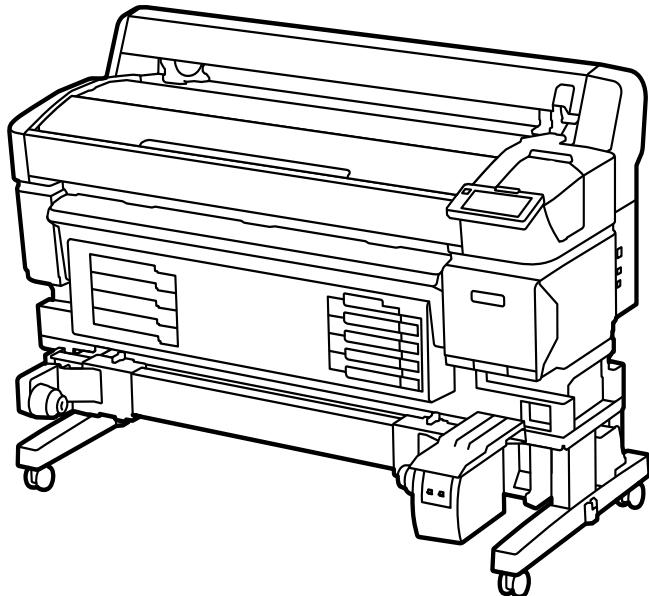


SERVICE MANUAL



Large Format Color Inkjet Printer

**SC-F6400 Series/
SC-F6400H Series**

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Service Support Planning Department

PRECAUTIONS

Precautionary notations throughout the text are categorized relative to 1) Personal injury and 2) Damage to equipment.

DANGER Signals a precaution which, if ignored, could result in serious or fatal personal injury. Great caution should be exercised in performing procedures preceded by DANGER Headings.

WARNING Signals a precaution which, if ignored, could result in damage to equipment.

The precautionary measures itemized below should always be observed when performing repair/maintenance procedures.

DANGER

1. ALWAYS DISCONNECT THE PRODUCT FROM THE POWER SOURCE AND PERIPHERAL DEVICES PERFORMING ANY MAINTENANCE OR REPAIR PROCEDURES.
2. NO WORK SHOULD BE PERFORMED ON THE UNIT BY PERSONS UNFAMILIAR WITH BASIC SAFETY MEASURES AS DICTATED FOR ALL ELECTRONICS TECHNICIANS IN THEIR LINE OF WORK.
3. WHEN PERFORMING TESTING AS DICTATED WITHIN THIS MANUAL, DO NOT CONNECT THE UNIT TO A POWER SOURCE UNTIL INSTRUCTED TO DO SO. WHEN THE POWER SUPPLY CABLE MUST BE CONNECTED, USE EXTREME CAUTION IN WORKING ON POWER SUPPLY AND OTHER ELECTRONIC COMPONENTS.
4. WHEN DISASSEMBLING OR ASSEMBLING A PRODUCT, MAKE SURE TO WEAR GLOVES TO AVOID INJURY FROM METAL PARTS WITH SHARP EDGES.

WARNING

1. REPAIRS ON EPSON PRODUCT SHOULD BE PERFORMED ONLY BY AN EPSON CERTIFIED REPAIR TECHNICIAN.
2. MAKE CERTAIN THAT THE SOURCE VOLTAGES IS THE SAME AS THE RATED VOLTAGE, LISTED ON THE SERIAL NUMBER/RATING PLATE. IF THE EPSON PRODUCT HAS A PRIMARY AC RATING DIFFERENT FROM AVAILABLE POWER SOURCE, DO NOT CONNECT IT TO THE POWER SOURCE.
3. ALWAYS VERIFY THAT THE EPSON PRODUCT HAS BEEN DISCONNECTED FROM THE POWER SOURCE BEFORE REMOVING OR REPLACING PRINTED CIRCUIT BOARDS AND/OR INDIVIDUAL CHIPS.
4. IN ORDER TO PROTECT SENSITIVE MICROPROCESSORS AND CIRCUITRY, USE STATIC DISCHARGE EQUIPMENT, SUCH AS ANTI-STATIC WRIST STRAPS, WHEN ACCESSING INTERNAL COMPONENTS.
5. REPLACE MALFUNCTIONING COMPONENTS ONLY WITH THOSE COMPONENTS BY THE MANUFACTURE; INTRODUCTION OF SECOND-SOURCE ICs OR OTHER NON-APPROVED COMPONENTS MAY DAMAGE THE PRODUCT AND VOID ANY APPLICABLE EPSON WARRANTY.
6. WHEN AIR DUSTER IS USED ON THE REPAIR AND THE MAINTENANCE WORK, THE USE OF THE AIR DUSTER PRODUCTS CONTAINING THE INFLAMMABLE GAS IS PROHIBITED.
7. MAKE SURE AN ANTIVIRUS SOFTWARE IS INSTALLED ON THE COMPUTER USED FOR SERVICE SUPPORT. BE SURE TO HAVE THE LATEST VIRUS DEFINITION FILE FOR THE SOFTWARE.

About This Manual

About This Manual: This manual is made for the sole purpose of providing necessary information in order that a serviceperson qualified by Epson performs his / her appropriate repair / maintenance for the applicable Epson's products. You shall not use this manual out of this purpose.

This manual is Epson's confidential information. When you use this manual, you shall hold it in strict confidence and shall not disclose to any third party without prior consent of Epson.

The instructions and procedures included herein are intended for the experienced repair technicians, and attention should be given to the precautions on the preceding page.

Manual Configuration

This manual consists of six chapters and Appendix.

CHAPTER 1.PRODUCT DESCRIPTIONS

Provides a general overview and specifications of the product.

CHAPTER 2.TROUBLESHOOTING

Describes the step-by-step procedures for the troubleshooting.

CHAPTER 3.DISASSEMBLY / ASSEMBLY

Describes the step-by-step procedures for disassembling and assembling the product.

CHAPTER 4.ADJUSTMENT

Provides Epson-approved methods for adjustment.

CHAPTER 5.MAINTENANCE

Provides preventive maintenance procedures and the lists of Epson-approved lubricants and adhesives required for servicing the product.

CHAPTER 6.APPENDIX

Provides the following additional information for reference:

- Connectors
- Panel Menu Maps
- ASP List
- Exploded Diagrams

Symbols Used in this Manual

Various symbols are used throughout this manual either to provide additional information on a specific topic or to warn of possible danger present during a procedure or an action. Be aware of all symbols when they are used, and always read NOTE, CAUTION, or WARNING messages.



Indicates an operating or maintenance procedure, practice or condition that is necessary to keep the product's quality.



Indicates an operating or maintenance procedure, practice, or condition that, if not strictly observed, could result in damage to, or destruction of, equipment.



May indicate an operating or maintenance procedure, practice or condition that is necessary to accomplish a task efficiently. It may also provide additional information that is related to a specific subject, or comment on the results achieved through a previous action.



Indicates an operating or maintenance procedure, practice or condition that, if not strictly observed, could result in injury or loss of life.



ADJUSTMENT



ASSEMBLY

Indicates that a particular task must be carried out according to a certain standard after disassembly and before re-assembly, otherwise the quality of the components in question may be adversely affected.



LUBRICATION

Indicates that lubrication is needed for the parts after disassembly, when doing a maintenance or replacing a part with a new one.

Revision Status

Revision	Date of Issue	Description
A	Sep 21, 2022	First release
B	Jan. 13, 2023	<p>Revised</p> <p><input type="checkbox"/> Chapter 3</p> <ul style="list-style-type: none"> • "3.1.4 Recommended Tools" (P. 142): Added tool. • "3.4.4.2 DUCT CR" (P. 215): Assembly Point revised. • "3.4.4.13 INK TUBE" (P. 239): Assembly Point revised. <p><input type="checkbox"/> Chapter 4</p> <ul style="list-style-type: none"> • "4.1.3 Adjustment Items and the Order by Repaired Part" (P. 306): Partially revised. • "4.1.4 Adjustment Items" (P. 316): Added items. • "4.7.1 CR Belt Tension Check" (P. 343): Procedure revised. • "4.12.5 Initial Password Check & Input (EMEA only)" (P. 397): Added. • "4.12.6 Print Image" (P. 398): Added. <p><input type="checkbox"/> Chapter 6</p> <ul style="list-style-type: none"> • "6.1.1 Main Body" (P. 416): Partially revised. • "6.2 Connection Diagram" (P. 418): Partially revised. • "6.3 Panel Menu Map" (P. 426): Partially revised.
C	Apr. 26, 2023	<p>Revised</p> <p><input type="checkbox"/> Chapter 2</p> <ul style="list-style-type: none"> • "2.3.2 Service Call List" (P. 34): Partially revised. • "0014BD (Ink Leak Detection Error (Alphabet Mode))" (P. 57): Partially revised. • "005001 (Ink Leak Detection Error (Home))" (P. 99): Added. • "005002 (Ink Leak Detection Error (Full))" (P. 99): Added. • "005003 (Ink Leak Detection Error)" (P. 100): Added.

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CHAPTER

1

PRODUCT DESCRIPTION

1.1 Basic Specifications

1.1.1 Basic Specifications

Table 1-1. Basic Specifications

Item	Specification	
Printing method	On-demand ink jet	
	SC-F6400 Series: 400 nozzles x 2 rows x 4 colors (High Density Black, Cyan, Magenta, Yellow)	
Nozzle configuration	SC-F6400H Series: 400 nozzles x 1 row x 6 colors (High Density Black, Cyan, Magenta, Yellow, Light Cyan/ Fluorescent Pink/Violet, Light Magenta/Fluorescent Yellow/ Orange)	
Resolution (maximum)	600 x 1200dpi	
Control code	ESC/P raster (undisclosed command)	
Media feed method	Friction feed	
Built-in memory	1GB	
Interface	Super Speed USB 100Base-TX/1000Base-T*	
Temperature and humidity (without condensation)	Printing	10 to 35°C, 20 to 80% Recommended:15 to 25°C, 40 to 60%
	In storage (Before unpacking)	-20 to 60°C, 5 to 85% (Within 120 hours at 60°C, within a month at 40°C)
	In storage (Before charging ink)	-20 to 40°C, 5 to 85% (Within a month at 40°C)
	In storage (After charging ink)	5 to 3°C, 5 to 85%

Note " *": Use a shielded twisted pair cable (category 5e or better)

1.1.2 Electric Specifications

Table 1-2. Electric Specifications

Item	Specification	
Rated voltage	AC100 to 240 V	
Rated frequency	50 to 60 Hz	
Rated current	3.4 to 1.6 A	
Power consumption	Printing	Approx. 80 W
	Sleep mode	Less than 19 W
	Power off	Less than 0.3 W

1.1.3 Auto Take-Up Reel Unit

Table 1-3. Auto Take-Up Reel Unit

Item	Specification	
Media width	431.8 mm (17 inches) to 1118 mm (44 inches)	
Media outer diameter	3 inch core: up to 150 mm	
Gross weight	Approx. 13 kg	
Temperature and humidity (without condensation)	Recommended:15 to 25°C, 40 to 60% When operating:10 to 35°C, 20 to 80%	
Rated voltage	AC100 to 240 V	
Rated frequency	50 to 60 Hz	
Rated current	1.0 to 0.5 A	
Power consumption	Printing	Approx. 5.4 W
	Sleep mode	Approx. 2.8 W
	Power off	Approx. 0.45 W

Note : SC-F6400 Series is an optional item.

1.1.4 Ink Specifications

Table 1-4. Ink Specifications

Item	Specification
Type	Dedicated ink pack
Sublimation dye ink	SC-F6400 Series: High Density Black, Cyan, Magenta, Yellow SC-F6400H Series: High Density Black, Cyan, Magenta, Yellow, Light Cyan, Light Magenta, Fluorescent Pink, Fluorescent Yellow, Violet, Orange
Use by date	See the expiration date printed on the ink pack (store at normal temperature)
Print quality guarantee expiry	One year from printer installation
Storage temperature	5 to 35°C
External dimensions (approx.)	(W) 180 × (D) 410 × (H) 30 mm
Capacity	1600ml

1.2 Printing Specifications

1.2.1 Supported media

This printer supports the following paper specifications for non-Epson media.



- Do not use media that is wrinkled, has fluff, is ripped, or stained

ROLL MEDIA

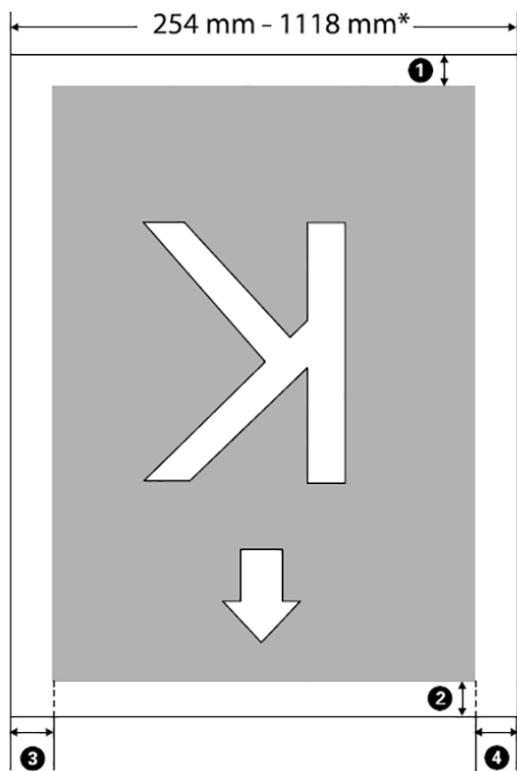
Table 1-5. Roll media

Item	Specification
Roll core size (core diameter)	2 or 3 inches
Roll outer diameter	Up to 150 mm
Media width*	254 mm (10 inches) to 1118 mm (44 inches)
Media thickness	0.08 to 0.5 mm

Note "*": 432 mm (17 inches) to 1118 mm (44 inches) when using the auto take-up reel unit

1.2.2 Printable Area

ROLL PAPER



Note "/*": When Paper Size Check is set to Off, this is 1,118 mm (44 inches) regardless of the width of the loaded paper.

(1) to (2) indicates the margins on all four sides. See the following for more details.

Table 1-6. Roll Paper Margin

Margin Position	Explanation	Available Setting Range
(1) Rear ^{*1}	This can be set in RIP. To maintain paper feeding accuracy, if the setting is less than 5 mm, it switches to 5 mm.	5 mm or more
(2) Leading edge ^{*1}	This can be set in RIP. This differs depending on the length of paper pulled out when the paper is loaded. Margins set in RIP are added during continuous printing, but to maintain paper feeding accuracy, if the setting is less than 5 mm, it switches to 5 mm.	5 mm or more
(3) Left edge ^{*2*3}	The value set for Side in Roll Paper Margin from the printer's setup menu. The default setting is 3 mm.	3 mm or 15 mm
(4) Right edge ^{*2*3}		

Note "/*1": The set margin and the actual print results may differ depending on the RIP being used. Contact the RIP manufacturer for more information

"*2": This may be available in the RIP depending on the RIP software being used. Contact the RIP manufacturer for more information.

"*3": If the total of the print data width and set left and right margins exceeds the printable area, a portion of the data will not be printed.



When Paper Size Check is set to Off, make sure that the width of the print data does not exceed the width of the loaded paper. If the width of the print data exceeds the width of the paper, ink may be printed beyond the edges of the paper soiling the interior of the printer.

1.3 Hardware Specifications

This section provides the printer dimensions and shows the main components.

1.3.1 Dimensions and Weight

Table 1-7. Dimensions and Weight

Item		Specification
Dimension	When stored	Printer: (W) 1608 × (D) 745 × (H) 1128 mm When the auto take-up reel unit is installed: (W) 1608 × (D) 916 × (H) 1128 mm
	Maximum time	Printer: (W) 1608 × (D) 745 × (H) 1206mm When the auto take-up reel unit is installed: (W) 1608 × (D) 916 × (H) 1206mm
Weight	SC-F6400 Series	120kg* ¹
	SC-F6400H Series	140kg* ²

Note "*1": Not including ink packs and auto take-up reel unit.

"*2": Not including ink packs.

1.3.2 Installation Space

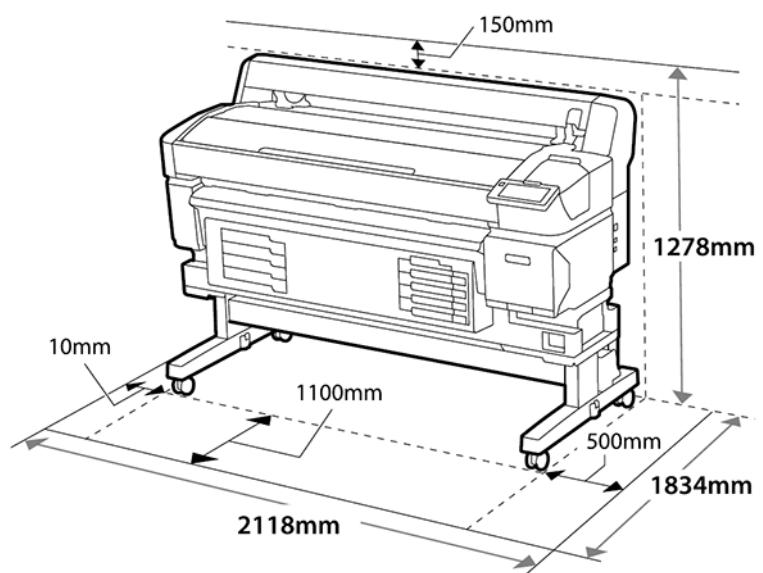


Figure 1-1. Installation Space

1.3.3 Part Names

FRONT SIDE

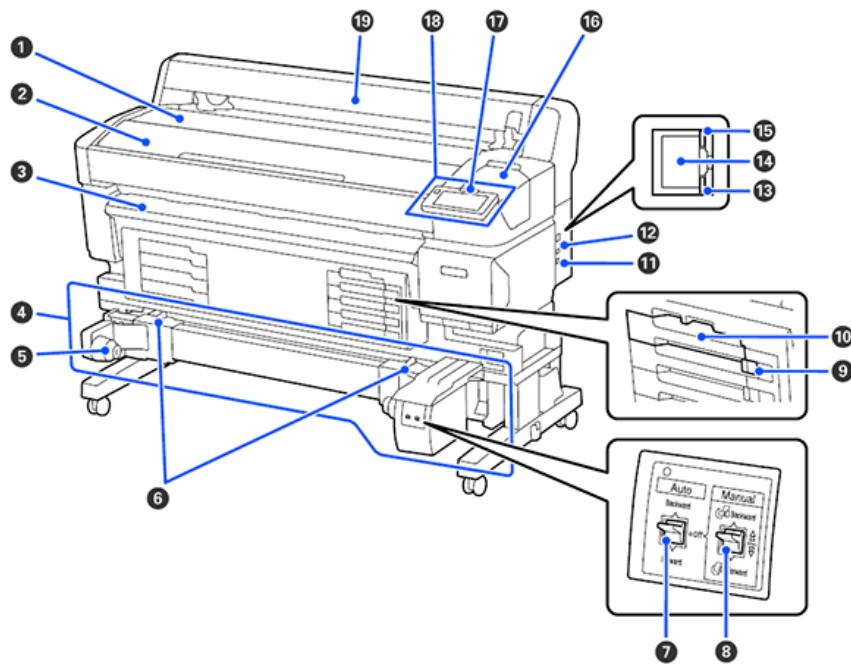
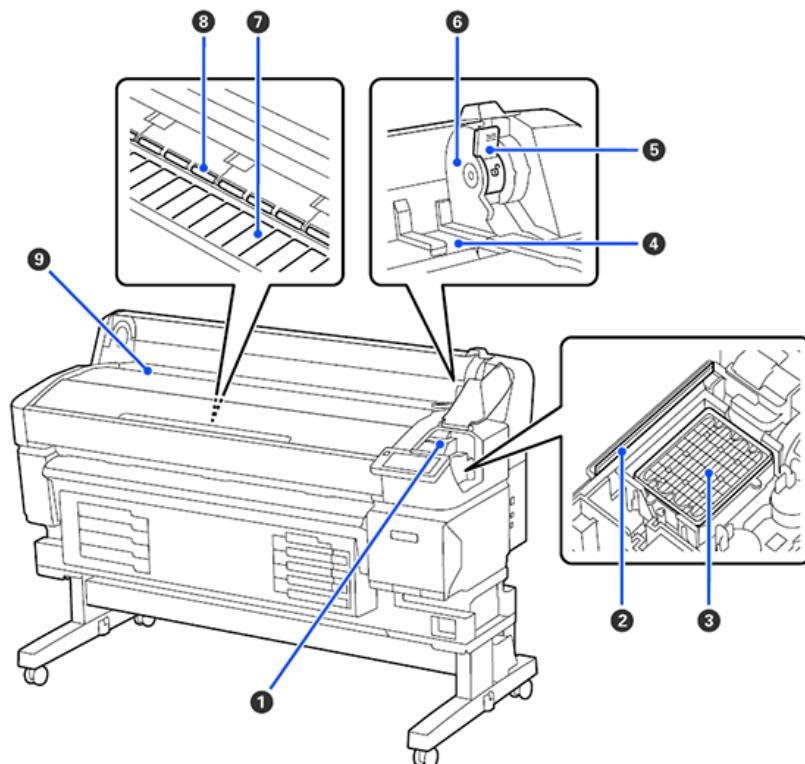


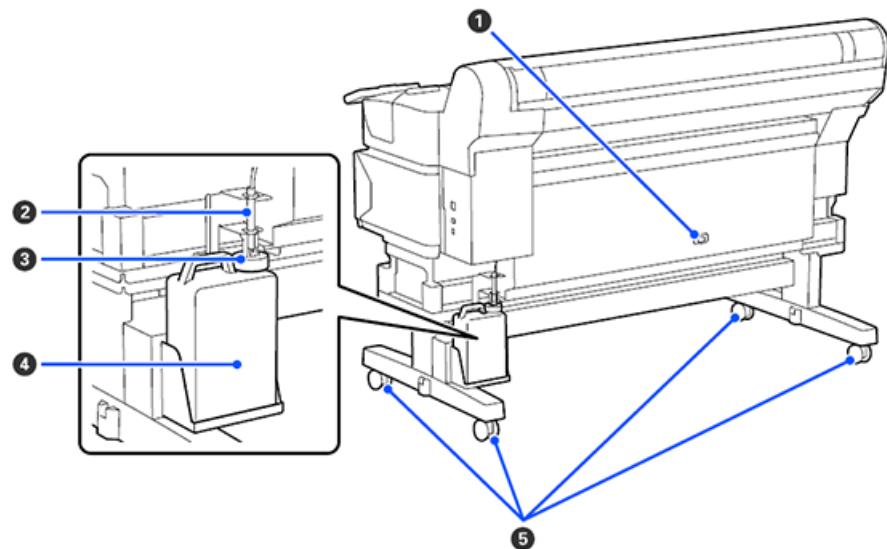
Figure 1-2. Front Side

Table 1-8. Front Side

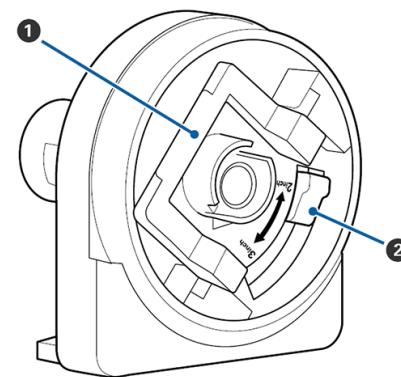
No.	Name
1	Roll rest
2	Printer cover
3	Output guide
4	Auto take-up reel unit (SC-F6400 Series is option)
5	Roll core holder
6	Lock lever
7	Auto switch
8	Manual switch
9	Lock switch
10	Ink supply unit tray
11	Option port
12	USB port
13	Data light
14	LAN port
15	Status light
16	Maintenance cover
17	Alert lamp
18	Control panel
19	Media cover

INSIDE**Figure 1-3. Inside****Table 1-9. Inside**

No.	Name
1	Print head
2	Wiper
3	Capping station
4	Roll adapter guide
5	Roll lock lever
6	Adapter holder
7	Platen
8	Roller
9	Input slot

REAR**Figure 1-4. Rear****Table 1-10. Rear**

No.	Name
1	AC inlet
2	Waste ink tube
3	Stopper
4	Waste ink bottle
5	Casters

ROLL PAPER ADAPTER**Figure 1-5. Roll paper adapter****Table 1-11. Roll paper adapter**

No.	Name
1	Adapter lock lever
2	Size lever

1.4 Control Panel Specifications

1.4.1 Control panel and LCD

CONTROL PANEL

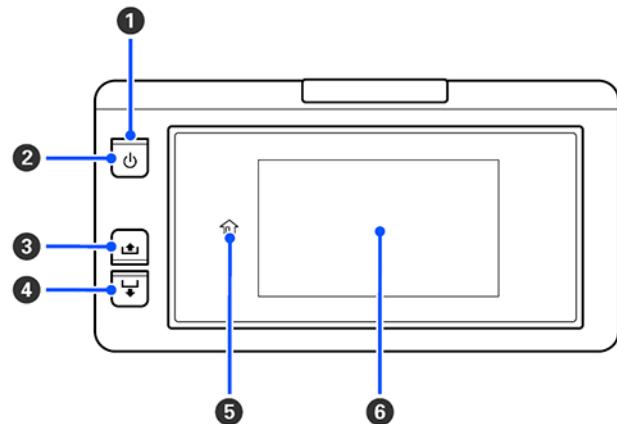


Figure 1-6. Control panel

Table 1-12. Control panel

	Name	Function
1	Power light (power light)	The printer's operational status is indicated by a lit or flashing light. <input type="checkbox"/> On: The power is on. <input type="checkbox"/> Flashing: The printer is receiving data or performing head cleaning or other operations during shut-down. <input type="checkbox"/> Off: The power is off.
2	Power button (power button)	Turns the power on and off.
3	[↑] button (rewind button)	Pressing this button rewinds the media.
4	[↓] button (feed button)	Pressing this button feeds the media.

Table 1-12. Control panel

	Name	Function
5	Home (Home)	Press this button to return to the home screen from the menu or others (when Home is on). When Home (home) cannot be used due to the printer's status, it is turned off.
6	Screen	Displays the printer's status, menus, error messages, and so on.

LCD

This section describes how to check the following two screens.

- Home screen
The current printer's status can be checked.

- Startup adjustment screen
The main adjustment values can be changed instantly. This screen is useful when adjustments are repetitively performed to stabilize the print quality at the time of using a new media.

The screen switches between the home screen and startup adjustment screen every time  is pressed.

■ Home screen

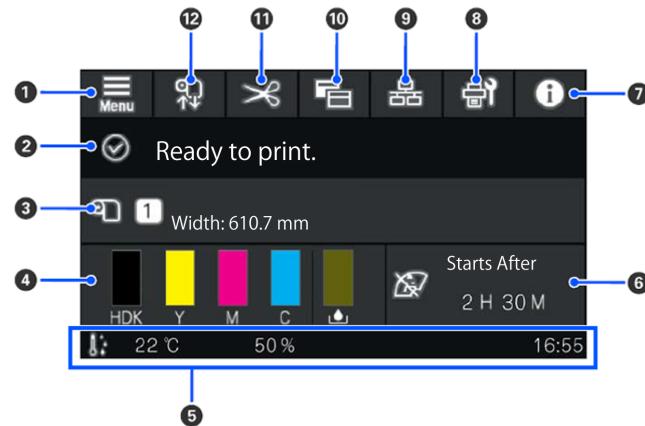


Figure 1-7. LCD

Table 1-13. LCD

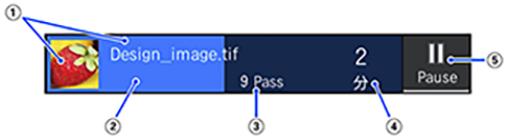
Name	Function
1  (Menu)	Displays the setting menu.
2 Status display area	<p>Displays the printer's status and warning notification. Only the latest warning notification is displayed in this area. Press  to check all the warning notifications.</p> <p>When a printing job is received, the display changes as follows. The following describes how to check the display.</p>  <ol style="list-style-type: none"> ① Displays the preview and file name of the image being printed. ② A progress bar that indicates the printing progress. ③ Displays the print pass counts. ④ Displays the estimated time until the print completion. The heating time until the heater reaches the setting temperature, curing time after printing, and warm-up time of the PRINT HEAD may be included according to the setting. ⑤ The Pause button. Press the button, and select whether to stop the printing immediately (immediate stop) or to stop the printing after the current page (job when a single page is printed) is printed (stop between pages). When the [Restart] in the pause screen is pressed, the pause status is released and the printing restarts. When the immediate stop is selected, however, the printing may be unstable after the printing is restarted. This button becomes the Cancel button during the warm-up until the heater reaches the setting temperature. The job is canceled when the button is pressed. During the warm-up for the adjustment pattern printing, this button becomes the Start button, and the printing can be started even if the heater temperature is low.
3 Media information	Displays the number/name of the registered media being selected and width of the currently set media. When the remaining amount management is set to ON, the remaining amount of the set media is displayed as well. Pressing this area displays the media setting of the setting menu where the registered media number can be changed to another one and the setting of the registered media number being selected can be changed.

Table 1-13. LCD

Name	Function																				
4 Consumable status	<p>Displays the rough indication of the remaining amount and status of the consumables such as the ink pack. Press this area to check further detailed indication of the remaining amount and model number of each consumable.</p> <p>The following describes how to check each display.</p> <p>Status of the ink pack</p> <p>Indicates the rough indication of the remaining ink. The bar becomes low as the ink decreases. The alphabet below the bar is the abbreviation of the ink color. The following describes the abbreviation of the ink color.</p> <p>The displayed colors may differ according to the printer and ink used.</p> <table> <tbody> <tr><td>HDK</td><td>: High Density Black</td></tr> <tr><td>Y</td><td>: Yellow</td></tr> <tr><td>M</td><td>: Magenta</td></tr> <tr><td>C</td><td>: Cyan</td></tr> <tr><td>LM</td><td>: Light Magenta</td></tr> <tr><td>LC</td><td>: Light Cyan</td></tr> <tr><td>OR</td><td>: Orange</td></tr> <tr><td>V</td><td>: Violet</td></tr> <tr><td>FY</td><td>: Fluorescent Yellow</td></tr> <tr><td>FP</td><td>: Fluorescent Pink</td></tr> </tbody> </table> <p>The display of the bar changes according to the status of the ink pack.</p> <p> : Since the remaining ink level is low, a new ink pack is required to be prepared.</p> <p> : The remaining ink level is equal to or less than the limit value. Replace the ink pack with a new one.</p>	HDK	: High Density Black	Y	: Yellow	M	: Magenta	C	: Cyan	LM	: Light Magenta	LC	: Light Cyan	OR	: Orange	V	: Violet	FY	: Fluorescent Yellow	FP	: Fluorescent Pink
HDK	: High Density Black																				
Y	: Yellow																				
M	: Magenta																				
C	: Cyan																				
LM	: Light Magenta																				
LC	: Light Cyan																				
OR	: Orange																				
V	: Violet																				
FY	: Fluorescent Yellow																				
FP	: Fluorescent Pink																				

Table 1-13. LCD

Name	Function
4 Consumable status	: Time to agitate the ink pack. Pull out the ink pack tray and agitate the ink. : No ink pack is set in the ink pack tray installed. Set an ink pack. : Check that the lock switch of the ink pack tray is locked, and follow the instructions on the screen.
5 Environment temperature/humidity/time	Indicates the rough indication of the free capacity of the waste ink bottle. The bar becomes low as the free capacity decreases.
6 Implementation timing notice of maintenance/periodic cleaning	: The waste ink bottle is almost full. A new waste ink bottle is required to be prepared.
7 (Printer status)	is displayed on the top right of when a warning notification exists. When this area is pressed and the message list is pressed in the displayed screen, the screen that displays the list of warning notifications is displayed. Press each item in the screen to check the remedies and detailed information. The item that has been addressed in response to the warning is deleted from the list.

Table 1-13. LCD

Name	Function
8  (Maintenance)	The maintenance menu is displayed on the screen where the maintenance of the PRINT HEAD can be performed and consumables can be replaced.
9  / 	<p>Indicates whether the connection between the printer and computer is on or off with the icons shown below.</p> <p>Connection on: </p> <p>Connection off: </p> <p>The connection switches between on and off every time this area is pressed.</p> <p>For example, when multiple maintenance tasks are consecutively performed, such as printing the nozzle check pattern and cleaning the PRINT HEAD after cleaning around the PRINT HEAD, tasks can be completed efficiently by turning off the connection in advance to prevent other jobs from being received between each task.</p> <p>The connection may not be switched depending on the operation status of the printer. When the connection cannot be switched, the icon turns gray (grayed out) which indicates that the function is disabled.</p>
10 	The screen switches between the home screen and startup adjustment screen every time this area is pressed.
11 	Press this when cutting the media manually with the built-in cutter.
12 	Press this when setting and removing the media.

■ Startup adjustment screen

The following describes only the parts that are different from the home screen. The value of each adjustment can be changed during the printing. The adjusted result is registered to the currently selected media setting.

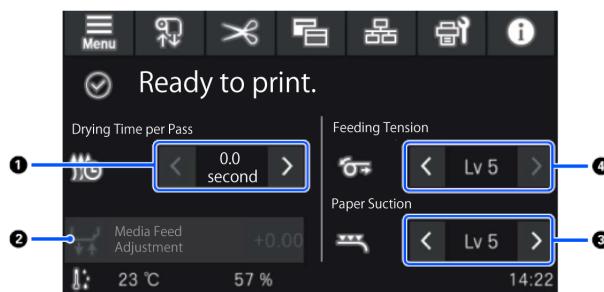
**Figure 1-8. LCD**

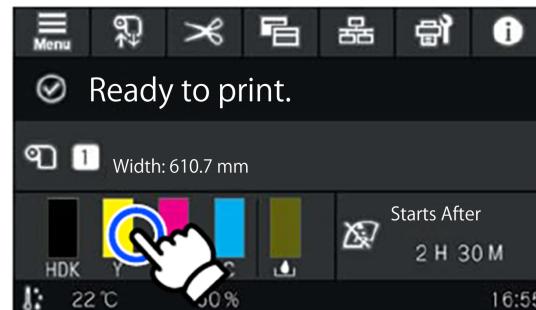
Table 1-14. LCD

Name	Function
1 Adjustment of drying time per pass	Displays the setting value of the drying time per pass set to the pass mode selected in the currently selected registered media number. Press the following buttons to change the value directly. [<] : When decreasing the time from the displayed one: [>] : When increasing the time from the displayed one:
2 Media feed correction	When correcting banding during the printing, press this area to perform the media feed correction. Since black banding (dark-colored lines) occurs when the media feed amount is too small, correct it to the + direction. Since white banding (white or light-colored lines) occurs when the media feed amount is too large, correct it to the - direction. The value indicates how much the feed amount is corrected in the + or - direction in percentage.
3 Suction power adjustment	Set the suction power of the platen to suck the media. The suction power increases as the setting value is increased. Normally, use the default value set for each media type as it is. When the media is rippling on the platen, increase the setting value. When the prints on a thin media or soft media are grainy or out of focus or the media cannot be fed correctly, decrease the setting value.
4 Feeding tension adjustment	When the media wrinkles during the printing, change the setting to increase the tension. The tension increases as the setting value is increased.

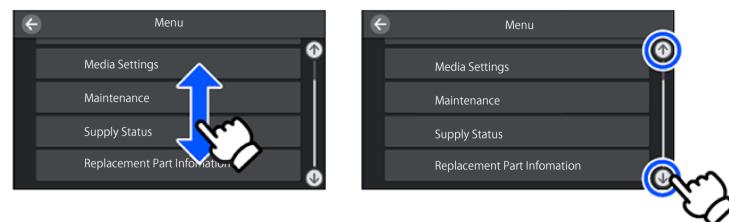
■ Operation

Black areas displayed on the home screen and startup adjustment screen do not operate even if they are pressed. When a gray-tile area in the operation area is pressed, the screen switches or a value changes.

Each function button on the upper part of the screen may not execute the function depending on the operation status of the printer. When the function cannot be executed, the icon color turns gray (grayed out), and the button does not operate even if it is pressed.

**Figure 1-9. LCD**

Press the operation area to operate. When the following scroll bar is displayed, move your finger up/down (slide) to scroll the screen. The screen can be scrolled by pressing the icons at the top and bottom of the scroll bar.

**Figure 1-10. LCD**

When the [How to...] button is displayed on the message screen or others, press it to check the operation guide.

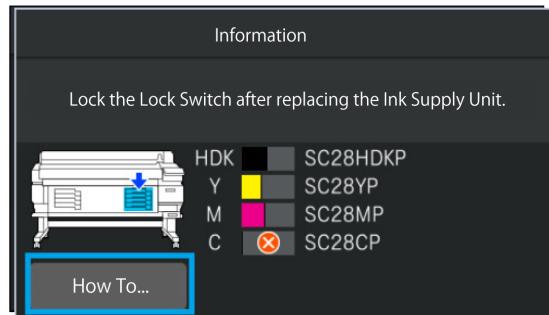


Figure 1-11. LCD

1.4.2 Various Startup Mode



When executing in each mode, press the specified area obliquely with your finger or place something that is depth 20 mm x width 25 mm x height 2 mm or more (example: coin or the like).

1.4.2.1 Inspection Mode

The Inspection mode is intended to be used by a service person for servicing the printer.

OPERATION

1. In a power off status, the printer is turned off, place a coin or the like on the left upper part of the touch panel shown below, or touch with your finger.
2. While placing the coin or the like, or pressing and holding with your finger, press and hold the power button at least 7 seconds.

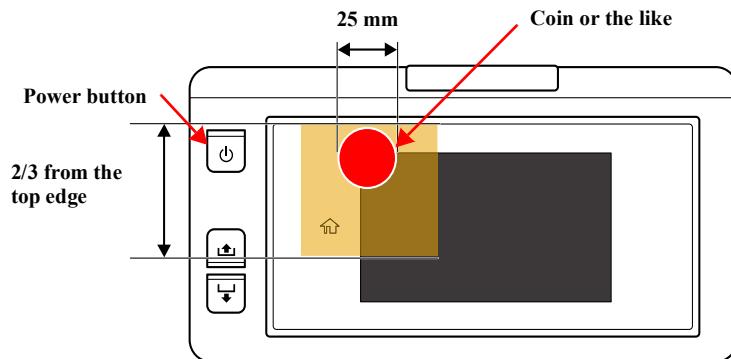
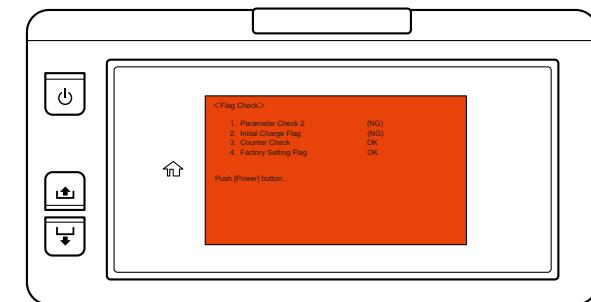


Figure 1-12. Operation

3. When the printer started in Inspection mode, remove a coin or the like, or release the finger.



Error in red screen will be displayed when turning the printer off, but ignore it and turn the printer off by pressing the power button again.



1.4.2.2 Program Update Mode

When updating the firmware, turn the printer on in the Program Update Mode.

OPERATION

1. In a power off status, the printer is turned off, place a coin or the like on the left part of the touch panel shown below, or touch with your finger.
2. While placing the coin or the like, or pressing and holding with your finger, press and hold the back feed button and the power button at least 7 seconds.

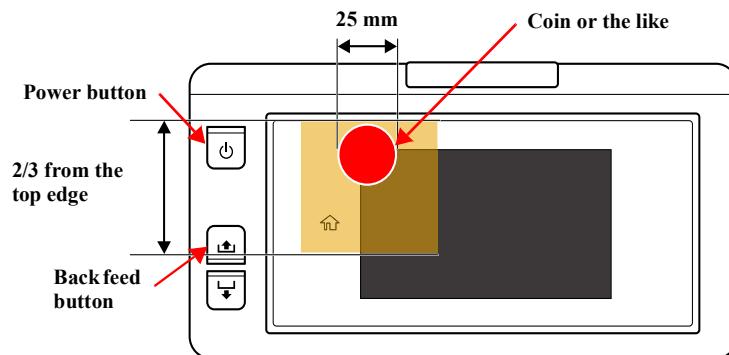


Figure 1-13. Operation

3. Choose the “2.Program Update Mode” from the panel.



Figure 1-14. Program update mode select screen

1.4.2.3 Repair Mode

This mode is for the maintenance of the printer.

When starting up the printer in the repair mode, the printer starts up quickly because the initializing operations and timer cleaning are skipped during boot-up. Other states are as same as normal mode.

OPERATION

1. In a power off status, the printer is turned off, place a coin or the like on the left part of the touch panel shown below, or touch with your finger.
2. While placing the coin or the like, or pressing and holding with your finger, press and hold the back feed button and the power button at least 7 seconds.

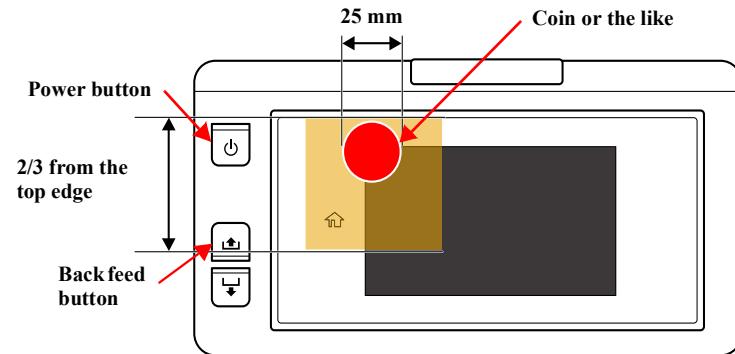


Figure 1-15. Operation

3. Choose the “1.Repair Mode” from the panel.

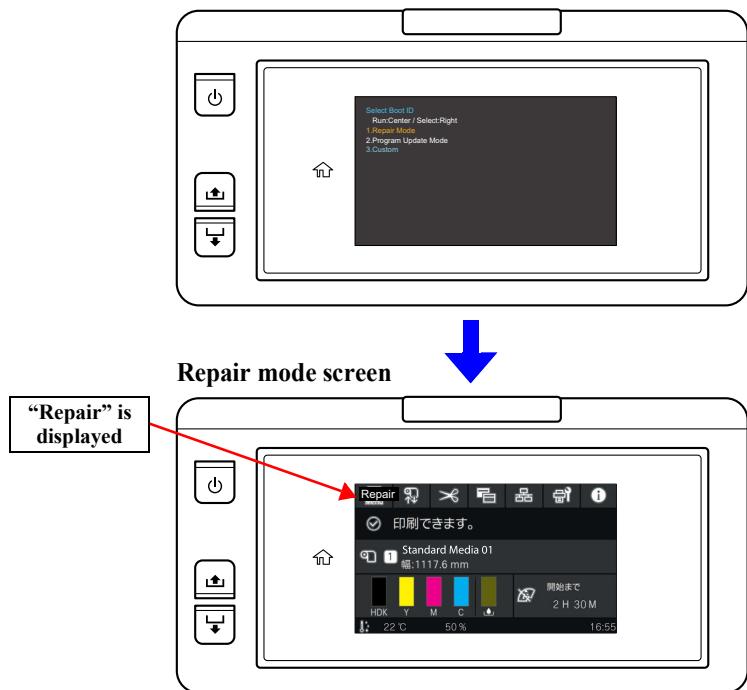


Figure 1-16. Repair mode select screen

CHAPTER

2

TROUBLESHOOTING

2.1 Overview

This section explains the basic procedure for troubleshooting problems on the printer quickly and efficiently.

When carrying out the troubleshooting procedures, take a flexible measure following your sales company's policy and considering the troubling situation.

2.1.1 Preliminary Check

Make sure to verify or perform the following basic items whenever servicing the printer.

2.1.1.1 Before performing troubleshooting

Before troubleshooting, perform basic checks such as connection check of the power cable and installation check of the ink cartridges.

2.1.1.2 Check for the usage environment

Check the user's usage environment.

- Temperature/humidity of the installation site
(For the guaranteed environment, see Chapter 1 ([P. 11](#)))
- Drivers/RIP that the user uses
- Genuine media or 3rd party's media?
- Genuine ink or 3rd party's ink?
- F/W version (the latest?)
- Check also the following if necessary.

Phenomenon	Check Item
Bad print quality	The installation site inclined?
	Any vibrating equipment near the site?
	The user's panel settings
	Is the interior dirty? Clean it if dirty.
	Missing dots/bad print quality
	Near a conditioner's ventilation duct?

2.1.1.3 Recurrence check of the trouble

Check if the trouble the user claims recurs with the returned printer.

- If RIP was used, check if the trouble recurs when the driver is used.
- If 3rd party's media were used, check if the trouble recurs when a genuine medium is used.
- If 3rd party's ink was used, perform the repair according to the policy of each local sales subsidiary.
- If the F/W was not the latest, gain agreement with the user on the update of F/W, and check if the trouble recurs when the latest F/W is used.

2.1.1.4 Check for the counter values/history

Download NVRAM and check the following with NVRAM Viewer. (For the check method, see Chapter 4 ([P. 329](#)))

- Counter history of the periodic replacement parts. (if any part's life is near.)
- Printer's operating history (if any cause for the trouble exists)
- Error history (the frequency/history of errors related with the trouble)

2.1.1.5 Test print check

For the trouble related with print quality, carry out "Test Print" and check the current adjustment status. (For the procedure of test print, see Chapter 4 ([P. 342](#)))

2.1.2 Troubleshooting Procedure

Refer to the following items according to the observed symptom, carry out the corresponding troubleshooting following the procedures described in the next sections.

1. Trouble with a Maintenance Call
2. Trouble with a Service Call
3. Trouble on print quality
4. Trouble on paper feeding/Ejecting
5. Other troubles
6. Trouble on Service Program
7. Trouble on NVRAM Viewer

2.1.3 Procedure after troubleshooting

2.1.3.1 If the trouble has been successfully solved

- Check if the movement of the covers is normal (without any damage, noises).
If any abnormality is found, lubricate or replace the faulty parts.
- Carry out the cleaning after repair.
- Prepare a report on the repair. (follow your company/local office's policy.)

2.1.3.2 If necessary to escalate the trouble case

Make a report with the following data.

- Backed-up NVRAM data
- F/W version
- Service Program version
- For bad print quality: a print sample with the marked symptom and a printed test pattern.
- For faulty parts: the faulty parts themselves and a photos of the troubling section.
- Information on the user/the repair listed below
(This is a format of the escalation report. At least check out the items on the list and register the case in the escalation system.)
 - ◆ Model name
 - ◆ Serial number
 - ◆ With or without options
 - ◆ Content of the claim from the user
 - ◆ Date of occurrence
 - ◆ Trouble occurrence conditions/recurrence method
 - ◆ What the service person actually observed
(Check items before check, the content of troubleshooting and repair.)
 - ◆ Date of escalation
 - ◆ Purpose of escalation
(Measures which the user/service person)
 - ◆ Degree of urgency (S/A/B/C)
 - S: High (those which may cause a death, ignition, etc.)
 - A: Problems, bugs
 - B: Strong request
 - C: Inquiry
 - ◆ Deadline for the response
 - ◆ Repair history
 - ◆ Part-replacement history

2.2 Maintenance Call

Maintenance call (Maintenance request) number is a character string written in hexadecimal code displayed on the screen when the maintenance request/maintenance error occurred. Value obtained from the logical sum of the items assigned to each bit in the table below is used.

Bit assignment (binary code)																													hexadecimal code	Maintenance name	Status			
31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000001	MAINTENANCE UNIT	Near the end of life	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000002	INK HOLDER RIGHT	Near the end of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000004	INK HOLDER LEFT	Near the end of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000008	Decompression Pump Unit	Near the end of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000010	DUCT CR	Near the end of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000020	INK TUBE	Near the end of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000040	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000080	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000100	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000200	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000400	RTC	Date/time not set		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00000800	RTC	Out of battery		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00001000	MAINTENANCE UNIT	End of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00002000	INK HOLDER RIGHT	End of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00004000	INK HOLDER LEFT	End of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00008000	Decompression Pump Unit	End of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00010000	DUCT CR	End of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00020000	INK TUBE	End of life		
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00040000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00080000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00100000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00200000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00400000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00800000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00100000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00200000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00400000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	00800000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	01000000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	02000000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	04000000	Reserved			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	08000000	Reserved			
0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10000000	Reserved			
0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20000000	Reserved			
0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40000000	Reserved			
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80000000	Reserved			

Note “*1”:When “00000009” is displayed

As “00000009” in hexadecimal means “00000000000000000000000000000001001” in binary, you can find out the code is assigned to Bit-0 and Bit-3 referring to the above table. In this case, two errors are occurring simultaneously. (Bit-0: MAINTENANCE UNIT near end/ Bit-3: Decompression Pump Unit near end)

"*2": When the part reached the end of the life and the user decided to continue using the part, Maintenance Call (life lengthening) occurs and is able to continue printing.

2.3 Troubleshooting from Service Call

2.3.1 Service Call Classification Table

Error code	Classification	Ref.
00112X	Home position detection related error	P.34
00113X	CR related error	P.34
00122X	PF related error	P.34
0014XX	Ink system related error	P.34
00151X	APG related error	P.34
00153X	Driven roller related error	P.34
00154X	Cutter related error	P.34
00159X	ATC related error	P.34
00164X	REEL unit related error	P.35
00166X/00167X	Cooling fan related error	P.35
001AXX/001BXX	Print head related error	P.35
001F0X	CSIC related error	P.35
001F8X/001F9X/001FBX/001FCX	Other board related error	P.35
Others	Others	P.35
256XXX/307218	System error code	P.35

2.3.2 Service Call List

Error Code	Error	Ref.
“00112X” (Home position detection related error)		
001121	Roll Paper Detector Malfunction Error	P.36
001125	CR Home Position Detection Error	P.37
001128	Cutter Home Position Detection Error	P.38
001129	PG Home Position Detection Error	P.38
00112B	PF Driven Release Home Position Detection Error	P.39
“00113X” (CR related error)		
001135	CR Motor Disconnection Error	P.40
001137	CR Motor Movement Inhibition Error	P.41
001138	CR Motor Overcurrent Error	P.42
001139	CR Motor Oscillation Error	P.43
00113A	CR Motor Overload Error	P.44
00113C	CR Motor Reversing Error	P.45
00113D	CR Motor Driving time-out Error	P.46
00113E	CR Motor Velocity Deviation Error	P.47
00113F	CR Motor Lock Error	P.48
“00122X” (PF related error)		
001229	PF Motor Oscillation Error	P.49
00122A	PF Motor Overload Error	P.50
00122C	PF Motor Reversing Error	P.51
00122D	PF Motor Driving time-out Error	P.51
00122E	PF Motor Velocity Deviation Error	P.52
00122F	PF Motor Lock Error	P.53
“0014XX” (Ink system related error)		
001418	Maintenance Unit Overload Error	P.54
001419	Maintenance Unit Oscillation Error	P.54
00141A	Maintenance Unit Overload Error	P.55
00141C	Maintenance Unit Reversing Error	P.55
00141D	Maintenance Unit Driving time-out Error	P.56

Error Code	Error	Ref.
00141E	Maintenance Unit Velocity Deviation Error	P.56
00141F	Maintenance Unit Lock Error	P.57
0014BD	Ink Leak Detection Error (Alphabet Mode)	P.57
0014BF	Maintenance Unit Position Uncertain Error By emergency Stop (For Preventing Machine Error)	P.58
“00151X” (APG related error)		
001519	APG Motor Oscillation Error	P.58
00151A	APG Motor Overload Error	P.59
00151C	APG Motor Reversing Error	P.60
00151D	APG Motor Driving time-out Error	P.60
00151E	APG Motor Velocity Deviation Error	P.61
00151F	APG Motor Lock Error	P.61
“00153X” (Driven roller related error)		
001539	Driven Roller Oscillation Error	P.62
00153A	Driven Roller Motor Overload Error	P.63
00153C	Driven Roller Motor Reversing Error	P.64
00153D	Driven Roller Motor Driving time-out Error	P.64
00153E	Driven Roller Motor Velocity Deviation Error	P.65
00153F	Driven Roller Motor Velocity Deviation Error	P.65
“00154X” (Cutter related error)		
001545	Cutter Motor Disconnection Error	P.66
001549	Cutter Motor Oscillation Error	P.67
00154A	Cutter Motor Overload Error	P.68
00154C	Cutter Motor Reversing Error	P.69
00154D	Cutter Motor Driving time-out Error	P.69
00154E	Cutter Motor Velocity Deviation Error	P.70
00154F	Cutter Motor Lock Error	P.70
“00159X” (ATC related error)		
001599	SOC Operation Error	P.71
00159A	ATC Motor Overload Error	P.71
00159C	ATC Motor Reversing Error	P.72

Error Code	Error	Ref.
00159D	ATC Motor Driving time-out Error	P.72
00159E	ATC Motor Velocity Deviation Error	P.73
00159F	ATC Motor Lock Error	P.73
“00164X” (REEL unit related error)		
001649	REEL Motor Oscillation Error	P.74
00164A	REEL Motor Overload Error	P.75
00164C	REEL Motor Reversing Error	P.75
00164D	REEL Motor Driving time-out Error	P.76
00164E	REEL Motor Velocity Deviation Error	P.76
00164F	REEL Motor Lock Error	P.77
“00166X/00167X” (Cooling fan related error)		
001664	CR Motor Cooling FAN Lock Error	P.77
001668	PS Cooling FAN Lock Error	P.78
001673	Main Board Cooling FAN Lock	P.78
“01AXX/001BXX” (Print head related error)		
001A38	Transistor Environmental Temperature Error	P.79
001A39	Head Fuse Error	P.80
001A3A	Head Hot Error (Head)	P.81
001A42	Head Temperature Error (Head)	P.81
001A45	Head Install Error	P.82
001A46	HCS Communication from Head to Main Board Error	P.83
001A47	Main Board Internal HCS Communication Error	P.84
001A48	HCS from Head to Main Board Error	P.85
001A49	Main Board Internal HCS Error	P.86
001A50	No Head Connection Error	P.87
001B00	I2C Communication Time-out Error	P.88
“001F0X” (CSIC related error)		
001FC0	CSIC FA Slot 1 Error	P.89
001FC1	CSIC FA Slot 2 Error	P.89
001FC2	CSIC FA Slot 3 Error	P.90
001FC3	CSIC FA Slot 4 Error	P.90

Error Code	Error	Ref.
001F04	CSIC FA Slot 5 Error	P.91
001F05	CSIC FA Slot 6 Error	P.91
“001F8X/001F9X/001FBX/001FCX” (Other board related errors)		
001F80	Fuse Blow Error	P.92
001F81	EPC_Check Error	P.92
001F82	Destination Outside Setting Range Error	P.93
001F84	CSIC Written Data Error 1	P.93
001F85	CSIC Written Data Error 2	P.94
001F90	SOC Operation Error	P.94
001F91	MR Data Error	P.95
001F92	In-process Life Error	P.95
001FB9	CS Rank Outside Setting Range Error	P.96
001FC0	ASIC Communication Error (Read) (CRCM1)	P.96
001FC1	ASIC Communication Error (Read) (CRCM2)	P.97
001FC8	ASIC Communication Error (Write) (CRCM1)	P.97
001FC9	ASIC Communication Error (Write) (CRCM2)	P.98
Others		
001000	Life End Error	P.98
005001	Ink Leak Detection Error (Home)	P.99
005002	Ink Leak Detection Error (Full)	P.99
005003	Ink Leak Detection Error	P.100
System error code		
256101	Watchdog Time-out	P.100
256200	Main Board failure (overvoltage) has occurred.	P.101
256237	Head LDAMP2 Error	P.101
256239	Head VHV Low Error (LDAMP2)	P.102
256240	Head VDD Low Error (LDAMP2)	P.102
256241	Head GVDD Low Error (LDAMP2)	P.103
256242	Head VBS abnormal Error (LDAMP2)	P.103
307218	Take-up unit recognition error	P.104

2.3.3 Details of Service Call

001121 (Roll Paper Detector Malfunction Error)

Description

During printing of the rear end (last) of a roll paper, even though the PE Sensor detects no paper, the roll paper sensor detects the presence of paper.

Suspected cause

- PE Sensor (roll paper) harness coming off
- Poor sliding or coming off of PE Sensor (roll paper) lever
- PE Sensor (roll paper) failure

Parts/Components to be checked

1. PE Sensor (roll paper) connector
2. PE Sensor (roll paper) lever

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the cable connections (CN17) for abnormalities such as detachment of the PE Sensor (roll paper) connector, a broken cable, etc. If an abnormality is found, reconnect it. Does the product recover from the error?	End	Go to step 2
2	Check the sliding condition of the PE Sensor (roll paper) lever and set the sensor lever to the correct position. Does the product recover from the error?	End	Go to step 3
3	Replace the PE Sensor (roll paper) (P. 282). Does the product recover from the error?	End	Escalate to the person in charge

001125 (CR Home Position Detection Error) **Description**

The CR HP Sensor cannot detect the CR Unit. Or, since the home contact position cannot be detected, the CR home position cannot be set.

 Suspected cause

- CR HP Sensor failure (there are many sensor failure cases)
- Damage on the Shield Plate of the CR Unit
- Faulty detection of the origin due to paper jam, etc.
- Incorrect reading of the CR Scale
- Broken CR Lock (HP origin (mechanical) could have been read incorrectly)

 Parts/Components to be checked

1. CR HP Sensor
2. CR Scale
3. Paper jam inside the printer
4. CR Lock
5. CR Encoder

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Remove the jammed paper. Does the product recover from the error?	End	Go to step 2
2	Check for CR HP Sensor failure (if the Shield Plate reacts to the sensor). Does the product recover from the error?	End	Go to step 3
3	Check if the CR Scale is contaminated, clean it with ethanol. Does the product recover from the error?	End	Go to step 4
4	Check CR Lock release. After power ON, check that the CR Lock release operation was performed correctly. If not, check the Pump Cap Unit state and if it has a failure replace it. Does the product recover from the error?	End	Go to step 5
5	Replace the CR Scale (P. 223). Does the product recover from the error?	End	Go to step 6
6	Check the reading state of the CR Encoder. If reading (from the Service Program) cannot be performed, re-install the CR Encoder. Check the operation state of the CR Motor. Does the product recover from the error?	End	Go to step 7
7	If there is any abnormality in the CR Encoder, replace it (P. 227). Does the product recover from the error?	End	Go to step 8
8	Replace the CR HP Sensor (P. 232). Does the product recover from the error?	End	Go to step 9
9	Replace the CR Lock (Maintenance Unit) (P. 236). Does the product recover from the error?	End	Escalate to the person in charge

001128 (Cutter Home Position Detection Error) Description

The cutter origin cannot be detected at the time of initialization. The cutter cannot return or the sensor does not react.

 Suspected cause

- The Mechanical Sensor has failed or its position has been shifted.
- The Cutter Belt has come off.
- Operation failure due to paper jam
- Poor connection of the Cutter Origin Sensor
- Cutter Origin Sensor failure
- Cutter Motor failure

 Parts/Components to be checked

1. Cutter Origin Sensor connector
2. Cutter Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check for a paper jam around the Cutter Unit and if a foreign object is found, remove it.</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the connection (CN16) of the Cutter Origin Sensor for connector disconnection, damage, or a broken cable.</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Cutter Unit (P. 290).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

001129 (PG Home Position Detection Error) Description

The position cannot be detected by the PG Sensor when PG is switched. The PG Sensor cannot perform detection even though the APG Motor is driven.

 Suspected cause

- The position cannot be detected by the PG Sensor when PG is switched.
- The PG Sensor cannot perform detection even though the APG Motor is driven.

 Parts/Components to be checked

1. PG Sensor
2. APG Unit
3. Foreign object around the contact position when the CR origin is detected

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check for PG Sensor failure (if the Shield Plate reacts to the sensor). If the PG Sensor failed, replace it (P. 235).</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Is the PG planetary gear moving (Planetary Gear and the gear do not engage)? If it is not moving, replace the APG Unit (P. 233).</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Check if the origin of the CR Unit has been displaced (the planetary gear and the gear do not engage). Also, remove foreign objects around the contact position during CR origin detection (this printer switches PG when the carriage returns to the home position).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00112B (PF Driven Release Home Position Detection Error) Description

When performing driven roller origin detection = driven roller reset operation, the sensor state and the current roller position detection result do not match.

 Suspected cause

- Poor connection of the Driven Roller Sensor
- Misalignment between the Driven Roller Motor and gear (poor installation)
- Driven Roller Sensor failure
- Broken flag (lever) (a blade is attached to the gear at the end of motor)
- Driven Roller Motor failure

 Parts/Components to be checked

1. Driven Roller Sensor
2. Driven Roller Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the connection of the Driven Roller Sensor for connector disconnection, damage, or a broken cable (CN6) and if an abnormality is found, reconnect the cable. Does the product recover from the error?	End	Go to step 2
2	Replace the Driven Roller Sensor (P. 279). Does the product recover from the error?	End	Go to step 3
3	Check the connection of the Driven Roller Motor for connector disconnection, damage, or a broken cable and if any abnormality is found, reconnect the cable. Does the product recover from the error?	End	Go to step 4
4	Replace the Driven Roller Motor (P. 278). Does the product recover from the error?	End	Escalate to the person in charge

001135 (CR Motor Disconnection Error) Description

 Suspected cause

- CR Motor failure
- CR Motor cable abnormality (connection, broken)
- Incorrect reading of the CR Scale (scratches, contamination)
- CR Encoder Sensor failure

 Parts/Components to be checked

1. CR Motor
2. CR Scale
3. CR Encoder

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the state of the CR Motor cable <ul style="list-style-type: none"> ■ Check the connection state of the cable, and if an abnormality is found, reconnect the cable. Does the product recover from the error?	End	Go to step 2
2	Check the state of the CR Motor <ul style="list-style-type: none"> ■ Check the connection state of the cable, and if an abnormality is found, reconnect the CR Motor. Does the product recover from the error?	End	Go to step 3
3	Check the state of the CR Scale <ul style="list-style-type: none"> ■ Clean the CR Scale if it is contaminated. If it is damaged, replace it Does the product recover from the error?	End	Go to step 4
4	Check the state of the cable <ul style="list-style-type: none"> ■ Check the connection state of the cable, and if an abnormality is found, reconnect the cable. Does the product recover from the error?	End	Escalate to person in charge

001137 (CR MOTOR MOVEMENT INHIBITION ERROR) Description

This error occurs when an attempt is made to operate CR while its operation is prohibited by the FA command.

 Suspected cause

An attempt was made to unlock the interlock (the cover is opened/closed) while CR operation is prohibited by the command.

 Parts/Components to be checked

Program Command

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Execute power OFF/ON Does the product recover from the error?	End	Escalate to the person in charge

1138 (CR Motor Overcurrent Error) Description

- There is an abnormality in the Maintenance Cover Sensor connection.
- Maintenance Cover Sensor failure
- There is an abnormality in the CR Motor or CR Encoder connection.
- The number of times of the detection of overcurrent flowing to the CR Motor has reached the specified value.

 Suspected cause

- Maintenance Cover Sensor cable abnormality (connection, broken)
- Maintenance Cover Sensor failure
- Abnormal load
- CR Encoder failure
- CR Motor failure

 Parts/Components to be checked

1. Maintenance Cover Sensor
2. CR Encoder
3. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections again for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it.</p> <ul style="list-style-type: none"> ■ Maintenance Cover Sensor connection ■ CR Encoder to Sub Board (CN102) ■ CR Motor to Main Board (CN201) <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the reading state of the CR Encoder. If reading (from the Service Program) cannot be performed, reinstall the CR Encoder.</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Maintenance Cover Sensor (P. 168).</p> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<p>Replace the CR Encoder (P. 227).</p> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<p>Replace the CR Motor (P. 230).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

1139 (CR Motor Oscillation Error) Description

The number of oscillations exceeds the specified value. Or, the control terminal (Vre terminal) of the CR Motor Driver was short-circuited.

 Suspected cause

- Main Board failure
- CR Motor failure

 Parts/Components to be checked

1. Main Board
2. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board state. Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board (P. 199). Does the product recover from the error?	End	Go to step 3
3	Replace the CR Motor (P. 230). Does the product recover from the error?	End	Escalate to the person in charge

00113A (CR Motor Overload Error) **Description**

The CR Motor did not operate normally due to some load and an overcurrent higher than the specified value was detected. The CR Motor rotation speed is not attained or is not detected correctly.

 Suspected cause

- CR Encoder cable abnormality (connection, broken)
- CR Motor cable abnormality (connection, broken)
- Abnormal load
- CR Encoder failure
- CR Motor failure

 Parts/Components to be checked

1. CR Unit
2. CR Encoder
3. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the obstacle in the CR moving range. Check if any obstacle is blocking the CR movement. If so, remove the obstacle. Does the product recover from the error?	End	Go to step 2
2	Check the CR Unit state. Check that the CR Unit is installed correctly. If not, reattach the CR Unit. Does the product recover from the error?	End	Go to step 3
3	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. <ul style="list-style-type: none"> ■ CR Encoder to Sub Board (CN102) ■ CR Motor to Main Board (CN201) Does the product recover from the error?	End	Go to step 4
4	Check the reading state of the CR Encoder. If reading (from the Service Program) cannot be performed, reinstall the CR Encoder. Does the product recover from the error?	End	Go to step 5
5	Lubrication to the CR Oil Pad. Does the product recover from the error?	End	Go to step 6
6	Install the CR Unit correctly (P. 245). Does the product recover from the error?	End	Go to step 7
7	Replace the CR Encoder (P. 227). Does the product recover from the error?	End	Go to step 8
8	Replace the CR Motor (P. 230). Does the product recover from the error?	End	Escalate to the person in charge

00113C (CR Motor Reversing Error) Description

The number of occurrences of reversing the CR Motor has reached a predetermined limit.

 Suspected cause

- CR Encoder cable abnormality (polarity reversal)
- CR Motor cable abnormality (polarity reversal)
- Slipping of the teeth of the CR Timing Belt
- CR Encoder failure

 Parts/Components to be checked

1. CR Belt tension
2. CR Encoder
3. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the reading state of the CR Encoder. If reading (from the Service Program) cannot be performed, reinstall the CR Encoder.</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it.</p> <ul style="list-style-type: none"> ■ CR Encoder to Sub Board (CN102) ■ CR Motor to Main Board (CN201) <p>If a disconnected cable is found, reconnect it.</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the CR Encoder (P. 227).</p> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<p>Check the CR Belt state.</p> <ul style="list-style-type: none"> ■ Check that the CR Belt is installed correctly. If an abnormality is found, reinstall it. ■ Check that the CR Belt tension is within the standard value. <p>If the value is outside the standard, adjust the CR Timing Belt tension.</p> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<p>Replace the CR Motor (P. 230).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00113D (CR Motor Driving time-out Error) Description

Abnormally-long driving duration of the CR Motor was detected.

 Suspected cause

- Firmware becomes out of control
- Foreign object near the CR Motor Driver having an abnormal load

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00113E (CR Motor Velocity Deviation Error) Description

The CR Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Abnormal load
- CR Encoder failure
- CR Motor failure
- Sub Board cable disconnection
- CR Motor Driver failure

 Parts/Components to be checked

1. CR Scale
2. CR Encoder
3. Sub Board
4. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check for CR Scale contamination and if it is found to be contaminated, clean it. Does the product recover from the error?	End	Go to step 2
2	Check the reading state of the CR Encoder. If reading (from the Service Program) cannot be performed, re-install the CR Encoder. Does the product recover from the error?	End	Go to step 3
3	Replace the CR Encoder (P. 227). Does the product recover from the error?	End	Go to step 4
4	Replace the Sub Board (P. 212). Does the product recover from the error?	End	Go to step 5
5	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00113F (CR Motor Lock Error) **Description**

The CR Motor was driven at a speed abnormally slower than a predetermined one during operation. Or, the waveform is not detected when the CR Motor is driving.

 Suspected cause

- CR Encoder cable abnormality (connection, broken)
- CR Motor cable abnormality (connection, broken)
- Abnormal load
- CR Encoder failure
- CR Motor failure

 Parts/Components to be checked

1. CR Belt tension
2. CR Encoder
3. CR Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the CR Belt state. <ul style="list-style-type: none"> ■ Check that the CR Belt is installed correctly. If an abnormality is found, reinstall it. ■ Check that the CR Belt tension is within the standard value. If the value is outside the standard, adjust the CR Timing Belt tension. Does the product recover from the error?	End	Go to step 2
2	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. <ul style="list-style-type: none"> ■ CR Encoder to Sub Board (CN102) ■ CR Motor to Main Board (CN201) Does the product recover from the error?	End	Go to step 3
3	Check the reading state of the CR Encoder. If reading (from the Service Program) cannot be performed, reinstall the CR Encoder. Does the product recover from the error?	End	Go to step 4
4	Replace the CR Encoder (P. 227). Does the product recover from the error?	End	Go to step 5
5	Replace the CR Motor (P. 230). Does the product recover from the error?	End	Escalate to the person in charge

001229 (PF Motor Oscillation Error) Description

The number of oscillations exceeds the specified value. Or, the control terminal (Vre terminal) of the PF Motor Driver was short-circuited.

 Suspected cause

- Main Board failure
- PF Motor failure

 Parts/Components to be checked

1. Main Board
2. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board state. Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board (P. 199). Does the product recover from the error?	End	Go to step 3
3	Replace the PF Motor (P. 270). Does the product recover from the error?	End	Escalate to the person in charge

00122A (PF Motor Overload Error) **Description**

Overcurrent to the PF Motor was detected. The PF Motor rotation speed is not attained or is not detected correctly.

 Suspected cause

- Abnormal load
- PF Encoder cable abnormality (connection, broken)
- PF Motor cable abnormality (connection, broken)
- PF Encoder failure
- PF Motor failure

 Parts/Components to be checked

1. PF Unit
2. PF Encoder
3. PF Motor
4. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the obstacle in the PF moving range. Check if any obstacle is blocking the PF movement. If so, remove the obstacle. Does the product recover from the error?	End	Go to step 2
2	Is the PF Unit installed correctly? If not, install it correctly. Does the product recover from the error?	End	Go to step 3
3	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. <ul style="list-style-type: none"> ■ PF Encoder to Main Board ■ PF Motor to Main Board Does the product recover from the error?	End	Go to step 4
4	Check the reading state of the PF Encoder. If reading (from the Service Program) cannot be performed, re-install the PF Encoder. Does the product recover from the error?	End	Go to step 5
5	Replace the PF Encoder (P. 273). Does the product recover from the error?	End	Go to step 6
6	Is there a foreign object in the driving section of the PF Motor? Does the product recover from the error?	End	Go to step 7
7	Replace the PF Motor (P. 270). Does the product recover from the error?	End	Go to step 8
8	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00122C (PF Motor Reversing Error) Description

The number of occurrences of reversing the PF Motor has reached a predetermined limit.

 Suspected cause

- PF Encoder cable abnormality (polarity reversal)
- PF Motor cable abnormality (polarity reversal)
- Slipping of the teeth of the PF Belt
- PF Encoder failure

 Parts/Components to be checked

1. PF Belt tension
2. PF Encoder
3. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the PF Belt state. <ul style="list-style-type: none"> ■ Check that the PF Belt is installed correctly. If an abnormality is found, reinstall it. ■ Check that the PF Belt tension is within the standard value. Does the product recover from the error? 	End	Go to step 2
2	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. <ul style="list-style-type: none"> ■ PF Encoder to Main Board ■ PF Motor to Main Board Does the product recover from the error?	End	Go to step 3
3	Replace the PF Encoder (P. 273). Does the product recover from the error?	End	Go to step 4
4	Replace the PF Motor (P. 270). Does the product recover from the error?	End	Escalate to the person in charge

00122D (PF Motor Driving time-out Error) Description

Abnormally-long driving duration of the PF Motor was detected.

 Suspected cause

- Firmware becomes out of control
- Abnormal load

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00122E (PF Motor Velocity Deviation Error) **Description**

The PF Motor was detected to be driving at an abnormal speed lower than the specified speed when driving. Or, the waveform is not detected when the PF Motor is driving.

 Suspected cause

- Abnormal load
- PF Encoder failure
- PF Motor failure
- PF Motor Driver failure

 Parts/Components to be checked

1. PF Scale
2. PF Encoder
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the PF Scale state. Visually check for scratches and contamination on the PF Scale.</p> <ul style="list-style-type: none"> ■ If it is contaminated: Clean it. ■ If there are scratches: Replace the PF Scale. <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the reading state of the PF Encoder. If reading (from the Service Program) cannot be performed, replace the PF Encoder (P. 273). Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Main Board (P. 199). Does the product recover from the error?</p>	End	Escalate to the person in charge

00122F (PF Motor Lock Error) **Description**

The PF Motor was detected to be driving at an abnormal speed lower than the specified speed when driving. Or, the waveform is not detected when the PF Motor is driving.

 Suspected cause

- PF Encoder cable abnormality (connection, broken)
- PF Motor cable abnormality (connection, broken)
- Abnormal load
- PF Encoder failure
- PF Motor failure

 Parts/Components to be checked

1. PF Belt tension
2. PF Encoder
3. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the PF Belt state. <ul style="list-style-type: none"> ■ Check that the PF Belt is installed correctly. If an abnormality is found, reinstall it. ■ Check that the PF Belt tension is within the standard value. Adjust the PF Timing Belt tension if it is outside the standard value. Does the product recover from the error?	End	Go to step 2
2	Check the reading state of the PF Encoder. If reading (from the Service Program) cannot be performed, replace the PF Encoder (P. 273). Does the product recover from the error?	End	Go to step 3
3	Replace the PF Motor (P. 270). Does the product recover from the error?	End	Escalate to the person in charge

001418 (Maintenance Unit Overload Error) Description

The number of occurrences of overcurrent to the Maintenance Unit has reached a predetermined limit.

 Suspected cause

- Maintenance Unit failure
- Maintenance Unit cable abnormality (connection, broken)

 Parts/Components to be checked

1. Maintenance Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Maintenance Unit operation state <ul style="list-style-type: none"> ■ When the Maintenance Unit is malfunctioning, replace it. Does the product recover from the error?	End	Go to step 2
2	Check the Maintenance Unit cable connection <ul style="list-style-type: none"> ■ Check the Maintenance Unit cable connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001419 (Maintenance Unit Oscillation Error) Description

The number of oscillations exceeds the specified value.

 Suspected cause

- Main Board failure

 Parts/Components to be checked

1. Main Board
2. Maintenance Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board state <ul style="list-style-type: none"> ■ Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
3	Replace the Main Board Does the product recover from the error?	End	Go to step 3
3	Replace the Maintenance Unit Does the product recover from the error?	End	Escalate to person in charge

00141A (Maintenance Unit Overload Error) Description

Overcurrent is detected more than predetermined limit since the Maintenance Unit did not operate properly because of some kind of load.

 Suspected cause

- Load abnormality
- Maintenance Unit cable abnormality (connection, broken)
- Maintenance Unit failure

 Parts/Components to be checked

1. Maintenance Unit
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the obstacle in the Maintenance Unit moving range <ul style="list-style-type: none"> ■ Check if any obstacle is blocking the Maintenance Unit movement. If so, remove the obstacle. Does the product recover from the error?	End	Go to step 2
2	Check the Maintenance Unit cable connection <ul style="list-style-type: none"> ■ Check the Maintenance Unit connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 3
3	Check the Maintenance Unit operation state <ul style="list-style-type: none"> ■ When the Maintenance Unit is malfunctioning, replace it. Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

00141C (Maintenance Unit Reversing Error) Description

The number of occurrences of reversing the Maintenance Unit has reached a predetermined limit.

 Suspected cause

- Maintenance Unit cable abnormality (polarity reversal)

 Parts/Components to be checked

1. Maintenance Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Maintenance Unit cable connection <ul style="list-style-type: none"> ■ Check the Maintenance Unit connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Check the Maintenance Unit operation state <ul style="list-style-type: none"> ■ When the Maintenance Unit is malfunctioning, replace it. Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

00141D (Maintenance Unit Driving time-out Error) Description

Abnormally-long driving duration of the Maintenance Unit was detected.

 Suspected cause

- Load abnormality
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Update the F/W Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

00141E (Maintenance Unit Velocity Deviation Error) Description

The Maintenance Unit was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Load abnormality
- Maintenance Unit failure
- Main Board failure

 Parts/Components to be checked

1. Maintenance Unit
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Maintenance Unit operation state ■ When the Maintenance Unit is malfunctioning, replace it. Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

00141F (Maintenance Unit Lock Error) Description

The Maintenance Unit was driven at a speed abnormally slower than a predetermined one during operation.

 Suspected cause

- Maintenance Unit cable abnormality (connection, broken)
- Load abnormality
- Maintenance Unit failure

 Parts/Components to be checked

1. Maintenance Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Maintenance Unit cable connection <ul style="list-style-type: none"> ■ Check the Maintenance Unit connection state. If there is any abnormality, connect it again. <p>Does the product recover from the error?</p>	End	Go to step 2
2	Check the Maintenance Unit operation state <ul style="list-style-type: none"> ■ When the Maintenance Unit is malfunctioning, replace it. <p>Does the product recover from the error?</p>	End	Escalate to person in charge

0014BD (Ink Leak Detection Error (Alphabet Mode)) Description

The Ink Leak Sensor has detected an ink leakage.

 Suspected cause

- Ink leakage inside the printer
- Faulty detection by sensor

 Parts/Components to be checked

1. Ink Holder Right
2. Ink Holder Left
3. Ink Leak Sensor Right
4. Ink Leak Sensor Left

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Identify the ink leak points <ul style="list-style-type: none"> ■ Check the state of the ink pack. If any abnormality, replace it. ■ Identify the ink leak points, and perform replacement depending on the part. ■ Perform ink leakage detection reset from the Service Program. ■ Escalate the information to the person in charge. <p>Does the product recover from the error?</p>	End	Escalate to person in charge

0014BF (Maintenance Unit Position Uncertain Error By emergency Stop (For Preventing Machine Error)) Description

Cover is opened when the Maintenance Unit is working.

 Suspected cause

- Wrong operation

 Parts/Components to be checked

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Turn the printer off and back it on again <ul style="list-style-type: none"> ■ Turn the printer off and back it on again with normal mode. Does the product recover from the error?	End	Escalate to person in charge

001519 (APG Motor Oscillation Error) Description

The number of oscillations exceeds the specified value. Or, the control terminal (Vre terminal) of the APG Motor Driver was short-circuited.

 Suspected cause

- Main Board failure
- APG Motor failure

 Parts/Components to be checked

1. Main Board
2. APG Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board state. Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board (P. 199). Does the product recover from the error?	End	Go to step 3
3	Replace the APG Motor (P. 233). Does the product recover from the error?	End	Escalate to the person in charge

00151A (APG Motor Overload Error) **Description**

- There is an abnormality in the APG Motor connection.
- Overcurrent to the APG Motor was detected.
- Broken APG Encoder cable (the APG Motor rotation speed is not attained/not detected correctly)

 Suspected cause

- Broken APG Motor cable
- Abnormal load
- APG Encoder failure
- APG Motor failure

 Parts/Components to be checked

1. APG Unit
2. APG Motor
3. Main Board
4. APG Cable

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check that the APG Unit is installed correctly. If it is not, install it correctly (P. 233).</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check if there is any foreign object in the driving section of the APG Motor.</p> <p>Check the following connections for an abnormality such as connector disconnection or a broken cable. If an abnormality is found, remove the foreign object or reconnect the cable.</p> <p>APG Motor (APG Encoder) to Main Board (CN409)</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Check APG operation. If it does not operate (from the Service Program), replace the APG Motor (P. 233).</p> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<p>Replace the Main Board (P. 199).</p> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<p>Replace the APG cable.</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00151C (APG Motor Reversing Error) Description

The number of occurrences of reversing the APG Motor has reached a predetermined limit.

 Suspected cause

- APG Motor Cable abnormality (polarity reversal)
- APG Encoder failure
- APG Motor failure

 Parts/Components to be checked

1. APG Cable
2. APG Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the following connections for an abnormality such as connector disconnection or a broken cable, and check the APG cable connection. If an abnormality is found, reconnect it. APG Motor (APG Encoder) to Main Board (CN409) Does the product recover from the error?	End	Go to step 2
2	Check APG operation from the Service Program. Does the product recover from the error?	End	Go to step 3
3	Replace the APG cable. Does the product recover from the error?	End	Go to step 4
4	Replace the APG Motor (P. 233). Does the product recover from the error?	End	Escalate to the person in charge

00151D (APG Motor Driving time-out Error) Description

Abnormally-long driving duration of the APG Motor was detected.

 Suspected cause

- Firmware becomes out of control
- Abnormal load

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00151E (APG Motor Velocity Deviation Error) Description

The APG Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Abnormal load
- APG Encoder failure
- APG Motor failure
- APG Motor Driver failure

 Parts/Components to be checked

1. APG Motor
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check APG operation from the Service Program. Does the product recover from the error?	End	Go to step 2
2	Replace the APG Motor (P. 233). Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00151F (APG Motor Lock Error) Description

The APG Motor was driven at a speed abnormally slower than a predetermined one during operation. Or, the waveform is not detected when the APG Motor is driving.

 Suspected cause

- There is an abnormality in the APG Motor connection.
- APG Encoder cable abnormality (connection, broken)
- APG Motor cable abnormality (connection, broken)
- Abnormal load
- APG Encoder failure
- APG Motor failure

 Parts/Components to be checked

1. APG Motor connector
2. APG Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the following connections for an abnormality such as connector disconnection, broken cable. If an abnormality is found, reconnect it. APG Motor (APG Encoder) to Main Board (CN409) Does the product recover from the error?	End	Go to step 2
2	Check APG operation from the Service Program. Does the product recover from the error?	End	Go to step 3
3	Replace the APG Motor (P. 233). Does the product recover from the error?	End	Escalate to the person in charge

001539 (Driven Roller Oscillation Error) Description

The number of oscillations exceeds the specified value. Or, the control terminal (Vre terminal) of the Driven Roller Motor Driver was short-circuited.

 Suspected cause

- Foreign object near the Driven Roller Motor Driver
- Failure of the Driven Roller Motor Driver on the Main Board
- Driven Roller failure

 Parts/Components to be checked

1. Main Board (Driven Roller Motor Driver)
2. Driven Roller Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board state. Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board (P. 199). Does the product recover from the error?	End	Go to step 3
3	Replace the Driven Roller Motor (P. 278). Does the product recover from the error?	End	Escalate to the person in charge

00153A (Driven Roller Motor Overload Error) Description

Overcurrent to the Driven Roller Motor was detected. The Driven Roller Motor rotation speed is not attained or is not detected correctly.

 Suspected cause

- Driven Roller Motor Encoder cable abnormality (connection, broken)
- Driven Roller Motor cable abnormality (connection, broken)
- Abnormal load
- Driven Roller Motor Encoder failure
- Driven Roller Motor failure

 Parts/Components to be checked

1. Driven Roller Motor Unit
2. Driven Roller Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check that the Driven Roller Motor Unit is installed correctly. If not, install it correctly. Does the product recover from the error?	End	Go to step 2
2	Check for foreign objects near the driving section of the Driven Roller Motor. If a foreign object is found, remove it. Does the product recover from the error?	End	Go to step 3
3	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. Driven Roller Motor (Driven Roller Motor Encoder) to Main Board (CN409, CN410) Does the product recover from the error?	End	Go to step 4
4	Replace the Driven Roller Motor (P. 278). Does the product recover from the error?	End	Escalate to the person in charge

00153C (Driven Roller Motor Reversing Error) Description

The number of occurrences of reversing the Driven Roller Motor has reached a predetermined limit.

 Suspected cause

- Driven Roller Motor Encoder cable abnormality (polarity reversal)
- Driven Roller Motor cable abnormality (polarity reversal)

 Parts/Components to be checked

1. Driven Roller Motor Encoder
2. Driven Roller Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections for an abnormality such as connector disconnection or a broken cable. Check the cable connection of the Driven Roller Motor Encoder and Driven Roller Motor. If an abnormality is found, reconnect it.</p> <p>Driven Roller Motor (Driven Roller Motor Encoder) to Main Board (CN409, CN410)</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Replace the Driven Roller Motor Encoder/Driven Roller Motor (P. 278).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00153D (Driven Roller Motor Driving time-out Error) Description

Abnormally-long driving duration of the Driven Roller Motor was detected.

 Suspected cause

- Abnormal load
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Replace the Main Board (P. 199).</p> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

00153E (Driven Roller Motor Velocity Deviation Error) Description

The Driven Roller Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Abnormal load
- Driven Roller Motor Encoder failure
- Driven Roller Motor failure
- Driven Roller Motor Driver failure

 Parts/Components to be checked

1. Driven Roller Motor Encoder
2. Driven Roller Motor
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Driven Roller Motor Encoder/Driven Roller Motor (P. 278). Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00153F (Driven Roller Motor Velocity Deviation Error) Description

The Driven Roller Motor was driven at a speed abnormally slower than a predetermined one during operation. Or, the waveform is not detected when the Driven Roller Motor is driving.

 Suspected cause

- Driven Roller Motor Encoder cable abnormality (connection, broken)
- Driven Roller Motor cable abnormality (connection, broken)
- Abnormal load
- Driven Roller Motor Encoder failure
- Driven Roller Motor failure

 Parts/Components to be checked

1. Driven Roller Motor Encoder
2. Driven Roller Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the following connections for an abnormality such as connector disconnection or a broken cable. Check the cable connection of the Driven Roller Motor Encoder and Driven Roller Motor. Driven Roller Motor (Driven Roller Motor Encoder) to Main Board (CN409, CN410) Does the product recover from the error?	End	Go to step 2
2	Replace the Driven Roller Motor Encoder/Driven Roller Motor (P. 278). Does the product recover from the error?	End	Escalate to the person in charge

001545 (Cutter Motor Disconnection Error) Description

Detected the Cutter Motor cable disconnection.

 Suspected cause

- Cutter Assy failure
- Cutter Assy cable abnormality (connection, broken)

 Parts/Components to be checked

1. Cutter Assy

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Cutter Assy cable connection ■ Check the Cutter Assy connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Check the Cutter Assy operation state ■ When the Cutter Assy is malfunctioning, replace it. Does the product recover from the error?	End	Go to step 3
3	Check the Main Board cable connection ■ Check the Main Board connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001549 (Cutter Motor Oscillation Error) Description

A fixed current (a small amount) is supplied to the motor and motor rotation is observed by the scale and encoder and the presence of an encoder signal is checked, but no signal is detected correctly.

- Cutter Unit operation cannot be detected.

 Suspected cause

- Abnormal load
- Cutter Motor Assy cable abnormality (connection, broken)
- Cutter Motor Assy Encoder failure
- Cutter Motor failure

 Parts/Components to be checked

1. Cutter Motor Assy
2. Cutter Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the Cutter Motor Assy connection for abnormalities such as connector disconnection, damage, or a broken cable.</p> <p>If an abnormality is found, reconnect it.</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Replace the Cutter Motor Assy.</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Cutter Unit (P. 290).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00154A (Cutter Motor Overload Error) **Description**

Overcurrent is detected more than predetermined limit since the Cutter Motor did not operate properly because of some kind of load.

 Suspected cause

- Cutter Motor Encoder cable abnormality (connection, broken)
- Cutter Motor cable abnormality (connection, broken)
- Abnormal load
- Cutter Motor Encoder failure
- Cutter Motor failure

 Parts/Components to be checked

1. Cutter Motor Assy
2. Cutter Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the obstacle in the cutter moving range. Check if any obstacle is blocking the cutter movement. If so, remove the obstacle. Does the product recover from the error?	End	Go to step 2
2	Check the following connections for abnormalities such as a connector disconnection or broken cable, and check the Cutter Motor Assy connection. If an abnormality is found, reconnect it. Cutter Motor (Cutter Motor Encoder) to Main Board (CN409, CN937) Does the product recover from the error?	End	Go to step 3
3	Replace the Cutter Motor Assy. Does the product recover from the error?	End	Go to step 4
4	Replace the Cutter Unit (P. 290). Does the product recover from the error?	End	Escalate to the person in charge

00154C (Cutter Motor Reversing Error) Description

The number of occurrences of reversing the Cutter Motor has reached a predetermined limit.

 Suspected cause

- Cutter Motor Encoder cable abnormality (polarity reversal)
- Cutter Motor cable abnormality (polarity reversal)
- Slipping of the teeth of the Cutter Timing Belt
- Cutter Motor Encoder failure

 Parts/Components to be checked

1. Cutter Motor Assy
2. Cutter Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections for abnormalities such as a connector disconnection or broken cable, and check the Cutter Motor Assy connection. If an abnormality is found, reconnect it.</p> <p>Cutter Motor (Cutter Motor Encoder) to Main Board (CN409, CN937)</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Replace the Cutter Motor Assy.</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Cutter Unit (P. 290).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00154D (Cutter Motor Driving time-out Error) Description

Abnormally-long driving duration of the Cutter Motor was detected.

 Suspected cause

- Abnormal load
- Firmware becomes out of control

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Replace the Main Board (P. 199).</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

00154E (Cutter Motor Velocity Deviation Error) Description

The Cutter Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Abnormal load
- Cutter Motor Encoder failure
- Cutter Motor failure
- Failure of the Cutter Motor Driver on the Main Board

 Parts/Components to be checked

1. Cutter Motor Assy
2. Cutter Unit
3. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Cutter Motor Assy connection. If an abnormality is found, reconnect it. Does the product recover from the error?	End	Go to step 2
2	Replace the Cutter Motor Assy. Does the product recover from the error?	End	Go to step 3
3	Replace the Cutter Unit (P. 290). Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00154F (Cutter Motor Lock Error) Description

The PRS Motor was driven at a speed abnormally slower than a predetermined one during operation. Or, the waveform is not detected when the Cutter Motor is driving.

 Suspected cause

- Cutter Motor Encoder cable abnormality (connection, broken)
- Cutter Motor cable abnormality (connection, broken)
- Abnormal load
- Cutter Motor Encoder failure
- Cutter Motor failure

 Parts/Components to be checked

1. Cutter Motor Assy
2. Cutter Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the following connections for abnormalities such as a connector disconnection or broken cable, and check the Cutter Motor Assy connection. If an abnormality is found, reconnect it. Cutter Motor (Cutter Motor Encoder) to Main Board (CN409, CN937) Does the product recover from the error?	End	Go to step 2
2	Replace the Cutter Motor Assy. Does the product recover from the error?	End	Go to step 3
3	Replace the Cutter Unit (P. 290). Does the product recover from the error?	End	Escalate to the person in charge

001599 (SOC Operation Error) Description

The number of oscillations exceeds the specified value. Or, the control terminal (Vre terminal) of the ATC Motor Driver was short-circuited.

 Suspected cause

- Main Board failure
- ATC Motor failure

 Parts/Components to be checked

1. Main Board
2. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board state. Check if any foreign object is on the Main Board. If so, remove it. Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board (P. 199). Does the product recover from the error?	End	Go to step 3
3	Replace the ATC Motor (P. 281). Does the product recover from the error?	End	Escalate to the person in charge

00159A (ATC Motor Overload Error) Description

Overcurrent is detected more than predetermined limit since the ATC Motor did not operate properly because of some kind of load. Or, the ATC Motor rotation speed is not attained or is not detected correctly.

 Suspected cause

- ATC Motor Encoder cable abnormality (connection, broken)
- ATC Motor cable abnormality (connection, broken)
- Abnormal load
- ATC Motor Encoder failure
- ATC Motor failure

 Parts/Components to be checked

1. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the obstacle in the ATC operation range Check if any obstacle is blocking the ATC operation. If so, remove the obstacle. Does the product recover from the error?	End	Go to step 2
2	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. ATC Motor to Main Board (CN409, CN936) Does the product recover from the error?	End	Go to step 3
3	Perform ATC Motor measurement. Does the product recover from the error?	End	Go to step 4
4	Replace the ATC Motor (P. 281). Does the product recover from the error?	End	Escalate to the person in charge

00159C (ATC Motor Reversing Error) Description

The number of occurrences of reversing the ATC Motor has reached a predetermined limit.

 Suspected cause

- ATC Motor cable abnormality (polarity reversal)
- ATC Motor

 Parts/Components to be checked

1. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections for an abnormality such as connector disconnection or a broken cable, and check the ATC Motor connector connection. If an abnormality is found, reconnect it.</p> <p>ATC Motor to Main Board (CN409, CN936) Does the product recover from the error?</p>	End	Go to step 2
2	<p>Replace the ATC Motor (P. 281). Does the product recover from the error?</p>	End	Escalate to the person in charge

00159D (ATC Motor Driving time-out Error) Description

Abnormally-long driving duration of the ATC Motor was detected.

 Suspected cause

- Firmware becomes out of control
- Abnormal load

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Replace the Main Board (P. 199). Does the product recover from the error?</p>	End	Escalate to the person in charge

00159E (ATC Motor Velocity Deviation Error) Description

The ATC Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Abnormal load
- ATC Motor Encoder failure
- ATC Motor failure
- ATC Motor Driver failure

 Parts/Components to be checked

1. ATC Motor
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform ATC Motor measurement. Does the product recover from the error?	End	Go to step 2
2	Replace the ATC Motor (P. 281). Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00159F (ATC Motor Lock Error) Description

- There is an abnormality in the ATC Motor connection.
- The ATC Motor was driven at a speed abnormally slower than a predetermined one during operation. Or, the waveform is not detected when the ATC Motor is driving.

 Suspected cause

- ATC Motor Encoder cable abnormality (connection, broken)
- ATC Motor cable abnormality (connection, broken)
- Abnormal load
- ATC Motor Encoder failure
- ATC Motor failure

 Parts/Components to be checked

1. ATC Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it. ATC Motor to Main Board (CN409, CN936) Does the product recover from the error?	End	Go to step 2
2	Perform ATC Motor measurement. Does the product recover from the error?	End	Go to step 3
3	Replace the ATC Motor (P. 281). Does the product recover from the error?	End	Escalate to the person in charge

001649 (REEL Motor Oscillation Error) Description

The number of oscillations exceeds the specified value. Or, the control terminal (Vre terminal) of the Take-up Reel Motor Driver was short-circuited.

 Suspected cause

- Foreign object near the Motor Driver on the Auto Take-up Reel Main Board
- Failure of the Auto Take-up Reel Motor Driver on the Main Board of the printer
- Auto Take-up Reel Motor failure

 Parts/Components to be checked

1. Main Board of the Auto Take-up Reel Unit
2. Auto Take-up Reel Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Take-up Reel Motor Driver of the Main Board of the Auto Take-up Reel Unit for abnormalities such as damage, and check for foreign objects near the Auto Take-up Reel Motor Driver. If a foreign object is found, remove it. Does the product recover from the error?	End	Go to step 2
2	If the product does not recover, replace the Main Board of the Auto Take-up Reel (P. 300). Does the product recover from the error?	End	Go to step 3
3	Replace the Auto Take-up Reel Unit. Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board of the printer (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00164A (REEL Motor Overload Error) Description

Overcurrent to the Take-up Reel Motor was detected. The Take-up Reel Motor rotation speed is not attained or is not detected correctly.

 Suspected cause

- Take-up Reel Motor Encoder cable abnormality (connection, broken)
- Take-up Reel Motor cable abnormality (connection, broken)
- Abnormal load
- Take-up Reel Motor Encoder failure
- Take-up Reel Motor failure

 Parts/Components to be checked

1. Main Board of the Auto Take-up Reel Unit

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it.</p> <p>Auto Take-up Reel Motor to Main Board (CN15) Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the Auto Take-up Reel Motor operation. Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Auto Take-up Reel Motor (P. 298), and check the operation of the Auto Take-up Reel Motor. Does the product recover from the error?</p>	End	Go to step 4
4	<p>Replace the Auto Take-up Reel Unit. Does the product recover from the error?</p>	End	Go to step 5
5	<p>Replace the Main Board of the printer (P. 199). Does the product recover from the error?</p>	End	Escalate to the person in charge

00164C (REEL Motor Reversing Error) Description

The number of occurrences of reversing the Take-up Reel Motor has reached a predetermined limit.

 Suspected cause

- Take-up Reel Motor cable abnormality (polarity reversal)
- Take-up Reel Motor failure

 Parts/Components to be checked

1. Auto Take-up Reel Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it.</p> <p>Auto Take-up Reel Motor to Main Board (CN15) Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the Auto Take-up Reel Motor operation. Does the product recover from the error?</p>	End	Escalate to the person in charge

00164D (REEL Motor Driving time-out Error) Description

Abnormally-long driving duration of the Take-up Reel Motor was detected.

 Suspected cause

- Firmware becomes out of control
- Abnormal load

 Parts/Components to be checked

1. Main Board of the Auto Take-up Reel
2. Main Board of the printer

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board of the Auto Take-up Reel (P. 300). Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board of the printer (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00164E (REEL Motor Velocity Deviation Error) Description

The Take-up Reel Motor was driven at a speed abnormally faster than a predetermined one during acceleration or deceleration.

 Suspected cause

- Abnormal load
- Take-up Reel Motor Encoder failure
- Take-up Reel Motor failure
- Take-up Reel Motor Driver failure

 Parts/Components to be checked

1. Auto Take-up Reel Motor
2. Main Board of the Auto Take-up Reel
3. Main Board of the printer

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Confirm operation of the Take-up Reel Motor. Does the product recover from the error?	End	Go to step 2
2	Replace the Take-up Reel Motor (P. 298). Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board of the Take-up Reel (P. 300). Does the product recover from the error?	End	Go to step 4
4	Replace the Auto Take-up Reel Unit. Does the product recover from the error?	End	Go to step 5
5	Replace the Main Board of the printer (P. 199). Does the product recover from the error?	End	Escalate to the person in charge

00164F (REEL Motor Lock Error) Description

- There is an abnormality in the Take-up Reel Motor connection.
- The Take-up Reel Motor was driven at a speed abnormally slower than a predetermined one during operation. Or, the waveform is not detected when the Take-up Reel Motor is driving.

 Suspected cause

- Take-up Reel Motor Encoder cable abnormality (connection, broken)
- Take-up Reel Motor cable abnormality (connection, broken)
- Abnormal load
- Take-up Reel Motor Encoder failure
- Take-up Reel Motor failure

 Parts/Components to be checked

1. Auto Take-up Reel Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the following connections for an abnormality such as a connector disconnection or a broken cable. If an abnormality is found, reconnect it.</p> <p>Auto Take-up Reel Motor to Main Board (CN15)</p> <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the Auto Take-up Reel Motor operation.</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the Auto Take-up Reel Motor (P. 298).</p> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<p>Replace the Auto Take-up Reel Unit.</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

001664 (CR Motor Cooling FAN Lock Error) Description

- The CR Motor Cooling Fan was driven at a speed abnormally slower than a predetermined one during operation.
- The waveform is not detected when the CR Motor Cooling Fan is operating.

 Suspected cause

- Foreign objects inside the CR Motor Cooling Fan.
- CR Motor Cooling Fan cable abnormality (connection, broken)
- CR Motor Cooling Fan failure
- Main Board failure

 Parts/Components to be checked

1. CR Motor Cooling Fan
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the CR Motor Cooling Fan status</p> <ul style="list-style-type: none"> ■ Check if there are any foreign objects in the CR Motor Cooling Fan. <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>Check the CR Motor Cooling Fan cable connection</p> <ul style="list-style-type: none"> ■ Check the connection status of cables related to the CR Motor Cooling Fan, and if abnormal, reconnect. <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>Replace the CR Motor Cooling Fan</p> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<p>Replace the Main Board</p> <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

001668 (PS Cooling FAN Lock Error)

- Description
- The PS Cooling Fan was driven at a speed abnormally slower than a predetermined one during operation.
 - The waveform is not detected when the PS Cooling Fan is operating.
- Suspected cause
- Foreign objects inside the PS Cooling Fan.
 - PS Cooling Fan cable abnormality (connection, broken)
 - PS Cooling Fan failure
 - Main Board failure
- Parts/Components to be checked
1. PS Cooling Fan
 2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the PS Cooling Fa status <ul style="list-style-type: none"> ■ Check if there are any foreign objects in the e PS Cooling Fan. Does the product recover from the error?	End	Go to step 2
2	Check the PS Cooling Fan cable connection <ul style="list-style-type: none"> ■ Check the connection status of cables related to the PS Cooling Fan, and if abnormal, reconnect. Does the product recover from the error?	End	Go to step 3
3	Replace the PS Cooling Fan Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001673 (Main Board Cooling FAN Lock)

- Description
- The Main Board Cooling Fan was driven at a speed abnormally slower than a predetermined one during operation.
 - The waveform is not detected when the Main Board Cooling Fan is operating.
- Suspected cause
- Foreign objects inside the Main Board Cooling Fan.
 - Main Board Cooling Fan cable abnormality (connection, broken)
 - Main Board Cooling Fan failure
 - Main Bord failure
- Parts/Components to be checked
1. Main Board Cooling Fan
 2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Main Board Cooling Fan status <ul style="list-style-type: none"> ■ Check if there are any foreign objects in the Main Board Cooling Fan. Does the product recover from the error?	End	Go to step 2
2	Check the Main Board Cooling Fan cable connection <ul style="list-style-type: none"> ■ Check the connection status of cables related to the Main Board Cooling Fan and if abnormal, reconnect. Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Cooling Fan Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001A38 (Transistor Environmental Temperature Error)

- Description
- The temperature rose and reached the specified value due to an abnormality in the Transistor Circuit for the Head Board.
 - The Head Thermistor detected a temperature outside the standard.
- Suspected cause
- Abnormality in the Transistor Circuit on the Head Board.
- Parts/Components to be checked
1. Head FFC
 2. CR-Main FFC
 3. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Did the product recover when the power was turned OFF/ON? Does the product recover from the error?	End	Go to step 2
2	Check the Head FFC, CR-Main FFC connection state. <ul style="list-style-type: none"> ■ Check the Head FFC, CR Main-FFC connection state (disconnection, skewed connection, inserted halfway, peeled terminal). If an abnormality is found, reconnect it. ■ If an abnormality is found with the Head FFC, CR Main-FFC and reconnecting does not work, replace the Head FFC. Does the product recover from the error?	End	Go to step 3
3	Replace the Print Head (P. 219). Does the product recover from the error?	End	Escalate to the person in charge

001A39 (Head Fuse Error) Description

 Suspected cause

- Head FFC abnormality (connection, broken)
- CR-Main FFC abnormality (connection, broken)
- Print Head failure
- Main Board failure
- CR Motor Control Board (SUB-B) failure

 Parts/Components to be checked

1. Head FFC
2. CR-Main FFC
3. Print Head
4. Main Board
5. CR Relay Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the connection state of the Head FFC, CR-Main FFC (disconnection, skewed connection, inserted halfway, peeled terminal).</p> <ul style="list-style-type: none"> ■ Connect the Head FFC again <p>Does the product recover from the error?</p>	End	Go to step 2
2	<p>If an abnormality is found with the Head FFC and reconnecting does not work, replace the Head FFC</p> <p>Does the product recover from the error?</p>	End	Go to step 3
3	<p>If an abnormality is found with the CR-Main FFC and reconnecting does not work, replace the CR-Main FFC</p> <p>Does the product recover from the error?</p>	End	Go to step 4
4	<p>Replace the Print Head</p> <p>Does the product recover from the error?</p>	End	Go to step 5
5	<p>Replace the Main Board</p> <p>Does the product recover from the error?</p>	End	Go to step 6
6	<p>Replace the CR Relay Board</p> <p>Does the product recover from the error?</p>	End	Go to step 7
7	<p>Simultaneously replace the Print Head, Main Board, and CR Motor Control Board (SUB-B)</p> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

001A3A (Head Hot Error (Head))

- Description

- Suspected cause
 - Head FFC (Print Head to CR Relay Board) abnormality (connection, broken)
 - CR-Main FFC (CR Relay Board to Main Board) abnormality (connection, broken)
 - Print Head failure
- Parts/Components to be checked
 1. Head FFC
 2. CR-Main FFC
 3. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the connection state of the Head FFC, CR-Main FFC (disconnection, skewed connection, inserted halfway, peeled terminal). <ul style="list-style-type: none"> ■ Connect the Head FFC, CR-Main FFC again Does the product recover from the error?	End	Go to step 2
2	If an abnormality is found with the Head FFC and reconnecting does not work, replace the Head FFC Does the product recover from the error?	End	Go to step 3
3	If an abnormality is found with the CR-Main FFC and reconnecting does not work, replace the CR-Main FFC Does the product recover from the error?	End	Go to step 4
4	Replace the Print Head Does the product recover from the error?	End	Escalate to person in charge

001A42 (Head Temperature Error (Head))

- Description

- Suspected cause
 - Print Head failure
 - Drive waveform abnormality
 - Head Thermistor abnormality (Print Head failure)
- Parts/Components to be checked
 1. Head FFC
 2. CR-Main FFC
 3. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Connect the Head FFC again Does the product recover from the error?	End	Go to step 2
2	If an abnormality is found with the Head FFC and reconnecting does not work, replace the Head FFC Does the product recover from the error?	End	Go to step 3
3	If an abnormality is found with the CR-Main FFC and reconnecting does not work, replace the CR-Main FFC Does the product recover from the error?	End	Go to step 4
4	Replace the Print Head Does the product recover from the error?	End	Escalate to person in charge

001A45 (Head Install Error) Description

 Suspected cause
■ Work mistake Parts/Components to be checked
1. --- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Print Head. Does the product recover from the error?	End	Escalate to person in charge

001A46 (HCS Communication from Head to Main Board Error) Description

HCS3 communication (Print Head side and Main Board) between the Main Board and Print Head failed.

 Suspected cause

- Head FFC abnormality (skewed connection/broken lead/short-circuit)
- CR-Relay FFC abnormality (skewed connection/broken lead/short-circuit)
- CR Relay Board signal short-circuit, broken lead
- Main Board signal short-circuit, broken lead

 Parts/Components to be checked

1. Print Head
2. CR Relay Board
3. Head FFC
4. CR-Main FFC
5. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Execute power OFF/ON Does the product recover from the error?	End	Go to step 2
2	Check the Head FFC, CR-Main FFC connection <ul style="list-style-type: none"> ■ Check the Head FFC, CR-Main FFC connection state (disconnection/skewed connection/inserted halfway, peeled terminal). If an abnormality is found, reconnect it. ■ If an abnormality is found with the Head FFC, CR-Main FFC and reconnecting does not work, replace the Head FFC, CR-Main FFC. Does the product recover from the error?	End	Go to step 3
3	Replace the Print Head Does the product recover from the error?	End	Go to step 4
4	Replace the CR Relay Board Does the product recover from the error?	End	Go to step 5
5	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001A47 (Main Board Internal HCS Communication Error) **Description**

HCS3 communication between the Main Board and Print Head failed within the Main Board.

 Suspected cause

- Main Board signal short-circuit, broken lead
- CR Relay Board signal short-circuit, broken lead
- Head FFC abnormality (skewed connection/broken lead/short-circuit)
- CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)

 Parts/Components to be checked

1. Main Board
2. CR Relay Board
3. Head FFC
4. CR-Main FFC
5. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Execute power OFF/ON Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board Does the product recover from the error?	End	Go to step 3
3	Replace the CR Relay Board Does the product recover from the error?	End	Go to step 4
4	Check the Head FFC, CR-Main FFC connection <ul style="list-style-type: none"> ■ Check the Head FFC, CR-Main FFC connection state (disconnection/skewed connection/inserted halfway, peeled terminal). If an abnormality is found, reconnect it. ■ If an abnormality is found with the Head FFC, CR-Main FFC and reconnecting does not work, replace the Head FFC, CR-Main FFC. Does the product recover from the error?	End	Go to step 5
5	Replace the Print Head Does the product recover from the error?	End	Escalate to the person in charge

001A48 (HCS from Head to Main Board Error) Description

HCS3 communication between the Main Board and Print Head failed.

 Suspected cause

- Head FFC abnormality (skewed connection/broken lead/short-circuit)
- CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)
- CR Relay Board signal short-circuit, broken lead
- Main Board signal short-circuit, broken lead

 Parts/Components to be checked

1. Print Head
2. CR Relay Board
3. Head FFC
4. CR-Main FFC
5. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Execute power OFF/ON Does the product recover from the error?	End	Go to step 2
2	Check the Head FFC, CR-Main FFC connection <ul style="list-style-type: none"> ■ Check the Head FFC, CR-Main FFC connection state (disconnection/skewed connection/inserted halfway, peeled terminal). If an abnormality is found, reconnect it. ■ If an abnormality is found with the Head FFC, CR-Main FFC and reconnecting does not work, replace the Head FFC, CR-Main FFC. Does the product recover from the error?	End	Go to step 3
3	Replace the Print Head Does the product recover from the error?	End	Go to step 4
4	Replace the CR Relay Board Does the product recover from the error?	End	Go to step 5
5	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001A49 (Main Board Internal HCS Error) **Description**

HCS3 communication between the Main Board and Print Head failed.

 Suspected cause

- Main Board signal short-circuit, broken lead
- CR Relay Board signal short-circuit, broken lead
- Head FFC abnormality (skewed connection/broken lead/short-circuit)
- CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)

 Parts/Components to be checked

1. Main Board
2. CR Relay Board
3. Head FFC Assy
4. CR-Main FFC
5. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Execute power OFF/ON Does the product recover from the error?	End	Go to step 2
2	Replace the Main Board Does the product recover from the error?	End	Go to step 3
3	Replace the CR Relay Board Does the product recover from the error?	End	Go to step 4
4	Check the Head FFC, CR-Main FFC connection <ul style="list-style-type: none"> ■ Check the Head FFC, CR-Main FFC connection state (disconnection/skewed connection/inserted halfway, peeled terminal). If an abnormality is found, reconnect it. ■ If an abnormality is found with the Head FFC, CR-Main FFC and reconnecting does not work, replace the Head FFC, CR-Main FFC. Does the product recover from the error?	End	Go to step 4
5	Replace the Print Head Does the product recover from the error?	End	Escalate to the person in charge

001A50 (No Head Connection Error) Description

-
- Suspected cause
- Communication between the Print Head and Head Driver Board is not possible.
-
- Parts/Components to be checked
1. Print Head
-
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the connection of the Print Head Does the product recover from the error?	End	Go to step 2
2	Check the connection of the Main Board Does the product recover from the error?	End	Go to step 3
3	Check the connections of the Main Board connectors (CN614, CN615, CN616, CN617, CN618, CN619, CN620 and CN621) Does the product recover from the error?	End	Escalate to person in charge

001B00 (I2C Communication Time-out Error)

- Description
 - There is no response from the Panel Unit.
 - There is no response from the CR Unit Relay Board.

- Suspected cause
 - Panel Assy failure
 - CR Unit Relay Board failure
 - Panel FFC abnormality (skewed connection/broken lead/short-circuit)
 - APG Sensor Cable/Ink Mark Sensor FFC abnormality (skewed connection/broken lead/short-circuit)
 - Head FFC/CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)
 - Main Board failure
 - CR Relay Board failure

- Parts/Components to be checked
 1. Panel Assy
 2. CR Unit Relay Board
 3. Panel FFC
 4. Head FFC Assy (PW Sensor /Ink Mark Sensor)
 5. Main Board
 6. CR Relay Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Execute power OFF/ON Does the product recover from the error?	End	Go to step 2
2	Check the Panel FFC/ Head FFC Assy connection <ul style="list-style-type: none"> ■ Check the Panel FFC/Head FFC Assy connection state (disconnection/skewed connection/inserted halfway, peeled terminal). If an abnormality is found, reconnect it. ■ If an abnormality is found with the Panel FFC/Head FFC Assy and reconnecting does not work, replace the Panel FFC/Head FFC Assy. Does the product recover from the error?	End	Go to step 3
3	Replace the Panel Assy Does the product recover from the error?	End	Go to step 4
4	Replace the CR Unit Relay Board Does the product recover from the error?	End	Go to step 5
5	Replace the Main Board Does the product recover from the error?	End	Go to step 6
6	Replace the CR Relay Board Does the product recover from the error?	End	Escalate to the person in charge

001F00 (CSIC FA Slot 1 Error) Description

CSIC related error of Ink Cartridge Holder slot 1 is detected.

 Suspected cause

- Ink Holder Right cable abnormality (connection, broken)
- Ink Holder Right failure
- Main Board failure

 Parts/Components to be checked

1. Ink Holder Right
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Right cable connection ■ Check the Ink Holder Right connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Right Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001F01 (CSIC FA Slot 2 Error) Description

CSIC related error of Ink Cartridge Holder slot 2 is detected.

 Suspected cause

- Ink Holder Right cable abnormality (connection, broken)
- Ink Holder Right failure
- Main Board failure

 Parts/Components to be checked

1. Ink Holder Right
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Right cable connection ■ Check the Ink Holder Right connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Right Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001F02 (CSIC FA Slot 3 Error) Description

CSIC related error of Ink Holder slot 3 is detected.

 Suspected cause

- Ink Holder Right cable abnormality (connection, broken)
- Ink Holder Right failure
- Main Board failure

 Parts/Components to be checked

1. Ink Holder Right
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Right cable connection ■ Check the Ink Cartridge Holder connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Right Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001F03 (CSIC FA Slot 4 Error) Description

CSIC related error of Ink Holder slot 4 is detected.

 Suspected cause

- Ink Holder Right cable abnormality (connection, broken)
- Ink Holder Right failure
- Main Board failure

 Parts/Components to be checked

1. Ink Holder Right
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Right cable connection ■ Check the Ink Cartridge Holder connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Right Does the product recover from the error?	End	Go to step 3
4	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001F04 (CSIC FA Slot 5 Error) Description

CSIC related error of Ink Holder slot 5 is detected.

 Suspected cause

- Ink Holder Left cable abnormality (connection, broken)
- Ink Holder Left failure
- Main Board failure

 Parts/Components to be checked

1. Ink Holder Left
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Left cable connection ■ Check the Ink Holder Left connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Left Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001F05 (CSIC FA Slot 6 Error) Description

CSIC related error of Ink Holder slot 6 is detected.

 Suspected cause

- Ink Holder Left cable abnormality (connection, broken)
- Ink Holder Left failure
- Main Board failure

 Parts/Components to be checked

1. Ink Holder Left
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Left cable connection ■ Check the Ink Holder Left connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Left Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001F80 (Fuse Blow Error)

- Description

- Suspected cause
 - A fuse in a high-voltage line has blown (there is a reason for the fuse blowing)
 - Broken wire of high-voltage line between the Power Supply Board and CRCM
 - Power Supply Board failure (42 V was not output from the power source to begin with)
- Parts/Components to be checked
 1. Cables between Power Supply Board and CRCM
 2. Power Supply Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Power Supply Board Does the product recover from the error?	End	Escalate to person in charge

001F81 (EPC_Check Error)

- Description

- Suspected cause
Damage of the FlashROM on the Main Board
- Parts/Components to be checked
 1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001F82 (Destination Outside Setting Range Error) Description

 Suspected cause

Main Board failure

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001F84 (CSIC Written Data Error 1) Description

CSIC related error is detected with the ink pack holder slot.

 Suspected cause

- CSIC connector cable connection abnormality
- CSIC connector failure
- Main Board failure

 Parts/Components to be checked

1. CSIC connector
2. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Status of cable connection between the CSIC connector and the related circuit board ■ Check the cable connection status, and if an abnormality is found, reconnect the cable. Does the product recover from the error?	End	Go to step 2
2	Replace the CSIC connector Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001F85 (CSIC Written Data Error 2)

- Description
CSIC related error is detected with the ink pack holder slot.
- Suspected cause
 - CSIC connector cable connection abnormality
 - CSIC connector failure
 - Main Board failure
- Parts/Components to be checked
 1. CSIC connector
 2. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Status of cable connection between the CSIC connector and the related circuit board <ul style="list-style-type: none"> ■ Check the cable connection status, and if an abnormality is found, reconnect the cable. Does the product recover from the error? 	End	Go to step 2
2	Replace the CSIC connector Does the product recover from the error?	End	Go to step 3
3	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001F90 (SOC Operation Error)

- Description

- Suspected cause
Damage of the Flash ROM on the Main Board
- Parts/Components to be checked
 1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001F91 (MR Data Error)

- Description

- Suspected cause
Damage of the Flash ROM on the Main Board
- Parts/Components to be checked
1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001F92 (In-process Life Error)

- Description
Unintended Jig mode operation
- Suspected cause
Manufacturing defect in process or a user operation
- Parts/Components to be checked
1. ---
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Turn the printer ON/OFF Does the product recover from the error?	End	Escalate to person in charge

001FB9 (CS Rank Outside Setting Range Error) Description

 Suspected cause

Damage of the FlashROM on the Main Board

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace the Main Board Does the product recover from the error?	End	Escalate to person in charge

001FC0 (ASIC Communication Error (Read) (CRCM1)) Description

- Reading of the Ink Cartridge Holder Board was not possible.
- Failed to connect the Ink Cartridge Holder Board.

 Suspected cause

- Ink Holder Right failure
- Main Board failure
- Ink Holder Right cable (FFC) abnormality (connection, broken) (A cartridge recognition error occurs when the contact section with the cartridge breaks.)

