engine Controller PCB	-	J701	Fixing Delivery/Paper Width Sensor PCB	-
J562	Engine Controller PCB	-	J562	Pickup Solenoid	-
J702	Fixing Delivery/Paper Width Sensor PCB	-	-	Fixing Film Unit	-

T-4-6



F-4-20

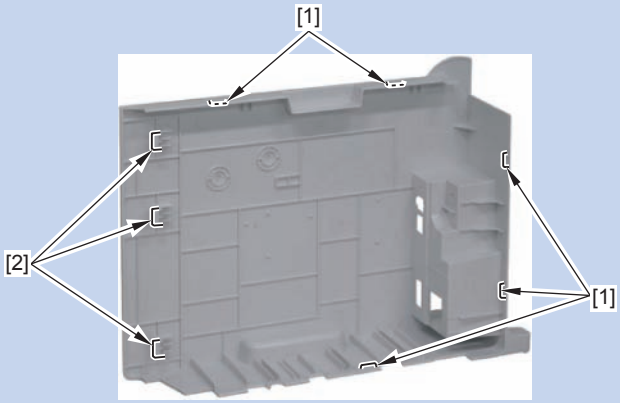
J No.	Name	Relay Connector	J No.	Name	Remarks
J1152	Motor Driver PCB	-	J1152	Main Motor	-
J581	Engine Controller PCB	-	-	Memory Tag	-
J901	Engine Controller PCB	-	-	Toner Sensor	Model with FAX (MF4780w/MF4770n/ MF4750)
J902	Engine Controller PCB	-	J6	Main Controller PCB	-
J905	Engine Controller PCB	-	-	Multi Pickup Sensor	-
J3	Memory Tag	-	-	Cartridge	-
J605	Main Controller PCB	-	J1305	Pseudo CI PCB	Model with FAX (100V)
J602	Main Controller PCB	-	J1204	FAX-NCU PCB	Model with FAX (MF4780w/MF4770n/ MF4750)
J601	Main Controller PCB	-	J1201	FAX-NCU PCB	Model with FAX (MF4780w/MF4770n/ MF4750)
J7	Main Controller PCB	-	J401	Control Panel PCB	-
J1	Main Controller PCB	-	J4	Wireless LAN PCB	Model with Wireless LAN (MF4780w)
J1202	FAX-NCU PCB	-	J1309	Pseudo CI PCB	Model with FAX (100V)
J1205	FAX-NCU PCB	-	J1205	Speaker	Model with FAX (MF4780w/MF4770n/ MF4750)

T-4-7

External Cover, Interior

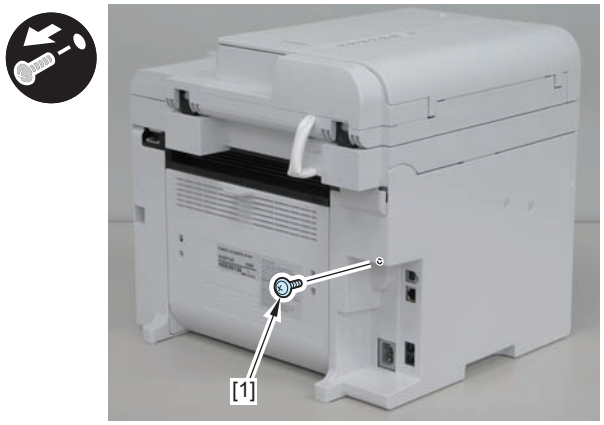
Removing the Left Cover(MF4890dw/4880dw)

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



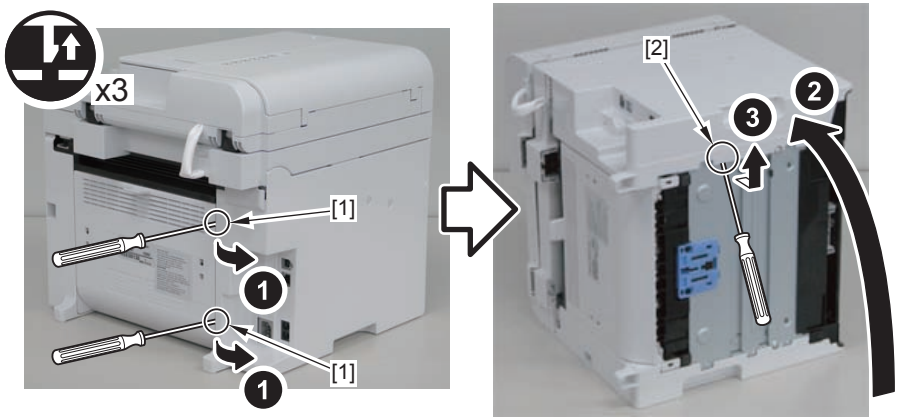
F-4-21

1) Remove the screw(black TP)[1].



F-4-22

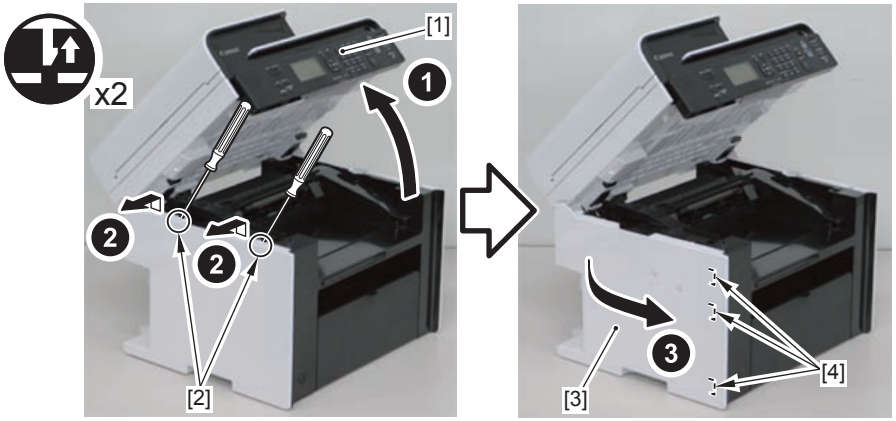
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-23

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].

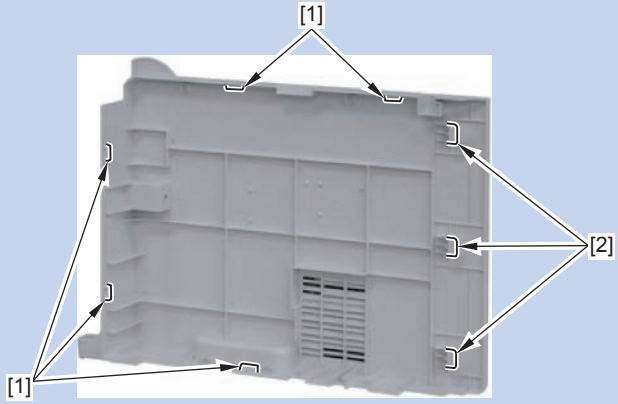
- 3 hooks[4]



F-4-24

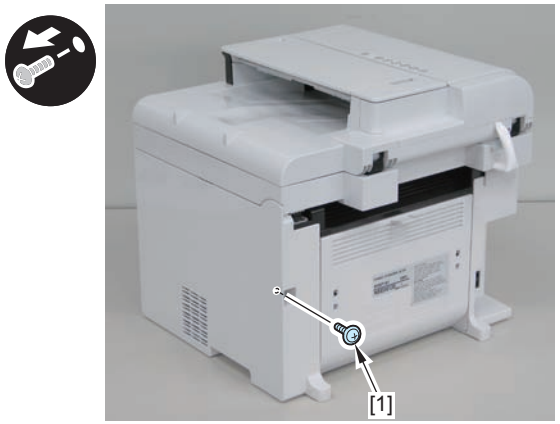
Removing the Right Cover(MF4890dw/4880dw)

Note:
The locations of the 5 right cover claws [1] and 3 hooks [2] are shown here.



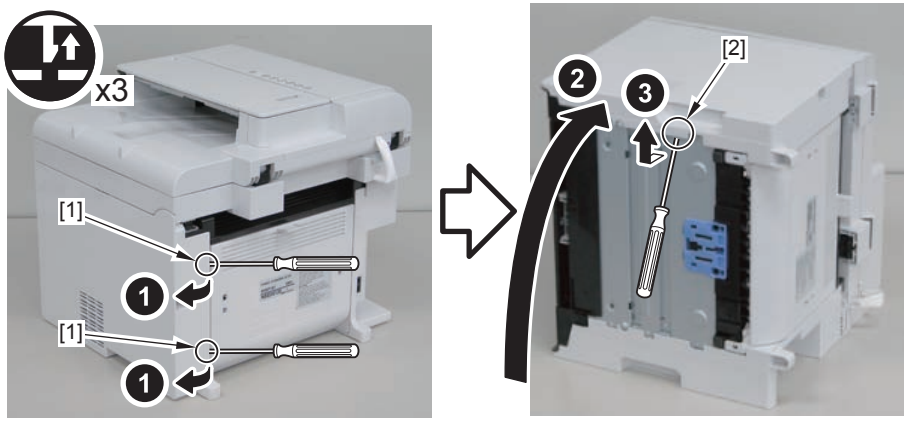
F-4-25

1) Remove the screw (black TP) [1].



F-4-26

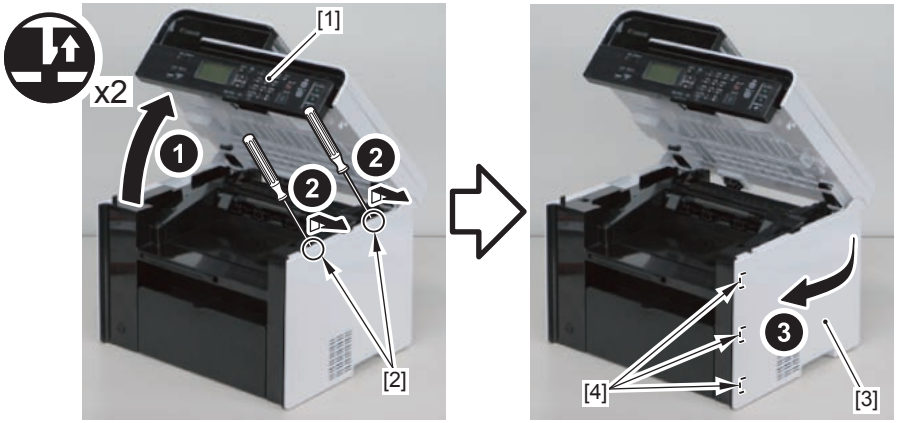
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-27

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].

- 3 hooks[4]



F-4-28

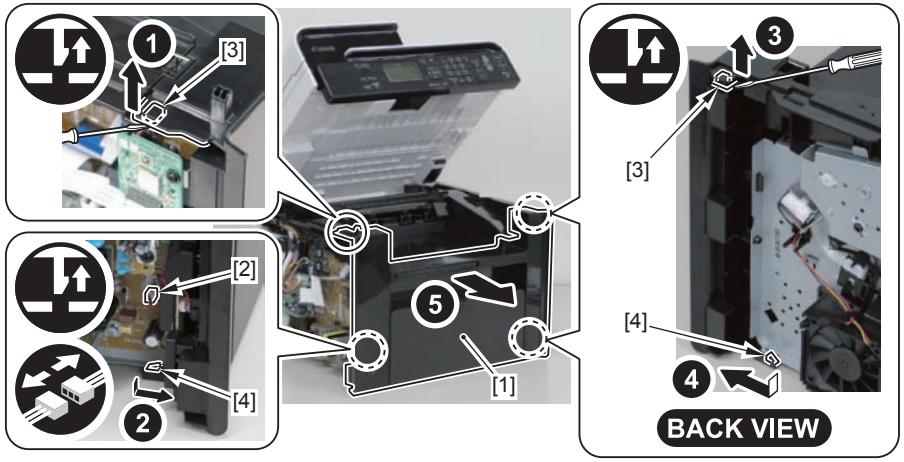
Removing the Front Cover Unit(MF4890dw/4880dw)

Preparation

1) Remove the left cover.
2) Remove the right cover.

Procedure

1) Remove the front cover unit[1]
- connector[2]
- 2 protrusions[3]
- 2 claws[4]



F-4-29

Removing the Upper Cover(MF4890dw/4880dw)

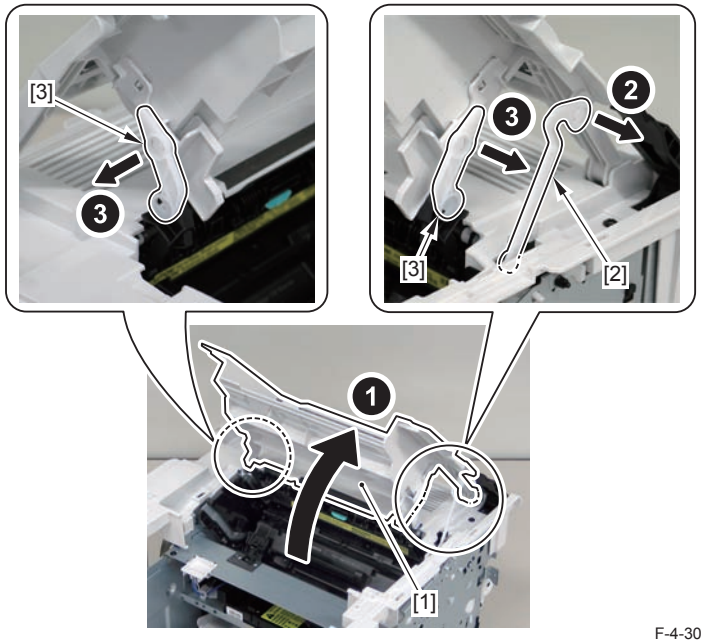
Preparation

1) Remove the left cover.
2) Remove the DADF unit and reader unit.
3) Remove the right cover.
4) Remove the front cover unit.

Procedure

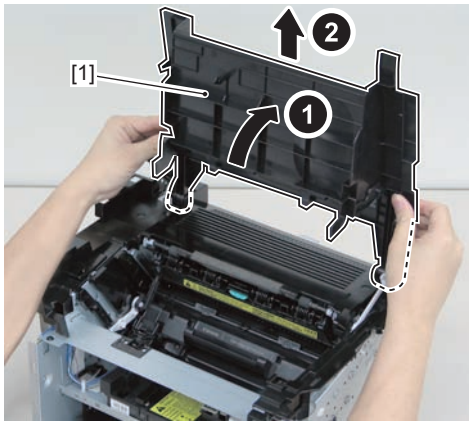
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

> Caution:
> When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



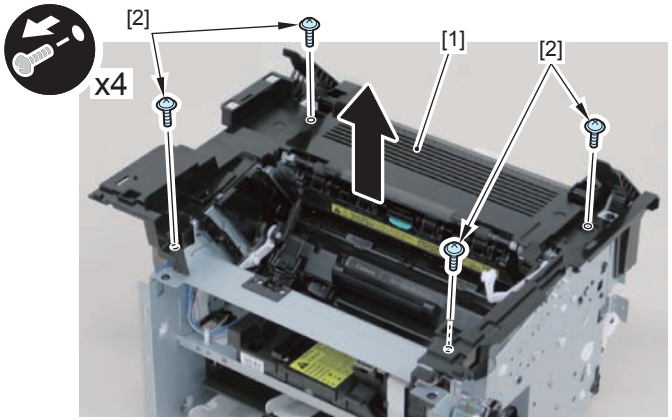
F-4-30

4)Raise the delivery tray[1] vertically and remove it.



F-4-31

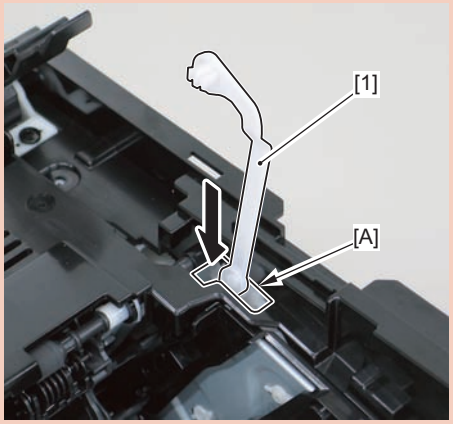
5)Remove the upper cover[1]
4 screws(black TP)[2]



F-4-32

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing

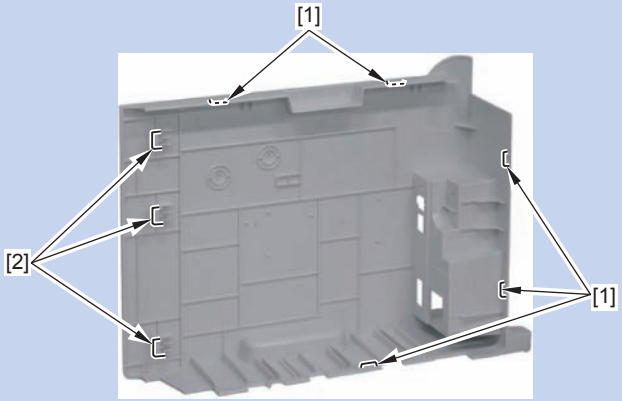


F-4-33

Removing the Left Cover(MF4870dn/MF4830d)

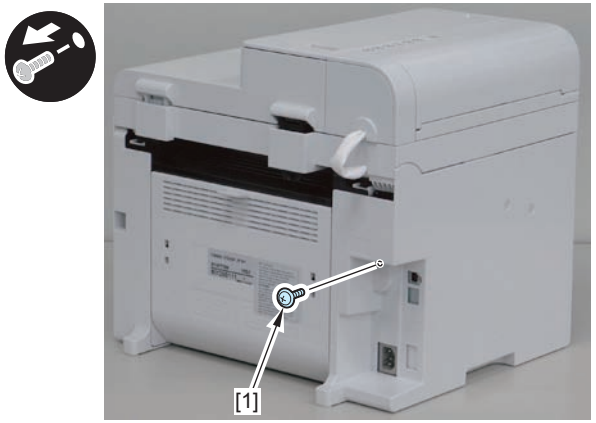
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



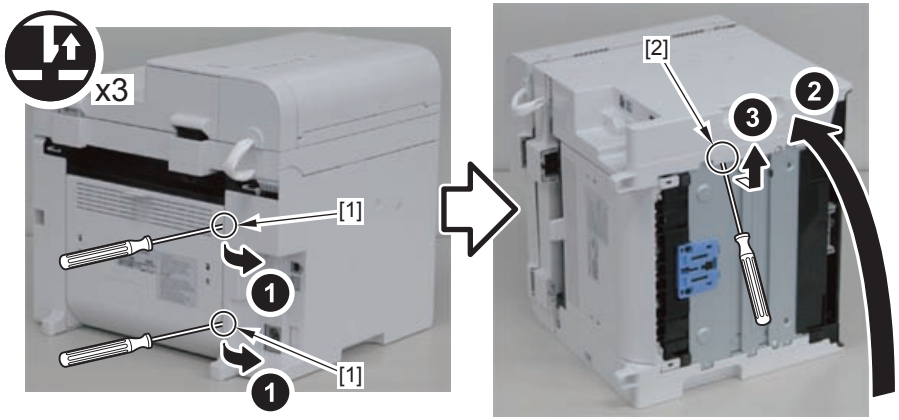
F-4-34

1) Remove the screw(black TP)[1].



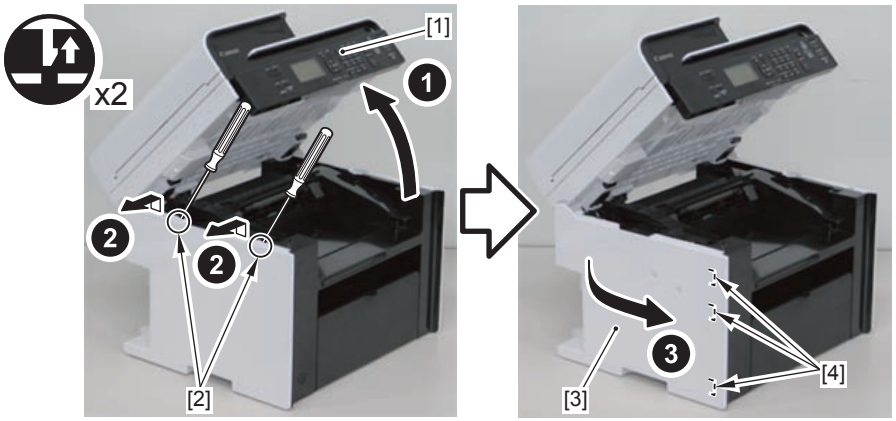
F-4-35

2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-36

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
- 3 hooks[4]

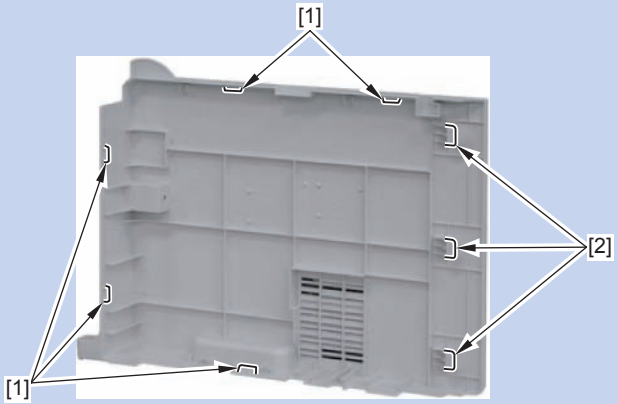


F-4-37

Removing the Right Cover(MF4870dn/MF4830d)

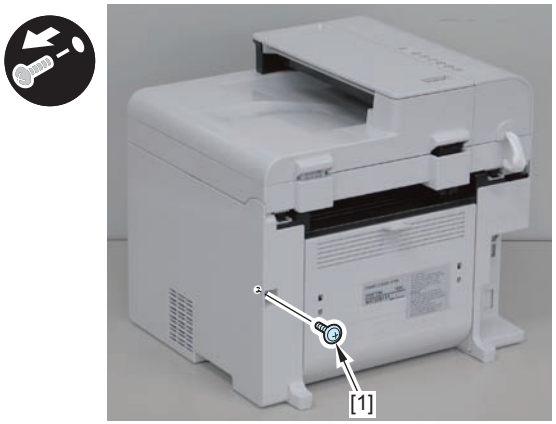
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



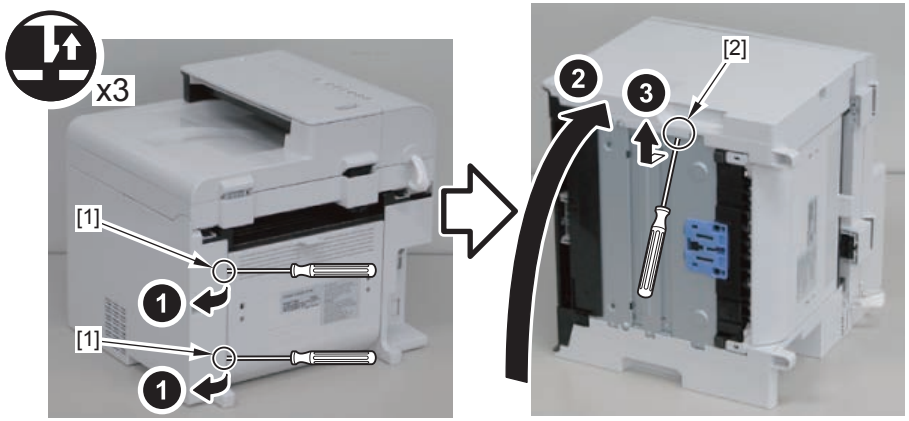
F-4-38

1) Remove the screw(black TP)[1].



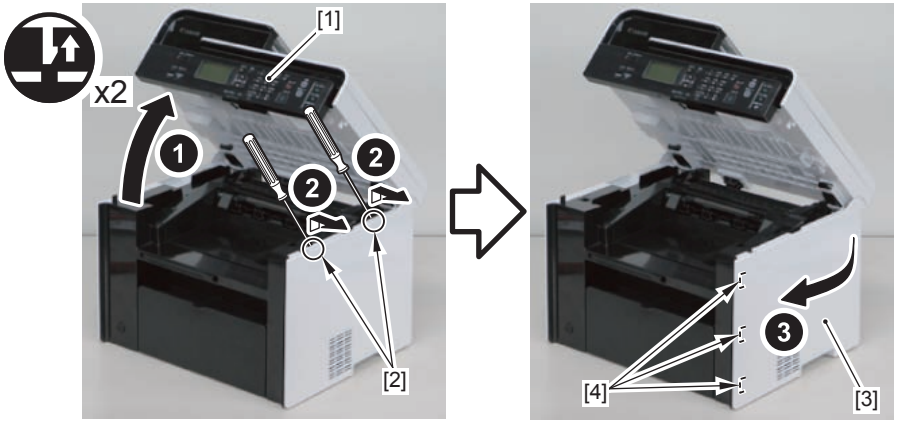
F-4-39

2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-40

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
- 3 hooks[4]



F-4-41

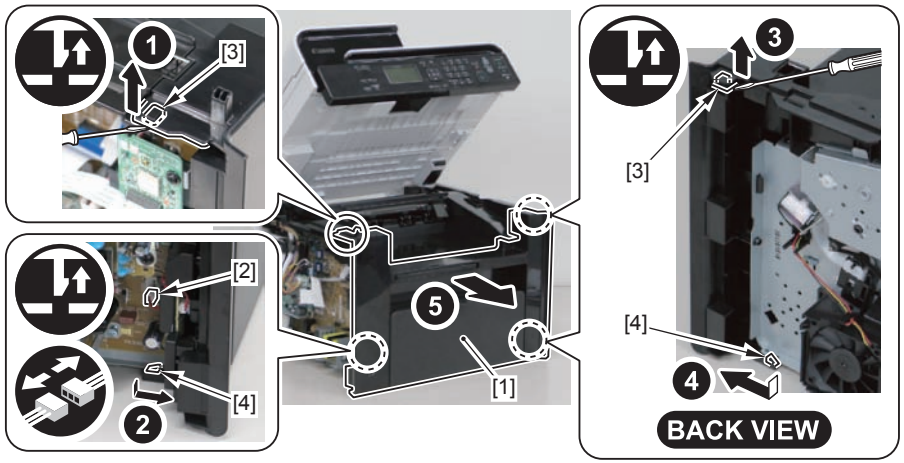
Removing the Front Cover Unit(MF4870dn/MF4830d)

Preparation

1) Remove the left cover.
2) Remove the right cover

Procedure

1) Remove the front cover unit[1]
- connector[2]
- 2 protrusions[3]
- 2 claws[4]



F-4-42

Removing the Upper Cover (MF4870dn/MF4830d)

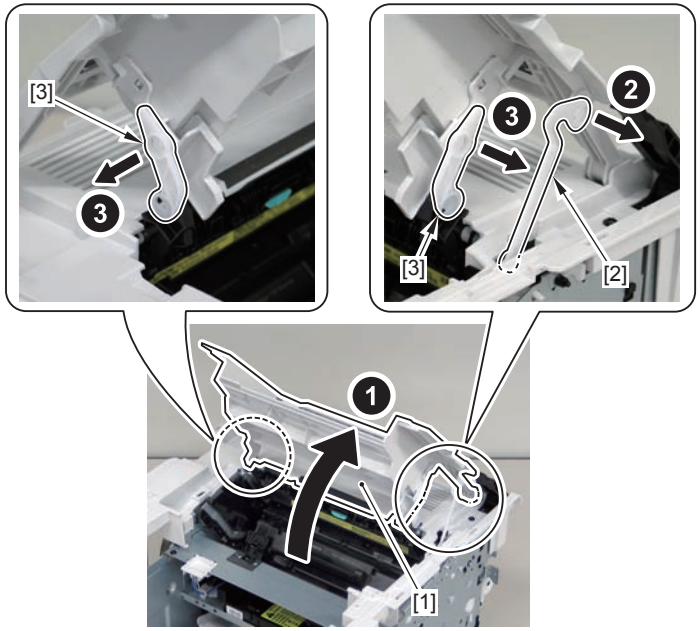
Preparation

1) Remove the left cover.
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit

Procedure

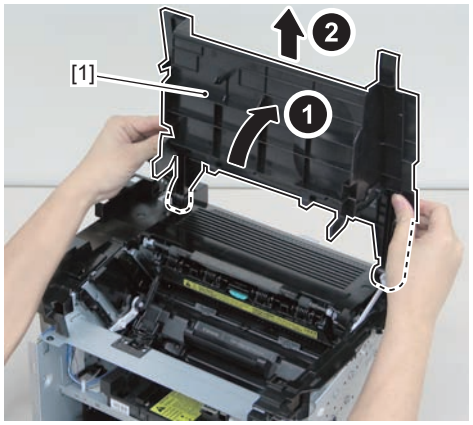
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

> Caution:
> When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



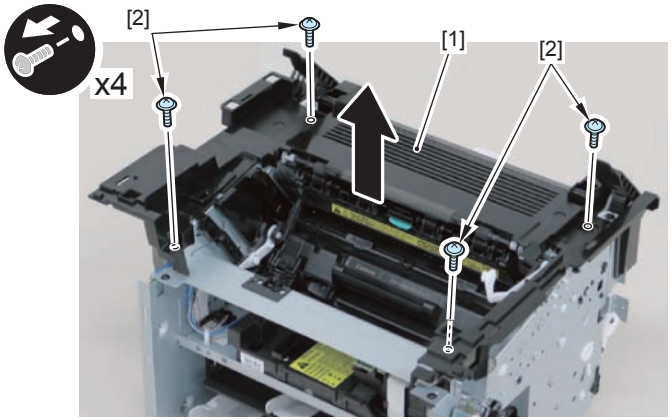
F-4-43

4)Raise the delivery tray[1] vertically and remove it.



F-4-44

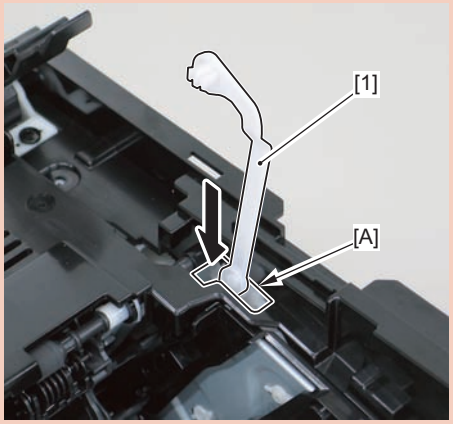
5)Remove the upper cover[1]
4 screws(black TP)[2]



F-4-45

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing

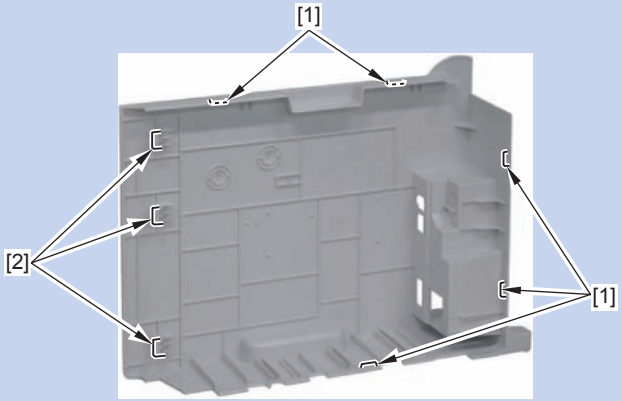


F-4-46

Removing the Left Cover(MF4820d)

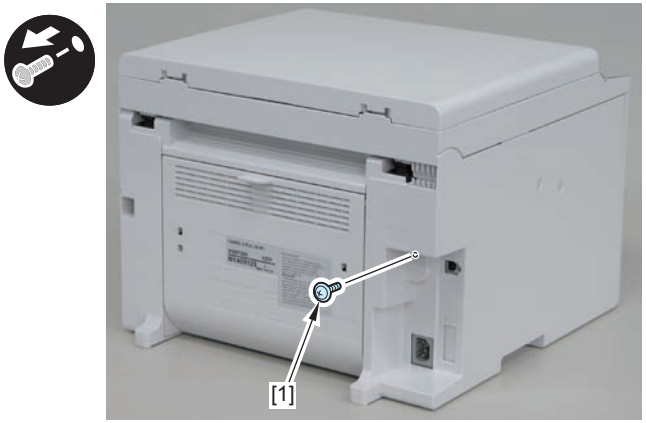
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



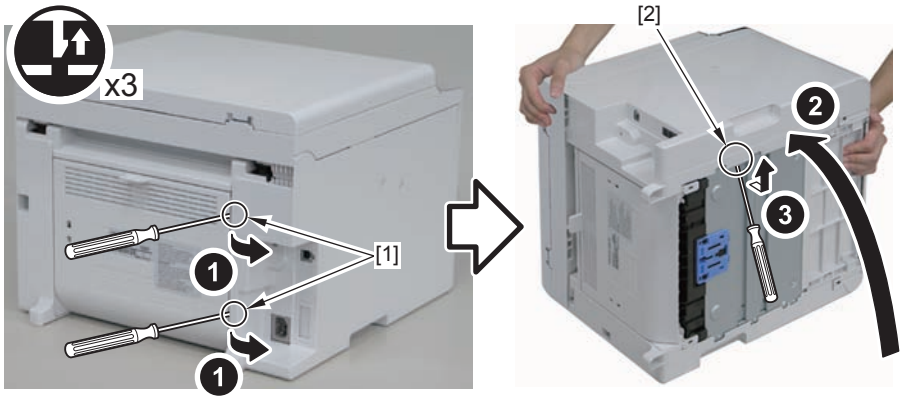
F-4-47

1) Remove the screw(black TP)[1].



F-4-48

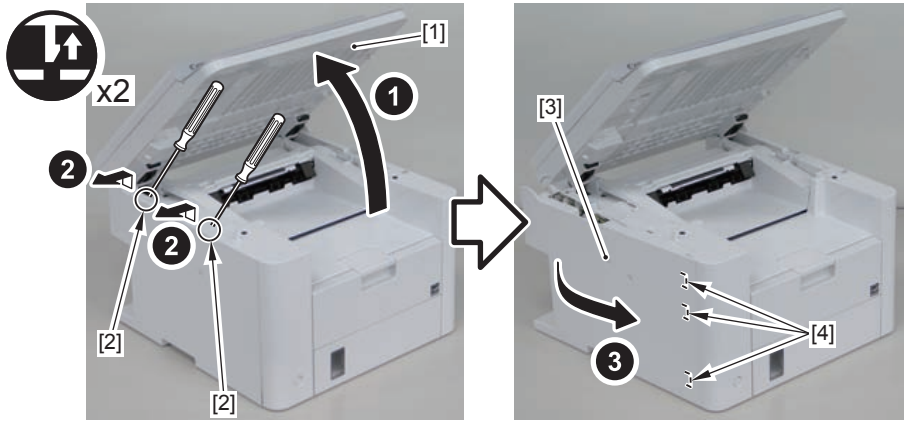
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-49

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
6) Remove the left cover[3]

- 3 hooks[4]

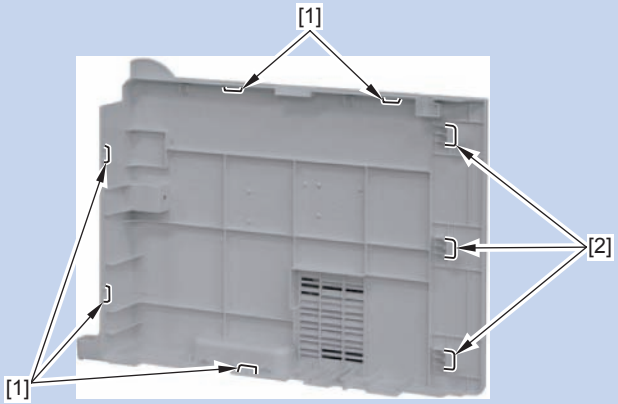


F-4-50

Removing the Right Cover(MF4820d)

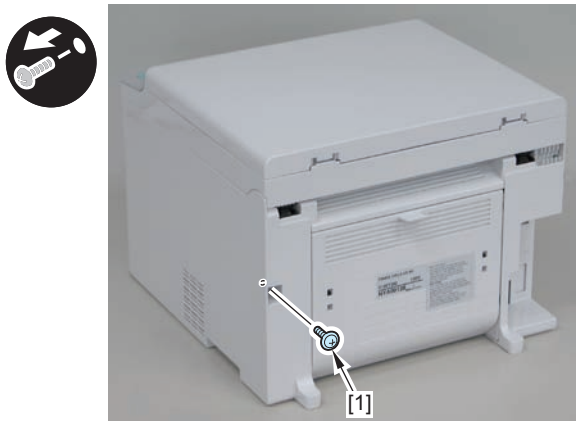
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



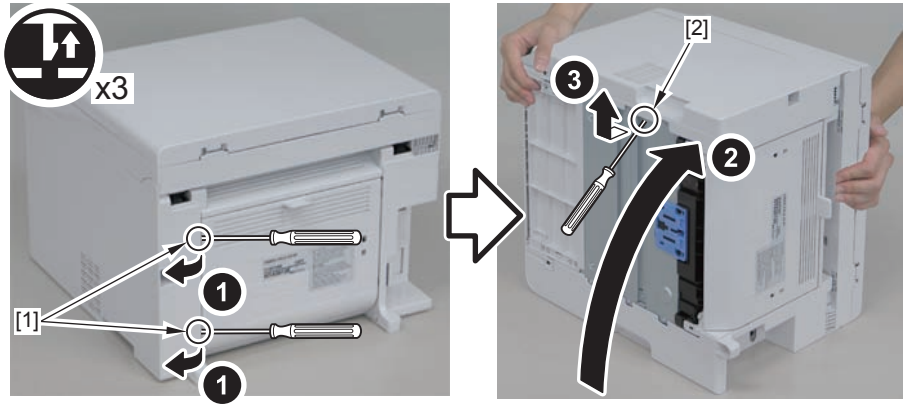
F-4-51

1) Remove the screw(black TP)[1].



F-4-52

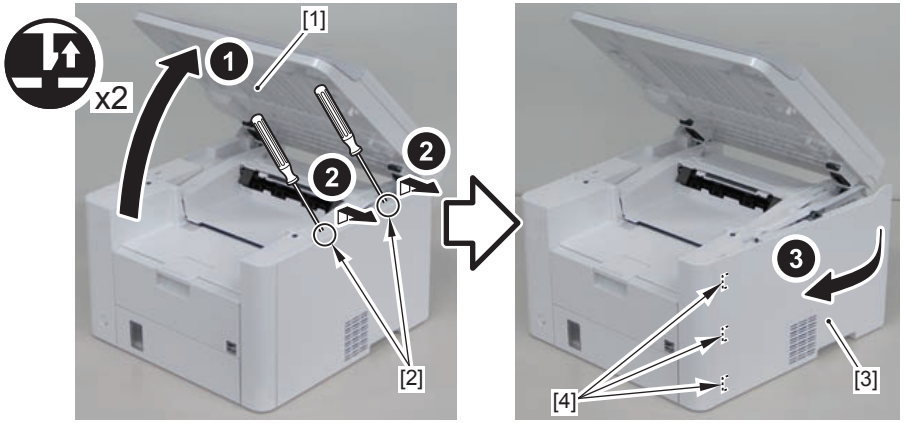
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-53

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
6) Remove the right cover[3]

- 3 hooks[4]



F-4-54

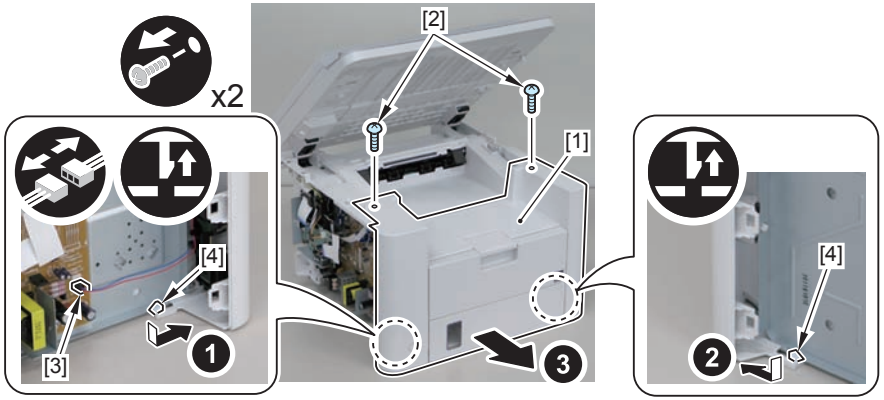
Removing the Front Cover Unit(MF4820d)

Preparation

1) Remove the left cover.
2) Remove the right cover

Procedure

1) Remove the front cover unit[1]
- 2 screws[2]
- 1 connector[3]
- 2 claws[4]



F-4-55

Removing the Upper Cover (MF4820d)

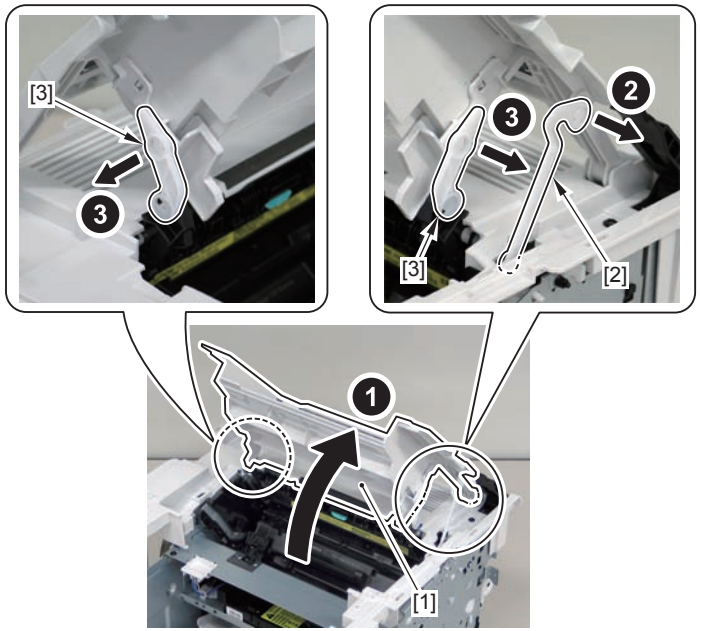
Preparation

1) Remove the left cover.
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit

Procedure

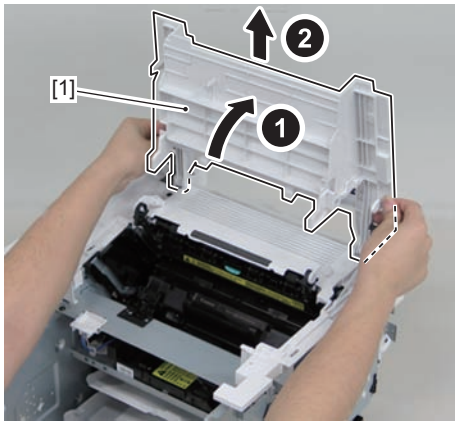
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

> Caution:
> When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



F-4-56

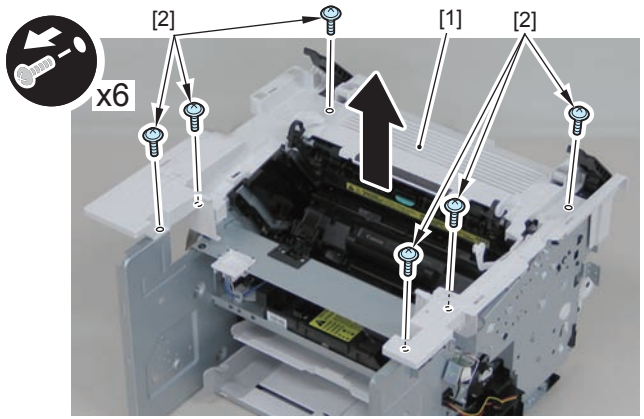
4)Raise the delivery tray[1] vertically and remove it.



F-4-57

5)Remove the upper cover[1]

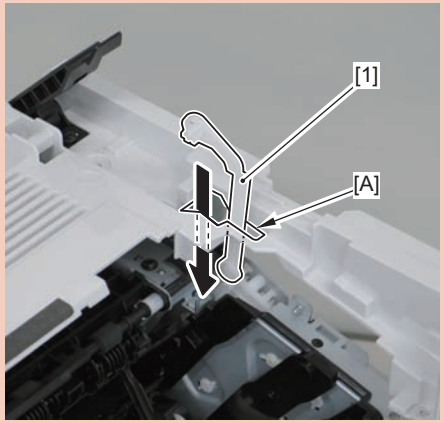
- 6 screws(black TP)[2]



F-4-58

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing

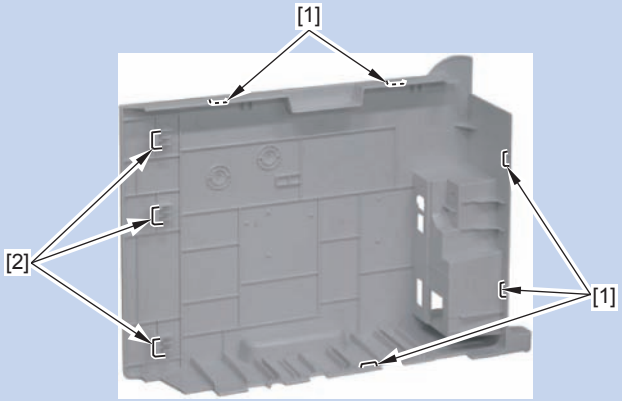


F-4-59

Removing the Left Cover(D530)

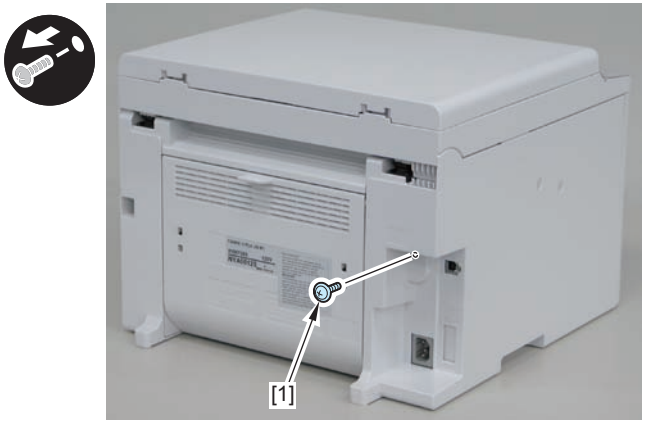
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



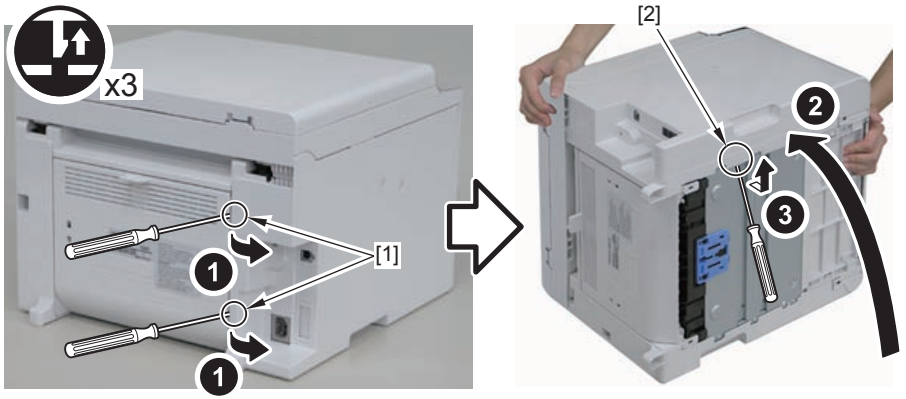
F-4-60

1) Remove the screw(black TP)[1].



F-4-61

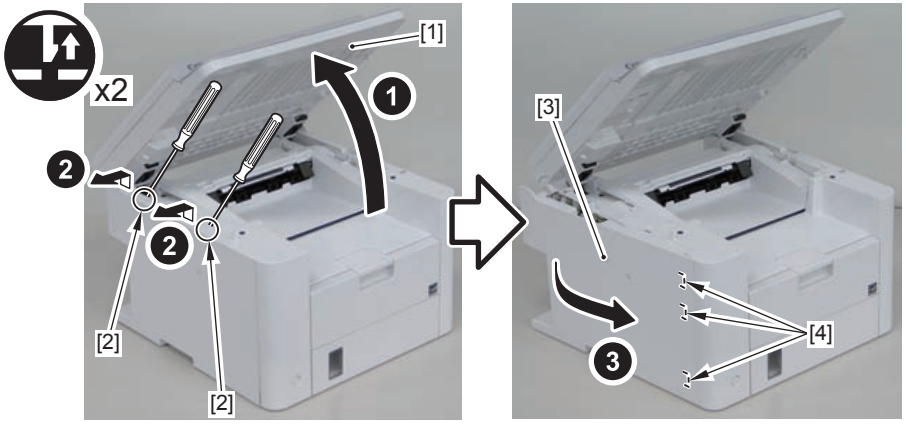
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-62

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
6) Remove the left cover[3]

- 3 hooks[4]

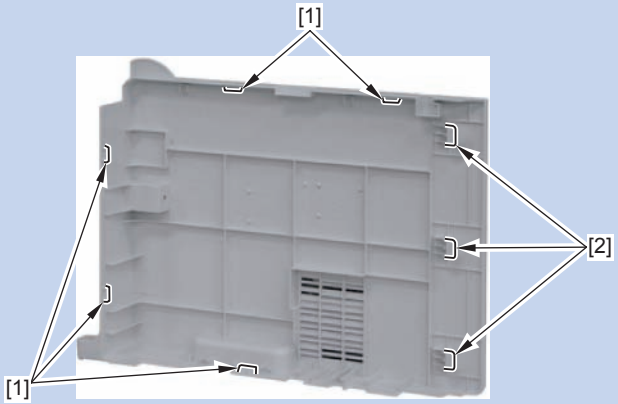


F-4-63

Removing the Right Cover(D530)

Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.

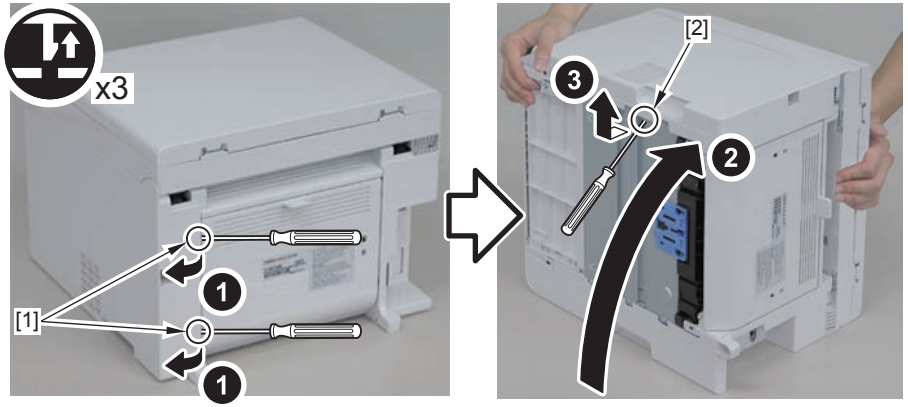


F-4-64

1) Remove the screw(black TP)[1].

F-4-65

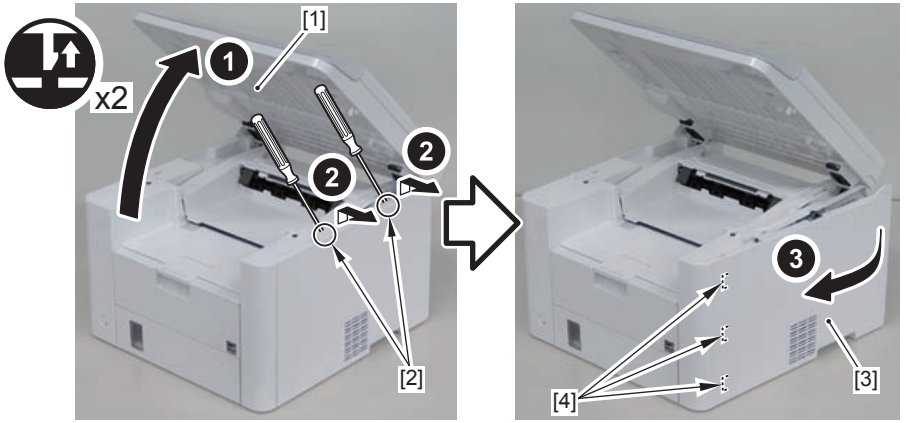
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-66

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
6) Remove the right cover[3]

- 3 hooks[4]



F-4-67

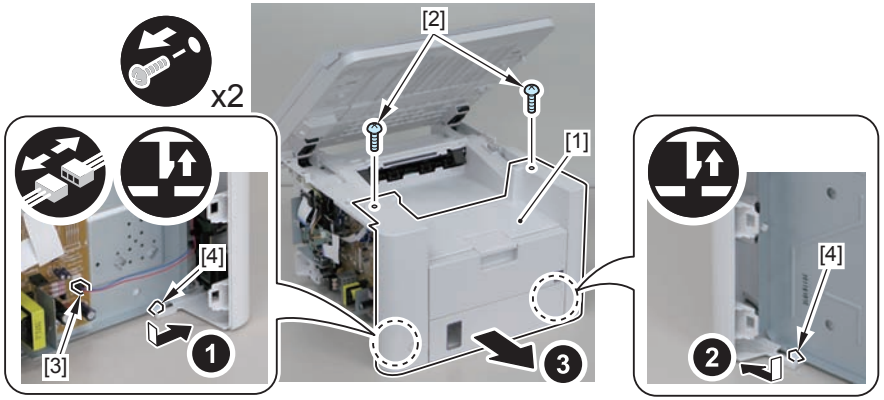
Removing the Front Cover Unit(D530)

Preparation

1) Remove the left cover.
2) Remove the right cover

Procedure

1) Remove the front cover unit[1]
- 2 screws[2]
- 1 connector[3]
- 2 claws[4]



F-4-68

Removing the Upper Cover (D530)

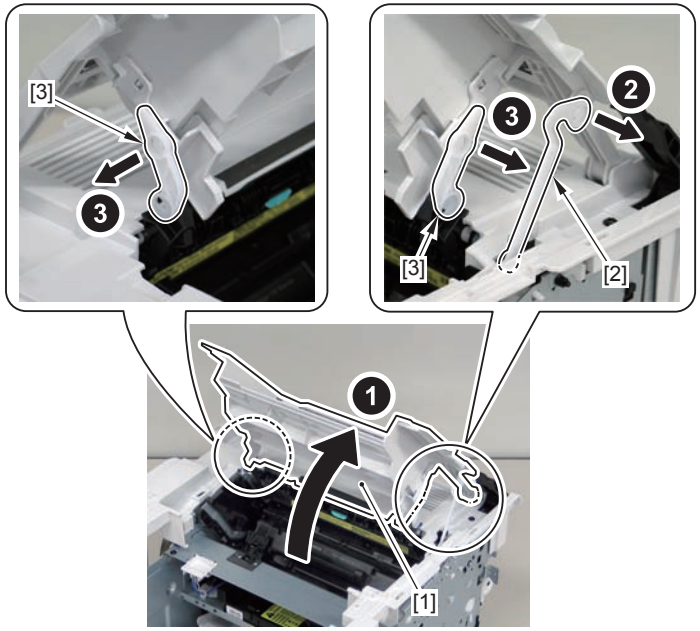
Preparation

1) Remove the left cover.
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit

Procedure

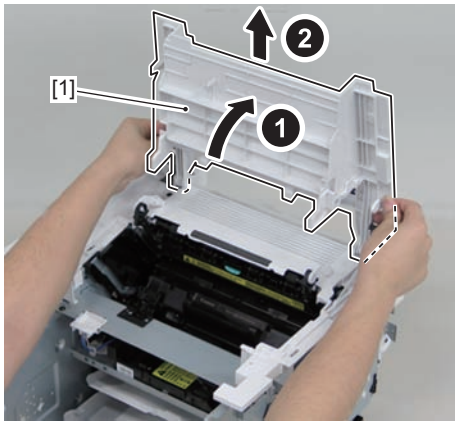
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

Caution:
When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



F-4-69

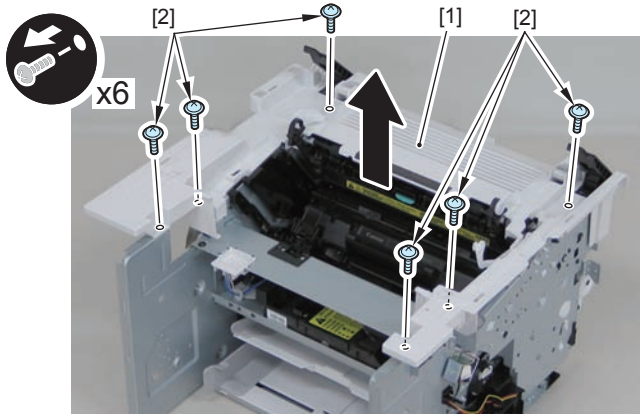
4)Raise the delivery tray[1] vertically and remove it.



F-4-70

5)Remove the upper cover[1]

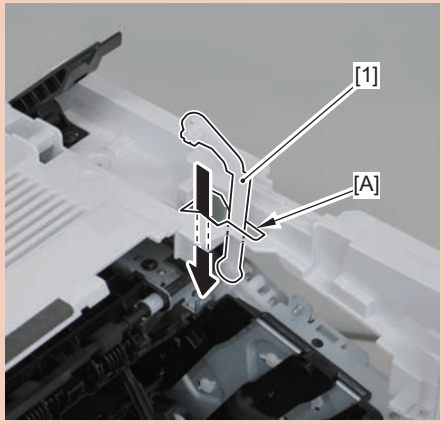
- 6 screws(black TP)[2]



F-4-71

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing

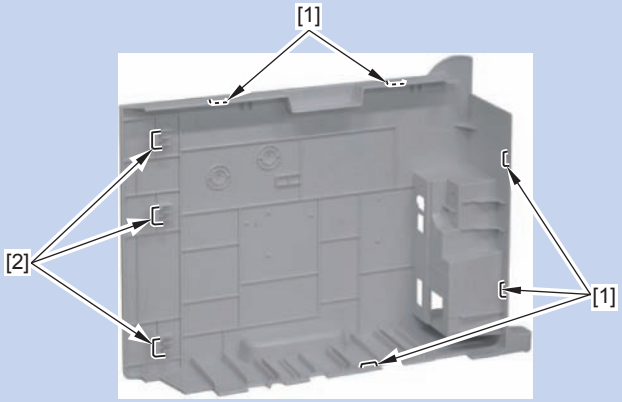


F-4-72

Removing the Left Cover(MF4780w/MF4770n/MF4750/MF4730)

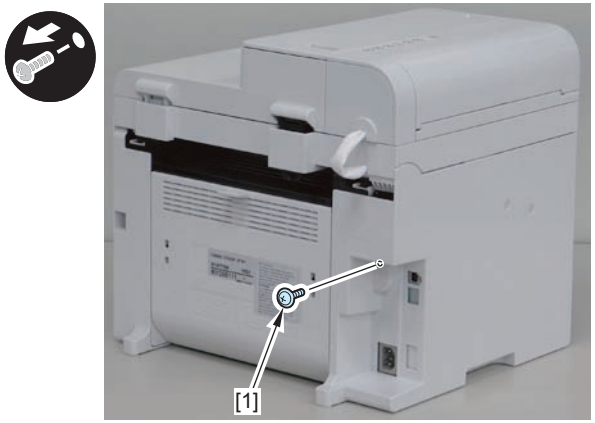
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



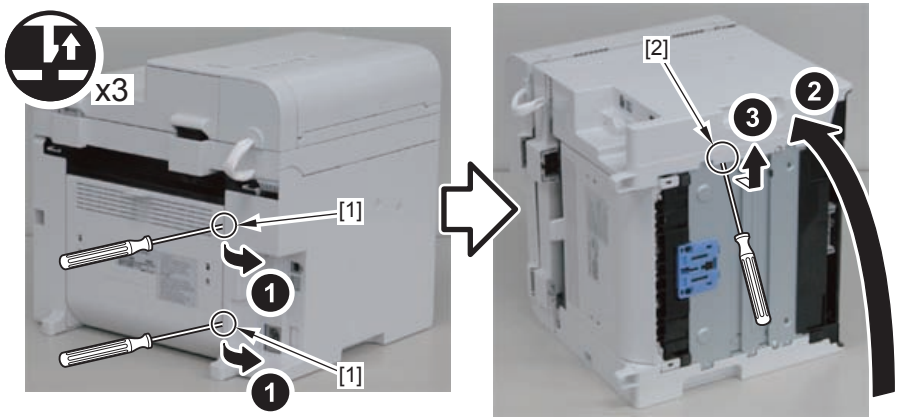
F-4-73

1) Remove the screw(black TP)[1].



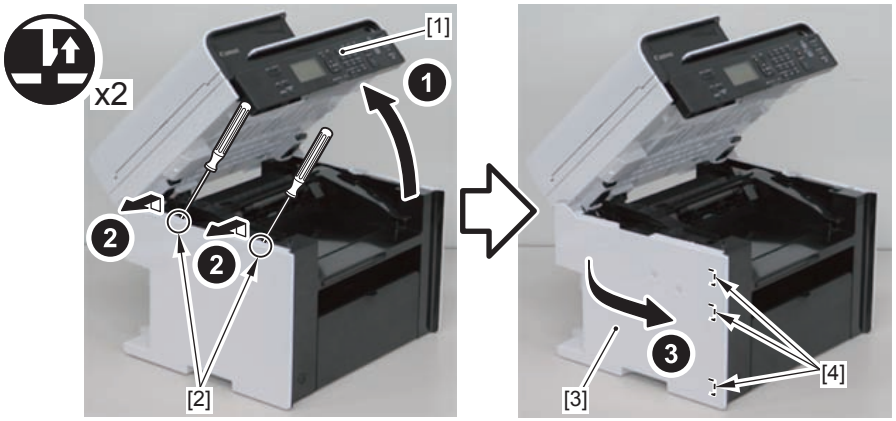
F-4-74

2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-75

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
- 3 hooks[4]

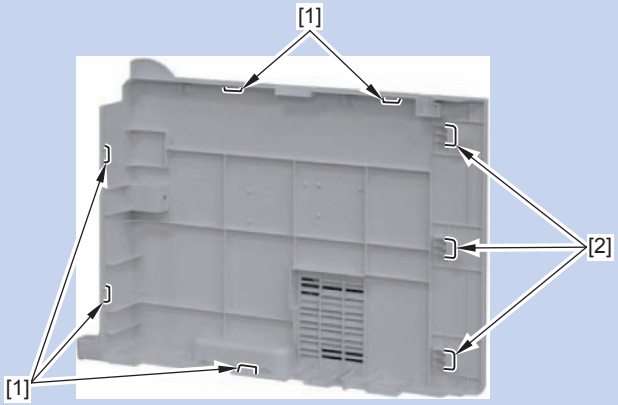


F-4-76

Removing the Right Cover(MF4780w/MF4770n/MF4750/MF4730)

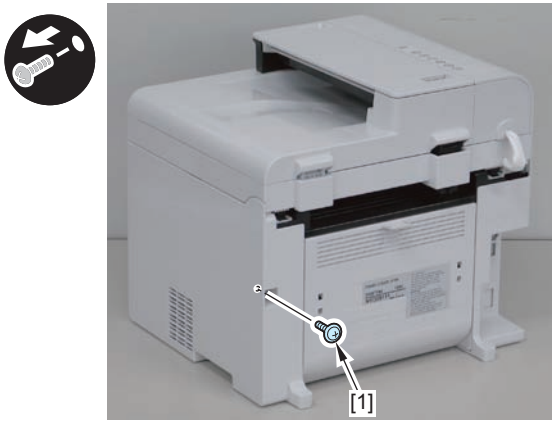
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



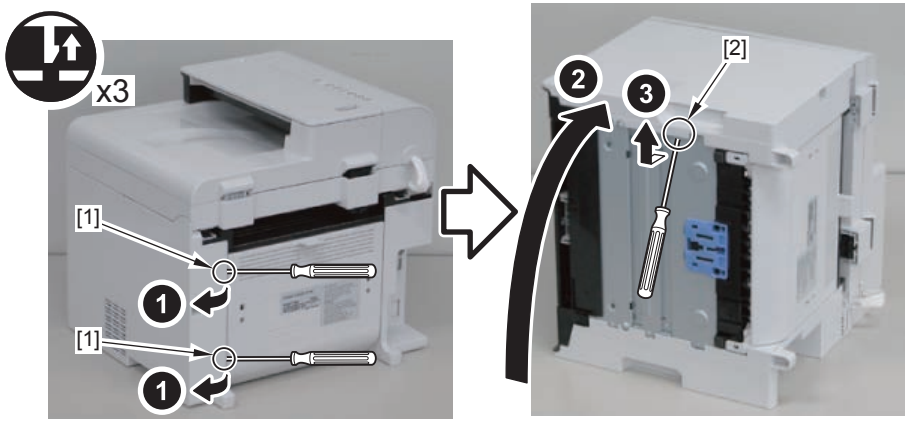
F-4-77

1) Remove the screw(black TP)[1].



F-4-78

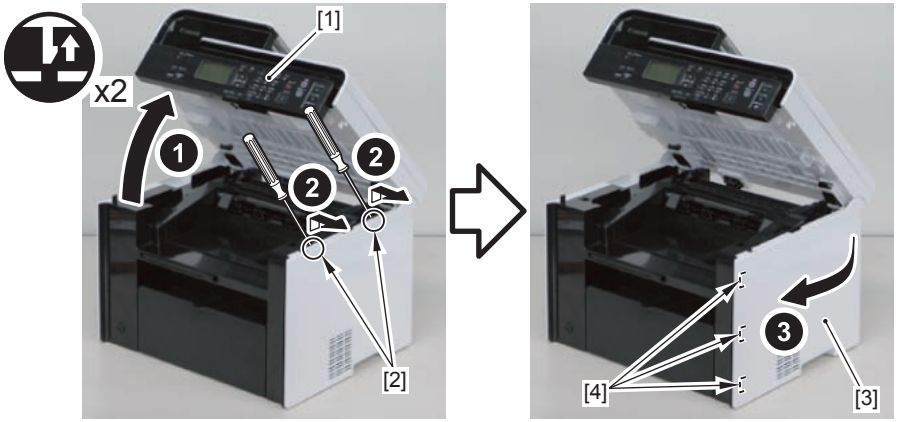
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-79

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].

- 3 hooks[4]



F-4-80

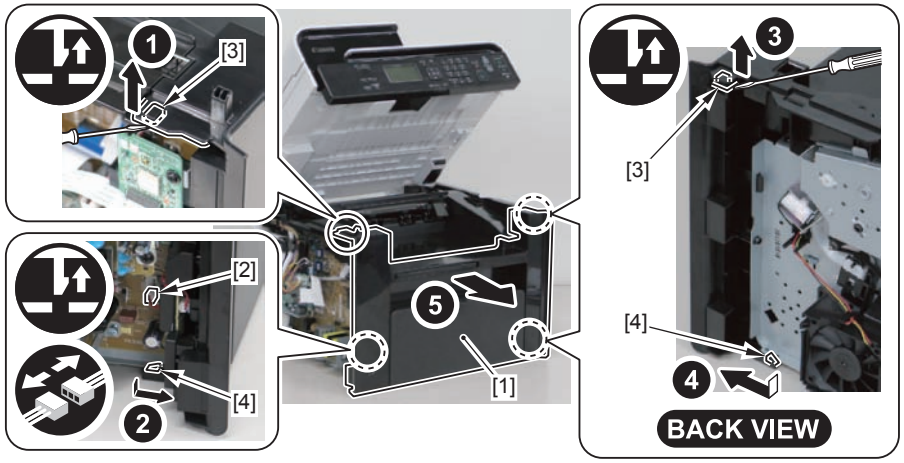
Removing the Front Cover Unit(MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover.
2) Remove the right cover

Procedure

1) Remove the front cover unit[1]
- connector[2]
- 2 protrusions[3]
- 2 claws[4]



F-4-81

Removing the Upper Cover MF4780w/MF4770n/MF4750/MF4730)

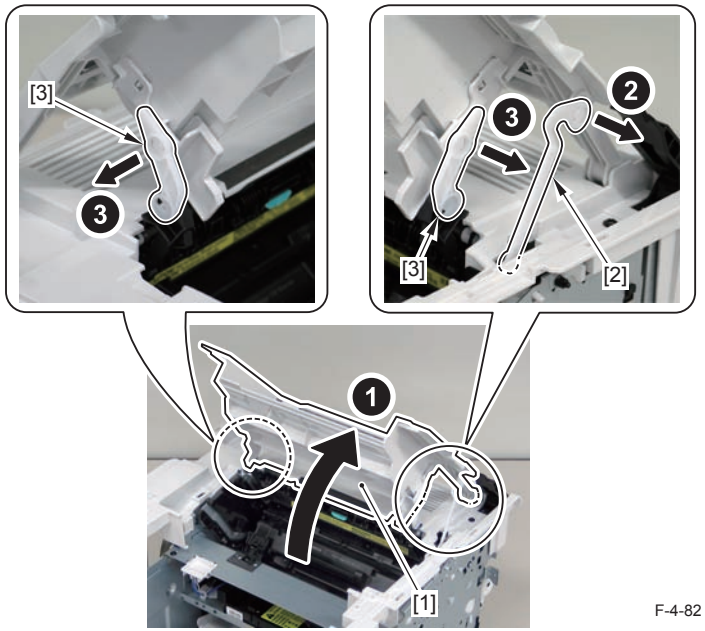
Preparation

1) Remove the left cover.
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit

Procedure

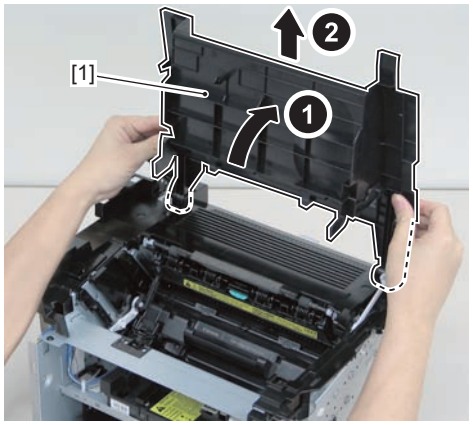
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

Caution:
When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



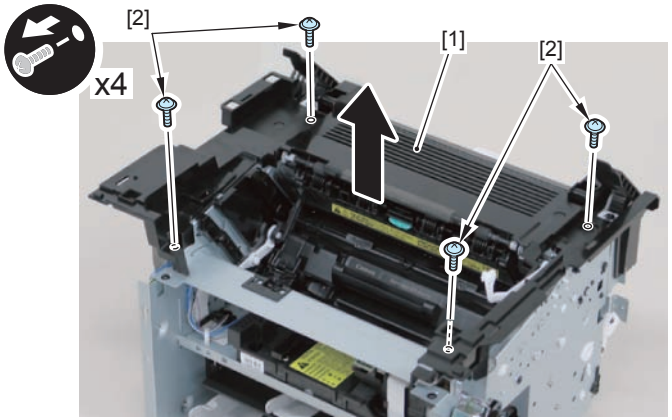
F-4-82

4)Raise the delivery tray[1] vertically and remove it.



F-4-83

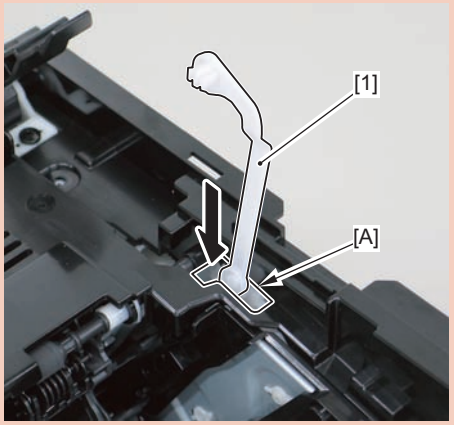
5)Remove the upper cover[1]
4 screws(black TP)[2]



F-4-84

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing

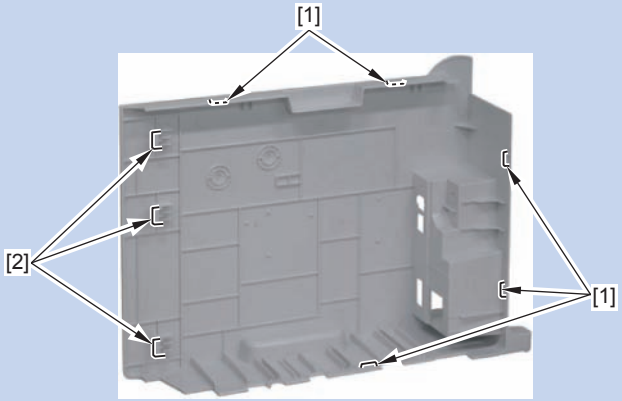


F-4-85

Removing the Left Cover(MF4720w/MF4712/MF4710)

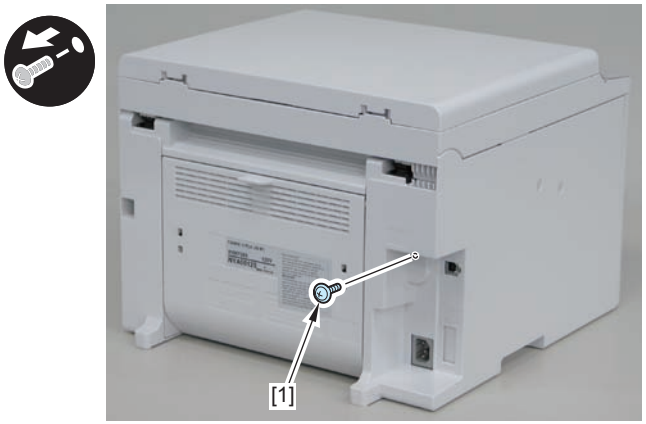
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



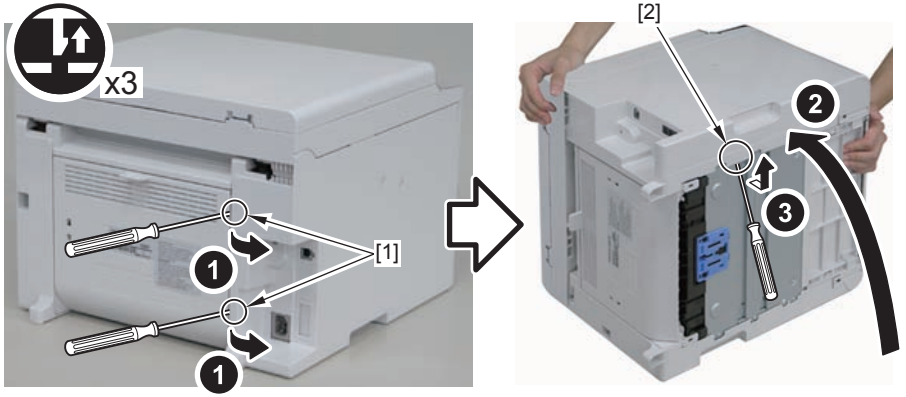
F-4-86

1) Remove the screw(black TP)[1].



F-4-87

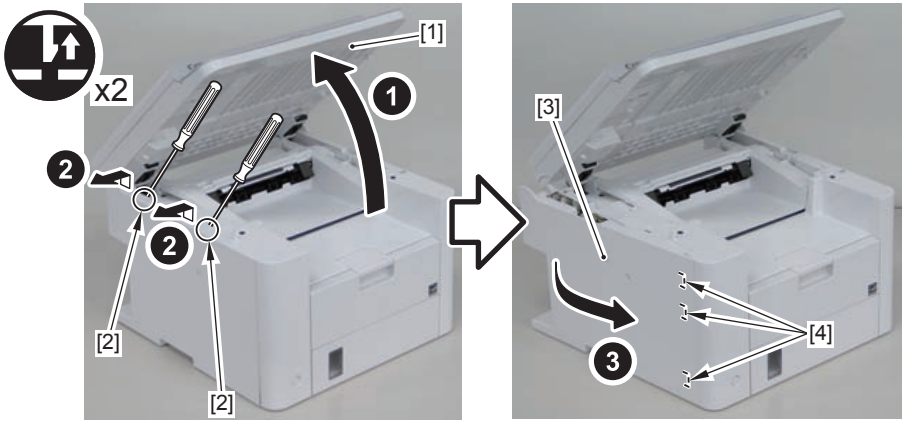
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-88

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
6) Remove the left cover[3]

- 3 hooks[4]

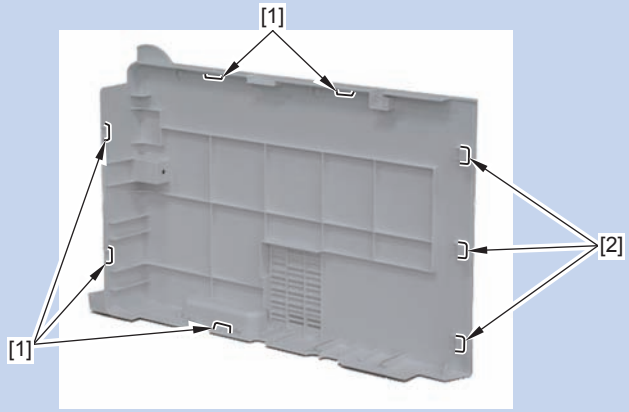


F-4-89

Removing the Right Cover(MF4720w/MF4712/MF4710)

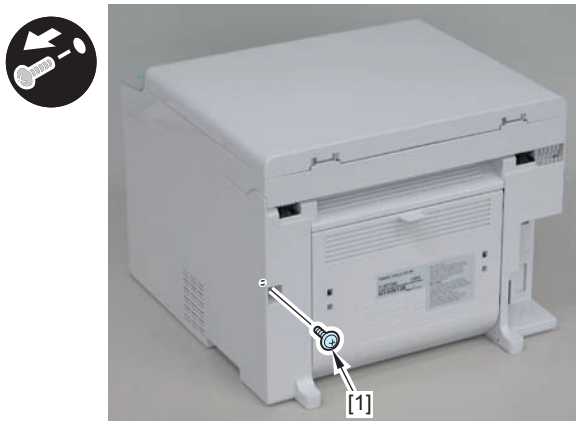
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



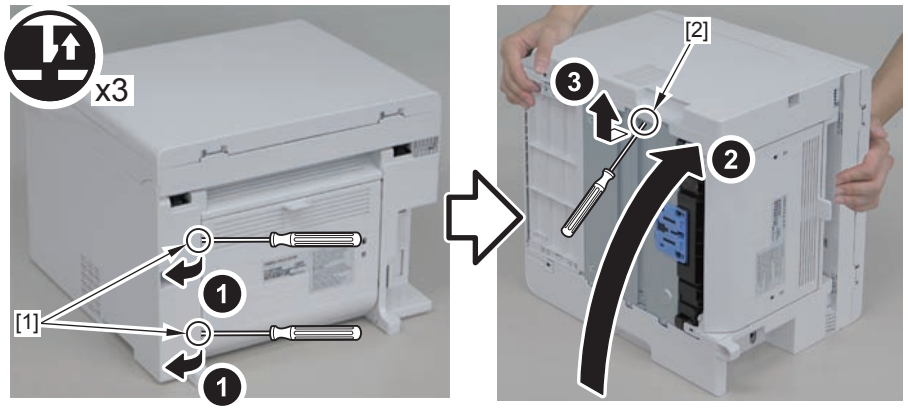
F-4-90

1) Remove the screw(black TP)[1].



F-4-91

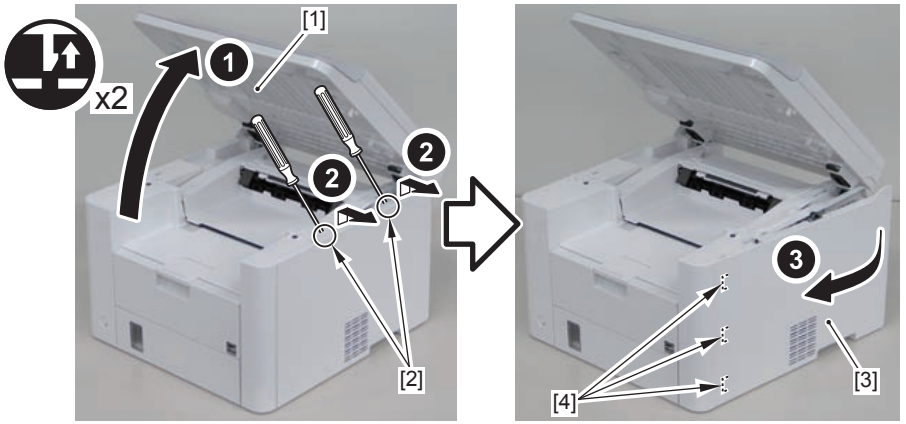
2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-92

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
6) Remove the right cover[3]

- 3 hooks[4]



F-4-93

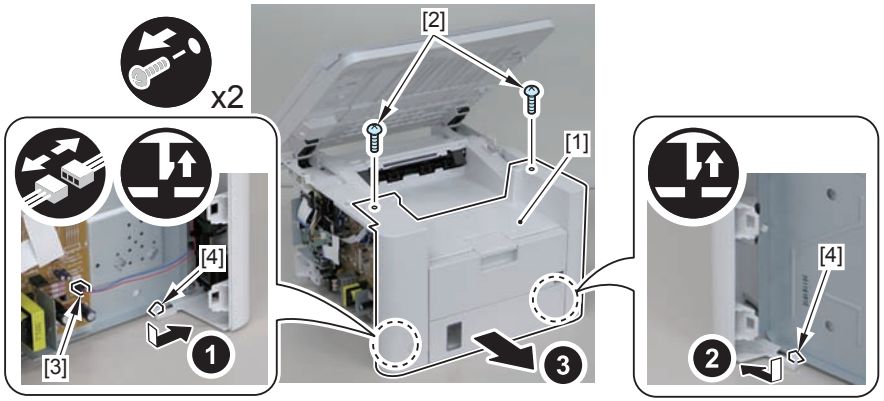
Removing the Front Cover Unit(MF4720w/MF4712/4710)

Preparation

1) Remove the left cover.
2) Remove the right cover

Procedure

1) Remove the front cover unit[1]
- 2 screws[2]
- 1 connector[3]
- 2 claws[4]



F-4-94

Removing the Upper Cover (MF4720w/MF4712/MF4710)

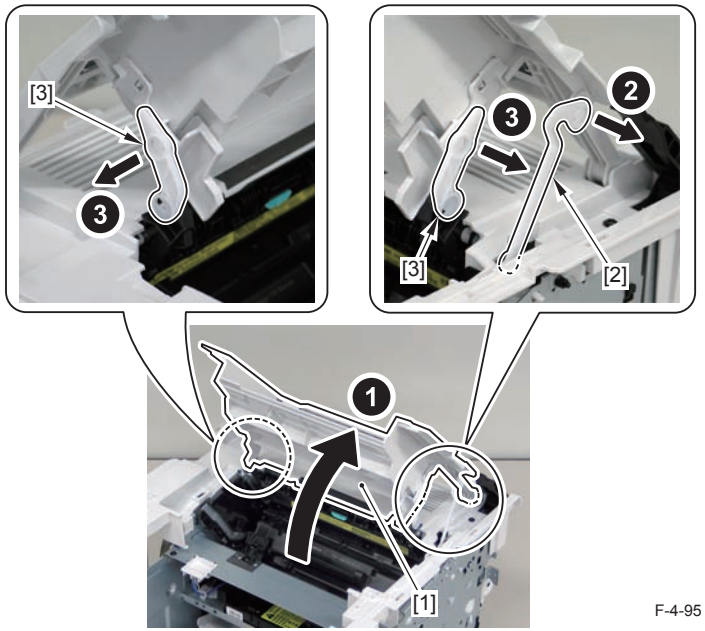
Preparation

1) Remove the left cover.
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit

Procedure

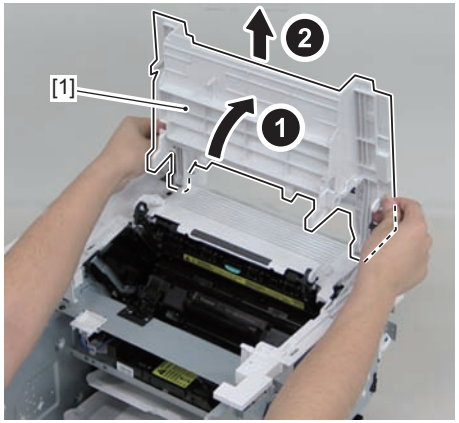
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

Caution:
When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



F-4-95

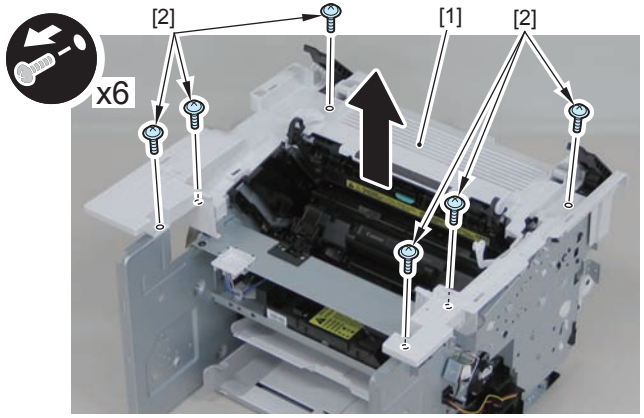
4)Raise the delivery tray[1] vertically and remove it.



F-4-96

5)Remove the upper cover[1]

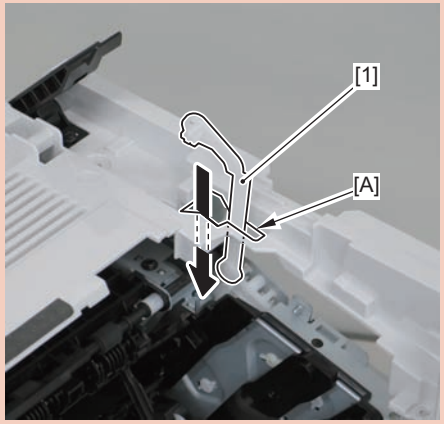
- 6 screws(black TP)[2]



F-4-97

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing

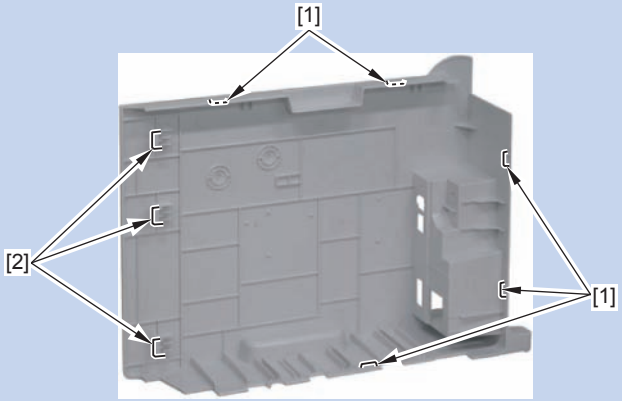


F-4-98

Removing the Left Cover(L418S/L410/L190)

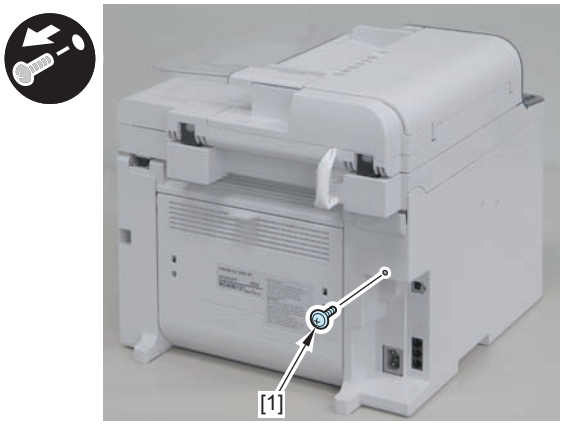
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



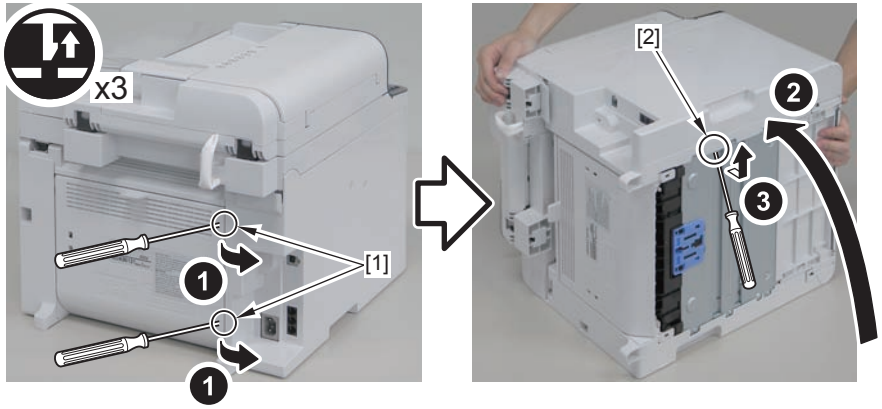
F-4-99

1) Remove the screw(black TP)[1].



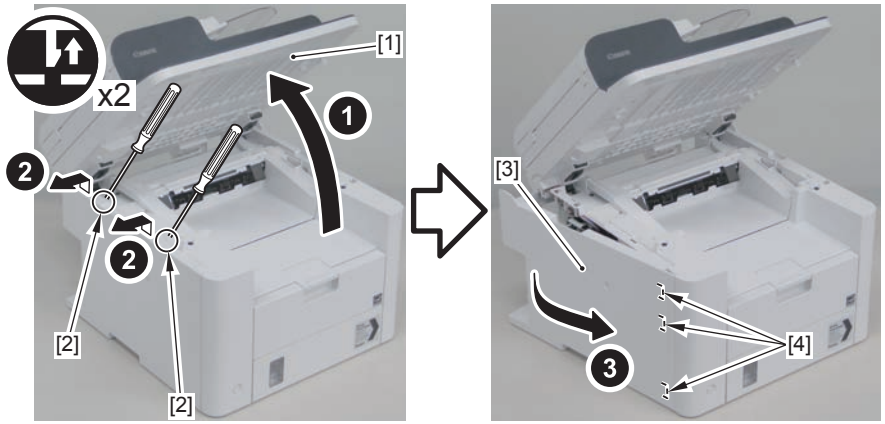
F-4-100

2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-101

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
- 3 hooks[4]

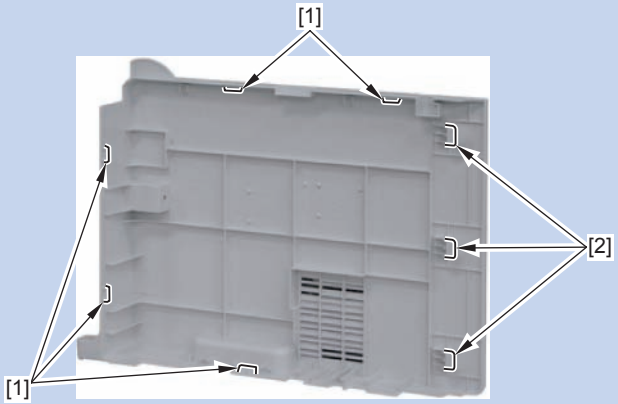


F-4-102

Removing the Right Cover(L418S/L410/L190)

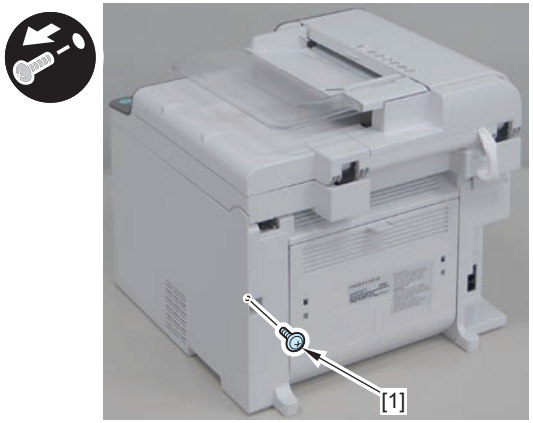
Procedure

Note:
The locations of the 5 left cover claws [1] and 3 hooks [2] are shown here.



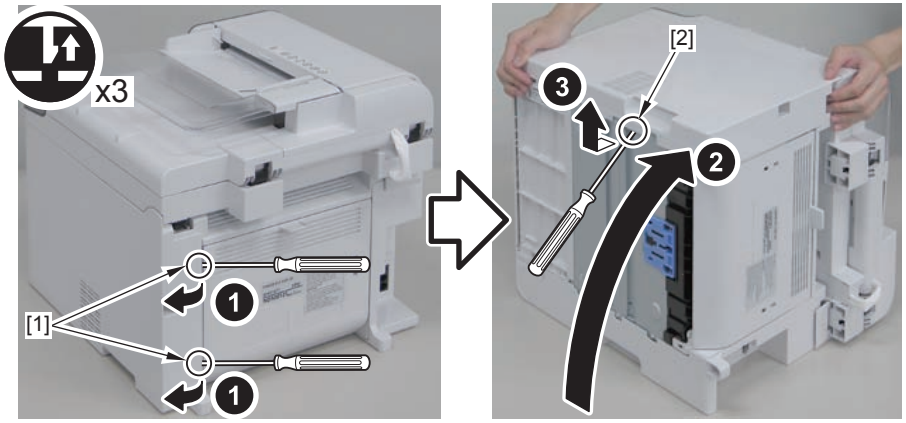
F-4-103

1) Remove the screw(black TP)[1].



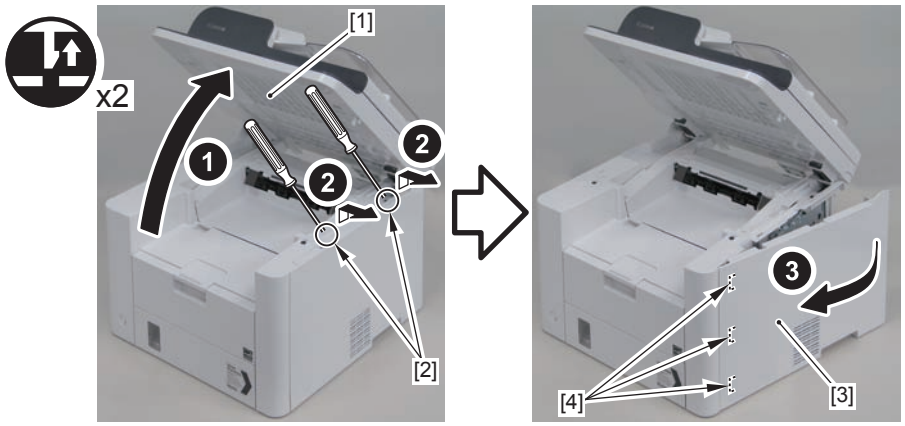
F-4-104

2) Remove the 2 rear claws [1]
3) Place the machine with its right side down, and remove the claw[2] on the underside.



F-4-105

4) Return the host machine to its original position.
5) Open the reader unit[1] and remove the 2 upper claws[2].
- 3 hooks[4]



F-4-106

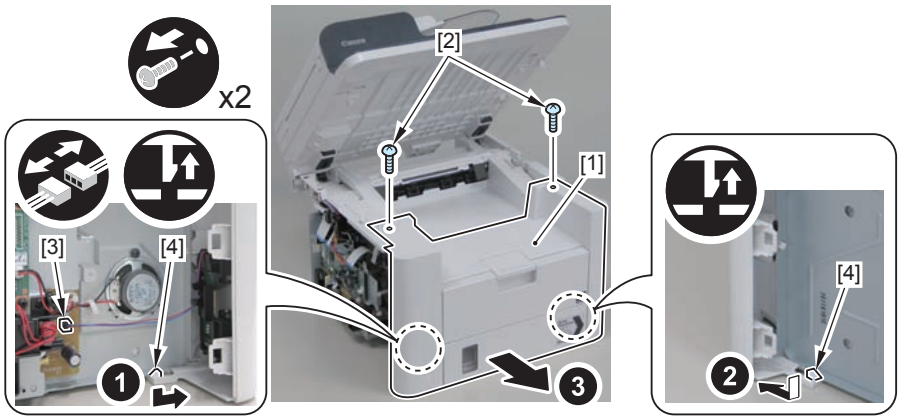
Removing the Front Cover Unit(L418S/L410/L190)

Preparation

1) Remove the left cover.
2) Remove the right cover

Procedure

1) Remove the front cover unit[1]
- connector[2]
- 2 protrusions[3]
- 2 claws[4]



F-4-107

Removing the Upper Cover (L418S/L410/L190))

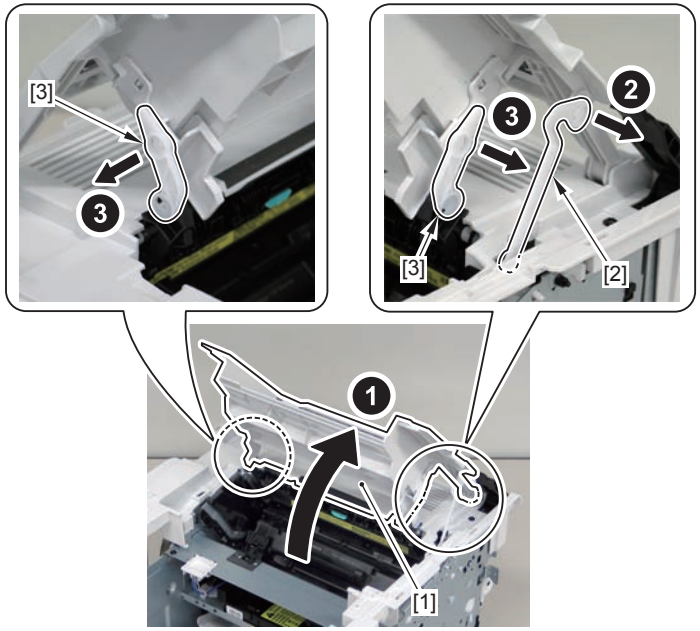
Preparation

1) Remove the left cover.
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit

Procedure

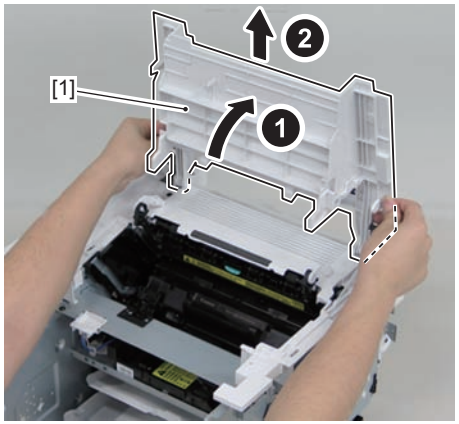
1) Open the delivery tray[1].
2) Remove the cartridge arm[2]
3) Remove the 2 fixing pressure arms[3].

> Caution:
> When assembling/disassembling the upper cover, take care not to lose the cartridge arm [2] and the 2 fixing pressure arms [3].



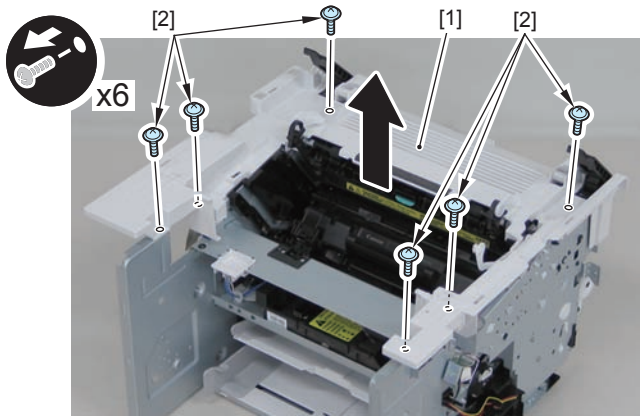
F-4-108

4)Raise the delivery tray[1] vertically and remove it.



F-4-109

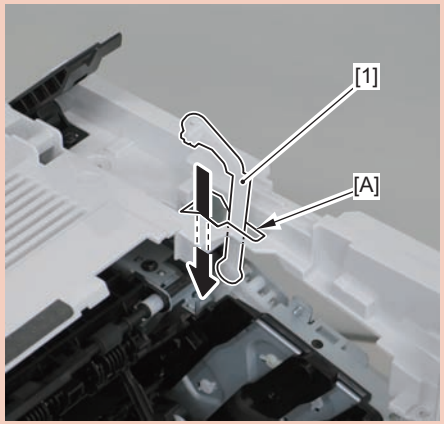
5)Remove the upper cover[1]
4 screws(black TP)[2]



F-4-110

Caution:

Be sure to put the cartridge arm[1] through the hole[A] of the upper cover when installing



F-4-111

Document Exposure/Feeder System

Removing the DADF Unit and Reader Unit(MF4890dw/MF4880dw)

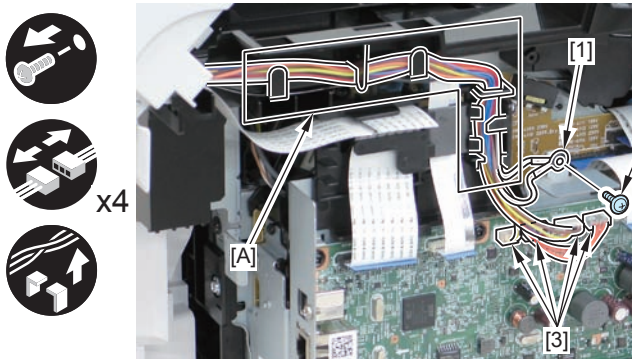
Preparation

1) Remove the left cover.

Procedure

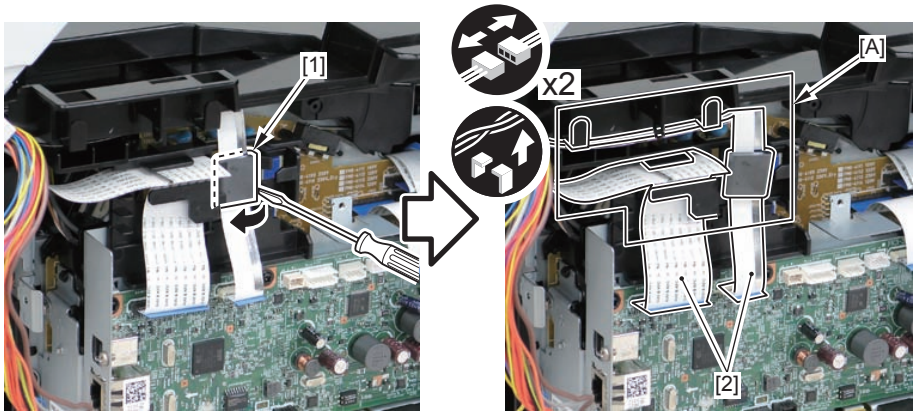
1) Remove the 2 grounding wires[1].
- 1 screw(black TP)

2) Disconnect the 3 connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-112

3) Remove the ferrite core[1], and disconnect the 2 flat cables from the harness guide[A]

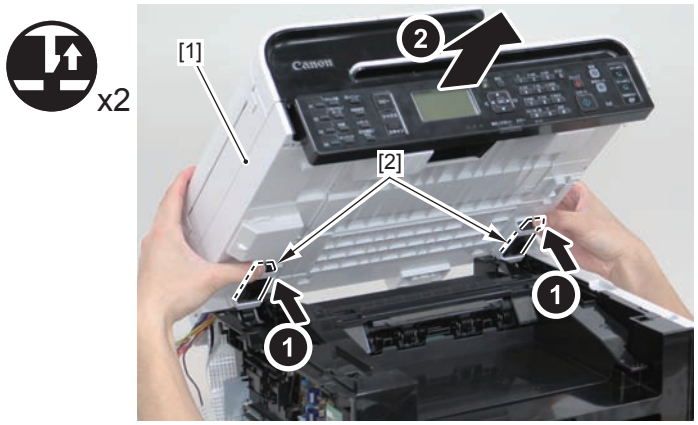


F-4-113

4) Remove the DADF unit and reader unit.
- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-114

Caution:

When installing the DADF unit and reader unit, secure the 2 hinge arm claws[1] to the 2 hooks[2] of the reader unit.

Removing the DADF Unit (MF4890dw/MF4880dw)

Preparation

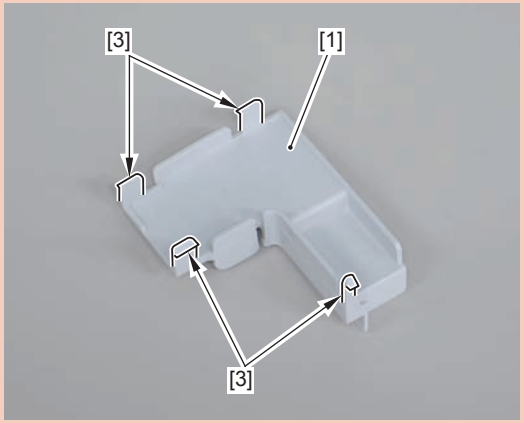
1) Remove the left cover.
2) Remove the DADF unit and reader unit

Procedure

1) Remove the connector cover[1] and plate[2] , and remove the harness from the guide[A].
- 4 claws[3]

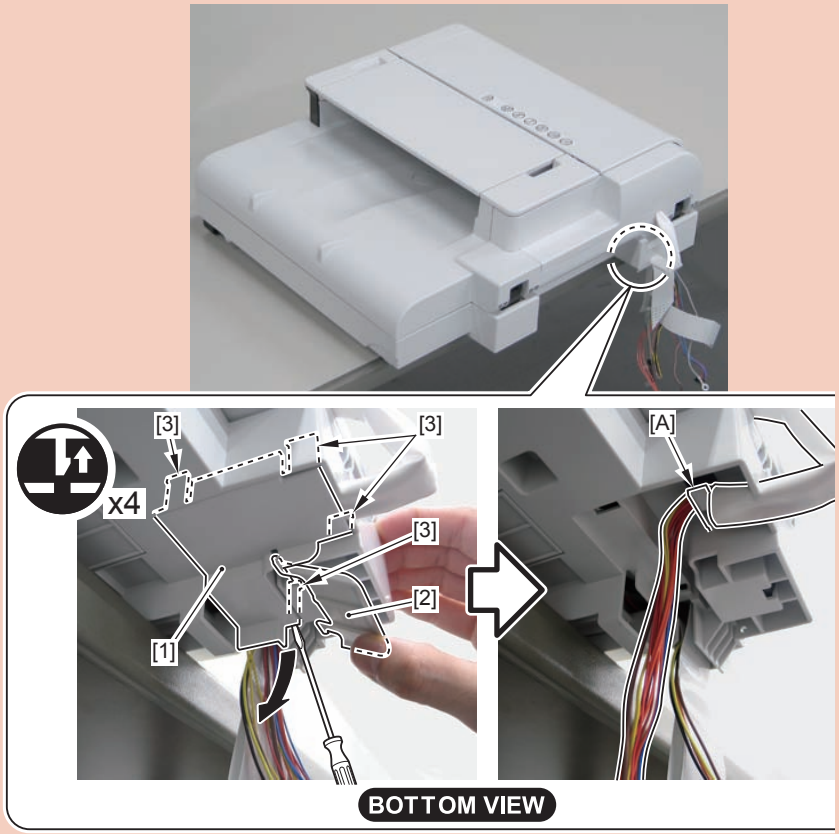
Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



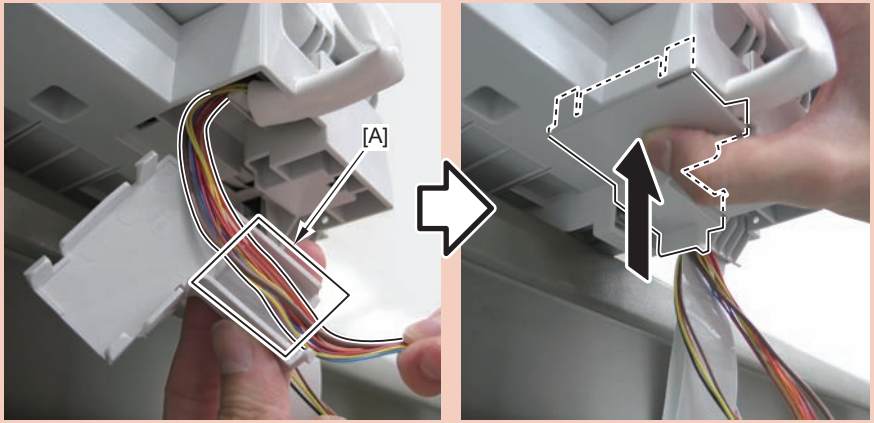
Caution:

Be sure to hold the connector cover when removing it.

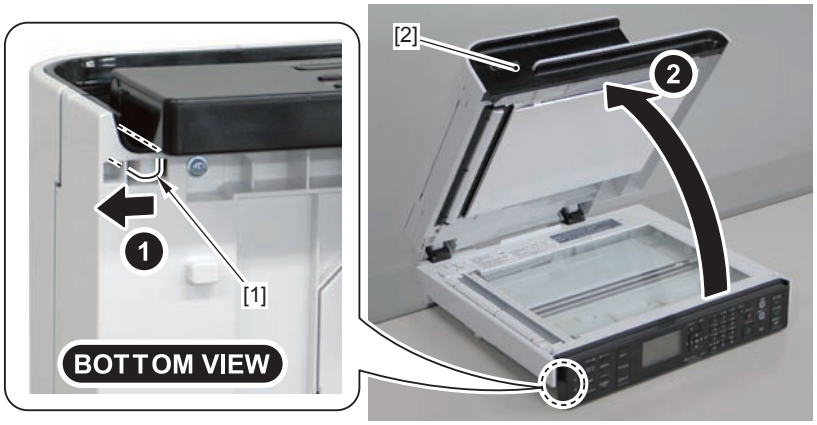


Caution:

Before installing the connector cover, be sure to store the harness, grounding wire, and flat cable in the [A] part.

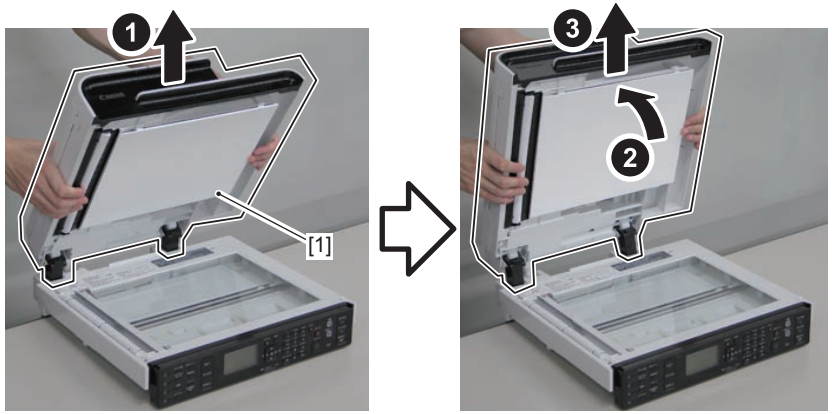


2)Release the lock[1] on the lower left front side of the reader unit, and open the DADF unit.



F-4-115

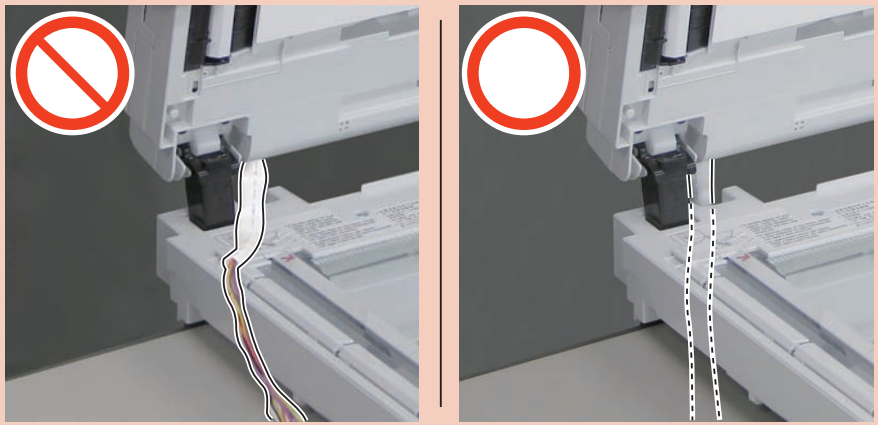
3)Remove the DADF unit[1] by lift it up and then raising it vertically.



F-4-116

Caution:

When installing the DADF unit , be careful not to damage the harnesses with [A] part.



F-4-117

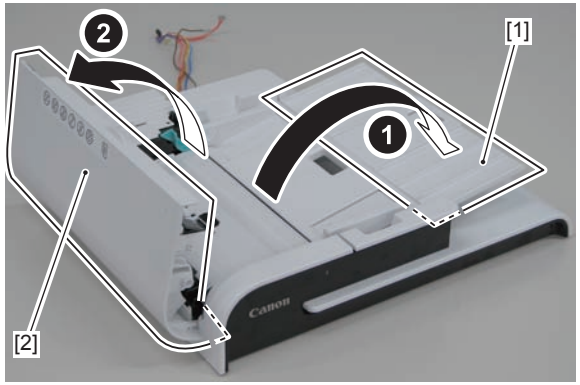
Removing the DADF Pickup Unit (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.

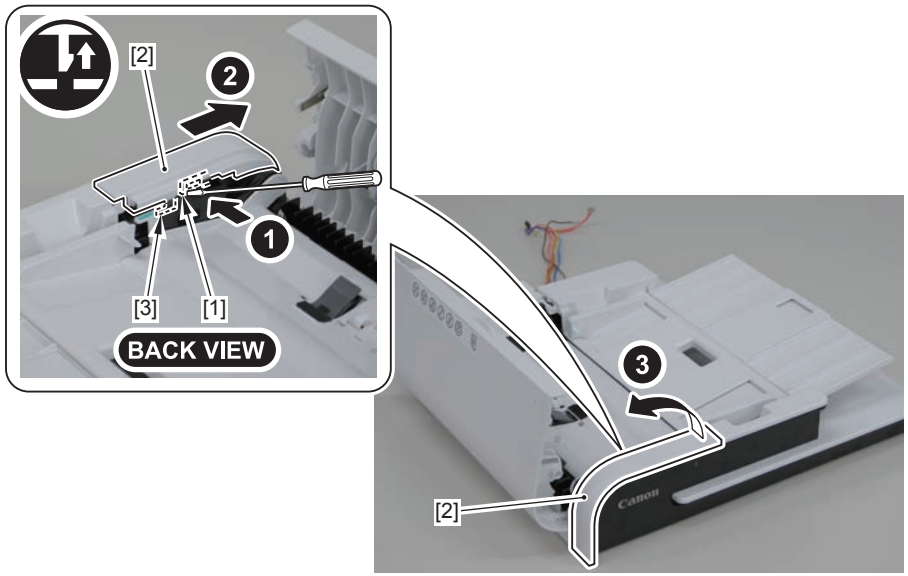
Procedure

1) Open the DADF pickup tray and DADF upper cover.



F-4-118

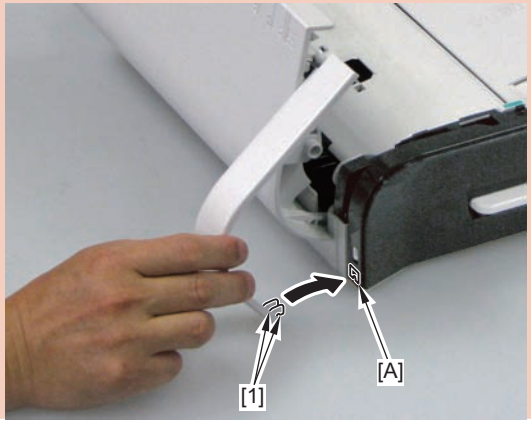
2)Remove the DADF upper front cover[2] by pushing the claw.



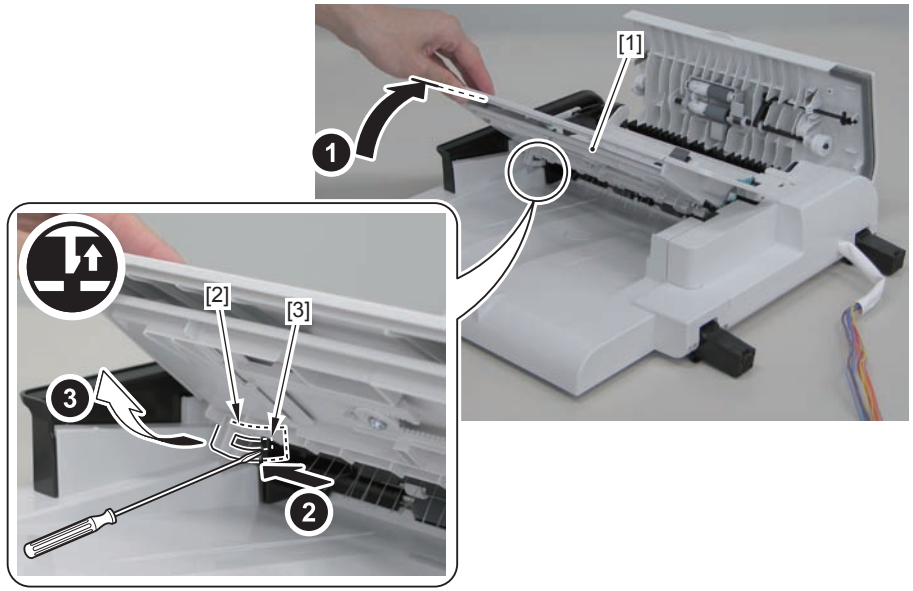
F-4-119

Caution:

When assembling the DADF upper front cover, align the 2 hooks[1] at left side to DADF front cover hole[A] to install the cover.

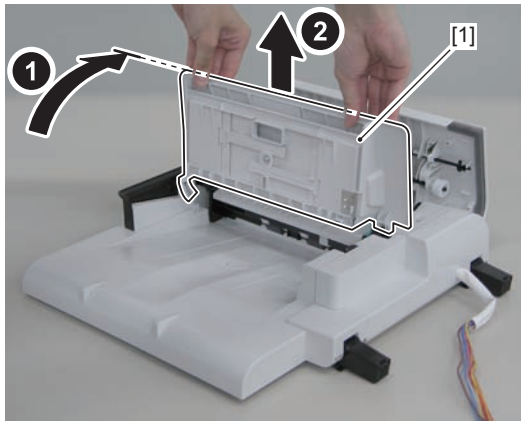


3)Open the DADF tray[1] until it stops. Then release the claw by pushing the hook[2] in the direction of the arrow[A] with a flat-blade screwdriver, and move the tray in the direction of the arrow.



F-4-120

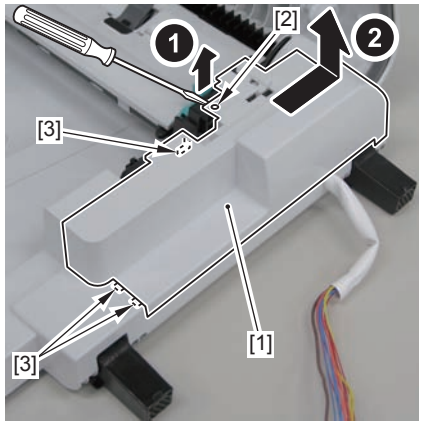
4)Open the DADF tray[1] to the position shown in the figure below, and remove it upward.



F-4-121

5)Remove the DADF upper rear cover[1].

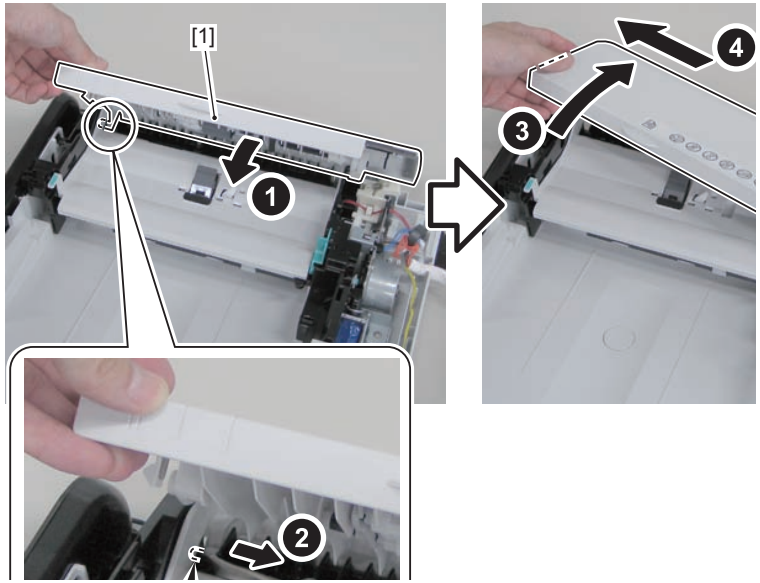
- 1 boss[2]
- 3 hooks[3]



F-4-122

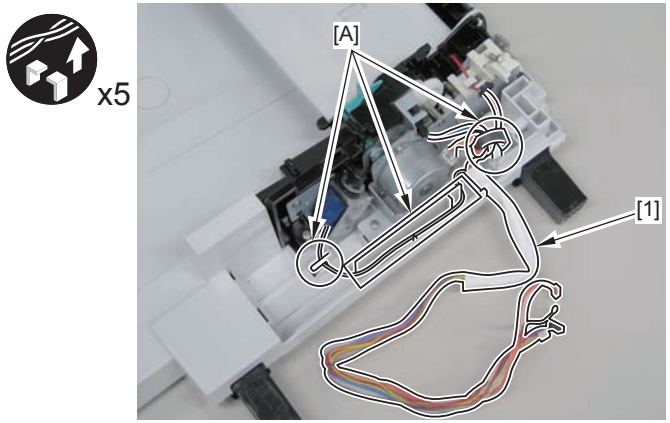
6)Remove the DADF upper cover[1].

- 2 shafts[2]



F-4-123

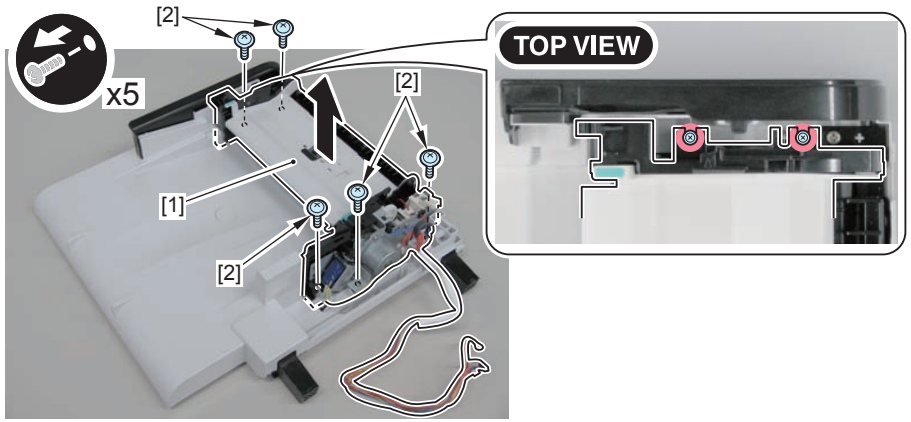
7)Remove the DADF unit communication cable[1] from the harness guide[A].



F-4-124

8)Remove the DADF unit.

5 screws[2]



F-4-125

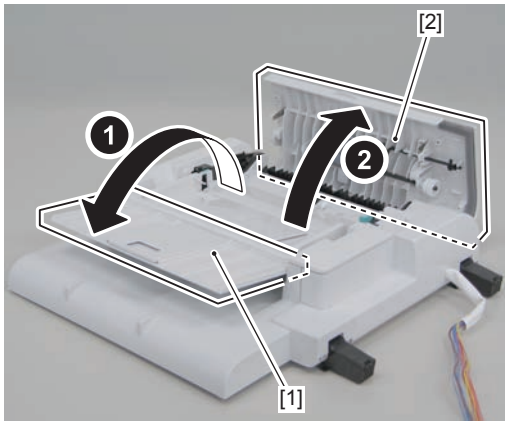
Removing the DADF Motor Unit (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.

Procedure

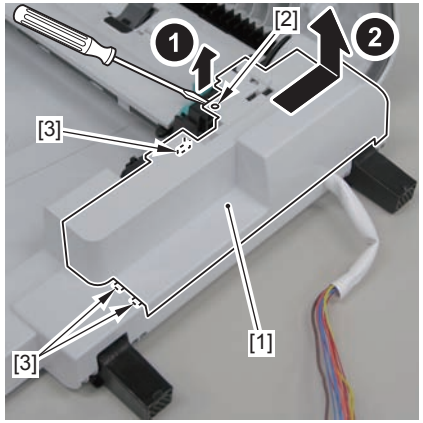
1) Open the DADF pickup tray and DADF upper cover.



F-4-126

2) Remove the DADF upper rear cover[1]

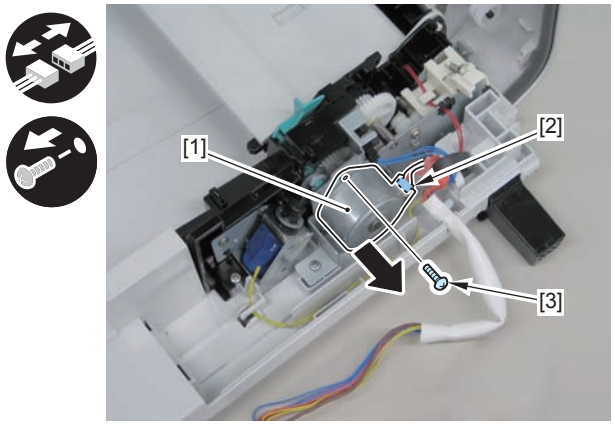
- 1 boss[2]
- 3 hooks[3]



F-4-127

3) Remove the DADF motor[1]

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



F-4-128

Removing the DADF Solenoid Unit (MF4890dw/MF4880dw)

Preparation

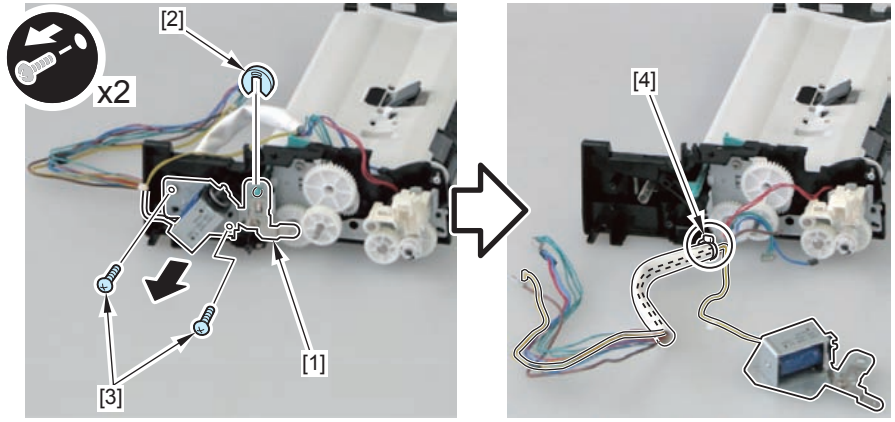
1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.
4) Remove the DADF pickup unit.
5) Remove the DADF motor unit.

Procedure

Caution:

Gently remove the DADF solenoid unit to prevent the gear phase from becoming displaced.

1) Remove the DADF solenoid unit [1].
- 1 e-ring [2]
- 2 screws [3]
- 1 harness band [4]

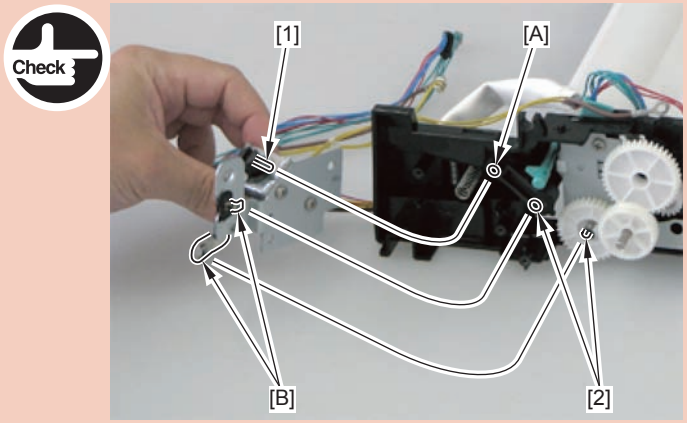


F-4-129

Caution:

When assembling the DADF solenoid unit, be sure to put the solenoid shaft [1] through the hole [A] on the solenoid arm.

When assembling the DADF solenoid unit, ensure that the 2 DADF pickup unit shafts [2] and the 2 DADF solenoid unit contact points [B] are in contact.



Removing the DADF Pickup Roller Unit (MF4890dw/MF4880dw)

Preparation

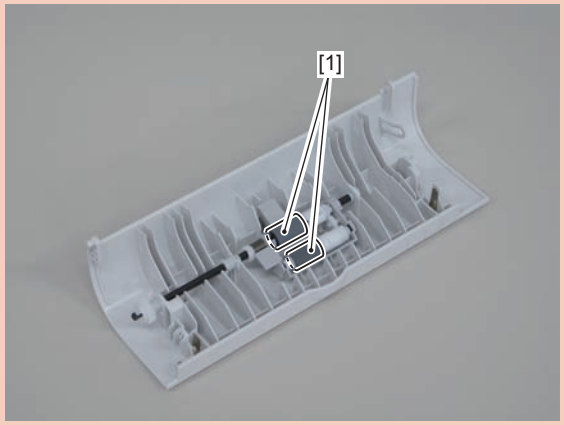
1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.
4) Remove the pickup unit.

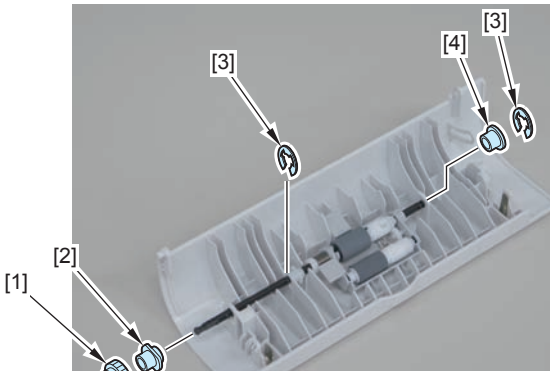
Procedure

1) Remove the gear[1],bushing[2],2 e-rings[3] and bushing[4]

Caution:

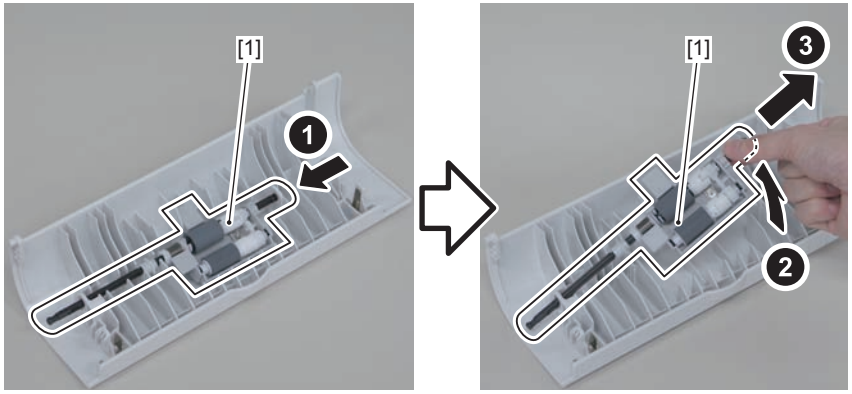
Do not touch the pickup roller surface[1]





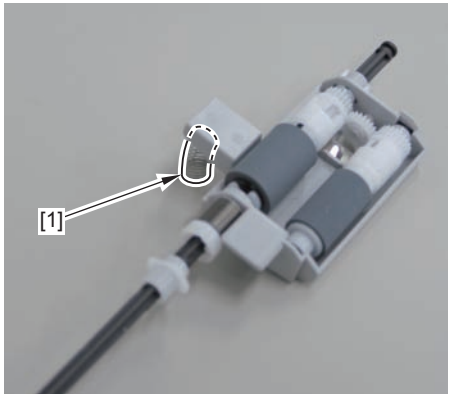
F-4-130

2) Remove the DADF pickup roller unit.



F-4-131

3) Remove the spring[1] on the back side of the pickup roller unit.

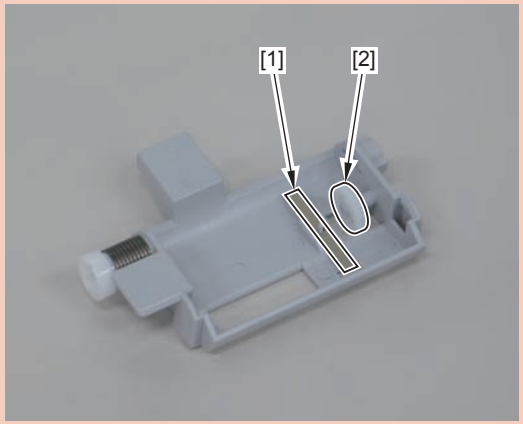


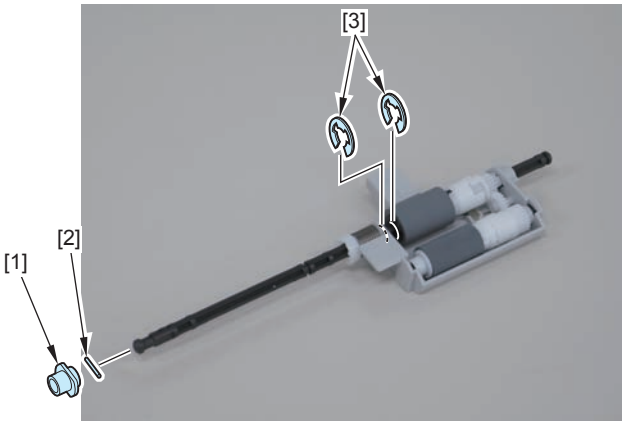
F-4-132

4)Remove the bushing[1],pin[2] and 2 e-rings[3]

Caution:

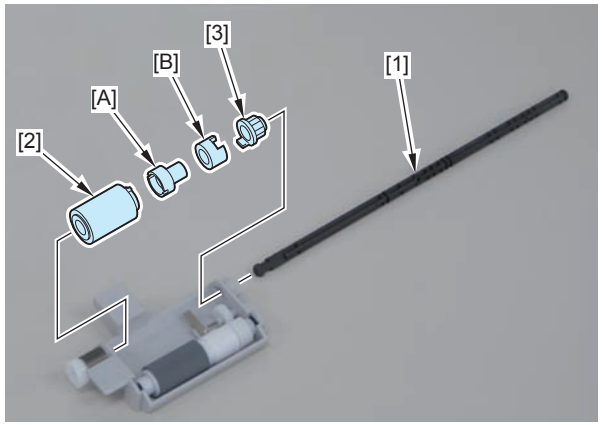
When disassembling/assembling, take care not to lose the plate spring[1] and gear[2]





F-4-133

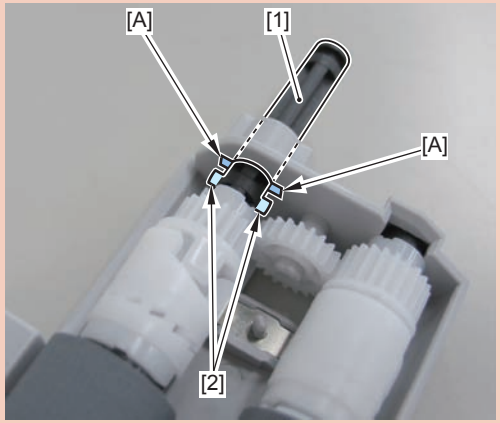
5)Pull out pickup roller shaft[1], and remove the pickup roller[2], bushing[A], bushing[B], and gear[3].



F-4-134

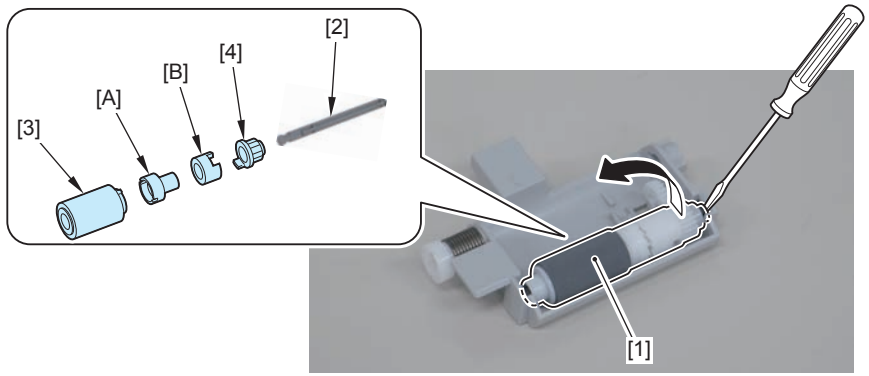
Note

When pulling out the pickup roller shaft[1], be sure to align the boss[2] of the roller shaft with the hole on the [A] part.



6)Remove the pickup roller unit[1]

- pickup roller shaft[2]
- pickup roller 2[3]
- 1 bushing[A]
- 1 bushing[B]
- 1 gear[4]



F-4-135

Removing the DADF Separation Pad(MF4890dw/MF4880dw)

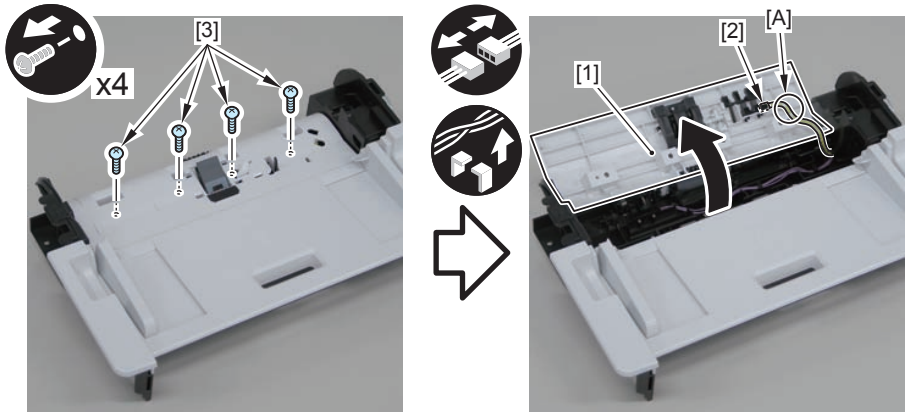
Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.
4)Remove the pickup unit.

Procedure

1)Remove the DADF pickup upper cover[1], and free the harness from the connector[2] and the harness guide[A].

- 4 screws[3]



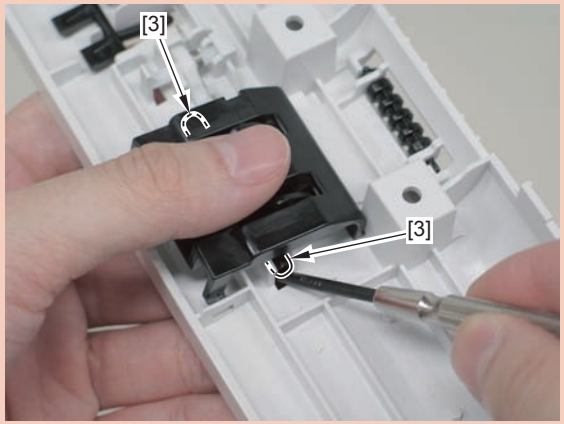
F-4-136

2)Remove the separation pad unit[1].

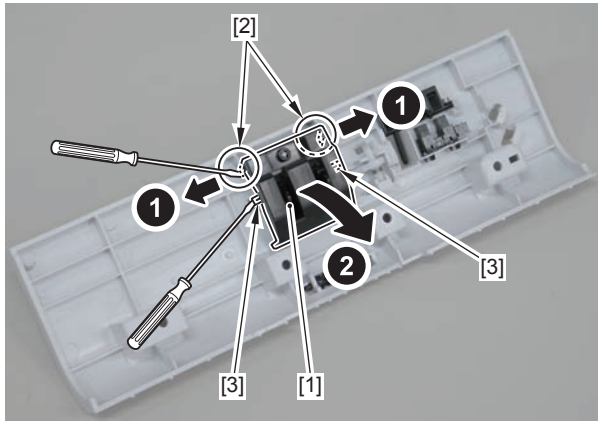
- 2 claws[2]
- 2 protrusions[3]

Caution.

Be sure to hold the separation pad unit with your fingers when releasing its 2 protrusions[3]



x2



F-4-137

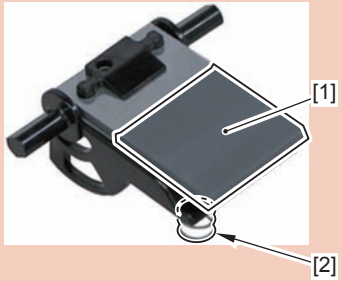
3)Remove the separation pad[1].

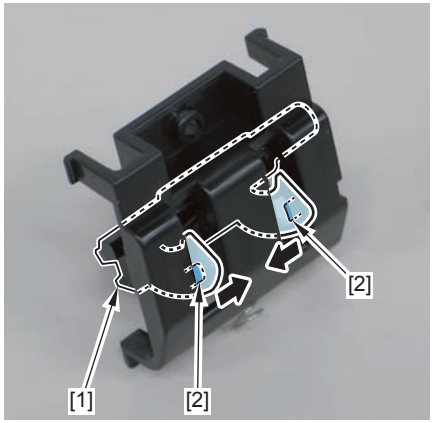
- 2 hooks[2]

Caution.

Do not touch the pad surface[1]

When disassembling/assembling, take care not to lose the spring[2] on the back side of the separation pad.



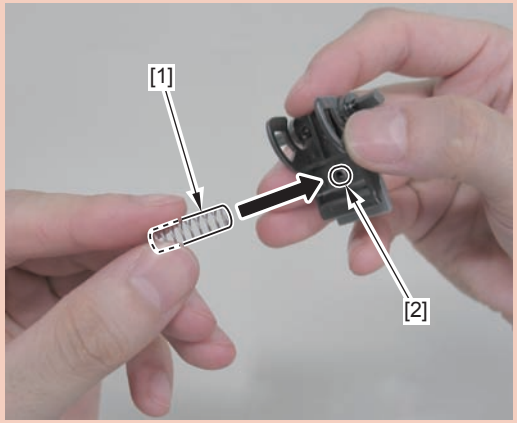


F-4-138

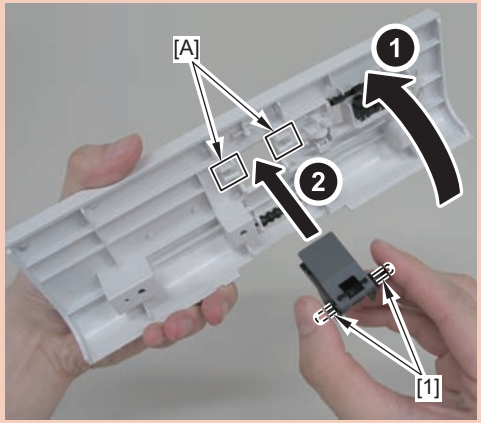
Caution.

When the spring[1] comes off, go through the following steps to install it.

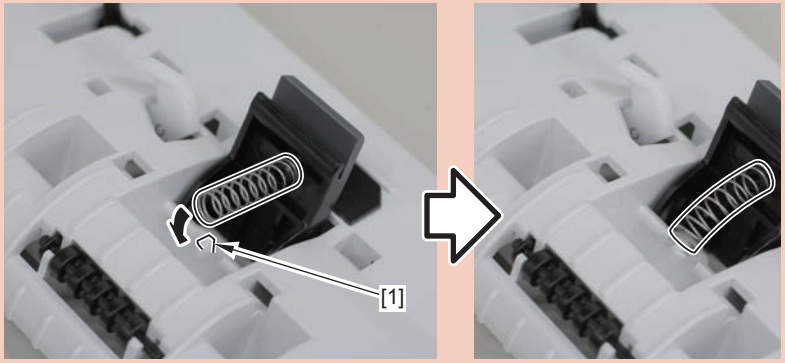
1)Install the spring[1] to the boss[2] on the back side of the separation pad.



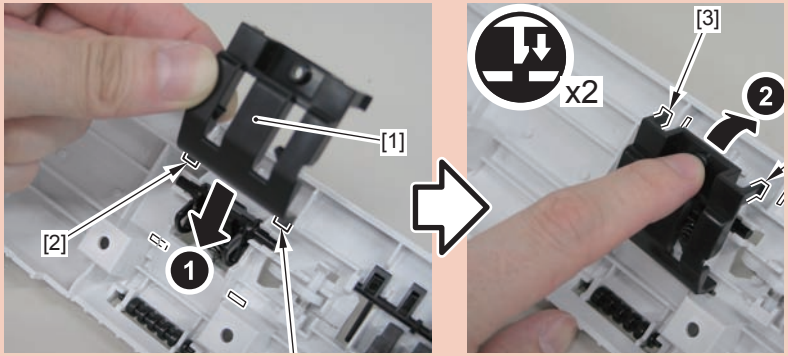
2)Install the shaft[1] of the separation pad unit to the [A] part on the back side of the DADF pickup upper cover.



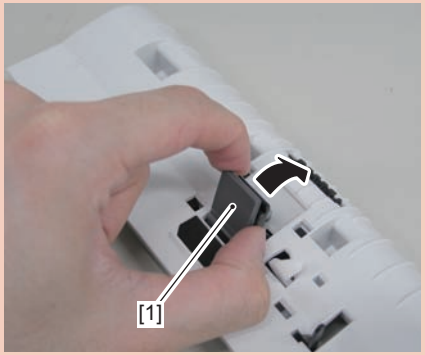
3)Install the spring to the protrusion[1] of the DADF pickup upper cover.



4)Turn the DADF pickup upper cover over to the back, and install the separation pad cover[1].



5)Turn the DADF pickup upper cover over to the front, and push in the separation pad unit[1].



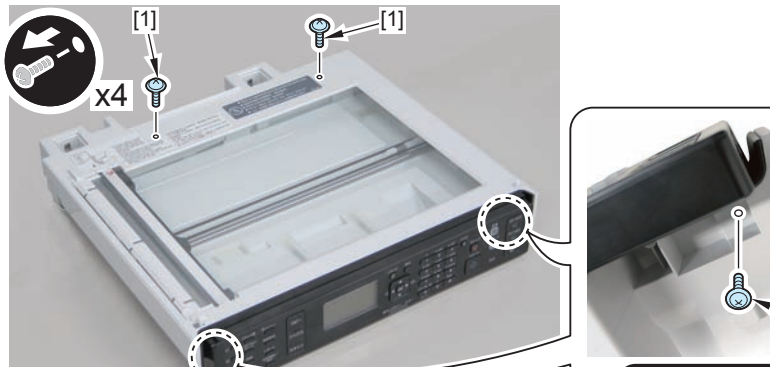
Removing the Copyboard Glass(MF4890dw/MF4880dw)

Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.

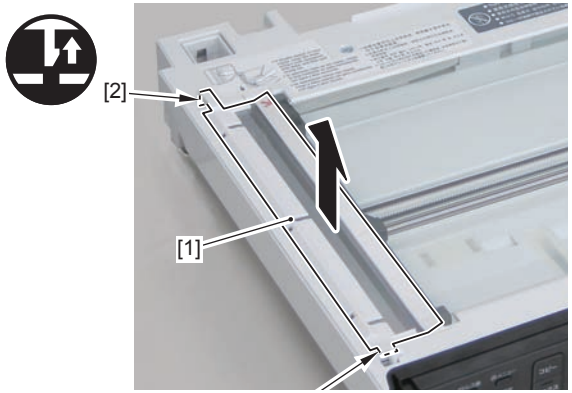
Procedure

1)Remove the 4 screws(TP)[1]



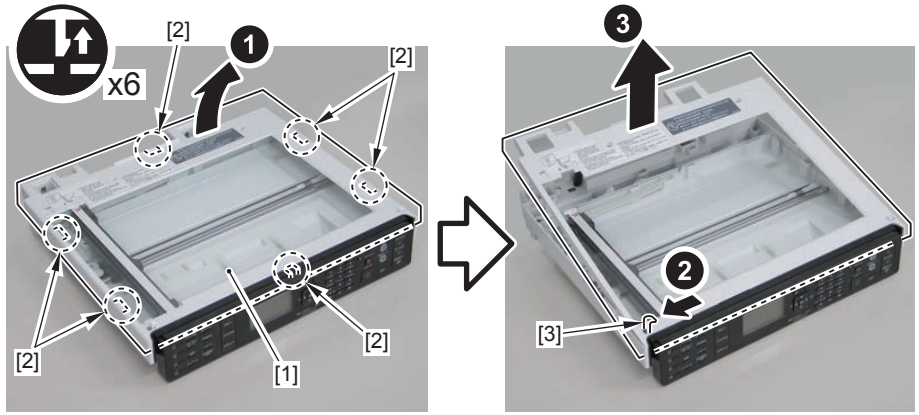
F-4-139

2)Remove the copyboard guide holder[1]
1 claw[2]
1 protrusions[3]



F-4-140

3)Remove the reader upper cover[1]
- 6 claws[2]
- 1 hook[3]



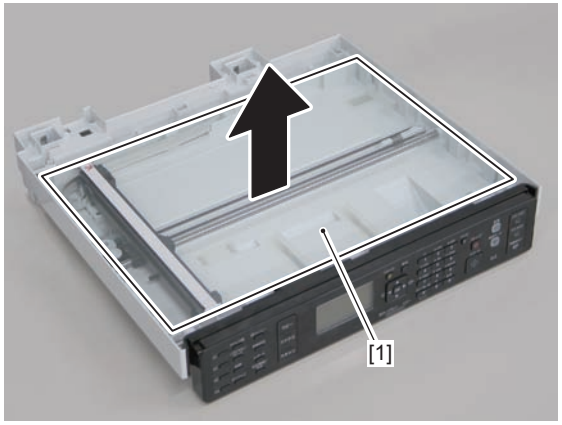
F-4-141

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.



F-4-142

Removing the Flatbed Motor Unit(MF4890dw/MF4880dw)

Preparation

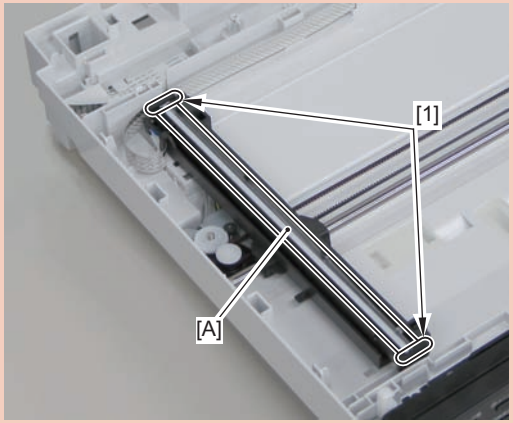
1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.
4) Remove the copyboard glass

Procedure

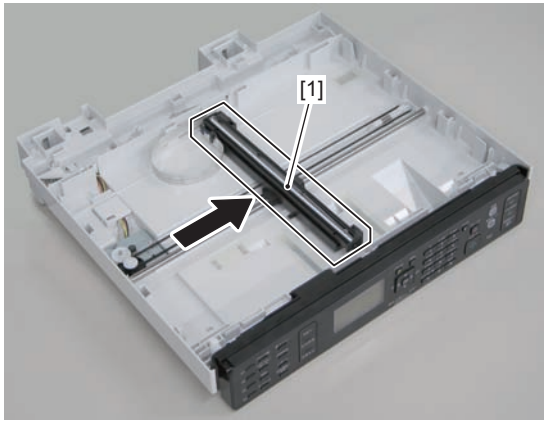
Caution.

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 [A] of the CIS unit.



1)Move the CIS unit[1].

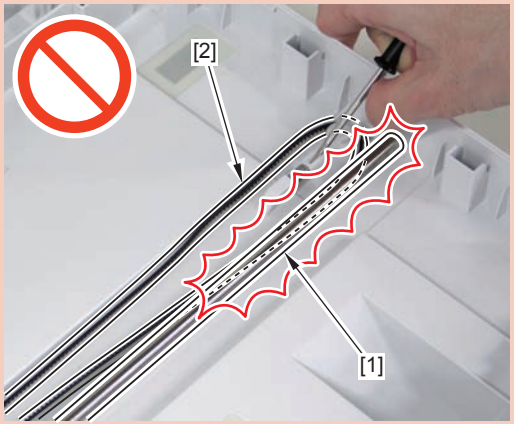


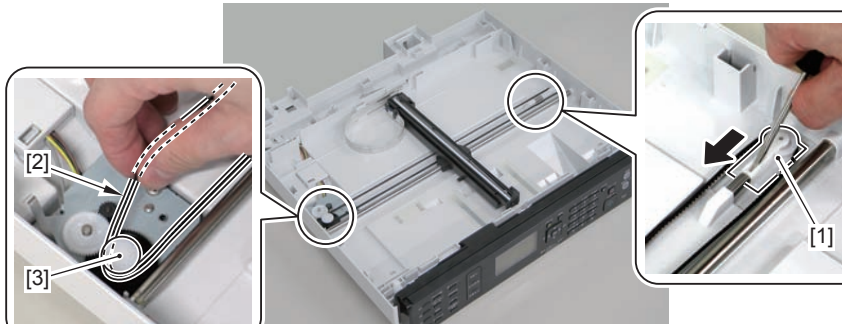
F-4-143

2)Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

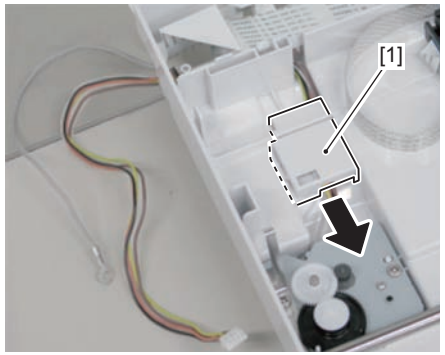
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





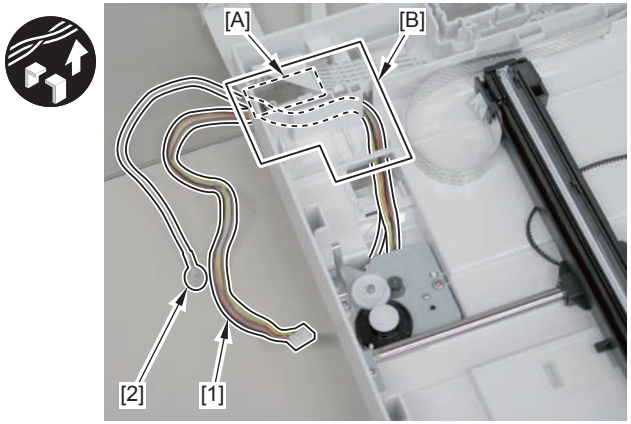
F-4-144

3)Remove the guide cover[1]



F-4-145

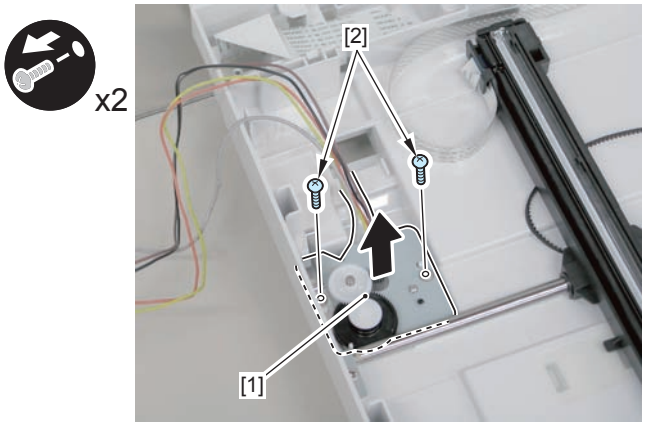
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-146

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-147

Removing the DADF CIS Unit(MF4890dw/MF4880dw)

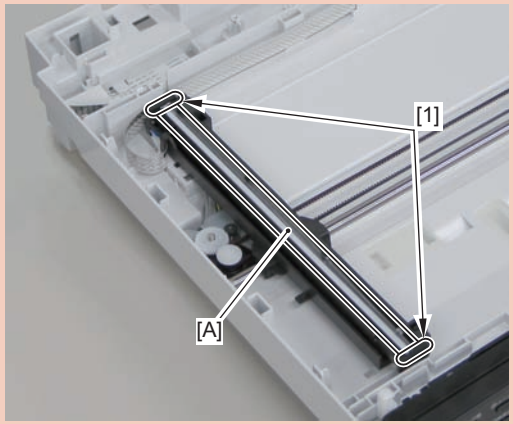
Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.
4)Remove the copyboard glass

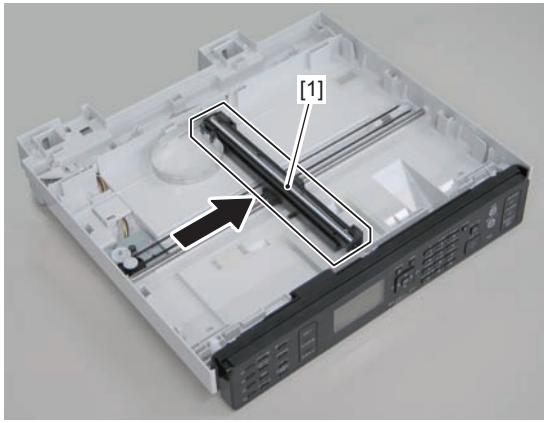
Caution.

When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



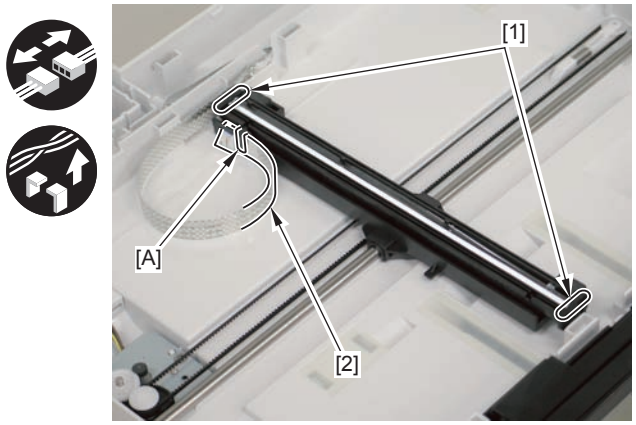
1)Move the CIS unit[1]



F-4-148

2)Remove 2 spacers[1] and flat cable[2].

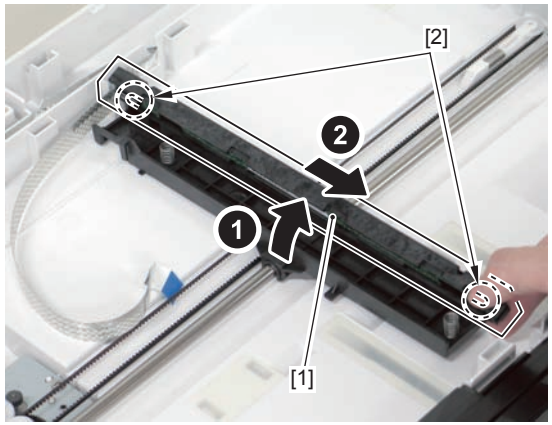
- 1 guide[A]



F-4-149

3)Remove the CIS unit[1]

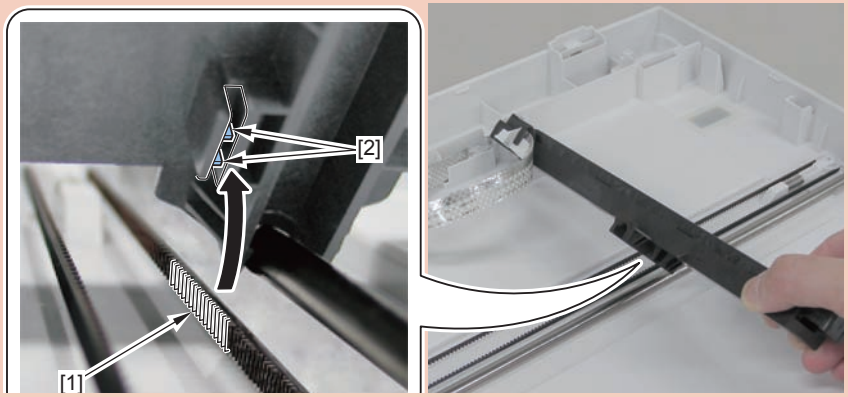
- 2 shafts[2]



F-4-150

Caution.

If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



Removing the SADF Unit and Reader Unit(MF4870dn/MF4830d)

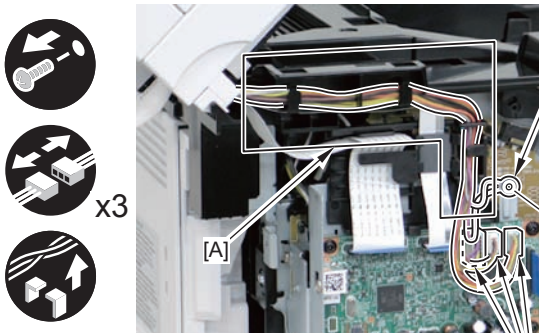
Preparation

1) Remove the left cover.

Procedure

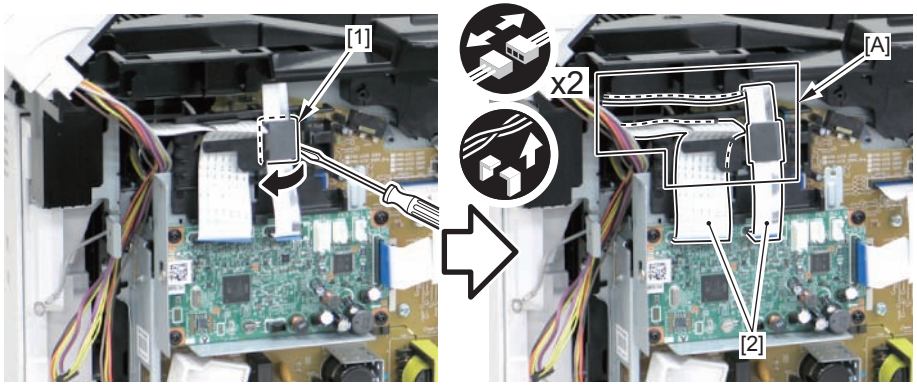
1) Remove the 2 grounding wires[1].
- 1 screw(black TP)

2) Disconnect the 3 connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-151

3) Remove the ferrite core[1], and disconnect the 2 flat cables from the harness guide[A]

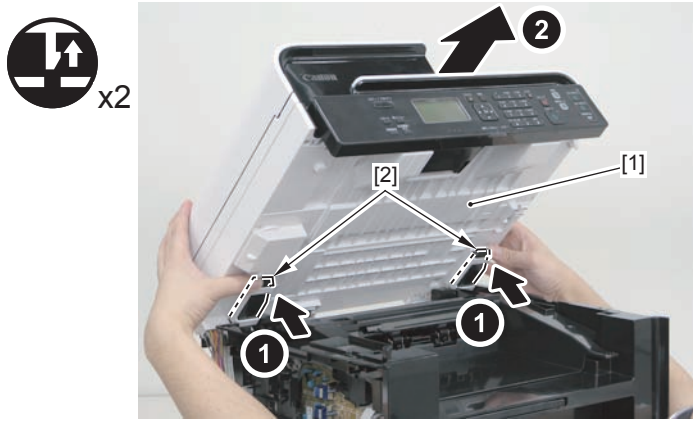


F-4-152

4) Remove the DADF unit and reader unit.
- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-153

Caution:

When installing the DADF unit and reader unit, secure the 2 hinge arm claws[1] to the 2 hooks[2] of the reader unit.

Removing the SADF Unit (MF4870dn/MF4830d)

Preparation

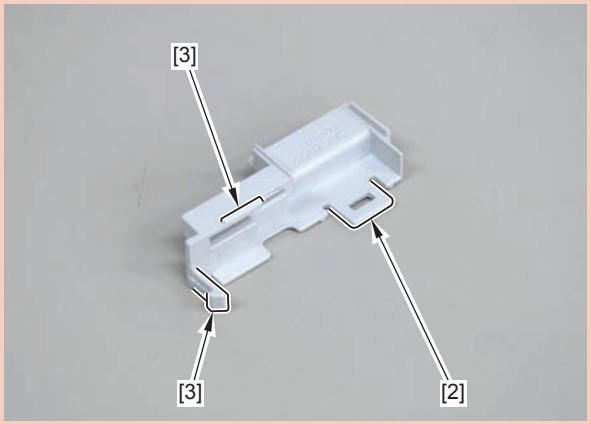
1) Remove the left cover.
2) Remove the SADF unit and reader unit

Procedure

1) Remove the connector[1].
- 1 hook[2]
- 2 claws[3].

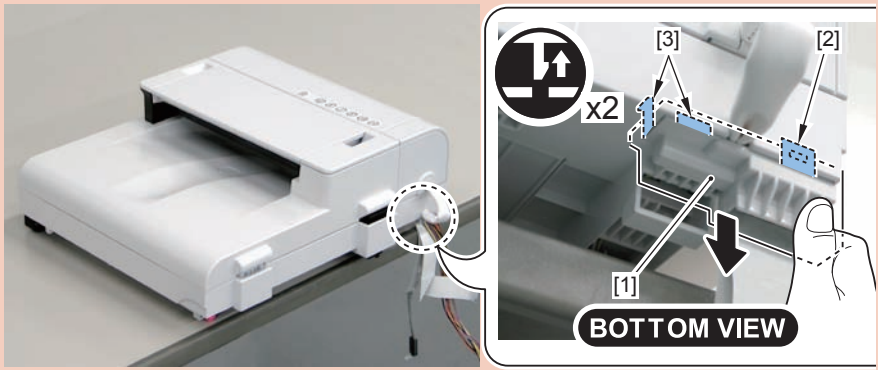
Note:

The location of hook[2] and the 2 claws[3] of the connector cover are shown here.



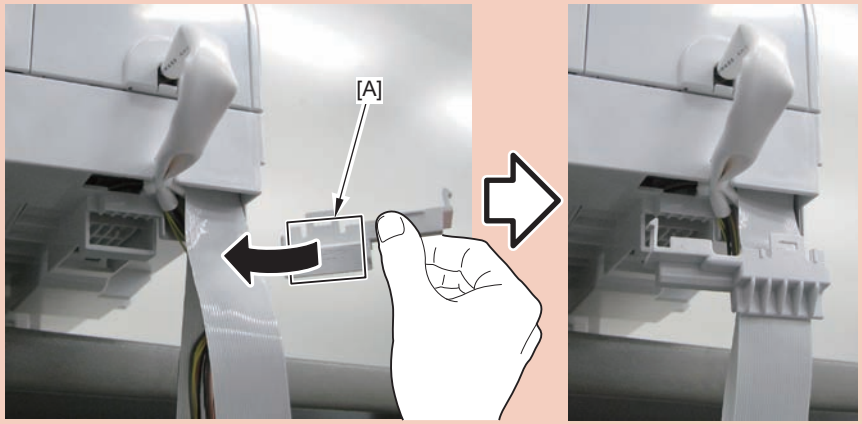
Caution:

Be sure to hold the connector cover when removing it.

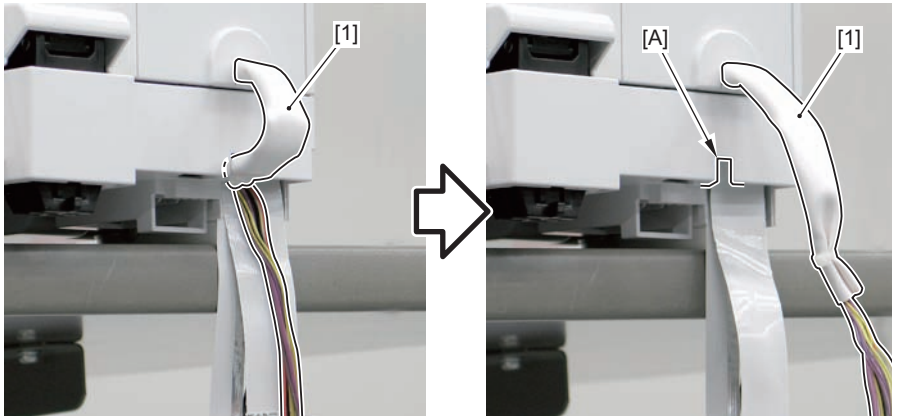


Caution:

Before installing the connector cover, be sure to store the harness, grounding wire, and flat cable in the [A] part.

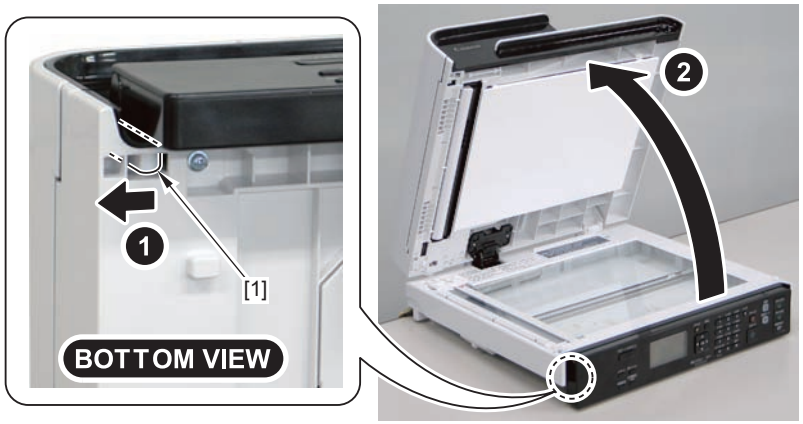


2)Free the reader harness[1] from the cut-off[A]



F-4-154

3)Release the lock[1] on the lower left front side of the reader unit, and open the SADF unit[2]

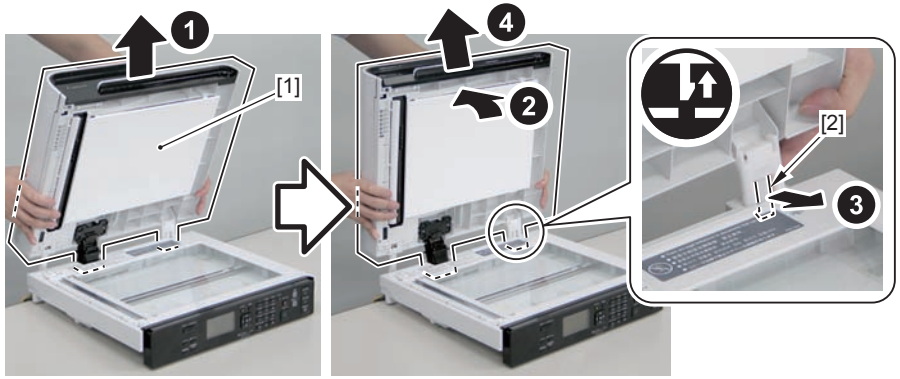


F-4-155

4)Remove the SADF unit[1] by lifting it up while pushing the claw[2]

Caution:

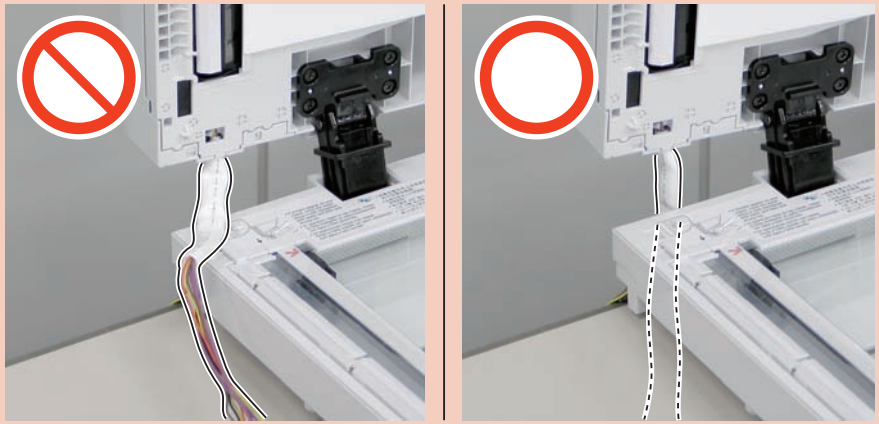
Be sure to avoid damaging the bottom sheet when placing the removed SADF unit.



