

imagePROGRAF

TX-2100, TX-5210

TX-2200, TX-5220

TX-3100, TX-5310

TX-3200, TX-5320

TX-4100, TX-5410

TX-4200, TX-5420

Service Manual

Revision 04

Canon

SM-21001E-04

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Application:

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CANON INC.

Digital Printing Quality Assurance Center 2

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Caution:

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

About This Document

Revision history

Revision	Month	Remarks
00	Dec. 2020	New release.
01	Feb. 2021	Revise.
02	May 2022	Parts counter: Corrected from "WF1" to "HMa1" on P. 418.
03	Mar. 2023	Revise.
04	Aug. 2024	Addition of models.

Applicable products

Main unit:

- TX-2100, TX-5210
- TX-2200, TX-5220
- TX-3100, TX-5310
- TX-3200, TX-5320
- TX-4100, TX-5410
- TX-4200, TX-5420

Option:

- Roll Unit RU-22
- Roll Unit RU-32
- Roll Unit RU-42
- IC Card Reader Attachment RA-01

Photos and illustrations

Some of the photos and illustrations in this document are from other models.

Safety Precautions

Caution on Lithium Battery

A lithium battery is installed in the printer. Be cautious of the following:

At repair:

Risk of explosion if battery is replaced by an incorrect type.

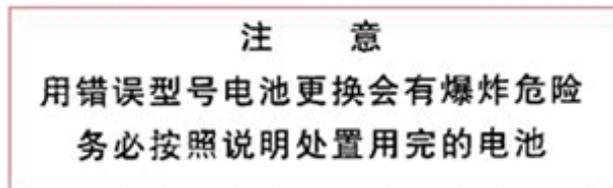
Explosionsrisiko, falls Batterie nicht mit vorgeschriebenem Batterietypus ersetzt wird.

At disposal:

Dispose of used batteries according to the local regulations.

Batterieentsorgung gemaess lokalen Vorschriften.

<For China>



<For California, USA only>

This product contains an internal battery for backup purposes.

Included battery contains Perchlorate Material-special handling may apply.

See <http://www.dtsc.ca.gov/hazardouswaste/perchlorate> for details.

Notes during Power-on or Power-off of Printer

DO NOT unplug the power cord during the power-on or -off operation of the printer. (After the ON button is pressed, it takes approx. two minutes for the printer to get ready and approx. 40 seconds for the printer to turn off.)

Notes on Works

Handling of Packaging Materials

When packaging materials for products and service parts are disposed of, they must be disposed of in accordance with local government rules.

For Italy, Environmental labelling:

For proper recycling of the packaging of our products and articles, please visit.

<https://www.canon-europe.com/sustainability/approach/packaging>

Per l'Italia, Etichettatura ambientale:

per il corretto riciclo degli imballaggi dei nostri prodotti e articoli, visita il sito.

<https://www.canon-europe.com/sustainability/approach/packaging>

CONTENTS

About This Document	3
Safety Precautions	4
Notes on Works	4
1. TROUBLESHOOTING.....	7
1-1. Outline	8
1-2. By Symptom	9
1-3. By Error Code.....	26
1-4. Electrical Component Layout Diagram	143
1-5. Connection Diagram	152
2. DISASSEMBLY AND REASSEMBLY	153
2-1. Introduction	154
2-2. Works Before Disassembly and After Reassembly	160
2-3. Disassembly and Reassembly.....	171
3. SERVICING FUNCTIONS	663
3-1. Outline	664
3-2. Service Mode.....	665
3-3. Firmware Update	742
3-4. Log Mode	748
4. PRINTER INSTALLATION, TRANSPORTATION, DISPOSAL	753
4-1. Printer Installation, Transportation, Reinstallation	754
4-2. Connection Settings for Remote Service.....	763
5. PERIODIC SERVICE	769
5-1. Outline	770
5-2. Periodic Replacement Parts.....	771
5-3. Consumable Parts	772
5-4. Periodic Maintenance	784
6. MECHANISM	785
6-1. Main Unit Configuration.....	786
6-2. Operation Principle	790
6-3. Initial Flowchart	842

1. TROUBLESHOOTING

1-1. Outline	8
1-1-1. Common Confirmation Items	8
1-2. By Symptom	9
1-2-1. Failure Diagnosis in Start-up Systems	9
1-2-2. Nozzle Check Pattern	15
1-3. By Error Code	26
1-3-1. How to Read Error Code	26
1-3-2. Details of Hardware Errors	34
1-4. Electrical Component Layout Diagram	143
1-4-1. PCBs	143
1-4-2. Sensors	146
1-4-3. Motors and Solenoids	148
1-4-4. Fans	150
1-5. Connection Diagram	152

1-1. Outline

1-1-1. Common Confirmation Items

No.	Details
1	Can the phenomenon declared by user reproduced by turning off or on the printer or by checking the operation?
2	Check any other problem by error log, interview with user, etc.
3	Confirm whether the user maintenance is performed or not.
4	Check the parts counter.
5	Confirm the trouble-related cable connection, insert and remove the cable, and replace the part if necessary.

1-2. By Symptom

1-2-1. Failure Diagnosis in Start-up Systems

This chapter will focus on the failure location identification in the case that the power does not turn on or the operation panel does not display any indication when turning on the power of the main unit from the operation panel.

Point:

During diagnosis, never touch the power supply unit after the MAIN PCB cover is removed.

• Failure Diagnosis Flows

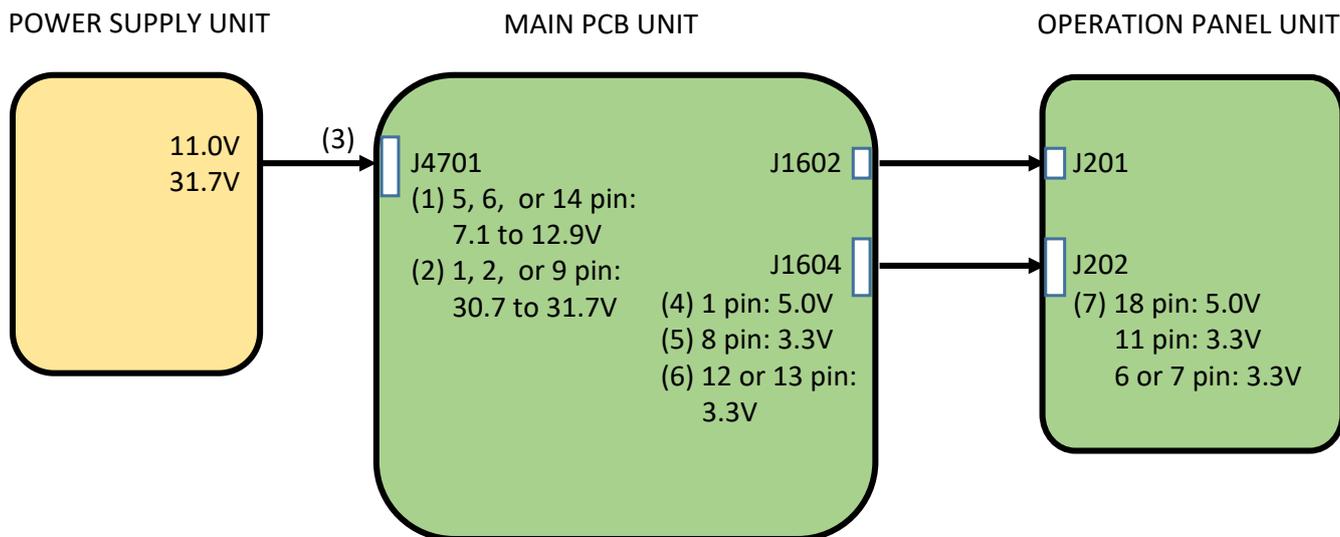
Follow the diagnosis flows to perform the failure diagnosis.

The numbers such as (1), (2), and etc. below refer to the diagnosis flow number.

1. Connect the cable for power supply route.
2. Check the specified voltage is supplied to the each board by a tester.

TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410

Power supply route

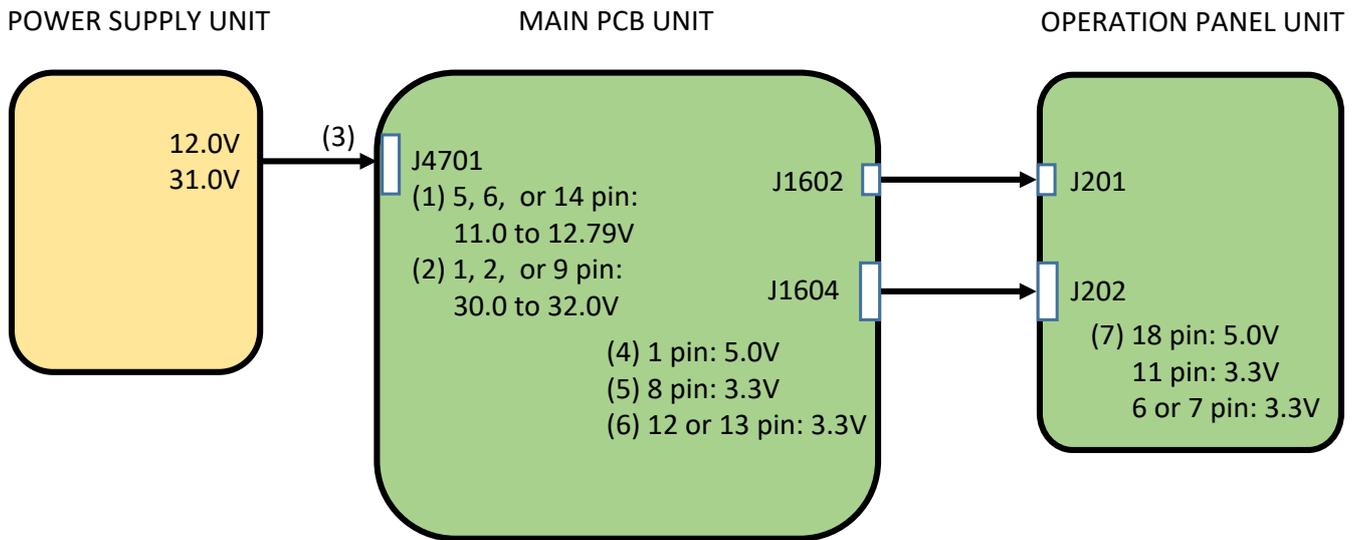


• Diagnosis flow

Flow	Check location	Handling
(1)	MAIN PCB UNIT > connector J4701 > check the voltage between 5 pin, 6 pin or 14 pin and GND (7.1V to 12.9V). <Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.	When the voltage is supplied, Go to (2). When the voltage is not supplied, Go to (3).
(2)	MAIN PCB UNIT > connector J4701 > check the voltage between 1 pin, 2 pin or 9 pin and GND (30.7V to 31.7V). <Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.	When the voltage is supplied, Go to (4). When the voltage is not supplied, Go to (3).

Flow	Check location	Handling
(3)	<p>Check if overcurrent protection is performed in POWER SUPPLY UNIT.</p> <p>Unplug the power cable and the cable connected to the connector J4701 of MAIN PCB UNIT temporarily. Wait for 10 seconds, then connect only the power cable again.</p> <p>CHECK (A)</p> <p>Check the voltage (7.9V to 11.0V) between GND and 5 pin, 6 pin or 14 pin of the cable (HARNESS ASS'Y, POWER SUPPLY) connected to the connector J4701 of MAIN PCB UNIT.</p> <p>CHECK (B)</p> <p>Check the voltage (31.7V) between GND and 1 pin or 2 pin or 9 pin of the cable (HARNESS ASS'Y, POWER SUPPLY) connected to the connector J4701 of MAIN PCB UNIT.</p> <p><Note> Contact GND of the tester to the main unit chassis in CHECK (A) and (B).</p>	<p>When the voltage is not supplied in either of the CHECK (A) or (B), replace the following: POWER SUPPLY UNIT</p> <p>When the voltage is supplied in both of the CHECK (A) and (B), replace the following: MAIN PCB UNIT</p>
(4)	<p>MAIN PCB UNIT > connector J1604 > check the voltage between 1 pin and GND (5.0V).</p> <p><Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.</p>	<p>When the voltage is supplied, Go to (5).</p> <p>When the voltage is not supplied, replace the following: MAIN PCB UNIT</p>
(5)	<p>MAIN PCB UNIT > connector J1604 > check the voltage between 8 pin and GND (3.3V).</p> <p><Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.</p>	<p>When the voltage is supplied, Go to (6).</p> <p>When the voltage is not supplied, replace the following: MAIN PCB UNIT</p>
(6)	<p>MAIN PCB UNIT > connector J1604 > check the voltage between 12 pin or 13 pin and GND (3.3V).</p> <p><Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.</p>	<p>When the voltage is supplied, Go to (7).</p> <p>When the voltage is not supplied, replace the following: MAIN PCB UNIT</p>
(7)	<p>OPERATION PANEL UNIT > connector J202 > check the voltage of the following three points:</p> <ul style="list-style-type: none"> • Voltage between 18 pin and GND (5.0V) • Voltage between 11 pin and GND (3.3V) • Voltage between 6 pin or 7pin and GND (3.3V) <p><Note> Contact GND of the tester to the soldering part of 1 pin of connector J202.</p>	<p>When the voltage is supplied, replace the following: OPERATION PANEL UNIT</p> <p>When the voltage is not supplied, replace the following: Cable between the operation panel PCB and the main PCB</p>

Power supply route



• Diagnosis flow

Flow	Check location	Handling
(1)	MAIN PCB UNIT > connector J4701 > check the voltage between 5 pin, 6 pin or 14 pin and GND (11.0V to 12.79V). <Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.	When the voltage is supplied, Go to (2). When the voltage is not supplied, Go to (3).
(2)	MAIN PCB UNIT > connector J4701 > check the voltage between 1 pin, 2 pin or 9 pin and GND (30.0V to 32.0V). <Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.	When the voltage is supplied, Go to (4). When the voltage is not supplied, Go to (3).
(3)	Check if overcurrent protection is performed in POWER SUPPLY UNIT. Unplug the power cable and the cable connected to the connector J4701 of MAIN PCB UNIT temporarily. Wait for 10 seconds, then connect only the power cable again. CHECK (A) Check the voltage (11.0V to 12.79V) between GND and 5 pin, 6 pin or 14 pin of the cable (HARNESS ASS'Y, POWER SUPPLY) connected to the connector J4701 of MAIN PCB UNIT. CHECK (B) Check the voltage (31.0V) between GND and 1 pin or 2 pin or 9 pin of the cable (HARNESS ASS'Y, POWER SUPPLY) connected to the connector J4701 of MAIN PCB UNIT. <Note> Contact GND of the tester to the main unit chassis in CHECK (A) and (B).	When the voltage is not supplied in either of the CHECK (A) or (B), replace the following: POWER SUPPLY UNIT When the voltage is supplied in both of the CHECK (A) and (B), replace the following: MAIN PCB UNIT
(4)	MAIN PCB UNIT > connector J1604 > check the voltage between 1 pin and GND (5.0V). <Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.	When the voltage is supplied, Go to (5). When the voltage is not supplied, replace the following: MAIN PCB UNIT

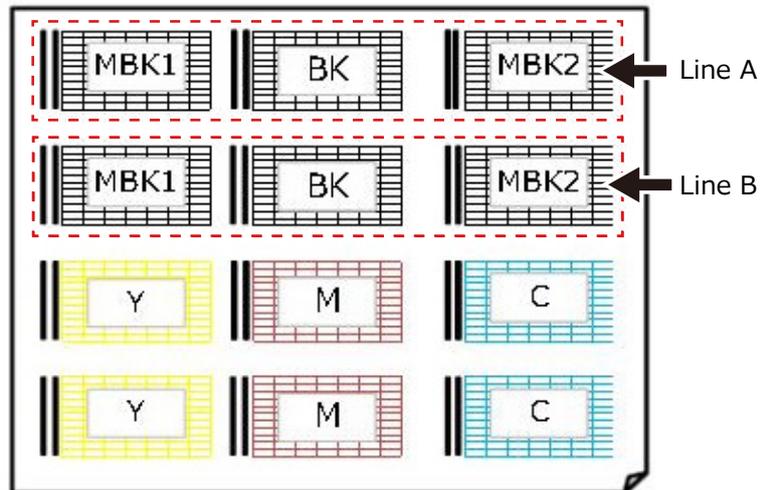
Flow	Check location	Handling
(5)	<p>MAIN PCB UNIT > connector J1604 > check the voltage between 8 pin and GND (3.3V).</p> <p><Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.</p>	<p>When the voltage is supplied, Go to (6).</p> <p>When the voltage is not supplied, replace the following: MAIN PCB UNIT</p>
(6)	<p>MAIN PCB UNIT > connector J1604 > check the voltage between 12 pin or 13 pin and GND (3.3V).</p> <p><Note> Contact GND of the tester to the screw fastening MAIN PCB UNIT.</p>	<p>When the voltage is supplied, Go to (7).</p> <p>When the voltage is not supplied, replace the following: MAIN PCB UNIT</p>
(7)	<p>OPERATION PANEL UNIT > connector J202 > check the voltage of the following three points:</p> <ul style="list-style-type: none"> • Voltage between 18 pin and GND (5.0V) • Voltage between 11 pin and GND (3.3V) • Voltage between 6 pin or 7 pin and GND (3.3V) <p><Note> Contact GND of the tester to the soldering part of 1pin of connector J202.</p>	<p>When the voltage is supplied, replace the following: OPERATION PANEL UNIT</p> <p>When the voltage is not supplied, replace the following: Cable between the operation panel PCB and the main PCB</p>

1-2-2. Nozzle Check Pattern

- **How to print nozzle check pattern**

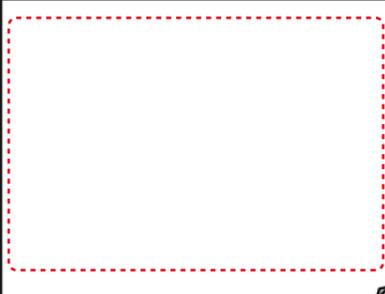
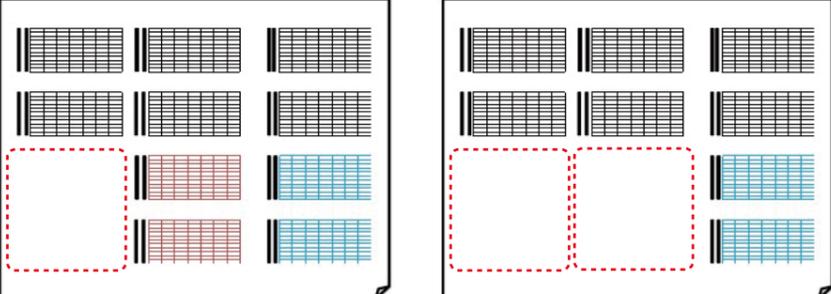
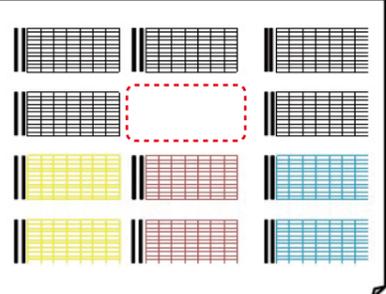
The nozzle check pattern can be printed in the service mode without compensation.

- **How to read nozzle check pattern**

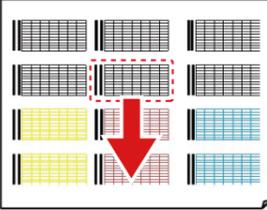


• **Printing failure sample images of nozzle check pattern**

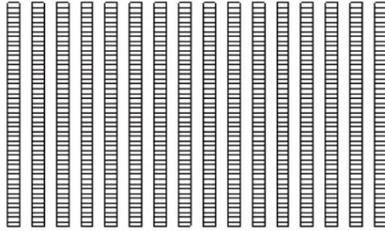
Print the service nozzle check pattern, check the applicable phenomenon, and try the solution in "Troubleshooting by printing failure."

All color non-ejection of ink	One-color or multi-color non-ejection of ink	Complete non-ejection of ink of Line A or Line B
		

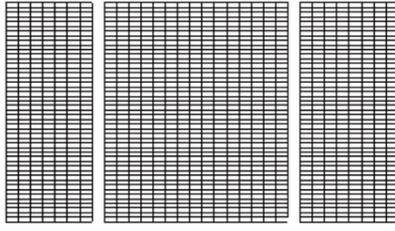
Non-ejection of ink with regularity of a line



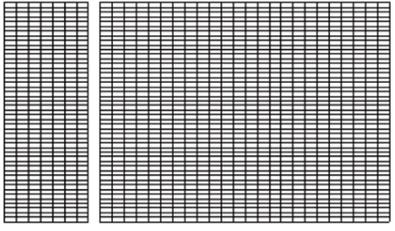
Per 2 nozzles



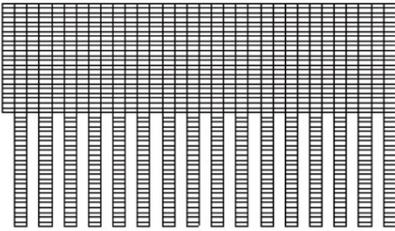
Per 16 nozzles



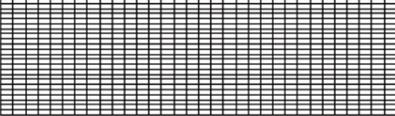
Per 32 nozzles



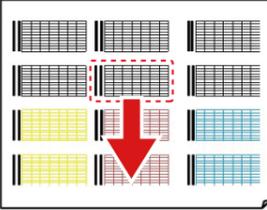
Upper or lower half of the lines



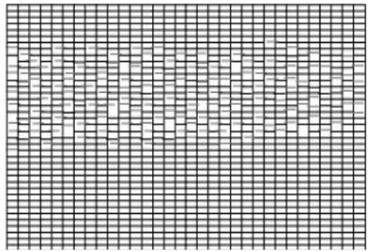
Upper or lower half of the lines



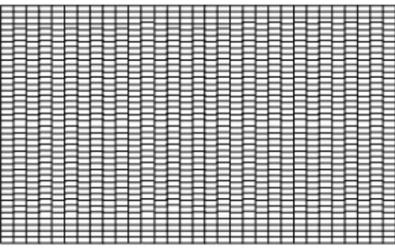
Dot mis-alignment



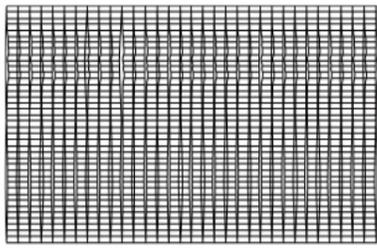
Dot mis-alignment and non-ejection of ink



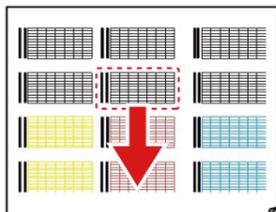
Dot mis-alignment



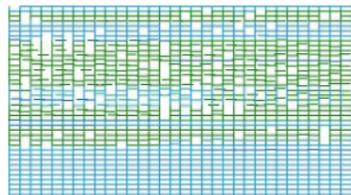
Double vertical line



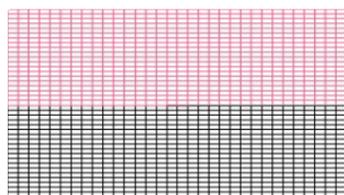
Mixed color



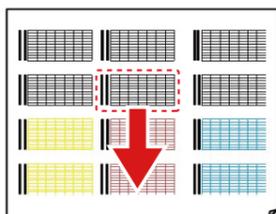
Mixed color (dot mis-alignment and non-ejection of ink)



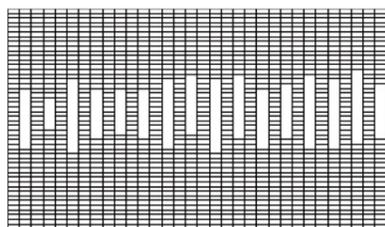
Mixed color (no non-ejection of ink)



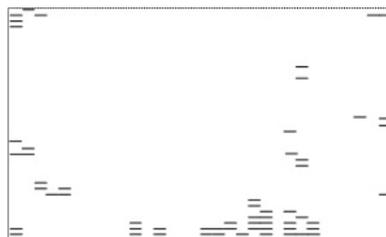
Non-ejection of ink without regularity of a line



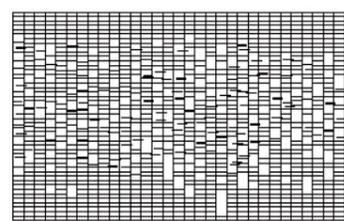
Non-ejection of ink without regularity of a line



Blur (small amount of ink ejection)



Non-ejection of ink and dot mis-alignment



• Troubleshooting by printing failure

All color non-ejection of ink

Sample image



Assumed causes

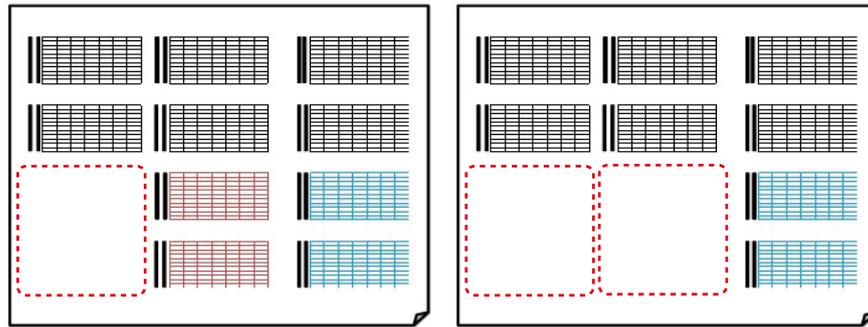
- Abnormal ink supply system
- Electric abnormality

Solution

1. Perform system cleaning, then check whether there is air in the tube.
 - a) When there is air in the tube, execute [SERVICE MODE > DIAGNOSIS > PURGE CHECK > PRESSURE CHECK].
 - a) When negative pressure is normally generated, replace the print head.
 - b) When negative pressure is not normally generated, replace the following part:
 - PURGE UNIT
 - b) When there is no air in the tube, execute [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK], then check the diagnosis result of "LONG FFC CHECK." shows "NG," replace the following part:
 - FLEXIBLE CABLE UNIT
2. Replace any of the following parts:
 - CARRIAGE RELAY PCB UNIT
 - MAIN PCB UNIT
 - POWER SUPPLY UNIT

One-color or multi-color non-ejection of ink

Sample image



Assumed causes

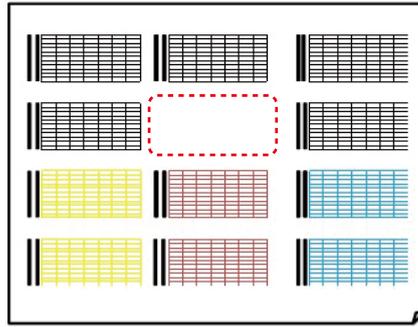
- Abnormal ink supply system
- Electric abnormality

Solution

1. Perform system cleaning, then check whether there is air in the tube.
 - a) When there is air in the tube, execute [SERVICE MODE > DIAGNOSIS > PURGE CHECK > PRESSURE CHECK].
 - a) When negative pressure is normally generated, replace the print head.
 - b) When negative pressure is not normally generated, replace the following part:
 - PURGE UNIT
 - b) When there is no air in the tube, execute [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK], then check the diagnosis result of "LONG FFC CHECK." It shows "NG," replace the following part:
 - FLEXIBLE CABLE UNIT
2. Replace any of the following parts:
 - CARRIAGE RELAY PCB UNIT
 - MAIN PCB UNIT
 - POWER SUPPLY UNIT

Complete non-ejection of ink of Line A or Line B

Sample image



Assumed causes

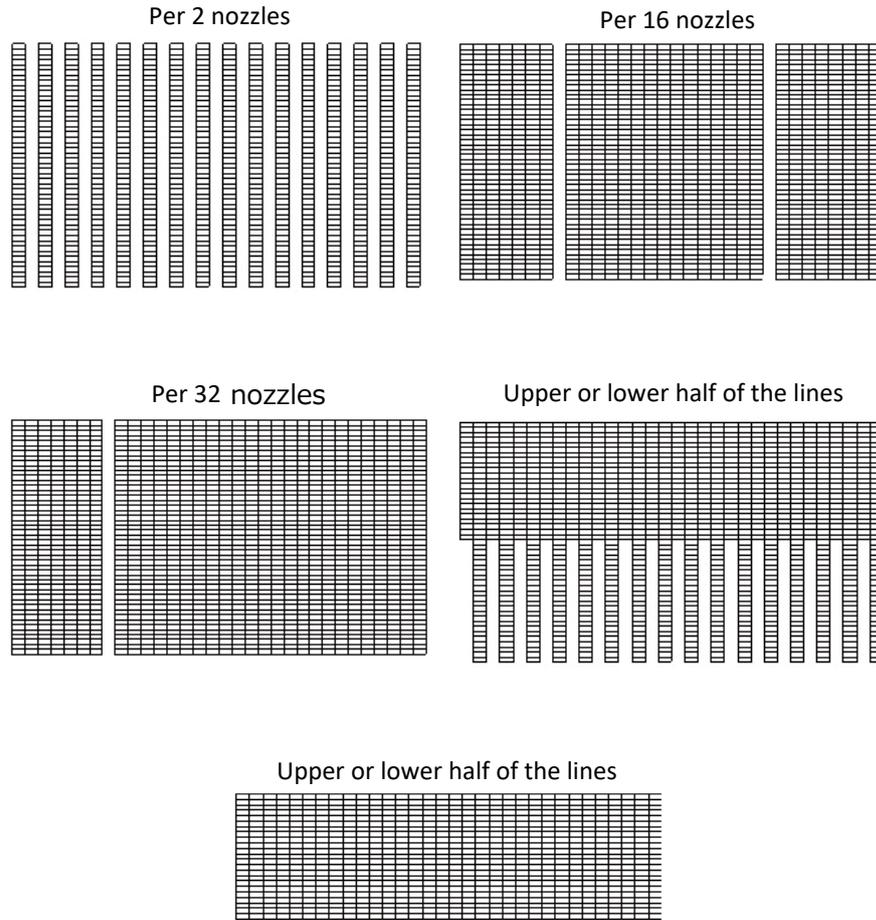
- Abnormal ink supply system
- Electric abnormality

Solution

1. Remove the print head, then clean the print head and carriage contacting part.
2. Install the print head, and execute [SERVICE MODE > DAGNOSIS > HEAD CNT CHECK].
 - a) When the diagnosis result shows "NG," replace the print head.
 - b) When the diagnosis result shows "OK," execute [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK], then check the diagnosis result of "LONG FFC CHECK." It shows "NG," replace the following part:
When the diagnosis result shows "NG," replace the following part:
 - FLEXIBLE CABLE UNIT
3. When the problem is not resolved, replace the print head or replace either of the following parts:
 - CARRIAGE RELAY PCB UNIT
 - MAIN PCB UNIT

Non-ejection of ink with regularity of a line

Sample image



Assumed causes

- Defective print head

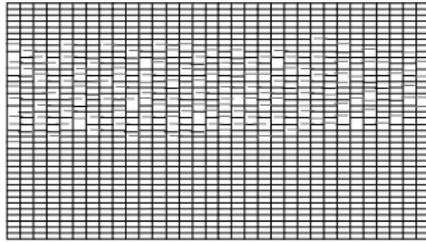
Solution

1. Replace the print head.
-

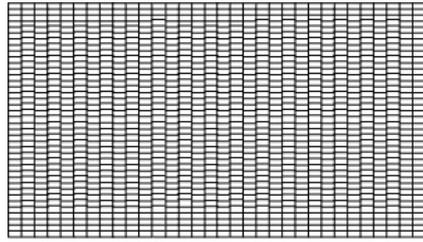
Dot mis-alignment

Sample image

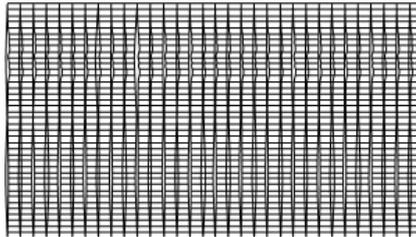
Dot mis-alignment and non-ejection of ink



Dot mis-alignment



Double vertical line



Assumed causes

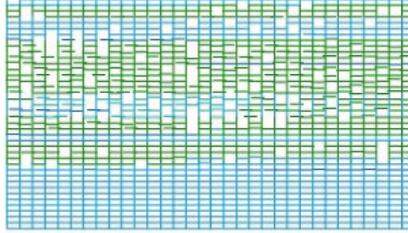
- Defective print head

Solution

1. Perform system cleaning.
 2. When the problem is not resolved, replace the print head.
-

Mixed color (dot mis-alignment and non-ejection of ink)

Sample image



Assumed causes

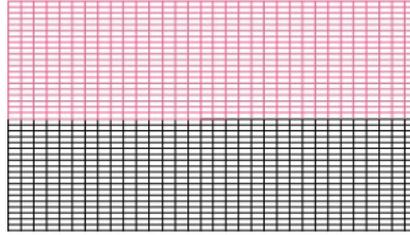
- Defective print head
- Abnormal purging system

Solution

1. When the ink accumulates at the cap of the purge unit, replace the following part:
 - PURGE UNIT
 2. Perform system cleaning.
 3. When the problem is not resolved, replace the print head.
-

Mixed color (no non-ejection of ink)

Sample image



Assumed causes

- Abnormal ink supply system
- Defective print head

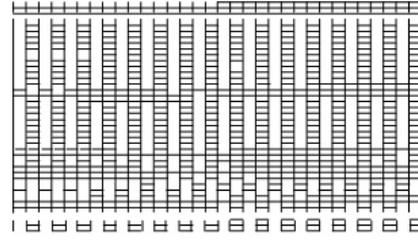
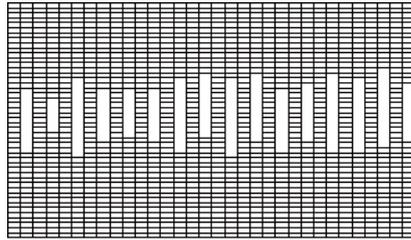
Solution

1. Perform system cleaning.
 2. When the ink accumulates at the cap of the purge unit, replace the following part:
 - PURGE UNIT
 3. When the problem is not resolved, replace the print head or the following part:
 - SUB INK TANK UNIT R
-

Non-ejection of ink without regularity of a line

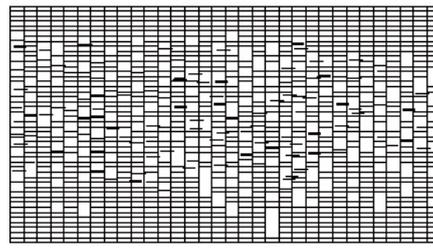
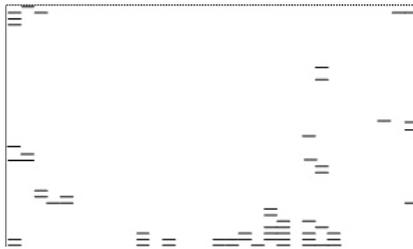
Sample image

Non-ejection of ink without regularity of a line



Blur (small amount of ink ejection

Non-ejection of ink and dot mis-alignment



Assumed causes

- Electrical factor

Solution

1. Execute [SERVICE MODE > DIAGNOSIS > HEAD CNT CHECK]. When the diagnosis result shows "NG," replace the print head.
2. Execute [SERVICE MODE > DIAGNOSIS > CR SYSREM > CHECK]. When the diagnosis result of "LONG FFC CHECK" shows "NG," replace the following part:
 - FLEXIBLE CABLE UNIT
3. When the problem is not resolved even after system cleaning is executed, replace the print head.
4. When the problem still occurs, replace either of the following parts:
 - CARRIAGE RELAY PCB UNIT
 - MAIN PCB UNIT

1-3. By Error Code

1-3-1. How to Read Error Code

When trouble occurs on this product, error messages are indicated on the operation panel.

Errors are divided into three categories as follows.

Error category	Description
Hardware error	The message appears when the trouble is caused by the main unit.
Jam	The message appears when the trouble is caused by the main unit.
Alarm	The message appears when some functions are lost.

• Code system

- Hardware error

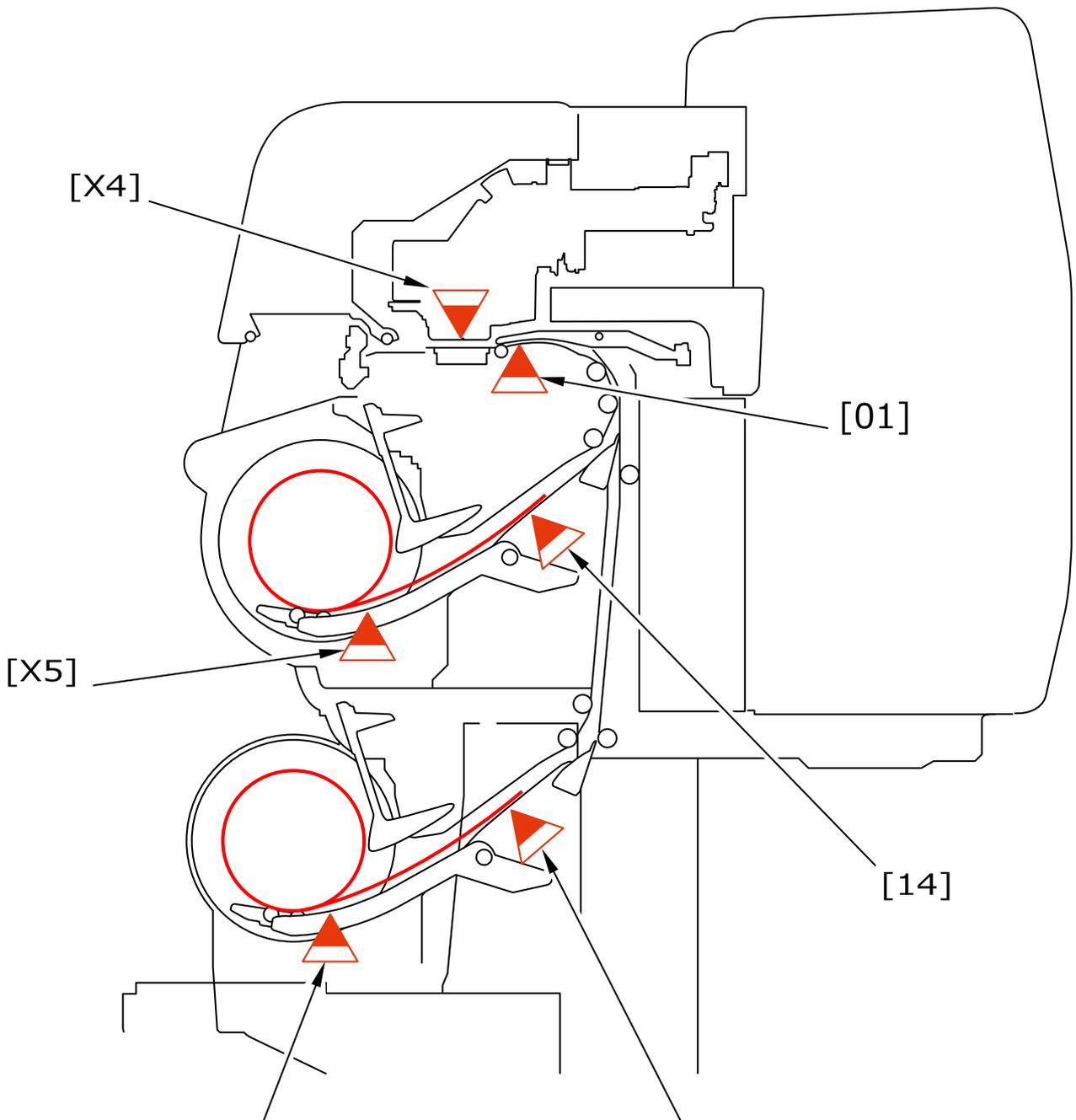
Code system	Description
ECMx-Yyyg	<p>ECMx: E code</p> <p>EC0x: Carriage system EC1x: Paper feed system EC2x: Print system EC3x: Ink supply system EC4x: Waste ink system EC5x: Electric unit</p> <p>Nyyg: Detail code</p> <p>4yyy: After the error is resolved, the error is required to be reset when the printer is launched in the service mode.*1</p> <p>Detail code other than the above: Error resetting is not required.</p> <p>Last digit of detail code: Indicates ink color of ink tank</p> <p>0: PBK 1: Y 2: M 3: C 6: MBK</p>

*1 When an error with the detail code "4yyy" or "5yyy" occurs, start the printer in the service mode after the error is resolved, and release the error following the instructions on the panel at the start-up of the printer (Note that it is not required to release the error "EC51-4091" and "EX51-4092" in the service mode). Until the error is resolved, the printer cannot be shut down and be started even selecting [OK] in the error releasing screen at the start-up of the service mode. For how to release the error, refer to "[3-2-1. How to Start Service Mode.](#)"

- Jam error

Code system	Description
aabbcc	<p>aa: Jammed unit</p> <ul style="list-style-type: none"> 00: Printer main unit 31: Lower roll unit FF: Unidentified <p>bb: Jam type</p> <ul style="list-style-type: none"> 11: Paper feed failure (roll paper) 12: Paper feed failure (cut paper) 21: Skew in paper feeding 22: Paper edge detection failure in paper feeding 31: Paper floating, paper folding 40: Cut error 51: Paper take-up failure 52: Paper take-up failure <p>00: Unidentified</p> <p>cc: Jammed part</p> <ul style="list-style-type: none"> 11: Between [14] upper paper entry sensor and [01] paper entry sensor Between [13] lower paper entry sensor and [01] paper entry sensor 12: [01] Paper entry sensor and the end of paper feeding 13: Between [X5] upper roll paper set sensor and [14] upper paper entry sensor Between [X6] lower roll paper set sensor and [13] lower paper entry sensor 15: Between paper loading and the end of paper feeding 21: [X4] Multi sensor 30: Platen, feed roller, front output guide 40: Cutter 50: Take-up part 00: Unidentified

Sensors



- Operator error and warning

Code system	Description
YYYY	

- Other errors

Other error code system:

Support number:

The error code for users indicated on PCs and online manuals. For service technicians, see the error code for service technicians described in this manual to perform troubleshooting.

Alarm code:

The error code to control operator error and warning in UGW.

(90xxxx is indicated in UGW (xxxx is the alarm code).)

Ink tank-related alarm codes

Detail codes	Last digit number of detail codes (x =)				
	0	1	2	3	6
140x	0021	0022	0023	0024	0027
231x	0321	0322	0323	0324	0327
250x	0301	0304	0303	0302	0307
254x	0112	0115	0114	0113	0118
270x	0661	0662	0663	0664	0667
	0681	0682	0683	0684	0687
	0741	0742	0743	0744	0747
	0761	0762	0763	0764	0767
	0781	0782	0783	0784	0787
271x	0701	0702	0703	0704	0707
	0721	0722	0723	0724	0727
	0801	0802	0803	0804	0807
	0821	0822	0823	0824	0827
	0841	0842	0843	0844	0847
273x	0601	0602	0603	0604	0607

- **Log display**

- **How to check error log**

Error history is able to be checked with the operation panel, status print, service log (PRINT INF), and UGW. The checkable error categories are as follows.

Error log	Operation panel	Status print	Service log (PRINT INF)	UGW
Hardware error	Indicated	Indicated	Indicated	Indicated
Jam error	Indicated	Indicated	Indicated* ¹	Indicated
Operator error, warning	Indicated, not indicated	Indicated, Indicated	Indicated, indicated	Indicated* ¹ , indicated* ¹

*1: Not all of the errors are indicated.

- How to read error log

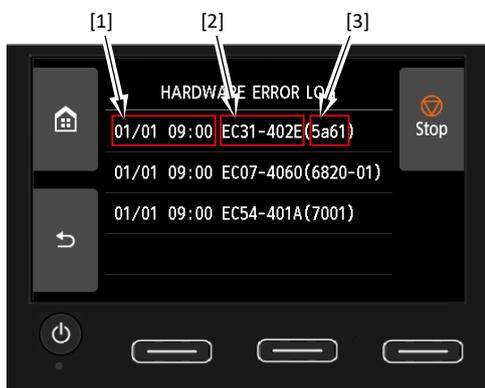
How to read error log in the service mode and the user mode is shown below.

Hardware error

Service mode

SERVICE MODE > PRINTER STATUS > ERROR LOG > HARDWARE ERROR LOG

Displayed screen



Displayed contents

[1] Time and date of the error occurrence [2] Error code (EC code - detail code) [3] Support number

When each item is selected, the detailed contents of each item such as number of sheets printed when an error occurs (in A4 equivalent), temperature (Celsius and Fahrenheit), and humidity are displayed.

User mode

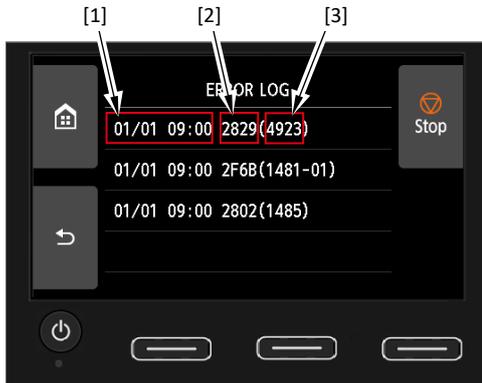
Home screen > Printer information > Error history > Hardware error

Operato error

Service mode

SERVICE MODE > PRINTER STATUS > ERROR LOG > ERROR LOG

Displayed screen



Displayed contents

[1] Time and date of the error occurrence [2] Detail code [3] Support number

When each item is selected, the detailed contents of each item such as number of sheets printed when an error occurs (in A4 equivalent), temperature (Celsius and Fahrenheit), and humidity are displayed.

User mode

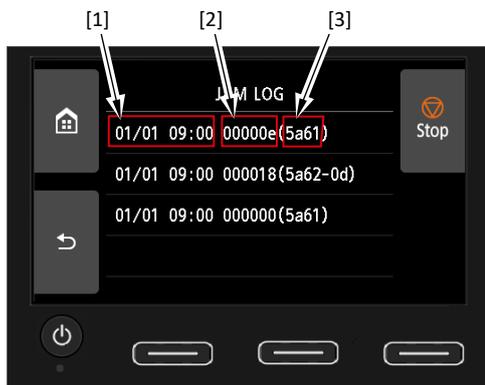
Home screen > Printer information > Error history > Recoverable error

Jam

Service mode

SERVICE MODE > PRINTER STATUS > ERROR LOG > JAM LOG

Displayed screen



Displayed contents

[1] Time and date of the error occurrence [2] Jam code [3] Support number

User mode

Home screen > Printer information > Error history > Paper feed/transfer error

1-3-2. Details of Hardware Errors

• Hardware errors

EC01-2F90	Carriage overload (Support number: 4801)
------------------	---

Detection description

The carriage motor keeps 100% output for more than a specified duration, and the carriage encoder detects that the carriage moves more than a constant length (10 mm or more).

Handling

1. Clean the carriage shaft.
2. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3054 and J3201)
 - FLEXIBLE CABLE UNIT
3. Move the carriage manually.
When the heavy load is applied to its operation, or the carriage does not move, replace the following part:
 - BUSHING / CLEANER KIT
4. Replace the following part:
 - CARRIAGE UNIT
5. When the problem is not resolved, replace the following part:
 - MOTOR, DC, 47.8W (Carriage motor)

EC01-2F95	Carriage drive timeout (Support number: 4801)
------------------	--

Detection description

The carriage motor drives. However, even after a certain time has passed, a carriage encoder cannot detect that the carriage has moved to the specified position.

Handling

1. Clean the carriage shaft.
2. Move the carriage manually. When the heavy load is applied to its operation, replace the following part:
 - BUSHING / CLEANER KIT
3. Check the connections of the following cables:
 - Cable between the carriage motor and the main PCB (J3803)
 - HARNESS ASS'Y, L
4. Attach the following part properly or replace it:
 - BELT, CARRIAGE
5. Replace either of the following parts:
 - RAIL CLEANER UNIT S
 - MOTOR, DC, 47.8W (Carriage motor)
6. When the problem is not resolved, replace the following:
 - CARRIAGE UNIT

EC02-2F42 Complete non-ejection in one line of nozzles
(Support number: 1492)

Detection description

It was detected in the non-ejection nozzle detection that all the nozzles in Line A or Line B of the same color do not eject ink.

Handling

1. After the printer is restarted, confirm that the ink tube is filled with ink.
If not, replace the following part:
 - INK TUBE UNIT
2. Execute [SERVICE MODE > DIAGNOSIS > HEAD CNT CHECK].
When the diagnosis result shows "NG," clean the contact surface of the print head using a waste cloth without a nap.
3. Execute [SERVICE MODE > FUNCTION > INK FILLING], and then print the nozzle check pattern.
When the nozzle check pattern cannot be printed properly, replace the print head.

EC03-403A Print head voltage recognition failure
(Support number: B20A)

Detection description

The output of the print head power source cannot be detected that the carriage unit due to failure of the main PCB or the carriage PCB.

Handling

1. Remove the foreign material at the print head and the carriage unit contact part.
2. Clean the contact surface of the print head using a waste cloth without a nap.
3. Replace the print head.
4. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC03-4061 Carriage unit installation error
(Support number: 5106)

Detection description

The carriage unit for a different printer model is connected.

Handling

1. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Replace the following part:
 - CARRIAGE UNIT for this model
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC04-2F31 Carriage parking position error
(Support number: 4801)

Detection description

After non-ejection detection or the non-ejected nozzle adjustment, a carriage encoder detects that the carriage does not stop at the position where the non-ejection detection is performed.

Handling

1. Clean or replace the carriage encoder film.
 - FILM, TIMING SLIT STRIP
2. Clean the carriage shaft.
3. When the problem is not resolved, replace any of the following parts:
 - INK TUBE UNIT
 - CARRIAGE UNIT
 - BUSHING / CLEANER KIT

EC04-2F91 Carriage encoder error
(Support number: 4801)

Detection description

A carriage encoder cannot detect the carriage encoder film, and accordingly it cannot detect the carriage movement as well.

Handling

1. When an error occurs after the following cables are disconnected and reconnected, connect them properly:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Clean the carriage encoder film and attach it properly. Or replace the following part:
 - FILM, TIMING SLIT STRIP
3. Check the connection of the following cable:
 - Cable between the carriage encoder and the carriage relay PCB
4. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE ENCODER UNIT
 - CARRIAGE UNIT

EC05-2F92 Carriage drive error
(Support number: 4801)

Detection description

The carriage motor keeps 100% output for a given length of time, and the carriage encoder detects that the carriage has not traveled a distance specified by the firmware.

Handling

1. Remove the foreign material in the carriage operating area.
2. Check the connections of the following cables:
 - Cable between the carriage motor and the main PCB (J3803)
 - HARNESS ASS'Y, L
3. Attach the following part properly, or replace it.
 - BELT, CARRIAGE
4. Clean the following part and attach it properly. Or replace it:
 - FILM, TIMING SLIT STRIP
5. When the problem is not resolved, replace either of the following parts:
 - MOTOR, DC, 47.8W (Carriage motor)
 - CARRIAGE UNIT

EC06-2F9A Carriage lift motor error
(Support number: 4801)

Detection description

Overload on the lift motor.

Handling

1. Check the connections of the following cables:
 - Cable between the carriage lift motor with encoder and the main PCB (J5002)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - LIFT UNIT
3. When the problem is not resolved, replace the following part:
 - CARRIAGE UNIT

EC06-2F9B Carriage lift sensor error
(Support number: 4801)

Detection description

Although the carriage lift motor drives with generating larger than a constant torque, the carriage lift sensor cannot detect the flag is OFF or ON.

Handling

1. Check the connections of the following cables:
 - Cable between the carriage lift sensor and the carriage PCB
 - Cable between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Replace the following part:
 - LIFT UNIT
3. When the problem is not resolved, replace the following part:
 - CARRIAGE UNIT

EC06-2F9C Carriage docking error
(Support number: 4801)

Detection description

For the following reasons, the carriage lift motor does not drive with generating a specified torque, and the carriage lift sensor cannot detect the flag is OFF or ON as well.

- The carriage does not move to the lift position in the lift operation.
- The coupling is damaged.

Handling

1. Confirm that the carriage is located at the lift position when an error occurs.
 - a) When the carriage does not move to the lift position
Follow the handling for [EC05-2F92](#).
 - b) When the carriage has moved to the lift position, replace the damaged part.
 - i) When the coupling at the carriage unit side is damaged, replace the following part:
 - COUPLING, CARRIAGE
 - ii) When the coupling at the lift unit side is damaged, replace the following part:
 - CARRIAGE UNIT

EC07-2F19 Carriage acceleration sensor error
(Support number: 4801)

Detection description

Access to acceleration sensor is disabled when starting up the printer or returning from standby.

Handling

1. Check the connections of the following cables:
 - Cable between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Replace the following part:
 - CARRIAGE UNIT

EC07-4060 Carriage EEPROM error
(Support number: 6820)

Detection description

EEPROM defect in the carriage PCB is detected.

Handling

1. Check the connections of the following cables:
 - Cable between the carriage relay PCB and the main PCB (J3503, J3504 and J3201)
 - FLEXIBLE CABLE UNIT
2. Replace the following part:
 - CARRIAGE UNIT
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC0F-2F93 Carriage jam error
(Support number: 1318)

Detection description

The carriage on the jammed paper is detected.

Handling

1. Remove the foreign material such as jammed paper in the carriage unit operating area.
2. Replace the following part:
 - CARRIAGE UNIT

EC0F-2F96 Carriage motor error
(Support number: 4801)

Detection description

When a carriage-related error occurs, the print job requiring carriage mechanical operation is received.

Handling

1. Check the connections of the following cables:
 - Cable between the carriage motor and the main PCB (J3803)
 - HARNESS ASS'Y, L
 2. Attach the following part properly, or replace it.
 - BELT, CARRIAGE
 3. When the problem is not resolved, replace either of the following parts:
 - MOTOR, DC, 47.8W (Carriage motor)
 - CARRIAGE UNIT
-

EC11-2F2A Paper feed home position error
(Support number: 4801)

Detection description

Paper feed initialization operation fails at power-on.

Handling

1. Remove the foreign material inside the printer.
2. When the paper feed motor does not drive and accordingly the error occurs, do the followings below.
 - 1) Check the connections of the following cables:
 - Cable between the paper feed motor and the main PCB (J3901)
 - HARNESS ASS'Y, L
 - 2) Replace the following part:
 - PAPER FEED MOTOR UNIT
3. Attach the following part properly, or replace it.
 - BELT, PAPER TRANSPORT
4. Clean the following part, or replace it:
 - FILM, TIMING SLIT DISK
5. Check the connections of the following cables:
 - Cable between the paper feed home position sensor and the main PCB (J5201)
 - HARNESS ASS'Y, L
6. Replace the following part:
 - PAPER FEED ENCODER UNIT

EC12-2F29 Paper feed motor drive timeout
(Support number: 4801)

Detection description

The paper feed encoder cannot detect the specified number of the slits of rotation even after a specified time passes.

Handling

1. Remove the foreign material inside the printer.
2. Clean or replace the following part:
 - FILM, TIMING SLIT DISK
3. Attach the following part properly, or replace either of the following parts:
 - BELT, PAPER TRANSPORT
 - FLANGE, PULLEY
4. When the problem is not resolved, replace either of the following parts:
 - PAPER FEED MOTOR UNIT
 - PAPER FEED ENCODER UNIT

EC12-2F2B Paper feed overload
(Support number: 4801)

Detection description

Paper feed motor keeps 100% output for a certain period.

Handling

1. Remove the foreign material inside the printer.
2. Clean or replace the following part:
 - FILM, TIMING SLIT DISK
3. Attach the following part properly, or replace it:
 - BELT, PAPER TRANSPORT
4. When the problem is not resolved, replace either of the following parts:
 - PAPER FEED MOTOR UNIT
 - PAPER FEED ENCODER UNIT

EC12-2F2C Paper feed motor error
(Support number: 4801)

Detection description

A driving command for paper feed motor is received after the paper feed motor-related error occurs.

Handling

1. Remove the foreign material inside the printer.
2. Clean or replace the following part:
 - FILM, TIMING SLIT DISK
3. Attach the following part properly, or replace it:
 - BELT, PAPER TRANSPORT
4. When the problem is not resolved, replace either of the following parts:
 - PAPER FEED MOTOR UNIT
 - PAPER FEED ENCODER UNIT

EC13-2F17 Platen suction fan error
(Support number: 4801)

Detection description

The specified number of times of lock signal is continuously detected when the suction fan operation starts.

Handling

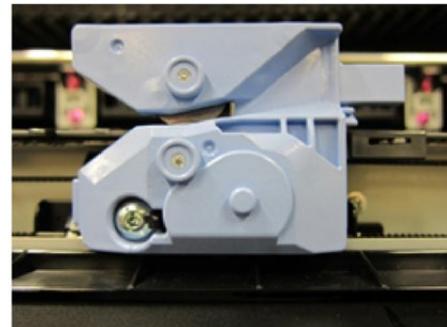
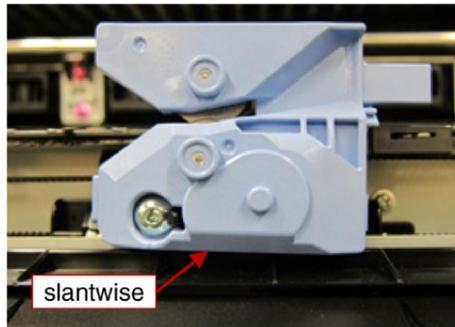
1. Check the connections of the following cables:
 - Cable between the vacuum fan and the main PCB (J4901)
 - HARNESS ASS'Y, R SIDE FRONT
 - HARNESS ASS'Y, R
 2. Replace the following part:
 - SUCTION FAN UNIT
 3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

Detection description

- A cutter home position sensor cannot be detected.
- Abnormal encoder value is detected when returning the cutter to the home position.

Handling

1. Remove the foreign material on the cutter blade.
2. Attach the cutter properly.



3. Replace the following part:
 - CUTTER UNIT S
4. Check the connections of the following cables:
 - Cable between the cutter home position sensor and the main PCB (J5102)
 - HARNESS ASS'Y, RSIDE FRONT
 - HARNESS ASS'Y, R
5. Replace the following part:
 - PHOTOINTERRUPTER, RPI-2500 (Cutter home position sensor)
6. When the problem is not resolved, replace either of the following parts:
 - CUTTER MOTOR UNIT, W/ENCODER
 - CUTTER BLADE UNIT

**EC16-2021 Upper active roll brake motor drive timeout
(Support number: 4801)**

Detection description

- Even after the upper active roll brake motor is driven for a specified time, the upper active roll brake motor encoder cannot detect the specified number of the slits of rotation.
- It is detected that the current exceeding the threshold continues to flow from the upper active roll brake motor for a specified time or longer.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the upper spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
 - Cable between the upper spool lock solenoid and the main PCB (J5401)
 - HARNESS ASS'Y, L
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Upper)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Upper)
 - NIP ARM UNIT

**EC16-2022 Upper active roll brake motor drive overload
(Support number: 4801)**

Detection description

The output value of the upper active roll brake motor reaches to the maximum value during pick-up of paper.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the upper spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
 - Cable between the upper spool lock solenoid and the main PCB (J5401)
 - HARNESS ASS'Y, L
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Upper)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Upper)
 - NIP ARM UNIT

EC16-2027**Upper active roll brake motor error****(Support number: 4801)****Detection description**

A driving command is received after the upper active roll brake motor-related error occurs.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the upper spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
 - Cable between the upper spool lock solenoid and the main PCB (J5401)
 - HARNESS ASS'Y, L
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Upper)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Upper)
 - NIP ARM UNIT

EC16-202A**Upper active roll brake motor drive control error****(Support number: 4801)****Detection description**

The main PCB detects the control abnormality of the upper active roll brake motor.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the upper spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
 - Cable between the upper spool lock solenoid and the main PCB (J5401)
 - HARNESS ASS'Y, L
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Upper)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
6. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC16-202E Upper roll spool not installed
(Support number: 100E)

Detection description

When the upper left spool lock solenoid is locked, the upper left spool set sensor and the upper right spool set sensor cannot detect the upper spool.

Handling

1. Attach the upper spool properly.
2. Load the recommended paper.
3. When the following part is damaged, replace it:
 - COVER SPL GEAR UNIT
4. Check the connections of the following cables:
 - Cable between the upper left spool set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, L
 - Cable between the upper right spool set sensor and the main PCB (J5102)
 - HARNESS ASS'Y, R SIDE FRONT
 - HARNESS ASS'Y, R
5. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Upper left spool set sensor)
 - SPOOL SENSOR UNIT (Upper right spool set sensor)
6. When the problem is not resolved, replace either of the following parts:
 - SPOOL LOCK UNIT
 - SPOOL LOCK UNIT, RIGHT

EC16-2038 Upper active roll brake motor calibration error
(Support number: 4801)

Detection description

Calibration of upper active roll brake motor fails.

Handling

1. Remove the spool, and execute [SERVICE MODE > ADJUSTMENT > UPPER ARB CALIB].
2. Remove the foreign material at the paper pickup assembly.
3. Attach the upper spool properly.
4. Load the recommended paper.
5. Check the connections of the following cables:
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
 - Cable between the upper spool lock solenoid and the main PCB (J5401)
 - HARNESS ASS'Y, L
6. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Upper)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
7. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

Detection description

- Even after the lower active roll brake motor is driven for a specified time, the lower active roll brake motor encoder cannot detect the specified number of the slits of rotation.
- It is detected that the current exceeding the threshold continues to flow from the lower active roll brake motor for a specified time or longer.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the lower spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower spool lock solenoid and the lower roll unit control PCB (J205)
 - HARNESS ASS'Y, LO SPL SOL
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Lower)
 - NIP ARM UNIT

Detection description

The output value of the lower active roll brake motor reaches to the maximum value during pick-up of paper.

Handling

1. Remove the foreign material at the paper pickup assembly.
 2. Attach the lower spool properly.
 3. Load the recommended paper.
 4. Check the connections of the following cables:
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower spool lock solenoid and the lower roll unit control PCB (J205)
 - HARNESS ASS'Y, LO SPL SOL
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Lower)
 - NIP ARM UNIT
-

Detection description

- The timing when lower roll drive timeout or lower roll drive overload occurs, operation instruction is indicated by firmware.
- When the timing when lower roll drive timeout or lower roll drive overload occurs, operation instruction is indicated by firmware.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the lower spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower spool lock solenoid and the lower roll unit control PCB (J205)
 - HARNESS ASS'Y, LO SPL SOL
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Lower)
 - NIP ARM UNIT

Detection description

The main PCB detects the control abnormality of the lower active roll brake motor.

Handling

1. Remove the foreign material at the paper pickup assembly.
2. Attach the lower spool properly.
3. Load the recommended paper.
4. Check the connections of the following cables:
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower spool lock solenoid and the lower roll unit control PCB (J205)
 - HARNESS ASS'Y, LO SPL SOL
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
5. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
6. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC17-202D **No lower roll unit**
(Support number: 1875)

Detection description

- The lower roll unit is not recognized when starting printing from the lower roll.
- The lower roll unit is not recognized despite feed available state of the lower roll.

Handling

1. Check the connections of the following cables:
 - Cables between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
2. Replace either of the following parts:
 - I/F PCB UNIT, RU
 - RELAY PCB UNIT, RU
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC17-202F **Lower roll spool detection error**
(Support number: 100F)

Detection description

When the lower spool lock solenoid is locked, the lower left spool set sensor and the upper right spool set sensor cannot detect the upper spool.

Handling

1. Attach the lower spool properly.
2. Load the recommended paper.
3. When the following part is damaged, replace it:
 - COVER SPL GEAR UNIT
4. Check the connections of the following cables:
 - Cable between the lower left spool set sensor and the lower roll unit control PCB (J206)
 - HARNESS ASS'Y, LO SPLSET L
 - Cable between the lower right spool set sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RU MAIN
 - HARNESS ASS'Y, LO FLAP SPLSET
 - Cables between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
5. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Lower left spool set sensor)
 - SPOOL SENSOR UNIT (Lower right spool set sensor)
6. When the problem is not resolved, replace either of the following parts:
 - SPOOL LOCK UNIT
 - SPOOL LOCK UNIT, RIGHT

EC17-2039 Lower active roll brake motor calibration error
(Support number: 4801)

Detection description

Calibration of lower active roll brake motor fails.

Handling

1. Remove the spool, and execute [SERVICE MODE > ADJUSTMENT > LOWER ARB CALIB].
2. Remove the foreign material at the paper pickup assembly.
3. Attach the lower spool properly.
4. Load the recommended paper.
5. Check the connections of the following cables:
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower spool lock solenoid and the lower roll unit control PCB (J205)
 - HARNESS ASS'Y, LO SPL SOL
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
6. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - LEVER ASS'Y, SPL LOCK R
7. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC17-203A Non-supported lower roll unit installed
(Support number: 1039)

Detection description

Installation of the lower roll unit for other than this printer is detected.

Handling

1. When the lower roll unit for other than this printer is installed, change to the one for this printer.
2. Check the connections of the following cables:
 - Cables between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace either of the following parts:
 - I/F PCB UNIT, RU
 - RELAY PCB UNIT, RU
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC17-203B Incompatible lower roll unit installed
(Support number: 1040)

Detection description

Installation of the lower roll unit for other than this printer

Handling

1. When the lower roll unit for other than this printer is installed, change to the one for this printer.
2. Check the connections of the following cables:
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace either of the following parts:
 - I/F PCB UNIT, RU
 - RELAY PCB UNIT, RU
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC17-203D Lower roll unit boot sequence error
(Support number: 4804)

Detection description

The motor driver boot sequence of lower roll unit was not completed properly in starting up.

Handling

1. Check the connections of the following cables:
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
2. Replace either of the following parts:
 - I/F PCB UNIT, RU
 - RELAY PCB UNIT, RU
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC19-2F21 Release lever position error
(Support number: 1214)

Detection description

Release lever for pinch roller is released during printing or paper feeding.

Handling

1. Close the release lever.
2. Attach the release lever for pinch roller and the pinch roller nip release lever sensor properly.
3. Check the connections of the following cables:
 - Cable between the pinch roller nip release lever sensor and the main PCB (J5102)
 - HARNESS ASS'Y, TANK CVR MFAN R
 - HARNESS ASS'Y, R
4. Replace the following part:
 - DETECT MICRO SWITCH (Pinch roller nip release lever sensor)
5. When the problem is not resolved, replace either of the following parts:
 - RELEASE LEVER UNIT
 - RELEASE LEVER LOCK UNIT

EC1B-2030 Upper roll nip arm sensor error
(Support number: 4801)

Detection description

Upper roll nip sensor cannot be detected when starting up the printer or switching nip position.

Handling

1. Remove the foreign material around the upper drive nip arm unit.
2. Check the connections of the following cables:
 - Cable between the upper roll nip sensor and the main PCB (J5305)
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
3. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Upper roll nip sensor)
 - DRIVE NIP ARM UNIT (Upper)

EC1B-2031 Upper roll nip arm drive timeout
(Support number: 4801)

Detection description

- Even if the upper roll nip motor is driven for the scheduled time, the upper roll nip motor encoder cannot detect the specified number of the slits of rotation.
- It is detected that the current exceeding the threshold continues to flow from the upper roll nip motor for a specified time or longer.

Handling

1. Remove the foreign material around the upper nip arm drive unit.
2. Check the connections of the following cables:
 - Cable between the upper roll nip motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
3. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Upper roll nip sensor)
 - DRIVE NIP ARM UNIT (Upper)

EC1B-2032 Upper roll nip arm drive overload
(Support number: 4801)

Detection description

The upper roll nip motor keeps 100% output for the specified time.

Handling

1. Remove the foreign material around the upper nip arm drive unit.
2. Check the connections of the following cables:
 - Cable between the main PCB (J5401) and the upper roll nip motor with encoder
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
3. When the problem is not resolved, replace the following part:
 - DRIVE NIP ARM UNIT (Upper)

EC1B-2033 Upper roll nip arm motor error
(Support number: 4801)

Detection description

An operation is commanded when any hardware error occurs in the upper roll nip motor.

Handling

1. Remove the foreign material around the upper nip arm drive unit.
2. Connect the following cable properly:
 - Cable between the upper roll nip motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
3. When the problem is not resolved, replace the following part:
 - DRIVE NIP ARM UNIT (Upper)

EC1C-2034 Lower roll nip arm sensor error
(Support number: 4801)

Detection description

Lower roll nip sensor cannot be detected when starting up the printer or switching nip position.

Handling

1. Remove the foreign material around the lower nip arm drive unit.
2. Check the connections of the following cables:
 - Cable between the lower roll nip sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Lower roll nip sensor)
 - DRIVE NIP ARM UNIT (Lower)

EC1C-2035 Lower roll nip arm drive timeout
(Support number: 4801)

Detection description

- Even if the lower roll nip motor is driven for the scheduled time, the lower roll nip motor encoder cannot detect the specified number of the slits of rotation.
- It is detected that the current exceeding the threshold continues to flow from the lower roll nip motor for a specified time or longer.

Handling

1. Remove the foreign material around the lower nip arm drive unit.
2. Check the connections of the following cables:
 - Cable between the lower roll nip sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Lower roll nip sensor)
 - DRIVE NIP ARM UNIT (Lower)

EC1C-2036 Lower roll nip arm drive overload
(Support number: 4801)

Detection description

The upper roll nip motor keeps 100% output for the specified time.

Handling

1. Remove the foreign material around the lower nip arm drive unit.
2. Check the connections of the following cables:
 - Cable between the lower roll nip motor and the lower roll unit control PCB (J202)
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. When the problem is not resolved, replace the following part:
 - DRIVE NIP ARM UNIT (Lower)

EC1C-2037 Lower roll nip arm motor error
(Support number: 4801)

Detection description

An operation is commanded when any hardware error occurs in the lower roll nip motor.

Handling

1. Remove the foreign material around the lower nip arm drive unit.
2. Check the connections of the following cables:
 - Cable between the lower roll nip motor and the lower roll unit control PCB (J202)
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. When the problem is not resolved, replace the following part:
 - DRIVE NIP ARM UNIT (Lower)

EC1D-2050 Upper roll paper set sensor error
(Support number: 4805)

Detection description

The communication with the upper roll paper set sensor failed when loading the upper roll paper.

Handling

1. Check the connections of the following cables:
 - Cable between the upper roll paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
2. Replace the following part:
 - NIP ARM SENSOR UNIT (Upper)

EC1E-2053 Lower roll paper set sensor error
(Support number: 4805)

Detection description

The communication with the lower roll paper set sensor failed when loading the lower roll paper.

Handling

1. Check the connections of the following cables:
 - Cable between the lower roll paper set sensor and the lower roll unit control PCB (J402)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, LO ROLL SEP RLY
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
2. Replace the following part:
 - NIP ARM SENSOR UNIT (Lower)

EC21-282D Print head life reached (reboot request)
(Support number: 140C)

Detection description

The operating time of the currently-installed print head reaches the specified one.

Handling

1. Restart the printer.

EC21-282E Print head life reached (print head replacement request)
(Support number: 1403)

Detection description

After "EC21-282D" error occurs, the printer does not recover by restarting the printer.

Handling

1. Replace the print head.

EC21-2F43 Non-ejection of ink detected
(Support number: 1494)exe

Detection description

Non-ejection of ink in the nozzles whose numbers are not smaller than the predetermined number is detected.

Handling

1. Restart the printer.
2. Perform System Cleaning.
 - When the ink tube is not filled with ink, replace either of the following parts:
 - INK TUBE UNIT
 - SUB INK TANK UNIT R
3. Print the service nozzle check pattern.
 - When the pattern is not printed properly, replace the print head.

EC21-2F44	Non-ejection of ink detected (Support number: 1492)
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Detection description

At the rate of fifty or more non-ejection nozzles per one nozzle have increased since last non-ejection detection.

Handling

1. Perform Deep Cleaning.
2. Print the service nozzle check pattern.

When the pattern is not printed properly, refer to [1-2-2. Nozzle Check Pattern](#) to implement the solution in the applicable pattern.

EC21-2F50	Print head voltage error (Support number: 1477)
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Detection description

Print head driving voltage leak is detected at print head replacement.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F51	Print head voltage error (Support number: 4801)
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Detection description

Print head driving voltage leak is detected at starting up, cleaning, or print starting.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F53 Print head voltage error (print head replacement request)
(Support number: 1478)

Detection description

After "EC21-2F51" error occurs, the printer does not recover by restarting the printer.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F54 Print head voltage error
(Support number: 4801)

Detection description

Abnormal print head driving voltage of the print head is detected.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F56 Print head voltage error
(Support number: 1477)

Detection description

Print head driving voltage leak is detected at print head replacement.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F57 **Print head voltage error**
(Support number: 4801)

Detection description

Print head driving voltage leak is detected at starting up, cleaning, or print starting.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F58 **Print head voltage error**
(Support number: 1478)

Detection description

After "EC21-2F57" error occurs, the printer does not recover by restarting the printer.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F59 **Print head voltage error**
(Support number: 4801)

Detection description

Abnormal print head driving voltage is detected.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F60 Print head voltage error
(Support number: 1477)

Detection description

Print head driving voltage leak is detected at print head replacement.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F61 Print head voltage error
(Support number: 4801)

Detection description

Print head driving voltage leak is detected at starting up, cleaning, or print starting.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC21-2F62 Print head voltage error
(Support number: 1478)

Detection description

After "EC21-2F61" error occurs, the printer does not recover by restarting the printer.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

**EC21-2F67 Print head voltage error
(Support number: 4801)**

Detection description

Abnormal print head driving voltage is detected during printing.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

**EC21-2F6D Print head EEPROM checksum error
(Support number: 140F)**

Detection description

Abnormity is detected in checksum judgement of EEPROM at print head installation or starting up.

Handling

1. Replace the print head.

**EC21-2F70 Print head diode temperature error (reboot request)
(Support number: 4801)**

Detection description

Abnormal temperature of the diode is detected at diode correction.

Handling

1. Restart the printer.

**EC21-2F71 Print head diode temperature error (reboot request)
(Support number: 4801)**

Detection description

Diode temperature is detected to be unstable at diode correction.

Handling

1. Restart the printer.

**EC21-2F72 Print head diode correction error (reboot request)
(Support number: 4801)**

Detection description

Abnormal value is detected at print head diode correction.

Handling

1. Restart the printer.

EC21-2F73 Print head diode temperature error (print head replacement request)
(Support number: 1408)

Detection description

The printer does not recover by rebooting after the "EC21-2F70" error occurs.

Handling

1. Replace the print head.

EC21-2F74 Print head diode temperature error (print head replacement request)
(Support number: 1409)

Detection description

The printer does not recover by rebooting after the "EC21-2F71" error occurs.

Handling

1. Replace the print head.

EC21-2F75 Print head diode correction error (print head replacement request)
(Support number: 140A)

Detection description

The printer does not recover by rebooting after the "EC21-2F72" error occurs.

Handling

1. Replace the print head.

EC21-2F7E Print head abnormal temperature rising (reboot request)
(Support number: 5200)

Detection description

Abnormal temperature rising on the print head heater board is detected.

Handling

1. Restart the printer.

EC21-2F7F Print head abnormal temperature rising (print head replacement request)
(Support number: 1478)

Detection description

The printer does not recover by rebooting after the "EC21-2F7E" error occurs.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
 2. Replace the print head.
 3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
 4. Replace the following part:
 - CARRIAGE RELAY PCB UNIT
 5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT
-

EC22-2F30 Head management sensor position adjustment error
(Support number: 4801)

Detection description

In non-ejection detection, the head management sensor cannot detect the ink ejected from the nozzles although the carriage moves to the position for the non-ejection detection.

Handling

1. Execute [HOME > Setup > Maintenance > Print Head Cleaning > Deep Cleaning].
2. When the ink tube is not filled with ink, replace either of the following parts:
 - INK TUBE UNIT
 - PURGE UNIT
3. Print the nozzle check pattern.
When the pattern is not printed properly, replace the print head.
4. Remove the foreign material around the print head management sensor.
5. Check the connections of the following cables:
 - Cables between the main PCB (J5004) and the print head management sensor unit
 - HARNESS ASS'Y, HEAD MANAGEMENT
 - HARNESS ASS'Y, R
6. Replace any of the following parts:
 - HEAD MANAGEMENT SENSOR UNIT
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC22-2F47 Head management sensor unit failure
(Support number: 4801)

Detection description

The head management sensor unit is detected to be faulty at starting up or non-ejection detection.

Handling

1. Remove the foreign material such as paper debris around the print head management sensor.
2. Clean the light-emitting part and the light receiving part of the print head management sensor.
3. Check the connections of the following cables:
 - Cables between the main PCB (J5004) and the print head management sensor light receiver PCB
 - HARNESS ASS'Y, HEAD MANAGEMENT
 - HARNESS ASS'Y, R
4. Replace the following part:
 - HEAD MANAGEMENT SENSOR UNIT
5. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC22-4001 End-of-life of counter: HMa1
(Support number: 5B16)

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC23-260E **Gap adjustment error**
(Support number: 4801)

Detection description

Abnormal light volume of the multi sensor is detected.

It also occurs when GAP detection is executed in normal paper pickup in the following conditions:

- The PCB replacement mode is not executed after the main PCB is replaced.
 - After the multi sensor unit or the carriage unit is replaced, [SERVICE MODE > ADJUSTMENT > GAP CALIB] (gap adjustment) is not executed.
-

Handling

1. Execute [SERVICE MODE > ADJUSTMENT > GAP CALIB].
2. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
3. Replace any of the following parts:
 - MULTI SENSOR UNIT
 - CARRIAGE UNIT
 - MAIN PCB UNIT

<When an error occurs after MAIN PCB UNIT is replaced>

- Start the printer in the service mode and execute the PCB replacement mode.

<When an error occurs after MULTI SENSOR UNIT and CARRIAGE UNIT are replaced>

- Execute [SERVICE MODE > ADJUSTMENT > GAP CALIB].
-

EC23-2F11 **Multi sensor communication error**
(Support number: 4801)

Detection description

Communicating with multi sensor related-hardware, such as LED driver and multi sensor EEPROM, is failed.

Handling

1. Reinstall the firmware.
 2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

EC23-2F18 **Carriage PCB communication error**
(Support number: 4801)

Detection description

Writing and reading to the carriage PCB is failed.

Handling

1. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504 and J3201)
 - FLEXIBLE CABLE UNIT
 2. Replace the following part:
 - CARRIAGE UNIT
 3. Reinstall the firmware.
-

EC23-2F32	Multi sensor error (Support number: 4801)
------------------	--

Detection description

Abnormity is detected in multi sensor EEPROM reading at each automatic adjustment, paper edge detection, GAP adjustment, and starting up.

Handling

1. Connect the following part properly. Or replace it:
 - MULTI SENSOR UNIT
2. Replace the following part:
 - CARRIAGE UNIT

EC24-4049	Abnormal temperature by temperature-humidity sensor (Support number: 8200)
------------------	---

Detection description

Abnormity is detected by the temperature-humidity sensor at reading temperature.

Handling

1. Check the connections of the following cables:
 - Cable between the temperature-humidity sensor and the main PCB (J4903)
 - HARNESS ASS'Y, L
2. Replace the following part:
 - SENSOR, HUMIDITY
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC24-404A	Abnormal humidity by temperature-humidity sensor (Support number: 8200)
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Detection description

Abnormity is detected by the temperature-humidity sensor at reading humidity.

Handling

1. Check the connections of the following cables:
 - Cable between the temperature-humidity sensor and the main PCB (J4903)
 - HARNESS ASS'Y, L
2. Replace the following part:
 - SENSOR, HUMIDITY
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC24-404B	Temperature-humidity sensor non-connection (Support number: 8200)
------------------	--

Detection description

Abnormity is detected by the temperature-humidity sensor at reading temperature and humidity.

Handling

1. Check the connections of the following cables:
 - Cable between the temperature-humidity sensor and the main PCB (J4903)
 - HARNESS ASS'Y, L
2. Replace the following part:
 - SENSOR, HUMIDITY
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC25-2F16 Mist fan error
(Support number: 4801)

Detection description

A mist fan lock signal is detected.

Handling

1. Connect the following cables properly:
 - Cable between the left mist fan and the main PCB (J4902)
 - HARNESS ASS'Y, L
 - Cable between the right mist fan and the main PCB (J4901)
 - HARNESS ASS'Y, R
2. Remove the foreign material around the mist fan.
3. Replace any of the following parts:
 - MIST FAN DUCT UNIT 1
 - MIST FAN DUCT UNIT 2
 - MIST FAN DUCT UNIT 3
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC25-4001 End-of-life of counter: Mi1
(Support number: 5B20)

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC31-2F09 Wiper blade motor error
(Support number: 4801)

Detection description

A wiper blade encoder has detected an abnormality in the operation of the wiper blade motor.

Handling

1. Remove the foreign material around the purge unit.
2. Check the connections of the following cables:
 - Cable between the wiper blade motor and the main PCB (J5002)
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PURGE UNIT

EC31-2F10 Wiper blade motor overload
(Support number: 4801)

Detection description

The motor keeps 100% output for the specified time.

Handling

1. Remove the foreign material around the purge unit.
2. Replace the following part:
 - PURGE UNIT

EC31-2F1B Wiper position sensor error
(Support number: 4801)

Detection description

The wiper position sensor does not detect the blade unit position although the blade unit moved to the specified position.

Handling

1. Remove the foreign material around the purge unit.
2. Check the connections of the following cables:
 - Cable between the wiper position sensor and the main PCB (J5101)
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PURGE UNIT

EC31-2F1C Purge main cam sensor error
(Support number: 4801)

Detection description

- The home position of purge main cam position cannot be detected when starting up the printer.
- Moving the carriage to the specified position is disabled when capping.

Handling

1. Remove the foreign material inside the printer.
2. Clean the carriage encoder film and attach it properly. Or replace the following part:
 - FILM, TIMING SLIT STRIP
3. Check the connections of the following cables:
 - Cable between the carriage encoder and the carriage relay PCB
 - CARRIAGE ENCODER UNIT
 - Cable between the purge main cam sensor and the main PCB (J5101)
 - HARNESS ASS'Y, R
4. Replace the following part:
 - PURGE UNIT
5. When the problem is not resolved, replace the following part:
 - CARRIAGE UNIT

EC31-2F1D Purge motor error
(Support number: 4801)

Detection description

The main cam sensor or the pump roller sensor fails to detect the operation of the purge motor although the purge motor operates properly.

Handling

1. Check the connections of the following cables:
 - Cable between the purge main cam sensor and the main PCB (J5101)
 - Cable between the pump roller sensor and the main PCB (J5101)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - PURGE UNIT

EC31-2F1E Purge motor overload
(Support number: 4801)

Detection description

It is detected that the purge motor keeps its full rotation for a certain time.

Handling

1. Remove the foreign material around the purge unit.
2. Check the connections of the following cables:
 - Cable between the purge motor and the main PCB (J5002)
 - Cable between the purge encoder and the main PCB (J5003)
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PURGE UNIT

EC31-2F1F Pump roller sensor error
(Support number: 4801)

Detection description

The pump roller sensor fails to detect the rotation of the pump roller when driving the pump unit.

Handling

1. Remove the foreign material around the purge unit.
2. Check the connections of the following cables:
 - Cable between the purge motor and the main PCB (J5002)
 - Cable between the purge encoder and the main PCB (J5003)
 - Cable between the pump roller sensor and the main PCB (J5101)
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PURGE UNIT

EC31-2F22 Purge motor drive timeout
(Support number: 4801)

Detection description

Although the current is flowed to the purge motor only for the specified time, the purge encoder cannot detect the operation completion of the purge motor.

Handling

1. Remove the foreign material around the purge unit.
 2. Check the connections of the following cables:
 - Cable between the purge motor and the main PCB (J5002)
 - Cable between the purge encoder and the main PCB (J5003)
 - HARNESS ASS'Y, R
 3. Replace the following part:
 - PURGE UNIT
-

EC31-2F23	Wiper blade motor drive timeout (Support number: 4801)
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Detection description

Although the current is flowed to the wiper blade motor only for the specified time, the wiper blade encoder cannot detect the operation completion of the wiper blade motor.

Handling

1. Remove the foreign material around the purge unit.
2. Check the connections of the following cables:
 - Cable between the wiper blade motor and the main PCB (J5002)
 - Cable between the wiper blade encoder and the main PCB (5003)
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PURGE UNIT

EC31-2F94	Carriage obstacle error (Support number: 4801)
------------------	---

Detection description

It is detected that the carriage strikes to the foreign material in the traveling direction.

Handling

1. Remove the foreign material such as paper debris around the purge unit.
2. When the purge lock pin strikes to the carriage unit during the carriage operation, replace the following part:
 - PURGE UNIT
3. When the problem is not resolved, replace the following part:
 - CARRIAGE UNIT

EC31-4001	End-of-life of counter: PG1, PG2, and PG3 (Support number: 5C00)
------------------	---

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC32-4001	End-of-life of counter: CR4 and CR6 (Support number: B510)
------------------	---

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC33-2F3E	Operation error 2 in [Prepare to move] (Support number: 4801)
------------------	--

Detection description

Installation of an ink tank is detected during ink vacuum operation before moving the printer.

Handling

1. Perform [Prepare to move] again.

EC33-402x	Ink supply valve leak at initial ink filling (Support number: 5A60) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)
------------------	---

Detection description

In initial ink filling, when the vacuum operation is executed while the ink supply valve is closed in order to check whether the ink supply valve can be closed properly, the result of the detection by ink level detection pin (shorter) does not change from “Detects ink” to “Detects no ink.”

Handling

1. Replace the following part:
 - SUB INK TANK UNIT R

EC34-2602	Right ink supply valve drive timeout (Support number: 4801)
------------------	--

Detection description

Due to overload of ink valve motor or detection failure of ink supply valve position sensor, the operation completion of ink supply valve driving cannot be detected.

Handling

1. Check the connections of the following cables:
 - Cable between the ink supply valve position sensor and the main PCB (J5001)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - SUB INK TANK UNIT R
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC34-2605	Right ink agitation valve drive timeout (Support number: 4801)
------------------	---

Detection description

Due to overload of ink valve motor or detection failure of ink agitation valve position sensor, the operation completion of agitation pump driving cannot be detected.

Handling

1. Check the connections of the following cables:
 - Cables between the ink agitation valve position sensor and the main PCB (J5001)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - SUB INK TANK UNIT R
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

Detection description

The right ink valve motor encoder cannot detect driving of the ink valve motor even if the ink valve motor is driven.

Handling

1. Check the connections of the following cables:
 - Cable for the ink valve motor with encoder and the main PCB (J5002)
 - HARNESS ASS'Y, R
 2. Replace the following part:
 - SUB INK TANK UNIT R
 3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

Detection description

Complete non-ejection in all colors through non-ejection detection.

Handling

1. When an error occurs after the TUBE UNIT replacement, replace the following part properly:
 - SIX-RING RUBBER CHAIN



SIX-RING RUBBER CHAIN is not attached properly.

2. Remove the foreign material around the print head management sensor.
3. When the ink tube is not filled with ink, perform the following handlings:
 - 1) Execute [SERVICE MODE > DIAGNOSIS > PURGE CHECK > PRESSURE CHECK] to check vacuum operation.
 - a) When the suction pressure of CAP is normal, replace the following part:
 - TUBE UNIT
 - b) When the suction pressure of CAP is not normal, replace the following part:
 - PURGE UNIT
 - 2) Replace the following part:
 - SUB INK TANK UNIT R
4. Print the service nozzle check pattern
When a printing failure appears in the print result, replace the print head.
5. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
 - Cable between the print head management sensor and the main PCB (J5004)
 - HARNESS ASS'Y, R
6. Replace either of the following parts:
 - RAIL CLEANER UNIT S
 - CARRIAGE UNIT
7. When the problem is not resolved, replace the following part:
 - HEAD MANAGEMENT SENSOR UNIT

EC3F-2F41	Non-ejection of ink detected (Support number: 1492)
------------------	--

Detection description

Non-ejection in all nozzles of the one color is detected through non-ejection detection after cleaning.

Handling

1. Perform Deep Cleaning.
2. When the ink tube is not filled with ink, replace either of the following parts:
 - TUBE UNIT
 - SUB INK TANK UNIT R
3. Print the service nozzle check pattern.
When the pattern is not printed properly, refer to [1-2-2. Nozzle Check Pattern](#) to implement the solution in the applicable pattern.

EC41-4001	End-of-life of counter: Wia7 (Support number: 5B20)
------------------	--

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC43-4001	End-of-life of counter: Wia1 (Support number: 5B20)
------------------	--

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC44-4001	End-of-life of counter: Wia2 (Support number: 5B20)
------------------	--

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC45-4001	End-of-life of counter: Wia3 (Support number: 5B20)
------------------	--

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC47-4001	End-of-life of counter: Wia6 (Support number: 5B20)
------------------	--

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC48-4001	End-of-life of counter: WF1 (Support number: 5B21)
------------------	---

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC49-4001	End-of-life of counter: Wia5 (Support number: 5B20)
------------------	--

Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC4A-4001	End-of-life of counter: WP1 (Support number: 5B10)
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Detection description

The parts counter of the affected part reached the value indicating the warning level 2.

Handling

1. Refer to "5-2. Consumable Parts" to replace the affected part.

EC51-203C	Motor driver launch error (Support number: 4803)
------------------	---

Detection description

Motor driver boot sequence was not completed properly in starting up.

Handling

1. Restart the printer.
2. Replace the following part:
 - MAIN PCB UNIT

EC51-2F07	USB Vbus overcurrent (Support number: 9000)
------------------	--

Detection description

Vbus overcurrent is detected.

Handling

1. Remove USB flash drive and restart the printer.
 2. Check the connections of the following cables:
 - Cable between the main PCB (J803) and the USB host PCB
 - CABLE, USB RELAY
 3. Replace either of the following part:
 - USB HOST PCB UNIT
 - MAIN PCB UNIT
-

EC51-2F14 Main PCB I2C bus error
(Support number: 4801)

Detection description

At the following timing, accessing DA converter for multi sensor is disabled.

- At the gain setting before reading a variety of patterns such as print head alignment pattern
 - At the gain setting before sheet edge detection
-

Handling

1. Reinstall the firmware.
2. Replace the following part:
 - MAIN PCB UNIT

EC51-2F15 Insufficient memory
(Support number: 4801)

Detection description

The errors requiring the memory larger than the memory capacity for error notification have occurred simultaneously.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. Replace the following part:
 - MAIN PCB UNIT

EC51-2F38 Top cover open
(Support number: 1214)

Detection description

The top cover sensor detects that the top cover was opened during specified period such as during or around carriage operation.

Handling

1. Close the top cover and restart the printer.
 2. Check the connections of the following cables:
 - Cable between the right top cover sensor and the main PCB (J3802)
 - HARNESS ASS'Y, INTERLOCK SW
 - HARNESS ASS'Y, RSIDE FRONT
 - HARNESS ASS'Y, R
 - Cable between the left top cover sensor and the main PCB (J3801)
 - HARNESS ASS'Y, INTERLOCK SW
 - HARNESS ASS'Y, L
 3. Replace the following part:
 - PHOTOINTERRUPTER, RPI-2500 (Top cover sensor)
 4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

EC51-2FDE	Right ink level detection error (Support number: 4801)
------------------	---

Detection description

The longer ink level detection pin in the sub ink tank unit detects "Detects no ink" and the shorter ink level detection pin detects "Detects ink."

Handling

1. Check the connections of the following cables:
 - Cable between the ink level detection PCB and the main PCB (J5501)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - MAIN PCB UNIT
3. When the problem is not resolved, replace the following part:
 - SUB INK TANK UNIT R

EC51-3000	Network sub-system-related error (Support number: 6900)
------------------	--

Detection description

Starting up sequence of network sub-system is failed.

Handling

1. Reinstall the firmware.
2. Check the connection of the following cable:
 - Cable between the wireless LAN PCB and the main PCB (J802)
3. Replace any of the following parts:
 - <TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410>
 - WIRELESS LAN PCB UNIT
 - <TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420>
 - FFC, WIRELESS LAN
 - WIRELESS LAN BOARD ASS'Y
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3001	Network sub-system-related error (Support number: 6901)
------------------	--

Detection description

Network sub-system does not respond.

Handling

1. Reinstall the firmware.
2. Check the connection of the following cable:
 - Cable between the wireless LAN PCB and the main PCB (J802)
3. Replace any of the following parts:
 - <TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410>
 - WIRELESS LAN PCB UNIT
 - <TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420>
 - FFC, WIRELESS LAN
 - WIRELESS LAN BOARD ASS'Y
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3002	Wireless LAN device non-connection (Support number: 6910)
------------------	--

Detection description

Wireless LAN device is not recognized.

Handling

1. Reinstall the firmware.
2. Check the connection of the following cable:
 - Cable between the wireless LAN PCB and the main PCB (J802)
3. Replace any of the following parts:
 - <TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410>
 - WIRELESS LAN PCB UNIT
 - <TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420>
 - FFC, WIRELESS LAN
 - WIRELESS LAN BOARD ASS'Y
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3004	Wired LAN driver error (Support number: 6920)
------------------	--

Detection description

The fatal error occurs in the Ethernet driver.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. Attach the I/F PCB to the main PCB properly.
4. Replace either of the following parts:
 - MAIN PCB UNIT
 - I/F PCB UNIT

EC51-3005	Wired LAN hardware error (Support number: 6921)
------------------	--

Detection description

Ethernet driver is physically broken.

Handling

1. Attach the I/F PCB to the main PCB properly.
2. Replace either of the following parts:
 - MAIN PCB UNIT
 - I/F PCB UNIT

EC51-3006	Network sub-system-related error (Support number: 6902)
------------------	--

Detection description

Starting up sequence of network sub-system fails.

Handling

1. Restart the printer.
 2. Reinstall the firmware.
 3. Replace the following part:
 - MAIN PCB UNIT
-

EC51-3100 USB controller-related error
(Support number: 6930)

Detection description

Bus error occurs at USB control-out end point.

Handling

1. Restart the printer.
2. Connect the USB cable supporting USB2.0 properly
3. Reinstall the firmware.
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3101 USB controller-related error
(Support number: 6931)

Detection description

USB control-in end point bus error occurs.

Handling

1. Restart the printer.
2. Connect the USB cable supporting USB2.0 properly.
3. Reinstall the firmware.
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3102 USB controller-related error
(Support number: 6932)

Detection description

Bus error occurs at print bulk-out end point.

Handling

1. Restart the printer.
2. Connect the USB cable supporting USB2.0 properly.
3. Reinstall the firmware.
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3103 USB controller-related error
(Support number: 6933)

Detection description

Bus error occurs at the USB print bulk-in end point.

Handling

1. Restart the printer.
2. Connect the USB cable supporting USB2.0 properly.
3. Reinstall the firmware.
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3104	USB sub-system-related error (Support number: 6940)
------------------	--

Detection description

USB firm error occurs.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3105	USB sub-system-related error (Support number: 6941)
------------------	--

Detection description

USB command error occurs.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3106	USB sub-system-related error (Support number: 6942)
------------------	--

Detection description

USB watchdog error occurs.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3107	USB sub-system-related error (Support number: 6943)
------------------	--

Detection description

USB-Relax firmware data copy error occurs.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3108	USB sub-system-related error (Support number: 6944)
------------------	--

Detection description

USB-Relax firmware instruction copy error occurs.

Handling

1. Restart the printer.
 2. Reinstall the firmware.
 3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

EC51-3109	USB sub-system-related error (Support number: 6945)
------------------	--

Detection description

Boot error of USB-Relax firmware occurs.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3110	USB sub-system-related error (Support number: 6946)
------------------	--

Detection description

Initial value set error of USB-Relax firmware watchdog occurs.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3301	Sub-chip connection error (Support number: 4801)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, connecting to sub-chip fails.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3302	Sub-chip initialization error (Support number: 4801)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, initialization of the sub-chip fails.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3303	Sub-chip firmware loading error (Support number: 4801)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, downloading sub-chip firmware fails.

Handling

1. Restart the printer.
 2. Reinstall the firmware.
 3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

EC51-3304	Media updating failure (Support number: 4905)
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Detection description

Updating the printer media information fails.

Handling

1. Restart the printer.
2. Update the printer media information with Media Configuration Tool.
3. Reinstall the firmware.
4. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3306	Main PCB flash memory error (Support number: 4905)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, initialization of NAND file system fails.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3307	Main PCB flash memory error (Support number: 4905)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, formatting of NAND file system fails.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3308	Checksum error at firmware update (Support number: 4905)
------------------	---

Detection description

Checksum of the firmware sent at firmware updating does not match.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3309	Memory allocation failure (Support number: 4905)
------------------	---

Detection description

Securing the operation area in RAM during firmware updating fails.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-330A	Firmware size error (Support number: 4905)
------------------	---

Detection description

The size information described in the received firmware data and the size of the actually-received data does not match at firmware updating.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3401	uniFlow sub-system-related error (Support number: 4801)
------------------	--

Detection description

The uniFlow-related system is not booted within a specified time.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-3402	uniFlow sub-system-related error (Support number: 4801)
------------------	--

Detection description

The program of the uniFlow-related system cannot be loaded.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4041	Main PCB SROM failure (Support number: 6820)
------------------	---

Detection description

Deletion of the corresponding area in SROM during firmware updating fails.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4042	Main PCB SROM failure (Support number: 6820)
------------------	---

Detection description

Writing to SROM during firmware updating fails.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

**EC51-4045 Main PCB EEPROM error
(Support number: 6820)**

Detection description

Abnormity is detected when the information is written to the main PCB EEPROM.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

**EC51-4046 Main PCB flash memory error
(Support number: 6820)**

Detection description

Deletion of the corresponding area in NAND flash during firmware updating fails.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

**EC51-4047 Main PCB flash memory error
(Support number: 6820)**

Detection description

Writing to NAND flash during firmware updating fails.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

**EC51-404C Serial ID error
(Support number: 6820)**

Detection description

Mismatch of the serial ID in the backup PCB and the main PCB is detected in start-up of the printer.

Handling

<When this error occurs after MAIN PCB UNIT is replaced>

1. Start up the printer in service mode and perform PCB replacement mode.

<When this error occurs although MAIN PCB UNIT is not replaced>

1. Replace the following part:
 - MAIN PCB UNIT
 2. When the problem is not resolved, put back to the MAIN PCB UNIT that has been installed before the replacement, and replace the following part:
 - BACKUP PCB UNIT
-

EC51-404D	Model ID error (Support number: 6820)
------------------	--

Detection description

When starting up the printer, model ID mismatch between the main PCB and the backup PCB is detected.

Handling

<When this error occurs after MAIN PCB UNIT is replaced>

1. Start up the printer in service mode and perform PCB replacement mode.

<When this error occurs although MAIN PCB UNIT is not replaced>

1. Check the connections of the following cables:
 - Cable between the backup PCB and the main PCB (J601)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - MAIN PCB UNIT
3. When the problem is not resolved, put back to the MAIN PCB UNIT that has been installed before the replacement, and replace the following part:
 - BACKUP PCB UNIT

EC51-404E	Main PCB EEPROM error (Support number: 6820)
------------------	---

Detection description

Accessing main PCB EEPROM is disabled.

Handling

1. Reinstall the firmware.
2. Replace the following part:
 - MAIN PCB UNIT
3. When the problem is not resolved, put back to the MAIN PCB UNIT that has been installed before the replacement, and replace the following part:
 - BACKUP PCB UNIT

EC51-4070	Main PCB flash memory error (Support number: 6820)
------------------	---

Detection description

ECC error in NAND flash occurs during firmware updating.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4071	Main PCB flash memory error (Support number: 6820)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, initialization of NAND flash fails.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4072	Main PCB flash memory error (Support number: 6820)
------------------	---

Detection description

When starting up the printer or returning from power saving mode, formatting of NAND flash fails.

Handling

1. Reinstall the firmware.
2. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4090	Firmware version error (Support number: 6820)
------------------	--

Detection description

The version of the printer firmware does not support uniFLOW function.

Handling

1. Update the firmware to the latest version.
2. Restart the printer.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4091	Sub-system launch timeout (Support number: 4801)
------------------	---

Detection description

The uniFLOW-related system is not started up within the specified time period.

Handling

1. Restart the printer.
2. Reinstall the firmware.
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC51-4092	Sub-system load error (Support number: 4801)
------------------	---

Detection description

The program of the uniFLOW-related system cannot be loaded.

Handling

1. Restart the printer.
 2. Reinstall the firmware.
 3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT
-

EC51-5001	Start-up disabled (Support number: 7050)
EC51-5002	Start-up disabled (Support number: 7051)
EC51-5003	Start-up disabled (Support number: 7052)

Detection description

Starting up the printer fails.

Handling

1. Check the connections of the following cables:
 - Cable between the main PCB (J602) and the ID PCB
 - HARNESS ASS'Y, R
2. Replace the following part:
 - MAIN PCB UNIT
3. When the problem is not resolved, ask sales company in each region.

EC52-4038	Power supply unit voltage error (Support number: 9110)
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Detection description

Power supply from the power supply unit stops in stand by or printing.

Handling

1. Unplug the power cable, and restart the printer after ten seconds or longer pass.
2. Check the connections of the following cables:
 - Cable between the power supply unit and the main PCB (J4701)
 - HARNESS ASS'Y, POWER SUPPLY
3. Replace either of the following parts:
 - POWER SUPPLY UNIT
 - MAIN PCB UNIT

EC52-4039	Power supply unit voltage error (Support number: 9110)
------------------	---

Detection description

Power supply from the power supply unit stops at VH leak checking of head voltage.

Handling

1. Unplug the power cable, and restart the printer after ten seconds or longer pass.
2. Check the connections of the following cables:
 - Cable between the power supply unit and the main PCB (J4701)
 - HARNESS ASS'Y, POWER SUPPLY
3. Replace either of the following parts:
 - POWER SUPPLY UNIT
 - MAIN PCB UNIT

EC54-290A	Hard disk error (Support number: 4801)
------------------	---

Detection description

Hard disk detection at start-up fails.

Handling

1. Check the connections of the following cables:
 - Cables between the HDD and the main PCB (J1501 and J1502)
 - HDD CABLE ASS'Y
2. Replace either of the following parts:
 - HDD, MQ01ABU050W
 - MAIN PCB UNIT

EC54-290C	SED hard disk error (Support number: 4909)
------------------	---

Detection description

Unspecified SED hard disk settings is detected in starting up.

Handling

1. Restart the printer.

After the printer is restarted, the message “initialize the hard disk?” appears on the control panel. Select “Yes” and perform format.*

*: This error is generated when selecting “No” to the above message.
2. Replace either of the following parts:
 - HDD, MQ01ABU050W
 - MAIN PCB UNIT

EC54-290D	SATA BRIDGE error (Support number: 4801)
------------------	---

Detection description

Hard disk detection at the printer start-up fails. (failure in SATA BRIDGE IC)

Handling

1. Restart the printer.
2. Replace the following part:
 - MAIN PCB UNIT

EC54-2910	Hard disk error (Support number: 4801)
------------------	---

Detection description

Reading and writing to the hard disk is disabled.

Handling

1. Check the connections of the following cables:
 - Cables between the HDD and the main PCB (J1501 and J1502)
 - HDD CABLE ASS'Y
2. Replace either of the following parts:
 - HDD, MQ01ABU050W
 - MAIN PCB UNIT

EC54-2911	Hard disk error (Support number: 4801)
------------------	---

Detection description

Hard disk capacity difference is detected at start-up.

Handling

1. Check the connections of the following cables:
 - Cables between the HDD and the main PCB (J1501 and J1502)
 - HDD CABLE ASS'Y
2. Replace either of the following parts:
 - HDD, MQ01ABU050W
 - MAIN PCB UNIT

EC54-2912	Hard disk error (Support number: 4801)
------------------	---

Detection description

Hard disk model ID mismatch is detected at start-up.

Handling

1. Check the connections of the following cables:
 - Cables between the HDD and the main PCB (J1501 and J1502)
 - HDD CABLE ASS'Y
2. Replace either of the following parts:
 - HDD, MQ01ABU050W
 - MAIN PCB UNIT

EC54-2913	SED hard disk error (Support number: 4801)
------------------	---

Detection description

Installation of SED hard disk was not detected.

Handling

1. Check the connections of the following cables:
 - Cables between the HDD and the main PCB (J1501 and J1502)
 - HDD CABLE ASS'Y
2. Check if the genuine SED hard disk has been installed.
 - a) When it is installed, replace the following part:
 - MAIN PCB UNIT
 - b) When it is not installed, replace the following part:
 - HDD, MQ01ABU050W

EC54-2914	SED hard disk error (Support number: 4801)
------------------	---

Detection description

Performing the SED functioned command failed.

Handling

1. Check the connections of the following cables:
 - Cables between the HDD and the main PCB (J1501 and J1502)
 - HDD CABLE ASS'Y
 2. Replace either of the following parts:
 - HDD, MQ01ABU050W
 - MAIN PCB UNIT
-

EC55-2F20 **Flexible cable connection error**
(Support number: 4801)

Detection description

Abnormal flexible cable connection in carriage unit or abnormal flexible cable connection between the main PCB and the carriage relay PCB.

Handling

1. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Reconnect the power cable after unplugging from the AC outlet for ten seconds or longer, and restart the printer.
3. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC55-2F24 **Flexible cable connection error**
(Support number: 1468)

Detection description

Flexible cable connection at an angle or non-connection is detected in the carriage unit or between the main PCB and the carriage relay PCB.

Handling

1. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Reconnect the power cable after unplugging from the AC outlet for ten seconds or longer, and restart the printer.
3. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC55-2F6C **Print head temperature reading error**
(Support number: 4801)

Detection description

Temperature reading by the direct diode sensor failed.

Handling

1. Check the connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
2. Reconnect the power cable after unplugging from the AC outlet for ten seconds or longer, and restart the printer.
3. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

EC56-2FE0	Ink tank ROM unit power supply error (Support number: 6502)
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Detection description

The power is not supplied to ink tank ROMs.

Handling

1. If this error occurs when the first time a new ink tank is installed to the main unit, replace the ink tank.
2. Check the connections of the following cables:
 - Cable between the remaining ink detection PCB and the main PCB (J5501)
 - HARNESS ASS'Y, R
3. Replace the following part:
 - MAIN PCB UNIT
4. When the problem is not resolved, replace the following part:
 - SUB INK TANK UNIT R

EC57-4040	RTC error (Support number: 6702)
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Detection description

Recording of GMT in RTC on the interface PCB is not detected at printer start-up in user mode.

Handling

1. Replace the coin battery and set the time in [SERVICE MODE > OTHERS > RTC SETTING].
2. Replace the following part:
 - I/F PCB UNIT

EC57-404F	RTC connection error (Support number: 6700)
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Detection description

Reading and writing to RTC data is disabled at printer start-up in user mode.

Handling

1. Attach the ID PCB and the main PCB properly.
2. Replace the following part:
 - I/F PCB UNIT
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

EC58-2F12	Backup PCB EEPROM error (Support number: 4801)
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Detection description

Reading and writing to backup PCB EEPROM is disabled.

Handling

1. Check the connections of the following cables:
 - Cable between the backup PCB and the main PCB (J601)
 - HARNESS ASS'Y, R
2. Replace the following part:
 - BACKUP PCB UNIT
3. When the problem is not resolved, replace the following part:
 - MAIN PCB UNIT

• Jams

001111-2E3A Paper feeding failure (upper roll) (Support number: 1300)

Detection description

Feeding of the roll paper fails at the upper roll paper path. (Between the upper paper entry sensor and the paper entry sensor)

Handling

1. Check the following:
 - Stuck paper pieces
 - Mismatch of media size or media type
 - Paper turn-up at the top edge
 - Curly end edge of the roll paper
 - Feeding of the paper with strong stiffness or heavy roll paper
2. Release the release lever and reload the sheet.
3. Replace the following parts from the top and check if the error is removed after each replacement.
 - ROLL PAPER FEED SENSOR UNIT (Upper)
 - HARNESS ASS'Y, RLNIP PF SNS (Upper)
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - DRIVE NIP ARM UNIT (Upper)
 - ACTIVE ROLL BRAKE UNIT (Upper)

001112-2E3D Paper feeding failure (upper roll) (Support number: 1300)

Detection description

Feeding of the roll paper fails at the upper roll paper path. (Between the paper entry sensor and the end of paper feeding)

Handling

1. Check the following:
 - Stuck paper pieces
 - Mismatch of media size or media type
 - Paper turn-up at the top edge
 - Curly end edge of the roll paper
 - Feeding of the paper with strong stiffness or heavy roll paper
2. Release the release lever and reload the sheet.
3. Replace the following parts from the top and check if the error is removed after each replacement.
 - ROLL PAPER FEED SENSOR UNIT (Upper)
 - HARNESS ASS'Y, RLNIP PF SNS (Upper)
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - DRIVE NIP ARM UNIT (Upper)
 - MULTI SENSOR UNIT
 - ACTIVE ROLL BRAKE UNIT (Upper)

001113-2025 Upper active roll drive brake motor overload (in roll paper loading)
(Support number: 1328)

Detection description

The electric current reached to the maximum loadable value at the upper active roll brake motor control in paper loading (between the upper roll paper set sensor and the upper paper entry sensor).

<The assumed situation>

- The active roll brake motor receives load, e.g. due to touching the roll paper by the user, during roll paper front edge detection by the upper roll paper set sensor.
- Heavy roll paper is being loaded.

Handling

1. Attach the spool properly.
2. Reload the roll paper.
3. Replace the following part:
 - ACTIVE ROLL BRAKE UNIT (Upper)

001113-2051 Unable to pick up the upper roll paper (in roll paper loading)
(Support number: 1326)

Detection description

The upper roll paper set sensor fails to detect the roll paper front edge in roll paper feeding.

<The assumed situation>

- The front edge of the roll paper does not peel off from the roll paper.
- The spool does not rotate due to gear damage in paper feeding.
- Sensor malfunction

Handling

1. Reload the roll paper.
2. Check the connections of the following cables:
 - Cable between the upper paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
3. Replace any of the following parts:
 - NIP ARM SENSOR UNIT (Upper)
 - DRIVE NIP ARM UNIT (Upper)
 - ACTIVE ROLL BRAKE UNIT (Upper)

001113-2052 Unable to pick up the upper roll paper (in roll paper loading)
(Support number: 1300)

Detection description

The upper paper entry sensor fails to detect the roll paper front edge within the specified time period after the roll paper front edge is detected.

Handling

1. Reload the roll paper.
2. Check the connections of the following cables:
 - Cable between the upper paper entry sensor and the main PCB (J5305)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
3. Replace any of the following parts:
 - ROLL PAPER SENSOR FEED UNIT (Upper)
 - DRIVE NIP ARM UNIT (Upper)
 - ACTIVE RLL BRAKE UNIT (Upper)

001113-2056 Upper roll paper not loaded
(Support number: 1034)

Detection description

The upper paper set sensor fails to detect loading of the roll paper in roll paper feeding.

Handling

1. Check the connections of the following cables:
 - Cable between the upper paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
 - Cable between the upper paper entry sensor and the main PCB (J5305)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
2. Replace any of the following parts:
 - NIP ARM SENSOR UNIT (Upper)
 - ROLL PAPER SENSOR UNIT (Upper)
 - PHOTO-INTERRUPTER (Paper entry sensor)

001215-200D Paper detection failure
(Support number: 1322)

Detection description

Detecting cut sheet fails at the paper path. (Between paper loading and the end of paper feeding)

Handling

1. Release the release lever. Check the cut sheet length and paper jam.
2. Replace either of the following parts:
 - MULTI SENSOR UNIT
 - PHOTO-INTERRUPTER (Paper entry sensor)

001215-2016	Paper feeding failure (Support number: 1300)
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Detection description

Feeding of the cut sheet fails at the paper path. (Between paper loading and the end of paper feeding)

Handling

1. Reload the paper. (Check the stuck paper pieces and the paper top edge.)
2. Replace either of the following parts:
 - PAPER FEED ENCODER UNIT
 - MULTI SENSOR UNIT

001215-2E3C	Paper feeding failure (Support number: 1300)
--------------------	---

Detection description

Feeding of the cut sheet fails at the paper path. (Between paper loading and the end of paper feeding)

Handling

1. Check the stuck paper pieces and the paper top edge.
2. Check the connections of the following cables:
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
 - The multi sensor cable
3. Replace either of the following parts:
 - PAPER FEED ENCODER UNIT
 - MULTI SENSOR UNIT

002121-2010	Skew (Support number: 1317)
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Detection description

The multi sensor detects skew.

Handling

1. Release the release lever and reload the sheet.
(Reset to the spool with setting the paper straight.)
2. Replace either of the following parts:
 - Roll holder set
 - MULTI SENSOR UNIT

002221-200C	Paper detection failure (at the paper leading edge) (Support number: 1322)
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Detection description

The multi sensor fails to detect the paper during paper feeding.

Handling

1. Check the top edge of the paper and the media type.
 2. Release the release lever and reload the sheet.
(Reset to the spool with setting the paper straight.)
 3. Replace the following part:
 - MULTI SENSOR UNIT
-

**002221-2017 Paper detection failure (at the right edge of the paper)
(Support number: 1322)**

Detection description

The multi sensor fails to detect the paper during paper feeding.

The multi sensor detected that the paper edge at home position side was off 5 mm during paper feeding.*

*: Loading the paper being off the reference position may also cause this error.

Handling

1. Release the release lever and reload the sheet.
(Reset to the spool with setting the paper straight.)
2. Replace the following part:
 - MULTI SENSOR UNIT

**003130-201C Sheet edge detection error during printing - cut sheet
(Support number: 1300)**

Detection description

Paper jam occurs at the platen or feed roller part during printing, or media detection fails.

Handling

1. Release the release lever and reload the sheet, or replace it.
2. Replace the following part:
 - MULTI SENSOR UNIT

**003130-201D Paper edge detection error during printing - roll paper
(Support number: 1300)**

Detection description

Paper jam occurs at the platen or feed roller part during printing, or media detection fails.

Handling

1. Release the release lever and reload the sheet, or replace it.
2. Replace the following part:
 - MULTI SENSOR UNIT

**003130-2F93 Carriage jam error
(Support number: 1318)**

Detection description

The carriage on the jammed paper is detected.

Handling

1. Remove the foreign material such as jammed paper in the carriage unit operating area.
2. Replace the following part:
 - CARRIAGE UNIT

004040-2019

Cut failure

(Support number: 4920)

Detection description

This error occurs in the following conditions:

- Neither the number of cutter motor rotations nor rotation speed satisfy the specified rotation number and rotation speed during cutting.
- The edge detection position is off +/-5 mm or more from the reference position in edge detection after cutting.
- This error also occurs in the non-recommended use environment or when the paper in use does not support [Automatic cut].

Handling

1. Remove the foreign material on the front output and around the paper delivery source.
2. Use the recommended paper in the recommended environment.
3. When the problem is not resolved, replace the following part:
 - CUTTER BLADE UNIT

311111-2E3B

Paper feeding failure (lower roll)

(Support number: 1300)

Detection description

Feeding of the roll paper fails at the lower roll paper path. (Between the lower paper entry sensor and the paper entry sensor)

Handling

1. Remove the foreign material.
2. Check the stuck paper pieces and the paper top edge.
3. Check the connections of the following cables:
 - Cable between the lower paper entry sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 - Cables between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
4. Replace any of the following parts:
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - DRIVE NIP ARM UNIT (Lower)
 - ACTIVE ROLL BRAKE UNIT (Lower)

311112-2E3E**Paper feeding failure (lower roll)****(Support number: 1300)****Detection description**

Feeding of the roll paper fails at the lower roll paper path. (Between the paper entry sensor and the end of paper feeding)

Handling

1. Remove the foreign material.
2. Release the release lever, and check the stuck paper pieces and the paper top edge.
3. Check the connections of the following cables:
 - Cable between the lower paper entry sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cables between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
4. Replace any of the following parts:
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - DRIVE NIP ARM UNIT (Lower)
 - ACTIVE ROLL BRAKE UNIT (Lower)

311113-2026**Lower active roll brake motor drive overload (in roll paper loading)****(Support number: 1329)****Detection description**

The electric current reached to the maximum loadable value at the lower active roll brake motor control in paper loading (between the lower roll paper set sensor and the lower paper entry sensor).

<The assumed situation>

- The active roll brake motor receives load, e.g. due to touching the roll paper by the user, during roll paper front edge detection with lower paper set sensor.
- Heavy roll paper is being loaded.

Handling

1. Set the spool again and load the roll paper again.
2. Replace the following part:
 - ACTIVE ROLL BRAKE UNIT (Lower)

311113-2054 Unable to pick up the lower roll paper (in roll paper loading)
(Support number: 1327)

Detection description

The lower roll paper set sensor fails to detect the roll paper front edge in roll paper feeding.

<The assumed situation>

- The front edge of the roll paper does not peel off from the roll paper.
- The spool does not rotate due to gear damage in paper feeding.
- Sensor malfunction

Handling

1. Load the roll paper again.
2. Check the connections of the following cables:
 - Cable between the lower roll paper set sensor and the lower roll unit control PCB (J402)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, LO ROLL SEP RLY
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace any of the following parts:
 - NIP ARM SENSOR UNIT (Lower)
 - DRIVE NIP ARM UNIT (Lower)
 - ACTIVE RLL BRAKE UNIT (Lower)

311113-2055 Unable to pick up the lower roll paper (in roll paper loading)
(Support number: 1300)

Detection description

The lower paper entry sensor fails to detect the roll paper front edge within the specified time period after the lower roll paper set sensor detected the roll paper front edge.

Handling

1. Load the roll paper again.
2. Check the connections of the following cables:
 - Cable between the lower paper entry sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace any of the following parts:
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - NIP ARM SENSOR UNIT (Lower)
 - ACTIVE ROLL BRAKE UNIT (Lower)

311113-2057 Lower roll paper not loaded
(Support number: 1035)

Detection description

The lower roll paper set sensor fails to detect loading of the roll paper in lower roll paper feeding.

