

**Model: Ri 100
Machine Code:
J089/J098/J099**

**Differences
(For CN and AP Models)**

Ver.1.0

**Latest Release: Mar, 2018
Initial Release: Mar, 2018
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Important Safety Notices

Warnings, Cautions, Notes

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

WARNING

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

CAUTION

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

Important

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

Note

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

General Safety Instructions

For your safety, please read this manual carefully before you use this product. Keep this manual handy for future reference.

Safety Information

Always obey the following safety precautions when using this product.

Safety During Operation

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



[A]: ON

[B]: OFF

[C]: Push ON/ Push OFF

[D]: Standby

Switches and Symbols

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

Safety

Prevention of Physical Injury

1. Before disassembling or assembling parts of the machine and peripherals, make sure that the machine and peripheral power cords are unplugged.
2. The plug should be near the machine and easily accessible.
3. Note that some components of the machine and the paper tray unit are supplied with electrical voltage even if the main power switch is turned off.
4. Always unplug the power cord from the power source before you move the product. Before you move the machine, arrange the power cord so it will not fall under the machine.
5. Disconnect all peripheral units (finisher, LCT, etc.) from the mainframe before you move the machine.
6. If any adjustment or operation check has to be made with exterior covers off or open while the main switch is turned on, keep hands away from electrified or mechanically driven components.
7. The machine drives some of its components when it completes the warm-up period. Be careful to keep hands away from the mechanical and electrical components as the machine starts operation.
8. The inside and the metal parts of the fusing unit become extremely hot while the machine is operating. Be careful to avoid touching those components with your bare hands.
9. To prevent a fire or explosion, keep the machine away from flammable liquids, gases, and aerosols.
10. Do not use flammable sprays or solvent in the vicinity of the machine. Also, avoid placing these items in the vicinity of the machine. Doing so could result in fire or electric shock.
11. To avoid fire or explosion, never use an organic cleaner near any part that generates heat.
12. Never remove any safety device unless it requires replacement. Always replace safety devices immediately.
13. Never do any procedure that defeats the function of any safety device.
14. Modification or removal of a safety device (fuse, switch, etc.) could lead to a fire and personal injury. Always test the operation of the machine to ensure that it is operating normally and safely after removal and replacement of any safety device.
15. For replacements use only the correct fuses or circuit breakers rated for use with the machine. Using replacement devices not designed for use with the machine could lead to a fire and personal injuries.

-
16. When using a vacuum cleaner around the machine, keep others away from the cleaner, especially small children.
 17. NEVER touch the AC circuits on the PSU board, to prevent electric shock caused by residual charge. Residual charge of about 100V-400V remains in the AC circuits on the PSU board for several months, even when the board has been removed from the machine after turning off the machine power and unplugging the power cord.

Observance of Electrical Safety Standards

1. The machine and its peripherals must be installed and maintained by a customer service representative who has completed the training course on those models with exceptions on some machines where the installation can be handled by the user.

Safety and Ecological Notes for Disposal

1. Dispose of replaced parts in accordance with local regulations.
2. When keeping used lithium batteries in order to dispose of them later, do not put more than 100 batteries per sealed box. Storing larger numbers or not sealing them apart may lead to chemical reactions and heat build-up.
3. The danger of explosion exists if a battery of this type is incorrectly replaced. Replace only with the same or an equivalent type recommended by the manufacturer. Discard used batteries in accordance with the manufacturer's instructions.

Safety Instructions for Ink Cartridges

Accidental Exposure To Ink

CAUTION

1. If ink gets on the skin, wash the affected area immediately with soap and cold running water.
2. If ink gets into the eyes, immediately flush the eyes with cold running water. If there are signs of irritation or other problems, seek medical attention.
3. If ink is swallowed, drink a strong solution of cold water and table salt to induce vomiting. Seek medical attention immediately.
4. Ink is difficult to remove from fabric. Work carefully to avoid staining clothing when performing routine maintenance or replacing cartridges.

Handling and Storing Ink Cartridges

WARNING

- Ink is flammable. Never store ink cartridges in a location where they will be exposed to high temperature or an open flame.

CAUTION

1. Always store ink cartridges out of the reach of children.
2. Always store ink cartridges in a cool, dry location that is not exposed to direct sunlight.

Ink Cartridge Disposal

CAUTION

1. Attach the caps to empty ink containers for temporary storage to avoid accidental spillage.
2. Return empty ink cartridges to a local dealer who can accept such items for collection and recycling or disposal.
3. If the customer decides to dispose of empty ink cartridges, make sure that they are disposed of in accordance with local laws and regulations.

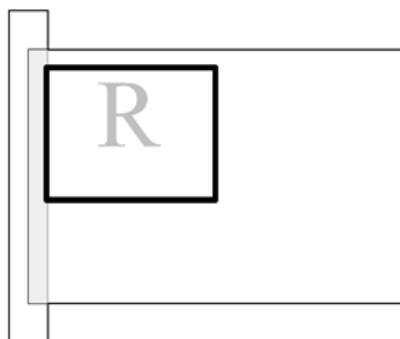
Conventions Used in this Manual

Symbols and Abbreviations

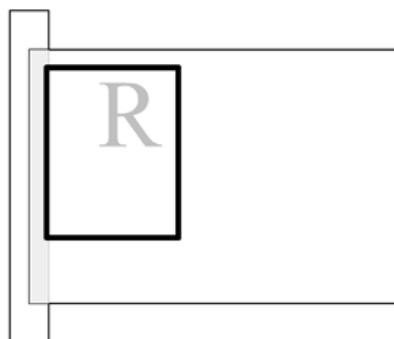
This manual uses several symbols.

Symbol	What It Means
	Clamp
	Clip ring
	Connector
	E-ring
	FFC (Flat Film Connector)
	Hook
	Pointer (cross-reference to another manual section)
	Screw
	Spring
	Standoff
	Timing Belt

This manual uses the following abbreviations.



SEF



LEF

Throughout this service manual, "SEF" denotes "Short Edge Feed" and "LEF" denotes "Long Edge Feed".

Warnings, Cautions, Notes

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- **Obey these guidelines to avoid problems such as mis-feeds, damage to originals, loss of valuable data and to prevent damage to the machine**

Note

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

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TABLE OF CONTENTS

- Important Safety Notices..... 1
 - Warnings, Cautions, Notes..... 1
 - General Safety Instructions..... 1
 - Safety..... 2
 - Prevention of Physical Injury..... 2
 - Observance of Electrical Safety Standards..... 3
 - Safety and Ecological Notes for Disposal..... 3
 - Safety Instructions for Ink Cartridges 3
 - Accidental Exposure To Ink..... 3
 - Handling and Storing Ink Cartridges..... 4
 - Ink Cartridge Disposal..... 4
- Conventions Used in this Manual..... 5
 - Symbols and Abbreviations..... 5
 - Warnings, Cautions, Notes..... 6
 - Trademarks..... 6

1. Overview of the Differences

- Differences between the Initial Lot and the Model Supporting the Design Change..... 13
 - Circumstances for Supporting the Design Change..... 13
 - Overview of the Modifications Related to the Design Change..... 13
 - Changes to the Machine’s Appearance..... 13
 - Added Units/Parts..... 15
 - Changed Parts..... 16
 - Changes to the Specifications..... 18
 - Main Machine's Specification..... 18
 - Minimum Space Requirements..... 19
 - Consumables..... 19
 - Preventive Maintenance..... 20
 - Requirements for Replacing Parts..... 20
 - Additional Items (SP, UP, and SC) and User Guidance Items Displayed by Remodeling..... 20
 - Additional Items in SP/UP/SC..... 20
 - Detailed Description..... 21
 - Parts Layout..... 21
 - Added or Changed Electrical Component Summary..... 24

Air Flow.....	24
Changes to the Specifications after the Release of the First Lot of FSMs (Changes except for those Related to the Design Change).....	26
Product Information.....	26
Changes Related to the Option.....	26
Changes/Corrections NOT Related to the Option.....	27
Machine Codes and Peripherals Configuration.....	28
Consumables.....	29
Instaration.....	32
Environment.....	32
Minimum Space Requirements.....	33
Precautions When Moving the Machine.....	34
Checklist before Moving the Printer.....	35
Important Information.....	36
Replacement and Adjustment.....	38
Parts to Be Replaced.....	38
Cleaning.....	38
Adjusting the Height of the Cassette.....	39
System Maintenance.....	39
Firmware Updates.....	39

2. Differences Related to Parts Replacement

Before Replacing Parts.....	41
Covers.....	42
Cover Names.....	42
Order of Cover Removal.....	43
Front Right Cover (with Leaf Spring).....	44
Power Cord Cover.....	45
Filter (Right).....	46
Filter Cover (Right).....	46
Right Lower Cover.....	47
Right Cover.....	47
Re-assembly.....	49
Rear Cover (Right).....	50

Port Cover.....	51
Filter (Left).....	51
Filter Cover (Left).....	51
Left Lower Cover.....	52
Left Cover.....	52
Rear Cover (Left).....	53
Canopy Cover.....	54
Front Cover, Operation Panel Board.....	54
Re-assembly.....	57
Rear Top Cover, Top Cover.....	59
Rear Transport Cover.....	61
Front Lower Cover.....	62
Right Guide Rail Cover.....	63
Left Guide Rail Cover.....	66
Cassette Stand, Cassette Carriage.....	70
Notes on Replacing the Cassette Stand and Cassette Carriage.....	70
Cassette Stand.....	70
Cassette Carriage.....	74
Encoders.....	80
Horizontal Encoder Strip.....	80
Boards.....	81
Relay Board.....	81
HRB (Head Relay Board).....	81
Notes on Installing the HRB	84
Motors, Bearing Race.....	86
Lifting Shaft Bearing Race.....	86
Notes on Mounting the Bearing / Reassembling the Cassette Carriage.....	89
Fan.....	90
Ink Mist Collecting Fan (Left).....	90
Notes on When Installing the Ink Mist Collecting Fan (Left).....	92
Duct Bottom Plate (Left).....	94
Ink Mist Collecting Fan (Right).....	94
Notes on When Installing the Ink Mist Collecting Fan (Right).....	96

Duct Bottom Plate (Right).....	98
Sensors, Switches.....	99
Interlock Switch.....	99
Cleaning.....	101
Horizontal Encoder Sensor Cleaning	101
Preparation.....	101
Moving the Print-Heads.....	102
Cleaning the Maintenance Unit.....	105
Auto Head Maintenance.....	107
Clean Internals.....	109
Adjusting the Height of the Cassette.....	110
Adjusting the Height of the Cassette Automatically.....	110
Adjusting the Height of the Cassette Manually.....	110

1. Overview of the Differences

Differences between the Initial Lot and the Model Supporting the Design Change

Circumstances for Supporting the Design Change

When printing at low temperature and low humidity, or when the APV is often as high as 500 sheets, ink mist tends to build up in the machine, leading to problems due to the machine becoming stained. (For example, the height sensor may become stained and fail to detect the height of the cassette correctly.) To counteract this, a model with fan units has been launched.

The air in the interior of the machine is expelled by the 2 supplementary fans and the ink mist trapped by filters in the fan ducts, preventing the interior from becoming stained and causing problems.

The exterior cover is also partly modified, resulting in a change in the machine's appearance, but the machine's size has not changed. (Its weight increases by approximately 2.0 kg.)

Note that this manual also contains the modified specifications and corrections to the existing FSM. For details, see page 26 "Changes to the Specifications after the Release of the First Lot of FSMs (Changes except for those Related to the Design Change)".

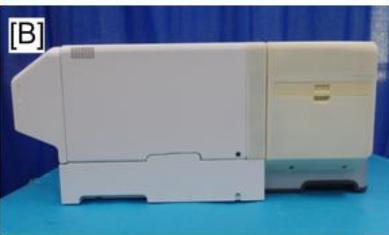
Overview of the Modifications Related to the Design Change

- Added fan units (one each at the left and right sides at the back of the machine).
- Resulting changes to the exterior parts and the machine's weight
- Changes to the interior relay board (fan control circuit added)
- Added accessories (2 filters)
- Changes to the procedure to change and adjust parts
- Added UP/SP/SC related to fan operation and control

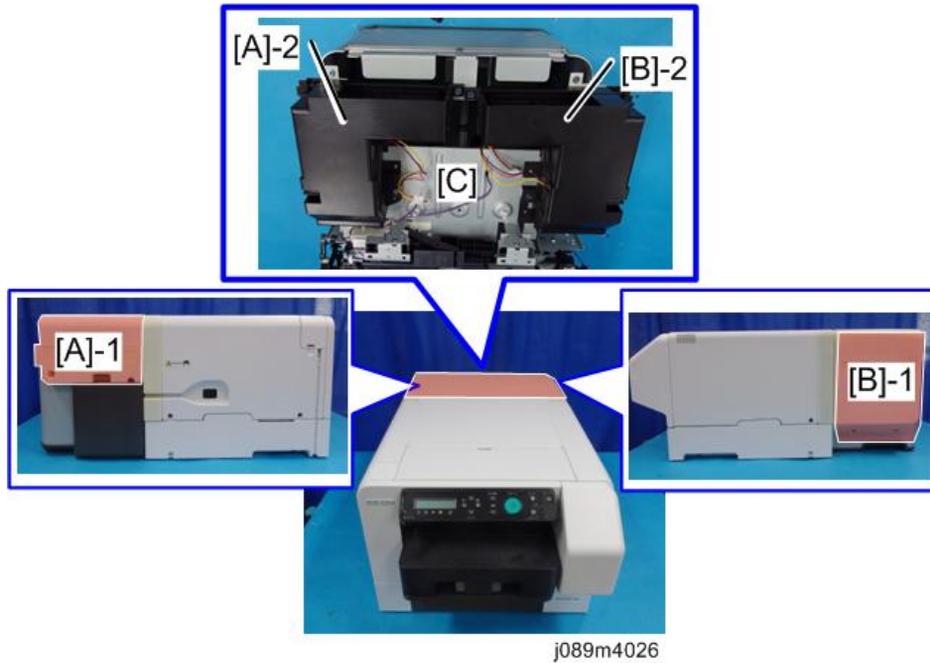
Changes to the Machine's Appearance

Each figure shows the view from the upper front [A], right [B], left [C], and back [D].

The appearance of the area at the back of the machine, especially the area around the rear transport cover, is significantly changed.

Before Design Change	After Design Change
<p data-bbox="175 335 216 374">[A]</p>  <p data-bbox="175 717 216 756">[B]</p>  <p data-bbox="175 958 216 997">[C]</p>  <p data-bbox="175 1205 216 1244">[D]</p>  <p data-bbox="504 1497 605 1520">j089m4031</p>	<p data-bbox="765 335 806 374">[A]</p>  <p data-bbox="765 717 806 756">[B]</p>  <p data-bbox="765 958 806 997">[C]</p>  <p data-bbox="765 1205 806 1244">[D]</p>  <p data-bbox="1053 1485 1153 1509">j089m4030</p>

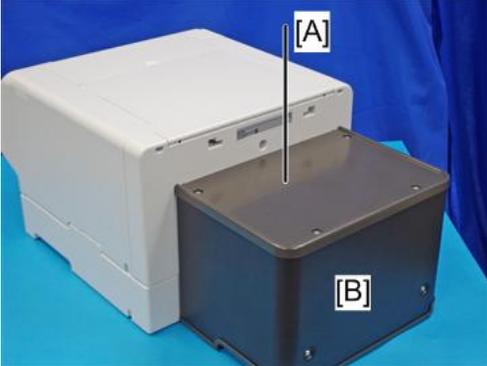
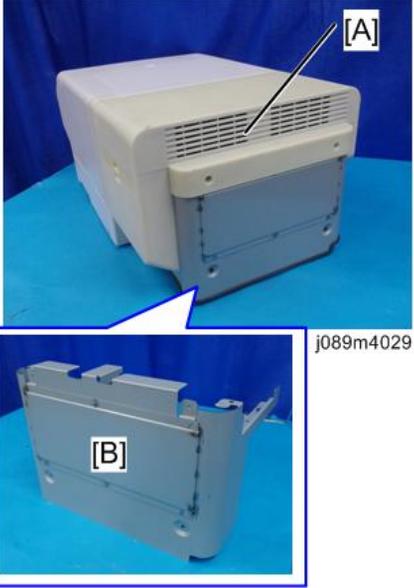
Added Units/Parts

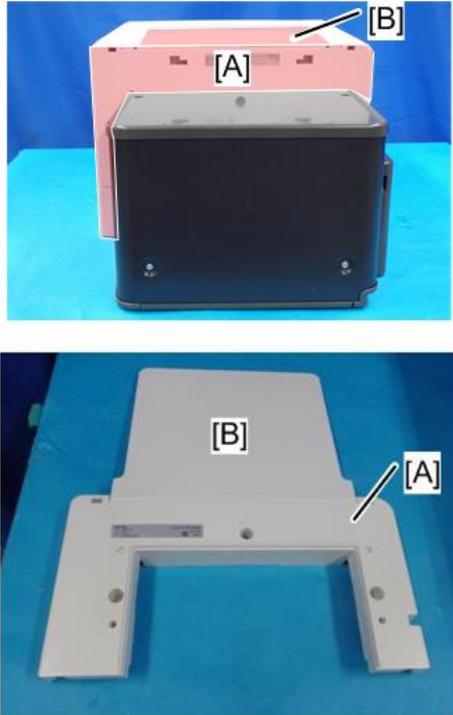
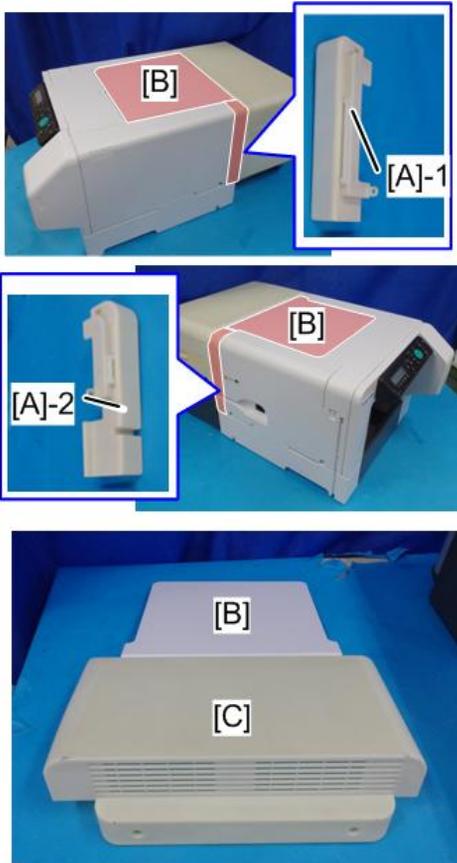


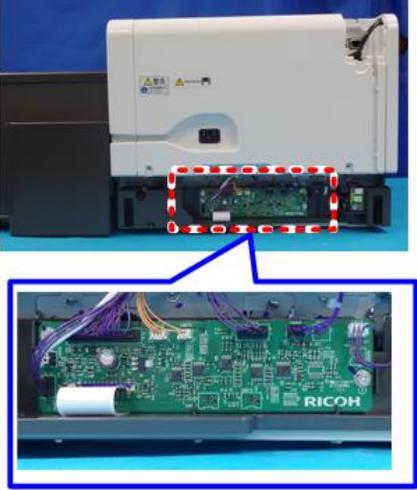
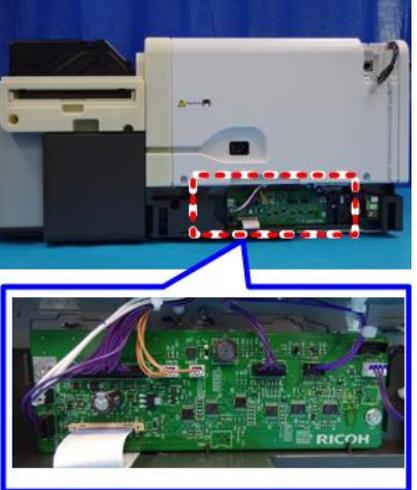
No.	Name	Remarks
[A]	Fan unit (left) [A]-1: Appearance [A]-2: After removing the surrounding cover.	Comprises the duct, fans, filter, and filter cover.
[B]	Fan unit (right) [B]-1: Appearance [B]-2: After removing the surrounding cover.	Same as above.
[C]	Fan unit base	

Changed Parts

1

Before Design Change	After Design Change
 <p style="text-align: right;">j089m4028</p>	 <p style="text-align: right;">j089m4029</p>
<p>Rear top cover [A]</p> <ul style="list-style-type: none"> • Before design change: Covers only the upper part of the rear transport cover. • After design change: Covers also the upper part of the fan unit. (Equipped with the fan exhaust port at the rear.) 	
<p>Rear transport cover [B]</p> <ul style="list-style-type: none"> • Before design change: Shaped to cover the entire path of the printing media. • After design change: Significantly changed shape to secure the airflow path for expelling the ink mist inside the machine. 	

Before Design Change	After Design Change
 <p style="text-align: right;">j089m4025</p>	 <p style="text-align: right;">j089m4027</p>
<p>Rear cover [A]</p> <ul style="list-style-type: none"> • Before design change: Shaped to cover the machine's entire rear part. • After design change: Divided into left and right parts ([A]-1: right, [A]-2: left) 	
<p>Top cover [B]</p> <ul style="list-style-type: none"> • Before design change: Attached to the rear cover. • After design change: This part has not changed, but it is attached to the rear top cover [C]. 	

Before Design Change	After Design Change
 <p style="text-align: center;">j089m4042</p>	 <p style="text-align: center;">j089m4043</p>
<p>Relay board: Equipped with the fan control circuit (enlarged) after the design change.</p>	

Changes to the Specifications

Main Machine's Specification

Items	Specifications	
Power consumption* 1	<ul style="list-style-type: none"> • During printing (Average): 35W • During power OFF: 0.5W 	
Energy Saver mode	Reduced power consumption in Energy Saver mode* 2	2W
	Time to switch into Energy Saver mode	5 min.
	Time to switch out from Energy Saver mode* 2	2.9 sec.
Weight* 3	24 kg (52.9 lb.) or less	

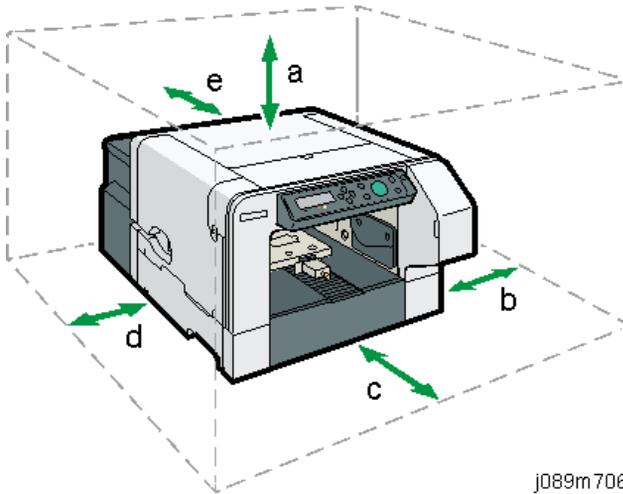
* 1: To avoid unnecessary power consumption, disconnect the power plug from the wall outlet. (Unplug the power plug only after making sure the power lamp is off.) Power Consumption may differ depending on the conditions and environment of the machine.

*2: The time it takes to switch out from energy saving functions and power consumption may differ depending on the conditions and environment of the machine.

*3: Its weight increases by approximately 1.5 kg after design change. When moving the machine, as same as the model before design change, two or more people are required to lift the printer.

Minimum Space Requirements

A space of 10 cm (4 inches) behind the machine's rear (e) is required.



a.	At least 27 cm (10.7 inches)
b.	At least 10 cm (4 inches)
c.	At least 53 cm (20.9 inches)
d.	At least 25 cm (9.9 inches)
e.	At least 10 cm (4 inches)

Consumables

Fan filter is added as a consumable.

Code	Product Name
J934-00	RICOH Fan Filter Type 1

Also, product codes for other consumables are changed. For details, see page 29 "Consumables".

Preventive Maintenance

There are no preventive maintenance requirements, as was the case before the design change.

1

Requirements for Replacing Parts

For details, see page 41 "Differences Related to Parts Replacement".

This section also describes what has become unnecessary for the model as a result of the design change, as well as the changes to the specifications following the release of the initial lot in addition to this design change.

Additional Items (SP, UP, and SC) and User Guidance Items Displayed by Remodeling

Additional Items in SP/UP/SC

SP5880

- SP5-880-XX:

The fan operates from the time of job transmission until completion of printing in order to collect the ink mist inside the machine. You can use this SP to switch the fan on or off and select whether or not to reduce speed.

However, the fan is mounted for preventing ink mist, so do not change this SP on a product in the field.

- SP5-880-XX: Display the filter counter.
- SP5-880-XX: Reset the filter counter.

Additional UP Items

It is possible to use the UP "Maintenance" menu to specify the fan operation settings and clear the counter.

- Fan Speed:
 - Normal Speed
 - Slow Speed
 - Off
- Fan Filter:
 - Printed Garments (Number of printed copies): XXX
 - Resets the print counter.

SC530-01 to 03

There is an SC for detecting fan errors.

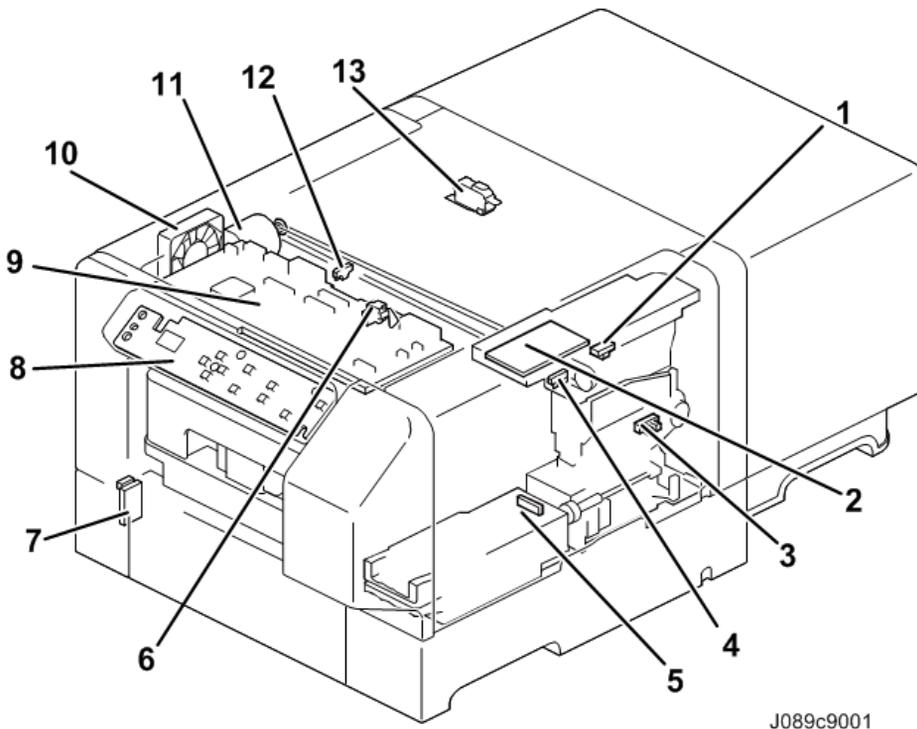
If an error occurs, check the applicable fan's connection or replace it.