 Parts/Components to be checked

1. Ink Holder Right cable (FFC)
2. Main Board
3. Ink Holder Right

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Right cable connection ■ Check the Ink Holder Right connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Right Cable (FFC) Does the product recover from the error?	End	Go to step 3
3	Replace the Ink Holder Right Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001FC1 (ASIC Communication Error (Read) (CRCM2))

- Description
- Reading of the Ink Cartridge Holder Board was not possible.
 - Failed to connect the Ink Cartridge Holder Board.
- Suspected cause
- Ink Holder Left failure
 - Main Board failure
 - Ink Holder Left cable (FFC) abnormality (connection, broken) (A cartridge recognition error occurs when the contact section with the cartridge breaks.)
- Parts/Components to be checked
1. Ink Holder Left Cable (FFC)
 2. Main Board
 3. Ink Holder Left
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Left cable connection ■ Check the Ink Holder Left connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Left Cable (FFC) Does the product recover from the error?	End	Go to step 3
3	Replace the Ink Holder Left Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001FC8 (ASIC Communication Error (Write) (CRCM1))

- Description
- Writing of the Ink Cartridge Holder Board was not possible.
 - Failed to connect the Ink Cartridge Holder Board.
- Suspected cause
- Ink Holder Right failure
 - Main Board failure
 - Ink Holder Right cable (FFC) abnormality (connection, broken) (A cartridge recognition error occurs when the contact section with the cartridge breaks.)
- Parts/Components to be checked
1. Ink Holder Right Cable (FFC)
 2. Main Board
 3. Ink Holder Right
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Right cable connection ■ Check the Ink Holder Right connection state. If there is any abnormality, connect it again. Does the product recover from the error?	End	Go to step 2
2	Replace the Ink Holder Right (FFC) Does the product recover from the error?	End	Go to step 3
3	Replace the Ink Holder Right Does the product recover from the error?	End	Go to step 4
4	Replace the Main Board Does the product recover from the error?	End	Escalate to the person in charge

001FC9 (ASIC Communication Error (Write) (CRCM2))

- Description
 - Writing of the Ink Cartridge Holder Board was not possible.
 - Failed to connect the Ink Cartridge Holder Board.

- Suspected cause
 - Ink Holder Left failure
 - Main Board failure
 - Ink Holder Left cable (FFC) abnormality (connection, broken) (A cartridge recognition error occurs when the contact section with the cartridge breaks.)

- Parts/Components to be checked
 1. Ink Holder Left cable (FFC)
 2. Main Board
 3. Ink Holder Left

- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the Ink Holder Left cable connection <ul style="list-style-type: none"> ■ Check the Ink Holder Left connection state. If there is any abnormality, connect it again. <p>Does the product recover from the error?</p>	End	Go to step 2
2	Replace the Ink Holder Left cable (FFC) <p>Does the product recover from the error?</p>	End	Go to step 3
3	Replace the Ink Holder Left <p>Does the product recover from the error?</p>	End	Go to step 4
4	Replace the Main Board <p>Does the product recover from the error?</p>	End	Escalate to the person in charge

001000 (Life End Error)

- Description

The corresponding periodic replacement part has reached the end of the service life.

- Suspected cause

End of service life of periodic replacement part

- Parts/Components to be checked
 1. Parts with defined service life

- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the content of the maintenance call (8-digit Hex), replace the part in question, and from the Service Program, reset the counter.</p> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

005001 (Ink Leak Detection Error (Home)) Description

The Ink Leak Sensor has detected an ink leakage.

 Suspected cause

- Ink leakage inside the printer
- Faulty detection by sensor

 Parts/Components to be checked

1. Ink Holder Right
2. Ink Leak Sensor Right

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Identify the ink leak points</p> <ul style="list-style-type: none"> ■ Check the state of the ink pack. If any abnormality, replace it. ■ Identify the ink leak points, and perform replacement depending on the part. ■ Perform ink leakage detection reset from the Service Program. ■ Escalate the information to the person in charge. <p>Does the product recover from the error?</p>	End	Escalate to person in charge

005002 (Ink Leak Detection Error (Full)) Description

The Ink Leak Sensor has detected an ink leakage.

 Suspected cause

- Ink leakage inside the printer
- Faulty detection by sensor

 Parts/Components to be checked

1. Ink Holder Left
2. Ink Leak Sensor Left

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Identify the ink leak points</p> <ul style="list-style-type: none"> ■ Check the state of the ink pack. If any abnormality, replace it. ■ Identify the ink leak points, and perform replacement depending on the part. ■ Perform ink leakage detection reset from the Service Program. ■ Escalate the information to the person in charge. <p>Does the product recover from the error?</p>	End	Escalate to person in charge

005003 (Ink Leak Detection Error) Description

The Ink Leak Sensor has detected an ink leakage.

 Suspected cause

- Ink leakage inside the printer
- Faulty detection by sensor

 Parts/Components to be checked

1. Ink Holder Right
2. Ink Holder Left
3. Ink Leak Sensor Right
4. Ink Leak Sensor Left

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Identify the ink leak points</p> <ul style="list-style-type: none"> ■ Check the state of the ink pack. If any abnormality, replace it. ■ Identify the ink leak points, and perform replacement depending on the part. ■ Perform ink leakage detection reset from the Service Program. ■ Escalate the information to the person in charge. <p>Does the product recover from the error?</p>	End	Escalate to person in charge

256101 (Watchdog Time-out) Description

SOC abnormal operation on Main Board

 Suspected cause

Flash ROM on the Main Board is damaged.

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Replace Main Board</p> <p>Does the product recover from the error?</p>	End	Escalate to person in charge

256200 (Main Board failure (overvoltage) has occurred.) Description

Main Board failure (overvoltage) has occurred.

 Suspected cause

Main Board failure

 Parts/Components to be checked

1. Main Board

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace Main Board Does the product recover from the error?	End	Escalate to person in charge

256237 (Head LDAMP2 Error) Description

Error detection by LDAMP2

 Suspected cause

Between SoC and LDAMP2 communication error

 Parts/Components to be checked

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace Main Board Does the product recover from the error?	End	Escalate to person in charge

256239 (Head VHV Low Error (LDAMP2))

- Description
Error detection by LDAMP2
- Suspected cause
 - VHV voltage drop (18V or less)
 - Head FFC abnormality (skewed connection/broken lead/short-circuit)
 - CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)
 - Print Head failure
- Parts/Components to be checked
 1. Head FFC
 2. CR-Main FFC
 3. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Disconnect/connect the CR-Main FFC Does the product recover from the error?	End	Go to step 2
2	Disconnect/connect the Head FFC Does the product recover from the error?	End	Go to step 3
3	Replace Print Head Does the product recover from the error?	End	Go to step 4
4	Replace CR Relay Board Does the product recover from the error?	End	Go to step 5
5	Replace Main Board Does the product recover from the error?	End	Escalate to person in charge

256240 (Head VDD Low Error (LDAMP2))

- Description
Error detection by LDAMP2
- Suspected cause
 - VDD voltage drop (2.7V or less)
 - Head FFC abnormality (skewed connection/broken lead/short-circuit)
 - CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)
 - Print Head failure
- Parts/Components to be checked
 1. Head FFC
 2. CR-Main FFC
 3. Print Head
 4. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Disconnect/connect the CR-Main FFC Does the product recover from the error?	End	Go to step 2
2	Disconnect/connect the Head FFC Does the product recover from the error?	End	Go to step 3
3	Replace Print Head Does the product recover from the error?	End	Go to step 4
4	Replace CR Relay Board Does the product recover from the error?	End	Go to step 5
5	Replace Main Board Does the product recover from the error?	End	Escalate to person in charge

256241 (Head GVDD Low Error (LDAMP2))

- Description
 - Error detection by LDAMP2
- Suspected cause
 - GVDD voltage drop (3.7V or less)
- Parts/Components to be checked
 1. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Replace Main Board Does the product recover from the error?	End	Escalate to person in charge

256242 (Head VBS abnormal Error (LDAMP2))

- Description
 - Error detection by LDAMP2
- Suspected cause
 - VBS \pm 1.0V or more
 - Head FFC abnormality (skewed connection/broken lead/short-circuit)
 - CR-Main FFC abnormality (skewed connection/broken lead/short-circuit)
 - Print Head failure
- Parts/Components to be checked
 1. Head FFC
 2. CR-Main FFC
 3. Print Head
 4. Main Board
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Disconnect/connect the CR-Main FFC Does the product recover from the error?	End	Go to step 2
2	Disconnect/connect the Head FFC Does the product recover from the error?	End	Go to step 3
3	Replace Print Head Does the product recover from the error?	End	Go to step 4
4	Replace CR Relay Board Does the product recover from the error?	End	Go to step 5
5	Replace Main Board Does the product recover from the error?	End	Escalate to person in charge

307218 (Take-up unit recognition error)

- Description
 - The Auto take-up reel unit is not recognized.
- Suspected cause
 - The connection quality of the USB cable used is low.

- Parts/Components to be checked

- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Use the supplied USB cable. Does the product recover from the error?	End	Escalate to person in charge

2.4 Troubleshooting from Problem Phenomenon

2.4.1 Problem Phenomenon Classification Table

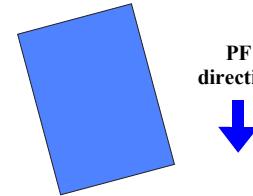
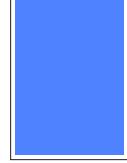
Phenomenon classification	Phenomenon	Ref.
Print quality related trouble	Problem Phenomenon related to print quality of the printer.	P.106
Paper ejection related trouble	Problem Phenomenon related to paper ejection of the printer.	P.107
Other troubles	Problem Phenomenon related to other troubles of the printer.	P.107
Service Program related trouble	Problem Phenomenon related to Service Program.	P.107
NVRAM Viewer related trouble	Problem Phenomenon related to NVRAM Viewer.	P.107
Auto Take-up Reel Unit related trouble	Problem Phenomenon related to the Auto Take-up Reel Unit.	P.108

2.4.2 Problem Phenomenon Overview

Phenomenon	Image	Ref.
Print quality related trouble		
The nozzles are still clogging after cleaning.		P.109
The nozzles are still clogging after cleaning. (Clogging due to thickened ink)		P.110
The same nozzles are still clogging after cleaning. (Clogged nozzles (one or more) are not improved even after cleaning.)		P.111
The nozzles are still clogging after cleaning. (Only some nozzles are clogged. The same nozzles are always clogged but different nozzles are clogged after cleaning).		P.111

Phenomenon	Image	Ref.
A large number of nozzles are clogged simultaneously, but they are improved after cleaning once. However, nozzles are clogged again after a while.		P.112
Some nozzles are clogged randomly.		P.112
Horizontal or vertical lines look misaligned, become a double line, or become thick.		P.113
Banding in the carriage movement direction. (Horizontal banding)	PF direction 	P.114
Banding in the paper feeding direction. (Vertical banding)	PF direction 	P.115
Printed side is smudged or smeared with ink.		P.117

Phenomenon	Image	Ref.
The backside of paper is smudged or smeared with ink.		P.118
Color or print density unevenness within a page or across pages.		P.119
Blurred print		P.120
Paper dust is attached or the traces of the rollers appear.		P.121
Cockling (uneven density due to paper wrinkling) occurs.		P.121
Ink clogging		P.122

Phenomenon	Image	Ref.
Paper ejection related trouble		
Paper feeding or paper ejecting is abnormal.	---	P.123
Paper is skewing.		
		P.124
Actual margins differ from the specified margins.		P.125
Other troubles		
The printer is not powered.	---	P.126
Cannot access to the network.	---	P.127
The printer makes a strange noise when the CR is moving.	---	P.128
Ink end error	---	P.129
Service Program related trouble		
Service Program does not start.	---	P.130
The printer does not operate even though the program function is executed.	---	P.131
“Media has been fed” error	---	P.131
NVRAM Viewer related trouble		
NVRAM Viewer does not start/File does not open.	---	P.132
The button used to open NVRAM Viewer is not displayed.	---	P.132
The content displayed on NVRAM Viewer does not match the item names.	---	P.133

Phenomenon	Image	Ref.
The counter reset history and error history are not displayed on NVRAM Viewer.	---	P.133
Auto Take-up Reel Unit related trouble		
The take-up paper tube warps and cannot take up paper properly.	---	P.134
Take-up paper is greatly displaced due to meandering.	---	P.134
Cannot take up correctly and banding occurs on the print results.	---	P.135
Cannot take up correctly due to meandering or looseness.	---	P.135
Ink is transferred to the back of the taken up roll paper (the product after sublimation transfer printing is smeared).		P.136
The Auto take-up reel unit is not recognized.	---	P.137

2.4.3 Detail of Each Problem Phenomenon

The nozzles are still clogging after cleaning.

Image



Suspected cause

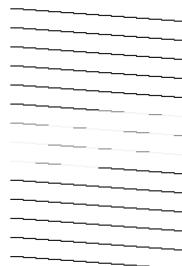
- Wiping cannot be performed properly due to a contaminated wiper, wiper failure or contaminated wiper cleaner.
- There is something wrong in the suction tube of the Pump Cap Unit and cleaning cannot be performed properly.
- Ink leakage
- The Head FFC is not connected correctly.
- The CR-Main FFC is not connected correctly.
- Print Head failure
- Low ink level
- Ink Holder failure

Parts/Components to be checked

1. Maintenance Unit
2. Head FFC
3. CR-Main FFC
4. Print Head
5. Ink Holder

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the ink leak points (all ink flow paths). When the ink leakage occurs, take measures according to where ink leakage occurs and escalate the information to the person in charge.	End	Go to step 2
2	Perform the head cleaning (CL3) again. Does the product recover from nozzle clogging?	End	Go to step 3
3	Check the wiper contamination. When the wiper is contaminated, clean it. Does the product recover from nozzle clogging?	End	Go to step 4
4	Clean the wiper. Does the product recover from nozzle clogging?	End	Go to step 5
5	Replace the wiper and wiper cleaner. Does the product recover from nozzle clogging?	End	Go to step 6
6	Check the Maintenance Unit damage. Check if the wiper, cap part, tube or the like is damaged. If so, replace the Maintenance Unit. Does the product recover from nozzle clogging?	End	Go to step 7
7	Check for disconnection, skew, or a peeled terminal of the Head FFC, CR-Main FFC. <ul style="list-style-type: none"> ■ When the FFC is disconnected or skewed (Head, CR Relay Board and Main Board are not damaged) Connect the Head FFC, CR-Main FFC again. ■ When there is damage such as a peeled terminal ((Head, CR Relay Board and Main Board are not damaged) Replace the Head FFC, CR-Main FFC). Does the product recover from nozzle clogging?	End	Go to step 8
8	Replace the Print Head (P. 219). Does the product recover from the failure?	End	Go to step 9
9	Replace the Ink Holder. Does the product recover from the failure?	End	Escalate to the person in charge

The nozzle are still clogging after cleaning. (Clogging due to thickened ink) Image Suspected cause

- Contamination on the cap part of the Maintenance Unit
- Damage on the cap part of the Maintenance Unit
- Dried up ink is attached on the nozzle surface and in the nozzle

 Parts/Components to be checked

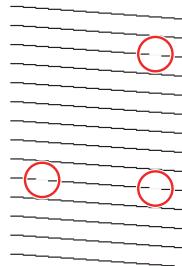
1. Maintenance Unit
2. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from nozzle clogging?	End	Go to step 2
2	Check the contamination on the cap part of the Maintenance Unit If found to be contaminated, clean it. For the cleaning method, refer to P.406 . Wipe off the ink and cleaning fluid and then perform head cleaning. Does the product recover from nozzle clogging?	End	Go to step 3
3	Check the Maintenance Unit damage. Check if the wiper, cap part, tube or the like is damaged. If so, replace the Maintenance Unit. Does the product recover from nozzle clogging?	End	Go to step 4
4	Replace the Print Head (P. 219). Does the product recover from the failure?	End	Escalate to the person in charge

**The same nozzles are still clogging after cleaning
(Clogged nozzles (one or more) are not improved even after cleaning.)**

Image



Suspected cause

- Nozzles are clogged because foreign material is stuck in the nozzles of the Print Head.
- Inside of the Print Head is damaged.
- Ink inside the Print Head is solidified.

Parts/Components to be checked

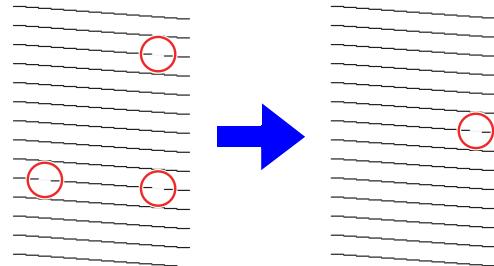
1. Print Head

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from nozzle clogging?	End	Go to step 2
2	Perform the head cleaning. Does the product recover from the failure?	End	Go to step 3
3	Perform Maintenance Unit cleaning. Does the product recover from the failure?	End	Go to step 4
4	Replace the Print Head (P. 219). Does the product recover from the failure?	End	Escalate to the person in charge

The nozzles are still clogging after cleaning. (Only some nozzles are clogged. The same nozzles are always clogged but different nozzles are clogged after cleaning.)

Image



Suspected cause

- Foreign material is stuck on the Print Head surface.

Parts/Components to be checked

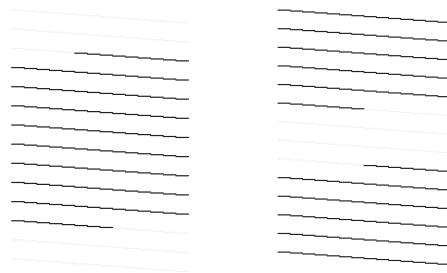
1. Pump Cap Unit
2. Print Head

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from nozzle clogging?	End	Go to step 2
2	Check the contamination on the cap part of the Pump Cap Unit. When the cap part of the Pump Cap Unit is contaminated, remove the lint or dirt with the cleaning stick. Then perform the head cleaning. Does the product recover from nozzle clogging?	End	Go to step 3
3	Perform the head cleaning. Does the product recover from the failure?	End	Go to step 4
3	Replace the Print Head (P. 219). Does the product recover from the failure?	End	Escalate to the person in charge

A large number of nozzles are clogged simultaneously
 (They are improved after head cleaning once. However, nozzles are clogged again after a while)

Image

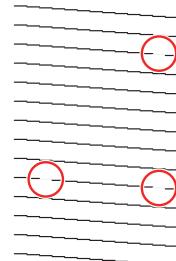


- Suspected cause
 - There are bubbles in the ink path.
- Parts/Components to be checked
 1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from nozzle clogging?	End	Go to step 2
2	Perform the initial charge. Does the product recover from nozzle clogging?	End	Go to step 3
3	Replace the Print Head (P. 219).	End	Escalate to the person in charge

Some nozzles are clogged randomly

Image

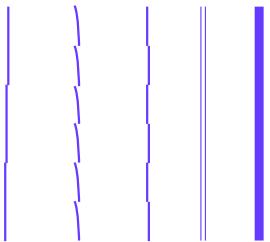


- Suspected cause
 - Lint or dust has entered the printer and then is stuck on the Print Head.
- Parts/Components to be checked
 1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from nozzle clogging?	End	Go to step 2
2	Check the environment of the installation site of the printer and see how much contamination there is inside the printer. Clean inside of the printer. Advise the customer to improve the environment of the installation site of the printer. Does the product recover from nozzle clogging?	End	Go to step 3
3	Perform the head cleaning. Does the product recover from the failure?	End	Go to step 4
4	Perform Maintenance Unit cleaning. Does the product recover from the failure?	End	Go to step 5
5	Replace the Print Head (P. 219). Does the product recover from the failure?	End	Escalate to the person in charge

Horizontal or vertical lines look misaligned, become a double line, or become thick

Image



- Suspected cause
 - Bi-D adjustment failure
 - Print Head related adjustment failure (inclination, slant)
 - PG adjustment failure
- Parts/Components to be checked
 1. Print Head
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform Bi-D adjustment. Does the product recover from the failure?	End	Go to step 2
2	Perform head inclination adjustment (CR direction)/head slant adjustment (PF direction). Does the product recover from the failure?	End	Go to step 3
3	Perform PG check & adjustment. Does the product recover from the failure?	End	Go to step 4
4	Replace the Print Head.	End	Escalate to the person in charge

Banding in the paper feeding direction (horizontal banding) Image Suspected cause

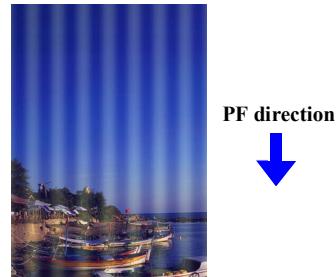
- Print Head related adjustment failure (inclination, slant)
- The paper feed amount correction value is abnormal
- PF Scale, PF Encoder failure
- PF Belt tension failure
- PF Motor failure

 Parts/Components to be checked

1. Print Head
2. PF Scale
3. PF Encoder
4. PF Belt
5. PF Motor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from the failure?	End	Go to step 2
2	Perform paper configuration with the control panel. Does the product recover from the failure?	End	Go to step 3
3	Perform head inclination adjustment (CR direction)/head slant adjustment (PF direction). Does the product recover from the failure?	End	Go to step 4
4	Perform PF paper feed adjustment. <ul style="list-style-type: none"> ■ Perform PF paper feed adjustment. Does the product recover from the failure?	End	Go to step 5
5	Check for PF Scale, PF Encoder contamination/damage. <ul style="list-style-type: none"> ■ Perform PF Scale contamination check with Service Program. ■ Check if the PF Scale is damaged or contaminated. Clean the PF Scale if contaminated. ■ Check that the PF Encoder is installed correctly. ■ If the PF Scale/PF Encoder is damaged, replace it. Does the product recover from the failure?	End	Go to step 6
6	Check PF Belt tension. <ul style="list-style-type: none"> ■ Perform PF Timing Belt Tension Adjustment. Does the product recover from the failure?	End	Go to step 7
7	Check the PF Motor. <ul style="list-style-type: none"> ■ Check if any service call related to the PF Motor has occurred using the NVRAM viewer. If so, replace the PF Motor. Does the product recover from the failure?	End	Escalate to the person in charge

Banding in the feeding direction (vertical banding) Image Suspected cause

- CR active damper adjustment failure
- PG adjustment failure
- CR Scale, CR Encoder abnormality
- CR Belt tension abnormality
- Suction power setting failure
- Suction Fan failure
- Lubrication on the CR moving parts is insufficient

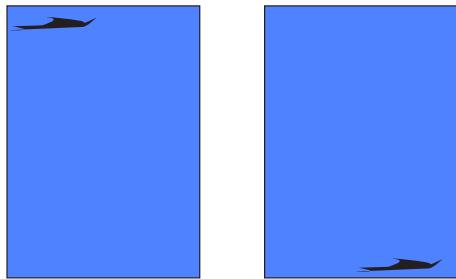
 Parts/Components to be checked

1. Print Head
2. CR Scale
3. CR Encoder
4. CR Belt
5. CR Oil Pad
6. CR Motor
7. Suction Fan

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from the failure?	End	Go to step 2
2	Perform the CR active damper. Does the product recover from the failure?	End	Go to step 3
3	Perform PG check & adjustment. Does the product recover from the failure?	End	Go to step 4
4	Check for CR Scale, CR Encoder contamination/damage <ul style="list-style-type: none">■ Perform CR Scale contamination check with Service Program.■ Check if the CR Scale is damaged or contaminated. Clean the CR Scale if contaminated.■ Check that the CR Encoder is installed correctly.■ If the CR Scale/CR Encoder is damaged, replace it. Does the product recover from the failure?	End	Go to step 5
5	Check CR Belt tension. Perform CR Timing Belt Tension Adjustment. Does the product recover from the failure?	End	Go to step 6
6	Check if the media is warped. If so, correct the media. Does the product recover from the failure?	End	Go to step 7
7	Use the Service Program to run an operation check of the Suction Fan. If the Suction Fan is abnormal, correct it. Does the product recover from the failure?	End	Go to step 8
8	Set the suction power again. Does the product recover from the failure?	End	Go to step 9
9	Replace the Suction Fan. Does the product recover from the failure?	End	Step 10
10	Lubrication to the CR Oil Pad. Does the product recover from the failure?	End	Go to step 11

Step	Confirmation points and methods	YES	NO
11	<p>Check the CR Motor.</p> <p>Check if any service call related to the CR Motor has occurred using the NVRAM viewer. If so, replace the CR Motor.</p> <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

Printed side is smudged or smeared with ink Image Suspected cause

- Paper state abnormality
- PG adjustment failure
- Driven Roller contamination
- Ink smudge due to dirt/lint attached to the Print Head
- Print Head rubs the print surface
- Print Head rubs the leading edge of the paper
- Print Head rubs the bottom edge of the paper
- Print Head rubs both right and left edges of the paper
- Print Head rubs the sections between the printed images
- PF Roller Middle Support is worn by dust or paper dust

 Parts/Components to be checked

1. Driven Roller
2. Print Head
3. Maintenance Unit
4. PF Roller Middle Support

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check used paper state.</p> <ul style="list-style-type: none"> ■ Check if the paper is wrinkled, bent, rippled, or warped. ■ Check if the paper is too thick and contacting with the Print Head. ■ Check if the paper is too thin and loosening when being fed. <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p>Check the Driven Roller contamination.</p> <p>Check if the roller section of the Driven Roller is contaminated with ink.</p> <p>If so, print some blank pages to clean it. If the Driven Roller is contaminated badly, replace the Driven Roller.</p> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<p>Check if PG adjustment is performed correctly.</p> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<p>Perform PG adjustment.</p> <p>Does the product recover from the failure?</p>	End	Go to step 5
5	<p>Check the contamination on the cap part of the Maintenance Unit.</p> <p>When the cap part of the Pump Cap Unit is contaminated, remove the lint or dirt with the cleaning stick. Then perform the head cleaning.</p> <p>Does the product recover from the failure?</p>	End	Go to step 6
6	<p>Perform PG check & adjustment.</p> <p>Does the product recover from the failure?</p>	End	Go to step 7
7	<p><When the Print Head rubs the leading edge of the paper></p> <p>Widen the leading edge margin.</p> <p>Does the product recover from the failure?</p>	End	Go to step 8
8	<p><When the Print Head rubs the bottom edge of the paper></p> <p>Widen the bottom edge margin.</p> <p>Does the product recover from the failure?</p>	End	Go to step 9

Step	Confirmation points and methods	YES	NO
9	<p><When the Print Head rubs both right and left edges of the paper></p> <ul style="list-style-type: none"> ■ Widen both the right and left edge margins. ■ Turn the image to be printed at 90 degrees using the printer driver or the like. <p>Does the product recover from the failure?</p>	End	Go to step 10
10	<p><When the Print Head rubs the sections between the pages></p> <p>Widen the margins between pages.</p> <p>Does the product recover from the failure?</p>	End	Go to step 11
11	<p>Check for paper dust.</p> <p>Does the product recover from the failure?</p>	End	Go to step 12
12	<p>Clean the platen.</p> <p>Does the product recover from the failure?</p>	End	Go to step 13
13	<p>Replace the PF Roller Middle Support.</p> <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

The backside of paper is smudged or smeared with ink

- Image



- Suspected cause
- The platen is contaminated
 - Ink mist sneaks to the back of the media by the suction of the Suction Fan
- Parts/Components to be checked
- Suction Fan
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the platen contamination.</p> <p>Check if any ink is attached on the platen. If found to be contaminated, clean it.</p> <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p>Check that the suction power of the Suction Fan is set properly.</p> <p>Set the suction power again.</p> <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

Color or print density unevenness within a page or across pages Image Suspected cause

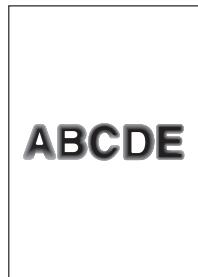
- The ink in the ink cartridge is not agitated enough
- Deterioration of ink quality
- PG adjustment failure

 Parts/Components to be checked

1. Ink Pack
2. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform the head cleaning (CL3) again. Does the product recover from the failure?	End	Go to step 2
2	Check the expiration date of the Ink Pack <ul style="list-style-type: none"> ■ Replace the expired ink packs with new ones. Does the product recover from the failure?	End	Go to step 3
3	Agitation of the Ink Pack. <ul style="list-style-type: none"> ■ Shake the ink packs so that ink droplets spread evenly inside the ink packs. Does the product recover from the failure?	End	Go to step 4
4	Perform PG check & adjustment. Does the product recover from the failure?	End	Escalate to the person in charge

Blurred print Image Suspected cause

- Too much ink discharge.
- Dot size is not appropriate
- Resolution of printed image is too low
- Bi-D adjustment failure
- PG is set too high

 Parts/Components to be checked

1. Print Head

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Perform head ID check & input. Does the product recover from the failure?	End	Go to step 2
2	Check the print duty. <ul style="list-style-type: none"> ■ Check the print duty of RIP that the customer or the print driver uses. If the duty is too high, lower it and check the image. Does the product recover from the failure?	End	Go to step 3
3	Check the RIP setting. <ul style="list-style-type: none"> ■ Check if the setting of RIP is proper. If not, change the RIP setting. Does the product recover from the failure?	End	Go to step 4
4	Check the resolution of the printed image. <ul style="list-style-type: none"> ■ Check if the resolution of the original image is enough. If not, print in higher resolution. Does the product recover from the failure?	End	Go to step 5
5	Check the Bi-D adjustment failure. <ul style="list-style-type: none"> ■ Print in Uni-D to see if the phenomenon can be recurred. If not, perform Bi-D adjustment. Does the product recover from the failure?	End	Go to step 6
6	Perform PG check & adjustment. Does the product recover from the failure?	End	Escalate to the person in charge

Paper dust is attached or the traces of the rollers appear Image

- Suspected cause
 - Mark of the Driven Roller
 - Paper dust transferred to the paper
- Parts/Components to be checked
 1. Driven Roller
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the paper state.</p> <ul style="list-style-type: none"> ■ When trace marks of the Driven Roller are imprinted on media because the media is set in the printer for a while, advise the customer to remove media when the printer is going to be left unused for a long time. <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p>Check the Driven Roller contamination.</p> <ul style="list-style-type: none"> ■ Check if any paper dust is attached to the roller of the Driver Roller. If found to be contaminated, clean it. ■ If not improved, replace the Driven Roller. <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

Cockling (uneven density due to paper wrinkling) occurs Image

- Suspected cause
 - Too much ink discharge
 - Driven Roller failure
- Parts/Components to be checked
 1. Driven Roller
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the print duty.</p> <ul style="list-style-type: none"> ■ Check the print duty of RIP that the customer or the print driver uses. If the duty is too high, lower it and check the image. (Cockling may occur when performing printing on thin media with high duty) <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p>Check the Driven Roller failure.</p> <ul style="list-style-type: none"> ■ Check if the Driven Roller is installed correctly. If not, reinstall the Driven Roller again. ■ If the Driven Roller is damaged, replace it. <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

Ink clogging

If ink clogging cannot be solved even after performing cleaning around the ink system itself, use the following steps to take measures.

- Required Tools
 - Cleaning Ink Pack (4 pcs to 6 pcs)
 - Tray Attachment (4 pcs to 6 pcs)

- Procedure

1. Turn the printer ON in the inspection mode.
Turn the power ON while pressing [**left upper side of the screen**] and power button, keep pressing until the mode select menu is displayed. ([P. 26](#))
2. Select **Initial Operation Menu**.
3. Select **CR Unlock (Maintenance/Power OFF)** to unlock the CR Unit.
When unlocked, the CR Unit moves to the full side, then the printer turns off automatically.
4. Clean ink attached to parts such as the cap, wiper and wiper rail. ([P. 406](#))
5. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. ([P. 27](#))
6. Execute the **Ink/Cleaning Liquid Draining**. ([P. 369](#))
7. Execute the **Tube Washing**. ([P. 370](#))
8. Execute the **Ink/Cleaning Liquid Draining** again. ([P. 369](#))
9. Execute the **Ink Charging**. ([P. 371](#))
10. Start the Service Program and select **Cleaning**. ([P. 359](#))
11. Click [**Nozzle Check**] button to print the nozzle check pattern, and execute the nozzle check.
12. Perform cleaning if necessary.
13. Replace the Print Head if the product does not recover.

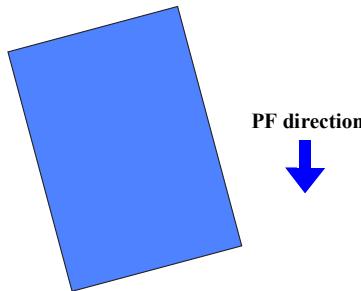
Paper feeding or paper ejecting is abnormal

- Suspected cause
 - PF Roller Middle Support is worn by dust or paper dust
 - PF Scale, PF Encoder failure
 - PF Belt tension failure
 - PF Motor failure
 - Driven Roller failure

- Parts/Components to be checked
 1. PF Roller Middle Support
 2. PF Scale
 3. PF Encoder
 4. PF Belt
 5. PF Motor
 5. Driven Roller

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check for PF Scale, PF Encoder contamination/damage.</p> <ul style="list-style-type: none"> ■ Perform PF Scale contamination check with Service Program. ■ Check if the PF Scale is damaged or contaminated. Clean the PF Scale if contaminated. ■ Check that the PF Encoder is installed correctly. ■ If the PF Scale/PF Encoder is damaged, replace it. <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p>Check PF Belt tension.</p> <p>Perform PF Timing Belt Tension Adjustment.</p> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<p>Check the PF Motor.</p> <p>Check if any service call related to the PF Motor has occurred using the NVRAM viewer.</p> <p>If so, replace the PF Motor.</p> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<p>Check the Driven Roller failure.</p> <ul style="list-style-type: none"> ■ Check if the Driven Roller is installed correctly. If not, install the Driven Roller again. ■ If the Driven Roller is damaged, replace it. <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

Paper is skewing Image Suspected cause

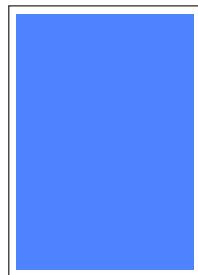
- PF Roller Middle Support is worn by dust or paper dust
- “Paper Skew Check” is not set
- “Paper Size Check” is not set
- PW Sensor is not functioning
- The roll paper is not set correctly
- Paper presser plate is too close to the paper and is putting too much stress on the paper

 Parts/Components to be checked

1. PF Roller Middle Support
2. PW Sensor

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check if there is contamination such as paper dust on the platen. If so, clean the platen. For the cleaning method, refer to P.408 . Does the product recover from the failure?	Go to step 2	End
2	Set the “Paper Skew Check” setting to “ON”. Does the product recover from the failure?	End	Go to step 3
3	Set the “Paper Size Check” setting to “ON”. Does the product recover from the failure?	End	Go to step 4
4	Using the Service Program, perform PW Sensor operation check. Does the product recover from the failure?	End	Go to step 5
5	If any abnormality is found, replace the PW Sensor (P.248). Does the product recover from the failure?	End	Go to step 6
6	The roll paper is installed to the Spindle in a skewed manner. Check that the roll paper is set correctly. If not, set the roll paper again. Does the product recover from the failure?	End	Go to step 7
7	Align the hole on the paper presser plate and the end of the paper. Does the product recover from the failure?	End	Escalate to the person in charge

Actual margins differ from the specified margins Image Suspected cause

- The paper feed amount correction value is abnormal
- “Paper Size Check” is not set.

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Perform PF paper feed adjustment.</p> <ul style="list-style-type: none">■ Perform PF paper feed adjustment.■ Set “Paper Size Check” to “ON”. (However, if displacement from the set value is within 2 mm, it is the specification of this product.) <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

The printer is not powered **Suspected cause**

- The power cable is unplugged
- The power voltage is unstable
- Connection failure of the Power Supply Board
- Connection failure of the panel board
- Power Supply Board failure
- AC Inlet failure
- Panel failure

 Parts/Components to be checked

1. Power Supply Board
2. AC Inlet
3. Panel

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the power cable. Check if the power cable is plugged properly. Does the product recover from the failure?	End	Go to step 2
2	Check the electrical outlet. Check if the electrical outlet is overloaded as a result of sharing power with any other electric equipment. If so, use one electrical outlet for the printer only if possible. Does the product recover from the failure?	End	Go to step 3
3	Check the board related cable routing. <ul style="list-style-type: none"> ■ Check the connection between the Power Supply Board and Main Board/Sub-B Board. Correct the problem if there is any. ■ Check the connection between the Panel and Main Board. Correct the problem if there is any. Does the product recover from the failure?	End	Go to step 4
4	Replace the Power Supply Board. Does the product recover from the failure?	End	Go to step 5
5	Replace the AC Inlet. Does the product recover from the failure?	End	Go to step 6
6	Replace the Panel. Does the product recover from the failure?	End	Escalate to the person in charge

Cannot access to the network

- Suspected cause
 - The type of network cable is incorrect
 - Network cable abnormality
 - LAN connector abnormality
 - MAC address abnormality

- Parts/Components to be checked
 1. Network cable
 2. Main Board (LAN connector)

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check if a cross cable is used. Replace with a straight cable. Does the product recover from the failure?	End	Go to step 2
2	Check the network cable. <ul style="list-style-type: none"> ■ Check that the network cable is connected correctly. ■ Check if the network cable is broken. Does the product recover from the failure?	End	Go to step 3
3	Check the LAN connector. Check if the LAN connector is deformed or damaged. If so, replace the Main Board. Does the product recover from the failure?	End	Go to step 4
4	Perform MAC address check & input. Does the product recover from the failure?	End	Go to step 5
5	Replace the Main Board (P. 199). Does the product recover from the failure?	End	Escalate to the person in charge

The printer makes a strange noise when the CR is moving

- Suspected cause
 - CR Belt tension abnormality
 - Lubrication on the CR moving parts is insufficient
 - CR Scale, CR Encoder abnormality
 - Stress is applied to the tube

- Parts/Components to be checked
 1. CR Belt
 2. CR Oil Pad
 3. CR Scale
 4. CR Encoder
 5. CR Motor

Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check CR Belt tension. Perform CR Timing Belt Tension Adjustment. Does the product recover from the failure?	End	Go to step 2
2	Lubrication to the CR Oil Pad. Does the product recover from the failure?	End	Go to step 3
3	Check for CR Scale, CR Encoder contamination/damage <ul style="list-style-type: none"> ■ Perform CR Scale contamination check with Service Program. ■ Check if the CR Scale is damaged or contaminated. Clean the CR Scale if contaminated. ■ Check that the CR Encoder is installed correctly. ■ If the CR Scale/CR Encoder is damaged, replace it. Does the product recover from the failure?	End	Go to step 4
4	Check if the resin film of CR_FFC is installed correctly. Install the resin film of CR_FFC correctly. Does the product recover from the failure?	End	Escalate to the person in charge

Ink end error

- Suspected cause
 - CR Belt tension abnormality
 - Lubrication on the CR moving parts is insufficient
 - CR Scale, CR Encoder abnormality
- Parts/Components to be checked
 1. CR Belt
 2. CR Oil Pad
 3. CR Scale
 4. CR Encoder
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check CR Belt tension. Perform CR Timing Belt Tension Adjustment. Does the product recover from the failure?	End	Go to step 2
2	Lubrication to the CR Oil Pad. Does the product recover from the failure?	End	Go to step 3
3	Check for CR Scale, CR Encoder contamination/damage <ul style="list-style-type: none"> ■ Perform CR Scale contamination check with Service Program. ■ Check if the CR Scale is damaged or contaminated. Clean the CR Scale if contaminated. ■ Check that the CR Encoder is installed correctly. ■ If the CR Scale/CR Encoder is damaged, replace it. Does the product recover from the failure?	End	Escalate to the person in charge

Service Program does not start Suspected cause

- The operating system is not supported
- There is something wrong with the program file
- License abnormality
- The printer is not connected properly

 Troubleshooting

Step	Confirmation points and methods	YES	NO
1	<p>Check the OS of the PC. Check if the OS of the PC is supported. Use the PC with supported OS.</p> <p><input type="checkbox"/> Supported OS</p> <ul style="list-style-type: none"> ■ Windows 7 (32/64 bit) ■ Windows 8/8.1 (32/64 bit) ■ Windows 10 (32/64 bit) <p>Does the product recover from the failure?</p>	End	Go to step 2
2	<p>Check the program file/license abnormality. Obtain the Service Program from the system again to see if it recurs. If not, delete the old program file/license because they have some problem.</p> <p>Does the product recover from the failure?</p>	End	Go to step 3
3	<p>Check the connection of multiple printers. Check if any printer is connected to the PC other than the one for adjustment. If so, disconnect printers that are not necessary for the adjustment.</p> <p>Does the product recover from the failure?</p>	End	Go to step 4
4	<p>Check the cable connection state. Connect the cable properly.</p> <p>Does the product recover from the failure?</p>	End	Escalate to the person in charge

The printer does not operate even though the program function is executed

- Suspected cause
- The printer power is off.
 - The printer is in a state in which it cannot accept commands.
 - After the USB ID was changed, the model name was not selected again.
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	If the power is off, turn it on. Does the product recover from the failure?	End	Go to step 2
2	Check that no error has occurred. Does the product recover from the failure?	End	Go to step 3
3	Eliminate errors that occurred. Does the product recover from the failure?	End	Go to step 4
4	Select the correct model name (port name). Does the product recover from the failure?	End	Escalate to the person in charge

“Media has been fed” error

- Suspected cause
- Media has been set for adjustment that does not involve printing.
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check if the media is set. Does the product recover from the failure?	Go to step 2	End
2	Remove the media. Does the product recover from the failure?	End	Escalate to the person in charge

NVRAM Viewer does not start/File does not open

- Suspected cause
 - NVRAM Viewer is not installed

- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Install NVRAM Viewer and then start the Service Program. Does the product recover from the failure?	End	Escalate to the person in charge

The button used to open NVRAM Viewer is not displayed

- Suspected cause
 - The NVRAM Viewer function is set to be hidden

- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Use a text editor to open the ini file (ext_dlg.ini) in the “Service” folder of the Service Program and check the NVRAM Viewer setting state. (0 = Don't display, 1 = Display) Does the product recover from the failure?	End	Go to step 2
2	Change settings according to the policy of each local sales subsidiary. Does the product recover from the failure?	End	Escalate to the person in charge

The content displayed on NVRAM Viewer does not match the item names

- Suspected cause
 - The Service Program being used is not for this product
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Is the Service Program for this product being used? Does the product recover from the failure?	Go to step 2	End
2	Use the Service Program for this product. Does the product recover from the failure?	End	Escalate to the person in charge

The counter reset history and error history are not displayed on NVRAM Viewer

- Suspected cause
 - Because there are many items, the counter reset history and the error history are not displayed on the Viewer, and they are displayed only in the CSV file.
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	To output the CSV file, click the “Save as CSV” button in the lower right corner of the NVRAM Viewer screen. The history data is included in this file. Does the product recover from the failure?	End	Escalate to the person in charge

The take-up paper tube warps and cannot take up paper properly

- Suspected cause
- The take-up paper tube having the same width as the roll paper being used for printing is not used for take up
- Parts/Components to be checked
1. Paper tube for take-up
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check that the take-up paper tube having the same width as the roll paper being used for printing is used for take up. Is the paper tube having the same width used?	Go to step 2	End
2	Replace with the take-up paper tube having the same width as the roll paper being used for printing. Does the product recover from the failure?	End	Escalate to the person in charge

Take-up paper is greatly displaced due to meandering

- Suspected cause
- The paper is taken up by outer winding
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check the take-up direction. Is the paper taken up by inner winding?	Go to step 2	End
2	If the paper is set for outer winding, suggest that the customer set the paper for inner winding. Does the product recover from the failure?	End	Escalate to the person in charge

Cannot take up correctly and banding occurs on the print results

- Suspected cause
 - A damaged paper tube is used for take up.
 - Roll paper (17 inch) with narrow width is being taken up for more than 50 meters.
- Parts/Components to be checked
 1. Paper tube for take-up
 2. Flange
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Check if the take-up paper tube is damaged. Is the take-up paper tube damaged?	Go to step 2	End
2	Replace with a non-damaged take-up paper tube. Does the product recover from the failure?	End	Go to step 3
3	Check for abnormalities such as damage on the flange part to which the paper tube is attached. Does the product recover from the failure?	End	Escalate to the person in charge

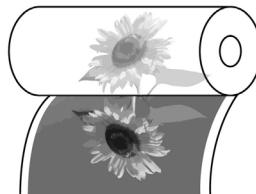
Cannot take up correctly due to meandering or looseness

- Suspected cause
 - A paper less than 44 inches has been taken up for more than 30 m.
- Troubleshooting

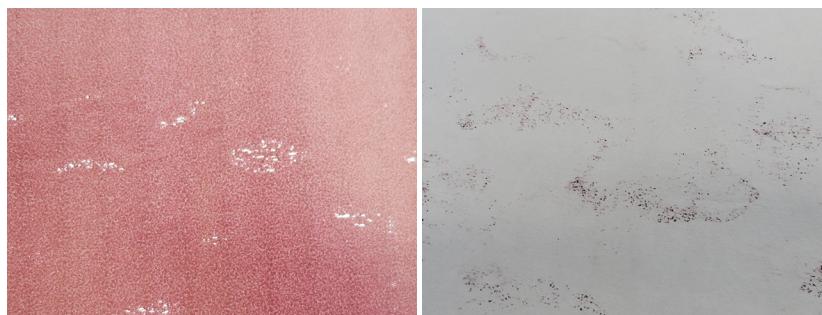
Step	Confirmation points and methods	YES	NO
1	Check if a paper less than 44 inches has been taken up for more than 30 m. Is the paper taken up more than 30 m?	Go to step 2	End
2	Advise the customer to take up paper within 30 m. Does the product recover from the failure?	End	Escalate to the person in charge

Ink is transferred to the back of the taken up roll paper (the product after sublimation transfer printing is smeared)

Image



Actual images



Front side

Back side

Suspected cause

- The printer is used outside the operating environment range.
- [Take-up Tension] is too high and the media is taken up too tightly.
- The ink has not dried sufficiently.
- Excessive ink discharge amount.
- A difficult to dry media is used.

Troubleshooting

Step	Confirmation points and methods	YES	NO														
1	Check the operating environment. Check that printing is performed in the following operating environment range for stable and normal operation. Temperature: 15 to 25°C Humidity: 40 to 60% (Non condensing) Contact your dealer for the media usage environment. Does the product recover from the failure?	End	Go to step 2														
2	Change [Take-up Tension] to [Manual] and set a lower value. Does the product recover from the failure?	End	Go to step 3														
3	Set a longer value for [Drying Time per Page]. Insufficient drying of ink can easily cause ink transfer. The drying time per page is set to assist the ink drying time by stopping the Print Head movement (path). Set a longer time than the value in the following table. Standard setting time for each media width <table border="1"> <thead> <tr> <th>Media width (inch)</th><th>Time (seconds)</th></tr> </thead> <tbody> <tr><td>64</td><td>2.3</td></tr> <tr><td>52</td><td>2.0</td></tr> <tr><td>44</td><td>1.8</td></tr> <tr><td>42</td><td>1.7</td></tr> <tr><td>36</td><td>1.6</td></tr> <tr><td>24</td><td>1.3</td></tr> </tbody> </table> Does the product recover from the failure?	Media width (inch)	Time (seconds)	64	2.3	52	2.0	44	1.8	42	1.7	36	1.6	24	1.3	End	Go to step 3
Media width (inch)	Time (seconds)																
64	2.3																
52	2.0																
44	1.8																
42	1.7																
36	1.6																
24	1.3																
4	Sufficiently dry the media after printing. If the media is taken up while the ink is not sufficiently dried, it is likely to cause ink transfer. Does the product recover from the failure?	End	Go to step 3														

Step	Confirmation points and methods	YES	NO
5	Adjust the ink discharge amount to lower the density. If ink discharge is excessive, ink transfer occurs easily because of a lack of ink dryness. Use Epson Edge Print or an off-the-shelf RIP to configure settings. Does the product recover from the failure?	End	Go to step 3
6	Try other media. Using media that dries easily may improve ink transfer. Does the product recover from the failure?	End	Escalate to the person in charge

The Auto take-up reel unit is not recognized.

- Image

- Suspected cause
 - The connection quality of the USB cable used is low.
- Troubleshooting

Step	Confirmation points and methods	YES	NO
1	Use the supplied USB cable. Does the product recover from the failure?	End	Escalate to the person in charge

CHAPTER

3

DISASSEMBLY & ASSEMBLY

3.1 Overview

This chapter describes procedures for disassembling the main components of SC-F6300 Series.

Be sure to follow the steps when disassembling the unit.

Unless otherwise specified, disassembled units or components can be reassembled by reversing the disassembly procedure.

WARNING

Procedures which, if not strictly observed, could result in personal injury are described under the heading “WARNING”.

CAUTION

“CAUTION” signals a precaution which, if ignored, could result in damage to equipment.

CHECK POINT

Important tips for procedures are described under the heading “CHECK POINT”.

REASSEMBLY

If the assembly procedure is different from the reversed disassembly procedure, the correct procedure is described under the heading “REASSEMBLY”.

ADJUSTMENT

Any adjustments required after reassembly of components or parts are described under the heading “ADJUSTMENT”. Be sure to perform the specified adjustments with reference to Chapter 4 “ADJUSTMENT”.

LUBRICATION

“LUBRICATION” signals that the part needs to be lubricated when replacing or maintaining it after disassembling.

3.1.1 Precautions

Before starting the disassembly or reassembly of the product, read the following precautions given under the headings “WARNING” and “CAUTION”.



- When the PRINTR COVER is opened, a safety-interlock mechanism causes the CR MOTOR and the PF MOTOR to stop. When the interlock function is disabled, be sure to take safety precautions and turn the function back to enabled after the operation.
- This printer is equipped with a lithium battery. When handling the lithium battery, the following precautions should be followed.
 - When replacing the battery, replace it only with a specified type of battery. Using a different type of battery may cause excess heat or explosion.
Recommended battery:CR2032 (Sony)
 - Dispose of used batteries according to manufacturer's instructions and local regulations. Contact your local government agency for information about battery disposal and recycling.
 - When disposing of the battery, be sure to securely cover its (+) end with tape to prevent combustion or explosion.
 - Do not recharge the battery.
 - Do not use the battery if it is discolored or damaged, or if any leakage of electrolyte is observed.
 - Do not dismantle, solder or heat the battery. Doing so could result in leakage of electrolyte, heat generation, or explosion.
 - Do not heat the battery or dispose of it in fire.
 - If the electrolyte leaked from the battery contacts with your skin or gets into your eyes, rinse it off with clean water and see a doctor immediately.

警告

如果更換不正確之電池型式會有爆炸的風險

請依製造商說明書處理用過之電池



WARNING

- The power switch for this printer is installed on the secondary side of the power circuit; therefore, the power is always supplied unless the AC Cable is unplugged. To prevent electric shock and circuit damage during servicing, make sure to follow the instructions below.
 - Before removing a circuit board, make sure to unplug the AC Cable from the AC outlet and confirm the LEDs are turned off by pressing the Power button on the Operating Panel. This operation discharges the residual charge in the printer.
 - Make sure not to place the removed circuit boards on the metal and such directly.
- Always wear gloves for disassembly and reassembly to avoid injury from sharp metal edges.
- Never touch the ink or wasted ink with bare hands. If ink comes into contact with your skin, wash it off with soap and water immediately. If irritation occurs, contact a physician.
- If ink gets in your eye, flush the eye with fresh water and see a doctor immediately.
- When replacing the MAIN BOARD, PSH BOARD, or Power harnesses and such, make sure to check visually if any harness is caught in between or any wrong connection exists.



CAUTION

- Locate the printer on a stable and flat surface.
- Use only recommended tools for disassembly, assembly or adjustment of the printer.
- Apply lubricants and adhesives as specified.
- Be careful not to soil the printer or the floor with the leaked ink when removing the ink-path-related components or parts. Spread a sheet of paper or cloth on the floor in advance.
- Do not touch electrical circuit boards with bare hands as the elements on the board are so sensitive that they can be easily damaged by static electricity. If you have to handle the boards with bare hands, use static electricity discharge equipment such as anti-static wrist straps.
- When the printer has to be operated with the covers removed, take extra care not to get your fingers or clothes caught in moving parts.
- When you have to remove any parts or components that are provided as after-service-parts but are not described in this chapter, carefully observe how they are installed and make sure to remember it before removing them.
- Disassembling the frame and some components (platen, PF shaft) of the printer is prohibited because they are assembled with precise measurements in 1/100 mm unit at the factory.

3.1.2 Cautions after assembling



CAUTION

- The ink-path-related components or parts should be firmly and securely reinstalled on the printer to prevent the ink from leakage.
- When reassembling the printer, make sure to connect the connectors of the electric components or parts correctly and securely. Use extreme care when connecting FFCs (flexible flat cables). Improper connection of the FFCs, such as inserting them diagonally into the connectors, could cause short-circuiting and lead to breakdown of the electric elements on the boards.
- When reassembling the printer, make sure to route the FFCs and other cables as specified in this chapter. Failure to do so may cause an unexpected contact of the cables with sharp metal edges, or lead to lower the noise immunity.
- When you removed any parts (especially cables) that are secured with acetate tape or two-sided tape, be sure to reinstall and secure them with the tape as exactly the same as they were.

3.1.3 Orientation Definition

The terms used for indicating the orientation/direction throughout this chapter are as follows.

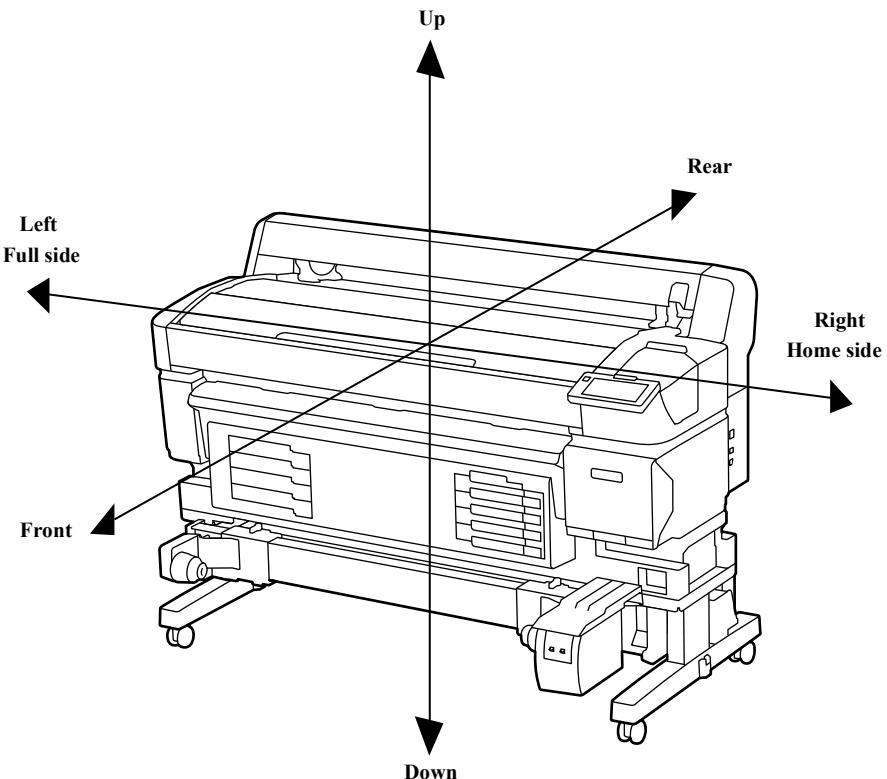


Figure 3-1. Orientation Definition

3.1.4 Recommended Tools

To protect this product from damage, use the tools indicated in the following table. For the tools required to perform the adjustment, refer to “Tools/Consumables for Adjustments” in Chapter 4.

Table 3-1. Tools

Name	Description	Target Part
Phillips screwdriver, No. 1	4 cm or longer shaft length (The one with a magnet is recommended)	<input type="checkbox"/> PRINT HEAD <input type="checkbox"/> Some encoders/sensors
Phillips screwdriver, No. 2	25 cm or longer shaft length (The one with a magnet is recommended)	Parts in general
Torque screwdriver (PH1)	4 cm or longer shaft length (The one with a magnet is recommended)	<input type="checkbox"/> INKTUBE <input type="checkbox"/> DUCT CR <input type="checkbox"/> MIDDLE TUBE ASSY
Tweezers	Nothing in particular	Parts in general
Acetate tape	To secure the cable/harness, or for the protection against the sharp edge	Parts in general (Use this tape when it is removed or when replacing the part)
Waste cloth	To prevent staining the printer with ink during operation	<input type="checkbox"/> INKTUBE <input type="checkbox"/> INK HOLDER <input type="checkbox"/> DUCT CR <input type="checkbox"/> PRINT HEAD <input type="checkbox"/> MAINTENANCE UNIT <input type="checkbox"/> MIDDLE TUBE ASSY

3.2 Parts Diagram

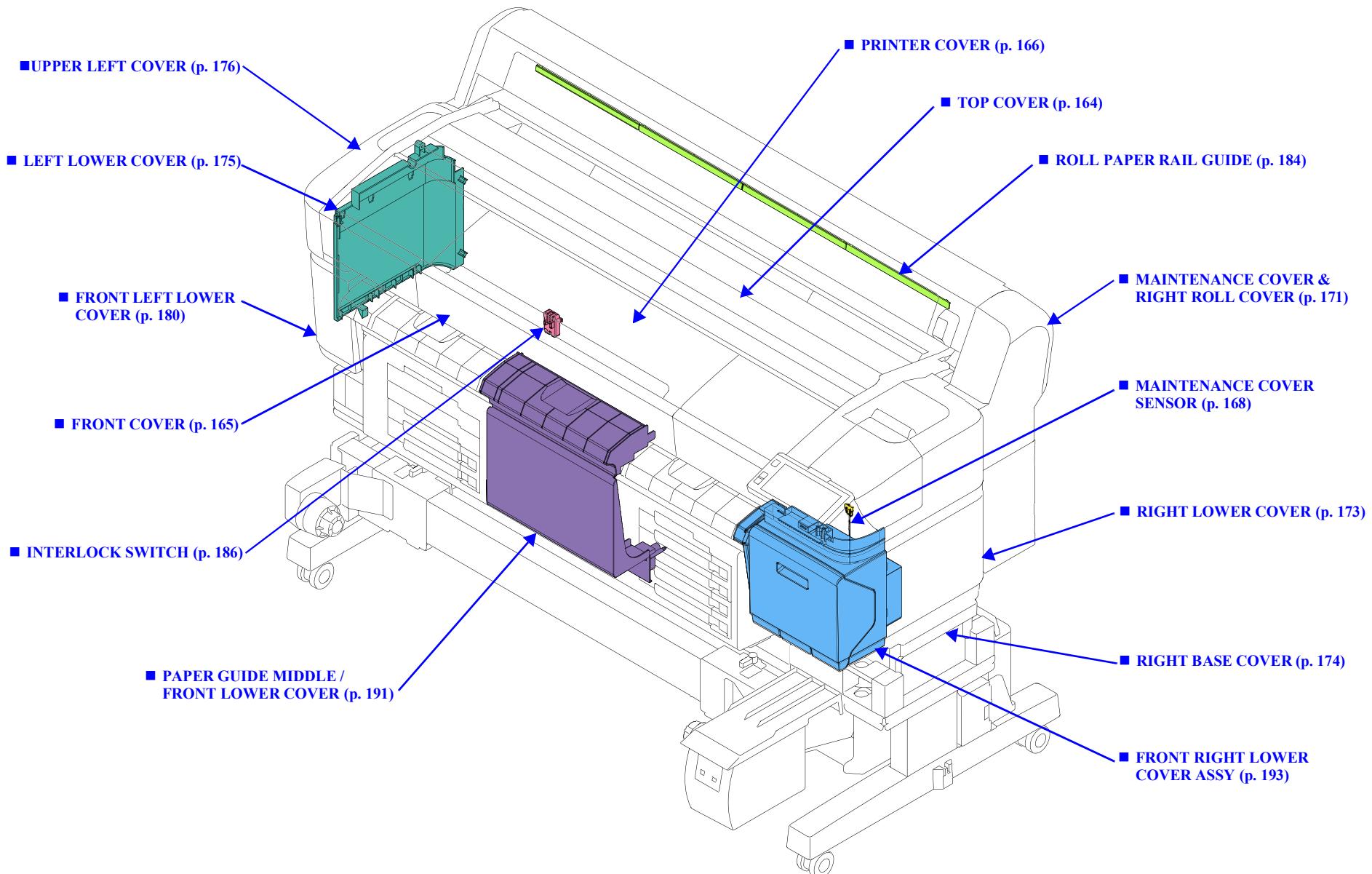


Figure 3-2. Housing

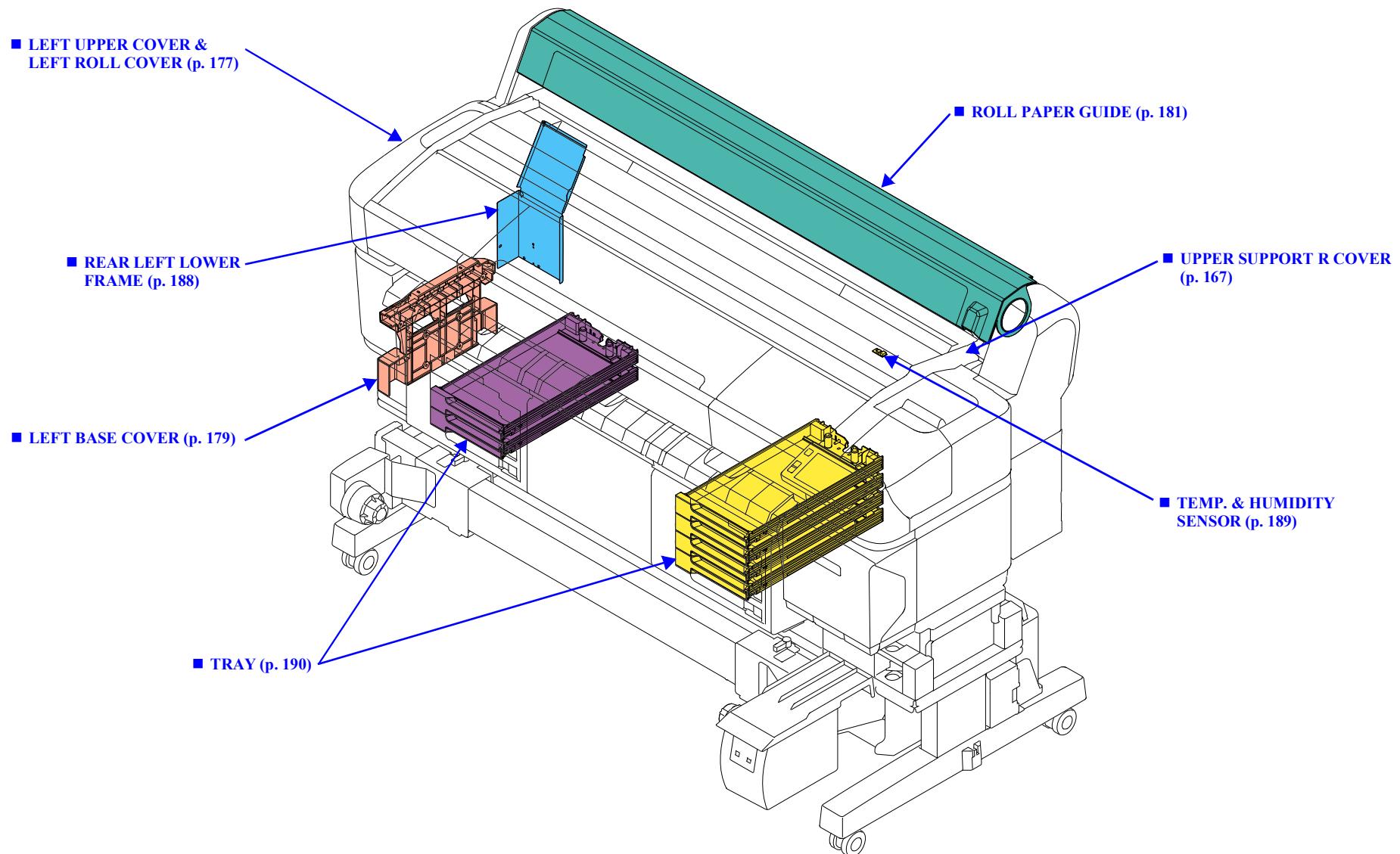


Figure 3-3. Housing

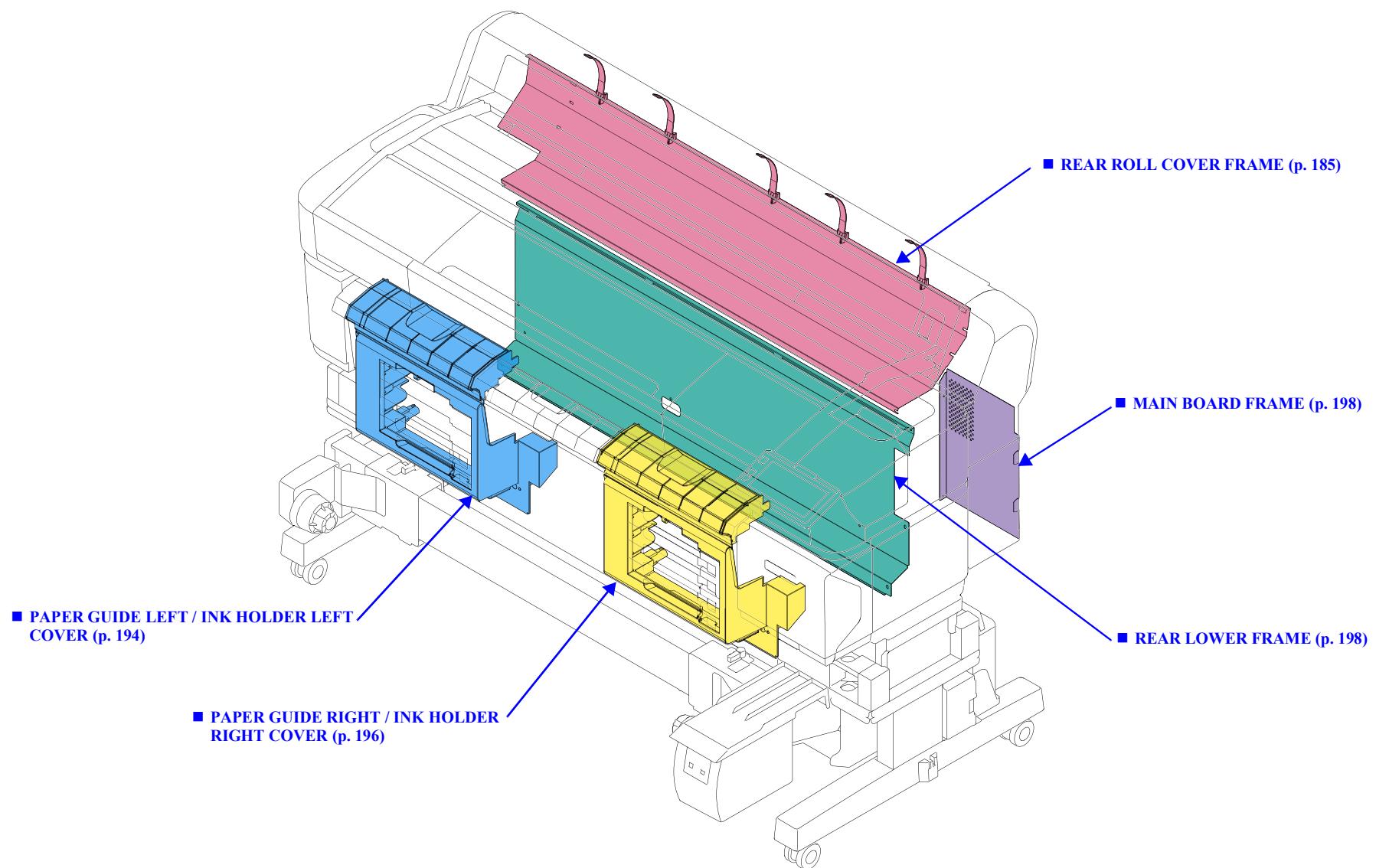


Figure 3-4. Housing

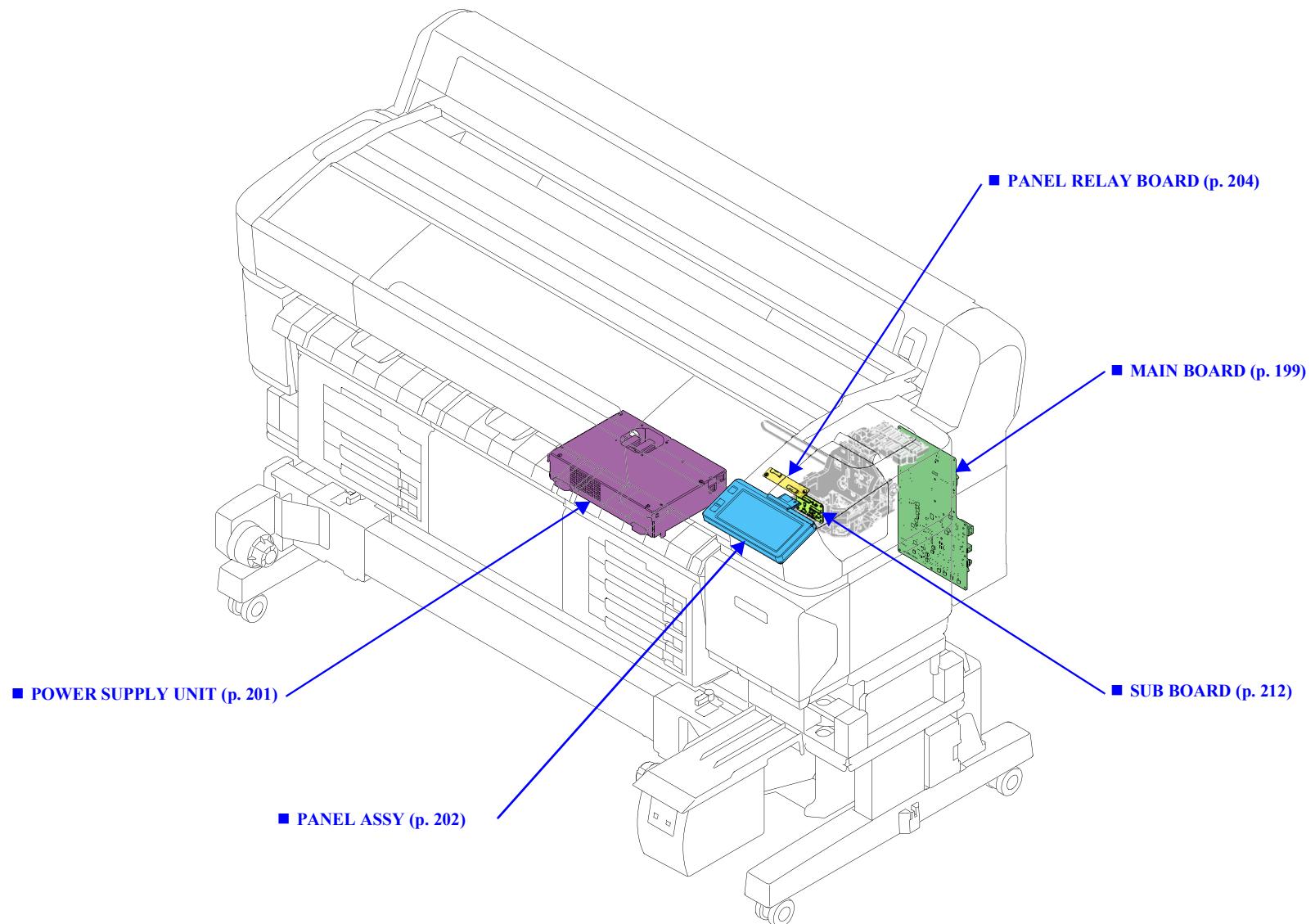


Figure 3-5. Electric Circuit Components

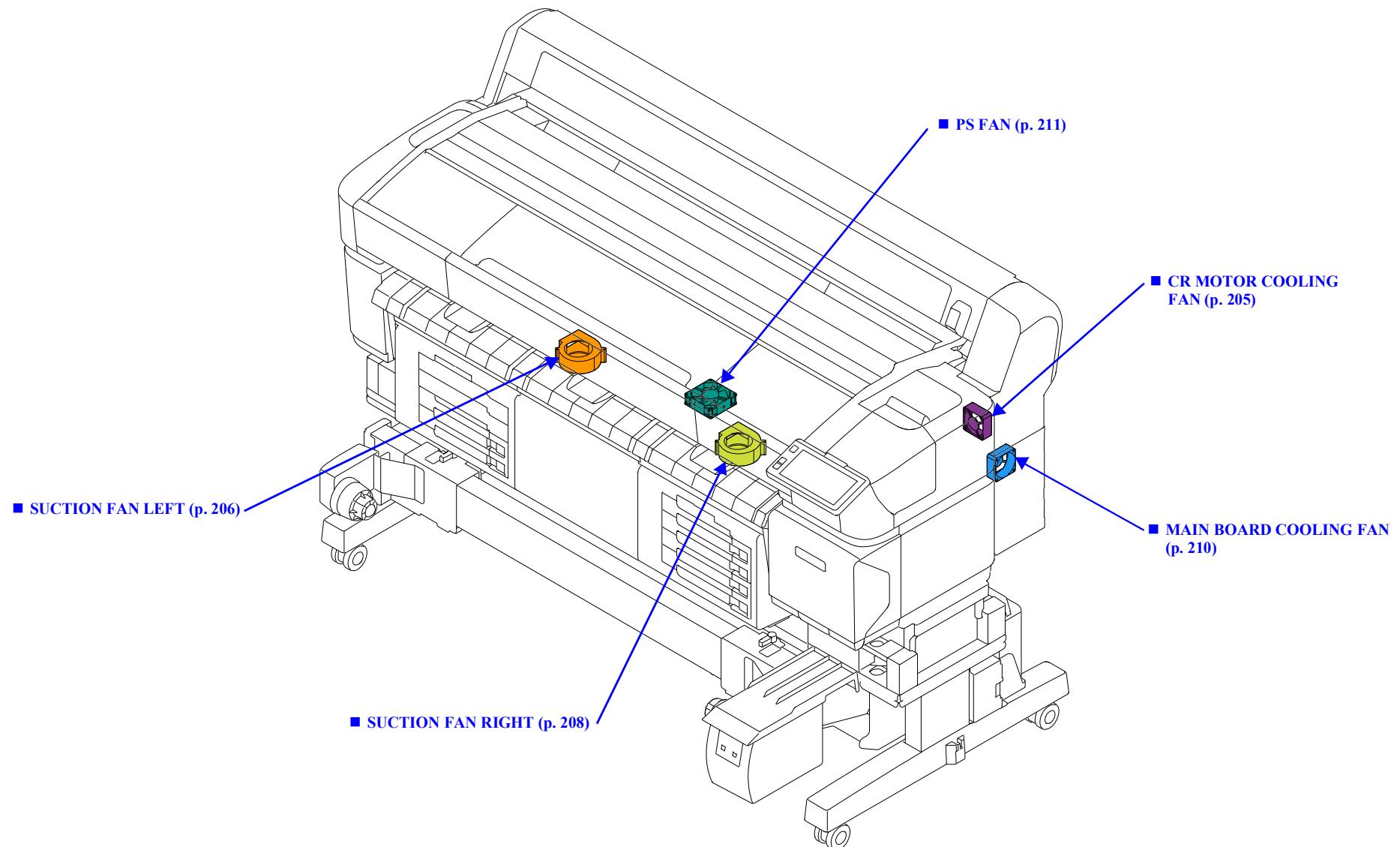


Figure 3-6. Electric Circuit Components

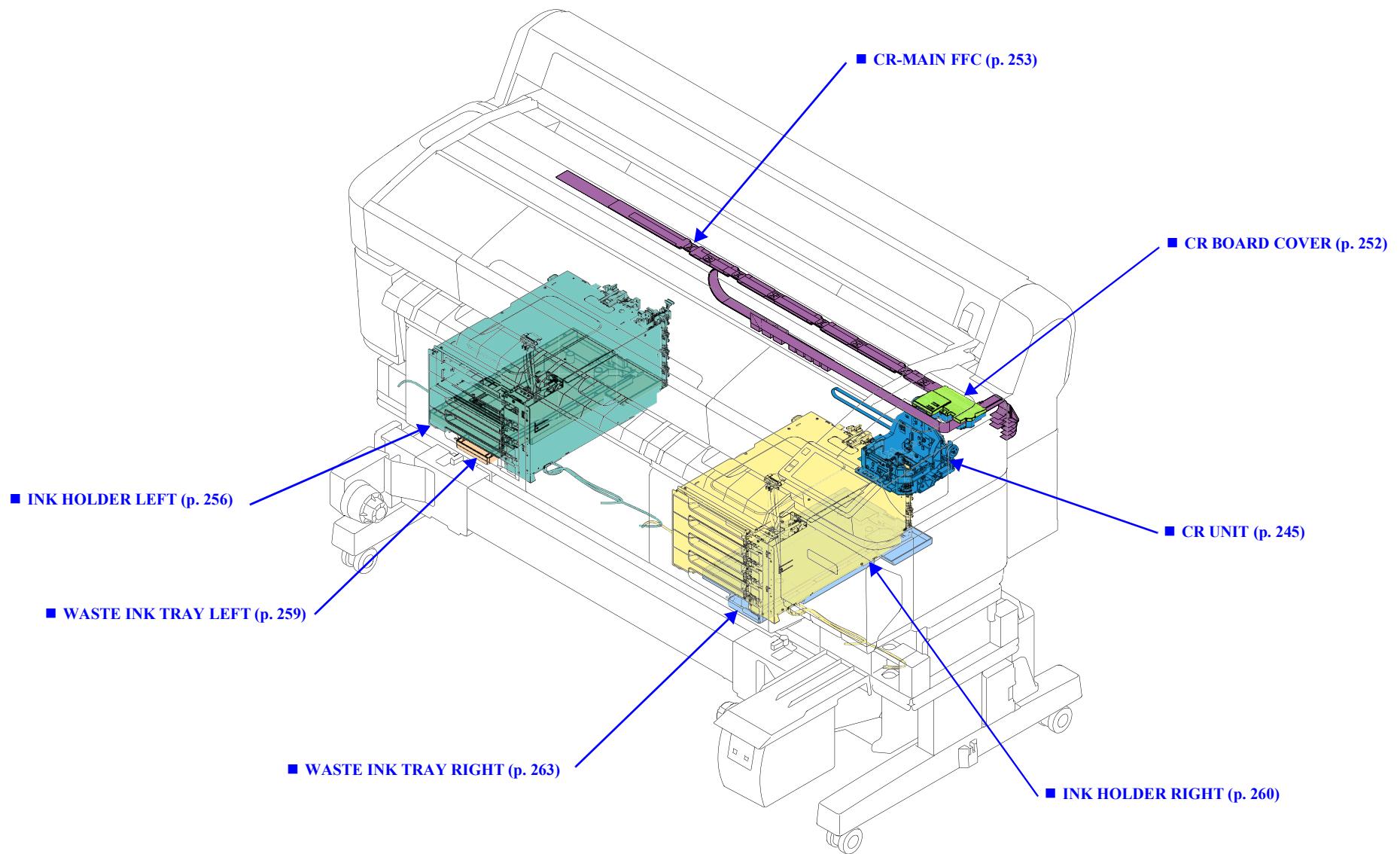


Figure 3-7. Carriage Mechanism/Ink System Mechanism

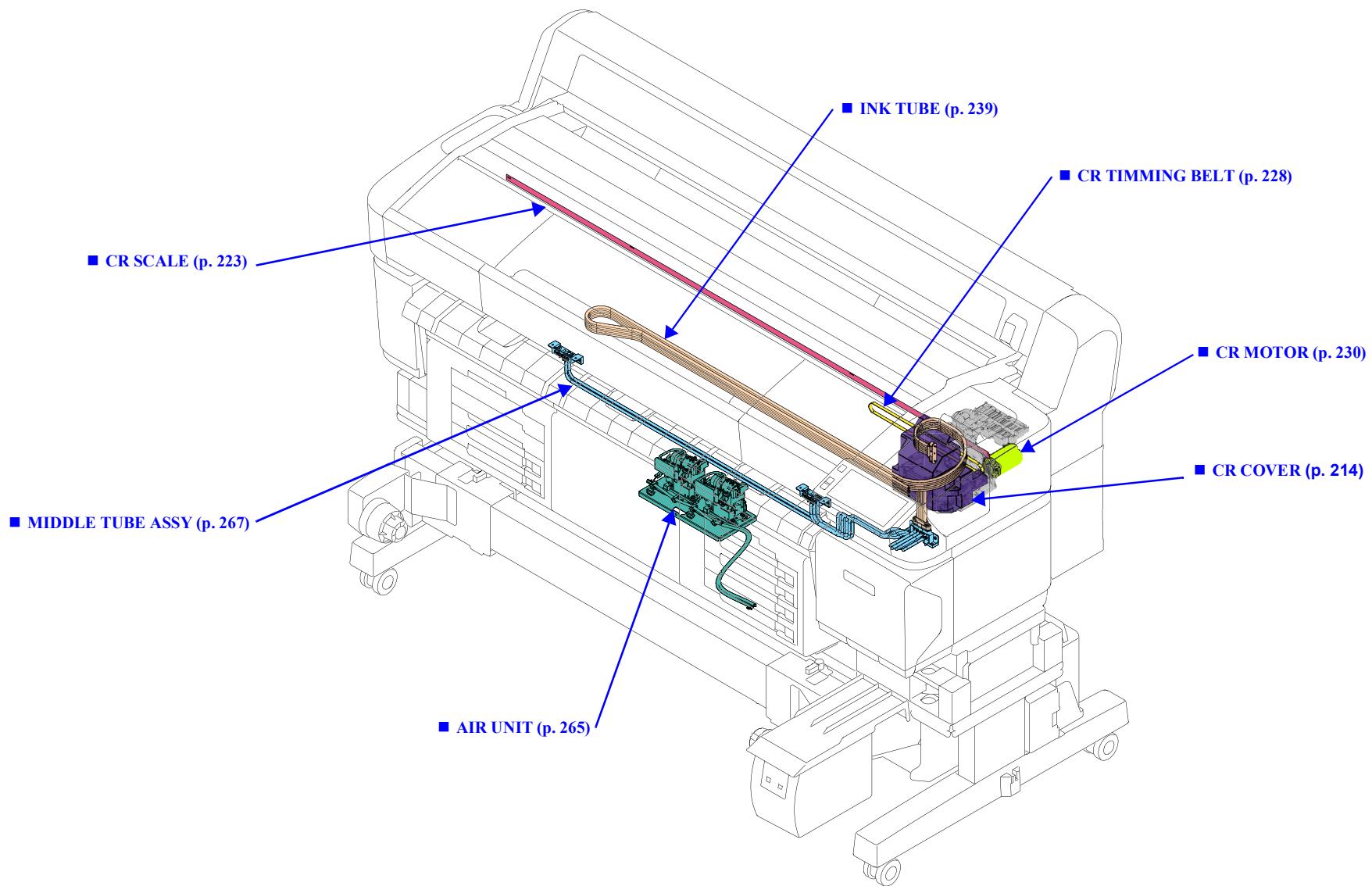


Figure 3-8. Carriage Mechanism/Ink System Mechanism

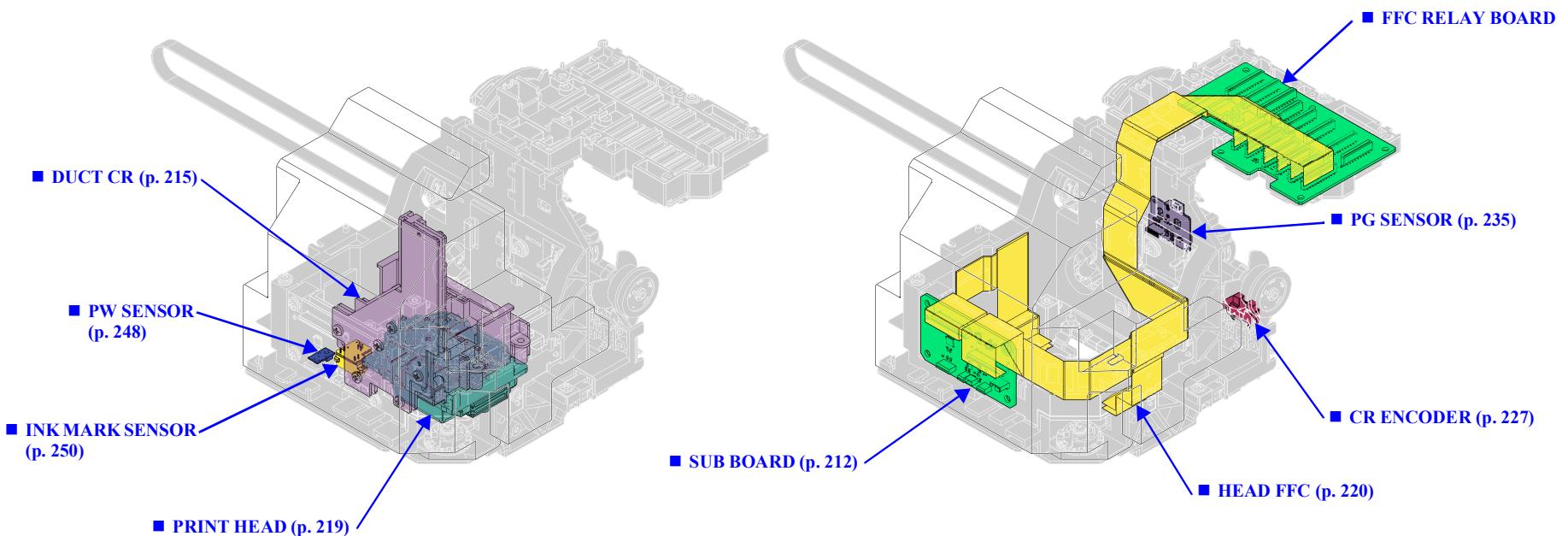


Figure 3-9. Carriage Mechanism

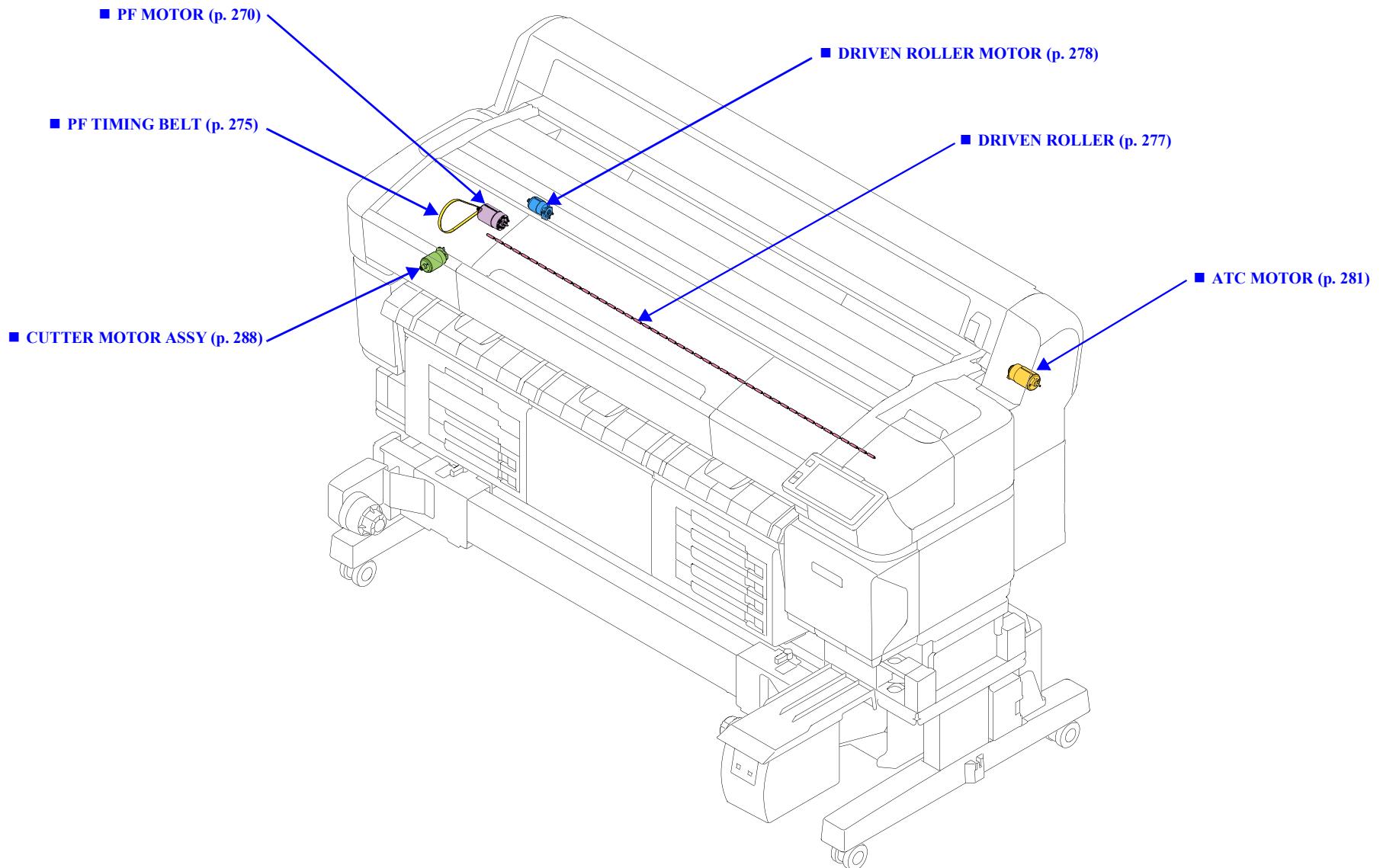


Figure 3-10. Paper Feed Mechanism / Cutter Mechanism

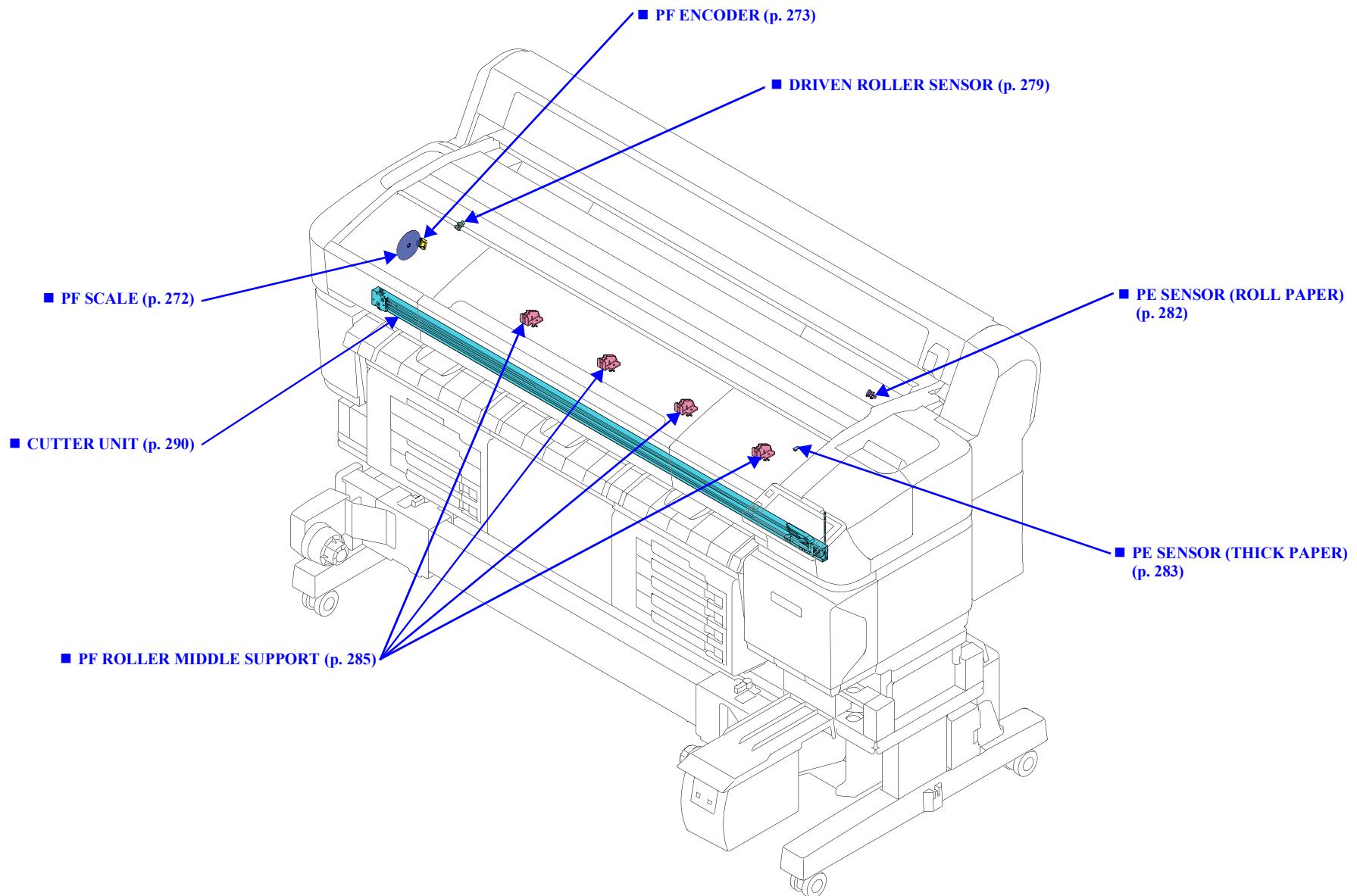


Figure 3-11. Paper Feed Mechanism / Cutter Mechanism

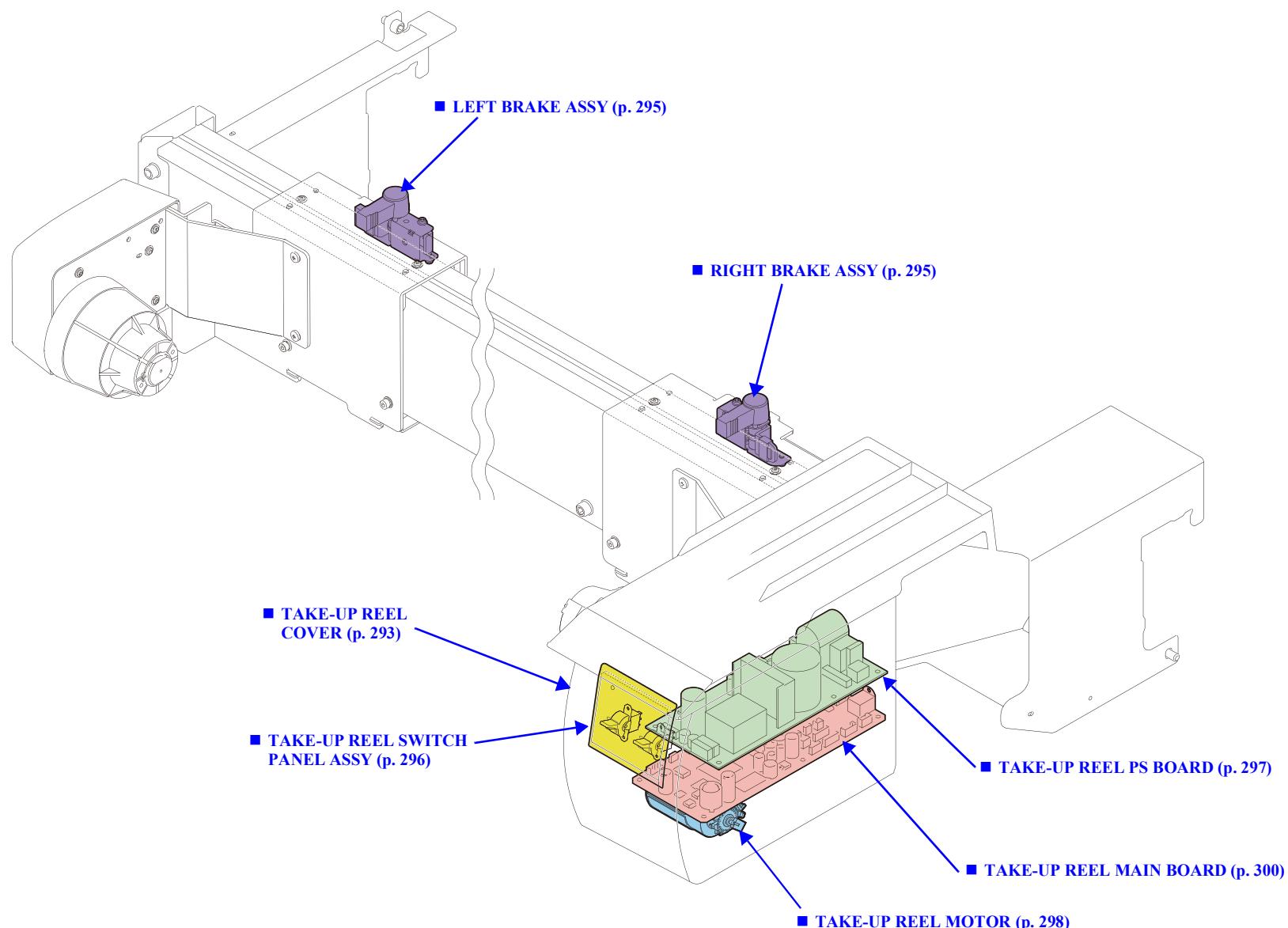
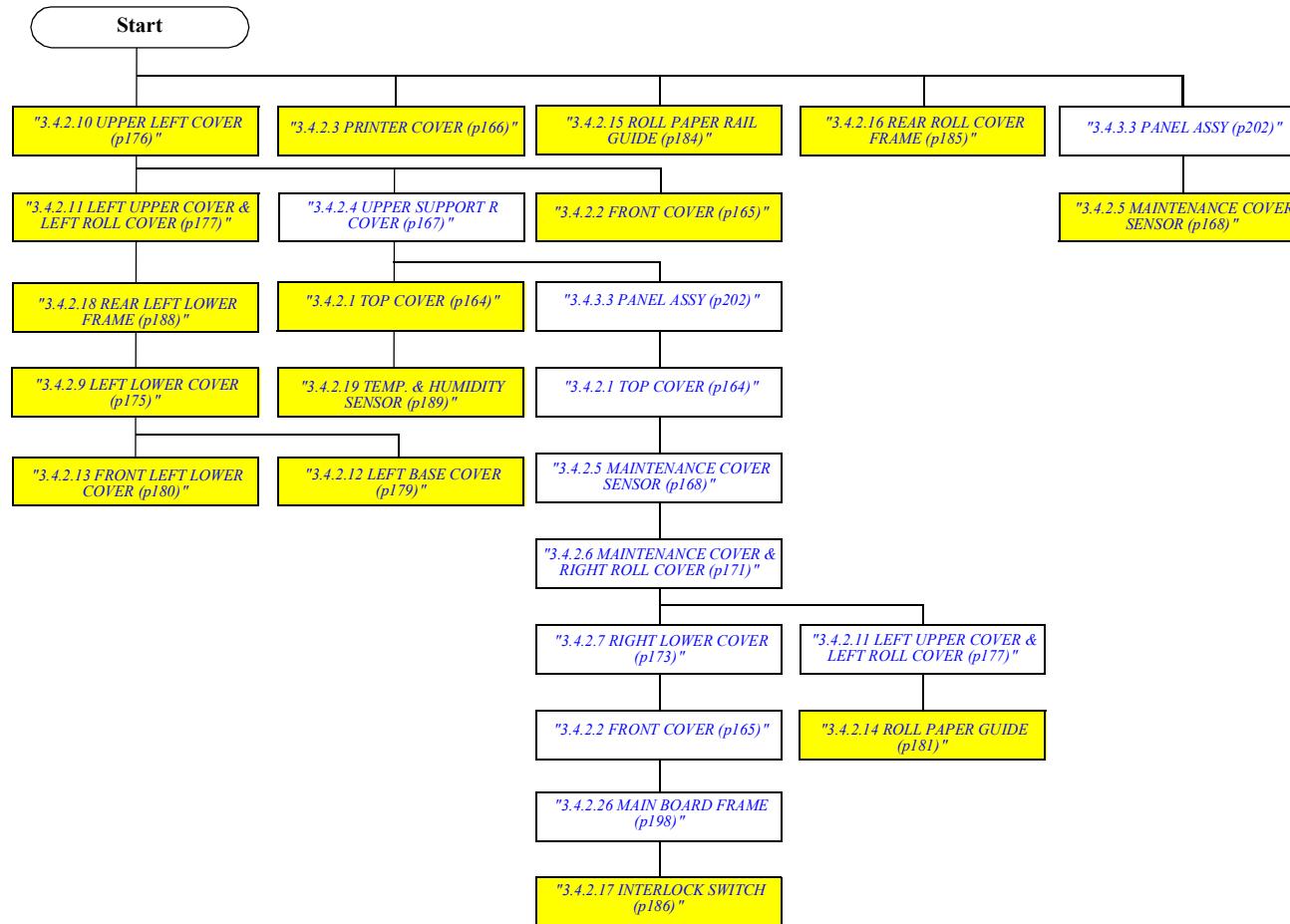
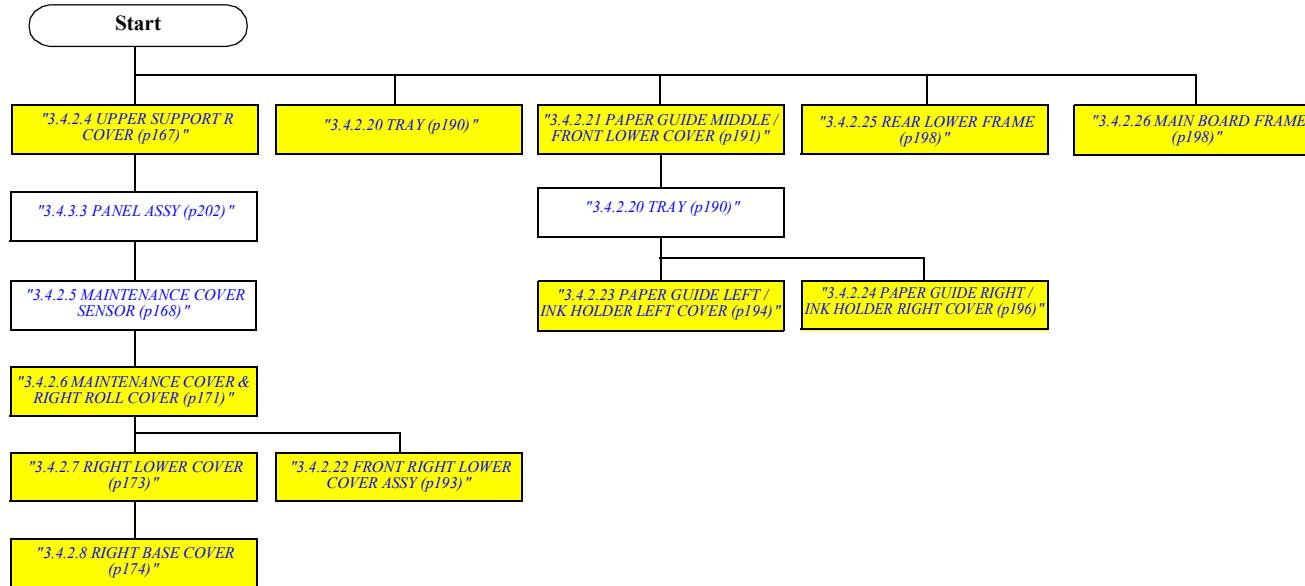


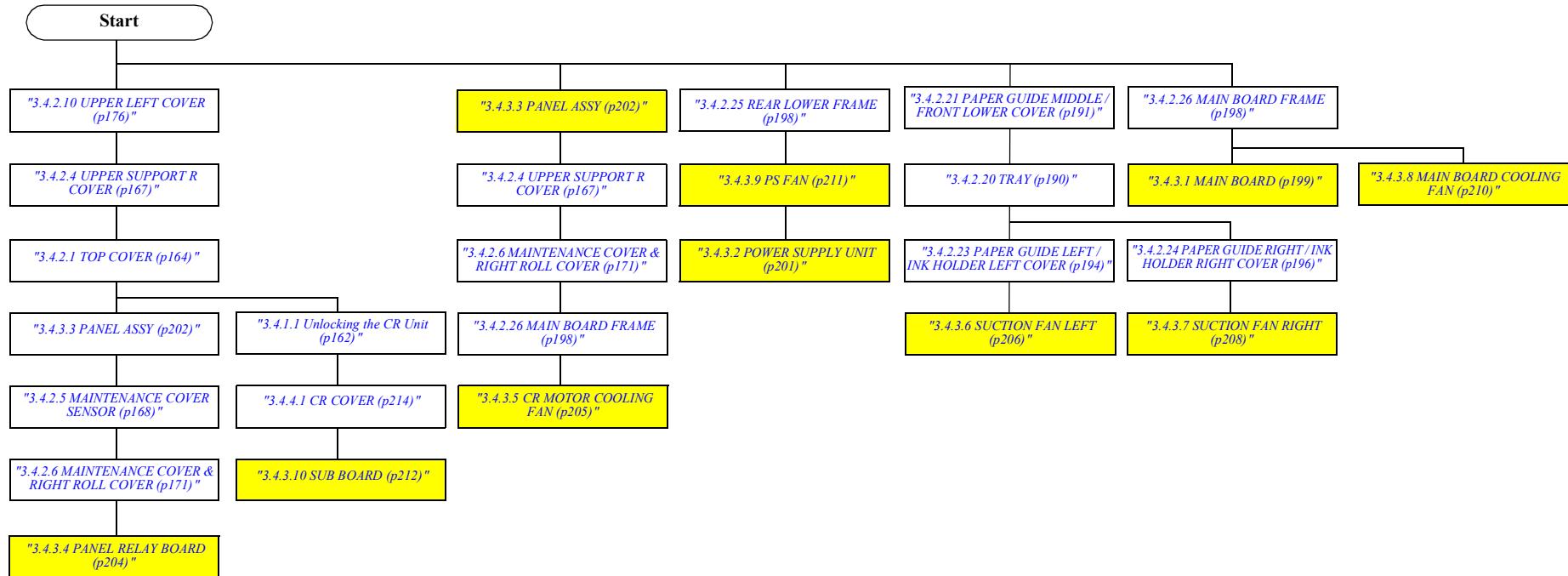
Figure 3-12. Auto take-up reel unit

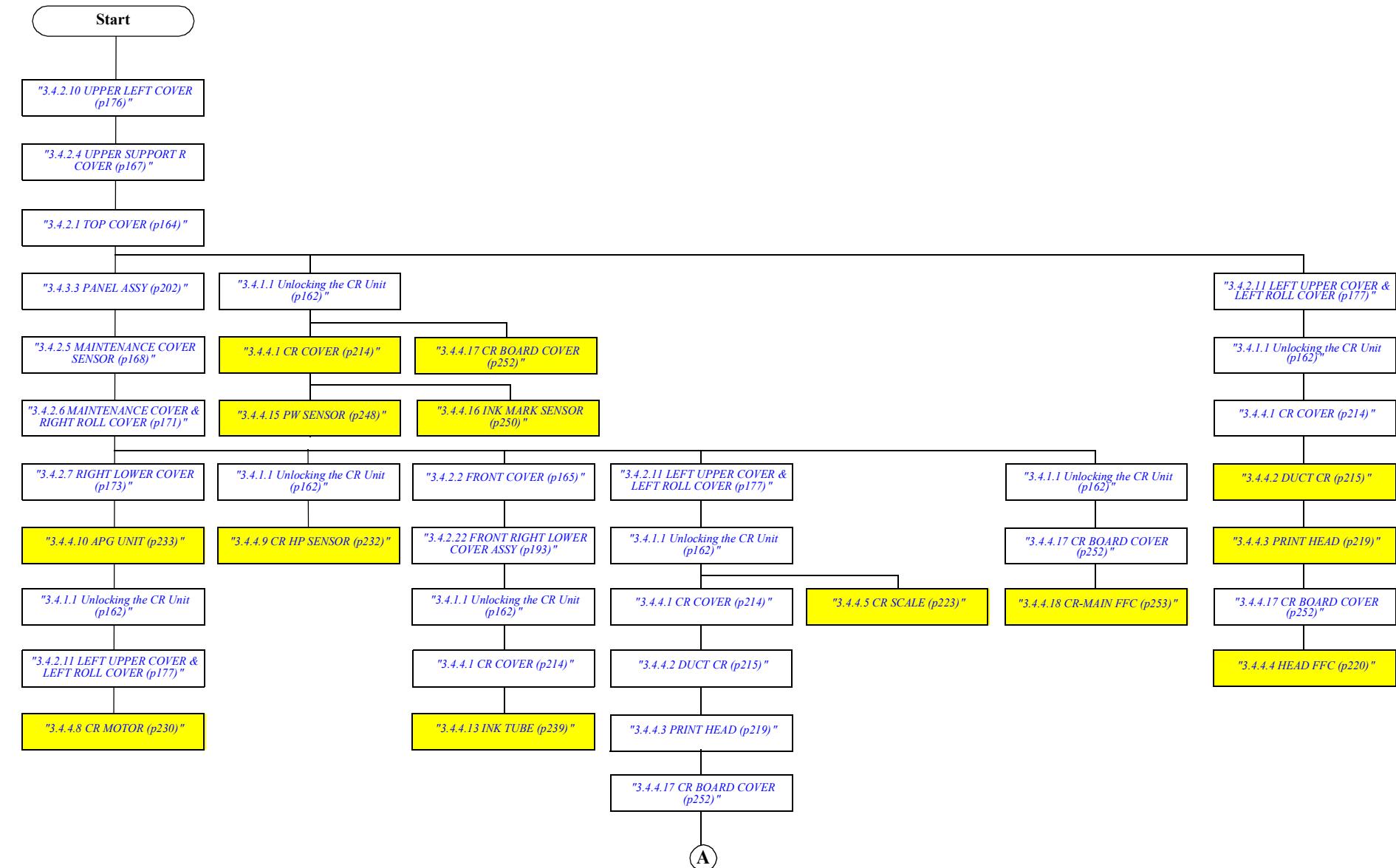
3.3 Disassembly Flowchart

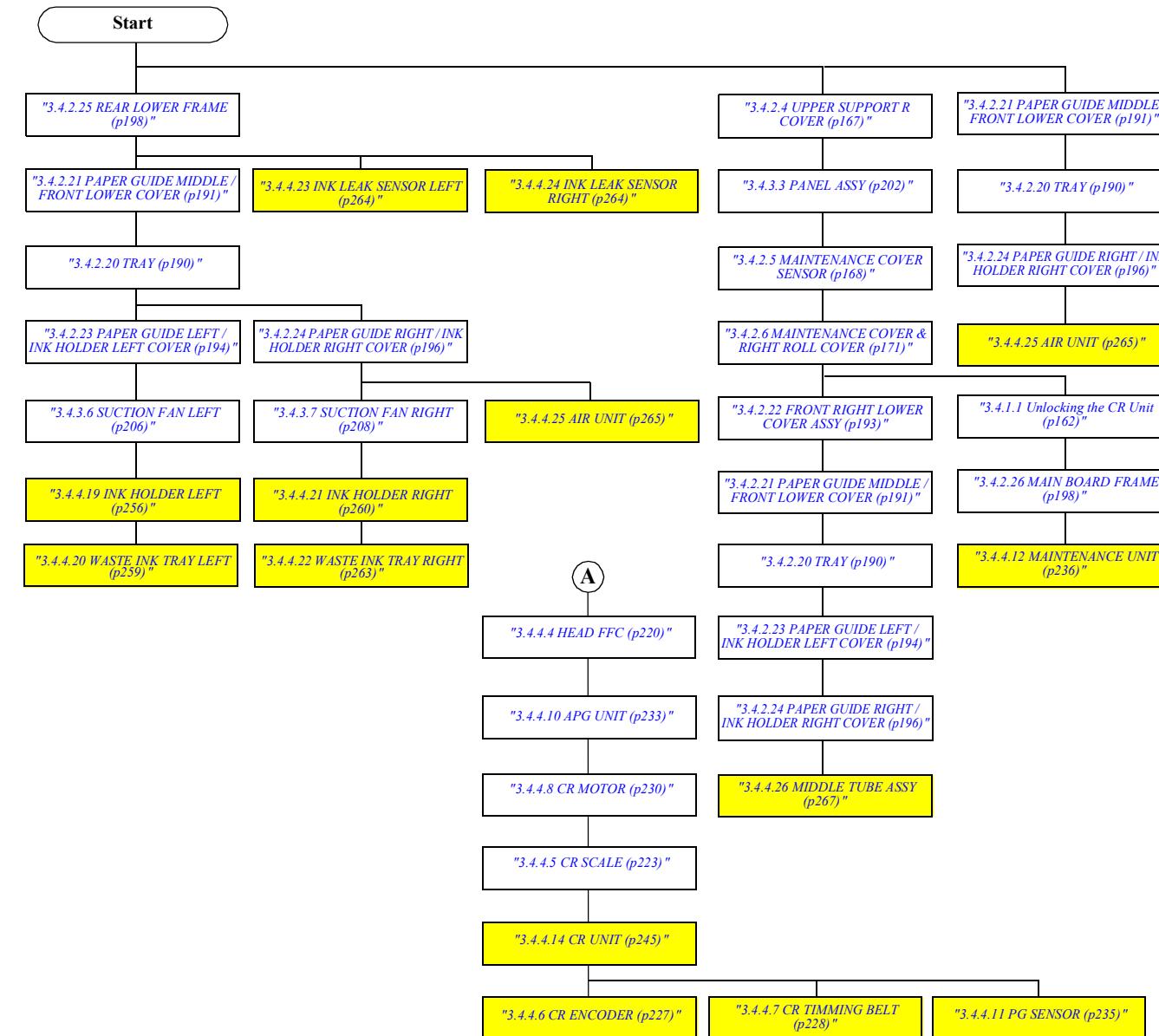
HOUSING (1)

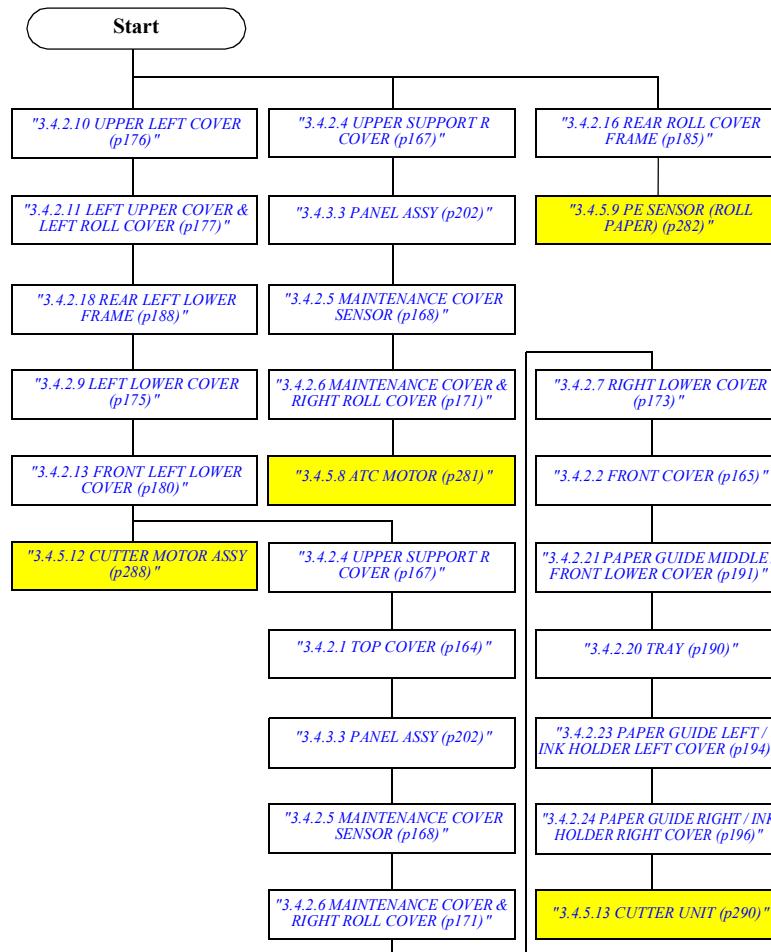


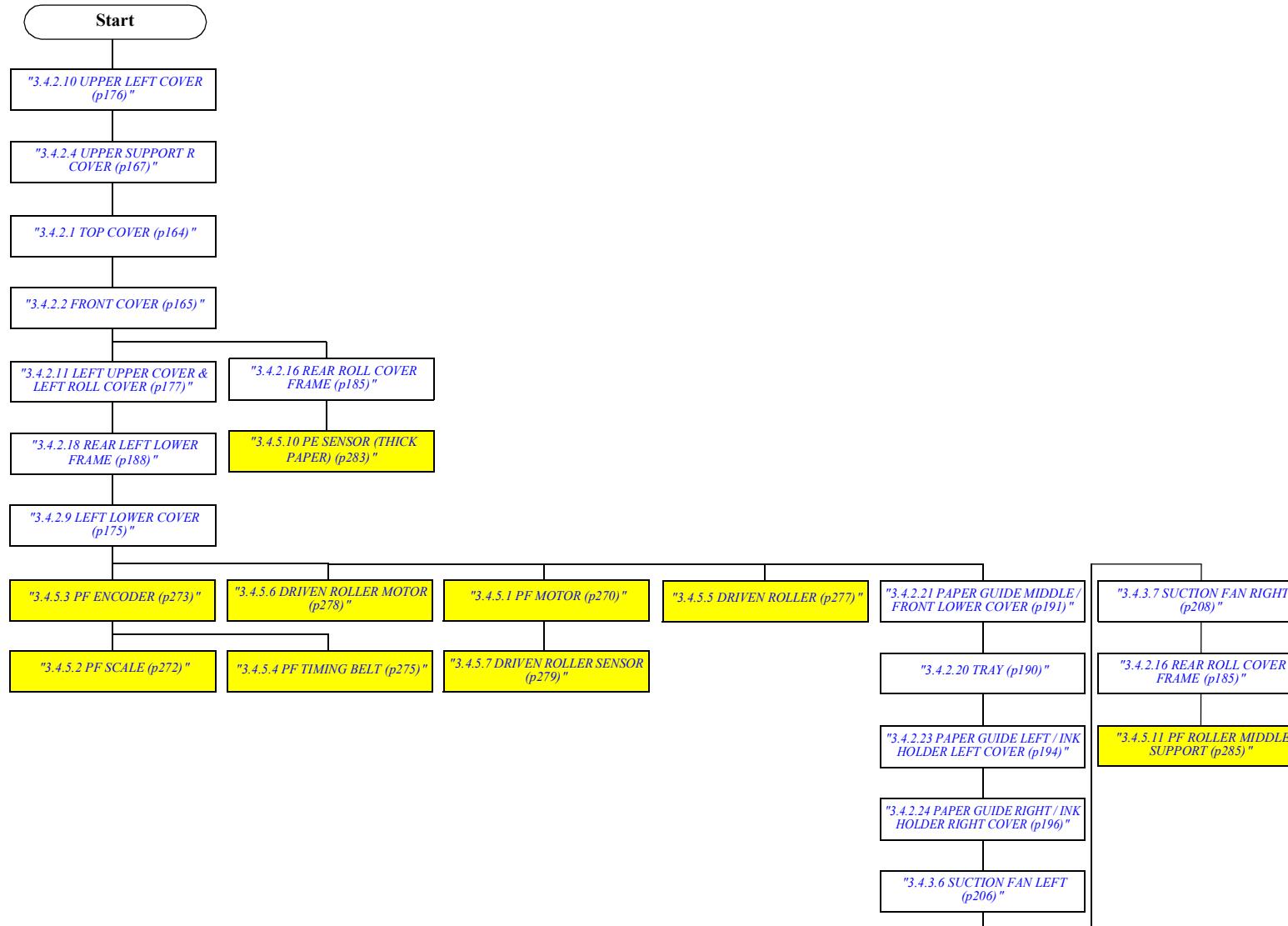
HOUSING (2)

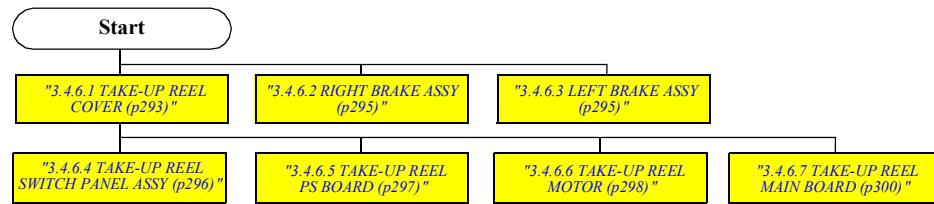
ELECTRIC CIRCUIT COMPONENTS / FANS

CARRIAGE MECHANISM / INK SYSTEM MECHANISM (1)

CARRIAGE MECHANISM / INK SYSTEM MECHANISM (2)

PAPER FEED MECHANISM / CUTTER MECHANISM (1)

PAPER FEED MECHANISM / CUTTER MECHANISM (2)

AUTO TAKE-UP REEL

3.4 Disassembly and Assembly Procedure

This section describes procedures for disassembling the components allowed to be disassembled. Unless otherwise specified, disassembled units or components can be reassembled by reversing the disassembly procedure.