Handling

1. Load the roll paper again.
2. Check the connections of the following cables:
 - Cable between the lower paper set sensor and the lower roll unit control PCB (J402)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, LO ROLL SEP RLY
 - Cable between the lower paper entry sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 - Cables between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace any of the following parts:
 - NIP ARM SENSOR UNIT (Lower)
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - PHOTO-INTERRUPTER (Paper entry sensor)

315150-2921 Lower roll take-up error
(Support number: 4922)

Detection description

The paper feed amount by the active roll brake motor is larger than the paper feed amount by the paper feed motor.

Handling

1. Put the tape on the paper core and select [OK].
2. Replace the roll holder.
3. Replace the following parts from the top and check if the error is removed after each replacement.
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - COVER SPL GEAR UNIT

315250-2920 Lower roll take-up error
(Support number: 4922)

Detection description

The paper feed amount by the active roll brake motor is shorter than the paper feed amount by the paper feed motor.

Handling

1. Remove the foreign material.
2. Reduce the take-up amount by roll unit.
3. Replace the roll holder.
4. Replace the following parts from the top and check if the error is removed after each replacement.
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT
 - COVER SPL GEAR UNIT

Detection description

Paper jam occurs.

Handling

1. Check the following:
 - Mismatch of media size or media type
 - Paper turn-up at the top edge
 - Curly end edge of the roll paper
 - Feeding of the paper with strong stiffness or heavy roll paper
 2. Release the release lever, and reload the paper.
Check the stuck paper pieces and the paper top edge.
 3. Replace the following parts from the top and check if the error is removed after each replacement.
 - ROLL PAPER FEED SENSOR UNIT
 - HARNESS ASS'Y, RLNIP PF SNS
 - PHOTO-INTERRUPTER (Paper sentry sensor)
 - DRIVE NIP ARM UNIT
 - MULTI SENSOR UNIT
 - ACTIVE ROLL BRAKE UNIT
-

• Operator errors and warnings

100x	Low ink in the ink tank (Support number: 1500, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)
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Detection description

Ink dot count of the affected color indicates low ink level value or lower.

Handling

1. Replace the ink tank where an error has occurred.

1012	Print head non-ejection of ink (Support number: 3001, alarm code: 0017)
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Detection description

The number of non-ejection nozzles is zero to 100 after recovery cleaning of non-ejection detection. In addition, the number of non-ejection complementary disabled nozzles is 30 or more.

Handling

1. Check the print out. Perform head cleaning as required.
2. When non-ejection of ink still occurs, replace the print head.

1021	Media type mismatch warning (Support number: 1051, alarm code: -)
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Detection description

The media type selected in the printer driver does not match the media loaded into the printer.

Handling

1. Match the media type set in the printer driver with the media type set to the printer. Or reset the printer driver to match the media type set to the printer.

1051	Size clip warning (Support number: 1054, alarm code: -)
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Detection description

Loading of the media into the printer smaller than the one selected in the printer driver.

Handling

1. Match the media size set in the printer driver with the media size set to the printer. Or reset the printer driver to match the media size set to the printer.

1053	Borderless printing disabled (paper edge detection error at home position side (warning)) (Support number: 1056, alarm code: -)
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Detection description

When the following conditions are satisfied:

- [Detect paper setting mismatch] is set at other than "Pause".
- The multi sensor detects that the paper edge at the home position side is not positioned within +/- 3mm from the reference paper position when borderless printing is started.

Handling

1. Reload the paper.
2. Replace the paper.
3. Replace the following part:
 - MULTI SENSOR UNIT

1054	Roll paper width mismatch (Support number: 1052, alarm code: -)
Detection description	
Mismatch of the roll paper width selected in [Fit Roll Paper Width] in the printer driver and the roll paper width loaded into the printer.	
Handling	
1. Match the roll paper width set in the printer driver with the roll paper width set to the printer. Or reset the printer driver to match the roll paper width set to the printer.	
1055	Three sides borderless printing disabled (warning) (Support number: 1057, alarm code: -)
Detection description	
When the following conditions are satisfied:	
<ul style="list-style-type: none"> · [Detect paper setting mismatch] is set at “Display warning”. · The multi sensor detects that the paper feed position of the borderless printing supported paper is off 3 mm or more from the tray for borderless printing at away position side during printing. 	
Handling	
<ul style="list-style-type: none"> • Load the paper in wider width than the print job paper size. • Specify the shorter paper width in print job than the loaded paper size. 	
140x	No ink in the ink tank (Support number: 1570, alarm code: Ink tank-related alarm codes) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)
Detection description	
The ink level detection pin (shorter) inside the sub ink tank detects no ink.	
Handling	
1. Replace the ink tank where no ink has been detected.	
141x	Ink tank removed (Support number: 1571, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)
Detection description	
The tank cover is opened and the ink tank is removed during printing.	
Handling	
1. Reinstall the ink tank of the color where an error has occurred. Or replace it.	
1701	SGRaster general error: false number of parameters (Support number: 3311, alarm code: -)
Detection description	
The number of print data parameters is incorrect.	
Handling	
1. Check the print result. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	

1702	SGRaster general error: omission of non-optional item (Support number: 3312, alarm code: -)
Detection description	
The omission prohibited parameter in the print data is omitted.	
Handling	
1. Check the print result. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	
1703	SGRaster general error: unsupported data (Support number: 3313, alarm code: -)
Detection description	
The data out of setting range is set in the print data.	
Handling	
1. Check the print result. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	
1706	SGRaster particular error: unsupported resolution value (Support number: 3314, alarm code: -)
Detection description	
The resolution setting in the print data is out of setting range.	
Handling	
1. Check the print result. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	
1707	SGRaster particular error: unsupported pressure value (Support number: 3315, alarm code: -)
Detection description	
The compression method of the print data is inappropriate.	
Handling	
1. Check the print result. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	
1708	SGRaster particular error: invalid format of data form (Support number: 3316, alarm code: -)
Detection description	
The format of print data form (color sequence, the number of bits) is inappropriate.	
Handling	
1. Check the print result. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	

1709	SGRaster particular error: combination failure of resolution and image data format (Support number: 3317, alarm code: -)
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Detection description

The combination of print data resolution and image data format is inappropriate.

Handling

1. Check the print result.
When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.

1800	Overflow during processing HP-GL/2 data - (1) (Support number: 3300, alarm code: 00739)
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Detection description

Memory overflows during processing HP-GL/2 data.

Handling

1. Decrease drawing data. Or, transform the data to HP RTL data which can be operated on-the-fly.*1

*1: The mechanism of sending data to the printer from the top of the papers in sequence.
This an option setting of software that can create HP-GL/2. Selecting this option can reduce memory consumption.

1801	HP-GL/2 command out of support (Support number: 3301, alarm code: 0076)
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Detection description

The parameter which is not supported by HP-GL/2 is specified.

Handling

Check the data to print.

1802	HP-GL/2 command unsupported (Support number: 3302, alarm code: 0077)
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Detection description

The printer received unsupported HP-GL/2 command print job.

Handling

Check the data to print.

1803	Overflow during processing HP-GL/2 data - (2) (Support number: 3303, alarm code: 0074)
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Detection description

Memory overflows during processing HP-GL/2 data.

Handling

1. Decrease drawing data. Or, transform the data to HP RTL data which can be operated on-the-fly.*1

*1: The mechanism of sending data to the printer from the top of the papers in sequence.
This an option setting of software that can create HP-GL/2. Selecting this option can reduce memory consumption.

1804	Overflow during processing HP-GL/2 data - (3) (Support number: 3304, alarm code: 0075)
Detection description	
Memory overflows during processing HP-GL/2 data.	
Handling	
1. Decrease drawing data. Or, transform the data to HP RTL data which can be operated on-the-fly.* ¹	
* ¹ : The mechanism of sending data to the printer from the top of the papers in sequence. This an option setting of software that can create HP-GL/2. Selecting this option can reduce memory consumption.	
1901	Converting PDF/JPEG into print data disabled (Support number: 3331, alarm code: -)
Detection description	
The hard disk capacity became insufficient in the middle of PDF or JPEG data conversion into print data on the HDD.	
Handling	
1. Delete the saved data in the shared box in the printer HDD.* ¹ Or, print with smaller print size or lower print quality when printing PDF/JPEG.	
* ¹ : Deleting the saved job data in the shared box may help avoiding HDD capacity shortage that occurs in conversion into print data.	
1902	Invalid JPEG format (Support number: 3332, alarm code: -)
Detection description	
JPEG format other than JPEG that complies with JFIF1.02 is detected.	
Handling	
1. Print from PC.	
1903	JPEG decode error (Support number: 3333, alarm code: -)
Detection description	
JPEG format other than JPEG that complies with JFIF1.02 is detected.	
Handling	
1. Print from PC.	
1904	PDF authentication error (Support number: 3334, alarm code: -)
Detection description	
The print permission setting in PDF file is set to "Not allowed to print."	
Handling	
1. Open PDF file with Adobe Acrobat to check if the printing has been permitted.	

1905	PDF parse error (Support number: 3335, alarm code: -)
Detection description	
The PDF file is broken.	
Handling	
1. Check the PDF file.	
1906	PDF font error (Support number: 3336, alarm code: -)
Detection description	
Font substitution occurs because neither the font is set in the PDF file nor included in the installed font.	
Handling	
1. Set and save embedding of the necessary fonts to PDF file.	
1908	Image process table error (Support number: 3341, alarm code: -)
Detection description	
Image failure is found in image process table check when processing the print job.	
Handling	
1. When using print program such as RIP (Raster Image Processor), ask the manufacturer of the print program.	
1909	Image process resolution error (Support number: 3342, alarm code: -)
Detection description	
The printer receives the print job whose input resolution cannot be converted into engine resolution.	
Handling	
1. Check each setting of the print job.	
1911	JPEG resolution mismatch (Support number: 3338, alarm code: -)
Detection description	
Processing at unsupported JPEG data resolution is requested.	
Handling	
1. Check each setting of the print job.	
200E	Paper size out of standard (Support number: 1323, alarm code: -)
Detection description	
At paper width detection for roll papers or at paper width detection and paper length detection for cut sheets, it is detected that the size of the paper loaded in the printer is smaller than the supported smallest value.	
Handling	
1. Load the supported-size paper.	
2. Replace the following part:	
· MULTI SENSOR UNIT	

200F	Paper size out of standard (Support number: 1323, alarm code: -)
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Detection description

At paper width detection for roll papers or at paper width detection and paper length detection for cut sheets, it is detected that the size of the paper in set is larger than the supported largest value.

Handling

1. Load the supported-size paper.
2. Replace the following part:
 - MULTI SENSOR UNIT

2020	No lower roll unit (Support number: 1036, alarm code: 0218)
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Detection description

The printer receives print job designating lower roll while lower roll unit has not been attached.

Handling

1. After the printer is turned off, confirm that the roll unit cable is connected between the connecting part of the rear side of the roll unit and the roll unit connecting part of the rear side of the printer.

202B	Upper roll end error (strong adhesion) (Support number: 1024, alarm code: -)
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Detection description

During paper feeding from the upper roll unit, the end edge detection error (the abnormal amount of rotation drive in ACTIVE ROLL BRAKE UNIT control) of the roll paper occurs due to strong adhesive on the roll end.

Note:

Assumed situation of this error is that the roll paper end edge cannot be peeled off from the roll core during paper feeding or printing, or paper feeding is disabled due to the weight of the roll paper.

Handling

1. Remove and reattach the upper spool.
2. Check the connections of the following cables:
 - Cable between the upper active roll brake motor with encoder and the main PCB (J5401)
 - HARNESS ASS'Y, LO ARB MOTOR
 - HARNESS ASS'Y, L
 - Cable between the upper spool lock solenoid and the main PCB (J5401)
 - HARNESS ASS'Y, L
3. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Upper)
 - SPOOL LOCK UNIT (Upper)
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Upper)
 - NIP ARM UNIT

202C	Lower roll end error (strong adhesion) (Support number: 1025, alarm code: -)
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Detection description

During paper feeding from the lower roll unit, the end edge detection error (the abnormal amount of rotation drive in ACTIVE ROLL BRAKE UNIT control) of the roll paper occurs due to strong adhesive on the roll end.

<The assumed situation> The roll paper edge does not peel off from the roll core during paper feeding or printing, or paper feeding is disabled due to heaviness of the roll paper.

Handling

1. Remove and reattach the lower spool.
2. Check the connections of the following cables:
 - Cable between the lower active roll brake motor with encoder and the lower roll unit control PCB (J204)
 - HARNESS ASS'Y, LO ARB MOTOR
 - Cable between the lower spool lock solenoid and the lower roll unit control PCB (J205)
 - HARNESS ASS'Y, LO SPL SOL
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace any of the following parts:
 - ACTIVE ROLL BRAKE UNIT (Lower)
 - SPOOL LOCK UNIT (Lower)
 - LEVER ASS'Y, SPL LOCK R
 - DRIVE NIP ARM UNIT (Lower)
 - NIP ARM UNIT

2041	Borderless printing disabled in take-up mode (detection error in paper edge at the home position side) (Support number: 4119, alarm code: -)
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Detection description

When the following conditions are satisfied:

- [Detect paper setting mismatch] is set at other than "Pause".
- The multi sensor detects that the paper edge at the home position side is not positioned within +/-3 mm from the reference paper position when the lower roll unit is used for taking up the paper and borderless printing is started.

Handling

1. Execute any of the followings:
 - a) Reset the roll paper if the skew is caused in the paper feed unit.
 - b) Put the tape and fix the roll paper on the take-up roll core again if the skew is caused in the take-up unit.
 - c) Select [Print with border] and continue printing.

2042	Borderless printing disabled in take-up mode (The data not supporting borderless printing was received.) (Support number: 4120, alarm code: -)
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Detection description

- The printer receives the data specifying the borderless printing unsupported paper types or unsupported paper width during the lower roll unit is taking up the paper.

Handling

1. Select either of the followings from the operation panel:
 - Print with border
 - Cancel

2043	Three sides borderless printing disabled in take-up mode (Support number: 4121, alarm code: -)
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Detection description

When the following condition is satisfied,

- [Detect paper setting mismatch] in the operation panel is set at “Hold job” or “Pause”.
- The multi sensor detects that the paper feed position of the borderless printing supported paper is off +3 mm or more from the tray for borderless printing at away position side (3mm or more from the default margin) when the printing starts.

Handling

1. Select either of the followings from the operation panel:
 - Print with the loaded paper.
 - Cancel

2044	Insufficient amount of remaining roll paper in take-up mode (Support number: 4121, alarm code: -)
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Detection description

- The lower roll unit is taking up the paper, [Manage remaining roll amount] is set at “Enable”, and the printer receives a print job that requires the longer paper size than the remaining paper length.

Handling

1. Select any of the followings from the operation panel:
 - Print with the loaded paper.
 - Replace the paper and print
 - Cancel

2060	Running out of upper roll paper alert (Support number: 1058, alarm code: -)
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Detection description

The remaining roll paper is less than the amount set in [Roll amount warning setting].

Handling

1. Prepare roll paper.
2. Replace the following part:
 - ACTIVE ROLL BRAKE UNIT (Upper)

2061	Running out of lower roll paper alert (Support number: 1059, alarm code: -)
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Detection description

The remaining roll paper is less than the amount set in [Roll amount warning setting].

Handling

1. Prepare roll paper.
2. Replace the following part:
 - ACTIVE ROLL BRAKE UNIT (Lower)

231x	Sub-ink tank ink filling failure (Support number: 1757, alarm code: Ink tank-related alarm codes) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)
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Detection description

In initial ink filling or sub tank ink filling when replacing the ink tank, the ink level detection pin in the sub ink tank is not turned ON even after a certain time has passed from ink tank installation.

Handling

1. Install the ink tank properly. Or, replace it.

2405	Borderless printing disabled - off the loading position (Support number: 4116, alarm code: -)
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Detection description

Borderless printing is disabled as the multi sensor detects the following:

- The paper is loaded out of position.
 - <When the printer driver is set at [Fit Roll Paper Width]>
The paper feed position of the borderless printing supported paper is off 3 mm or more from paper edge at the home position side or from the tray for borderless printing at away position side.
 - <When the printer driver is set at other than [Fit Roll Paper Width]>
The paper edge at the home position side is off 3 mm or more from the reference position.

Handling

1. Replace the following part:
 - MULTI SENSOR UNIT

2406	Borderless printing disabled - receiving borderless printing unsupported data (Support number: 4117, alarm code: -)
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Detection description

Besides receiving borderless print data at the start of the printing, at least a condition among the following conditions is satisfied.

- The paper feeding slot specified in the data is the slot other than roll paper feeding ports.
- The print mode set in the data does not support borderless printing.
- Banner printing is specified in the data.
- The paper size that does not support borderless printing is specified in the job.
- Oversize amount of borderless printing in the data is out of standard.

Handling

1. Select the following from the operation panel to continue printing:
 - [Print with border]Or, select [Cancel] to stop printing.

2407 **Borderless printing disabled - the paper edge is off during printing**
(Support number: 4114, alarm code: -)

Detection description

- The multi sensor detects that the paper edge at the home position side is not positioned within +3 mm from the reference paper position.
- The printer driver is set at [Fit Roll Paper Width]. Besides, the multi sensor detects that the paper edge at away position side is off 3 mm or more from the tray for borderless printing during borderless printing.

Handling

1. Reload the paper.

2409 **Borderless printing disabled - after restarting the hold job (off the loading position)**
(Support number: 4913, alarm code: -)

Detection description

When restarting the hold job after replacing the paper with [Replace paper] button, the following cause may disable borderless printing.*

- The loaded paper position is off the reference position.

*What is "Hold Job?"

When "Hold Job?" is selected at [Device settings > Paper-related settings > Detect paper setting mismatch] from the operation panel, the printer saves the printing jobs in HDD without performing printing. These saved jobs are called "Hold Job".

Handling

1. Reload the paper.
2. Replace the following part:
 - MULTI SENSOR UNIT

2410 **Borderless printing disabled (transparent paper)**
(Support number: 4122, alarm code: -)

Detection description

In printing on transparent paper, borderless printing is specified.

Handling

1. Cancel the print job, select bordered printing, then perform printing. Or, change to the paper supporting printing with border.

250x **Ink empty**
(Support number: 1752, alarm code: [Ink tank-related alarm codes](#))
x = Indicates ink color of ink tank according to last digit of detail code
([Details of last digits of detail code](#))

Detection description

During printing or cleaning, remaining ink dot count reaches to the value of empty.

Handling

1. Install the ink tank properly. Or, replace it.

252x	<p>No ink tank: (Support number: 1660, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

Ink tank is not detected when closing the tank cover.

Handling

1. Install the ink tank properly. Or, replace it.

254x	<p>Ink tank ID error (Support number: 168B, alarm code: Ink tank-related alarm codes) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

The ink tank that does not support the corresponding product is installed.

Handling

1. Install the ink tank that supports the corresponding products.

258x	<p>Insufficient ink not before printing (Support number: 1756, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

The ink amount necessary before cleaning is insufficient.

Handling

1. Replace the ink tank of the color where an error has occurred.

25Bx	<p>Ink level detection pin OFF when the tank cover is open (Support number: 1201, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

Ink level detection pin turns off when the tank cover is open.

Handling

1. Close the tank cover. Check the remaining ink amount.
When ink is not left, replace the ink tank of the color where an error has occurred.
2. Check the connections of the following cables:
 - Cable between the ink level detection PCB and the main PCB (J5501)
 - HARNESS ASS'Y, R

270x	<p>Remaining ink amount unknown (Canon genuine ink) (Support number: 1730, alarm code: Ink tank-related alarm codes) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

The ink consumption amount used for status print, pattern adjustment printing, or print head cleaning exceeded the specified amount.

Refilling ink to the ink cartridge may cause this error.

Handling

1. Replace the ink tank.

271x	<p>Remaining ink amount unknown (non-identifiable ink) (Support number: 1731, alarm code: Ink tank-related alarm codes) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

Installation of the non-Canon genuine ink tank is detected.

Handling

1. Replace with the Canon genuine ink tank.

273x	<p>Remaining ink amount unknown (no detection by ink level detection pin) (Support number: 1753, alarm code: Ink tank-related alarm codes) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

It was detected that the remaining ink amount of the ink tank is unknown.

Handling

1. Replace the ink tank.

27Dx	<p>Notification of new ink tank installation (Support number: 1552, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

The new ink tank installation is detected.

Handling

1. Press [OK]. Or the printer recovers when certain amount of time passed.

27Ex	<p>Notification of used ink tank installation (Support number: 1551, alarm code: -) x = Indicates ink color of ink tank according to last digit of detail code (Details of last digits of detail code)</p>
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Detection description

The installation of the ink tank installed in the printer in the past is detected.

Handling

1. Press [OK]. Or the printer recovers when certain amount of time passed.

2800	<p>No print head (Support number: 1401, alarm code: 0181)</p>
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Detection description

The access cover is closed though no print head is detected.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connection of the following cable:
 - Cables between the carriage relay PCB (J201, J202, and J301) and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE UNIT

2802	Print head ID error (Support number: 1485, alarm code: 0189)
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Detection description

When installing the print head, incorrect ID is detected.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504 and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE UNIT

280D	Non-ejection of ink (Support number: 1495, alarm code: 0192)
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Detection description

After recovery cleaning of non-ejection detection, 100 to 767 nozzles are non-ejection. In addition, 30 or more nozzles are non-ejection complementary disabled nozzles.

Handling

1. Print the service nozzle check pattern.
2. Check the printing condition of the nozzle check pattern, and follow [1-2-2. Nozzle Check Pattern](#).

2812	Print head version error (Support number: 1485, alarm code: 0194)
-------------	--

Detection description

Installation of inappropriate print head version was detected.

Handling

1. Clean the contact surface of the print head using a waste cloth without a nap.
2. Replace the print head.
3. Check the cable connections of the following cables:
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
4. Replace the following part:
 - CARRIAGE UNIT

2816	Maintenance cartridge EEPROM error (Support number: 1722, alarm code: 0197)
-------------	--

Detection description

An error is detected in the communication with maintenance cartridge EEPROM.

Handling

1. Install the maintenance cartridge properly. Or, replace it.
2. Check the cable connections of the following cables:
 - Cables between the maintenance cartridge relay PCB and the main PCB (J5001)
 - HARNESS ASS'Y, R
3. Replace either of the following parts:
 - ROM BOARD UNIT
 - MAIN PCB UNIT

2817	Maintenance cartridge ID error (Support number: 1722, alarm code: 0198)
Detection description	
The maintenance cartridge that had been installed to the other model is detected.	
Handling	
1. Install the maintenance cartridge properly. Or, replace it.	
2818	No maintenance cartridge (Support number: 1721, alarm code: -)
Detection description	
Installation of the maintenance cartridge is not detected.	
Handling	
1. Install the maintenance cartridge properly. Or, replace it.	
2. Check the cable connections of the following cables:	
<ul style="list-style-type: none"> · Cable between the maintenance cartridge relay PCB and the main PCB (J5001) - HARNESS ASS'Y, R 	
3. Replace either of the following parts:	
<ul style="list-style-type: none"> · ROM BOARD UNIT · MAIN PCB UNIT 	
2819	Maintenance cartridge full (Support number: 1720, alarm code: 0063)
Detection description	
It was detected that no capacity is left in the maintenance cartridge.	
Handling	
1. Replace with a new maintenance cartridge.	
281A	Little remaining capacity of maintenance cartridge (Support number: 3250, alarm code: -)
Detection description	
It is detected that little capacity is left in the maintenance cartridge.	
Handling	
1. Prepare the maintenance cartridge for replacement.	
281B	Insufficient capacity of maintenance cartridge (Support number: 1720, alarm code: -)
Detection description	
It is detected that the maintenance cartridge does not have any free capacity required for cleaning.	
Handling	
1. Replace with a new maintenance cartridge.	
281C	Little remaining capacity of maintenance cartridge (First time) (Support number: 3250, alarm code: -)
Detection description	
It is detected that little capacity is left in the maintenance cartridge.	
Handling	
1. Check remaining capacity of the maintenance cartridge and prepare the maintenance cartridge for replacement.	

2829	Multi sensor optical axis correction error (Support number: 4923, alarm code: 0209)
-------------	--

Detection description

The correction value becomes abnormal during optical axis adjustment of the multi sensor.

Handling

1. When the printed optical adjustment pattern has blur, perform print head cleaning.
2. When the pattern is not printed properly, print the nozzle check pattern.
Check the printing condition of the nozzle check pattern, and follow the handling in [1-2-2. Nozzle Check Pattern.](#)
3. Replace the following part:
 - MULTI SENSOR UNIT

2901	Hard disk capacity warning (Support number: 3350, alarm code: -)
-------------	---

Detection description

The total capacity of the personal box in the printer hard disk became smaller than 1GB.

Handling

1. Delete the file saved in the hard disk.
2. Replace the following part:
 - HDD, MQ01ABU050W

2902	Printing without saving to the hard disk (Support number: 3352, alarm code: -)
-------------	---

Detection description

Printing starts without saving due to hard disk factors. (Example: no blank capacity in the hard disk, etc.)

Handling

1. Delete the file saved in the hard disk.
2. Replace the following part:
 - HDD, MQ01ABU050W

2905	Hard disk full (Support number: 4900, alarm code: -)
-------------	---

Detection description

The hard disk does not have any free capacity.

Handling

1. Delete the file saved in the hard disk.
2. Replace the following part:
 - HDD, MQ01ABU050W

2906	Max. number of files saved to the hard disk (Support number: 4903, alarm code: -)
-------------	--

Detection description

The number of files saved in the hard disk reaches the max.

Handling

1. Delete the file saved in the hard disk.
2. Replace the following part:
 - HDD, MQ01ABU050W

2907	Almost the max. number of files saved to the hard disk (Support number: 3351, alarm code: -)
Detection description	
The number of files beyond assumption is saved in the hard disk.	
Handling	
<ol style="list-style-type: none"> 1. Delete the file saved in the hard disk. 2. Replace the following part: <ul style="list-style-type: none"> · HDD, MQ01ABU050W 	
2D00	Common calibration for upper roll paper not performed (Support number: 3101, alarm code: -)
Detection description	
Calibration unsupported media is loaded. In addition, the history of common calibration for the media other than the loaded one is not existed.	
Handling	
<ol style="list-style-type: none"> 1. Perform color calibration. 	
2D01	Alarm to perform common calibration for upper roll paper (Support number: 3101, alarm code: -)
Detection description	
Calibration unsupported media is loaded. Despite calibration timing for all media, calibration has not been performed.	
Handling	
<ol style="list-style-type: none"> 1. Perform color calibration. 	
2D02	Alarm to perform media-specific calibration for upper roll paper (Support number: 3101, alarm code: -)
Detection description	
Calibration operable media is loaded. Despite calibration timing for each media, calibration has not been performed.	
Handling	
<ol style="list-style-type: none"> 1. Perform calibration. 	
2D03	Incomplete print head alignment (Support number: 3000, alarm code: -)
Detection description	
At the initial installation or at the incomplete print head position adjustment after the print head replacement. (including cancel)	
Handling	
<ol style="list-style-type: none"> 1. Perform the print head alignment. 	

2D04	Print head alignment failure (Support number: 4937, alarm code: -)
-------------	---

Detection description

The printer fails to adjust print head alignment toward the print head nozzle line direction.

Handling

1. Print the service nozzle check pattern.
When the pattern is not printed properly, perform cleaning.
2. Replace the print head.
3. Replace the following part:
 - MULTI SENSOR UNIT

2D05	Recommendation to re-execute print head alignment (Support number: 3006, alarm code: -)
-------------	--

Detection description

The cut sheet is not fed when receiving the job selecting cut sheet. Or "No sheets." is detected after starting printing.

Handling

1. Load cut sheets on the paper source.

2D08	Common calibration for lower roll paper not performed (Support number: 3101, alarm code: -)
-------------	--

Detection description

Calibration unsupported media is loaded. In addition, the history of common calibration for the media other than the loaded one is not existed.

Handling

1. Perform color calibration.

2D09	Alarm to perform common calibration for lower roll paper (Support number: 3101, alarm code: -)
-------------	---

Detection description

Calibration unsupported media is loaded. Despite calibration timing for all media, calibration has not been performed.

Handling

1. Perform color calibration.

2D0A	Alarm to perform media-specific calibration for lower roll paper (Support number: 3101, alarm code: -)
-------------	---

Detection description

Calibration operable media is loaded. Despite calibration timing for each media, calibration has not been performed.

Handling

1. Perform color calibration.

2D0B	Common calibration for cut paper not performed (Support number: 3101, alarm code: -)
-------------	---

Detection description

Calibration unsupported media is loaded. In addition, history of common calibration for the media other than the loaded one is not existed.

Handling

1. Perform color calibration.

2D0C	Alarm to perform common calibration for cut paper (Support number: 3101, alarm code: -)
-------------	--

Detection description

Calibration unsupported media is loaded. Despite calibration timing for all media, calibration has not been performed.

Handling

1. Perform color calibration.

2D0D	Alarm to perform media-specific calibration for cut paper (Support number: 3101, alarm code: -)
-------------	--

Detection description

Calibration operable media is loaded. Despite calibration timing for each media, calibration has not been performed.

Handling

1. Perform color calibration.

2E02	No cut sheet (Support number: 1005, alarm code: -)
-------------	---

Detection description

The cut sheet is not fed when receiving the job selecting cut sheet. Or "No sheets." is detected after starting printing.

Handling

1. Load cut sheets on the paper source.

2E08	Roll paper width mismatch (Support number: 2130, alarm code: -)
-------------	--

Detection description

At the start of paper printing, all the following conditions are satisfied:

- "Fit Roll Paper Width" is specified in the data.
- The roll paper has been fed.
- The paper width setting specified in the data is different from the one of the fed roll paper.
- "Pause" is selected in "Detect paper setting mismatch" setting.

Handling

1. Follow the instructions on the operation panel.

2E09	Insufficient roll paper left (Support number: 1021, alarm code: -)
-------------	---

Detection description

The printer, which is selecting “Enable” at [Manage remaining roll amount], receives a print job that requires the longer paper size than the remaining paper length. Note the lower roll unit has not been installed.

Handling

1. Select any of the followings from the operation panel and release the error:
 - Print with the loaded paper.
 - Replace the paper and print
 - Cancel
2. Check the connections of the following cables:
 - Cable between the upper paper entry sensor and the main PCB (J5305)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, UP RLNIP RELAYS
 - HARNESS ASS'Y, L
 - Cable between the upper roll paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace any of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Upper)
 - NIP ARM SENSOR UNIT (Upper)
 - DRIVE NIP ARM UNIT (Upper)

2E0A	Cut sheet has been fed while received data is for roll paper (Support number: 1306, alarm code: -)
-------------	---

Detection description

The printer receives roll paper print job when the cut sheet is set.

Handling

1. Remove the cut sheet, and then load the roll paper again.

2E0B	Roll paper has been fed while received data is for cut sheet (Support number: 1324, alarm code: -)
-------------	---

Detection description

The printer receives cut sheet print job when the roll paper is set.

Handling

1. Remove the roll paper, and load the cut sheet.

2E0C	Cut sheet data received in take-up mode (Support number: 1325, alarm code: -)
-------------	--

Detection description

The printer receives the print data selecting cut sheet printing while take-up unit is in use.

Handling

1. Remove the roll paper, and set the cut sheet.

2E0D	Lower roll paper data received though upper roll paper is not yet ejected (Support number: 4107, alarm code: 0433)
-------------	---

Detection description

When the upper roll paper feeding has been completed but the printed roll paper is still on the upper roll unit, the printer receives the print data that requires to select the lower roll paper setting.

Note: Selecting “No” or “Print cut Guideline” in [Automatic Cutting] setting for upper roll printing may cause this error.

Handling

1. Cut the printed paper and then restart printing.

2E0E	Upper roll paper data received though lower roll paper is not yet ejected (Support number: 4107, alarm code: 0434)
-------------	---

Detection description

When the lower roll paper feeding has been completed but the printed roll paper is still on the lower roll unit, the printer receives the print data that requires to select the upper roll paper setting.

Note: Selecting “No” or “Print cut Guideline” in [Automatic Cutting] setting for lower roll printing may cause this error.

Handling

1. Cut the printed paper and then restart printing.

2E0F	Lower roll unit setting error (Support number: 4112, alarm code: -)
-------------	--

Detection description

The lower roll paper feeding has been completed, but the printed roll paper is still on the lower roll unit. In this state, the printer receives the print data that requires to select the upper roll paper setting.

Handling

1. Cut the printed paper and restart printing.

2E15	Media type mismatch (Support number: 1061, alarm code: -)
-------------	--

Detection description

The media type selected in the job is different from the actual fed media.

Handling

Select either of the menus below from the operation panel to continue printing. Or, cancel the print job.

- [Print with the loaded paper]
- [Replace the paper and print it]

2E1B	End of roll paper (Upper roll) (Support number: 1024, alarm code: -)
-------------	---

Detection description

During feeding the upper roll paper, the paper entry sensor detects the roll paper end.

Handling

1. Replace the roll paper.
2. Check the connections of the following cables:
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PHOTO-INTERRUPTER (Paper entry sensor)

2E1C	End of roll paper (Lower roll) (Support number: 1025, alarm code: -)
-------------	---

Detection description

During feeding the lower roll paper, the paper entry sensor detects the roll paper end.

Handling

1. Replace the roll paper.
2. Check the connections of the following cables:
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace the following part:
 - PHOTO-INTERRUPTER (Paper entry sensor)

2E20	Inappropriate paper type or size for printing paper feeding system adjustment pattern (Support number: 2132, alarm code: -)
-------------	--

Detection description

When adjusting feeding system with cut sheets, media type or size of page 2 or after is fed as different sheet from those of page 1, and appropriate adjustment is considered to be disabled.

Handling

1. Check the size of the loaded cut sheet. Or reload the sheet.
2. Replace the following part:
 - MULTI SENSOR UNIT

2E21	Inappropriate paper type or size for printing print head position adjustment pattern (Support number: 2132, alarm code: -)
-------------	---

Detection description

When adjusting the print head position with cut sheets, media type or size of page 2 or after is fed as different sheet from those of page 1, and appropriate adjustment is considered to be disabled.

Handling

1. Reload the paper.
2. Replace the following part:
 - MULTI SENSOR UNIT

2E30	Size clip error (Support number: 2131, alarm code: -)
-------------	--

Detection description

The width of the paper loaded on the printer is shorter than the paper width for the print job.

Handling

1. Reload the paper.
 - <For roll papers>
 - Load an appropriate size of roll paper.
 - <For cut sheets>
 - Load the paper having the same size and type as the first page.
2. Replace the following part:
 - MULTI SENSOR UNIT

Detection description

The printer, which is selecting "Enable" at [Manage remaining roll amount], receives a print job that requires the longer paper size than the remaining paper length.

Handling

1. Check the number of remaining roll paper and select either of the followings:
 - [Print with the loaded paper]
 - [Replace the paper and print]
2. Check the connections of the following cables:
 - Cable between the upper roll paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
 - Cable between the upper paper entry sensor and the main PCB (J5305)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace any of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Upper)
 - NIP ARM SENSOR UNIT (Upper)
 - DRIVE NIP ARM UNIT (Upper)

Detection description

The printer, which is selecting "Enable" at [Manage remaining roll amount], receives a print job that requires the longer paper size than the remaining paper length.

Handling

1. Check the number of remaining roll paper and select either of the followings:
 - [Print with the loaded paper]
 - [Replace the paper and print]
2. Check the connections of the following cables:
 - Cable between the lower roll paper set sensor and the lower roll unit control PCB (J402)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, LO ROLL SEP RLY
 - Cable between the lower paper entry sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace either of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - NIP ARM SENSOR UNIT (Lower)
 - DRIVE NIP ARM UNIT (Lower)

2E33**Upper roll paper not loaded****(Support number: 100A, alarm code: -)****Detection description**

When receiving a upper roll paper specified print job, the roll paper has not been picked up from the upper roll paper pickup assembly.

The roll paper has not been picked up, and the specified paper feeding slot is set at "Auto."

Handling

1. Load the roll paper in the upper roll paper pickup assembly.
2. Check the connections of the following cables:
 - Cable between the upper roll paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
 - Cable between the upper paper entry sensor and the main PCB (J5305)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace any of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Upper)
 - NIP ARM SENSOR UNIT (Upper)
 - DRIVE NIP ARM UNIT (Upper)

2E34**Lower roll paper not loaded****(Support number: 100B, alarm code: -)****Detection description**

When receiving a lower roll paper specified print job, the roll paper has not been picked up from the lower roll paper pickup assembly.

Or, the roll paper has not been picked up, and the specified paper feeding slot is set at "Auto."

Handling

1. Load the roll paper in the lower roll paper pickup assembly.
2. Check the connections of the following cables:
 - Cable between the lower roll paper set sensor and lower roll unit control PCB (J402)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, LO ROLL SEP RLY
 - Cable between the lower paper entry sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace any of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - NIP ARM SENSOR UNIT (Lower)
 - DRIVE NIP ARM UNIT (Lower)

2E38 **Small paper size for status print**
(Support number: 2132, alarm code: -)

Detection description

In printing the printer internal data, the smaller paper than the size specified by each printing content is loaded.

Handling

1. Load the specified size or larger paper.
2. Replace the following part:
 - MULTI SENSOR UNIT

2E40 **Upper roll paper not loaded**
(Support number: 100A, alarm code: -)

Detection description

After the printing is started, no upper roll paper is detected.

Handling

1. Load the roll paper at the upper roll unit.
 2. Check the connections of the following cables:
 - Cable between the upper roll paper set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, L
 - Cable between the upper paper entry sensor and the main PCB (J5305)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, UP RLNIP RELAY
 - HARNESS ASS'Y, L
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
 3. Replace any of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Upper)
 - NIP ARM SENSOR UNIT (Upper)
 - DRIVE NIP ARM UNIT (Upper)
-

2E41	Lower roll paper not loaded (Support number: 100B, alarm code: -)
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Detection description

After the printing is started, no lower roll paper is detected.

Handling

1. Load the roll paper at the lower roll unit.
2. Check the connections of the following cables:
 - Cable between the lower roll paper set sensor and the lower roll unit control PCB (J402)
 - HARNESS ASS'Y, ROLL SEP RLY
 - HARNESS ASS'Y, LO ROLL SEP RLY
 - Cable between the lower paper entry sensor and the lower roll unit control PCB(J208)
 - HARNESS ASS'Y, RLNIP PF SNS
 - HARNESS ASS'Y, RU MAIN
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
 - Cable between the paper entry sensor and the main PCB (J5102)
 - HARNESS ASS'Y, LFPE SNS
 - HARNESS ASS'Y, R
3. Replace any of the following parts:
 - PHOTO-INTERRUPTER (Paper entry sensor)
 - ROLL PAPER FEED SENSOR UNIT (Lower)
 - NIP ARM SENSOR UNIT (Lower)
 - DRIVE NIP ARM UNIT (Lower)

2E42	Media type mismatch after resuming the held job (Support number: 4911, alarm code: -)
-------------	--

Detection description

The size of the paper selected in the held job is different from the actual fed paper.

Handling

1. Select either of the followings to perform printing:
 - [Print with the loaded paper]
 - [Replace the paper and print]

2E43	Media type unknown (Support number: 4111, alarm code: -)
-------------	---

Detection description

1. The job is selecting an unregistered media type in the printer.

This error occurs under the following situation:

 - A print job that required a paper type which had been registered in the printer at some point of time was saved in the HDD. After that, this media type was deleted from the printer by MCT. However, this job was executed.
 - When printing from driver, media type data is not obtained from the printer until pressing "Get Information..." button. After deleting a media type from MCT, a print job that specifies this deleted media is executed without pressing "Get Information..." button.

Handling

Check the media type settings and print again.

2E45	Roll paper width mismatch after resuming the held job (Support number: 4910, alarm code: -)
-------------	--

Detection description

The width of the roll paper selected in the held job is different from the width of actual fed roll paper.

Handling

Select [Replace the paper and print] or press [Cancel] to stop printing.

2E75	Three sides borderless printing disabled (Support number: 4113, alarm code: -)
-------------	---

Detection description

When the following condition is satisfied.

- [Detect paper setting mismatch] in the operation panel is set at “Hold job” or “Pause”.
 - The printer driver is not set at [Fit Roll Paper Width].
 - The multi sensor detects that the paper feed position is off +3 mm or more from the tray for borderless printing at away position side when the printing starts.
-

Handling

1. Select either of the menus below to continue printing.
 - [Replace the paper and print it]
 - [Print with the loaded paper]
-

2EA1	Spool installation error in the upper ARB calibration (Support number: 1018, alarm code: -)
-------------	--

Detection description

It is detected in upper ARB calibration that the spool is set.

Handling

1. Remove the spool installed in the printer, and execute the calibration of the upper active roll brake unit again.
 2. Check the connections of the following cables:
 - Cable between the upper left spool set sensor and the main PCB (J5305)
 - HARNESS ASS'Y, L
 - Cable between the upper right spool set sensor and the main PCB (J5102)
 - HARNESS ASS'Y, RSIDE FRONT
 - HARNESS ASS'Y, R
 3. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Upper left spool set sensor)
 - SPOOL SENSOR UNIT (Upper right spool set sensor)
-

2EA2 Spool installation error in the lower ARB calibration
(Support number: 1019, alarm code: 0521)

Detection description

It is detected in lower ARB calibration that the spool is set.

Handling

1. Remove the spool installed in the printer, and execute the calibration of the lower active roll brake unit again.
2. Check the connections of the following cables:
 - Cable between the lower left spool set sensor and the lower roll unit control PCB (J206)
 - HARNESS ASS'Y, LO SPLSET L
 - Cable between the lower right spool set sensor and the lower roll unit control PCB (J208)
 - HARNESS ASS'Y, RU MAIN
 - HARNESS ASS'Y, LO FLAP SPLSET
 - Cable between the lower roll unit control PCB and the lower roll unit relay PCB
 - CABLE, ROLL UNIT
 - Cables between the lower roll unit relay PCB and the main PCB (J4203 and J4204)
 - HARNESS ASS'Y, RU RELAY
3. Replace either of the following parts:
 - PHOTOINTERRUPTER, RPI-2500 (Lower left spool set sensor)
 - SPOOL SENSOR UNIT (Lower right spool set sensor)

2EA3 Print head alignment unavailable for the media
(Support number: 4932, alarm code: 0100)

Detection description

The media for films which has too high transparency to adjust the print head position is loaded.

Handling

1. When a highly transparent film media* is loaded, replace the media.
*Tracing paper, semi-transparent matte film, Clear Films, etc.
2. Replace the following part:
 - MULTI SENSOR UNIT

2EA4 Blur printing of the print head alignment pattern
(Support number: 4934, alarm code: 0102)

Detection description

The density at the pattern edge is lower than prescribed value.

Handling

1. Print the service nozzle check pattern. Follow the handling in [1-2-2. Nozzle Check Pattern](#).
2. Replace the following part:
 - MULTI SENSOR UNIT

2EA5 Insufficient contrast in the print head alignment pattern
(Support number: 4933, alarm code: 0101)

Detection description

The difference of the density in the printed print head alignment pattern is lower than the prescribed value.

Handling

1. Print the service nozzle check pattern. Follow the handling in [1-2-2. Nozzle Check Pattern](#).
2. Replace the following part:
 - MULTI SENSOR UNIT

2EA6	Abnormal print head alignment value (Support number: 4935, alarm code: 0103)
-------------	---

Detection description

The print head alignment value is higher than the prescribed value.

Handling

1. Print the service nozzle check pattern. Follow the handling in [1-2-2. Nozzle Check Pattern](#).
2. Replace the following part:
 - MULTI SENSOR UNIT

2EA7	Hard disk format abnormal (Support number: 4901, alarm code: 0524)
-------------	---

Detection description

The hard disk format type is different.

Handling

1. Tap [OK] to format the hard disk.

2EA8	Automatic feeding adjustment error (Support number: 4931, alarm code: 0206)
-------------	--

Detection description

Reading patterns for automatic feeding adjustment fails.

Handling

1. Replace with the paper without smudge.
2. Install the printer in the place without outside light.
3. After print head cleaning, print the service nozzle check pattern.

When the pattern is not printed properly, refer to [1-2-2. Nozzle Check Pattern](#) to implement the solution in the applicable pattern.
4. Replace any of the following parts:
 - MULTI SENSOR UNIT
 - PAPER FEED ROLLER UNIT
 - PINCH ROLLER UNIT

2EA9	Eccentricity adjustment error (Support number: 4936, alarm code: 0207)
-------------	---

Detection description

Eccentricity automatic adjustment value is out of the prescribed value.

Handling

1. Replace with the paper without smudge.
2. Install the printer in the place without outside light.
3. After print head cleaning, print the service nozzle check pattern.

When the pattern is not printed properly, refer to [1-2-2. Nozzle Check Pattern](#) to implement the solution in the applicable pattern.
4. Replace any of the following parts:
 - MULTI SENSOR UNIT
 - PAPER FEED ROLLER UNIT
 - PINCH ROLLER UNIT

2EAA	Automatic feeding adjustment failure (Support number: 4929, alarm code: 0211)
-------------	--

Detection description

In processing of automatic judgement for uneven paper feeding, the multi sensor read value is out of the prescribed value.

Handling

1. Replace with the paper without smudge.
2. Install the printer in the place without outside light.
3. After print head cleaning, print the service nozzle check pattern.
When the pattern is not printed properly, refer to [1-2-2. Nozzle Check Pattern](#) to implement the solution in the applicable pattern.
4. Replace any of the following parts:
 - MULTI SENSOR UNIT
 - PAPER FEED ROLLER UNIT
 - PINCH ROLLER UNIT

2EAB	Failure in automatic judgment of uneven printing in the carriage moving direction (Support number: 4928, alarm code: 0278)
-------------	---

Detection description

In processing of automatic judgement for uneven printing toward carriage scanning direction, multi sensor read value is out of the prescribed value.

Handling

1. After print head cleaning, print the service nozzle check pattern.
When the pattern is not printed properly, refer to [1-2-2. Nozzle Check Pattern](#) to implement the solution in the applicable pattern.
2. Replace either of the following parts:
 - MOTOR, DC, 47.8W (Carriage motor)
 - CARRIAGE UNIT

2EBC	Carriage cogging correction failure (Support number: 4930, alarm code: 0215)
-------------	---

Detection description

In the automatic judgement for carriage cogging adjustment process, the measured value is out of the specified range.

Handling

1. Attach the carriage film encoder properly, or replace it.
 - FILM, TIMING SLIT STRIP
2. Check the connections of the following cables:
 - Cable between the carriage encoder and the carriage relay PCB
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504, and J3201)
 - FLEXIBLE CABLE UNIT
3. Replace the following part:
 - CARRIAGE ENCODER UNIT
4. When the problem is not resolved, replace either of the following parts:
 - MOTOR, DC, 47.8W (Carriage motor)
 - CARRIAGE UNIT

2EBD	Paper not supporting color calibration set (Support number: 4924, alarm code: -)
Detection description	
The paper not supporting color calibration is set when color calibration is executed.	
Handling	
1. Cancel color calibration.	
2EBE	Paper size check in color calibration (Support number: 4926, alarm code: -)
Detection description	
The paper whose size does not support color calibration is set when color calibration is executed.	
Handling	
1. Set the paper whose size supports color calibration.	
2EBF	Pattern reading error in color calibration (Support number: 4927, alarm code: 0523)
Detection description	
In performing color calibration, an error occurs in pattern reading by multi sensor.	
Handling	
1. Perform Deep Cleaning.	
2. Print the service nozzle check pattern.	
When the pattern is not printed properly, refer to 1-2-2. Nozzle Check Pattern to implement the solution in the applicable pattern.	
2F6A	Print head-installed model error (Support number: 1480, alarm code: -)
Detection description	
The print head which had been installed into a different model before was installed.	
Handling	
1. Replace with a new print head.	
2F6B	Installed print head model error (ink system) (Support number: 1481, alarm code: -)
Detection description	
The print head which had been installed into the model that used a different ink set before was installed. This error occurs in service mode only.	
Handling	
1. Replace with either of the following print heads: <ul style="list-style-type: none"> · Print head which has been installed in the same model · A new print head 	

2F7C	Print head contact error at print head replacement (Support number: 140B, alarm code: -)
-------------	---

Detection description

Despite of print head installation, the print head is not recognized.

Handling

1. Remove the foreign material at the print head and the carriage unit contact part.
2. Clean the contact surface of the print head using a waste cloth without a nap.
3. Replace the print head.
4. Check the connections of the following cables:
 - Cables between the main PCB (J3201, J3503, and J3504) and the carriage relay PCB
 - FLEXIBLE CABLE UNIT
5. When the problem is not resolved, replace either of the following parts:
 - CARRIAGE UNIT
 - MAIN PCB UNIT

3000	WPSPIN timeout (Support number: 4950, alarm code: -)
-------------	---

Detection description

WPS (PIN mode) processing terminates with error due to timeout.

Handling

1. Tap [OK] to release the error.
2. Follow the message on the operation panel. (Check and reset the setting.)

3001	WPSPBC timeout (Support number: 4950, alarm code: -)
-------------	---

Detection description

WPS (PBC mode) processing terminates with error due to timeout.

Handling

1. Tap [OK] to release the error.
2. Follow the message on the operation panel. (Check and reset the setting.)

3002	WPSPBC session overlap (Support number: 4950, alarm code: -)
-------------	---

Detection description

WPS (PBC mode) processing terminates with error due to session overlapping.

Handling

1. Tap [OK] to release the error.
2. Follow the message on the operation panel. (Check and reset the setting.)

3003	WPS credential error (Support number: 4950, alarm code: -)
-------------	---

Detection description

WPS (PBC mode) processing terminates with error due to false credential (encryption mode is WEP).

Handling

1. Tap [OK] to release the error.
2. Follow the message on the operation panel. (Check and reset the setting.)

3004	Other WPS errors (Support number: 4950, alarm code: -)
Detection description	
The failure of the reasons other than above WPS.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3005	AOSS multiple access points error (Support number: 4951, alarm code: -)
Detection description	
Multiple wireless LAN routers in AOSS mode are detected.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3006	AOSS timeout (Support number: 4951, alarm code: -)
Detection description	
Wireless LAN router in AOSS mode is not detected.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3007	AOSS connection error (Support number: 4951, alarm code: -)
Detection description	
The other device is connecting to the wireless router.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3008	AOSS security setting error (Support number: 4951, alarm code: -)
Detection description	
When confirming wireless LAN router and security information, the error occurs.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3009	Other AOSS errors (Support number: 4951, alarm code: -)
Detection description	
Wireless LAN set-up by AOSS fails.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	

3010	Access point connection failure (Support number: 4952, alarm code: -)
Detection description	
Connecting to the access point by setting wireless LAN manually fails.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3011	Access point not detected with the specified SSID (Support number: 4952, alarm code: -)
Detection description	
In set-up, AP detection of the input SSID fails.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3012	Connection alarm due to IP address obtaining failure (Support number: 4953, alarm code: -)
Detection description	
In wireless detail setting, despite selecting [WEP], obtaining IP address fails, and Auto IP is set.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3013	Cableless setup timeout (Support number: 4954, alarm code: -)
Detection description	
In cableless set-up, wireless LAN setting process was finished in error due to timeout.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check and reset the setting.) 	
3014	Cableless setup setting failure (Support number: 4954, alarm code: -)
Detection description	
In cableless set-up, wireless LAN setting fails.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Follow the message on the operation panel. (Check the setting and reset) 	
3015	LAN invalid in IPv4/IPv6 setting (Support number: 4955, alarm code: -)
Detection description	
LAN is invalid when IPv4/IPv6 is selected.	
Handling	
<ol style="list-style-type: none"> 1. Tap [OK] to release the error. 2. Enable [Active wired LAN] or [Active wireless LAN]. 	

3016	LAN setting unavailable (Support number: 4956, alarm code: -)
-------------	--

Detection description

When changing LAN setting, the setting change was not available due to the following reasons.

- The printer is in the middle of operation.
 - Remote UI is selecting the printer settings.
-

Handling

1. Tap [OK] to release the error. After terminating other operations, select settings again.
-

3022	Wi-Fi Direct connection request (Support number: 4959, alarm code: -)
-------------	--

Detection description

Connection is requested from Wi-Fi Direct supported device.

Handling

1. Select “Yes (accept)” or “No (not accept).”
-

3023	SMTP server setting error (Support number: 3414, alarm code: -)
-------------	--

Detection description

Connecting to SMTP server fails.

Handling

1. Check with the remote UI if the address and port number of the mail server for outgoing message (SMTP) in the mail server settings are correct.
-

3024	POP server setting error (Support number: 3415, alarm code: -)
-------------	---

Detection description

Unable to connect to POP server.

Handling

1. Check with the remote UI if the address and port number of the mail server for outgoing message (SMTP) in the mail server settings are correct.
-

3025	SMTP SSL connection error (Support number: 3416, alarm code: -)
-------------	--

Detection description

Unable to connect SMTP server with SSL.

Handling

1. Check with the remote UI if the secure connection (SSL) settings of the mail server and the printer are matching.
-

3026	POP SSL connection error (Support number: 3417, alarm code: -)
-------------	---

Detection description

Unable to connect POP server with SSL.

Handling

1. Check with the remote UI if the secure connection (SSL) settings of the mail server and the printer are matching.
-

3027	SMTP command error (Support number: 3418, alarm code: -)
-------------	---

Detection description

Sending command to SMTP server fails.

Handling

1. Check with the remote UI if the items related to the mail server for outgoing message (SMTP) in the mail server settings are correct.

3028	SMTP authorization error (Support number: 3419, alarm code: -)
-------------	---

Detection description

SMTP authorization user name is not specified, SMTP authorization password is not specified, or SMTP authorization fails.

Handling

1. Check with the remote UI if the account and the password for outgoing message in the mail server settings are correct.

3029	POP command error (Support number: 3420, alarm code: -)
-------------	--

Detection description

Sending command to POP server fails.

Handling

1. Check with the remote UI if the items related to the mail server for incoming message (POP3) in the mail server settings are correct.

3030	POP authorization error (Support number: 3421, alarm code: -)
-------------	--

Detection description

POP authorization user name is not specified, POP authorization password is not specified, or POP authorization fails.

Handling

1. Check with the remote UI if the account and the password for incoming message in the mail server settings are correct.

3031	APOP authorization error (Support number: 3422, alarm code: -)
-------------	---

Detection description

APOP authorization fails.

Handling

1. Check with the remote UI if the APOP settings are appropriate.

3032	Socket server connection error (Support number: 3423, alarm code: -)
-------------	---

Detection description

Communication timeout occurs when connecting with SMTP server or Read/Write socket error occurs.

Handling

1. Check with the remote UI if the mail server settings are appropriate.
-

3033	Destination mail address error (Support number: 3424, alarm code: -)
Detection description	
Destination mail address is incorrect.	
Handling	
1. Select a correct e-mail address of destination with the remote UI and send again.	
3034	Unsupported device connected (Support number: 2001, alarm code: -)
Detection description	
USB host unsupported device is connected.	
Handling	
1. Follow the message on the operation panel. (Check and reset the setting.) When USB flash drive is connected via USB hub, connect the USB flash drive directly.	
3035	Hub not supported (Support number: 2002, alarm code: -)
Detection description	
USB hub is connected to USB host.	
Handling	
1. Remove unsupported USB hub. When USB flash drive is connected via USB hub, connect the USB flash drive directly.	
3036	IPv4 address conflict alert (Support number: 3448, alarm code: 0861)
Detection description	
The IPv4 address set in the printer is conflicting with the address set in other devices.	
Handling	
1. Change the set IP address in the printer not to overlap with other devices.	
3036	Fails in communication error with the server for remote monitoring service (Support number: 3451, alarm code: -)
Detection description	
The communication with the server for remote monitoring service was failed.	
Handling	
1. Check the network connection, and then perform a communication test again.	
3210	Counter alarm 1: Wia1 (Support number: 3200, alarm code: 0901)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	

3220	Counter alarm 1: Wia2 (Support number: 3200, alarm code: 0902)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3230	Counter alarm 1: Wia3 (Support number: 3200, alarm code: 0903)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3250	Counter alarm 1: Wia5 (Support number: 3200, alarm code: 0905)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3260	Counter alarm 1: Wia6 (Support number: 3200, alarm code: 0906)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3270	Counter alarm 1: Wia7 (Support number: 3200, alarm code: 0907)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3280	Counter alarm 1: WF1 (Support number: 3200, alarm code: 0941)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3290	Counter alarm 1: CR1 (Support number: 3200, alarm code: 0911)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	

3291	Counter alarm 2: CR1 (Support number: 3201, alarm code: 0961)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	
32A0	Counter alarm 1: CR2 (Support number: 3200, alarm code: 0912)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
32A1	Counter alarm 2: CR2 (Support number: 3201, alarm code: 0962)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	
32B0	Counter alarm 1: CR3 (Support number: 3200, alarm code: 0913)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
32B1	Counter alarm 2: CR3 (Support number: 3201, alarm code: 0963)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	
32C0	Counter alarm 1: CR4 (Support number: 3200, alarm code: 0914)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
32D0	Counter alarm 1: CR5 (Support number: 3200, alarm code: 0915)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	

32D1	Counter alarm 2: CR5 (Support number: 3201, alarm code: 0965)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	
32E0	Counter alarm 1: CR6 (Support number: 3200, alarm code: 0916)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
32F0	Counter alarm 1: PG1 (Support number: 3200, alarm code: 0921)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3305	Data corruption in media update (Support number: 3306, alarm code: 0520)
Detection description	
Recognizing the media data properly fails due to the broken media data of the printer.	
Handling	
1. Start up Media Configuration Tool and recover the printer media data.	
2. Reinstall the firmware.	
3. Replace the following part:	
· MAIN PCB UNIT	
3400	Counter alarm 1: PG2 (Support number: 3200, alarm code: 0922)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3410	Counter alarm 1: PG3 (Support number: 3200, alarm code: 0923)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	

3420	Counter alarm 1: HMa1 (Support number: 3200, alarm code: 0926)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3430	Counter alarm 1: MT1 (Support number: 3200, alarm code: 0942)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3431	Counter alarm 2: MT1 (Support number: 3201, alarm code: 0992)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	
3440	Counter alarm 1: LFS1 (Support number: 3200, alarm code: 0931)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3441	Counter alarm 2: LFS1 (Support number: 3201, alarm code: 0981)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	
3450	Parts counter Counter alarm 1: PL1 (Support number: 3200, alarm code: 0943)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3451	Counter alarm 2: PL1 (Support number: 3201, alarm code: 0993)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 2.	
Handling	
1. Refer to "5-2. Consumable Parts" to replace the affected part.	

3460	Counter alarm 1: Mi1 (Support number: 3200, alarm code: 0934)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3470	Counter alarm 1: WP1 (Support number: 3200, alarm code: 0944)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
3480	Counter alarm 1: Mi2 (Support number: 3200, alarm code: 0935)
Detection description	
The parts counter of the affected part reached the value indicating the warning level 1.	
Handling	
1. The part is available for a while until the operation panel indicates "Part replacement needed."	
4001	Multi sensor durability error (Support number: 4925, alarm code: 0522)
Detection description	
The multi sensor has reached the end of its lifetime.	
Handling	
1. Replace the following part: · MULTI SENSOR UNIT	
-	No cut sheet for status print (Support number: 1012, alarm code: -)
Detection description	
When the operation of printing on cut sheet starts, the cut sheets are not loaded or the paper entry sensor cannot detect that the cut sheets are loaded.	
Handling	
1. Load cut sheets.	
2. Check the connections of the following cables: · Cable between the paper entry sensor and the main PCB (J5102) - HARNESS ASS'Y, LFPE SNS - HARNESS ASS'Y, R	
3. Replace the following part: · PHOTO-INTERRUPTER (Paper entry sensor)	

- **Print head locking cover open**
(Support number: 1200, alarm code: -)

Detection description

It is detected that the print head locking cover is open.

Handling

1. Lock the print head locking cover.
2. Check the connections of the following cables:
 - Cable between the print head locking cover sensor and the carriage PCB
 - Cables between the carriage relay PCB and the main PCB (J3503, J3504 and J3201)
 - FLEXIBLE CABLE UNIT

- **Ink tank cover open**
(Support number: 1201, alarm code: -)

Detection description

The ink tank cover is open, or it cannot be detected that the ink tank cover is closed.

Handling

1. Close the ink tank cover.
2. Check the connections of the following cables:
 - Cable between the ink tank cover sensor and the main PCB (J5102)
 - HARNESS ASS'Y, TANK CVR MFAN R
 - HARNESS ASS'Y, R

- **Ink tank cover open during operation**
(Support number: 1210, alarm code: -)

Detection description

It is detected that the ink tank cover is open during printing operation.

Handling

1. Close the ink tank cover
2. Check the connections of the following cables:
 - Cable between the ink tank cover sensor and the main PCB (J5102)
 - HARNESS ASS'Y, TANK CVR MFAN R
 - HARNESS ASS'Y, R

- **Release lever open**
(Support number: 1213, alarm code: -)

Detection description

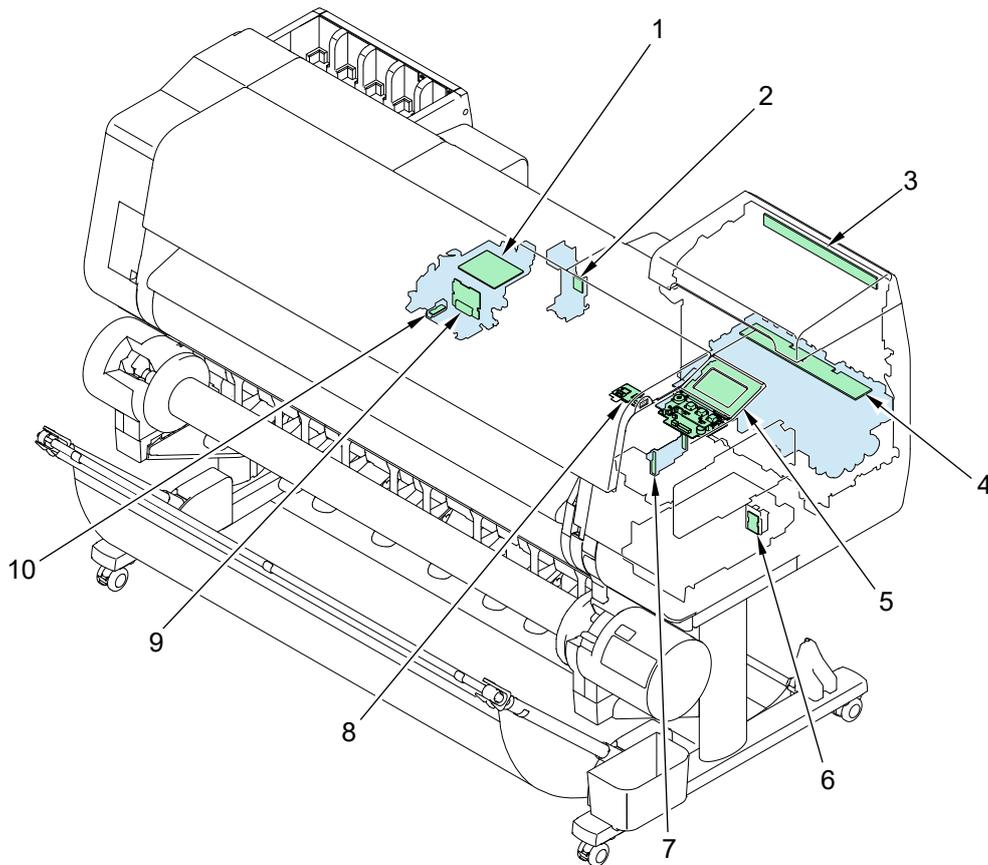
It is detected that the release lever has been released.

Handling

1. Lower the release lever.

1-4. Electrical Component Layout Diagram

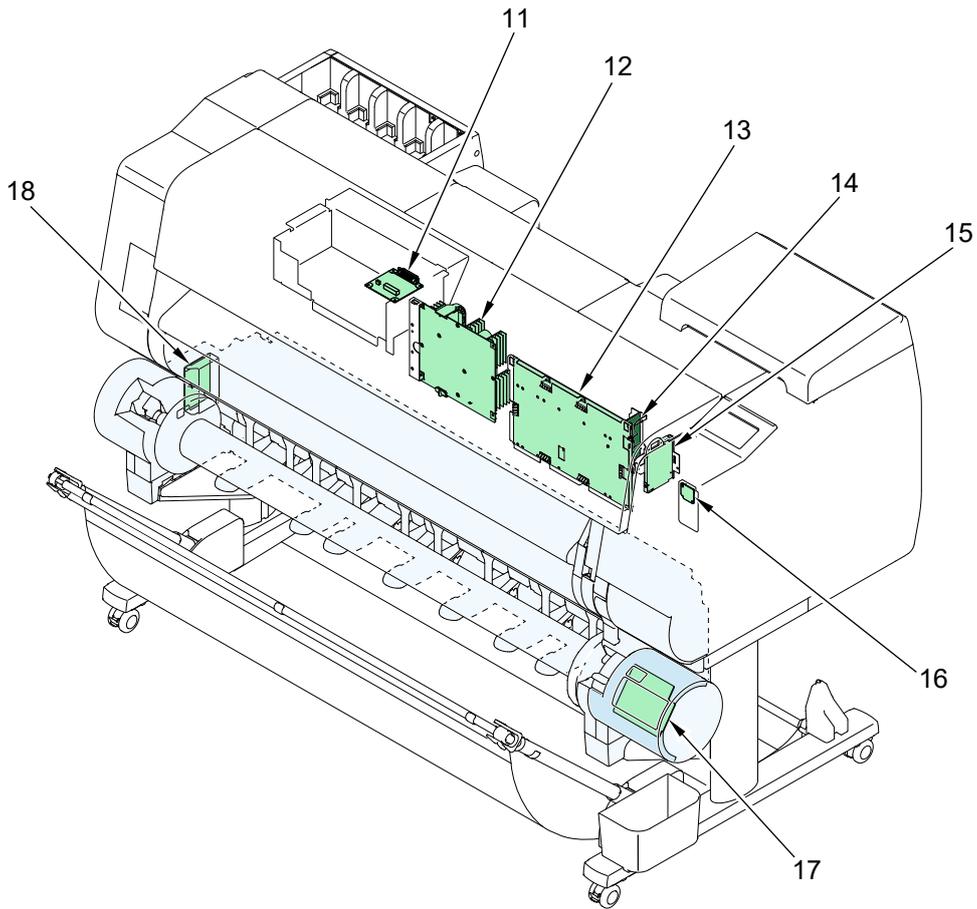
1-4-1. PCBs



No.	Name	Remarks
1	Carriage relay PCB	CARRIAGE RELAY PCB UNIT
2	Wireless LAN PCB ^{*1}	Included in WIRELESS LAN PCB UNIT
3	Tank LED PCB	TANK LED PCB UNIT
4	Ink level detection PCB ^{*1}	Included in SUB INK TANK UNIT R
5	Operation panel I/F PCB ^{*1} Operation panel control PCB ^{*1}	Included in OPERATION PANEL UNIT
6	Maintenance cartridge relay PCB ^{*1}	Included in ROM BOARD UNIT
7	Print head management sensor unit ^{*1}	Included in HEAD MANAGEMENT SENSOR UNIT
8	USB Host PCB ^{*1}	Included in USB HOST PCB ASS'Y
9	Carriage PCB ^{*1}	Included in CARRIAGE UNIT
10	Multi sensor PCB ^{*1}	Included in MULTI SENSOR UNIT

*1: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

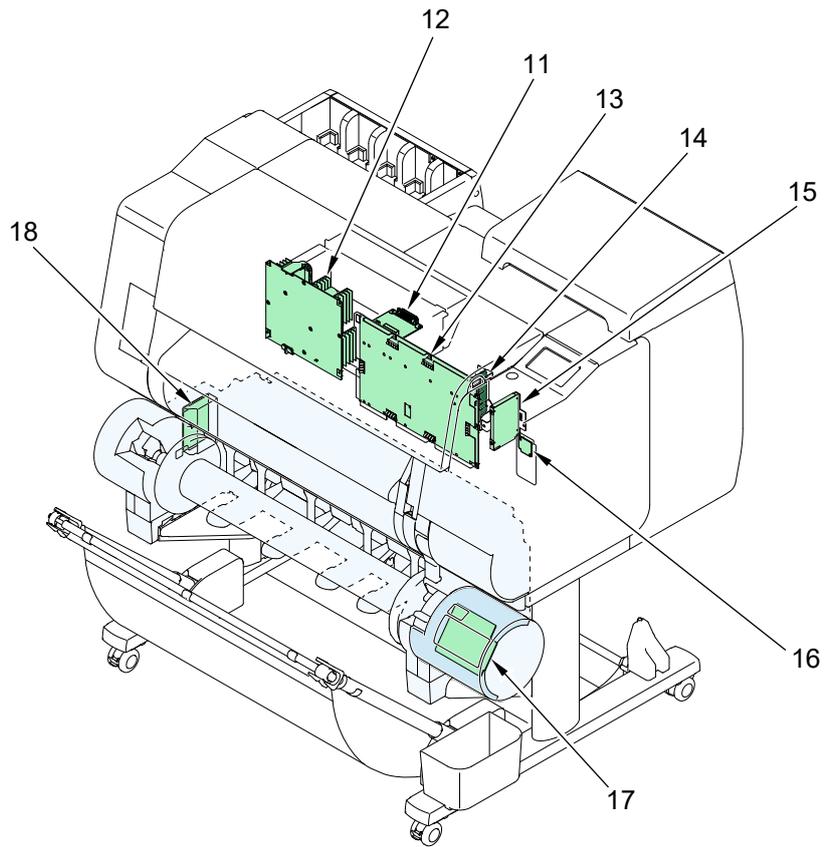
36" model, 44" model



No.	Name	Remarks
11	Lower roll unit relay PCB ^{*1}	Included in RELAY PCB UNIT, RU
12	Power supply unit	Included in POWER SUPPLY UNIT
13	Main PCB ^{*1}	Included in MAIN PCB UNIT
14	I/F PCB ^{*1}	Included in I/F PCB UNIT
15	HDD	HDD, MQ01ABU050W
16	Backup PCB ^{*1}	Included in BACKUP PCB UNIT
17	Lower roll unit operation panel ^{*1}	Included in OPERATION PANEL UNIT, RU
18	Lower roll unit control PCB ^{*1}	Included in I/F PCB UNIT, RU

*1: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

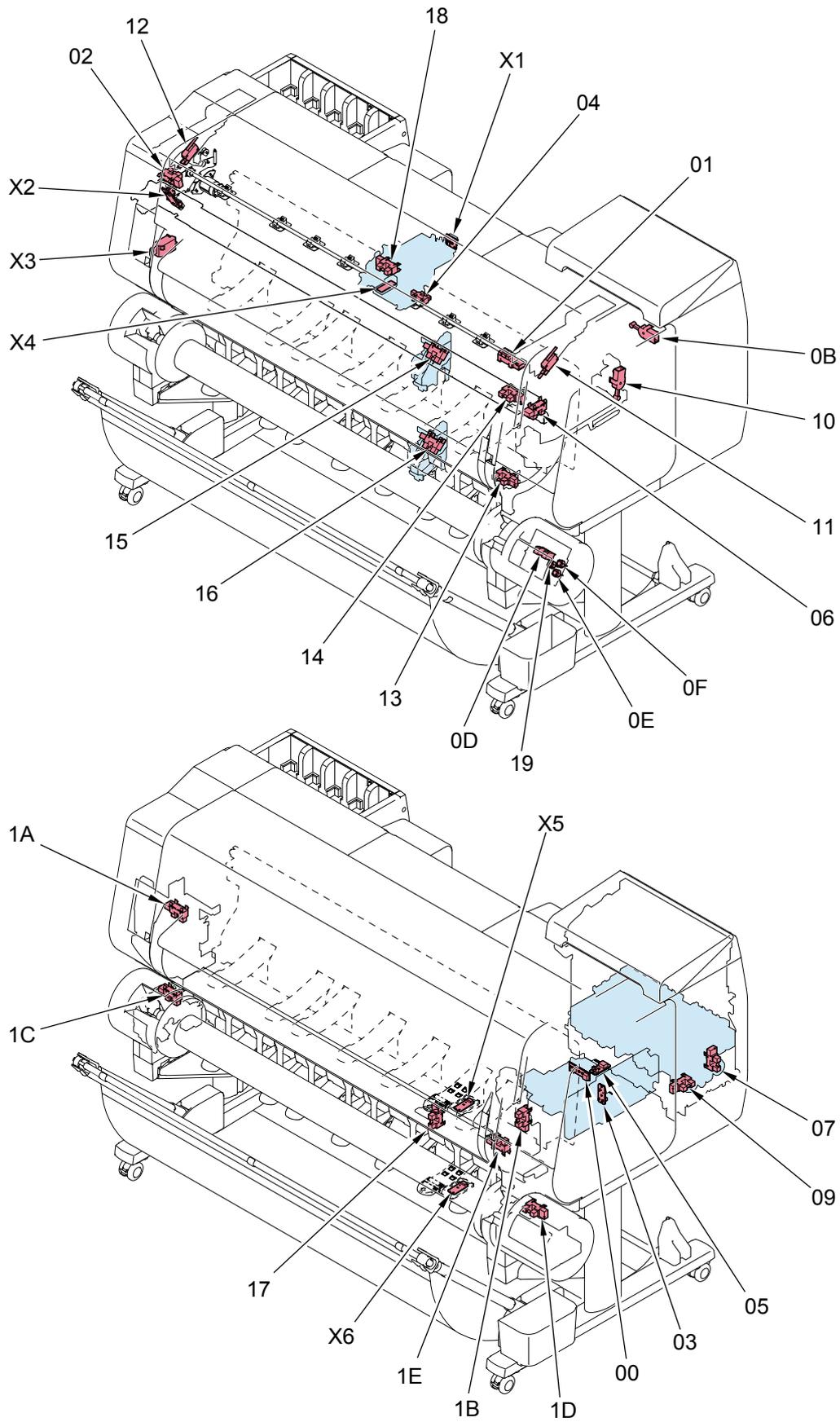
24" model



No.	Name	Remarks
11	Lower roll unit relay PCB* ¹	Included in RELAY PCB UNIT, RU
12	Power supply unit	Included in POWER SUPPLY UNIT
13	Main PCB* ¹	Included in MAIN PCB UNIT
14	I/F PCB* ¹	Included in I/F PCB UNIT
15	HDD	HDD, MQ01ABU050W
16	Backup PCB* ¹	Included in BACKUP PCB UNIT
17	Lower roll unit operation panel* ¹	Included in OPERATION PANEL UNIT, RU
18	Lower roll unit control PCB* ¹	Included in I/F PCB UNIT, RU

*¹: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

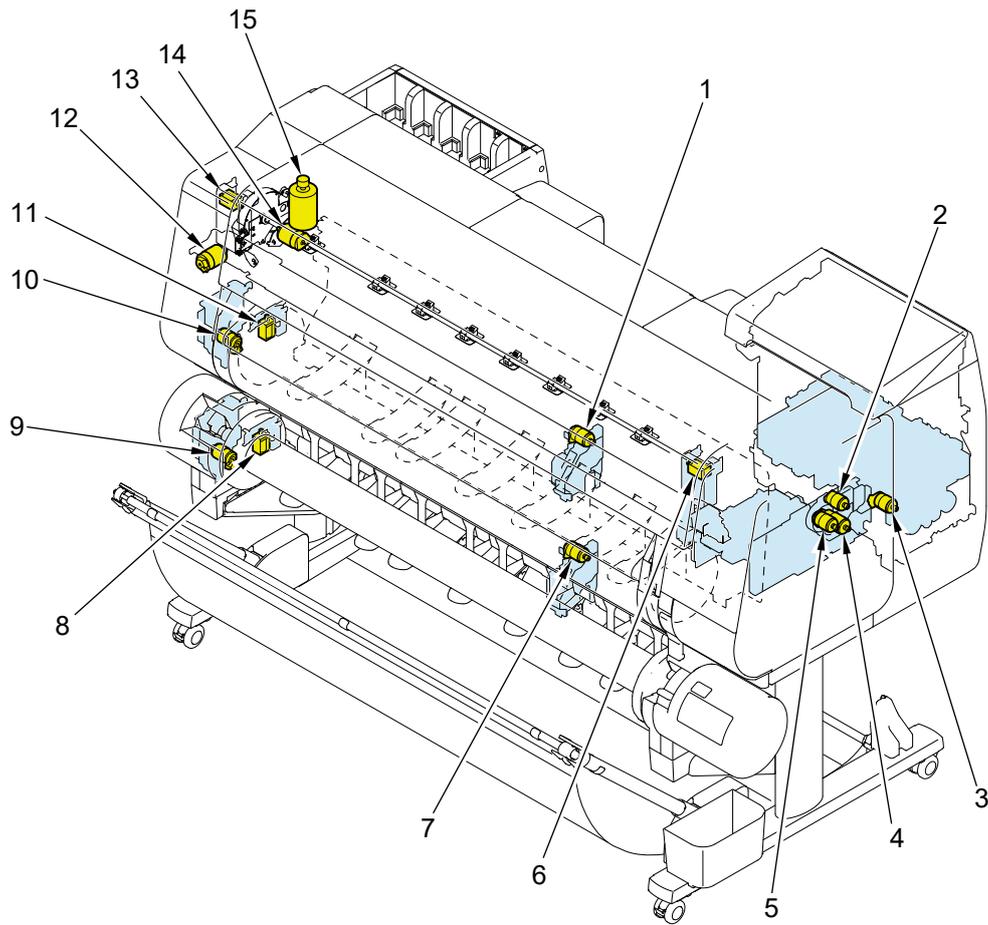
1-4-2. Sensors



Operation panel Display	Name	Remarks
0	0 Purge main cam sensor* ¹	Included in PURGE UNIT
	1 Paper entry sensor	PHOTO INTERRUPTER
	2 Paper feed home position sensor* ¹	Included in PAPER FEED ENCODER UNIT
	3 Pump roller sensor* ¹	Included in PURGE UNIT
	4 Carriage lift sensor	IC, PHOTO INTERRUPTER
	5 Wiper position sensor* ¹	Included in PURGE UNIT
	6 Cutter home position sensor* ¹	IC, PHOTO INTERRUPTER
	7 Right choke valve position sensor* ¹	Included in SUB INK TANK UNIT R
	8 -	-
	9 Right agitation valve position sensor* ¹	Included in SUB INK TANK UNIT R
	A -	-
	B Right tank cover switch	DETECT MICRO SWITCH
	C -	-
	D Paper wind direction sensor* ¹	Included in OPERATION PANEL UNIT, RU
	E Paper wind switch* ¹	Included in OPERATION PANEL UNIT, RU
F Paper unwind switch* ¹	Included in OPERATION PANEL UNIT, RU	
1	0 Pinch roller nip release lever sensor	DETECT MICRO SWITCH
	1 Right top cover sensor	MICROSWITCH
	2 Left top cover sensor	MICROSWITCH
	3 Lower paper entry sensor* ¹	Included in ROLL PAPER FEED SENSOR UNIT
	4 Upper paper entry sensor* ¹	included in ROLL PAPER FEED SENSOR UNIT
	5 Upper roll nip sensor	IC, PHOTO INTERRUPTER
	6 Lower roll nip sensor	IC, PHOTO INTERRUPTER
	7 Flapper position sensor	IC, PHOTO INTERRUPTER
	8 Print head locking cover sensor	IC, PHOTO INTERRUPTER
	9 Paper wind on/off switch* ¹	Included in OPERATION PANEL UNIT, RU
	A Upper left spool set sensor	IC, PHOTO INTERRUPTER
	B Upper right spool set sensor* ¹	Included in SPOOL SENSOR UNIT
	C Lower left spool set sensor	IC, PHOTO INTERRUPTER
	D Lower right spool set sensor	IC, PHOTO INTERRUPTER
	E Upper roll cover sensor* ¹	Included in SPOOL SENSOR UNIT
F -	-	
NO	Name	Remarks
X1	Carriage encoder* ¹	Included in CARRIAGE ENCODER UNIT
X2	Paper feed encoder* ¹	Included in PAPER FEED ENCODER UNIT
X3	Temperature-humidity sensor* ¹	Included in SENSOR, HUMIDITY
X4	Multi sensor* ¹	Included in MULTI SENSOR UNIT
X5	Upper roll paper set sensor* ¹	Included in NIP ARM SENSOR UNIT
X6	Lower roll paper set sensor* ¹	Included in NIP ARM SENSOR UNIT

*1: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

1-4-3. Motors and Solenoids

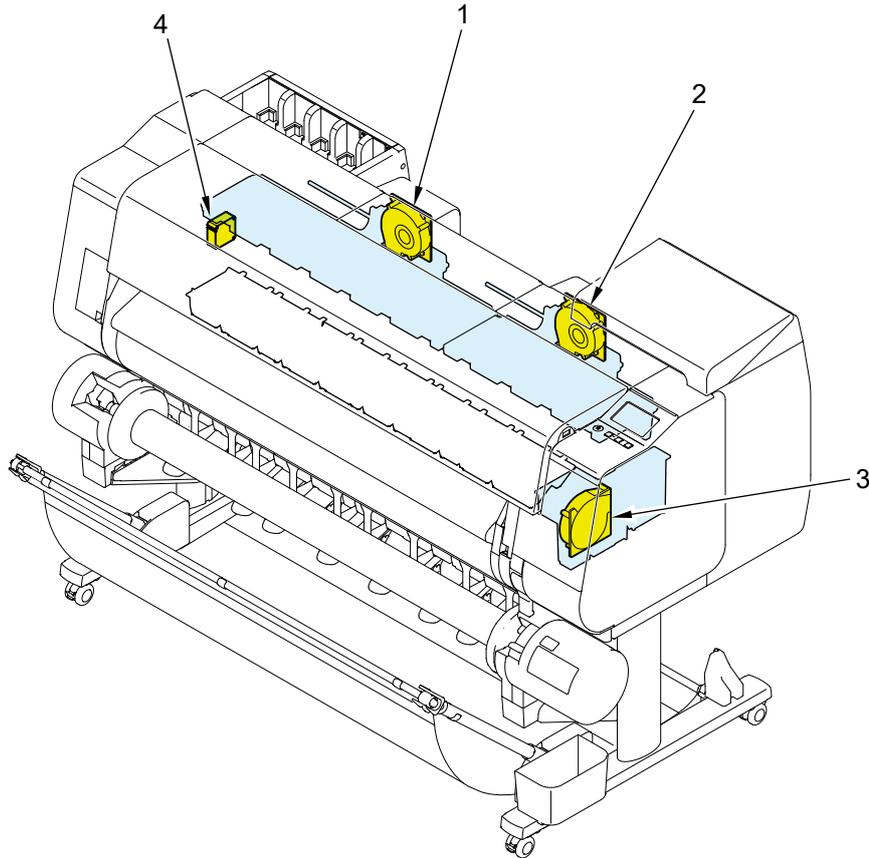


No.	Name	Remarks
1	Upper roll nip motor* ¹	Included in DRIVE NIP ARM UNIT
2	Wiper blade motor* ¹	Included in PURGE UNIT
3	Right ink valve motor* ¹	Included in SUB INK TANK UNIT R
4	Purge motor* ¹	Included in PURGE UNIT
5	Carriage lift motor* ¹	Included in LIFT UNIT
6	Right top cover lock solenoid* ¹	Included in ACCESS COVER LOCK UNIT R
7	Lower roll nip motor* ¹	Included in DRIVE NIP ARM UNIT
8	Lower spool lock solenoid* ¹	Included in SPOOL LOCK UNIT
9	Lower active roll brake motor (option)* ¹	Included in ACTIVE ROLL BREAK UNIT
10	Upper active roll brake motor* ¹	Included in ACTIVE ROLL BREAK UNIT
11	Upper spool lock solenoid* ¹	Included in SPOOL LOCK UNIT
12	Cutter motor* ¹	Included in CUTTER MOTOR UNIT, W/ENCODER
13	Left top cover lock solenoid	SOLENOID
14	Paper feed motor* ¹	Included in PAPER FEED MOTOR UNIT
15	Carriage motor	MOTOR, DC, 47.8W

*1: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

1-4-4. Fans

36" model, 44" model



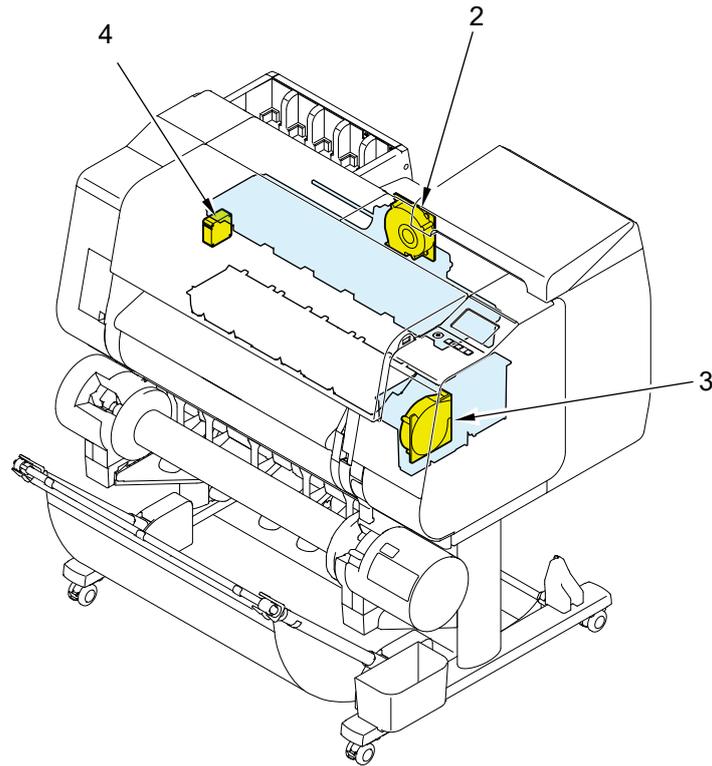
No.	Name	Remarks
1	Left mist fan ^{*1, *2}	(36" model) Included in MIST FAN DUCT UNIT 3 (44" model) Included in MIST FAN DUCT UNIT 2
2	Right mist fan ^{*1}	Included in MIST FAN DUCT UNIT 1
3	Suction fan ^{*1}	Included in SUCTION FAN UNIT
4	Power supply cooling fan ^{*3}	COOLING FAN, POWER SUPPLY UNIT

*1: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

*2: TX3100, TX4100, TX5310, and TX5410

*3: TX3200, TX4200, TX5320, and TX5420

24" model

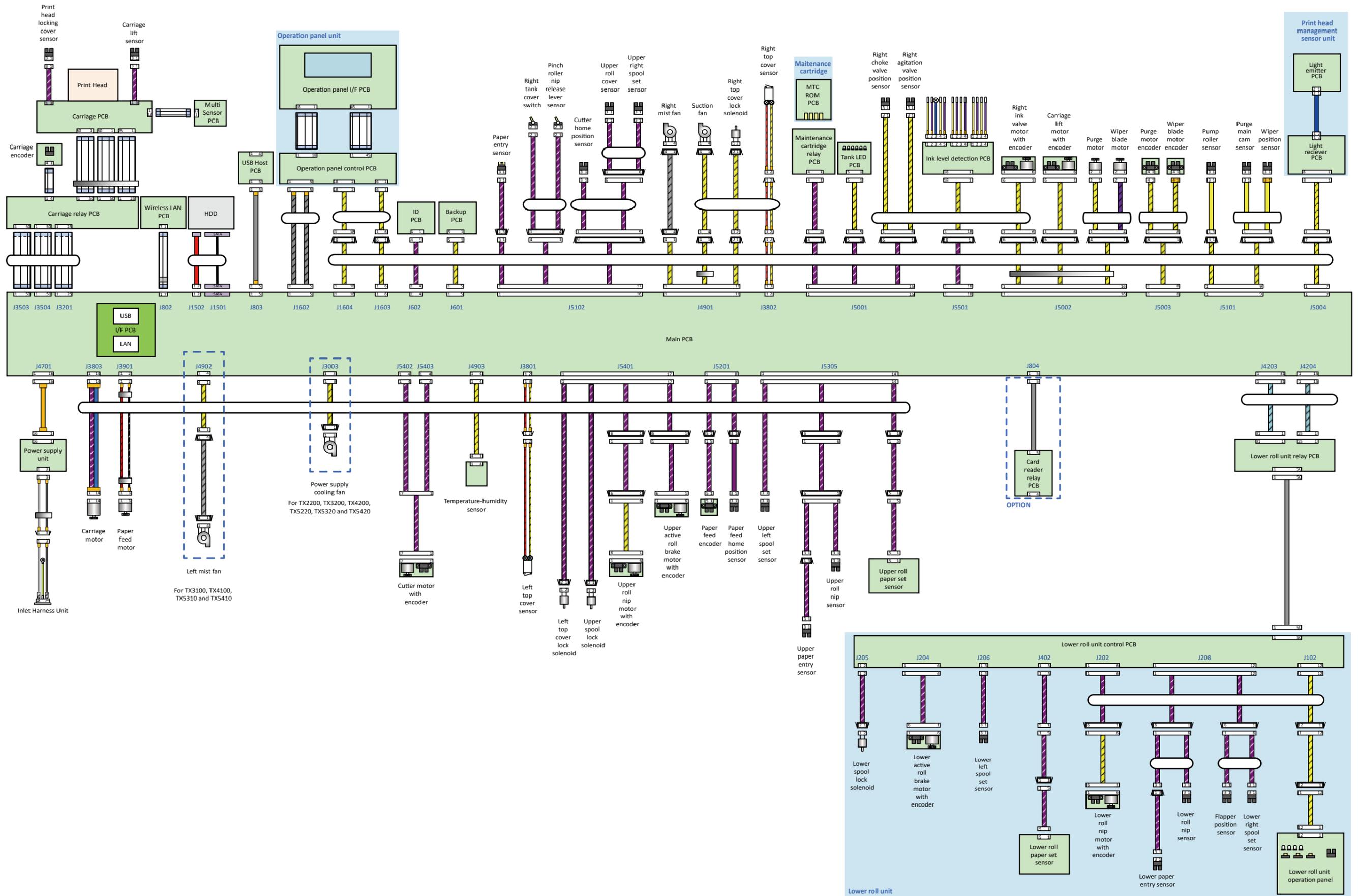


No.	Name	Remarks
2	Right mist fan ^{*1}	Included in MIST FAN DUCT UNIT 2
3	Suction fan ^{*1}	Included in SUCTION FAN UNIT
4	Power supply cooling fan ^{*2}	COOLING FAN, POWER SUPPLY UNIT

*1: It should be replaced by the unit mentioned in the Remarks, because it is unable to replace with the single parts.

*2: TX2200 and TX5220

1-5. Connection Diagram



2. DISASSEMBLY AND REASSEMBLY

2-1. Introduction	154
2-2. Works Before Disassembly and After Reassembly.....	160
List of Works Before Disassembly and After Reassembly	160
2-3. Disassembly and Reassembly	171
Index by Parts Names	171
1. Left Ink Tank Box Unit	179
2. Left Side (Active Roll Brake Unit, PF Encoder Unit)	209
3. Left Front (Left Access Cover Lock)	231
4. Access Cover	249
5. Front-1 (Nip Arm Unit, Waste Ink Absorber)	265
6. Front-2 (Suction Fan Unit, Spool Sensor Unit).....	285
7. Main PCB Unit, Power Supply Unit, Hard Disk Drive (24" model)	303
7. Main PCB Unit, Power Supply Unit, Hard Disk Drive (36" model)	327
7. Main PCB Unit, Power Supply Unit, Hard Disk Drive (44" model)	351
8. Right Front (Right Access Cover Lock)	367
9. Right Side (Purge Unit, Operation Panel)	395
10. Right Ink Tank Unit	423
11. Carriage Unit (1)	439
12. Carriage Unit (2)	469
13. Paper Feed Roller Unit (Pinch Roller Unit)	509
14. Cutter Blade Unit	553
15. Left Harness Ass'y, Right Harness Ass'y	567
16. Lower Roll Unit (1)	611
17. Lower Roll Unit (2)	621
18. Lower Roll Unit (3)	635

2-1. Introduction

This chapter gives procedures for disassembling and reassembling the printer.

After failure diagnostics, the service technician is requested to follow the instructions in this chapter to replace a faulty unit.

Each procedure is based on 44" model with 24" model and 36" model information added when necessary.

Harnesses, wire saddles, and edge saddles are subject to change without notice.

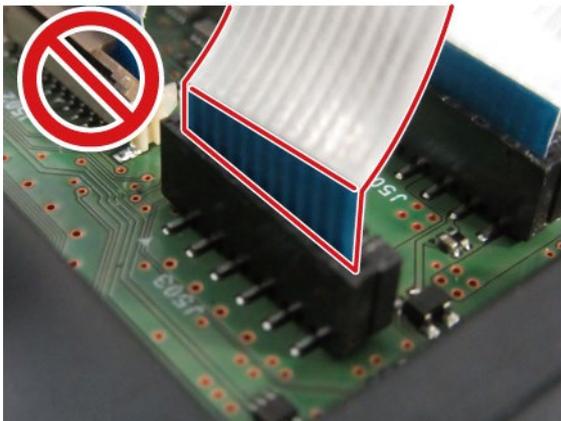
• What to Note in Disassembly and Reassembly

Observe the following when disassembling or reassembling units:

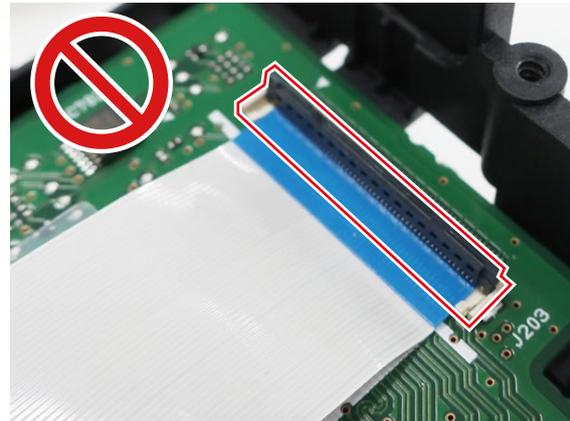
- Before disassembly or reassembly, be sure to unplug the power cord for the safety purpose.
- Before disassembly or reassembly, remove the paper from the printer.
- Before handling the circuit board, touch the metal part of the printer to discharge static electricity and protect the board from damaged due to static electricity.
- Before replacing the circuit board, unplug the power cord from the printer and wait for three minutes or longer to ensure discharge of electricity from the board.
- When placing a removed print head, keep the face surface free from contacting anything.
DO NOT place it with the face surface facing down.
- Before draining ink, make sure to protect the associated units as well as the surrounding work space from smeared with ink.
- In reassembling the unit, make sure to use the proper screw (length and diameter).
- Tighten the screw cautiously not to apply any extra power. Screwing too tight or too strong will break or deform the screw hole.
- DO NOT make the printer operate with a part or unit removed.
- When replacing a unit with the rating plate, remove the plate and attach it to the replaced new unit.
- In reassembling the unit, make sure that the cables are connected correctly in the proper position and that they are not caught in the parts.

Examples of wrong connection:

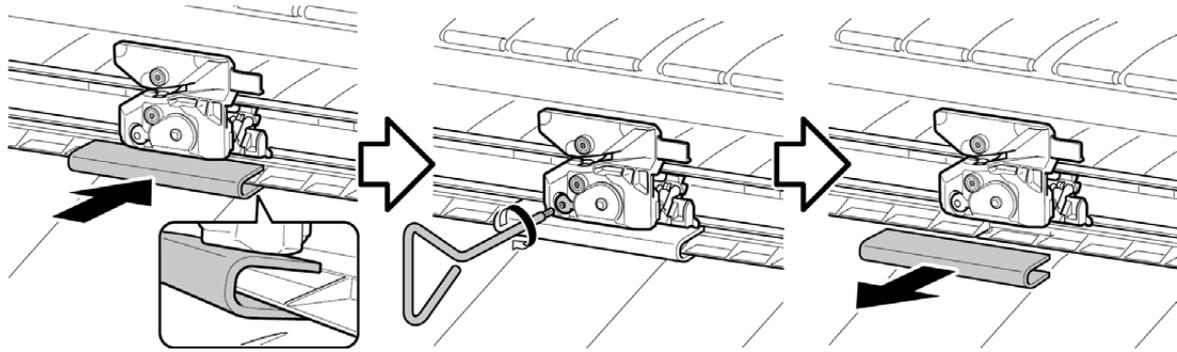
1) Cable connected at an angle or incompletely



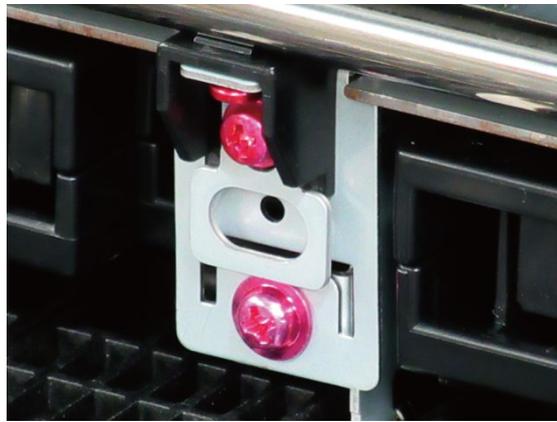
2) Cable not locked in place



- When attaching the cutter unit, attach the special tool under the unit with the unit positioned in the center as shown below, then tighten the screw.



- The unit that is fixed with a red screw cannot be adjusted in the field, thus it must not be disassembled. If the red screw is loosened or removed, the printer will not be able to operate or print properly. DO NOT loosen or remove the red screw.



• **How to Use the DISASSEMBLY AND REASSEMBLY Section**

Points:

Each section consists of “disassembly flowchart and illustration” and “detailed procedures.”

With the part name in the flowchart and the part illustration, you will be able to have a quick look at the shortest way to reach the target part.

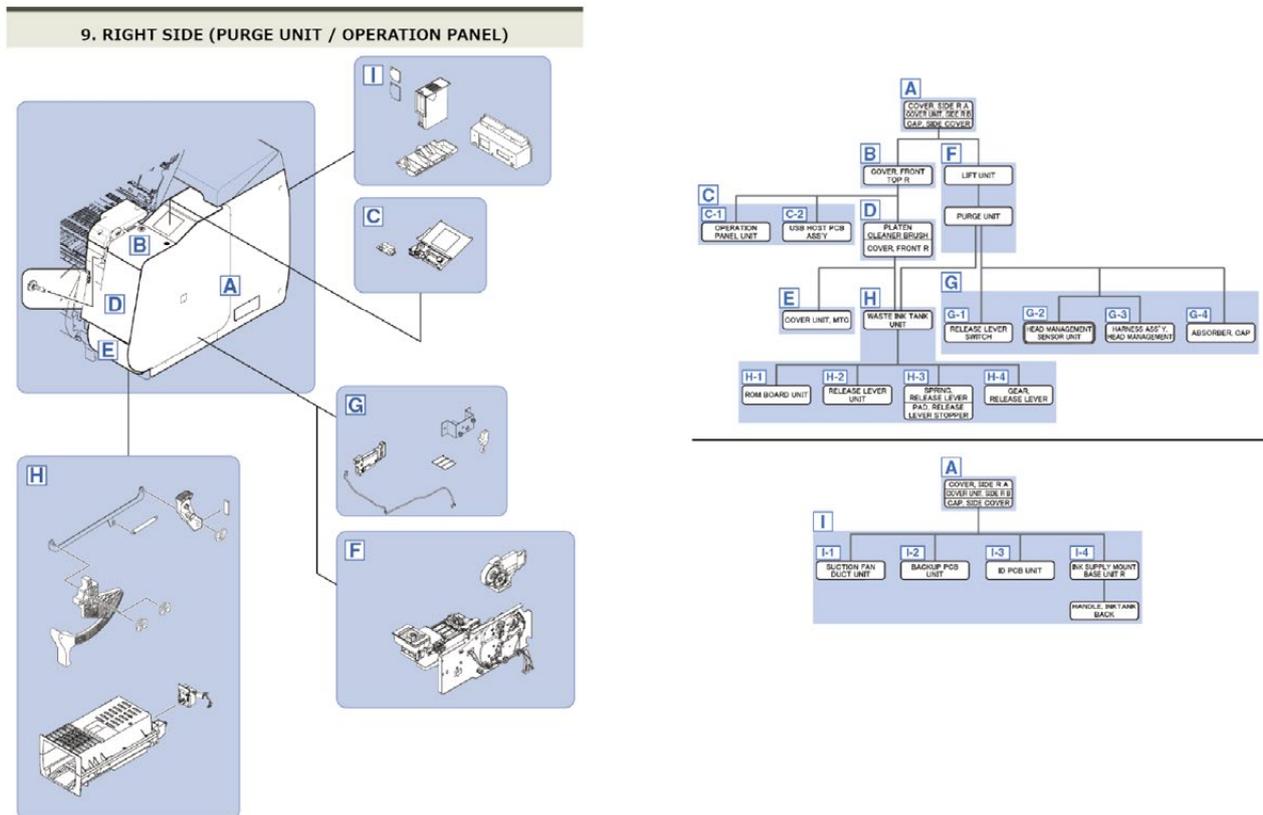
To assemble the unit, follow the disassembly procedures in reverse order unless otherwise specified.

Disassembly flowchart:

- The steps to remove the target part are shown in the simple diagram.
- Only the service parts are given in the flowchart.

Illustration:

- Each group of parts corresponding to the one in the disassembly flowchart is shown.
- The service parts are indicated in the color white.



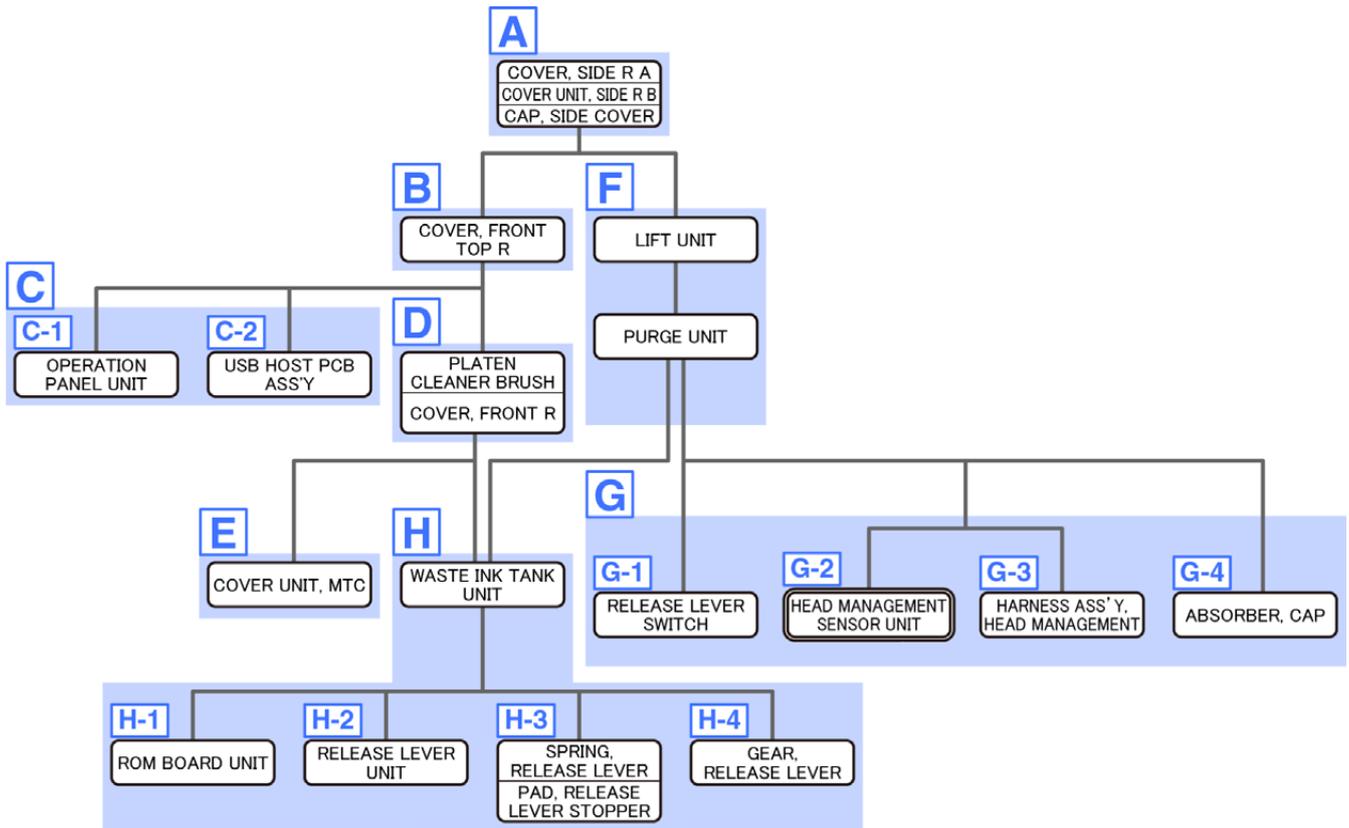
Detailed procedures:

- The disassembly procedures outlined in the flowchart are explained step by step.

• How to Read the Flowchart

Legend:

< Example >



: Part name.

: Adjustment in the service mode is necessary when this part is attached.

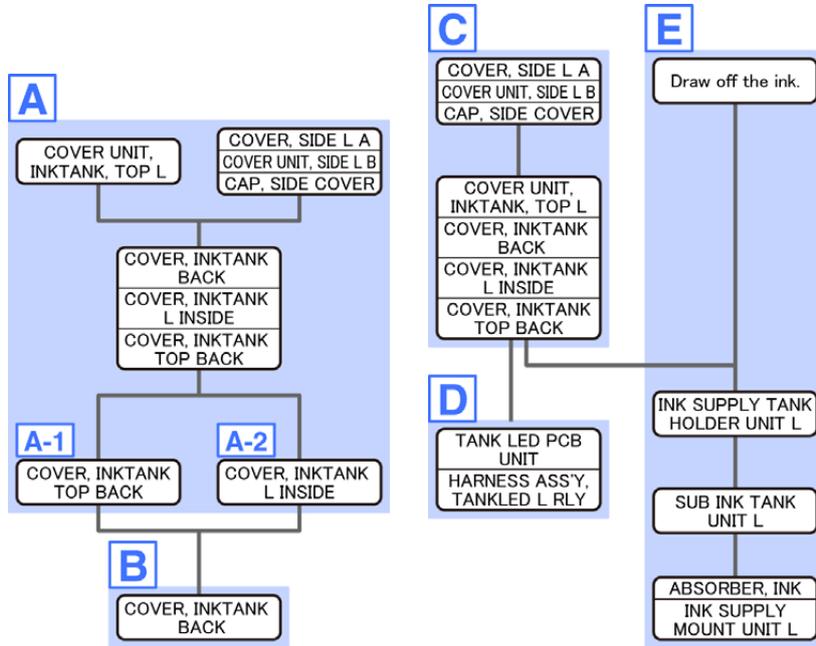
A **A-1** : Group in the detailed procedures.

• **How to Use the Flowchart**

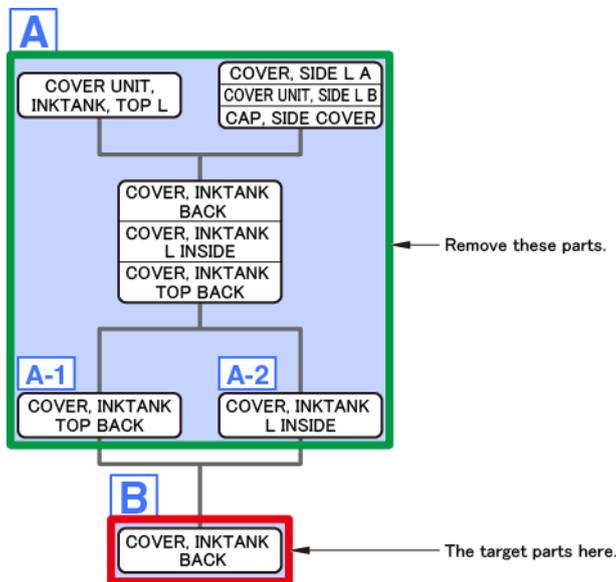
Each flowchart starts from the first step of disassembly with the printer standing still. Go through the flowchart from the top to the target part.

Multiple parts in the same frame mean that they are handled as a unit.

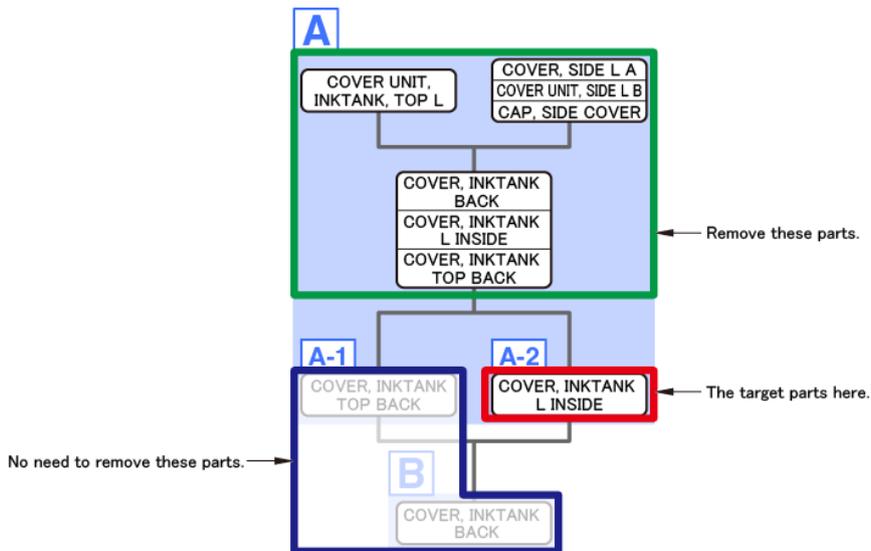
< Example >



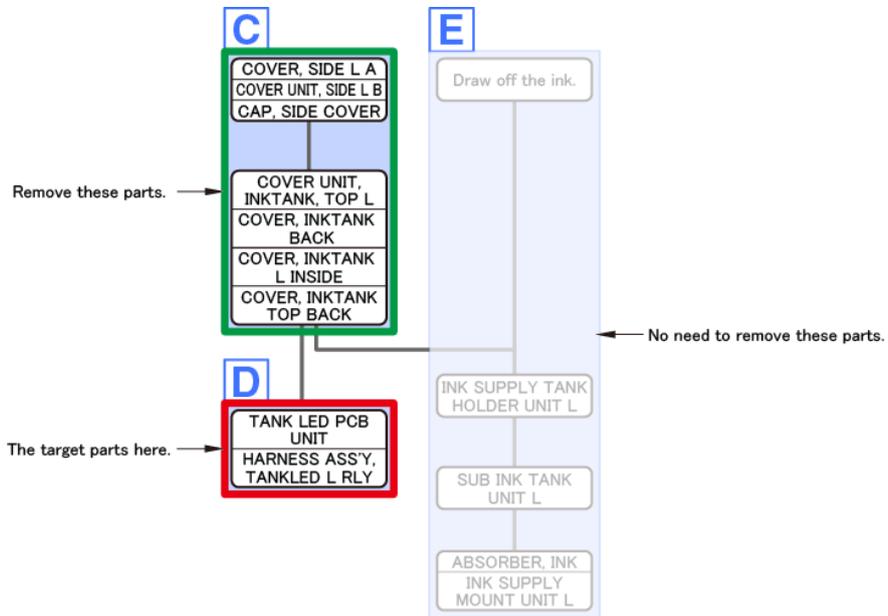
Example 1) To remove COVER, INKTANK BACK:



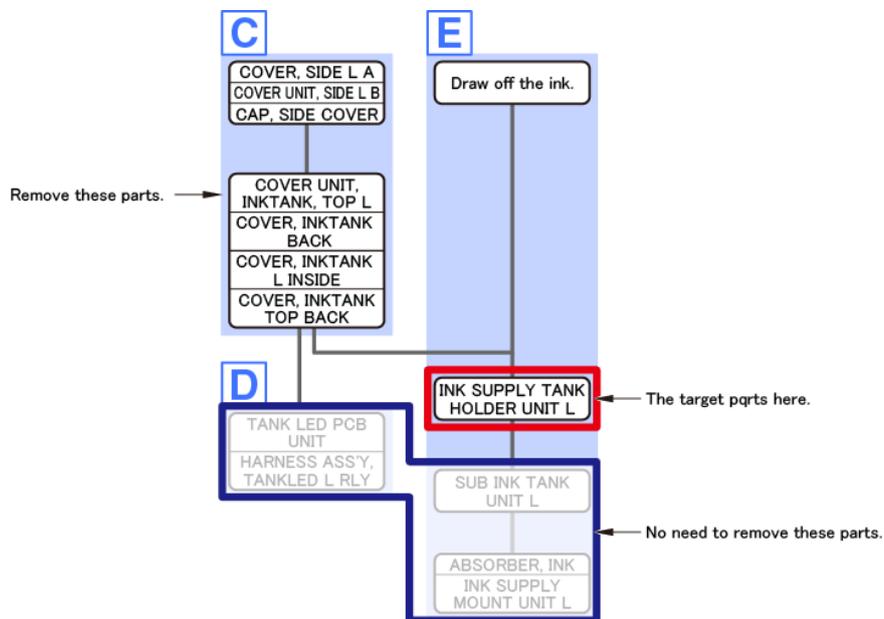
Example 2) To remove COVER, INKTANK L INSIDE:



Example 3) To remove HARNESS ASS'Y, TANKLED L RLY:



Example 4) To remove INK SUPPLY TANK HOLDER UNIT L:



2-2. Works Before Disassembly and After Reassembly

List of Works Before Disassembly and After Reassembly

In the Parts Names Index table, when a check mark is provided in the "works before disassembly" or "works after reassembly" column, perform the operation listed in the table below.

A part that needs to be replaced at the same time as the target part, if any, is listed under "Before disassembly" or "After reassembly." Be sure to check the table below in advance.

For details of each operation in the service mode, see "3. SERVICING FUNCTIONS."

Details of grease application are given in the applicable step of disassembly or reassembly procedures.

Part name	What to do
ABSORBER, INK	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually ></p> <p>See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes.
	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
ACTIVE ROLL BRAKE UNIT (lower)	<p>After reassembly:</p> <ul style="list-style-type: none"> · Calibrate the lower active roll brake unit. [SERVICE MODE > ADJUSTMENT > LOWER ARB CALIB]
ACTIVE ROLL BRAKE UNIT (upper)	<p>After reassembly:</p> <ul style="list-style-type: none"> · Calibrate the upper active roll brake unit. [SERVICE MODE > ADJUSTMENT > UPPER ARB CALIB] · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > PL1]
BACKUP PCB UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Start the printer in the PCB replacement mode and write the data to the BACKUP PCB UNIT.

Part name	What to do
BELT, CARRIAGE	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually ></p> <p>See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
CAM SHAFT UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Apply grease.

Part name	What to do
CARRIAGE UNIT	<p>TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410:</p> <ul style="list-style-type: none"> Replace the following part at the same time: <ul style="list-style-type: none"> FILM, TIMING SLIT STRIP <p>Before disassembly:</p> <ul style="list-style-type: none"> Drain the ink. <ul style="list-style-type: none"> < In the service mode > <ol style="list-style-type: none"> Unlock the carriage. <ul style="list-style-type: none"> [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. Open the ink supply valve and drain ink. <ul style="list-style-type: none"> [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. The ink in the tubes will be drained into the SUB INK TANK UNIT. <ul style="list-style-type: none"> The valve closes when the ink draining is completed <p>< To drain the ink manually ></p> <p>See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. <ul style="list-style-type: none"> [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] Perform Ink Filling. <ul style="list-style-type: none"> [SERVICE MODE > FUNCTION > INK FILLING] Perform Gap Calibration. <ul style="list-style-type: none"> [SERVICE MODE > ADJUSTMENT > GAP CALIB] Adjust the optical axis of the multi sensor. <ul style="list-style-type: none"> [SERVICE MODE > ADJUSTMENT > OPTICAL AXIS] Control the carriage cogging torque. <ul style="list-style-type: none"> [SERVICE MODE > ADJUSTMENT > CR MOTOR COG] Reset the applicable parts counters. <ul style="list-style-type: none"> TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410: <ul style="list-style-type: none"> Before resetting the parts counters, replace the part listed below. <ul style="list-style-type: none"> FILM, TIMING SLIT STRIP TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410: <ul style="list-style-type: none"> [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR1] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR2] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR3] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR5] TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420: <ul style="list-style-type: none"> [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR1] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR2] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR3] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR5] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > MS1]

Part name	What to do
COUPLING, CARRIAGE	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually ></p> <p>See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
FILM, TIMING SLIT DISK	<p>After reassembly:</p> <ul style="list-style-type: none"> · Adjust the line feeding and eccentricity. [SERVICE MODE > ADJUSTMENT > LF TUNING]
FILM, TIMING SLIT STRIP (TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420 only)	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420: [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR7]
FLEXIBLE CABLE UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Check the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR6]
HEAD MANAGEMENT SENSOR UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Adjust the optical axis of the head management sensor. [SERVICE MODE > ADJUSTMENT > NOZZLE CHK POS] · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > HMa1]

Part name	What to do
HOLDER, SLIDER PRESSURE, CR	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
I/F PCB UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Set the time to RTC. [SERVICE MODE > OTHERS > RTC SETTING] <p>When the coin battery of the I/F PCB UNIT is removed or replaced, also set the time to RTC.</p>
INK SUPPLY MOUNT UNIT R	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]

Part name	What to do
INK SUPPLY TANK HOLDER UNIT	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
INK TUBE UNIT	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING] · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR4]

Part name	What to do
MAIN PCB UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Start the printer in the PCB replacement mode and write the data to the MAIN PCB UNIT. · Adjust the LF encoder. [SERVICE MODE > ADJUSTMENT> LF ENC ADJ] · Calibrate the upper active roll brake unit. [SERVICE MODE > ADJUSTMENT> UPPER ARB CALIB] · Calibrate the lower active roll brake unit. [SERVICE MODE > ADJUSTMENT> LOWER ARB CALIB]
MIST FAN DUCT UNIT 1 MIST FAN DUCT UNIT 2 MIST FAN DUCT UNIT 3	<p>After reassembly:</p> <ul style="list-style-type: none"> · According to the printer model, replace the following part or the parts at the same time: TX-2100, TX-2200, TX-4200, TX-5210, TX-5220, TX-5420: MIST FAN DUCT UNIT 2 only TX-3200, TX-5320: MIST FAN DUCT UNIT 1 only TX-3100, TX-5310: MIST FAN DUCT UNIT 1 and MIST FAN DUCT UNIT 3 TX-4100, TX-5410: MIST FAN DUCT UNIT 1 and MIST FAN DUCT UNIT 2 · Reset the applicable parts counters. TX-2100, TX-2200, TX-3200, TX-4200, TX-5210, TX-5220, TX-5320, TX-5420 [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Mi1] TX-3100, TX-4100, TX-5310, TX-5410: [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Mi1] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Mi2]
MULTI SENSOR UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Gap Calibration. [SERVICE MODE > ADJUSTMENT > GAP CALIB] · Adjust the optical axis of the multi sensor. [SERVICE MODE > ADJUSTMENT > OPTICAL AXIS] · Reset the applicable parts counters. TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410: [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR5] TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420: [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > CR5] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > MS1]
PAPER FEED ENCODER UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Adjust the LF encoder. [SERVICE MODE > ADJUSTMENT > LF ENC ADJ] · When resetting the parts counter, replace the following part at the same time: - FILM, TIMING SLIT DISK [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > LFS1]

Part name	What to do
PHOTOINTERRUPTER, RPI-2500 (CARRIAGE LIFT SENSOR)	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually ></p> <p>See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
PINCH ROLLER UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Apply grease.
PINCH ROLLER UNIT L	<p>After reassembly:</p> <ul style="list-style-type: none"> · Apply grease.
PLATEN UNIT, TOP A	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Dynamic Print Head Alignment. [SERVICE MODE > ADJUSTMENT > CR REG]
PLATEN UNIT, TOP AWAY	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Dynamic Print Head Alignment. [SERVICE MODE > ADJUSTMENT > CR REG]
PLATEN UNIT, TOP B	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Dynamic Print Head Alignment. [SERVICE MODE > ADJUSTMENT > CR REG] · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > WP1]
PLATEN UNIT, TOP C	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Dynamic Print Head Alignment. [SERVICE MODE > ADJUSTMENT > CR REG]
PLATEN UNIT, TOP D	<p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Dynamic Print Head Alignment. [SERVICE MODE > ADJUSTMENT > CR REG]
PURGE UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counters. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > PG1] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > PG2] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > PG3] [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > HMa1]
RELEASE LEVER UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Apply grease.