F-4-156

Caution:

When installing the DADF unit , be careful not to damage the harnesses with [A] part.



F-4-157

Removing the SADF Pickup Unit (MF4870dn/MF4830d)

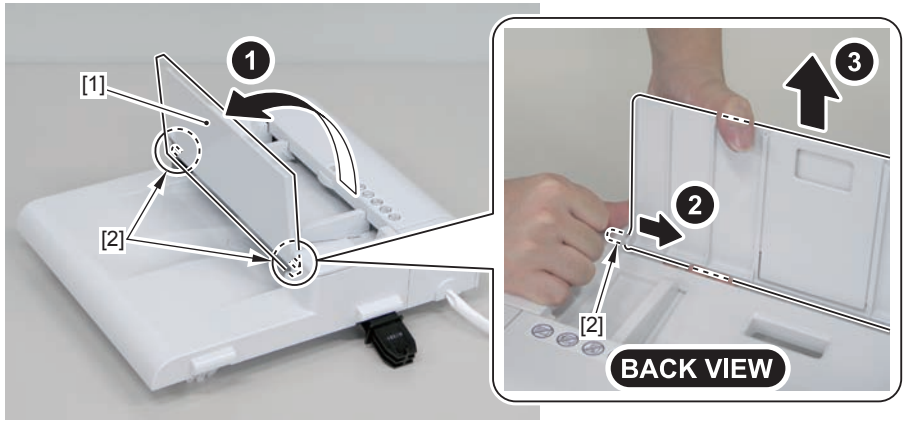
Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.

Procedure

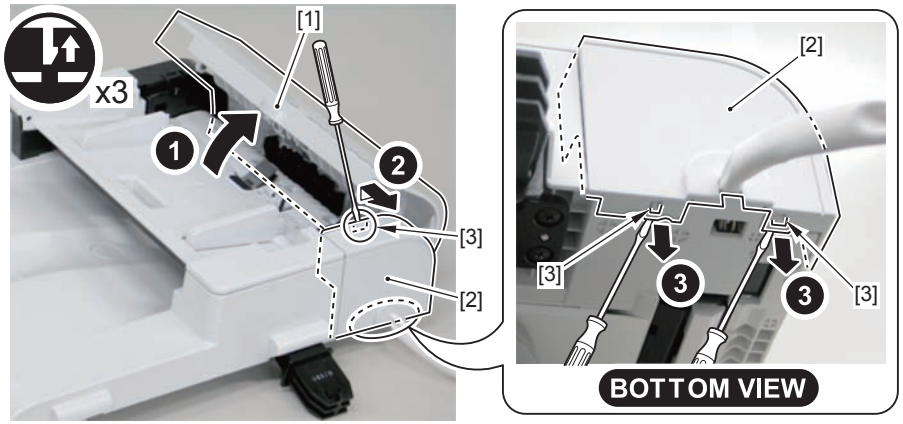
1) Open the SADF pickup tray[1] and remove the SADF pickup tray.

- 2 shafts[2]



F-4-158

2)Open the SADF upper cover[1] and remove the SADF rear cover.

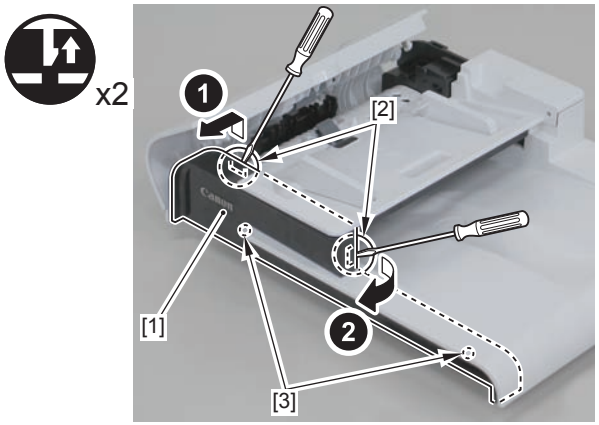


F-4-159

3)Remove the SADF front cover[1].
- 2 claws[2]
- 2 bosses[3]

Caution:

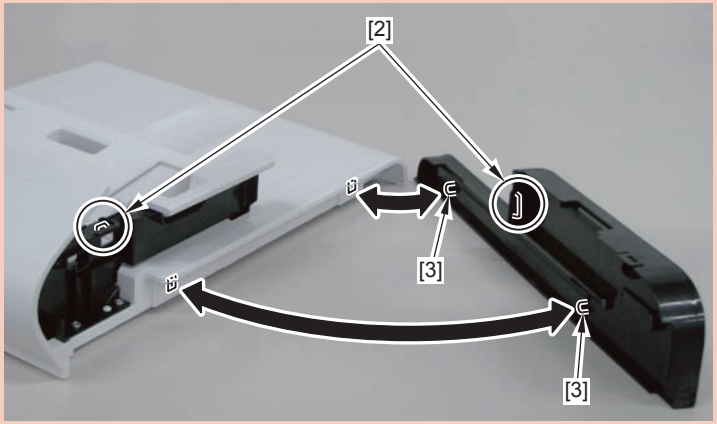
When releasing the 2 claws[2] on the SADF front cover, be careful not to put too much force, otherwise they may get damaged.



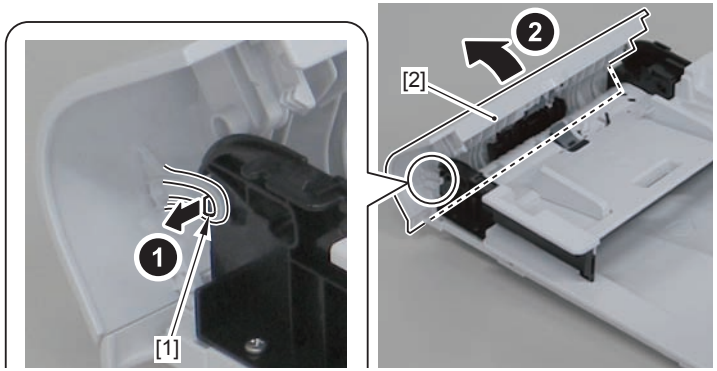
F-4-160

Note:

The following shows the 2 claws[2] and 2 bosses[3] of the SADF front cover.

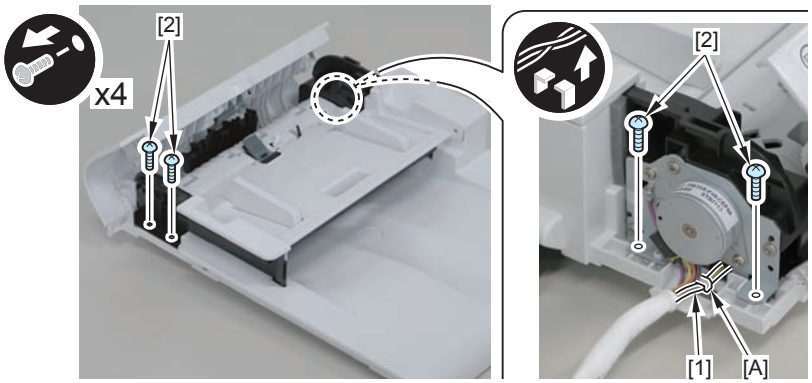


4)Free the boss[1], and open the SADF upper cover[2] by the amount for which the boss is freed.



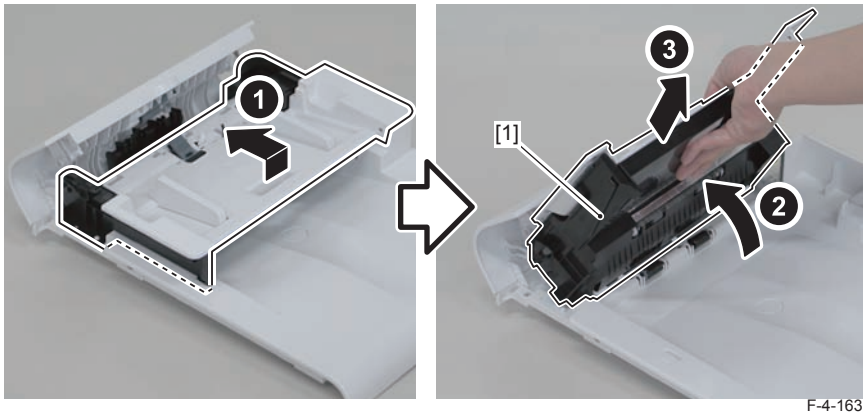
F-4-161

5)Free the harness[1] from the guide[A], and remove the 4 screws[2] on the right and left.



F-4-162

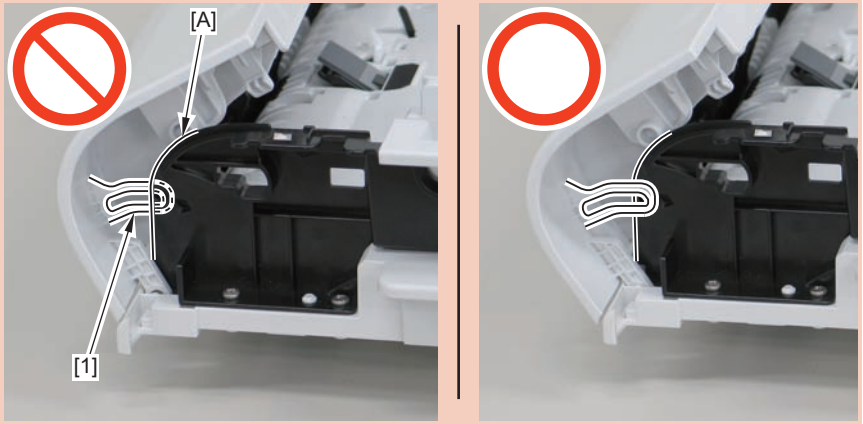
6)Remove the SADF pickup unit.



F-4-163

Caution:

When install the SADF upper cover, be sure that the guide[1] does not get inside the[A] part.



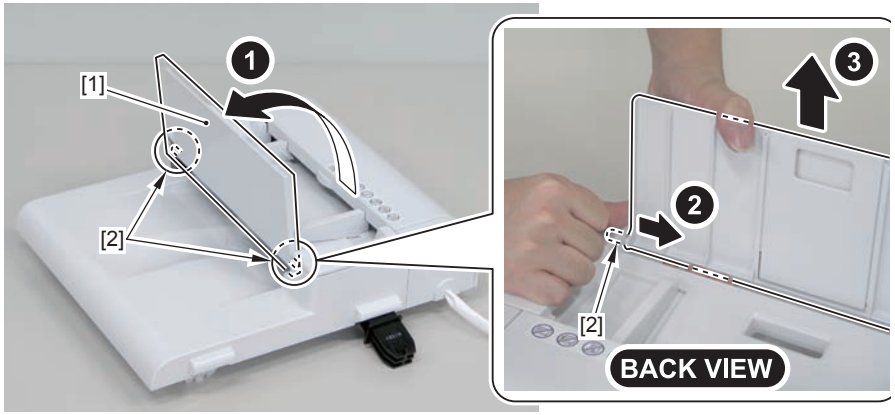
Removing the SADF Motor Unit (MF4870dn/MF4830d)

Preparation

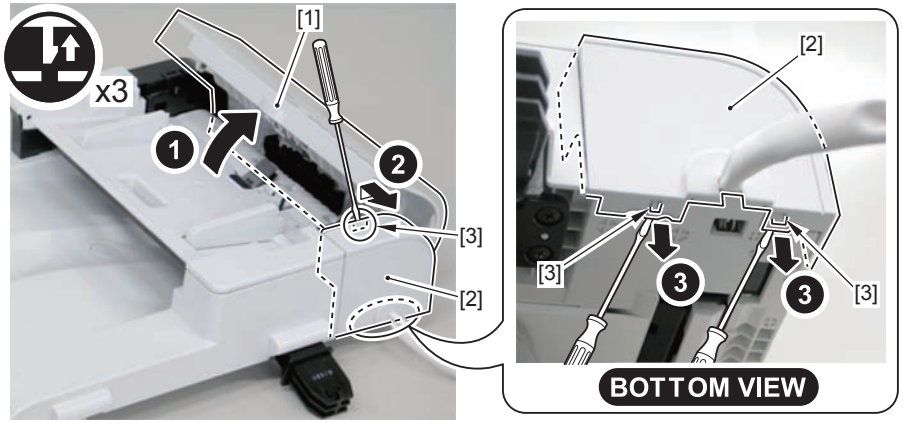
1) Remove the left cover.
2) Remove the SADF unit and reader unit
3) Remove the SADF unit.

Procedure

1) Open the SADF pickup tray[1] and remove the SADF pickup tray.
- 2 shafts[2]



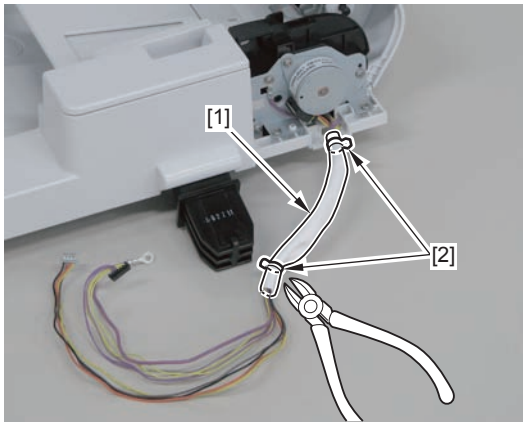
2) Open the SADF upper cover[1] and remove the SADF rear cover[2]. F-4-164
- 3 claws[3]



F-4-165

3)Remove the tube[1] protecting the harness.

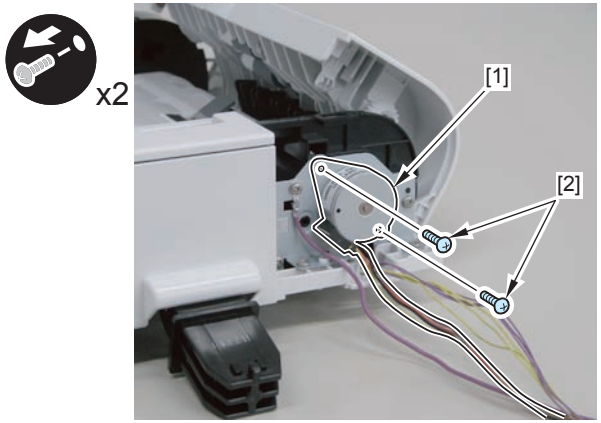
- 2 harnesses bands[2]



F-4-166

4)Remove the SADF motor[1].

- 2 screws[2]



F-4-167

Removing the SADF Pickup Roller 1,2 (MF4870dn/MF4830d)

Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.
4)Remove the SADF pickup unit.

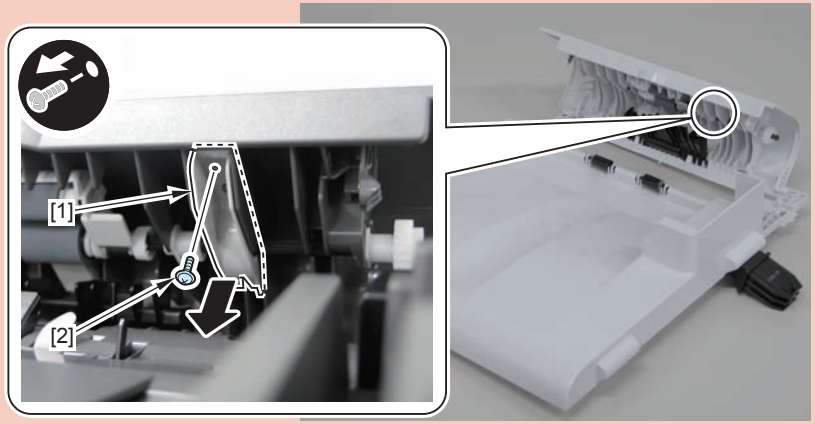
Procedure

1)Remove the rib[1]

- 1 screw[2]

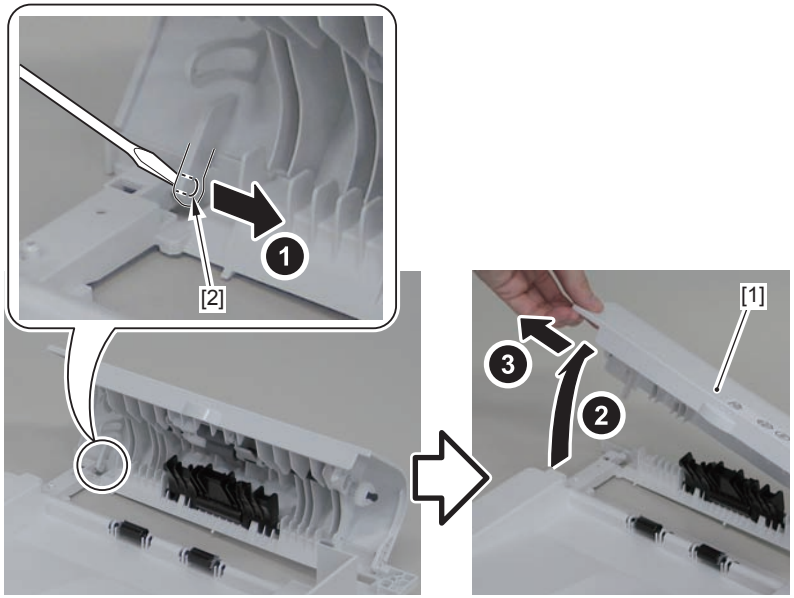
Caution:

Do not touch the pickup roller surface[1]



F-4-168

2)Remove the SADF upper cover[1].
2 shafts[2]

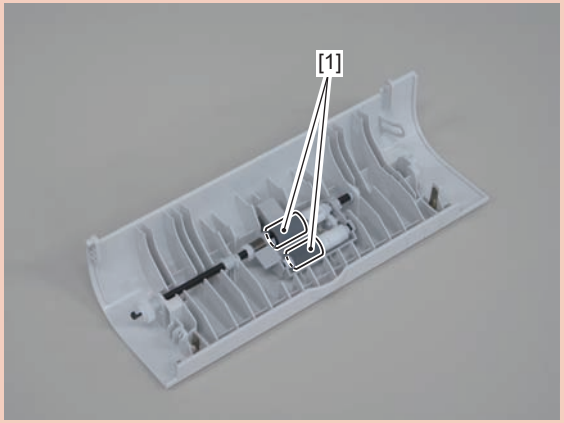


F-4-169

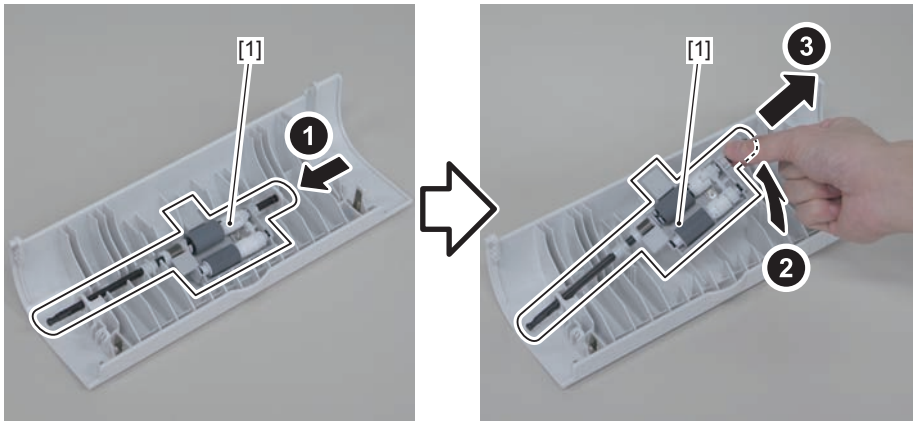
3)Remove the gear[1],bushing[2],2 e-rings[3] and bushing[4]

Caution:

Do not touch the pickup roller surface[1].

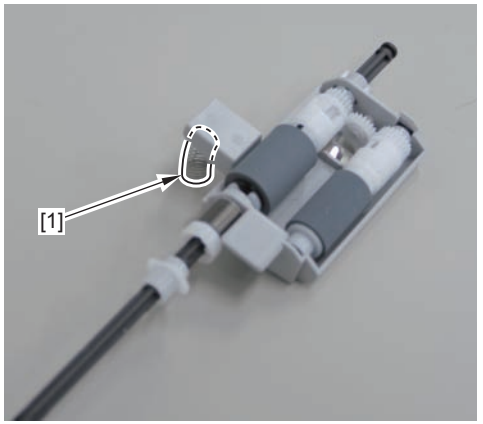


4)Remove the pickup roller unit[1].



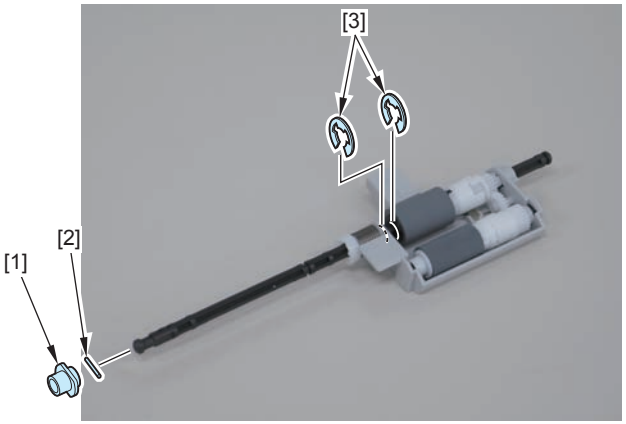
F-4-170

5)Remove the spring[1] on the back side of the pickup roller unit.



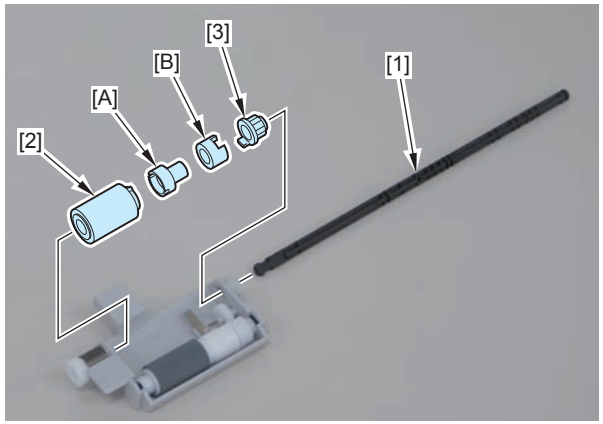
F-4-171

6)Remove the bushing[1],pin[2] and 2 e-rings[3].



F-4-172

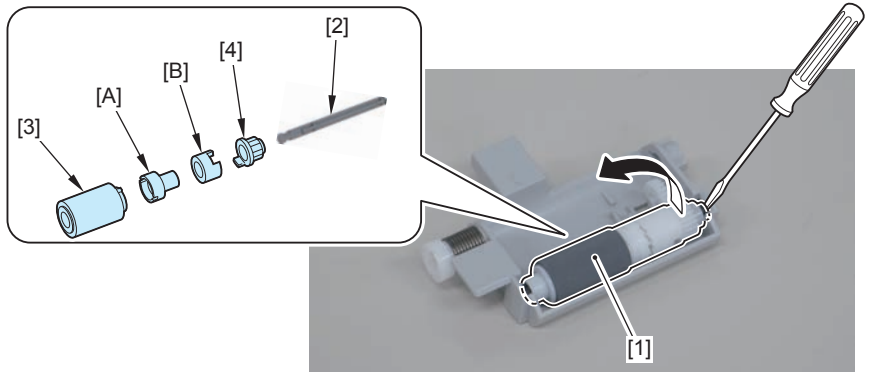
7)Pull out the pickup roller shaft[1], and remove the pickup roller[2], bushing[3],bushing[4], and gear[5]



F-4-173

8)Remove the pickup roller unit 2[1].

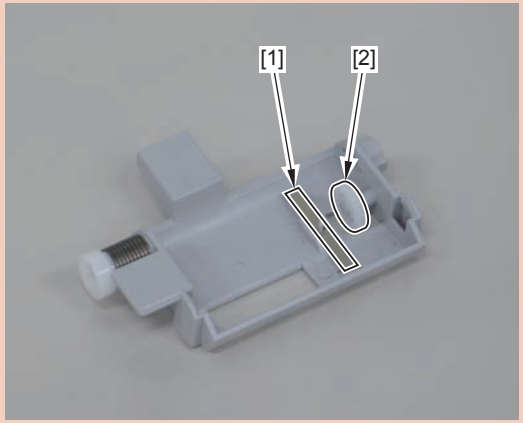
- 1 pickup roller shaft2[2]
- 1 pickup roller 2[3]
- 1 bushing[4]
- 1 bushing[5]



F-4-174

Caution:

When disassembly/assembly, be careful not to lose the plate[1] and gear[2].



Removing the SADF Separation Pad(MF4870dn/MF4830d)

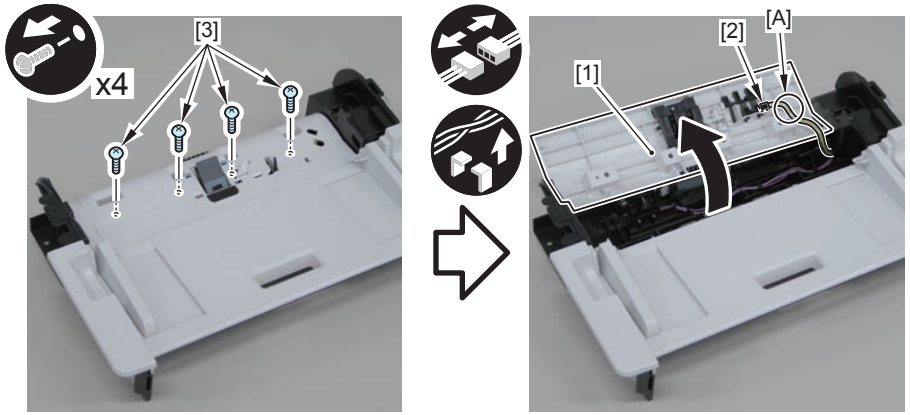
Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.
4)Remove the SADF pickup unit.

Procedure

1)Remove the SADF pickup upper cover[1], and free the harness from the connector[2] and the harness guide[A].

- 4 screws[3]



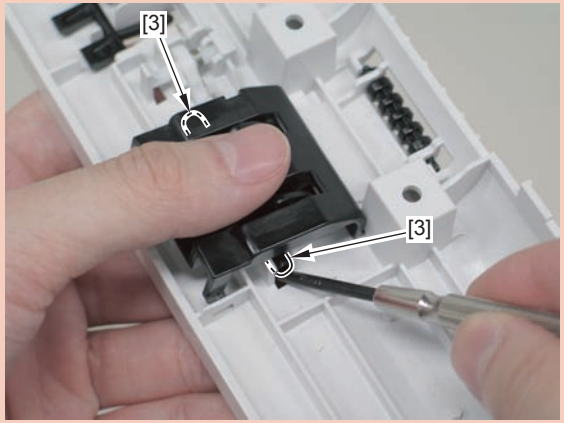
F-4-175

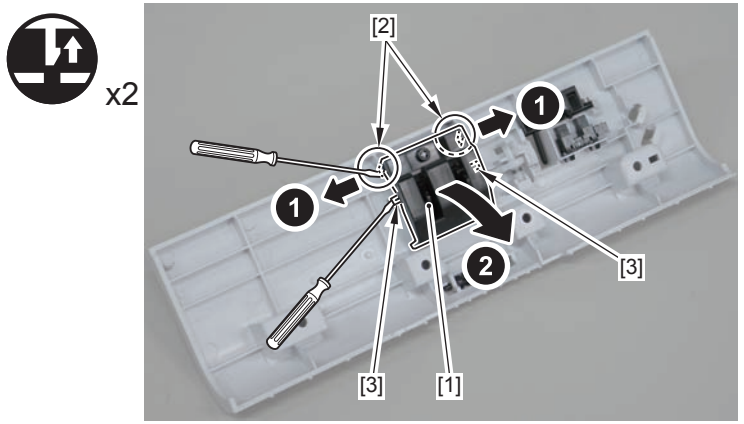
2)Remove the separation pad unit[1].

- 2 claws[2]
- 2 protrusions[3]

Caution.

Be sure to hold the separation pad unit with your fingers when releasing its 2 protrusions[3]





F-4-176

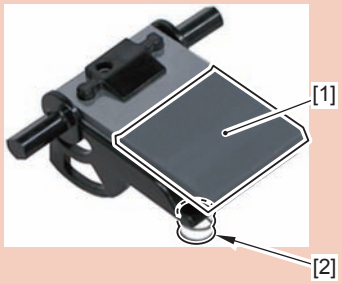
3)Remove the separation pad[1].

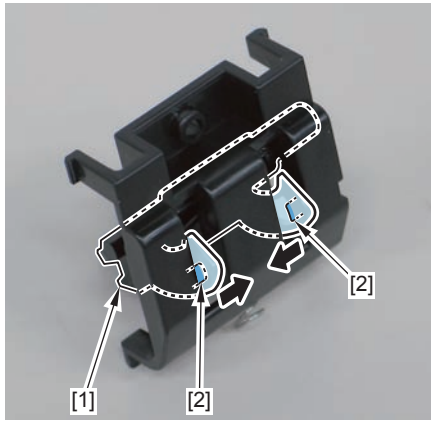
- 2 hooks[2]

Caution.

Do not touch the pad surface[1]

When disassembling/assembling, take care not to lose the spring[2] on the back side of the separation pad.



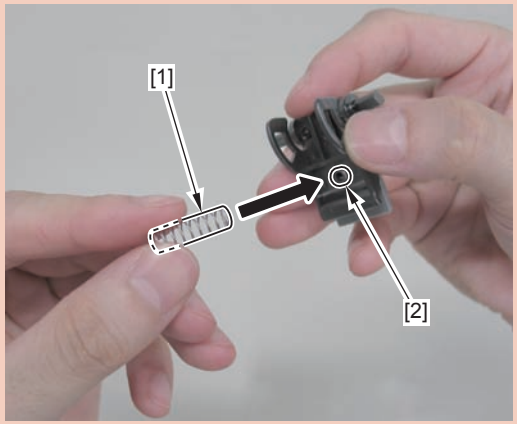


F-4-177

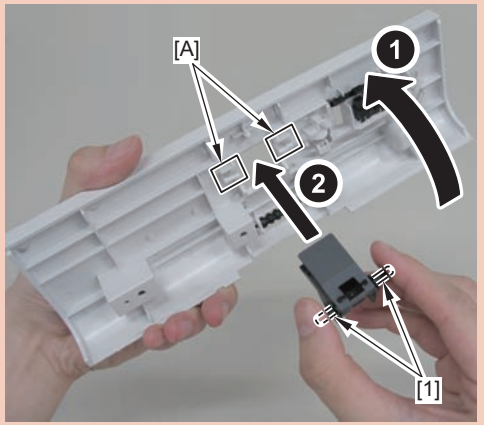
Caution.

When the spring[1] comes off, go through the following steps to install it.

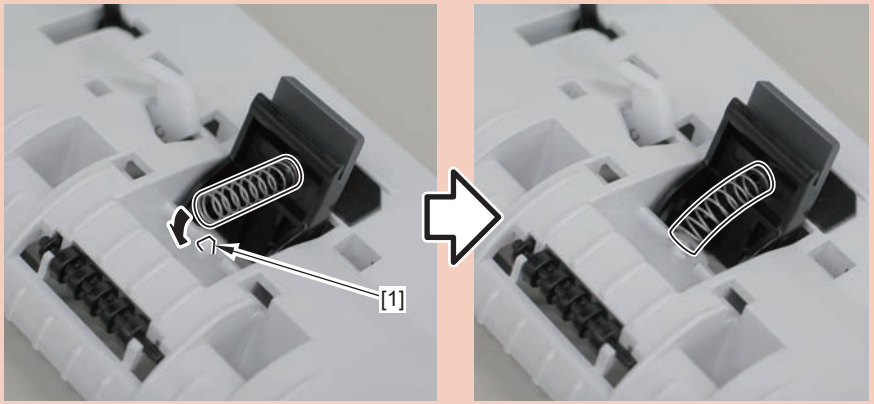
1)Install the spring[1] to the boss[2] on the back side of the separation pad.



2)Install the shaft[1] of the separation pad unit to the [A] part on the back side of the SADF pickup upper cover.

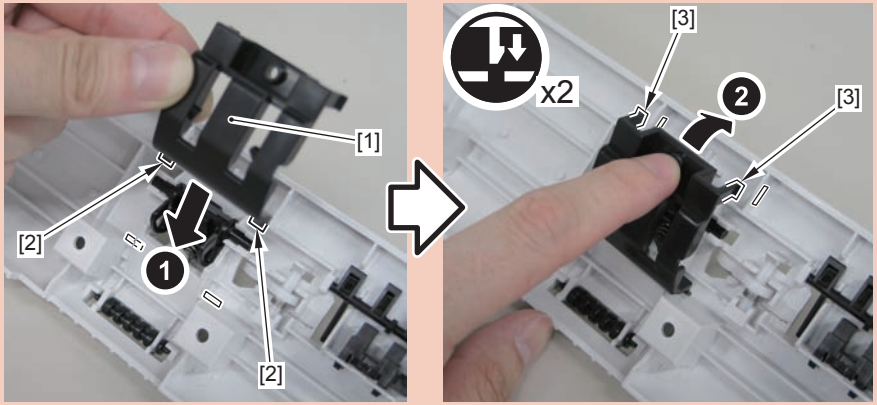


3)Install the spring to the protrusion[1] of the SADF pickup upper cover.

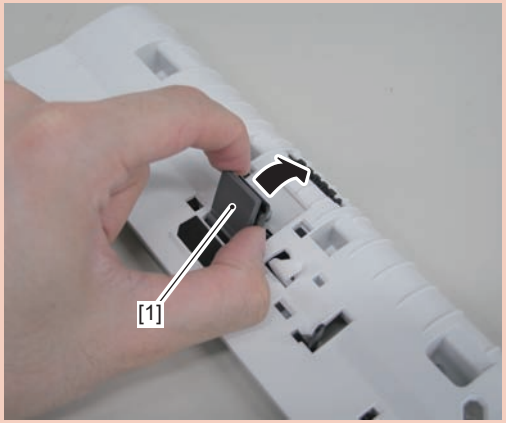


4)Turn the SADF pickup upper cover over to the back, and install the separation pad cover[1].

- 2 hooks[2]
- 2 claws[3]



5)Turn the SADF pickup upper cover over to the front, and push in the separation pad unit[1].



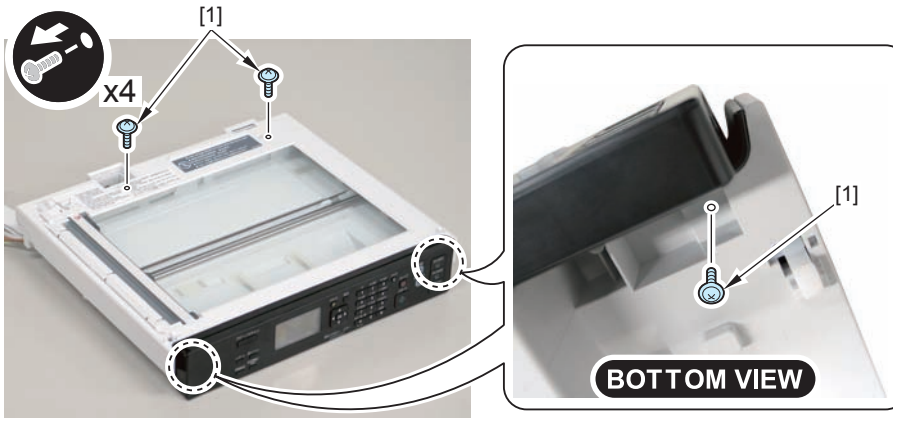
Removing the Copyboard Glass(MF4870dn/MF4830d)

Preparation

1) Remove the left cover.
2) Remove the SADF unit and reader unit
3) Remove the SADF unit.

Procedure

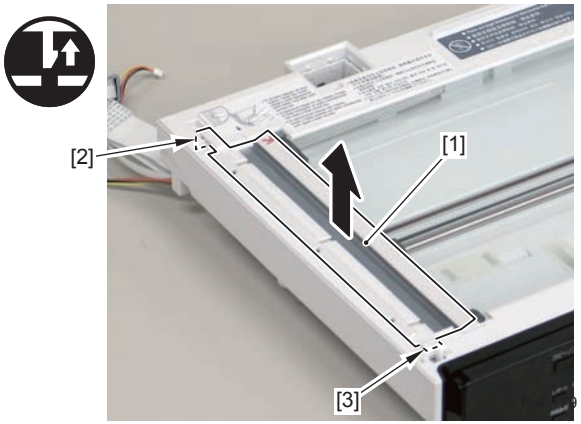
1) Remove the 4 screws(TP)[1]



F-4-178

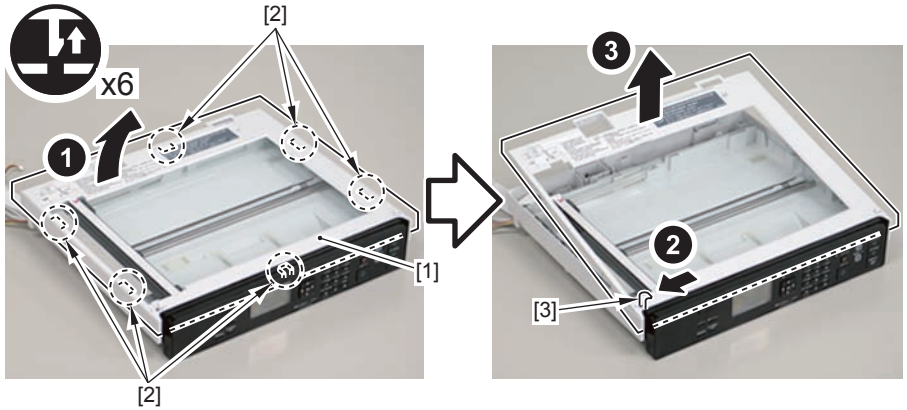
2) Remove the copyboard guide holder[1]

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



3) Remove the reader upper cover[1]

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



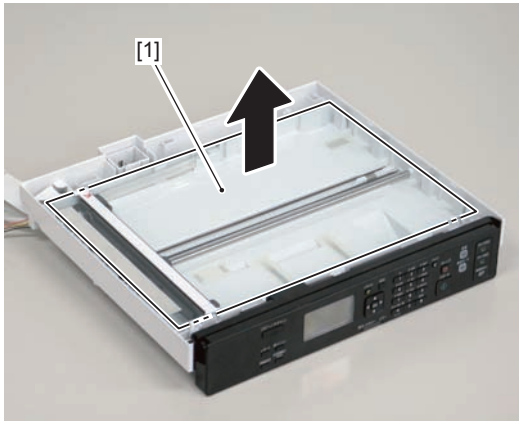
F-4-180

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.



F-4-181

Removing the Flatbed Motor Unit(MF4870dn/MF4830d)

Preparation

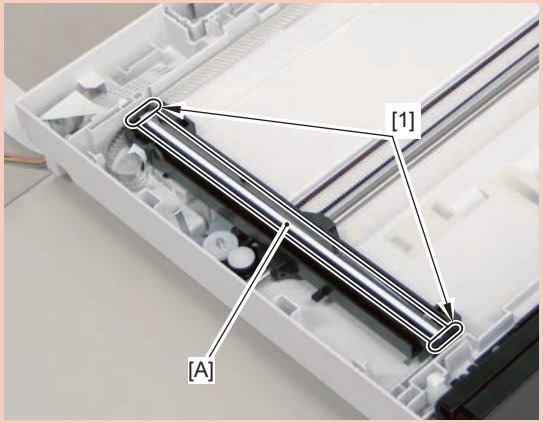
1) Remove the left cover.
2) Remove the SADF unit and reader unit
3) Remove the SADF unit.
4) Remove the copyboard glass

Procedure

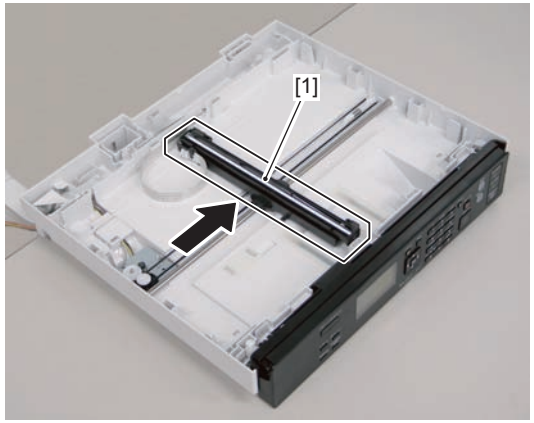
Caution.

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 [A] of the CIS unit.



1)Move the CIS unit[1].

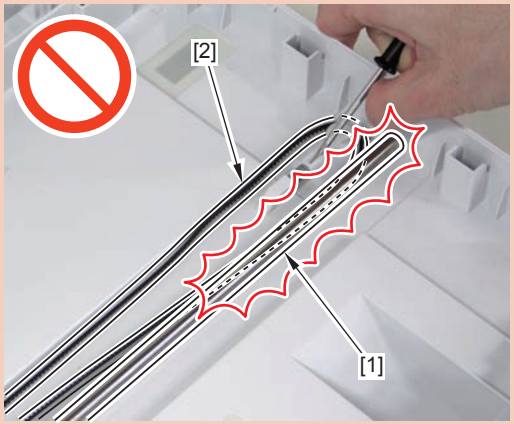


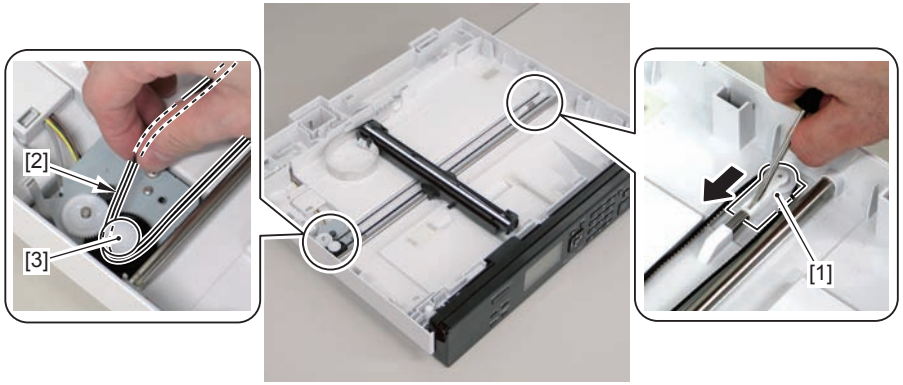
F-4-182

2)Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

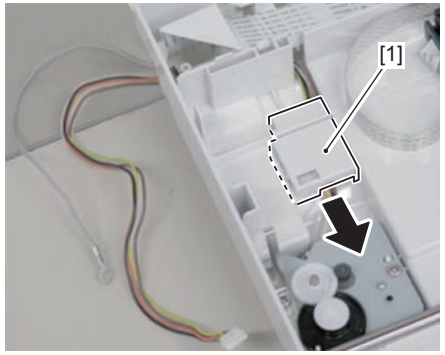
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





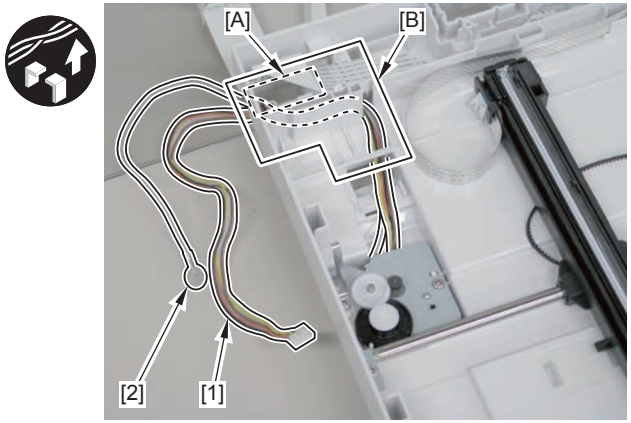
3)Remove the guide cover[1]

F-4-183



F-4-184

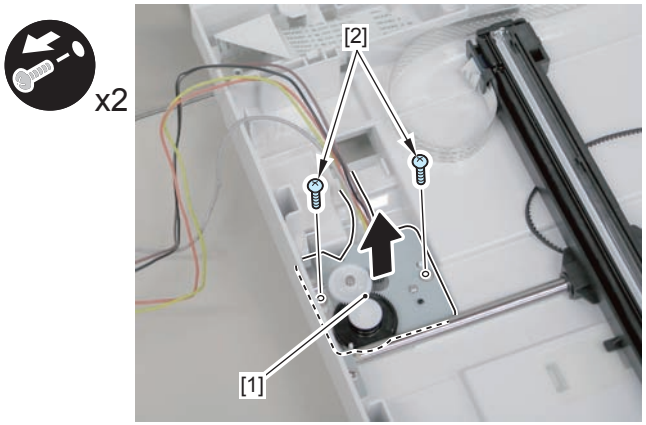
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-185

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-186

Removing the SADF CIS Unit(MF4870dn/MF4830d)

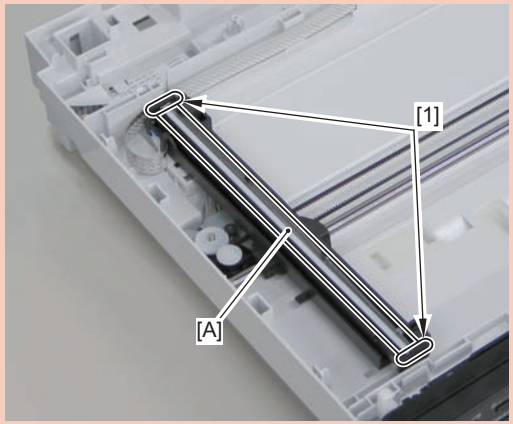
Procedure

1)Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.
4)Remove the copyboard glass

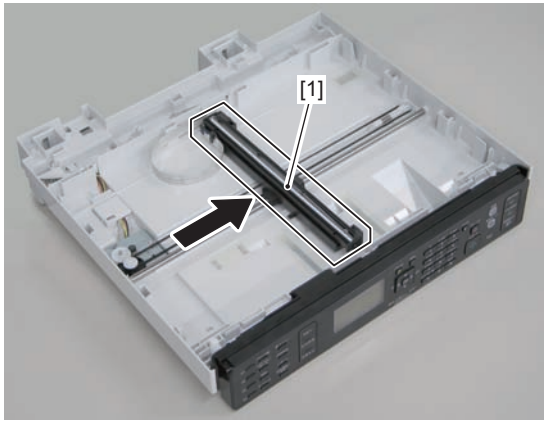
Caution.

When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



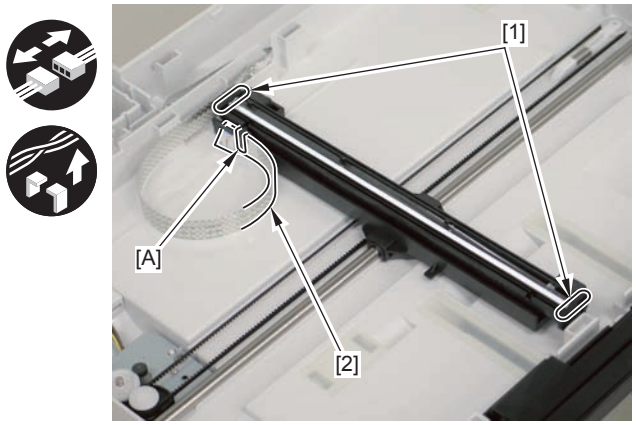
1)Move the CIS unit[1]



F-4-187

2)Remove 2 spacers[1] and flat cable[2].

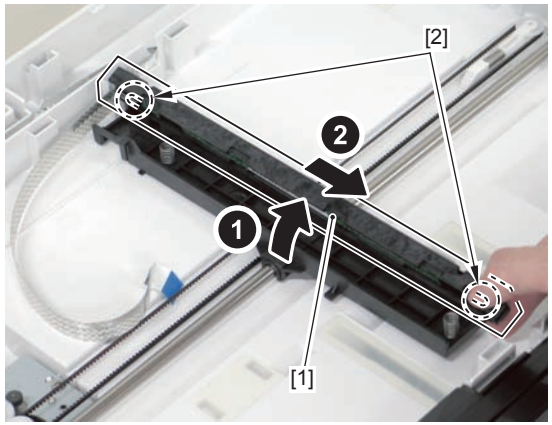
- 1 guide[A]



F-4-188

3)Remove the CIS unit[1]

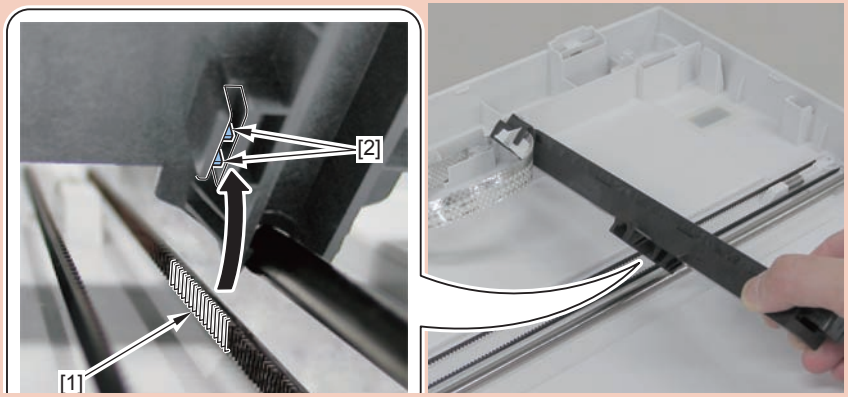
- 2 shafts[2]



F-4-189

Caution.

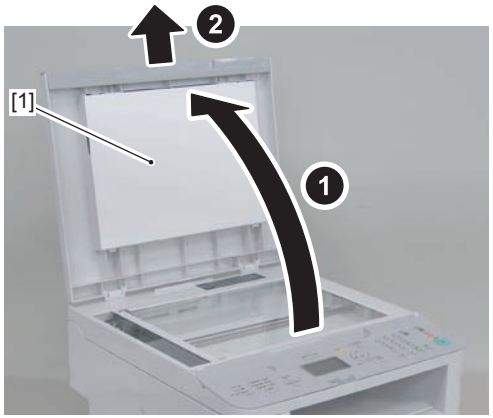
If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



Removing the Copyboard Cover (MF4820d)

Procedure

1) Remove the copyboard cover[1]



F-4-190

Removing the Copyboard Cover and Reader Unit (MF4820d)

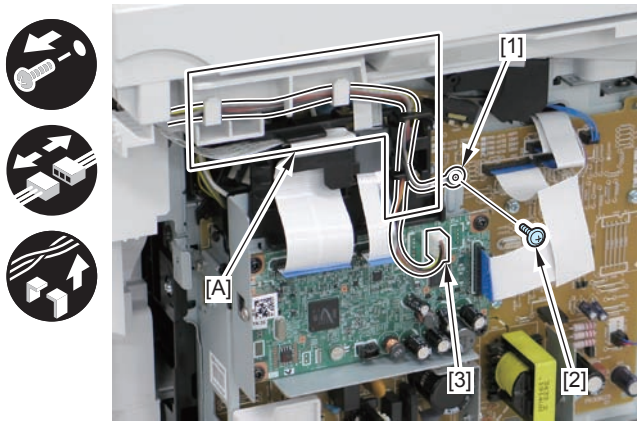
Preparation

1) Remove the left cover.

Procedure

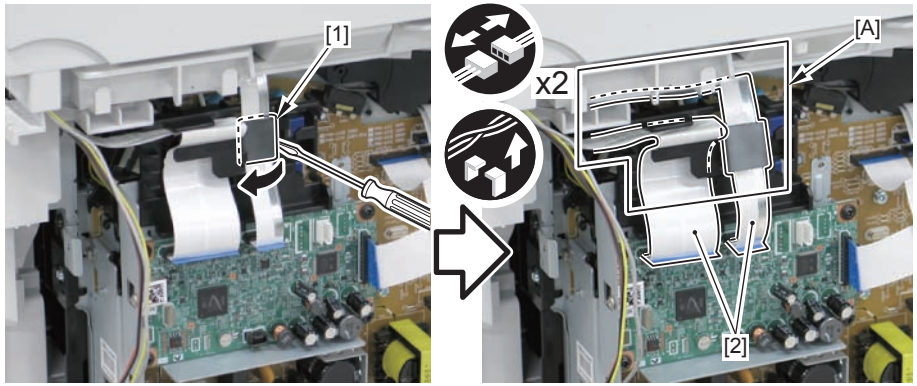
1) Remove the 1 grounding wires[1].
- 1 screw(black TP)

2) Disconnect the connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-191

3) Remove the ferrite core[1], and disconnect the 2 flat cables from the harness guide[A]



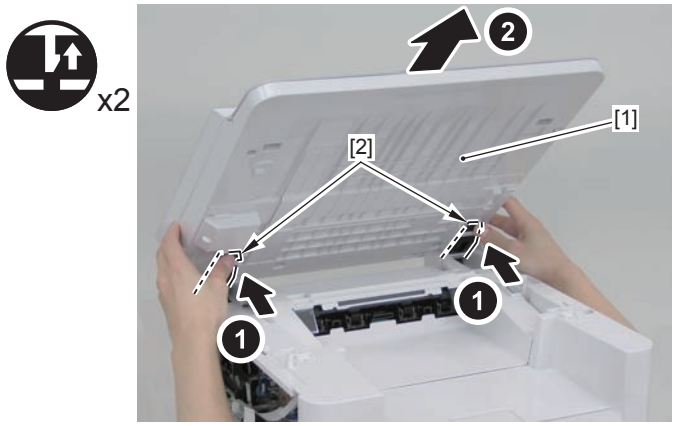
F-4-192

4)Remove the copyboard cover and reader unit.

- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-193

Caution:

When mounting the reader unit and copyboard cover, fix the 2 hinge arm claws [1] to the 2 latches [2] of the reader unit.

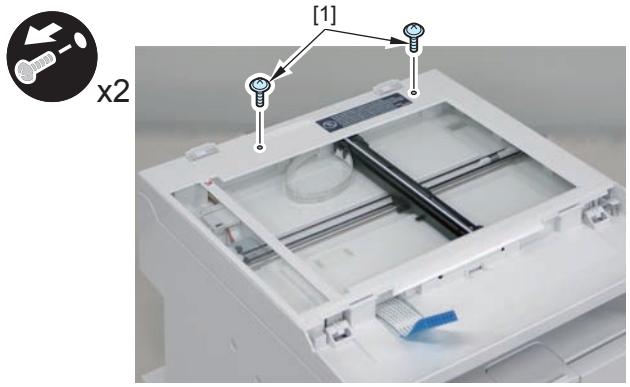
Removing the Copyboard Glass(MF4820d)

Preparation

1)Remove the copyboard cover.
2)Remove the control panel unit.

Procedure

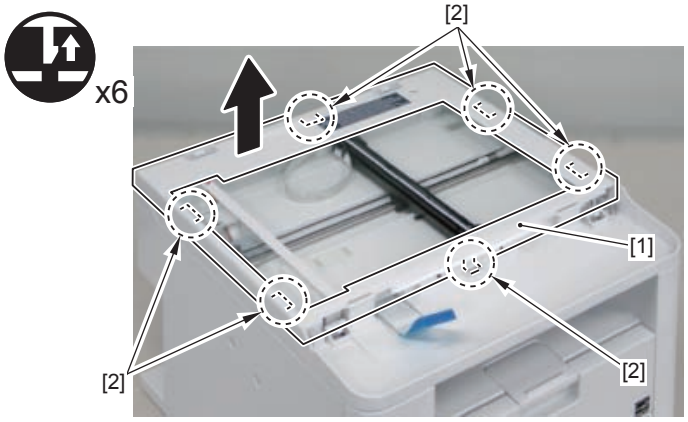
1)Remove the 2 screws[1]



F-4-194

2)Remove the reader upper cover[1]

- 6 claw[2]



F-4-195

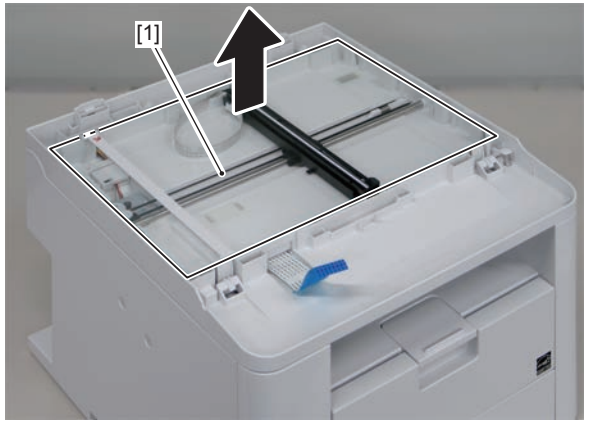
3)Remove the copyboard glass[1].

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.



F-4-196

Removing the Flatbed Motor Unit(MF4820d)

Preparation

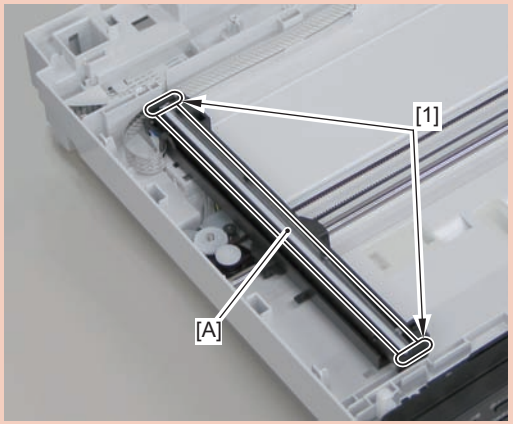
1) Remove the left cover.
2) Remove the copyboard cover .
3) Remove the control panel.
4) Remove the copyboard glass.

Procedure

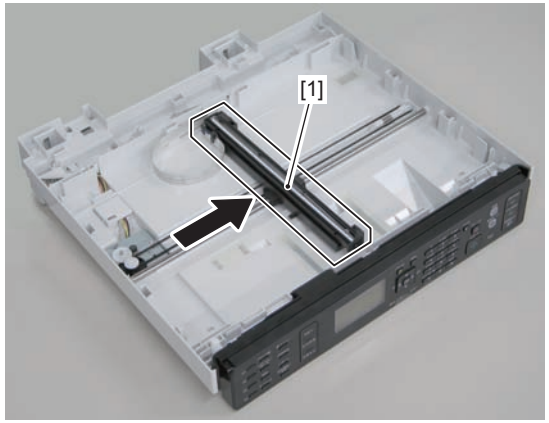
Caution.

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 [A] of the CIS unit.



1) Move the CIS unit[1].

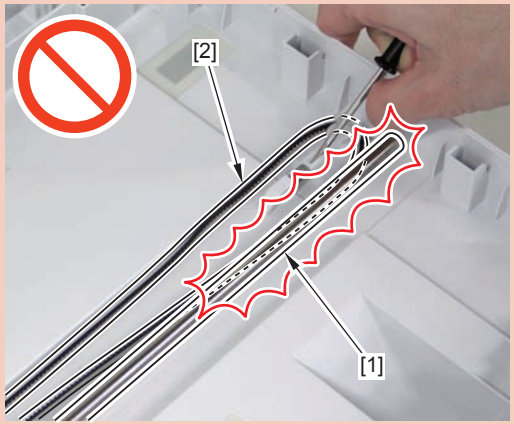


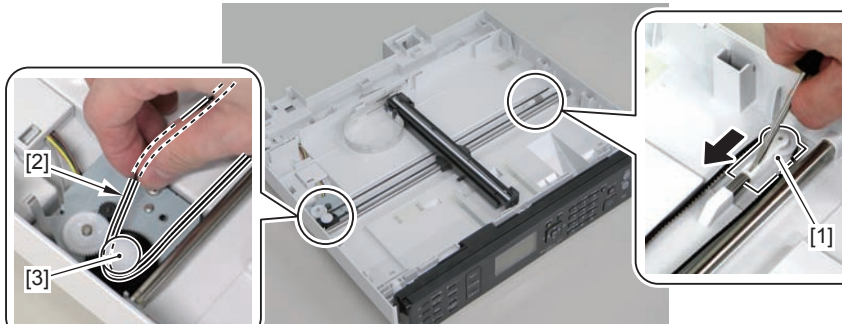
F-4-197

2) Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

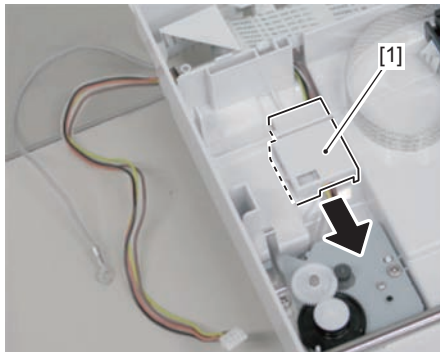
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





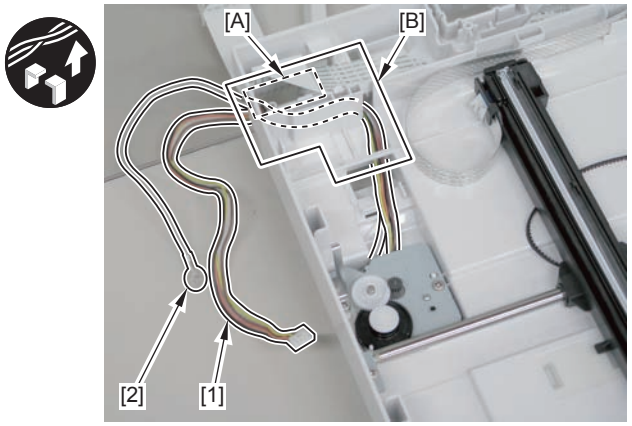
F-4-198

3)Remove the guide cover[1]



F-4-199

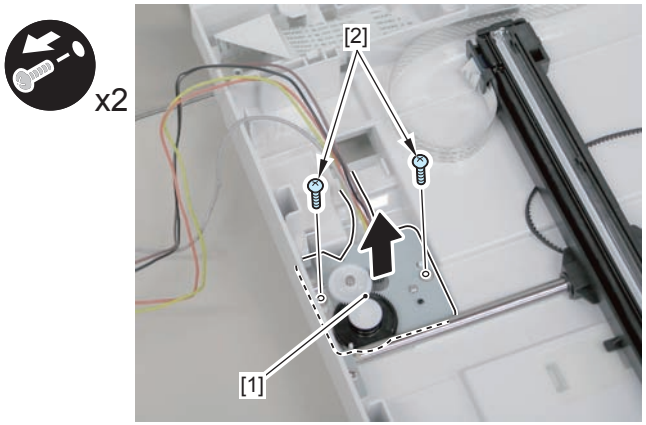
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-200

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-201

Removing the CIS Unit(MF4820d)

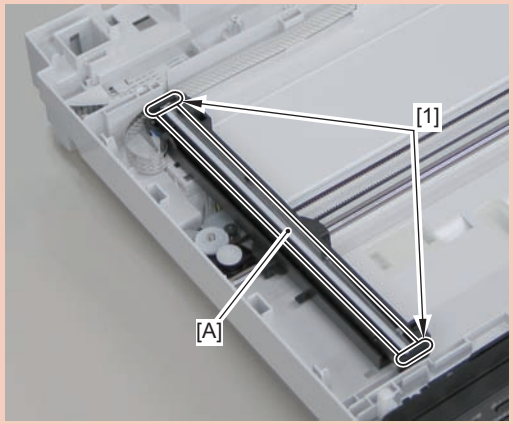
Preparation

1) Remove the copyboard cover.
2) Remove the control panel unit.
3) Remove the copyboard glass

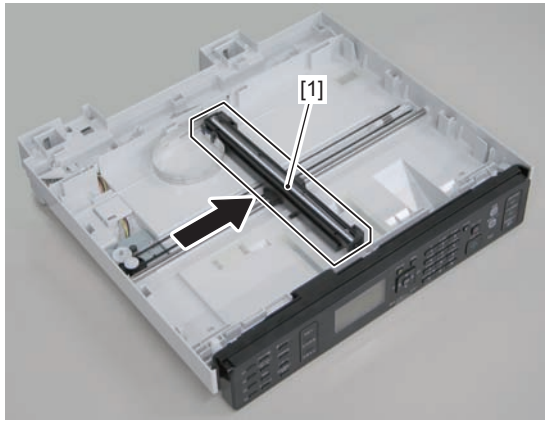
Caution.

When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



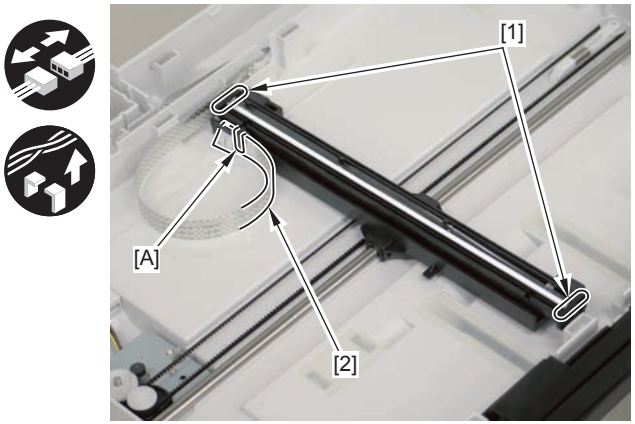
1) Move the CIS unit[1]



F-4-202

2) Remove 2 spacers[1] and flat cable[2].

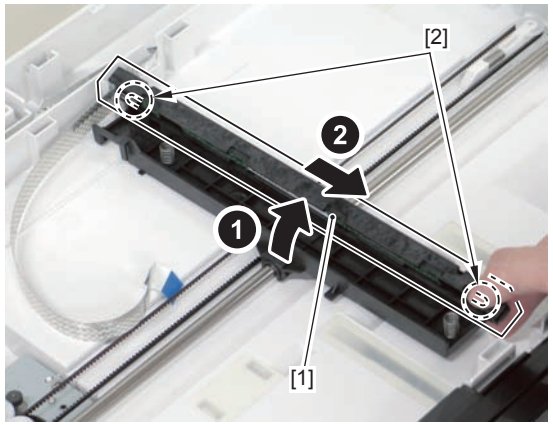
- 1 guide[A]



F-4-203

3)Remove the CIS unit[1]

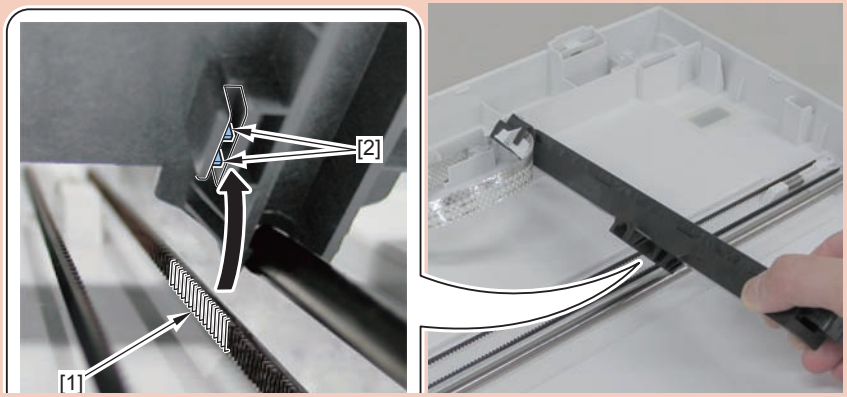
- 2 shafts[2]



F-4-204

Caution.

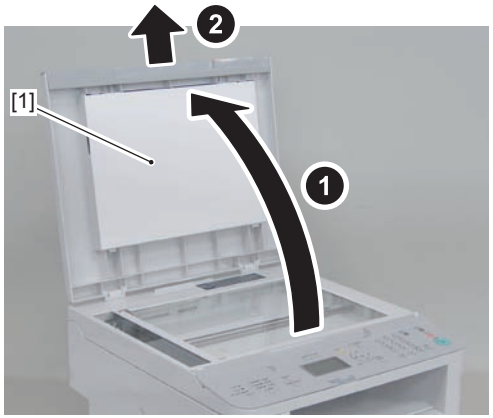
If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



Removing the Copyboard Cover (D530)

Procedure

1) Remove the copyboard cover[1]



F-4-205

Removing the Copyboard Cover and Reader Unit (D530)

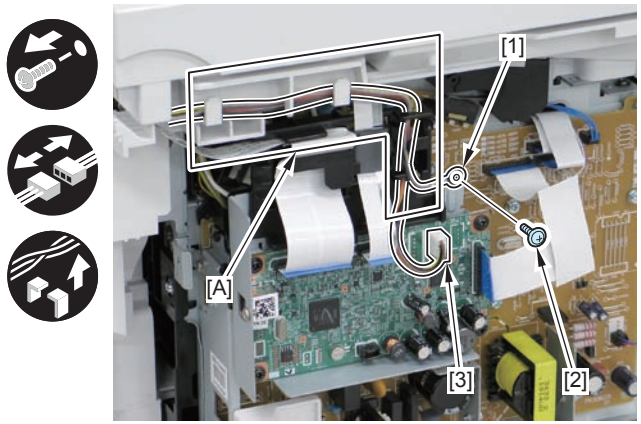
Preparation

1) Remove the left cover.

Procedure

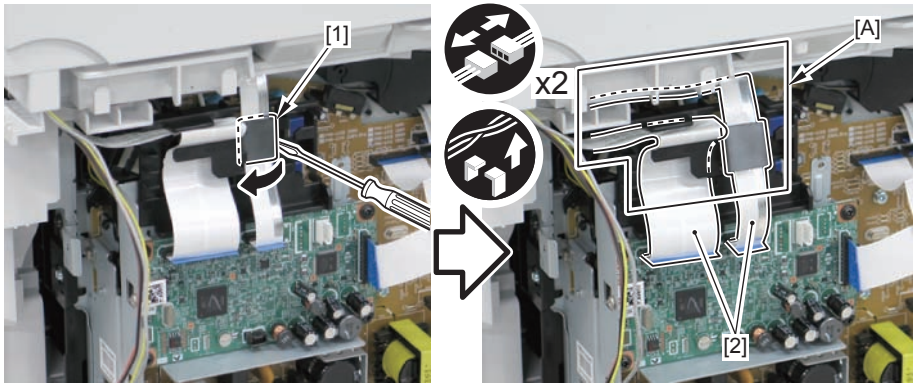
1) Remove the 1 grounding wires[1].
- 1 screw(black TP)

2) Disconnect the connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-206

3) Remove the ferrite core[1], and disconnect the 2 flat cables from the harness guide[A]

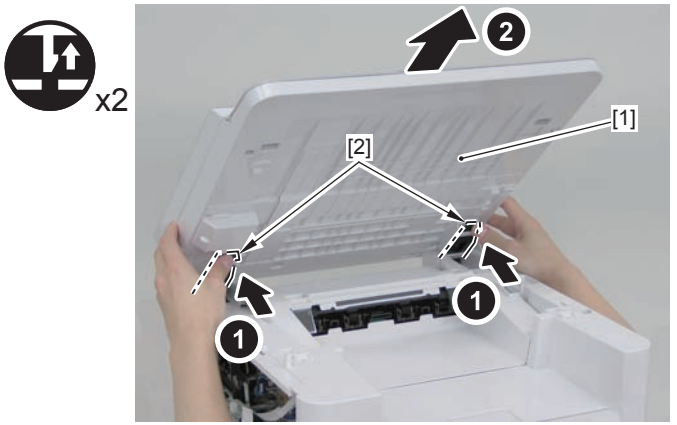


F-4-207

4) Remove the copyboard cover and reader unit.
- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-208

Caution:

When mounting the reader unit and copyboard cover, fix the 2 hinge arm claws [1] to the 2 latches [2] of the reader unit.

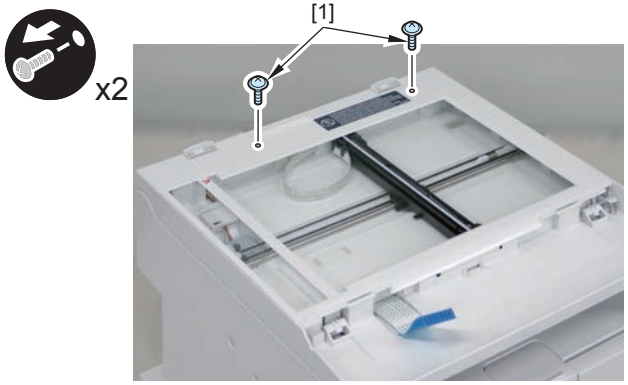
Removing the Copyboard Glass(D530)

Preparation

1)Remove the copyboard cover.
2)Remove the control panel unit.

Procedure

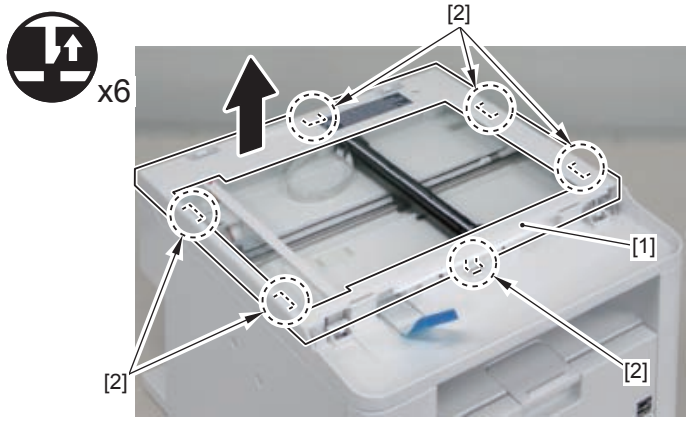
1)Remove the 2 screws[1]



F-4-209

2)Remove the reader upper cover[1]

- 6 claw[2]



F-4-210

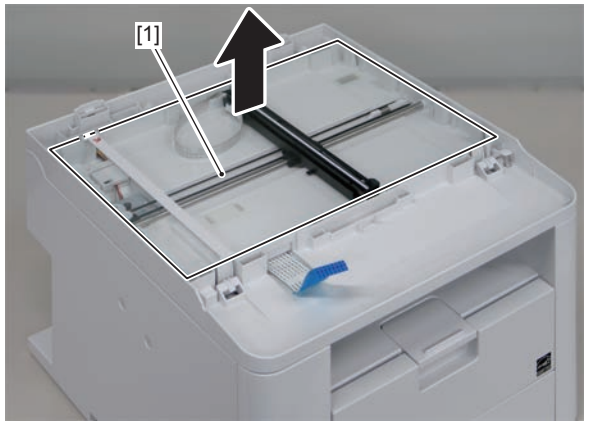
3)Remove the copyboard glass[1].

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.



F-4-211

Removing the Flatbed Motor Unit(D530)

Preparation

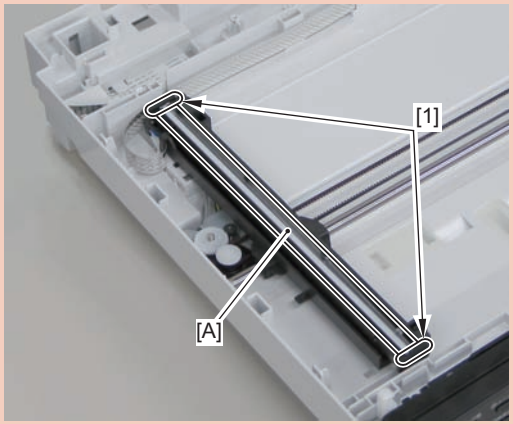
1) Remove the left cover.
2) Remove the copyboard cover .
3) Remove the control panel.
4) Remove the copyboard glass.

Procedure

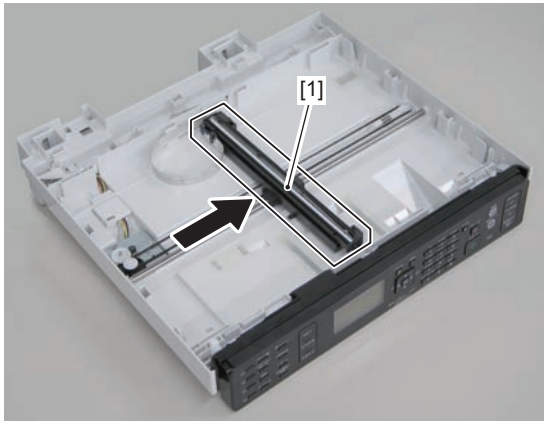
Caution.

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 [A] of the CIS unit.



1) Move the CIS unit[1].

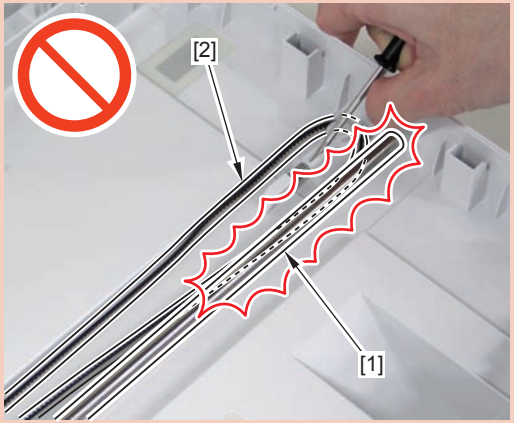


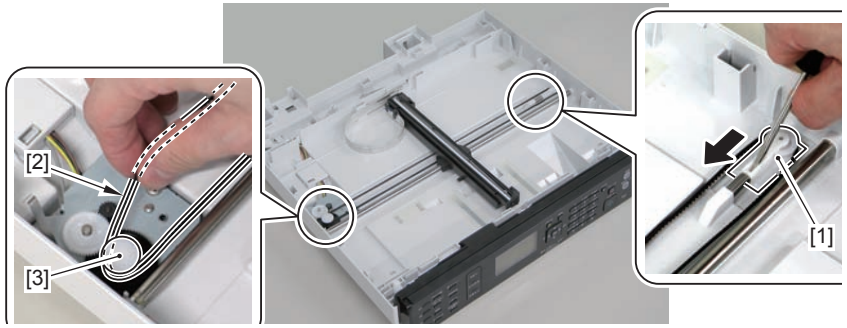
F-4-212

2)Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

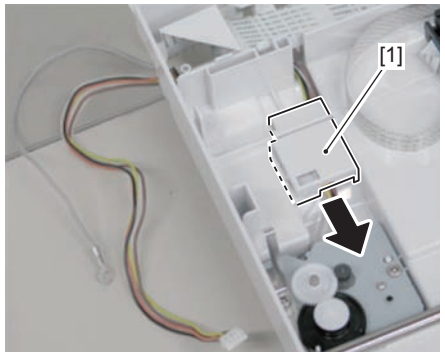
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





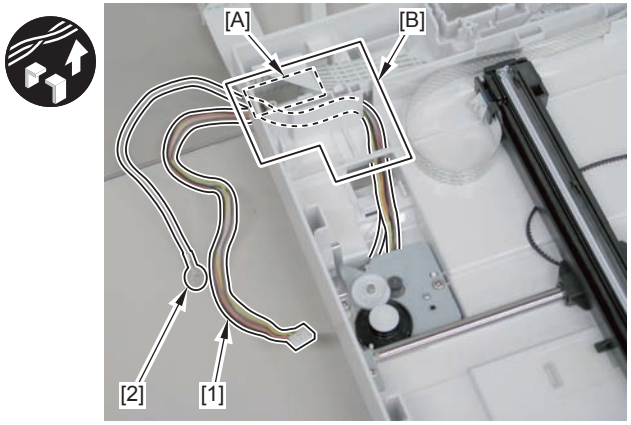
F-4-213

3)Remove the guide cover[1]



F-4-214

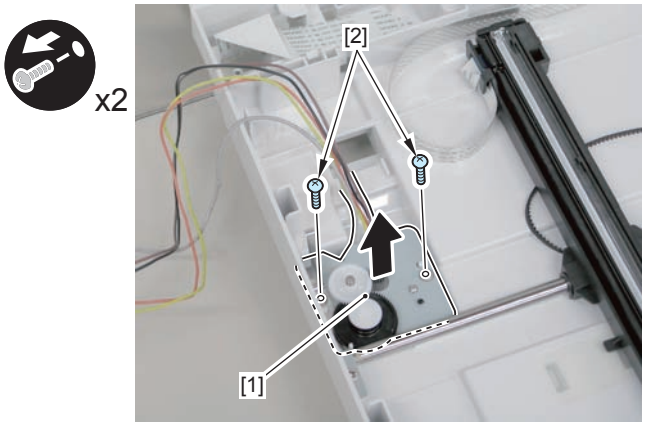
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-215

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-216

Removing the CIS Unit(D530)

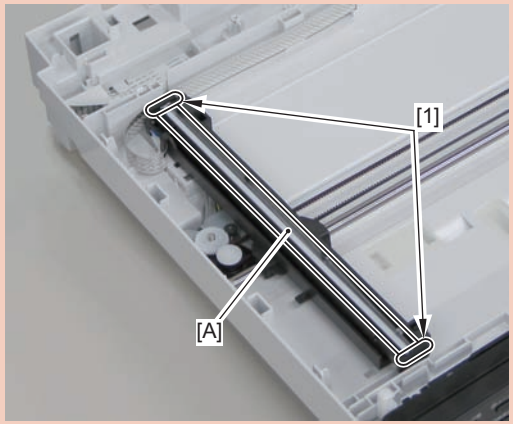
Preparation

1) Remove the copyboard cover.
2)Remove the control panel unit.
3)Remove the copyboard glass

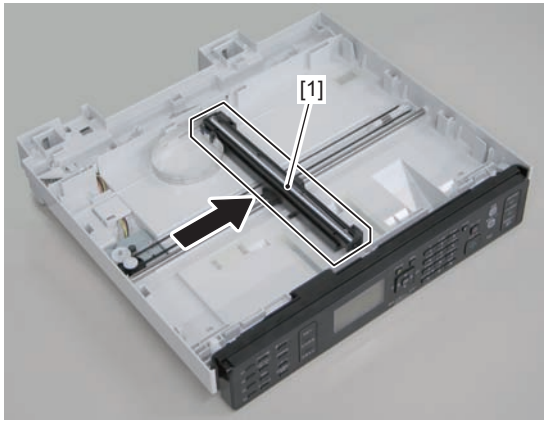
Caution.

When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



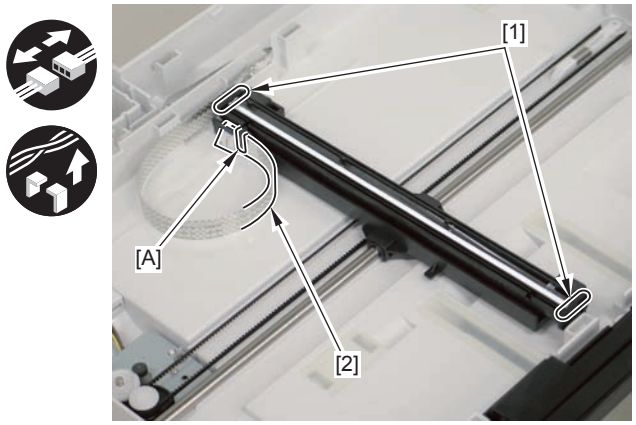
1)Move the CIS unit[1]



F-4-217

2)Remove 2 spacers[1] and flat cable[2].

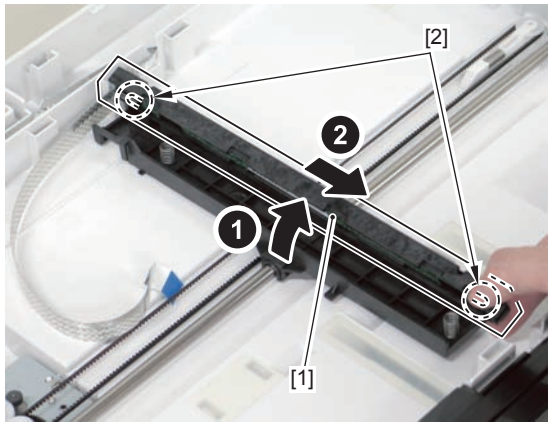
- 1 guide[A]



F-4-218

3)Remove the CIS unit[1]

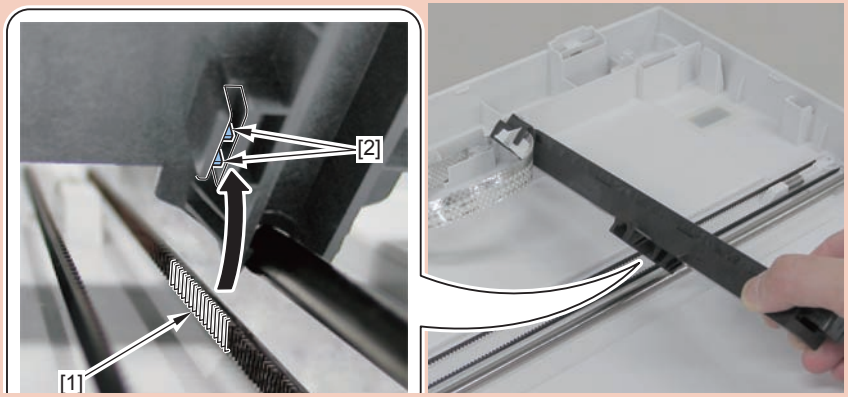
- 2 shafts[2]



F-4-219

Caution.

If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



Removing the SADF Unit and Reader Unit(MF4780w/MF4770n/MF4750/MF4730)

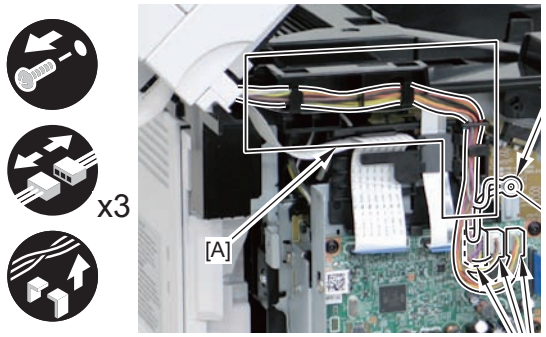
Preparation

1) Remove the left cover.

Procedure

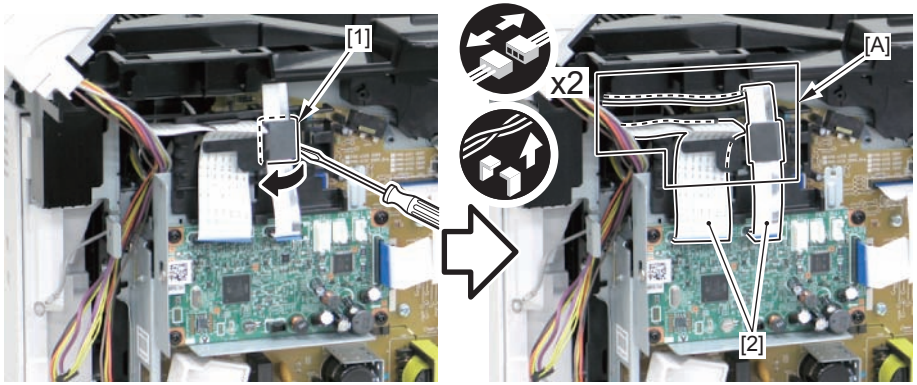
1) Remove the 2 grounding wires[1].
- 1 screw(black TP)

2) Disconnect the 3 connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-220

3)Remove the ferrite core[1], and disconnect the 2 flat cables from the harness guide[A]

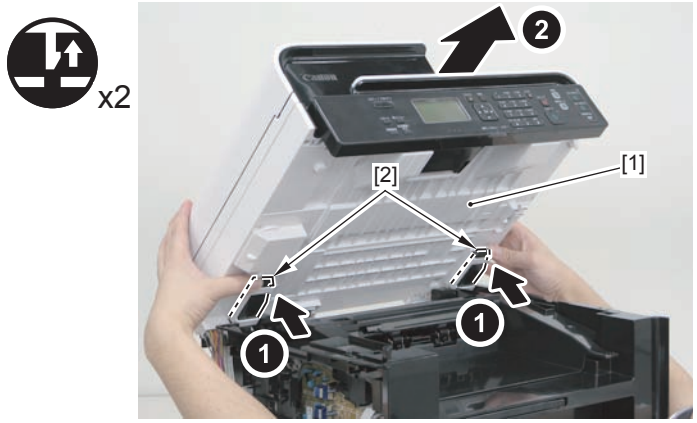


F-4-221

4)Remove the DADF unit and reader unit.
- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-222

Caution:

When installing the DADF unit and reader unit, secure the 2 hinge arm claws[1] to the 2 hooks[2] of the reader unit.

Removing the SADF Unit (MF4780w/MF4770n/MF4750/MF4730)

Preparation

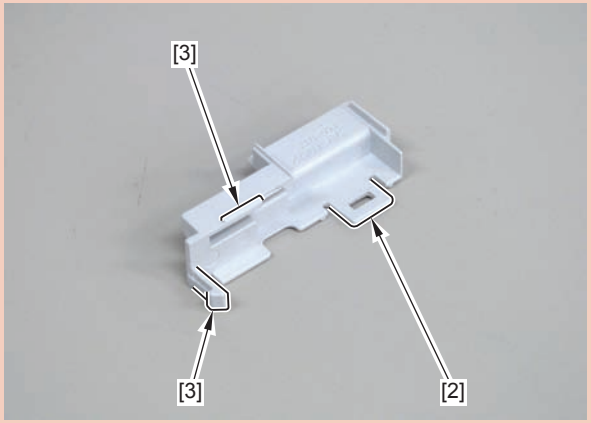
1) Remove the left cover.
2) Remove the SADF unit and reader unit

Procedure

1) Remove the connector[1].
- 1 hook[2]
- 2 claws[3].

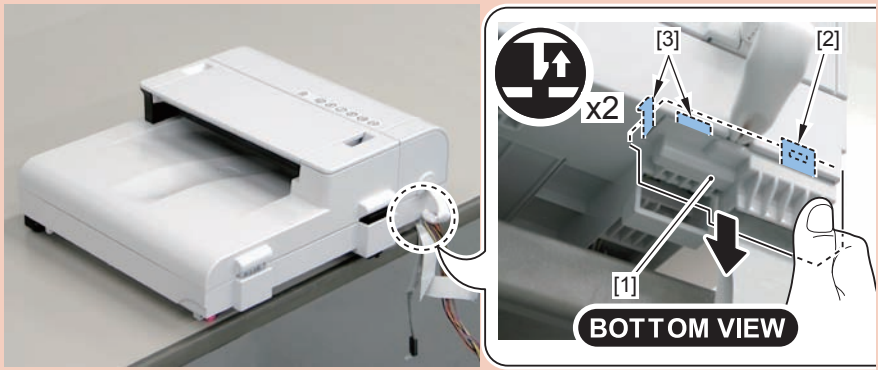
Note:

The location of hook[2] and the 2 claws[3] of the connector cover are shown here.



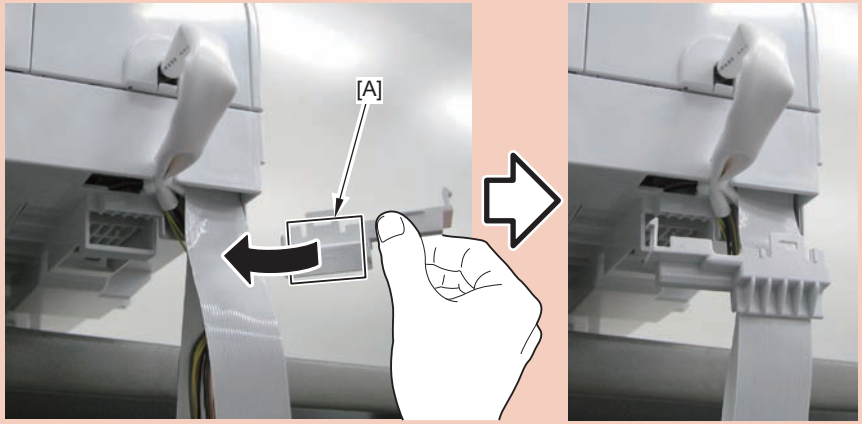
Caution:

Be sure to hold the connector cover when removing it.

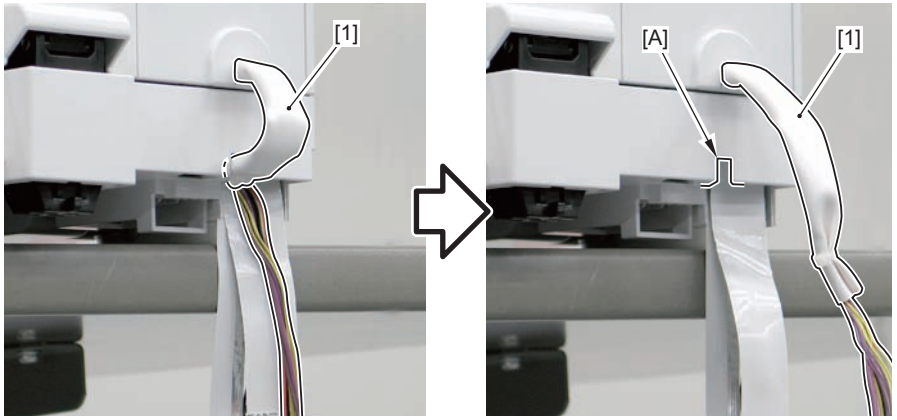


Caution:

Before installing the connector cover, be sure to store the harness, grounding wire, and flat cable in the [A] part.

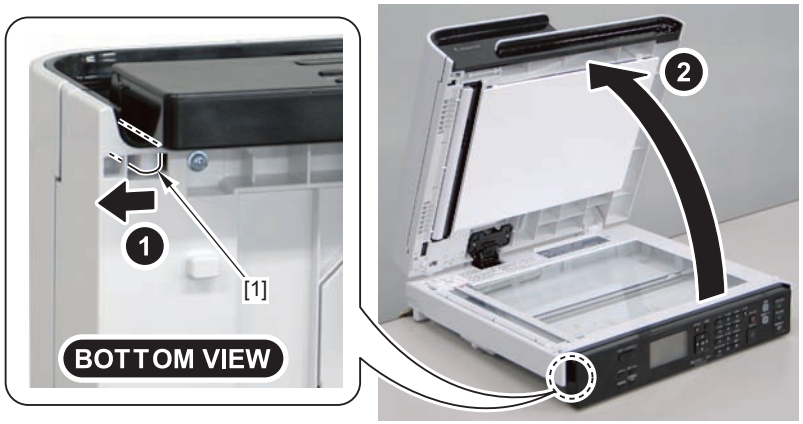


2)Free the reader harness[1] from the cut-off[A]



F-4-223

3)Release the lock[1] on the lower left front side of the reader unit, and open the SADF unit[2]

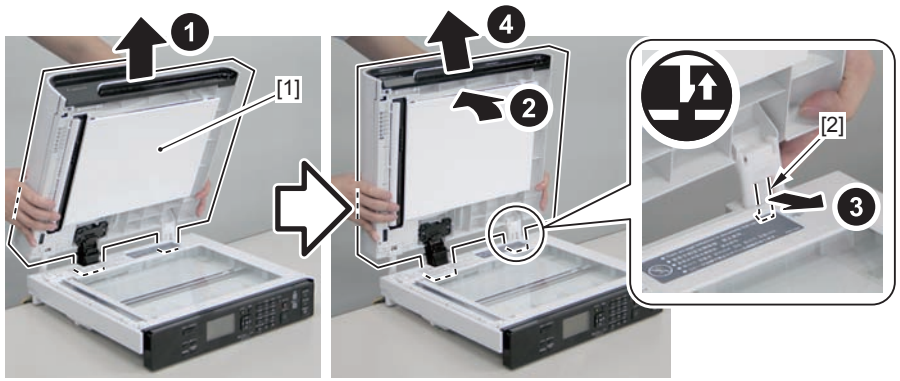


F-4-224

4)Remove the SADF unit[1] by lifting it up while pushing the claw[2]

Caution:

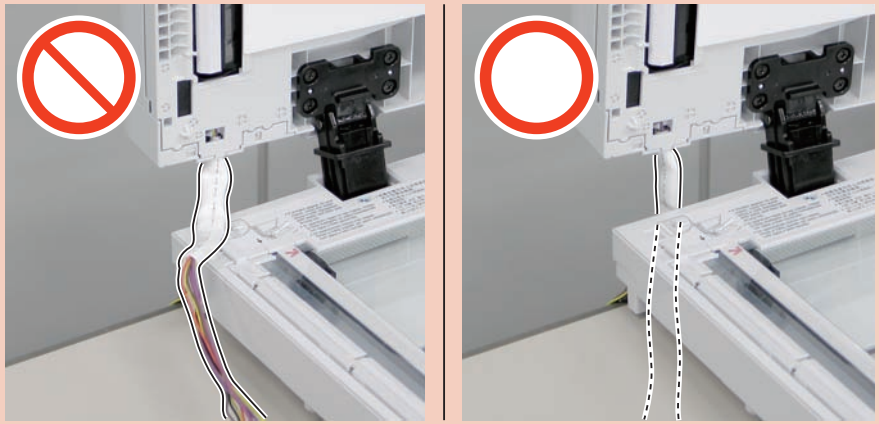
Be sure to avoid damaging the bottom sheet when placing the removed SADF unit.



F-4-225

Caution:

When installing the DADF unit , be careful not to damage the harnesses with [A] part.



F-4-226

Removing the SADF Pickup Unit (MF4780w/MF4770n/MF4750/MF4730)

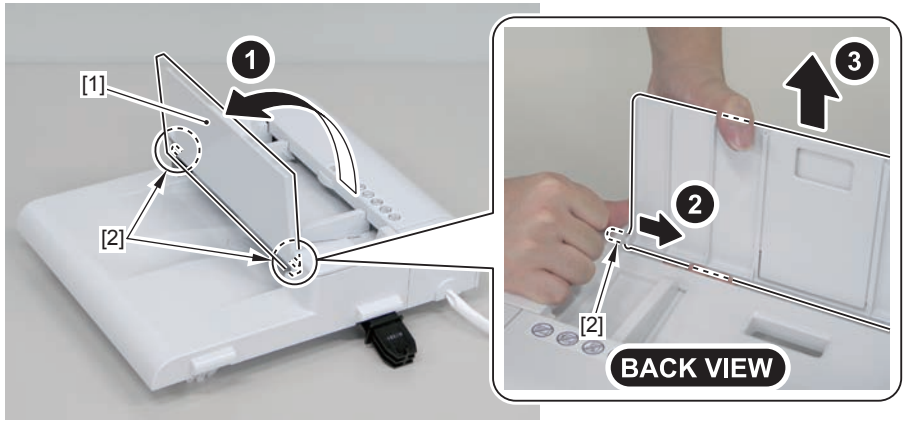
Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.

Procedure

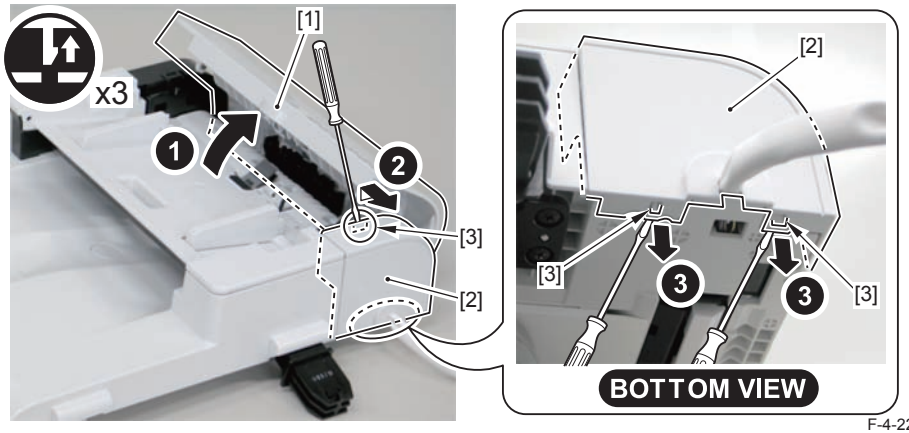
1) Open the SADF pickup tray[1] and remove the SADF pickup tray.

- 2 shafts[2]



F-4-227

2)Open the SADF upper cover[1] and remove the SADF rear cover.

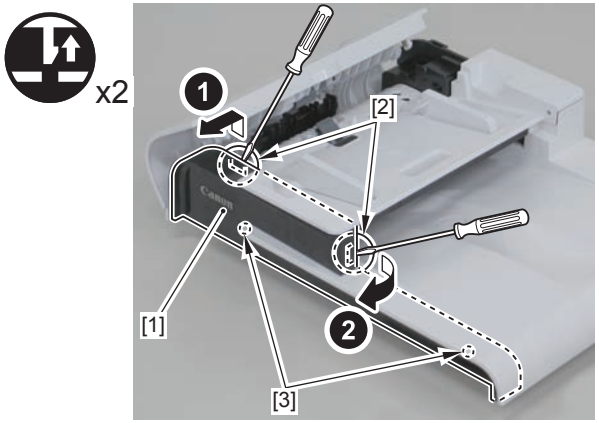


F-4-228

3)Remove the SADF front cover[1].
- 2 claws[2]
- 2 bosses[3]

Caution:

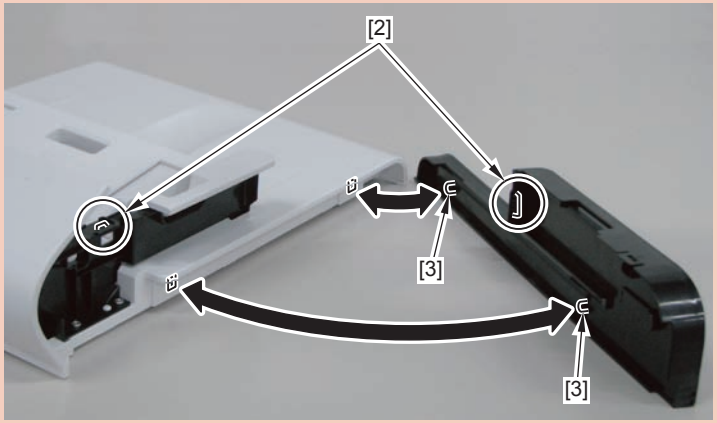
When releasing the 2 claws[2] on the SADF front cover, be careful not to put too much force, otherwise they may get damaged.



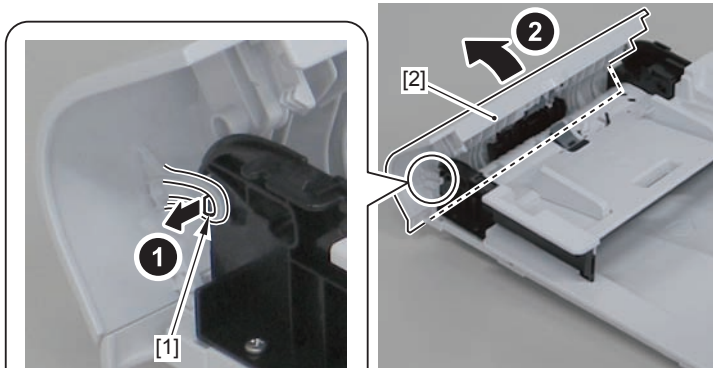
F-4-229

Note:

The following shows the 2 claws[2] and 2 bosses[3] of the SADF front cover.

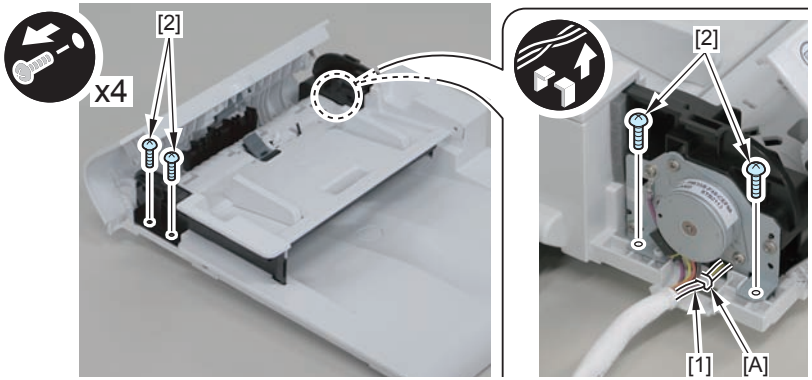


4)Free the boss[1], and open the SADF upper cover[2] by the amount for which the boss is freed.



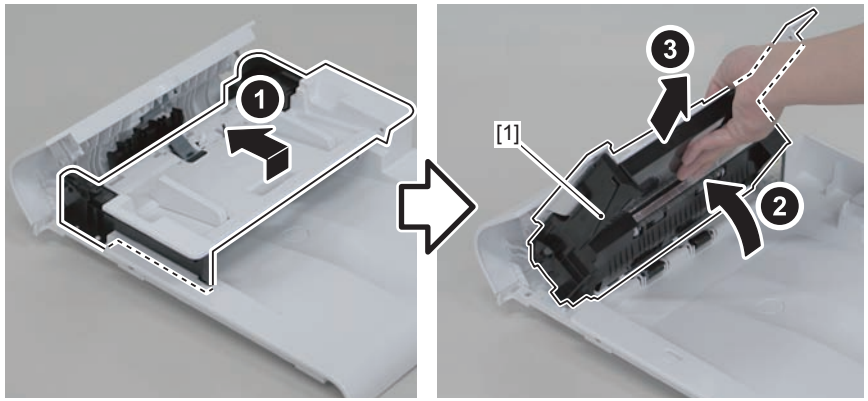
F-4-230

5)Free the harness[1] from the guide[A], and remove the 4 screws[2] on the right and left.



6)Remove the SADF pickup unit.

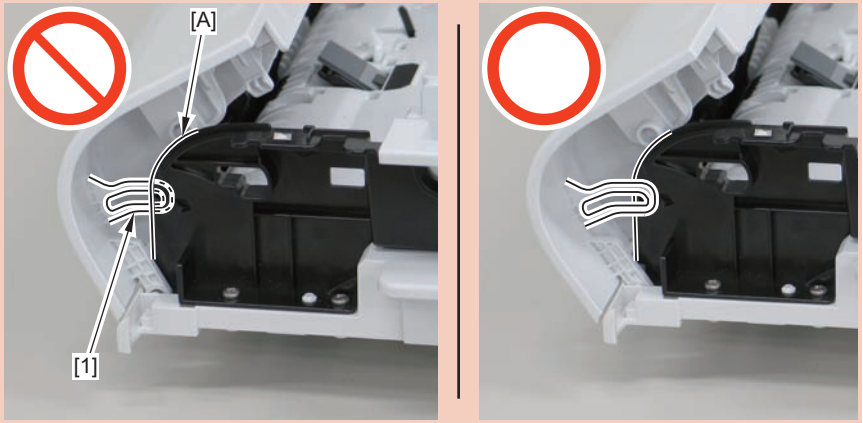
F-4-231



F-4-232

Caution:

When install the SADF upper cover, be sure that the guide[1] does not get inside the[A] part.



Removing the SADF Motor Unit (MF4780w/MF4770n/MF4750/MF4730

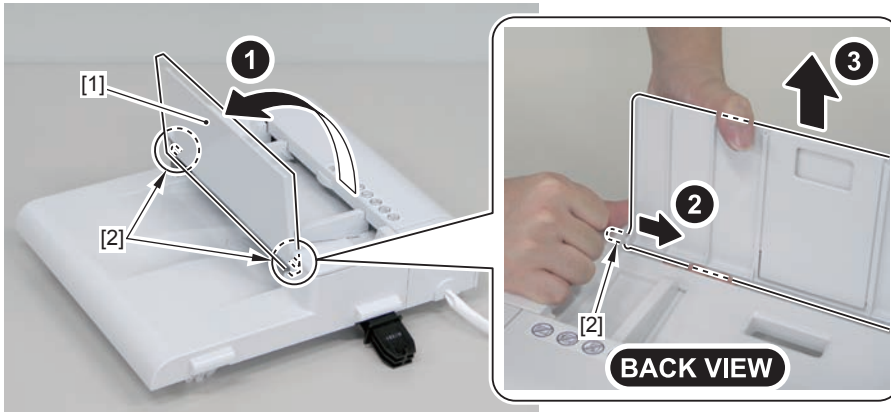
Preparation

1) Remove the left cover.
2) Remove the SADF unit and reader unit
3) Remove the SADF unit.

Procedure

1) Open the SADF pickup tray[1] and remove the SADF pickup tray.

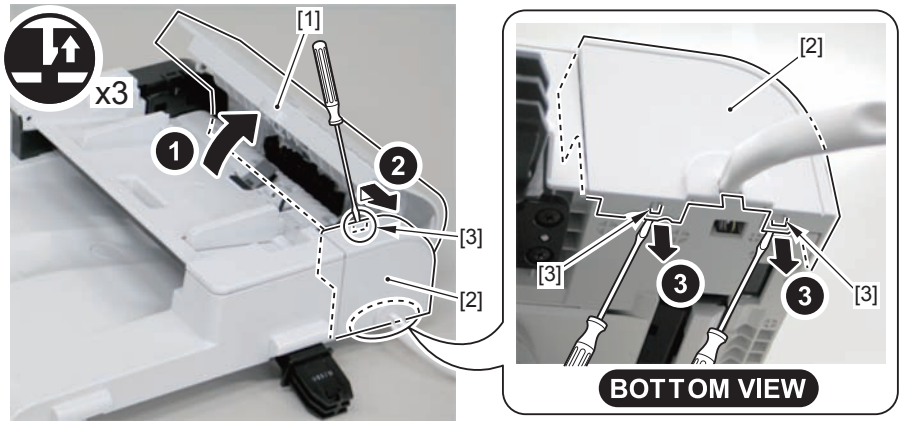
- 2 shafts[2]



F-4-233

2) Open the SADF upper cover[1] and remove the SADF rear cover[2].

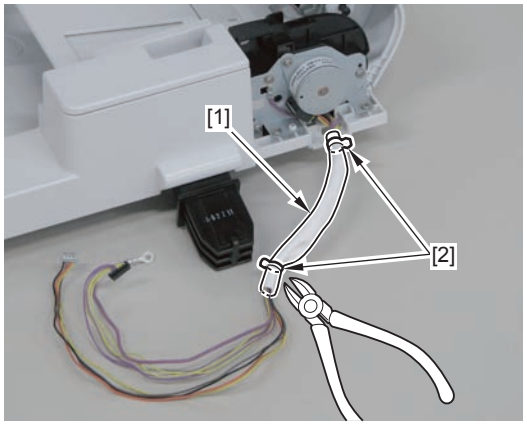
- 3 claws[3]



F-4-234

3)Remove the tube[1] protecting the harness.

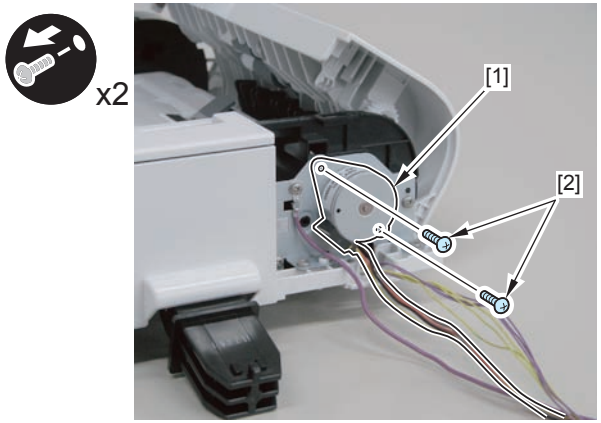
- 2 harnesses bands[2]



F-4-235

4)Remove the SADF motor[1].

- 2 screws[2]



F-4-236

Removing the SADF Pickup Roller 1,2 (MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.
4)Remove the SADF pickup unit.

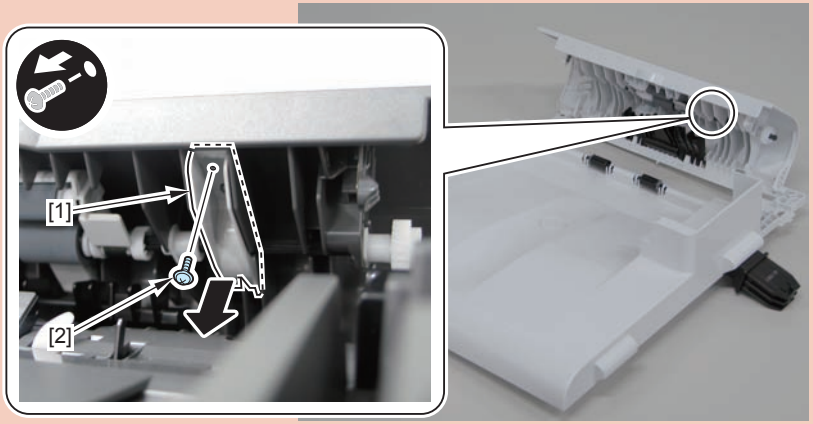
Procedure

1)Remove the rib[1]

- 1 screw[2]

Caution:

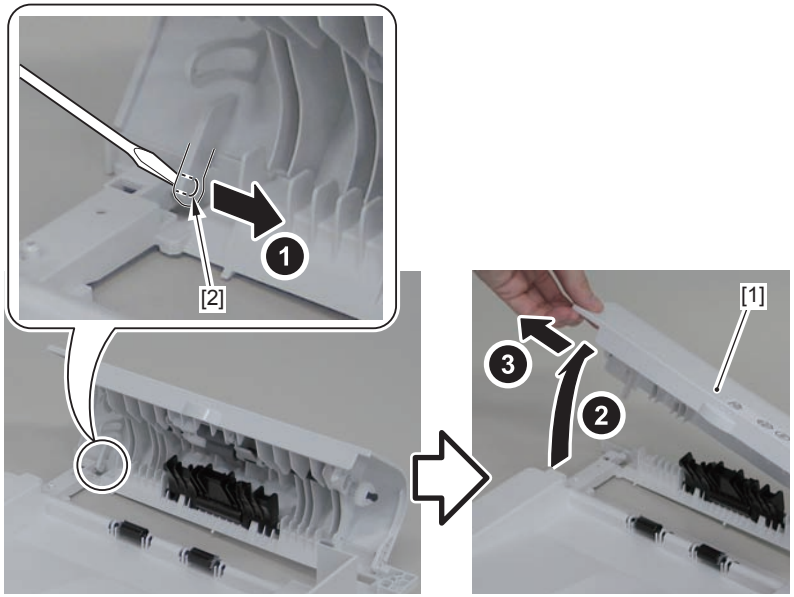
Do not touch the pickup roller surface[1]



F-4-237

2)Remove the SADF upper cover[1].

2 shafts[2]

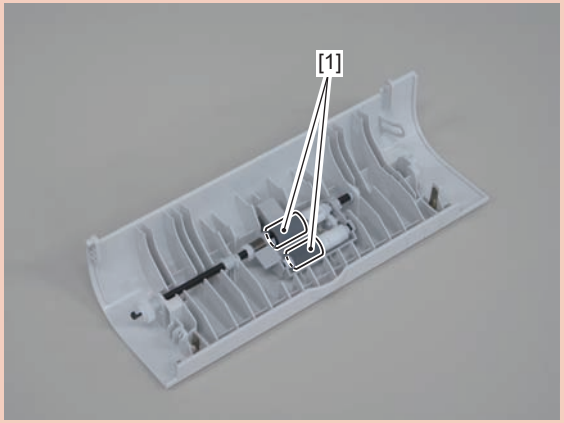


F-4-238

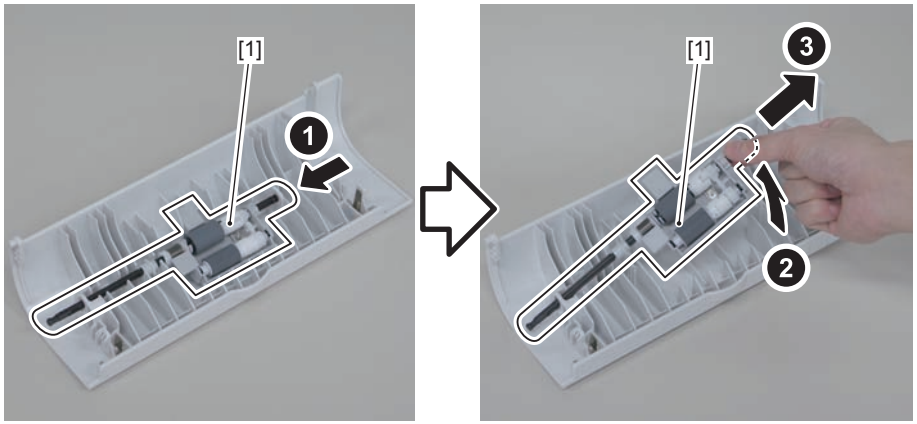
3)Remove the gear[1],bushing[2],2 e-rings[3] and bushing[4]

Caution:

Do not touch the pickup roller surface[1].

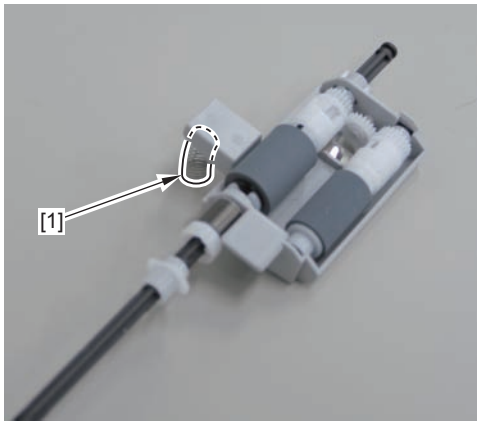


4)Remove the pickup roller unit[1].



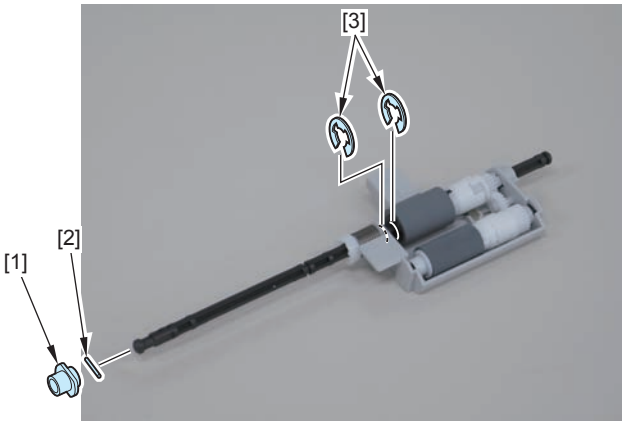
F-4-239

5)Remove the spring[1] on the back side of the pickup roller unit.



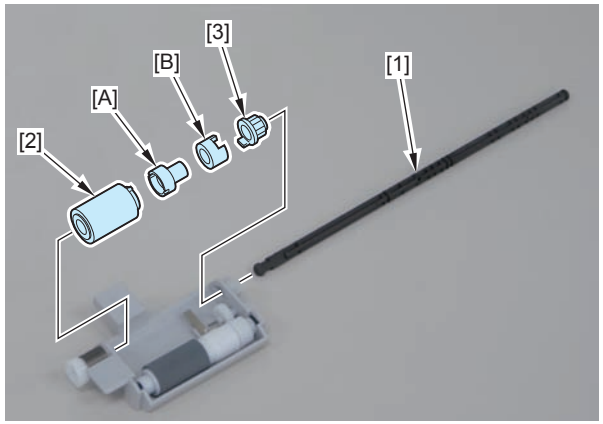
F-4-240

6)Remove the bushing[1],pin[2] and 2 e-rings[3].



F-4-241

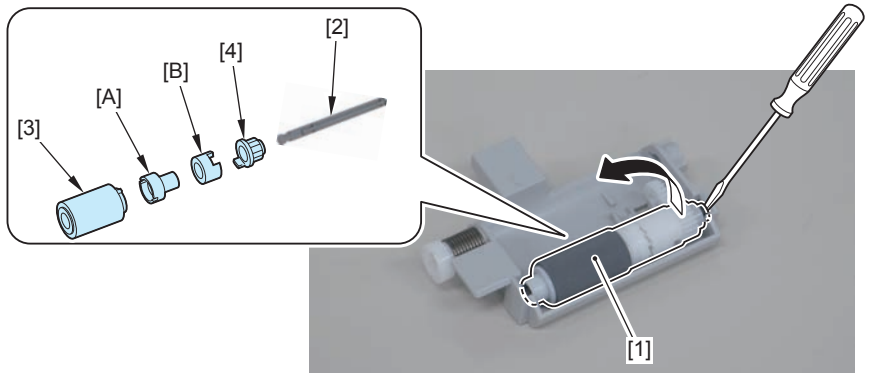
7)Pull out the pickup roller shaft[1], and remove the pickup roller[2], bushing[3],bushing[4], and gear[5]



F-4-242

8)Remove the pickup roller unit 2[1].

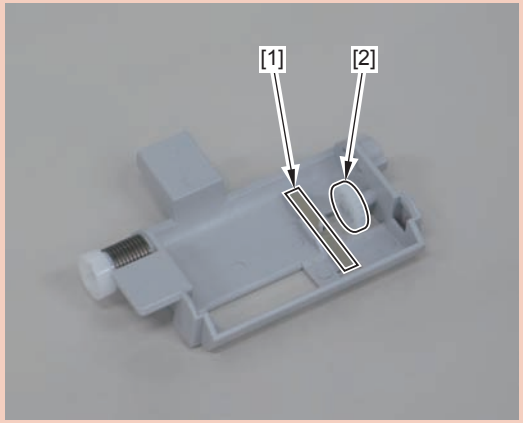
- 1 pickup roller shaft2[2]
- 1 pickup roller 2[3]
- 1 bushing[4]
- 1 bushing[5]



F-4-243

Caution:

When disassembly/assembly, be careful not to lose the plate[1] and gear[2].



Removing the SADF Separation Pad(MF4780w/MF4770n/MF4750/MF4730)

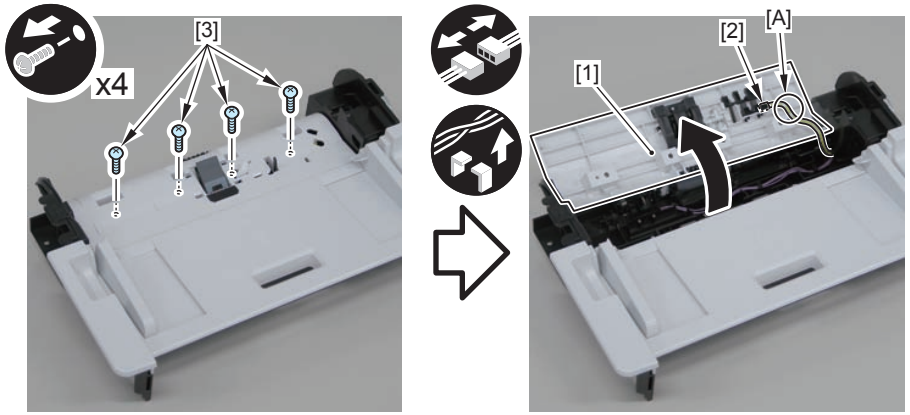
Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.
4)Remove the SADF pickup unit.

Procedure

1)Remove the SADF pickup upper cover[1], and free the harness from the connector[2] and the harness guide[A].

- 4 screws[3]



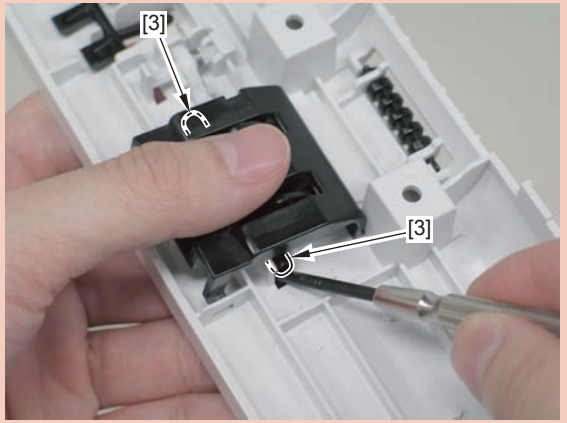
F-4-244

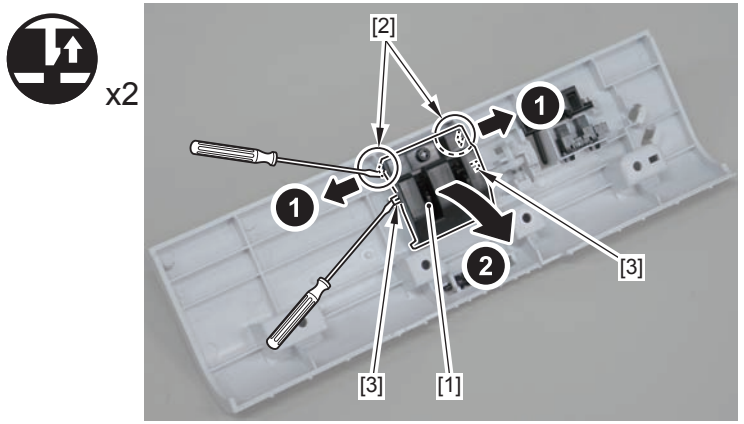
2)Remove the separation pad unit[1].

- 2 claws[2]
- 2 protrusions[3]

Caution.

Be sure to hold the separation pad unit with your fingers when releasing its 2 protrusions[3]





F-4-245

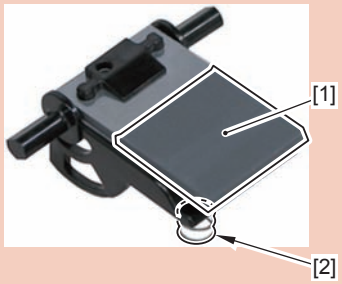
3)Remove the separation pad[1].

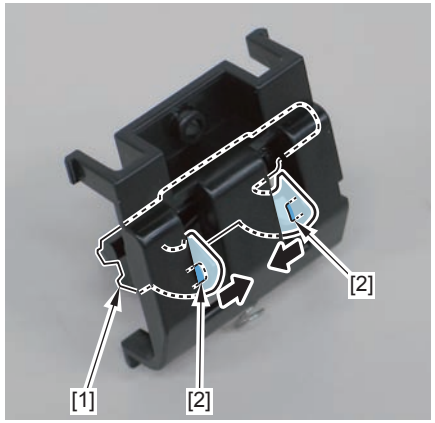
- 2 hooks[2]

Caution.

Do not touch the pad surface[1]

When disassembling/assembling, take care not to lose the spring[2] on the back side of the separation pad.



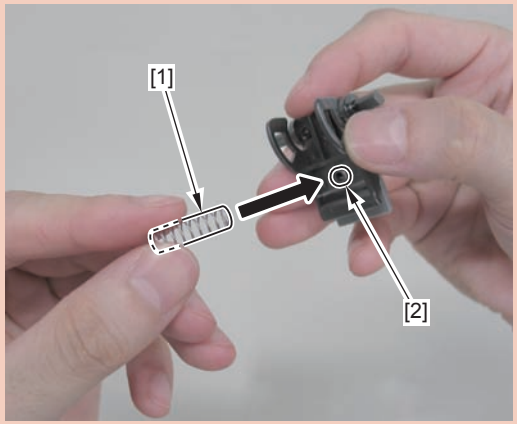


F-4-246

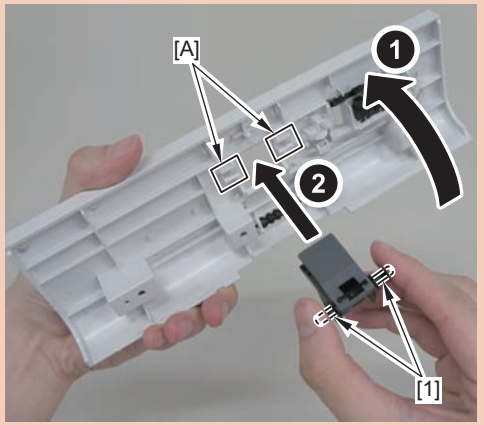
Caution.

When the spring[1] comes off, go through the following steps to install it.

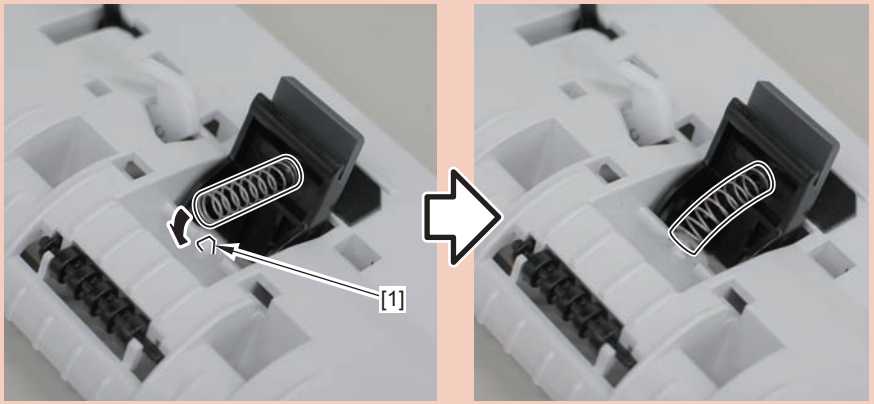
1)Install the spring[1] to the boss[2] on the back side of the separation pad.



2)Install the shaft[1] of the separation pad unit to the [A] part on the back side of the SADF pickup upper cover.

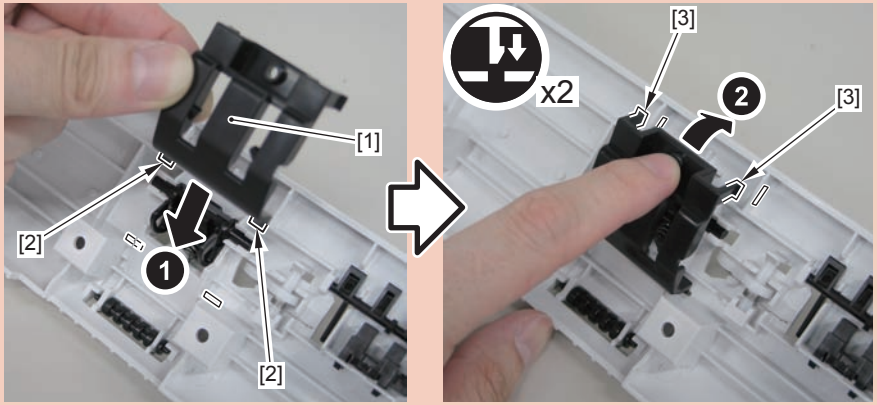


3)Install the spring to the protrusion[1] of the SADF pickup upper cover.

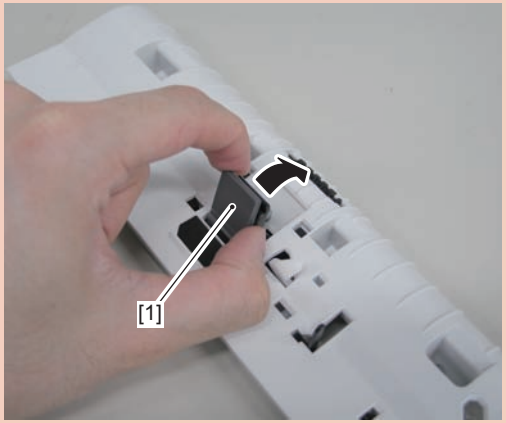


4)Turn the SADF pickup upper cover over to the back, and install the separation pad cover[1].

- 2 hooks[2]
- 2 claws[3]



5)Turn the SADF pickup upper cover over to the front, and push in the separation pad unit[1].



Removing the Copyboard Glass(MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.

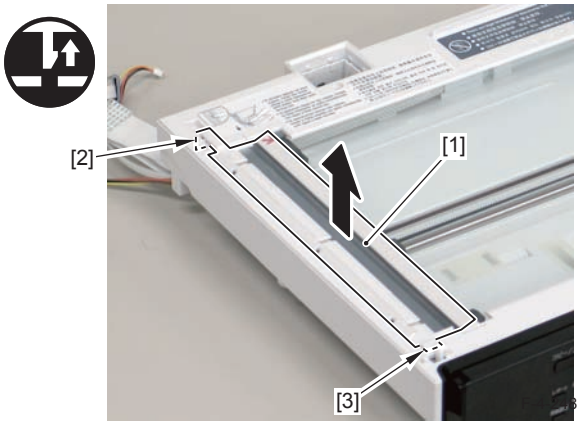
Procedure

1)Remove the 4 screws(TP)[1]

F-4-247

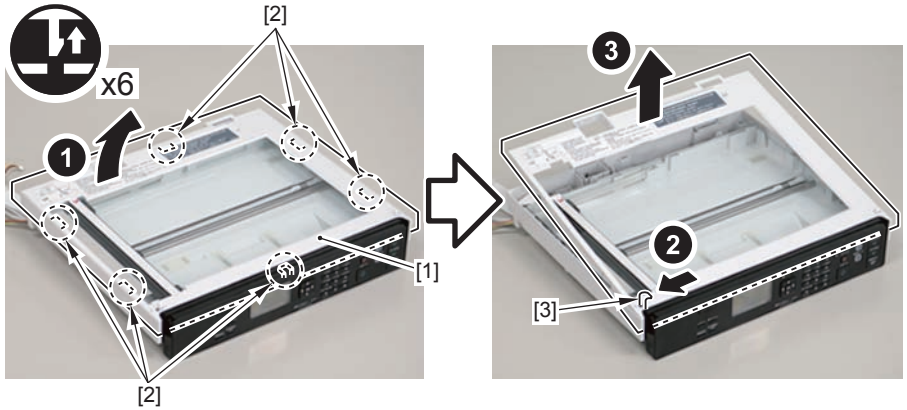
2)Remove the copyboard guide holder[1]

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



3)Remove the reader upper cover[1]

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



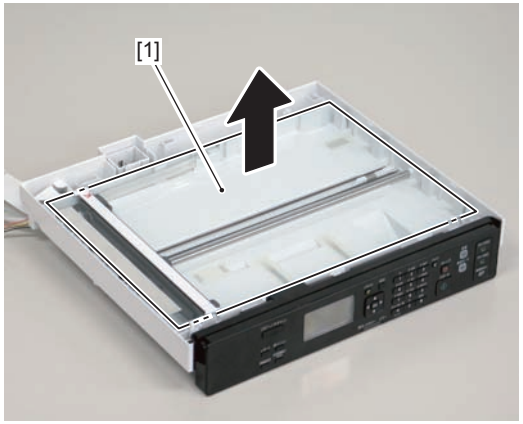
F-4-249

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.



F-4-250

Removing the Flatbed Motor Unit(MF4780w/MF4770n/MF4750/MF4730)

Preparation

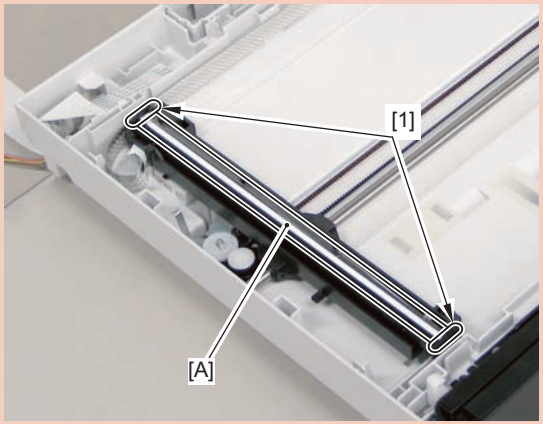
1) Remove the left cover.
2) Remove the SADF unit and reader unit
3) Remove the SADF unit.
4) Remove the copyboard glass

Procedure

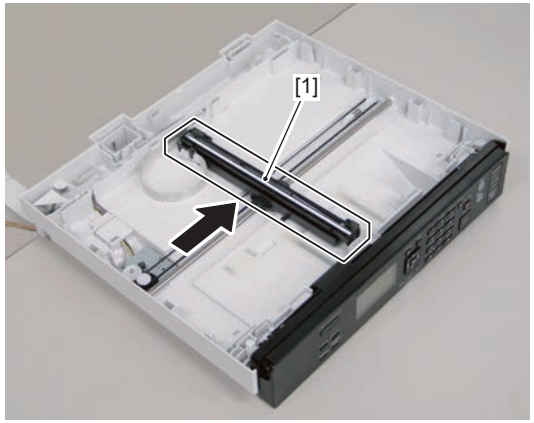
Caution.

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 [A] of the CIS unit.



1)Move the CIS unit[1].

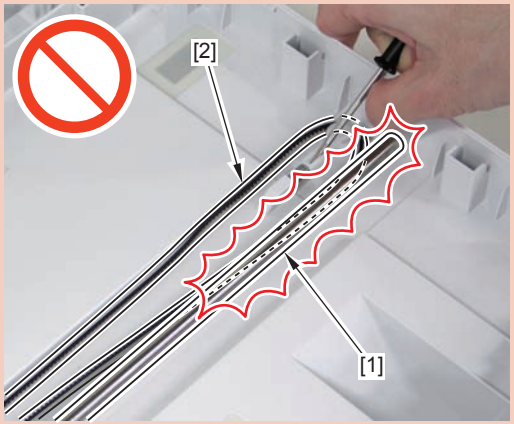


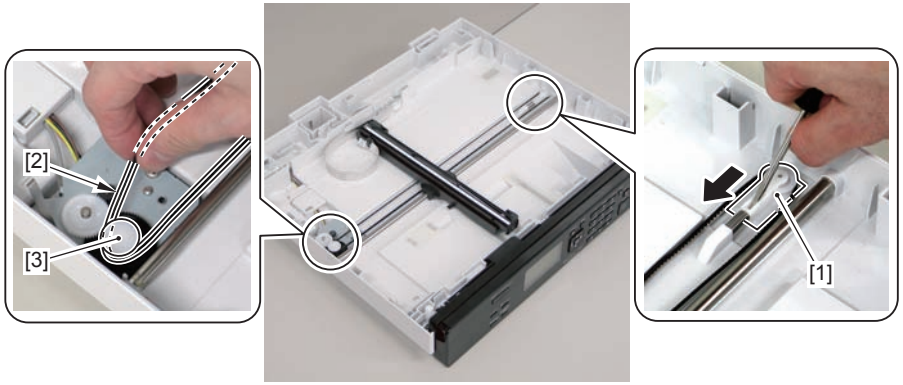
F-4-251

2)Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

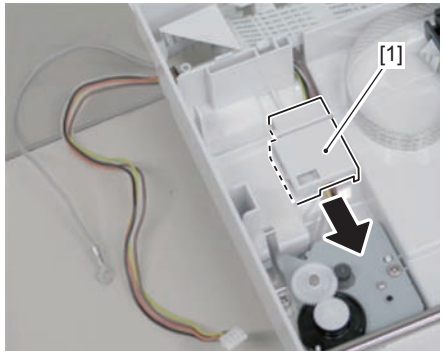
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





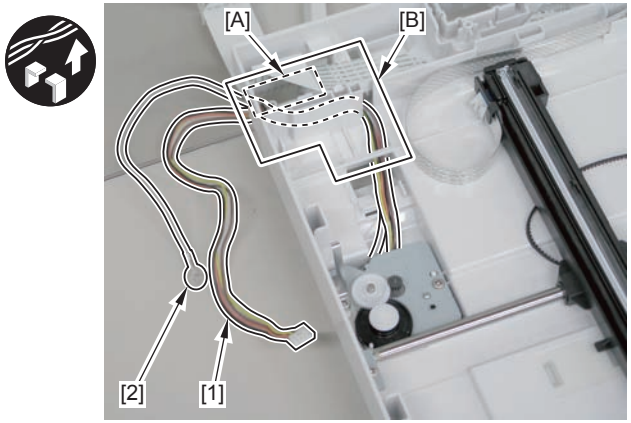
3)Remove the guide cover[1]

F-4-252



F-4-253

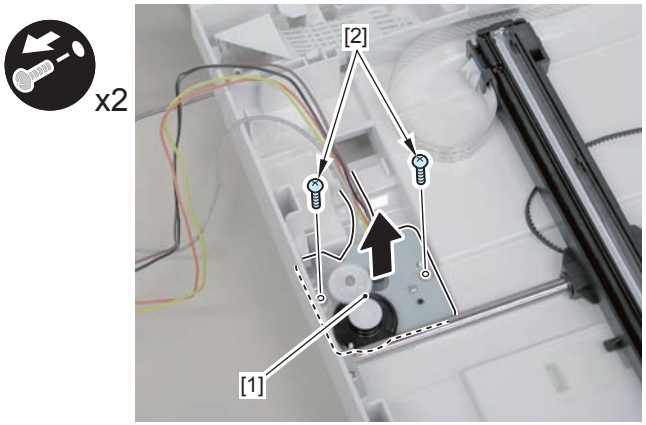
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-254

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-255

Removing the SADF CIS Unit(MF4780w/MF4770n/MF4750/MF4730)

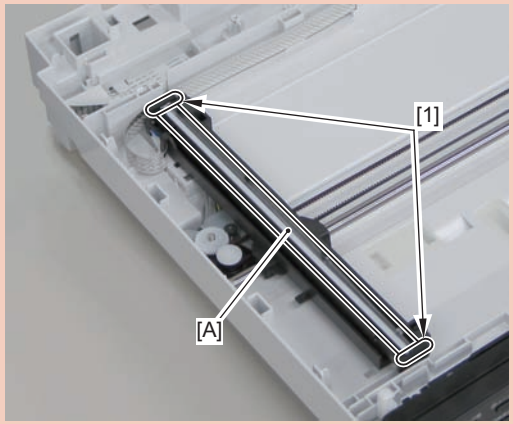
Procedure

1)Remove the left cover.
2)Remove the SADF unit and reader unit
3)Remove the SADF unit.
4)Remove the copyboard glass

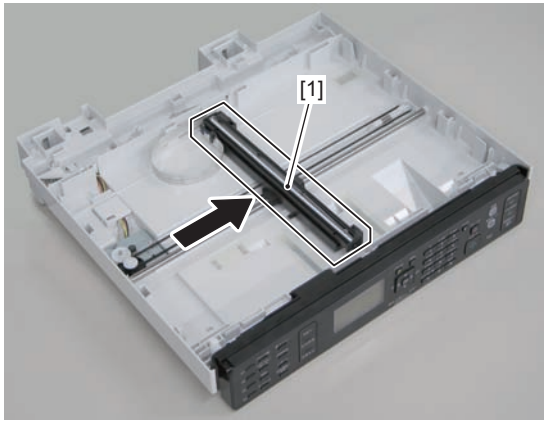
Caution.

When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



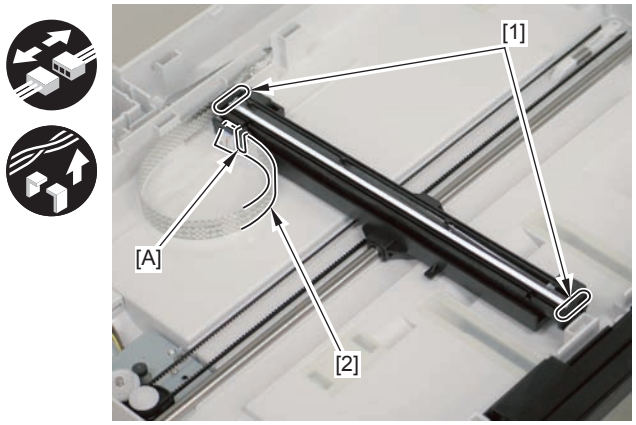
1)Move the CIS unit[1]



F-4-256

2)Remove 2 spacers[1] and flat cable[2].

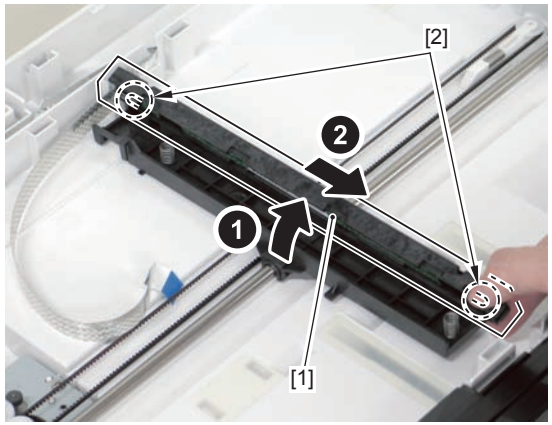
- 1 guide[A]



F-4-257

3)Remove the CIS unit[1]

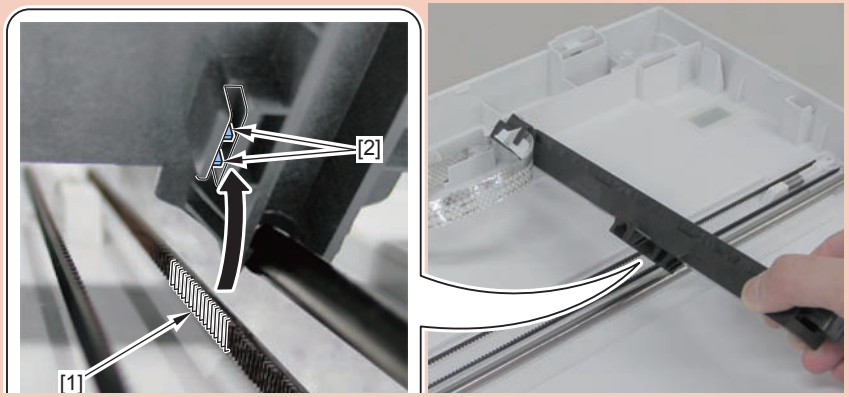
- 2 shafts[2]



F-4-258

Caution.

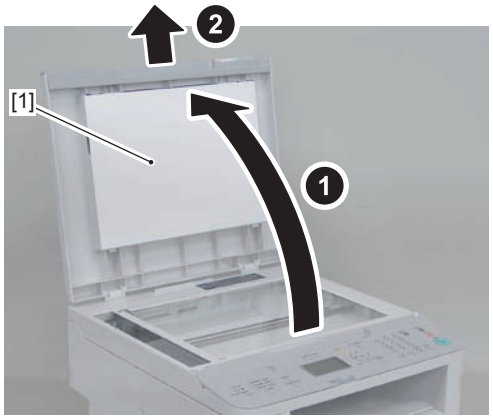
If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



Removing the Copyboard Cover (MF4720w/MF4712/MF4710)

Procedure

1) Remove the copyboard cover[1]



F-4-259

Removing the Copyboard Cover and Reader Unit (MF4720w/MF4712/MF4710)

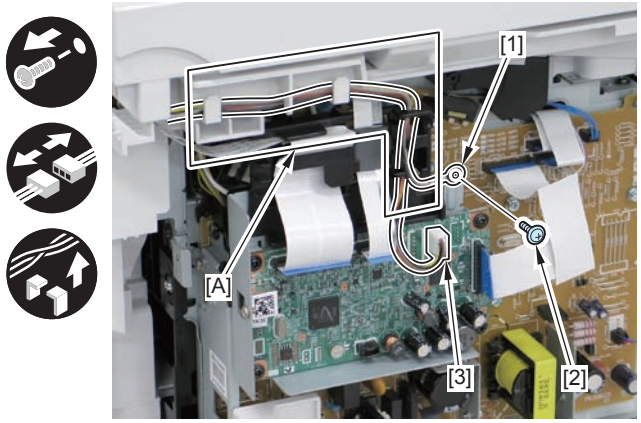
Preparation

1) Remove the left cover.

Procedure

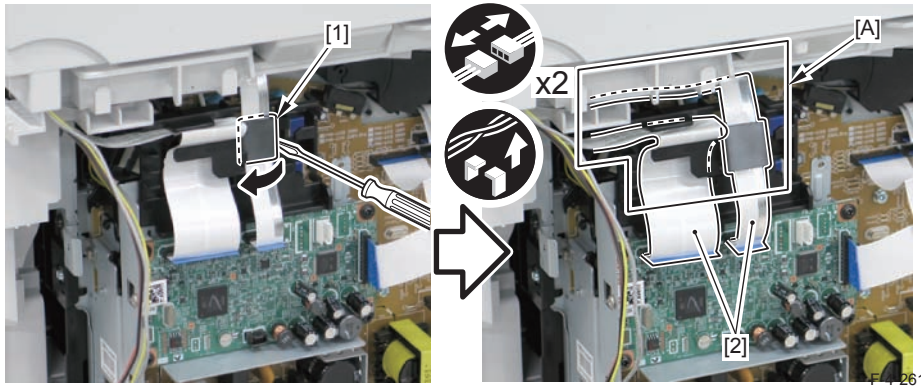
1) Remove the 1 grounding wires[1].
- 1 screw(black TP)

2) Disconnect the connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-260

3) Remove the ferrite core[1], and disconnect the 2 flat cables from the harness guide[A]



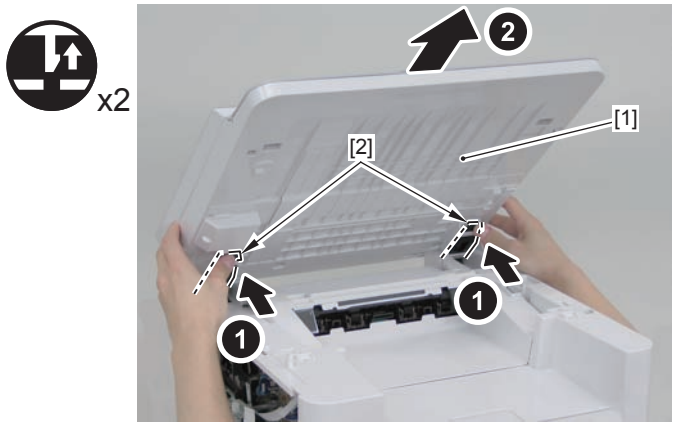
F-4-261

4)Remove the copyboard cover and reader unit.

- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-262

Caution:

When mounting the reader unit and copyboard cover, fix the 2 hinge arm claws [1] to the 2 latches [2] of the reader unit.

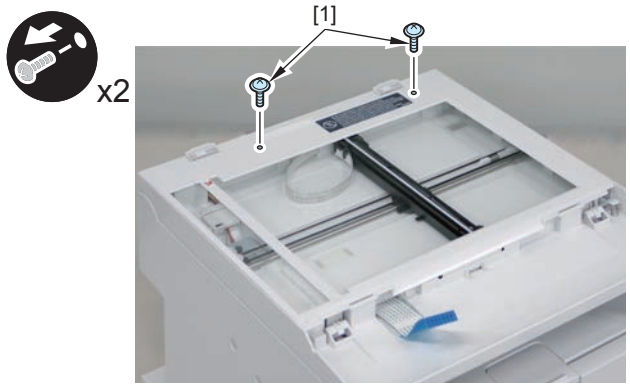
Removing the Copyboard Glass(MF4720w/MF4712/MF4710)

Preparation

1)Remove the copyboard cover.
2)Remove the control panel unit.

Procedure

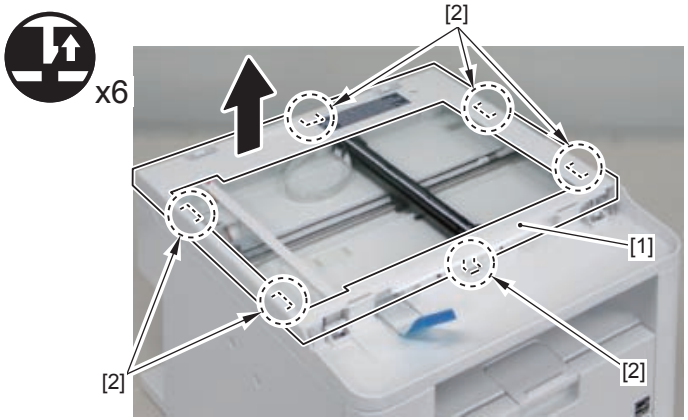
1)Remove the 2 screws[1]



F-4-263

2)Remove the reader upper cover[1]

- 6 claw[2]



F-4-264

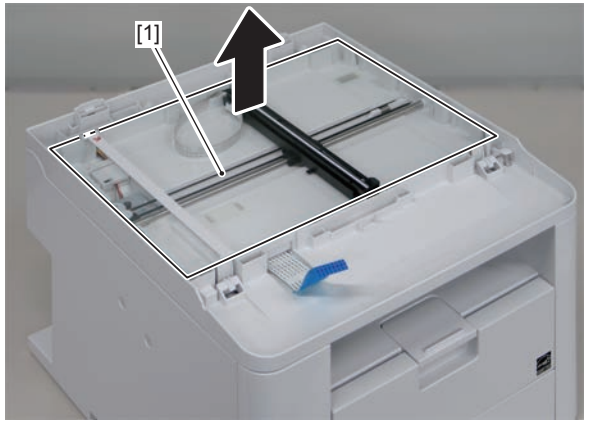
3)Remove the copyboard glass[1].

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.



F-4-265

Removing the Flatbed Motor Unit(MF4720w/MF4712/MF4710)

Preparation

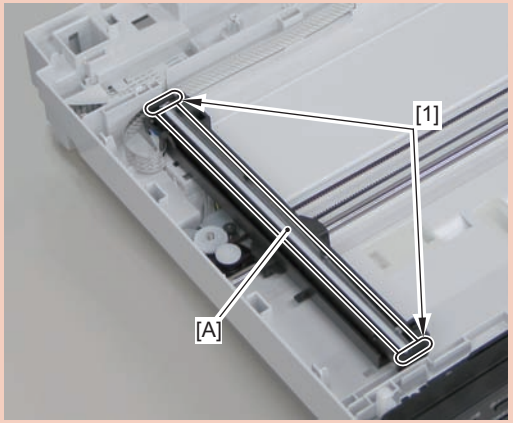
1) Remove the left cover.
2)Remove the copyboard cover .
3)Remove the copyboard cover.
4)Remove the control panel.
5)Remove the copyboard glass.

Procedure

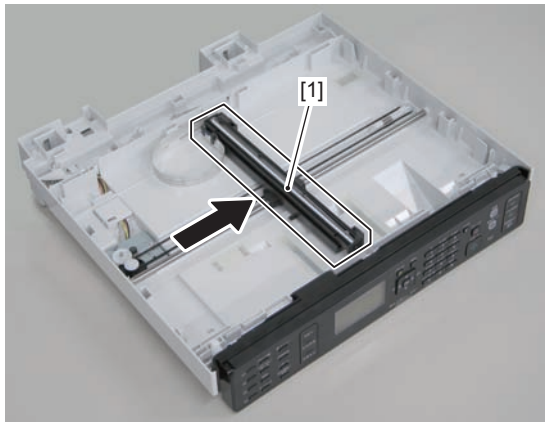
Caution.

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 [A] of the CIS unit.



1)Move the CIS unit[1].

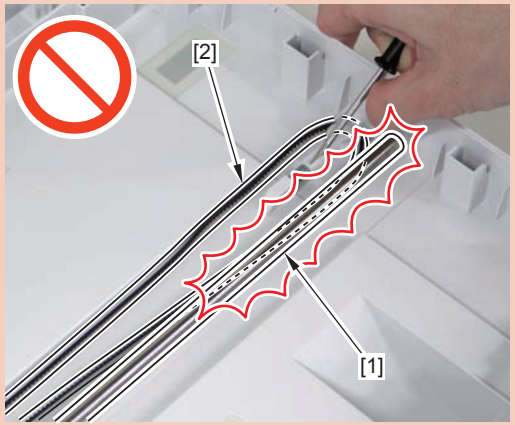


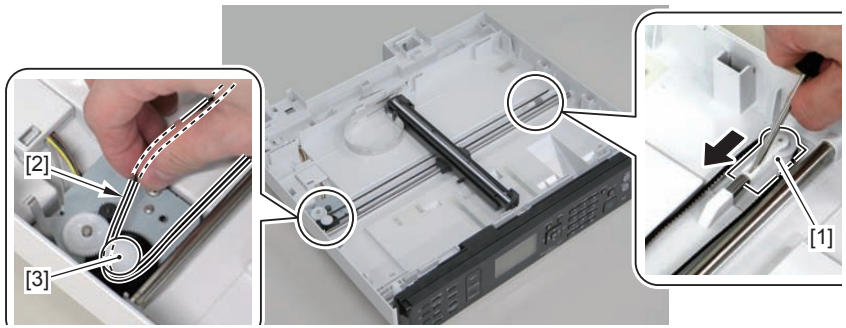
F-4-266

2)Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

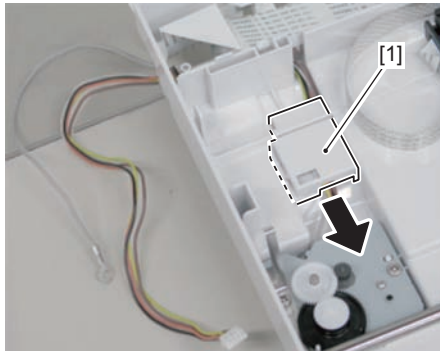
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





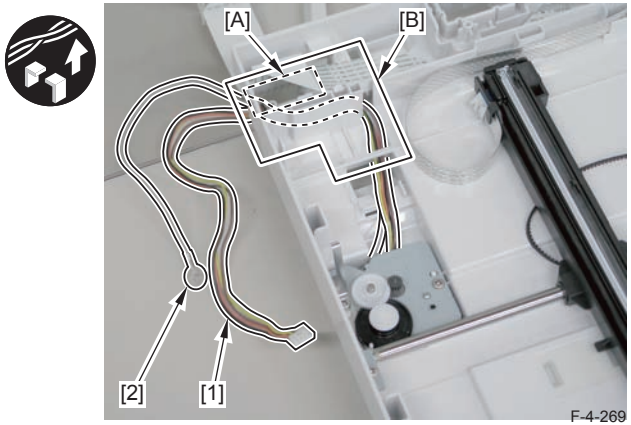
F-4-267

3)Remove the guide cover[1]



F-4-268

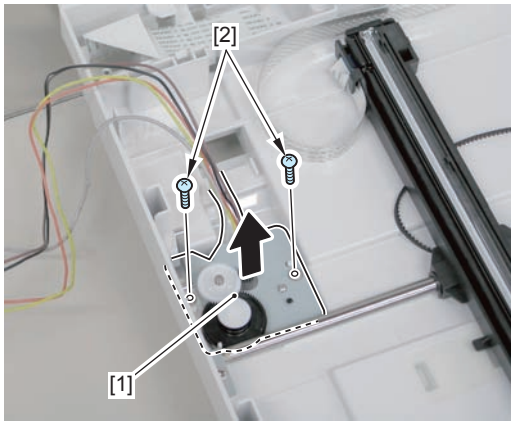
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-269

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-270

Removing the CIS Unit (MF4720/MF4712/MF4710)

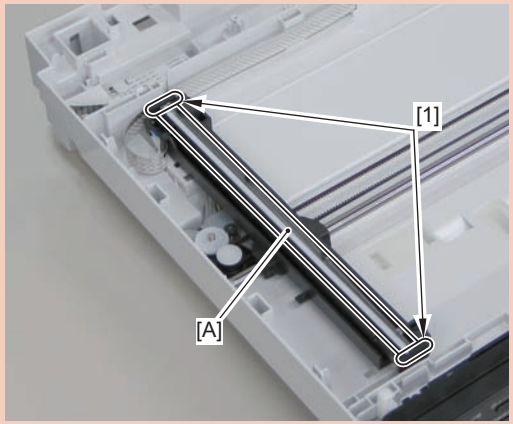
Preparation

1) Remove the copyboard cover.
2) Remove the control panel unit.
3) Remove the copyboard glass

Caution.

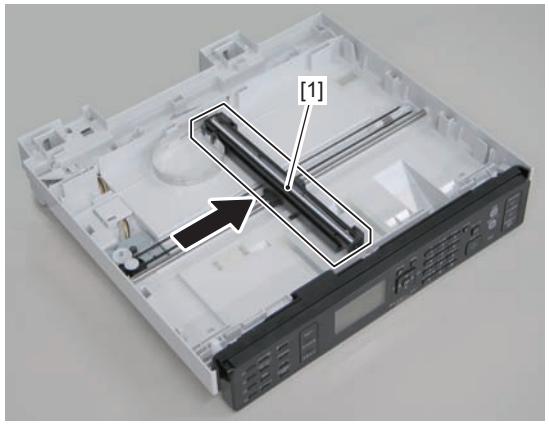
When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



Procedure

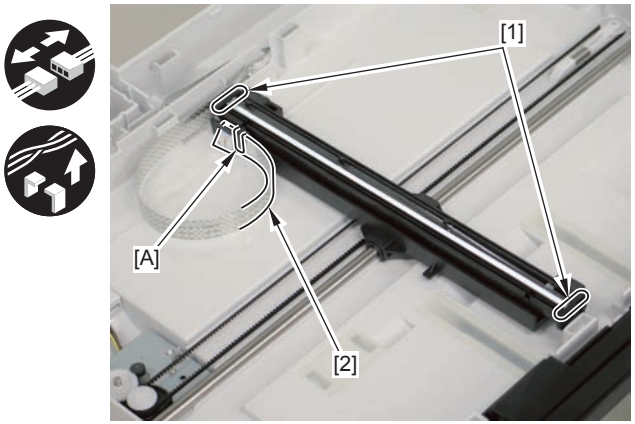
1) Move the CIS unit[1]



F-4-271

2) Remove 2 spacers[1] and flat cable[2].

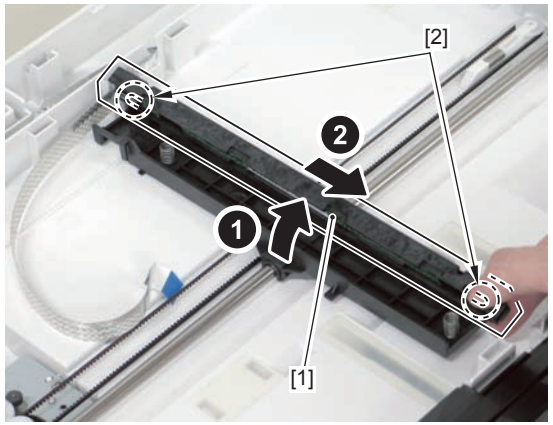
- 1 guide[A]



F-4-272

3)Remove the CIS unit[1]

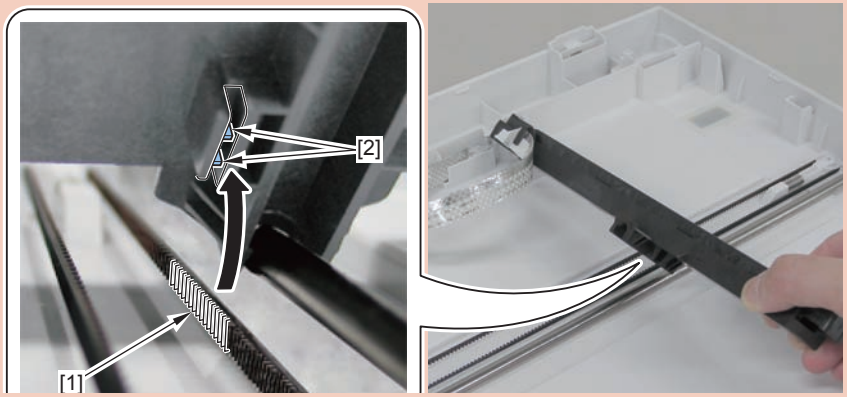
- 2 shafts[2]



F-4-273

Caution.

If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



Removing the DADF Unit and Reader Unit (L418S/L410/L190)

Preparation

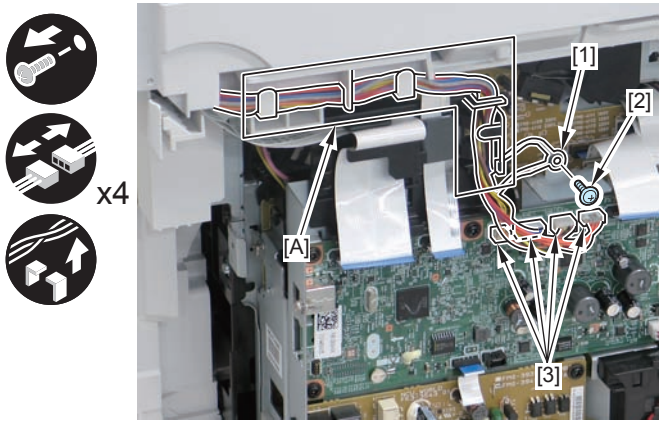
1) Remove the left cover.

Procedure

1) Remove the grounding wire[1].

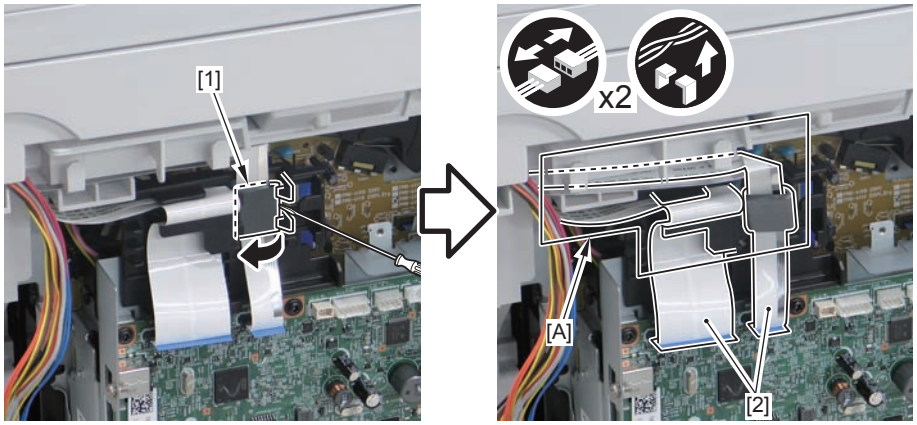
- 1 screw(black TP)[2]

2) Disconnect the 4 connectors[3], and free the grounding wire and the harnesses from the harness guide[A].



F-4-274

3)Remove the ferrite core[1], and disconnect the 2 flat cables[2] from the harness guide[A]



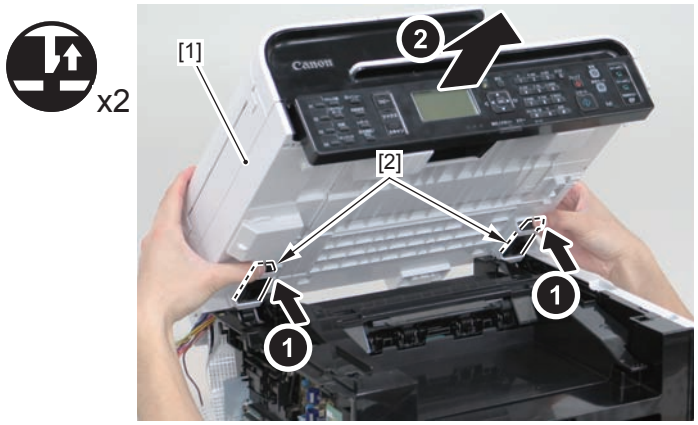
F-4-275

4)Remove the DADF unit and reader unit.

- 2 claws[2]

Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



F-4-276

Caution:

When installing the DADF unit and reader unit, secure the 2 hinge arm claws[1] to the 2 hooks[2] of the reader unit.

Removing the DADF Unit (L418S/L410/L190)

Preparation

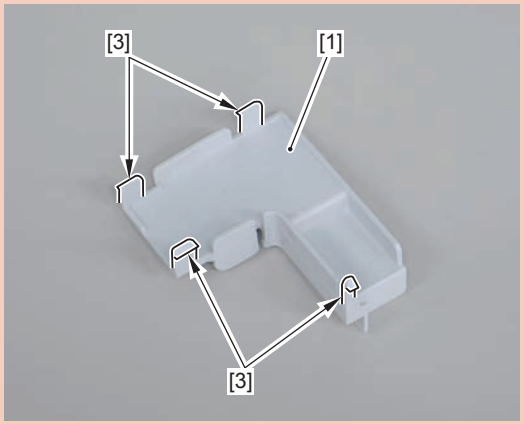
1) Remove the left cover.
2) Remove the DADF unit and reader unit

Procedure

1) Remove the connector cover[1] and plate[2] , and remove the harness from the guide[A].
- 4 claws[3]

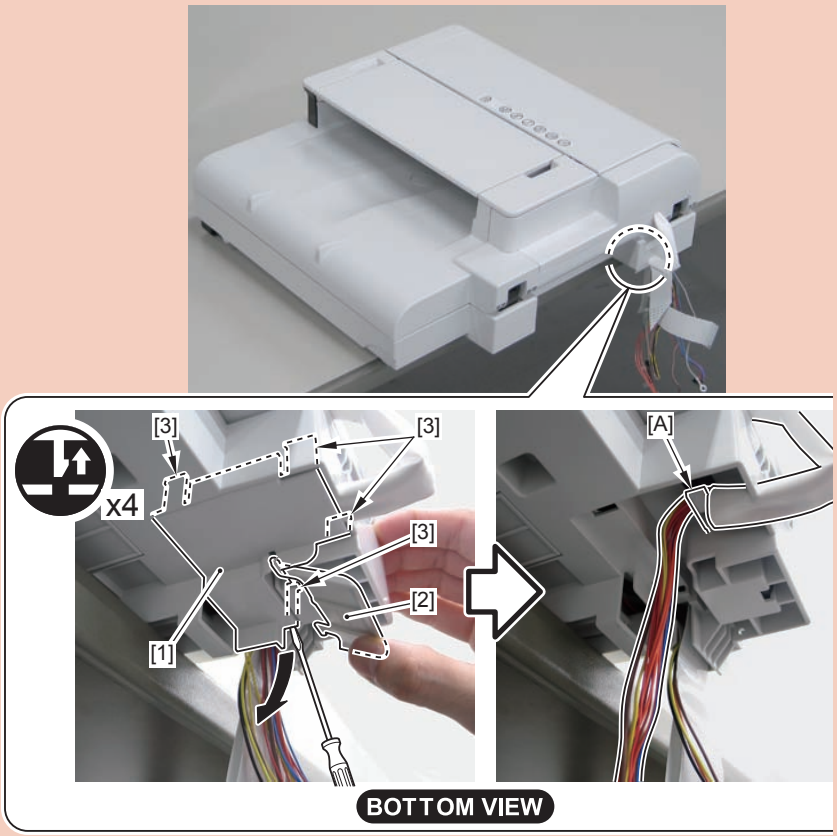
Caution:

When placing the removed copyboard cover and reader unit on the desk, floor, etc.,be careful not to get the flat cable and harnesses trapped under them.



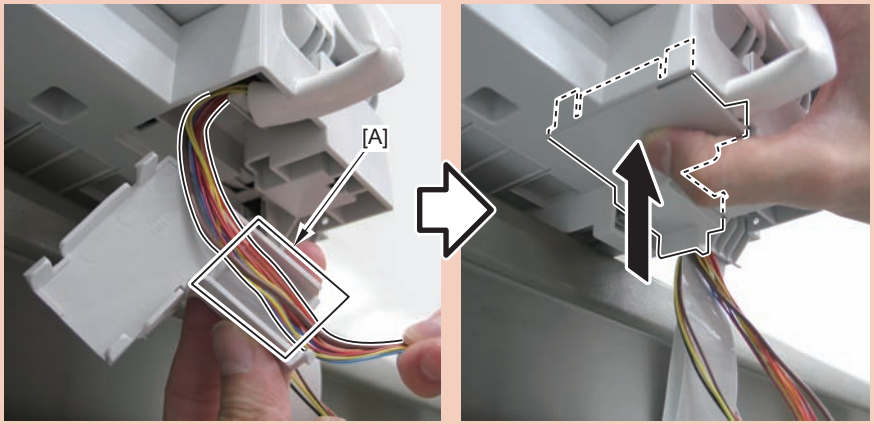
Caution:

Be sure to hold the connector cover when removing it.