-01: Ink mist collecting fan (right) error

-02: Ink mist collecting fan (left) error

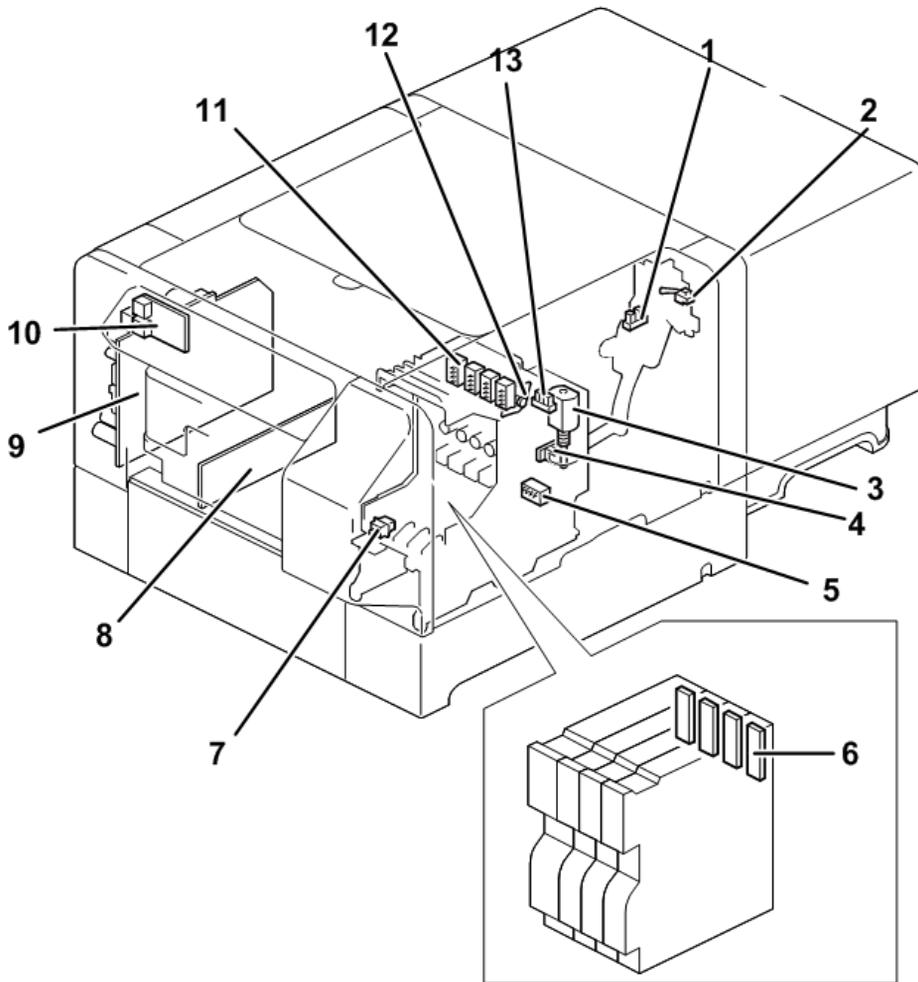
-03: Ink mist collecting fan (left and right) error

1

Detailed Description**Parts Layout**

No.	Part Name	No.	Part Name
1	Registration Sensor	8	Operation Panel Unit
2	HRB	9	CTL Board
3	Maintenance HP Sensor	10	Cooling Fan

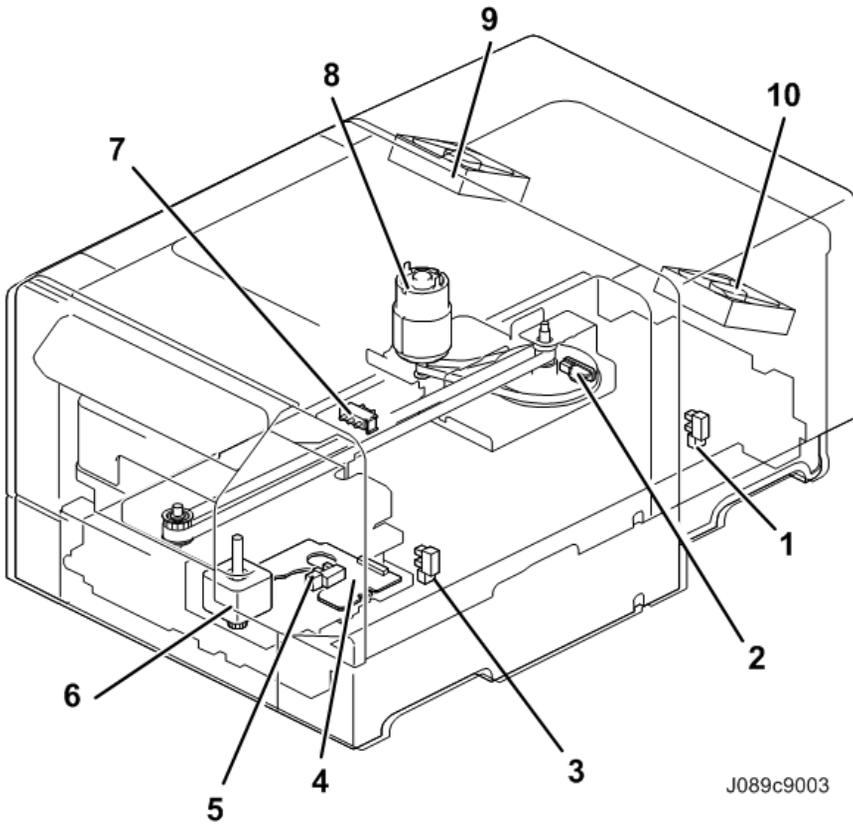
No.	Part Name	No.	Part Name
4	Height Sensor (IN)	11	Horizontal Motor
5	ID Chip (Ink Collector Unit)	12	Height Sensor (Out)
6	Top Cover Switch	13	Interlock Switch
7	Temperature/Humidity Sensor	-	-



J089c9002

No.	Part Name	No.	Part Name
1	Ink Level Sensor	8	Relay Board

No.	Part Name	No.	Part Name
2	Air Purge Detection Switch	9	PSU
3	Drive Motor	10	Wireless LAN Board
4	Maintenance Encoder Sensor	11	CCB
5	WTR	12	Drive Switching Motor
6	ID Chip (Ink Cartridge)	13	Maintenance CAM Sensor
7	Front Light Cover Switch	-	-



No.	Part Name	No.	Part Name
1	Cassette Carriage HP Sensor (Rear)	6	Lift Motor
2	Vertical Encoder Sensor	7	Cassette Size Sensor
3	Cassette Carriage HP Sensor (Front)	8	Vertical Encoder Motor

No.	Part Name	No.	Part Name
4	Lift Board	9	Ink mist collecting fan (left)
5	Lift Tray HP Sensor	10	Ink mist collecting fan (right)

Added or Changed Electrical Component Summary

No.	Component	Function
Motors		
MT	Ink mist collecting fans (left and right)	A fan attached on the upper rear part of the machine, one each on the left and right. Collects the ink mist inside the machine by the filter and discharges the mist.
PCBs		
PCB	Relay Board	Mainly relays signals between the lift board and the CTL board. Also responsible for relaying signals between the sensors (cassette carriage HP sensor, height sensor, cassette size detection sensor, etc.) This also controls the ink mist collecting fans.

Air Flow

The filter's life is 2,000 prints and must be replaced by the user.

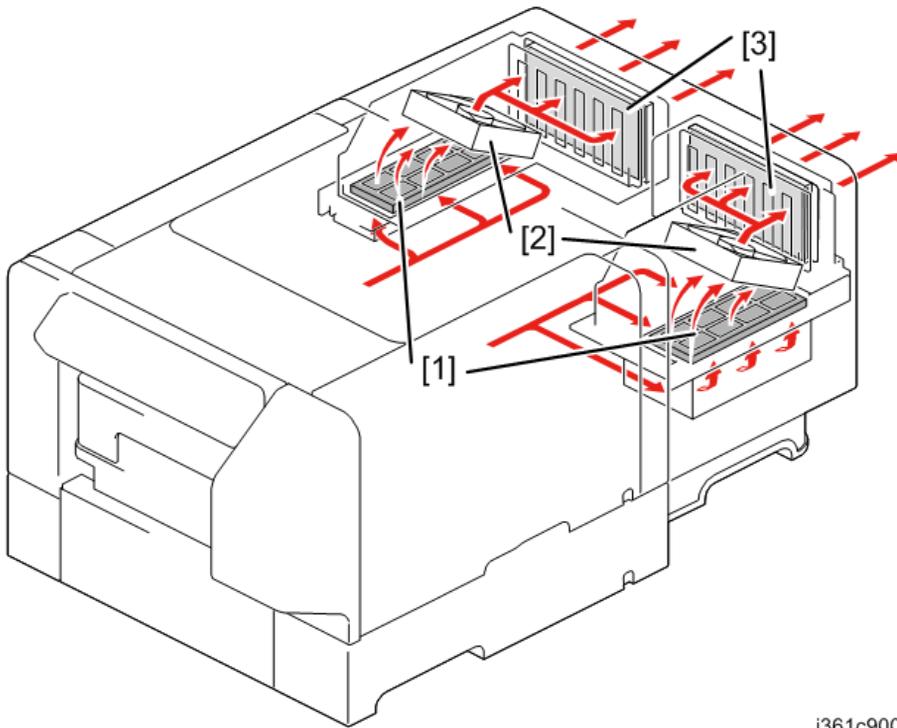
If an alert message appears on the operation panel, replace both the left and right filters at the same time.

After replacing the filter, the user must reset the counter on the UP menu. (The machine can continue printing even without resetting. Instruct the user to reset it.)

Path

1. Collecting the ink mist with the filter
2. Passing through the fan.
3. Lowering the airflow by the 2 straightening boards and discharging the air.

If there is some ink mist that could not be collected in Step 1, it is collected by the filter between the straightening boards (to prevent staining the user's wall with ink).



j361c9005

Changes to the Specifications after the Release of the First Lot of FSMs (Changes except for those Related to the Design Change)

This section lists the changes, except for those related to the design change, to the specifications after the release of the first lot, along with corrections to the mistakes in the existing FSM document.

Product Information

Changes Related to the Option

RICOH Tray for Multi Purpose Type 1 (J364): This was removed from the options. Consequently, the related descriptions in the FSM have changed as follows:

Main Machine

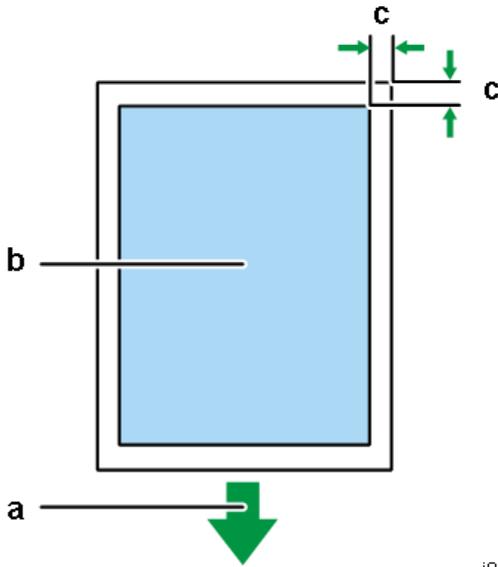
Items	Specifications	
Printable area	A4 standard tray	291 × 204 mm (11.5 × 8.0 inches)
	A5 tray (option)	204 × 142 mm (8.0 × 5.6 inches)
Fabric thickness	<ul style="list-style-type: none"> A4 standard tray and A5 tray (option) 7 mm (0.27 inches)	

Optional Cassettes

Items	Specifications
External dimensions (W × D × H)	<ul style="list-style-type: none"> A5 tray 242.2 × 409.2 × 97.9 mm (9.5 × 16.1 × 3.9 inches)
Weight	<ul style="list-style-type: none"> A5 tray 2.13 kg (4.7 lb.)

Printing Operation

Print Area



j089m703

- a. Front of the Cassette
 - b. Printable Area
 - c. Windows: 3 mm (0.12 inches), Mac: 3 mm (0.12 inches)
- The printing ranges of each cassette are as follows:
- A4 standard tray: 291 × 204 mm (11.5 × 8.0 inches)
 - A5 tray: 204 × 142 mm (8.0 × 5.6 inches)

Changes/Corrections NOT Related to the Option

Changed/Corrected at:		Old	New
Product Information > Specifications > Basic Specifications > Print Volume, Service Life		5 years, or 60K prints	5 years, or 12K prints
Product Information > Specifications > Operation Specifications > Printing Operation	Functions that can be adjusted with the driver	Number of copies	Deleted

Product Information > Specifications > Operation Specifications > Print Speed and Resolution	Fine Mode	dpi: 1200 x 1200 RPCS-R Driver: 1 minute 20 seconds or less	dpi: 1200 x 1200 RPCS-R Driver: 2 minutes 30 seconds or less
Product Information > Specifications > Operation Specifications > Print Speed and Resolution	Speed mode	dpi: 600 x 600 RPCS-R Driver: 2 minutes 30 seconds or less	dpi: 600 x 600 RPCS-R Driver: 1 minute 20 seconds or less
Product Information > Specifications > Control Boards >> Controller	CPU	SH2A	PowerPC 464FP, 800MHz
	RAM	SDRAM 32MB	128MB

Machine Codes and Peripherals Configuration

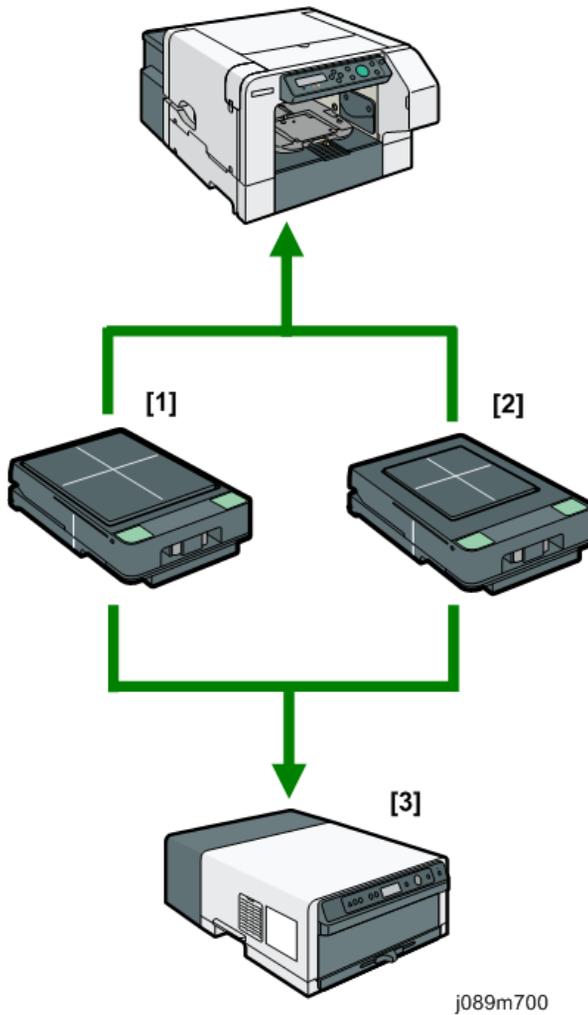
Descriptions related to the option changed as follows.

RICOH Tray for Multi Purpose Type 1 (J364): This was removed from the options. Consequently, the related descriptions in the FSM have changed as follows:

Options

Code	Product Name	Remarks
J361	RICOH Rh 100	Dryer for garment printer. A heat press for fixing printed images onto fabric.
J362	RICOH Tray for Standard Size Type 1	Same as the supplied standard (A4) tray.
J363	RICOH Tray for Small Size Type 1	A5 tray

Diagram



[1]: RICOH Tray for Standard Size Type 1 (standard/optional)

[2]: RICOH Tray for Small Size Type 1 (optional tray)

[3]: RICOH Rh 100 (optional dryer for garment printer)

Consumables

The product codes for each region have changed as follows:

Ink Cartridges

Starter Cartridges are not shipped with this machine.

Never install used ink cartridges to initialize ink supply at installation.

Code	Product Name	Remarks
J922-08 (for NA, AP, and India) J922-24 (for China) J922-48 (for EU)	RICOH Garment Ink Cartridge K (Hi Yield) Type 1	These are medium -size cartridges.
J922-09 (for NA, AP, and India) J922-25 (for China) J922-49 (for EU)	RICOH Garment Ink Cartridge C (Hi Yield) Type 1	
J922-10 (for NA, AP, and India) J922-26 (for China) J922-50 (for EU)	RICOH Garment Ink Cartridge M (Hi Yield) Type 1	
J922-11 (for NA, AP, and India) J922-27 (for China) J922-51 (for EU)	RICOH Garment Ink Cartridge Y (Hi Yield) Type 1	

Code	Product Name	Remarks
J922-12 (for NA, AP, and India) J922-28 (for China) J922-52 (for EU)	RICOH Garment Ink Cartridge K Type 1	These are small -size cartridges.
J922-13 (for NA, AP, and India) J922-29 (for China) J922-53 (for EU)	RICOH Garment Ink Cartridge C Type 1	
J922-14 (for NA, AP, and India) J922-30 (for China) J922-54 (for EU)	RICOH Garment Ink Cartridge M Type 1	
J922-15 (for NA, AP, and India) J922-31 (for China) J922-55 (for EU)	RICOH Garment Ink Cartridge Y Type 1	

Ink Collector Unit

Code	Product Name
J923-01	RICOH Ink Collection Unit Type 1 *

*This ink collector unit is only for this machine. The units for SG 3110DN / SG 3110DNw, or the other Geljet machines have the same appearance, but they are incompatible with this machine due to a software detection.

Others

In addition to the changes of the product codes for each region, cleaning liquid is added as a consumables.

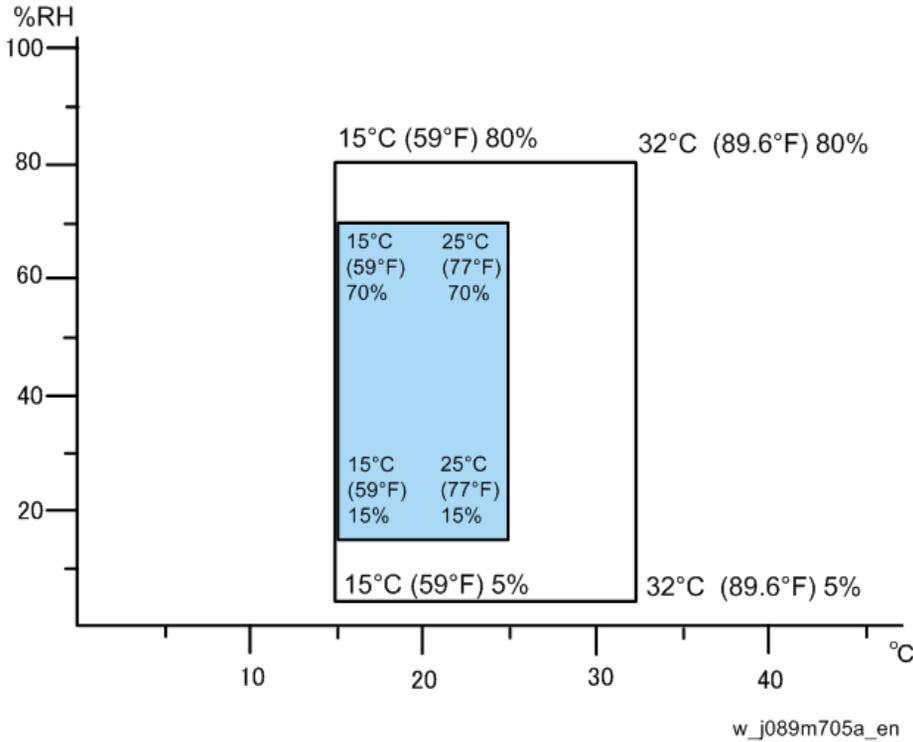
Code	Product Name
J922-40 (for other than China) J922-44 (for China)	RICOH Cleaning Cartridge K Type 1

Code	Product Name
J922-41 (for other than China) J922-45 (for China)	RICOH Cleaning Cartridge C Type 1
J922-42 (for other than China) J922-46 (for China)	RICOH Cleaning Cartridge M Type 1
J922-43 (for other than China) J922-47 (for China)	RICOH Cleaning Cartridge Y Type 1
J926-01	RICOH Cleaning Liquid Type 1

Instaration

Environment

Both "Permissible Range" and "Recommended Range" are corrected.



- White area: Permissible Range (Performance guarantee range for the complete specifications including print image quality)
- Blue area: Recommended Range

Set up the machine in a location that meets these minimum requirements (Performance guarantee range not including print image quality)

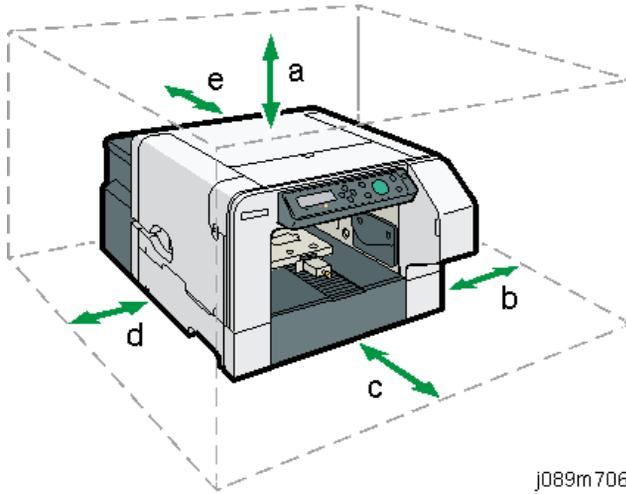
Temperature Range:	10°C to 40°C (50°F to 113°F)
Humidity Range:	5% to 90% RH
Ambient Illumination:	Less than 2,000 Lux (never expose to direct sunlight).

Minimum Space Requirements

Required space at the machine's front and left side (c and d) is corrected.

Note

- In addition, after design change, a space of 10 cm (4 inches) behind the machine's rear (e) is required.

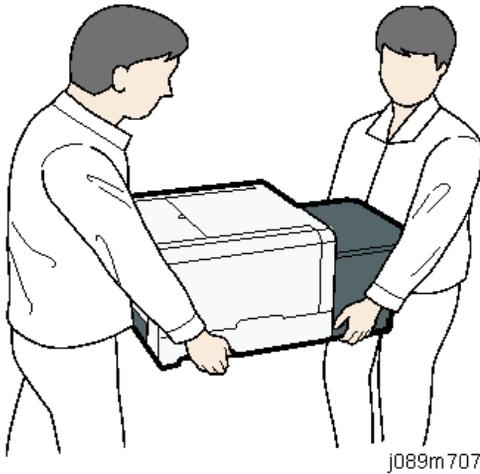


	Old	New
a.	At least 27 cm (10.7 inches)	<-
b.	At least 10 cm (4 inches)	<-
c.	At least 45 cm (17.8 inches)	At least 53 cm (20.9 inches)
d.	At least 3 cm (1.2 inches)	At least 25 cm (9.9 inches)
e.	At least 0 cm (0 inches)	At least 10 cm (4 inches)

Precautions When Moving the Machine

Added or corrected the following items.

- The machine weighs around 24kg (52.9lb.).
- Two or more people are required to lift the printer.



- When moving the printer, lift it slowly so that you do not strain yourself. Lifting the printer forcibly or handling it roughly will risk injury to yourself and damage to the printer.

Be cautious of the following points when moving the machine for repairs or transferring it to a repair facility etc.

- When moving the machine a short distance in a building, make sure the ink cartridges remain set in position.
- When moving the machine a long distance such as for off-site repair, according to the type of ink cartridge in use, do as follows:
 - M -size ink cartridges (RICOH Garment Ink Cartridge X Type 1):
Do not remove the ink cartridges. Make sure that the ink cartridges are fully inserted, and then move the machine as it is.
 - L -size ink cartridges (RICOH Garment Ink Cartridge X (Hi Yield) Type 1):
Remove the ink cartridges. After moving the machine, reinstall the ink cartridges by fully inserting them, and then leave them installed in the machine.
- Always remove the cassette before moving the machine.
- Make sure that the cover and tray do not open or come off by securing them with tape at the positions at which they were secured for product shipment.
- Do not tilt or apply shocks to the machine. If the machine is tilted, ink may spill out of the machine.
- After moving the machine, check the quality of images by performing a test print, and clean the machine if necessary.

Checklist before Moving the Printer

Added or corrected the following items.

1. Always remove the cassette before moving the machine.

2. When moving the machine a short distance in a building, make sure the ink cartridges remain set in position.
3. When moving the machine a long distance such as for off-site repair, L -size ink cartridges (RICOH Garment Ink Cartridge X (Hi Yield) Type 1) must be removed. After moving the machine, reinstall the ink cartridges by fully inserting them, and then leave them installed in the machine.

For details, see page 34 "Precautions When Moving the Machine".

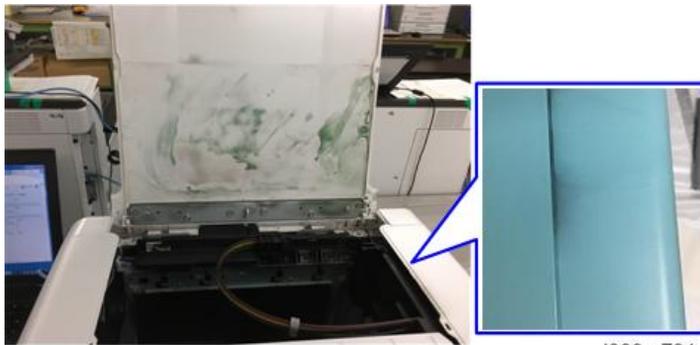
Important Information

Additional User Guidance: Instruct the user to clean the exterior and height sensors periodically.

Exterior

Soak a cloth in water or the cleaning liquid supplied with the maintenance kit, wring it out well, and use it to wipe the exterior. If the stain does not come off, use alcohol for cleaning.