Part name	What to do
SHAFT, PRESSURE RELEASE UNIT	After reassembly: <ul style="list-style-type: none"> · Apply grease.
SIX-RING RUBBER CHAIN	Before disassembly: <ul style="list-style-type: none"> · Drain the ink. < In the service mode > 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed < To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:" · Wait for five to ten minutes, and confirm that the ink is drained from the tubes.
	After reassembly: <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
SLIDER BUSHING, OILLESS, CR	Before disassembly: <ul style="list-style-type: none"> · Drain the ink. < In the service mode > 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed < To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:" · Wait for five to ten minutes, and confirm that the ink is drained from the tubes.
	After reassembly: <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]

Part name	What to do
SPRING, SLIDER PRESSURE, CR	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
STOPPER, SUB SLIDER, CR	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually > See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <hr/> <p>After reassembly:</p> <ul style="list-style-type: none"> · Check the CARRIAGE UNIT and the FLEXIBLE CABLE UNIT. [SERVICE MODE > DIAGNOSIS > CR SYSTEM CHECK] · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]

Part name	What to do
SUB INK TANK UNIT R	<p>Before disassembly:</p> <ul style="list-style-type: none"> · Drain the ink. <p>< In the service mode ></p> <ol style="list-style-type: none"> 1. Unlock the carriage. [SERVICE MODE > FUNCTION > CR UNLOCK] Then, slide the carriage to where the print head can be replaced and remove the print head. 2. Open the ink supply valve and drain ink. [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] The supply valve (choke valve) of the SUB INK TANK UNIT will open. 3. The ink in the tubes will be drained into the SUB INK TANK UNIT. The valve closes when the ink draining is completed <p>< To drain the ink manually ></p> <p>See 2-3. Disassembly and Reassembly > 10. Right Ink Tank Unit > E > Point > "To do it manually:"</p> <ul style="list-style-type: none"> · Wait for five to ten minutes, and confirm that the ink is drained from the tubes. <p>After reassembly:</p> <ul style="list-style-type: none"> · Perform Ink Filling. [SERVICE MODE > FUNCTION > INK FILLING]
SUCTION FAN DUCT UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · When resetting the parts counter, replace the following part at the same time: - SUCTION FAN UNIT [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia7]
SUCTION FAN UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · When resetting the parts counter, replace the following part at the same time: - SUCTION FAN DUCT UNIT [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia7]
WASTE INK ABSORBER UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia6]
WASTE INK ABSORBER UNIT A	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia1]
WASTE INK ABSORBER UNIT B	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia2]
WASTE INK ABSORBER UNIT C	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia3]
WASTE INK ABSORBER UNIT E (TX-3100, TX-3200, TX-5310, TX-5320 only)	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Wia5]
WASTE INK TANK UNIT	<p>After reassembly:</p> <ul style="list-style-type: none"> · Reset the applicable parts counter. [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > WF1]

2-3. Disassembly and Reassembly

Index by Parts Names

Parts names and where to find them in the disassembly and reassembly procedures are listed below.

For an electrical component (motor, sensor, and switch) that is designated as a service part, the part name where the applicable component is used is given in the parentheses.

• Printer

Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
ABSORBER	√	√	1	A-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
ABSORBER, CAP			9	G-4	
ABSORBER, INK			10	E	
ACCESS COVER UNIT			4	D	
ACTIVE ROLL BRAKE UNIT		√	2	C	
AWAY PLATEN			4	C	
BACKUP PCB UNIT		√	9	I-2	
BASE, CHAIN LINK			12	E-3	
BELT, CARRIAGE	√	√	12	B-1	
BELT, PAPER TRANSPORT			2	D-2	
BOX, INKTANK			1	A-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
BUSH UNIT, ROLL COVER L			6	A	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
BUSH, ARM ROTARY SHAFT			13	D	
BUSH, ROLL COVER A			6	A	TX-4100, TX-4200, TX-5410, TX-5420
BUSHING / CLEANER KIT			11	E-1	
BUSHING, PR RELEASE			13	B	
BUSHING, PRESSURE RELEASE			13	B	
CABLE, USB RELAY			9	<PC>	
CAM SHAFT UNIT		√	5	E-4	
CAM, ROLL COVER SIDE			6	<PC>	
CAP, CAM SHAFT			13	<PC>	TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
CAP, ROLL COVER SHAFT			6	A	
CAP, SIDE COVER			1	A	Left
			9	A	Right
CARRIAGE ENCODER UNIT			12	C-2	
CARRIAGE RELAY PCB UNIT			12	C-1	
CARRIAGE UNIT	√	√	12	B-1	
CASE, SPOOL SIDE INNER R			8	C	
CATCH, ROLL COVER			6	<PC>	
CODEWHEEL COVER UNIT			2	D	
COOLING FAN, POWER SUPPLY UNIT			2	<PC>	TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
COUPLING, CARRIAGE	√	√	12	B-2	
COVER SPL GEAR UNIT			2	C-1	
COVER UNIT, BACK TOP CENTER			3	D	
COVER UNIT, BACK TOP R			8	A	
COVER UNIT, INKTANK, TOP R			10	A	
COVER UNIT, MTC			9	E	

Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
COVER UNIT, SIDE L B			1	A	
COVER UNIT, SIDE R B			9	A	
COVER, BACK			2	E	TX-4100, TX-4200, TX-5410, TX-5420
COVER, BACK POSITION			14	B-1	
COVER, BACK RIGHT			13	A	TX-2100, TX-2200, TX-5210, TX-5220
COVER, BACK W-FAN			2	E	TX-3100, TX-3200, TX-5310, TX-5320
COVER, FRONT L			3	C	
COVER, FRONT R			8	A	
COVER, FRONT TOP R			8	A	
COVER, HOME POSITION			14	B	
COVER, INKTANK BACK			1	A-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
			10	B	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
COVER, INKTANK L INSIDE			1	A-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
COVER, INKTANK R INSIDE			10	A-2	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
COVER, INKTANK TOP BACK			10	A-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
COVER, LEVER PI, CR			11	A-3	
COVER, MIST FAN			13	A	
COVER, PF ENCODER OUTER			2	D	
COVER, PI SENSOR, CR			12	B-2	
COVER, ROLL BACK UP			5	A	TX-4100, TX-4200, TX-5410, TX-5420
COVER, ROLL FRONT			6	<PC>	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
COVER, ROLL FRONT A			6	<PC>	TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
COVER, ROLL FRONT B			6	<PC>	TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
COVER, ROLL FRONT C			6	<PC>	TX-3200, TX-4200, TX-5320, TX-5420
COVER, ROLL SIDE L			6	<PC>	
COVER, ROLL SIDE R			6	<PC>	
COVER, ROLL TOP			6	<PC>	
COVER, SIDE L A			1	A	
COVER, SIDE R A			9	A	
COVER, SOCKET			10	<PC>	
COVER, SPOOL L			6	E	
COVER, SPOOL R			6	B	
COVER, TOP L			1	A	
CUTTER BLADE UNIT			14	B-1	
CUTTER MOTOR UNIT, W/ENCODER			14	B-1	
DAMPER UNIT, ROLL COVER R			6	C-2	
DETECT MICRO SWITCH (RELEASE LEVER SWITCH)			9	G-1	
DETECT MICRO SWITCH (RIGHT TANK COVER SWITCH)			8	B-2	
DRIVE NIP ARM UNIT			5	E-3	
EJECT LEVER, INK TANK			10	<PC>	
FFC, WIRELESS LAN			7	C	TX-4200, TX-5420
			7	D	TX-2200, TX-3200, TX-5220, TX-5320
FILM, TIMING SLIT DISK		v	2	D-1	

Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
FILM, TIMING SLIT STRIP			11	C	
FLANGE, PULLEY			2	D-1	
FLAPPER SEPARATE UNIT			5	A	
FLAPPER SEPARATE UNIT W/SP			5	A	
FLEXIBLE CABLE UNIT		√	12	E-2	
GEAR, PRESSURE RELEASE			13	B	
GEAR, RELEASE LEVER			9	H-4	
GUARD ACCESS COVER UNIT W/SPUR			4	A	
GUIDE UNIT, LOW A			5	D	
GUIDE UNIT, LOW B			5	D	
GUIDE UNIT, LOW C			5	D	TX-3100, TX-3200, TX-4100, TX-4200, TX-5310, TX-5320, TX-5410, TX-5420
GUIDE UNIT, LOW D			5	D	TX-4100, TX-4200, TX-5410, TX-5420
GUIDE UNIT, OUTSIDE A			6	G-1	
GUIDE UNIT, OUTSIDE B			6	G-2	TX-2100, TX-2200, TX-4100, TX-4200, TX-5210, TX-5220, TX-5410, TX-5420
HANDLE UNIT, INK TANK S			10	<PC>	
HANDLE, INKTANK BACK			9	I-4	
HARNESS ASS'Y, HEAD MANAGEMENT			9	G-3	
HARNESS ASS'Y, INLET RELAY			7	A-5	TX-4100, TX-5410
			7	B-1	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
			7	D-1	TX-4200, TX-5420
HARNESS ASS'Y, INTERLOCK SW			3	B	Left
			8	B-3	Right
HARNESS ASS'Y, L			15		
HARNESS ASS'Y, LFPE SNS			13	C-2	
HARNESS ASS'Y, LO ARB MOTOR			2	C	
HARNESS ASS'Y, MFAN L			2	E	TX-3100, TX-4100, TX-5310, TX-5410
HARNESS ASS'Y, PANEL LVDS			8	B-1	
HARNESS ASS'Y, POWER SUPPLY			7	A-3	TX-4100, TX-5410
			7	C	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
			7	D-3	TX-4200, TX-5420
HARNESS ASS'Y, R			15		
HARNESS ASS'Y, RLNIP PF SNS			5	E-2	
HARNESS ASS'Y, ROLL SEP RLY			5	F-2	
HARNESS ASS'Y, RSIDE FRONT			8	C-2	
HARNESS ASS'Y, RU RELAY			1	A-4	
HARNESS ASS'Y, TANK CVR MFAN R			9	J	
HARNESS ASS'Y, TANKLED R RLY			10	D	
HARNESS ASS'Y, UP RLNIP RELAY			5	F-1	
HDD CABLE ASS'Y			7	A-4	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
			7	A-6	TX-4100, TX-4200, TX-5410, TX-5420
HDD, MQ01ABU050W (HARD DISK)			7	A-3	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
			7	B	TX-4100, TX-4200, TX-5410, TX-5420
HEAD LEVER UNIT			11	A-2	
HEAD MANAGEMENT SENSOR UNIT		√	9	G-2	
HINGE ASS'Y, ACCESS COVER SP			4	D-2	
HOLDER, BELT, CR			12	<PC>	
HOLDER, PAPER FEED ROLLER			13	D	
HOLDER, SLIDER PRESSURE, CR	√	√	12	B-3	

Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
HOLDER, SPOOL SIDE L			6	E	
HOLDER, SPOOL SIDE R			6	B	
HOLDER, SWITCH			3	B	Left
			8	B-3	Right
I/F PCB UNIT		√	7	A-2	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
			7	A-4	TX-4100, TX-4200, TX-5410, TX-5420
IDLER PULLEY UNIT			12	<PC>	
INK SUPPLY MOUNT BASE UNIT L			1	A-2	
INK SUPPLY MOUNT BASE UNIT R			9	I-4	
INK SUPPLY MOUNT UNIT R	√	√	10	E	
INK SUPPLY TANK HOLDER UNIT	√	√	10	E	
INK TUBE UNIT	√	√	12	E-1	
INKTANK COVER UNIT, L			1	A-1	TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
INKTANK COVER UNIT, R			10	C	TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
INLET HARNESS UNIT			1	A-3	
JOINT LEVER B			11	A-1	
LABEL, SLANT			11	<PC>	
LEVER, INK TANK			10	<PC>	
LEVER, LOCK L			4	<PC>	
LEVER, LOCK R			4	<PC>	
LEVER, PAPER FEED SENSOR			5	E-1	
LEVER, TUBE			11	A-1	
LIFT UNIT			9	F	
LOCK ACCESS COVER UNIT R			8	C-1	
LOCK BELT			<PC>		TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
LOCK LEVER, ACCESS COVER L			3	E	
MAIN PCB UNIT		√	7	A-1	
MICRO SWITCH (LEFT TOP COVER SWITCH)			3	B	
MICRO SWITCH (RIGHT TOP COVER SWITCH)			8	B-3	
MIST FAN DUCT UNIT 1		√	13	B	TX-3100, TX-3200, TX-4100, TX-4200, TX-5310, TX-5320, TX-5410, TX-5420
MIST FAN DUCT UNIT 2		√	13	B	TX-2100, TX-2200, TX-4100, TX-5210, TX-5220, TX-5410
MIST FAN DUCT UNIT 3		√	13	B	TX-3100, TX-5310
MOTOR, DC, 47.8W (CARRIAGE MOTOR)			11	D	
MULTI SENSOR UNIT		√	11	A-4	
NIP ARM SENSOR UNIT			5	E-4	
NIP ARM UNIT			5	E-4	
OPERATION PANEL UNIT			9	C-1	
PAD, BUSHING, CR			11	E-1	
PAD, EJECT FRICTION			6	<PC>	
PAD, RELEASE LEVER STOPPER			9	H-3	
PAPER FEED ENCODER UNIT		√	2	D	
PAPER FEED MOTOR UNIT			2	D-2	
PAPER FEED ROLLER UNIT			13	D	

Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
PHOTO-INTERRUPTER (PAPER ENTRY SENSOR)			13	C-1	
PHOTOINTERRUPTER, RPI-2500 (CARRIAGE LIFT SENSOR)	√	√	12	B-2	
PHOTOINTERRUPTER, RPI-2500 (CUTTER HP SENSOR)			14	B-2	
PHOTOINTERRUPTER, RPI-2500 (HEAD COVER SENSOR)			11	A-3	
PHOTOINTERRUPTER, RPI-2500 (UPPER LEFT SPOOL SET SENSOR)			2	C-2	
PHOTOINTERRUPTER, RPI-2500 (UPPER ROLL NIP SENSOR)			5	E-3	
PINCH ROLLER UNIT		√	13	D	
PINCH ROLLER UNIT L		√	13	D	
PLATE UNIT, SPOOL SIDE SUPPORT			6	F	
PLATE, PRODUCT NAME			<PC>		TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420
PLATE, SPRING SWITCH			3	B	Left
			8	B-3	Right
PLATEN CLEANER BRUSH			8	A	
PLATEN UNIT, TOP A		√	4	C	
PLATEN UNIT, TOP AWAY		√	4	C	
PLATEN UNIT, TOP B		√	4	C	
PLATEN UNIT, TOP C		√	4	C	TX-3100, TX-3200, TX-4100, TX-4200, TX-5310, TX-5320, TX-5410, TX-5420
PLATEN UNIT, TOP D		√	4	C	TX-4100, TX-4200, TX-5410, TX-5420
PLATEN, INK PRE EJECTION			14	A	
PLATEN, REAR			13	D	
PLATEN, REAR COLLAR			13	D	TX-3100, TX-3200, TX-5310, TX-5320
PLATEN, UNDER A			14	B-1	
PLATEN, UNDER C			14	B-1	TX-3100, TX-3200, TX-5310, TX-5320
PLATEN, UNDER HOME			14	B-1	
POWER SUPPLY UNIT			7	A-2	TX-4100, TX-5410
			7	B-2	TX-2100, TX-2200, TX-3100, TX-3200, TX-5210, TX-5220, TX-5310, TX-5320
			7	D-2	TX-4200, TX-5420
PRE PRINTING PLATEN BASE ASS'Y			14	A	
PURGE UNIT		√	9	F	
RAIL CLEANER UNIT S			11	E	
RELAY PCB UNIT, RU			1	A-2	
RELEASE LEVER UNIT		√	9	H-2	
ROLL COVER UNIT			6	<PC>	TX-4100, TX-4200, TX-5410, TX-5420
ROLL PAPER FEED SENSOR UNIT			5	E-2	
ROLLER, PRESS			4	<PC>	
ROM BOARD UNIT			9	H-1	
ROTARY DAMPER			4	D-2	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
SENSOR, HUMIDITY			2	B	
SHAFT PRESSURE RELEASE UNIT		√	13	B	
SHAFT, PRESS ROLLER			4	<PC>	
SHEET DAMPER			11	<PC>	
SIX-RING RUBBER CHAIN	√	√	12	E-1	
SLIDER BUSHING, OILLESS, CR	√	√	12	B-4	

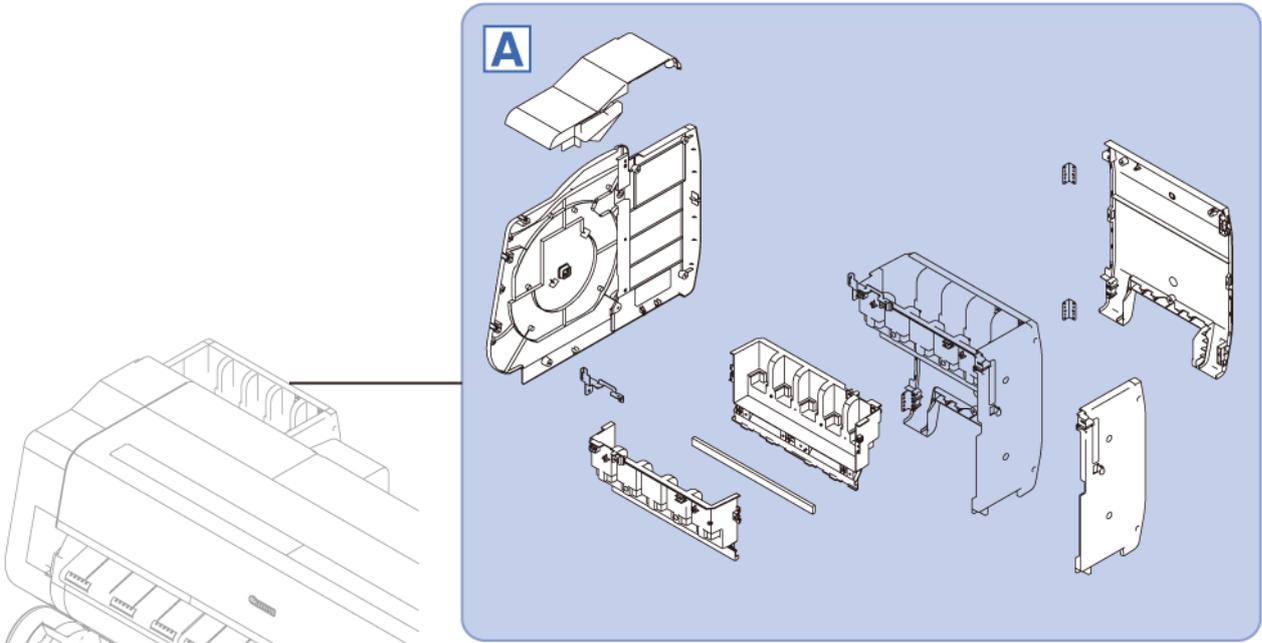
Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
SLIDER, IDLER PULLEY			12	<PC>	
SOLENOID			3	E	
SPOOL LOCK UNIT			2	C-1	
SPOOL SENSOR UNIT			6	C-1	
SPRING, ACCESS COVER			4	D-2	
SPRING, EARTH			6	A	
SPRING, EJECT EARTH			8	C-1	
SPRING, FILM STRIP			11	C	
SPRING, HEAD LEVER			11	A-12	
SPRING, IDLER PULLEY			12	<PC>	
SPRING, LOCK			3	E	
SPRING, PAPER FEED SENSOR			5	E-1	
SPRING, PAPER SET			5	E-4	
SPRING, RELEASE LEVER			9	H-3	
SPRING, SLIDER PRESSURE, CR	√	√	12	B-3	
SPRING, SPOOL COVER			6	E	Left
			6	B	Right
SPRING, TENSION			2	D-2	
SPRING, TENSION			11	A-1	
STOPPER, BELT, CR			12	B-2	
STOPPER, SUB SLIDER, CR	√	√	12	B-3	
SUB INK TANK UNIT R	√	√	10	E	
SUCTION FAN DUCT UNIT		√	9	I-1	
SUCTION FAN UNIT		√	6	G	
TANK LED PCB UNIT			10	D	
TENSIONER, IDLER PULLEY			11	D	
TUBE UNIT			12	E-1	
UPPER GUIDE, INK TANK			10	<PC>	
USB HOST PCB UNIT			9	C-2	
WASTE INK ABSORBER UNIT		√	5	C	
WASTE INK ABSORBER UNIT A		√	5	A	
WASTE INK ABSORBER UNIT B		√	5	A	
WASTE INK ABSORBER UNIT C		√	5	A	TX-4100, TX-4200, TX-5410, TX-5420
WASTE INK ABSORBER UNIT E		√	5	A	TX-3100, TX-3200, TX-5310, TX-5320
WASTE INK TANK UNIT		√	9	H	
WINDOW			4	D-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
WINDOW R			4	D-1	TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410
WIRELESS LAN BOARD ASS'Y			7	C	TX-4200, TX-5420
			7	D	TX-2200, TX-3200, TX-5220, TX-5320
WIRELESS LAN PCB UNIT			7	C	TX-4100, TX-5410
			7	D	TX-2100, TX-3100, TX-5210, TX-5310

• Lower Roll Unit

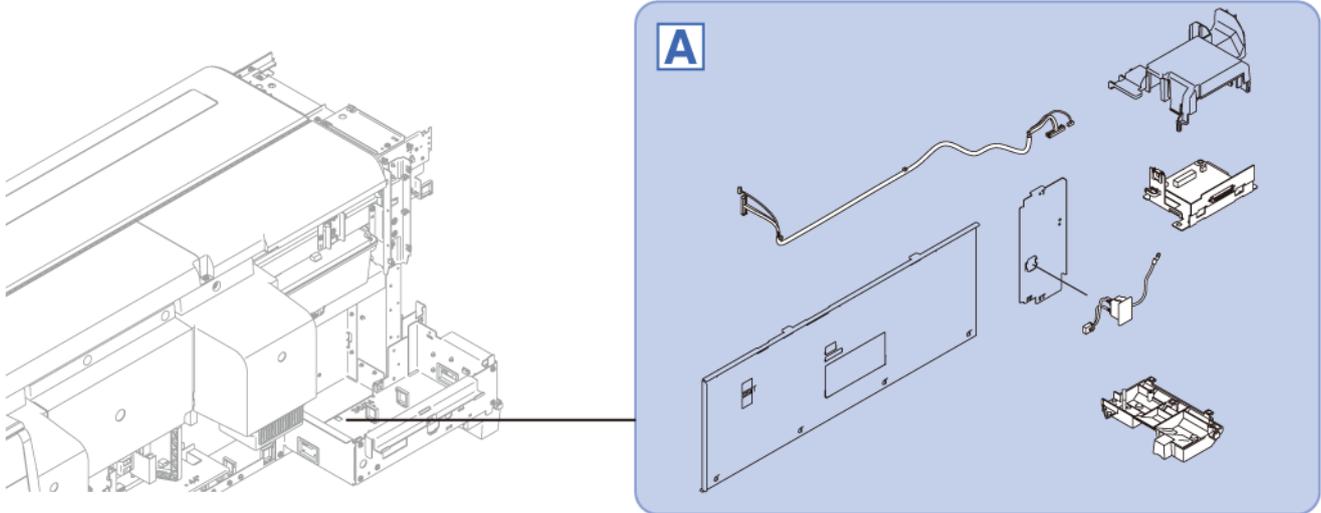
Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
ACTIVE ROLL BRAKE UNIT		√	17	B	
BUSHING, DRIVE			16	H	
CABLE, ROLL UNIT			17	<PC>	
CAM SHAFT UNIT			18	I	
CAM, FLAP SELEC			18	F-1	
CAP, COVER SIDE L			17	A	
COVER SPL GEAR UNIT			17	B-1	
COVER UNIT, SIDE OUTER L			17	A	
COVER UNIT, SIDE OUTER R			17	F	
COVER, SIDE L SUB			17	A	
ACTIVE ROLL BRAKE UNIT			16	E	
COVER, SIDE R REAR			16	G-1	
COVER, SIDE TOP L			17	B-2	
DRIVE NIP ARM UNIT			18	H-1	
FLAPPER SEPARATE UNIT			18	G	
FLAPPER SEPARATE UNIT W/SP			18	G	
GUIDE UNIT, LOW A			18	G	
GUIDE UNIT, LOW B			18	G	
GUIDE UNIT, LOW C			18	G	36" model, 44" model
GUIDE UNIT, LOW D			18	G	44" model
GUIDE, UPPER			16	A	Left
			16	B	Right
HANDLE UNIT, LOWER SUPPORT L			18	B-1	
HANDLE UNIT, LOWER SUPPORT R			18	B-1	
HARNESS ASS'Y, LO ARB MOTOR			17	E-5	
HARNESS ASS'Y, LO FLAP SPLSET			18	D-2	
HARNESS ASS'Y, LO ROLL SEP RLY			17	E-3	
HARNESS ASS'Y, LO SPL SOL			17	E-2	
HARNESS ASS'Y, LO SPLSET L			17	E-4	
HARNESS ASS'Y, RLNIP PF SNS			18	J-1	
HARNESS ASS'Y, ROLL SEP RLY			18	K-2	
HARNESS ASS'Y, RU MAIN			18	K-1	
HARNESS ASS'Y, RU PANEL RLY			17	F	
HOLDER, SPOOL L			16	A	
HOLDER, SPOOL R			16	B	
I/F PCB UNIT, RU			17	E-1	
KNOB, OPERATION			16	H	
LEVER ASS'Y, SPL LOCK R			16	H	
LEVER, PAPER FEED SENSOR			18	J-2	
LOCK LEVER A			16	C-1	
LOCK LEVER B			16	C-1	
NIP ARM SENSOR UNIT			18	H-3	
NIP ARM UNIT			18	H-2	
OPERATION PANEL UNIT, RU			16	G-1	
PAPER GUIDE ROLLER UNIT, RU A			18	G	
PAPER GUIDE ROLLER UNIT, RU B			18	G	
PAPER GUIDE ROLLER UNIT, RU C			18	G	44" model
PAPER GUIDE ROLLER UNIT, RU E			18	G	36" model
PHOTOINTERRUPTER, RPI-2500 (FLAPPER POSITION SENSOR)			18	D-1	
PHOTOINTERRUPTER, RPI-2500 (LOWER LEFT SPOOL SET SENSOR)			17	D	

Part name	Works before disassembly	Works after reassembly	Disassembly and reassembly procedures		Remarks
			Title	Group	
PHOTOINTERRUPTER, RPI-2500 (LOWER RIGHT SPOOL SET SENSOR)			16	G-2	
PHOTOINTERRUPTER, RPI-2500 (LOWER ROLL NIP SENSOR)			18	H-1	
PLATE, SPOOL GROUND			16	C-2	
RAIL UNIT L			18	B-2	
RAIL UNIT R			18	B-2	
ROLL PAPER FEED SENSOR UNIT			18	J-1	
ROLLER, LOCK			16	D	
SPOOL LOCK UNIT			17	C	
SPRING, LOCK A			16	C-1	
SPRING, LOCK C			16	F	
SPRING, PAPER FEED SENSOR			18	J-2	
SPRING, PAPER SET			18	H-2, H-3	
SUPPORT, FLAP SELEC			18	F-2	

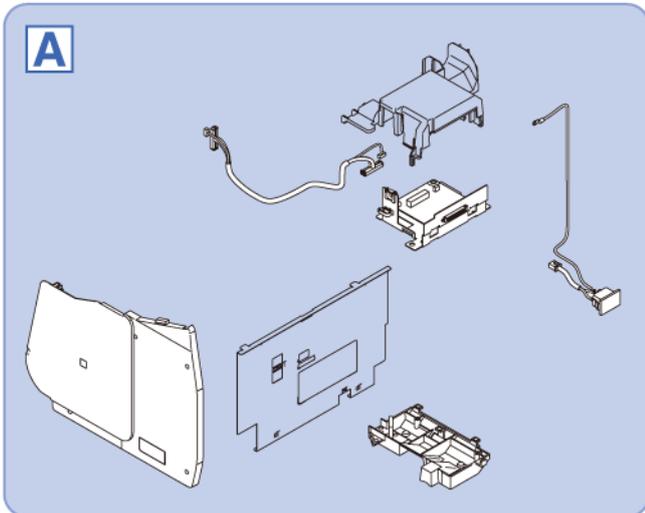
1. Left Ink Tank Box Unit



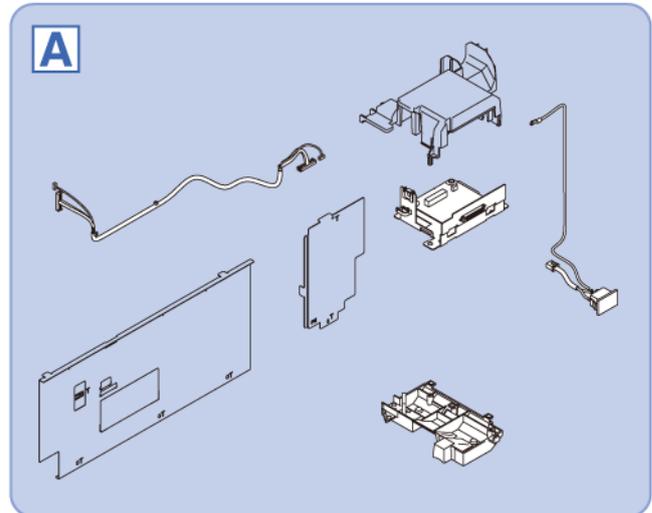
44" model



24" model

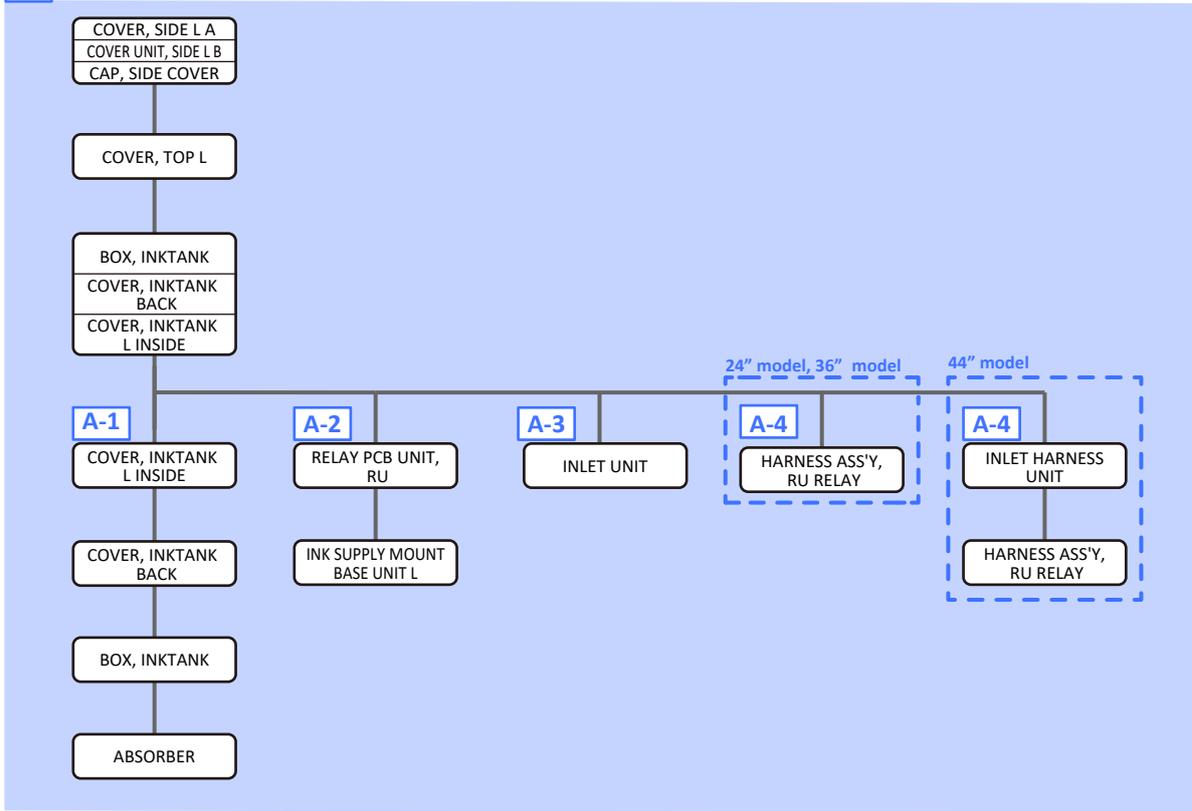


36" model



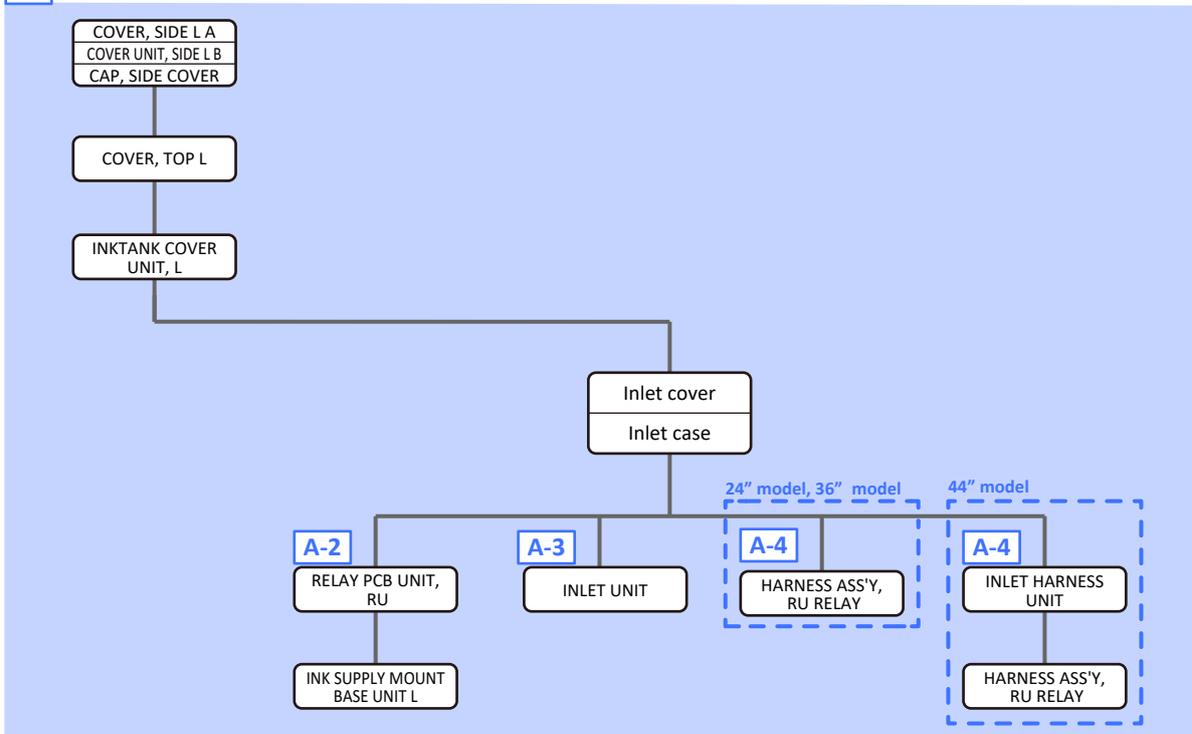
TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

A



TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

A

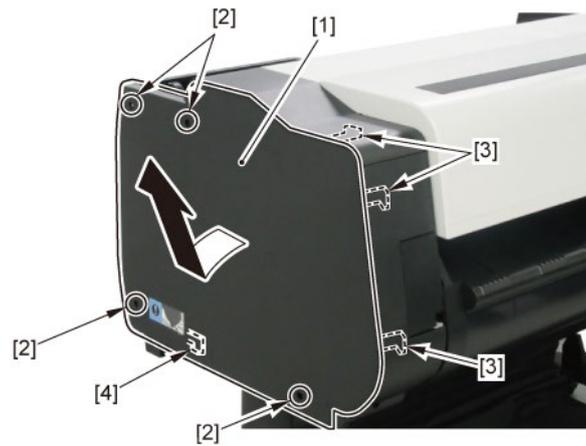


A

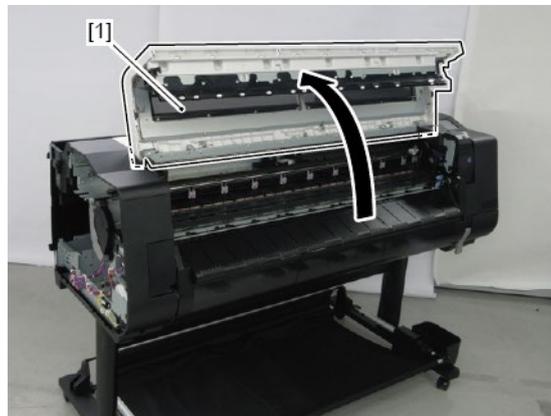
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

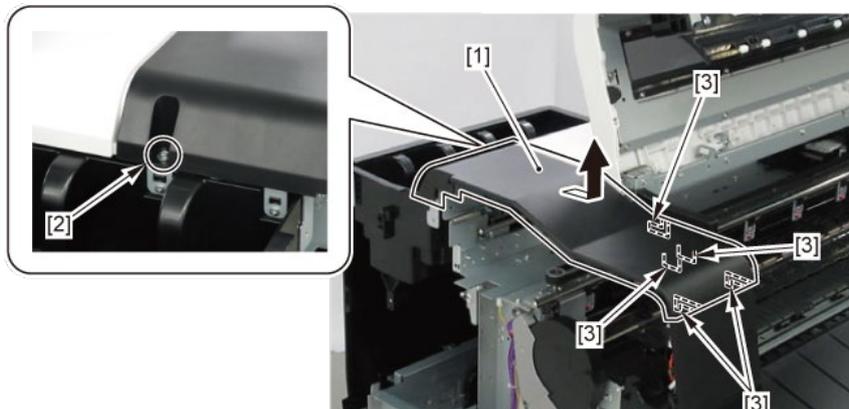


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

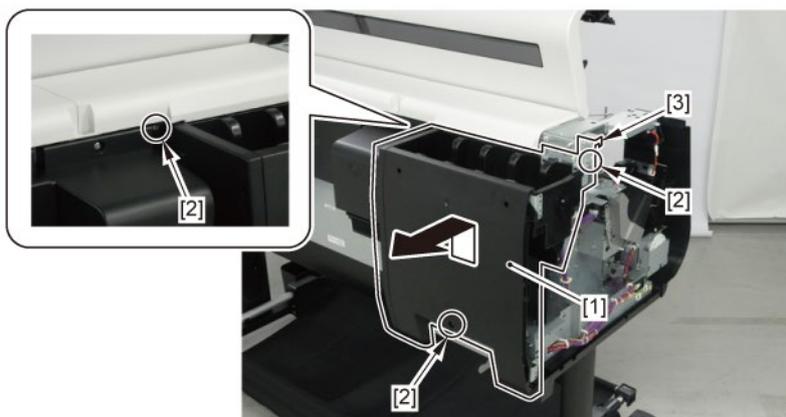
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

4. Remove [1] INKTANK COVER UNIT, L.

TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

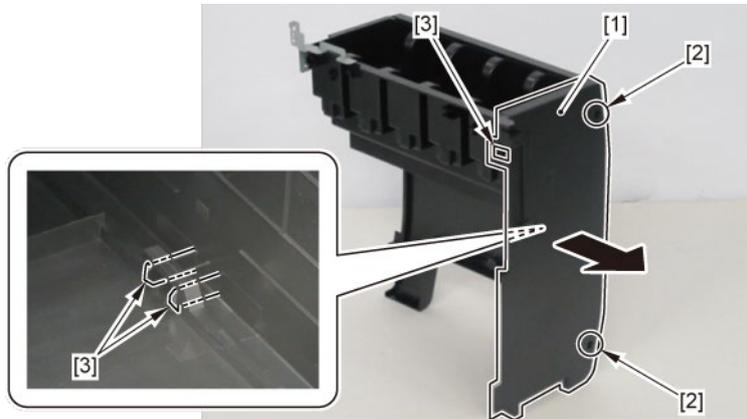
[2]	[3]
	
3 pcs	1 pc



A-1 (TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410)

5. Remove [1] COVER, INKTANK L INSIDE.

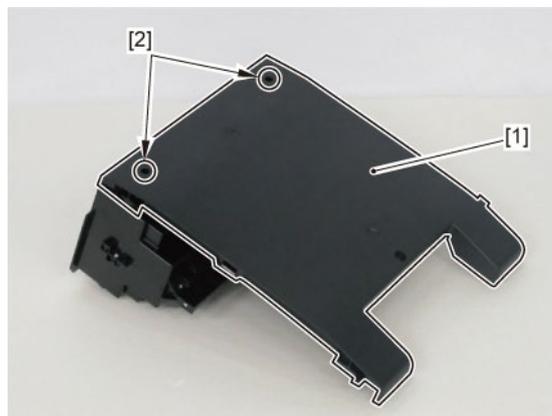
[2]	[3]
	
2 pcs	3 pcs



6. Remove [1] COVER, INKTANK BACK.

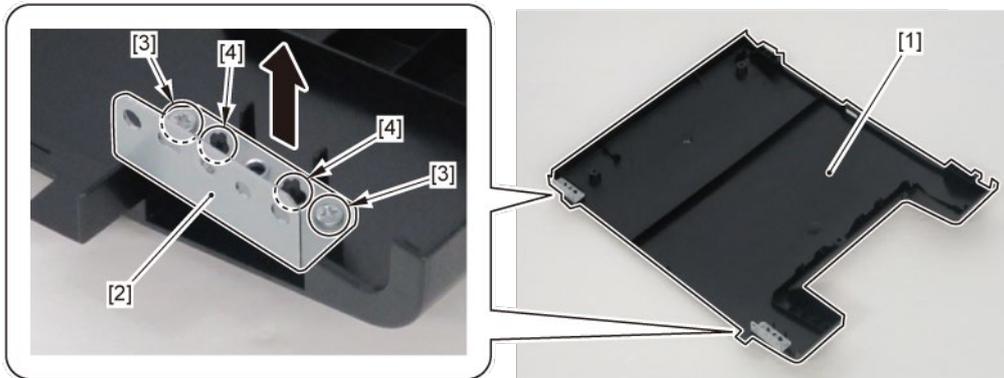
[2]

2 pcs



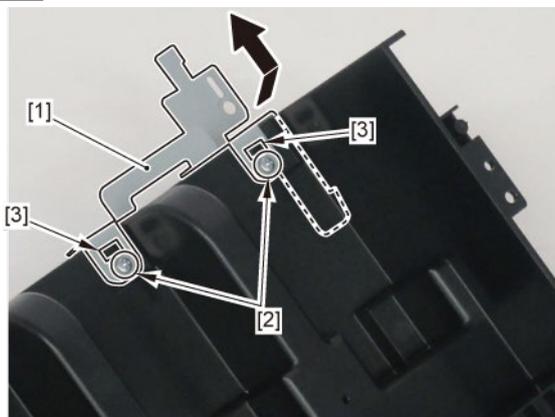
7. From [1] COVER, INKTANK BACK, remove [2] two plates.

[3]	[4]
	
2 pcs each	2 pcs each



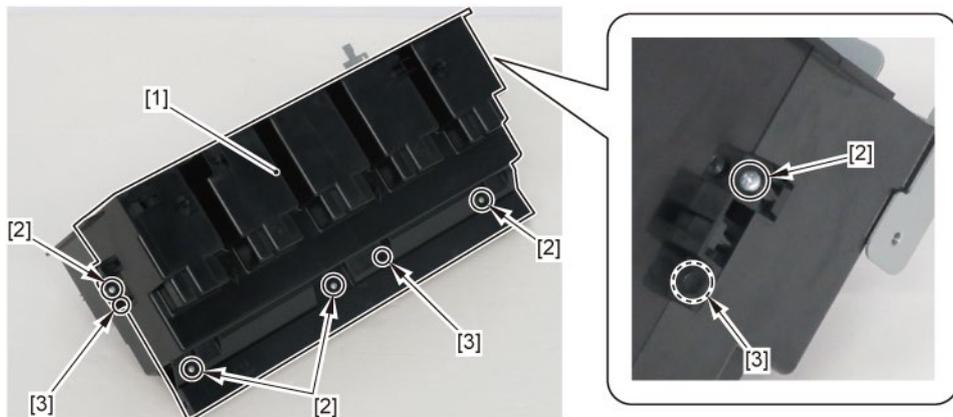
8. Remove [1] the plate.

[2]	[3]
	
2 pcs	2 pcs

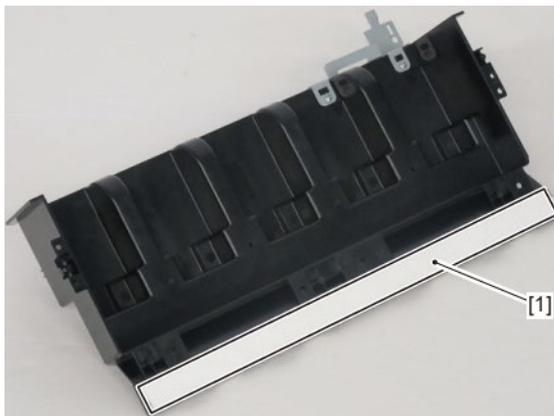


9. Remove [1] BOX, INKTANK.

[2]	[3]
	
5 pcs	3 pcs



10. Remove [1] ABSORBER.



A-2 (TX-2100, TX-3100, TX-5210, TX-5310)

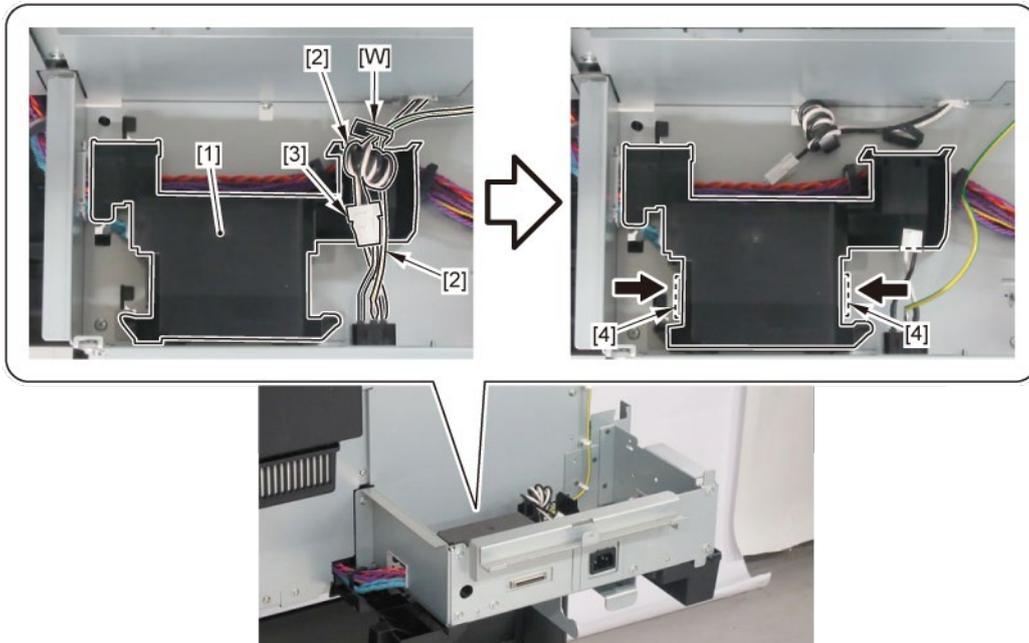
5. From [1] the cover of the RELAY PCB, release [2] the cable.

[3]	[W]
	
1 pc	1 pc

6. Remove [1] the cover of the RELAY PCB.

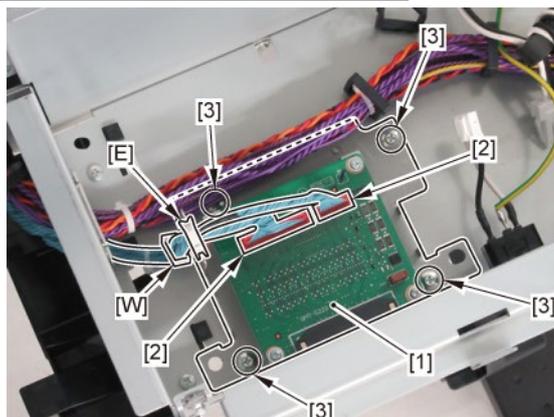
[4]

2 pcs



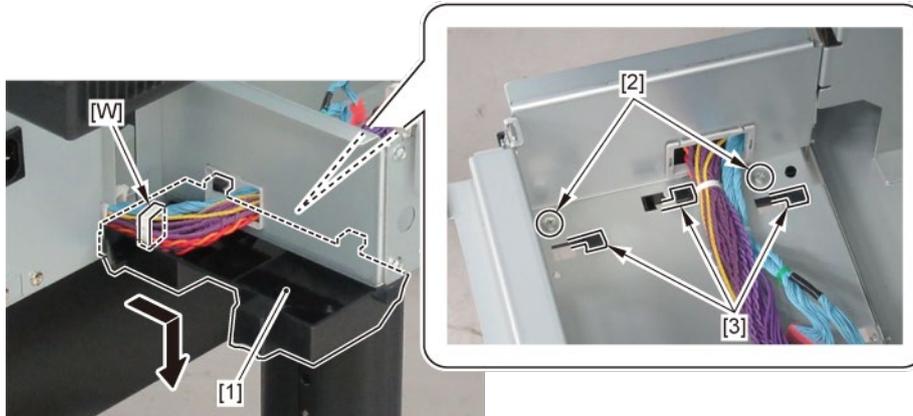
7. Remove [1] RELAY PCB UNIT, RU.

[2]	[3]	[W]	[E]
			
2 pcs	4 pcs	1 pc	1 pc



8. Remove [1] INK SUPPLY MOUNT BASE UNIT L.

[2]	[3]	[W]
		
2 pcs	3 pcs	1 pc

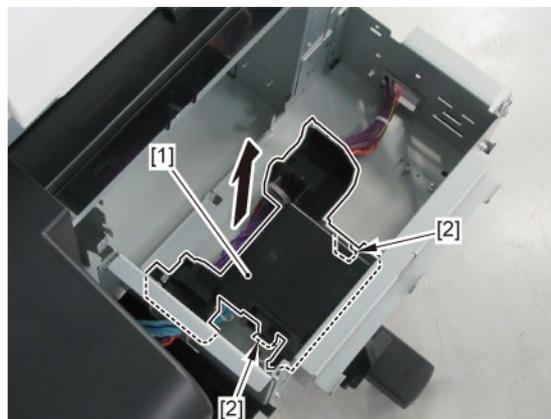


A-2 (TX-4100, TX-5410)

5. Remove [1] the cover of the RELAY PCB.

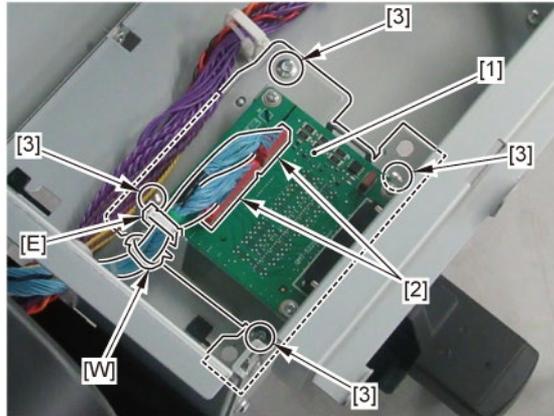
[2]

2 pcs



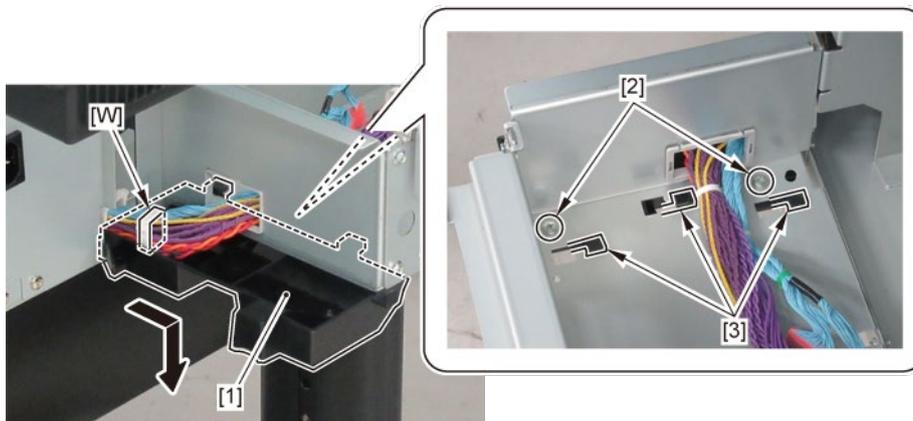
6. Remove [1] RELAY PCB UNIT, RU.

[2]	[3]	[W]	[E]
			
2 pcs	4 pcs	1 pc	1 pc



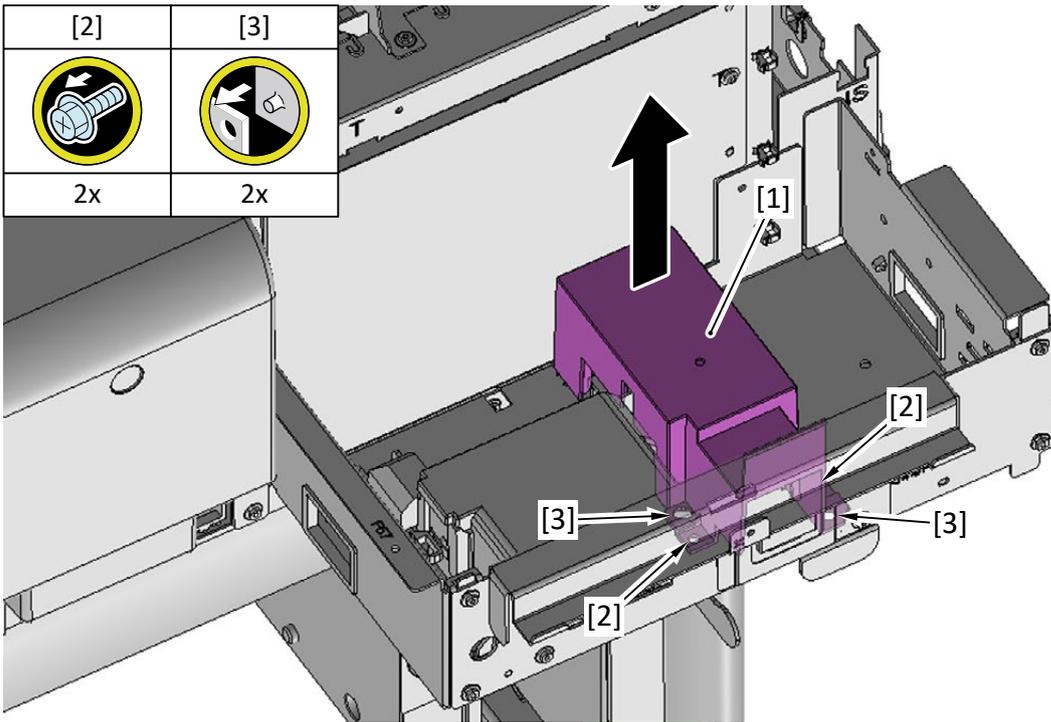
7. Remove [1] INK SUPPLY MOUNT BASE UNIT L.

[2]	[3]	[W]
		
2 pcs	3 pcs	1 pc

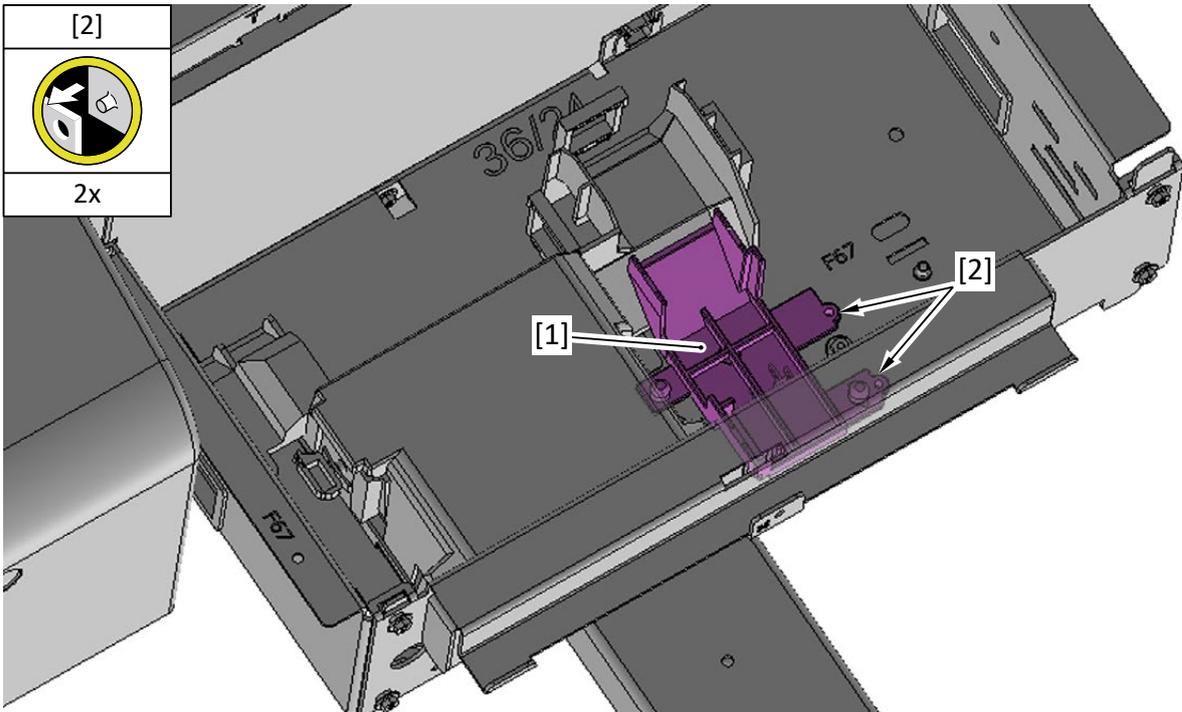


A-2 (TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420)

5. Remove [1] the inlet cover.



6. Remove [1] the inlet case.



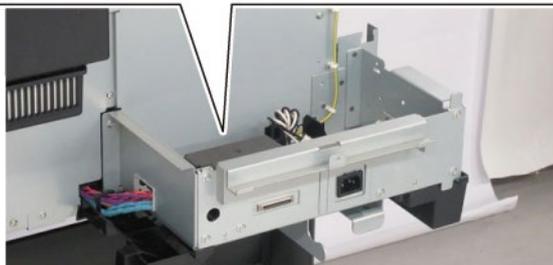
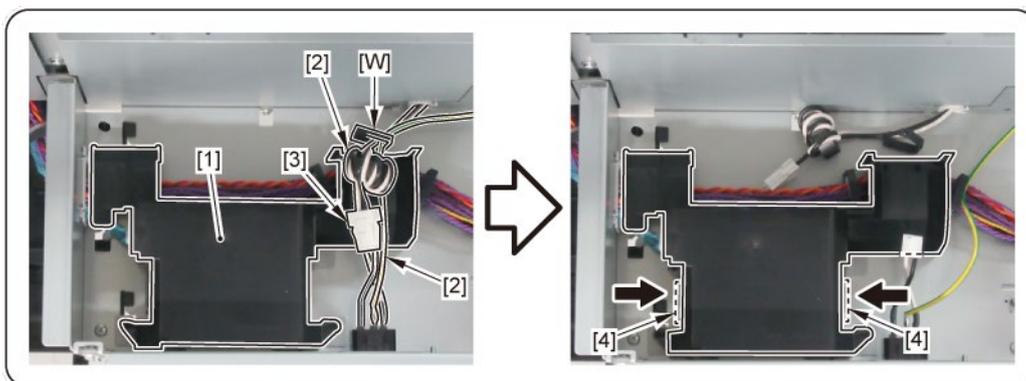
7. From [1] the cover of the RELAY PCB, release [2] the cable.

[3]	[W]
	
1 pc	1 pc

8. Remove [1] the cover of the RELAY PCB.

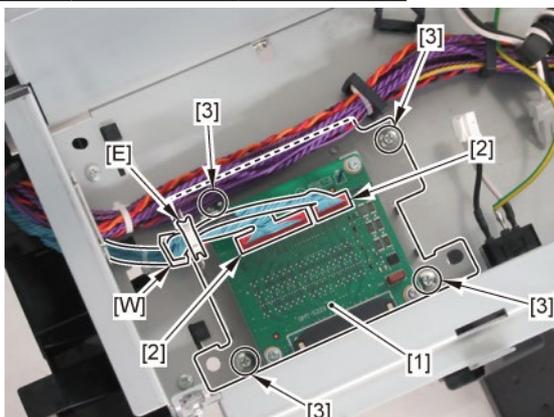
[4]

2 pcs



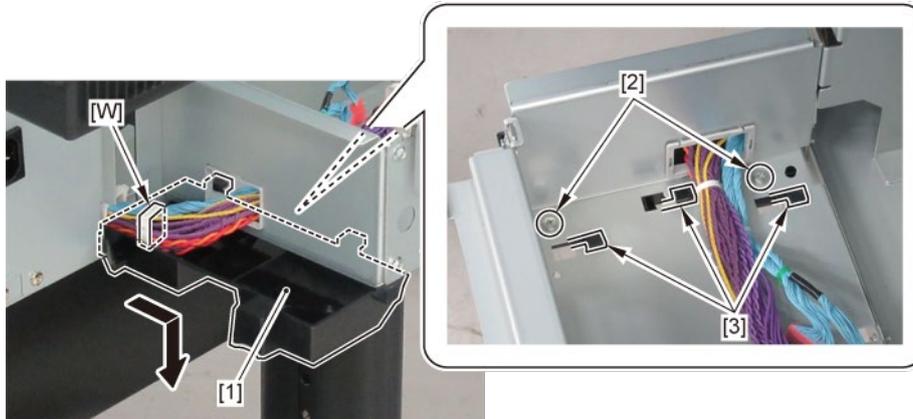
9. Remove [1] RELAY PCB UNIT, RU.

[2]	[3]	[W]	[E]
			
2 pcs	4 pcs	1 pc	1 pc



10. Remove [1] INK SUPPLY MOUNT BASE UNIT L.

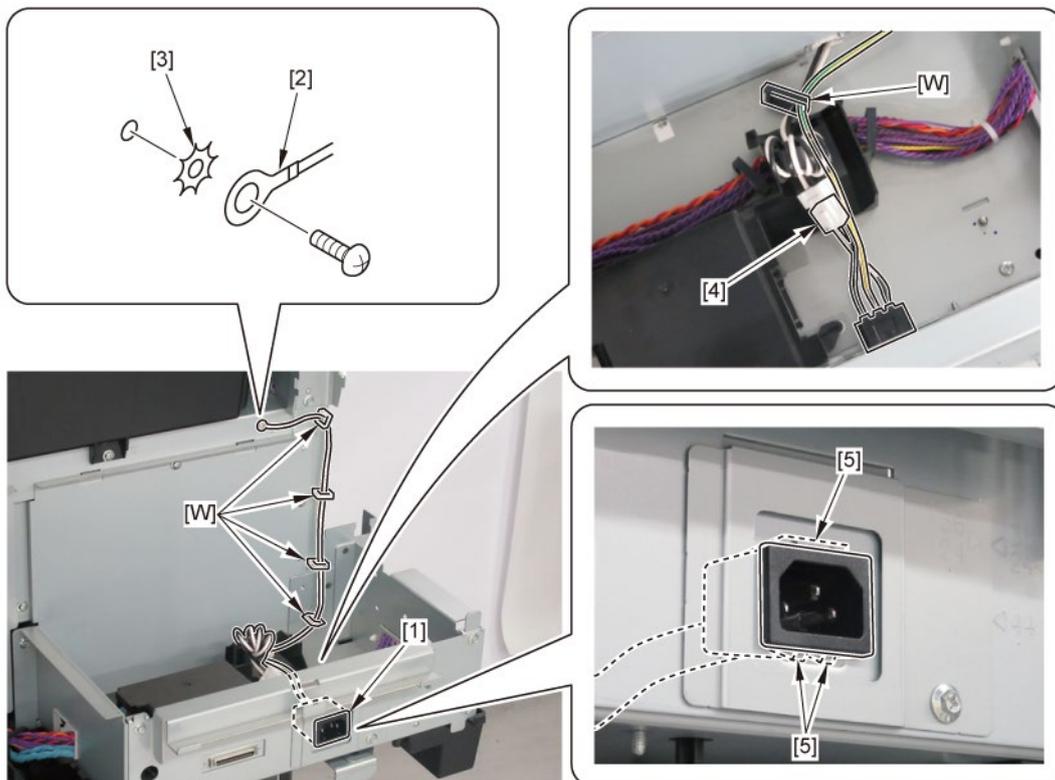
[2]	[3]	[W]
		
2 pcs	3 pcs	1 pc



A-3 (TX-2100, TX-3100, TX-5210, TX-5310)

5. Remove [1] INLET HARNESS UNIT.

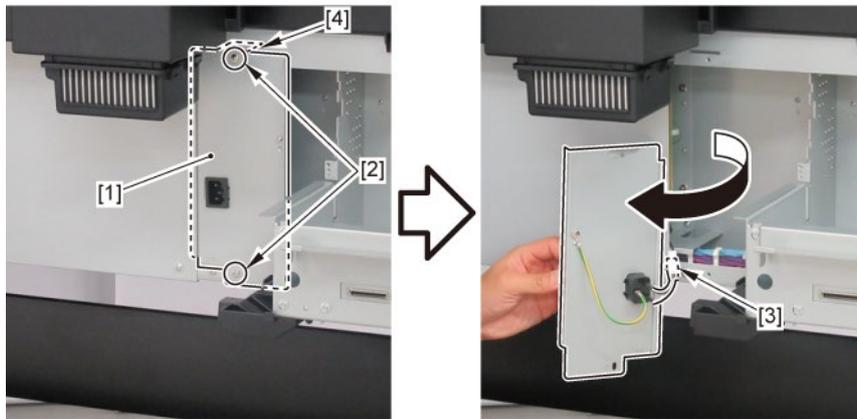
[2]	[3]	[4]	[5]	[W]
				
1 pc	1 pc	1 pc	3 pcs	5 pcs



A-3 (TX-4100, TX-5410)

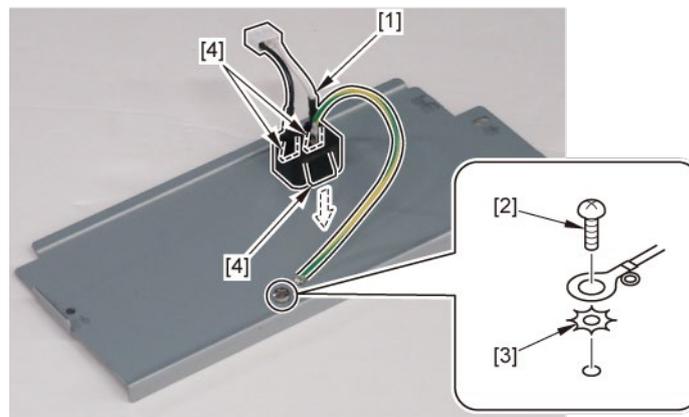
5. Remove [1] the plate (with the INLET HARNESS UNIT).

[2]	[3]	[4]
		
2 pcs	1 pc	1 pc



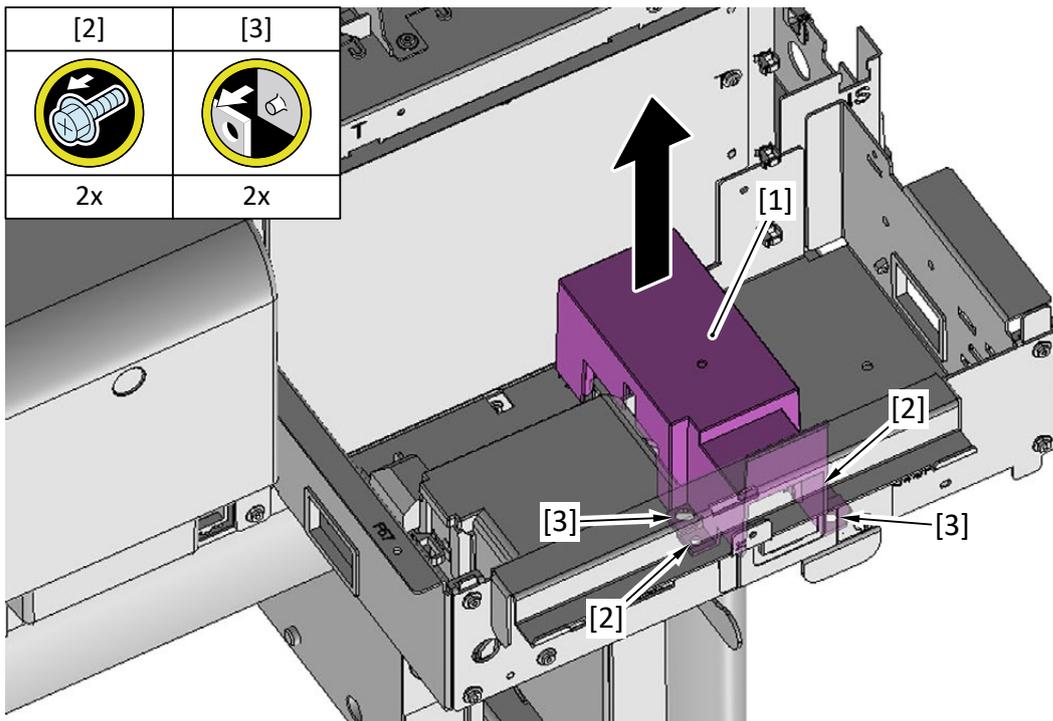
6. Remove [1] INLET HARNESS UNIT.

[2]	[3]	[4]
		
1 pc	1 pc	3 pcs

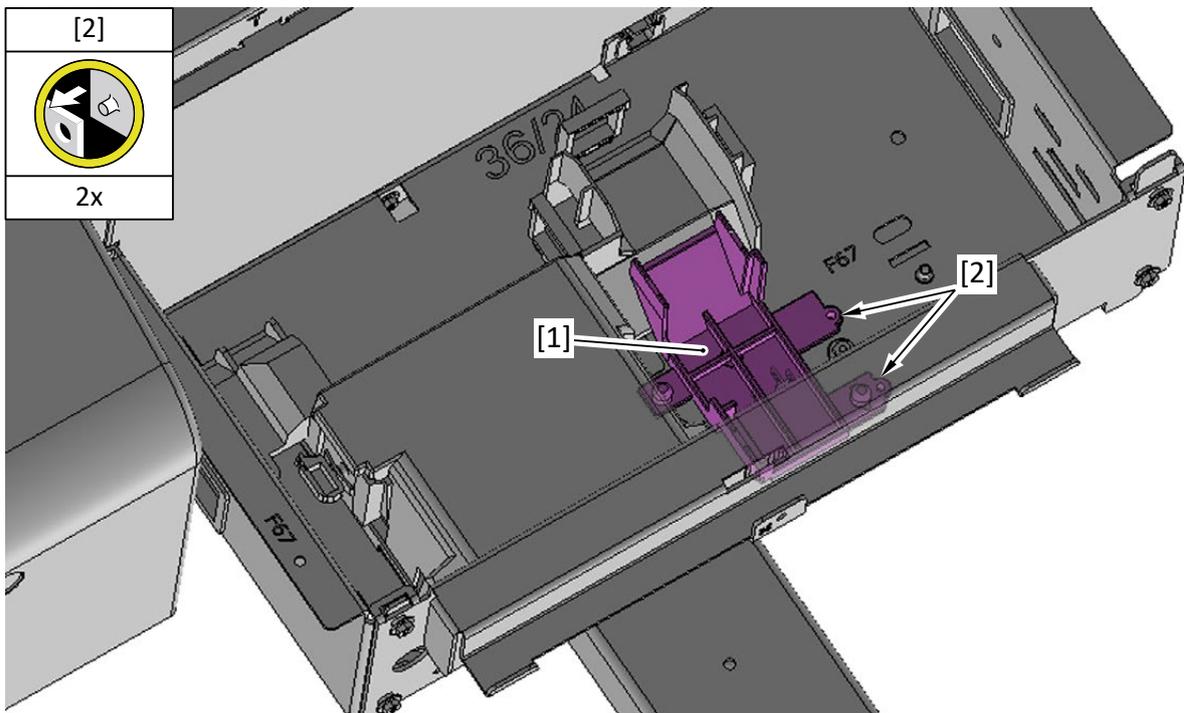


A-3 (TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420)

5. Remove [1] the inlet cover.

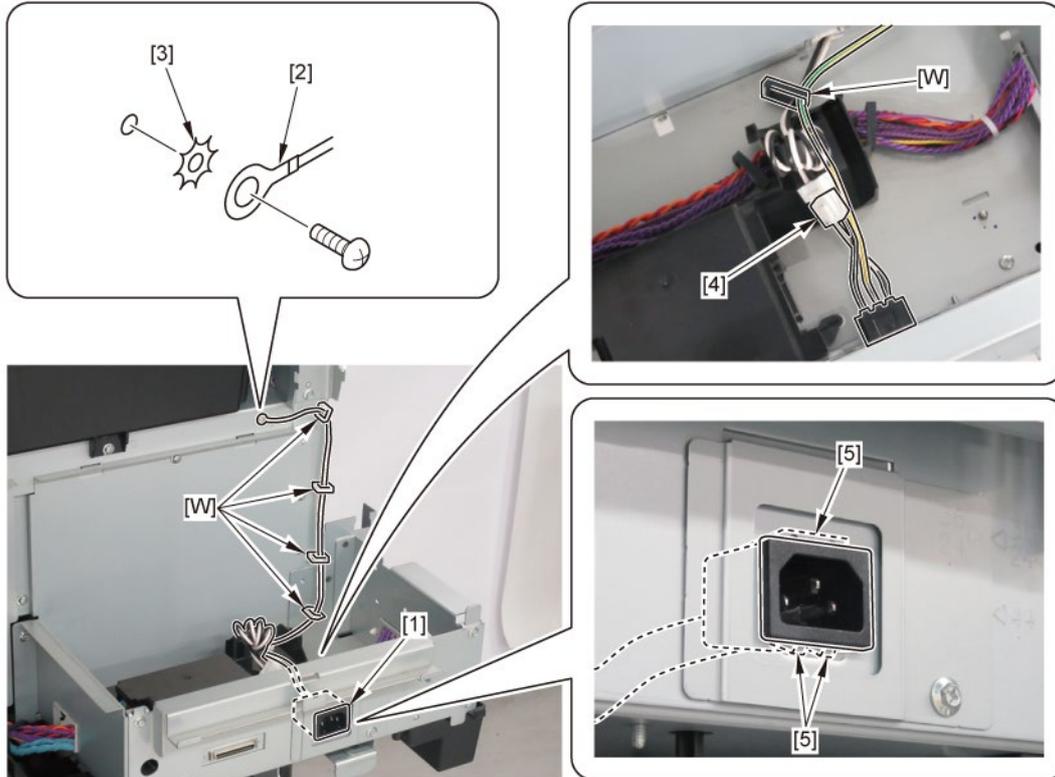


6. Remove [1] the inlet case.



7. Remove [1] INLET HARNESS UNIT.

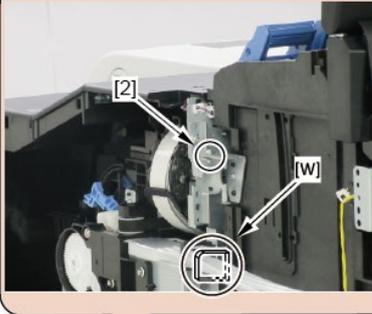
[2]	[3]	[4]	[5]	[W]
				
1 pc	1 pc	1 pc	3 pcs	5 pcs



A-4 (TX-2100, TX-5210)

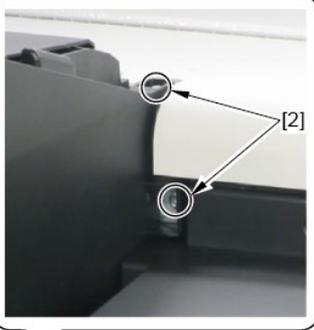
5. Open [1] the right ink unit.

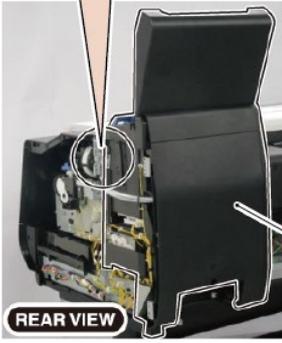
[2]	[W]
	
4 pcs	1 pc



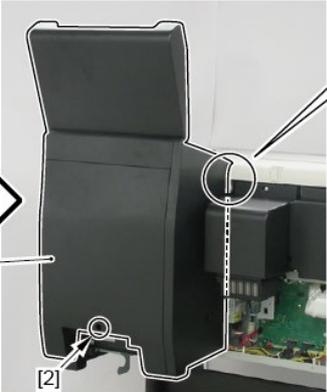
Before opening the unit:

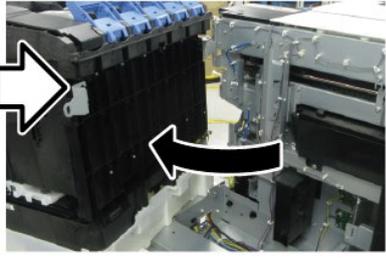
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





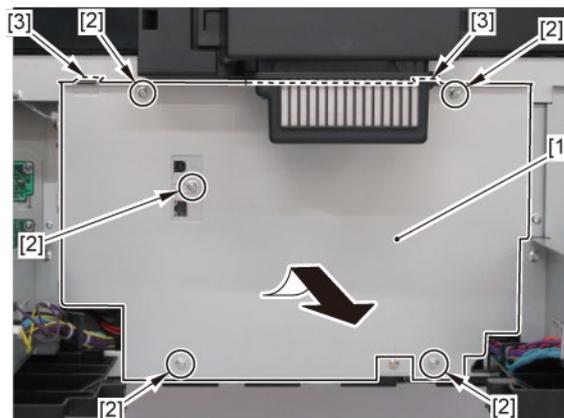
REAR VIEW





6. Remove [1] the plate.

[2]	[3]
	
5 pcs	2 pcs



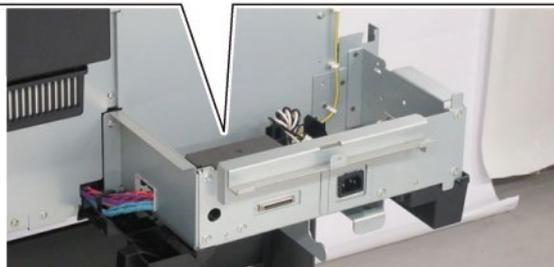
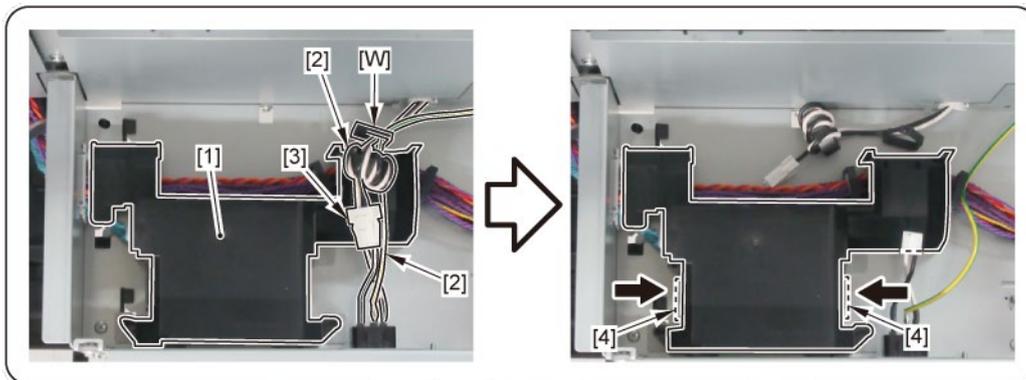
7. From [1] the cover of the RELAY PCB, release [2] the cable.

[3]	[W]
	
1 pc	1 pc

8. Remove [1] the cover of the RELAY PCB.

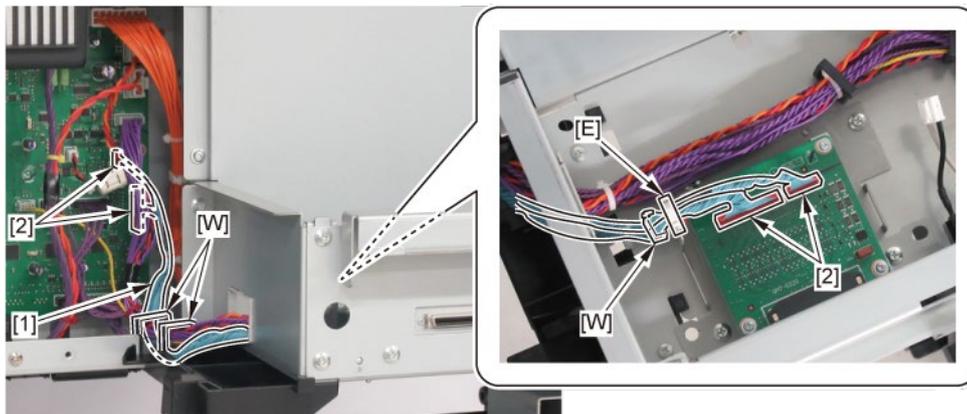
[4]

2 pcs



9. Remove [1] HARNESS ASS'Y, RU RELAY.

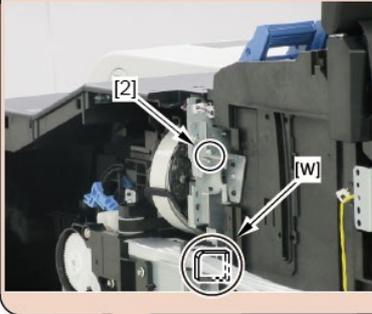
[2]	[W]	[E]
		
4 pcs	3 pcs	1 pc



A-4 (TX-3100, TX-5310)

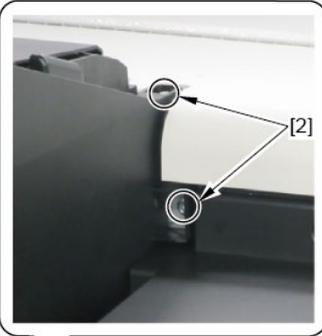
5. Open [1] the right ink unit.

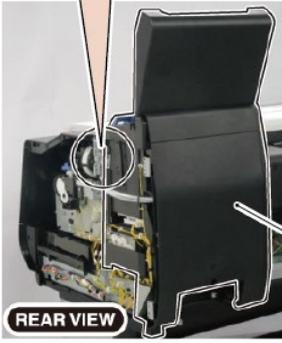
[2]	[W]
	
4 pcs	1 pc



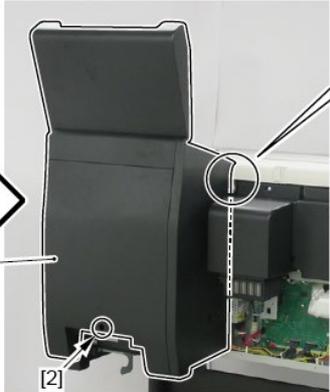
Before opening the unit:

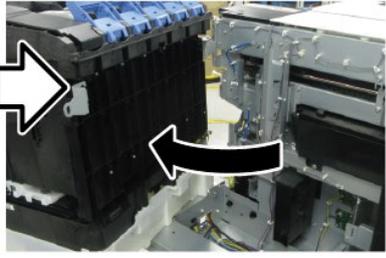
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





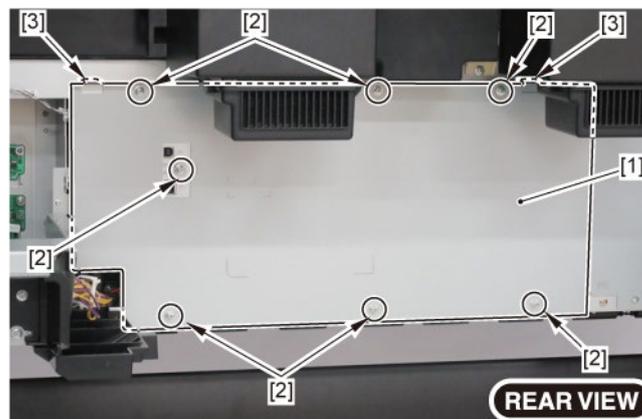
REAR VIEW





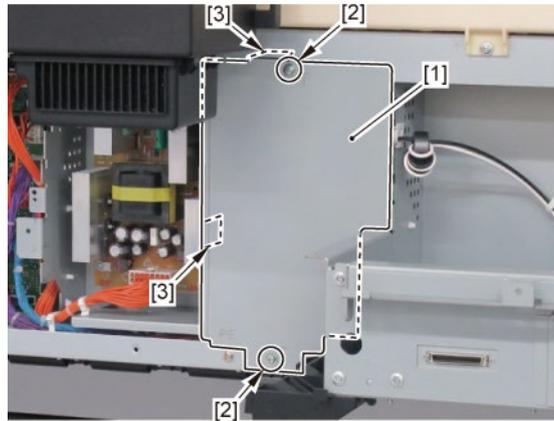
6. Remove [1] the plate.

[2]	[3]
	
7 pcs	2 pcs



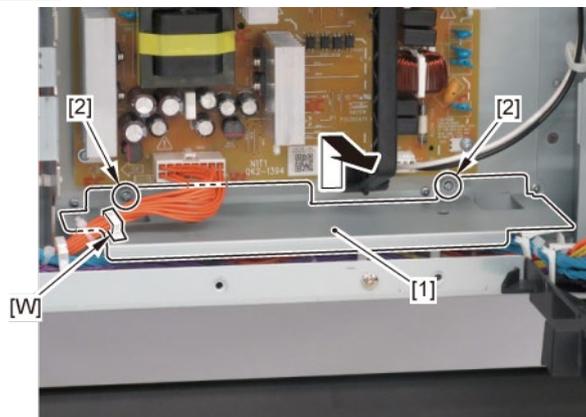
7. Remove [1] the plate.

[2]	[3]
	
2 pcs	2 pcs



8. Remove [1] the plate.

[2]	[W]
	
2 pcs	1 pc



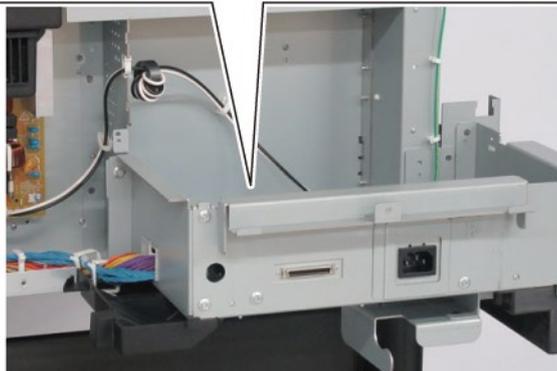
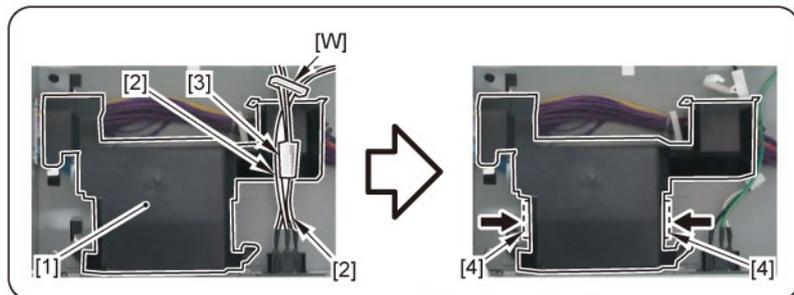
9. From [1] the cover of the RELAY PCB, release [2] the cable.

[3]	[W]
	
1 pc	1 pc

10. Remove [1] the cover of the RELAY PCB.

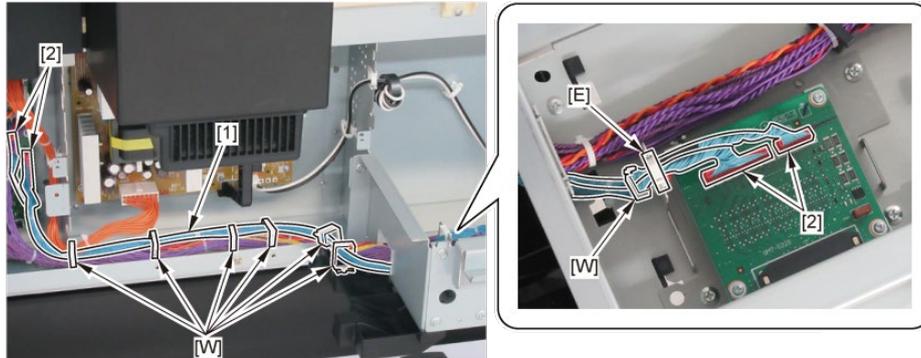
[4]

2 pcs



11. Remove [1] HARNESS ASS'Y, RU RELAY.

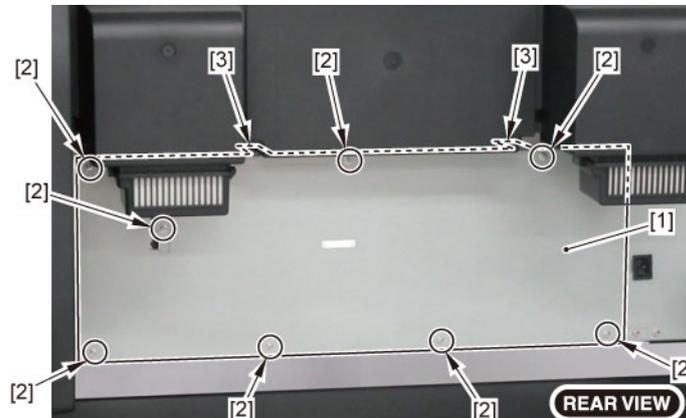
[2]	[W]	[E]
		
4 pcs	7 pcs	1 pc



A-4 (TX-4100, TX-5410)

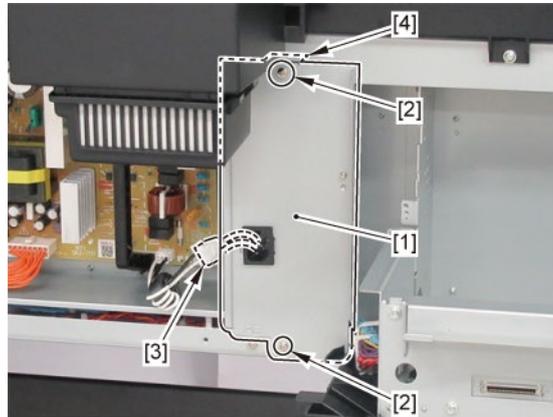
5. Remove [1] the plate.

[2]	[3]
	
8 pcs	2 pcs



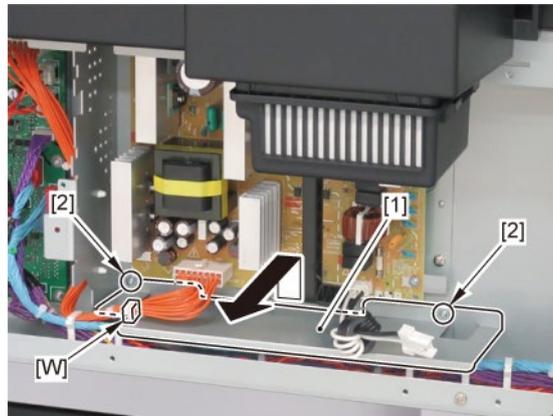
6. Remove [1] the plate (with the INLET UNIT).

[2]	[3]	[4]
		
2 pcs	1 pc	1 pc



7. Remove [1] the plate.

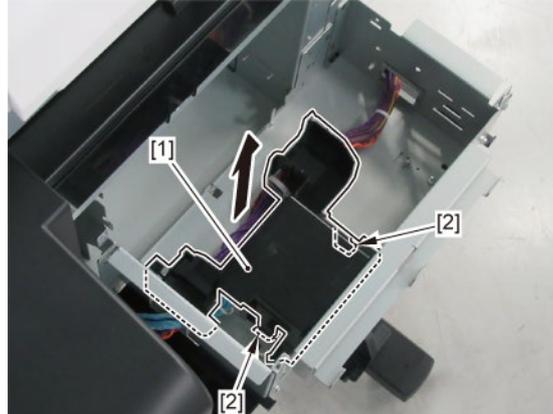
[2]	[W]
	
2 pcs	1 pc



8. Remove [1] the cover of the RELAY PCB.

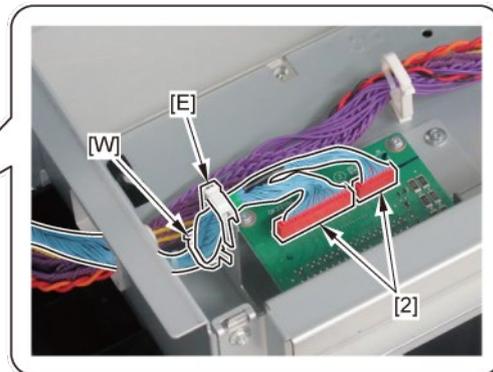
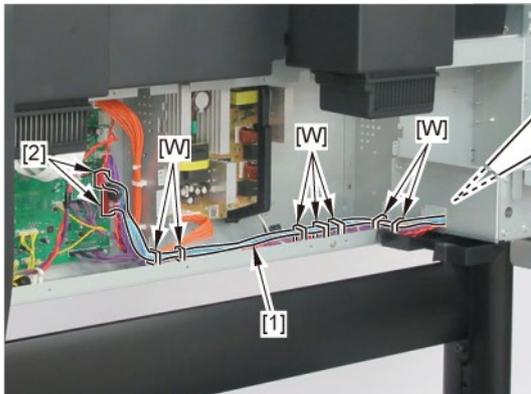
[2]

2 pcs



9. Remove [1] HARNESS ASS'Y, RU RELAY.

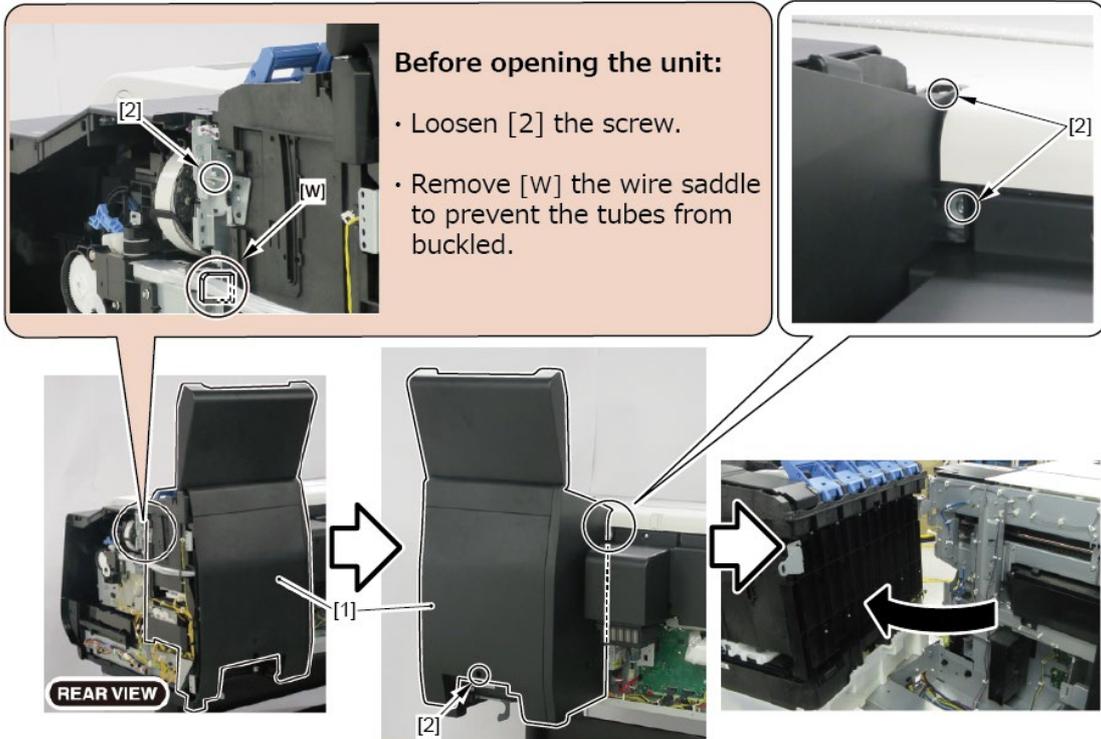
[2]	[W]	[E]
		
4 pcs	8 pcs	1 pc



A-4 (TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420)

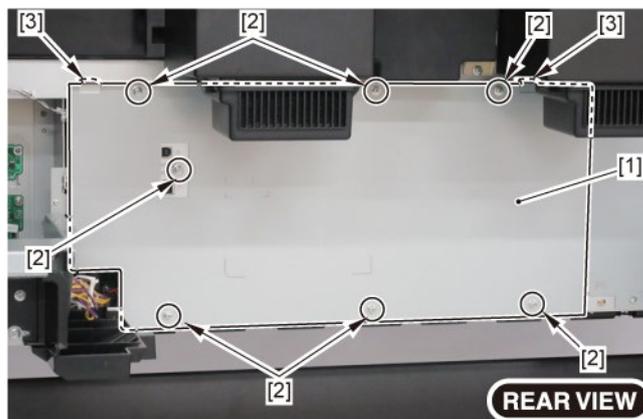
5. Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc



6. Remove [1] the plate.

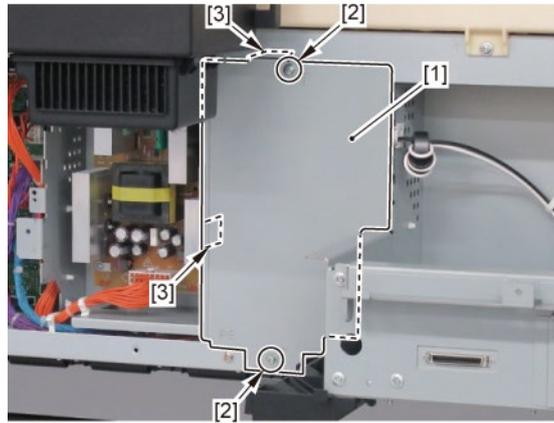
[2]	[3]
	
7 pcs	2 pcs



7. Remove [1] the plate.

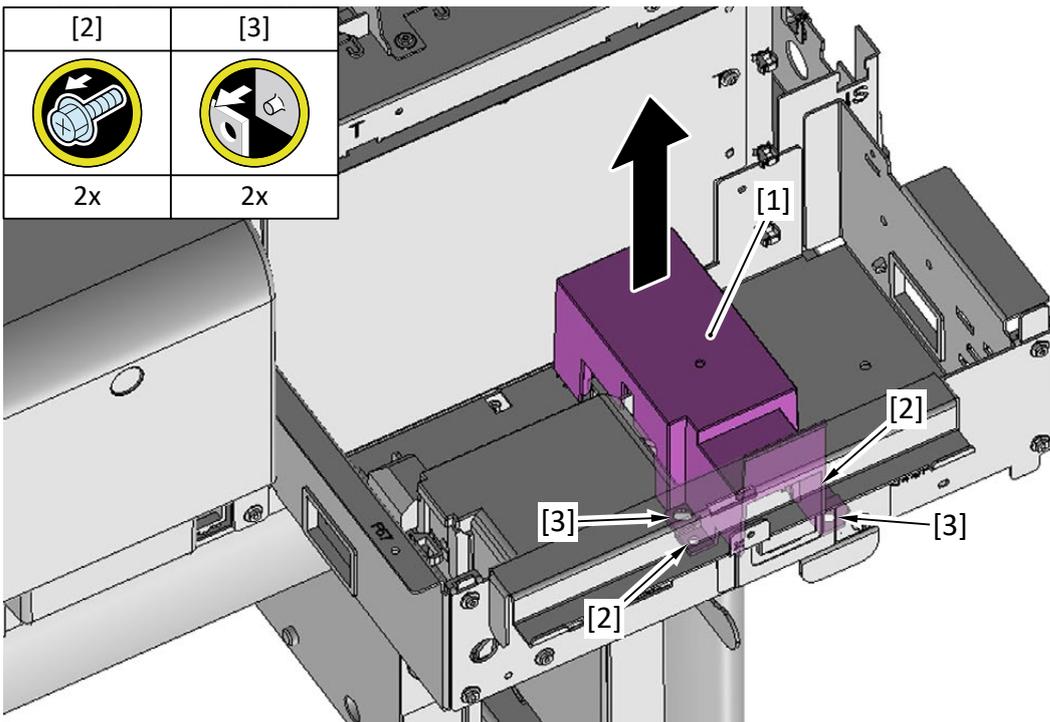
TX-3200, TX-4200, TX-5320, TX-5420

[2]	[3]
	
2 pcs	2 pcs

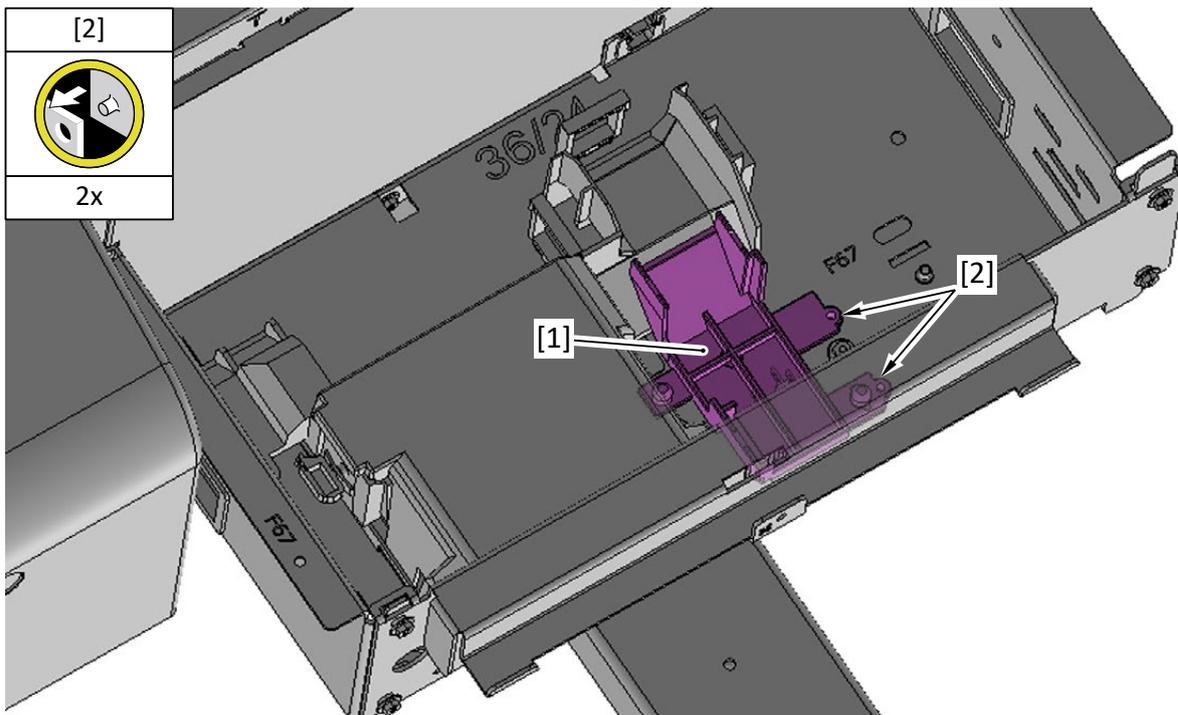


8. Remove [1] the inlet cover.

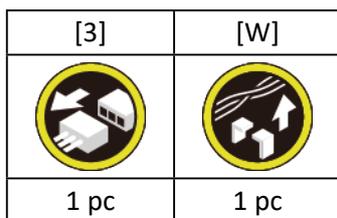
[2]	[3]
	
2x	2x



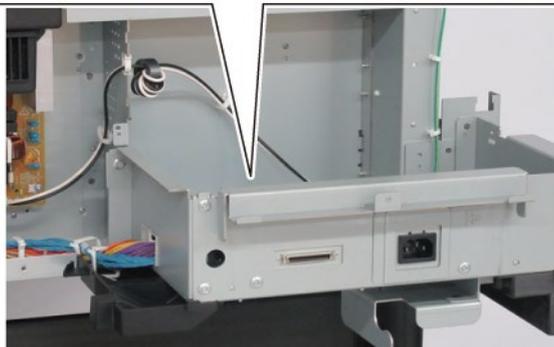
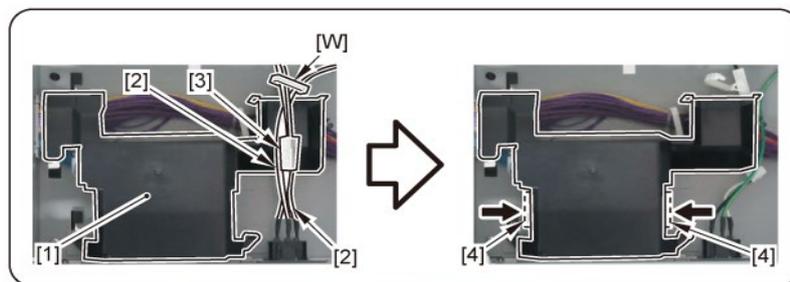
9. Remove [1] the inlet case.



10. From [1] the cover of the RELAY PCB, release [2] the cable.



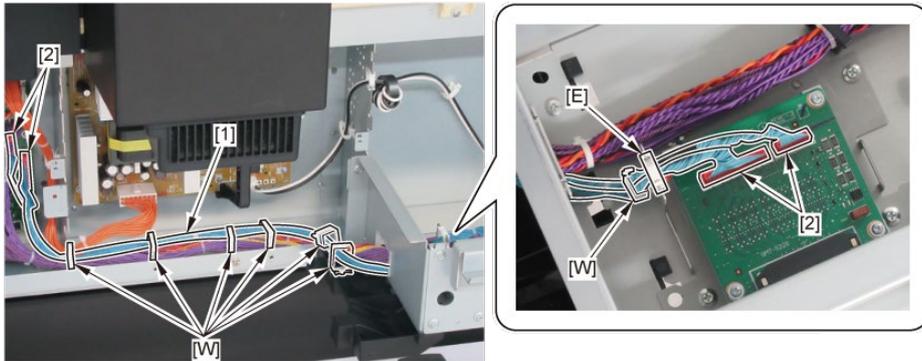
11. Remove [1] the cover of the RELAY PCB.