3.4.1 Preparation for servicing

3.4.1.1 Unlocking the CR Unit



When you have unlocked the CR Unit and finished your reassembly work, move the CR Unit (Print Head) over the platen and turn the printer on to let it perform the initialization sequence. (By this sequence, the CR Unit is locked and Print Head is capped.) If the initialization is performed on or over the Cap, the Print Head may be damaged.

Automatic

1. Start the printer in the inspection mode.
Turn the power ON while pressing [left upper side of the screen] and power button, keep pressing until the mode select menu is displayed. (P. 26)
2. Select **Initial Operation Menu → CR Unlock**.
3. Touch the panel screen.

Manual (1)

1. Disengage the hooks, and remove the CR cover from the RIGHT UPPER COVER.
2. Insert a screwdriver into the point as shown in the figure.
3. Turn the white shaft of the MAINTENANCE UNIT counterclockwise with the screwdriver until you hear the click of the CR being unlocked.

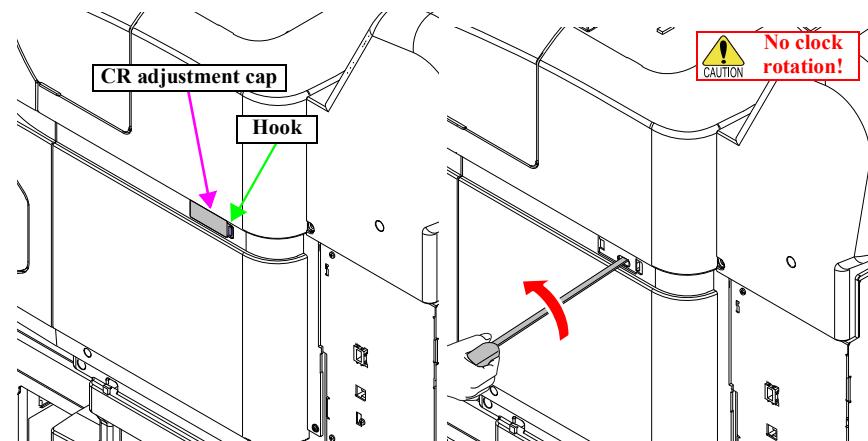


Figure 3-13. Unlocking the CR Unit (1)



Do not turn the screwdriver clockwise.

Manual (2)

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Remove the RIGHT LOWER COVER. ([p173](#))
6. Insert a screwdriver into the point as shown in the figure.
7. While viewing the CR Lock Lever status from the front of the printer, turn the white shaft of the MAINTENANCE UNIT counterclockwise with the screwdriver.
8. Turn the screwdriver until the CR Lock Lever reaches the CR unlock position.



Do not turn the screwdriver clockwise.



- When the CR is unlocked, it clicks.
- Use a screwdriver with a 170 mm or longer shaft.

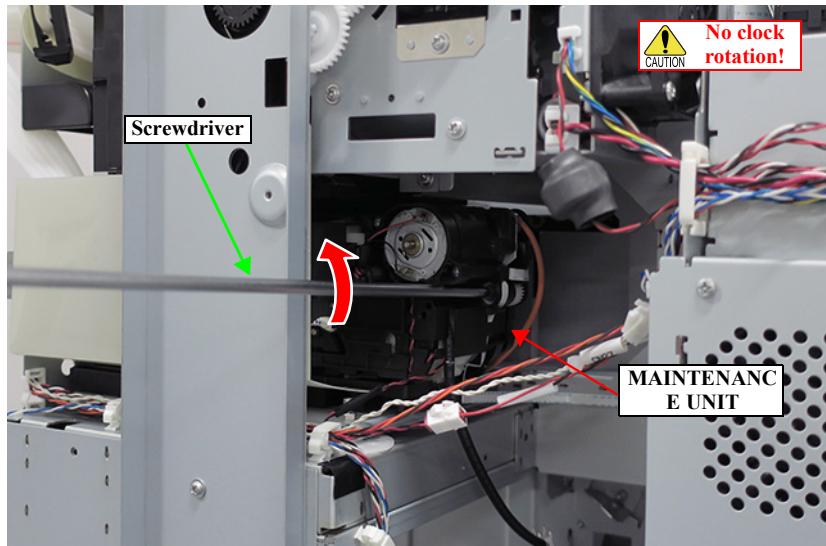


Figure 3-14. Unlocking the CR Unit (2)

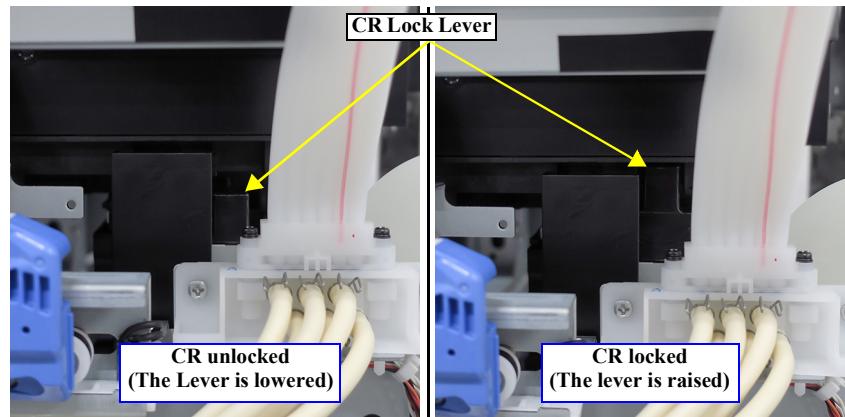


Figure 3-15. Status of the CR Lock Lever

3.4.2 Housing

3.4.2.1 TOP COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the two screws, and remove the TOP COVER.
A) Silver M3x8 S-tite screw with built-in washer: 2 pcs



Pay attention to the positioning points (See [Figure 3-16](#)).

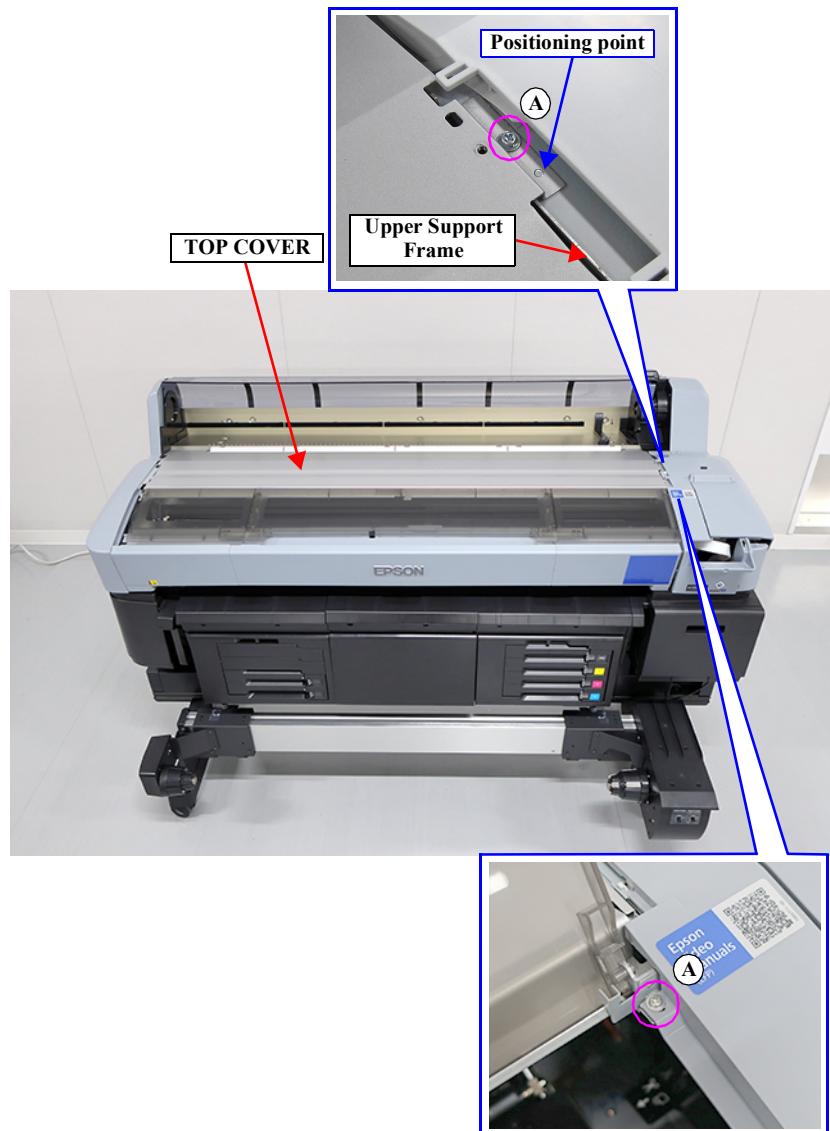


Figure 3-16. Removing the TOP COVER

3.4.2.2 FRONT COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the seven screws, and remove the FRONT COVER.
 - A) Silver M3x8 S-tite screw with built-in washer: 7 pcs



To ensure the INTERLOCK SWITCH can detect the flag of PRINTER COVE, tighten the screws which secure the FRONT COVER while pulling the Front Frame toward you.

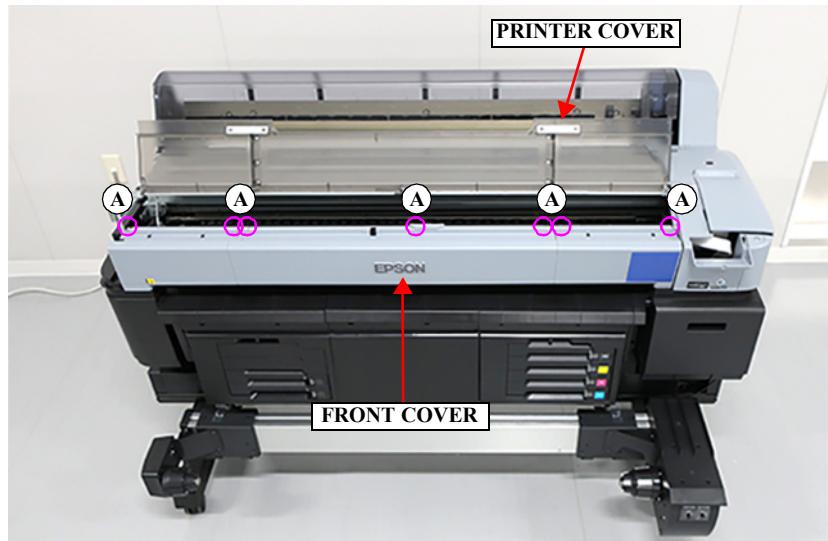
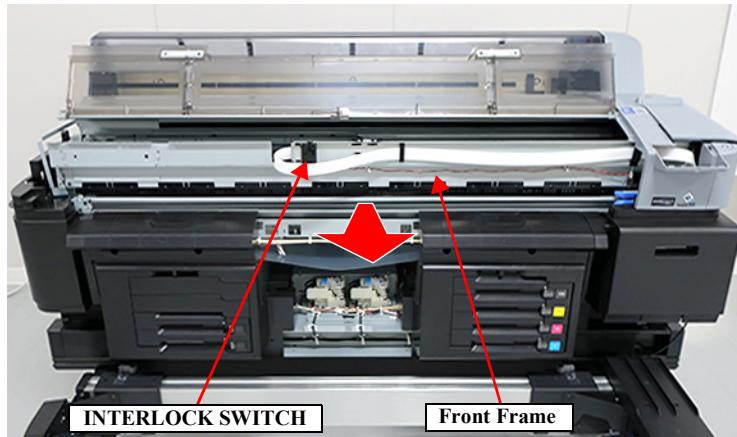


Figure 3-17. Removing the FRONT COVER

3.4.2.3 PRINTER COVER

1. Remove the screw, and remove the hinge fixing cover.

A) Silver M3x8 Bind P-tite screw: 1 pc

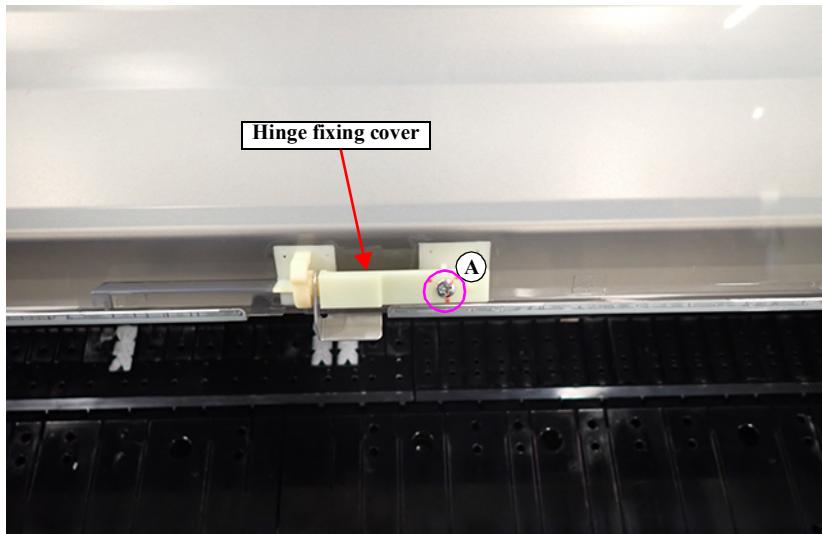


Figure 3-18. Removing the hinge fixing cover

2. Disengage the three hinges of the PRINTER COVER from the bearings, and remove the PRINTER COVER.

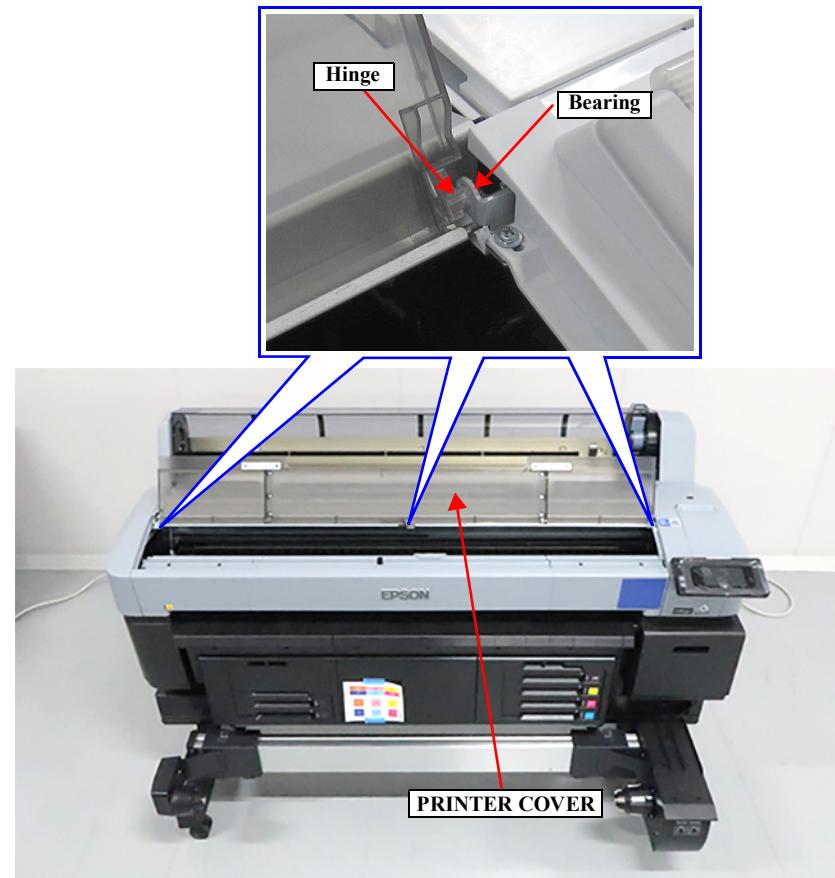


Figure 3-19. Removing the PRINTER COVER

3.4.2.4 UPPER SUPPORT R COVER

1. Remove the two screws, and remove the UPPER SUPPORT R COVER.

A) Silver M3x8 S-tite screw with built-in washer: 2 pcs



Pay attention to the positioning points. (See below figure)

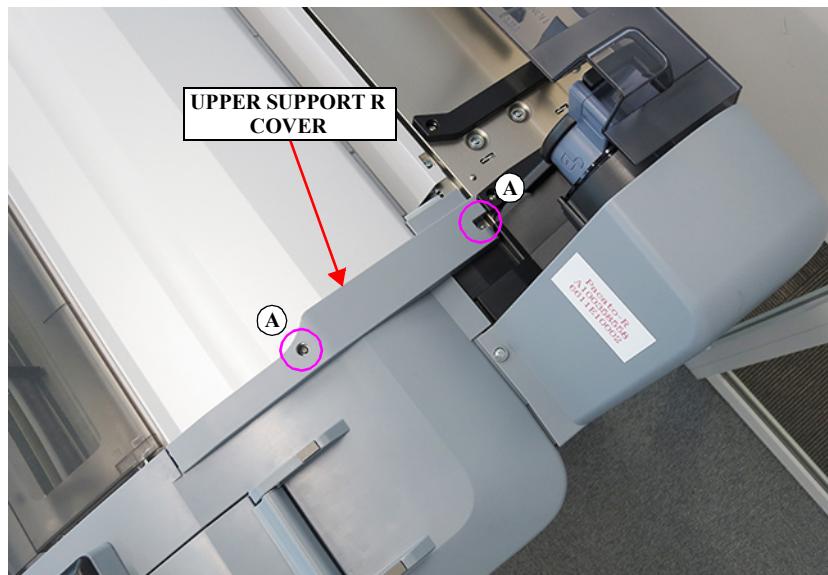
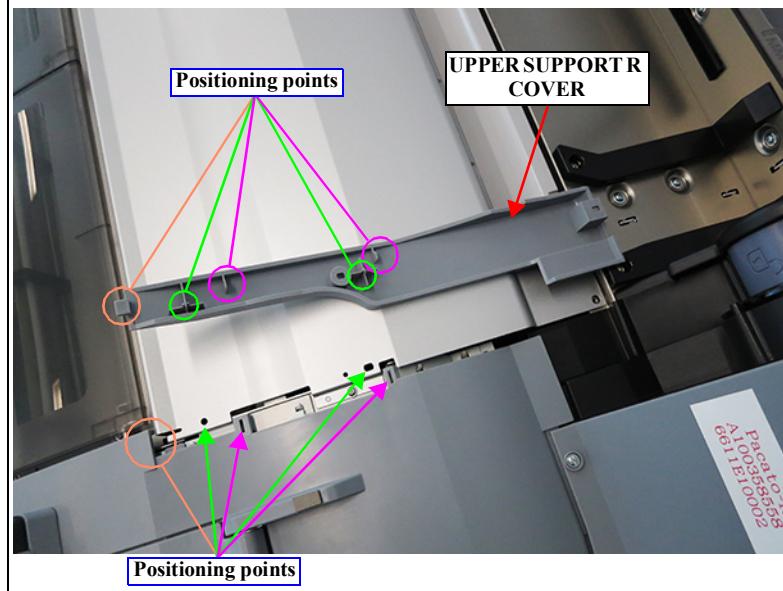


Figure 3-20. Removing the UPPER SUPPORT R COVER

3.4.2.5 MAINTENANCE COVER SENSOR

1. Remove the PANEL ASSY. ([p202](#))
2. Open the MAINTENANCE COVER.
3. Remove the two screws, and remove the FRONT RIGHT COVER.
- A) Silver M3x8 Cup P-tite screw: 2 pcs

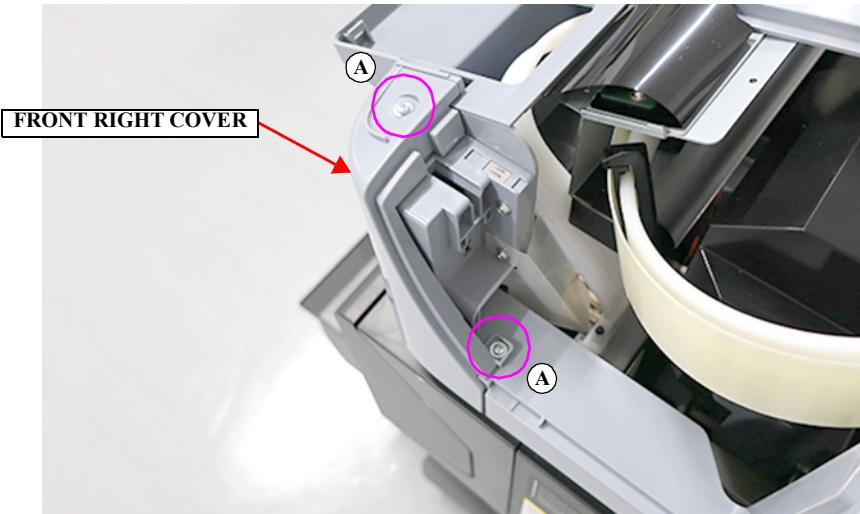


Figure 3-21. Removing the MAINTENANCE COVER SENSOR (1)

4. Remove the two screws, and remove the pet film.
- B) Silver M3x8 P-tite screw with built in washer: 2 pcs



Secure the Pet film and the MAINTENANCE COVER SENSOR with the same screw.

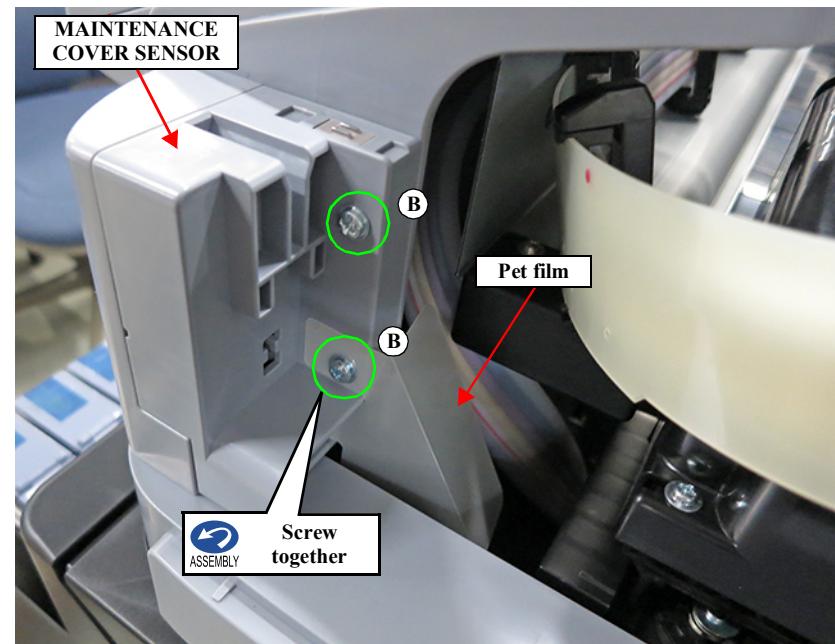


Figure 3-22. Removing the MAINTENANCE COVER SENSOR (2)

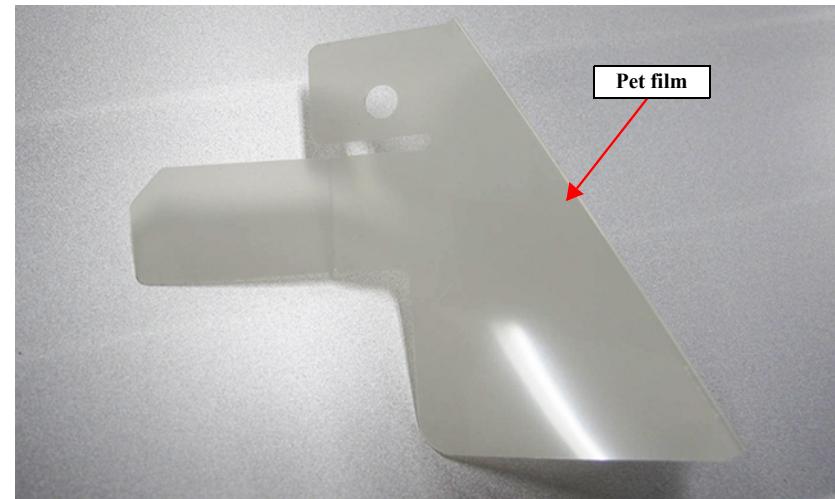


Figure 3-23. Removing the MAINTENANCE COVER SENSOR (3)

5. Release the cable from the Cable Guide.

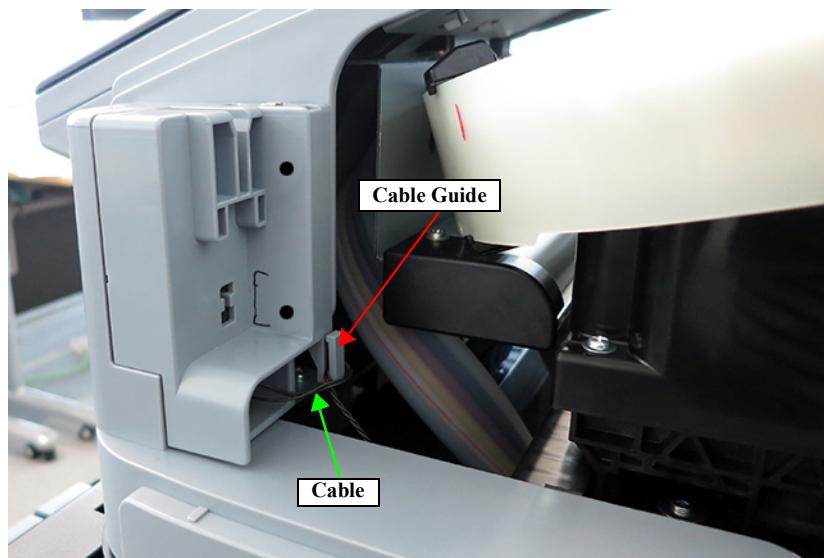


Figure 3-24. Removing the MAINTENANCE COVER SENSOR (4)

6. Remove the MAINTENANCE COVER SENSOR Assy.

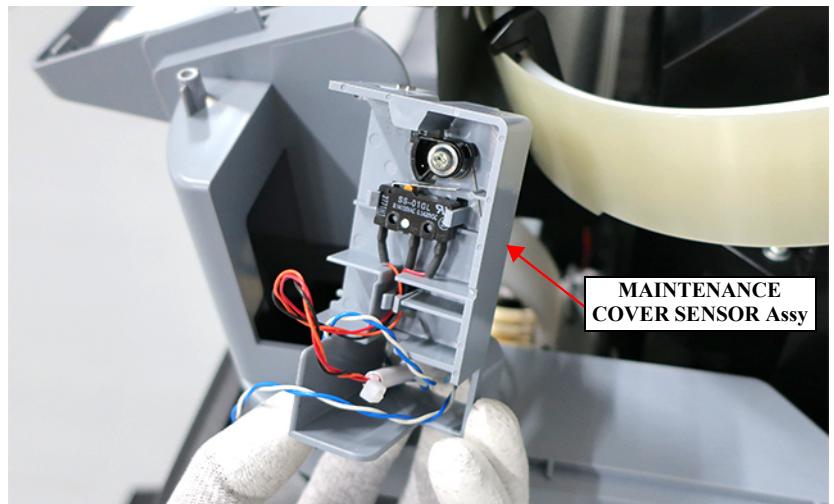


Figure 3-25. Removing the MAINTENANCE COVER SENSOR (5)



When this part is removed to remove another part, the following steps are not required.

7. Remove the cable from the relay connector.
8. Disengage the two hooks, and remove the MAINTENANCE COVER SENSOR.

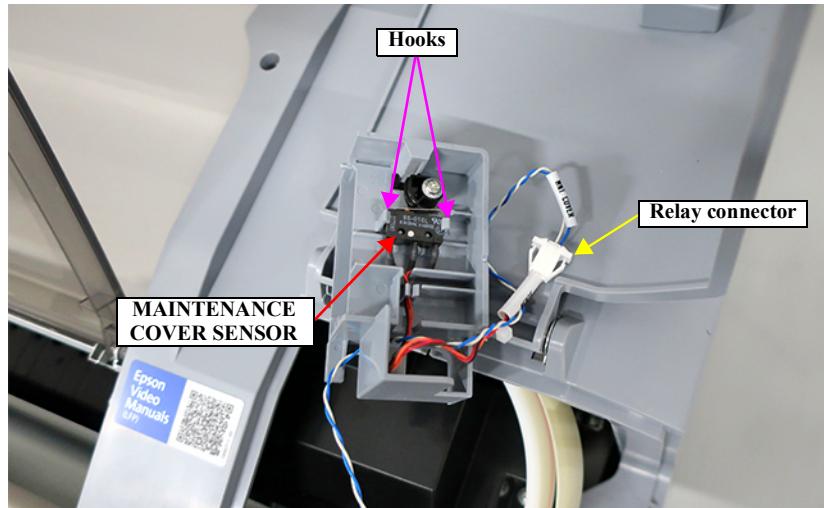


Figure 3-26. Removing the MAINTENANCE COVER SENSOR (6)

3.4.2.6 MAINTENANCE COVER & RIGHT ROLL COVER

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Open the PRITER COVER.
5. Remove the seven screws that secure the MAINTENANCE COVER & RIGHT ROLL COVER.
 - A) Silver M4x12 P-tite screw with washer: 1 pc
 - B) Silver M3x8 S-tite screw with built-in washer: 3 pcs
 - C) Silver M3x8 P-tite screw with built-in washer: 2 pcs
 - D) Silver M3x10 P-tite screw with washer: 1 pc
6. Loosen the two screws E.

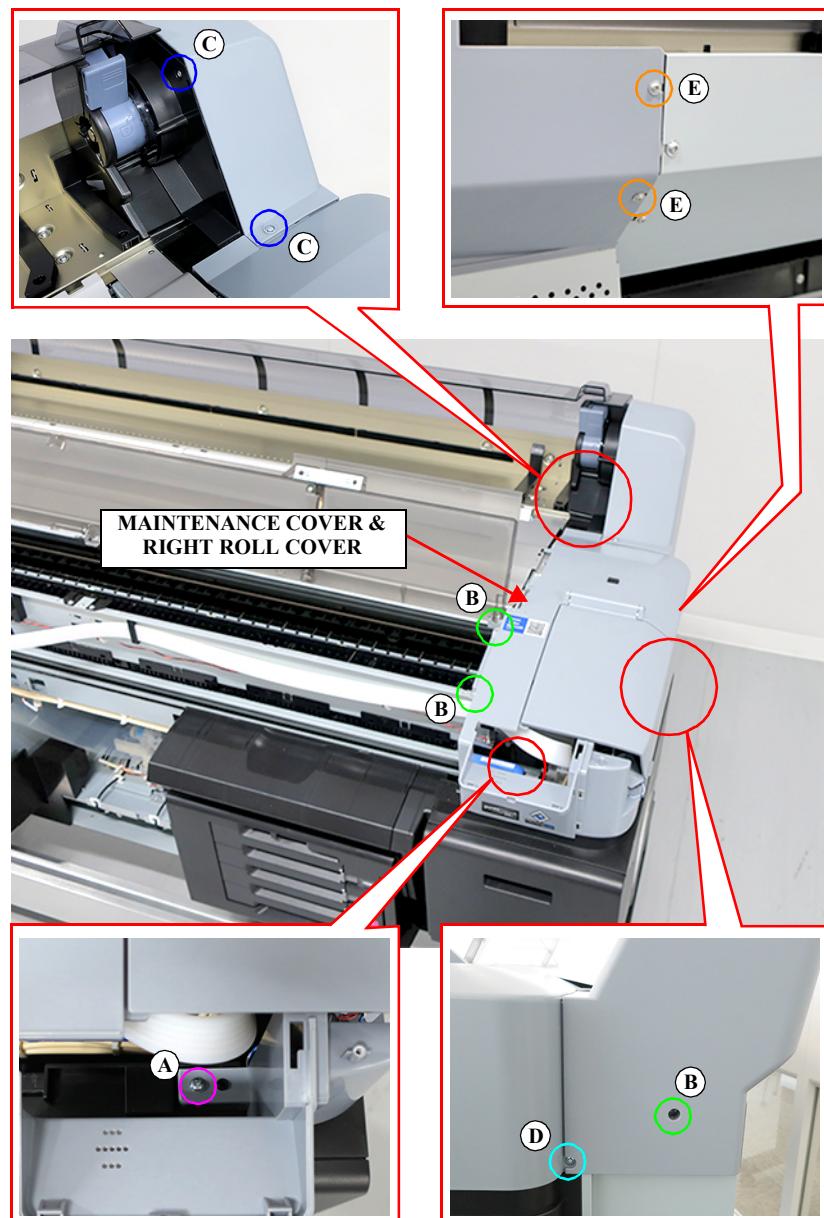


Figure 3-27. Removing the MAINTENANCE COVER & RIGHT ROLL COVER (1)

7. Disengage the dowel on the front side, and remove the MAINTENANCE COVER and RIGHT ROLL COVER at the same time.



Make sure to put the MAINTENANCE COVER and the RIGHT ROLL COVER together, and then install them at the same time.

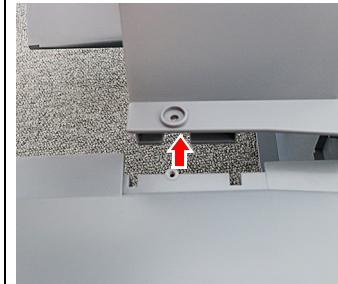


Figure 3-28. Removing the MAINTENANCE COVER & RIGHT ROLL COVER (2)

3.4.2.7 RIGHT LOWER COVER

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Remove the three screws, and remove the RIGHT LOWER COVER.
 - A) Silver M3x10 P-tite screw with washer: 1 pc
 - B) Silver M3x8 S-tite screw with built-in washer: 2 pcs



ASSEMBLY

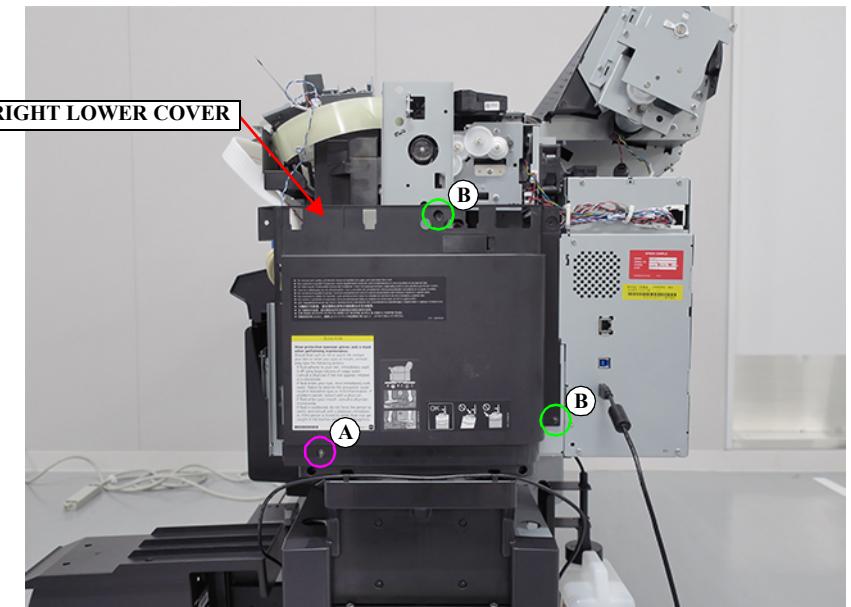
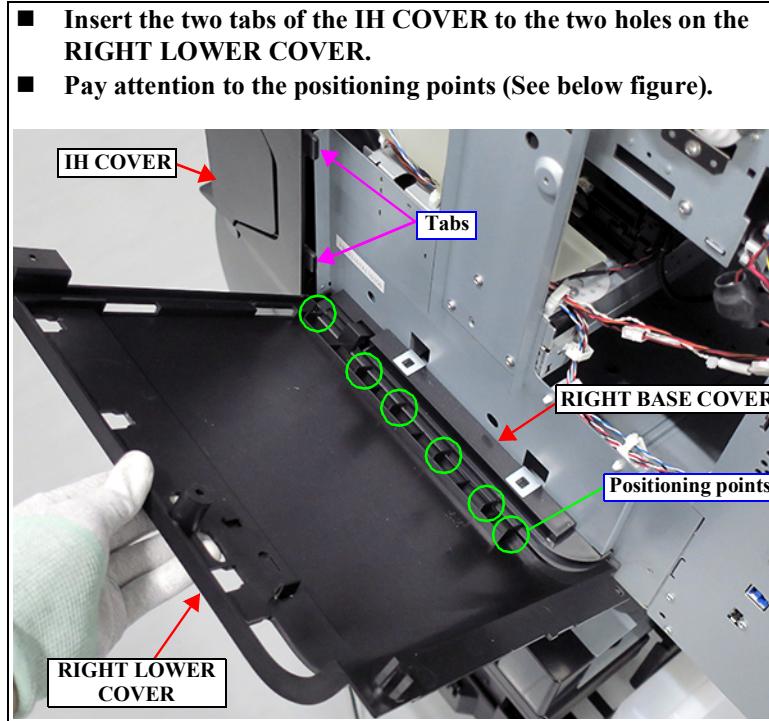


Figure 3-29. Removing the RIGHT LOWER COVER

3.4.2.8 RIGHT BASE COVER

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Remove the RIGHT LOWER COVER. ([p173](#))
6. Remove the six screws, and remove the RIGHT BASE COVER.
A) Black M3x8 S-tite screw with built-in washer: 6 pcs



ASSEMBLY

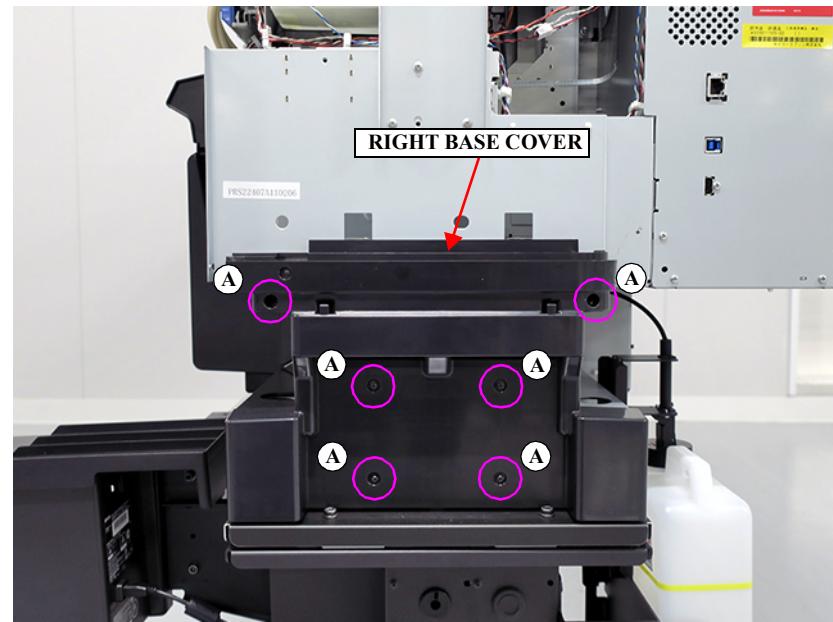
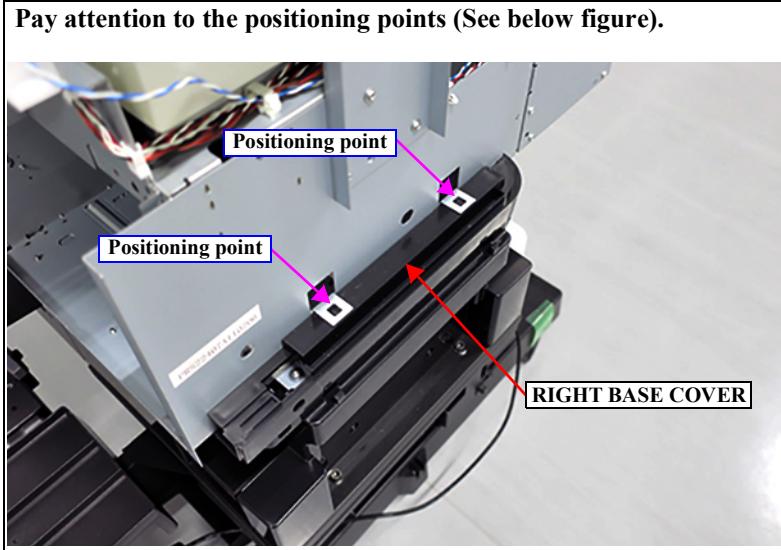


Figure 3-30. Removing the RIGHT BASE COVER

3.4.2.9 LEFT LOWER COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
3. Remove the FRONT COVER. ([p165](#))
4. Remove the REAR LEFT LOWER FRAME. ([p188](#))
5. Remove the two screws, and LEFT LOWER COVER.
 - A) Black M3x10 P-tite screw with washer: 1 pc
 - B) Silver M4x12 P-tite screw with built-in washer: 1 pc

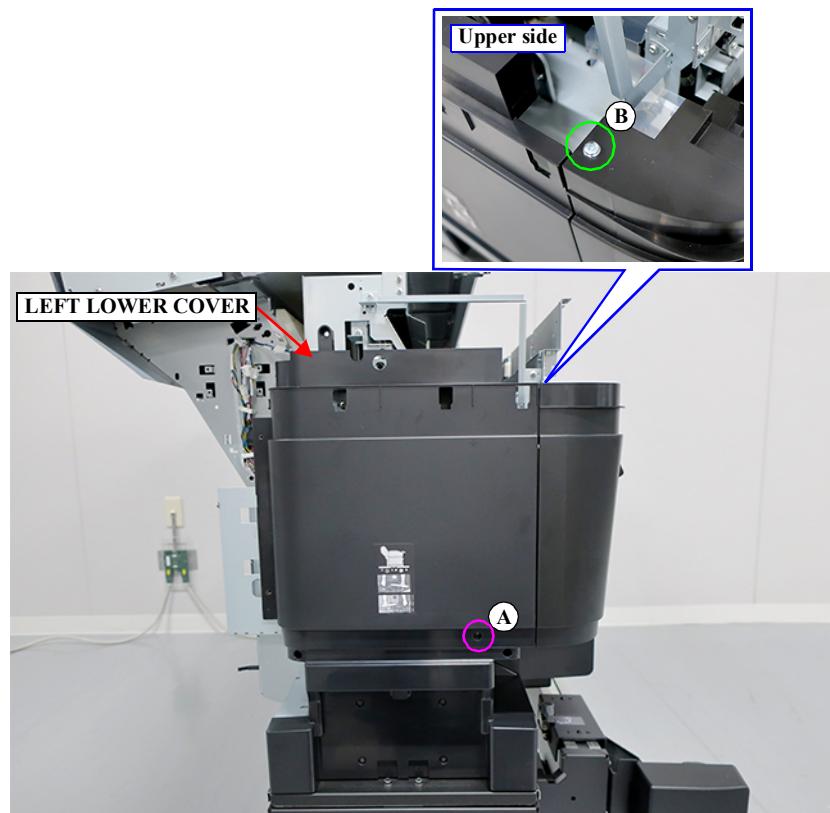
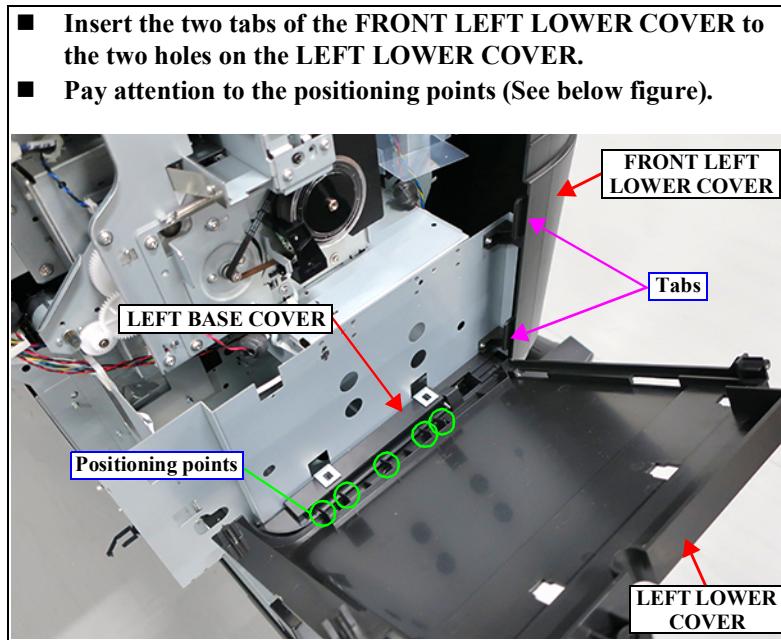


Figure 3-31. Removing the LEFT LOWER COVER

3.4.2.10 UPPER LEFT COVER

1. Open the PRINTER COVER.
2. Remove the five screws, and remove the UPPER LEFT COVER.
A) Silver M3x8 S-tite screw with built-in washer: 5 pcs

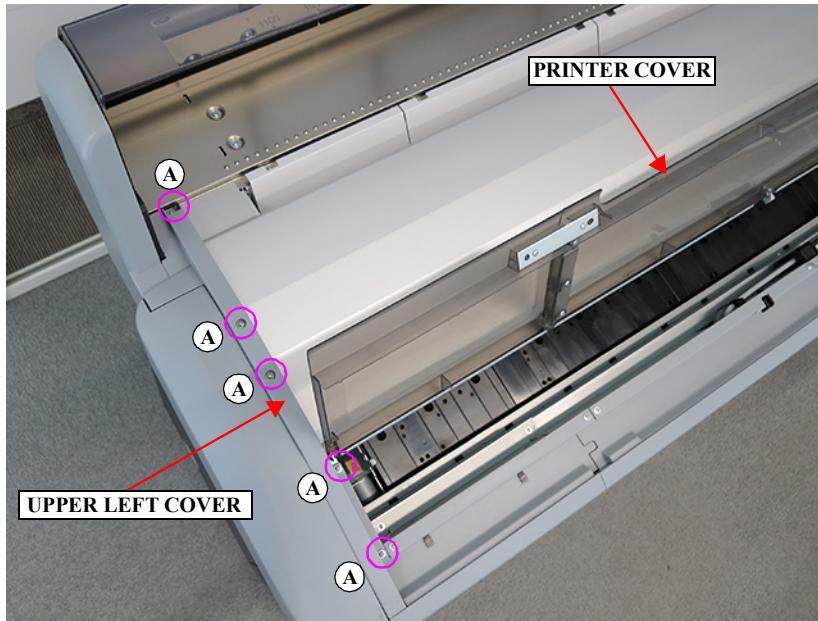


Figure 3-32. Removing the UPPER LEFT COVER

3.4.2.11 LEFT UPPER COVER & LEFT ROLL COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the six screws that secure the LEFT UPPER COVER & LEFT ROLL COVER.
 - A) Silver M4x12 -tite screw with washer: 3 pcs
 - B) Silver M3x8 S-tite screw with built-in washer: 1 pc
 - C) Silver M3x8 P-tite screw with built-in washer: 2 pcs
3. Remove the dowel, and remove the LEFT UPPER COVER and LEFT ROLL COVER at the same time.



When this part is removed to remove another part, the following steps are not required.

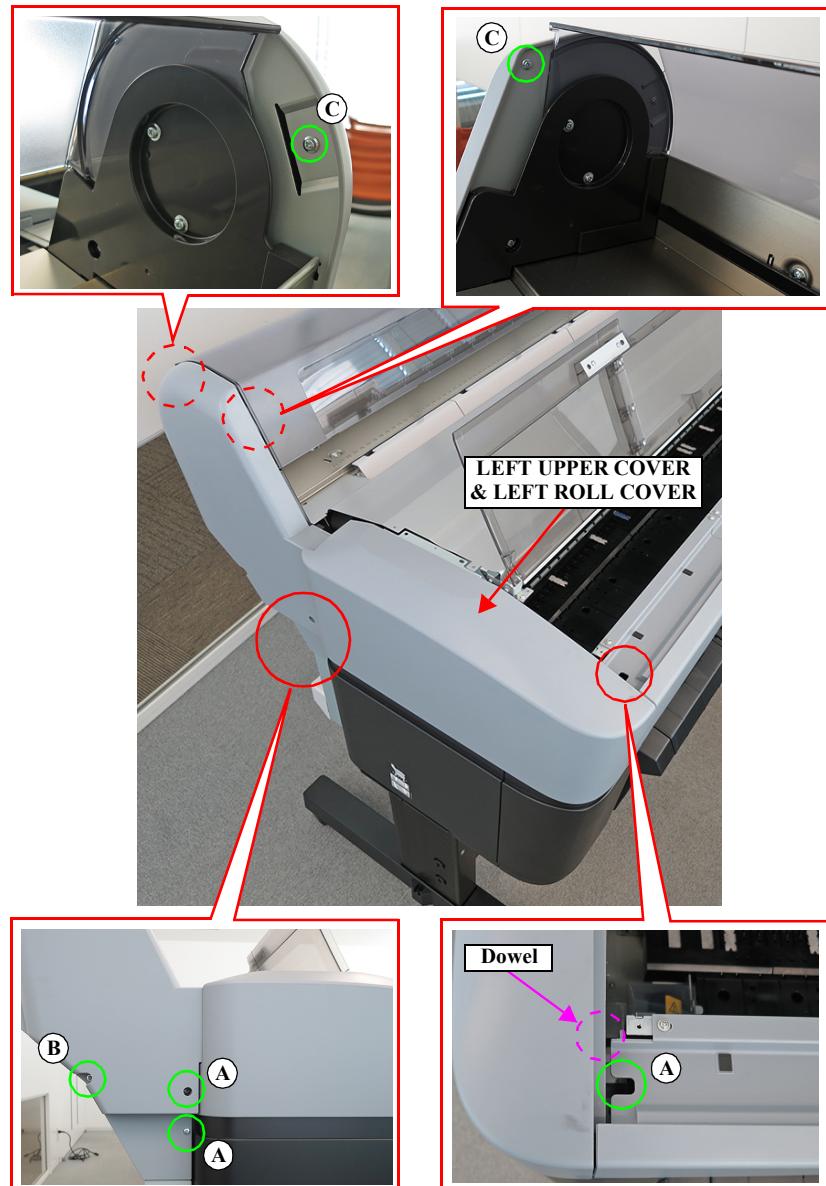


Figure 3-33. Removing the LEFT UPPER COVER & LEFT ROLL COVER (1)

4. Remove the one screw, and separate the LEFT UPPER COVER from the LEFT ROLL COVER.

D) Silver M3x8 S-tite screw with built-in washer: 1 pc

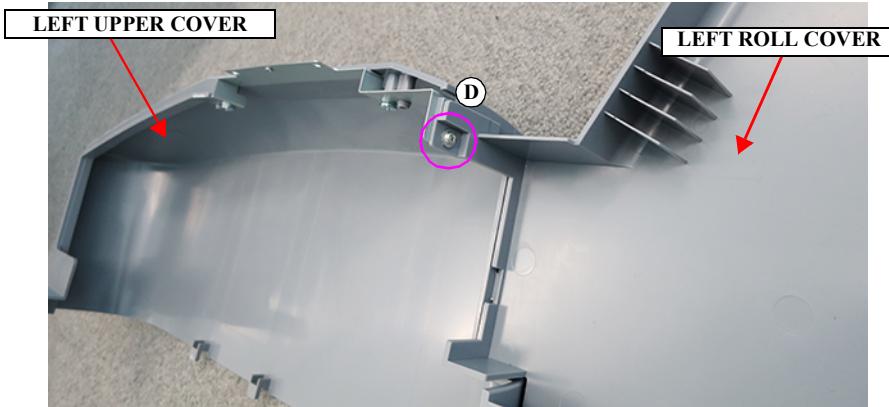


Figure 3-34. Removing the LEFT UPPER COVER & LEFT ROLL COVER (2)

3.4.2.12 LEFT BASE COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
3. Remove the FRONT COVER. ([p165](#))
4. Remove the REAR LEFT LOWER FRAME. ([p188](#))
5. Remove the LEFT LOWER COVER. ([p175](#))
6. Remove the six screws and remove the LEFT LOWER COVER.
 - A) Black M3x8 S-tite screw with built-in washer: 6 pcs



Pay attention to the positioning points (See below figure).

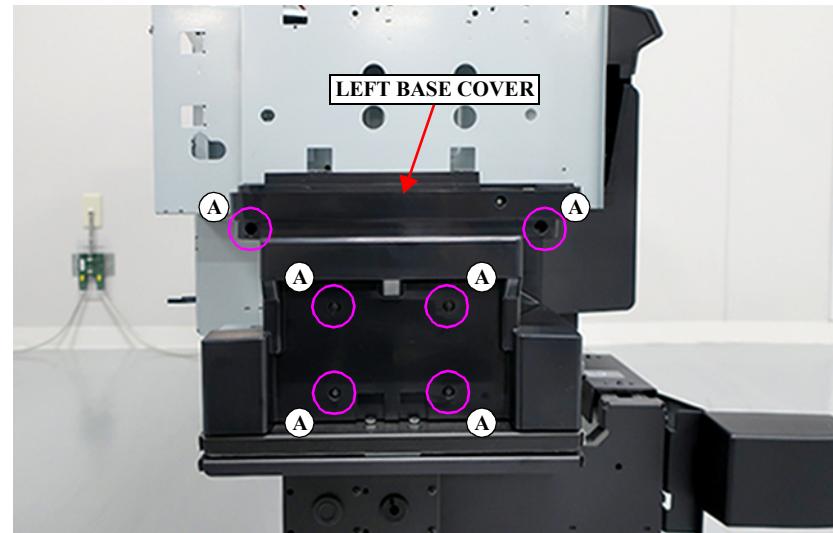
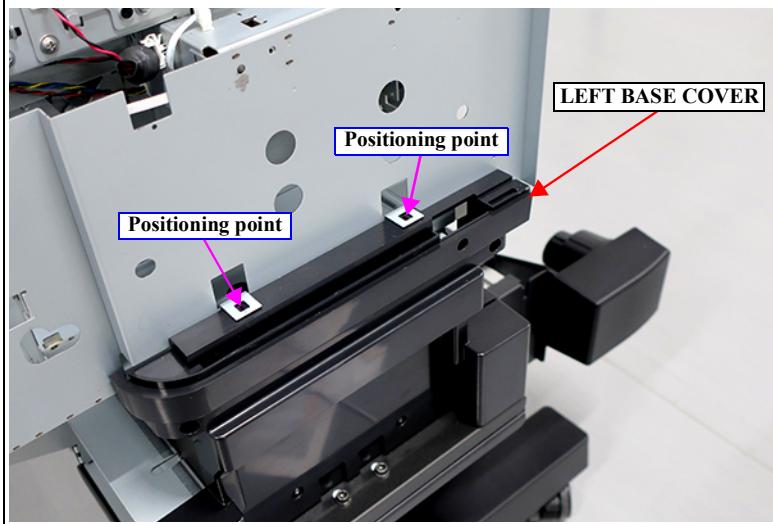


Figure 3-35. Removing the LEFT BASE COVER

3.4.2.13 FRONT LEFT LOWER COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
3. Remove the FRONT COVER. ([p165](#))
4. Remove the REAR LEFT LOWER FRAME. ([p188](#))
5. Remove the LEFT LOWER COVER. ([p175](#))
6. Remove the four screws, and remove the FRONT LEFT LOWER COVER.
A) Silver M3x8 S-tite screw with built-in washer: 4 pcs



ASSEMBLY

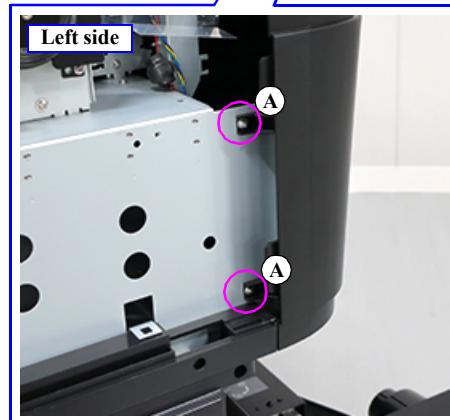
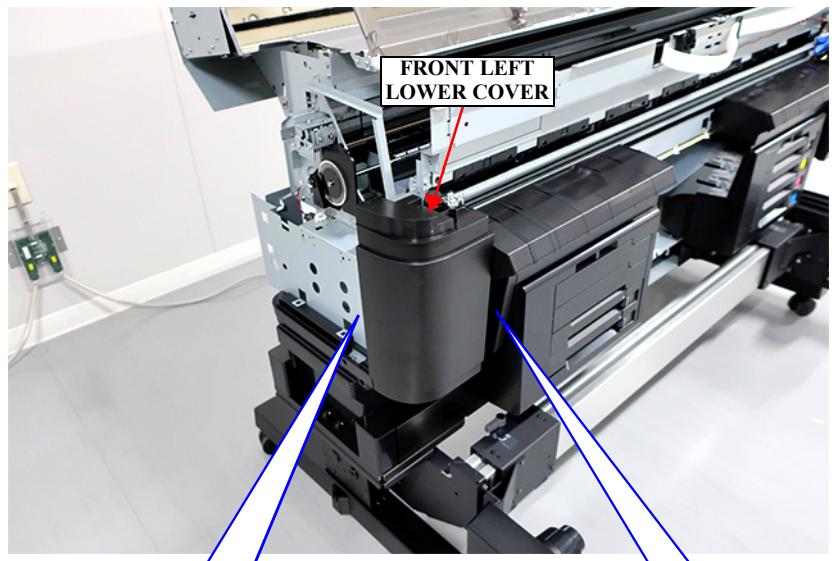
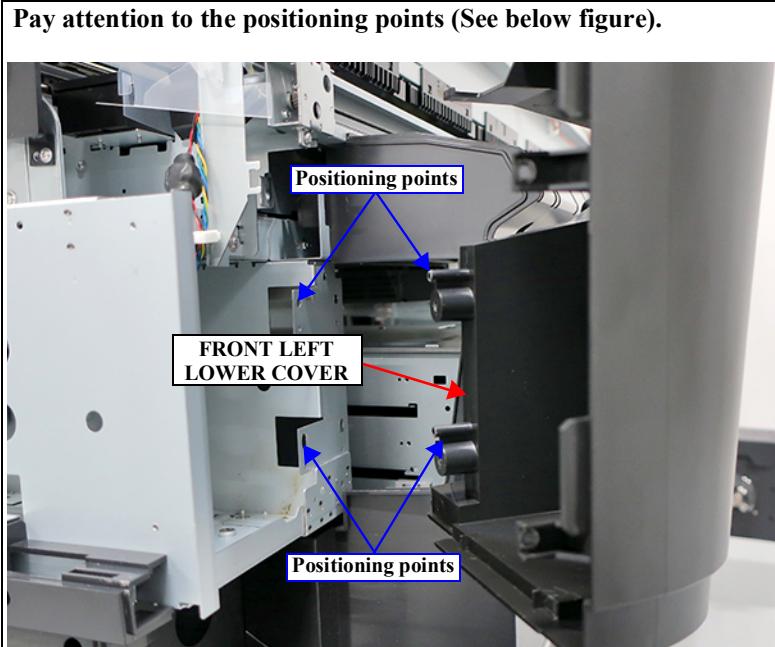


Figure 3-36. Removing the FRONT LEFT LOWER COVER

3.4.2.14 ROLL PAPER GUIDE

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the PANEL ASSY. ([p202](#))
4. Remove the TOP COVER. ([p164](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
8. Remove the three screws, and remove the Left Roll Cover Guide.
A) Silver M4x8 Cup S-tite screw: 3 pcs

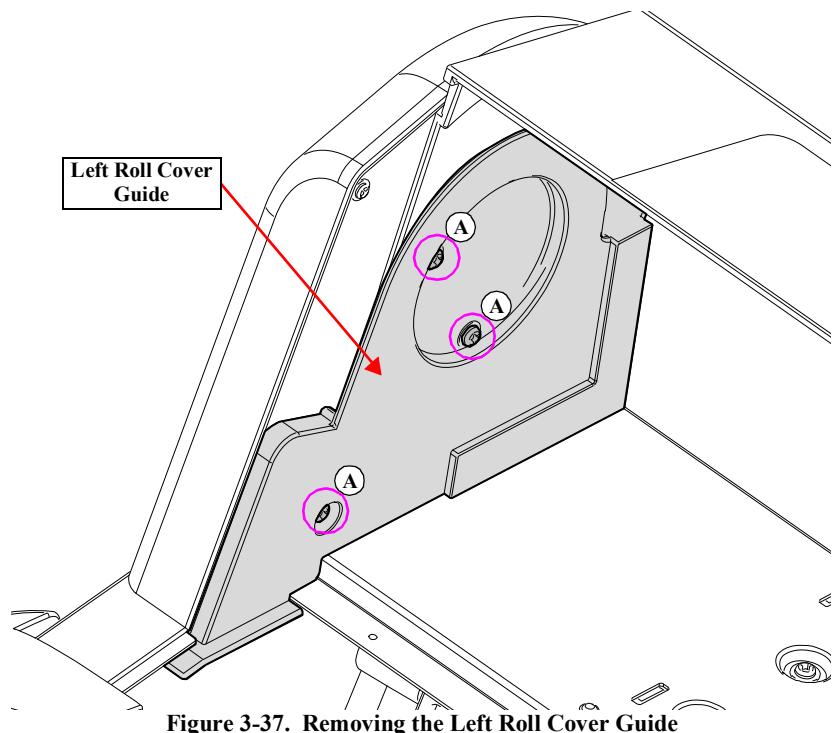


Figure 3-37. Removing the Left Roll Cover Guide

9. Remove the two screws, and remove the Roll Paper Edge Guide.

B) Silver M3x8 Cup S-tite screw: 2 pcs

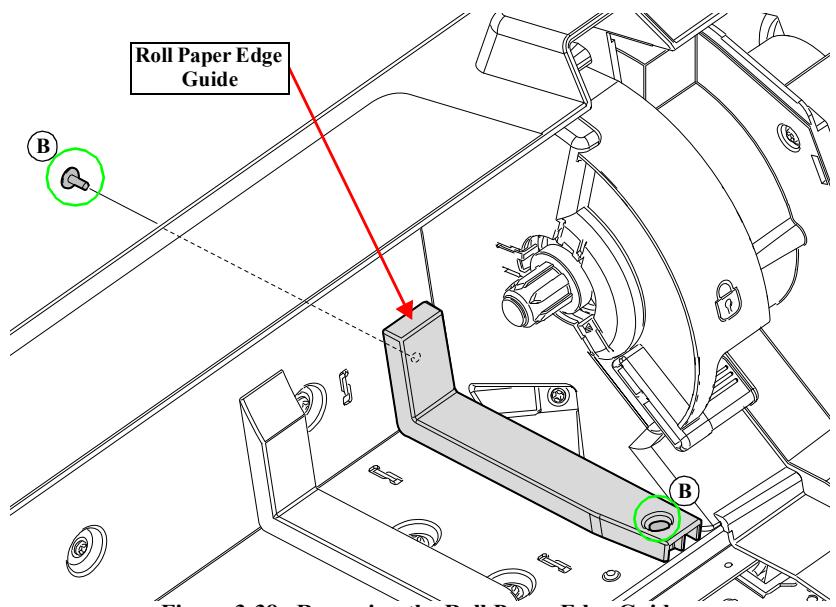
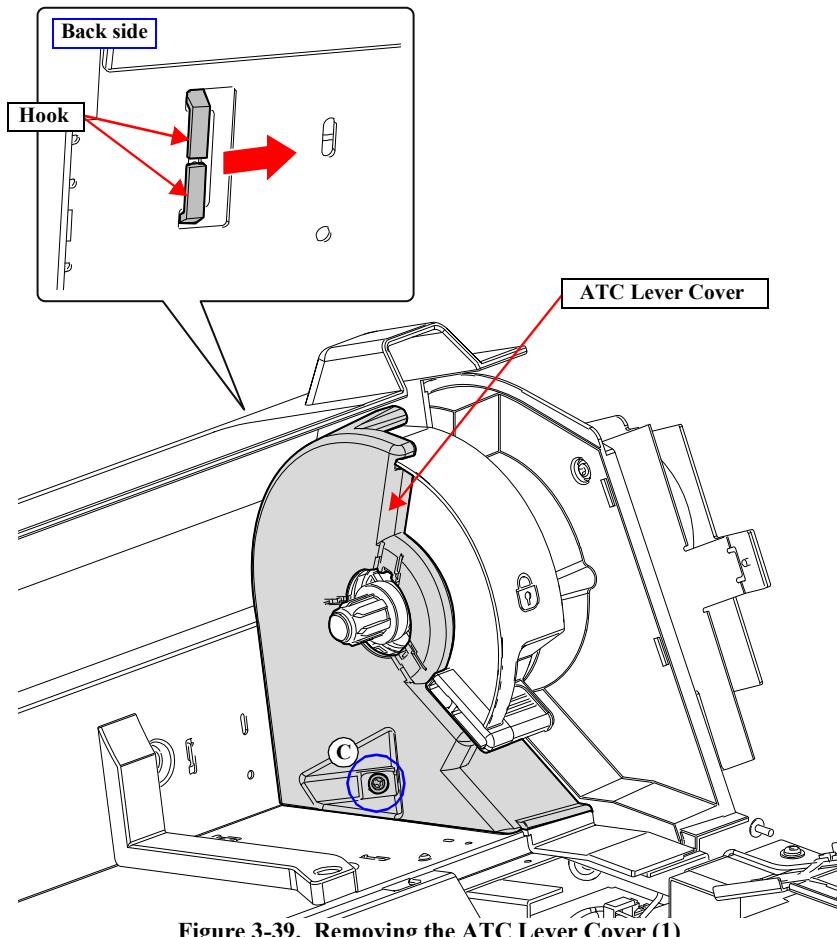
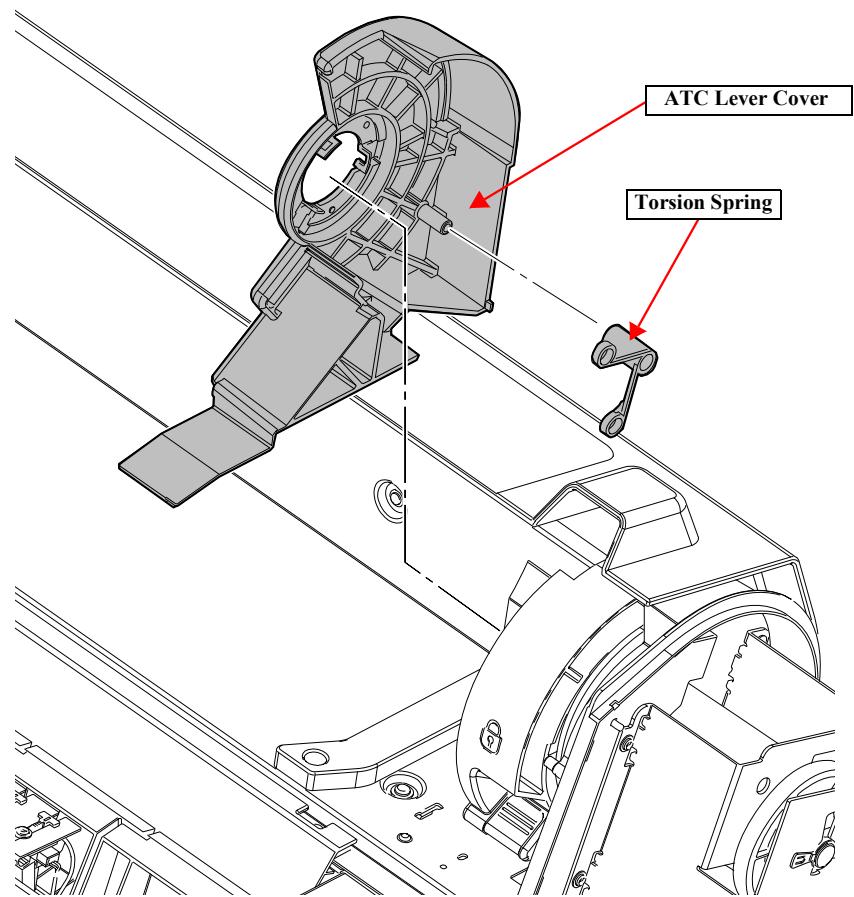


Figure 3-38. Removing the Roll Paper Edge Guide

10. Remove the screw that secures the ATC Lever Cover.
C) Silver M3x6 Cup S-tite screw: 1 pc
11. Slide the ATC Lever Cover to disengage the hook.



12. Remove the ATC Lever Cover and Torsion Spring.



13. Remove the ATC Lever.

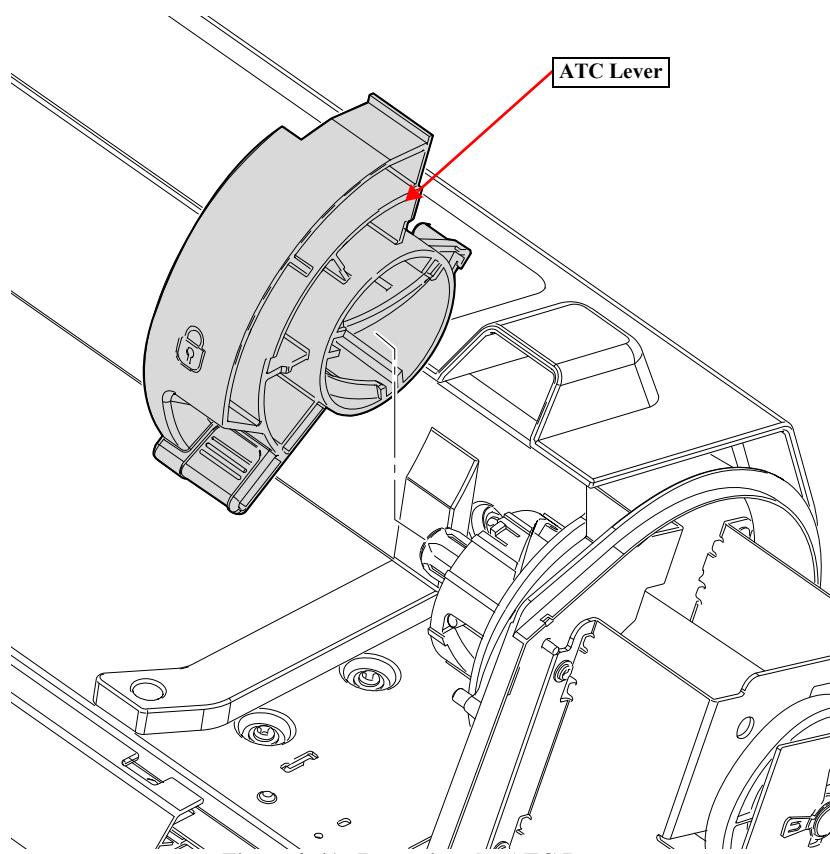


Figure 3-41. Removing the ATC Lever

14. Remove the Roll Paper Guide.

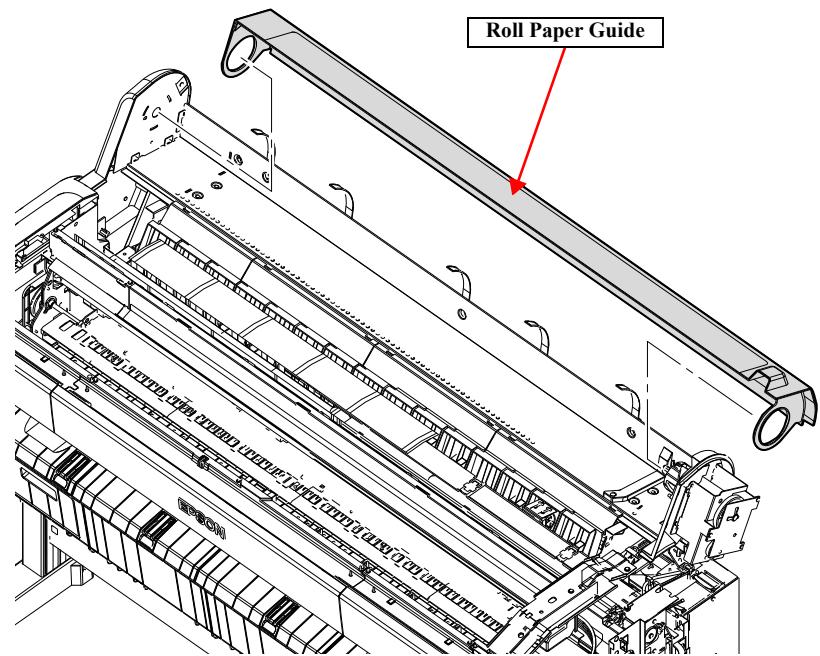


Figure 3-42. Removing the Roll Paper Guide

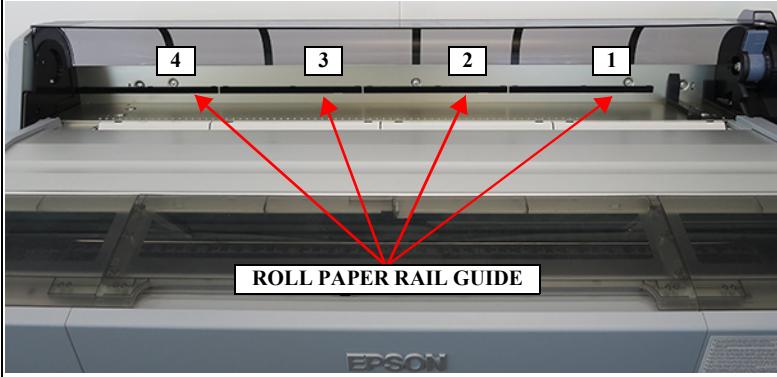
3.4.2.15 ROLL PAPER RAIL GUIDE



CHECK

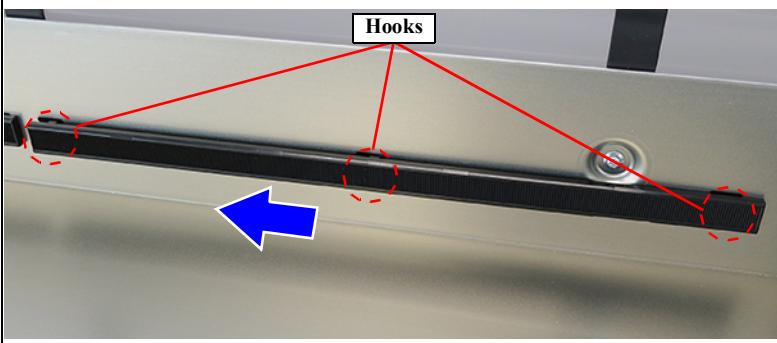
Remove the four ROLL PAPER RAIL GUIDES from the right to the left. They cannot be removed in the reverse order. It is also impossible to remove the middle one first. When reinstalling them, install them from the left to the right.

- Removal order 1 => 2 => 3 => 4
- Installation order 4 => 3 => 2 => 1



ASSEMBLY

While pressing the three hook positions shown below, slide the ROLL PAPER RAIL GUIDE leftward to install it.



1. While pinching and pulling the portion of the ROLL PAPER RAIL GUIDE as shown below to disengage the dowel, slide the ROLL PAPER RAIL GUIDE to the right to remove it.

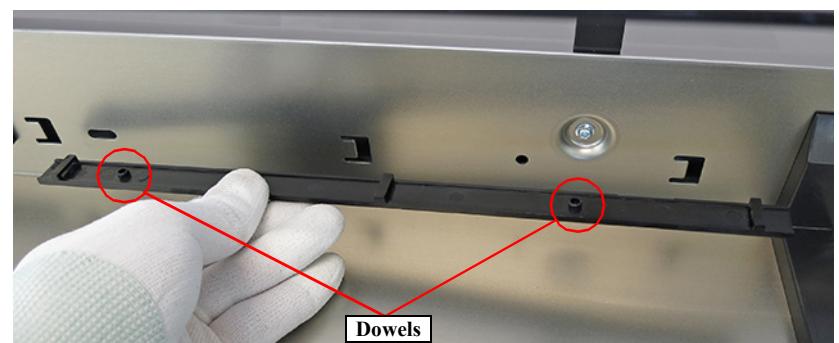


Figure 3-43. Removing the ROLL PAPER RAIL GUIDE

3.4.2.16 REAR ROLL COVER FRAME

1. Remove the nine screws, and remove the REAR ROLL COVER FRAME.



Place the REAR ROLL COVER FRAME so that it will come on all the four tabs of the R Side Roll Frame and L Side Roll Frame.

ASSEMBLY

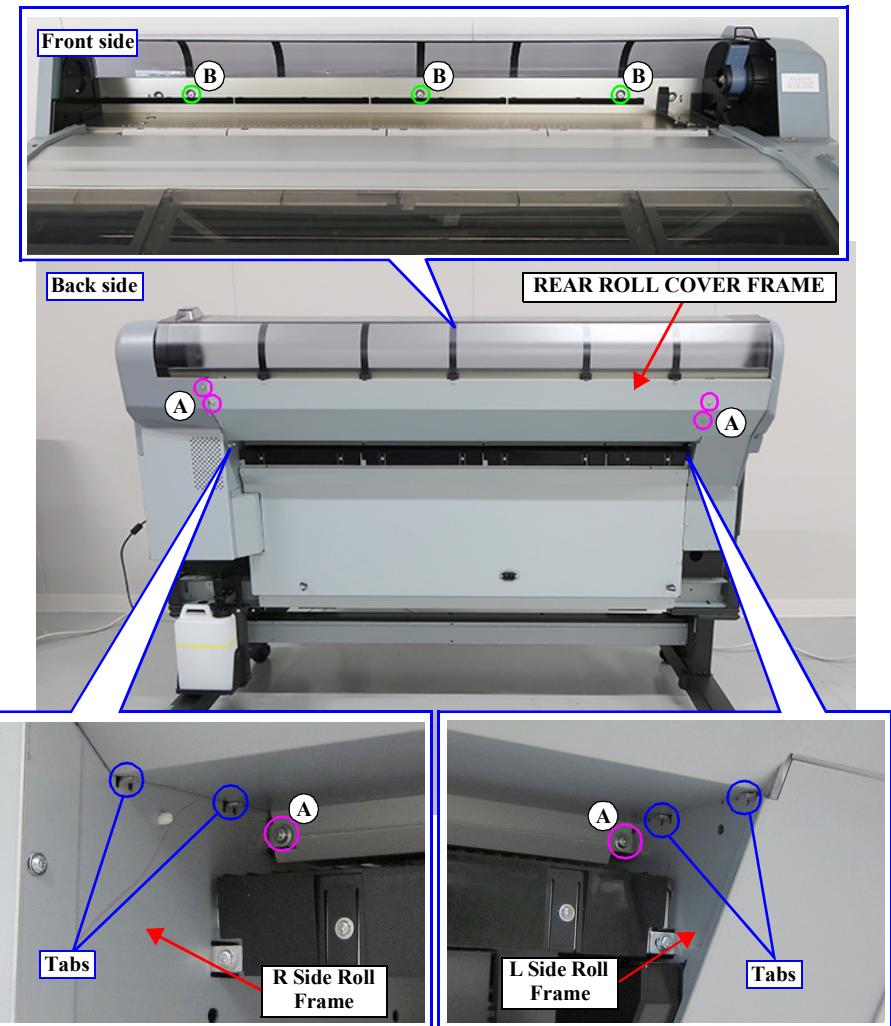


Figure 3-44. Removing the REAR ROLL COVER FRAME

3.4.2.17 INTERLOCK SWITCH

1. Remove the UPPER LEFT COVER. (p176)
2. Remove the UPPER SUPPORT R COVER. (p167)
3. Remove the PANEL ASSY. (p202)
4. Remove the TOP COVER. (p164)
5. Remove the MAINTENANCE COVER SENSOR. (p168)
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. (p171)
7. Remove the RIGHT LOWER COVER. (p173)
8. Remove the FRONT COVER. (p165)
9. Remove the MAIN BOARD FRAME. (p198)
10. Remove the screw, and remove the INTERLOCK SWITCH.
A) Silver M3x8 S-tite screw with built-in washer: 1 pc
11. Release the cable from the eight clamps at front side.



Insert the hook of the INTERLOCK SWITCH to the hole on the Front Support Frame.

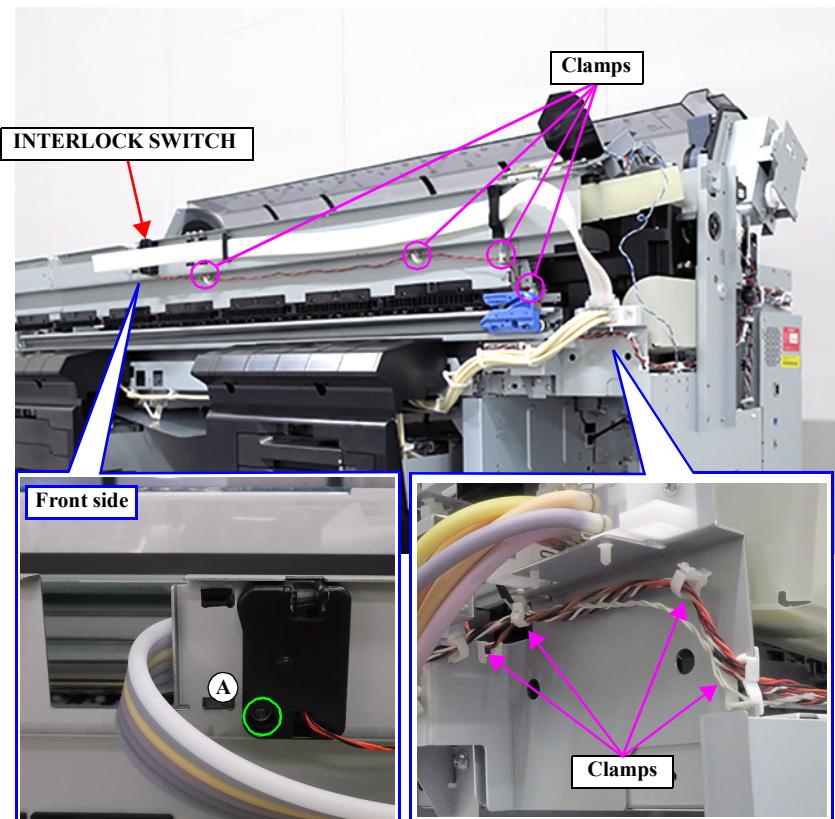
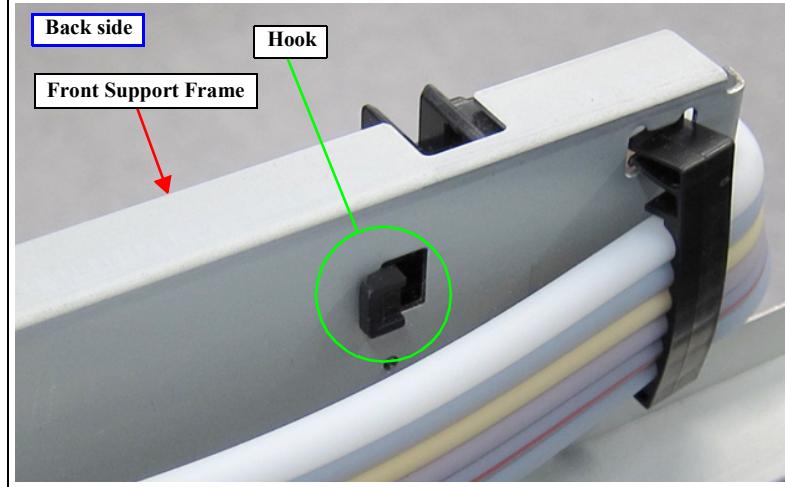


Figure 3-45. Removing the INTERLOCK SWITCH (1)

12. Remove the cable from the connector (CN209) of the MAIN BOARD.
13. Release the cable from the seven clamps.

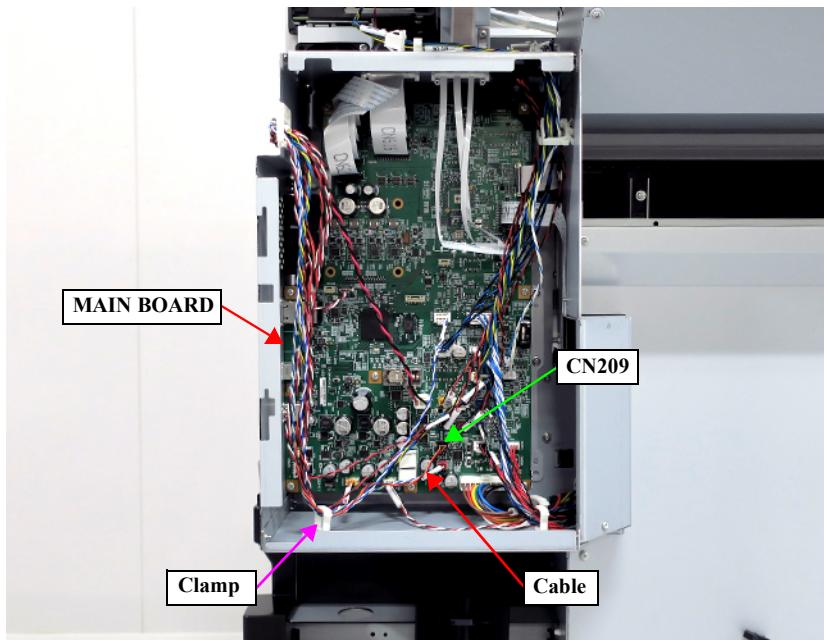


Figure 3-46. Releasing the Cable (MAIN BOARD)

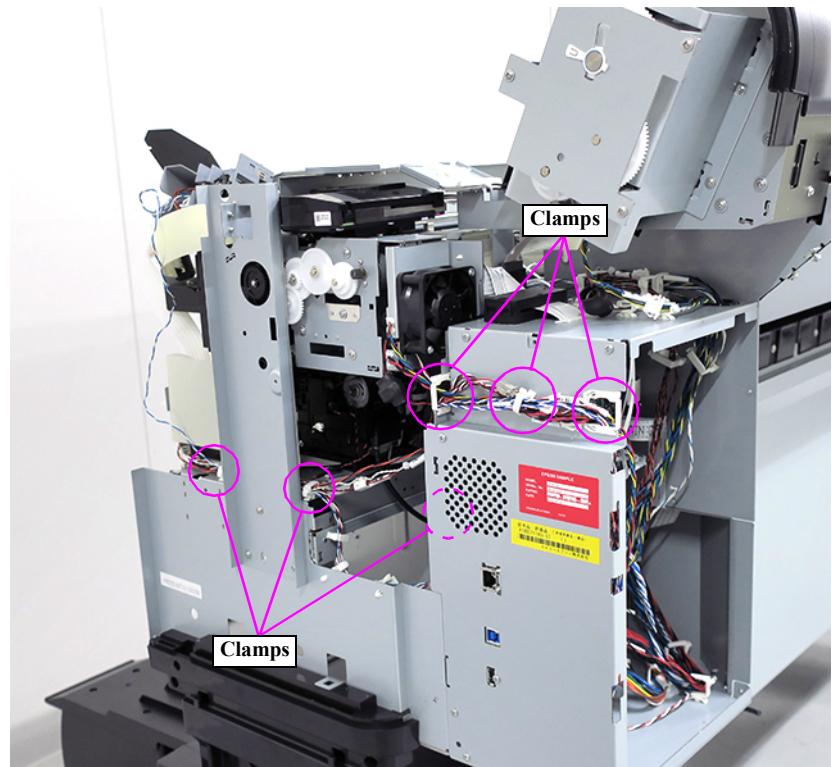


Figure 3-47. Releasing the Cable (Right side)

3.4.2.18 REAR LEFT LOWER FRAME

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
3. Remove the four screws.
 - A) Silver M3x8 Cup S-tite screw: 3 pcs
 - B) Silver M4x12 P-tite screw with built-in washer: 1 pc

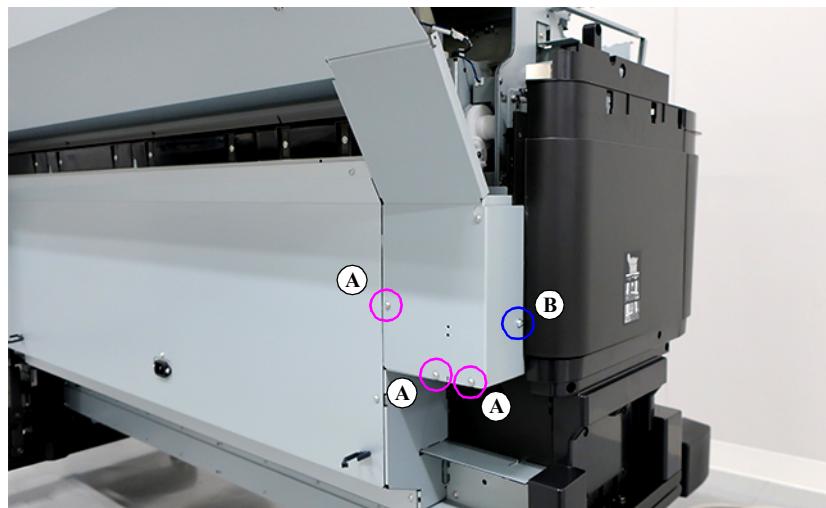


Figure 3-48. Removing the REAR LOWER FRAME (1)

4. Remove the screw, and remove the REAR LEFT LOWER FRAME.

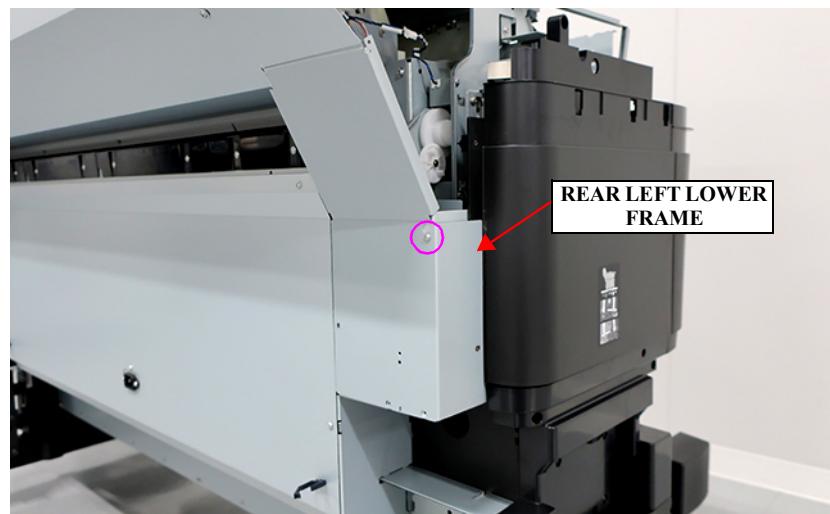


Figure 3-49. Removing the REAR LOWER FRAME (2)

3.4.2.19 TEMP. & HUMIDITY SENSOR

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the cable from the connector.
5. Remove the screw, and remove the TEMP. & HUMIDITY SENSOR.
A) Silver M3x6 Bind machine screw: 1 pc

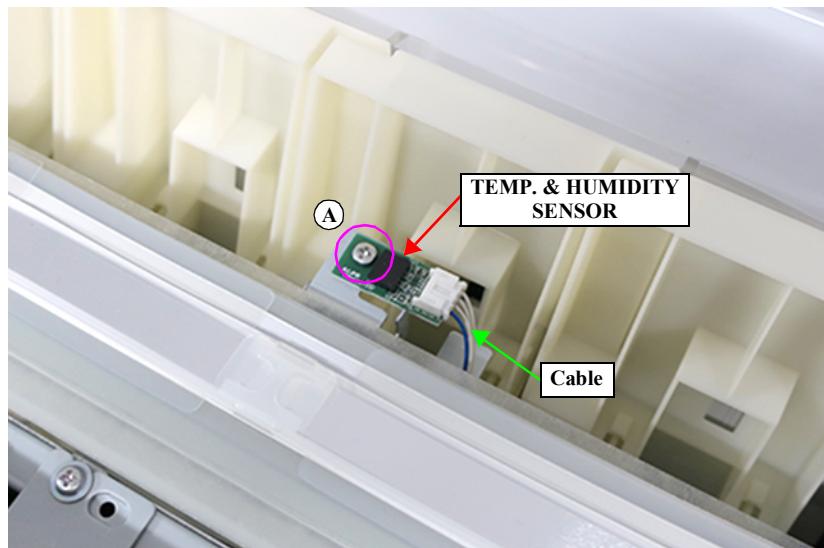


Figure 3-50. Removing the TEMP. & HUMIDITY SENSOR

3.4.2.20 TRAY



When removing the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER, remove only the TRAY on the right side. When removing the PAPER GUIDE LEFT / INK HOLDER LEFT COVER, remove only the TRAY on the left side.

1. Release the lock and pull the TRAY.

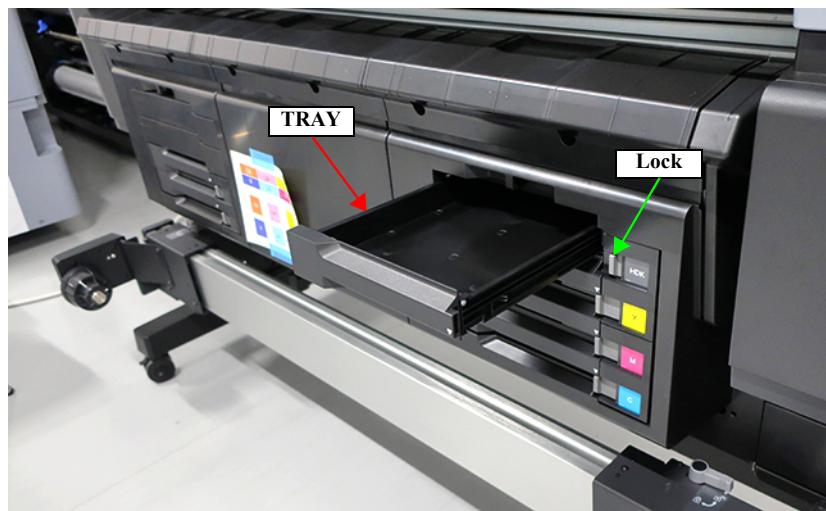


Figure 3-51. Removing the TRAY (1)

2. Remove the remaining TRAY in the same way.



Figure 3-52. Removing the TRAY (2)

3.4.2.21 PAPER GUIDE MIDDLE / FRONT LOWER COVER

1. Remove the four screws.
 - A) Silver M3x6 Cup S-tite screw: 2 pcs
 - B) Silver M4x8 Cup S-tite screw: 2 pcs

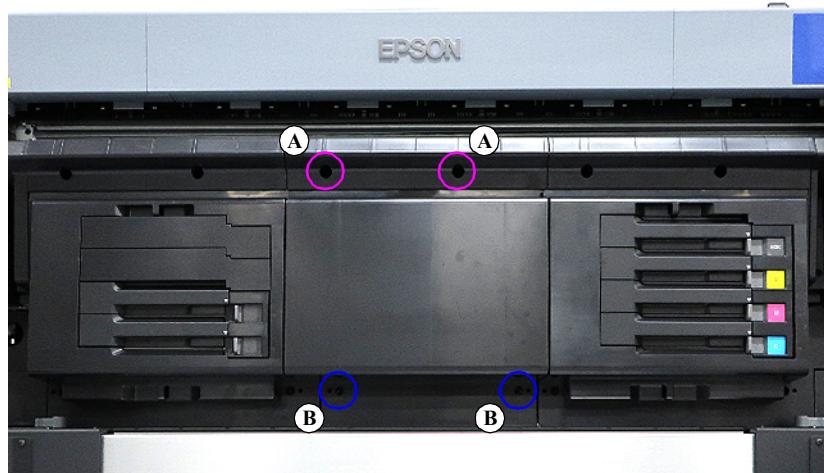


Figure 3-53. Removing the PAPER GUIDE MIDDLE / FRONT LOWER COVER (1)

2. Pull out the PAPER GUIDE MIDDLE / FRONT LOWER COVER.



Figure 3-54. Removing the PAPER GUIDE MIDDLE / FRONT LOWER COVER (2)

- Separate the PAPER GUIDE MIDDLE from the FRONT LOWER COVER.

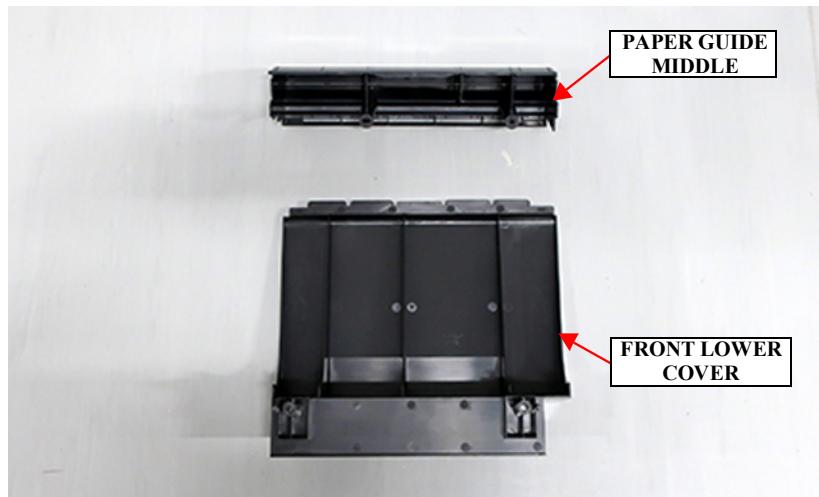


Figure 3-55. Removing the PAPER GUIDE MIDDLE / FRONT LOWER COVER (3)



Assemble the PAPER GUIDE MIDDLE and FRONT LOWER COVER, and install it to the printer.

3.4.2.22 FRONT RIGHT LOWER COVER ASSY

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Open the FRONT RIGHT LOWER COVER.
6. Remove the four screws, and remove the FRONT RIGHT LOWER COVER ASSY.
A) Silver M3x8 Cup S-tite screw: 4 pcs



Figure 3-56. Removing the FRONT RIGHT LOWER COVER ASSY

3.4.2.23 PAPER GUIDE LEFT / INK HOLDER LEFT COVER

1. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
2. Remove the TRAY. ([p190](#))
3. Remove the four screws.
 - A) Silver M3x6 Cup S-tite screw: 2 pcs
 - B) Silver M4x8 Cup S-tite screw: 2 pcs

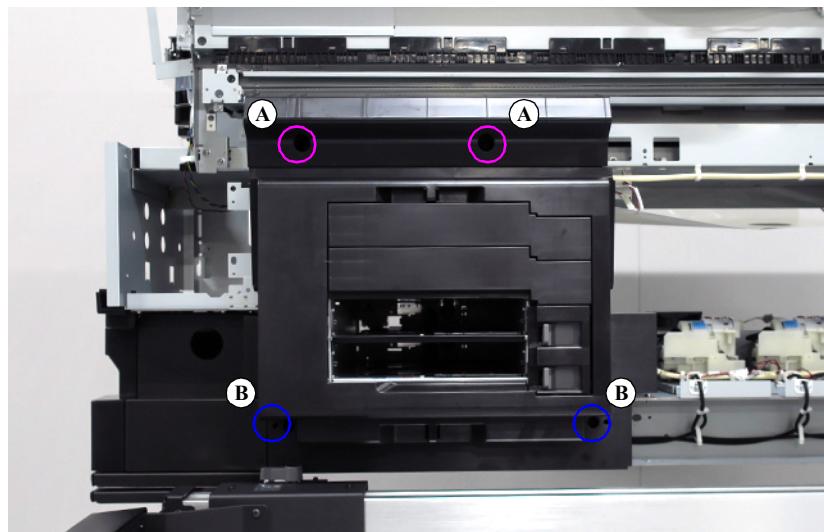


Figure 3-57. Removing the PAPER GUIDE LEFT / INK HOLDER LEFT COVER (1)

4. Pull out the PAPER GUIDE LEFT / INK HOLDER LEFT COVER.

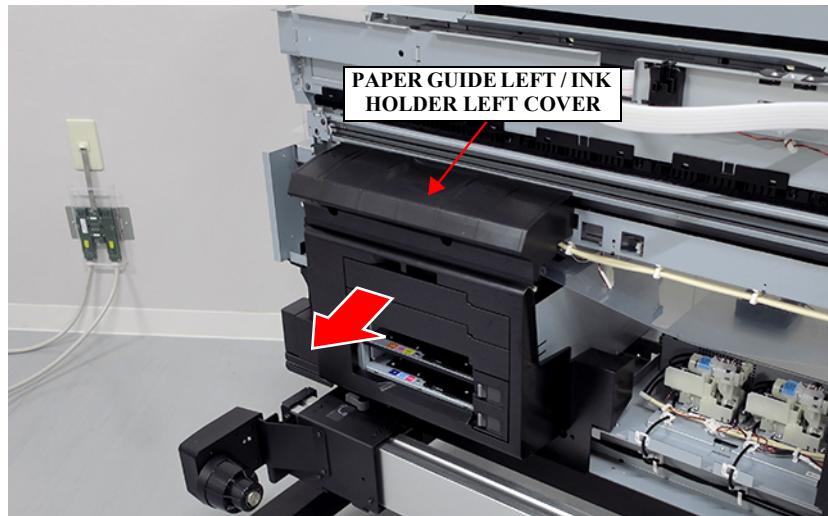


Figure 3-58. Removing the PAPER GUIDE LEFT / INK HOLDER LEFT COVER (2)

5. Separate the PAPER GUIDE LEFT from the INK HOLDER LEFT.

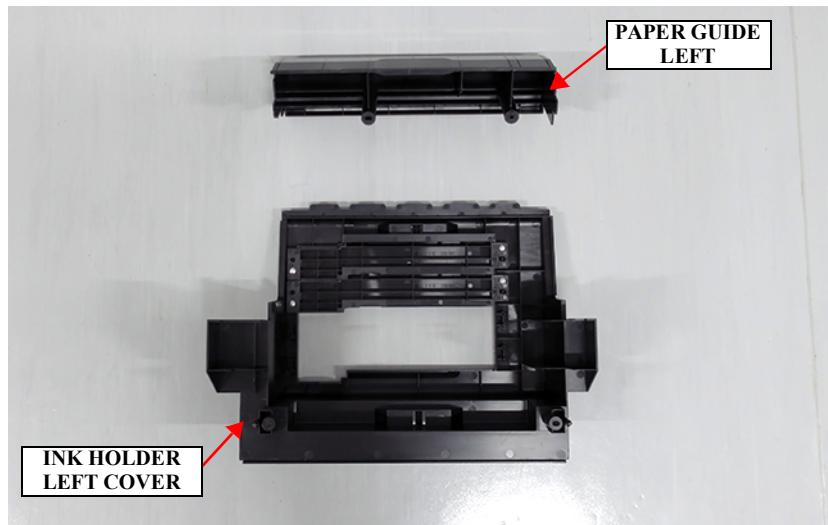


Figure 3-59. Removing the PAPER GUIDE LEFT / INK HOLDER LEFT COVER (3)



Assemble the PAPER GUIDE LEFT and INK HOLDER LEFT COVER, and install it to the printer.

ASSEMBLY

3.4.2.24 PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER

1. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
2. Remove the TRAY. ([p190](#))
3. Remove the four screws.
 - A) Silver M3x6 Cup S-tite screw: 2 pcs
 - B) Silver M4x8 Cup S-tite screw: 2 pcs

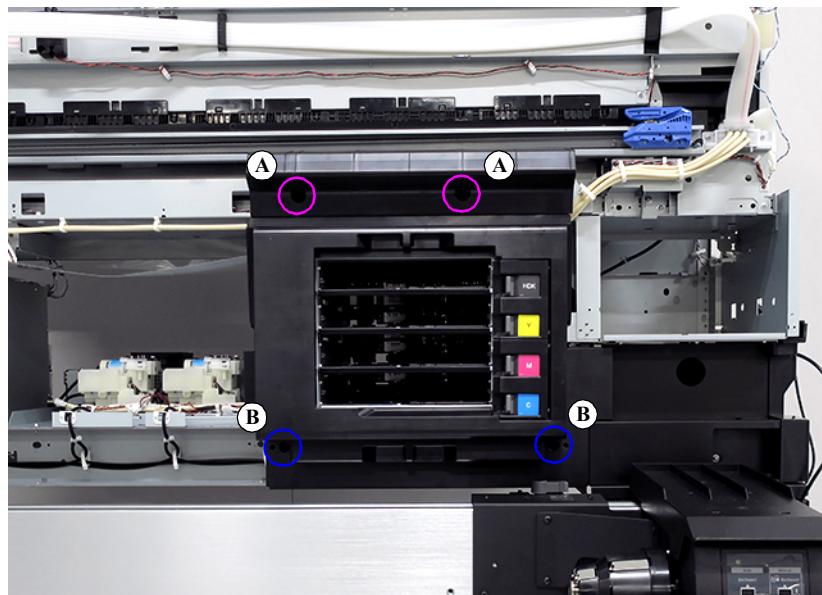


Figure 3-60. Removing the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER (1)

4. Pull out the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER.

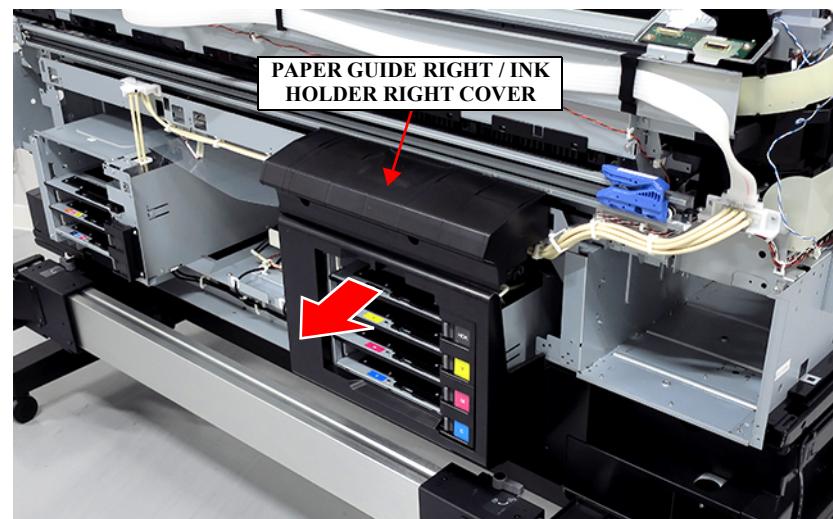


Figure 3-61. Removing the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER (2)

5. Separate the PAPER GUIDE RIGHT from the INK HOLDER RIGHT.

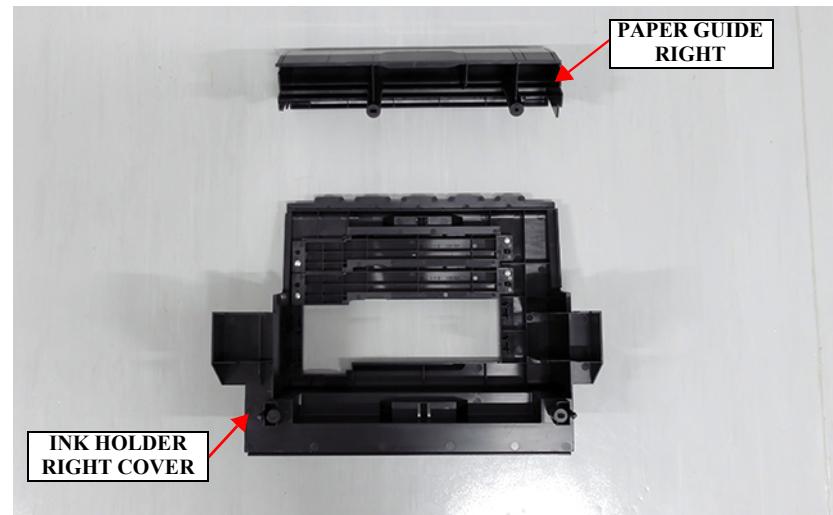


Figure 3-62. Removing the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER (3)



ASSEMBLY

Assemble the PAPER GUIDE RIGHT and INK HOLDER RIGHT COVER, and install it to the printer.

3.4.2.25 REAR LOWER FRAME

1. Remove the seven screws.
 - A) Silver M3x6 Cup S-tite screw: 7 pcs
2. Disengage the four hooks, and remove the REAR LOWER FRAME.

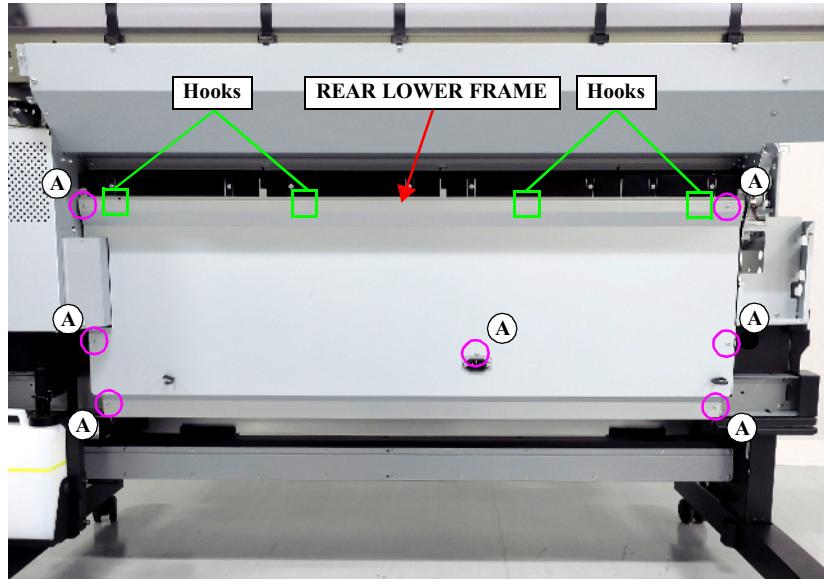


Figure 3-63. Removing the REAR LOWER FRAME

3.4.2.26 MAIN BOARD FRAME

1. Remove the four screws, and remove the MAIN BOARD FRAME.
 - A) Silver M3x6 Bind machine screw: 4 pcs



Figure 3-64. Removing the MAIN BOARD FRAME

3.4.3 Electric Circuit Components

3.4.3.1 MAIN BOARD



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the MAIN BOARD FRAME. ([p198](#))
2. While lifting the connector lock (CN35), remove the FFC.
3. Remove all the cables and FFCs connected to the MAIN BOARD.

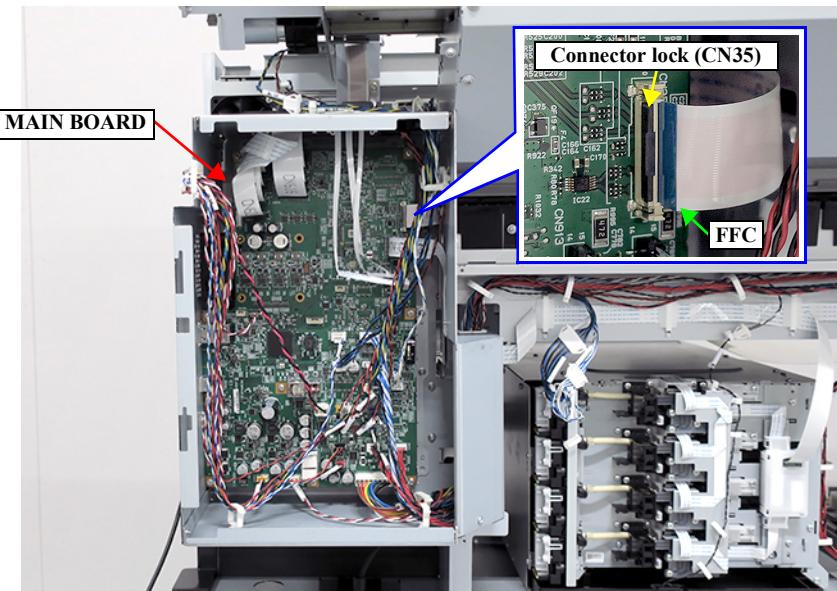


Figure 3-65. Removing the MAIN BOARD (1)

4. Remove the ten screws.

- A) Silver M3x6 Bind machine screw: 10 pcs

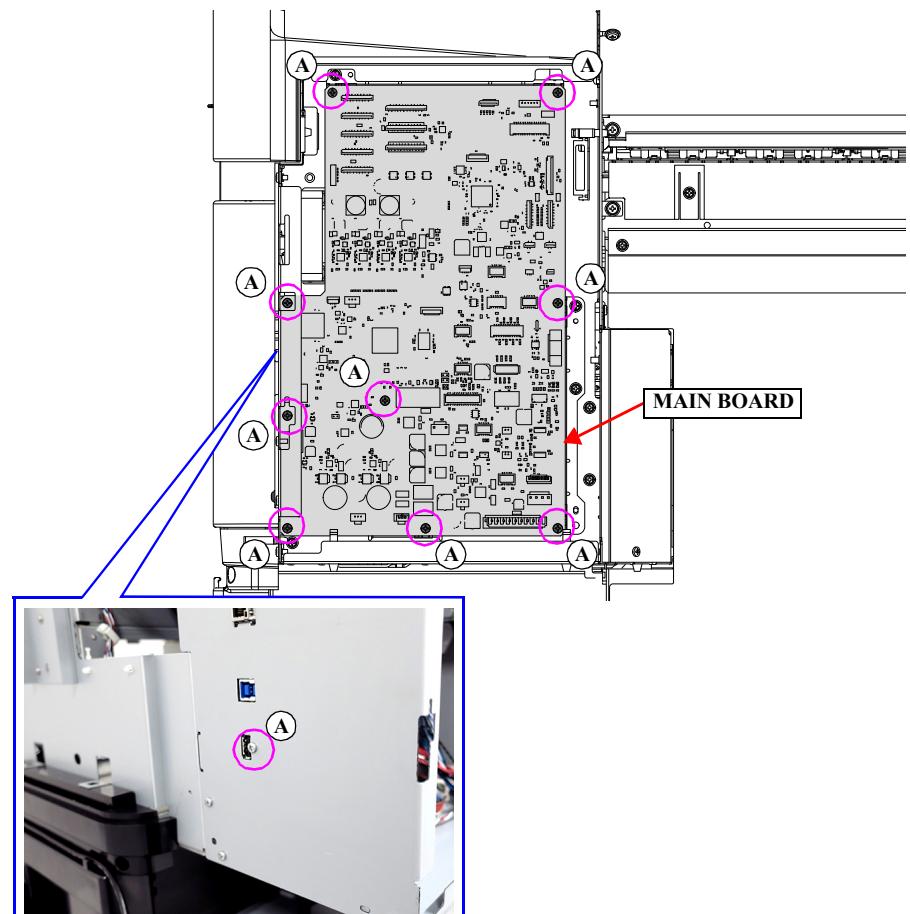


Figure 3-66. Removing the MAIN BOARD (2)

5. Slightly slide MAIN BOARD to the direction of the arrow to shift the connector of CN200 from the hole of the frame, and remove the MAIN BOARD.