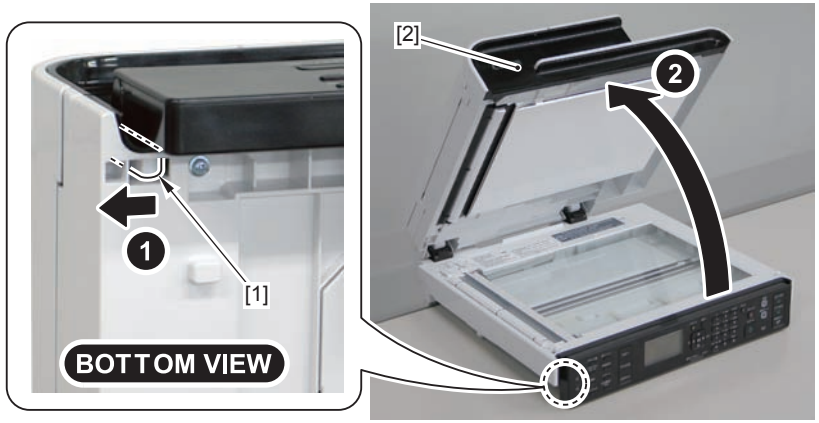


Caution:

Before installing the connector cover, be sure to store the harness, grounding wire, and flat cable in the [A] part.

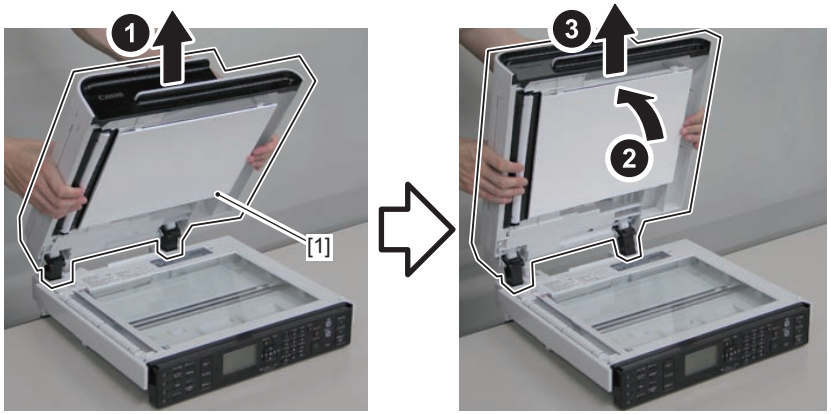


2)Release the lock[1] on the lower left front side of the reader unit, and open the DADF unit.



F-4-277

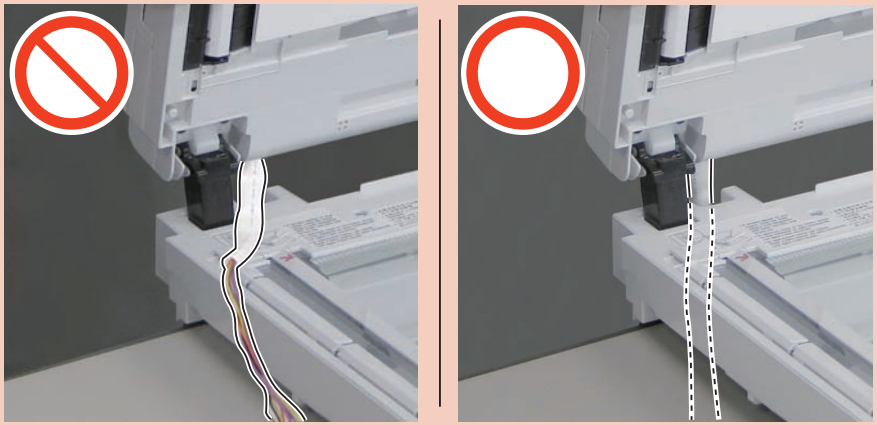
3)Remove the DADF unit[1] by lift it up and then raising it vertically.



F-4-278

Caution:

When installing the DADF unit , be careful not to damage the harnesses with [A] part.



F-4-279

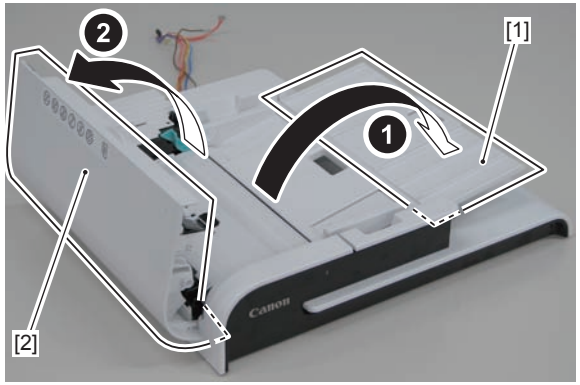
Removing the DADF Pickup Unit (L418S/L410/L190)

Preparation

1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.

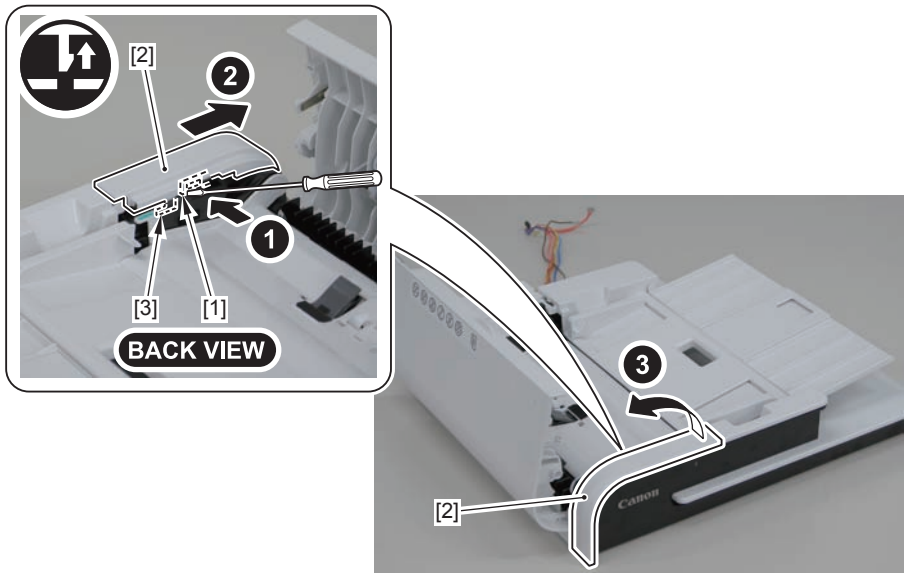
Procedure

1) Open the DADF pickup tray and DADF upper cover.



F-4-280

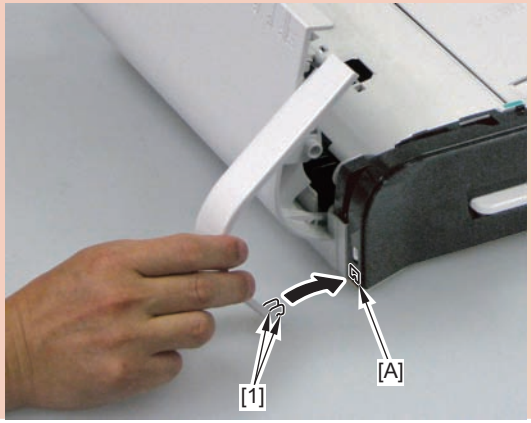
2) Remove the DADF upper front cover[2] by pushing the claw.



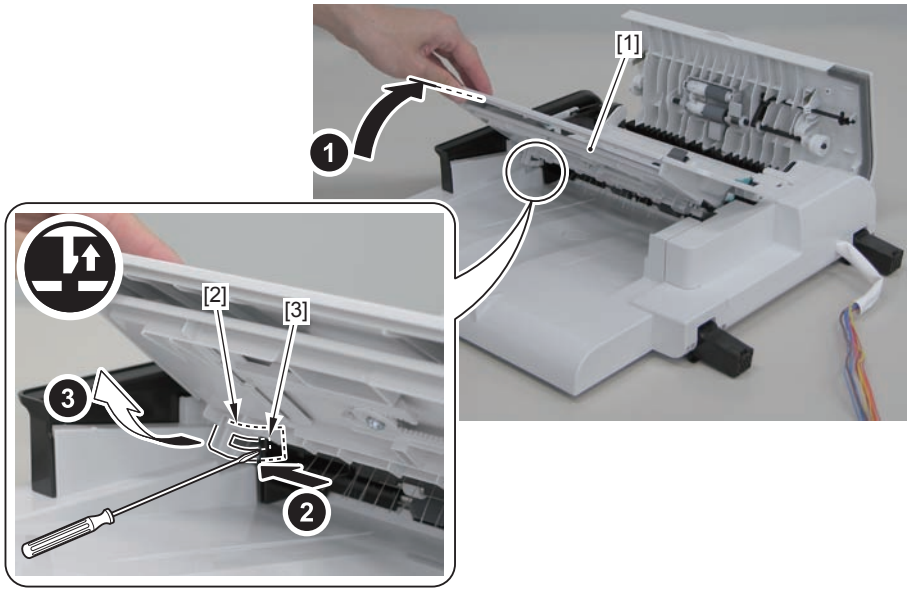
F-4-281

Caution:

When assembling the DADF upper front cover, align the 2 hooks[1] at left side to DADF front cover hole[A] to install the cover.

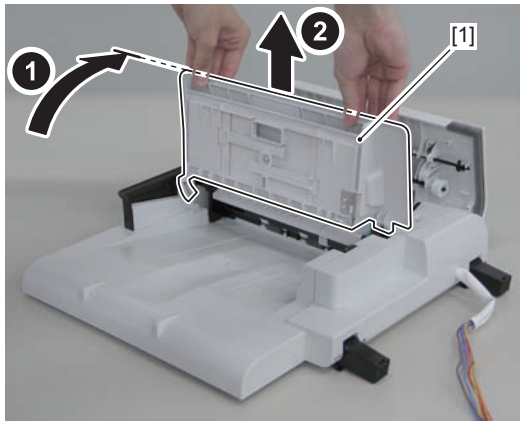


3)Open the DADF tray[1] until it stops. Then release the claw by pushing the hook[2] in the direction of the arrow[A] with a flat-blade screwdriver, and move the tray in the direction of the arrow.



F-4-282

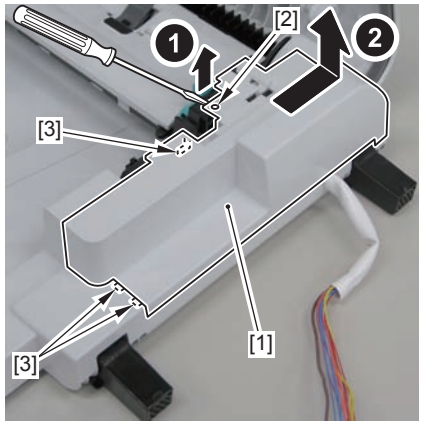
4)Open the DADF tray[1] to the position shown in the figure below, and remove it upward.



F-4-283

5)Remove the DADF upper rear cover[1].

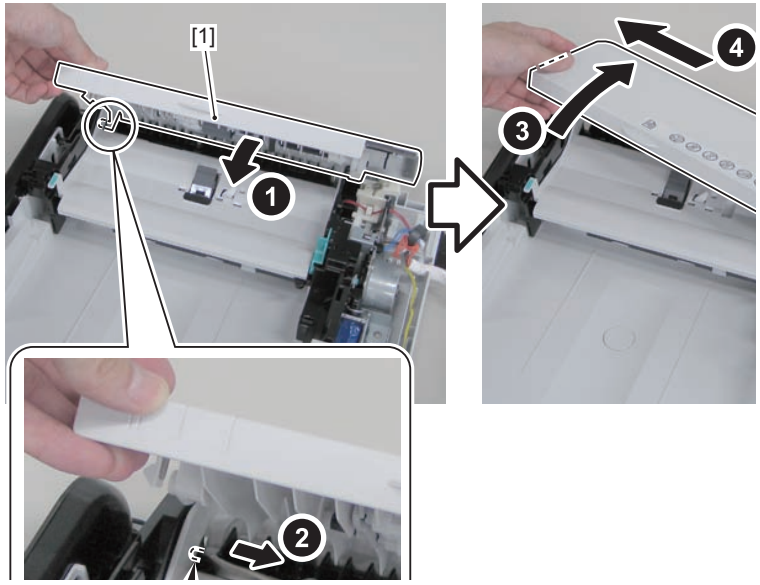
- 1 boss[2]
- 3 hooks[3]



F-4-284

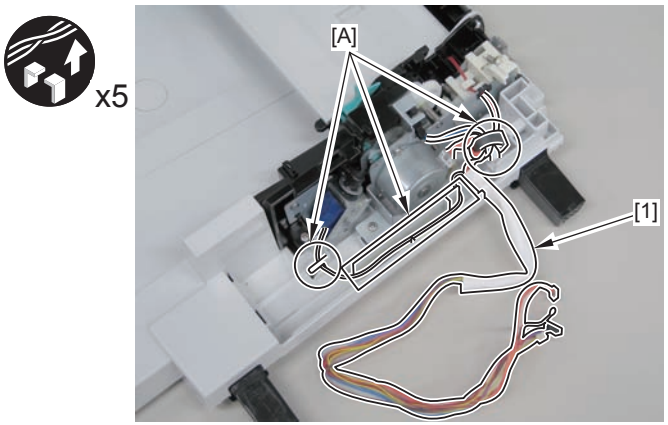
6)Remove the DADF upper cover[1].

- 2 shafts[2]



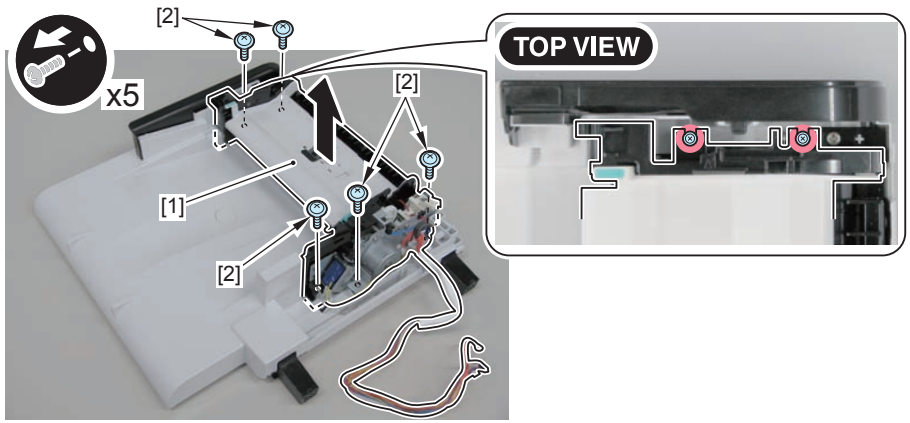
F-4-285

7)Remove the DADF unit communication cable[1] from the harness guide[A].



F-4-286

8)Remove the DADF unit.
5 screws[2]



F-4-287

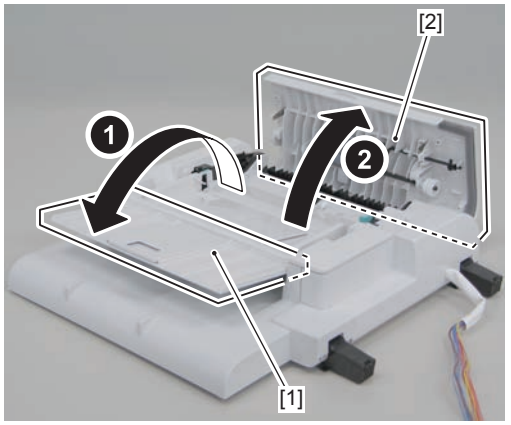
Removing the DADF Motor Unit (L418S/L410/L190)

Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.

Procedure

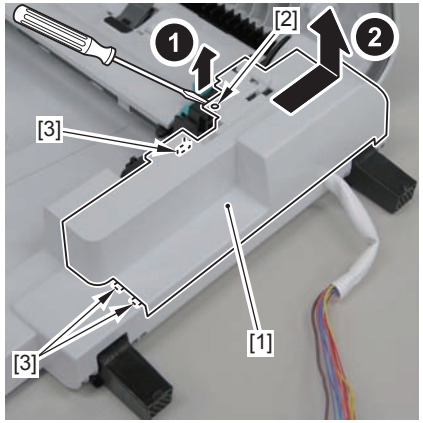
1) Open the DADF pickup tray and DADF upper cover.



F-4-288

2) Remove the DADF upper rear cover[1]

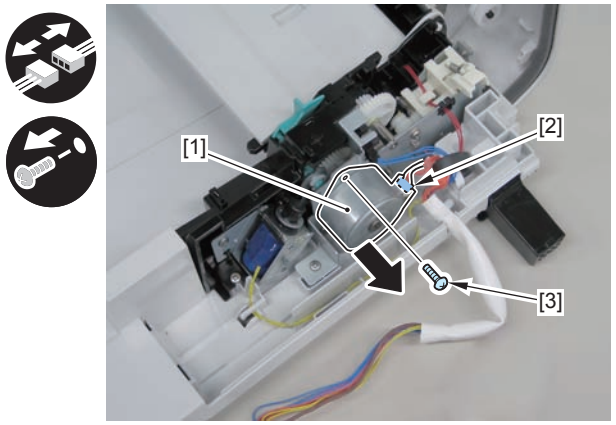
- 1 boss[2]
- 3 hooks[3]



F-4-289

3)Remove the DADF motor[1]

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



F-4-290

Removing the DADF Solenoid Unit (L418S/L410/L190)

Preparation

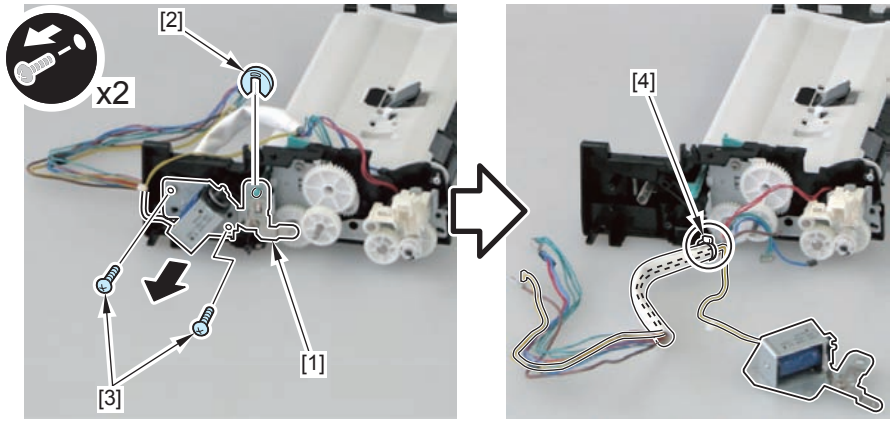
1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.
4)Remove the DADF pickup unit.
5)Remove the DADF motor unit.

Procedure

Caution:
Gently remove the DADF solenoid unit to prevent the gear phase from becoming displaced.

1) Remove the DADF solenoid unit [1].

- 1 e-ring [2]
- 2 screws [3]
- 1 harness band [4]

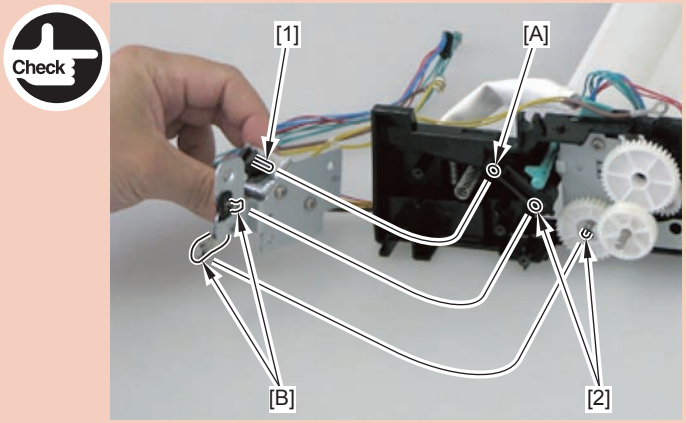


F-4-291

Caution:

When assembling the DADF solenoid unit, be sure to put the solenoid shaft [1] through the hole [A] on the solenoid arm.

When assembling the DADF solenoid unit, ensure that the 2 DADF pickup unit shafts [2] and the 2 DADF solenoid unit contact points [B] are in contact.



Removing the DADF Pickup Roller Unit (L418S/L410/L190)

Preparation

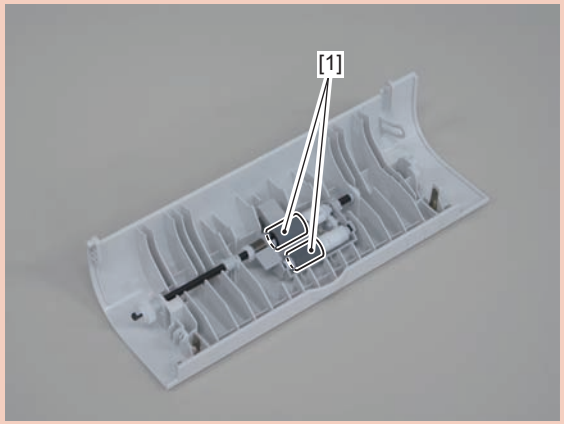
1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.
4) Remove the pickup unit.

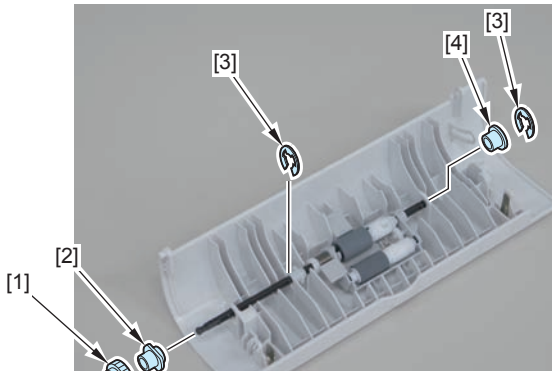
Procedure

1) Remove the gear[1],bushing[2],2 e-rings[3] and bushing[4]

Caution:

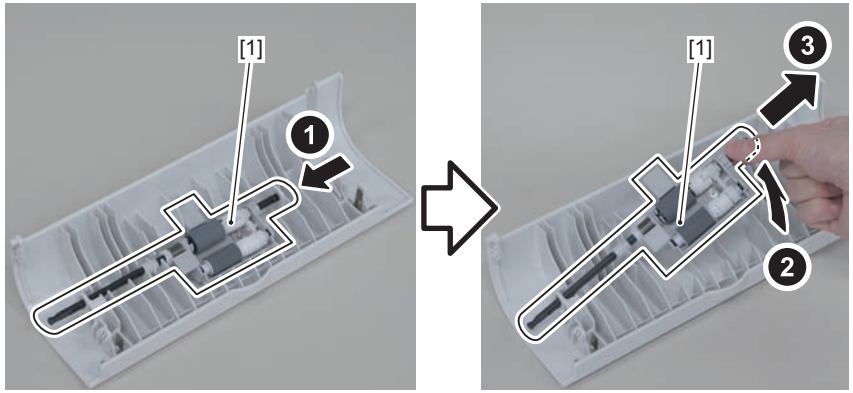
Do not touch the pickup roller surface[1]





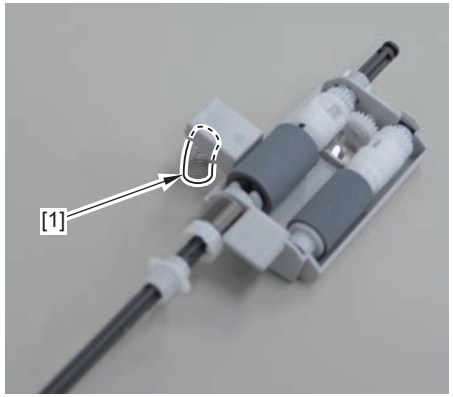
F-4-292

2)Remove the DADF pickup roller unit.



F-4-293

3)Remove the spring[1] on the back side of the pickup roller unit.

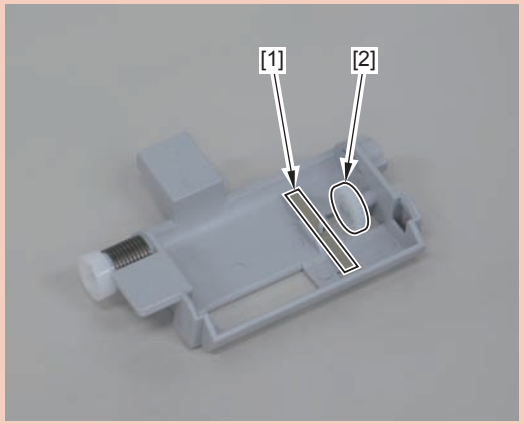


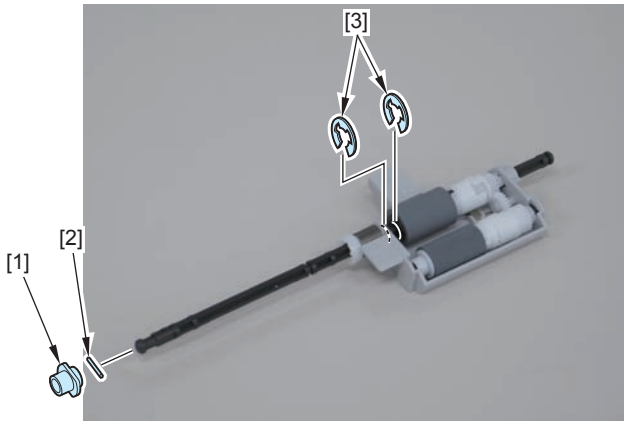
F-4-294

4)Remove the bushing[1],pin[2] and 2 e-rings[3]

Caution:

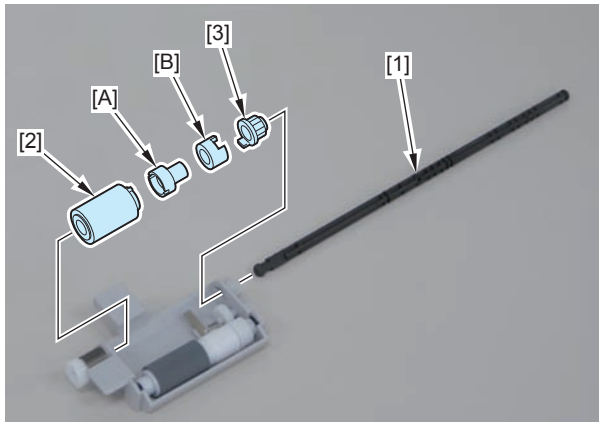
When disassembling/assembling, take care not to lose the plate spring[1] and gear[2]





F-4-295

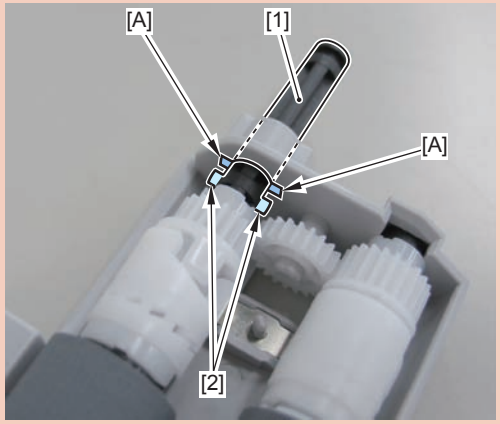
5)Pull out pickup roller shaft[1], and remove the pickup roller[2], bushing[A], bushing[B], and gear[3].



F-4-296

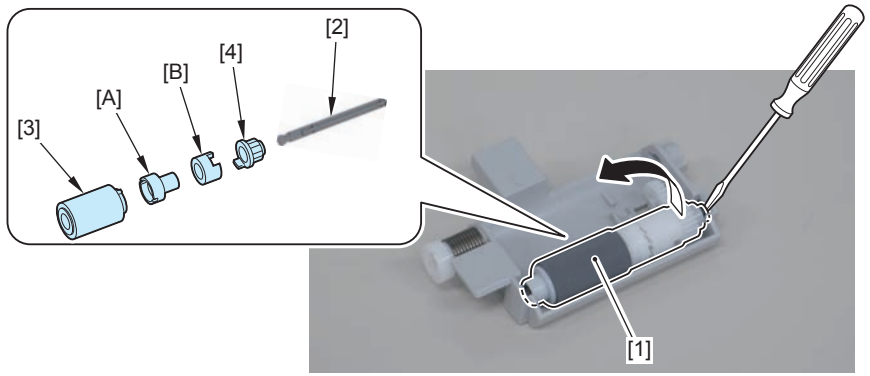
Note

When pulling out the pickup roller shaft[1], be sure to align the boss[2] of the roller shaft with the hole on the [A] part.



6)Remove the pickup roller unit[1]

- pickup roller shaft[2]
- pickup roller 2[3]
- 1 bushing[A]
- 1 bushing[B]
- 1 gear[4]



F-4-297

Removing the DADF Separation Pad (L418S/L410/L190)

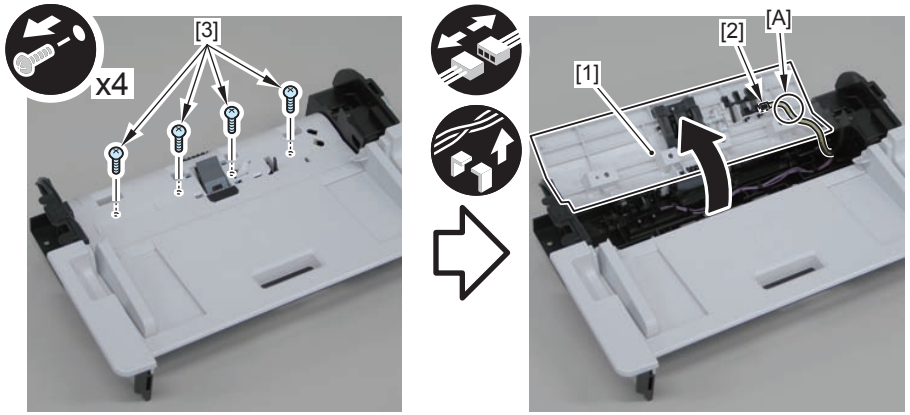
Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.
4)Remove the pickup unit.

Procedure

1)Remove the DADF pickup upper cover[1], and free the harness from the connector[2] and the harness guide[A].

- 4 screws[3]



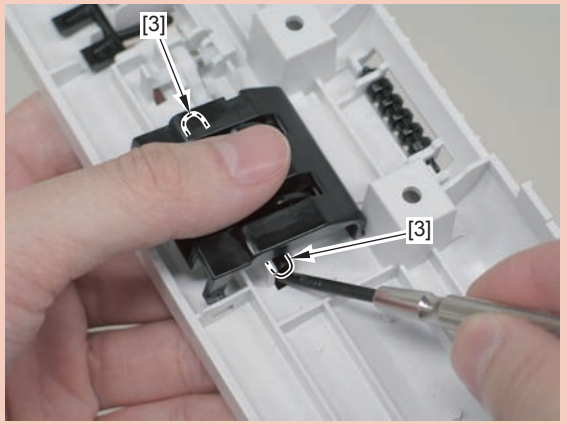
F-4-298

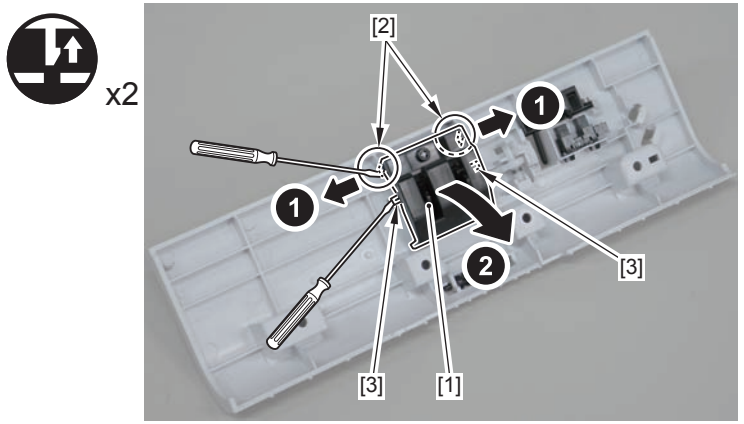
2)Remove the separation pad unit[1].

- 2 claws[2]
- 2 protrusions[3]

Caution.

Be sure to hold the separation pad unit with your fingers when releasing its 2 protrusions[3]





F-4-299

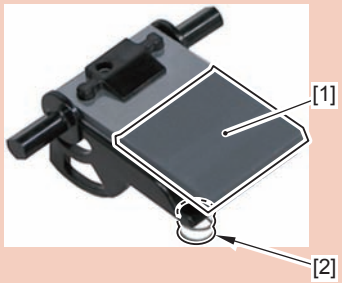
3)Remove the separation pad[1].

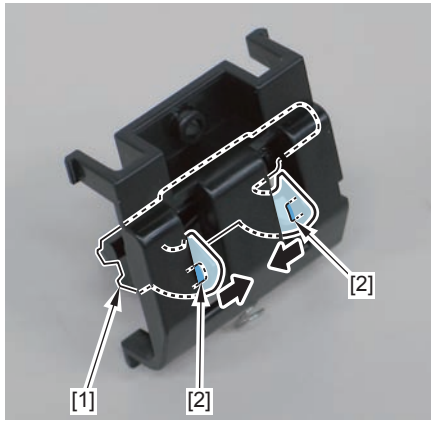
- 2 hooks[2]

Caution.

Do not touch the pad surface[1]

When disassembling/assembling, take care not to lose the spring[2] on the back side of the separation pad.



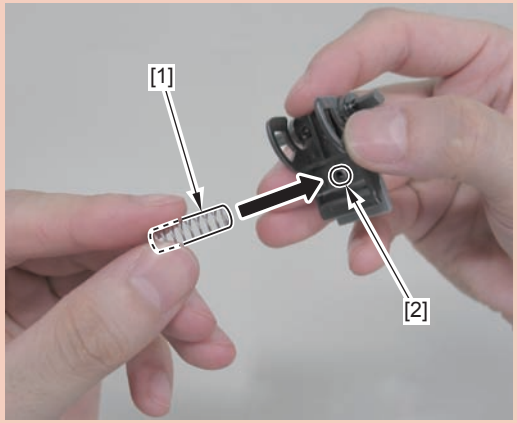


F-4-300

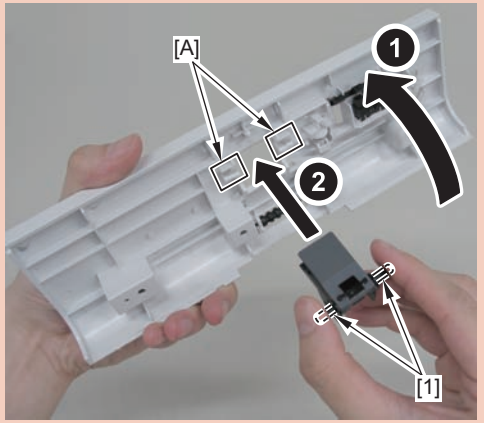
Caution.

When the spring[1] comes off, go through the following steps to install it.

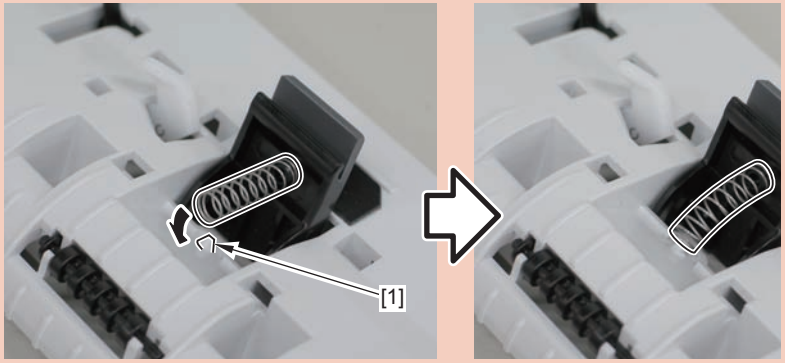
1)Install the spring[1] to the boss[2] on the back side of the separation pad.



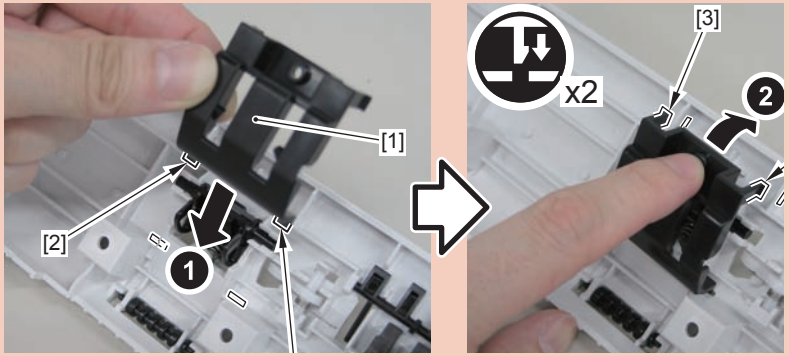
2)Install the shaft[1] of the separation pad unit to the [A] part on the back side of the DADF pickup upper cover.



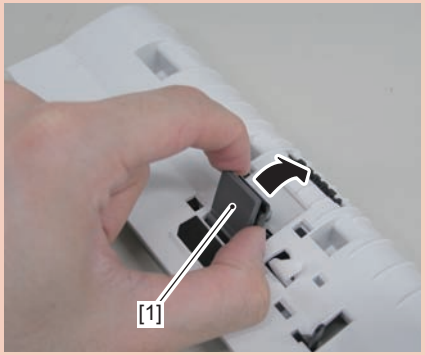
3)Install the spring to the protrusion[1] of the DADF pickup upper cover.



4)Turn the DADF pickup upper cover over to the back, and install the separation pad cover[1].



5)Turn the DADF pickup upper cover over to the front, and push in the separation pad unit[1].



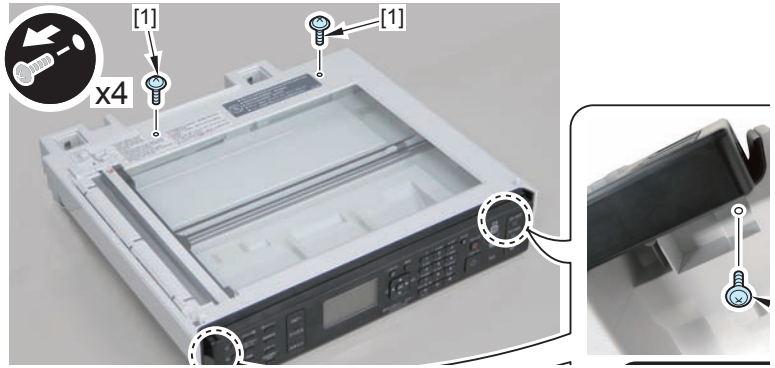
Removing the Copyboard Glass (L418S/L410/L190)

Preparation

1) Remove the left cover.
2)Remove the DADF unit and reader unit
3)Remove the DADF unit.

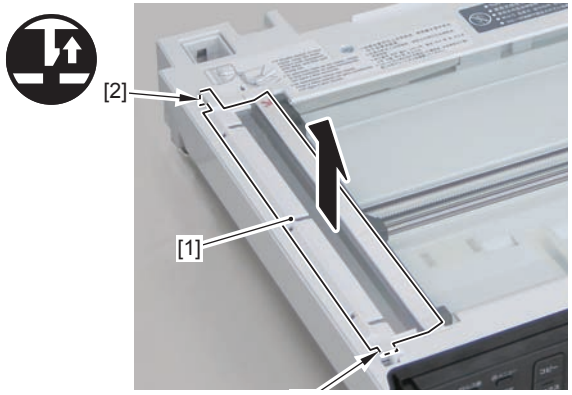
Procedure

1)Remove the 4 screws(TP)[1]



F-4-301

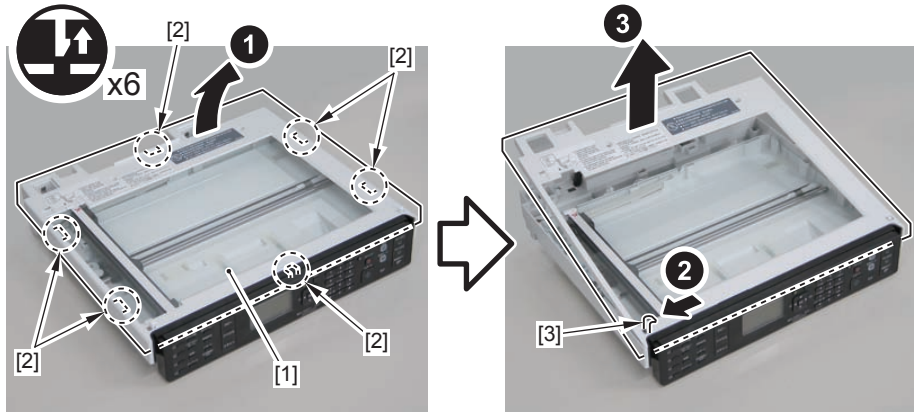
2)Remove the copyboard guide holder[1]
1 claw[2]
1 protrusions[3]



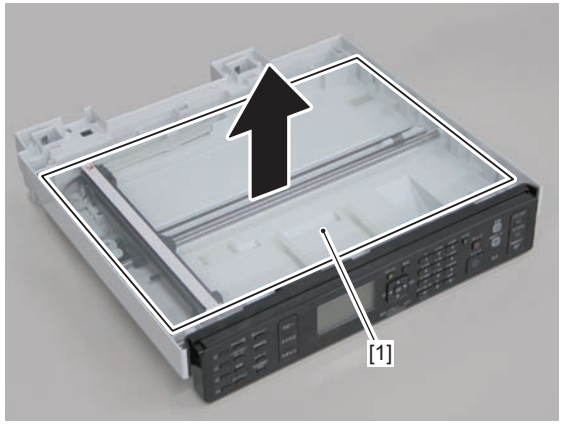
F-4-302

3)Remove the reader upper cover[1]

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



F-4-303



F-4-304

Caution.

Place the detached copyboard glass cover on a cloth etc. to avoid damaging the bottom sheet.

When removing the copyboard glass, take care not to touch the glass surface.

If the surface becomes dirty, clean it with lens-cleaning paper.

Removing the Flatbed Motor Unit (L418S/L410/L190)

Preparation

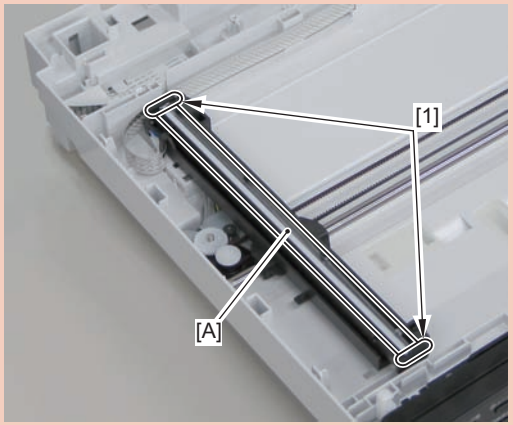
1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.
4) Remove the copyboard glass

Procedure

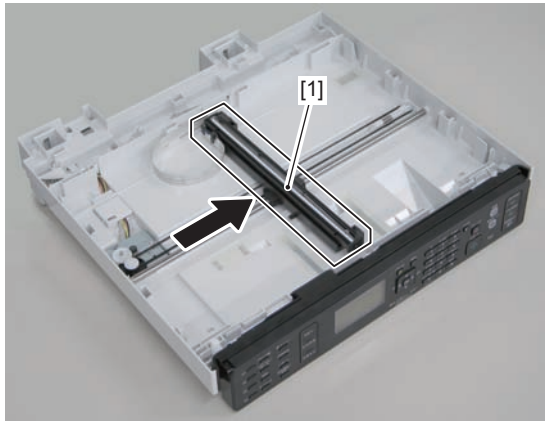
Caution.

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 [A] of the CIS unit.



1) Move the CIS unit[1].

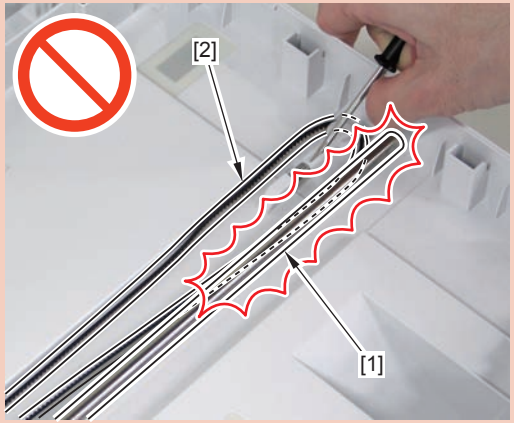


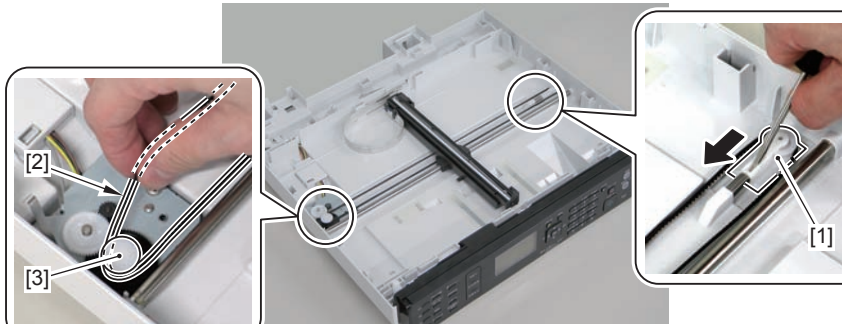
F-4-305

2) Move the gear[1], and remove the belt[2] from the gear[3]

Caution.

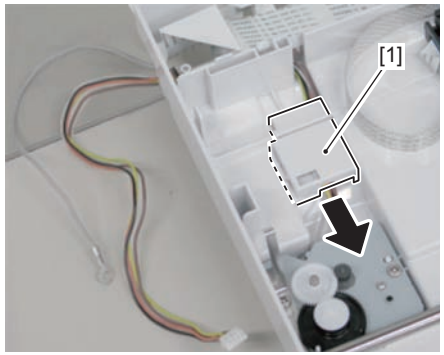
Grease is applied on the shaft[1] of the contact sensor, so be careful not to let the belt[2] come in contact with the shaft.





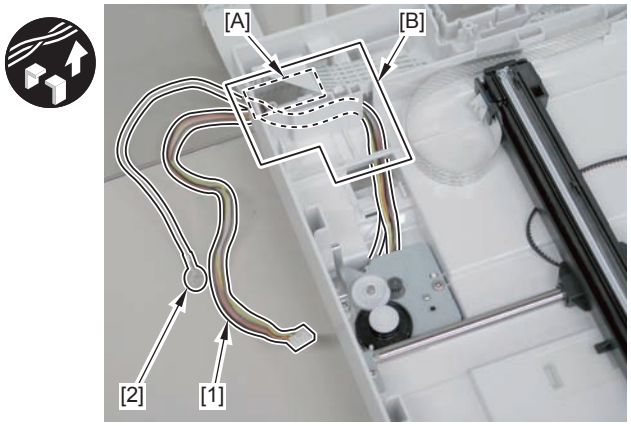
F-4-306

3)Remove the guide cover[1]



F-4-307

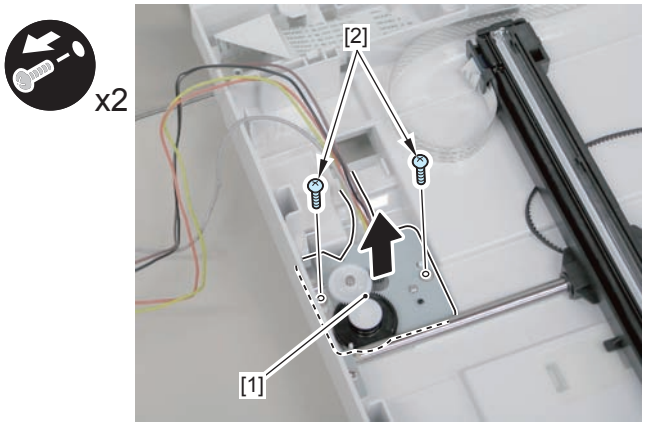
4)Free the harness[1] and the grounding wire[2] from the hole[A] of the reader unit and the harness guide[B]



F-4-308

5)Remove the flatbed motor unit[1]

- 2 screws[2]



F-4-309

Removing the DADF CIS Unit (L418S/L410/L190)

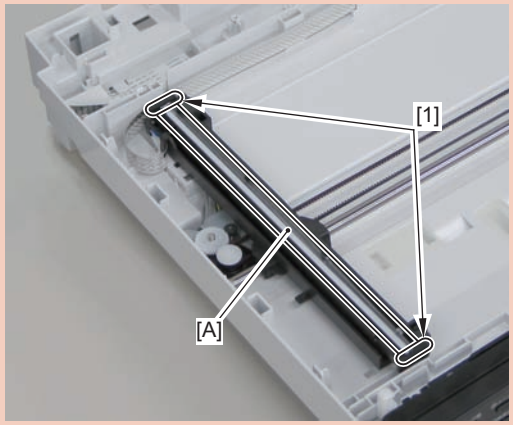
Preparation

1) Remove the left cover.
2) Remove the DADF unit and reader unit
3) Remove the DADF unit.
4) Remove the copyboard glass

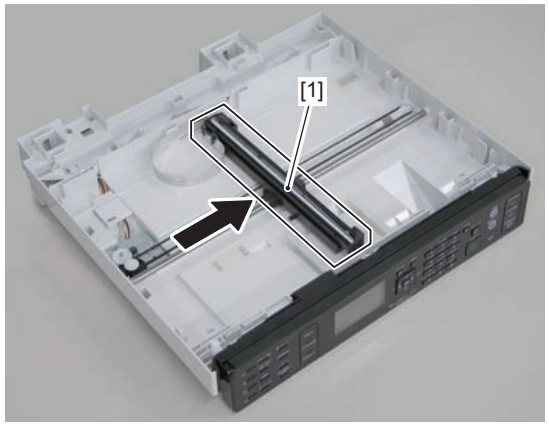
Caution.

When assembling/disassembling the CIS unit, take care not to lose the 2 CIS unit spacers [1].

When assembling/disassembling the CIS unit, do not touch the copy reading area [A] of the CIS unit.



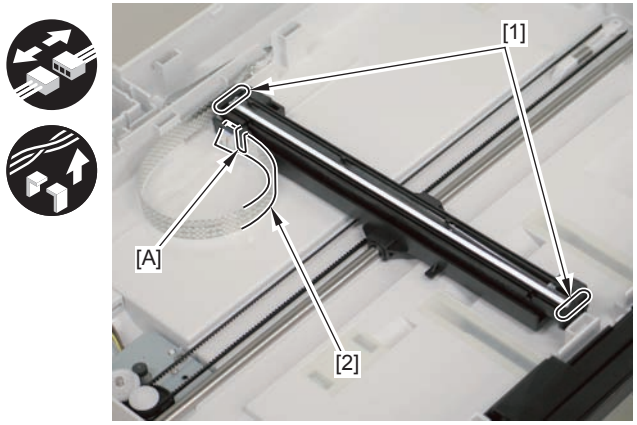
1) Move the CIS unit[1]



F-4-310

2) Remove 2 spacers[1] and flat cable[2].

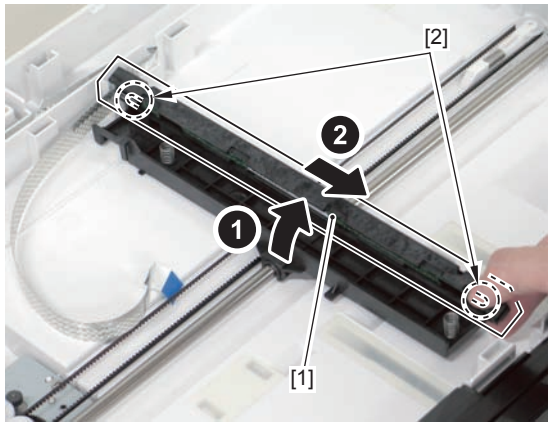
- 1 guide[A]



F-4-311

3)Remove the CIS unit[1]

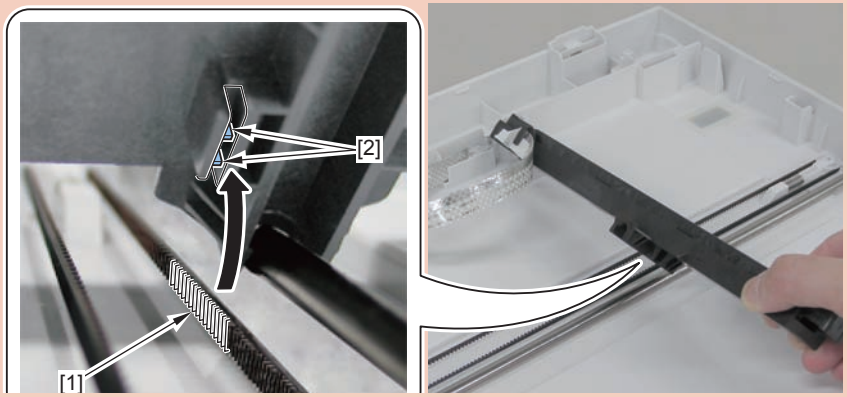
- 2 shafts[2]



F-4-312

Caution.

If the CIS unit comes off, be sure to align the tooth[1] on the belt with the tooth[2] on the bottom of the CIS unit to install the unit.



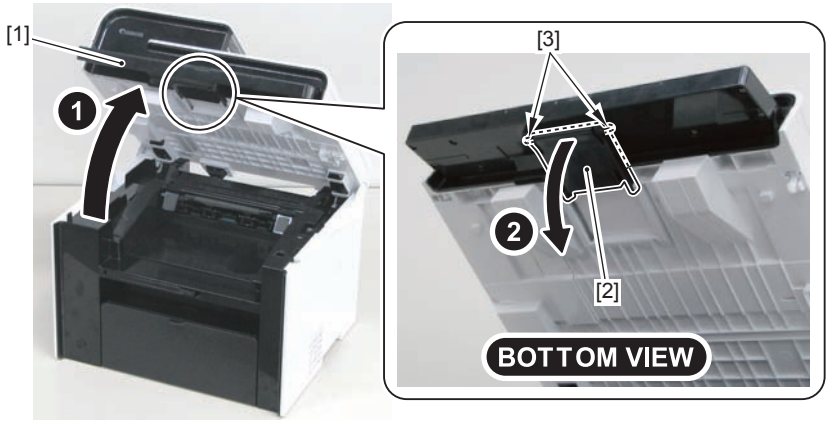
Controller System

Removing the Control Panel Unit (MF4890dw/MF4880dw)

Procedure

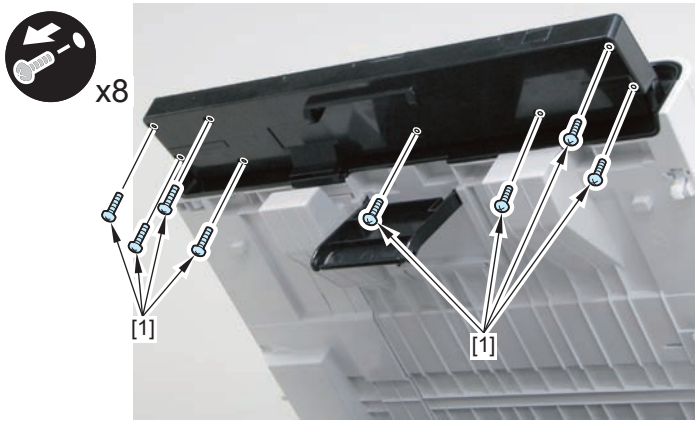
1)Open the reader unit [1] and remove the control panel support plate[2]

- 2 protrusions[3]



F-4-313

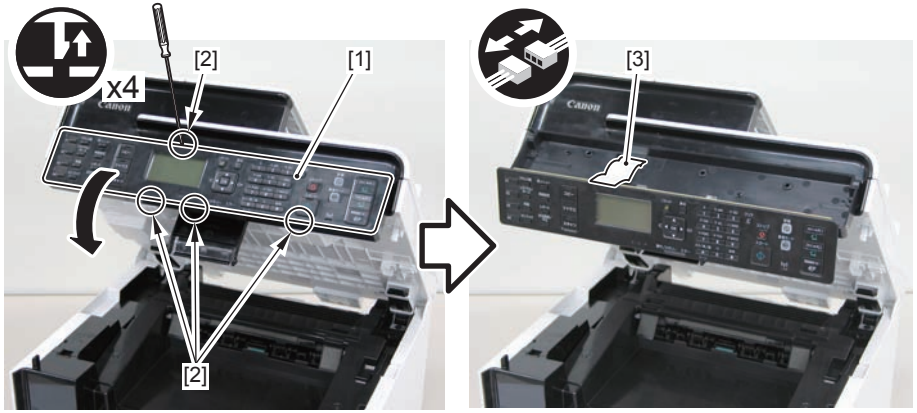
2)Remove the 8 screws[1] on the back side of the control panel unit.



F-4-314

3)Remove the control panel unit[1]

- 4 claws[2]
- 1 flat cable[3]



F-4-315

Removing the Drive Belt (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover

Procedure

1) Close the reader unit [1] and place the host machine with its left side down.

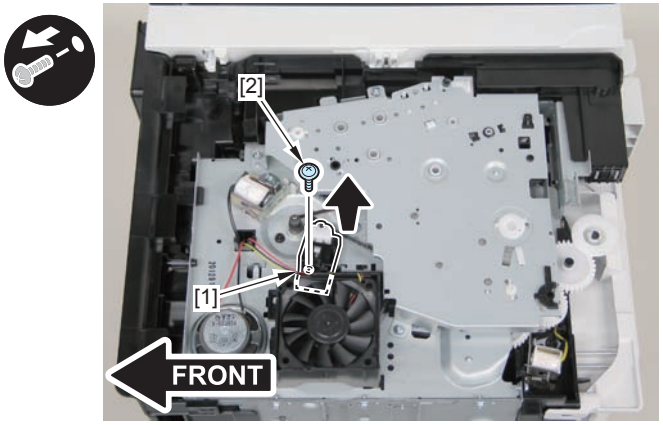
Caution:

Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.

F-4-316

2) Remove the tension unit[1].

- 1 screw[2]

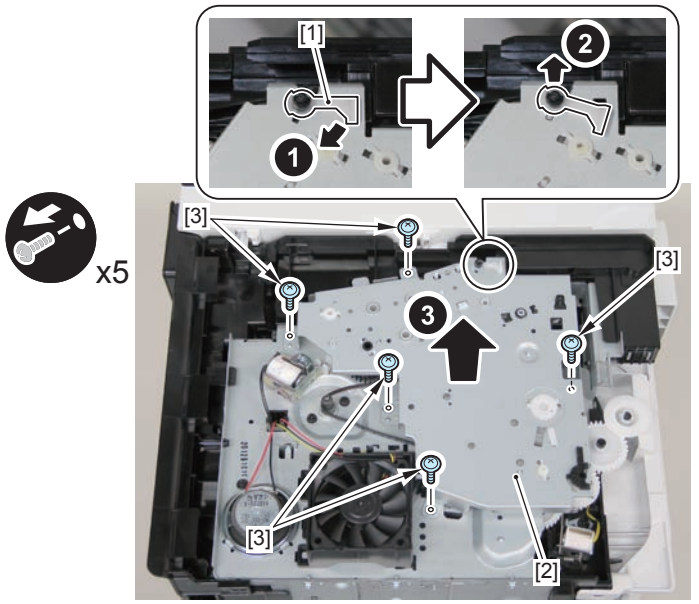


3) Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

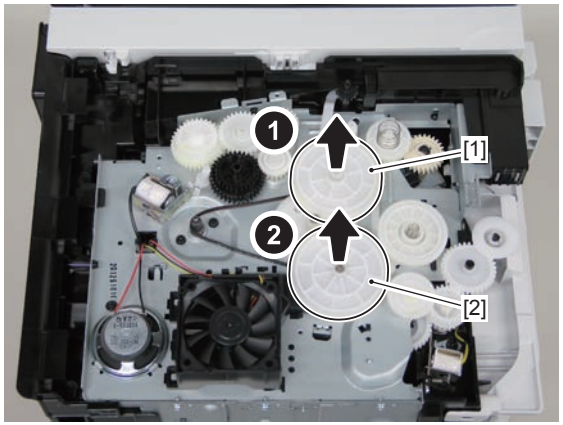
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



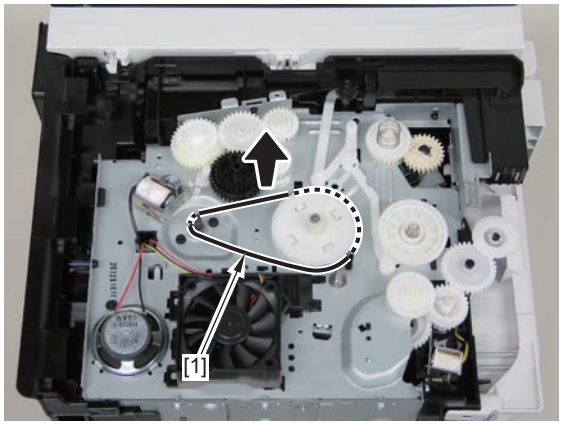
F-4-317

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-318

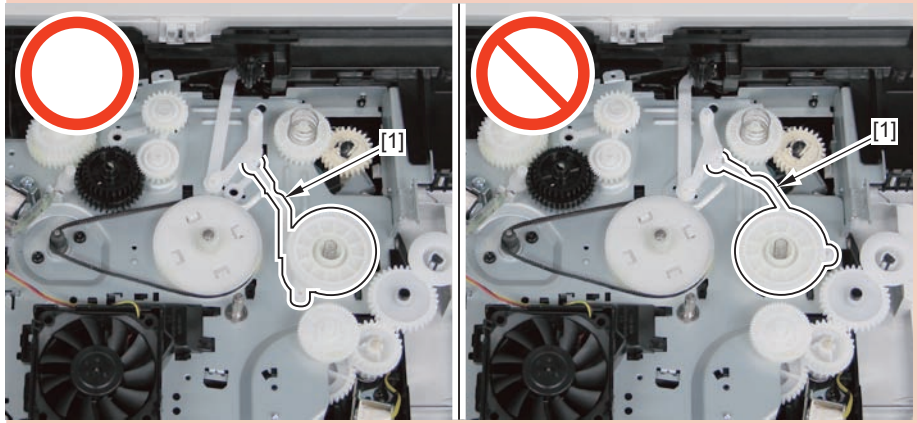
5)Remove the drive belt.



F-4-319

Caution:

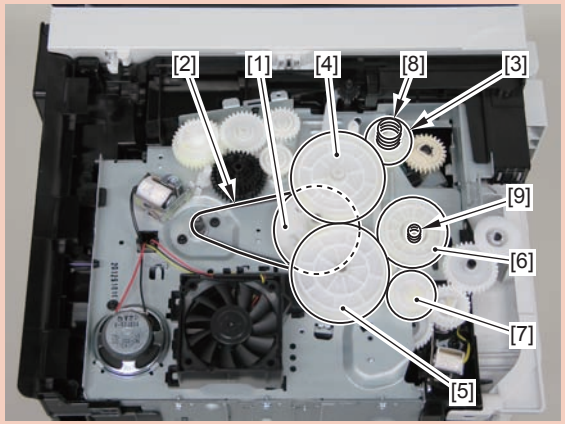
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-320

Caution:

Assemble the drive gear in the order shown in the below picture.

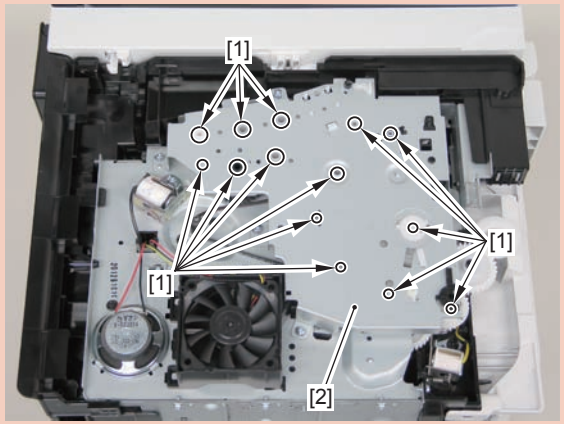


F-4-321

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-322

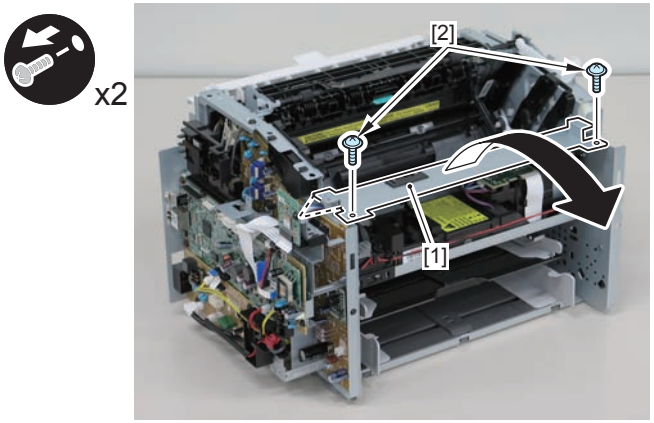
Removing the Main Motor (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

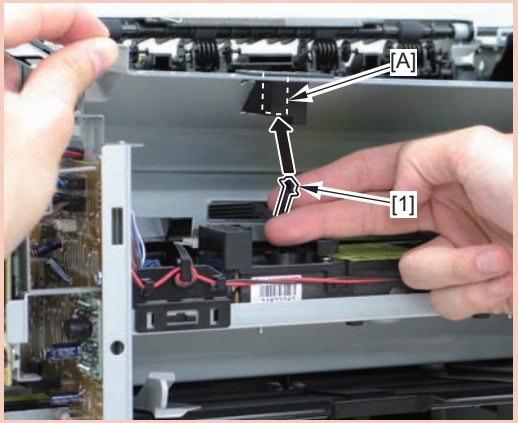
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-323

Caution:

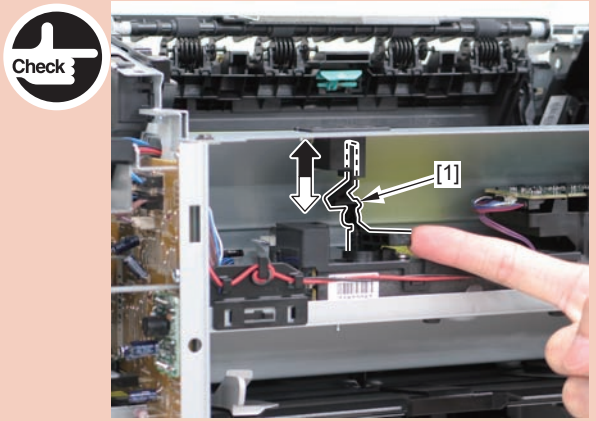
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-324

Caution:

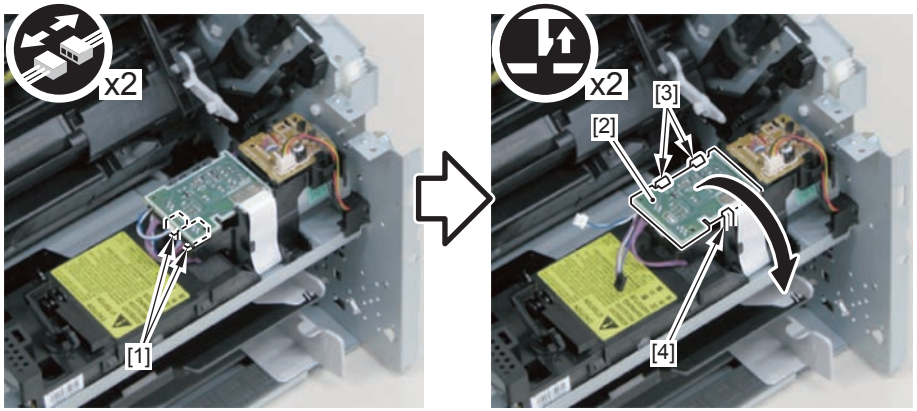
Ensure that the shutter open/close lever [1] can move vertically.



F-4-325

2)Disconnect the connectors[1], and remove the motor driver PCB[2]

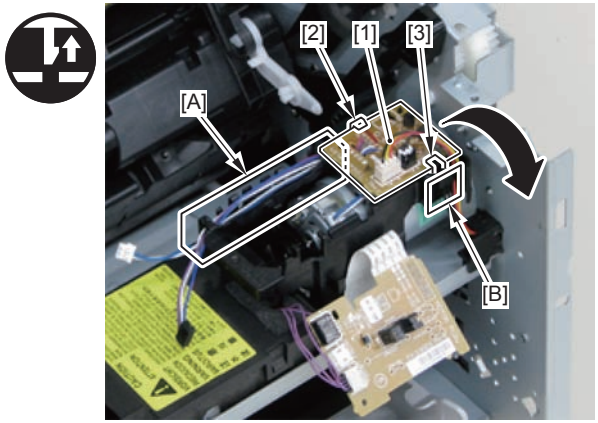
- 2 claws[3]
- 1 hook[4]



F-4-326

3)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]

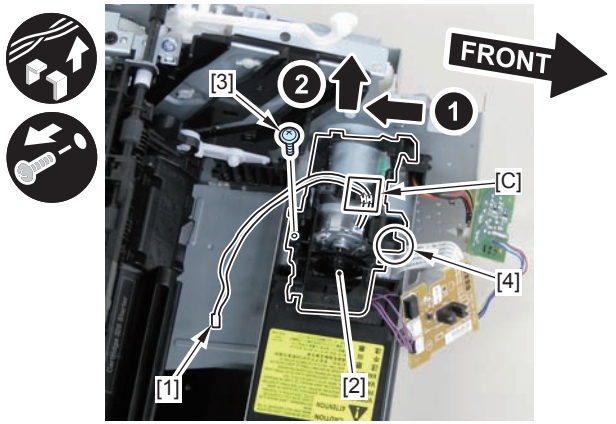


F-4-327

4)Free the motor harness[1] from the harness guide[C].

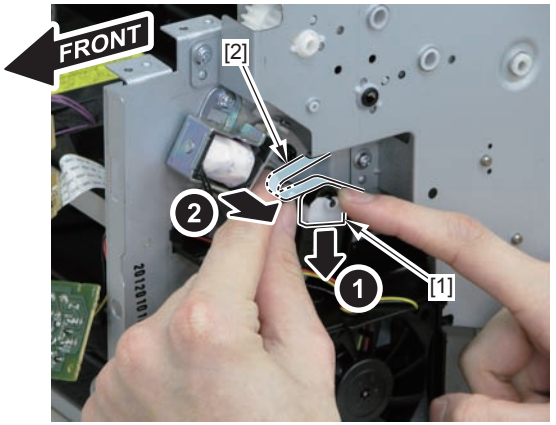
5)Remove the motor guide[2]

- 1 screw[3]
- 1 hook[4]



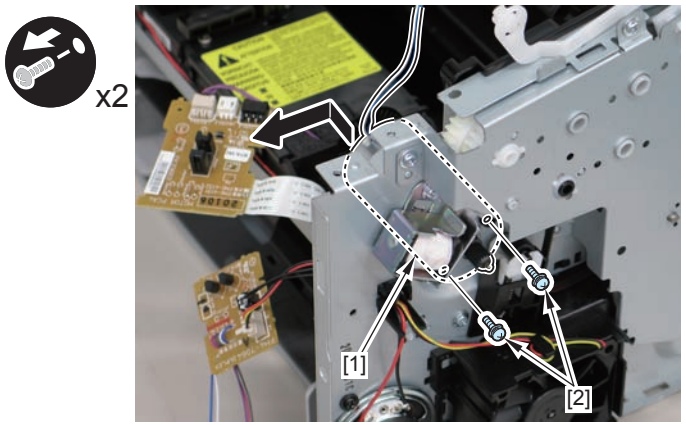
F-4-328

6)Lower the tension unit[1], and remove the belt[2].



F-4-329

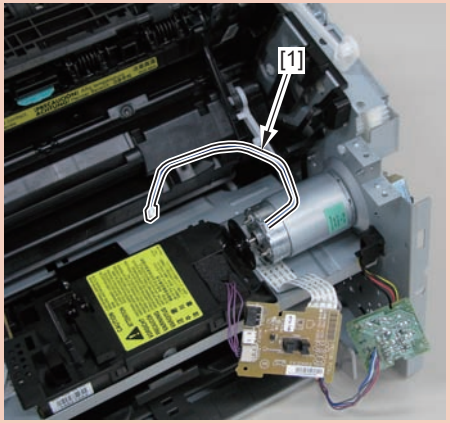
7)Remove the main motor[1]
2 screws(with washer)[2]



F-4-330

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



F-4-331

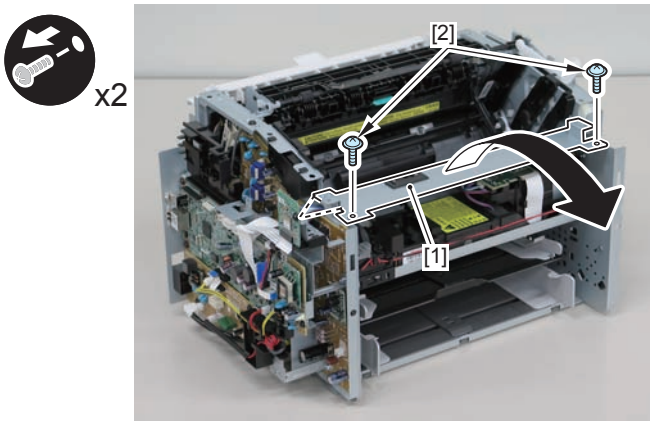
Removing the Main Fan (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2)Remove the DADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.

Procedure

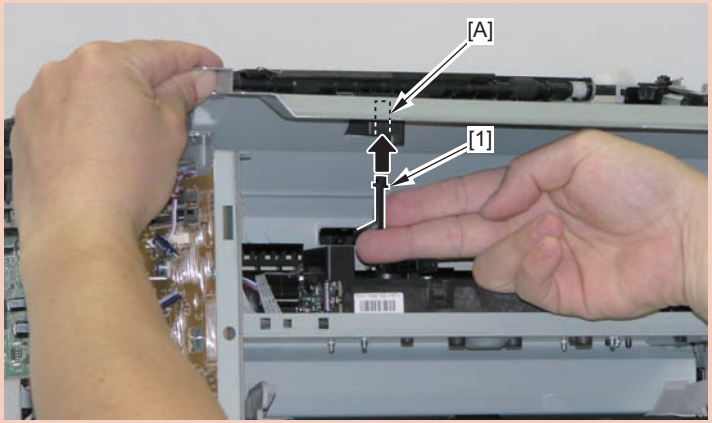
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-332

Caution:

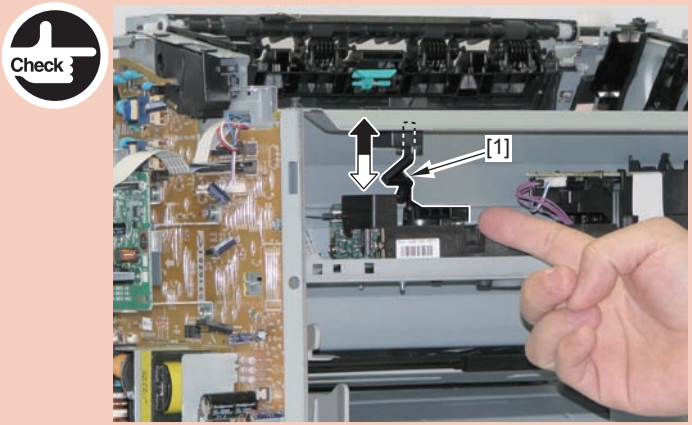
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-333

Caution:

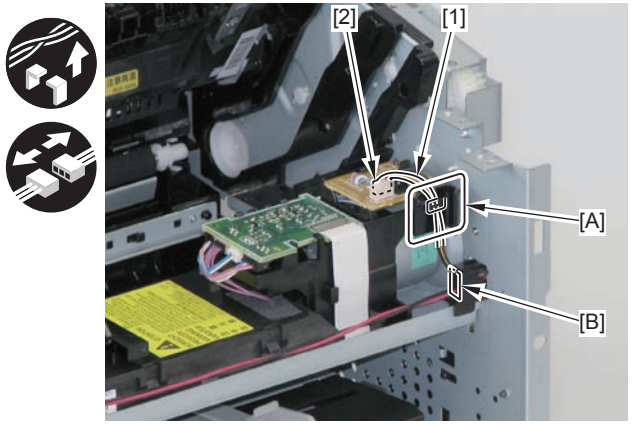
Ensure that the shutter open/close lever [1] can move vertically.



F-4-334

2)Free the fan harness[1] from the harness guide[A], and put it through the hole[B] of the right side plate to the outside.

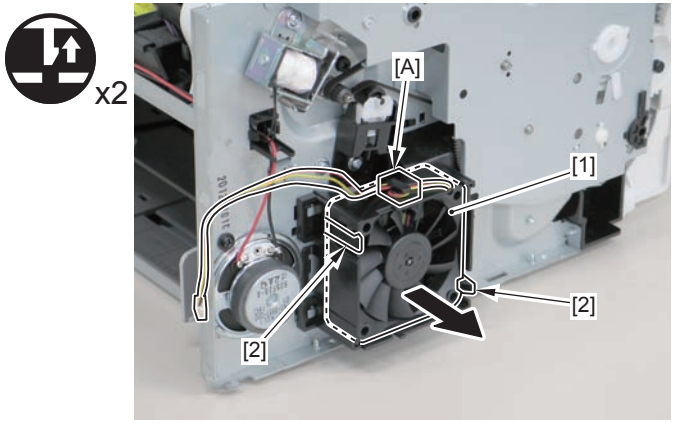
- 1 connector[2]



F-4-335

3)Free the harness from the guide[A], and remove the main fan[1].

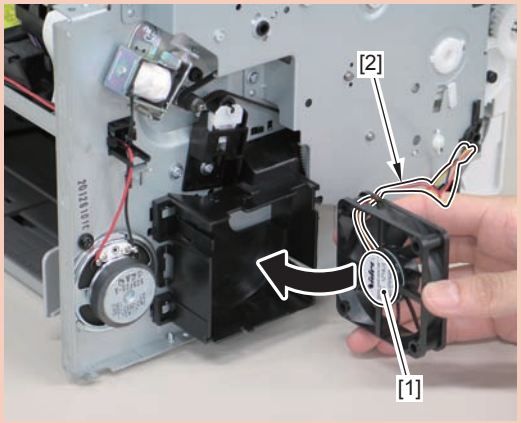
- 2 claws[2]



F-4-336

Caution:

When mounting the main fan, attach the harness [2] to the upper-right side of the fan with the fan label [1] facing inwards.



F-4-337

Removing the Engine Controller PCB(MF4890dw/MF4880dw)

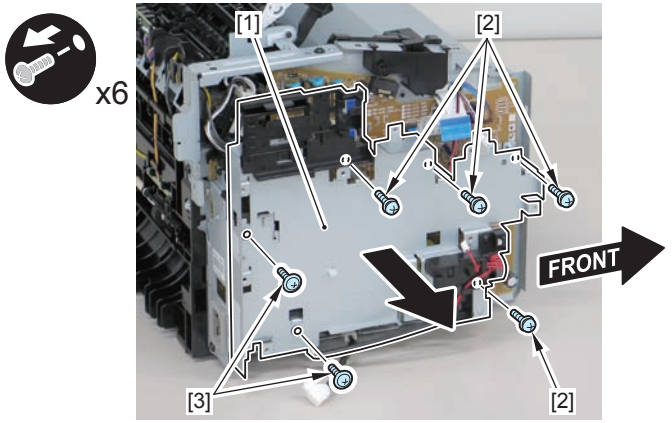
Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB
8) Remove the FAX NCU PCB
9) Remove the wireless LAN PCB.

Procedure

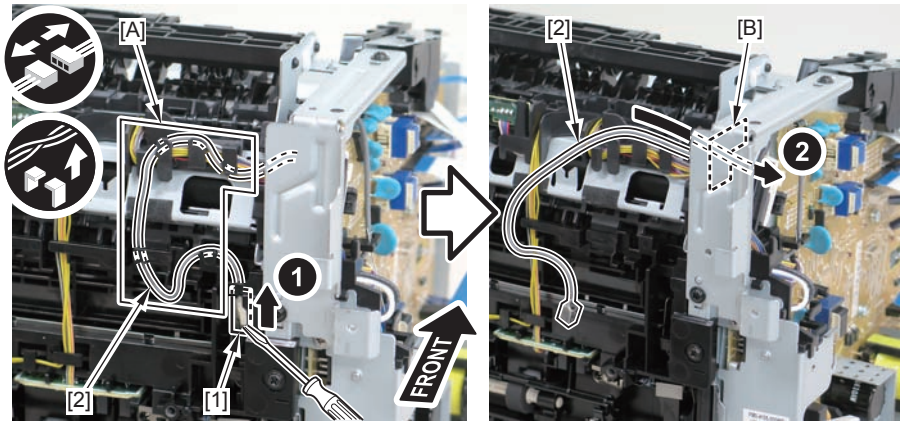
1) Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-338

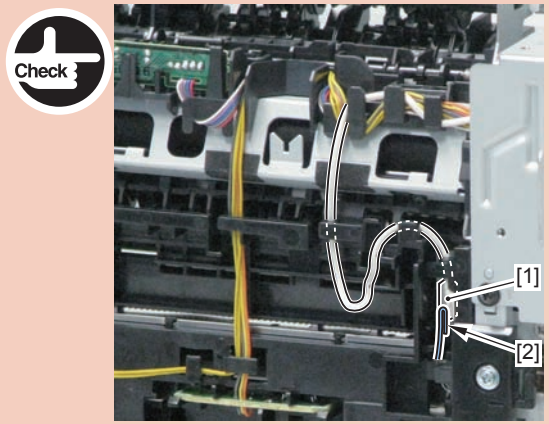
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-339

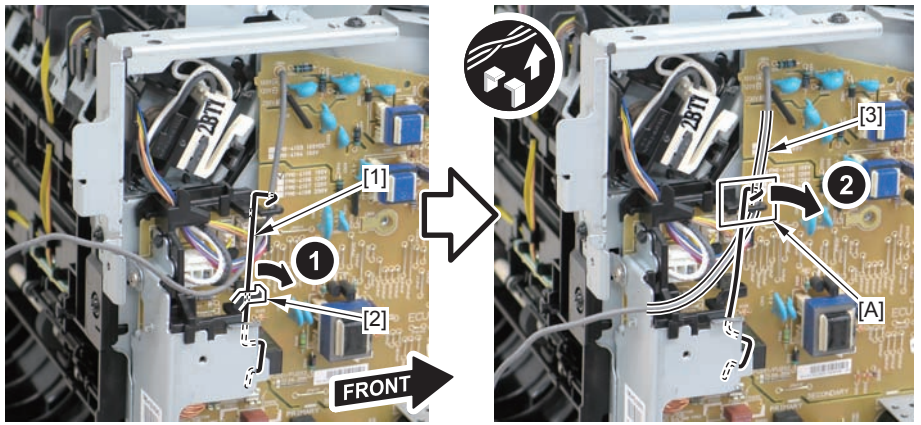
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-340

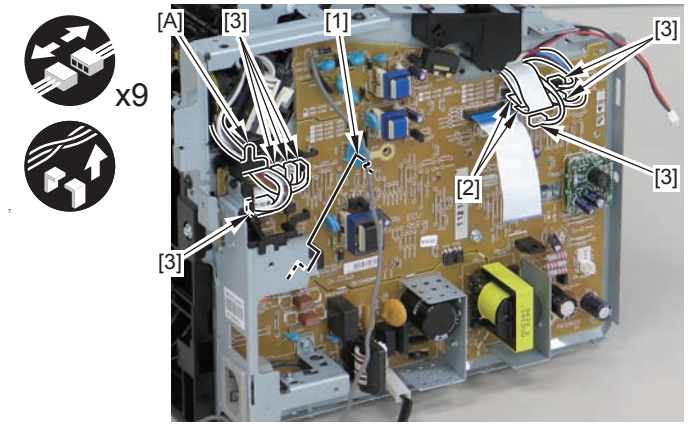
3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-341

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

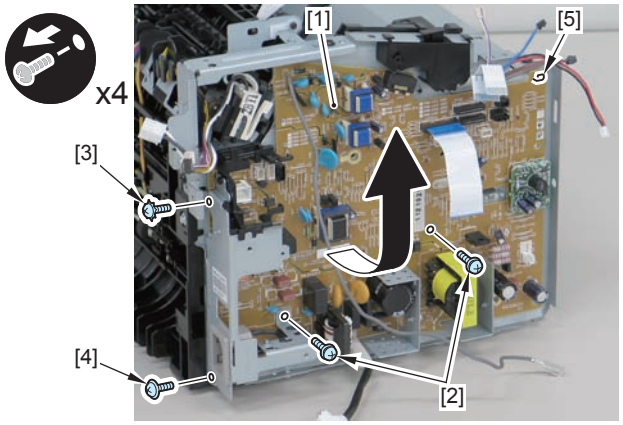
- 2 flat cables[2]



F-4-342

5)Remove the engine controller PCB[1].

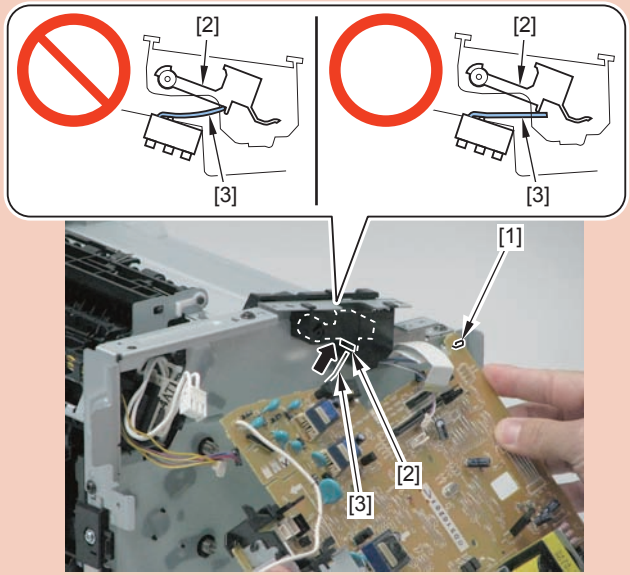
- 2 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-343

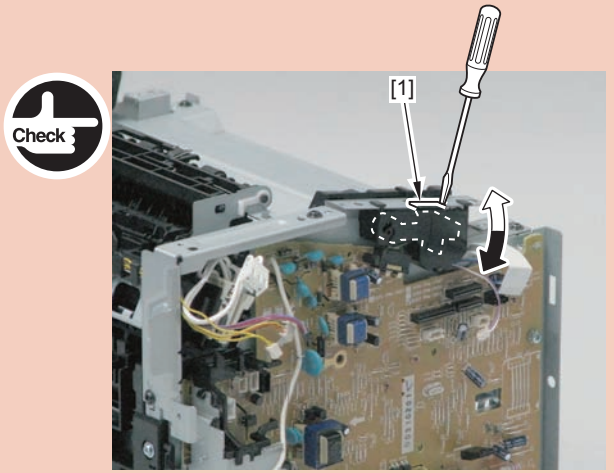
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-344

Ensure that the switch arm [1] can move vertically.



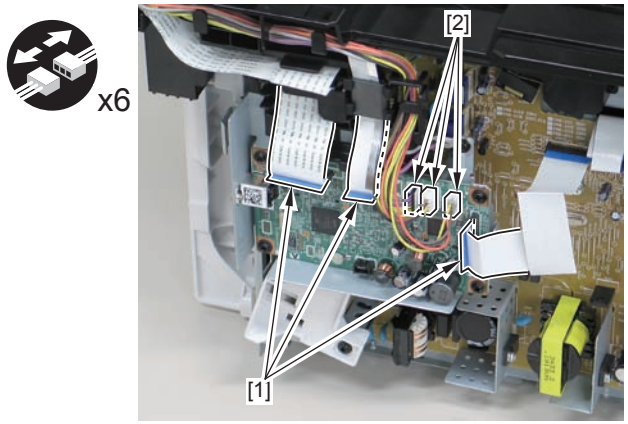
Removing the Main Controller PCB(MF4890dw/MF4880dw)

Preparation

1) Remove the left cover

Procedure

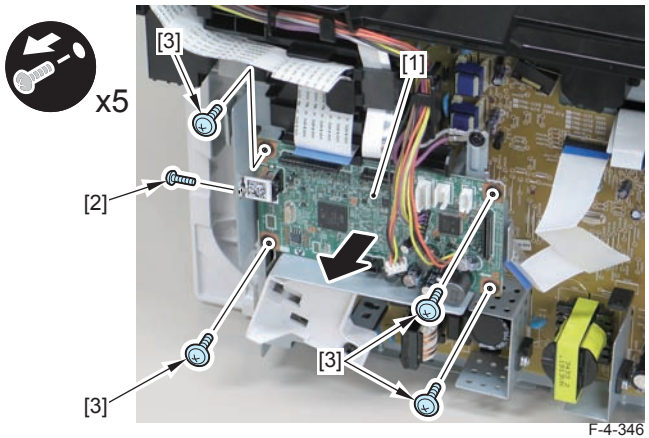
1)Remove the 3 flat cables[1] and 3 connectors[2].



F-4-345

2)Remove the main controller PCB[1].

- 1 screw(bind)[2]
- 4 screws(black TP)[3]



F-4-346

Removing the FAX NCU PCB(MF4890dw/MF4880dw)

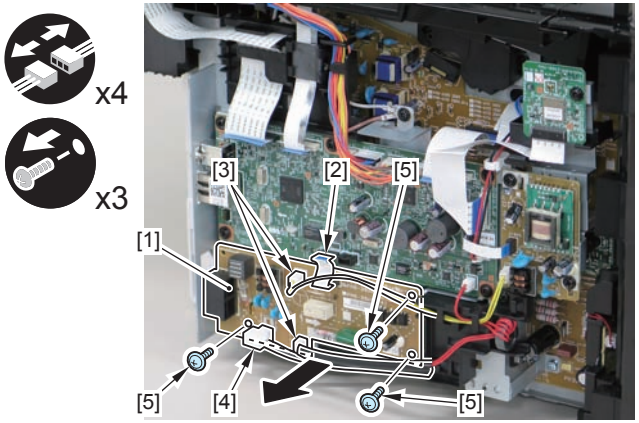
Preparation

1) Remove the left cover

Procedure

1)Remove the FAX NCU PCB[1]

- 1 flat cable[2]
- 2 connectors[3]
- 1 protrusion[4]
- 3 screws[5]



F-4-347

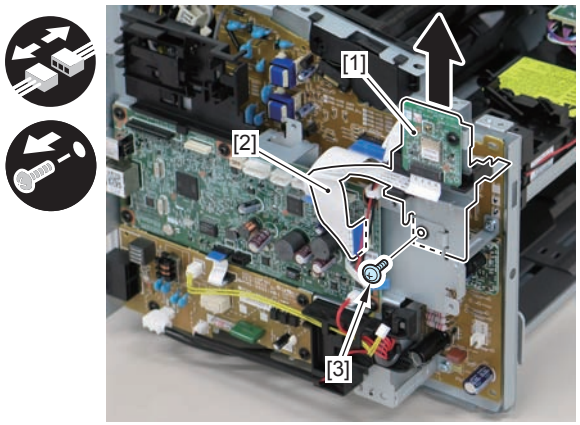
Removing the Wireless LAN PCB(MF4890dw/MF4880dw)

Preparation

1) Remove the left cover

Procedure

1)Remove the wireless LAN PCB.
- 1 flat cable[2]
- 1 screw[3]



F-4-348

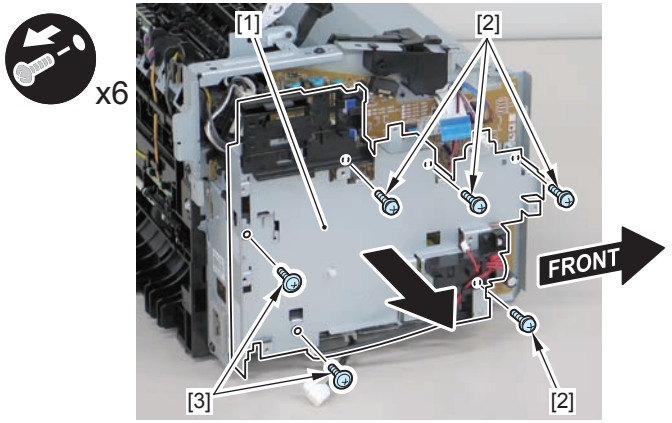
Removing the Paper Leading Edge Sensor PCB(MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2)Remove the DADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB
8)Remove the FAX NCU PCB.
9)Remove the wireless LAN PCB.

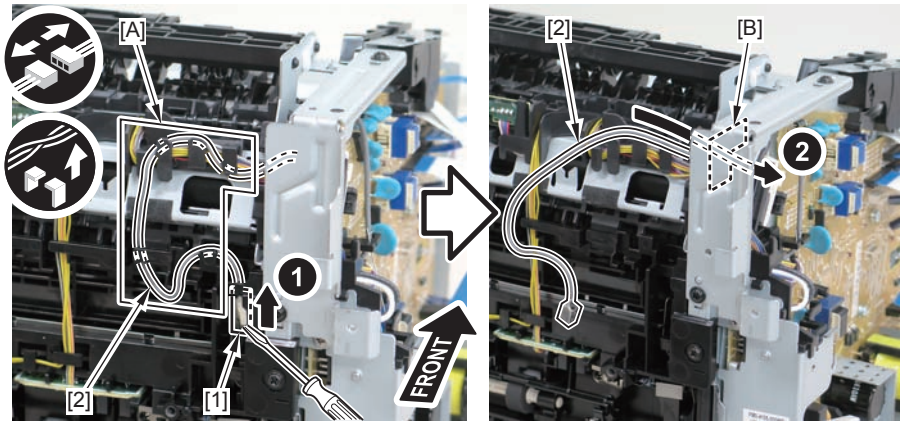
Procedure

1)Remove the main controller mounting plate[1]
- 4 screws(with washers)[2]
- 2 screws(black TP)[3]



F-4-349

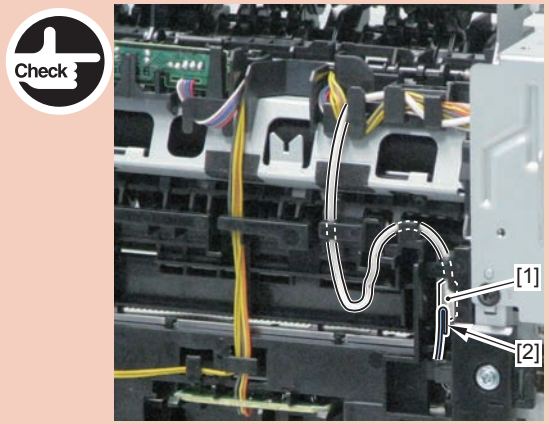
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-350

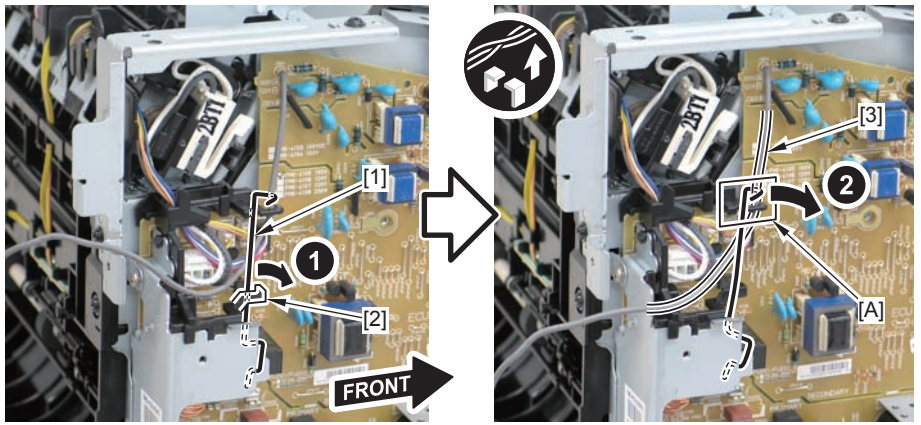
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



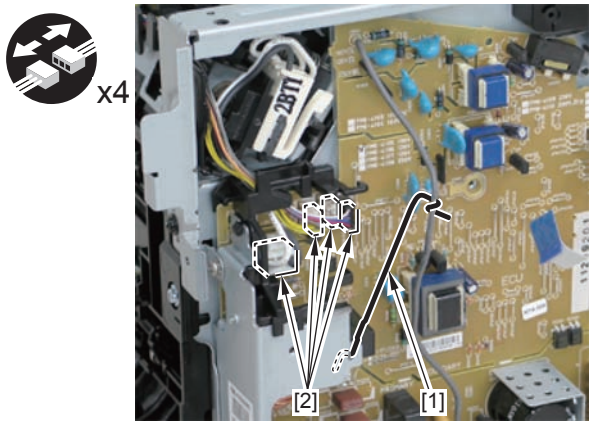
F-4-351

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



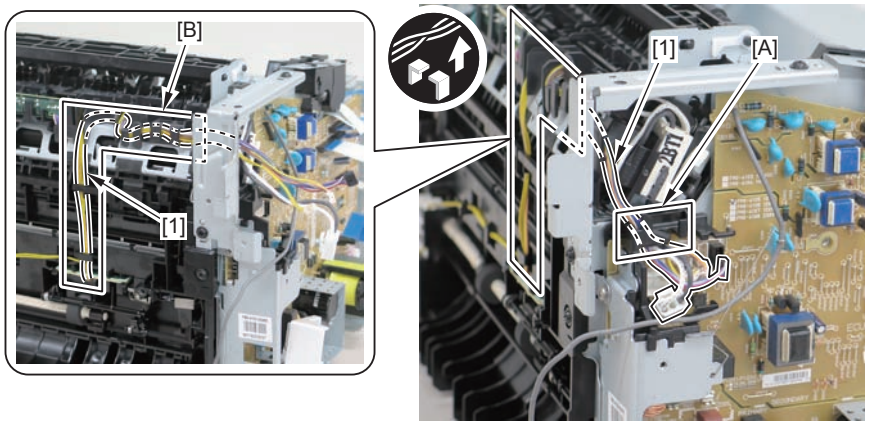
F-4-352

4) Remove the harness retaining spring [1] and 4 connectors [2].



F-4-353

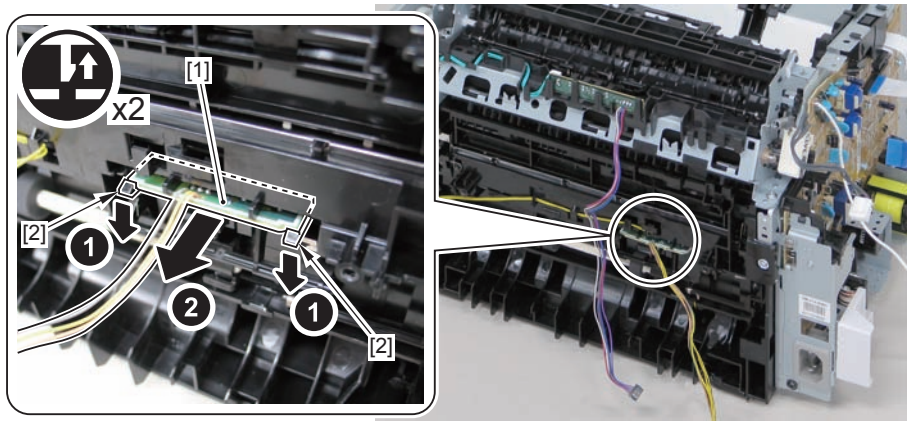
5)Remove the harness[1] from the guide[A] and [B].



F-4-354

6)Remove the paper leading edge sensor PCB[1]

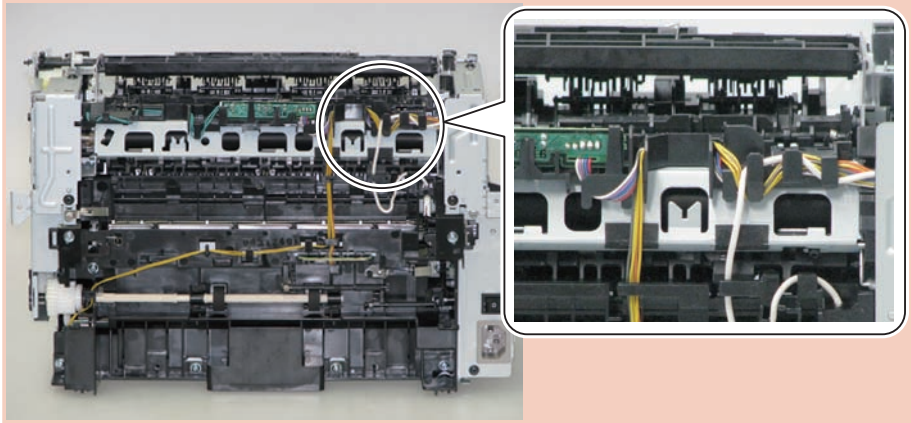
- 2 claws[2]



F-4-355

Note:

The below picture shows how to wind the harness.



F-4-356

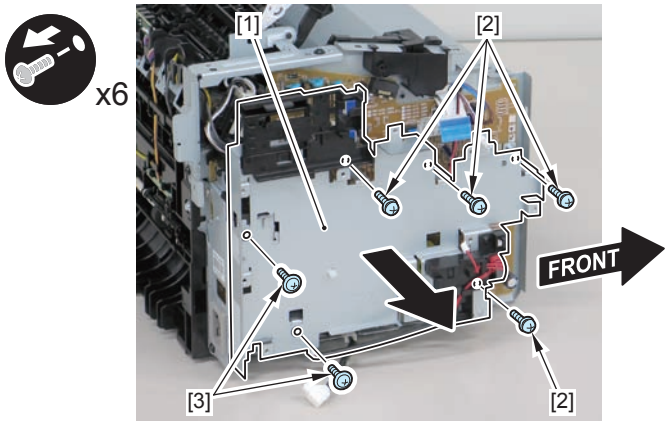
Removing the Fixing Delivery/Paper Width Sensor PCB(MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

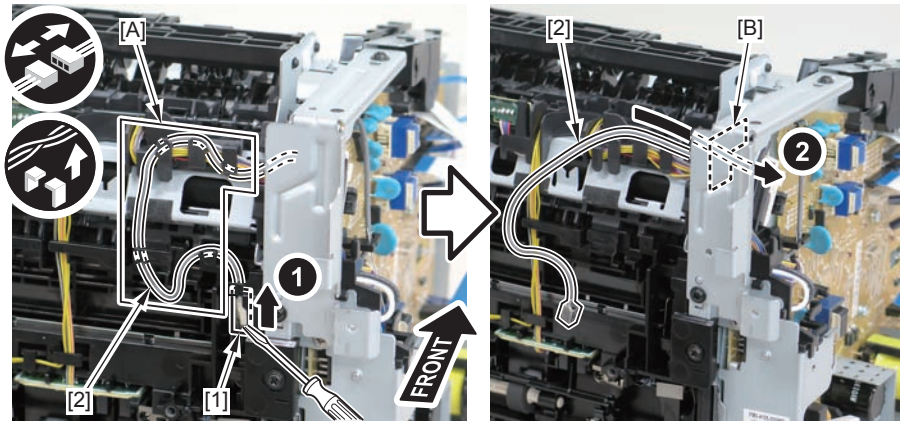
Procedure

1) Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-357

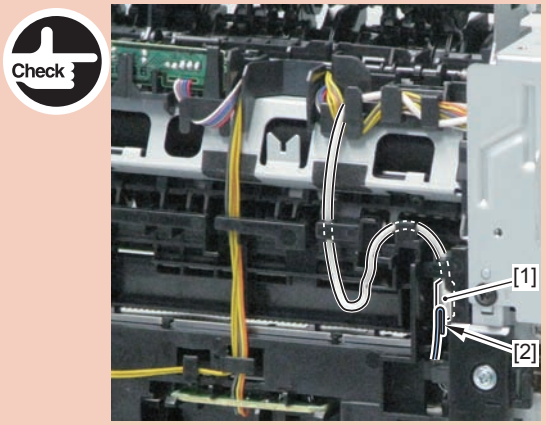
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-358

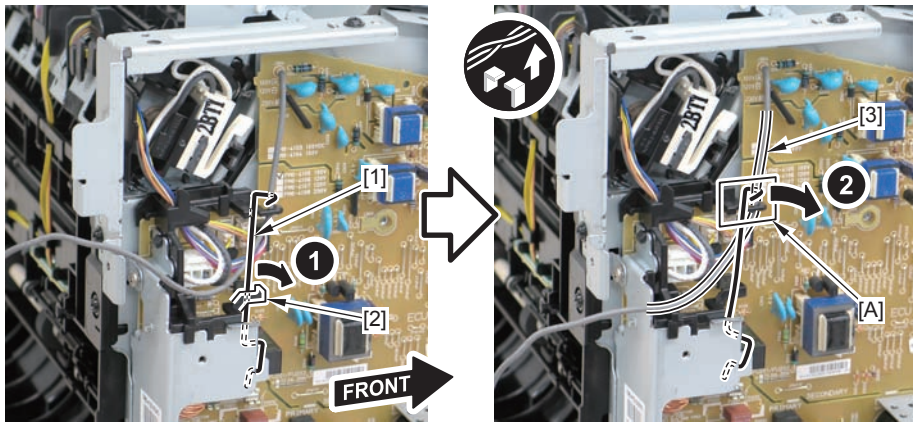
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



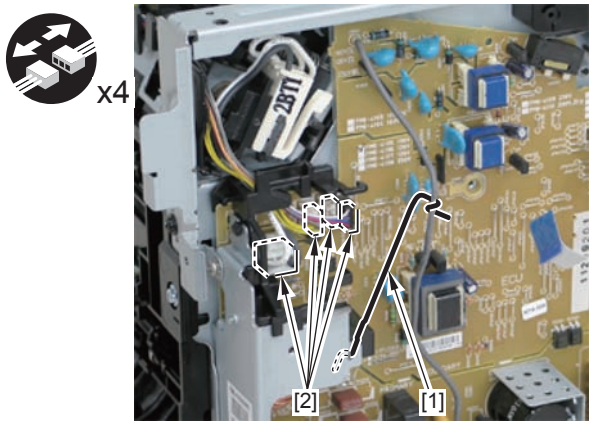
F-4-359

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



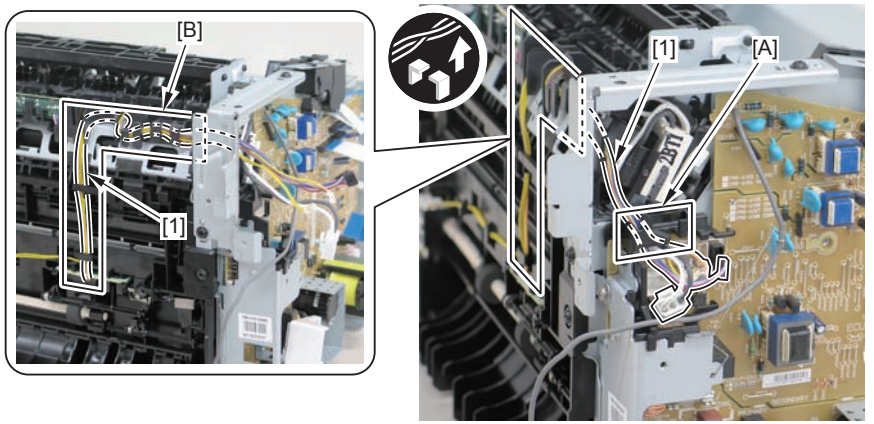
F-4-360

4) Remove the harness retaining spring [1] and 4 connectors [2].



F-4-361

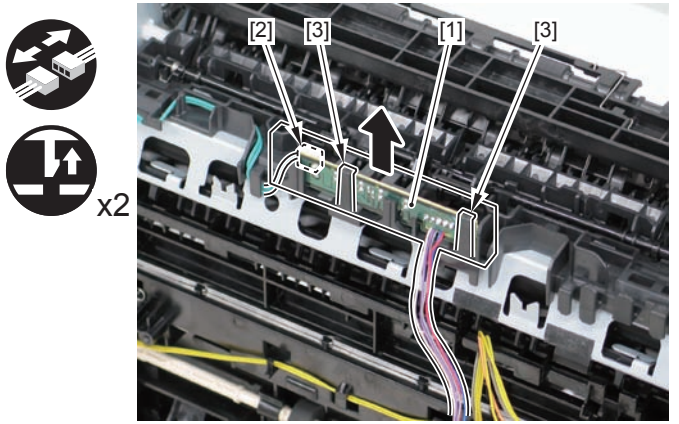
5)Remove the harness[1] from the guide[A] and [B].



F-4-362

6)Remove the fixing delivery/paper width sensor PCB[1]

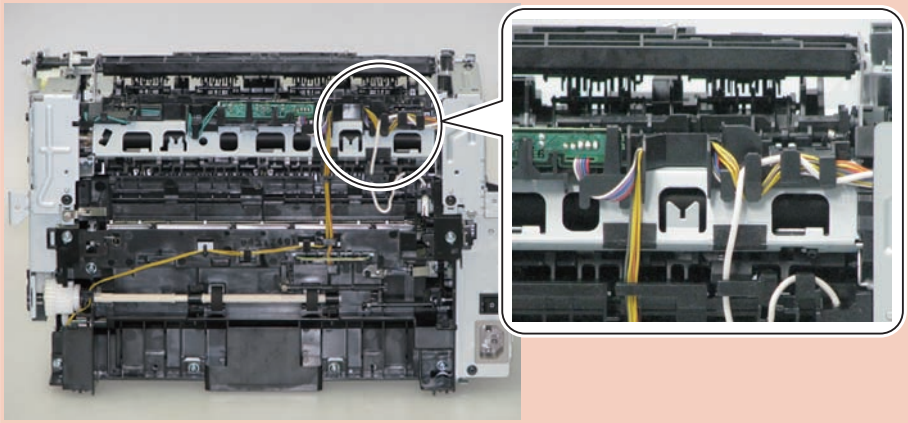
- 1 connector
- 2 claws[3]



F-4-363

Note:

The below picture shows how to wind the harness.



F-4-364

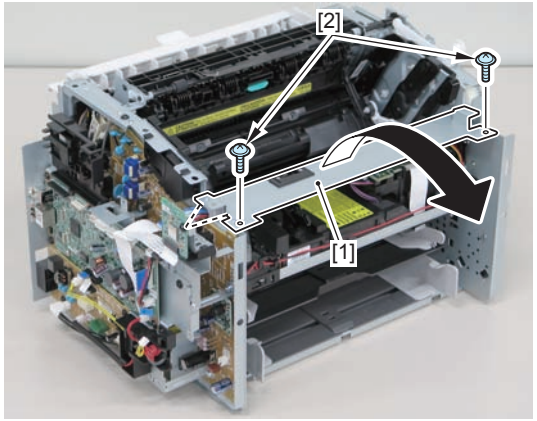
Removing the Toner Sensor and Multi Pickup Sensor Unit (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the wireless LAN PCB.

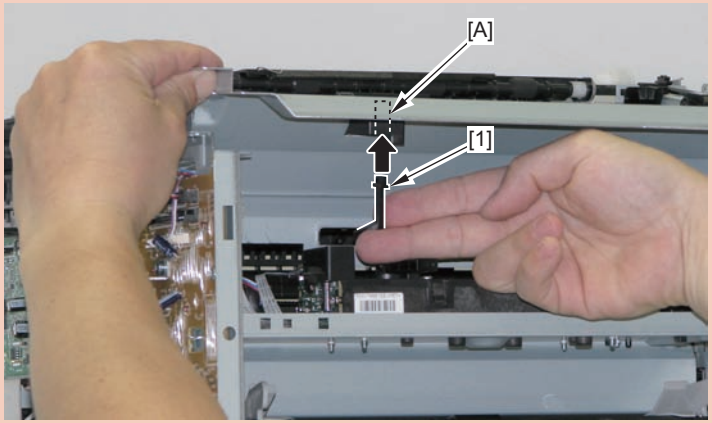
Procedure

1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



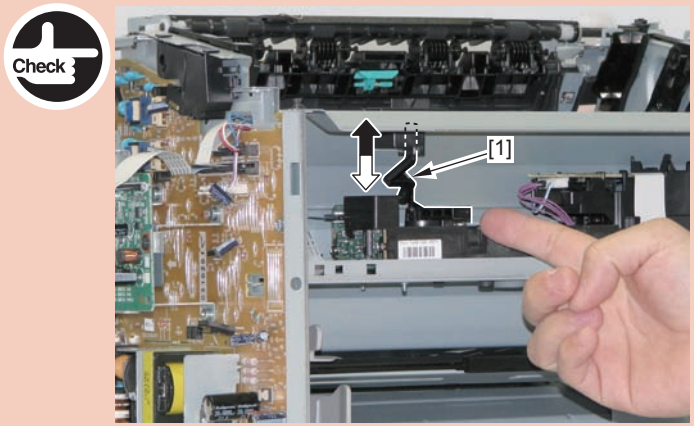
F-4-365

Caution:
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



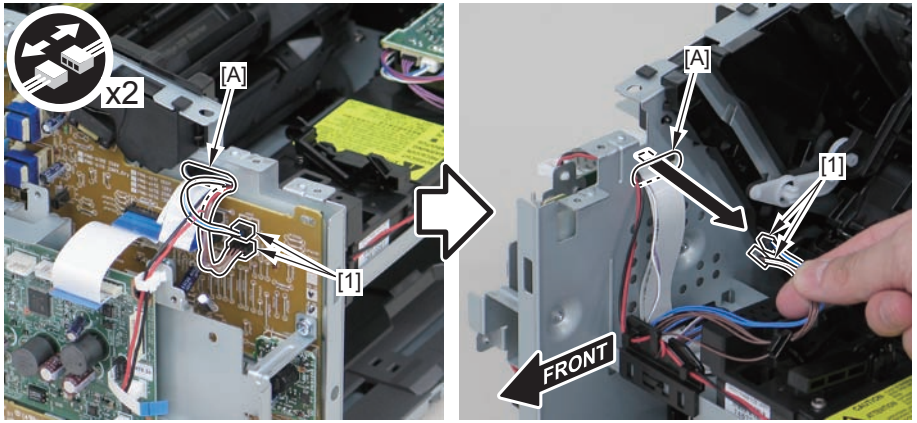
F-4-366

Caution:
Ensure that the shutter open/close lever [1] can move vertically.



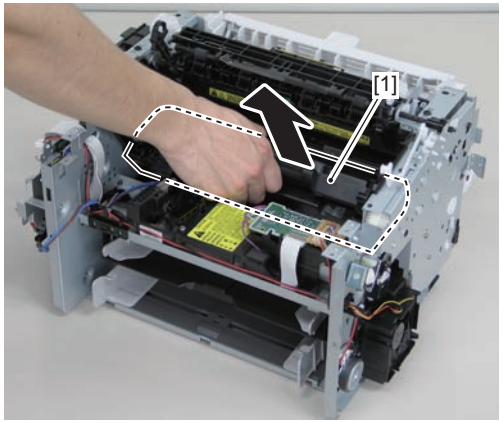
F-4-367

2)Disconnect the 2 connectors[1], and put it through the hole[A] of the left side plate to the inside.



F-4-368

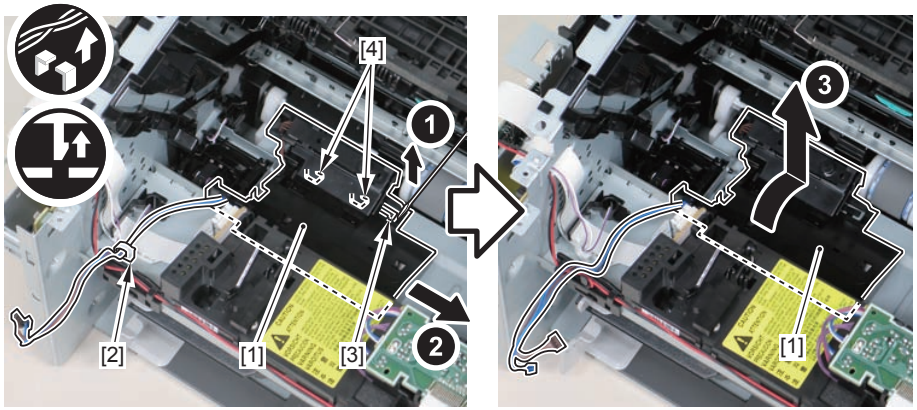
3)Remove the drum unit[1].



F-4-369

4)Remove the toner sensor/multi pickup sensor unit.

- 1 wire saddle[2]
- 1 claw[3]
- 2 hooks[4]



F-4-370

Removing the Speaker (MF4890dw/MF4880dw)

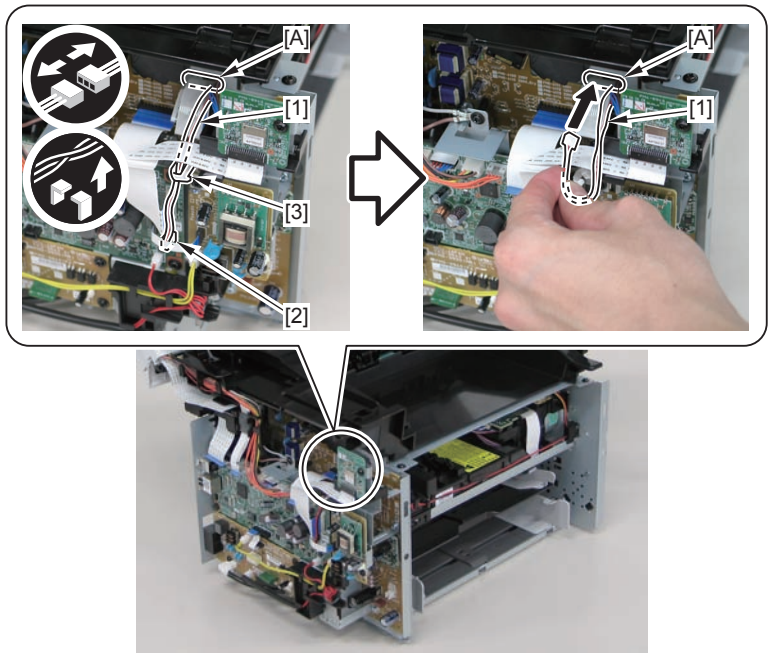
Preparation

1)Remove the left cover
2)Remove the right cover
3)Remove the front cover unit

Procedure

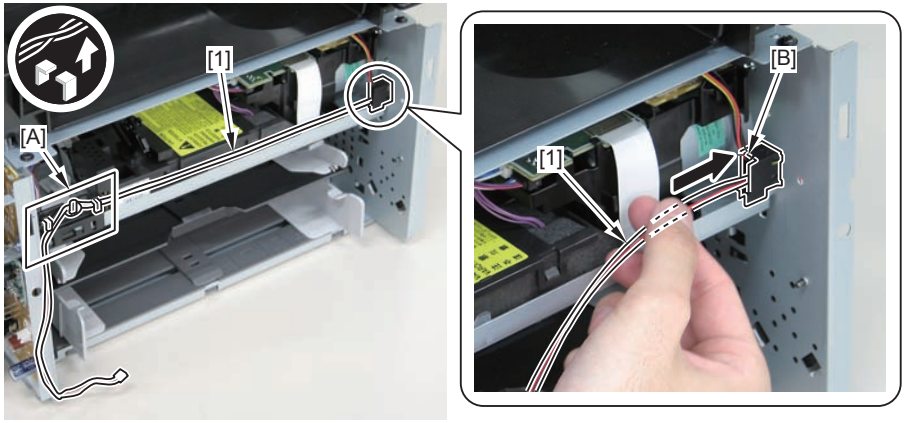
1)Disconnect the speaker harness[1], and put it through the hole[A] of the left side plate to the inside.

- 1 connector[2]
- 1 wire saddle[3]



F-4-371

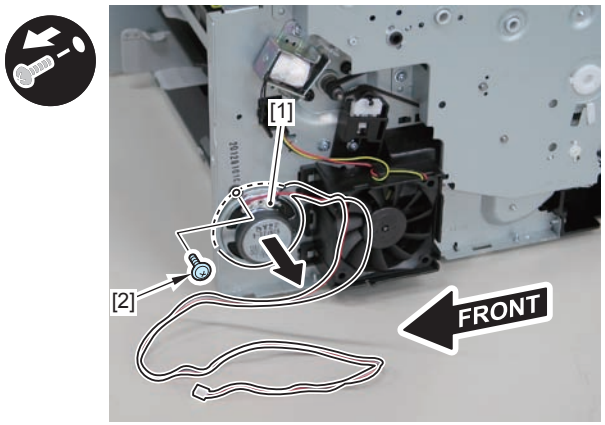
2)Free the speaker harness[1] from the harness guide[A], and put it thriugh the hole[B] of the right side plate to the outside.



F-4-372

3)Remove the speaker[1].

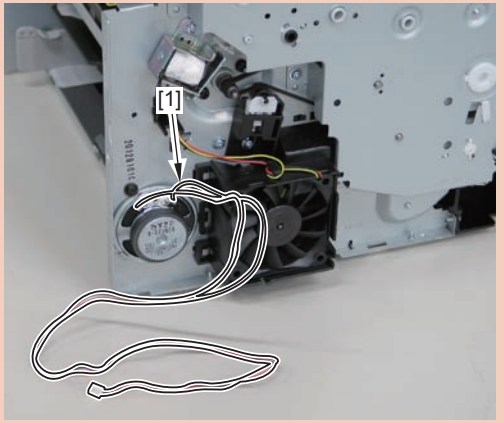
- 1 screw[2]



F-4-373

Caution:

When mounting the speaker, attach the harness [1] to the upper side of the speaker. (So that the speaker harness connector can reach the main controller.)



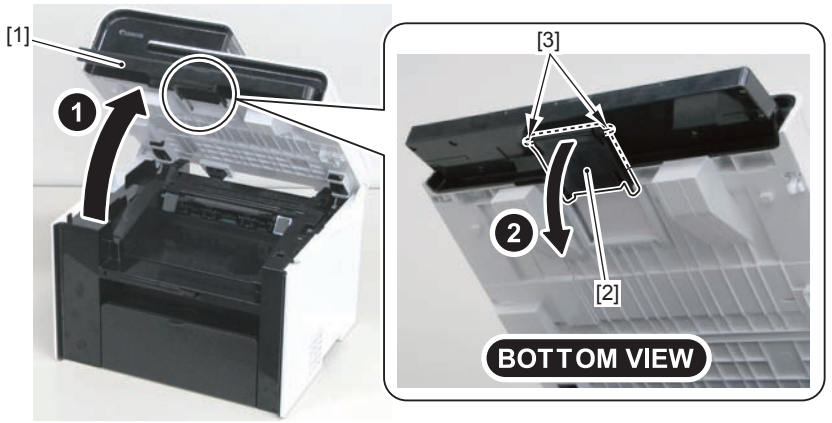
F-4-374

Removing the Control Panel Unit (MF4870dn/MF4830d)

Procedure

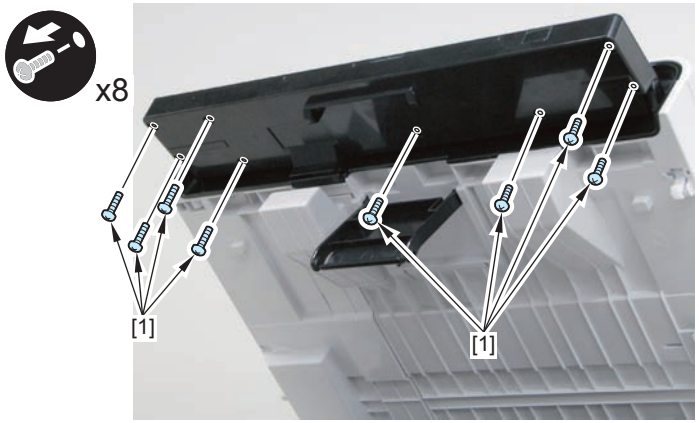
1)Open the reader unit [1] and remove the control panel support plate[2]

- 2 protrusions[3]



F-4-375

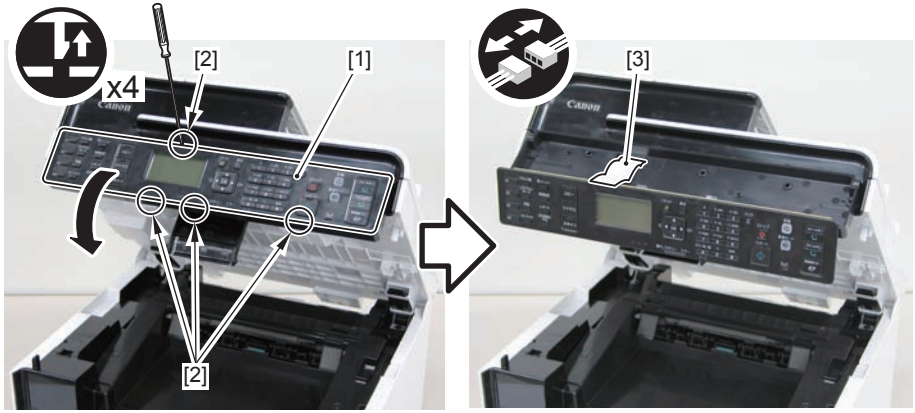
2)Remove the 8 screws[1] on the back side of the control panel unit.



F-4-376

3)Remove the control panel unit[1]

- 4 claws[2]
- 1 flat cable[3]



F-4-377

Removing the Drive Belt (MF4870dn/MF4830d)

Preparation

1) Remove the left cover

Procedure

1) Close the reader unit [1] and place the host machine with its left side down.

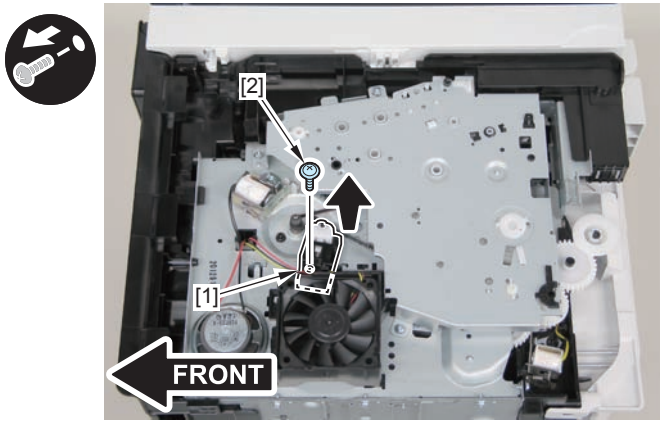
Caution:

Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.

F-4-378

2) Remove the tension unit[1].

- 1 screw[2]



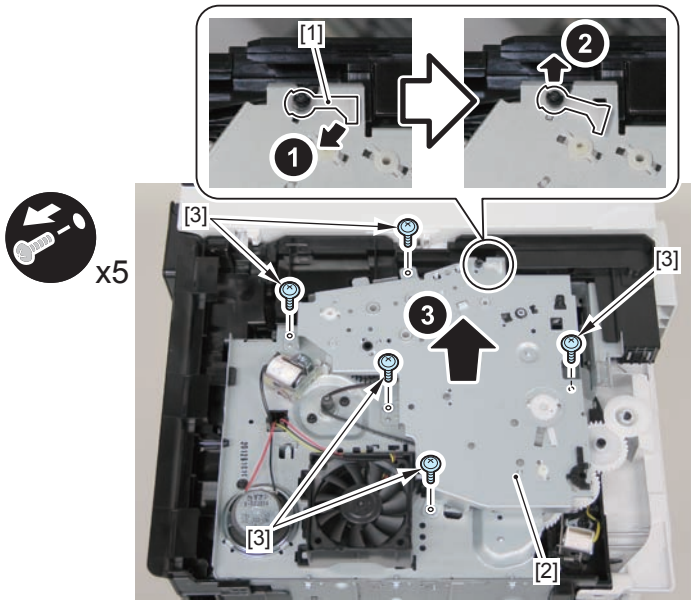
F-4-379

3) Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

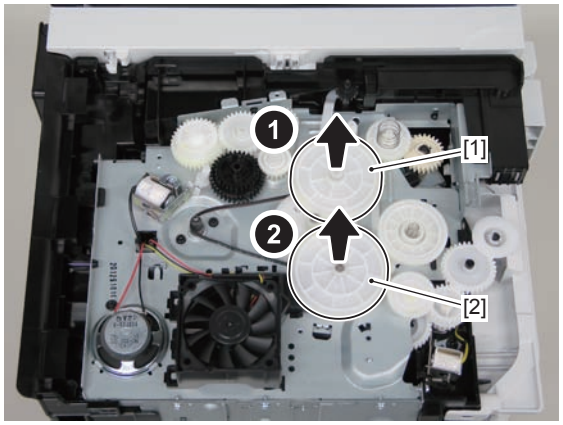
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



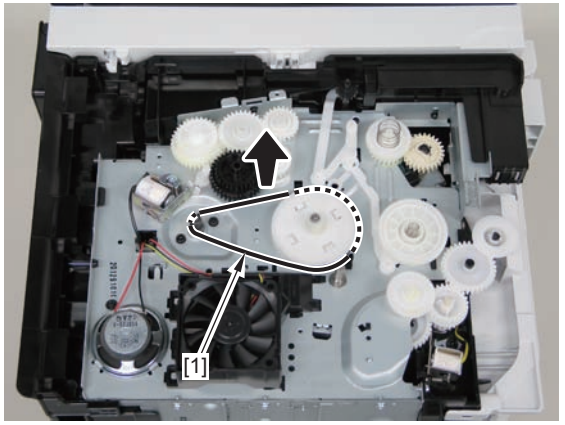
F-4-380

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-381

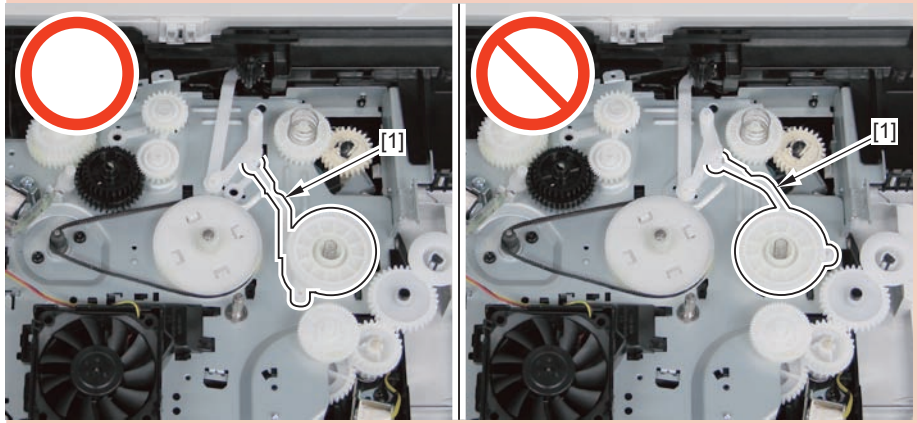
5)Remove the drive belt.



F-4-382

Caution:

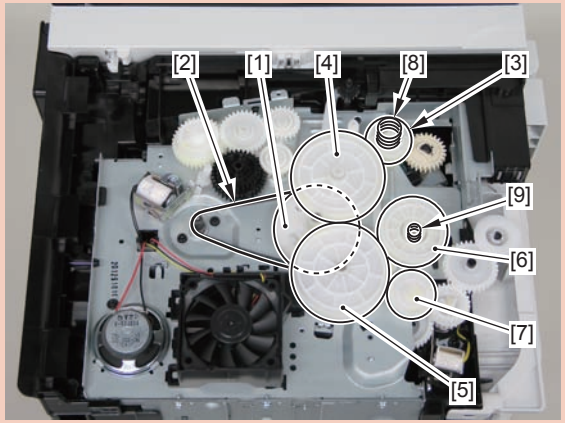
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-383

Caution:

Assemble the drive gear in the order shown in the below picture.

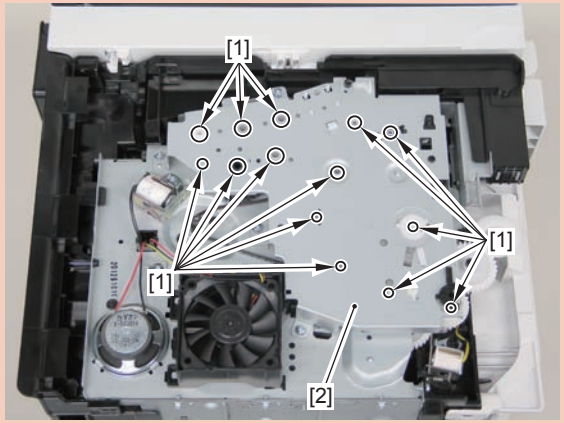


F-4-384

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-385

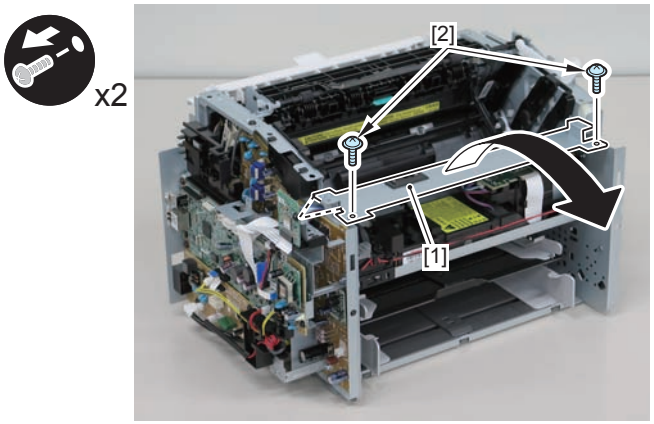
Removing the Main Motor (MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

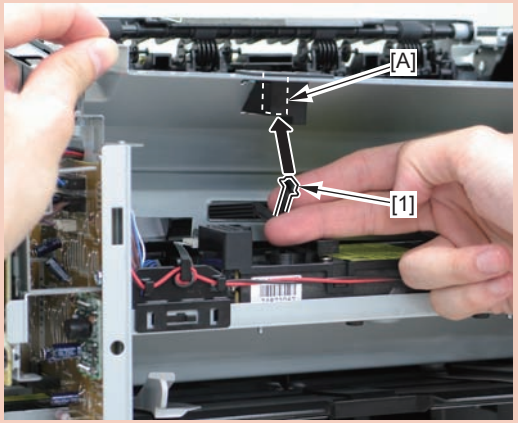
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-386

Caution:

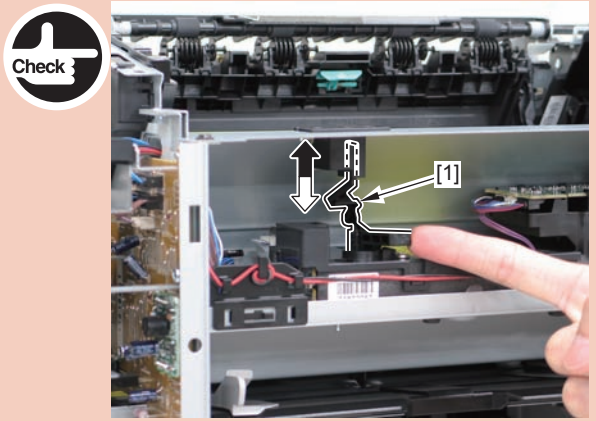
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-387

Caution:

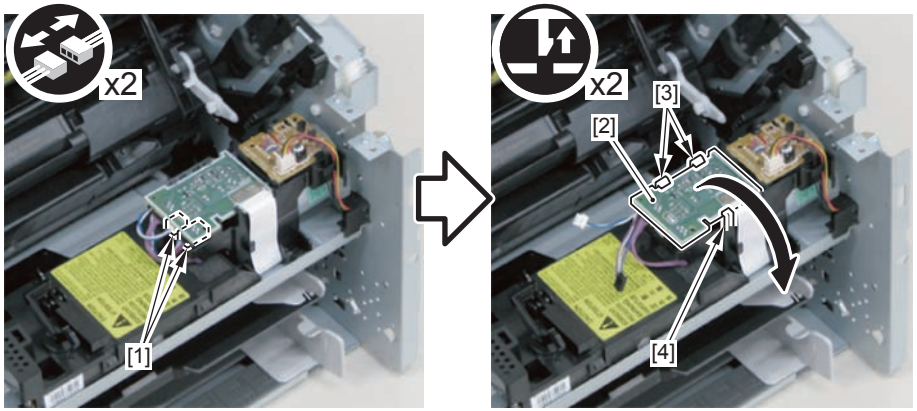
Ensure that the shutter open/close lever [1] can move vertically.



F-4-388

2)Disconnect the connectors[1], and remove the motor driver PCB[2]

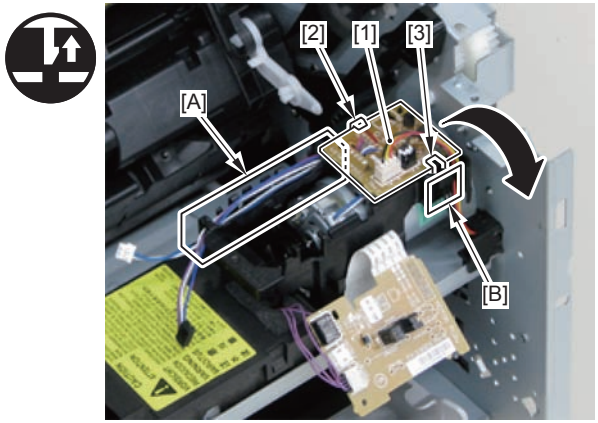
- 2 claws[3]
- 1 hook[4]



F-4-389

3)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]

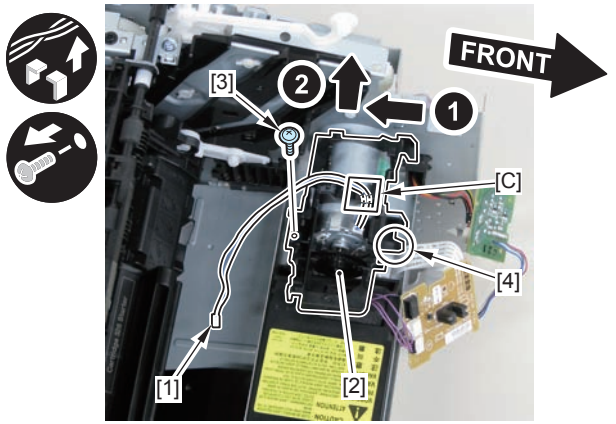


F-4-390

4)Free the motor harness[1] from the harness guide[C].

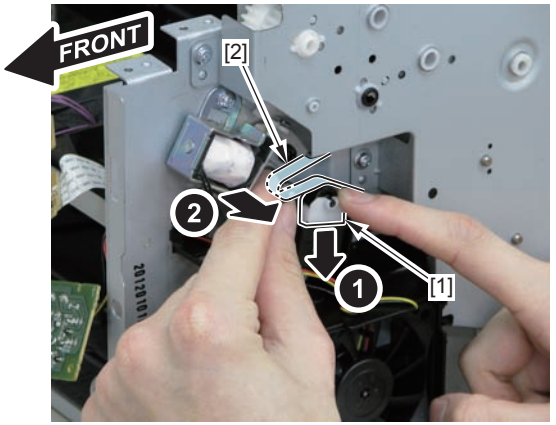
5)Remove the motor guide[2]

- 1 screw[3]
- 1 hook[4]



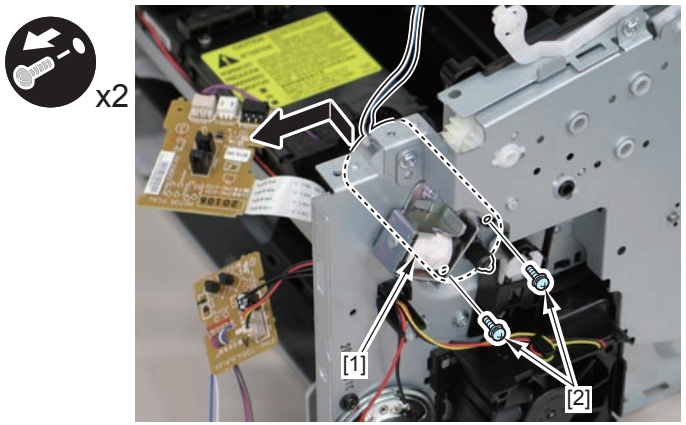
F-4-391

6)Lower the tension unit[1], and remove the belt[2].



F-4-392

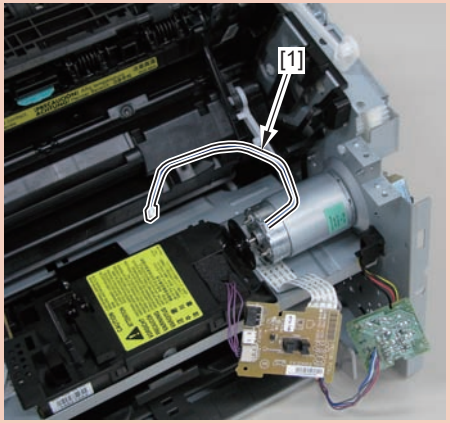
7)Remove the main motor[1]
2 screws(with washer)[2]



F-4-393

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



F-4-394

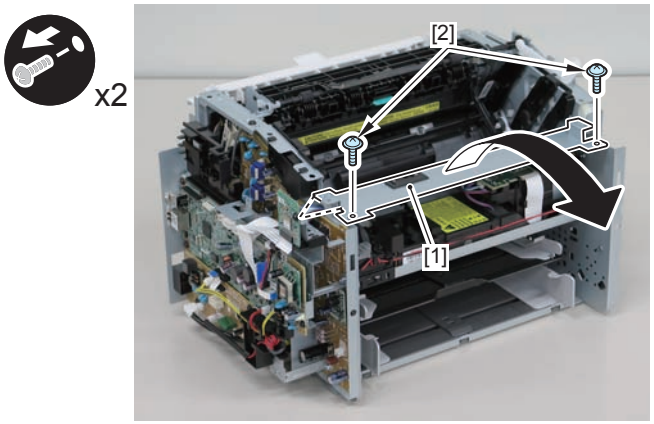
Removing the Main Fan (MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.

Procedure

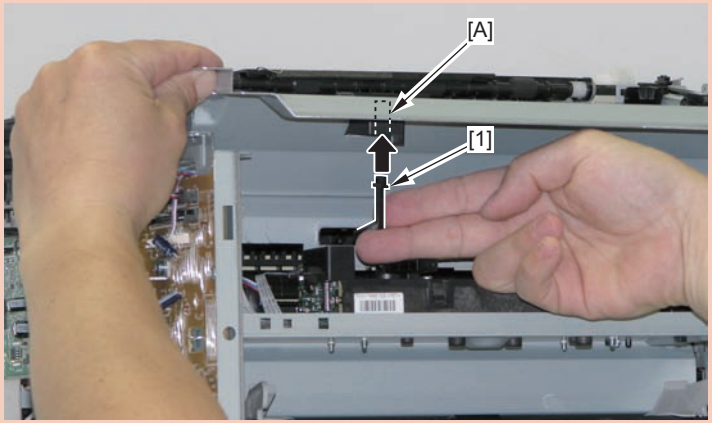
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-395

Caution:

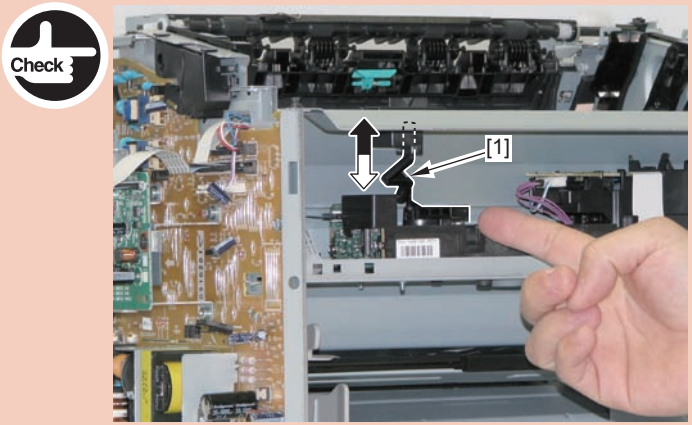
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-396

Caution:

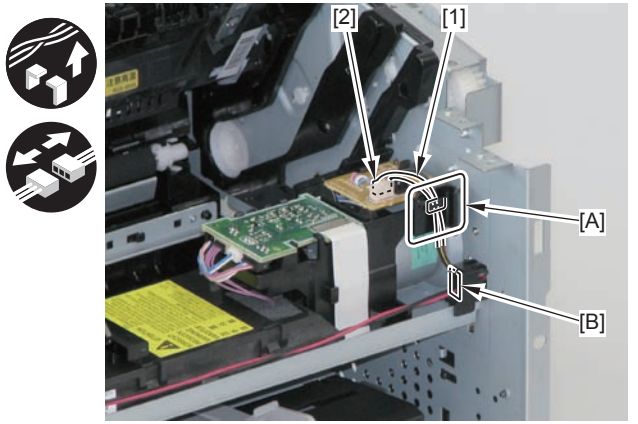
Ensure that the shutter open/close lever [1] can move vertically.



F-4-397

2)Free the fan harness[1] from the harness guide[A], and put it through the hole[B] of the right side plate to the outside.

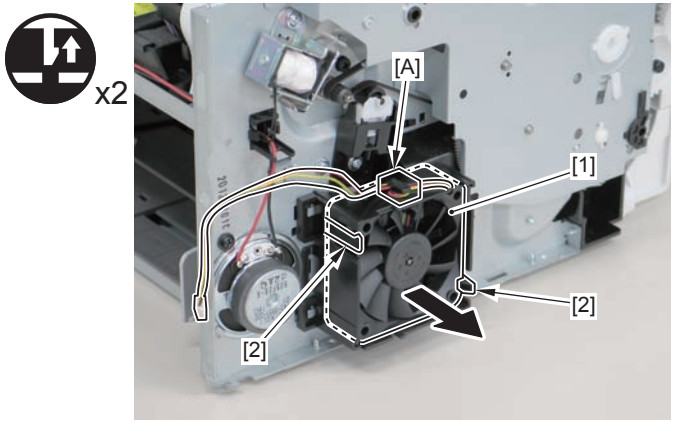
- 1 connector[2]



F-4-398

3)Free the harness from the guide[A], and remove the main fan[1].

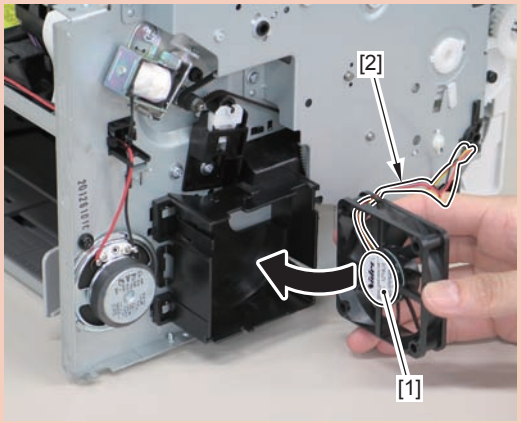
- 2 claws[2]



F-4-399

Caution:

When mounting the main fan, attach the harness [2] to the upper-right side of the fan with the fan label [1] facing inwards.



F-4-400

Removing the Engine Controller PCB (MF4870dn/MF4830d)

Preparation

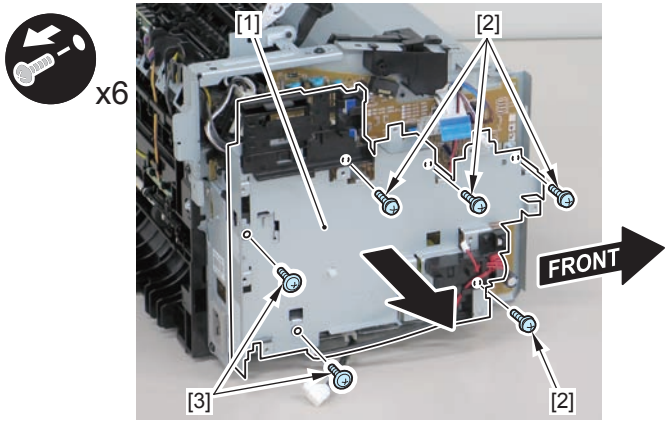
1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB
8) Remove the FAX NCU PCB(MF4870dn)

Procedure

(MF4870dn)

1) Remove the main controller mounting plate[1]

- 4 screws(with washer)[2]
- 2 screws(black TP)[3]

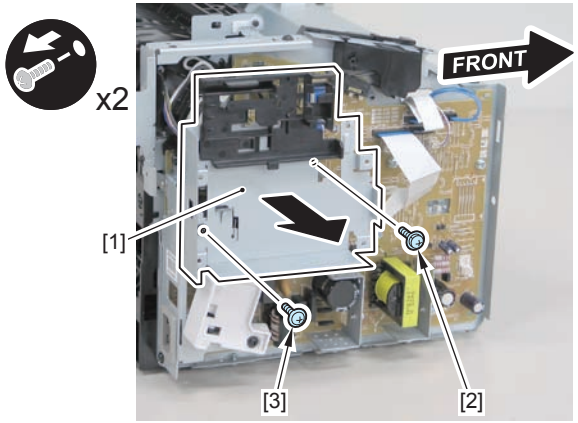


F-4-401

(MF4830d)

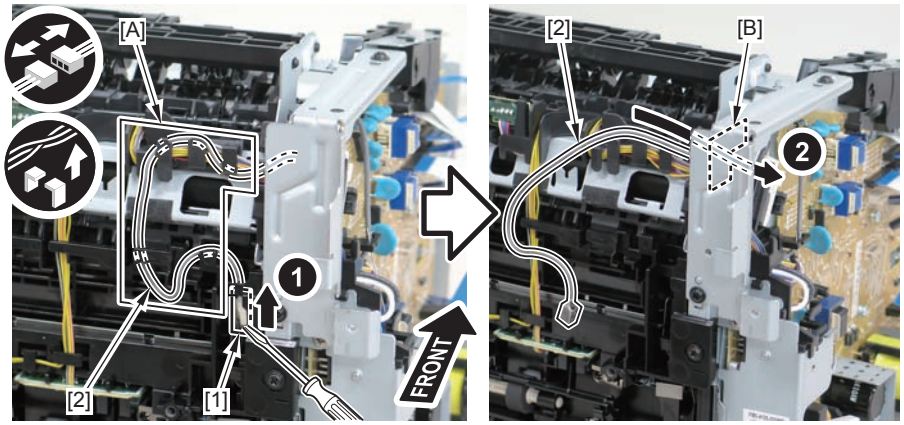
1) Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-402

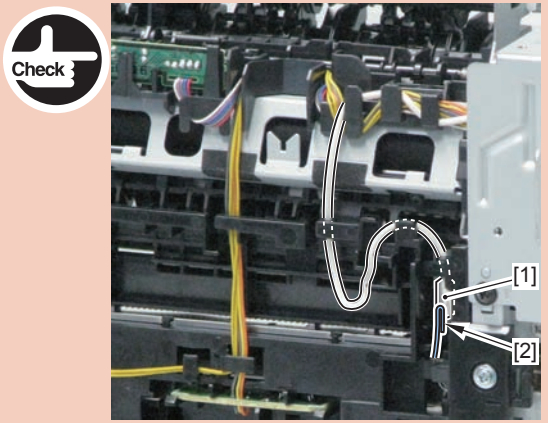
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-403

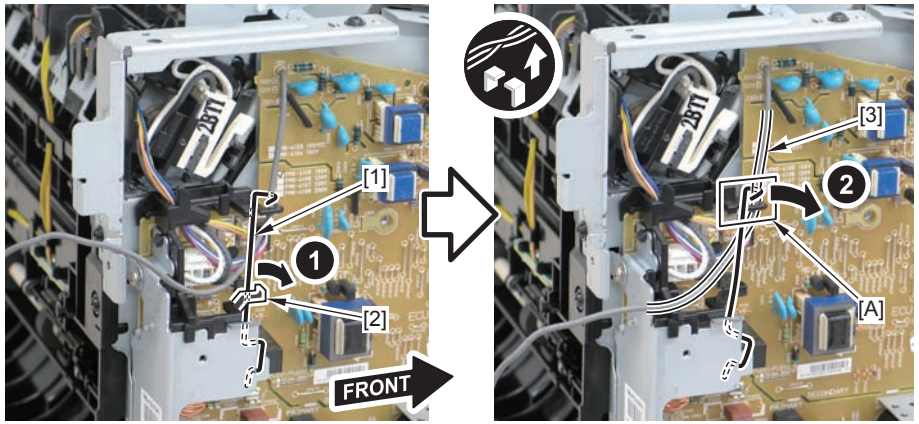
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-404

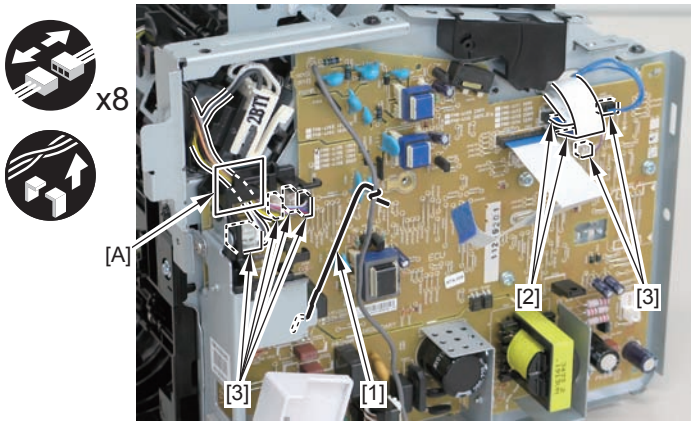
3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-405

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

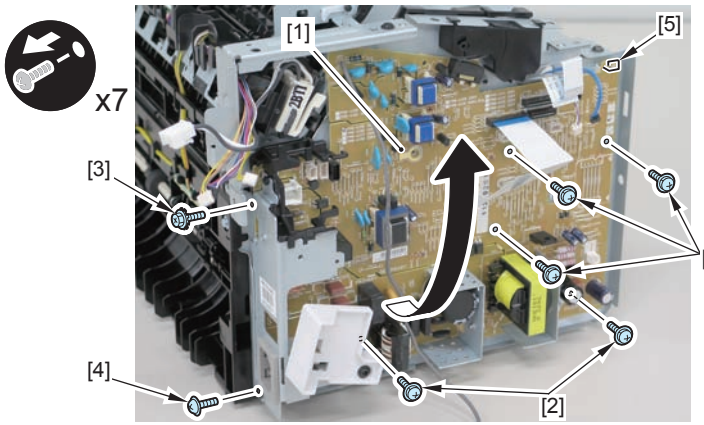
- 2 flat cables[2]
- 6 connectors[3]



F-4-406

5)Remove the engine controller PCB[1].

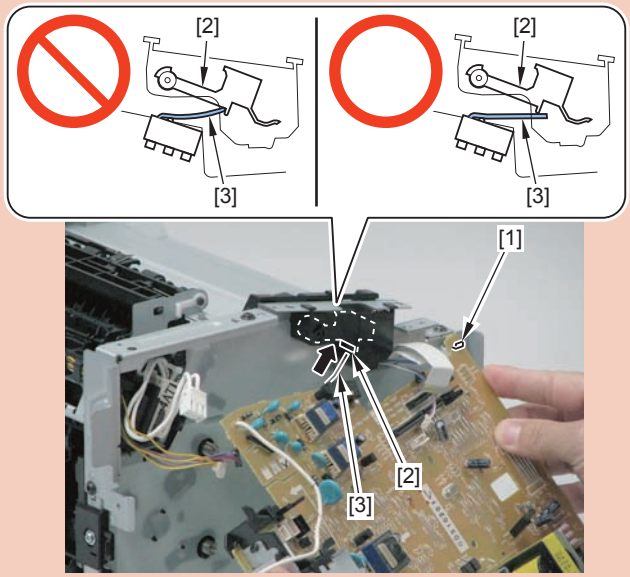
- 5 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-407

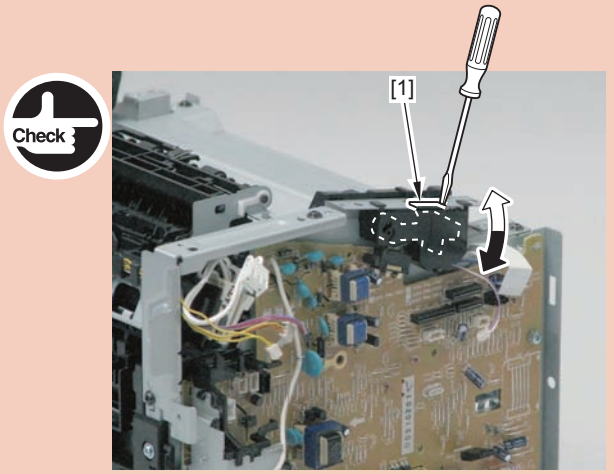
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-408

Ensure that the switch arm [1] can move vertically.



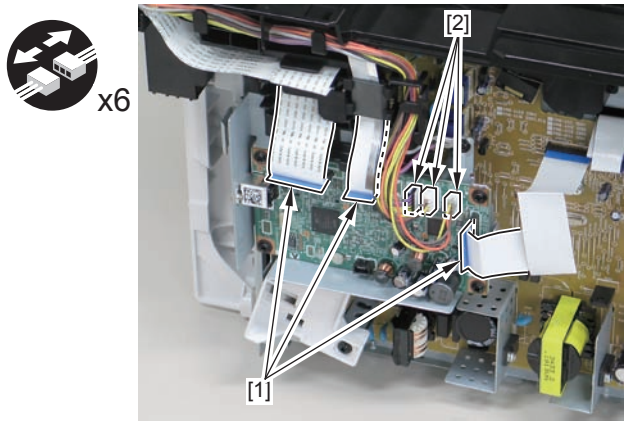
Removing the Main Controller PCB (MF4870dn/ MF4830d)

Preparation

1) Remove the left cover

Procedure

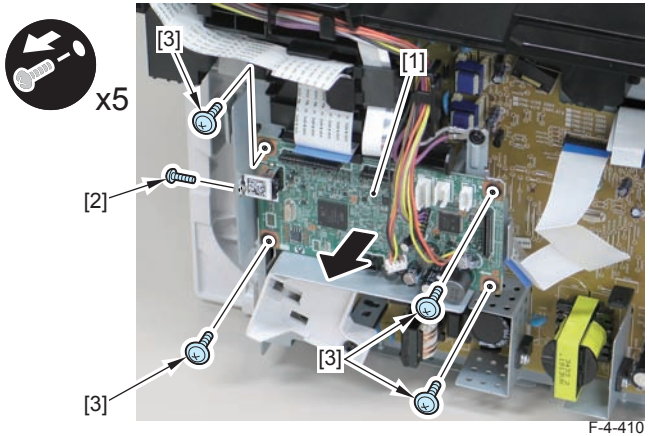
1)Remove the 3 flat cables[1] and 3 connectors[2].



F-4-409

2)Remove the main controller PCB[1].

- 1 screw(bind)[2]
- 4 screws(black TP)[3]



F-4-410

Removing the FAX NCU PCB (MF4870dn)

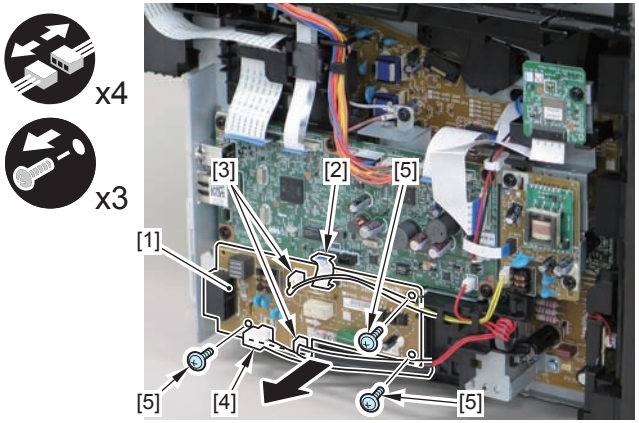
Preparation

1) Remove the left cover

Procedure

1)Remove the FAX NCU PCB[1]

- 1 flat cable[2]
- 2 connectors[3]
- 1 protrusion[4]
- 3 screws[5]



F-4-411

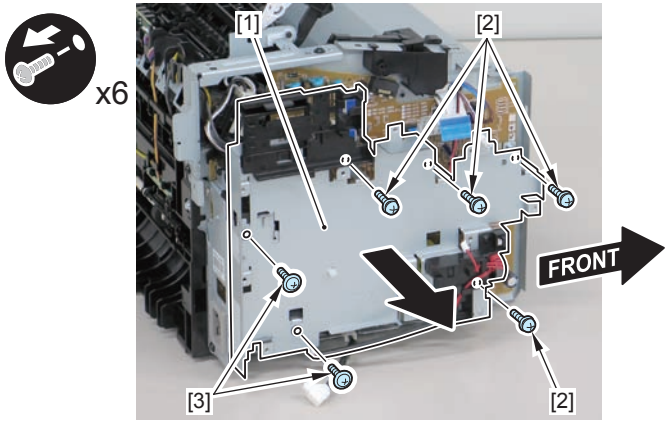
Removing the Paper Leading Edge Sensor PCB(MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB
8)Remove the FAX NCU PCB.(MF4870dn)

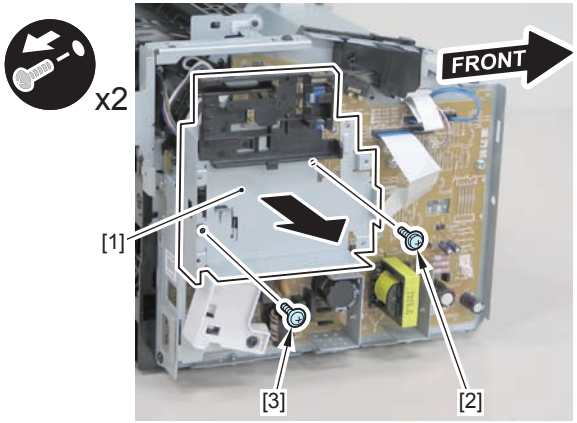
Procedure

(MF4870dn)
1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



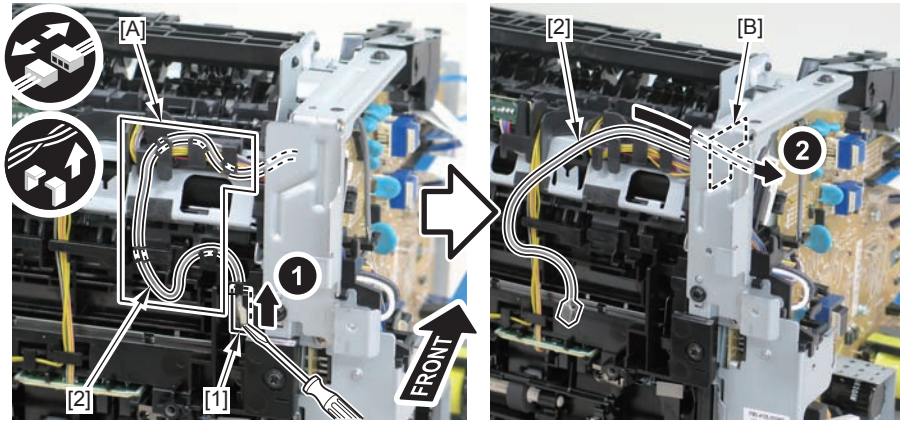
F-4-412

(MF4830d)
1)Remove the main controller mounting plate[1]
- 1 screw(with washers)[2]
- 1 screw(black TP)[3]



F-4-413

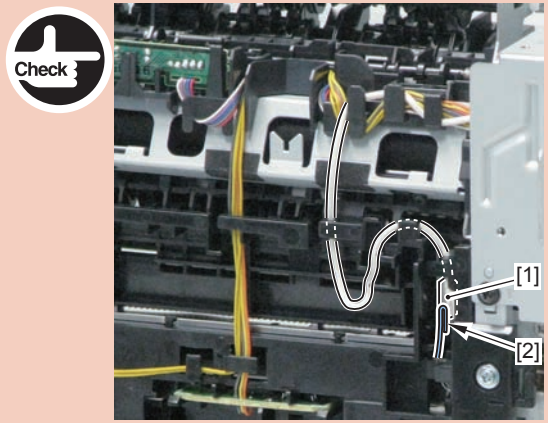
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-414

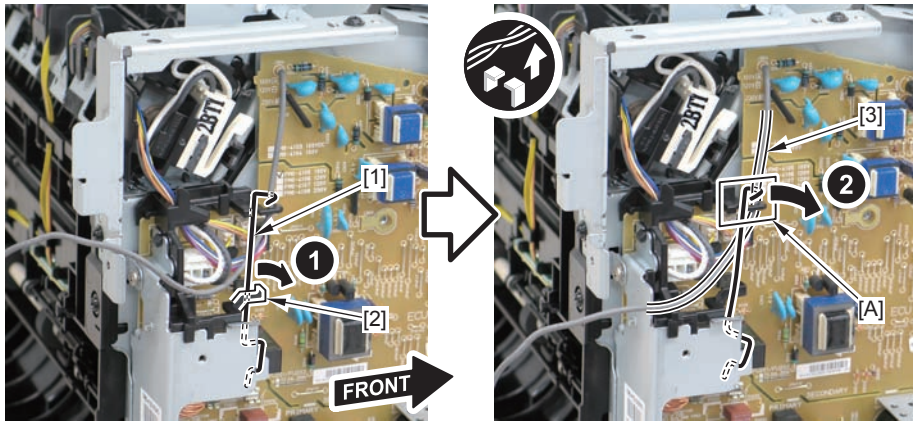
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



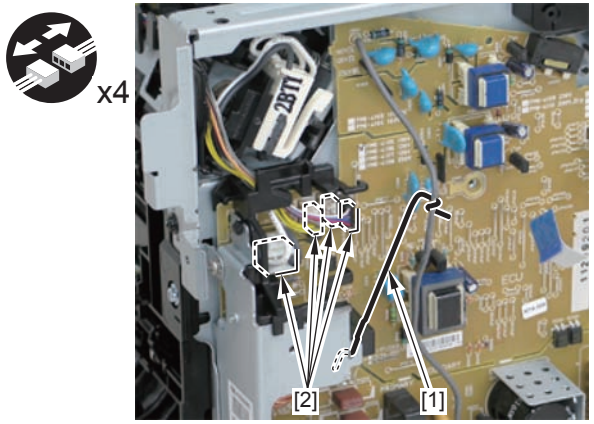
F-4-415

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



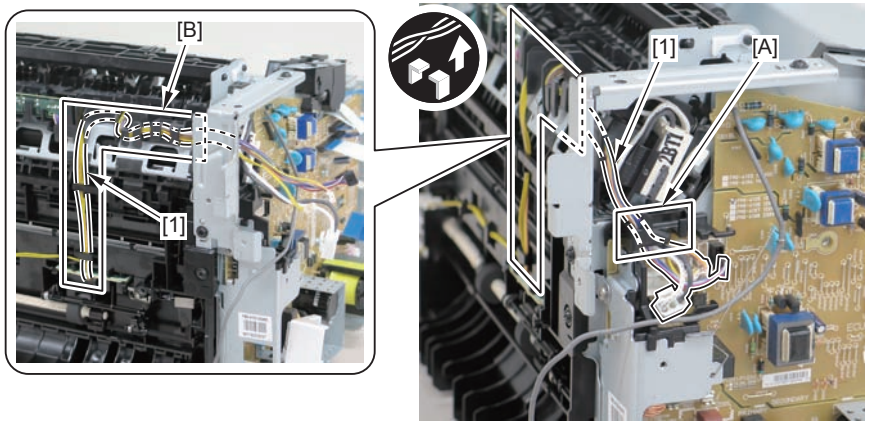
F-4-416

4)Remove the harness retaining spring[1] and 4 connectors[2]



F-4-417

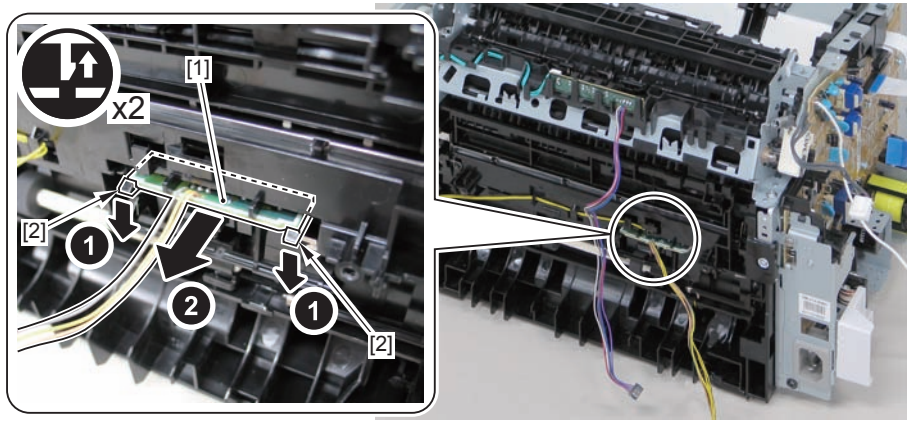
5)Remove the harness[1] from the guide[A] and [B].



F-4-418

6)Remove the paper leading edge sensor PCB[1]

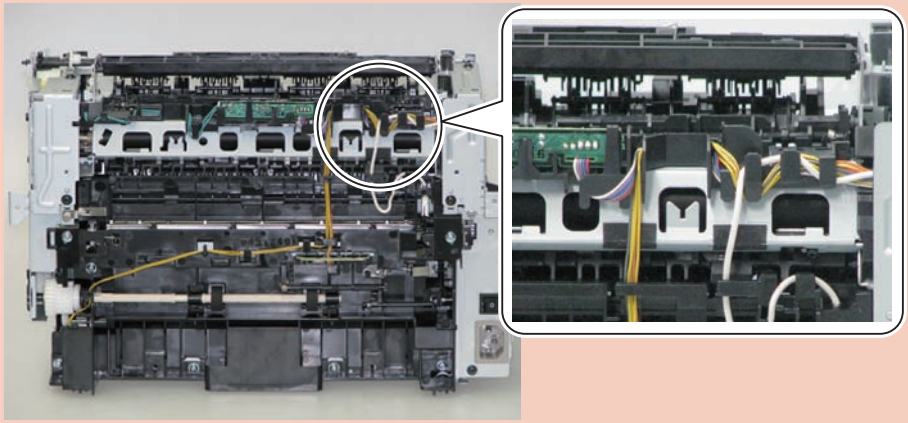
- 2 claws[2]



F-4-419

Note:

The below picture shows how to wind the harness.