12. Remove [1] HARNESS ASS'Y, RU RELAY.

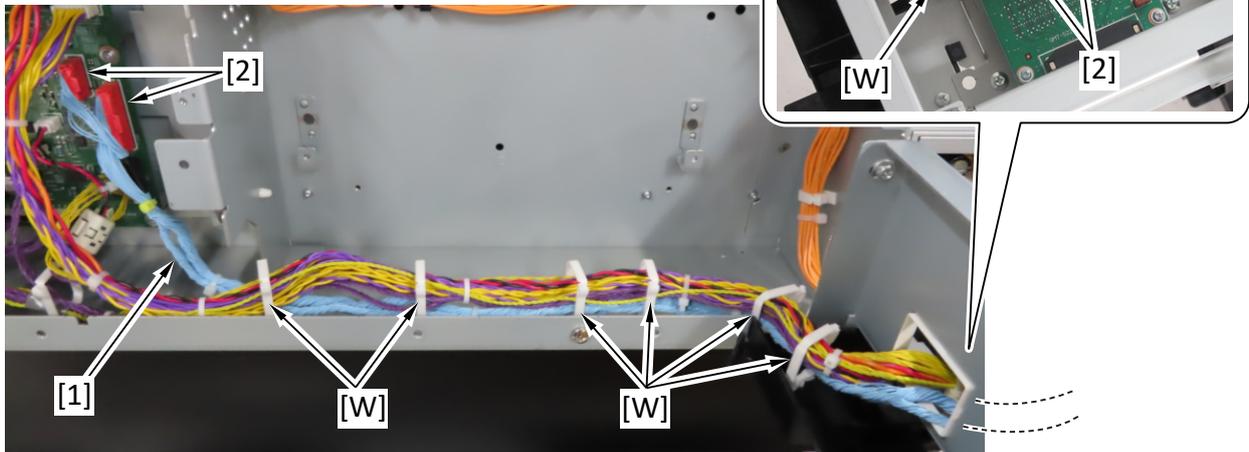
TX-2200, TX-5220

[2]	[W]	[E]
		
4 pcs	7 pcs	1 pc



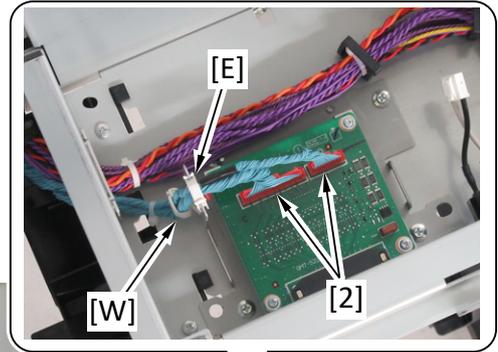
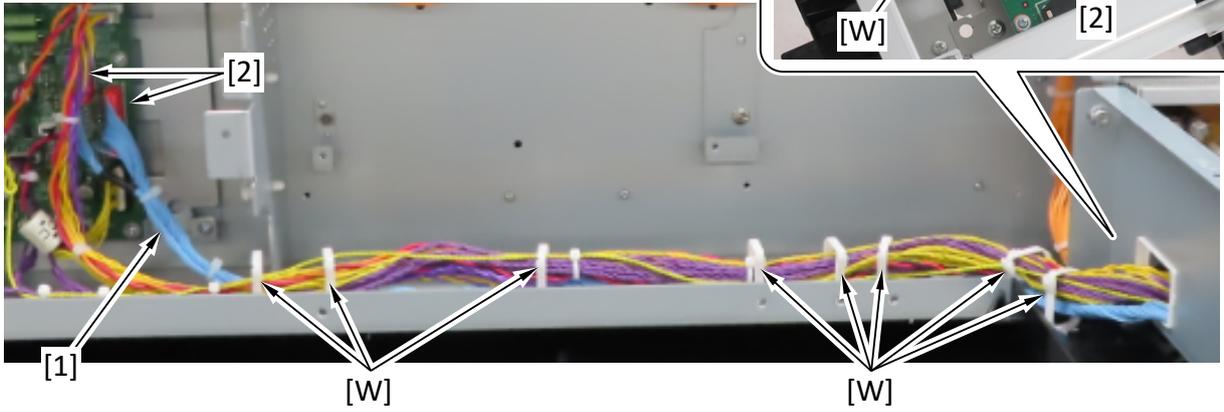
TX-3200, TX-5320

[2]	[W]	[E]
		
4x	7x	1x

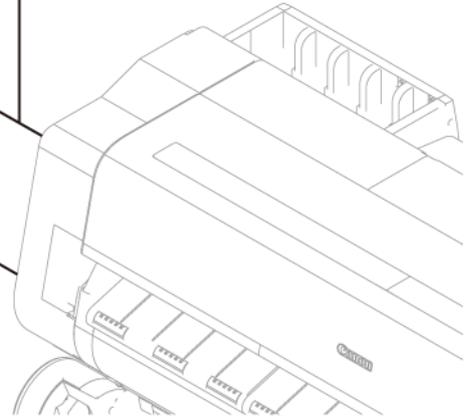
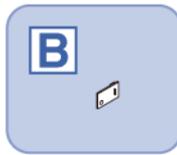
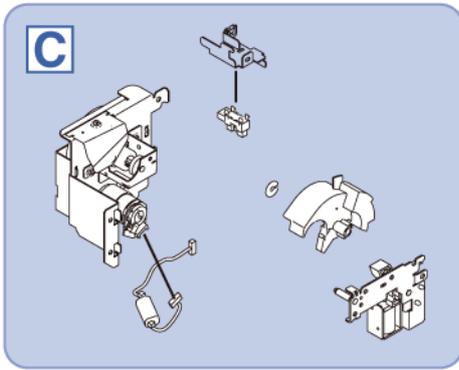
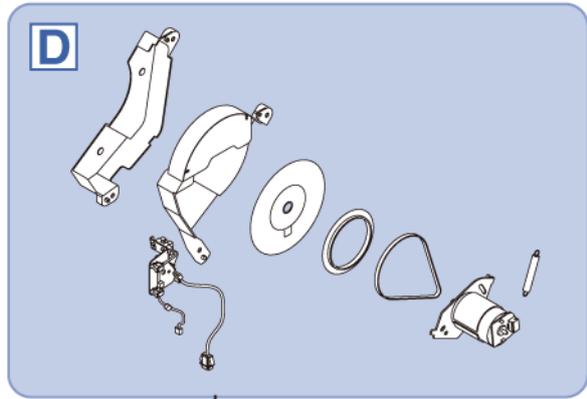
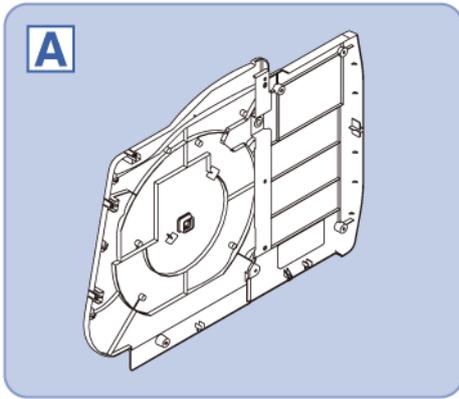


TX-4200, TX-5420

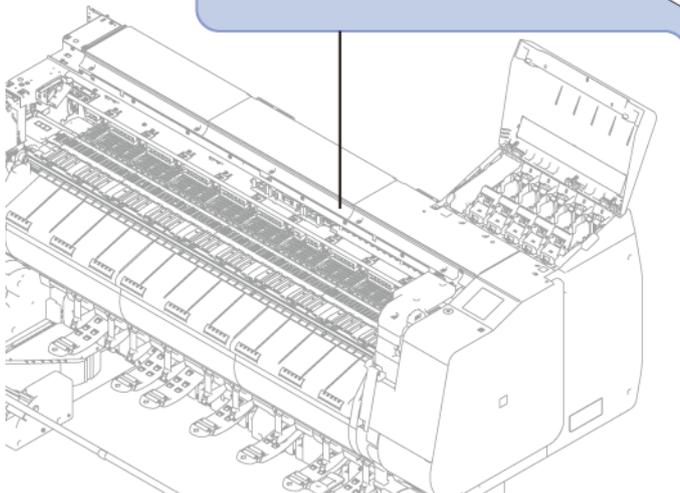
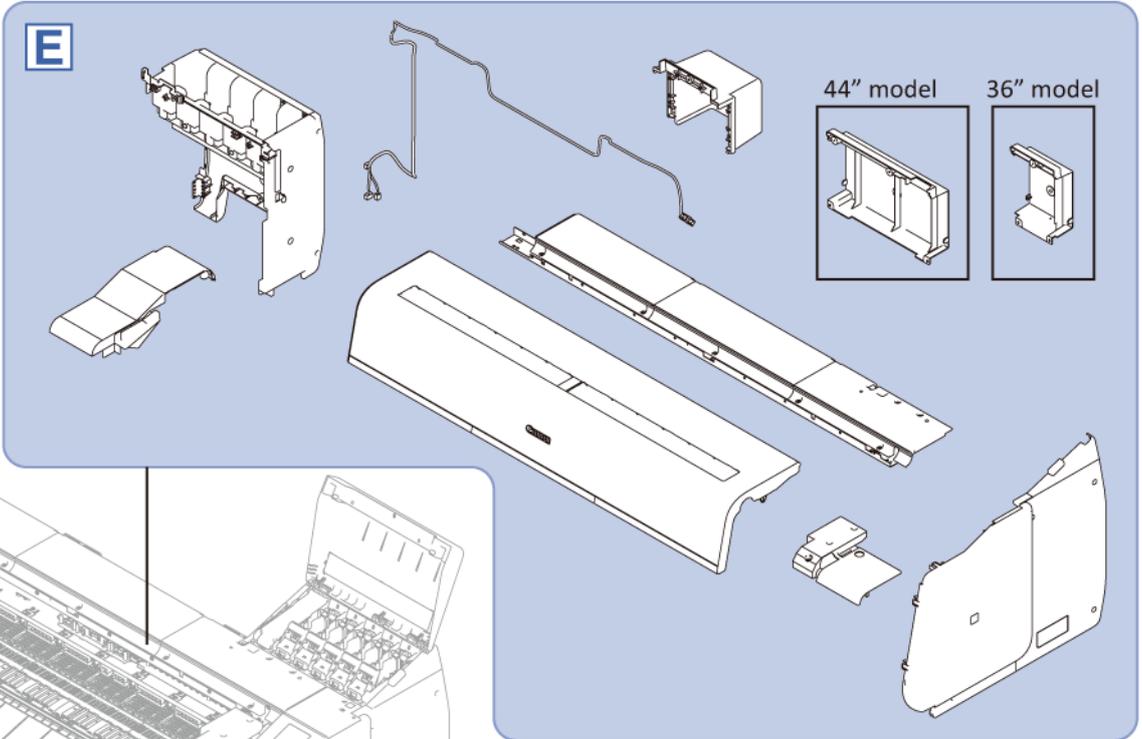
[2]	[W]	[E]
		
4x	9x	1x

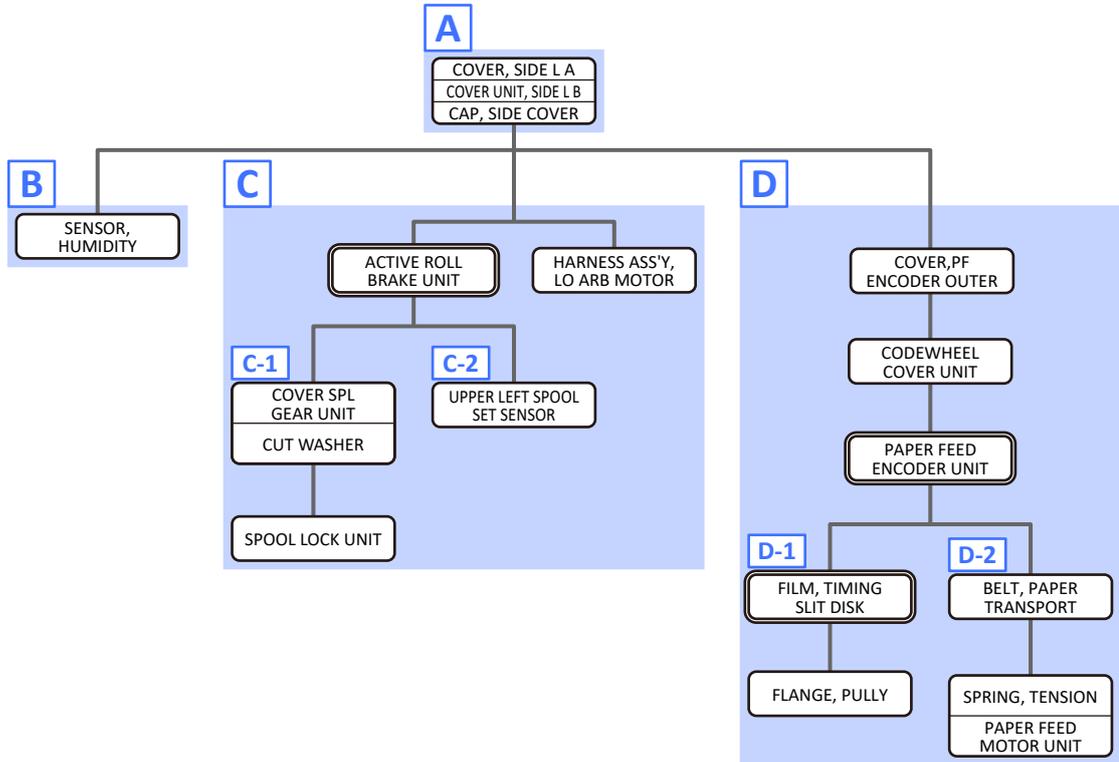


2. Left Side (Active Roll Brake Unit, PF Encoder Unit)

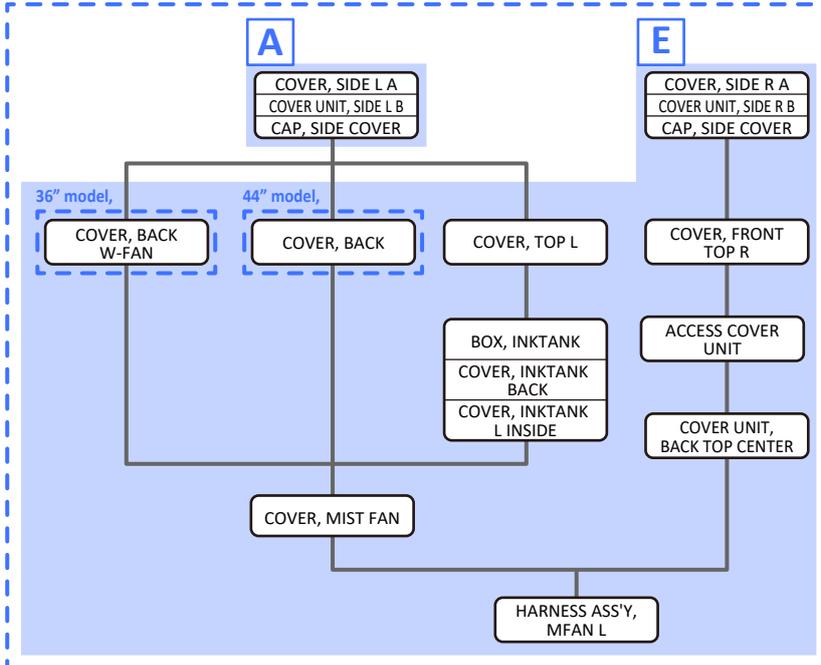


TX-3100, 4100, 5310, 5410





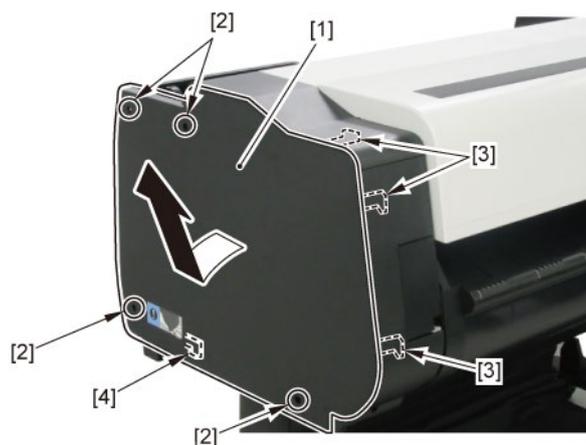
TX-3100, 4100, 5310, 5410



A

1. Remove [1] a set of
 - COVER, SIDE L A
 - COVER UNIT, SIDE L B
 - CAP, SIDE COVER.

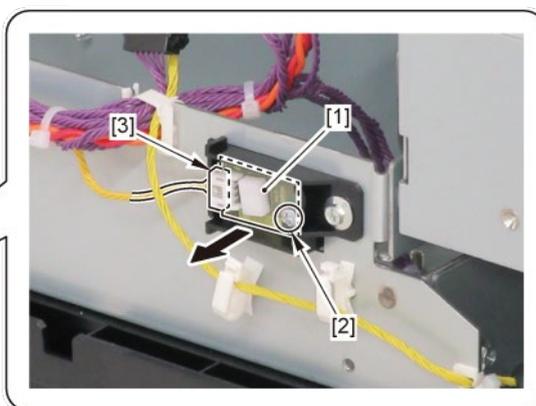
[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc



B

1. Remove all the parts of Group A.
2. Remove [1] SENSOR, HUMIDITY.

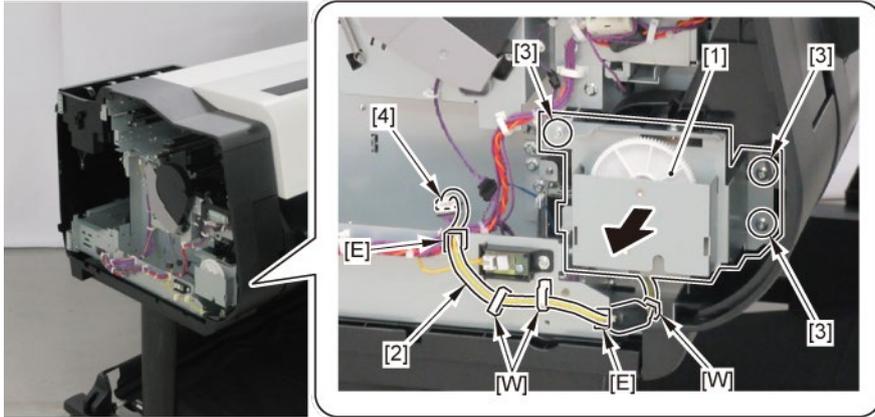
[2]	[3]
	
1 pc	1 pc



C

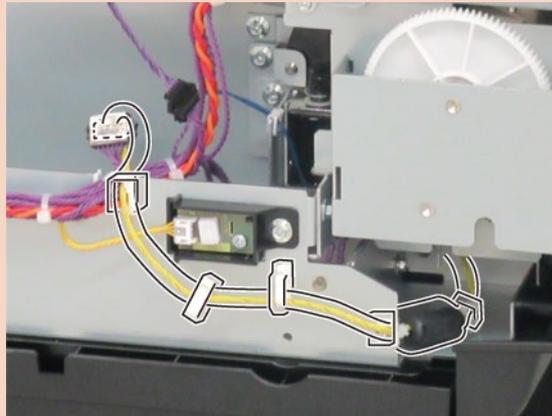
1. Remove all the parts of Group A.
2. Remove [1] ACTIVE ROLL BRAKE UNIT and [2] HARNESS ASS'Y, LO ARB MOTOR.

[3]	[4]	[W]	[E]
			
3 pcs	1 pc	3 pcs	2 pcs



Notes when assembling the unit:

- Arrange the HARNESS ASS'Y, ARB MOTOR as shown below.

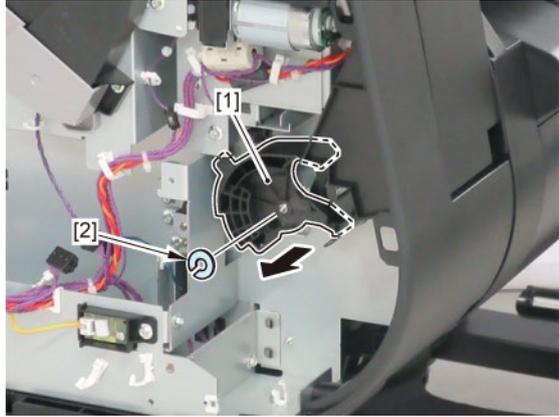


C-1

3. Remove [1] COVER SPL GEAR UNIT.

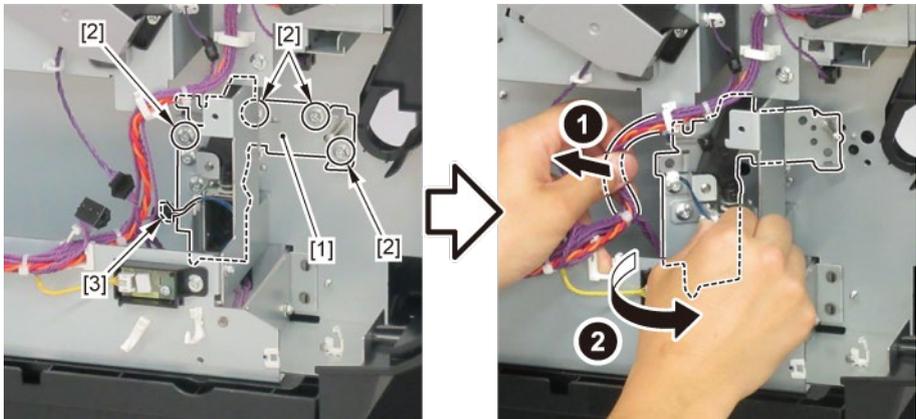
[2]

1 pc



4. Remove [1] SPOOL LOCK UNIT.

[2]	[3]
	
4 pcs	1 pc



C-2

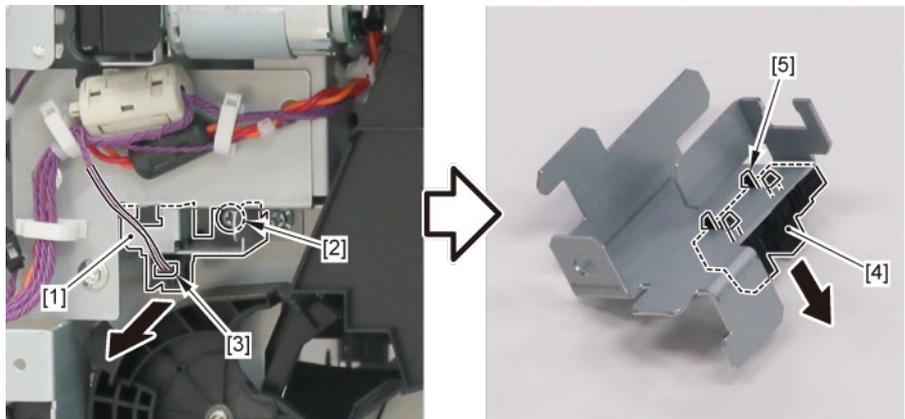
3. Remove [1] the plate with the UPPER LEFT SPOOL SET SENSOR.

[2]	[3]
	
1 pc	1 pc

4. Remove [4] UPPER LEFT SPOOL SET SENSOR.

[5]

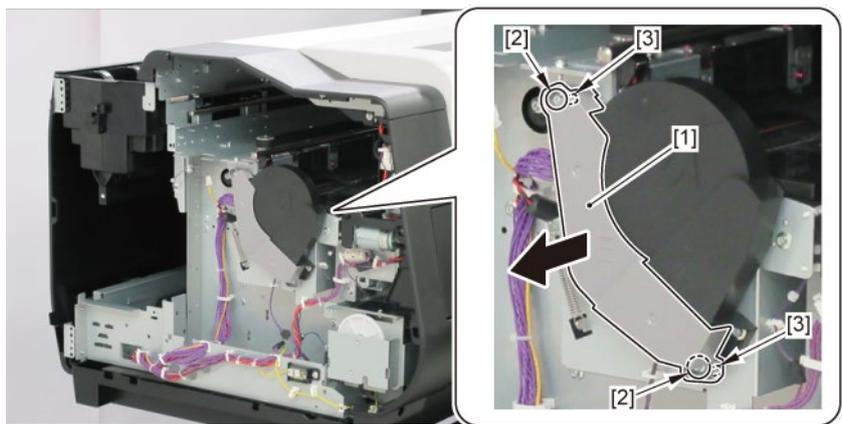
4 pcs



D

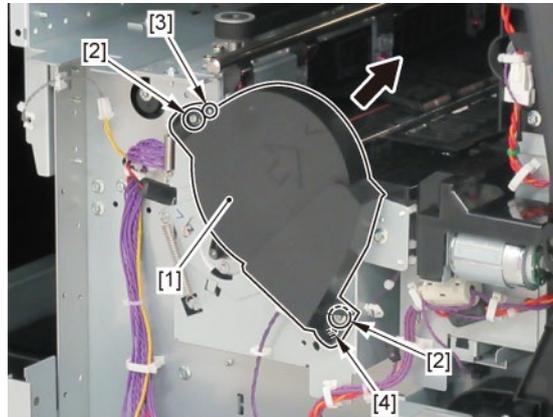
1. Remove all the parts of Group A.
2. Remove [1] COVER, PF ENCODER OUTER.

[2]	[3]
	
2 pcs	2 pcs



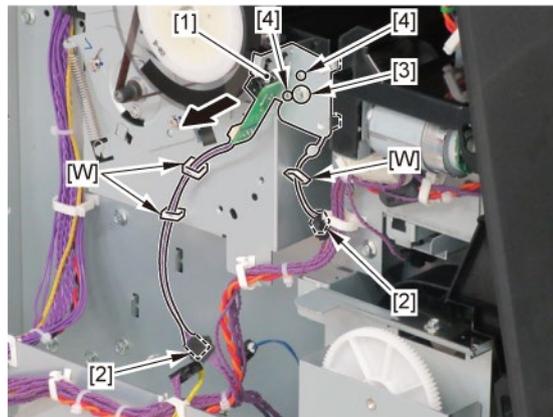
3. Remove [1] CODEWHEEL COVER UNIT.

[2]	[3]	[4]
		
2 pcs	1 pc	1 pc



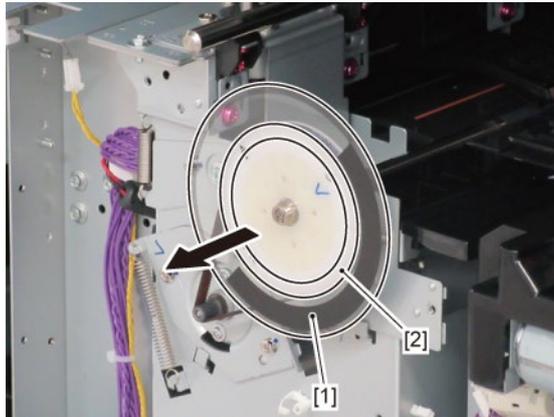
4. Remove [1] PAPER FEED ENCODER UNIT.

[2]	[3]	[4]	[W]
			
2 pcs	1 pc	2 pcs	3 pcs



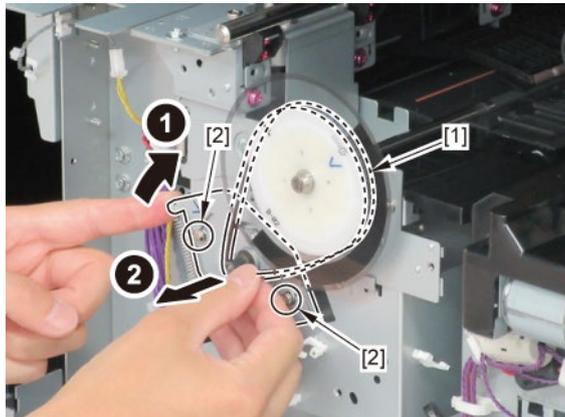
D-1

5. Remove [1] FILM, TIMING SLIT DISK.
6. Remove [2] FLANGE, PULLEY.



D-2

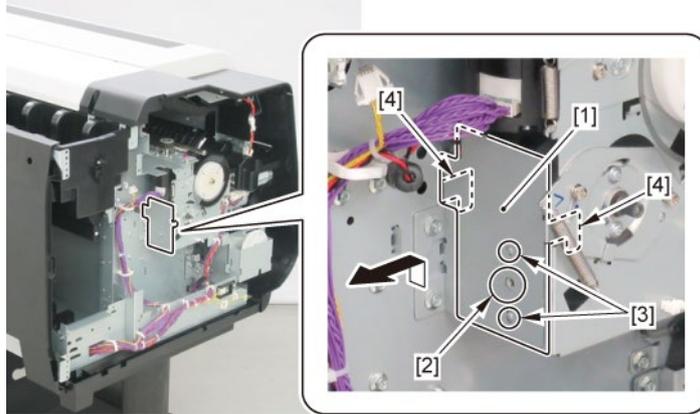
5. Remove [1] BELT, PAPER TRANSPORT.



6. Remove [1] the plate.

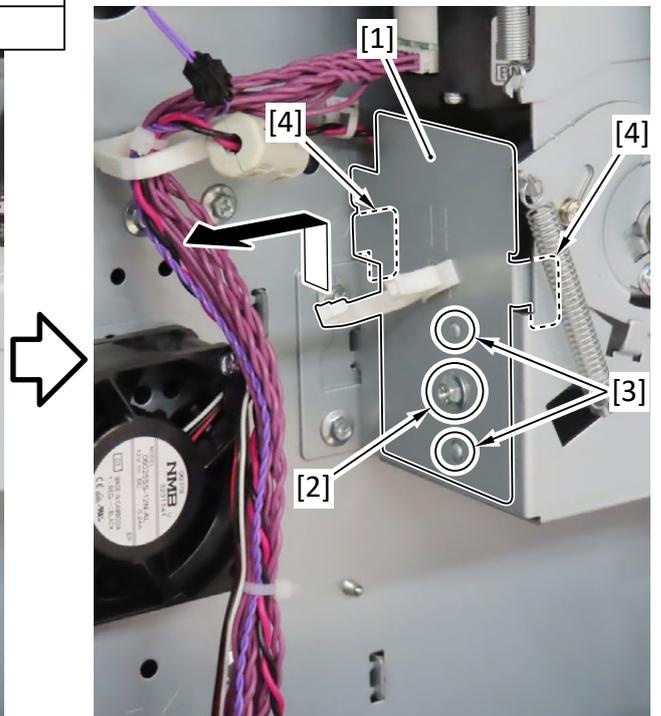
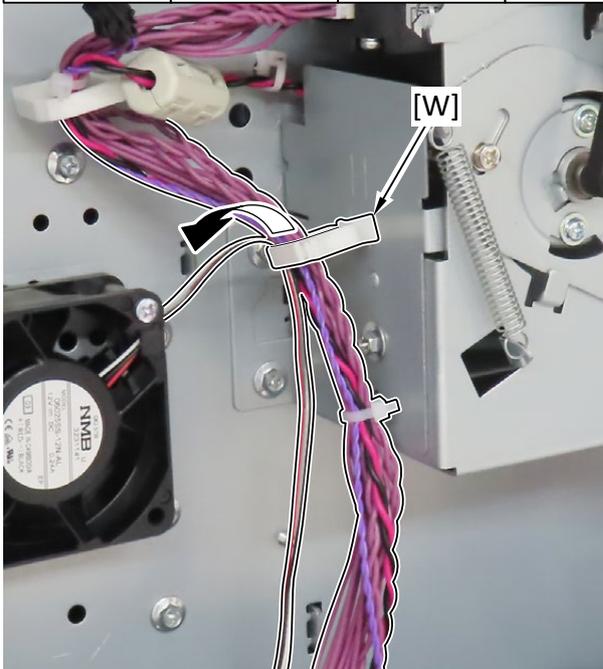
TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

[2]	[3]	[4]
		
1 pc	2 pcs	2 pcs



TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

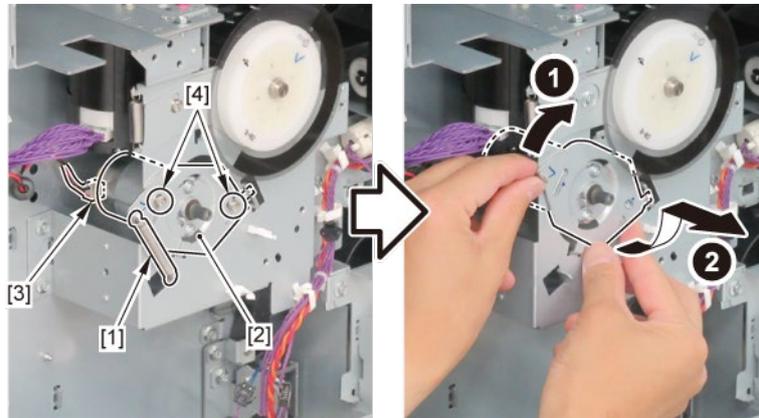
[W]	[2]	[3]	[4]
			
1x	1x	2x	2x



7. Remove [1] SPRING, TENSION.

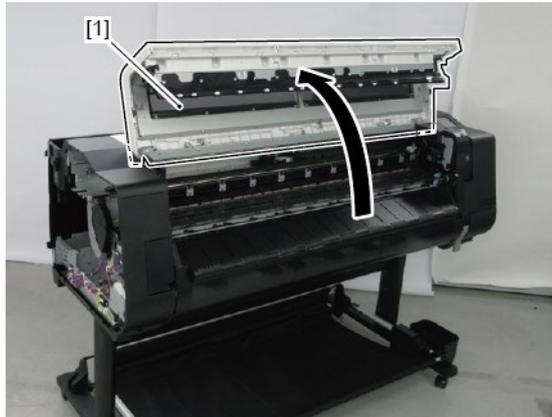
8. Remove [2] PAPER FEED MOTOR UNIT.

[3]	[4]
	
1 pc	2 pcs



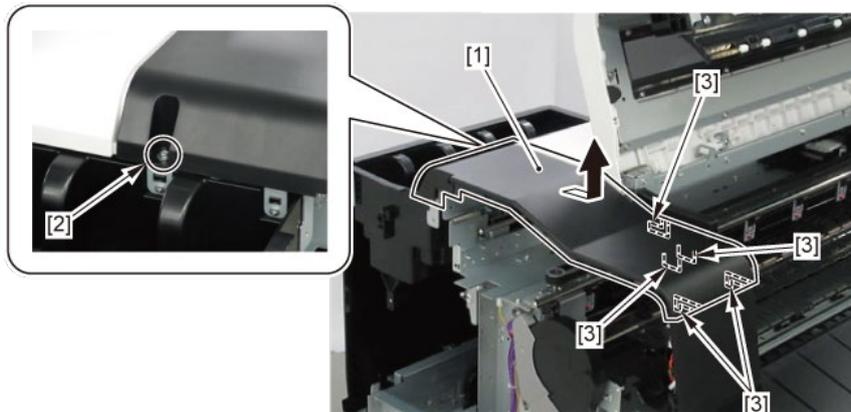
E (TX-3100, TX-4100, TX-5310, TX-5410)

1. Remove all the parts of Group A.
2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

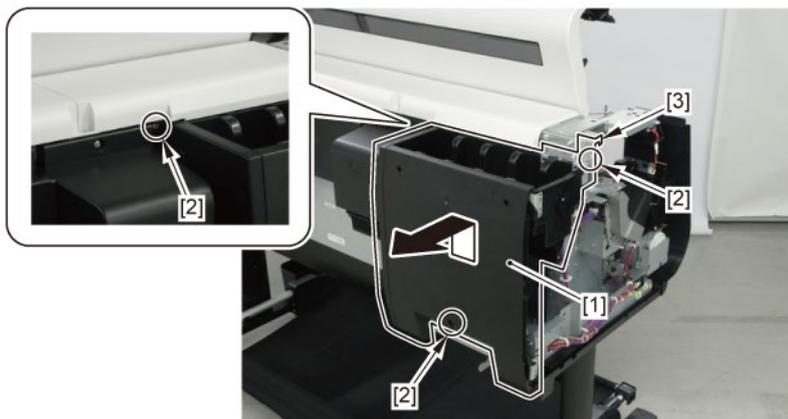
[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

- BOX, INK TANK
- COVER, INK TANK BACK
- COVER, INK TANK L INSIDE.

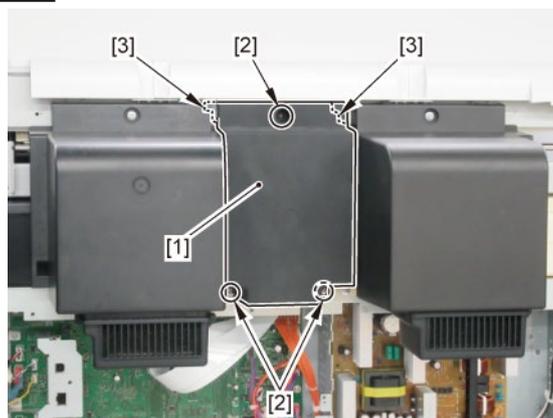
[2]	[3]
	
3 pcs	1 pc



5. Remove [1] COVER, BACK W-FAN.

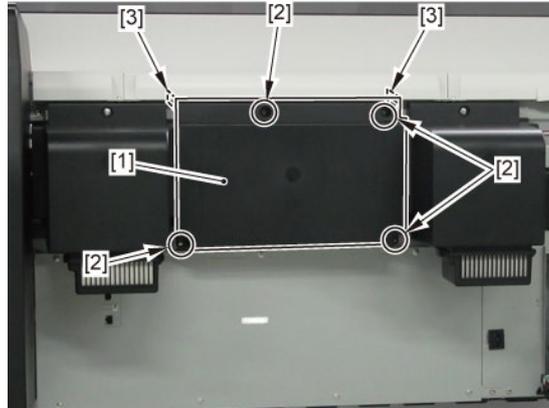
(36" model)

[2]	[3]
	
3 pcs	2 pcs



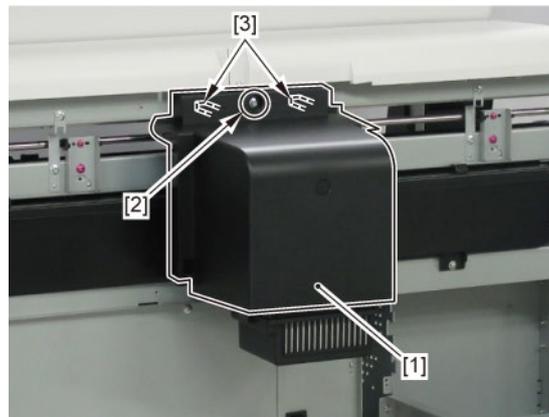
(44" model)

[2]	[3]
	
4 pcs	2 pcs



6. Remove [1] COVER, MIST FAN.

[2]	[3]
	
1 pc	2 pcs



7. Open [1] the right ink tank cover.

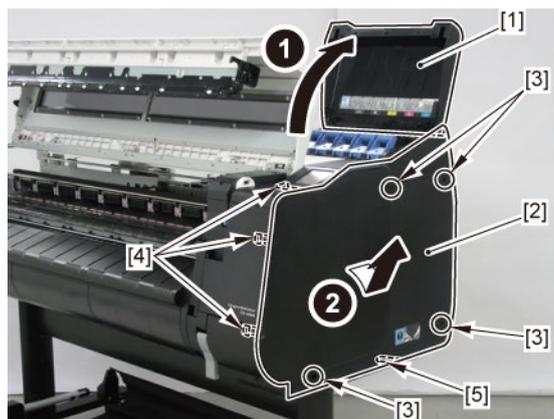
8. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

- CAP, SIDE COVER.

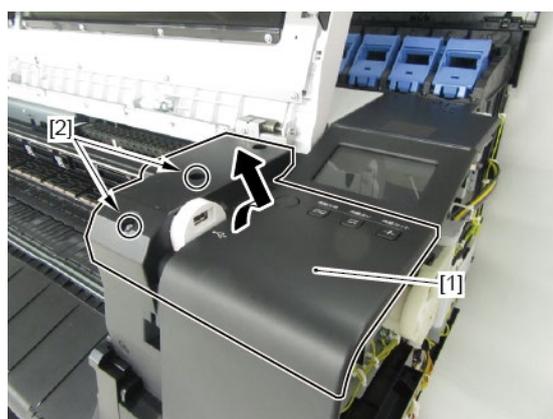
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



9. Remove [1] COVER, FRONT TOP R.

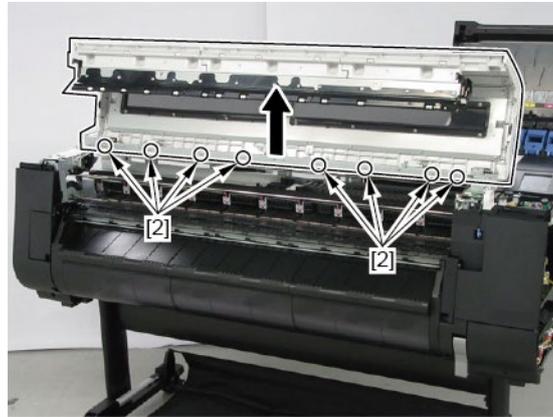
[2]

2 pcs



10. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
36" model	7 pcs
44" model	8 pcs

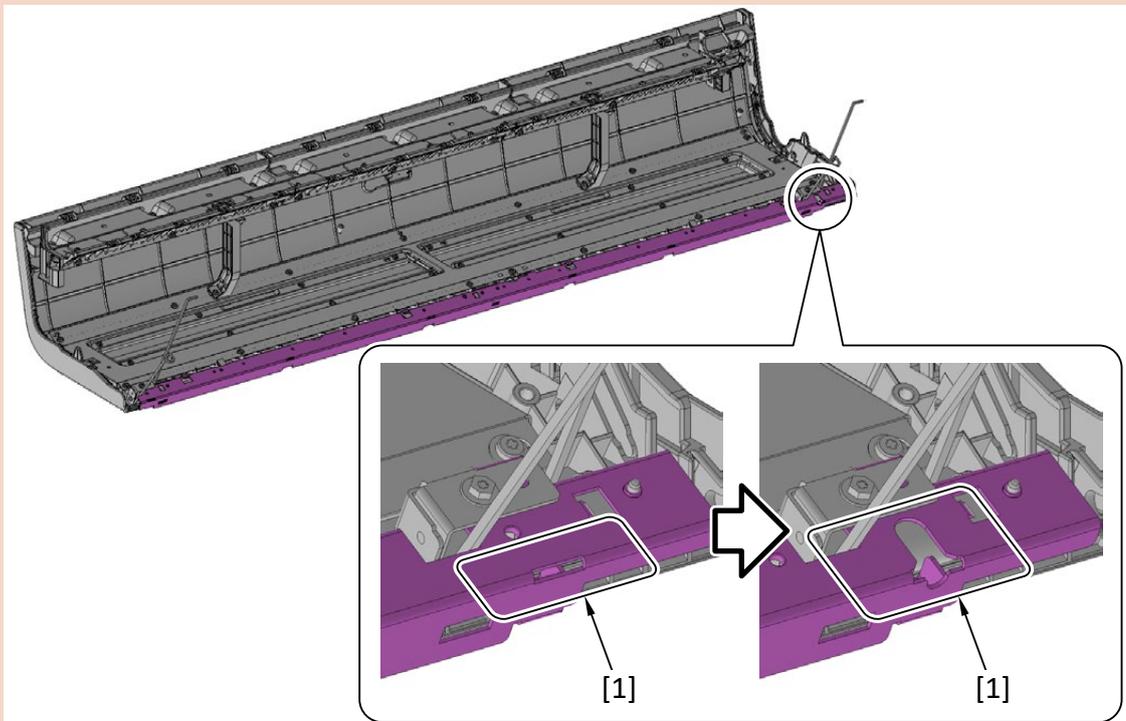


TX-4100, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

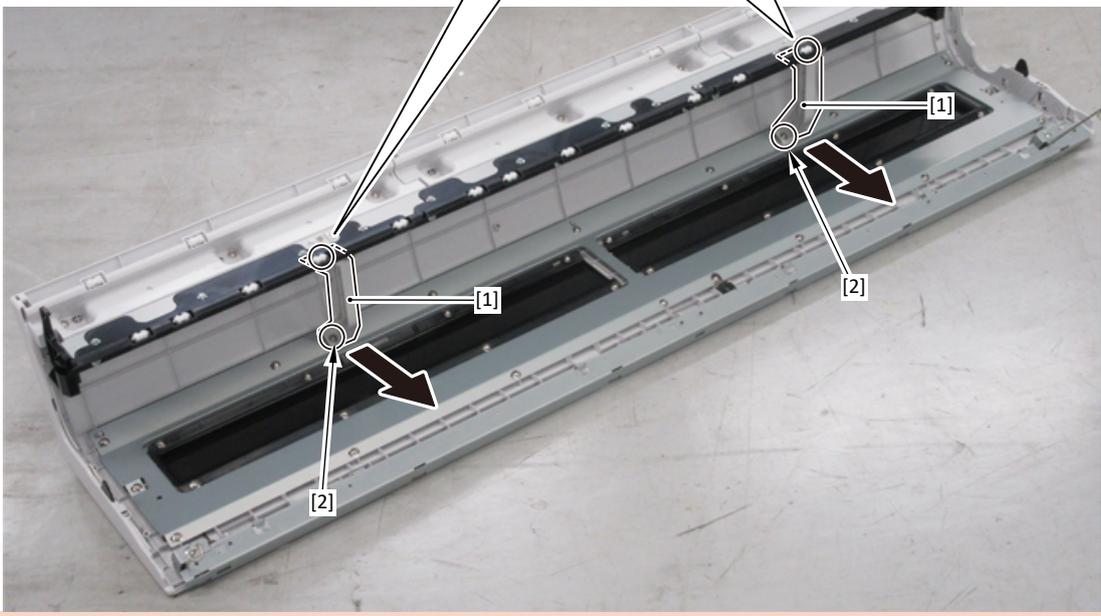
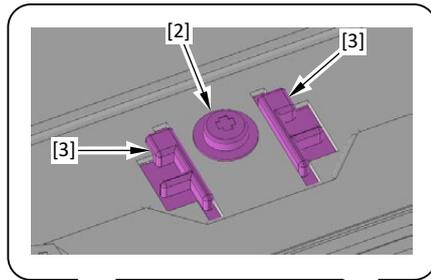
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



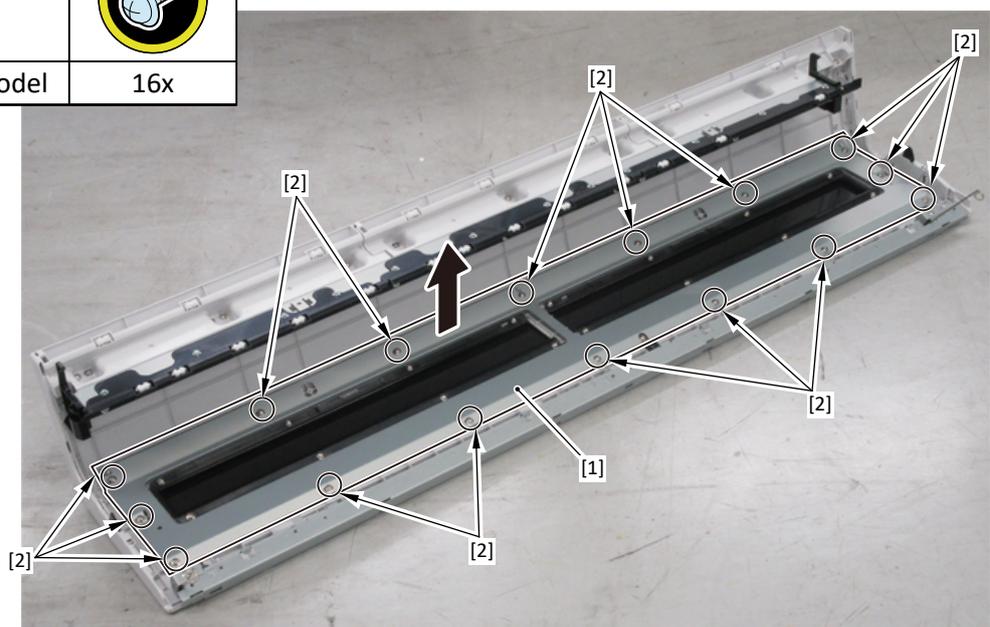
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



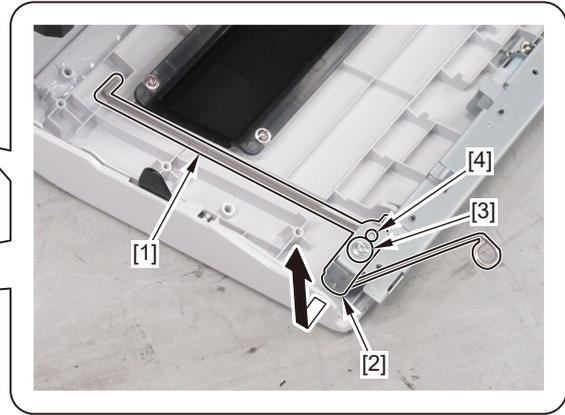
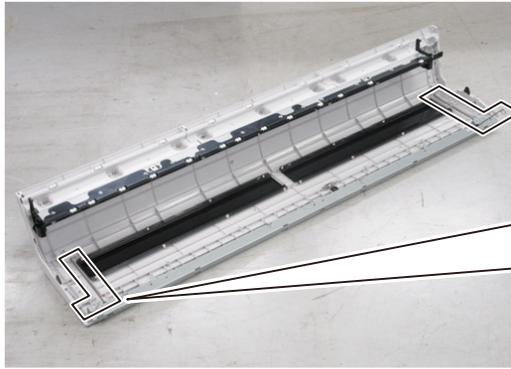
2. Remove [1] the plate.

	[2]
	
44" model	16x



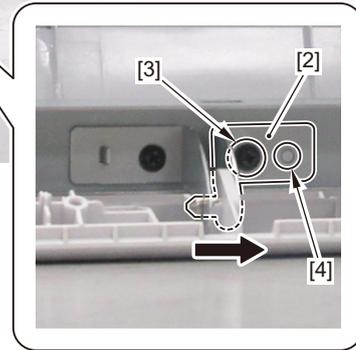
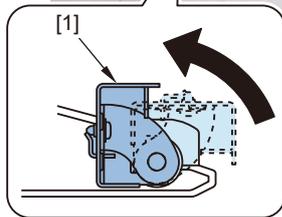
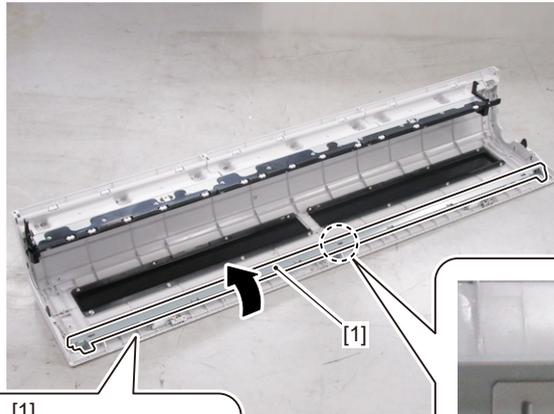
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



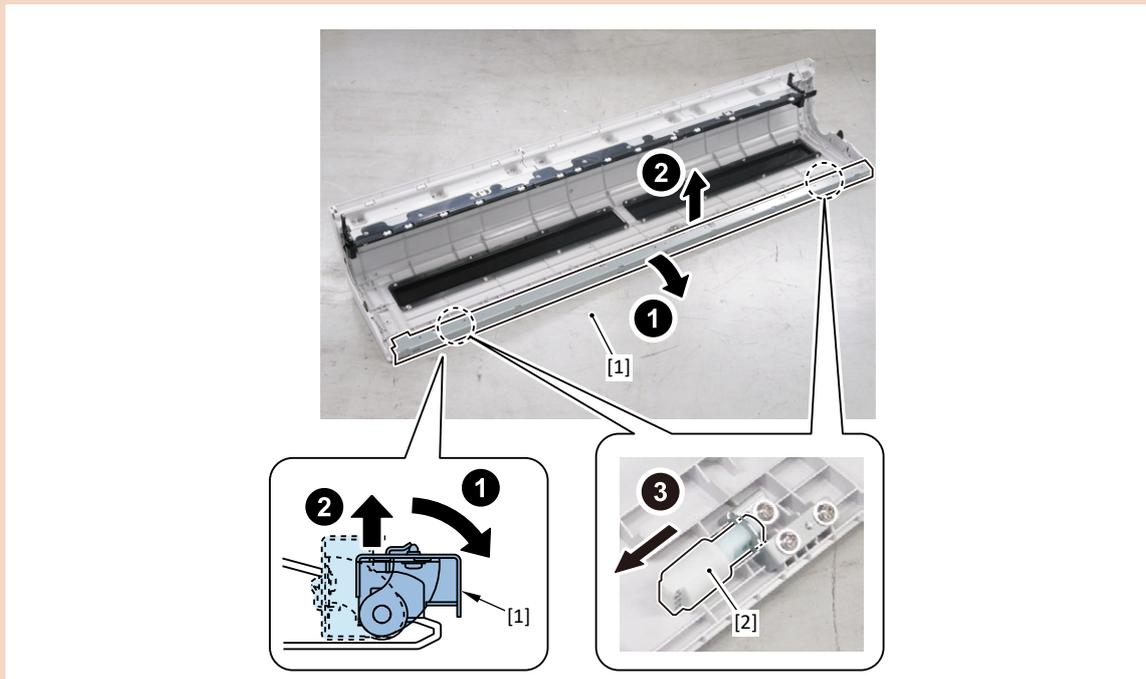
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x



5. Return [1] the plate and remove it.

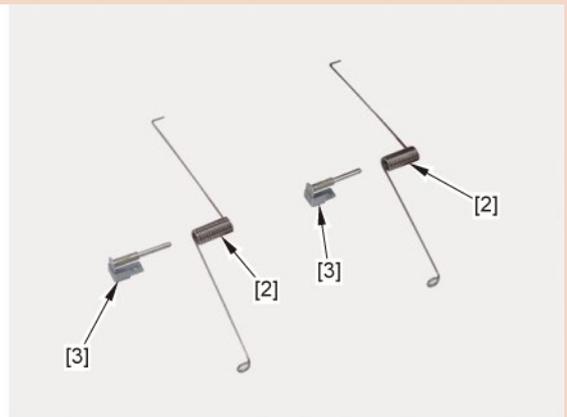
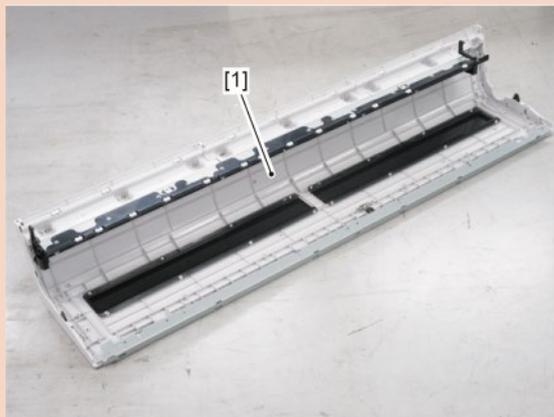
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

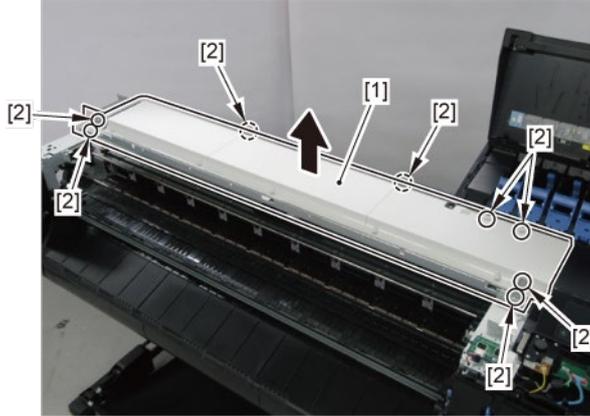
When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.



11. Remove [1] COVER UNIT, BACK TOP CENTER.

[2]

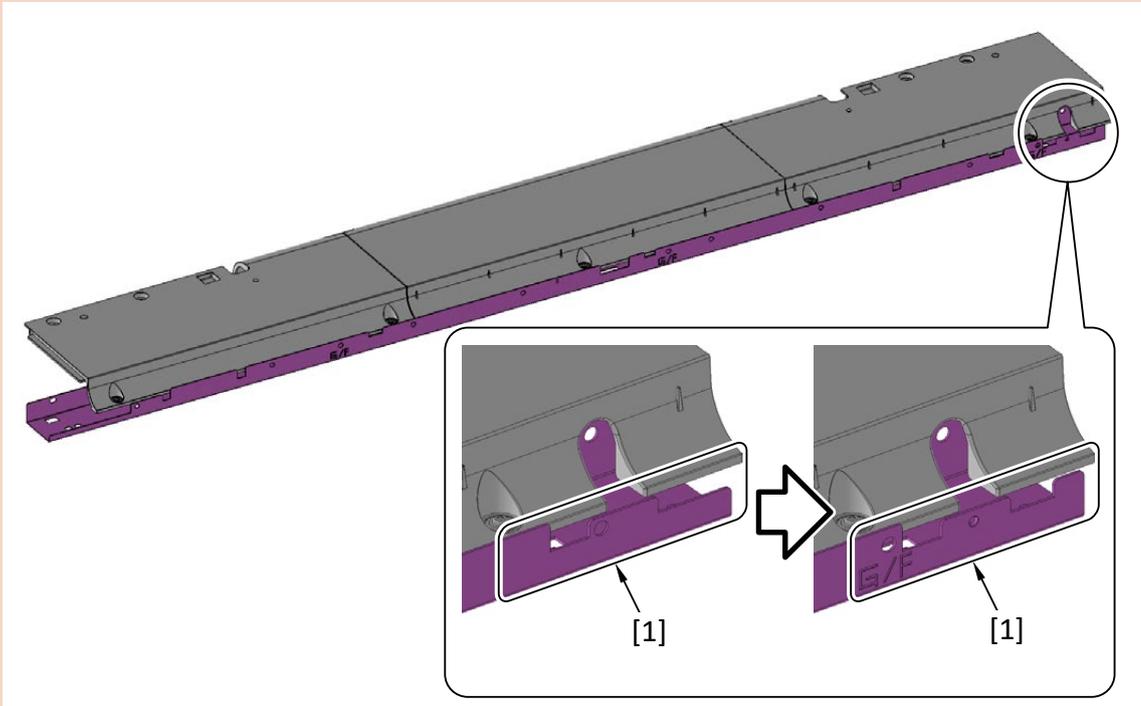
8 pcs



TX-4100, TS-5410: Notes when replacing the unit

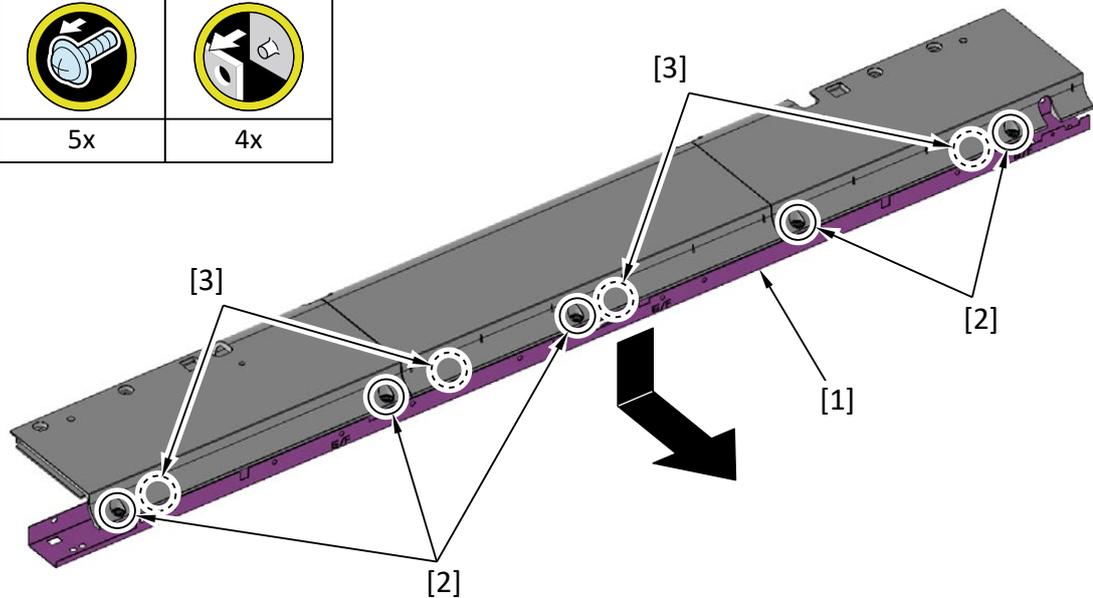
When replacing COVER UNIT, BACK TOP CENTER, check the shape of [1] the plate.

If the plate shape of the service part differs from that of the removed COVER UNIT, BACK TOP CENTER, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.



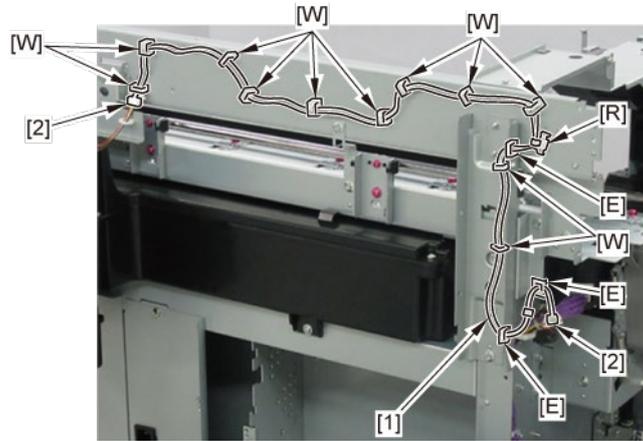
1. Remove [1] the plate.

[2]	[3]
	
5x	4x

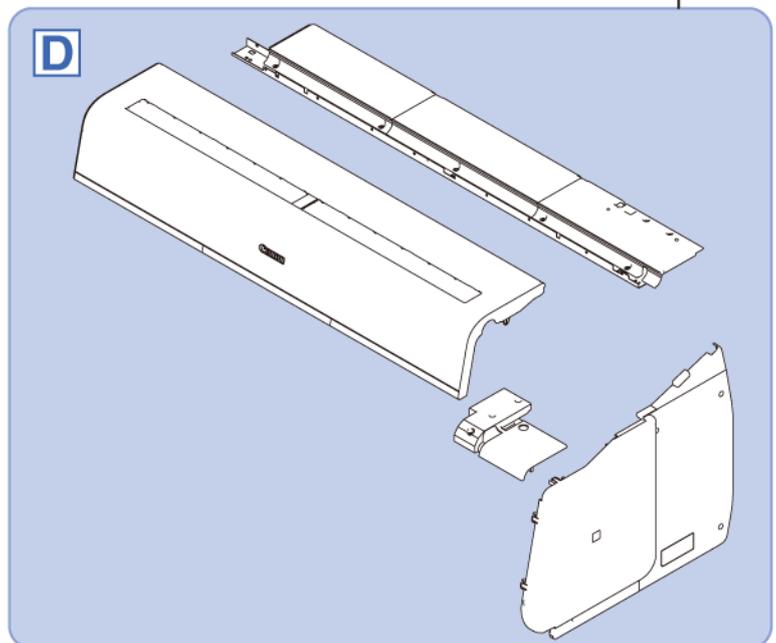
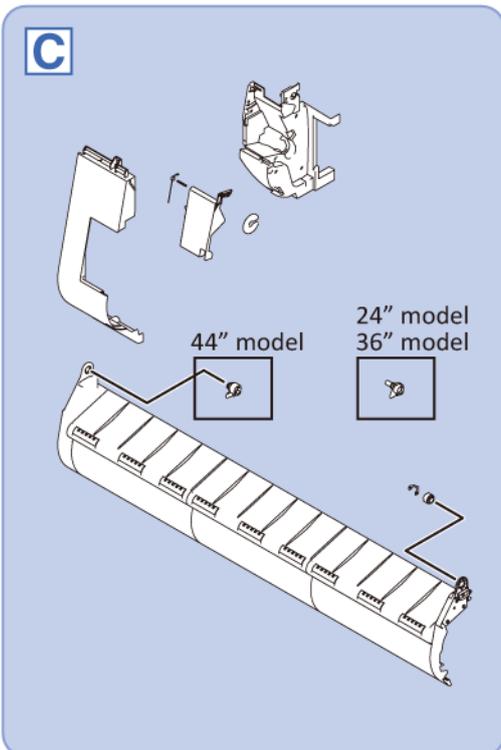
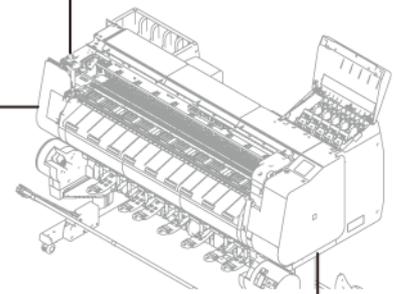
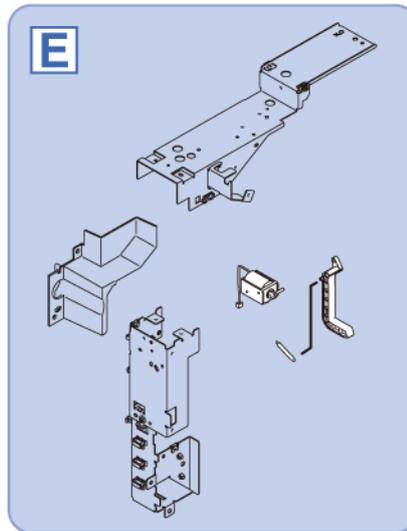
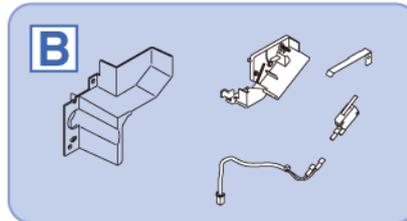
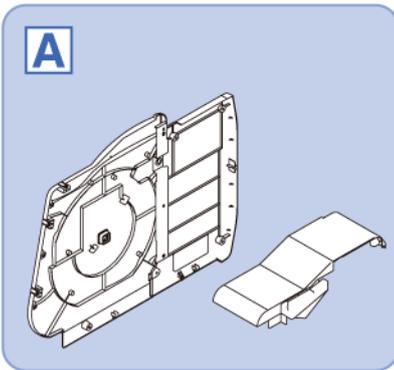


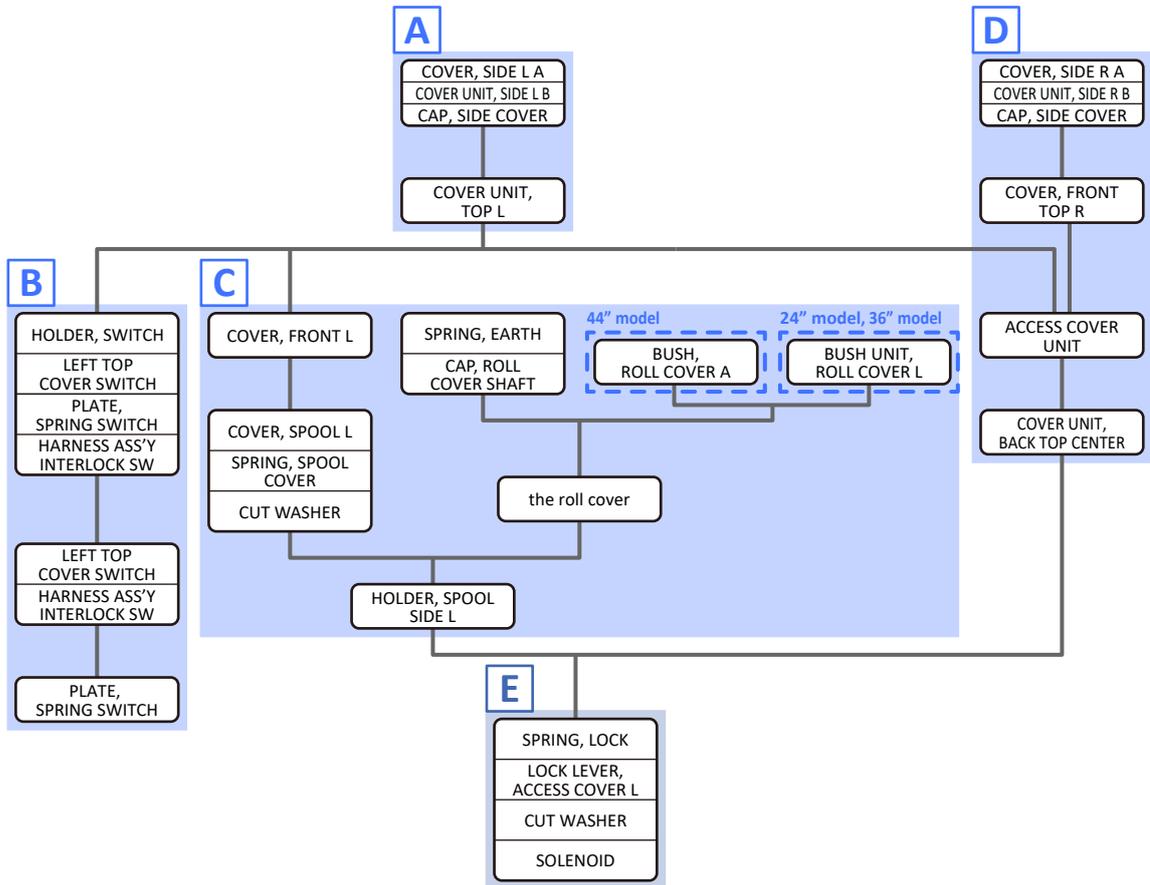
12. Disconnect [1] HARNESS ASS'Y, MFAN L.

[2]	[W]	[E]	[R]
			
2 pcs	11 pcs	3 pcs	1 pc



3. Left Front (Left Access Cover Lock)



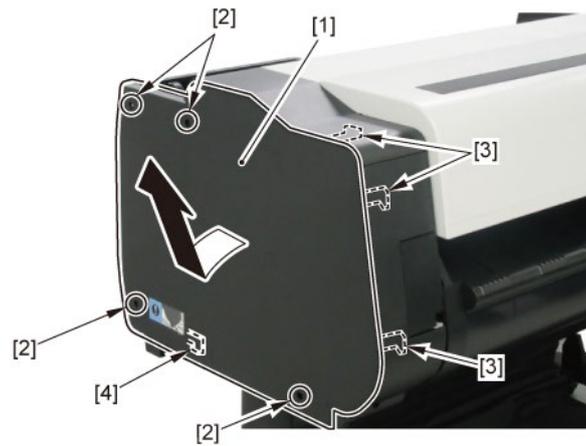


A

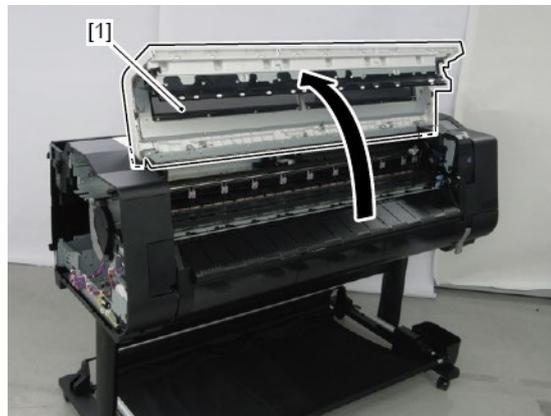
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

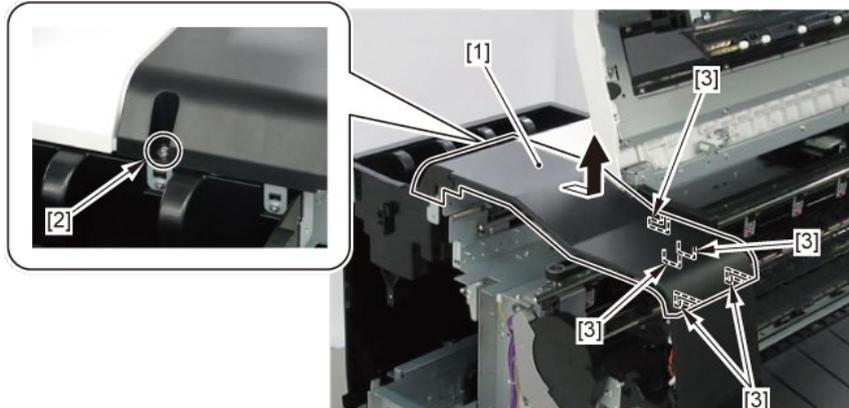


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

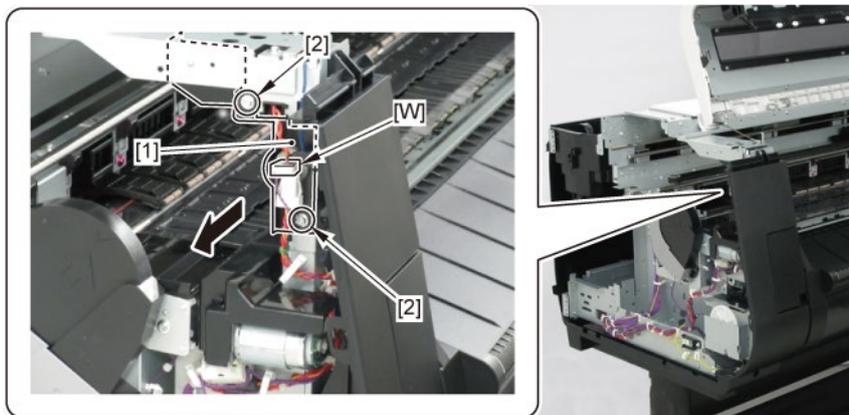
[2]	[3]
	
1 pc	5 pcs



B

1. Remove all the parts of Group A.
2. Remove [1] the inner cover L.

[2]	[W]
	
2 pcs	1 pc



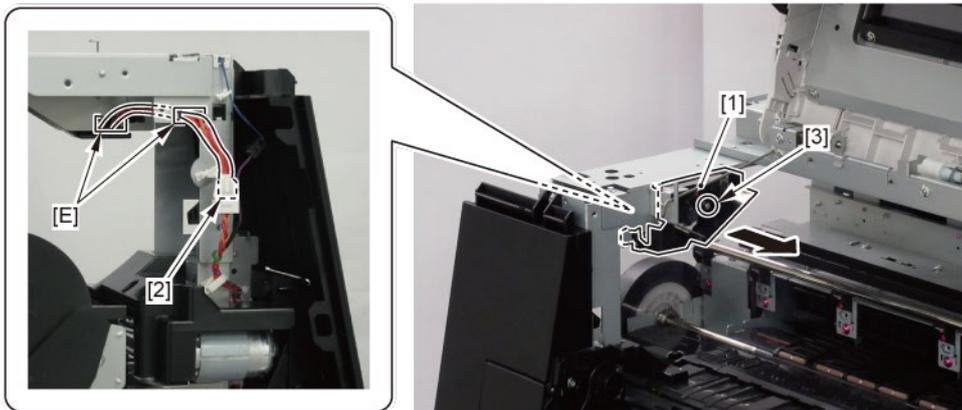
3. Remove [1] HOLDER, SWITCH with

- LEFT TOP COVER SWITCH

- PLATE, SPRING SWITCH

- HARNESS ASS'Y, INTERLOCK SW.

[2]	[3]	[E]
	 LONG	
1 pc	1 pc	2 pcs

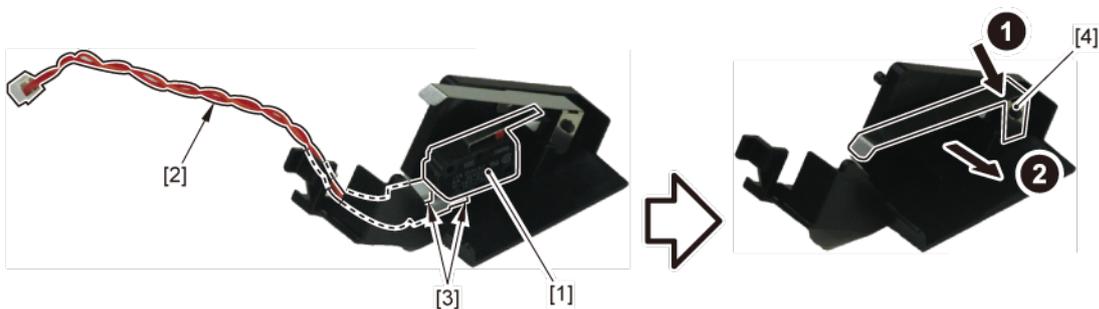


4. Remove [1] LEFT TOP COVER SWITCH and [2] HARNESS ASS'Y, INTERLOCK SW.

[3]

2 pcs

5. Remove [4] PLATE, SPRING SWITCH.

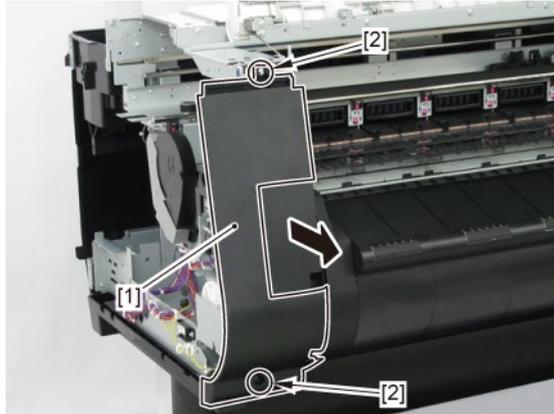


C

1. Remove all the parts of Group A.
2. Remove [1] COVER, FRONT L.

[2]

2 pcs



3. Remove [1] SPRING, EARTH and [2] CAP, ROLL COVER SHAFT.

[3]

2 pcs

4. Remove [4] BUSH, ROLL COVER A.

(the BUSH UNIT, ROLL COVER L in 24" model and 36" model)

[5]

1 pc

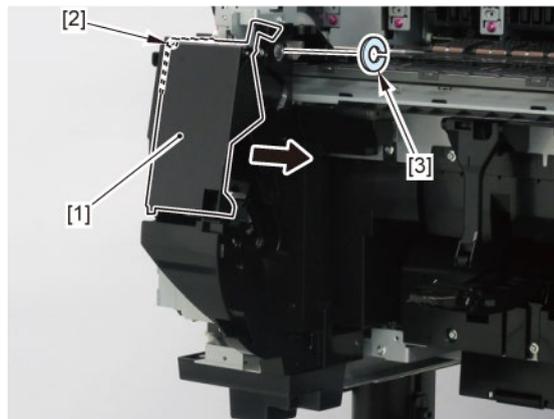
5. Remove [6] the roll cover.



6. Remove [1] COVER, SPOOL L and [2] SPRING, SPOOL COVER.

[3]

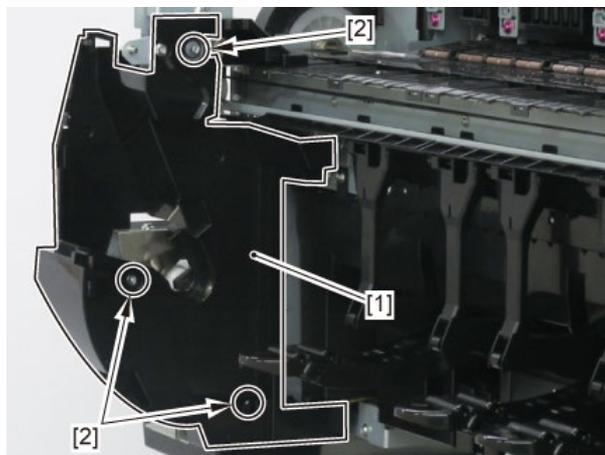
1 pc



7. Remove [1] HOLDER, SPOOL SIDE L.

[2]

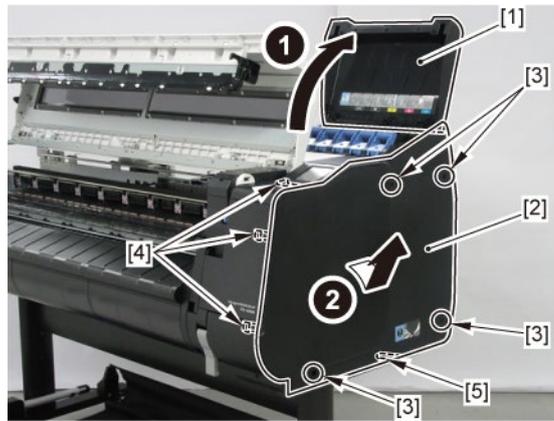
3 pcs



D

1. Remove all the parts of Group A.
2. Open [1] the right ink tank cover.
3. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

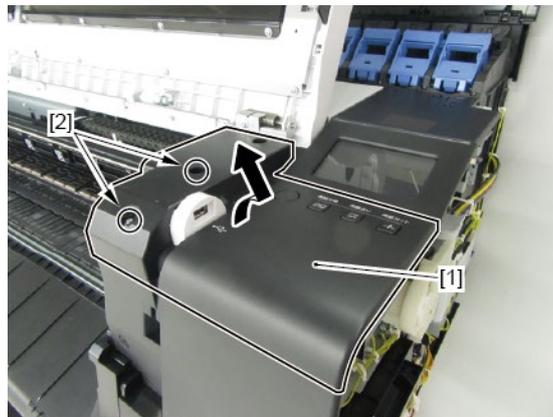
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



4. Remove [1] COVER, FRONT TOP R.

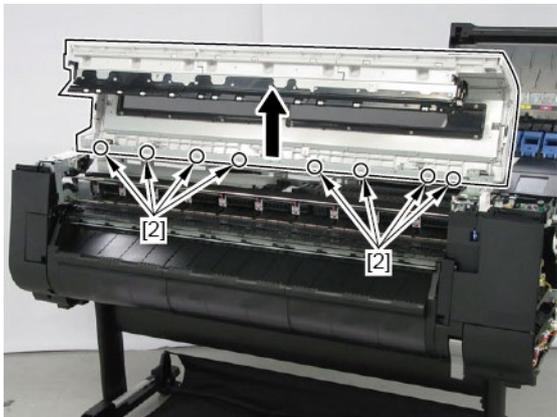
[2]

2 pcs



5. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
24" model	5 pcs
36" model	7 pcs
44" model	8 pcs

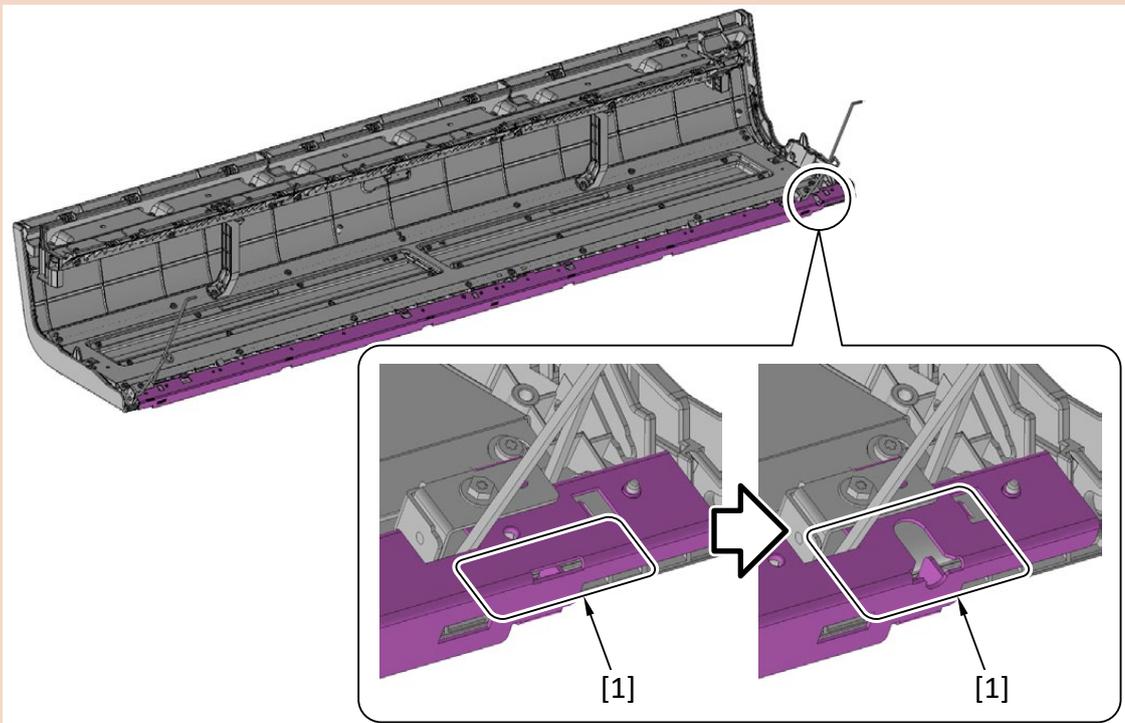


TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

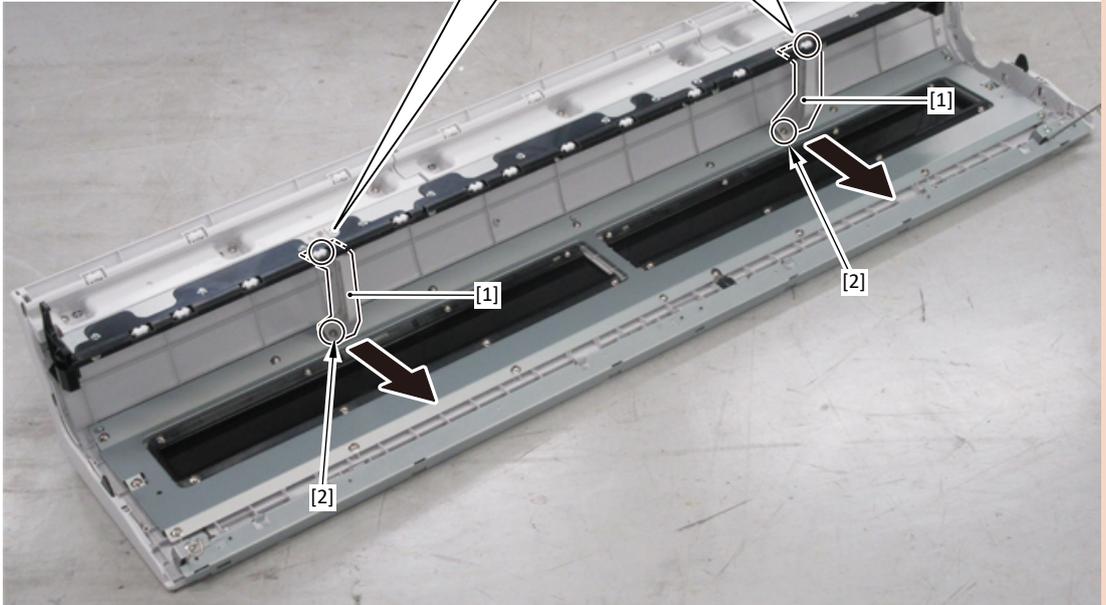
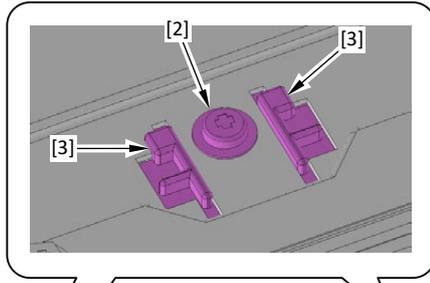
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



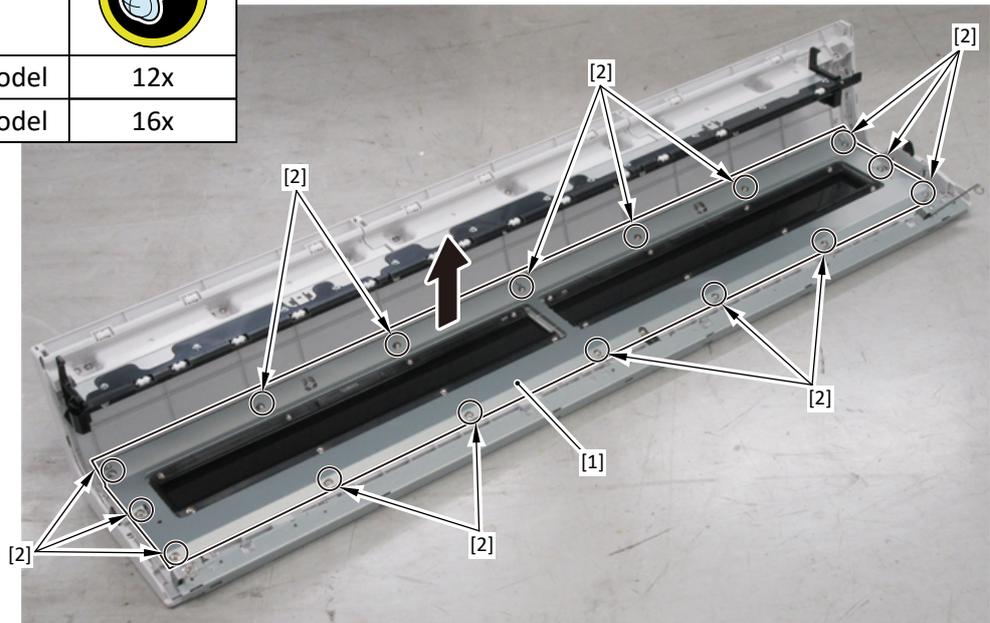
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



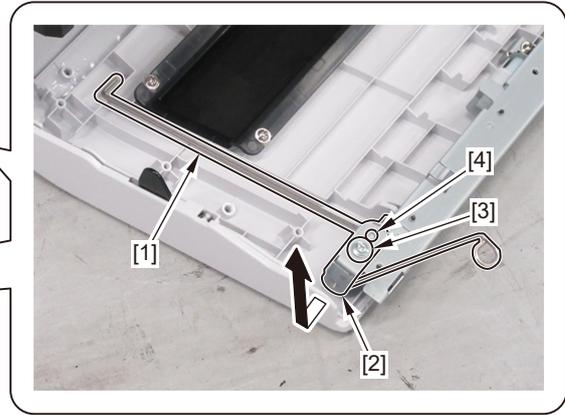
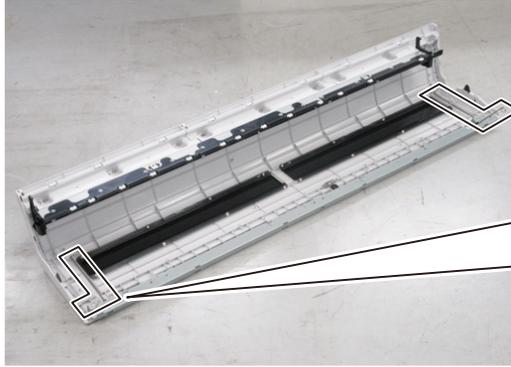
2. Remove [1] the plate.

	[2]
	
24" model	12x
44" model	16x



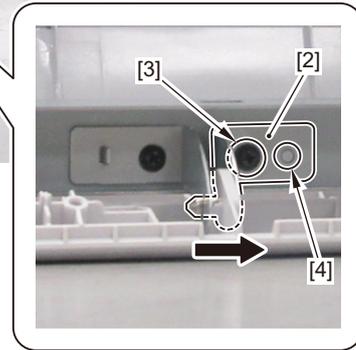
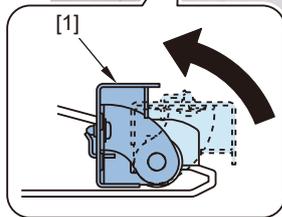
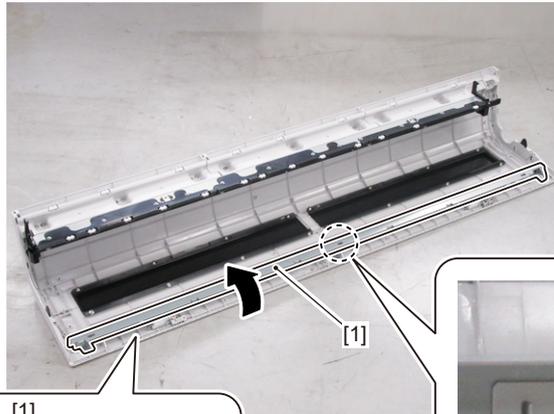
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



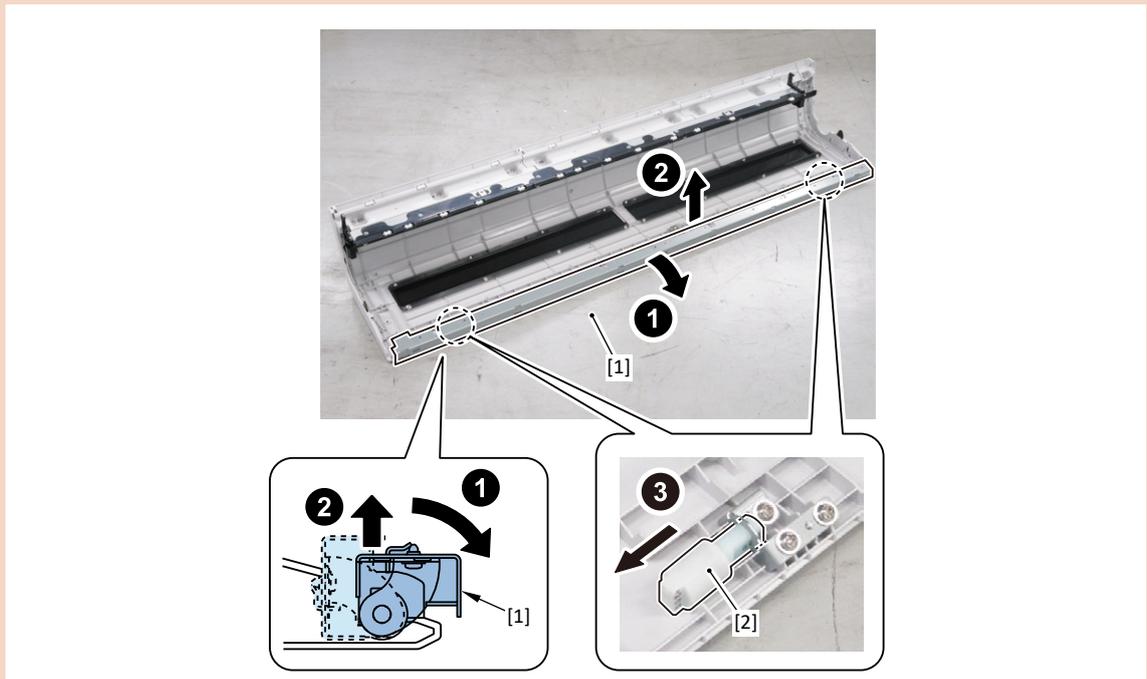
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x





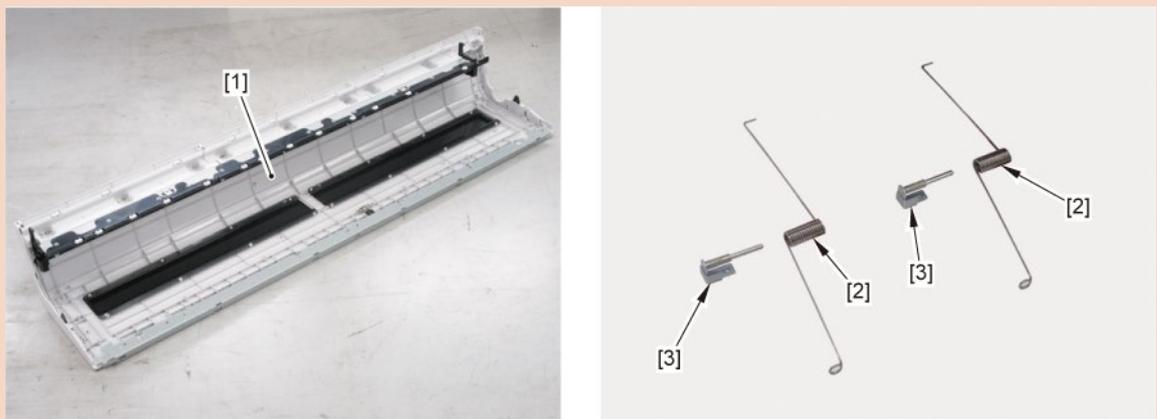
5. Return [1] the plate and remove it.
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.

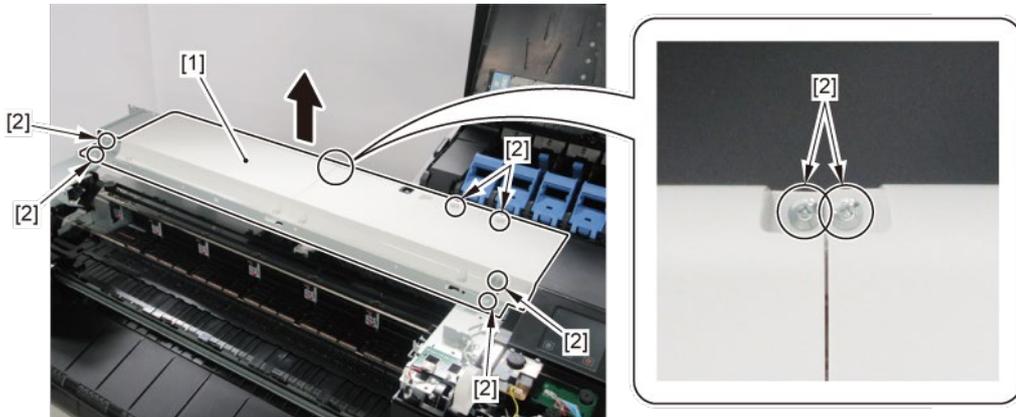


6. Remove [1] COVER UNIT, BACK TOP CENTER.

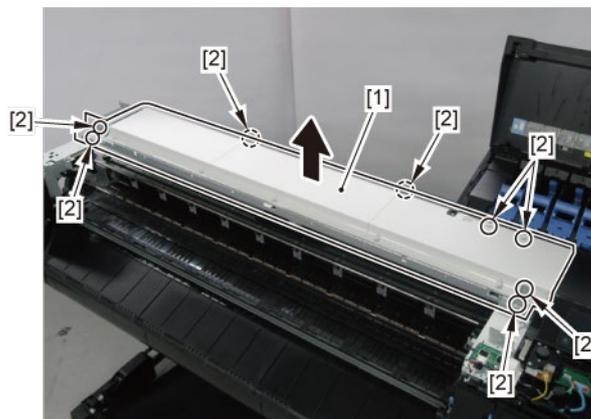
[2]

8 pcs

(24" model)



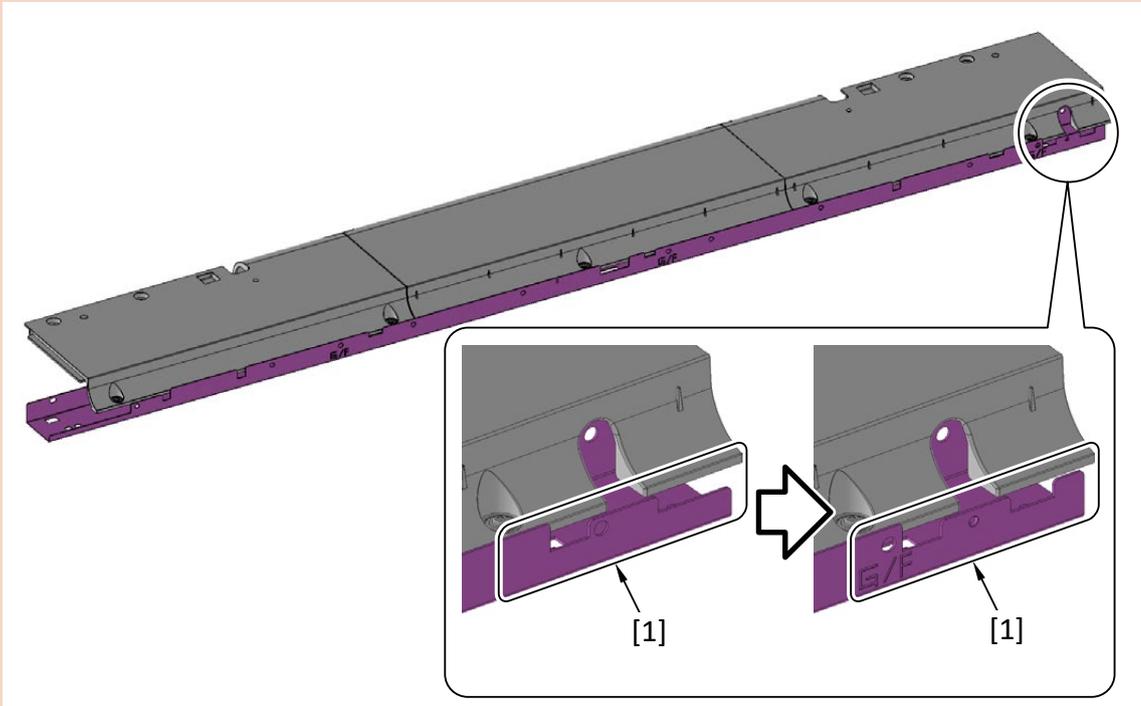
(36" model, 44" model)



TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing COVER UNIT, BACK TOP CENTER, check the shape of [1] the plate.

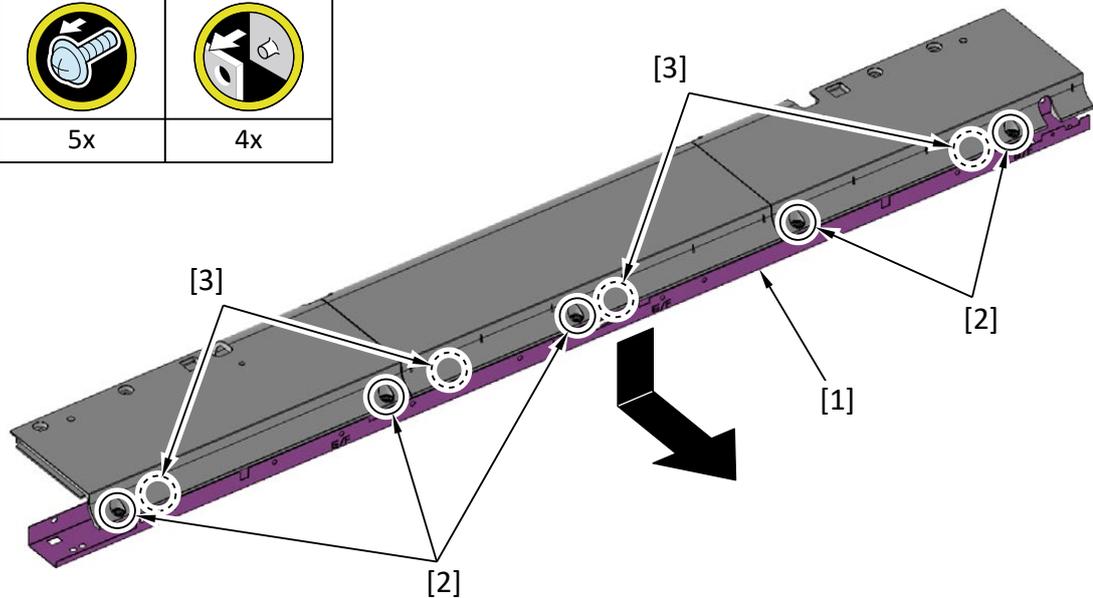
If the plate shape of the service part differs from that of the removed COVER UNIT, BACK TOP CENTER, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.



Point

1. Remove [1] the plates (four in 24" model, five in 44" model).

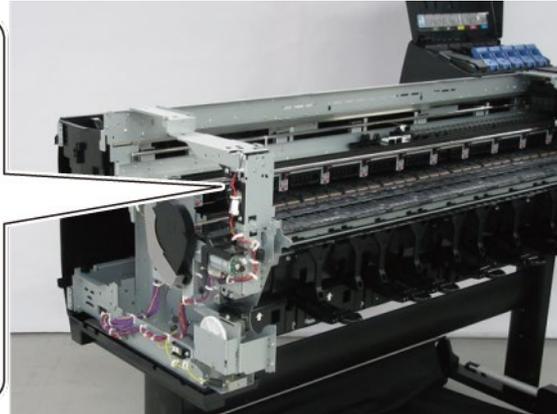
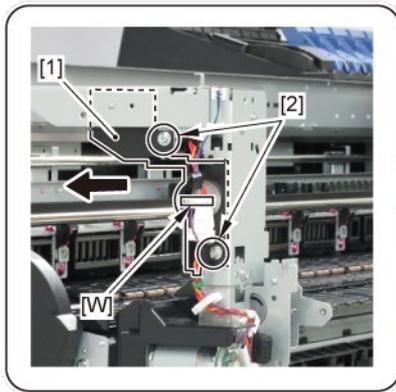
[2]	[3]
	
5x	4x



E

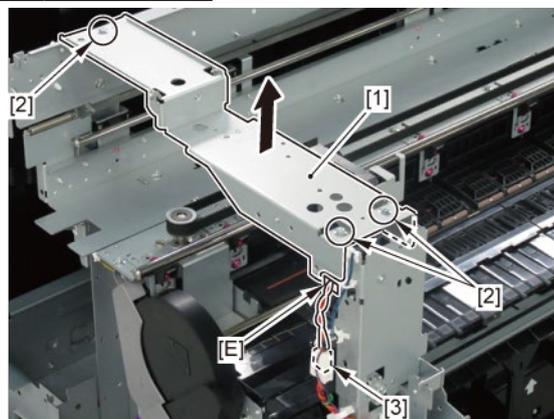
1. Remove all the parts of Groups A, C, and D.
2. Remove [1] the inner cover.

[2]	[W]
	
2 pcs	1 pc



3. Remove [1] the plate.

[2]	[3]	[E]
		
3 pcs	1 pc	1 pc



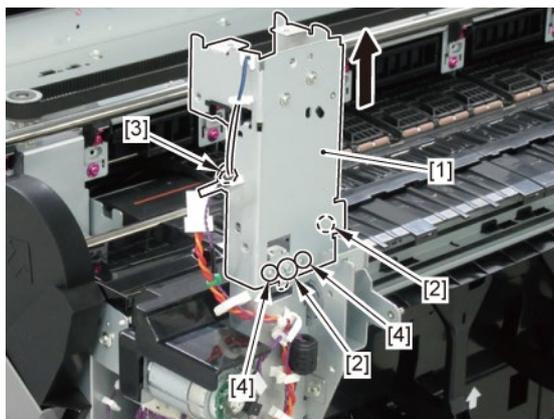
4. Remove [1] the plate with

- SPRING, LOCK

- LOCK LEVER, ACCESS COVER L

- SOLENOID.

[2]	[3]	[4]
		
2 pcs	1 pc	2 pcs



5. Remove [1] SPRING, LOCK.

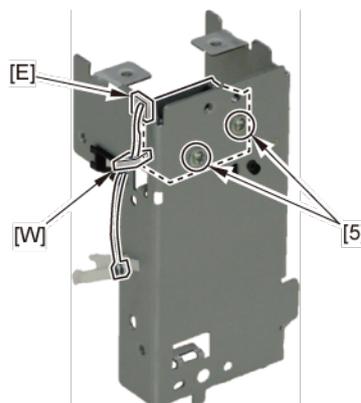
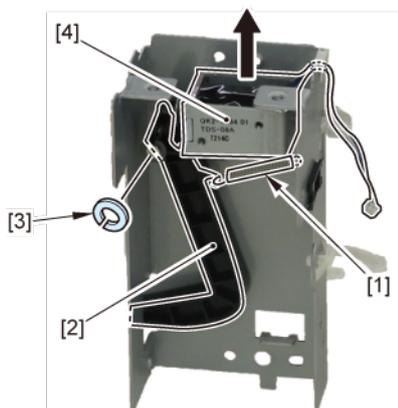
6. Remove [2] LOCK LEVER, ACCESS COVER L.

[3]

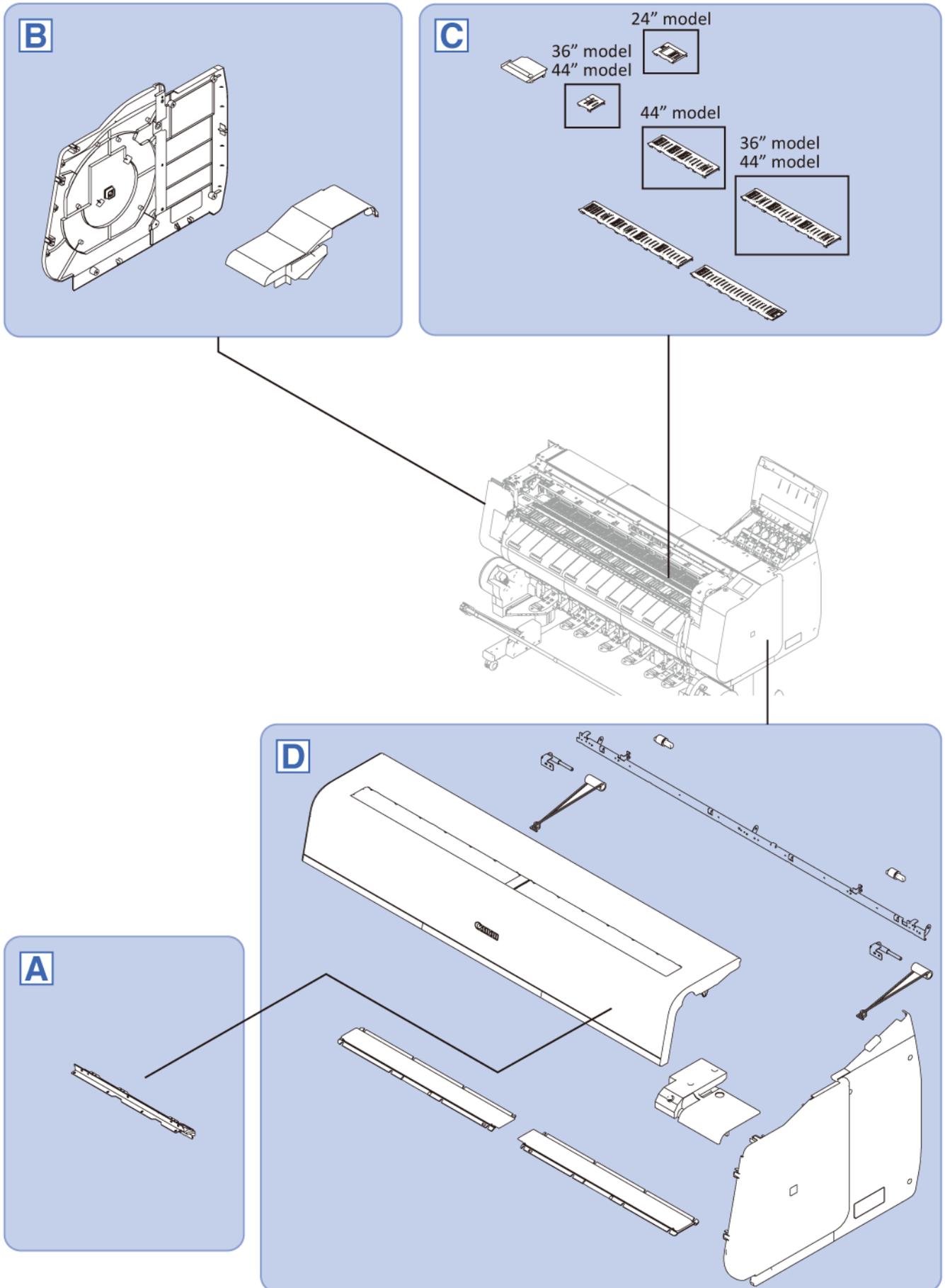
1 pc

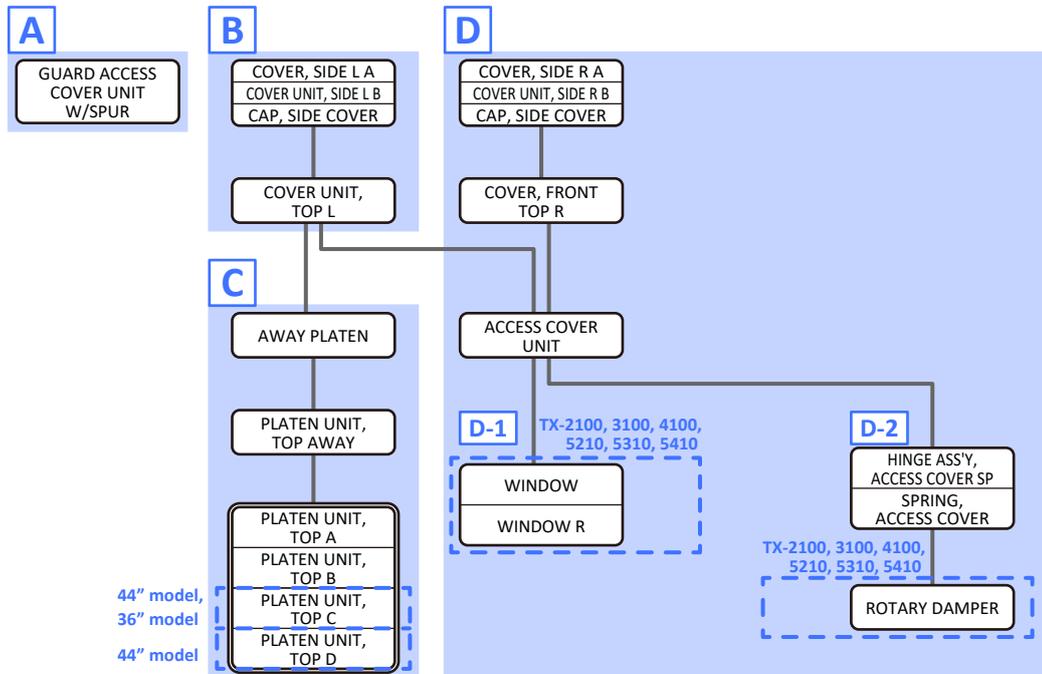
7. Remove [4] SOLENOID.

[5]	[W]	[E]
		
2 pcs	1 pc	1 pc



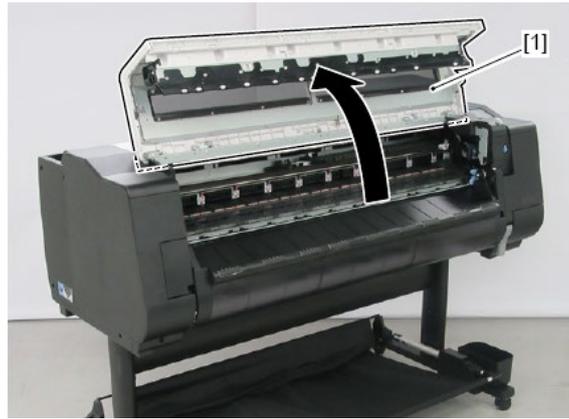
4. Access Cover





A

1. Open [1] the access cover.



2. Remove [1] GUARD ACCESS COVER UNIT W/SPUR.

[2]

7 pcs

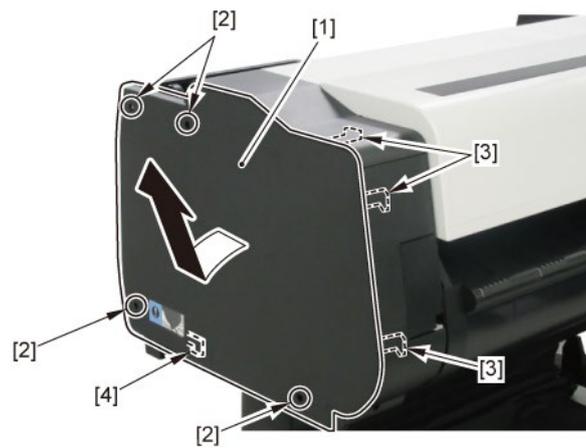


B

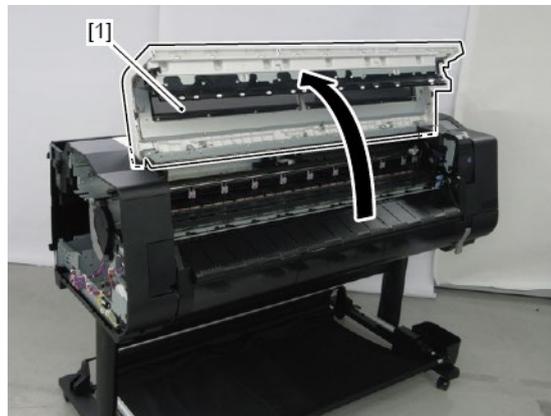
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

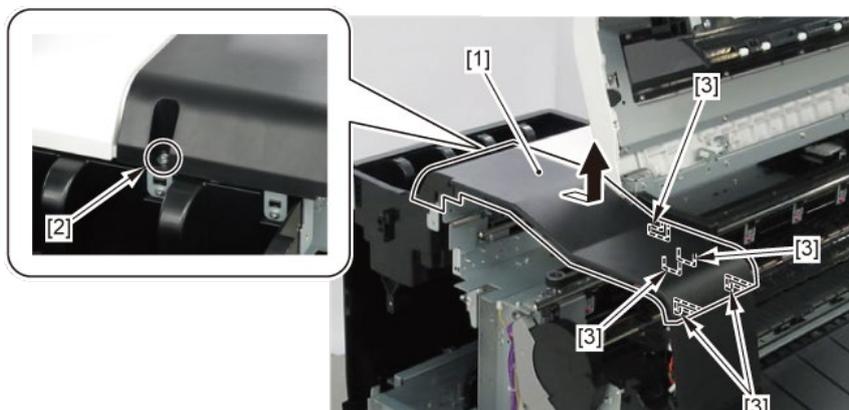


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

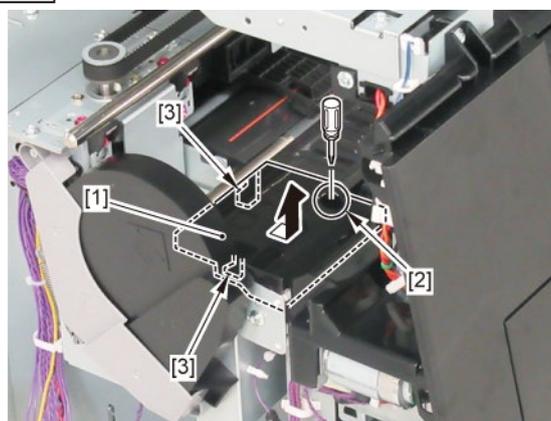
[2]	[3]
	
1 pc	5 pcs



C

1. Remove all the parts of Group B.
2. Remove [1] AWAY PLATEN.

[2]	[3]
	
1 pc	2 pcs

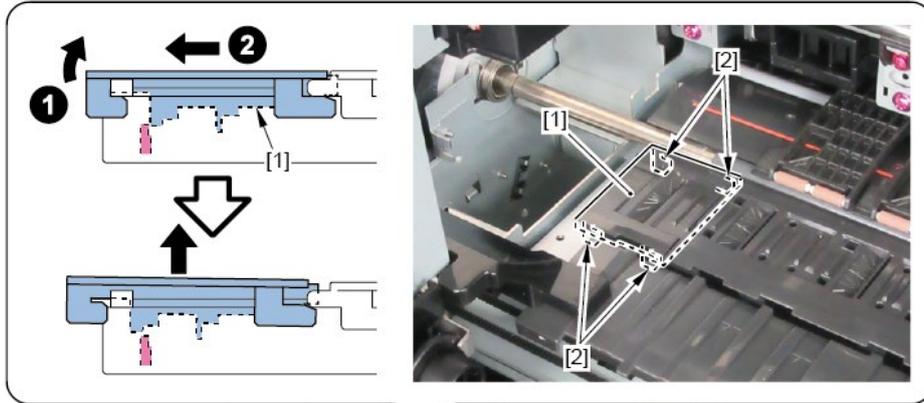


Use a stubby screwdriver.

3. Remove [1] PLATEN UNIT, TOP AWAY.

[2]

4 pcs



4. Remove

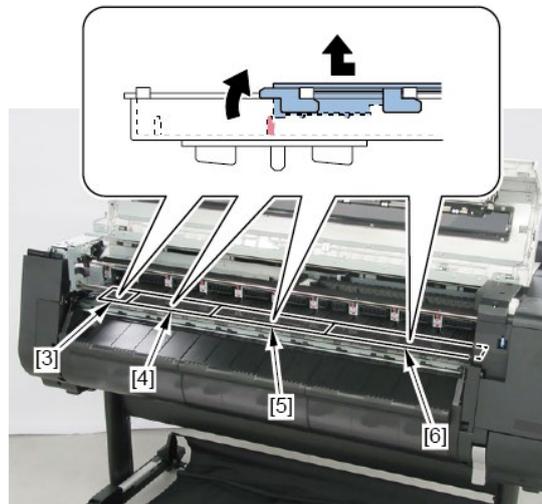
[1] PLATEN UNIT, TOP D

[2] PLATEN UNIT, TOP C

[3] PLATEN UNIT, TOP B, and

[4] PLATEN UNIT, TOP A.

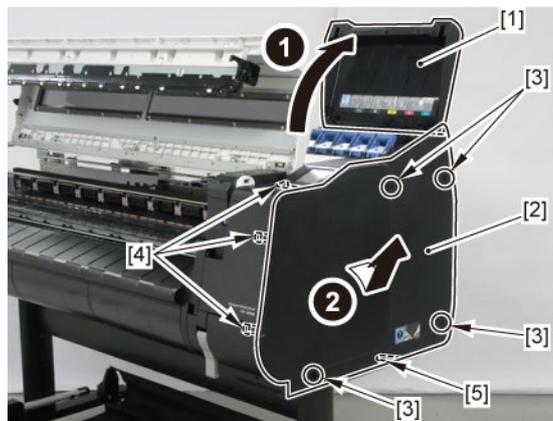
	PLATEN UNIT, TOP			
	A [4]	B [3]	C [2]	D [1]
				
12 pcs	16 pcs	14 pcs	12 pcs	
24" model	release	release	-	-
36" model	release	release	release	-
44" model	release	release	release	release



D

1. Remove all the parts of Group B.
2. Open [1] the right ink tank cover.
3. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

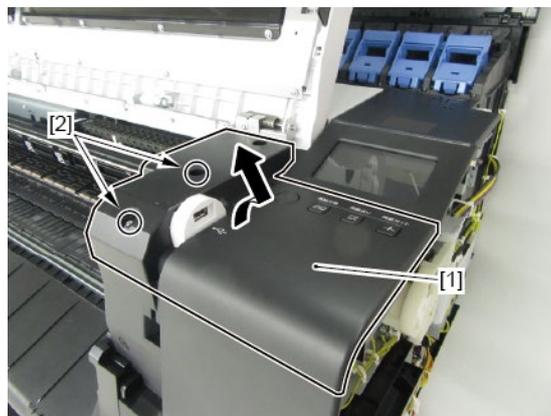
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



4. Remove [1] COVER, FRONT TOP R.

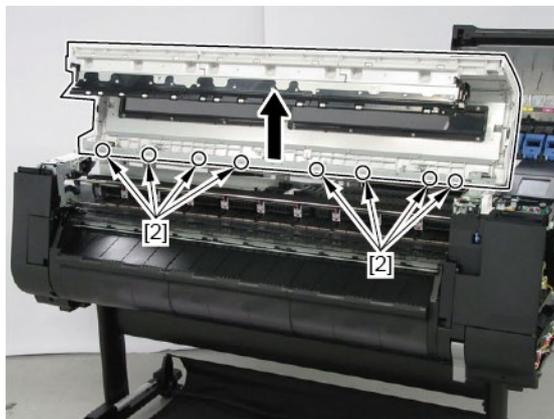
[2]

2 pcs



5. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
24" model	5 pcs
36" model	7 pcs
44" model	8 pcs

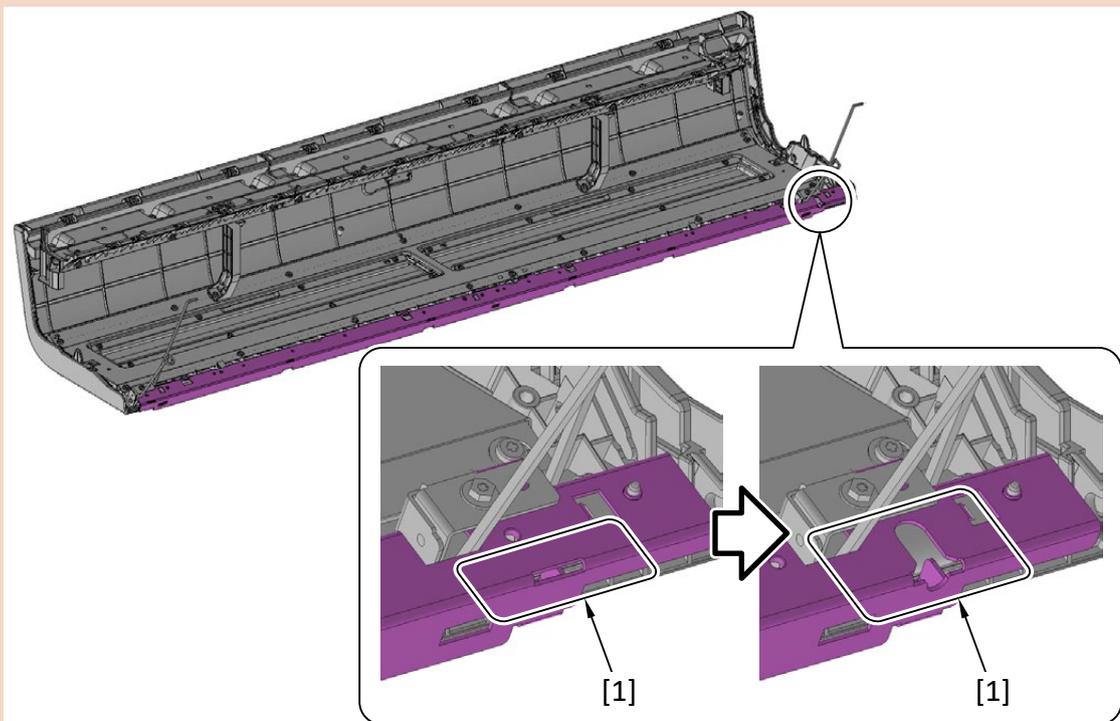


TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

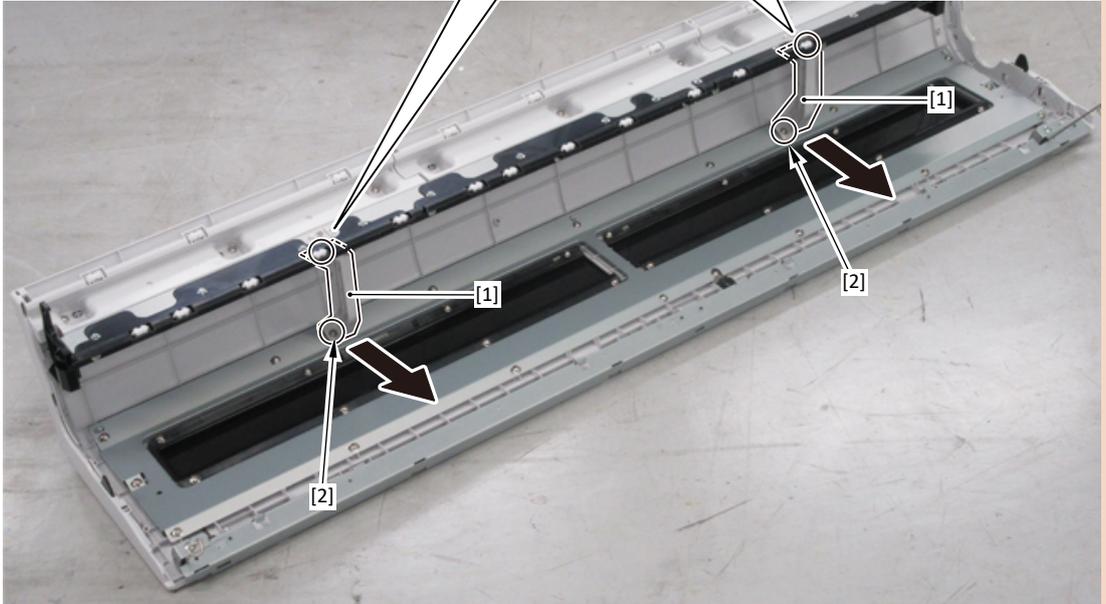
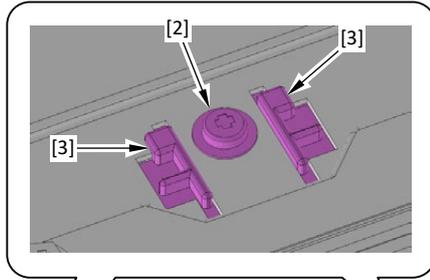
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



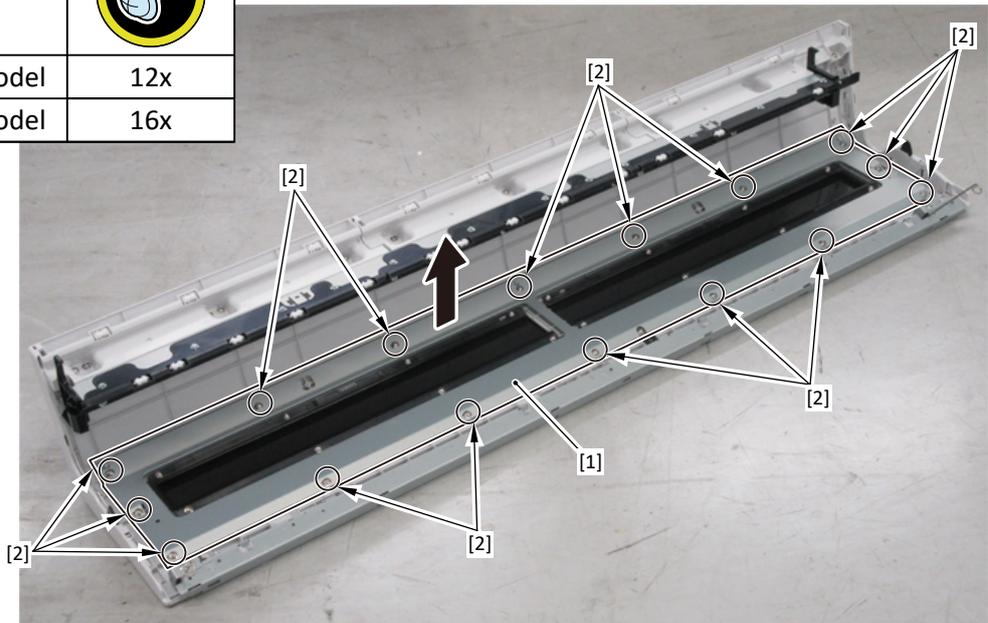
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



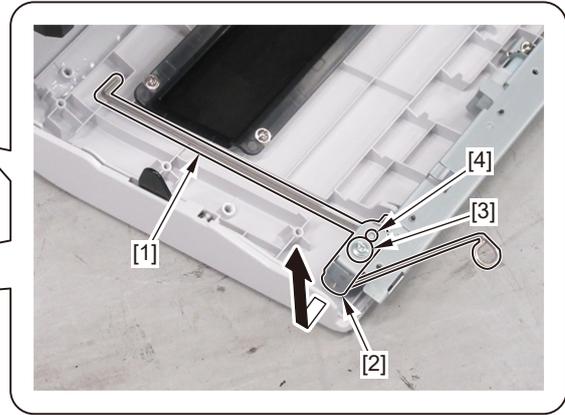
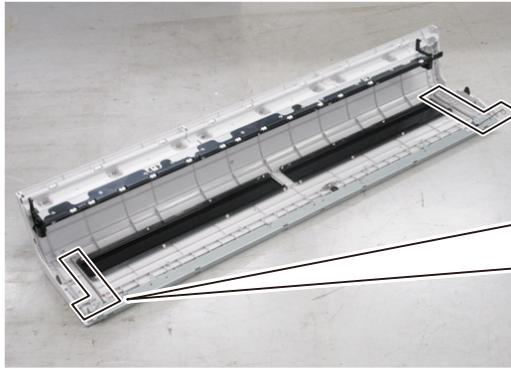
2. Remove [1] the plate.