If you leave the stain, the ink mist may escape from the gap in the cover.



j089m731

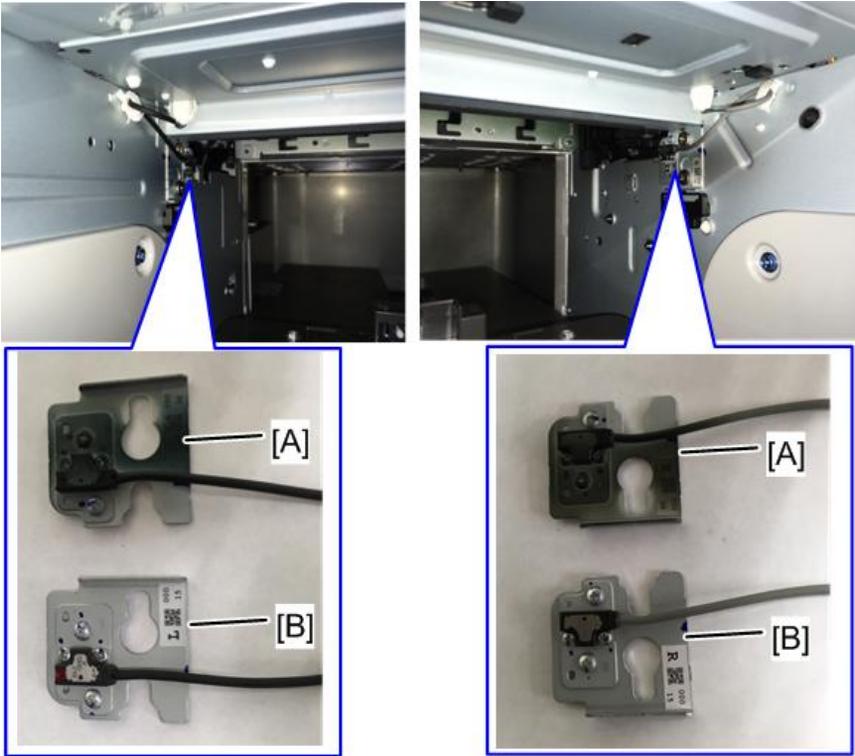
Height Sensors

Clean the left and right sensors with the cleaning liquid and cleaning stick supplied with the maintenance kit.

- [A]: Stained with ink mist

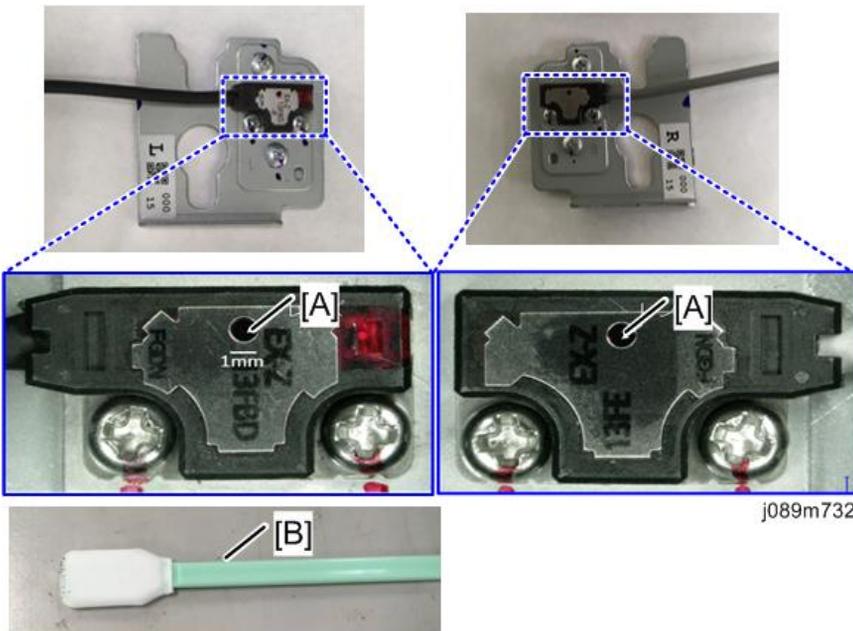
If you leave the stain, the sensor becomes incapable of detecting the tray's height.

- [B] Not stained with ink mist



j089m730

There is a depression in the sensor's lens [A], so remove the stain thoroughly using the end of the cleaning stick [B].



j089m732

Replacement and Adjustment

1

Parts to Be Replaced

Added the following items (for details, follow the links):

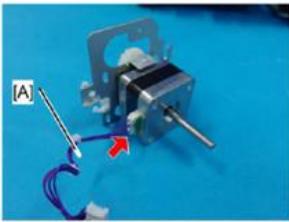
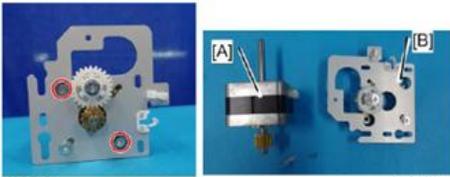
- Cassette Carriage (page 74 "Cassette Carriage")
- Horizontal Encoder Strip: Added the items to be checked after replacement. (page 80 "Horizontal Encoder Strip")
- HRB (Head Relay Board: Carriage Internal Circuit Board) (page 81 "HRB (Head Relay Board)")
- Cassette Carriage Lifting Shaft Bearing Race (page 86 "Lifting Shaft Bearing Race")

Moved the following item:

- Cassette Stand (page 70 "Cassette Stand")

Deleted description according to the following:

Lift Motor Unit: The procedure for disassembling this unit after removing it from the cassette carriage has been deleted (because the items to be replaced changed from the motor alone to the motor unit including its bracket and harness).

Old	New
<p>6. Remove the harness [A].</p>  <p>x1 J089m190</p> <p>7. Separate the lift motor [A] from the bracket [B].</p>  <p>x2 J089m190a</p> <p style="text-align: right;">J089m6001</p>	<p>Deleted the steps on the left table.</p>

Cleaning

Added/changed the following:

- Moving the Print-Head (page 102 "Moving the Print-Heads")
- Cleaning the Maintenance Unit (page 105 "Cleaning the Maintenance Unit")
- Auto Head Maintenance (page 107 "Auto Head Maintenance")
- Clean Internals: The description about the cleaning cartridge in the Note at the beginning was changed as follows:

Old	New
In this case, cleaning cartridges owned by the user will be used.	In this case, use the cleaning cartridge model matching the cartridge owned by the user.

Adjusting the Height of the Cassette

Added "Adjusting the Height of the Cassette Automatically". (page 110 "Adjusting the Height of the Cassette Automatically")

System Maintenance

Firmware Updates

Remove the following from the supported operating systems.

- Microsoft® Windows® 8
- Microsoft® Windows® 8 Pro
- Microsoft® Windows® 8 Enterprise

2. Differences Related to Parts Replacement

Before Replacing Parts

2

↓ Note

- Some parts of this section illustrate the procedure using an image of the model before the design change, but the procedure is the same for the model after the design change.

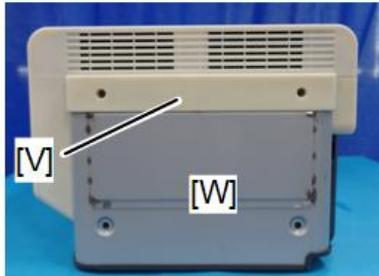
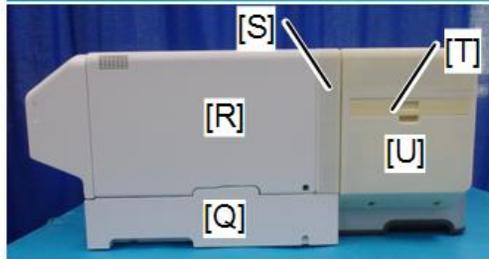
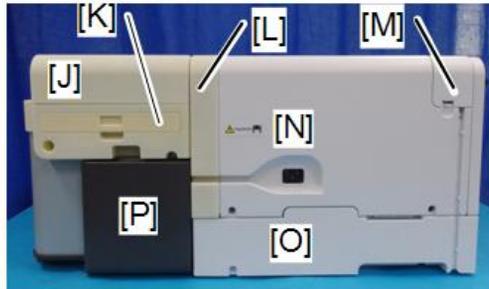
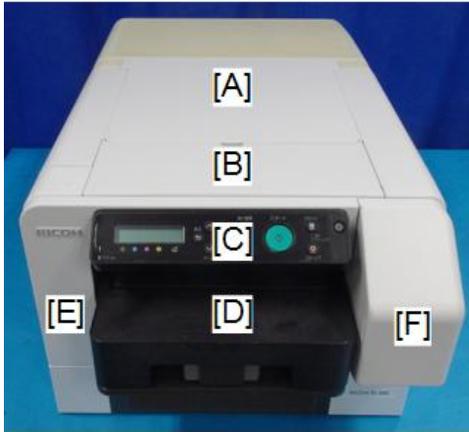
★ Important

- When reassembling the machine, be sure to attach the screws to their original positions. Especially, the blue and black screws are assigned to particular screw holes.

Covers

Cover Names

2



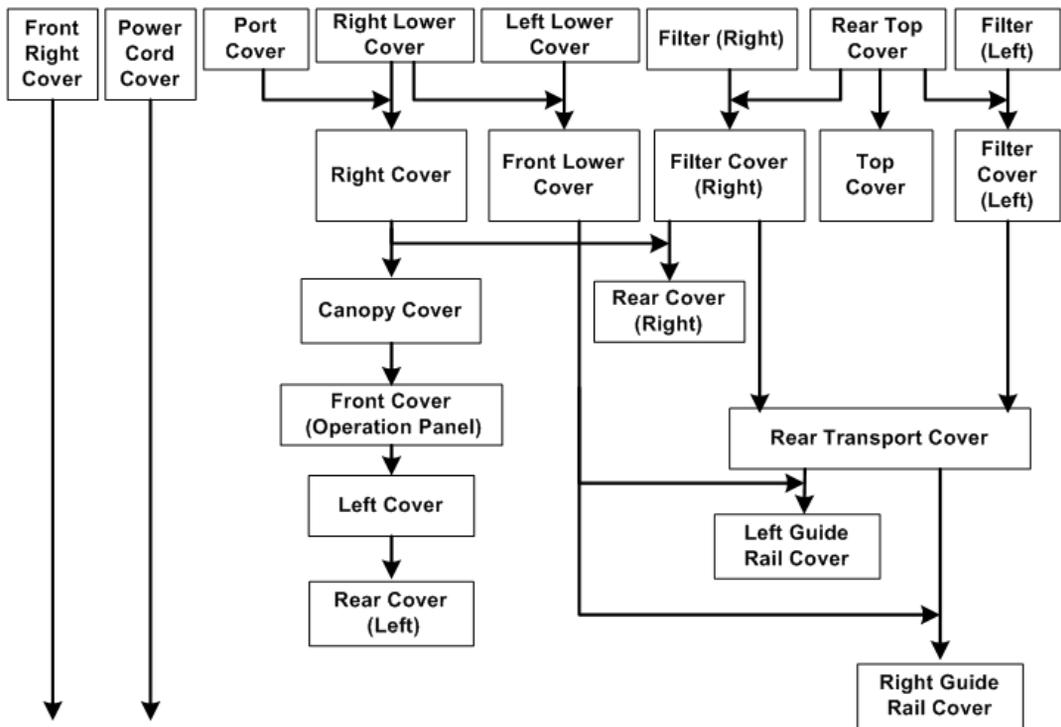
j089m005

[A]	Top Cover	[M]	Port Cover
[B]	Canopy Cover	[N]	Left Cover
[C]	Operation Panel	[O]	Left Lower Cover
[D]	Cassette	[P]	Power Cord Cover
[E]	Front Cover	[Q]	Right Lower Cover
[F]	Front Right Cover	[R]	Right Cover
[G]	Left Guide Rail Cover	[S]	Rear Cover (Right)
[H]	Right Guide Rail Cover	[T]	Filter (Right)

[I]	Front Lower Cover	[U]	Filter Cover (Right)
[J]	Filter Cover (Left)	[V]	Rear Top Cover
[K]	Filter (Left)	[W]	Rear Transport Cover
[L]	Rear Cover (Left)		

Order of Cover Removal

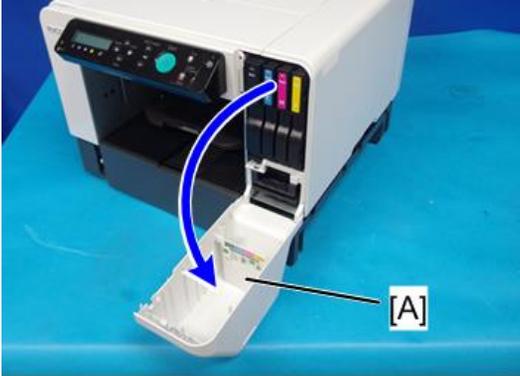
It is very important that you understand how to remove and reinstall the covers before doing replacement procedures. Here is a general summary of the order of removal.



w_j089m050d_en

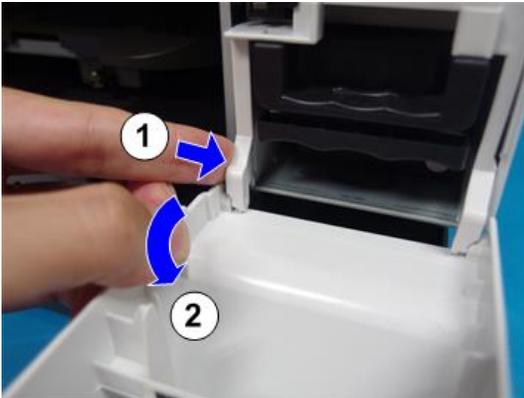
Front Right Cover (with Leaf Spring)

1. Open the front right cover [A].



j089m006

2. Disengage the latch and remove the front right cover.



j089m007

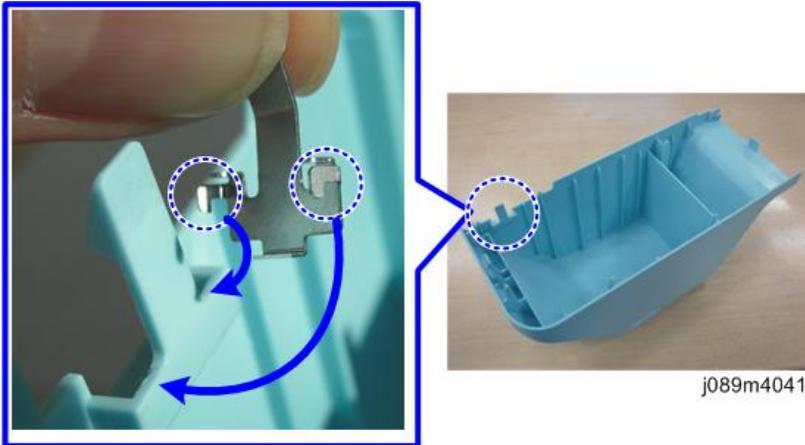
3. Remove the leaf spring [A].



j089m4040

Note

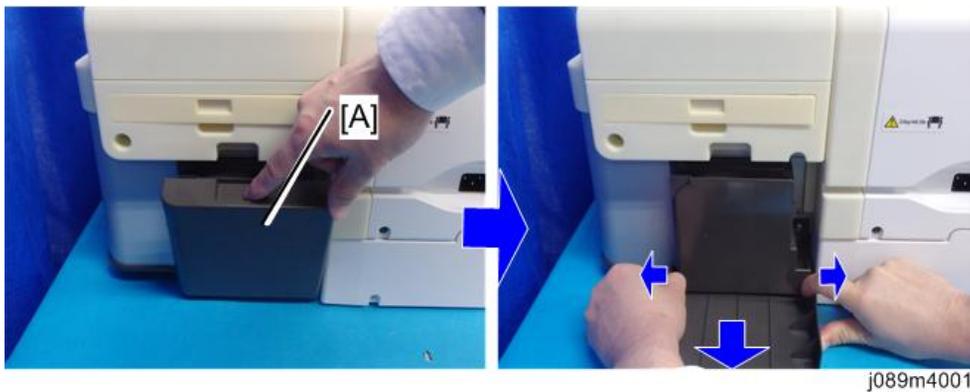
- When attaching the leaf spring, engage the 2 hooks on the spring with the front right cover's edge as shown.



2

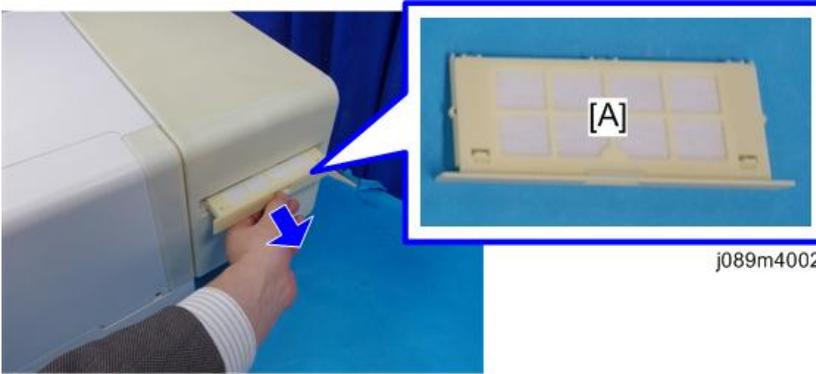
Power Cord Cover

- Disengage the latch and remove the power cord cover [A].



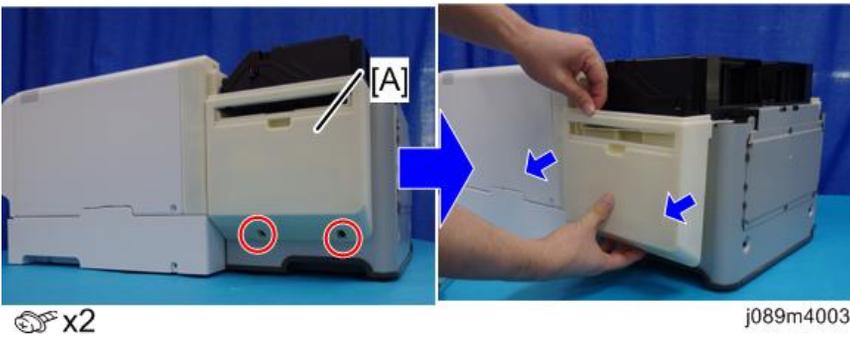
Filter (Right)

1. Remove the filter (right) [A].



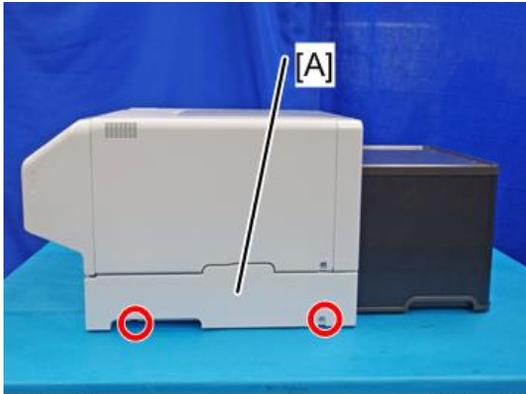
Filter Cover (Right)

1. Remove the filter (right). (page 46 "Filter (Right)")
2. Remove the rear top cover. (page 59 "Rear Top Cover, Top Cover")
3. Remove the filter cover (right) [A].



Right Lower Cover

1. Remove the right lower cover [A].



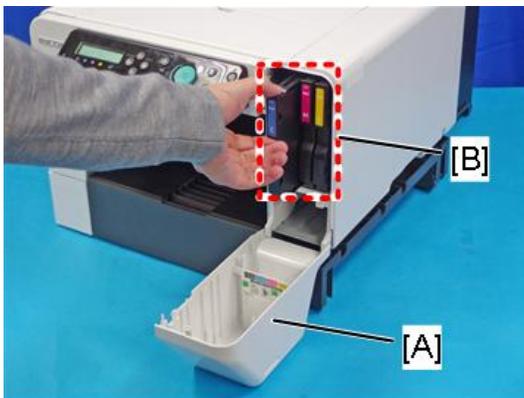
 x2

j089m008

2

Right Cover

1. Remove the right lower cover. (page 47 "Right Lower Cover")
2. Open the front right cover [A], and remove all ink cartridges [B].



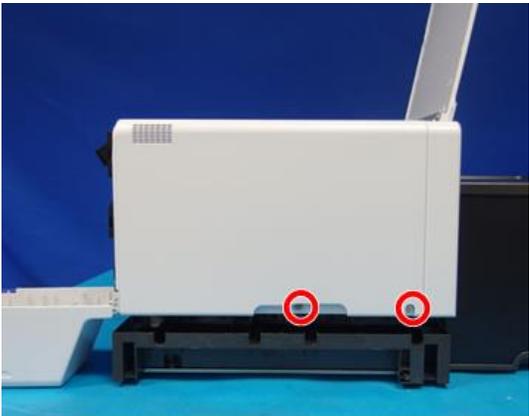
j089m018

3. Open the top cover.



j089m010

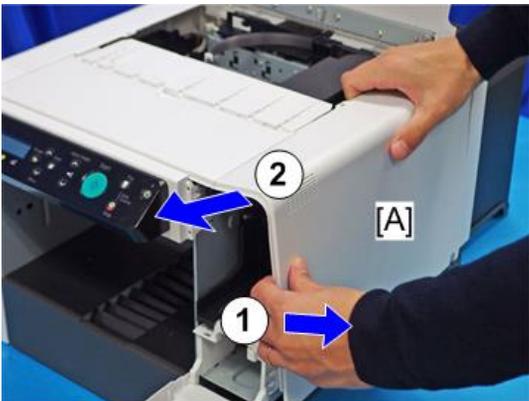
4. Remove 2 screws.



 x2

j089m011

5. Remove the right cover [A].

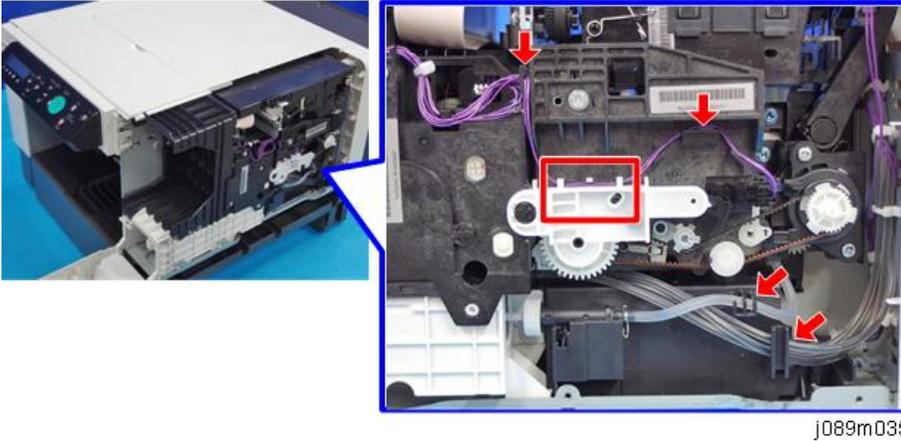


j089m012

Re-assembly

When re-attaching the right cover, check the following points.

1. Check that the harness and ink tube are secured with the tabs.

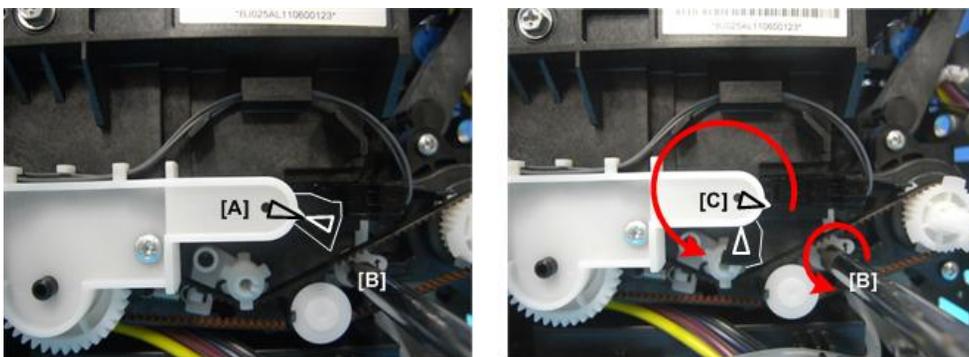


2. Check that the maintenance unit is locked.

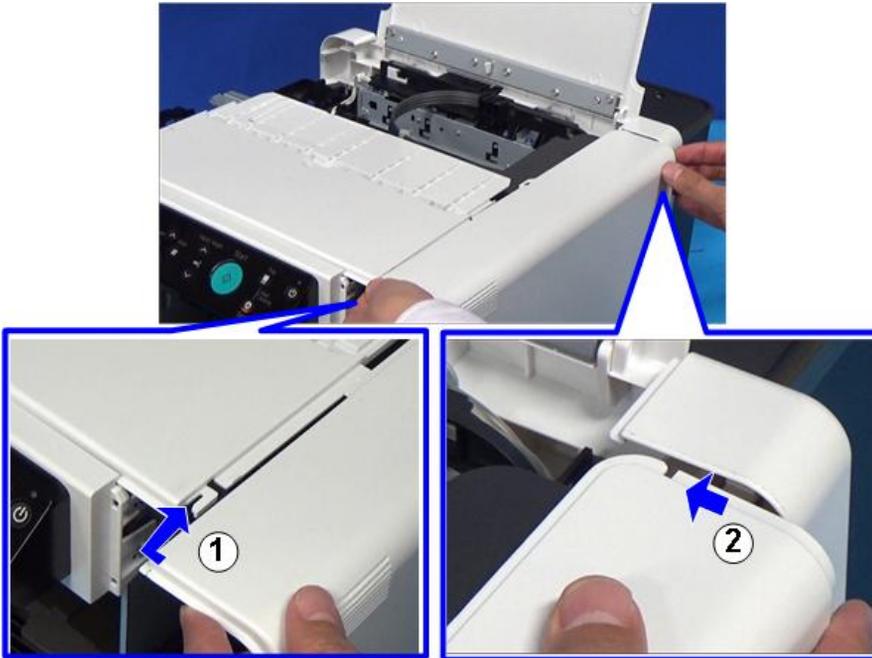
- If the triangles are aligned tip-to-tip as shown at [A], this means the carriage is unlocked (not ready for operation) and can be moved manually.
- Insert a screwdriver at [B], turn it counter-clockwise to rotate the lower triangle around until it is at [C]. This locks the carriage for normal operation.

⬇ Note

- Never rotate the screwdriver clockwise. It may cause a malfunction.



3. Reattach the right cover.



j089m139

Rear Cover (Right)

- 1. Remove the filter cover (right). (page 46 "Filter Cover (Right)")
- 2. Remove the right cover. (page 47 "Right Cover")
- 3. Remove the rear cover (right) [A].