F-4-420

Removing the Fixing Delivery/Paper Width Sensor PCB(MF4870dn/MF4830d)

Preparation

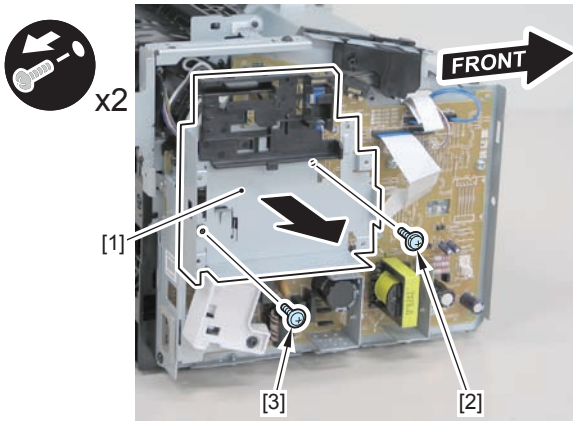
1) Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB
8)Remove the FAX NCU PCB(MF4870dn)

Procedure

(MF4830d)

1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]

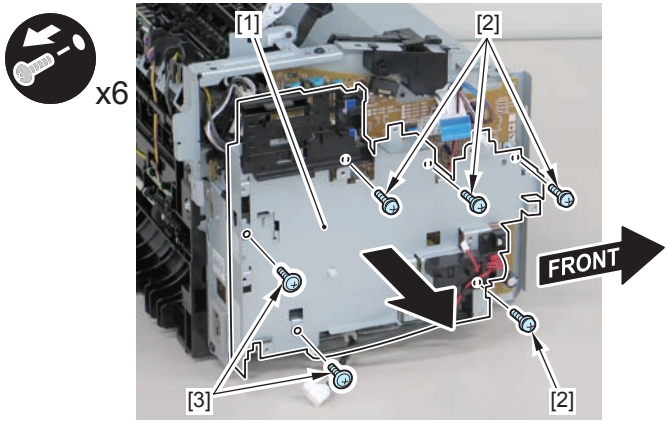


F-4-421

(MF4870dn)

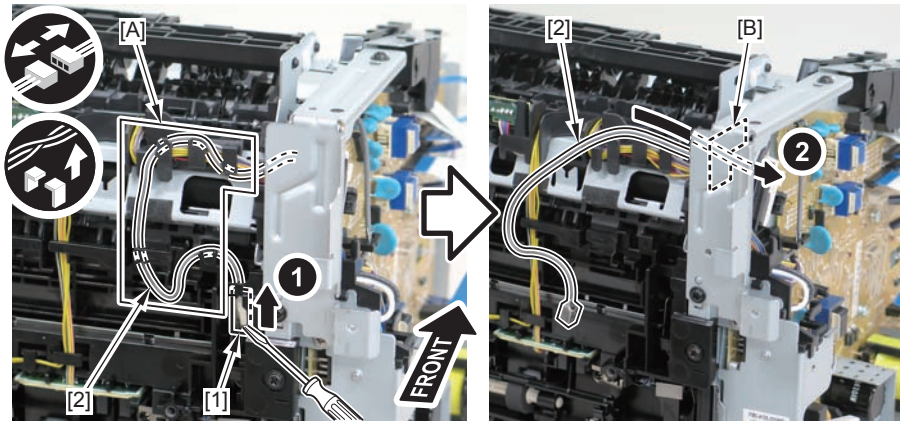
1)Remove the main controller mounting plate[1]

- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-422

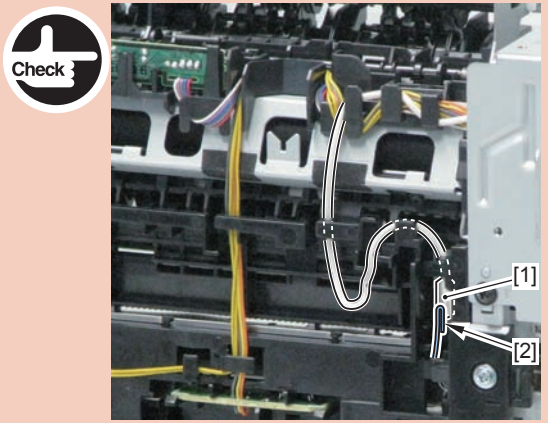
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-423

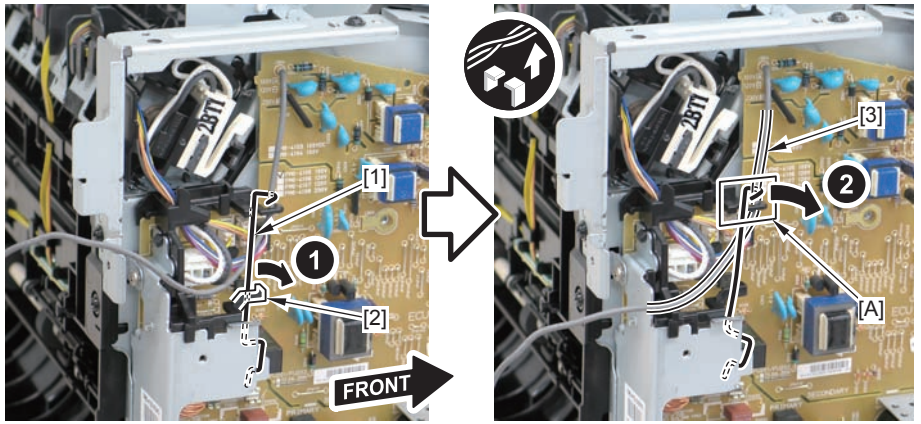
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



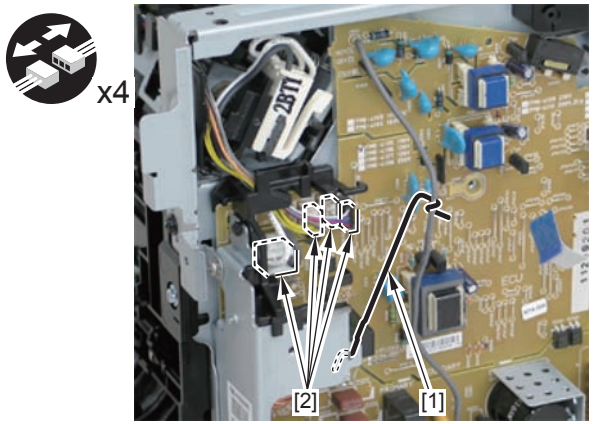
F-4-424

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



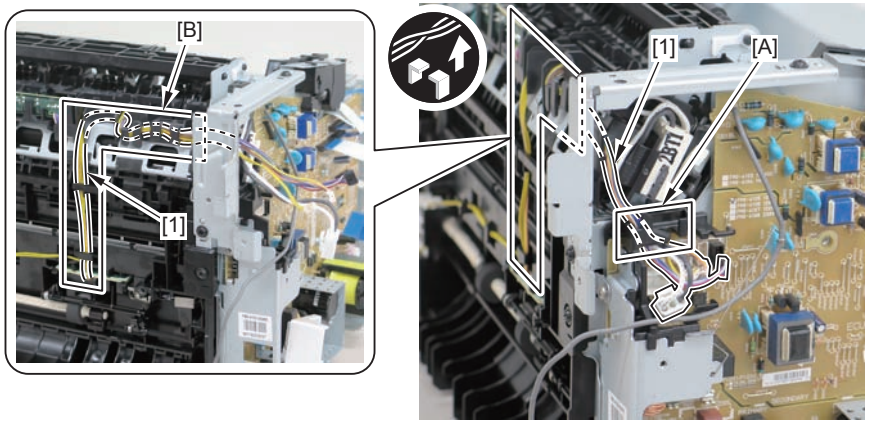
F-4-425

4)Remove the harness retaining spring[1] and 4 connectors[2]



F-4-426

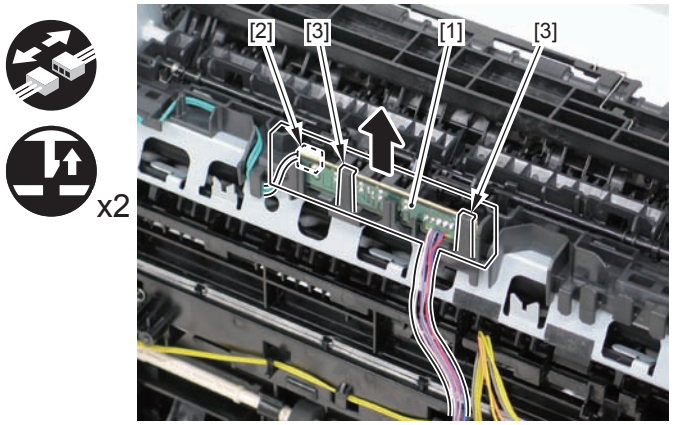
5)Remove the harness[1] from the guide[A] and [B].



F-4-427

6)Remove the fixing delivery/paper width sensor PCB[1]

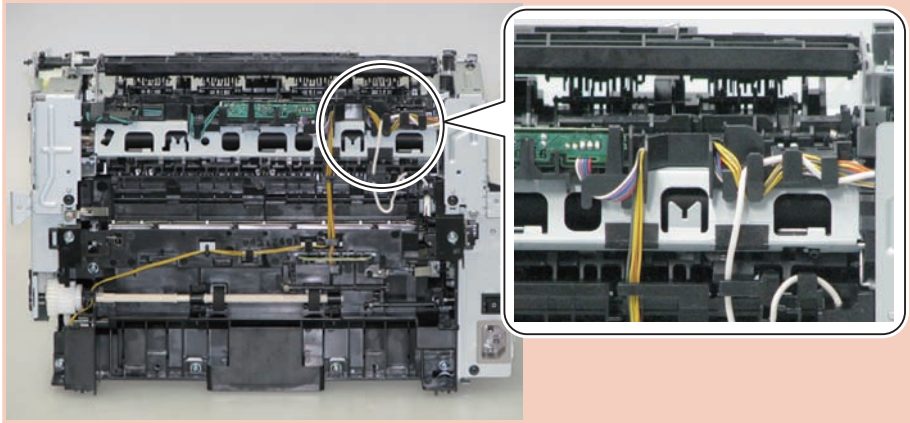
- 1 connector
- 2 claws[3]



F-4-428

Note:

The below picture shows how to wind the harness.it.



F-4-429

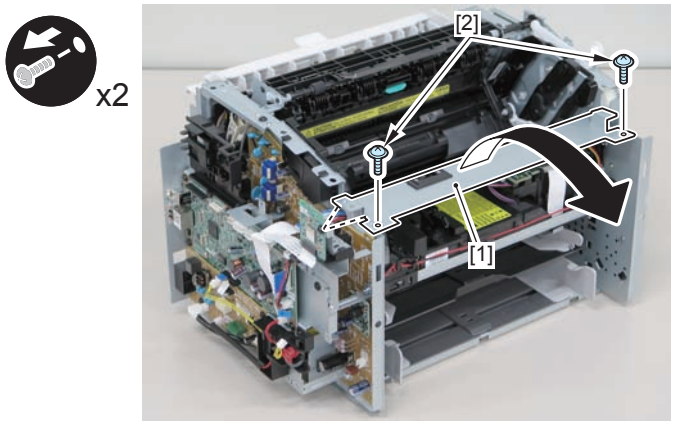
Removing the Toner Sensor and Multi Pickup Sensor Unit (MF4870dn)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

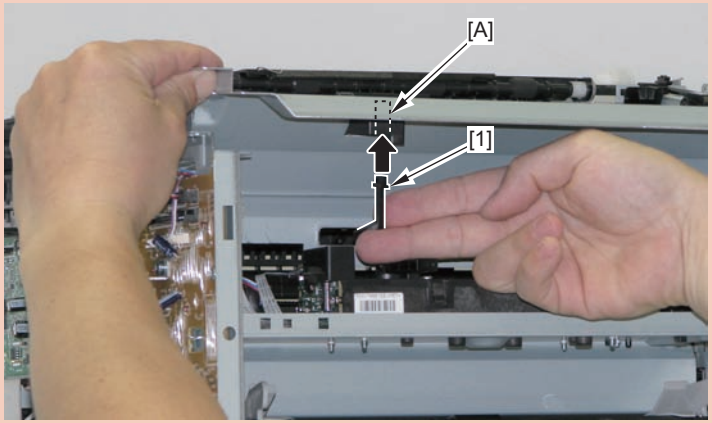
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-430

Caution:

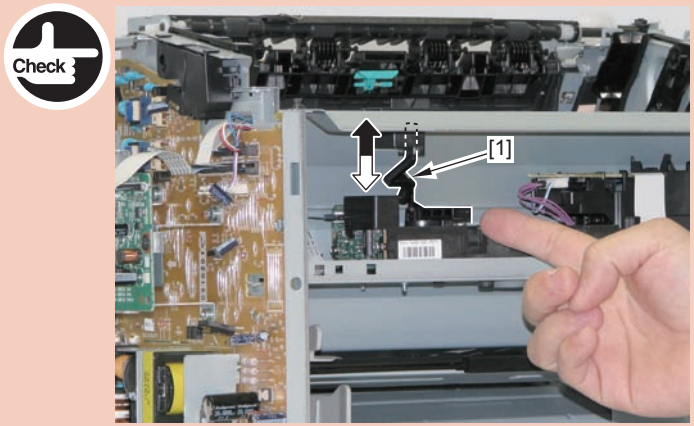
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-431

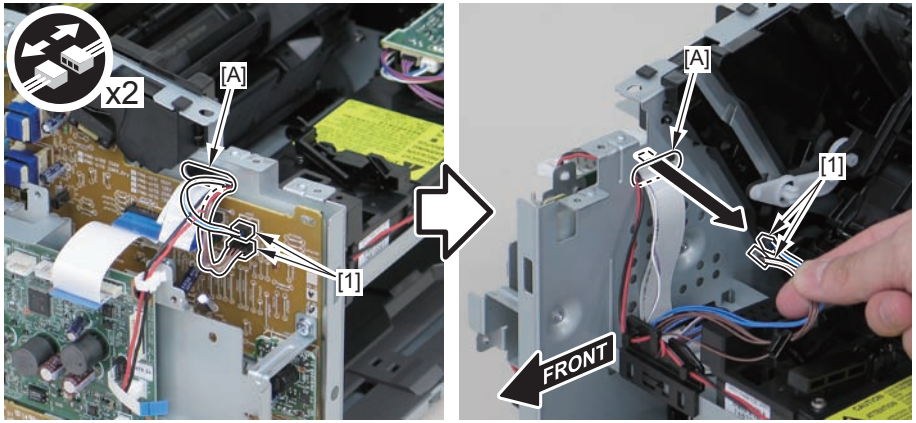
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



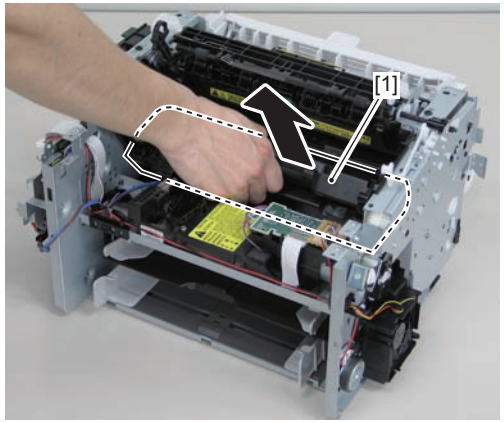
F-4-432

2)Disconnect the 2 connectors[1], and put it through the hole[A] of the left side plate to the inside.



F-4-433

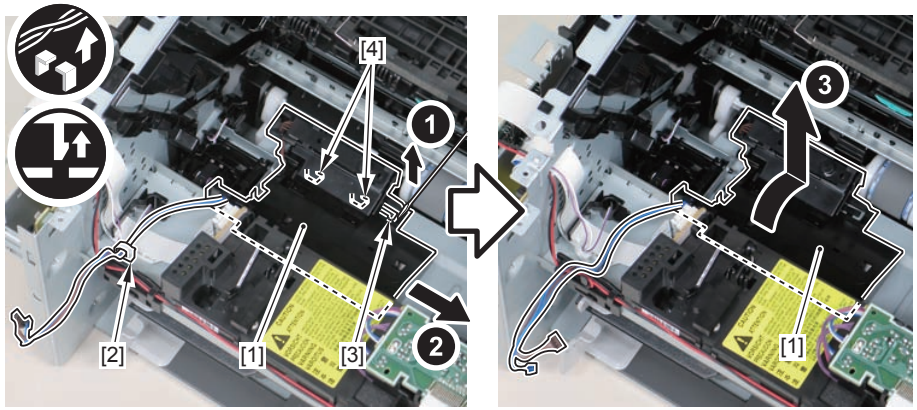
3)Remove the drum unit[1].



F-4-434

4)Remove the toner sensor/multi pickup sensor unit.

- 1 wire saddle[2]
- 1 claw[3]
- 2 hooks[4]



F-4-435

Removing the Speaker (MF4870dn)

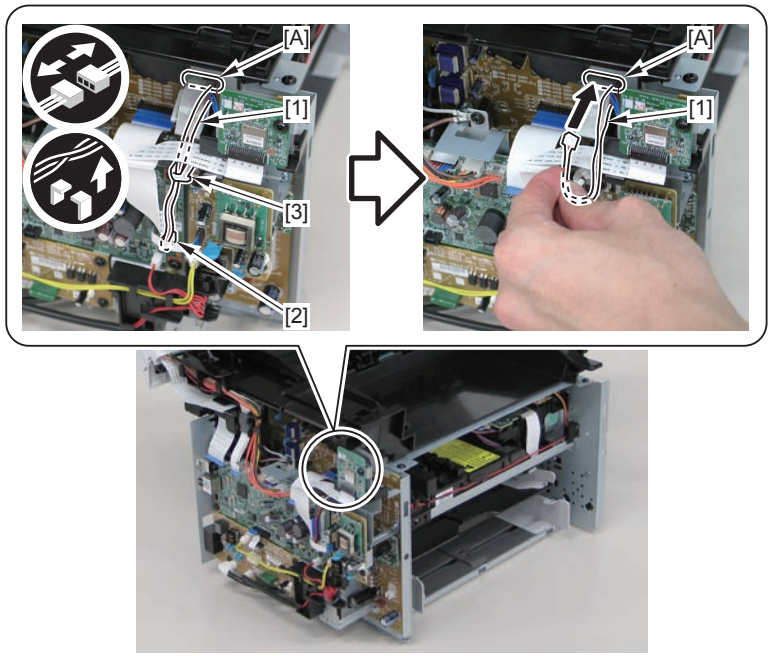
Preparation

1) Remove the left cover
2) Remove the right cover
3) Remove the front cover unit

Procedure

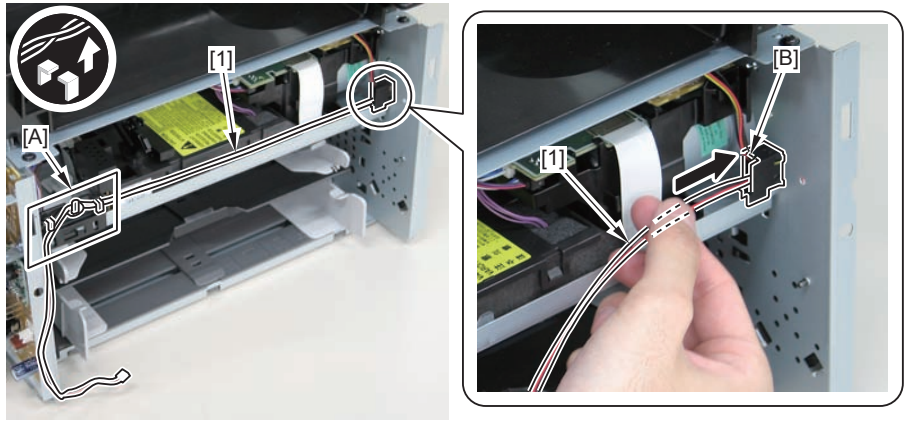
1) Disconnect the speaker harness[1], and put it through the hole[A] of the left side plate to the inside.

- 1 connector[2]
- 1 wire saddle[3]



F-4-436

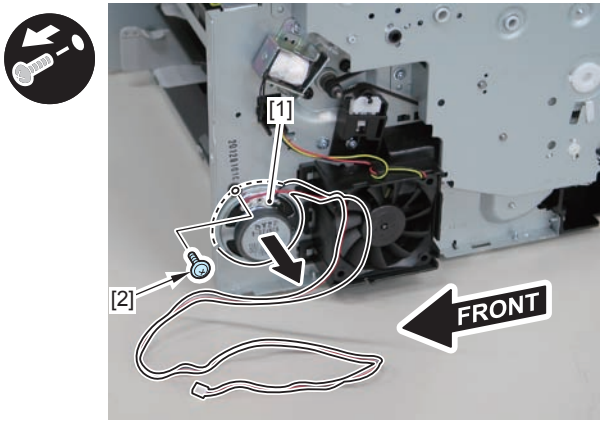
2) Free the speaker harness[1] from the harness guide[A], and put it through the hole[B] of the right side plate to the outside.



F-4-437

3) Remove the speaker[1].

- 1 screw[2]

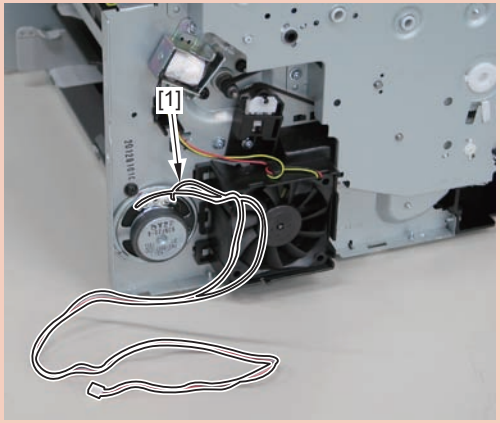


F-4-438

Caution:

When mounting the speaker, attach the harness [1] to the upper side of the speaker.

(So that the speaker harness connector can reach the main controller.)



F-4-439

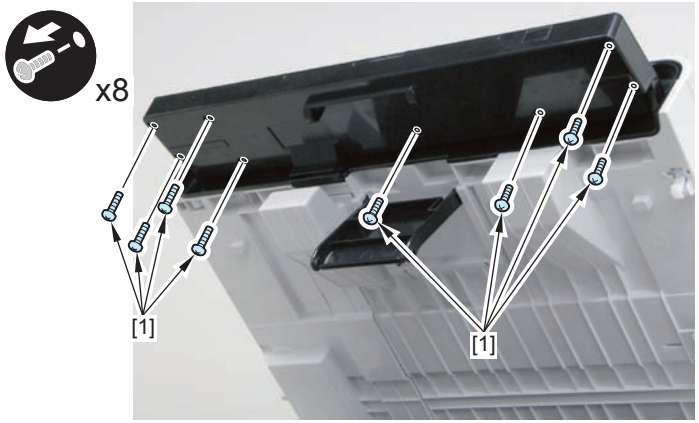
Removing the Control Panel Unit (MF4820d)

Procedure

1)Open the reader unit and remove the control panel support plate.

F-4-440

2)Remove the 8 screws[1] on the back side of the control panel unit.



F-4-441

3)Remove the control panel unit[1]

- 4 claws[2]
- 1 flat cable[3]

Removing the Drive Belt (MF4820d)

Preparation

1) Remove the left cover

Procedure

1) Close the reader unit [1] and place the host machine with its left side down.

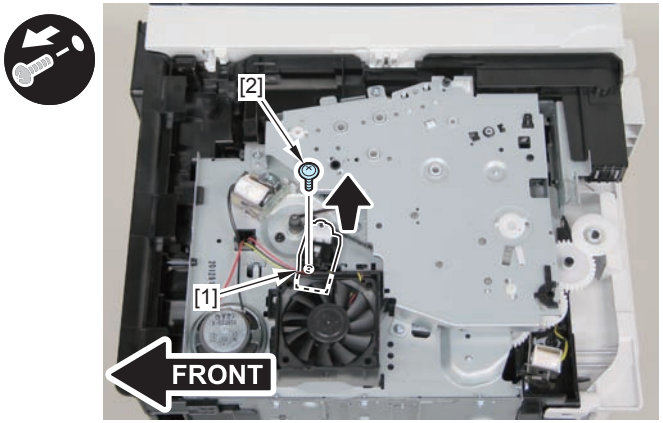
Caution:

Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.

F-4-442

2)Remove the tension unit[1].

- 1 screw[2]

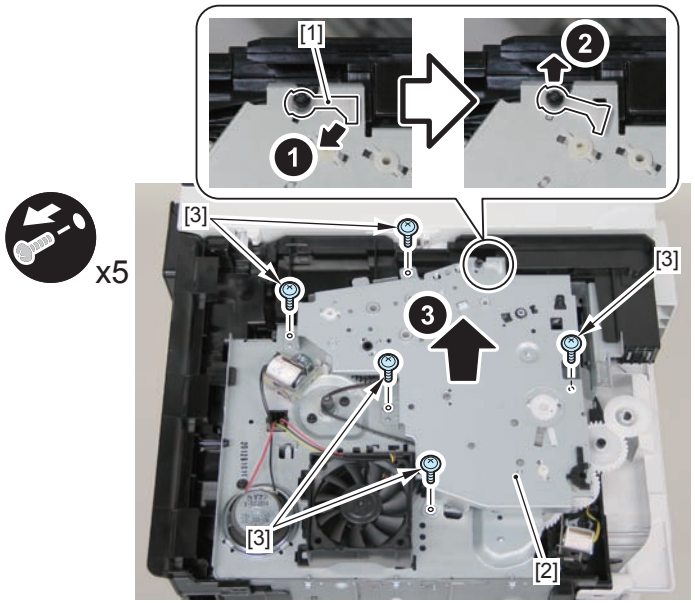


3)Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

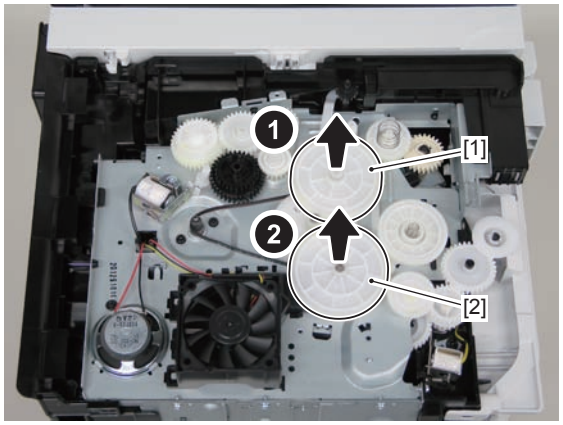
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



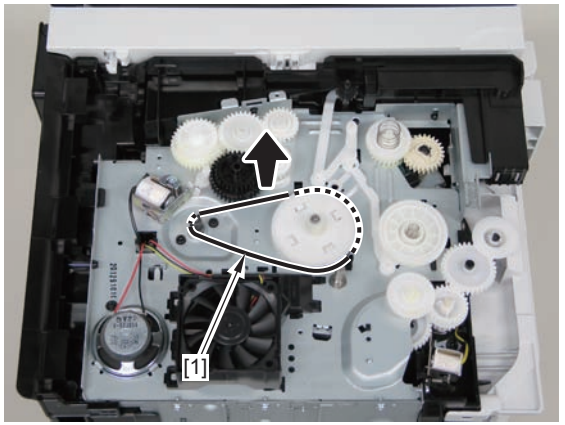
F-4-443

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-444

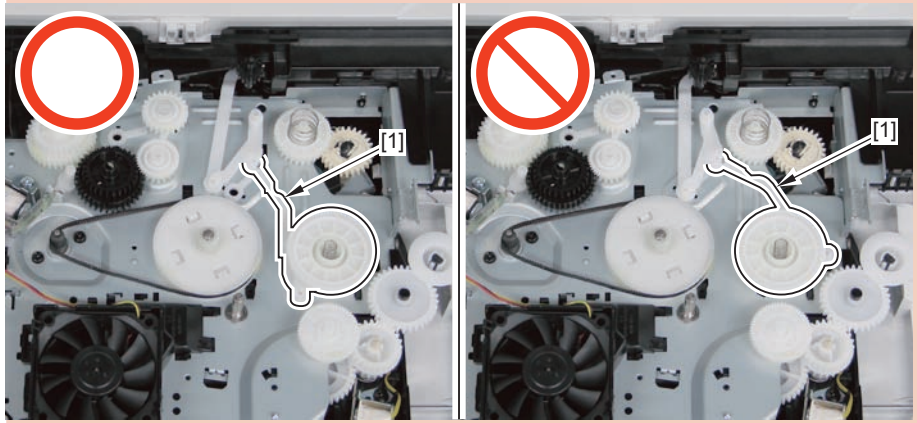
5)Remove the drive belt.



F-4-445

Caution:

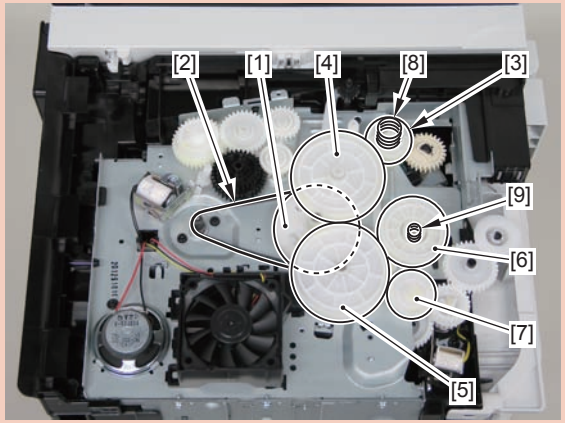
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-446

Caution:

Assemble the drive gear in the order shown in the below picture.

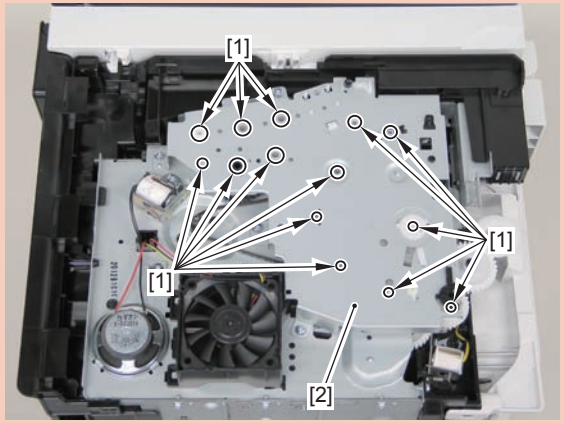


F-4-447

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-448

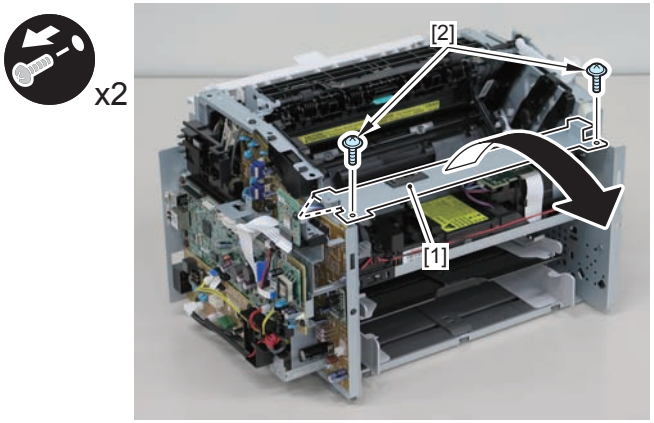
Removing the Main Motor (MF4820d)

Preparation

1) Remove the left cover
2) Remove the copyboadr cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

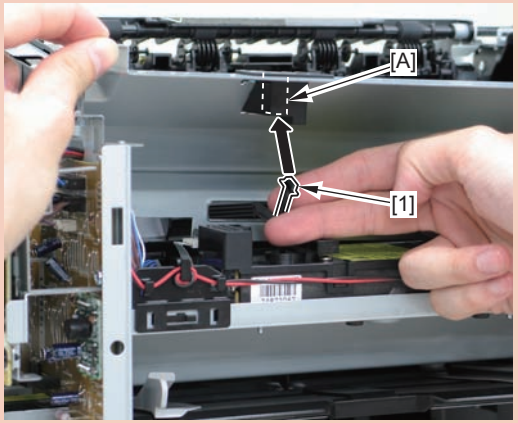
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-449

Caution:

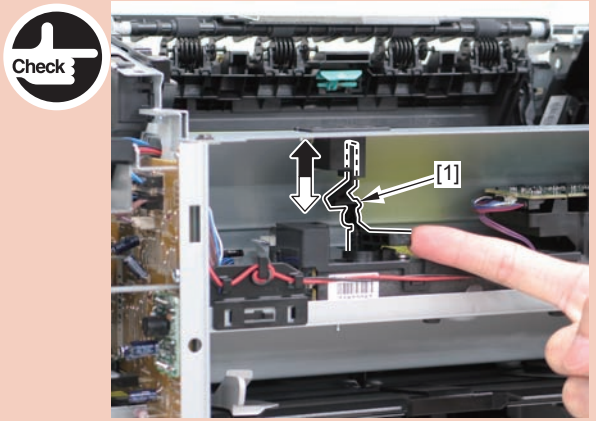
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-450

Caution:

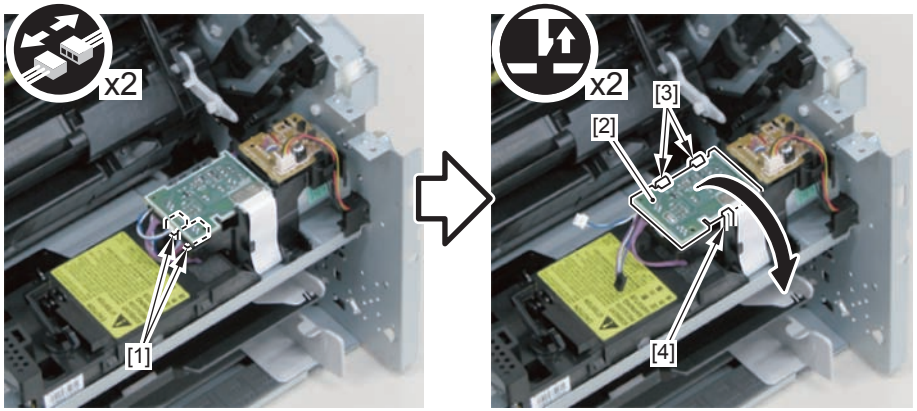
Ensure that the shutter open/close lever [1] can move vertically.



F-4-451

2)Disconnect the connectors[1], and remove the motor driver PCB[2]

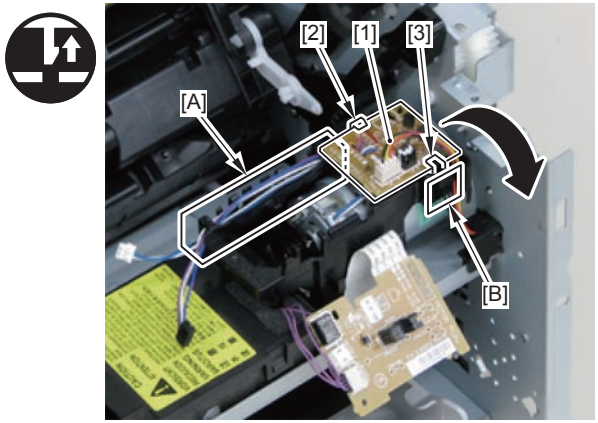
- 2 claws[3]
- 1 hook[4]



F-4-452

3)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]

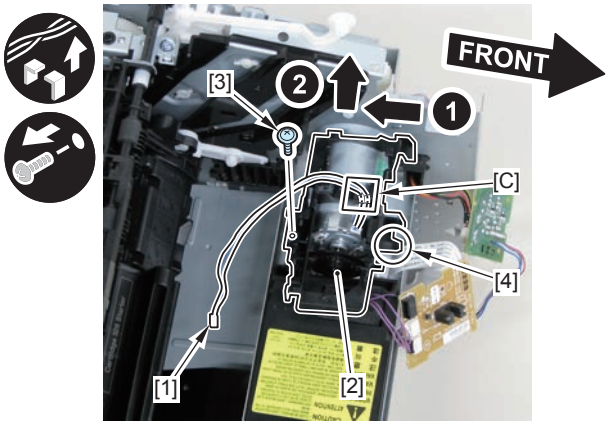


F-4-453

4)Free the motor harness[1] from the harness guide[C].

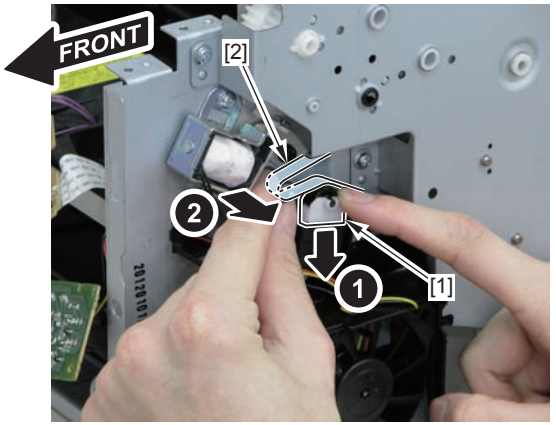
5)Remove the motor guide[2]

- 1 screw[3]
- 1 hook[4]



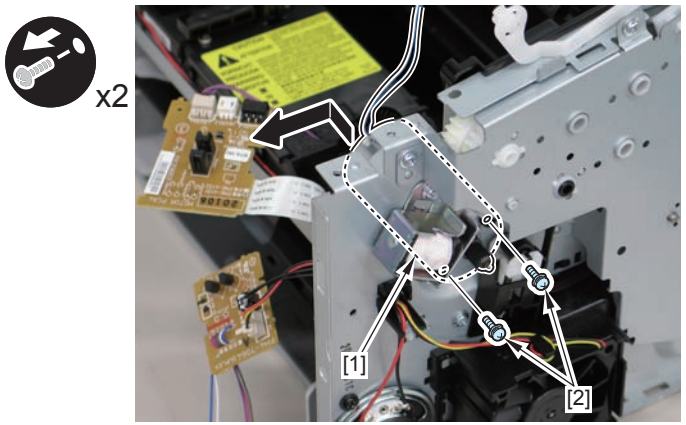
F-4-454

6)Lower the tension unit[1], and remove the belt[2].



F-4-455

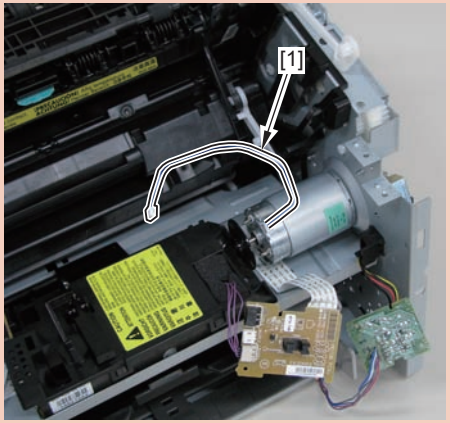
7)Remove the main motor[1]
2 screws(with washer)[2]



F-4-456

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



F-4-457

Removing the Engine Controller PCB(MF4820d)

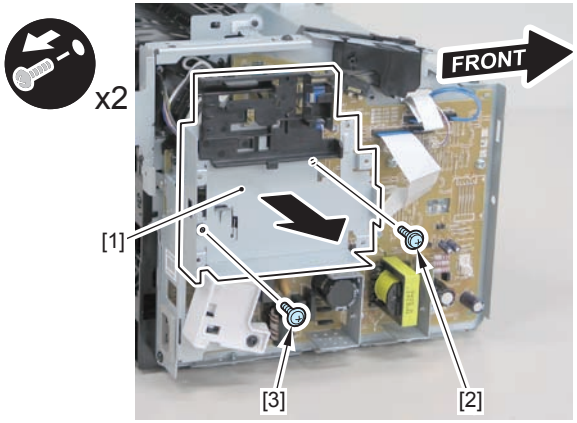
Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB

Procedure

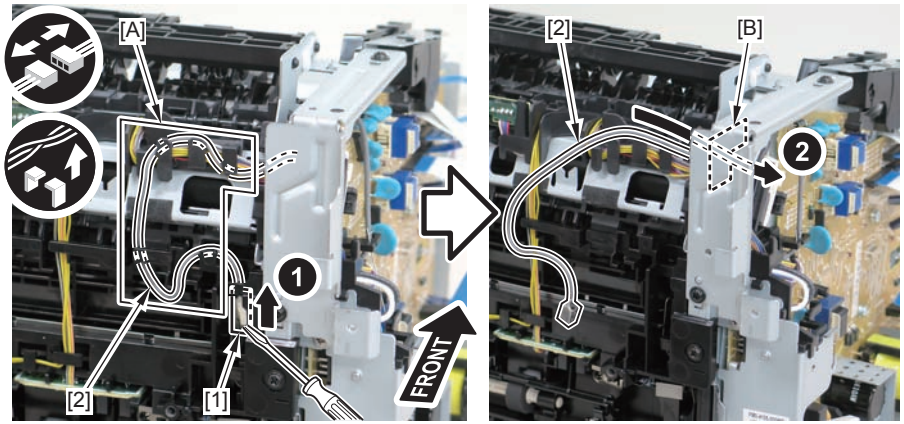
1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-458

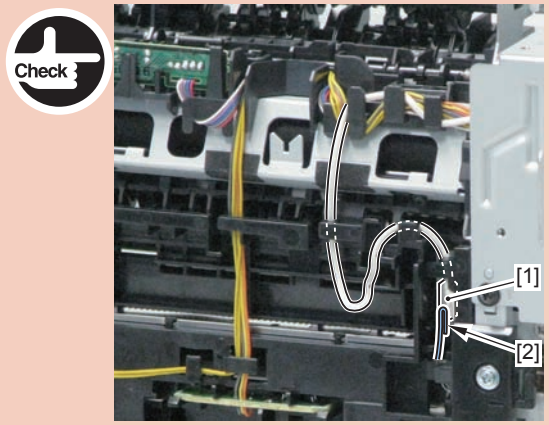
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-459

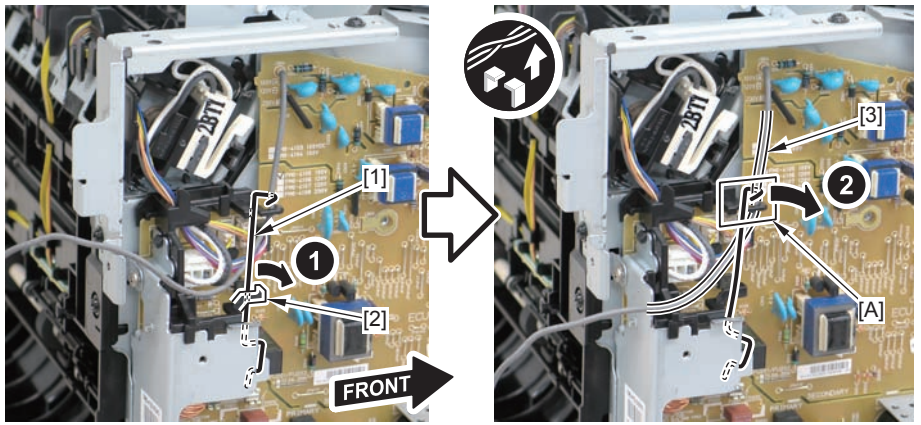
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-460

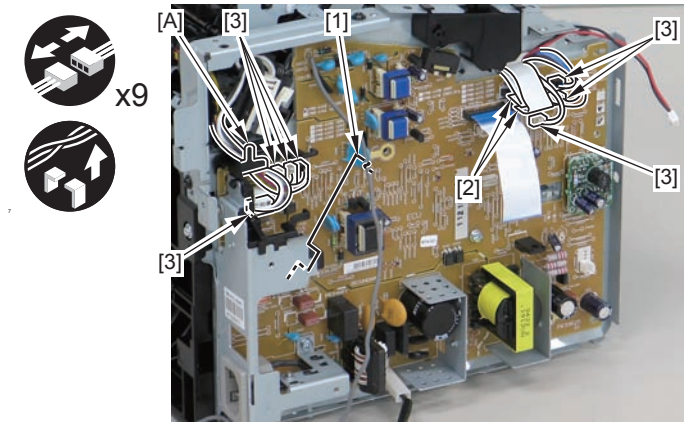
3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-461

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

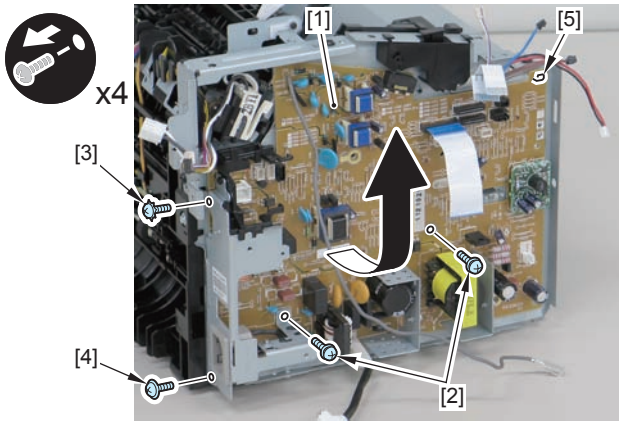
- 2 flat cables[2]



F-4-462

5)Remove the engine controller PCB[1].

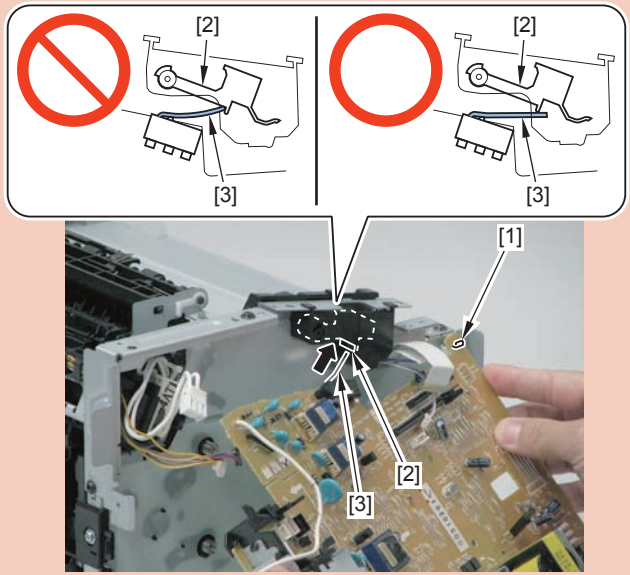
- 2 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-463

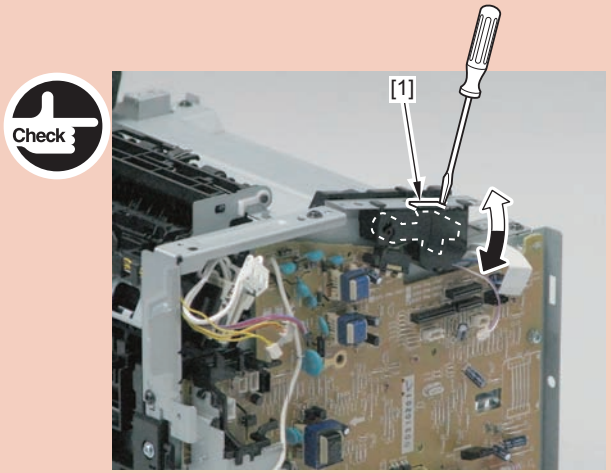
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-464

Ensure that the switch arm [1] can move vertically.



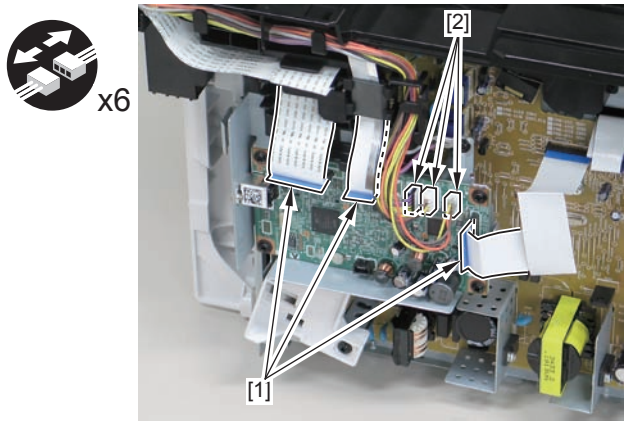
Removing the Main Controller PCB(MF4820d)

Preparation

1) Remove the left cover

Procedure

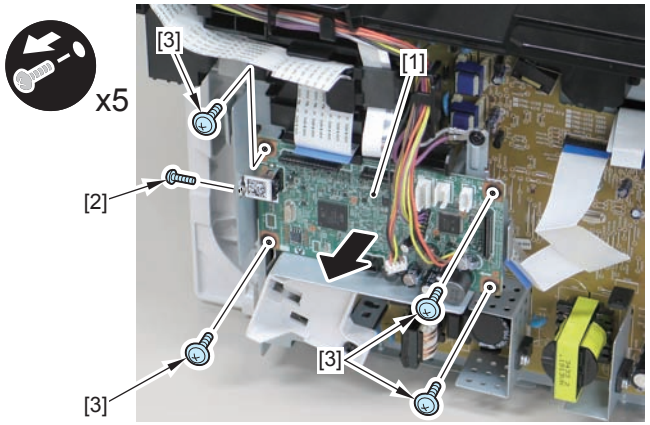
1)Remove the 3 flat cables[1] and 3 connectors[2].



F-4-465

2)Remove the main controller PCB[1].

- 1 screw(bind)[2]
- 4 screws(black TP)[3]



F-4-466

Removing the Paper Leading Edge Sensor PCB(MF4820d)

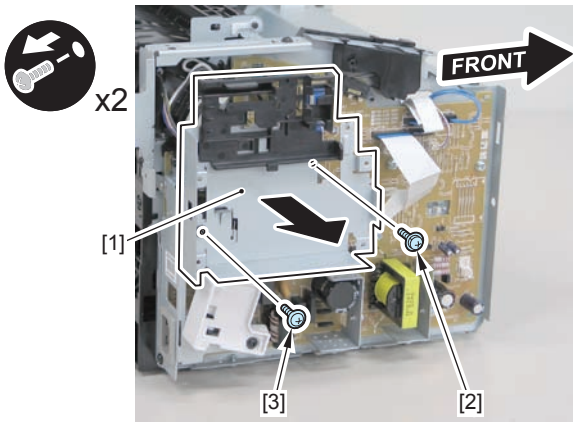
Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB

Procedure

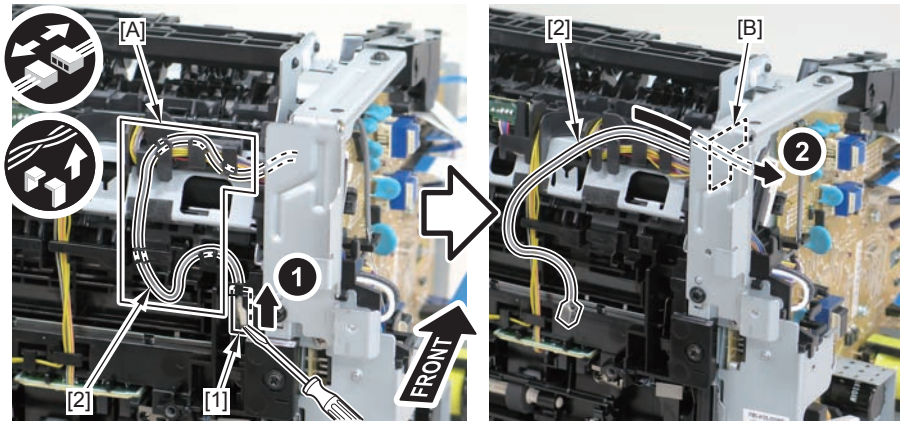
1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-467

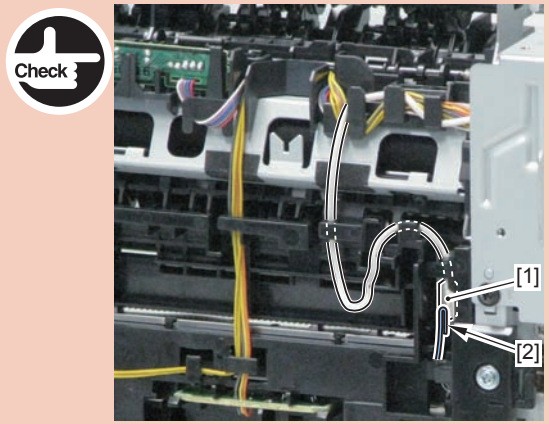
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-468

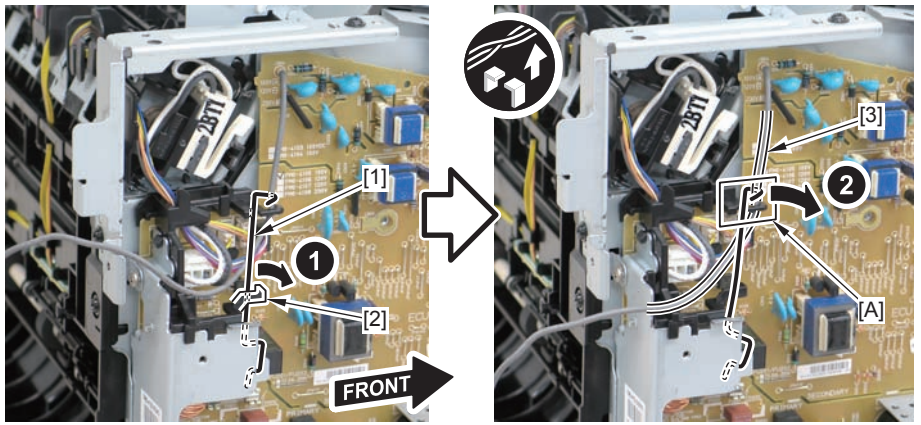
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



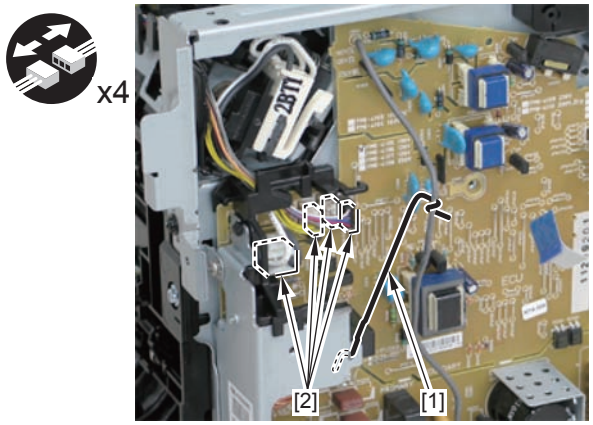
F-4-469

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



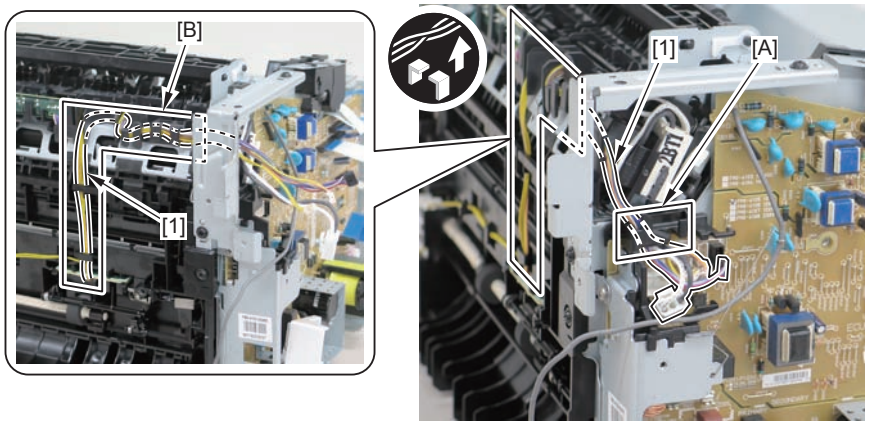
F-4-470

4) Remove the harness retaining spring [1] and 4 connectors [2].



F-4-471

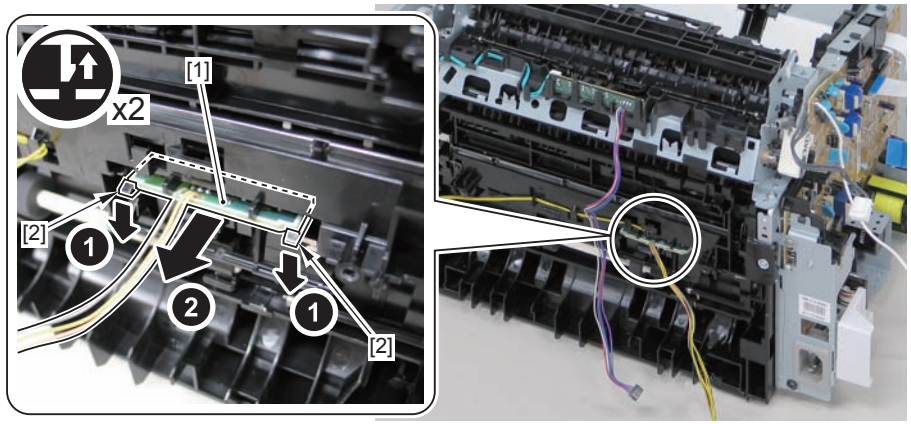
5)Remove the harness[1] from the guide[A] and [B].



F-4-472

6)Remove the paper leading edge sensor PCB[1]

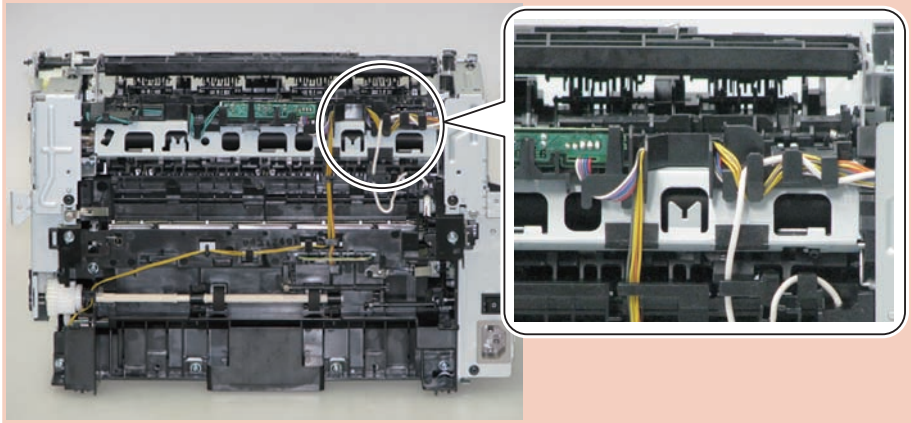
- 2 claws[2]



F-4-473

Note:

The below picture shows how to wind the harness.



F-4-474

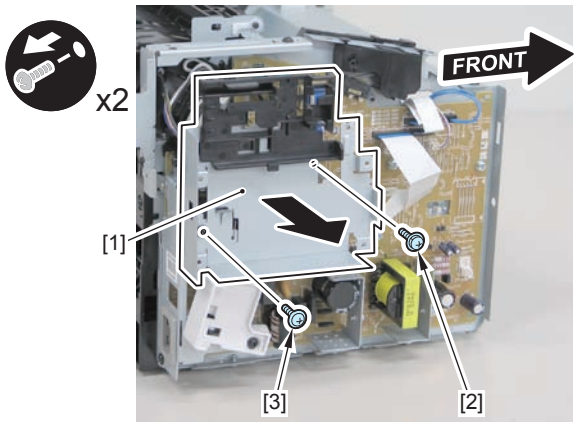
Removing the Fixing Delivery/Paper Width Sensor PCB(MF4820d)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

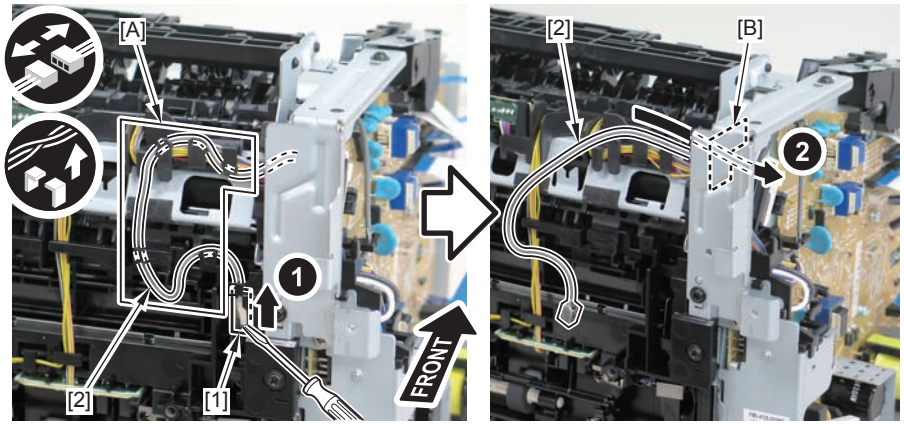
Procedure

1) Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-475

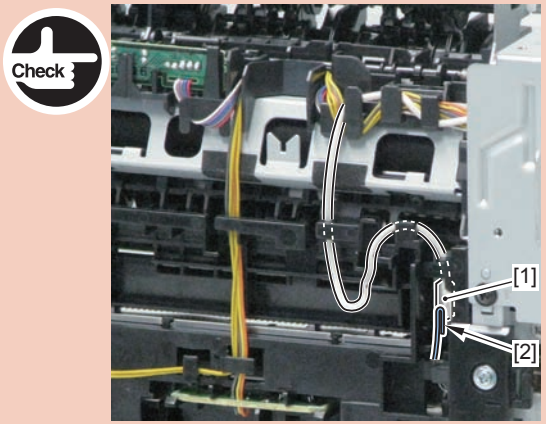
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-476

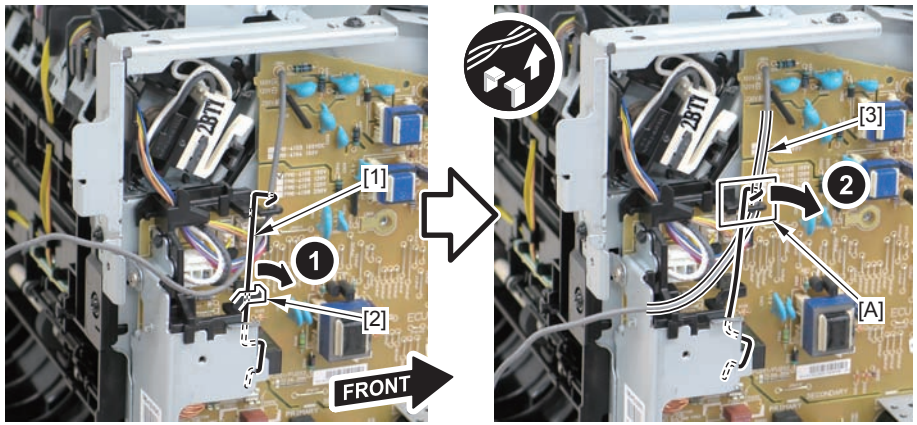
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



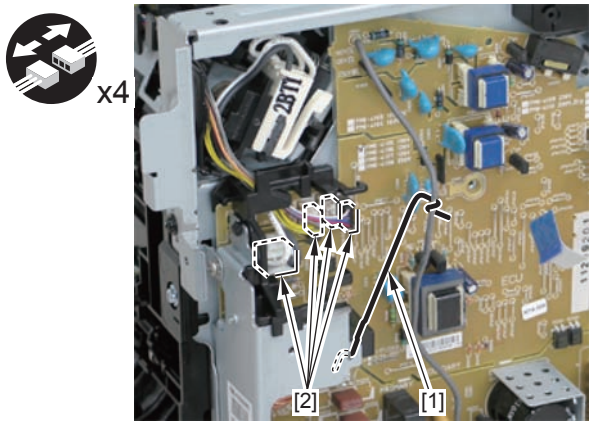
F-4-477

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



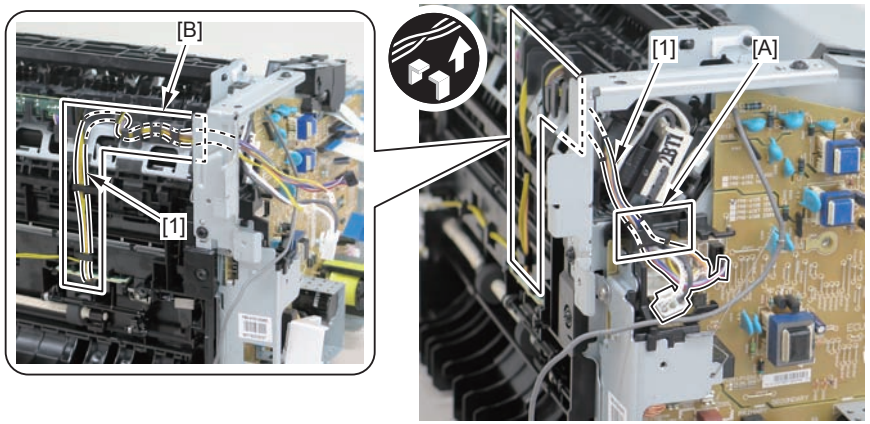
F-4-478

4) Remove the harness retaining spring [1] and 4 connectors [2].



F-4-479

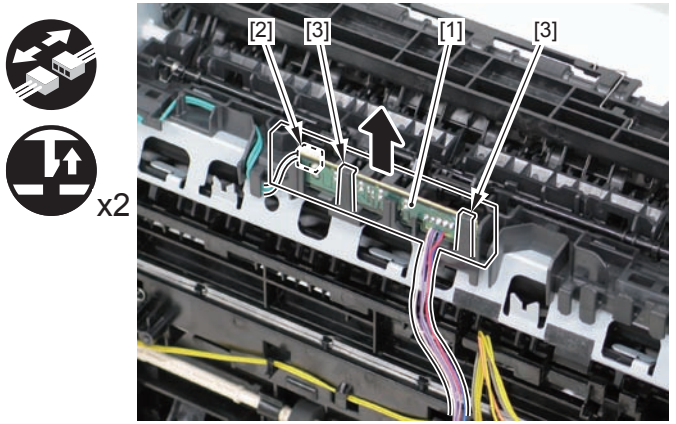
5)Remove the harness[1] from the guide[A] and [B].



F-4-480

6)Remove the fixing delivery/paper width sensor PCB[1]

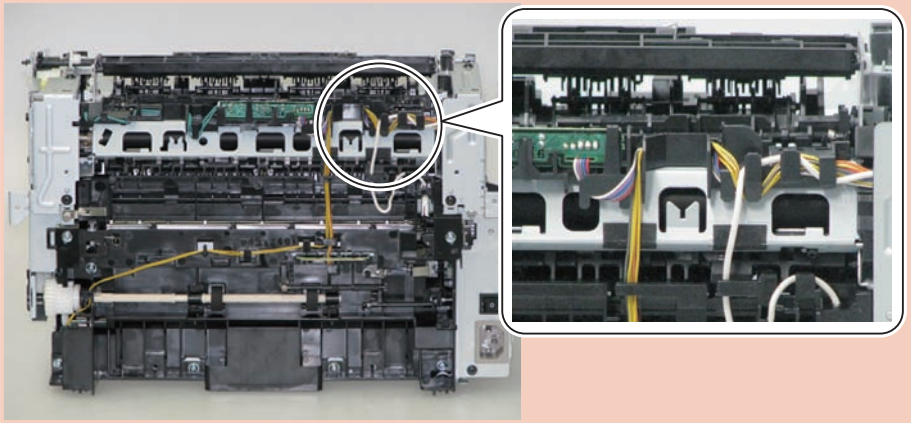
- 1 connector
- 2 claws[3]



F-4-481

Note:

The below picture shows how to wind the harness.



F-4-482

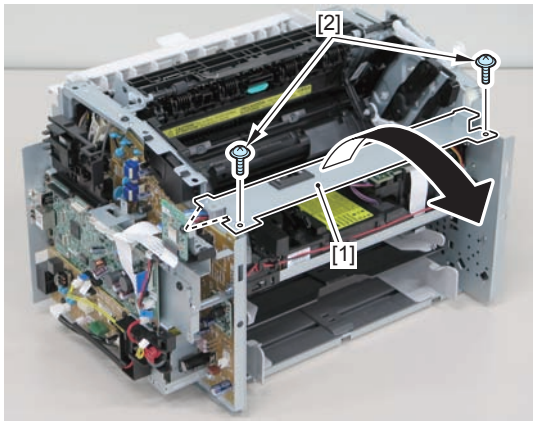
Removing the Toner Sensor and Multi Pickup Sensor Unit (MF4820d)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

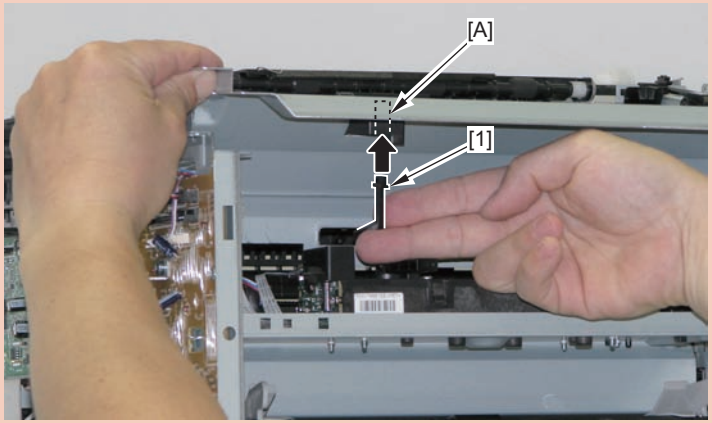
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-483

Caution:

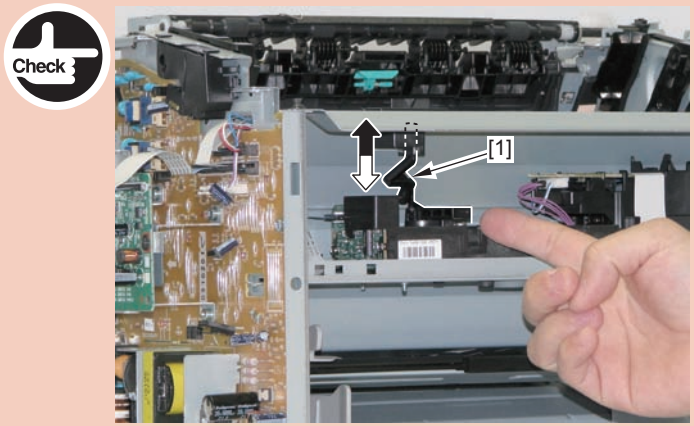
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-484

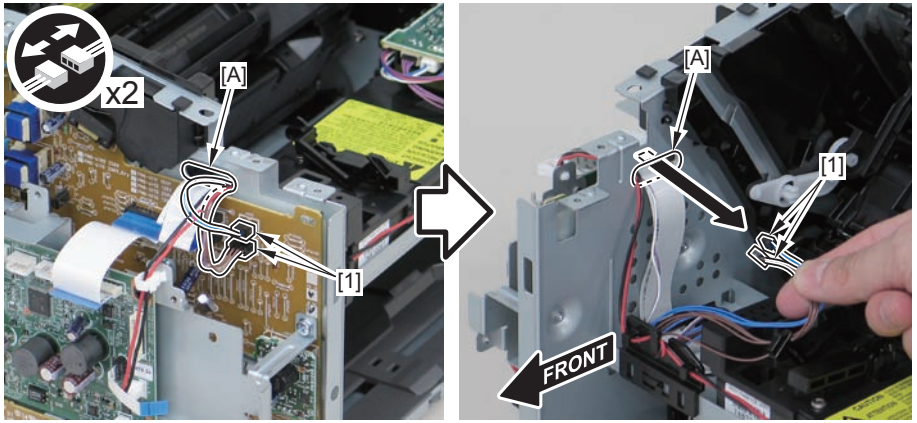
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



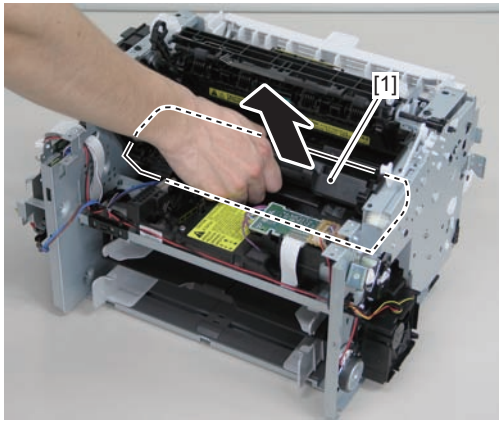
F-4-485

2)Disconnect the 2 connectors[1], and put it through the hole[A] of the left side plate to the inside.



F-4-486

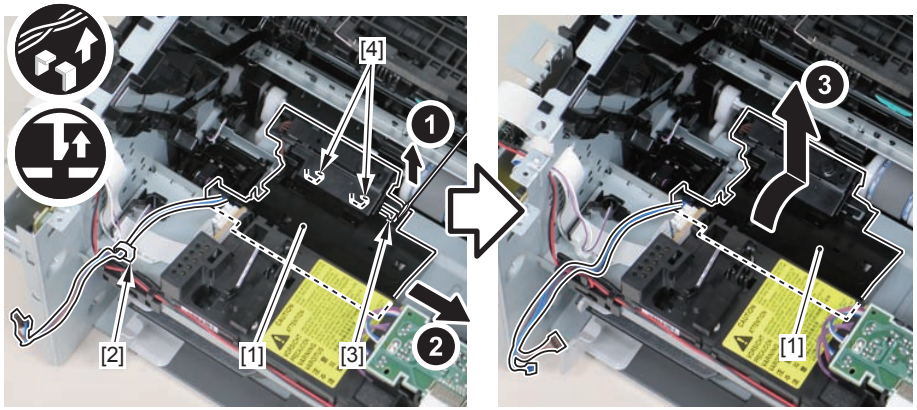
3)Remove the drum unit[1].



F-4-487

4)Remove the toner sensor/multi pickup sensor unit.

- 1 wire saddle[2]
- 1 claw[3]
- 2 hooks[4]



F-4-488

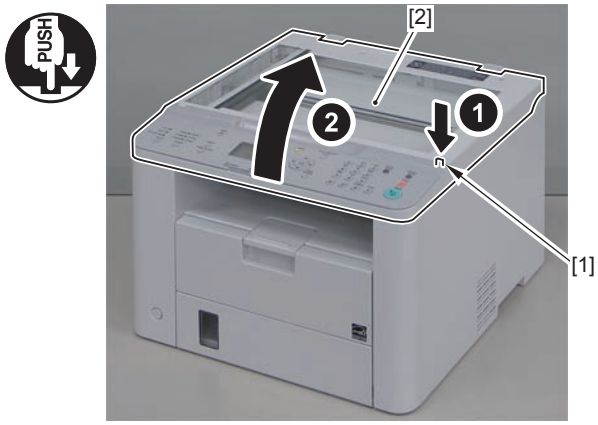
Removing the Control Panel Unit (D530)

Procedure

1)Remove the copyboard cover.

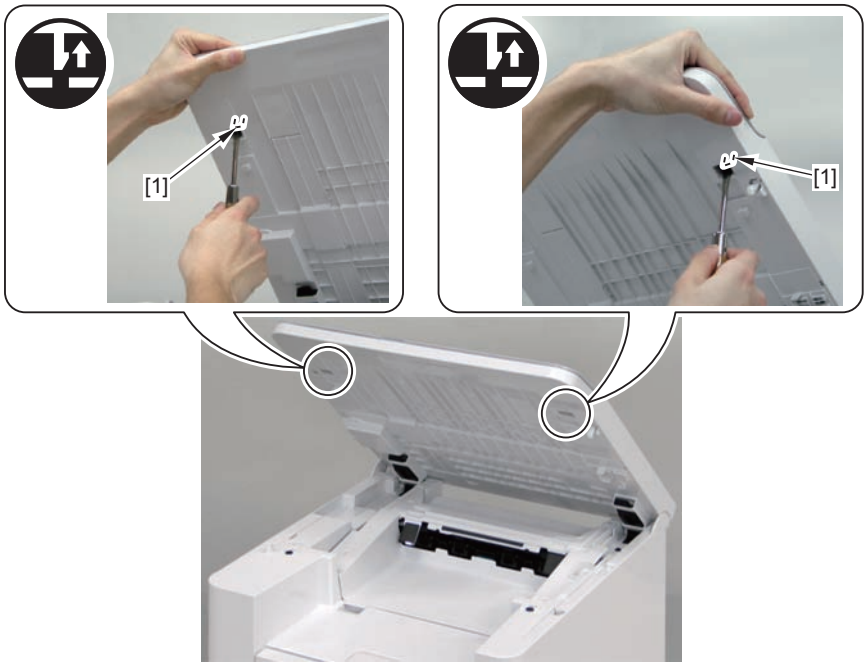
Procedure

1)Press the unlock button[1] and open the reader unit[2]



F-4-489

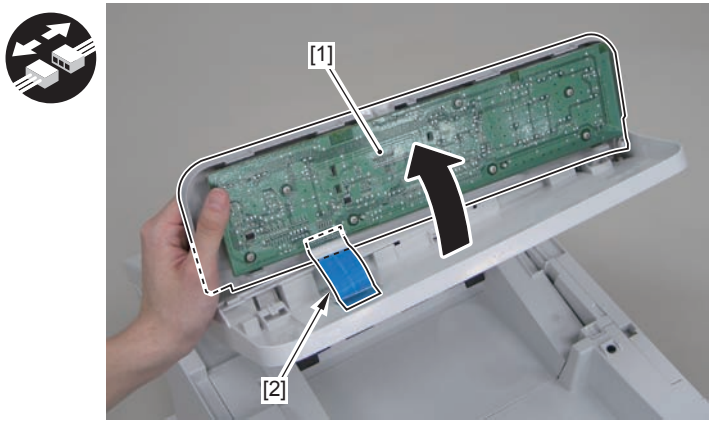
2) Remove the 2 claws[1]



F-4-490

3) Remove the control panel unit[1

- 1 flat cable[2]



F-4-491

Removing the Drive Belt (D530)

Preparation

1) Remove the left cover

Procedure

1) Close the reader unit [1] and place the host machine with its left side down.

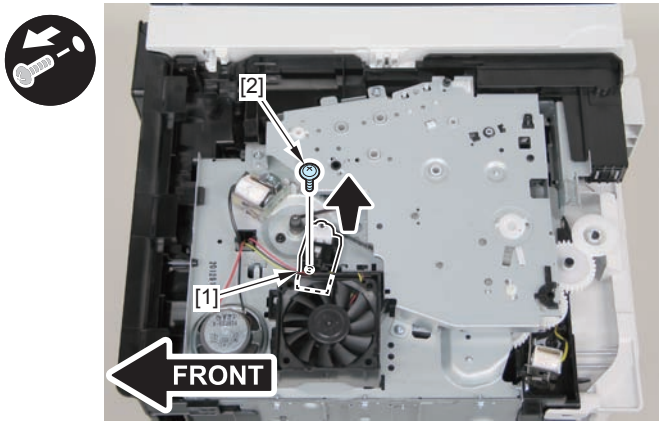
Caution:

Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.

F-4-492

2) Remove the tension unit[1].

- 1 screw[2]



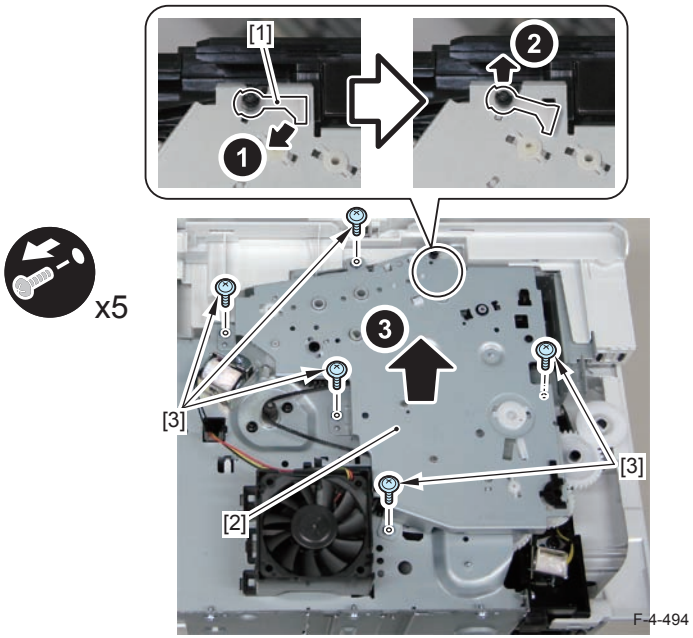
F-4-493

3)Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

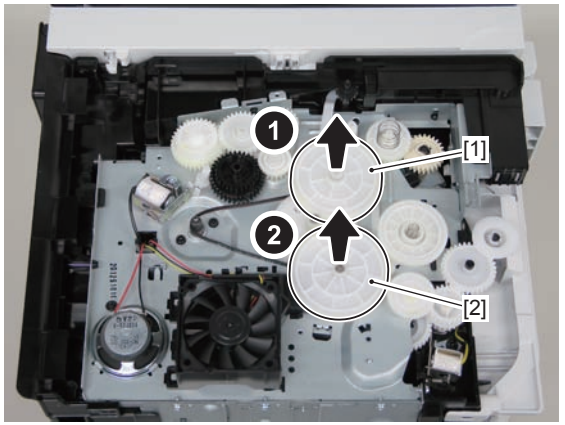
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



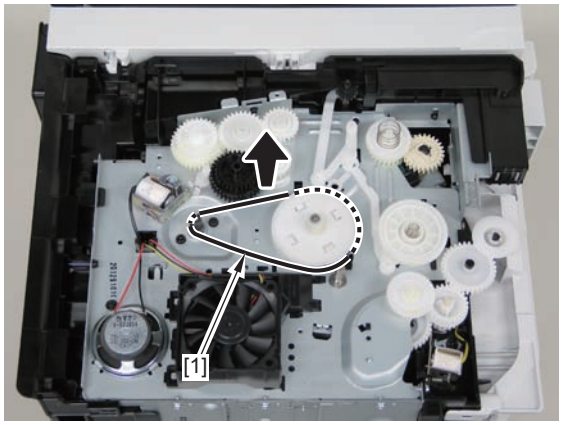
F-4-494

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-495

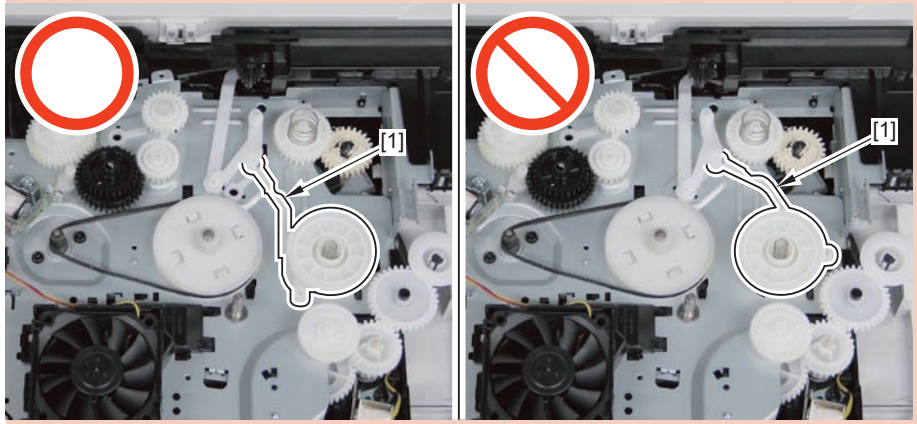
5)Remove the drive belt.



F-4-496

Caution:

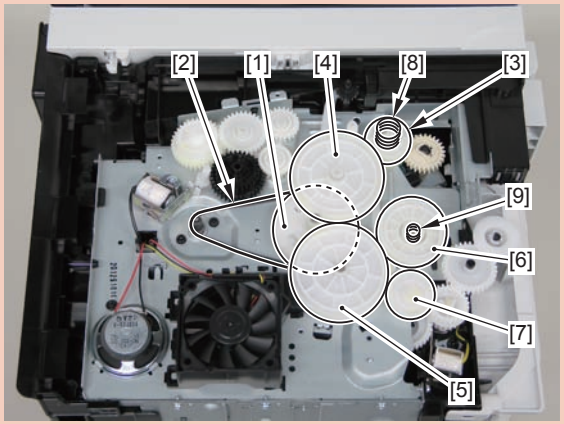
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-497

Caution:

Assemble the drive gear in the order shown in the below picture.

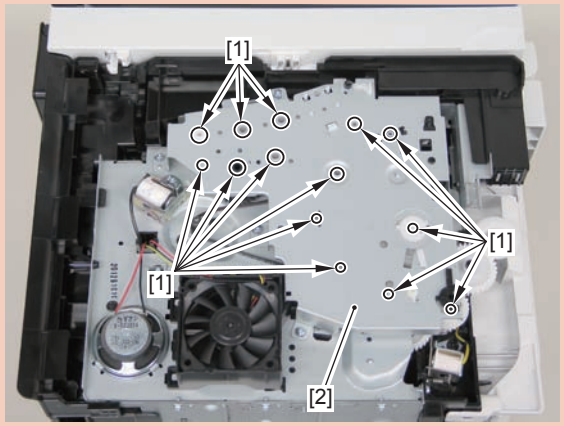


F-4-498

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-499

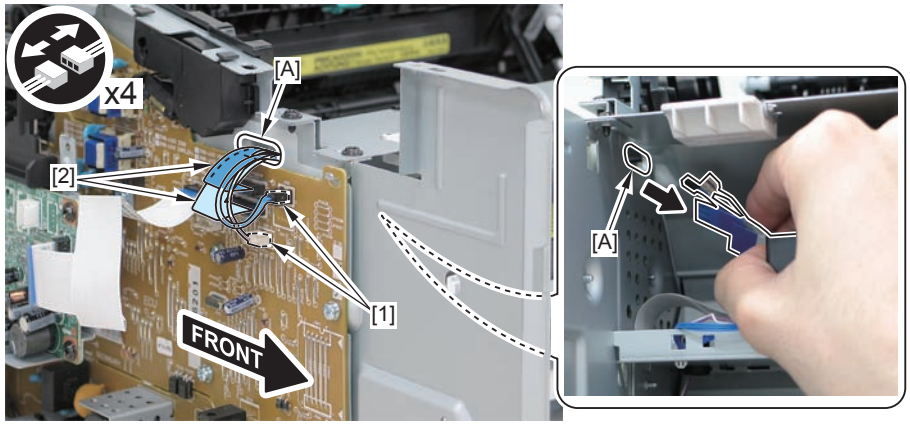
Removing the Main Motor (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-500

Caution:

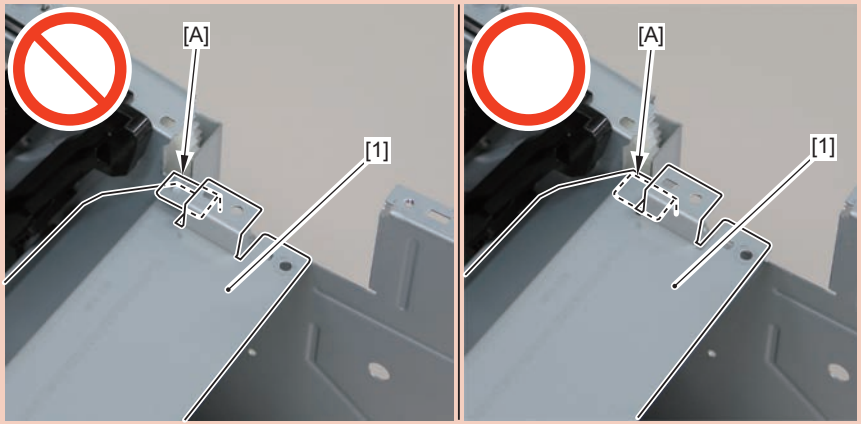
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

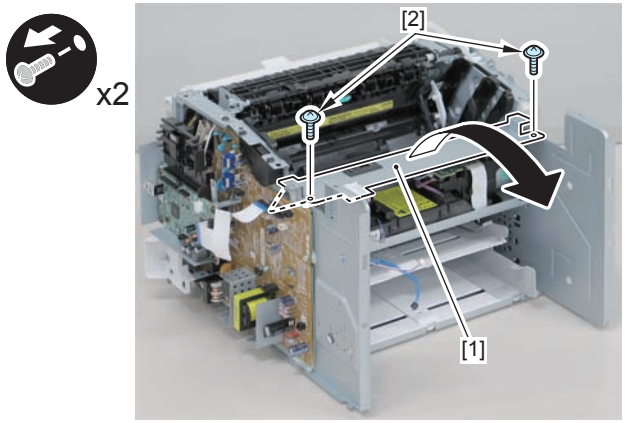
2)Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

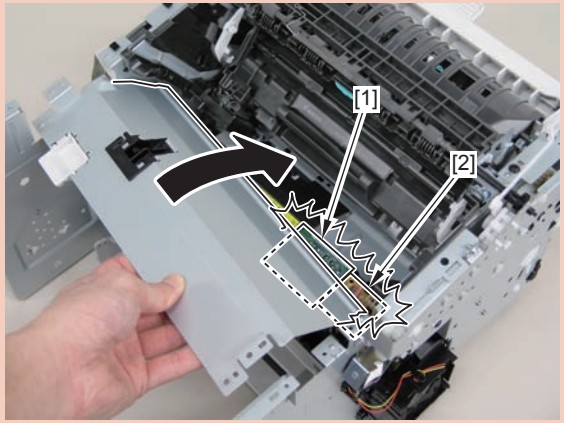




F-4-501

Caution:

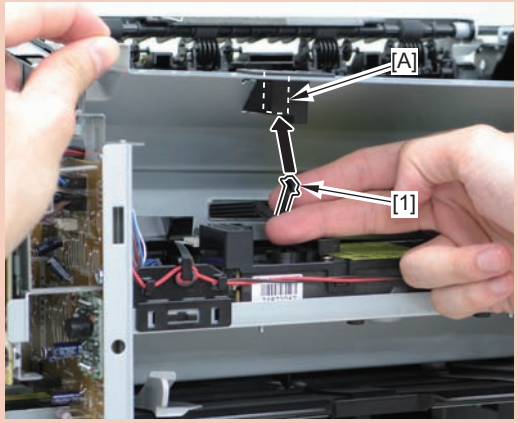
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-502

Caution:

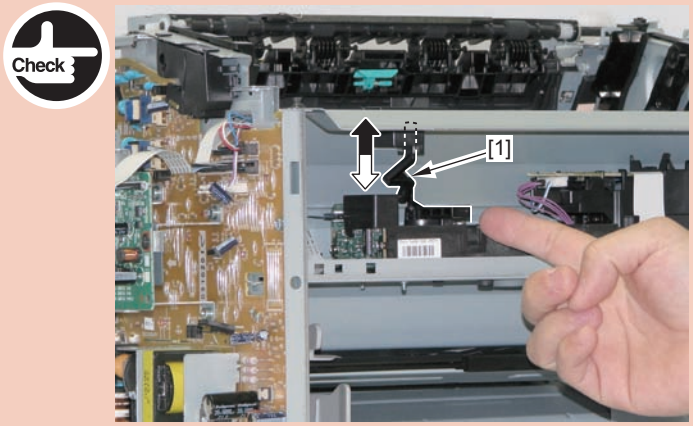
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-503

Caution:

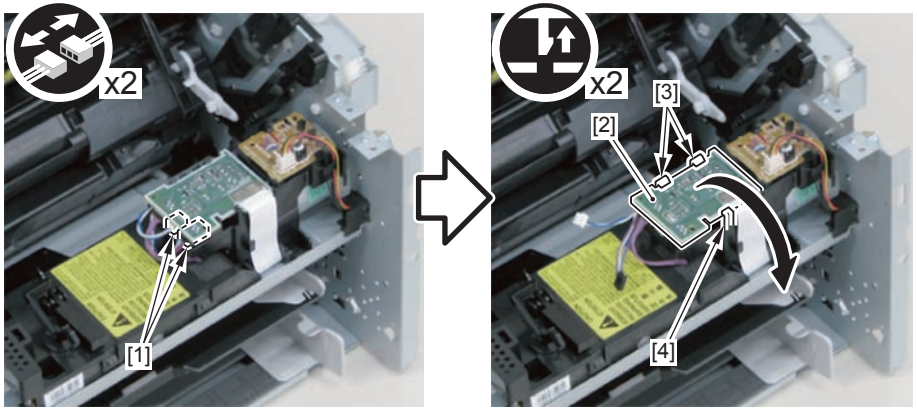
Ensure that the shutter open/close lever [1] can move vertically.



F-4-504

3)Disconnect the 2 connectors[1], and remove the motor driver PCB[2]

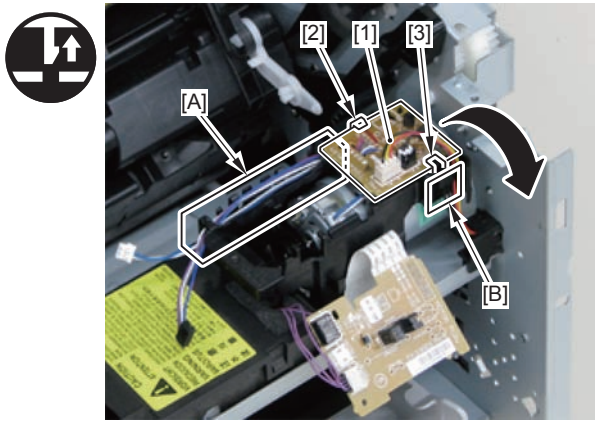
- 2 claws[3]
- 1 hook[4]



F-4-505

4)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]

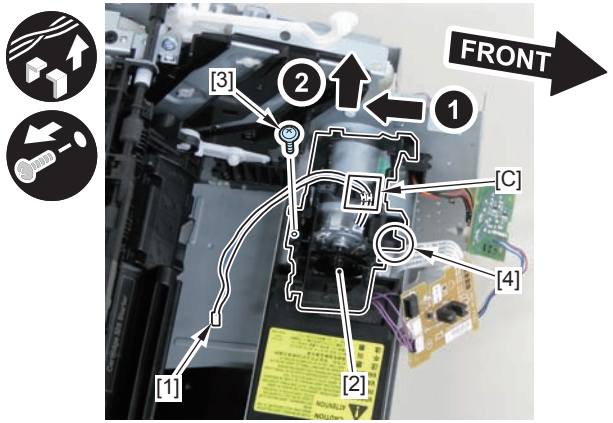


F-4-506

5)Free the motor harness[1] from the harness guide[C].

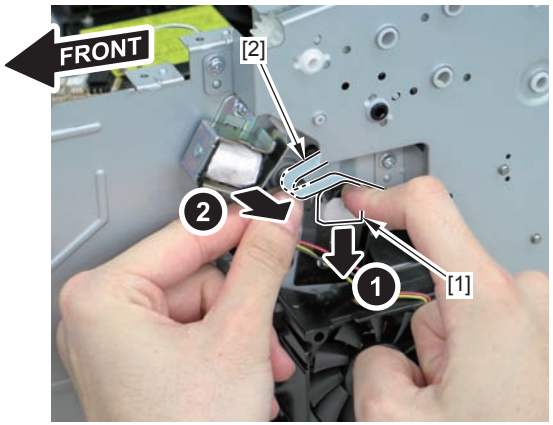
6)Remove the motor guide[2]

- 1 screw[3]
- 1 hook[4]



F-4-507

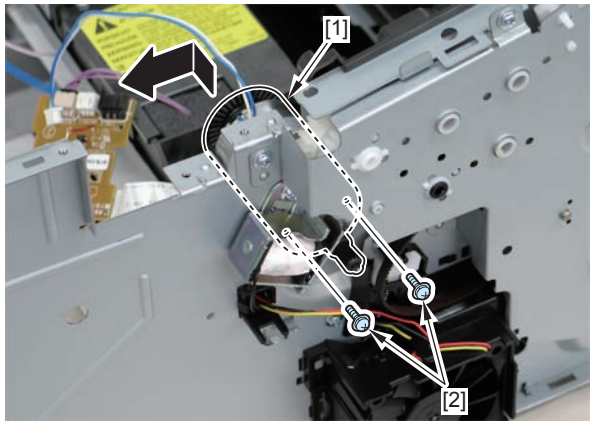
7)Lower the tension unit[1], and remove the belt[2].



F-4-508

8)Remove the main motor[1]

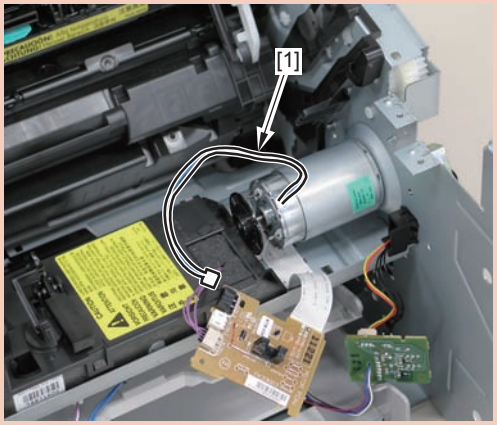
- 2 screws(with washer)[2]



F-4-509

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



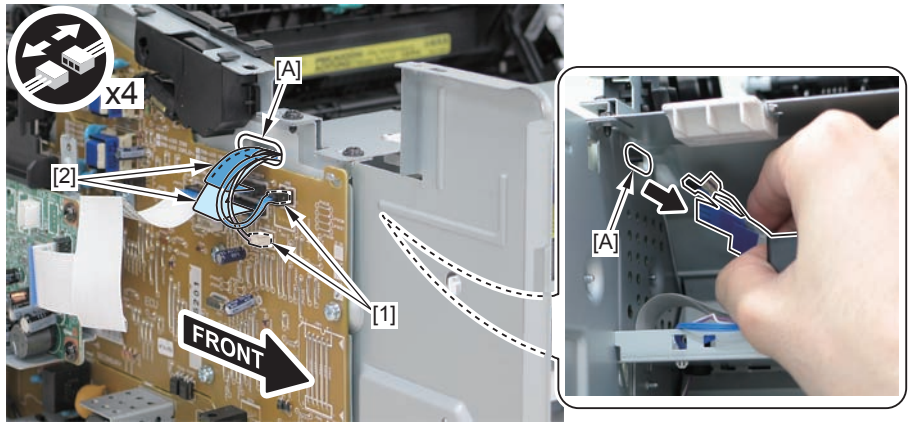
Removing the Main Fan (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



Caution:

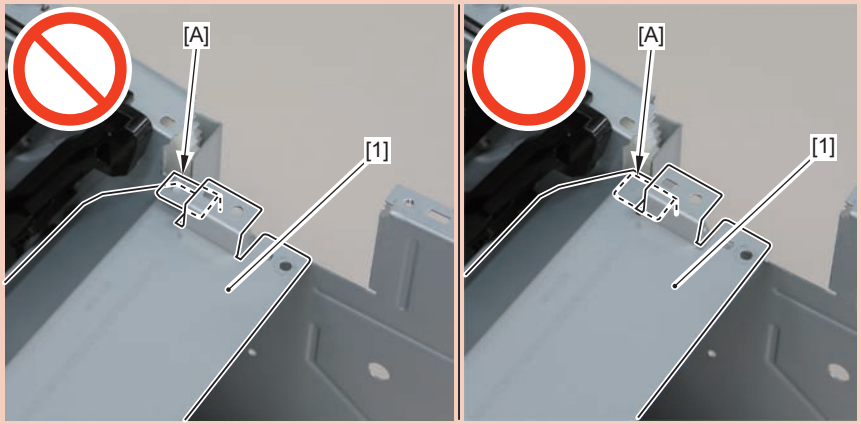
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

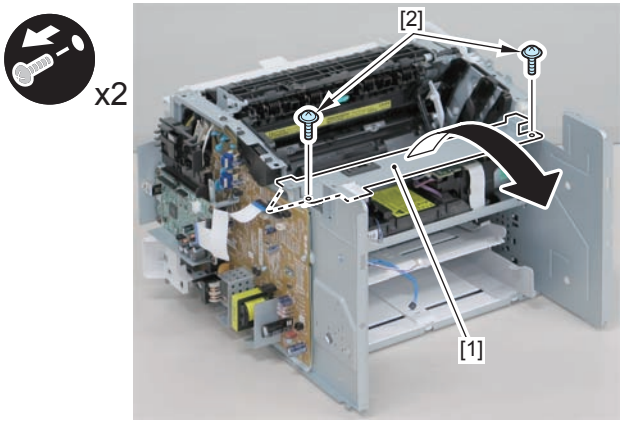
2) Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

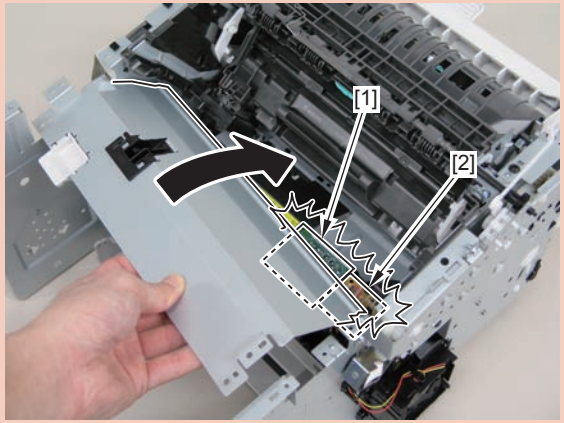




F-4-510

Caution:

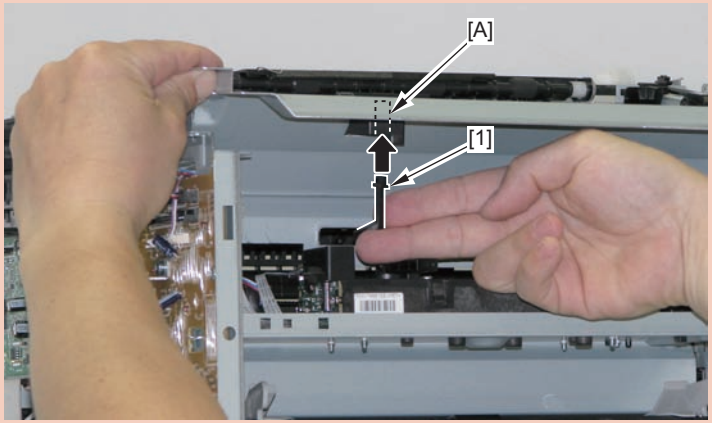
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-511

Caution:

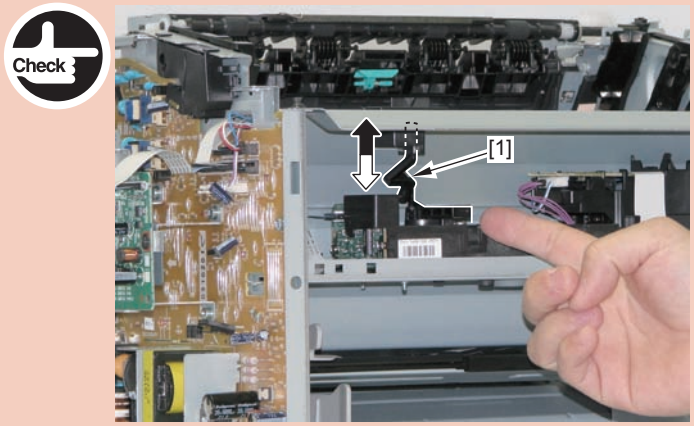
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-512

Caution:

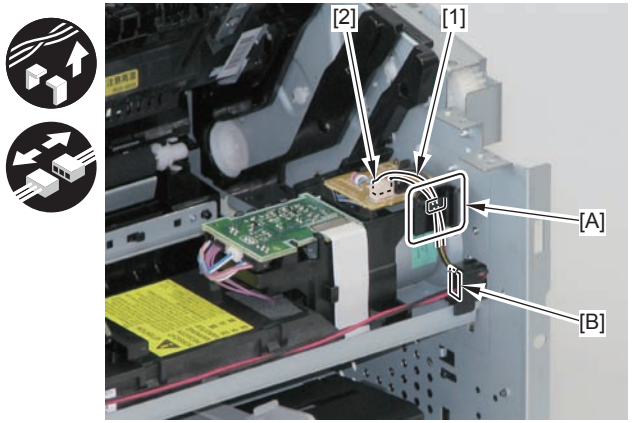
Ensure that the shutter open/close lever [1] can move vertically.



F-4-513

3)Free the fan harness[1] from the harness guide[A], and put it through the hole[B] of the right side plate to the outside.

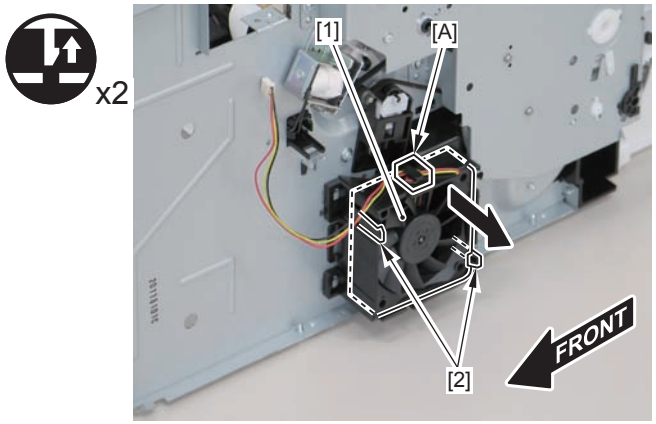
- 1 connector[2]



F-4-514

4)Free the harness from the guide[A], and remove the main fan[1].

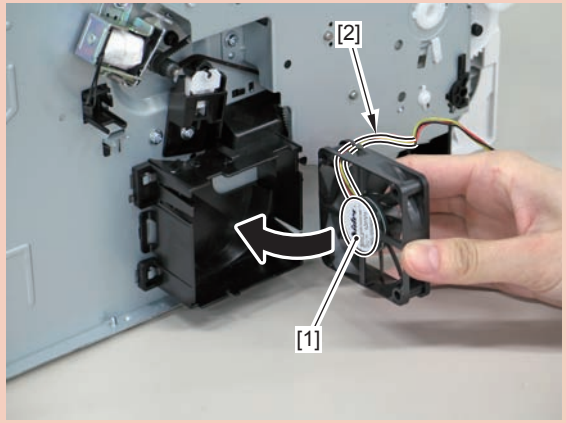
- 2 claws[2]



F-4-515

Caution:

When mounting the main fan, attach the harness [2] to the upper-right side of the fan with the fan label [1] facing inwards.



F-4-516

Removing the Engine Controller PCB(D530)

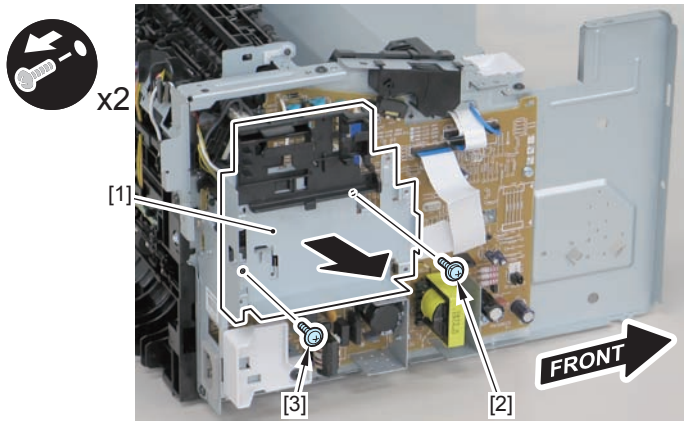
Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB

Procedure

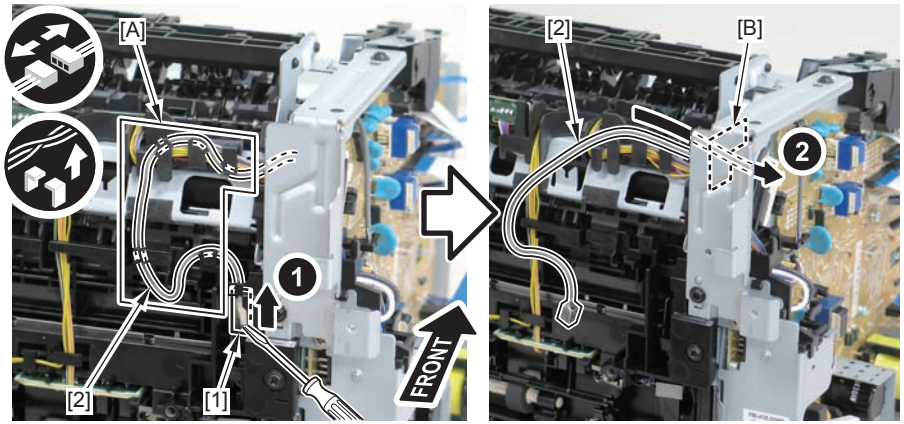
1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-517

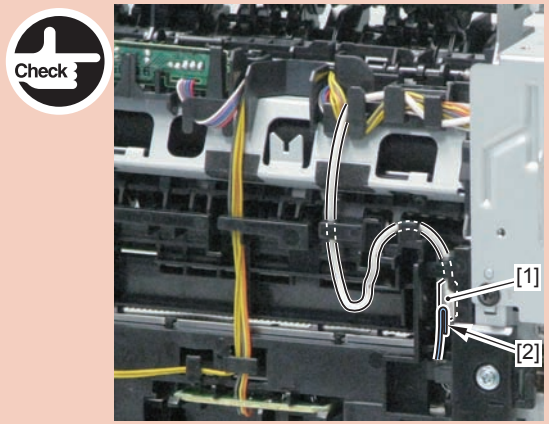
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-518

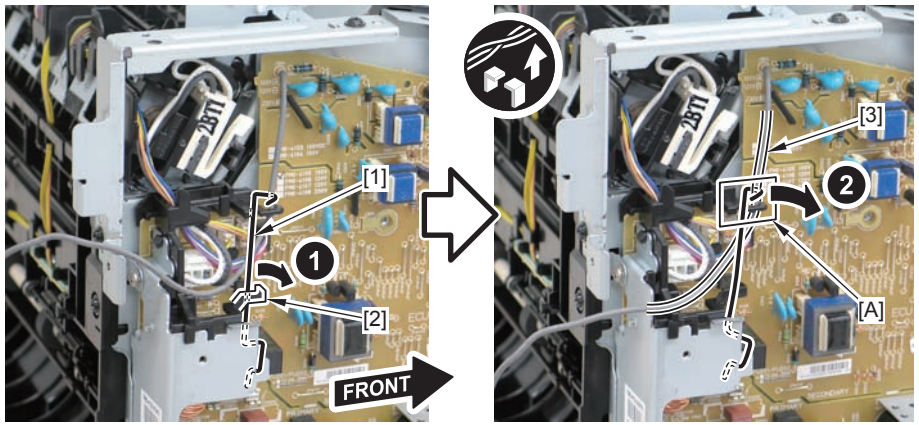
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-519

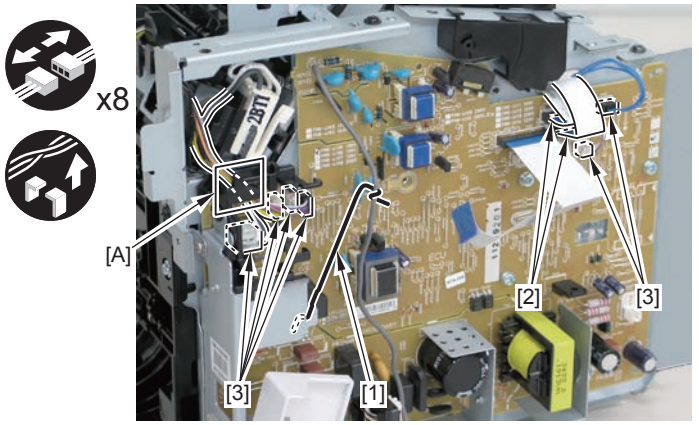
3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-520

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

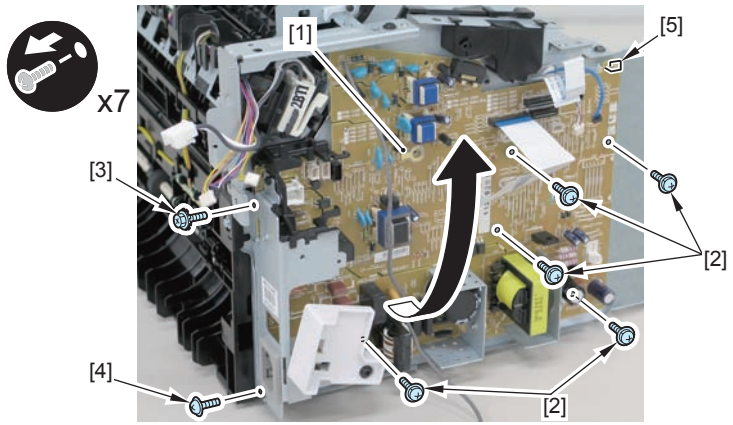
- 2 flat cables[2]
- 6 connectors[3]



F-4-521

5)Remove the engine controller PCB[1].

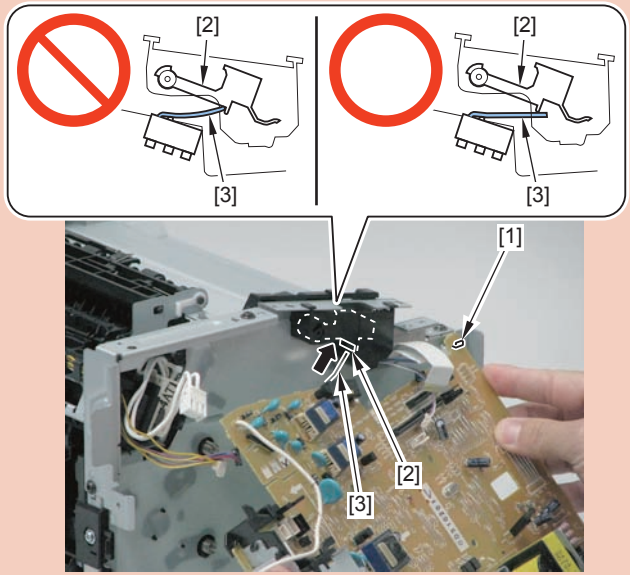
- 5 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-522

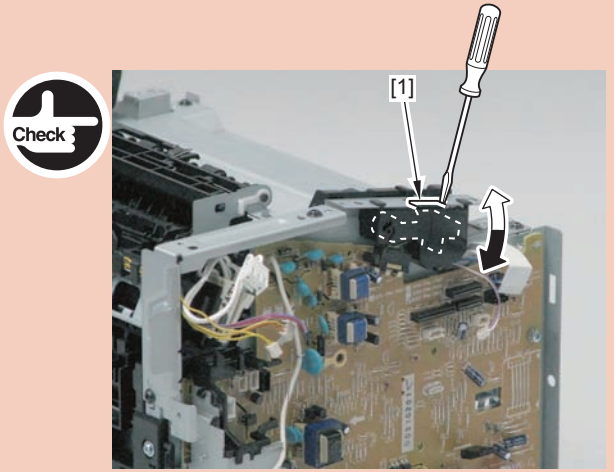
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-523

Ensure that the switch arm [1] can move vertically.



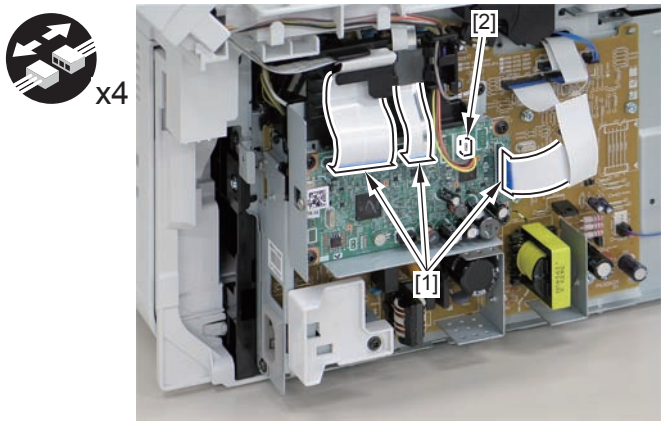
Removing the Main Controller PCB(D530)

Preparation

1) Remove the left cover

Procedure

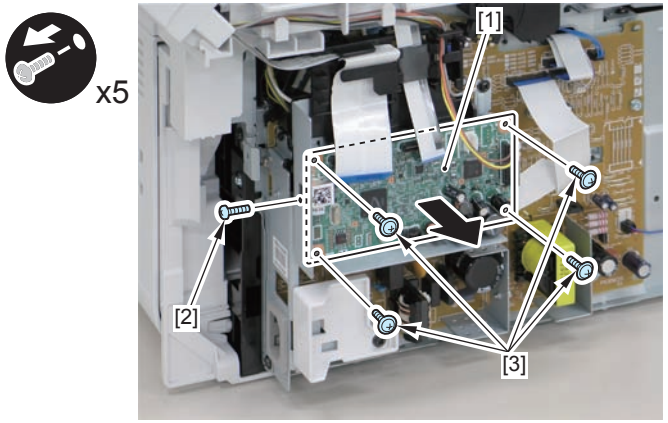
1)Remove the 3 flat cables[1] and connector[2].



F-4-524

2)Remove the main controller PCB[1].

- 1 screw(binding)[2]
- 4 screws(black TP)[3]



F-4-525

Removing the Paper Leading Edge Sensor PCB(D530)

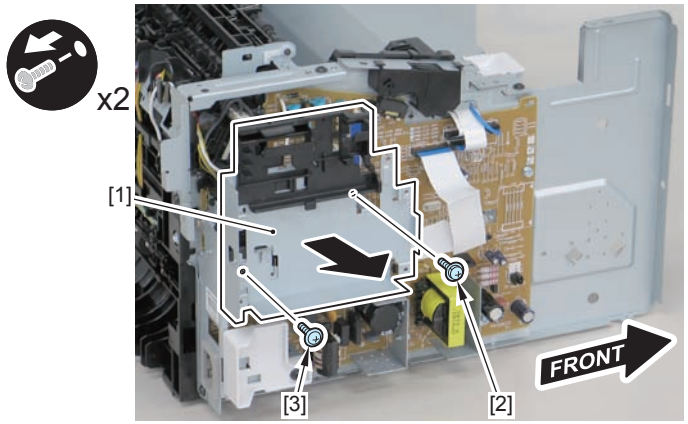
Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB

Procedure

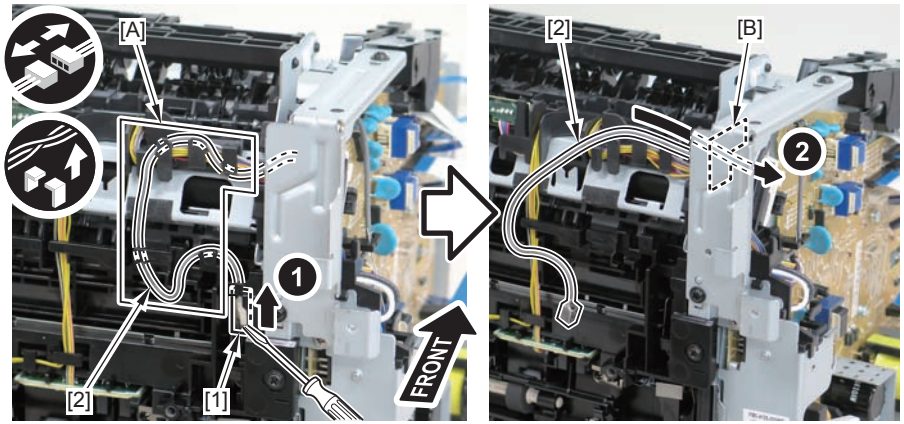
1)Remove the main controller mounting plate[1]

- 1 screw(with washers)[2]
- 1 screws(black TP)[3]



F-4-526

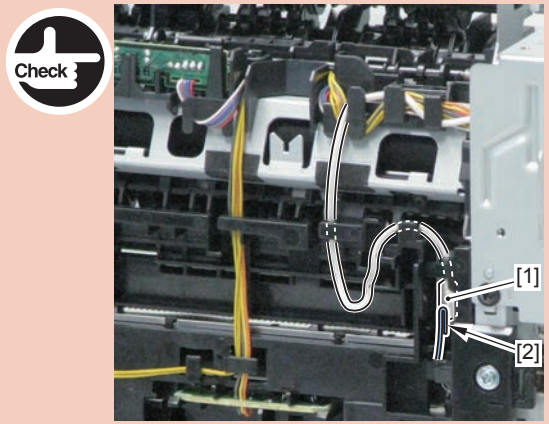
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-527

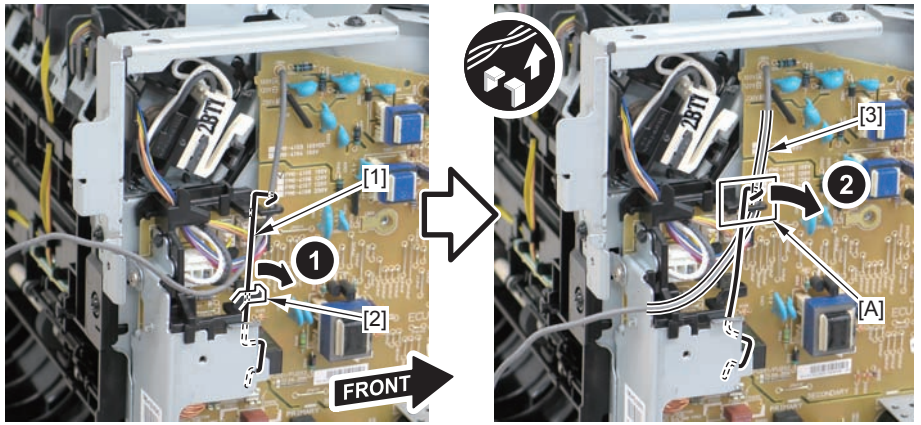
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



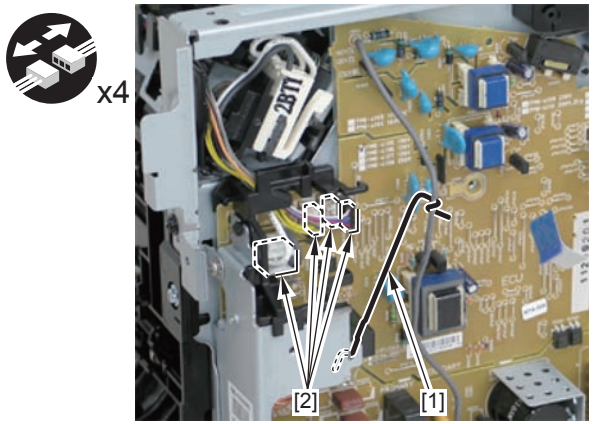
F-4-528

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



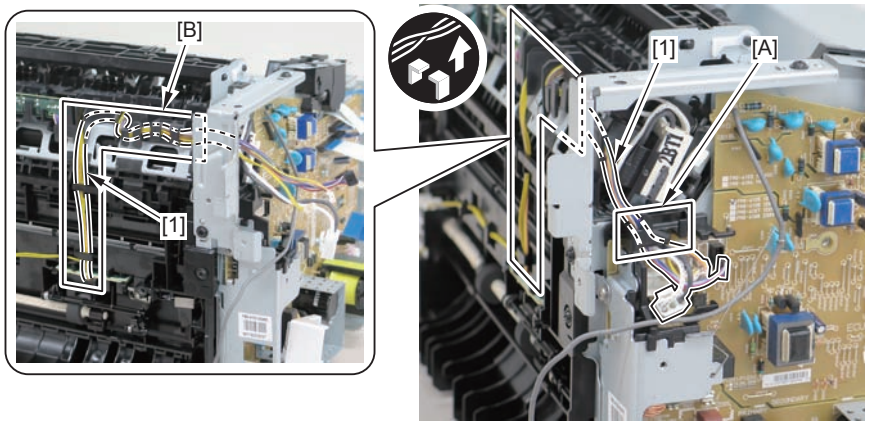
F-4-529

4)Remove the harness retaining spring[1] and 4 connectors[2].



F-4-530

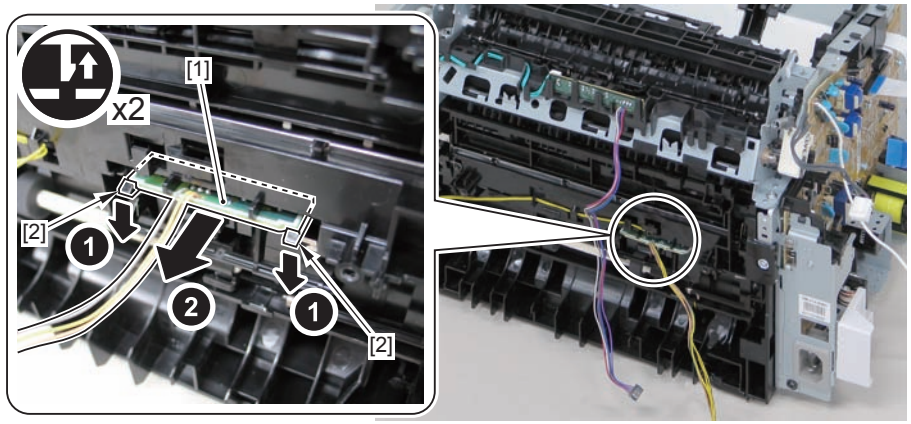
5)Remove the harness[1] from the guide[A] and [B].



F-4-531

6)Remove the paper leading edge sensor PCB[1]

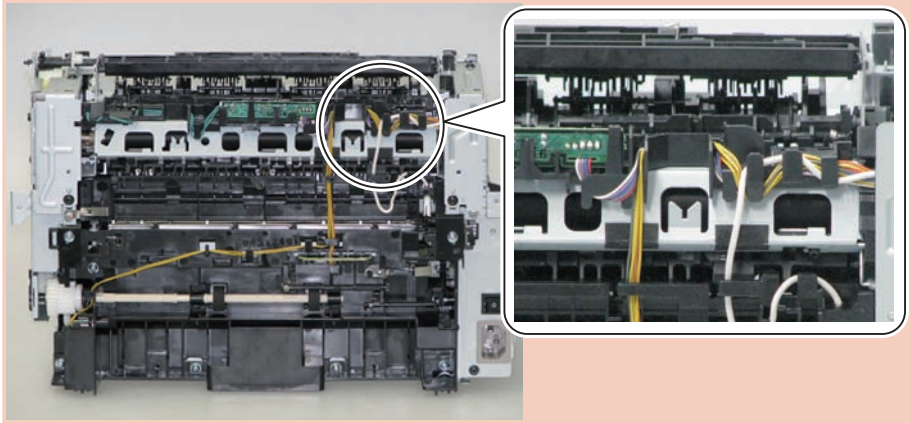
- 2 claws[2]



F-4-532

Note:

The below picture shows how to wind the harness.



F-4-533

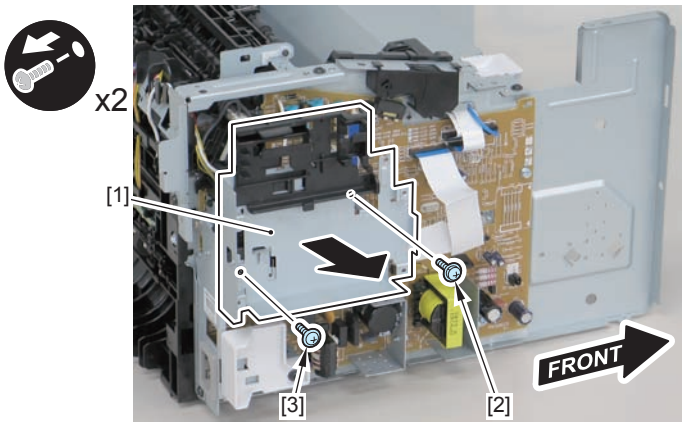
Removing the Fixing Delivery/Paper Width Sensor PCB(D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

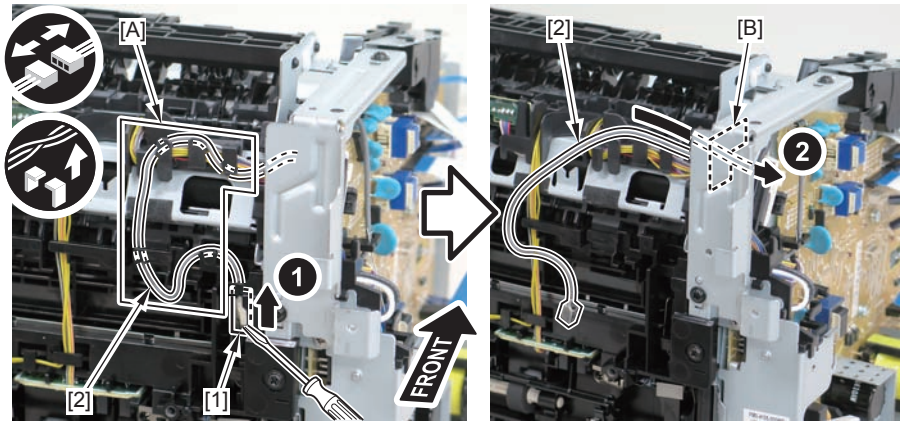
Procedure

1) Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-534

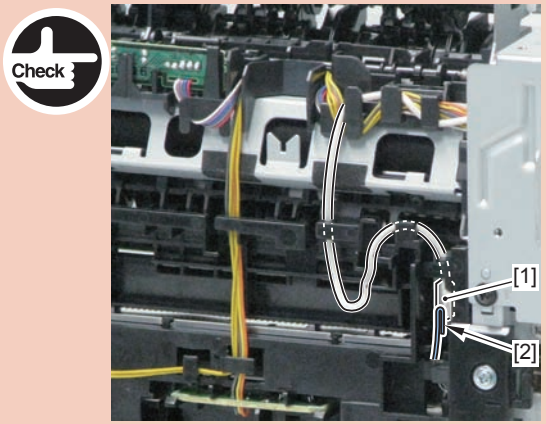
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-535

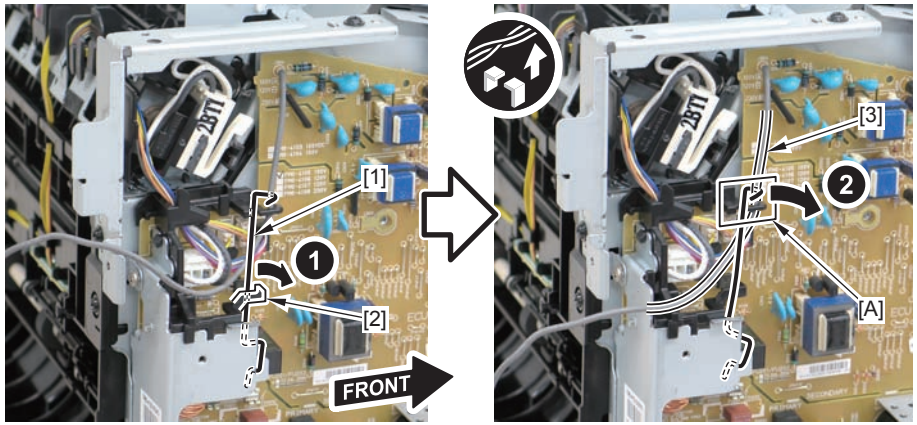
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



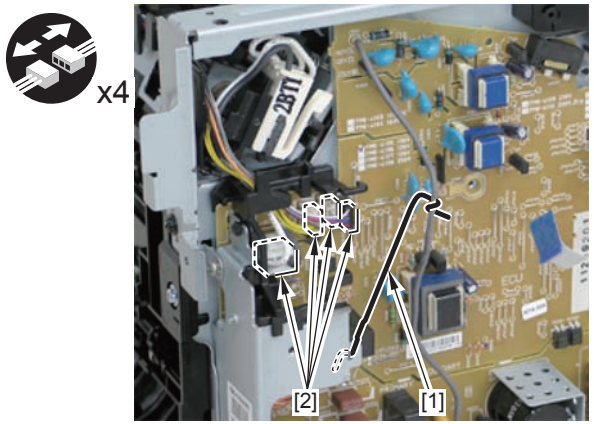
F-4-536

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



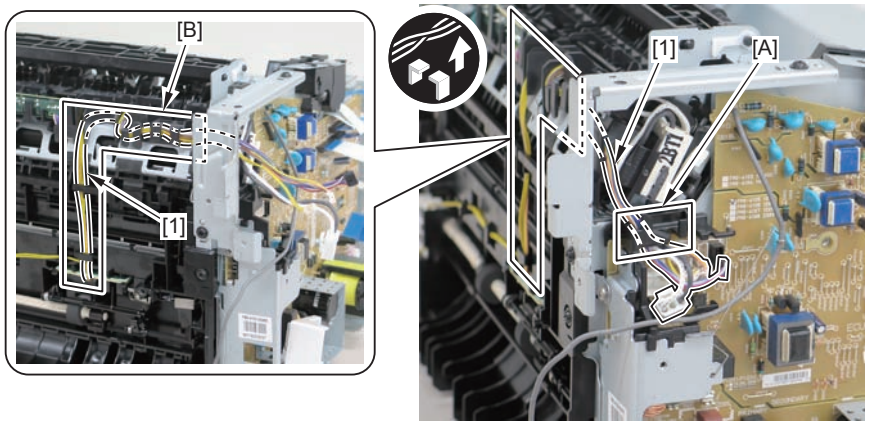
F-4-537

4)Remove the harness retaining spring[1] and 4 connectors[2].



F-4-538

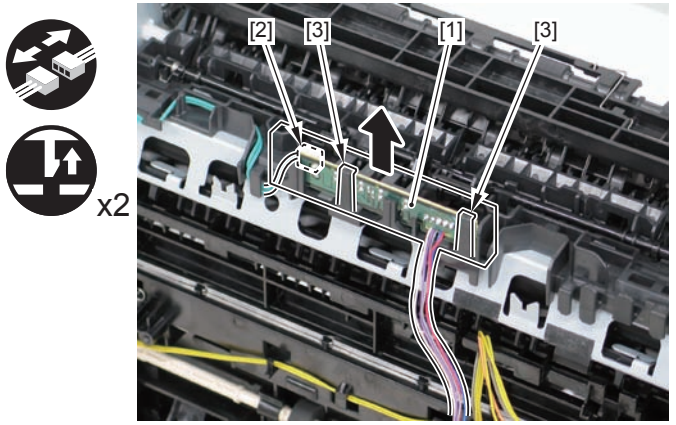
5)Remove the harness[1] from the guide[A] and [B].



F-4-539

6)Remove the fixing delivery/paper width sensor PCB[1]

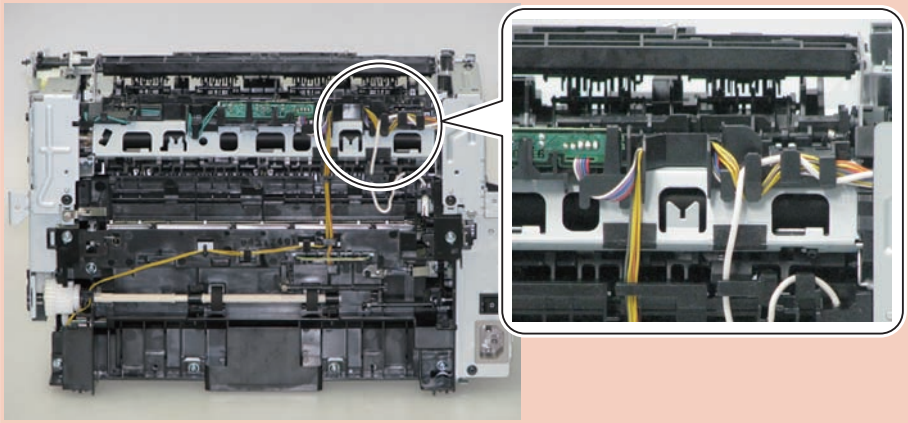
- 1 connector
- 2 claws[3]



F-4-540

Note:

The below picture shows how to wind the harness.



F-4-541

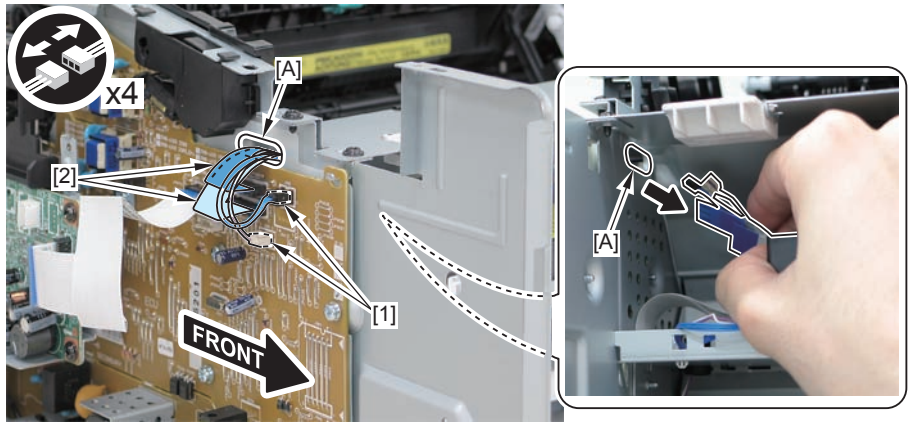
Removing the Multi Pickup Sensor Unit (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



Caution:

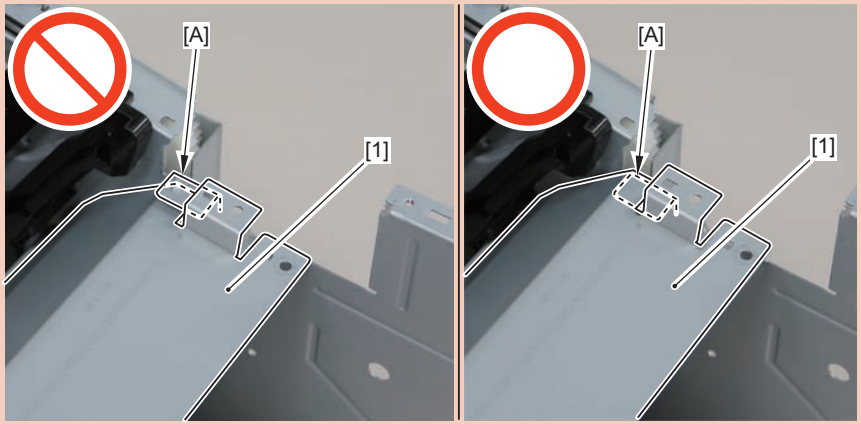
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

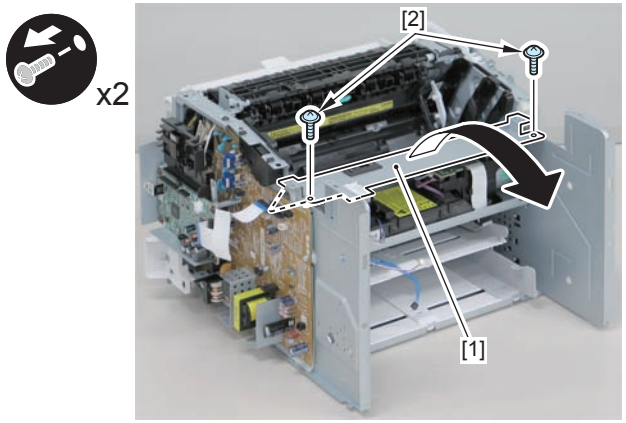
2)Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

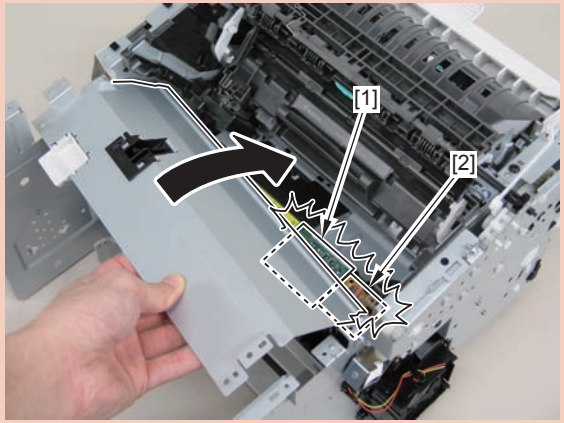




F-4-542

Caution:

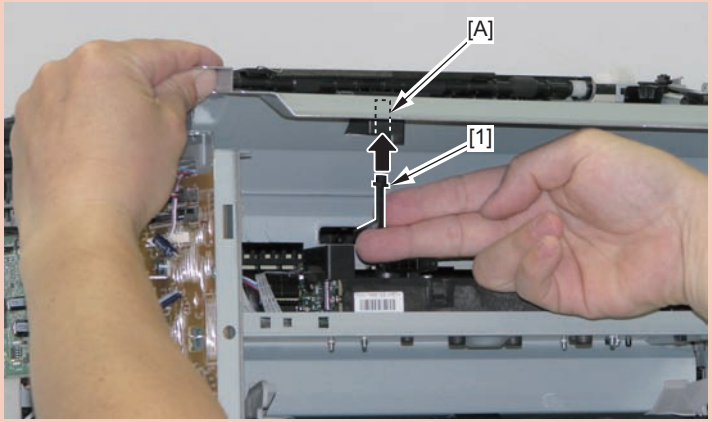
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-543

Caution:

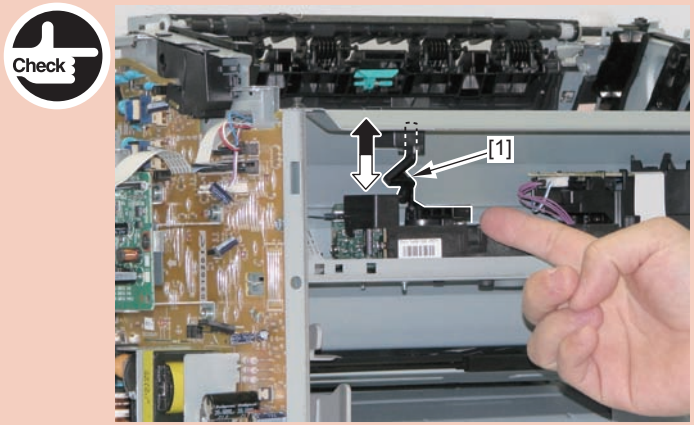
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-544

Caution:

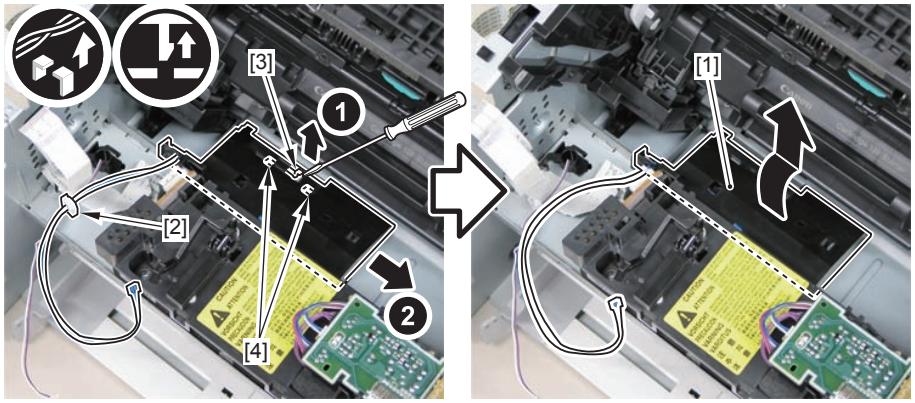
Ensure that the shutter open/close lever [1] can move vertically.



F-4-545

3)Remove the multi pickup sensor unit[1]

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



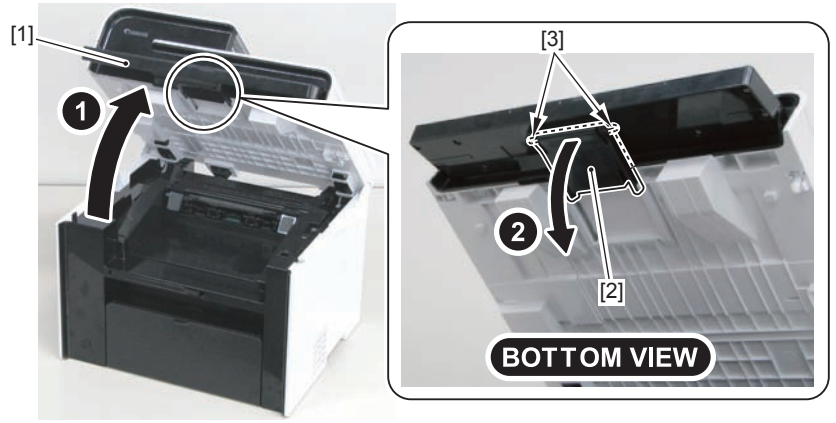
F-4-546

Removing the Control Panel Unit (MF4780w/MF4770n/MF4750/MF4730)

Procedure

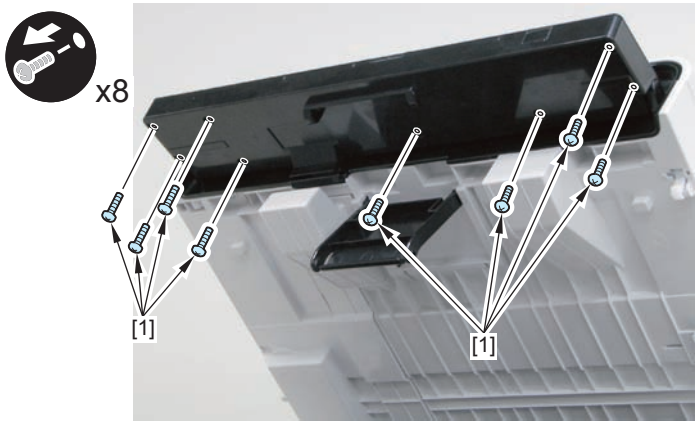
1)Open the reader unit [1] and remove the control panel support plate[2]

- 2 protrusions[3]



F-4-547

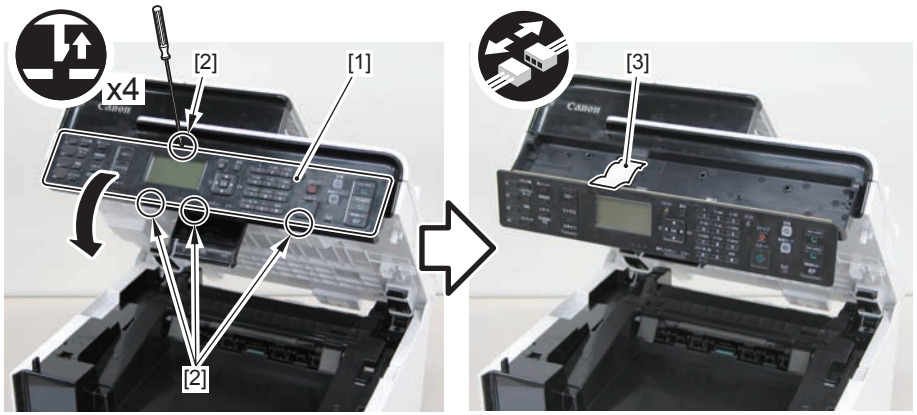
2) Remove the 8 screws[1] on the back side of the control panel unit.



F-4-548

3) Remove the control panel unit[1]

- 4 claws[2]
- 1 flat cable[3]



F-4-549

Removing the Drive Belt (MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the right cover

Procedure

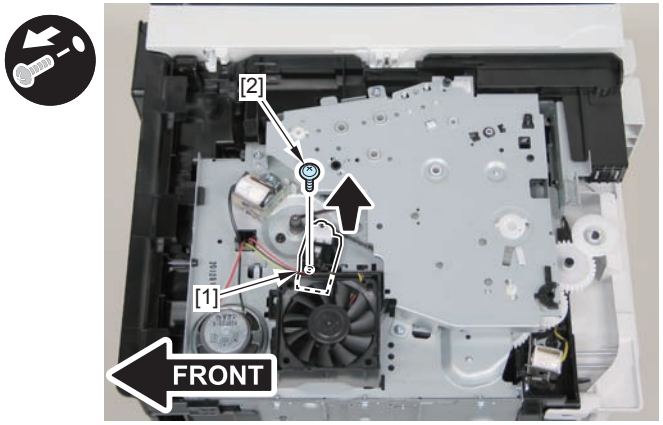
1) Close the reader unit [1] and place the host machine with its left side down.

> Caution:
>
> Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.

F-4-550

2) Remove the tension unit[1].

- 1 screw[2]



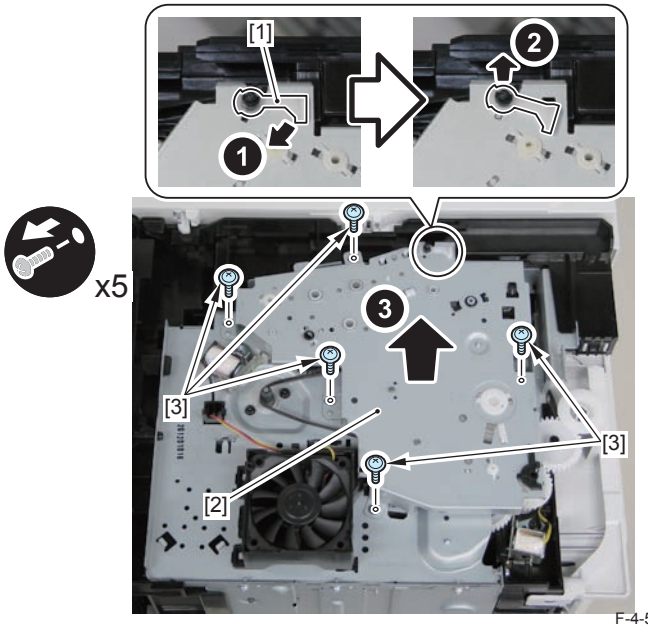
F-4-551

3)Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

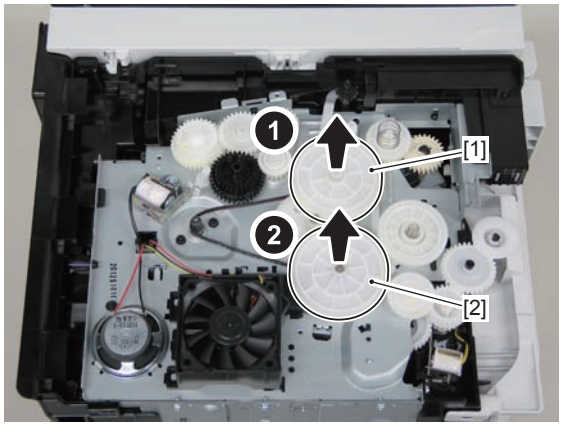
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



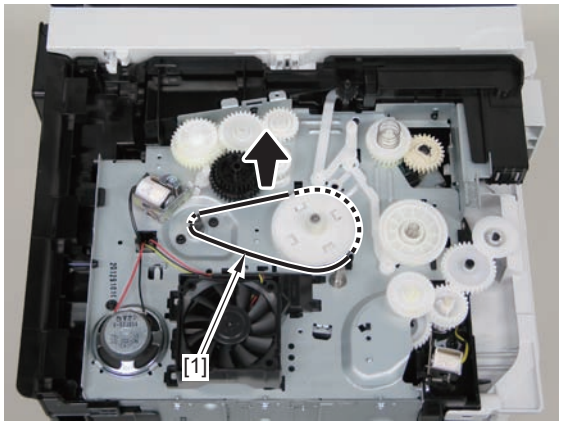
F-4-552

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-553

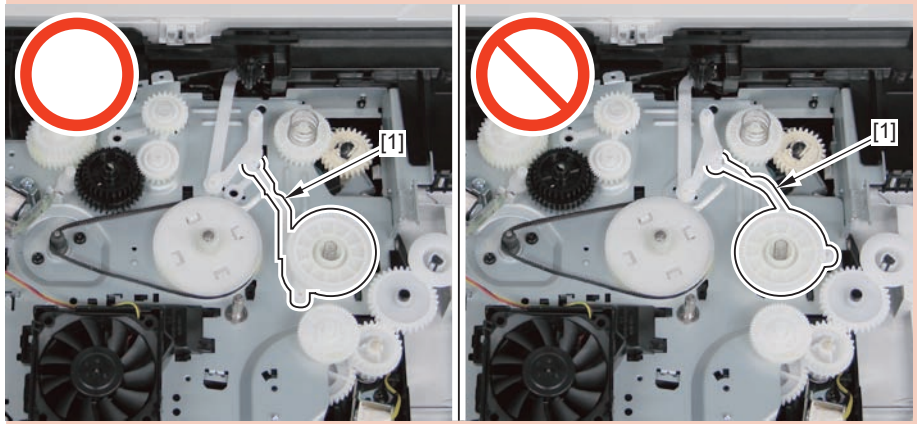
5)Remove the drive belt.



F-4-554

Caution:

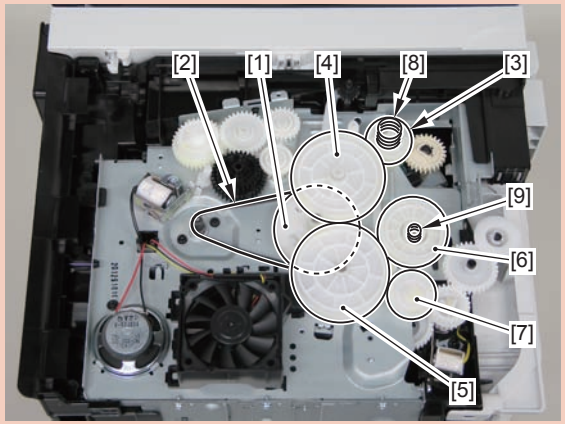
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-555

Caution:

Assemble the drive gear in the order shown in the below picture.

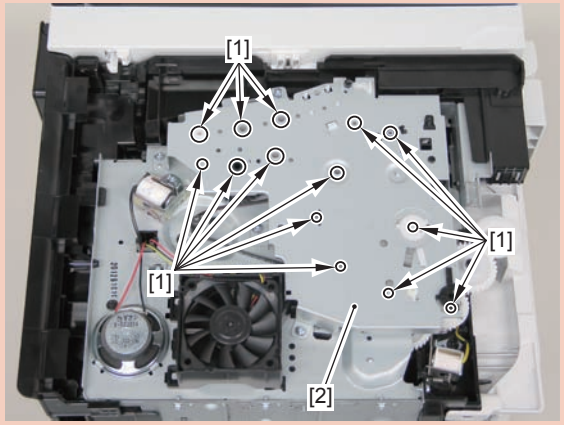


F-4-556

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-557

Removing the Main Motor (MF4780w/MF4770n/MF4750/MF4730)

Preparation

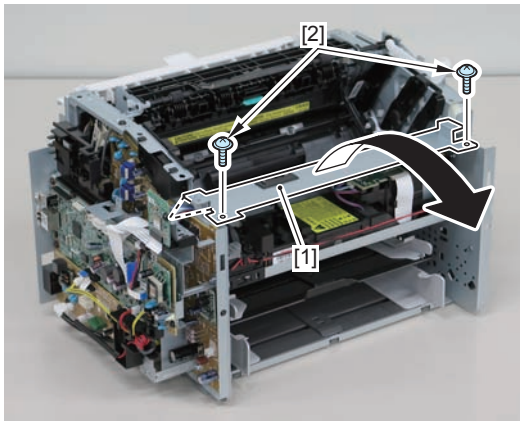
1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the scanner cover[1]

- 2 screws(black TP)[2]

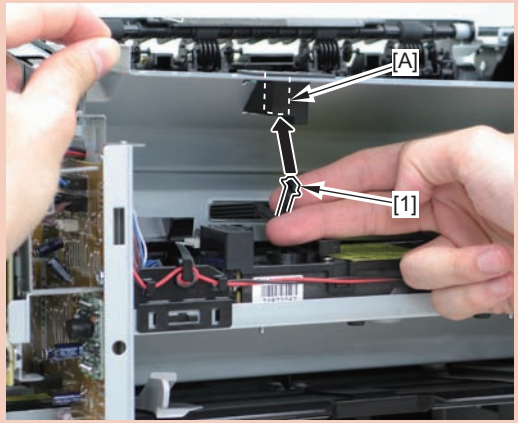
x2



F-4-558

Caution:

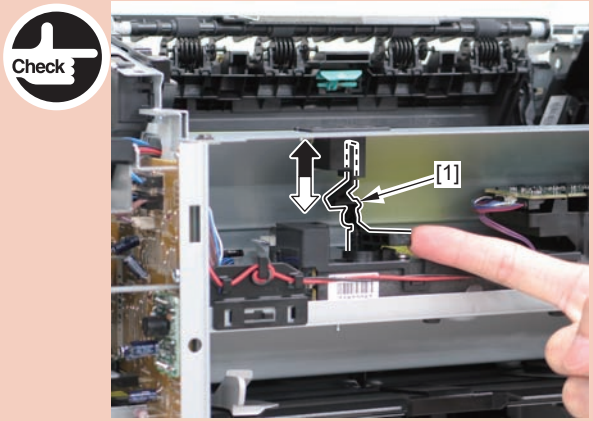
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-559

Caution:

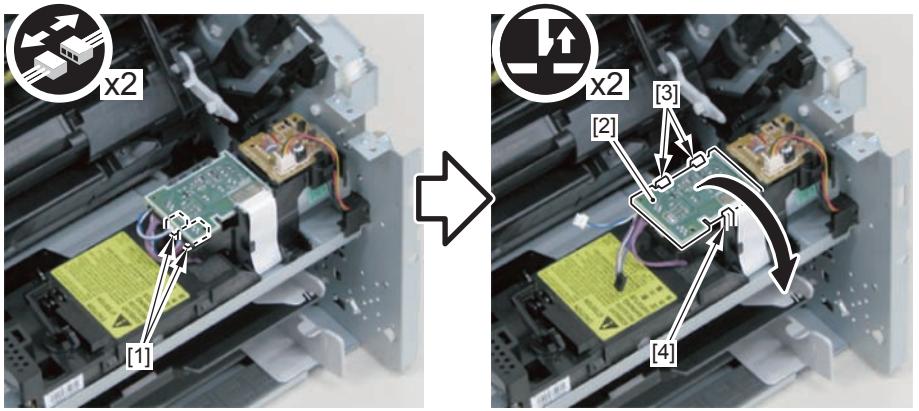
Ensure that the shutter open/close lever [1] can move vertically.



F-4-560

2)Disconnect the connectors[1], and remove the motor driver PCB[2]

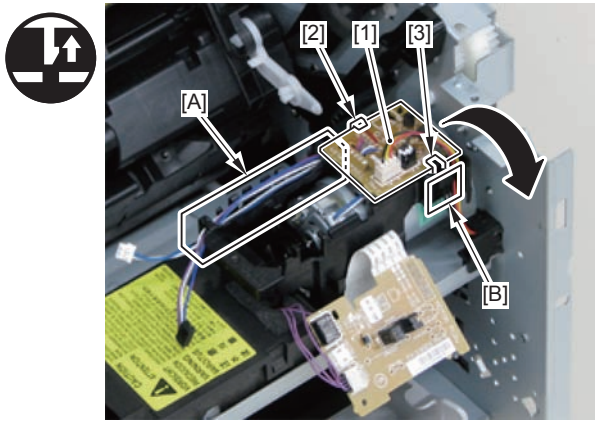
- 2 claws[3]
- 1 hook[4]



F-4-561

3)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]

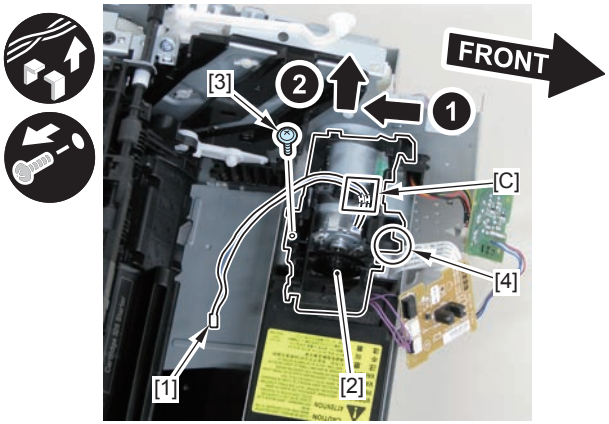


F-4-562

4)Free the motor harness[1] from the harness guide[C].

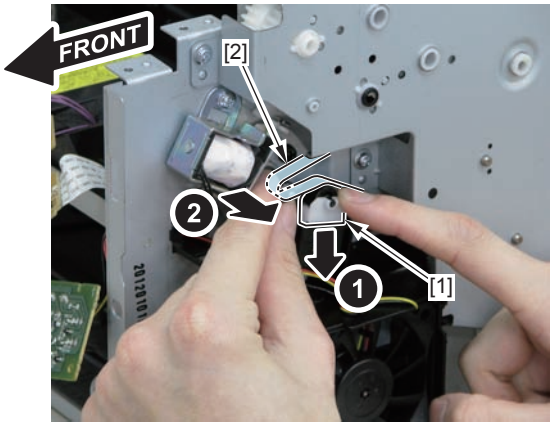
5)Remove the motor guide[2]

- 1 screw[3]
- 1 hook[4]



F-4-563

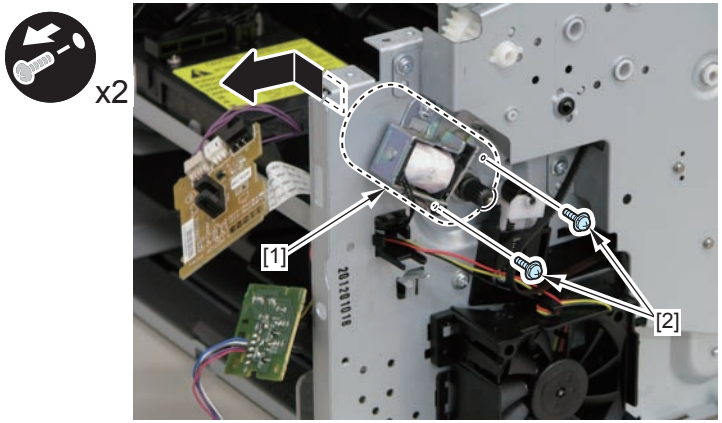
6)Lower the tension unit[1], and remove the belt[2].



F-4-564

7)Remove the main motor[1]

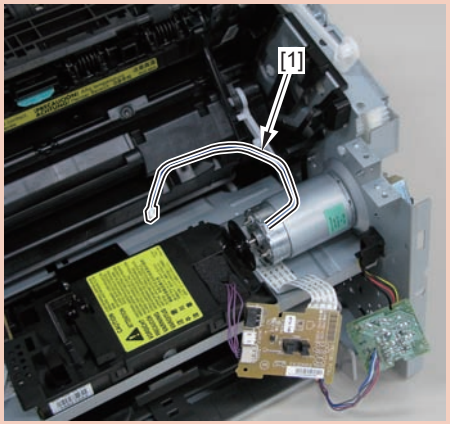
- 2 screws(with washer)[2]



F-4-565

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



F-4-566

Removing the Engine Controller PCB (MF4780w/MF4770n/MF4750/MF4730)

Preparation

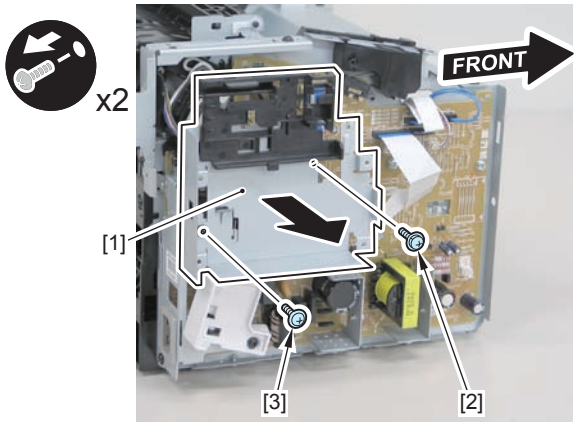
1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

Procedure

(MF4730)

1) Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]

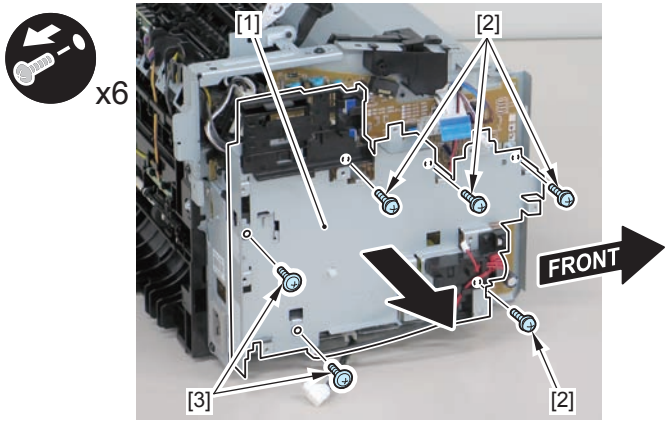


F-4-567

(MF4780w/MF4770n/MF4750/MF4730)

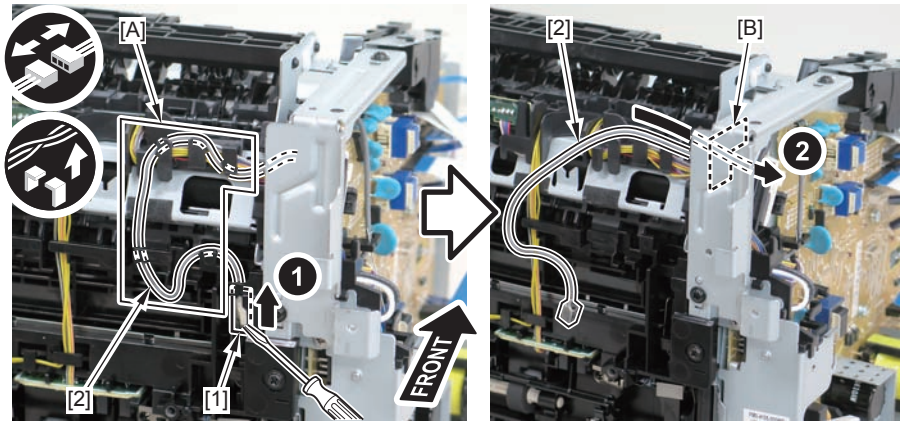
1) Remove the main controller mounting plate[1]

- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-568

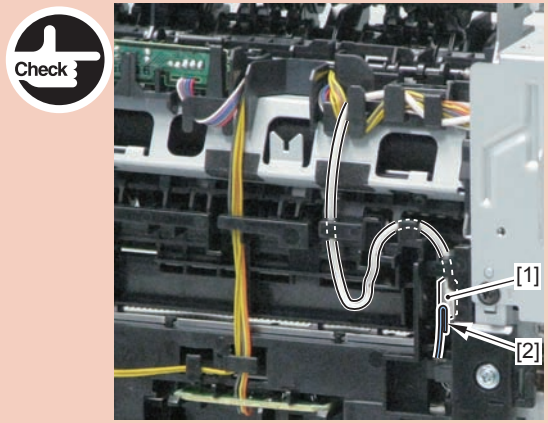
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-569

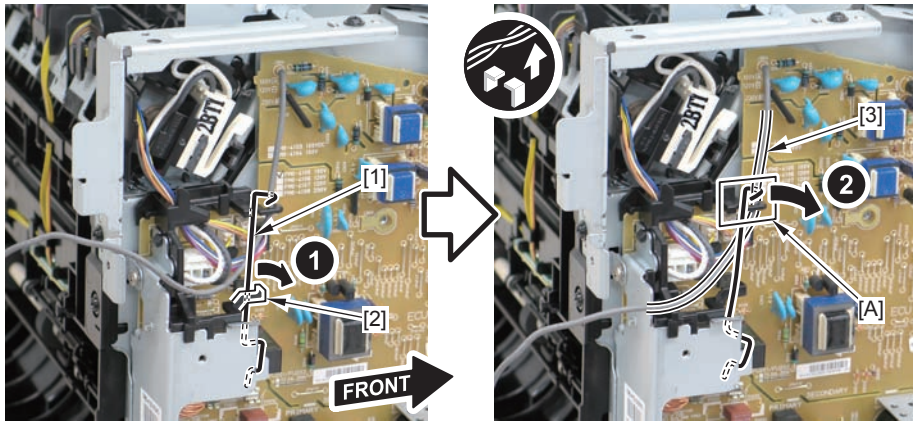
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-570

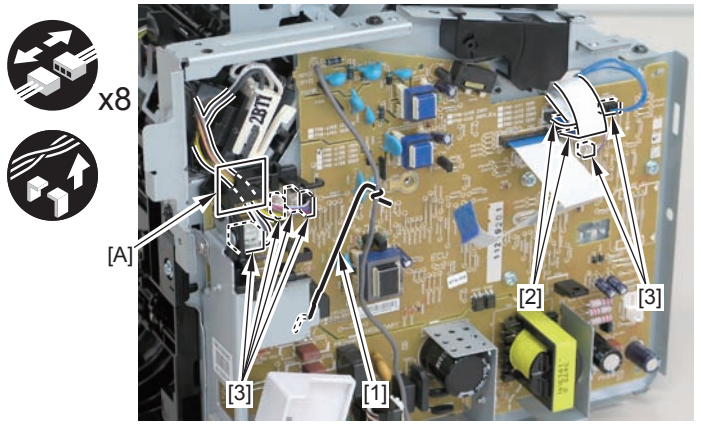
3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-571

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

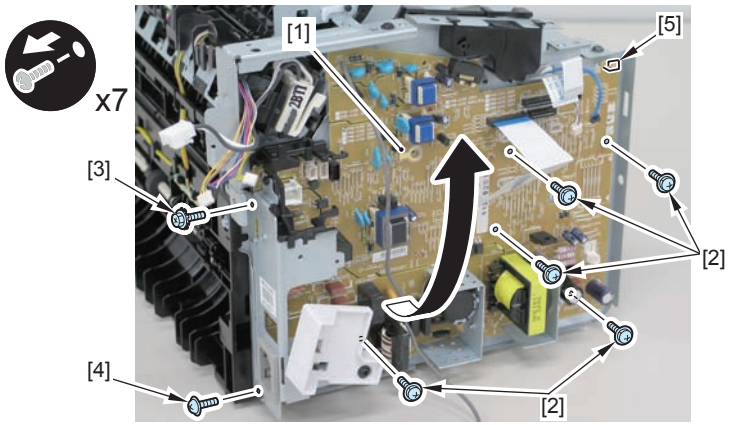
- 2 flat cables[2]
- 6 connectors[3]



F-4-572

5)Remove the engine controller PCB[1].

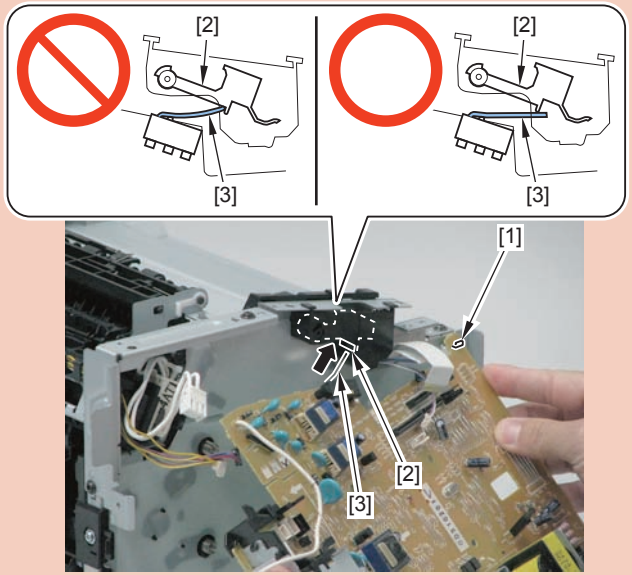
- 5 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-573

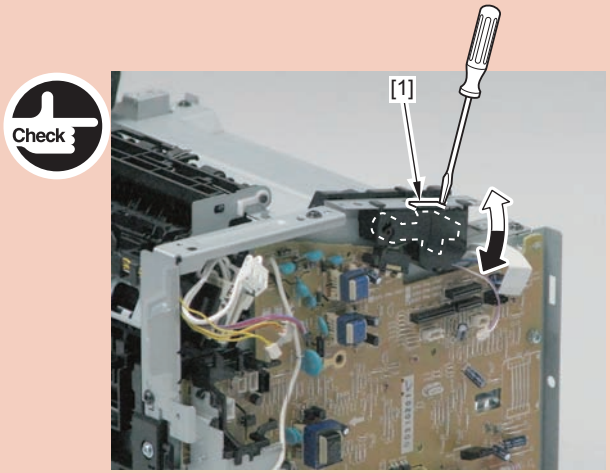
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-574

Ensure that the switch arm [1] can move vertically.