	[2]
	
24" model	12x
44" model	16x



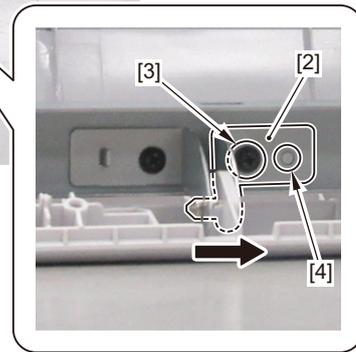
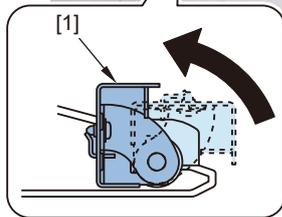
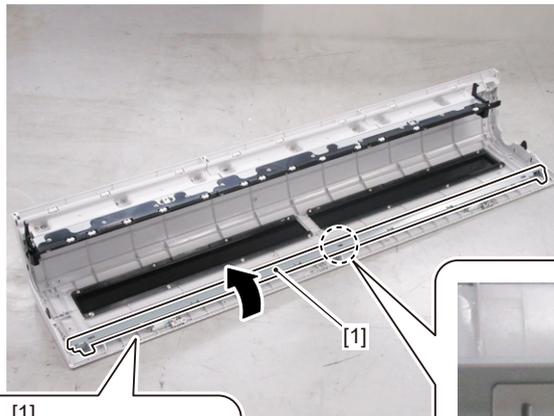
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



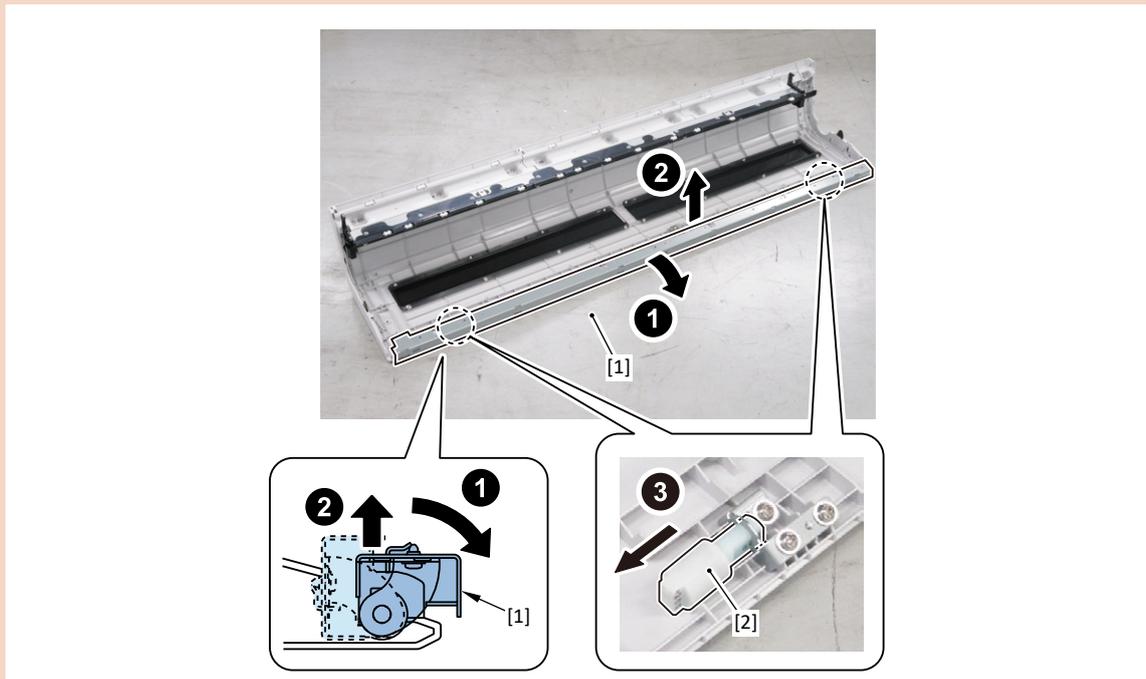
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x



5. Return [1] the plate and remove it.

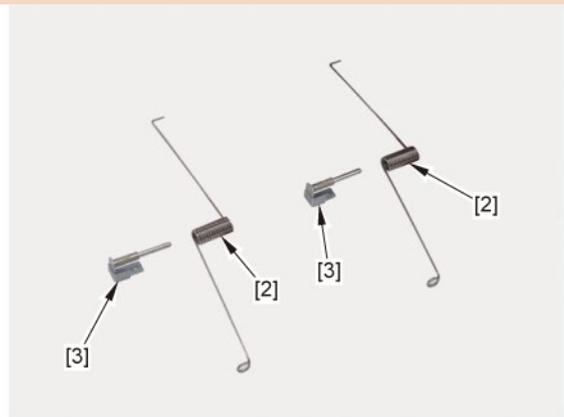
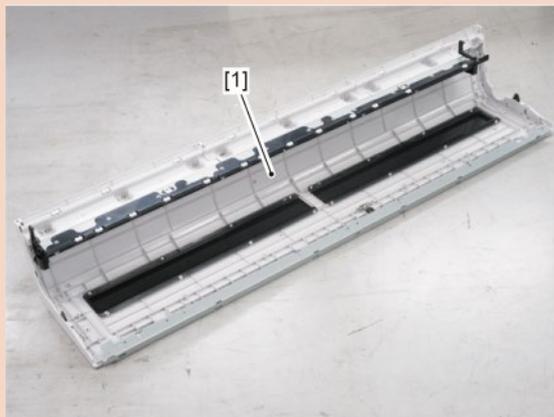
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.

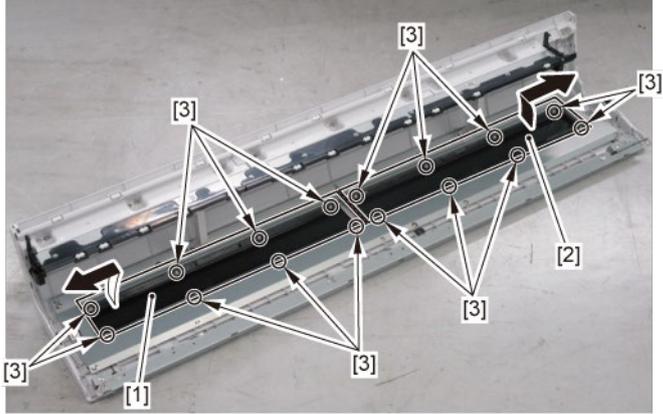


D-1 (TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410)

6. Remove [1] WINDOW and [2] WINDOW R.

[3]

8 pcs each

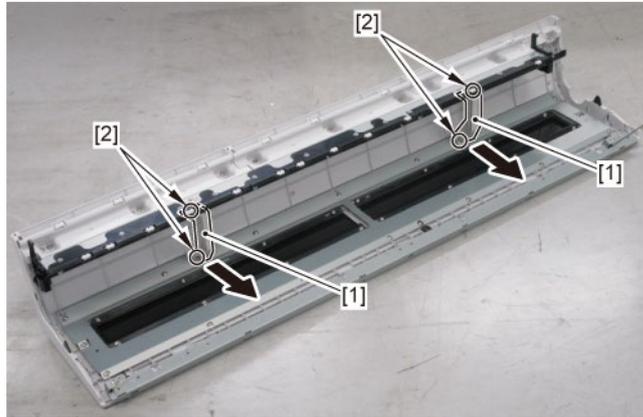


D-2

6. Remove [1] two handles.

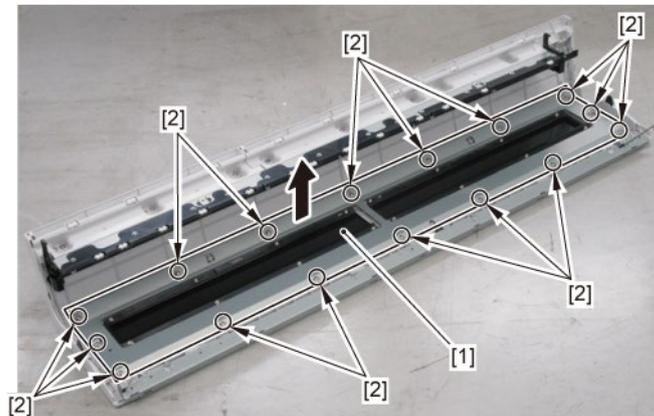
[2]

2 pcs each



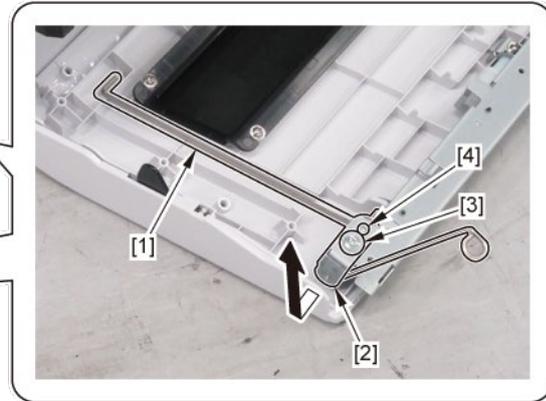
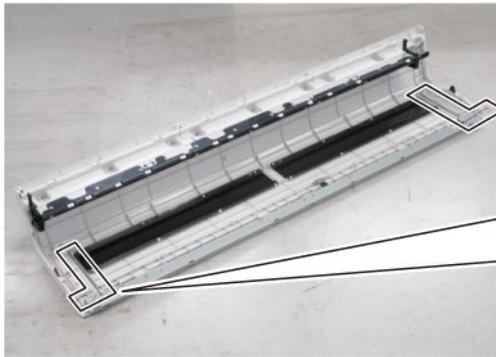
7. Remove [1] the plate.

	[2]
	
24" model	12 pcs
36" model	16 pcs
44" model	16 pcs



8. Remove [1] two SPRING, ACCESS COVER and [2] two HINGE ASS'Y, ACCESS COVER SP.

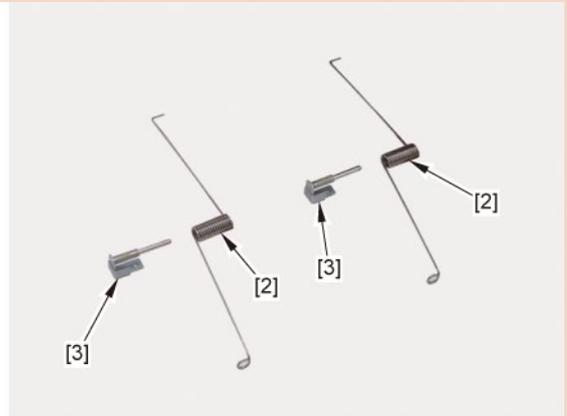
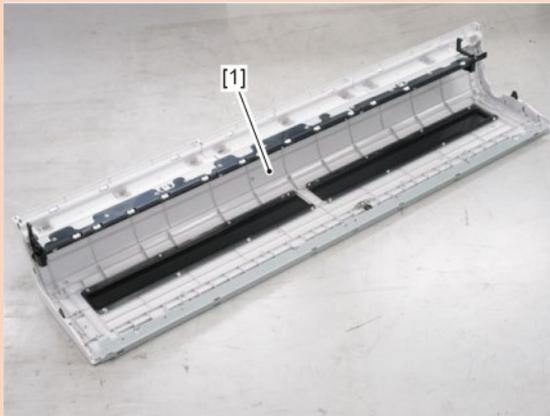
[3]	[4]
	
1 pc each	1 pc each



Notes when replacing ACCESS COVER UNIT:

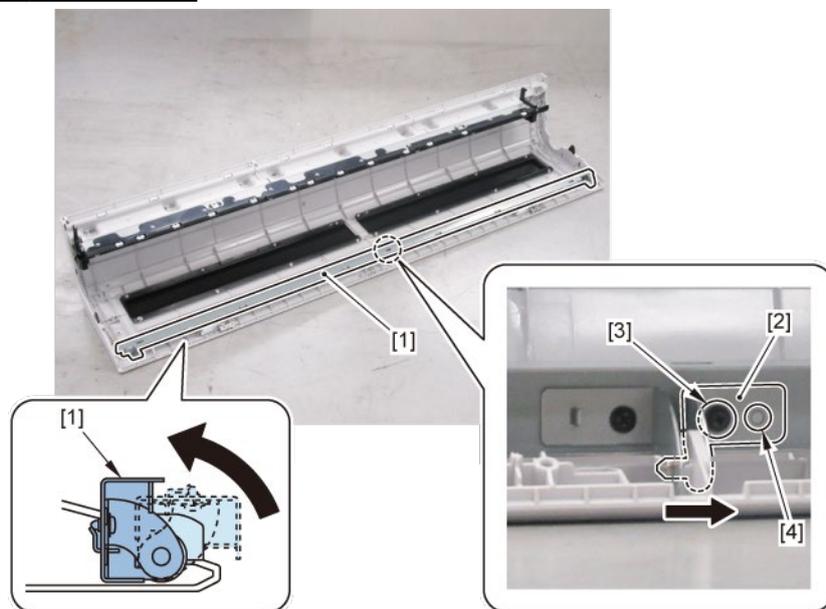
[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.



9. Turn [1] the plate as shown below and remove [2] the shaft.

[3]	[4]
	
BK	
1 pc	1 pc

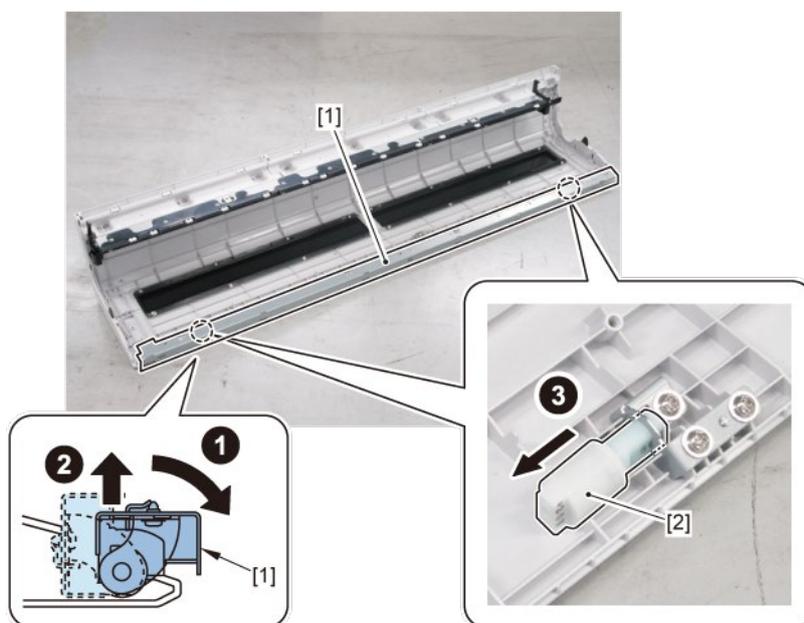


10. Return [1] the plate to the original position, then remove the plate.

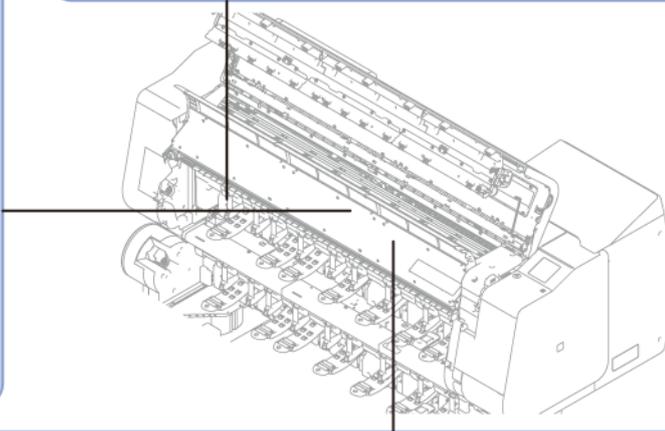
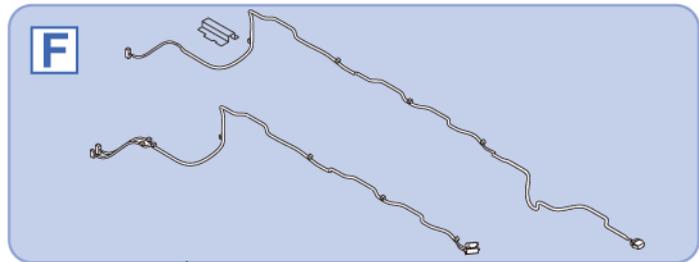
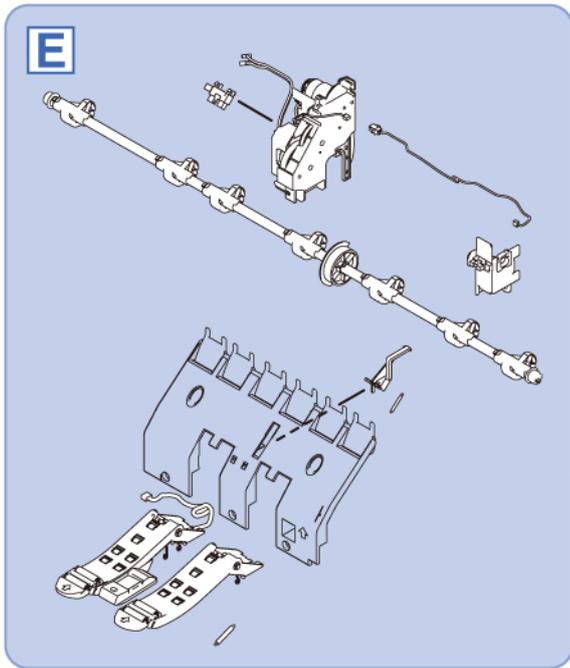
TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

11. Remove [2] ROTARY DAMPER.

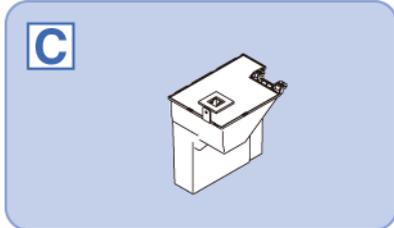
TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410



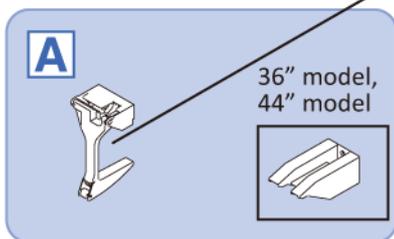
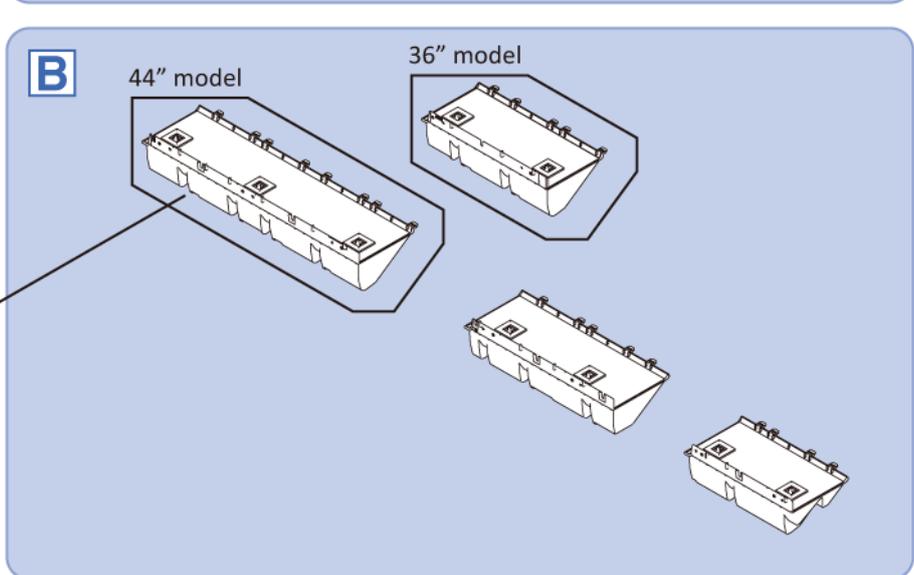
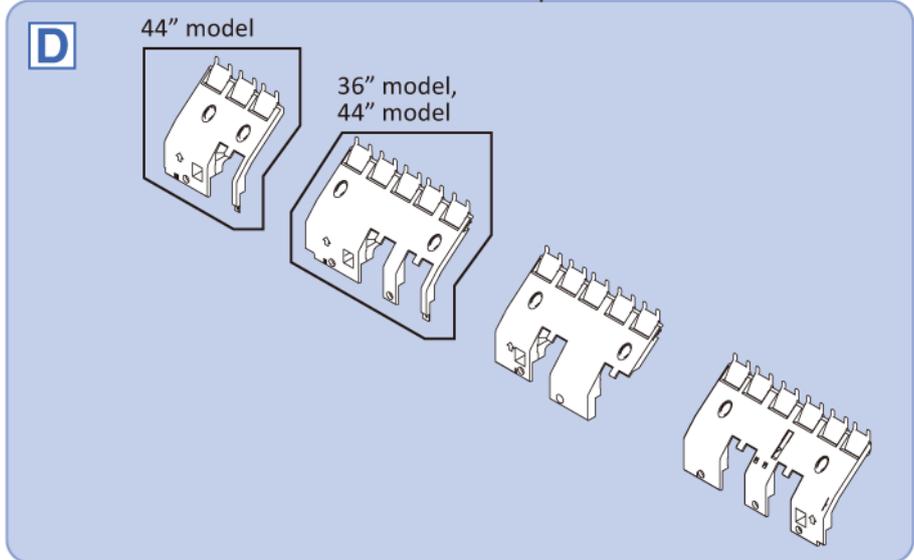
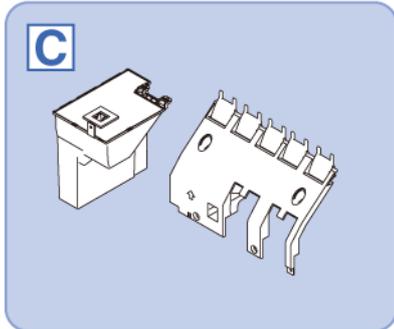
5. Front-1 (Nip Arm Unit, Waste Ink Absorber)

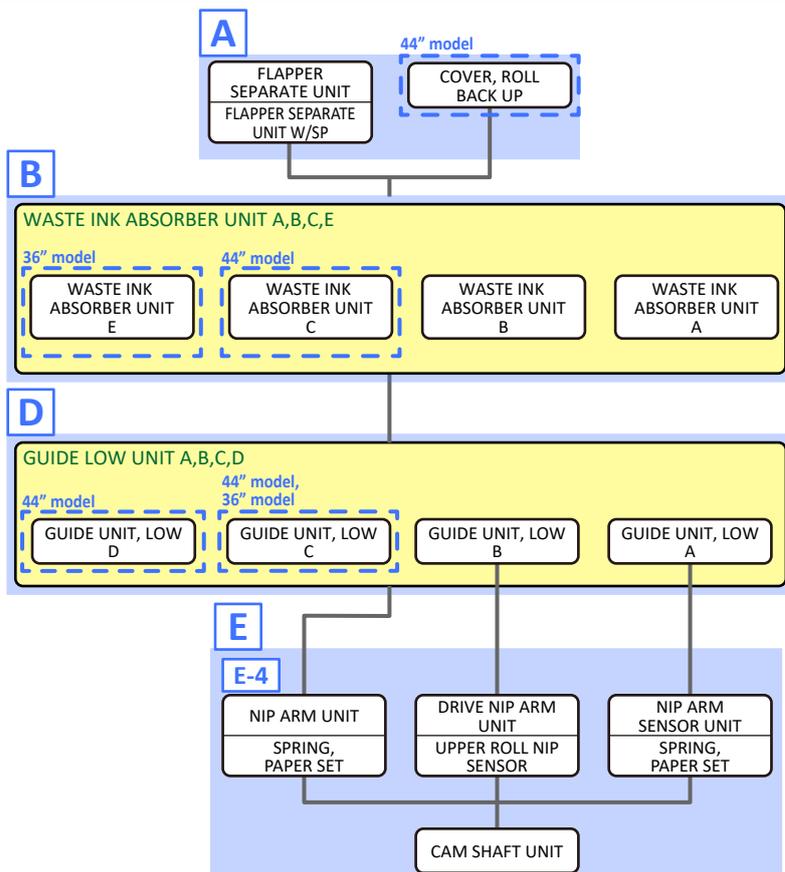
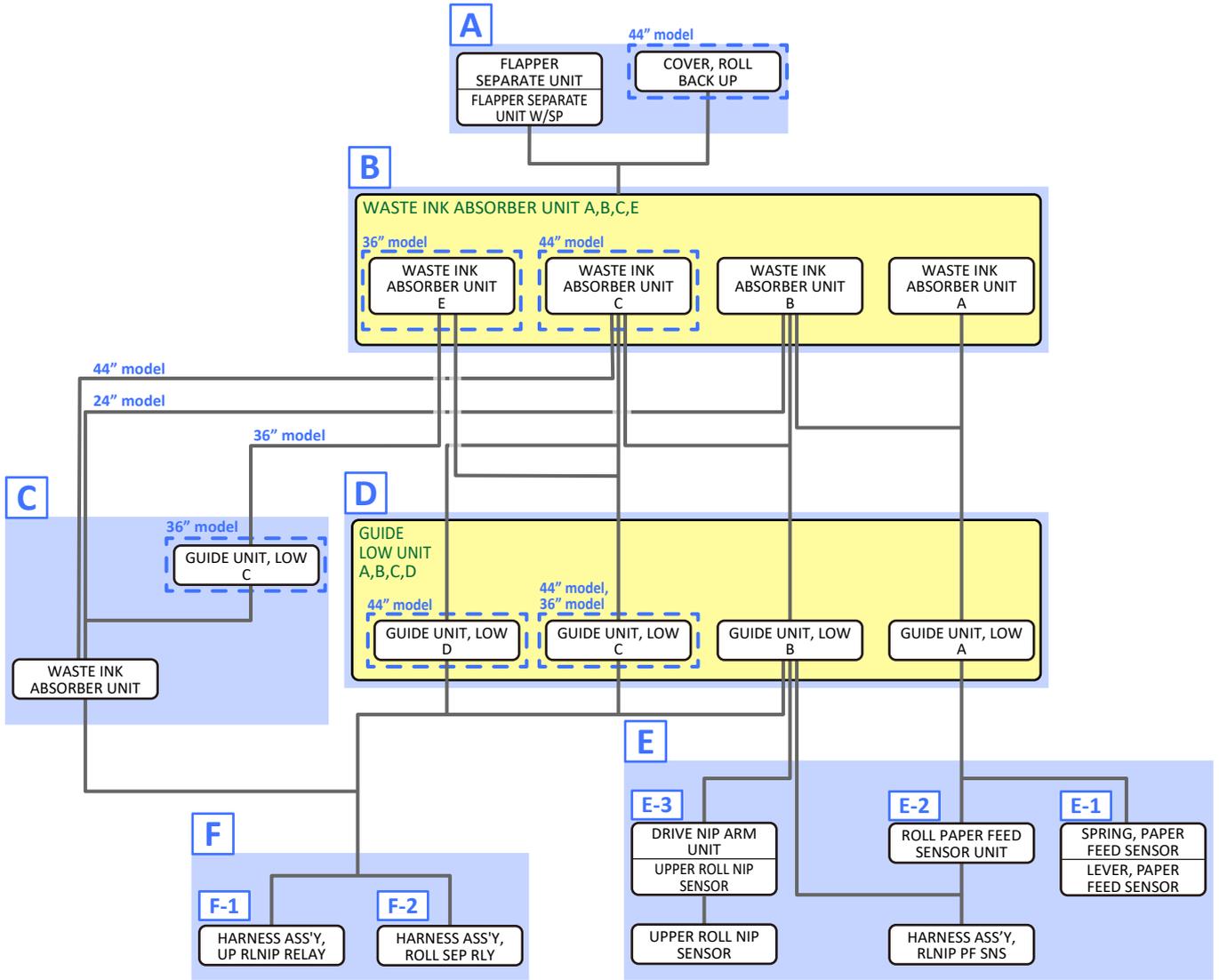


24" model, 44" model



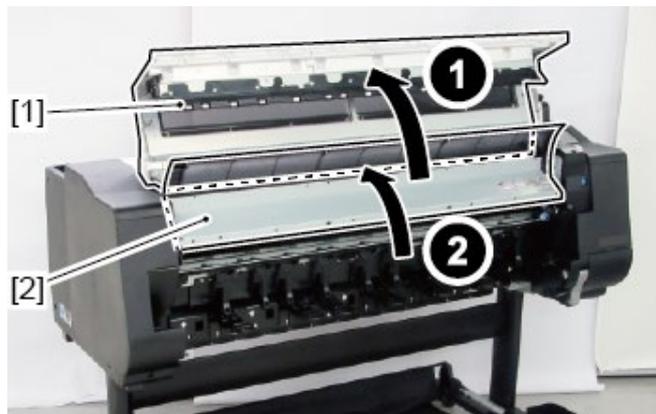
36" model





A

1. Open [1] the access cover.
2. Open [2] the roll cover.



3. Remove eight pieces of [1] FLAPPER SEPARATE UNIT (four pieces in 24" model, six pieces in 36" model) and [2] FLAPPER SEPARATE UNIT W/SP.

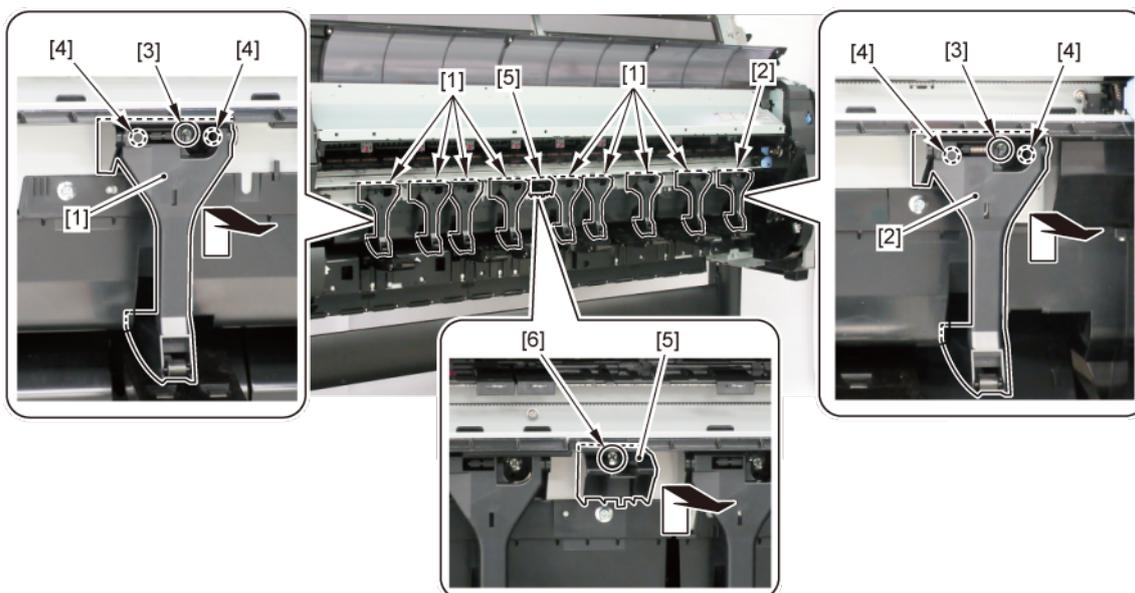
[3]	[4]
	
1 pc each	2 pcs each

(44" model only)

4. Remove [5] COVER, ROLL BACK UP.

[6]

1 pc



B

1. Remove all the parts of Group A.
2. Remove [1] WASTE INK ABSORBER UNIT A.

[2]

2 pcs

3. Remove [3] WASTE INK ABSORBER UNIT B.

[4]

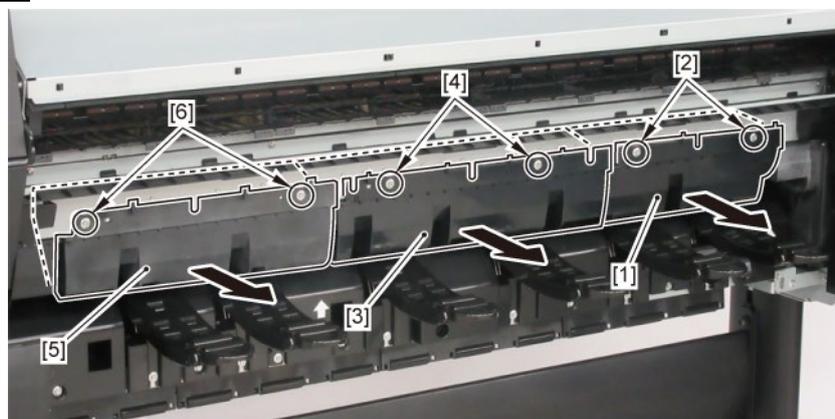
2 pcs

(36" model only)

4. Remove [5] WASTE INK ABSORBER UNIT E.

[6]

2 pcs

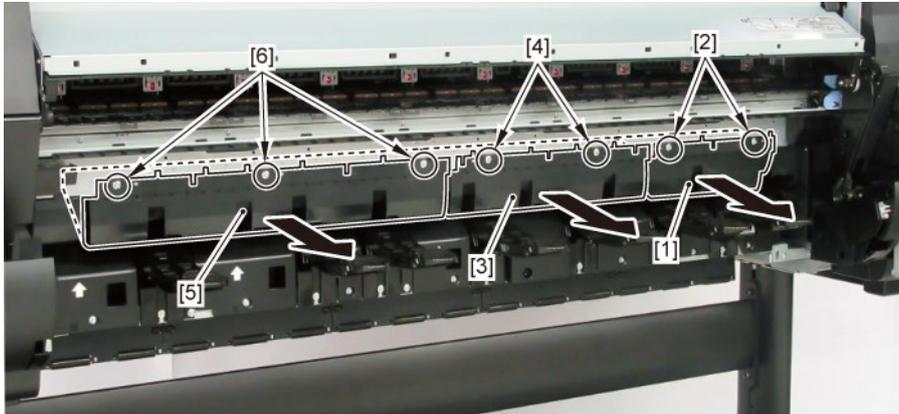


(44" model only)

4. Remove [5] WASTE INK ABSORBER UNIT C.

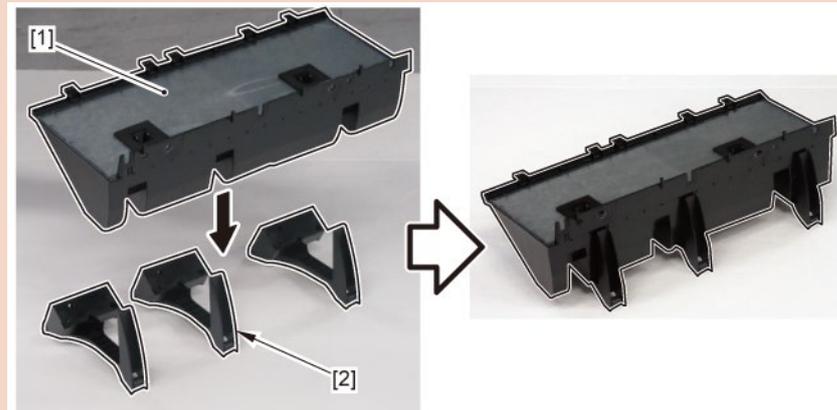
[6]

3 pcs



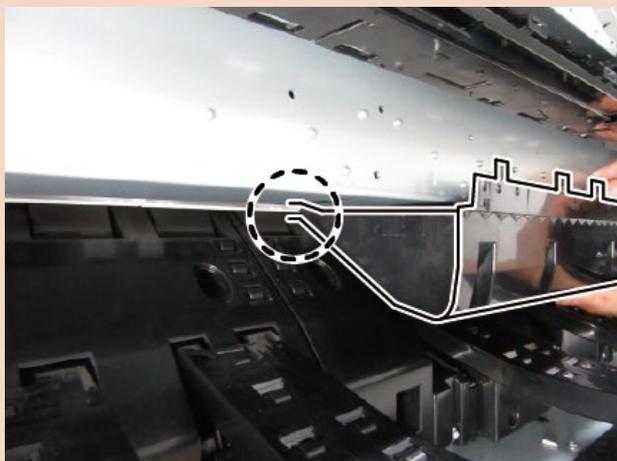
Points of disassembly:

- To prevent ink leakage from the absorber, place the removed [1] WASTE INK ABSORBER with [2] FLAPPER, SEPARATE fitted in place as shown below.



Notes when attaching WASTE INK ABSORBER UNIT:

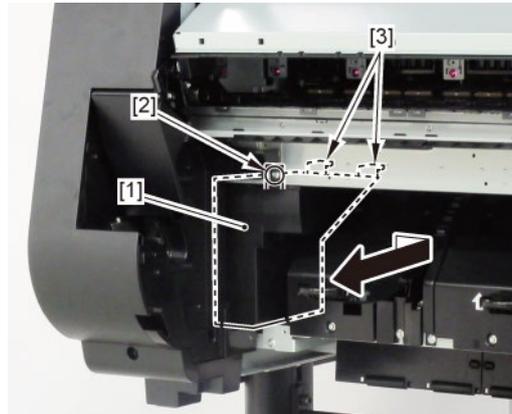
- Make sure that the unit firmly catches the white edge.



C (24" model, 44" model)

1. Remove all the parts of Groups A and B.
2. Remove [1] WASTE INK ABSORBER UNIT.

[2]	[3]
	
1 pc	2 pcs

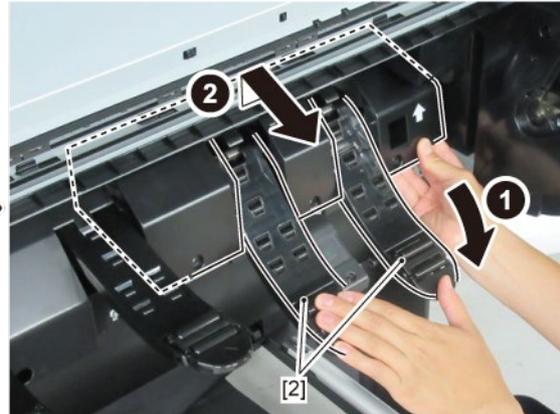
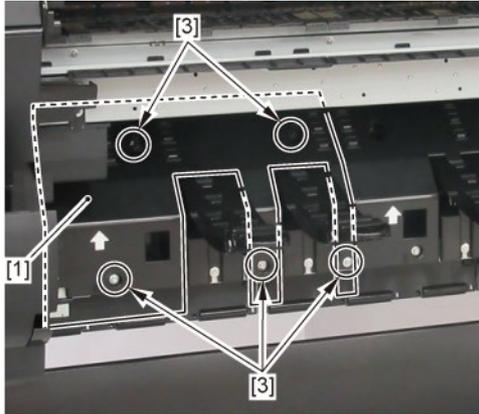


C (36" model)

1. Remove all the parts of Groups A and B.
2. Push down [2] NIP ARM UNIT and remove [1] GUIDE UNIT, LOW C.

[3]

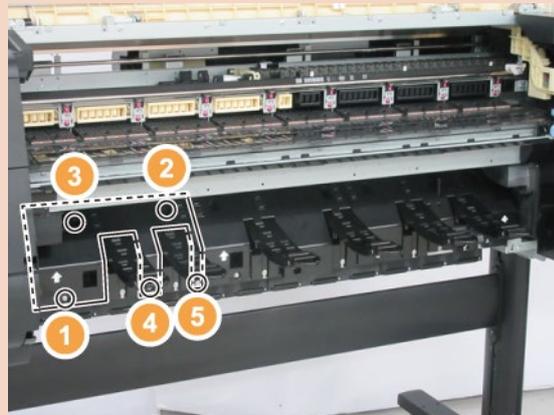
5 pcs



Notes when assembling the unit:

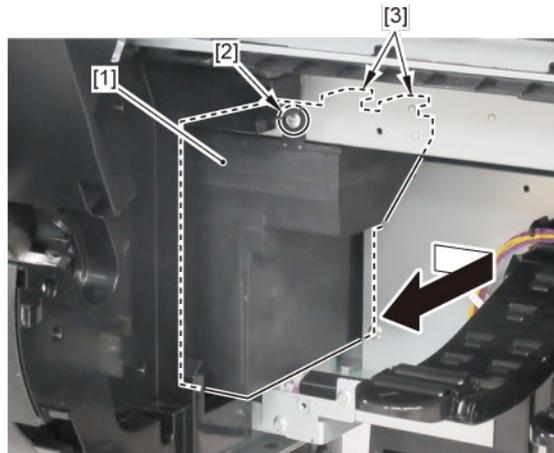
Tighten the screws in the order of numbers shown below.

Point



3. Remove [1] WASTE INK ABSORBER UNIT.

[2]	[3]
	
1 pc	2 pcs



D

1. Remove all the parts of Groups A and B.
2. Push down [2] NIP ARM UNIT and remove [1] GUIDE UNIT, LOW A.
3. Push down [2] NIP ARM UNIT and remove [4] GUIDE UNIT, LOW B.

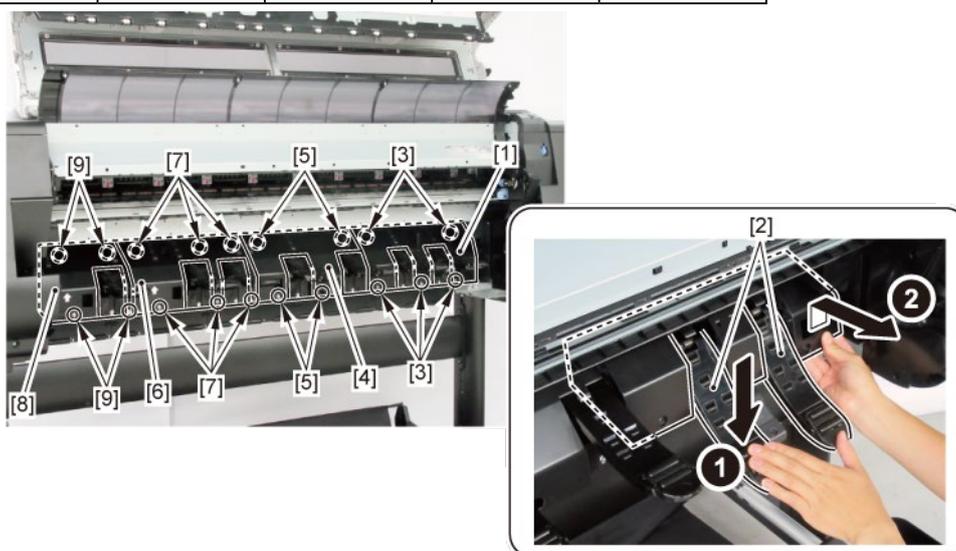
(36" model, 44" model only)

4. Push down [2] NIP ARM UNIT and remove [6] GUIDE UNIT, LOW C.

(44" model only)

5. Push down [2] NIP ARM UNIT and remove [8] GUIDE UNIT, LOW D.

	[3]	[5]	[7]	[9]
				
24" model	5 pcs	4 pcs	-	-
36" model	5 pcs	4 pcs	5 pcs	-
44" model	5 pcs	4 pcs	6 pcs	4 pcs



Points of disassembly:

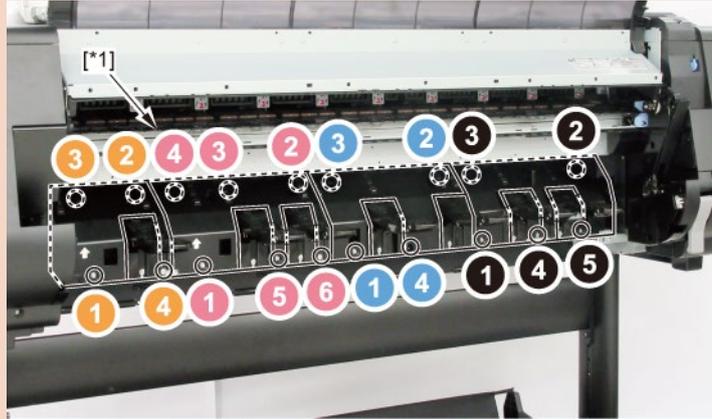
- When removing 1 to 8 individually, it is necessary to remove GUIDE UNIT, LOW A to E indicated as "remove" in the list.



	GUIDE UNIT, LOW A	GUIDE UNIT, LOW B	GUIDE UNIT, LOW C	GUIDE UNIT, LOW D
1.SPRING, PAPER FEED SENSOR	remove	-	-	-
2.LEVER, PAPER FEED SENSOR	remove	-	-	-
3.ROLL PAPER FEED SENSOR UNIT	remove	-	-	-
4.HARNES ASS'Y, RLNIP PF SNS	remove	remove	-	-
5.DRIVE NIP ARM UNIT	-	remove	-	-
6.UPPER ROLL NIP SENSOR	-	remove	-	-
7.HARNES ASS'Y, UP RLNIP RELAY	-	remove	remove	remove
8.CAM SHAFT UNIT	remove	remove	remove	remove

Notes when assembling the unit:

Tighten the screws in the order of numbers shown below.



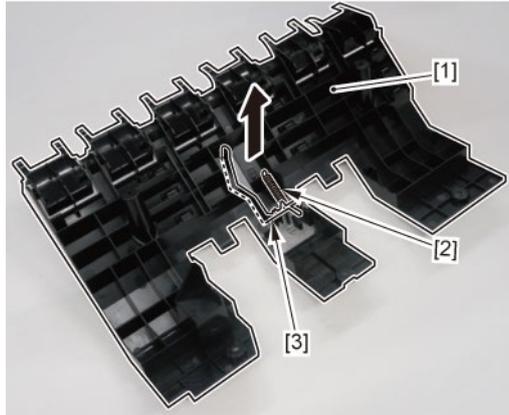
[*1] 44" model only.

E

1. Remove all the parts of Groups A, B, and D.

E-1

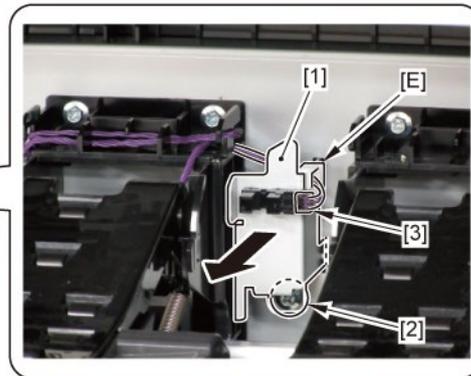
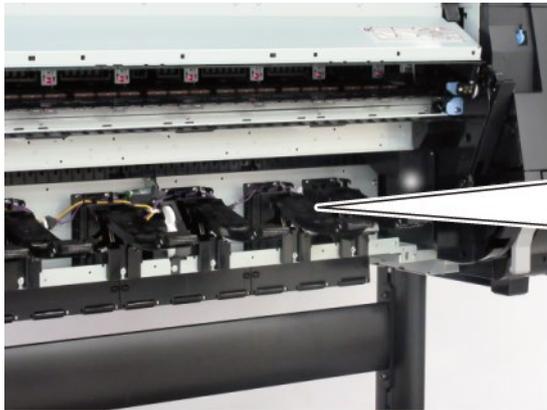
2. From [1] GUIDE UNIT, LOW A, remove [2] SPRING, PAPER FEED SENSOR and [3] LEVER, PAPER FEED SENSOR.



E-2

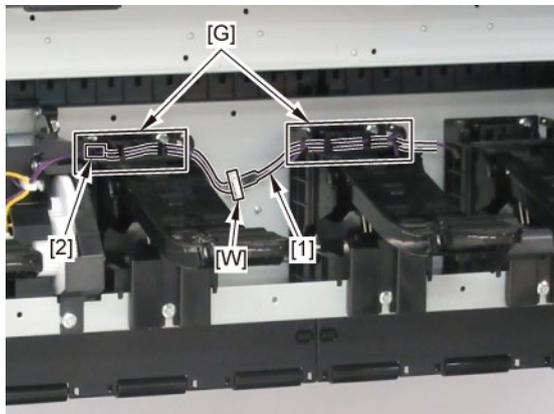
2. Remove [1] ROLL PAPER FEED SENSOR UNIT.

[2]	[3]	[E]
		
1 pc	1 pc	1 pc



3. Disconnect [1] HARNESS ASS'Y, RLNIP PF SNS.

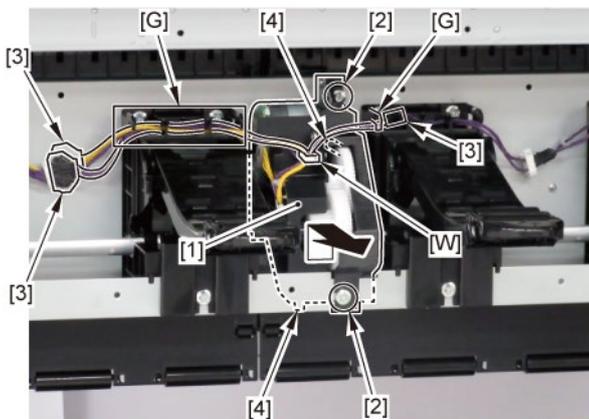
[2]	[W]	[G]
		
1 pc	1 pc	2 pcs



E-3

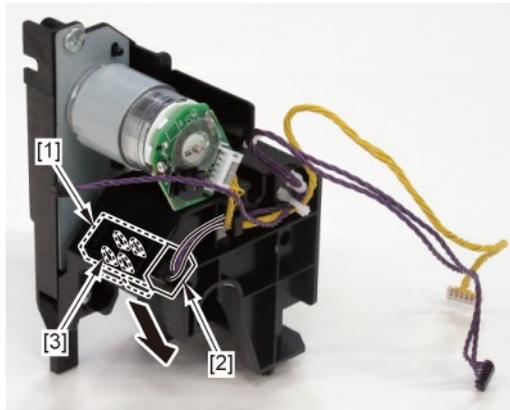
2. Remove [1] DRIVE NIP ARM UNIT.

[2]	[3]	[4]	[W]	[G]
				
2 pcs	3 pcs	2 pcs	1 pc	2 pcs



3. Remove [1] UPPER ROLL NIP SENSOR.

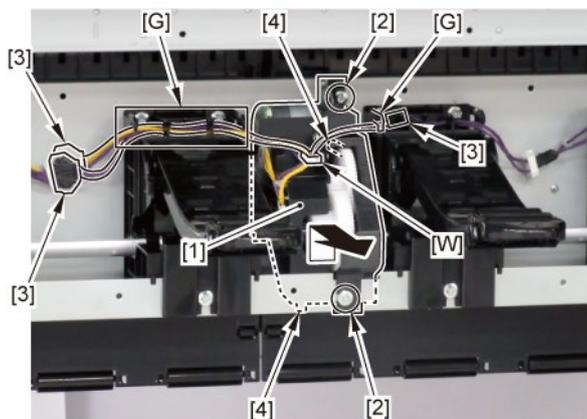
[2]	[3]
	
1 pc	4 pcs



E-4

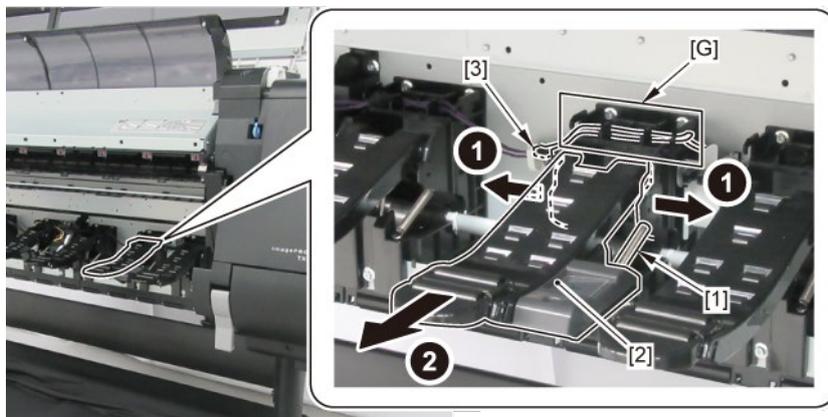
2. Remove [1] DRIVE NIP ARM UNIT.

[2]	[3]	[4]	[W]	[G]
				
2 pcs	3 pcs	2 pcs	1 pc	2 pcs



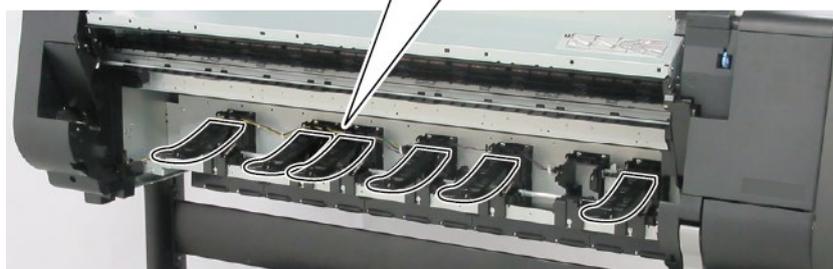
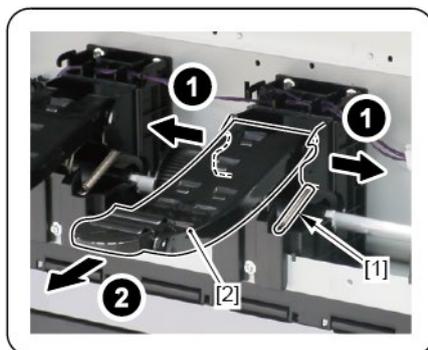
3. Remove [1] SPRING, PAPER SET and [2] NIP ARM SENSOR UNIT.

[3]	[G]
	
1 pc	1 pc

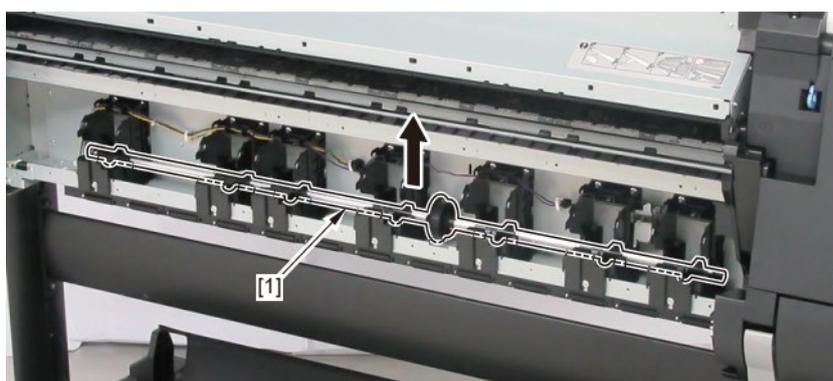


4. Remove six pieces each of [1] SPRING, PAPER SET and [2] NIP ARM UNIT.

(three pieces each in 24" model, five pieces each in 36" model).



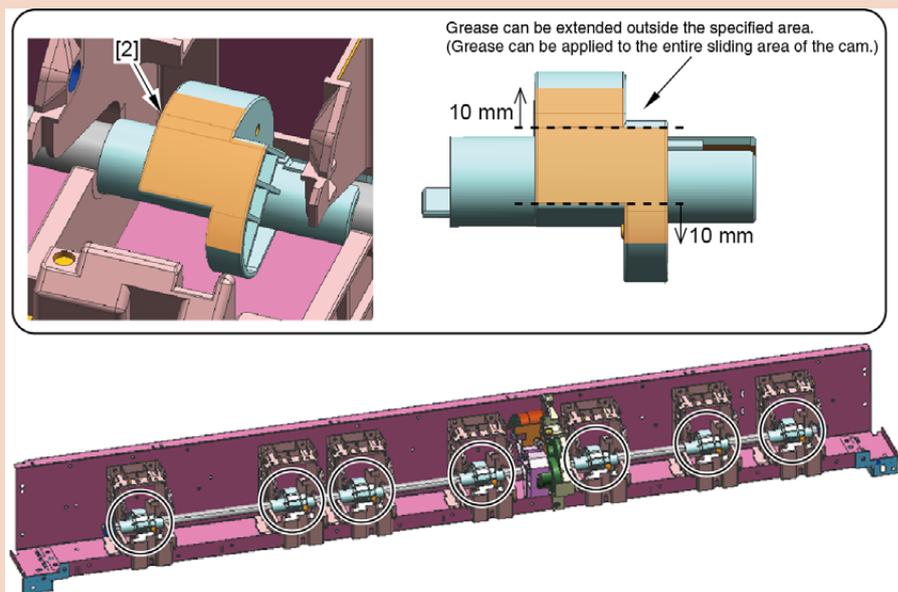
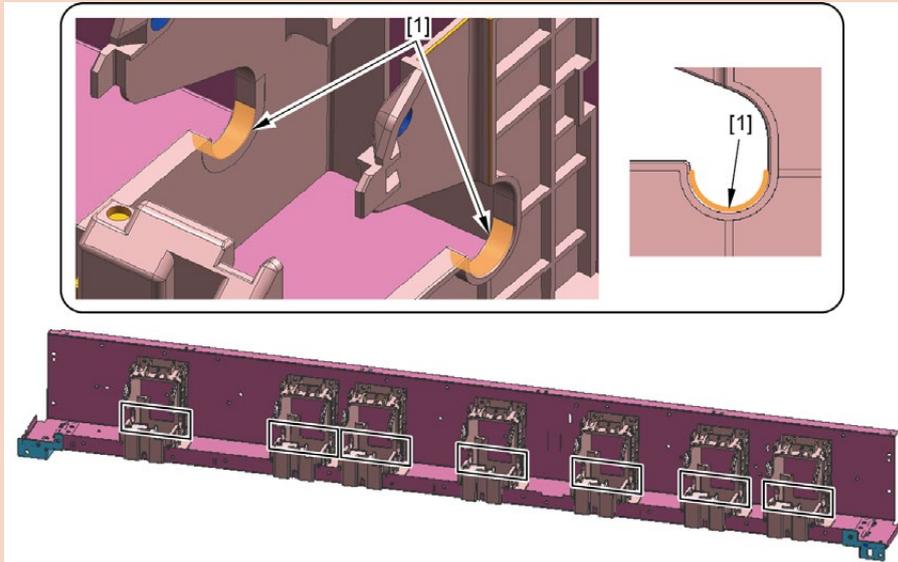
5. Remove [1] CAM SHAFT UNIT.



Notes when the CAM SHAFT UNIT is replaced:

Apply grease to the portions specified below.

- [1]: FLOIL G-31KB, 9 to 18 mg
- [2]: FLOIL G-31KB, 27 to 54 mg

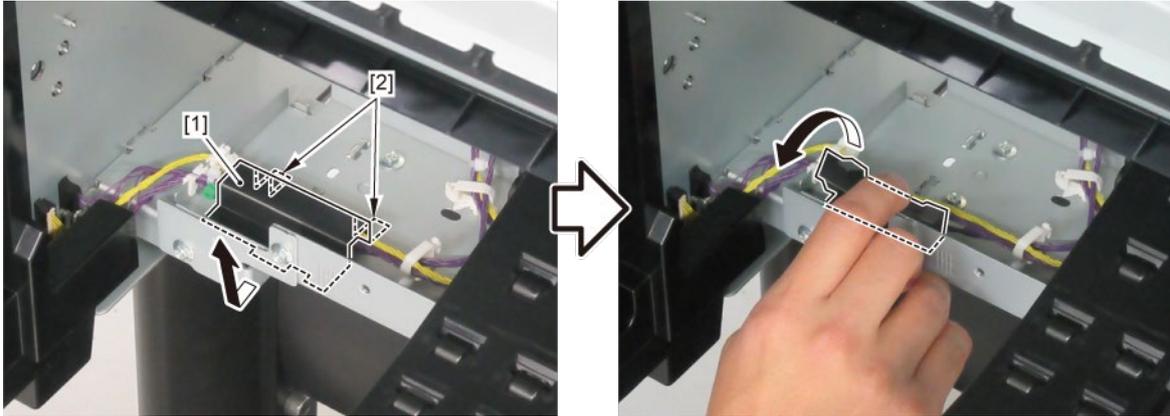


F

1. Remove all the parts of Groups A, B, C, and D.
2. Remove [1] the cable cover.

[2]

2 pcs

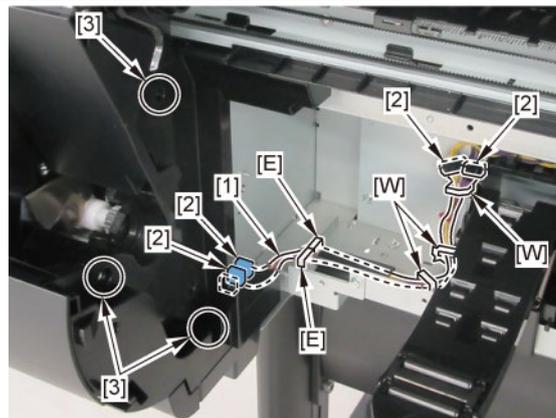


F-1

3. Disconnect [1] HARNESS ASS'Y, UP RLNIP RELAY.

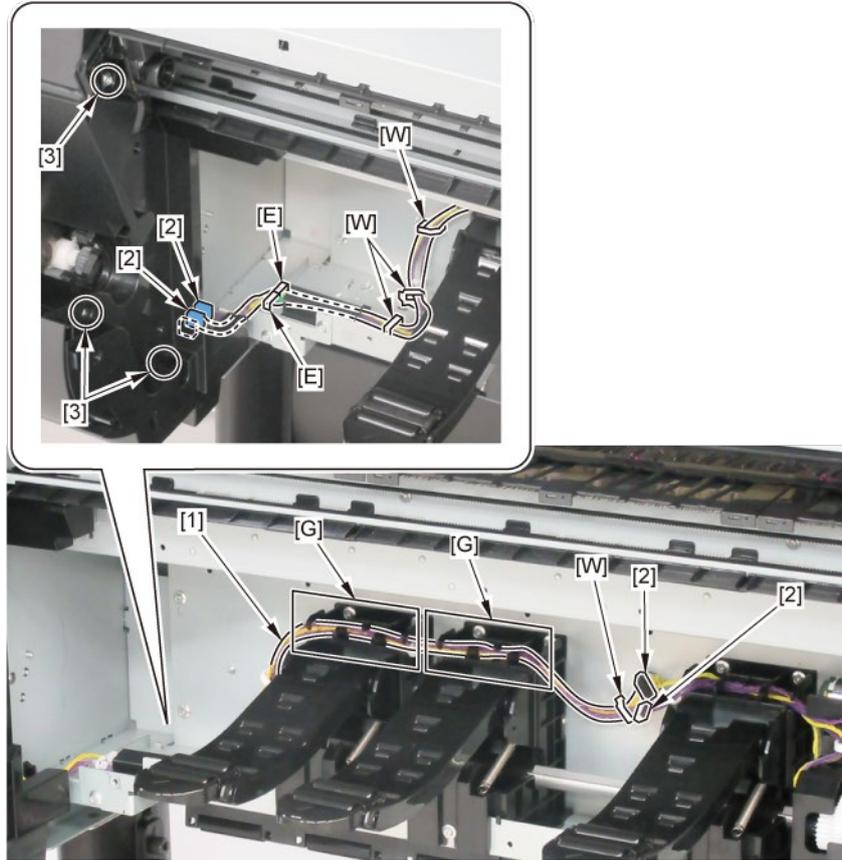
(24" model)

[2]	[3]	[W]	[E]
			
4 pcs	3 pcs	3 pcs	2 pcs



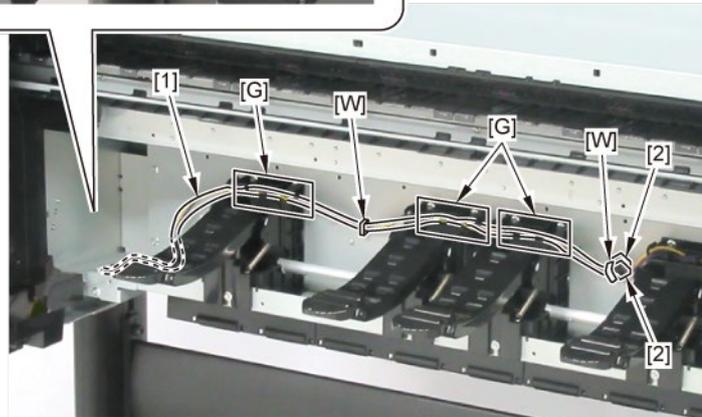
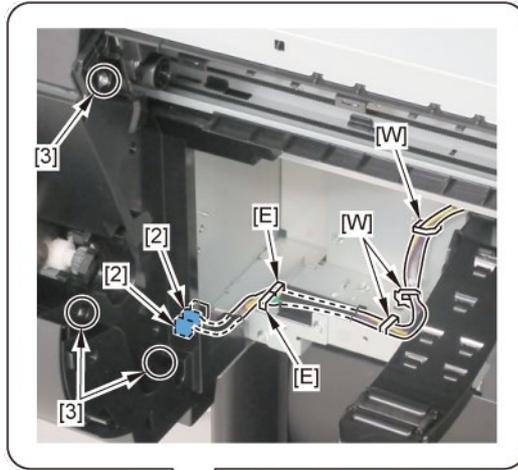
(36" model)

[2]	[3]	[W]	[E]	[G]
				
4 pcs	3 pcs	4 pcs	2 pcs	2 pcs



(44" model)

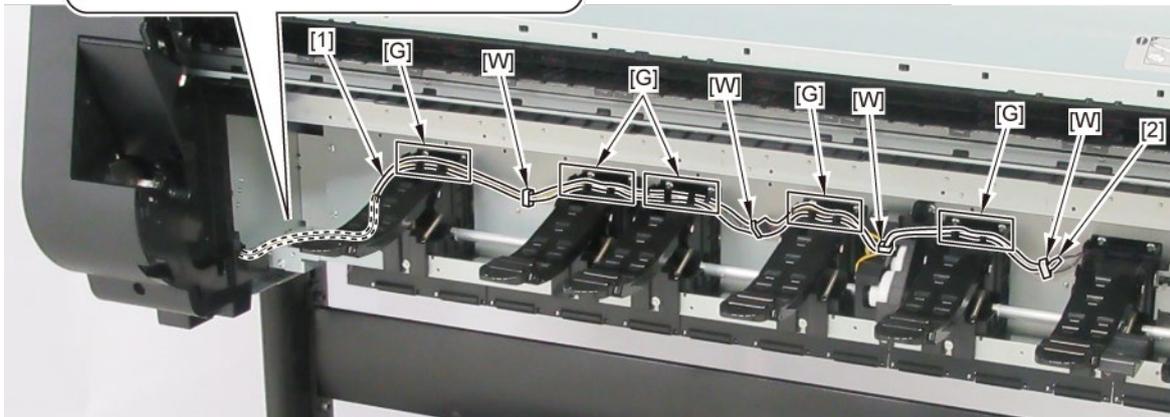
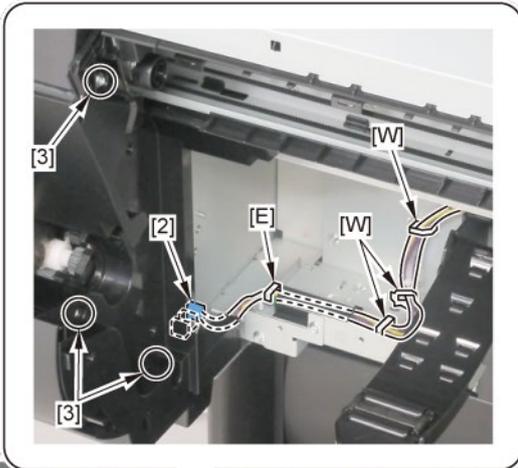
[2]	[3]	[W]	[E]	[G]
				
4 pcs	3 pcs	5 pcs	2 pcs	3 pcs



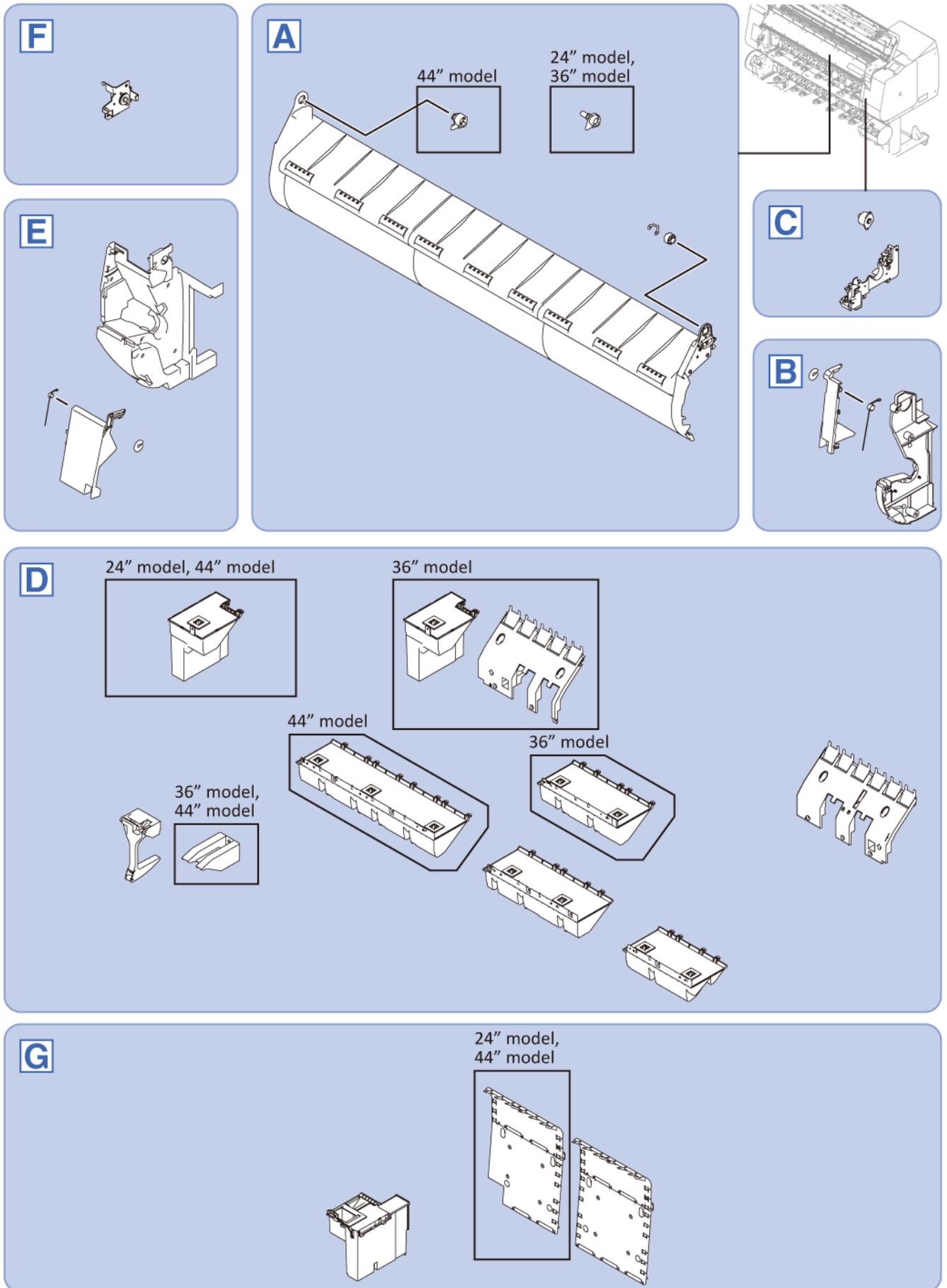
F-2

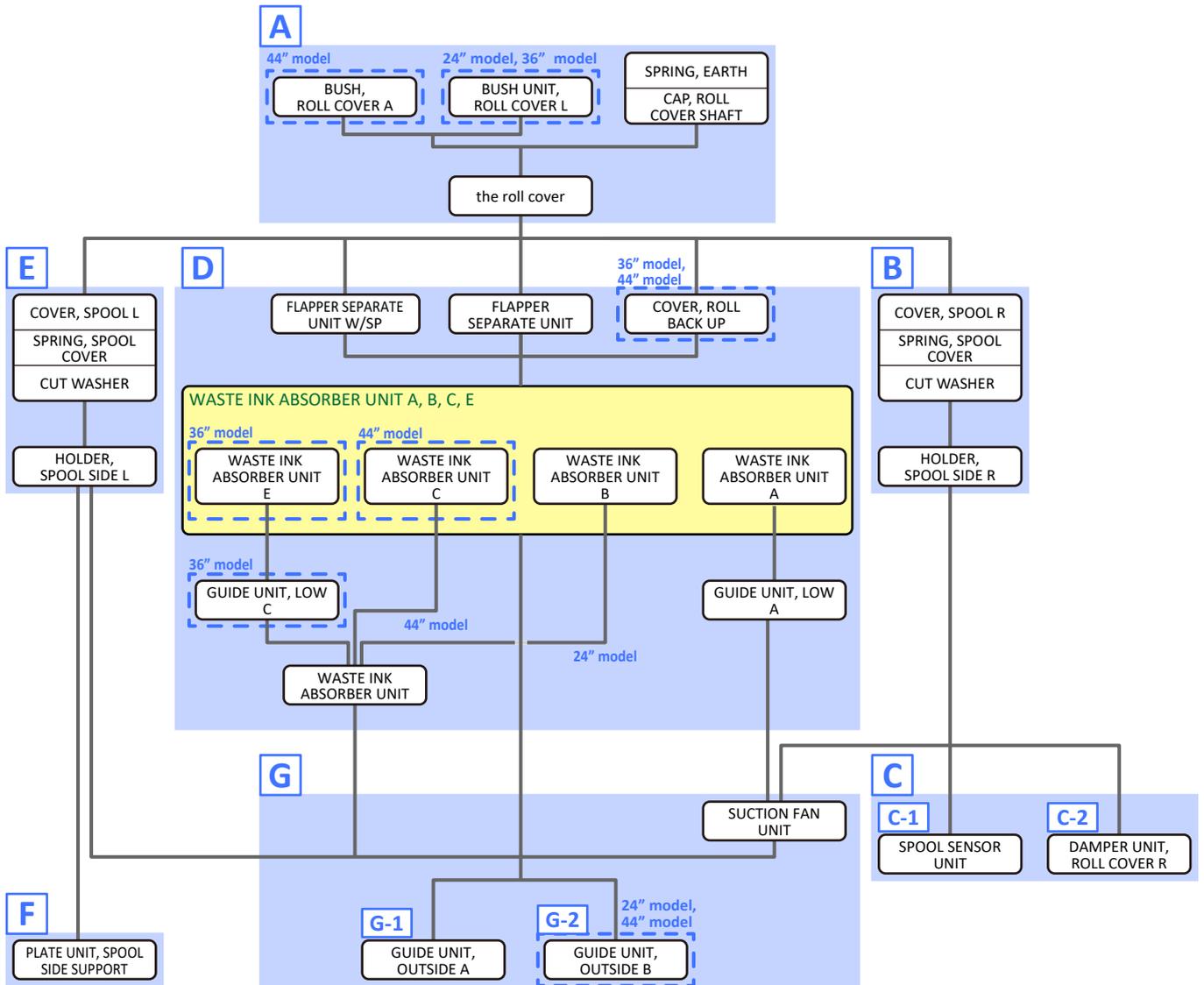
3. Disconnect [1] HARNESS ASS'Y, ROLL SEP RLY.

	[2]	[3]	[W]	[E]	[G]
24" model	2 pcs	3 pcs	5 pcs	1 pc	2 pcs
36" model	2 pcs	3 pcs	5 pcs	1 pc	4 pcs
44" model	2 pcs	3 pcs </td <td>7 pcs</td> <td>1 pc</td> <td>5 pcs</td>	7 pcs	1 pc	5 pcs



6. Front-2 (Suction Fan Unit, Spool Sensor Unit)





A

1. Open [1] the access cover.
2. Remove [1] SPRING, EARTH and [2] CAP, ROLL COVER SHAFT.

[3]

2 pcs

3. Remove [4] BUSH, ROLL COVER A.
(the BUSH UNIT, ROLL COVER L in 24" model and 36" model)

[5]

1 pc

4. Remove [6] the roll cover.

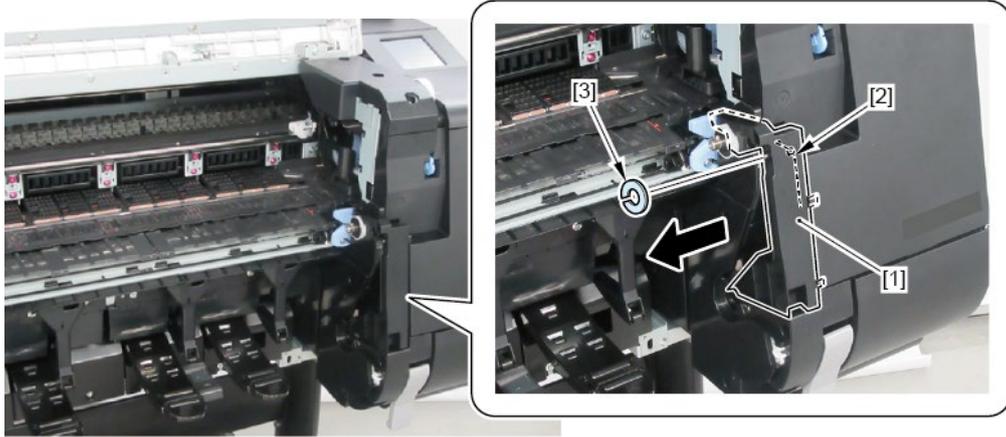


B

1. Remove all the parts of Group A.
2. Remove [1] COVER, SPOOL R and [2] SPRING, SPOOL COVER.

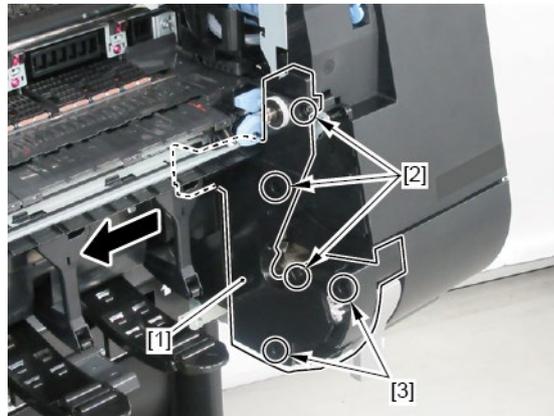
[3]

1 pc



3. Remove [1] HOLDER, SPOOL SIDE R.

[2]	[3]
	
3 pcs	2 pcs



Notes when assembling the unit:

- When tightening the screws, DO NOT push the HOLDER, SPOOL SIDE R against the printer in the black-arrowed direction. Just place it in the proper position and fasten the screws.



- After the unit is fixed, confirm that the spool slides in place to the end smoothly.

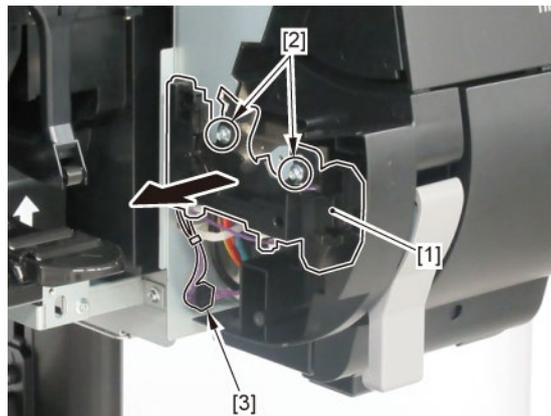
C

1. Remove all the parts of Groups A and B.

C-1

2. Remove [1] SPOOL SENSOR UNIT.

[2]	[3]
	
2 pcs	1 pc

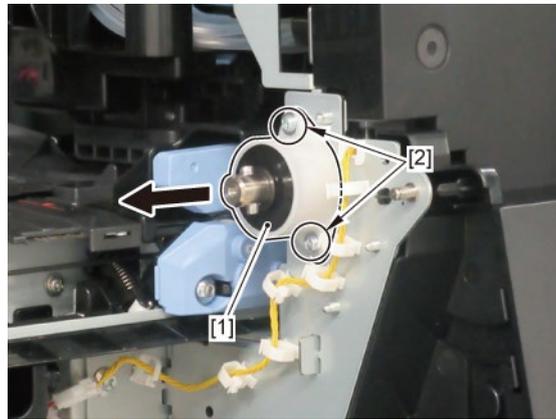


C-2

2. Remove [1] DAMPER UNIT, ROLL COVER R.

[2]

2 pcs



D

1. Remove all the parts of Group A.
2. Remove eight pieces of [1] FLAPPER SEPARATE UNIT (four pieces in 24" model, six pieces in 36" model) and [2] FLAPPER SEPARATE UNIT W/SP.

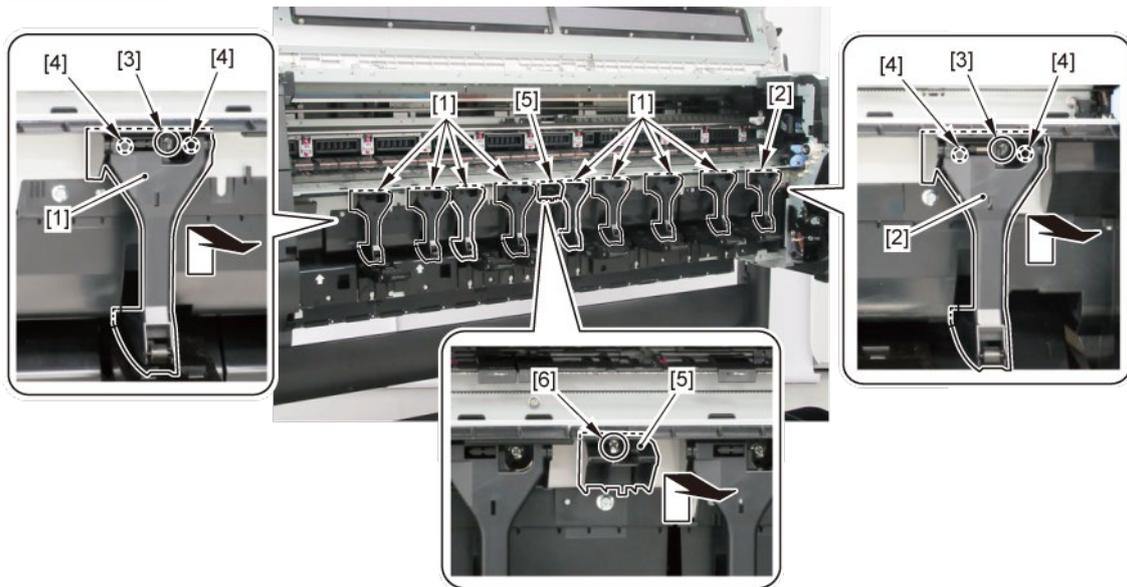
[3]	[4]
	
1 pc each	2 pcs each

(44" model only)

3. Remove [5] COVER, ROLL BACK UP.

[6]

1 pc



4. Remove [1] WASTE INK ABSORBER UNIT A.

[2]

2 pcs

5. Remove [3] WASTE INK ABSORBER UNIT B.

[4]

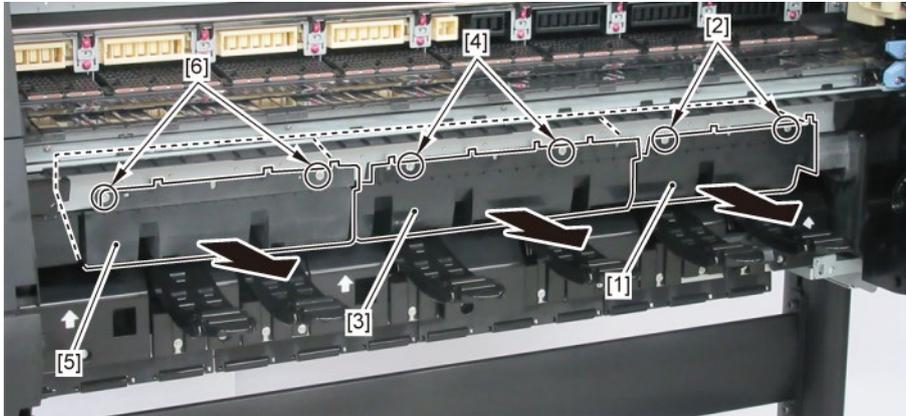
2 pcs

(36" model only)

6. Remove [5] WASTE INK ABSORBER UNIT E.

[6]

2 pcs

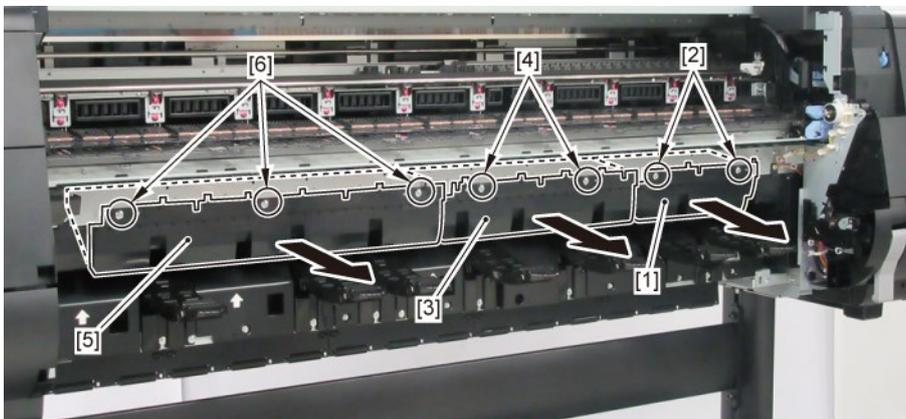


(44" model only)

7. Remove [5] WASTE INK ABSORBER UNIT C.

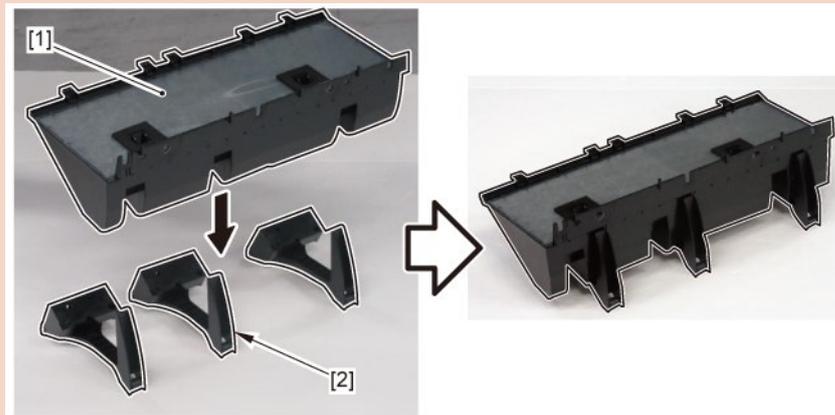
[6]

3 pcs



Points of disassembly:

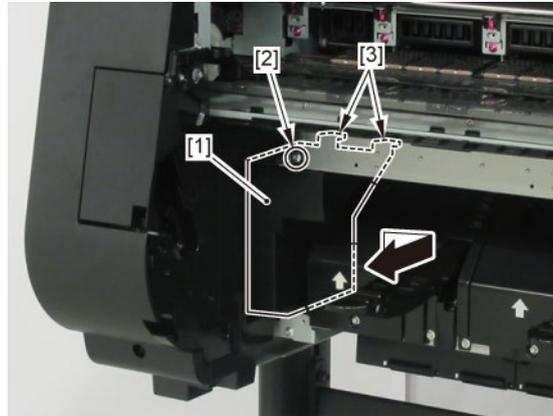
To prevent ink leakage from the absorber, place the removed [1] WASTE INK ABSORBER with [2] FLAPPER, SEPARATE fitted in place as shown below.



(24" model, 44" model)

8. Remove [1] WASTE INK ABSORBER UNIT.

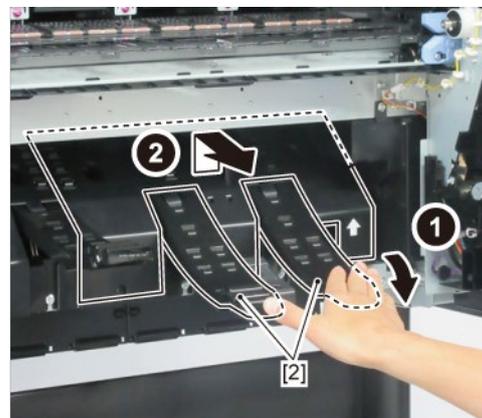
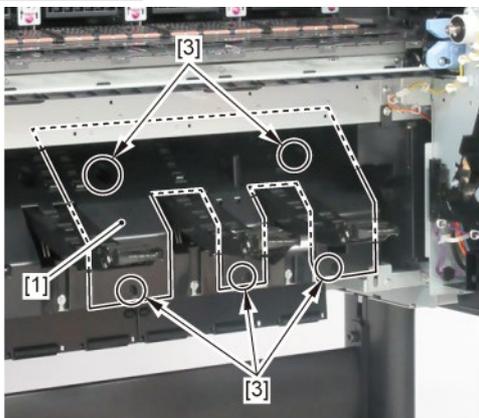
[2]	[3]
	
1 pc	2 pcs



9. Push down [2] NIP ARM UNIT and remove [1] GUIDE UNIT, LOW A.

[3]

5 pcs

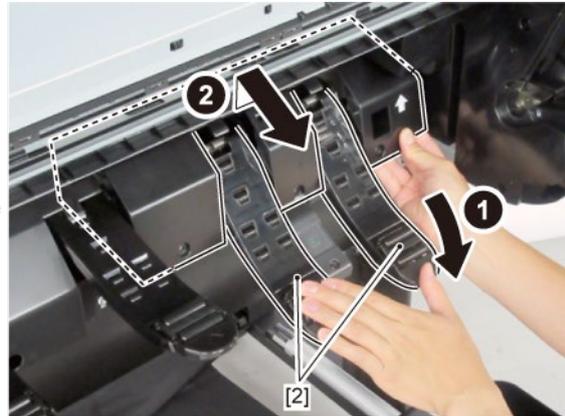
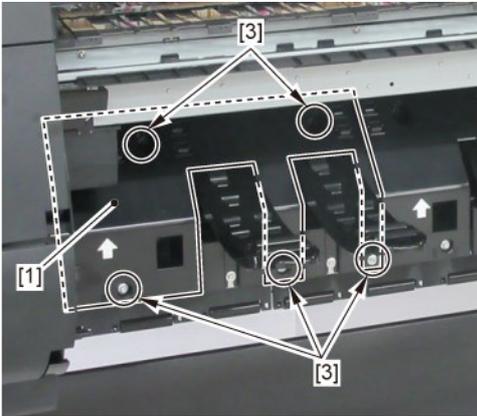


(36" model)

7. Push down [2] NIP ARM UNIT and remove [1] GUIDE UNIT, LOW C.

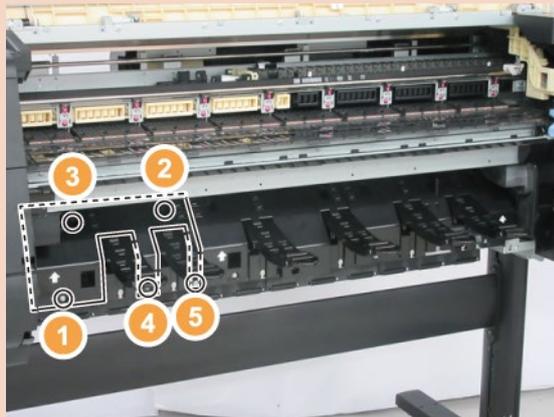
[3]

5 pcs



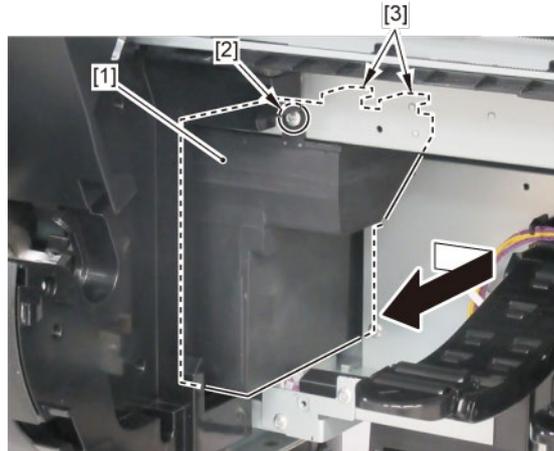
Notes when assembling the unit:

Tighten the screws in the order of numbers shown below.



8. Remove [1] WASTE INK ABSORBER UNIT.

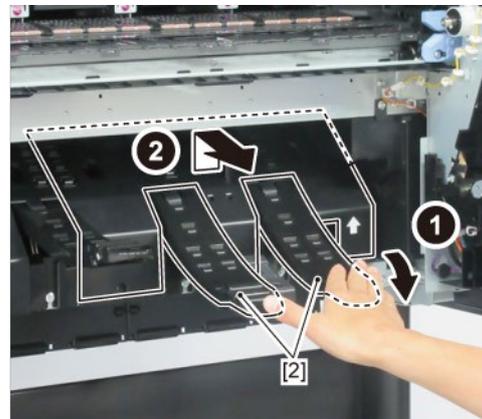
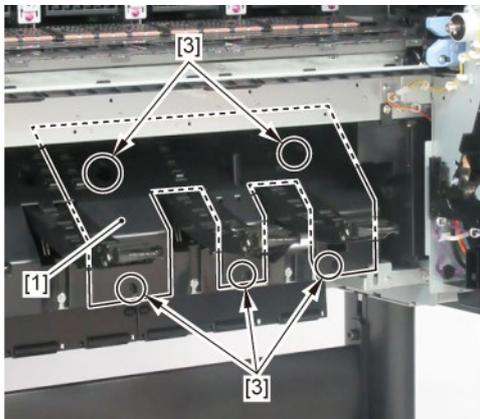
[2]	[3]
	
1 pc	2 pcs



9. Push down [2] NIP ARM UNIT and remove [1] GUIDE UNIT, LOW A.

[3]

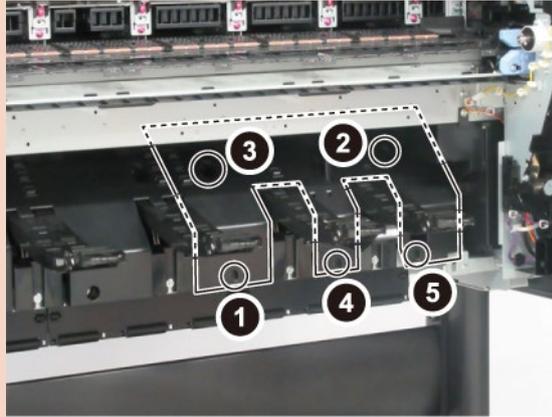
5 pcs



Notes when assembling the unit:

Tighten the screws in the order of numbers shown below.

Point

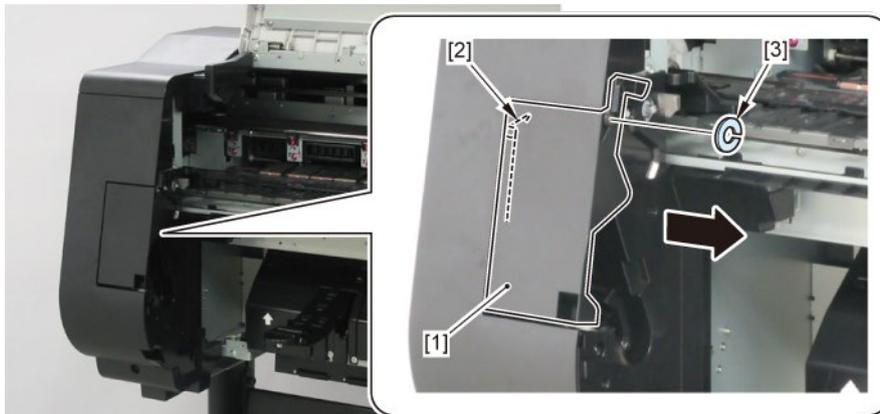


E

1. Remove all the parts of Group A.
2. Remove [1] COVER, SPOOL L and [2] SPRING, SPOOL COVER.

[3]

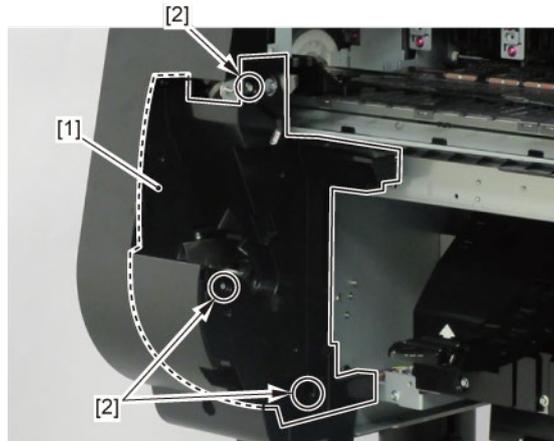
1 pc



3. Remove [1] HOLDER, SPOOL SIDE L.

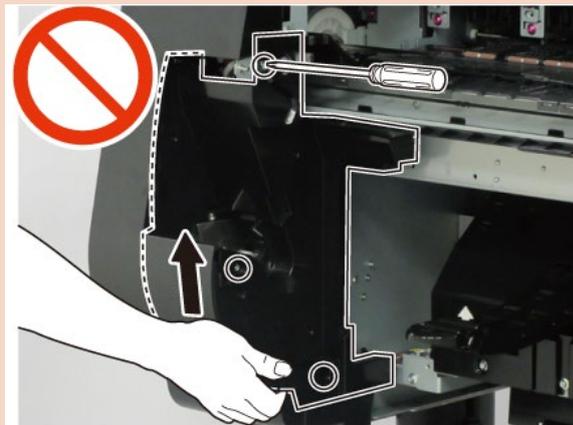
[2]

3 pcs



Notes when assembling the unit:

- When tightening the screws, DO NOT lift or hold the HOLDER, SPOOL SIDE L, upward. Just place it in the proper position and fasten the screws.



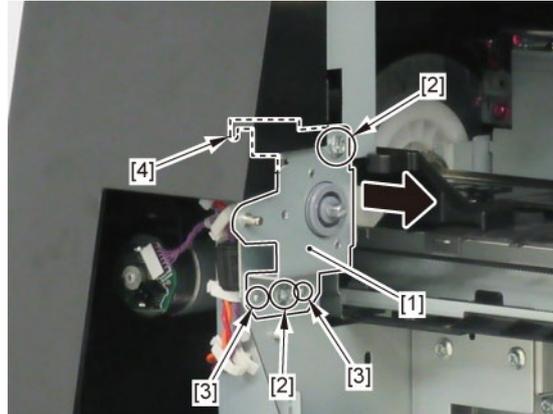
- After the unit is fixed, confirm that the COVER, SPOOL L works well.

Point

F

1. Remove all the parts of Groups A and E.
2. Remove [1] PLATE UNIT, SIDE SUPPORT.

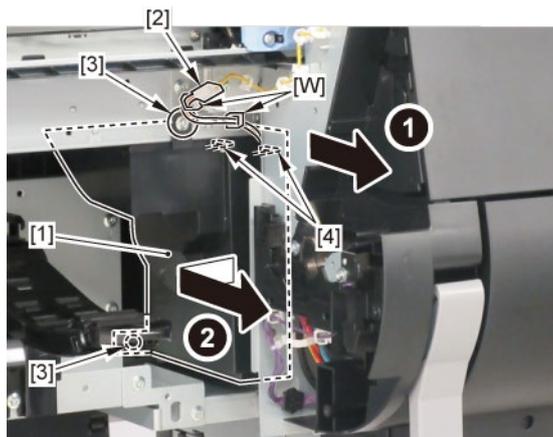
[2]	[3]	[4]
		
2 pcs	2 pcs	1 pc



G

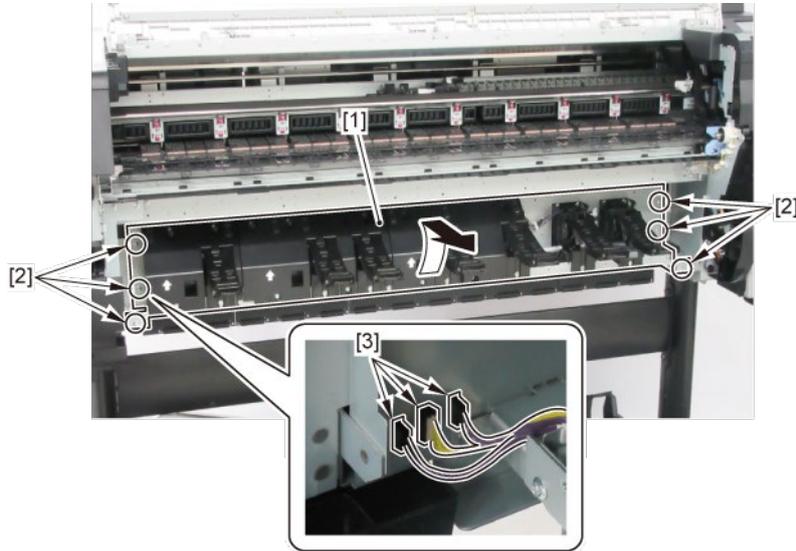
1. Remove all the parts of Groups A, B, D, and E.
2. Remove [1] SUCTION FAN UNIT.

[2]	[3]	[4]	[W]
			
1 pc	2 pcs	2 pcs	2 pcs



3. Remove [1] the paper feed guide.

[2]	[3]
	
6 pcs	3 pcs

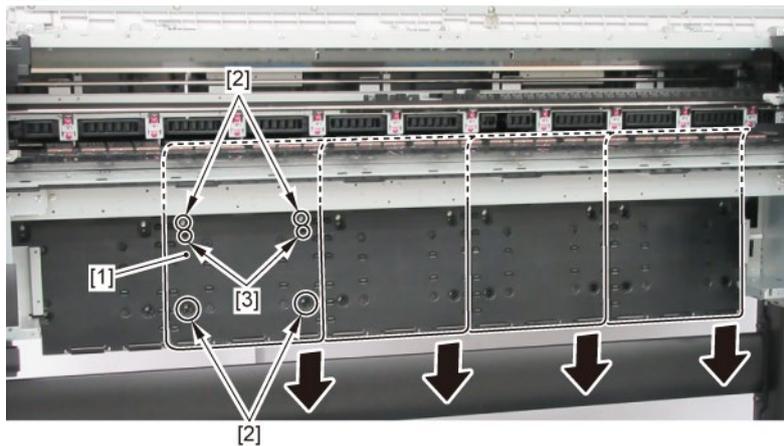


G-1 (24" model, 44" model)

4. Remove four pieces of [1] GUIDE UNIT, OUTSIDE A. (two pieces in 24" model)

(To remove the rightmost GUIDE UNIT, the adjacent GUIDE UNIT on the left needs to be removed first.)

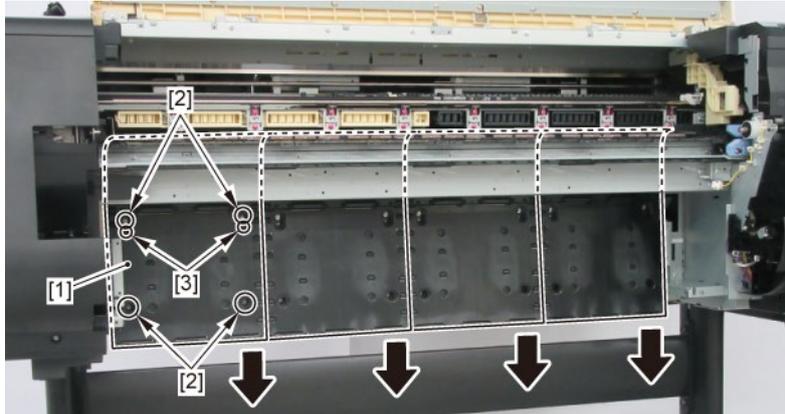
[2]	[3]
	
4 pcs each	2 pcs each



G-1 (36" model)

4. Remove four pieces of [1] GUIDE UNIT, OUTSIDE A. (To remove the rightmost GUIDE UNIT, the adjacent GUIDE UNIT on the left needs to be removed first, and vice versa.)

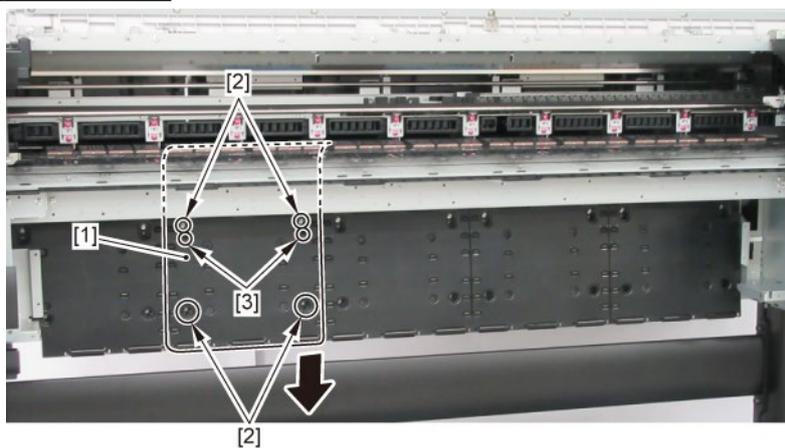
[2]	[3]
	
4 pcs each	2 pcs each



G-2 (24" model, 44" model)

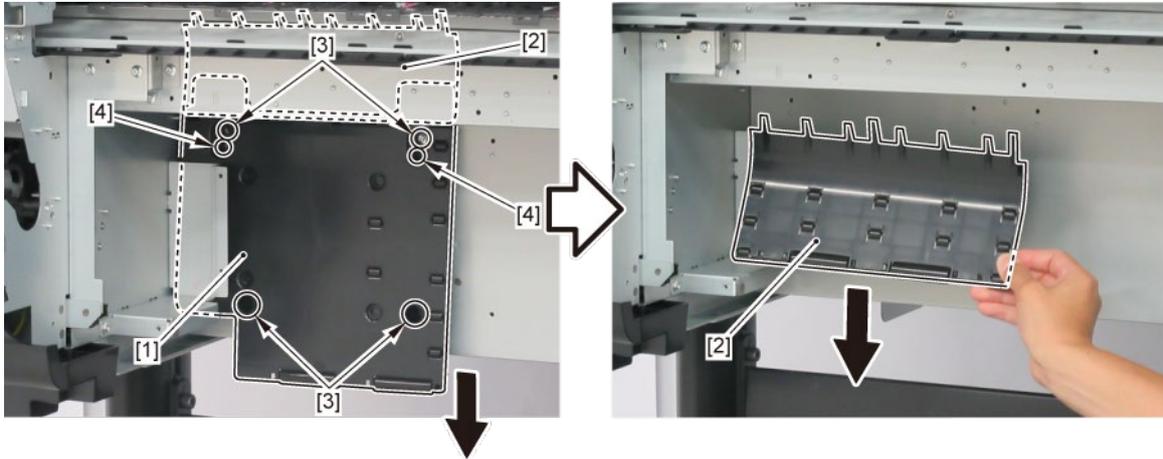
4. Remove [1] GUIDE UNIT, OUTSIDE A.

[2]	[3]
	
4 pcs	2 pcs

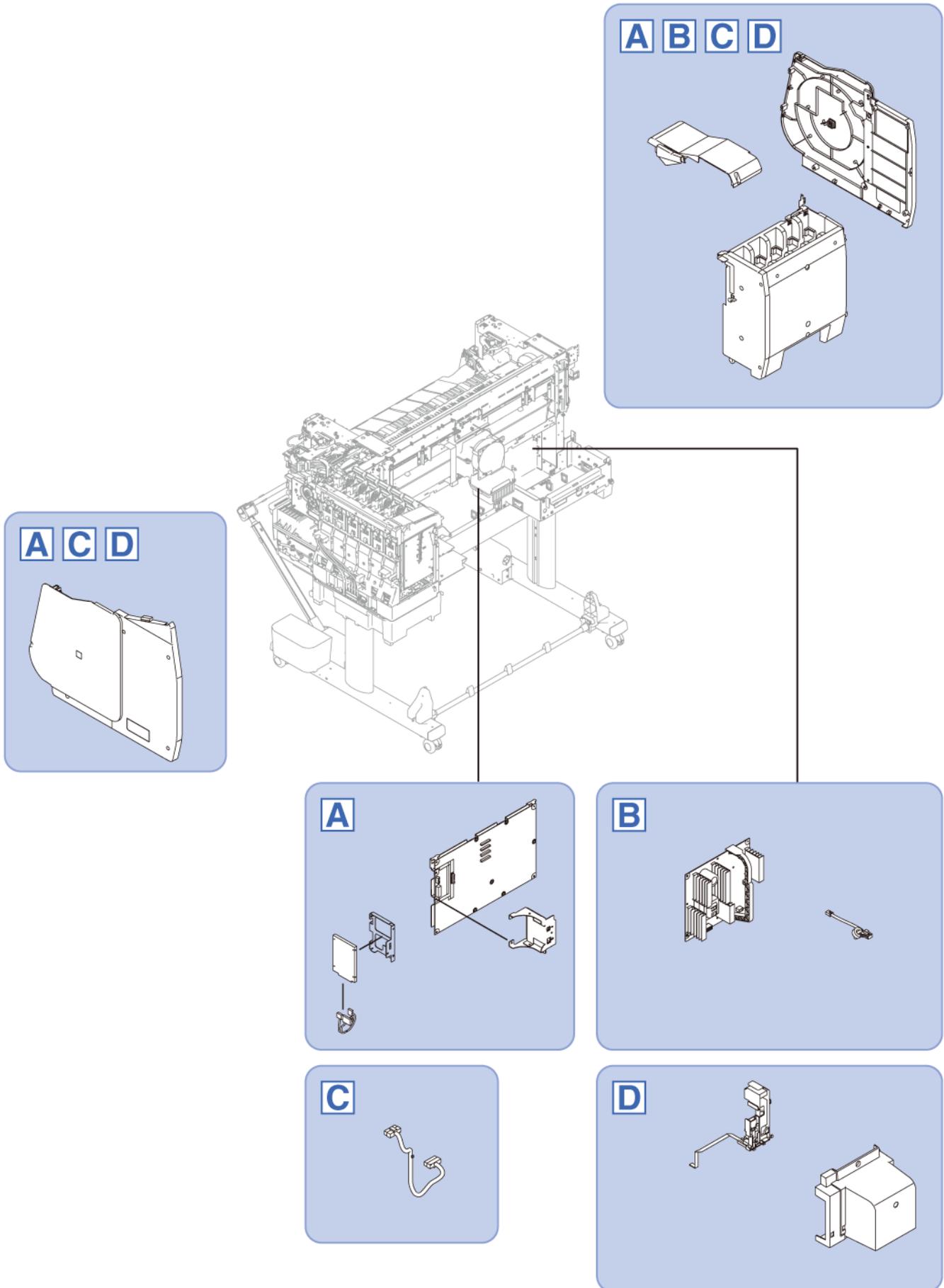


5. Remove the GUIDE UNIT, OUTSIDE B ([1] and [2]). Separate the joint of [1] and [2]. Remove [1] the lower part of the guide unit first, then [2] the upper part.