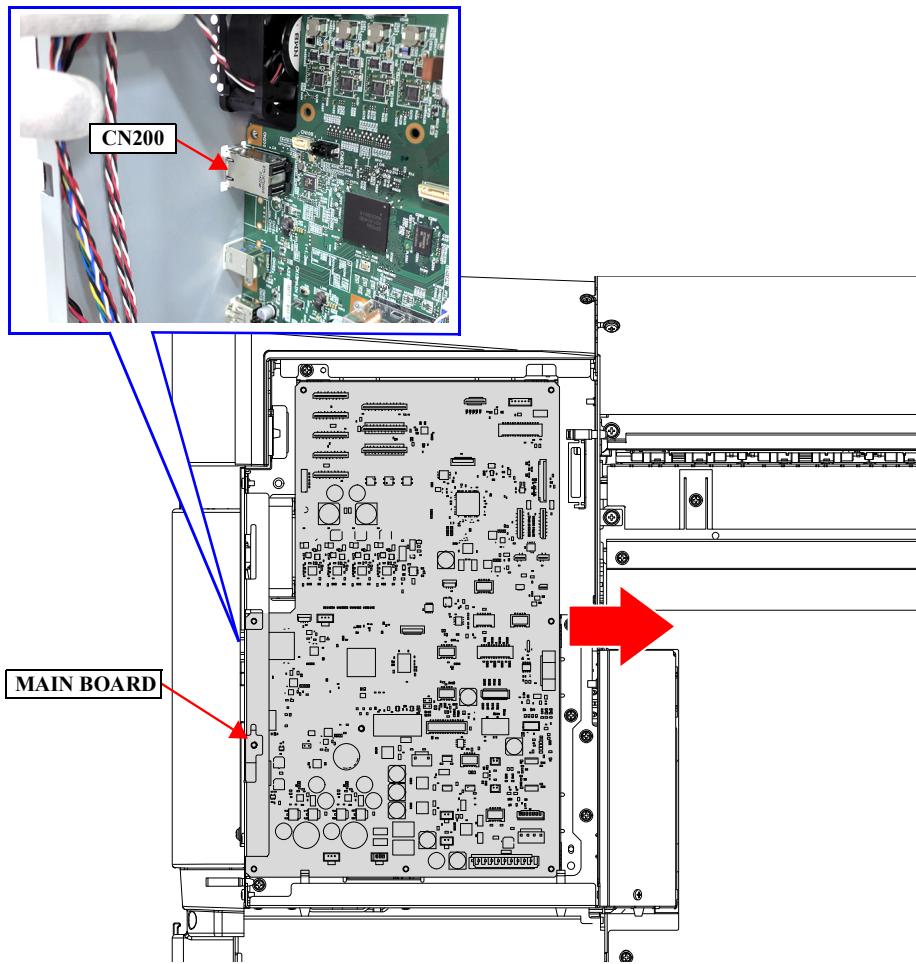


Figure 3-67. Removing the MAIN BOARD (3)

3.4.3.2 POWER SUPPLY UNIT



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the REAR LOWER FRAME. ([p198](#))
 2. Remove the PS FAN. ([p211](#))
 3. Release the cable from the clamp.
 4. Remove the four screws, and remove the frame.
- A) Silver M3x8 Cup S-tite screw: 4 pcs

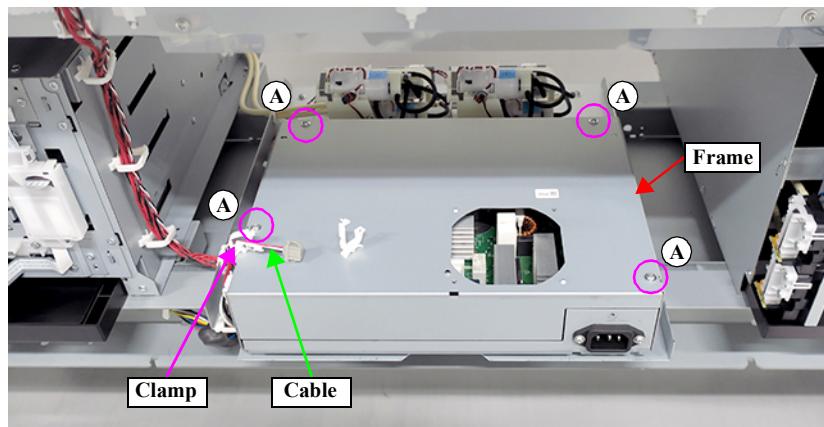


Figure 3-68. Removing the POWER SUPPLY UNIT (1)

5. Remove the cables from the connectors (CN3 and CN4) of the Power Supply Board.
6. Release the cable from the two clamps.

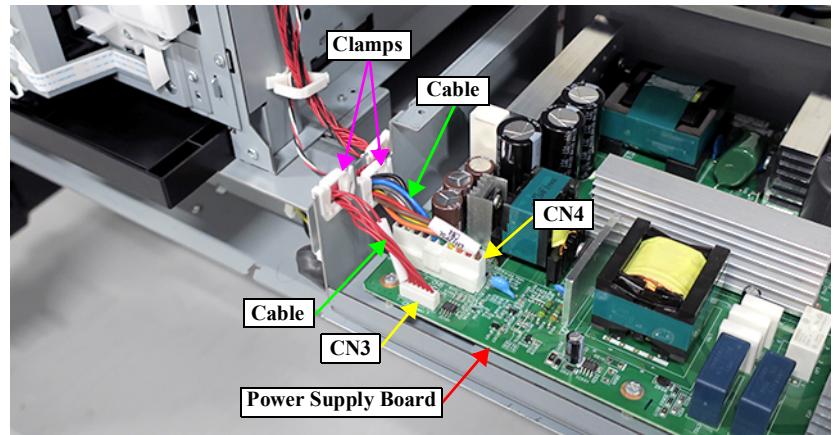


Figure 3-69. Removing the POWER SUPPLY UNIT (2)

7. Remove the screw, and pull out the POWER SUPPLY UNIT.
- B) Silver M3x8 Cup S-tite screw: 1 pc

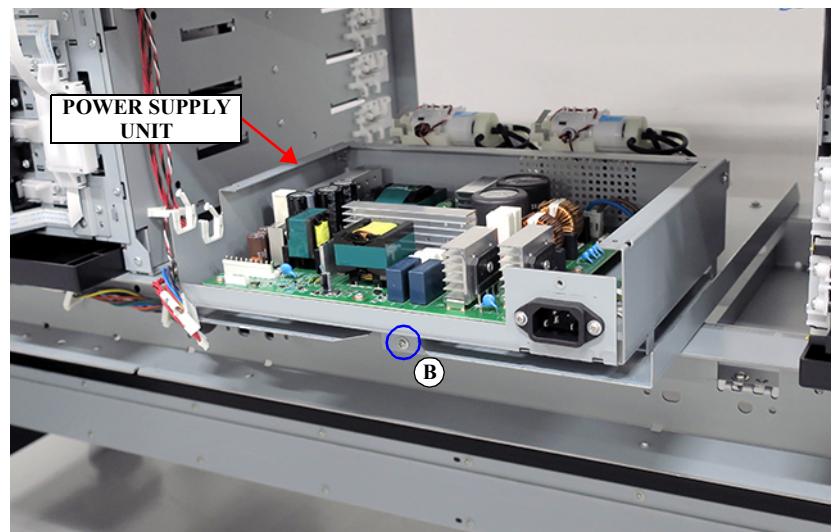


Figure 3-70. Removing the POWER SUPPLY UNIT (3)

3.4.3.3 PANEL ASSY

1. Open the MAINTENANCE COVER.
2. Flip the film.

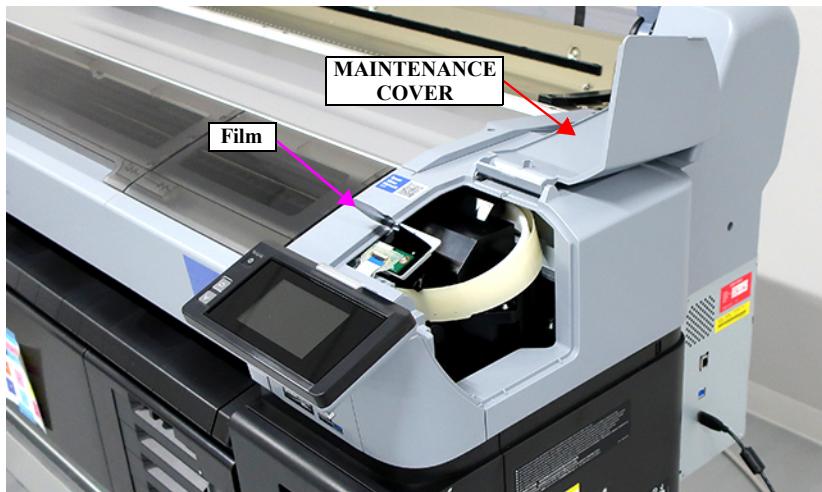


Figure 3-71. Removing the PANEL ASSY (1)

3. While lifting the connector lock, remove the panel FFC.
4. Remove the screw.
 - A) Silver M3x8 Cup S-tite screw: 1 pc

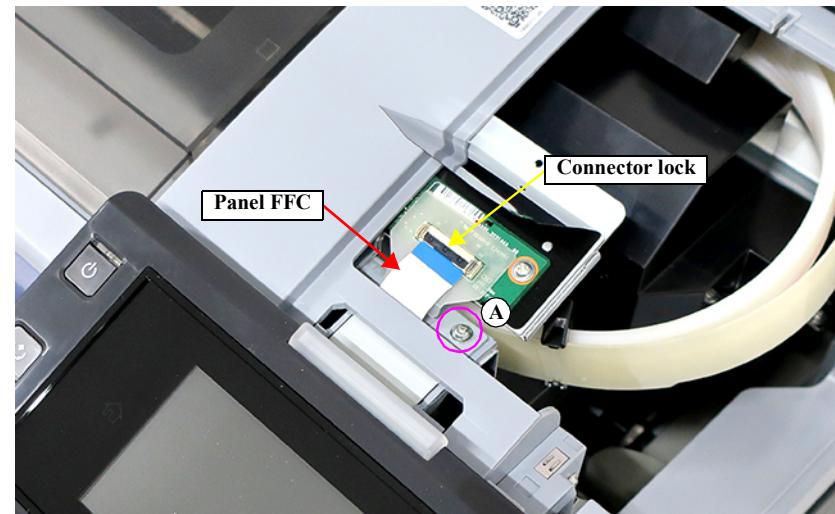


Figure 3-72. Removing the PANEL ASSY (2)

5. Remove the screw.
B) Silver M3x8 Cup S-tite screw: 1 pc
6. Slide and remove the PANEL ASSY.



Figure 3-73. Removing the PANEL ASSY (3)

3.4.3.4 PANEL RELAY BOARD

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. While lifting the connector lock, remove the FFC.
8. Remove the two screws, and remove the PANEL RELAY BOARD.
A) Silver M3x8 Cup S-tite screw: 2 pcs

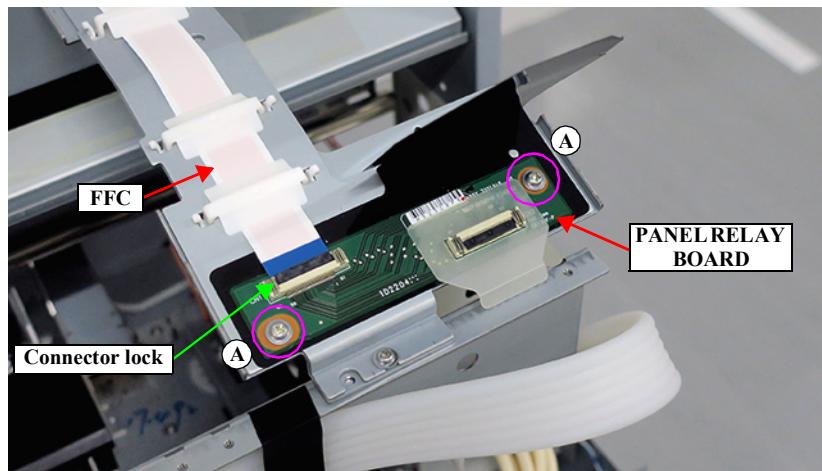


Figure 3-74. Removing the PANEL RELAY BOARD

3.4.3.5 CR MOTOR COOLING FAN

1. Remove the PANEL ASSY. ([p202](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
4. Remove the MAIN BOARD FRAME. ([p198](#))
5. Remove the cable from the relay connector.
6. Release the cable from the clamp.
7. Remove the two screws, and remove the CR MOTOR COOLING FAN.
 - A) Silver M3x30 Bind machine screw: 2 pcs

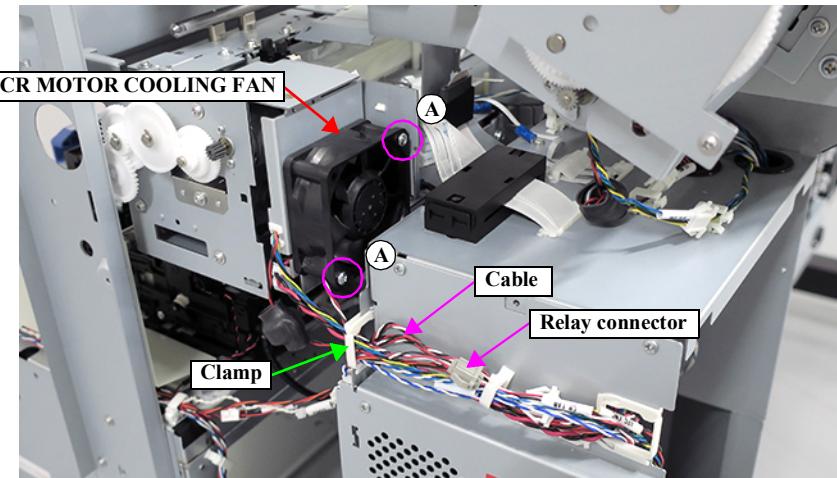
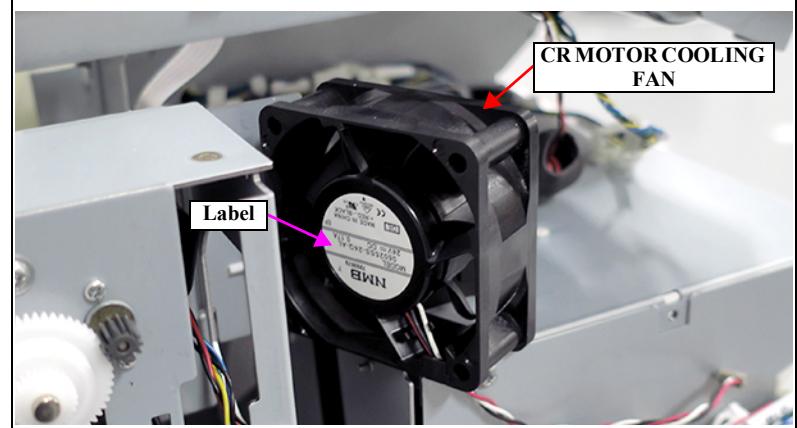


Figure 3-75. Removing the CR MOTOR COOLING FAN



Install it with the surface where the label is pasted facing the front.



3.4.3.6 SUCTION FAN LEFT



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
2. Remove the TRAY. ([p190](#))
3. Remove the PAPER GUIDE LEFT / INK HOLDER LEFT COVER. ([p194](#))
4. Loosen the screw and remove the film.
5. Remove the cable from the relay connector.

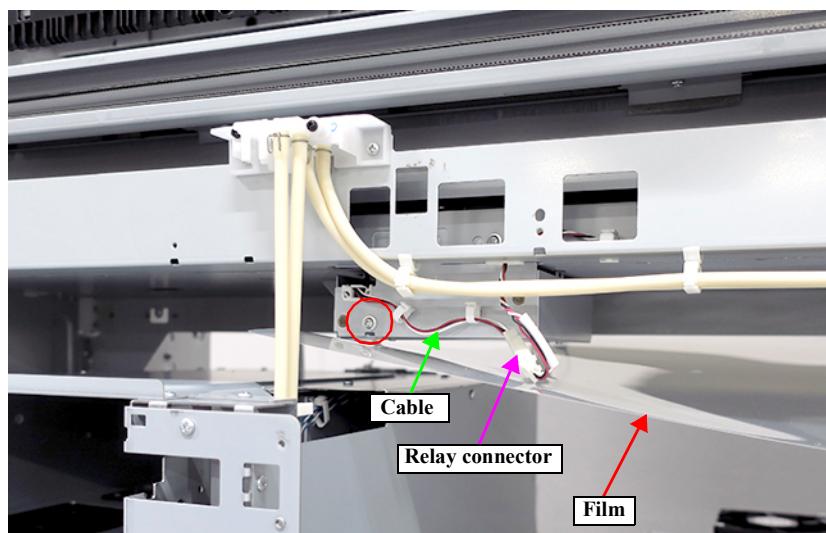


Figure 3-76. Removing the SUCTION FAN LEFT (1)

6. Loosen the screw.
7. Slide the SUCTION FAN LEFT Assy to the front side, and disengage the four hooks to remove it.

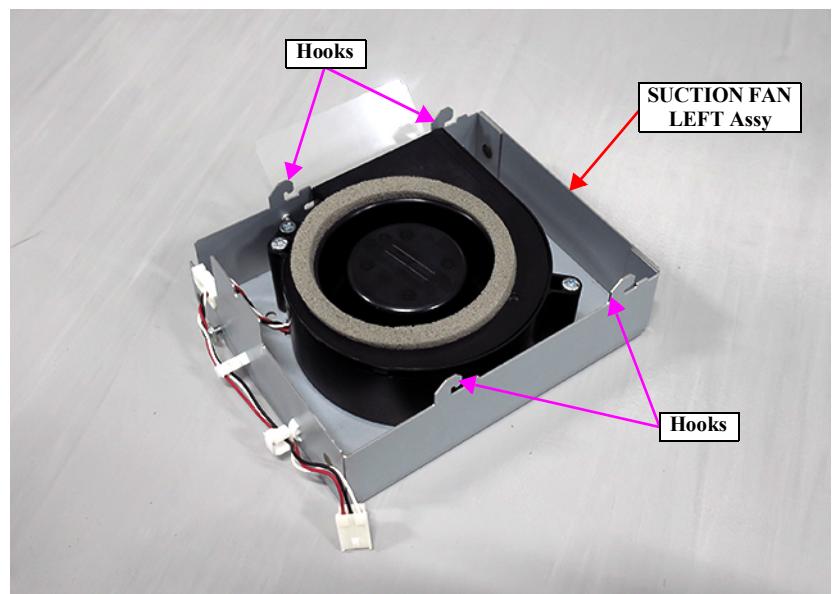
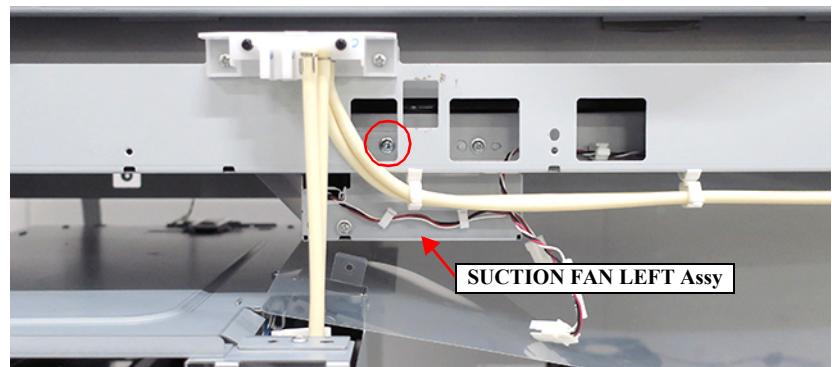


Figure 3-77. Removing the SUCTION FAN LEFT (2)



When this part is removed to remove the INK HOLDER LEFT, the following steps are not required.

8. Release the cable from the three clamps.
9. Remove the two screws, and remove the SUCTION FAN LEFT.
 - A) Silver M3x35 Bind machine screw: 2 pcs

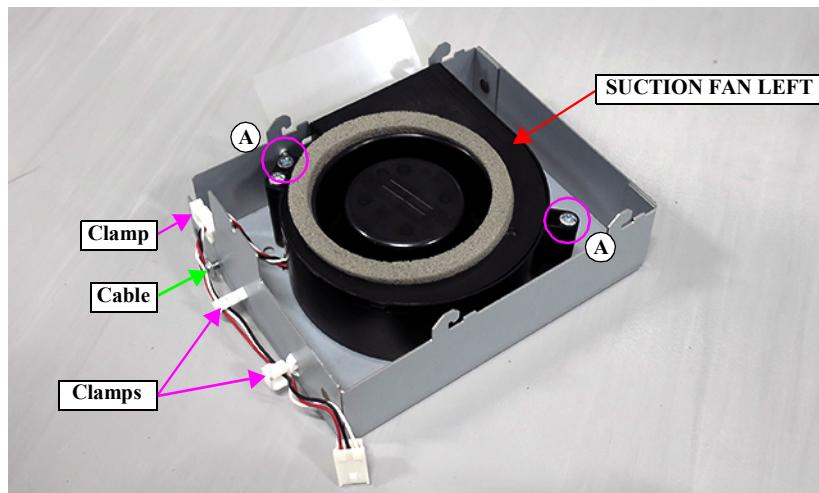


Figure 3-78. Removing the SUCTION FAN LEFT (3)

3.4.3.7 SUCTION FAN RIGHT



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
2. Remove the TRAY. ([p190](#))
3. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))
4. Loosen the screw and remove the film.
5. Remove the cable from the relay connector.

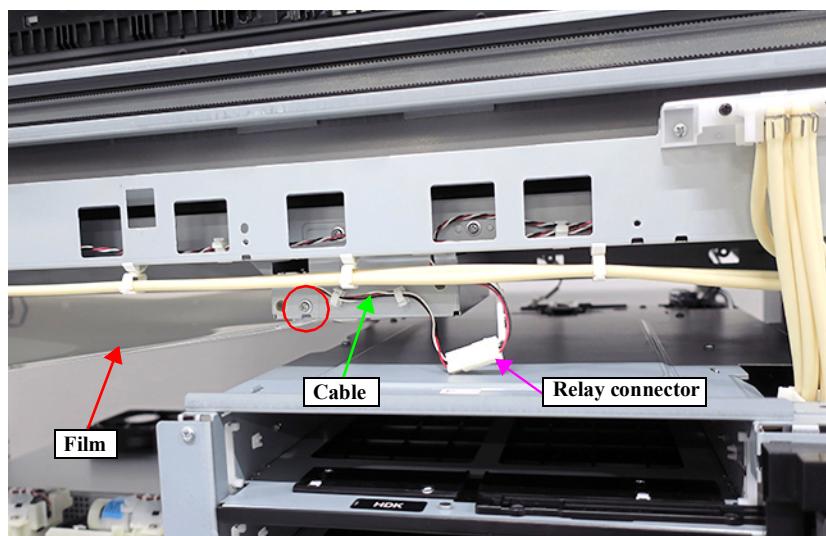


Figure 3-79. Removing the SUCTION FAN RIGHT (1)

6. Loosen the screw.
7. Slide the SUCTION FAN RIGHT Assy to the front side, and disengage the four hooks to remove it.

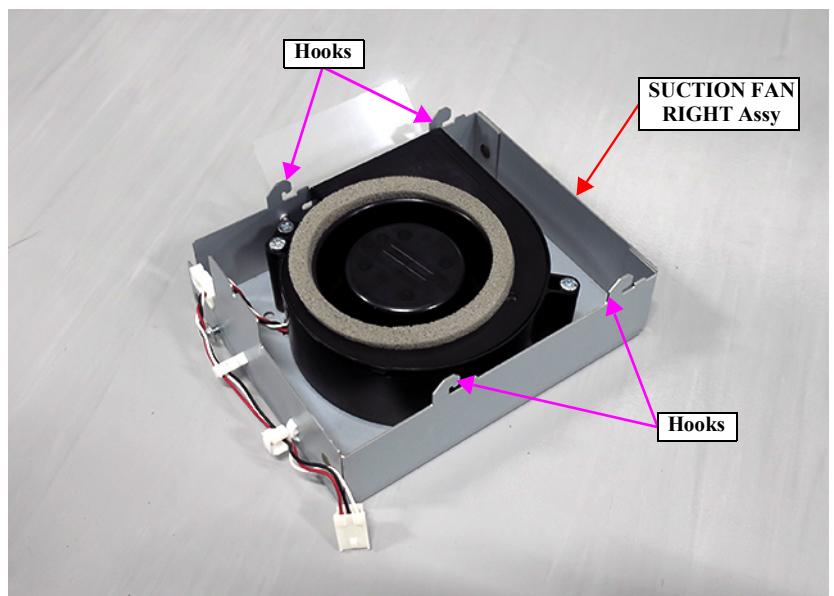
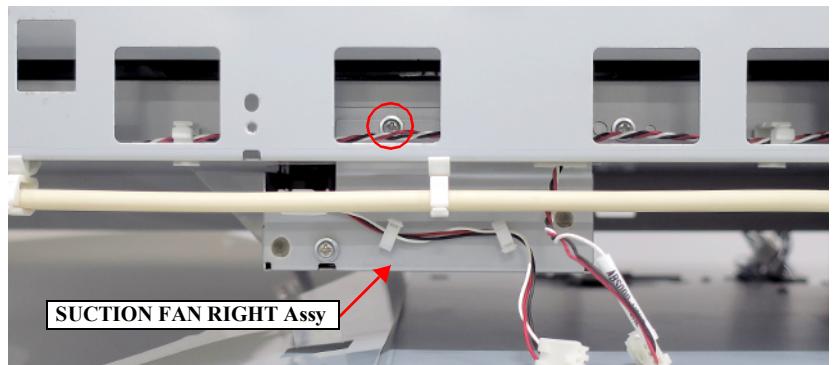


Figure 3-80. Removing the SUCTION FAN RIGHT (2)



When this part is removed to remove the INK HOLDER RIGHT, the following steps are not required.

8. Release the cable from the three clamps.
9. Remove the two screws, and remove the SUCTION FAN RIGHT.
 - A) Silver M3x35 Bind machine screw: 2 pcs

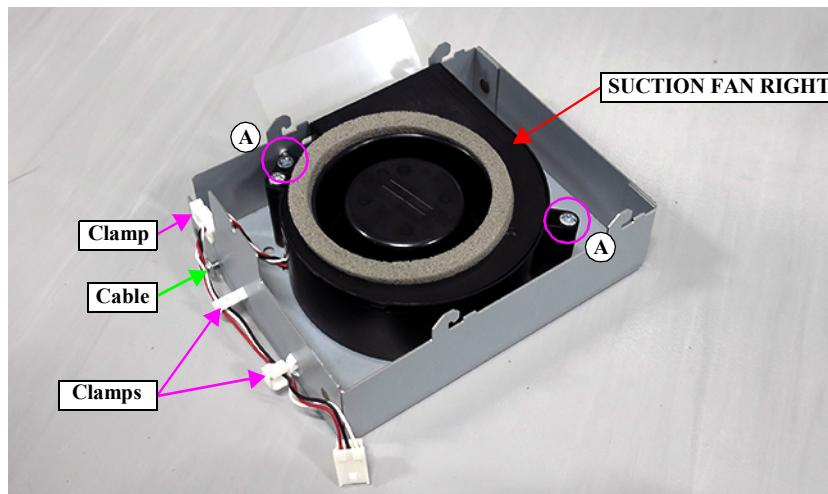


Figure 3-81. Removing the SUCTION FAN RIGHT (3)

3.4.3.8 MAIN BOARD COOLING FAN

1. Remove the MAIN BOARD FRAME. ([p198](#))
2. Release the cable from the three clamps.
3. Remove the seven screws, and remove the frame.
- A) Silver M3x6 Bind machine screw: 7 pcs

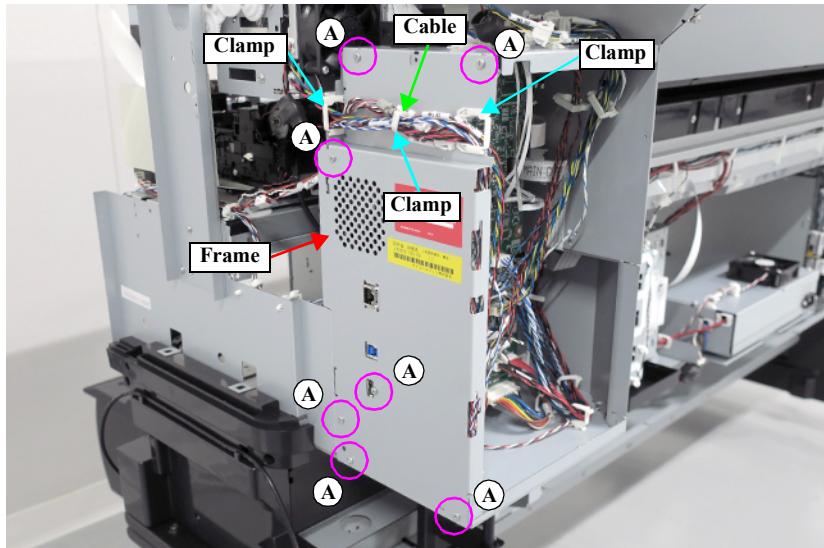


Figure 3-82. Removing the MAIN BOARD COOLING FAN (1)

4. Remove the cable from the connector (CN630) of the MAIN BOARD.
5. Remove the two screws, and remove the MAIN BOARD COOLING FAN.
- B) Silver M3x30 Bind machine screw: 2 pcs

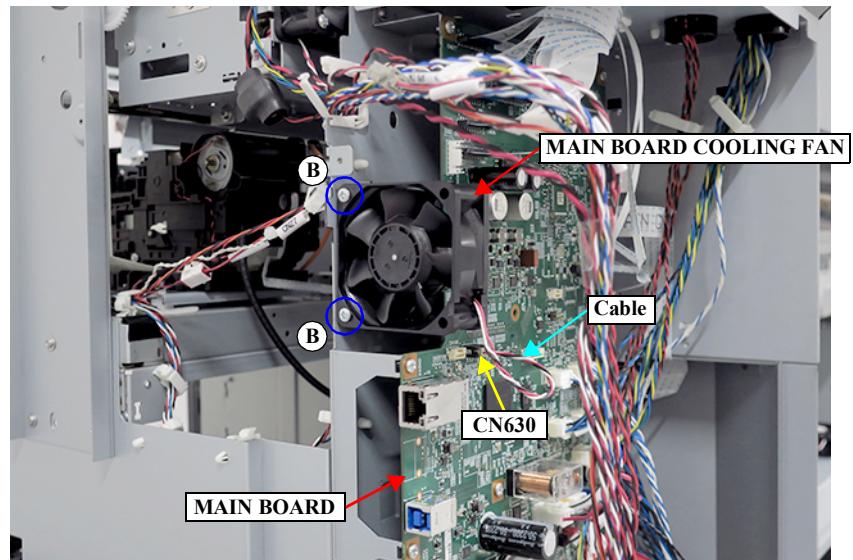
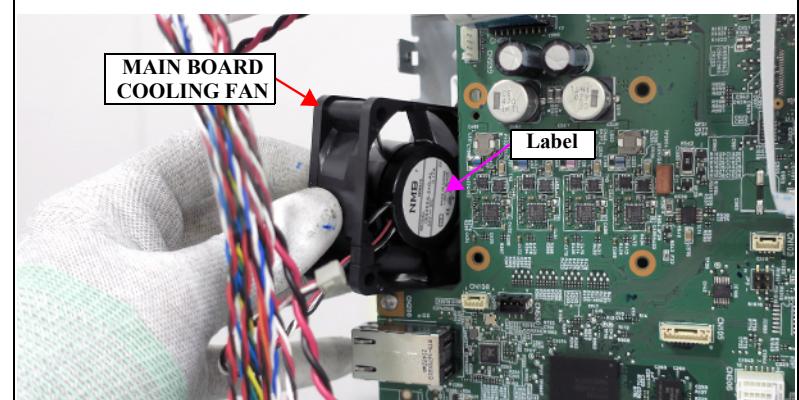


Figure 3-83. Removing the MAIN BOARD COOLING FAN (2)



Install it with the surface where the label is pasted facing inside.



3.4.3.9 PS FAN

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the cable from the relay connector.
3. Release the cable from the clamp.
4. Remove the two screws, and remove the PS FAN.
 - A) Silver M3x30 Bind machine screw: 2 pcs



Install it with the surface where the label is pasted facing upward
(See [Figure 3-84](#)).

ASSEMBLY

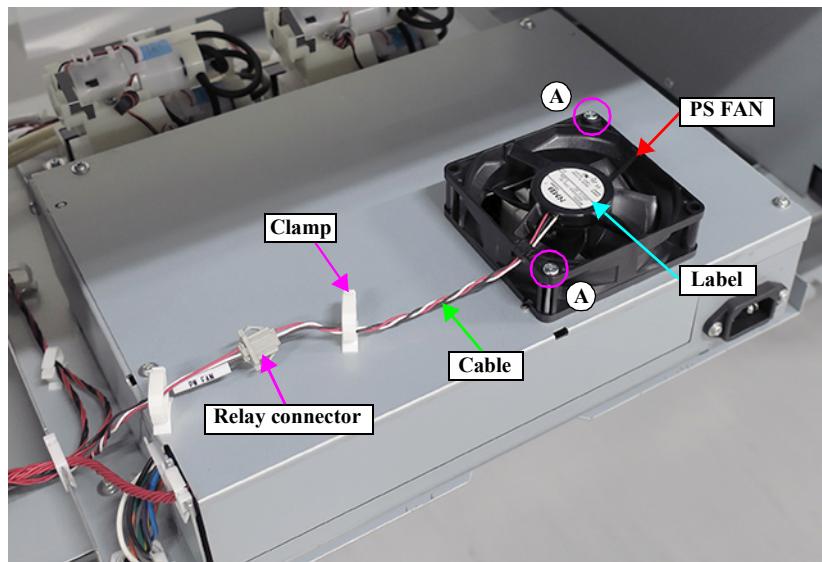


Figure 3-84. Removing the PS FAN

3.4.3.10 SUB BOARD

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Unlock the CR UNIT. ([p162](#))
5. Remove the CR COVER. ([p214](#))

6. Move the CR UNIT to the left end.
7. Remove the two screws, and remove the CR Front Frame.
 - A) Silver M3x8 S-tite screw with built-in washer: 2 pcs



Pay attention to the positioning points (See below figure, [Figure 3-85](#)).

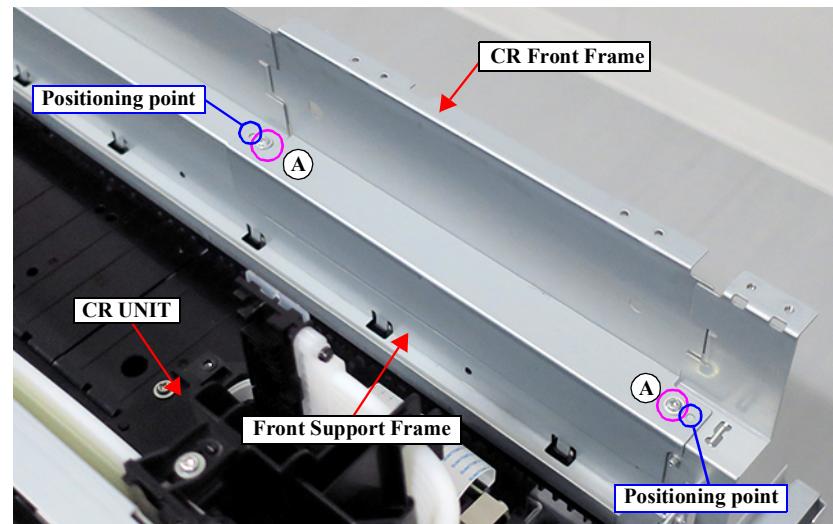
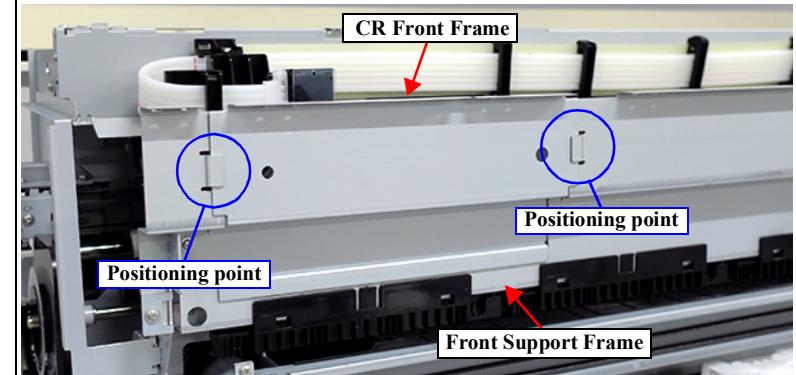


Figure 3-85. Removing the CR Front Frame

8. Disengage the two hooks of the Upper EJ Holder, and remove the Upper EJ Holder.

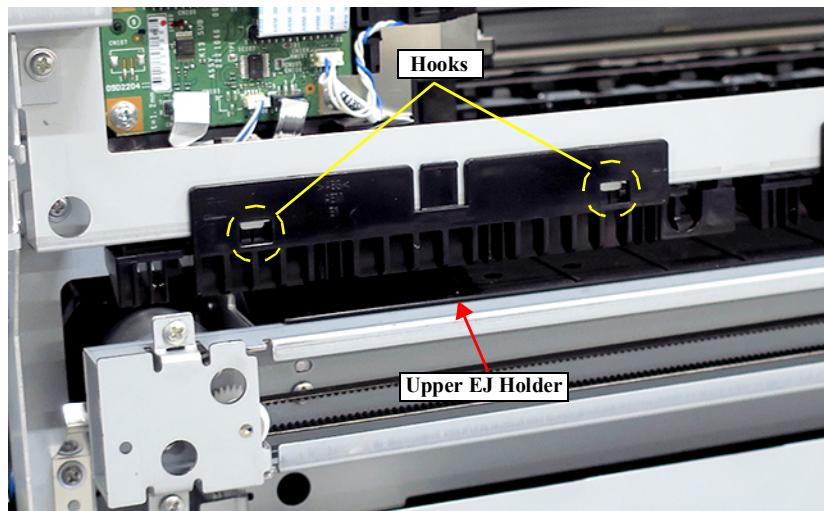


Figure 3-86. Removing the Upper EJ Holder

9. Disconnect all cables and FFCs connected to the SUB BOARD.
10. Remove the four screws, and remove the SUB BOARD.
 - B) Silver M3x8 Cup S-tite screw: 4 pcs

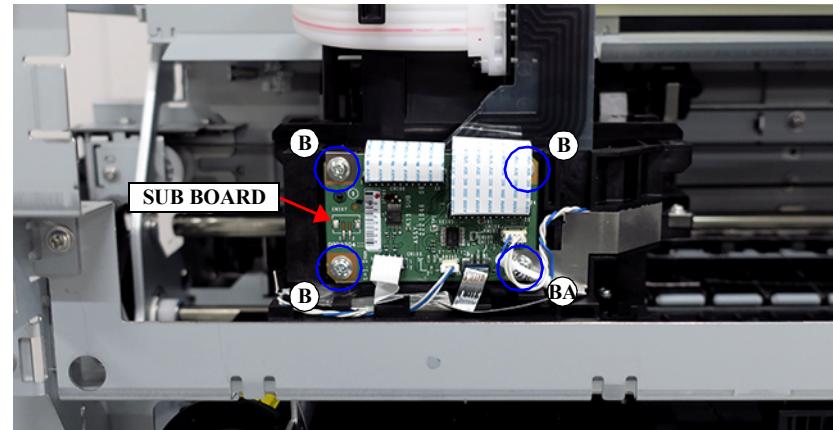
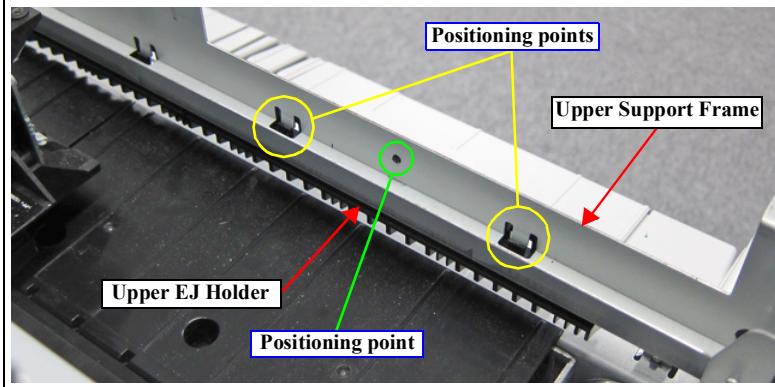


Figure 3-87. Removing the SUB BOARD



Pay attention to the positioning points (See below figure).



3.4.4 Carriage Mechanism / Ink System Mechanism

3.4.4.1 CR COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Unlock the CR UNIT. ([p162](#))
5. Move the CR UNIT on the platen.
6. Remove the two screws, and remove the CR COVER.
A) Silver M3x8 Cup S-tite screw: 2 pcs

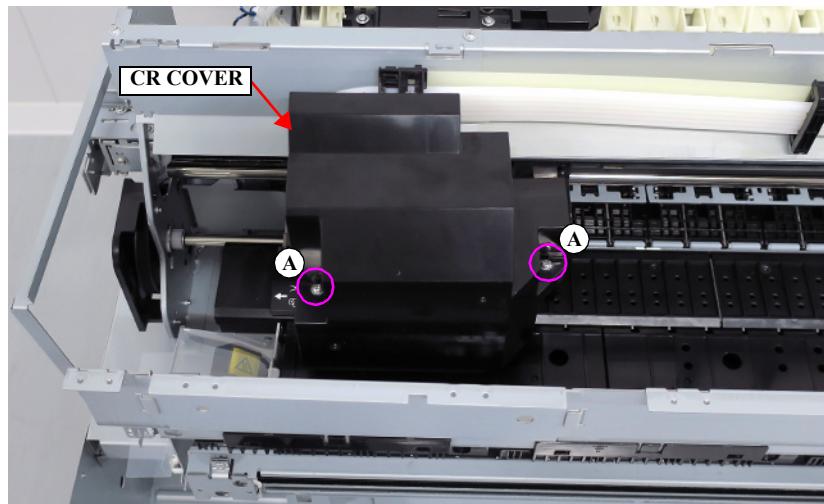


Figure 3-88. Removing the CR COVER

3.4.4.2 DUCT CR



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
5. Unlock the CR UNIT. ([p162](#))
6. Remove the CR COVER. ([p214](#))
7. Remove the three screws.
A) Silver M3x8 Cup S-tite screw: 3 pcs

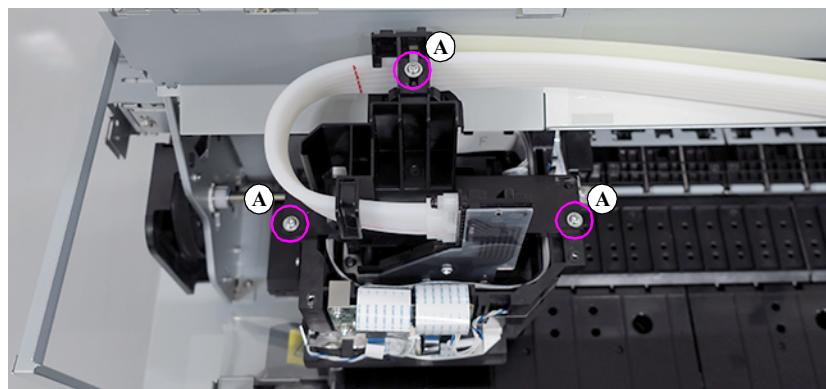


Figure 3-89. Removing the DUCT CR (1)

8. Release the dowel at the tube holder lower from the tube holder upper.
9. Release the INK TUBEfrom the tube holder lower.
10. Release the INK TUBEfrom the tube holder upper.



Align the line of the INK TUBEto the left edge of the tube holder upper.

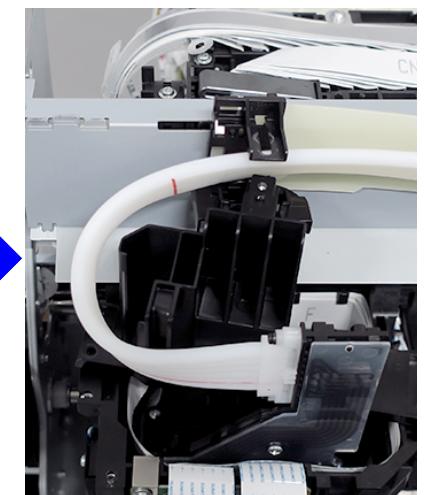
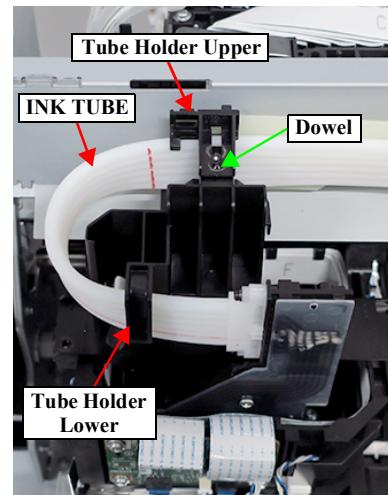
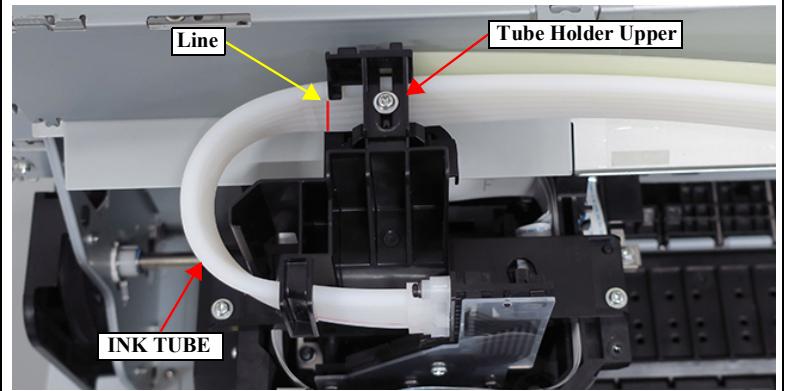


Figure 3-90. Removing the DUCT CR (2)



When this part is removed to remove another part, **Step 11** and **Step 12** are not required.



In the next step, ink may leak from the joint. Prepare a waste cloth or the like in advance.

11. Remove the two screws, and remove the INK TUBE.

- B) Black M2.5x18 S-tite screw with built-in washer: 2 pcs



Figure 3-91. Removing the DUCT CR (3)



■ Before installing the joint, make sure the seal rubber is attached to the flow path.



- Before attaching the seal rubber, let it get wet with cleaning liquid.
- Since the seal rubber cannot be reused, replace it with a new one.
- Using a torque screwdriver, tighten both the screws securing the Ink Tube twice alternately.
 - Specified torque: $0.29 \pm 0.01 \text{ Nm}$

12. Remove the seal rubber.



Figure 3-92. Removing the DUCT CR (4)

13. Remove the two screws, and remove the CR Front Frame.

- C) Silver M3x6 S-tite screw with built-in washer: 2 pcs



Pay attention to the positioning points (See below figure, Figure 3-103).

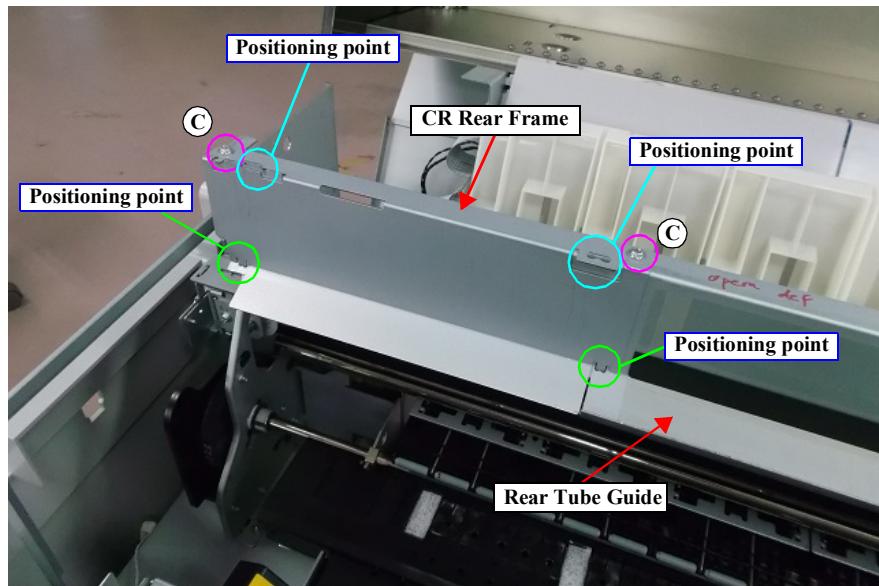
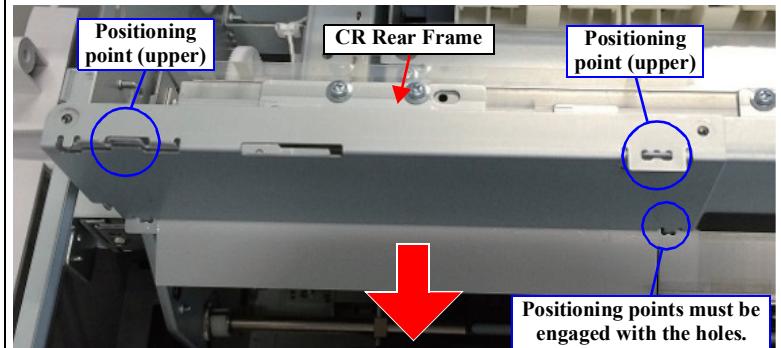


Figure 3-93. Removing the CR Rear Frame

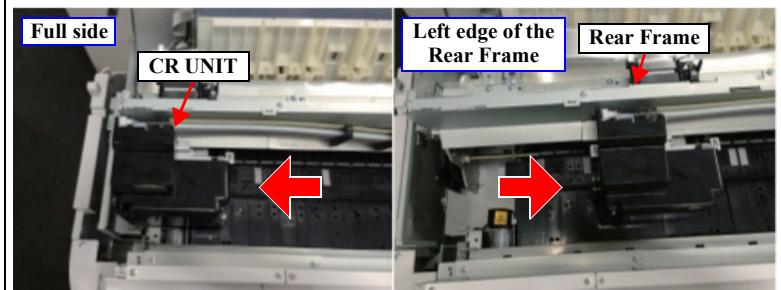


When installing the CR Rear Frame, check the following.

- Align the two positioning points (upper) and secure with two screws while pulling toward you.
- Make sure that two positioning points (lower) are engaged with the holes on the Rear Tube Guide.



- Move the CR UNIT from the left end of the Rear Frame to the full side and check from the side to make sure that FFC Protection Sheet and Rear Tube Guide are not interfering with each other.



14. Remove the four screws, and remove the DUCT CR.

- D) Silver M2.6x20 Bind machine screw: 4 pcs

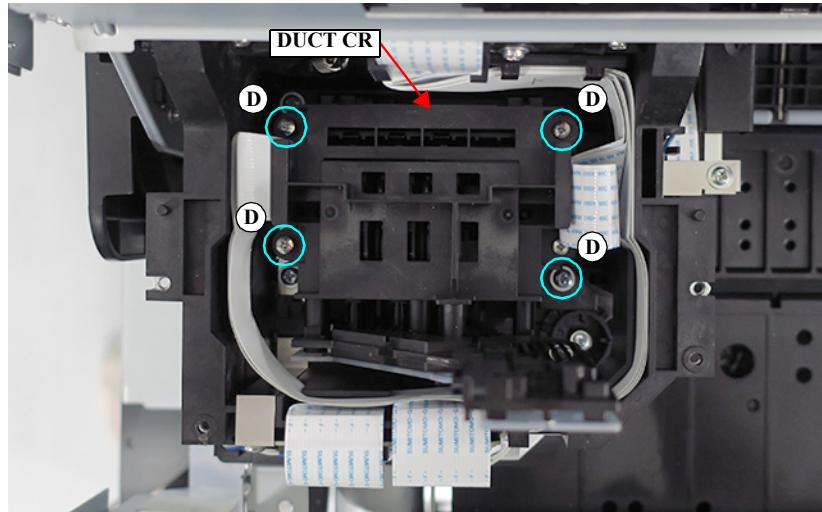


Figure 3-94. Removing the DUCT CR (5)

3.4.4.3 PRINT HEAD



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
5. Unlock the CR UNIT. ([p162](#))
6. Remove the CR COVER. ([p214](#))
7. Remove the DUCT CR. ([p215](#))
8. Remove the three screws, and remove the PRINT HEAD.

A) Silver M2.6x8 Bind machine screw: 3 pcs

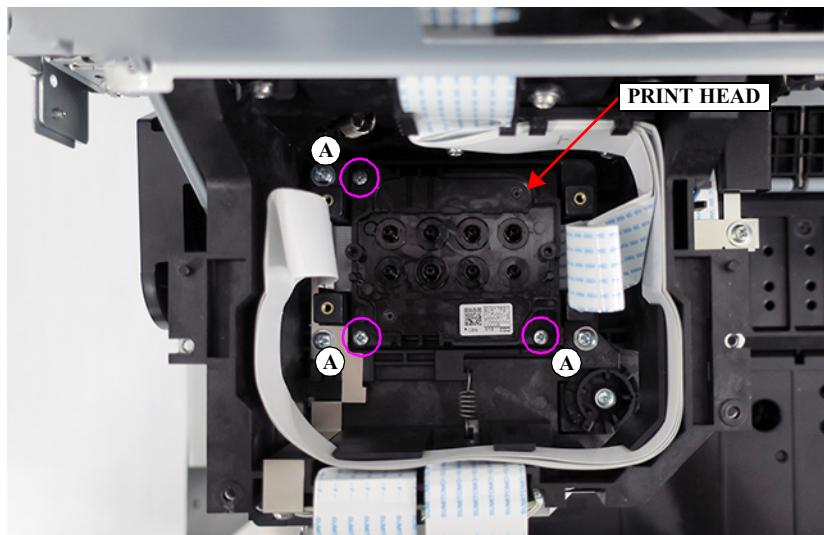


Figure 3-95. Removing the PRINT HEAD (1)

9. PRINT HEAD Remove the four HEAD FFCs from the connector of the PRINT HEAD.

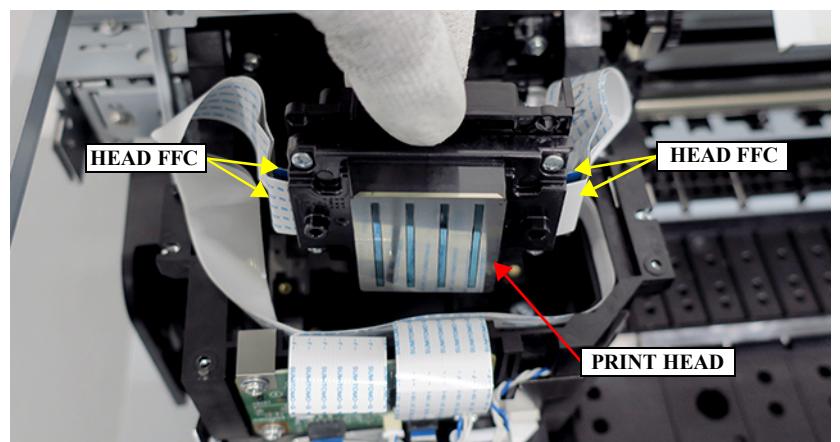


Figure 3-96. Removing the PRINT HEAD (2)

3.4.4.4 HEAD FFC

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
5. Unlock the CR UNIT. ([p162](#))
6. Remove the CR COVER. ([p214](#))
7. Remove the DUCT CR. ([p215](#))
8. Remove the PRINT HEAD. ([p219](#))
9. Remove the CR BOARD COVER. ([p252](#))

10. Remove the HEAD FFC from the FFC relay board.



Set the two ferrite cores at the points shown in the figure below.

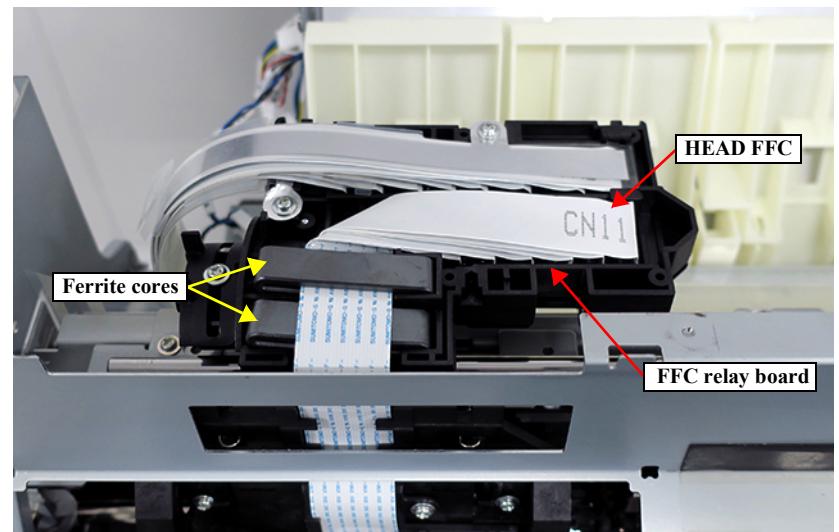


Figure 3-97. Removing the HEAD FFC (1)

11. Remove the HEAD FFC from the connectors (CN100 and CN101) of the SUB BOARD.

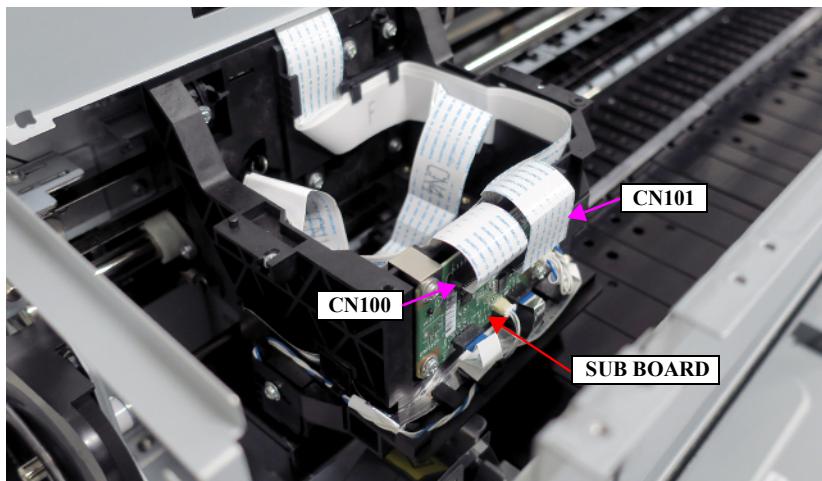


Figure 3-98. Removing the HEAD FFC (2)

12. Release the HEAD FFC from the four guides of the CR UNIT.

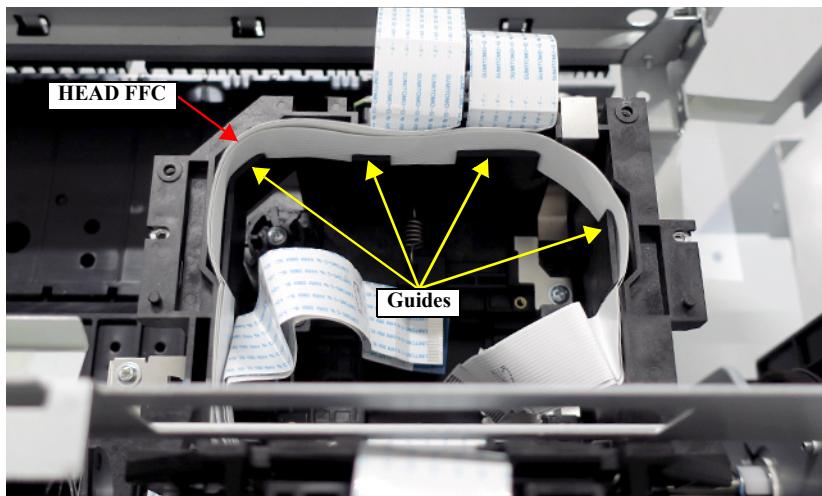


Figure 3-99. Removing the HEAD FFC (3)

13. Release the HEAD FFC from the two guides of the CR UNIT.

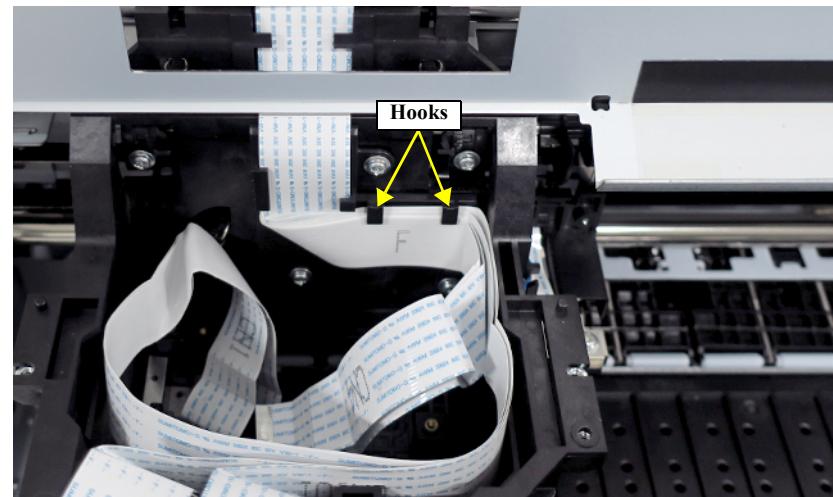


Figure 3-100. Removing the HEAD FFC (4)

14. Remove ferrite core A and ferrite core B from the HEAD FFC.



Pass the HEAD FFC connected to CN13 and CN14 through the ferrite core A.

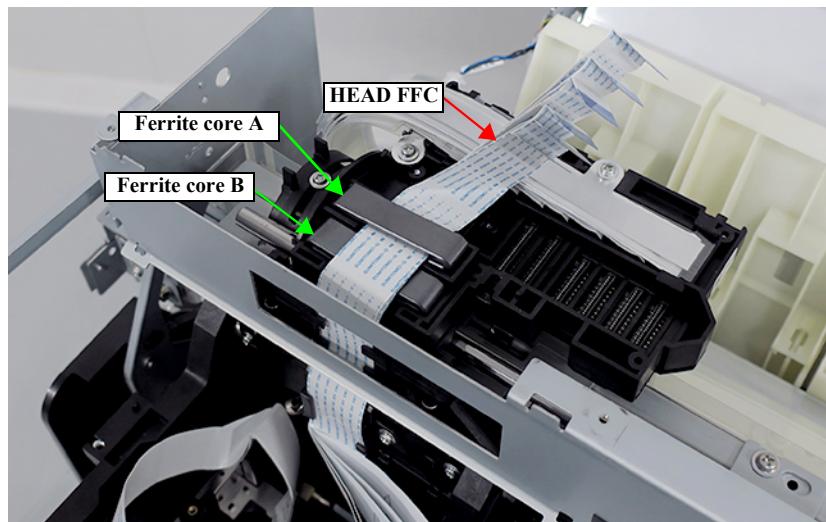


Figure 3-101. Removing the HEAD FFC (5)

15. Pull out the HEAD FFC from the six tabs of the CR UNIT, and remove it.

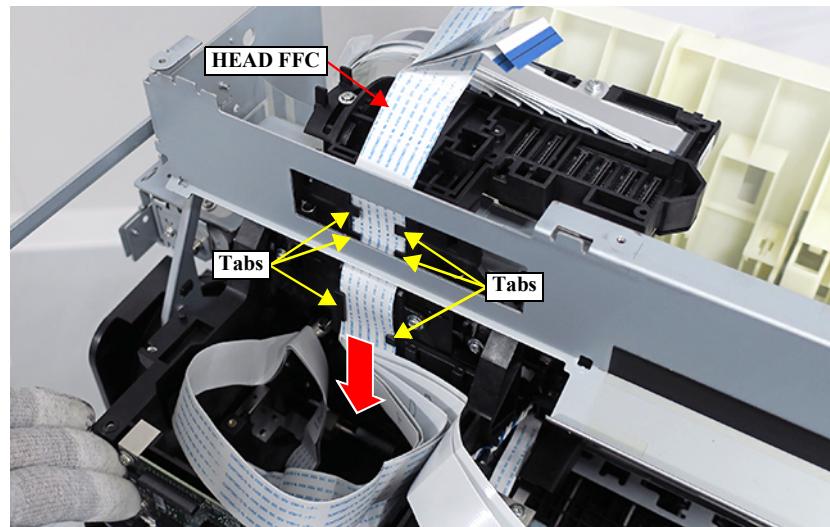


Figure 3-102. Removing the HEAD FFC (6)

3.4.4.5 CR SCALE



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
8. Unlock the CR UNIT. ([p162](#))
9. Remove the two screws, and remove the CR Rear Frame.
 - A) Silver M3x6 S-tite screw with built-in washer: 2 pcs



Pay attention to the positioning points (See [Figure 3-103](#)).

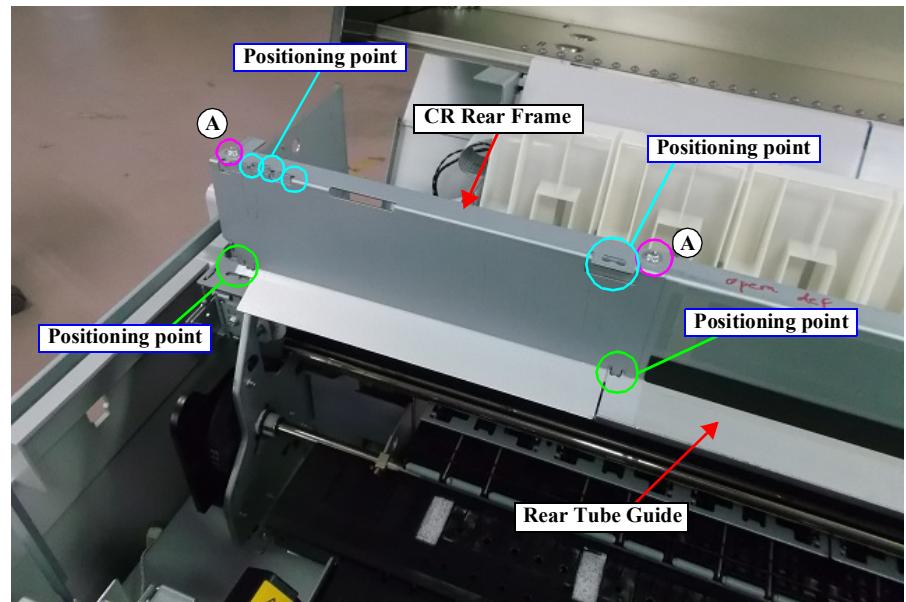


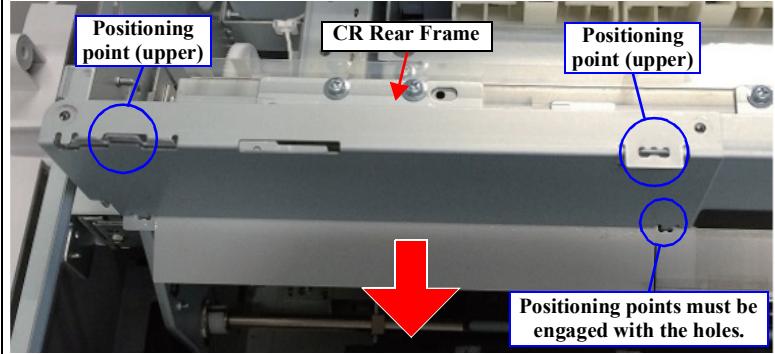
Figure 3-103. Removing the CR Rear Frame



ASSEMBLY

When installing the CR Rear Frame, check the following.

- Align the two positioning points (upper) and secure with two screws while pulling toward you.
- Make sure that two positioning points (lower) are engaged with the holes on the Rear Tube Guide.



10. Remove the five screws, and remove the Rear Tube Guide.

- B) Silver M3x8 S-tite screw with built-in washer: 4 pcs
- C) Silver M4x8 S-tite screw with built-in washer: 1 pc



Pay attention to the positioning points (See [Figure 3-104](#)).

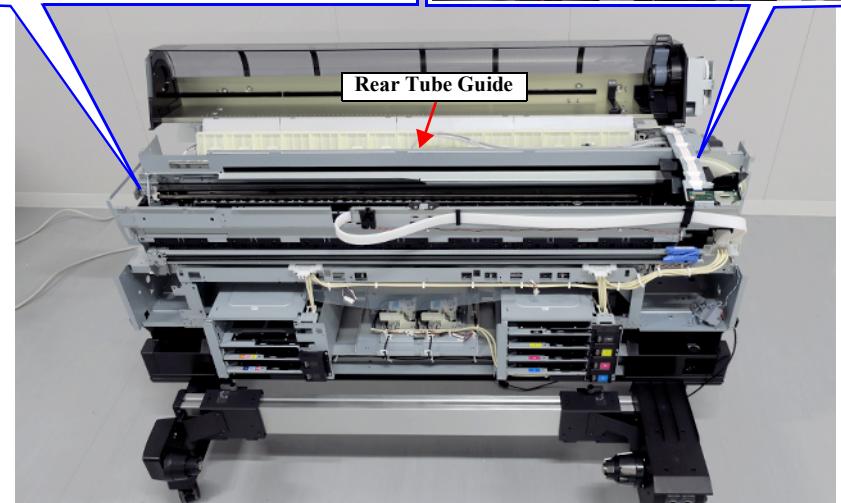
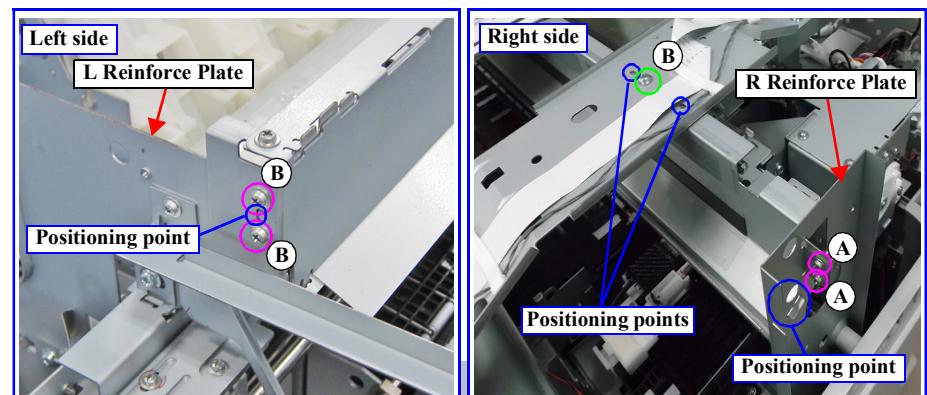


Figure 3-104. Removing the Rear Tube Guide

11. Remove the Tension spring.
12. Remove the CR SCALE from the hook of the CR Scale Holder B.

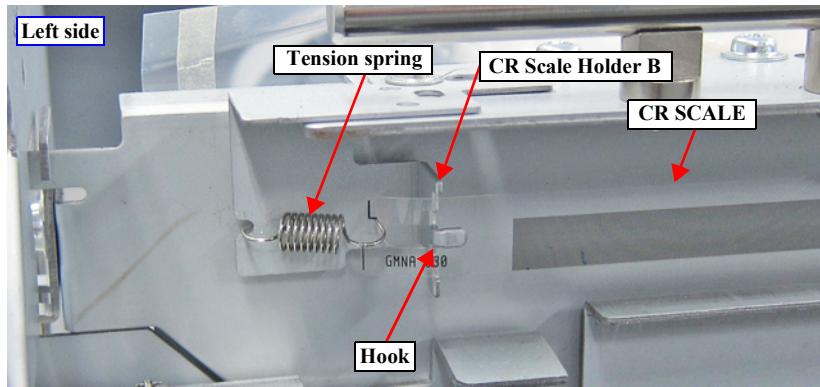


Figure 3-105. Removing the CR SCALE (Left side)

14. Remove the CR SCALE from the hook of the CR Scale Holder.

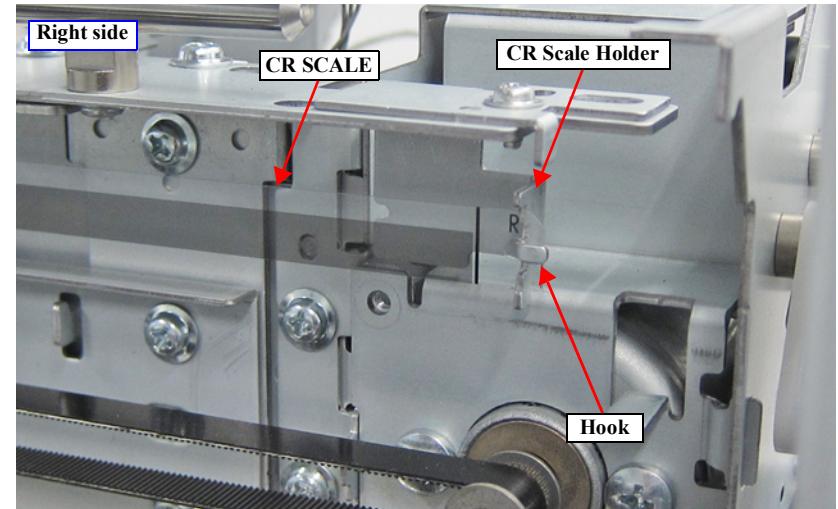


Figure 3-107. Removing the CR SCALE (Right)

13. Remove the CR SCALE from the two each hooks on the two CR Scale Holder.

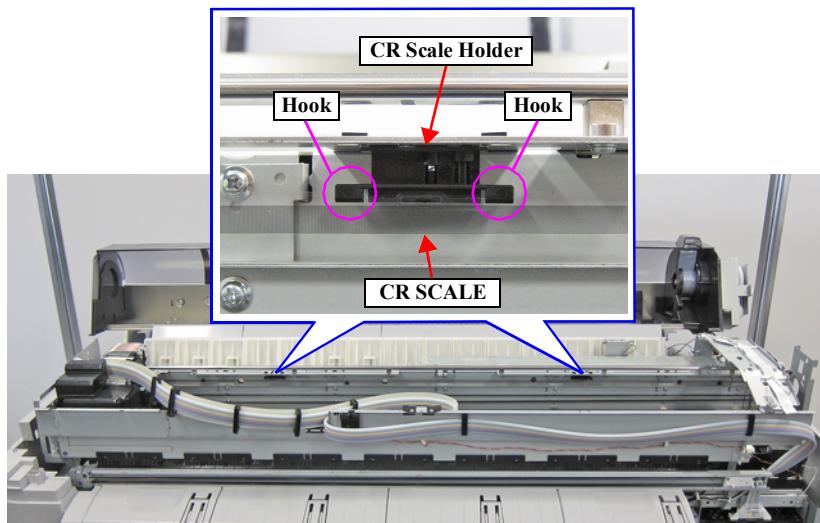


Figure 3-106. Removing the CR SCALE (Center)

15. Remove the CR SCALE from the CR UNIT.



ASSEMBLY

- Since the CR SCALE has a specific orientation, install it in the direction so that you can read the letters L/R correctly from the front.
- Route the CR SCALE through the detection point on the CR ENCODER on the rear of the CR UNIT when installing it.
- If protection films are applied on both sides of the new CR Scale, peel them off before installation.

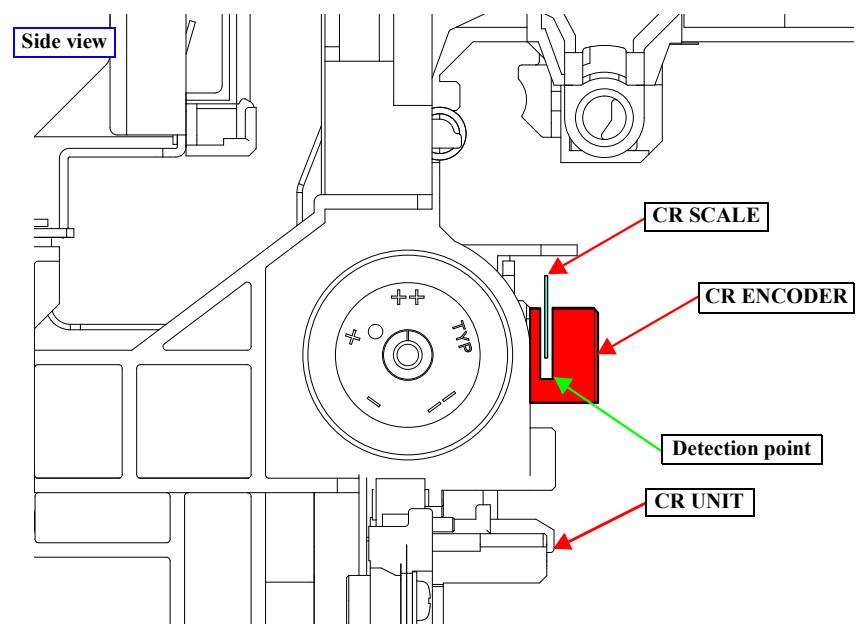
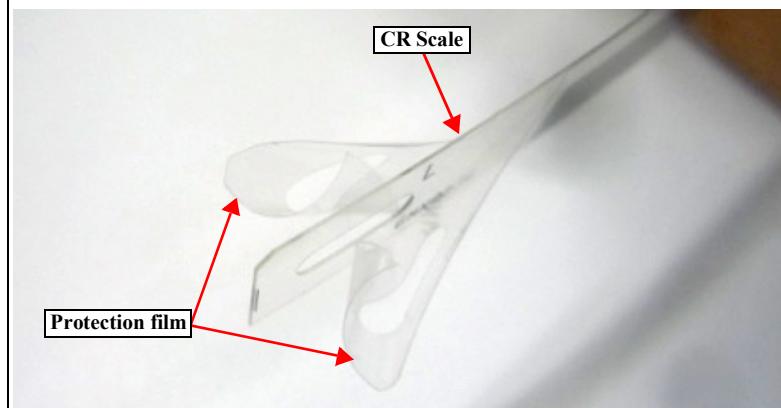


Figure 3-108. Removing the CR SCALE

3.4.4.6 CR ENCODER



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
8. Unlock the CR UNIT. ([p162](#))
9. Remove the CR COVER. ([p214](#))
10. Remove the DUCT CR. ([p215](#))
11. Remove the PRINT HEAD. ([p219](#))
12. Remove the CR BOARD COVER. ([p252](#))
13. Remove the HEAD FFC. ([p220](#))
14. Remove the APG UNIT. ([p233](#))
15. Remove the CR MOTOR. ([p230](#))
16. Remove the CR SCALE. ([p223](#))
17. Remove the CR UNIT. ([p245](#))
18. Remove the two screws, and remove the CR ENCODER.
 - A) Silver M2x10 P-tite screw: 2 pcs
19. Remove the FFC from the connector of the CR ENCODER.

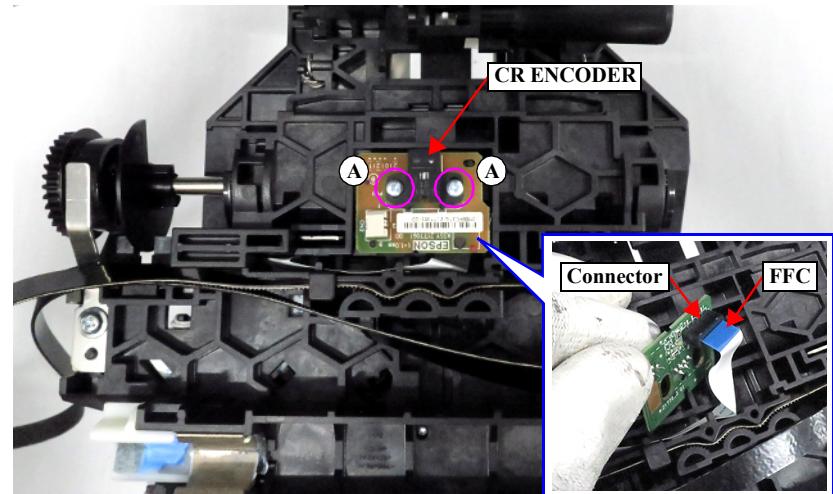


Figure 3-109. Removing the CR ENCODER (1)

3.4.4.7 CR TIMMING BELT



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.



In the next step, the two plastic washers at the both ends of the pulley shaft will come off. Be careful not to lose them.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
8. Unlock the CR UNIT.?→P. 162?
9. Remove the CR COVER. ([p214](#))
10. Remove the DUCT CR. ([p215](#))
11. Remove the PRINT HEAD. ([p219](#))
12. Remove the CR BOARD COVER. ([p252](#))
13. Remove the HEAD FFC. ([p220](#))
14. Remove the APG UNIT. ([p233](#))
15. Remove the CR MOTOR. ([p230](#))
16. Remove the CR SCALE. ([p223](#))
17. Remove the CR UNIT. ([p245](#))
18. Remove the two screws, and remove the Pulley Cover.
 - A) Silver M3x6 S-tite screw with built-in washer: 1 pc
 - B) Silver M3x12 screw: 1 pc

19. Remove the Pulley, Shaft, and Belt together from the Pulley Holder.

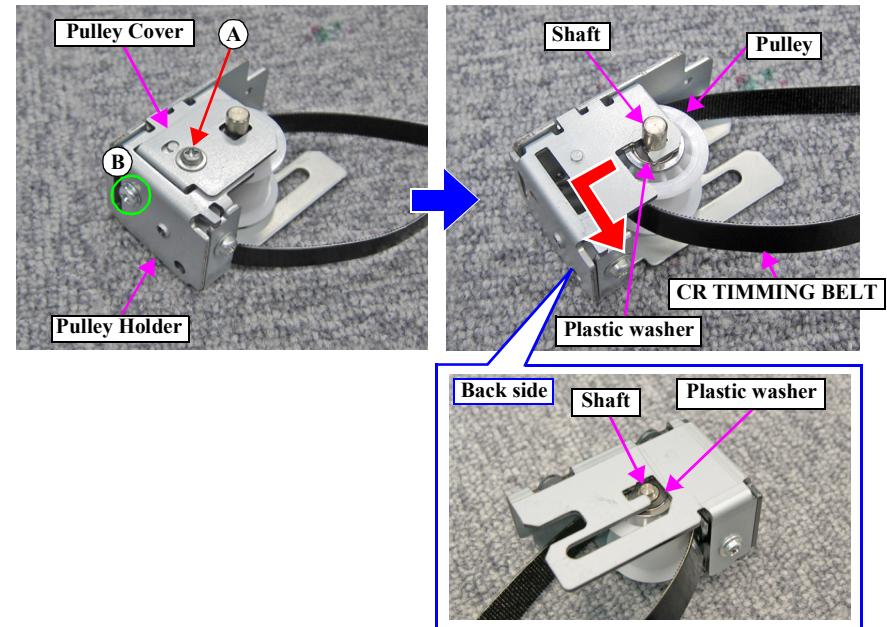


Figure 3-110. Disassembling the Pulley Holder

20. Remove the CR TIMING BELT from the Belt Holder on the back side of the CR UNIT.

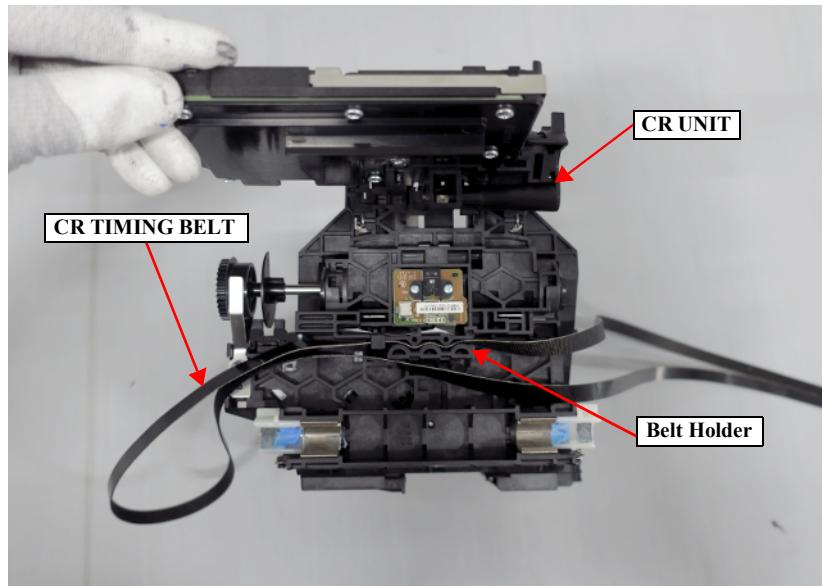


Figure 3-111. Removing the CR TIMING BELT

3.4.4.8 CR MOTOR



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the RIGHT LOWER COVER. ([p173](#))
8. Remove the APG UNIT. ([p233](#))
9. Unlock the CR UNIT. ([p162](#))
10. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
11. Loosen the two screws that secure the Pulley Holder.



Before loosening the tension at the next step, mark the position of the Pulley Holder to make the required adjustment easier.

12. Rotate the Belt tension screw counterclockwise to loosen the tension of the CR TIMMING BELT.

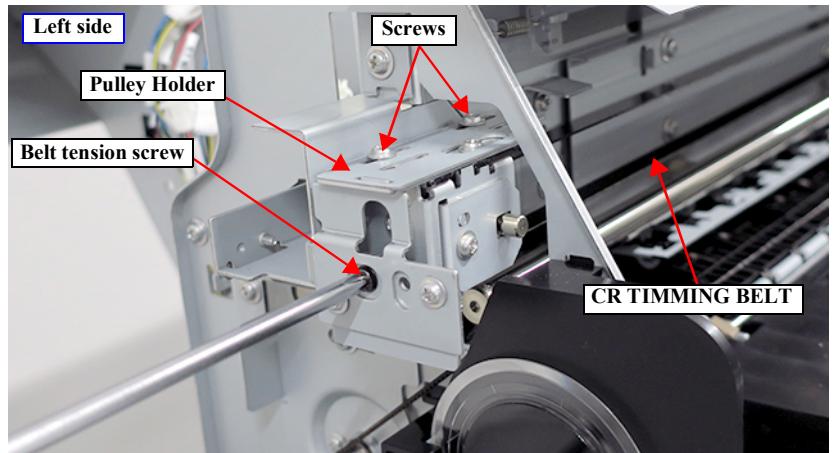


Figure 3-112. Loosening the CR TIMMING BELT tension

13. Remove the CR TIMMING BELT from the pinion gear of the CR MOTOR.
 14. Remove the two screws that secure the CR MOTOR.
- A) Silver M4x10 Machine screw: 2 pcs

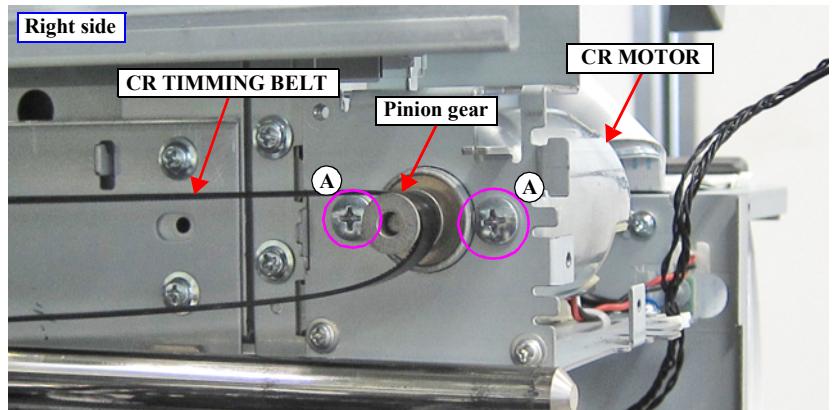


Figure 3-113. Removing the CR TIMMING BELT (1)

15. Remove the cable from the connector (CN201) of the MAIN BOARD.

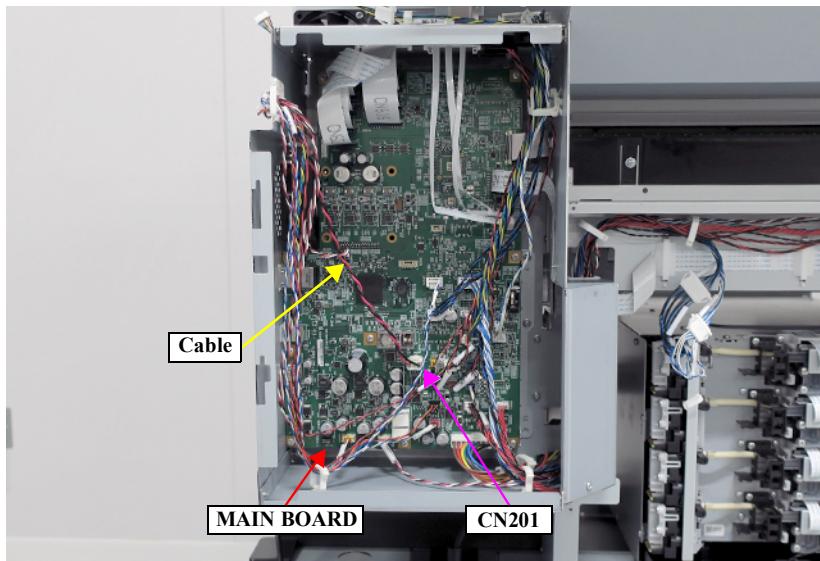


Figure 3-114. Removing the CR MOTOR (2)

16. Release the cables from the four clamps.

17. Remove the CR MOTOR.

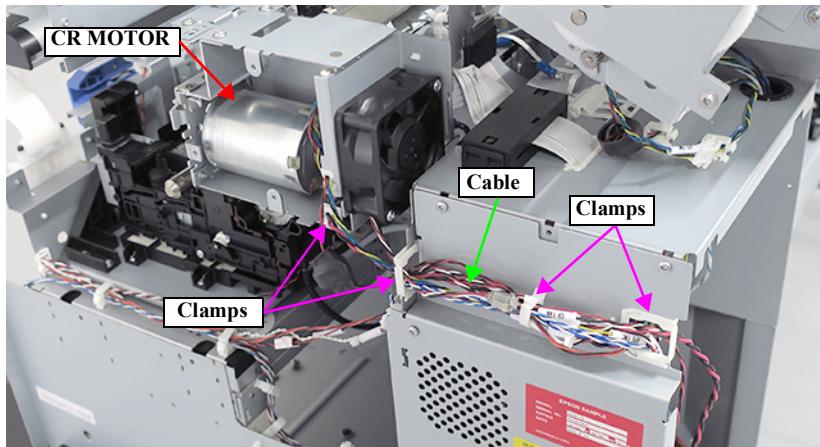


Figure 3-115. Removing the CR MOTOR (3)

3.4.4.9 CR HP SENSOR

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Unlock the CR UNIT. ([p162](#))
8. Move the CR UNIT on the platen.
9. Disengage the hooks, and remove the CR HP SENSOR.
10. Disconnect the cable from the CR HP SENSOR.

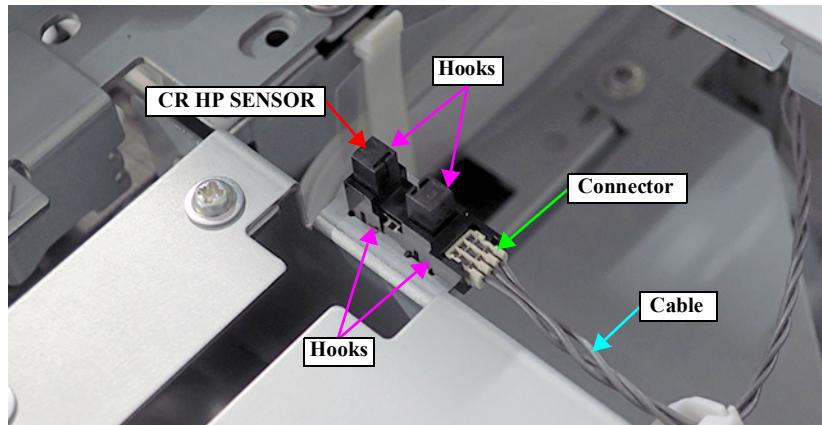


Figure 3-116. Removing the CR HP SENSOR

3.4.4.10 APG UNIT



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the RIGHT LOWER COVER. ([p173](#))



When removing the R Reinforce Plate in the next step, take care not to remove the Upper Reinforce Plate together.

8. Remove the five screws, and remove the R Reinforce Plate.
 - A) Silver M3x6 S-tite screw with built-in washer: 3 pcs
 - B) Silver M3x8 S-tite screw with built-in washer: 2 pcs



- Pay attention to the positioning point (See [Figure 3-117](#)).
- Tighten three screws A of R Reinforce Plate as follows.
 - 1.Temporarily tighten screw (1) in [Figure 3-117](#).
 - 2.Tighten screws (2) and (3) in order.
 - 3.Tighten screw (1) fully.

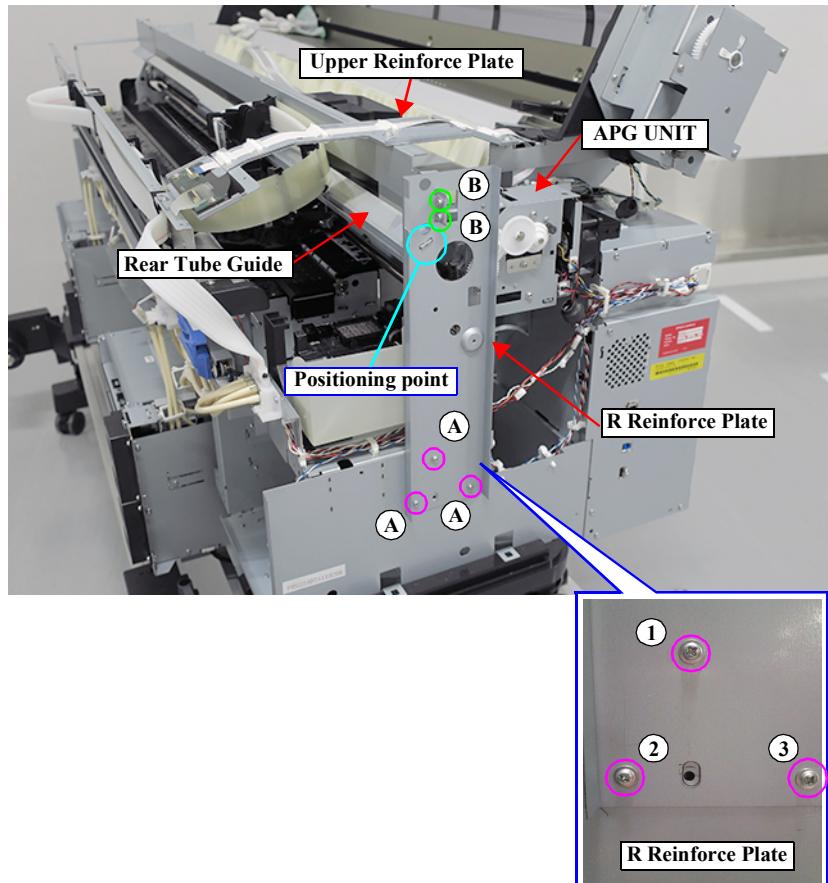


Figure 3-117. Removing the R Reinforce Plate

9. Remove the three screws that secure the APG UNIT.

C) Silver M3x6 S-tite screw with built-in washer: 3 pcs



Pay attention to the positioning points (See [Figure 3-118](#)).

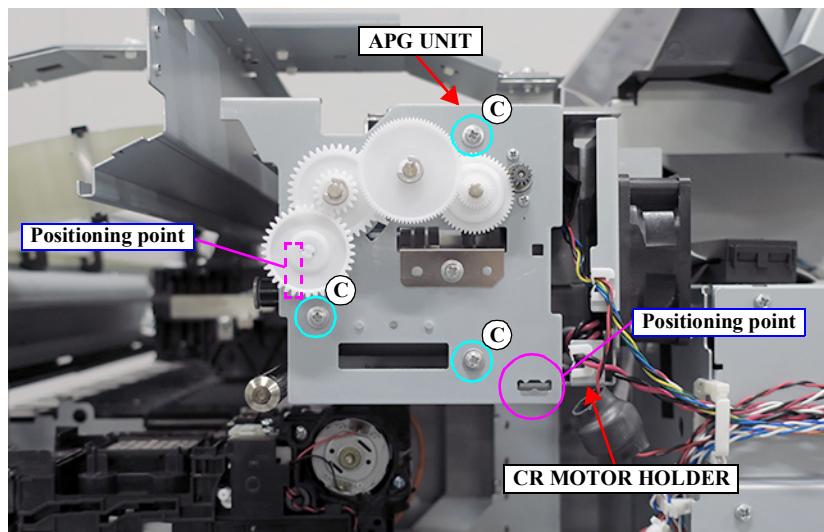


Figure 3-118. Removing the APG UNIT

10. Remove the APG Motor Cover.

11. Disconnect the cable from the connector of the APG Motor, and remove the APG UNIT.

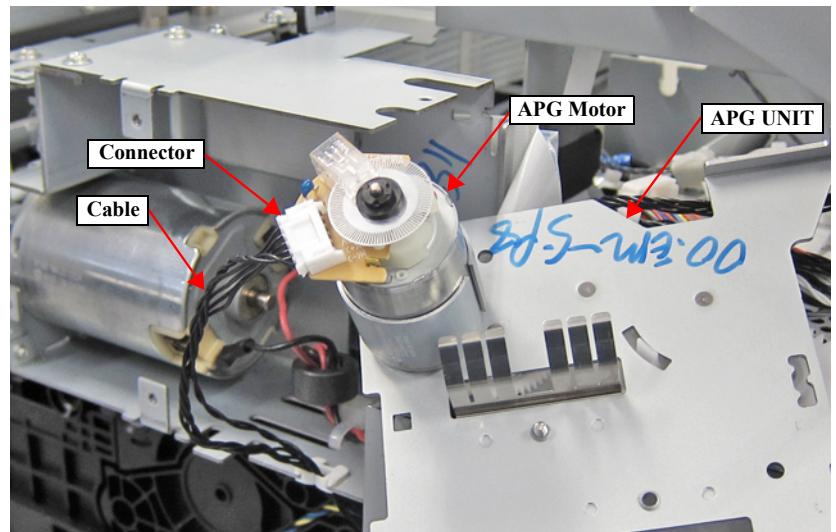


Figure 3-119. Removing the Cable

3.4.4.11 PG SENSOR

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
8. Unlock the CR UNIT. ([p162](#))
9. Remove the CR COVER. ([p214](#))
10. Remove the DUCT CR. ([p215](#))
11. Remove the PRINT HEAD. ([p219](#))
12. Remove the CR BOARD COVER. ([p252](#))
13. Remove the HEAD FFC. ([p220](#))
14. Remove the APG UNIT. ([p233](#))
15. Remove the CR MOTOR. ([p230](#))
16. Remove the CR SCALE. ([p223](#))
17. Remove the CR UNIT. ([p245](#))
18. Disengage the hooks, and remove the PG SENSOR.

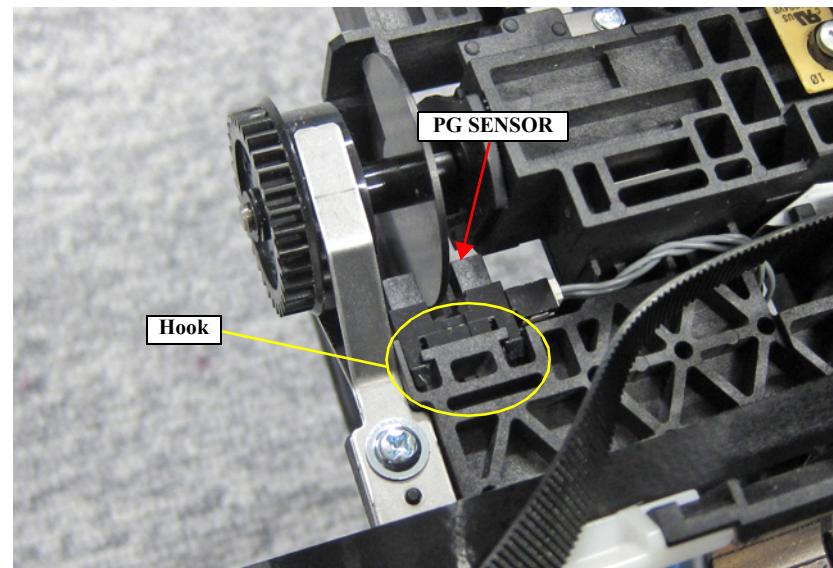


Figure 3-120. Removing the PG SENSOR

19. Disconnect the Cable from the PG SENSOR.

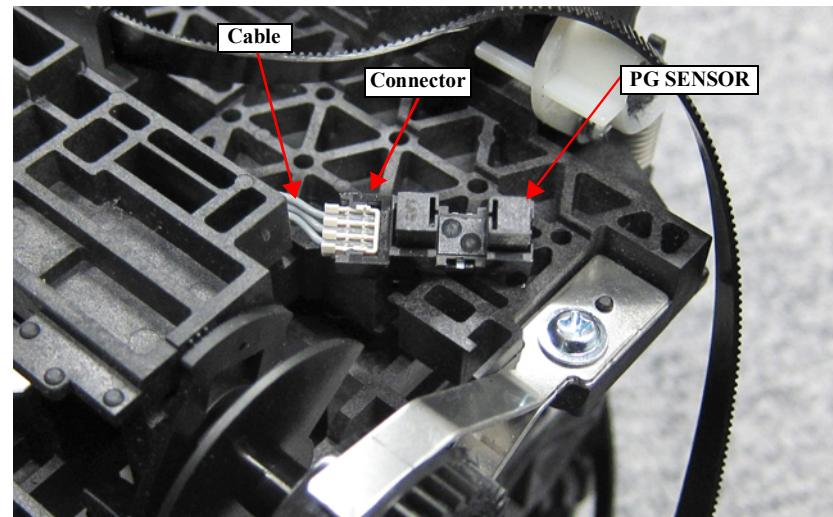


Figure 3-121. Removing the Cable

3.4.4.12 MAINTENANCE UNIT



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Unlock the CR UNIT. ([p162](#))
6. Remove the MAIN BOARD FRAME. ([p198](#))
7. Remove the FFC from the connector (CN408) of the MAIN BOARD.

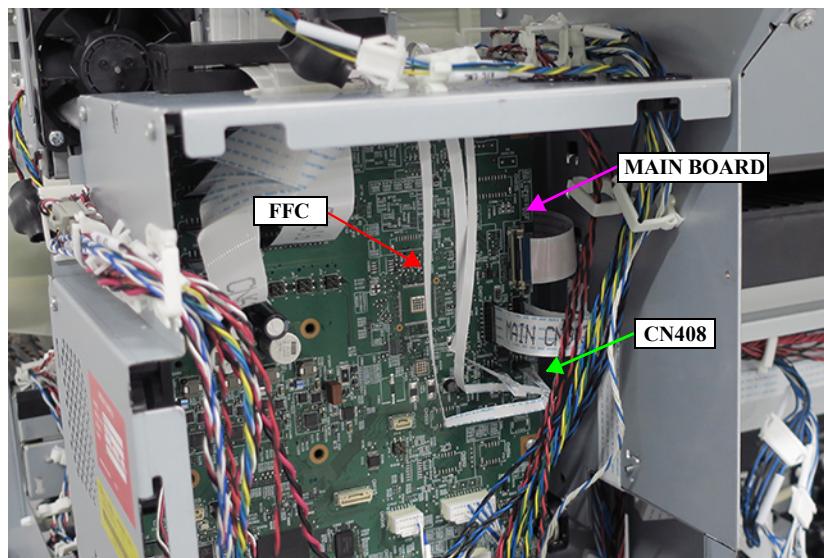


Figure 3-122. Removing the MAINTENANCE UNIT (1)

8. Pull out the FFC from the hole of the board box.

9. Remove the FFC clamp.

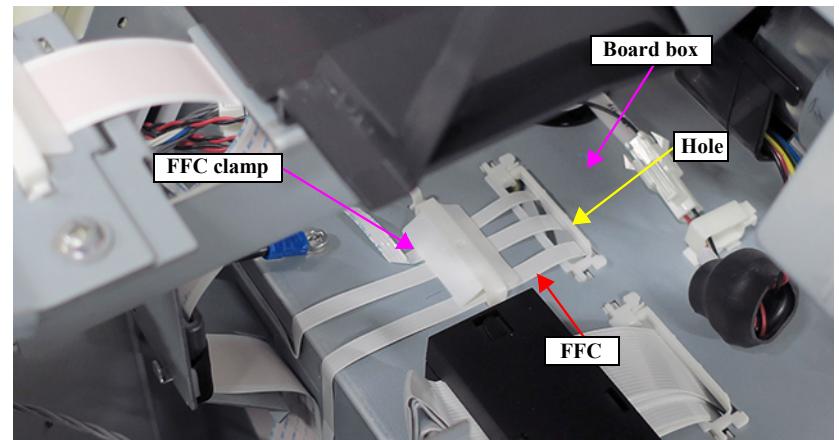


Figure 3-123. Removing the MAINTENANCE UNIT (2)

10. Remove the FFC.

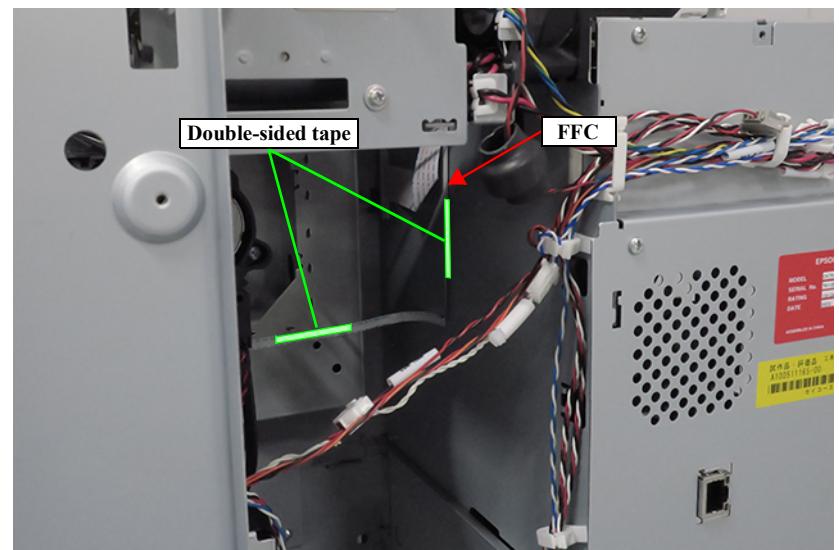


Figure 3-124. Removing the MAINTENANCE UNIT (3)

11. Remove the cable from the relay connector.
12. Release the cable from the clamp.

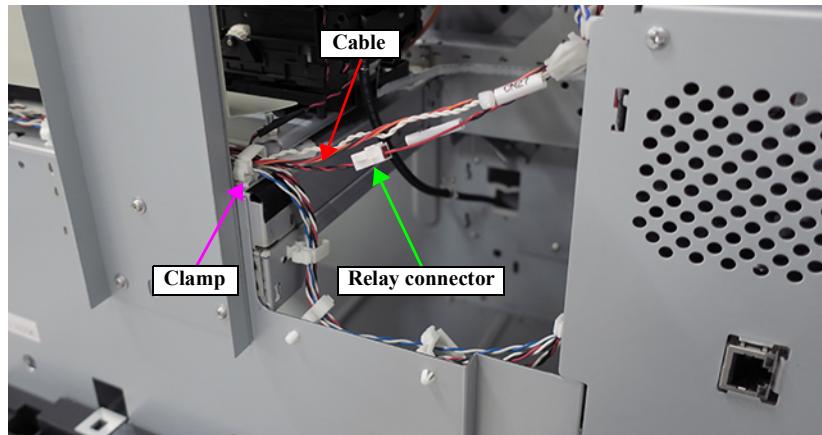


Figure 3-125. Removing the MAINTENANCE UNIT (4)



In the next step, waste ink may leak from the waste ink tube.
Prepare a waste cloth or the like in advance.

13. Slide the tube grip and pull out the waste ink tube from the joint.

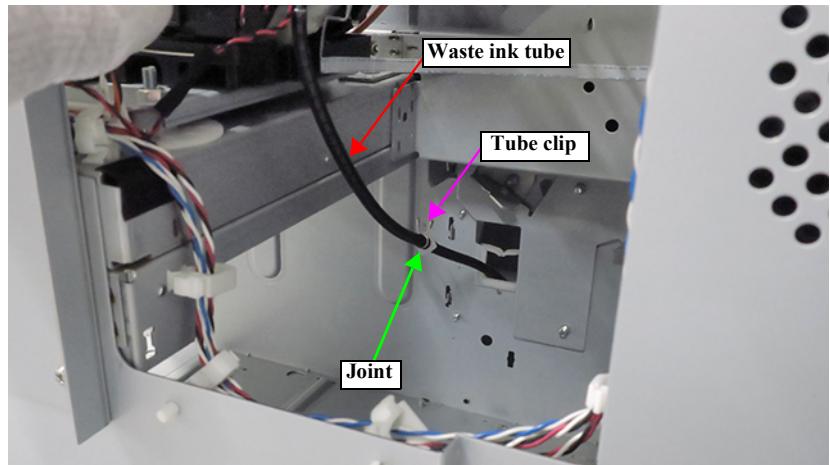


Figure 3-126. Removing the MAINTENANCE UNIT (5)

14. Remove the three screws and slide the upper reinforce plate.
 - A) Silver M4x8 Cup S-tite screw: 2 pcs
 - B) Silver M3x8 Cup S-tite screw: 1 pc

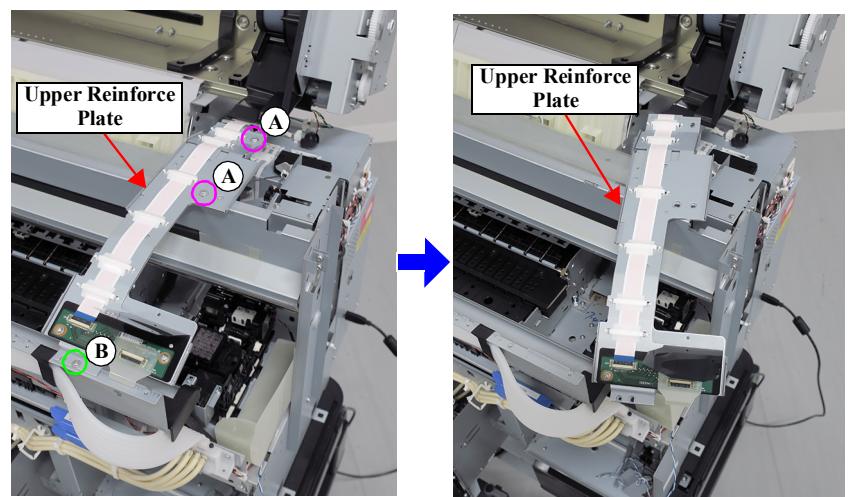


Figure 3-127. Removing the MAINTENANCE UNIT (6)

15. Remove the four screws, and remove the MAINTENANCE UNIT.

- C) Silver M3x6 S-tite screw: 3 pcs
- D) Silver M3x6 S-tite screw: 1 pc



ASSEMBLY

Secure the screw D and grounding lead wire with the same screw.
(See [Figure 3-128](#).)

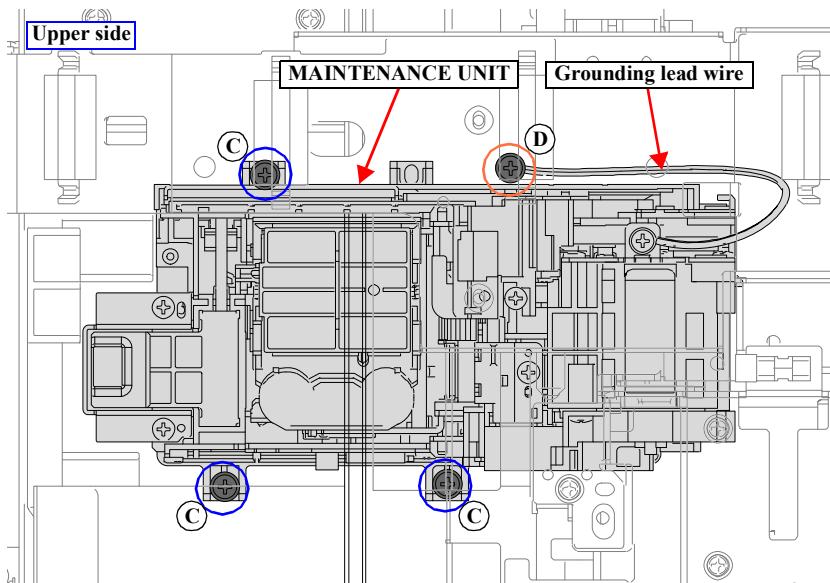


Figure 3-128. Removing the MAINTENANCE UNIT (7)

3.4.4.13 INK TUBE



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the FRONT COVER. ([p165](#))
8. Remove the FRONT RIGHT LOWER COVER ASSY. ([p193](#))
9. Unlock the CR UNIT. ([p162](#))
10. Remove the CR COVER. ([p214](#))
11. Remove the three screws.
A) Silver M3x8 Cup S-tite screw: 3 pcs

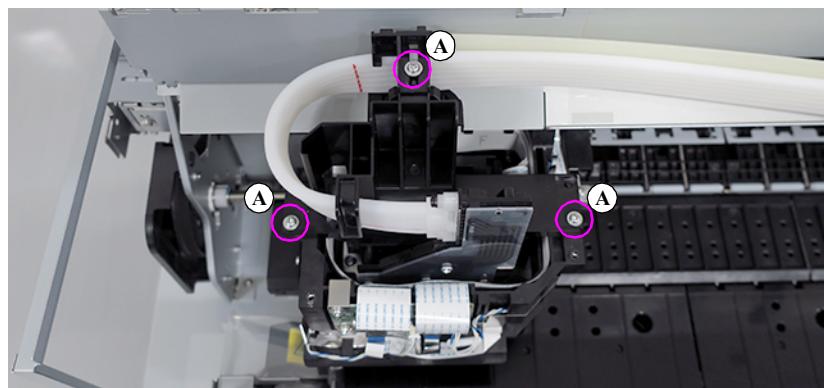


Figure 3-129. Removing the INK TUBE (1)

12. Release the dowel at the tube holder lower from the tube holder upper.
13. Release the INK TUBE from the tube holder lower.
14. Release the INK TUBE from the tube holder upper.



Align the line of the INK TUBE to the left edge of the tube holder upper.

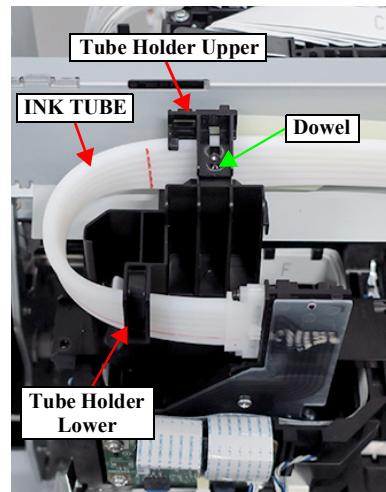
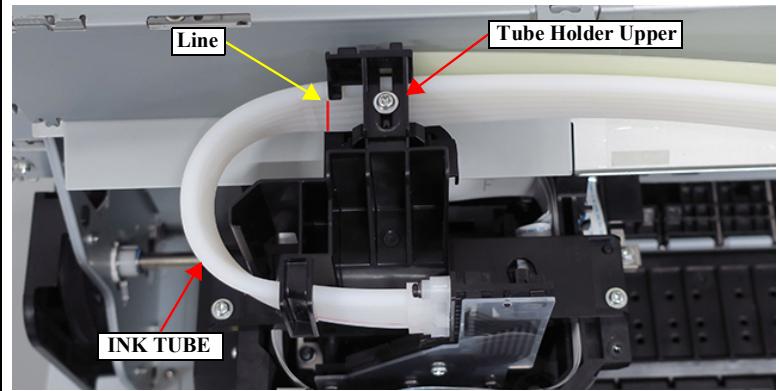


Figure 3-130. Removing the INK TUBE (2)



In the next step, ink may leak from the ink tube. Prepare a waste cloth or the like in advance.

15. Remove the two screws, and remove the INK TUBE.
B) Black M2.5x18 S-tite screw with built-in washer: 2 pcs



Figure 3-131. Removing the INK TUBE (3)



- Before installing the joint, make sure the seal rubber is attached to the flow path.