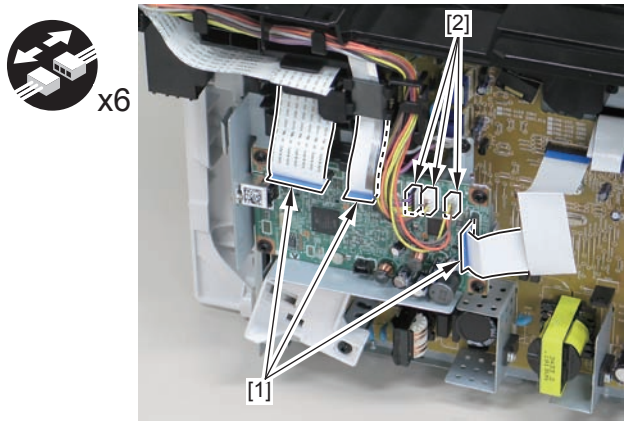
Removing the Main Controller PCB (MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover

Procedure

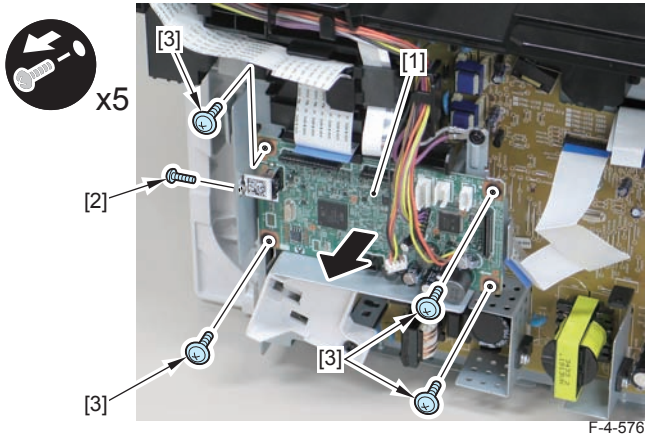
1)Remove the 3 flat cables[1] and 3 connectors[2].



F-4-575

2)Remove the main controller PCB[1].

- 1 screw(bind)[2]
- 4 screws(black TP)[3]



F-4-576

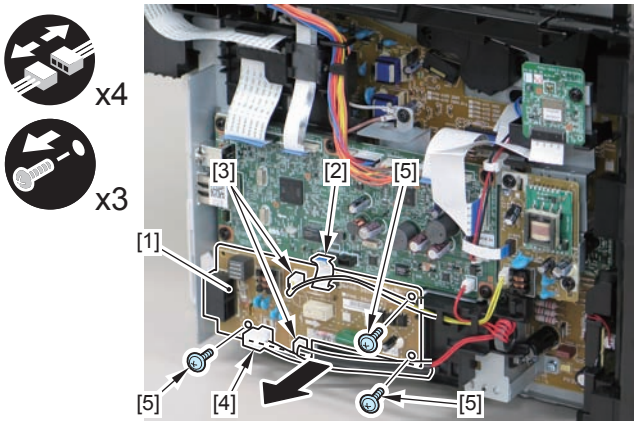
Removing the FAX NCU PCB (MF4780w/MF4770n/MF4750/)

Preparation

1) Remove the left cover

Procedure

1)Remove the FAX NCU PCB[1]
- 1 flat cable[2]
- 2 connectors[3]
- 1 protrusion[4]
- 3 screws[5]



F-4-577

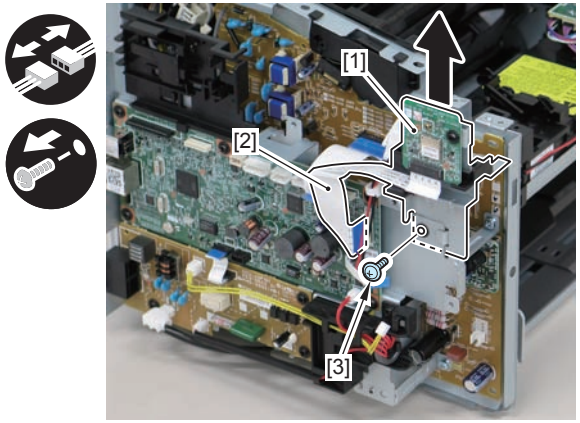
Removing the Wireless LAN PCB (MF4780w)

Preparation

1) Remove the left cover

Procedure

1)Remove the wireless LAN PCB.
- 1 flat cable[2]
- 1 screw[3]



F-4-578

Removing the Paper Leading Edge Sensor PCB (MF4780w/MF4770n/MF4750/MF4730)

Preparation

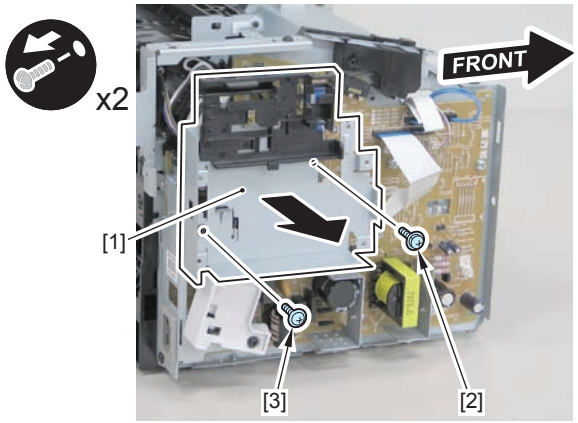
1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB
8) Remove the FAX NCU PCB.(MF4780w/MF4770n/MF4750)
9) Remove the wireless LAN PCB.(MF4780w)

Procedure

(MF4730)

1) Remove the main controller mounting plate[1]

- 1 screw(with washers)[2]
- 1 screws(black TP)[3]

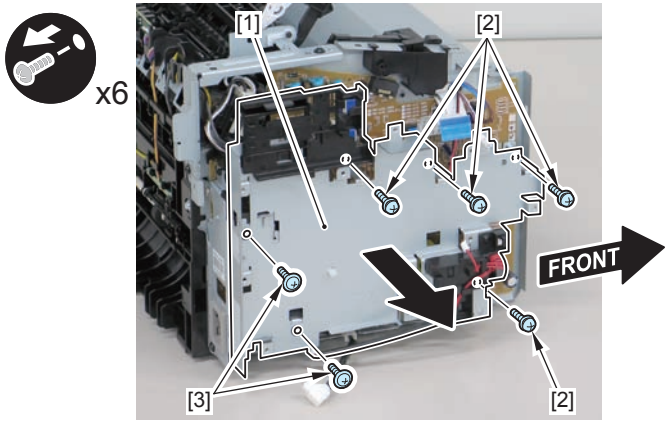


F-4-579

(MF4780w/MF4770n/MF4750)

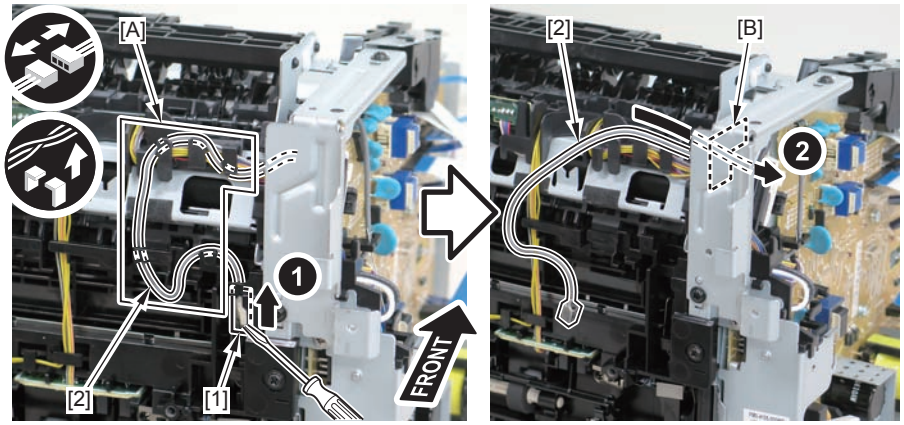
1) Remove the main controller mounting plate[1]

- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-580

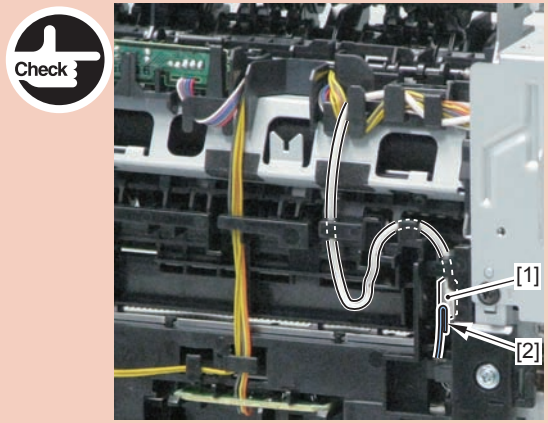
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-581

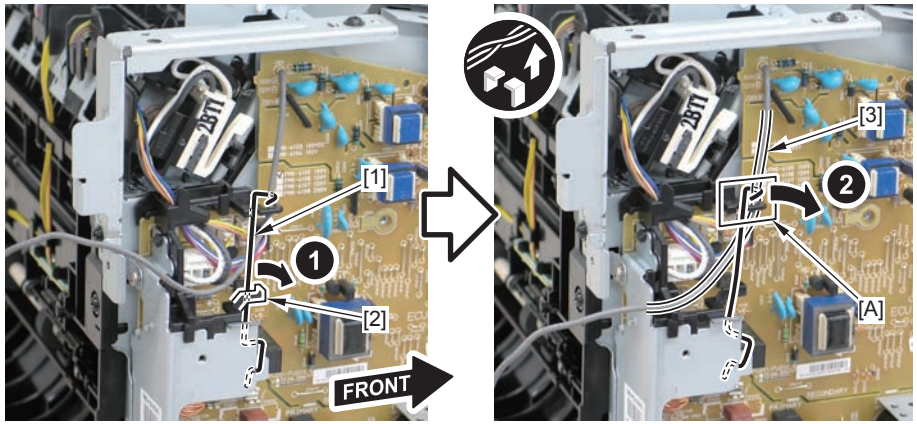
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



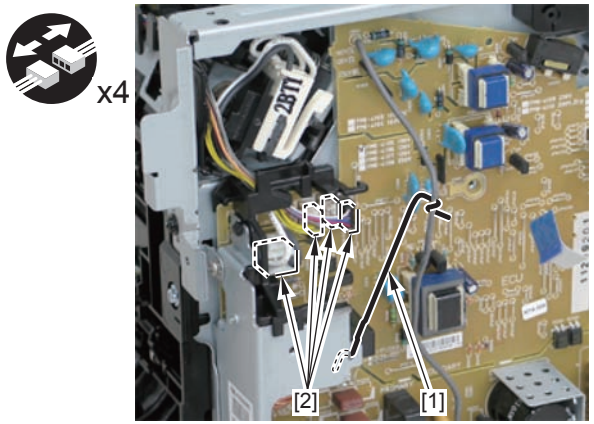
F-4-582

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



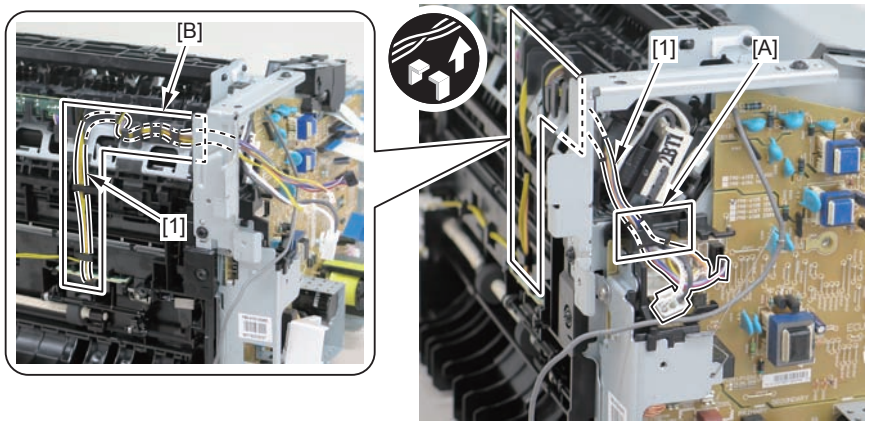
F-4-583

4)Remove the harness retaining spring[1] and 4 connectors[2]



F-4-584

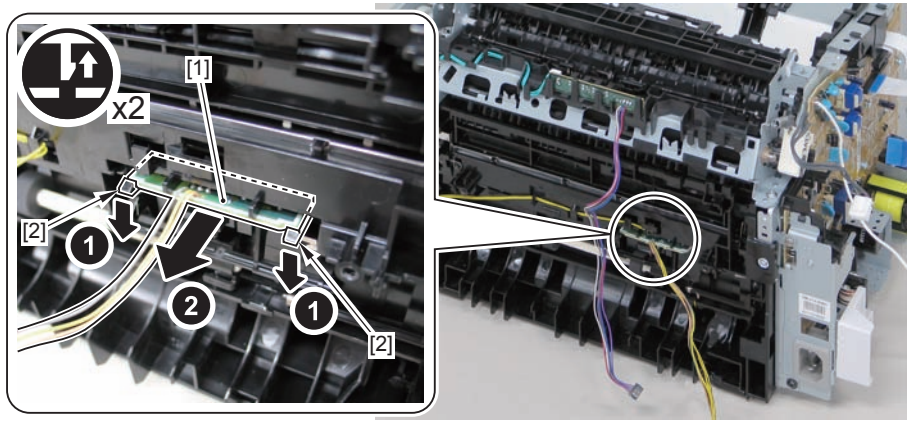
5)Remove the harness[1] from the guide[A] and [B].



F-4-585

6)Remove the paper leading edge sensor PCB[1]

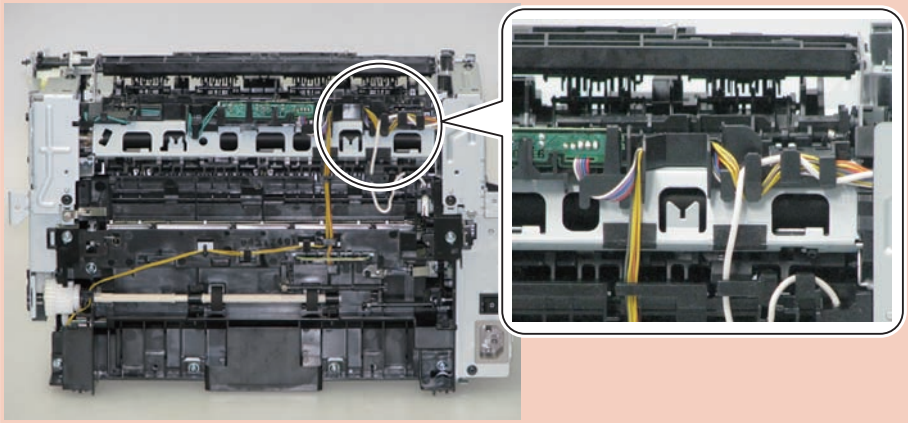
- 2 claws[2]



F-4-586

Note:

The below picture shows how to wind the harness.



F-4-587

Removing the Fixing Delivery/Paper Width Sensor PCB (MF4780w/MF4770n/MF4750/MF4730)

Preparation

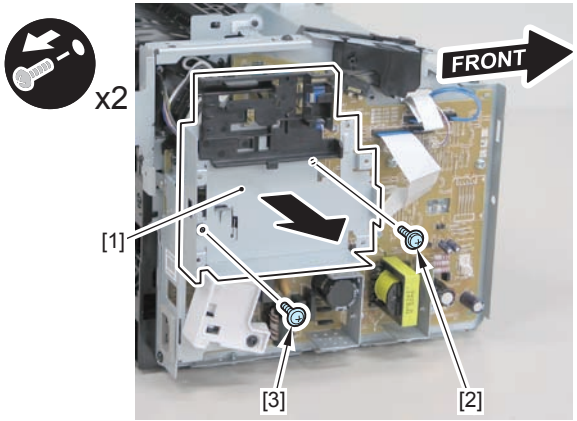
1)Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit.
7)Remove the main controller PCB
8)Remove the FAX NCU PCB.(MF4780w/MF4770n/MF4750)
9)Remove the wireless LAN PCB.(MF4780w)

Procedure

(MF4730)

1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



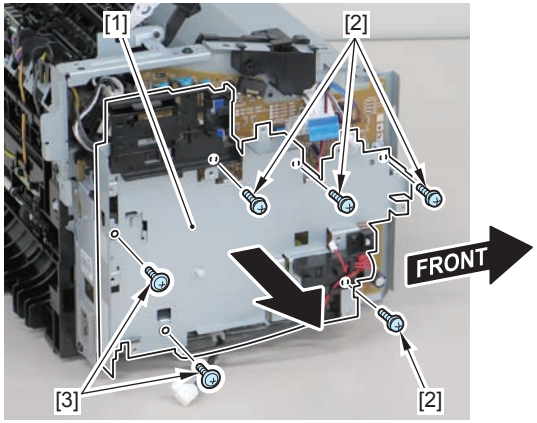
F-4-588

(MF4780w/MF4770n/MF4750)

1)Remove the main controller mounting plate[1]

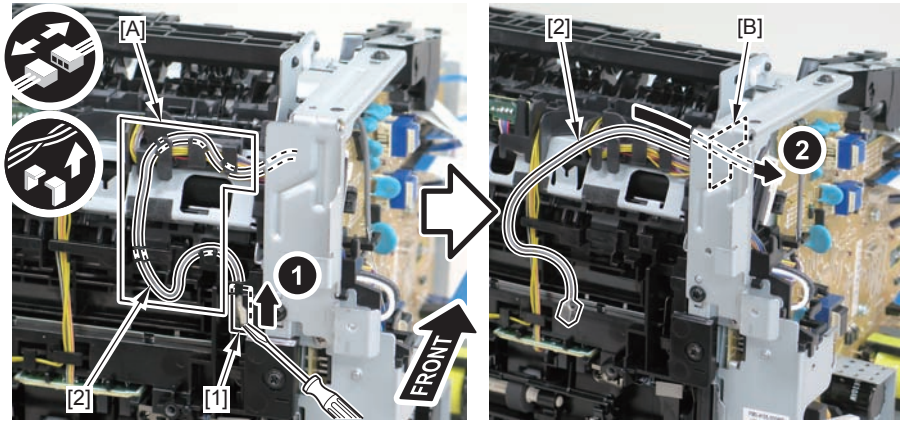
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]

x6



F-4-589

2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].

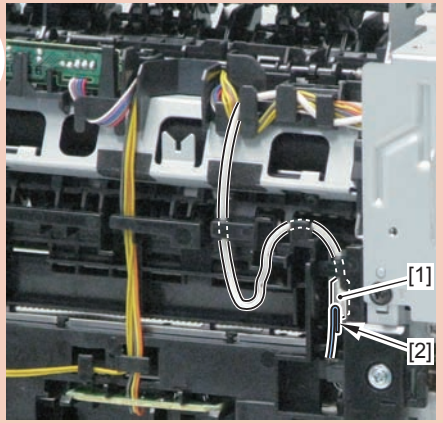


F-4-590

Caution:

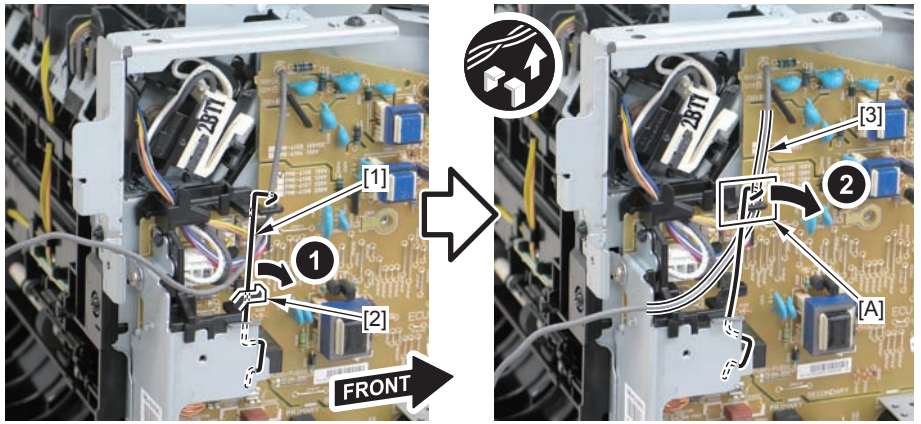
When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.

Check



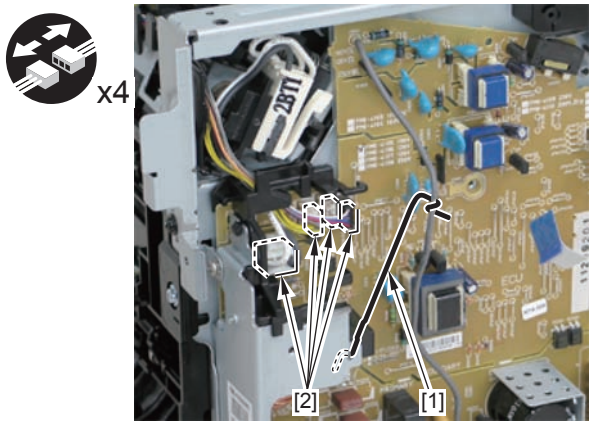
F-4-591

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



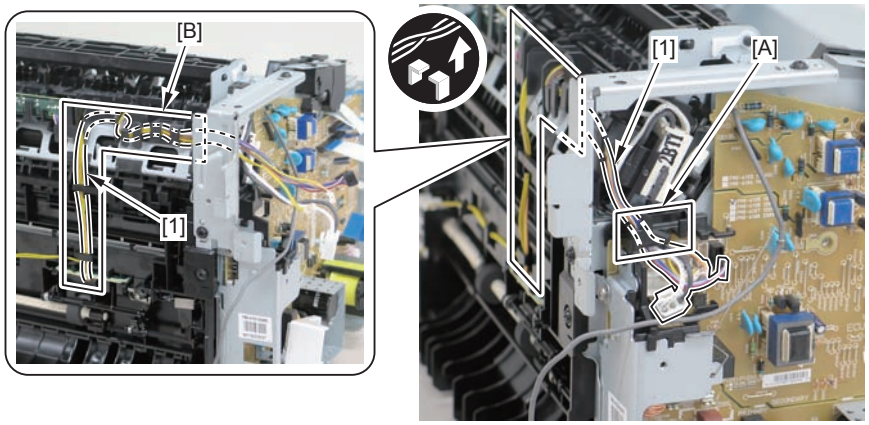
F-4-592

4)Remove the harness retaining spring[1] and 4 connectors[2]



F-4-593

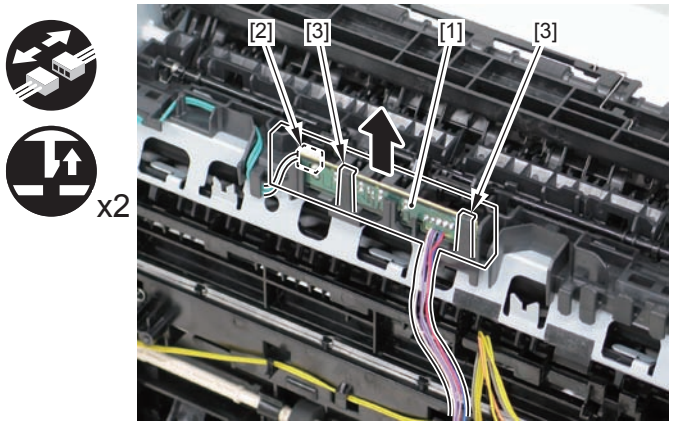
5)Remove the harness[1] from the guide[A] and [B].



F-4-594

6)Remove the fixing delivery/paper width sensor PCB[1]

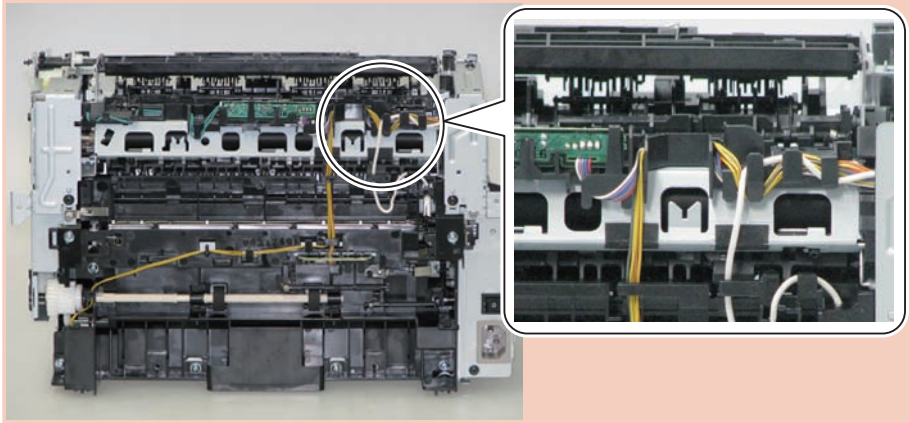
- 1 connector
- 2 claws[3]



F-4-595

Note:

The below picture shows how to wind the harness.it.



F-4-596

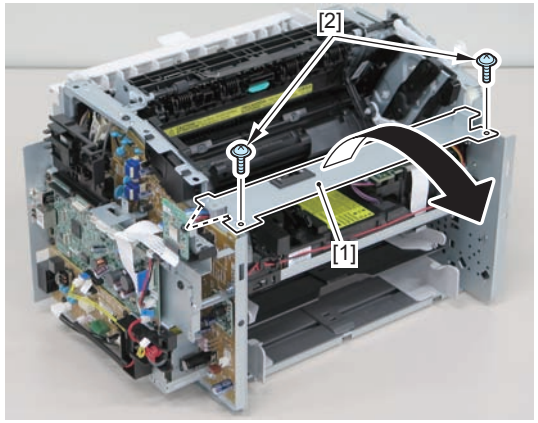
Removing the Toner Sensor and Multi Pickup Sensor Unit (MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

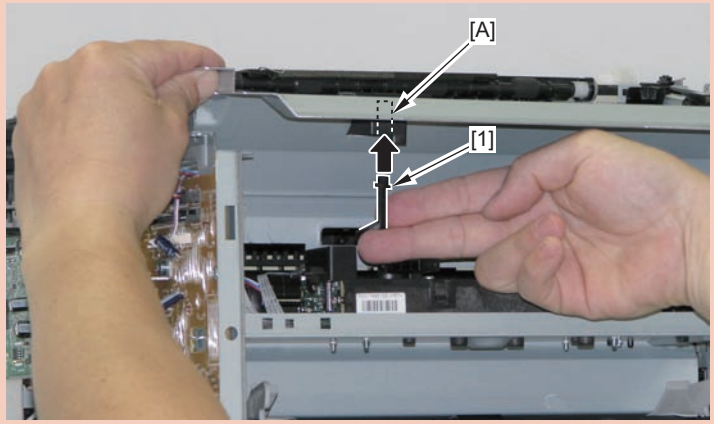
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-597

Caution:

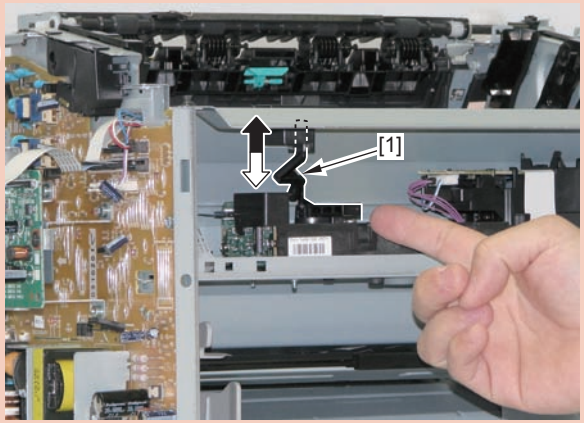
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-598

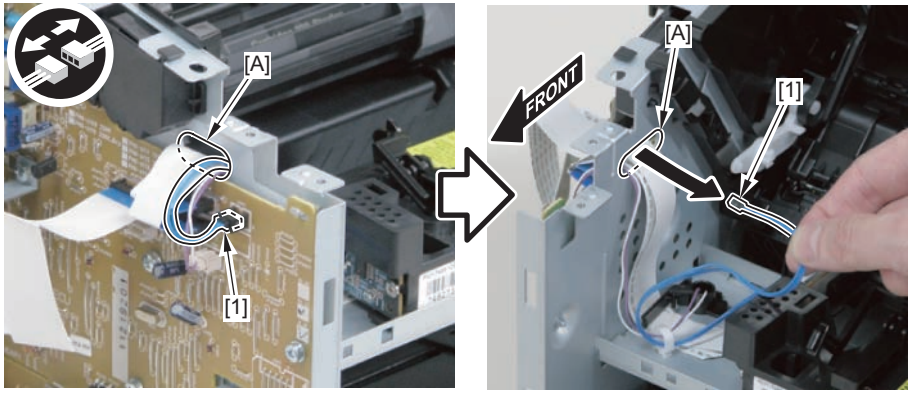
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



F-4-599

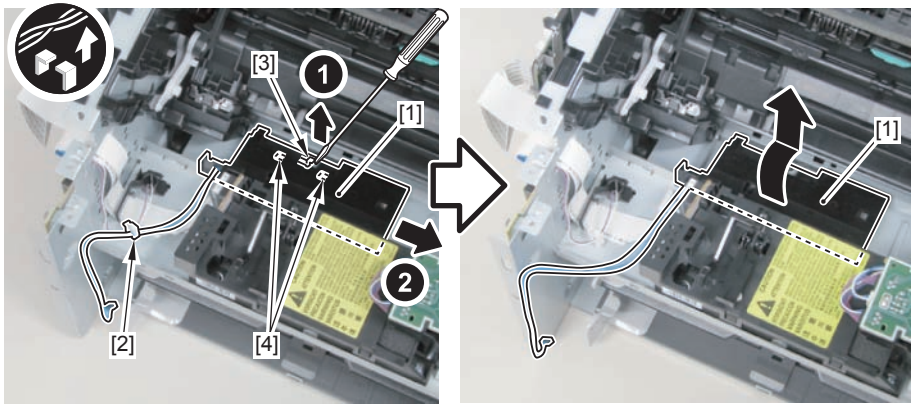
2)Disconnect the connector[1], and put it through the hole[A] of the left side plate to the inside.



F-4-600

3)Remove the toner sensor and multi pickup sensor unit[1]

- 1 wire saddle[2]
- 1 claw[3]
- 2 hooks[4]



F-4-601

Removing the Speaker (MF4780w/MF4770n/MF4750)

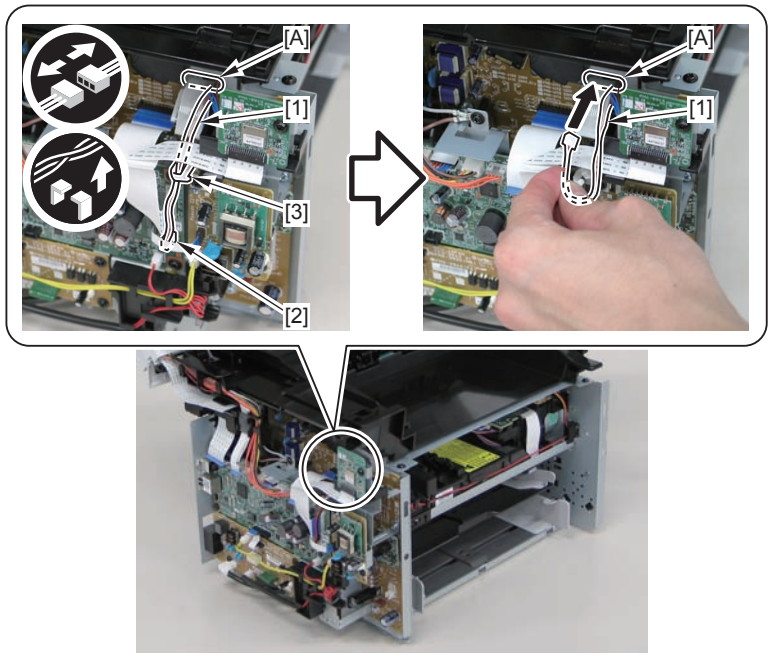
Preparation

1)Remove the left cover
2)Remove the right cover
3)Remove the front cover unit

Procedure

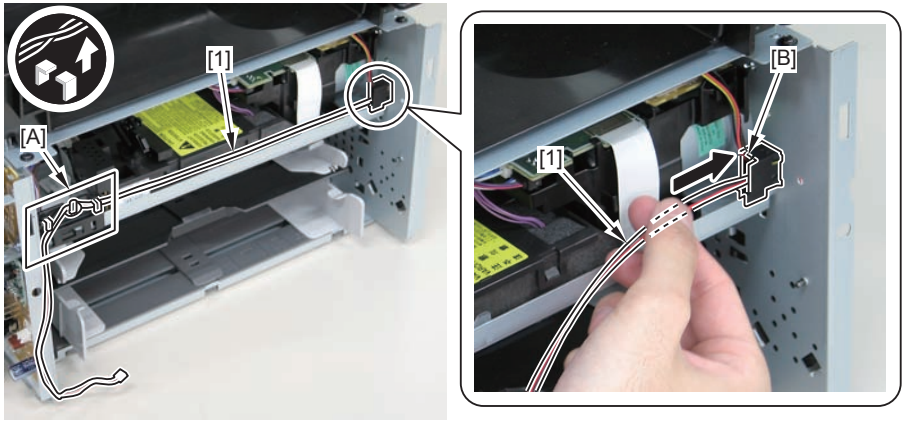
1)Disconnect the speaker harness[1], and put it through the hole[A] of the left side plate to the inside.

- 1 connector[2]
- 1 wire saddle[3]



F-4-602

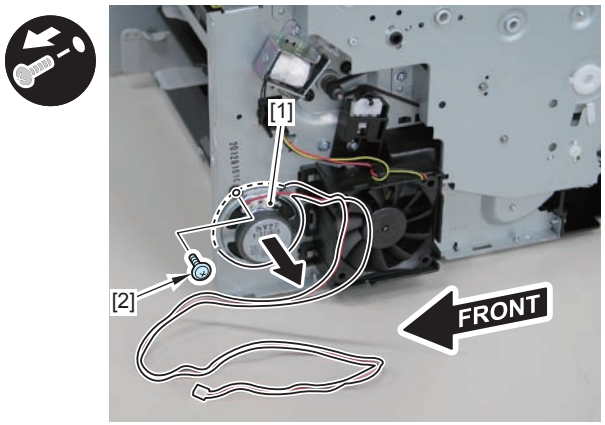
2)Free the speaker harness[1] from the harness guide[A], and put it through the hole[B] of the right side plate to the outside.



F-4-603

3)Remove the speaker[1].

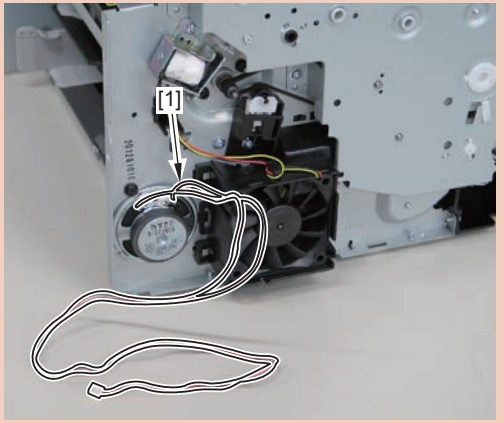
- 1 screw[2]



F-4-604

Caution:

When mounting the speaker, attach the harness [1] to the upper side of the speaker. (So that the speaker harness connector can reach the main controller.)



F-4-605

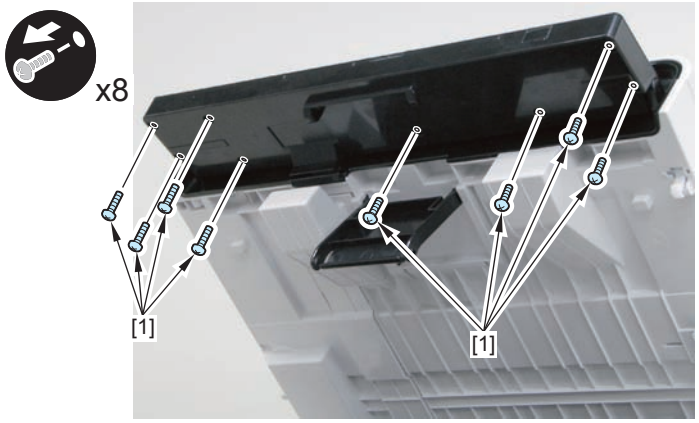
Removing the Control Panel Unit (MF4720w/MF4712/MF4710)

Procedure

1)Open the reader unit and remove the control panel support plate

F-4-606

2) Remove the 8 screws[1] on the back side of the control panel unit.



F-4-607

3) Remove the control panel unit

- 4 claws
- 1 flat cable

Removing the Drive Belt (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover

Procedure

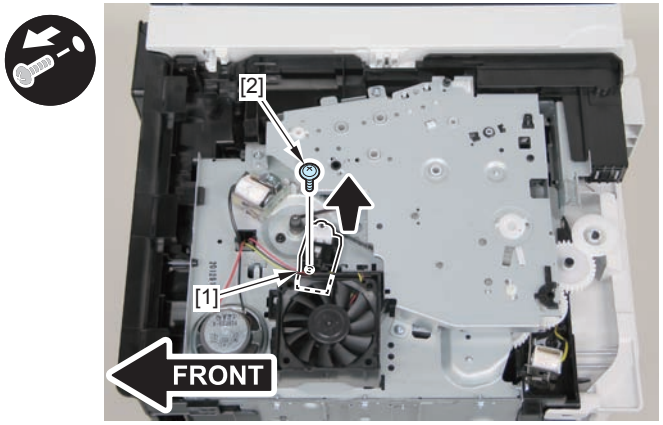
1) Close the reader unit [1] and place the host machine with its left side down.

> Caution:
>
> Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.

F-4-608

2)Remove the tension unit[1].

- 1 screw[2]



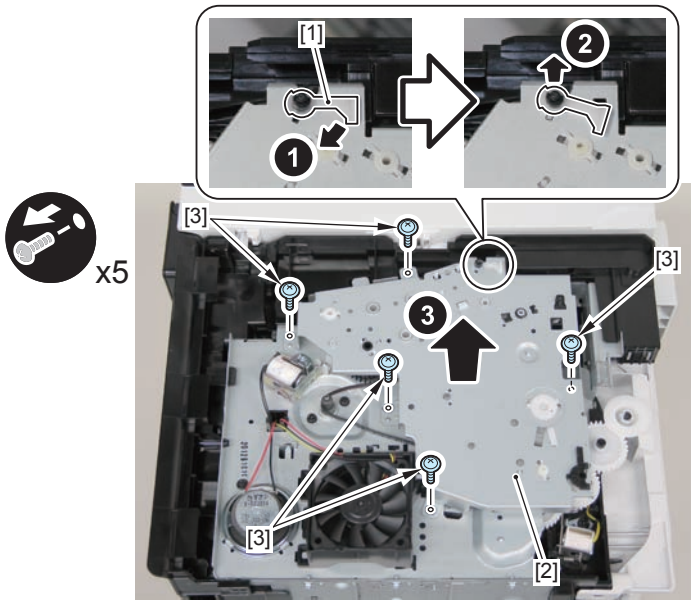
F-4-609

3)Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

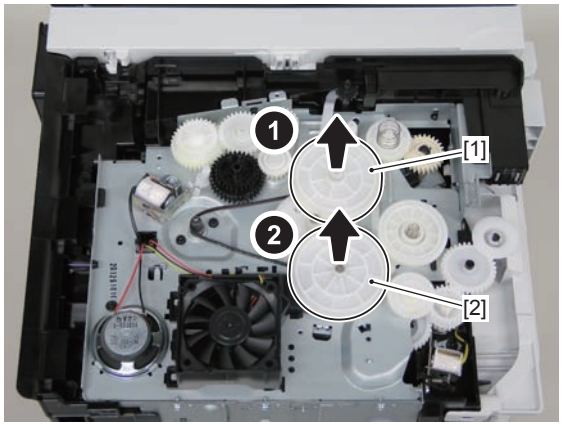
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



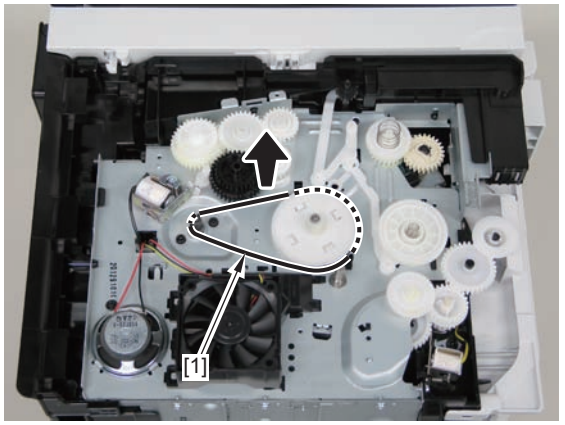
F-4-610

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-611

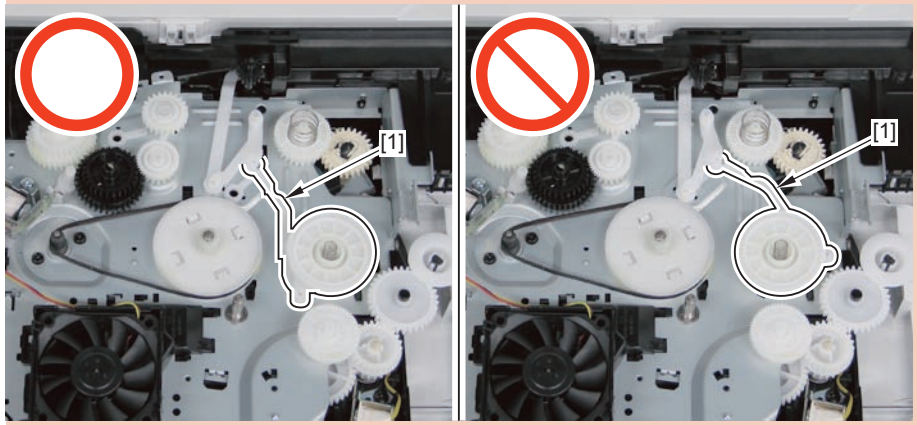
5)Remove the drive belt.



F-4-612

Caution:

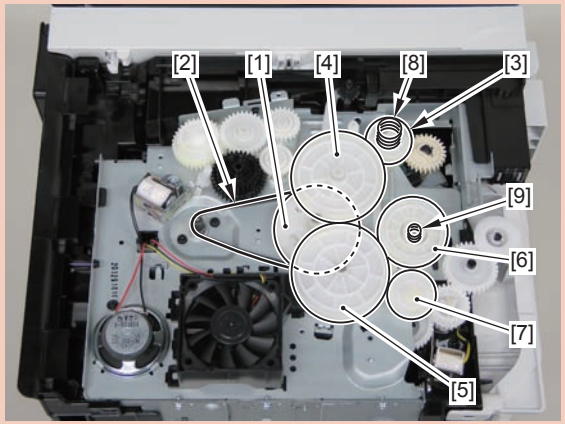
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-613

Caution:

Assemble the drive gear in the order shown in the below picture.

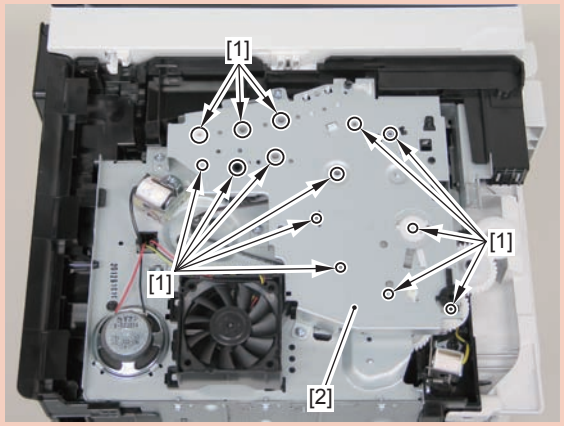


F-4-614

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-615

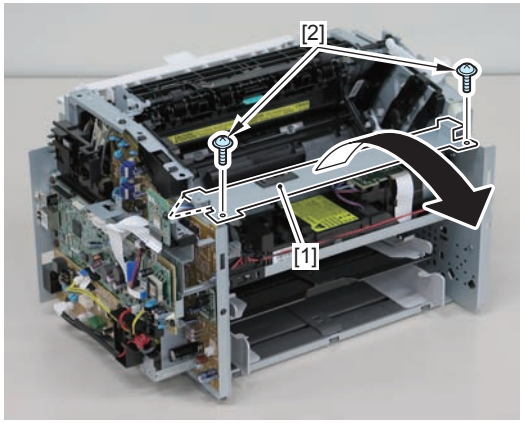
Removing the Main Motor (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

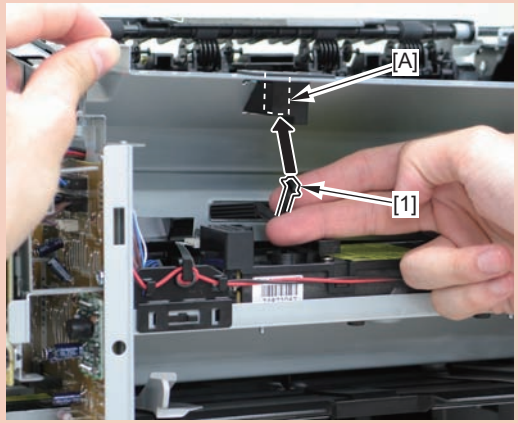
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-616

Caution:

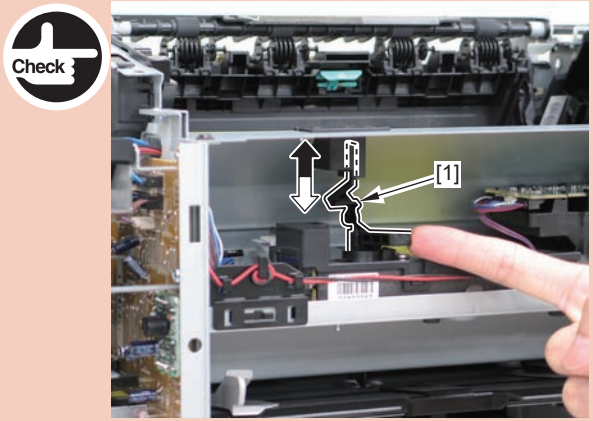
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-617

Caution:

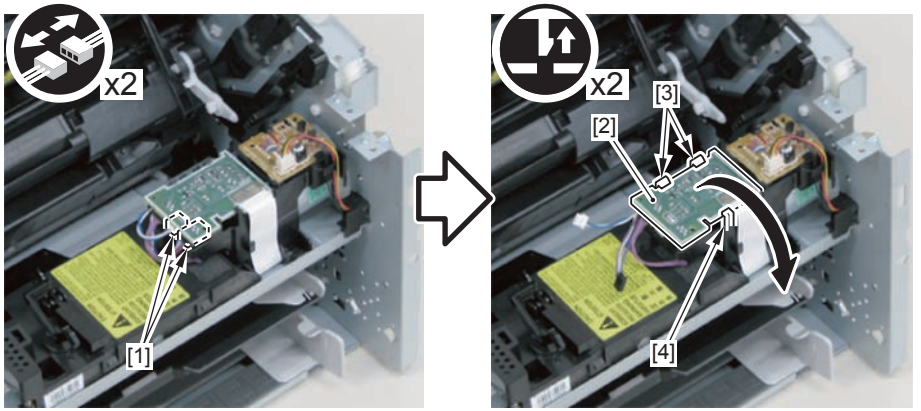
Ensure that the shutter open/close lever [1] can move vertically.



F-4-618

2)Disconnect the connectors[1], and remove the motor driver PCB[2]

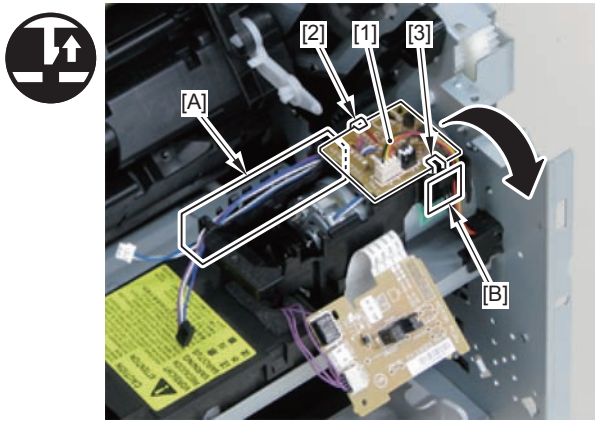
- 2 claws[3]
- 1 hook[4]



F-4-619

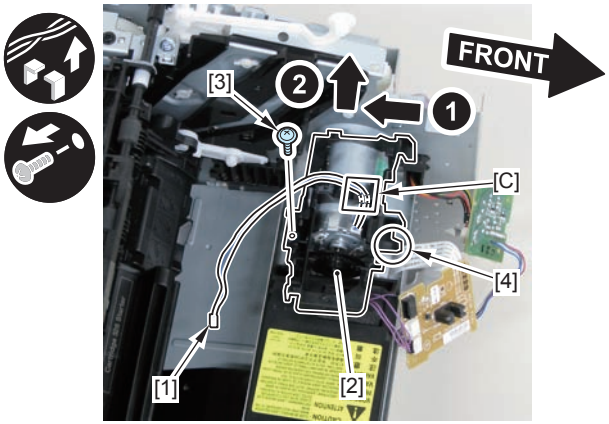
3)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]



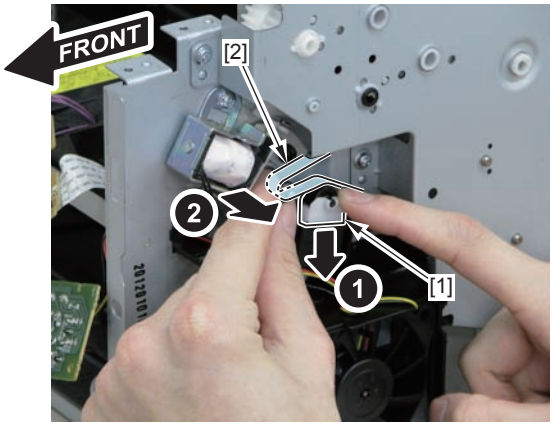
F-4-620

4)Free the motor harness[1] from the harness guide[C].
5)Remove the motor guide[2]
- 1 screw[3]
- 1 hook[4]



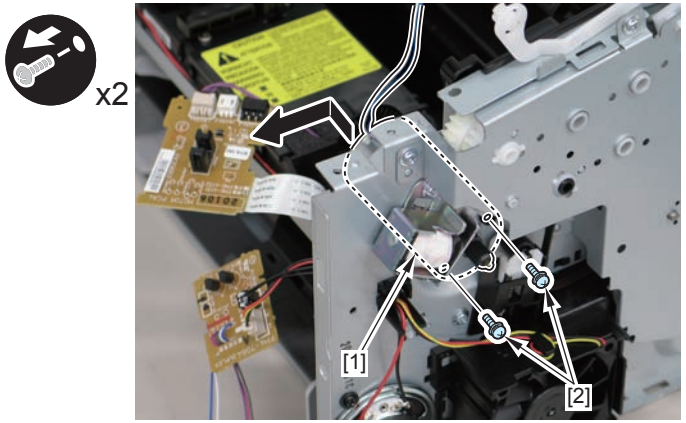
F-4-621

6)Lower the tension unit[1], and remove the belt[2].



F-4-622

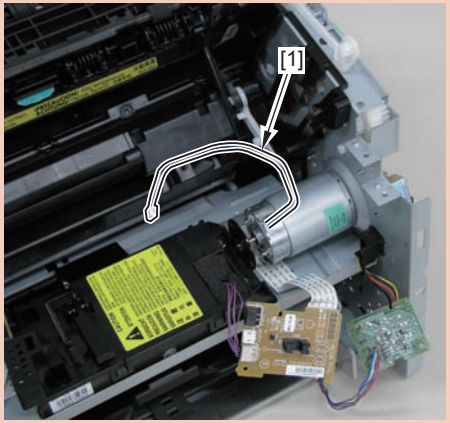
7)Remove the main motor[1]
2 screws(with washer)[2]



F-4-623

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



F-4-624

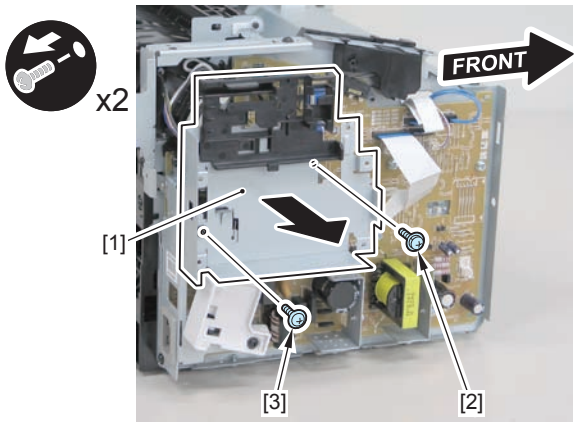
Removing the Engine Controller PCB (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

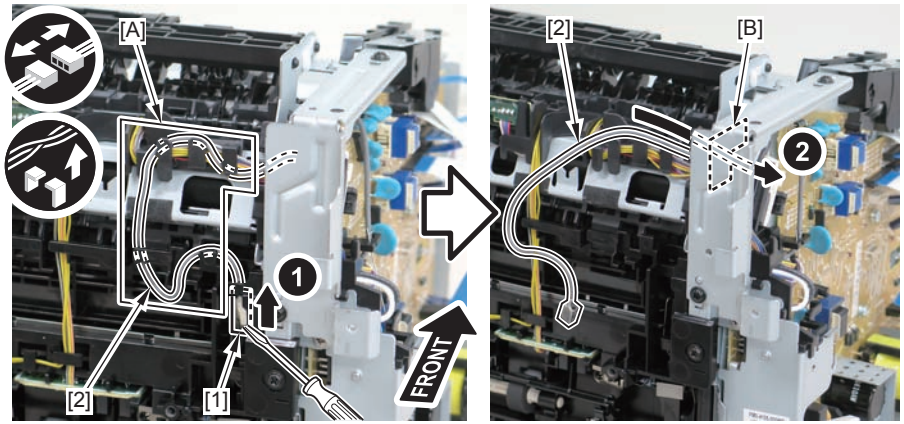
Procedure

1) Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-625

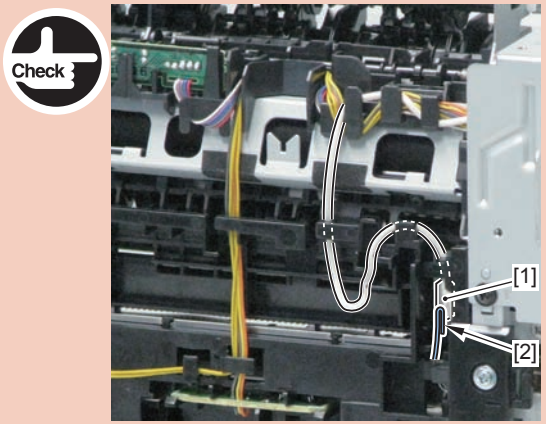
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-626

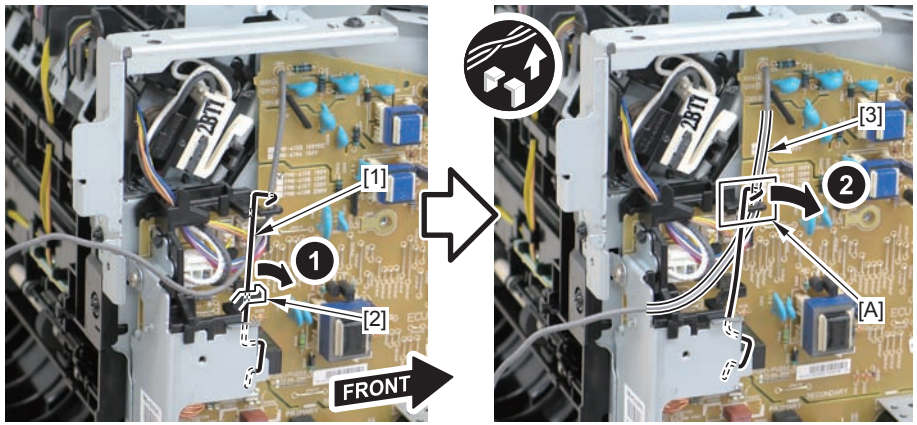
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-627

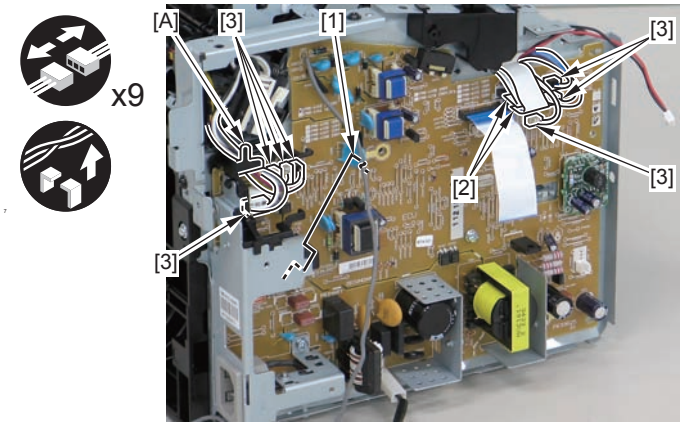
3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-628

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

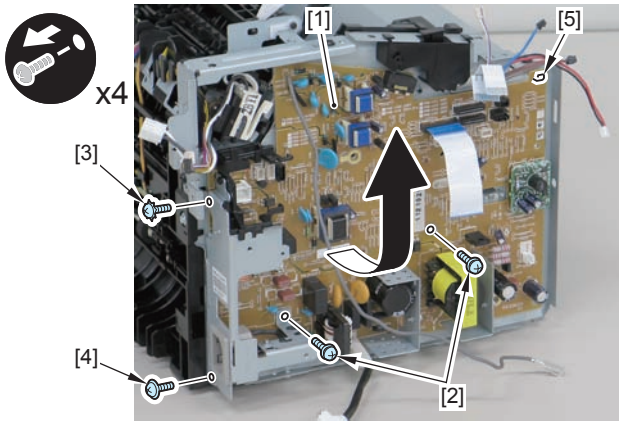
- 2 flat cables[2]



F-4-629

5)Remove the engine controller PCB[1].

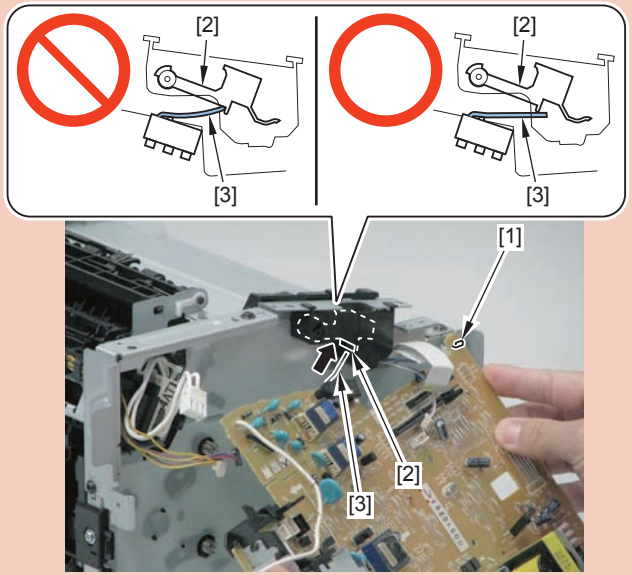
- 2 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-630

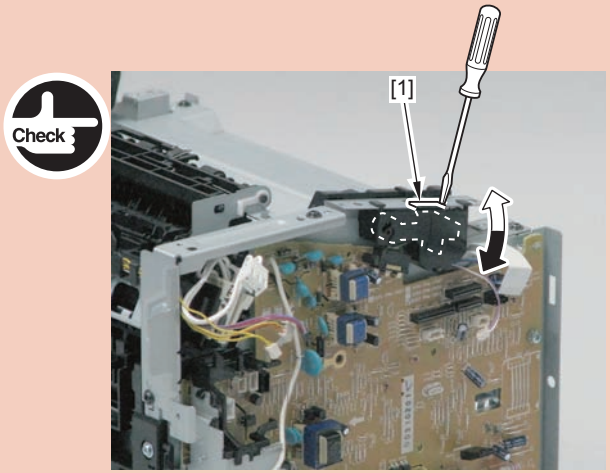
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-631

Ensure that the switch arm [1] can move vertically.



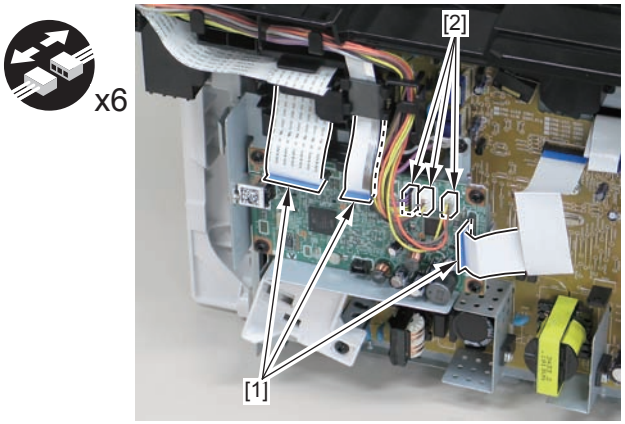
Removing the Main Controller PCB (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover

Procedure

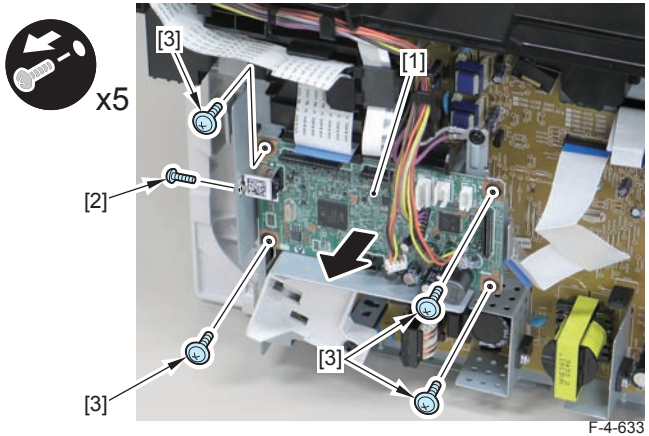
1)Remove the 3 flat cables[1] and 3 connectors[2].



F-4-632

2)Remove the main controller PCB[1].

- 1 screw(bind)[2]
- 4 screws(black TP)[3]



F-4-633

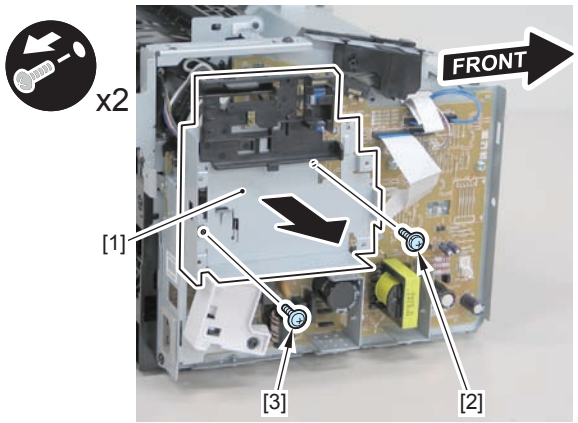
Removing the Paper Leading Edge Sensor PCB (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

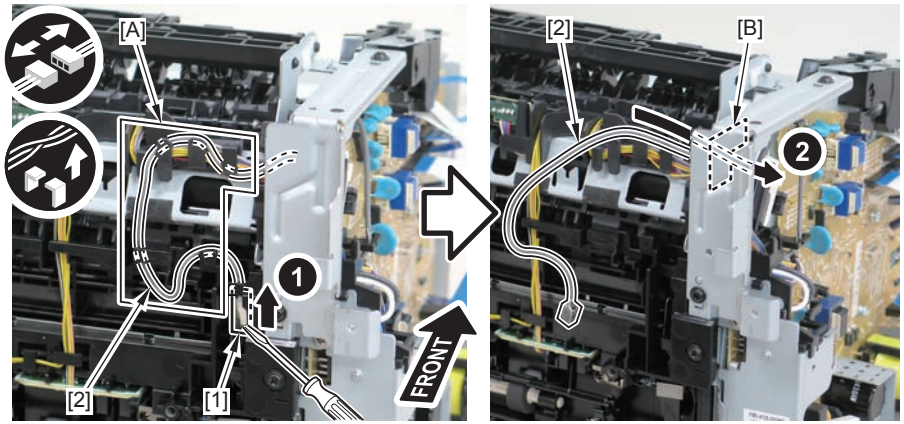
Procedure

1) Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-634

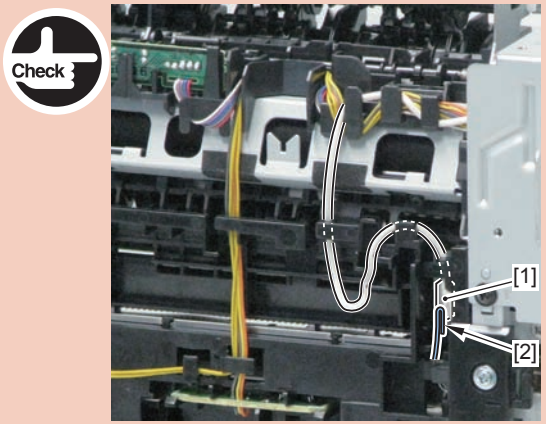
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-635

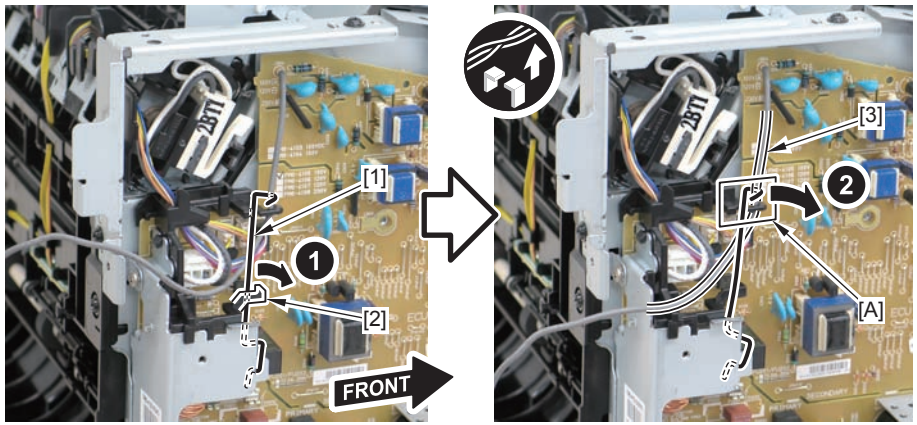
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



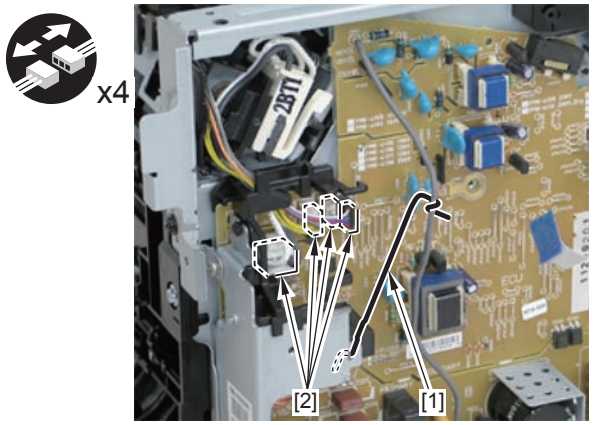
F-4-636

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



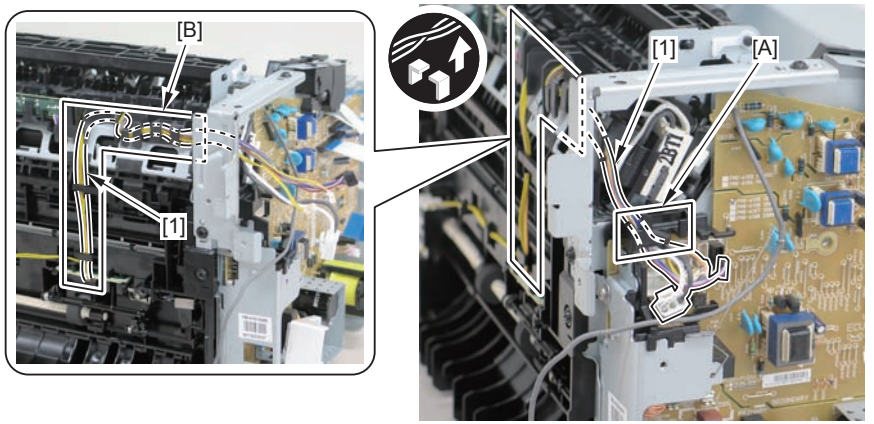
F-4-637

4) Remove the harness retaining spring [1] and 4 connectors [2].



F-4-638

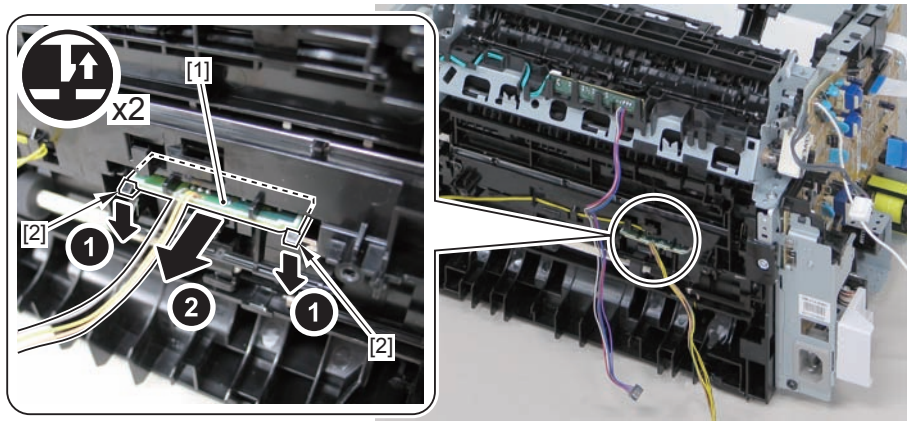
5)Remove the harness[1] from the guide[A] and [B].



F-4-639

6)Remove the paper leading edge sensor PCB[1]

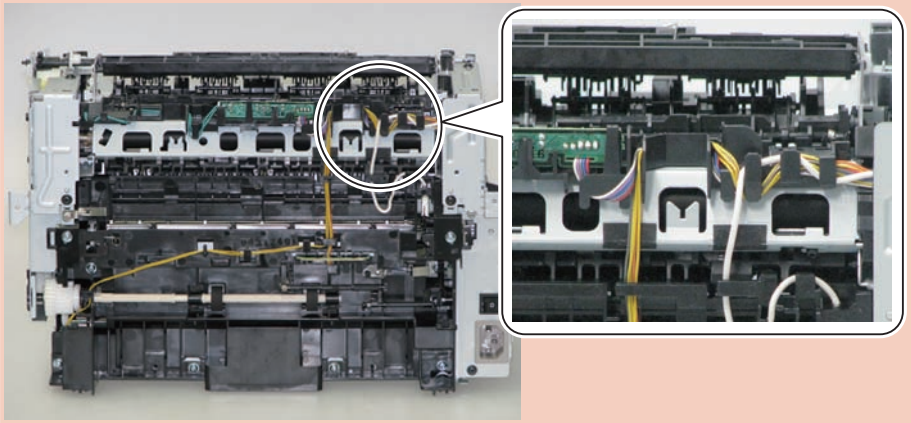
- 2 claws[2]



F-4-640

Note:

The below picture shows how to wind the harness.



F-4-641

Removing the Fixing Delivery/Paper Width Sensor PCB (MF4720w/MF4712/MF4710)

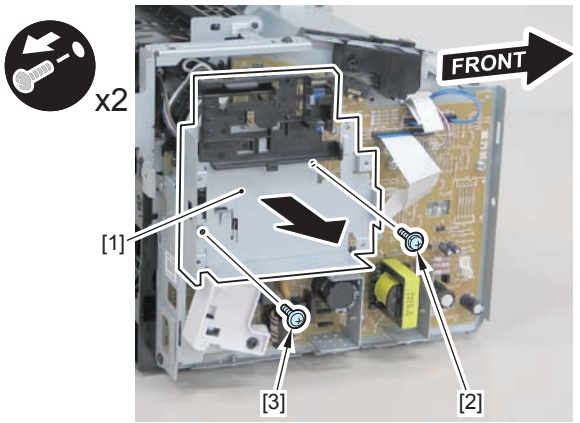
Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB

Procedure

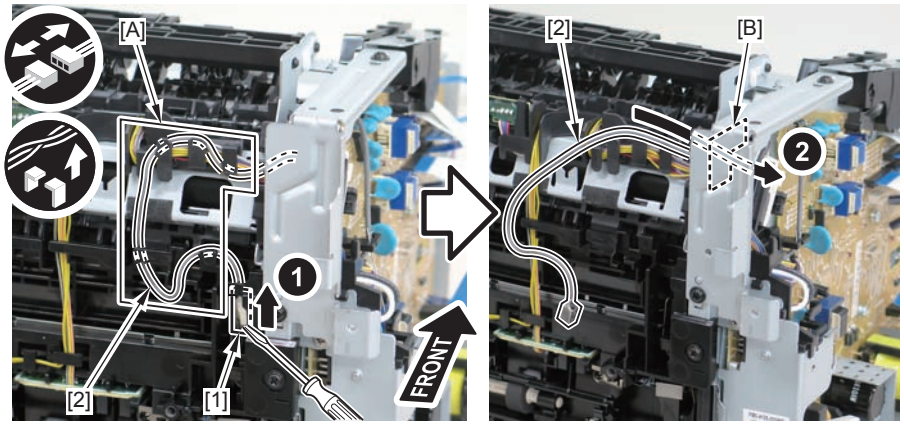
1) Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-642

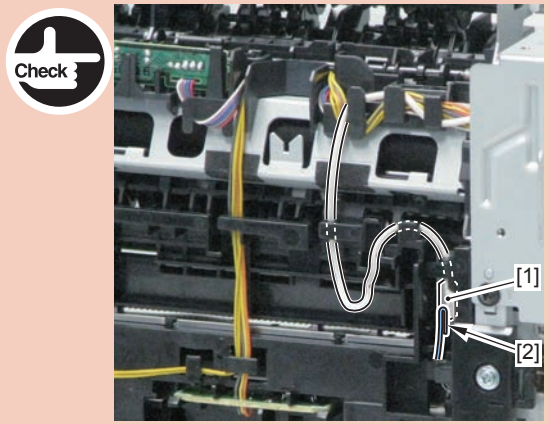
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-643

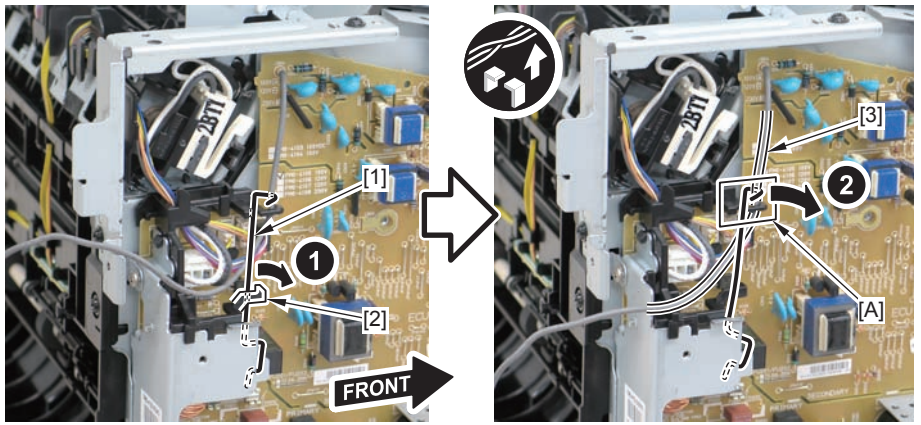
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



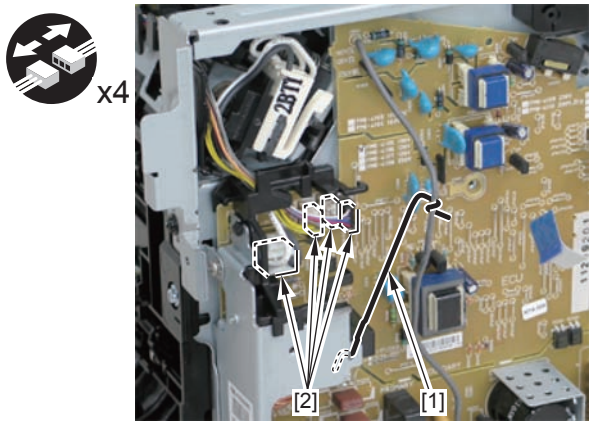
F-4-644

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



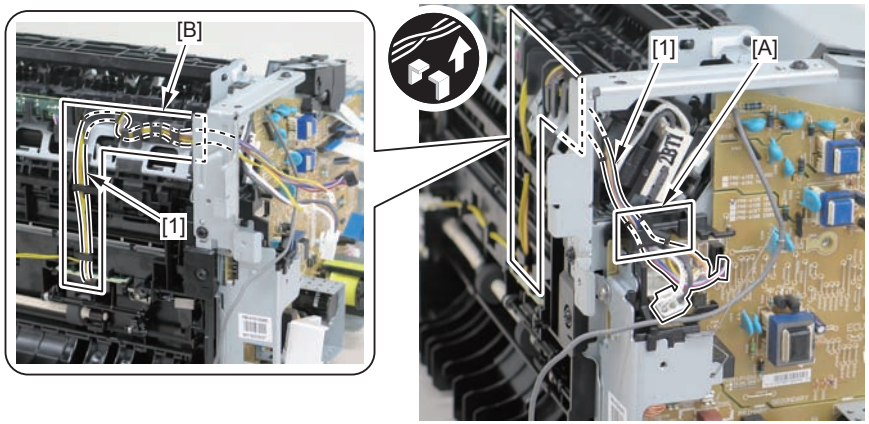
F-4-645

4) Remove the harness retaining spring [1] and 4 connectors [2].



F-4-646

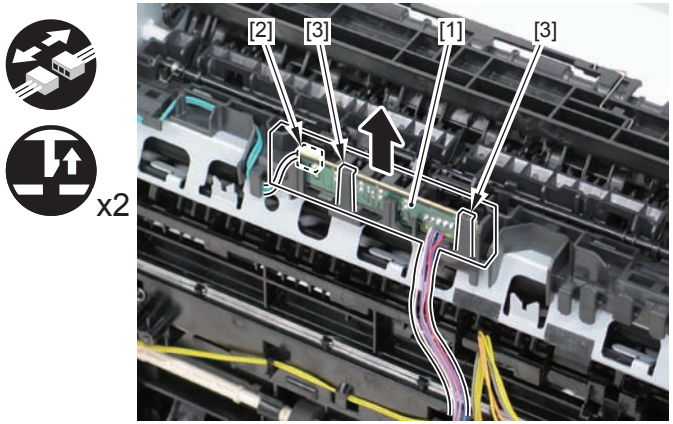
5)Remove the harness[1] from the guide[A] and [B].



F-4-647

6)Remove the fixing delivery/paper width sensor PCB[1]

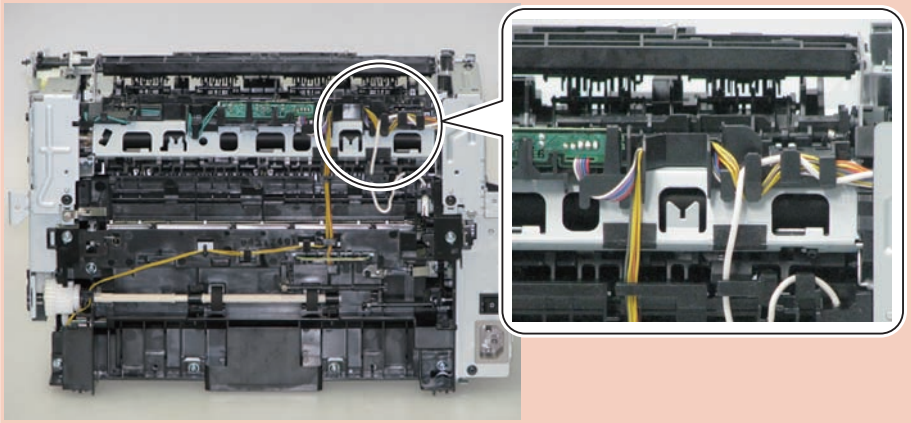
- 1 connector
- 2 claws[3]



F-4-648

Note:

The below picture shows how to wind the harness.



F-4-649

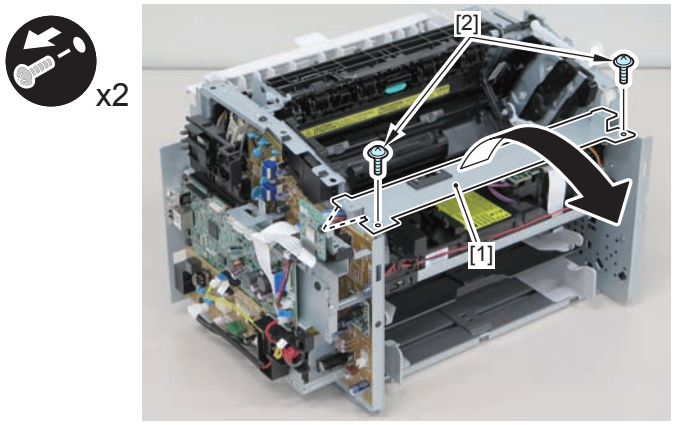
Removing the Toner Sensor and Multi Pickup Sensor Unit (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

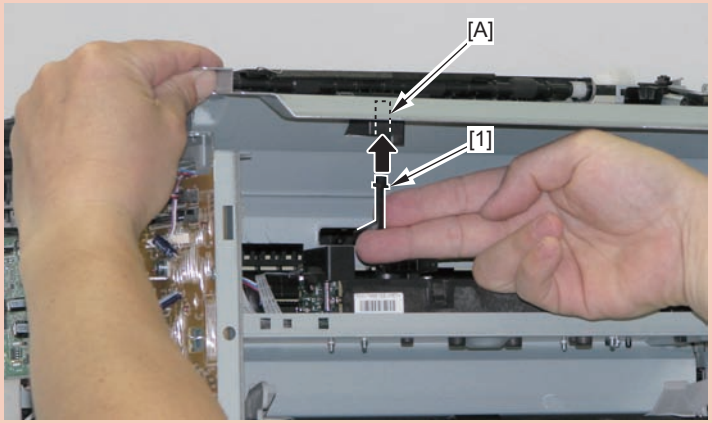
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-650

Caution:

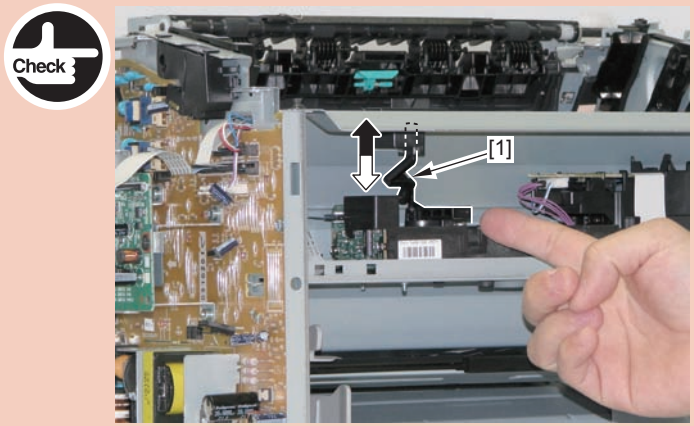
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-651

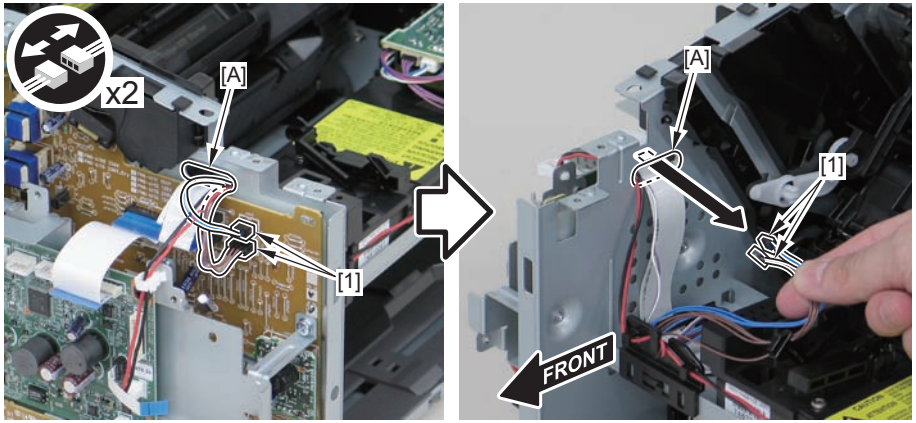
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



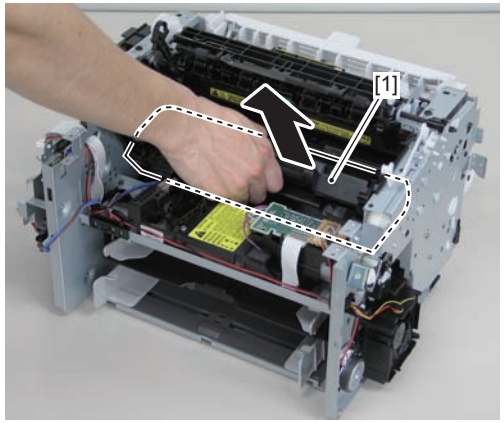
F-4-652

2)Disconnect the 2 connectors[1], and put it through the hole[A] of the left side plate to the inside.



F-4-653

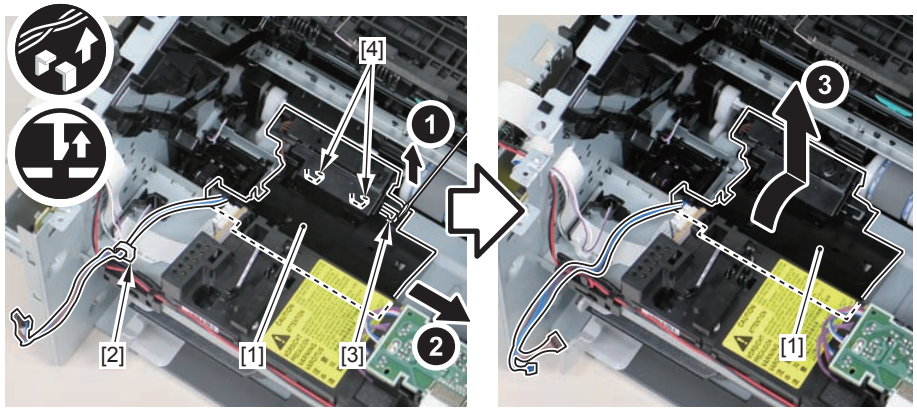
3)Remove the drum unit[1].



F-4-654

4)Remove the toner sensor/multi pickup sensor unit.

- 1 wire saddle[2]
- 1 claw[3]
- 2 hooks[4]



F-4-655

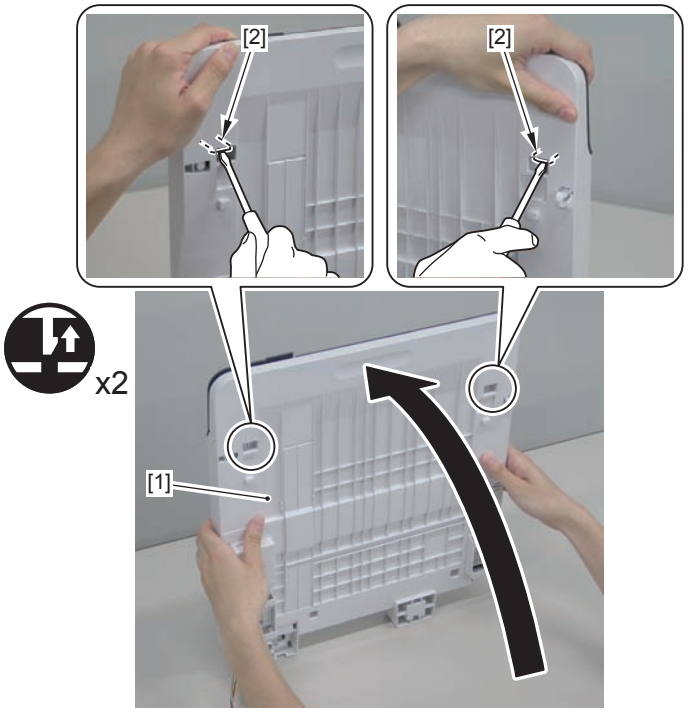
Removing the Control Panel Unit (L418S/L410/L190)

Preparation

1)Remove the left cover
2)Remove the DADF unit and reader unit.
3)Remove the DADF unit.

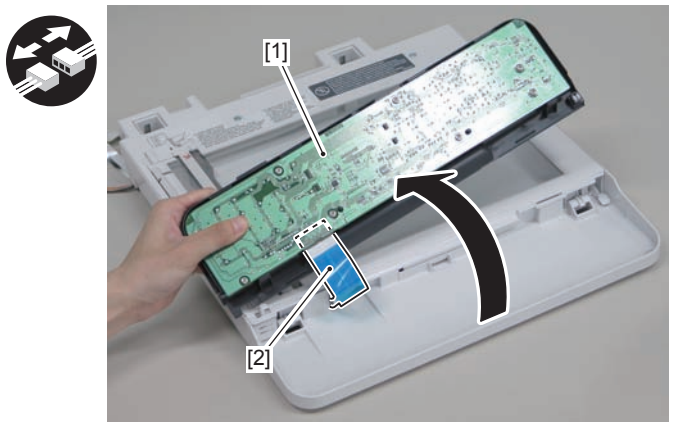
Procedure

1) Lift the control panel unit [1] as shown below and release 2 claws [2].



F-4-656

2) Remove the control panel unit.[1]



F-4-657

Removing the Drive Belt (L418S/L410/L190)

Preparation

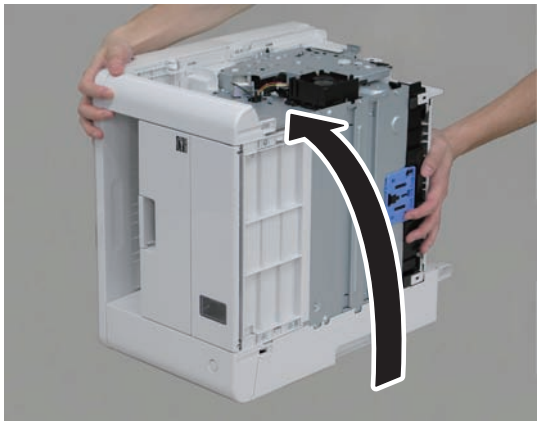
1) Remove the right cover

Procedure

1) Close the reader unit [1] and place the host machine with its left side down.

Caution:

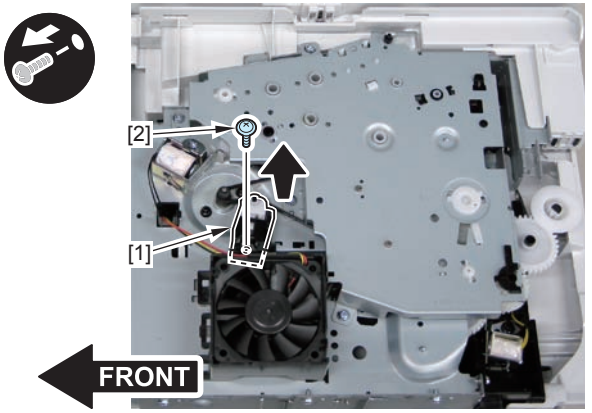
Be sure to hold the reader unit firmly when turning the machine with its left side down because the reader unit will be forced open by hinge spring pressure.



F-4-658

2) Remove the tension unit[1].

- 1 screw[2]



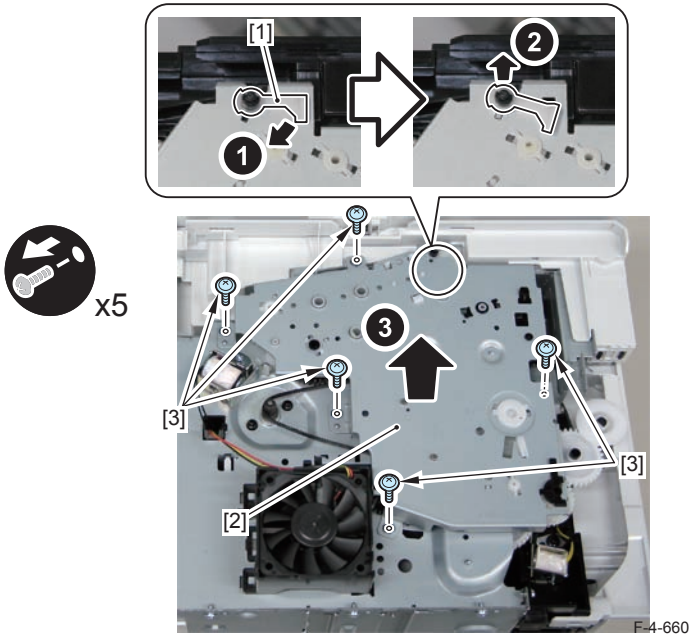
F-4-659

3) Remove the shaft support[1], and remove the drive cover[2]

- 5 screws[3]

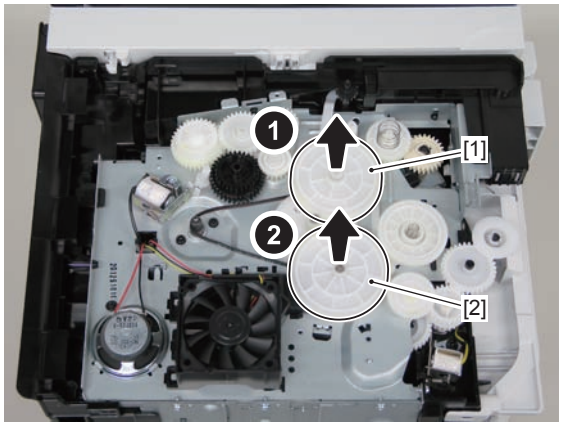
Caution:

Be sure to raise the drive cover[2] straight above slowly to prevent the gear phase from becoming displaced.



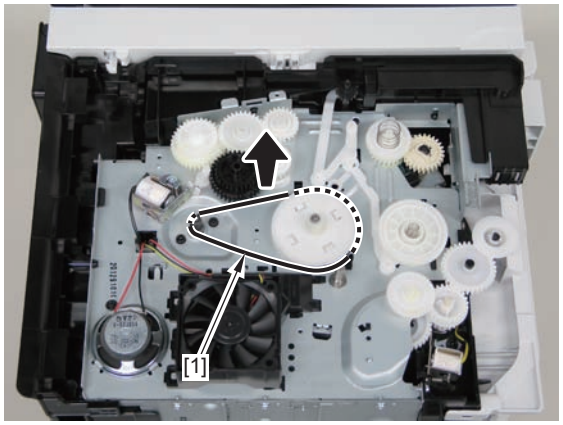
F-4-660

4)Remove the fixing transmission gear[1] and the cartridge transmission gear[2]



F-4-661

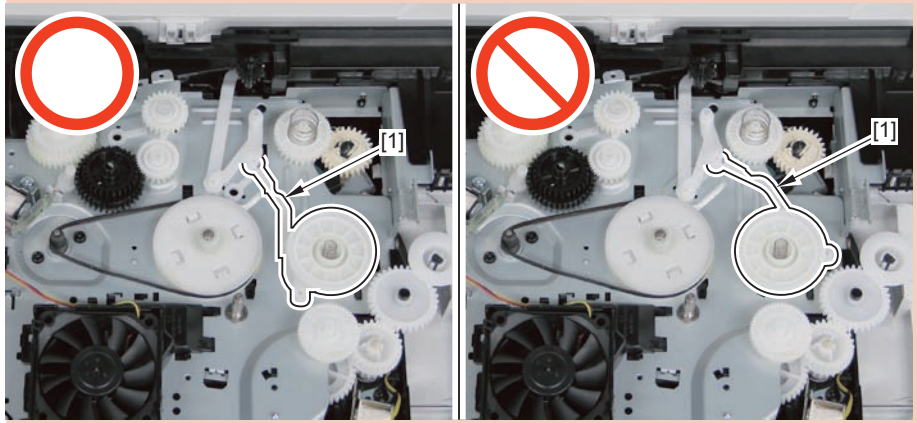
5)Remove the drive belt.



F-4-662

Caution:

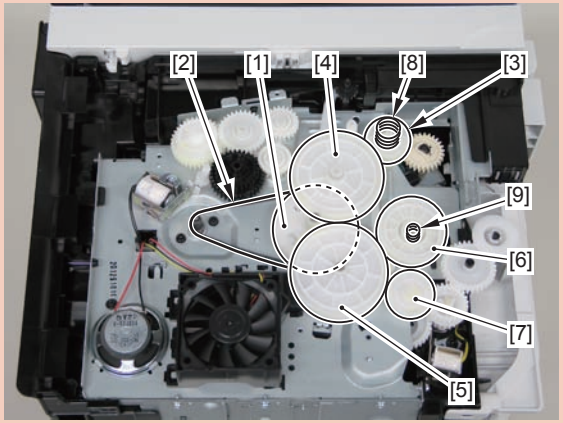
When assembling the drive gear, install the cartridge arm [1] according to the position shown in the left picture.



F-4-663

Caution:

Assemble the drive gear in the order shown in the below picture.

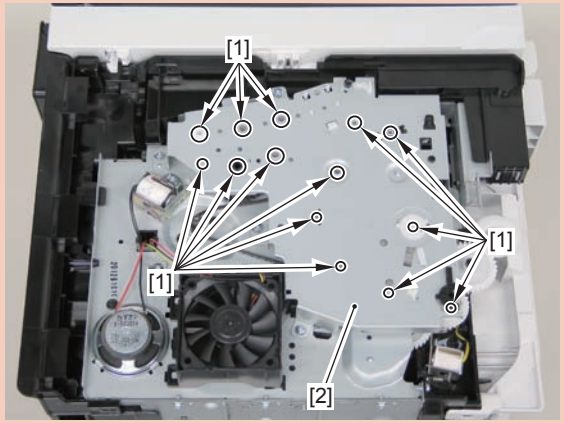


F-4-664

[1] Primary deceleration pulley [6] Gear coupling
[2] Timing belt [7] Feed deceleration gear
[3] Fixing ratchet gear [8] Compression spring
[4] Fixing transmission gear [9] Compression spring
[5] Cartridge transmission gear
[6] Gear coupling
[7] Feed deceleration gear
[8] Compression spring
[9] Compression spring

Caution:

Align the drive cover [2] with the 14 shaft holes [1] to mount it.



F-4-665

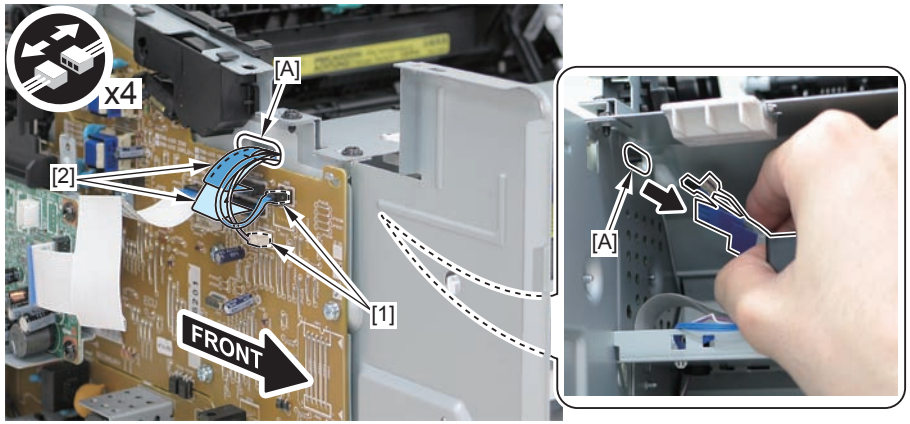
Removing the Main Motor (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-666

Caution:

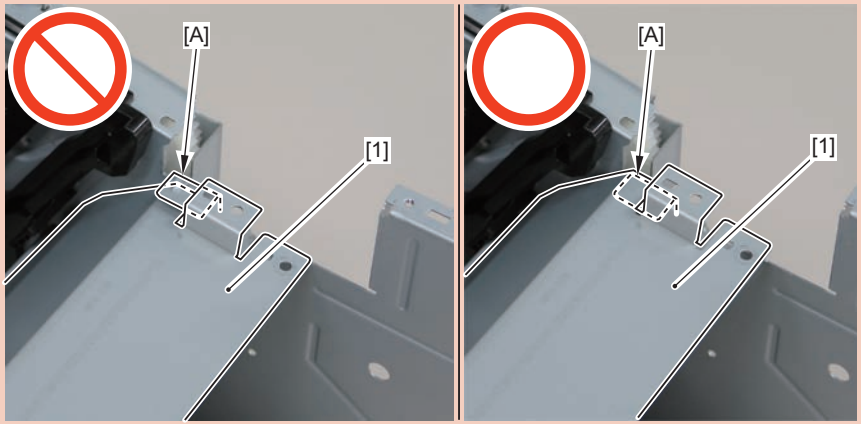
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

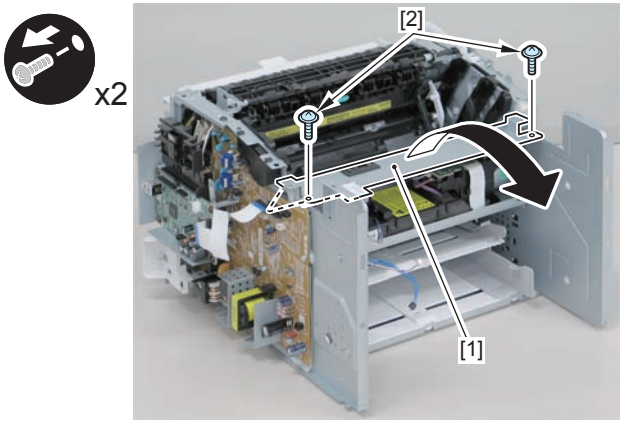
2) Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

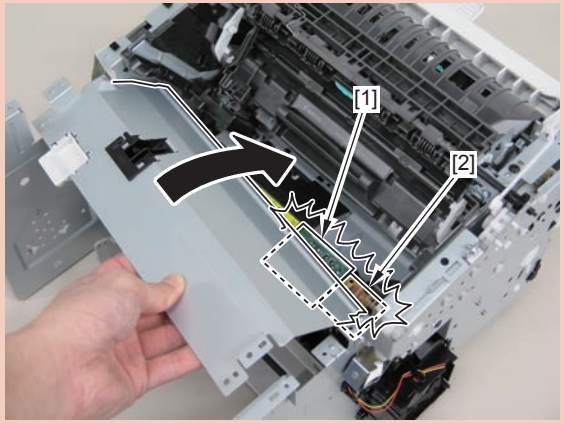




F-4-667

Caution:

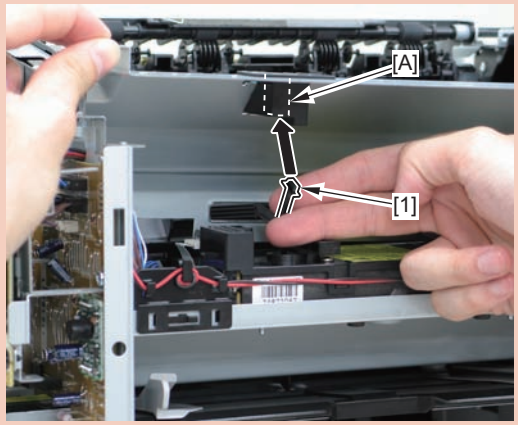
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-668

Caution:

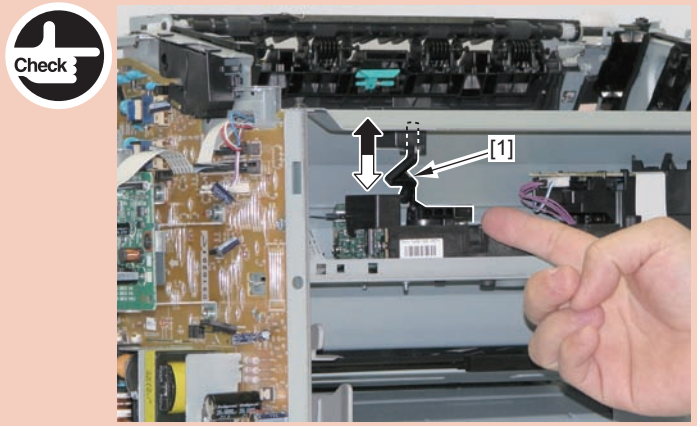
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-669

Caution:

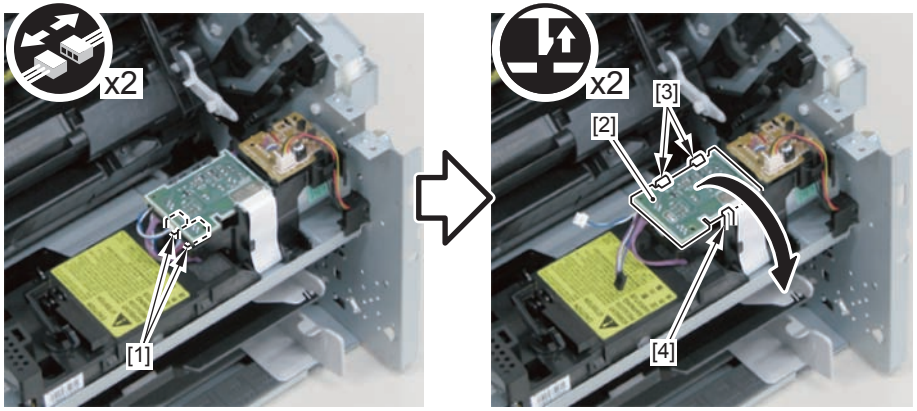
Ensure that the shutter open/close lever [1] can move vertically.



F-4-670

3)Disconnect the 2 connectors[1], and remove the motor driver PCB[2]

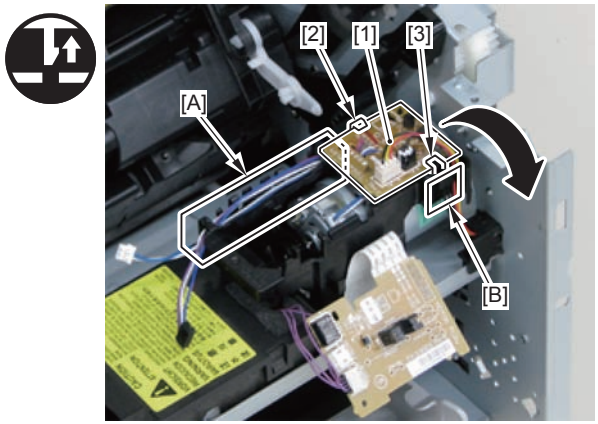
- 2 claws[3]
- 1 hook[4]



F-4-671

4)Free the harness from the harness guide[A] and [B], and remove the duplex relay PCB[1]

- 1 claw[2]
- 1 hook[3]

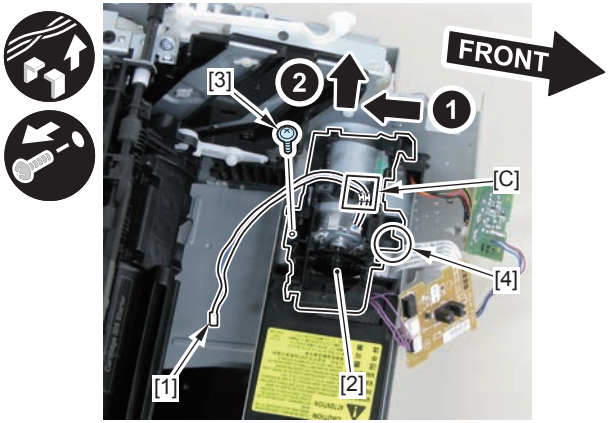


F-4-672

5)Free the motor harness[1] from the harness guide[C].

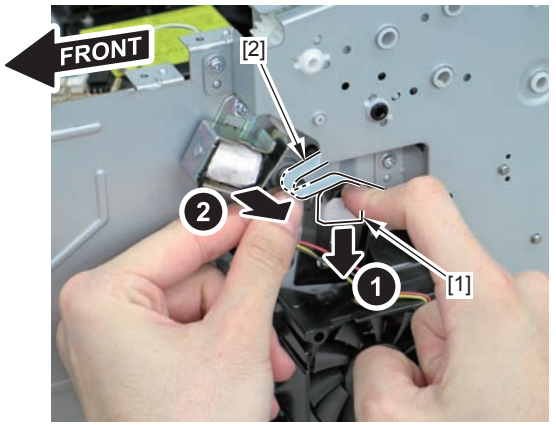
6)Remove the motor guide[2]

- 1 screw[3]
- 1 hook[4]



F-4-673

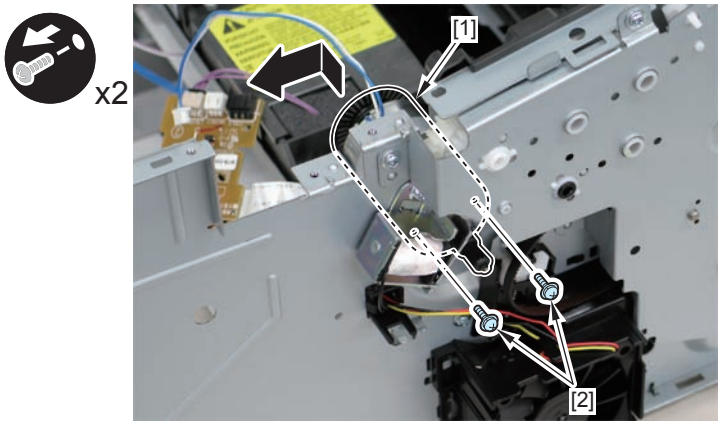
7)Lower the tension unit[1], and remove the belt[2].



F-4-674

8)Remove the main motor[1]

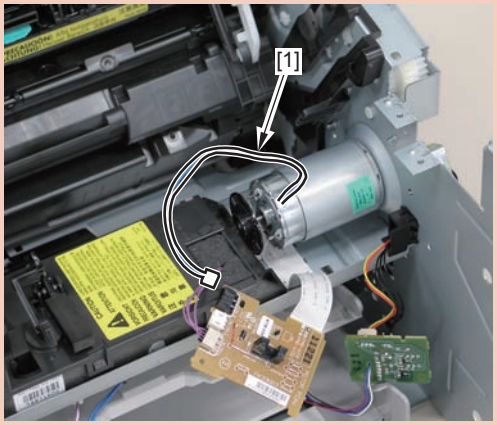
- 2 screws(with washer)[2]



F-4-675

Caution:

When installing the main motor, be sure to install the harness[1] to the upper side of the motor.



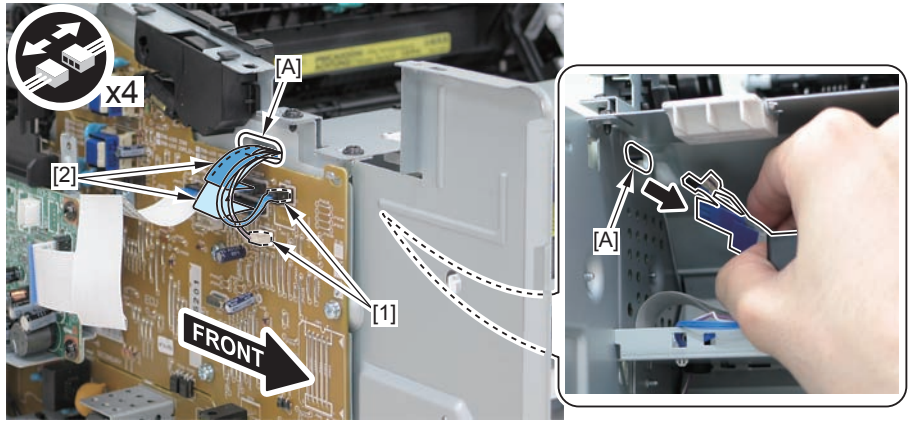
Removing the Main Fan (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



Caution:

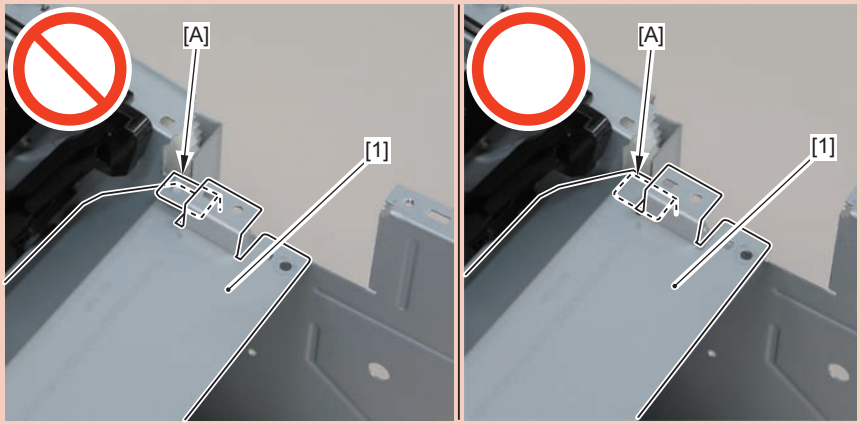
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

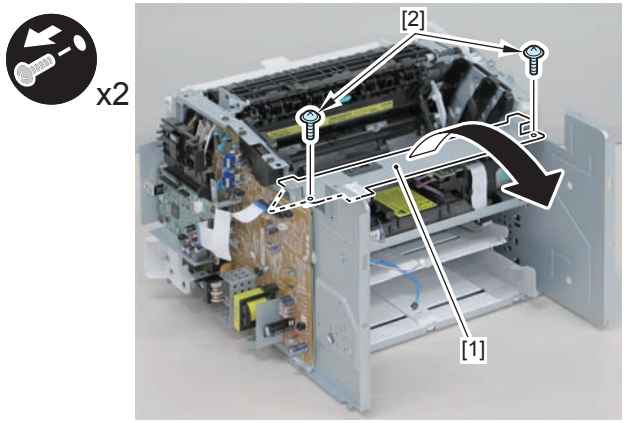
2)Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

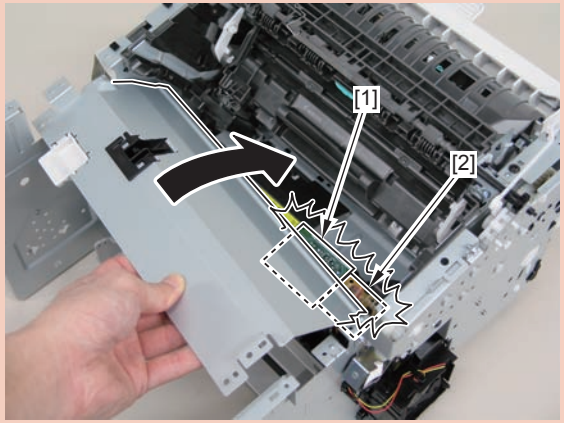




F-4-676

Caution:

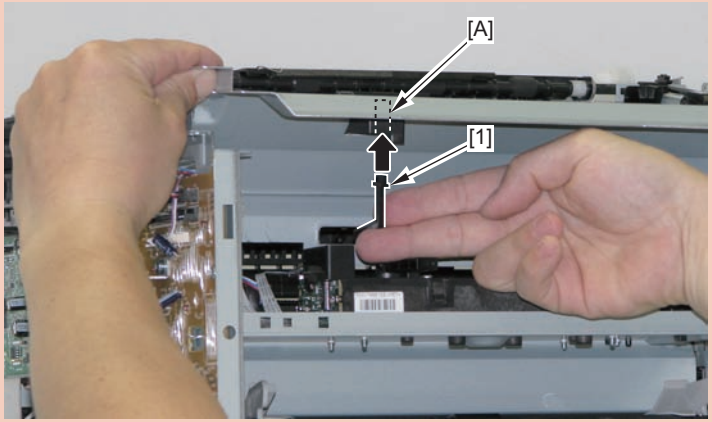
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-677

Caution:

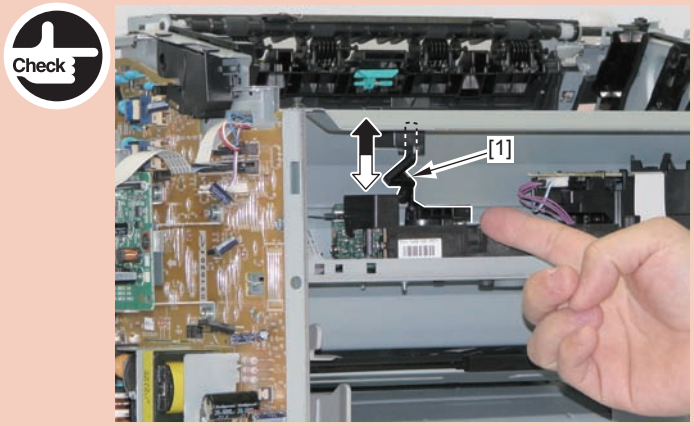
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-678

Caution:

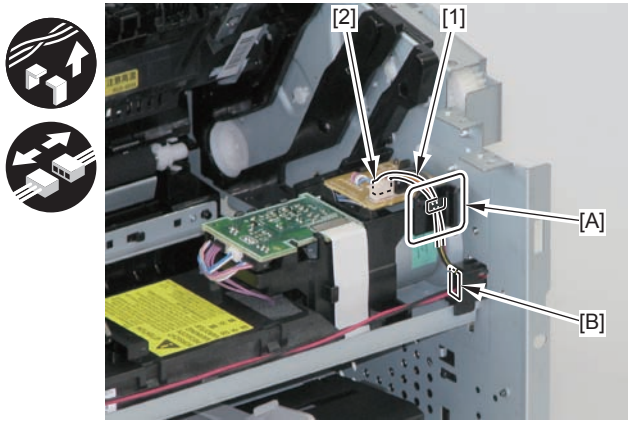
Ensure that the shutter open/close lever [1] can move vertically.



F-4-679

3)Free the fan harness[1] from the harness guide[A], and put it through the hole[B] of the right side plate to the outside.

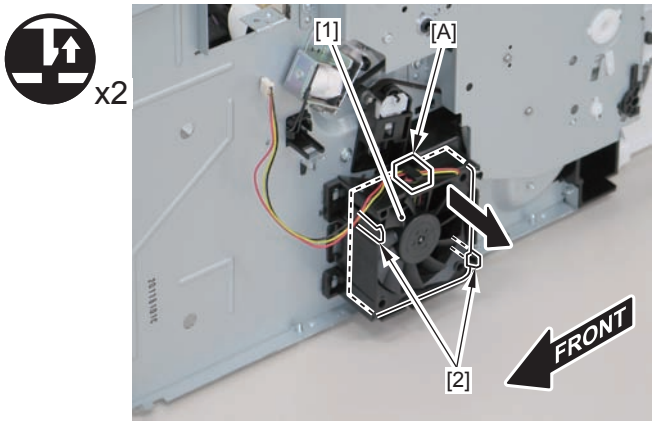
- 1 connector[2]



F-4-680

4)Free the harness from the guide[A], and remove the main fan[1].

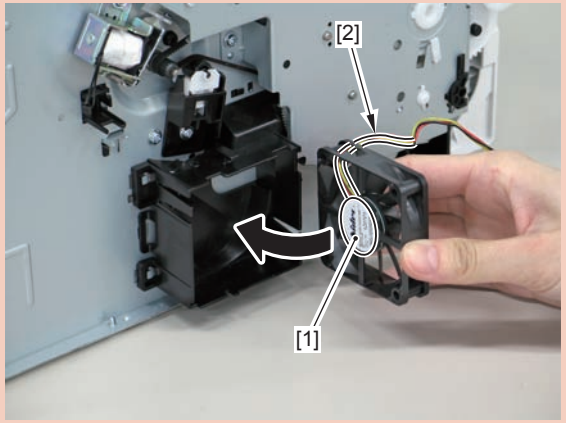
- 2 claws[2]



F-4-681

Caution:

When mounting the main fan, attach the harness [2] to the upper-right side of the fan with the fan label [1] facing inwards.



F-4-682

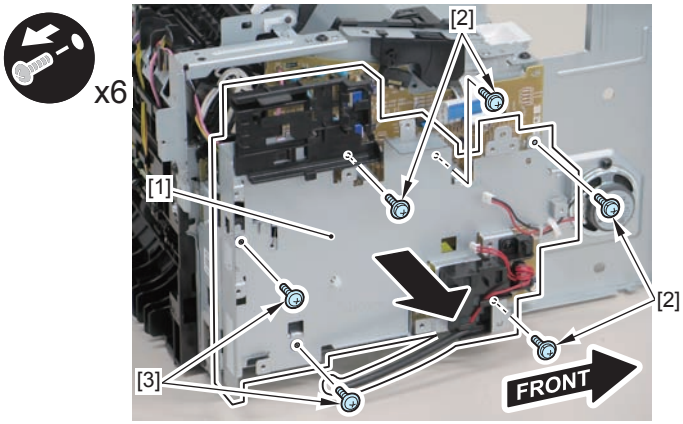
Removing the Engine Controller PCB (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB
8) Remove the FAX NCU PCB
9) Remove the wireless LAN PCB.

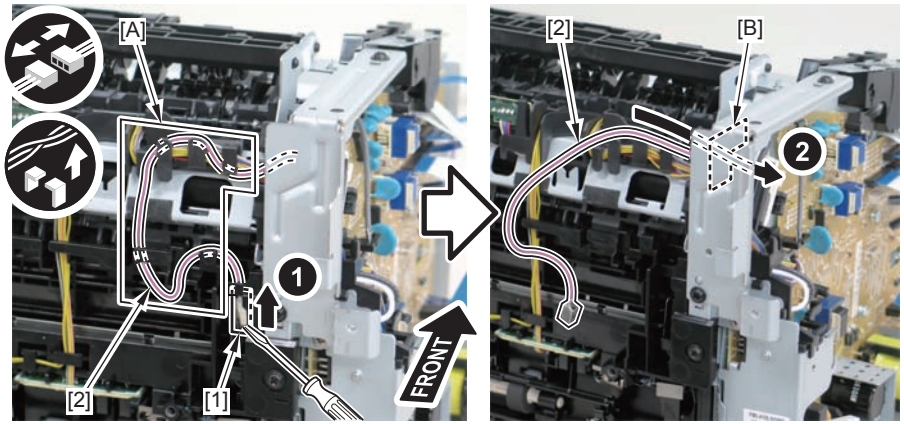
Procedure

1) Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-683

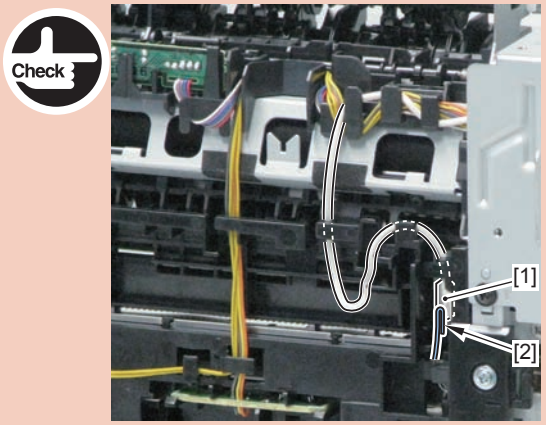
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-684

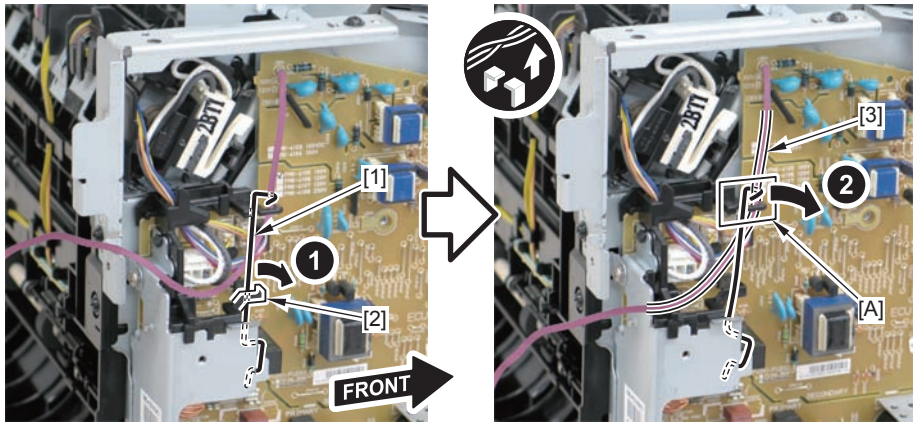
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-685

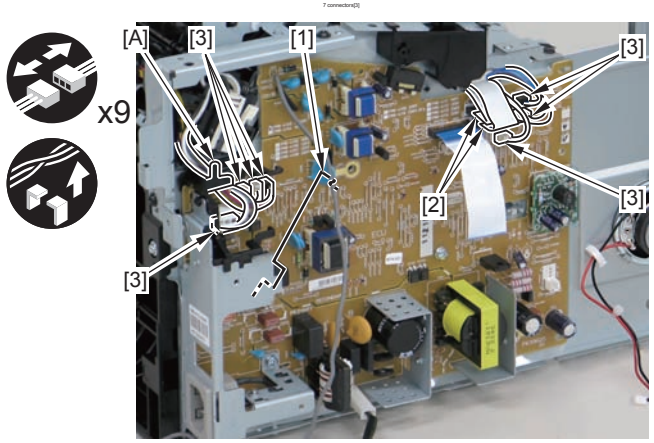
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-686

4)Remove the harness retaining spring[1], and free the harness from the guide[A].

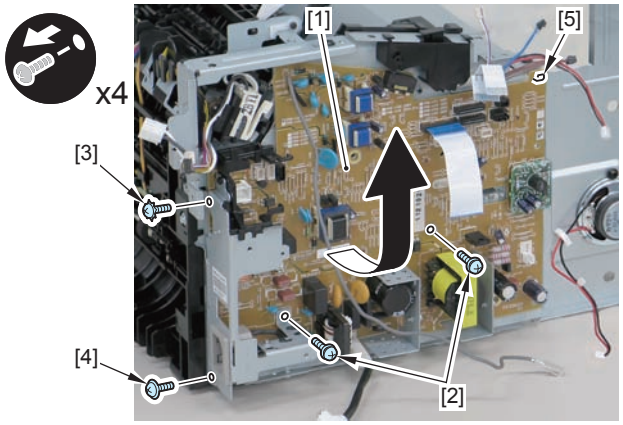
- 2 flat cables[2]
- 6 connectors[3]



F-4-687

5)Remove the engine controller PCB[1].

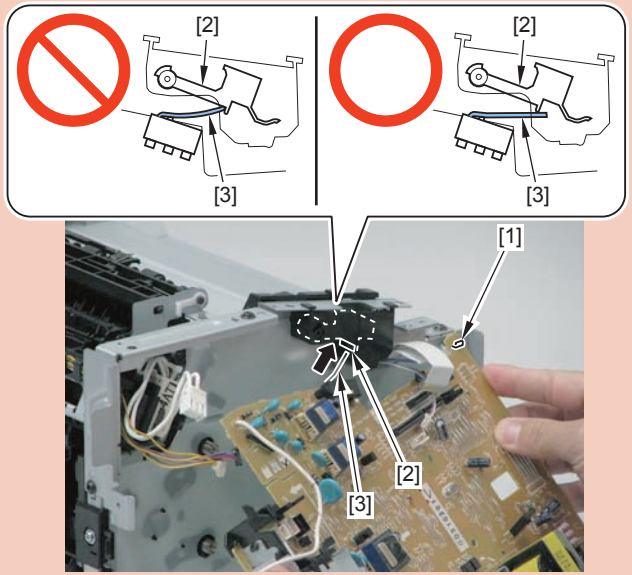
- 5 screws(with washers)[2]
- 1 screw(with tooth lock washer)[3]
- 1 screw(black TP)[4]
- 1 hook[5]



F-4-688

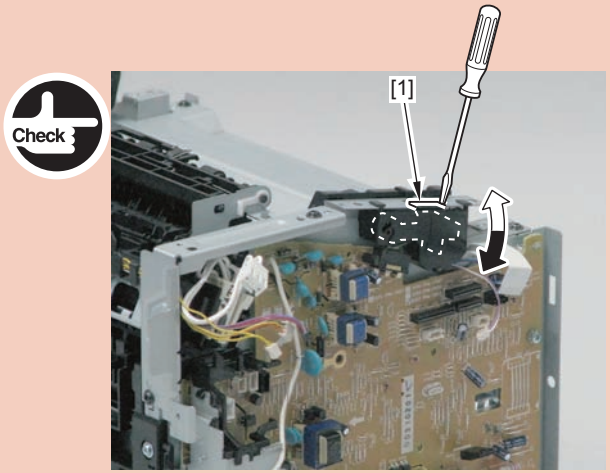
Caution:

When reassembling, attach the engine controller PCB to the hook [1] and then mount the switchboard [3] to the lower side of the switch arm [2].



F-4-689

Ensure that the switch arm [1] can move vertically.



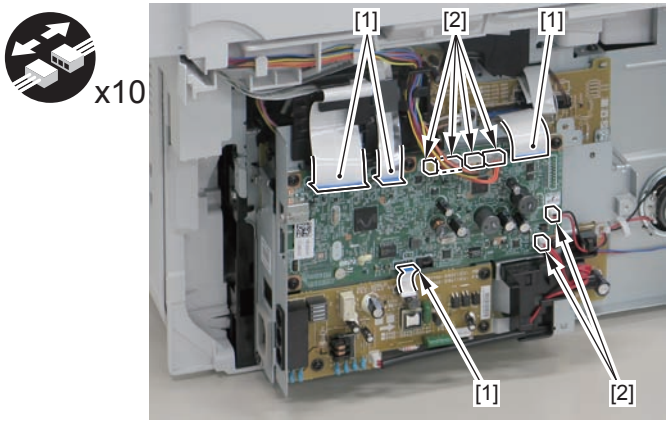
Removing the Main Controller PCB (L418S/L410/L190)

Preparation

1) Remove the left cover

Procedure

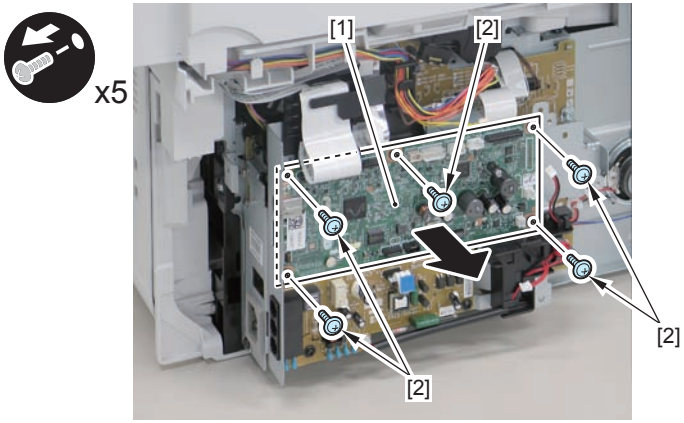
1)Remove the 4 flat cables[1] and 6 connectors[2].



F-4-690

2)Remove the main controller PCB[1].

- 5 screws(black TP)[3]



F-4-691

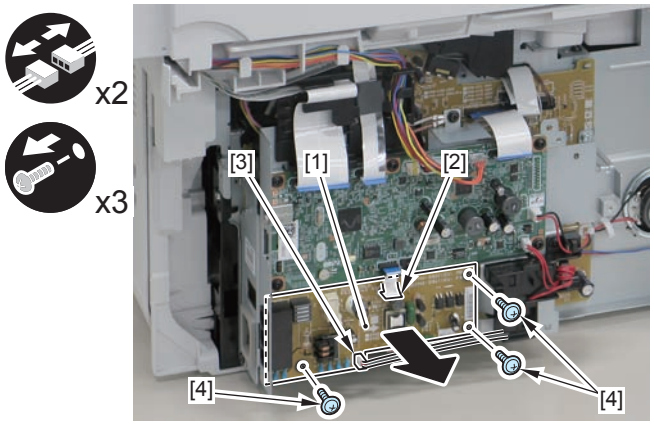
Removing the FAX NCU PCB(L418S/L410/L190)

Preparation

1) Remove the left cover

Procedure

1)Remove the FAX NCU PCB[1]
- 1 flat cable[2]
- 1 connector[3]
- 3 screws[4]



F-4-692

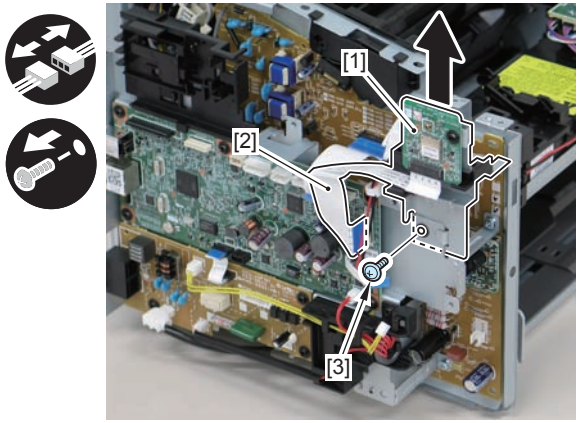
Removing the Wireless LAN PCB (L418S/L410/L190)

Preparation

1) Remove the left cover

Procedure

1)Remove the wireless LAN PCB.
- 1 flat cable[2]
- 1 screw[3]



F-4-693

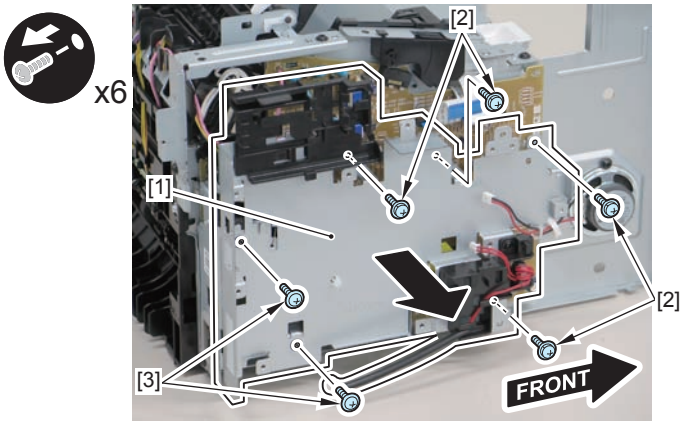
Removing the Paper Leading Edge Sensor PCB (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB
8) Remove the FAX NCU PCB.
9) Remove the wireless LAN PCB.

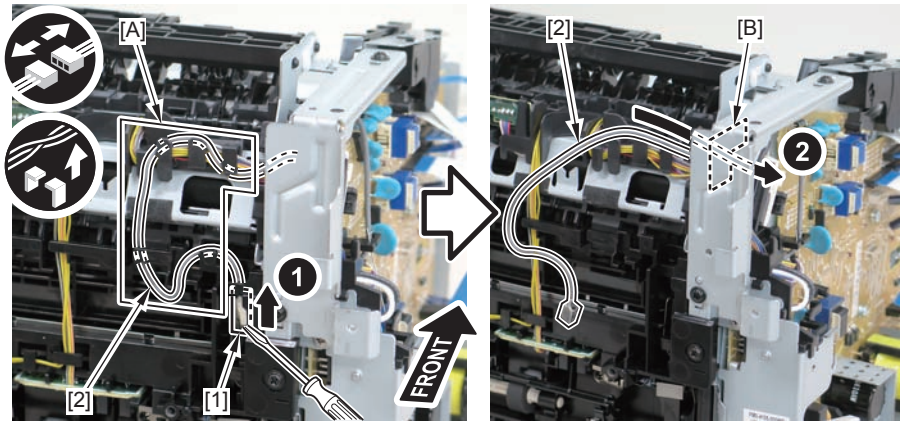
Procedure

1) Remove the main controller mounting plate[1]
- 4 screws(with washers)[2]
- 2 screws(black TP)[3]



F-4-694

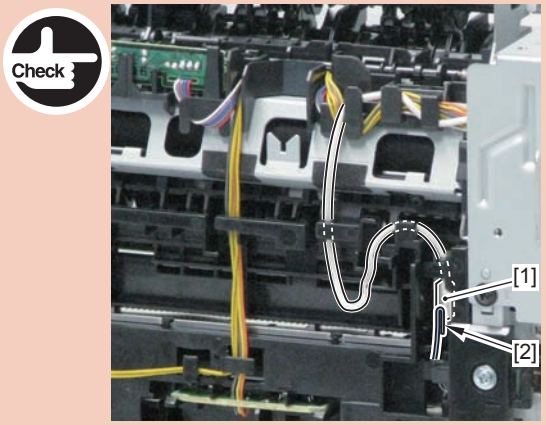
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-695

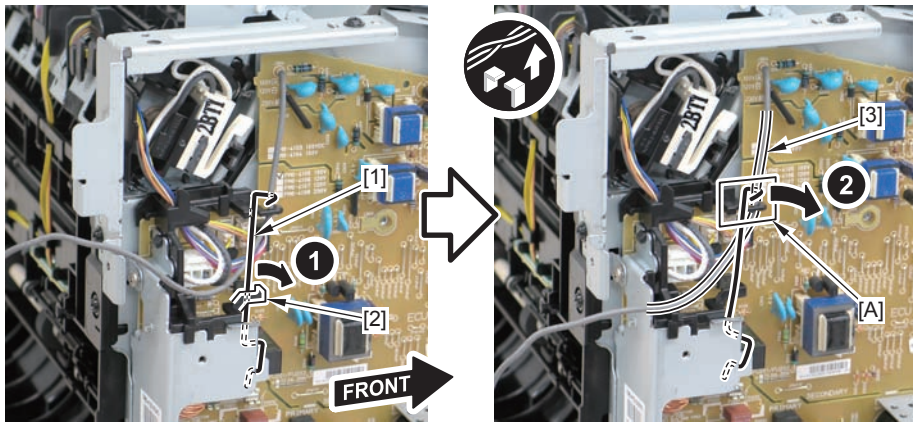
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



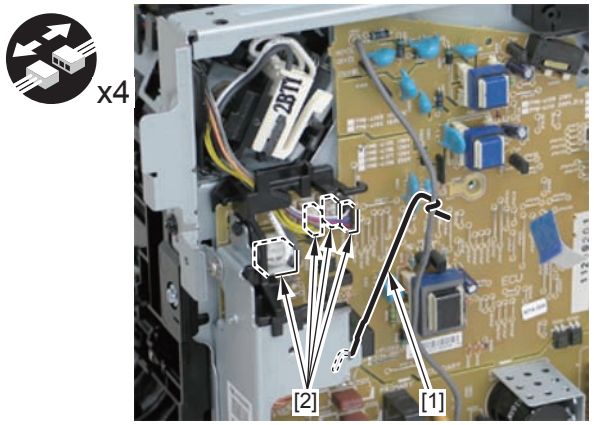
F-4-696

3)Remove the harness spring[1] from the hook[2], and free the harness[3] from the guide[A].



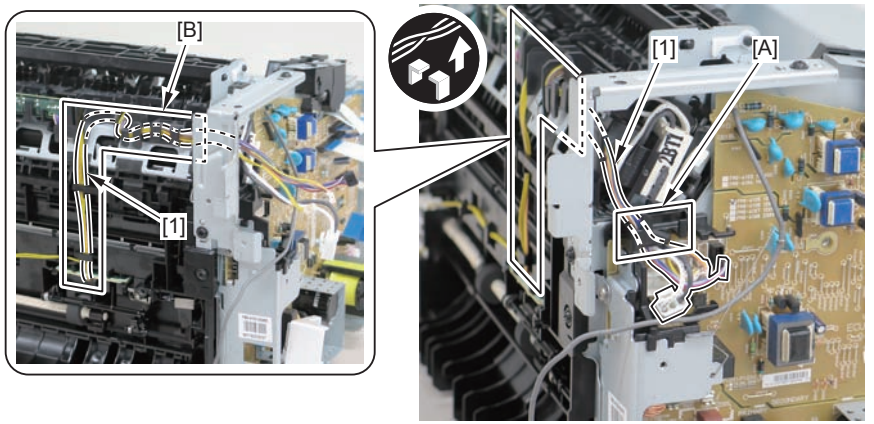
F-4-697

4)Remove the harness retaining spring[1] and 4 connectors[2].



F-4-698

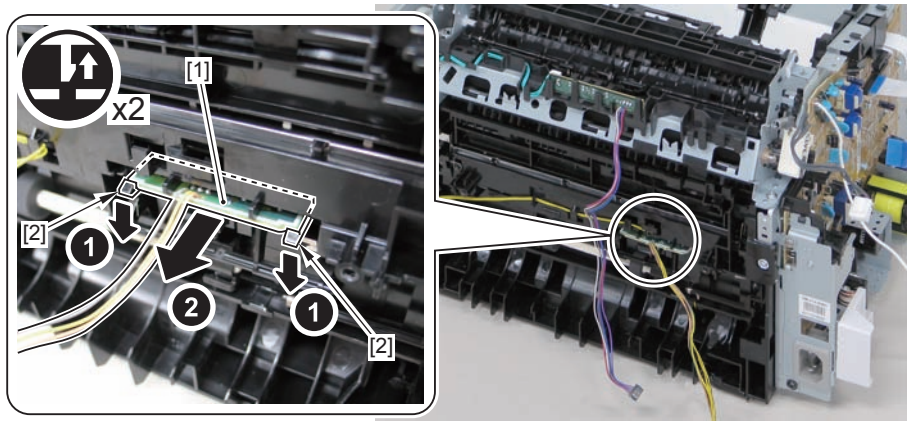
5)Remove the harness[1] from the guide[A] and [B].



F-4-699

6)Remove the paper leading edge sensor PCB[1]

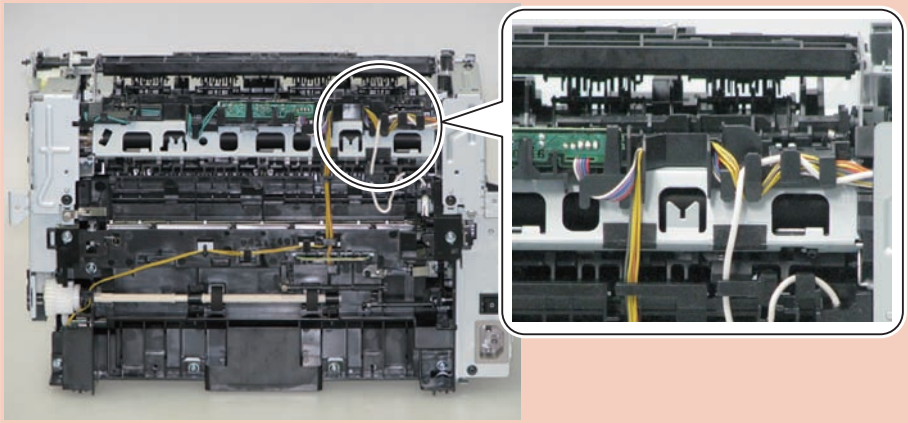
- 2 claws[2]



F-4-700

Note:

The below picture shows how to wind the harness.



F-4-701

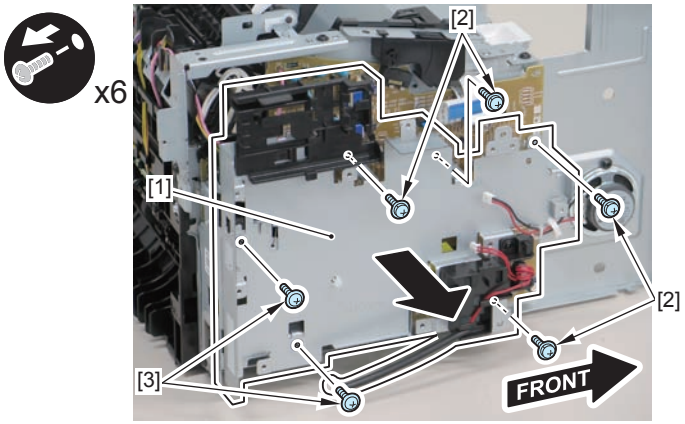
Removing the Fixing Delivery/Paper Width Sensor PCB (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit.
7) Remove the main controller PCB
8) Remove the FAX NCU PCB.
9) Remove the wireless LAN PCB.

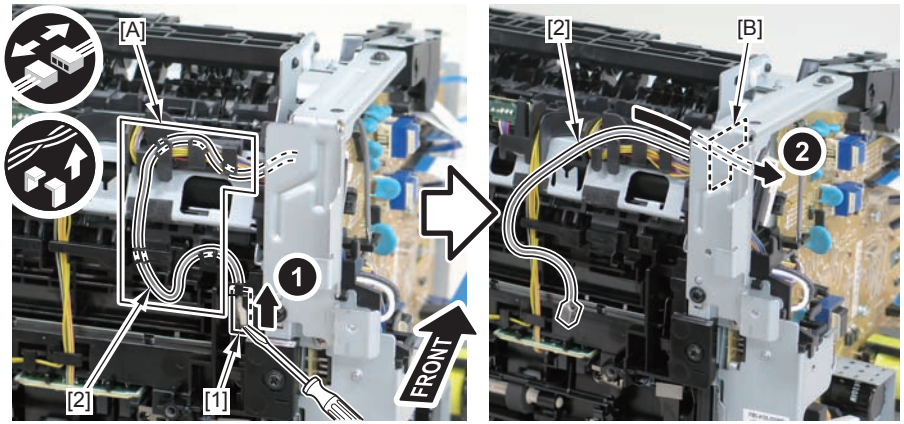
Procedure

1) Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-702

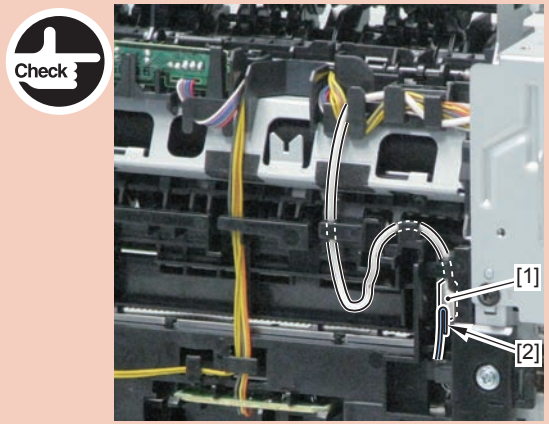
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-703

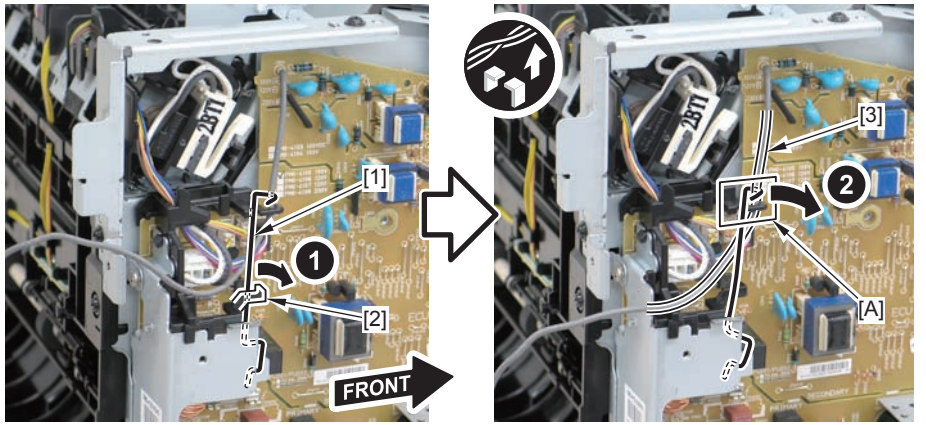
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



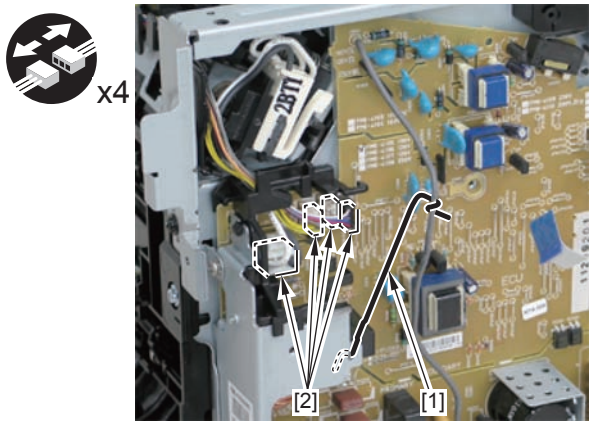
F-4-704

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



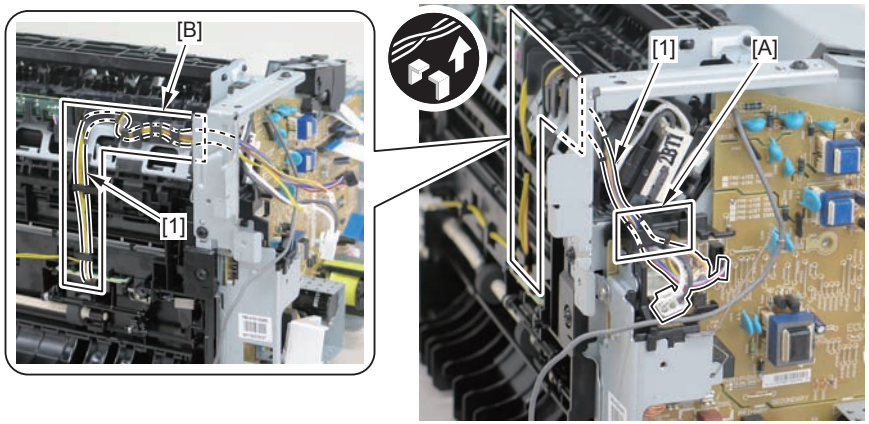
F-4-705

4)Remove the harness retaining spring[1] and 4 connectors[2].



F-4-706

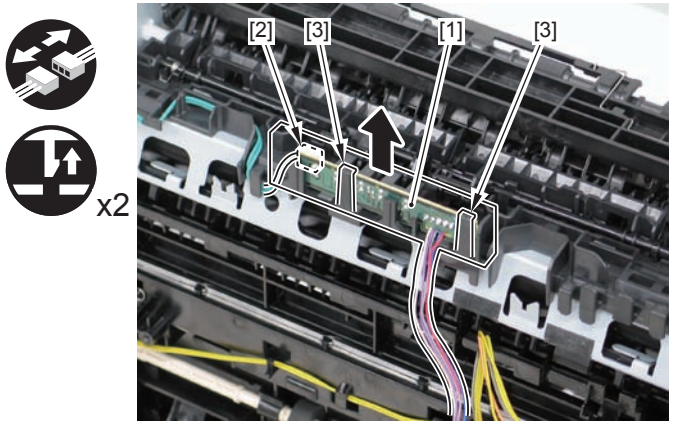
5)Remove the harness[1] from the guide[A] and [B].



F-4-707

6)Remove the fixing delivery/paper width sensor PCB[1]

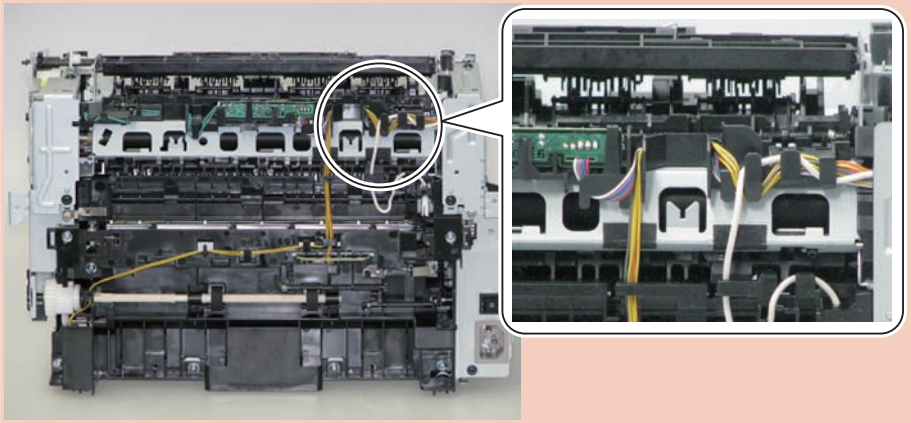
- 1 connector
- 2 claws[3]



F-4-708

Note:

The below picture shows how to wind the harness.



F-4-709

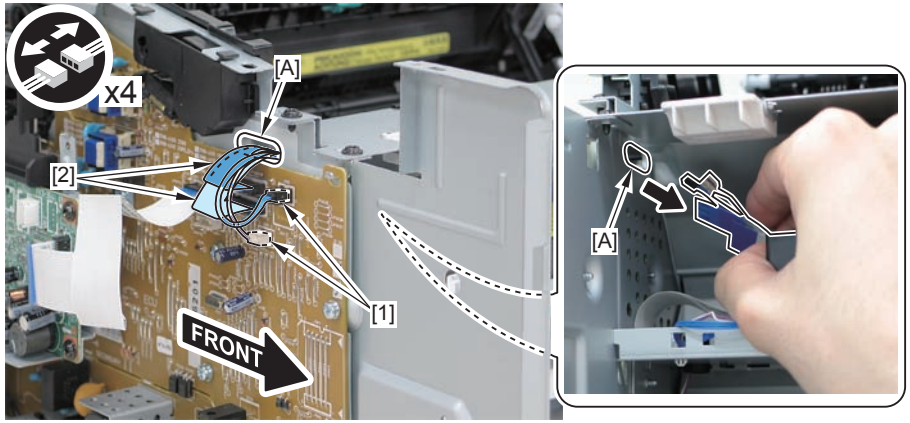
Removing the Toner Sensor and Multi Pickup Sensor Unit (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-710

Caution:

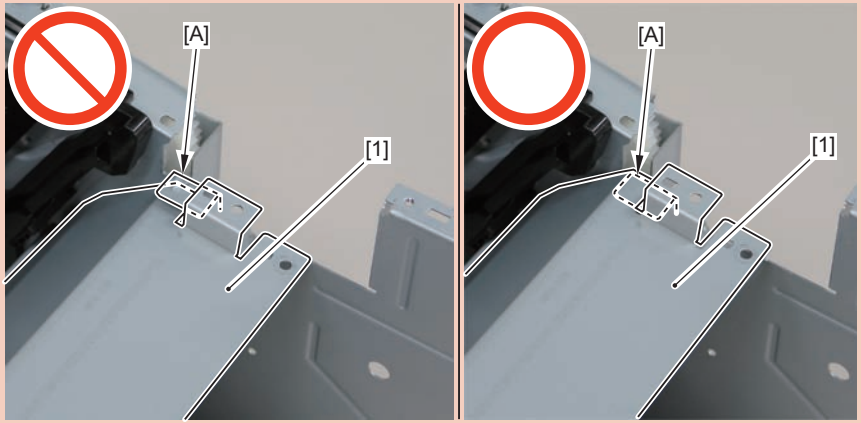
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

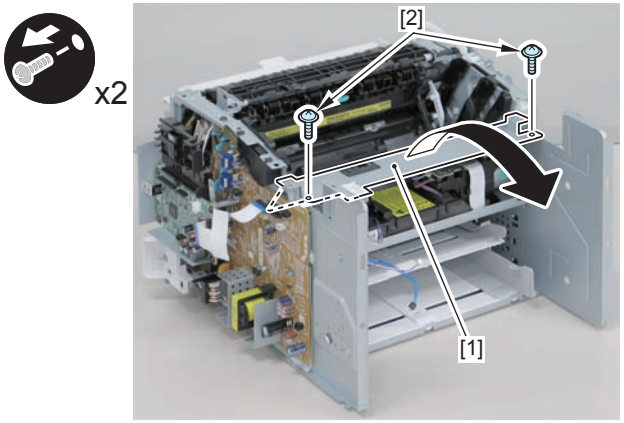
2) Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

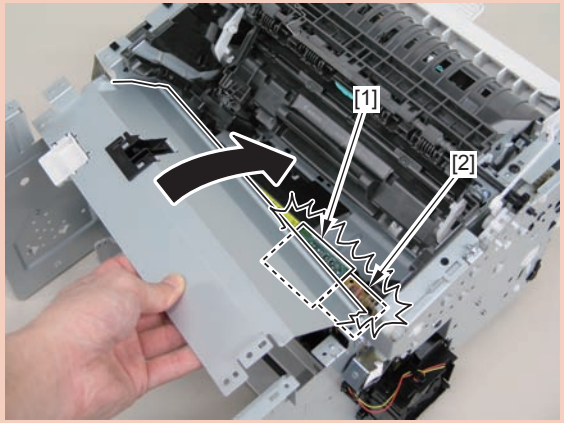




F-4-711

Caution:

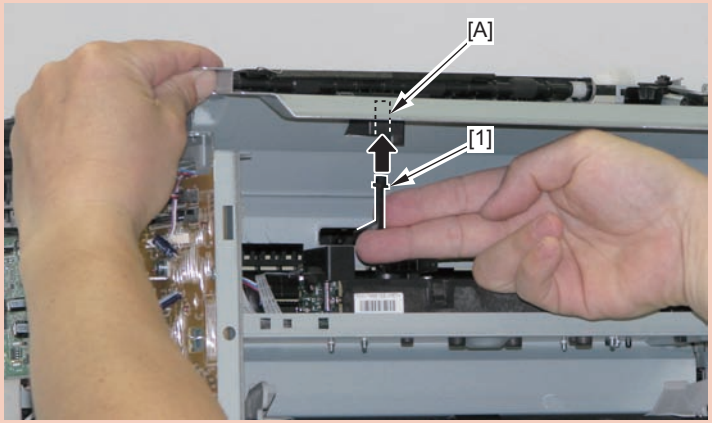
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-712

Caution:

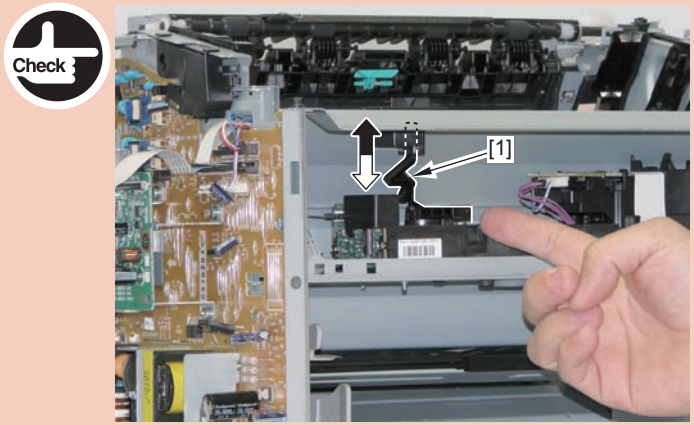
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-713

Caution:

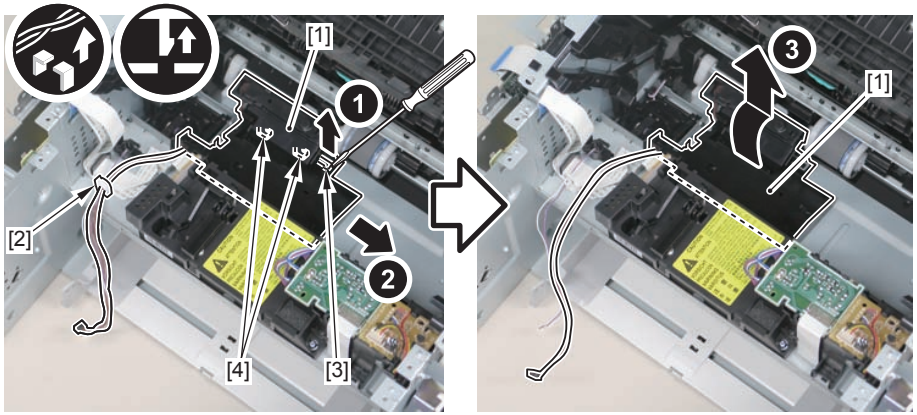
Ensure that the shutter open/close lever [1] can move vertically.



F-4-714

3)Remove the toner sensor/multi pickup sensor unit.

- 1 wire saddle[2]
- 1 claw[3]
- 2 hooks[4]



F-4-715

Removing the Speaker (L418S/L410/L190)

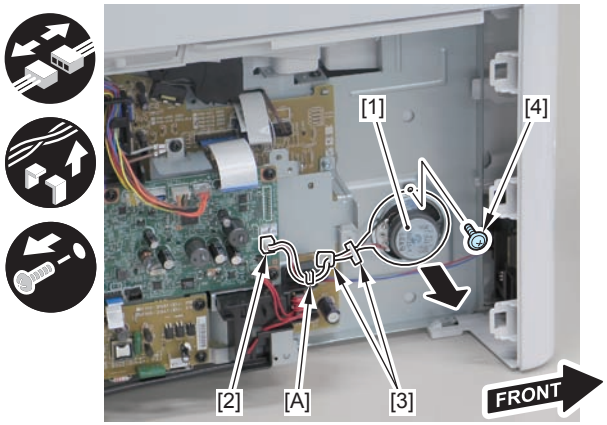
Preparation

1) Remove the left cover

Procedure

1)Disconnect harness from the guide[A], and remove the speaker[1].

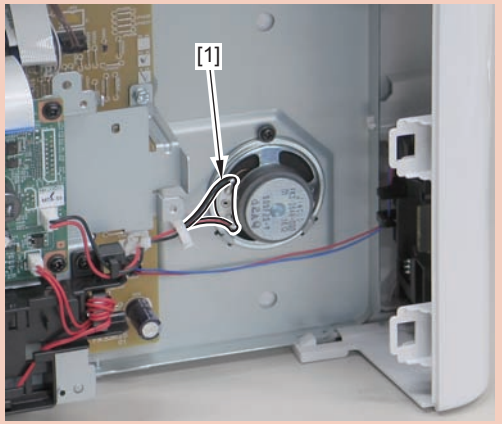
- 1 connector[2]
- 2 wire saddles[3]
- 1 screw[4]



F-4-716

Caution:

When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-717

Laser Exposure System

Removing the Laser Scanner Unit (MF4890dw/MF4880dw)

Preparation

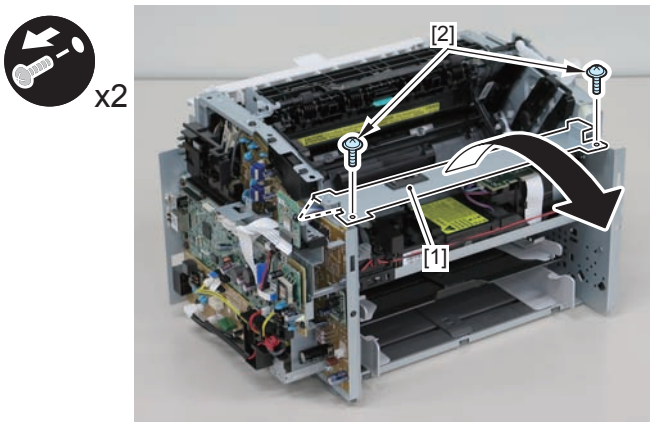
1)Remove the left cover.
2)Remove the DADF unit and reader unit.
3)Remove the right cover.
4)Remove the front cover unit.
5)Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

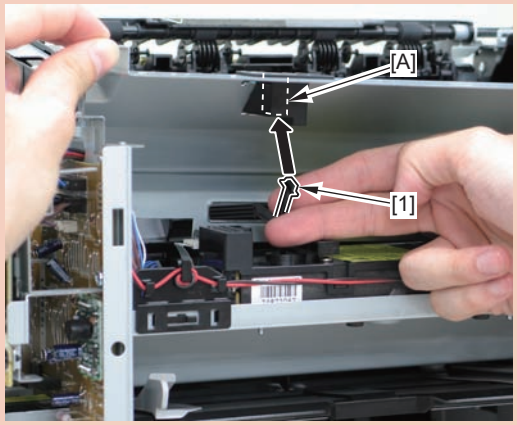
1) Remove the scanner cover [1].
- 2 screws (black TP) [2]



F-4-718

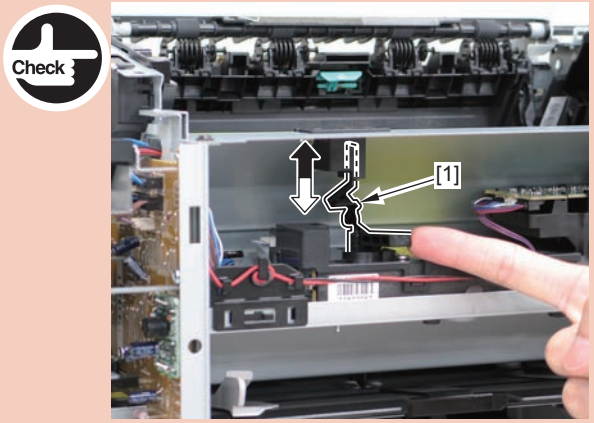
Caution:

- When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



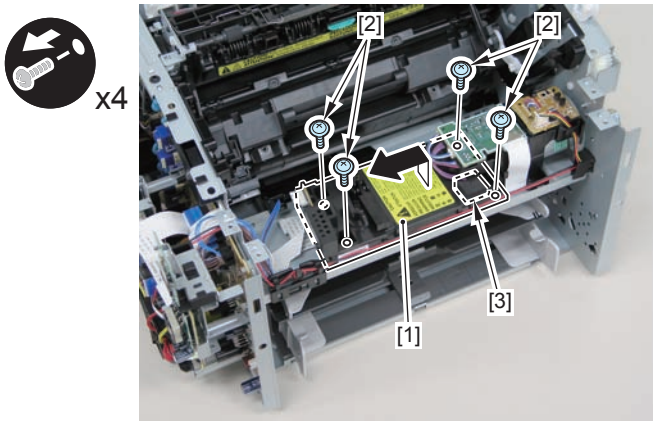
F-4-719

- Ensure that the shutter open/close lever [1] can move vertically.



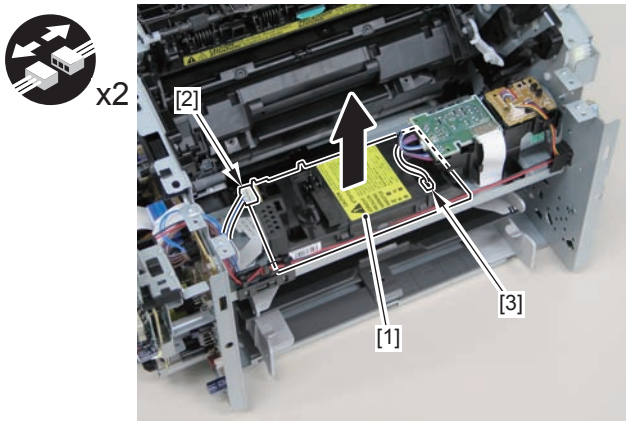
F-4-720

2) Move the laser scanner unit [1].
- 4 screws [2]
- 1 sponge[3]



F-4-721

3) Remove the laser scanner unit [1].
- 1 flat cable [2]
- 1 connector [3]



F-4-722

Removing the Laser Scanner Unit (MF4870dn/4830d)

Preparation

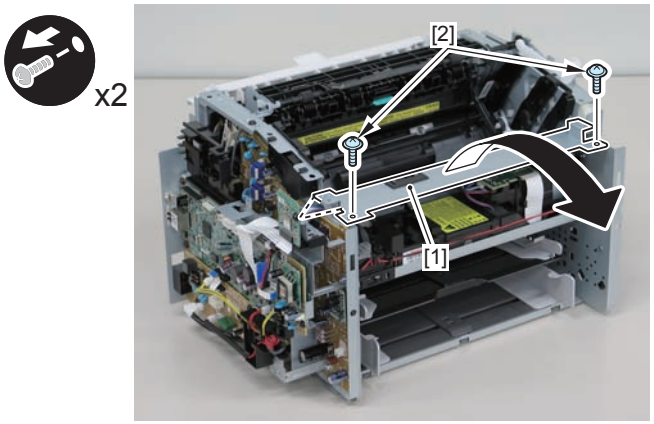
1) Remove the left cover.
2) Remove the SADF unit and reader unit.
3) Remove the right cover.
4) Remove the front cover unit.
5) Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

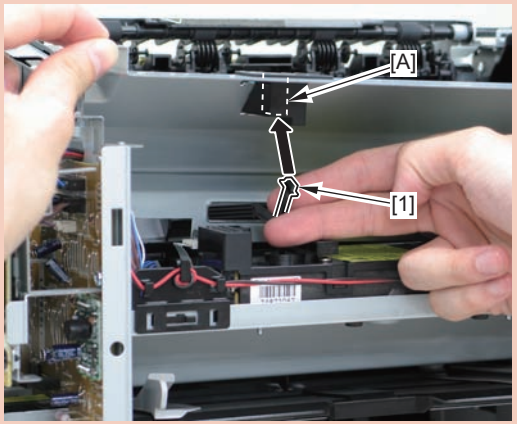
1) Remove the scanner cover [1].
- 2 screws (black TP) [2]



F-4-723

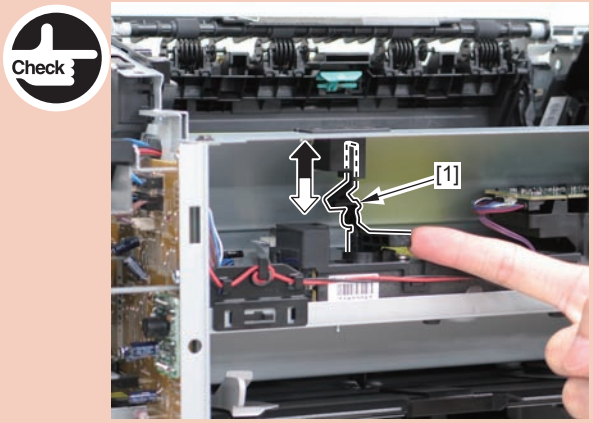
Caution:

- When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-724

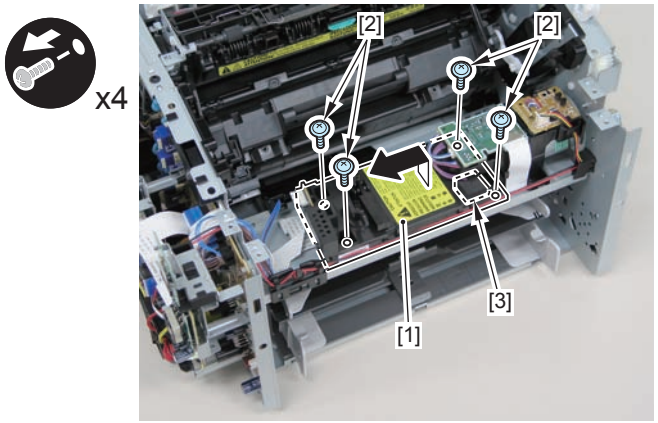
- Ensure that the shutter open/close lever [1] can move vertically.



F-4-725

2) Move the laser scanner unit [1].

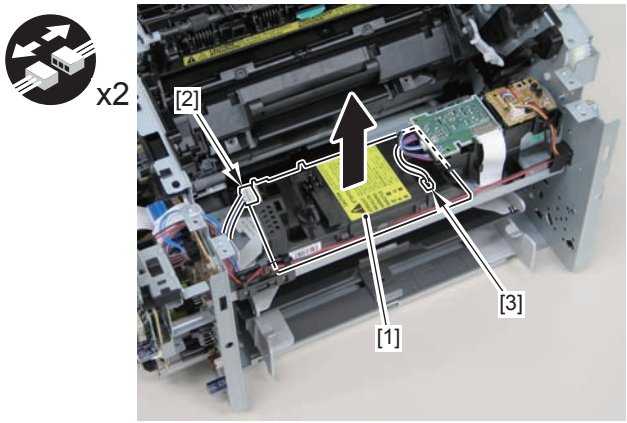
- 4 screws [2]
- 1 sponge[3]



F-4-726

3) Remove the laser scanner unit [1].