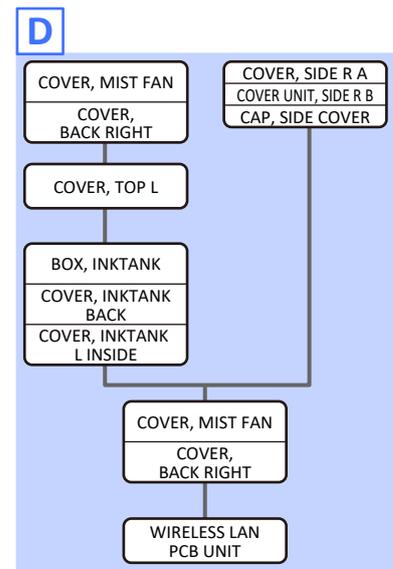
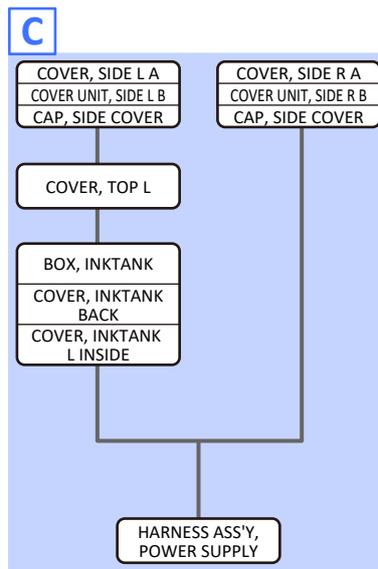
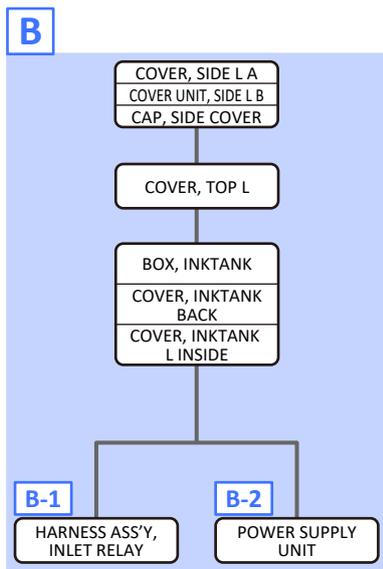
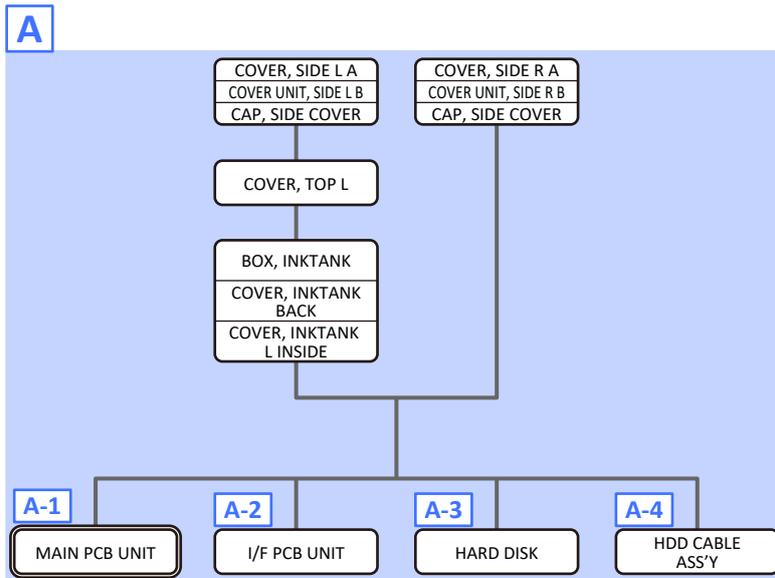
[3]	[4]
	
4 pcs	2 pcs



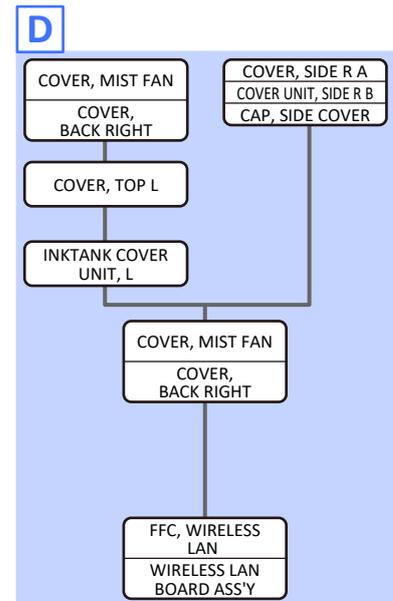
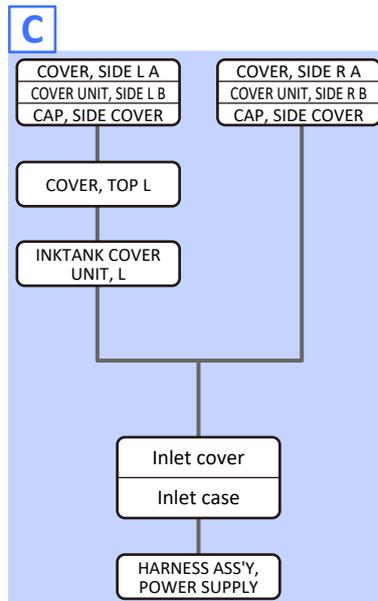
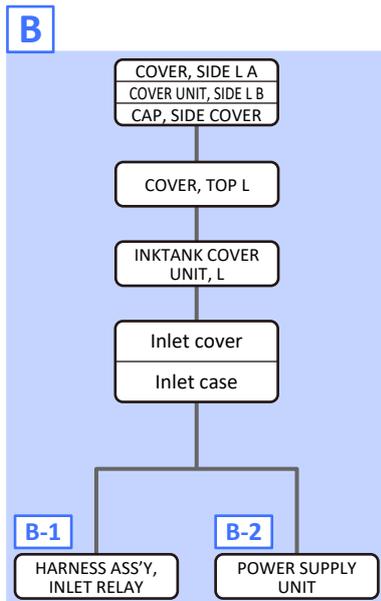
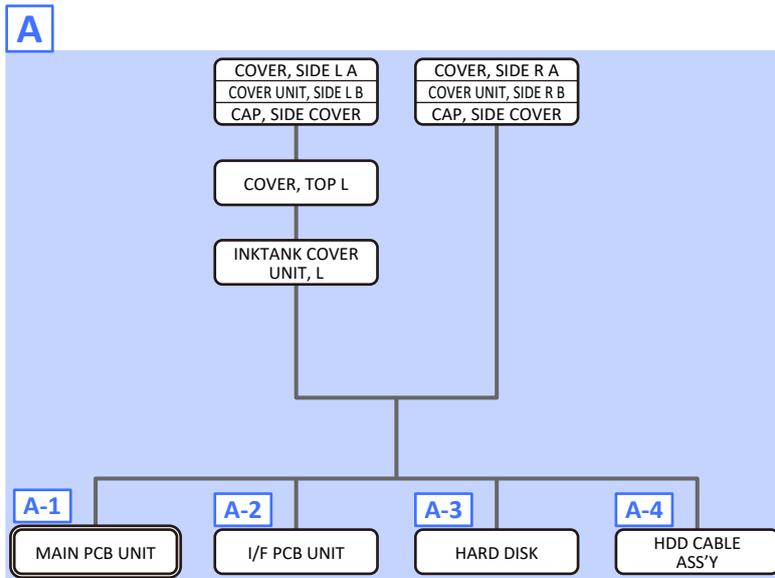
7. Main PCB Unit, Power Supply Unit, Hard Disk Drive (24" model)



TX-2100, TX-5210



TX-2200, TX-5220

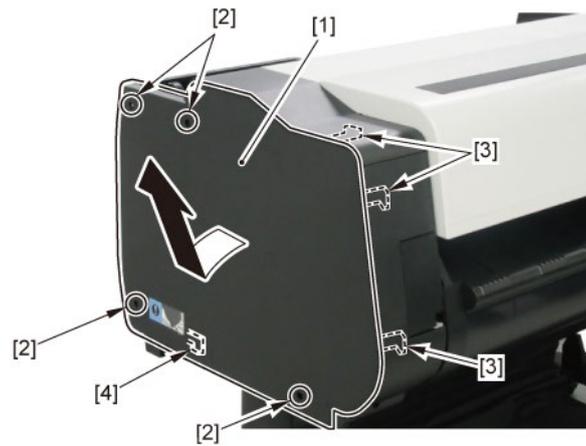


A

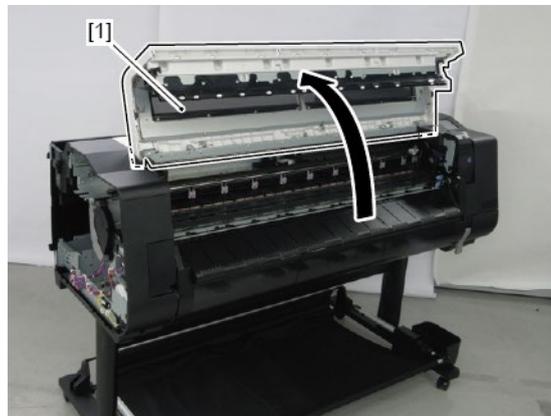
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

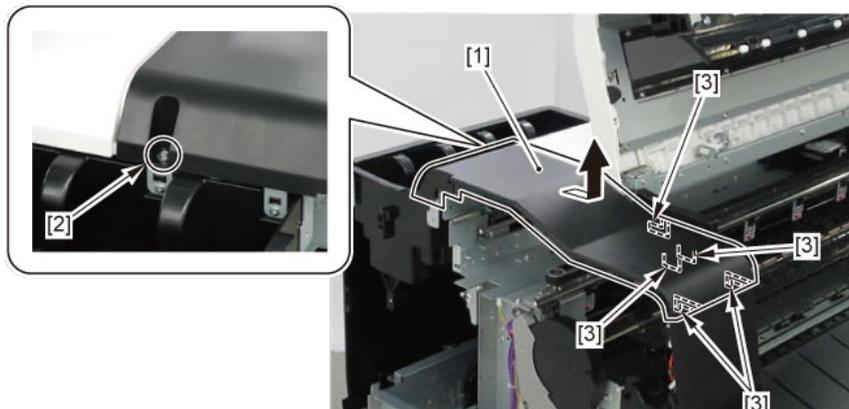


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

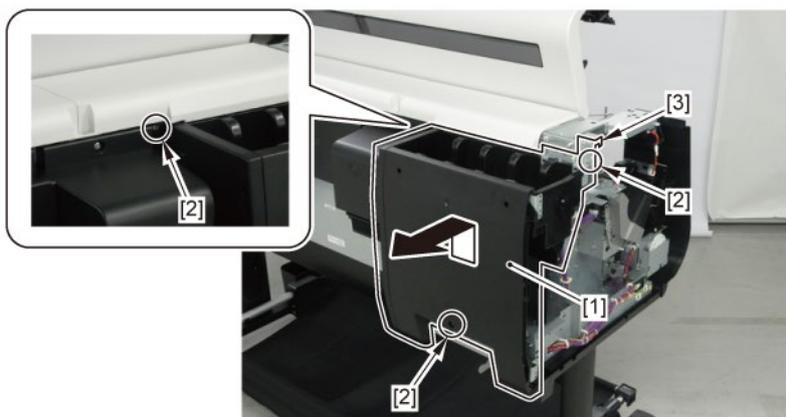
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INKTANK COVER UNIT, L.

TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

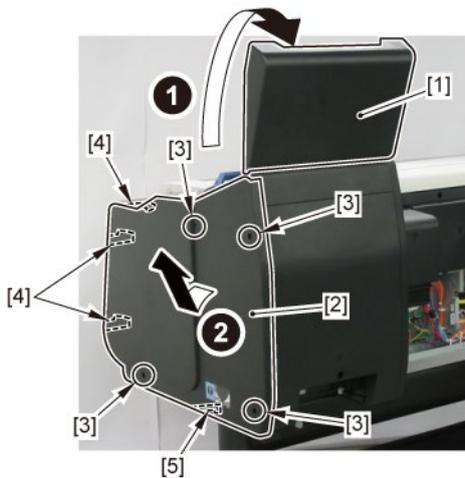
6. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

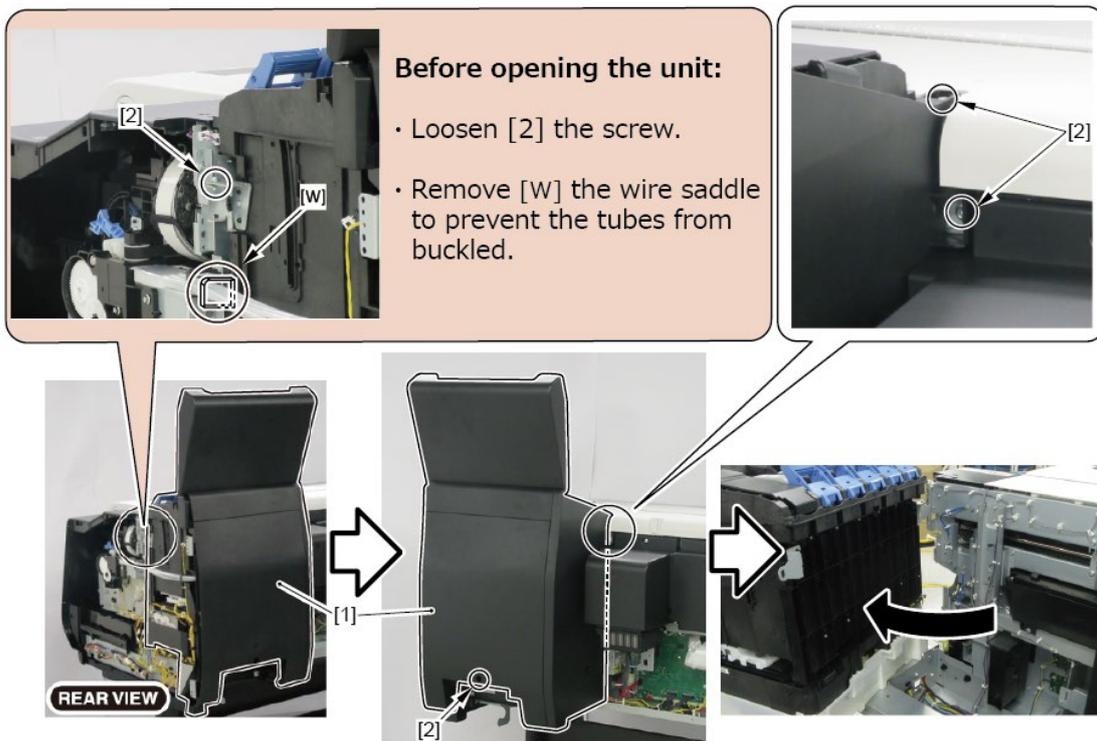
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



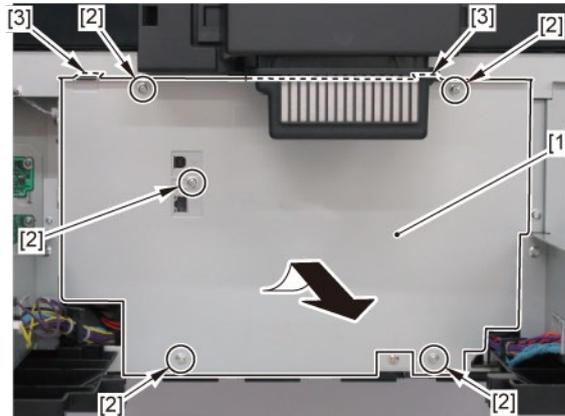
7. Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc



8. Remove [1] the plate.

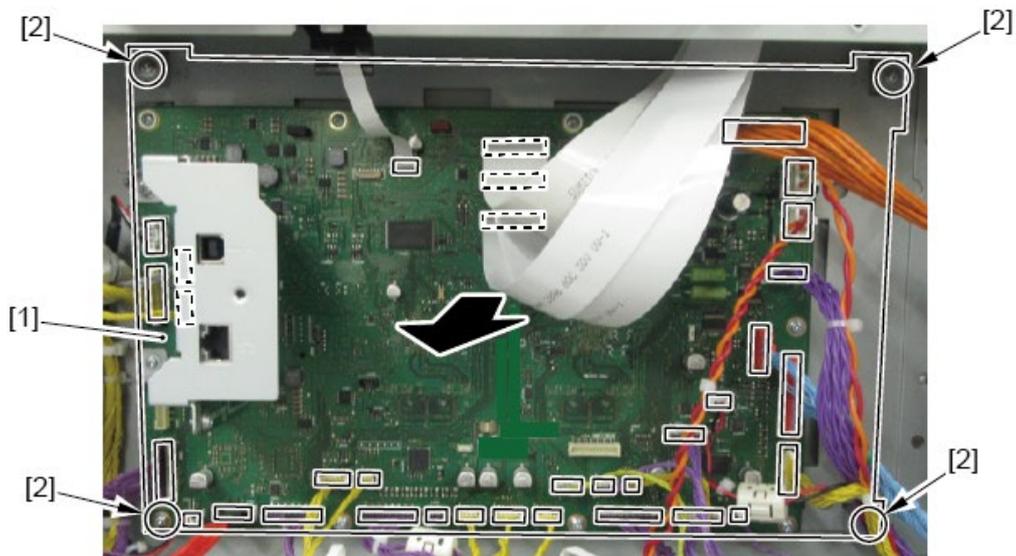
[2]	[3]
	
5 pcs	2 pcs



A-1

9. Remove the MAIN PCB UNIT.

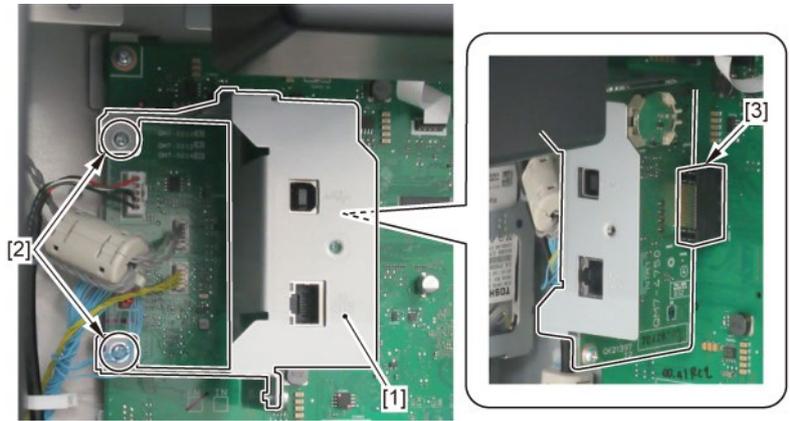
[1]	[2]
	
ALL	4 pcs



A-2

9. Remove [1] I/F PCB UNIT.

[2]	[3]
	
2 pcs	1 pc



A-3

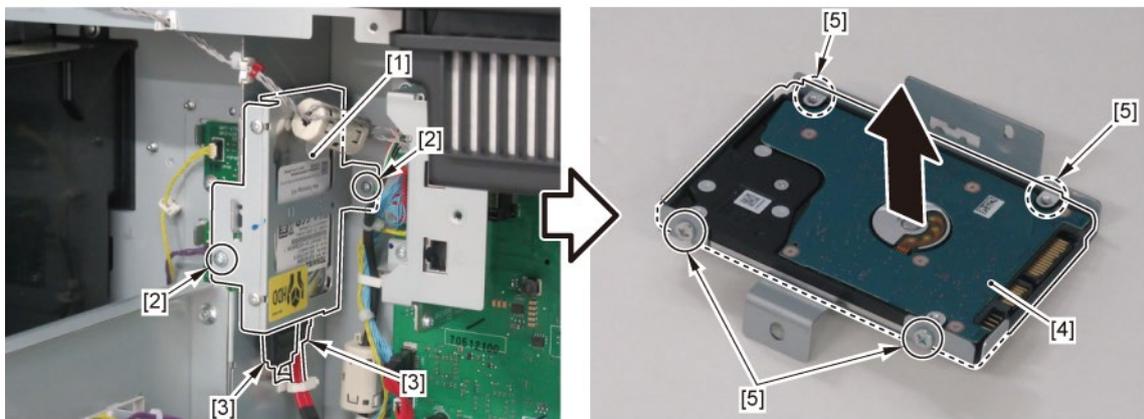
9. Remove [1] the bracket (with the HARD DISK).

[2]	[3]
	
2 pcs	2 pcs

10. Remove [4] the HARD DISK.

[5]

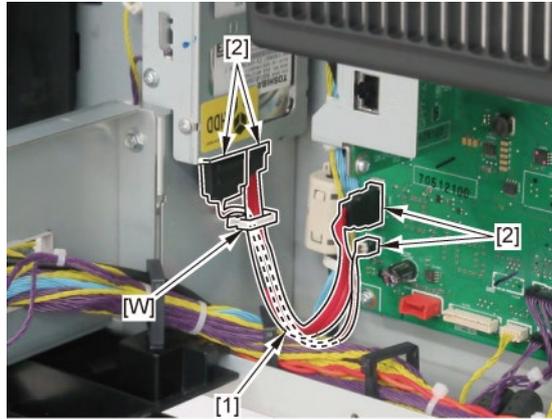
4 pcs



A-4

9. Disconnect [1] HDD CABLE ASS'Y.

[2]	[W]
	
4 pcs	1 pc



Notes when assembling the unit:

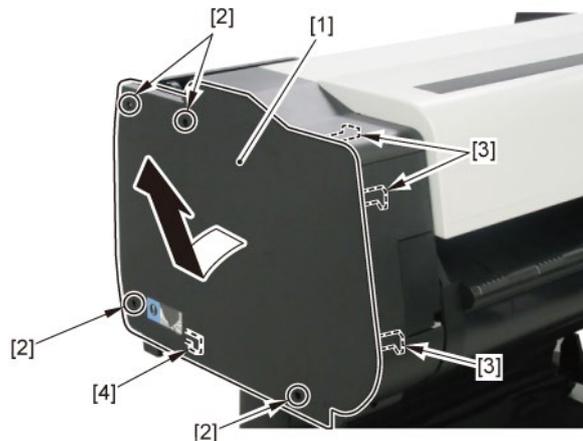
The HDD CABLE ASS'Y must be on top of the other cables.

B

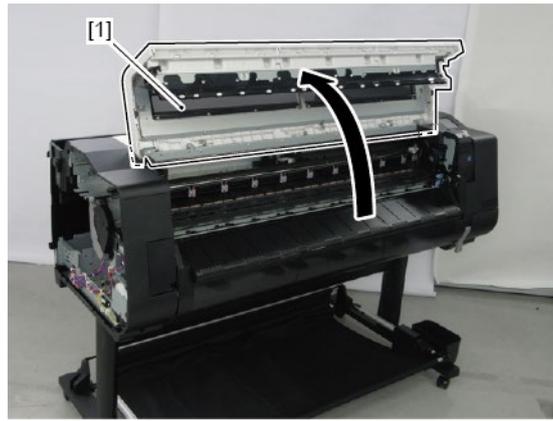
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

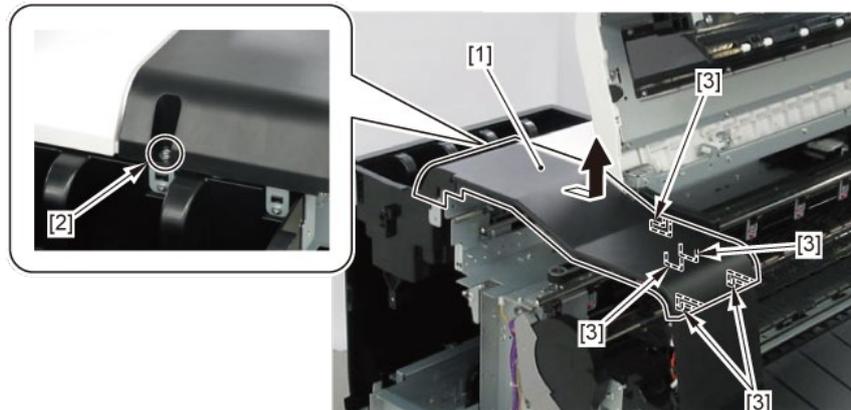


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



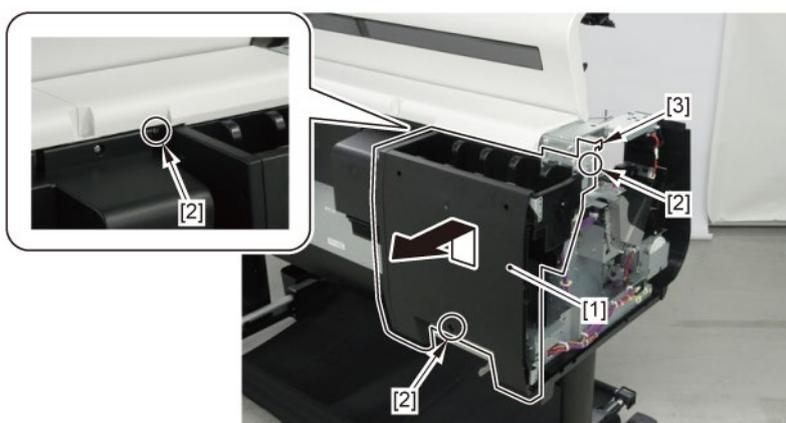
4. Remove [1] a set of
 - BOX, INK TANK
 - COVER, INK TANK BACK
 - COVER, INK TANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INK TANK COVER UNIT, L.

TX-2200, TX-5220

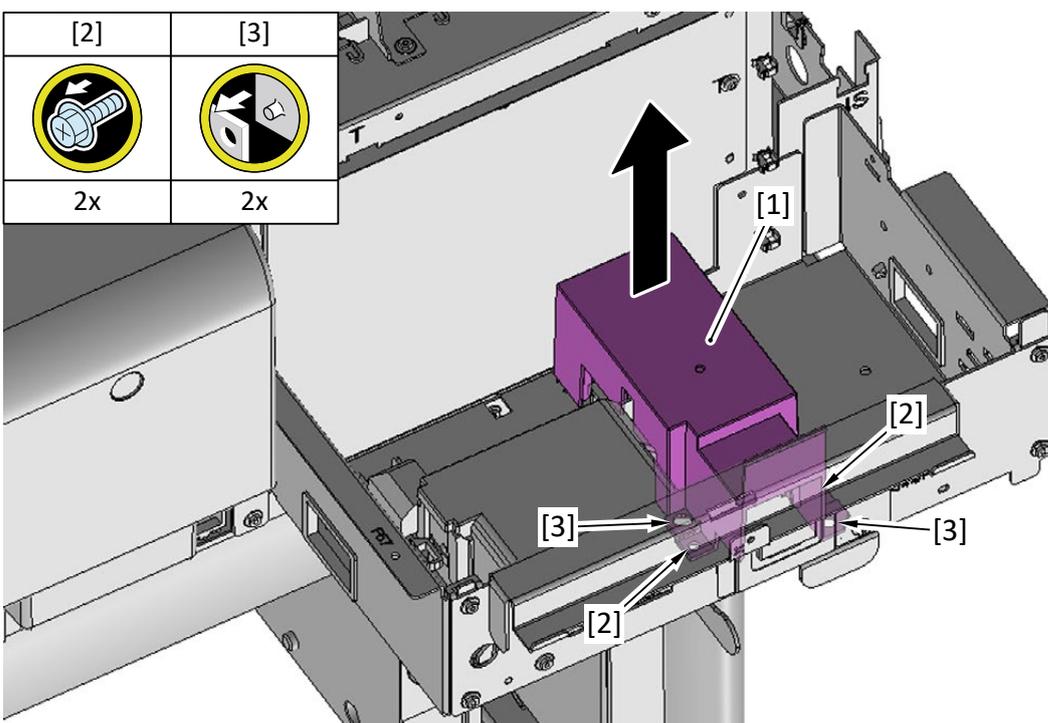
[2]	[3]
	
3 pcs	1 pc



5. Remove [1] the inlet cover.

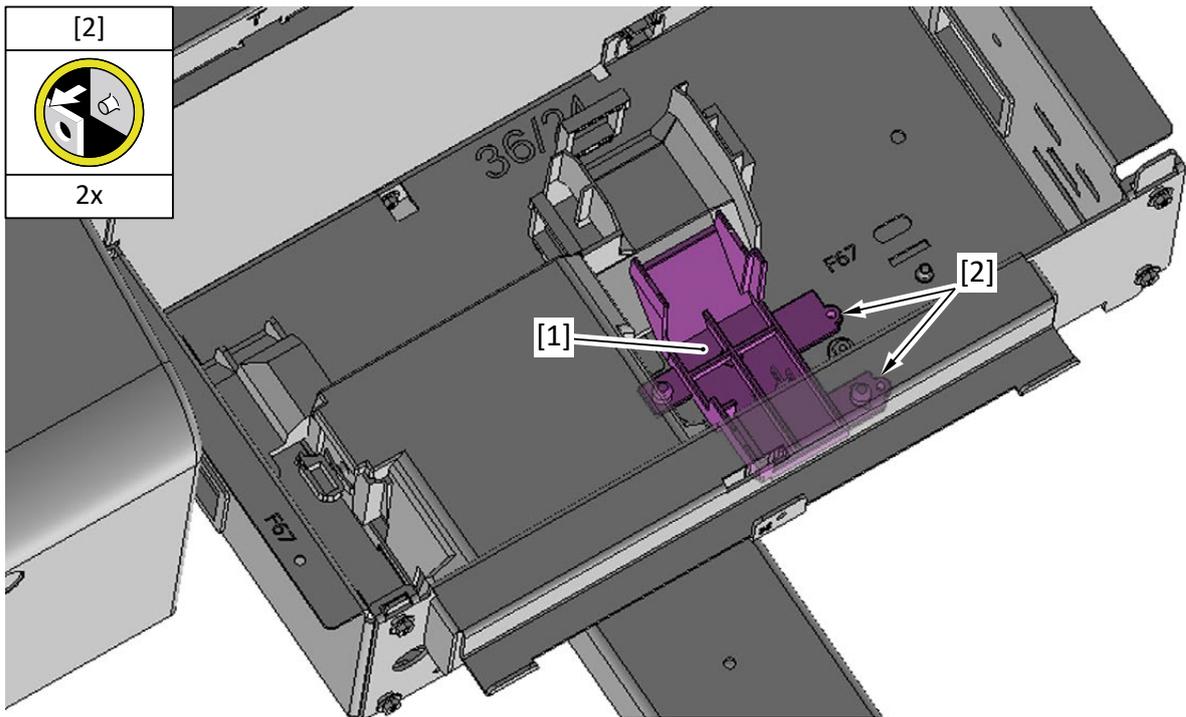
TX-2200, TX-5220

[2]	[3]
	
2x	2x



6. Remove [1] the inlet case.

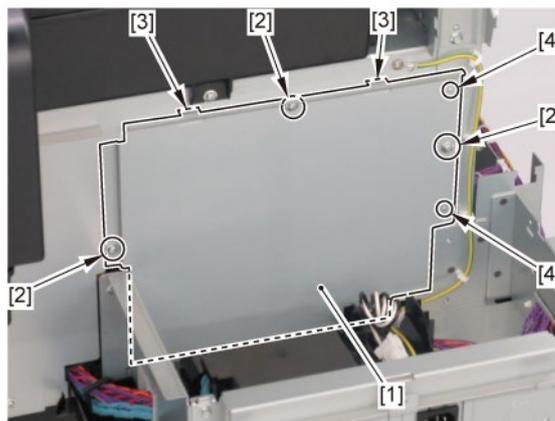
TX-2200, TX-5220



B-1

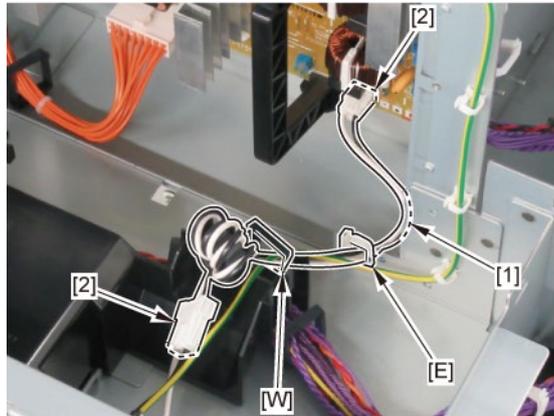
7. Remove [1] the plate.

[2]	[3]	[4]
		
3 pcs	2 pcs	2 pcs



8. Disconnect [1] HARNESS ASS'Y, INLET RELAY.

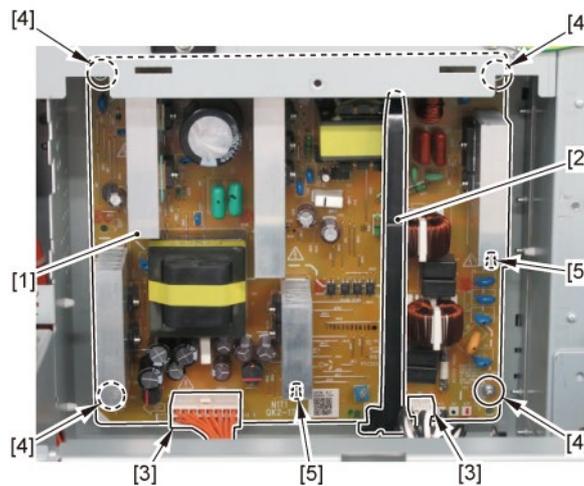
[2]	[W]	[E]
		
2 pcs	1 pc	1 pc



B-2

7. While holding [2] the handle, remove [1] POWER SUPPLY UNIT.

[3]	[4]	[5]
		
2 pcs	4 pcs	2 pcs

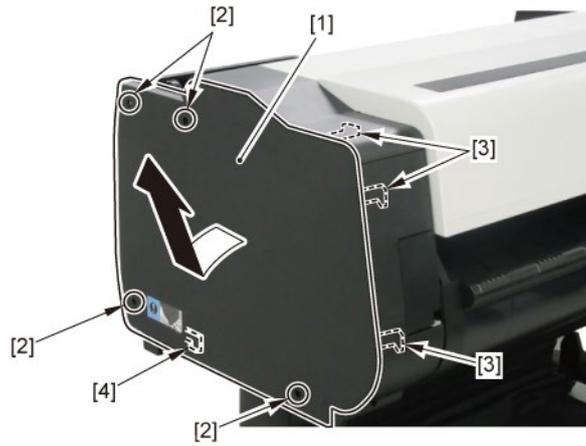


C

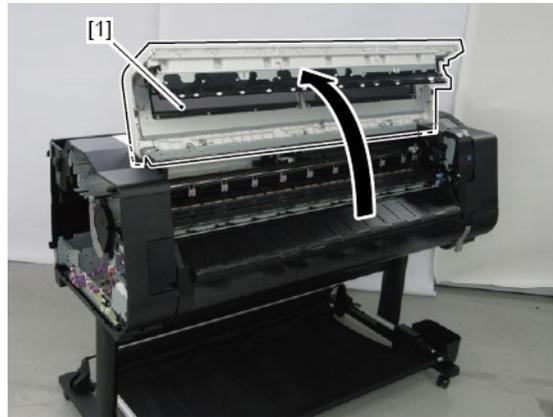
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

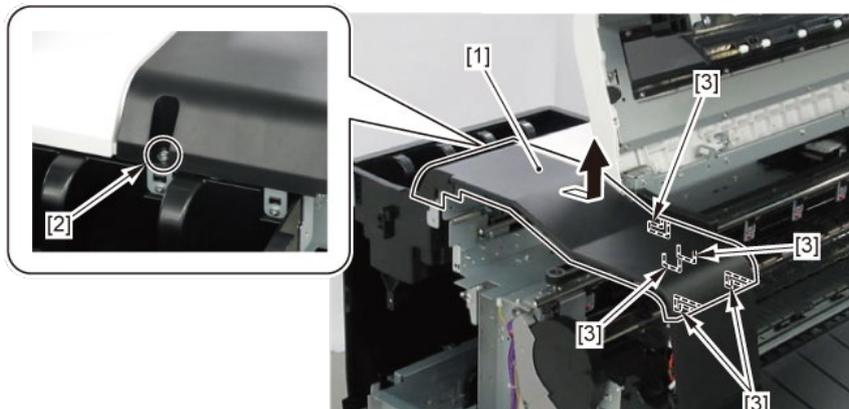


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

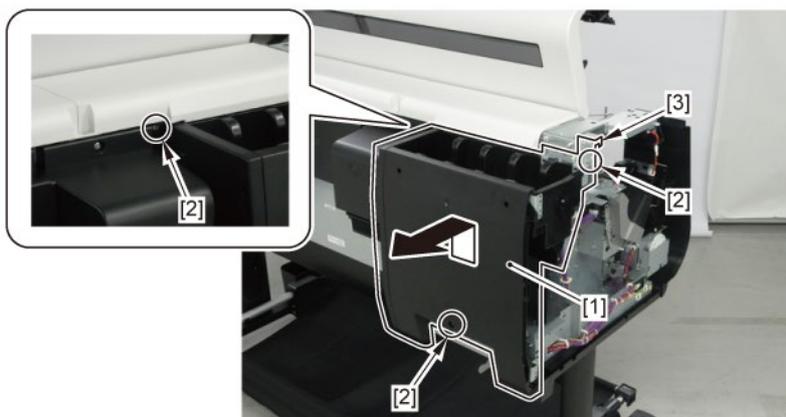
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INKTANK COVER UNIT, L.

TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

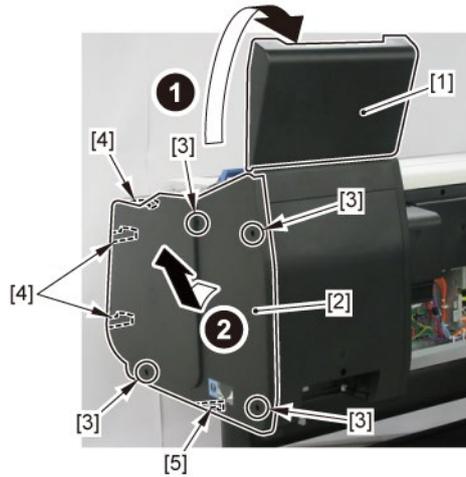
6. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

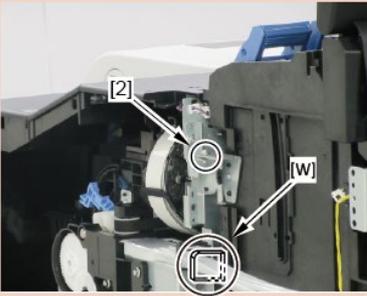
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



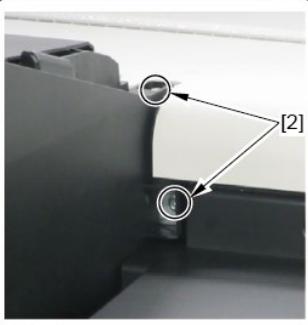
7. Open [1] the right ink unit.

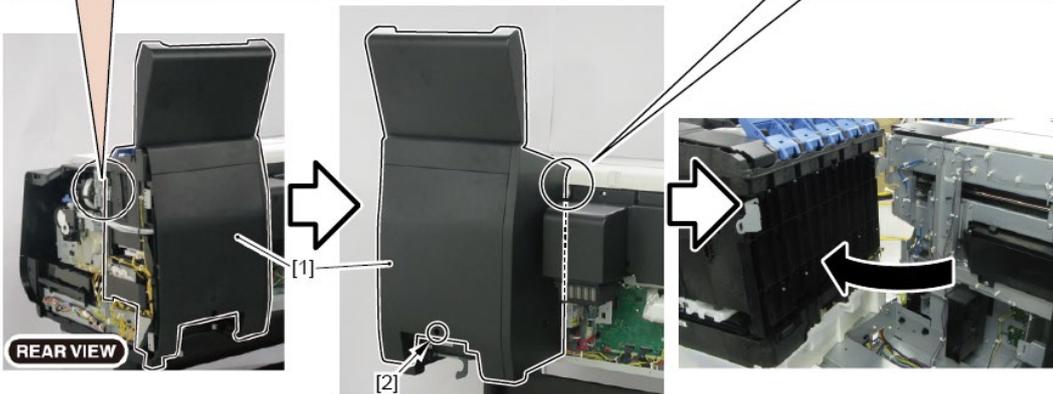
[2]	[W]
	
4 pcs	1 pc



Before opening the unit:

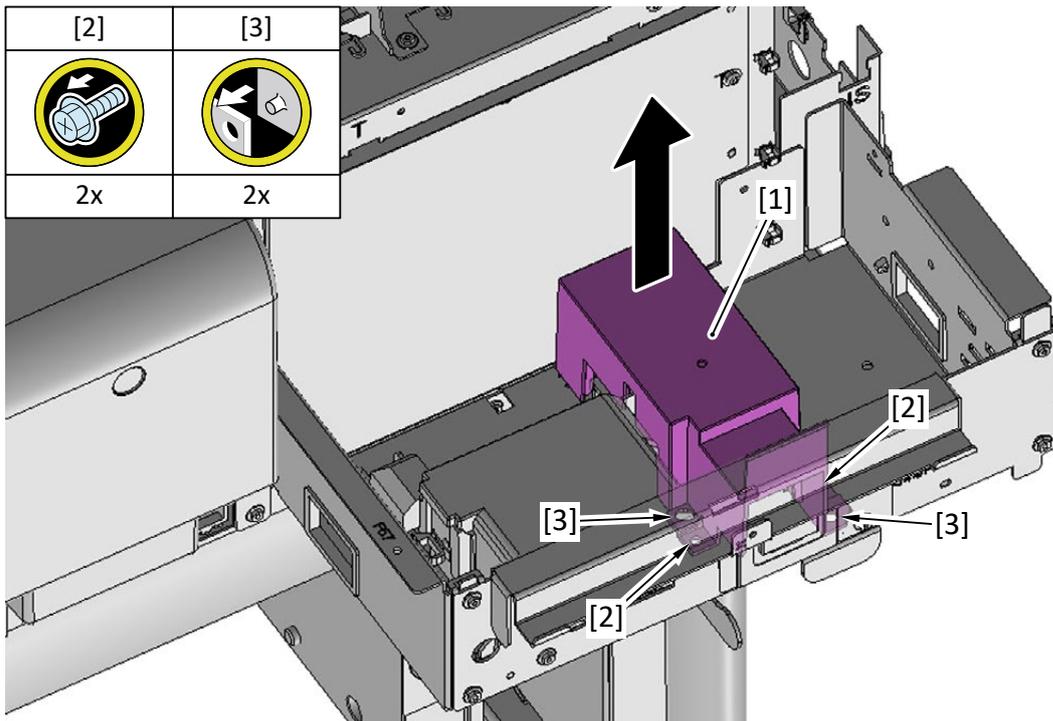
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





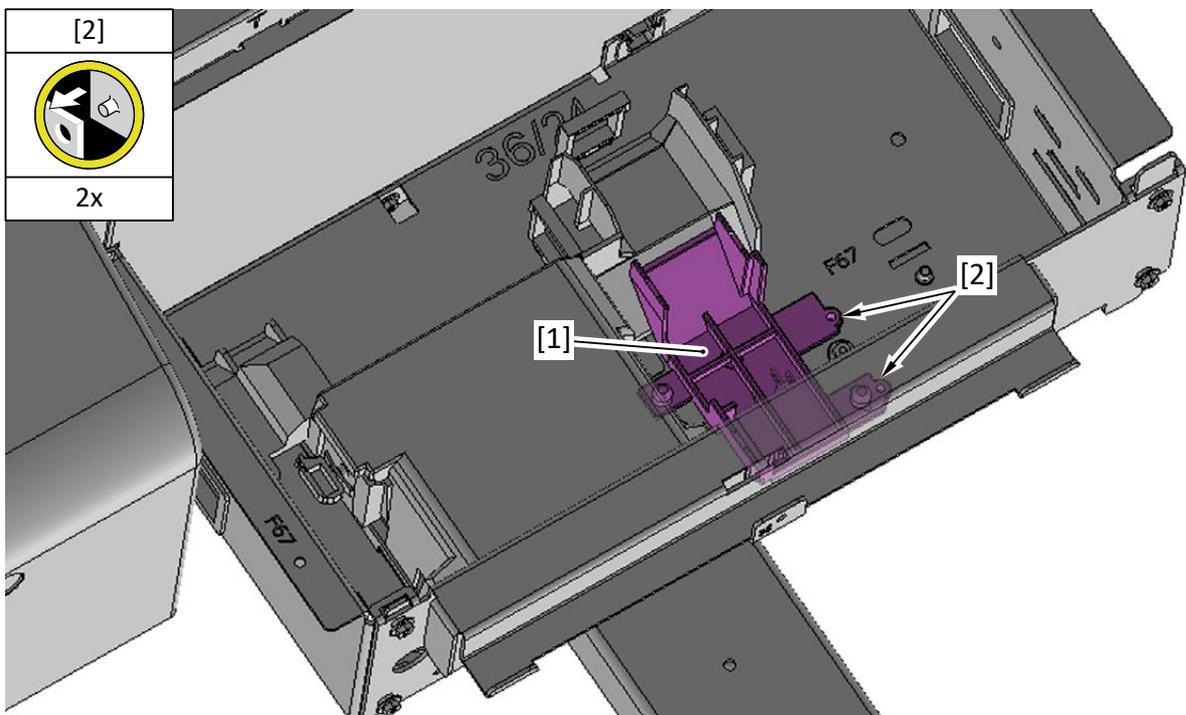
- Remove [1] the inlet cover.

TX-2200, TX-5220



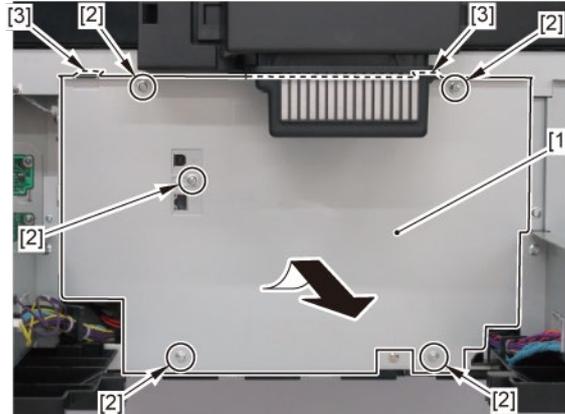
- Remove [1] the inlet case.

TX-2200, TX-5220



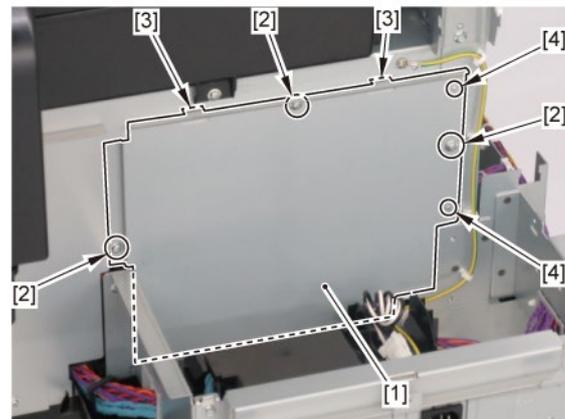
10. Remove [1] the plate.

[2]	[3]
	
5 pcs	2 pcs



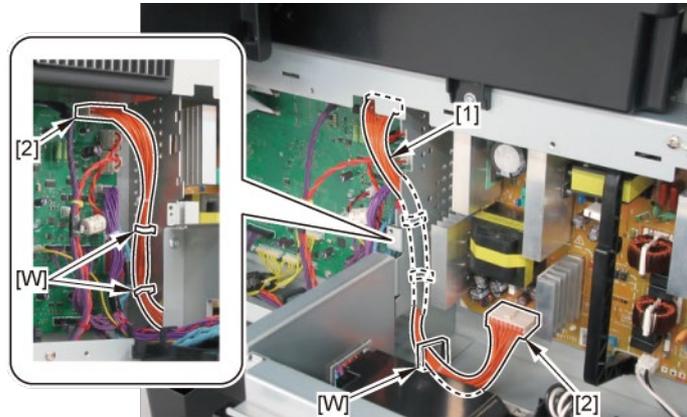
11. Remove [1] the plate.

[2]	[3]	[4]
		
3 pcs	2 pcs	2 pcs



12. Disconnect [1] HARNESS ASS'Y, POWER SUPPLY.

[2]	[W]
	
2 pcs	3 pcs

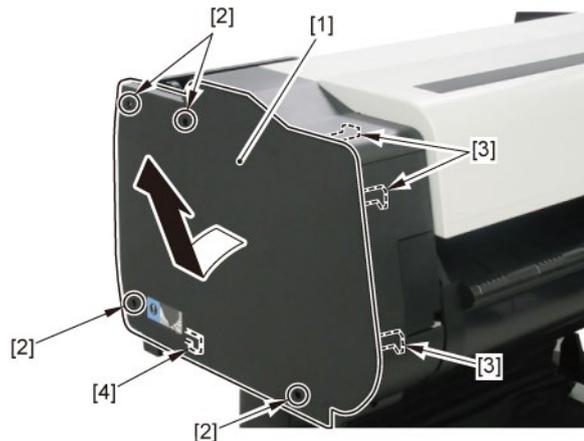


D

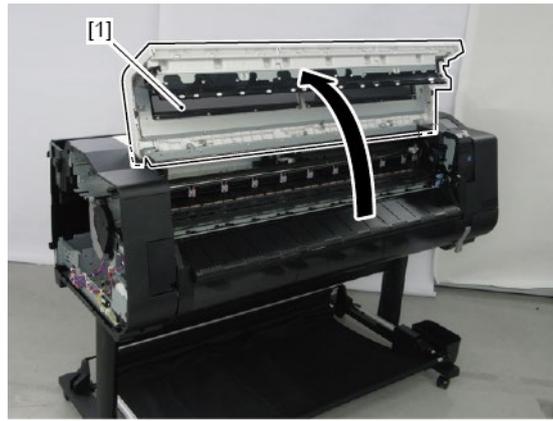
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

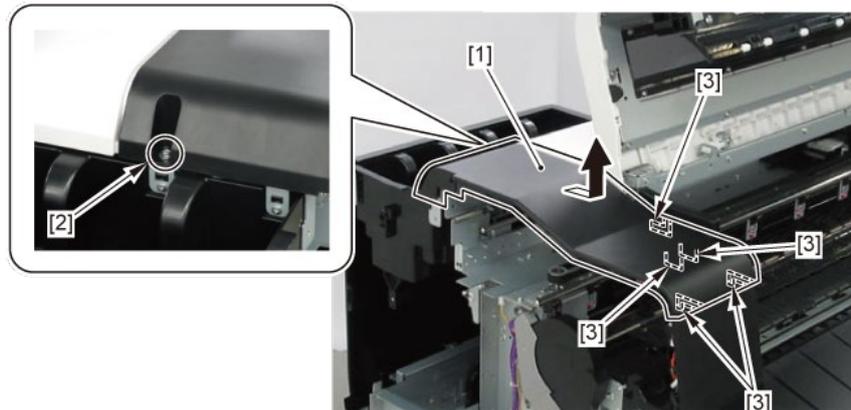


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



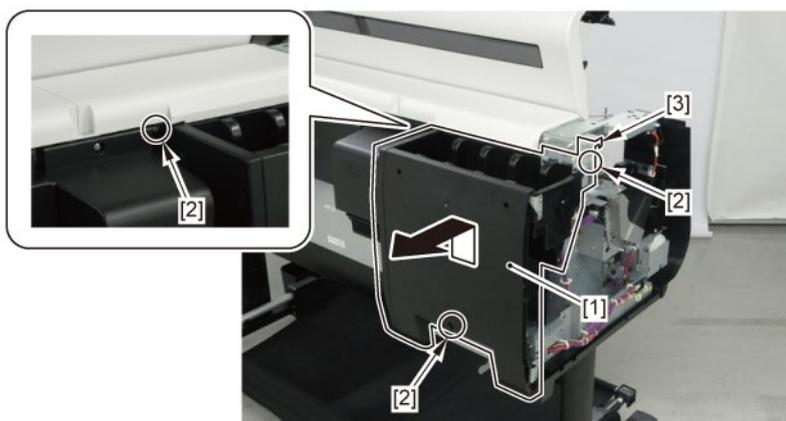
4. Remove [1] a set of
- BOX, INK TANK
 - COVER, INK TANK BACK
 - COVER, INK TANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INK TANK COVER UNIT, L.

TX-2200, TX-5220

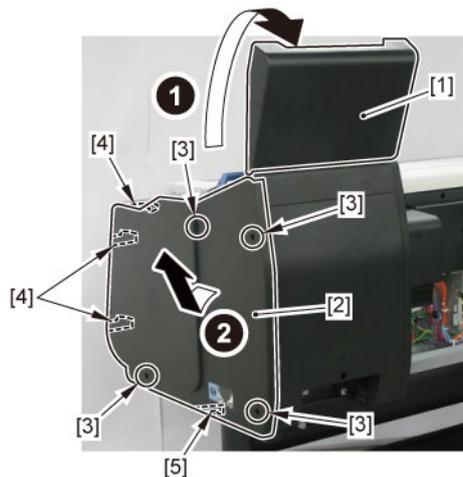
[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

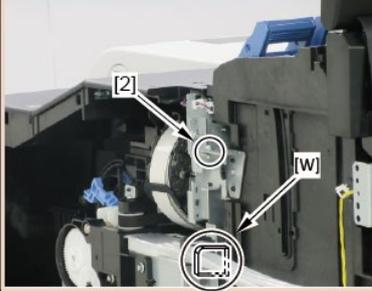
6. Remove [2] a set of
- COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



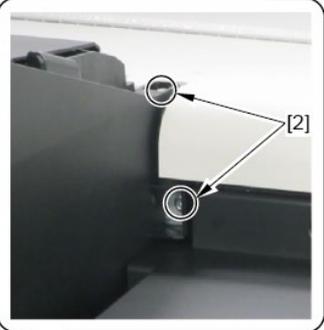
7. Open [1] the right ink unit.

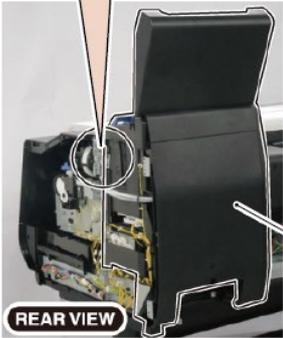
[2]	[W]
	
4 pcs	1 pc



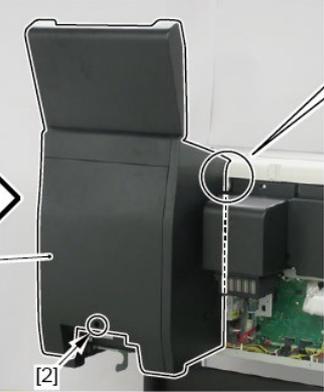
Before opening the unit:

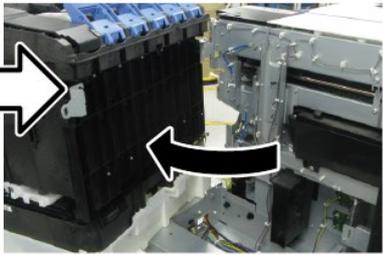
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





REAR VIEW

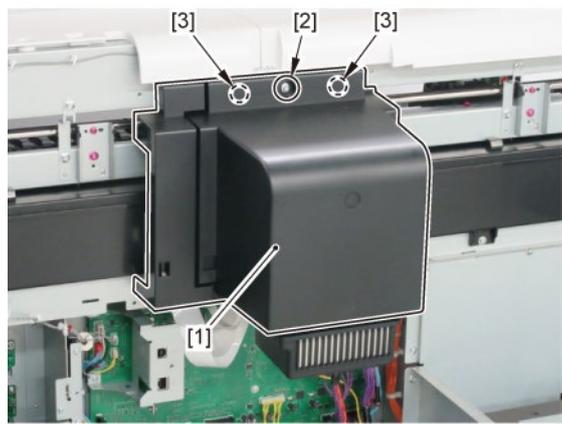




8. Remove [1] a set of

- COVER, MIST FAN
- COVER, BACK RIGHT.

[2]	[3]
	
1 pc	2 pcs



9. Remove [1] WIRELESS LAN PCB UNIT.

TX-2100, TX-5210

9. Remove [1] a set of

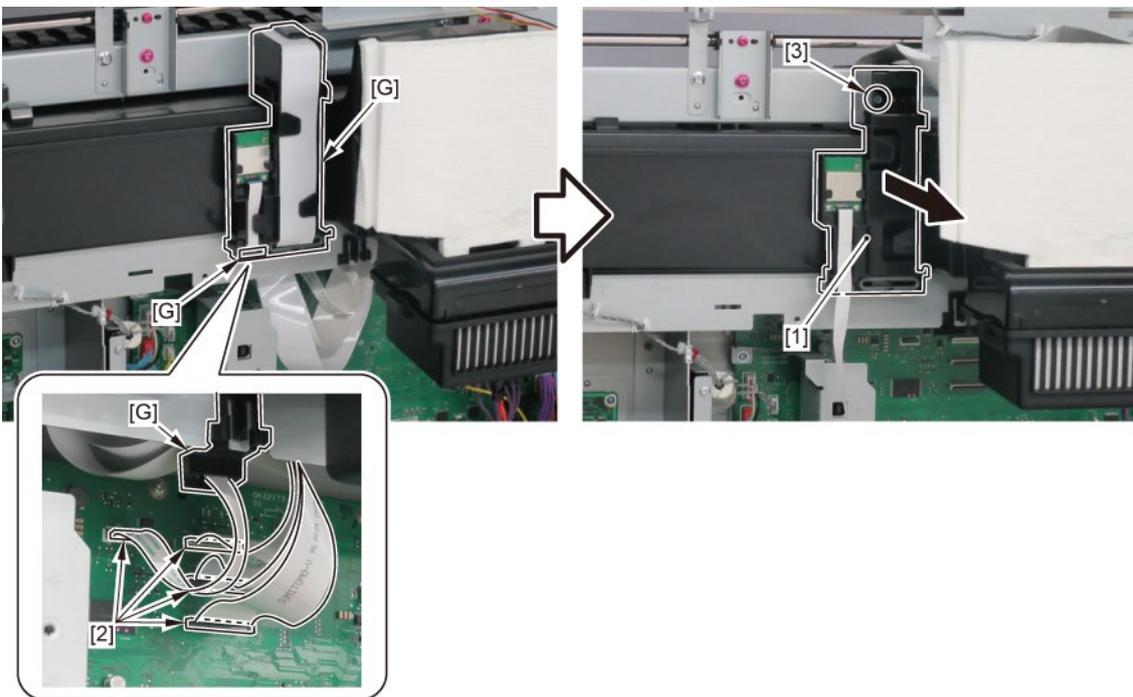
- FFC, WIRELESS LAN

- WIRELESS LAN BOARD ASS'Y.

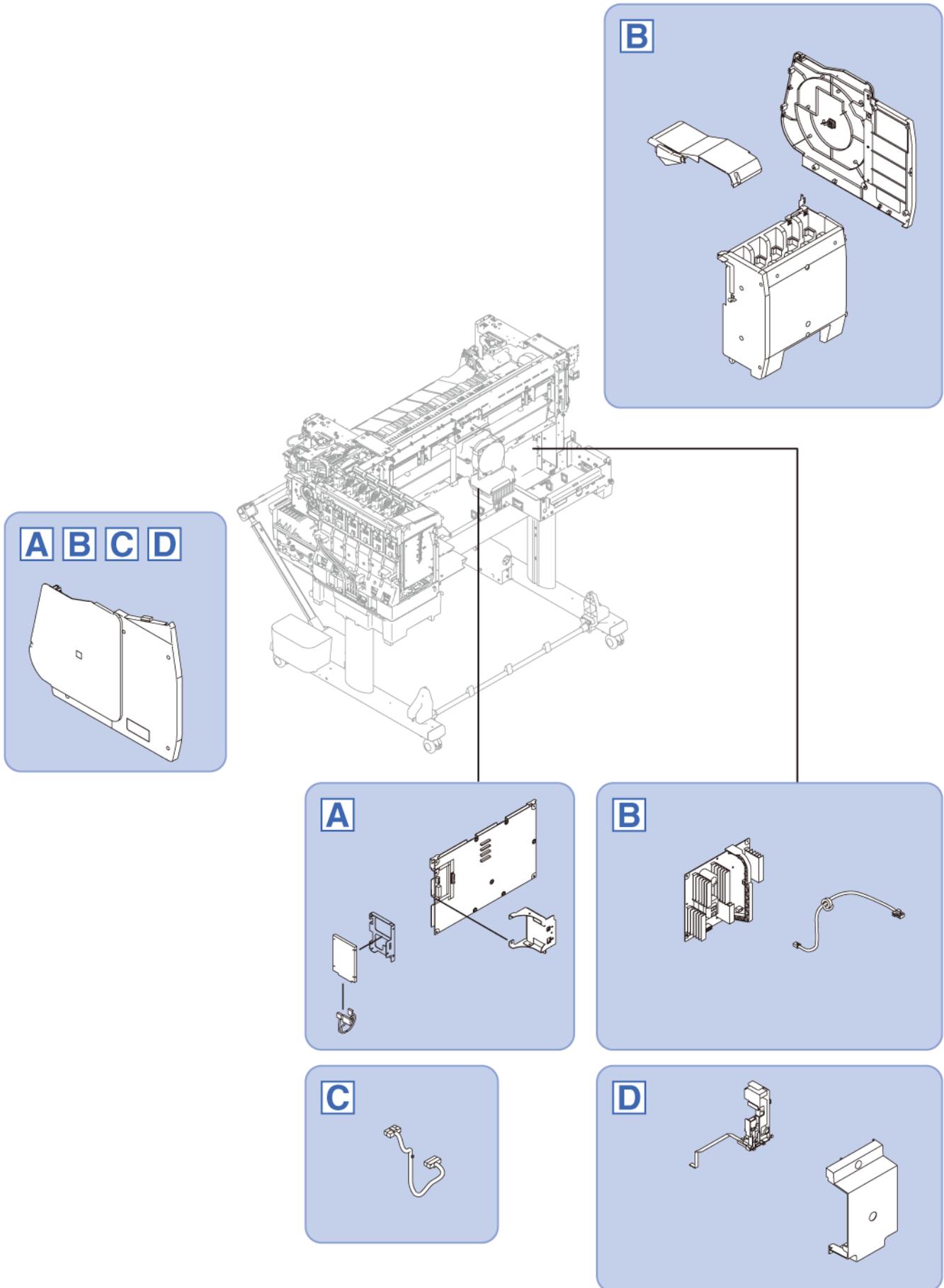
TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc

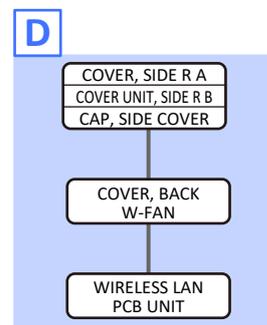
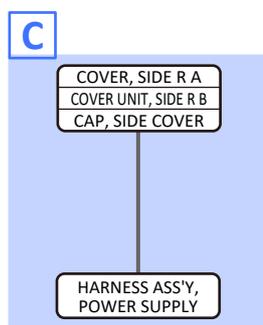
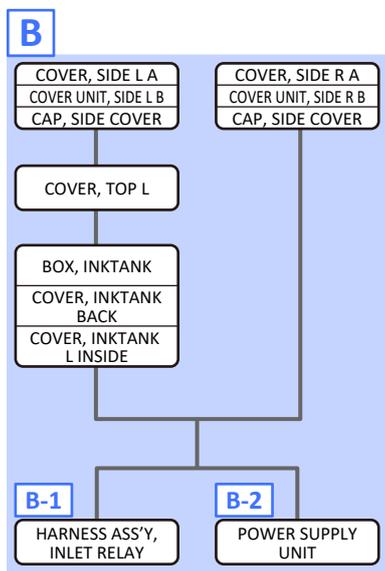
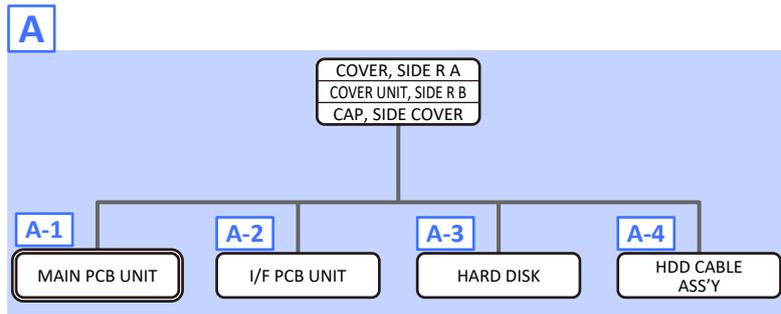
[2]	[3]	[G]
		
4 pcs	1 pc	3 pcs



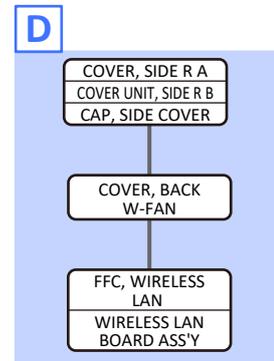
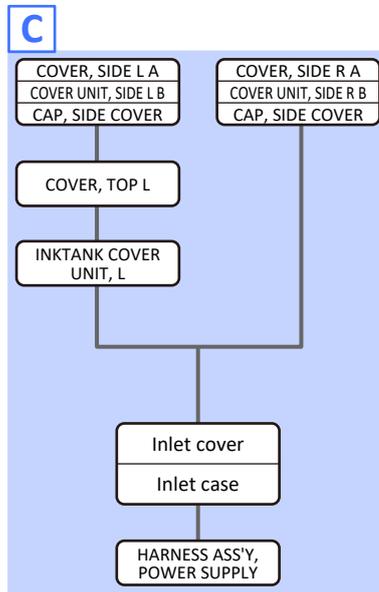
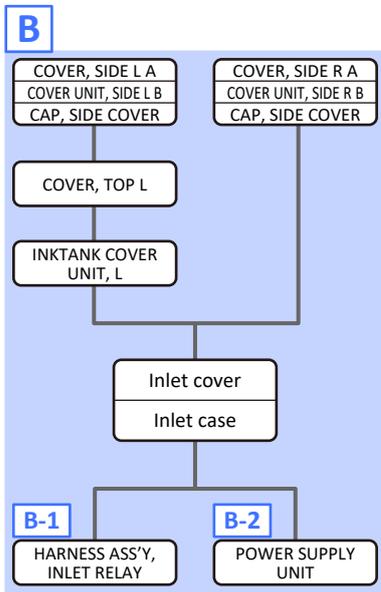
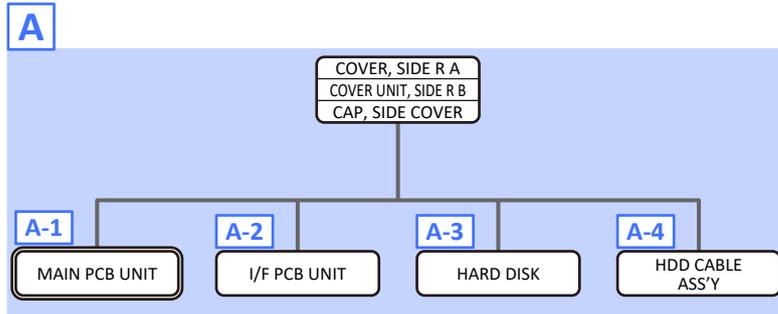
7. Main PCB Unit, Power Supply Unit, Hard Disk Drive (36" model)



TX-3100, TX-5310



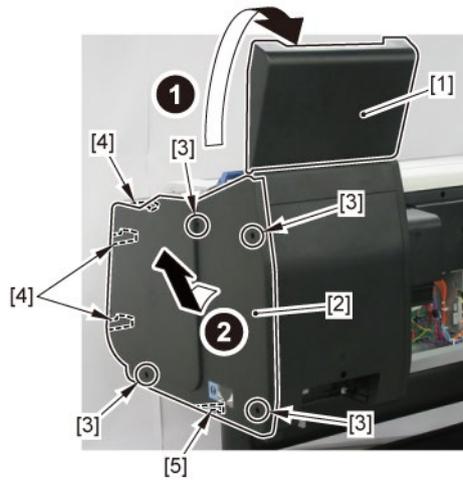
TX-3200, TX-5320



A

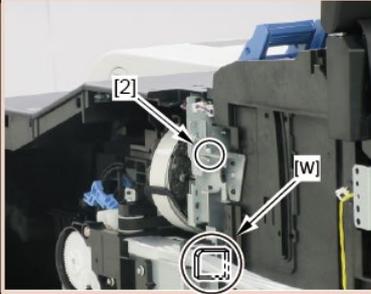
1. Open [1] the right ink tank cover.
2. Remove a set of [2]
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



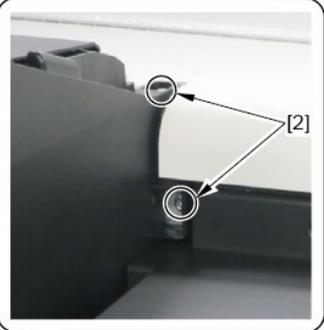
3. Open [1] the right ink unit.

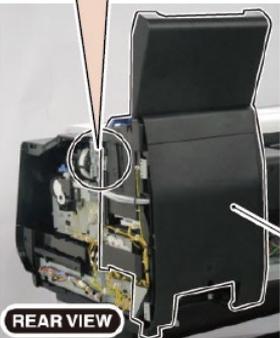
[2]	[W]
	
4 pcs	1 pc



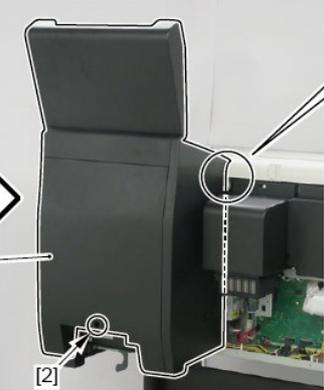
Before opening the unit:

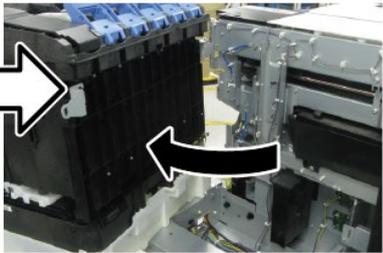
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





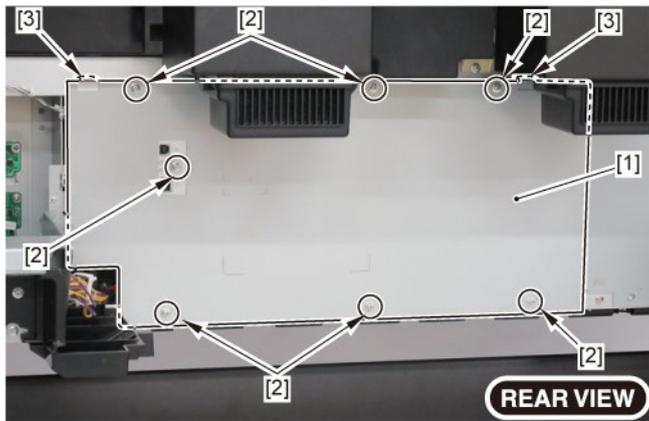
REAR VIEW





4. Remove [1] the plate.

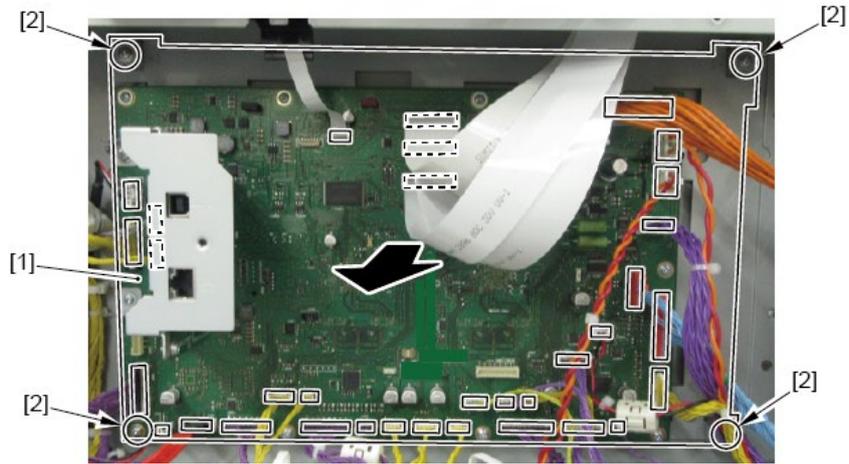
[2]	[3]
	
7 pcs	2 pcs



A-1

5. Remove the MAIN PCB UNIT.

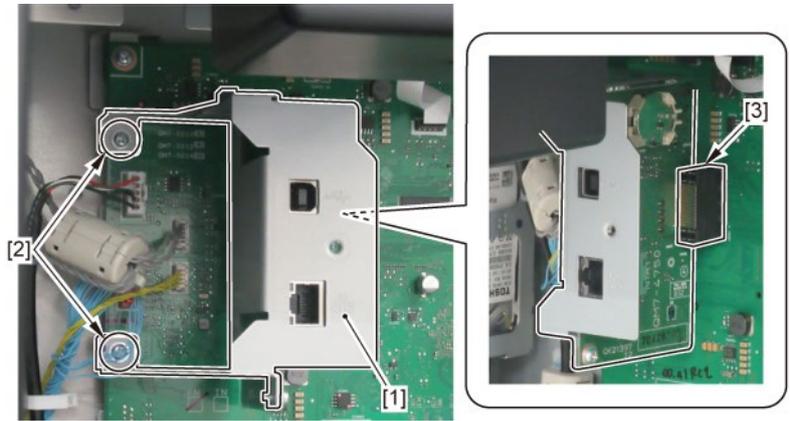
[1]	[2]
	
ALL	4 pcs



A-2

5. Remove [1] I/F PCB UNIT.

[2]	[3]
	
2 pcs	1 pc



A-3

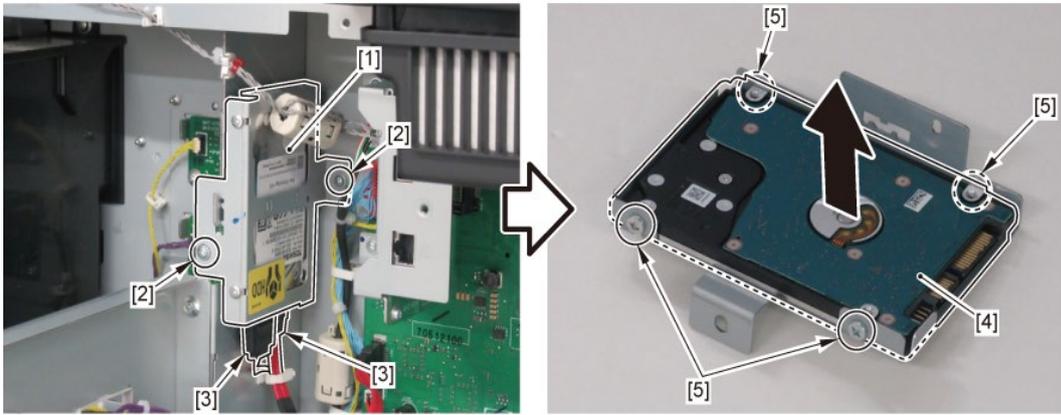
5. Remove [1] the bracket (with the HARD DISK).

[2]	[3]
	
2 pcs	2 pcs

6. Remove [4] the HARD DISK.

[5]

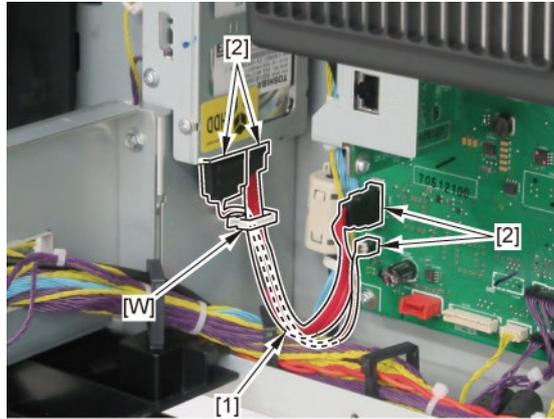
4 pcs



A-4

5. Disconnect [1] HDD CABLE ASS'Y.

[2]	[W]
	
4 pcs	1 pc



Notes when assembling the unit:

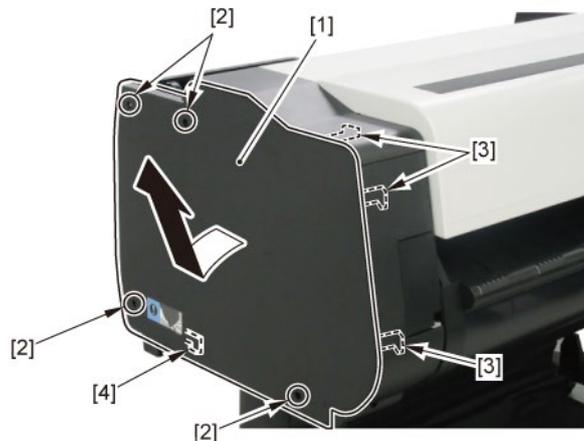
The HDD CABLE ASS'Y must be on top of the other cables.

B

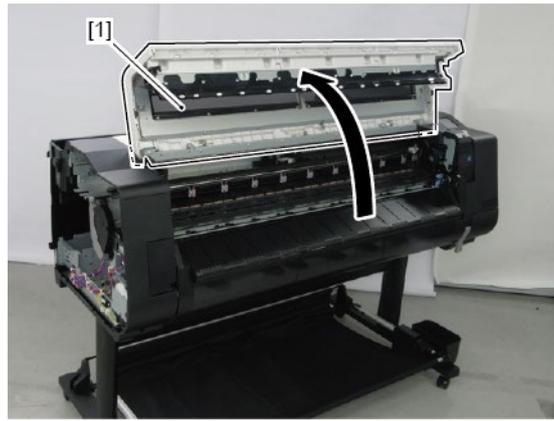
1. Remove a set of [1]

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

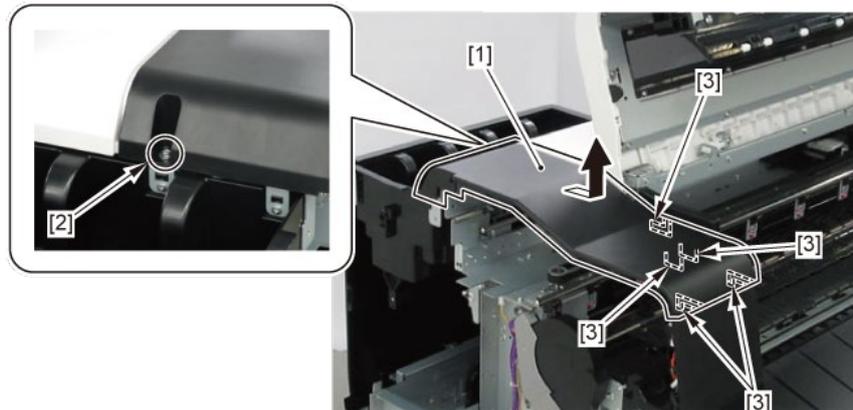


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



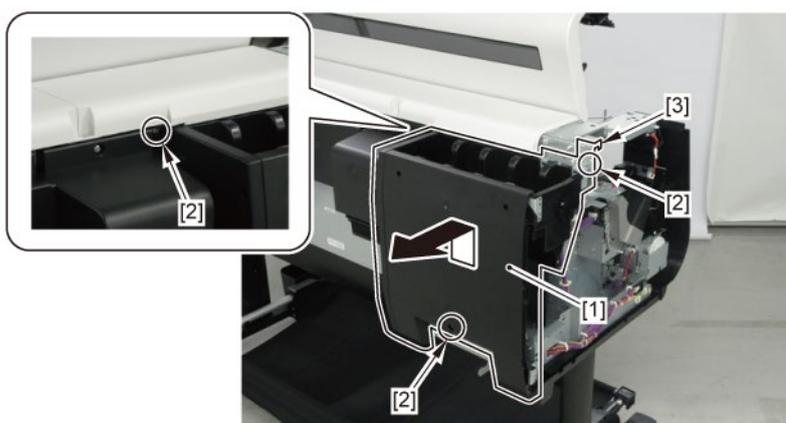
4. Remove [1] a set of
 - BOX, INK TANK
 - COVER, INK TANK BACK
 - COVER, INK TANK L INSIDE.

TX-3100, TX-5310

4. Remove [1] INK TANK COVER UNIT, L.

TX-3200, TX-5320

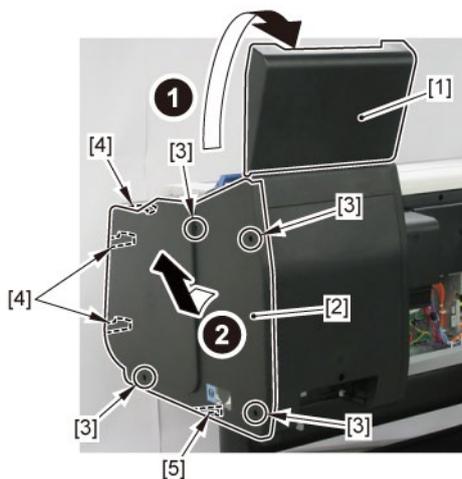
[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

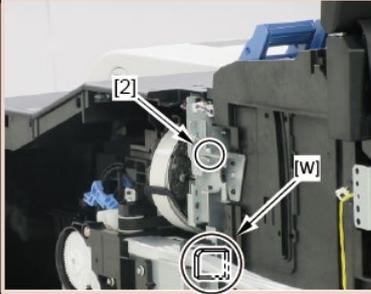
6. Remove a set of [2]
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



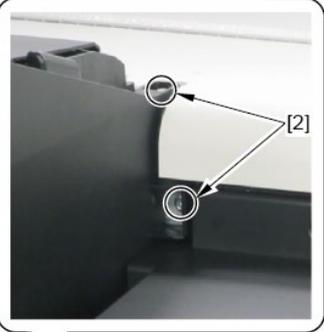
7. Open [1] the right ink unit.

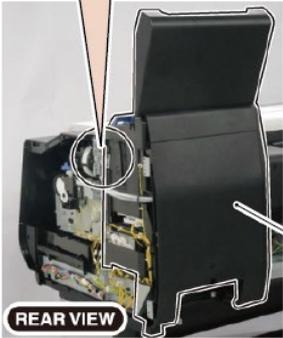
[2]	[W]
	
4 pcs	1 pc



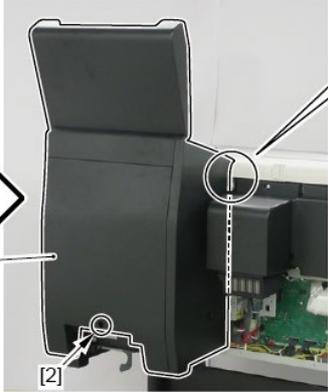
Before opening the unit:

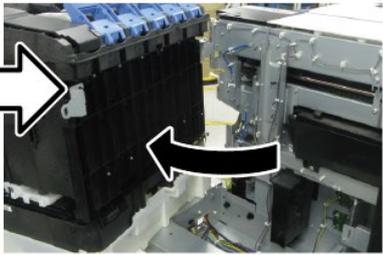
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





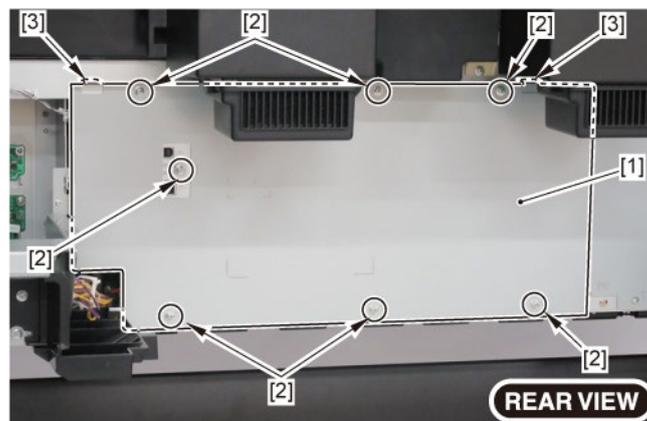
REAR VIEW





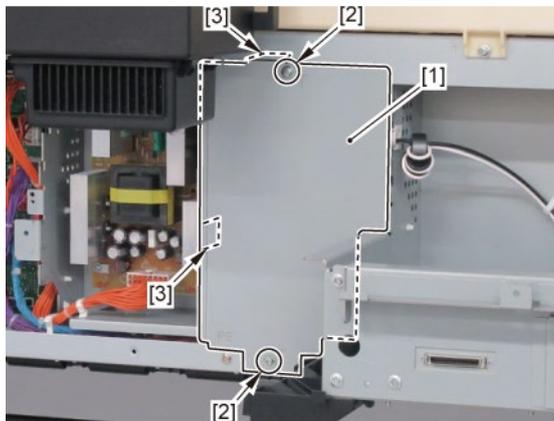
8. Remove [1] the plate.

[2]	[3]
	
7 pcs	2 pcs



9. Remove [1] the plate.

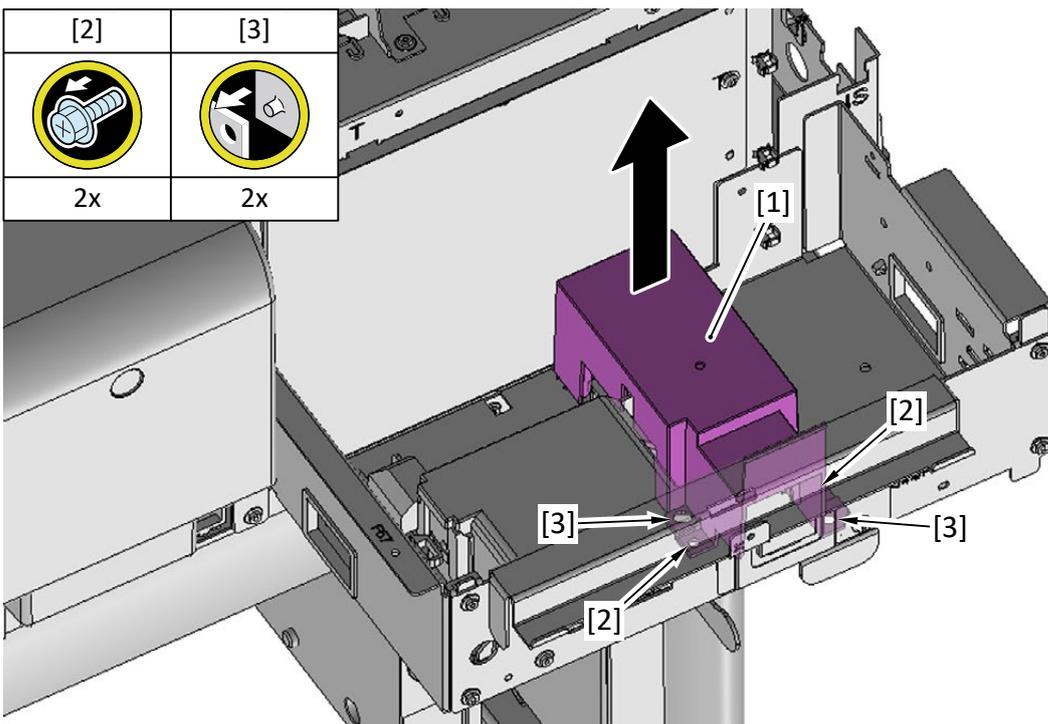
[2]	[3]
	
2 pcs	2 pcs



10. Remove [1] the inlet cover.

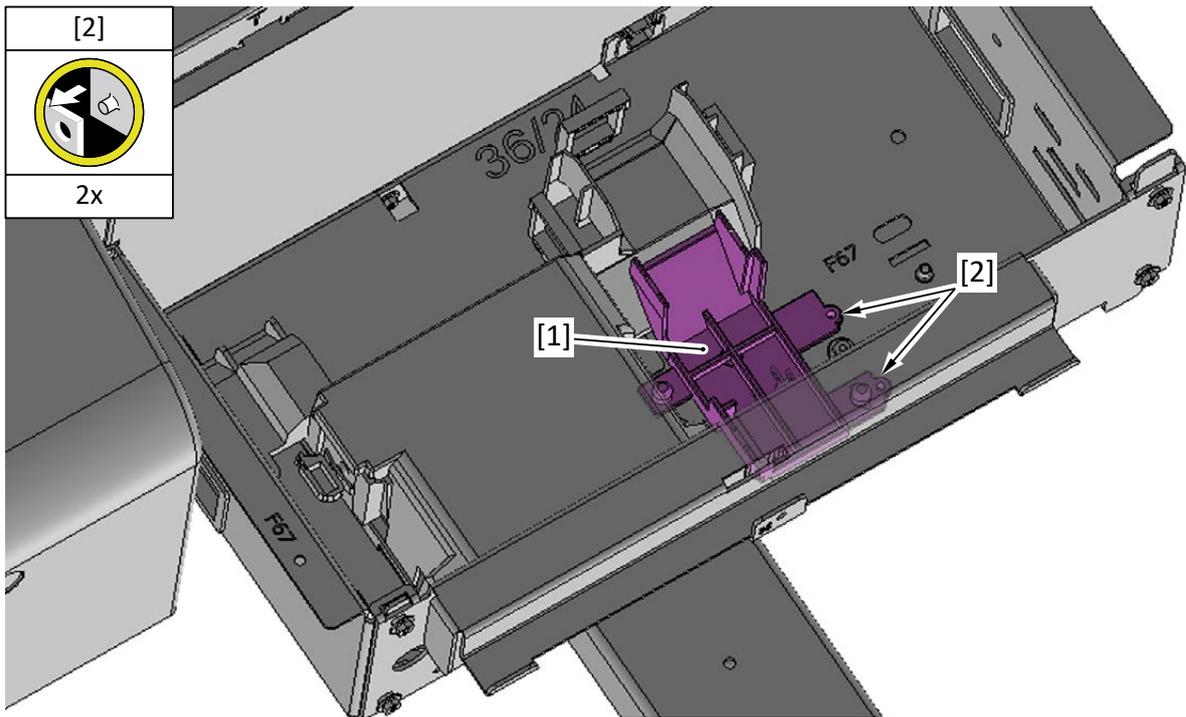
TX-3200, TX-5320

[2]	[3]
	
2x	2x



11. Remove [1] the inlet case.

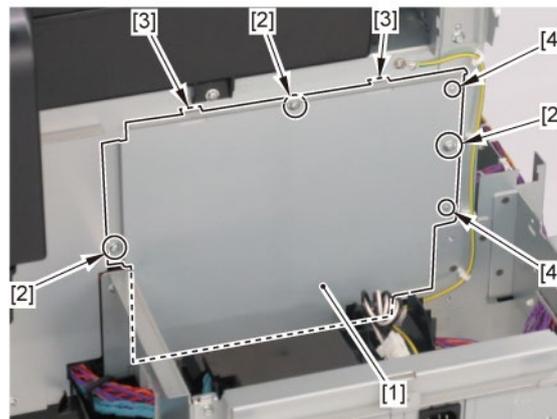
TX-3200, TX-5320



12. Remove [1] the plate.

TX-3200, TX-5320

[2]	[3]	[4]
		
3 pcs	2 pcs	2 pcs

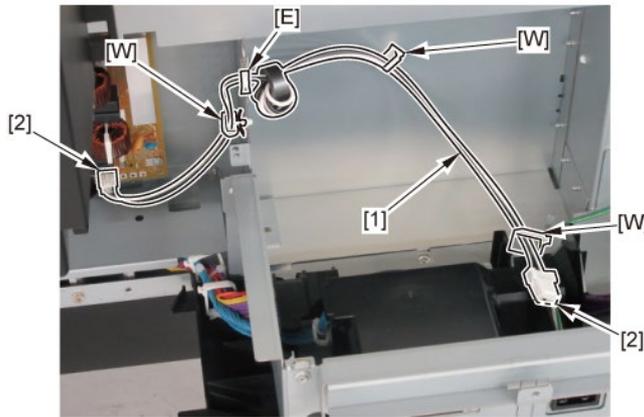


B-1

13. Disconnect [1] HARNESS ASS'Y, INLET RELAY.

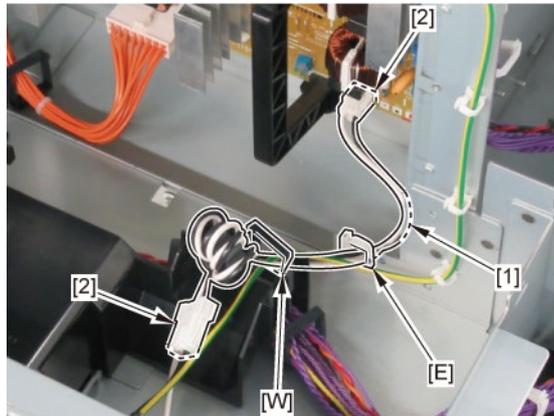
TX-3100, TX-5310

[2]	[W]	[E]
		
2 pcs	3 pcs	1 pc



TX-3200, TX-5320

[2]	[W]	[E]
		
2 pcs	1 pc	1 pc

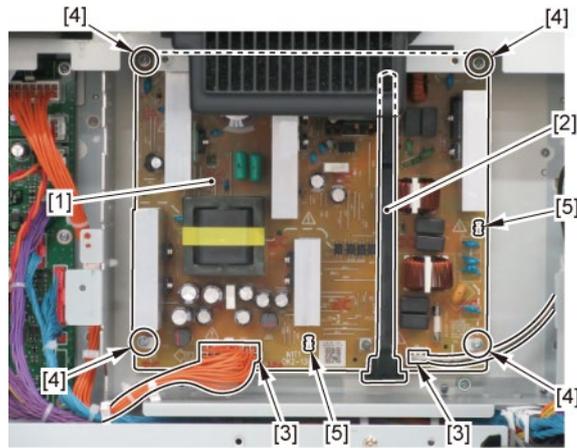


B-2

13. While holding [2] the handle, remove [1] POWER SUPPLY UNIT.

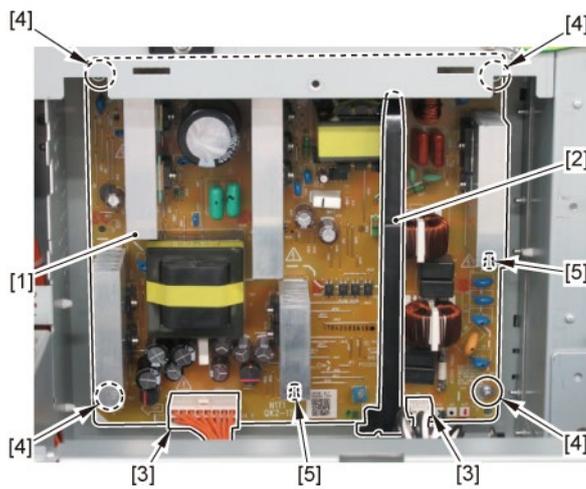
TX-3100, TX-5310

[3]	[4]	[5]
		
2 pcs	4 pcs	2 pcs



TX-3200, TX-5320

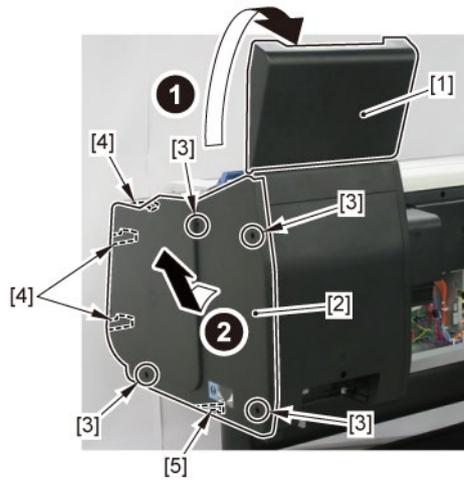
[3]	[4]	[5]
		
2 pcs	4 pcs	2 pcs



C

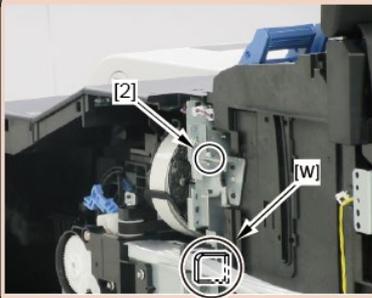
1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



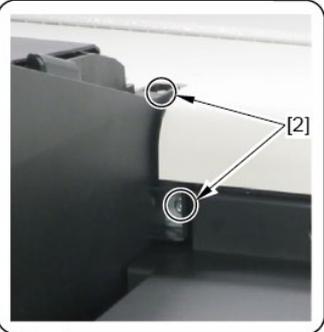
3. Open [1] the right ink unit.

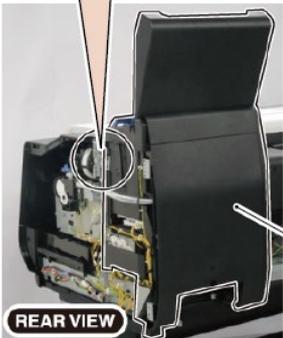
[2]	[W]
	
4 pcs	1 pc



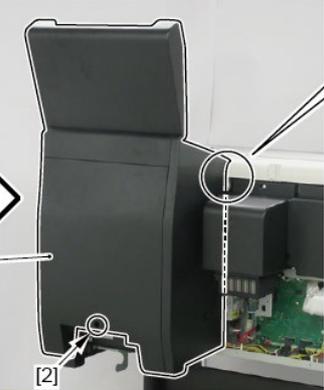
Before opening the unit:

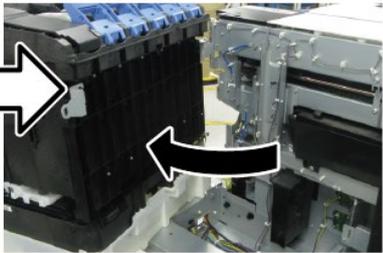
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





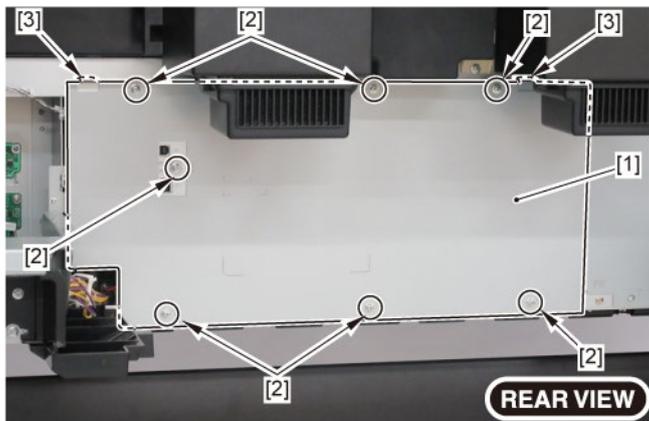
REAR VIEW





4. Remove [1] the plate.

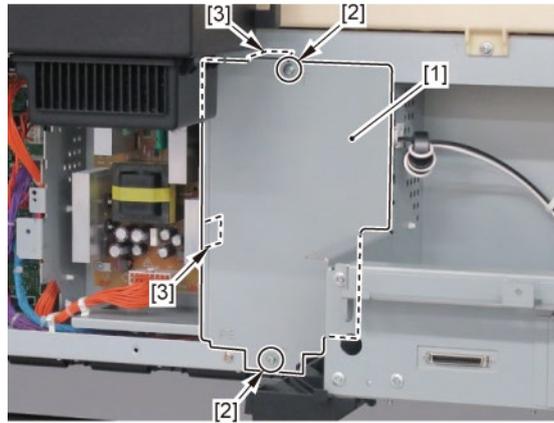
[2]	[3]
	
7 pcs	2 pcs



5. Remove [1] the plate.

TX-3200, TX-5320

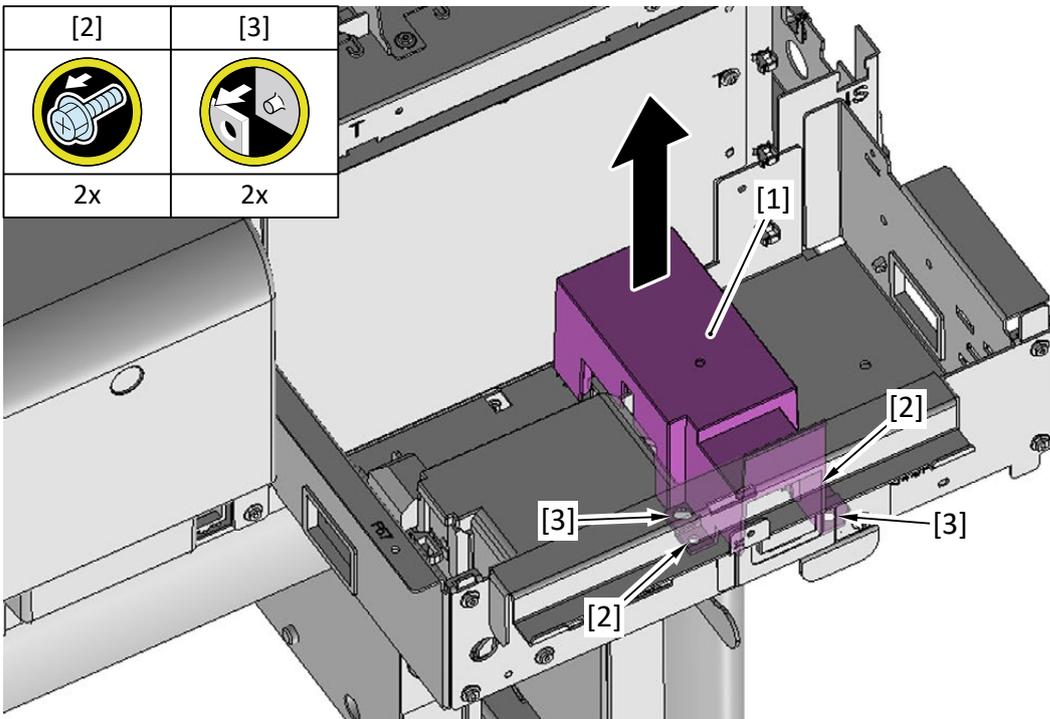
[2]	[3]
	
2 pcs	2 pcs



6. Remove [1] the inlet cover.

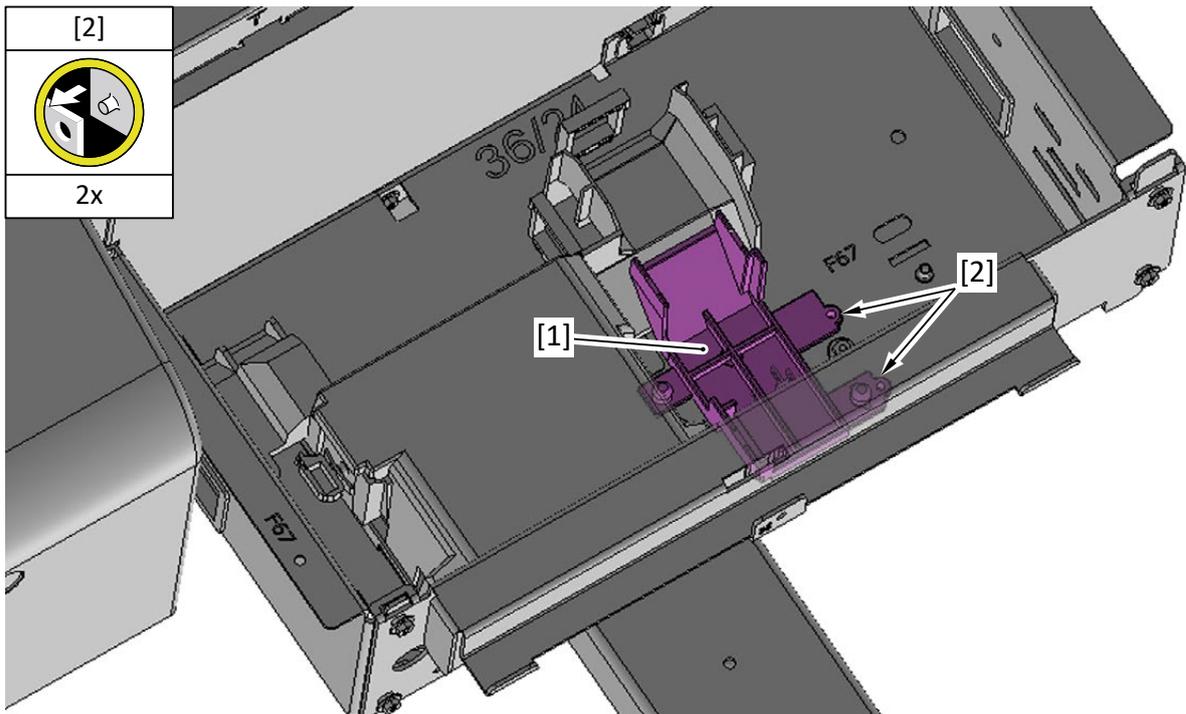
TX-3200, TX-5320

[2]	[3]
	
2x	2x



7. Remove [1] the inlet case.

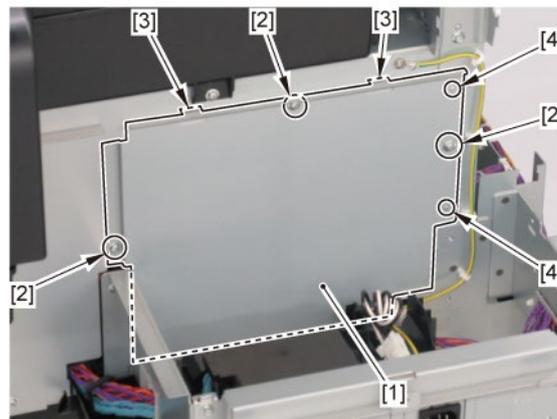
TX-3200, TX-5320



8. Remove [1] the plate.

TX-3200, TX-5320

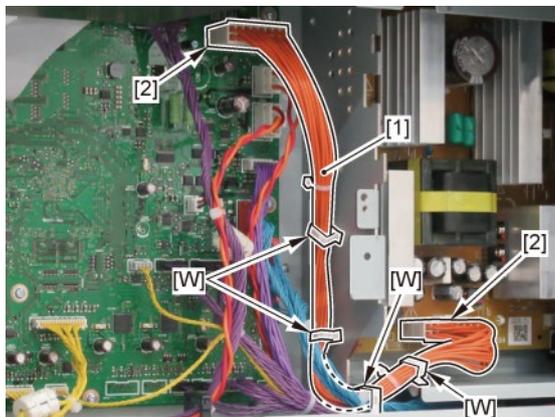
[2]	[3]	[4]
		
3 pcs	2 pcs	2 pcs



9. Disconnect [1] HARNESS ASS'Y, POWER SUPPLY.

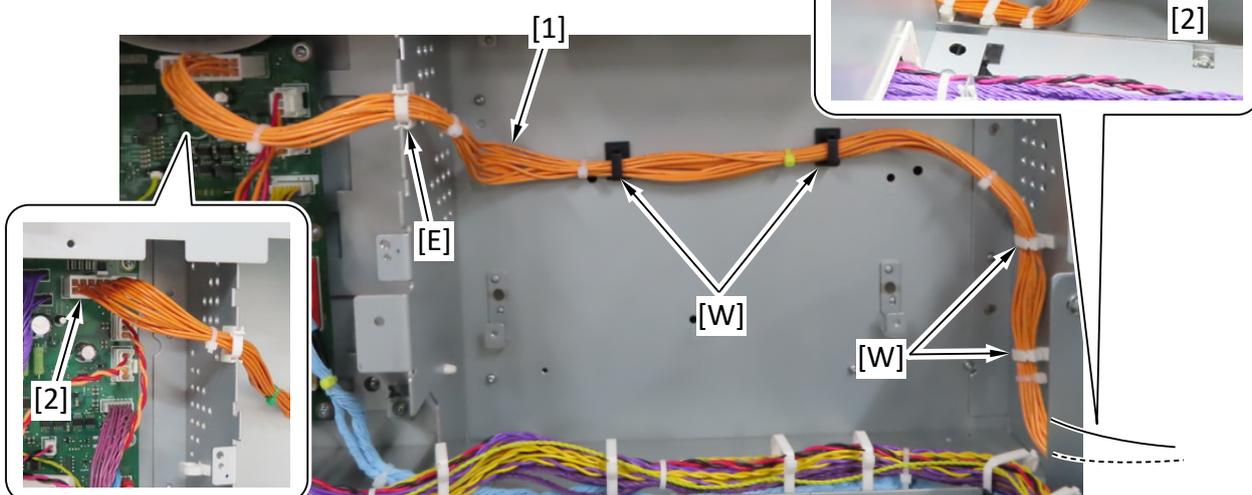
TX-3100, TX-5310

[2]	[W]
	
2 pcs	4 pcs



TX-3200, TX-5320

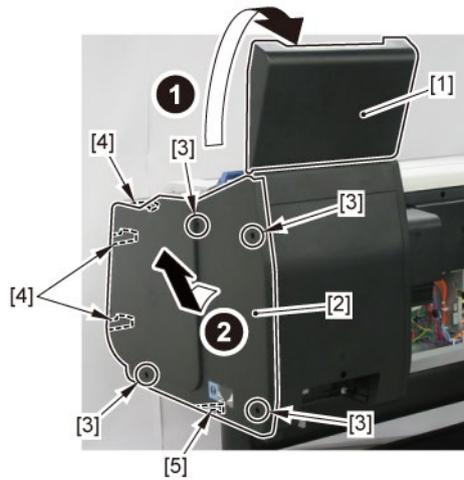
[2]	[W]	[E]
		
2x	6x	1x



D

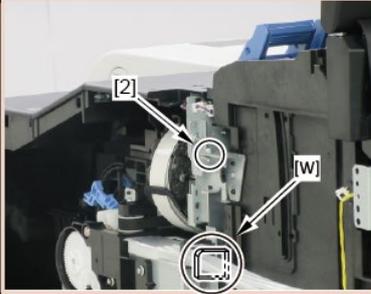
1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



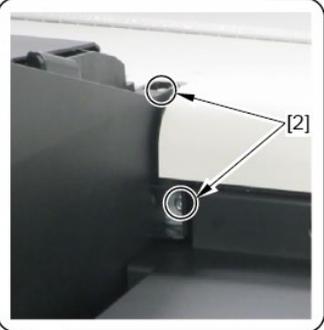
3. Open [1] the right ink unit.

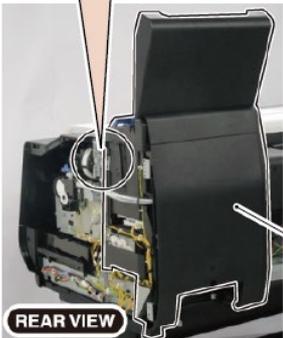
[2]	[W]
	
4 pcs	1 pc



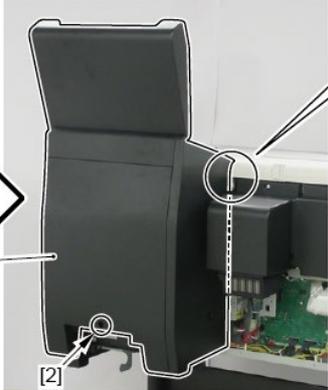
Before opening the unit:

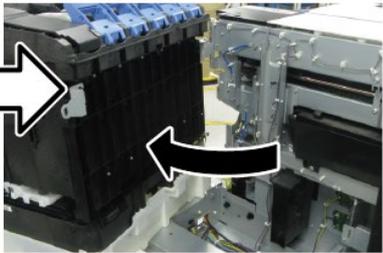
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





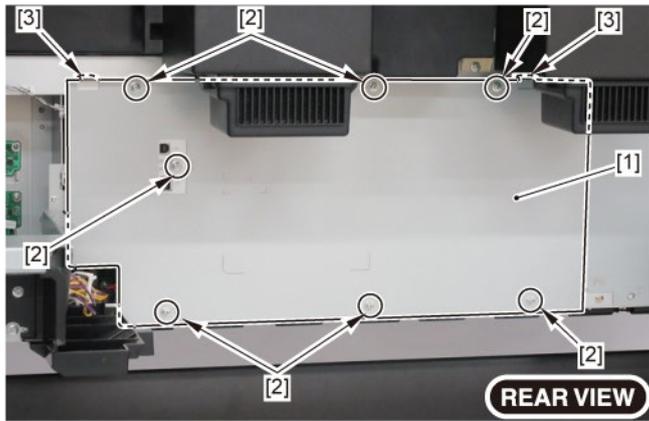
REAR VIEW





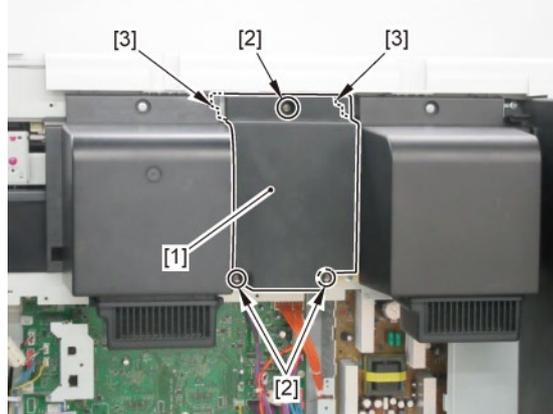
4. Remove [1] the plate.