- Before attaching the seal rubber, let it get wet with cleaning liquid.
- Since the seal rubber cannot be reused, replace it with a new one.
- Using a torque screwdriver, tighten both the screws securing the Ink Tube twice alternately.
 - Specified torque: $0.29 \pm 0.01 \text{ Nm}$

16. Remove the seal rubber.



Figure 3-132. Removing the INK TUBE (4)

17. Disengage the two each hooks on the five Tube Holders, and release the INK TUBE.

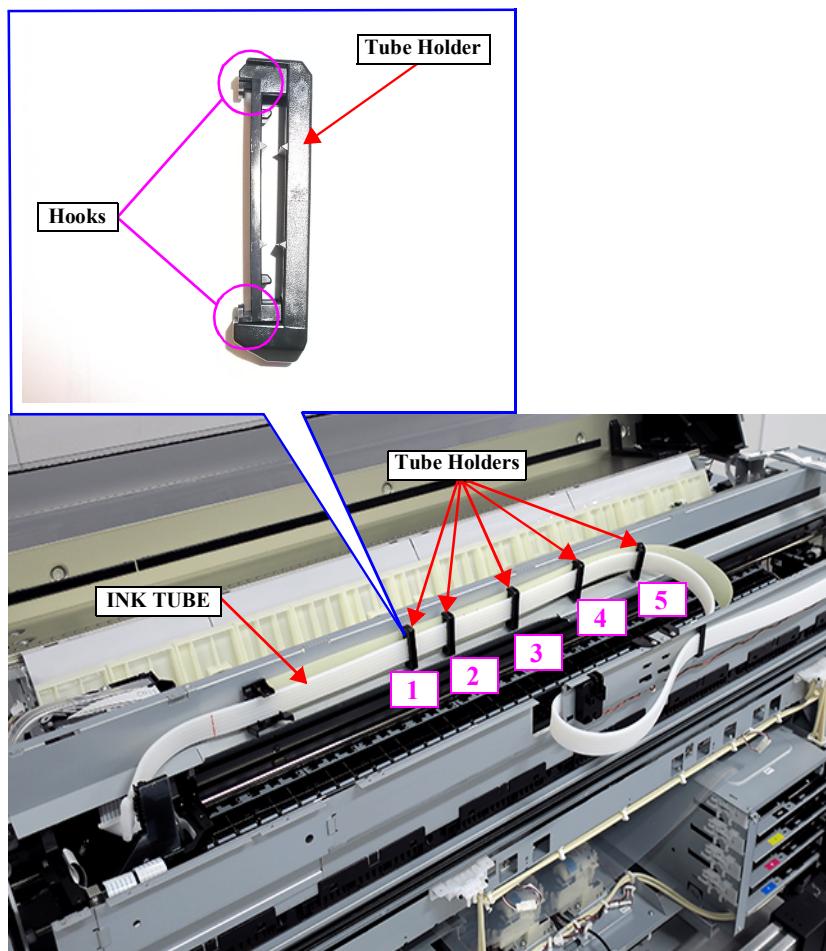
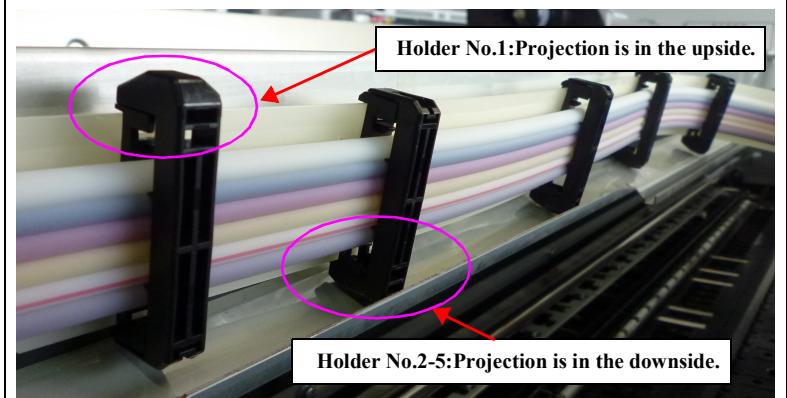


Figure 3-133. Removing the INK TUBE (Left side)

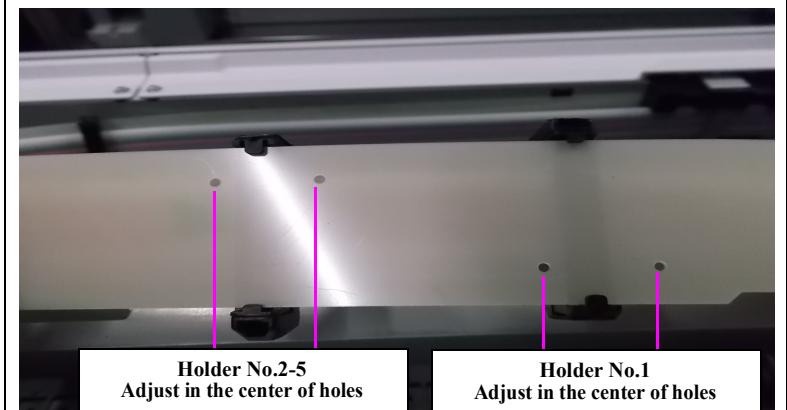


When mounting the Tube Holders, attach the following points:

- Work on installation with a turn from No.1 holder which is the nearest to CR Unit to No.5 holder.
- Only No.1 holder, mounting direction is upside down of the other holders. Projection of a holder is mounted upward only No.1. (purpose: prevent noise during CR movement)



- After attaching holders, adjust digit position of them in the center of mark holes on the Tube Guide Plate.



18. Remove the screw and release the INK TUBE by lifting the Front Tube fixing Plate.

C) Silver M3x6 S-tite screw with built-in washer: 1 pc

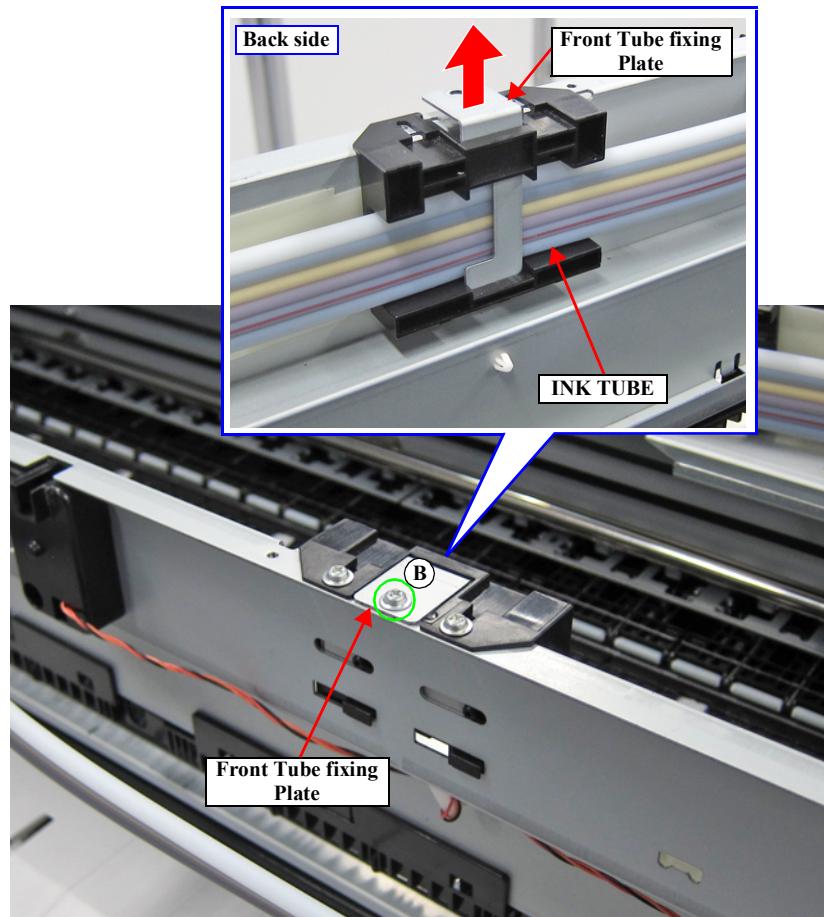


Figure 3-134. Releasing the INK TUBE (Front side)

19. Disengage the hooks, and remove the three Tube Holders.

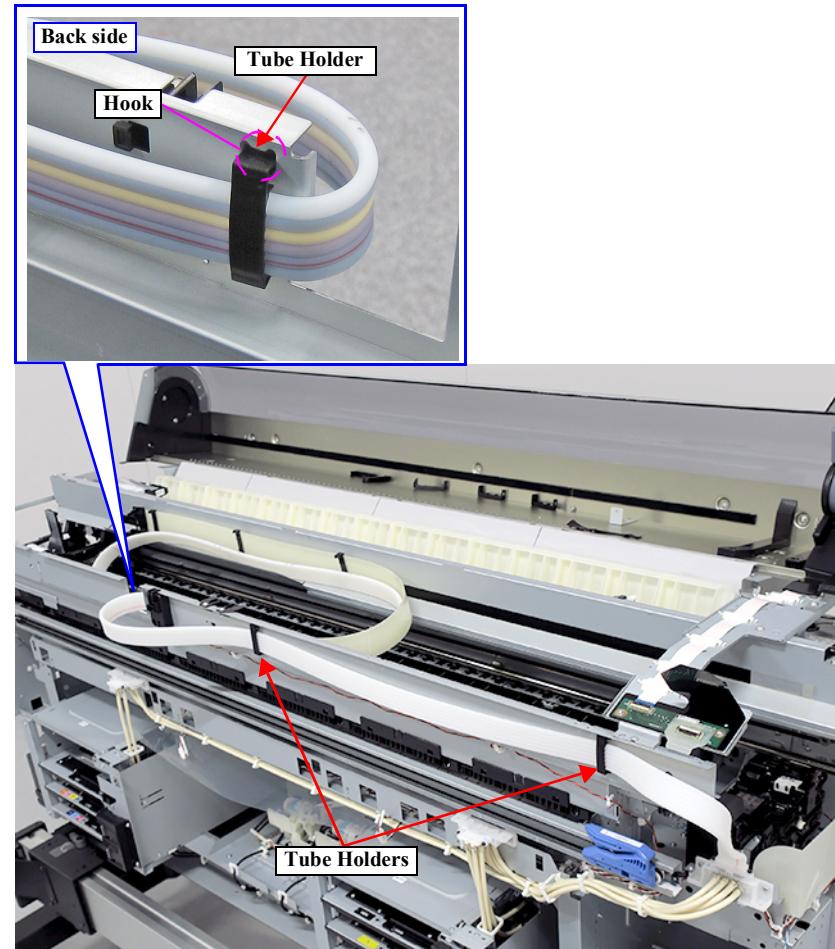


Figure 3-135. Removing the Tube Holder



In the next step, ink may leak from the ink tube. Prepare a waste cloth or the like in advance.

20. Remove the two screws, and remove the INK TUBE.

D) Black M2.5x18 S-tite screw with built-in washer: 2 pcs

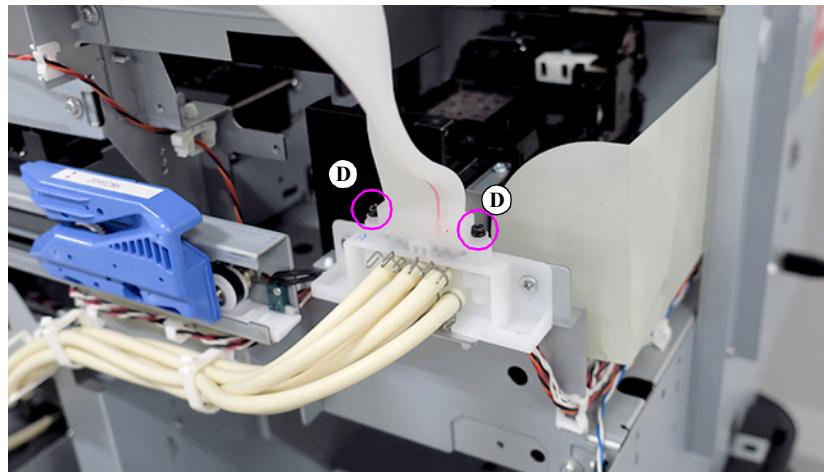


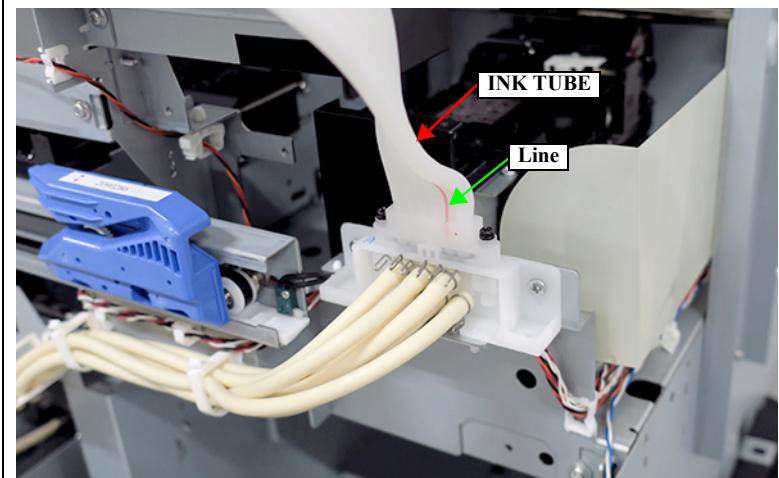
Figure 3-136. Removing the INK TUBE (5)



■ Before installing the joint, make sure the seal rubber is attached to the flow path.



- Before attaching the seal rubber, let it get wet with cleaning liquid.
- Since the seal rubber cannot be reused, replace it with a new one.
- Using a torque screwdriver, tighten both the screws securing the Ink Tube twice alternately.
 - Specified torque: 0.29 ± 0.01 Nm
- Install the INK TUBE so that the line of it is on the right side.



21. Remove the seal rubber.

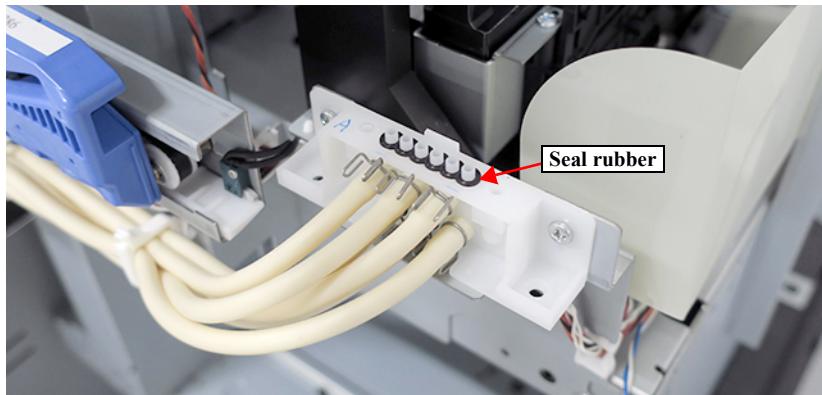


Figure 3-137. Removing the INK TUBE (6)

3.4.4.14 CR UNIT



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
8. Unlock the CR UNIT. ([p162](#))
9. Remove the CR COVER. ([p214](#))
10. Remove the DUCT CR. ([p215](#))
11. Remove the PRINT HEAD. ([p219](#))
12. Remove the CR BOARD COVER. ([p252](#))
13. Remove the HEAD FFC. ([p220](#))
14. Remove the APG UNIT. ([p233](#))
15. Remove the CR MOTOR. ([p230](#))
16. Remove the CR SCALE. ([p223](#))
17. Remove the Belt tension screw and the two screws on the upper part of the Pulley Holder Assy, then remove the Pulley Holder Assy.
A) Silver M3x6 S-tite screw with built-in washer: 2 pcs

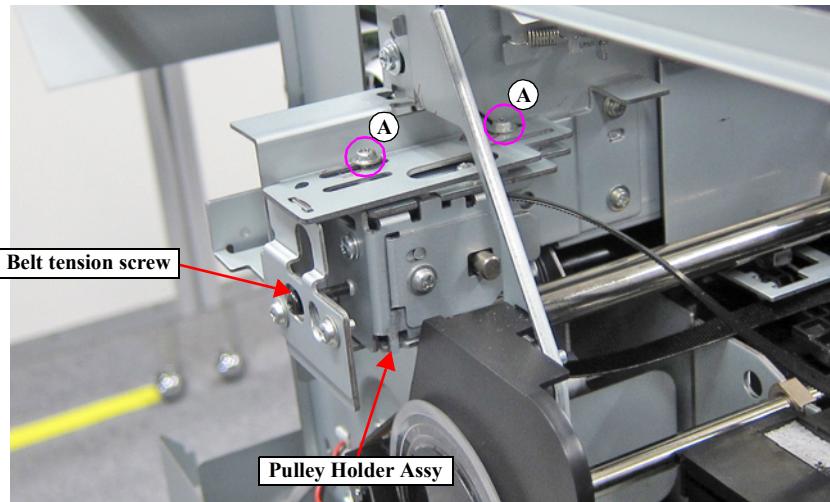


Figure 3-138. Removing the Pulley Holder Assy

18. Remove the two screws.
B) Silver M3x8 Cup S-tite screw: 2 pcs

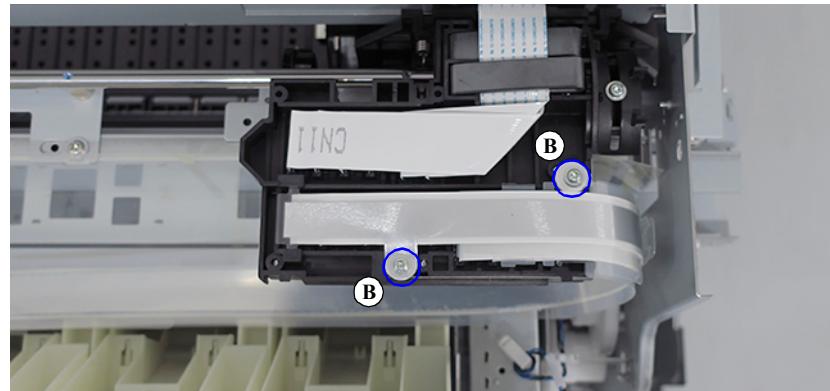


Figure 3-139. Removing the CR UNIT (1)

19. Remove the CR-MAIN FFC from the connector of the FFC relay board.

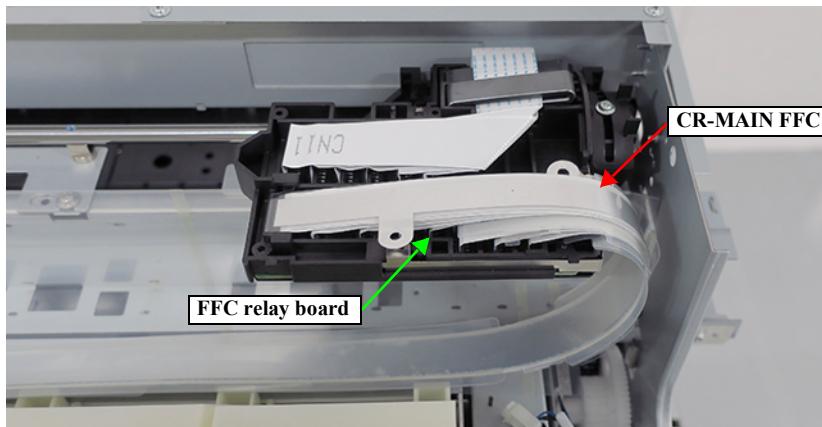


Figure 3-140. Removing the CR UNIT (2)

20. Disengage the two tabs of the sheet guide FFC lower from the CR UNIT.

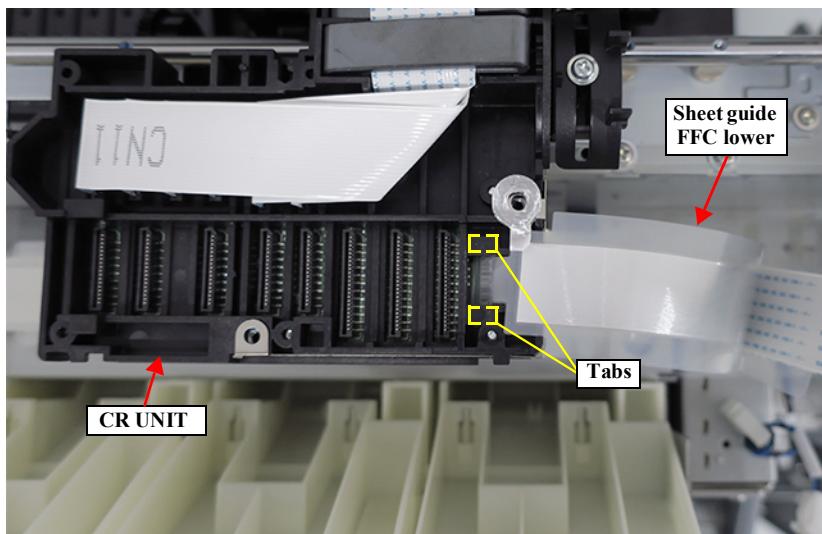


Figure 3-141. Removing the CR UNIT (3)

21. Remove the five screws, and remove the CR Motor Holder.

C) Silver M3x6 S-tite screw with built-in washer: 5 pcs

22. Remove the screw, and remove the CR Scale Holder.

D) Silver M3x6 S-tite screw with built-in washer: 1 pc

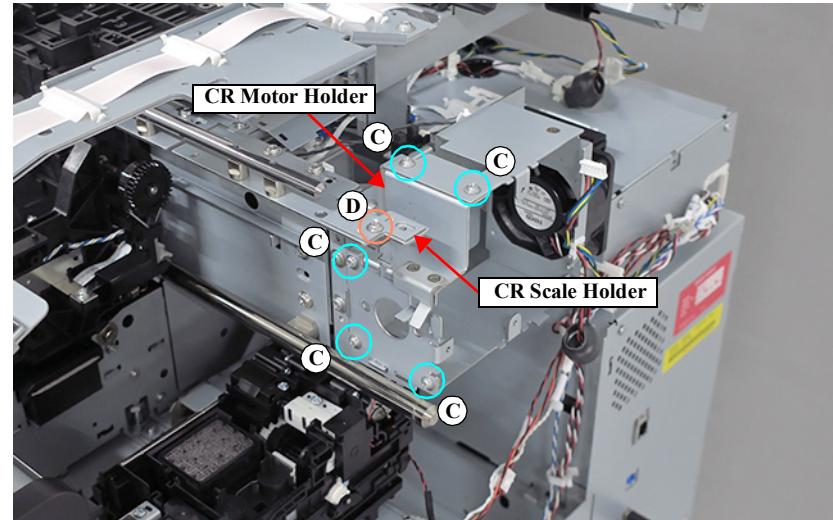


Figure 3-142. Removing the CR Scale Holder

23. Remove the CR UNIT while sliding in the direction of the arrow.

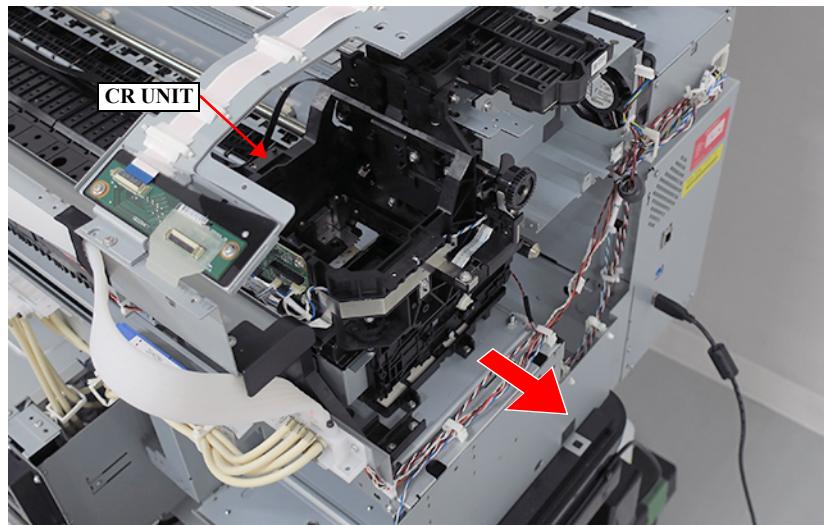


Figure 3-143. Removing the CR UNIT (4)

3.4.4.15 PW SENSOR



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))

2. Remove the UPPER SUPPORT R COVER. ([p167](#))

3. Remove the TOP COVER. ([p164](#))

4. Unlock the CR UNIT. ([p162](#))

5. Remove the CR COVER. ([p214](#))

6. Remove the screw.

A) Silver M3x8 Cup P-tite screw: 1 pc

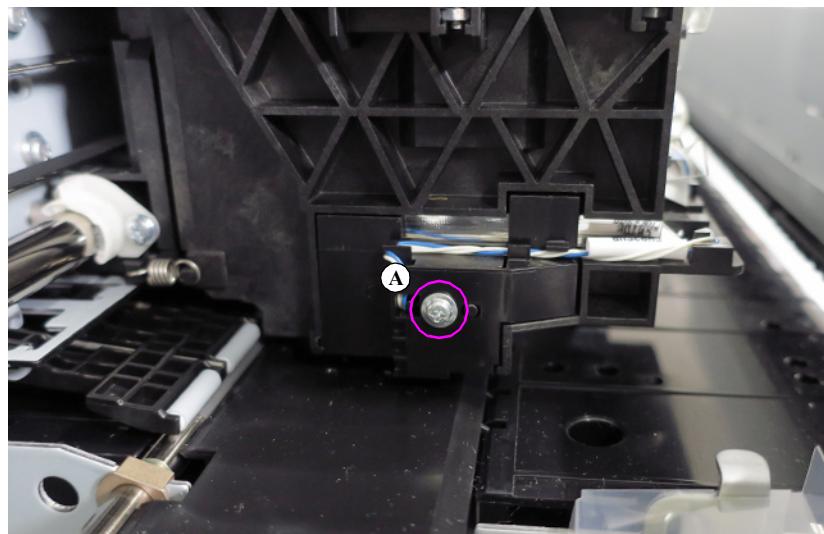


Figure 3-144. Removing the PW SENSOR (1)

7. Disengage the hook and remove the sensor Assy.

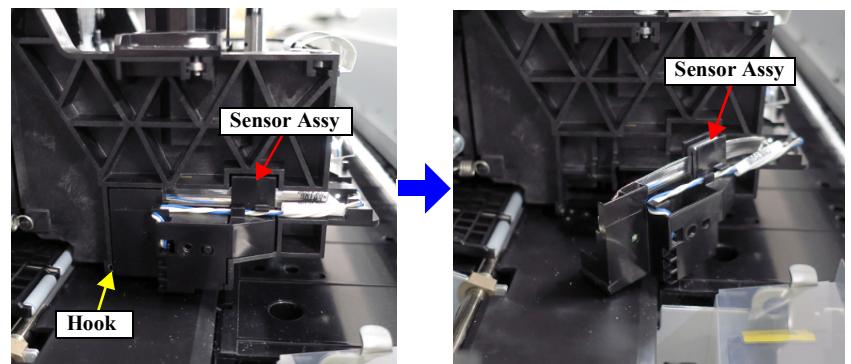


Figure 3-145. Removing the PW SENSOR (2)

8. Remove the PW SENSOR.

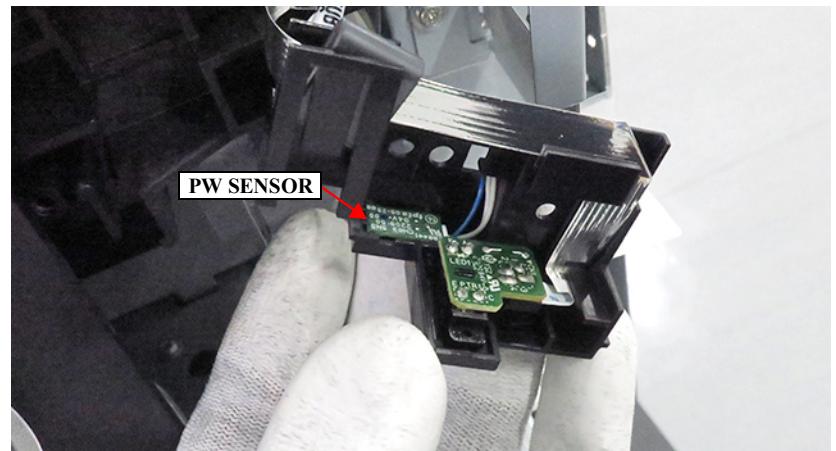


Figure 3-146. Removing the PW SENSOR (3)

9. Remove the cable from the connector.

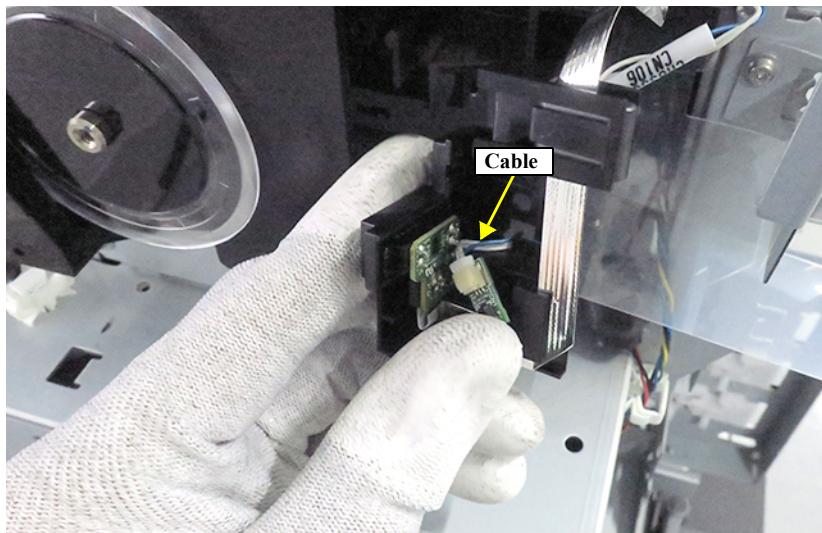


Figure 3-147. Removing the PW SENSOR (4)

3.4.4.16 INK MARK SENSOR

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Unlock the CR UNIT. ([p162](#))
5. Remove the CR COVER. ([p214](#))
6. Remove the screw.

A) Silver M3x8 Cup P-tite screw: 1 pc

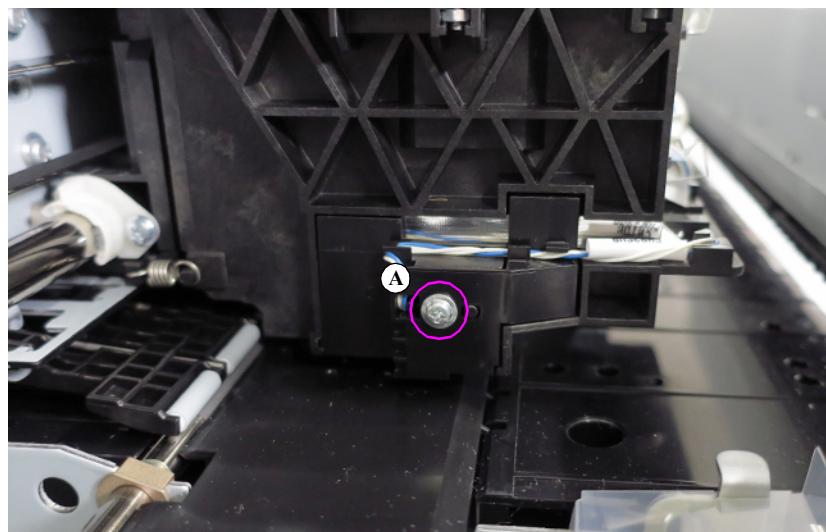


Figure 3-148. Removing the INK MARK SENSOR (1)

7. Disengage the hook and remove the sensor Assy.

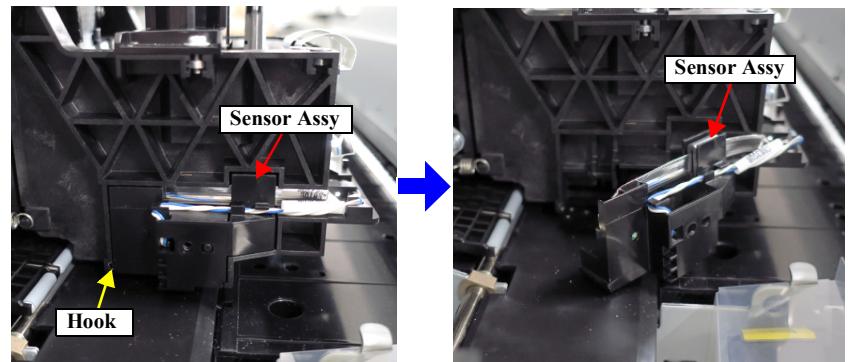


Figure 3-149. Removing the INK MARK SENSOR (2)

8. Remove the INK MARK SENSOR.

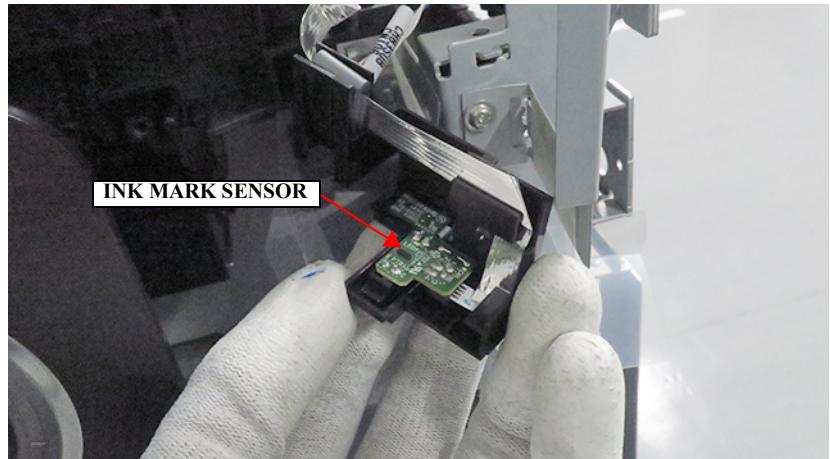


Figure 3-150. Removing the INK MARK SENSOR (3)

9. Remove the FFC from the connector.

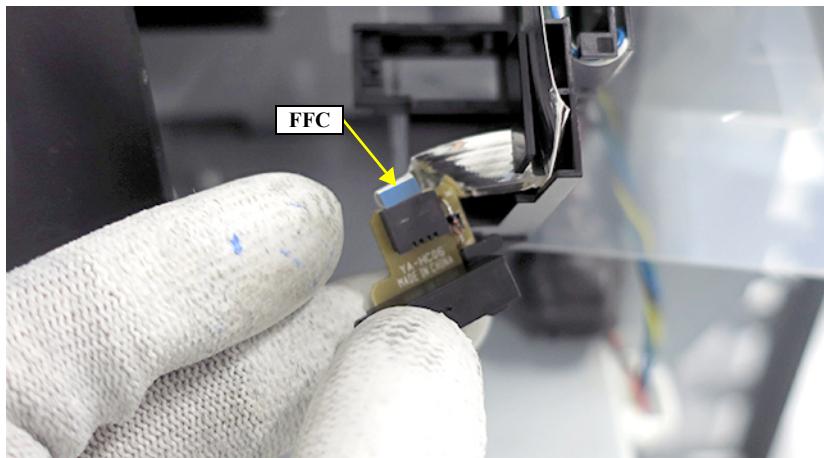


Figure 3-151. Removing the INK MARK SENSOR (4)

3.4.4.17 CR BOARD COVER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Unlock the CR UNIT. ([p162](#))
5. Remove the screw, and remove the CR BOARD COVER.
A) Silver M3x8 Cup S-tite screw: 1 pc



Pay attention to the positioning points (See [Figure 3-152](#)).

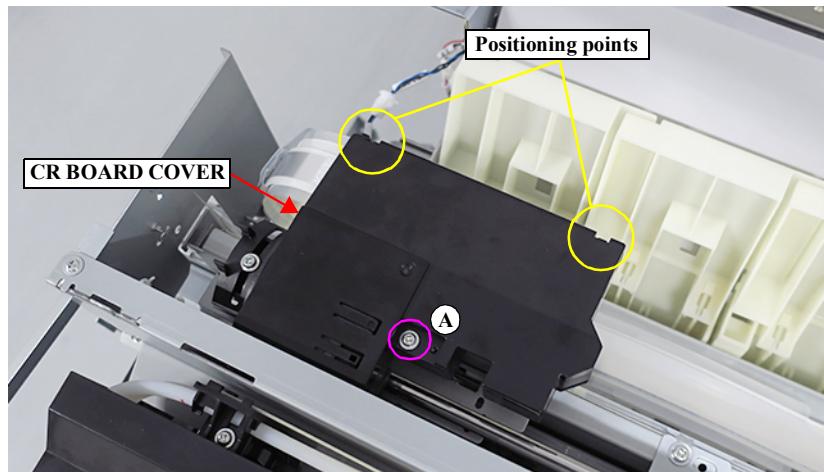


Figure 3-152. Removing the CR BOARD COVER

3.4.4.18 CR-MAIN FFC

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the PANEL ASSY. ([p202](#))
5. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
6. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
7. Unlock the CR UNIT. ([p162](#))
8. Remove the CR BOARD COVER. ([p252](#))
9. Remove the CR-MAIN FFC from the connectors (CN614, CN615, CN616, CN617, CN618, CN619, CN620, CN621) of the MAIN BOARD.

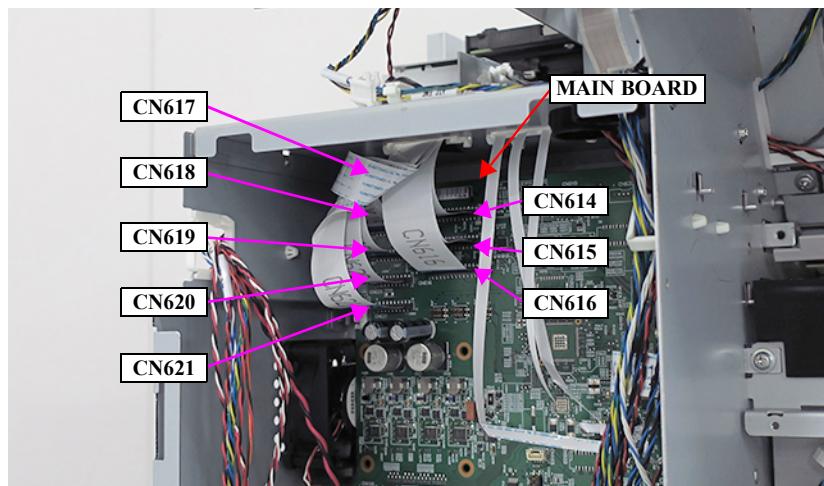


Figure 3-153. Removing the CR-MAIN FFC (1)

10. Pull out the CR-MAIN FFC from the hole of the board box.
11. Disengage the hook, and open the FFC holder.

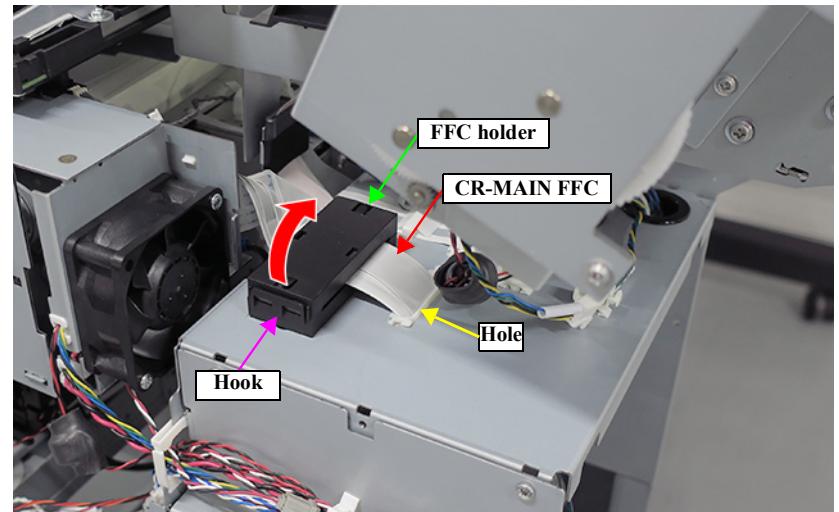


Figure 3-154. Removing the CR-MAIN FFC (2)

12. Remove the three screws, and remove the FFC guide Assy.

A) Silver M3x6 Cup S-tite screw: 3 pcs

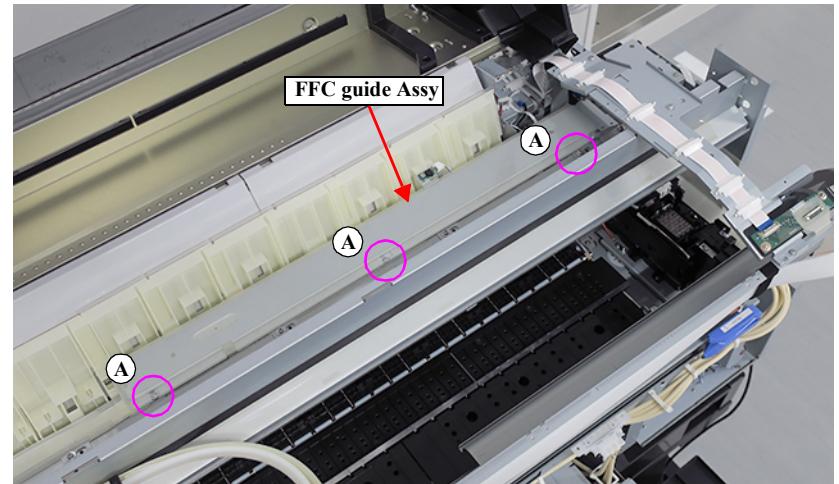


Figure 3-155. Removing the CR-MAIN FFC (3)

13. Remove the five FFC clamps.
14. Remove the film.

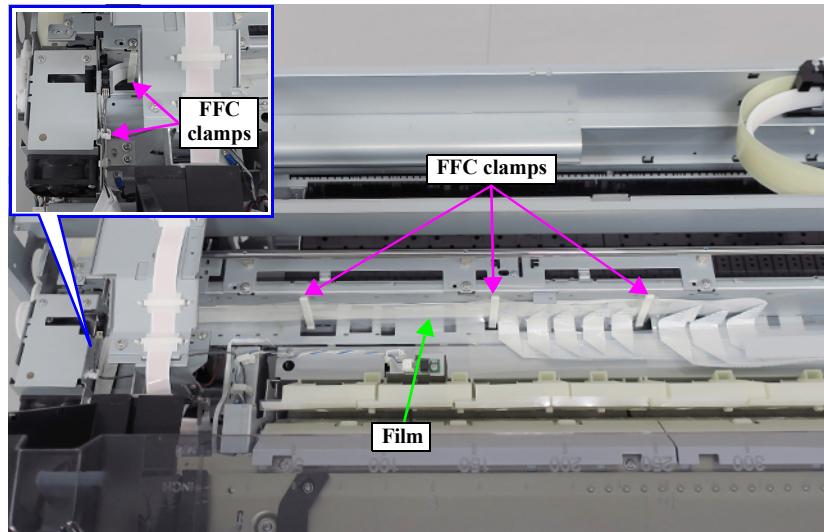


Figure 3-156. Removing the CR-MAIN FFC (5)

15. Remove the sheet guide FFC.

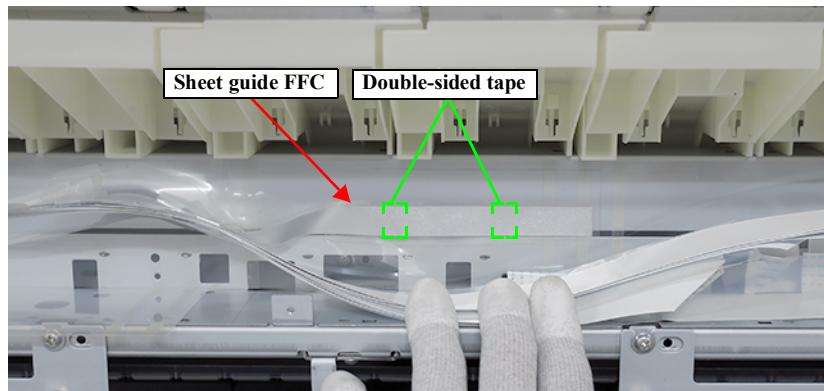


Figure 3-157. Removing the CR-MAIN FFC (6)

16. Remove the two screws.
- B) Silver M3x8 Cup S-tite screw: 2 pcs

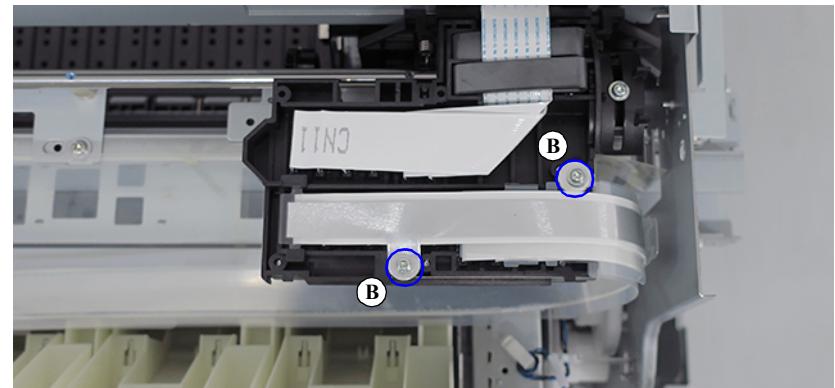


Figure 3-158. Removing the CR-MAIN FFC (7)

17. Remove the CR-MAIN FFC from the connector of the FFC relay board.

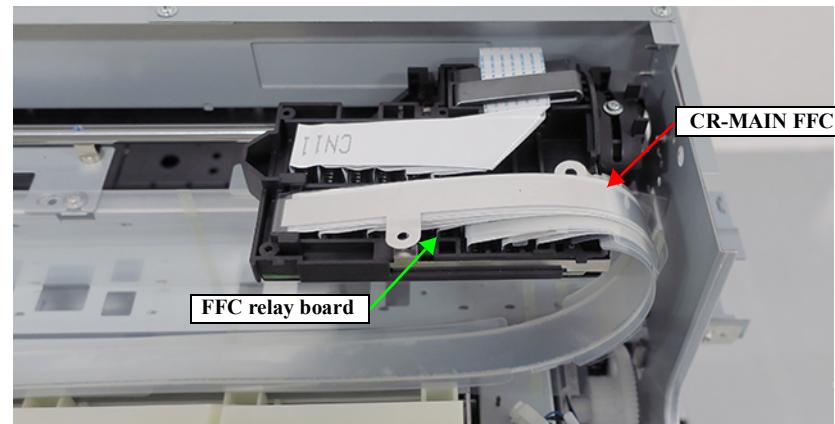


Figure 3-159. Removing the CR-MAIN FFC (8)

18. Disengage the two tabs of the sheet guide FFC lower from the CR UNIT.

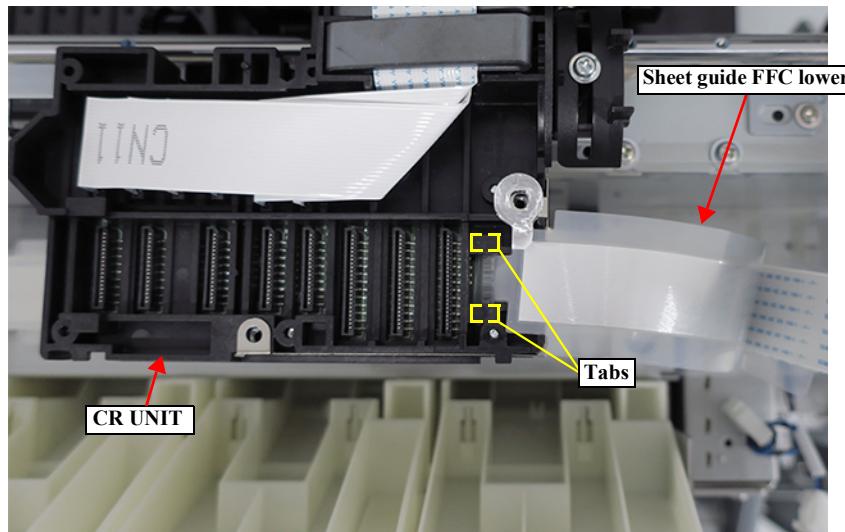


Figure 3-160. Removing the CR-MAIN FFC (9)

19. Disengage the eight joints from the two holes on the sheet guide FFC lower.

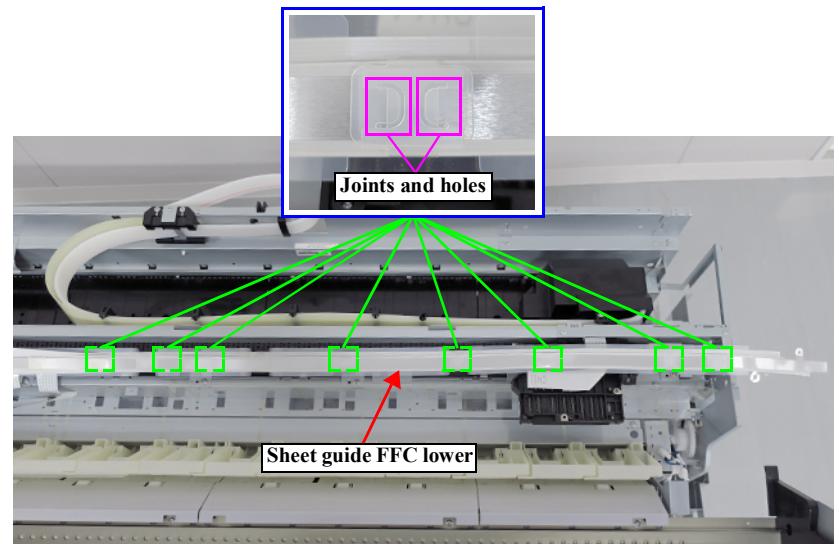


Figure 3-161. Removing the CR-MAIN FFC (10)

20. Separate the sheet guide FFC lower from the CR-MAIN FFC.

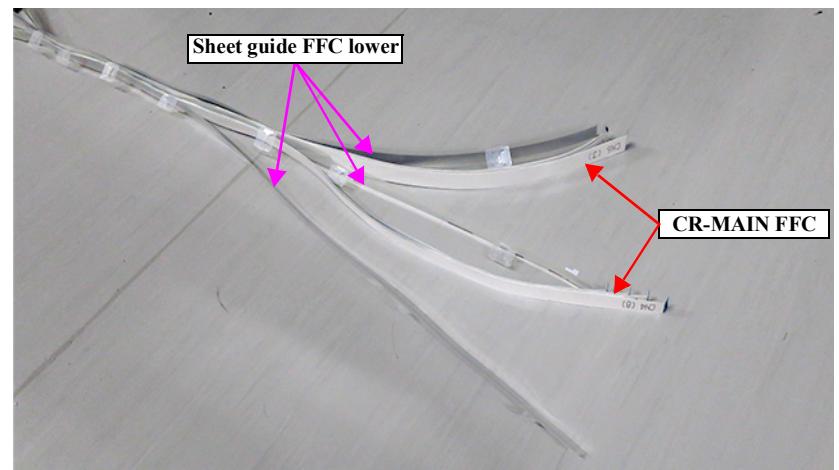


Figure 3-162. Removing the CR-MAIN FFC (11)

3.4.4.19 INK HOLDER LEFT



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
3. Remove the TRAY. ([p190](#))
4. Remove the PAPER GUIDE LEFT / INK HOLDER LEFT COVER. ([p194](#))
5. Remove the SUCTION FAN LEFT. ([p206](#))
6. Remove the two cables from the two relay connectors.
7. Remove the cable of the INK LEAK SENSOR LEFT from the relay connector.
8. Release the cable of the INK LEAK SENSOR LEFT from the six clamps.

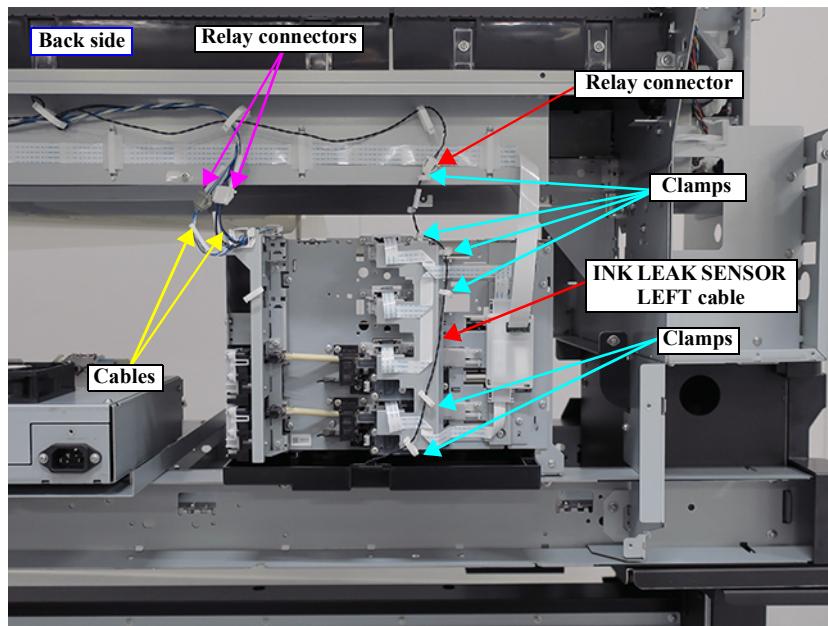


Figure 3-163. Removing the INK HOLDER LEFT (1)

9. Remove the CSIC FFC from the connector.
10. Remove the two screws.
 - A) Silver M4x10 Cup S-tite screw: 2 pcs

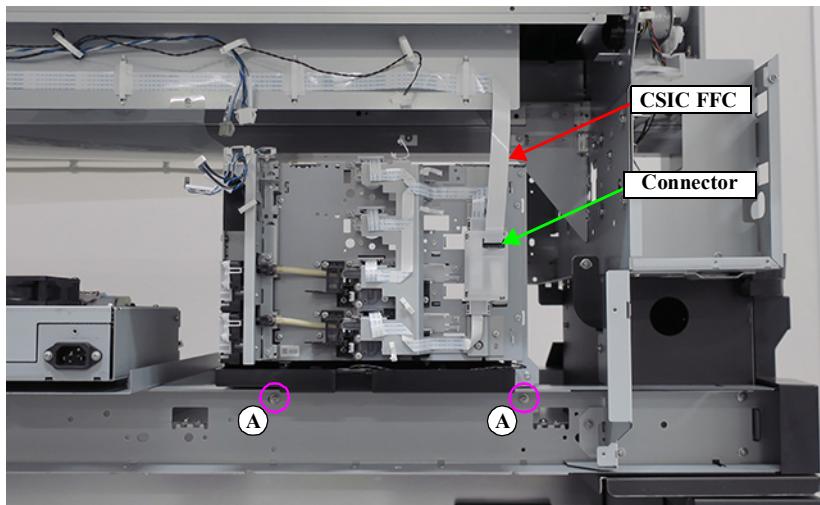


Figure 3-164. Removing the INK HOLDER LEFT (2)



In the next step, ink may leak from the joint. Prepare a waste cloth or the like in advance.

11. Remove the two screws, and disengage the joint.
- B) Black M2.5x18 S-tite screw with built-in washer: 2 pcs

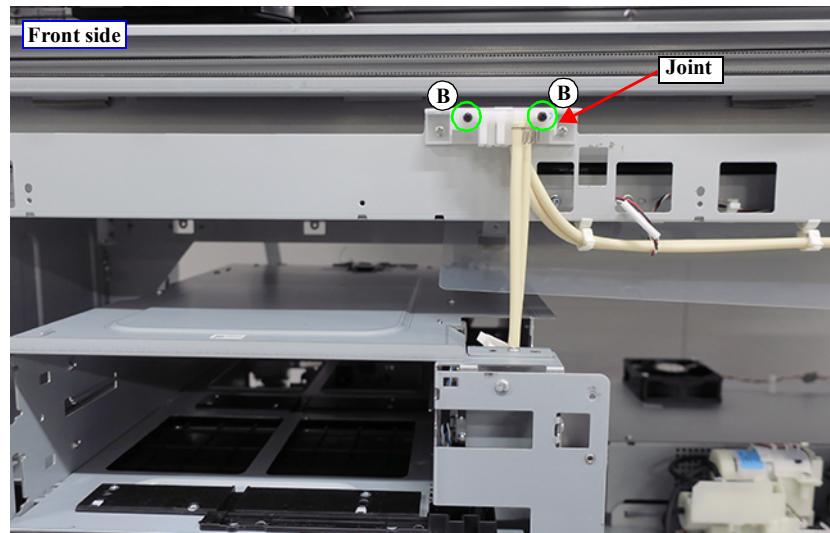
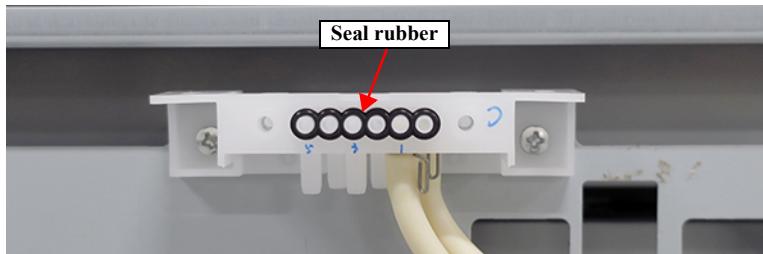


Figure 3-165. Removing the INK HOLDER LEFT (3)



ASSEMBLY

- Before installing the joint, make sure the seal rubber is attached to the flow path.



- Before attaching the seal rubber, let it get wet with cleaning liquid.
- Since the seal rubber cannot be reused, replace it with a new one.
- Using a torque screwdriver, tighten both the screws securing the Ink Tube twice alternately.
 - Specified torque: 0.29 ± 0.01 Nm

12. Remove the seal rubber.

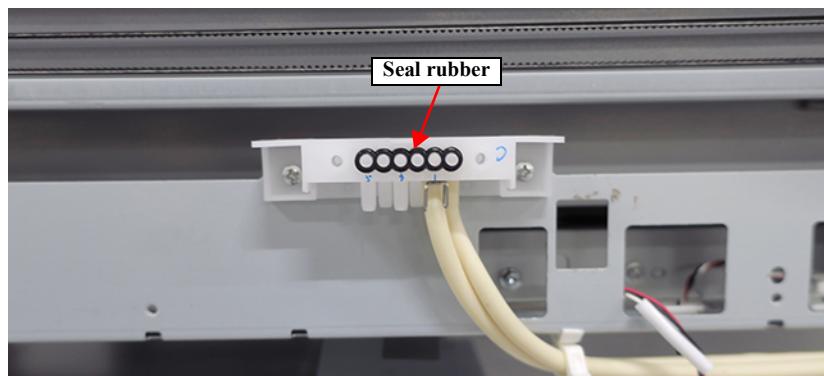


Figure 3-166. Removing the INK HOLDER LEFT (4)

13. Pull out the two air tubes from the two joints.

14. Release the air tubes from the three clamps.

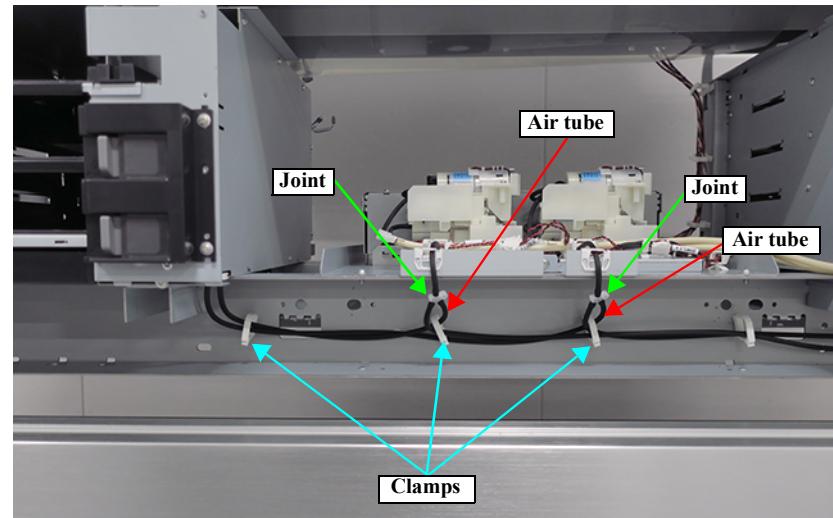


Figure 3-167. Removing the INK HOLDER LEFT (5)

15. Remove the two screws.
 - C) Silver M4x10 Cup S-tite screw: 2 pcs

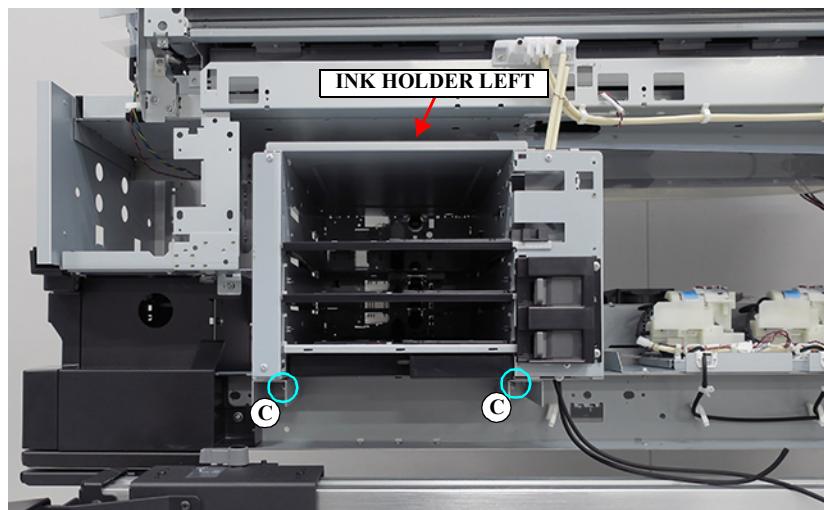


Figure 3-168. Removing the INK HOLDER LEFT (6)

16. Pull out the INK HOLDER LEFT.

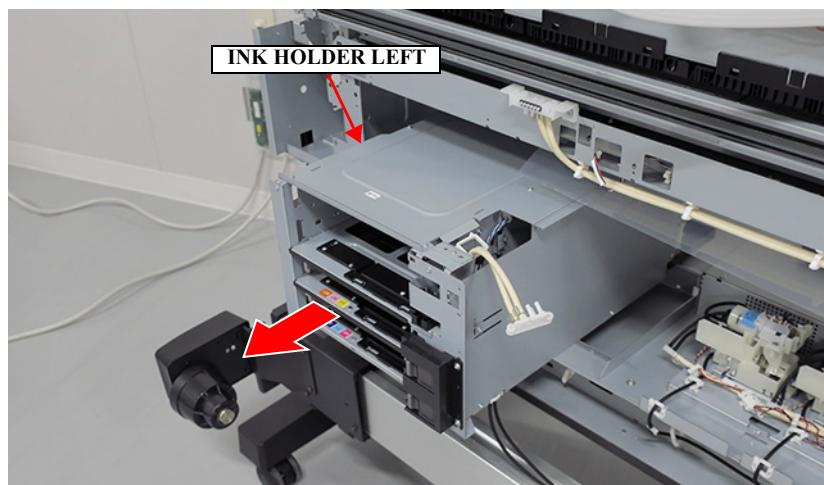


Figure 3-169. Removing the INK HOLDER LEFT (7)

3.4.4.20 WASTE INK TRAY LEFT

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
3. Remove the TRAY. ([p190](#))
4. Remove the PAPER GUIDE LEFT / INK HOLDER LEFT COVER. ([p194](#))
5. Remove the SUCTION FAN LEFT. ([p206](#))
6. Remove the INK HOLDER LEFT. ([p256](#))
7. Remove the four screws, and remove the WASTE INK TRAY LEFT.
 - A) Silver M4x8 Cup S-tite screw: 4 pcs

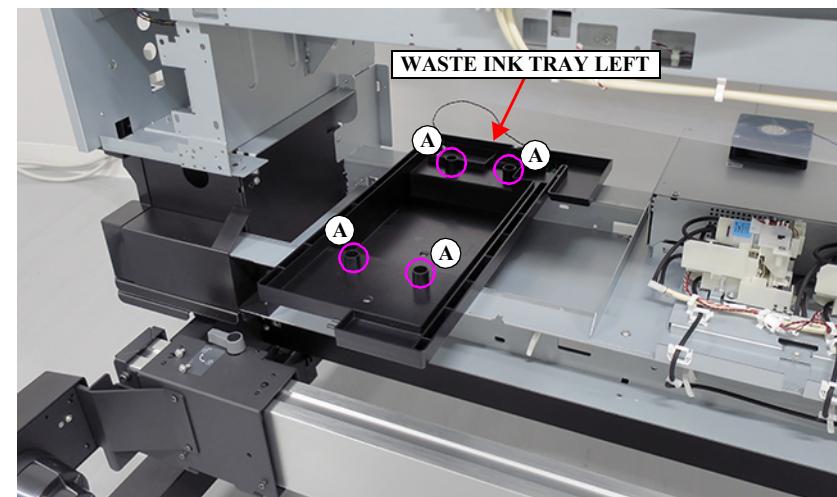


Figure 3-170. Removing the WASTE INK TRAY LEFT

3.4.4.21 INK HOLDER RIGHT



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
3. Remove the TRAY. ([p190](#))
4. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))
5. Remove the SUCTION FAN RIGHT. ([p208](#))
6. Remove the cables from the two relay connectors.
7. Release the cable of the INK LEAK SENSOR RIGHT from the six clamps.

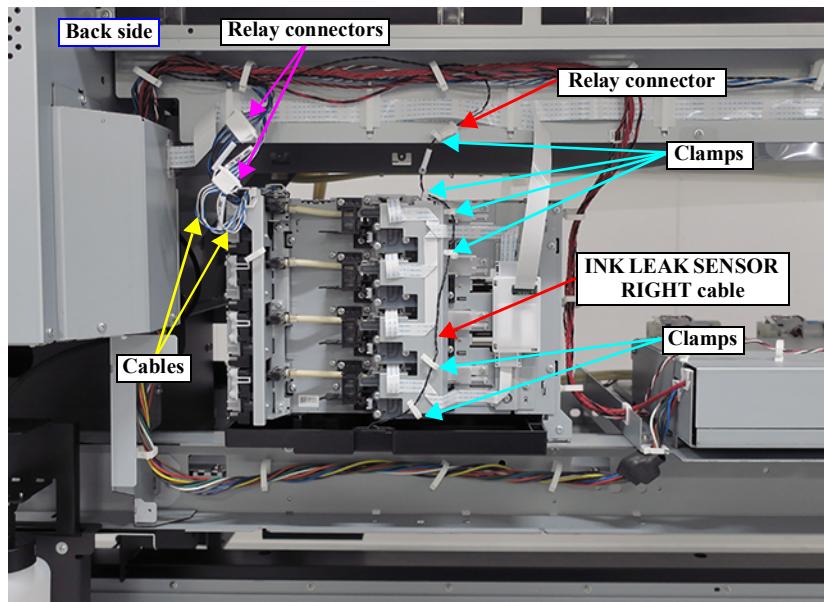


Figure 3-171. Removing the INK HOLDER RIGHT (1)

8. Remove the CSIC FFC from the connector.
 9. Release the cables from the three clamps.
 10. Remove the two screws.
- A) Silver M4x8 Cup S-tite screw: 2 pcs

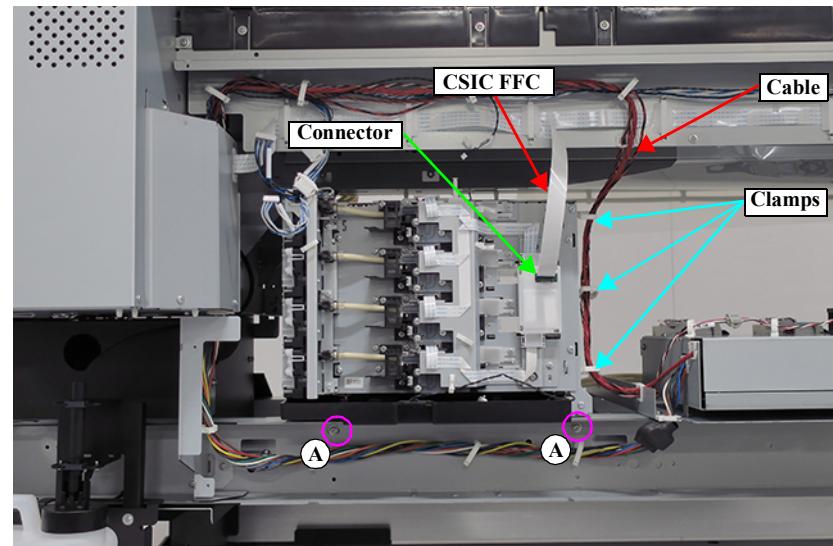


Figure 3-172. Removing the INK HOLDER RIGHT (2)



In the next step, ink may leak from the ink tube. Prepare a waste cloth or the like in advance.

11. Remove the two screws, and disengage the joint.
- B) Black M2.5x18 S-tite screw with built-in washer: 2 pcs

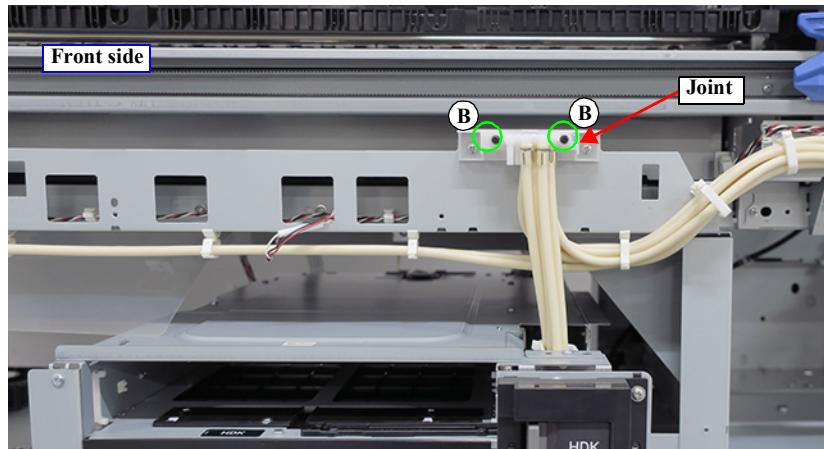
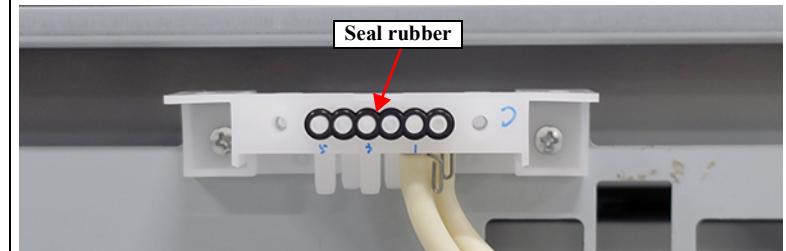


Figure 3-173. Removing the INK HOLDER RIGHT (3)



- Before installing the joint, make sure the seal rubber is attached to the flow path.



- Before attaching the seal rubber, let it get wet with cleaning liquid.
- Since the seal rubber cannot be reused, replace it with a new one.
- Using a torque screwdriver, tighten both the screws securing the Ink Tube twice alternately.
 - Specified torque: $0.29 \pm 0.01 \text{ Nm}$

12. Remove the seal rubber.

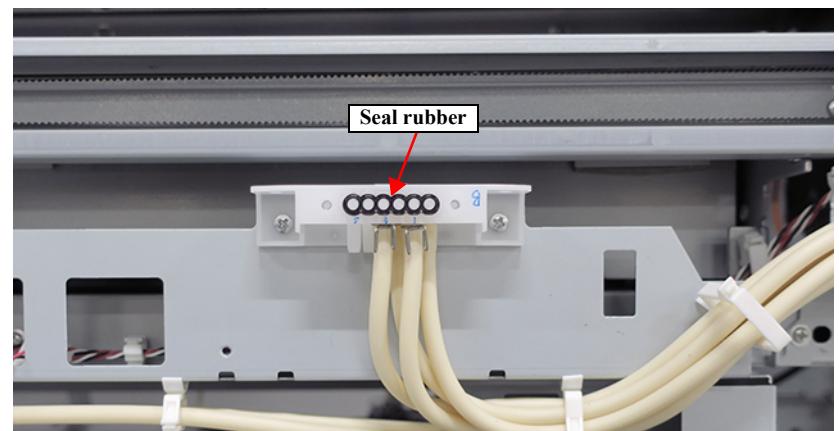


Figure 3-174. Removing the INK HOLDER RIGHT (4)

13. Pull out the two air tubes from the two joints.
14. Release the air tubes from the five clamps.

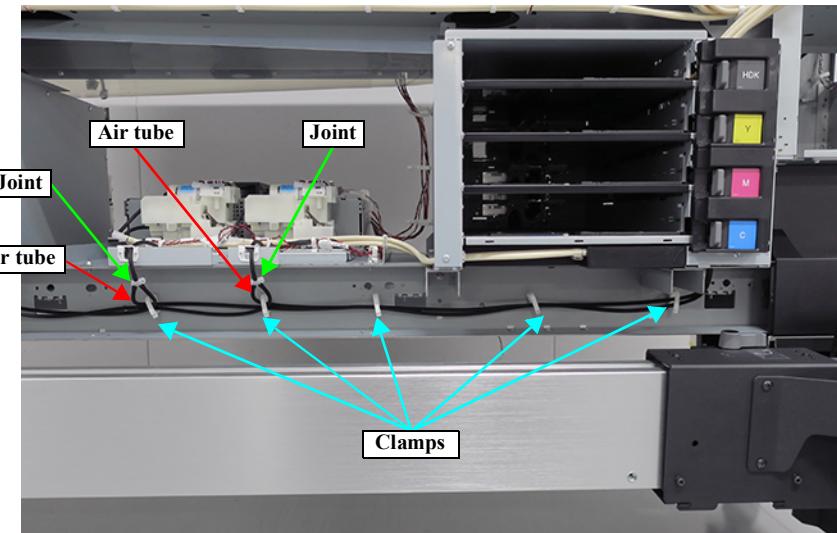


Figure 3-175. Removing the INK HOLDER RIGHT (5)

15. Slide the two tube clips, and pull out the two air tubes.
16. Release the two air tubes from the clamp.

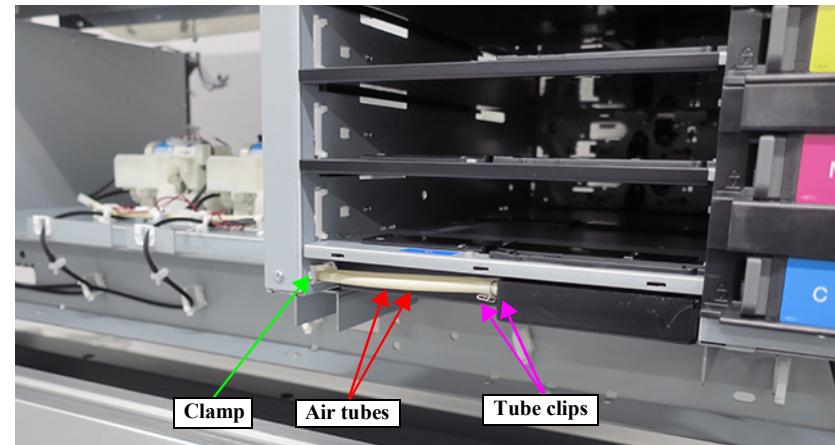


Figure 3-176. Removing the INK HOLDER RIGHT (6)

17. Remove the two screws.
- C) Silver M4x10 Cup S-tite screw: 2 pcs

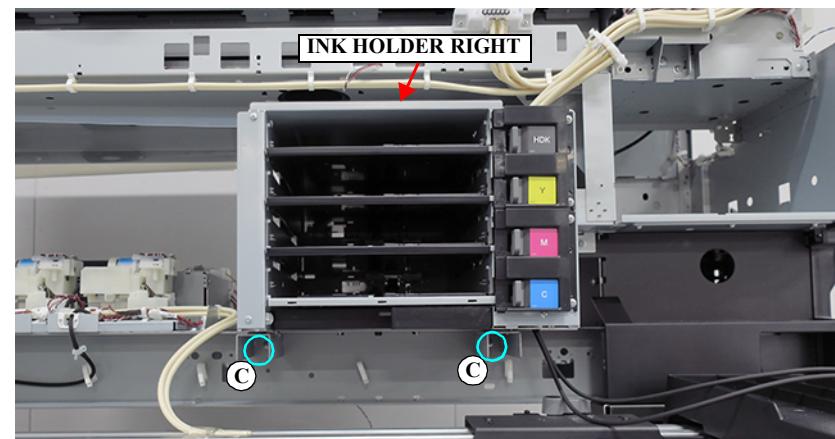


Figure 3-177. Removing the INK HOLDER RIGHT (7)

18. Pull out the INK HOLDER RIGHT.

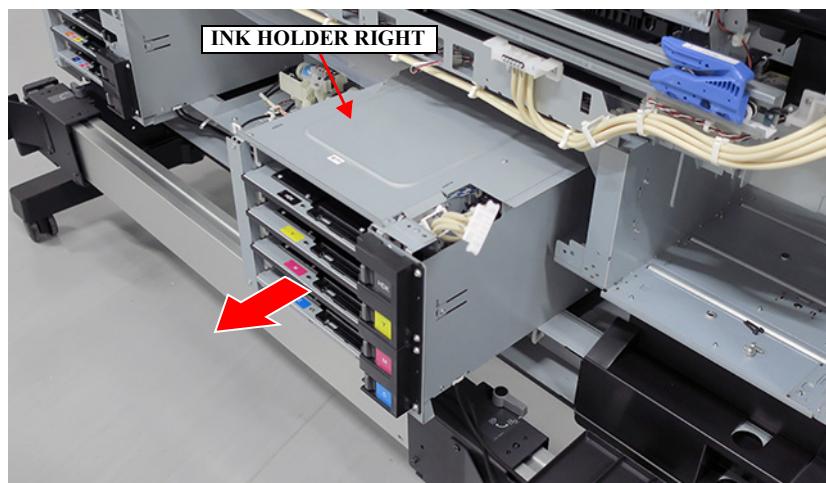


Figure 3-178. Removing the INK HOLDER RIGHT (8)

3.4.4.22 WASTE INK TRAY RIGHT

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
3. Remove the TRAY. ([p190](#))
4. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))
5. Remove the SUCTION FAN RIGHT. ([p208](#))
6. Remove the INK HOLDER RIGHT. ([p260](#))
7. Remove the four screws, and remove the WASTE INK TRAY RIGHT.
 - A) Silver M4x8 Cup S-tite screw: 4 pcs

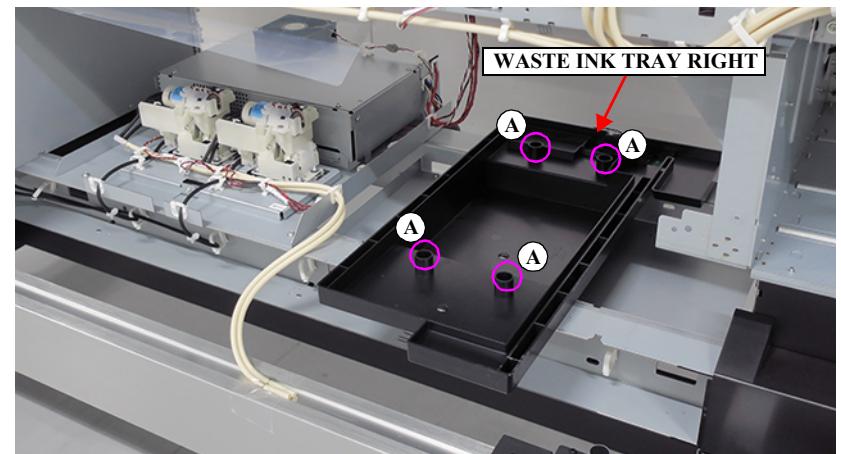


Figure 3-179. Removing the WASTE INK TRAY RIGHT

3.4.4.23 INK LEAK SENSOR LEFT

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the INK LEAK SENSOR LEFT.
3. Release the cable from the hook.
4. Release the cable from the six clamps.
5. Remove the cable from the relay connector.

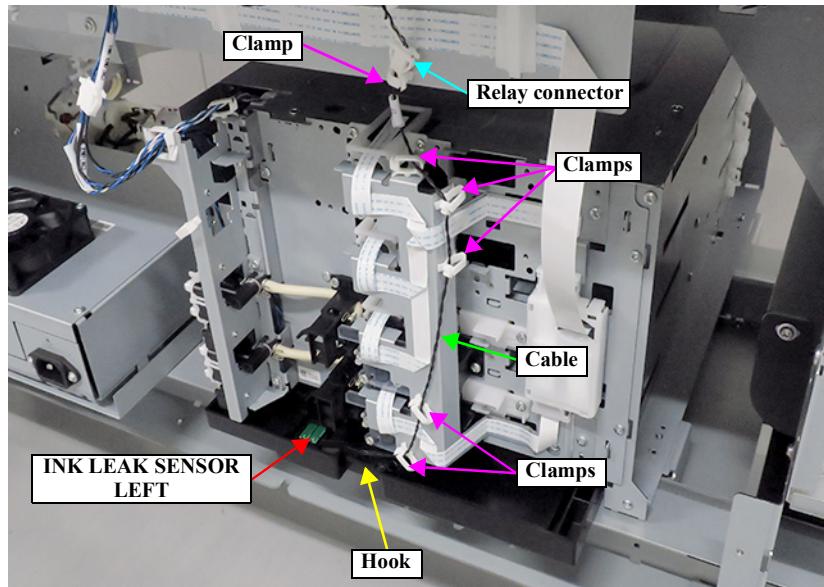


Figure 3-180. Removing the INK LEAK SENSOR LEFT

3.4.4.24 INK LEAK SENSOR RIGHT

1. Remove the REAR LOWER FRAME. ([p198](#))
2. Remove the INK LEAK SENSOR RIGHT.
3. Release the cable from the hook.
4. Release the cable from the six clamps.
5. Remove the cable from the relay connector.

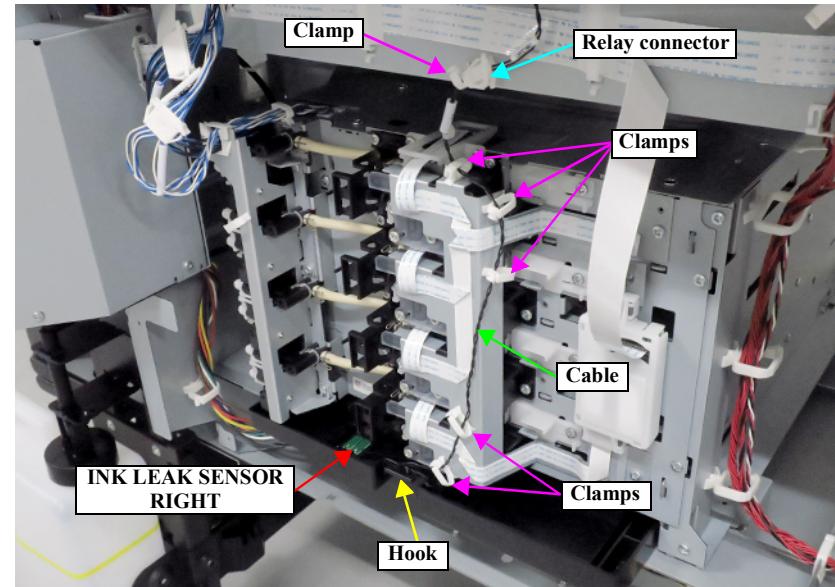


Figure 3-181. Removing the INK LEAK SENSOR RIGHT

3.4.4.25 AIR UNIT

1. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
2. Remove the TRAY. ([p190](#))
3. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))
4. Slide the two tube clips, and pull out the two air tubes.
5. Release the two air tubes from the two clamps.

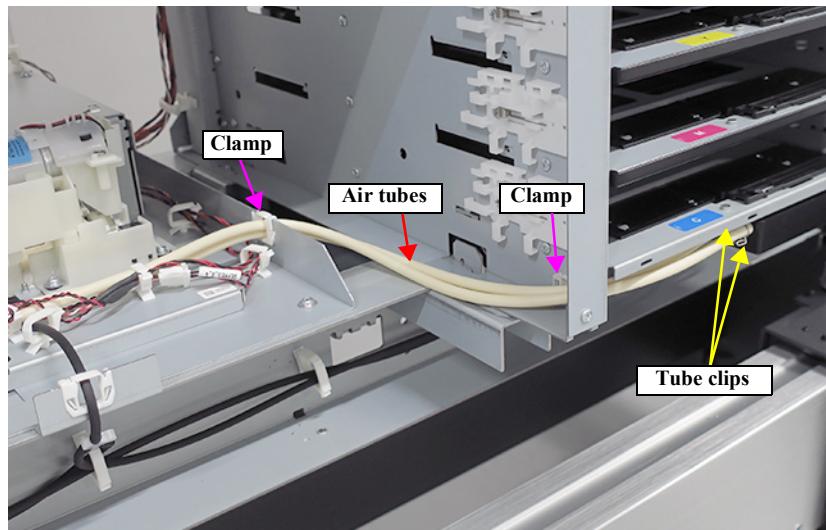


Figure 3-182. Removing the AIR UNIT (1)

6. Remove the two air tubes from the two joints.
7. Pull out the two air tubes from the two clamps.

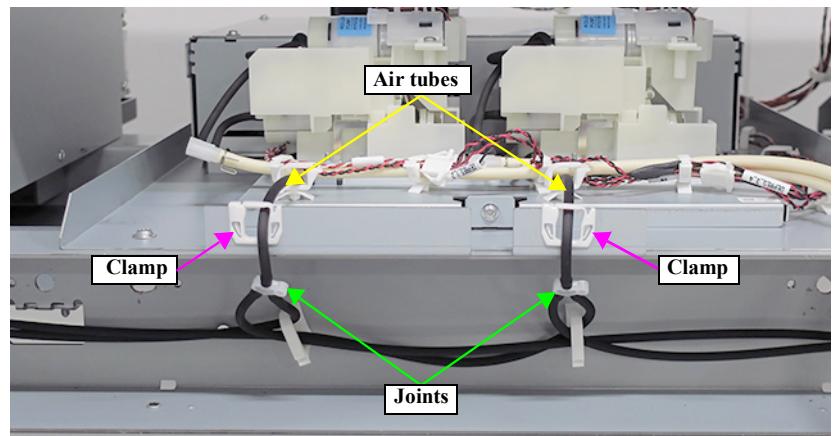


Figure 3-183. Removing the AIR UNIT (2)

8. Remove the two cables from the two relay connectors.
9. Release the two cables from the two clamps.

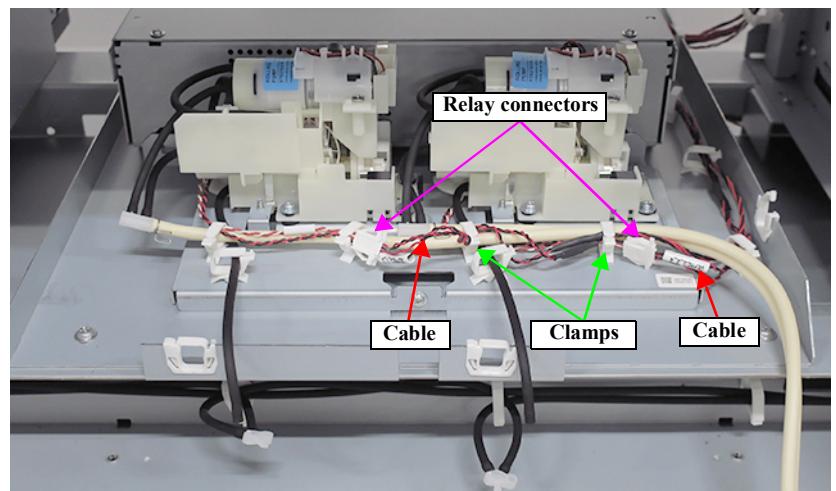


Figure 3-184. Removing the AIR UNIT (3)

10. Remove the screw, and remove the AIR UNIT.

- A) Silver M3x8 Cup S-tite screw: 1 pc

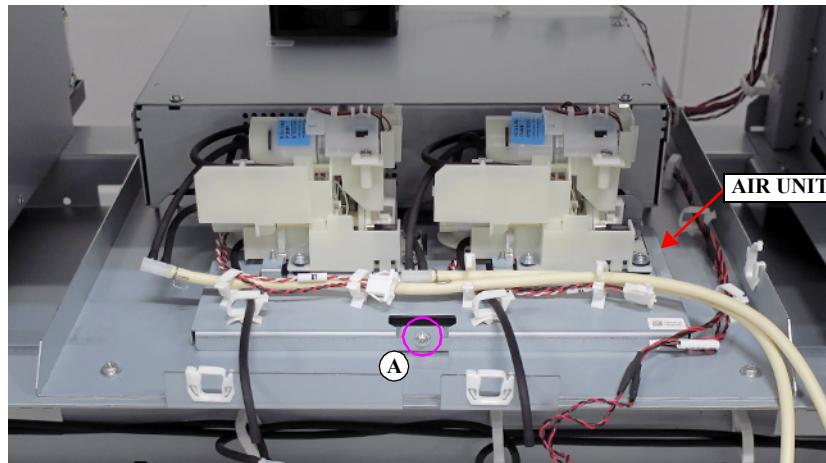


Figure 3-185. Removing the AIR UNIT (4)

3.4.4.26 MIDDLE TUBE ASSY

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Remove the FRONT RIGHT LOWER COVER ASSY. ([p193](#))
6. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
7. Remove the TRAY. ([p190](#))
8. Remove the PAPER GUIDE LEFT / INK HOLDER LEFT COVER. ([p194](#))
9. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))
10. Release the MIDDLE TUBE ASSY from the clamps.



The number of clamps differs depending on the model.

- SC-F6400H Series: 10 pcs
- SC-F6400 Series: 3 pcs

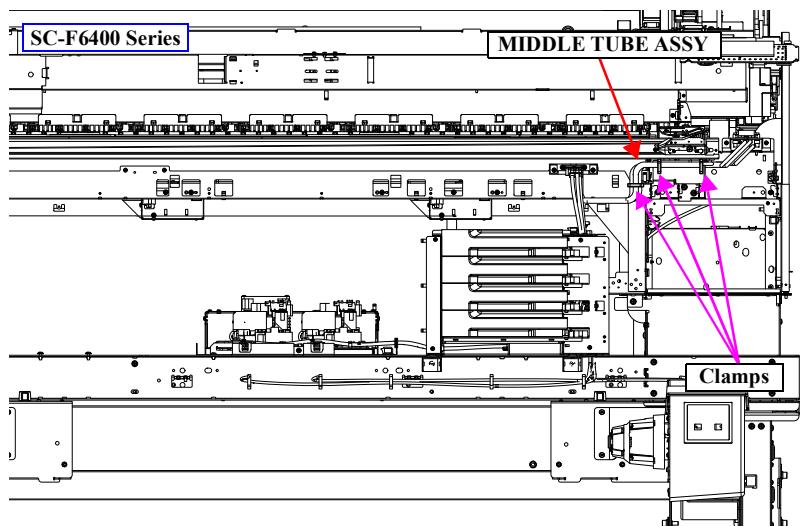
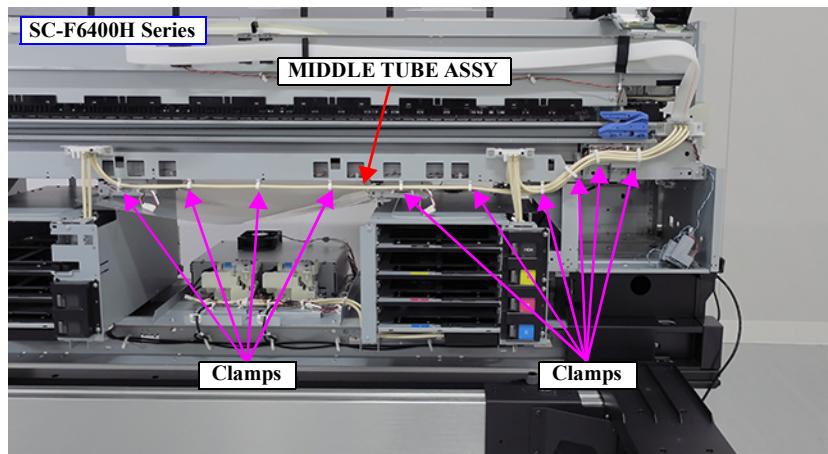


Figure 3-186. Removing the MIDDLE TUBE ASSY (1)



In the next step, ink may leak from the joint. Prepare a waste cloth or the like in advance.



11. Remove the two screws per joint, and disengage the joints.

A) Black M2.5x18 S-tite screw with built-in washer

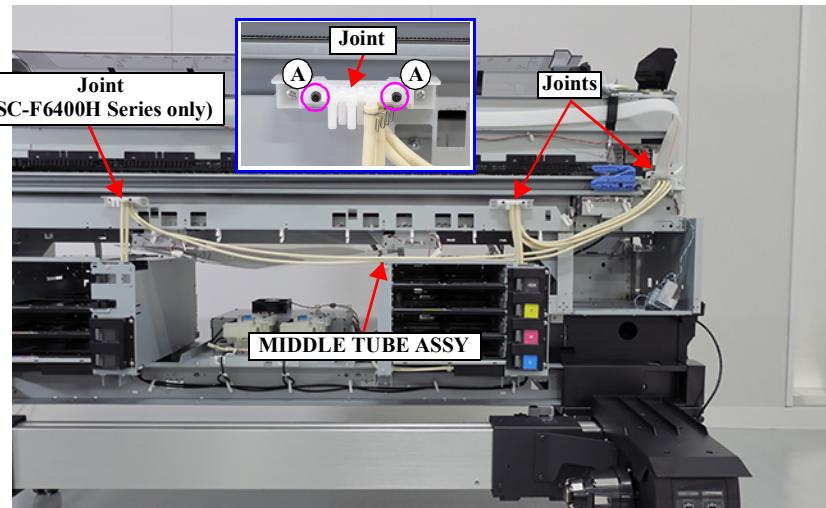


Figure 3-187. Removing the MIDDLE TUBE ASSY (2)

- Before installing the joint, make sure the seal rubber is attached to the flow path.



- Before attaching the seal rubber, let it get wet with cleaning liquid.
- Since the seal rubber cannot be reused, replace it with a new one.
- Using a torque screwdriver, tighten both the screws securing the Ink Tube twice alternately.
 - Specified torque: $0.29 \pm 0.01 \text{ Nm}$

12. Remove the seal rubber.

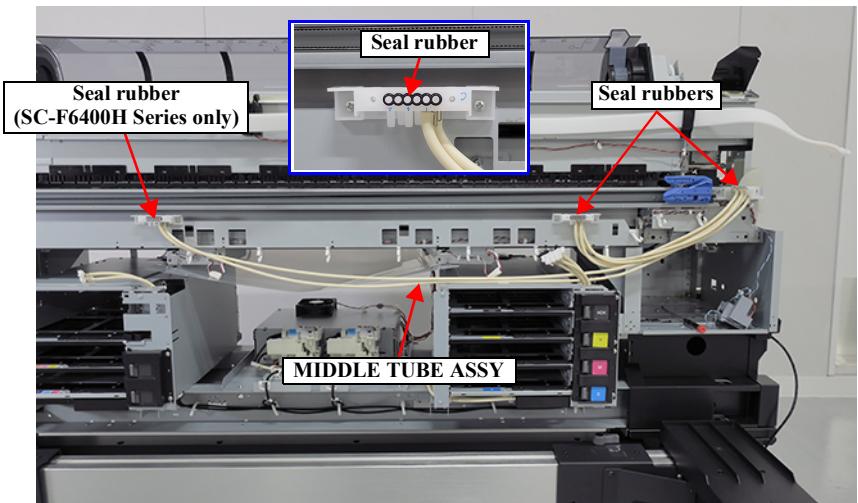


Figure 3-188. Removing the MIDDLE TUBE ASSY (3)

13. Remove two screws that secure the joint, and remove the MIDDLE TUBE ASSY.

B) Silver M3x6 S-tite screw

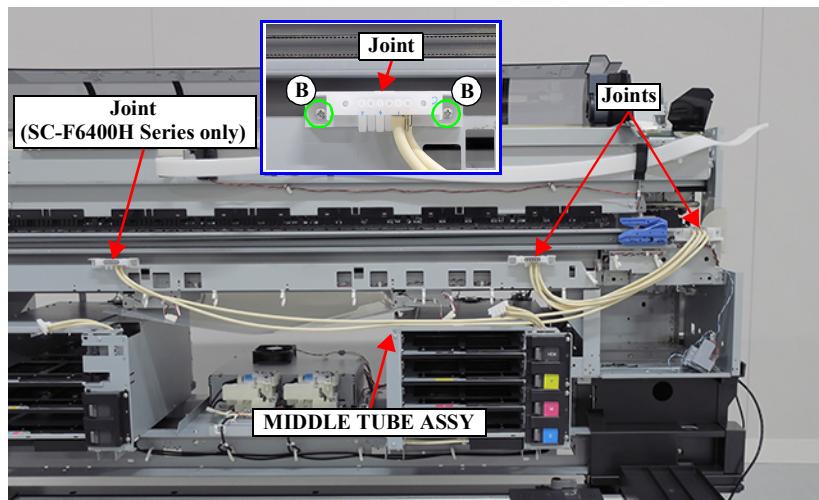


Figure 3-189. Removing the MIDDLE TUBE ASSY (4)

3.4.5 Paper Feed Mechanism

3.4.5.1 PF MOTOR



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the Tension Spring.
9. Remove the two screws, and remove the PF Motor Mounting Plate.
 - A) Silver M4x8 S-tite screw with built-in washer: 2 pcs



Pay attention to the positioning point (See [Figure 3-190](#)).

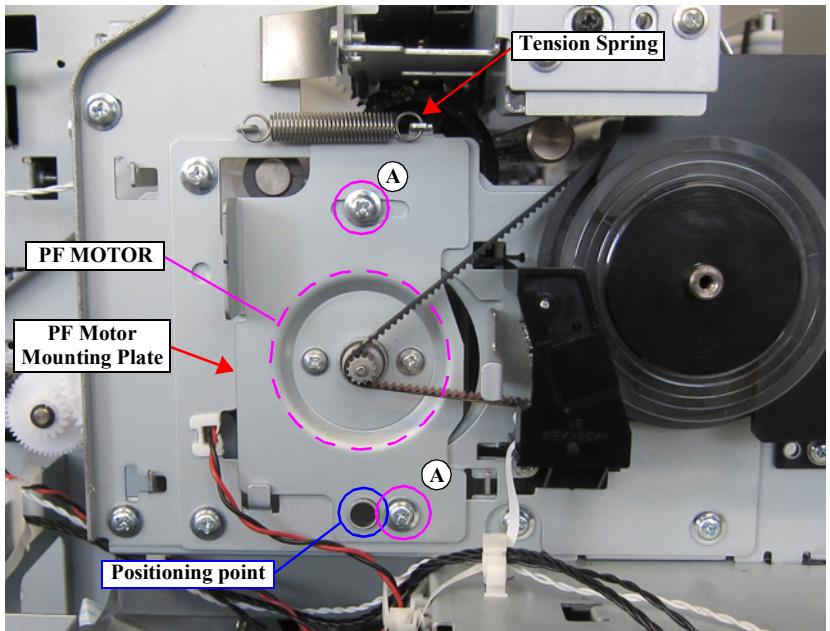


Figure 3-190. Removing the PF Motor Mounting Plate

10. Remove the two screws, and remove the PF MOTOR from the PF Motor Mounting Plate.

A) Silver M3x5 Machine screw: 2 pcs

11. Release the cable from the Edging Saddle.

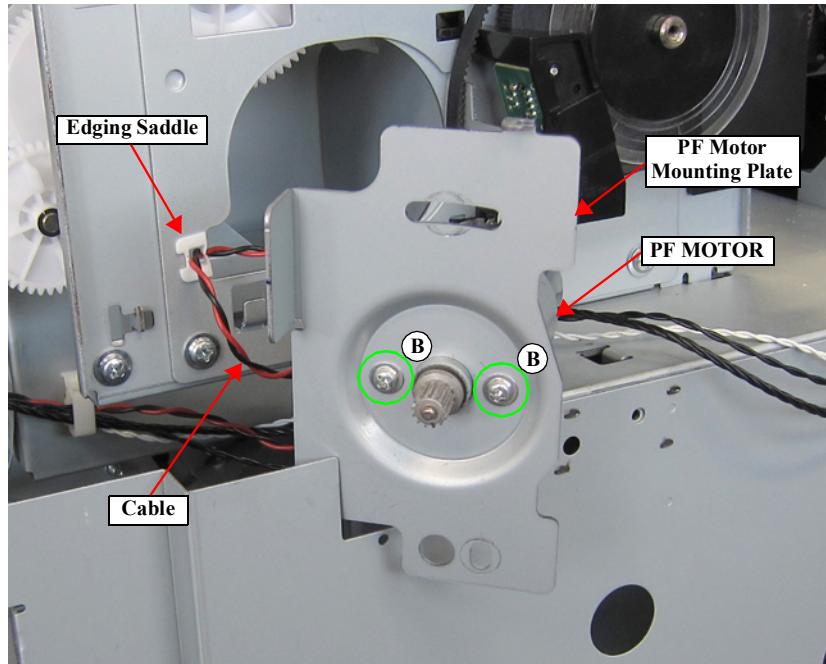


Figure 3-191. Removing the PF MOTOR (1)

12. Remove the cable from the relay connector.

13. Release the cable from the five clamps, and remove the PF MOTOR.

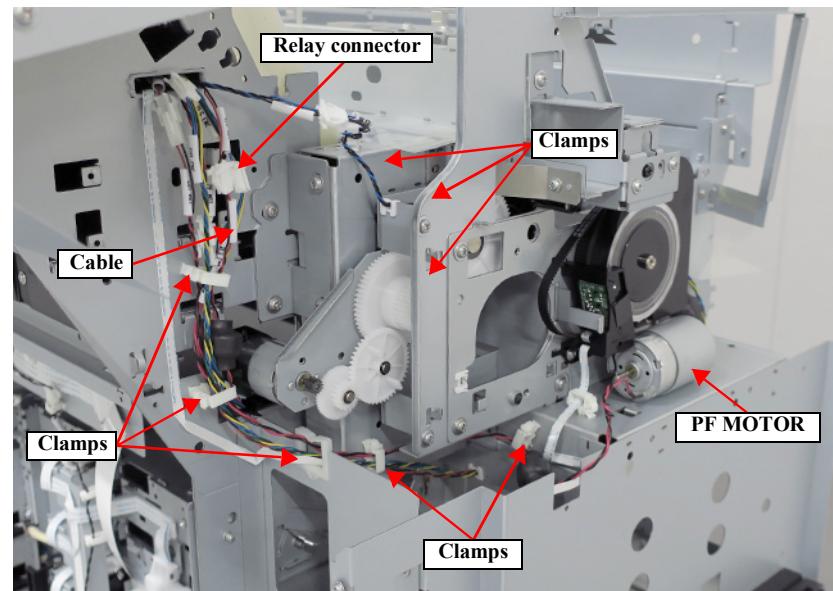


Figure 3-192. Removing the PF MOTOR (2)

3.4.5.2 PF SCALE

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the PF ENCODER. ([p273](#))
9. Remove the PF SCALE.

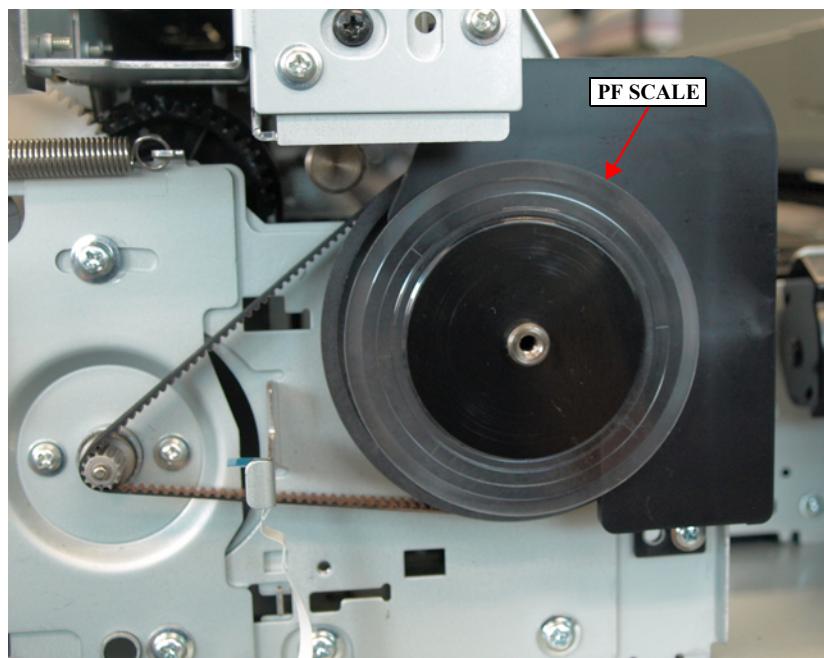


Figure 3-193. Removing the PF SCALE

3.4.5.3 PF ENCODER



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the screw that secures the PF Encoder Assy.
A) Silver M3x8 S-tite screw with built-in washer: 1 pc
9. Disengage the two hooks of the PF Encoder Assy, and remove the PF Encoder Assy.



Engage the two hooks on the PF Encoder Assy under the PF Roller Frame by sliding the assy.

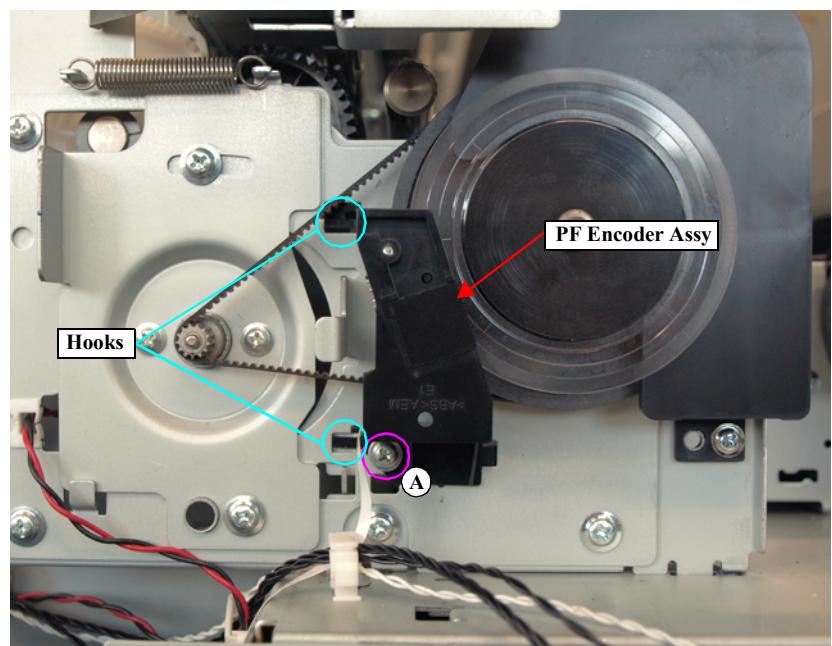
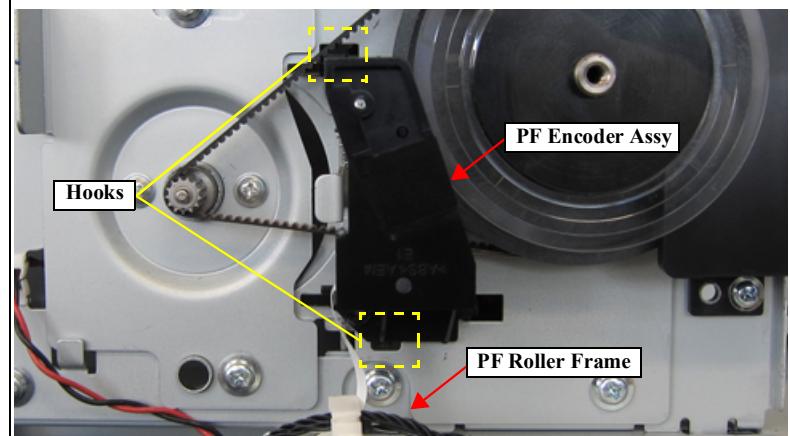


Figure 3-194. Removing the PF Encoder Assy

10. Remove the screw, and remove the PF ENCODER.
 - B) Silver M2.5x6 P-tite screw: 1 pc
11. Disconnect the FFC from the connector of the PF ENCODER.

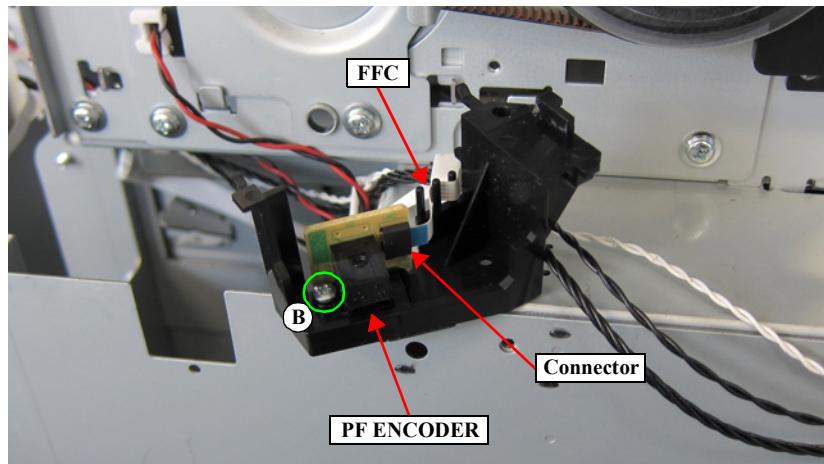


Figure 3-195. Removing the PF ENCODER

3.4.5.4 PF TIMING BELT



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the PF ENCODER. ([p273](#))
9. Remove the PF TIMING BELT from the pinion gear of the PF MOTOR.
10. Remove the screw, and remove the PF Shade Cover.
 - A) Silver M3x8 S-tite screw with built-in washer: 1 pc



- Pay attention to the positioning point (See [Figure 3-196](#)).
- Engage the hook on the PF Shade Cover into the hole on the Left Frame.

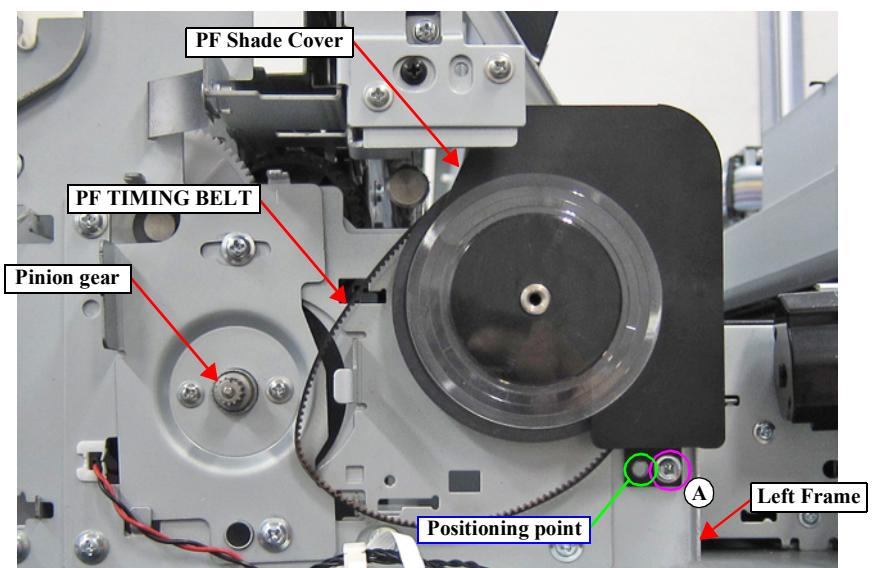
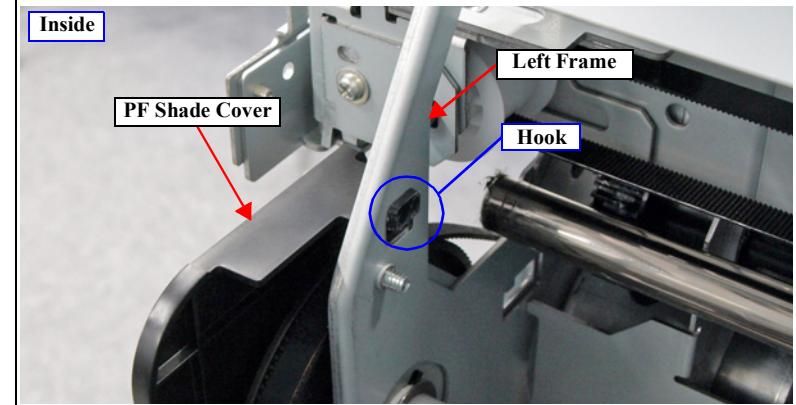


Figure 3-196. Removing the PF Shade Cover

11. Remove the PF TIMING BELT.

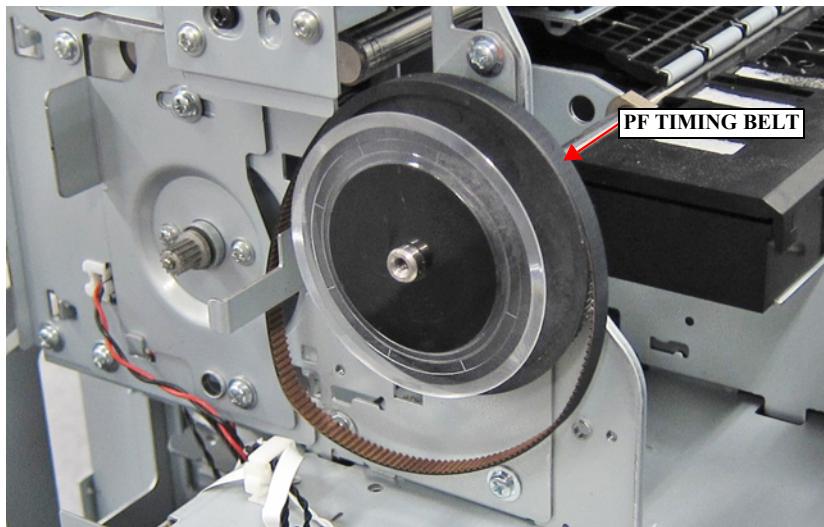


Figure 3-197. Removing the PF TIMING BELT

3.4.5.5 DRIVEN ROLLER

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Rotate the Combination Gear 18.4, 37.6 counterclockwise to set the DRIVEN ROLLER in the release position.

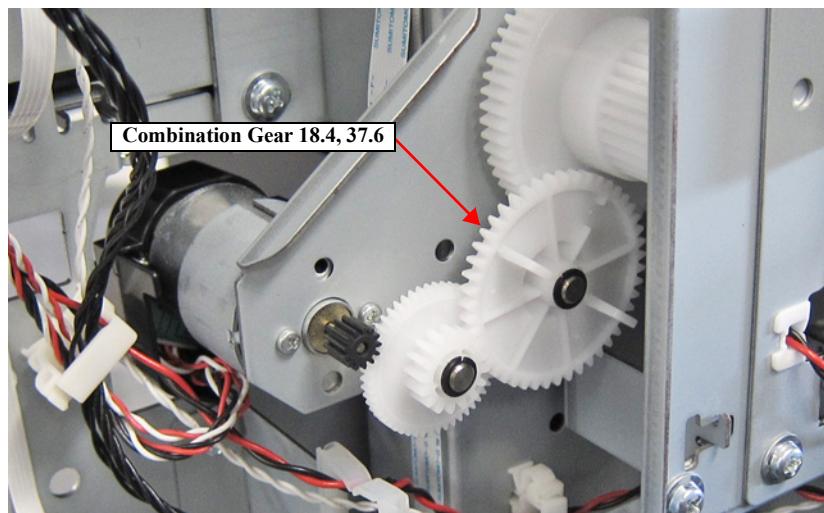


Figure 3-198. Rotate the Combination Gear 18.4, 37.6

9. Remove the DRIVEN ROLLER Shaft from the four grooves of the Release Roller Assy.

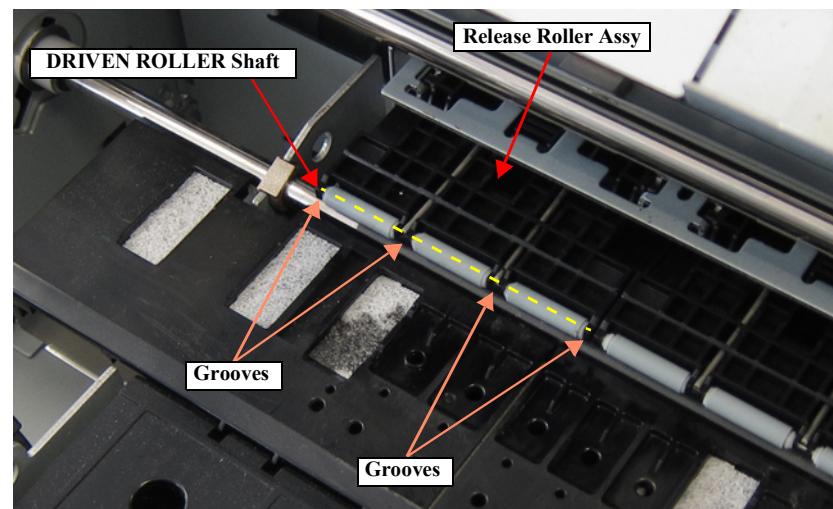


Figure 3-199. Removing the DRIVEN ROLLER (1)

10. Pull out the DRIVEN ROLLER Shaft from the three DRIVEN ROLLERS.

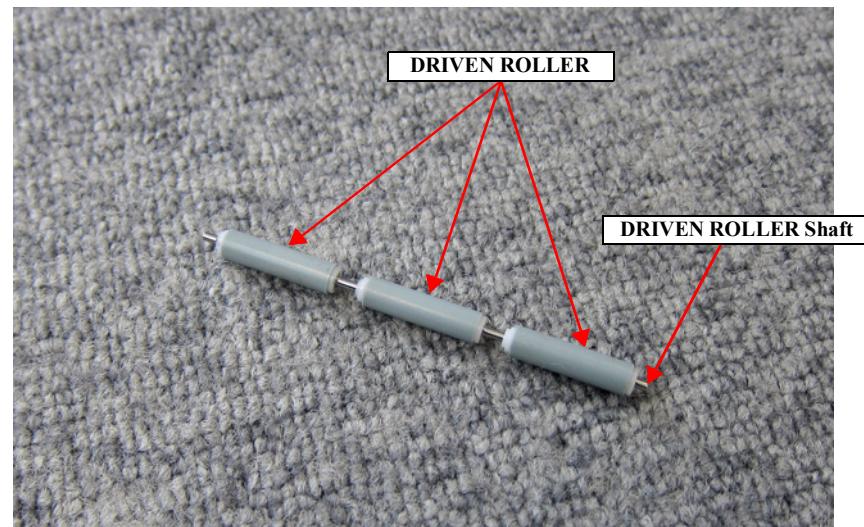


Figure 3-200. Removing the DRIVEN ROLLER (2)

3.4.5.6 DRIVEN ROLLER MOTOR

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the two Plastic washers, and remove the Combination gear 26, 12.8 and Combination gear 18.4, 37.6.
9. Remove the two screws, and remove the DRIVEN ROLLER MOTOR.