- 1 flat cable [2]
- 1 connector [3]



F-4-727

Removing the Laser Scanner Unit (MF4820d)

Preparation

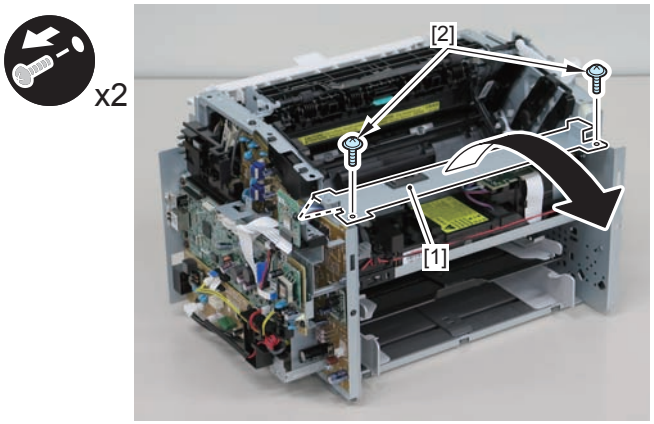
1)Remove the left cover.
2)Remove the copyboard cover and reader unit.
3)Remove the right cover.
4)Remove the front cover unit.
5)Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

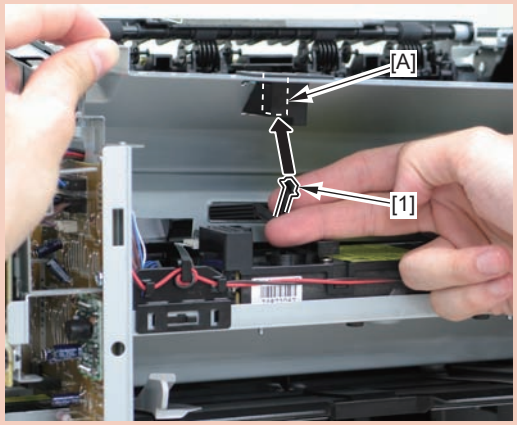
1) Remove the scanner cover [1].
- 2 screws (black TP) [2]



F-4-728

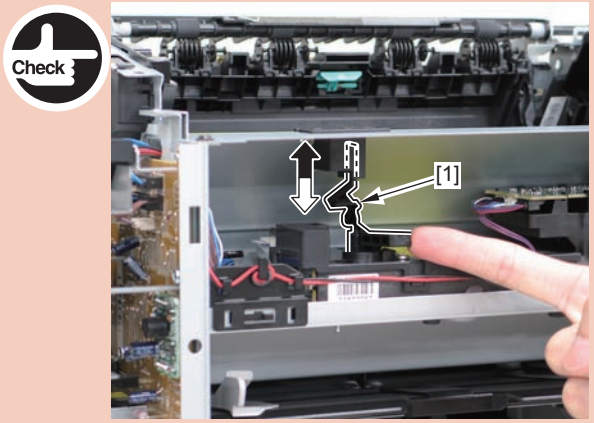
Caution:

- When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



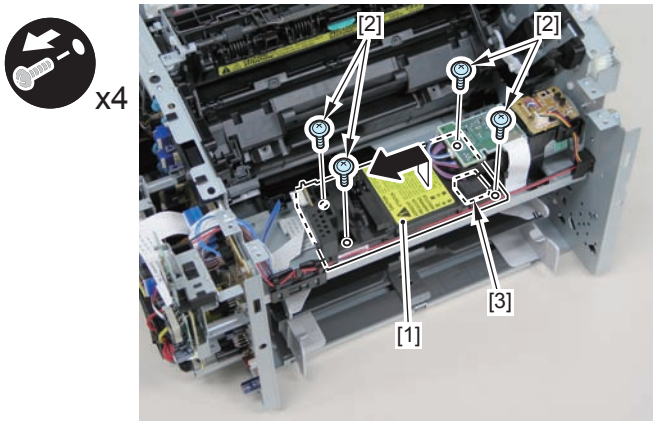
F-4-729

- Ensure that the shutter open/close lever [1] can move vertically.



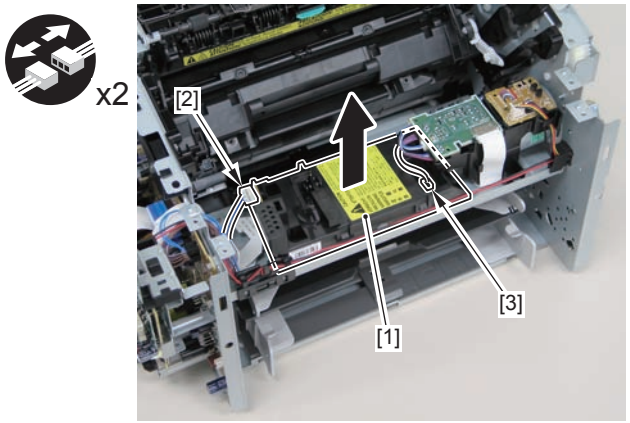
F-4-730

2) Move the laser scanner unit [1].
- 4 screws [2]
- 1 sponge[3]



F-4-731

3) Remove the laser scanner unit [1].
- 1 flat cable [2]
- 1 connector [3]



F-4-732

Removing the Laser Scanner Unit (D530)

Preparation

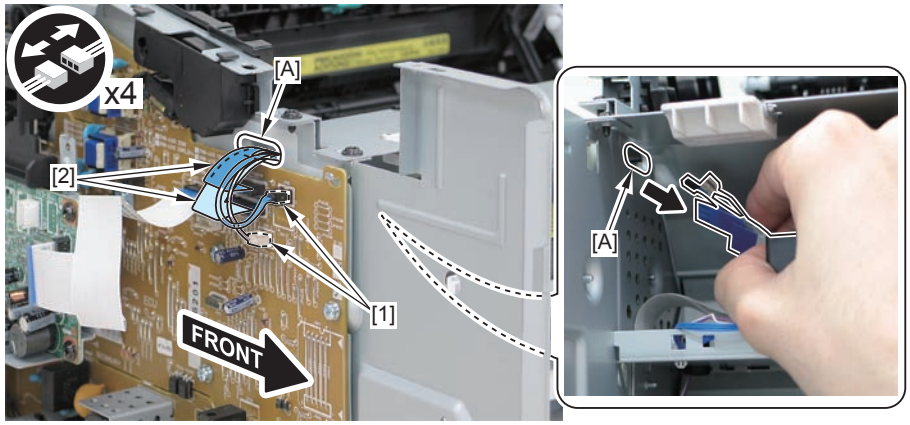
1) Remove the left cover.
2) Remove the copyboard cover and reader unit.
3) Remove the right cover.
4) Remove the front cover unit.
5) Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-733

Caution:

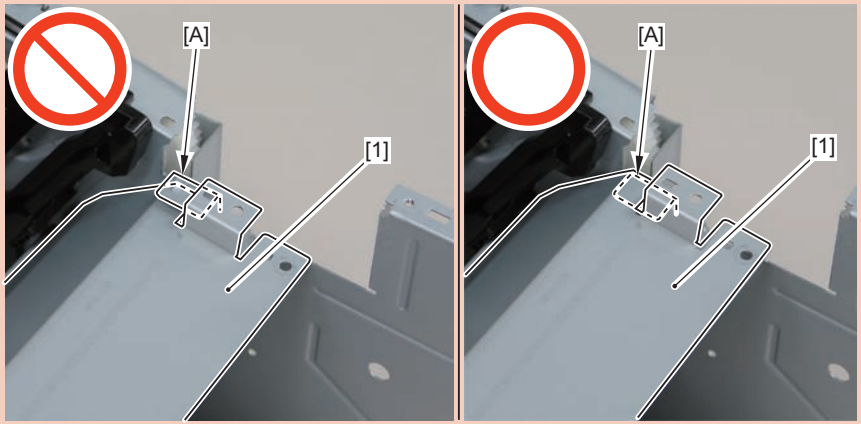
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

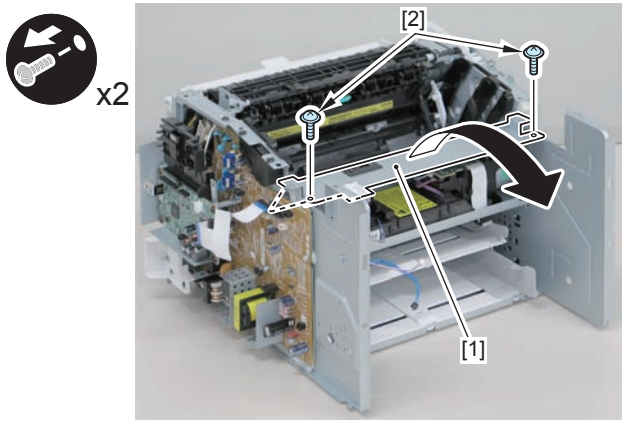
2)Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

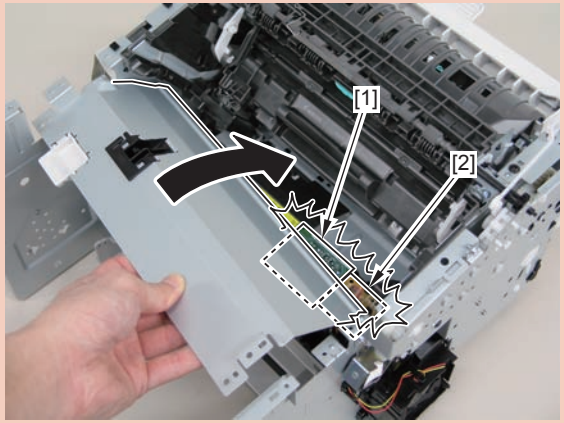




F-4-734

Caution:

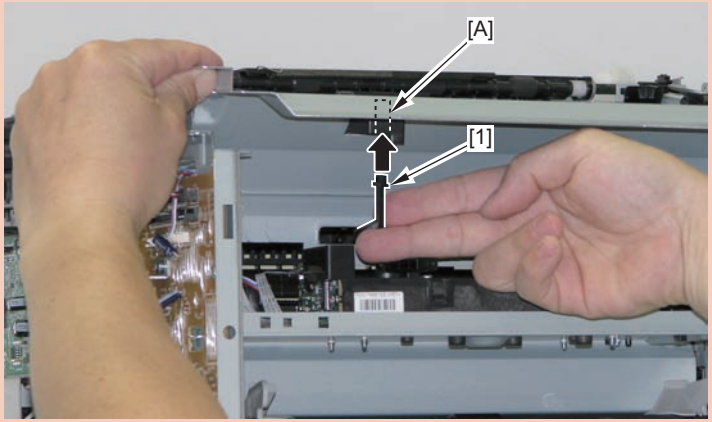
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-735

Caution:

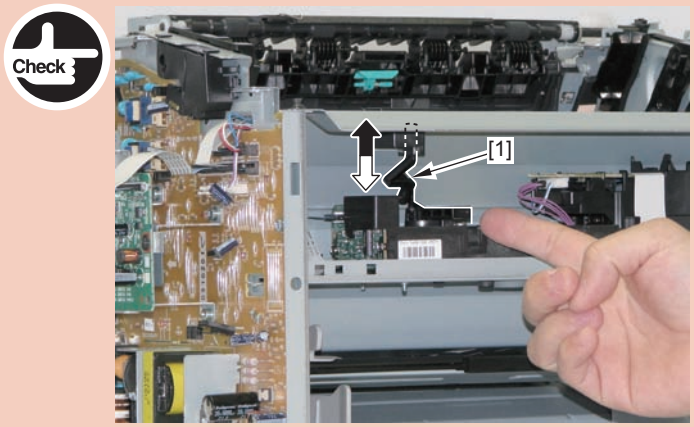
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-736

Caution:

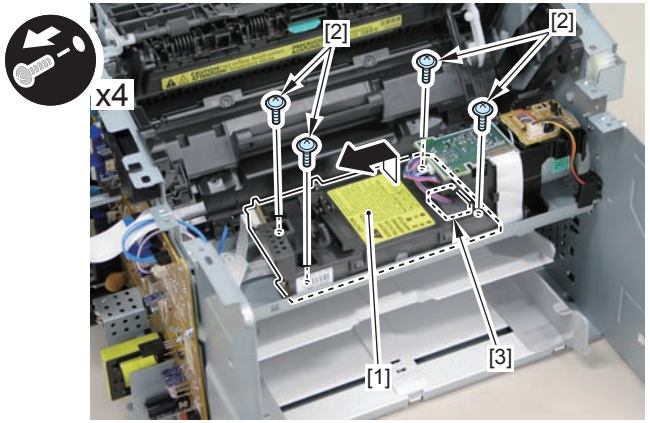
Ensure that the shutter open/close lever [1] can move vertically.



F-4-737

3)Move the laser scanner unit [1].

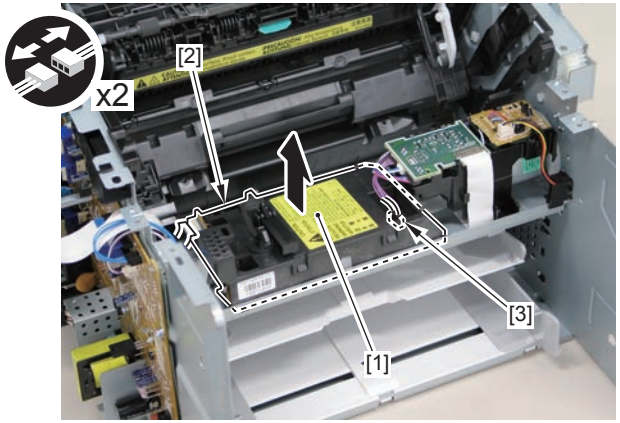
- 4 screws [2]
- 1 sponge[3]



F-4-738

3) Remove the laser scanner unit [1].

- 1 flat cable [2]
- 1 connector [3]



F-4-739

Removing the Laser Scanner Unit (MF4780w/MF4770n/MF4750/MF4730)

Preparation

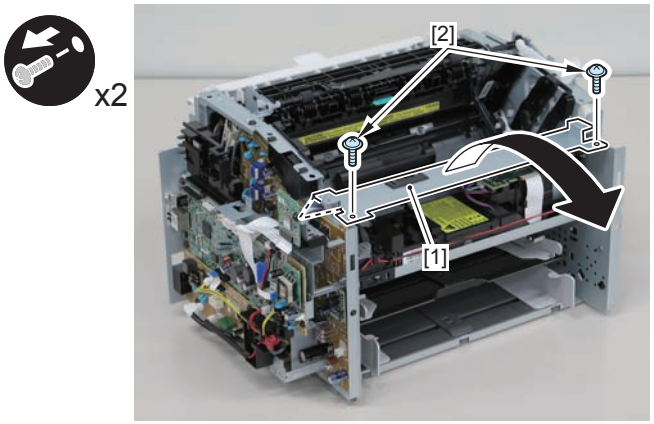
1)Remove the left cover.
2)Remove the SADF unit and reader unit.
3)Remove the right cover.
4)Remove the front cover unit.
5)Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

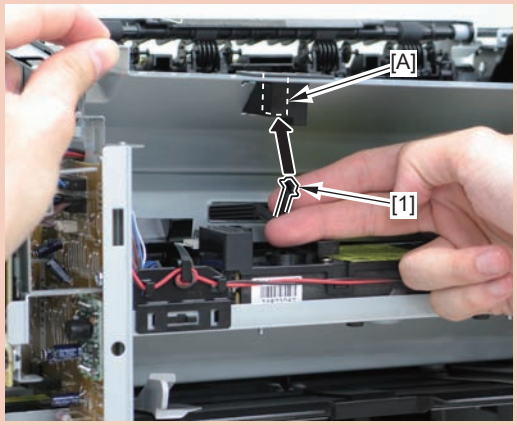
1) Remove the scanner cover [1].
- 2 screws (black TP) [2]



F-4-740

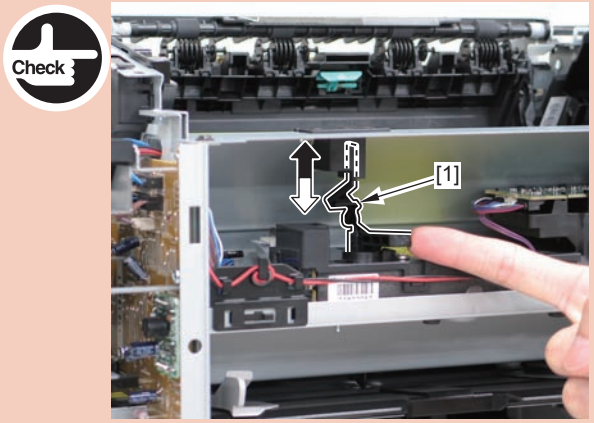
Caution:

- When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



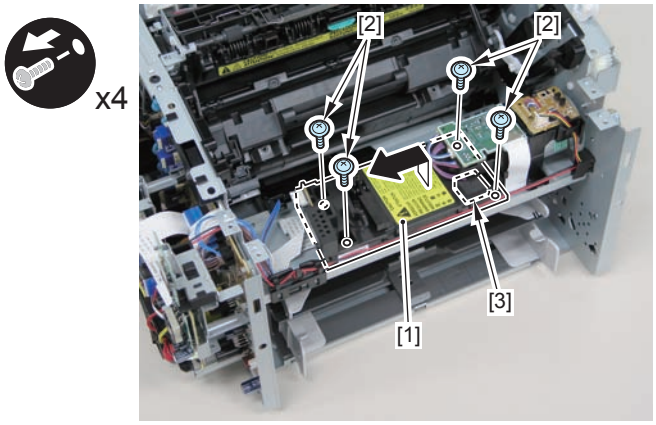
F-4-741

- Ensure that the shutter open/close lever [1] can move vertically.



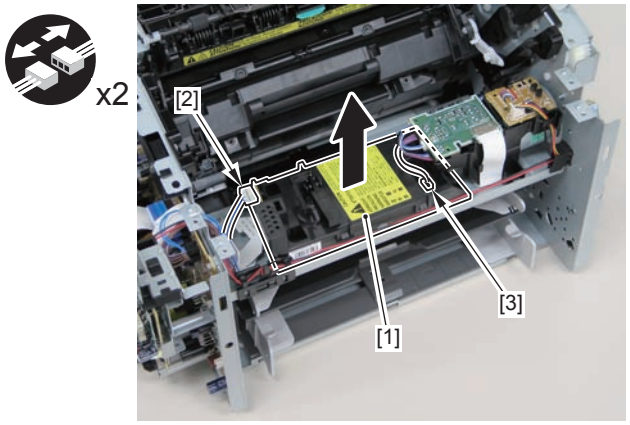
F-4-742

2) Move the laser scanner unit [1].
- 4 screws [2]
- 1 sponge[3]



F-4-743

3) Remove the laser scanner unit [1].
- 1 flat cable [2]
- 1 connector [3]



F-4-744

Removing the Laser Scanner Unit (MF4720w/MF4712/MF4710)

Preparation

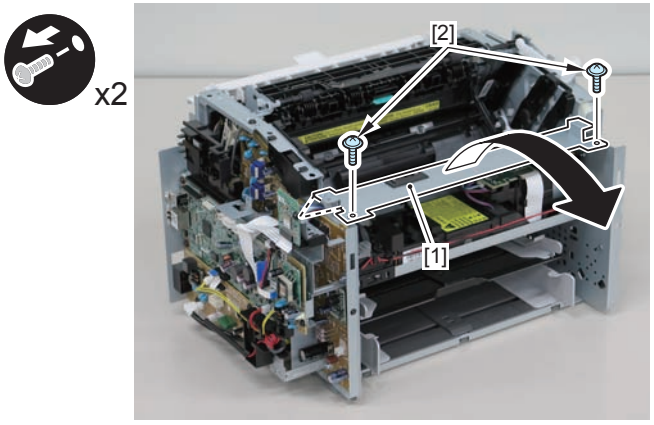
1) Remove the left cover.
2) Remove the copyboard cover and reader unit.
3) Remove the right cover.
4) Remove the front cover unit.
5) Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

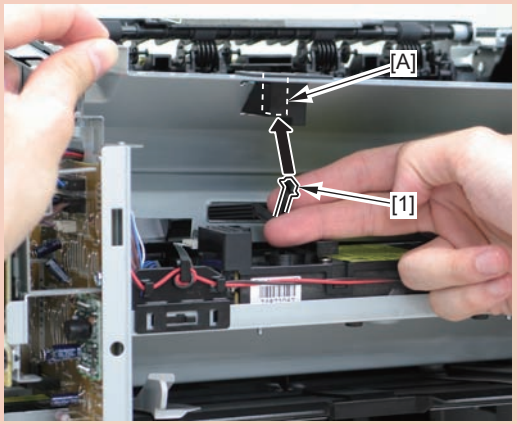
1) Remove the scanner cover [1].
- 2 screws (black TP) [2]



F-4-745

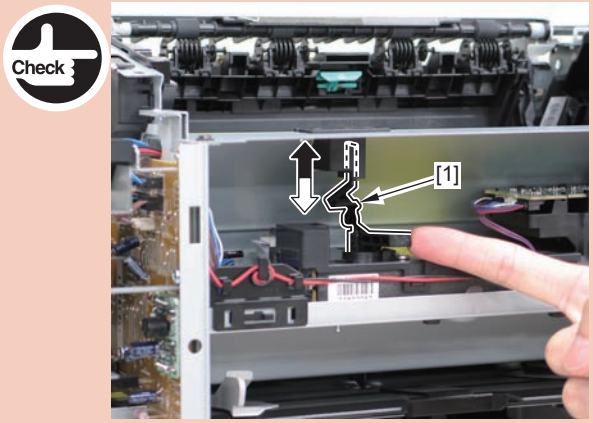
Caution:

- When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-746

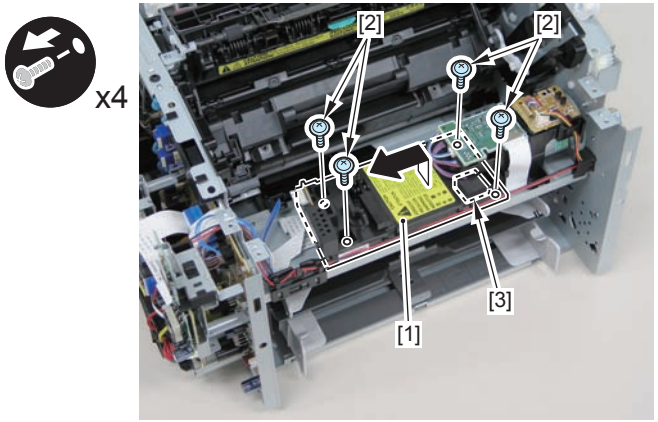
- Ensure that the shutter open/close lever [1] can move vertically.



F-4-747

2) Move the laser scanner unit [1].

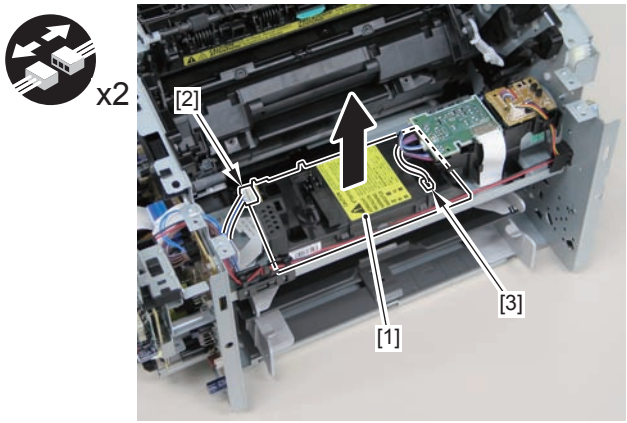
- 4 screws [2]
- 1 sponge[3]



F-4-748

3) Remove the laser scanner unit [1].

- 1 flat cable [2]
- 1 connector [3]



F-4-749

Removing the Laser Scanner Unit (L418S/L410/L190)

Preparation

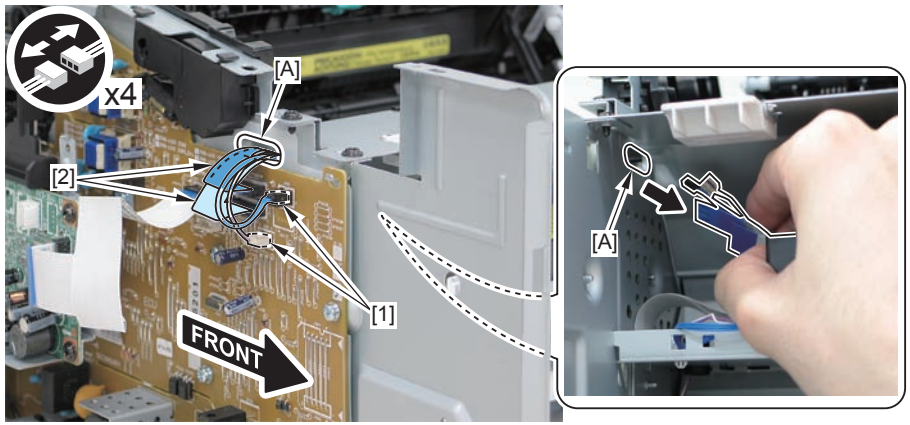
1)Remove the left cover.
2)Remove the DADF unit and reader unit.
3)Remove the right cover.
4)Remove the front cover unit.
5)Remove the upper cover

Procedure

Caution:

Do not disassemble the laser scanner unit because adjustment is required.

1)Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-750

Caution:

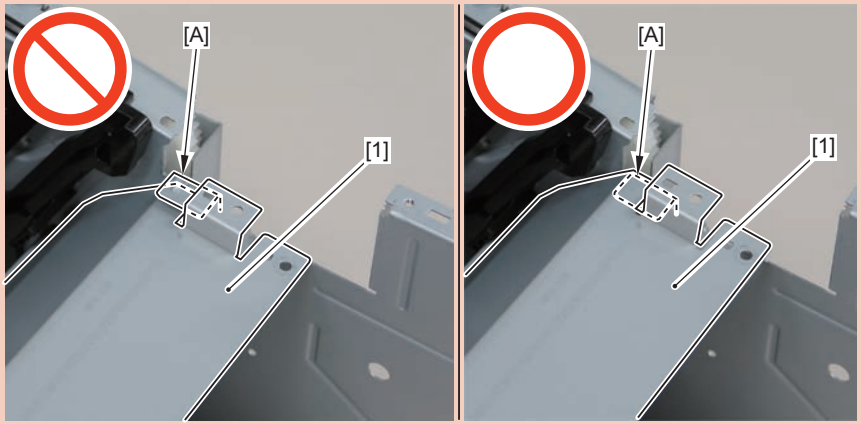
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

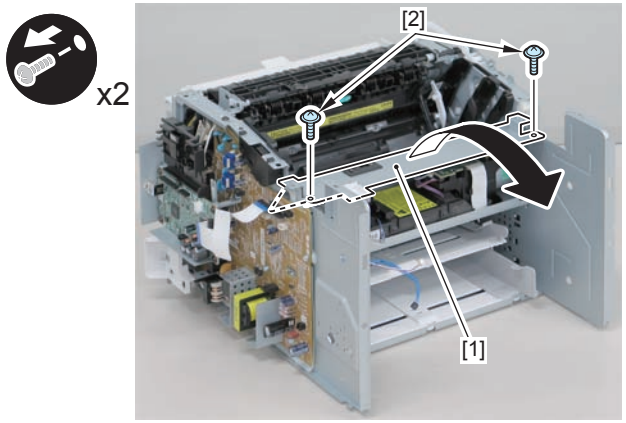
2)Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

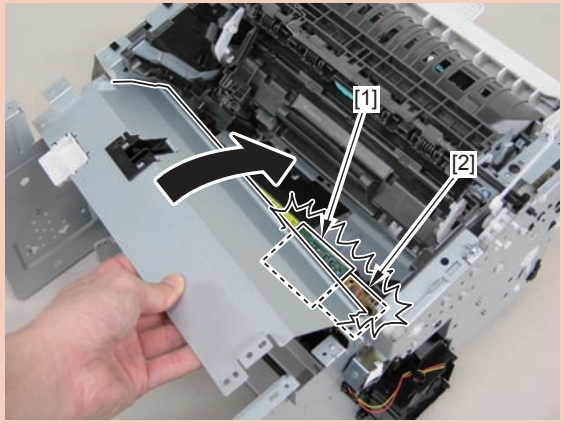




F-4-751

Caution:

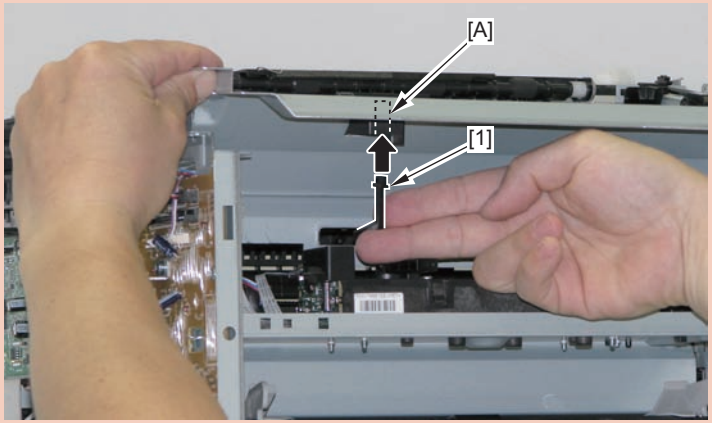
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-752

Caution:

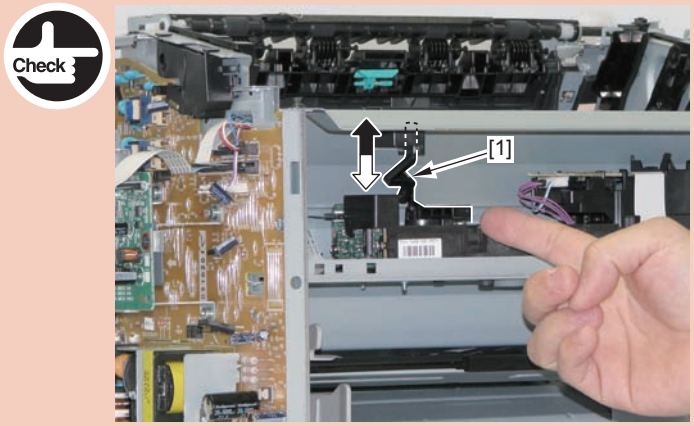
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover



F-4-753

Caution:

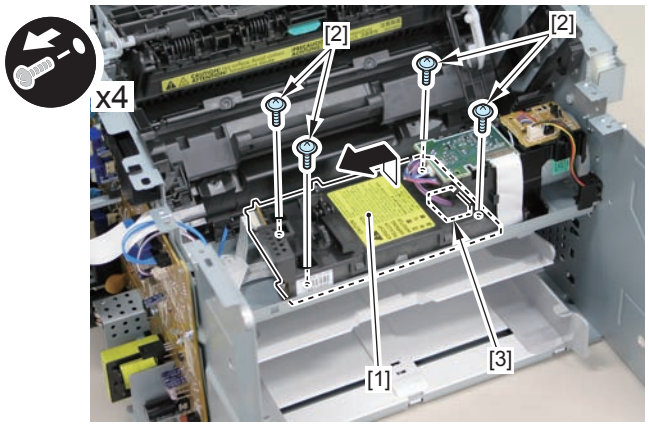
Ensure that the shutter open/close lever [1] can move vertically.



F-4-754

3)Move the laser scanner unit [1].

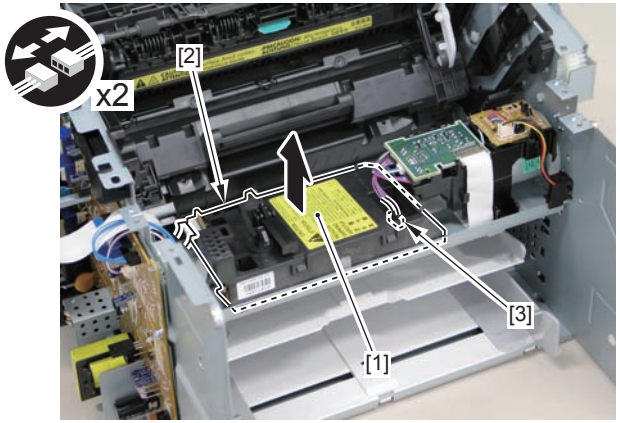
- 4 screws [2]
- 1 sponge[3]



F-4-755

3) Remove the laser scanner unit [1].

- 1 flat cable [2]
- 1 connector [3]



F-4-756

Image Formation System

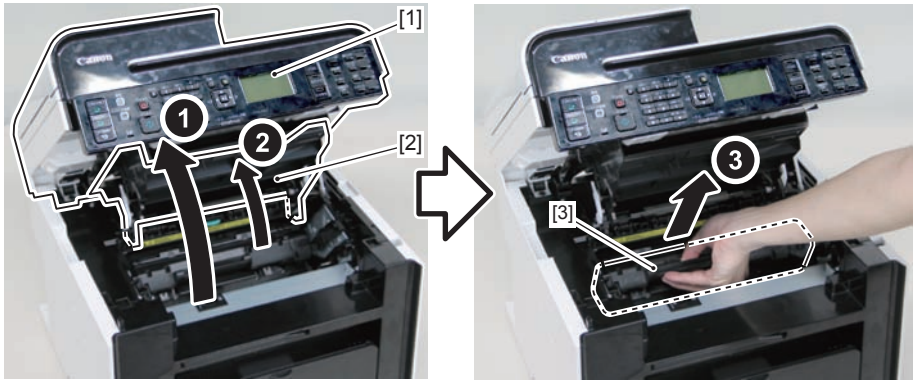
Removing the Transfer Roller (MF4890dw/MF4880dw)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

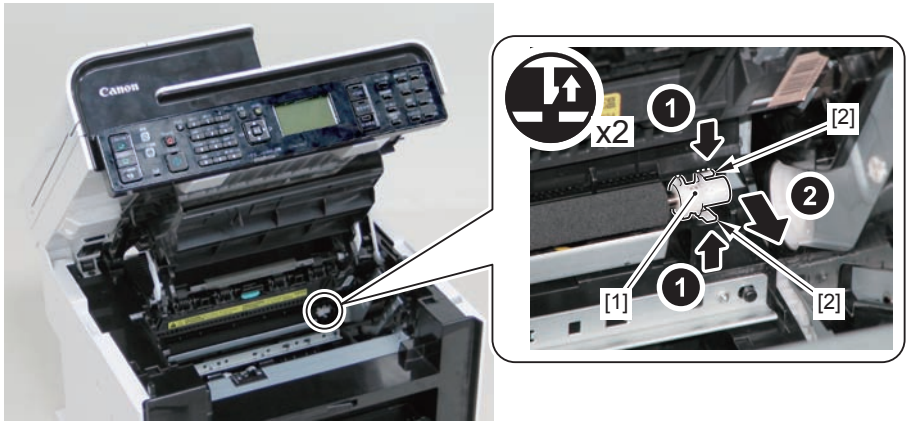
1) Open the reader unit [1] and delivery tray [2]. , and remove the drum unit[3].



F-4-757

2) Remove the transfer roller bushing [1].

- 2 claws [2

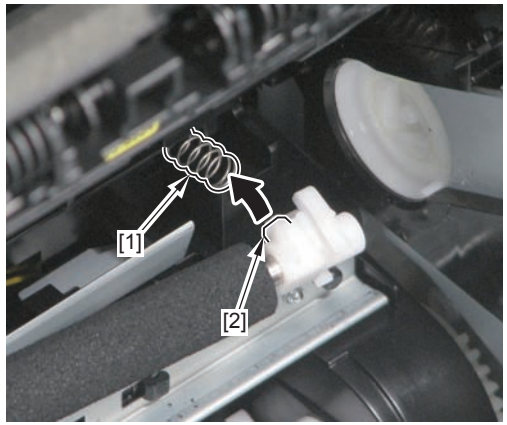


F-4-758

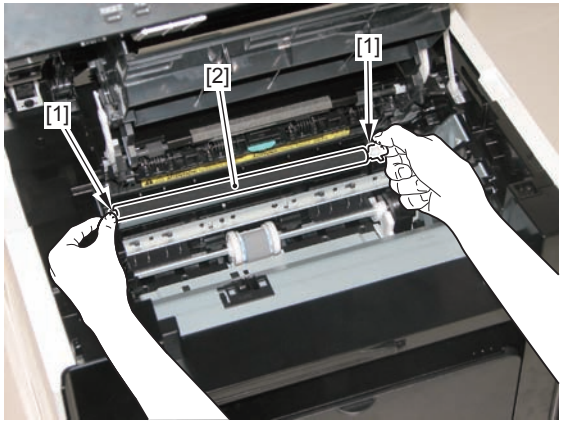
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-759



F-4-760

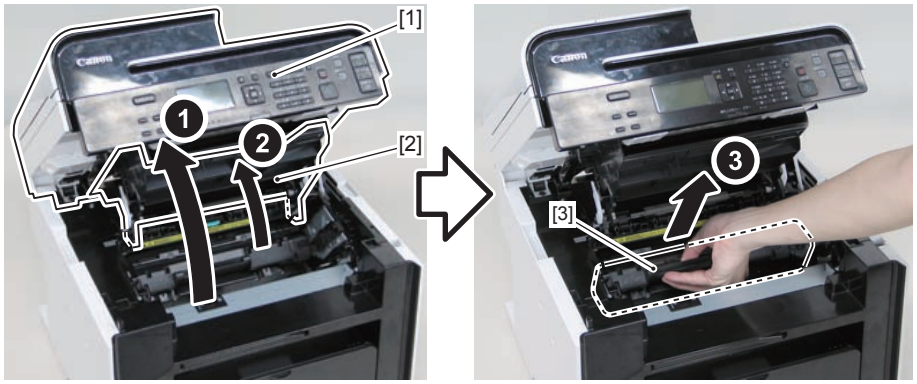
Removing the Transfer Roller (MF4870dn/MF4830d)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

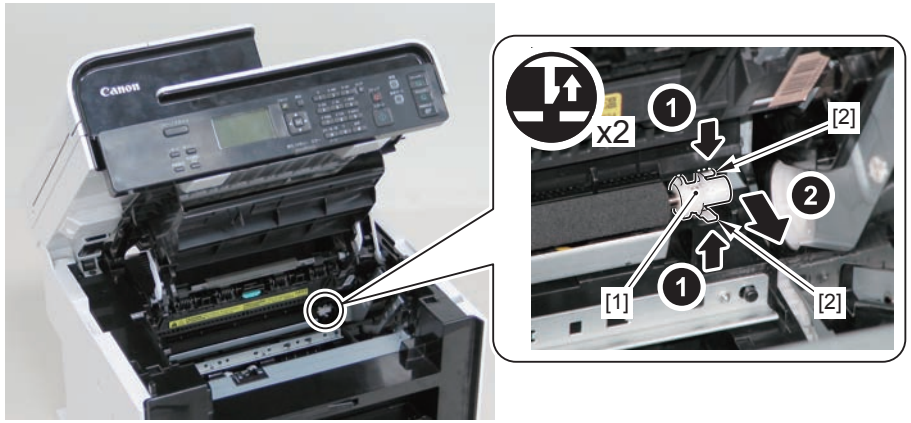
1) Open the reader unit [1] and delivery tray [2]. , and remove the drum unit[3].



F-4-761

2) Remove the transfer roller bushing [1].

- 2 claws [2]

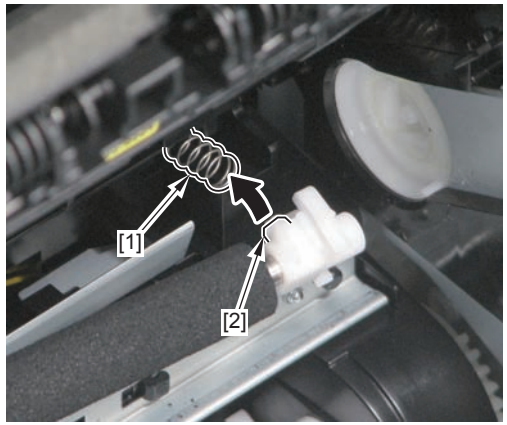


F-4-762

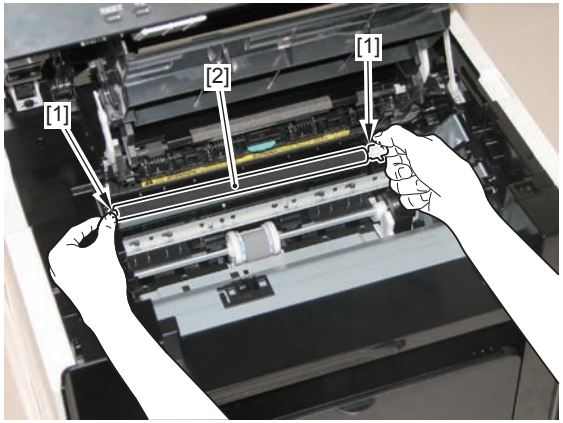
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-763



F-4-764

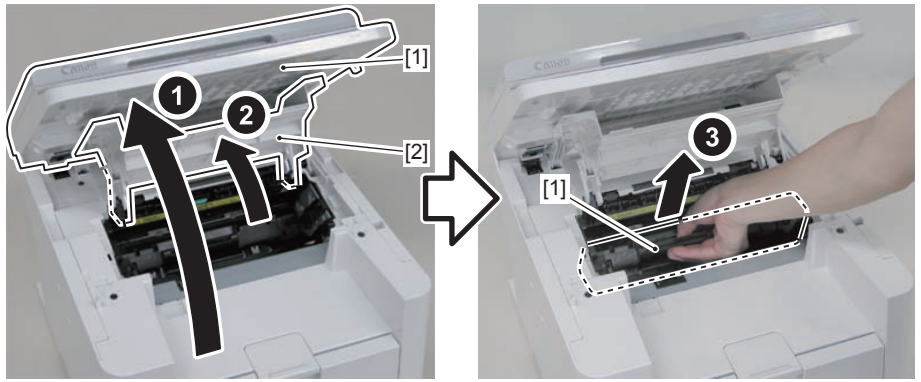
Removing the Transfer Roller (MF4820d)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

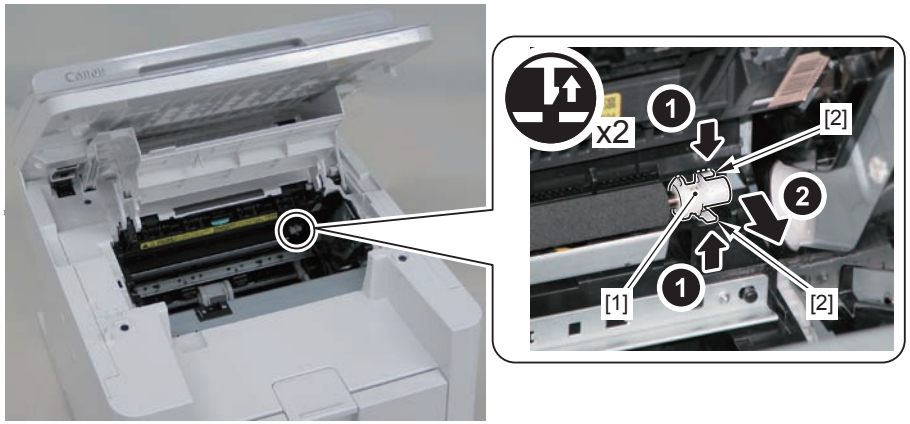
1) Open the reader unit [1] and delivery tray [2], and remove the drum unit[3].



F-4-765

2) Remove the transfer roller bushing [1].

- 2 claws [2]

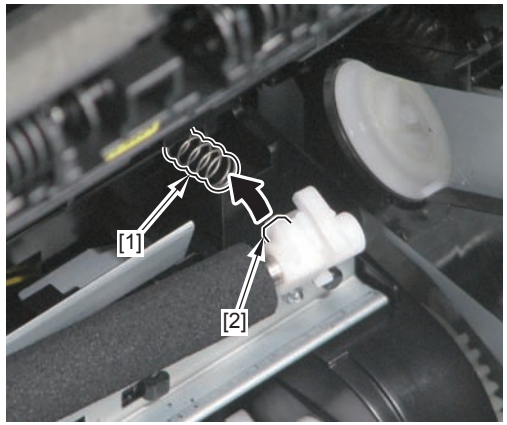


F-4-766

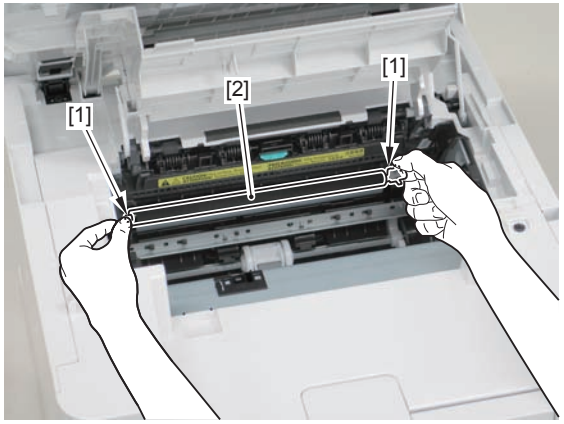
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-767



F-4-768

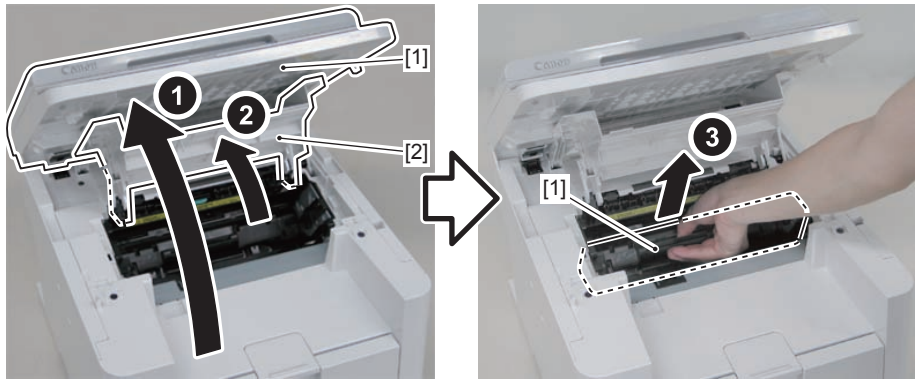
Removing the Transfer Roller (D530)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

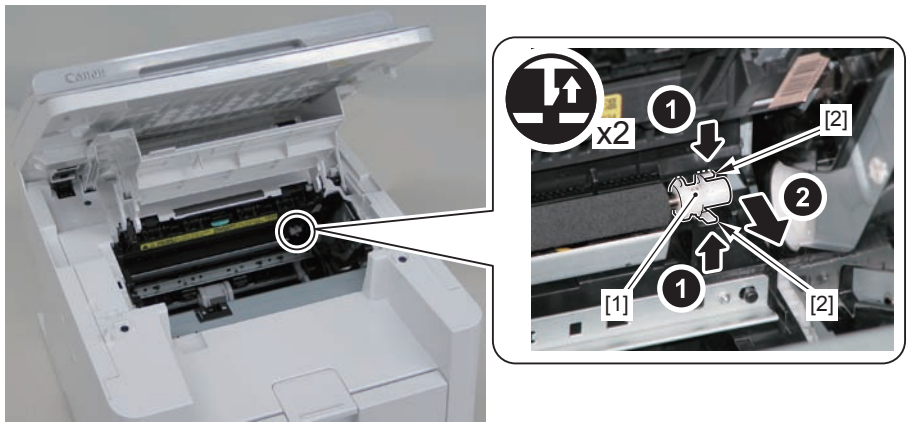
1) Open the reader unit [1] and delivery tray [2], and remove the drum unit[3].



F-4-769

2) Remove the transfer roller bushing [1].

- 2 claws [2]

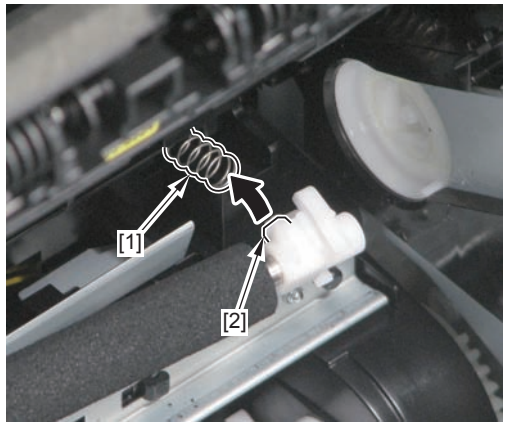


F-4-770

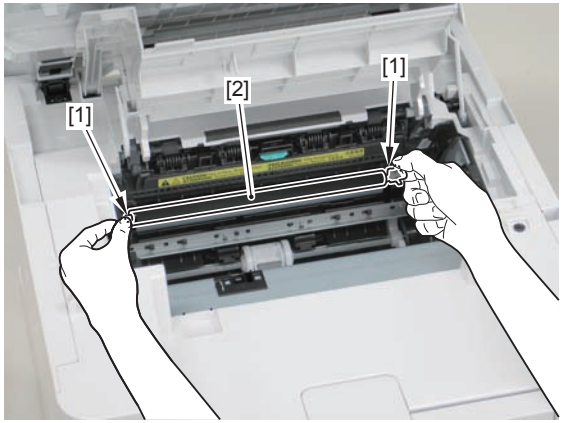
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-771



F-4-772

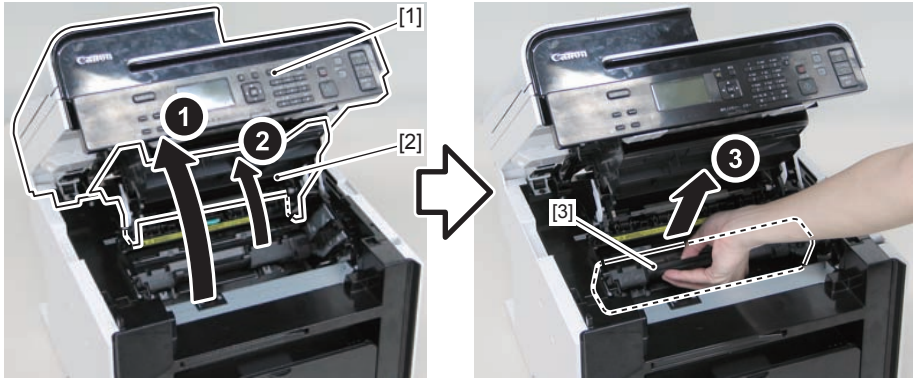
Removing the Transfer Roller (MF4780w/MF4770n/MF4750/MF4730)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

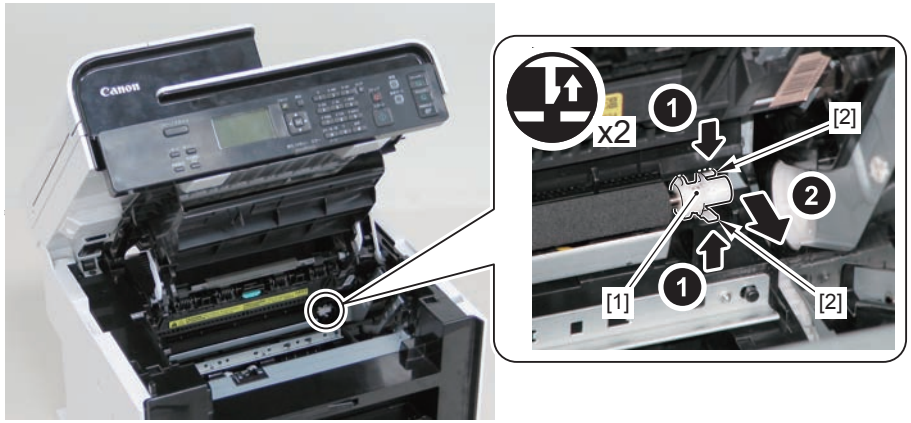
1) Open the reader unit [1] and delivery tray [2], and remove the drum unit[3].



F-4-773

2) Remove the transfer roller bushing [1].

- 2 claws [2]

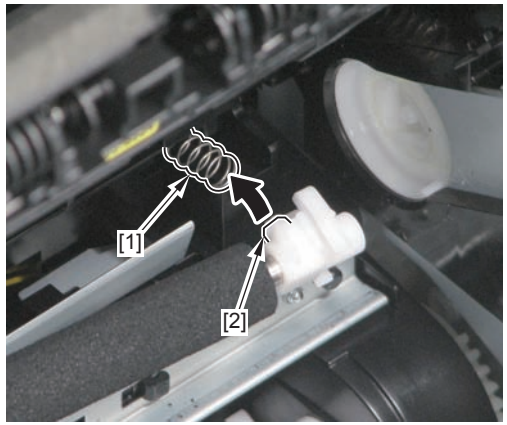


F-4-774

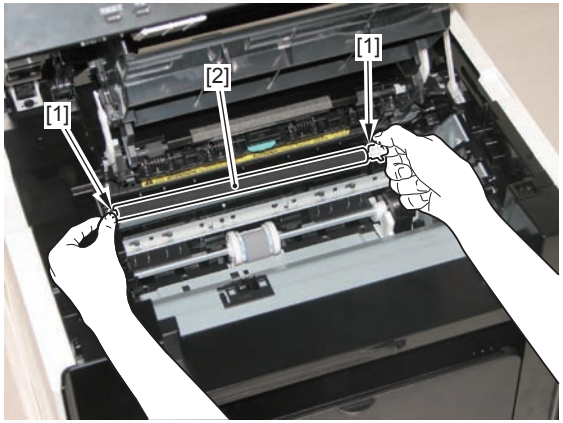
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-775



F-4-776

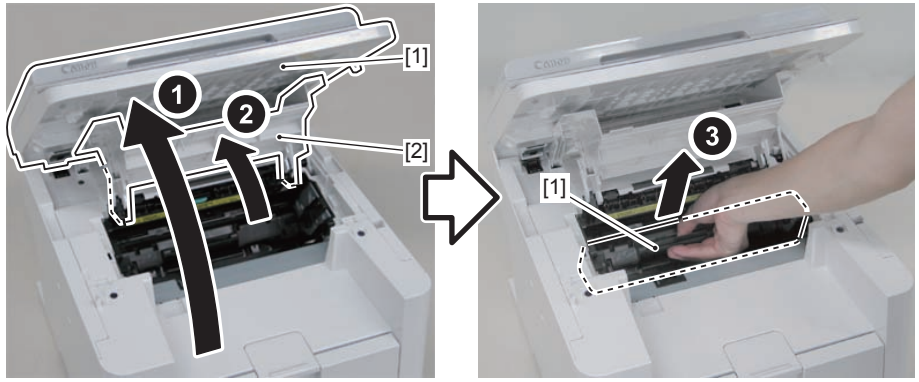
Removing the Transfer Roller (MF4720w/MF4712/MF4710)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

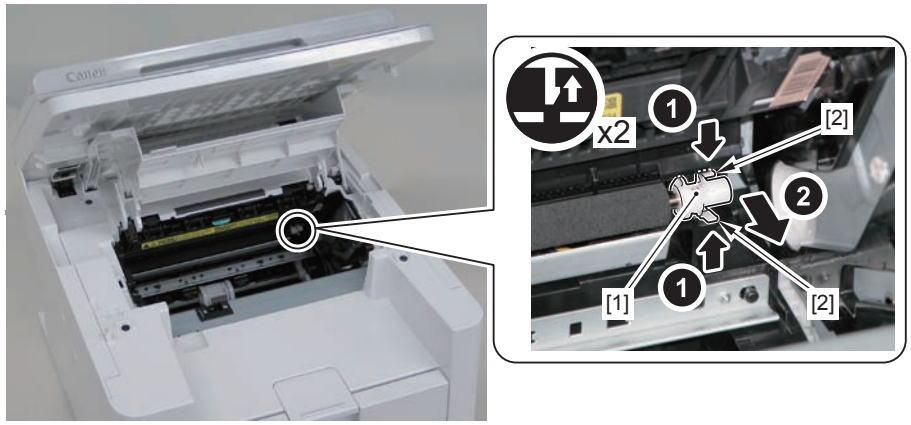
1) Open the reader unit [1] and delivery tray [2], and remove the drum unit[3].



F-4-777

2) Remove the transfer roller bushing [1].

- 2 claws [2]

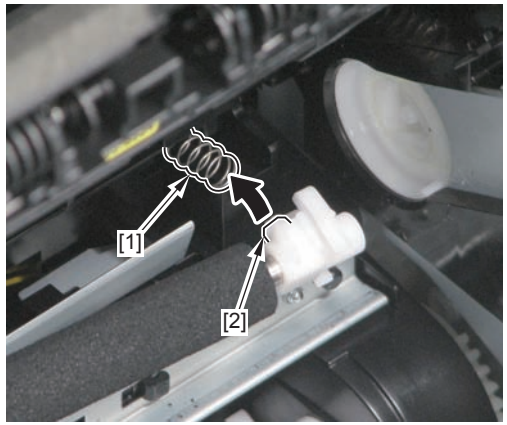


F-4-778

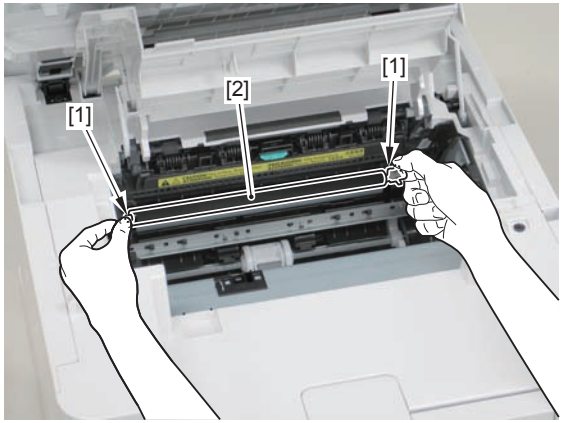
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-779



F-4-780

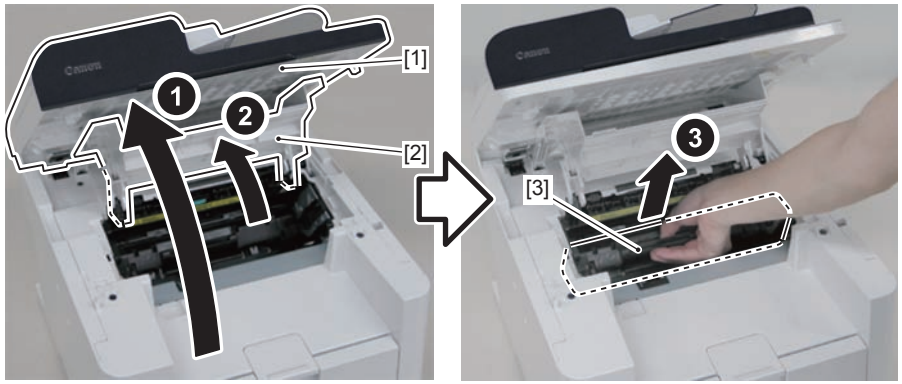
Removing the Transfer Roller (L418S/L410/L190)

Procedure

Caution:

When assembling/disassembling the transfer roller, do not touch the surface of the roller.

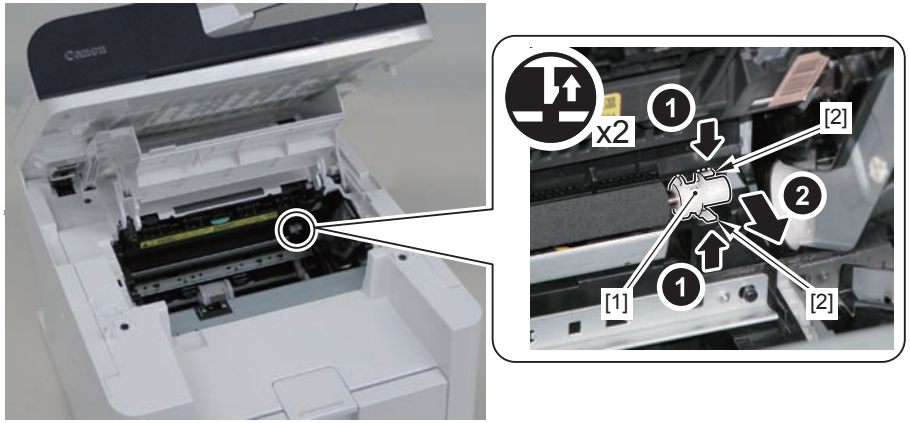
1) Open the reader unit [1] and delivery tray [2], and remove the drum unit[3].



F-4-781

2) Remove the transfer roller bushing [1].

- 2 claws [2]

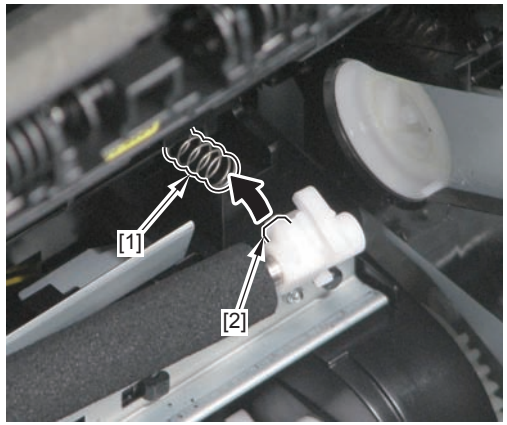


F-4-782

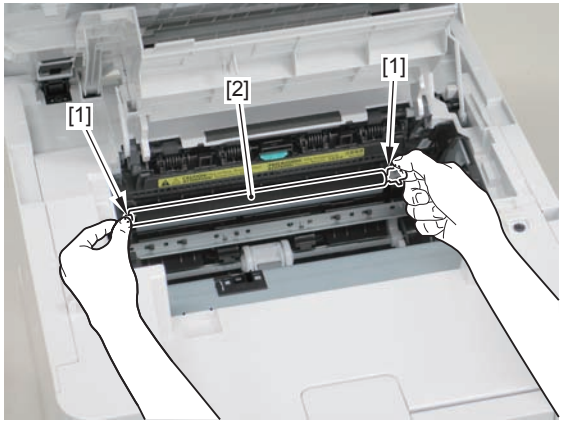
3) Hold both shafts [1] of the transfer roller and remove the roller [2].

Caution:

When installing the transfer roller to the host machine, be sure to fit the protrusion[2] to the spring[1]



F-4-783



F-4-784

Fixing System

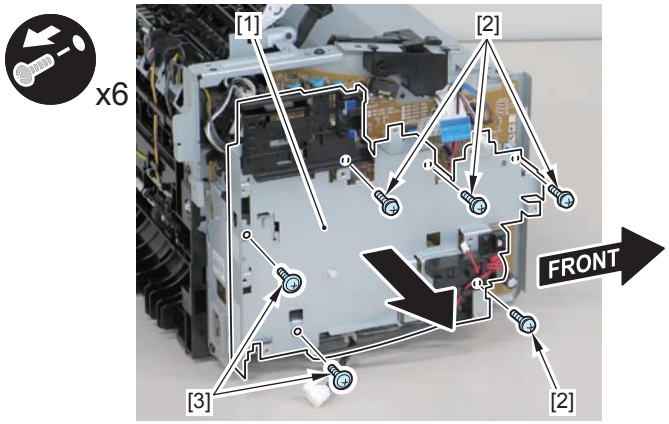
Removing the Fixing Assembly (MF4890dw/MF4880dw)

Preparation

1)Remove the left cover
2)Remove the DADF unit and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB
9)Remove the wireless LAN PCB

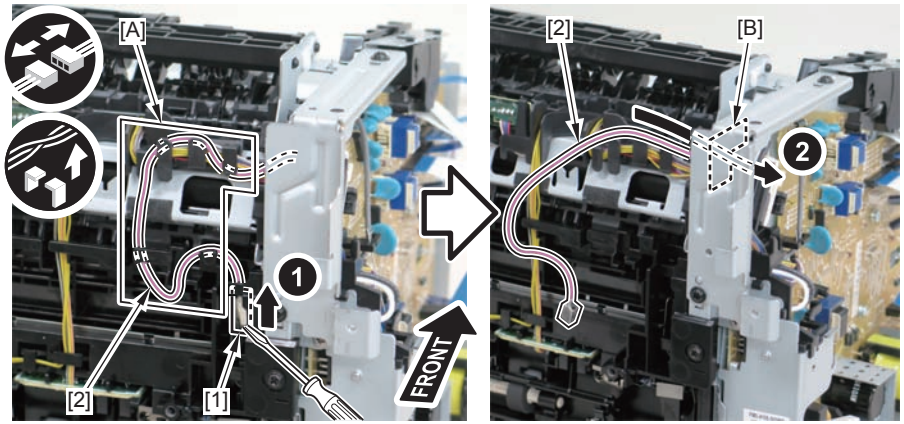
Procedure

1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-785

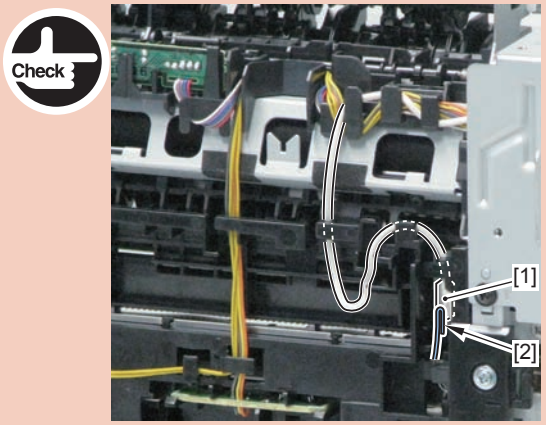
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-786

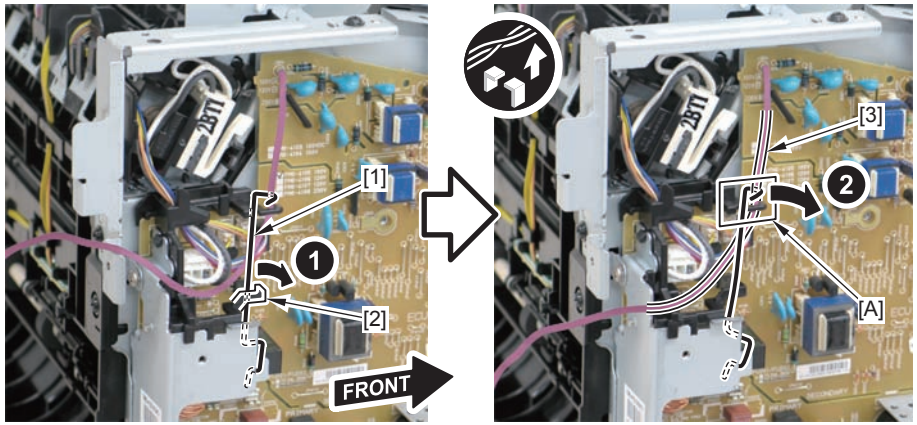
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-787

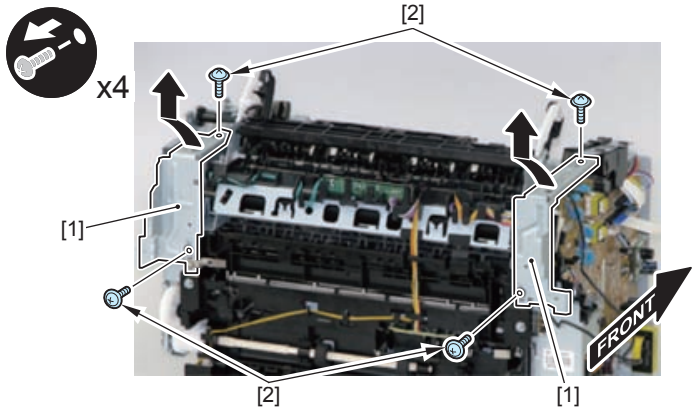
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-788

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

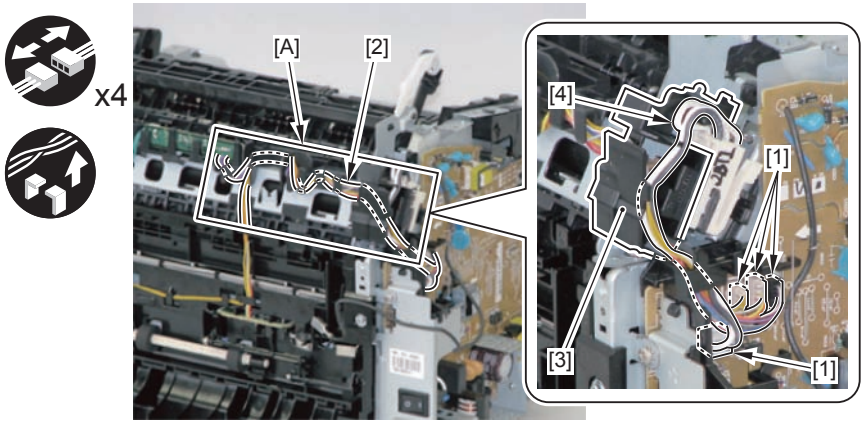


F-4-789

5) Remove the 4 connectors [1].

6) Disengage the harness [2] from the harness guide [A].

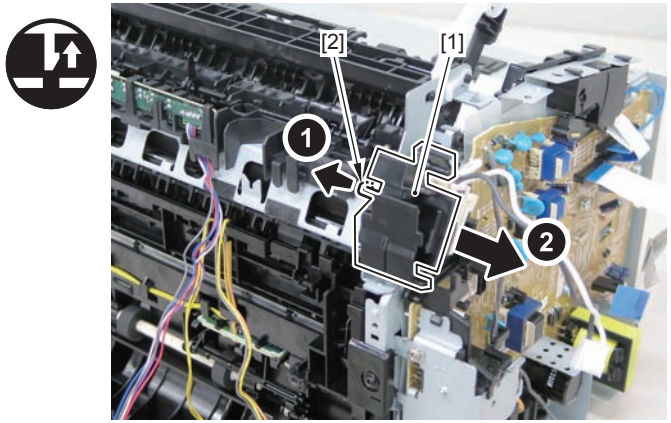
7) Disengage the fixing harness [4] from the harness holder [3].



F-4-790

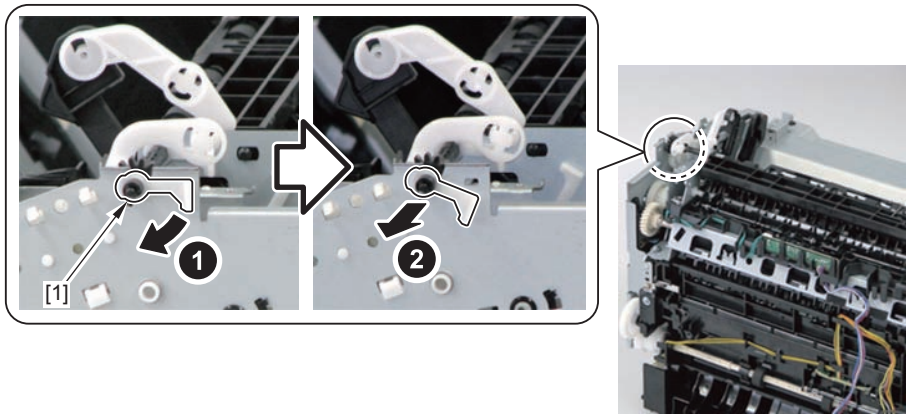
8) Remove the harness holder [1].

- 1 claw [2]



F-4-791

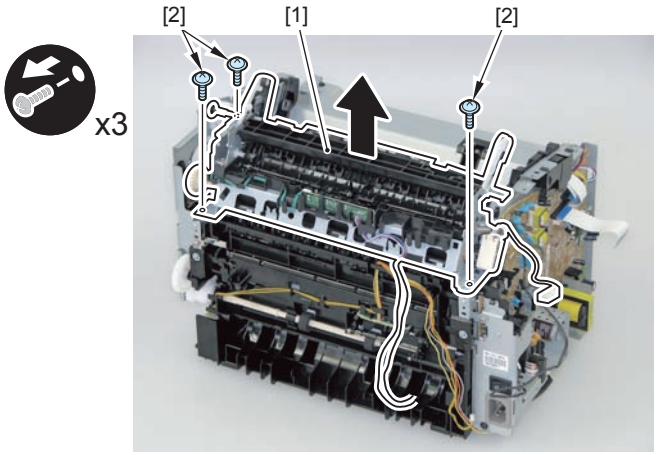
9) Remove the shaft support [1] of the delivery roller.



F-4-792

10) Remove the fixing assembly [1].

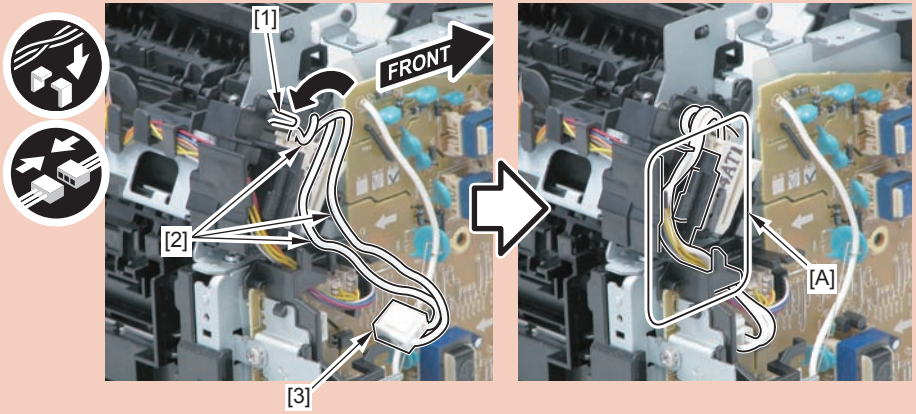
• 3 screws [2]



F-4-793

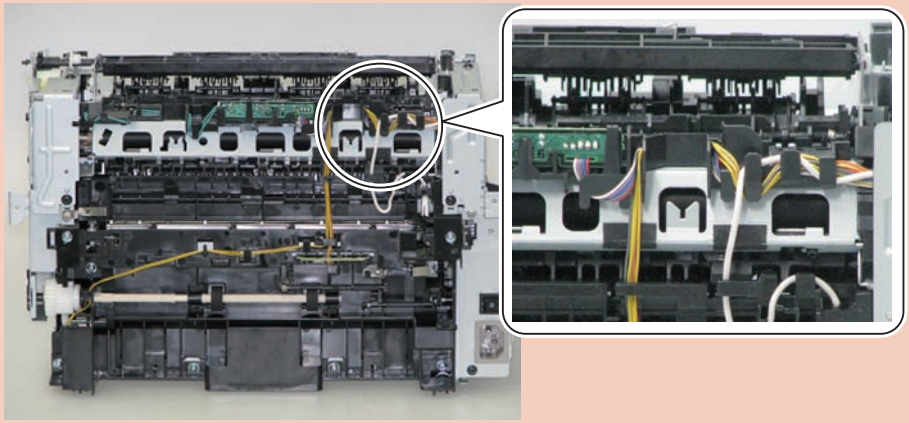
Caution:

When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-795

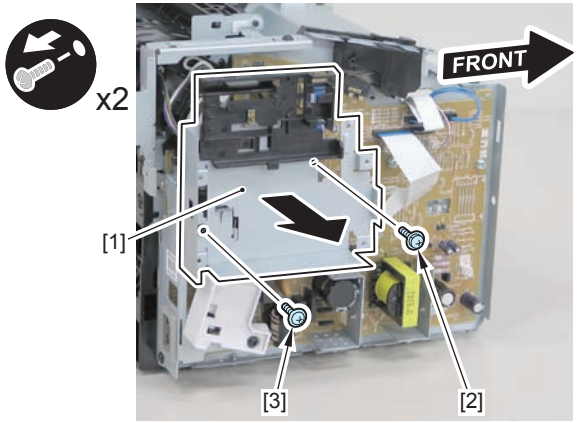
Removing the Fixing Assembly(MF4870dn/MF4830d)

Preparation

1)Remove the left cover
2)Remove the SADF unit and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB(MF4870dn)

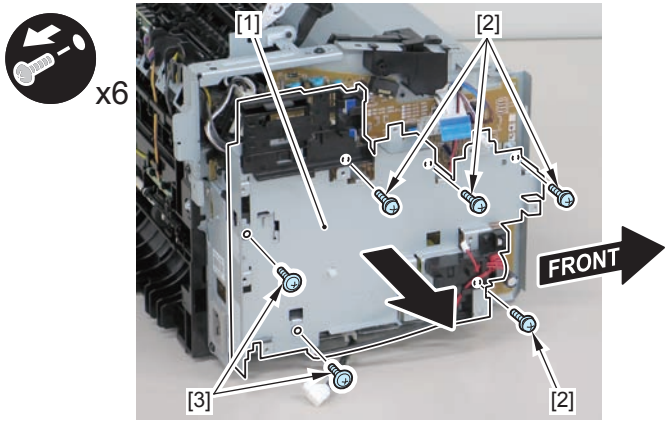
Procedure

(MF4830d)
1)Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



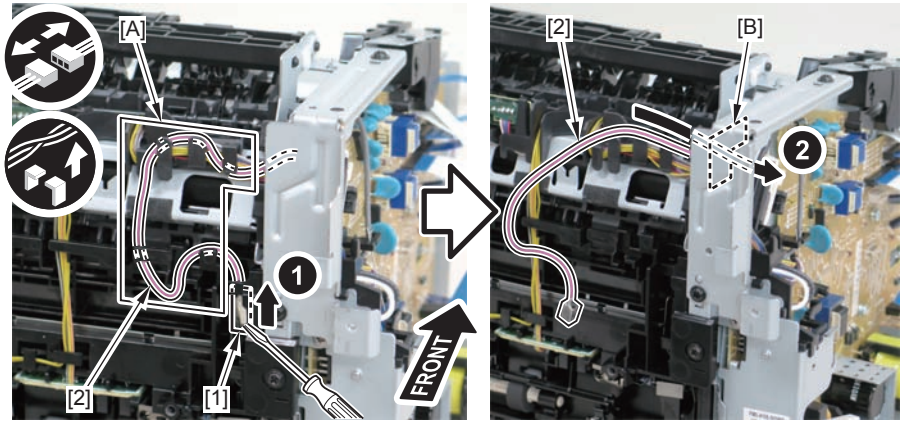
F-4-796

(MF4870dn)
1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-797

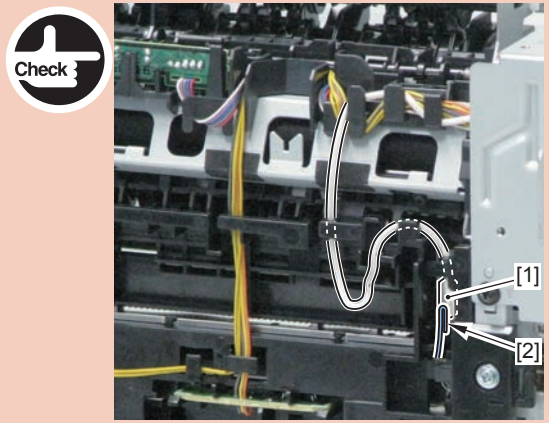
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-798

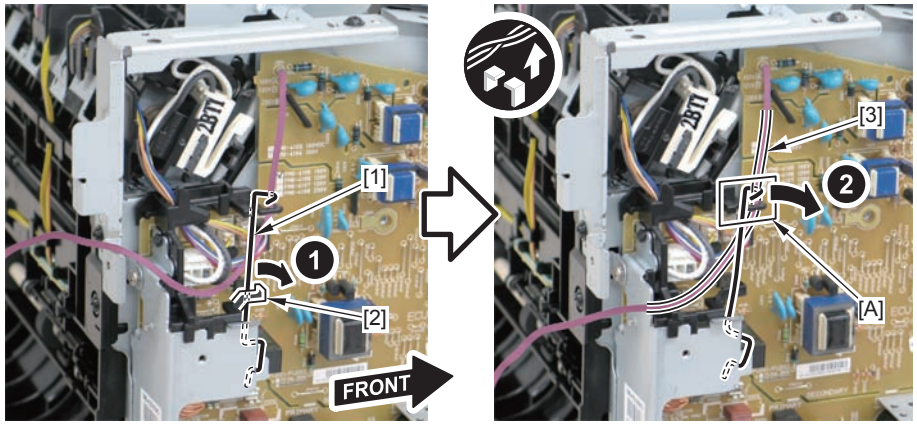
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-799

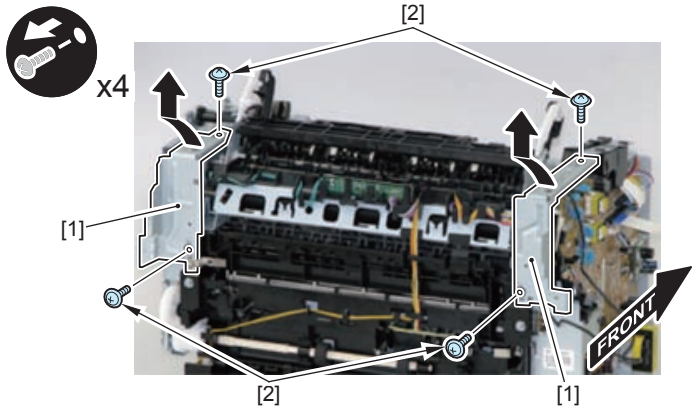
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-800

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

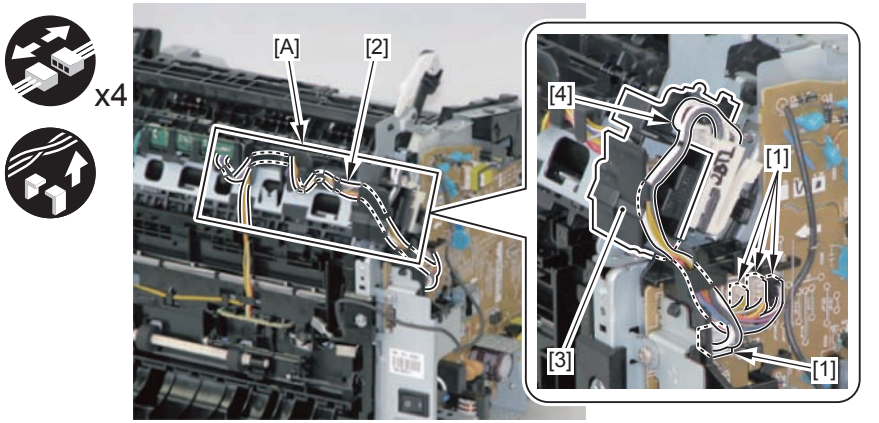


F-4-801

5) Remove the 4 connectors [1].

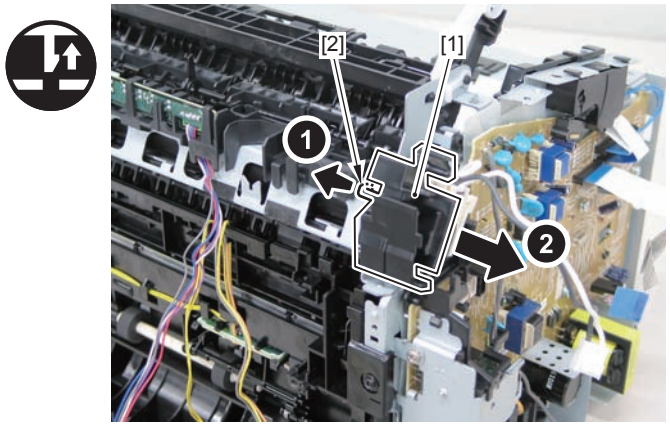
6) Disengage the harness [2] from the harness guide [A].

7) Disengage the fixing harness [4] from the harness holder [3].



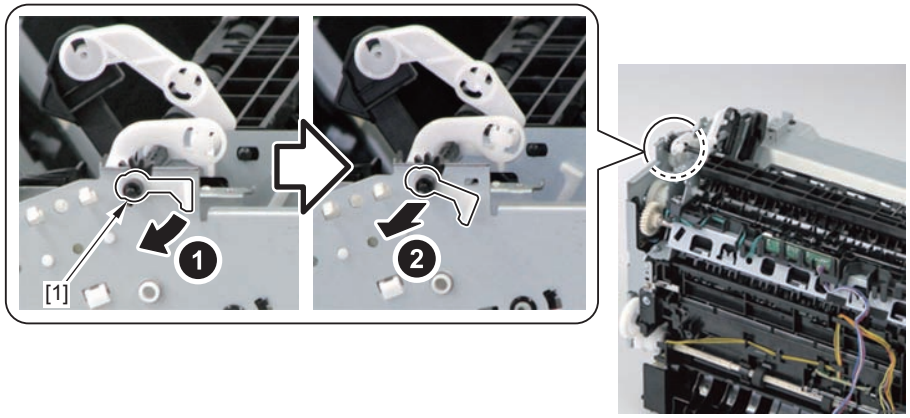
F-4-802

8) Remove the harness holder [1].
• 1 claw [2]



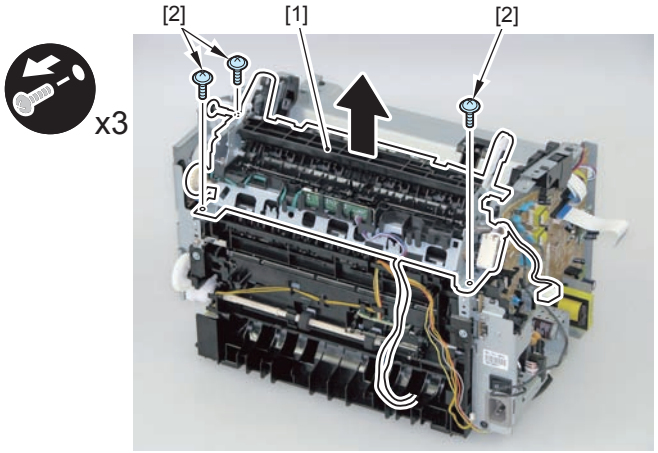
F-4-803

9) Remove the shaft support [1] of the delivery roller.



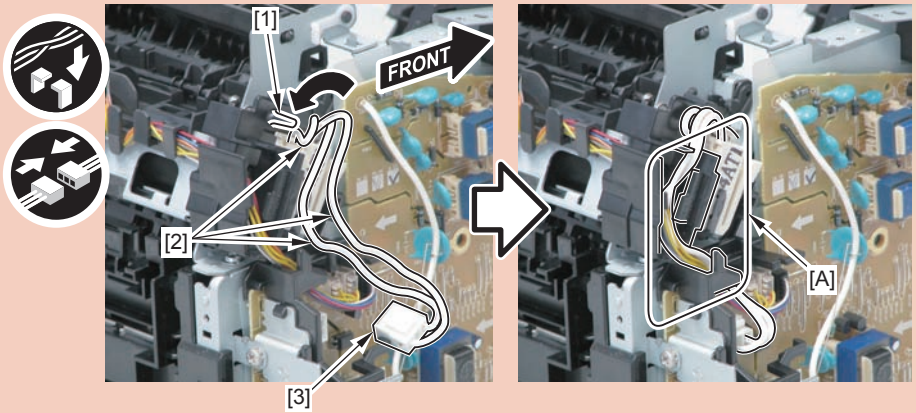
F-4-804

10) Remove the fixing assembly [1].
• 3 screws [2]



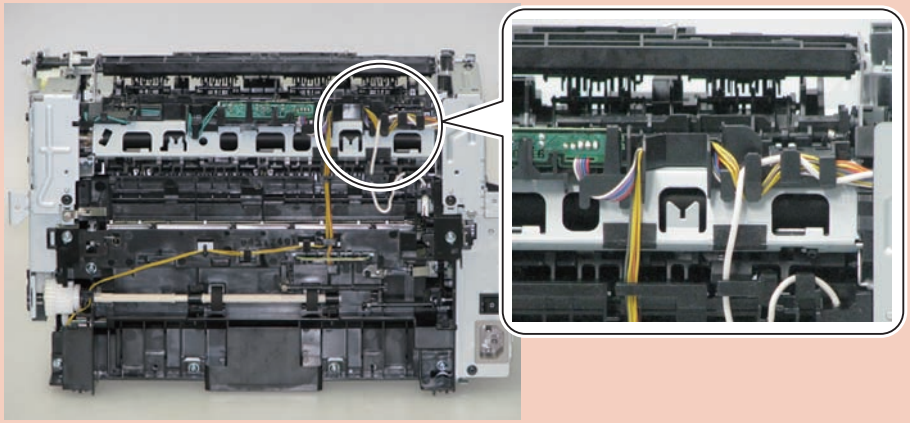
F-4-805

Caution:
When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-807

Removing the Fixing Assembly (MF4820d)

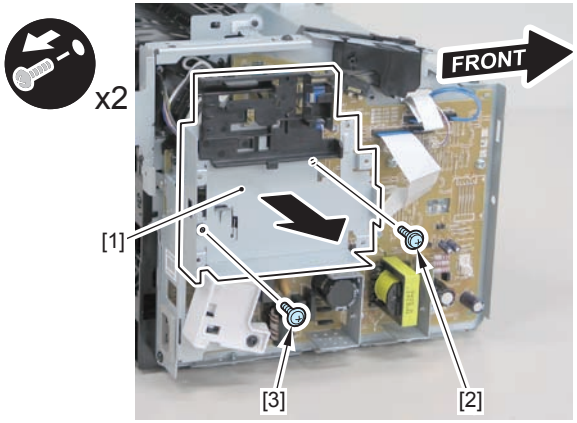
Preparation

1)Remove the left cover
2)Remove the copyboard cover and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB

Procedure

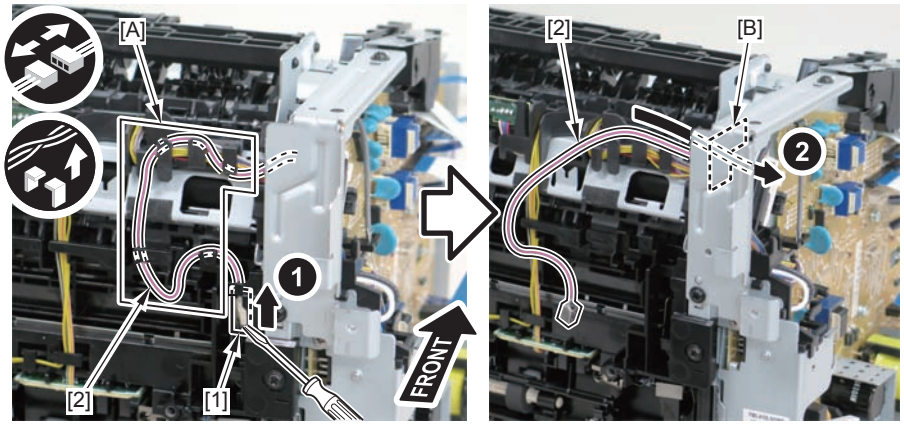
1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-808

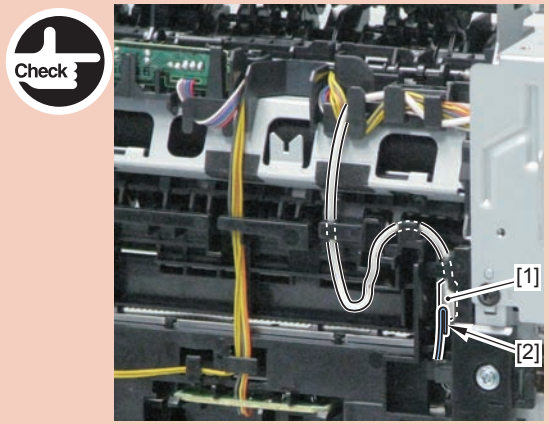
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-809

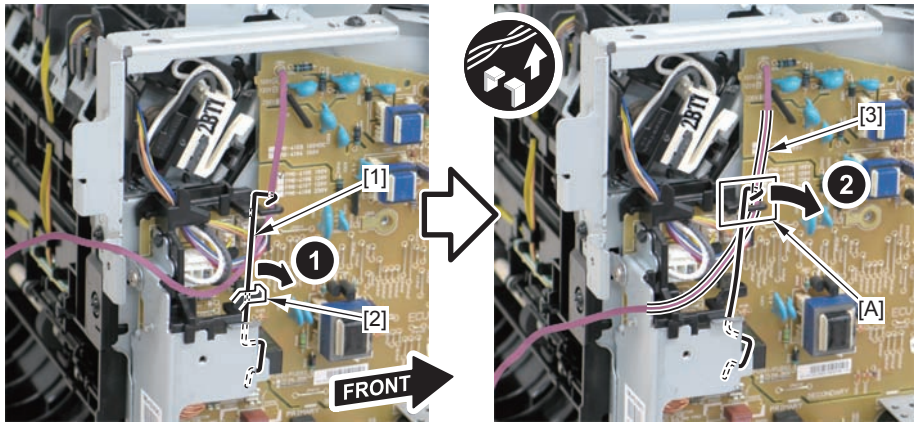
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-810

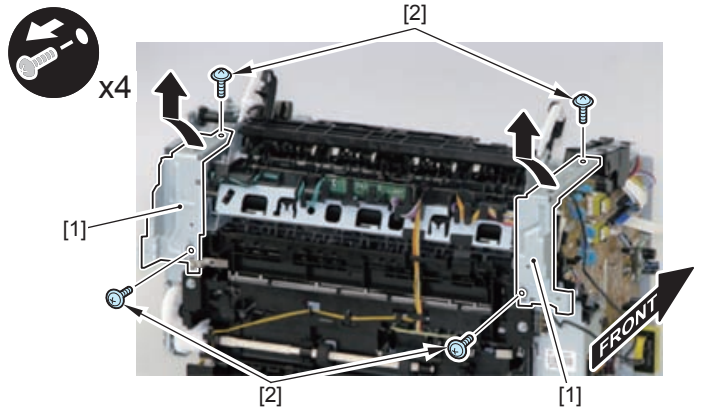
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-811

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

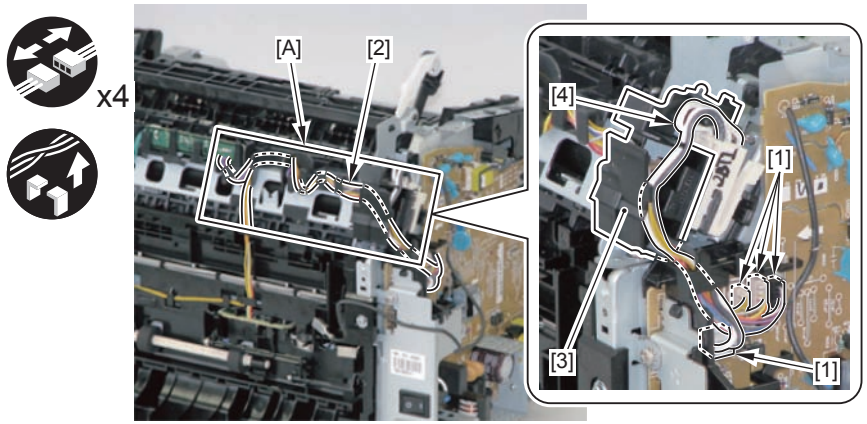


F-4-812

5) Remove the 4 connectors [1].

6) Disengage the harness [2] from the harness guide [A].

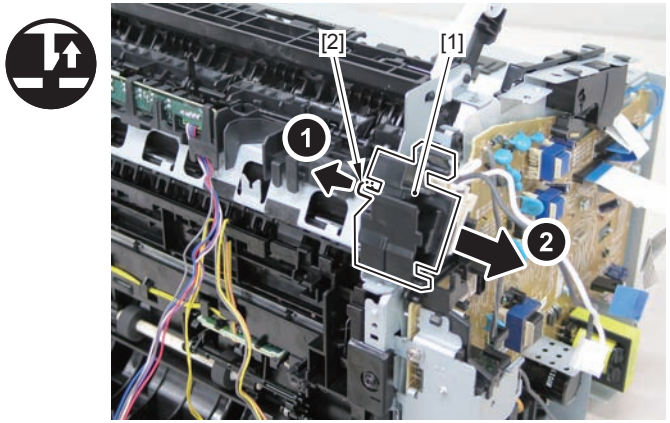
7) Disengage the fixing harness [4] from the harness holder [3].



F-4-813

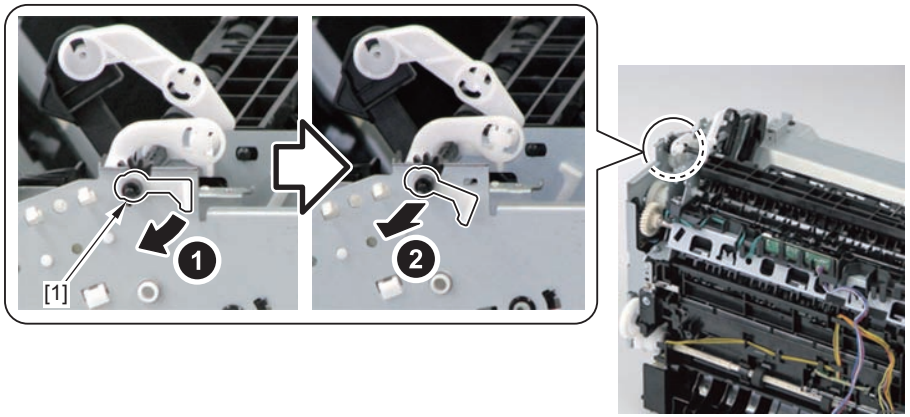
8) Remove the harness holder [1].

• 1 claw [2]



F-4-814

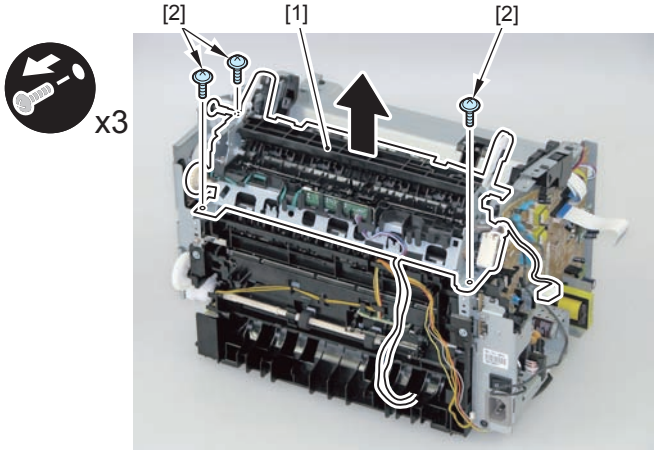
9) Remove the shaft support [1] of the delivery roller.



F-4-815

10) Remove the fixing assembly [1].

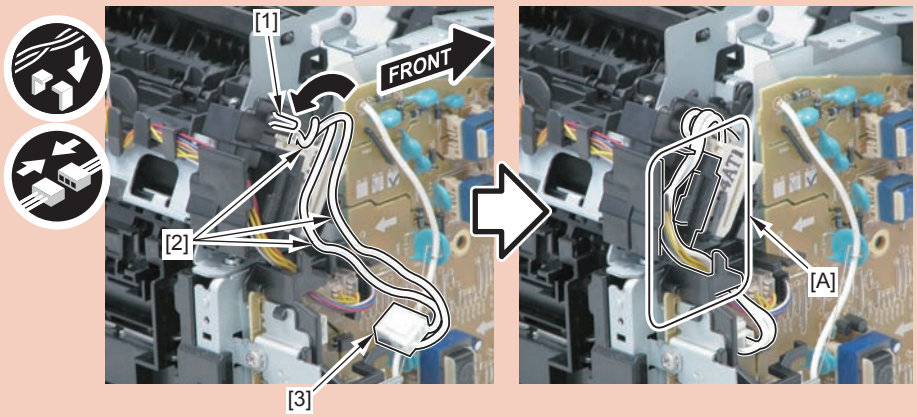
• 3 screws [2]



F-4-816

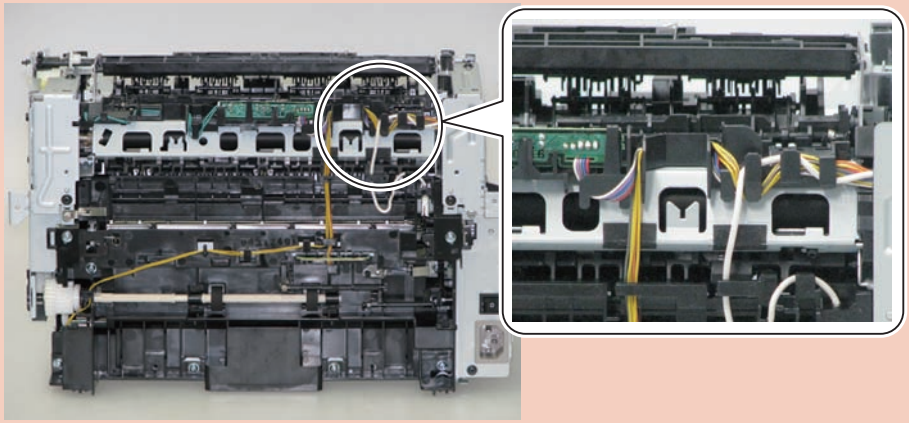
Caution:

When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-818

Removing the Fixing Assembly (D530)

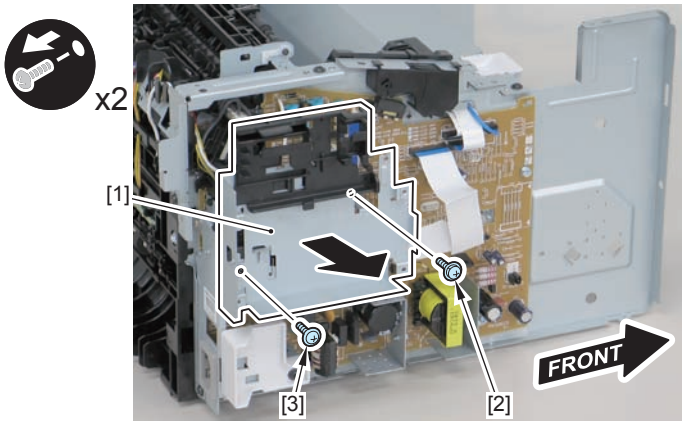
Preparation

1)Remove the left cover
2)Remove the DADF unit and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB

Procedure

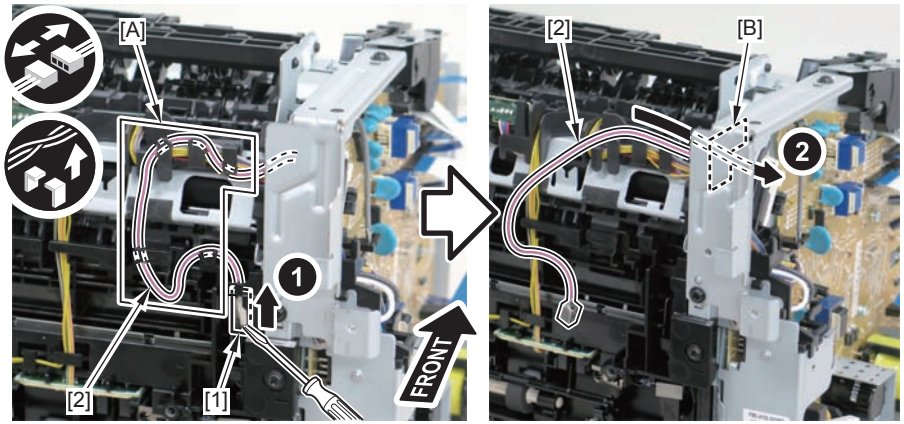
1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-819

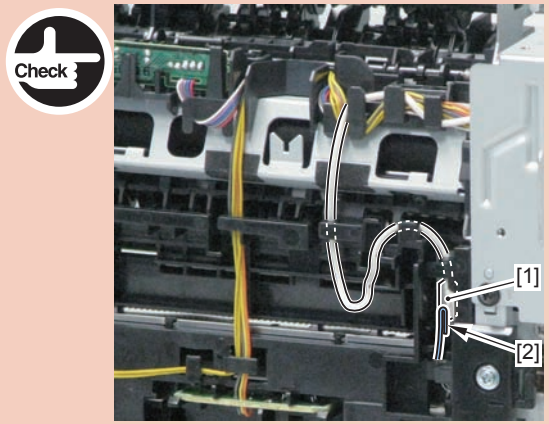
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-820

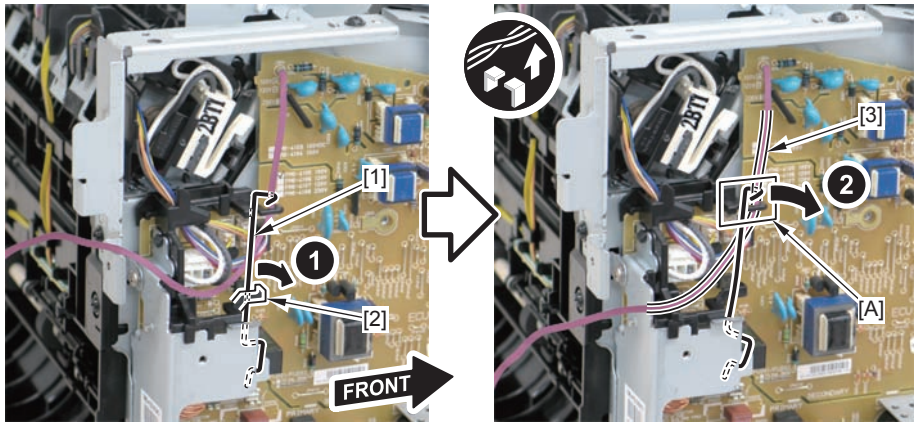
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-821

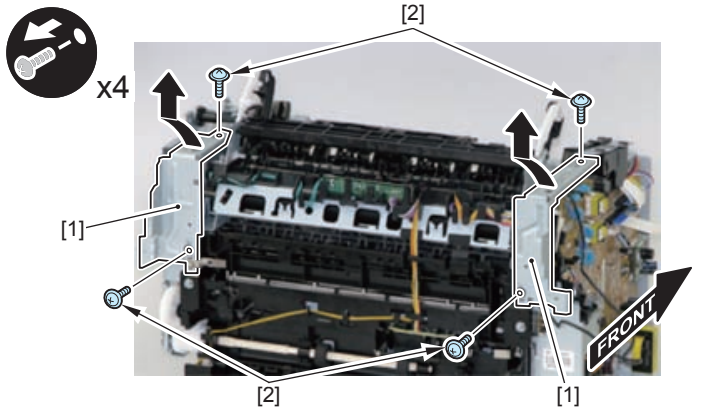
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-822

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

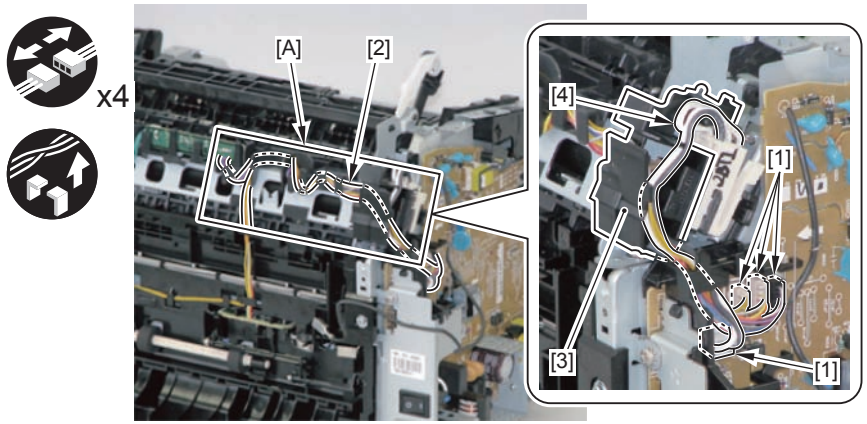


F-4-823

5) Remove the 4 connectors [1].

6) Disengage the harness [2] from the harness guide [A].

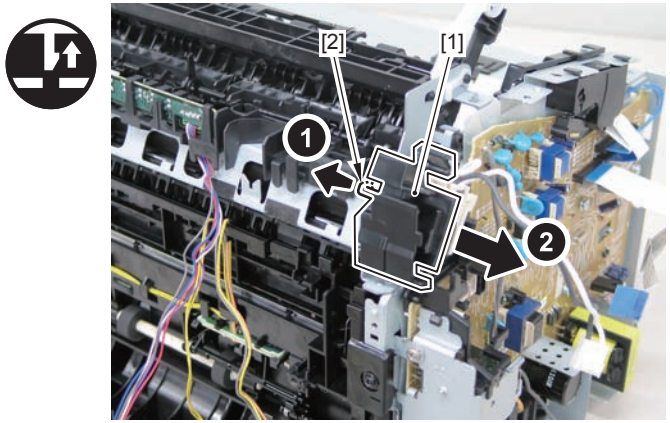
7) Disengage the fixing harness [4] from the harness holder [3].



F-4-824

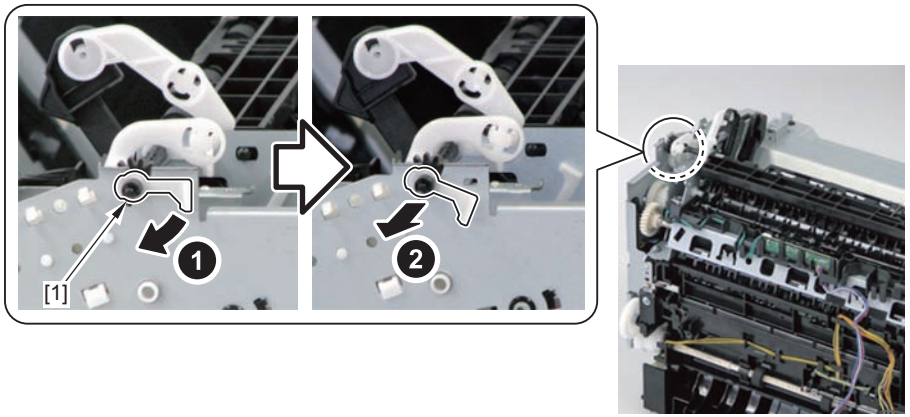
8) Remove the harness holder [1].

• 1 claw [2]



F-4-825

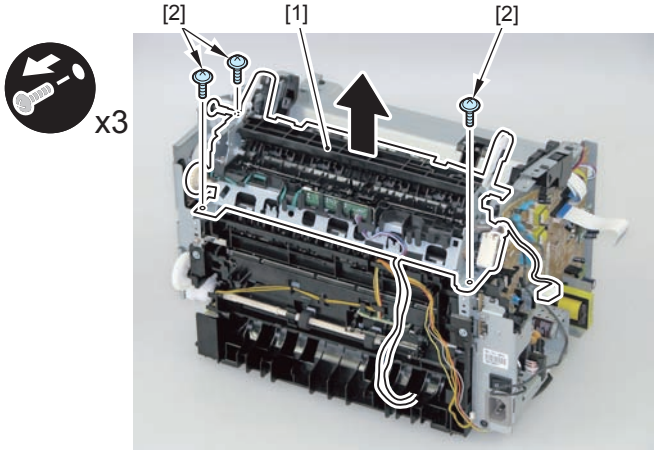
9) Remove the shaft support [1] of the delivery roller.



F-4-826

10) Remove the fixing assembly [1].

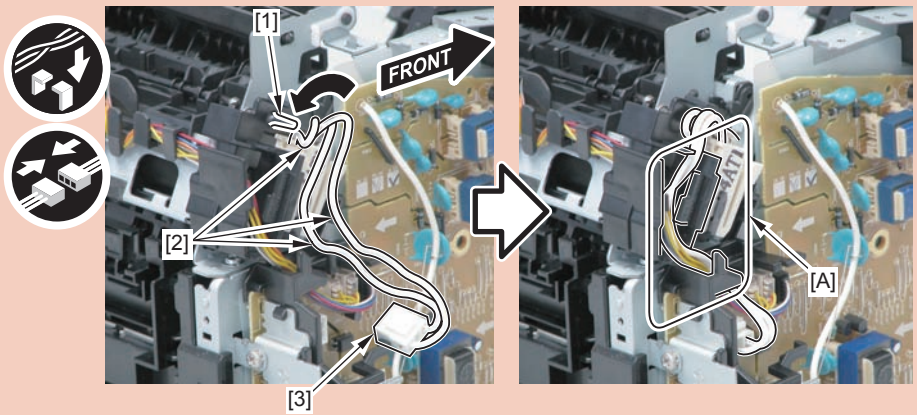
• 3 screws [2]



F-4-827

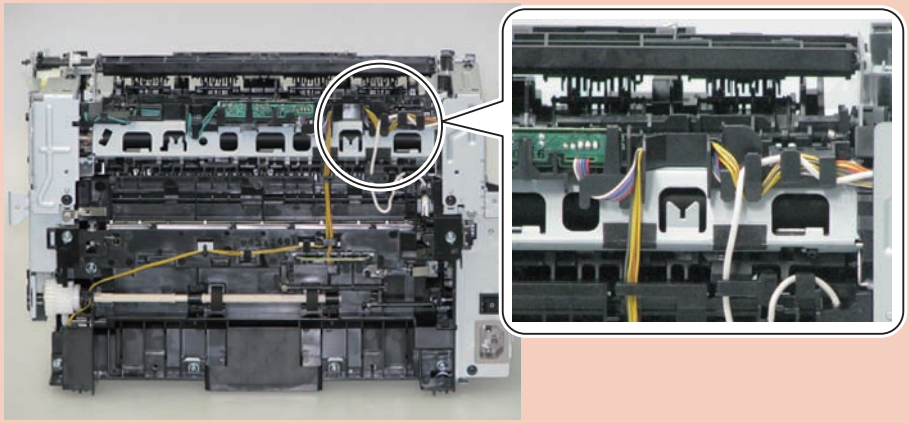
Caution:

When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-829

Removing the Fixing Assembly (MF4780w/MF4770n/MF4750/MF4730)

Preparation

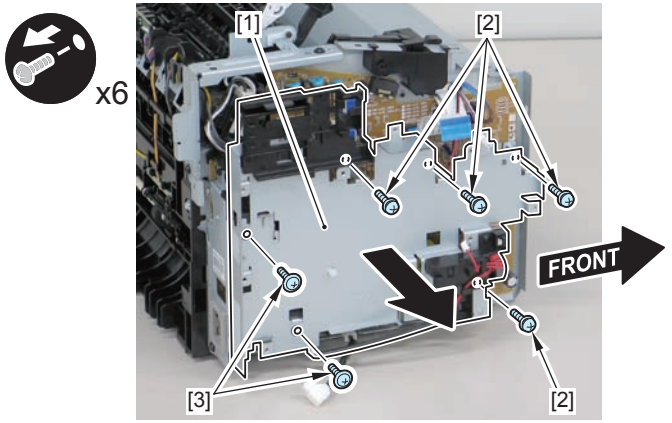
1)Remove the left cover
2)Remove the SADF unit and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB(MF4780w/MF4770n/MF4750)
9)Remove the wireless LAN PCB(MF4780w)

Procedure

(MF4780w/MF4770n/MF4750)

1)Remove the main controller mounting plate[1]

- 4 screws(with washer)[2]
- 2 screws(black TP)[3]

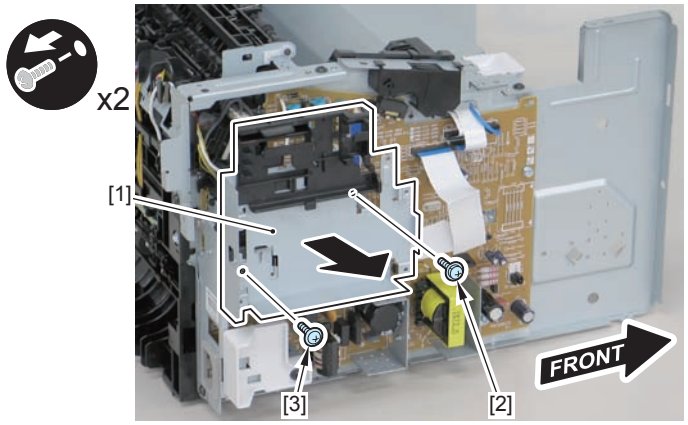


F-4-830

(MF4730)

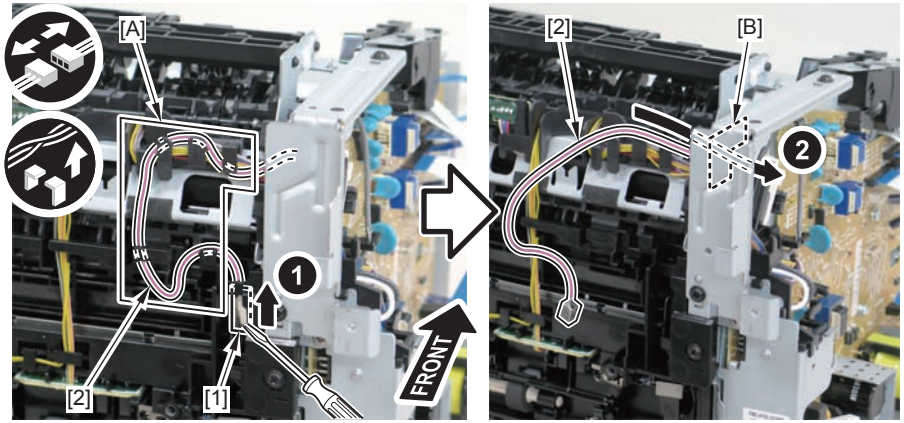
1)Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-831

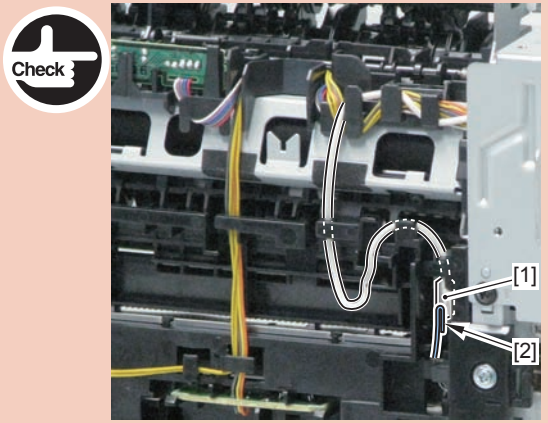
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-832

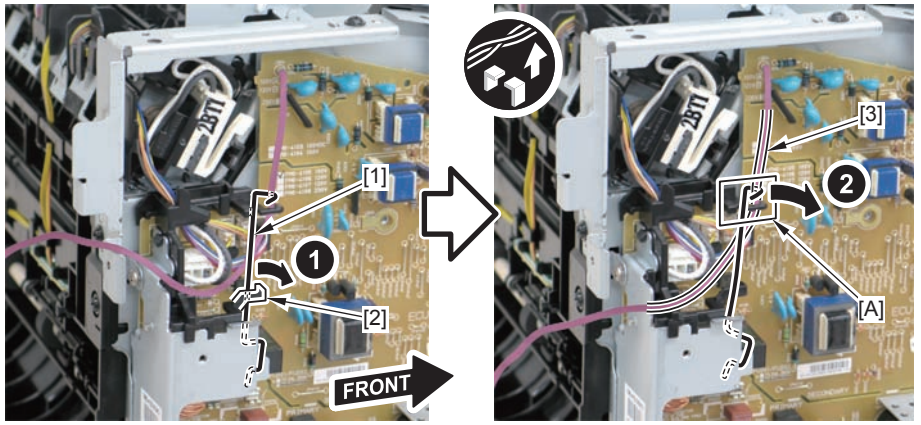
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-833

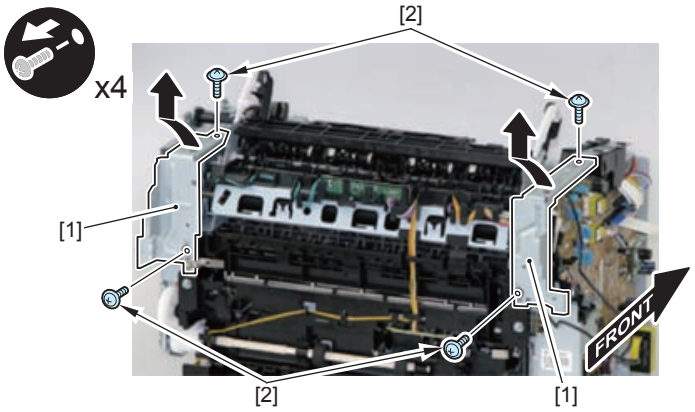
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-834

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

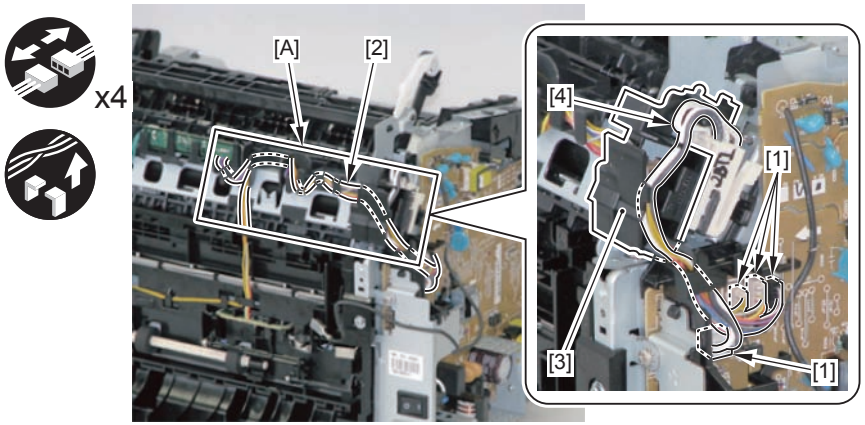


F-4-835

5) Remove the 4 connectors [1].

6) Disengage the harness [2] from the harness guide [A].

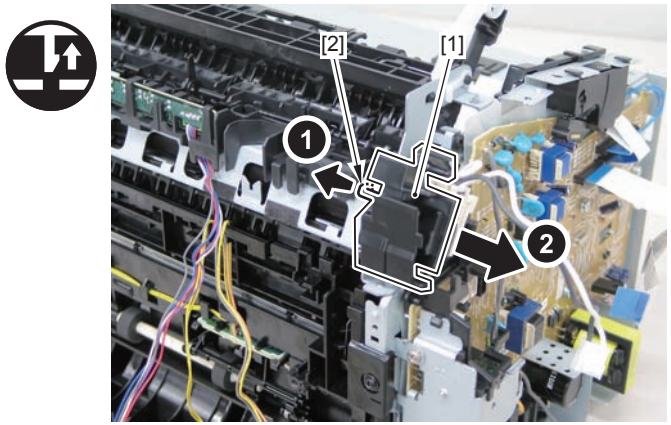
7) Disengage the fixing harness [4] from the harness holder [3].



F-4-836

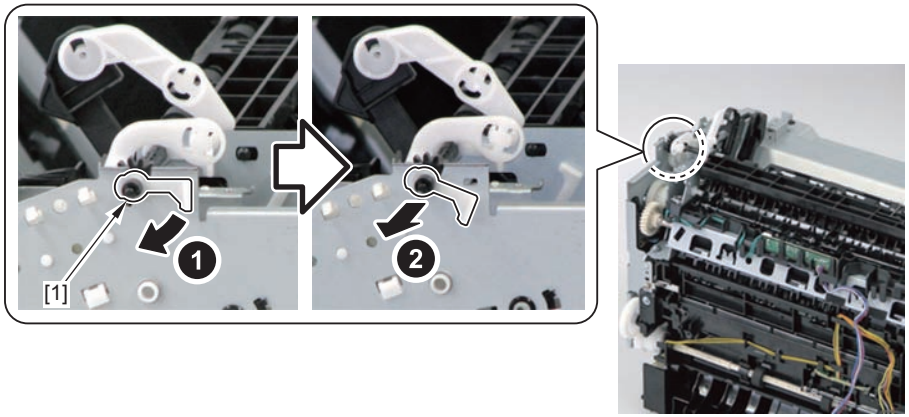
8) Remove the harness holder [1].

- 1 claw [2]



F-4-837

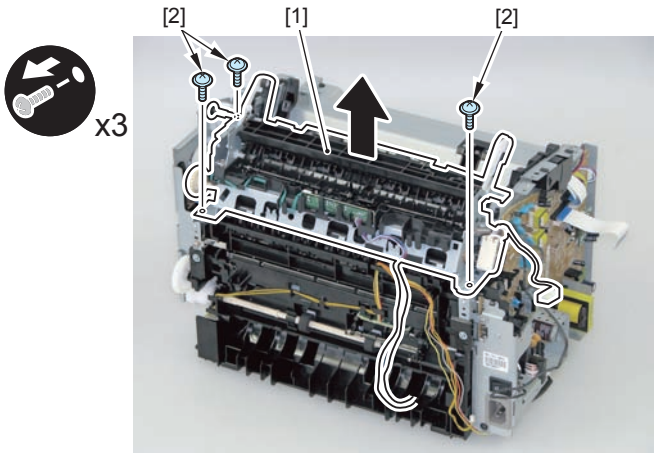
9) Remove the shaft support [1] of the delivery roller.



F-4-838

10) Remove the fixing assembly [1].

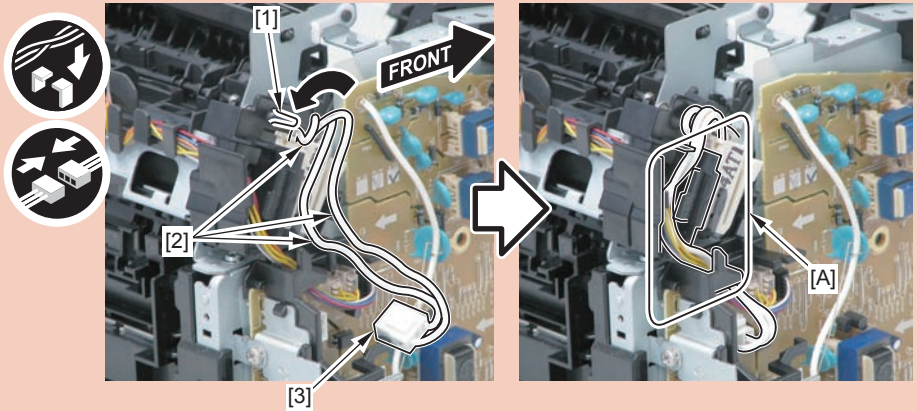
• 3 screws [2]



F-4-839

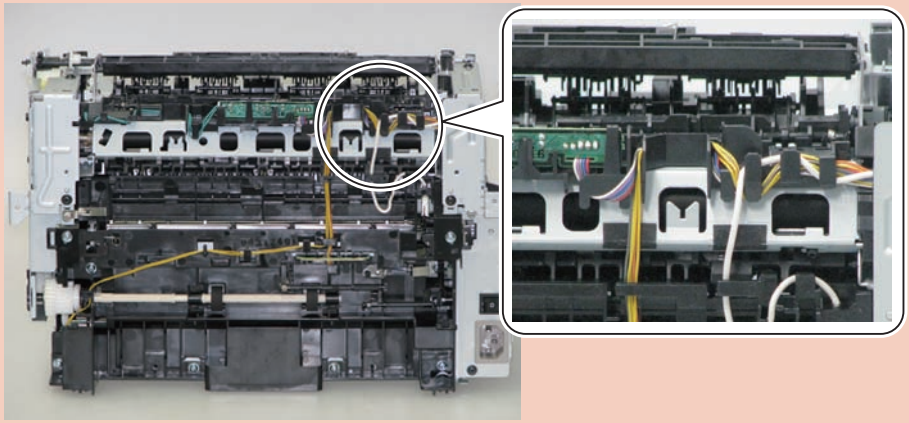
Caution:

When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-841

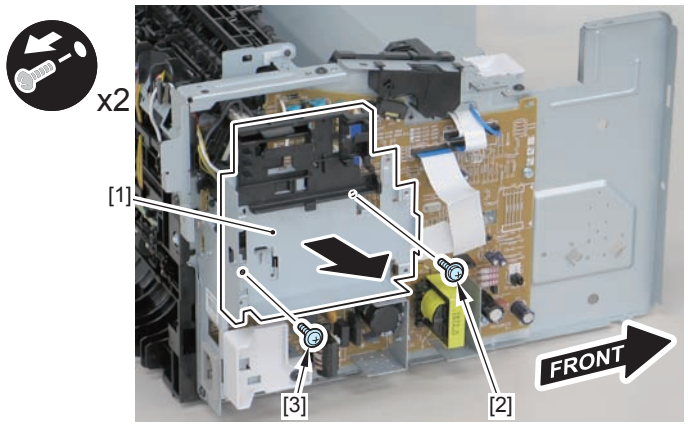
Removing the Fixing Assembly (MF4720w/MF4712/MF4710)

Preparation

1)Remove the left cover
2)Remove the copyboard cover and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB

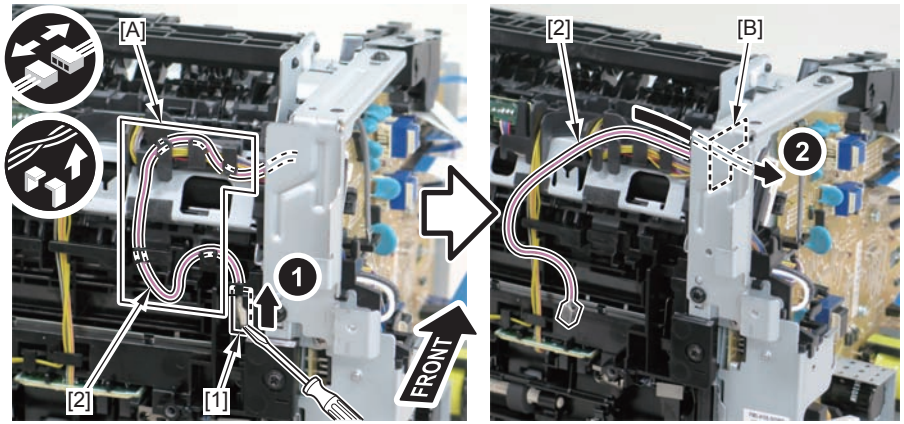
Procedure

1)Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-842

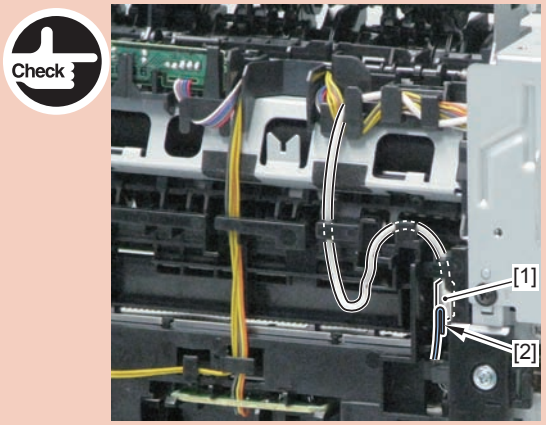
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-843

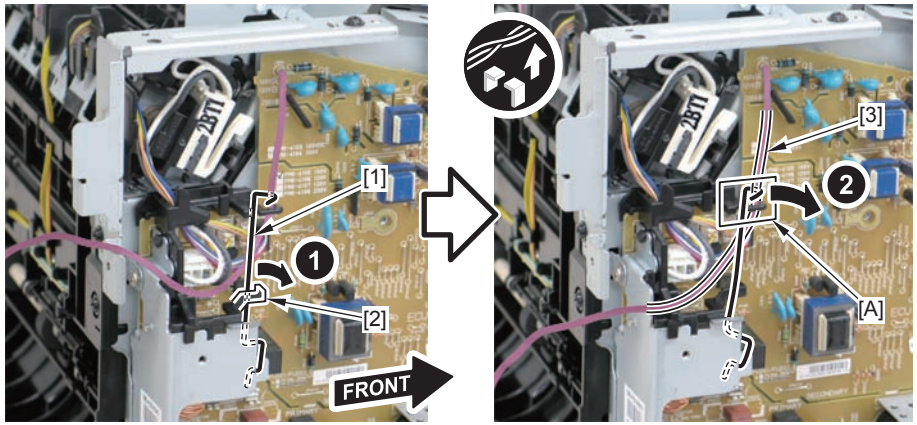
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-844

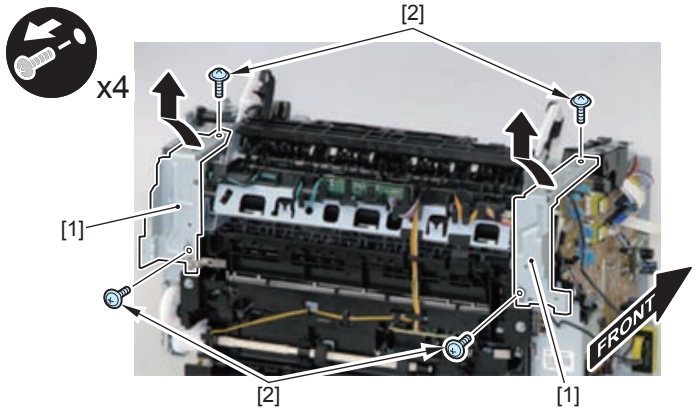
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-845

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

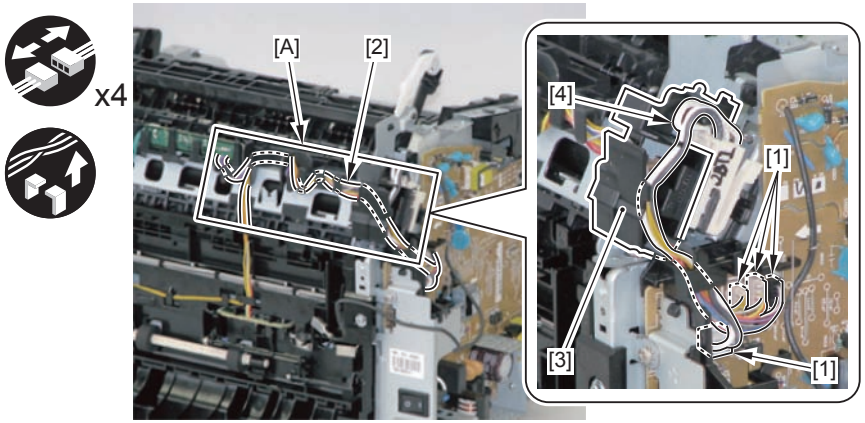


F-4-846

5) Remove the 4 connectors [1].

6) Disengage the harness [2] from the harness guide [A].

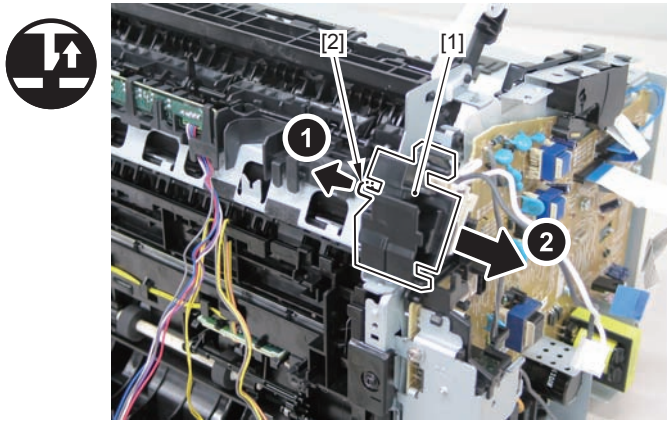
7) Disengage the fixing harness [4] from the harness holder [3].



F-4-847

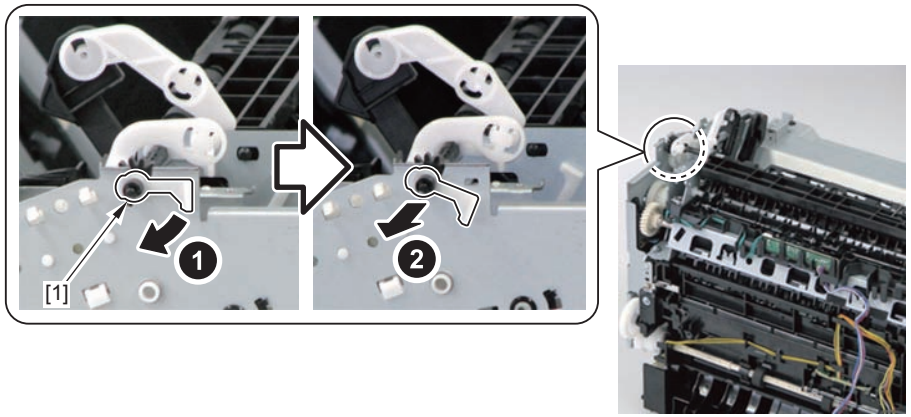
8) Remove the harness holder [1].

• 1 claw [2]



F-4-848

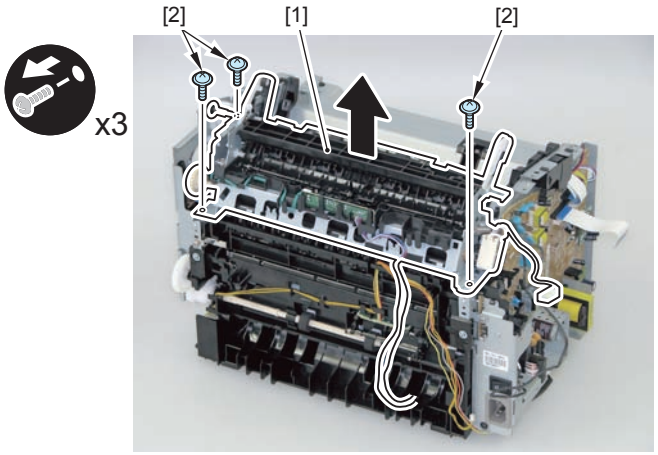
9) Remove the shaft support [1] of the delivery roller.



F-4-849

10) Remove the fixing assembly [1].

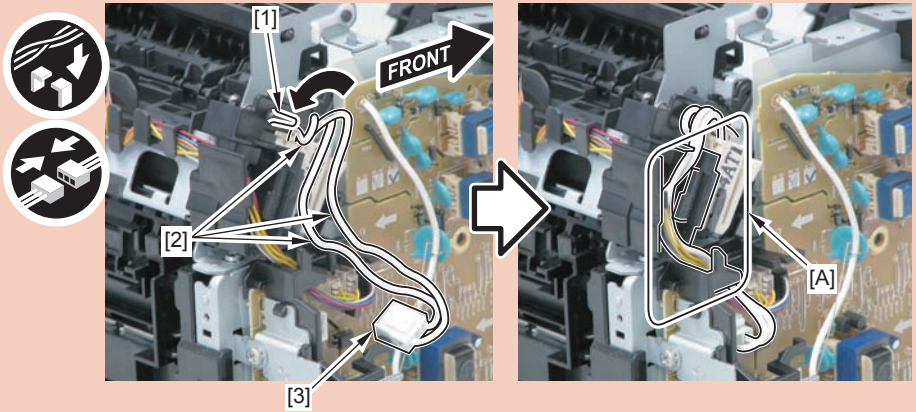
• 3 screws [2]



F-4-850

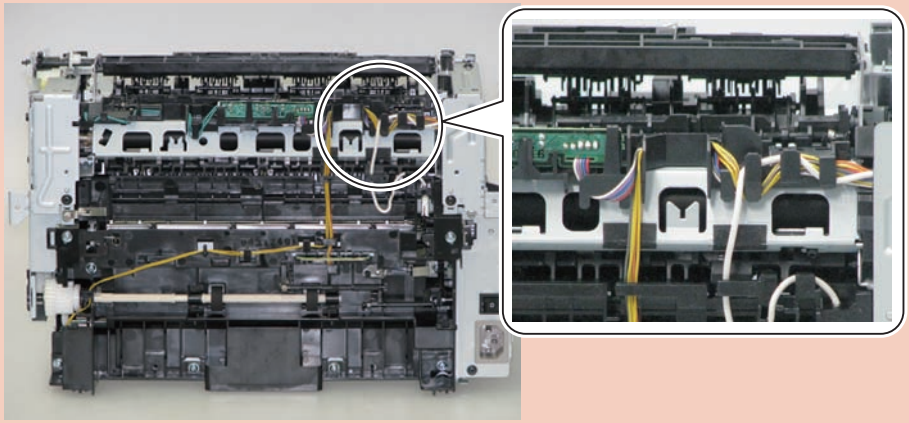
Caution:

When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-852

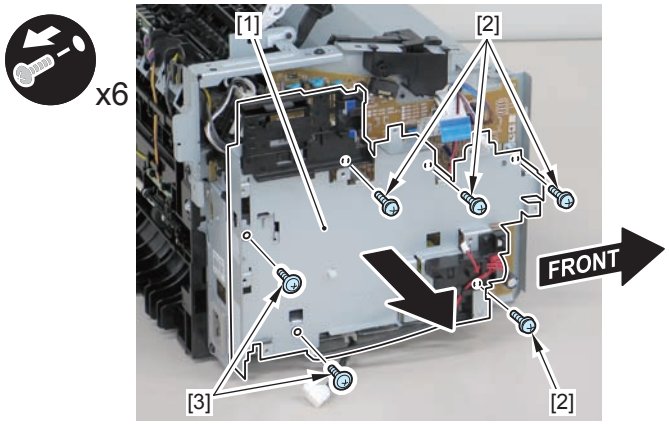
Removing the Fixing Assembly (L418S/L410/L190)

Preparation

1)Remove the left cover
2)Remove the DADF unit and reader unit
3)Remove the right cover
4)Remove the front cover unit
5)Remove the upper cover
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB
9)Remove the wireless LAN PCB

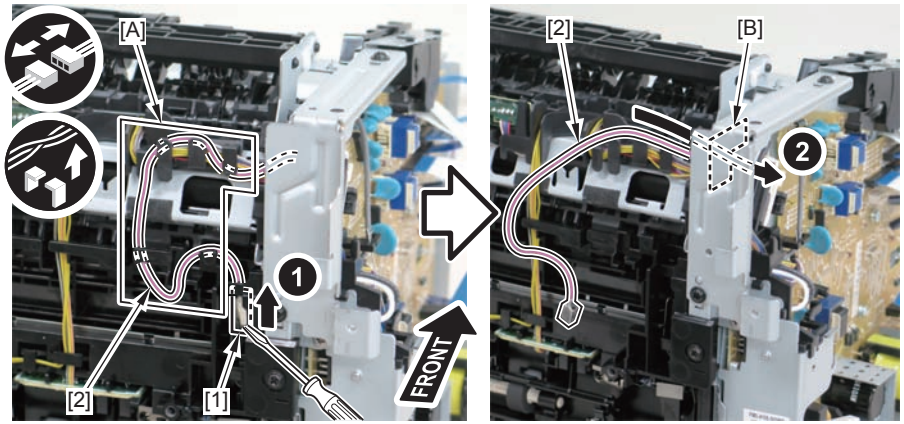
Procedure

1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-853

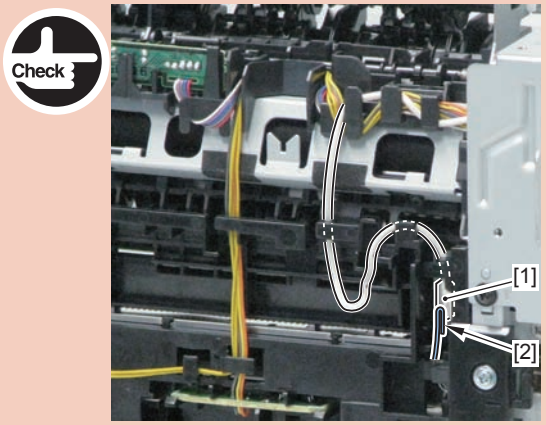
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-854

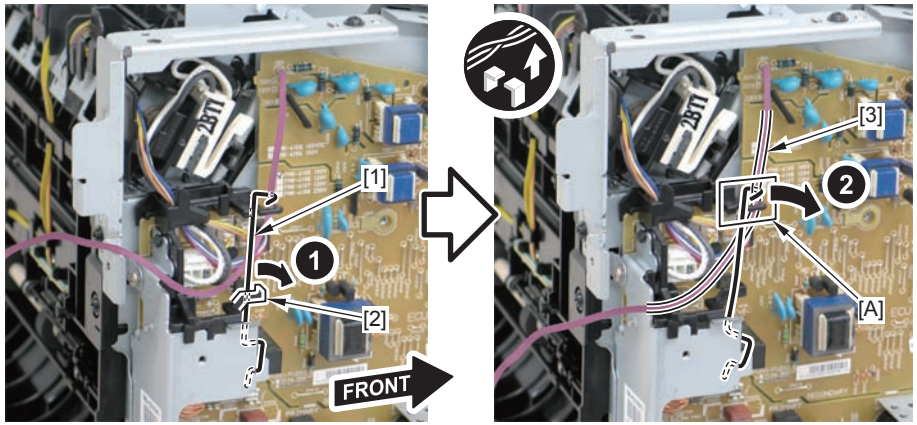
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



F-4-855

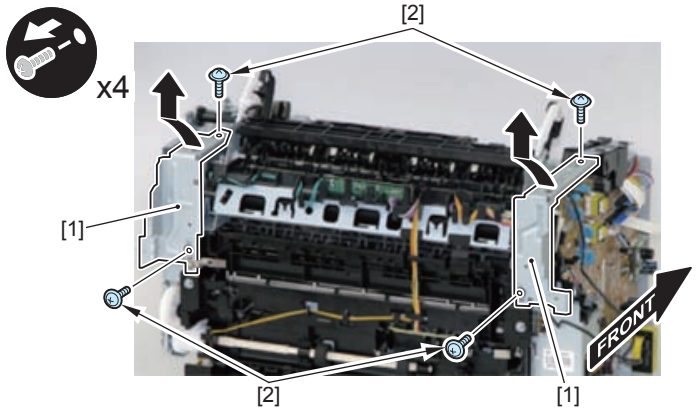
3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



F-4-856

4)Remove the 2 left/right reinforcing plates[1]

- 4 screws(black TP)[2]

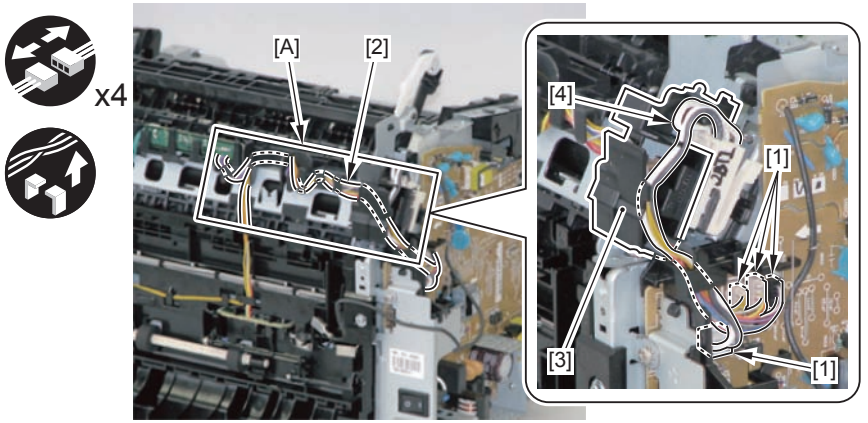


F-4-857

5) Remove the 4 connectors [1].

6) Disengage the harness [2] from the harness guide [A].

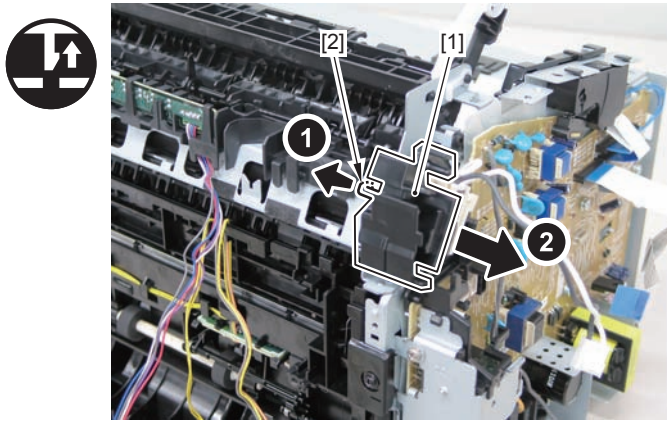
7) Disengage the fixing harness [4] from the harness holder [3].



F-4-858

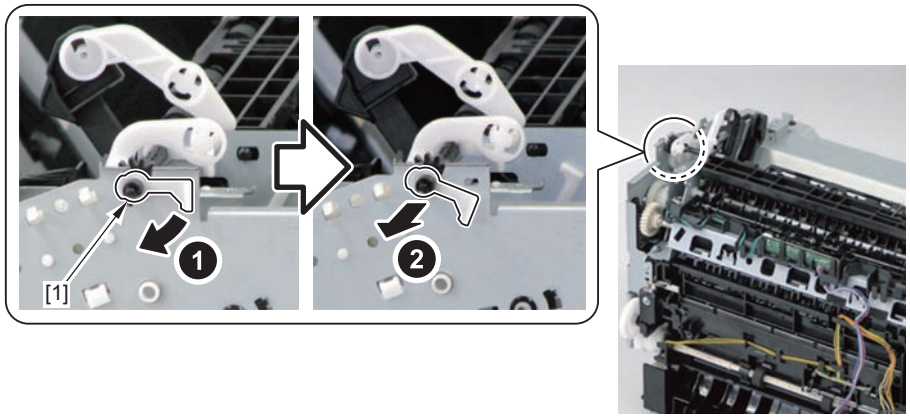
8) Remove the harness holder [1].

• 1 claw [2]



F-4-859

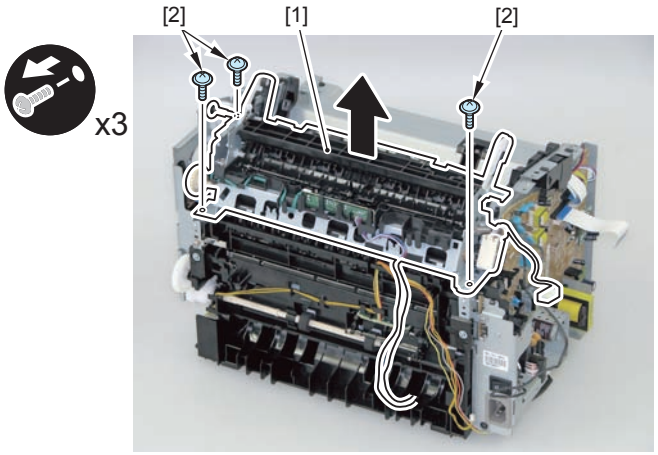
9) Remove the shaft support [1] of the delivery roller.



F-4-860

10) Remove the fixing assembly [1].

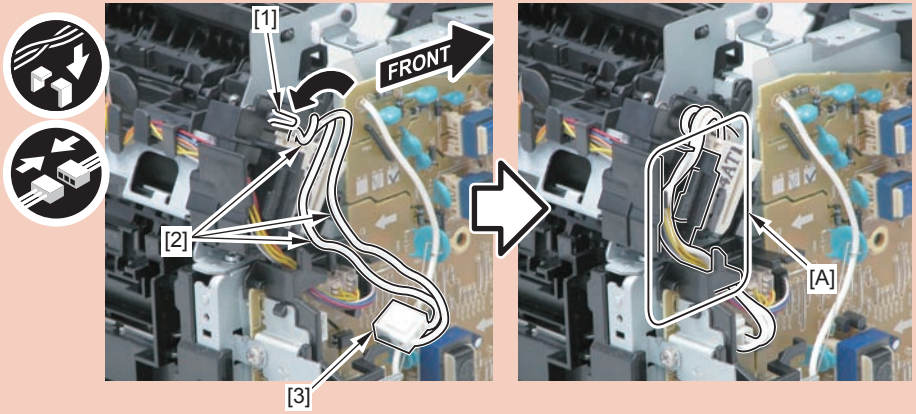
• 3 screws [2]



F-4-861

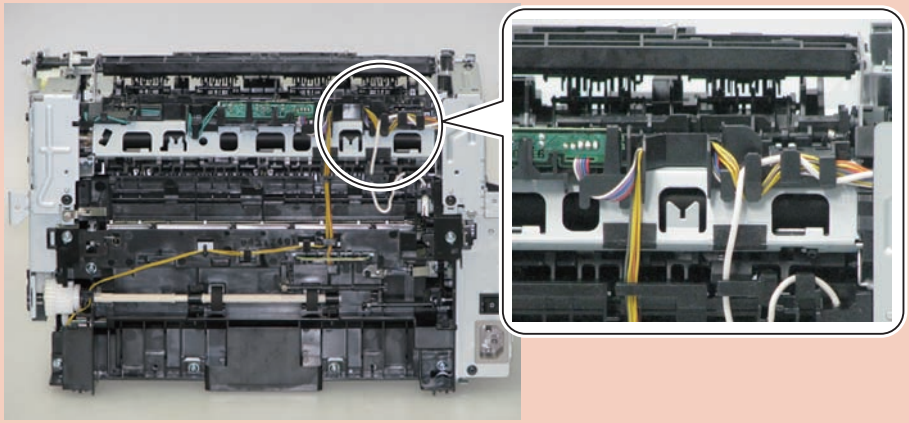
Caution:

When mounting the fixing harness, wrap the fixing harness [2] around the protruding part [1] of the harness holder, pass it through the harness guide [A], and then mount the connector [3].



Note:

The below picture shows how to wind the harness.



F-4-863

Pickup And Feeding System

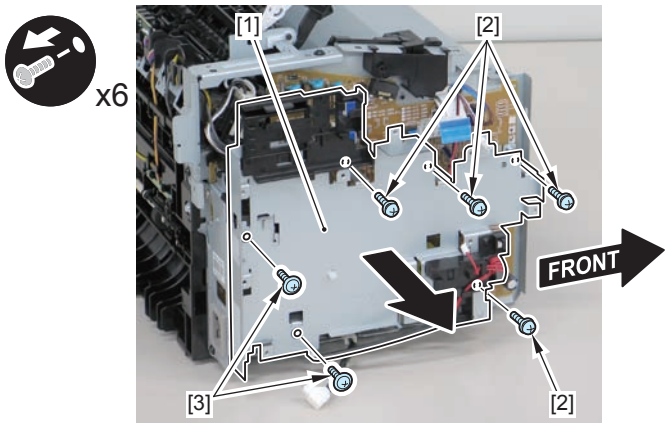
Removing the Pickup Unit (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB
8) Remove the FAX NCU PCB
9) Remove the wireless LAN PCB
10) Remove the separation pad

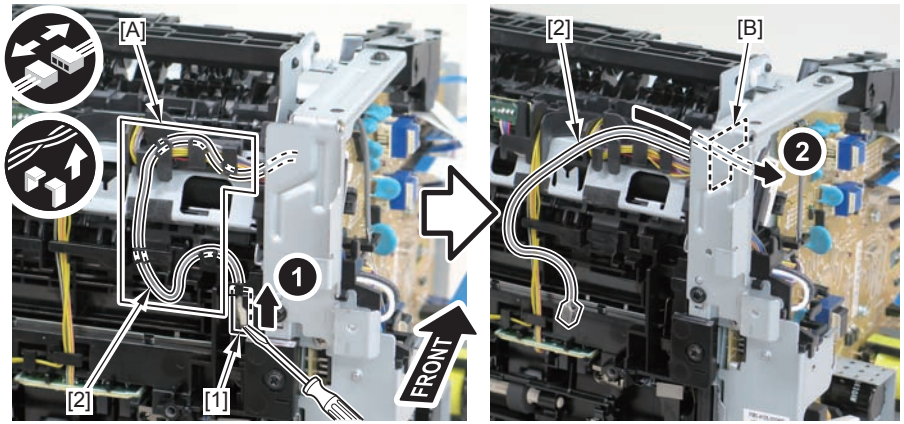
Procedure

1) Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-864

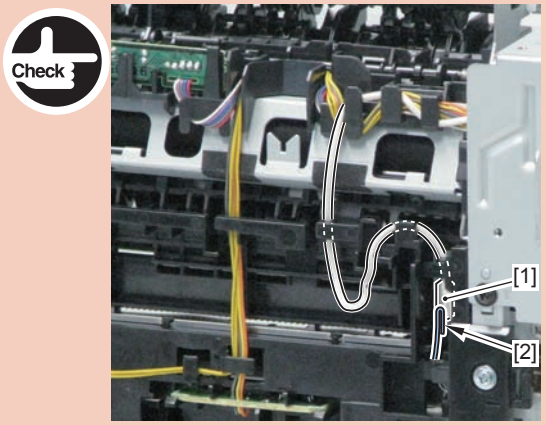
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-865

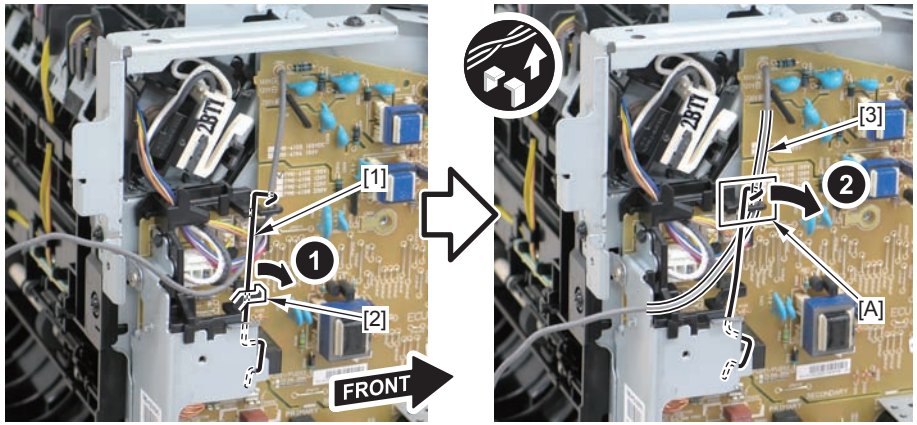
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



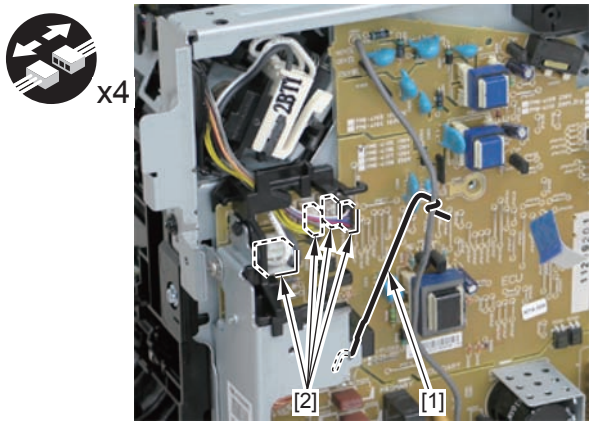
F-4-866

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



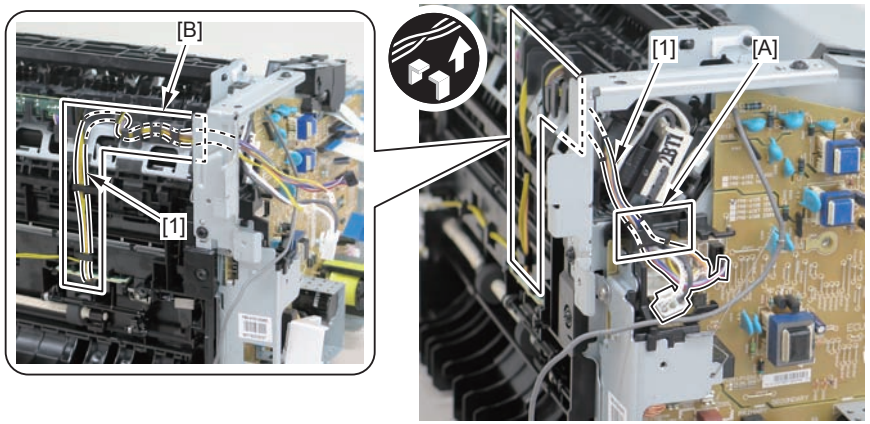
F-4-867

4)Remove the harness retaining spring[1] and 4 connectors[2].



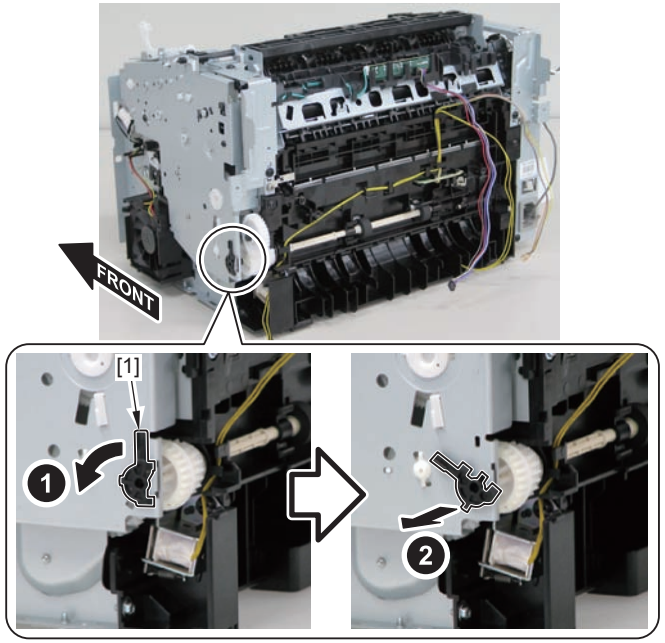
F-4-868

5)Remove the harness[1] from the guide[A] and [B].



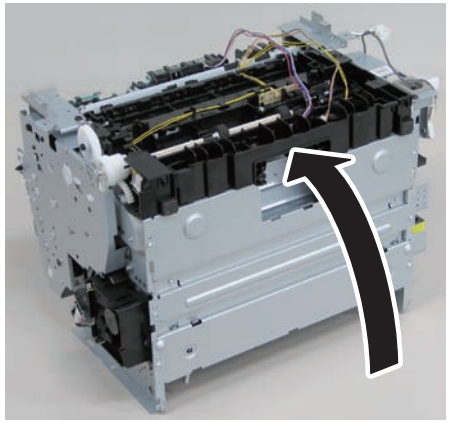
F-4-869

6)Remove the shaft retainer[1]



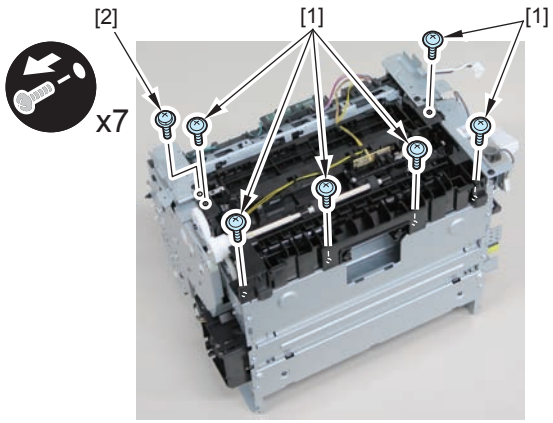
F-4-870

7)Face the front of the host machine downwards.



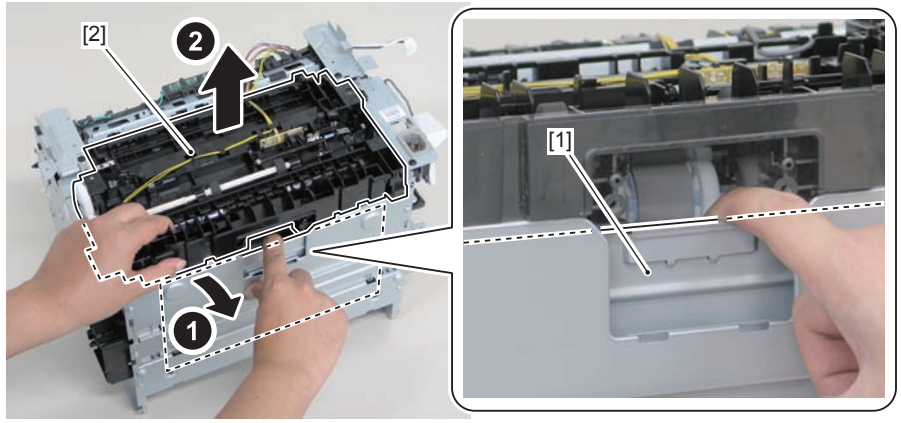
F-4-871

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-872

9)Remove the pickup unit[2] while opening the pickup tray[1]



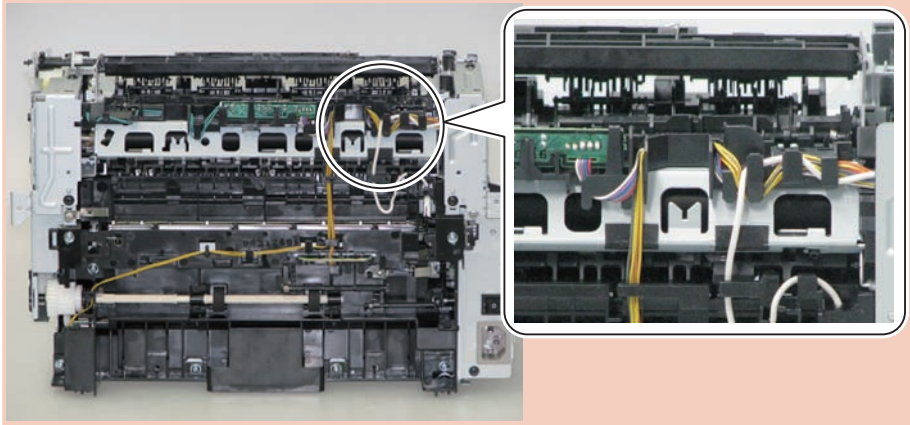
F-4-873

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-874

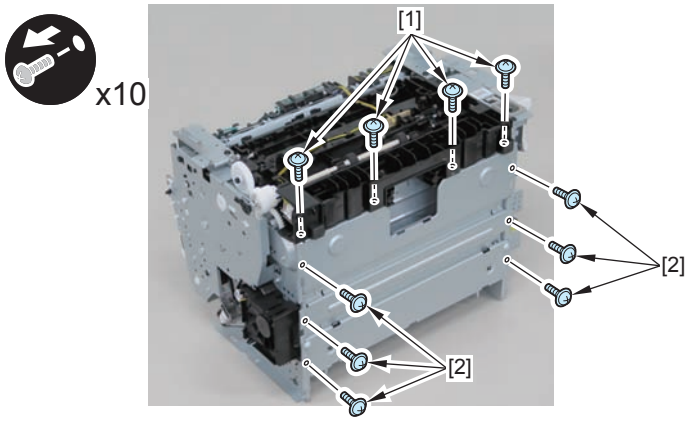
Removing the Pickup Tray Unit (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad

Procedure

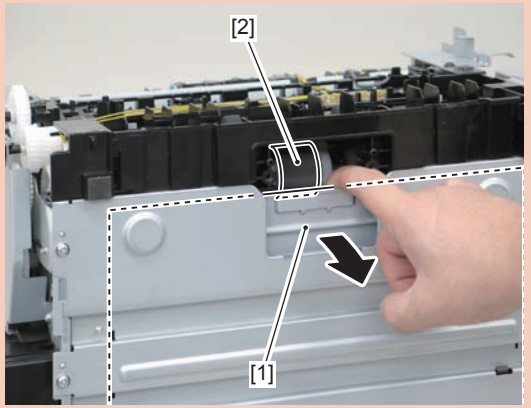
1) Remove the 4 screws(black TP)[1] and 6 screws[2].

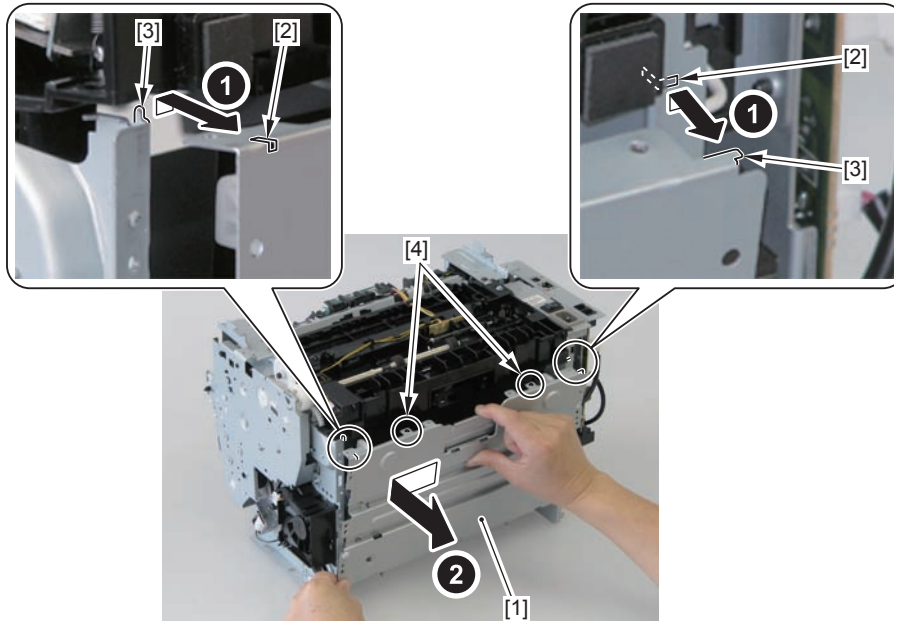


F-4-875

2) Remove the pickup tray unit [1].
- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

Caution:
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.

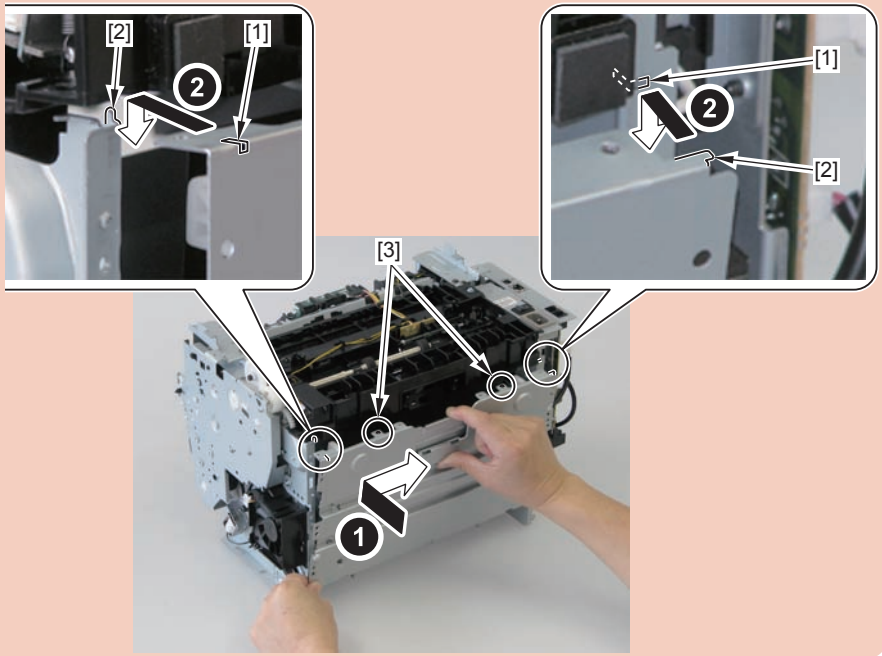




F-4-876

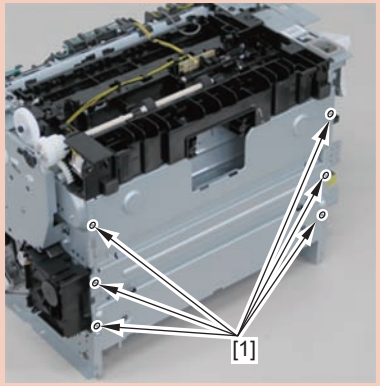
Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.



Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



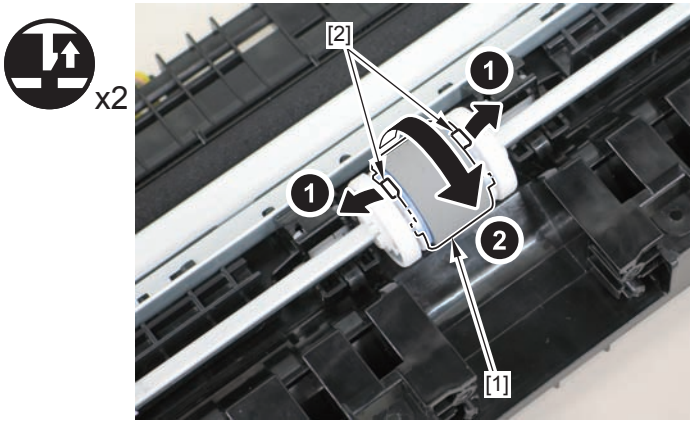
Removing the Pickup Roller (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

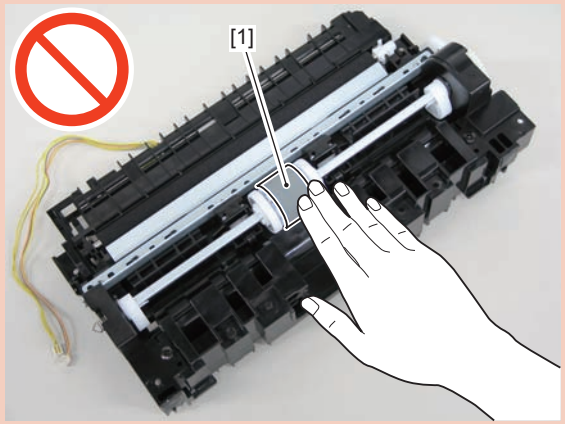
1) Remove the pickup roller[1]
- 2 claws[2]



F-4-877

Caution:

Do not touch the surface of the roller.



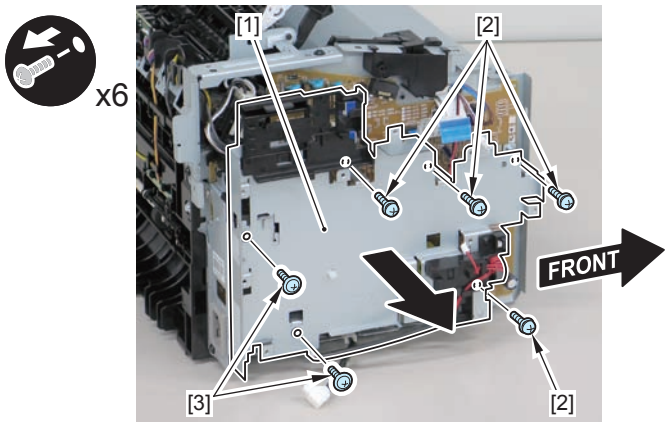
Removing the Pickup Solenoid (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB
8) Remove the FAX NCU PCB
9) Remove the wireless LAN PCB

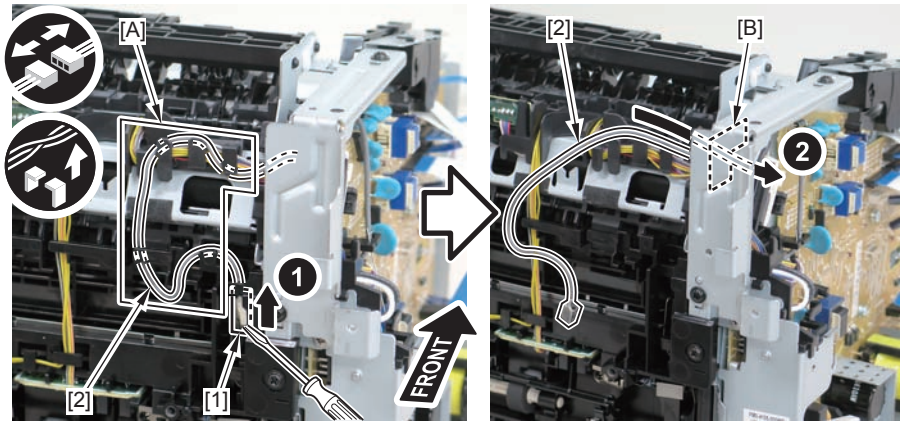
Procedure

1) Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



F-4-878

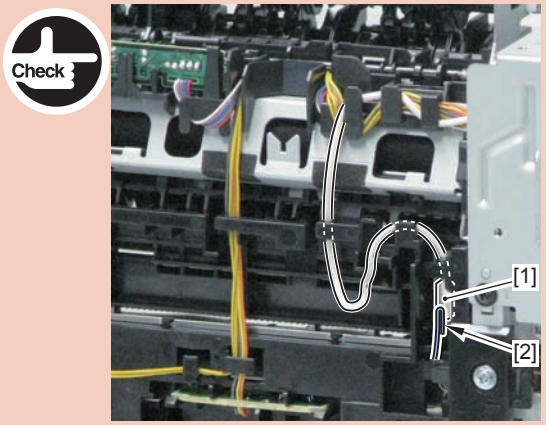
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-879

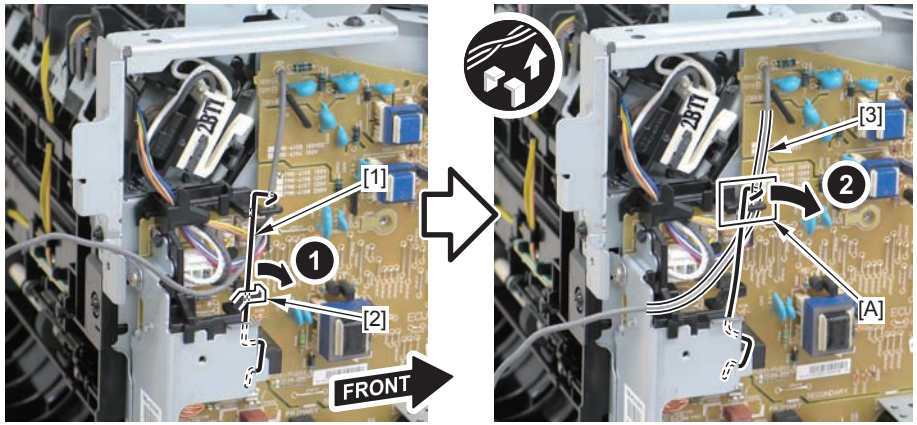
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



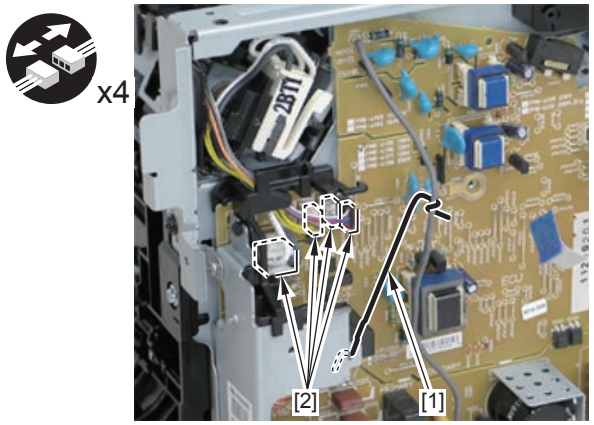
F-4-880

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



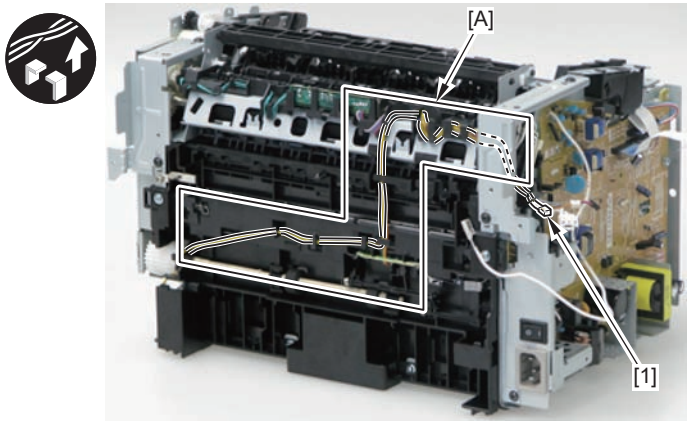
F-4-881

4)Remove the harness retaining spring[1] and 4 connectors[2].



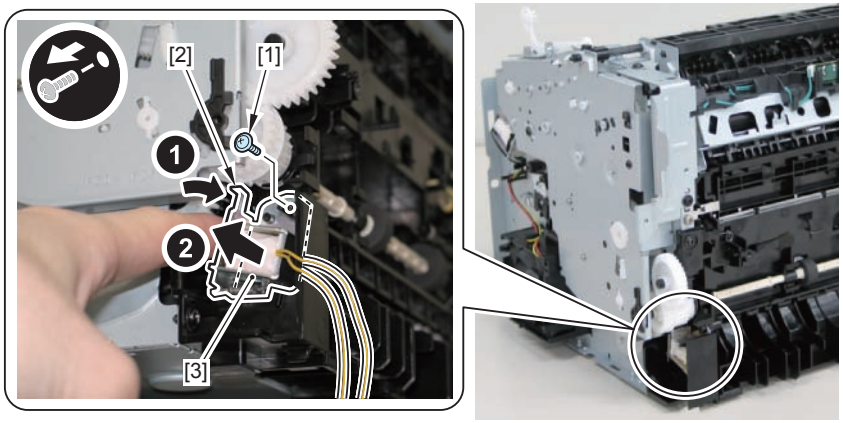
F-4-882

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-883

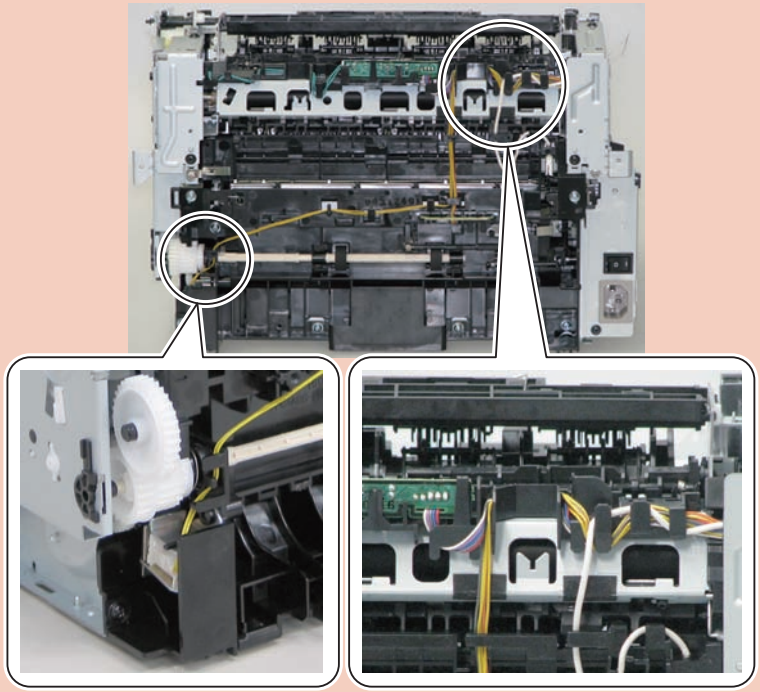
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-884

Caution:

The below picture shows how to wind the harness.



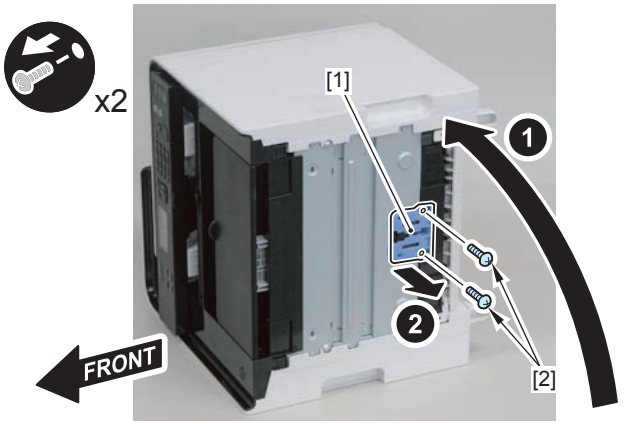
Removing the Separation Pad (MF4890dw/MF4880dw)

Procedure

Caution:

When assembling/disassembling the separation pad, do not touch the surface of the

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-885

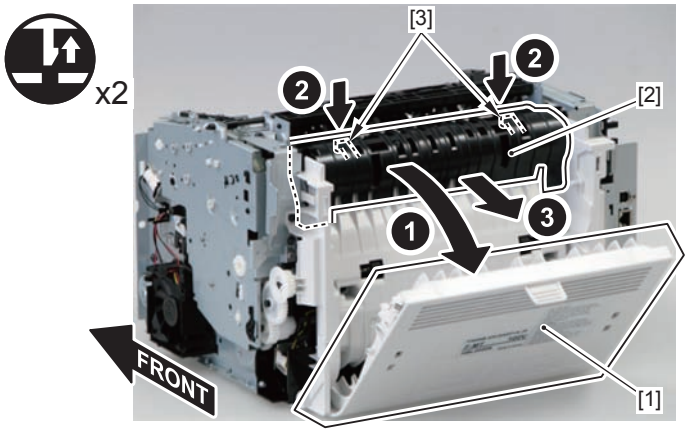
Removing the Duplex Feed Unit (MF4890dw/MF4880dw)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

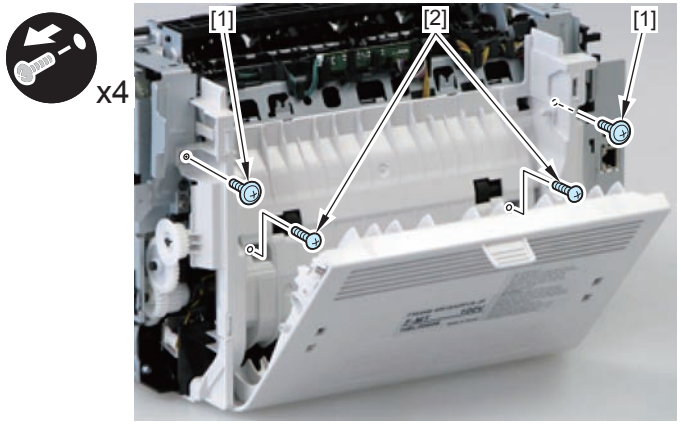
Procedure

1) Open the rear cover[1], and remove the duplex guide[2]
- 2 claws[3]



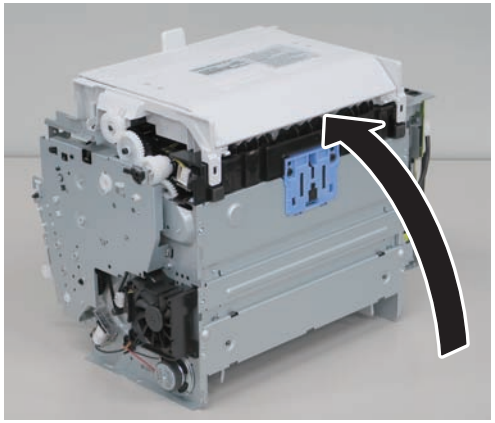
F-4-886

2) Remove the 2 screws (TP) [1] and 2 screws (tapping) [2] using a stubby screwdriver.



F-4-887

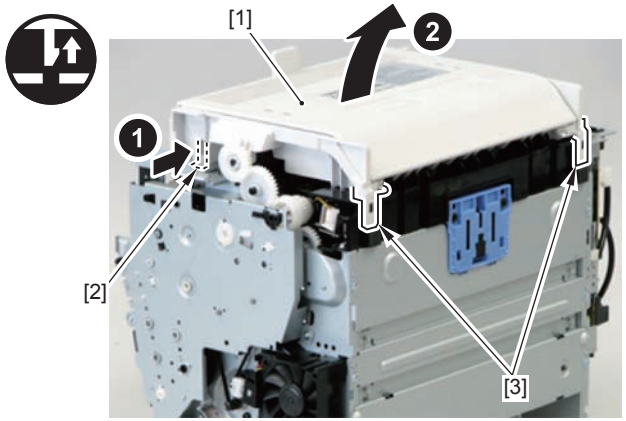
3) Close the rear cover.
4) Face the front of the host machine downwards.



F-4-888

5)Remove the duplex feed unit[1]

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



F-4-889

Removing the Duplex Solenoid (MF4890dw/MF4880dw)

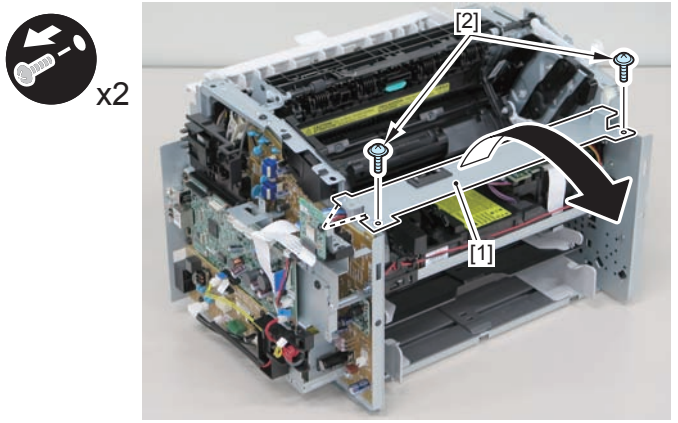
Preparation

1)Remove the left cover
2)Remove the DADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.

Procedure

1)Remove the scanner cover[1]

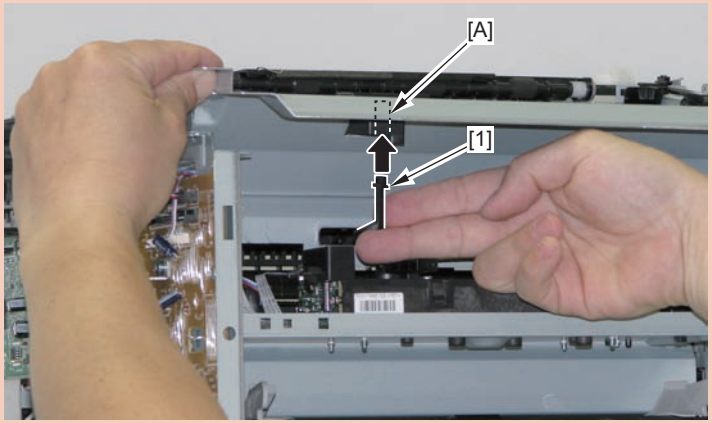
- 2 screws(black TP)[2]



F-4-890

Caution:

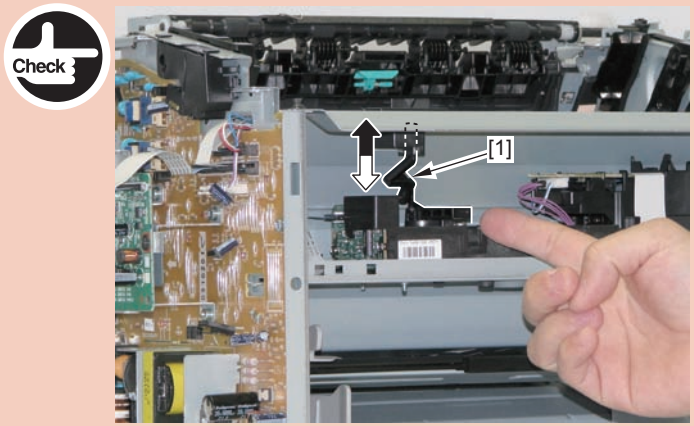
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-891

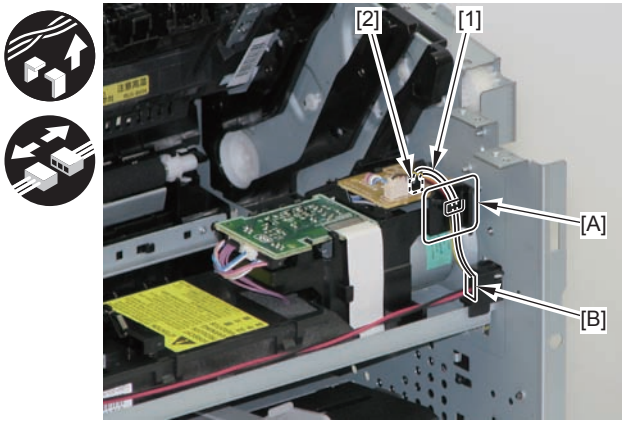
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



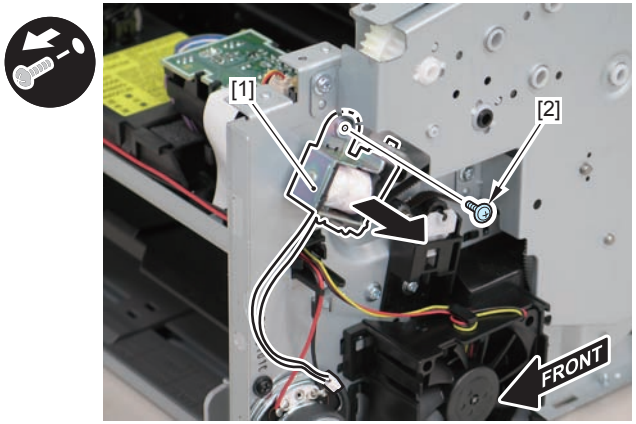
F-4-892

2)Free the solenoid harness[1] from the guide[A], and put it through the hole[B] of the right side plate to the outside.



F-4-893

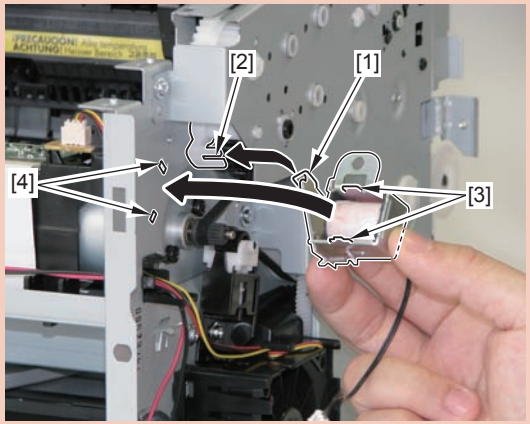
3)Remove the duplex solenoid[1].



F-4-894

Caution:

When mounting the duplex solenoid, align the solenoid lever [1] with the groove in the link [2], and insert the 2 solenoid positioning protrusions [3] into the 2 positioning holes [4] in the side panel to mount the solenoid.



Removing the Pickup Unit (MF4870dn/MF4830d)

Preparation

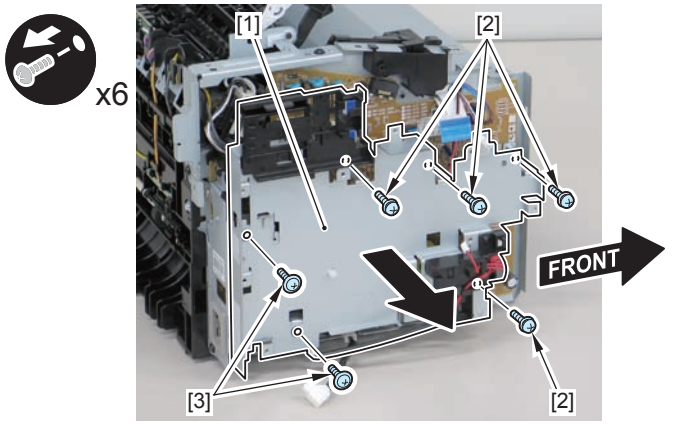
1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB
8) Remove the FAX NCU PCB(MF4870dn)
9) Remove the separation pad

Procedure

(MF4870dn)

1) Remove the main controller mounting plate[1]

- 4 screws(with washer)[2]
- 2 screws(black TP)[3]

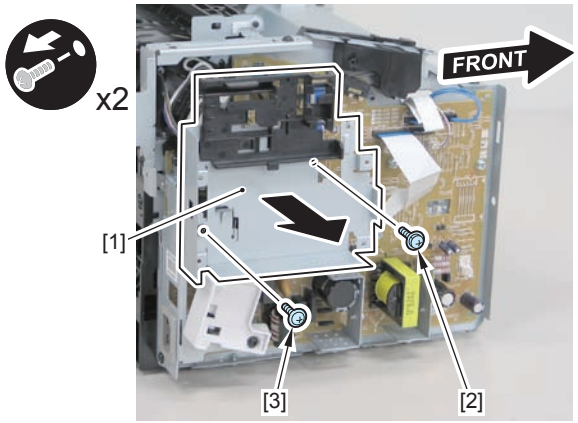


F-4-895

(MF4830d)

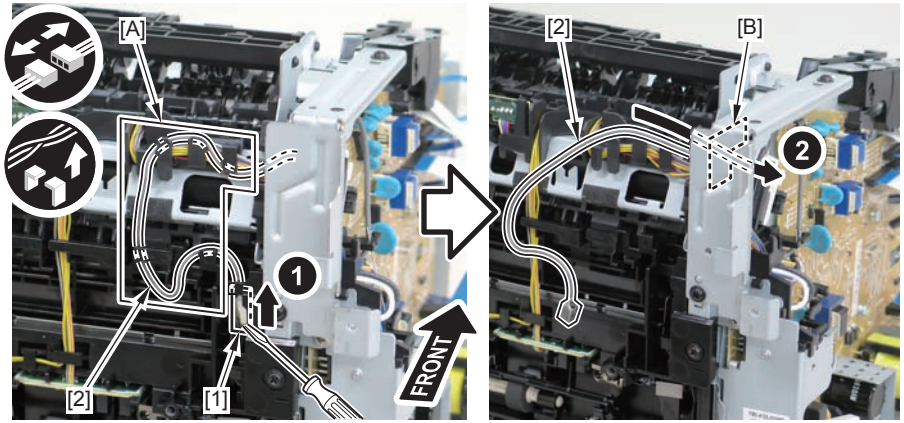
1) Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-896

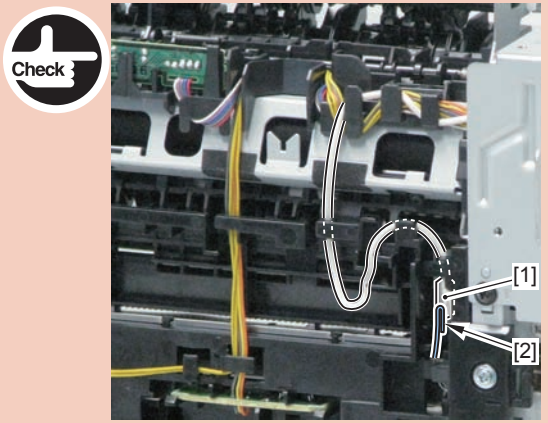
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-897

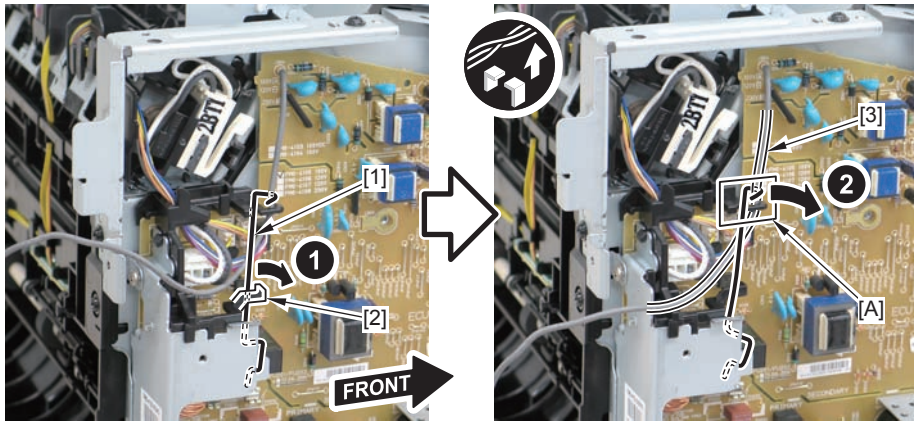
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



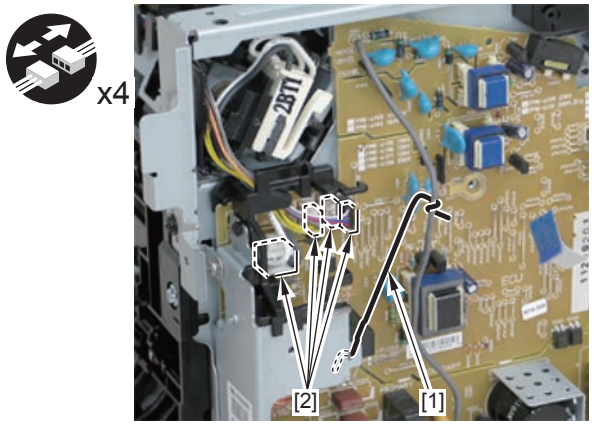
F-4-898

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



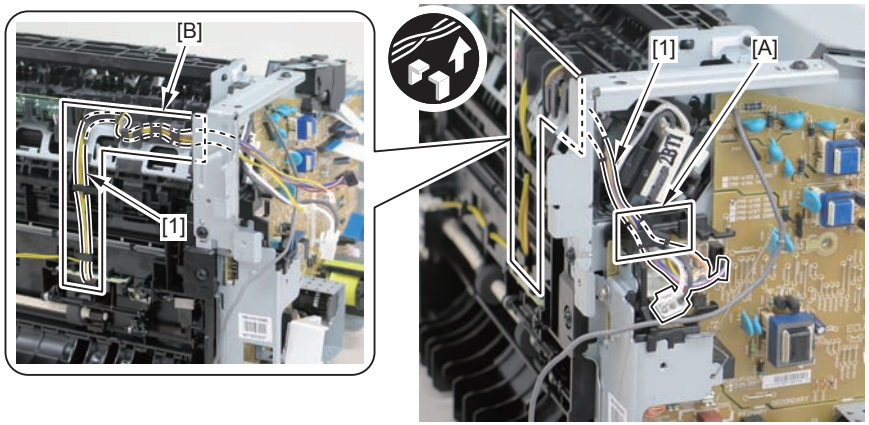
F-4-899

4)Remove the harness retaining spring[1] and 4 connectors[2].



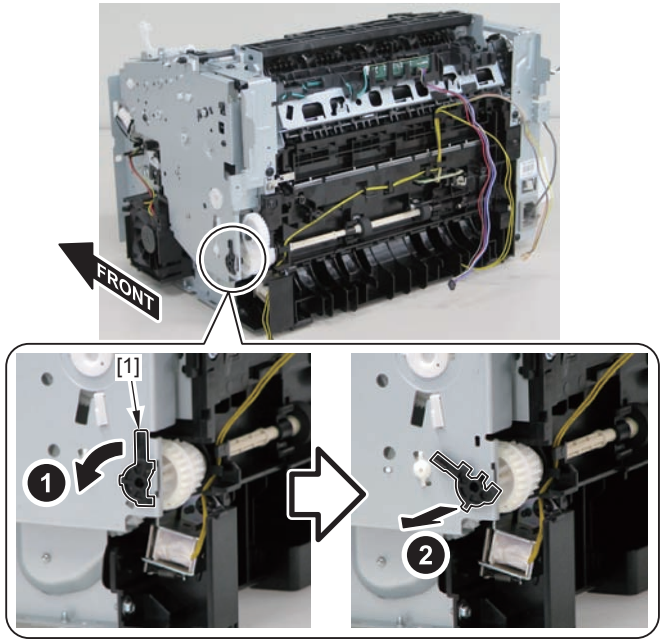
F-4-900

5)Remove the harness[1] from the guide[A] and [B].



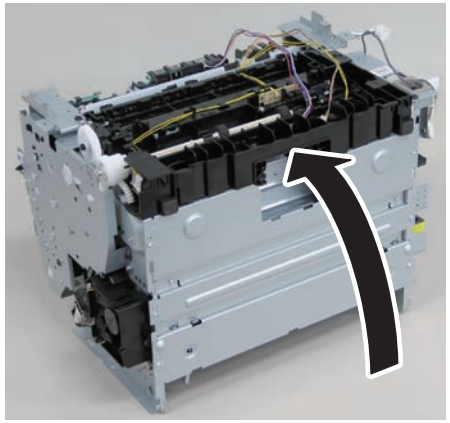
F-4-901

6)Remove the shaft retainer[1]



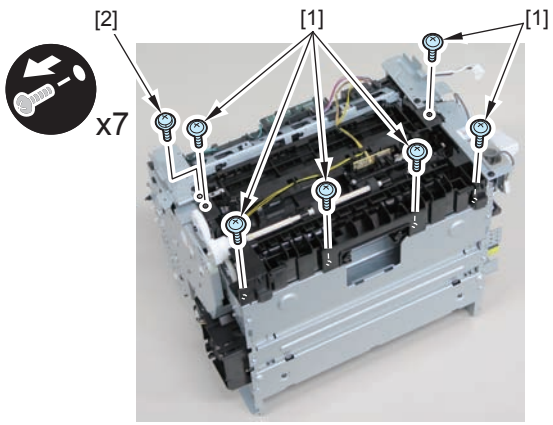
F-4-902

7)Face the front of the host machine downwards.



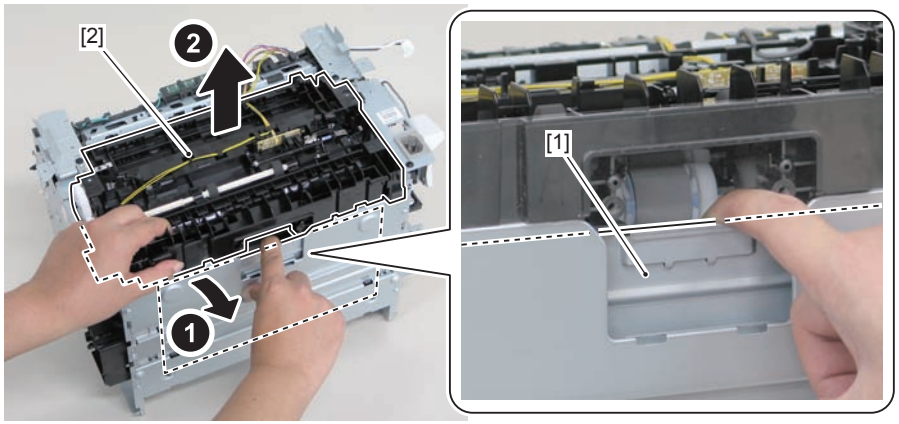
F-4-903

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-904

9)Remove the pickup unit[2] while opening the pickup tray[1]



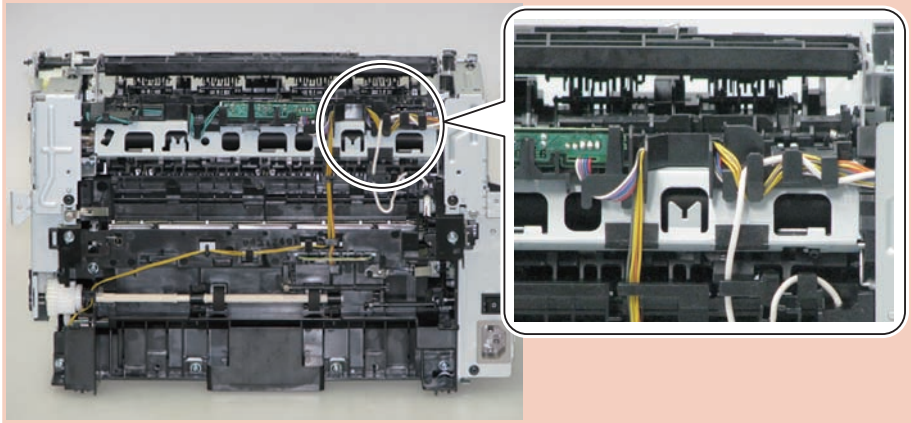
F-4-905

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-906

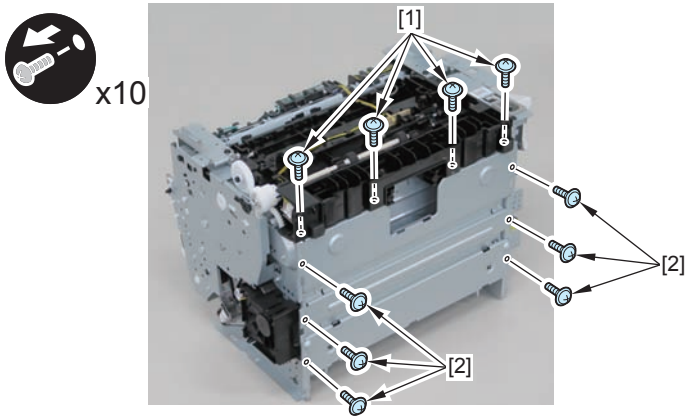
Removing the Pickup Tray Unit (MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad

Procedure

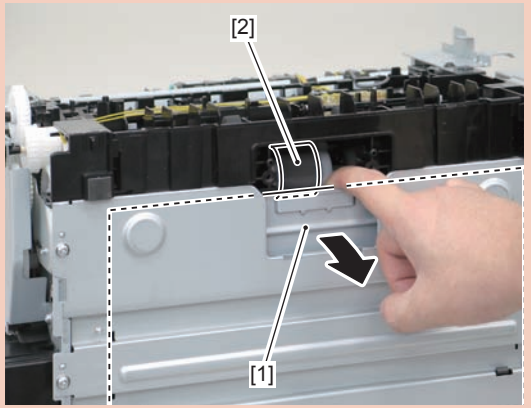
1) Remove the 4 screws(black TP)[1] and 6 screws[2].

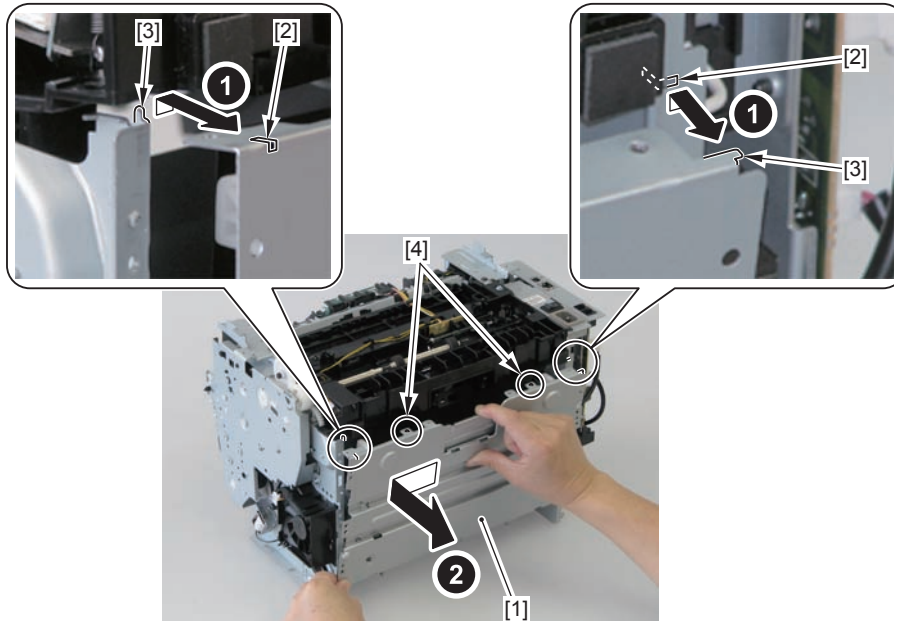


F-4-907

2) Remove the pickup tray unit [1].
- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

Caution:
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.

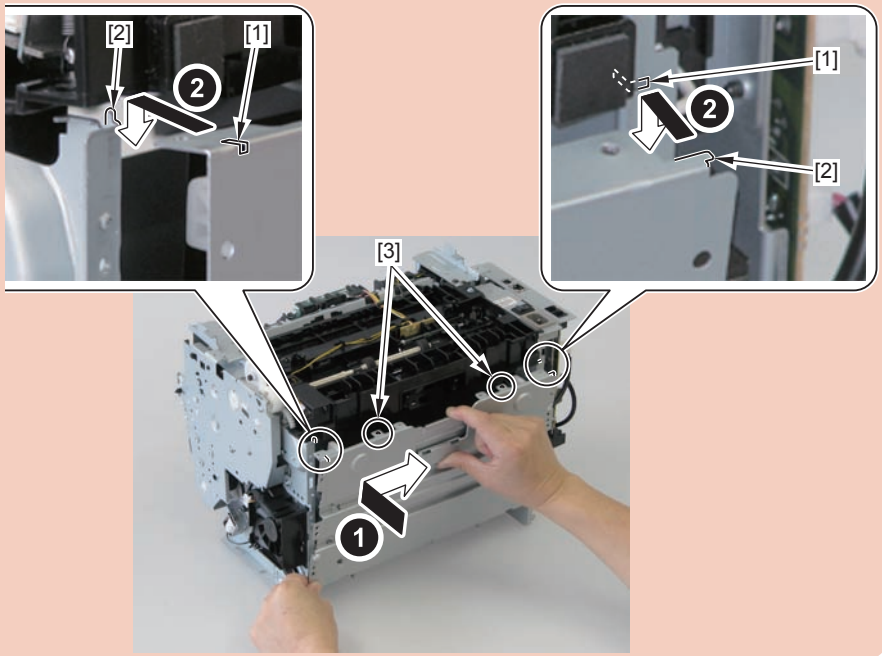




F-4-908

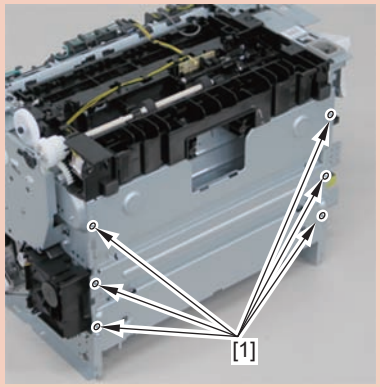
Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.



Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



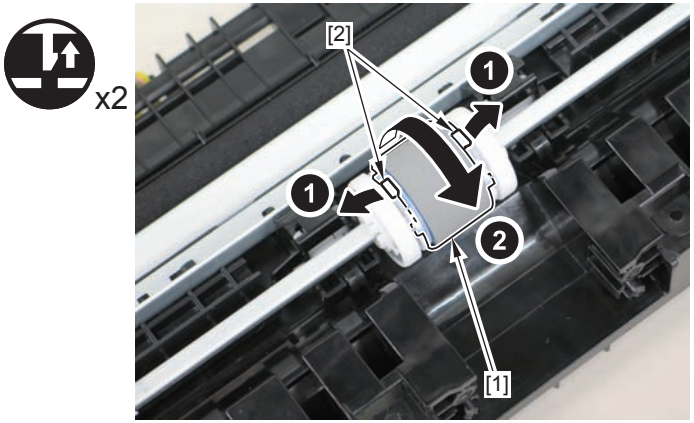
Removing the Pickup Roller (MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

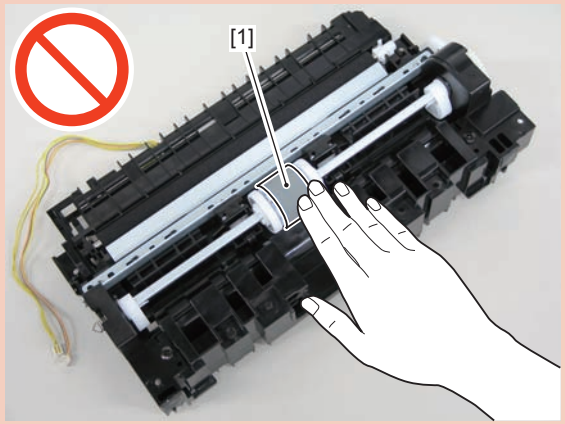
1) Remove the pickup roller[1]
- 2 claws[2]



F-4-909

Caution:

Do not touch the surface of the roller.



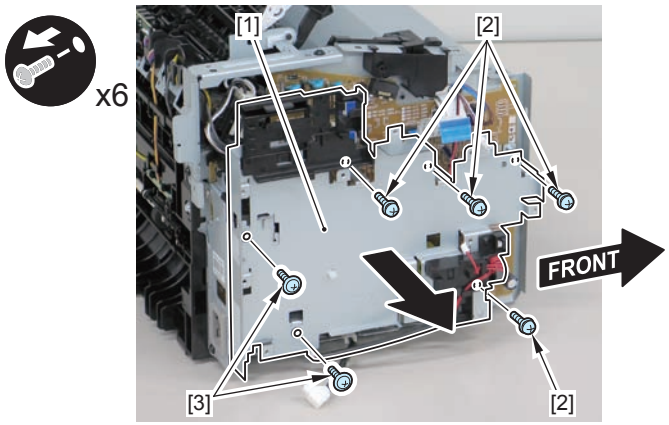
Removing the Pickup Solenoid (MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB(MF4870dn)

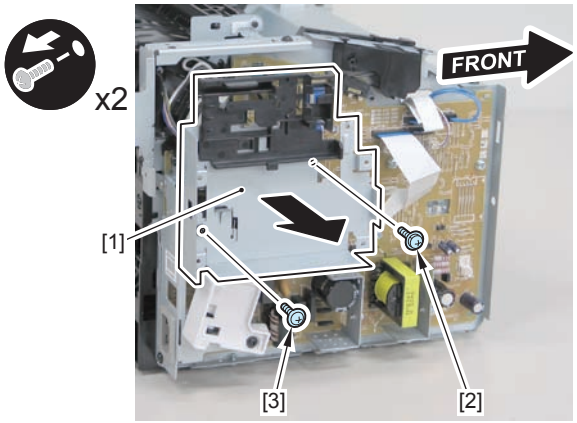
Procedure

(MF4870dn)
1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



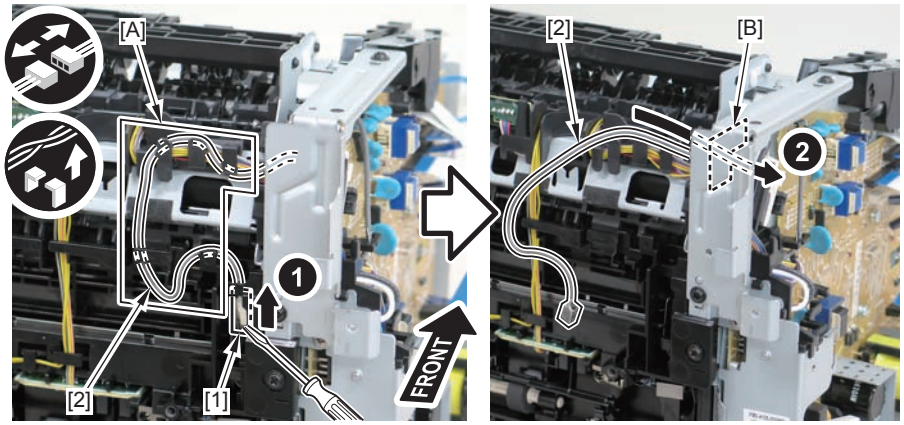
F-4-910

(MF4830d)
1)Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-911

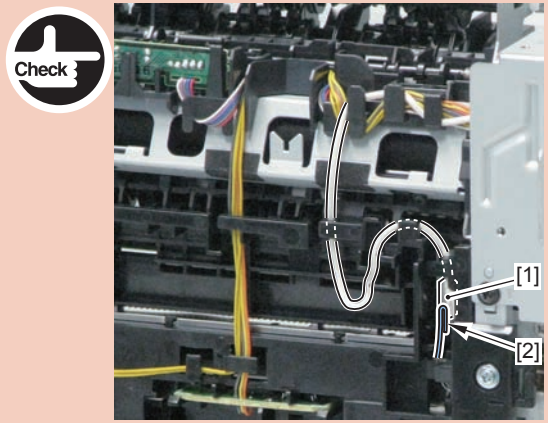
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-912

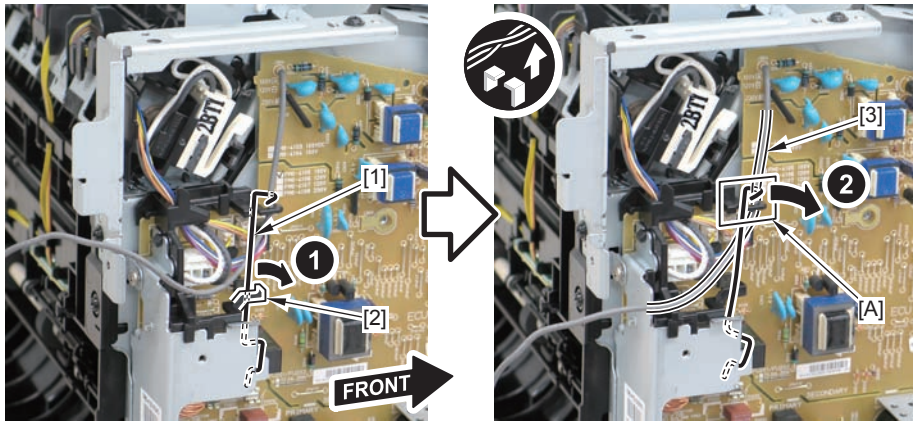
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



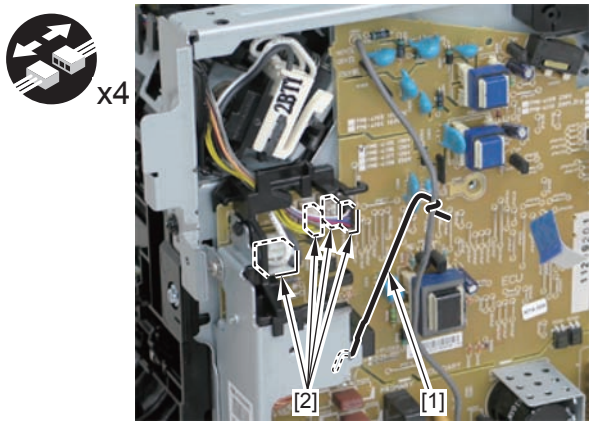
F-4-913

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



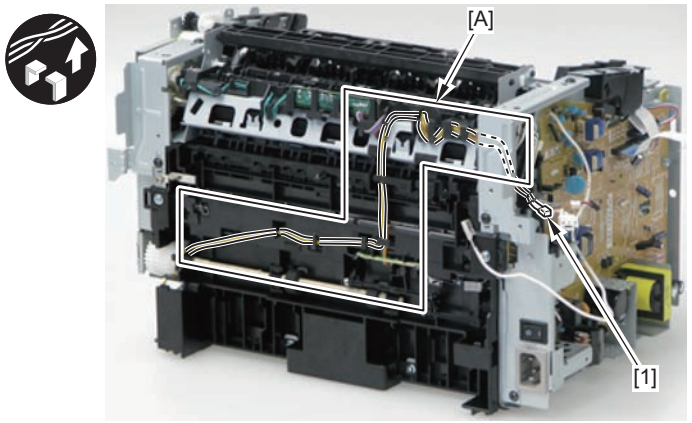
F-4-914

4)Remove the harness retaining spring[1] and 4 connectors[2].



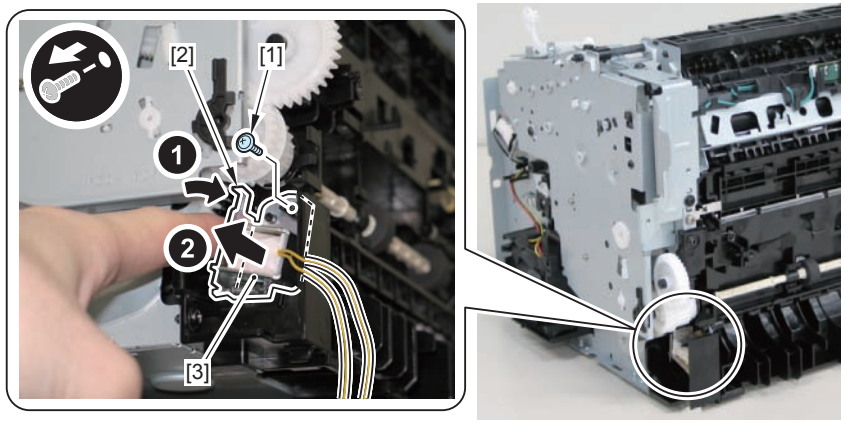
F-4-915

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-916

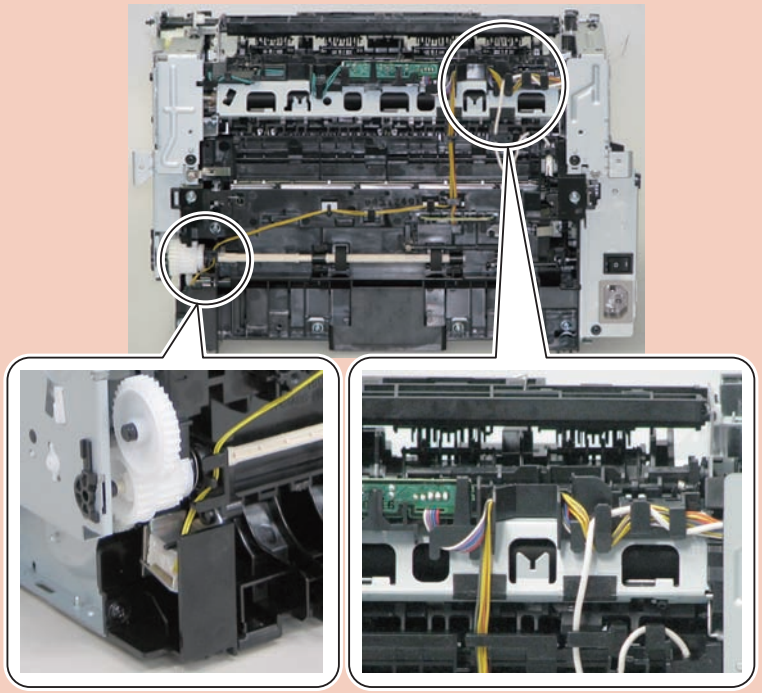
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-917

Caution:

The below picture shows how to wind the harness.



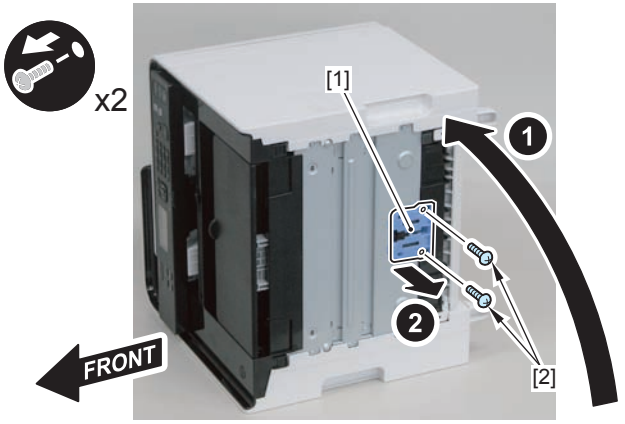
Removing the Separation Pad (MF4870dn/MF4830d)

Procedure

Caution:

When assembling/disassembling the separation pad, do not touch the surface of the

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-918

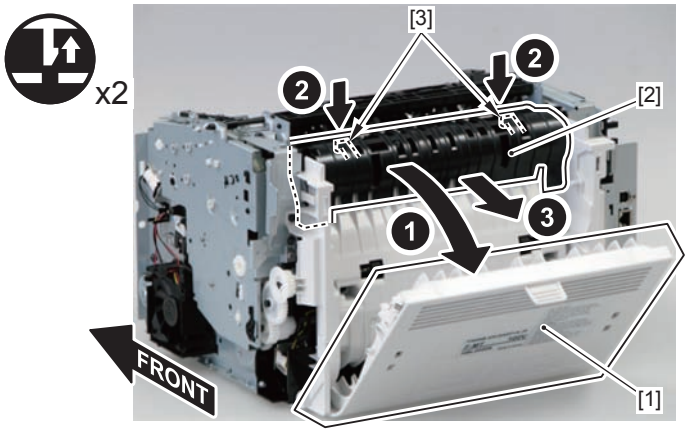
Removing the Duplex Feed Unit (MF4870dn/MF4830d)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

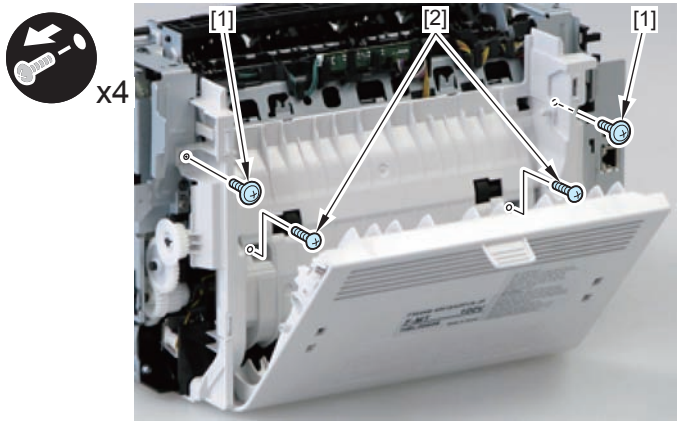
Procedure

1) Open the rear cover[1], and remove the duplex guide[2]
- 2 claws[3]



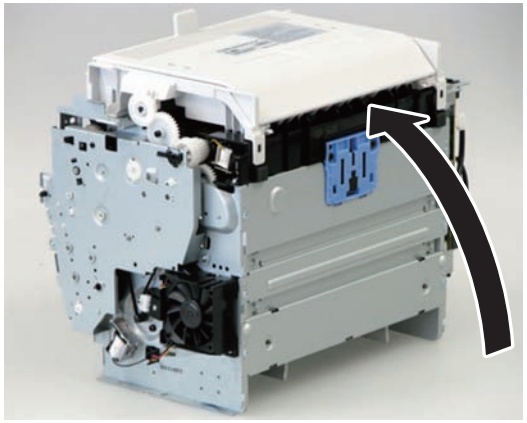
F-4-919

2) Remove the 2 screws (TP) [1] and 2 screws (tapping) [2] using a stubby screwdriver.



F-4-920

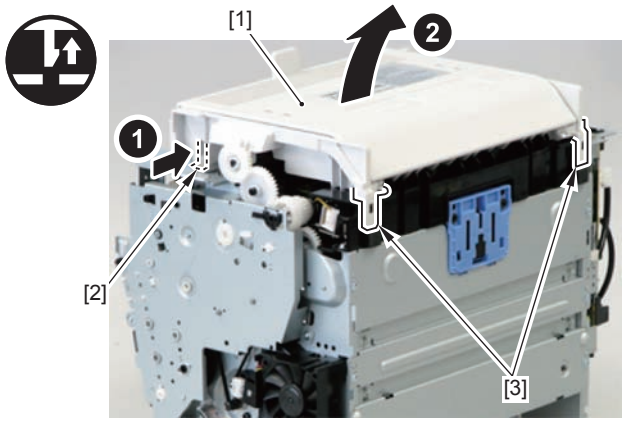
3) Close the rear cover.
4) Face the front of the host machine downwards.



F-4-921

5)Remove the duplex feed unit[1].

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



F-4-922

Removing the Duplex Solenoid (MF4870dn/MF4830d)

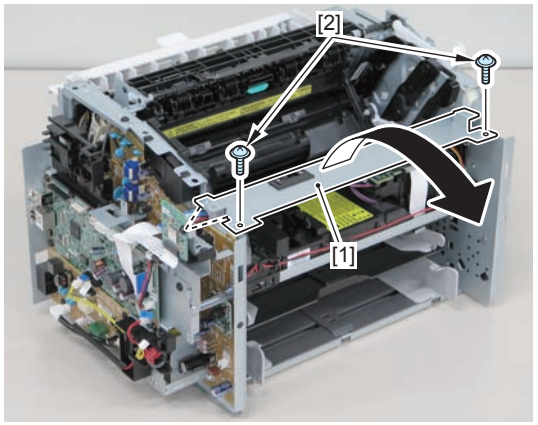
Preparation

1)Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.

Procedure

1)Remove the scanner cover[1]

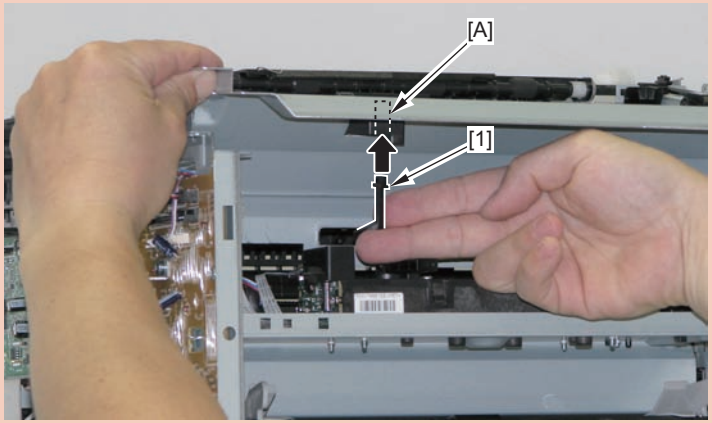
- 2 screws(black TP)[2]



F-4-923

Caution:

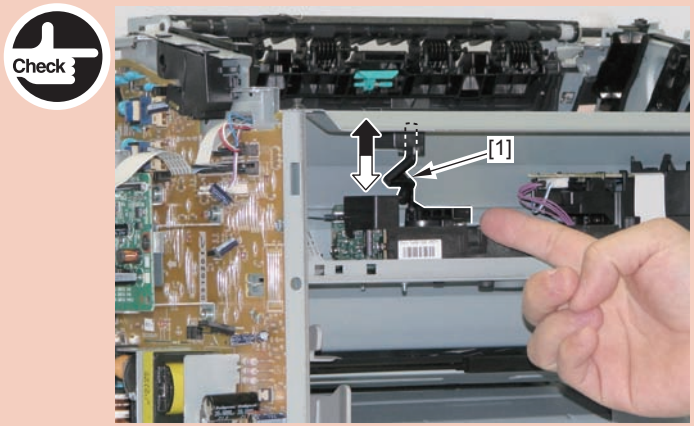
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-924

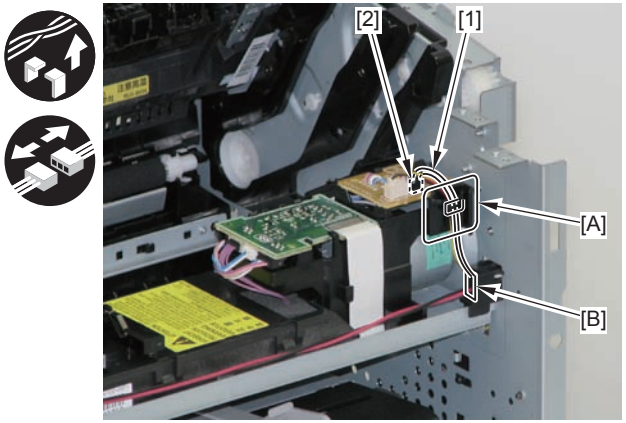
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



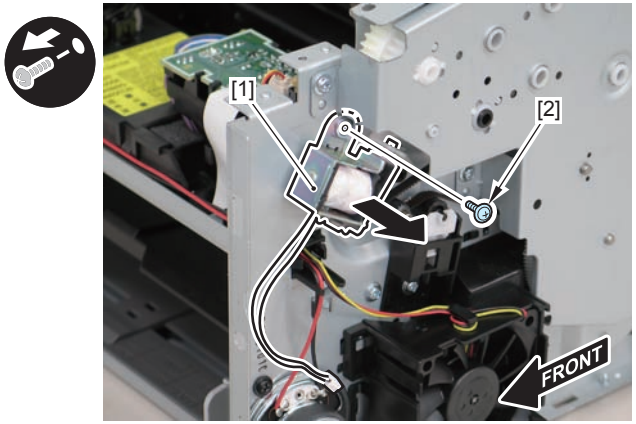
F-4-925

2)Free the solenoid harness[1] from the guide[A], and put it through the hole[B] of the right side plate to the outside.



F-4-926

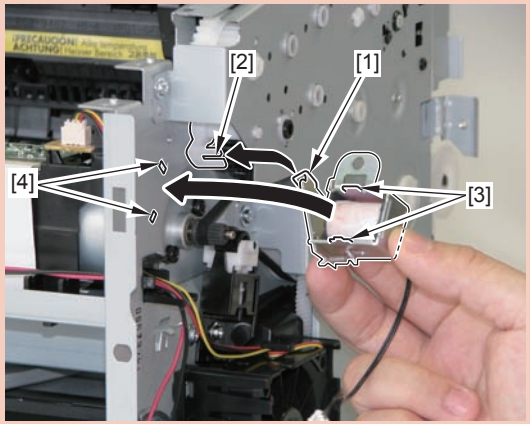
3)Remove the duplex solenoid[1].



F-4-927

Caution:

When mounting the duplex solenoid, align the solenoid lever [1] with the groove in the link [2], and insert the 2 solenoid positioning protrusions [3] into the 2 positioning holes [4] in the side panel to mount the solenoid.



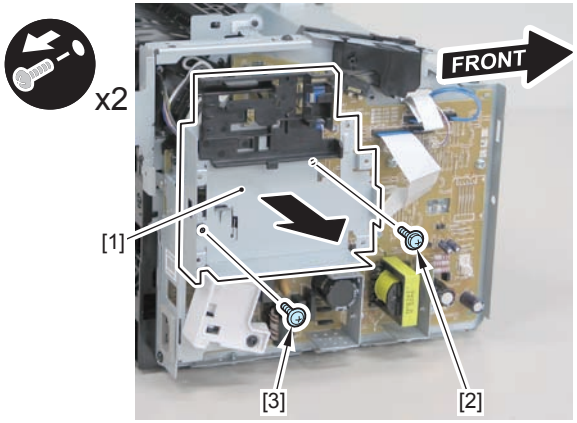
Removing the Pickup Unit (MF4820d)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB

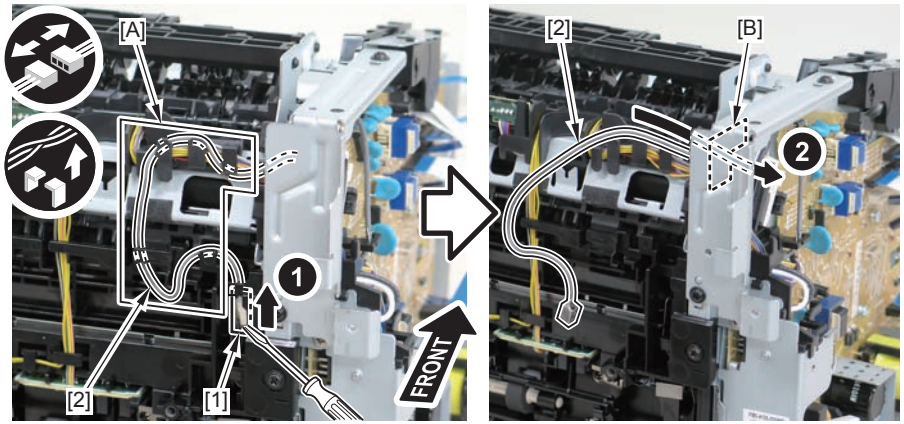
Procedure

1) Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-928

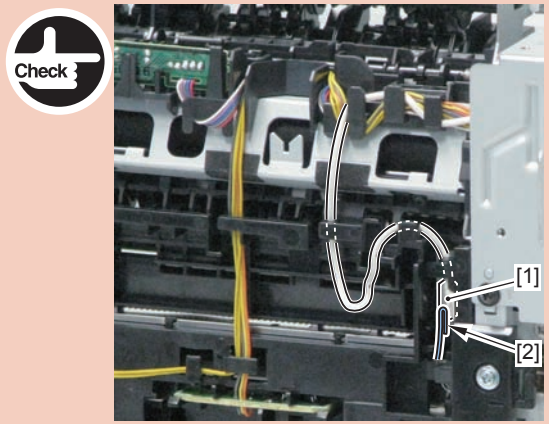
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-929

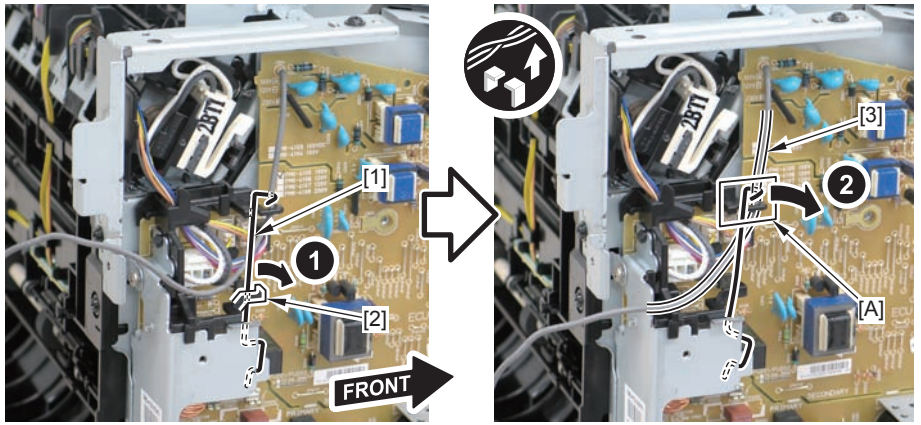
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



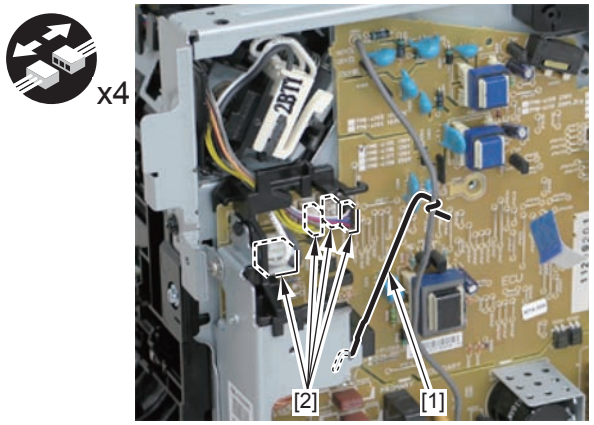
F-4-930

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



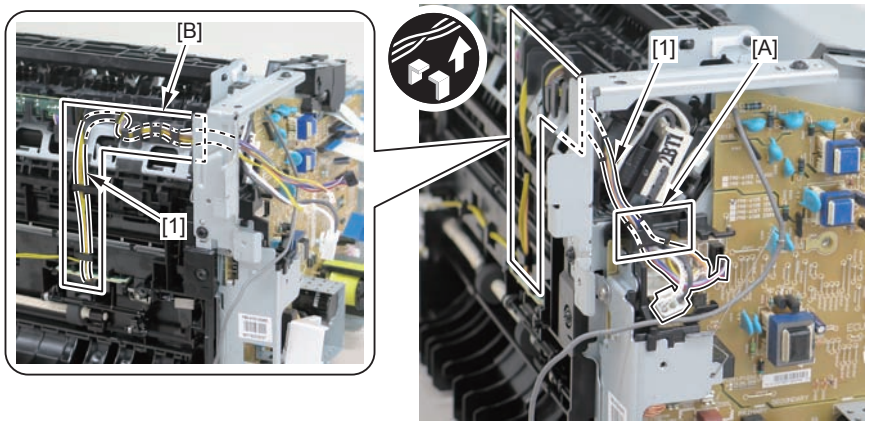
F-4-931

4)Remove the harness retaining spring[1] and 4 connectors[2].



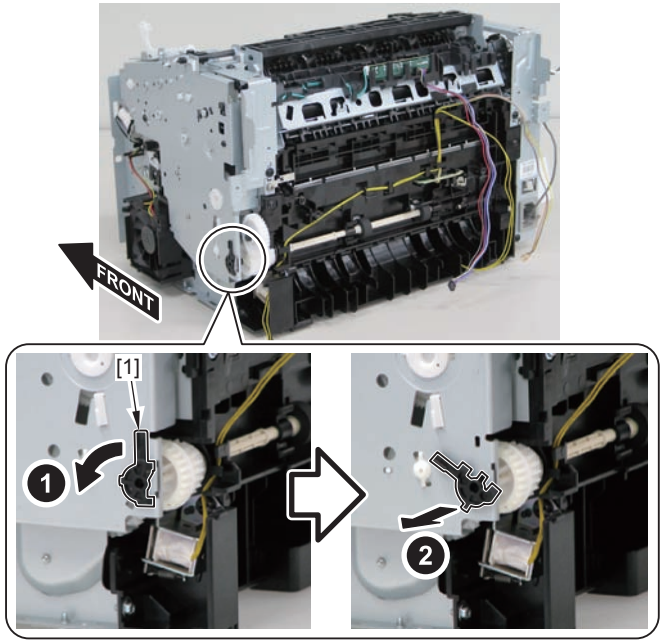
F-4-932

5)Remove the harness[1] from the guide[A] and [B].



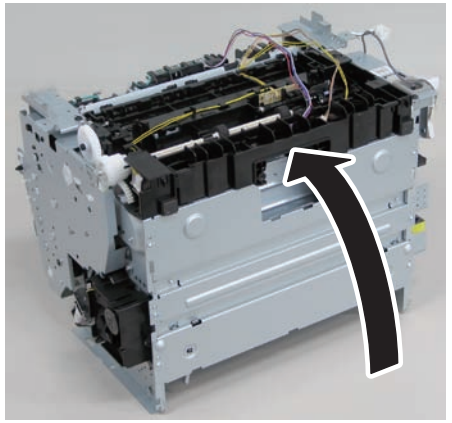
F-4-933

6)Remove the shaft retainer[1]



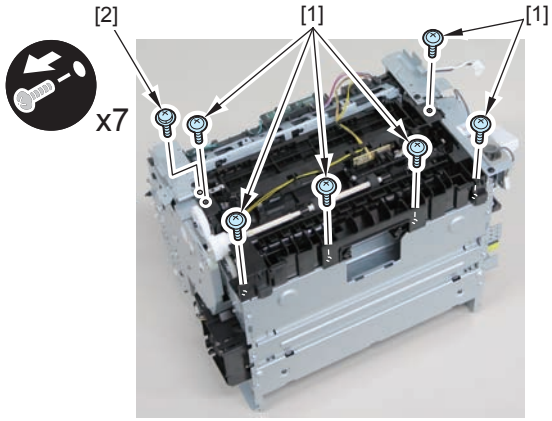
F-4-934

7)Face the front of the host machine downwards.



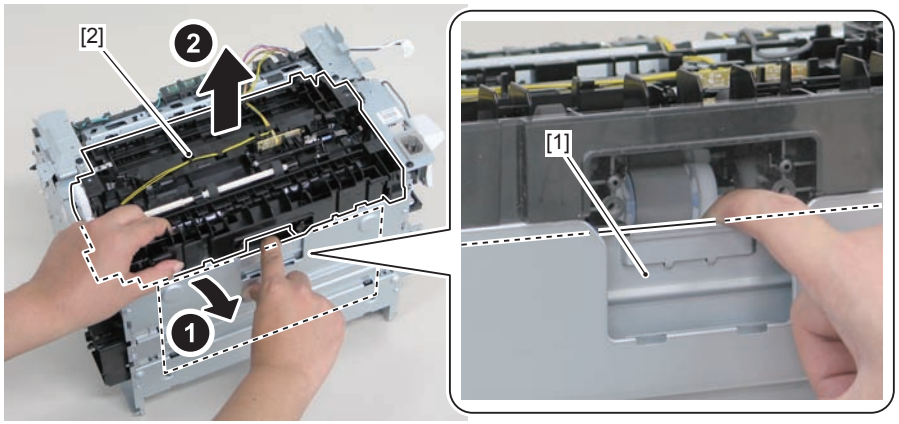
F-4-935

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-936

9)Remove the pickup unit[2] while opening the pickup tray[1]



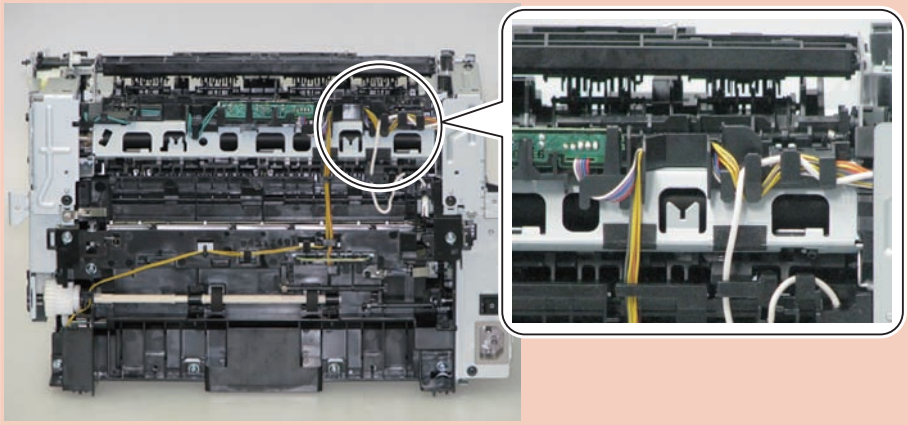
F-4-937

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-938

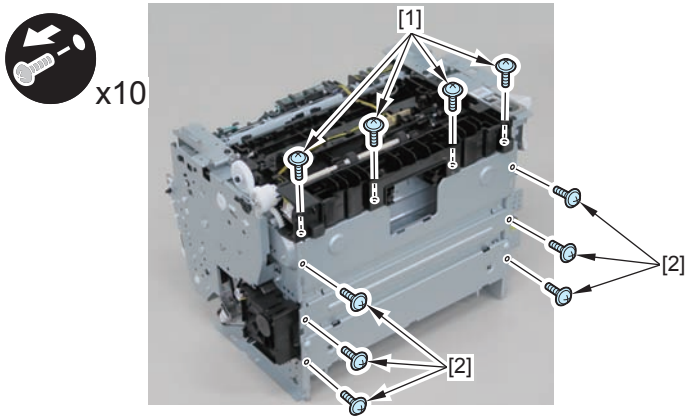
Removing the Pickup Tray Unit (MF4820d)

Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the separation pad

Procedure

1)Remove the 4 screws(black TP)[1] and 6 screws[2].



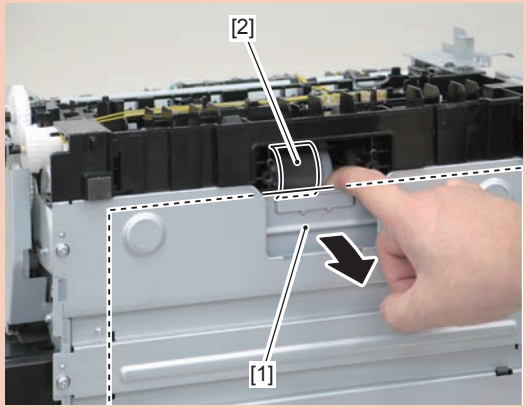
F-4-939

2) Remove the pickup tray unit [1].

- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

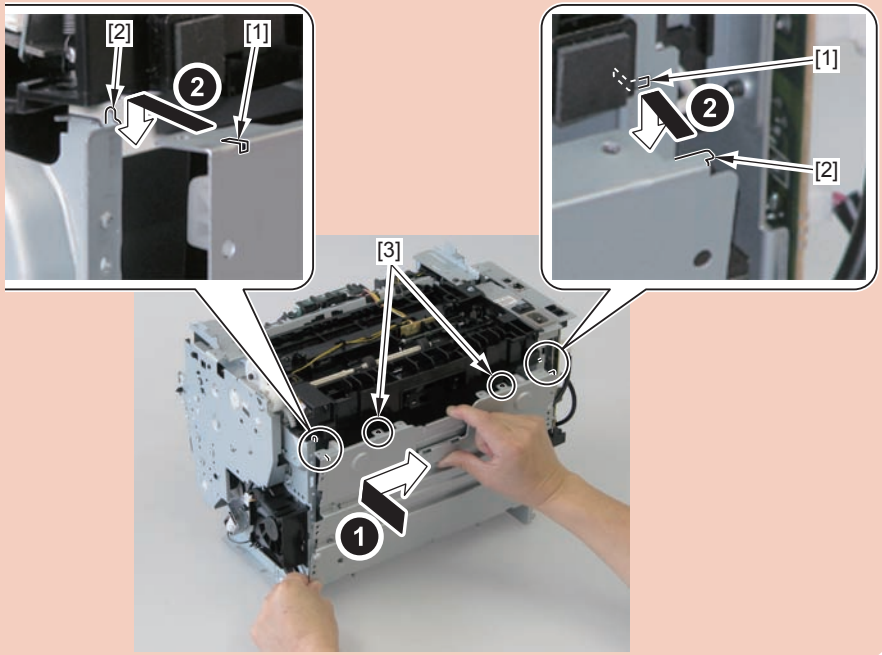
Caution:

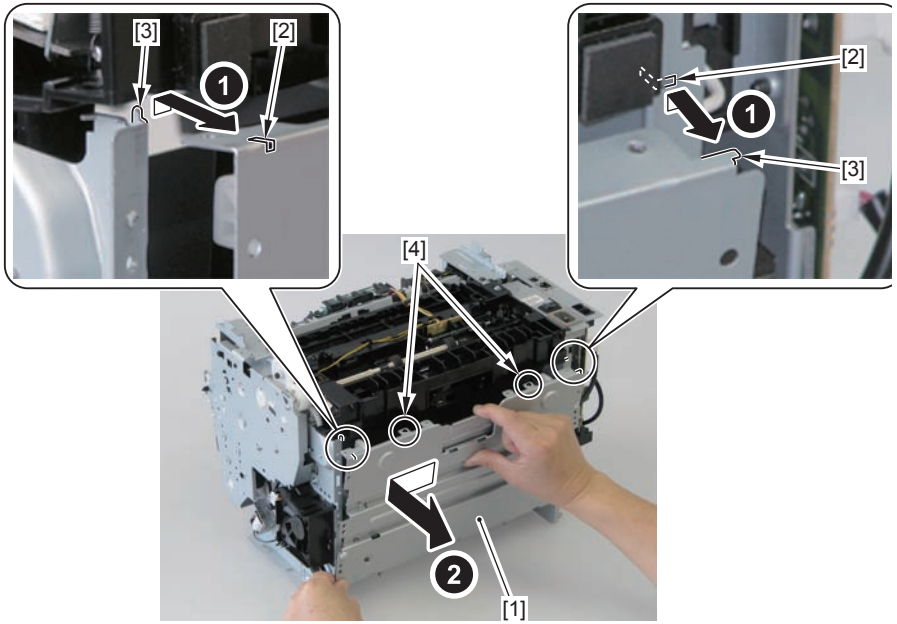
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.



Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.

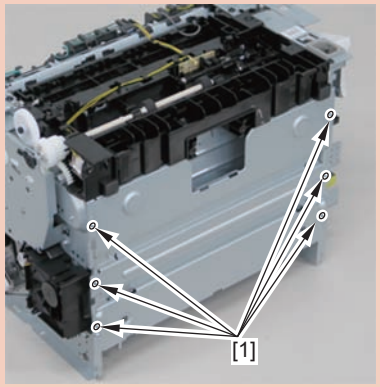




F-4-940

Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



Removing the Pickup Roller (MF4820d)

Preparation

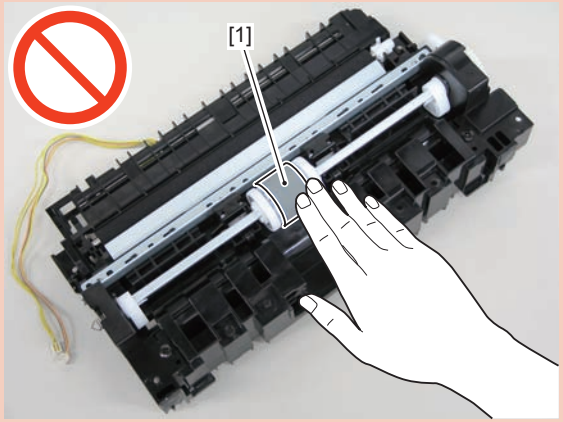
1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

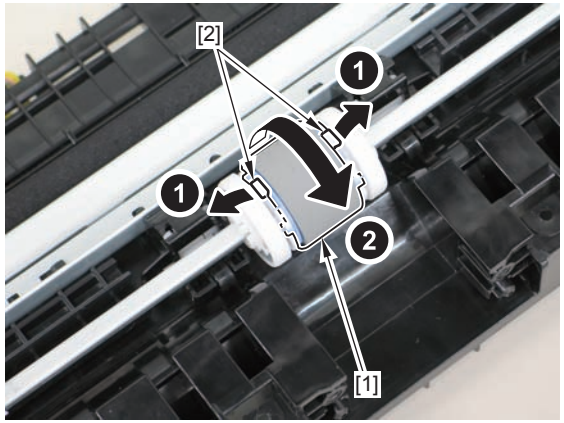
1) Remove the pickup roller[1]
- 2 claws[2]

Caution:

Do not touch the surface of the roller.



x2



F-4-941

Removing the Pickup Solenoid (MF4820d)

Preparation

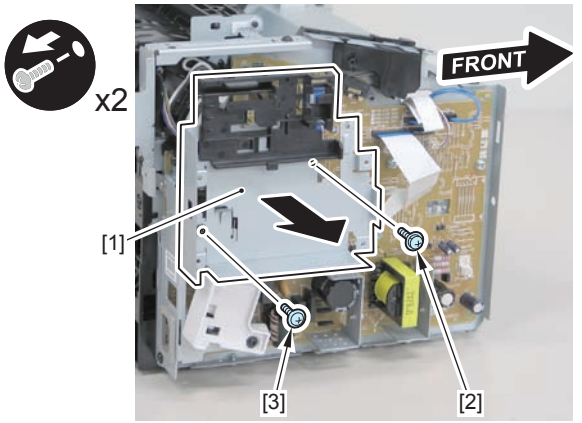
1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB

Procedure

(1) Remove the main controller mounting plate[1]

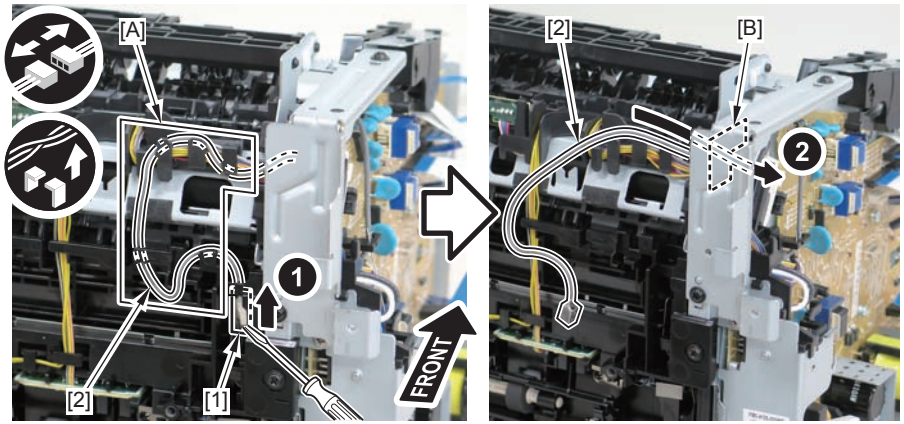
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]

x2



F-4-942

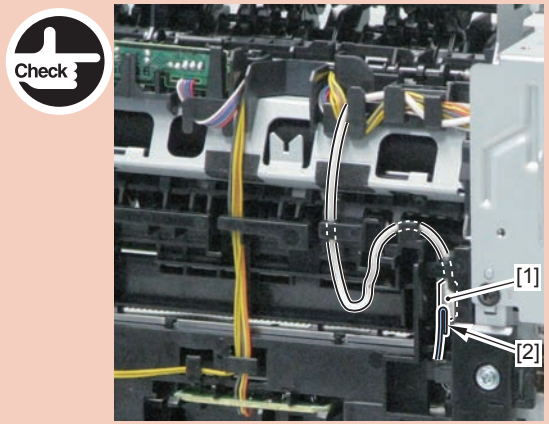
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-943

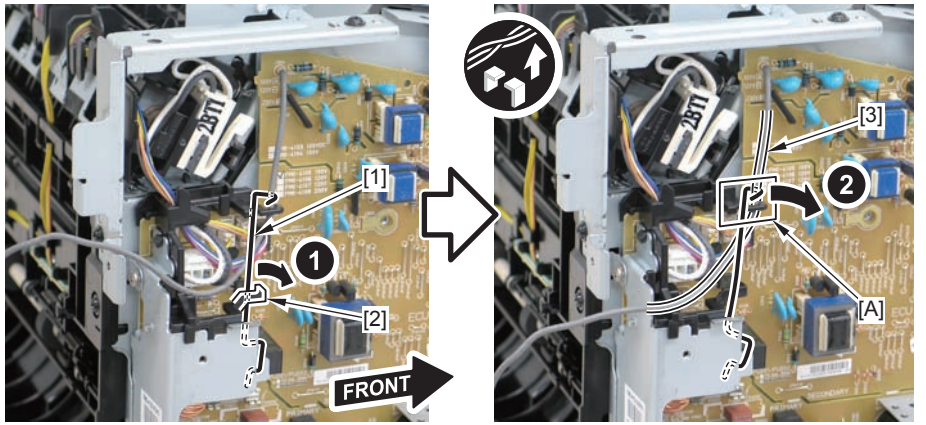
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



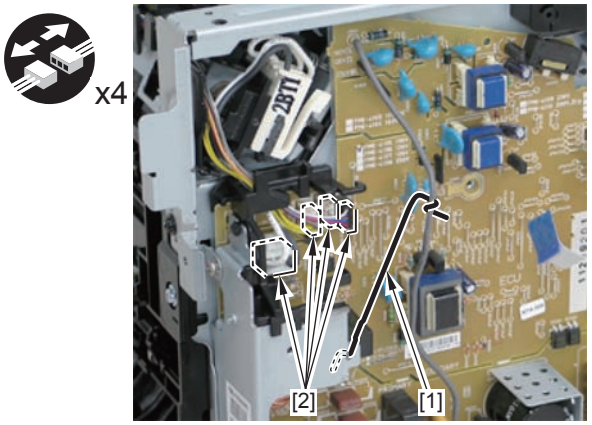
F-4-944

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



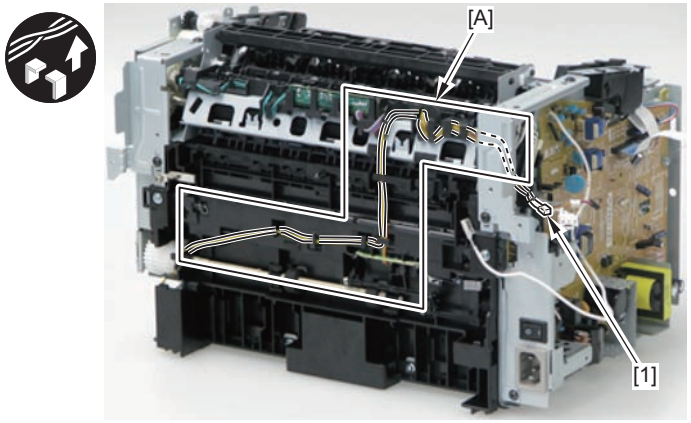
F-4-945

4)Remove the harness retaining spring[1] and 4 connectors[2].



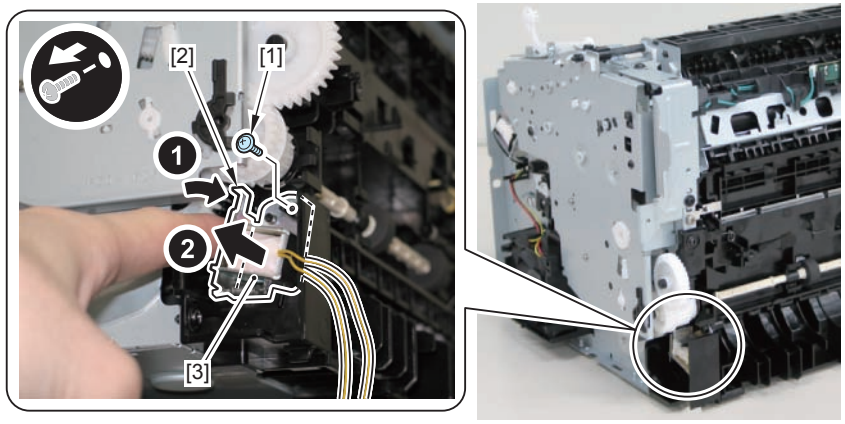
F-4-946

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-947

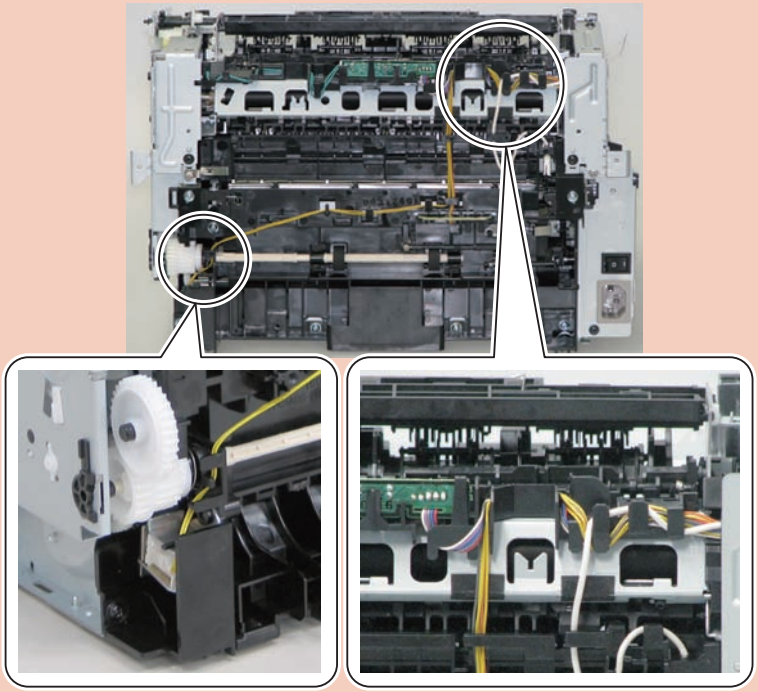
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-948

Caution:

The below picture shows how to wind the harness.

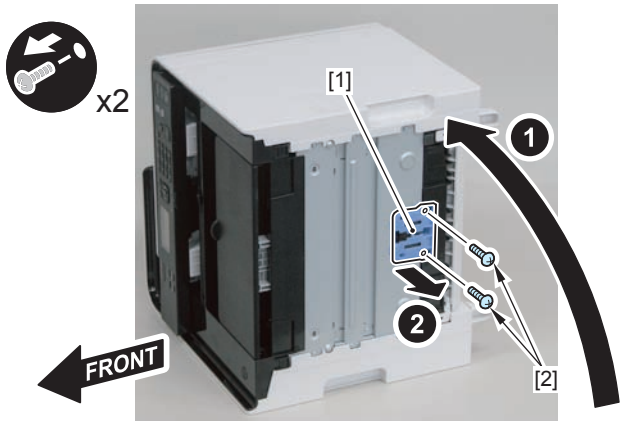


Removing the Separation Pad (MF4820d)

Procedure

Caution:
When assembling/disassembling the separation pad, do not touch the surface of the separation pad.

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-949

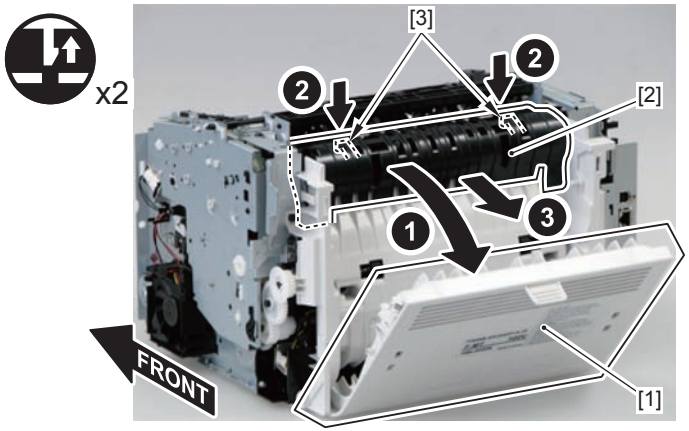
Removing the Duplex Feed Unit (MF4820d)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

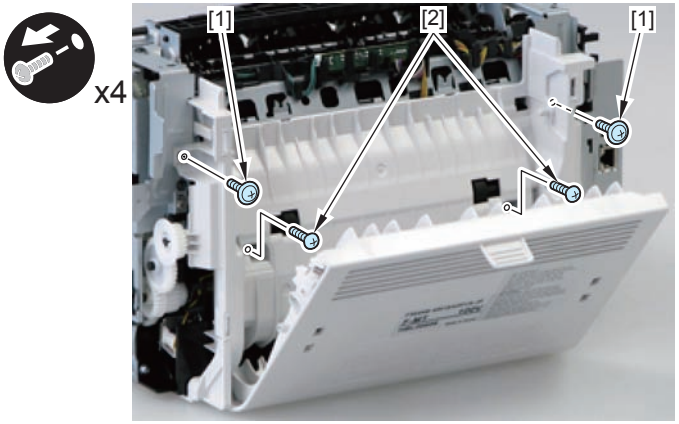
Procedure

1) Open the rear cover[1], and remove the duplex guide[2]
• 2 claws[3]



F-4-950

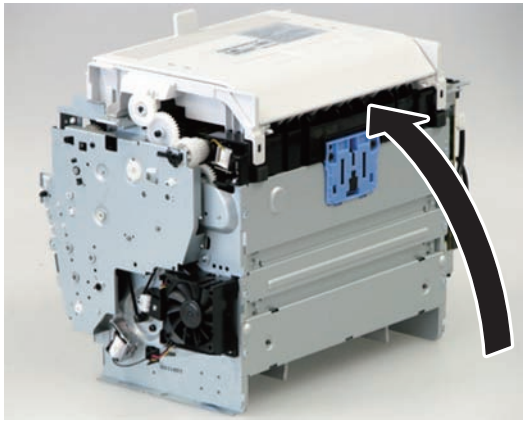
2) Remove the 2 screws (TP) [1] and 2 screws (tapping) [2] using a stubby screwdriver.



F-4-951

3) Close the rear cover.

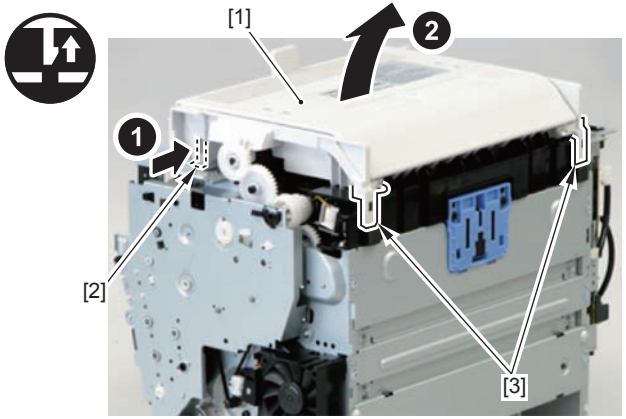
4) Face the front of the host machine downwards.



F-4-952

5)Remove the duplex feed unit[1].

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



F-4-953

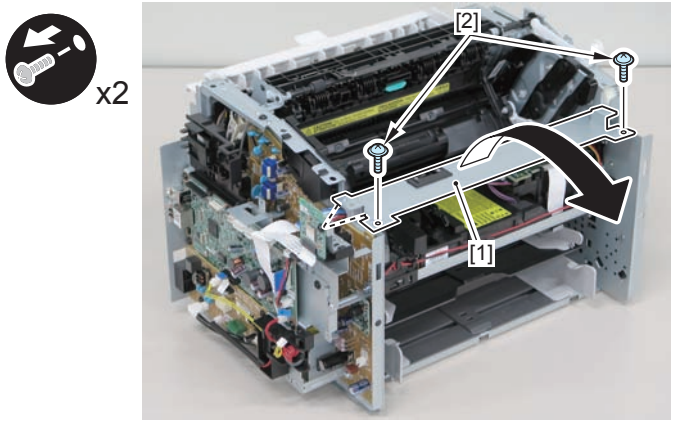
Removing the Duplex Solenoid (MF4820d)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

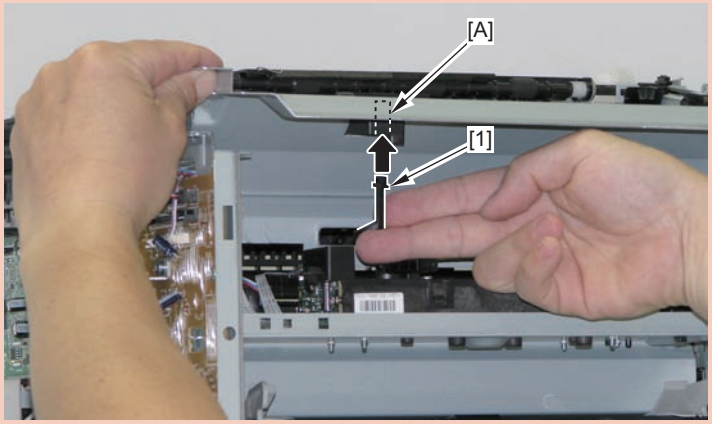
1) Remove the scanner cover[1]
- 2 screws(black TP)[2]



F-4-954

Caution:

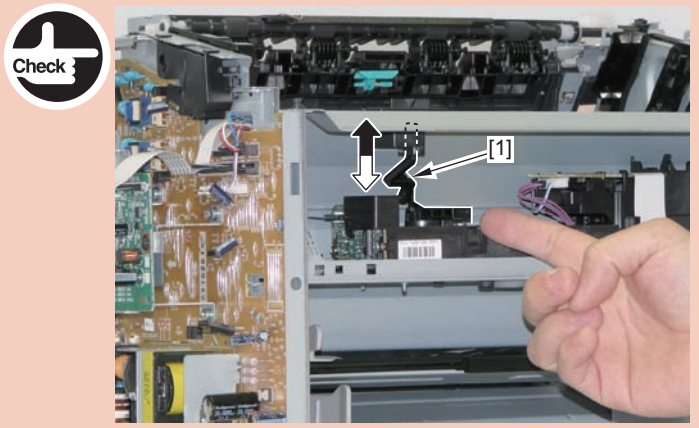
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-955

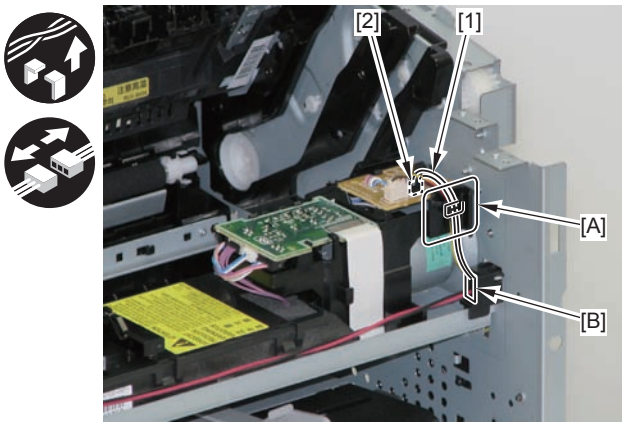
Caution:

Ensure that the shutter open/close lever [1] can move vertically.



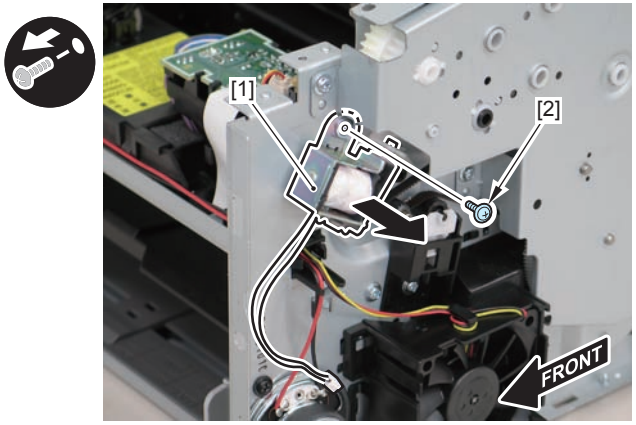
F-4-956

2)Free the solenoid harness[1] from the guide[A], and put it through the hole[B] of the right side plate to the outside.



F-4-957

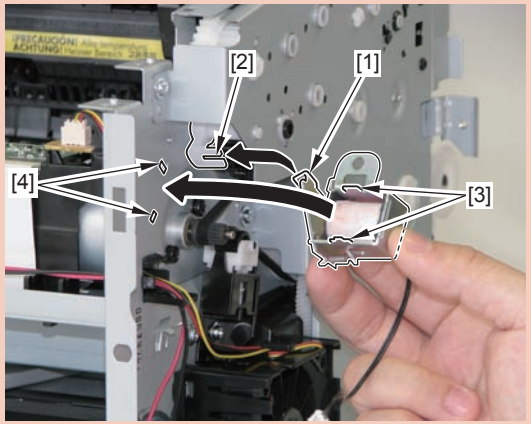
3)Remove the duplex solenoid[1].



F-4-958

Caution:

When mounting the duplex solenoid, align the solenoid lever [1] with the groove in the link [2], and insert the 2 solenoid positioning protrusions [3] into the 2 positioning holes [4] in the side panel to mount the solenoid.



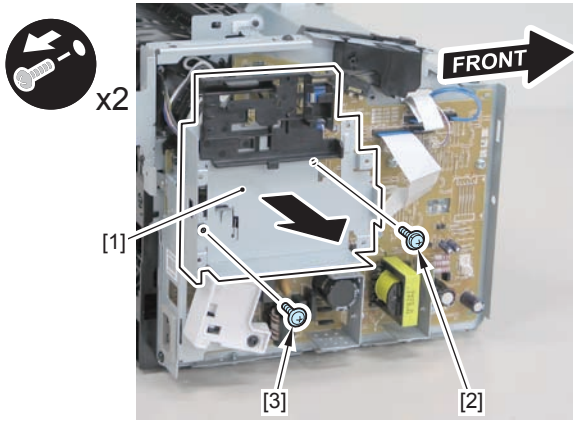
Removing the Pickup Unit (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB

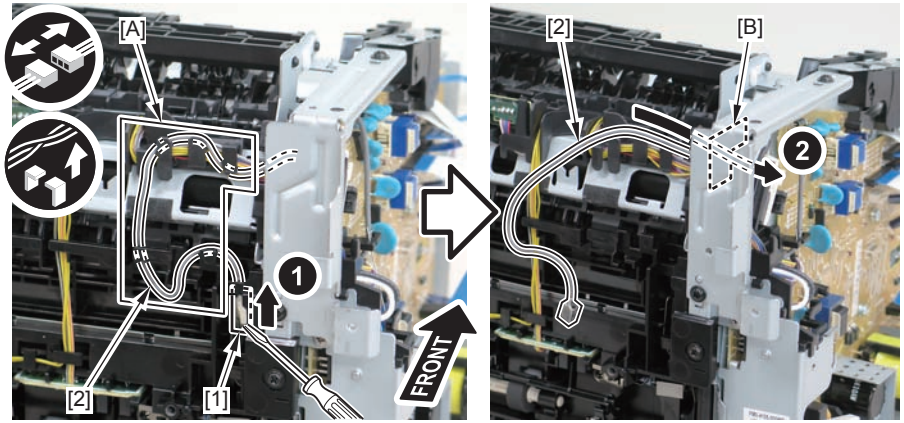
Procedure

1) Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-959

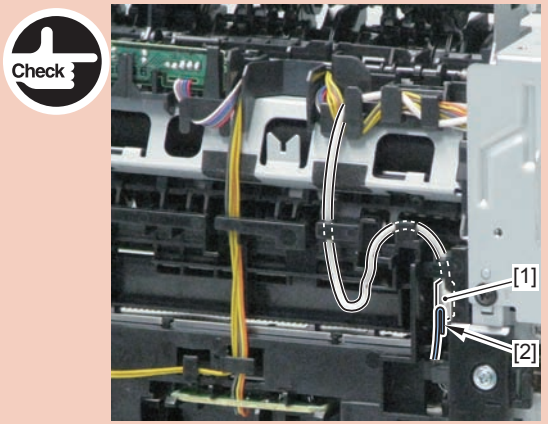
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-960

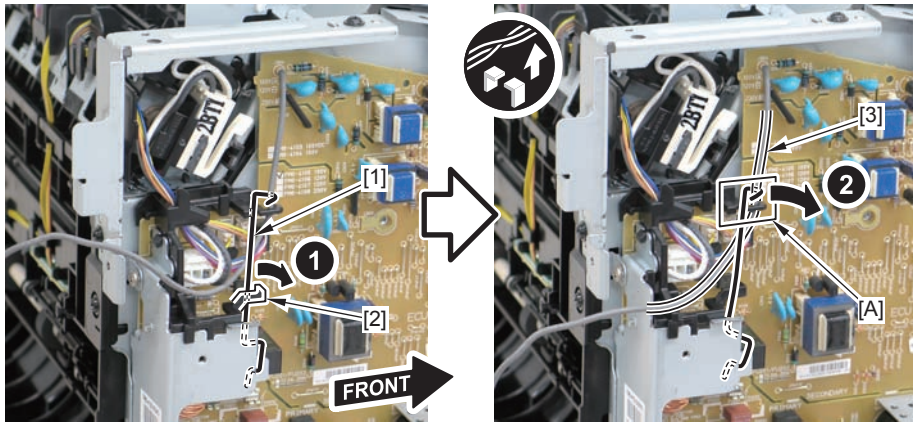
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



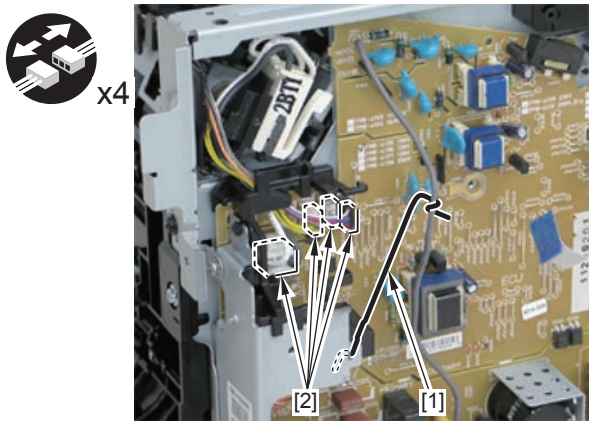
F-4-961

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



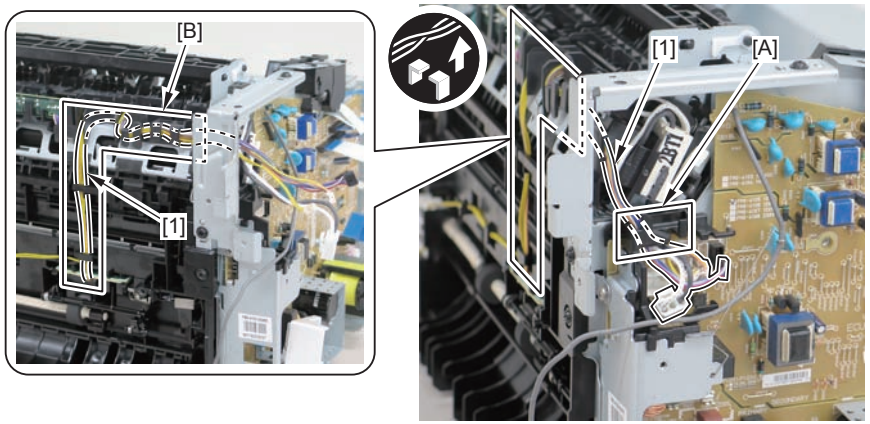
F-4-962

4)Remove the harness retaining spring[1] and 4 connectors[2].



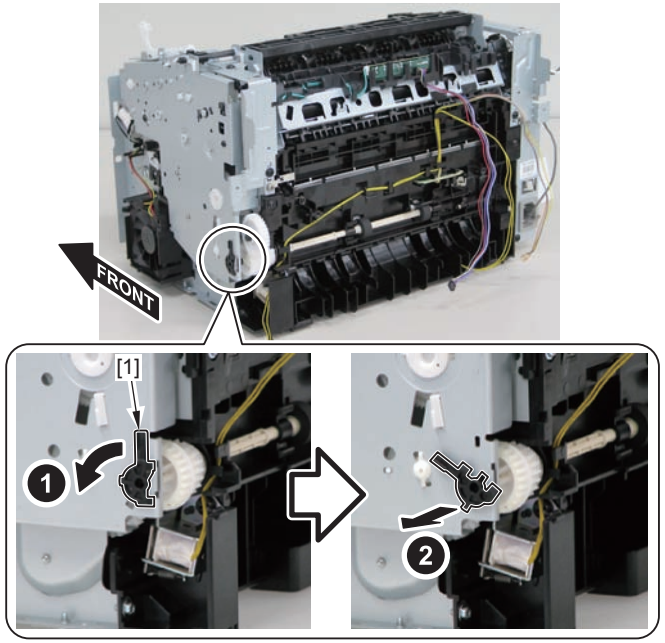
F-4-963

5)Remove the harness[1] from the guide[A] and [B].



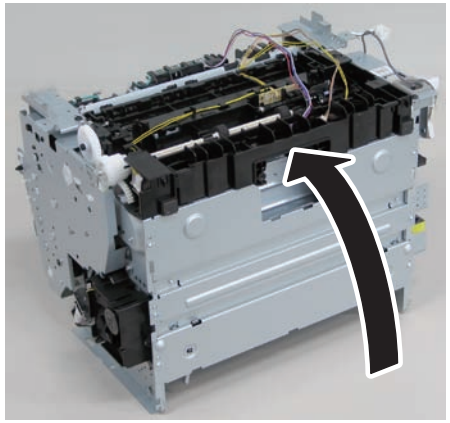
F-4-964

6)Remove the shaft retainer[1]



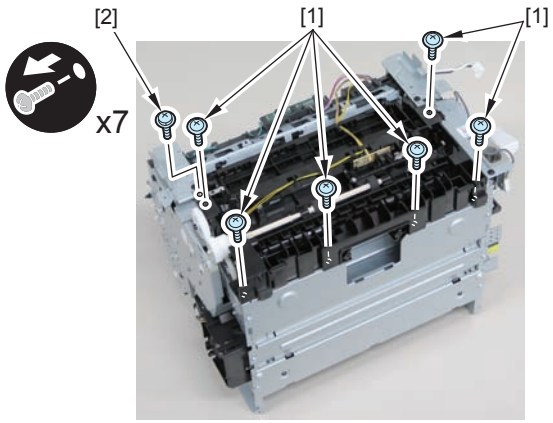
F-4-965

7)Face the front of the host machine downwards.



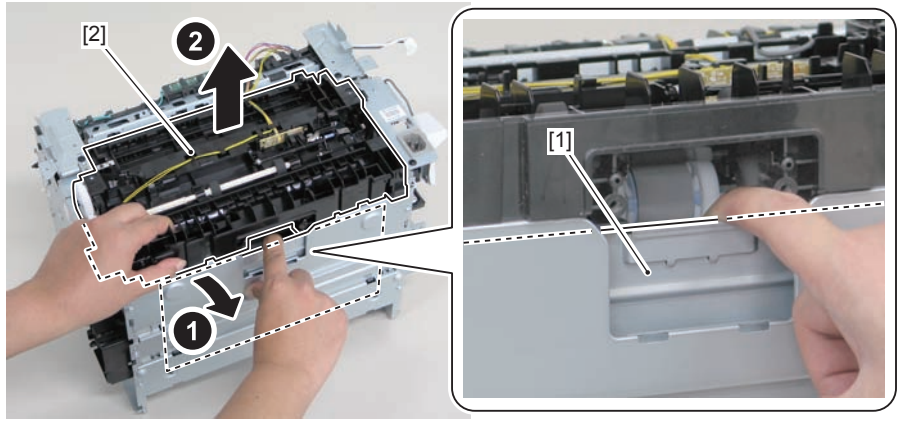
F-4-966

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-967

9)Remove the pickup unit[2] while opening the pickup tray[1]



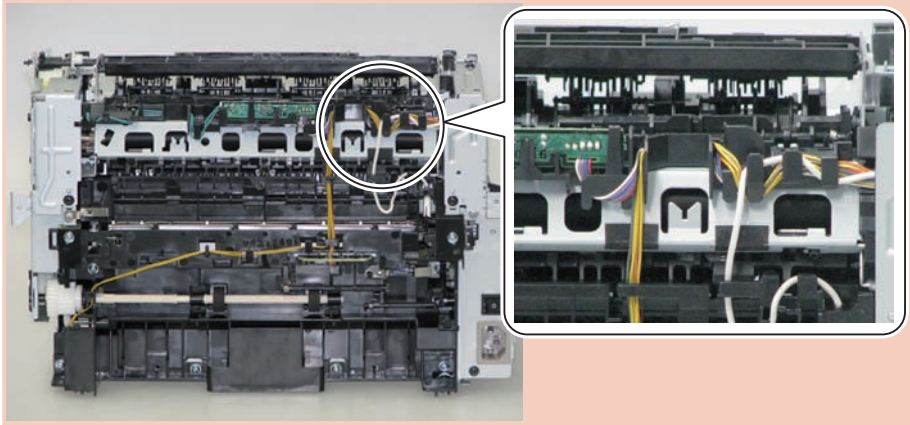
F-4-968

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-969

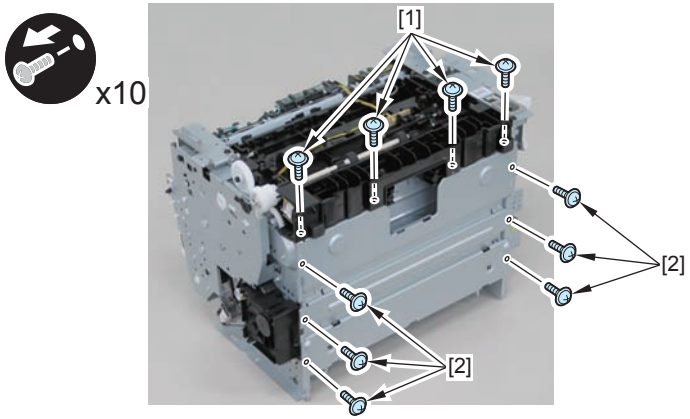
Removing the Pickup Tray Unit (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad

Procedure

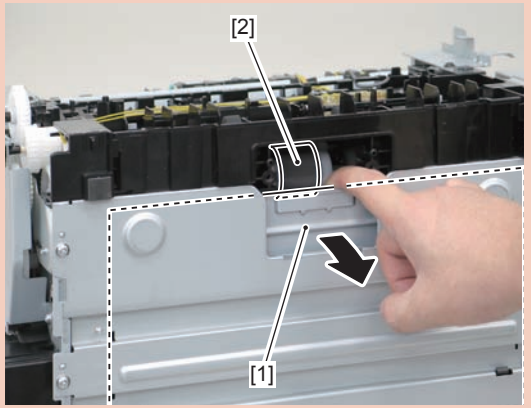
1) Remove the 4 screws(black TP)[1] and 6 screws[2].

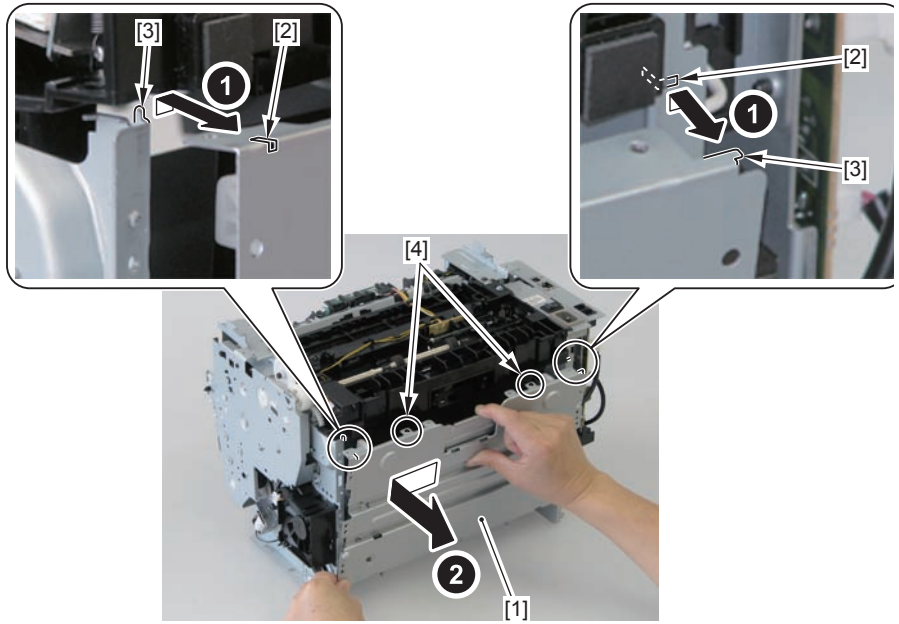


F-4-970

2) Remove the pickup tray unit [1].
- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

Caution:
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.

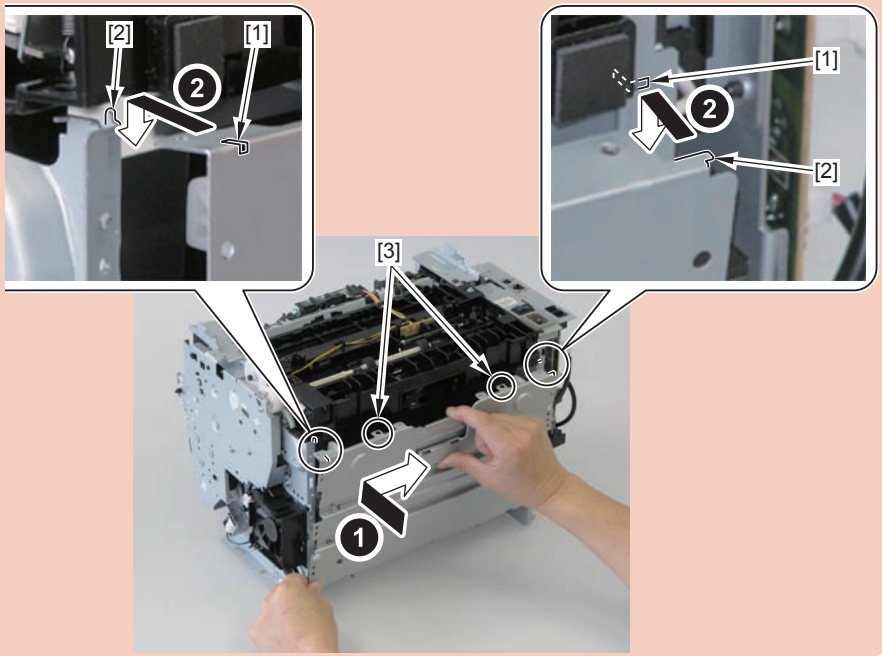




F-4-971

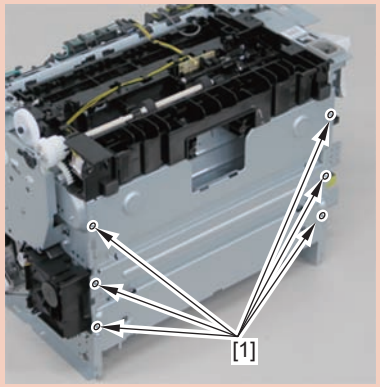
Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.



Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



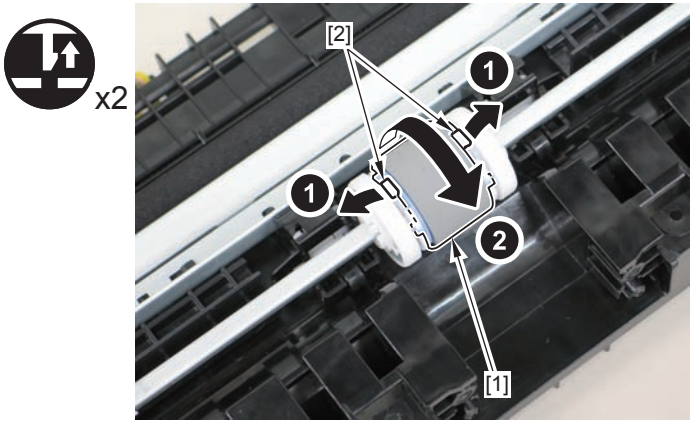
Removing the Pickup Roller (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

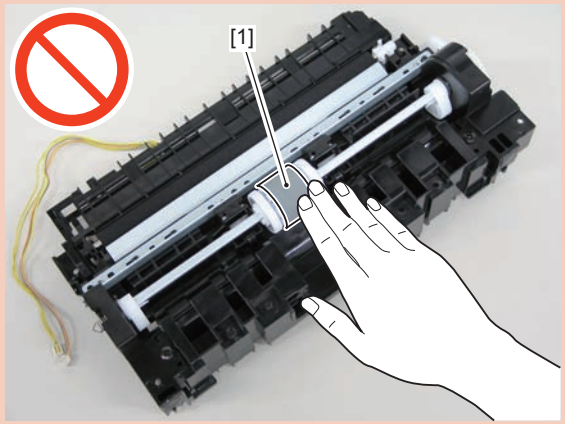
1) Remove the pickup roller[1]
- 2 claws[2]



F-4-972

Caution:

Do not touch the surface of the roller.



Removing the Pickup Solenoid (D530)

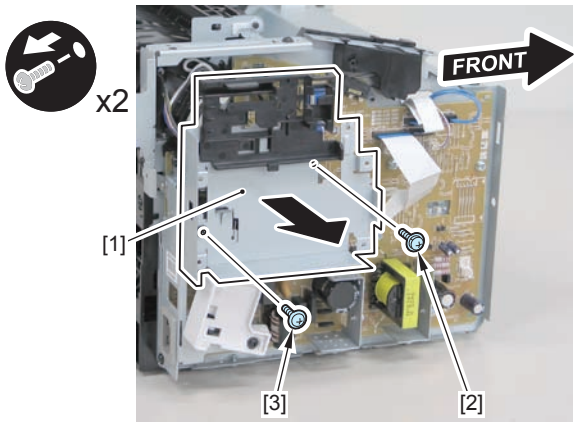
Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB

Procedure

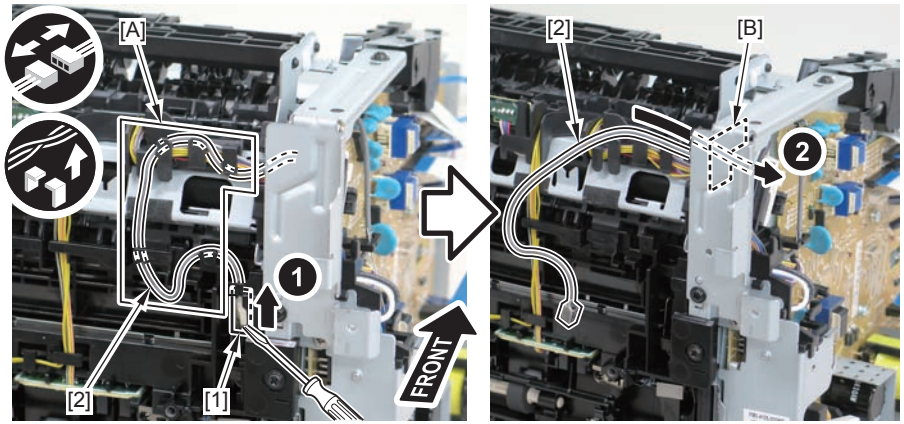
(1) Remove the main controller mounting plate[1]

- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-973

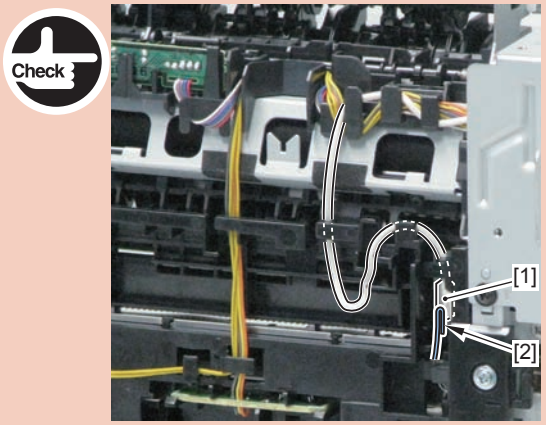
2) Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-974

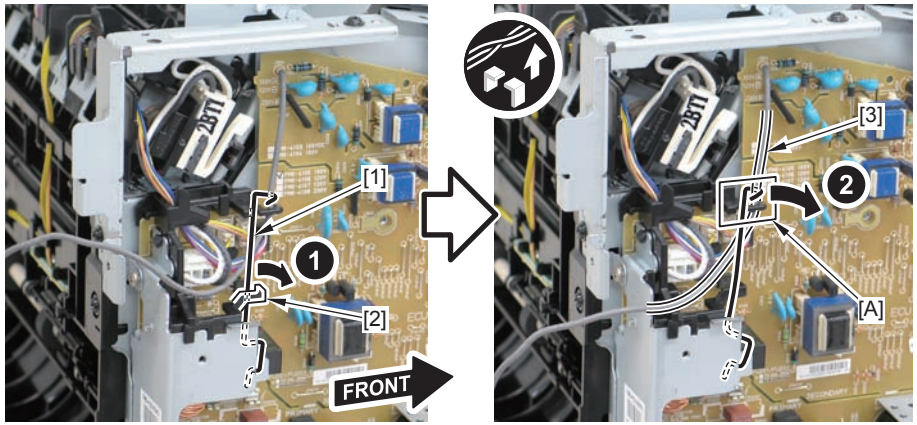
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



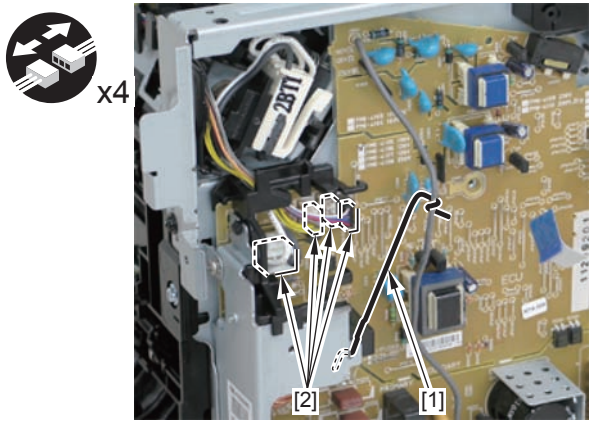
F-4-975

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



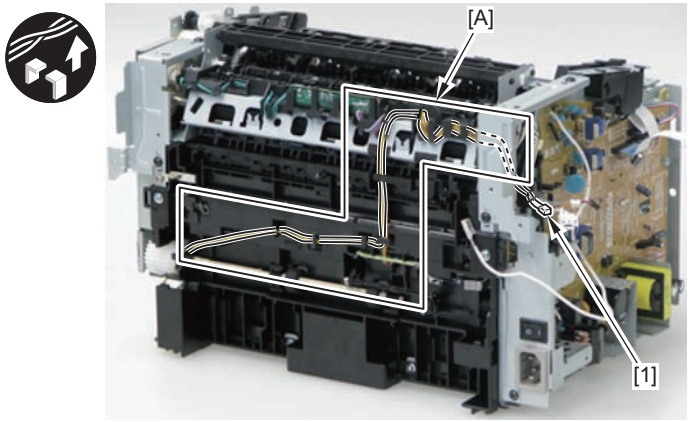
F-4-976

4)Remove the harness retaining spring[1] and 4 connectors[2].



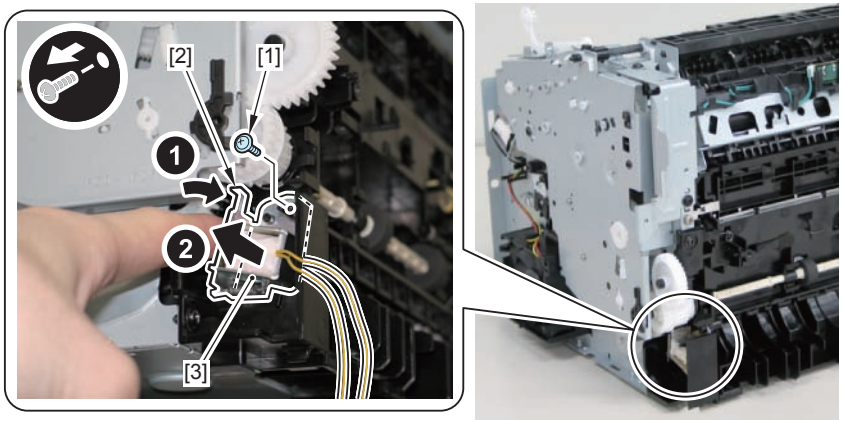
F-4-977

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-978

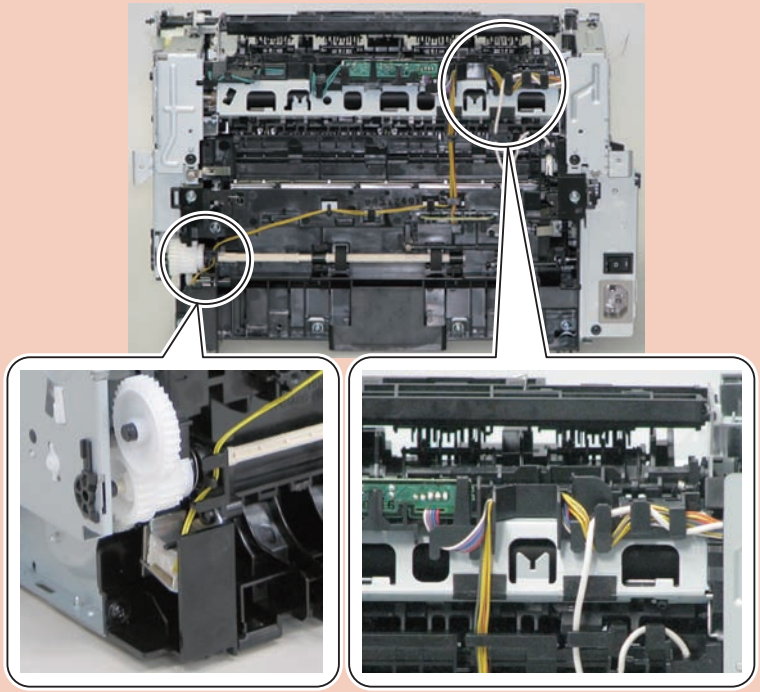
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-979

Caution:

The below picture shows how to wind the harness.



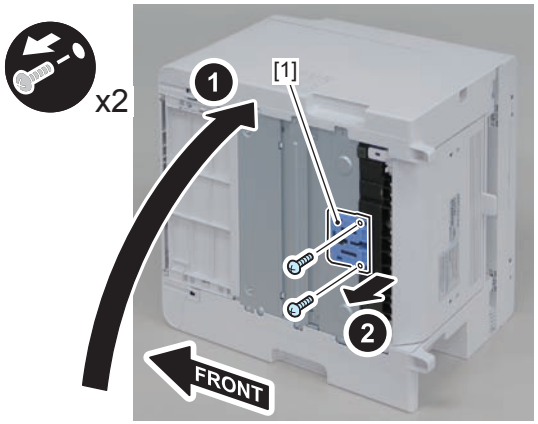
Removing the Separation Pad (D530)

Procedure

Caution:

When assembling/disassembling the separation pad, do not touch the surface of the separation pad.

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-980

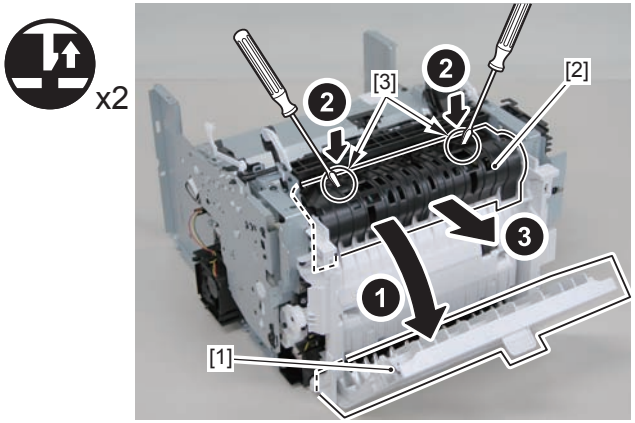
Removing the Duplex Feed Unit (D530)

Preparation

1) Remove the left cover
2) Remove the copyboard cover and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

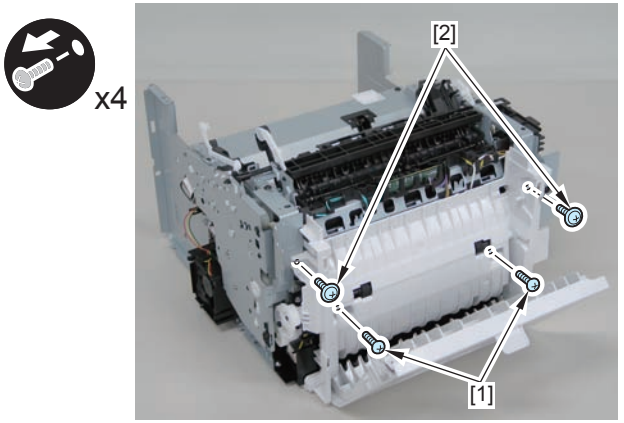
Procedure

1) Open the rear cover[1], and remove the duplex guide[2]
- 2 claws[3]



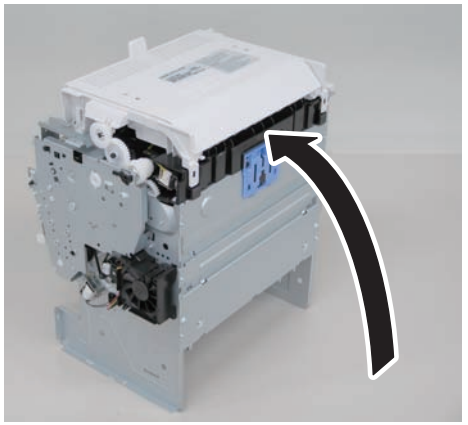
F-4-981

2) Remove the 2 screws (TP) [1] and 2 screws (tapping) [2] using a stubby screwdriver.



F-4-982

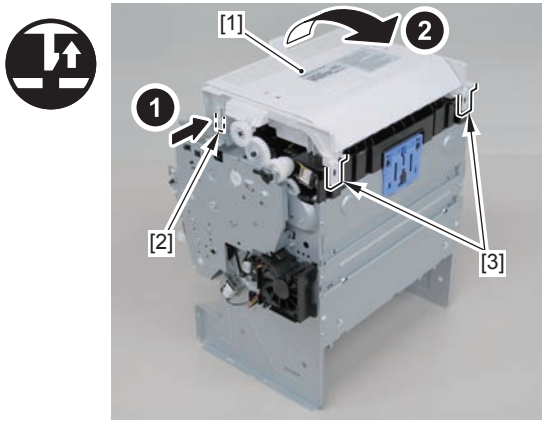
3) Close the rear cover.
4) Face the front of the host machine downwards.



F-4-983

5)Remove the duplex feed unit[1].

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



F-4-984

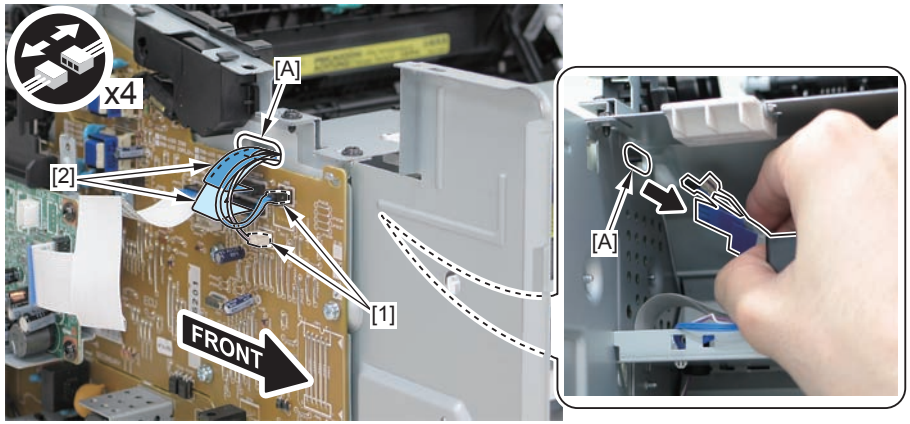
Removing the Duplex Solenoid (D530)

Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-985

Caution:

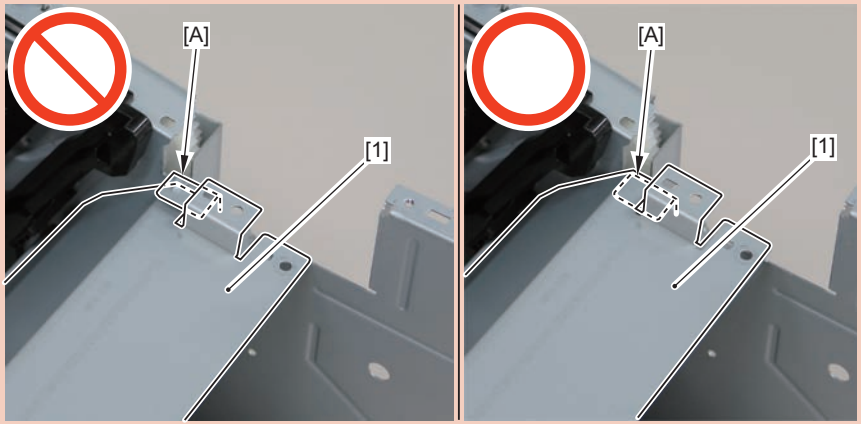
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

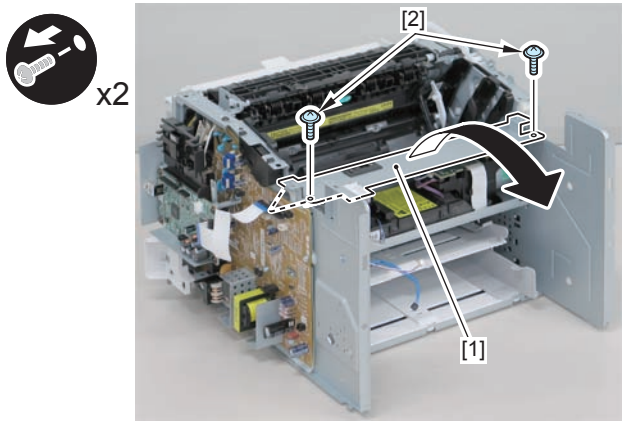
2)Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

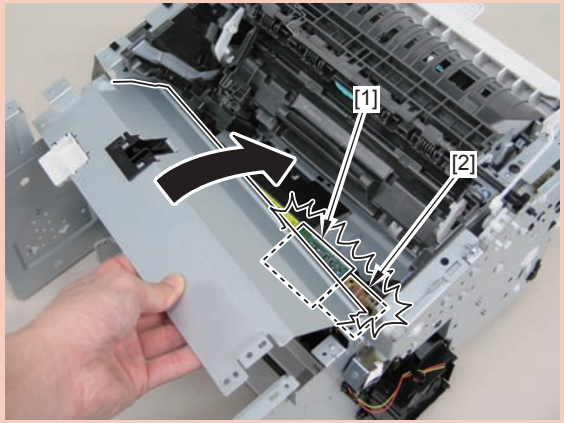




F-4-986

Caution:

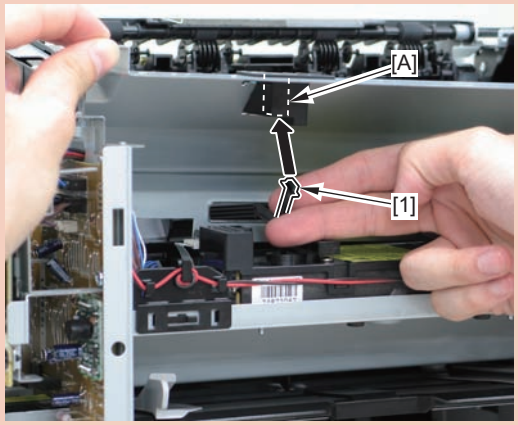
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-987

Caution:

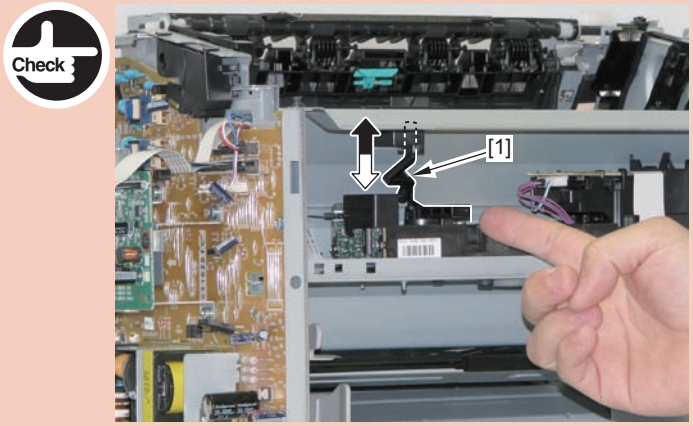
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-988

Caution:

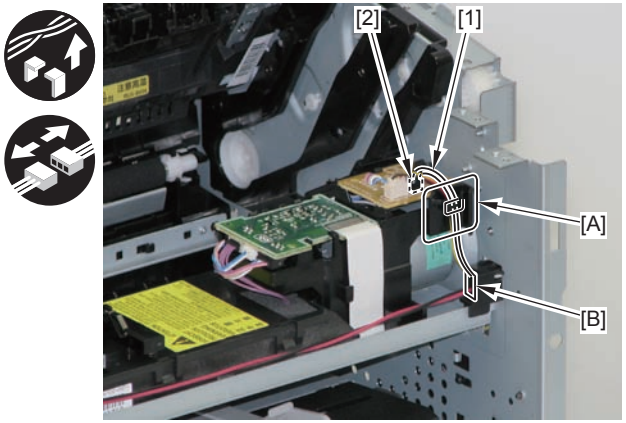
Ensure that the shutter open/close lever [1] can move vertically.



F-4-989

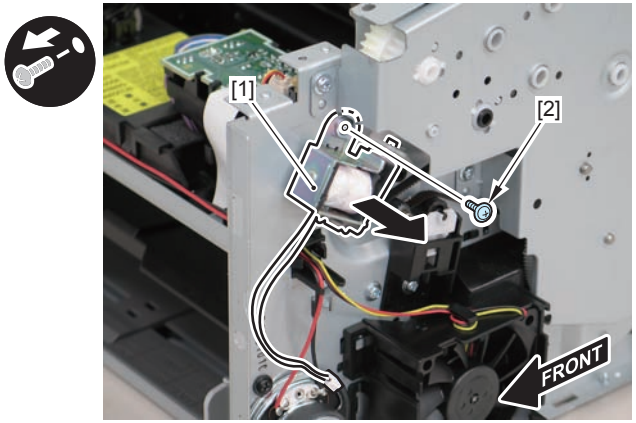
3)Free the solenoid harness[1] from the guide[A], and put it through the hole[B] of the right side plate to the outside.

- 1 connector[2]



F-4-990

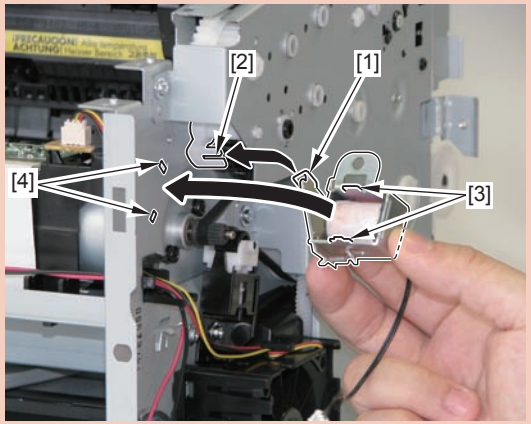
4)Remove the duplex solenoid[1].



F-4-991

Caution:

When mounting the duplex solenoid, align the solenoid lever [1] with the groove in the link [2], and insert the 2 solenoid positioning protrusions [3] into the 2 positioning holes [4] in the side panel to mount the solenoid.



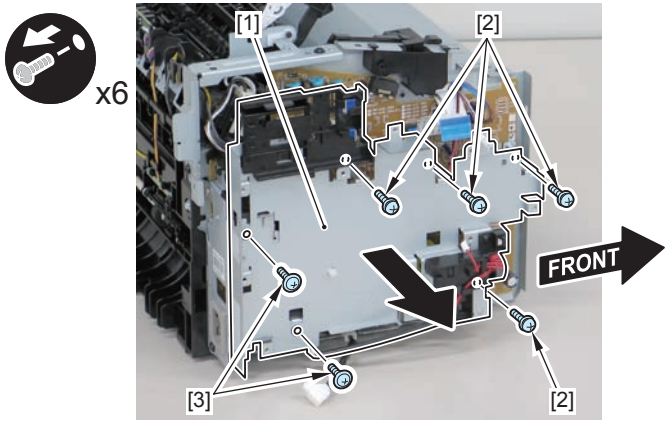
Removing the Pickup Unit (MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB(MF4780w/MF4770n/MF4750)
9)Remove the separation pad

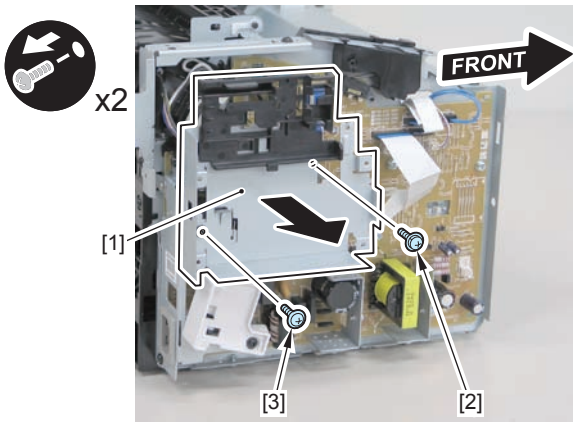
Procedure

(MF4780w/MF4770n/MF4750)
1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]



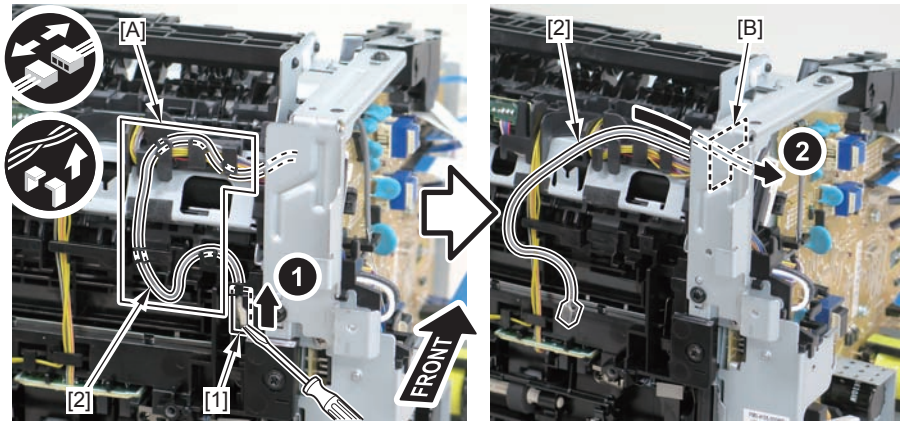
F-4-992

(MF4730)
1)Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-993

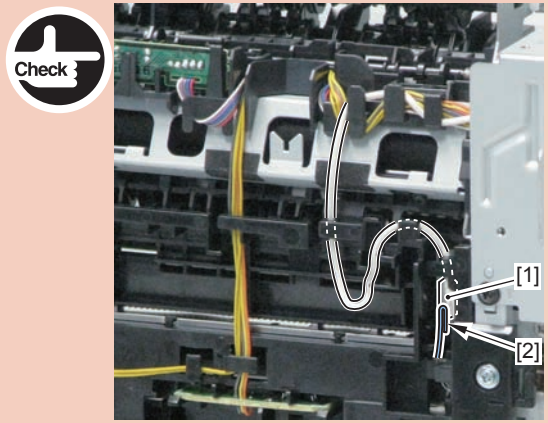
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-994

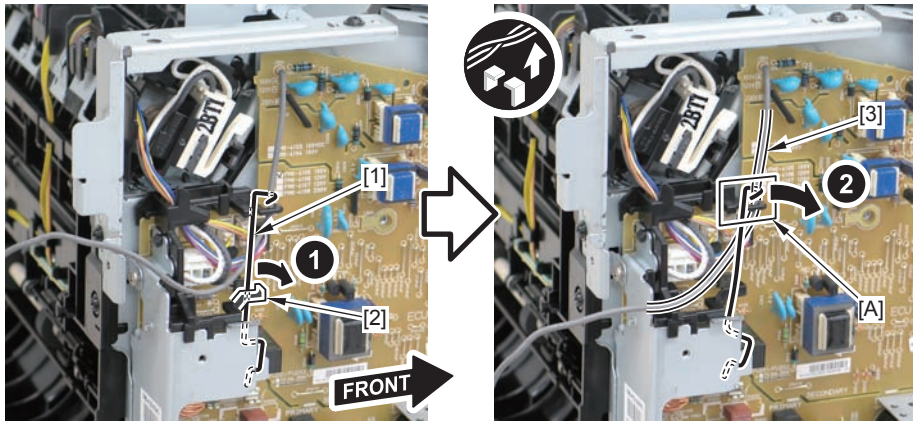
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



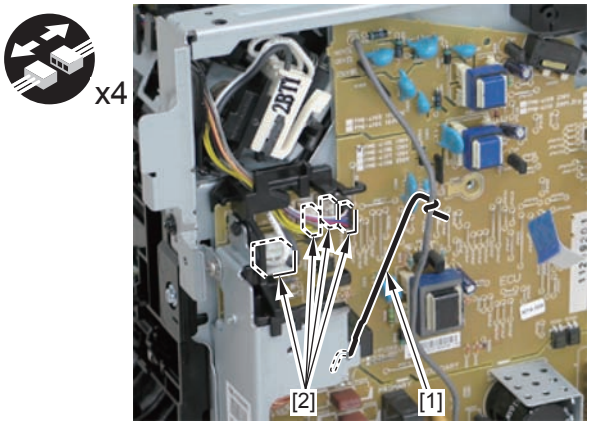
F-4-995

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



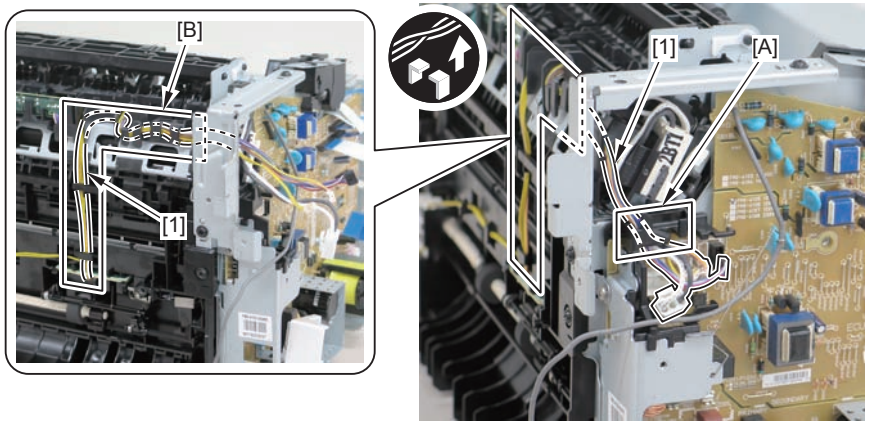
F-4-996

4)Remove the harness retaining spring[1] and 4 connectors[2].



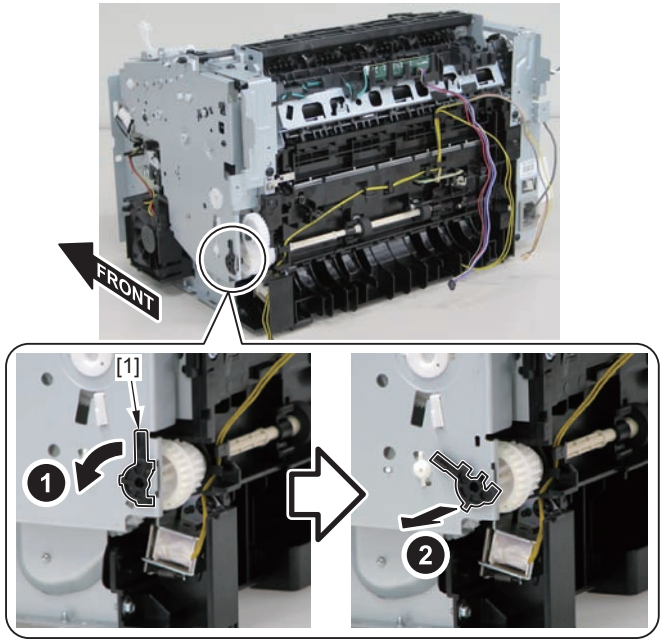
F-4-997

5)Remove the harness[1] from the guide[A] and [B].



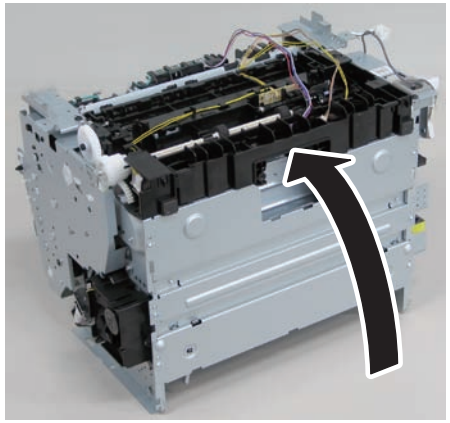
F-4-998

6)Remove the shaft retainer[1]



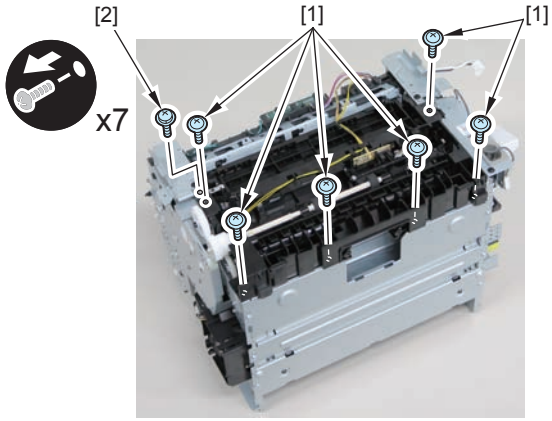
F-4-999

7)Face the front of the host machine downwards.



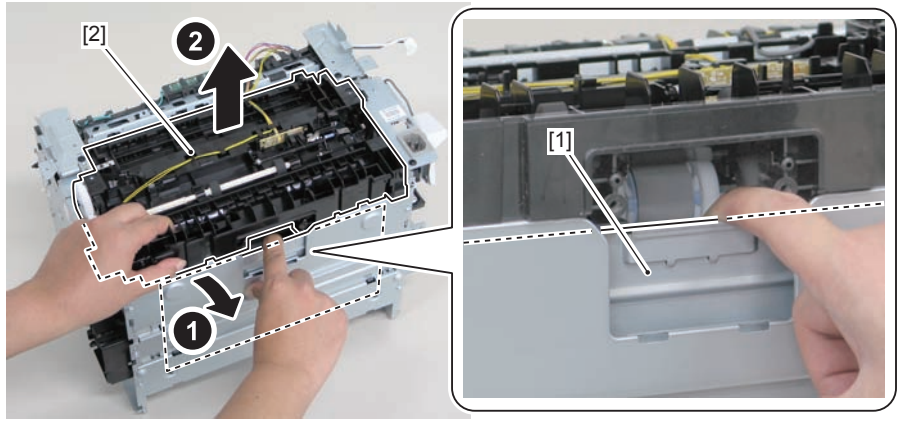
F-4-1000

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-1001

9)Remove the pickup unit[2] while opening the pickup tray[1]



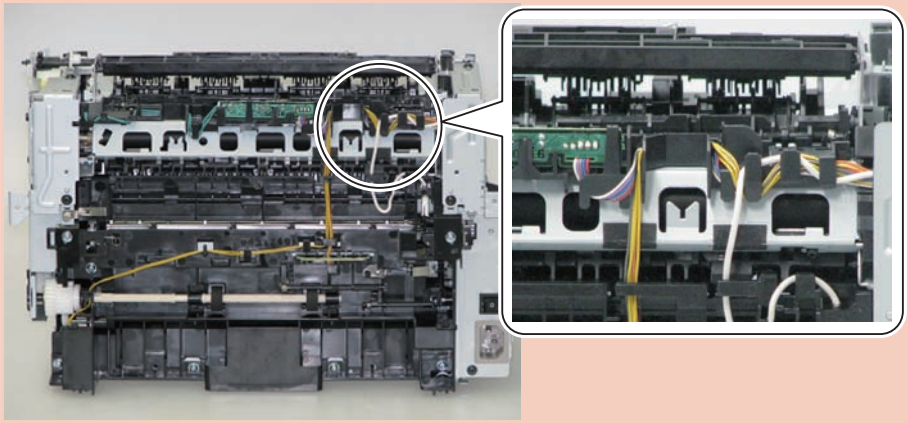
F-4-1002

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-1003

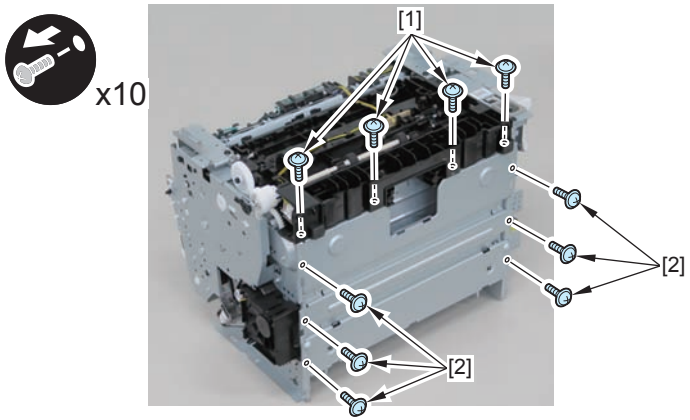
Removing the Pickup Tray Unit (MF4780w/MF4770n/MF4750/MF4730)

Preparation

1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad

Procedure

1) Remove the 4 screws(black TP)[1] and 6 screws[2].



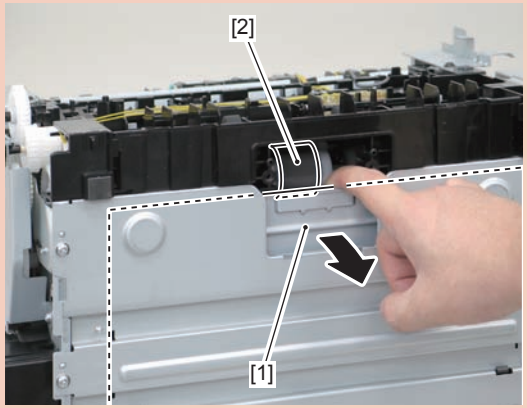
F-4-1004

2) Remove the pickup tray unit [1].

- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

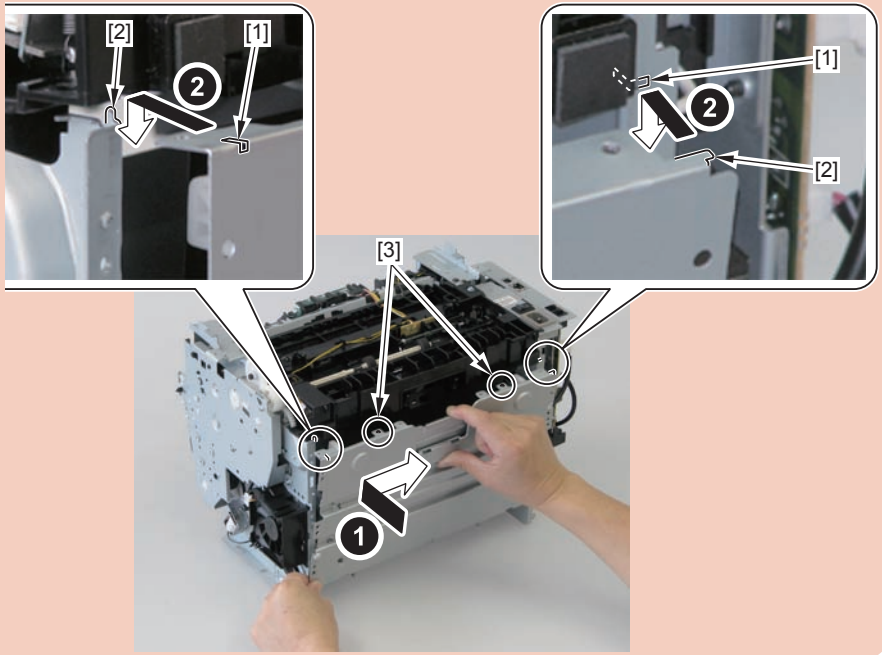
Caution:

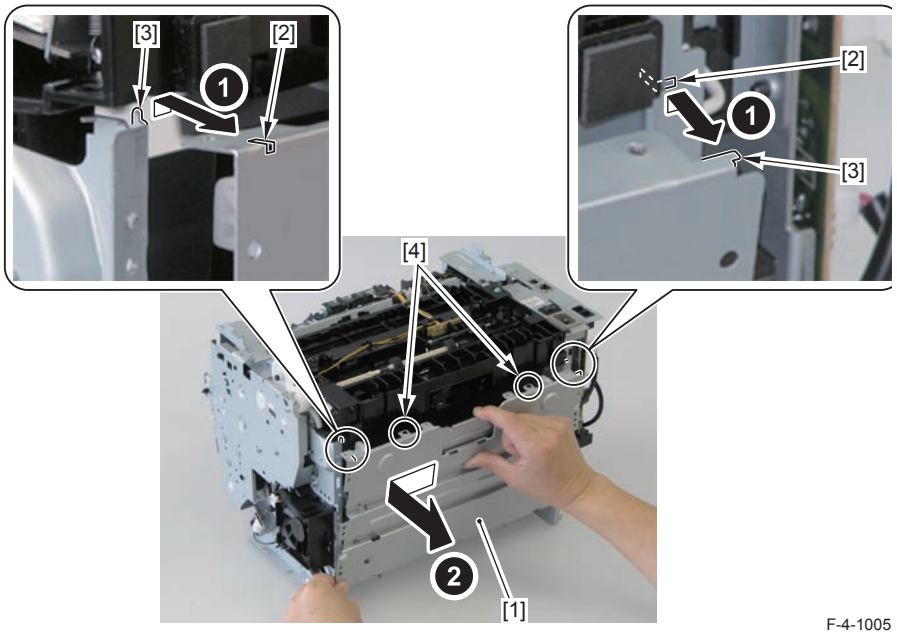
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.



Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.

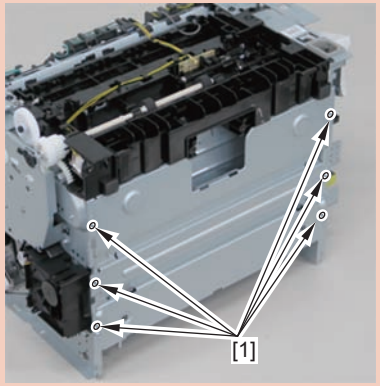




F-4-1005

Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



Removing the Pickup Roller (MF4780w/MF4770n/MF4750/MF4730)

Preparation

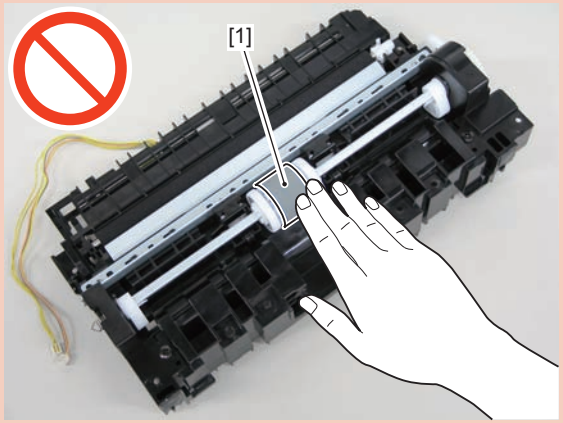
1) Remove the left cover
2) Remove the SADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

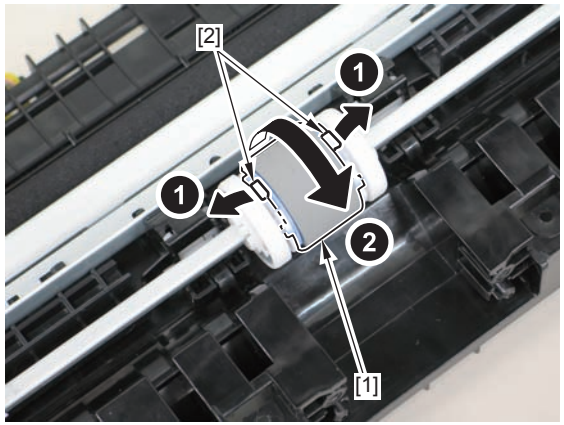
1) Remove the pickup roller[1]
- 2 claws[2]

Caution:

Do not touch the surface of the roller.



x2



F-4-1006

Removing the Pickup Solenoid (MF4780w/MF4770n/MF4750/MF4730)

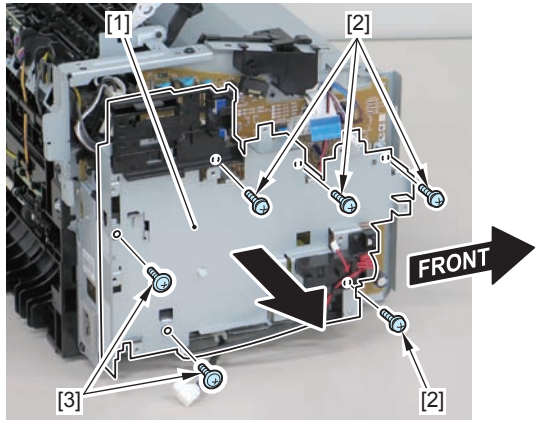
Preparation

1)Remove the left cover
2)Remove the SADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB(MF4780w)
9)Remove the wireless LAN PCB(MF4780w)

Procedure

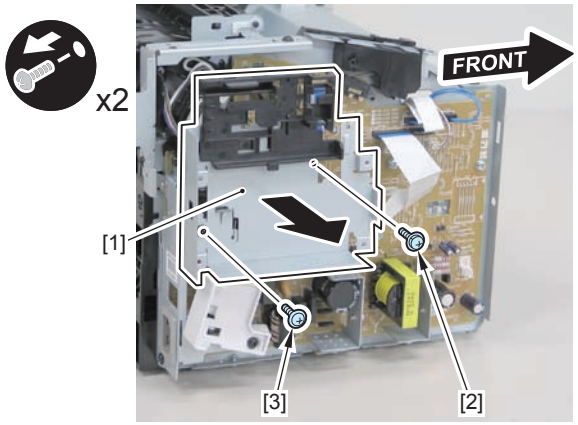
(MF4780w/MF4770n/MF4750)
1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]

x6



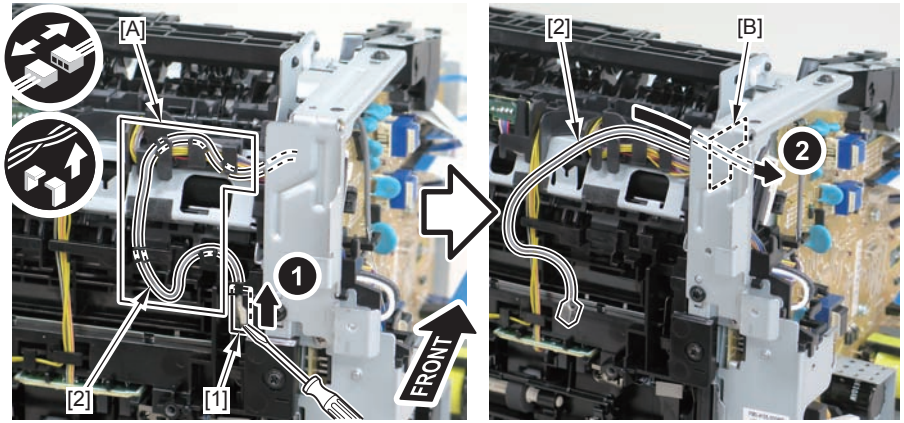
F-4-1007

(MF4730)
1)Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]



F-4-1008

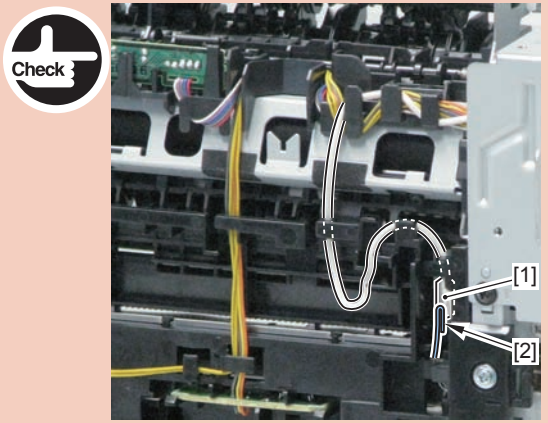
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-1009

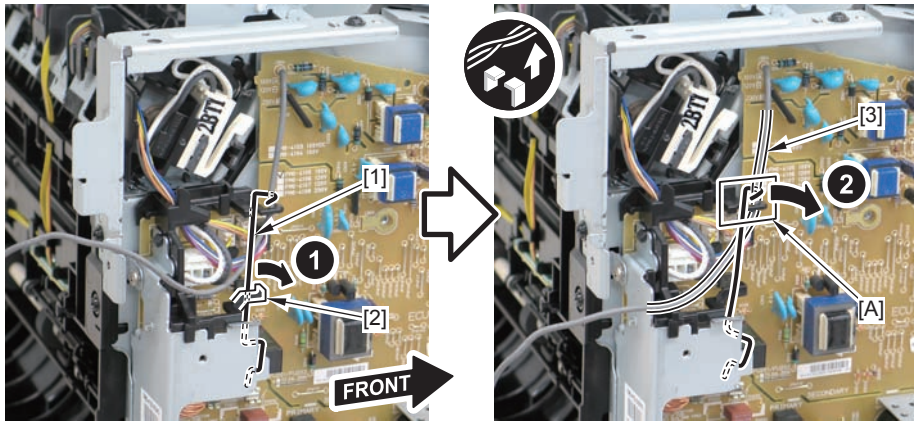
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



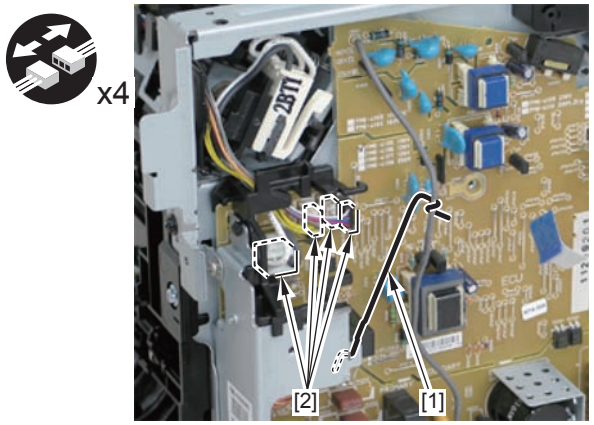
F-4-1010

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



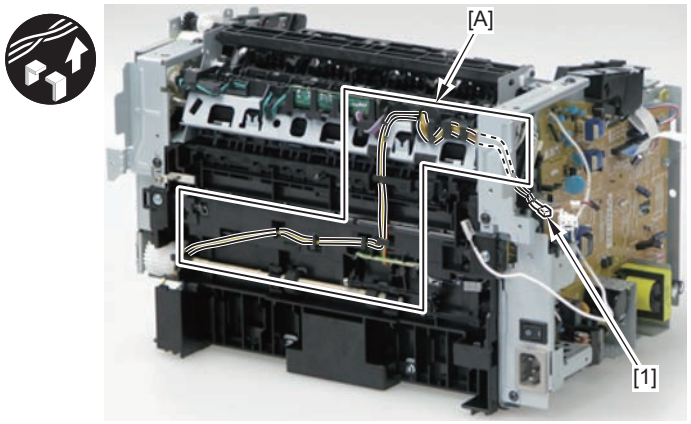
F-4-1011

4)Remove the harness retaining spring[1] and 4 connectors[2].