[2]	[3]
	
7 pcs	2 pcs



5. Remove [1] COVER, BACK W-FAN.

[2]	[3]
	
3 pcs	2 pcs



6. Remove [1] WIRELESS LAN PCB UNIT.

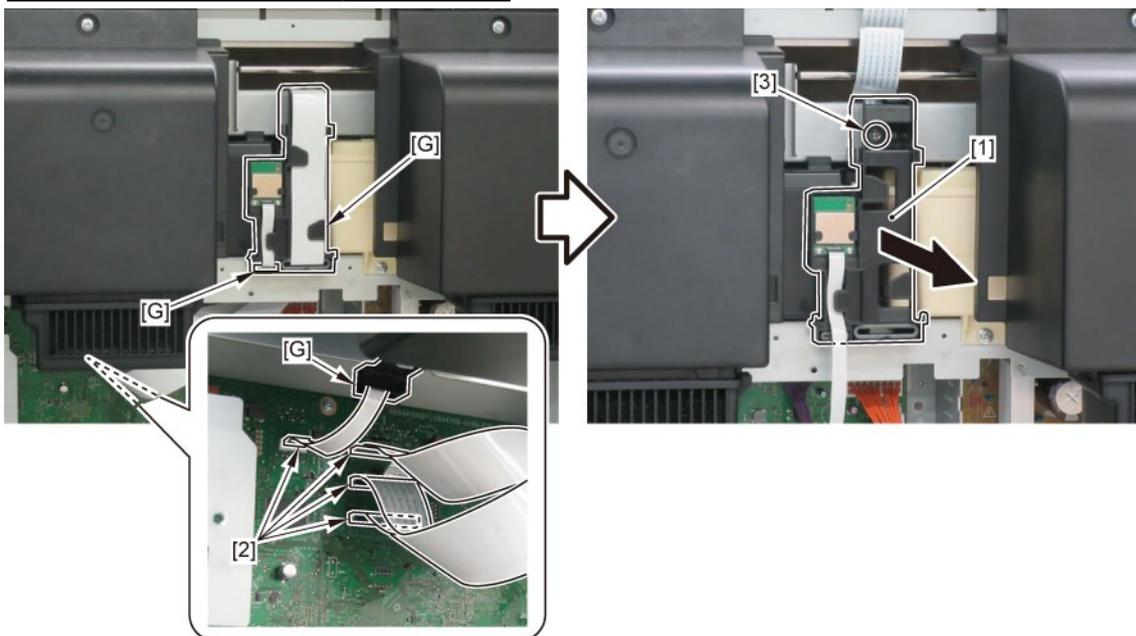
TX-3100, TX-5310

6. Remove [1] a set of

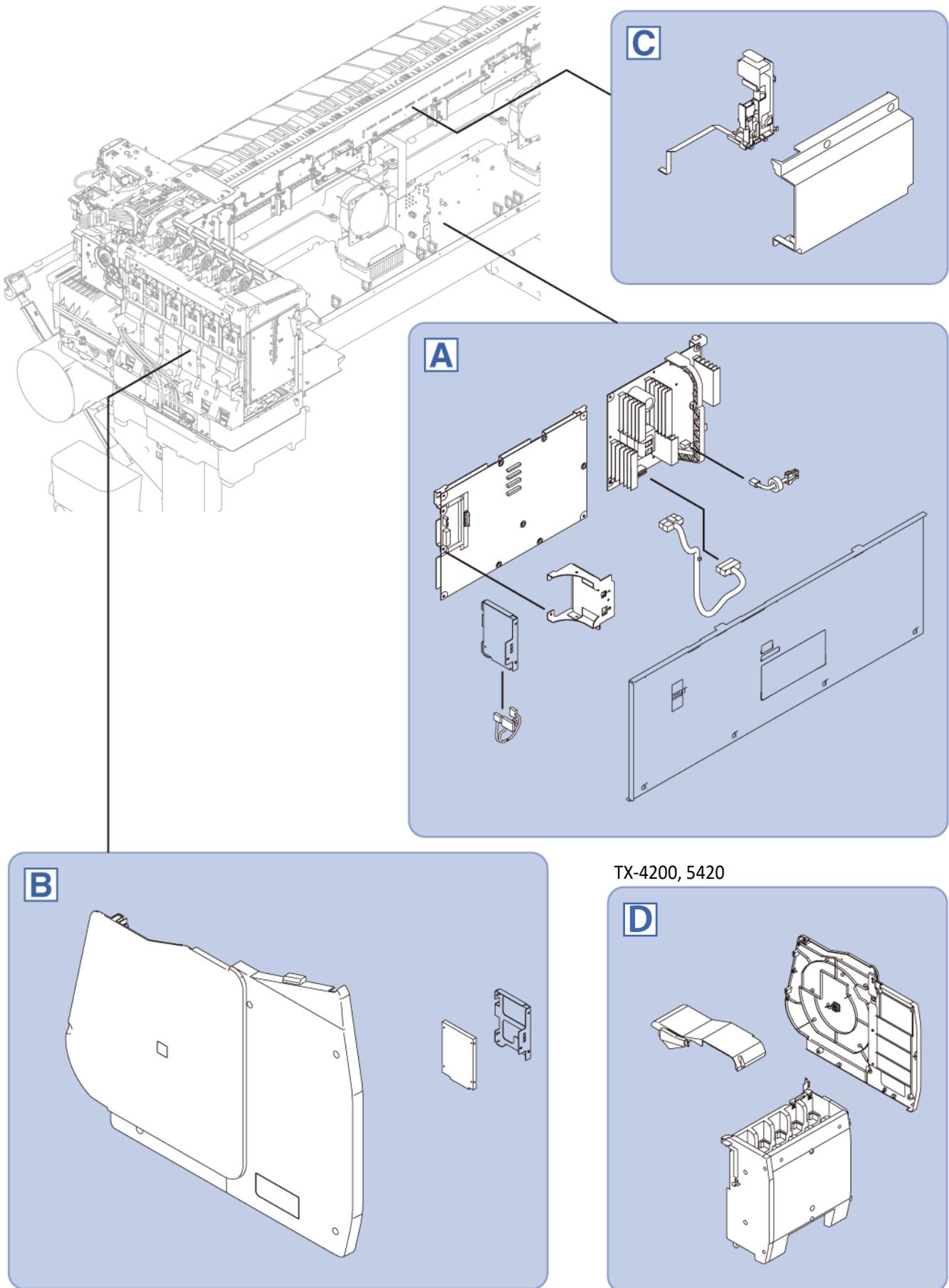
- FFC, WIRELESS LAN
- WIRELESS LAN BOARD ASS'Y

TX-3200, TX-5320

[2]	[3]	[G]
		
4 pcs	1 pc	3 pcs

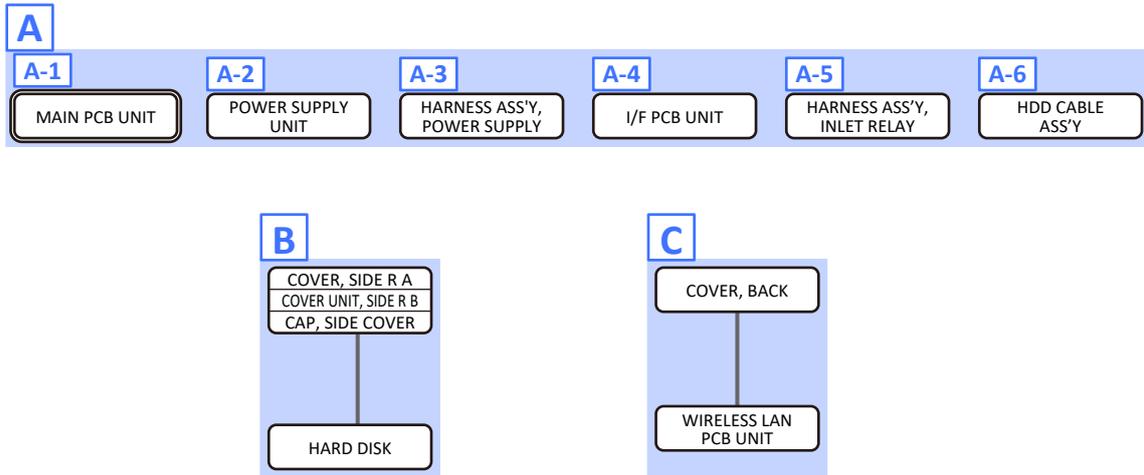


7. Main PCB Unit, Power Supply Unit, Hard Disk Drive (44" model)

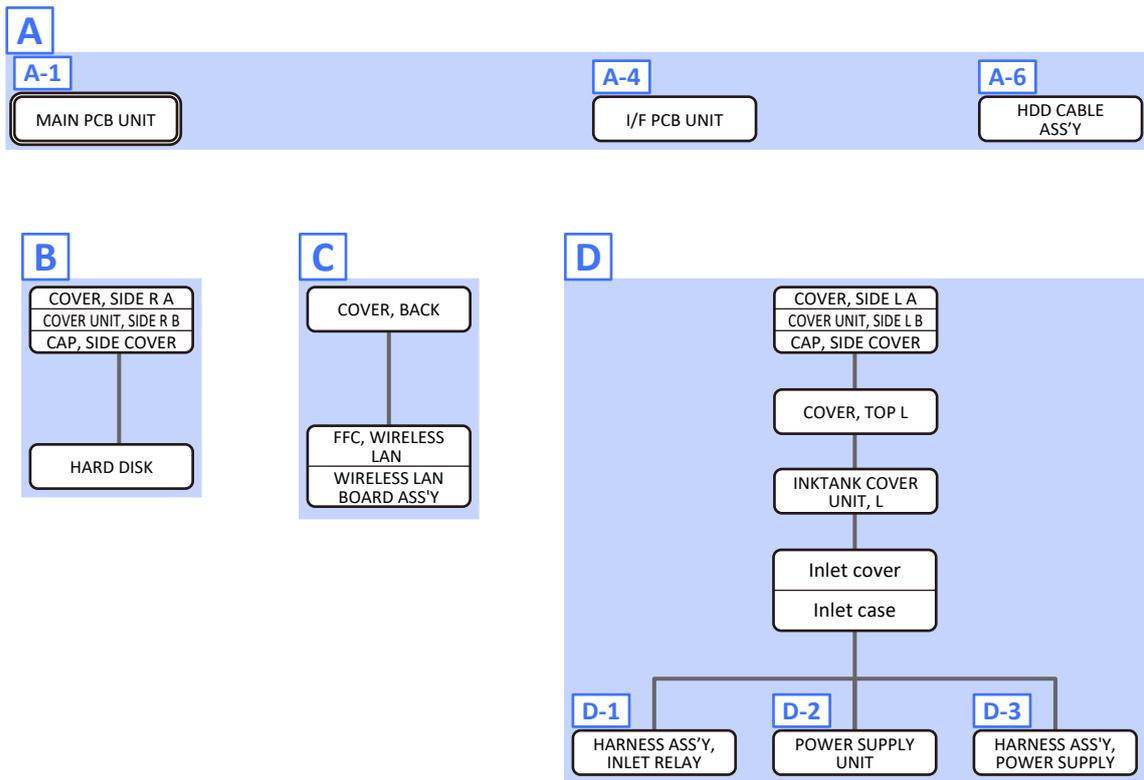


TX-4200, 5420

TX-4100, TX-5410



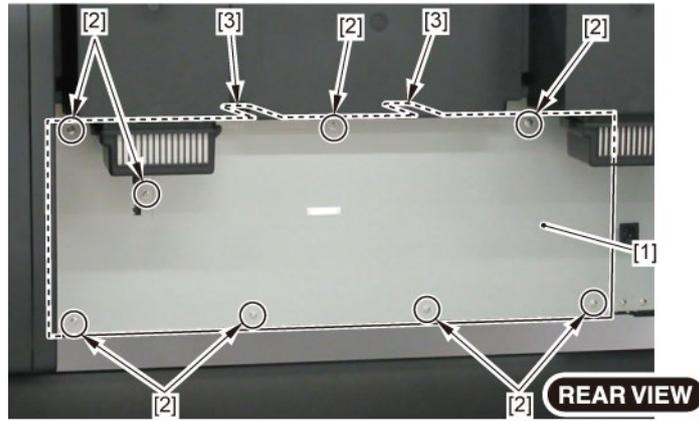
TX-4200, TX-5420



A

1. Remove [1] the plate.

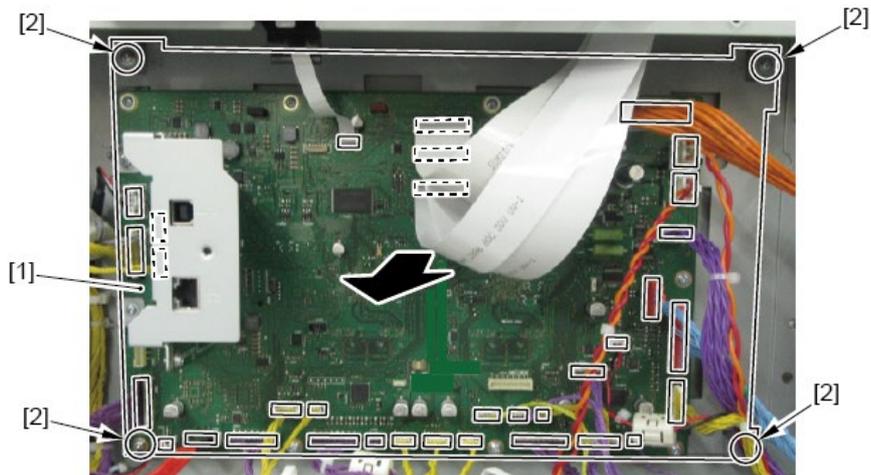
[2]	[3]
	
8 pcs	2 pcs



A-1

2. Remove the MAIN PCB UNIT.

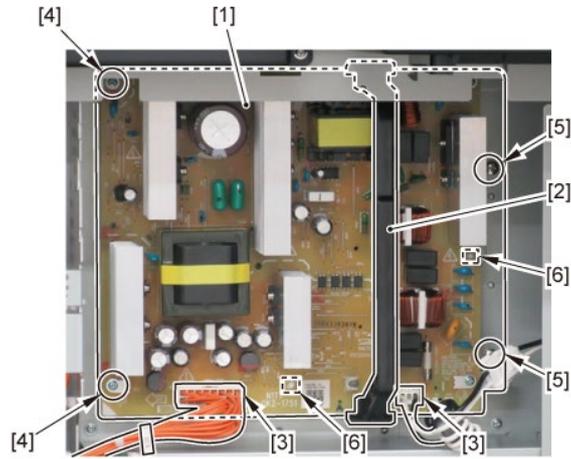
[1]	[2]
	
ALL	4 pcs



A-2 (TX-4100, TX-5410)

2. While holding [2] the handle, remove [1] POWER SUPPLY UNIT.

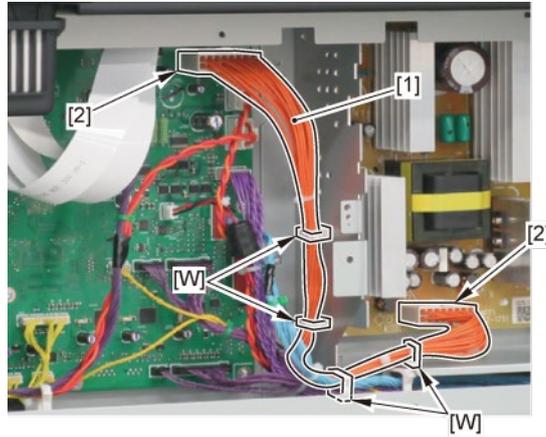
[3]	[4]	[5]	[6]
			
2 pcs	2 pcs	2 pcs	2 pcs



A-3 (TX-4100, TX-5410)

2. Disconnect [1] HARNESS ASS'Y, POWER SUPPLY.

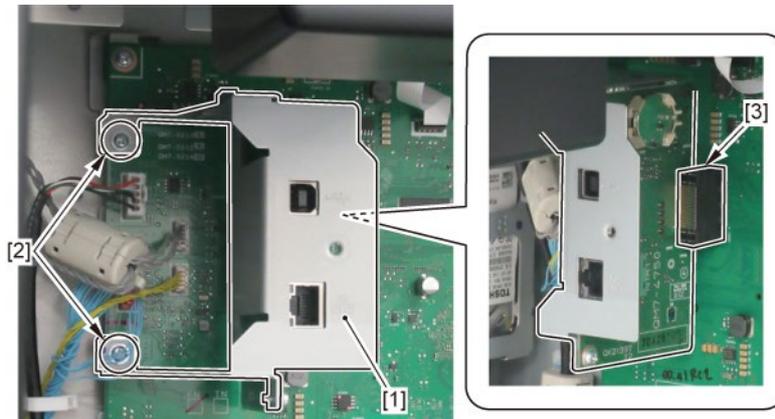
[2]	[W]
	
2 pcs	4 pcs



A-4

2. Remove [1] I/F PCB UNIT.

[2]	[3]
	
2 pcs	1 pc

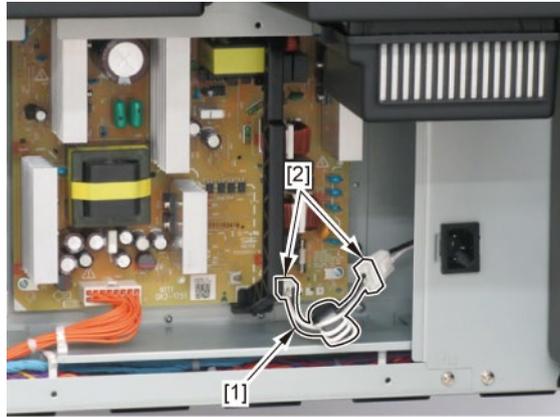


A-5 (TX-4100, TX-5410)

2. Disconnect [1] HARNESS ASS'Y, INLET RELAY.

[2]

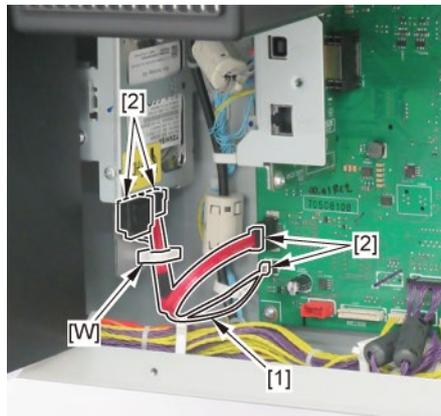
2 pcs



A-6

2. Disconnect [1] HDD CABLE ASS'Y.

[2]	[W]
	
4 pcs	1 pc



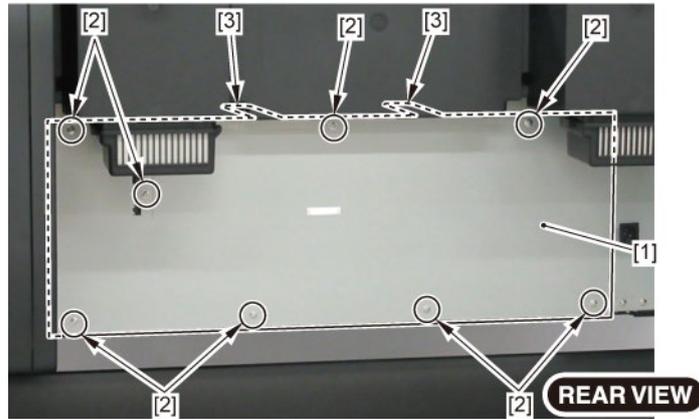
Notes when assembling the unit:

The HDD CABLE ASS'Y must be on top of the other cables.

B

1. Remove [1] the plate.

[2]	[3]
	
8 pcs	2 pcs

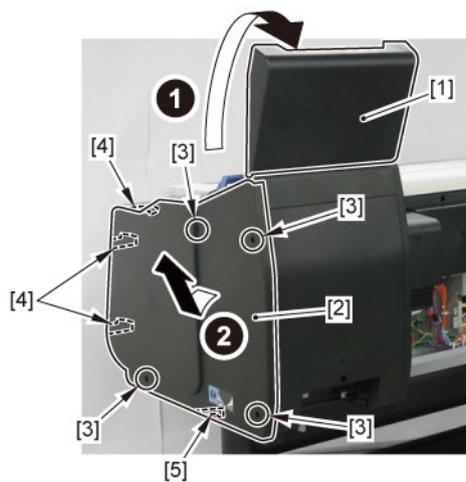


2. Open [1] the right ink tank cover.

3. Remove [2] a set of

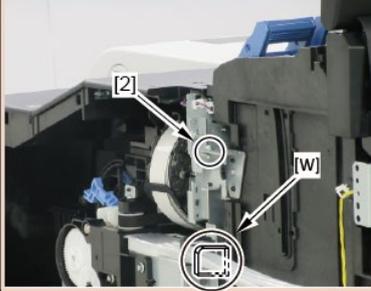
- COVER, SIDE R A
- COVER UNIT, SIDE R B
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



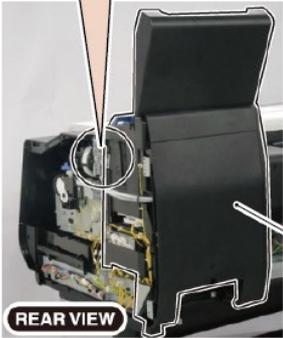
4. Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc

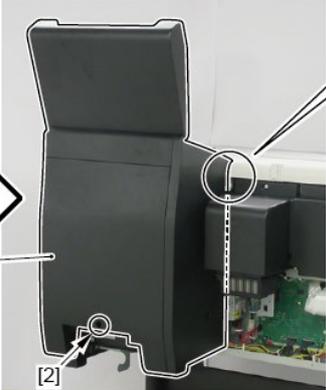


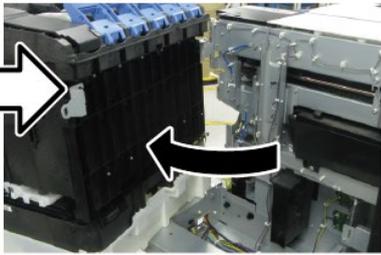
Before opening the unit:

- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.



REAR VIEW





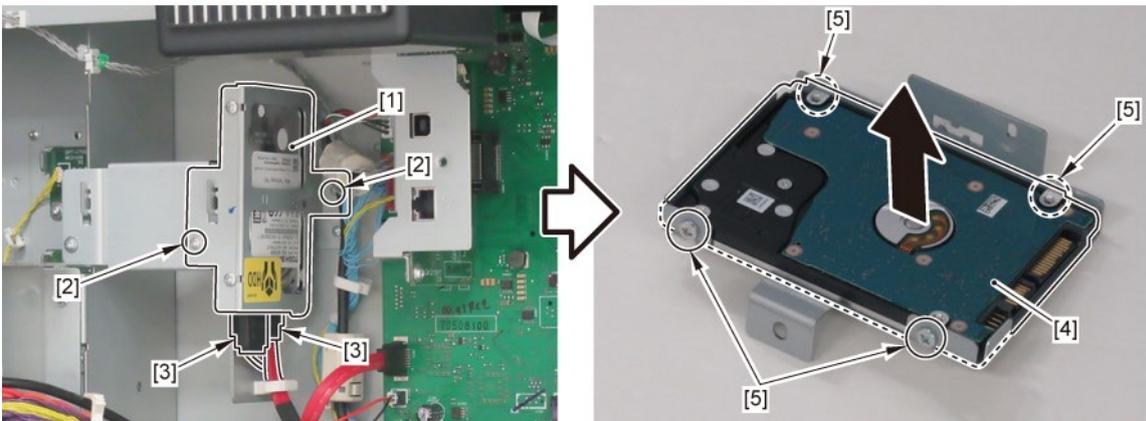
5. Remove [1] the bracket (with the HARD DISK).

[2]	[3]
	
2 pcs	2 pcs

6. Remove [4] HARD DISK.

[5]

4 pcs

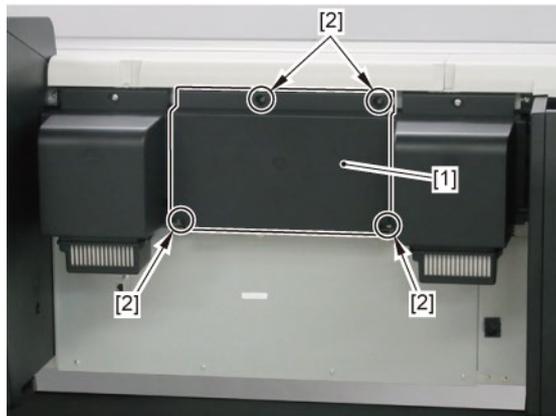


C

1. Remove [1] COVER, BACK.

[2]

4 pcs



2. Remove [1] the plate.

[2]	[3]
	
8 pcs	2 pcs



3. Remove [1] WIRELESS LAN PCB UNIT.

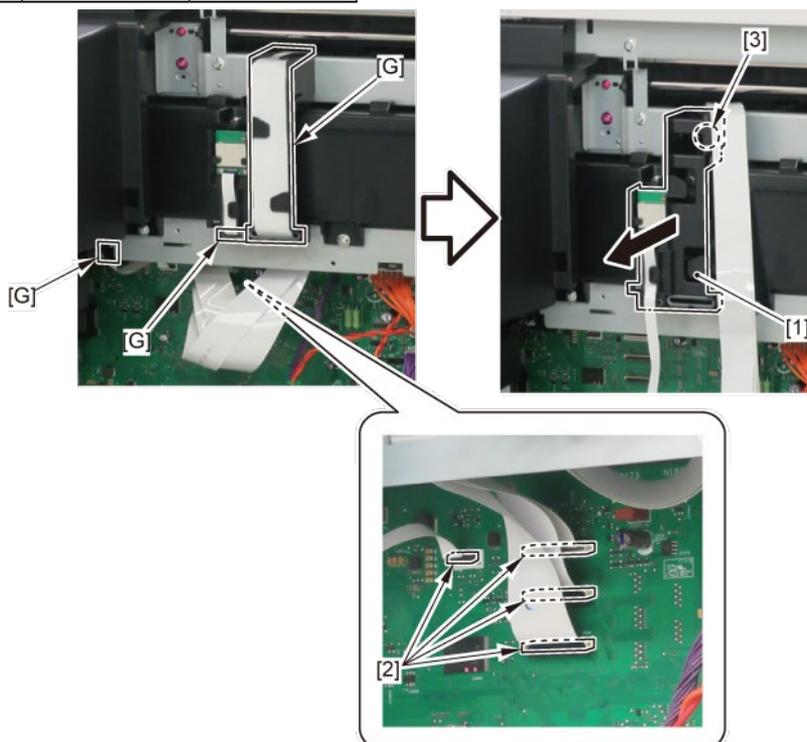
TX-4100, TX-5410

3. Remove [1] a set of

- FFC, WIRELESS LAN
- WIRELESS LAN BOARD ASS'Y.

TX-4200, TX-5420

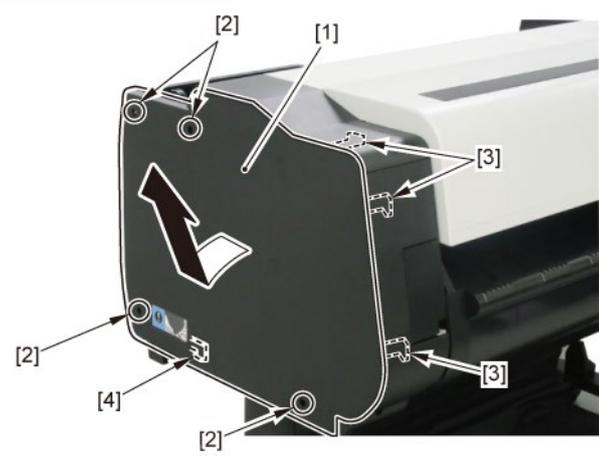
[2]	[3]	[G]
		
4 pcs	1 pc	3 pcs



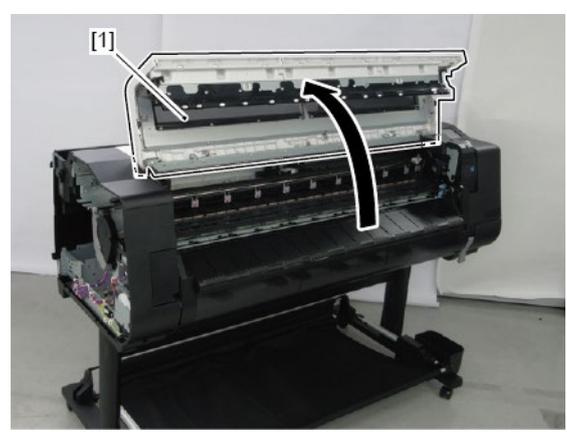
D (TX-4200, TX-5420)

1. Remove [1] a set of
 - COVER, SIDE L A
 - COVER UNIT, SIDE L B
 - CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

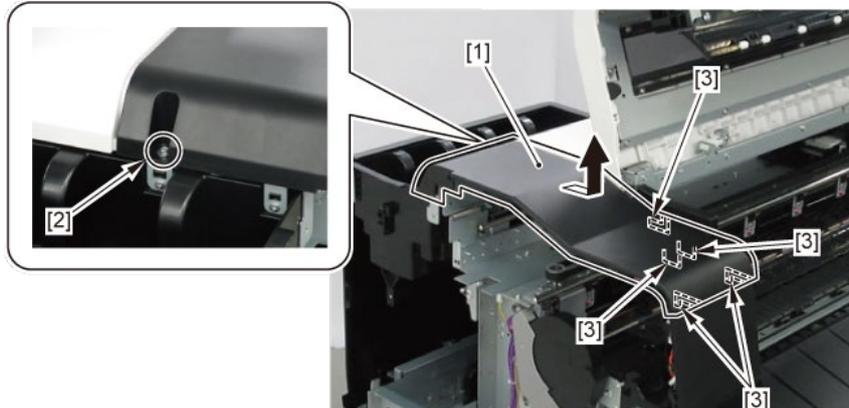


2. Open [1] the access cover.



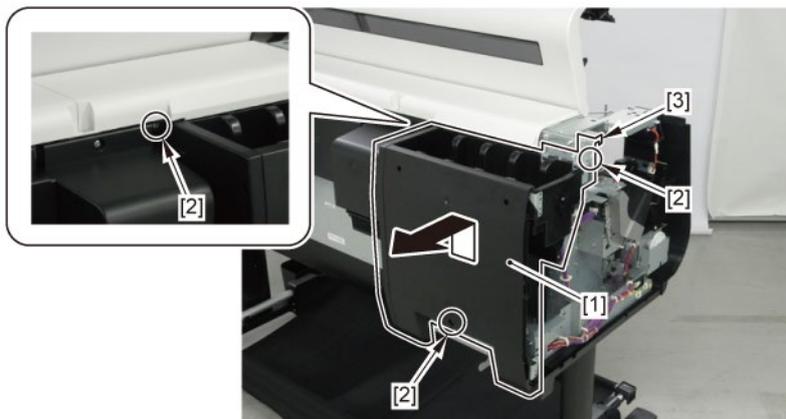
3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs

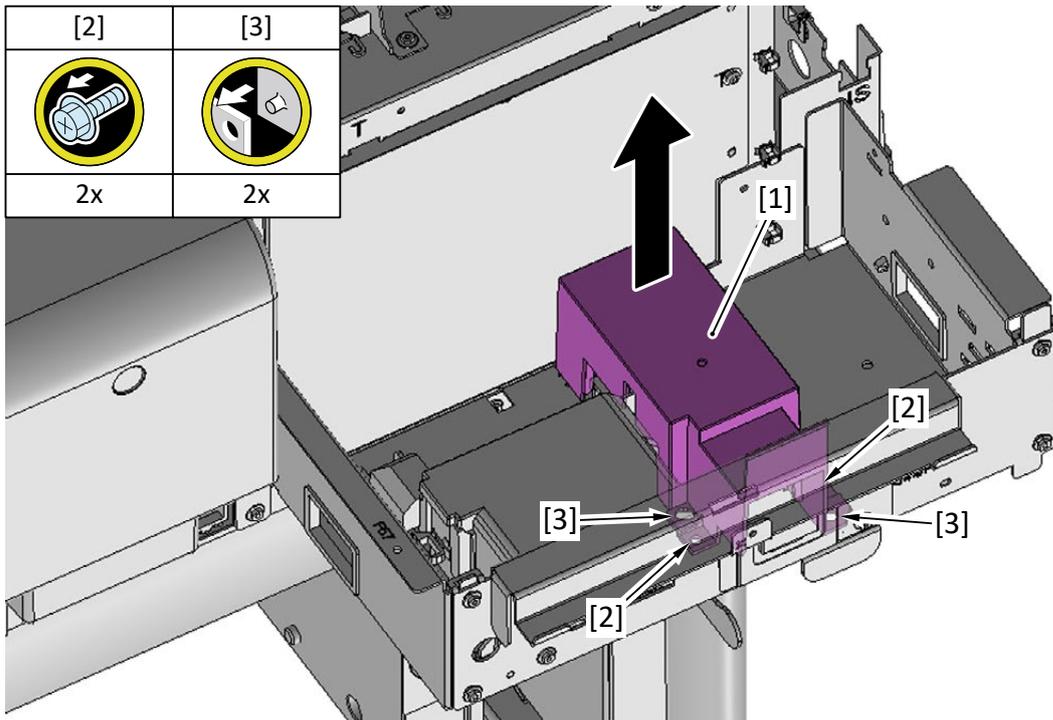


4. Remove [1] INKTANK COVER UNIT, L.

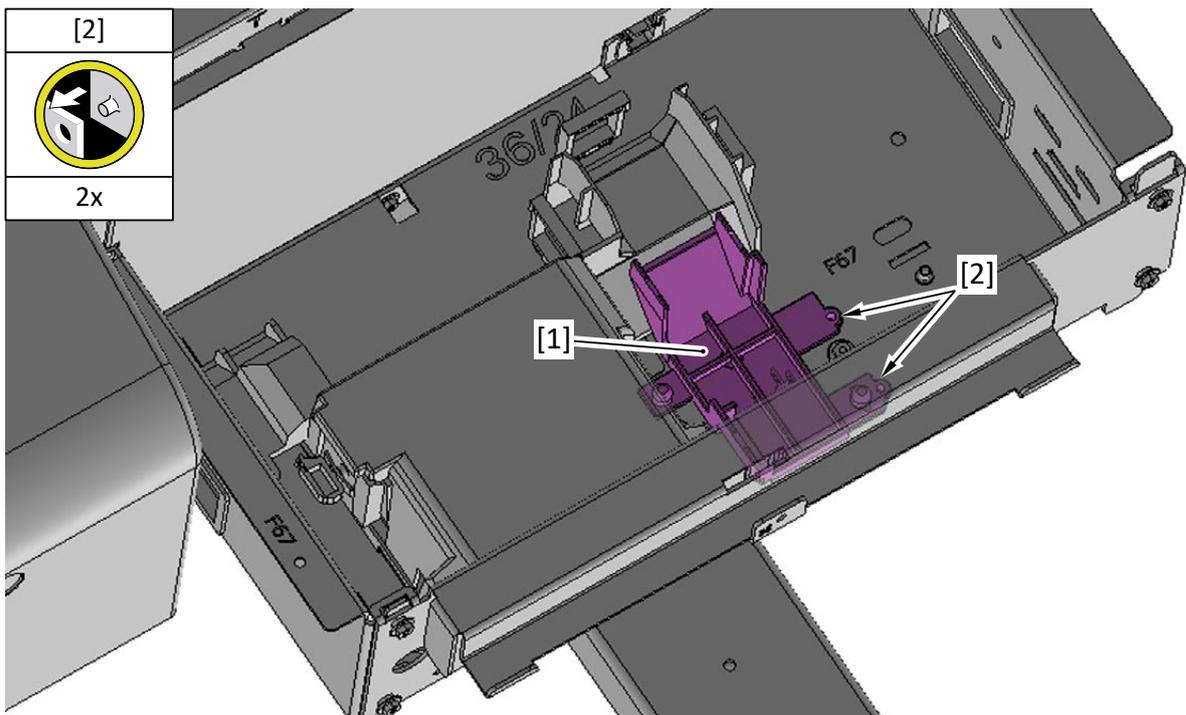
[2]	[3]
	
3 pcs	1 pc



5. Remove [1] the inlet cover.

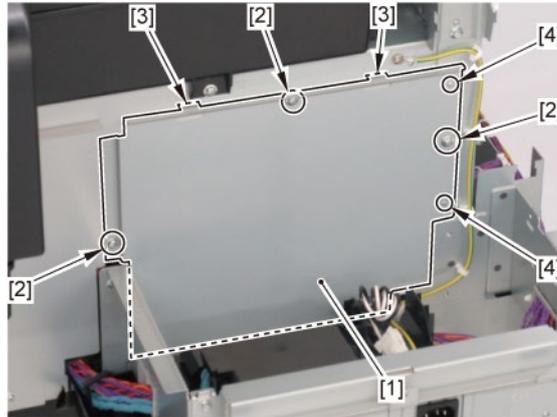


6. Remove [1] the inlet case.



7. Remove [1] the plate.

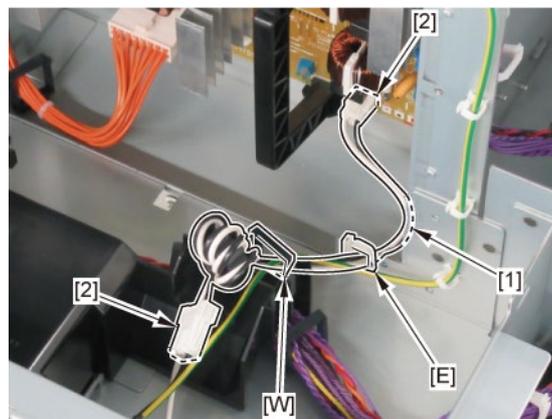
[2]	[3]	[4]
		
3 pcs	2 pcs	2 pcs



D-1

8. Disconnect [1] HARNESS ASS'Y, INLET RELAY.

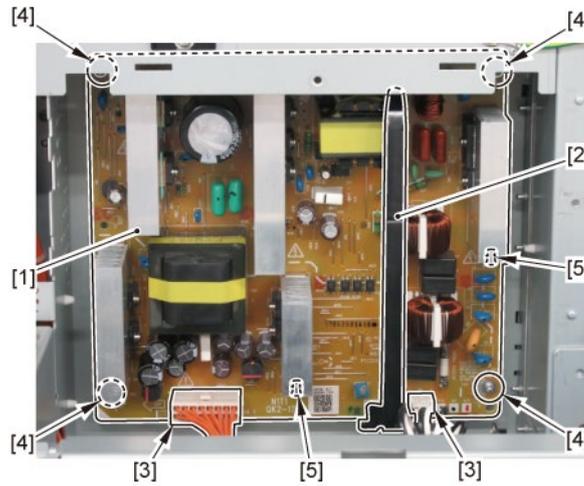
[2]	[W]	[E]
		
2 pcs	1 pc	1 pc



D-2

8. While holding [2] the handle, remove [1] POWER SUPPLY UNIT.

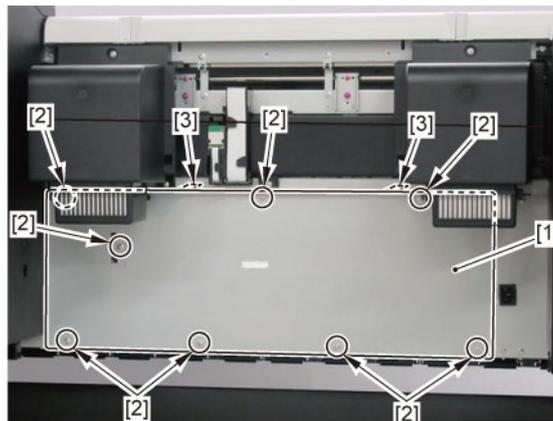
[3]	[4]	[5]
		
2 pcs	4 pcs	2 pcs



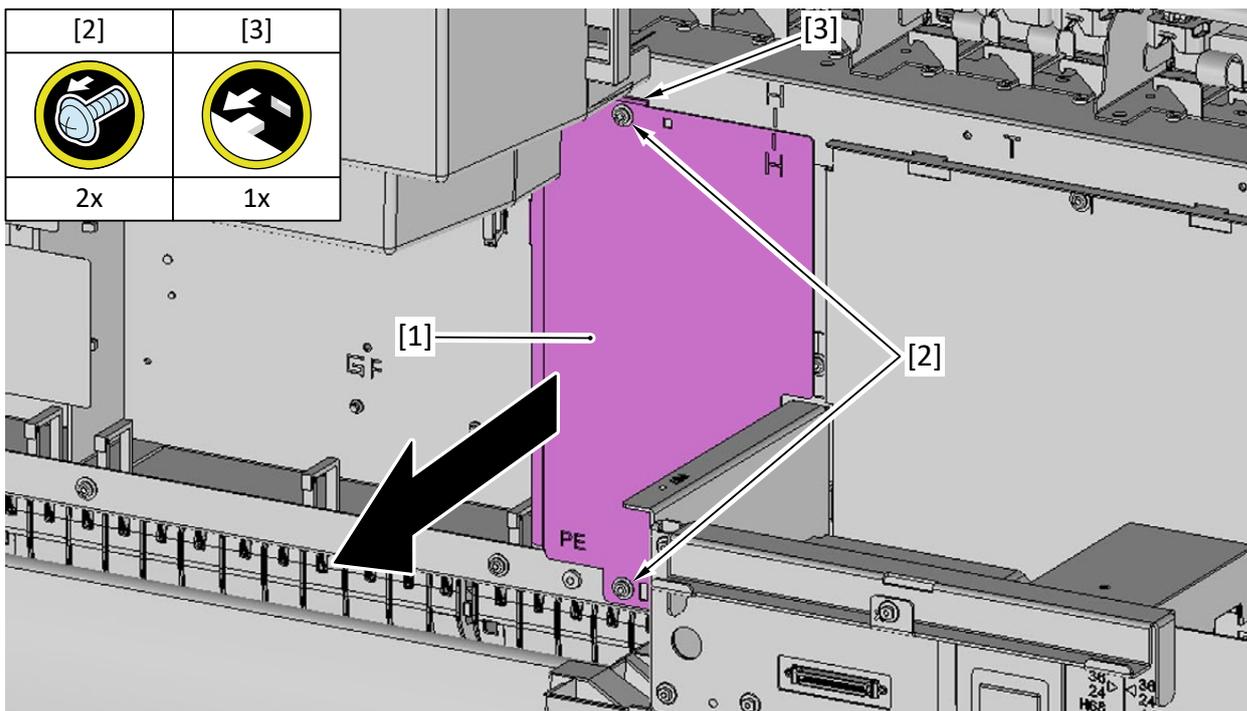
D-3

8. Remove [1] the plate.

[2]	[3]
	
8 pcs	2 pcs

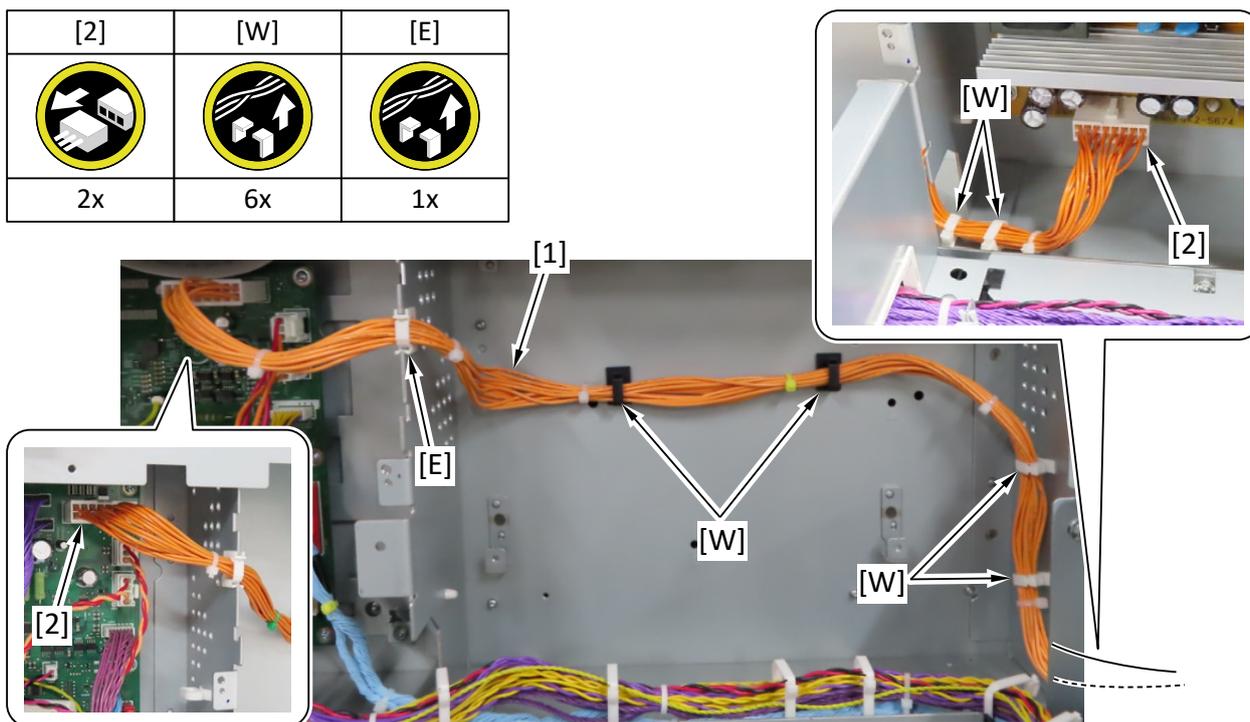


9. Remove [1] the plate.

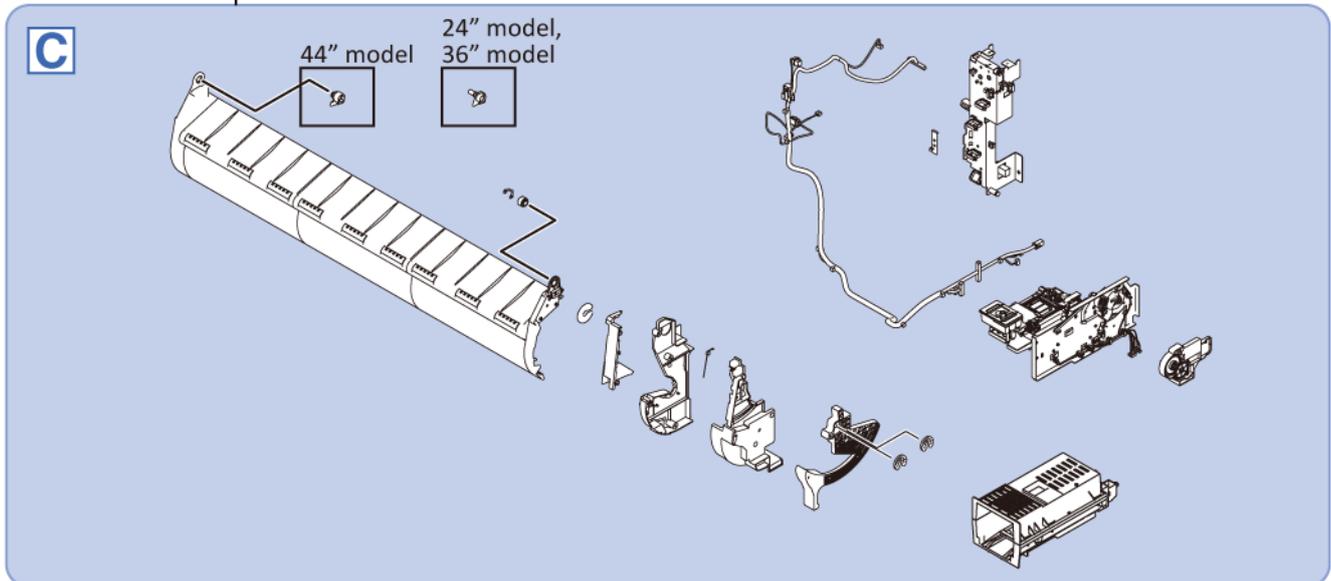
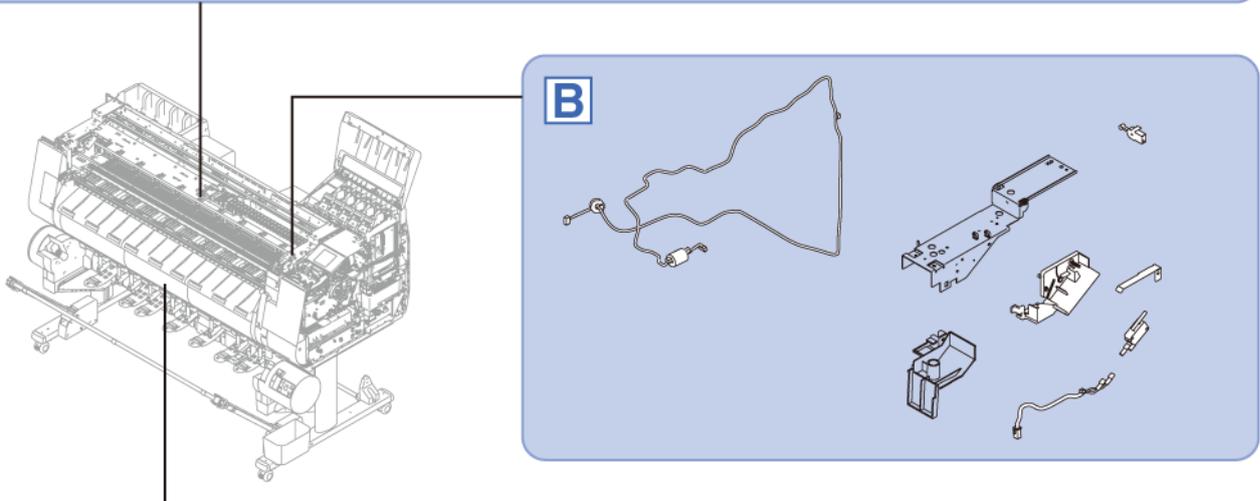
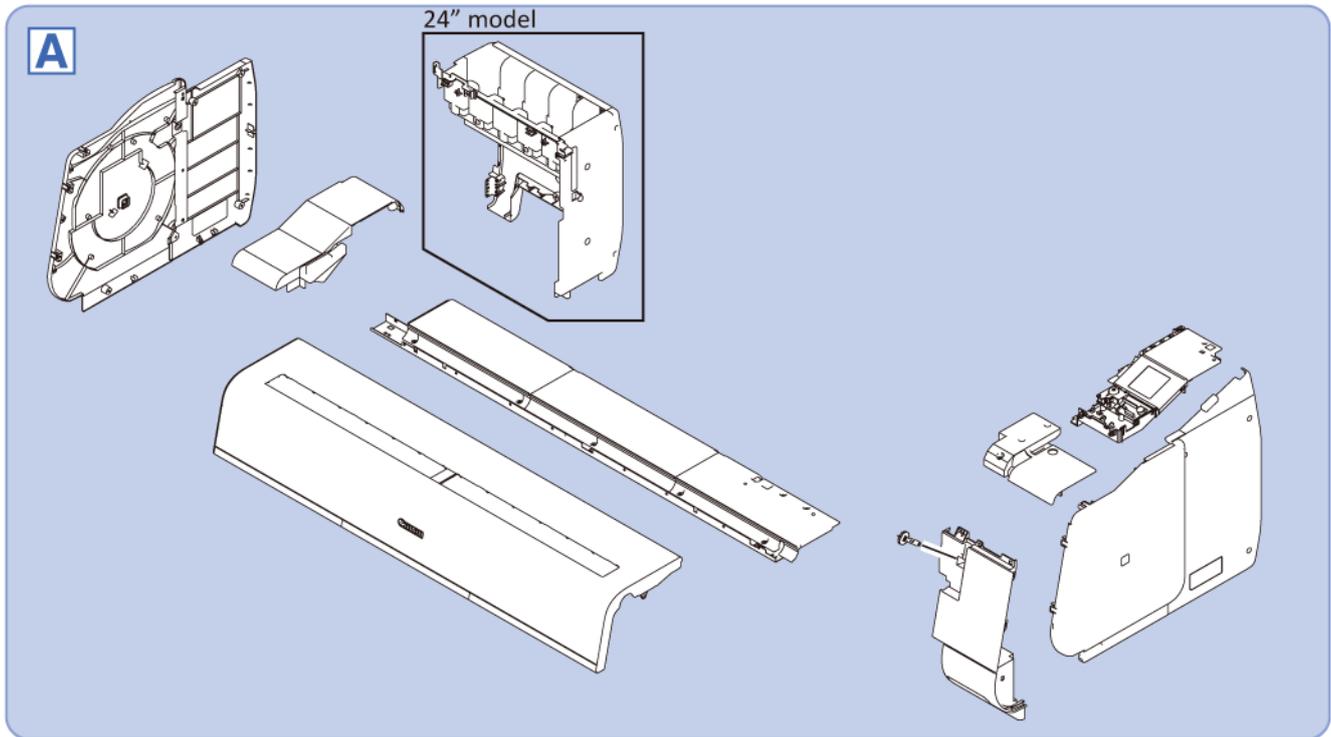


10. Disconnect [1] HARNESS ASS'Y, POWER SUPPLY.

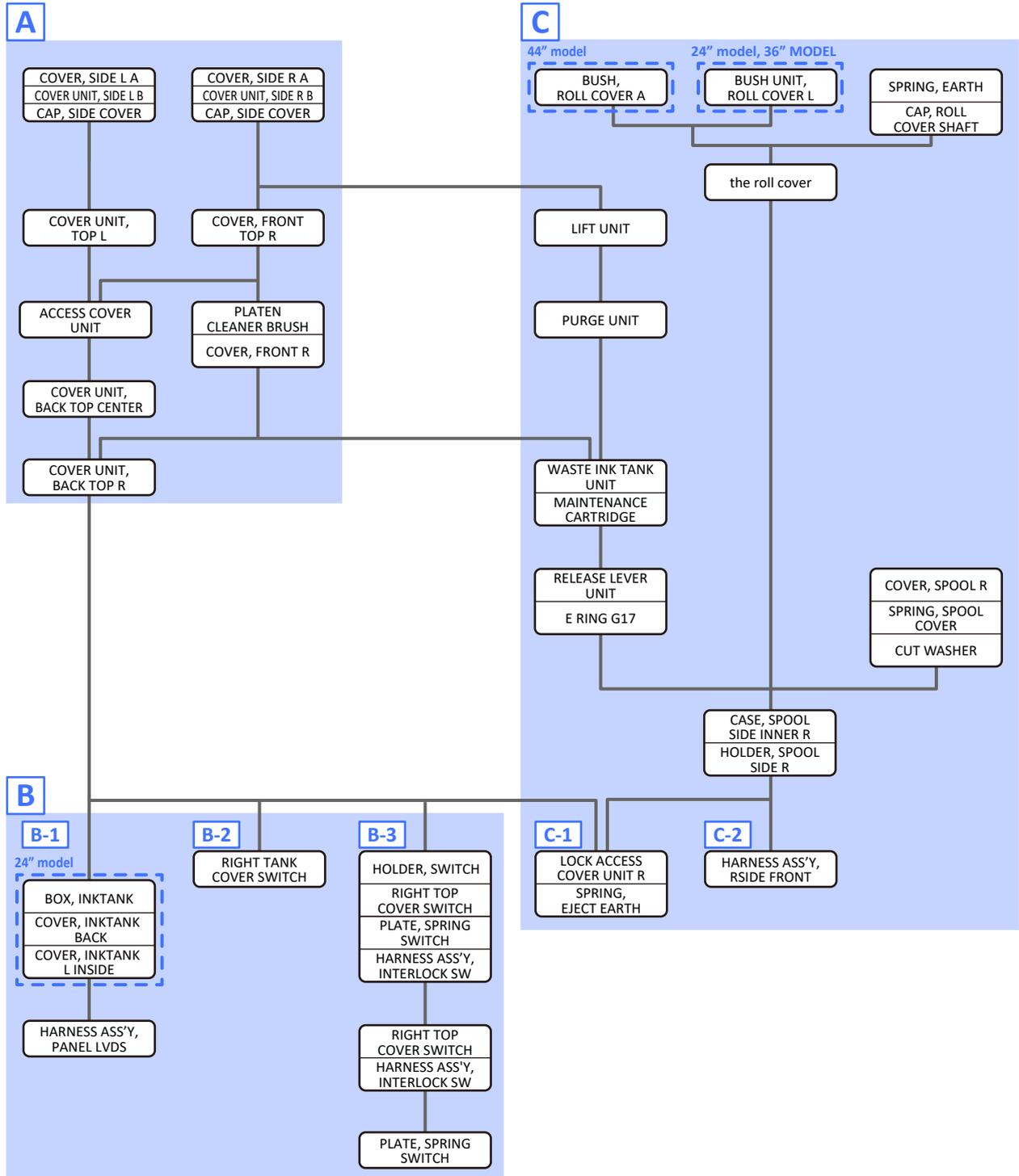
[2]	[W]	[E]
		
2x	6x	1x



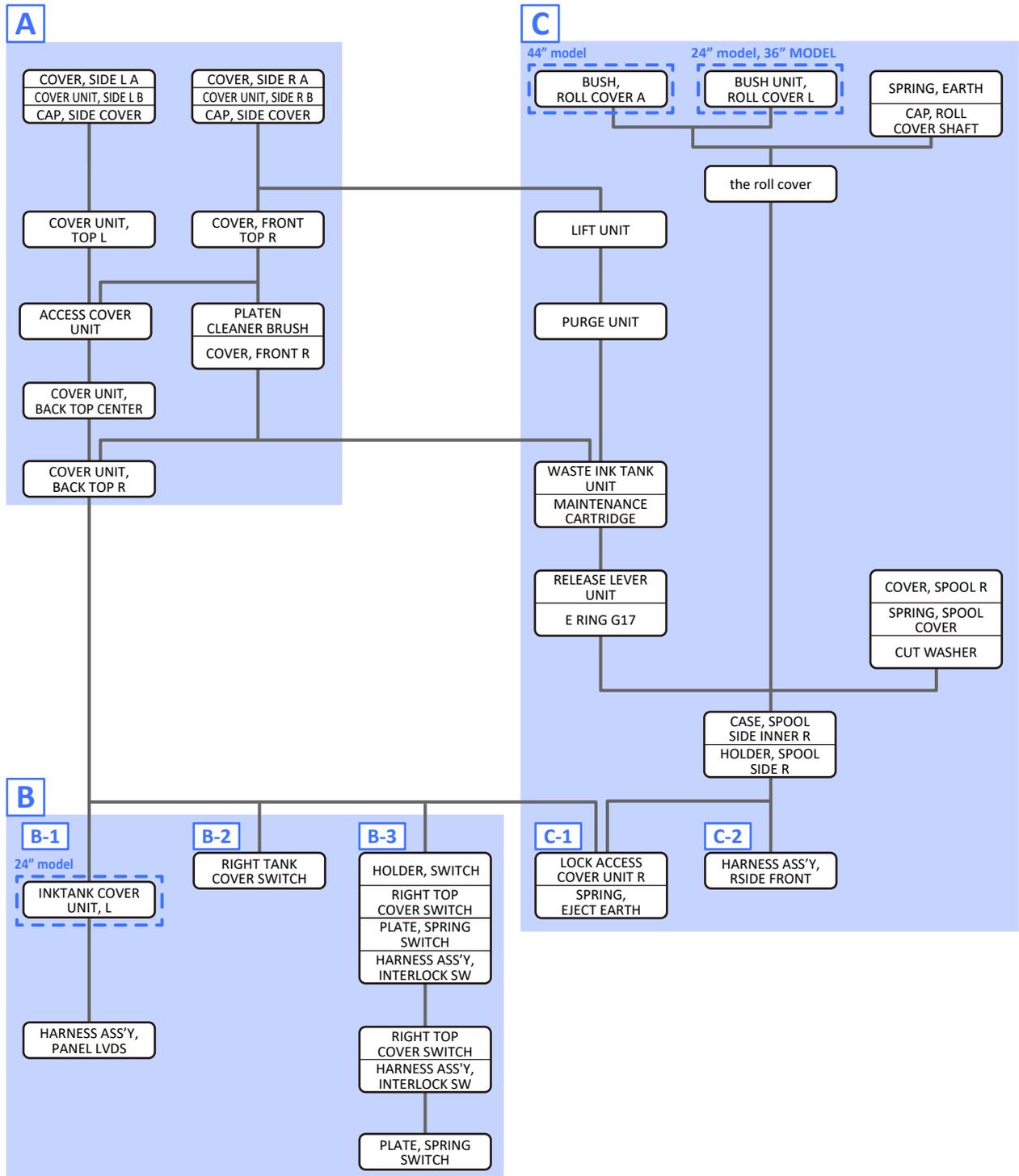
8. Right Front (Right Access Cover Lock)



TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410



TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

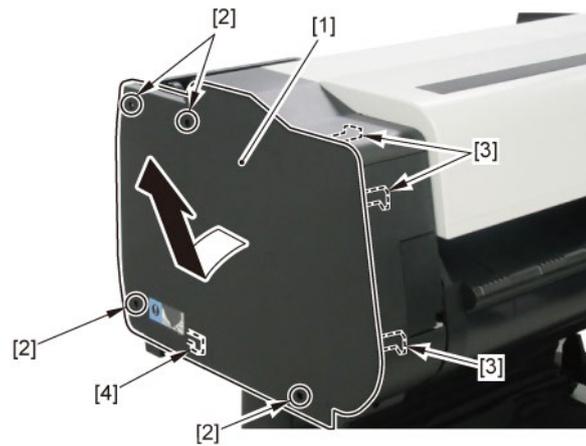


A

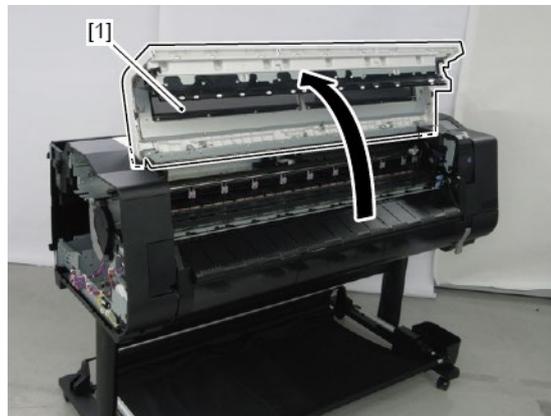
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

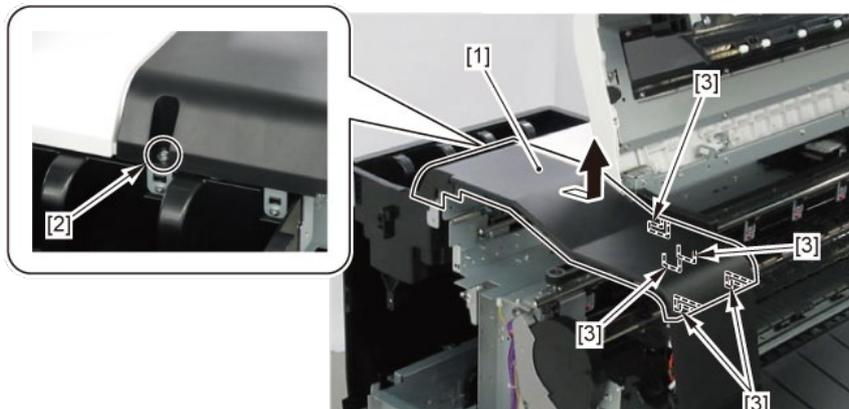


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs

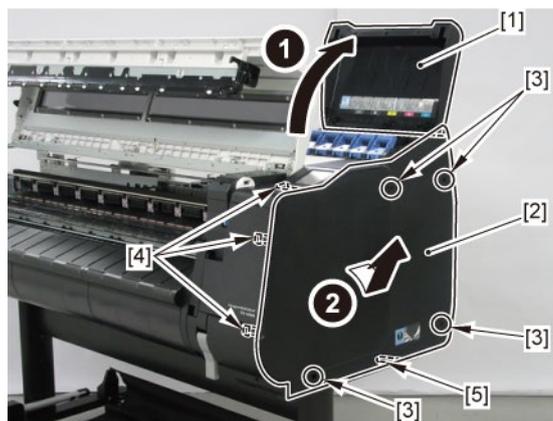


4. Open [1] the right ink tank cover.

5. Remove [2] a set of

- COVER, SIDE R A
- COVER UNIT, SIDE R B
- CAP, SIDE COVER.

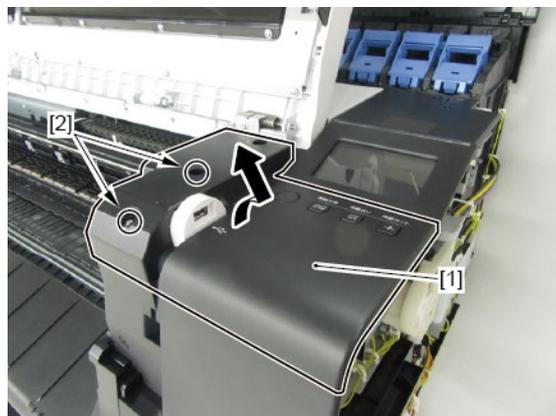
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



6. Remove [1] COVER, FRONT TOP R.

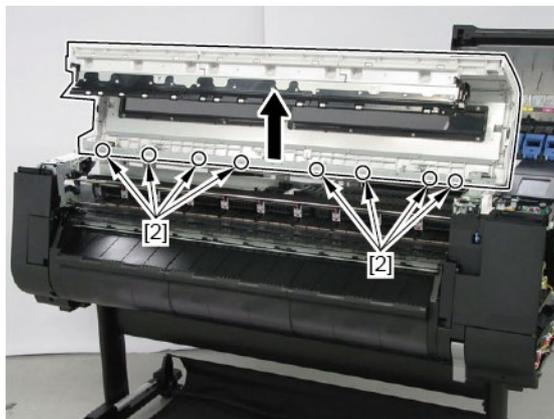
[2]

2 pcs



7. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
24" model	5 pcs
36" model	7 pcs
44" model	8 pcs

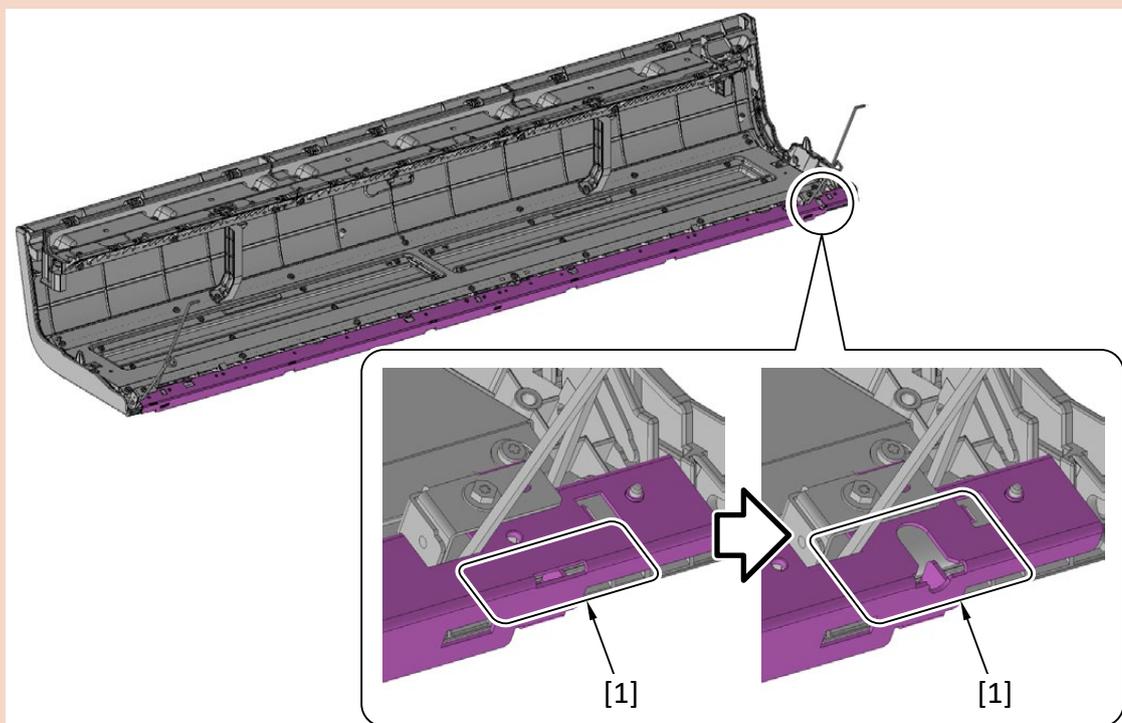


TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

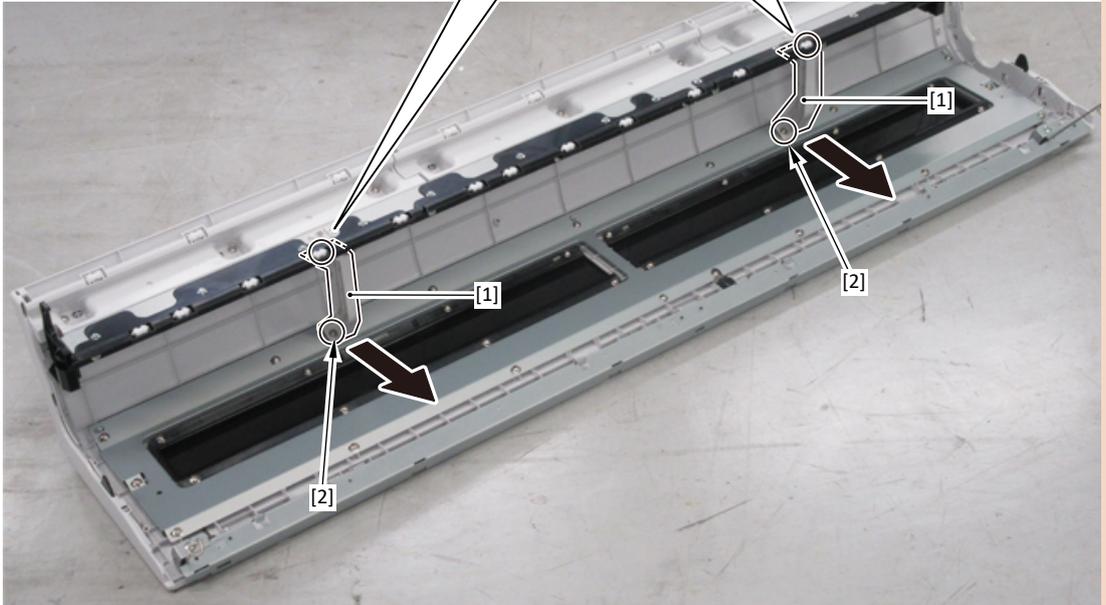
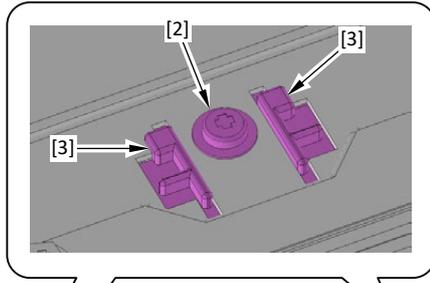
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



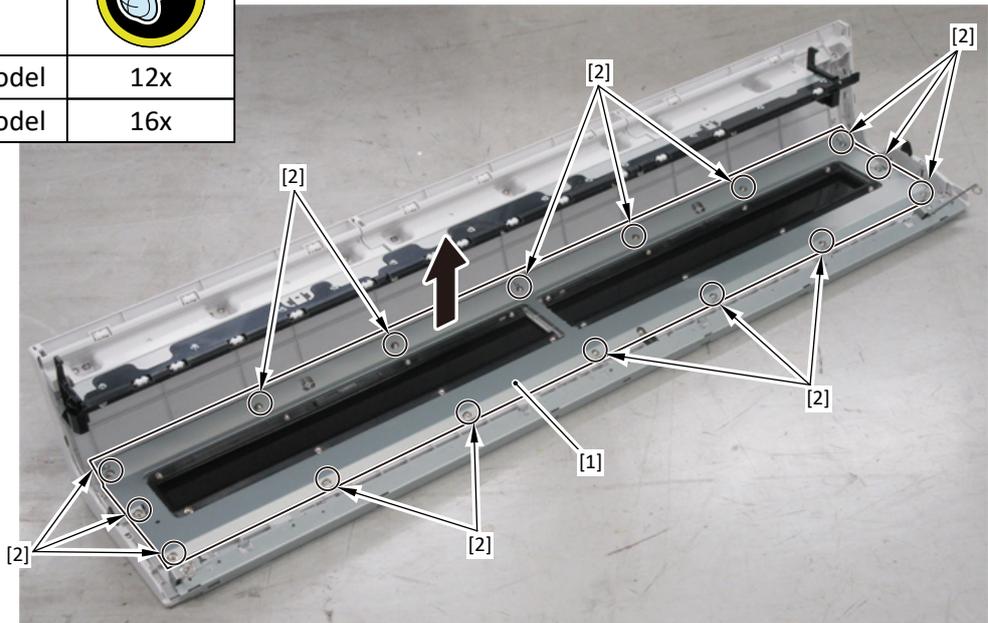
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



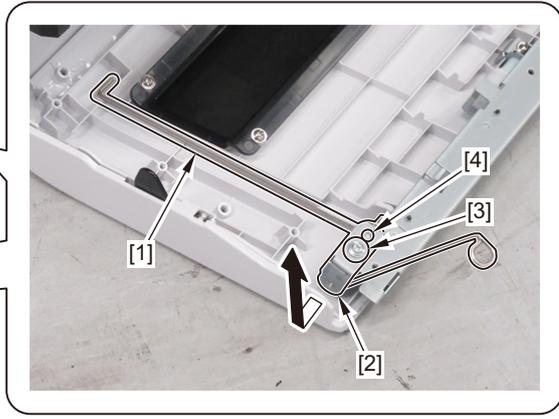
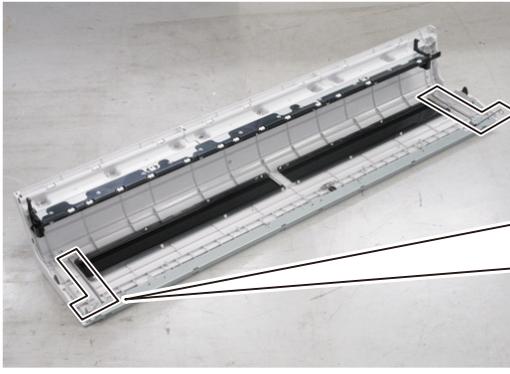
2. Remove [1] the plate.

	[2]
	
24" model	12x
44" model	16x



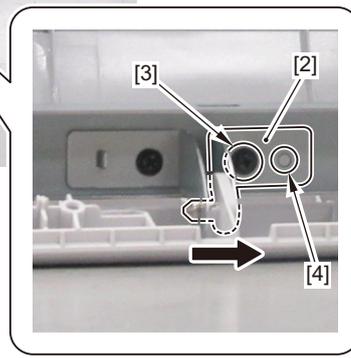
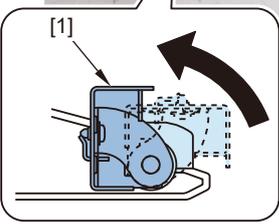
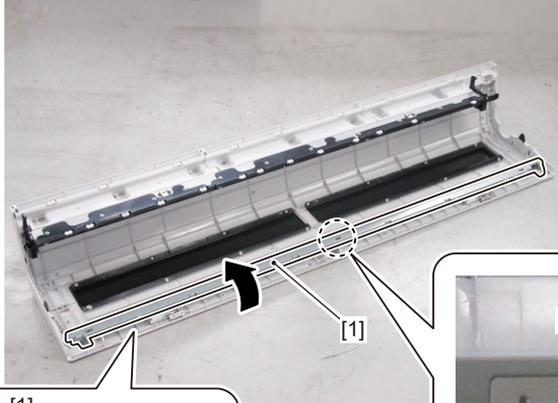
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



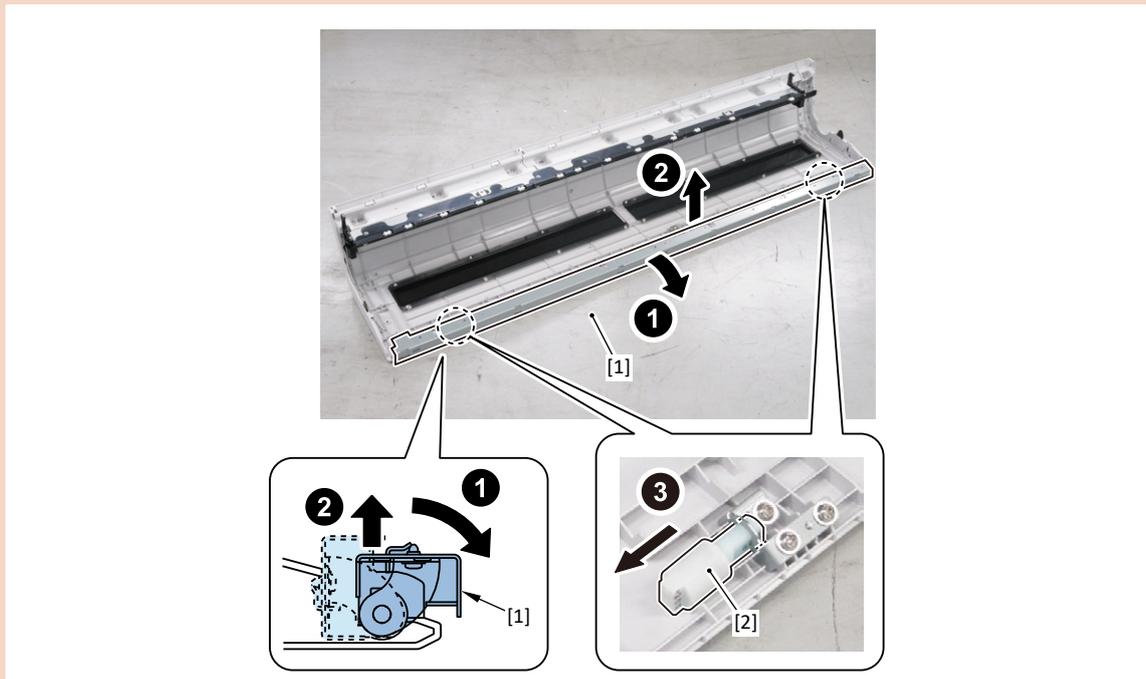
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x



5. Return [1] the plate and remove it.

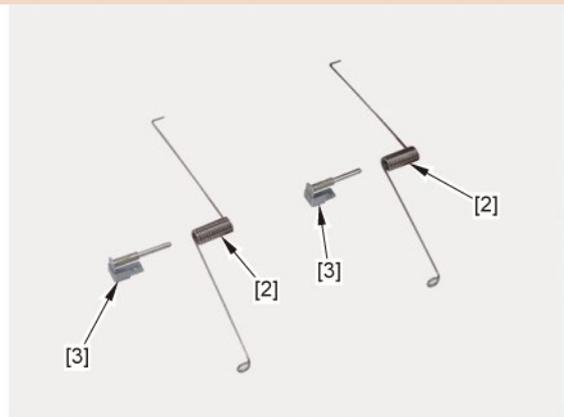
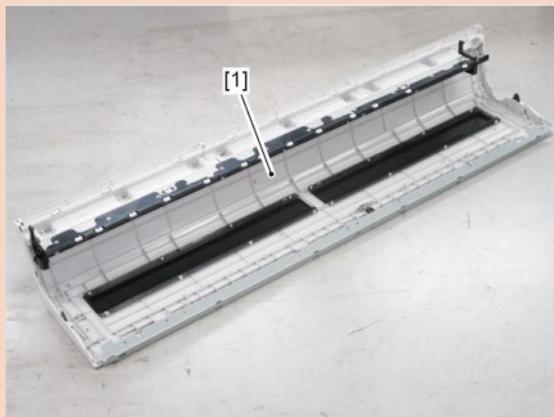
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.

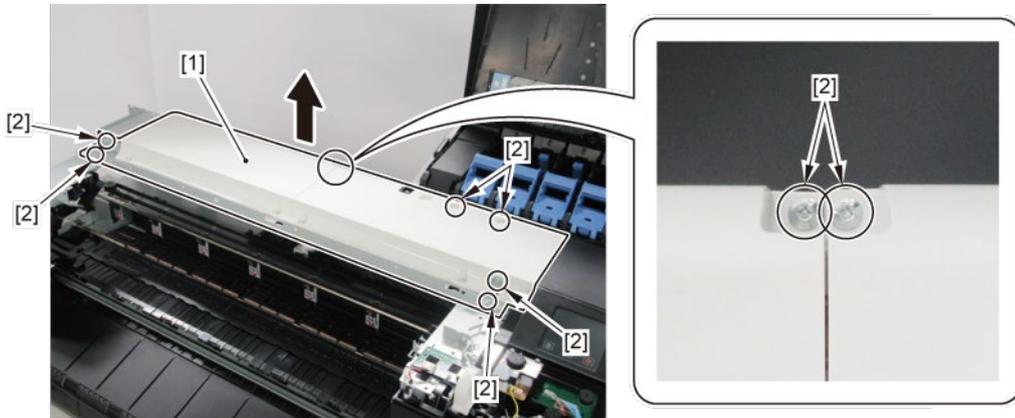


8. Remove [1] COVER UNIT, BACK TOP CENTER.

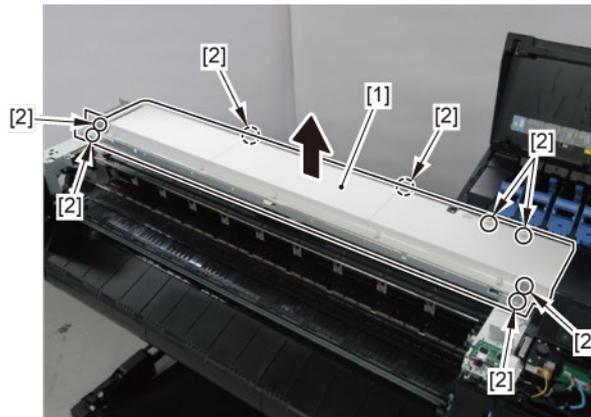
[2]

8 pcs

(24" model)



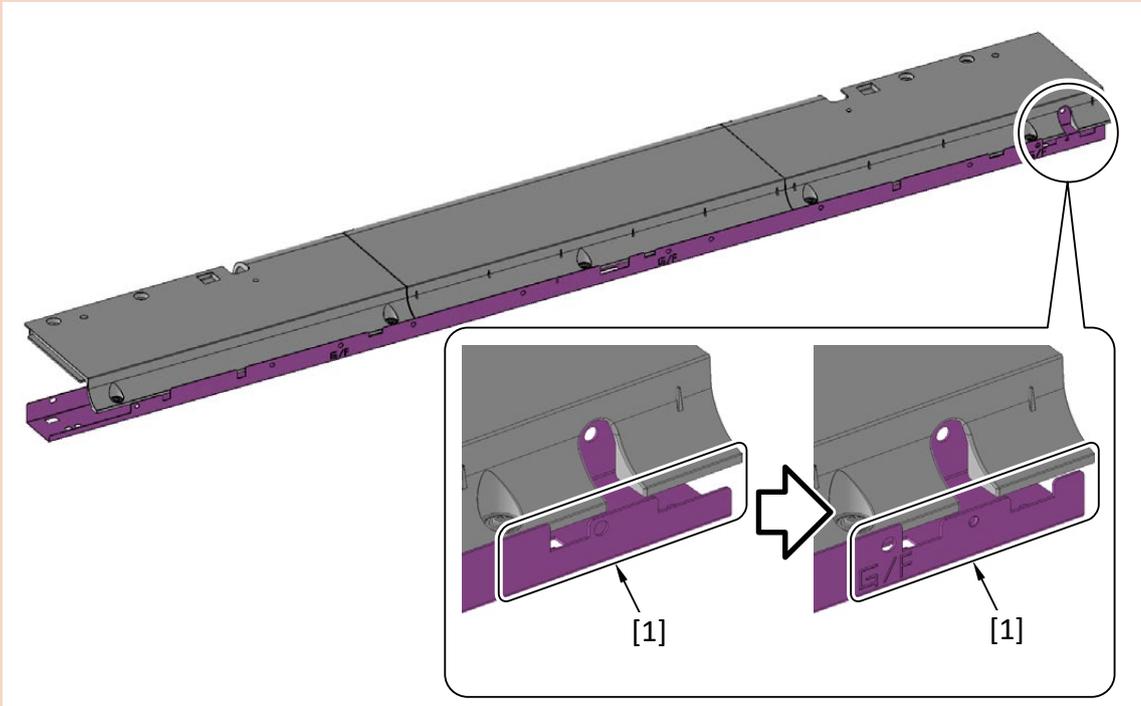
(36" model, 44" model)



TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

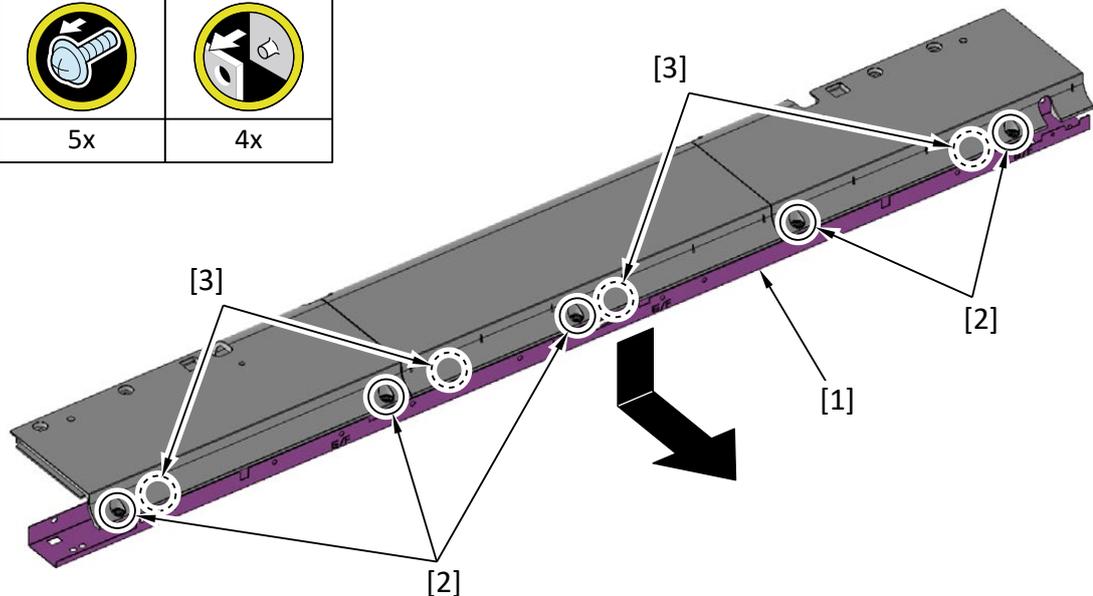
When replacing COVER UNIT, BACK TOP CENTER, check the shape of [1] the plate.

If the plate shape of the service part differs from that of the removed COVER UNIT, BACK TOP CENTER, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.



1. Remove [1] the plates (four in 24" model, five in 44" model).

[2]	[3]
	
5x	4x

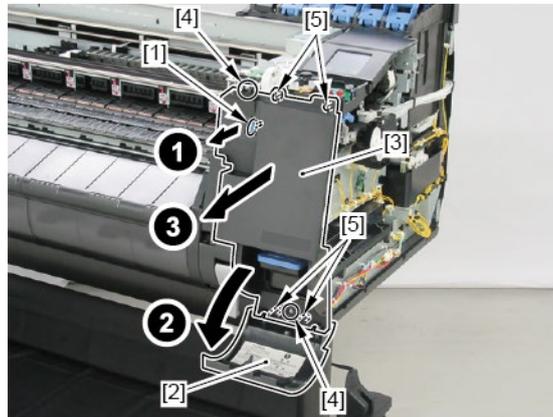


9. Remove [1] PLATEN CLEANER BRUSH.

10. Open [2] COVER UNIT, MTC

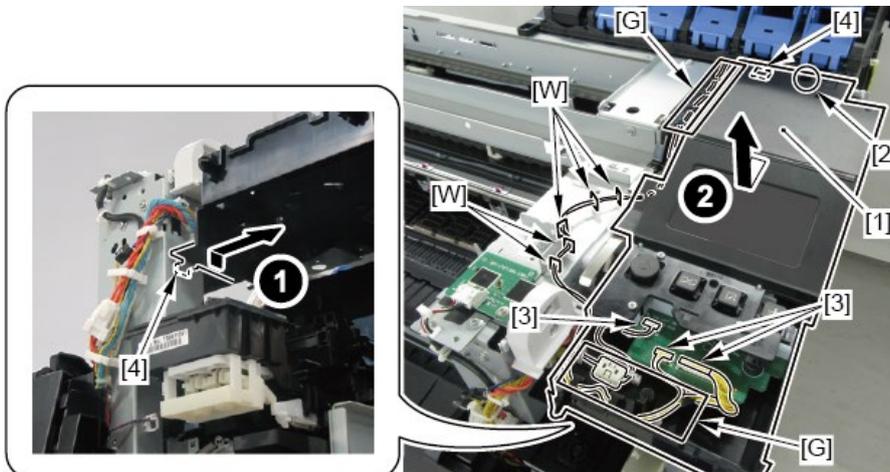
11. Remove [3] COVER, FRONT R.

[4]	[5]
	
2 pcs	4 pcs



12. Remove [1] COVER UNIT, BACK TOP R (with the OPERATION PANEL UNIT).

[2]	[3]	[4]	[W]	[G]
				
1 pc	3 pcs	2 pcs	5 pcs	2 pcs



B

1. Remove all the parts of Group A.

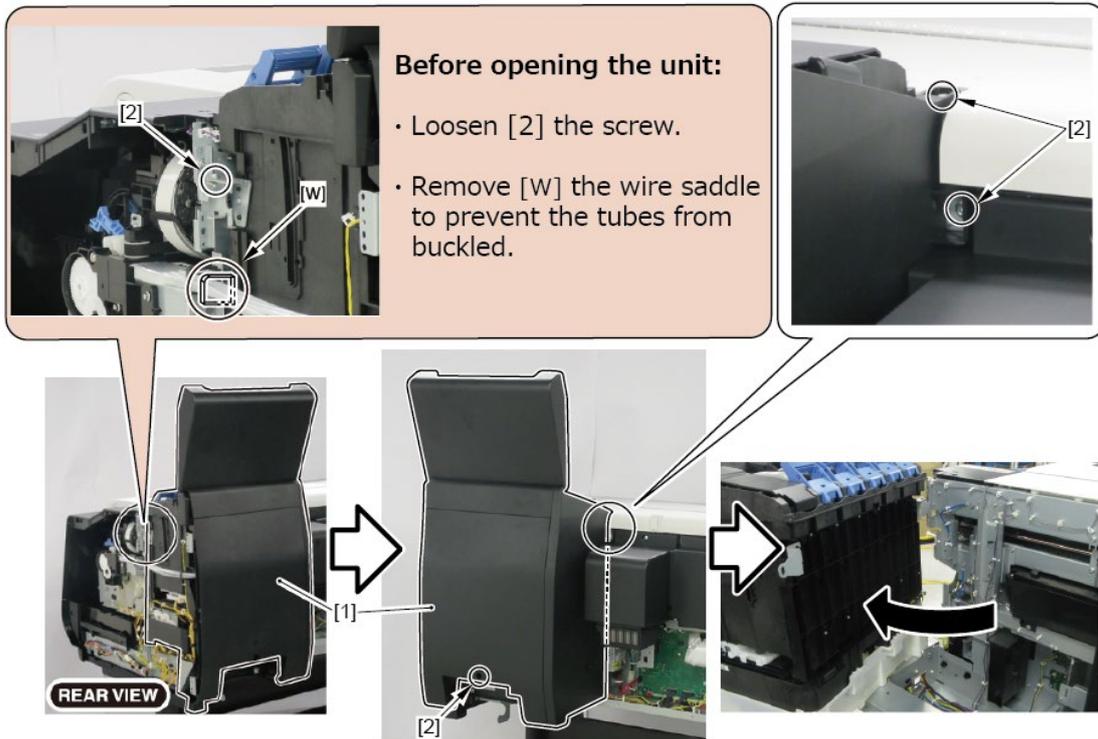
B-1 (24" model)

2. Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc

Before opening the unit:

- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.



The diagram illustrates the process of opening the right ink unit. It starts with a rear view of the unit, showing the cover (1) and the screw (2) to be loosened. A side view shows the cover being lifted. A close-up shows the cover being moved away from the printer's internal components, revealing the ink tubes and the wire saddle (W) that needs to be removed to prevent buckling.

3. Remove [1] a set of

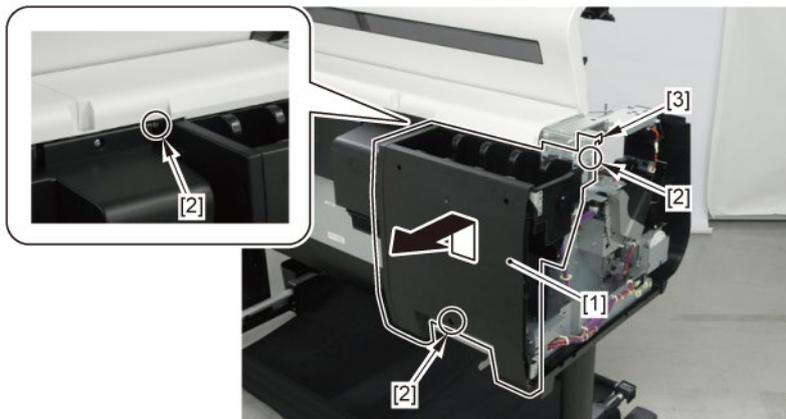
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

3. Remove [1] INKTANK COVER UNIT, L.

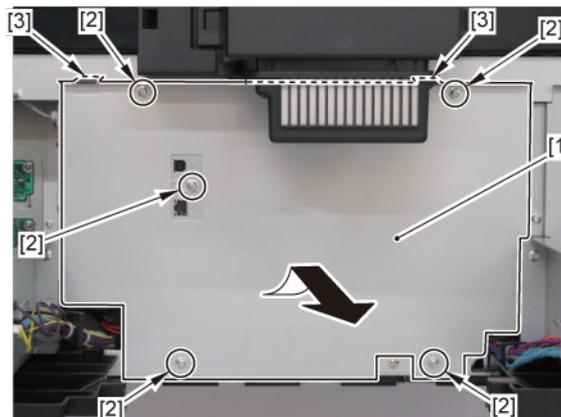
TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

[2]	[3]
	
3 pcs	1 pc



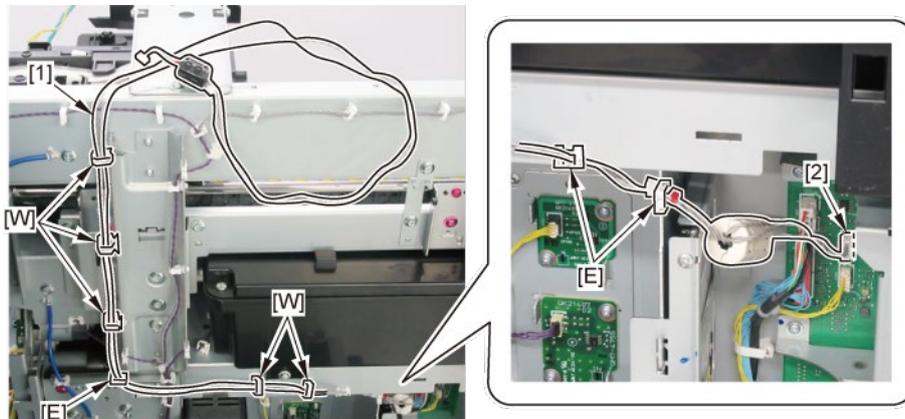
4. Remove [1] the plate.

[2]	[3]
	
5 pcs	2 pcs



5. Disconnect [1] HARNESS ASS'Y, PANEL LVDS.

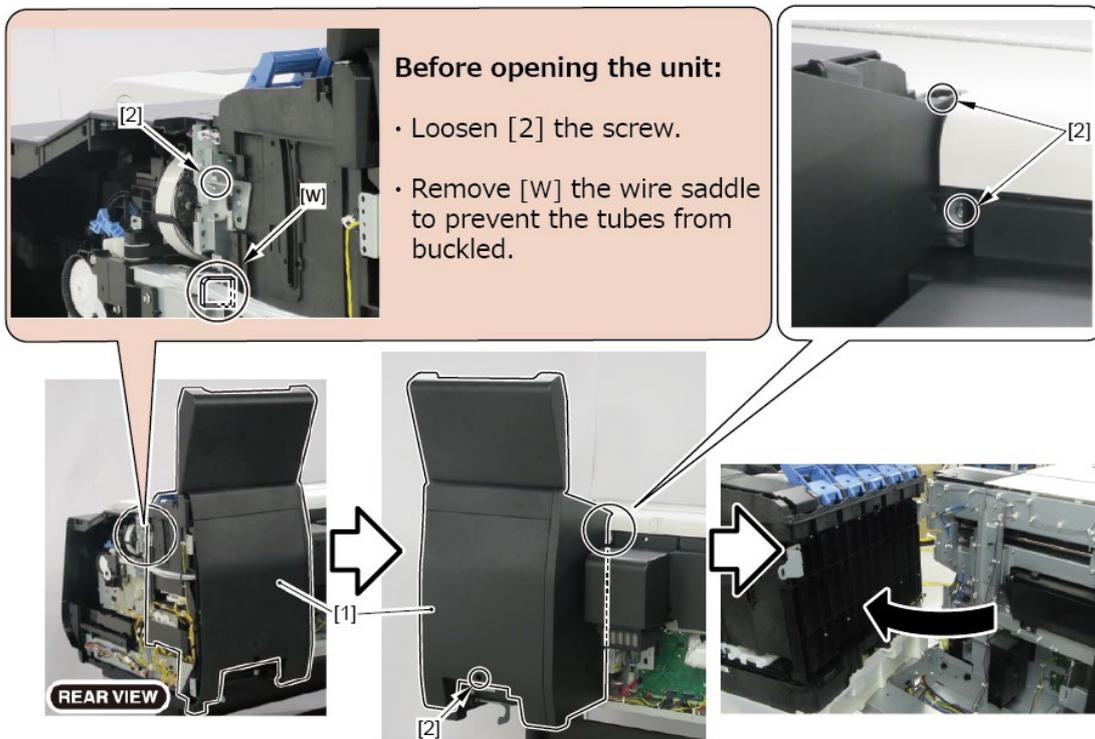
[2]	[W]	[E]
		
1 pc	5 pcs	3 pcs



B-1 (36" model, 44" model)

2. Open [1] the right ink unit.

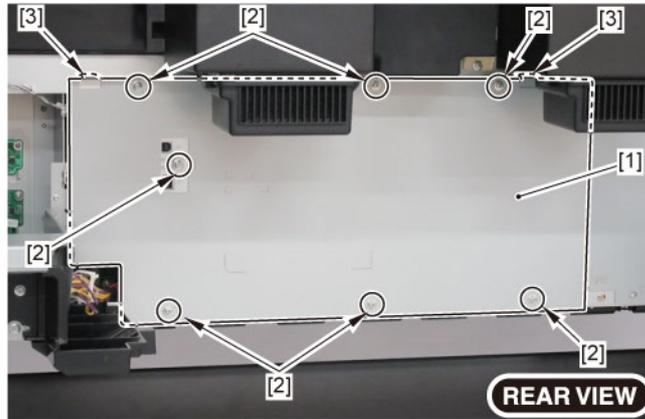
[2]	[W]
	
4 pcs	1 pc



3. Remove [1] the plate.

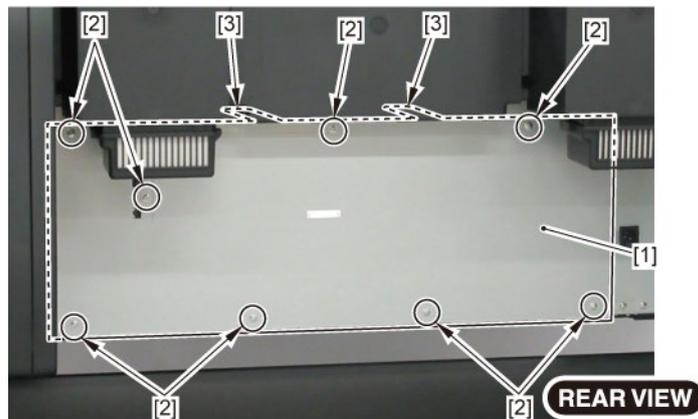
(36" model)

[2]	[3]
	
7 pcs	2 pcs



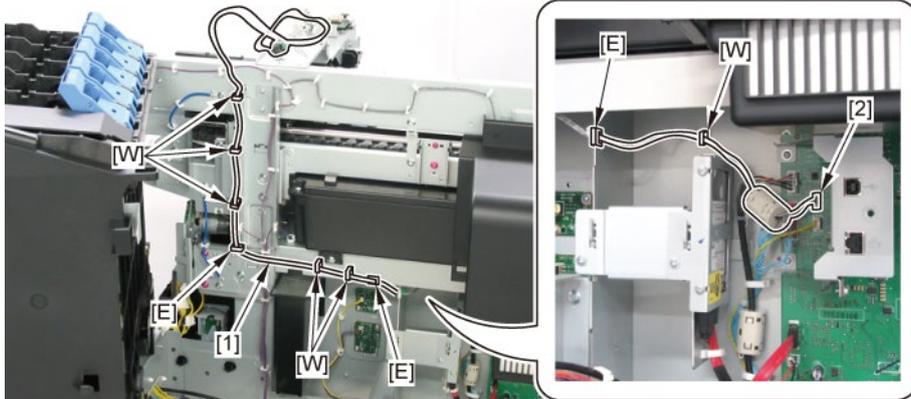
(44" model)

[2]	[3]
	
8 pcs	2 pcs



4. Disconnect [1] HARNESS ASS'Y, PANEL LVDS.

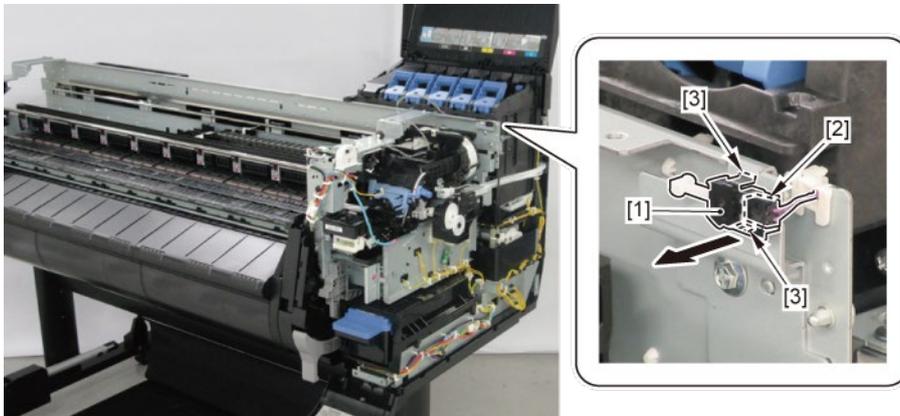
[2]	[W]	[E]
		
1 pc	6 pcs	3 pcs



B-2

2. Remove [1] RIGHT TANK COVER SWITCH.

[2]	[3]
	
1 pc	2 pcs



B-3

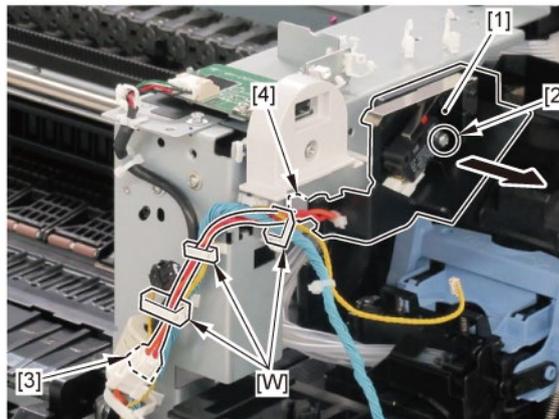
2. Remove [1] HOLDER, SWITCH with

- RIGHT TOP COVER SWITCH

- PLATE, SPRING SWITCH

- HARNESS ASS'Y, INTERLOCK SW.

[2]	[3]	[4]	[W]
			
LONG			
1 pc	1 pc	1 pc	3 pcs

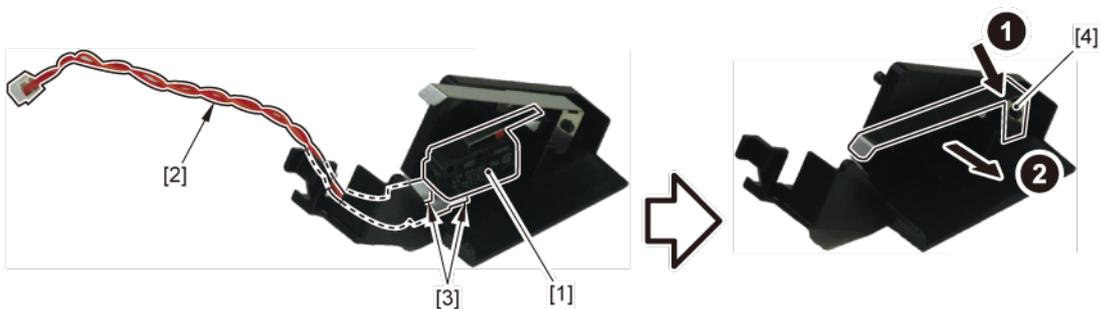


3. Remove [1] RIGHT TOP COVER SWITCH and [2] HARNESS ASS'Y, INTERLOCK SW.

[3]

2 pcs

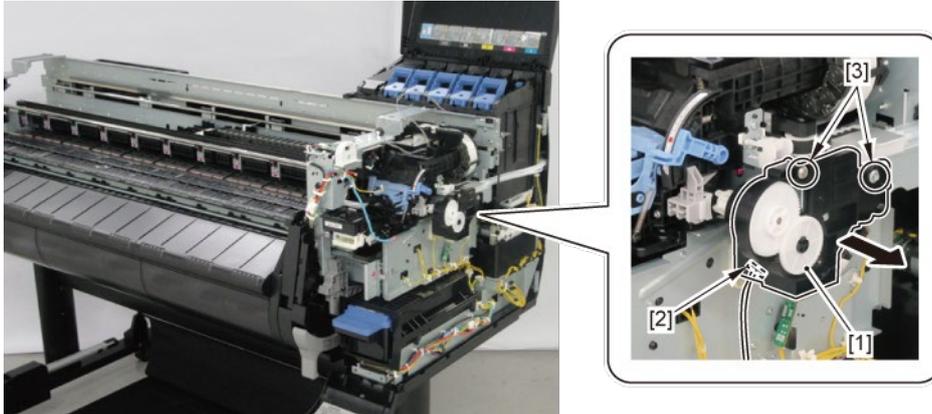
4. Remove [4] PLATE, SPRING SWITCH.



C

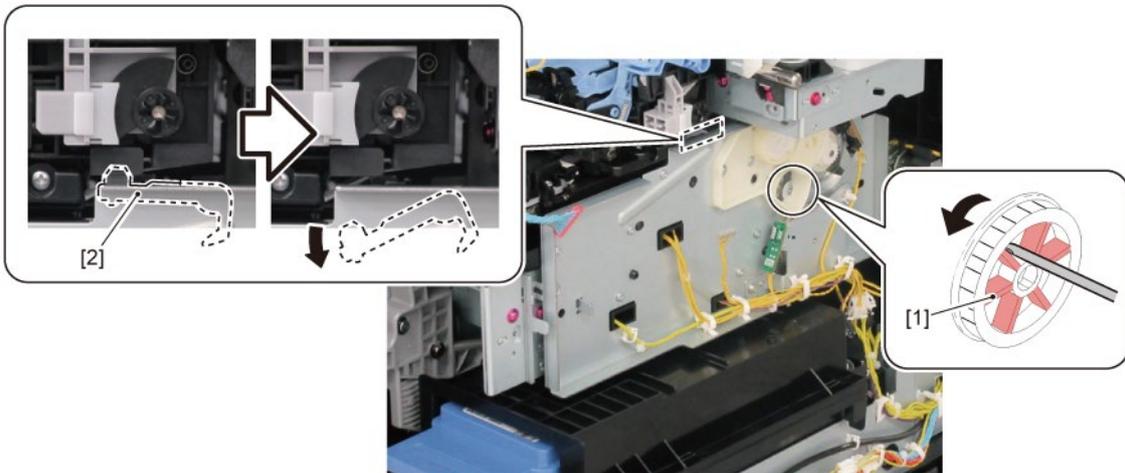
1. Remove all the parts of Group A.
2. Remove [1] LIFT UNIT.

[2]	[3]
	
1 pc	2 pcs



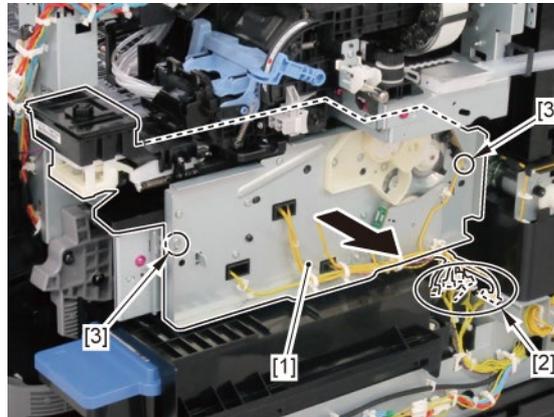
3. Unlock the carriage.

Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



4. Remove [1] PURGE UNIT.

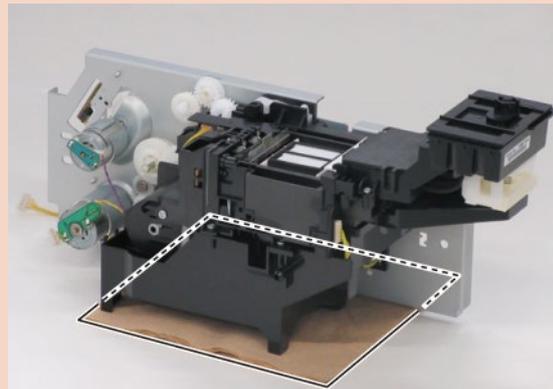
[2]	[3]
	
6 pcs	2 pcs



Notes when removing the unit:

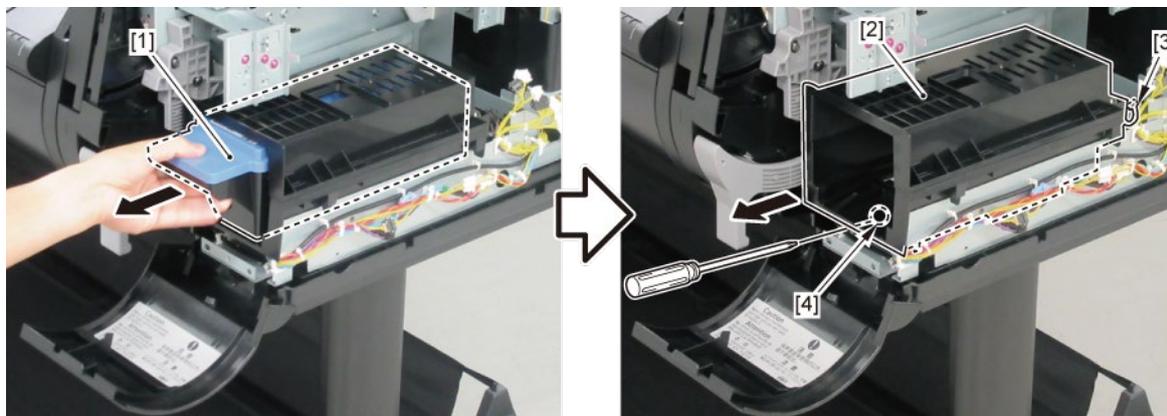
There is an opening on the bottom of the PURGE UNIT. Place the unit on paper towel, etc.

Point



5. Remove [1] MAINTENANCE CARTRIDGE and [2] WASTE INK TANK UNIT.

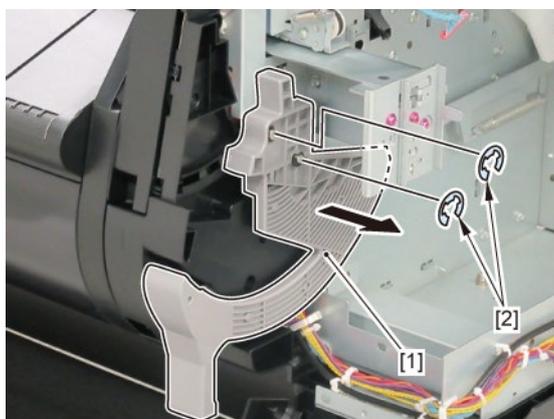
[3]	[4]
	
1 pc	1 pc



6. Remove [1] RELEASE LEVER UNIT.

[2]

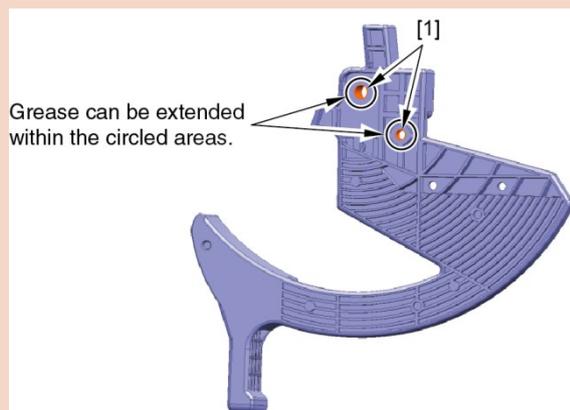
2 pcs



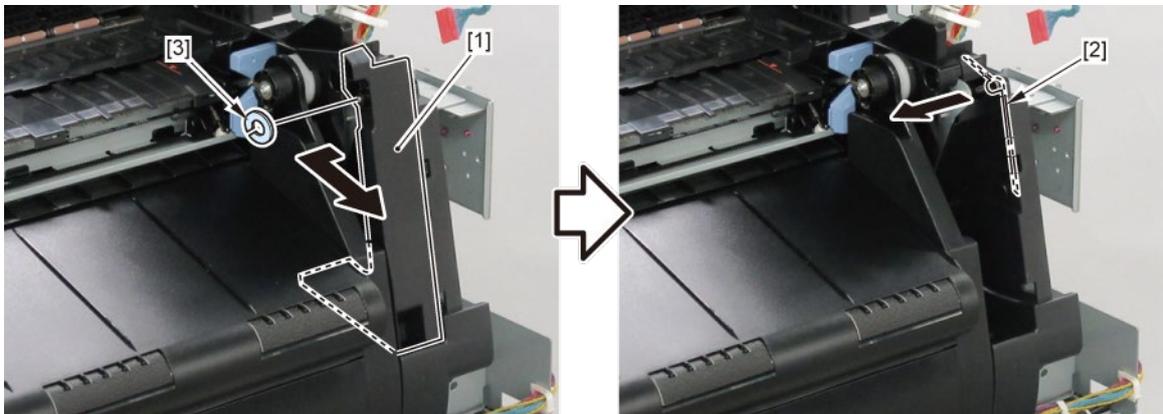
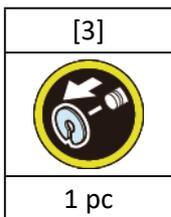
Notes when the RELEASE LEVER UNIT is replaced:

Apply grease to the portions specified below.

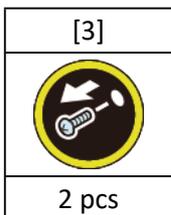
[1]: FLOIL G-31KB, 9 to 18 mg



7. Remove [1] COVER, SPOOL R and [2] SPRING, SPOOL COVER.



8. Remove [1] SPRING, EARTH and [2] CAP, ROLL COVER SHAFT.

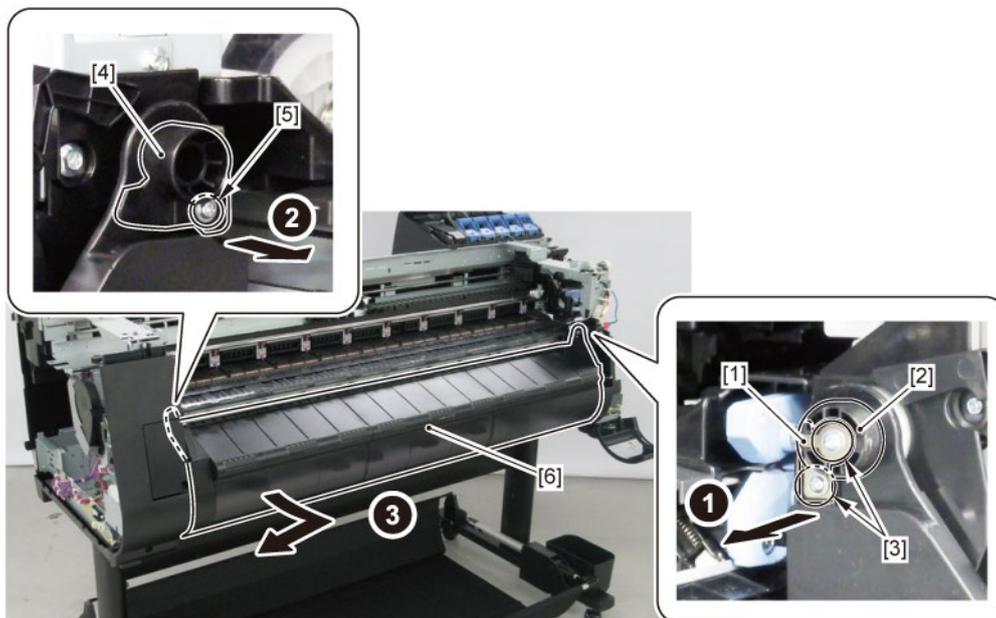


9. Remove [4] BUSH, ROLL COVER A.

(the BUSH UNIT, ROLL COVER L in 24" model and 36" model)

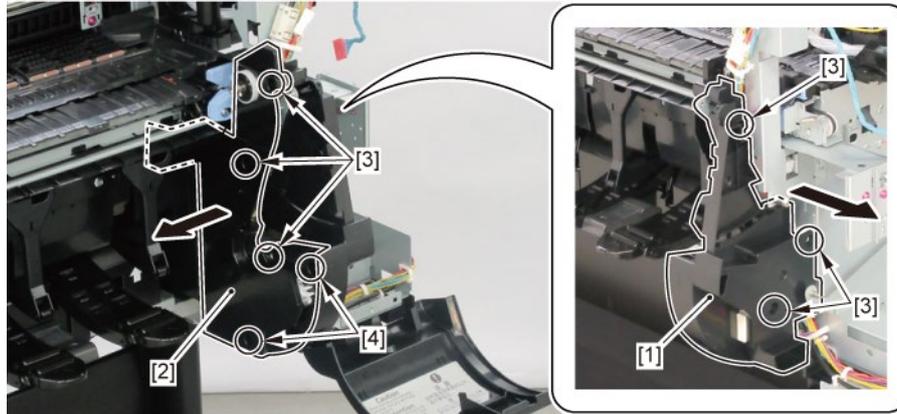


10. Remove [6] the roll cover.



11. Remove [1] CASE, SPOOL SIDE INNER R and [2] HOLDER, SPOOL SIDE R.

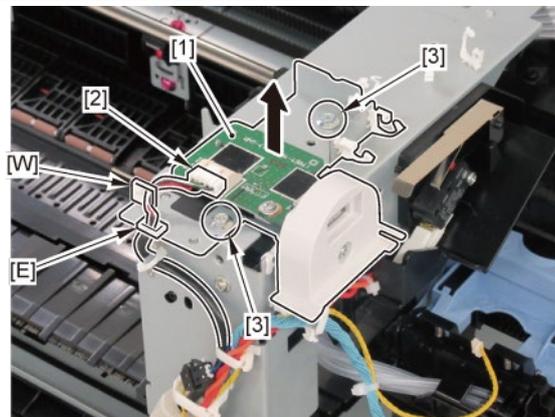
[3]	[4]
	
6 pcs	2 pcs



C-1

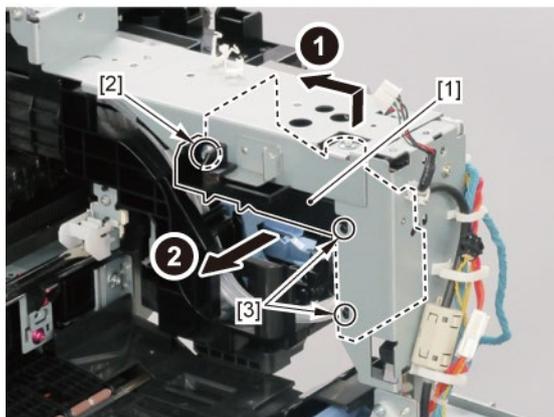
12. Remove [1] the plate (with the USB HOST PCB ASS'Y).

[2]	[3]	[W]	[E]
			
1 pc	2 pcs	1 pc	1 pc



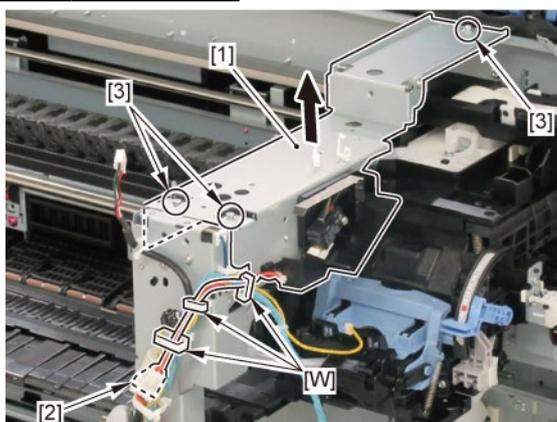
13. Remove [1] the inner cover R.

[2]	[3]
	
1 pc	2 pcs



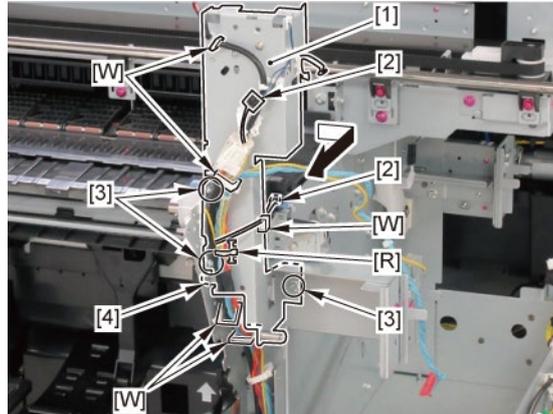
14. Remove [1] the plate.

[2]	[3]	[W]
		
1 pc	3 pcs	3 pcs



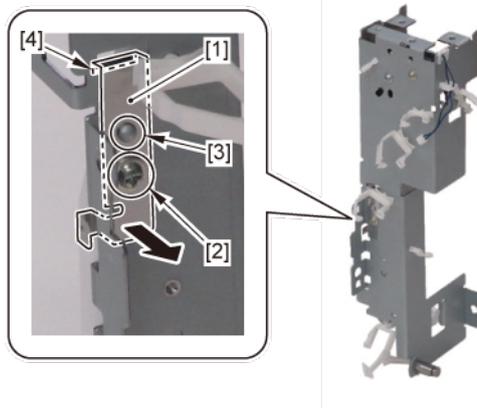
15. Remove [1] LOCK ACCESS COVER UNIT R.