A) Silver M2.6x4 screw: 2 pcs

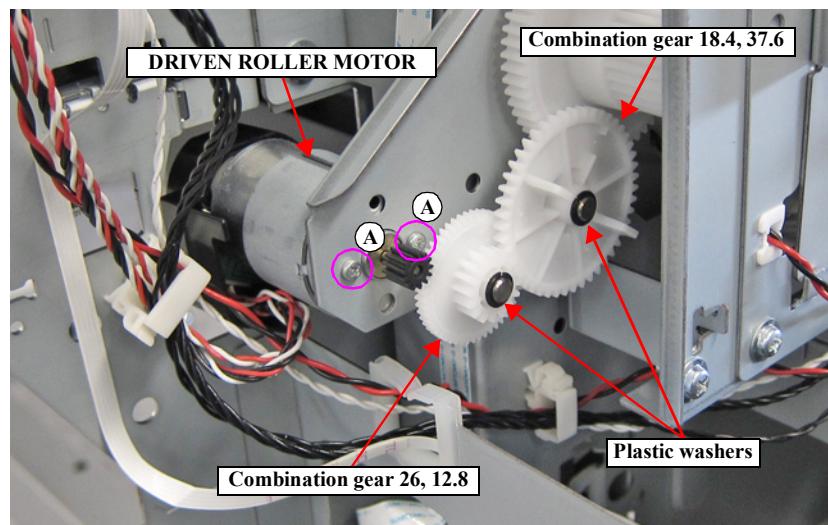


Figure 3-201. Removing the Combination gear 26, 12.8 and Combination gear 18.4, 37.6

10. Remove the Motor Cover.

11. Disconnect the cable from the connector of the DRIVEN ROLLER MOTOR, and remove the DRIVEN ROLLER MOTOR.

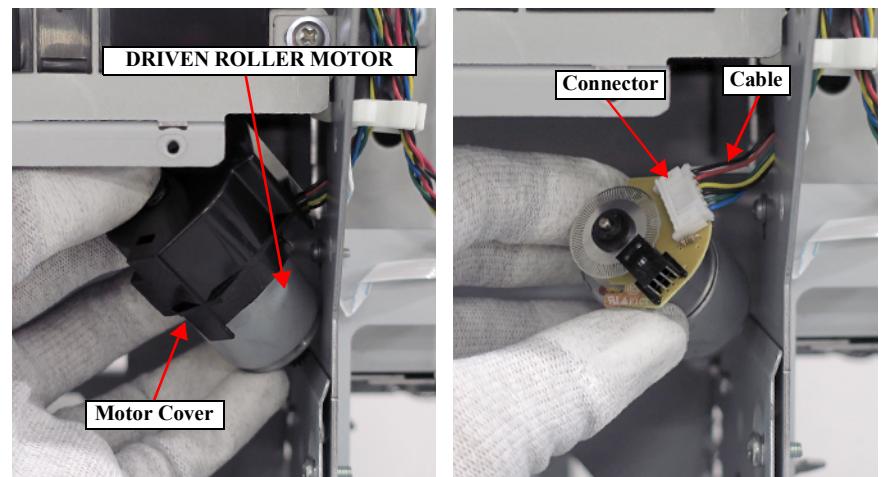


Figure 3-202. Removing the DRIVEN ROLLER MOTOR

3.4.5.7 DRIVEN ROLLER SENSOR

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the PF MOTOR. ([p270](#))
9. Rotate the Combination gear 18.4, 37.6 counterclockwise to set the DRIVEN ROLLER in the release position (The sensor is in the transmissive state.).



CHECK

Confirm the status of the DRIVEN ROLLER with the relative positions of the DRIVEN ROLLER SENSOR and Spur Gear 43 as shown below.

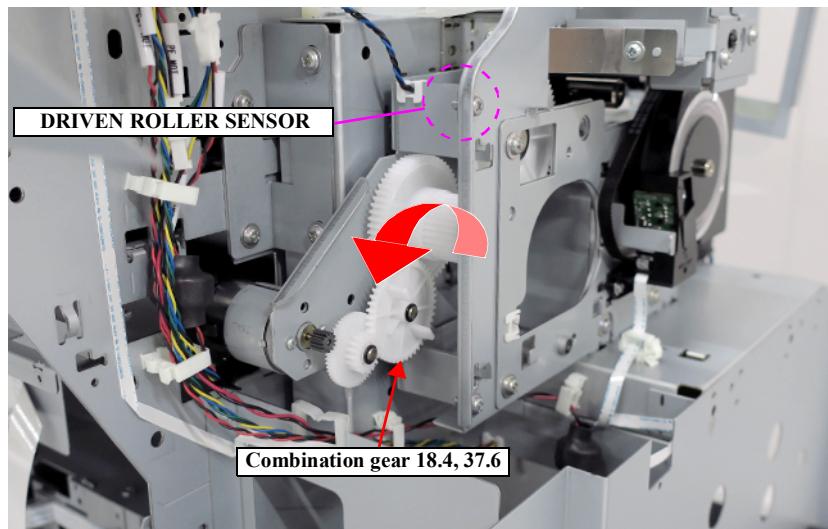
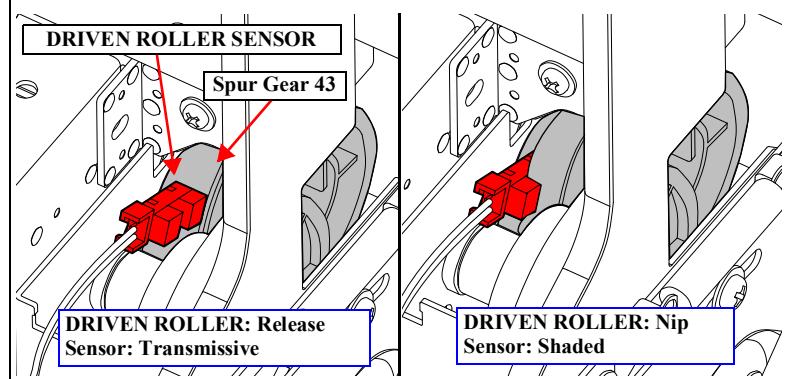


Figure 3-203. Rotate the Combination gear 18.4, 37.6

10. Remove the Plastic washer of the Combination gear 29, 59.2, and pull the Combination gear 29, 59.2 slightly toward you.
11. Loosen the screw that secures the Spur gear 43, and pull the Spur gear 43 slightly toward you.

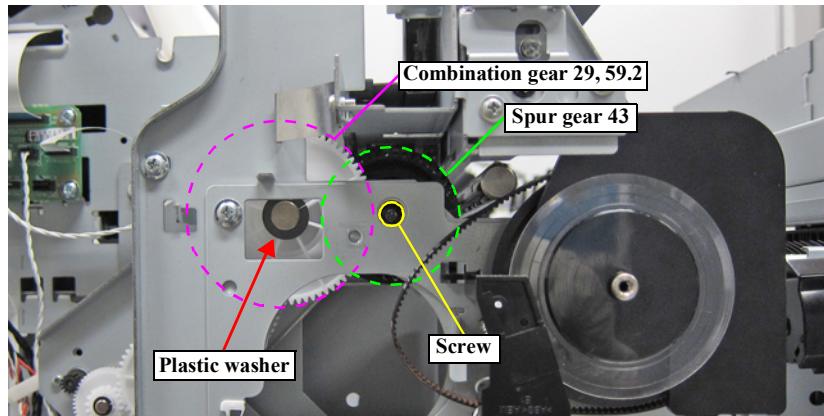


Figure 3-204. Removing the DRIVEN ROLLER SENSOR (1)

12. Disengage the hooks, and remove the DRIVEN ROLLER SENSOR.

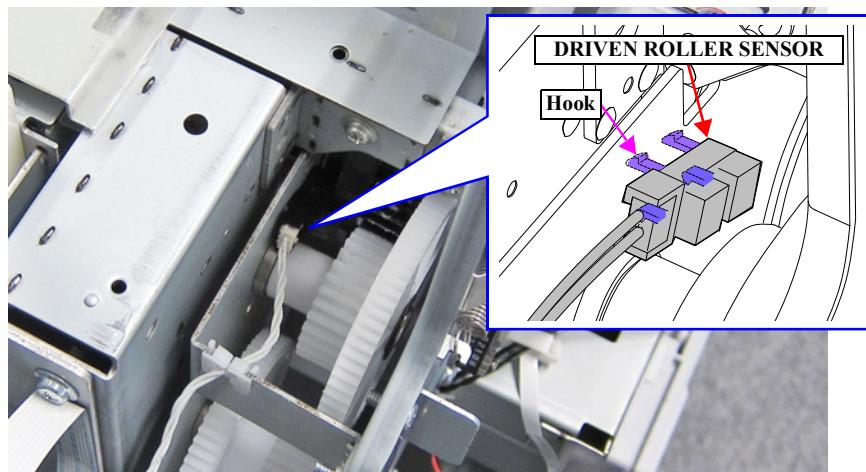


Figure 3-205. Removing the DRIVEN ROLLER SENSOR (2)

13. Disconnect the cable from the DRIVEN ROLLER SENSOR.

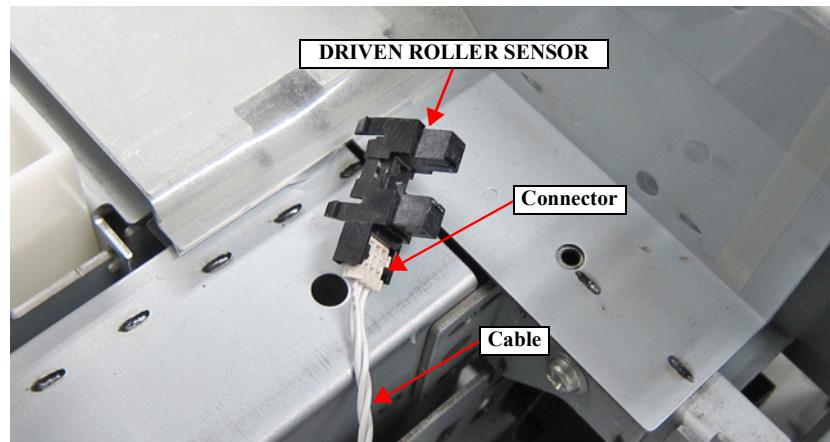


Figure 3-206. Removing the DRIVEN ROLLER SENSOR (3)

3.4.5.8 ATC MOTOR



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER SUPPORT R COVER. ([p167](#))
2. Remove the PANEL ASSY. ([p202](#))
3. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
4. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
5. Remove the two screws, and remove the ATC MOTOR
 A) Silver M3x6 S-tite screw with washer: 2 pcs

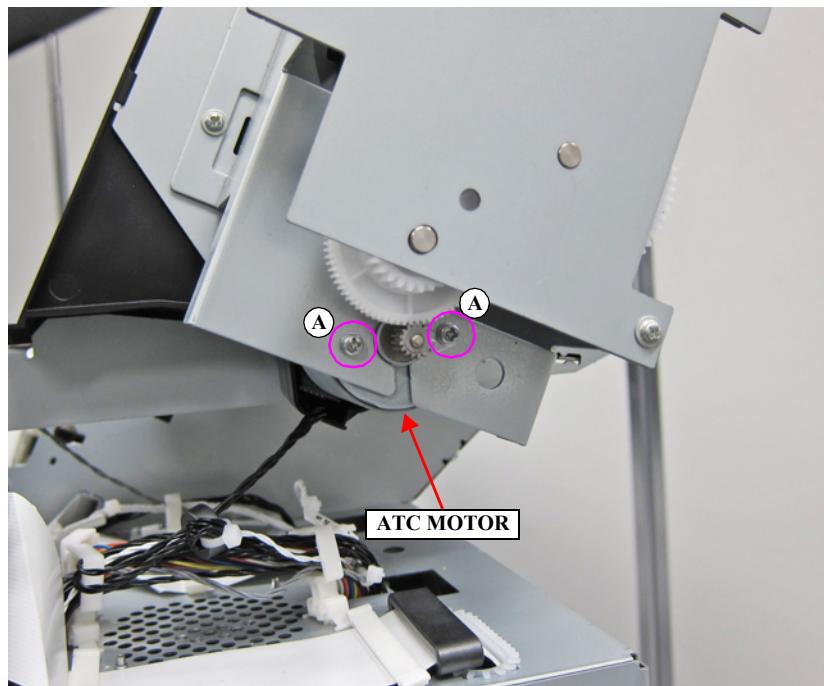


Figure 3-207. Removing the ATC MOTOR

6. Remove the Motor Cover from the ATC MOTOR.

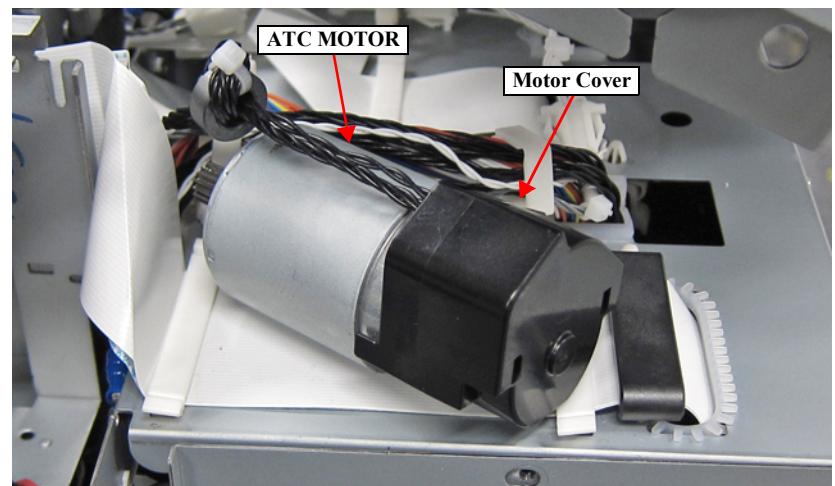


Figure 3-208. Removing the Motor Cover

7. Disconnect the cable from the connector of the ATC MOTOR.

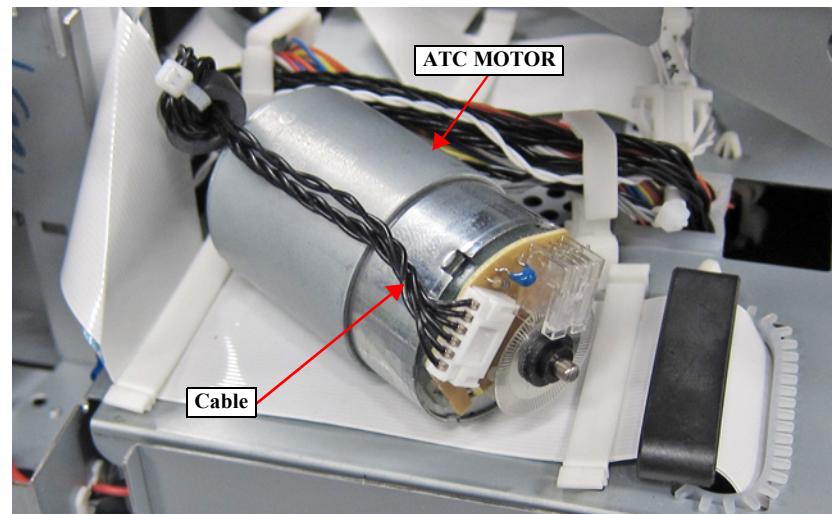


Figure 3-209. Removing the Cable

3.4.5.9 PE SENSOR (ROLL PAPER)

1. Remove the REAR ROLL COVER FRAME. ([p185](#))
2. Remove the two screws, and remove the PE Sensor Assy.
 - A) Silver M3x8 S-tite screw with built-in washer: 2 pcs

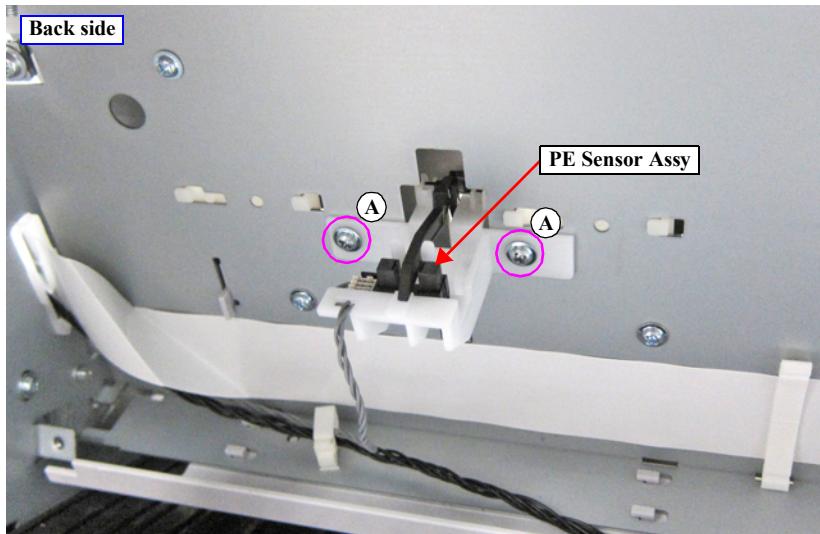


Figure 3-210. Removing the PE Sensor Assy

3. Disengage the hook, and remove the PE SENSOR.
4. Release the cable from the hook of the Holder.
5. Disconnect the cable from the PE SENSOR.

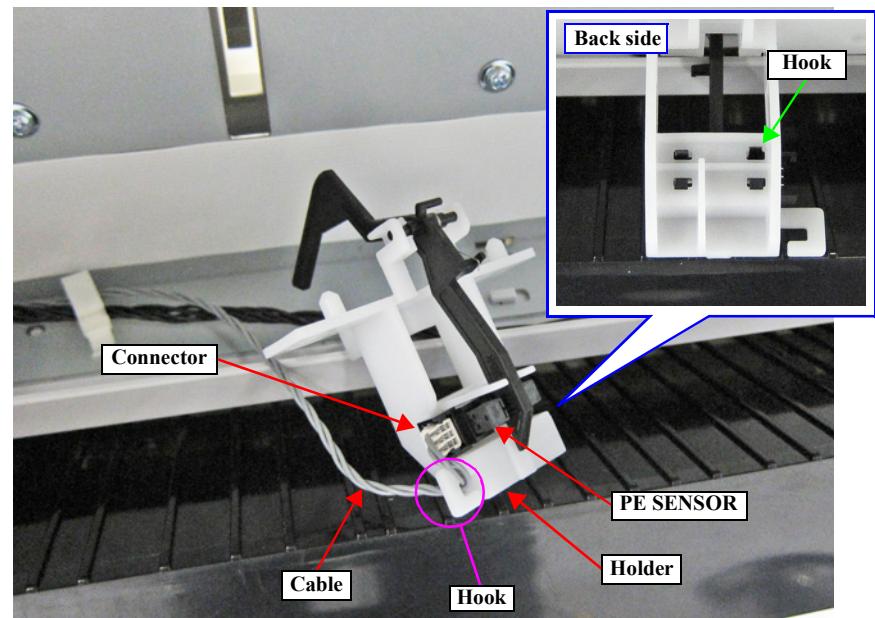


Figure 3-211. Removing the PE SENSOR (ROLL PAPER)

3.4.5.10 PE SENSOR (THICK PAPER)

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the REAR ROLL COVER FRAME. ([p185](#))
6. Perform **Step 6** to **Step 17** of the INK HOLDER RIGHT.
7. Pull out the INK HOLDER RIGHT.

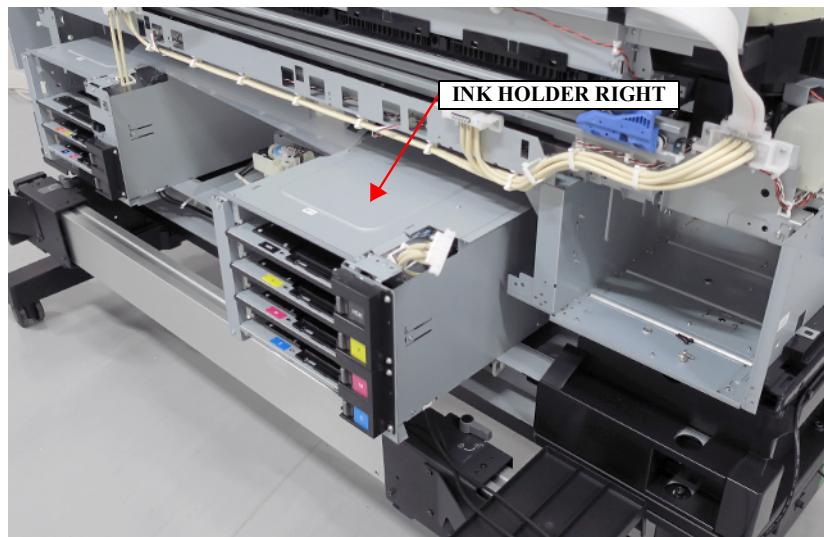


Figure 3-212. Removing the PE SENSOR (THICK PAPER) (1)

Remove the two screws, and remove the Rear Paper Guide.

- A) Silver M3x6 Cup S-tite screw: 2 pcs

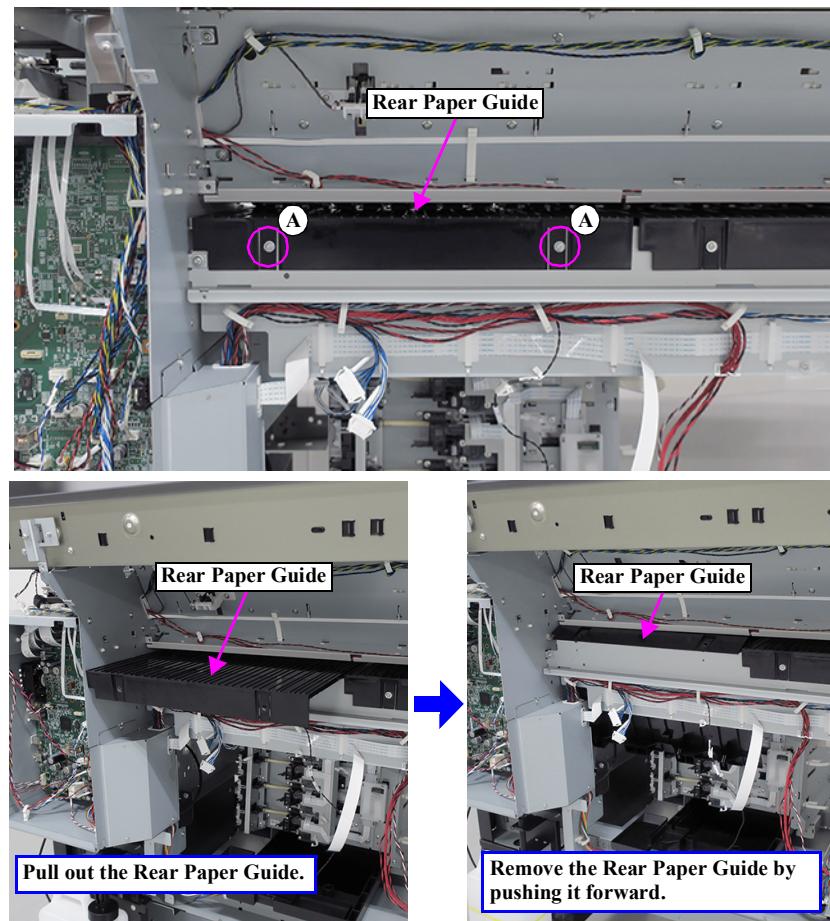


Figure 3-213. Removing the PE SENSOR (THICK PAPER) (2)

8. Release the two hooks on the PE Sensor Assy, and remove the PE Sensor Assy to the back side.

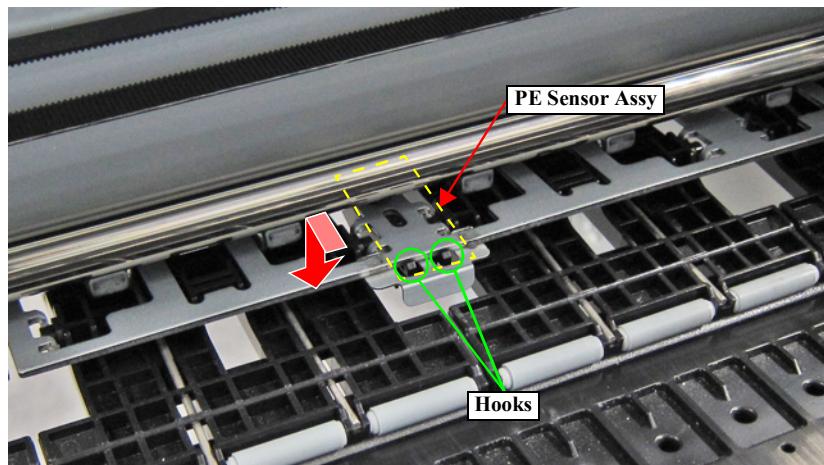


Figure 3-214. Removing the PE Sensor Assy

9. Disengage the two hooks, and remove the Sensor Cap.
10. Disconnect the FFC from the PE SENSOR.

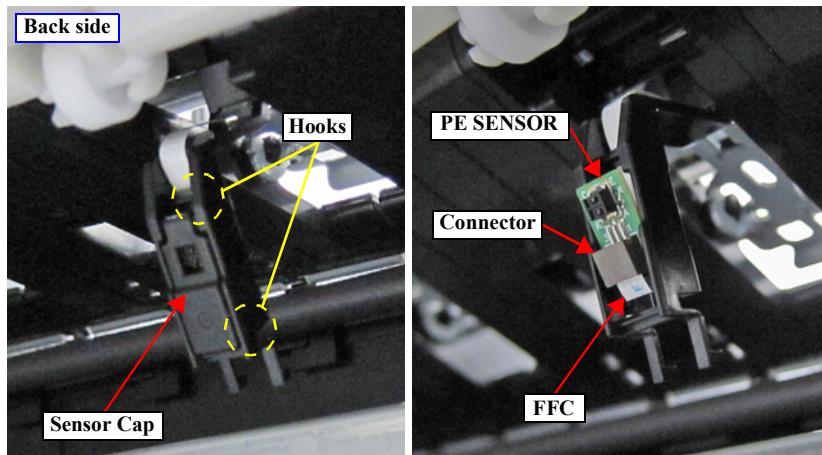


Figure 3-215. Removing the PE SENSOR (THICK PAPER) (3)

3.4.5.11 PF ROLLER MIDDLE SUPPORT

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the UPPER SUPPORT R COVER. ([p167](#))
3. Remove the TOP COVER. ([p164](#))
4. Remove the FRONT COVER. ([p165](#))
5. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
6. Remove the REAR LEFT LOWER FRAME. ([p188](#))
7. Remove the LEFT LOWER COVER. ([p175](#))
8. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
9. Remove the TRAY. ([p190](#))
10. Remove the PAPER GUIDE LEFT / INK HOLDER LEFT COVER. ([p194](#))
11. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))
12. Remove the SUCTION FAN LEFT. ([p206](#))
13. Remove the SUCTION FAN RIGHT. ([p208](#))
14. Remove the REAR ROLL COVER FRAME. ([p185](#))
15. Perform [Step 6](#) to [Step 15](#) of the INK HOLDER LEFT.
16. Perform [Step 6](#) to [Step 17](#) of the INK HOLDER RIGHT.
17. Pull out the INK HOLDER LEFT and INK HOLDER RIGHT.

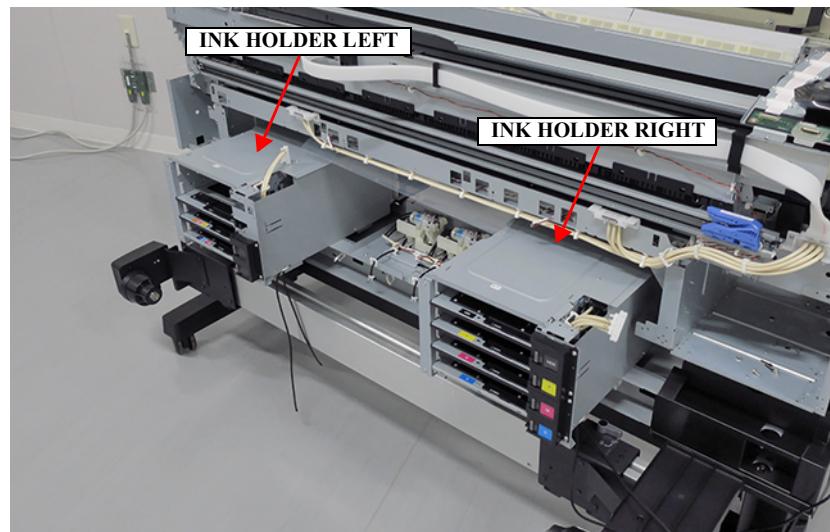


Figure 3-216. Removing the PF ROLLER MIDDLE SUPPORT (1)

18. Loosen the two screws and remove the film.

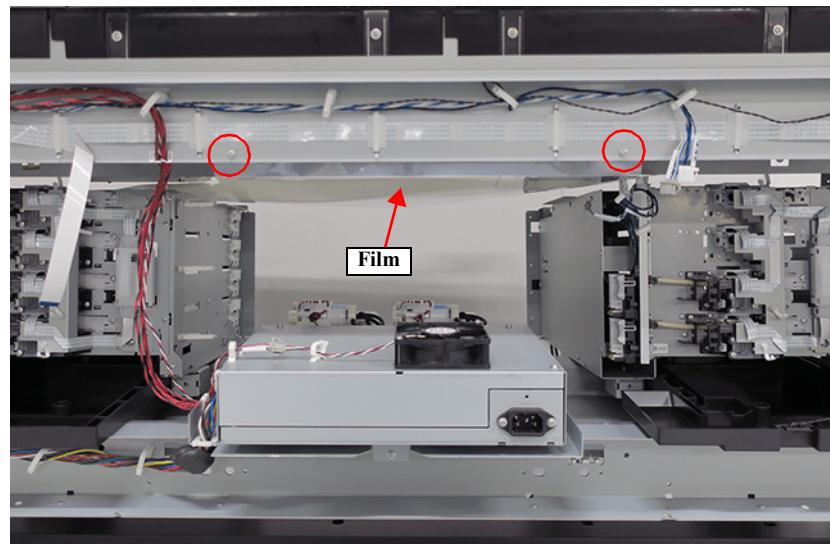


Figure 3-217. Removing the PF ROLLER MIDDLE SUPPORT (2)

19. Remove the eight screws, and remove the four Rear Paper Guides.

- A) Silver M3x6 Cup S-tite screw: 8 pcs

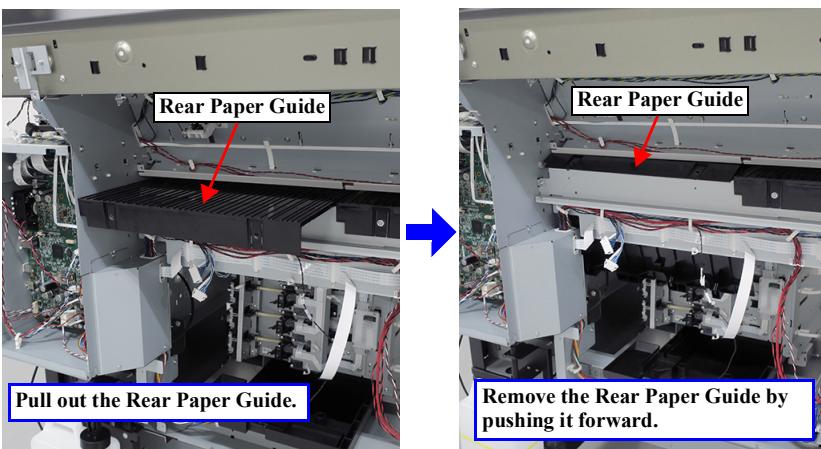
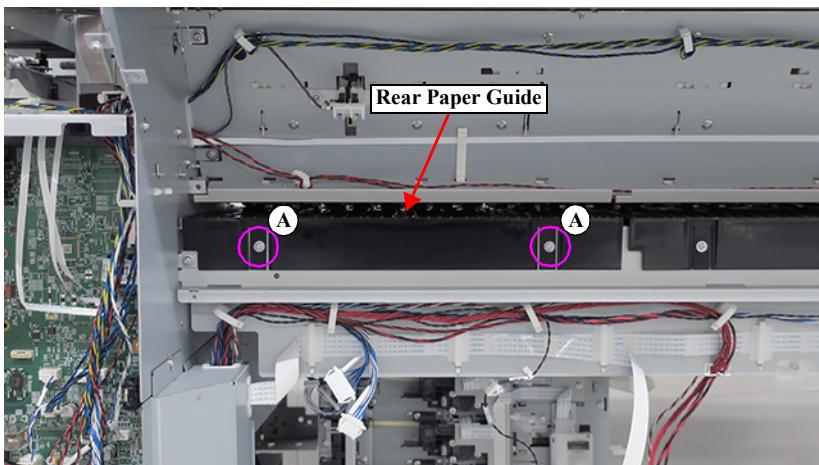


Figure 3-218. Removing the PF ROLLER MIDDLE SUPPORT (3)

20. PF ROLLER MIDDLE SUPPORT For each of the four PF ROLLER MIDDLE SUPPORTs, remove the two securing screws using the ratchet driver.

- B) Silver M3x8 Cup S-tite screw: 8 pcs

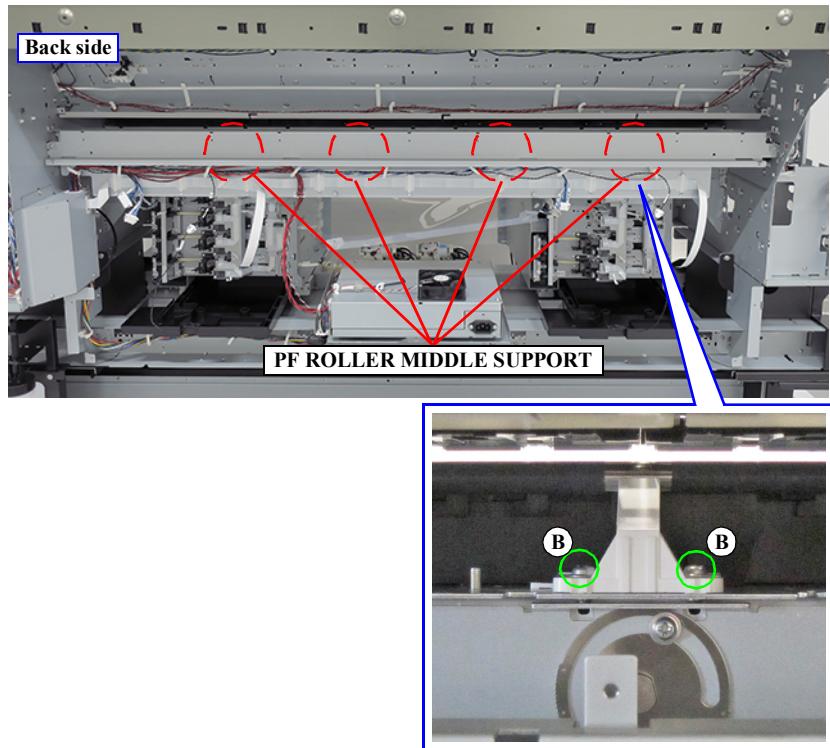


Figure 3-219. Removing the PF ROLLER MIDDLE SUPPORT (4)

21. Disengage the tab of the PF ROLLER MIDDLE SUPPORT using the flat-head screwdriver or the similar tool, and slide it to the left.
22. Lift the PF Roller and loosen the PF ROLLER MIDDLE SUPPORT.
23. Slide the PF ROLLER MIDDLE SUPPORT in the direction of the arrow to release the two hooks, and remove it toward you.

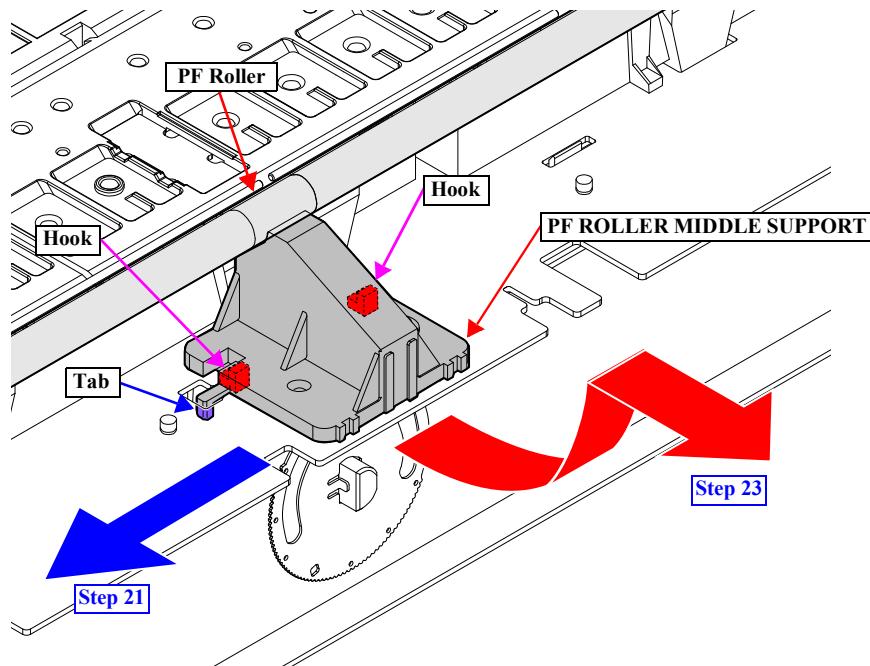


Figure 3-220. Removing the PF ROLLER MIDDLE SUPPORT (5)

3.4.5.12 CUTTER MOTOR ASSY



When replacing/removing this part, refer to **4.1.3 Adjustment Items and the Order by Repaired Part (p306)** and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
3. Remove the REAR LEFT LOWER FRAME. ([p188](#))
4. Remove the LEFT LOWER COVER. ([p175](#))
5. Remove the FRONT LEFT LOWER COVER. ([p180](#))
6. Remove 2 screws.
A) Silver M3x6 screw: 2 pcs

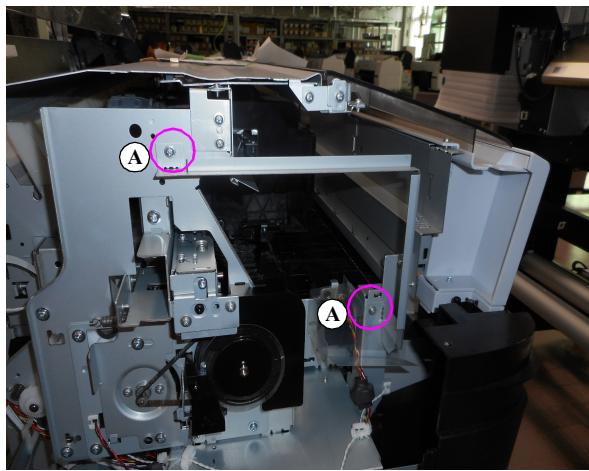


Figure 3-221. Removing the CUTTER MOTOR ASSY (1)

7. Remove the film and lift the plate.

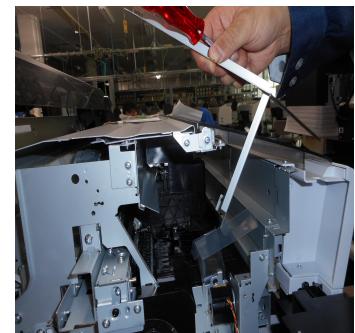
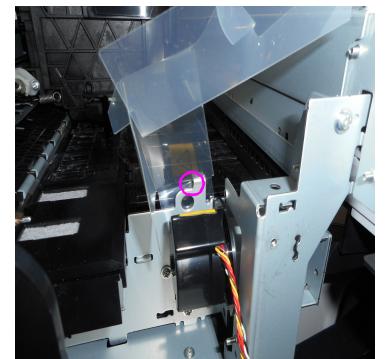
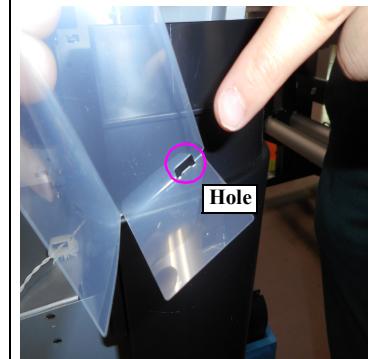


Figure 3-222. Removing the CUTTER MOTOR ASSY (2)



When reassembling this parts, pass the hole of film into the plate.



8. Remove the Motor Cover.
9. Disconnect the motor cable from the connector of the Cutter Motor.

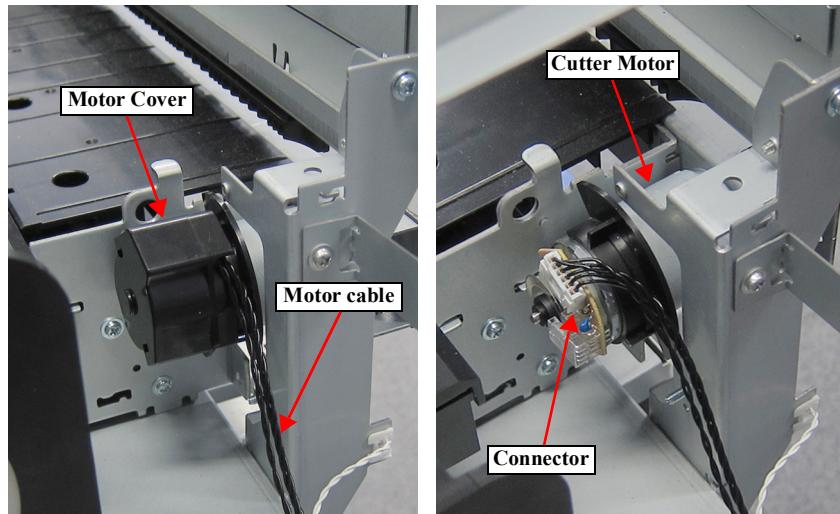


Figure 3-223. Removing the CUTTER MOTOR ASSY

10. Remove the two screws, and remove the CUTTER MOTOR ASSY.
 - B) Silver M3x3 screw: 2 pcs

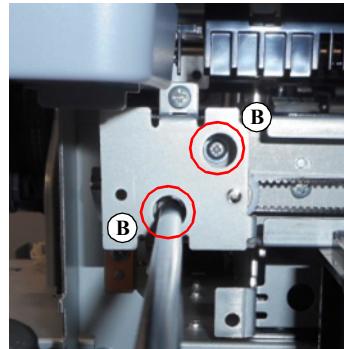


Figure 3-224. Removing the CUTTER MOTOR ASSY (3)

3.4.5.13 CUTTER UNIT



When replacing/removing this part, refer to [4.1.3 Adjustment Items and the Order by Repaired Part \(p306\)](#) and make sure to perform the specified operations including required adjustment.

1. Remove the UPPER LEFT COVER. ([p176](#))
2. Remove the LEFT UPPER COVER & LEFT ROLL COVER. ([p177](#))
3. Remove the REAR LEFT LOWER FRAME. ([p188](#))
4. Remove the LEFT LOWER COVER. ([p175](#))
5. Remove the FRONT LEFT LOWER COVER. ([p180](#))
6. Remove the UPPER SUPPORT R COVER. ([p167](#))
7. Remove the TOP COVER. ([p164](#))
8. Remove the PANEL ASSY. ([p202](#))
9. Remove the MAINTENANCE COVER SENSOR. ([p168](#))
10. Remove the MAINTENANCE COVER & RIGHT ROLL COVER. ([p171](#))
11. Remove the RIGHT LOWER COVER. ([p173](#))
12. Remove the FRONT COVER. ([p165](#))
13. Remove the PAPER GUIDE MIDDLE / FRONT LOWER COVER. ([p191](#))
14. Remove the TRAY. ([p190](#))
15. Remove the PAPER GUIDE LEFT / INK HOLDER LEFT COVER. ([p194](#))
16. Remove the PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER. ([p196](#))

17. Remove the sensor cable from the relay connector (CN027).

18. Release the sensor cable from the five clamps.

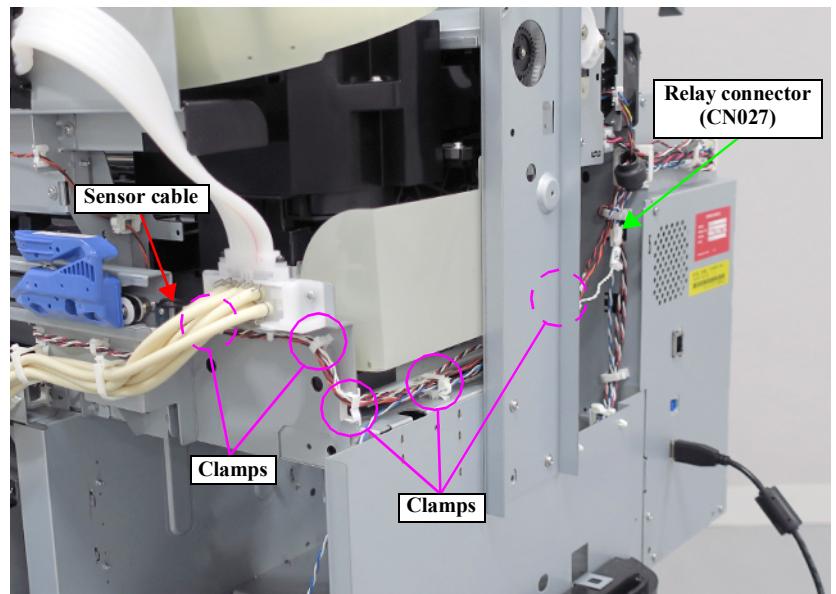


Figure 3-225. Removing the CUTTER UNIT (1)

19. Remove 2 screws.

- A) Silver M3x6 screw: 2 pcs

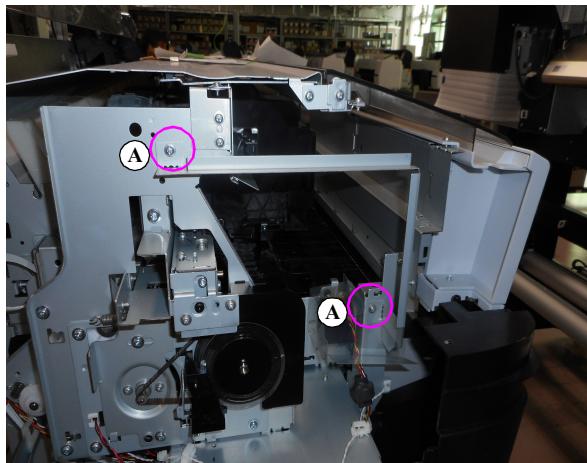


Figure 3-226. Removing the CUTTER UNIT (2)

20. Remove the film and lift the plate.

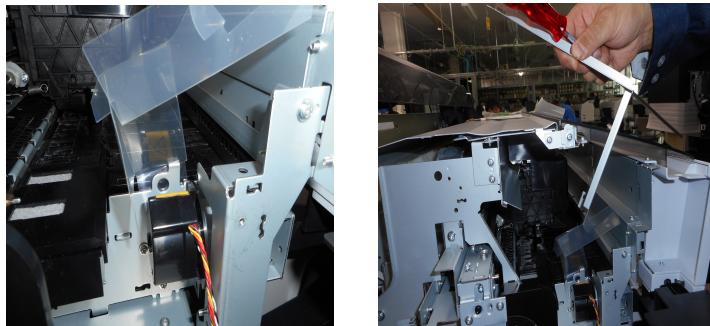
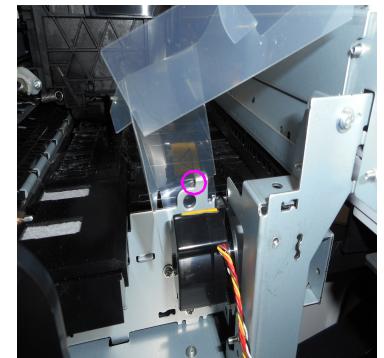
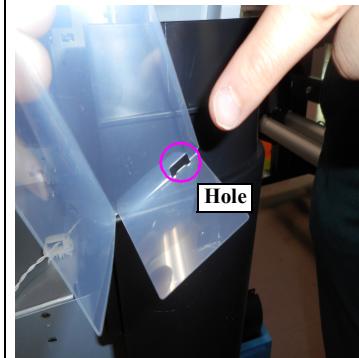


Figure 3-227. Removing the CUTTER UNIT (3)



When reassembling this parts, pass the hole of film into the plate.



21. Remove the Motor Cover.

22. Disconnect the motor cable from the connector of the Cutter Motor.

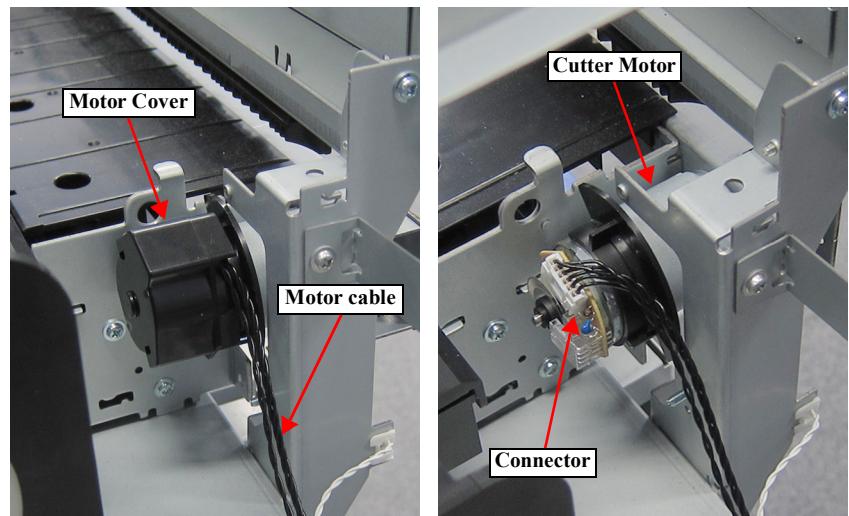


Figure 3-228. Releasing the Motor Cable

23. Remove the two screws, and remove the CUTTER UNIT.

B) Silver M3x6 screw: 2 pcs



Pay attention to the positioning points (See [Figure 3-229](#)).

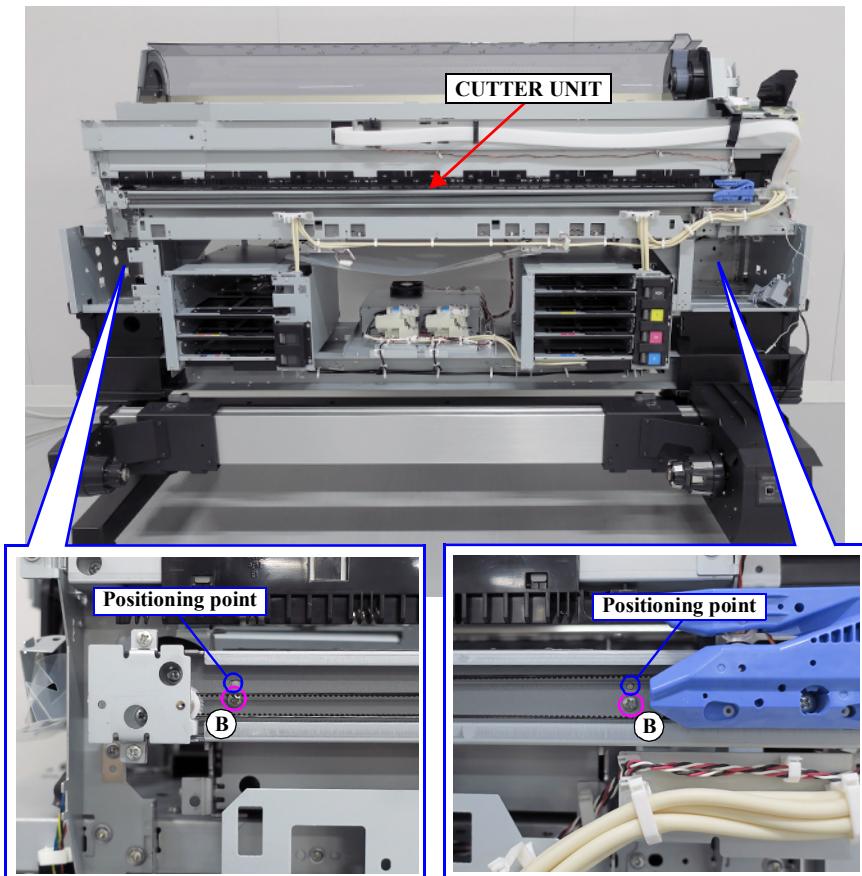


Figure 3-229. Removing the CUTTER UNIT (4)

3.4.6 Auto Take-up Reel Unit

3.4.6.1 TAKE-UP REEL COVER

1. Remove the hexagon socket head cap screw.

A) Black/M3×6: 1pcs

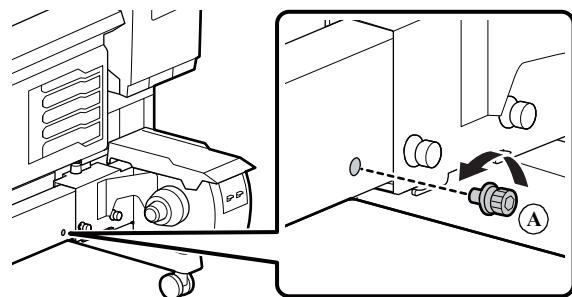


Figure 3-230. Removing the Take-up Reel Cover

2. Slide the Auto Take-up Reel Unit to a position where it can be removed easily.

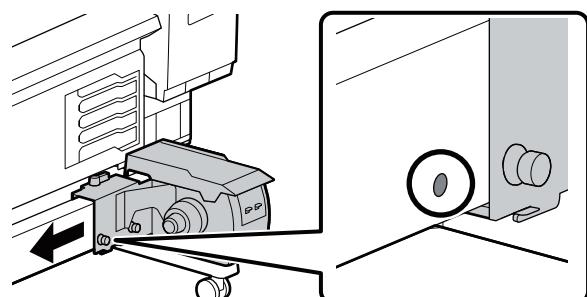


Figure 3-231. Removing the Take-up Reel Cover

3. Remove the two screws of the Frame Slider (right side).
- B) Black/M4x8: 2 pcs
4. Remove the Right Reinforcement Plate Slider.

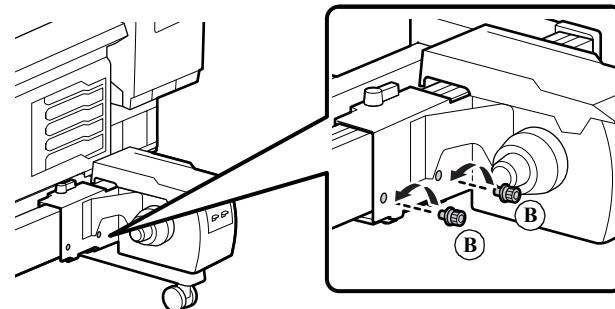


Figure 3-232. Removing the Take-up Reel Cover

5. Remove the Frame Slider (right side).

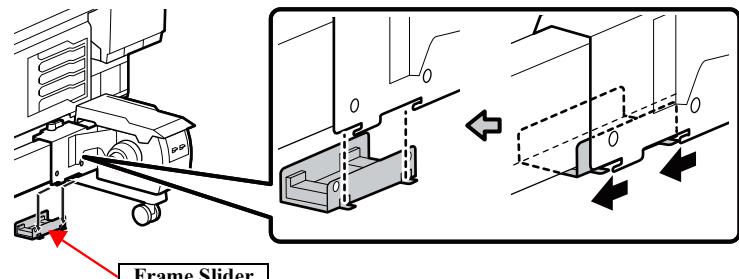


Figure 3-233. Removing the Take-up Reel Cover

6. Remove the four screws and remove the Take-up Reel Cover.

C) M3x10/Cup P-tite screw: 4 pcs

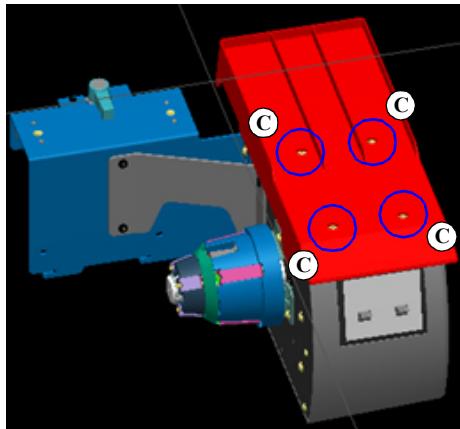


Figure 3-234. Removing the Take-up Reel Cover

8. Disconnect the relay connector.

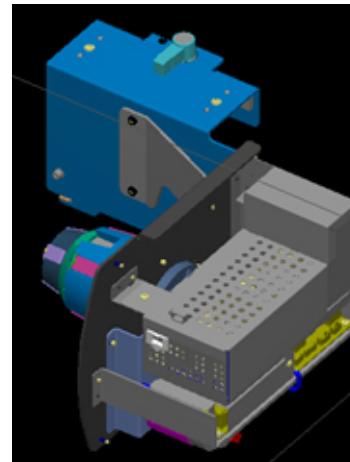


Figure 3-236. Removing the Take-up Reel Cover

7. Remove the four screws that secures the Take-up Reel Cover and remove the Take-up Reel Cover from the Auto Take-up Reel Unit.

D) Black/M3x10/P-tite screw: 4 pcs

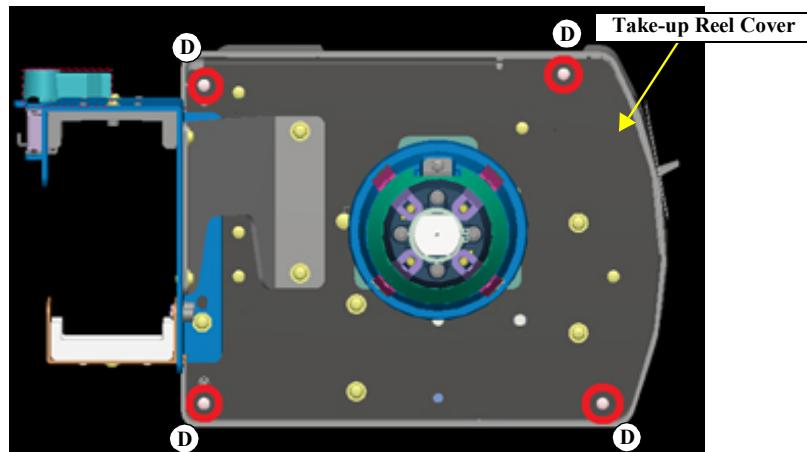


Figure 3-235. Removing the Take-up Reel Cover

3.4.6.2 RIGHT BRAKE ASSY

1. Perform Step 1 to Step 5 of 3.4.6.1 TAKE-UP REEL COVER (*p293*).
2. Remove the three screws and remove the RIGHT BRAKE ASSY.
 - A) Black/C.P.(S-P1)SCREW,M3x6,F/ZB-3C: 3 pcs

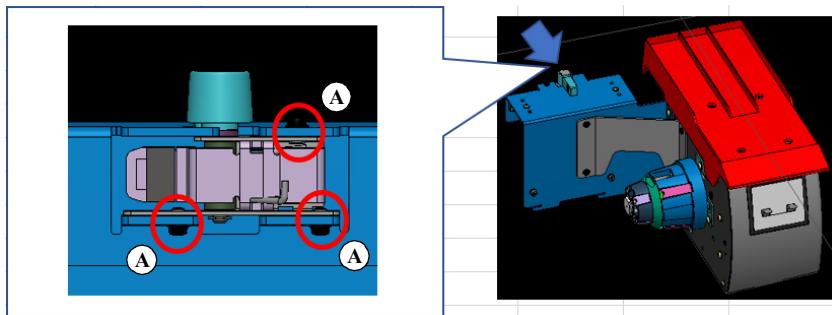


Figure 3-237. Removing the Take-up Right Brake Assy

3.4.6.3 LEFT BRAKE ASSY

1. Remove the two screws of the Frame Slider (left side).
 - A) Black/M4x8: 2 pcs
2. Remove the Left Reinforcement Panel Slider.
3. Remove the Left Frame Slider.
4. Remove the three screws and remove the LEFT BRAKE ASSY.
 - B) Black/C.P.(S-P1)SCREW,M3x6,F/ZB-3C: 3 pcs

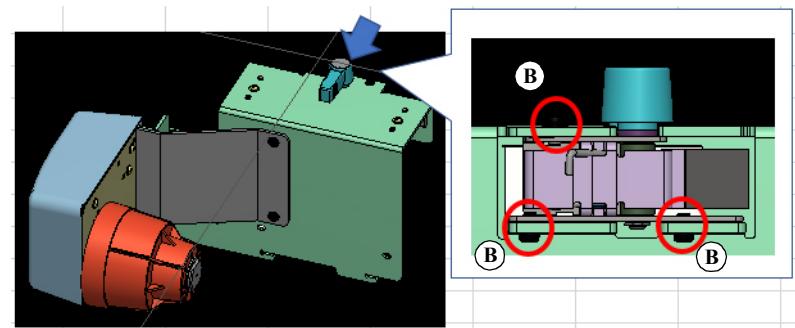


Figure 3-238. Removing the Left Brake Assy

3.4.6.4 TAKE-UP REEL SWITCH PANEL ASSY

1. Remove the TAKE-UP REEL COVER. ([p293](#))
2. Disengage the six hooks securing the panel cover from the inside of the TAKE-UP REEL COVER and remove the TAKE-UP REEL SWITCH PANEL ASSY from the TAKE-UP REEL COVER.

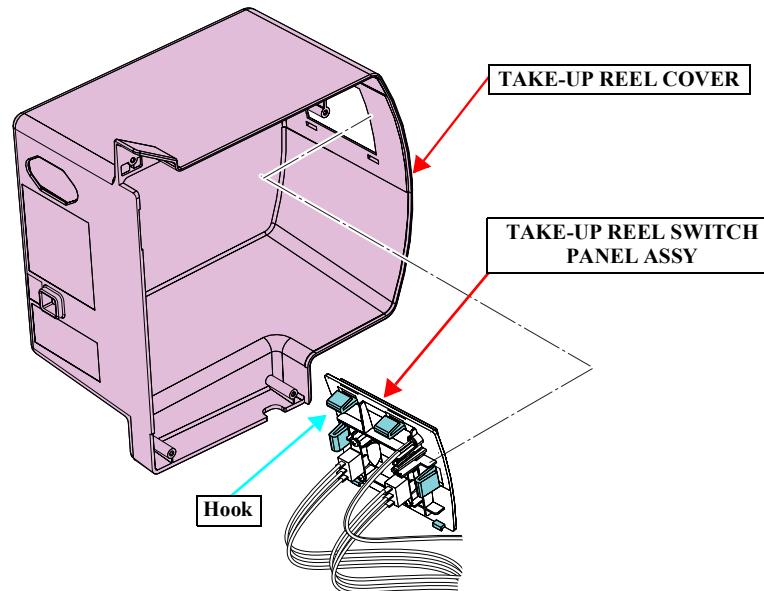


Figure 3-239. Removing the TAKE-UP REEL COVER

3.4.6.5 TAKE-UP REEL PS BOARD

1. Remove the TAKE-UP REEL COVER. ([p293](#))
2. Remove the two screws that secure the Plate A, and remove the Plate A.
 - A) Black, Phillips, Bind S-tite M3x6: 2 pcs
3. Remove the two screws that secure the Plate B, and remove the Plate B.
 - B) Black, Phillips, Bind S-tite M3x6: 1 pc
 - C) Black, Phillips, Bind S-tite M4x8: 1 pc

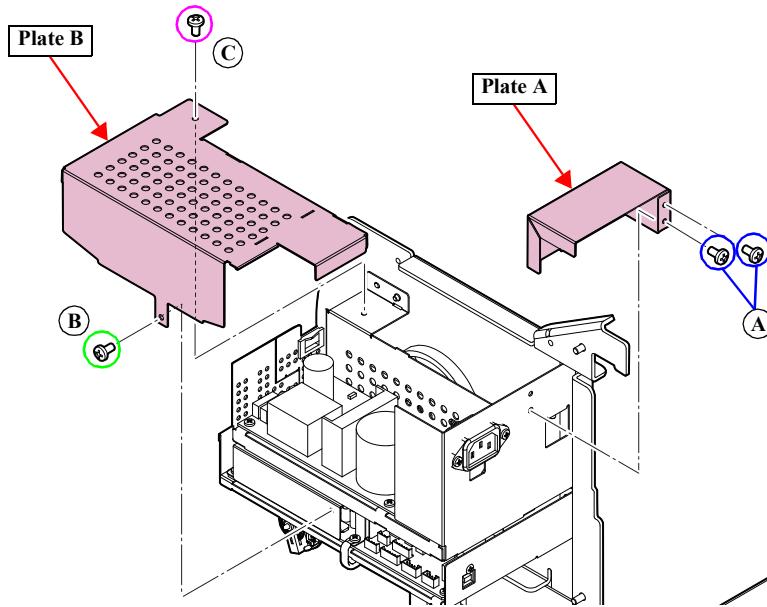


Figure 3-240. Removing the Plate A/B

4. Remove the six screws that secure the TAKE-UP REEL PS BOARD, and remove the TAKE-UP REEL PS BOARD.
 - D) Black, Phillips, Bind S-tite M3x6: 6 pcs
5. Disconnect the connectors (CN1, CN2) on the TAKE-UP REEL PS BOARD.

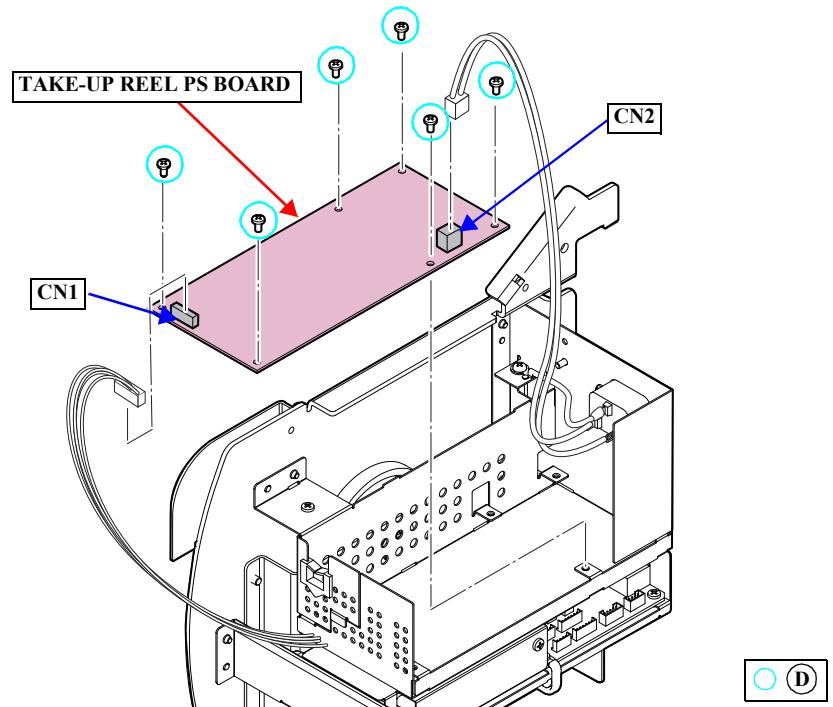


Figure 3-241. Removing the TAKE-UP REEL PS BOARD

3.4.6.6 TAKE-UP REEL MOTOR

1. Remove the TAKE-UP REEL COVER. ([p293](#))
2. Disconnect the connector (CN1) on the TAKE-UP REEL MAIN BOARD.
3. Remove the four screws that secure the Power Supply Unit, and remove the Power Supply Unit.
 - A) Black, Phillips, Bind S-tite M3x6: 4 pcs

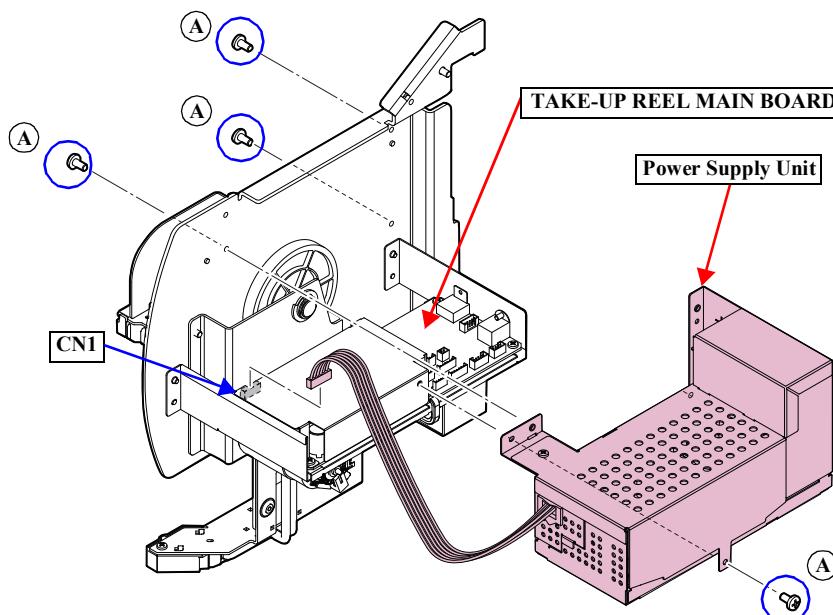


Figure 3-242. Removing the Power Supply Unit

4. Remove the two screws that secure the TAKE-UP REEL MAIN BOARD Unit.
- B) Black, Phillips, Bind S-tite M3x6: 2 pcs
5. Disconnect the connector from the TAKE-UP REEL MOTOR, and remove the TAKE-UP REEL MAIN BOARD Unit.

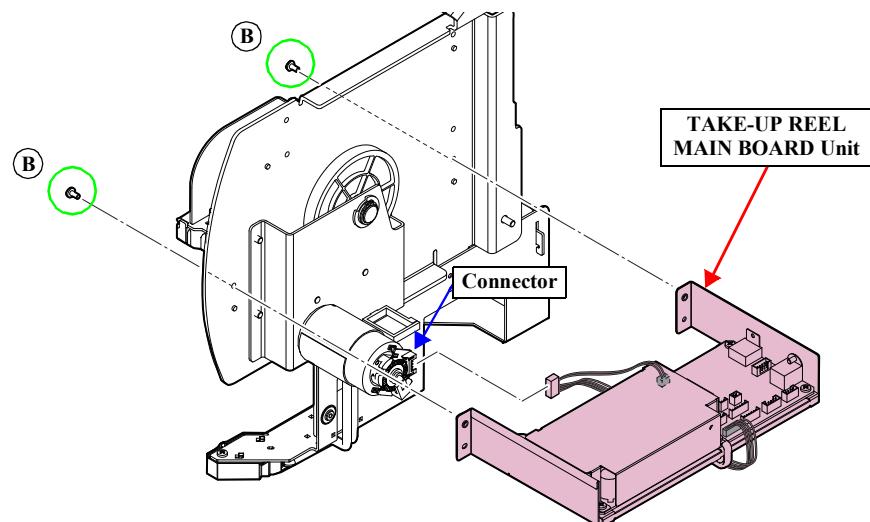


Figure 3-243. Removing the TAKE-UP REEL MAIN BOARD Unit

6. Remove the C-Ring.
7. Remove the four screws that secure the Motor Mounting Plate, and remove the Motor Mounting Plate.
C) Black, Phillips, Bind S-tite M4x8: 4 pcs

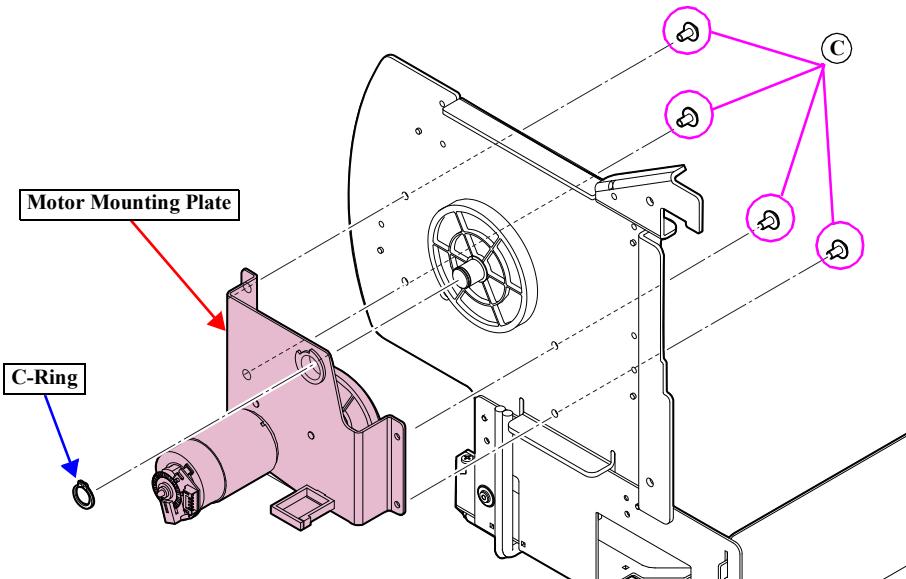


Figure 3-244. Removing the Motor Mounting Plate

8. Remove the two gears from the Motor Mounting Plate.
9. Remove the two screws that secure the TAKE-UP REEL MOTOR, and remove the TAKE-UP REEL MOTOR.
D) Black, Phillips, Bind S-tite with S.W & P.W. M3x6: 2 pcs

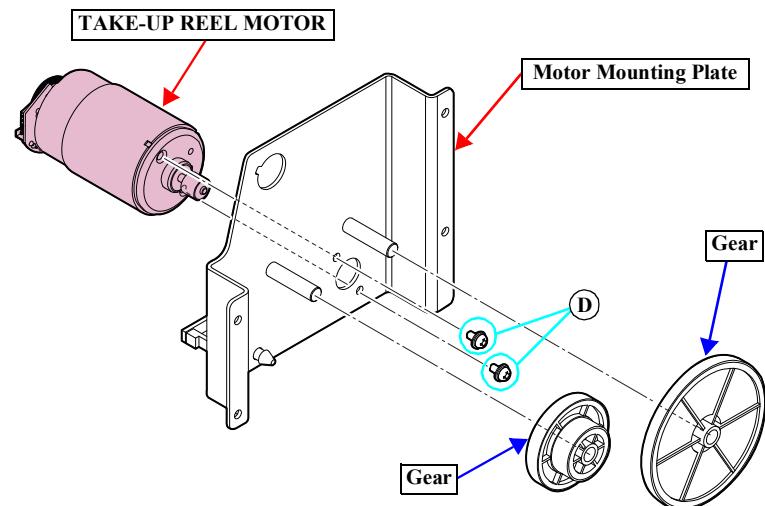


Figure 3-245. Removing the TAKE-UP REEL MOTOR

3.4.6.7 TAKE-UP REEL MAIN BOARD

1. Remove the TAKE-UP REEL COVER. ([p293](#))
2. Disconnect the connector (CN1) on the TAKE-UP REEL MAIN BOARD.
3. Remove the four screws that secure the Power Supply Unit, and remove the Power Supply Unit.
 - A) Black, Phillips, Bind S-tite M3x6: 4 pcs

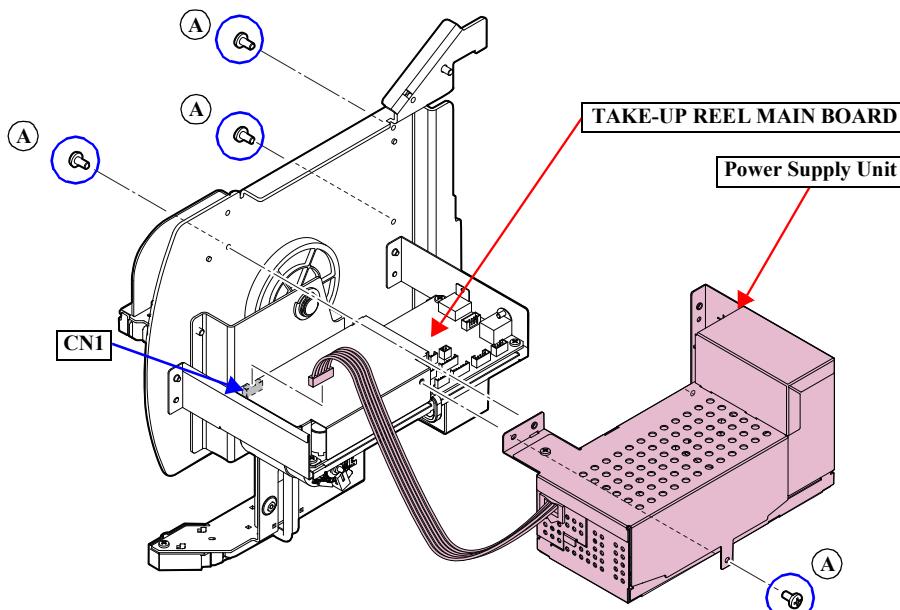


Figure 3-246. Removing the Power Supply Unit

4. Remove the four screws that secure the Shield Plate, and remove the three clamps and the Shield Plate.
 - B) Black, Phillips, Bind S-tite M3x6: 4 pcs
5. Disconnect all the connectors on the TAKE-UP REEL MAIN BOARD.
6. Remove the three screws that secure the TAKE-UP REEL MAIN BOARD, and remove the TAKE-UP REEL MAIN BOARD.
 - C) Black, Phillips, Bind S-tite M3x6: 3 pcs

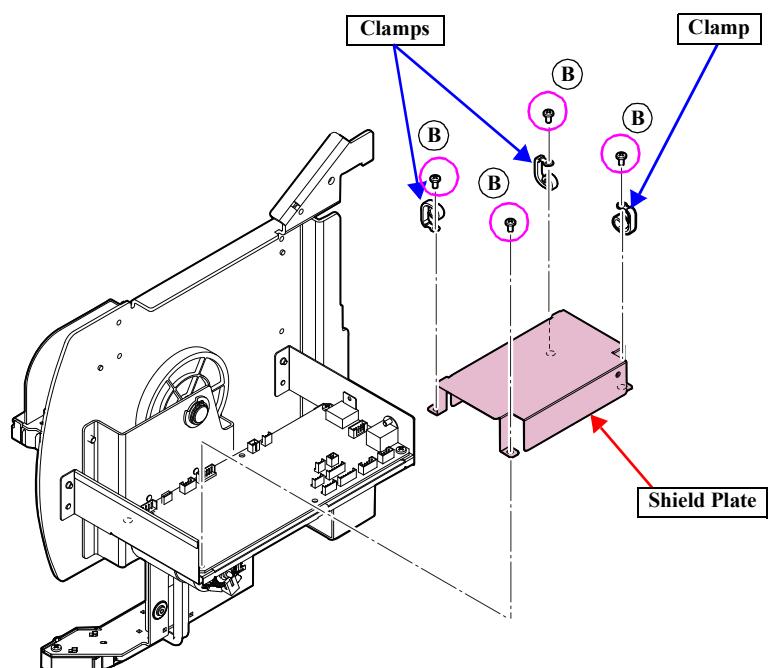


Figure 3-247. Removing the Removing the Shield Plate

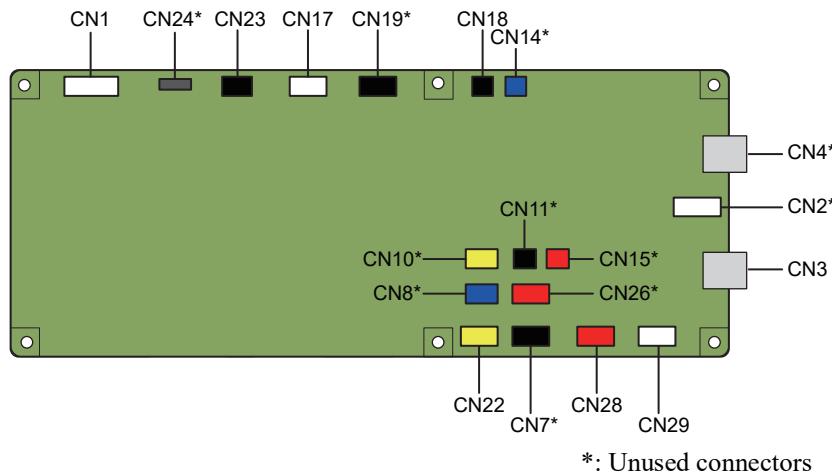


Figure 3-248. Connector location

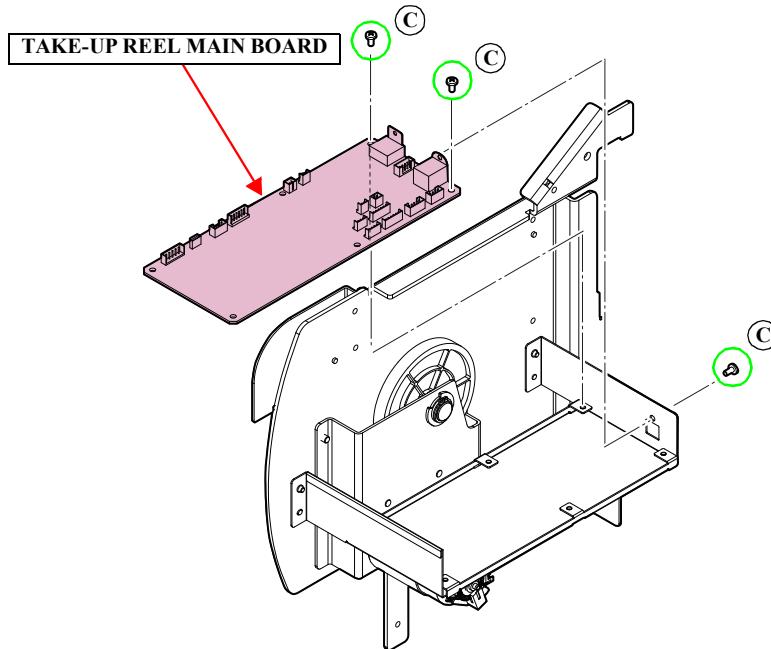


Figure 3-249. Removing the TAKE-UP REEL MAIN BOARD

Connector assignment:

Connector assignment:	Color	Destination
CN1	White	TAKE-UP REEL PS BOARD (CN2)
CN2*	White	Unused
CN3	-	USB-A
CN4*	-	Unused
CN7*	Black	Unused
CN8*	Blue	Unused
CN10*	Yellow	Unused
CN11*	Black	Unused
CN14*	Blue	Unused
CN15*	Red	Unused
CN17	White	TAKE-UP REEL SWITCH
CN18	Black	TAKE-UP REEL MOTOR
CN19*	Black	Unused
CN22	Yellow	TAKE-UP REEL MOTOR
CN23	Black	TAKE-UP REEL LED
CN24*	(FFC)	Unused
CN26*	Red	Unused

CHAPTER

4

ADJUSTMENT

4.1 Overview

This chapter describes the Service Program software utility and the adjustment procedures required after repairing or replacing certain parts.

4.1.1 PC settings before starting adjustment

Before starting the adjustment work, perform the following procedure to use service program without any conflict with EPSON Edge Dashboard.

1. Click the [Start] button on your PC, and then select [Control Panel] in the “PC Setting” menu.
2. Click the [All Control Panel Items], and then select [Services] from “Administrative Tools”.

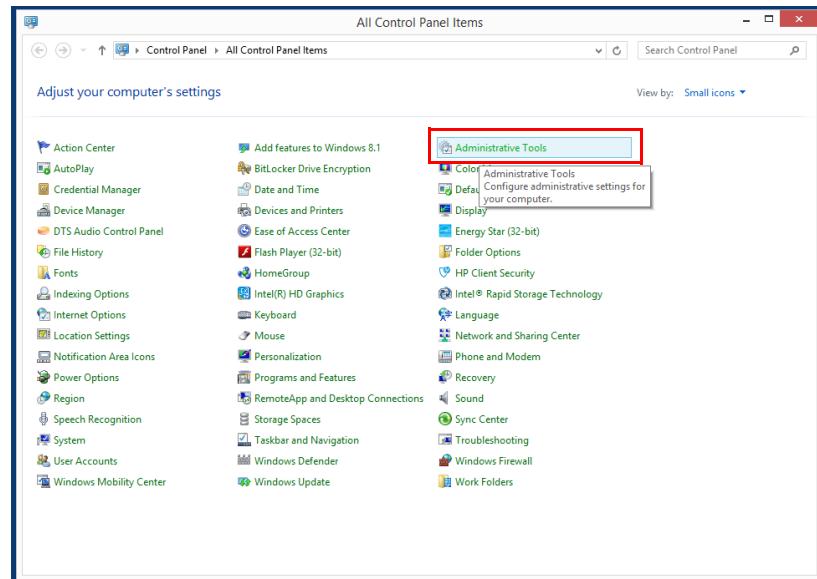


Figure 4-1.

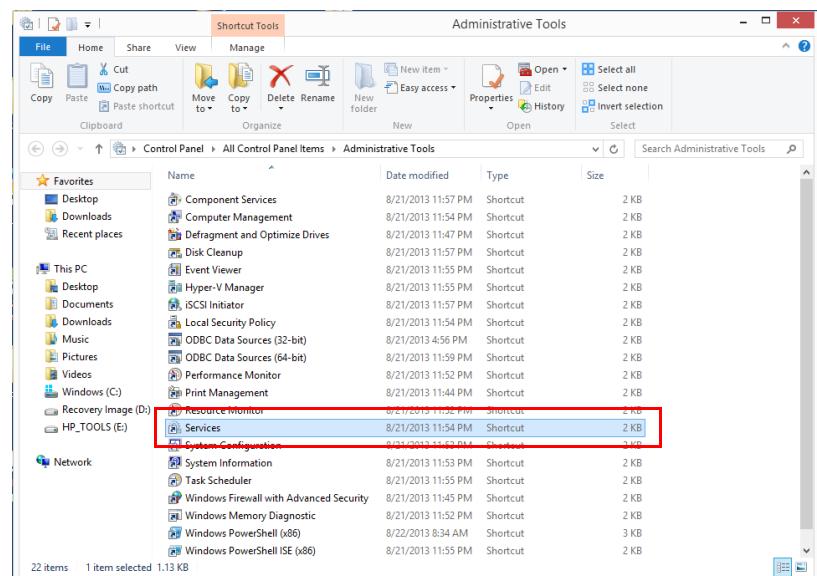


Figure 4-2.

3. Right-click the “EPSON DFAgency” in service list, and then select [Stop].



“EPSON DFAgency” is printer communication module for EPSON Edge Dashboard.

4. Confirm the “Status” has changed to “ ” (blank) from “Running” to start the adjustment work.



To use “EPSON Edge Dashboard” again, either right-click the “EPSON DFAgency” in the services list and select [Start] or restart the PC.

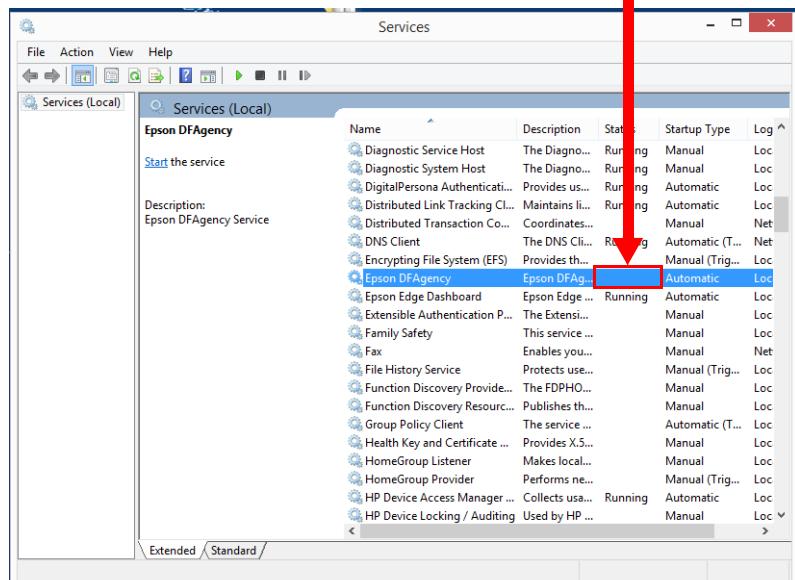
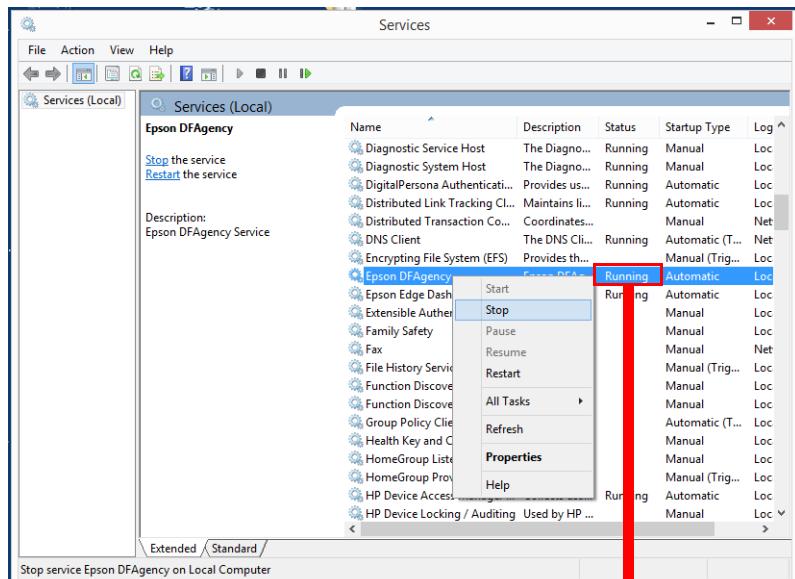
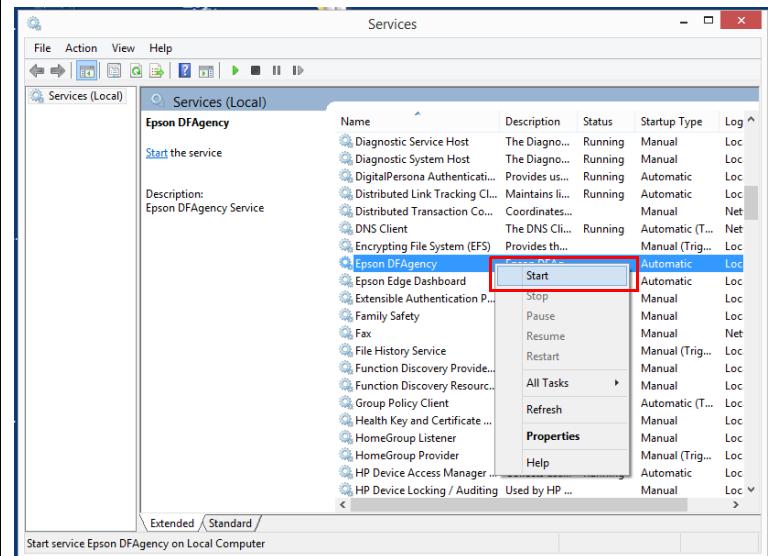


Figure 4-3.

4.1.2 Precautions

Always observe the following cautions whenever making an adjustment on the printer.



- Always refer to "["4.1.3 Adjustment Items and the Order by Repaired Part" \(p.306\)](#)" and make sure to perform all the adjustments listed in the table in the given order.
- Always read and follow the precautions given in each section that explains each adjustment. Ignoring the precautions can result in malfunction of the printer.

4.1.3 Adjustment Items and the Order by Repaired Part

The following table shows the required adjustments by repaired or replaced part and the order in which the adjustments must be performed.

Note "1": The adjustments required for the MAIN BOARD differs depending on whether the NVRAM on the old board can be backed up or not.

"2": When the firmware update is required, first check the version of firmware currently installed on the printer, then update the firmware if necessary.

"3": PGPP: Premium Glossy Photo Paper (250)

Matte Paper: Archival Matte Paper/Enhanced Matte Paper

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
CR related parts/units	CR MOTOR	Replacement	1	Replacement	---					p. 230
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	CR Belt Tension Check	✓	Tension meter U-507		✓	✓	p. 343
			4	CR Motor Measurement & Auto Adjustment	✓			✓	---	p. 350
			5	CR Active Damper Adjustment (Automatic)	✓			✓	---	p. 349
			6	Manual Uni-d adjustment	✓		PGPP	✓	---	p. 351
			7	Manual Bi-D adjustment	✓		PGPP	✓	---	p. 352
			8	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			9	Counter Reset (by Panel)	✓			✓	---	p. 399
			10	Housing Assembly	---			✓	✓	
	CR SCALE	Replacement	1	Replacement	---					p. 223
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	CR Scale Check	✓			✓	✓	p. 347
			4	Housing Assembly	---			✓	✓	

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
CR related parts/units	CR TIMING BELT	Replacement	1	Replacement	---					p. 228
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	CR Belt Tension Check	✓	Tension meter U-507		✓	✓	p. 343
			4	APG Function Check	✓			✓	---	p. 345
			5	CR Scale Check	✓			✓	---	p. 347
			6	CR Active Damper Adjustment (Automatic)	✓			✓	---	p. 349
			7	Manual Uni-d adjustment	✓		PGPP	✓	---	p. 351
			8	Manual Bi-D adjustment	✓		PGPP	✓	---	p. 352
			9	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			10	Housing Assembly	---			✓	✓	
CR related parts/units	CR UNIT (CR Assy)	Replacement	1	Replacement	---					p. 245
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	CR Belt Tension Check	✓	Tension meter U-507		✓	✓	p. 343
			4	APG Function Check	✓			✓	✓	p. 345
			5	CR Scale Check	✓			✓	✓	p. 347
			6	CR Motor Measurement & Auto Adjustment	✓			✓	---	p. 350
			7	CR Active Damper Adjustment (Automatic)	✓			✓	---	p. 349
			8	Head Inclination Check & Adjustment (CR direction)	✓			✓	---	p. 360
			9	Head Slant Manual Adjustment (PF direction)	✓			✓	---	p. 362
			10	PG Adjustment	---	Thickness gauge		✓	---	p. 353
			11	Manual Uni-d adjustment	✓		PGPP	✓	---	p. 351
			12	Manual Bi-D adjustment	✓		PGPP	✓	---	p. 352
			13	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			14	Cut Position check & adjustment	✓			✓	---	p. 384
			15	Counter Reset (by Panel)	---			✓	---	p. 399
			16	Housing Assembly	---			✓	✓	
CR related parts/units	APG UNIT (APG Motor)	Replacement	1	Replacement	---					p. 233
		After replacement	2	Turn the power on in Repair Mode	---			✓	---	p. 27
			3	APG Function Check	✓			✓	---	p. 345
			4	Reset the motor counter.	---			✓	---	p. 399

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
CR related parts/units	PW SENSOR	Replacement	1	Replacement	---					p. 248
		After replacement	2	Turn the power on in Repair Mode	---			✓	---	p. 27
			3	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			4	Cut Position Check & Adjustment	✓			✓	---	p. 384
	CR ENCODER	Replacement	1	Replacement	---					p. 227
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	CR Belt Tension Adjustment	✓	Tension meter U-507		✓	✓	p. 343
			4	APG Function Check	✓			✓	---	p. 345
			5	CR Scale Check	✓			✓	---	p. 347
			6	CR Motor Measurement & Auto Adjustment	✓			✓	---	p. 350
			7	CR Active Damper Adjustment (Automatic)	✓			✓	---	p. 349
			8	Head Inclination Check & Adjustment (CR direction)	✓			✓	---	p. 360
			9	Head Slant Manual Adjustment (PF direction)	✓			✓	---	p. 362
			10	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			11	Housing Assembly	---			✓	✓	

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
Head related	PRINT HEAD	Before replacement	1	Turn the power on in Repair Mode	---			✓	✓	p. 27
			2	Tube Decompression (by Panel)	✓			✓	✓	p. 357
			3	Move the Print Head to Replacement Position (automatically power off)	✓			✓	✓	p. 356
		Replacement	4	Replacement	---					p. 219
		After replacement	5	Turn the power on in Repair Mode	---			✓	✓	p. 27
			6	Head ID Input & Check (automatically power off)	✓			✓	---	p. 358
			7	Turn the power on in Repair Mode	---			✓	✓	p. 27
			8	Set paper.	---			✓	✓	
			9	Ink Charging (by Panel)	---			✓	✓	p. 371
			10	Nozzle Check & Cleaning	✓		PGPP	✓	✓	p. 359
			11	Nozzle Verification Technology: Noise Check	✓			✓	✓	p. 365
			12	Nozzle Verification Technology: Rank Classification	✓			✓	---	p. 366
			13	Head Inclination Check & Adjustment (CR direction)	✓			✓	✓	p. 360
			14	Head Slant Manual Adjustment (PF direction)	✓			✓	✓	p. 362
			15	PG Adjustment	---	Thickness gauge		✓	---	p. 353
			16	Manual Uni-d adjustment	✓		PGPP	✓	✓	p. 351
			17	Manual Bi-D adjustment	✓		PGPP	✓	---	p. 352
			18	Nozzle Verification Technology: Function Check	✓			✓	✓	p. 367
Ink supply related parts/units	MAINTENANCE UNIT (PUMP CAP UNIT)	Replacement	1	Replacement	---					p. 236,
		After replacement	2	Turn the power on in Repair Mode	---			✓	---	p. 27
			3	Pump Cap Unit Measurement & Auto Adjustment	✓			✓	---	p. 372
			4	Counter Reset (by Panel)	---			✓	---	p. 399

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
Ink supply related parts/units	INK HOLDER	Before replacement	1	Turn the power on in Repair Mode	---			✓	✓	p. 27
			2	Counter Reset (by Panel)	---			✓	---	p. 399
			3	Ink/Cleaning Liquid Draining (by Panel)	---			✓	✓	p. 369
			4	Turn the power off.	---			✓	---	
		Replacement	5	Replacement	---					p. 256, p. 260
		After replacement	6	Turn the power on in Repair Mode	---			✓	✓	p. 27
			7	Ink Charging (by Panel)	---			✓	✓	p. 371
			8	Nozzle Check & Cleaning	✓		PGPP	✓	✓	p. 359
			9	Turn the power off.	---			✓	---	
			10	Turn the power on in normal mode.	---			✓	✓	
			11	Make sure the error never recurs.	---			✓	✓	
	INK TUBE	Before replacement	1	Turn the power on in Repair Mode	---			✓	✓	p. 27
			2	Counter Reset (by Panel)	---			✓	---	p. 399
			3	Ink/Cleaning Liquid Draining (by Panel)	---			✓	✓	p. 369
			4	Move the Print Head to Replacement Position (automatically power off)	✓			✓	✓	p. 356
		Replacement	5	Replacement	---					p. 239
		After replacement	6	Turn the power on in Repair Mode	---			✓	✓	p. 27
			7	Ink Charging (by Panel)	---			✓	✓	p. 371
			8	Nozzle Check & Cleaning	✓		PGPP	✓	✓	p. 359
			9	Turn the power off.	---			✓	---	
			10	Turn the power on in normal mode.	---			✓	✓	
			11	Make sure the error never recurs.	---			✓	✓	

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
Ink supply related parts/units	DUCT CR (INK DAMPER UNIT)	Before replacement	1	Turn the power on in Repair Mode	---			✓	✓	p. 27
			2	Counter Reset (by Panel)	---			✓	---	p. 399
			3	Ink/Cleaning Liquid Draining (by Panel)	---			✓	✓	p. 369
			4	Move the Print Head to Replacement Position (automatically power off)	✓			✓	✓	p. 356
		Replacement	5	Replacement	---					p. 215
		After replacement	6	Turn the power on in Repair Mode	---			✓	✓	p. 27
			7	Ink Charging (by Panel)	---			✓	✓	p. 371
			8	Nozzle Check & Cleaning	✓		PGPP	✓	✓	p. 359
			9	Turn the power off.	---			✓	✓	
			10	Turn the power on in normal mode.	---			✓	✓	
			11	Make sure the error never recurs.	---			✓	✓	
Paper feed related parts/units	PF TIMING BELT	Replacement	1	Replacement	---					p. 275
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	PF Belt Tension Check	✓	Tension meter U-507		✓	✓	p. 376
			4	PF Motor Measurement & Auto Adjustment	✓			✓	---	p. 382
			5	Manual Paper Feed Adjustment	✓			✓	---	p. 381
			6	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			7	Cut Position Check & Adjustment	✓			✓	---	p. 384
	PF MOTOR	Replacement	1	Replacement	---					p. 270
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	PF Belt Tension Check	✓	Tension meter U-507		✓	✓	p. 376
			4	PF Motor Measurement & Auto Adjustment	✓			✓	---	p. 382
			5	Manual Paper Feed Adjustment	✓			✓	---	p. 381
			6	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			7	Cut Position Check & Adjustment	✓			✓	---	p. 384
			8	Counter Reset (by Panel)	---			✓	---	p. 399

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
Paper feed related parts/units	PF ENCODER	Replacement	1	Replacement	---					p. 273
		After replacement	2	Turn the power on in Repair Mode	---			✓	✓	p. 27
			3	PF Scale Check	✓			✓	✓	p. 379
	CUTTER UNIT (cutter motor)	Replacement	1	Replacement	---					p. 290
		After replacement	2	Turn the power on in Repair Mode	---			✓	---	p. 27
			3	Cutter Motor Measurement & Auto Adjustment	✓			✓	---	p. 387
			4	Cut Position Check & Adjustment	✓			✓	---	p. 384
			5	Counter Reset (by Panel)	---			✓	---	p. 399
	ATC MOTOR	Replacement	1	Replacement	---					p. 281
		After replacement	2	Turn the power on in Repair Mode	---			✓	---	p. 27
			3	ATC Motor Measurement & Auto Adjustment	✓			✓	---	p. 383
			4	Counter Reset (by Panel)	---			✓	---	p. 399
Board related parts/units	Main Board (NVRAM backup OK) ^{*1}	Before replacement	1	Turn the power on in Inspection Mode	---			✓	---	p. 26
			2	NVRAM Backup & Restore (Backup)	✓			✓	---	p. 329
			3	Turn the power off.	---			✓	---	
		Replacement	4	Replacement	---					p. 199
		After replacement	5	Turn the power on in Program Update Mode	---			✓	---	p. 27
			6	Update the firmware. ^{*2} (automatically power off)	✓			✓	---	p. 339
			7	Turn the power on in Inspection Mode	---			✓	---	p. 26
			8	Main Board initial setting (automatically power off)	✓			✓	---	p. 392

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
Board related parts/units	Main Board (NVRAM backup OK) ^{*1}	After replacement	9	Turn the power on in Inspection Mode	---			✓	---	p. 26
			10	NVRAM Backup & Restore (Restore)	✓			✓	---	p. 329
			11	Turn the power on in Repair Mode	---			✓	✓	p. 27
			12	RTC Input	✓			✓	---	p. 389
			13	Nozzle Verification Technology: Noise Check	✓			✓	✓	p. 365
			14	Nozzle Verification Technology: Function Check	✓			✓	✓	p. 366
			15	Housing Assembly	---			✓	✓	
	Main Board (NVRAM backup NG) ^{*1}	After replacement	1	Replacement	---					p. 199
			2	Turn the power on in Program Update Mode	---			✓	---	p. 27
			3	Update the firmware. ^{*2} (automatically power off)	✓			✓	---	p. 339
			4	Turn the power on in Inspection Mode	---			✓	---	p. 26
			5	Main Board initial setting (automatically power off)	✓			✓	---	p. 392
			6	Turn the power on in Inspection Mode	---			✓	---	p. 26
			7	Rear AD Adjustment	---			✓	---	p. 386
			8	Turn the power off.	---			✓	---	
			9	Turn the power on in Repair Mode	---			✓	---	p. 27
			10	Head ID Input & Check (automatically power off)	✓			✓	---	p. 358
			11	Turn the power on in Inspection Mode	---			✓	---	p. 26
			12	RTC Input	✓			✓	---	p. 389
			13	MAC Address Check & Input	✓			✓	---	p. 390
			14	Turn the power on in Repair Mode	---			✓	✓	p. 27
			15	Serial Number Input	✓			✓	---	p. 391
			16	Initial Password Check & Input (EMEA only)	✓			✓	---	p. 397
			17	Color Mode Setting	✓			✓	---	p. 395
			18	Input Offset Value	✓			✓	---	p. 375
			19	Check the firmware version on the control panel	---			✓	---	

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations		Service Program	Jig	Media	Replaced	Reattached	Page	
Board related parts/units	Main Board (NVRAM backup NG) ^{*1}	After replacement	20	Platen Fan Suction Check	✓			✓	---	p. 393
			21	APG Function Check	✓			✓	---	p. 345
			22	PF Motor Measurement & Auto Adjustment	✓			✓	---	p. 382
			23	CR Motor Measurement & Auto Adjustment	✓			✓	---	p. 350
			24	CR Active Damper Adjustment	✓			✓	---	p. 349
			25	Pump Cap Unit Measurement & Auto Adjustment	✓			✓	---	p. 372
			26	ATC Motor Measurement & Auto Adjustment	✓			✓	---	p. 383
			27	Nozzle Check & Cleaning	✓		PGPP	✓	---	p. 359
			28	Nozzle Verification Technology: Noise Check	✓			✓	✓	p. 365
			29	Nozzle Verification Technology: Rank Classification	✓			✓	---	p. 366
			30	Manual Paper Feed Adjustment	✓			✓	---	p. 381
			31	Manual Uni-d adjustment	✓		PGPP	✓	---	p. 351
			32	Manual Bi-D adjustment	✓		PGPP	✓	---	p. 352
			33	Top&Side Check & Adjustment	✓		PGPP	✓	---	p. 385
			34	Cutter Motor Measurement & Auto Adjustment	✓			✓	---	p. 387
			35	Cut Position Check & Adjustment	✓			✓	---	p. 384

Table 4-1. Adjustment items and the order by repaired part

Class	Replaced or Repaired (Reattached) Part/Unit	Required Operations			Service Program	Jig	Media	Replaced	Reattached	Page
Board related parts/units	PSH BOARD (Power Supply Board)	After replacement	Replacement	1	Replacement	---				p. 199
				2	Turn the power on in Repair Mode	---			✓	p. 27
				3	CR Motor Measurement & Auto Adjustment	✓			✓	p. 350
				4	PF Motor Measurement & Auto Adjustment	✓			✓	p. 382
				5	Pump Cap Unit Measurement & Auto Adjustment	✓			✓	p. 372
				6	Cutter Motor Measurement & Auto Adjustment	✓			✓	p. 387
				7	ATC Motor Measurement & Auto Adjustment	✓			✓	p. 383
				8	Housing Assembly	---			✓	✓
Others	SUCTION FAN	After replacement	Replacement	1	Replacement	---				p. 206, p. 208
				2	Turn the power on in Repair Mode	---			✓	p. 27
				3	Platen Fan Suction Check	✓			✓	p. 393

4.1.4 Adjustment Items

The following table describes the general outline of the adjustments.

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
CR related	CR Belt Tension Check	Apply a specified tension to the CR TIMING BELT. Measure the tension of the belt using the sonic tension meter to check if it is within standards. If not, adjust the tension.	<p>When the belt tension is out of standards, the following symptoms may occur.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Belt tension is high: The life of the belt will be shortened. High load applied to the carriage causes frequent wait control over the carriage movements to prevent overheating. If the tension is too high, the shaft of the motor leans and the brush in the motor becomes worn, and will result in CR overload error. <input type="checkbox"/> Belt tension is low: The belt teeth slip and the carriage swings. The correction by the active damper does not work and the bands (vertical bands) occur near the side edges of paper. 	Repair mode	√	Tension meter U-507		p. 343
	Nozzle Verification Technology: Noise Check	Check if there are any noises due to the connection state or damage of the Print Head or FFCs.	Since Nozzle Verification Technology does not work normally, auto nozzle check may not be performed correctly.	Repair mode	√			p. 365
	Nozzle Verification Technology: Rank Classification	To improve the detection accuracy of Nozzle Verification Technology, rank the nozzles.	Since the possibility of mal-detection of nozzle clogging increases due to the incorrect threshold value, unnecessary cleanings have been performed.	Repair mode	√			p. 366

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
CR related	Nozzle Verification Technology: Function Check	Carry out Nozzle Verification Technology to all the nozzles and make sure no abnormality is detected.	Since Nozzle Verification Technology does not work normally, auto nozzle check may not be performed correctly.	Repair mode	√			p. 367
	APG Function Check	Rotates the APG motor to change the PG, and see if the PG is correctly set to its home position (TYP).	When the PG is not switched properly responding to the print setting, low image quality or CL operation abnormality may occur.	Repair mode	√			p. 345
	CR Scale Check	Checks the CR SCALE for any abnormality such as damage or dirt and checks if the scale can be properly read by the encoder.	When the CR SCALE is not read properly, the carriage will not operate normally.	Repair mode	√			p. 347
	CR Active Damper Adjustment	Calibrates the active damper. * Active damper is a function to reduce the carriage vibration which causes vertical bands on prints by outputting waveforms which have phases opposite to the motor vibration.	Because the motor vibration/carriage vibration cannot be reduced, vertical bands may appear on prints.	Repair mode	√			p. 349
	CR Motor Measurement & Auto Adjustment	The CR MOTOR is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the MAIN BOARD.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			p. 350

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
CR related	Manual Uni-d adjustment	Minimizes errors in positioning ink drops while the carriage is moving back to the home. The errors can occur due to variations in wave forms and platen gap, and variation in rows. [Manual adjustment only] Print an adjustment pattern, visually select the proper correction value, and input it to the service program.	Without this adjustment, the printer may fail to position ink drops accurately resulting in print quality problems, such as blurred or grainy image, banding.	Repair mode	√		PGPP	p.351
	Manual Bi-D Adjustment	Minimizes errors in positioning ink drops while the carriage is moving back and forth. The errors can occur due to variations in wave forms and platen gap, and variation in rows. [Manual adjustment only] Print an adjustment pattern, visually select the proper correction value, and input it to the service program.	Without this adjustment, the printer may fail to position ink drops accurately resulting in print quality problems, such as blurred or grainy image, banding.	Repair mode	√		PGPP	p.352
	PG Adjustment	Adjust the platen gap of the CR UNIT using the thickness gauge.	When the PG is out of standards, the following symptoms may occur. <input type="checkbox"/> Gap is too wide: Unstable ink droplet paths or misaligned dots occur, and it causes low printing quality such as banding, printing misalignment, or grainy image. <input type="checkbox"/> Gap is too narrow: The head rubs paper.	Repair mode	√	Thickness gauge		p. 353
	Move the Print Head to Replacement Position	Move the CR UNIT to the head replacement position.	---	Repair mode	√			p. 356

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Head related	Tube Decompression	Reduce the pressure in the ink flow paths. Doing this prevents ink leakage that can occur when removing the PRINT HEAD or other ink related parts/units.	Removing a part or a unit which is needed to reduce the pressure without reducing causes ink leakage.	Repair mode	---			p. 357
	Head ID Input & Check	Register the head rank ID to the printer using the Service Program or check the currently registered head rank ID. Head rank ID is information needed to drive the PRINT HEAD with proper voltages so that proper amount of ink droplets are fired. The ID is assigned to each head and listed on the label on the head.	If the new ID is not registered after replacing the head, the head ID of the older head is used and the proper drive voltage cannot be set. The following symptoms may occur. <input type="checkbox"/> Since the amount of ink droplets is not proper, the color and density abnormalities are found on prints. <input type="checkbox"/> Since the amount of ink droplets turns to be unstable, dot missing or misaligned dots occur while printing or flushing.	Repair mode	√			p. 358
	Nozzle Check & Cleaning	<input type="checkbox"/> Print nozzle check pattern to check if nozzle clogging occurs. <input type="checkbox"/> Specify the power and the color from the Service Program and execute the head cleaning.	Nozzle clogging is not solved and the printing cannot be executed properly.	Repair mode	√			p. 359
	Head Inclination Check & Adjustment (CR direction)	Correct inclination of the PRINT HEAD in the CR direction. Print an adjustment pattern, and visually check the pattern to see if the adjustment is needed. To correct the head inclination, turn the cam.	If this adjustment is not made, print quality problems such as misaligned lines, grainy image, banding, or color unevenness may occur in the scale of PRINT HEAD surface area.	Repair mode	√		Premium Glossy Photo Paper (250)	p. 360
	Head Slant Manual Adjustment (PF direction)	Correct slant of the PRINT HEAD in the PF direction. Print an adjustment pattern, and visually check the pattern to see if the adjustment is needed. To correct the head slant, move the lever.	If this adjustment is not made, the gap between the PRINT HEAD surface and paper is kept uneven (e.g.: the gap at the front side is wider than that at the rear side), and causes irregularity in size and position of printed dots. This may be observed as print quality problems such as grainy image, banding, or color unevenness.	Repair mode	√		Premium Glossy Photo Paper (250)	p. 362

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Head related	Ink/Cleaning Liquid Draining	Discharge ink from the printer.	If ink is not discharged when instructed to do so before removing parts or units, ink may leak from the printer and contaminate surroundings.	Repair mode	---	Tray Attachment		p. 369
	Tube Washing	If ink is not discharged when instructed to do so before removing parts or units, ink may leak from the printer and contaminate surroundings.	If ink is not discharged when instructed to do so before removing parts or units, ink may leak from the printer and contaminate surroundings.	Repair mode	---	Cleaning Ink Pack		p. 370
	Ink Charging	Charge ink in the ink flow paths.	If this is not executed after discharging ink, air bubbles will remain in the Ink Tubes and may cause dot missing.	Repair mode	---			p. 371

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Ink supply related	Pump Cap Unit Measurement & Automatic Adjustment	The pump cap motor is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the MAIN BOARD.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			p. 372
	Ink Leak Detection Error Reset	Reset the error in the Ink leak sensor.	The Ink leak error does not disappear.	Repair mode	√			p. 374
	Input Offset Value	Write the correction value related to the position relationship between the PRINT HEAD and MAINTENANCE UNIT. (Only when the MAIN BOARD is replaced and NVRAM cannot be acquired.)	When the position relationship between the PRINT HEAD and MAINTENANCE UNIT is not correct, the head cleaning may not be performed properly.	Repair mode	√			p. 375
	Initial Ink Charge Flag ON/OFF	<input type="checkbox"/> Turn on the flag to carry out Initial Ink Charge when the printer's power is turned back on. <input type="checkbox"/> When replacing the Main Board, if NVRAM cannot be backed up, turn off the flag.	<input type="checkbox"/> During refurbishment, Initial Ink Charge cannot be carried out. <input type="checkbox"/> When replacing the Main Board (NVRAM backup is NG), Initial Ink Charge is performed.	Repair mode	√			p. 373

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Media Feed related	PF Belt Tension Check	Apply a specified tension to the PF TIMING BELT. Measure the tension of the belt using the sonic tension meter to check if it is within standards. If not, adjust the tension.	<p>When the belt tension is out of standards, the following symptoms may occur.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Belt tension is high: The life of the belt will be shortened. High load applied to the PF MOTOR causes frequent wait controls during paper feeding to prevent overheating. If the tension is too high, the shaft of the motor leans and the brush in the motor becomes worn, and will result in PF motor overload error. <input type="checkbox"/> Belt tension is low: The belt teeth slip and paper cannot be fed properly. 	Repair mode	√	Tension meter U-507		p. 376
	PC Scale Check	Check the PF SCALE for any abnormality such as damage or dirt and check if the scale can be properly read by the encoder using the Service Program.	When the PF SCALE is not read properly, paper feeding may become impossible and an error may occur.	Repair mode	√			p. 379
	Manual Paper Feed Adjustment	Adjusts the amount of media feeding which usually varies between the printers.	If paper feeding accuracy lowers, print quality problems such as banding may occur.	Repair mode	√		PGPP	p.381

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Media Feed related	PF Motor Measurement & Auto Adjustment	The PF MOTOR is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the MAIN BOARD.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			p. 382
	ATC Motor Measurement & Auto Adjustment	The ATC MOTOR is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the MAIN BOARD.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			p. 383

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Media Feed related	Cut Position Check & Adjustment	Adjust the auto cut with the auto cutter to cut paper at the proper position. Feed the roll paper and execute printing and cutting of the adjustment pattern using the Service Program. Measuring the gap between the bottom edge of the printed paper and the pattern and inputting the measurement result adjusts the cut position.	The cut position may be misaligned.	Repair mode	√			p. 384
	Top&Side Check & Adjustment	Adjusts the print start position of the top, right and left edges of paper. Feed A4 matte paper from the paper cassette and print the adjustment patterns using the Service Program. Measure the adjustment patterns then input the measurement result. The print start position is automatically adjusted.	If this adjustment is not made, the width or length of paper cannot be detected correctly. As the result, misaligned print position or insufficient blank space may occur, or printed images may be broken.	Repair mode	√		Premium Glossy Photo Paper (250)	p. 385
	Cutter Motor Measurement & Auto Adjustment	The cutter motor is designed to stop when the amount of heat generation (motor temperature) during motor operation reaches a predetermined limit. The amount of heat generation is estimated based on the electrical characteristics of the motor, which vary by motor and power supply of the printer. Therefore, to get the motor control to work properly, the electrical characteristics values of the motor need to be measured and stored in the memory on the MAIN BOARD.	If this adjustment is not made, the estimation of the motor temperature cannot be made properly and may cause the following symptoms. <input type="checkbox"/> Even though there is no problem with the motor temperature, the printer pauses during printing because it judges that the motor is in high-temperature state. <input type="checkbox"/> Despite the motor is in a high-temperature state, a lower motor temperature is estimated and the printer does not stop. This may cause the printer to malfunction.	Repair mode	√			p. 387

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Media Feed related	Rear AD Adjustment	Adjust the detection sensitivity of the PE SENSOR so that it can recognize the paper inserted in the printer correctly. Let the sensor detect the Standard Sheet (translucent media) which is hard to recognize to check the result on the Control Panel. (By using the media which is hard to recognize, paper can be recognized regardless of the environmental condition or the media)	If the adjustment is not executed, paper recognition failures may occur (e.g. paper empty error occurs even with paper inserted, some media are not recognized).	Repair mode	---	Standard Sheet		p. 386
Boards Related	NVRAM Backup & Restore	Make a backup of data stored in the NVRAM or restore the data from a backup.	---	Repair mode/ Inspection mode	√			p. 388
	RTC Input	Check the current setting of the RTC. Write the correct information as needed.	If the adjustment is not executed, a maintenance error (RTC setting error) or USB recognition error occurs.	Repair mode	√			p. 389
	MAC Address Check & Input	Read and check the MAC address of the printer. Write a new MAC address as needed.	If the address is not input or a wrong address is set, a network connection trouble occurs.	Repair mode	√			p. 390
	Serial Number Read & Write	Check the serial number and USB ID currently set to the printer. Write the correct information as needed.	If the serial number is not input or a wrong number is set, it makes service management (such as the print/NVRAM) harder.	Repair mode/ Inspection mode	√			p. 391
	Main Board Initial Setting	Make initial settings of the Main Board.	---	Inspection mode	√			p. 392

Table 4-2. Adjustment Items

Class	Adjustment Items	Overview	Symptoms that the Adjustment is Needed	Printer Mode	Service Program	Jig	Media	Page
Others	Platen Fan Suction Check	Run an operation check of the SUCTION FAN.	---	Repair mode	√			p. 393
	Reset Job History	Reset the user job history using the Service Program.	---	Repair mode	√			p. 394
	Color Mode Setting (SC-F6400H Series only)	Set which combination to use from Orange/Violet, Fluorescent pink/Fluorescent yellow, Light Cyan/Light Magenta.	---	Repair mode	√			p. 395
	Sensor Check1	Displays the state of the sensor.	---	Repair mode	√			p. 396
	Initial Password Check & Input (EMEA only)	Sets initial password when initialized the Main Board after replacing it.	---	Repair mode	√			p. 397
	Print Image	Print an arbitrary image (.prn).	---	Normal mode	√			p. 398
	Counter Reset	Resets the life counter corresponding the replaced part.	<input type="checkbox"/> If a new part is used without resetting the counter, the counter reaches the end of service life earlier than the real life, and then a service call error occurs. <input type="checkbox"/> Correct printer operational information will not remain and analysis will become difficult.	Repair mode	---			p. 399
	Long-term Storage Preparation	Carry out if the printer is not used more than two weeks.	---	Repair mode	---			p. 400

4.1.5 List of Tools/Software/Consumables for Adjustments

The tables below show the tools required for adjusting this printer.