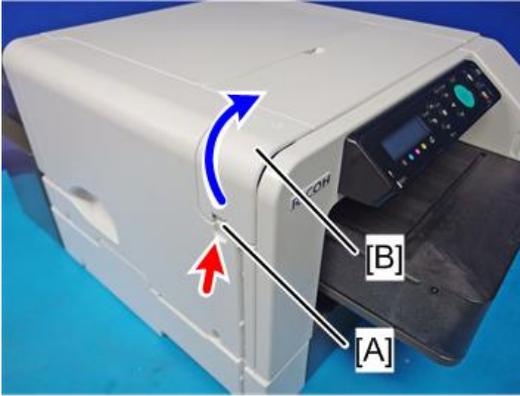


 x1

j089m4004

Port Cover

1. Pressing the tab [A], remove the port cover [B].

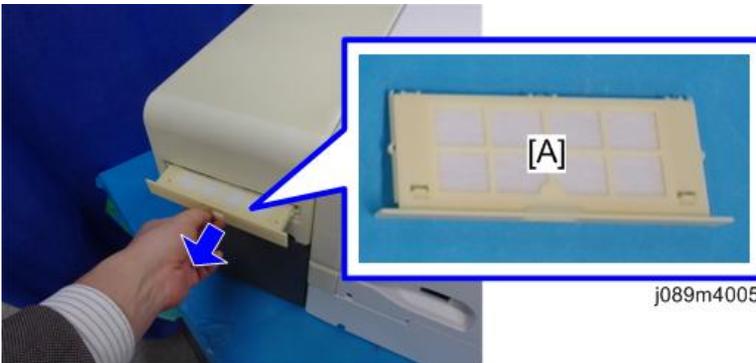


j089m013

2

Filter (Left)

1. Remove the filter (left) [A].

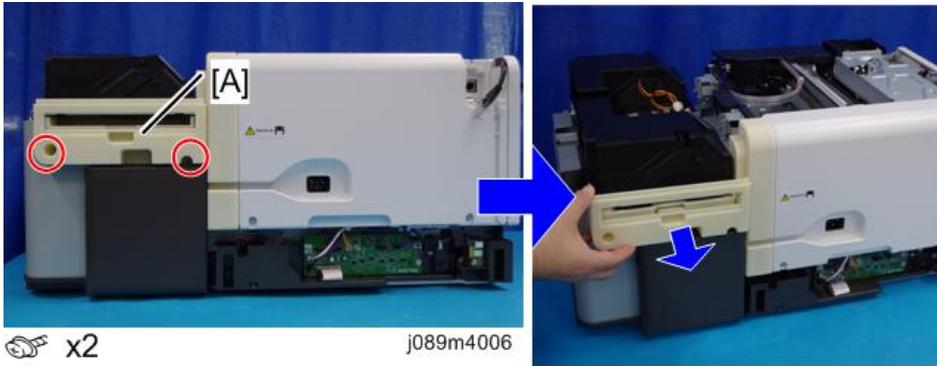


j089m4005

Filter Cover (Left)

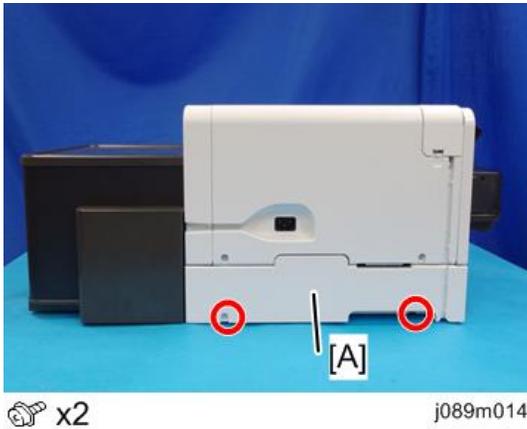
1. Remove the rear top cover. (page 59 "Rear Top Cover, Top Cover")
2. Remove the filter (left) [A]. (page 51 "Filter (Left)")

3. Remove the filter cover (left) [A].



Left Lower Cover

1. Remove the left lower cover [A].



Left Cover

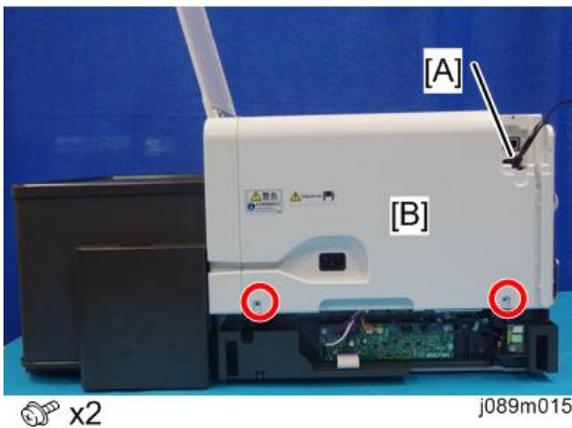
1. Remove the port cover. (page 51 "Port Cover")
2. Remove the front cover. (page 54 "Front Cover, Operation Panel Board")
3. Remove the left lower cover. (page 52 "Left Lower Cover")

4. Open the top cover.



j089m010a

5. Pull out the LAN cable [A], and remove the left cover [B].

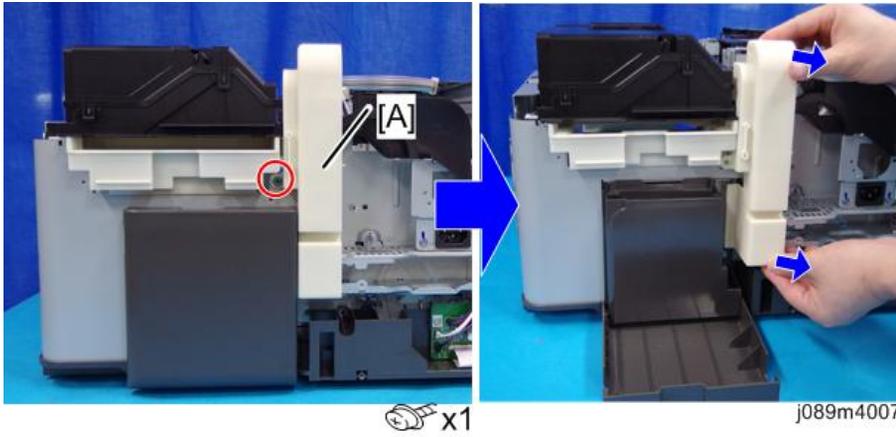


j089m015

Rear Cover (Left)

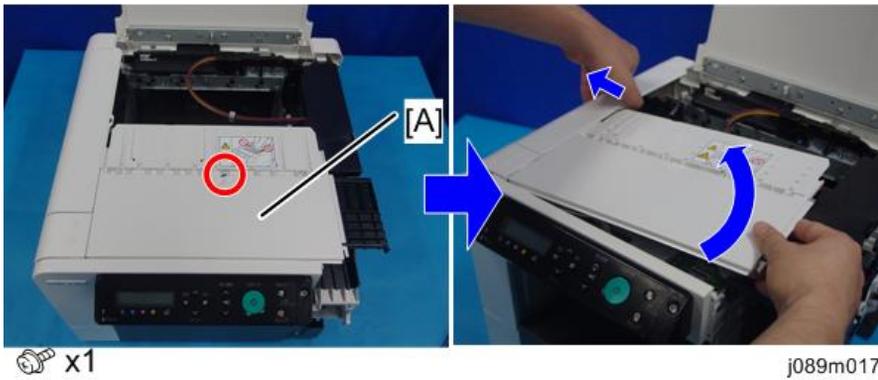
1. Remove the filter cover (left). (page 51 "Filter Cover (Left)")
2. Remove the left cover. (page 52 "Left Cover")

3. Remove the rear cover (left) [A].



Canopy Cover

1. Remove the right cover. (page 47 "Right Cover")
2. Remove the canopy cover [A].



Front Cover, Operation Panel Board

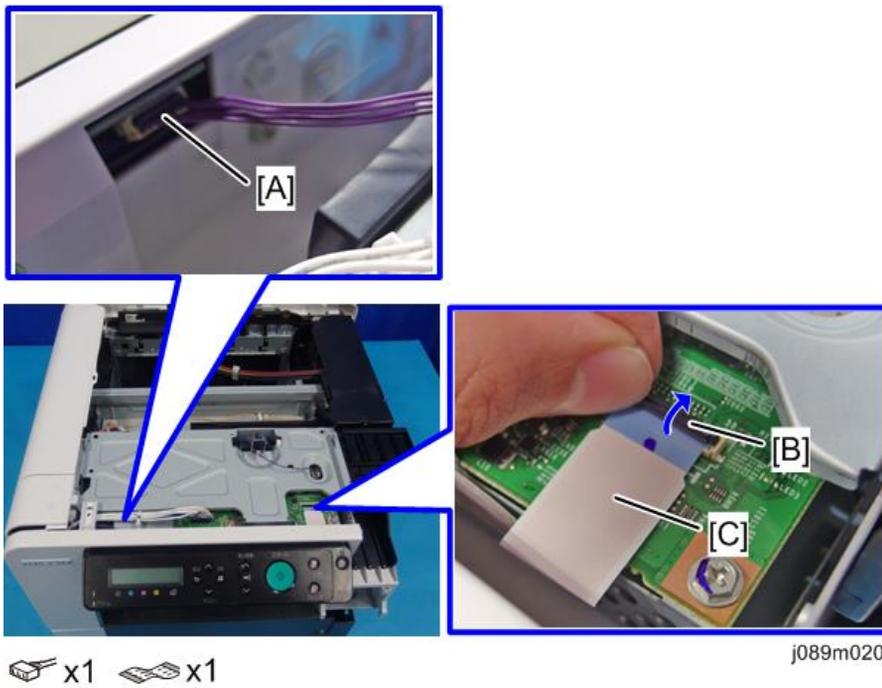
1. Remove the canopy cover. (page 54 "Canopy Cover")

2. Remove the 3 screws.

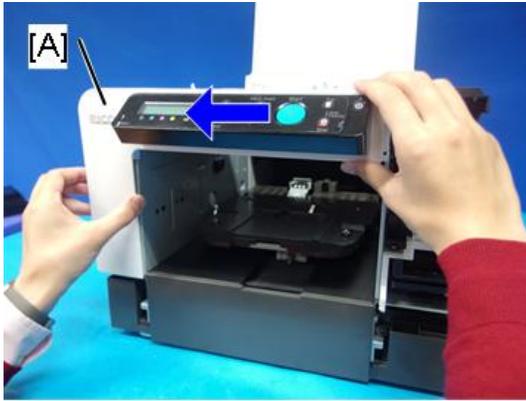


3. Disconnect the connector [A].

4. Release the lock [B] and remove the FFC [C].

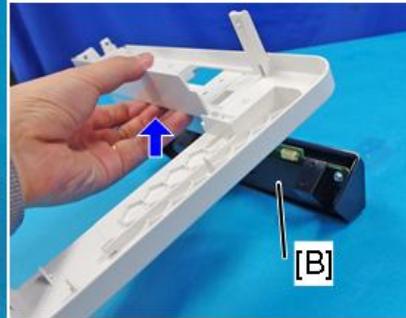
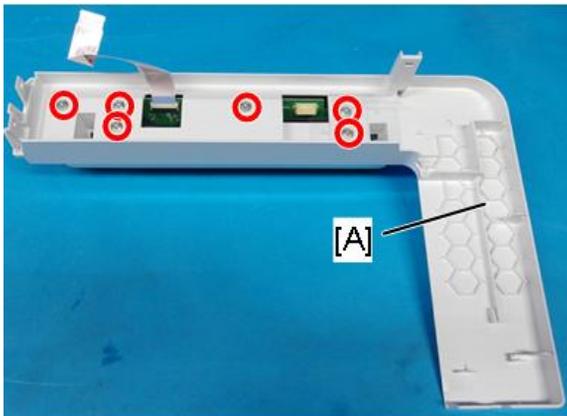


5. Slide the front cover [A] to the left to remove it.



j089m021

6. Separate the front cover [A] and the operation panel unit [B].

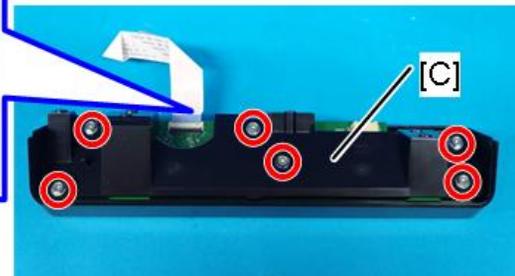
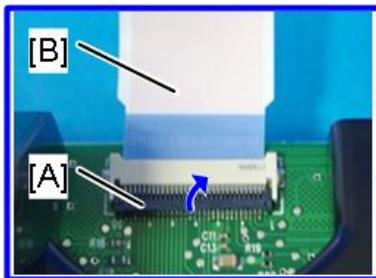


j089m022

 x6

7. Release the lock [A] and remove the FFC [B].

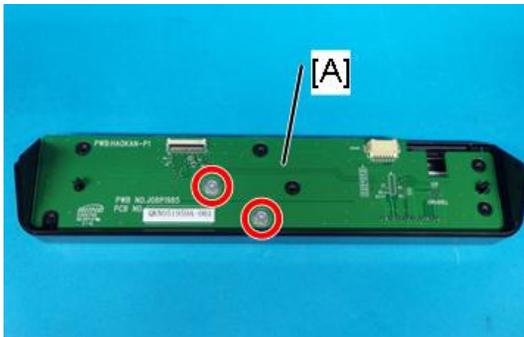
8. Remove the operation panel board cover [C].



 x6  x1

j089m023

9. Remove the operation panel board [A].



 x2

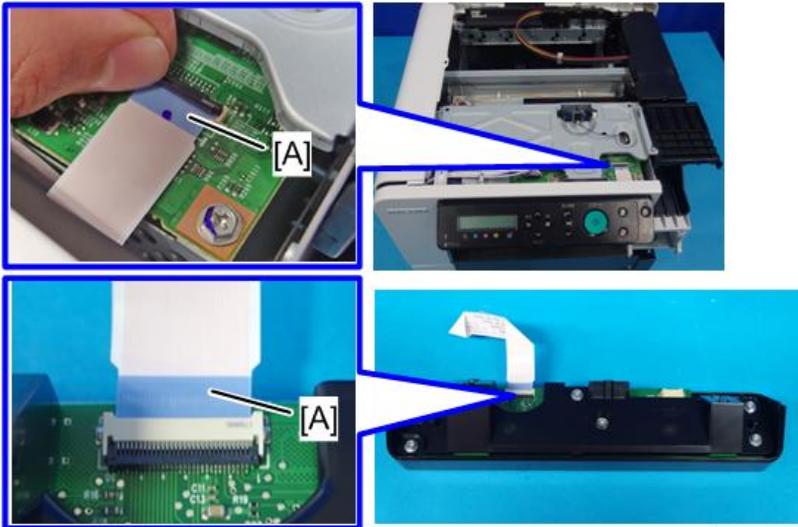
j089m 024

2

Re-assembly

FFC

1. The blue band [A] must be facing up when you reconnect the FFC.



j089m033

Front Cover

1. Remove only the screw at the machine's front part of the left cover.

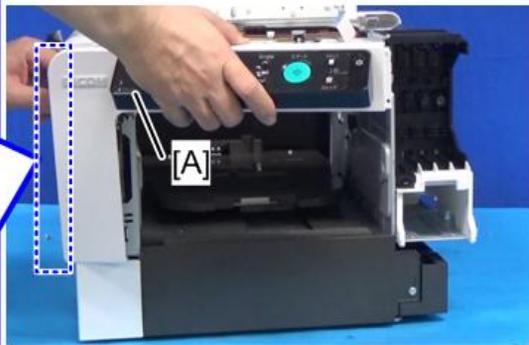
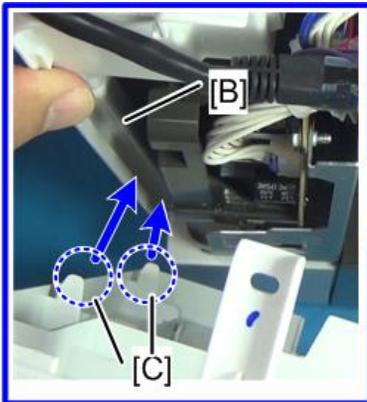


 x1

j089m4008

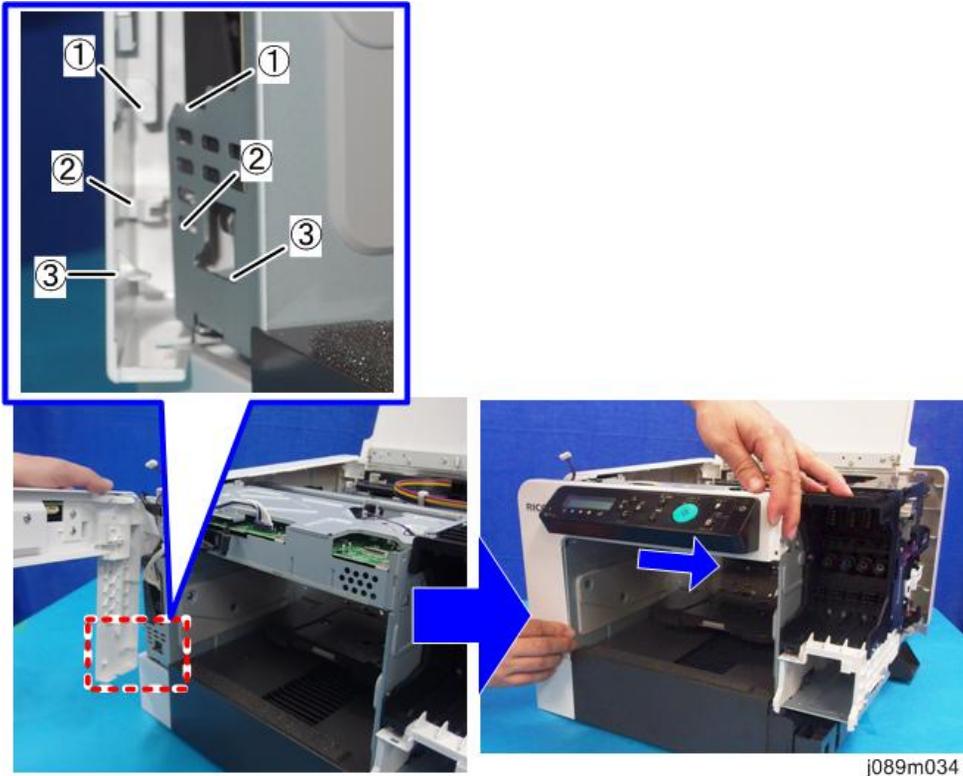
2. Attach the front cover [A].

Slightly pulling out the temporarily attached front part [B] of the left cover, insert the front cover's 2 tabs [C] into the gap.



j089m5031

- Align the tabs (3 points) on the left bottom of the front cover with the machine's frame and slide the cover to attach it.



- Fasten the screw at the front part of the left cover.

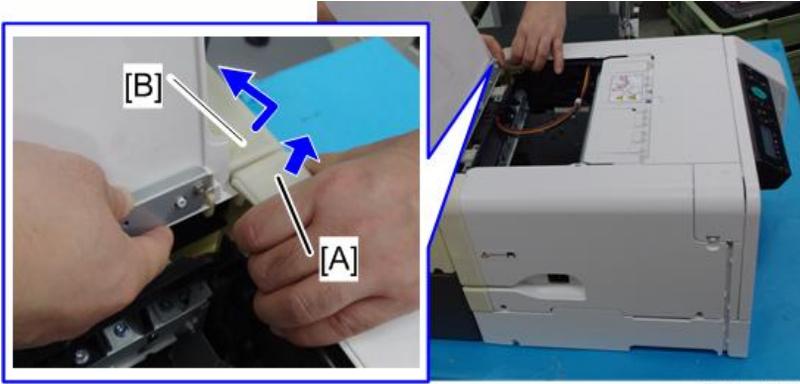
Rear Top Cover, Top Cover

- Remove the rear top cover [A].

- Remove the 4 screws.

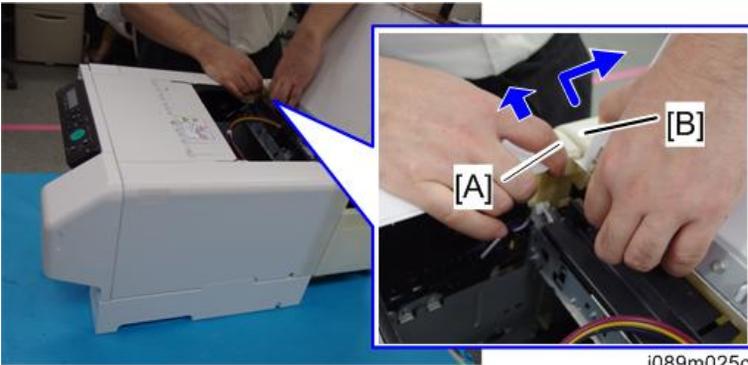


- Pulling up the rear cover (right) [A] slightly, lift the rear top cover's front right end [B] slightly and then pull it out toward the rear side.



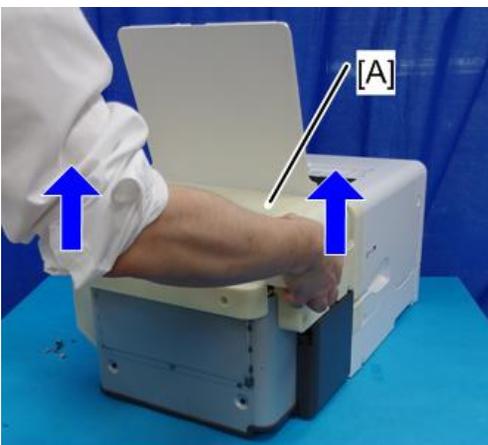
j089m025b

3. Pulling up the rear cover (left) [A] slightly, lift the rear top cover's front left end [B] slightly and then pull it out toward the rear side.



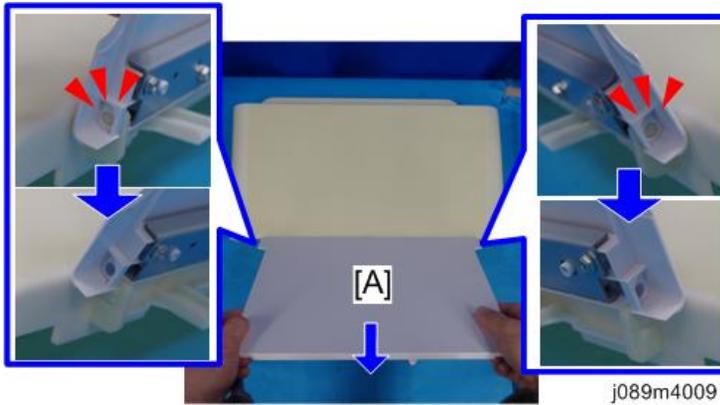
j089m025c

4. Lift the rear top cover [A] and then remove it.



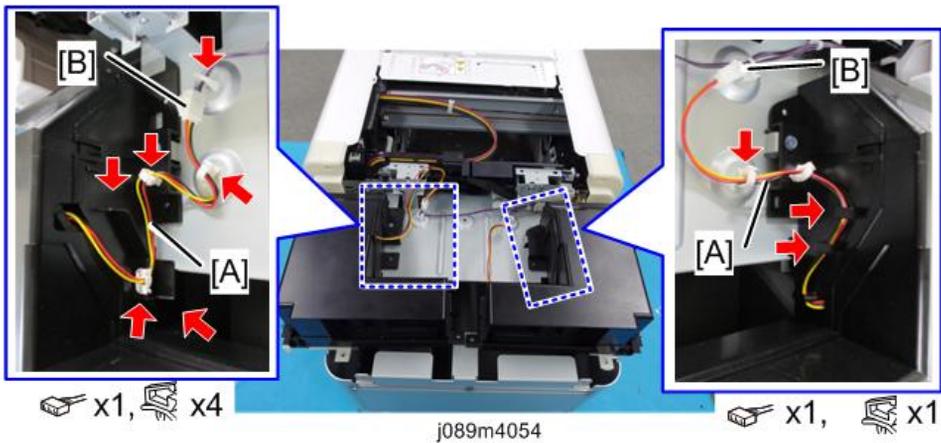
j089m025d

2. Disengage the 2 latches, and remove the top cover [A].



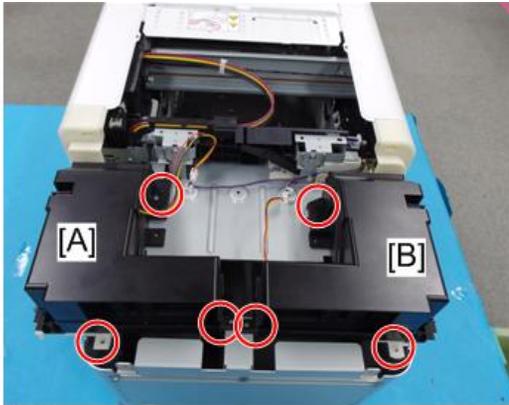
Rear Transport Cover

1. Remove the filter cover (right). (page 46 "Filter Cover (Right)")
2. Remove the filter cover (left). (page 51 "Filter Cover (Left)")
3. Release the harnesses [A] from the cable guides and the harness guides, and disconnect the connectors [B].