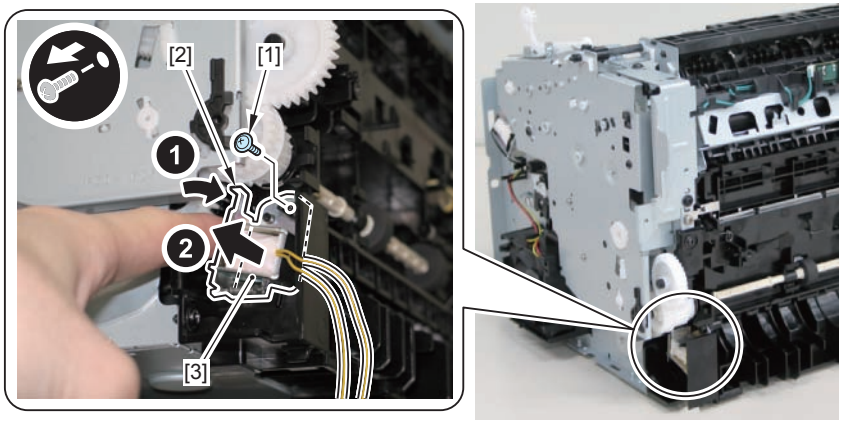
F-4-1012

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-1013

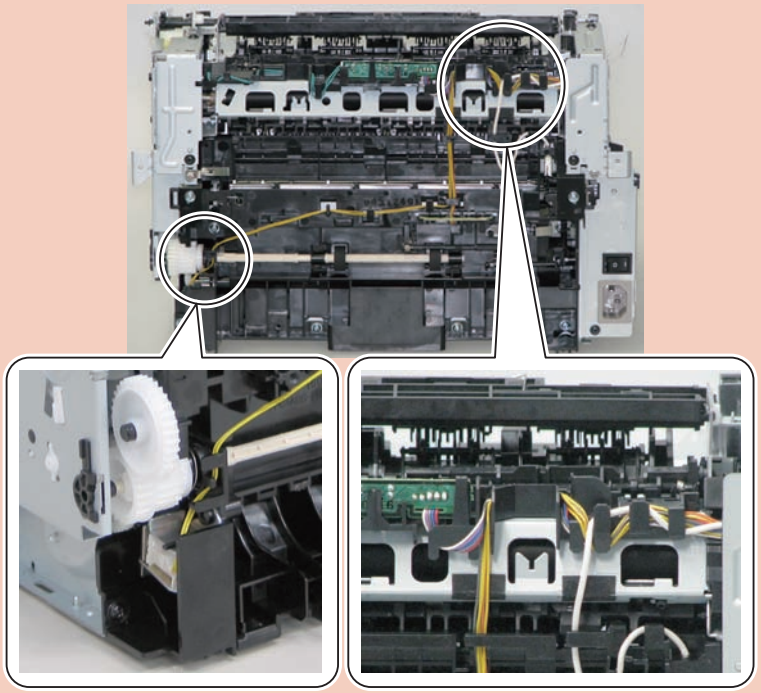
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-1014

Caution:

The below picture shows how to wind the harness.

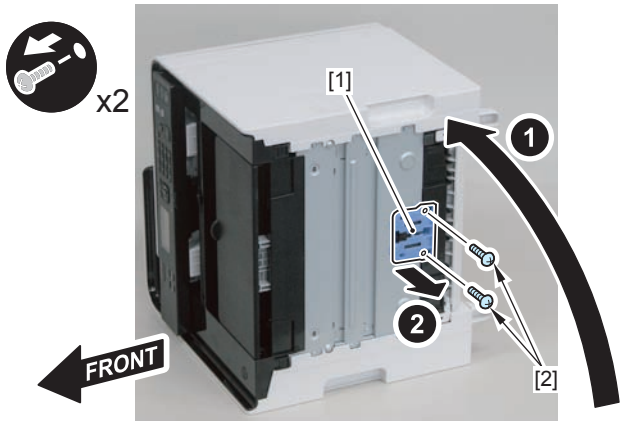


Removing the Separation Pad (MF4780w/MF4770n/MF4750/MF4730)

Procedure

Caution:
When assembling/disassembling the separation pad, do not touch the surface of the separation pad.

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-1015

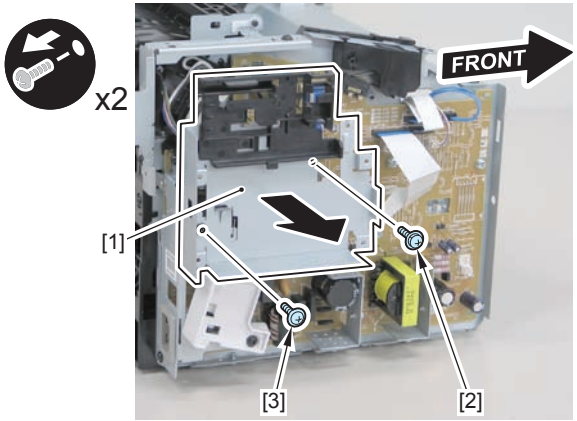
Removing the Pickup Unit (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the main controller PCB

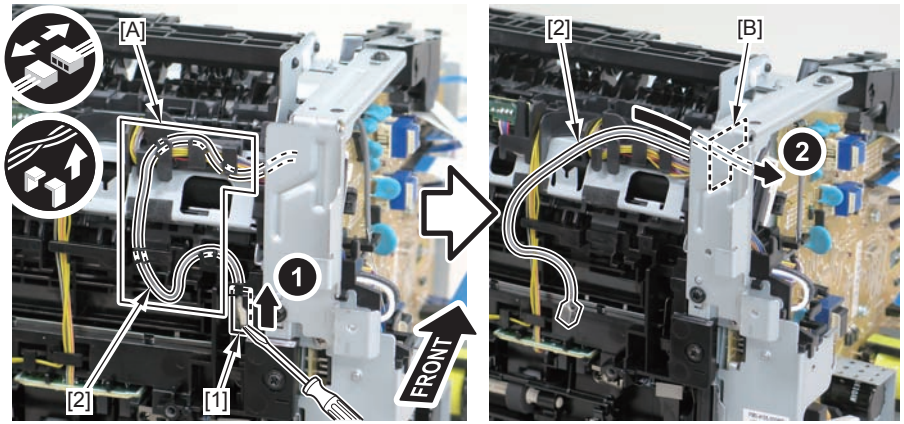
Procedure

1)Remove the main controller mounting plate[1]
• 1 screw(with washer)[2]
• 1 screw(black TP)[3]



F-4-1016

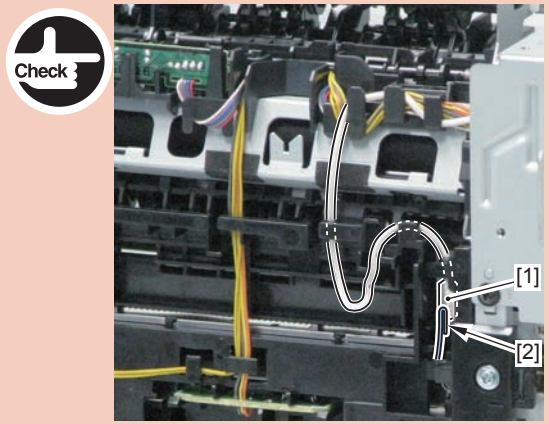
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-1017

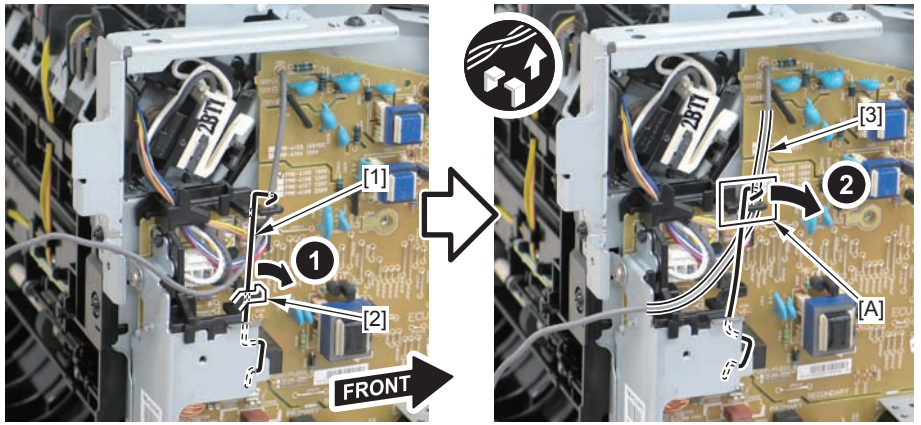
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



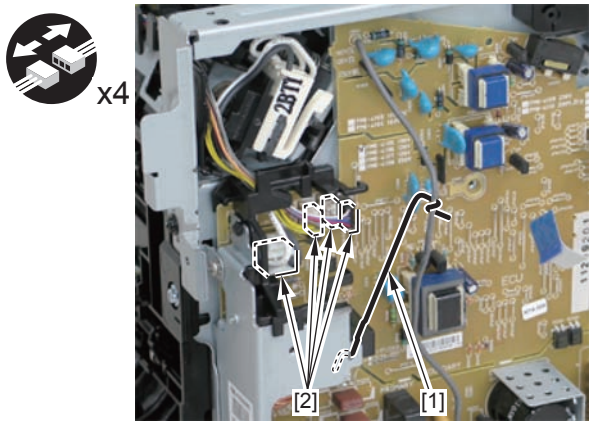
F-4-1018

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



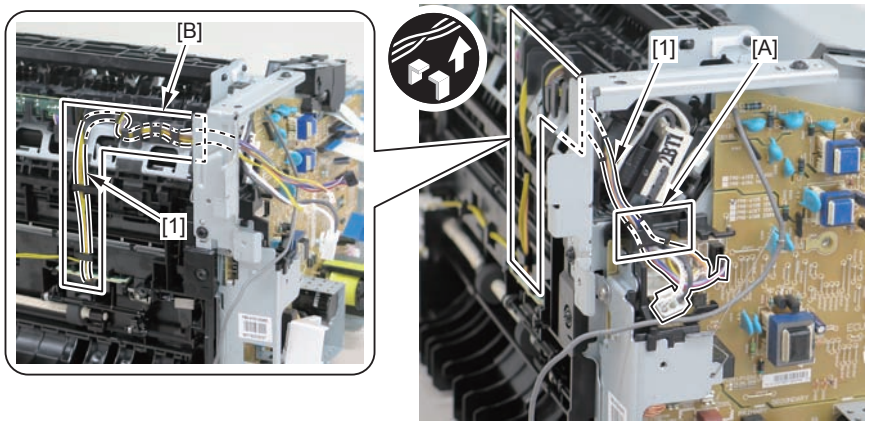
F-4-1019

4)Remove the harness retaining spring[1] and 4 connectors[2].



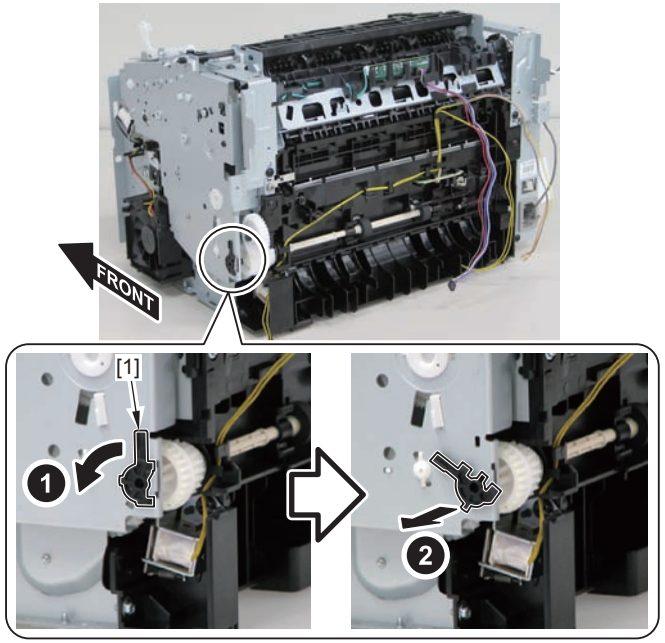
F-4-1020

5)Remove the harness[1] from the guide[A] and [B].



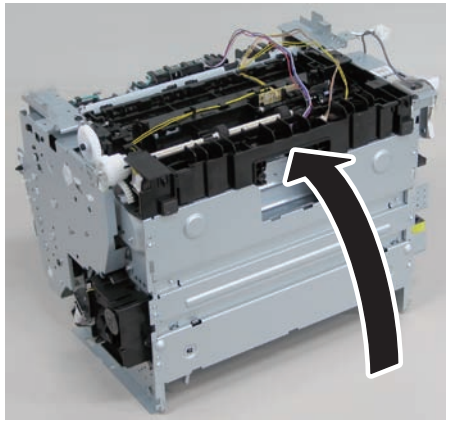
F-4-1021

6)Remove the shaft retainer[1]



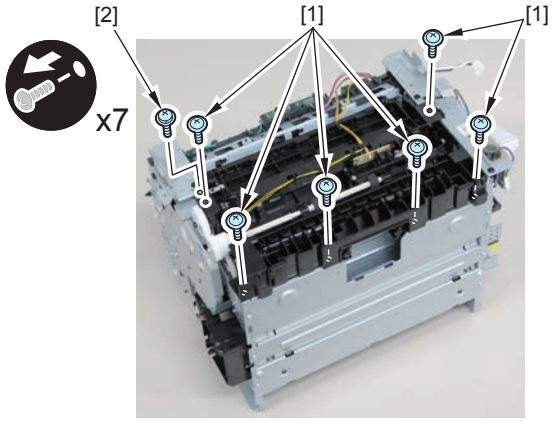
F-4-1022

7)Face the front of the host machine downwards.



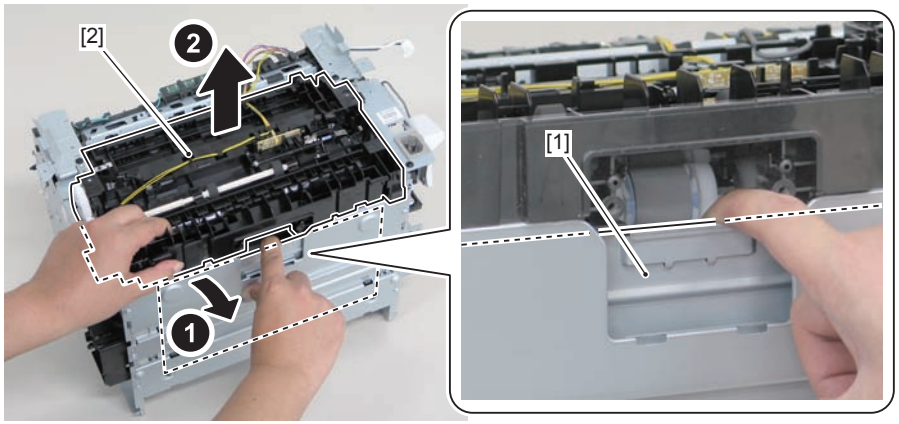
F-4-1023

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-1024

9)Remove the pickup unit[2] while opening the pickup tray[1]



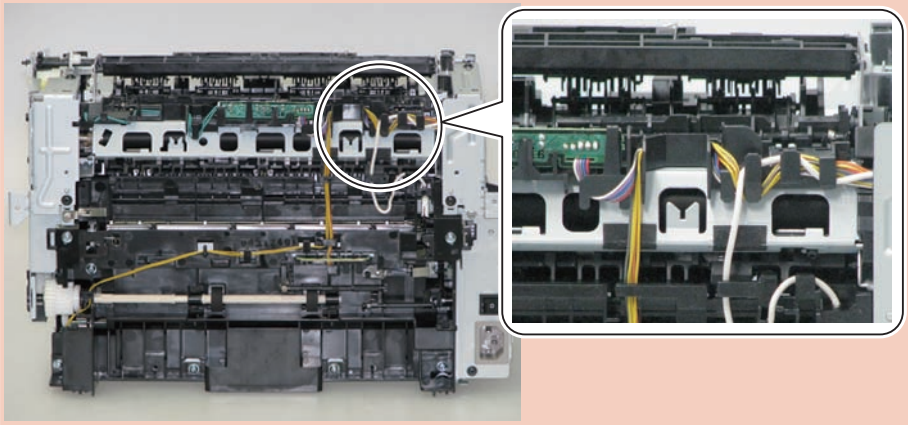
F-4-1025

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-1026

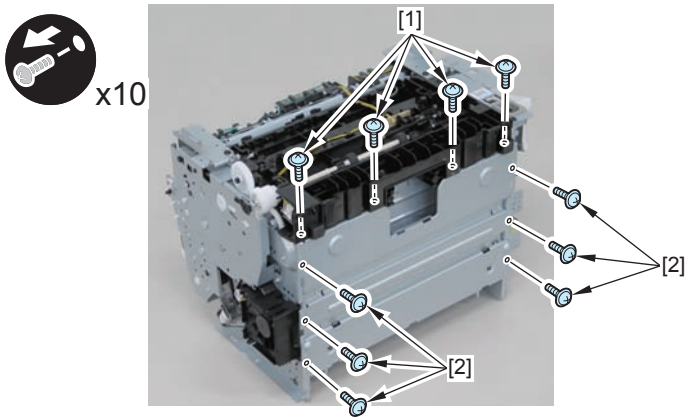
Removing the Pickup Tray Unit (MF4720w/MF4712/MF4710)

Preparation

1) Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the separation pad

Procedure

1)Remove the 4 screws(black TP)[1] and 6 screws[2].



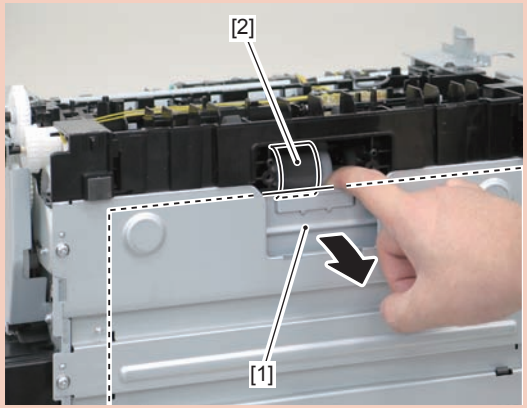
F-4-1027

2) Remove the pickup tray unit [1].

- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

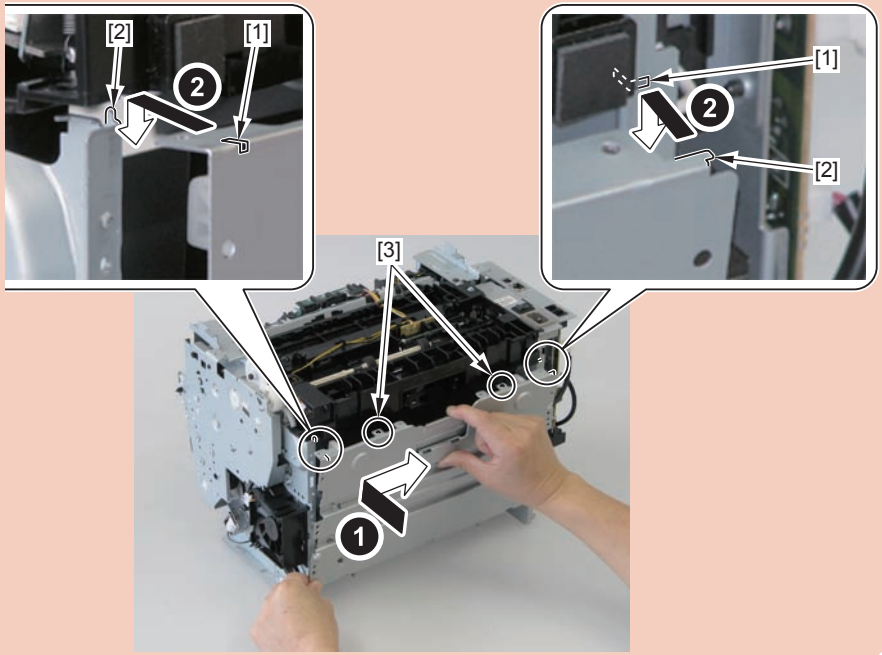
Caution:

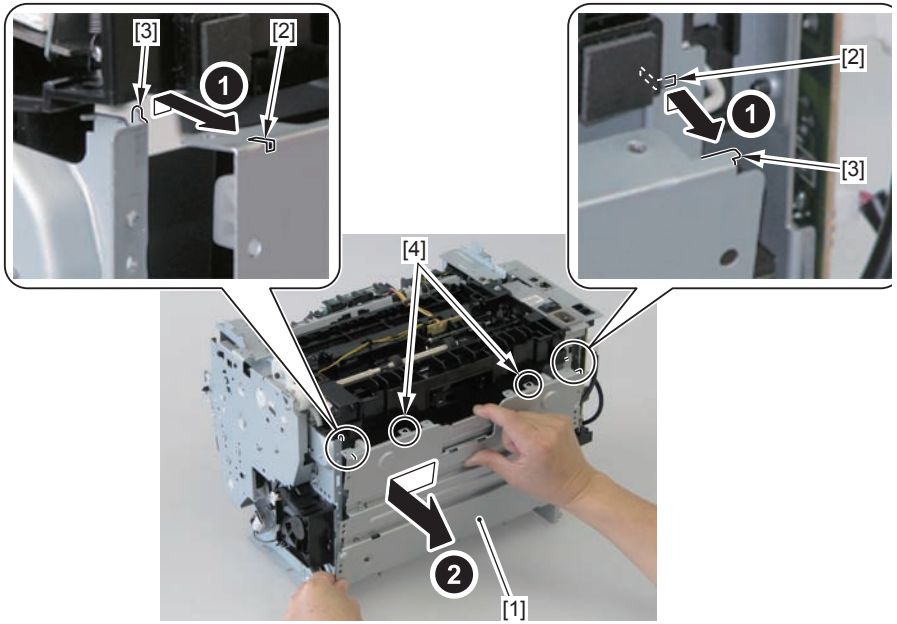
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.



Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.

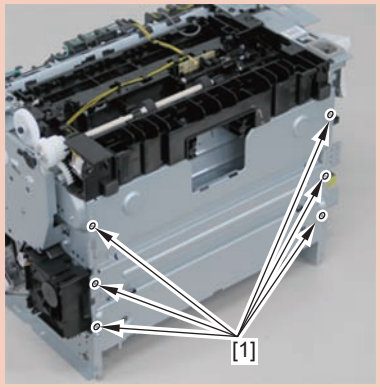




F-4-1028

Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



Removing the Pickup Roller (MF4720w/MF4712/MF4710)

Preparation

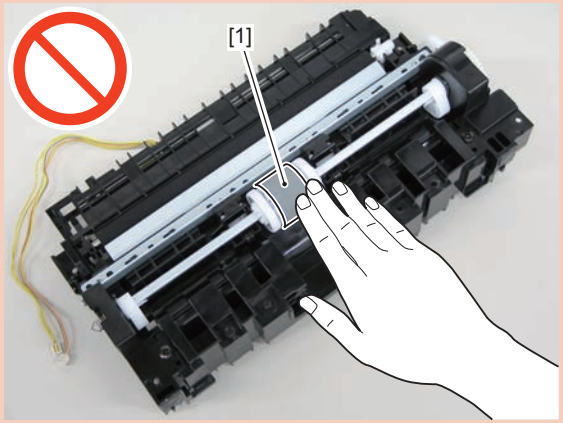
1) Remove the left cover
2) Remove the copyboard cover unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

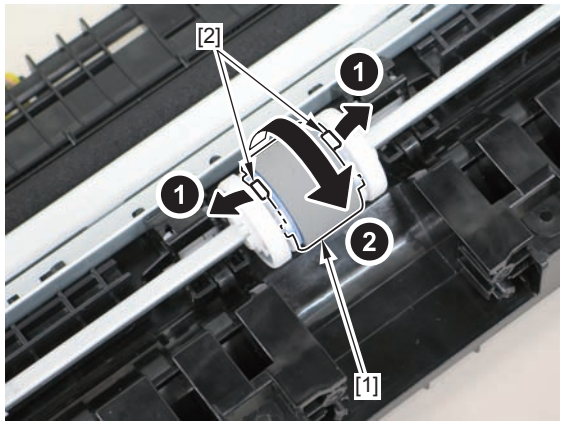
1) Remove the pickup roller[1]
- 2 claws[2]

Caution:

Do not touch the surface of the roller.



x2



F-4-1029

Removing the Pickup Solenoid (MF4720w/MF4712/MF4710)

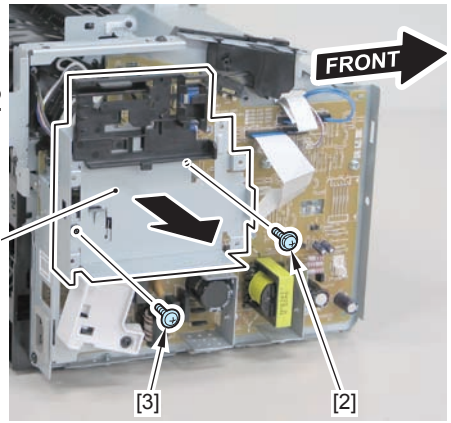
Preparation

1)Remove the left cover
2)Remove the copyboard cover and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the main controller PCB

Procedure

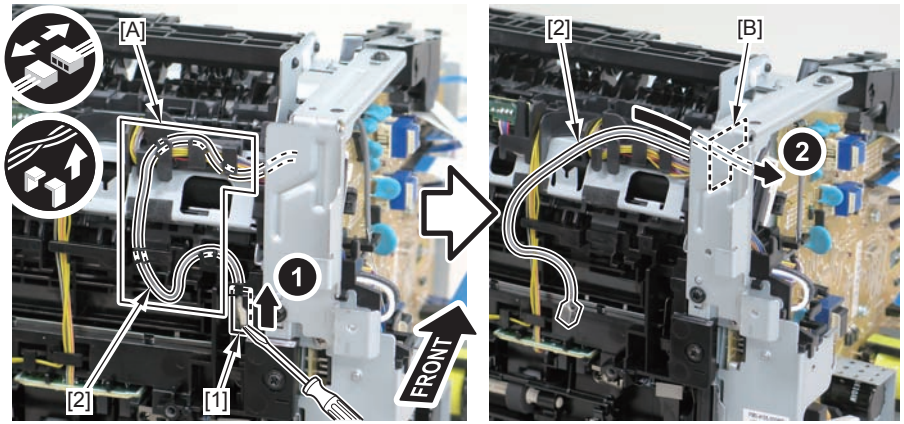
1)Remove the main controller mounting plate[1]
- 1 screw(with washer)[2]
- 1 screw(black TP)[3]

x2



F-4-1030

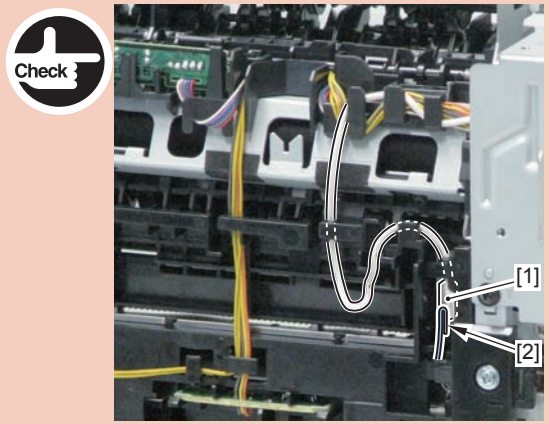
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-1031

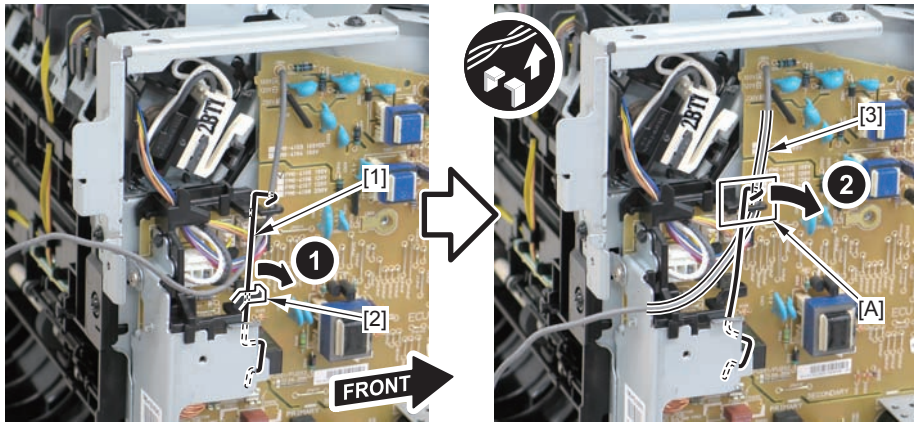
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



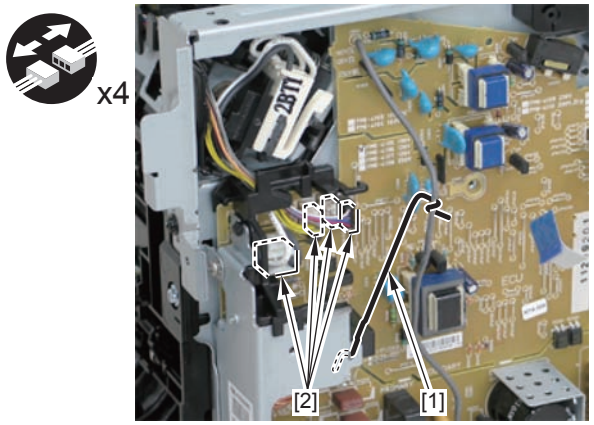
F-4-1032

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



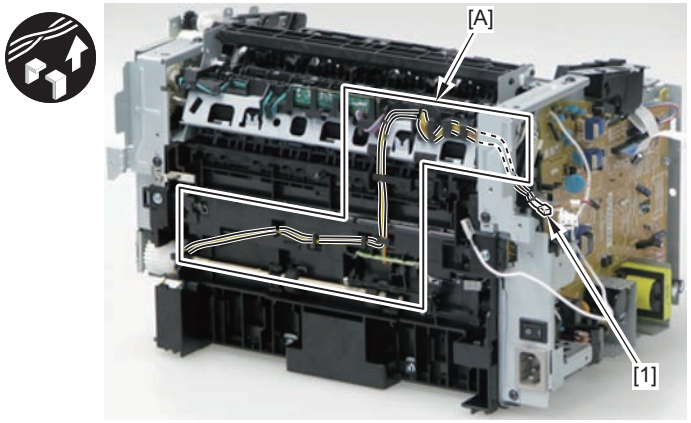
F-4-1033

4)Remove the harness retaining spring[1] and 4 connectors[2].



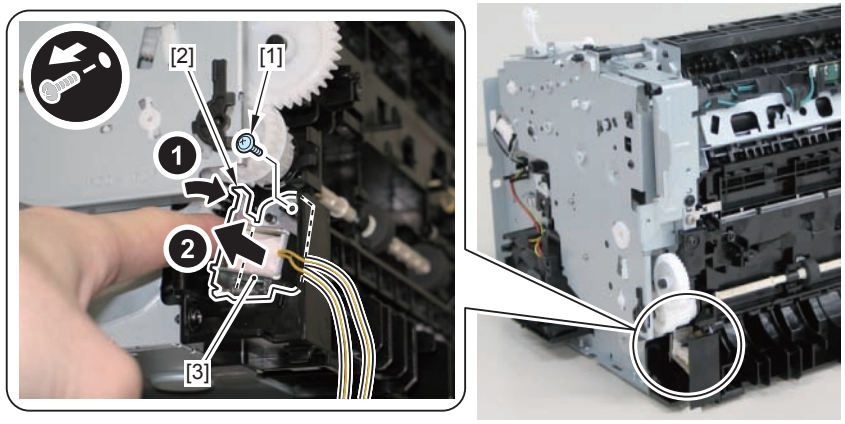
F-4-1034

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-1035

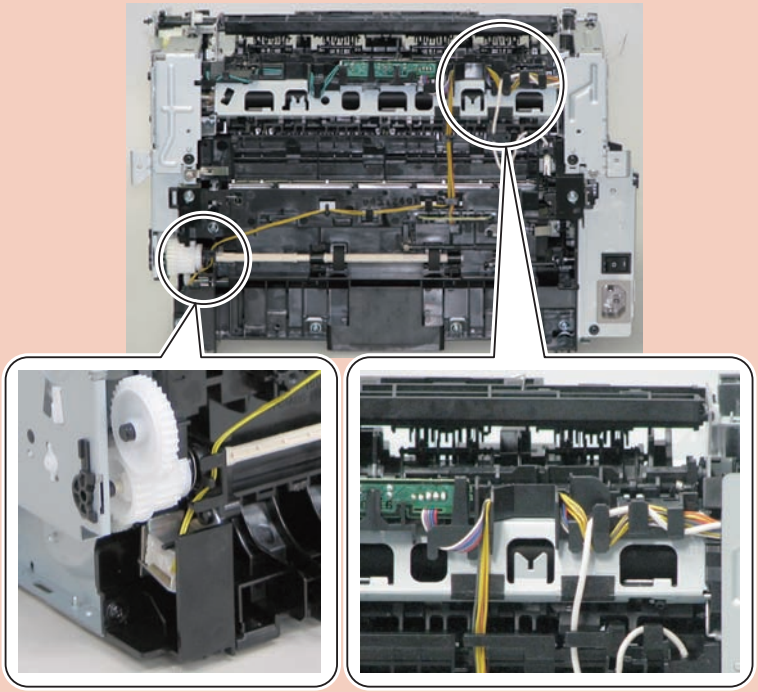
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-1036

Caution:

The below picture shows how to wind the harness.

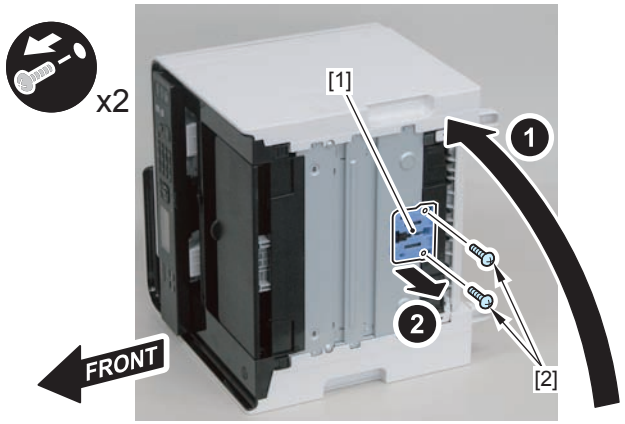


Removing the Separation Pad (MF4720w/MF4712/MF4710)

Procedure

Caution:
When assembling/disassembling the separation pad, do not touch the surface of the separation pad.

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-1037

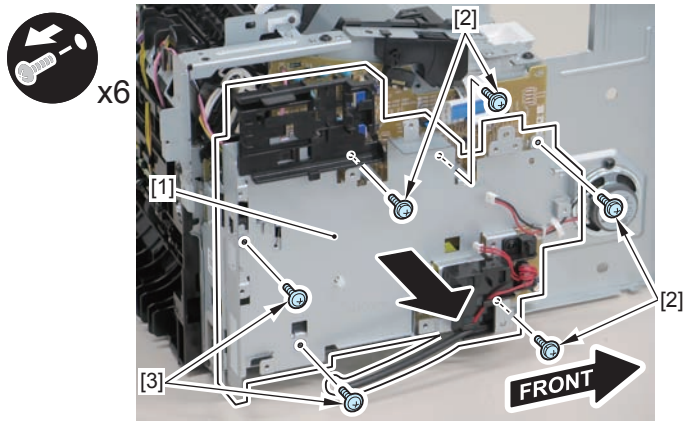
Removing the Pickup Unit (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the main controller PCB
8) Remove the FAX NCU PCB
9) Remove the wireless LAN PCB
10) Remove the separation pad

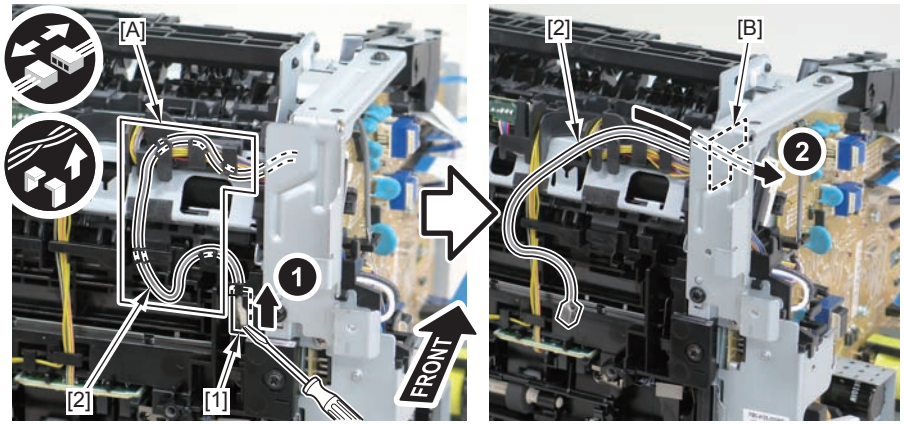
Procedure

1) Remove the main controller mounting plate[1]
• 4 screws(with washer)[2]
• 2 screws(black TP)[3]



F-4-1038

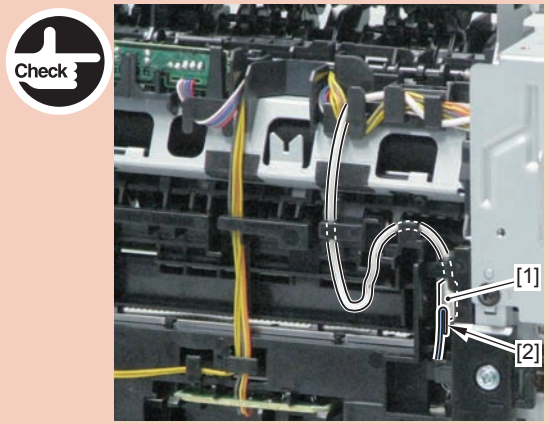
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-1039

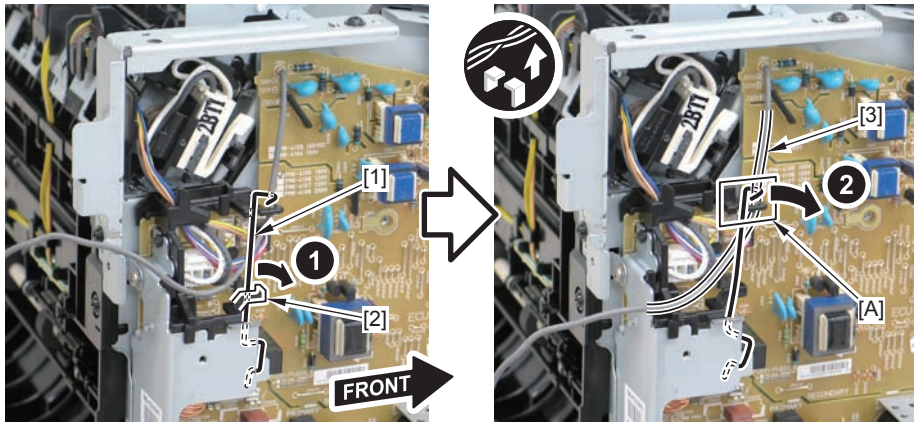
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



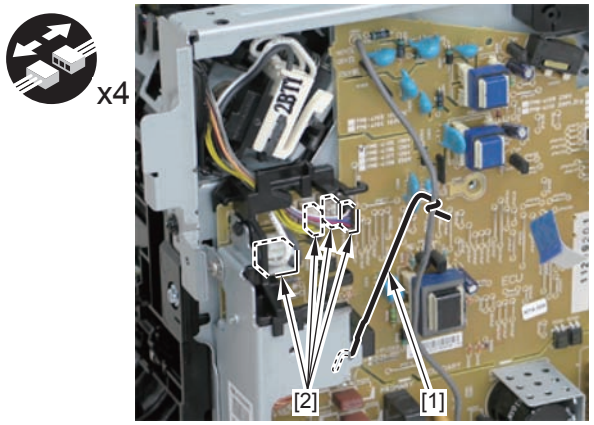
F-4-1040

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



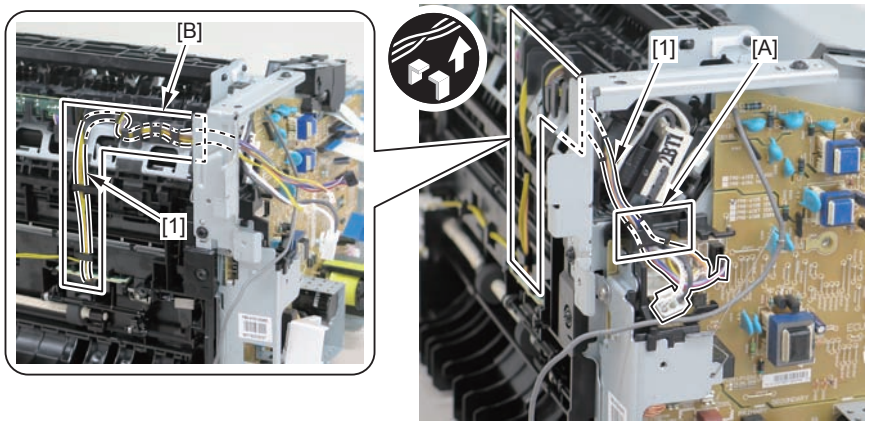
F-4-1041

4)Remove the harness retaining spring[1] and 4 connectors[2].



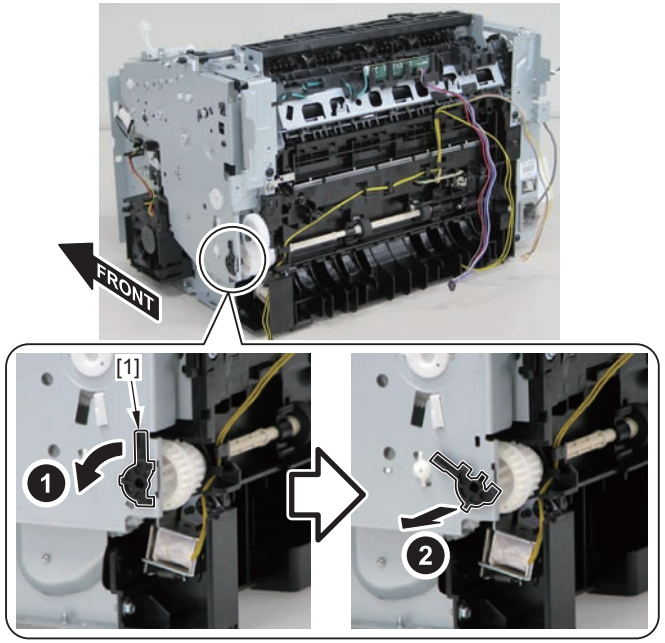
F-4-1042

5)Remove the harness[1] from the guide[A] and [B].



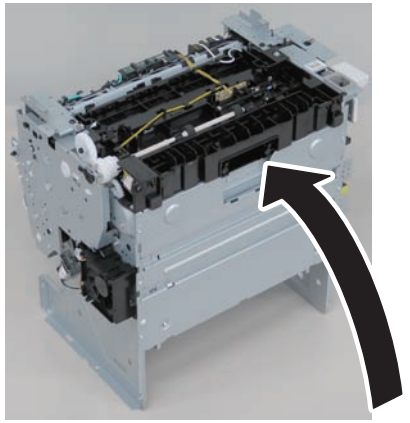
F-4-1043

6)Remove the shaft retainer[1]



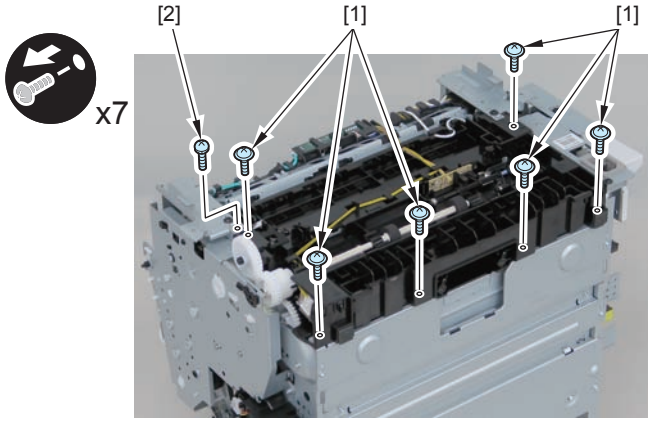
F-4-1044

7)Face the front of the host machine downwards.



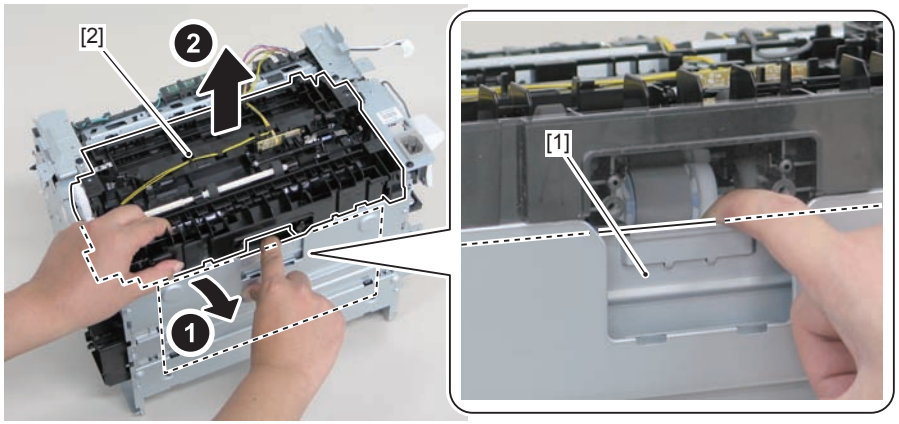
F-4-1045

8) Remove the 6 screws (TP) [1] and the screw (with washer) [2].



F-4-1046

9)Remove the pickup unit[2] while opening the pickup tray[1]



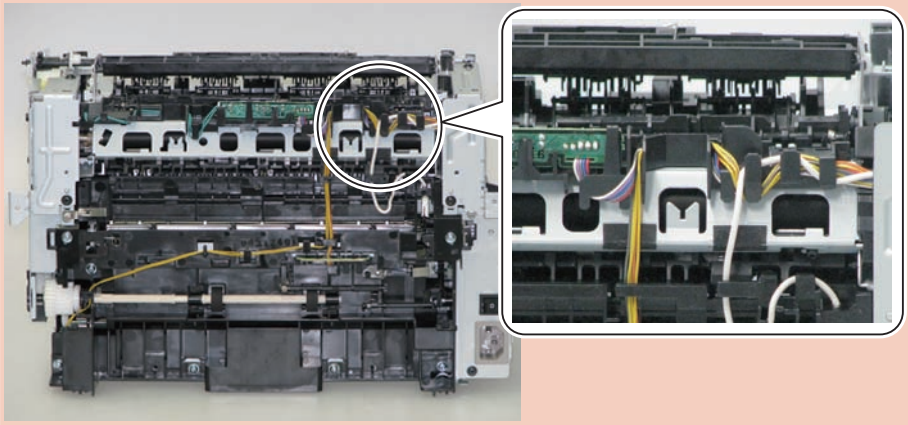
F-4-1047

Caution:

When installing/removing the pickup unit, be sure to do so while opening the pickup tray.

Note:

The below picture shows how to wind the harness.



F-4-1048

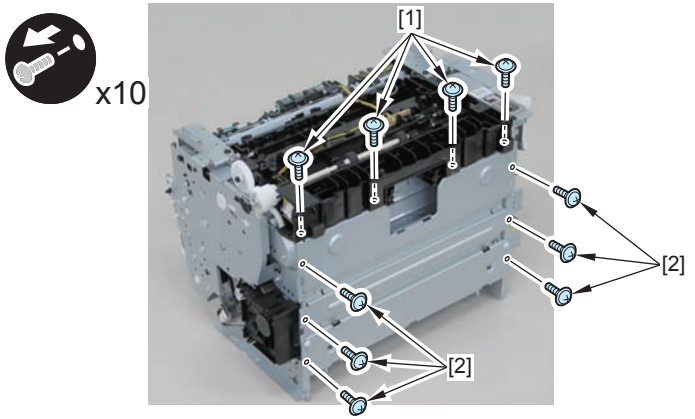
Removing the Pickup Tray Unit (L418S/L410/L190)

Preparation

1) Remove the left cover
2)Remove the DADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the separation pad

Procedure

1)Remove the 4 screws(black TP)[1] and 6 screws[2].



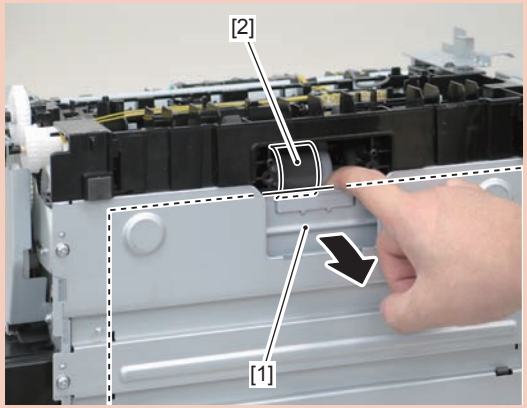
F-4-1049

2) Remove the pickup tray unit [1].

- 2 boss holes [2]
- 2 hooks [3]
- 2 bosses [4]

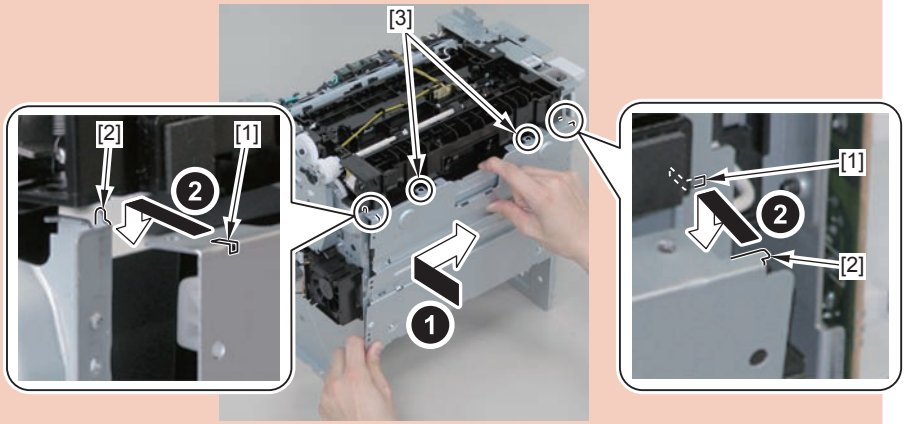
Caution:

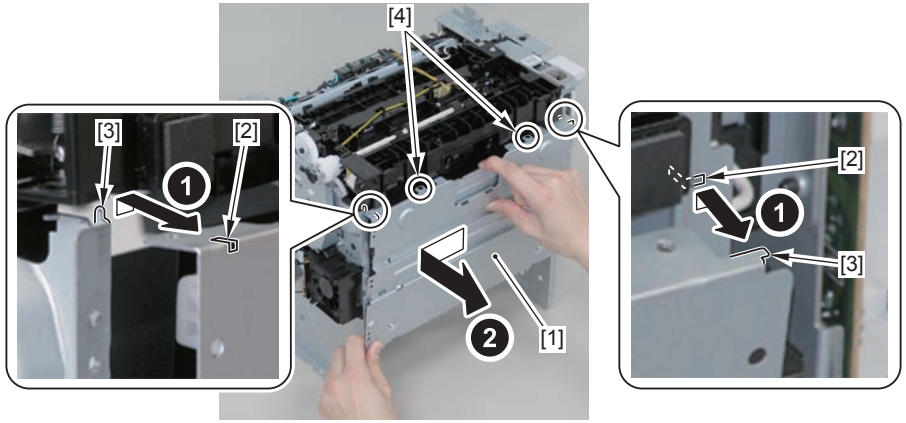
When assembling/disassembling the pickup tray unit, hold the pickup tray [1] down to attach/release it.



Caution:

Align the 2 boss holes [1], 2 hooks [2] and 2 bosses [3] of the pickup tray unit with the pickup unit to mount the unit.

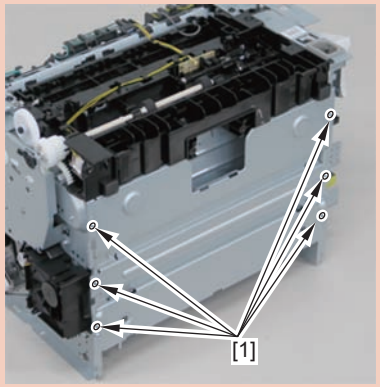




F-4-1050

Caution:

When assembling the pickup tray unit, check the positioning of the 6 bosses [1] in the unit.



Removing the Pickup Roller (L418S/L410/L190)

Preparation

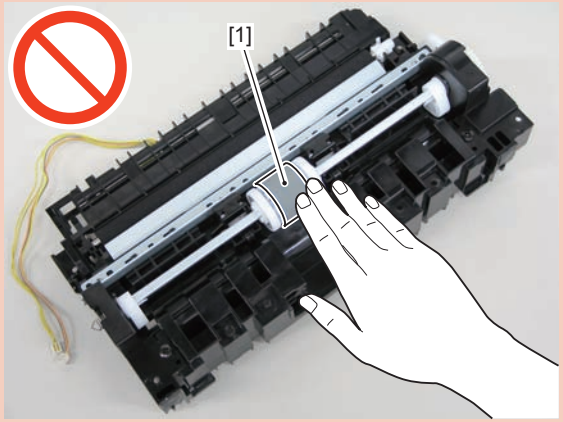
1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.
6) Remove the duplex feed unit
7) Remove the separation pad
8) Remove the pickup tray unit

Procedure

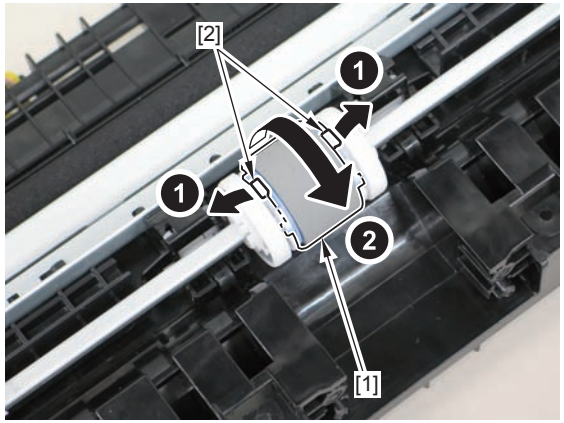
1) Remove the pickup roller[1]
- 2 claws[2]

Caution:

Do not touch the surface of the roller.



x2



F-4-1051

Removing the Pickup Solenoid (L418S/L410/L190)

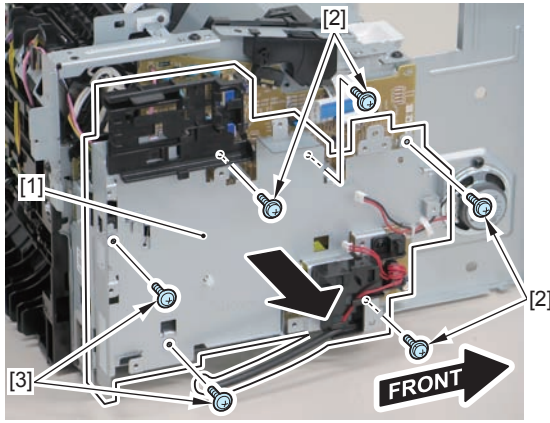
Preparation

1)Remove the left cover
2)Remove the DADF unit and reader unit.
3)Remove the right cover
4)Remove the front cover unit.
5)Remove the upper cover.
6)Remove the duplex feed unit
7)Remove the main controller PCB
8)Remove the FAX NCU PCB
9)Remove the wireless LAN PCB

Procedure

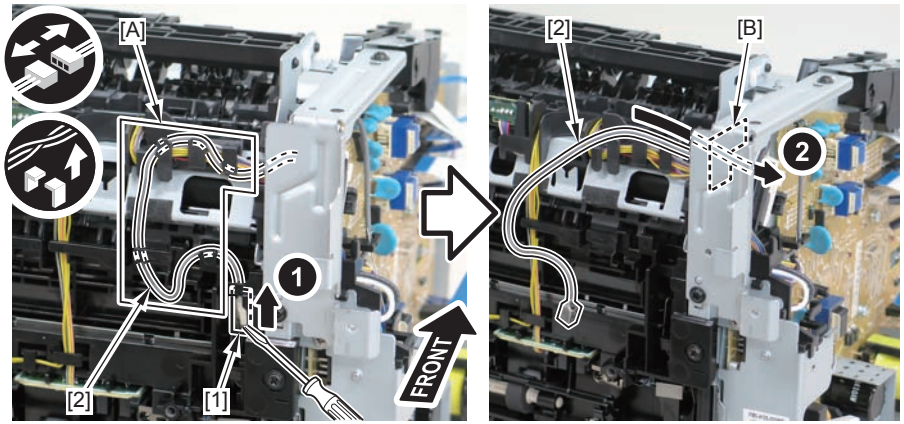
1)Remove the main controller mounting plate[1]
- 4 screws(with washer)[2]
- 2 screws(black TP)[3]

x6



F-4-1052

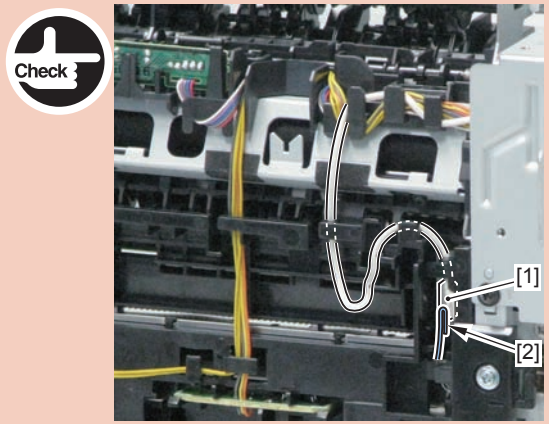
2)Disconnect the terminal[1], free the harness[2] from the harness guide[A], and then put it through the hole[B].



F-4-1053

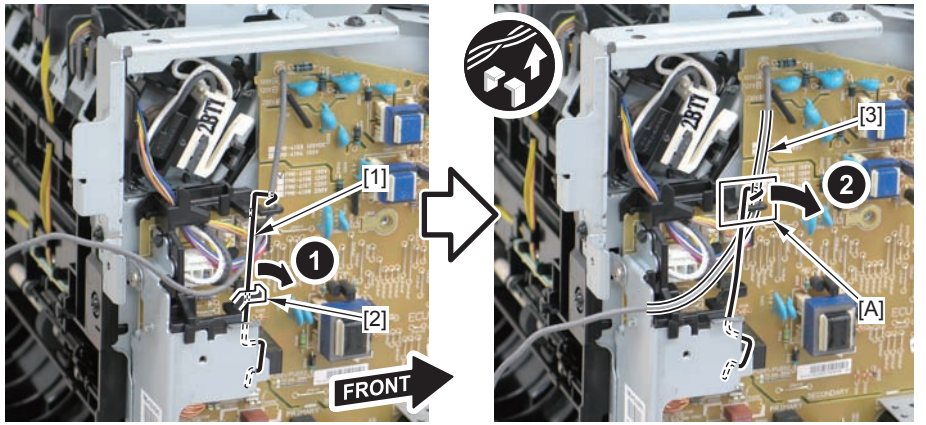
Caution:

When connecting the terminal[1], be sure that the contact spring[2] is in contact with it.



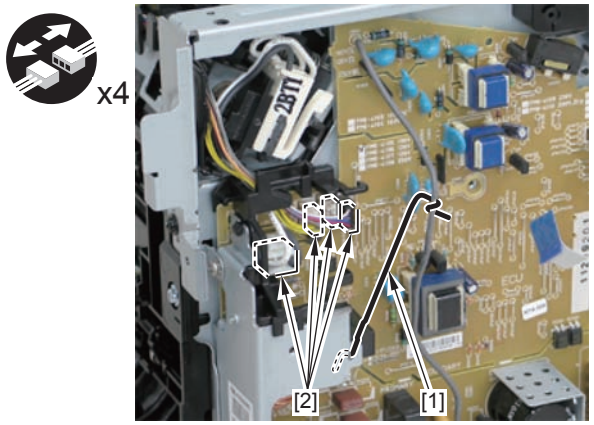
F-4-1054

3)Remove the harness retaining spring[1] from the hook[2], and free the harness[3] from the guide[A].



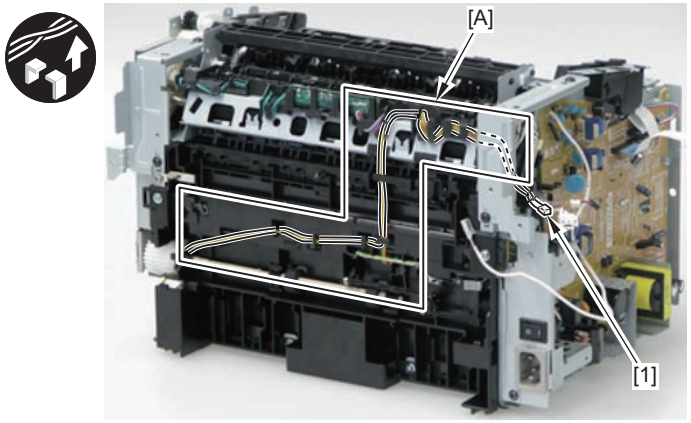
F-4-1055

4)Remove the harness retaining spring[1] and 4 connectors[2].



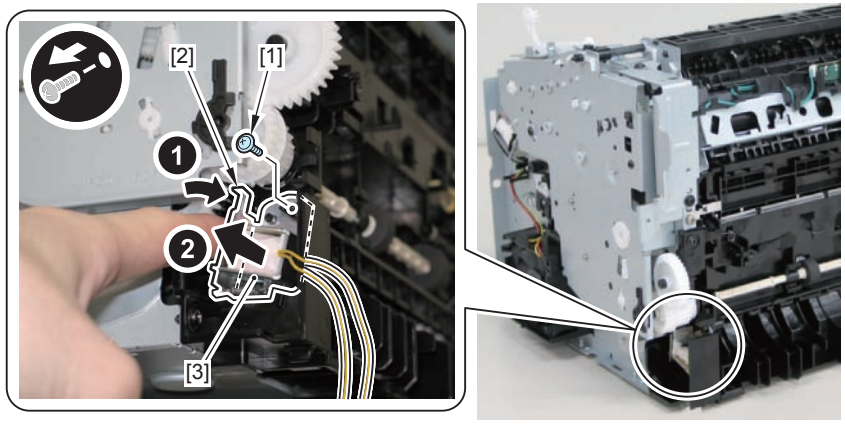
F-4-1056

5)Free the pickup solenoid harness[1] from the harness guide[A]



F-4-1057

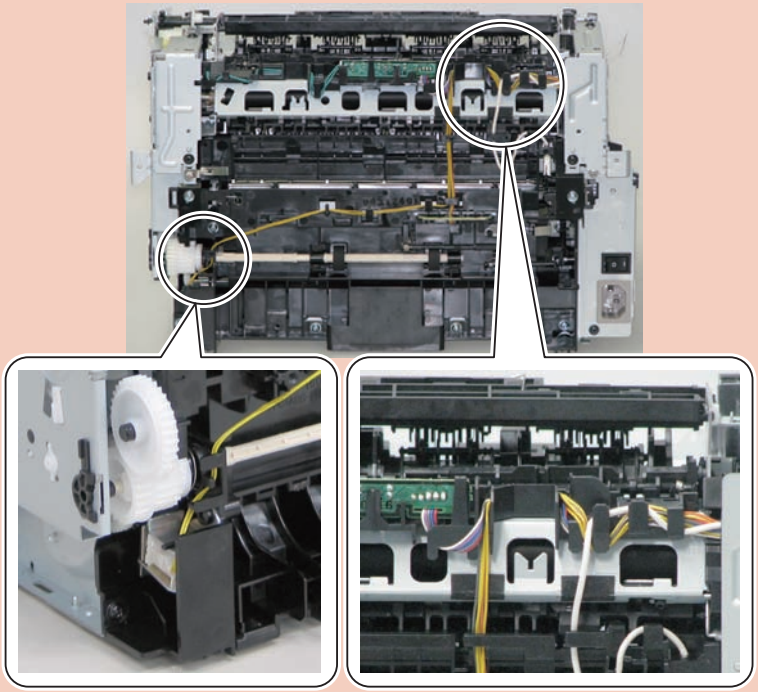
6)Remove the screw[1], move the solenoid arm[2] and remove the pickup solenoid[3].



F-4-1058

Caution:

The below picture shows how to wind the harness.

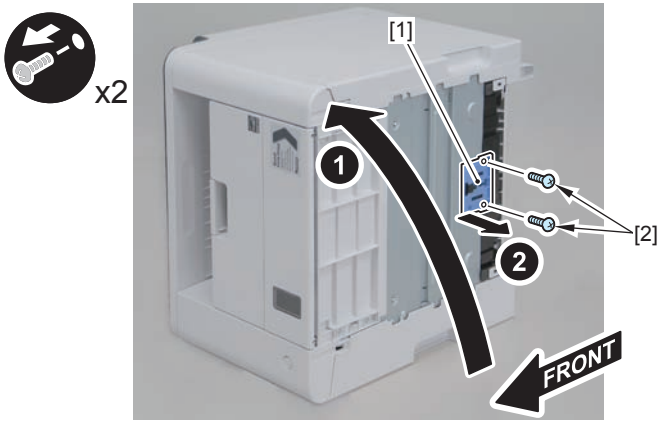


Removing the Separation Pad (L418S/L410/L190)

Procedure

Caution:
When assembling/disassembling the separation pad, do not touch the surface of the separation pad.

1) Face the left side of the host machine downwards.
2) Remove the separation pad [1].
• 2 screws [2]



F-4-1059

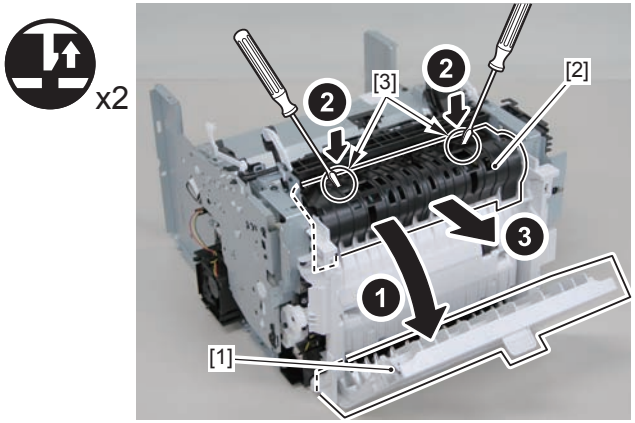
Removing the Duplex Feed Unit (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

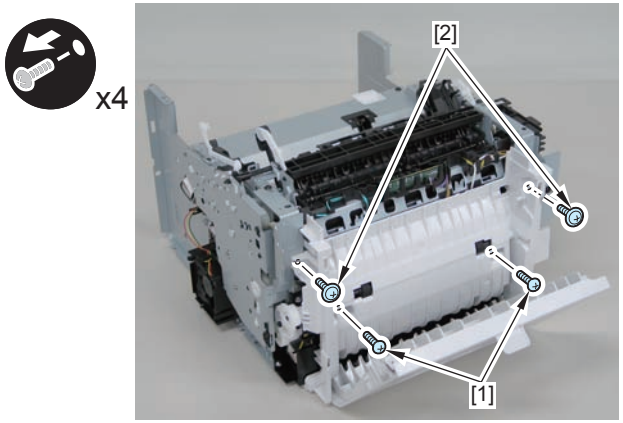
Procedure

1) Open the rear cover[1], and remove the duplex guide[2]
• 2 claws[3]



F-4-1060

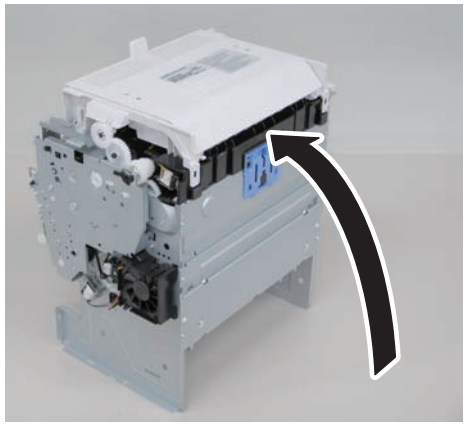
2) Remove the 2 screws (TP) [1] and 2 screws (tapping) [2] using a stubby screwdriver.



F-4-1061

3) Close the rear cover.

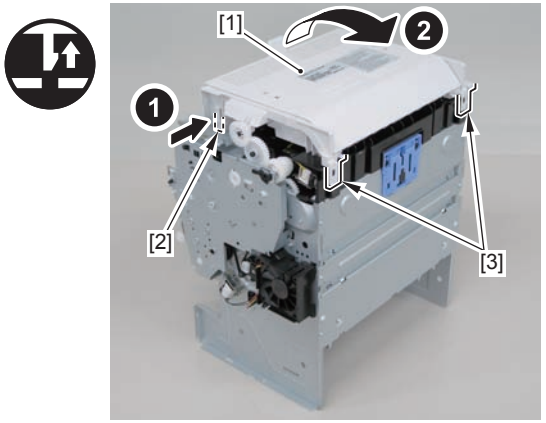
4) Face the front of the host machine downwards.



F-4-1062

5)Remove the duplex feed unit[1].

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



F-4-1063

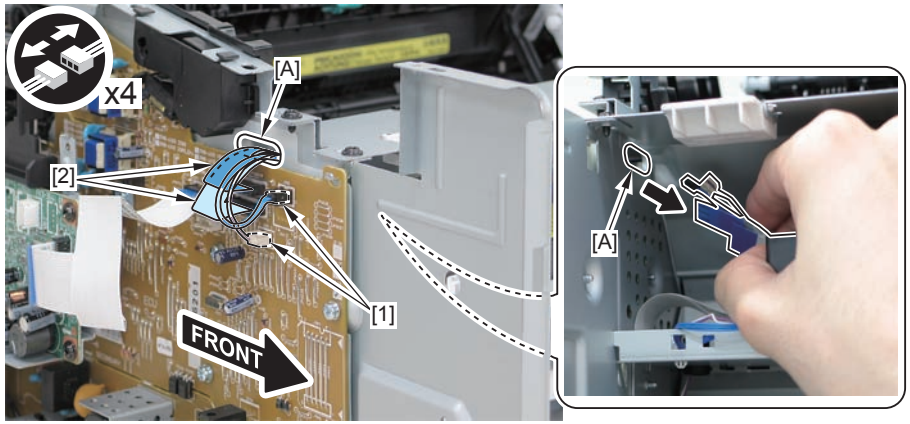
Removing the Duplex Solenoid (L418S/L410/L190)

Preparation

1) Remove the left cover
2) Remove the DADF unit and reader unit.
3) Remove the right cover
4) Remove the front cover unit.
5) Remove the upper cover.

Procedure

1) Remove the 2 connectors[1] and 2 flat cables[2], and put them through the hole[A] of the left side plate to the inside.



F-4-1064

Caution:

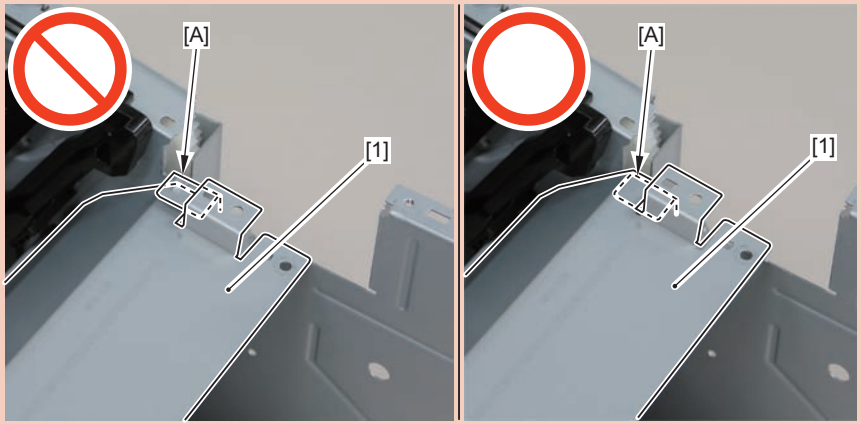
When removing the scanner cover, be sure to disconnect the flat cable in advance to prevent damage to the cable

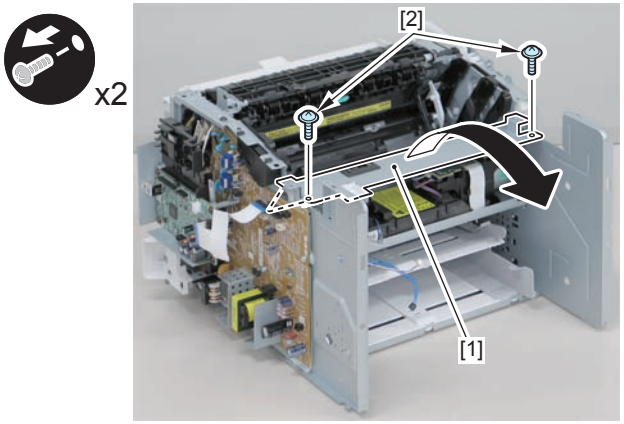
2) Remove the scanner cover[1]

- 2 screws(black TP)[2]

Caution:

When removing the scanner cover, be sure that the cover does not get under[A] part of the right side plate.

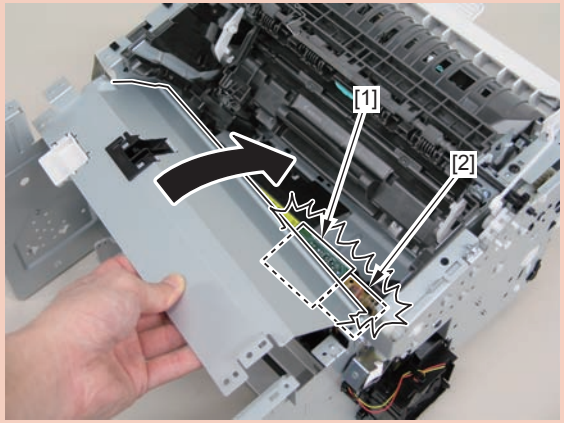




F-4-1065

Caution:

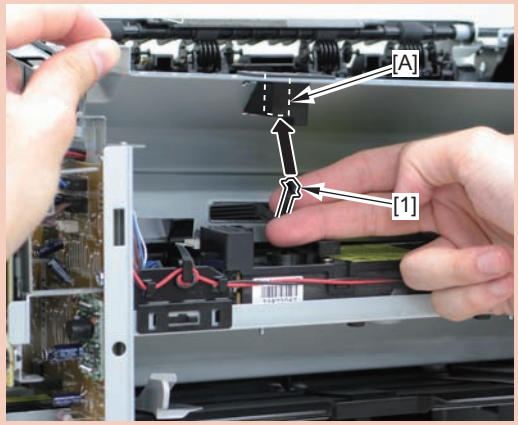
When install the scanner cover, be careful not to damage the motor driver PCB[1] and the duplex relay PCB[2]



F-4-1066

Caution:

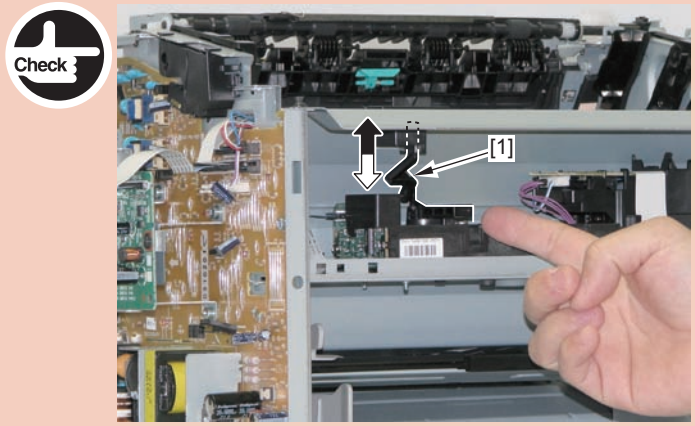
When mounting the scanner cover, pass the shutter open/close lever [1] through the hole [A] in the scanner cover.



F-4-1067

Caution:

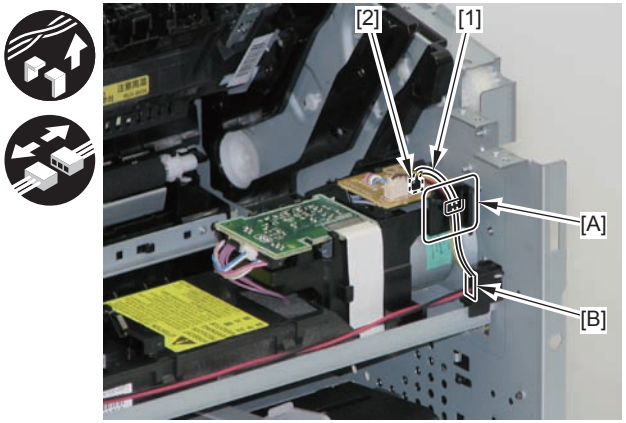
Ensure that the shutter open/close lever [1] can move vertically.



F-4-1068

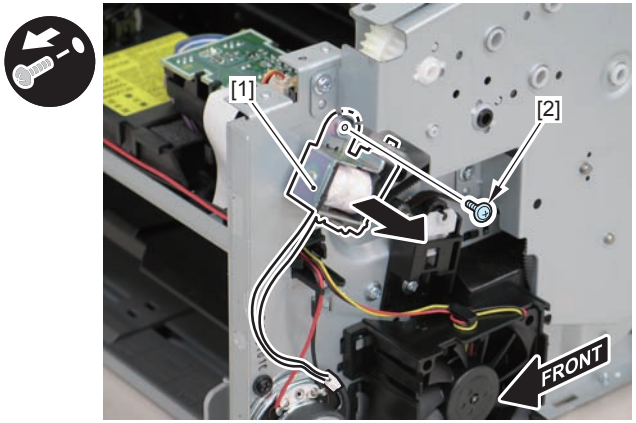
3)Free the solenoid harness[1] from the guide[A], and put it through the hole[B] of the right side plate to the outside.

- 1 connector[2]



F-4-1069

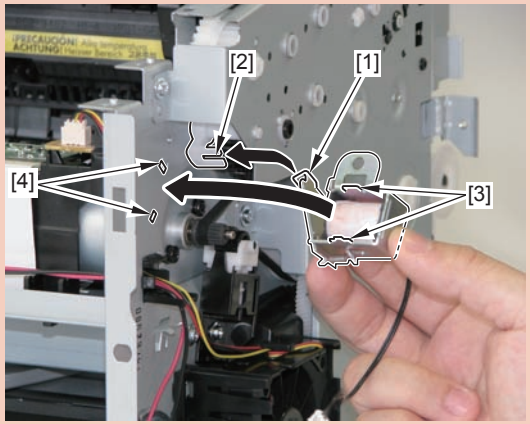
4)Remove the duplex solenoid[1].



F-4-1070

Caution:

When mounting the duplex solenoid, align the solenoid lever [1] with the groove in the link [2], and insert the 2 solenoid positioning protrusions [3] into the 2 positioning holes [4] in the side panel to mount the solenoid.



5 Adjustment

Mechanical Adjustment

Mechanical Adjustment

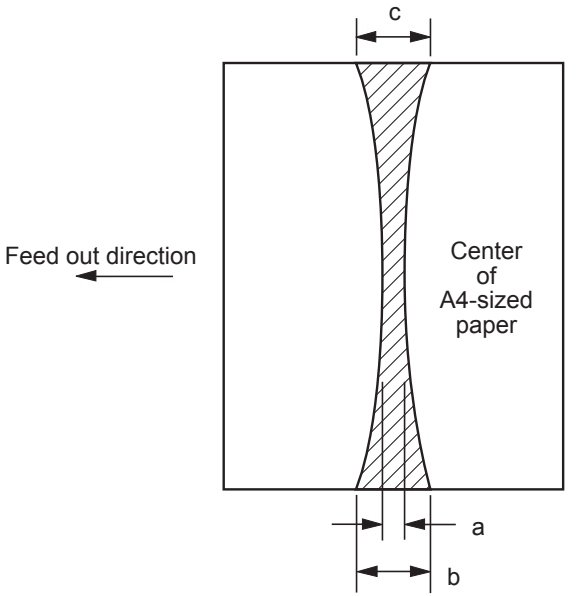
Confirming Nip Width

Caution :

Be sure to follow the procedures below, otherwise the fixing film or the fixing sleeve may be damaged.

The nip width of the fixing unit is not adjustable in this printer, however, the incorrect nip width may cause the faulty fixing.
Follow the procedures below to check the nip width.

1) Prepare an all-black print of A4 size made by the same type of EP Toner cartridge for this printer before visiting the customer site.
2) Load the printed sheet facing DOWN on the pickup tray.
3) Print a test-page.
4) Turn off the printer when the leading edge of the paper appears in the face-down delivery slot.
   Wait for 60 seconds and open the cartridge door to remove the paper from the printer.
5) Measure the width of the glossy band across the paper and check if it is meeting the requirements below.
   Wasp/Horsethief/Blackrock
   - Center (a): 5.5mm to 8.1mm
   - Right and left (b, c): 5.5mm to 8.1mm



F-5-1

6 Troubleshooting

- Test Print
- Troubleshooting Items
- Version Upgrade
- Log Collector

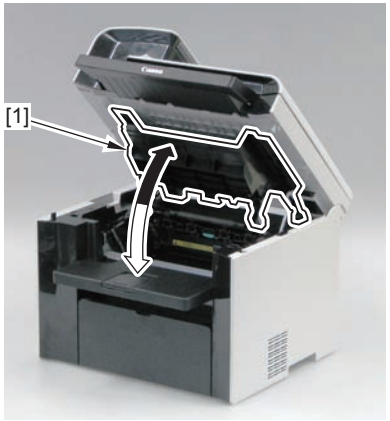
Test Print

Test Print Function

This equipment has a test print function to check if the printer engine normally operates.
Test patterns (horizontal lines) are output when executing this test print.

The following is the operation procedure;
a.1-sided print
1) Set A4/LTR papers on the pickup tray or the manual feed pickup tray.
2) Continuously open and close the Delivery Tray [1] at least 5 times for odd number of times with the Power Switch ON.
3) A 1-sided engine test print is executed.

b. 2-sided print
1) Set A4/LTR papers on the pickup tray or the manual feed pickup tray.
2) Continuously open and close the Delivery Tray [1] at least 5 times for even number of times with the Power Switch ON.
3) A 2-sided engine test print is executed.



F-6-1

Troubleshooting Items

Image Faults

Smudged/Streaked

Bleeding (smear) occurs immediately after the power is turned on for the first time for the day

Description

There is sometimes a case where the difference of temperature between air and inside of the machine causes moisture to occur on the toner immediately after the power is turned on for the first time for the day.

As a result, when the toner transferred on a sheet at the time of initial printing passes through the fixing assembly, moisture on the toner is vaporized into steam, causing breading (smear) to occur.

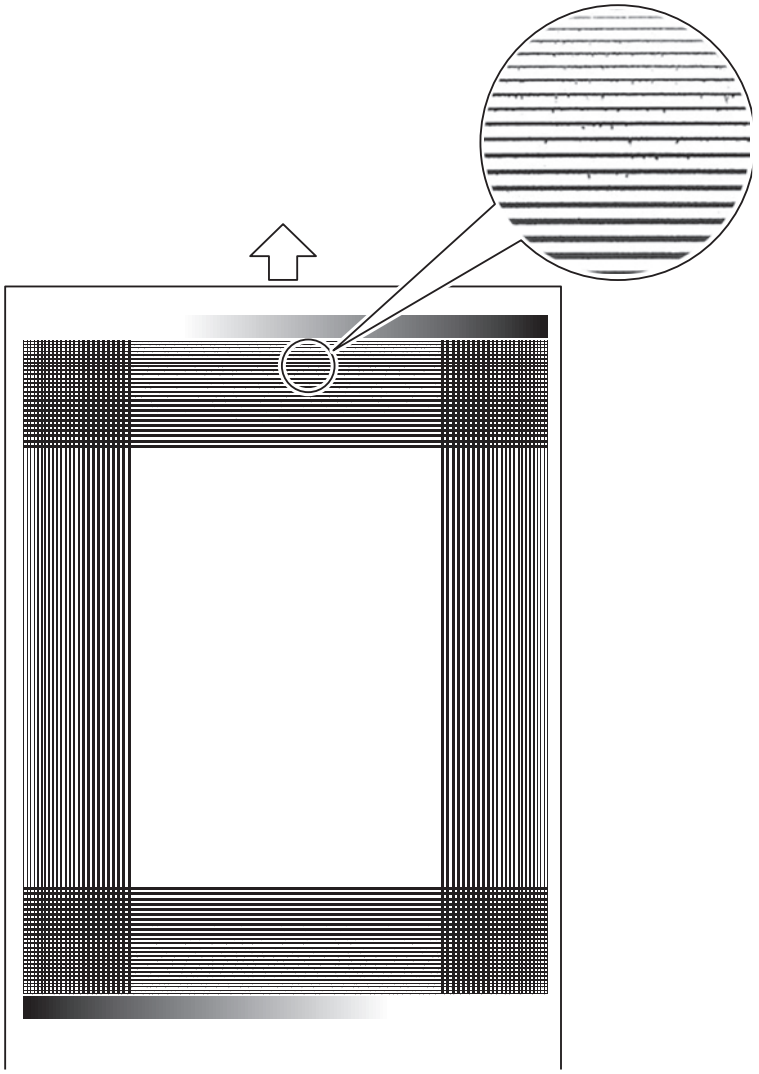
Field Remedy

Prevent bleeding using the following user mode items.

Setting items	Setting value	Description	Additional information
Adjustment/ Maintenance > Special Processing > Special Mode Z	Not used,Mode 1 through 4 (Factory setting: Mode 2)	Make a setting to perform thinning of printed image data by processing of the controller. When the value set for the mode increases, the amount of thinning increases. (The image density decreases.)	Printing time does not increase because the method of image processing performed by the controller is changed. This mode is less effective than Mode B.
Adjustment/ Maintenance > Special Processing > Special Mode B	Not used,Mode 1 through 3 (Factory setting: Not used)	Extend the initial rotation period by processing of the engine. When the value set for the mode increases, the initial rotation period is extended.	The initial rotation period in engine operation is extended, and printing time increases. The initial rotation period for each mode is shown below. Mode 1: 13 sec, Mode 2: 30 sec, Mode 3: 60 sec

T-6-1

Image sample

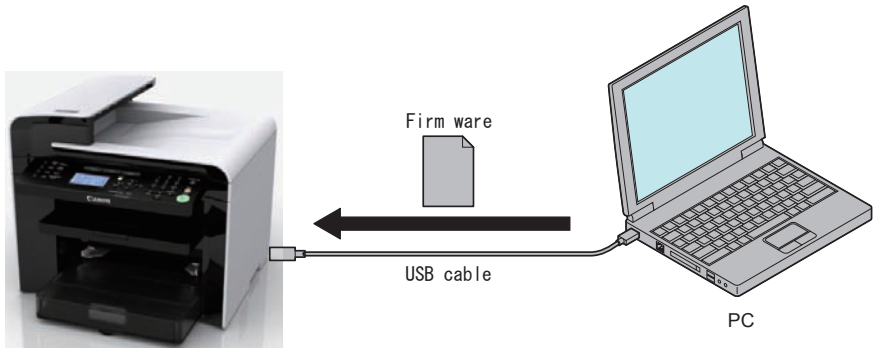


F-6-2

Version Upgrade

Overview

To upgrade versions, use the user support tool (hereinafter UST) and download firmware from a personal computer (hereinafter PC) to this product.



F-6-3

Firmware configuration

Firmware	Function	Stored in
BOOTROM	Start the main controller.	Main controller PCB
BOOTABLE	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-6-2

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*
    *: Only as for the 32 bit processor version
  - Microsoft Windows Server 2008
    (Microsoft Windows 7 to be supported)
  - Microsoft Windows 7
- 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.

Note:
Press STOP key to cancel Download mode and return to the normal operation.

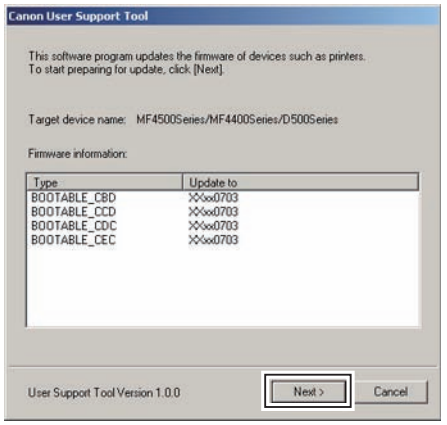
Downloading System Software

1) Open UST.

USTUPD.exe

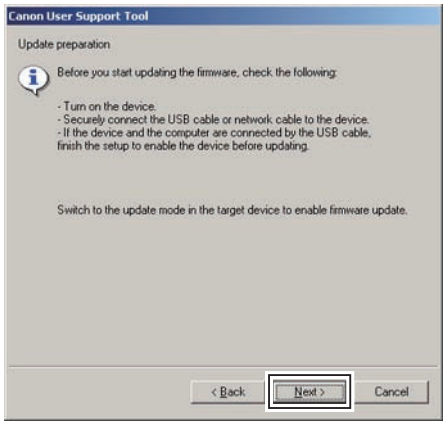
F-6-4

2) Take a note of the firmware version to upgrade and click [Next] button.



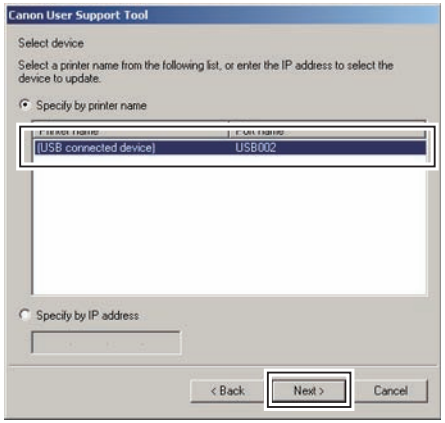
F-6-5

3) Click [Next] button.



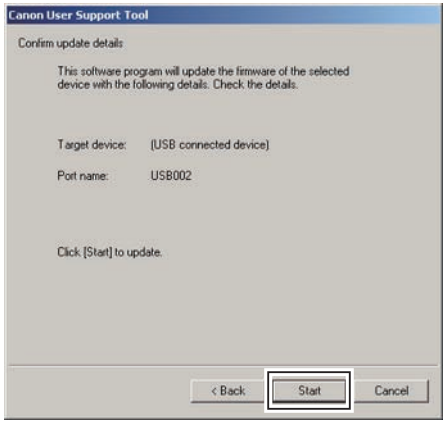
F-6-6

4) Select [USB Device] and click [Next] button.



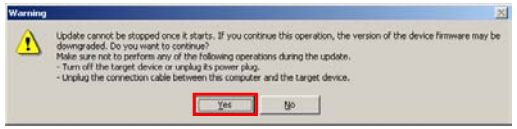
F-6-7

5) Click [Start] button.



F-6-8

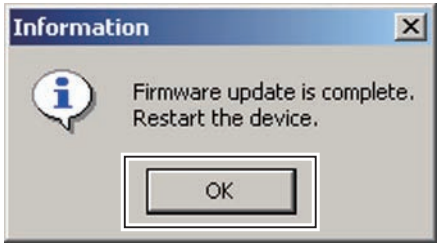
6) Click [Yes] button for the warning message to start download.



F-6-9

F-6-10

7) Click [OK] button when download is completed.



F-6-11

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 > OUTPUT > SPEC

Log Collector

Outline

A method to collect the operational status log of the host machine will be provided as a means to analyze failures occurred in the field. When a request was made to the headquarters of the sales company by the CINC division incharge of field follow-up, collect the log by the tool.

Scope of Application

- This function can be used in all the models.
- The tool is supported by Windows XP, Windows Vista and Windows 7.
- Host machine and the PC which operates the tool are connected directly by an USB Cable. Multiple host machines cannot be connected to a PC.

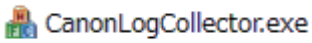
What to Prepare

- Host machine
- USB Cable (Connector shape: A-B)
- PC with a usable USB port (OS: Windows XP, Vista, Windows 7)
- Tool (CanonLogCollector_Ver1.0.0.6.zip)*

  *Obtain a tool according to instructions of Canon sales company HQ.

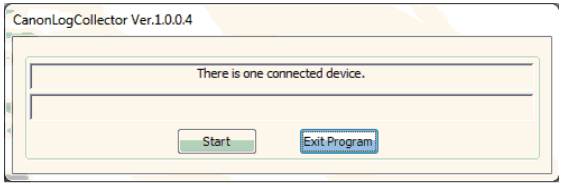
Operation Procedure

1. Connecting the USB Cable
   Connect the USB Cable while both the host machine and the PC are in operation.
2. Decompressing CanonLogCollector_Ver1.0.0.6.zip
   Create any folder with a write permission on the PC. When CanonLogCollector_ Ver1.0.0.6.zip isdecompressed, "CanonLogCollector.exe" is extracted.



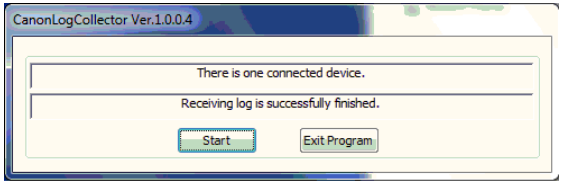
F-6-12

3. Starting the tool
   Double-click to start CanonLogCollector.exe. The CanonLogCollector screen opens.



F-6-13

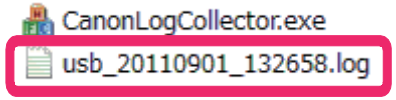
4. Collecting the log
   Press the [Start] button on the CanonLogCollector screen. When "Receiving log is successfully finished." is displayed, press the [Exit Program] button to close the tool.



F-6-14

The collected log is generated in TXT format in the folder where "CanonLogCollector.exe" is located. Bring back and send the log to the headquarters of the sales company. The log file is "usb_2011901_132658.log" in the figure below.The capacity of the log file is 300 KB or less. The time needed to collect the log is approx.10 seconds.

Note:
While the machine is in operation, log information is always added. However, the storage area is limited to 300KB, so the information is overwritten in the order from the old log information.Since log information may be overwritten if a long time passes after error occurrence, be sure to collect log as soon as possible.

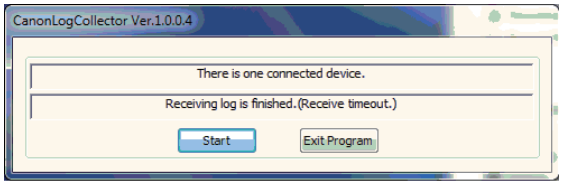


F-6-15

Naming rule for log file:
It is recorded with usb_yyyymmdd_hhmmss.log.yyyymmdd_hhmmss indicates year, month, date, and time (hour, minute, second) when the log is collected.

Troubleshooting

The log data is not properly sent from the host machine to the PC when "Receiving log is finished. (Receivetimeout.)" was displayed after the [Start] button was pressed on the CanonLogCollector screen. The size of the log file becomes approx. 1 KB. Collect the log again after setting the USB connection properly. The capacity of the log properly collected becomes 200 KB to 300 KB. Turn OFF and then ON the main power of the host machine when the log cannot be collected even after the USBconnection has been properly set on the PC.



F-6-16

7 Error Codes

- Overview
- Error Codes

Overview

This section describes codes shown in case any problem is occurred.

Since this product does not collect logs for 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	N/A	-
Alarm code	N/A	-

T-7-1

Error Codes

Code		Detection description	Remedy
E000	0000	Fixing Assembly does not start up within specified time.	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check that the heater resistance measured between 1PIN and 2PIN of the cable (J101) on the Main Controller Board is in the following range. Replace the Fixing Assembly when the resistance value is abnormal. [1] 120 V machine - Heater resistance: 16.0 Ω ±7% [2] 230 V machines - Heater resistance: 53.8 Ω ±7% (2) Check the connection of connector (J101) on the Engine Controller Board. (3) Check the connection of connector (J552) on Engine Controller Board. (4) Replace the Fixing Assembly. (5) Replace the Engine Controller Board.
E001	0000	Abnormal high-temperature detection	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check that the heater resistance measured between 1PIN and 2PIN of the cable (J101) on the Main Controller Board is in the following range. Replace the Fixing Assembly when the resistance value is abnormal. [1] 120 V machine - Heater resistance: 16.0 Ω ±7% [2] 230 V machines - Heater resistance: 53.8 Ω ±7% (2) Check the connection of connector (J101) on the Engine Controller Board. (3) Check the connection of connector (J552) on Engine Controller Board. (4) Replace the Fixing Assembly. (5) Replace the Engine Controller Board.
E003	0000	Abnormal low-temperature detection	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check that the heater resistance measured between 1PIN and 2PIN of the cable (J101) on the Main Controller Board is in the following range. Replace the Fixing Assembly when the resistance value is abnormal. [1] 120 V machine - Heater resistance: 16.0 Ω ±7% [2] 230 V machines - Heater resistance: 53.8 Ω ±7% (2) Check the connection of connector (J101) on the Engine Controller Board. (3) Check the connection of connector (J552) on Engine Controller Board. (4) Replace the Fixing Assembly. (5) Replace the Engine Controller Board.
E004	0000	Fixing power supply drive circuit error	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Replace the Engine Controller Board. (2) Replace the Fixing Assembly.
E100	0001	Error detection on any of scanner motor, laser unit, and BD detection at scanner area.	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Replace the Laser Scanner Unit. (2) Replace the Engine Controller Board.
E196	2000	ROM read/write error (Error in storing each setting values for user mode / service mode / factory mode)	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Update the set of the Controller Firmware (2) Replace the Main Controller Board.
E202	0002	Contact Sensor HP error, Failure in return	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check the connection of Flat Cable between Main Controller Board (J5) and Contact Sensor. (2) Replace the Flat Cable between Main Controller Board (J5) and Contact Sensor. (3) Replace the Contact Sensor. (4) Replace the Main Controller Board.

Code		Detection description	Remedy
E225	0001	Light intensity of a lamp is less or equal to the criteria	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check the connection of Flat Cable between Main Controller Board (J5) and Contact Sensor. (2) Replace the Flat Cable between Main Controller Board (J5) and Contact Sensor. (3) Replace the Contact Sensor. (4) Replace the Main Controller Board.
E301	0001	Insufficient light intensity in shading	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check the connection of Flat Cable between Main Controller Board (J5) and Contact Sensor. (2) Replace the Flat Cable between Main Controller Board (J5) and Contact Sensor. (3) Replace the Contact Sensor. (4) Replace the Main Controller Board.
E736	0000	Communication error with CCU/modem, or no FAX board installed on FAX model.	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check the connection of connectors between the Main Controller Board (J601, J602) and the FAX-NCU Board (J1201, J1204). (2) Replace the connectors between the Main Controller Board (J601, J602) and the FAX-NCU Board (J1201, J1204). (3) Replace the FAX-NCU Board. (4) Replace the Main Controller Board.
E740	0002	Error detection on either Network Board or Mac address	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check the connection of the network cable. (2) Replace the Main Controller Board.
E744	0002	Language file error	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. Update the set of the Controller Firmware
	4000	Engine ID error (Invalid engine connection is detected)	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Check the Engine Controller Board. (2) Update the Engine Firmware. (3) Update the set of the Controller Firmware
	6000	Communication error with Wireless LAN board.	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Replace the Wireless LAN Board. (4) Replace the Main Controller Board.
E806	0000	Fan Motor cannot rotate at specified revolution speed.	When the same error repeatedly occurs after several times of turning the power OFF/ON, execute the following remedies. (1) Replace the Main Fan Unit. (2) Replace the Engine Controller Board.

T-7-2

8 Service Mode

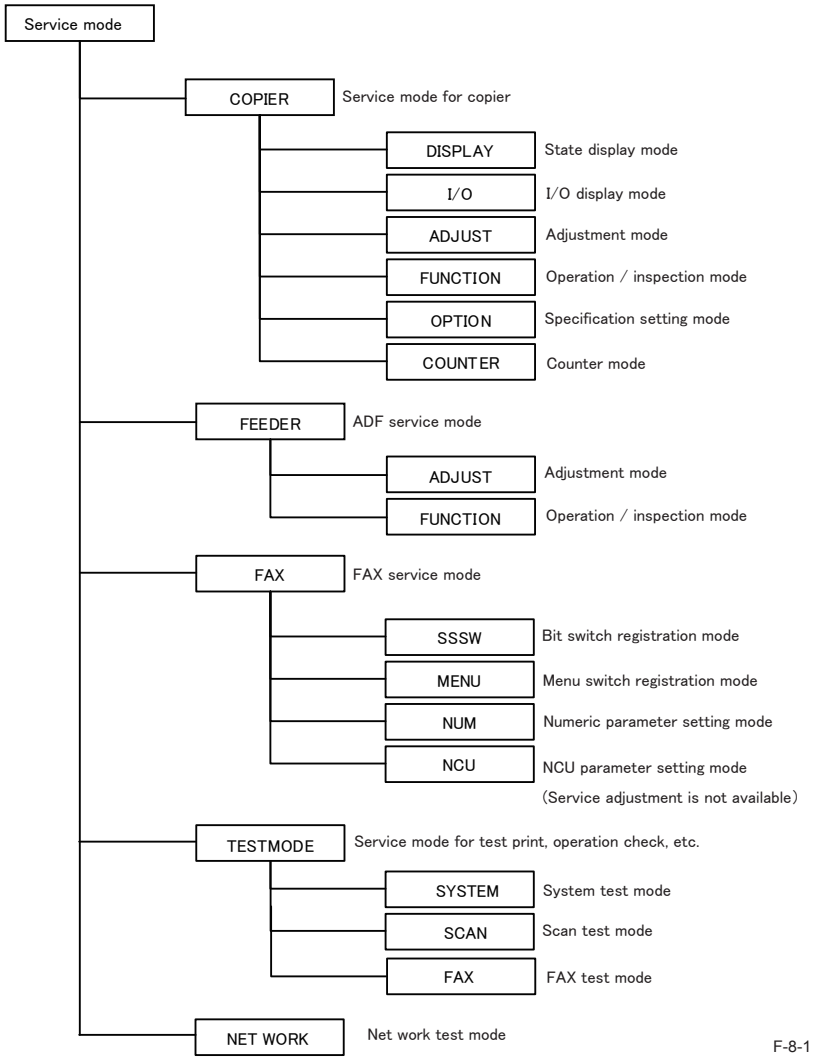
- Overview
- COPIER
- FEEDER
- FAX
- TESTMODE

Overview

Entering Service Mode.

Contact the sales company for the method to enter service mode.

Service Mode Menu



F-8-1

COPIER

DISPLAY

VERSION

COPIER>DISPLAY>VERSION	
Sub item	Description
MAIN	Display version/checksum/date of Bootable (Product program area)
ECONT	Display ROM version of recording engine

T-8-1

CCD

COPIER>DISPLAY>CCD			
Sub item	Description	Common to all models	ADF model only
FB-TARGET-B	Shading target value for BLUE of Reader Copyboard	Yes	
FB-TARGET-G	Shading target value for GREEN of Reader Copyboard	Yes	
FB-TARGET-R	Shading target value for RED of Reader Copyboard	Yes	
FB-TARGET-BW	Shading target value of Reader Copyboard in black and white	Yes	
DF-TARGET-B	Shading target value for BLUE of DF		Yes
DF-TARGET-G	Shading target value for GREEN of DF		Yes
DF-TARGET-R	Shading target value for RED of DF		Yes
DF-TARGET-BW	Shading target value of DF in black and white		Yes

T-8-2

I/O

R-CON

COPIER>I/O>R-CON		
Address	BIT	Contents of display
P001	0	Sensor state display (DES)
	1	Sensor state display (DS)

T-8-3

ADJUST

■ ADJ-XY

COPIER>ADJUST>ADJ-XY			
Sub item	Description	Common to all models	ADF model only
ADJ-X	Adjustment value of image reading start position (Horizontal scanning direction) (X direction) [Applicable case] When the reading position of vertical scanning direction in fixed reading is incorrect [Adjustment] • Reduce the setting value when non-image width is larger than criteria. • Increase the setting value when the area out of original area is copied. • When increment the setting value by 1, the image reading start position is moved toward trailing edge by 0.1mm. Setting range: - 30 ~ 30 [Value after RAM clear: 0]	Yes	
STRD-POS	Adjusting reading position in DF stream reading [Applicable case] When the reading position of vertical scanning direction in DF stream reading is incorrect [Adjustment] • When increment the setting value by 1, image reading start position is moved toward leading edge by 0.1mm. Setting range: - 30 ~ 30 [Value after RAM clear: 0]		Yes
ADJ-X-MG	Fine adjustment (0.1% precision) of magnification ratio in Horizontal scanning direction in copyboard reading ±3% [Applicable case] When copy output image is larger or smaller than original image [Adjustment] Adjust by comparing the copy output and original. Increase the value when output image is smaller. Decrease the value when output image is larger. Setting range: - 30 ~ 30 [Factory default settings/ Value after RAM clear] 0 [Caution] This adjustment is targeted to adjust the image position on copy output. This may affect to the image of SCAN.	Yes	

T-8-4

■ CCD

COPIER>ADJUST>CCD			
Sub item	Description	Common to all models	ADF model only
FBTAR-R	Shading target value for RED in copyboard reading Setting range: 128 ~ 384 [Value after RAM clear: 290]	Yes	
FBTAR-G	Shading target value for GREEN in copyboard reading Setting range: 128 ~ 384 [Value after RAM clear: 284]	Yes	
FBTAR-B	Shading target value for BLUE in copyboard reading Setting range: 128 ~ 384 [Value after RAM clear: 278]	Yes	
FBTAR-BW	Shading target value in copyboard black and white reading Setting range: 128 ~ 384 [Value after RAM clear: 301]	Yes	
DFTAR-R	Shading target value for RED in DF reading Setting range: 128 ~ 384 [Value after RAM clear: 334]		Yes
DFTAR-G	Shading target value for GREEN in DF reading Setting range: 128 ~ 384 [Value after RAM clear: 323]		Yes
DFTAR-B	Shading target value for BLUE in DF reading Setting range: 128 ~ 384 [Value after RAM clear: 318]		Yes
DFTAR-BW	Shading target value in black and white reading Setting range: 128 ~ 384 [Value after RAM clear: 341]		Yes

T-8-5

FUNCTION

CLEAR

COPIER>FUNCTION>CLEAR			
Sub item	Description	Common to all models	Network model and FAX model only
TEL-USER	Clear the user data and the registered address data. SSSW is not cleared. When this service mode is executed, a message "REBOOTING..." is displayed on the Control Panel, and the host machine is automatically restarted.	Yes	
SRVC-DAT	SERVICE DATA is cleared. User data is not cleared.	Yes	
HIST	Each log data is cleared. ACT-HIST: Communication log is cleared. ACT-HIST: Each print log is cleared.	Yes	
PWD-CLEAR	Password of the system administrator is cleared.		Yes
ALL	The following data are cleared. • USER DATA • SERVICE DATA • JOB ID • Each log • CLEAR DATE USER DATA/ SERVICE DATA are reset to the default location value. Appropriate values for LOCAL / SIZE-LC needs to be preset before executing of CLEAR -> ALL When this service mode is executed without setting the appropriate values for LOCAL / SIZE-LC, factory default settings are continued to use. When this service mode is executed, a message "REBOOTING..." is displayed on the Control Panel, and the host machine is automatically restarted.	Yes	

T-8-6

MISC-R

COPIER>FUNCTION>MISC-R	
Sub item	Description
SCANLAMP	Execution of lighting function for Scanning Lamp.

T-8-7

MISC-P

OUTPUT

When outputting the report, place paper in the Pickup Cassette, and remove paper from the Multi-purpose Tray.
If paper is placed in the Multi-purpose Tray, the report is not output even if paper is placed in the Pickup Cassette.

COPIER>FUNCTION>MISC-P	
Sub item	Description
SRVC-DAT	To output the system data list/ system dump list as follows;
SYS-DAT	To output the system data list. Service software switches and parameters used in FAX function are mainly outputted.
SYS-DMP	To output the system dump list. Service data such as the number of communications, the number of receiving pages and sending pages, and the number of error are outputted.
CNTR	To output the counter report. Counter values of use trend for reading, storage, communications, and copy are displayed.
SPEC	To output the spec report. Current device status is printed out.

T-8-8

SYSTEM

COPIER>FUNCTION>SYSTEM	
Sub item	Description
DOWNLOAD	To switch to the download mode.

T-8-9

PARAM

COPIER>FUNCTION>PARAM	
Sub item	Description
EXC-NAVI	To switch of installation navigation. Setting value 0: Enable (Default) 1: Disable Set this switch to 1 after the termination of installation navigation. Installation navigation is not executed when this switch is 1 at next start-up. When this service mode is executed, a message "REBOOTING..." is displayed on the Control Panel, and the host machine is automatically restarted.

T-8-10

SPLMAN

COPIER>FUNCTION>SPLMAN			
Sub item	Description	Common to all models	Double sided printing model only
TOP-MPT	Adjustment of leading edge margin when feeding from MP tray. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 104)	Yes	
TOP-DUP-MPT	Adjustment of leading edge margin on both sides/ back side when feeding from MP tray. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 104)		Yes
LEFT-MPT	Adjustment of left margin when feeding from MP tray. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 97)	Yes	
LEFT-DUP-MPT	Adjustment of left margin on both sides/ back side when feeding from MP tray. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 96)		Yes
TOP-CST	Adjustment of leading edge margin when feeding from cassette. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 104)	Yes	
TOP-DUP-CST	Adjustment of leading edge margin on both sides/ back side when feeding from cassette. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 104)		Yes
LEFT-CST	Adjustment of left margin when feeding from cassette. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 97)	Yes	
LEFT-DUP-CST	Adjustment of left margin on both sides/ back side when feeding from cassette. Adjustment in: 0.1mm Setting range: 50 ~ 150 (Default value: 96)		Yes

T-8-11

OPTION

BODY

COPIER>OPTION>BODY	
Sub item	Description
LOCALE	To set country group. 1: Japan 2: North America 3: Korea 4: China 5: Taiwan 6: Europe 7: Asia 8: Oceania Execute the following service mode to enable this setting.

T-8-12

ACC

COPIER>OPTION>ACC	
Sub item	Description
WLAN	-
WLANMODE	Shows whether the Wireless LAN IEEE 802.11/n standard is enabled/disabled. 0: Disabled (When COPIER > OPTION > BODY > LOCALE is set to "6", this is the default setting.) 1: Enabled (When COPIER > OPTION > BODY > LOCALE is set to the value other than "6", this is the default setting.)
WLANSERIAL	Use this setting to use the serial interface exclusively for the WiFi function. Use this setting to take various measurement of Wireless LAN. 0: Normal mode 1: Measurement mode

T-8-13

SERIAL

COPIER>OPTION>SERIAL	
Sub item	Description
SN-MAIN	Enter the device serial number written on the rating name plate of the host machine.

T-8-14

COUNTER

TOTAL

COPIER>COUNTER>TOTAL				
Display/ Setting/ Adjustment rage: 0 ~ 999,999 Return to 0 when exceeding 999,999.				
Sub item	Description	Common to all models	FAX model only	Double sided printing model only
SERVICE1	Total counter 1 for service Count up when a paper is ejected from the machine (regardless of sizes such as large size and small size.)	Yes		
SERVICE2	Total counter 2 for service Count up when a paper is ejected from the machine (regardless of sizes such as large size and small size.)	Yes		
TTL	Total counter (Copier + Printer + FAX + Combination)	Yes		
COPY	Total copy counter Count up when a paper is ejected from the machine after execution of copy operation.	Yes		
PDL-PRT	PDL printing counter Count up when PDL printing, ejecting a paper from the machine, and duplex stacking. Blank paper is also counted. Count up by 1 regardless of large or small.	Yes		
FAX-PRT	FAX reception printing counter Count up when FAX reception printing, ejecting a paper from the machine, and duplex stacking. Blank paper is also counted. Count up by 1 regardless of large or small. It can be cleared.		Yes	
RPT-PRT	Report printing counter Count up when report printing, ejecting a paper from the machine, and duplex stacking. Blank paper is also counted. Count up by 1 regardless of large or small. It can be cleared.	Yes		
2-SIDE	2 sided copy/ print counter Count up the number of passing through the duplex path in copying/ printing when ejecting a paper from the machine and duplex stacking. Blank paper is also counted. Count up by 1 regardless of large or small. It can be cleared.			Yes
SCAN	Scanning counter Count up the number of scanning when scanning is completed. Count up by 1 regardless of large or small. It can be cleared.	Yes		

T-8-15

PICK-UP

COPIER>COUNTER>PICK-UP			
Display/ Setting/ Adjustment rage: 0 ~ 999,999 Return to 0 when exceeding 999,999.			
Sub item	Description	Common to all models	Double sided printing model only
C1	Total counter of cassette 1 pickup Display the number of pages picked up from cassette 1.	Yes	
MF	Total counter of multi-purpose tray pickup Display the number of pages picked up from multi-purpose tray.	Yes	
2-SIDE	Total counter of 2-sided pickup Display the number of pages by 2-sided pickup.		Yes

T-8-16

FEEDER

COPIER>COUNTER>FEEDER		
Display/ Setting/ Adjustment rage: 0 ~ 999,999 Return to 0 when exceeding 999,999.		
Sub item	Description	ADF model only
FEED	Total counter of document pickup by ADF	Yes

T-8-17

JAM

COPIER>COUNTER>JAM				
Display/ Setting/ Adjustment rage: 0 ~ 999,999 Return to 0 when exceeding 999,999.				
Sub item	Description	Common to all models	ADF model only	Double sided printing model only
TOTAL	Total jam counter	Yes		
FEEDER	Total jam counter for feeder		Yes	
2-SIDE	Jam counter for duplex unit			Yes
MF	Jam counter for multi-purpose tray	Yes		
C1	Jam counter for cassette 1	Yes		

T-8-18

FEEDER

ADJUST

FEEDER>ADJUST		
Sub item	Description	ADF model only
DOCST	Adjustment of the page front reading position when using ADF(common in SADF model and DADF model) Setting range: -30 ~ 30	Yes
LA-SPD	Adjustment of magnification ratio in vertical scanning direction in stream feeding Setting range: -200 ~ 200	Yes

T-8-19

FUNCTION

FEEDER>FUNCTION		
Sub item	Description	ADF model only
FEED-CHK	Paper feeding test for only ADF Setting value 1: SADF 2:DADF	Yes
SL-ON	Operation start-up for solenoid	Yes
MTR-ON	Operation start-up for motor	Yes
FEED-ON	Paper feeding test for only ADF	Yes

T-8-20

FAX

List of SSSW

- FAX model only

FAX>SSSW		
SSSW No.	Bit No.	Function
SW 01		(Errors, COPY functions)
	Bit 0	Output error codes for service technicians
	Bit 1	Error in memory dump
	Bit 2	Enter the password for transferring received confidential image
	Bit 3	Prohibit COPY
	Bit 4	Display No. 300s
	Bit 6	Prohibit users from setting date/time
	Bit 7	Collectively clear user setting prohibition
SW 02		(Setting for network connection criteria)
	Bit 0	Do not start when memory clear list is unable to output
	Bit 4	V34 CCRTN OFF
	Bit 7	Connect the terminal as F network type 2
SW 03		(Echo measures)
	Bit 0	Check EQM of TCF
	Bit 1	Apply echo protect tone to V.29
	Bit 4	Heard DIS twice
	Bit 5	First DIS interference
	Bit 6	Interfered DIS frequency
	Bit 7	Output 1080Hz before CED
SW 04		(Measures against communication troubles)
	Bit 0	Monitor LC
	Bit 1	Check CI signal frequency
	Bit 2	V21 end flag
	Bit 3	Prohibit T.30 node F kept by both parties
	Bit 4	T.30 node F echo timer
	Bit 5	Check CI signal frequency when setting PBX
	Bit 6	Do not send CNG for manual outgoing transmission
	Bit 7	Do not send CED for manual incoming transmission
SW 05		(Standard functions, DIS signal setting)
	Bit 1	mm/inch conversion (text mode)
	Bit 2	mm/inch conversion (text and picture / picture mode)
	Bit 3	Prohibit DIS from transmitting bit33 and the followings.
	Bit 4	Declare cut sheets
	Bit 5	Declare LRT/LGL in DIS
	Bit 6	Prohibit ECM outgoing transmission
	Bit 7	Prohibit ECM incoming transmission

FAX>SSSW		
SSSW No.	Bit No.	Function
SW 06		(Setting of reading criteria)
	Bit 0	Move from DES to pre-scan position
	Bit 1	Pre-scan at time other than power-ON
	Bit 2	Restrict document length
	Bit 3	Stamp option
	Bit 4	Reading width 0:A4 1: LTR
	Bit 5	Record memory copy time sharing
	Bit 6	Variable resolution at COPY
	Bit 7	Half tone + super fine
SW 07-SW 11		
		Not in use
SW 12		(Page timer setting)
	Bit 0	1 page timeout (outgoing transmission)
	Bit 1	
	Bit 2	1 page timeout (HT transmission)
	Bit 3	
	Bit 4	1 page timeout (incoming transmission)
	Bit 5	
	Bit 7	1 page timeout
SW 13		
	Bit 0	Prohibit relay broadcasting / transfer while receiving relay / transfer
	Bit 1	Response to faulty image while receiving relay / transfer
	Bit 2	Convert mm/inch when transmitting received image
SW 14		
	Bit 0	
	Bit 1	Standard paper size type <NADA>COPIER > OPTION > BODY > MODEL-SZ
	Bit 2	Convert inch to mm in both main/vertical scanning directions or only in vertical scanning direction
	Bit 3	Convert inch to mm only for OCR transmission
	Bit 4	Declare resolution for Inch series
SW 15		
	Bit 1	Polarity memory timing at dial-in
	Bit 2	Receive incoming calls to ND circuit: device circuit
	Bit 6	Detect continuous signals when switching F/T
SW 16-SW 17		
		Not in use
SW 18		
	Bit 0	Detect carrier disconnection between DCS and TCF
	Bit 1	Waiting time for carrier disconnection between DCS and TCF
	Bit 2	Prohibit communication control for IP network
SW 19-SW 21		
		Not in use

FAX>SSSW		
SSSW No.	Bit No.	Function
SW 22		
	Bit 0	Prohibit NSX transmission
	Bit 1	Prohibit separated A4 record
	Bit 2	Prohibit broadcasting transmission
	Bit 3	Prohibit manual polling actions
	Bit 4	Prohibit manual transmission when transmitting archives
	Bit 6	With archive transmission function
SW 23-SW 24		
		Not in use
SW 25		(Setting for report display function)
	Bit 0	Prioritize the received telephone number to the dialed number
	Bit 1	Prioritize the received abbreviated name to the dialed abbreviated name
	Bit 2	Regard a received blank CIS as an unreceived CIS
	Bit 3	Message language selection for user SW
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
SW 29		
		Not in use
SW 30		
	Bit 0	Support for 1284 device ID
	Bit 5	New dial tone detection method
SW 31		
		Not in use
SW 32		
	Bit 0	Canon/NTT NSX switching SW
	Bit 5	0:NCU2004 1:NCU2002
SW 33-SW 50		
		Not in use

T-8-21

List of Menu

- FAX model only

Menu switch registration mode		
No.	Parameter	Selection
01-04	Not in use	
05	ON/OFF of NL equalizer	0: OFF 1: ON
06	Telephone line monitor	0-3 0: DIAL 1: SERVICEMAN 1 2: SERVICEMAN 2 3: OFF
07	Transmission level (ATT)	0-15
08	Upper limit of V.34 modulation speed	0-5 0: 3429BAUD 1: 3200BAUD 2: 3000BAUD 3: 2800BAUD 4: 2743BAUD 5: 2400BAUD
09	Upper limit of V.34 data speed	0-13 0: 33.6kbps, 1:31.2, 2: 28.8, 3: 26.4, 4: 24.0, 5: 21.6, 6: 19.2, 7: 16.8, 8: 14.4, 9: 12.0, 10: 9.6, 11: 7.2, 12: 4.8, 13: 2.4
10	Pseudo-CI signal frequency	0-2 0: 50Hz, 1: 25Hz, 2: 17Hz
11-20	Not in use	

T-8-22

List of NUM

- FAX model only

Numeric parameter setting mode		
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 60s
06	NCC pause (after ID code)	1 to 60s
07-09	Not in use	
10	T.30 T0 timer	55s 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 55s by default)
14	Not in use	
15	Threshold between hooking and 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 pseudo-CI cadence (short)	0 to 999
22	Duration to deactivate pseudo-CI cadence (long)	0 to 999
23	CNG detection level when switching between FAX and TEL	0 to 7
24	Pseudo-RBT outgoing level when switching between FAX and TEL	10 to 20 (100v), 0 to 20 (120, 230v)
25	CNG monitor duration while the answering device is activated	0 to 999
26	No signal detection level while the answering device is activated	0 to 7
27	Duration to detect preamble of V21 low-speed flag	20 (*10ms)
28-50	Not in use	
51	Threshold to detect hook	10 to 9999
53	Set DTMF calling counts when receiving FAX remotely	0 to 9999
54	Set BusyTone outgoing duration when using handset	0 to 9999
55-73	Not in use	
78-80	Exclusive use of a developer	

T-8-23

List of NCU

- FAX model only

TONE/PULSE

(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
TONE		01:	Tone signal sending time (PSTN)	10 to 9999 (ms)
		02:	Minimum pause time (PSTN)	10 to 9999 (ms)
PULSE	PULSE FORM		Pulse digit format	0 -> DP (N)
				1 -> DP (N+1)
				2 -> DP (10-N)
	PULSE NUM	01:	Pulse dial speed (10pps)	5 to 300 (x0.1pps)
		02:	Pulse dial speed (20pps)	5 to 300 (x0.1pps)
		03:	Pulse dial make ratio	10 to 90 (%)
		04:	Minimum pause time	10 to 9999 (ms)

T-8-24

TONE/PULSE

(1) Bit switch

Bit No.	Function	1	0
Bit 0	Frequency detection method	Modem	Tonal counter
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-8-25

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;	T0 timer	0 to 9999 (x10ms)
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 7
08;	Number of valid tone detection	0 to 9999 (times)

T-8-26

2nd DIAL TONE

(1) Bit switch

Bit No.	Function	1	0
Bit 0	Frequency detection method	Modem	Tonal counter
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-8-27

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;	T0 timer	0 to 9999 (x10ms)
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 7
08;	Number of valid tone detection	0 to 9999 (times)

T-8-28

BUSY TONE0

(1) Bit switch

Bit No.	Function	1	0
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-8-29

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;		
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 7
08;	Number of valid tone detection	0 to 9999 (times)

T-8-30

BUSY TONE1

(1) Bit switch

Bit No.	Function	1	0
Bit 0			
Bit 1			
Bit 2	Signal frequency	Changed	Not changed
Bit 3	RBT signal detection	Detected	Not detected
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-8-31

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;		
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 7
08;	Number of valid tone detection	0 to 9999 (times)

T-8-32

REORDER TONE

(1) Bit switch

Bit No.	Function	1	0
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-8-33

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;		
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 7
08;	Number of valid tone detection	0 to 9999 (times)

T-8-34

AUTO RX

(1) Numeric value parameter

Parameter No.	Function	Setting range
01;	CI ON time	0 to 9999 (x10ms)
02;	CI long off time	0 to 9999 (x10ms)
03;	CI off time	0 to 9999 (x10ms)
04;	CL long off time	0 to 9999 (x10ms)
05;	CI MAX off time	0 to 9999 (x10ms)
06;	CI wait time	0 to 9999 (x10ms)
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-8-35

CNG DETECT

(1) Numeric value parameter

Parameter No.	Function		Setting range
01;	At F/T switching	CNG MIN ON time	0 to 9999 (x10ms)
02;		CNG MAX ON time	0 to 9999 (x10ms)
03;			
04;			
05;			
06;		Hit ratio	0 to 9999 (%)
07;	At direct connecting to answering phone	CNG MIN ON time	0 to 9999 (x10ms)
08;		CNG MAX ON time	0 to 9999 (x10ms)
09;		Tolerable time of instantaneous interruption	0 to 9999 (x10ms)
10;			
11;		Number of detection	0 to 9999 (Times)
12;		Hit ratio	0 to 9999 (%)

T-8-36

RKEY

(1) Numeric value parameter

Parameter No.	Function	Setting range
01;	Connection time of flash	0 to 9999 (x10ms)
02;	Connection time of grounding wire	0 to 9999 (x10ms)
03;		

T-8-37

PBX DIAL TONE

(1) Bit switch

Bit No.	Function	1	0
Bit 0	Frequency detection method	Modem	Tonal counter
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-8-38

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;	T0 timer	0 to 9999 (x10ms)
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 9
08;	Number of valid tone detection	0 to 9999 (times)

T-8-39

PBX BUSY TONE

(1) Bit switch

Bit No.	Function	1	0
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-8-40

(2) Numeric value parameter

Parameter No.	Function	Setting range
01;	T0 timer	0 to 9999 (x10ms)
02;	T1 timer	0 to 9999 (x10ms)
03;	T2 timer	0 to 9999 (x10ms)
04;	T3 timer	0 to 9999 (x10ms)
05;	T4 timer	0 to 9999 (x10ms)
06;	Signal detection table	0 to 16
07;	Signal detection level	0 to 9
08;	Number of valid tone detection	0 to 9999 (times)

T-8-41

TESTMODE

SYSTEM

DRAM

TESTMODE>SYSTEM>DRAM	
Sub item	Description
TEST1	Data read/write check for DRAM (except system work area)

T-8-42

SPEAKER

TESTMODE>SYSTEM>SPEAKER		
Sub item	Description	FAX model only
ON	Volume level is stepped up by 1 from minimum to maximum every time pressing OK key. When the volume level is reached to maximum, it changes to silence and minimum volume.	Yes
MIN	Play with minimum volume by pressing OK key.	Yes
MAX	Play with maximum volume by pressing OK key.	Yes

T-8-43

SCAN

ADJUST

ADF-ADJ

TESTMODE>SCAN>ADJUST>ADF-ADJ		
Sub item	Description	ADF model only
DF-SPEED	Enter the adjustment value for the magnification ratio in vertical scanning direction in stream feeding Setting range: -200 ~ 200	Yes
DF-OFFSET	Enter for the adjustment of DF original stop position Setting value: -30 ~ 30	Yes

T-8-44

SENSOR

TESTMODE>SCAN>ADJUST>SENSOR	
Sub item	Description
TRAY PAPER SENS	Display the status of Multi Pickup Sensor 1: Paper existing 0: No paper
REGI SENS	Display the status of Leading Edge Sensor 1: Paper existing 0: No paper
ESS DOOR SENS	Display the status of Delivery Tray Open/ Close Switch 1: OPEN 0: CLOSE

T-8-45

■ ADFTEST

TESTMODE>SCAN>ADFTEST			
Sub item	Description	Single-sided ADF model	Double-sided ADF model
SPEED	For testing of ADF feeding speed. Execute feeding test of ADF motor at specified speed. [Setting value] STD-FAX Fine-FAX SFine-FAX RGB-600dpi RGB-300dpi RGB-150dpi Gray600dpi Gray300dpi Gray150dpi Mono600dpi Mono300dpi Mono150dpi	Yes	Yes
2-SIDE	Specify ON/OFF for duplex mode		Yes
COUNT	Page counter for originals: Existing	Yes	Yes
START	Start feeding	Yes	Yes

T-8-46

■ BOOKFEED

TESTMODE>SCAN>BOOKFEED	
Sub item	Description
SPEED	For testing of feeding speed. Execute feeding test of the book motor at specified speed. [Setting value] STD-FAX Fine-FAX SFine-FAX RGB-600dpi RGB-300dpi RGB-150dpi Gray600dpi Gray300dpi Gray150dpi Mono600dpi Mono300dpi Mono150dpi
PAGE	Display the number of bookfeed pages
START	Start of bookfeed
STOP	End of bookfeed

T-8-47

FAX

■ MODEM

TESTMODE>FAX>MODEM		
Sub item	Description	FAX model only
FREQ	Transmit selected frequency in closed DC circuit using tone generation function of modem. [Setting values] 462Hz 1100Hz 1300Hz 1500Hz 1650Hz 1850Hz 2100Hz	Yes
G3TX	Transmit selected signal pattern in closed DC circuit at selected frequency using G3 signal transmission function of modem. [Setting values] 300bps 2400bps 4800bps 7200bps 9800bps TC7200 TC9600 12000bp 14400bp	Yes
DTMFTX(LONG)	Transmit DTMF signal using DTMF transmission function of modem after DC circuit closure.	Yes
V34G3TX	Transmit selected frequency using G3 signal transmission function (V.34) after DC circuit closure. [Setting values] SPEED 3429baud 3200baud 3000baud 2800baud 2743baud 2400baud	Yes

T-8-48

RELAY-1

TESTMODE>FAX>MODEM>RELAY-1		
Sub item	Description	FAX model only
CML	Test ON/OFF of port SW and relay on NCU Setting value: ON, OFF	Yes
H	Test ON/OFF of port SW and relay on NCU Setting value: ON, OFF	Yes

T-8-49

FACULTY

TESTMODE>FAX>FACULTY		
Sub item	Description	FAX model only
G34800TX	Transmit the frequency of 4800bps using G3 signal transmission function after DC circuit closure.	Yes
DETECT1	Ring detection Check the status (ON, OFF) of hook and Ci, Fc from i line.	Yes
DETECT2	CNG detection test 1 Execute CNG signal check and FED check. Detect CNG after CML relay is ON.	Yes
DETECT3	CNG detection test 2 Execute CNG signal check and FED check. Detect CNG after CML relay is OFF.	Yes

T-8-50

PANEL

TESTMODE>FAX>PANEL	
Sub item	Description
KEY CHECK START	Key check [Applicable case] Check if all keys functions normally after replacement of Control Panel.
LED CHECK START	LED check [Applicable case] Check if all LEDs are lit normally after replacement of Control Panel.
LCD CHECK START	LCD check [Applicable case] Check if LCD can display without any missing dot after replacement of Control Pannel.

T-8-51

NETWORK

SSSW

NETWORK>SSSW		
Sub item	BIT	Description
SW01 ~ SW09	0	Not in use
	1	
	2	
	3	
	4	
	5	
	6	
	7	
SW10 Network Config System	0	Not in use
	1	
	2	
	3	Turn ON(Enable)/ OFF(Disable) for acquisition of host name (Option 12) by DHCP Default value: 0
	4	Turn ON(Enable)/ OFF(Disable) for registration of host name (Option 81) by DHCP Default value: 1
	5	Not in use
	6	
	7	
SW11 ~ SW50	0	Not in use
	1	
	2	
	3	
	4	
	5	
	6	
	7	

T-8-52

Appendix

- Service Tools
- Solvent/Oil List
- General Circuit Diagram
- General Timing Chart

Service Tools

The followings are the required tools to perform the service operation.

No.	Tool name	Tool number	Usage/remarks
1	Tool case	TKN-0001	
2	Jumper wire	TKN-0069	With clip
3	Gap gauge	CK-0057	0.02 to 0.03mm
4	Spring scale	CK-0058	To check cassette spring pressure
5	Philips screwdriver	CK-0101	M4, M5 Length: 363mm
6	Philips screwdriver	CK-0104	M3, M4 Length: 155mm
7	Philips screwdriver	CK-0105	M4, M5 Length: 191mm
8	Philips screwdriver	CK-0106	M4, M5 Length: 85mm
9	Flat-blade screwdriver	CK-0111	
10	Precision slot head screwdriver	CK-0114	6 pieces set
11	Hex-key wrench set	CK-0151	5 pieces set
12	Smooth file	CK-0161	
13	Hex screwdriver	CK-0170	M4, Length: 107mm
14	Nipper	CK-0201	
15	Long-nose pliers	CK-0202	
16	Pliers	CK-0203	
17	Stop-ring pliers	CK-0205	For shaft ring
18	Crimping tool	CK-0218	
19	Tweezers	CK-0302	
20	Scale	CK-0303	150mm For measurement
21	Plastic hummer	CK-0314	
22	Brush	CK-0315	
23	Penlight	CK-0327	
24	Plastic bottle	CK-0328	
25	Lint-free paper	CK-0336	500SH/PKG
26	Oiler	CK-0349	30cm3
27	Plastic bottle	CK-0351	30cm3
28	Digital multi-meter	FY9-2032	

T-9-1

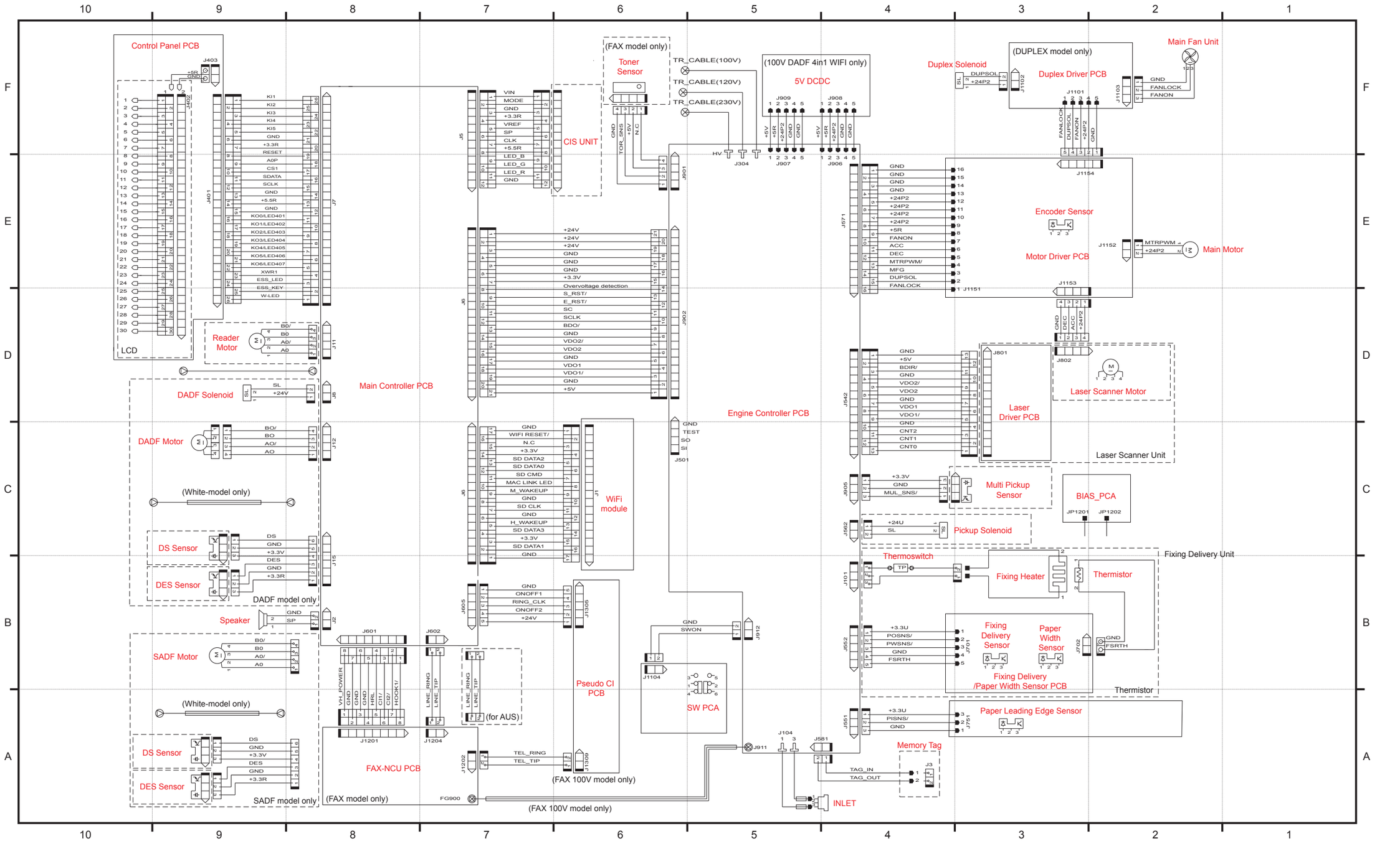
Solvent/Oil List

Name	Usage	Remarks
Ethyl alcohol	Cleaning e.g.) Metal parts Grease Toner contamination	• Local procurement • Keep fire away
Lubricant	• Apply it on gears etc. • Apply it on shafts and shaft supports etc.	• tool number: HY9-0007 (Dow Corning made Molykote EM-50L)

T-9-2

General Circuit Diagram

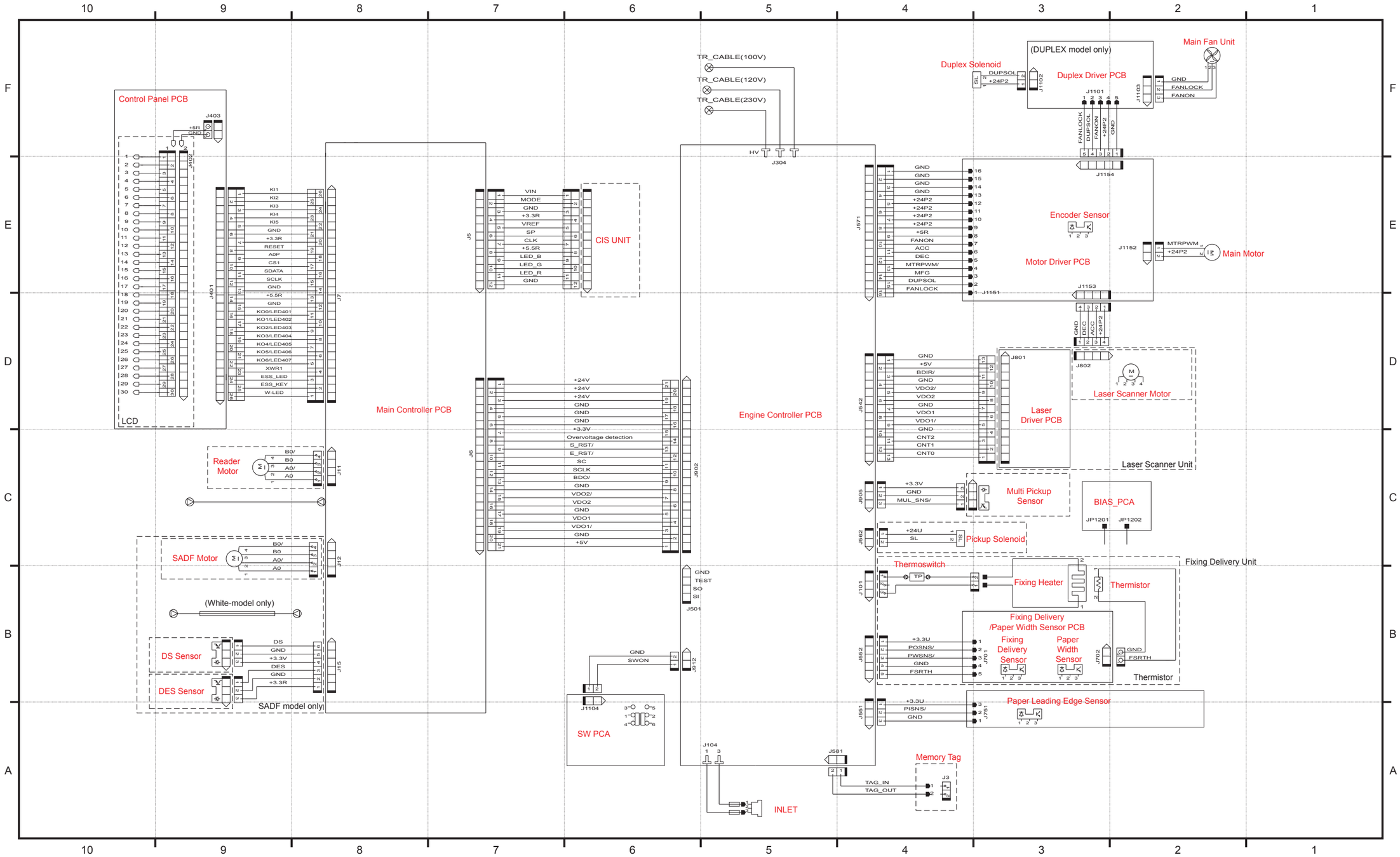
MF4890dw/MF4880dw/MF4870dn



P.1

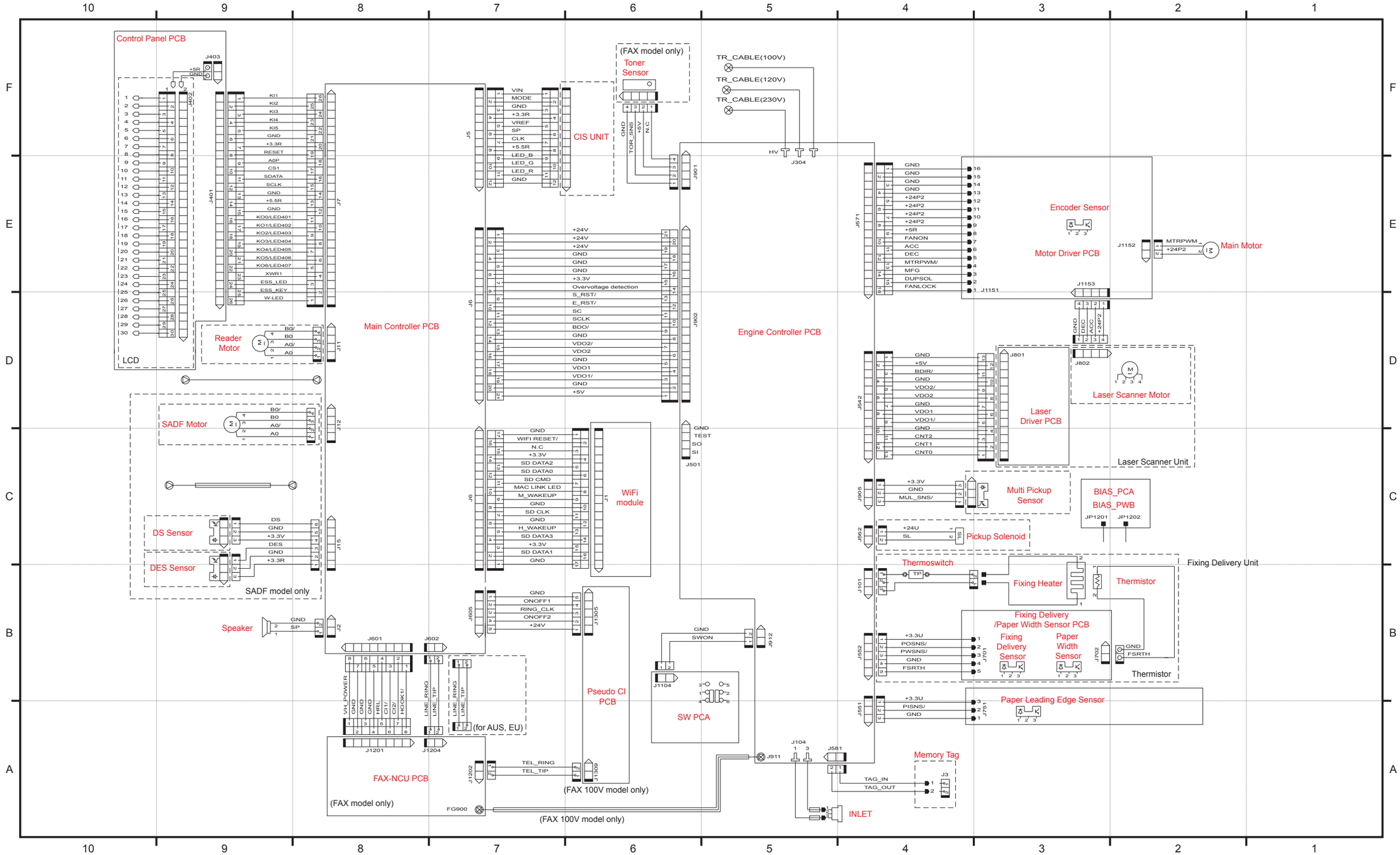
F-9-1

MF4830d/MF4820d



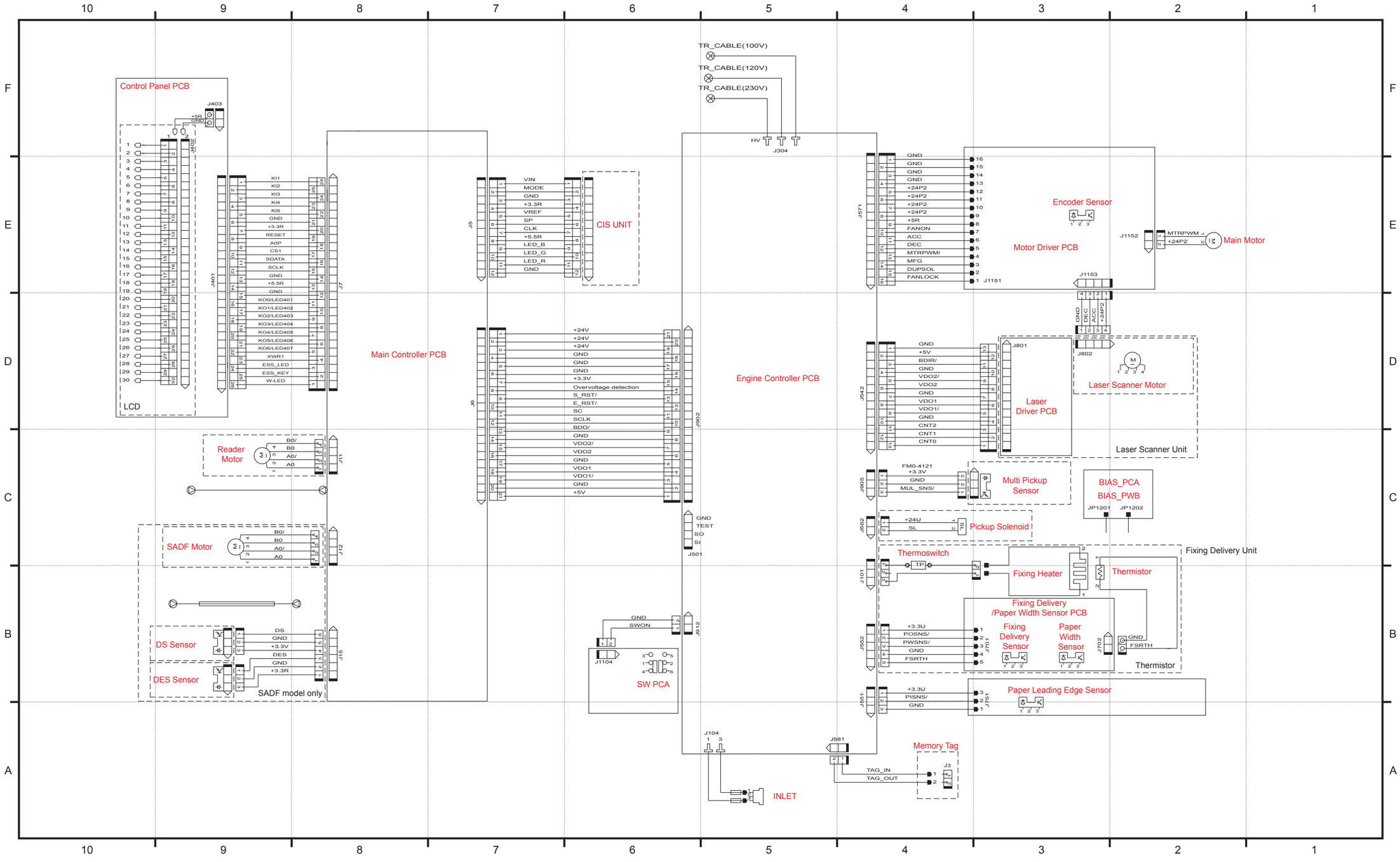
F-9-2

MF4780w/MF4770n/MF4750



P.3

F-9-3


Control Panel PCB
LCD
Main Controller PCB
Engine Controller PCB
CIS UNIT
Motor Driver PCB
Encoder Sensor
Main Motor
Laser Driver PCB
Laser Scanner Motor
Laser Scanner Unit
Multi Pickup Sensor
BIAS_PCA
BIAS_PWB
Pickup Solenoid
Fixing Delivery Unit
Thermoswitch
Fixing Heater
Thermistor
Fixing Delivery /Paper Width Sensor PCB
Fixing Delivery Sensor
Paper Width Sensor
Thermistor
Paper Leading Edge Sensor
Reader Motor
SADF Motor
SADF model only
DS Sensor
DES Sensor
SW PCA
INLET
Memory Tag
TR_CABLE(100V)
TR_CABLE(120V)
TR_CABLE(230V)
HV
J304
J403
J402
J401
J7
J5
J6
J502
J501
J571
J1151
J1152
J1153
J542
J801
J802
J905
J562
J101
J552
J701
J551
J751
J702
J11
J12
J15
J912
J1104
J104
J581
J3
P.4

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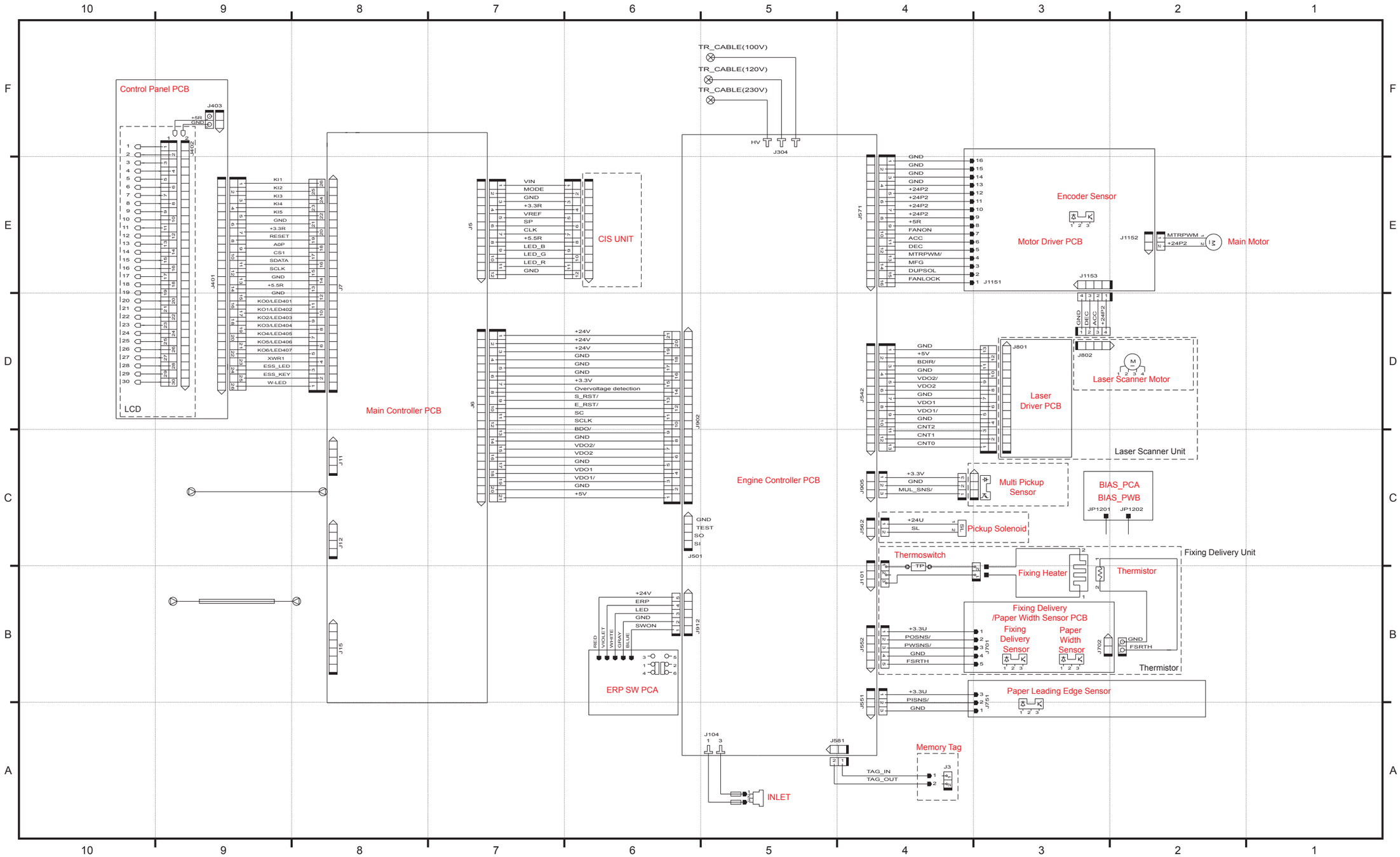
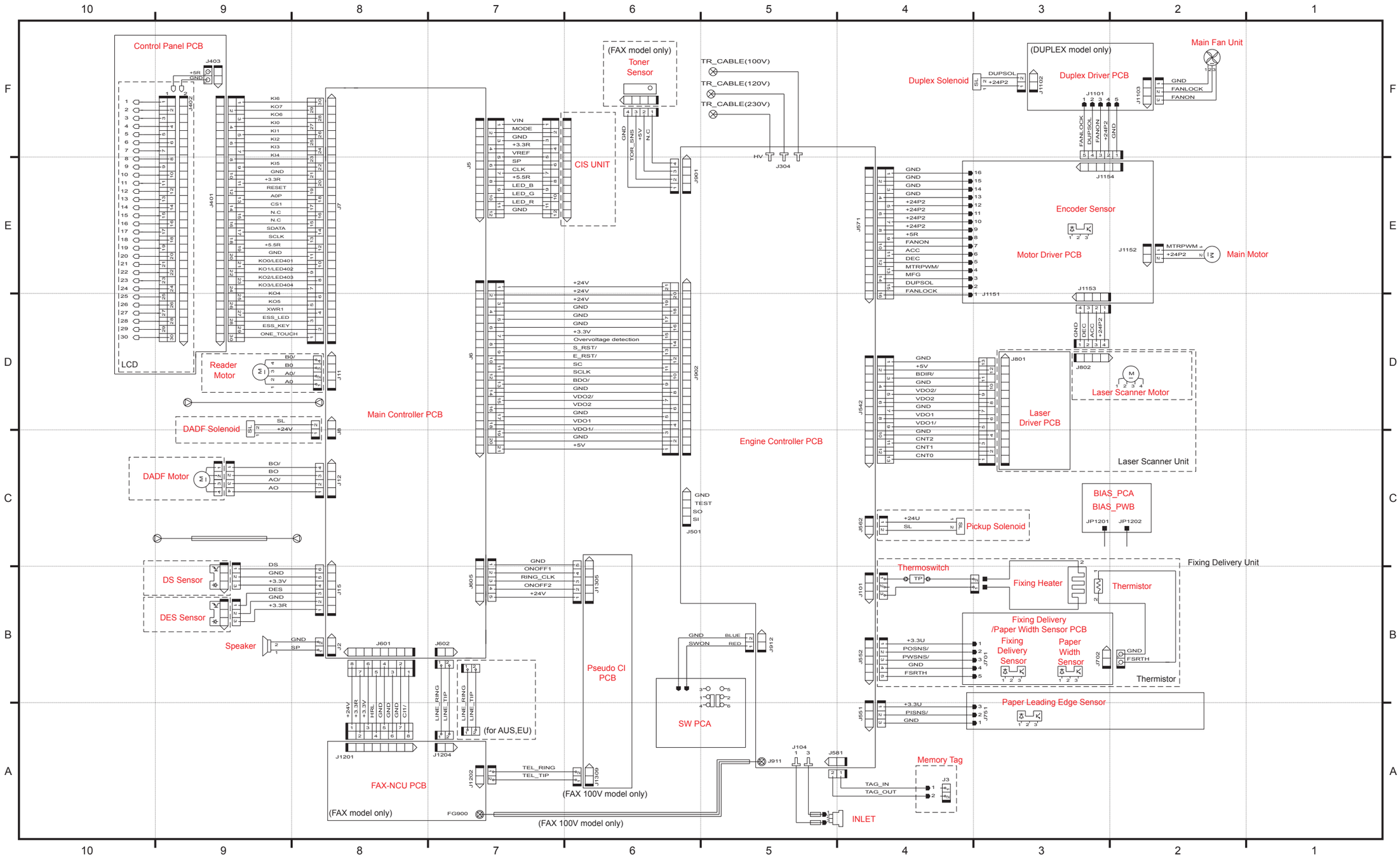
MF4720w/MF4712/MF4710



P.5

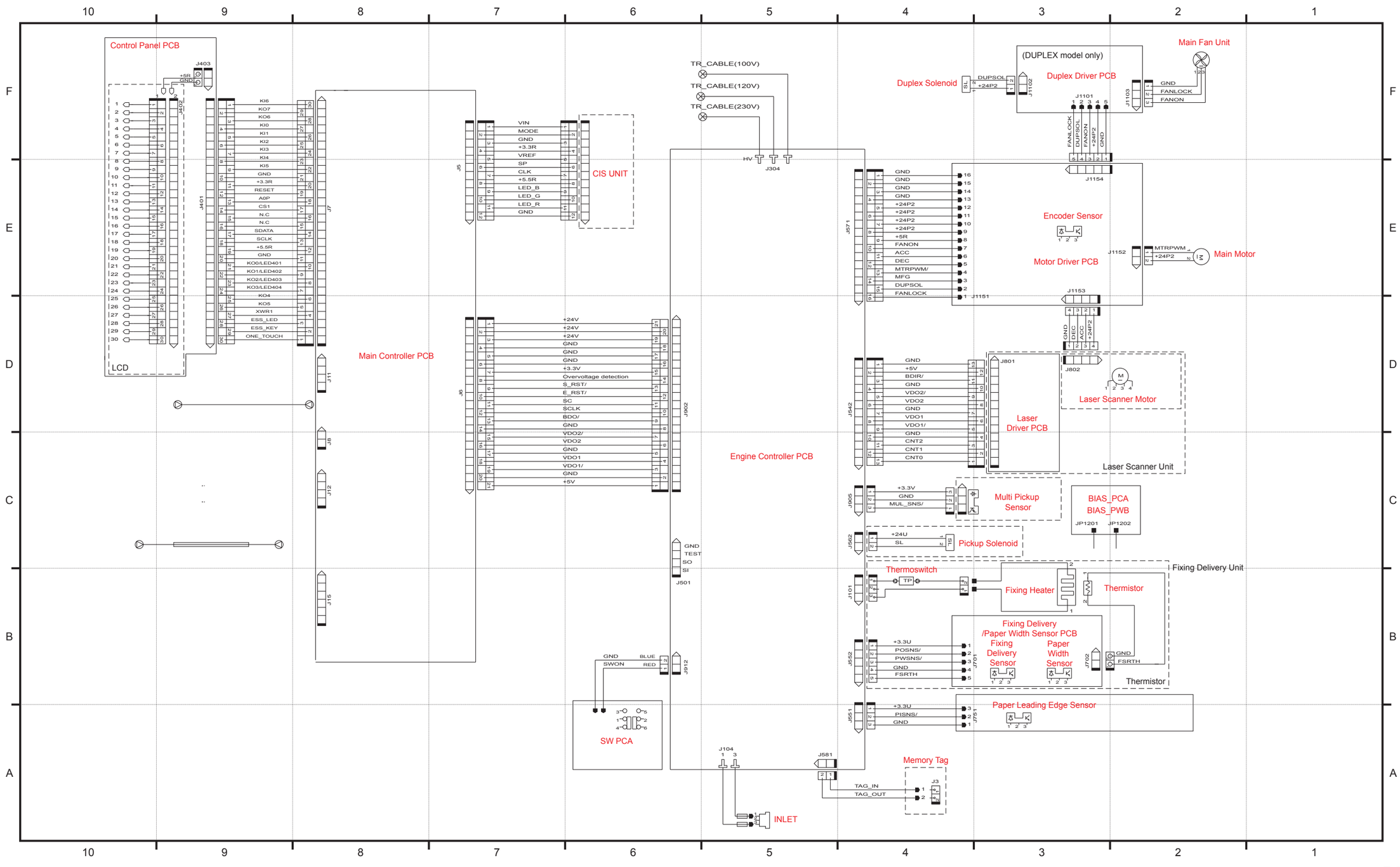
F-9-5


Control Panel PCB
LCD
Reader Motor
DADF Solenoid
DADF Motor
DS Sensor
DES Sensor
Speaker
Main Controller PCB
(FAX model only)
Toner Sensor
CIS UNIT
Pseudo CI PCB
(for AUS,EU)
FAX-NCU PCB
(FAX model only)
(FAX 100V model only)
TR_CABLE(100V)
TR_CABLE(120V)
TR_CABLE(230V)
Engine Controller PCB
SW PCA
(DUPLEX model only)
Duplex Solenoid
Duplex Driver PCB
Main Fan Unit
Encoder Sensor
Motor Driver PCB
Main Motor
Laser Driver PCB
Laser Scanner Motor
Laser Scanner Unit
BIAS_PCA
BIAS_PWB
Pickup Solenoid
Fixing Delivery Unit
Thermoswitch
Fixing Heater
Thermistor
Fixing Delivery /Paper Width Sensor PCB
Fixing Delivery Sensor
Paper Width Sensor
Paper Leading Edge Sensor
Memory Tag
INLET
(FAX 100V model only)

P.6

F-9-6

D530

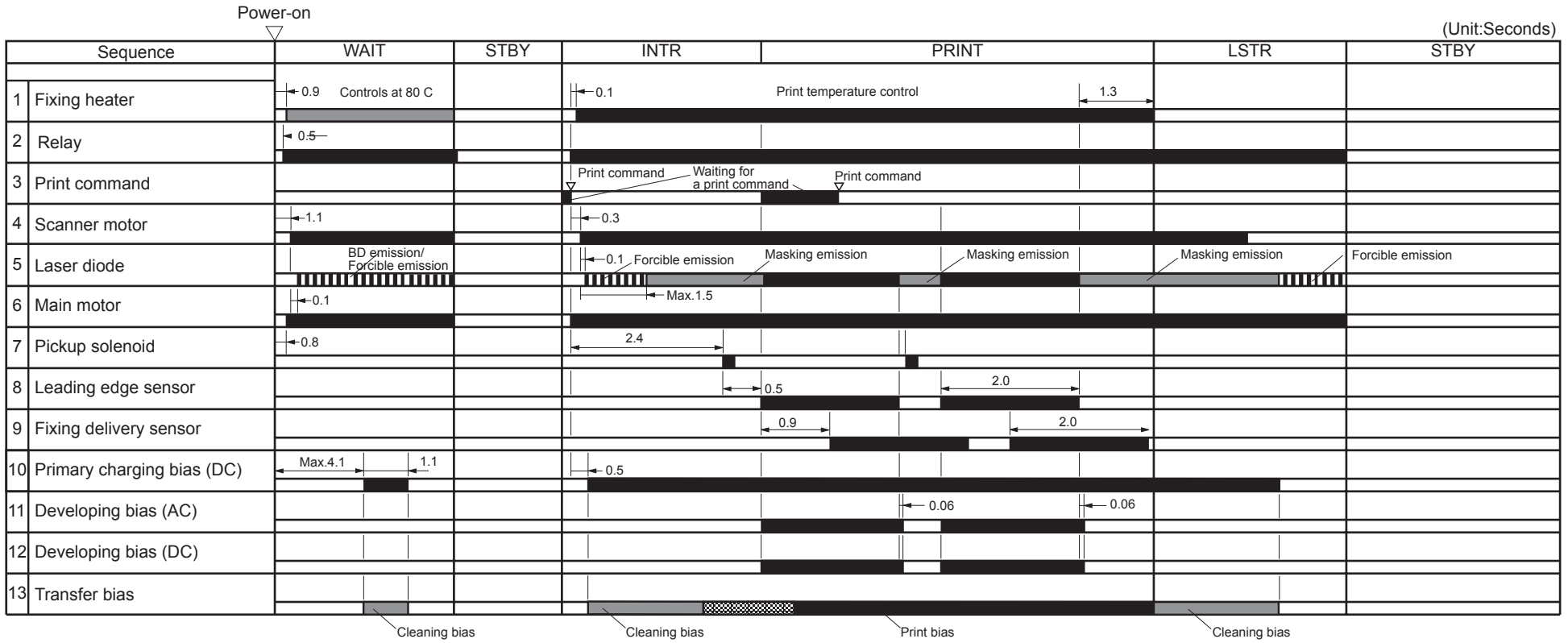

Control Panel PCB
J403
+5R
GND
J402
J401
KI6
KO7
KO6
KI0
KI1
KI2
KI3
KI4
KI5
GND
+3.3R
RESET
A0P
CS1
N.C
N.C
SDATA
SCLK
+5.5R
GND
KO0/LED401
KO1/LED402
KO2/LED403
KO3/LED404
KO4
KO5
XWR1
ESS_LED
ESS_KEY
ONE_TOUCH
J7
LCD
J11
J8
J12
J15
Main Controller PCB
J5
VIN
MODE
GND
+3.3R
VREF
SP
CLK
+5.5R
LED_B
LED_G
LED_R
GND
CIS UNIT
J6
+24V
+24V
+24V
GND
GND
GND
+3.3V
Overvoltage detection
S_RST/
E_RST/
SC
SCLK
BDO/
GND
VDO2/
VDO2
GND
VDO1
VDO1/
GND
+5V
J902
GND
TEST
SO
SI
J501
TR_CABLE(100V)
TR_CABLE(120V)
TR_CABLE(230V)
HV
J304
Engine Controller PCB
GND
SWON
BLUE
RED
J912
SW PCA
J104
J581
INLET
Memory Tag
J3
TAG_IN
TAG_OUT
Duplex Solenoid
DUPSOL
+24P2
J1102
(DUPLEX model only)
Duplex Driver PCB
J1101
J1103
GND
FANLOCK
FANON
Main Fan Unit
FANLOCK
DUPSOL
FANON
+24P2
GND
J1154
J571
GND
GND
GND
GND
+24P2
+24P2
+24P2
+24P2
+5R
FANON
ACC
DEC
MTRPWM/
MFG
DUPSOL
FANLOCK
J1151
Encoder Sensor
Motor Driver PCB
J1152
MTRPWM
+24P2
Main Motor
J1153
GND
DEC
ACC
+24P2
J542
GND
+5V
BDIR/
GND
VDO2/
VDO2
GND
VDO1
VDO1/
GND
CNT2
CNT1
CNT0
J801
J802
Laser Scanner Motor
Laser
Driver PCB
Laser Scanner Unit
J905
+3.3V
GND
MUL_SNS/
Multi Pickup
Sensor
BIAS_PCA
BIAS_PWB
JP1201
JP1202
J562
+24U
SL
Pickup Solenoid
Fixing Delivery Unit
Thermoswitch
TP
J101
Fixing Heater
Thermistor
Fixing Delivery
/Paper Width Sensor PCB
Fixing
Delivery
Sensor
Paper
Width
Sensor
J552
+3.3U
POSNS/
PWSNS/
GND
FSRTH
J701
J702
GND
FSRTH
Thermistor
J551
+3.3U
PISNS/
GND
J751
Paper Leading Edge Sensor

P.7

F-9-7

General Timing Chart

Print on A4 plain paper (2 pages) (Unit: second)



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