Hardware Tools

Table 4-3. Hardware tools

Tool Name	Code	Target Adjustment
Sonic tension meter U-507	1294120	<input type="checkbox"/> CR Belt Tension Adjustment <input type="checkbox"/> PF Belt Tension Adjustment
Standard Sheet (JETRAS JP-D300S)	1476228	<input type="checkbox"/> Rear AD Adjustment
Thickness Gauge (2.5/2.8)	Commercially available	PG Adjustment
Calibrated Loupe	Commercially available	<input type="checkbox"/> CR & PF Direction Head Slant Adjustment <input type="checkbox"/> Cut Position Check & Adjustment
Ruler	Commercially available	<input type="checkbox"/> Top&Side Check & Adjustment <input type="checkbox"/> Cut Position Check & Adjustment
Tray Attachment	1880524	<input type="checkbox"/> Ink Eject

Software Tools

Table 4-4. Software tools

Software Name	Explanation
Service Program	Used for almost all of the required adjustments.
Communication Driver	To connect with the printer.
Latest version of firmware	---

Consumables

Table 4-5. Consumables

Consumable Name	Code	Target Adjustment
Premium Glossy Photo Paper (250)	---	Most of the adjustments
Cleaning Ink Pack	1888080	Most of the adjustments



CAUTION

Bring back the following brought and used items, then dispose of them based on the local regulations in your country, please.

- Ink cartridges
- Cleaning cartridges
- Draining cartridges

Especially in case of ink cartridges in Europe, please refer to the following web site to confirm the regulation in detail.

ECO Info: <http://www.epson.eu/weee> (available from July 2015)

4.1.6 Service Program Basic Operations

This section describes the basic operations of the Service Program.

System Requirements

- OS: Windows 10, 11
- Interface: USB

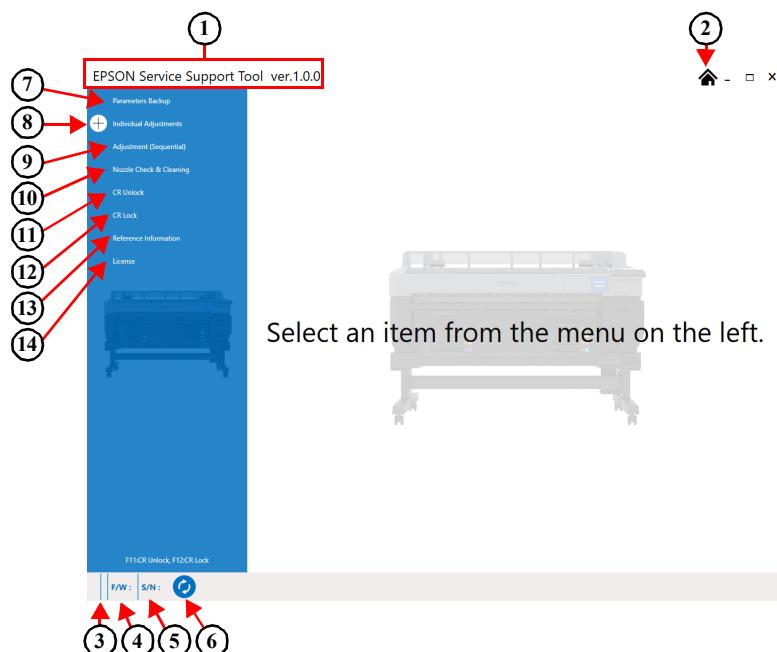


The network can be used only for MAC Address Check & Input.

Startup

1. Click “EPSON SC-F6400_F6400H Series (ServiceProgram_Ver.X.X.X)_XX.exe” in [Start] of Windows.
2. Select the item to run from the menu on the left side.

Description for each menu



Select an item from the menu on the left.

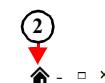


Table 4-6.

No.	Name	Explanation
1	Program name and version	Displays name and version of the program.
2	Home button	Return to home screen.
3	MODE	Displays the current communication state between the printer and PC.
4	F/W	Displays the current Firmware version of the printer.
5	S/N	Displays the serial number of the connected printer.
6	Update button	Updates the information by connecting to the printer again.
7	Parameter Backup	Backup the printer information (NVRAM)
8	Individual Adjustments	Every adjustment can be performed individually.
9	Adjustment (Sequential)	Proper adjustment flow is made by selecting the replaced parts. Follow the flow and perform adjustment.
10	Nozzle Check & Cleaning	Perform the Head Cleaning.
11	CR Unlock	Releases CR Lock.
12	CR Lock	Locks the carriage.
13	References	Display panel menu map and block diagram of electric circuit components.
14	License	Displays license related information.

CAUTION
Make sure the firmware is the latest version.
If not, VSD8 cannot be adjusted correctly.

4.2 NV-RAM BACKUP/NVRAM Viewer

Parameters stored in the NVRAM on the Main Board are read/stored and written onto the other NVRAM on the Main Board using this menu. Also, the read parameter information is displayed on the computer screen. (NVRAM Viewer)

4.2.1 Parameter Backup procedure

1. Turn the printer ON. (Normal mode, repair mode, inspection mode)
2. Start the service program.
3. Select **Parameter Backup** in the menu.
4. Parameter backup starts by clicking [**Printer NVRAM Backup**]. Saving dialog opens when backup finishes, so select destination, name the file and save it.

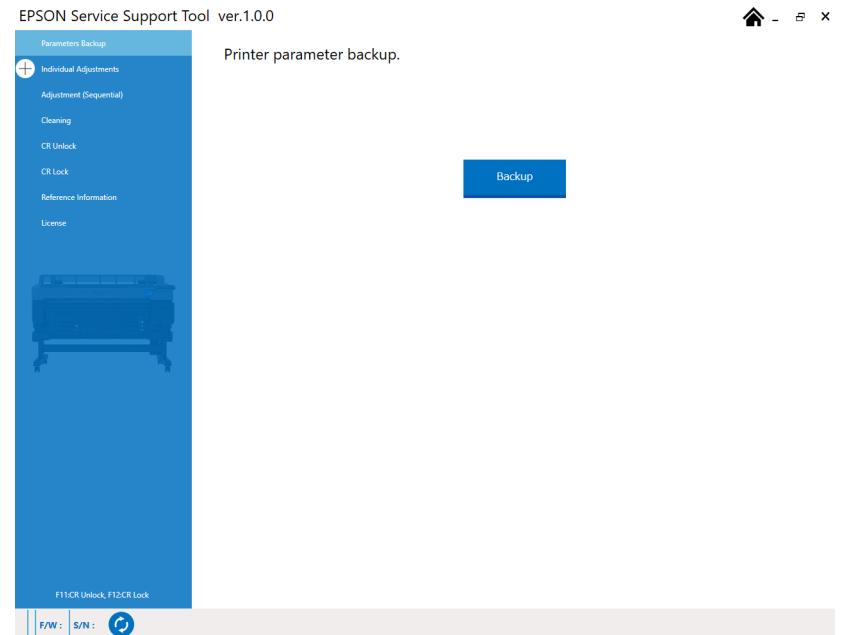


Figure 4-4. [**Printer NVRAM Backup**] screen

4.2.2 NVRAM Viewer Basic Operation

The following functions are provided.

Item	Description
Life Parts Operation History	Displays operation state of life parts.
IC Replacement History	Displays history of ink cartridge replacement
Utilization History	Displays operation state of the printer.
Error History	Displays error history.
Basic Information	Displays basic information of the printer.

PROCEDURE

1. Start NVRAM Viewer.
2. Click [File Open] button and select NVRAM data.
3. Select the tab to switch the screen.
4. After displayed the information, information is saved in Excel file by clicking [Excel Export] button of the file tab.

DESCRIPTION

Life Parts Operation History

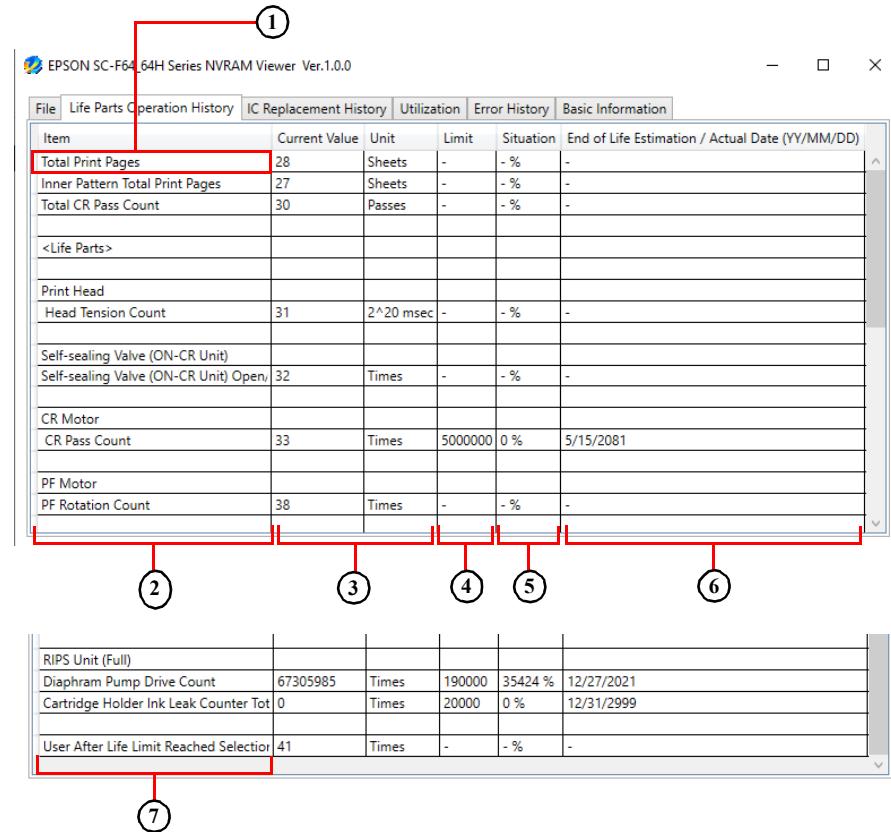


Figure 4-5. [Life Parts Operation History] Screen

1	Total Print Pages	Total pages the printer has printed
2	Item	---
3	Current Value	Displays current values for each part or unit.
4	Limit	Displays the life limit of the part if it has.

5	Situation	Displays the percentage of Current Value (3) considering the Limit (4) as 100%.
6	End of Life Estimation / Actual Date (YY/MM/DD)	<ul style="list-style-type: none"> <input type="checkbox"/> Case 1. Displays future date The estimated date when the part or unit reaches the end of its service life. <input type="checkbox"/> Case 2. Displays past date The actual date when the part or unit reached the end of its service life. <input type="checkbox"/> Case 3. Displays other data If situation is 0% or if the initial ink charge date equals the date of obtaining NVRAM, displays “-“.
-	Number of Agreed Times	<ul style="list-style-type: none"> <input type="checkbox"/> Case 1. Displays the number In the condition that the part or unit reached the end of its service life, displays the summation that user pressed the Agreement by panel. <input type="checkbox"/> Case 2. Displays “-“ Firmware to extend life is NOT installed.

IC Replacement History

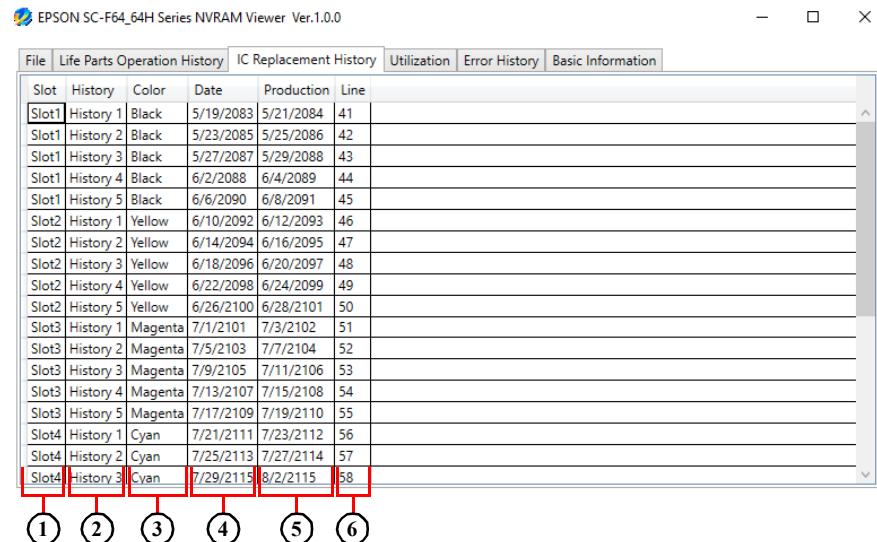


Figure 4-6. [IC Replacement History] Screen

1	Slot	Slot name
2	History	Ink cartridge replacement history
3	Color	Replaced ink color
4	Date	Ink cartridge replacement date
5	Production	Ink cartridge manufacturing date
6	Line	Production line number

Utilization History

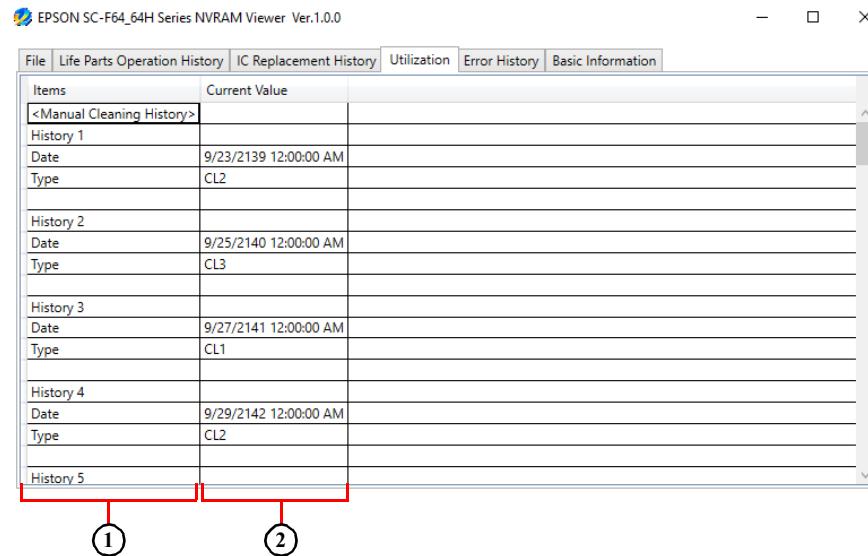


Figure 4-7. [Utilization History] Screen

1	Items	---
2	Current Value	Displays the current value per item.

Error History

Type	Error Content	Time Stamp
<Normal Error>		
920536	Ink Case Open Error (P3)	1/20/2068 11:16:18 AM
920504	Ink Case Open Error (P2)	3/8/2067 3:23:46 PM
920000	Paper Jam Error	7/13/2058 3:19:30 PM
920500	Front Cover Open Error	4/10/2057 5:50:58 PM
920538	Ink Case Open Error (P5)	7/13/2045 8:17:06 AM
920208	No Paper Error (Roll)	12/14/1978 11:17:22 PM
920537	Ink Case Open Error (P4)	11/27/1978 1:09:22 PM
920503	Ink Case Open Error (P1)	10/5/1978 10:29:22 AM
920539	Ink Case Open Error (P6)	9/18/1978 12:21:22 AM
920525	Head Maintenance Cover Open Error Home	7/26/1978 9:41:22 PM
<Service Call Error>		
256240	Head VDD Low Error (LDAMP2)	4/18/2057 1:43:32 AM
005747	Head Driver Cooling FAN Lock	12/23/2054 7:35:30 PM
005732	CR Motor Cooling FAN Lock Error	11/4/2053 4:49:06 PM
005710	REEL Motor Velocity Deviation Error	11/29/2051 12:20:18 PM
005708	REEL Motor Reversing Error	1/15/2051 4:27:46 PM

Figure 4-8. [Error History] Screen

1	Type	Displays the types of the most recent six normal errors saved in the NVRAM.
2	Error Content	Information of the error.
3	Time Stamp	Displays the time stamps of the currently displayed errors.
4	Type	Displays the types of the most recent six service call errors saved in the NVRAM.
5	Error Content	Information of the error.
6	Time Stamp	Displays the time stamps of the currently displayed errors.

Basic Information

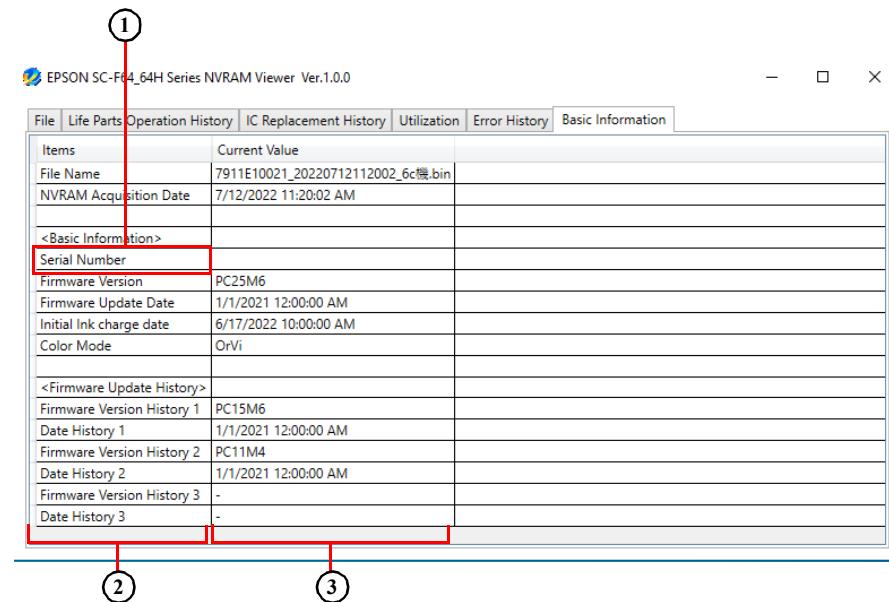


Figure 4-9. [Basic Information] Screen

1	Serial Number	Product serial number.
2	Items	---
3	Current Value	The current value of the item.

INFORMATION SAVED TO CSV FILES

Life Parts Operation History

Item	Description	
Total Print Pages	Sheets	Total pages the printer has printed
Inner Pattern Total Print Pages	Sheets	Total adjustment patterns the printer has printed
Total CR Pass Count	Passes	Total CR pass counts.
<Life Parts>		
PRINT HEAD	Number of shots	2^{20} Shots
	Head Tension Count	2^{20} msec
DUCT CR	DUCT CR Open/Close Count	Times
CR MOTOR	CR Pass Count	Times
PF MOTOR	PF Rotation Count	Times
INK TUBE	CR Pass Count	Times
MAINTENANCE UNIT	Suction Pump Rotation Count	Times
	Wiping Count	Times
Decompression Pump Unit	Ink Path Decompression Pump Drive Time	Sec
INK HOLDER RIGHT	Diaphragm Pump Drive Count	Times
	Cartridge Holder Ink Leak Counter Total Attach/Disattach Count	Times
INK HOLDER LEFT	Diaphragm Pump Drive Count	Times
	Cartridge Holder Ink Leak Counter Total Attach/Disattach Count	Times
User After Life Limit Reached Selection Count	Times	Frequency that user selected longevity continuance with panel.

Operation history (the following information is displayed for each of the items.)

- Current Value
- Limit
- Situation
- End of Life Estimation / Actual Date
(YY/MM/DD)

Operation history (the following information is displayed for each of the items.)

- Current Value
- Limit
- Situation
- End of Life Estimation / Actual Date
(YY/MM/DD)

IC Replacement History

Item	Description
Slot1	Displays the following information of the last five replacements of ink cartridges.
Slot2	
Slot3	
Slot4	
Slot5	
Slot6	
	<input type="checkbox"/> Color <input type="checkbox"/> Date <input type="checkbox"/> Production <input type="checkbox"/> Line (YY/MM/DD)

Utilization History

Table 4-7. Utilization History

Item	Description						
Manual Cleaning History	<table border="1"> <tr> <td>History</td> <td>Cleaning history of the last 10 executions.</td> </tr> <tr> <td>Date</td> <td></td> </tr> <tr> <td>Type</td> <td></td> </tr> </table>	History	Cleaning history of the last 10 executions.	Date		Type	
History	Cleaning history of the last 10 executions.						
Date							
Type							

Table 4-7. Utilization History

Item	Description
	CL1 All Line Execution
	CL2 AB Line Execution
	CL2 CD Line Execution
	CL2 EF Line Execution
	CL2 GH Line Execution
	CL2 All Line Execution
Manual Cleanings Count (Can be reset)	CL3 AB Line Execution
	CL3 CD Line Execution
	CL3 EF Line Execution
	CL3 GH Line Execution
	CL3 All Line Execution

Performed number of each cleaning.

Table 4-7. Utilization History

Item		Description
Manual Cumulative Cleanings Count (No reset)	CL1 CD Line Execution	Performed number of each cleaning
	CL1 EF Line Execution	
	CL1 GH Line Execution	
	CL1 All Line Execution	
	CL2 AB Line Execution	
	CL2 CD Line Execution	
	CL2 EF Line Execution	
	CL2 GH Line Execution	
	CL2 All Line Execution	
	CL3 AB Line Execution	
	CL3 CD Line Execution	
	CL3 EF Line Execution	
	CL3 GH Line Execution	
	CL3 All Line Execution	
Auto Cleaning History	History	Performed number of each cleaning
	Date	
	Type	

Table 4-7. Utilization History

Item		Description
Cumulative head wiping execution	Wiping Execution	Performed number of each wiping
Head wiping execution per head	Wiping Execution	
Temperature	Print Head temperature when Print Start	Temperature related information
	Max. Temperature	
	Max. Temperature Date	
	Min. Temperature	
	Min. Temperature Date	
	--11 °C	
Print Pages per Head Temperature	-10 - 0 °C	Printed pages per head temperature.
	1 - 10 °C	
	11 - 15 °C	
	16 - 25 °C	
	26 - 35 °C	
	36 °C -	
	User Ink Eject Execution Date	
Storage History	Temperature when User Ink Eject	Replacement history of each item.
	User Ink Re-Charge Date	
	NVT Out of Operation Temperature Range Executions History	
Date	Date	
	Temperature	

Table 4-7. Utilization History

Item	Description
Amount of Ink Consumed (Epson Genuine)	Black (1600 ml)
	Yellow (1600 ml)
	Magenta (1600 ml)
	Cyan (1600 ml)
	Light Magenta / Fluorescent Yellow / Orange (1600 ml)
	Light Cyan / Fluorescent Pink / Violet (1600ml)
Amount of Ink Consumed (Non-Genuine)	Black (1600 ml)
	Yellow (1600 ml)
	Magenta (1600 ml)
	Cyan (1600 ml)
	Light Magenta / Fluorescent Yellow / Orange (1600 ml)
	Light Cyan / Fluorescent Pink / Violet (1600 ml)

Basic Information

Table 4-9. Basic Information

Item	Description
File Name	Displays the name of NVRAM file
NVRAM Acquisition Date	Displays acquisition date and time of NVRAM
<Basic Information>	
Serial Number	Serial number of the printer.
Firmware Version	The version of the firmware installed on the printer.
Firmware Update Date	Displays F/W install date
Initial Ink charge date	Displays the date and time when the initial ink charge was done.
Color Mode	---
<Firmware Update History>	
Firmware Version History	Firmware update history
Date History	

Table 4-8. Error History

Item	Description
Normal Error	Displays the most recent ten errors and their time stamps.
Service Call Error	Displays the most recent twenty five service call errors and their time stamps.
Error History	Displays the number of occurrences of each service call error.
Number of Errors	Displays the number of occurrences of normal errors and service call errors.

4.3 Individual Adjustments

This mode executes the adjustment required for the repair individually.

PROCEDURE

1. Click **Individual Adjustments** from the main menu.
2. Select the category, and select the adjustment from the adjustment items shown on the right side of the screen.
3. Follow the instructions on the screen to execute the adjustment.

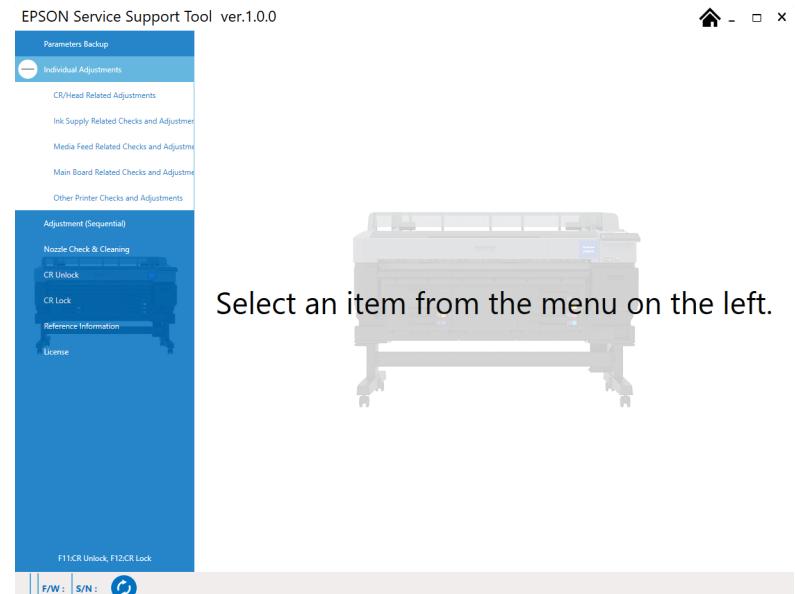


Figure 4-10. Individual Adjustments

4.4 Adjustment (Sequential)

Mode that generates necessary adjustment item by selecting the removed/replaced parts. Executes the adjustments in order. Able to select multiple parts.

PROCEDURE

1. Click **Adjustment (Sequential)** from the main menu.
2. Select the name of the removed/replaced part.
3. Click the **[OK]** button.

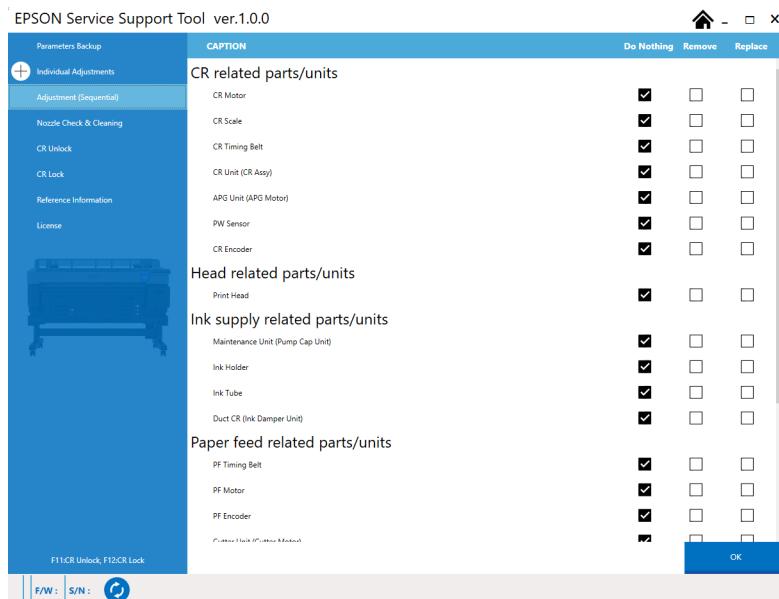


Figure 4-11. Adjustment (Sequential) (1)

4. Follow the instructions on the screen to execute the adjustment.
5. Click the **[OK]** button when the adjustment is finished. Color of the adjustment name changes. (Notifies the adjustment is finished)
6. Click **[Next]** to proceed to the next adjustment.



- Click the **[prev]** button to return to the previous adjustment.
- The list of adjustment that should be performed is displayed by clicking the adjustment name.

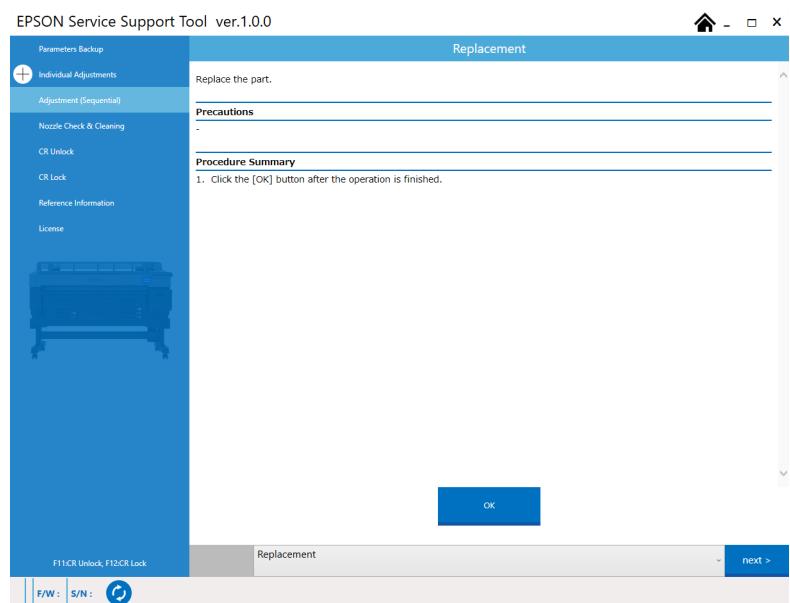


Figure 4-12. Adjustment (Sequential) (2)

4.5 Installing Firmware

The firmware of this printer is written in the Main Board. If the Main Board is replaced or the firmware needs to be updated, follow the procedure below to write the firmware to the Main Board.

PROCEDURE

- Normal firmware update (Not replacing the Main Board)
 1. Connect the Printer and PC with a USB cable.
 2. Turn the printer ON in normal mode.
 3. Start the Firmware updater (EPFWUPD.exe).
 4. When the Firmware updater started, click [Next].

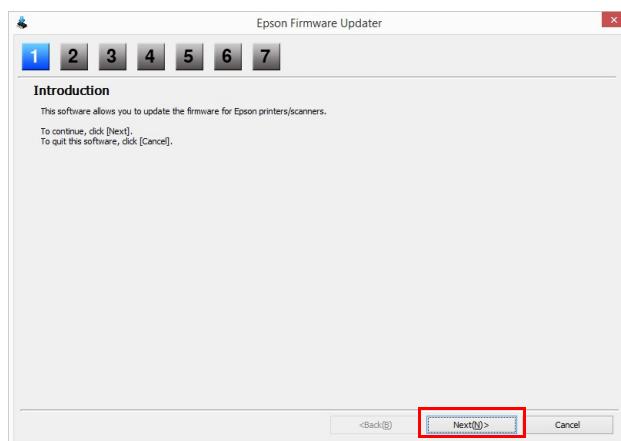


Figure 4-13.Firmware update (1)

5. Read license agreement, select **I agree**, and click [Next].

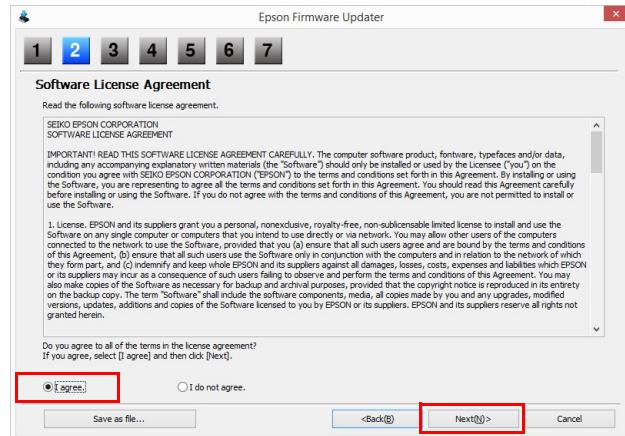


Figure 4-14.Firmware update (2)

6. Click [Browse], select the firmware data which you install.

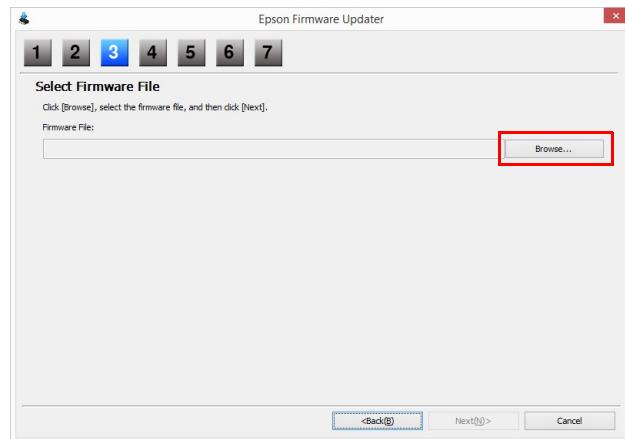


Figure 4-15.Firmware update (3)

7. Since precaution is displayed by clicking [Next], click [Next] again.

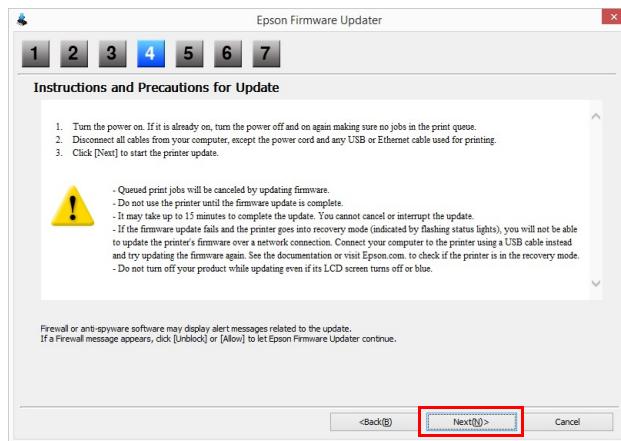


Figure 4-16.Firmware update (4)

8. The information of firmware updating and the printer connected currently is displayed. Check the check box, and click [Start] to start Firmware update.

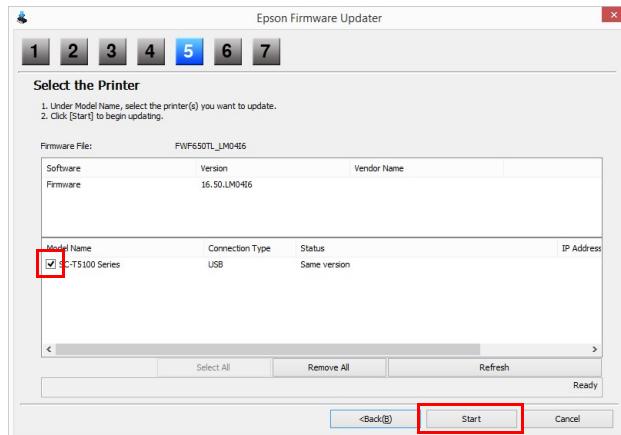


Figure 4-17.Firmware update (5)

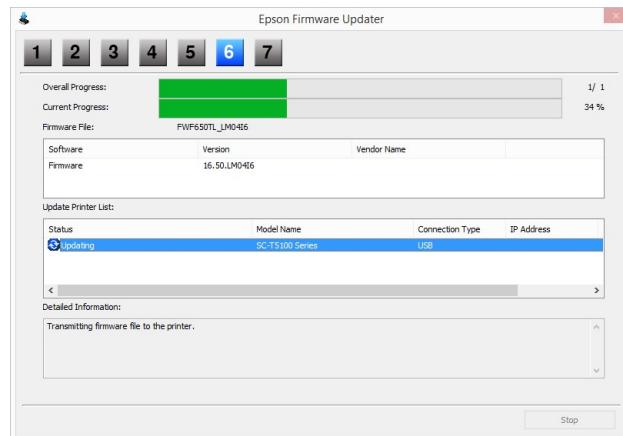


Figure 4-18.Firmware update (6)



**Make sure not to turn off the printer until updating is complete.
Otherwise, the printer may not operate normally.**

9. The printer automatically turns off and back on again when the update is finished.
10. Click [Finish] of the firmware updater to finish.



Downgrading firmware is not recommended, but it can be performed in firmware update mode.

- Firmware update after replacing the Main Board
- 1. Connect the Printer and PC with a USB cable.
- 2. Turn the printer ON in the program update mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.(P.
[27](#))
- 3. Start the firmware updater (EPFWUPD.exe).
- 4. Perform [Step 4](#) to [Step 8](#) of normal firmware update (Not replacing the Main Board).



CHECK

Printer information is not displayed in the Firmware update mode.



CAUTION

- Make sure not to turn off the printer until updating is complete. Otherwise, the printer may not operate normally.
- Printer update is not finished when “Finish” is displayed on the screen of firmware updater. When printer update is finished, “FINISHED” is displayed on the panel and the LED flashes regularly.

- 5. When update is finished, turn the printer off, and click [Finish] on the updater.

4.6 References

This function allows you to view the following information (PDF files).

- Control panel menus in the normal mode
- Control panel menus in the inspection mode
- Wired Diagram

PROCEDURE

1. Select [References] from the main menu.
2. Select **Panel Menu** or **Wired Diagram**.

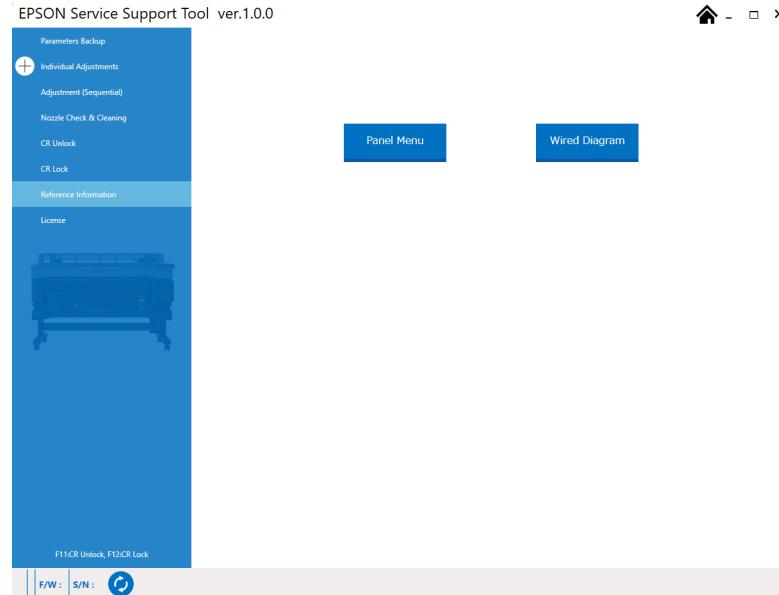


Figure 4-19.[References] screen

4.7 CR Related Adjustments

4.7.1 CR Belt Tension Check

REQUIRED TOOLS

- Sonic tension meter U-507
- Something to flip the belt

STANDARD VALUE

25.5 ± 1 N

EXECUTION MODE

Repair mode

PROCEDURE

1. Remove the following part in advance.
 - LEFT UPPER COVER & LEFT ROLL COVER ([P. 177](#))
2. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. ([P. 27](#))
3. When any paper is loaded, remove it.
4. Start the Service Program and select **CR Belt Tension Check**.
5. Click [**Run**]. The CR UNIT moves left and right three times, and then moves to the adjustment position.

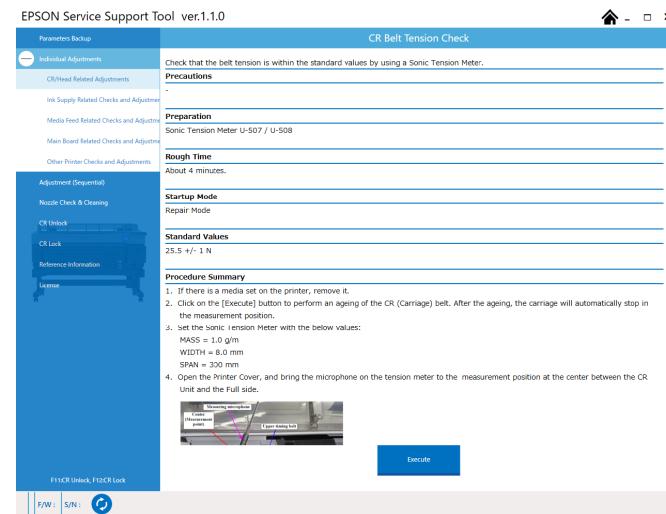


Figure 4-20. [CR Belt Tension Check] Screen

6. Input the following values to the tension meter.
 - MASS: 1.0 g/m
 - WIDTH: 8.0 mm
 - SPAN: 300 mm
7. Bring the microphone of the tension meter closer to the position shown in [Figure 4-21](#).



Bring the microphone within 5 mm from the belt but do not let it touch the belt.

8. Press [MEASURE] on the tension meter and flip the belt with tweezers or a similar tool.



- Be sure to measure the tension of the belt on the upper side. If you measure the tension of the belt on the lower side, the measuring value may be inaccurate.
- Flip the belt as weak as the tension meter can measure it.
- Be careful not to let the microphone touch the belt when flipping the belt.

9. Measure the belt tension for three times, and check if the average is within the standards.
- Within the standards: Finish the adjustment
 - Out of the standards: Go to [Step 10](#)

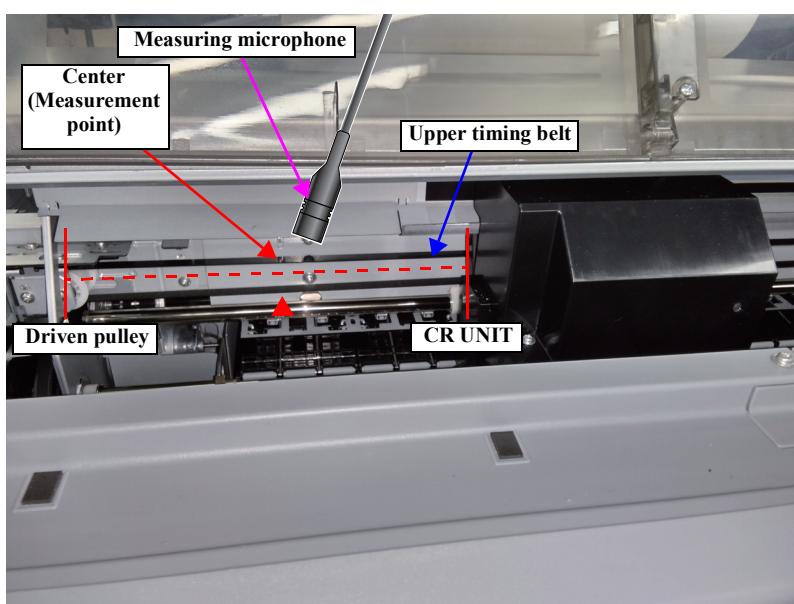


Figure 4-21. Measuring the belt tension

10. Loosen the two screws that secure the driven pulley holder.

11. Turn the adjustment screw to adjust the belt tension.

- If larger than standard value: Turn the screw counterclockwise.
- If smaller than standard value: Turn the screw clockwise.

After adjusting the tension, tighten the screws loosened in [Step 10](#), and then back to [Step 7](#).



The tension is changed about 1.5N by turning the adjusting screw for a quarter turn.

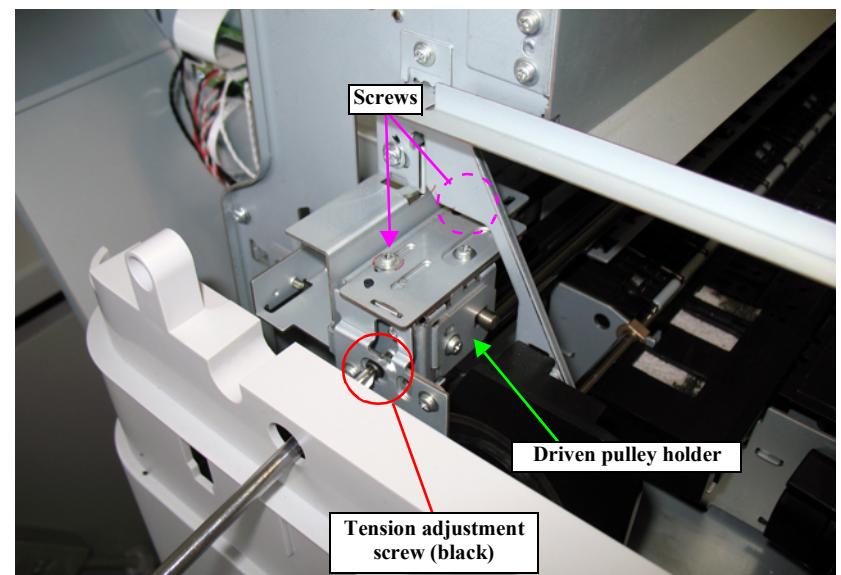


Figure 4-22. Tension adjustment screw

4.7.2 APG Function Check

EXECUTION MODE

Repair mode

PROCEDURE

1. Remove the following part in advance.
 - RIGHT UPPER COVER (P. 171)
2. Turn the printer ON in the repair mode.
Turn the power ON while pressing [left upper side of the screen], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
3. Start the Service Program and select **APG Function Check**.
4. Click [**Run**].
The APG mechanism will move.

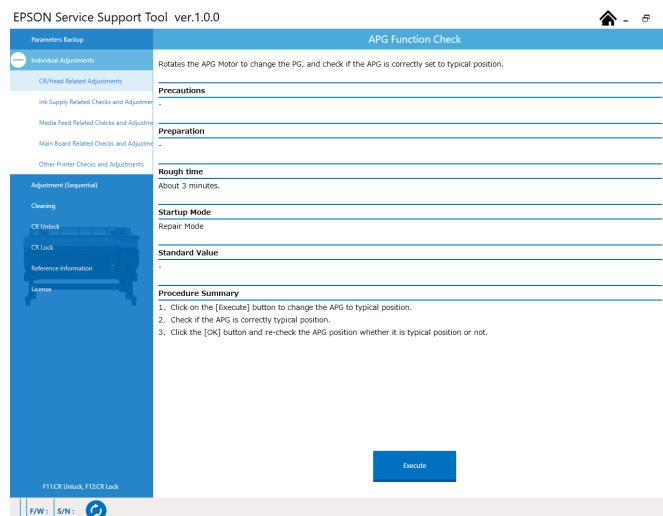


Figure 4-23. [APG Function Check] Screen

5. Check that the mark on the top of the APG cam is "--". Run the check two times and check the mark.

- "--" is on the top: Finish the adjustment
- "--" is not on the top: Go to **Step 6**

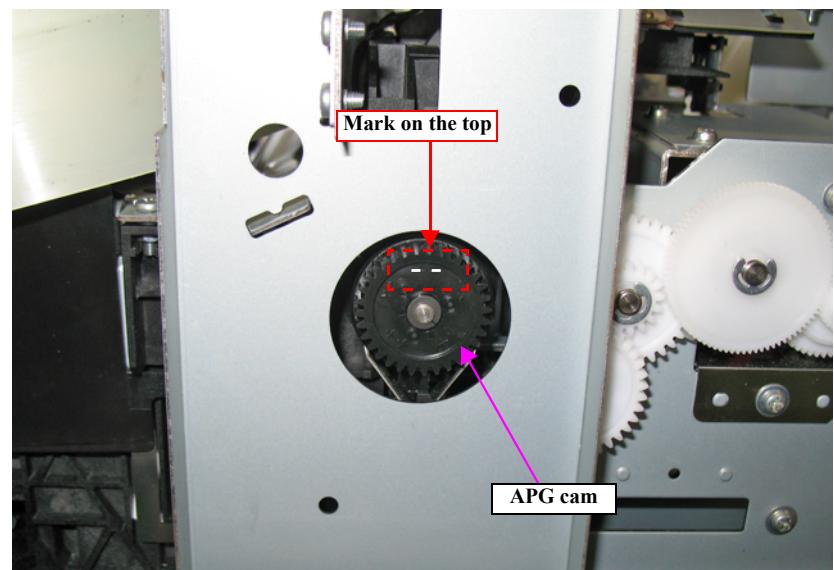


Figure 4-24. Checking the APG cam

6. Since the APG is not switched correctly, execute the following remedy responding to the symptom.

Symptom	Remedy
The CR UNIT does not move to the APG switch position (home position).	Since the CR UNIT may not move smoothly, lubricate the CR UNIT. (P. 412)
The CR UNIT moves to the APG switch position but the APG mechanism does not operate.	Since the APG Motor may not operate, check the wiring of the APG Motor. If there is no trouble for the wiring, replace the APG Motor (APG unit). (P. 233)
The APG mechanism operates but the APG is not switched correctly.	Since the APG mechanism on the CR UNIT may not have been installed correctly, replace the CR UNIT. (P. 245)

After taking the above measure, return to [Step 4](#) to check again.

4.7.3 CR Scale Check

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Start the Service Program and select **CR Scale Check**.
3. Click [**Run**].
The CR UNIT moves left and right five times, and then the CR ENCODER starts to read the scale.
 - The result is OK: Finish the adjustment
 - The result is NG: Go to Step 4

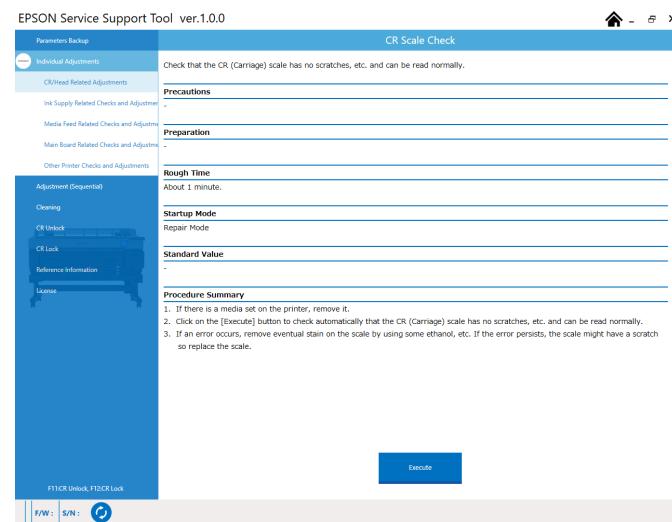


Figure 4-25. [CR Scale Check] Screen

4. Since the CR SCALE is not scanned correctly, clean the scale using ethanol. If the scale still cannot be read properly, replace the CR ENCODER ([P. 227](#)) or the CR SCALE ([P. 223](#)). After replacing the part, return to [Step 3](#) and check again.

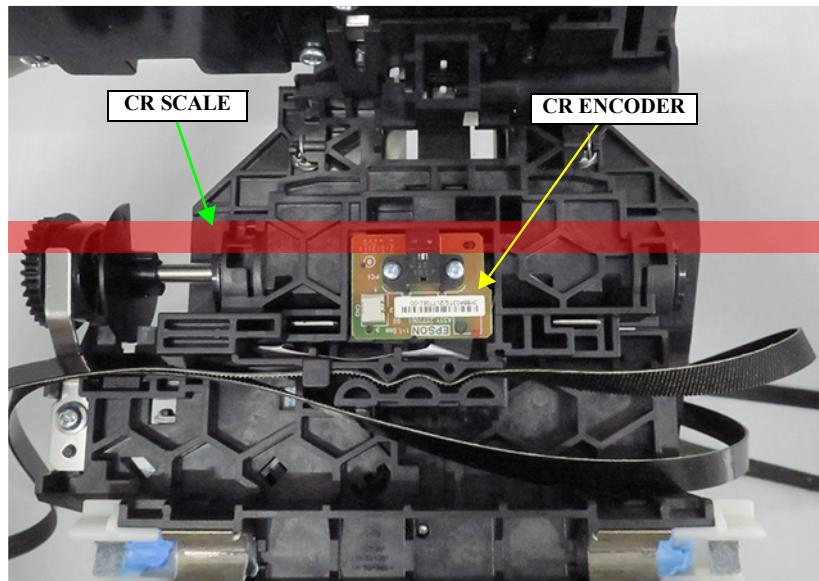


Figure 4-26. CR Encoder and Scale Check

4.7.4 CR Active Damper Adjustment

EXECUTION MODE

Repair mode

PROCEDURE

1. When any paper is loaded, remove it.
2. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
3. Start the Service Program and select **CR Active Damper Adjustment**.
4. Click [**Run**] to execute the calibration of the CR active damper.
5. If a completion message appears, press [**OK**].

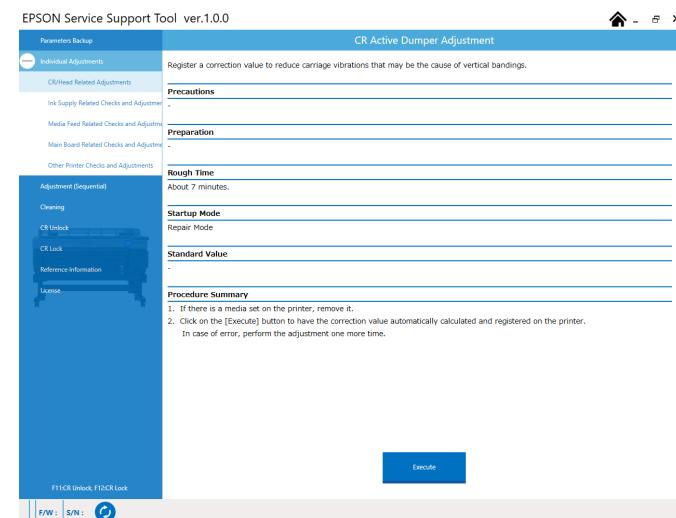


Figure 4-27. [CR Active Damper Adjustment] Screen

4.7.5 CR Motor Measurement & Auto Adjustment

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. [\(P. 27\)](#)
2. Start the Service Program and select **CR Motor Measurement & Auto Adjustment**.
3. If there is a media set on the printer, remove it.
4. Click the [**Execute**] button to apply a correction automatically.
5. In case of error, perform the operation one more time. If the error persists, exchange the CR (Carriage) motor [\(P. 230\)](#).

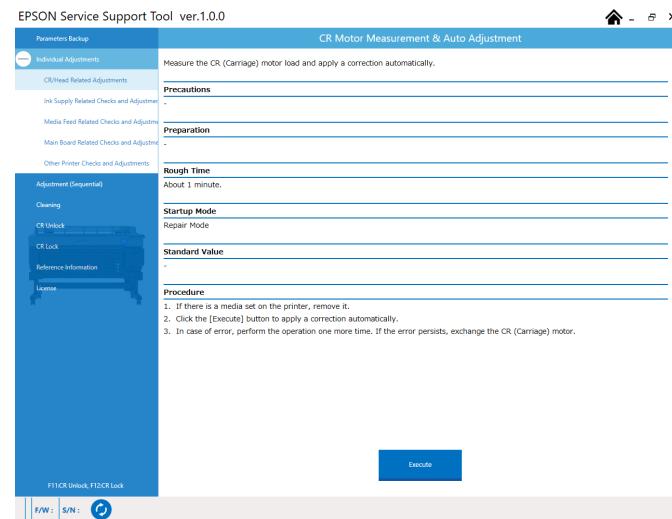


Figure 4-28. [CR Motor Measurement & Auto Adjustment] Screen

4.7.6 Manual Uni-D Adjustment

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

ADJUSTMENT PROCEDURE

- Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
- Load the media for adjustment.
- Start the service program and select **Manual Uni-D Adjustment**.
- Select a model.
- Click on the **[Manual Home-> Full]** tab and **[Print]** button to print the adjustment patterns and from the printed patterns, select a pattern which the reference line and the inspection line match and write the number in the input field.
- After inputting all the numbers, click on the **[Input]** button.
- Click on the **[Manual Full-> Home]** tab and **[Print]** button to print the adjustment patterns and from the printed patterns, select a pattern which the reference line and the inspection line match and write its number in the corresponding input field.
- After inputting all the numbers, click on the **[Input]** button.

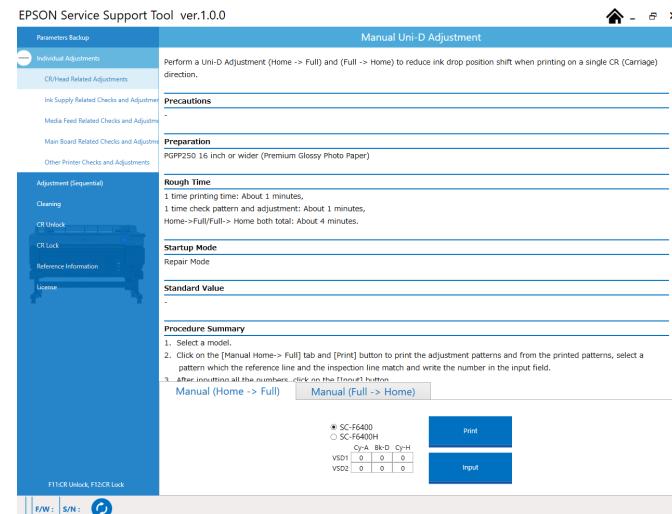


Figure 4-29. [Manual Uni-D Adjustment] Screen

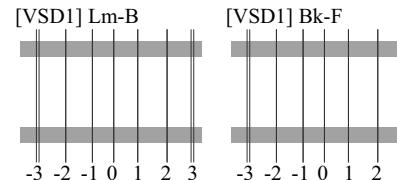


Figure 4-30. Adjustment Pattern

4.7.7 Manual Bi-D Adjustment

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Load the media for adjustment.
3. Start the service program and select **Manual Bi-D Adjustment**.
4. Click on the **[Print]** button to print the adjustment patterns.
5. Select each pattern which the reference line and the inspection line match.
6. After inputting all the numbers, click on the **[Input]** button.

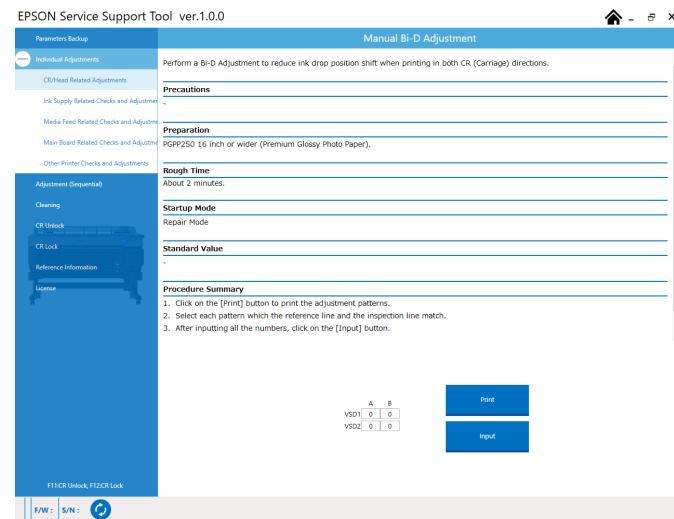


Figure 4-31. [Manual Bi-D Adjustment] Screen

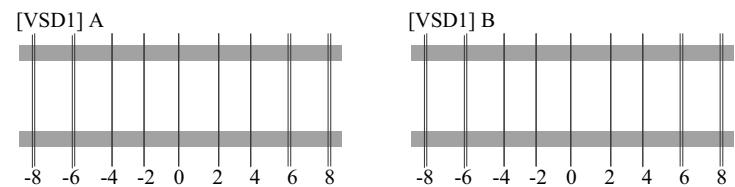


Figure 4-32. Adjustment Pattern

4.7.8 PG Adjustment

REQUIRED TOOLS

Thickness Gauge

STANDARD VALUE

2.1±0.05mm

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. When any paper is loaded, remove it.
3. Start the Service Program and select **PG Adjustment**.
4. Click the [**Execute**] button to release the CR lock and move the CR unit. The printer will automatically turn off.
5. Remove the following parts in advance.
 - **RIGHT UPPER COVER** [\(P. 171\)](#)
6. Check that the mark on the top of the APG cam is “+”.

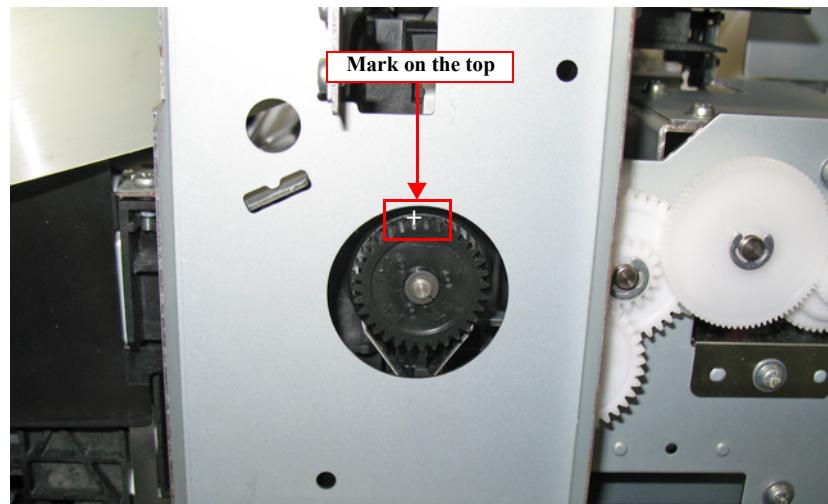


Figure 4-33. APG cam position checking point

<PG check>

7. Place the thickness gauge on the specified position as follows, and check PG at the both left and right of the PRINT HEAD. If the result is NG, adjust PG carrying out [Step 8](#) and the following steps.



When moving the CR UNIT, make sure to do it by pulling the CR TIMING BELT.

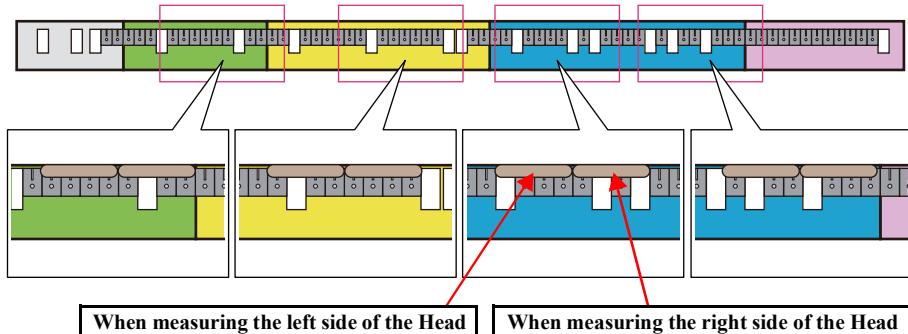


Figure 4-34. The measurement position

<Adjustment>

8. Move the CR UNIT to the left end.
9. Remove the CR COVER. ([P. 214](#))
10. Remove the following two plate.

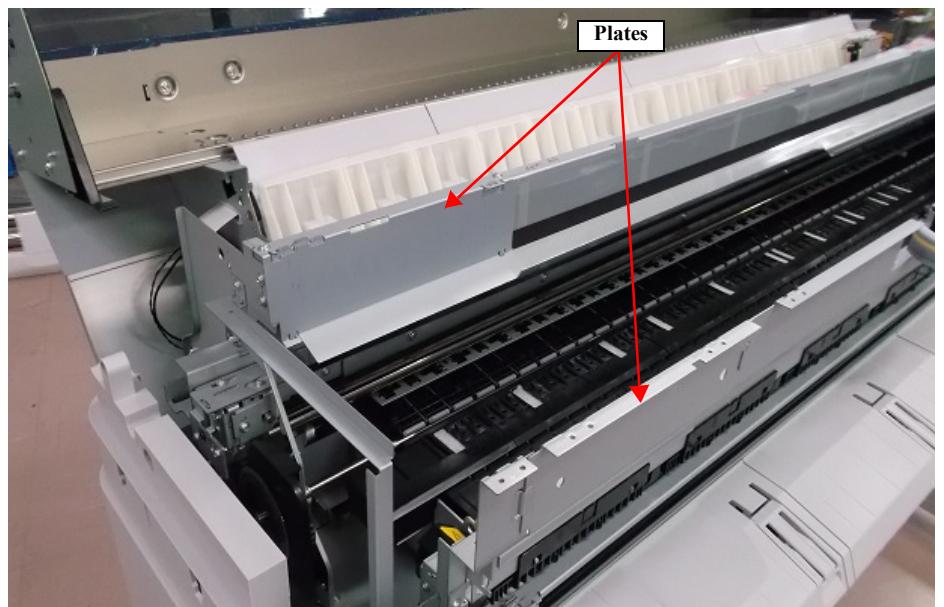


Figure 4-35. Removing the plate

11. Loosen the PG adjustment screws that secure the PG adjustment levers.
12. Move the PG adjustment levers up and down to change the gap (PG).
13. Adjust all the measurement points to become within the standard.
14. Measure all the points again after adjustment to confirm all of them are within the standard.
15. Attach the removed parts.

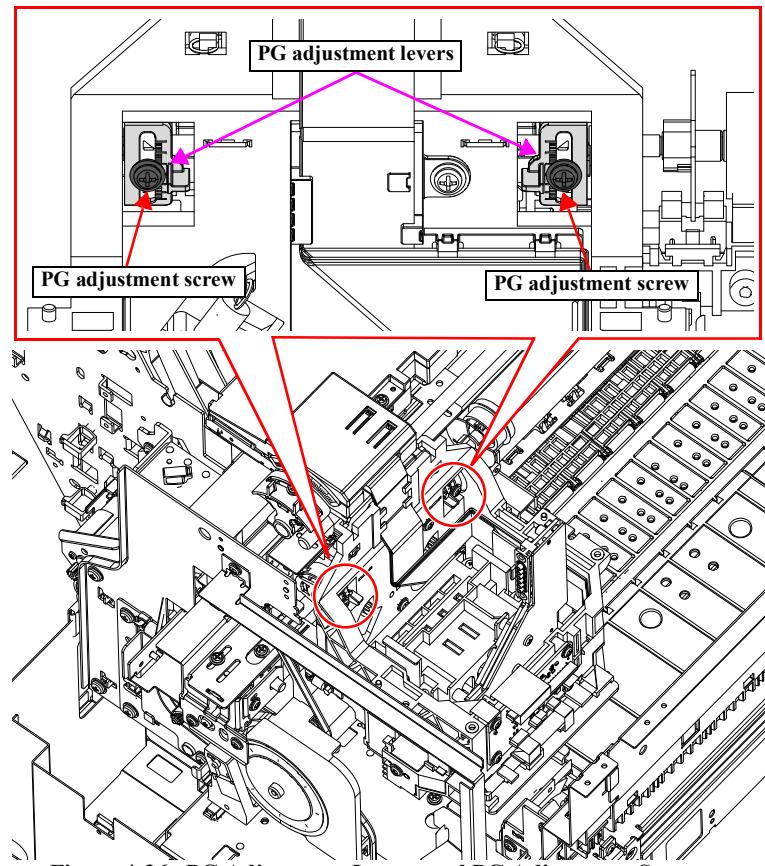


Figure 4-36. PG Adjustment Levers and PG Adjustment Screws

4.7.9 Move the Print Head to Replacement Position

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Start the Service Program and select **Move the Print Head to Replacement Position**.
3. Click the [**Execute**] button to release the CR lock and move the CR UNIT to the head replacement position. The printer will automatically turn off.

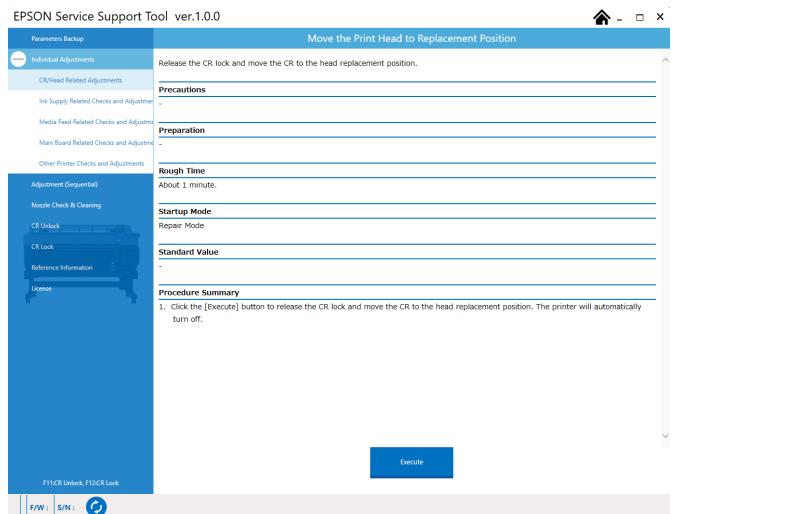


Figure 4-37. [Move the Print Head to Replacement Position] Screen

4.8 Head Related Checks and Adjustments

4.8.1 Tube Decompression

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Select **Menu > Maintenance > Repair Menu > Tube Decompression** in that order.
Touch **[Start]** button.
3. Attach a new or empty waste ink bottle, and touch **[OK]** button on the panel.
4. Touch **[OK]** button on the panel to start the **Tube Decompression**.
5. When it is completed, touch **[OK]** button on the panel.

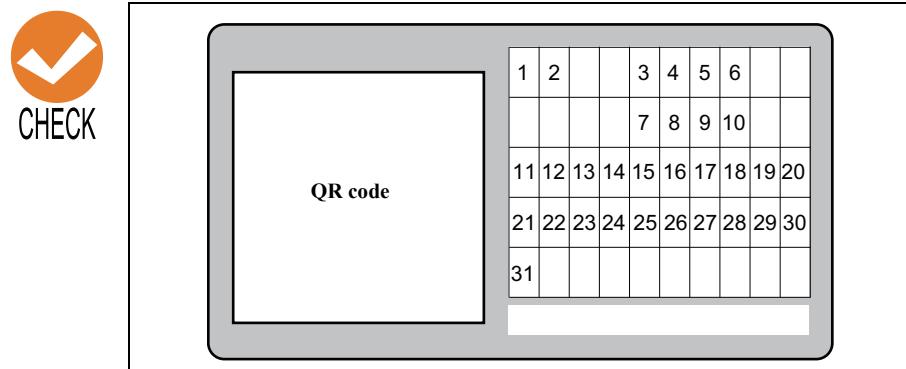
4.8.2 Head ID Input & Check

EXECUTION MODE

Repair mode

PROCEDURE

1. Write down the Head Rank ID (31 digits) that is printed on the ID label on the PRINT HEAD (on a new PRINT HEAD when replaced with a new one.).



2. Assemble the printer.
3. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
4. Start the Service Program and select **Head ID Input & Check**.
5. Click on the **[Input]** button to register the head ID automatically on the printer.
The printer will automatically turn off.
6. Click on the **[Check]** button to check the head ID that was registered.

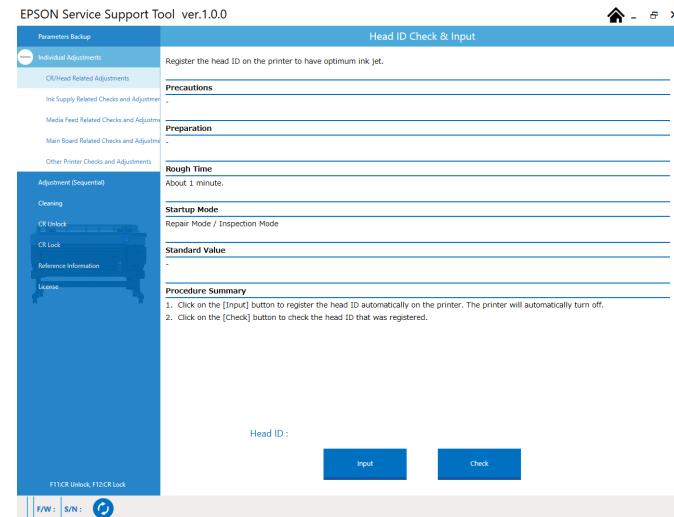


Figure 4-38. [Head ID Input & Check] Screen

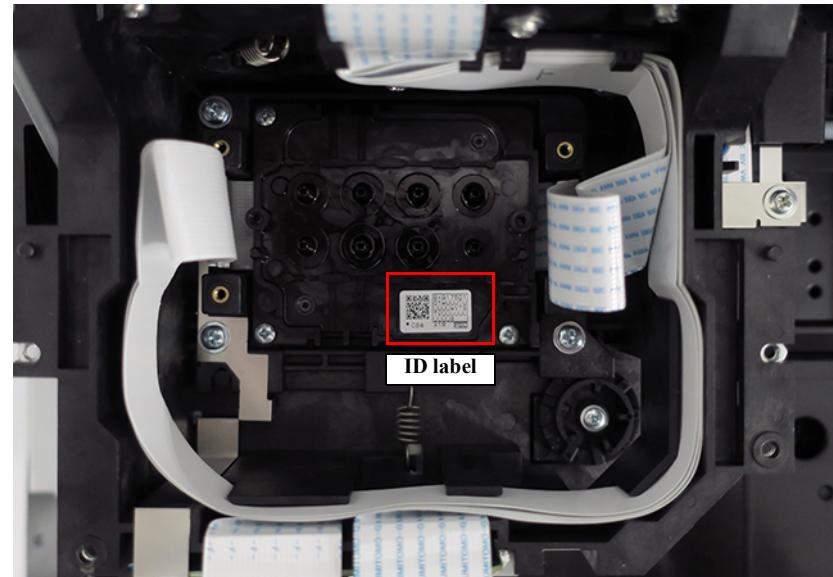


Figure 4-39. Head rank ID

4.8.3 Nozzle Check & Cleaning

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE



After replacing the head, run CL3 three times and CL1 once.

1. Turn the printer ON in the repair mode.

Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)

2. Start the Service Program and select **Nozzle Check & Cleaning**.
3. Click the **[Nozzle Check]** button to print the nozzle check pattern.
 - If no nozzle is clogged: Finish the adjustment.
 - If any nozzle is clogged: Go to [Step 4](#)
4. Select the cleaning level to apply.
5. Click on the **[Execute]** button to perform the head cleaning selected.

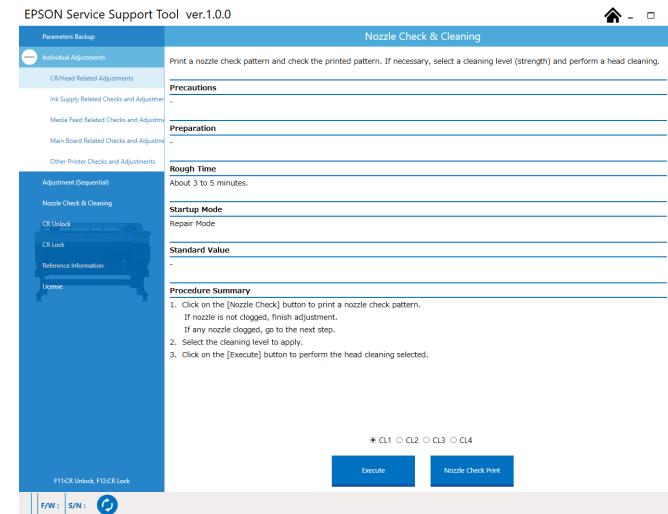


Figure 4-40. [Nozzle Check & Cleaning] Screen

4.8.4 Head Inclination Check & Adjustment (CR direction)

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Load the paper into the printer.
3. Start the Service Program and select **Head Inclination Check & Adjustment (CR direction)**.
4. Click **[Run]**. The adjustment pattern is printed.

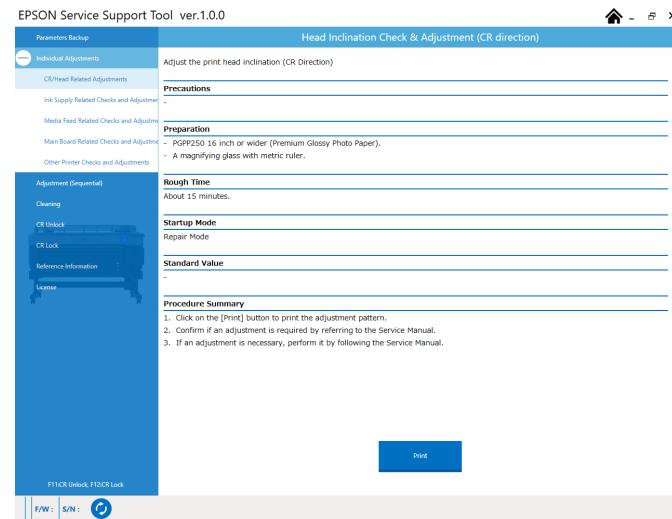


Figure 4-41. [Head Inclination Check & Adjustment (CR direction)] Screen

5. Examine the printed pattern using a loupe.
If adjustment is needed, go to [Step 6](#).

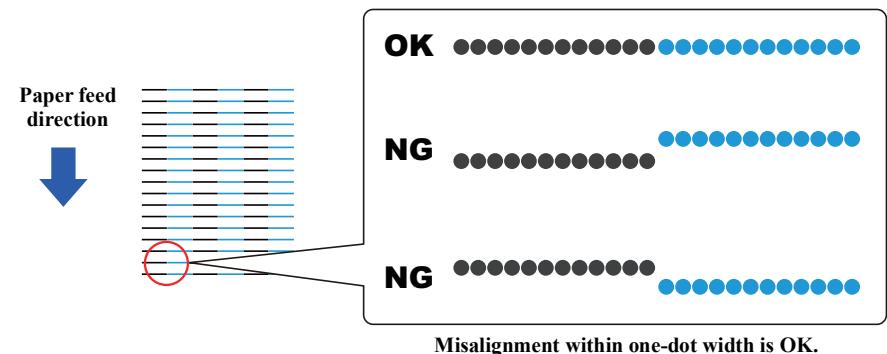


Figure 4-42. Judgment

6. Press the F11 key of the keyboard to unlock the CR unit.
7. Move the CR unit to the left end of the printer.
8. Remove the CR COVER. (P. 214)
9. Loosen the three screws that secure the head holder one turn in order to (3) > (2) > (1).
10. Turn the adjustment knob to correct the head inclination. See [Figure 4-43](#) for which direction to move the knob.



Move the Duct CR to the right and to the left a few times before and after rotating the Adjustment Knob. Since the Print Head may be stuck on the CR Unit with ink, the Print Head may not move even the Adjustment Knob is rotated unless the Duct CR is moved beforehand.

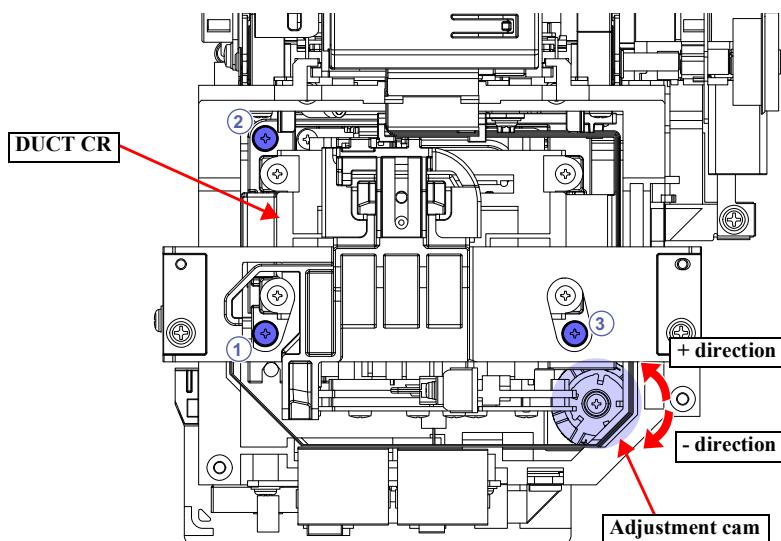


Figure 4-43. Correcting the Head Inclination

11. Tighten the three screws that secure the head holder in order to (1) > (2) > (3).

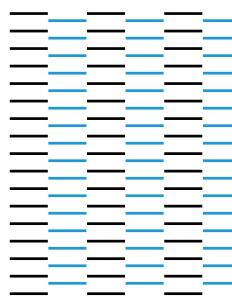
12. Attach the CR COVER.
13. Print the pattern and see if the inclination is corrected. If not, repeat the procedure until the pattern becomes normal.



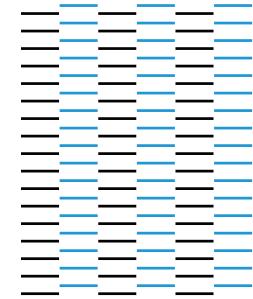
CHECK

■ **For which direction to turn the knob, see below.**

Paper feed direction
↓

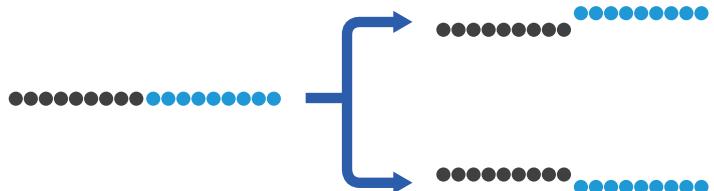


When BK lines lie
above C lines,
turn clockwise



When BK lines lie
below C lines,
turn counterclockwise

- The lines move about one-dot width when the knob is moved by seven or eight notches.



4.8.5 Head Slant Manual Adjustment (PF direction)

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Load the paper into the printer.
3. Start the Service Program and select **Head Slant Manual Adjustment (PF direction)**.
4. Click **[Run]**. The adjustment pattern is printed.

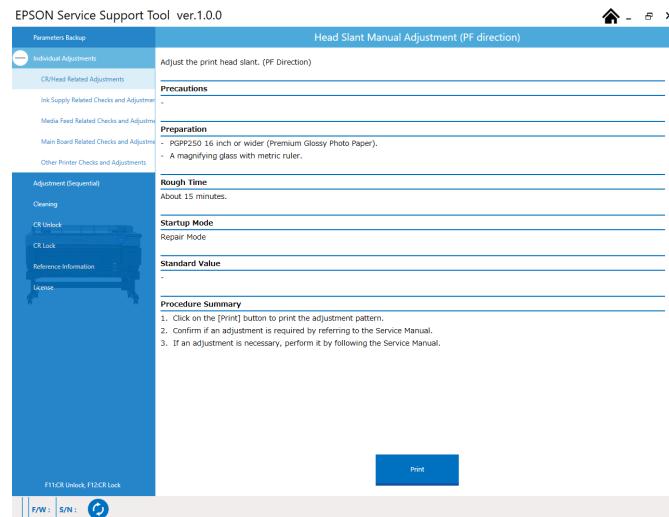


Figure 4-44. Head Slant Manual Adjustment (PF direction) Screen

5. Examine the printed pattern using a loupe.
See if the gaps between the blocks are parallel.
If adjustment is needed, go to [Step 6](#).

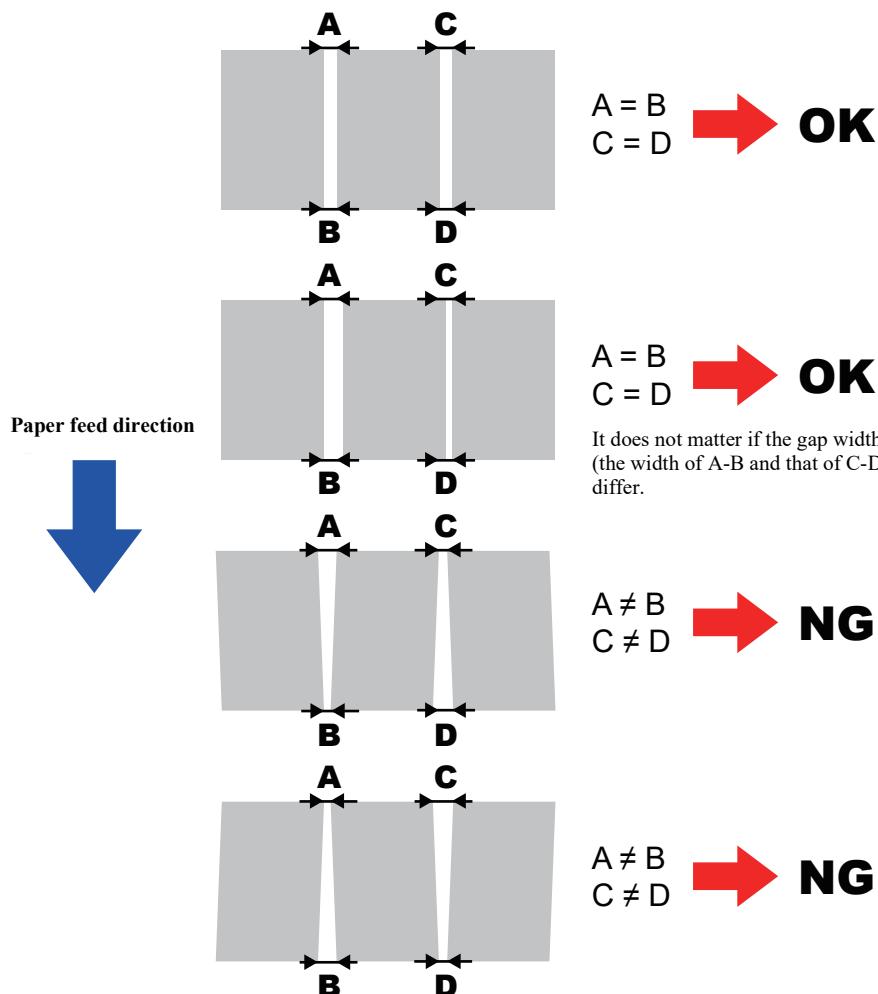


Figure 4-45. Judgment

6. Press the F11 key of the keyboard to unlock the CR UNIT.
7. Move the CR UNIT to the left end of the printer.
8. Loosen the screw (Bit No. 1) that secures the adjustment knob.



Be careful not to completely remove the screw that secures the adjustment knob.

9. Move the adjustment knob to correct the head slant. See [Figure 4-46](#) for which direction to move the knob.

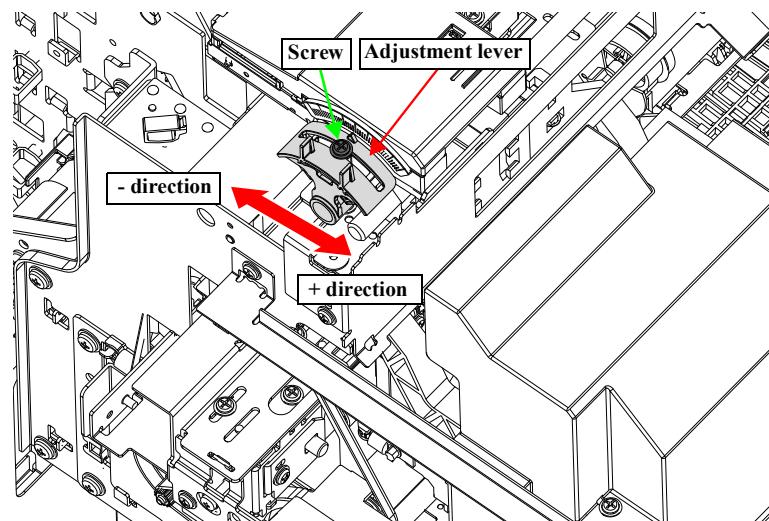


Figure 4-46. Correcting the Head Slant

10. Tighten the screw to secure the adjustment knob.
11. Print the pattern and see if the slant is corrected. If not, repeat the procedure until normal pattern is printed.

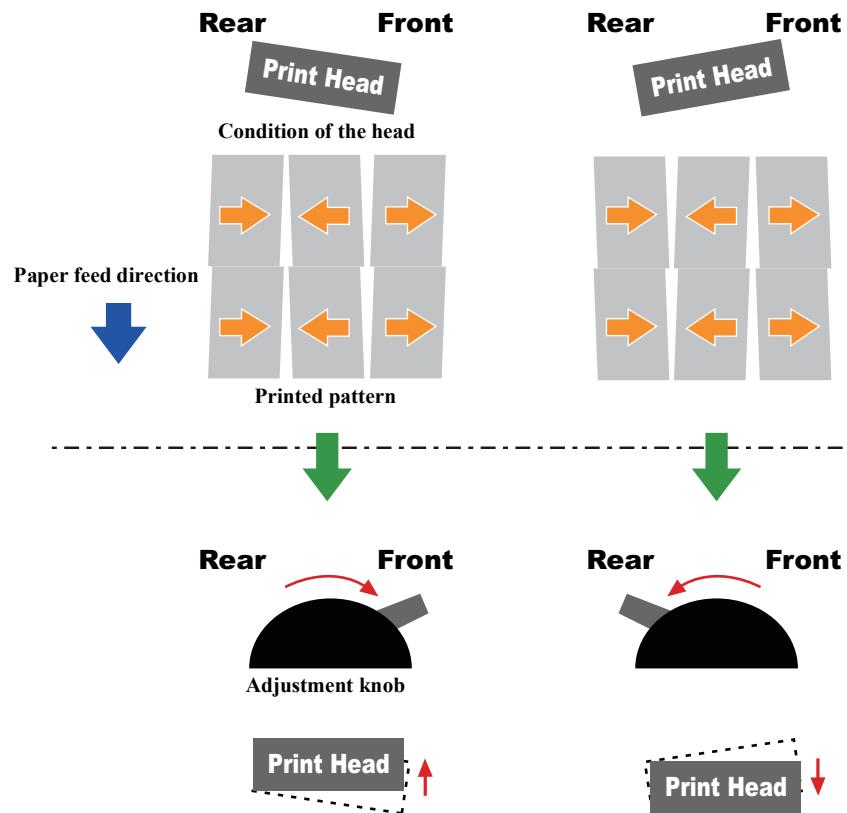


Figure 4-47. Adjustment

4.8.6 Nozzle Verification Technology: Noise Check

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **Nozzle Verification Technology: Noise Check**.
3. Click on the [**Execute**] button to perform a nozzle verification. The inspection is performed automatically.
4. When the check is finished and Success appears, click the [**OK**] button.
If Fail appears, confirm the head FFC is connected properly (no mal-connection or slant connection, etc.).
If not improved yet, replace the head FFC (P. 220) or Print Head (P. 219) with a new one.

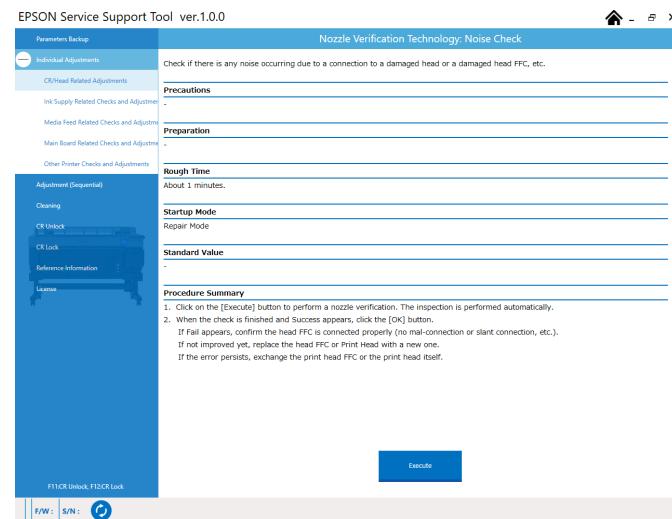


Figure 4-48. [Nozzle Verification Technology: Noise Check] Screen

4.8.7 Nozzle Verification Technology: Rank Classification

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **Nozzle Verification Technology: Rank Classification**.
3. Click the **[Print]** button to print the alignment check pattern. (If you already check the nozzle status is healthy at pre-adjustment, you can skip to print the head alignment check pattern.)
4. Click on the **[Execute]** button to perform a rank sorting. The sorting is performed automatically.

In case of error, reconfirm the nozzles condition, if necessary do a head cleaning and perform the sorting again.
5. If the adjustment fails no matter how many times, the Print Head failure occurs. Therefore, replace the Print Head with a new one. (P. 219)

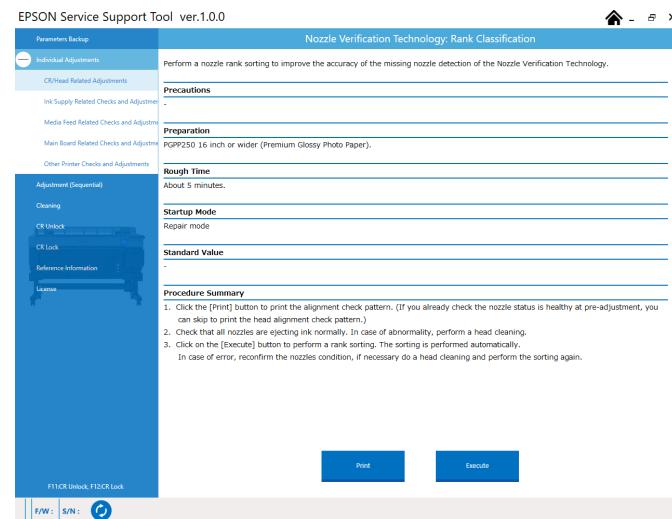


Figure 4-49. [Nozzle Verification Technology: Rank Classification] Screen

4.8.8 Nozzle Verification Technology: Function Check

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Start the Service Program and select **Nozzle Verification Technology: Function Check**.
3. Click the [**Print**] button to print the alignment check pattern. (If you already check the nozzle status is healthy at pre-adjustment, you can skip to print the head alignment check pattern.)
4. Click the [**Execute**] button to confirm the missing nozzle detection result of the nozzle verification technology.

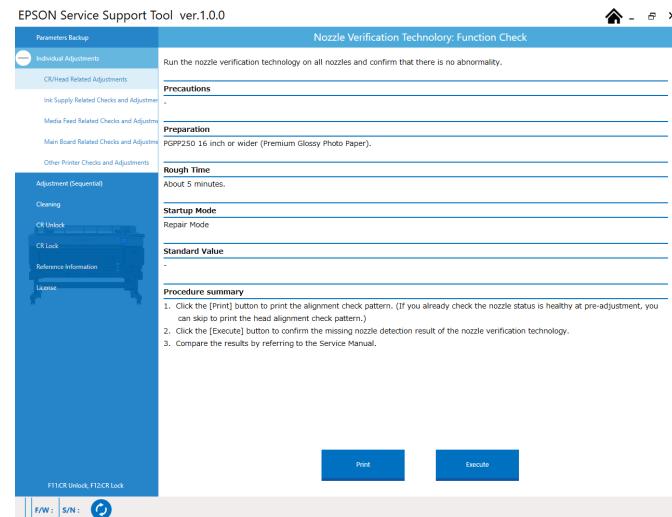


Figure 4-50. [Nozzle Verification Technology: Function Check] Screen



- Number displayed on the screen is nozzle number, not number of the missing nozzles. Count the displayed nozzle number to calculate the number of missing nozzles.
- Correspondence between the nozzle row and color are as follows.

Nozzle row	Ink color	
	SC-F6400 Series	SC-F6400H Series
A	Cy	Lc/Fp/Vi
B	Ye	Lm/Fy/Or
C	Ma	Cy
D	HDK	Ye
E	HDK	Ma
F	Ma	HDK
G	Ye	---
H	Cy	---

5. Correspond according to the displayed result.

- **Success** is displayed.

Check there is no missing nozzle in the printed alignment check pattern.

-> No missing nozzle: Finish the check.

-> Any missing nozzle: Go to [Step 6](#)

- **[Nozzle missing detection]** is displayed.

Go to [Step 6](#)

6. Perform Cleaning, and perform this check again after nozzle missing is improved.

7. If not improved, perform Nozzle Verification Technology: Noise Check ([P. 365](#))

and Nozzle Verification Technology: Rank Classification ([P. 366](#)) in this order,

and perform this check again. Even if not improved, replace the Print Head ([P.](#)

[219](#)).

4.8.9 Ink/Cleaning Liquid Draining

THINGS TO PREPARE

Tray Attachment (4 pcs to 6 pcs)

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Select **Menu > Maintenance > Repair Menu > Ink/Cleaning Liquid Draining** in that order.
Touch [**Start**] button.
3. Attach a new or empty waste ink bottle, and touch [**OK**] button on the panel.
4. Follow the instructions on the panel to remove the Ink Pack and install the Tray Attachment.
When the operation has been completed, touch [**OK**] button on the panel.
5. Touch [**OK**] button on the panel to start the **Ink/Cleaning Liquid Draining**.
6. When it is completed, touch [**OK**] button on the panel.

4.8.10 Tube Washing

THINGS TO PREPARE

Cleaning Ink Pack (4 pcs to 6 pcs)

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Select **Menu > Maintenance > Repair Menu > Tube Washing** in that order.
Touch [**Start**] button.
3. Attach a new or empty waste ink bottle, and touch [**OK**] button on the panel.
4. Follow the instructions on the panel to remove the Ink Pack and install the Cleaning Ink Pack.
When the operation has been completed, touch [**OK**] button on the panel.
5. Touch [**OK**] button on the panel to start the **Tube Washing**.
6. When it is completed, touch [**OK**] button on the panel.

4.8.11 Ink Charging

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Select **Menu > Maintenance > Repair Menu > Ink Charging** in that order.
Touch [**Start**] button.
3. Attach a new or empty waste ink bottle, and touch [**OK**] button on the panel.
4. Follow the instructions on the panel to install the Ink Pack.
When the operation has been completed, touch [**OK**] button on the panel.
5. Touch [**OK**] button on the panel to start the **Ink Charging**.
6. When it is completed, touch [**OK**] button on the panel.

4.9 Ink Supply Related Checks and Adjustments

4.9.1 Pump Cap Unit Measurement & Auto Adjustment

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed. [\(P. 27\)](#)
2. Start the Service Program and select **Pump Cap Unit Measurement & Auto Adjustment**.
3. When any paper is loaded, remove it.
4. Click the **[Execute]** button to apply a correction automatically.
5. In case of error, perform the operation one more time. If the error persists, exchange the Maintenance Unit [\(P. 236\)](#).

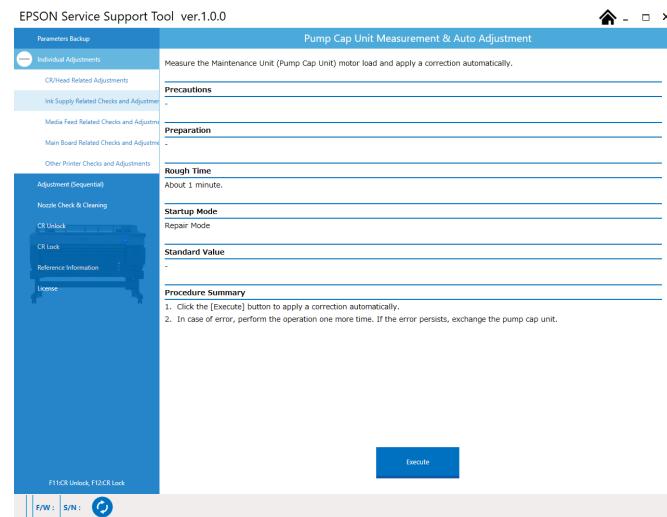


Figure 4-51. [Pump Cap Unit Measurement & Auto Adjustment] Screen

4.9.2 Initial Ink Charge Flag ON/OFF

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Start the Service Program and select **Initial Ink Charge Flag ON/OFF**.
3. Click on the [**Check**] button to confirm the current flag status.
4. Click on the [**Execute**] button to change the flag.
5. Turn off the printer.

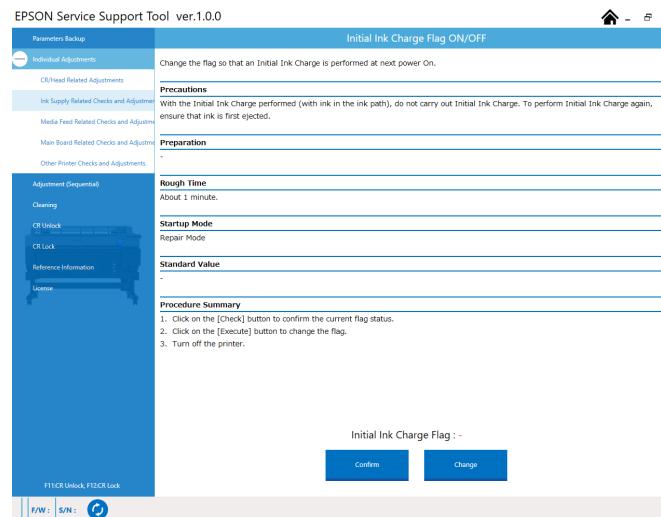


Figure 4-52. [Initial Ink Charge Flag ON/OFF] Screen

4.9.3 Ink Leak Detection Error Reset

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Start the Service Program and select **Ink Leak Detection Error Reset**.
3. Click on the **[Execute]** button to reset the flag.
4. Restart the printer and confirm that the service call is cleared.

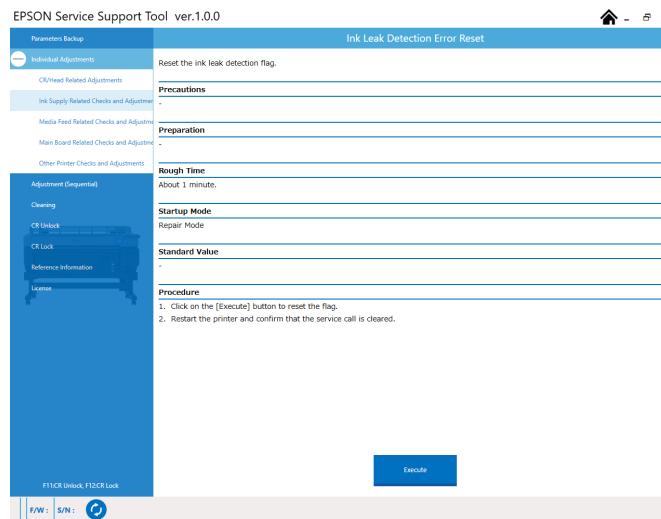


Figure 4-53. [Ink Leak Detection Error Reset] Screen

4.9.4 Input Offset Value

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **Input Offset Value**.
3. Access the Printer Information Access System for get “Offset Value”. (<https://support2.epson.net/scp120kos/>)
4. Enter the serial number of printer and the pass code (7777).
5. Download the offset values by clicking **[Save]**, or write down the displayed values.
6. Click the **[Factory Data]** and select the file downloaded offset value, or write the value from your notes into the service program.
7. Click the **[Execute]** to register the offset value.

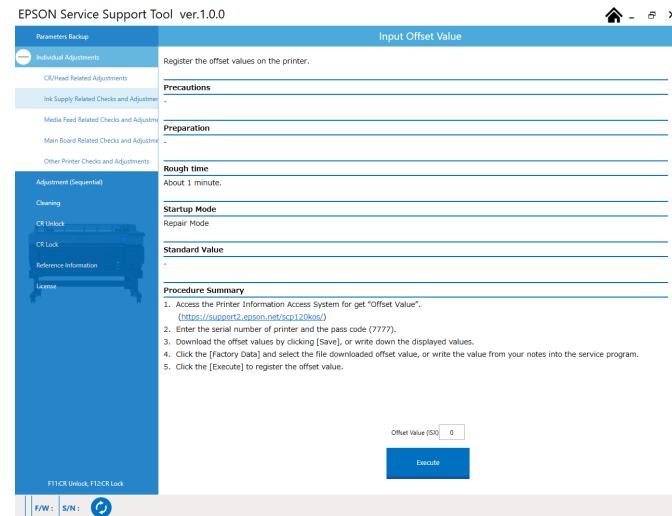


Figure 4-54. [Input Offset Value] Screen

4.10 Media Feed Related Checks and Adjustments

4.10.1 PF Belt Tension Check

REQUIRED TOOLS

- Sonic tension meter U-507
- Any tools to flip the timing belt

STANDARD VALUE

- $10 \pm 3.5 \text{ N}$

EXECUTION MODE

Repair mode

PROCEDURE

1. Remove the following parts in advance.
 - LEFT UPPER COVER (P. 177)
 - LEFT LOWER COVER (P. 175)
2. Loosen the two screws that secure the PF motor mounting plate.
3. Move the mounting plate back and forth three times to soften the PF TIMING BELT.
4. Tighten the two screws to secure the mounting plate.

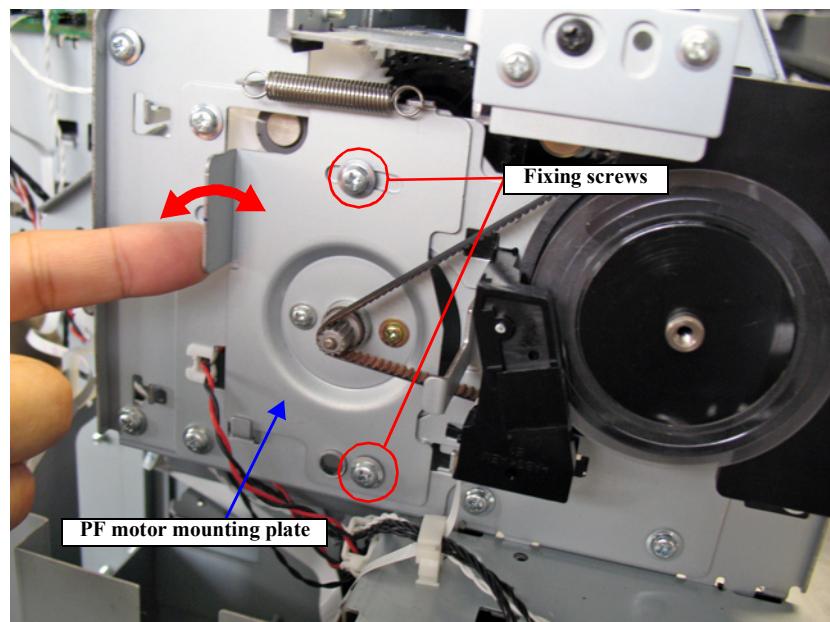


Figure 4-55. Softening the PF TIMING BELT

5. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
6. Start the Service Program and select **PF Belt Tension Check**.
7. Click [**Run**].
The PF roller rotates 30 revolutions.

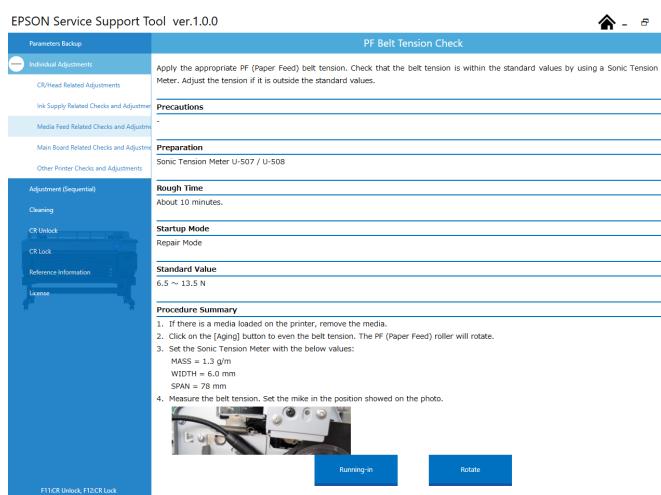


Figure 4-56. [PF Belt Tension Check] Screen

8. Input the following information on the belt into the tension meter.
 - MASS: 1.3 g/m
 - WIDTH: 6.0 mm/R
 - SPAN: 78 mm

9. Bring the microphone of the tension meter close to the belt as shown in [Figure 4-57](#).



The distance between the microphone and the belt surface should be 5 mm or less, but do not let it touch the belt.

10. Click [**MEASURE**] on the tension meter, and flip the timing belt with tweezers or a similar tool.



- **Flip the timing belt as weak as the tension meter can measure it.**
- **Be careful not to let the microphone touch the timing belt when flipping the belt.**

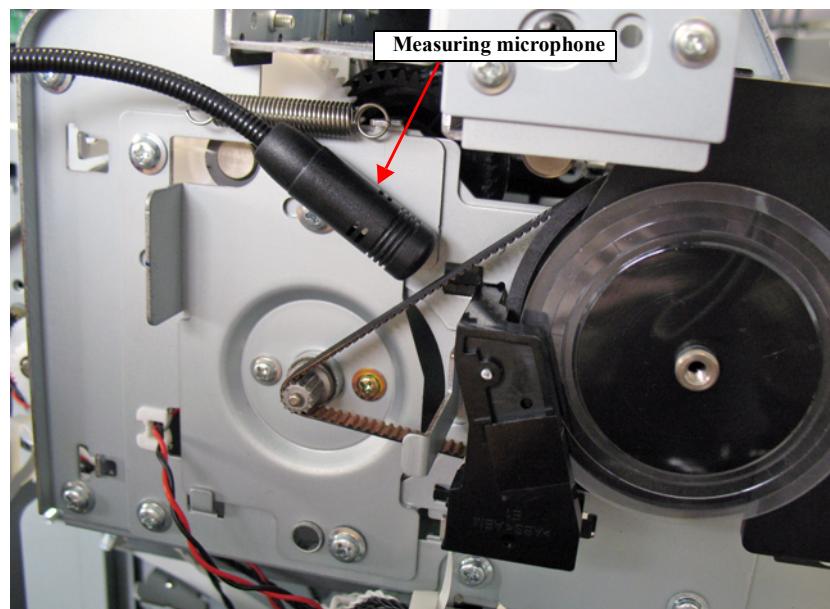


Figure 4-57. PF Belt Tension Check

11. Measure the belt tension three times, and check if the average is within the standards.

- Within the standards: Finish the adjustment
- Out of the standards: Go to [Step 2](#)

4.10.2 PC Scale Check

EXECUTION MODE

Repair mode

PROCEDURE

1. Remove the following part in advance.
 - LEFT UPPER COVER (P. 177)
 - LEFT LOWER COVER (P. 175)
2. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
3. Start the Service Program and select **PF Scale Check**.
4. Click [**Execute**] to rotate the PF SCALE.
Look at the PF ENCODER and the PF SCALE from straight above, and visually check that the scale is not in contact with the encoder.

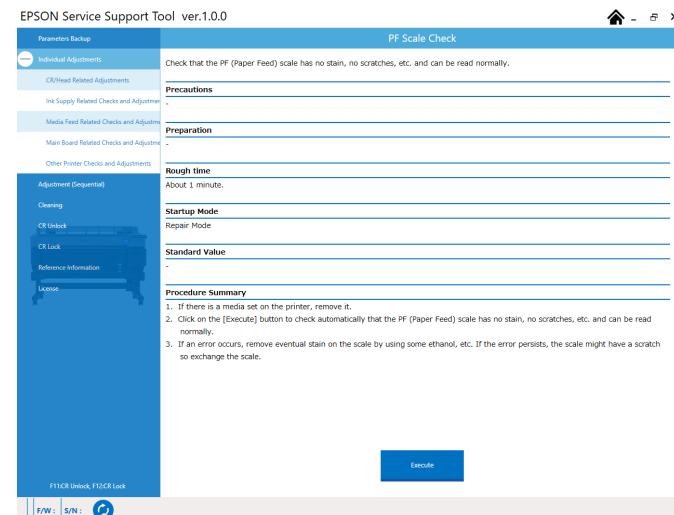


Figure 4-58. [PF Scale Check] Screen

5. After the PF SCALE has rotated 30 revolutions, the check result is displayed.
 - The result is OK: Finish the adjustment
 - The result is NG: Go to [Step 6](#)
6. Since the PF SCALE may be dirty, clean it with ethanol. After cleaning the PF SCALE, perform [Step 4](#) to run the check again. If the result is still NG, replace the PF ENCODER ([P. 273](#)) or the PF SCALE ([P. 272](#)) and check again.

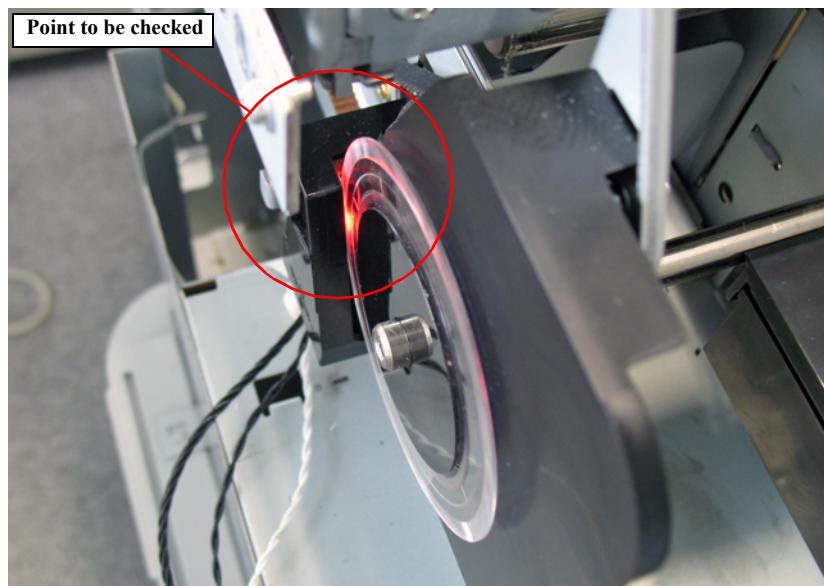


Figure 4-59. PC Scale Check

4.10.3 Manual Paper Feed Adjustment

PAPER USED

PGPP250 24 inch (Premium Glossy Photo Paper)

EXECUTION MODE

Repair mode

PROCEDURE

- Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
- Start the Service Program and select **Manual Paper Feed Adjustment**.
- Click **[Print]**. The adjustment pattern is printed.
- Enter the value of the pattern with the least banding from block A / B of the PF adjustment pattern, and then click **[Input]**.