4. Remove the ink mist collecting fan unit (right) [A].

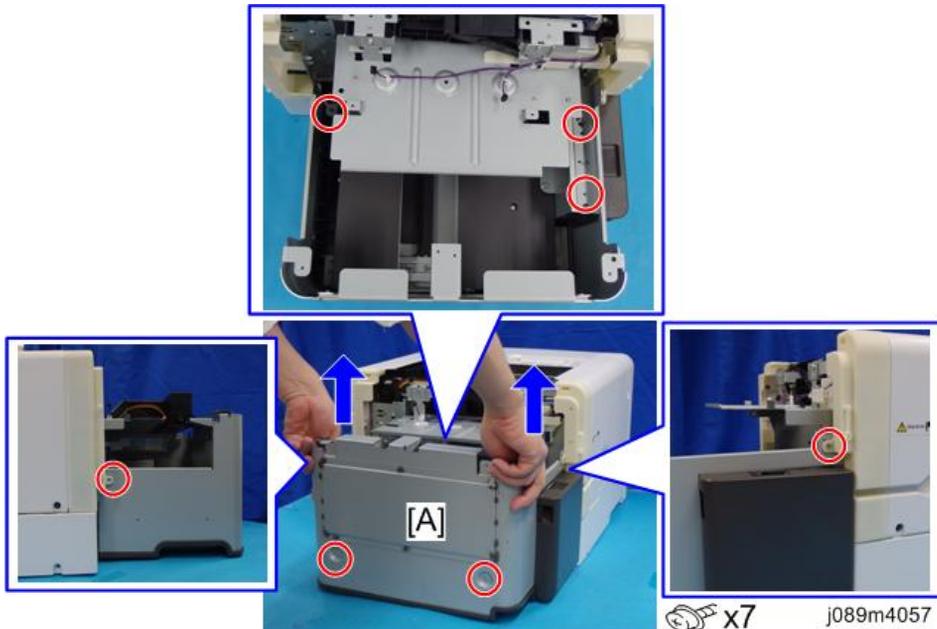
5. Remove the ink mist collecting fan unit (left) [B].



 x6

j089m4055

6. Remove the rear transport cover [A].



 x7

j089m4057

Front Lower Cover

1. Remove the cassette.
2. Remove the right lower cover. (page 47 "Right Lower Cover")
3. Remove the left lower cover. (page 52 "Left Lower Cover")

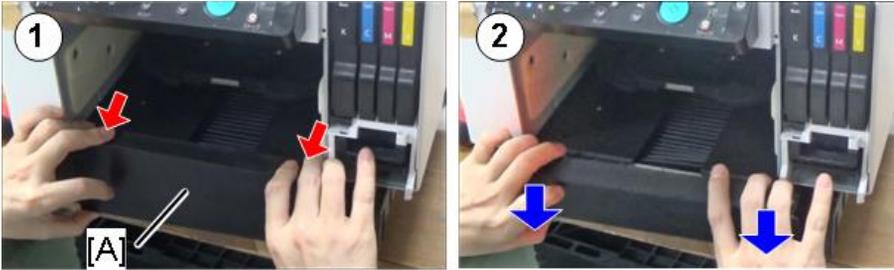
4. Remove 2 screws of the front lower cover.



 x2

J089m150

5. Disengage the two tabs on the front lower cover [A], and then remove the cover by pulling it downward.

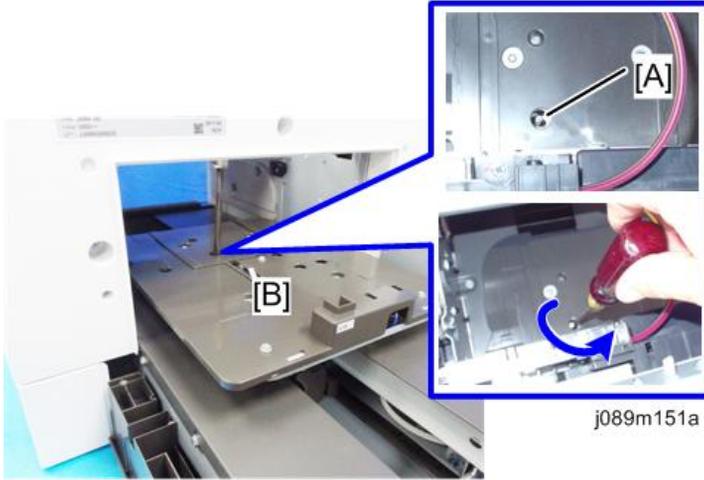


J089m151

Right Guide Rail Cover

1. Remove the rear transport cover. (page 61 "Rear Transport Cover")
2. Remove the front lower cover. (page 62 "Front Lower Cover")

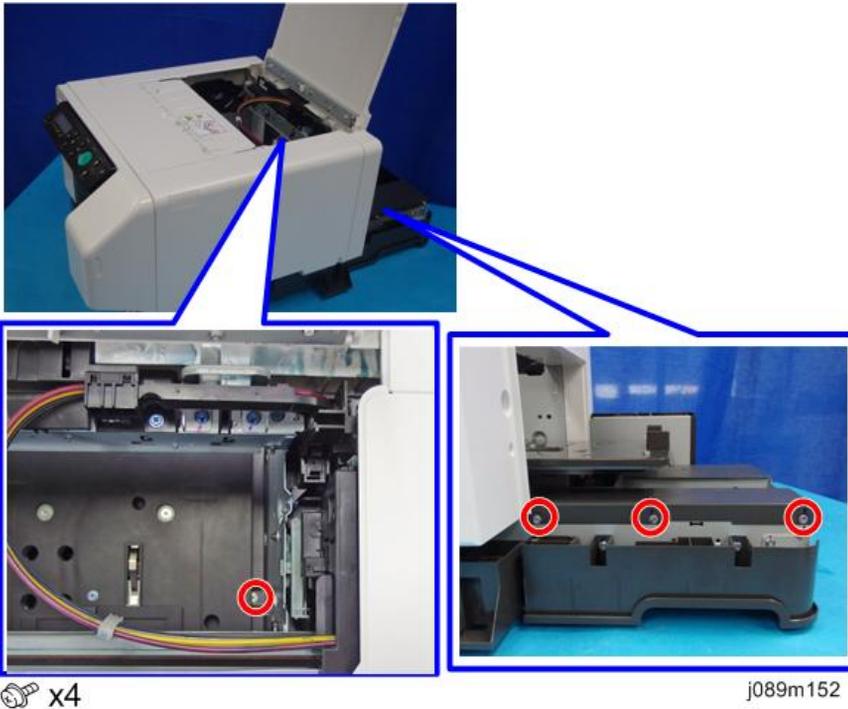
3. To lift the cassette stand [B], turn the screw [A] counterclockwise until it stops by using a flathead screwdriver.



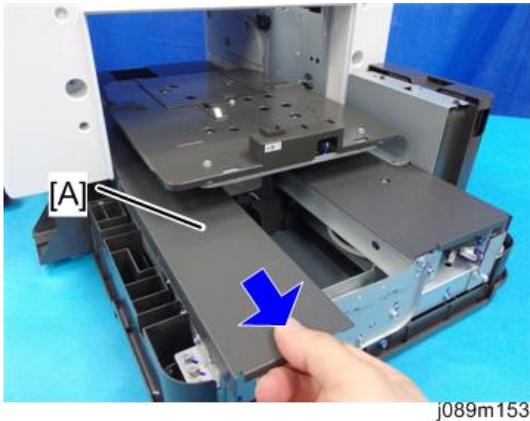
Note

- After the right guide-rail cover (or both guide-rail covers if the left guide-rail cover was also removed) is installed, turn this screw clockwise to lower the cassette stand.
- Again, turn the screw until the screwdriver stops. If the screw stops rotating when either lifting or lowering the cassette stand, do not turn it any further.

4. Remove the screws of the right guide rail cover.

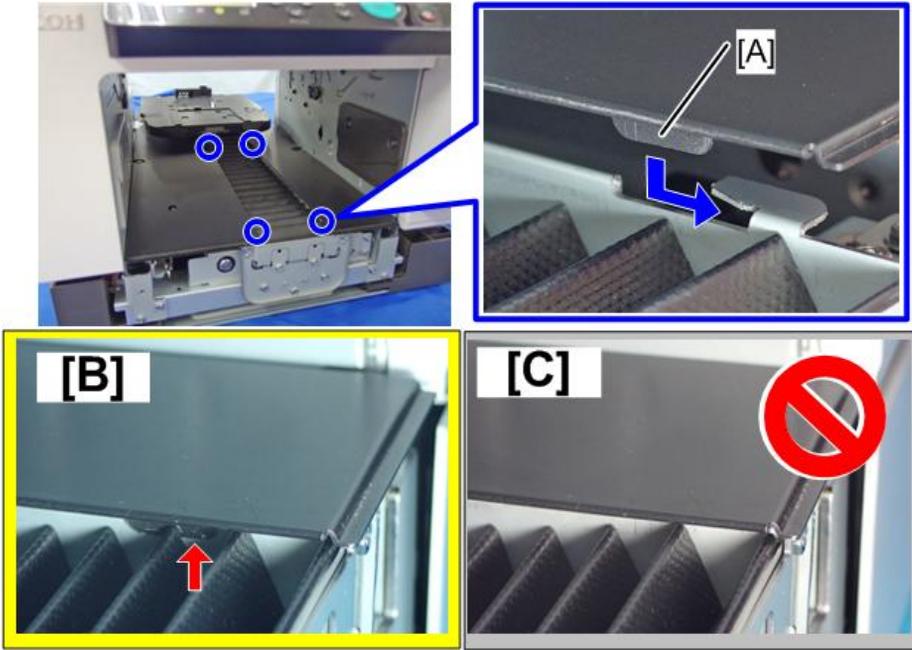


5. Remove the right guide rail cover [A].



↓ Note

- When attaching the right/left guide rail cover, make sure that the tabs [A] indicated by blue circles as shown are engaged in the corresponding holes.
[B]: OK
[C]: Not OK

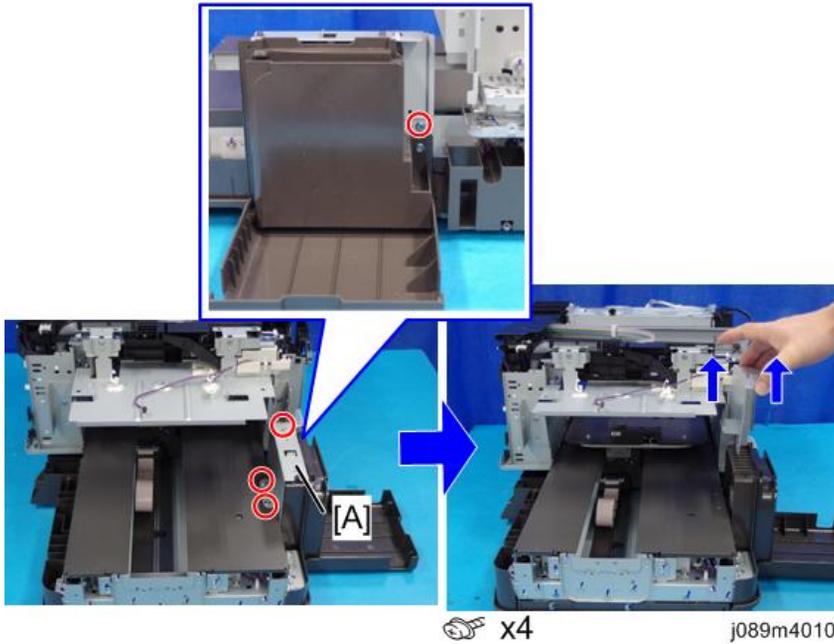


j089m154

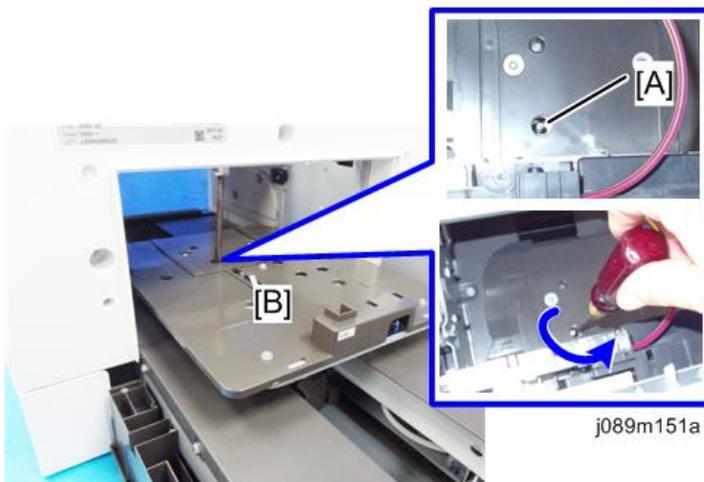
Left Guide Rail Cover

1. Remove the rear transport cover. (page 61 "Rear Transport Cover")
2. Remove the front lower cover. (page 62 "Front Lower Cover")

3. Remove the vertical motor cover [A].



4. To lift the cassette stand [B], turn the screw [A] counterclockwise until it stops by using a flathead screwdriver.



↓ Note

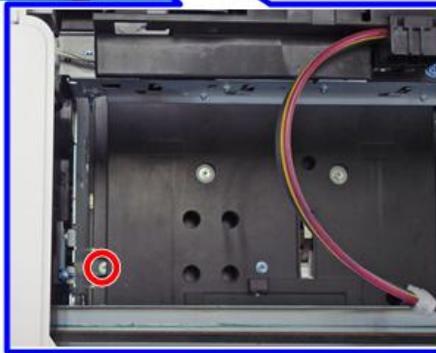
- After the left guide-rail cover (or both guide-rail covers if the right guide-rail cover was also removed) is installed, turn this screw clockwise to lower the cassette stand.
- Again, turn the screw until the screwdriver stops.

- If the screw stops rotating when either lifting or lowering the cassette stand, do not turn it any further.

5. Remove the screws of the left guide rail cover.



 x2



j089m155

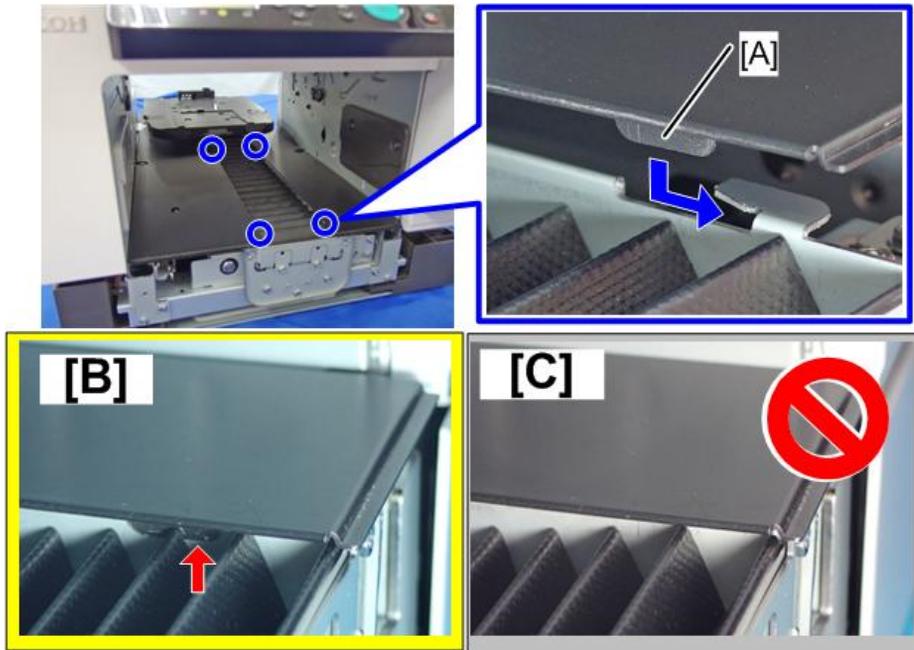
6. Remove the left guide rail cover [A].



j089m156

Note

- When attaching the right/left guide rail cover, make sure that the tabs [A] indicated by blue circles as shown are engaged in the corresponding holes.
[B]: OK
[C]: Not OK



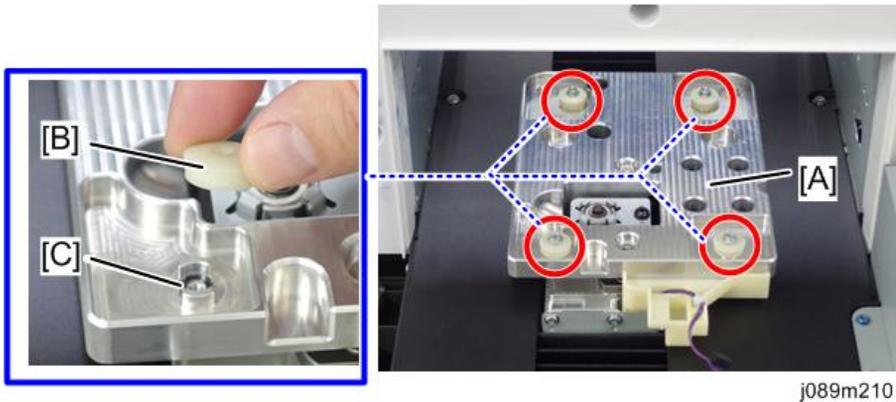
j089m154

Cassette Stand, Cassette Carriage

Notes on Replacing the Cassette Stand and Cassette Carriage

★ Important

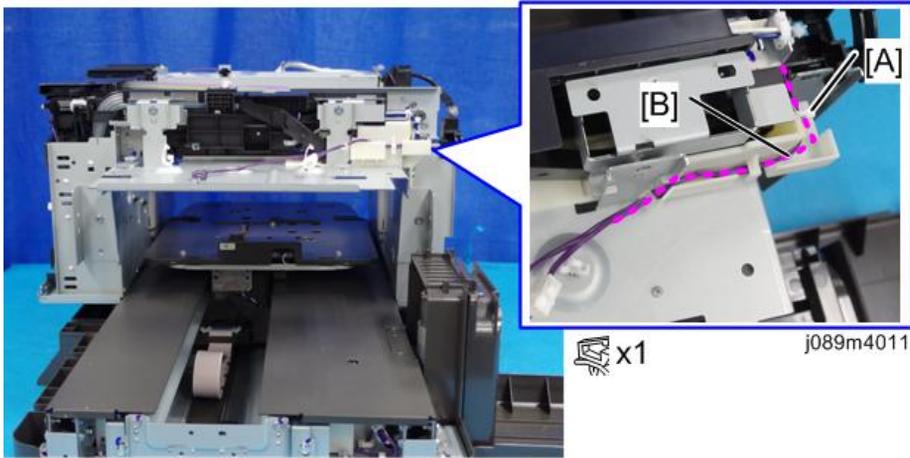
- Cassette stand and cassette carriage are provided as a set, so you must replace them together. Reason: The cassette stand's height and levelness are precisely adjusted in alignment with the cassette carriage.
- The height and levelness of the cassette stand are precisely adjusted at 4 points; by the caps [B] and spacers [C] beneath them on the cassette carriage [A]. Both the caps and spacers are selected and positioned according to each cassette stand and cassette carriage. Thus, they are supplied as service parts secured to each cassette carriage by the screws for securing the cassette stand.
- Therefore, when replacing the cassette carriage, do not reuse the existing caps and spacers, but use the caps and spacers supplied with the replacement cassette carriage without changing their positions.



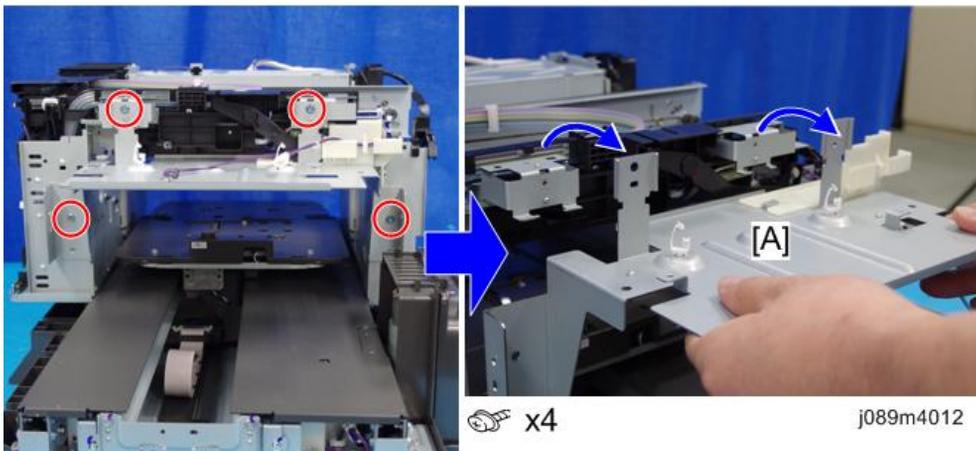
Cassette Stand

1. Remove the rear transport cover. (page 61 "Rear Transport Cover")
2. Remove the rear cover (right). (page 50 "Rear Cover (Right)")
3. Remove the rear cover (left). (page 53 "Rear Cover (Left)")

4. Release the clamp [A], and release the harness [B] from the harness guides.



5. Remove the fan unit base [A].



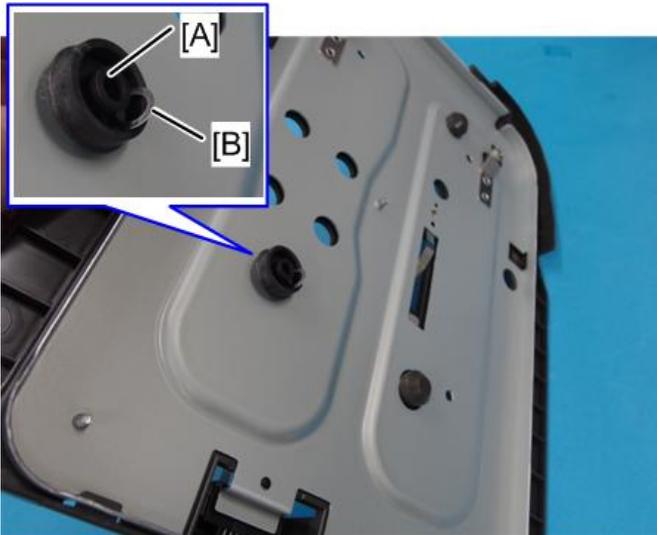
⚠ CAUTION

- The following procedure explains how to remove the cassette stand. Note that there are caps [A] and spacers [B] between the cassette stand and the cassette carriage to precisely adjust the height and levelness of the cassette stand at 4 points.
- When detaching and reattaching the cassette stand for replacing other parts, make sure not to remove or change the positions of the caps and spacers. (If they come off when detaching the cassette stand, be sure to return them to their original positions.)



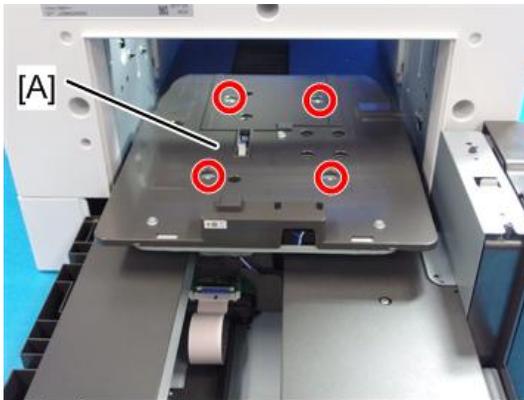
j089m159

- Example of a cap [A] and spacer [B] coming off when removing the cassette stand (The cap has stuck to the back of the cassette stand and come off with the spacer.)



j089m4048

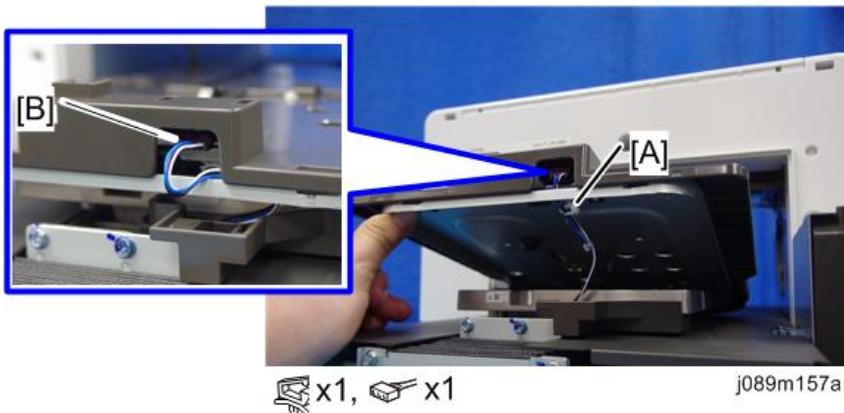
6. Remove the 4 screws to turn over the cassette stand [A].



 x4

j089m157

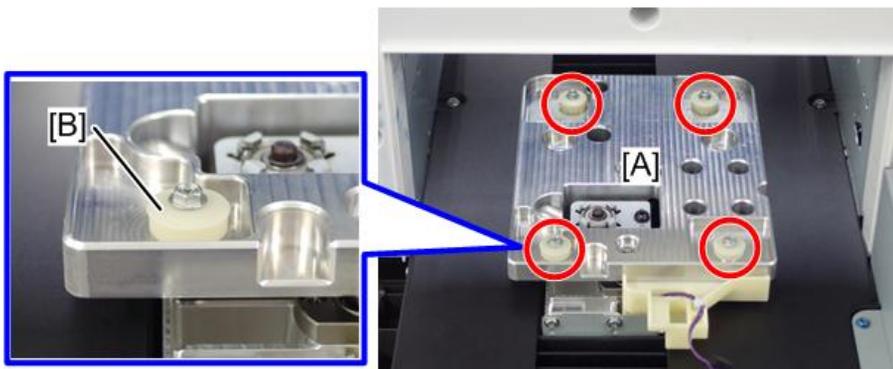
7. Release the cable clamp [A], and disconnect the connector [B] to remove the cassette stand.



 x1,  x1

j089m157a

8. There are 4 caps [B] attached to the cassette carriage [A], which has had the cassette stand removed. Use the screws removed in Step 2 to fix the caps.

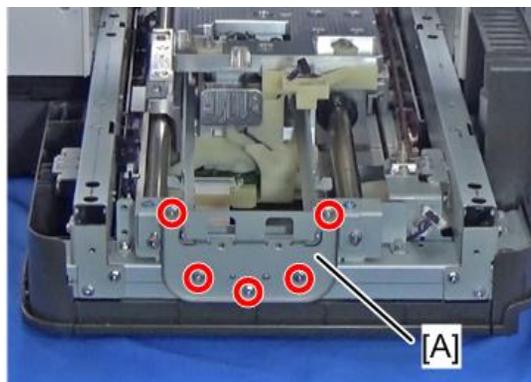


j089m158

Cassette Carriage

1. Remove the cassette stand. (page 70 "Cassette Stand")
2. Remove the right guide rail cover. (page 63 "Right Guide Rail Cover")
3. Remove the left guide rail cover. (page 66 "Left Guide Rail Cover")
4. Remove the bracket [A].

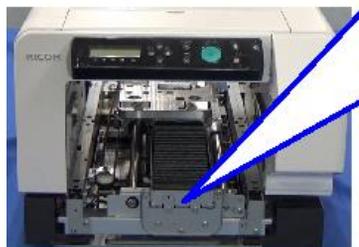
2



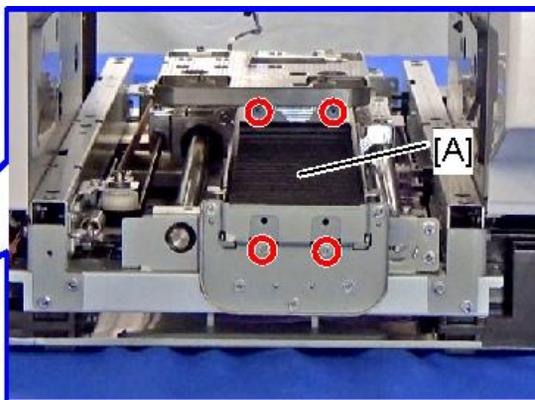
 x5

j089m173

5. Remove the accordion cover [A].

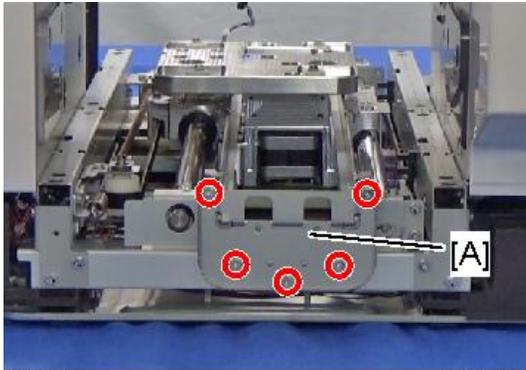


 x4



j089m193

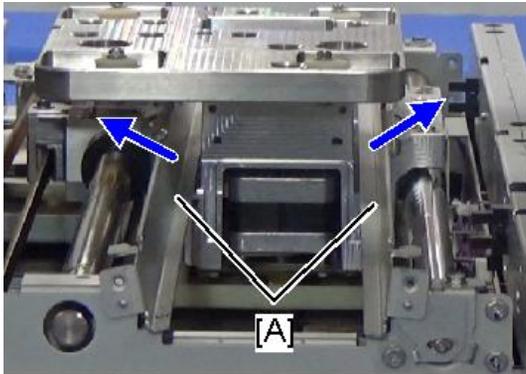
6. Remove the bracket [A].



 x5

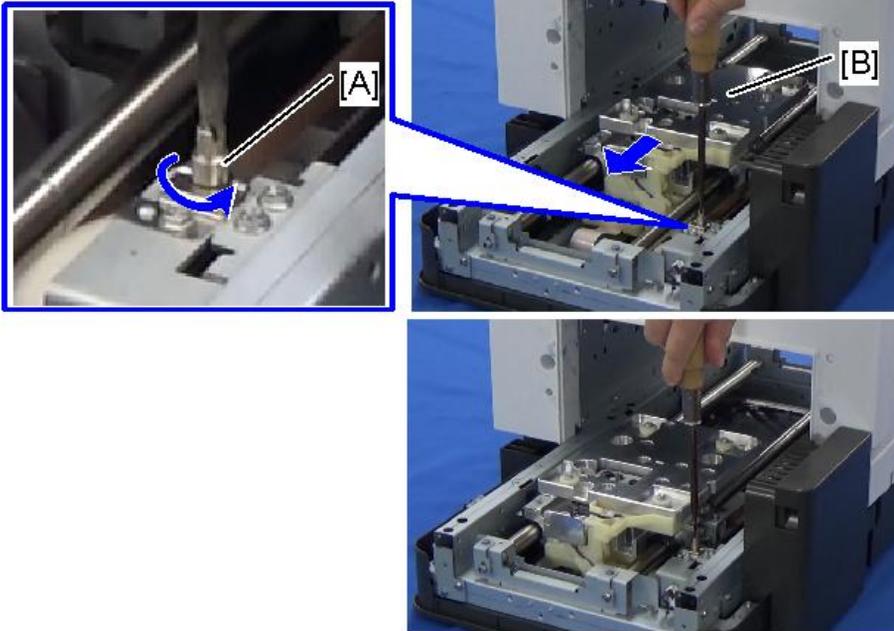
j089m194

7. Remove the 2 accordion cover guides [A].



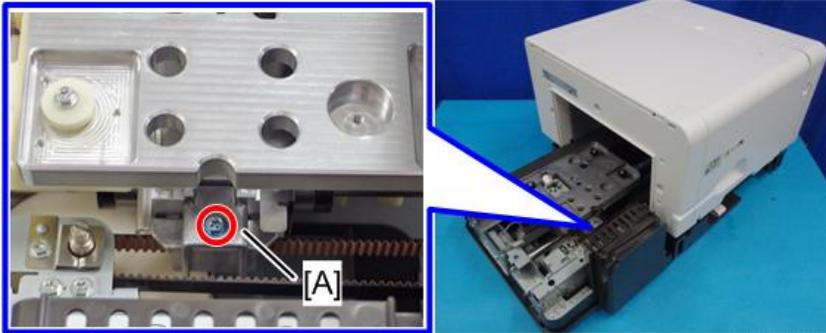
j089m195

- 8. Insert a screwdriver at [A], and turn it counter-clockwise to move the cassette carriage [B] to the rear.



j089m196

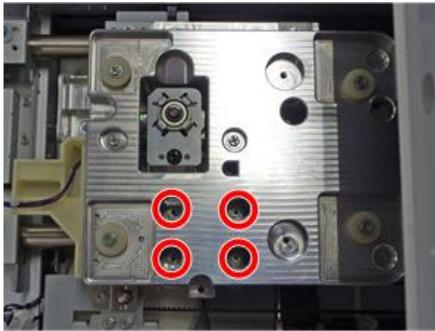
- 9. Remove the belt engaging bracket [A].



 x1

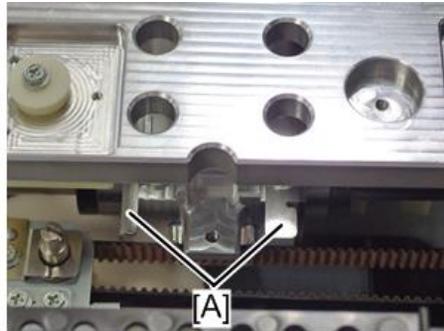
j089m160

10. Remove the 2 brackets [A].



 x4

j089m182

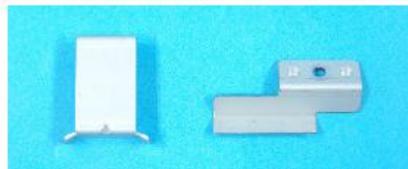
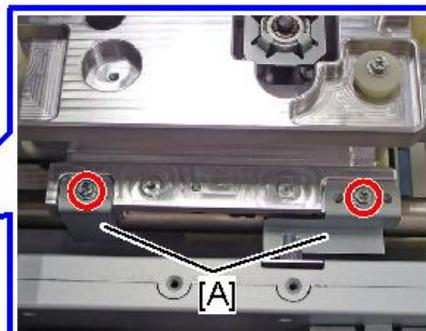


11. Remove the 2 brackets [A] at the right side.

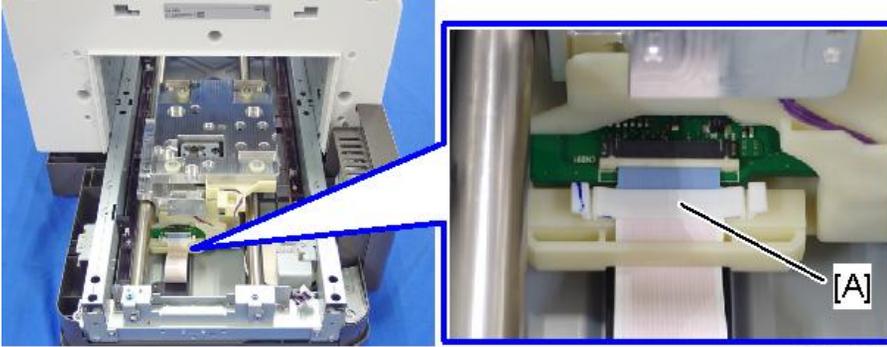


 x2

j089m183

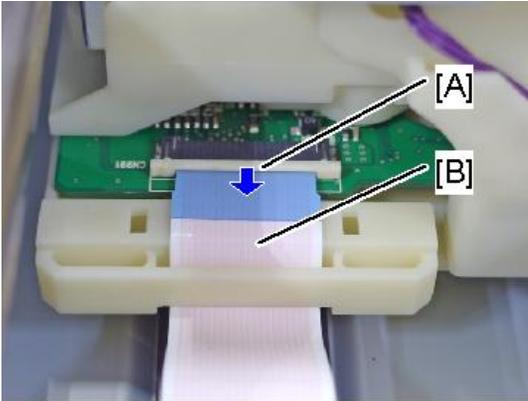


12. Remove the clamp [A].



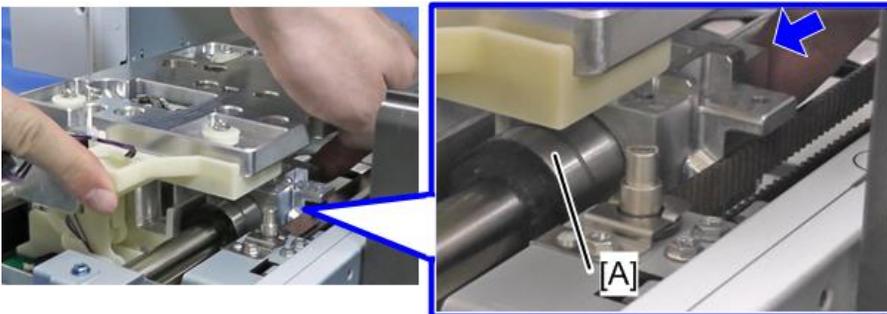
j089m184

13. Slide the FFC lock [A] and disconnect the FFC [B].



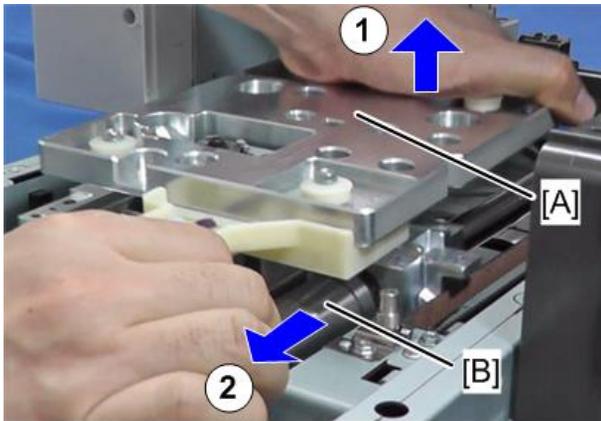
j089m185

14. Push out the linear bushing [A].



j089m197

15. While lifting the cassette carriage [A], pull out the linear bushing [B].



j089m084

16. Remove the cassette carriage [A].



j089m199

Encoders

Horizontal Encoder Strip

2

<After Replacement>

Check for any image quality degradation according to the following procedure:

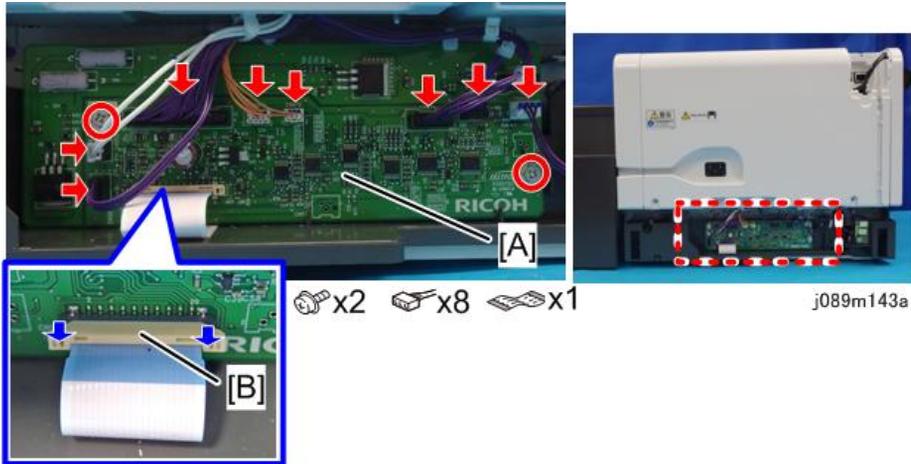
- Do the "Nozzle Check". (See "Nozzle Check" on the field service manual.)
(Do the following only if image quality degradation, such as an ink discharge error or color mixture error, occurs.)
- Do the "Head Position". (See "Head Position" on the field service manual.) (Inspect the nozzle check patterns and execute this up to 3 times for print heads with problems only.)
(Do the following only if image quality degradation, such as an ink discharge error or color mixture error, occurs.)
- Do the "Registration". (See "Registration" on the field service manual.) (once)

Boards

Relay Board

1. Remove the left lower cover. (page 52 "Left Lower Cover")
2. Remove the relay board [A].

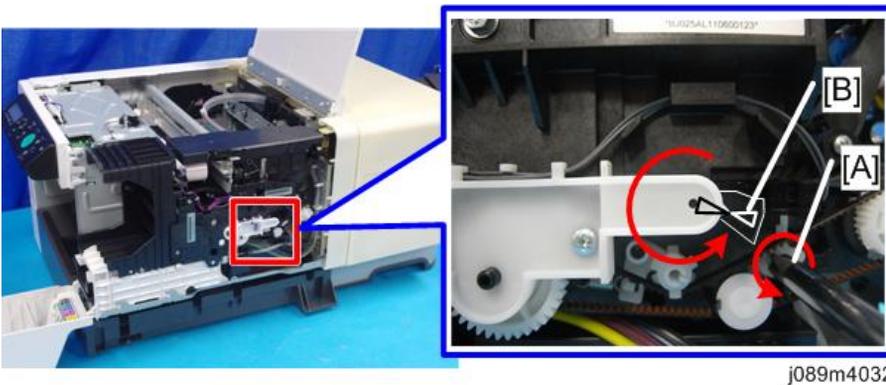
Unlock the FFC lock [B], and disconnect the FFC.



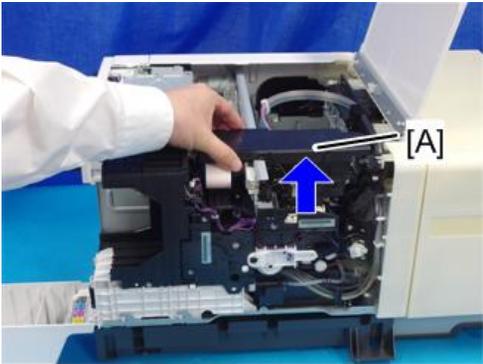
HRB (Head Relay Board)

1. Remove the canopy cover. (page 54 "Canopy Cover")
2. Insert the tip of a screwdriver into the hole [A] and turn it counter-clockwise to rotate the lower triangle [B] up to the other triangle until they are aligned.

When the triangles are aligned, the carriage is unlocked.

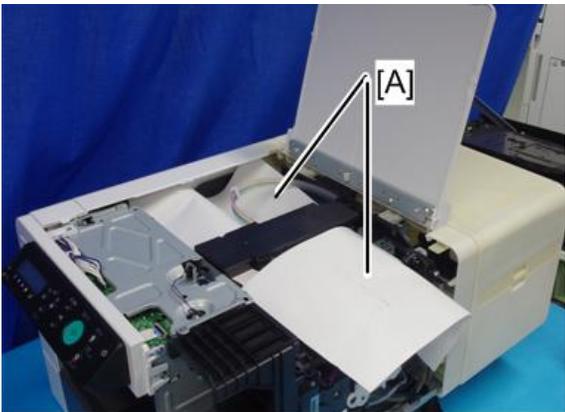


3. Push the carriage [A] to the center of the machine.



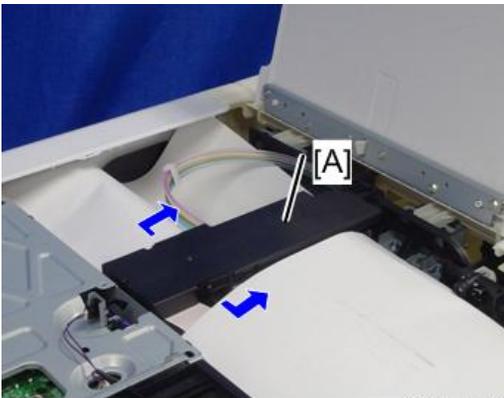
j089m4033

4. Cover the horizontal encoder strip with paper [A] to prevent it from staining or being damaged.



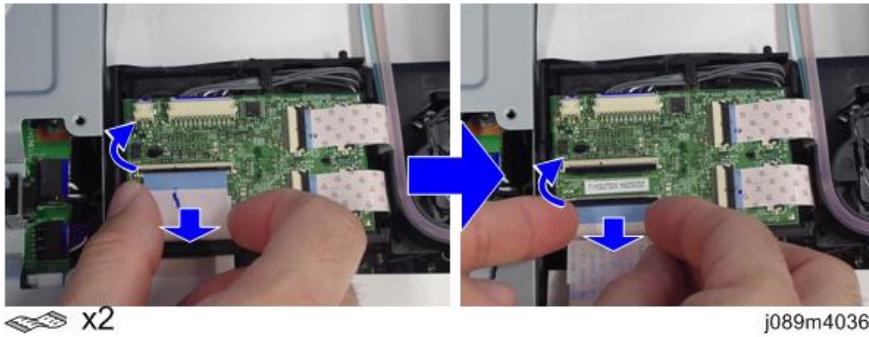
j089m4034

5. Remove the carriage top cover [A].

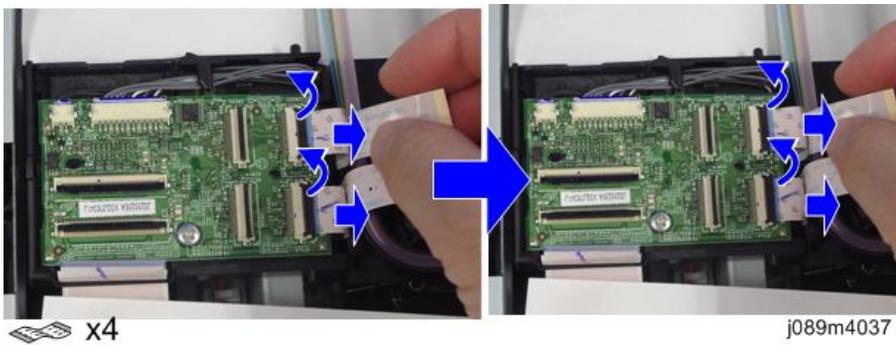


j089m4035

6. Release the locks and disconnect the 2 FFCs.



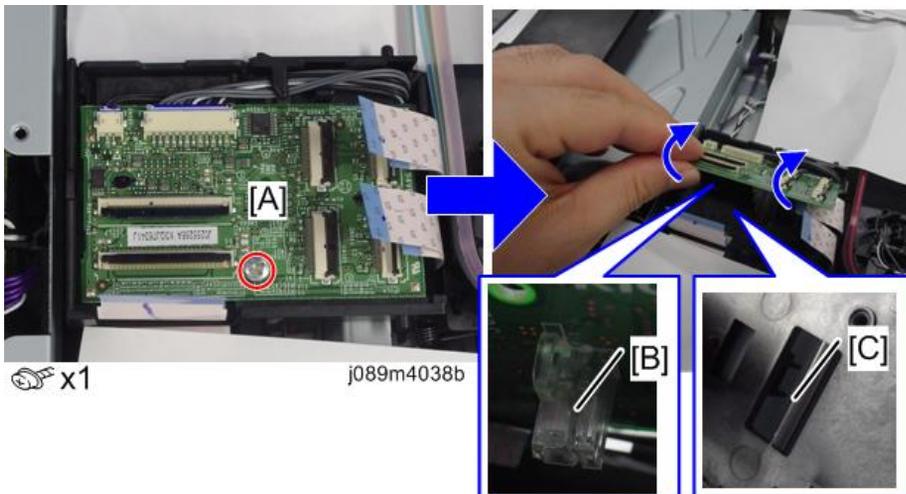
7. Release the locks and disconnect the 4 small FFCs.



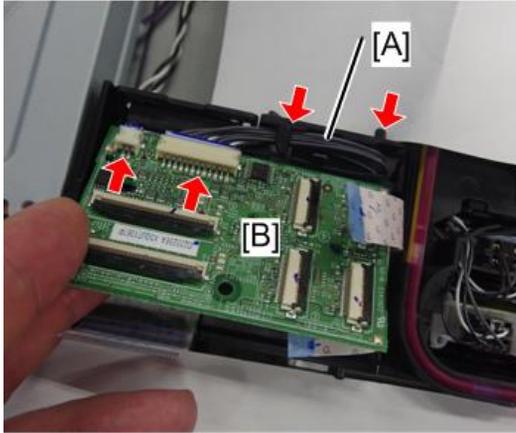
8. Lift the HRB [A] as shown.

Note

- Be sure to lift the HRB in the way shown. If you lift it in a different way, the sensor groove [B] on the back of the HRB may catch on the horizontal encoder strip [C] and damage it.



9. Release the harnesses [A] from the harness guides, and disconnect the 2 connectors to remove the HRB [B].



j089m4038a

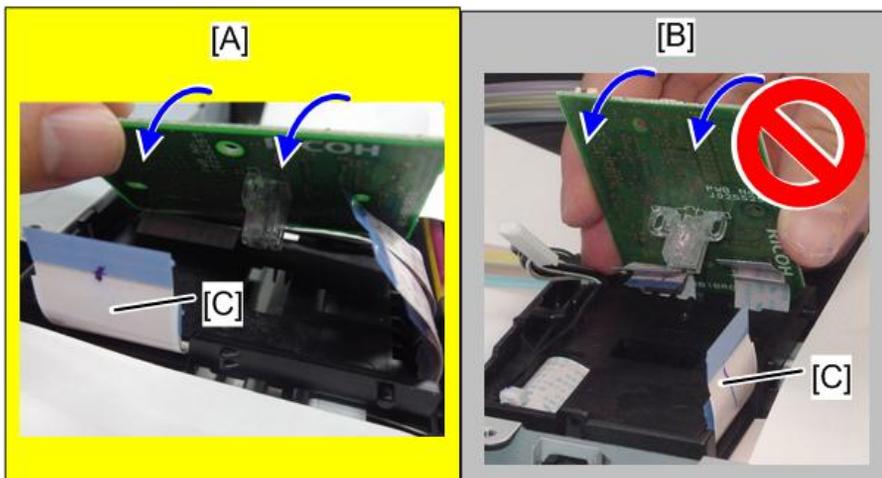
Notes on Installing the HRB

Note

- Be sure to attach the HRB in the way shown below. Attaching it in a different way will damage the horizontal encoder strip.
- Attaching the HRB (Note the position of the FFC [C].)

[A]: Correct (The horizontal encoder strip does not catch on the sensor groove.)

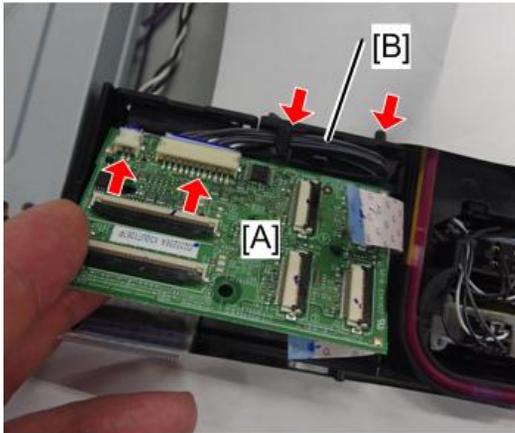
[B]: Incorrect (The horizontal encoder strip catches on the sensor groove.)



j089m4039

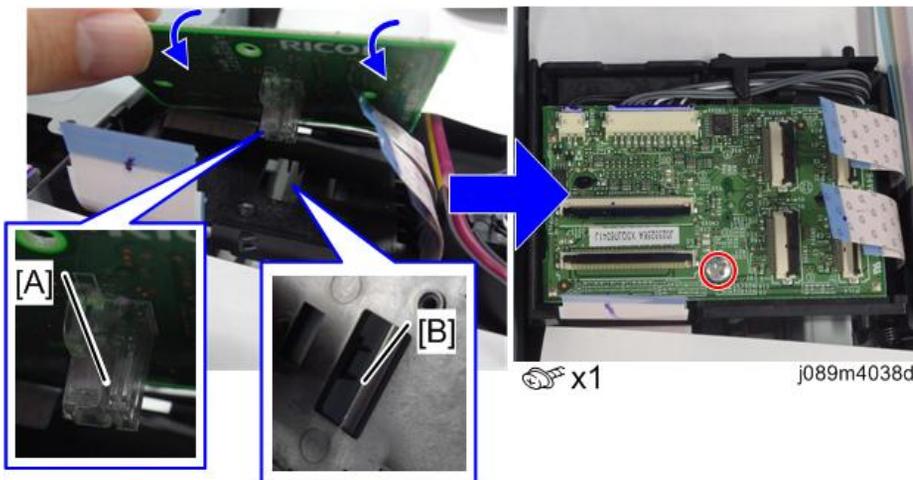
- When attaching the HRB, be very careful not to fold, bend, or strongly warp the horizontal encoder strip. Also, do not deform the slit on the strip. If a problem occurs, replace the horizontal encoder strip with a new one.

1. Connect the 2 connectors to the HRB [A], and route the harnesses [B] along the harness guides.



j089m4038c

2. Attach the HRB, making sure that the sensor groove [A] on its back is engaged with the horizontal encoder strip [B].



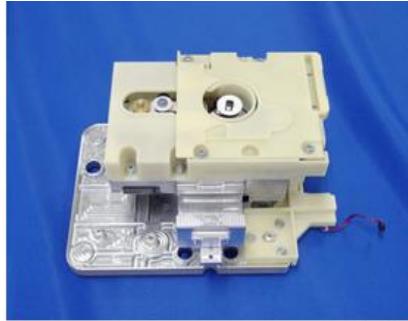
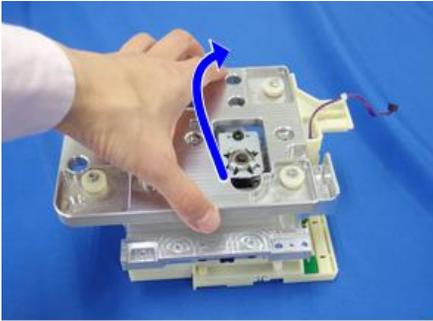
j089m4038d

Motors, Bearing Race

Lifting Shaft Bearing Race

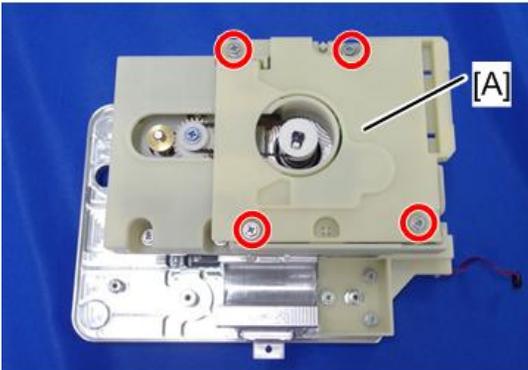
2

1. Remove the cassette carriage. (page 74 "Cassette Carriage")
2. Flip the cassette carriage upside down and lay it down.



j089m172

3. Remove the lift board cover. [A].



 x4

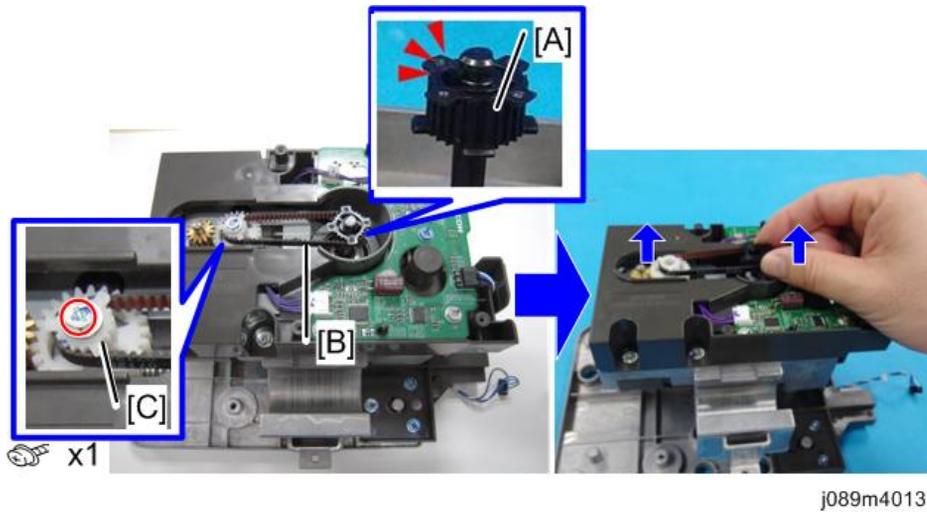
j089m173

4. Remove the gear [A] and the belt [B].

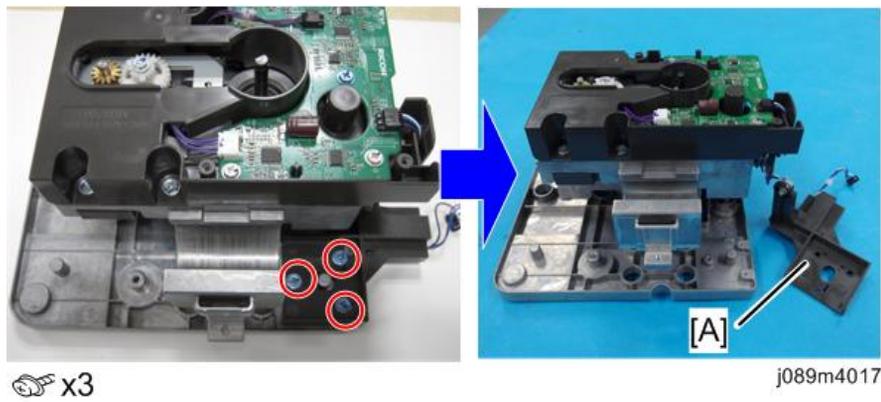
You can smoothly remove the gear by removing the screw and slightly lifting the gear [C] at the lift motor.