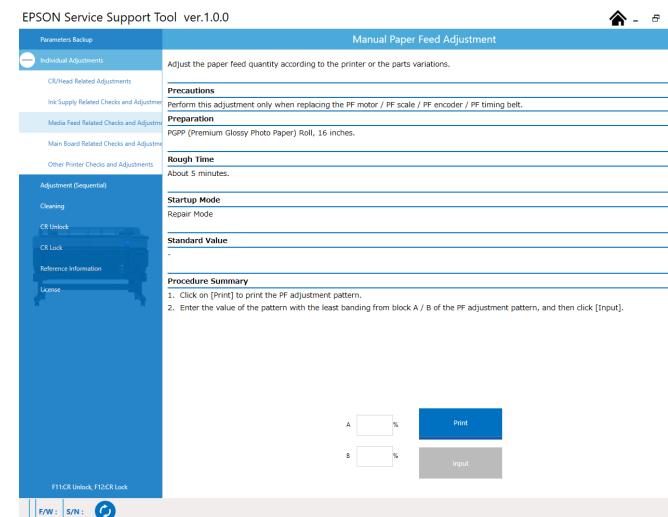
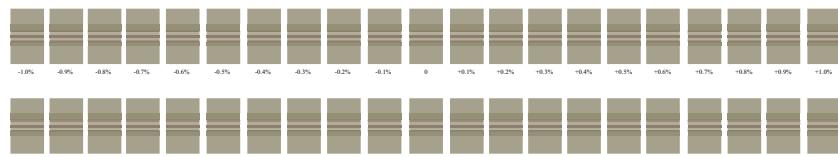


Figure 4-60. [Manual Paper Feed Adjustment] Screen

SC-F6400 Series



SC-F6400H Series

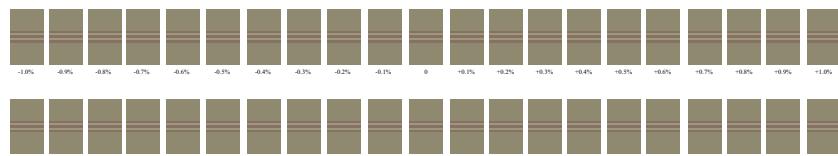


Figure 4-61. Adjustment pattern

4.10.4 PF Motor Measurement & Auto Adjustment

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **PF Motor Measurement & Auto Adjustment**.
3. If there is some media set on the printer, remove it.
4. Click the [**Execute**] button to apply a correction automatically.
5. In case of error, perform the operation one more time. If the error persists, replace the PF (Paper Feed) motor (P. 270).

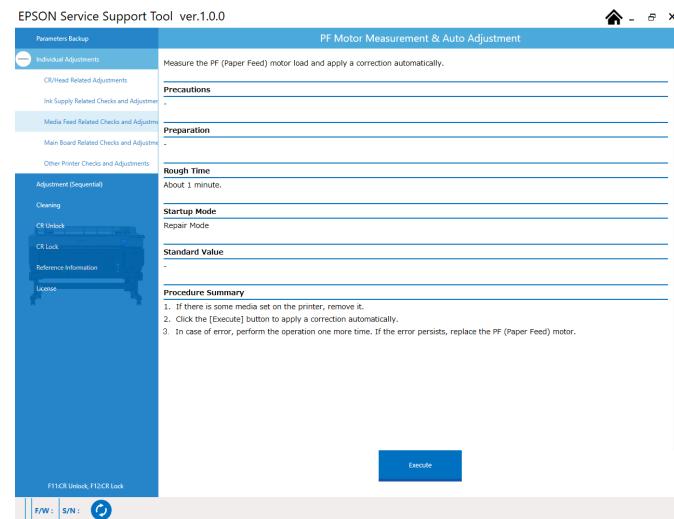


Figure 4-62. [PF Motor Measurement & Auto Adjustment]画面

4.10.5 ATC Motor Measurement & Auto Adjustment

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **ATC Motor Measurement & Auto Adjustment**.
3. If there is some media set on the printer, remove it.
4. Click the [**Execute**] button and perform measurement with roll paper set.
5. In case of error, perform the operation one more time. If the error persists, try again using new roll paper. Even if not improved, replace the ATC motor (P. 281).

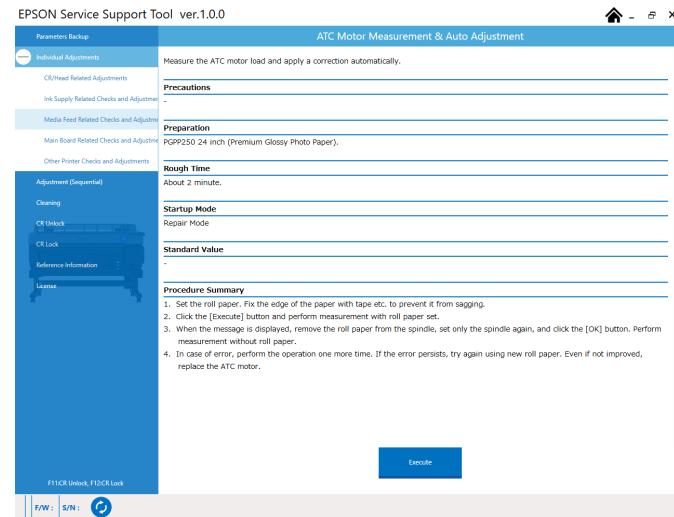


Figure 4-63. [ATC Motor Measurement & Auto Adjustment] Screen

4.10.6 Cut Position Check & Adjustment

REQUIRED TOOLS

- Calibrated Loupe

PAPER USED

PGPP250 44 inch (Premium Glossy Photo Paper)

STANDARD VALUE

- 15 ± 0.3 mm

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **Cut position check and adjustment**.
3. Click **[Print]**.
The adjustment pattern will be printed.
4. Measure the distances of three points, Home, Center, and Full shown in [Figure 4-65](#).
5. Check if the average of the maximum value and the minimum value is within the standards.
 - Within the standards: Finish the adjustment
 - Out of the standards: Go to [Step 6](#)
6. Input the maximum value and the minimum value from the values measured in [Step 4](#).

7. Click **[Write]** and return to [Step 3](#).

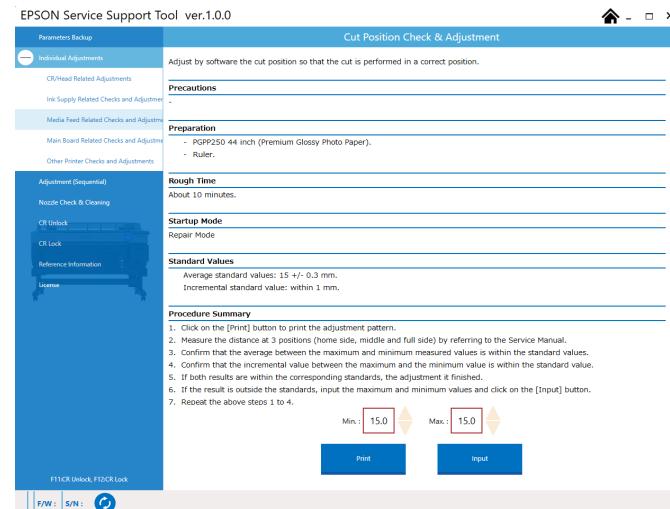


Figure 4-64. [Cut position check and adjustment] Screen

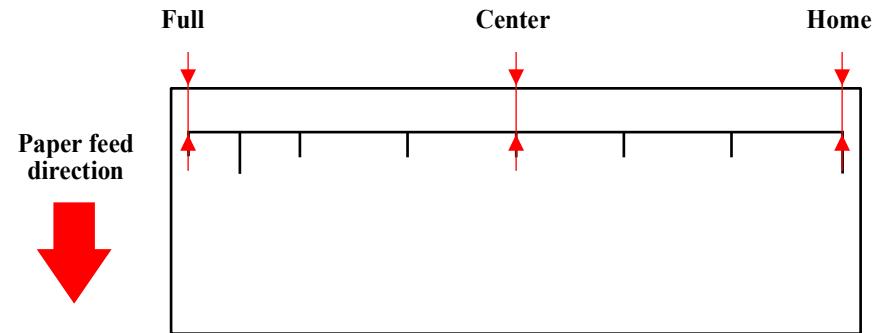


Figure 4-65. Adjustment Pattern

4.10.7 Top&Side Check & Adjustment

PAPER USED

PGPP250 16 inch or wider (Premium Glossy Photo Paper)

STANDARD VALUE

- Top margin: 5 ± 0.4 mm
- Side margin: 5 ± 0.4 mm

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Start the Service Program and select **Top&Side Check & Adjustment**.
3. Click **[Print]**. The adjustment pattern will be printed.
4. Measure the gap between the edge of the adjustment pattern and the line, select the line closest to standard value from the edge of the adjustment pattern and input its number.
5. After inputting all the values, click the **[Enter]** button.

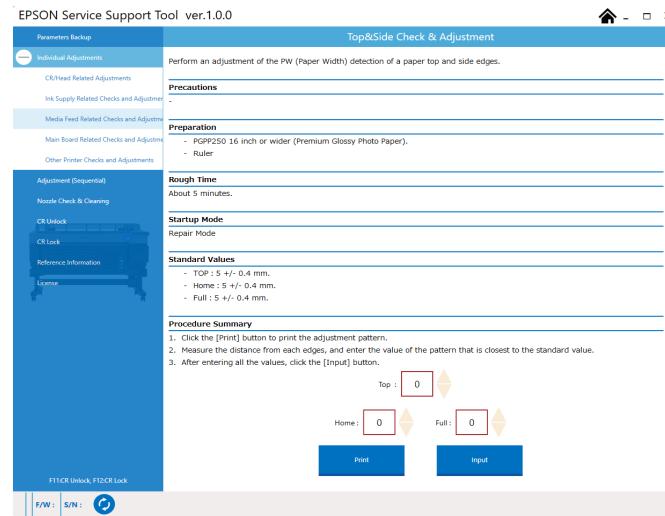


Figure 4-66. [Top&Side Check & Adjustment] Screen

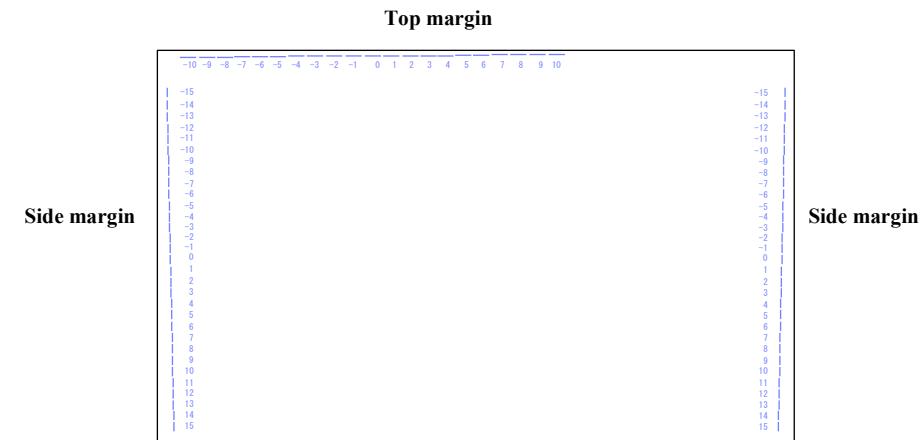


Figure 4-67. Adjustment Pattern

4.10.8 Rear AD Adjustment

REQUIRED TOOLS

Standard Sheet (JETRAS JP-D300S)

EXECUTION MODE

Inspection mode

PROCEDURE

1. Turn the printer ON in the inspection mode.
Turn the power ON while pressing **[left upper side of the screen]** and power button, keep pressing until the mode select menu is displayed. (P. 26)
2. Select **Inspection Menu > Rear AD**.
3. Check the **Rear AD OK?** is displayed on the Panel, then press the **[center of the screen]** of the Touch Panel.
4. Check the **Jig Paper Set OK?** is displayed on the panel, and load the standard sheet from the paper path, then press the **[center of the screen]** of the Touch Panel.



Set the standard sheet with its matte surface up.



When the following procedure is conducted, make sure not to remove the exterior parts to acquire correct AD values.

5. Check that the triple-digit displayed on the control panel and take memo of it.
6. Check the **JIG Paper Remove** is displayed on the Panel, press the **[center of the screen]** of the Touch Panel.

7. Check the **Jig Paper Reset OK?** is displayed on the Panel, and remove the standard sheet, then press the **[center of the screen]** of the Touch Panel.
8. Confirm that **OK** is displayed on the panel.
If **Retry Rear AD Adjust** is displayed, check the standard sheet for any abnormality (damage, dirt, wrinkle) and perform the adjustment again.



When the **Retry AD Adjust is displayed again, the PE SENSOR is broken. Replace the PE SENSOR with a new one and carry out the adjustment again.**

9. Press the **[left of the screen]** to return the top menu.
10. Turn the printer OFF.

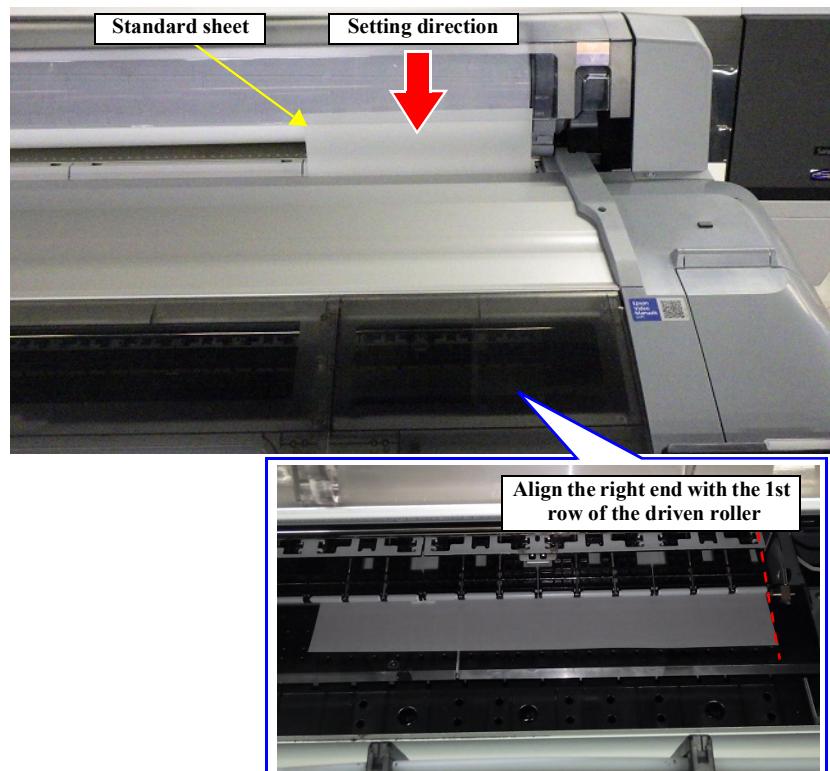


Figure 4-68. Setting Position of the Standard Sheet

4.10.9 Cutter Motor Measurement & Auto Adjustment

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)
2. Start the Service Program and select **Cutter Motor Measurement & Auto Adjustment**.
3. When any paper is loaded, remove it.
4. Click the [**Execute**] button to apply a correction automatically.
5. In case of error, perform the operation one more time. If the error persists, replace the Cutter motor (P. 288).

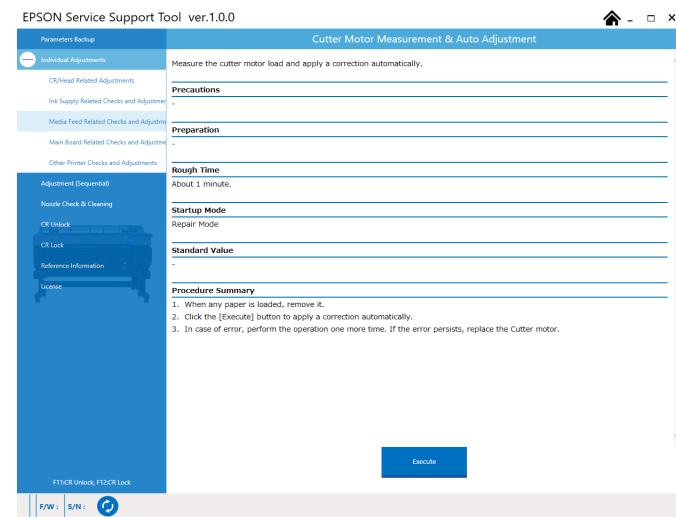


Figure 4-69. [Cutter Motor Measurement & Auto Adjustment] Screen

4.11 Boards Related Checks and Adjustments

4.11.1 NVRAM Backup & Restore

EXECUTION MODE

Repair mode / Inspection mode

PROCEDURE

1. Turn the printer ON in the repair mode or the inspection mode.

- Repair mode

Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)

- Inspection mode

Turn the power ON while pressing [**left upper side of the screen**] and power button, keep pressing until the mode select menu is displayed. (P. 26)

2. Start the Service Program and select **NVRAM Backup & Restore**.
3. Click on the [**Read**] button to read the NVRAM data.
4. Click on the [**File Reference**] button to choose the NVRAM data.
5. Click on the [**Write**] button to write the NVRAM data.

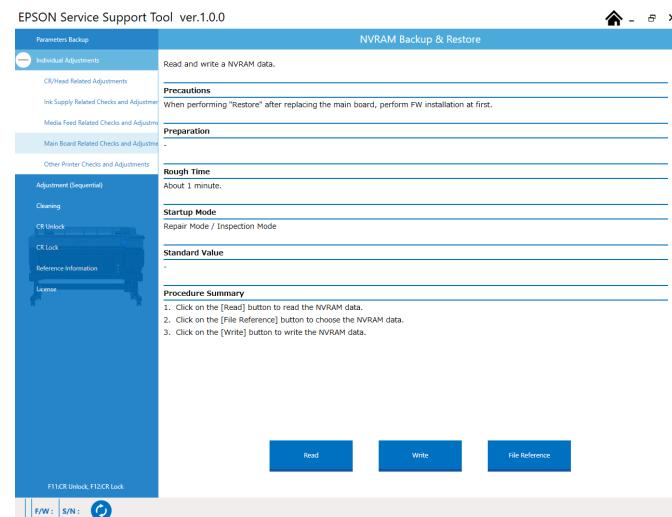


Figure 4-70. [NVRAM Backup & Restore] Screen

4.11.2 RTC Input

EXECUTION MODE

Repair mode / Inspection mode

PROCEDURE

1. Turn the printer ON in the repair mode or the inspection mode.

- Repair mode

Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)

- Inspection mode

Turn the power ON while pressing [**left upper side of the screen**] and power button, keep pressing until the mode select menu is displayed. (P. 26)

2. Start the Service Program and select **RTC Input**.

3. Click on the [**Update**] button to display the PC time on the screen.

4. Click on the [**Input**] button to set the time displayed.

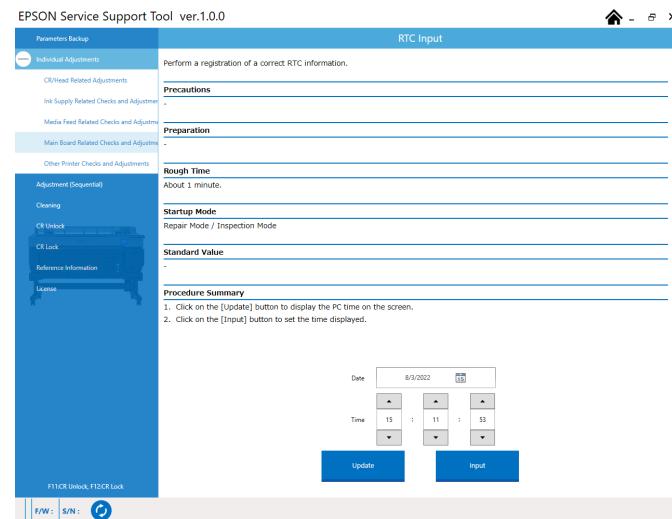


Figure 4-71. [RTC Input] Screen

4.11.3 MAC Address Check & Input

EXECUTION MODE

Inspection mode

PROCEDURE

1. Turn the printer ON in the inspection mode.
Turn the power ON while pressing [left upper side of the screen] and power button, keep pressing until the mode select menu is displayed. (P. 26)
2. Start the Service Program and select **MAC Address Check & Input**.

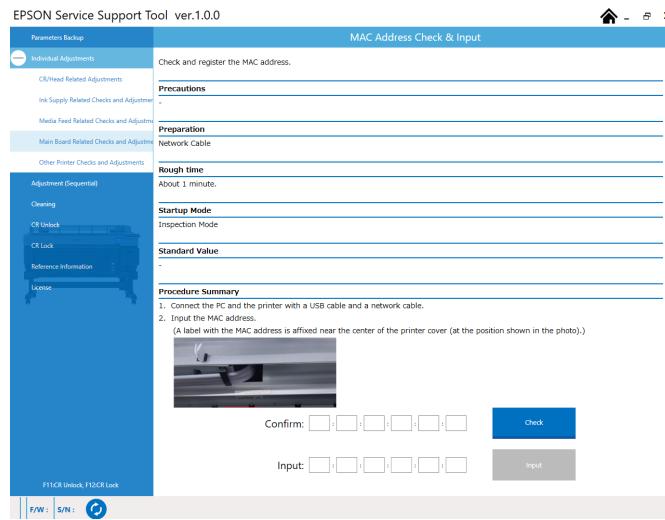


Figure 4-72. [MAC Address Check & Input] Screen

3. Enter the MAC address indicated on the MAC address label, and click [Write].



Click [Read] once. After waiting two and half minutes until the network firmware is restarted, follow the procedure below.



Figure 4-73. MAC Address Label

4. Click [Check], and check that the address you entered and that displayed on the screen are the same.

4.11.4 Serial Number Read & Write

EXECUTION MODE

Repair mode / Inspection mode

PROCEDURE

- Turn the printer ON in the repair mode or the inspection mode.

- Repair mode

Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed. (P. 27)

- Inspection mode

Turn the power ON while pressing [**left upper side of the screen**] and power button, keep pressing until the mode select menu is displayed. (P. 26)

- Start the Service Program and select **Serial Number Read & Write**.

- Enter a 10-digit serial number of the printer, and click [**Write**].

The serial number is written to the NVRAM on the MAIN BOARD.

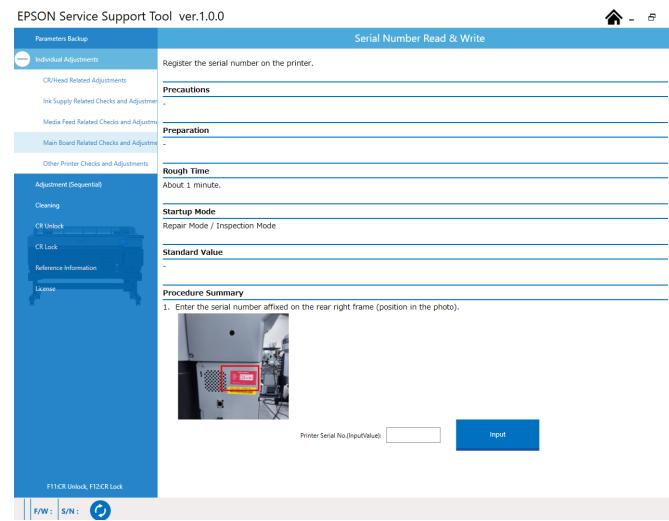


Figure 4-74. [Serial Number Read & Write] Screen

4.11.5 Main Board Initial Setting

EXECUTION MODE

Inspection mode

PROCEDURE

1. Turn the printer ON in the inspection mode.
Turn the power ON while pressing [**left upper side of the screen**] and power button, keep pressing until the mode select menu is displayed. (P. 26)
2. Start the Service Program and select **Main Board Initial Setting**.
3. Click on the [**Execute**] button.
4. An initialization of the main board is performed.



If the initialization fails, run this function again. If it still fails, replace Main Board to a brand-new main board.

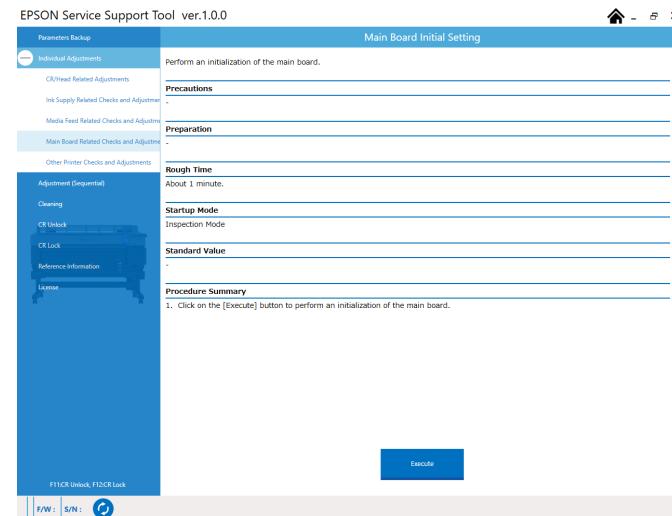


Figure 4-75. [Main Board Initial Setting] Screen

4.12 Other Printer Checks and Adjustments

4.12.1 Platen Fan Suction Check

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Start the Service Program and select **Platen Fan Suction Check**.
3. Click **[Execute]**. When the suction fan operates, check its operation sound and also check if the fan sucks paper placed on the platen.

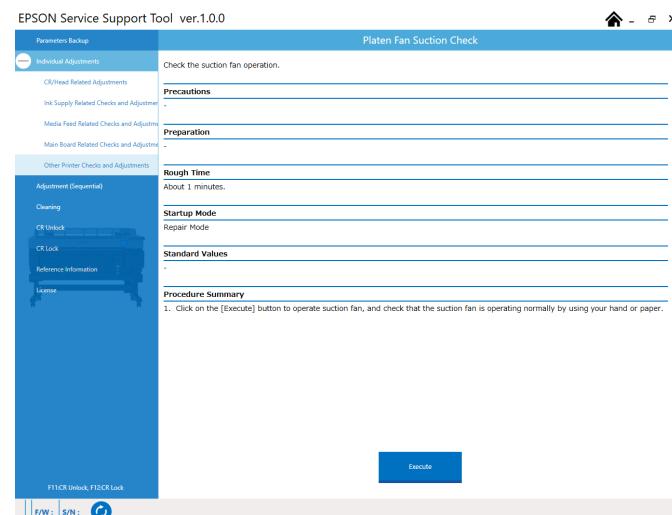


Figure 4-76. [Platen Fan Suction Check] Screen

4.12.2 Reset Job History

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Start the Service Program and select **Reset Job History**.
3. Click [**Execute**] to reset the user job history.

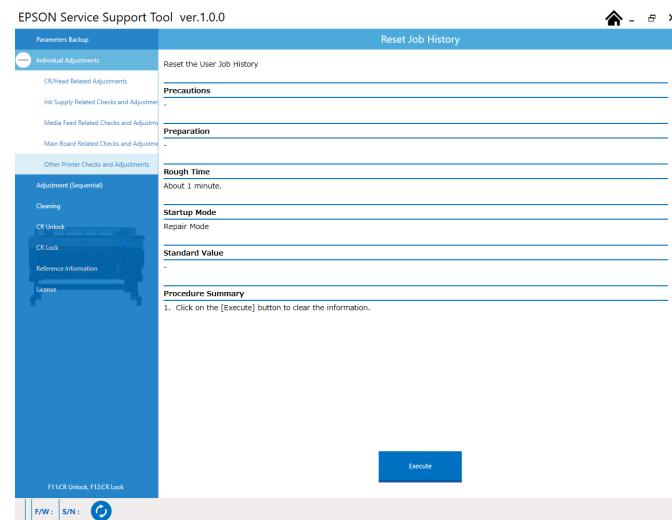


Figure 4-77. [Reset Job History] Screen

4.12.3 Color Mode Setting



Changing the color mode of ink-charged printer is prohibited.



This adjustment is for SC-6400H series only.

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Start the Service Program and select **Color Mode Setting**.
3. Click the **[Execute]** button.
4. Restart the printer manually.

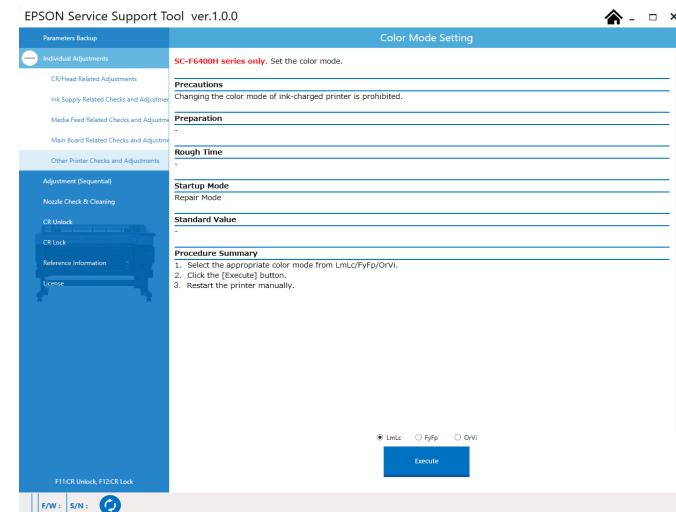


Figure 4-78. [Color Mode Setting] Screen

4.12.4 Sensor Check1

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
(P. 27)
2. Start the Service Program and select **Sensor Check1**.
3. Click the [**Execute**] button to display the status of each sensor.

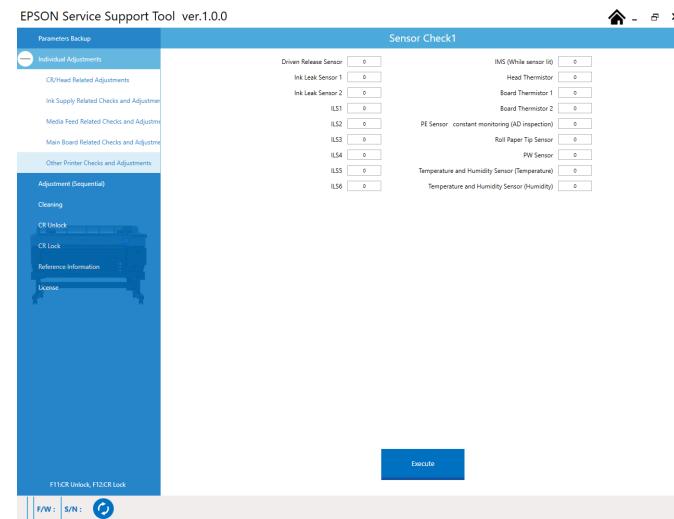


Figure 4-79. [Sensor Check1] Screen

4.12.5 Initial Password Check & Input (EMEA only)



Before this adjustment, check if the password label is attached to the product. (Shown by red frame in below photo)

If it is not attached, skip this adjustment.



EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing **[left upper side of the screen]**, back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Start the Service Program and select **Initial Password Check & Input (EMEA only)**.
3. Check the password label and enter the password written on the label in the input field.
4. Click the **[Input]** button and write the initial password to the printer. (If you get an error, check if the entered value is correct)
5. Click the **[Check]** button and confirm that the initial password value displayed on the screen is the same as the value on the password label attached to the product.

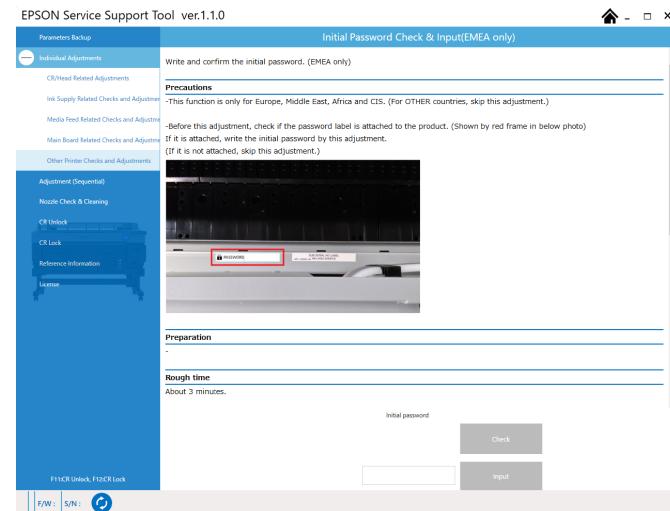


Figure 4-80. [Initial Password Check & Input (EMEA only)] Screen

4.12.6 Print Image

EXECUTION MODE

Normal mode

PROCEDURE

1. Turn the printer ON in the normal mode.
2. Start the Service Program and select **Print Image**.
3. Click the **[File Reference]** button and then select the data (.prn) to print.
4. Click the **[Print]** button to print.

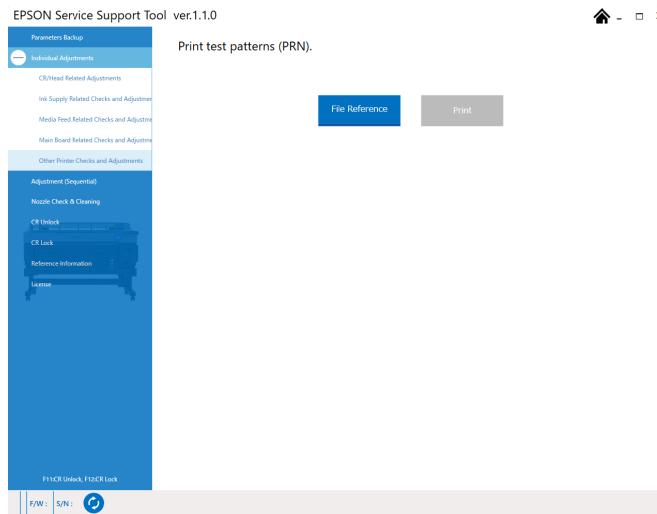


Figure 4-81. [Print Image] Screen

4.12.7 Counter Reset

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Select **Menu > Maintenance > Repair Menu > Replacement Part Information** in that order.
3. Select the part for which to perform counter reset. When the confirmation screen appears, touch [**Yes**].
The counter is reset.

4.12.8 Long-term Storage Preparation

THINGS TO PREPARE

Cleaning Ink Pack (4 pcs to 6 pcs)

EXECUTION MODE

Repair mode

PROCEDURE

1. Turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
2. Select **Menu > Maintenance > Repair Menu > Long-term Storage Preparation** in that order.
Touch [**Start**] button.
3. Attach a new or empty waste ink bottle, and touch [**OK**] button on the panel.
4. Follow the instructions on the panel to remove the Ink Pack and install the Cleaning Ink Pack.
When the operation has been completed, touch [**OK**] button on the panel.
5. Touch [**OK**] button on the panel to start the **Long-term Storage Preparation**.
6. When it is completed, attach a new or empty waste ink bottle, and touch the [**OK**] button on the panel.
7. Follow the instructions on the panel to turn off the printer.
8. Before using the printer again, turn the printer ON in the repair mode.
Turn the power ON while pressing [**left upper side of the screen**], back feed button and power button, keep pressing until the mode select menu is displayed.
[\(P. 27\)](#)
9. Touch [**OK**] button on the panel.
10. Make sure that the attach a new or empty waste ink bottle, and touch [**OK**] button on the panel.

11. Remove the Cleaning Ink Pack, and install the Ink Pack and then touch [**OK**] button on the panel.
12. When it is completed, touch [**OK**] button on the panel.

CHAPTER

5

MAINTENANCE

5.1 Overview

This chapter provides information on how to maintain the printer in its optimum operating condition.

Basically, servicing on the printer should be performed on-site. Be sure to strictly observe the following precautions when servicing to avoid an accident or injury causing the user trouble.



WARNING

- The power switch is installed on the secondary side of the power circuit, so power is always supplied to the power supply circuit even when the switch is OFF unless the power cord is unplugged from the wall power outlet. Unless otherwise stated (for printing or operation checks), be sure to unplug the power cord from the wall outlet before disassembling or assembling the printer to prevent electric shock and damage to the circuit.
- The Front Sensor provided for detecting open/close status of the Printer Cover also acts as a safety interlock switch. Never disable the switch function to prevent possible injury.
- A lithium battery is mounted on the Main Board (control circuit) for memory backup. Be sure to observe the following precautions when handling the Main Board.
 - Be careful not to short the electrode of the battery.
 - When replacing the battery, make sure to insert it in correct orientation.
 - Never heat the battery or plunge it into the flames.
 - Do not put the Main Board directly on conductive materials.
- Be extremely careful not to get the ink into your eye or let it come into contact with your skin. If it happens, wash out your eye or skin with water immediately. If any abnormality is found, contact a physician.



CAUTION

- Ensure sufficient work space for servicing.
- Locate the printer on a stable and flat surface.
- When using compressed air products; such as air duster, for cleaning during repair and maintenance, the use of such products containing flammable gas is prohibited.
- Be sure to spread a sheet of paper or cloth on the work space before removing any ink-path-related parts or components to keep the space from being soiled with leaked ink.
- Do not touch electrical circuit boards with bare hands as the elements on the board are so sensitive that they can be easily damaged by static electricity. If you have to handle the boards with bare hands, use static electricity discharge equipment such as anti-static wrist straps.
- When the printer has to be operated with the covers removed, take extra care not to get your fingers or clothes caught in moving parts such as the fan unit.
- When the printer needs to be repacked for transportation after being used, make sure to follow the steps below after turning the power OFF.
 - Check that the Printhead is capped properly.
 - Leave the ink cartridges installed in the printer.
 - Repack the printer using the packaging box, cushioning materials and protective equipment indicated in the unpacking guide.

5.2 Storing the Printer

When storing the printer, make sure to leave the ink cartridges installed and place it on a horizontal surface, and also inform the user on the following cautions.

- When not using the printer for a long time
 - Turn on the printer and print at least two weeks to prevent the Print Head from clogging.
 - Remove the media. If the media is left set for a long time, nip impression of the press roller may remain on the media, or the media may ripple.
 - Check that the Print Head is capped properly.
 - Close all the covers.
 - Protect the printer with an anti-static cloth or other cover.
 - If the printer is not used more than two weeks, execute the Long-term Storage Preparation. (P. 400)
- Before using the printer again

Make sure to print a nozzle check pattern and check for clogging of the Print Head. If any clogging can be seen, carry out a head cleaning.



After performing the head cleaning a few times, try turning off the printer and leaving it overnight or longer, so that the ink may dissolve and the clogging might be improved.

- If the Long-Term Storage Preparation was performed before storage, turn on the printer in the repair mode (P. 27), and perform according to the instructions on the panel.

5.3 Moving or Transporting the Printer

5.3.1 Moving the Printer

Move the printer as described below within the same floor without any difference in level or steps.



- When moving the printer, do not tilt it 10 degree or more in any directions. Otherwise, you may be injured by an accidental fall.
- Make sure the ink cartridge is installed when transporting.

1. Check the following items in advance.

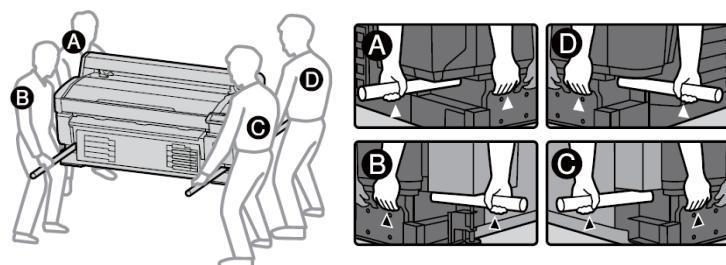
- Turn the power off, and remove all cables.
- Remove all optional devices.
- Unlock the caster.

2. Transport the printer.

5.3.2 Transporting the Printer



- Do not lift or carry the printer with one person. The printer must be packed and moved by four or more people.
- When lifting the printer, work in a posture that does not damage your body, and hold the point shown below. Otherwise, printer may fall or you may get injured by catching your finger in between.



Be sure to perform the following before transporting the printer.

- Turn the power off, and remove all cables.
- Remove paper.
- Remove all optional devices.
- Remove waste ink bottle.
- Pack the printer in the same state as when it was purchased using the original protective materials and packaging.

Refer to the following and prepare the printer to transport/store.

1. Execute the Ink/Cleaning Liquid Draining. [\(P. 369\)](#)
2. Execute the Tube Washing. [\(P. 370\)](#)
3. Execute the Ink/Cleaning Liquid Draining again. [\(P. 369\)](#)

Perform the following procedure after transport.

1. Connect the all cables.
2. Execute the initial ink charge. [\(P. 371\)](#)
3. Execute the nozzle check.
4. Execute the cleaning if necessary.

5.4 Exchange Parts

Exchange parts of this printer are as follows.

Note *1: M/C = Maintenance call

*2: See Chapter 2 “Troubleshooting” for details of maintenance call and service call.

Table 5-1. Exchange Parts

Parts	Life	Exchange Timing (call) *1*2
Print Head	The number of fired ink droplets: 12,000,000,000	<input type="checkbox"/> M/C: None
Duct CR	Buffer counter: 400,000 times	<input type="checkbox"/> M/C (Near end of life): 00000010 <input type="checkbox"/> M/C (End of life): 00100000
Ink Tube	5,000,000 paths	<input type="checkbox"/> M/C (Near end of life): 00200000 <input type="checkbox"/> M/C (End of life): 00000020
Ink Holder Left	Pump counter: 190,000 times	<input type="checkbox"/> M/C (Near end of life): 00000002 <input type="checkbox"/> M/C (End of life): 00020000
Ink Holder Right	Pump counter: 190,000 times	<input type="checkbox"/> M/C (Near end of life): 00000004 <input type="checkbox"/> M/C (End of life): 00040000
CR Motor	5,000,000 paths	<input type="checkbox"/> M/C: None
Maintenance Unit	780,000 times	<input type="checkbox"/> M/C (Near end of life): 00000001 <input type="checkbox"/> M/C (End of life): 00010000
Cutter Unit	The number of cuts: 20,000	<input type="checkbox"/> M/C: None
RTC Battery	---	<input type="checkbox"/> M/C (Date/time not set): 00004000 <input type="checkbox"/> M/C (Out of battery): 00008000

5.5 Cleaning

5.5.1 Cleaning the Cap and the Wiper

1. Press  on the screen, and press Maintenance - Cleaning the Maintenance Parts - Print Head in this order.
2. Press Next - Start in this order.
The Print Head moves to cleaning position.
3. Open the maintenance cover.

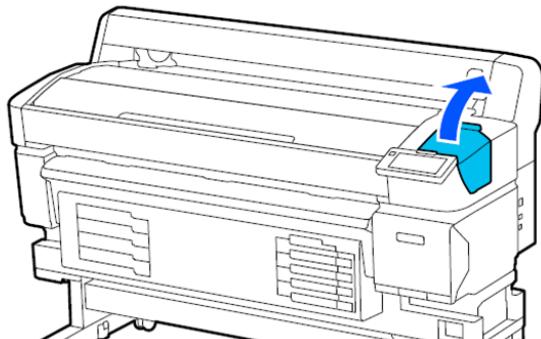


Figure 5-1. Cleaning the Cap and the Wiper

4. Pour the cap cleaning liquid up to the one mark in the cup.
It is recommended to work on a tray or the like to be careful not to contaminate the surroundings.

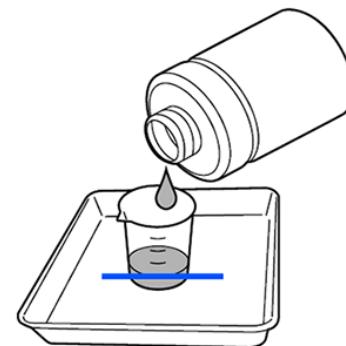


Figure 5-2. Cleaning the Cap and the Wiper

5. Dampen the cleaning stick with cap cleaning liquid.
Do not allow cap cleaning liquid to drip from the cleaning stick.

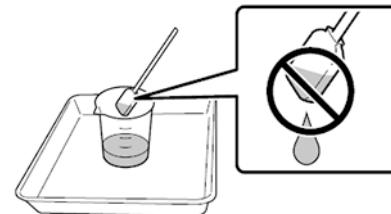


Figure 5-3. Cleaning the Cap and the Wiper

6. Wipe off any ink, lint, or dust with cleaning stick that is stuck to the area on the edge of the cap.

Wipe off the following three areas.

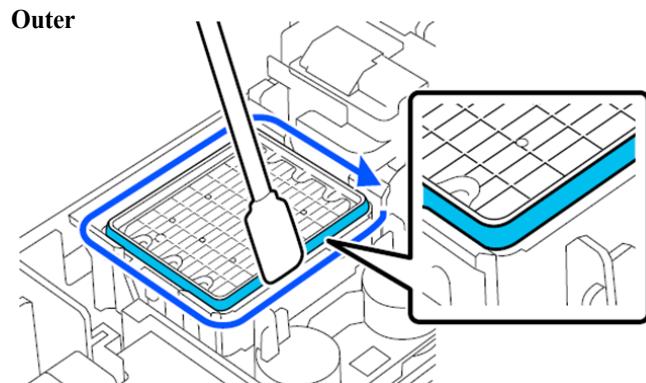


Figure 5-4. Cleaning the Cap and the Wiper

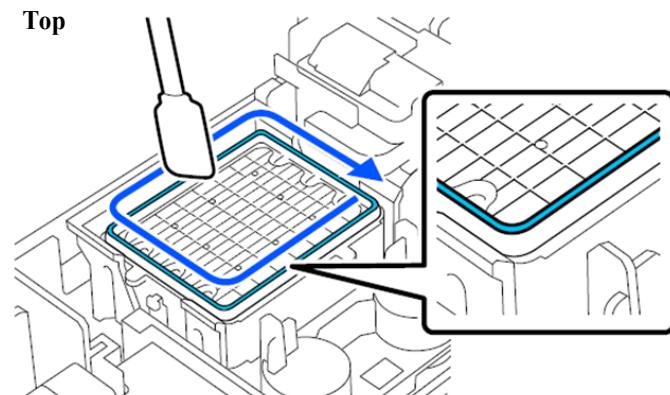


Figure 5-5. Cleaning the Cap and the Wiper

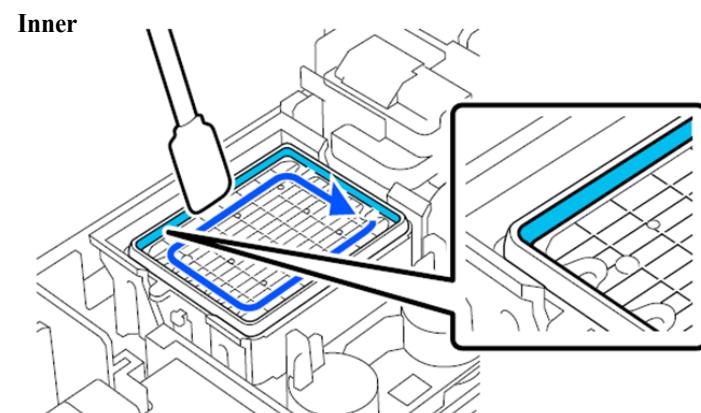


Figure 5-6. Cleaning the Cap and the Wiper

7. Wipe off any ink, lint, or dust with cleaning stick that is stuck to the area of the platen shown in the illustration.

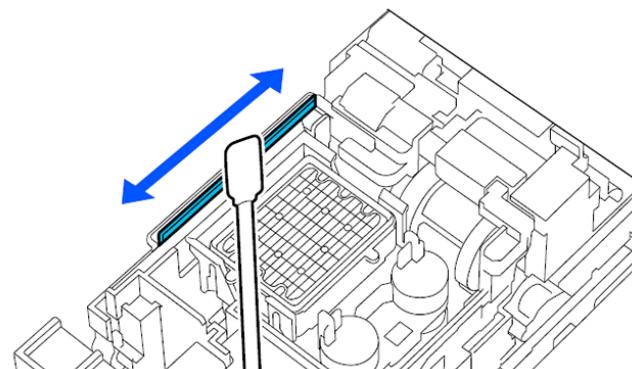


Figure 5-7. Cleaning the Cap and the Wiper

8. Close the maintenance cover, and press End.

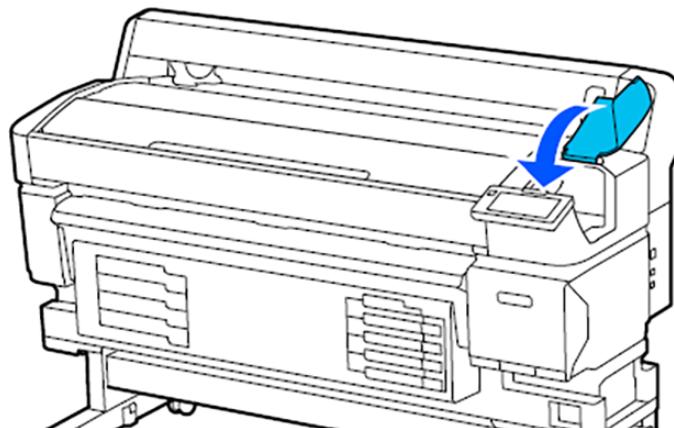


Figure 5-8. Cleaning the Cap and the Wiper

5.5.2 Cleaning the Platen

1. Remove the media, and make sure the printer is turned off and the screen has turned off, and then unplug the power cable from the outlet.
2. Leave the printer for a minute.
3. Open the printer cover and use a soft, clean cloth to carefully clean away any dust or dirt inside the printer.

Thoroughly wipe the platen. To avoid spreading the dirt, wipe from the top to the bottom. If the printer is particularly dirty, dampen the cloth with water containing a small amount of neutral detergent, and then firmly wring the cloth dry before using it to wipe the printer's surface. Then, dry off the inside of the printer with a dry, soft cloth.

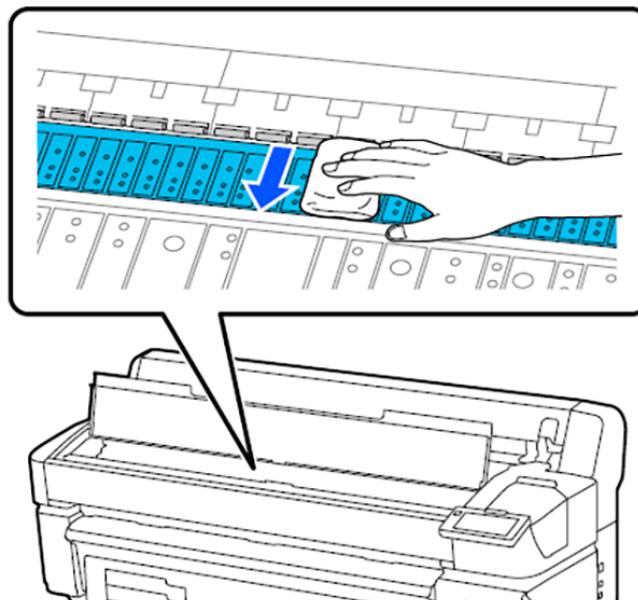


Figure 5-9. Cleaning the Platen



Do not touch the ink tubes while cleaning. Doing so may cause a malfunction.

4. If any paper particles (that looks like white powder) accumulates on the platen, use something like a cocktail stick to push it in.

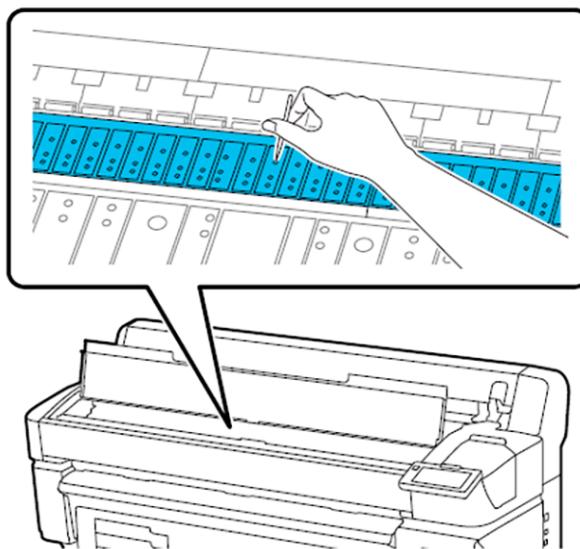


Figure 5-10. Cleaning the Platen

5. After cleaning, close the printer cover.



If the print surface is still dirty even after cleaning the platen, follow the steps below to clean the roller by feeding and ejecting roll paper.

1. Turn on the printer, and load it with the widest available media.
2. Press [\leftarrow] button. Paper is fed while Forward [\rightarrow] button is pressed. If the paper is not soiled, cleaning is complete.
3. Cut the paper after cleaning is done.

5.5.3 Cleaning the Print Head

1. Press  on the screen, and press Maintenance - Cleaning the Maintenance Parts - Print Head in this order.
Head maintenance menu is displayed.
2. Push Next - Start.
print head moves.
3. Open the printer cover.

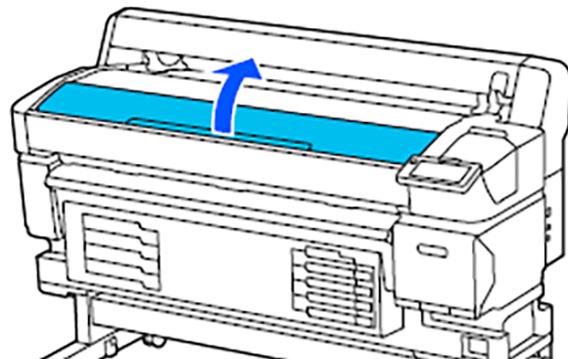


Figure 5-11. Cleaning the Print Head

4. Remove the backing from the two head cleaning kits.

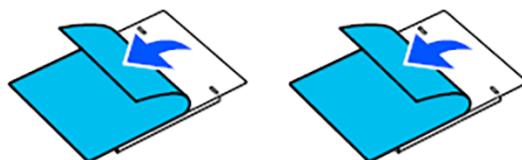


Figure 5-12. Cleaning the Print Head

5. Place the two head cleaning kits on the platens on either side of the print head.

Placement position

Place in the position shown in the illustration.

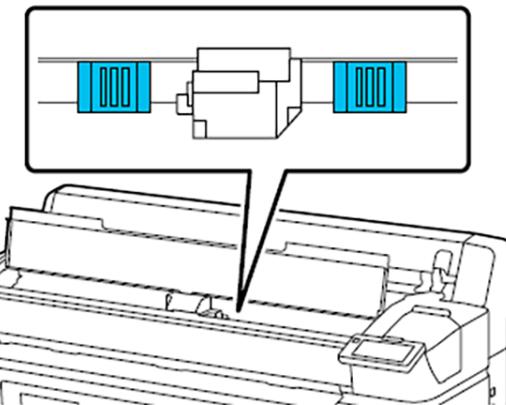


Figure 5-13. Cleaning the Print Head

Placement method

Place the head cleaning kits by applying the edge of the pads to the roller.

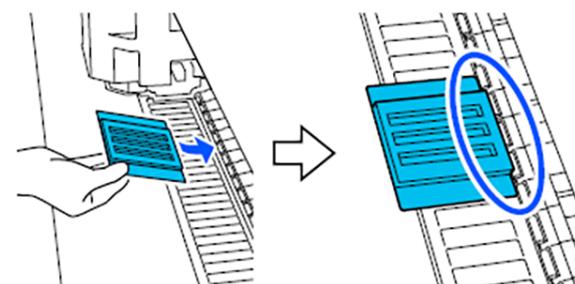


Figure 5-14. Cleaning the Print Head



- Place the cleaning pads so that there are no gaps between the pads and the roller. Cleaning will not be performed correctly if the pads are not placed properly.
- Do not move the print head by hand. This can cause damage.

6. Rub your finger over the areas indicated in the illustration to secure the kit in place.

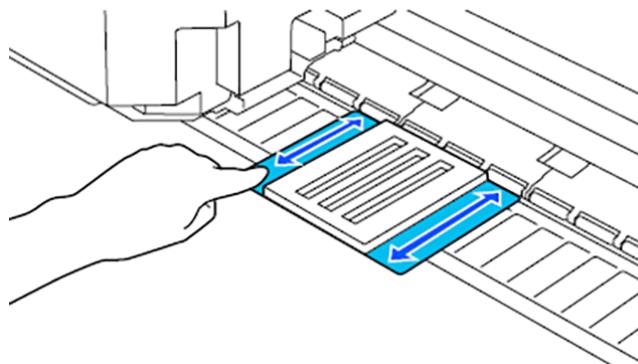


Figure 5-15. Cleaning the Print Head



Secure the adhesive parts of the pads so that there are no parts that have not been stuck down. Do not press the cleaning pad too hard at this point. This could deform the platen.

7. Close the printer cover, and then press the Continue button.
Print head maintenance starts.



Do not open the printer cover while cleaning. Cleaning stops if the cover is opened.

8. When the message to remove the head cleaning kit is displayed on the control panel screen, open the printer cover.
9. Remove the two cleaning kits.

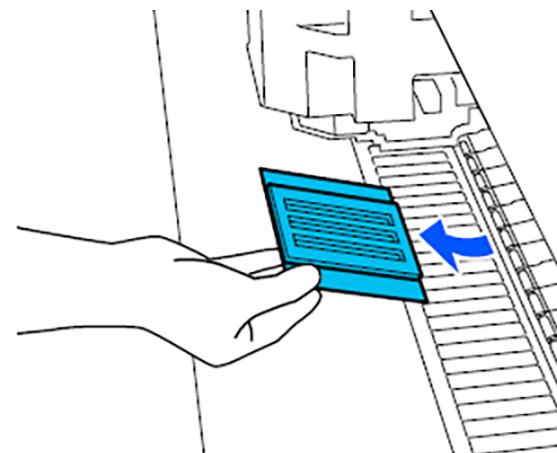


Figure 5-16. Cleaning the Print Head

5.6 Lubrication

LUBRICATION

This section describes necessary lubrication to maintain the functions and performance of this printer. Make sure to properly lubricate the parts/units specified in this section as necessary when replacing or maintaining them.

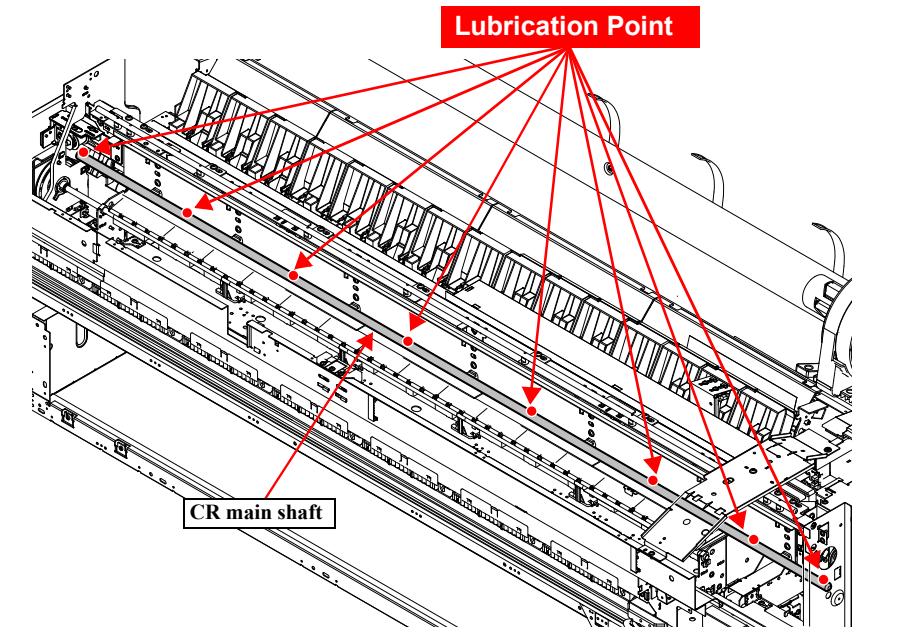
- Make sure to perform the lubrication following the specified lubrication points, lubricants, and amount. Otherwise, the printer may not operate normally.
- When lubricating the originally installed parts, first wipe off the old lubricant completely.

LUBRICATION POINTS LIST

Lubrication No.	Corresponding Part	Name of Lubricant	Lubrication Tool	Reference
1	CR main shaft	Part name: G-84 Part code: 1516265		p.412
2	CR sub shaft	Part name: G-84 Part code: 1516265		p.413
3	OIL PAD HOLDER (RIGHT/LEFT)	Part name: G-84 Part code: 1516265	ϕ 2 mm injector	p.413
		Part name: O-17 Part code: 1521154		
4	CR slider	Part name: G-84 Part code: 1516265		p.414

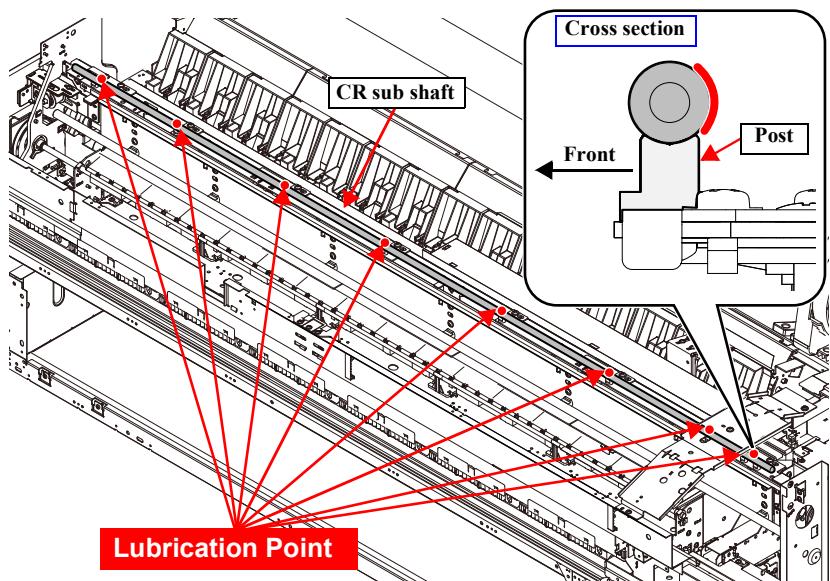
[Lubrication 1]

Part Name	CR main shaft
Lubricants (Part Code)	G-84 (1516265)
Amount	ϕ 2 mm x 8 mm x 8 points
Lubrication Tool	ϕ 2 mm injector
Lubrication Manner	Lubricate on both ends of the CR main shaft and between the posts, then spread the lubricant entirely with a waste cloth or the like.
Note	Be careful not to apply the lubricant beyond the specified point.



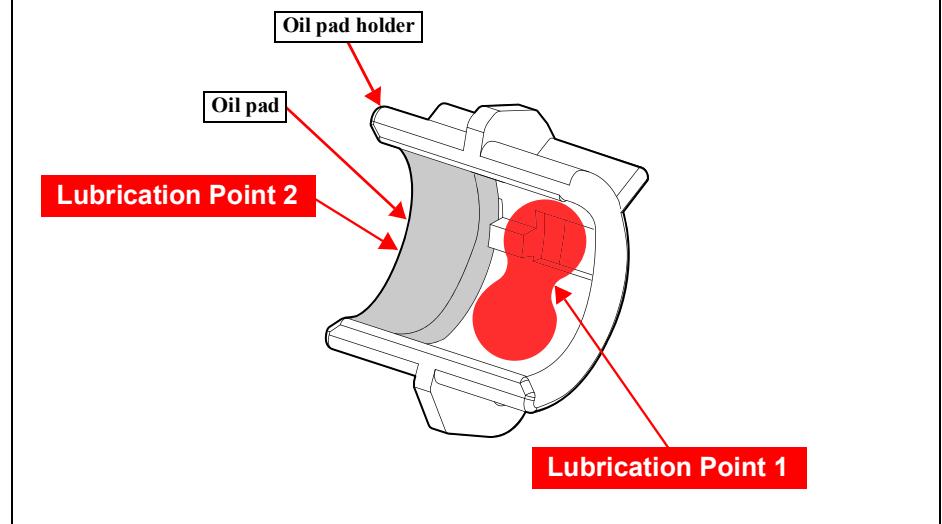
[Lubrication 2]

Part Name	CR sub shaft
Lubricants (Part Code)	G-84 (1516265)
Amount	φ 2 mm x 4 mm x 8 points
Lubrication Tool	φ 2 mm injector
Lubrication Manner	Lubricate on the back of the CR sub shaft at the posts and spread the lubricant entirely with a waste cloth or the like.
Note	Be careful not to apply the lubricant beyond the specified point.



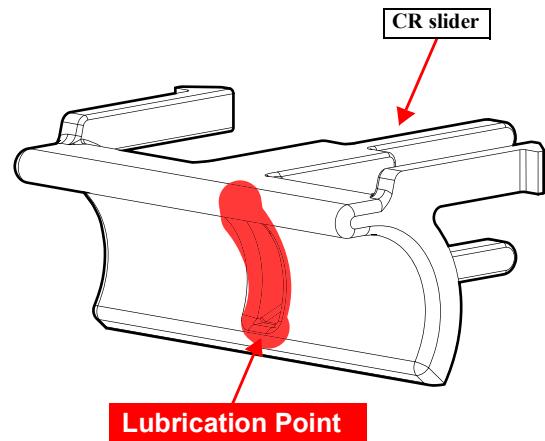
[Lubrication 3]

Part Name	Oil pad holder (Left/Right)
Lubricants (Part Code)	1. G-81 (1574337) 2. O-17 (1521154)
Amount	1. 0.2 g to 0.25 g 2. 0.2 cc
Lubrication Tool	φ 2 mm injector
Lubrication Manner	Remove the oil pad holder. 1. Apply the lubricant with a syringe. 2. Let the oil soak into the oil pad.
Note	Be careful not to apply the lubricant beyond the specified point.



[Lubrication 4]

Part Name	CR slider
Lubricants (Part Code)	G-84 (1516265)
Amount	ϕ 2 mm x 7 mm
Lubrication Tool	ϕ 2 mm injector
Lubrication Manner	On the contact point of the CR slider with the sub shaft, lubricate by filling the lubricant into the groove.
Note	Be careful not to apply lubricant beyond the specified point.



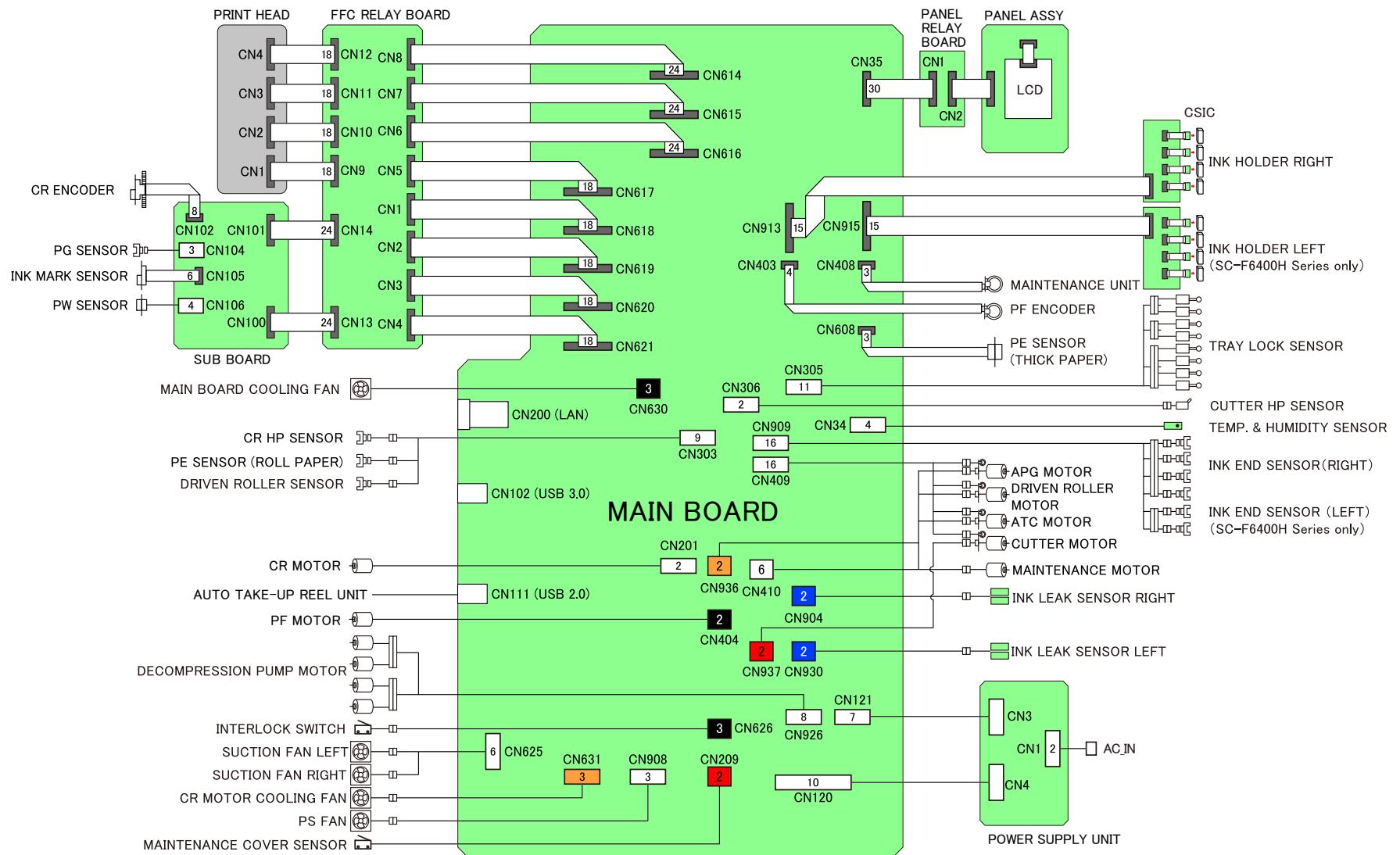
CHAPTER

6

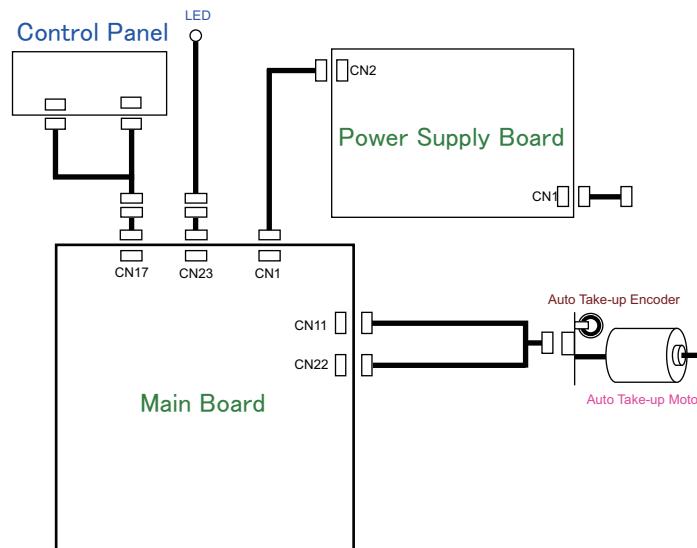
APPENDIX

6.1 Block Wiring Diagram

6.1.1 Main Body



6.1.2 Auto Take-up Reel



6.2 Connection Diagram

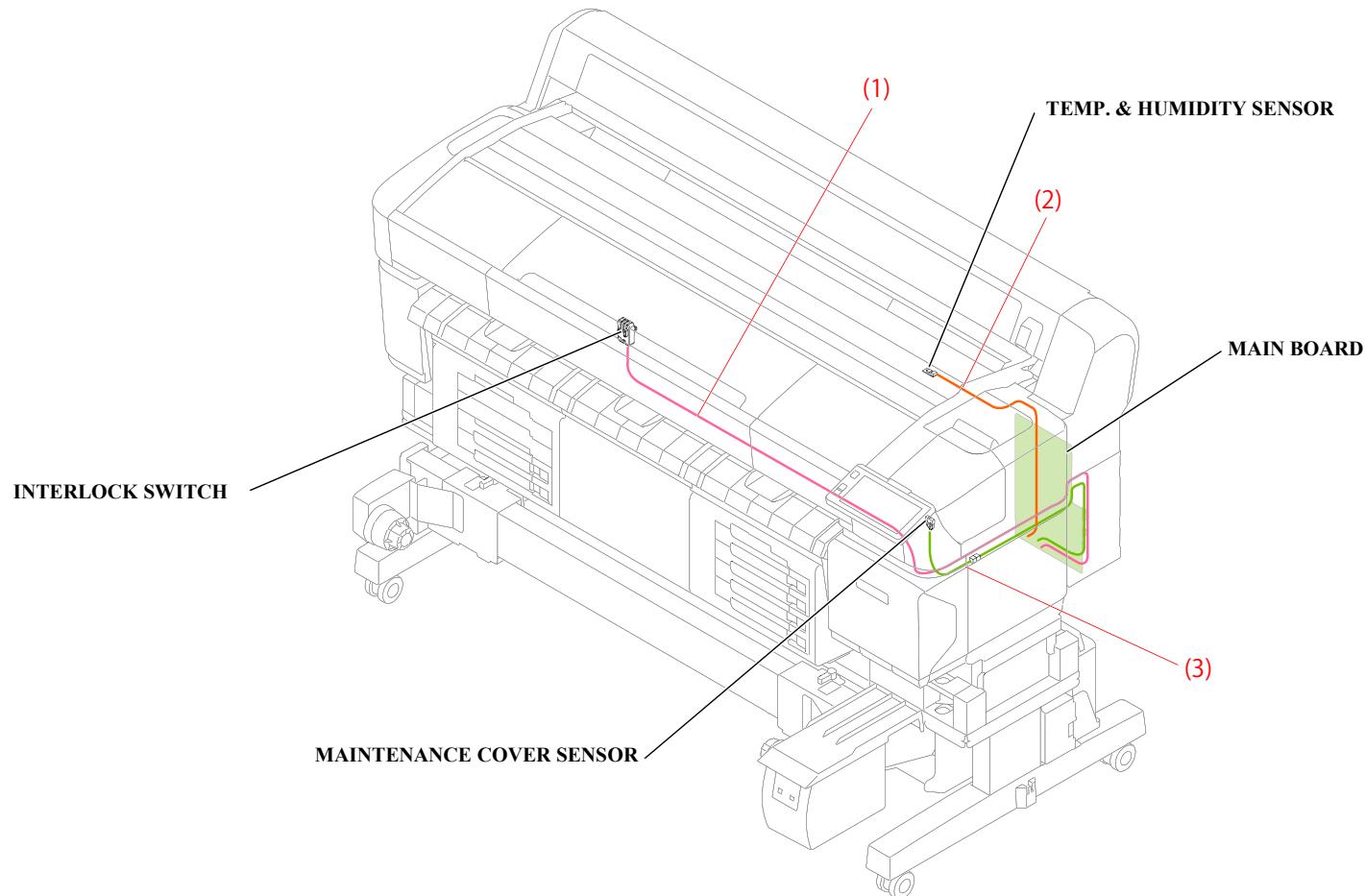
Table 6-1.

Parts		Ref. (Ch3 sec.No.)	
Housing	INTERLOCK SWITCH	P.419	3.4.2.17
	TEMP. & HUMIDITY SENSOR	P.419	3.4.2.19
	MAINTENANCE COVER SENSOR	P.419	3.4.2.5
Electric Circuit Components	POWER SUPPLY UNIT	P.420	3.4.3.2
	PS FAN	P.420	3.4.3.9
	CR MOTOR COOLING FAN	P.420	3.4.3.5
	MAIN BOARD COOLING FAN	P.420	3.4.3.8
	PANEL ASSY	P.420	3.4.3.3
	SUCTION FAN LEFT	P.420	3.4.3.3
	SUCTION FAN RIGHT	P.420	3.4.3.7
Carriage Mechanism/ Ink System Mechanism	CR-MAIN FFC	P.421	3.4.3.7
	CR HP SENSOR	P.421	3.4.4.9
	CR MOTOR	P.421	3.4.4.8
	APG UNIT	P.421	3.4.4.10
	MAINTENANCE UNIT	P.421	3.4.4.12
	HEAD FFC	P.422	3.4.4.4
	CR ENCODER	P.422	3.4.4.6
	PG SENSOR	P.422	3.4.4.11
	PW SENSOR	P.422	3.4.4.15
	INK MARK SENSOR	P.422	3.4.4.16
Carriage Mechanism/ Ink System Mechanism	INK HOLDER LEFT	P.423	3.4.4.19
	INK LEAK SENSOR LEFT	P.423	3.4.4.23
	INK HOLDER RIGHT	P.423	3.4.4.21
	INK LEAK SENSOR RIGHT	P.423	3.4.4.24
	AIR UNIT	P.423	3.4.4.25

Table 6-1.

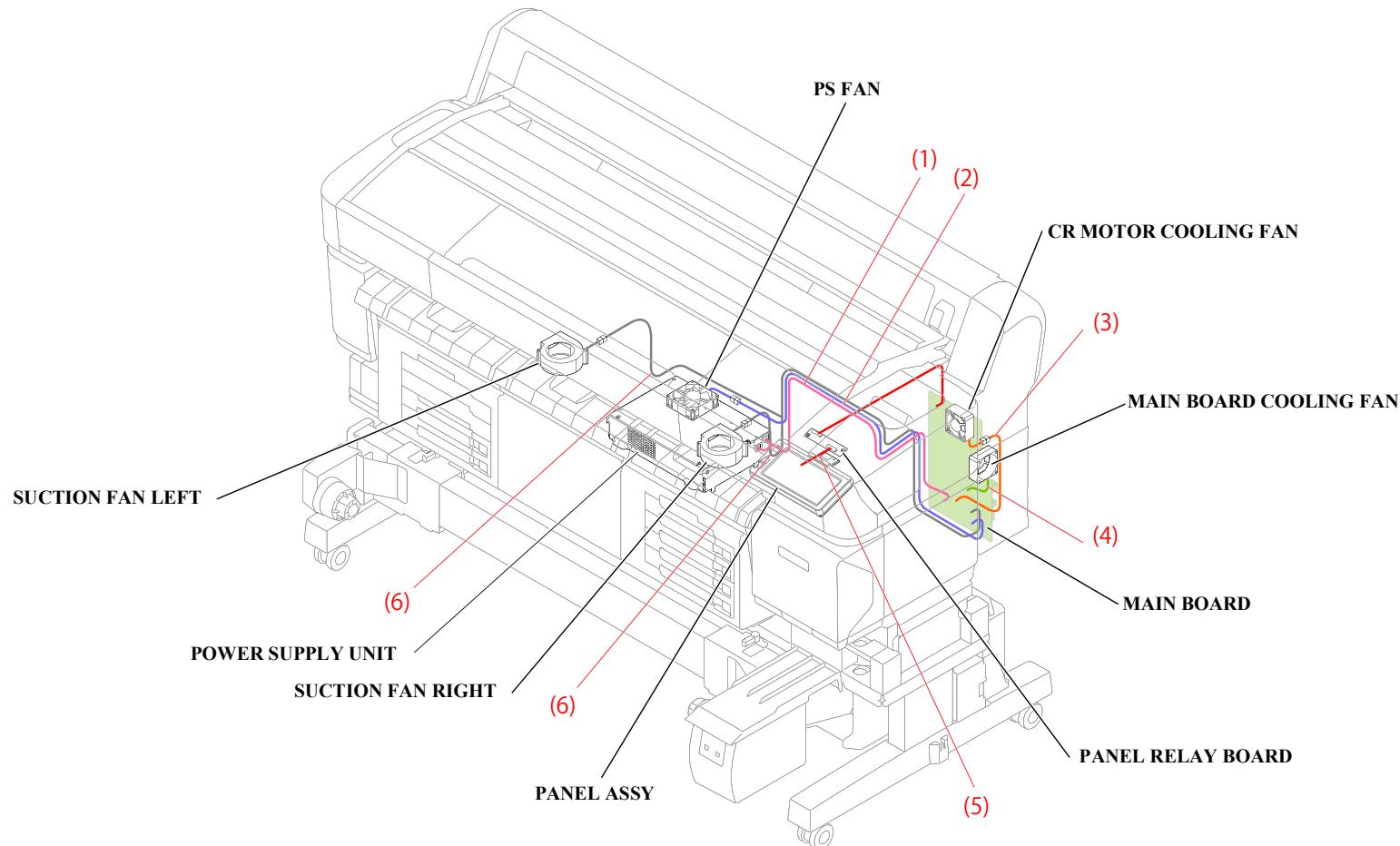
Parts	Ref. (Ch3 sec.No.)
PAPER FEED MECHANISM	
CUTTER MOTOR ASSY	P.424 3.4.5.12
PE SENSOR (ROLL PAPER)	P.424 3.4.5.9
PE SENSOR (THICK PAPER)	P.424 3.4.5.10
CUTTER UNIT	P.424 3.4.5.13
DRIVEN ROLLER MOTOR	P.425 3.4.5.6
ATC MOTOR	P.425 3.4.5.8
PF MOTOR	P.425 3.4.5.1
PF ENCODER	P.425 3.4.5.3
DRIVEN ROLLER SENSOR	P.425 3.4.5.7

Housing



Cable No.	Connection		Cable No.	Connection	
1	INTERLOCK SWITCH	MAIN BOARD (CN626)	2	TEMP. & HUMIDITY SENSOR	MAIN BOARD (CN34)
3	MAINTENANCE COVER SENSOR	Relay connector (MAIN BOARD (CN209))			

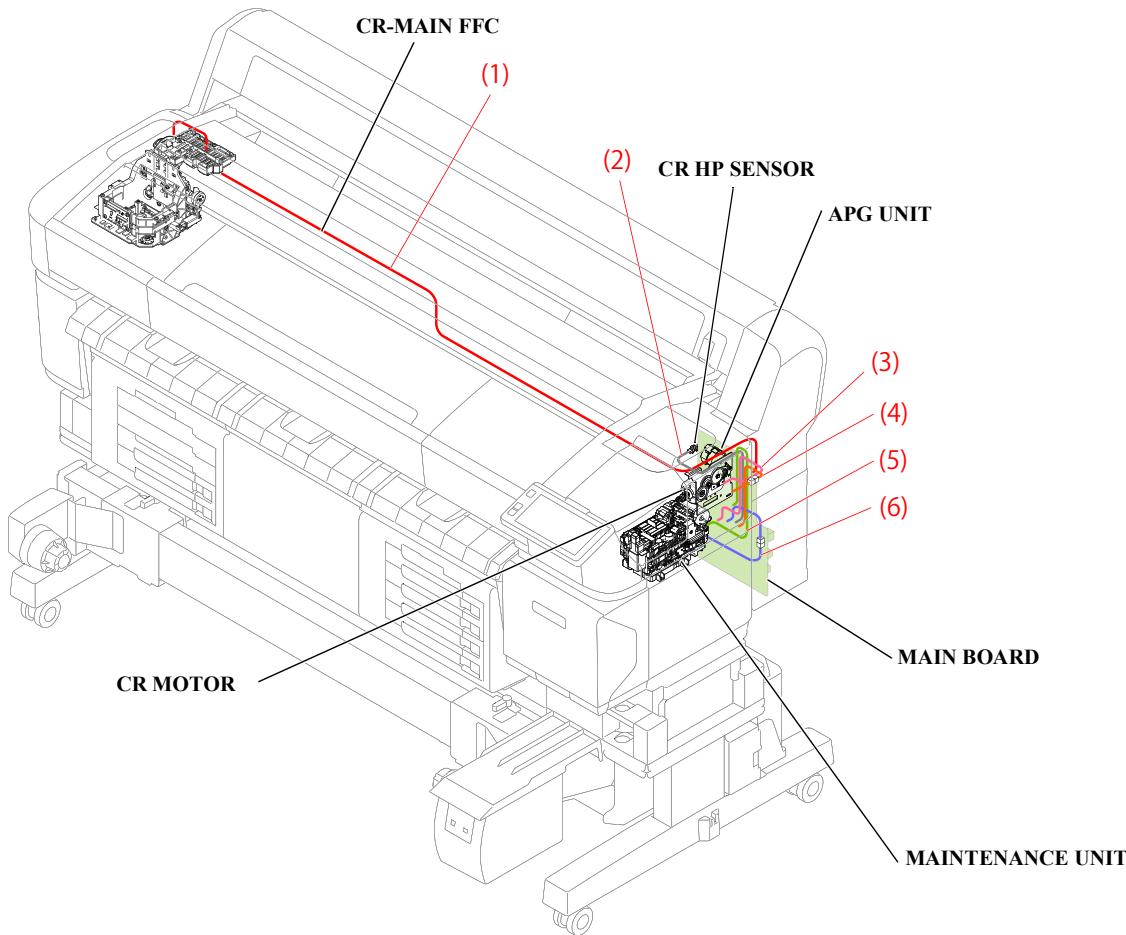
Electric Circuit Components



Cable No.*	Connection		Cable No.*	Connection	
1	POWER SUPPLY UNIT	MAIN BOARD (CN120, CN121)	2	PS FAN	Relay connector (MAIN BOARD (CN908))
3	CR MOTOR COOLING FAN	Relay connector (MAIN BOARD (CN631))	4	MAIN BOARD COOLING FAN	MAIN BOARD (CN630)
5	PANEL ASSY	PANEL RELAY BOARD (CN2), MAIN BOARD (CN35)	6	SUCTION FAN LEFT/ SUCTION FAN RIGHT	Relay connector (MAIN BOARD (CN625))

Note "/*": Underline: FFC

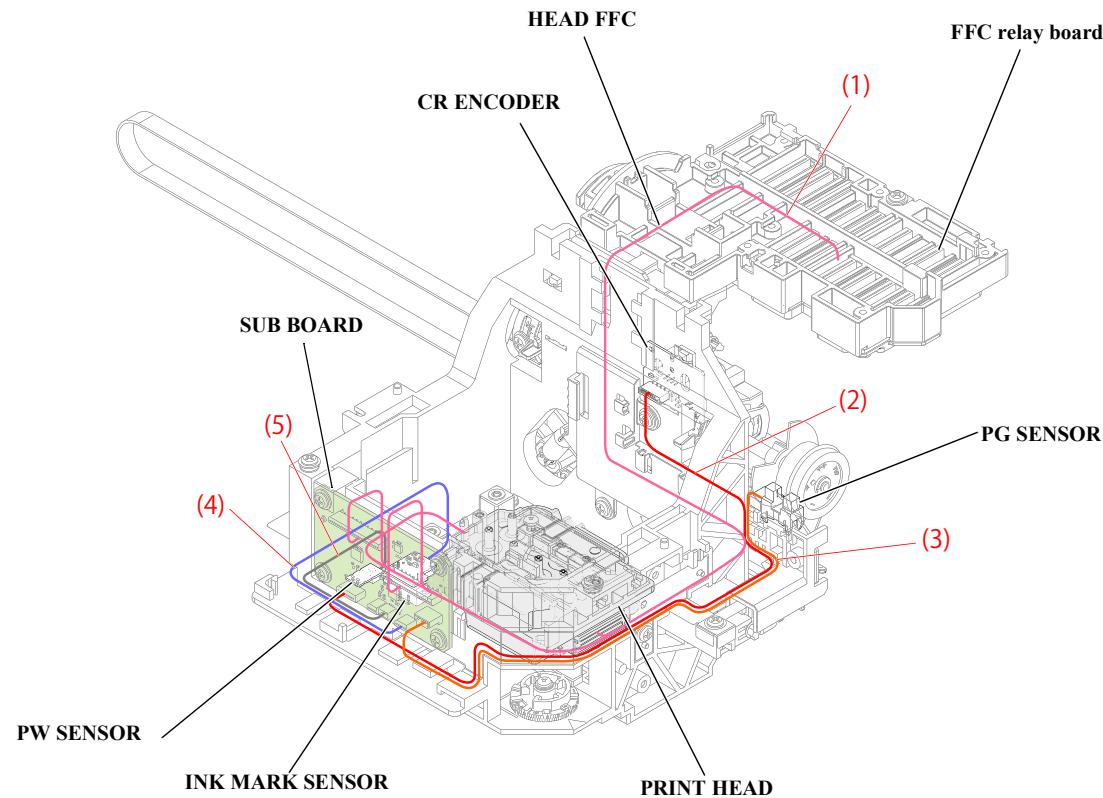
Carriage Mechanism/Ink System Mechanism (1)



Cable No.*	Connection		Cable No.*	Connection	
1	CR-MAIN FFC	MAIN BOARD (CN614, CN615, CN616, CN617, CN618, CN619, CN620, CN621)	2	CR HP SENSOR	Relay connector (MAIN BOARD (CN303))
3	CR MOTOR	MAIN BOARD (CN201)	4	APG UNIT	Relay connector (MAIN BOARD (CN409, CN936))
5	MAINTENANCE UNIT	MAIN BOARD (CN408)	6	MAINTENANCE UNIT	Relay connector (MAIN BOARD (CN410))

Note "/*": Underline: FFC

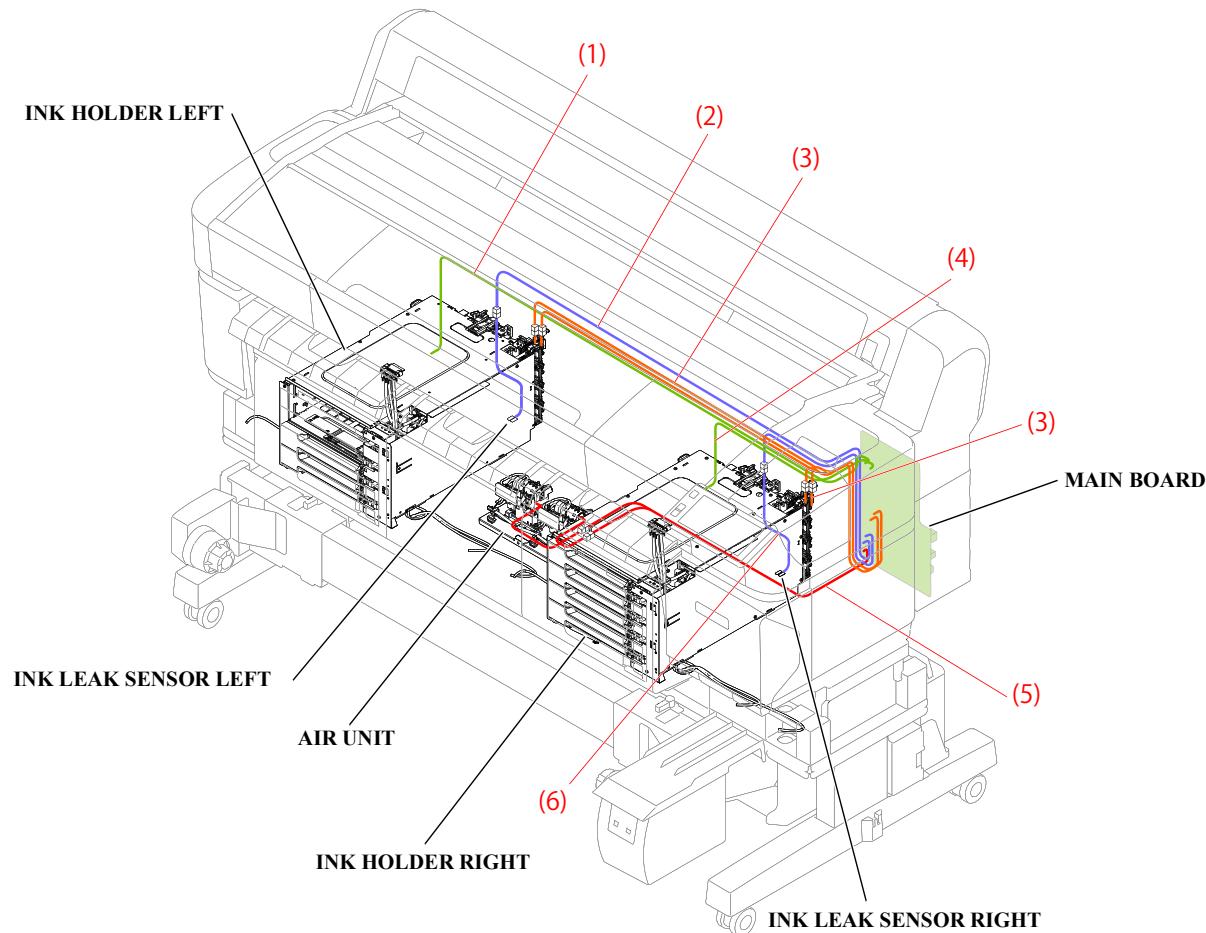
Carriage Mechanism/Ink System Mechanism (2)



Cable No.*	Connection		Cable No.*	Connection	
1	HEAD FFC (PRINT HEAD)	FFC relay board (CN9, CN10, CN11, CN12, CN13, CN14)	2	CR ENCODER	SUB BOARD (CN102)
3	PG SENSOR	SUB BOARD (CN104)	4	PW SENSOR	SUB BOARD (CN106)
5	INK MARK SENSOR	SUB BOARD (CN105)			

Note "*": Underline: FFC

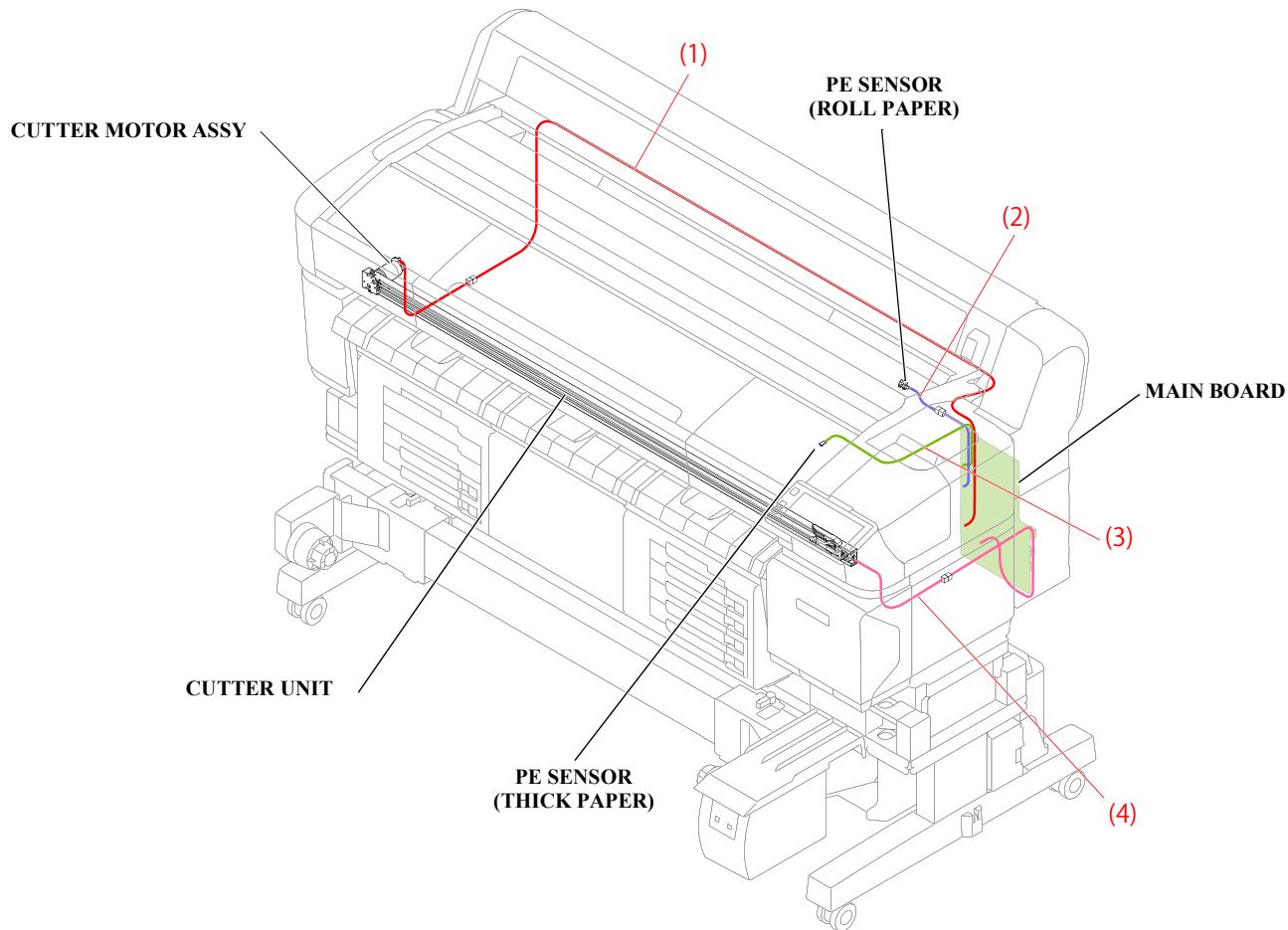
Carriage Mechanism/Ink System Mechanism (3)



Cable No.*	Connection		Cable No.*	Connection	
1	INK HOLDER LEFT	MAIN BOARD (CN915)	2	INK LEAK SENSOR LEFT	Relay connector (MAIN BOARD (CN930))
3	INK HOLDER LEFT/ INK HOLDER RIGHT	Relay connector (MAIN BOARD (CN305, CN909))	4	INK HOLDER RIGHT	MAIN BOARD (CN913)
5	AIR UNIT	Relay connector (MAIN BOARD (CN926))	6	INK LEAK SENSOR RIGHT	Relay connector (MAIN BOARD (CN904))

Note "*": Underline: FFC

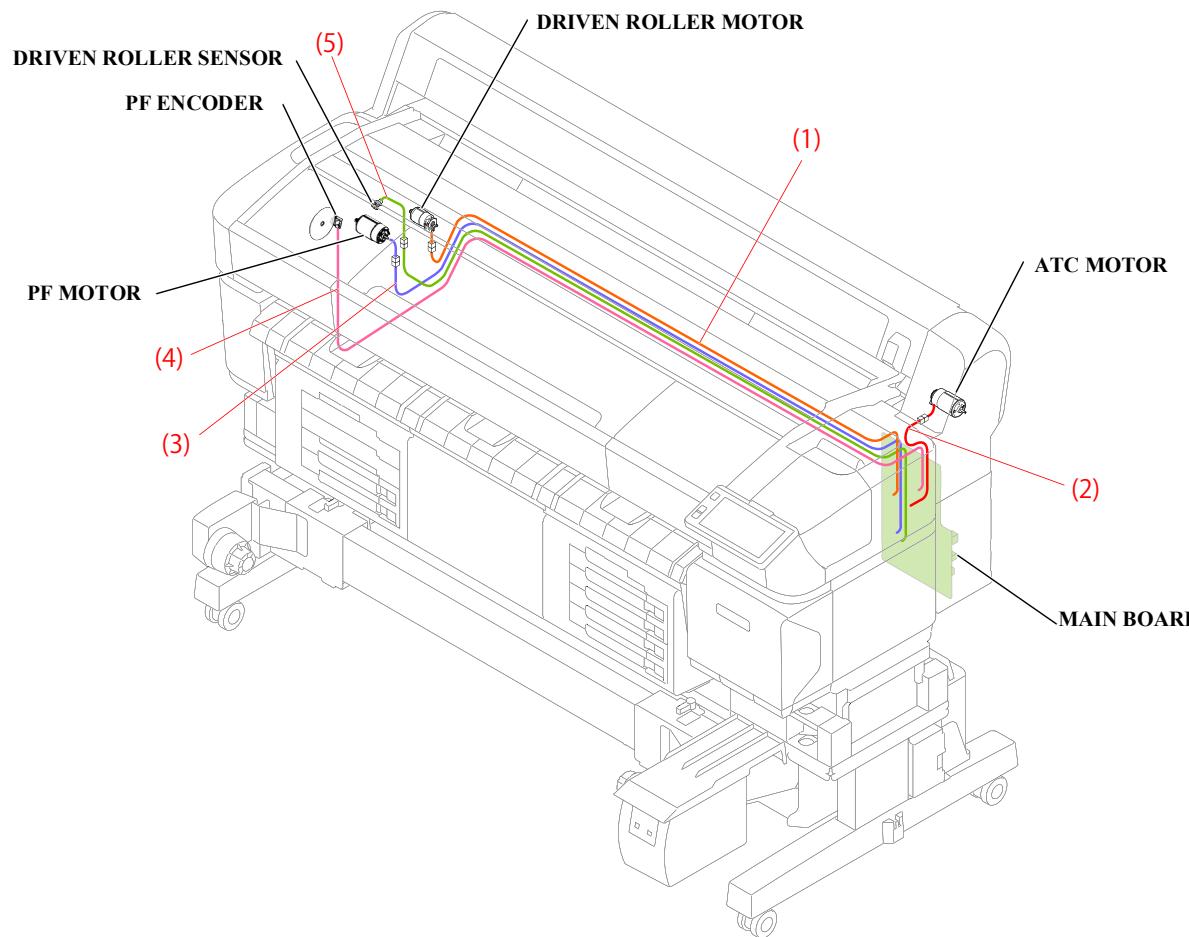
Paper Feed Mechanism/Cutter Mechanism (1)



Cable No.*	Connection		Cable No.*	Connection	
1	CUTTER MOTOR ASSY	Relay connector (MAIN BOARD (CN937))	2	PE SENSOR (ROLL PAPER)	Relay connector (MAIN BOARD (CN303))
3	PE SENSOR (THICK PAPER)	MAIN BOARD (CN608)	4	CUTTER UNIT	Relay connector (MAIN BOARD (CN306))

Note **: Underline: FFC

Paper Feed Mechanism/Cutter Mechanism (2)



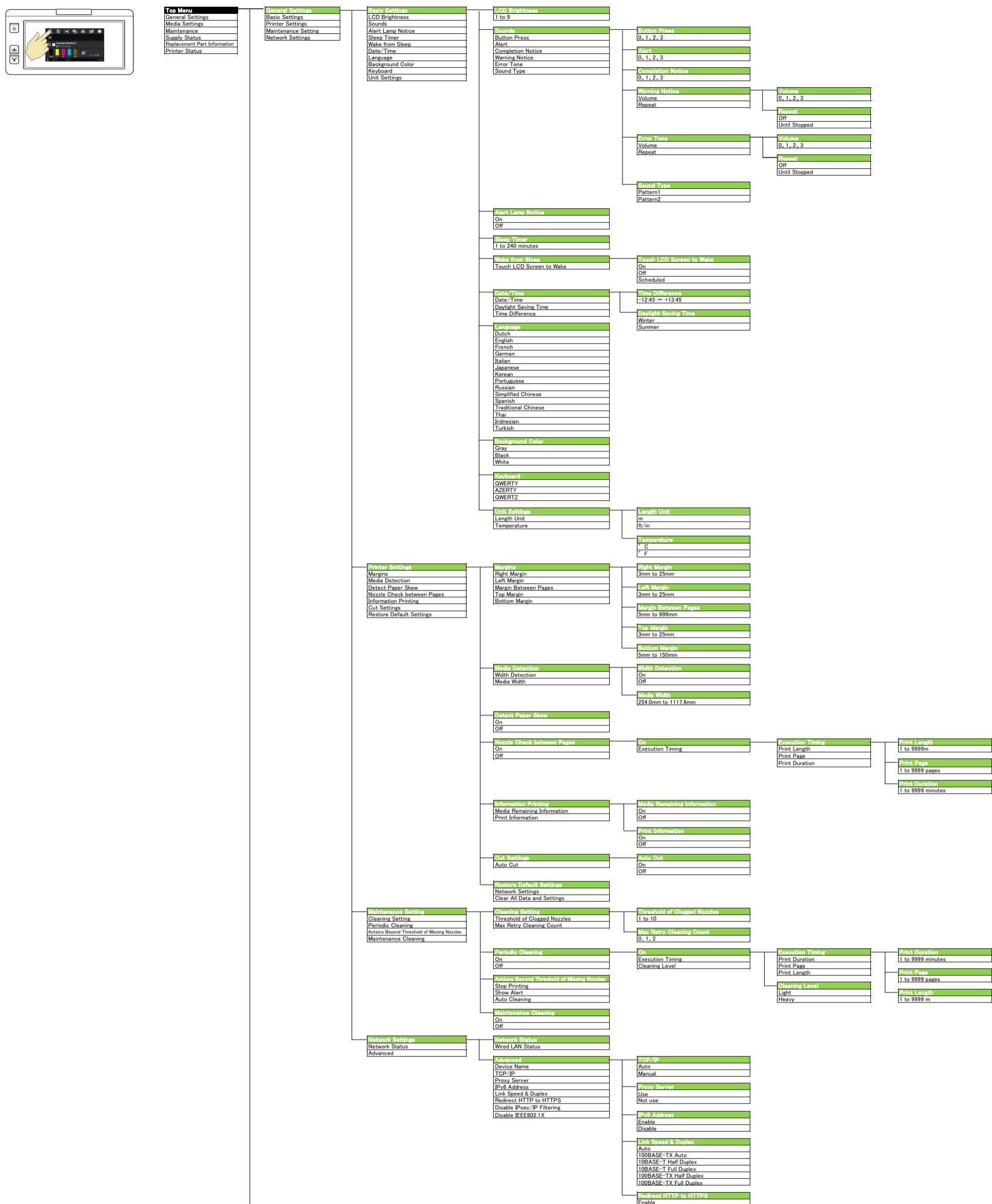
Cable No.*	Connection		Cable No.*	Connection	
1	DRIVEN ROLLER MOTOR	Relay connector (MAIN BOARD (CN936))	2	ATC MOTOR	Relay connector (MAIN BOARD (CN936))
3	PF MOTOR	MAIN BOARD (CN404)	4	PF ENCODER	MAIN BOARD (CN403)
5	DRIVEN ROLLER SENSOR	Relay connector (MAIN BOARD (CN303))			

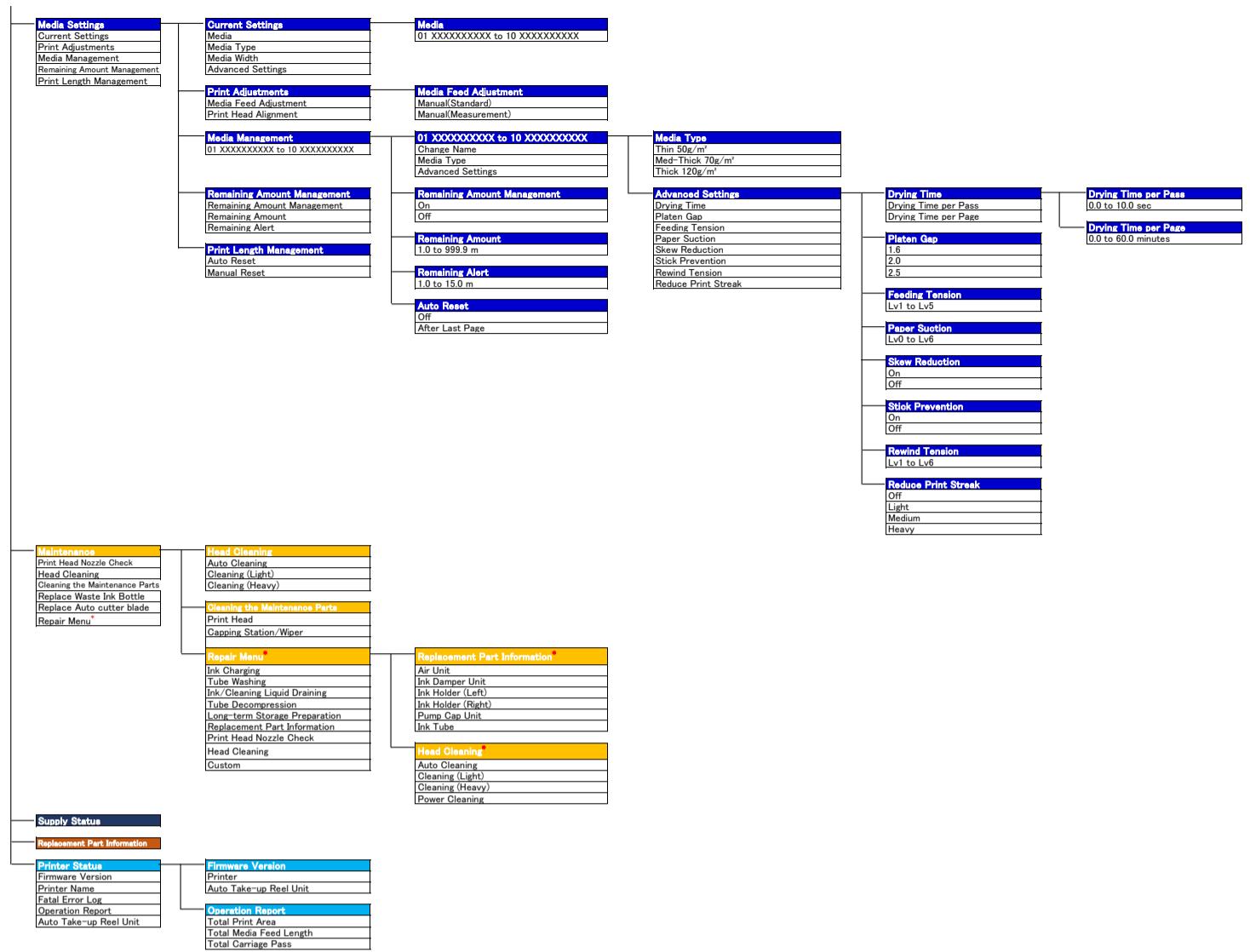
Note **: Underline: FFC

6.3 Panel Menu Map

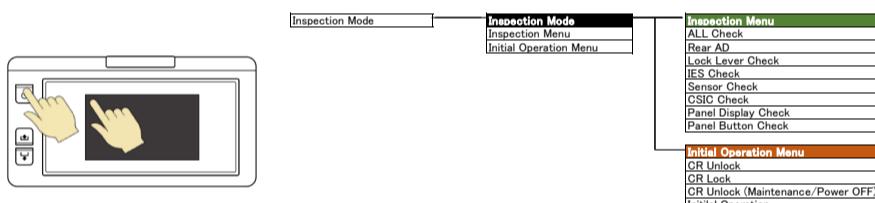
■ User Menu Map/Repair Mode Menu Map

*: Repair mode menu only





■ Inspection Mode Menu Map



6.4 Part names used in this manual

To make it easier to locate the target part from its part name, this manual uses the part names different from the ASP part names. The table below shows the conversion of the part names used in this manual and the corresponding ASP part names.

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
TOP COVER	COVER, TOP, BASE, 44	3.4.2.1
FRONT COVER	COVER, FRONT; C, CF07 ASSY, ASP	3.4.2.2
PRINTER COVER	<input type="checkbox"/> COVER, PRINTER, SUB, RIG HT, 44; B	3.4.2.3
	<input type="checkbox"/> COVER, PRINTER, SUB, LEF T, 44	
	<input type="checkbox"/> COVER, PRINTER; C	
UPPER SUPPORT R COVER	COVER, TOP, SUPPORT, RIGH T; C	3.4.2.4
MAINTENANCE COVER SENSOR	COVER SIDER, UPPER SENSOR ASSY., CH66, ESL, ASP	3.4.2.5
MAINTENANCE COVER & RIGHT ROLL COVER	<input type="checkbox"/> COVER, SIDE, ROLL, RIGHT; C <input type="checkbox"/> HOUSING, SIDE, RIGHT	3.4.2.6
RIGHT LOWER COVER	COVER, SIDE, RIGHT, LOWER; D	3.4.2.7
RIGHT BASE COVER	COVER, BASE, RIGHT, -	3.4.2.8
LEFT LOWER COVER	COVER, SIDE, LEFT, LOWER; B	3.4.2.9
UPPER LEFT COVER	COVER, TOP, LEFT; C	3.4.2.10
LEFT UPPER COVER & LEFT ROLL COVER	<input type="checkbox"/> COVER, SIDE, LEFT, UPPER; D	3.4.2.11
	<input type="checkbox"/> COVER, SIDE, ROLL, LEFT; C	
LEFT BASE COVER	COVER, BASE, LEFT	3.4.2.12

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Housing	FRONT LEFT LOWER COVER	COVER, FRONT, LEFT, LOWE R; B
	ROLL PAPER GUIDE	COVER, ROLL, 44
	ROLL PAPER RAIL GUIDE	RAIL, GUIDE, ROLL PAPER
	REAR ROLL COVER FRAME	N/A
	INTERLOCK SWITCH	INTER LOCK, ASSY, ESL, ASP
	REAR LEFT LOWER FRAME	N/A
	TEMP. & HUMIDITY SENSOR	SENSOR, TEMPERATURE, HUMIDITY, HSHCAA106F
	TRAY	TRAY, JNK PACK, ASSY., ESL, ASP
	PAPER GUIDE MIDDLE / FRONT LOWER COVER	<input type="checkbox"/> COVER, IR, FRONT, MIDDLE <input type="checkbox"/> PAPER GUIDE, LOWER
	FRONT RIGHT LOWER COVER ASSY	COVER, IH; B, ASSY, ASP
	PAPER GUIDE LEFT / INK HOLDER LEFT COVER	<input type="checkbox"/> PAPER GUIDE, LOWER <input type="checkbox"/> COVER, IR, FRONT, SIDE, AS SY., 6C, ESL, ASP
	PAPER GUIDE RIGHT / INK HOLDER RIGHT COVER	<input type="checkbox"/> PAPER GUIDE, LOWER <input type="checkbox"/> COVER, IR, FRONT, SIDE, AS SY., 4C, ESL, ASP
	REAR LOWER FRAME	N/A
	MAIN BOARD FRAME	N/A

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Electric Circuit Components	MAIN BOARD	BOARD ASSY.,MAIN
	POWER SUPPLY UNIT	BOARD ASSY.,POWER SUPPLY,CH12 PSL(7317G)
	PANEL ASSY	PANEL,CK13 ASSY.,ESL,ASP
	PANEL RELAY BOARD	BOARD ASSY.,INTERFACE
	CR MOTOR COOLING FAN	FAN,COOLING,06025SS-24Q-AL-DE
	SUCTION FAN LEFT	FAN ASSY.,ABSORPTION,ASSY ST.,ESL,ASP
	SUCTION FAN RIGHT	
	MAIN BOARD COOLING FAN	FAN,COOLING,06025SS-24Q-AL-DE
	PS FAN	FAN,COOLING,08025SS-24Q-AL-D5
	SUB BOARD	BOARD ASSY.,SUB

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Carriage Mechanism/ Ink System Mechanism	CR COVER	COVER,CR,-
	DUCT CR	ONCR ASSY,CK**, ASP
	PRINT HEAD	<input type="checkbox"/> PRINT HEAD,PCT2-4C <input type="checkbox"/> PRINT HEAD,PCT2-6C
	HEAD FFC	<input type="checkbox"/> HARNESS,HEAD,FFC1 <input type="checkbox"/> HARNESS,HEAD,FFC2 <input type="checkbox"/> HARNESS,HEAD,FFC3 <input type="checkbox"/> HARNESS,HEAD,FFC4
	CR SCALE	SCALE,CR, ASP
	CR ENCODER	BOARD ASSY.,ENCODER
	CR TIMMING BELT	TIMING BELT,CR,44
	CR MOTOR	MOTOR ASSY.,CR
	CR HP SENSOR	PHOTO INTERRUPTER
	APG UNIT	MOTOR,APG,ASSY.,ESL,ASP
	PG SENSOR	PHOTO INTERRUPTER
	MAINTENANCE UNIT	PUMP,CAP,ASSY,CK13,CB, ASP
	INK TUBE	Tube Assy 4C.,CK13,ESL,ASP
	CR UNIT	CR,44,ASSY.,ESL,ASP
	PW SENSOR	BOARD ASSY.,DETECTOR,PW;B
	INK MARK SENSOR	HARNESS,RELAY,IMS,FFC1
	CR BOARD COVER	N/A

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Carriage Mechanism/ Ink System Mechanism	CR-MAIN FFC	3.4.4.18
	□ HARNESS,RELAY,HEAD,F FC1	
	□ HARNESS,RELAY,HEAD,F FC2	
	□ HARNESS,RELAY,HEAD,F FC3	
	□ HARNESS,RELAY,HEAD,F FC4	
	□ HARNESS,RELAY,HEAD,F FC5	
	□ HARNESS,RELAY,HEAD,F FC6	
	□ HARNESS,RELAY,HEAD,F FC7	
	□ HARNESS,RELAY,HEAD,F FC8	
	INK HOLDER LEFT	3.4.4.19
INK HOLDER RIGHT	SLOT ASSY.,PA**,CK**, ASP	3.4.4.21
INK LEAK SENSOR LEFT	HARNESS,INK DETECTOR,IH,UPPER,ASSY	3.4.4.23
INK LEAK SENSOR RIGHT		
AIR UNIT	DECOMPRESSION PUMP ASSY,CK13, ASP	3.4.4.25
MIDDLE TUBE ASSY	□ SUPPLY,TUBE,ASSY,CK13, ASP?SC-F6400 Series? □ SUPPLY,TUBE,ASSY,CK79, ASP?SC-F6400H Series?	3.4.4.26

Table 6-2. Conversion Table

Part name used in this manual	ASP part name	Ref. (Ch3 sec.No.)
Paper Feed Mechanism/ Cutter Mechanism	PF MOTOR	MOTOR ASSY.,PF
	PF SCALE	SCALE,PF,UNIT,ESL,ASP
	PF ENCODER	BOARD ASSY.,ENCODER
	PF TIMING BELT	TIMING BELT,PF
	DRIVEN ROLLER	ROLLER ASSY.,DRIVEN;ST ASP
	DRIVEN ROLLER MOTOR	MOTOR ASSY.,ASF,SUB
	DRIVEN ROLLER SENSOR	PHOTO INTERRUPTER
	ATC MOTOR	MOTOR ASSY.,REWIND
	PE SENSOR (ROLL PAPER)	PHOTO INTERRUPTER
	PE SENSOR (THICK PAPER)	BOARD ASSY.,DETECTOR,PW;B
Auto Take-up Reel	PF ROLLER MIDDLE SUPPORT	CENTER,SUPPORT,ROLLER, PF
	CUTTER MOTOR ASSY	HARNESS,MOTOR,CUTTER
	CUTTER UNIT	CUTTER,44,ASSY.,ESL,ASP
	TAKE-UP REEL COVER	COVER,WINDER,DRIVE
	RIGHT BRAKE ASSY	FULCRUM PLATE;BRAKE,RIGHT
Auto Take-up Reel	LEFT BRAKE ASSY	FULCRUM PLATE;BRAKE,LEFT
	TAKE-UP REEL SWITCH PANEL ASSY	N/A
	TAKE-UP REEL PS BOARD	BOARD ASSY.,POWER SUPPLY
	TAKE-UP REEL MOTOR	MOTOR ASSY.,REWIND
	TAKE-UP REEL MAIN BOARD	BOARD ASSY.,MAIN
		3.4.6.7

6.5 Exploded Diagram/Parts List

For the exploded diagrams and parts list, refer to Service Parts Information.