 **Note**

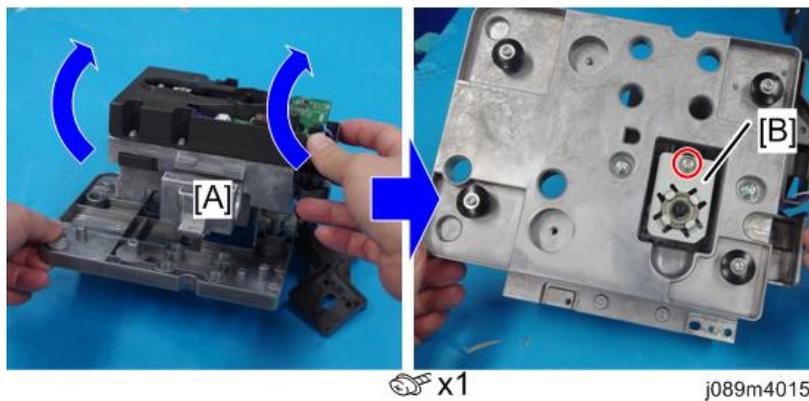
- During the assembly, be sure to re-attach the screw that was removed in step 4.



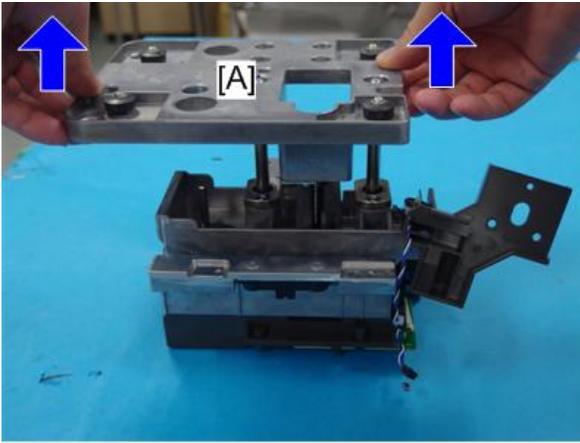
5. Release the plastic bracket [A].



6. Turn the cassette carriage [A] its top side up, and remove the bracket [B]. (M3 screw with washer x1)

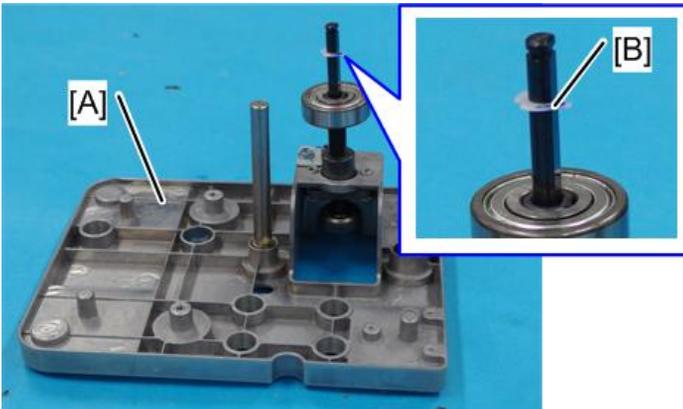


7. Pull up the upper part of the cassette carriage [A].



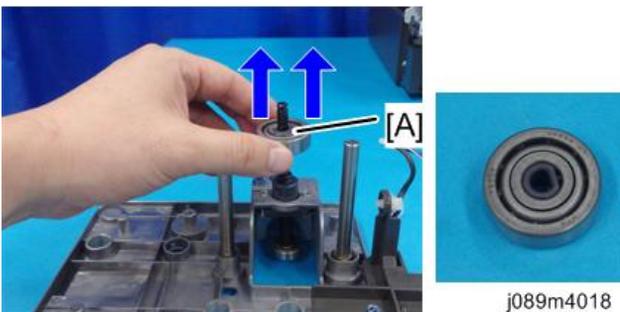
j089m4014

8. Place the upper part of the cassette carriage [A], and remove the stopper [B].



j089m4019

9. Remove the bearing race [A].



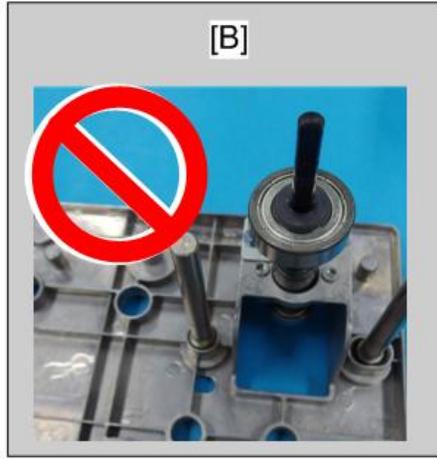
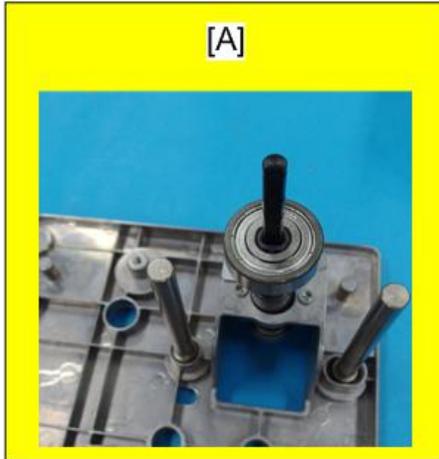
j089m4018

Notes on Mounting the Bearing / Reassembling the Cassette Carriage

1. When mounting the bearing on the shaft, mount it with the flanged side face down.

[A]: Flanged side face down (OK)

[B]: Flanged side face up (Not OK)

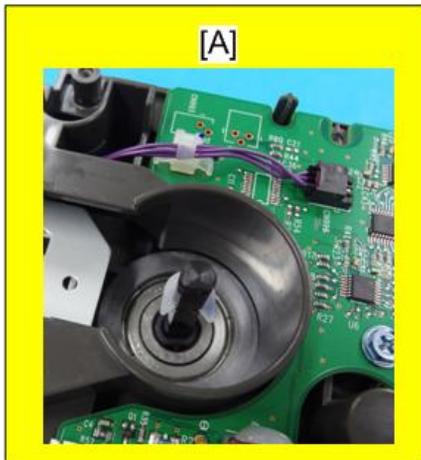


j089m4020

2. When reattaching the upper part of the cassette carriage, make sure that the bearing is seated in the housing hole.

[A]: The bearing is seated in the housing hole. (OK)

[B]: The bearing is not seated in the housing hole. (Not OK)



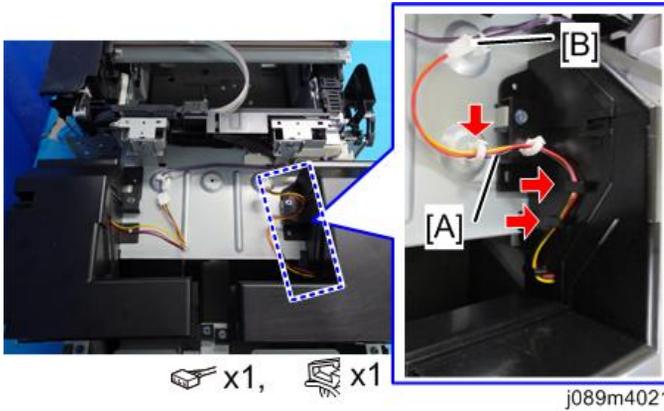
j089m4020a

Fan

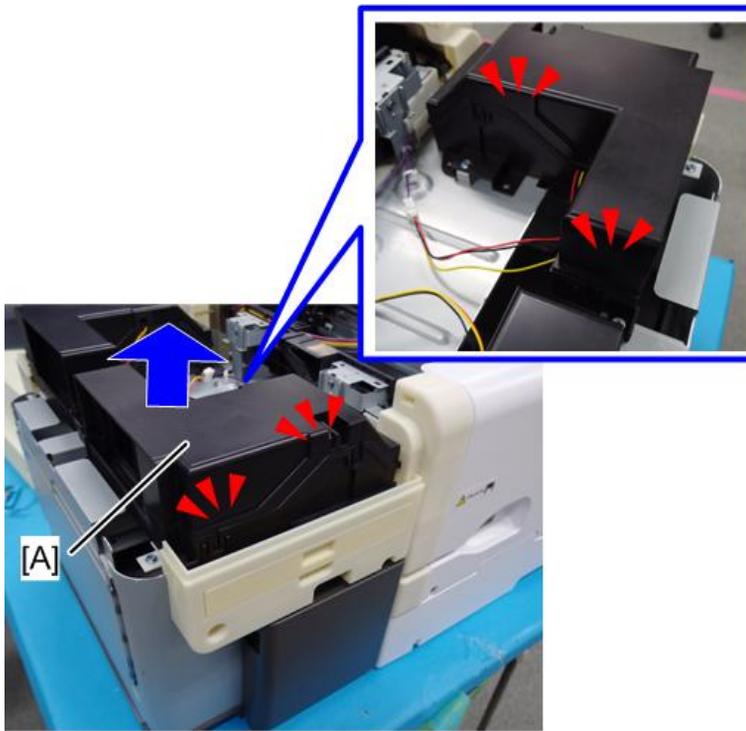
Ink Mist Collecting Fan (Left)

2

1. Remove the rear top cover. (page 59 "Rear Top Cover, Top Cover")
2. Release the harness [A] from the cable guides and the harnesses, and disconnect the connector [B].



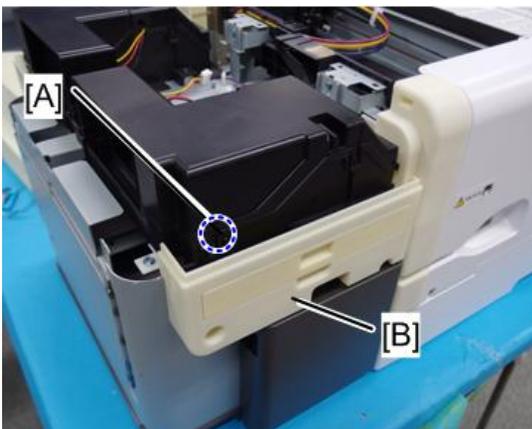
3. Remove the upper part of the duct [A]. (hook x4)



j089m4044

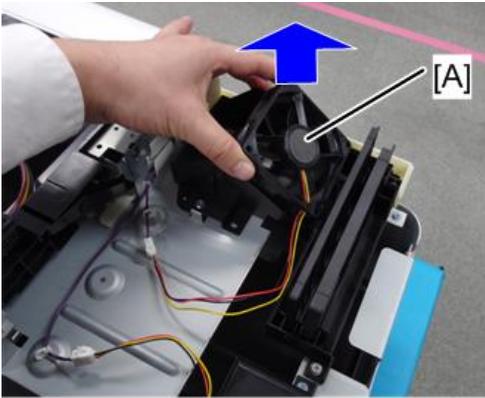
↓ Note

- If the hook at [A] is difficult to disengage, remove the filter cover [B]. For details about how to remove the filter cover, see "page 51".



j089m4049

4. Remove the ink mist collecting fan (left) [A].

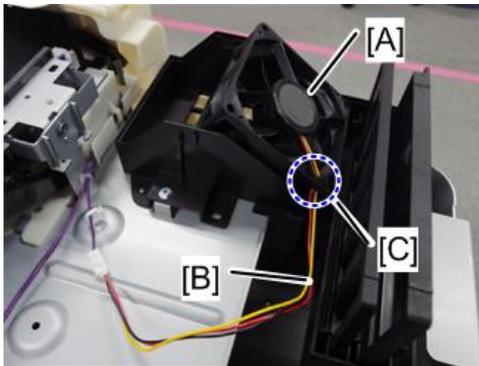


j089m4045

Notes on When Installing the Ink Mist Collecting Fan (Left)

1. Attach the fan.

When you attach it, make sure that the labeled side [A] is face up and the harness [B] is engaged with the part [C] as shown.

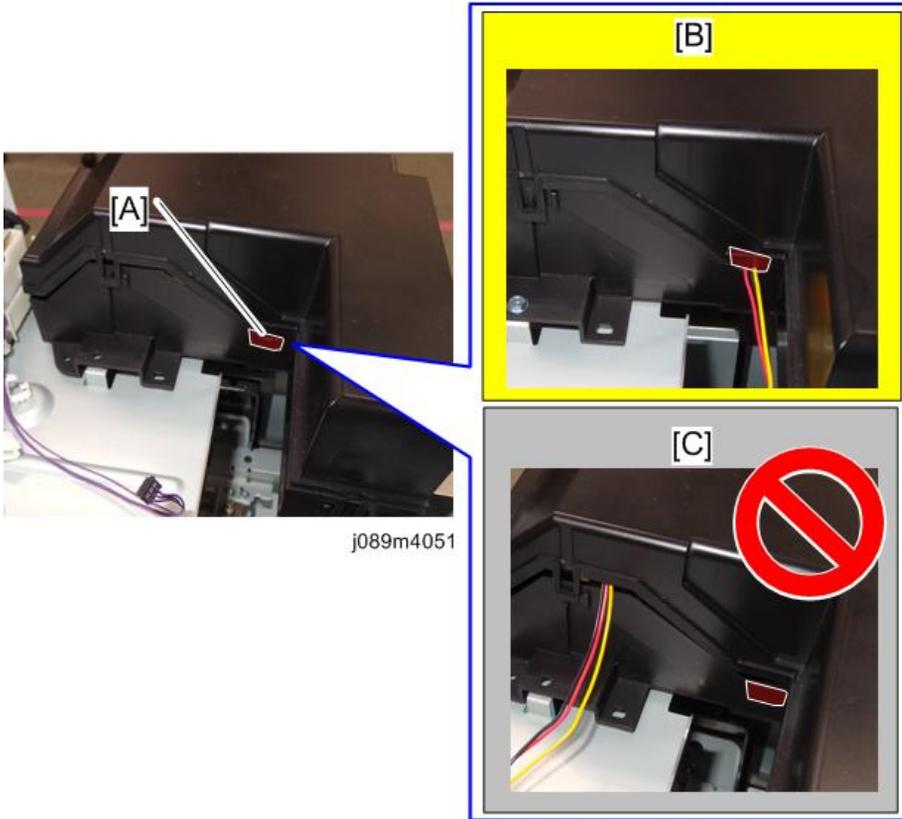


j089m4050

2. Have the fan's harness come out from the cutout on the duct, as shown by red shading [A] in the figure.

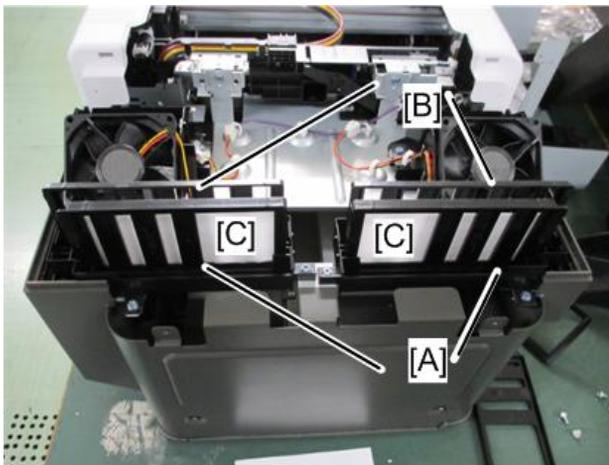
[B]: The harness comes out from the duct's cutout. (OK)

[C]: The harness is caught by the duct's edge. (Not OK)



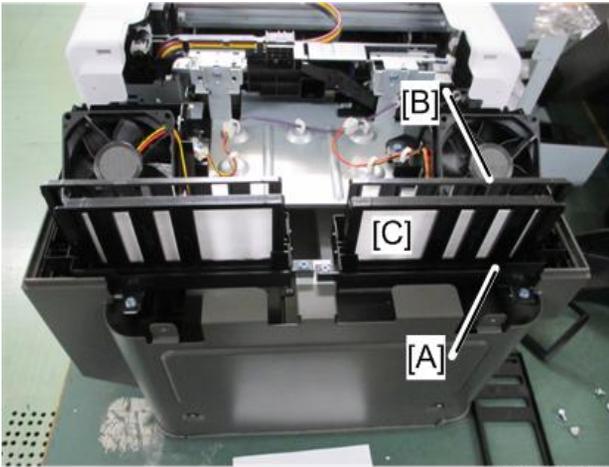
Note

- If the flow adjustment plates (outer plates [A] and inner plates [B]) and filter element [C] in the fan unit come off when removing the upper part of the duct, reinstall them in their original positions. (The parts are all identical. Each part has a guide rib that engages with the guide groove on the bottom of the unit to prevent misalignment.)



Duct Bottom Plate (Left)

1. Remove the ink mist collecting fan (left). (page 90 "Ink Mist Collecting Fan (Left)")
2. Remove the flow adjustment plates (outer plates [A] and inner plates [B]) and filter element [C].

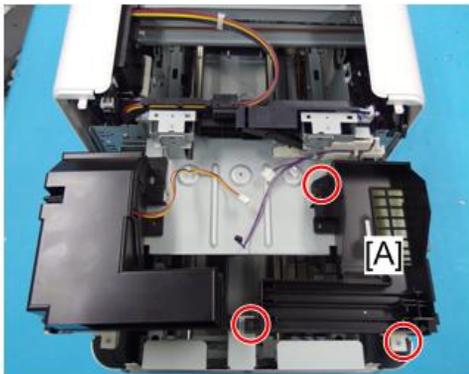


j089m5019b

Note

- Each part has a guide rib that engages with the guide groove on the duct bottom plate to prevent misalignment.

3. Remove the duct bottom plate (left) [A].



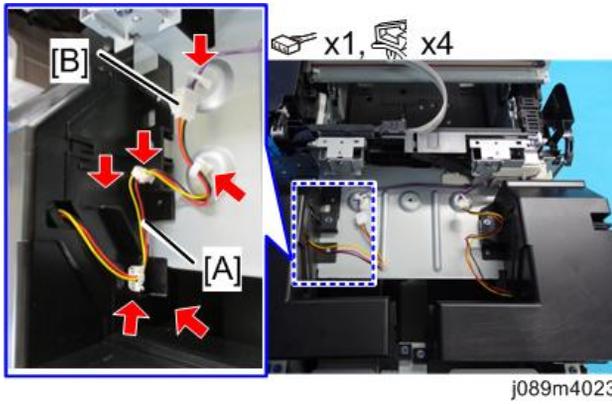
 x3

j089m4022

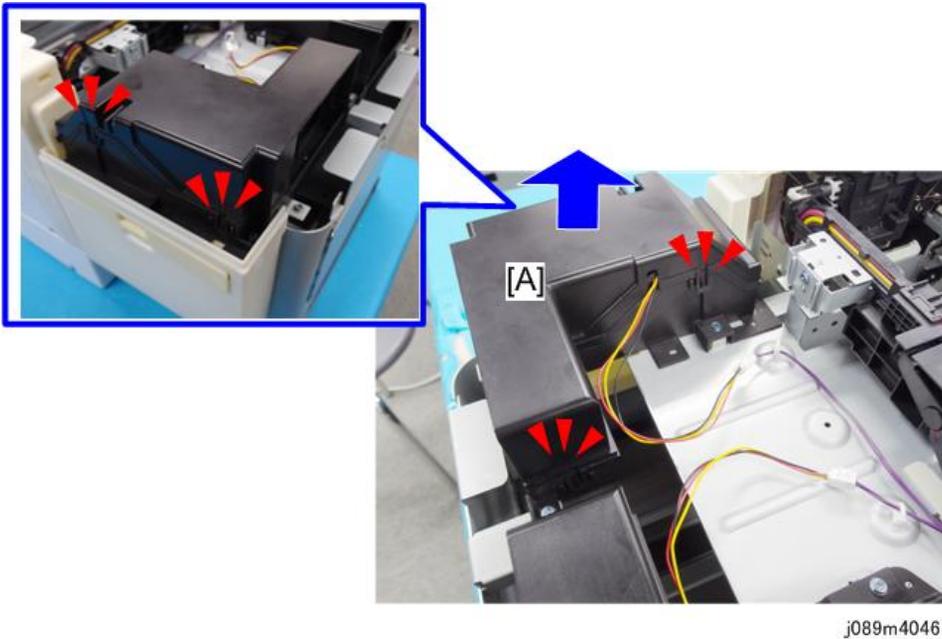
Ink Mist Collecting Fan (Right)

1. Remove the rear top cover. (page 59 "Rear Top Cover, Top Cover")

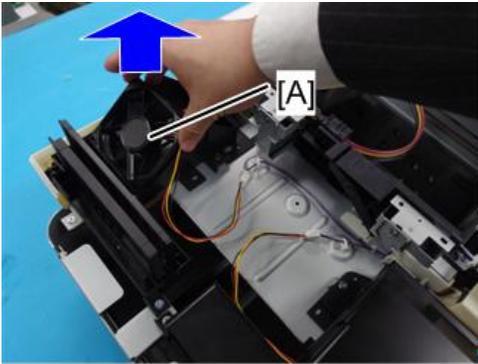
2. Release the harness [A] from the cable guides and the harnesses, and disconnect the connector [B].



3. Remove the upper part of the duct [A]. (hook x4)



4. Remove the ink mist collecting fan (left) [A].

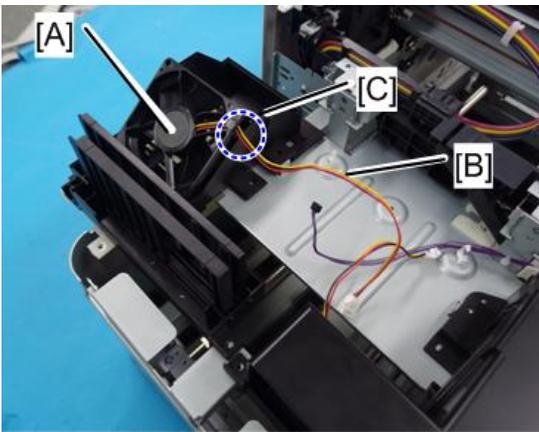


j089m4047

Notes on When Installing the Ink Mist Collecting Fan (Right)

1. Attach the fan.

When you attach it, make sure that the labeled side [A] is face up and the harness [B] is engaged with the part [C] as shown.

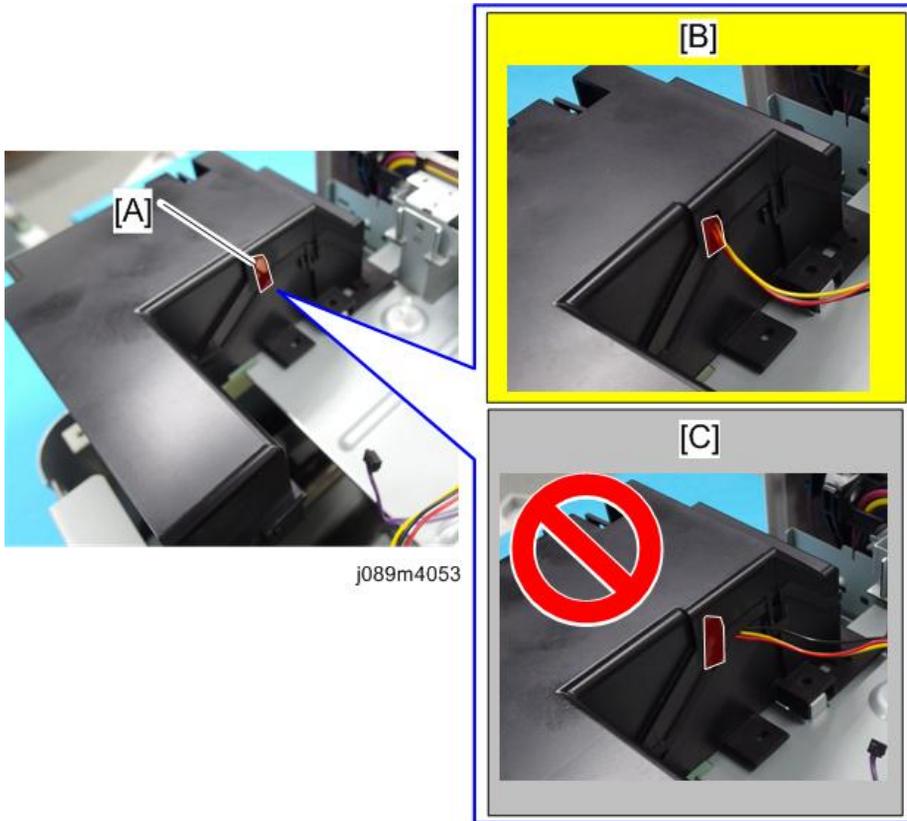


j089m4052

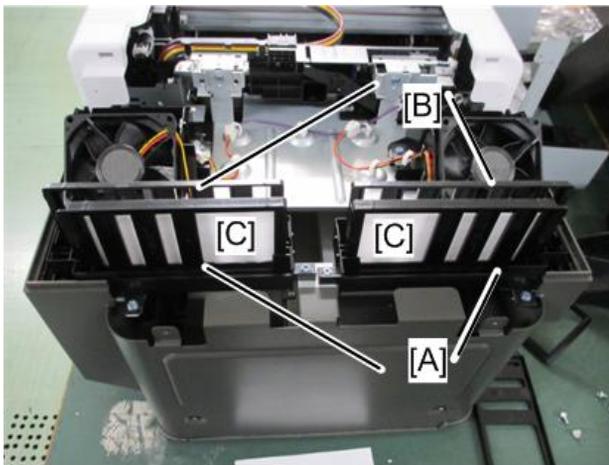
2. Have the fan's harness come out from the cutout on the duct, as shown by red shading [A] in the figure.

[B]: The harness comes out from the duct's cutout. (OK)

[C]: The harness is caught by the duct's edge. (Not OK)

**Note**

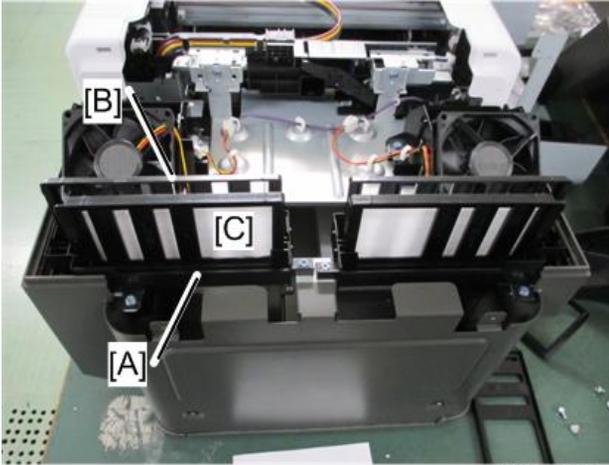
- If the flow adjustment plates (outer plates [A] and inner plates [B]) and filter element [C] in the fan unit come off when removing the upper part of the duct, reinstall them in their original positions. (The parts are all identical. Each part has a guide rib that engages with the guide groove on the bottom of the unit to prevent misalignment.)



Duct Bottom Plate (Right)

1. Remove the ink mist collecting fan (right). (page 94 "Ink Mist Collecting Fan (Right)")
2. Remove the flow adjustment plates (outer plates [A] and inner plates [B]) and filter element [C].

2

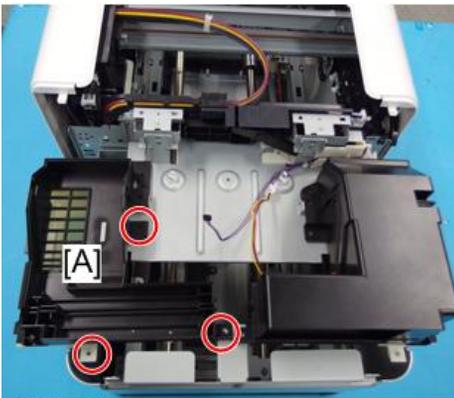


j089m5019c

↓ Note

- Each part has a guide rib that engages with the guide groove on the duct bottom plate to prevent misalignment.

3. Remove the duct bottom plate (right) [A].



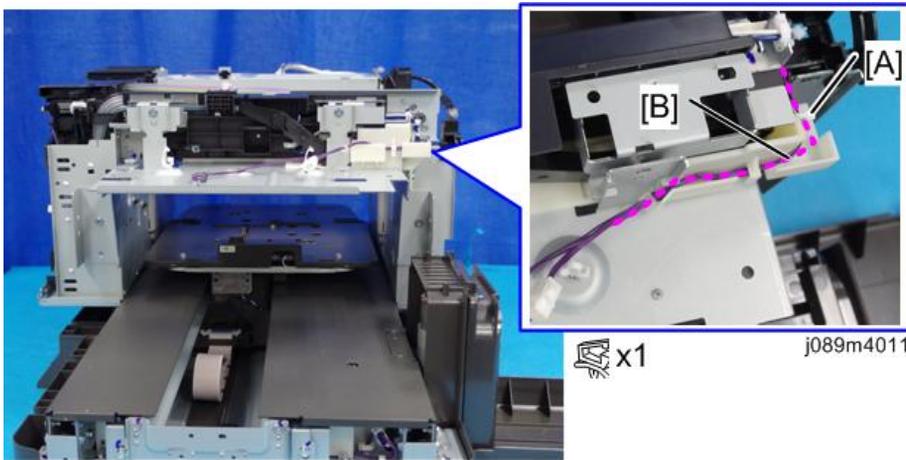
🔑 x3

j089m4024

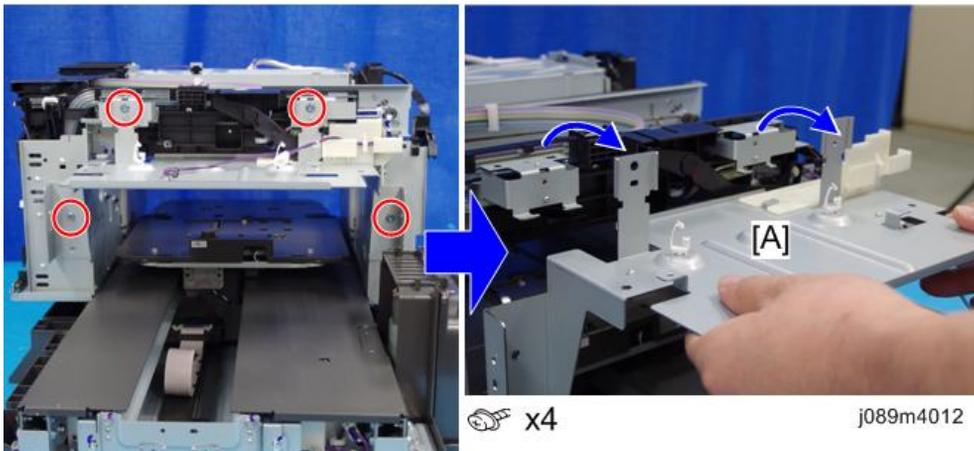
Sensors, Switches

Interlock Switch

1. Remove the rear transport cover. (page 61 "Rear Transport Cover")
2. Remove the rear cover (right). (page 50 "Rear Cover (Right)")
3. Remove the rear cover (left). (page 53 "Rear Cover (Left)")
4. Release the clamp [A], and release the harness [B] from the harness guides.



5. Remove the fan unit base [A].



6. Remove the crank [A].

★ Important

- Be careful not to damage the hook [1]. It can break easily.

Cleaning

Horizontal Encoder Sensor Cleaning

2

Preparation

1. Remove the old horizontal encoder strip.

For details how to remove the horizontal encoder strip, see "Horizontal Encoder Strip" on the field service manual.

2. Prepare a horizontal encoder strip for cleaning (made of plastic).

Note

- The horizontal encoder strip used for cleaning is made of plastic. The horizontal encoder strip that is actually attached is made of metal. Make sure to use the metal horizontal encoder when attaching (see "Horizontal Encoder Strip" on the field service manual).

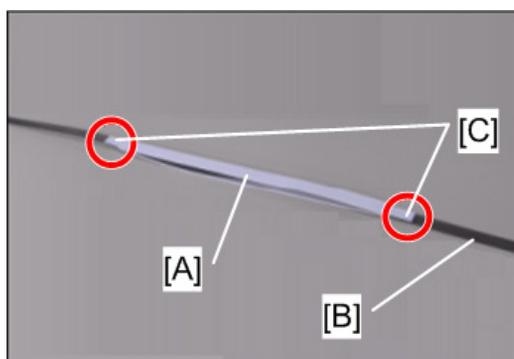
[A]: Horizontal encoder strip made of plastic (for cleaning use)

[B]: Horizontal encoder strip made of metal



j089m049b

3. Paste 2 cleaning felts [A] on both sides of the strip prepared in Step 2 [B] at the center.



j0271229

Note

- There are double-sided adhesive tapes [C] at both ends of each cleaning felt.
- Make sure that the cleaning felts are straightened.

Moving the Print-Heads

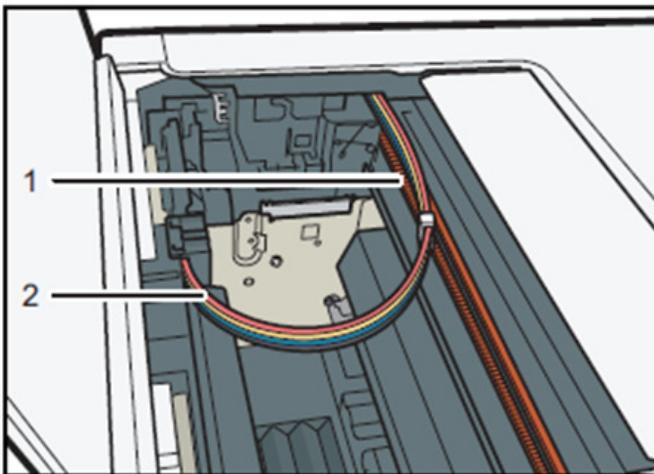
If a foreign object remains inside the machine, move the print head and remove it. The machine reboots when the operations are completed. Print a [Nozzle Check] test pattern to check whether the print head nozzles are clogged.

CAUTION

- Do not open the cover while the machine is operating and keep your hands or fingers clear of the machine. Doing so might cause your hands or fingers to get trapped in the machine, potentially causing injury.

Important

- After moving the print head and turning the power off, be sure to turn the power back on. Do not keep the print head moving.
- Do not touch the toothed rubber belt and ink tube. Moreover, pay attention not to have your sleeves caught on the ink tube or cables.
 1. Toothed rubber belt
 2. Ink tubes



j089m202

- When the cartridge runs out, the machine will not operate. After replacing the ink cartridge, perform this operation.
- Do not use tools with sharp tips to remove stuck foreign objects. Using it may cause a failure.

1. Check that the top cover is closed.
2. Press the [▼ /Menu] key.
3. Press the [▲] or [▼ /Menu] key to display [Maintenance], and then press the [#Enter] key.

```
<Menu>
Maintenance
```

4. Press the [▲] or [▼ /Menu] key to display [Move Print-Heads], and then press the [#Enter] key.

```
<Maintenance>
Move Print-Heads
```

5. Open the top cover.
6. Remove stuck foreign objects.
Remove the foreign objects carefully.
7. Check that there are no foreign objects, and then close the top cover.
The machine turns off and on automatically, and then it returns to the usual condition.

8. Press the [▼ /Menu] key.
9. Press the [▲] or [▼ /Menu] key to display [Maintenance], and then press the [#Enter] key.

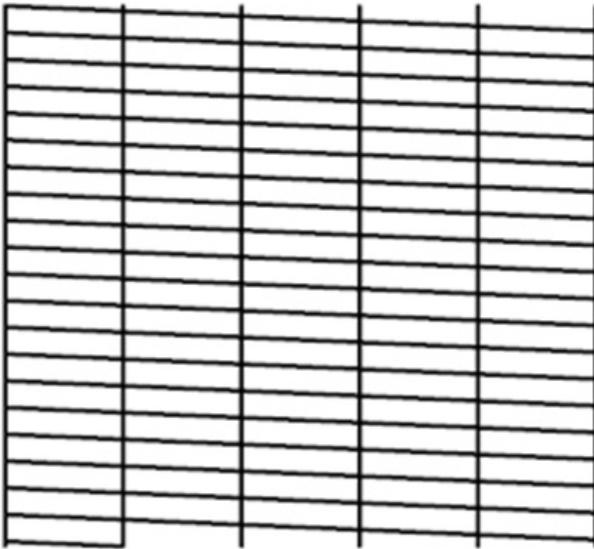
```
<Menu>
Maintenance
```

10. Press the [▲] or [▼ /Menu] key to display [Nozzle Check], and then press the [#Enter] key.

```
<Maintenance>
Nozzle Check
```

11. Press the [Start] key.
A test pattern is printed.
12. Press the [Escape] key.
Check the printed test pattern.

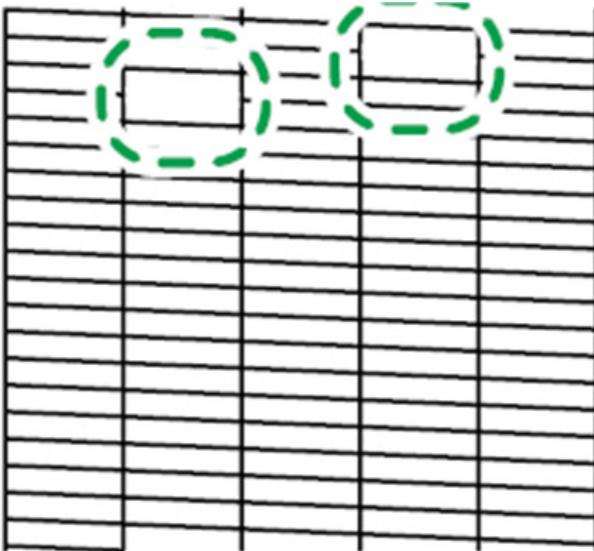
Normal



j089m203

When print heads are clogged

If the print head is clogged, perform Head Cleaning. See "Print Head Cleaning and Adjustment" on the field service manual.



j089m204

Cleaning the Maintenance Unit

You can move the Maintenance Unit to the position for cleaning. If a message prompting you to provide regular maintenance appears, clean the Maintenance Unit.

↓ Note

- Do not touch the toothed rubber belt or ink tubes when cleaning the Maintenance Unit. Also, take care not to have your sleeves caught with cables or ink tubes.
- The cleaning cloth cannot be used to clean the Maintenance Unit. Use the cleaning stick to clean it.
- If you have not cleaned the print head nozzles, proceed to clean them.
- When cleaning the Maintenance Unit, be careful not to drop the cleaning stick into the machine.

1. Press the [▼ / Menu] key.
2. Press the [▲] or [▼ / Menu] key to display [Maintenance], and then press the [#Enter] key.

```
<Menu>
Maintenance
```

3. Press the [▲] or [▼ / Menu] key to display [Clean Maint Unit], and then press the [#Enter] key.

```
<Maintenance>
Clean Maint Unit
```

4. Press the [#Enter] key.

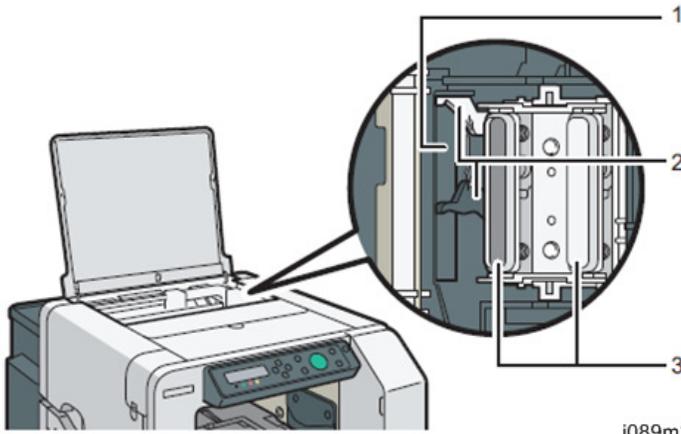
```
Press # to
clean Maint Unit
```

5. When "Open Top Cover to clean unit" is displayed, open the top cover.

The Maintenance Unit will move to a position where you can clean it.

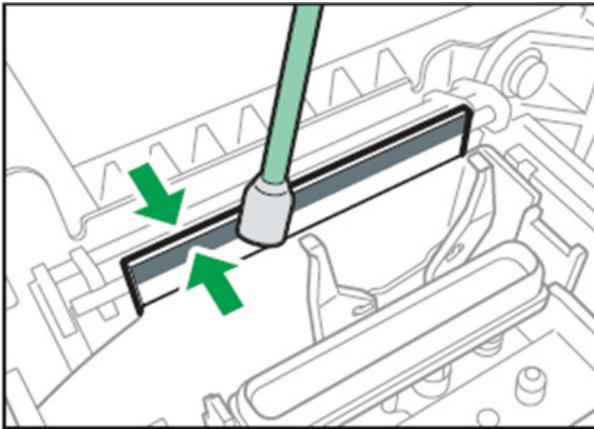
6. Wipe off any dirt in the area shown in the figure with the cleaning stick moistened with the cleaning liquid.

For the top part of the cap (shown in red in the figure), wipe it gently.



j089m205

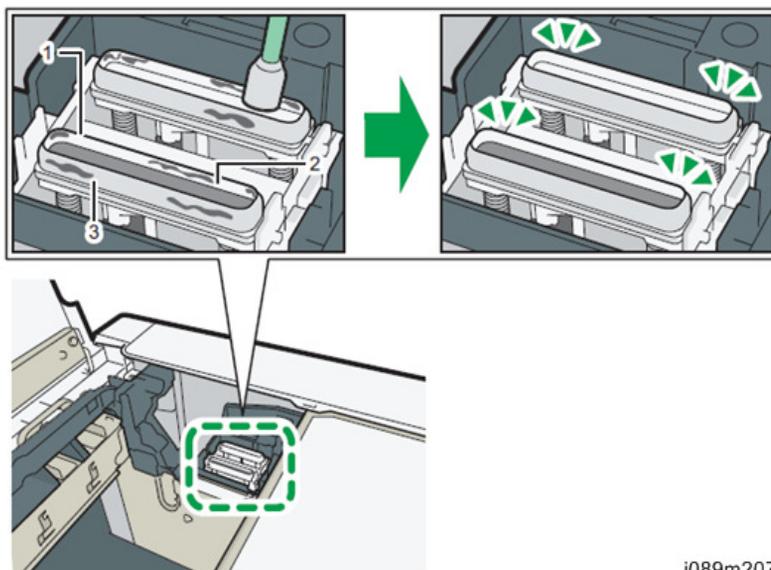
1. Wiper (back and front)
2. Lever
3. Cap (side part, top part, and inner part)



j089m206

1. Top part
2. Side part
3. Inner part

Wipe the side part, top part, and inner part of the cap until all the solidified ink is removed.



j089m207

1. Top part
2. Inner part
3. Side part

The video instructions we provide also explain how to clean the Maintenance Unit. For details, see the manufacturer's website.

7. After cleaning the Maintenance Unit, close the top cover.

Head-cleaning starts after restart, after which the machine returns to the usual condition.

Auto Head Maintenance

You can clean the print head nozzles automatically. If the message prompting you to provide regular maintenance appears, clean the print head.

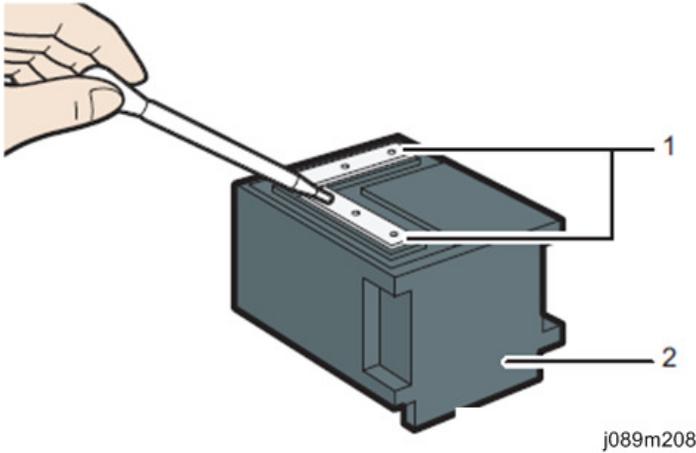
ⓘ Note

- Do not put your hands inside the machine while cleaning of the print head nozzles is automatically performed. Your fingers may be trapped and injured inside the machine.
- You cannot reuse the absorbent. After using it, be sure to dispose it properly.
- If you have not cleaned the maintenance unit, proceed to clean it.

1. **Attach the two absorbents to the cleaning tool, and then use the dropper to moisten the absorbent with the cleaning liquid.**

Use the dropper to suck cleaning liquid up to the scale 2 on the dropper. Use half of this for each absorbent swab.

Be sure to moisten the absorbent with the cleaning liquid until the absorbent is completely wet.



1. Absorbent
2. Cleaning Tool

2. Press the [▼/Menu] key.
3. Press the [▲] or [▼/Menu] key to display [Maintenance], and then press the [#Enter] key.

```
<Menu>
Maintenance
```

4. Press the [▲] or [▼/Menu] key to display [Auto Head Maint.], and then press the [#Enter] key.

```
<Maintenance>
Auto Head Maint.
```

The print heads will move to a position where you can clean it.

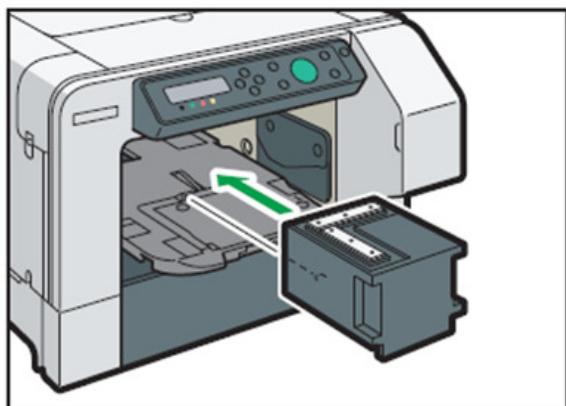
5. Press the [#Enter] key.

```
Press # to start
maintenance head
```

6. When "Remove Tray" is displayed, remove the cassette.

7. When "Set Maint. Kit Press Start key" is displayed, attach the cleaning tool to the cassette stand.

Push the cleaning tool to the back until it clicks.



j089m209

8. Press the [Start] key.

Cleaning of the print head nozzles will start automatically. It takes 10 to 15 minutes.

9. When "Remove Maint Kit Press Start key" is displayed, detach the cleaning tool, and then press the [Start] key.

This machine will return to the usual condition.

Clean Internals

↓ Note

- This work should usually be carried out by the user. However, if the user does not expect to use the machine for one month or longer after it is repaired, this work shall be carried out by CE.
- In this case, use the cleaning cartridge model matching the cartridge owned by the user.

Adjusting the Height of the Cassette

Adjusting the Height of the Cassette Automatically

★ Important

- Remove the garment from the cassette before performing auto adjustment. Do not perform auto adjustment while the garment is on the cassette.
- When you perform auto adjustment, the height of the cassette is adjusted appropriately according to the cassette that is set. Perform auto adjustment again every time a different cassette is set.
- When you perform auto adjustment, the height of the cassette is adjusted so it is suitable for loading thin garments, such as T-shirts. When loading thick garments in the cassette, fine-tune the height of the cassette using the [Adjust Height▼] key after sending the print job. For details about how to adjust the height of the cassette manually, see the next section.

When printing starts, the machine adjusts the height of the cassette according to the height value specified in the [Maintenance] menu. If the printed image is blurry or there is dust stuck to it, or the height of the cassette may not be adjusted appropriately, adjust the height of the cassette using the [Maintenance] menu.

1. Load the cassette without a garment on it.
2. Press the [▼/Menu] key.
3. Press the [▲] or [▼/Menu] key to display [Maintenance], and then press the [#Enter] key.
4. Press the [▲] or [▼/Menu] key to display [Height Adjust], and then press the [#Enter] key.
5. Press the [▲] or [▼/Menu] key to display [Auto Adjust], and then press the [#Enter] key.
6. Check that "Press # to start" is displayed, and then press the [#Enter] key.

Auto adjustment starts after the cassette is loaded into the machine. After auto adjustment is completed, the cassette returns and stops in position so that you can see the cassette positioning line on the left side of it.

↓ Note

- The value set by adjustment is stored in [Manual Adjust] in the [Maintenance] menu.
- If an error occurs during auto adjustment, perform the operation from Step 1 again.

Adjusting the Height of the Cassette Manually

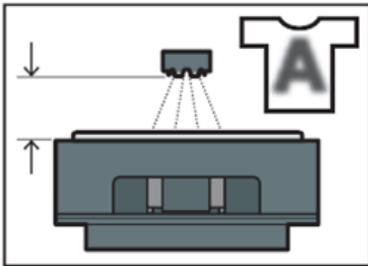
Even though a similar item is described in "Notes for Users" (J088-6648), read this section that it contains the latest information.

★ Important

- If you enter a negative value as the height value, the height position sensor in the machine may react. Load the fabric correctly so that the printing surface can be flat.
- If the fabric is not correctly set after the height of the cassette is adjusted manually, the machine might not start printing because a height position sensor in the machine reacts when you send a print job. In this case, remove the cassette, load the fabric into the cassette correctly, and then load the cassette into the machine. The image quality might deteriorate if you change the height value significantly. In this case, adjust the registration.
- Adjust the height little by little so that the print side is not rubbed.

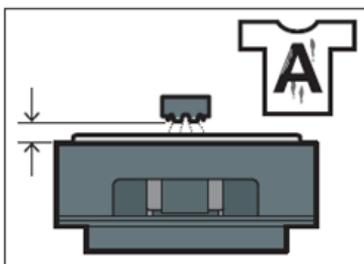
Normally, the height of the cassette is automatically adjusted at the start of printing. If the printed image is blurry or there is dust stuck to it, or the height of the cassette may not be adjusted appropriately, adjust the height of the cassette manually using the [Maintenance] menu.

If the distance between the print head and the fabric is too large, the printed image might be blurry. If this is the case, enter a negative value as the height value.



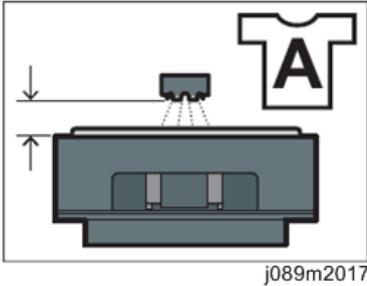
j089m2015

If the distance between the print head and the fabric is too small, dust might stick to the fabric. If this is the case, clean both the Maintenance Unit and print head. If the problem is not resolved, enter a positive value as the height value.



j089m2016

When the distance between the print head and the fabric is suitable, the printed image is satisfactory as shown in the figure.



1. Press the [▼/Menu] key.
2. Press the [▲] or [▼/Menu] key to display [Maintenance], and then press the [#Enter] key.
3. Press the [▲] or [▼/Menu] key to display [Height Adjust], and then press the [#Enter] key.
4. Press the [#Enter] key.
5. Press the [▲] or [▼/Menu] key to enter the height value, and then press the [#Enter] key.
 - You can enter a height value from -20 to 20 in increments of 0.1. We recommend changing the existing setting by entering values in increments of ± 0.1 to 0.3.
 - If the printed image is blurry when the A4 standard tray or A5 tray is used, first enter "-2.0" as the height value, and then increase the value in increments of 0.1 to 0.3 until the error message is not displayed. While adjusting the height, load the fabric into the cassette so that the printing surface can be flat.
 - If you enter a negative value as the height value and the value is too small, the machine might not start printing because the height position sensor in the machine reacts. Adjust the height of the cassette by pressing the [Adjust Height▲] or the [Adjust Height▼] key.

↓ Note

- The value you set in Step 5 remains after the machine is turned off.
- If you enter "-2.0" as the height value and want to increase the value in Step 5, press the [Stop] key to cancel printing whenever you enter a new height value.