[2]	[3]	[4]	[W]	[R]
				
2 pcs	3 pcs	1 pc	5 pcs	1 pc



16. Remove [1] SPRING, EJECT EARTH.

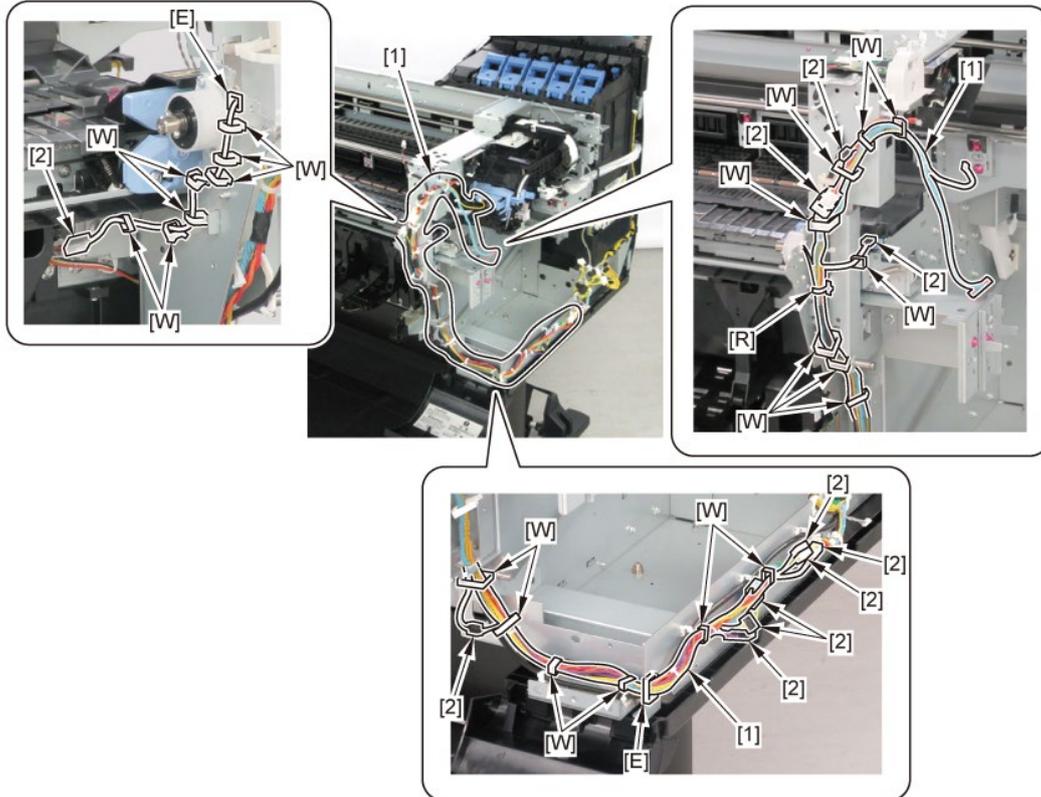
[2]	[3]	[4]
		
1 pc	1 pc	1 pc



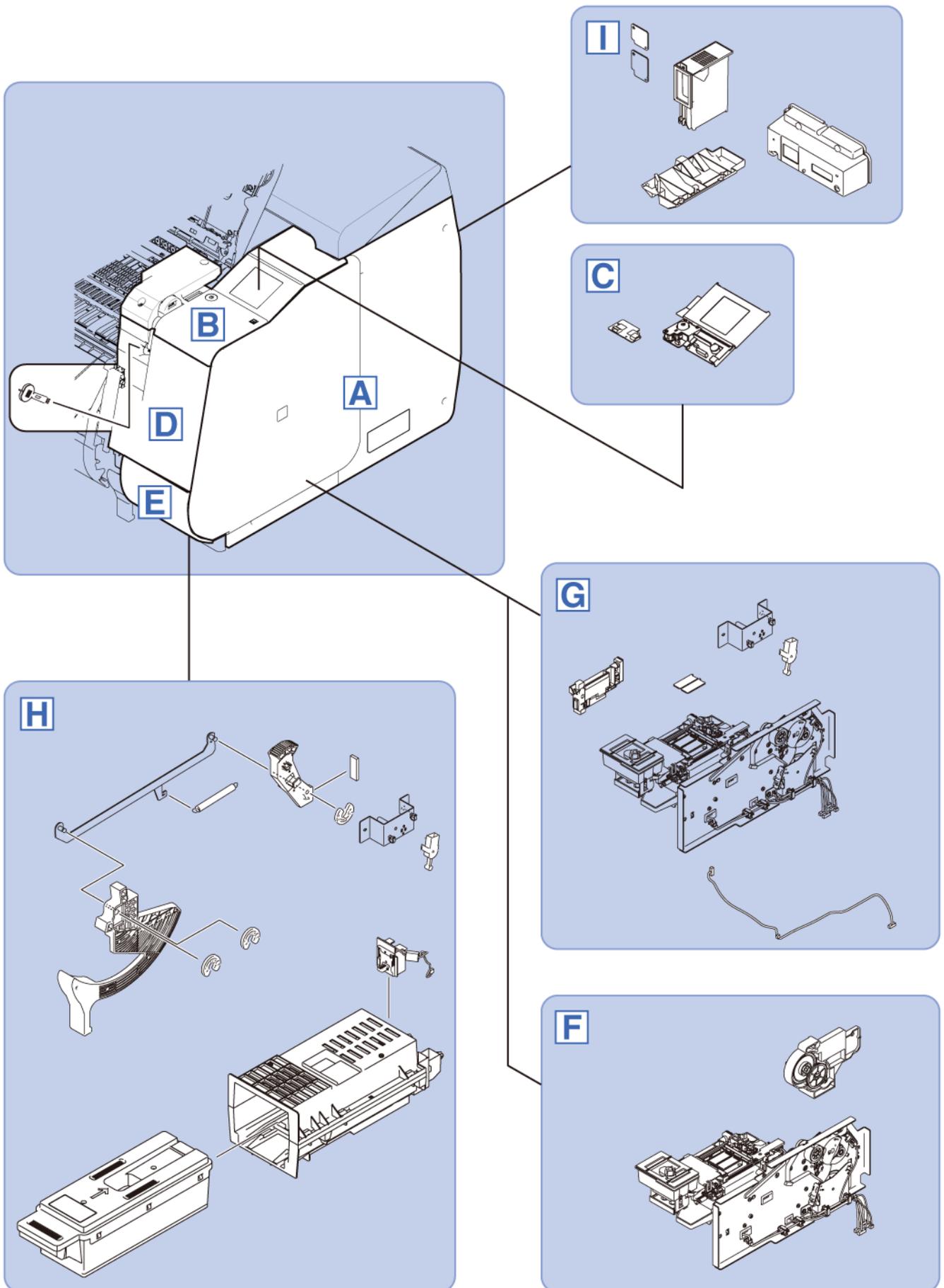
C-2

12. Disconnect [1] HARNESS ASS'Y, RSIDE FRONT.

[2]	[W]	[E]	[R]
			
11 pcs	21 pcs	2 pcs	1 pc



9. Right Side (Purge Unit, Operation Panel)



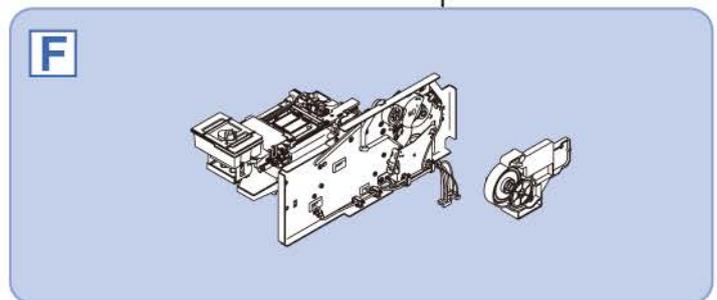
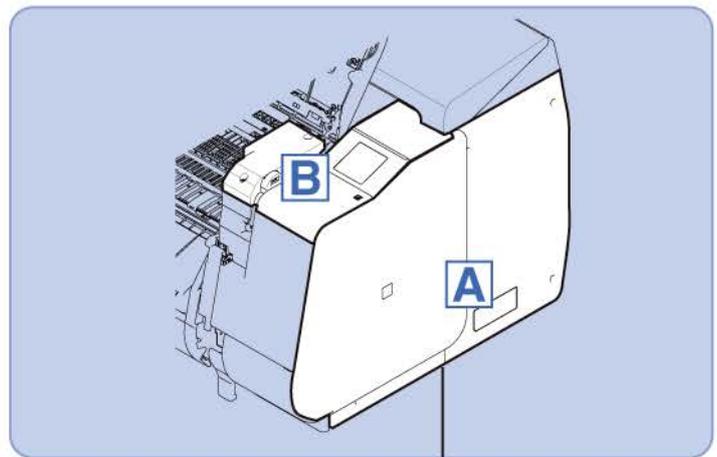
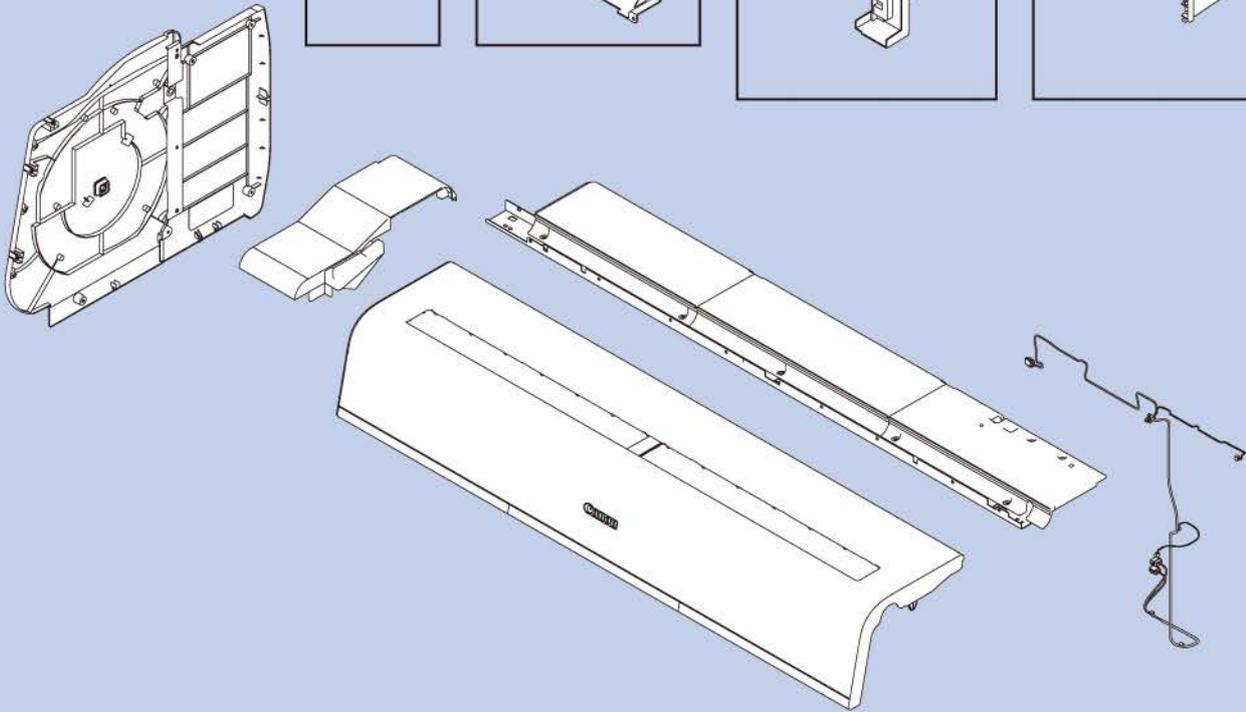
J

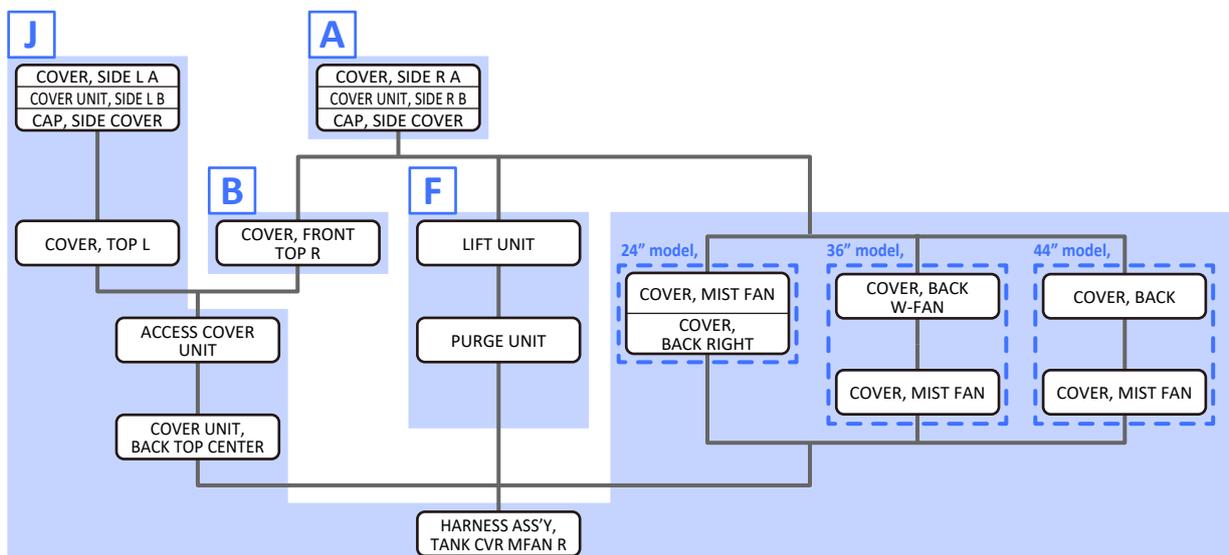
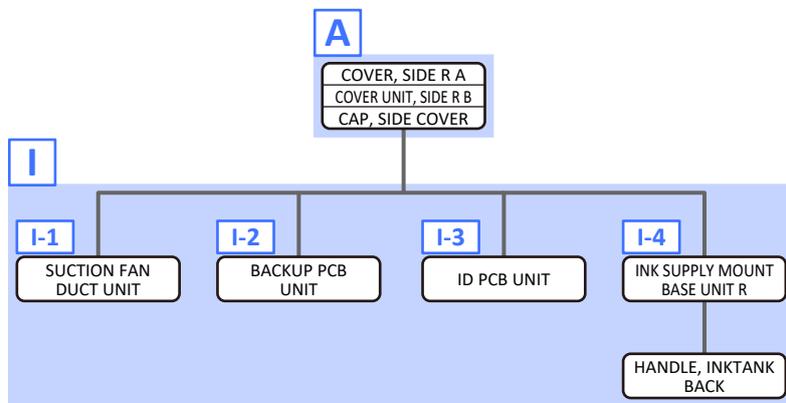
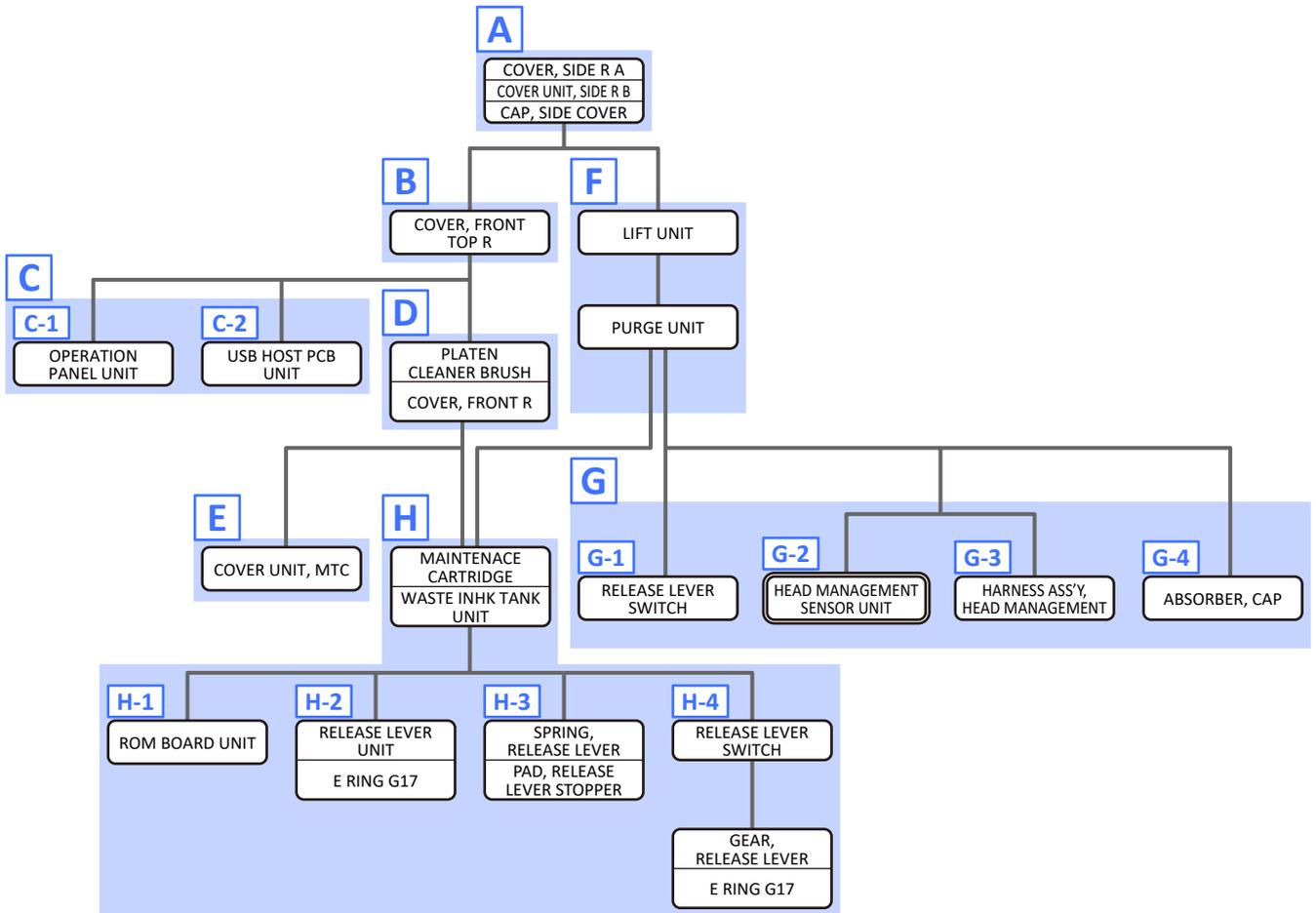
36" model

44" model

24" model

36" model, 44" model

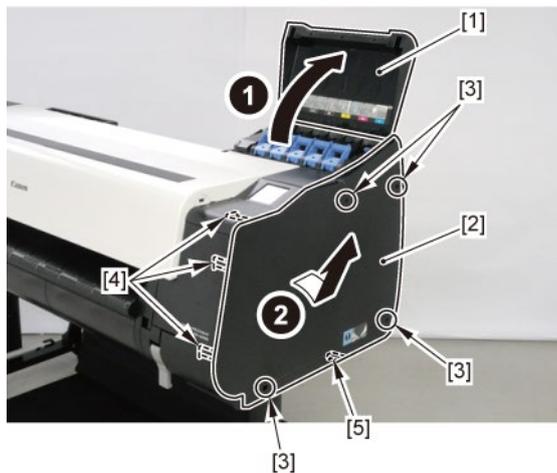




A

1. Open [1] the right ink tank cover
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc

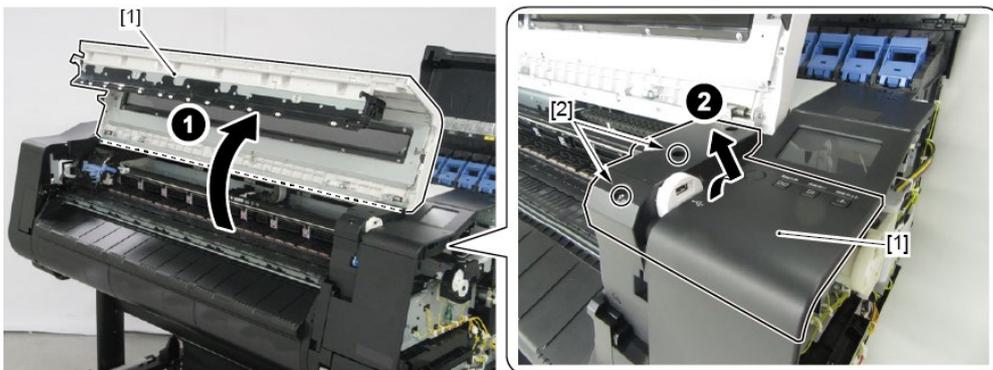


B

1. Remove all the parts of Group A.
2. Open [1] the access cover.
3. Remove [2] COVER, FRONT TOP R.

[3]

2 pcs



C

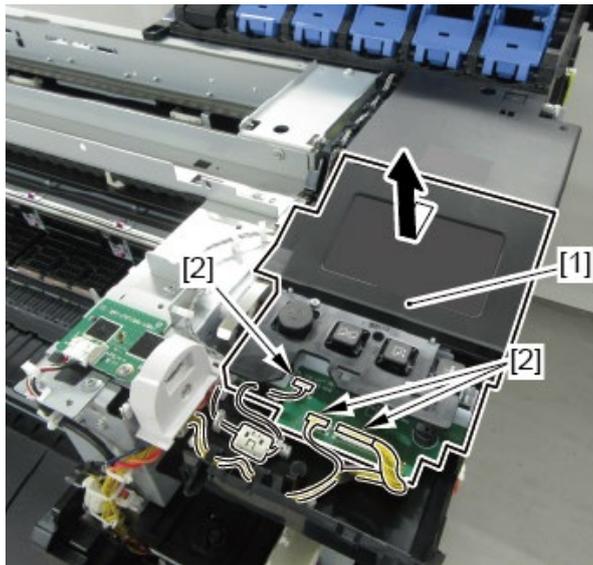
1. Remove all the parts of Groups A and B.

C-1

2. Remove [1] OPERATION PANEL UNIT.

[2]

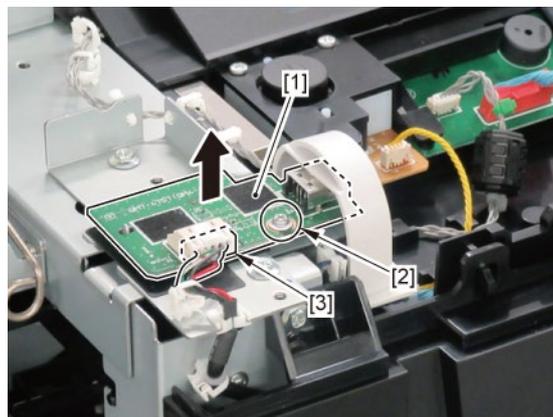
3 pcs



C-2

2. Remove [1] USB HOST PCB UNIT.

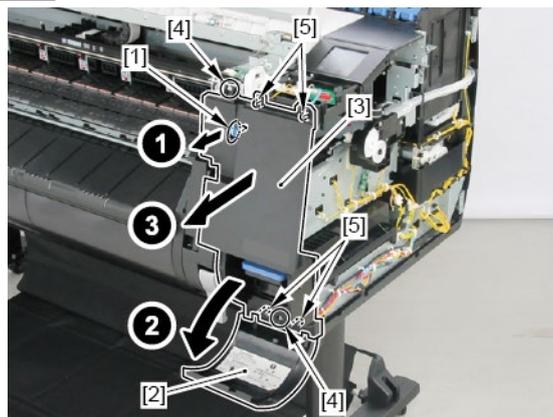
[2]	[3]
	
1 pc	1 pc



D

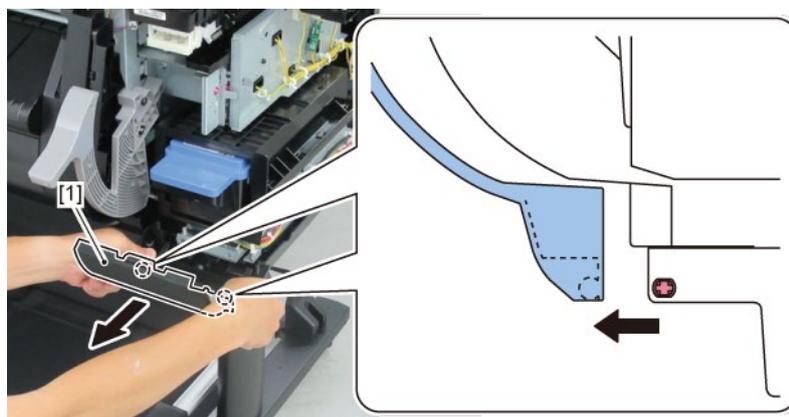
1. Remove all the parts of Groups A and B.
2. Remove [1] PLATEN CLEANER BRUSH.
3. Open [2] COVER UNIT, MTC.
4. Remove [3] COVER, FRONT R.

[4]	[5]
	
2 pcs	4 pcs



E

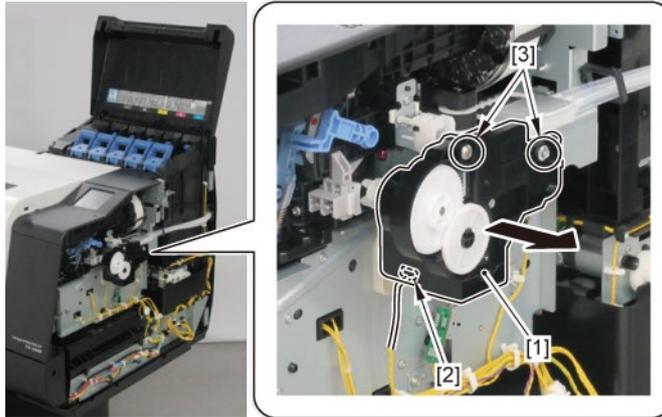
1. Remove all the parts of Groups A, B, and D.
2. Remove [1] COVER UNIT, MTC.



F

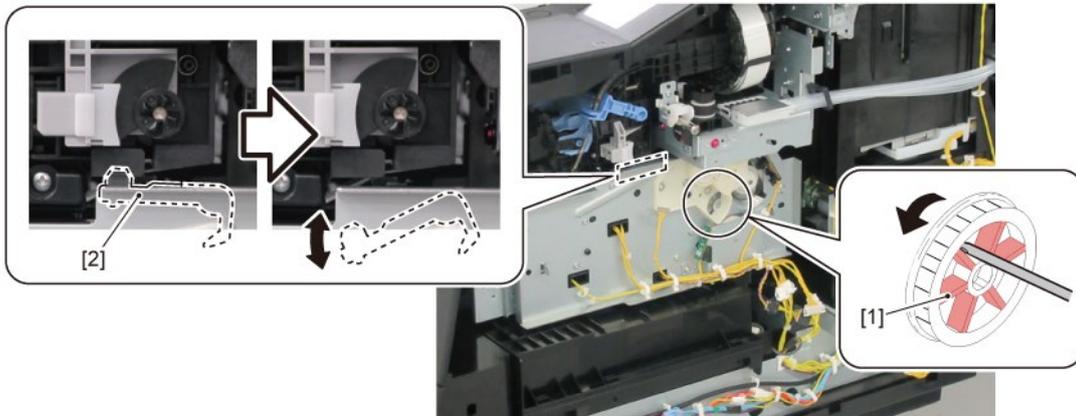
1. Remove all the parts of Group A.
2. Remove [1] LIFT UNIT.

[2]	[3]
	
1 pc	2 pcs



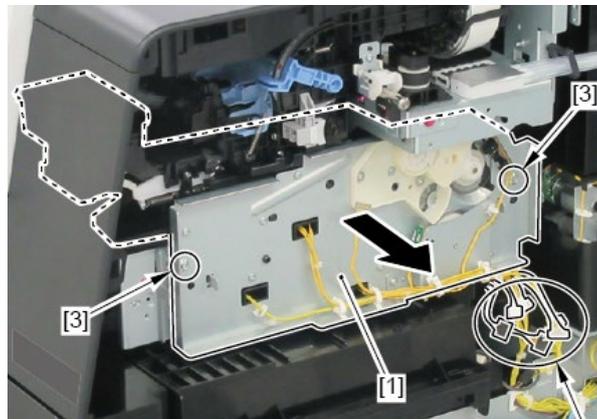
3. Unlock the carriage.

Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



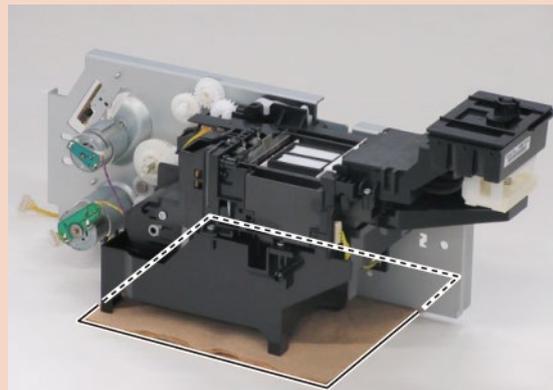
4. Remove [1] PURGE UNIT.

[2]	[3]
	
6 pcs	2 pcs



Notes when removing the unit:

There is an opening on the bottom of the PURGE UNIT. Place the unit on paper towel, etc.



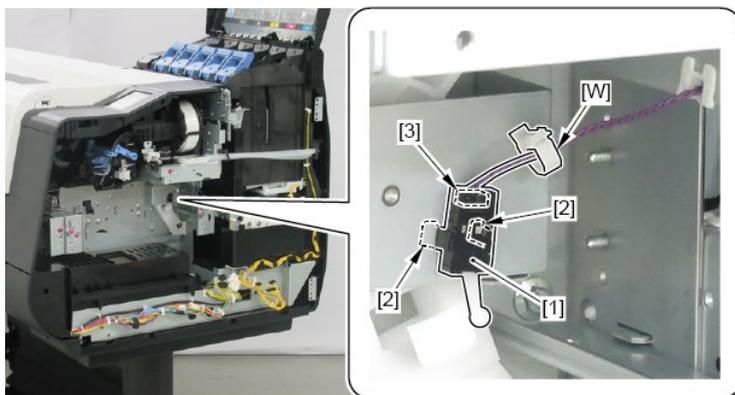
G

1. Remove all the parts of Groups A and F.

G-1

2. Remove [1] RELEASE LEVER SWITCH.

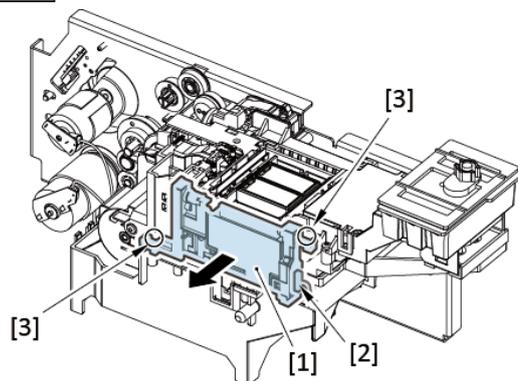
[2]	[3]	[W]
		
2 pcs	1 pc	1 pc



G-2

2. Remove [1] HEAD MANAGEMENT SENSOR UNIT.

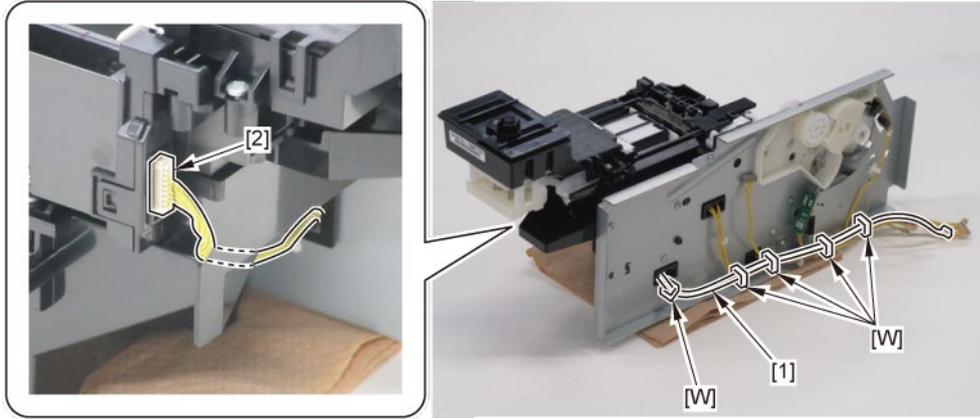
[2]	[3]
	
1 pc	2 pcs



G-3

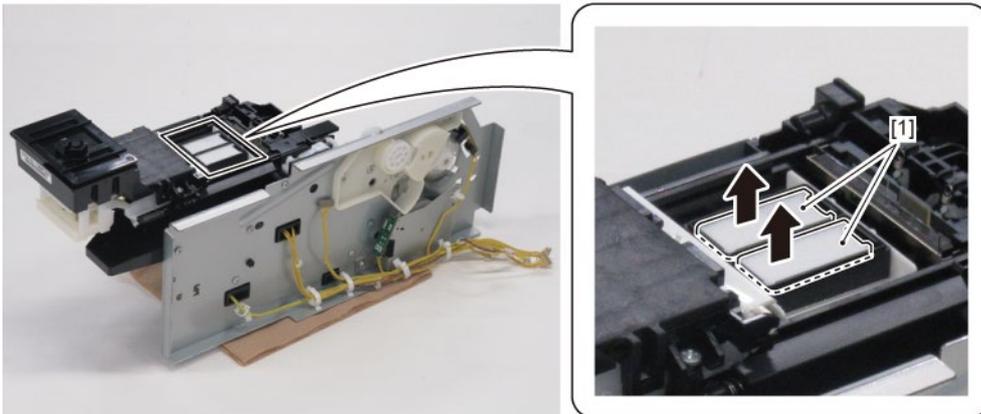
2. Disconnect [1] HARNESS ASS'Y, HEAD MANAGEMENT.

[2]	[W]
	
1 pc	5 pcs



G-4

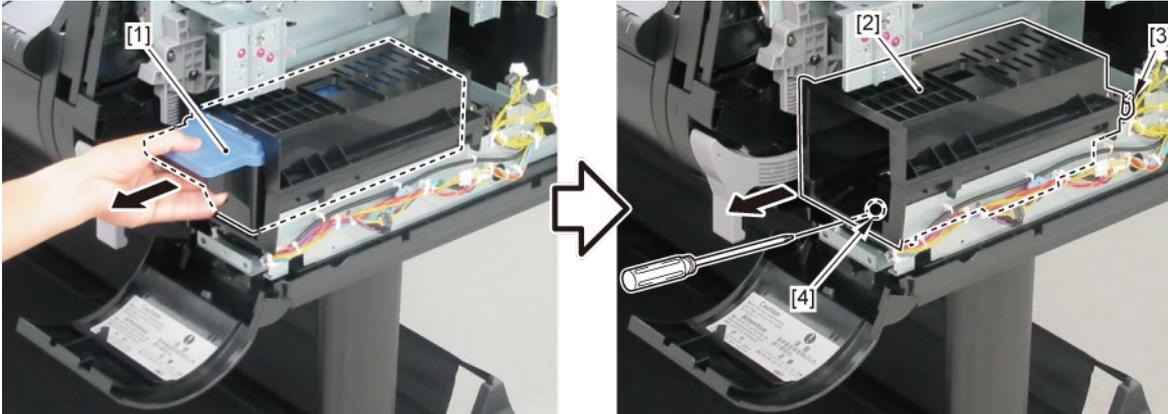
2. Remove two pieces of [1] ABSORBER, CAP.



H

1. Remove all the parts of Groups A, B, D, and F.
2. Remove [1] MAINTENANCE CARTRIDGE and [2] WASTE INK TANK UNIT.

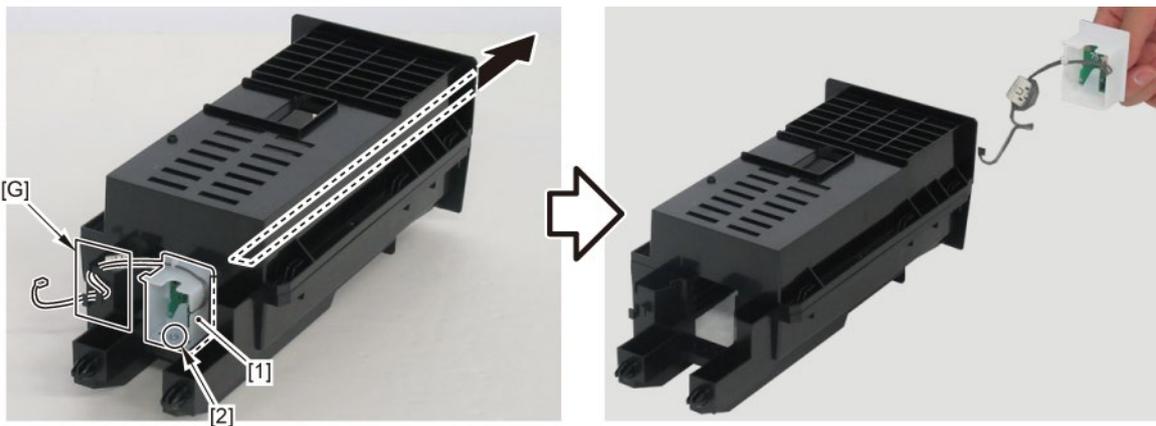
[3]	[4]
	
1 pc	1 pc



H-1

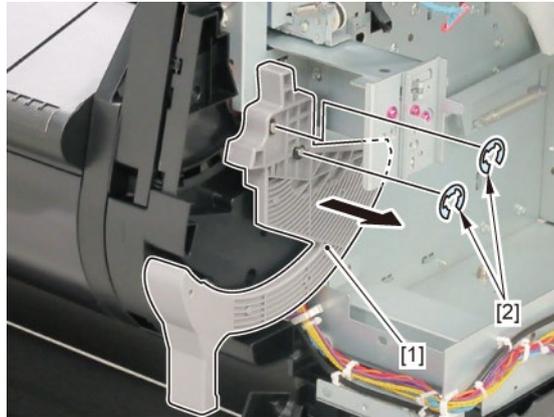
3. Remove [1] ROM BOARD UNIT.

[2]	[G]
	
1 pc	1 pc



H-2

3. Remove [1] RELEASE LEVER UNIT.

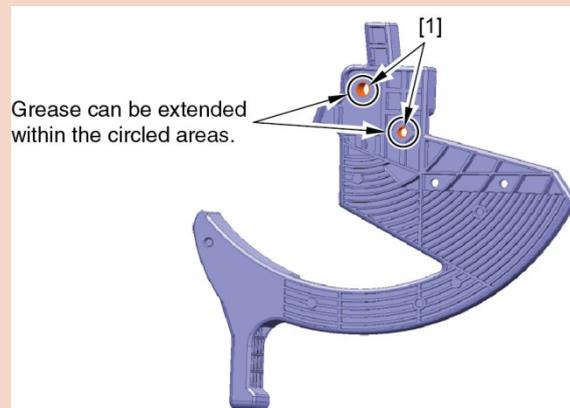


Notes when the RELEASE LEVER UNIT is replaced:

Apply grease to the portions specified below.

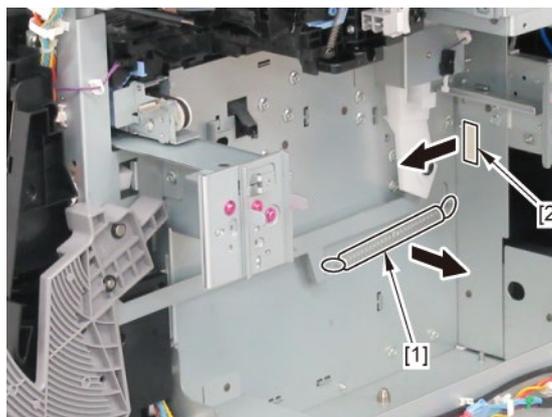
[1]: FLOIL G-31KB, 9 to 18 mg

Point



H-3

3. Remove [1] SPRING, RELEASE LEVER.
4. Remove [2] PAD, RELEASE LEVER STOPPER.



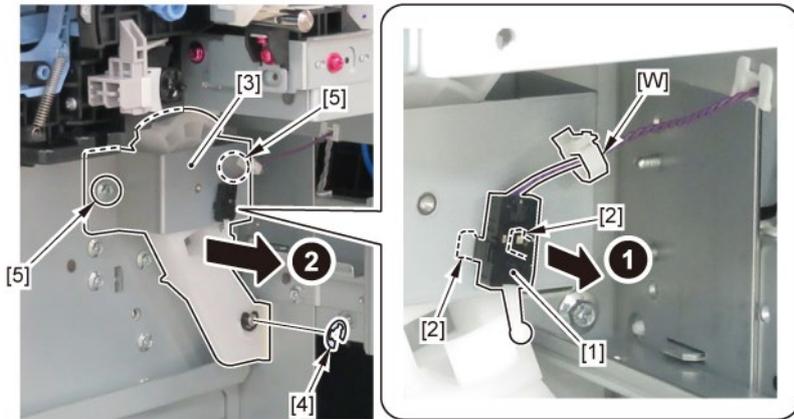
H-4

3. Remove [1] RELEASE LEVER SWITCH.

[2]	[W]
	
2 pcs	1 pc

4. Remove [3] the plate (with the GEAR, RELEASE LEVER).

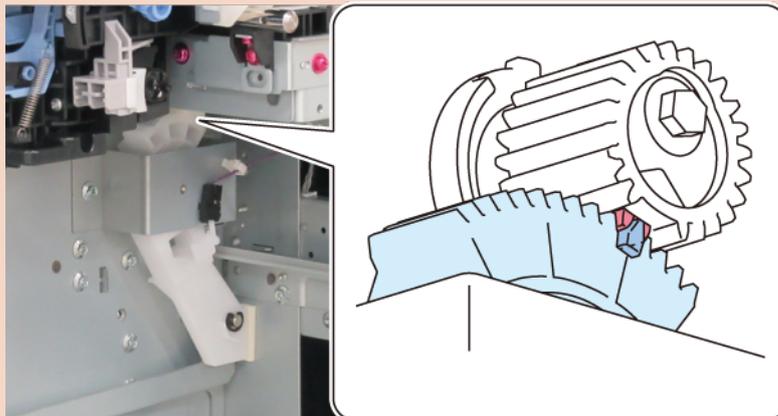
[4]	[5]
	
1 pc	2 pcs



Notes when assembling the unit:

Adjust the phase of gears.

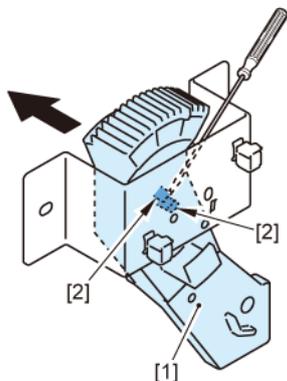
Point



5. Remove [1] GEAR, RELEASE LEVER.

[2]

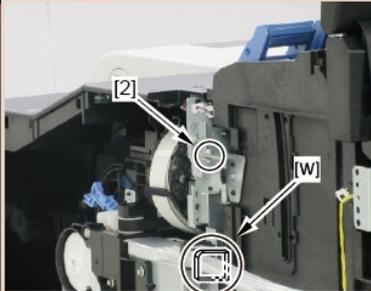
2 pcs



I

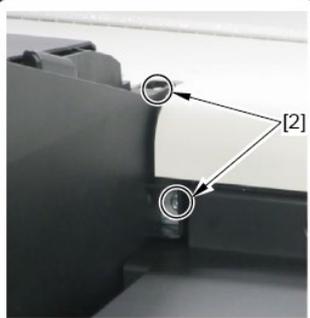
1. Remove all the parts of Group A.
2. Open [1] the right ink unit.

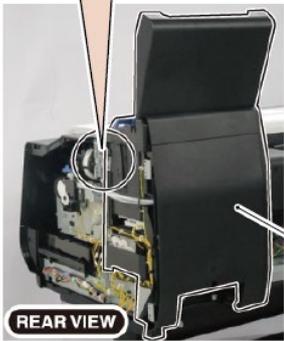
[2]	[W]
	
4 pcs	1 pcs



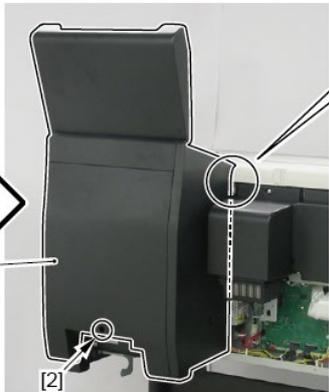
Before opening the unit:

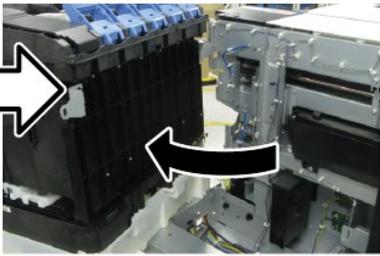
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





REAR VIEW

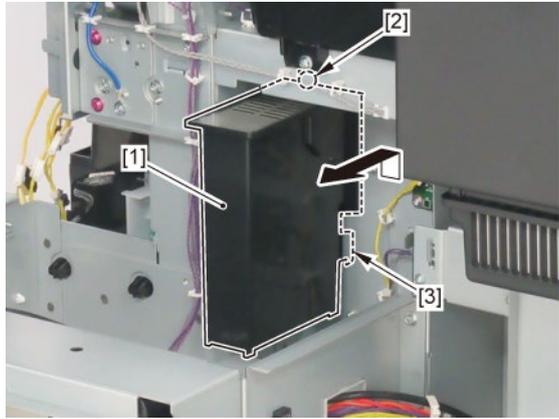




I-1

3. Remove [1] SUCTION FAN DUCT UNIT.

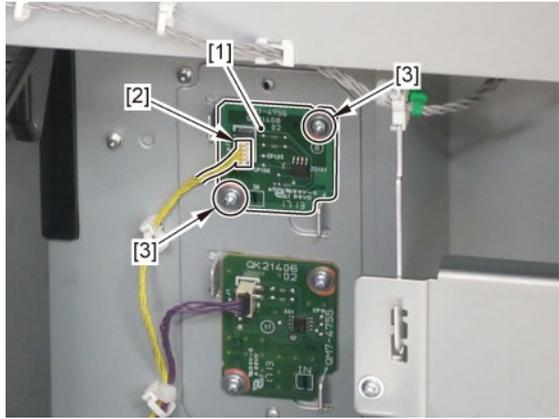
[2]	[3]
	
1 pc	1 pc



I-2

3. Remove [1] BACKUP PCB UNIT.

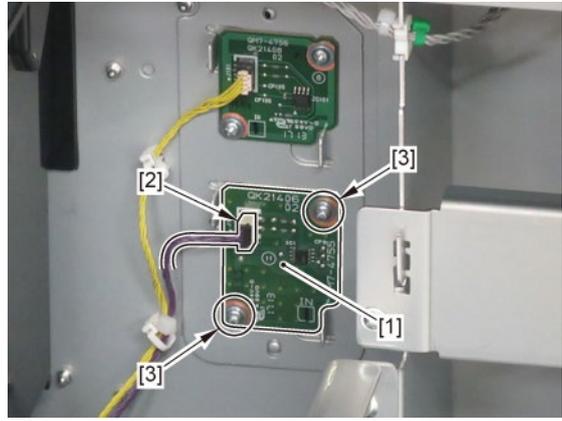
[2]	[3]
	
1 pc	2 pcs



I-3

3. Remove [1] ID PCB UNIT.

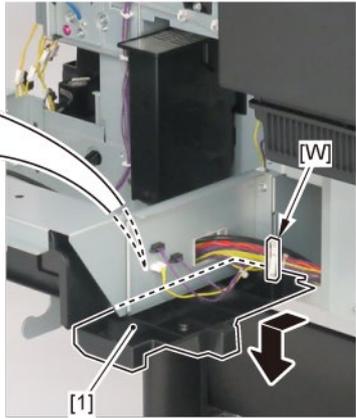
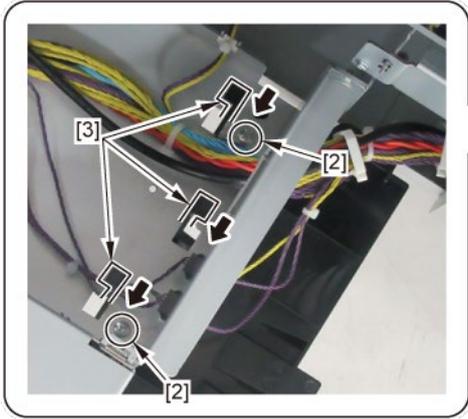
[2]	[3]
	
1 pc	2 pcs



I-4

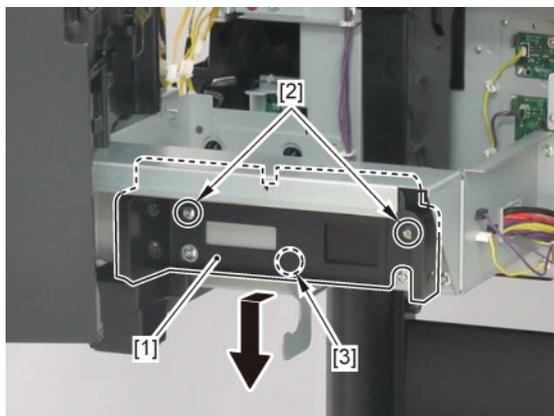
3. Remove [1] INK SUPPLY MOUNT BASE UNIT R.

[2]	[3]	[W]
		
2 pcs	3 pcs	1 pc



4. Remove [1] HANDLE, INKTANK BACK.

[2]	[3]
	
2 pcs	1 pc



J

1. Remove all the parts of Groups A, B and F.
2. Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc

Before opening the unit:

- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.

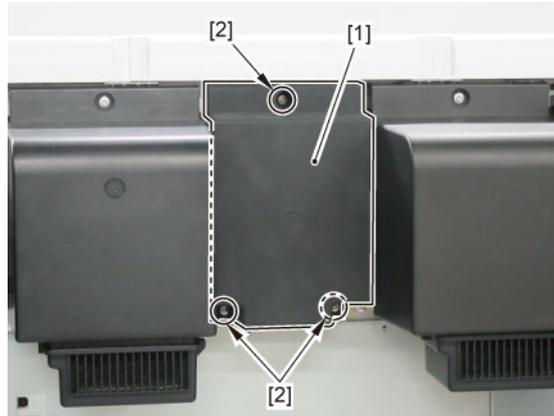
REAR VIEW

3. Remove [1] COVER, BACK W-FAN.

(36" model)

[2]

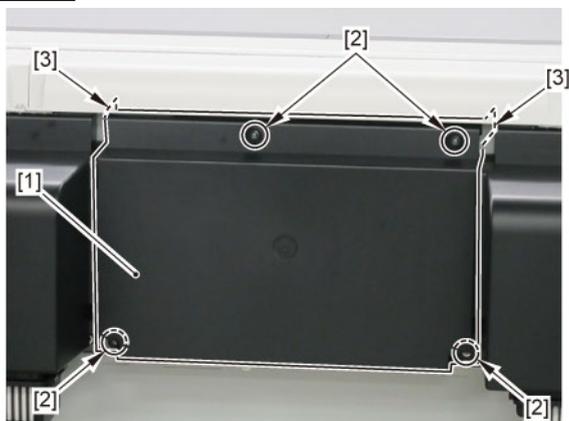
3 pcs



3. Remove [1] COVER, BACK.

(44" model)

[2]	[3]
	
4 pcs	2 pcs



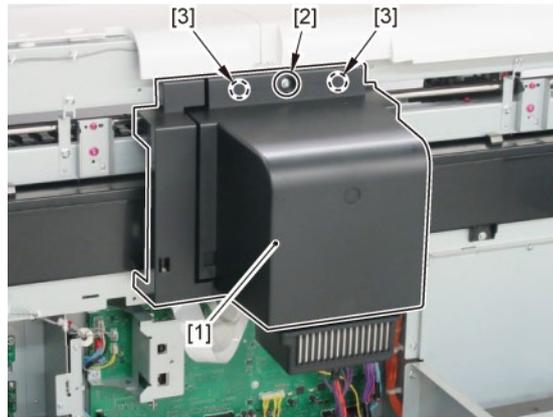
(24" model)

4. Remove [1] a set of

- COVER, MIST FAN

- COVER, BACK RIGHT.

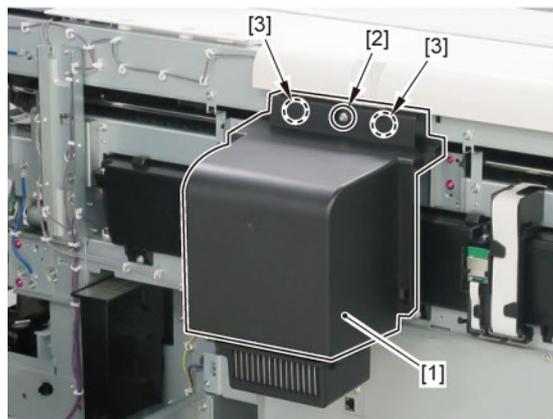
[2]	[3]
	
1 pc	2 pcs



(36" model, 44" model)

Remove [1] COVER, MIST FAN.

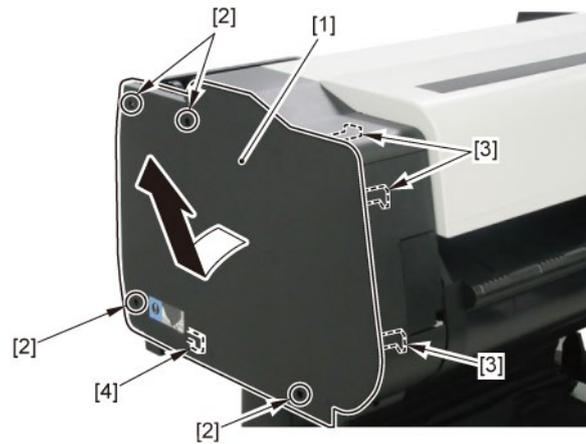
[2]	[3]
	
1 pc	2 pcs



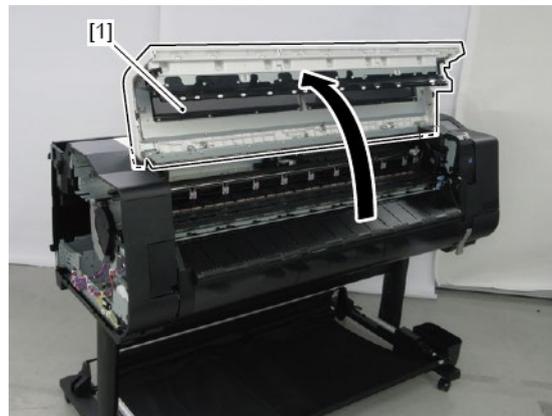
5. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

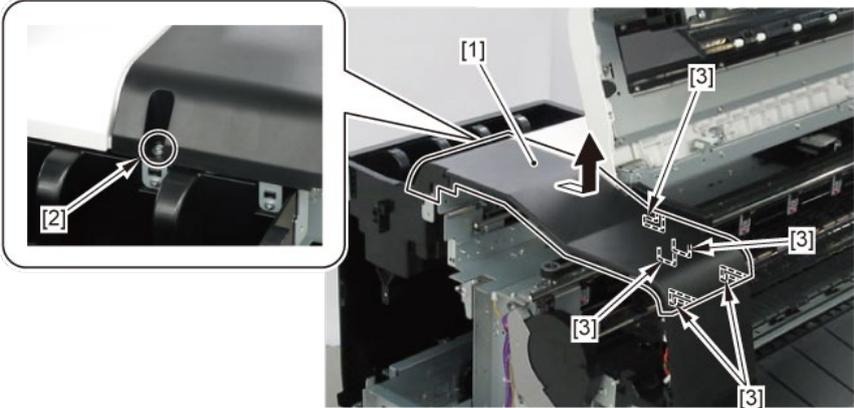


6. Open [1] the access cover.



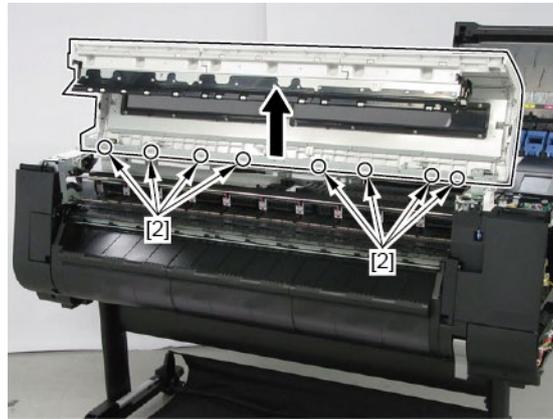
7. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



8. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
24" model	5 pcs
36" model	7 pcs
44" model	8 pcs

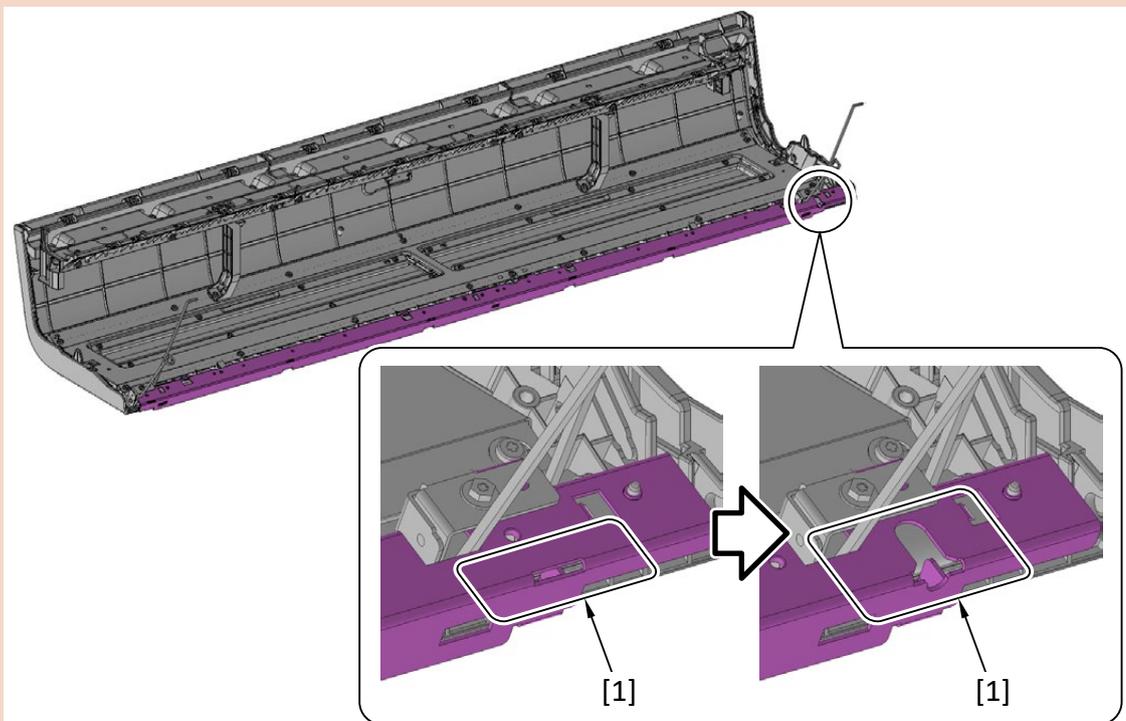


TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

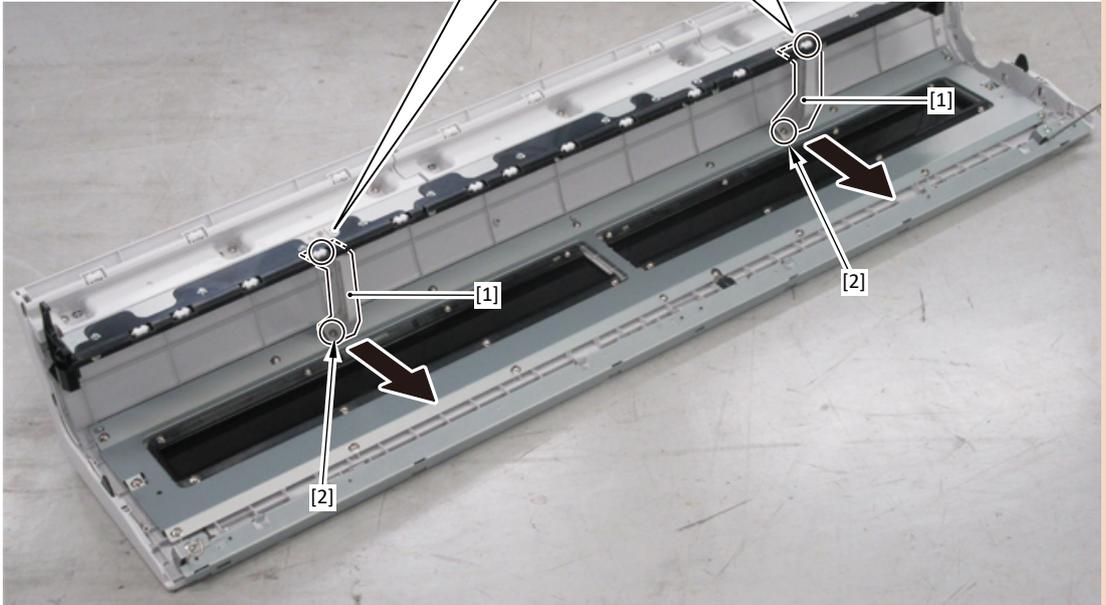
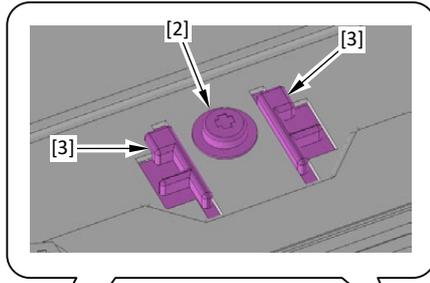
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



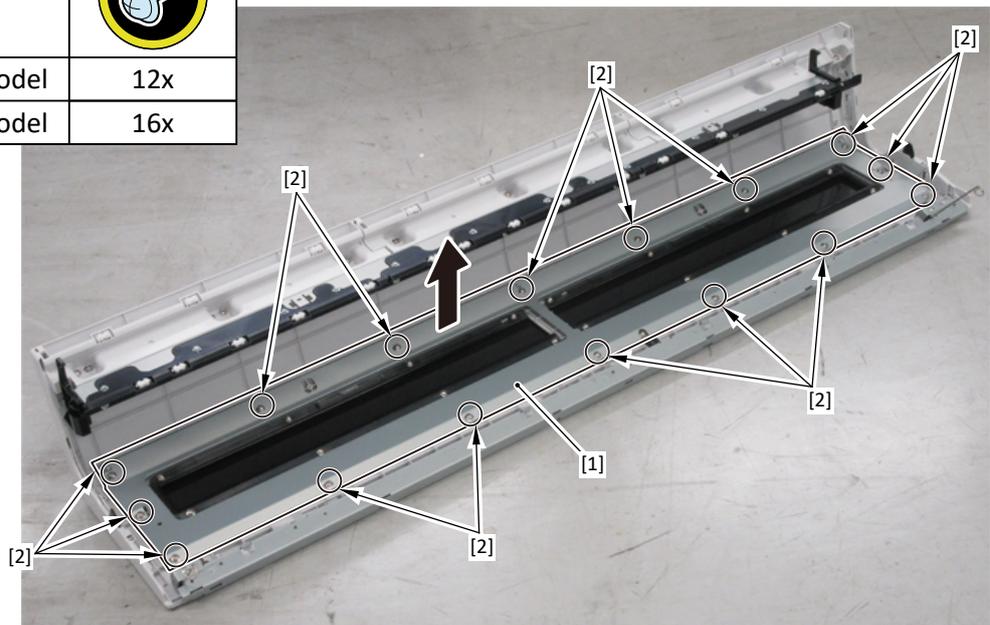
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



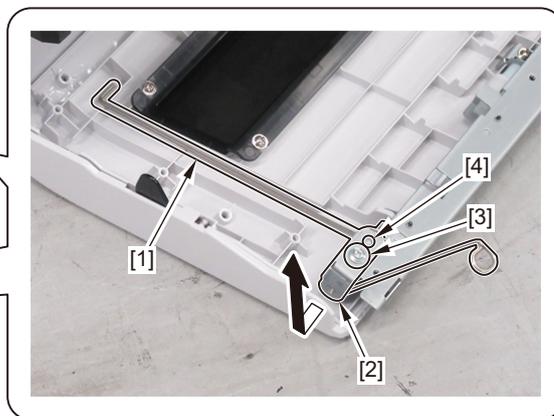
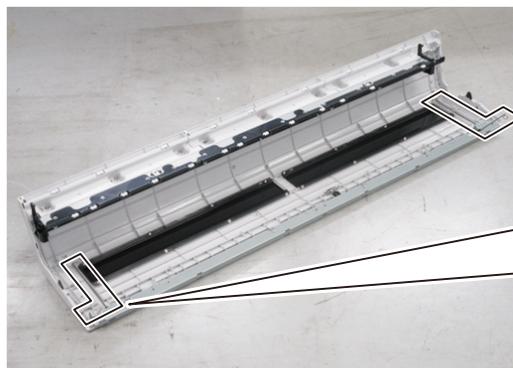
2. Remove [1] the plate.

	[2]
	
24" model	12x
44" model	16x



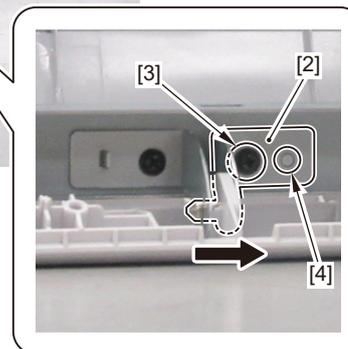
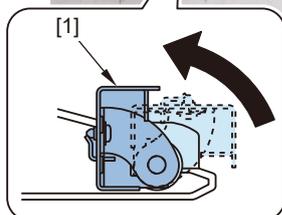
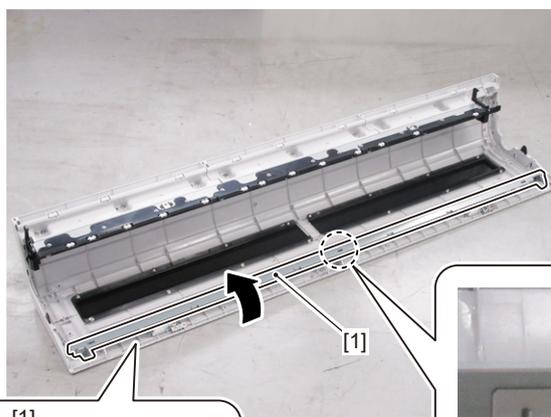
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



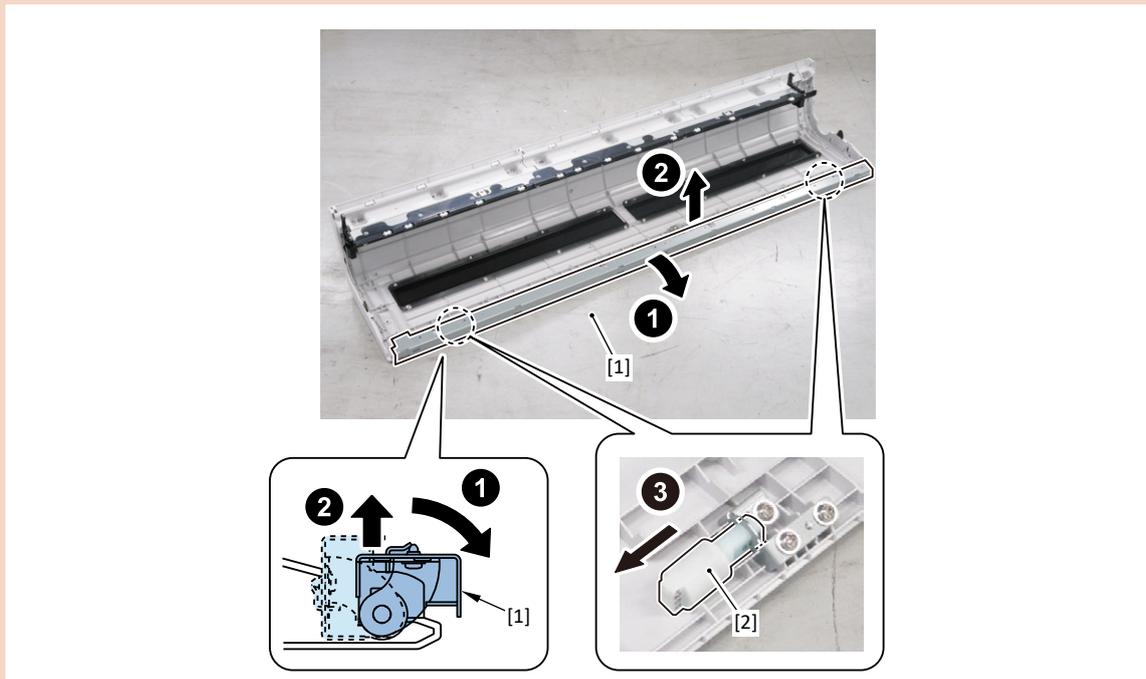
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x



5. Return [1] the plate and remove it.

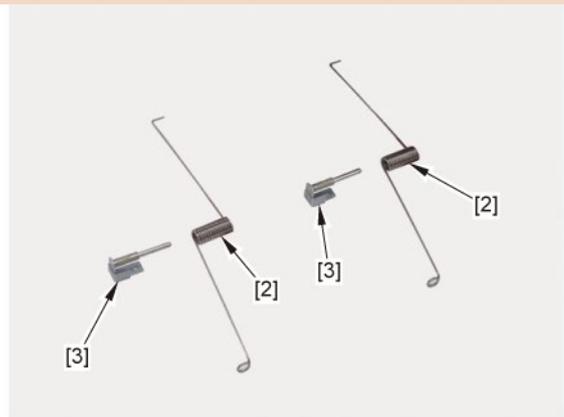
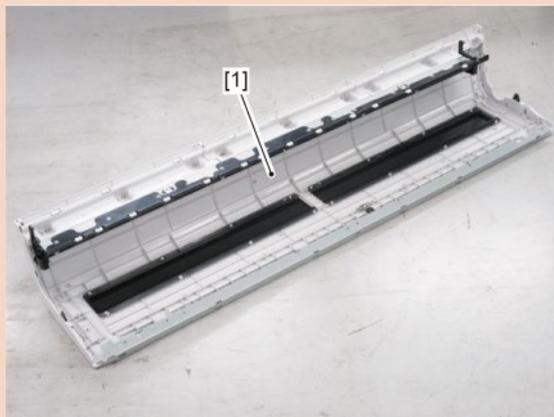
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.

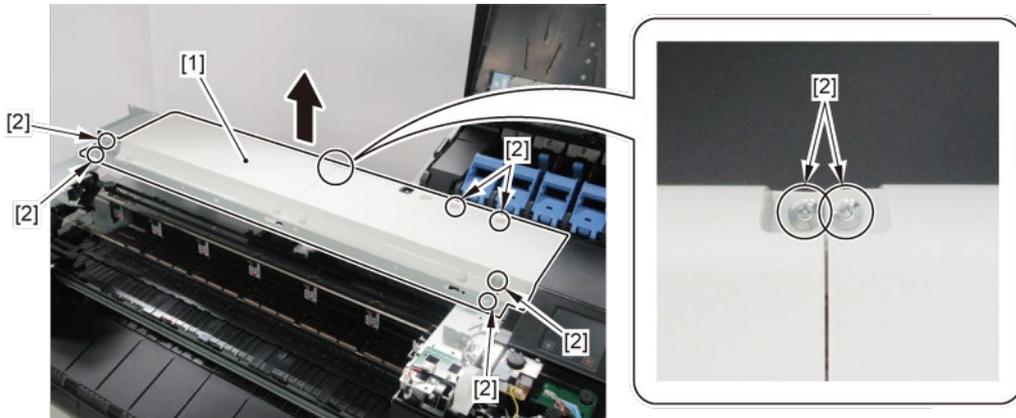


9. Remove [1] COVER UNIT, BACK TOP CENTER.

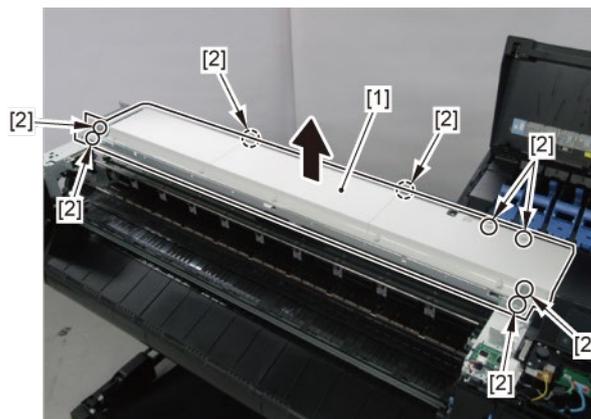
[2]

8 pcs

(24" model)



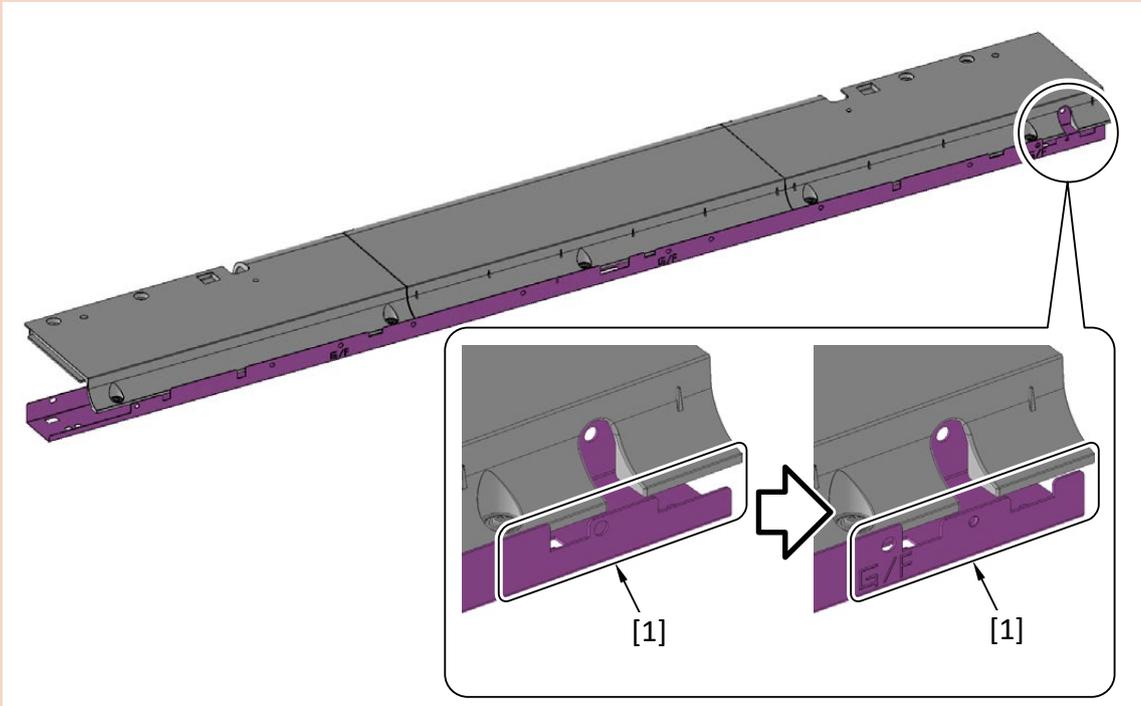
(36" model, 44" model)



TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

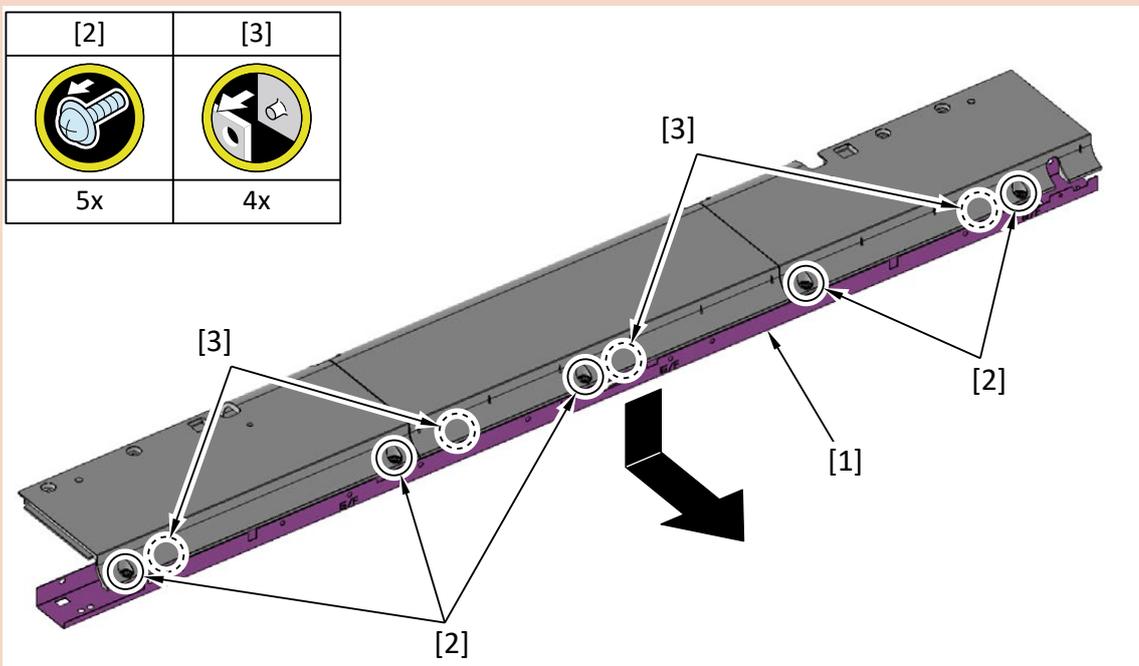
When replacing COVER UNIT, BACK TOP CENTER, check the shape of [1] the plate.

If the plate shape of the service part differs from that of the removed COVER UNIT, BACK TOP CENTER, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.



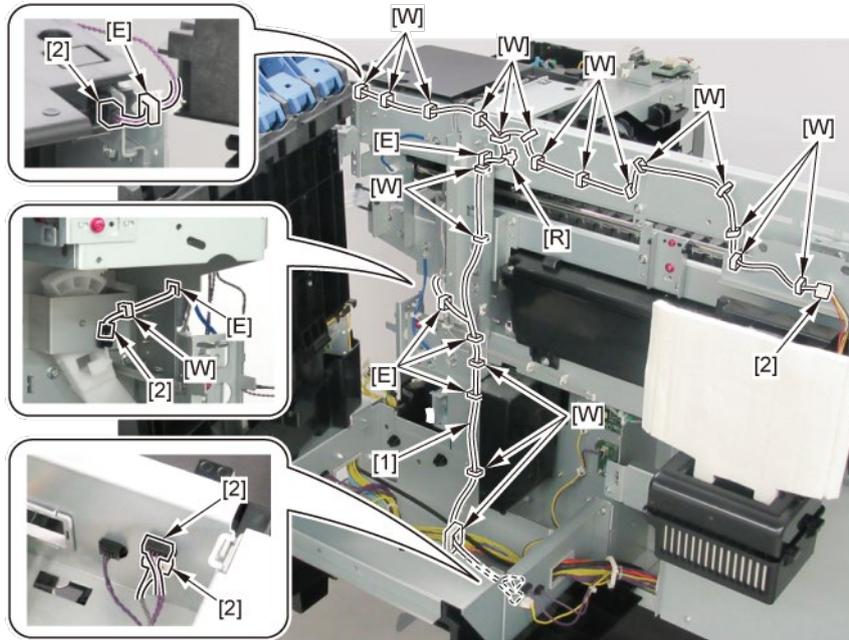
Point

1. Remove [1] the plates (four in 24" model, five in 44" model).

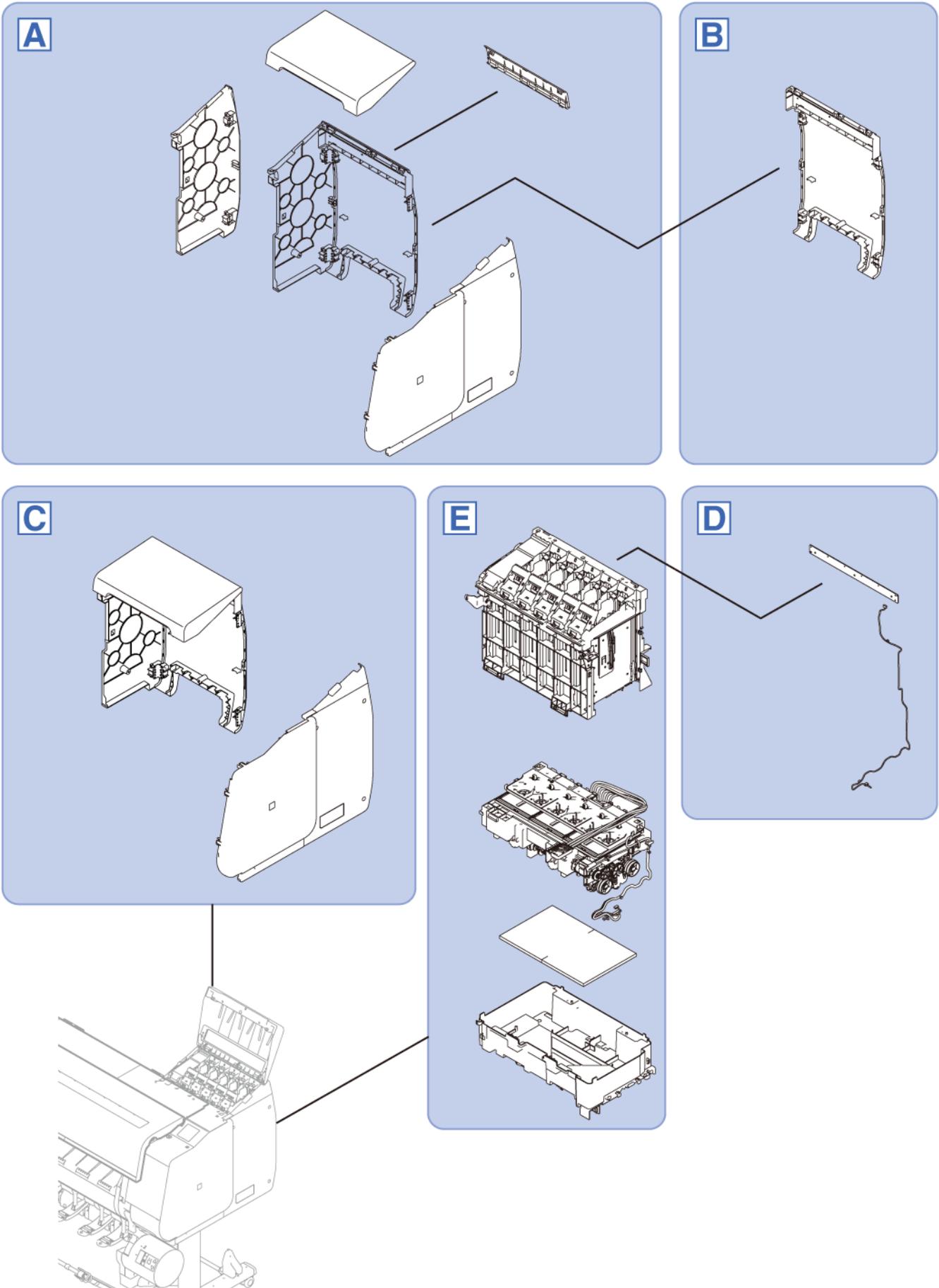


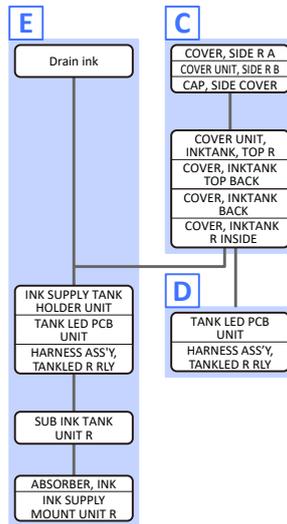
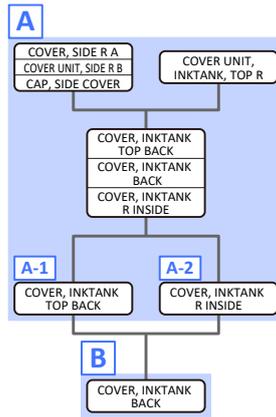
10. Disconnect [1] HARNESS ASS'Y, TANK CVR MFAN R.

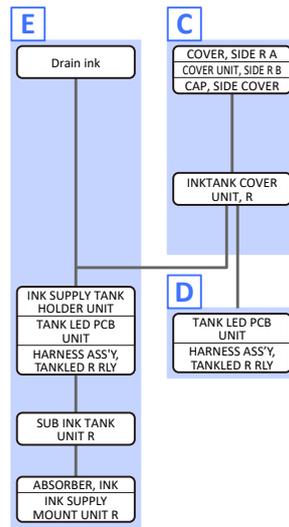
[2]	[W]	[E]	[R]
			
5 pcs	20 pcs	6 pcs	1 pc



10. Right Ink Tank Unit

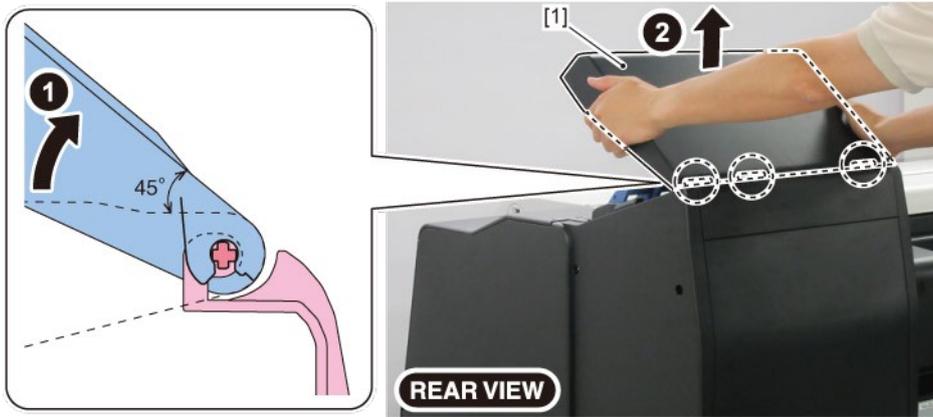






A (TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410)

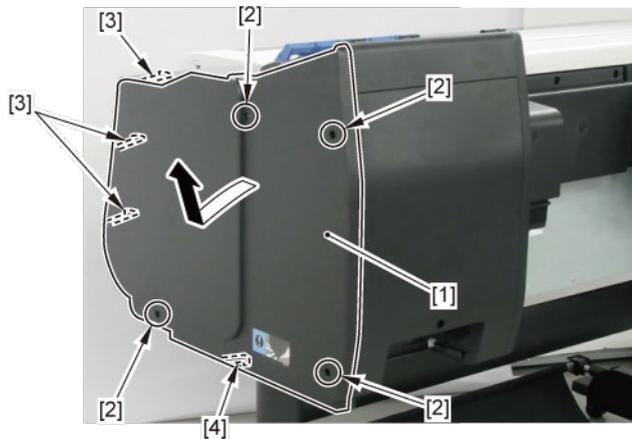
1. Remove [1] COVER UNIT, INKTANK, TOP R.



2. Remove [1] a set of

- COVER, SIDE R A
- COVER UNIT, SIDE R B
- CAP, SIDE COVER.

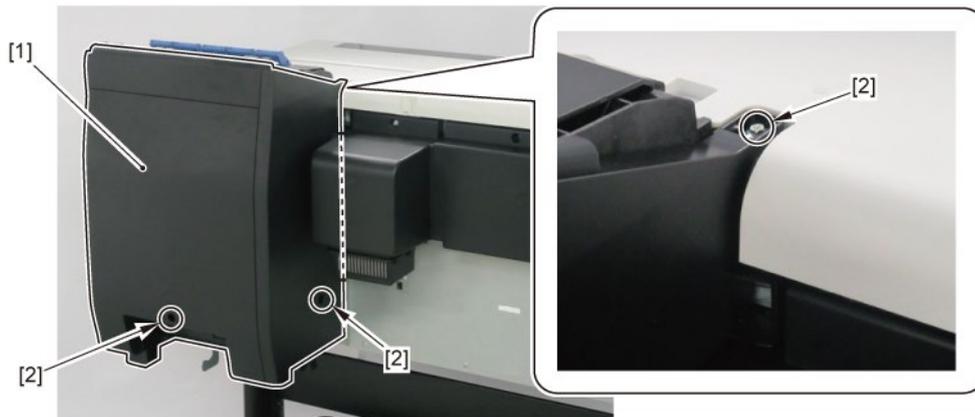
[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc



3. Remove [1] a set of
- COVER, INKTANK TOP BACK
 - COVER, INKTANK BACK
 - COVER, INKTANK R INSIDE.

[2]

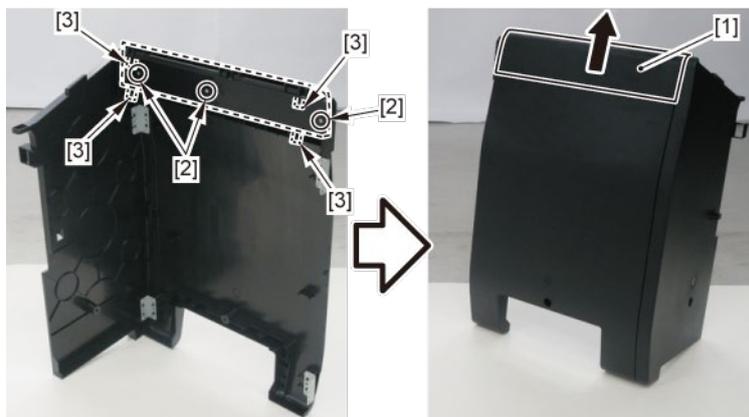
3 pcs



A-1 (TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410)

4. Remove [1] COVER, INKTANK TOP BACK.

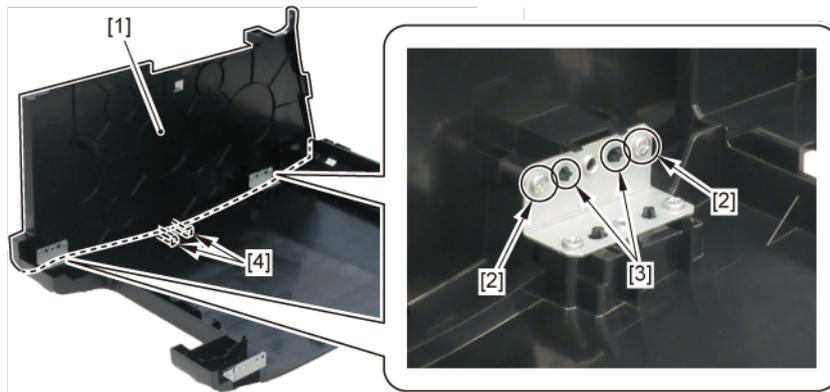
[2]	[3]
	
3 pcs	4 pcs



A-2 (TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410)

4. Remove [1] COVER, INKTANK R INSIDE.

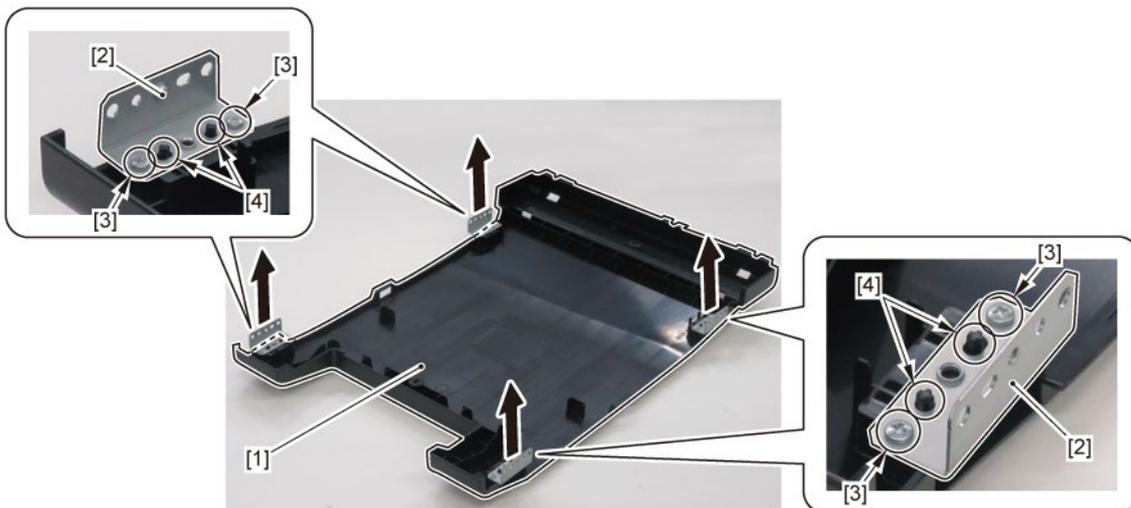
[2]	[3]	[4]
		
2 pcs each	2 pcs each	2 pcs



B (TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410)

- Remove all the parts of Group A.
- From [1] COVER, INKTANK BACK, remove [2] four plates.

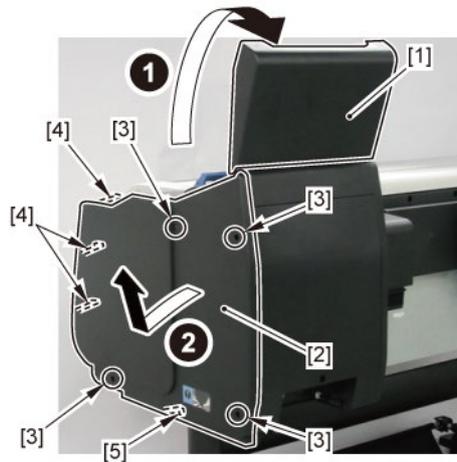
[3]	[4]
	
2 pcs each	2 pcs each



C

1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



3. Remove [1] a set of
 - COVER UNIT, INKTANK, TOP R
 - COVER, INKTANK TOP BACK
 - COVER, INKTANK BACK
 - COVER, INKTANK R INSIDE.

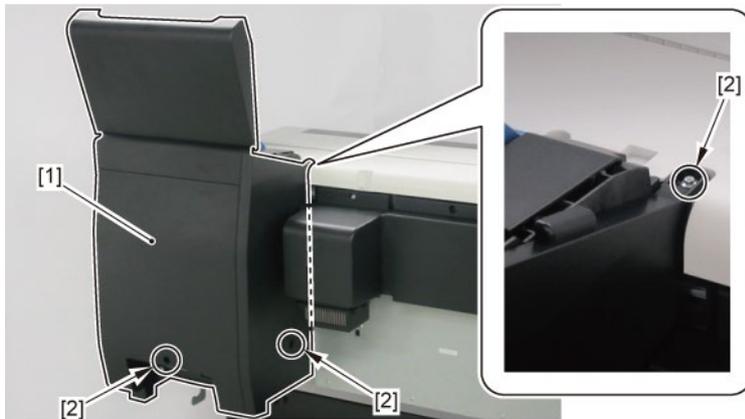
TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

3. Remove [1] INKTANK COVER UNIT, R.

TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

[2]

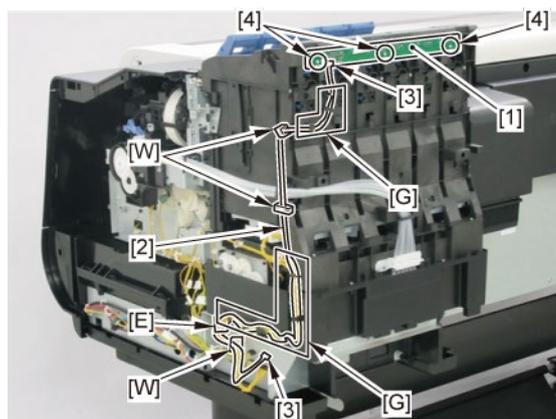
3 pcs



D

1. Remove all the parts of Group C.
2. Remove [1] TANK LED PCB UNIT and [2] HARNESS ASS'Y, TANKLED R RLY.

[3]	[4]	[W]	[E]	[G]
				
2 pcs	3 pcs	3 pcs	1 pc	2 pcs

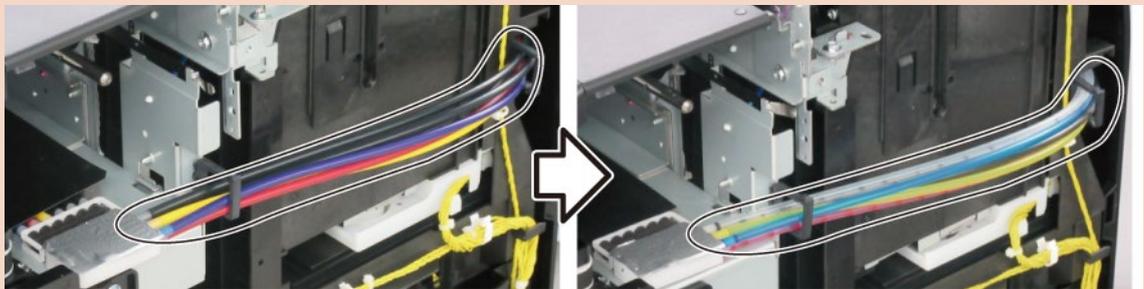


E

1. Remove all the ink tanks.
2. Drain ink into the sub ink tan

▪ **To do it in the Service Mode:**

1. Unlock the carriage by selecting [SERVICE MODE > FUNCTION > CR UNLOCK] in the operation panel, manually move the carriage unit to the position where the print head can be
2. On the printer operation panel, select [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN]. The supply valve (choke valve) of SUB INK TANK UNIT will open.
3. Ink will be drained from the CARRIAGE UNIT (or INK TUBE UNIT) into the SUB INK TANK UNIT.
4. Wait for five to ten minutes, then confirm that the ink has been drained from the tubes.



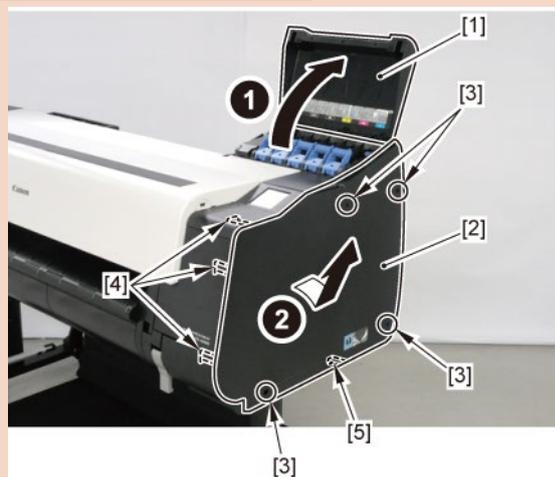
5. Power off the printer and unplug the power cord.

▪ **To do it manually:**

1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

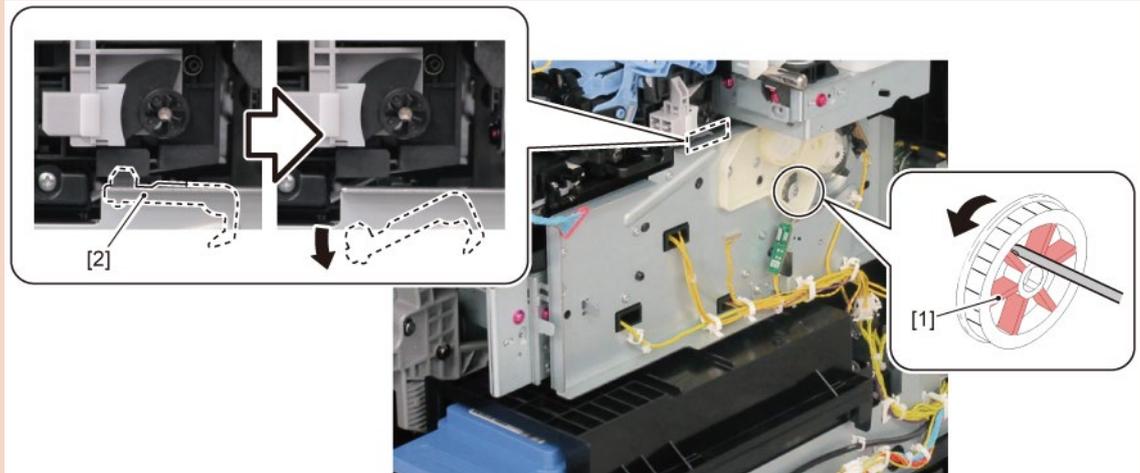


[3]	[4]	[5]
4 pcs	3 pcs	1 pc



3. Unlock the carriage.

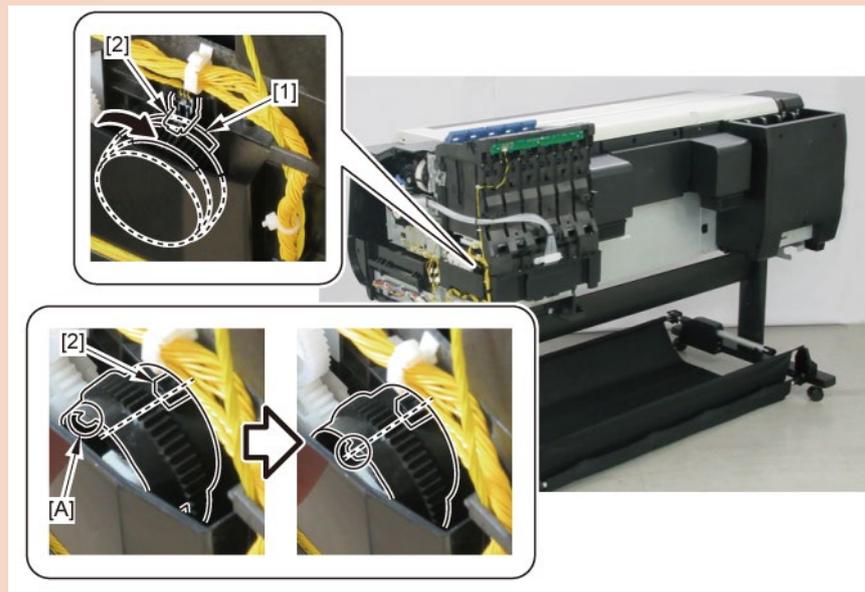
Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



4. Turn the gear in the arrowed direction to open ink tank unit valve.

When [1] the gear flag comes under [2] the sensor, the valve will open.

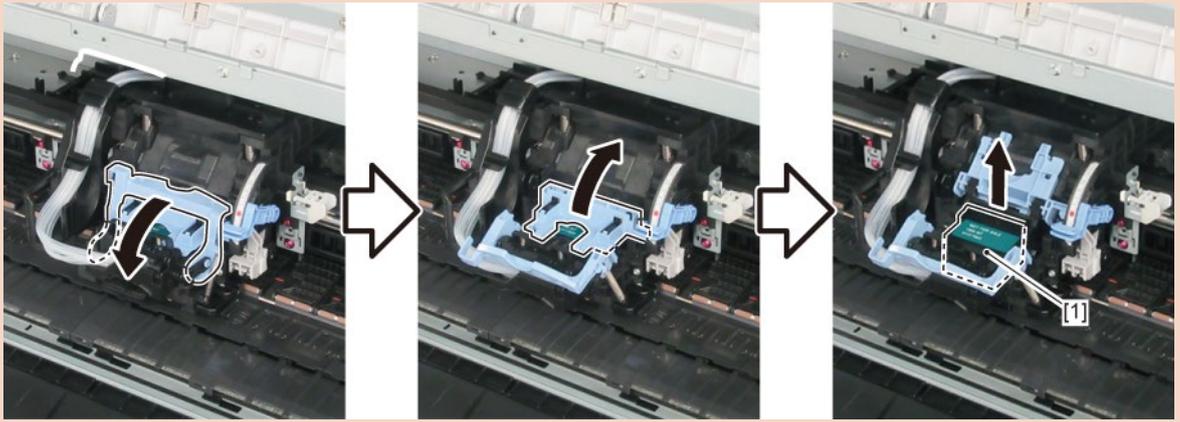
When [A] the tab is at the top center, the valve is fully opened.



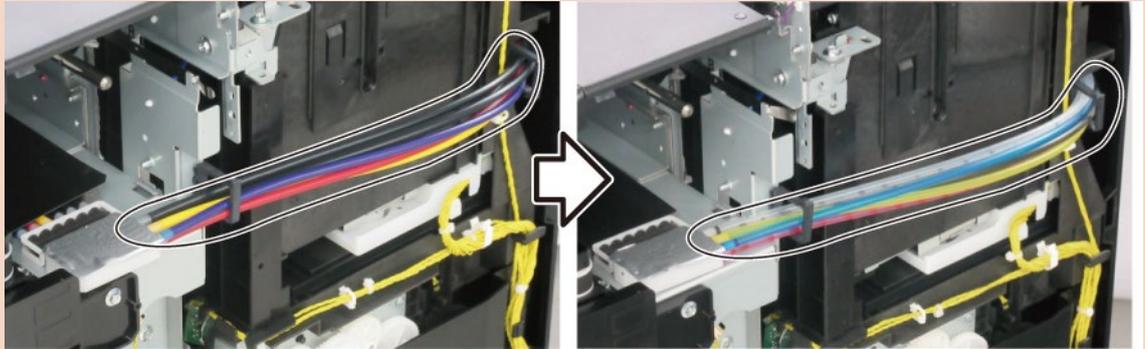
5. Open [1] the access cover.



6. Remove [1] PRINT HEAD.



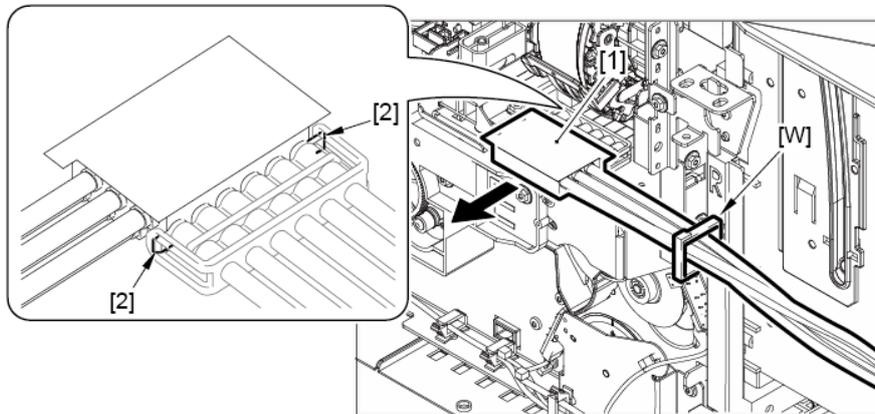
7. Wait for five to ten minutes, then confirm that the ink has been drained from the tubes.



3. Remove all the parts of Group C.

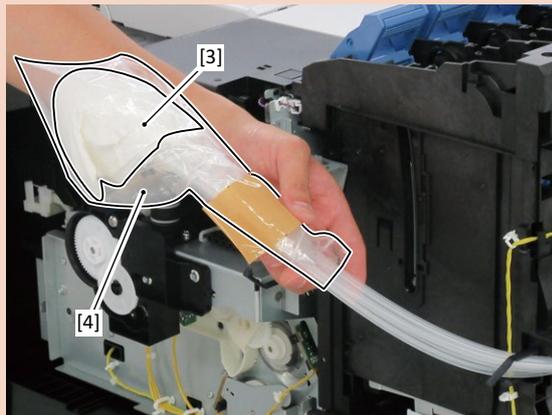
4. Disconnect [1] the tube joint.

[2]	[W]
	
2 pcs	1 pc



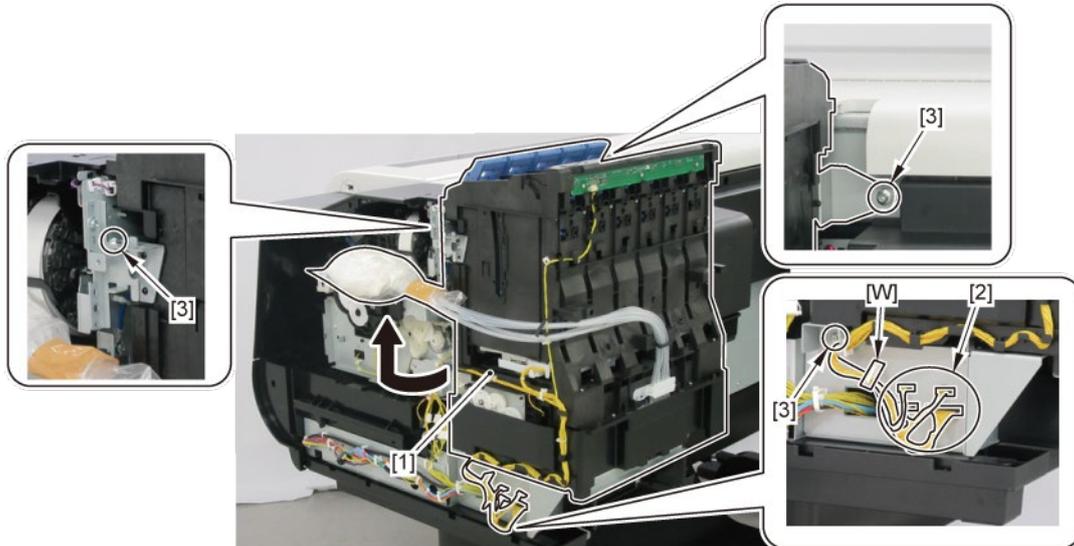
Notes when removing the unit:

Wrap the joint in [3] paper towel, etc., put them in [4] a plastic bag, and close the bag.



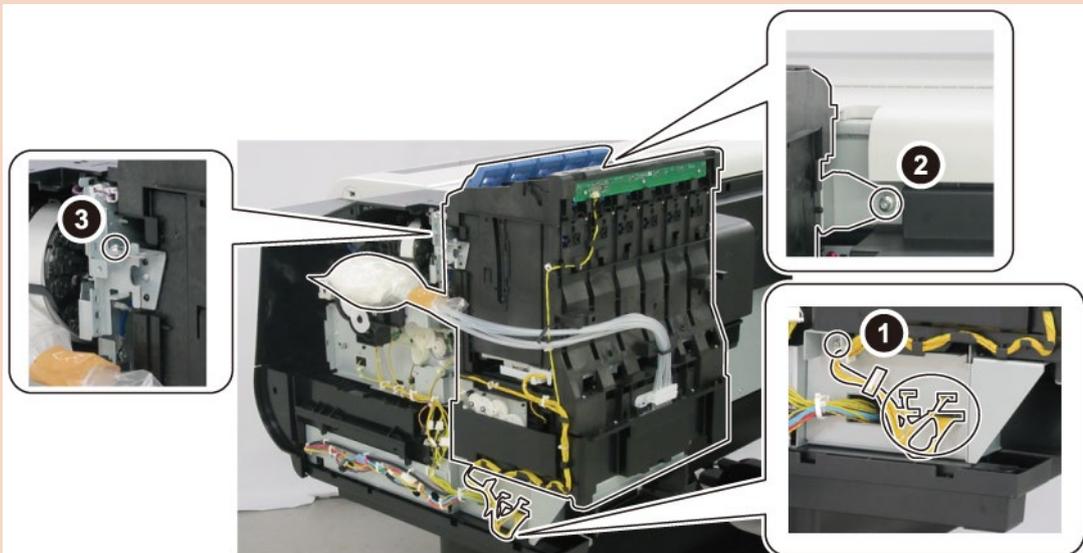
5. Remove [1] the ink tank unit.

[2]	[3]	[W]
		
4 pcs	3 pcs	1 pc



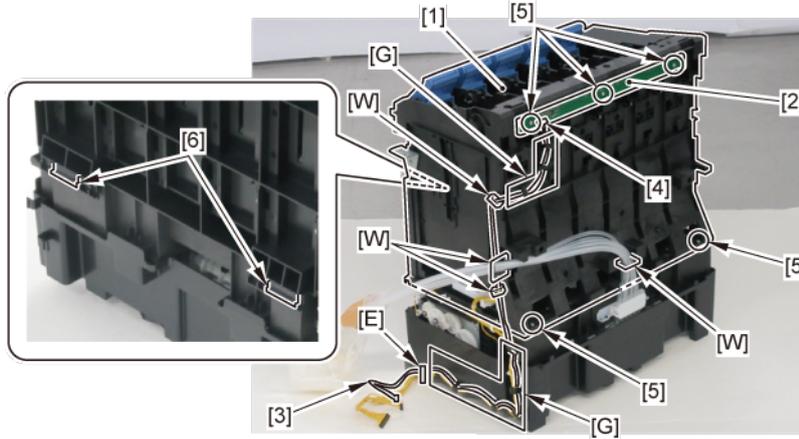
Notes when assembling the unit:

Tighten each screw in the order of numbers shown below.



6. Remove [1] INK SUPPLY TANK HOLDER UNIT, [2] TANK LED PCB UNIT, and [3] HARNESS ASS'Y, TANK LED R RLY.

[4]	[5]	[6]	[W]	[E]	[G]
					
1 pc	5 pcs	2 pcs	4 pcs	1 pc	2 pcs



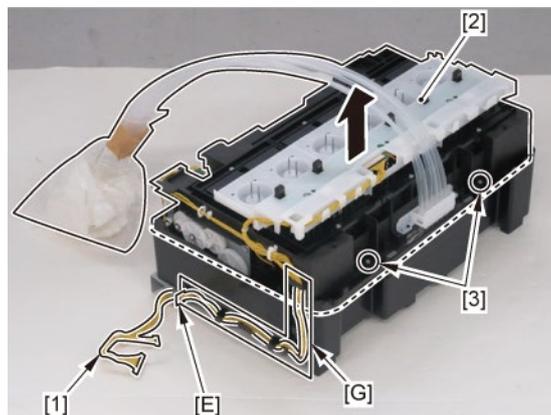
7. Disconnect the harness.

[E]	[G]
	
1 pc	1 pc

8. Remove [2] SUB INK TANK UNIT R.

[3]

2 pcs

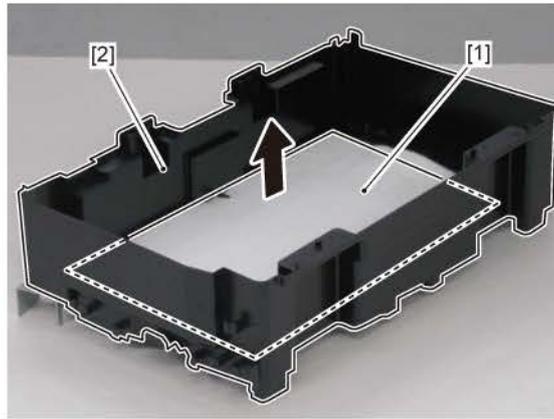


Notes when the SUB INK TANK UNIT R is replaced:

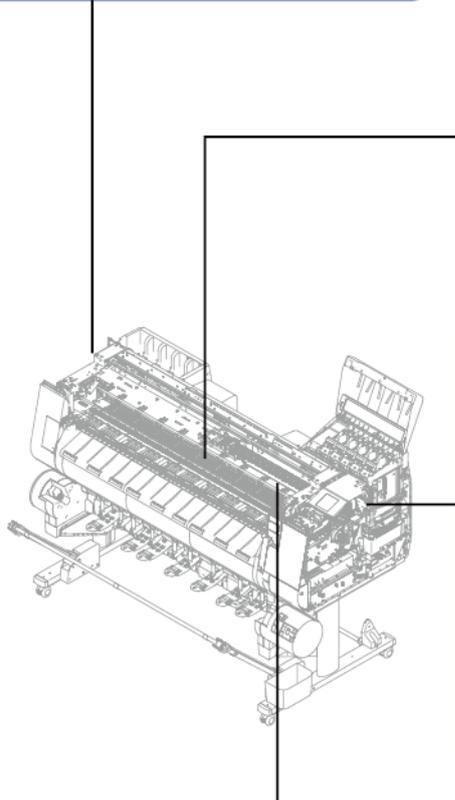
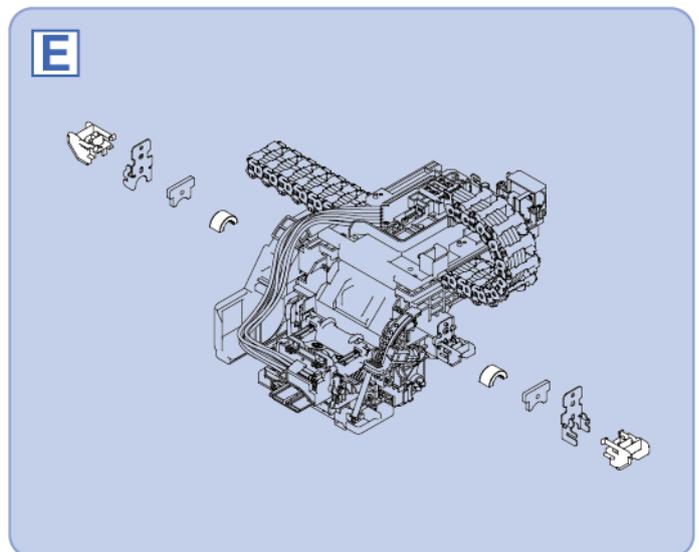
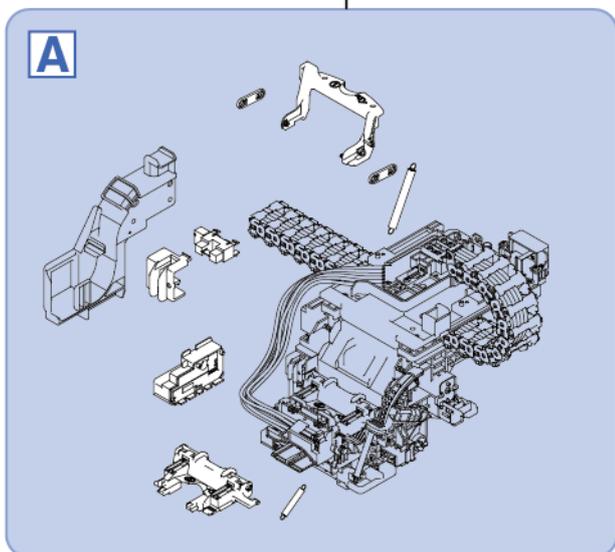
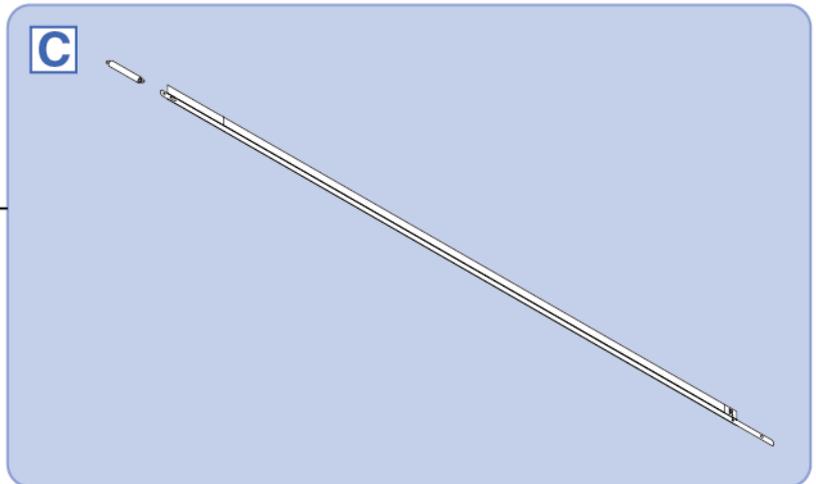
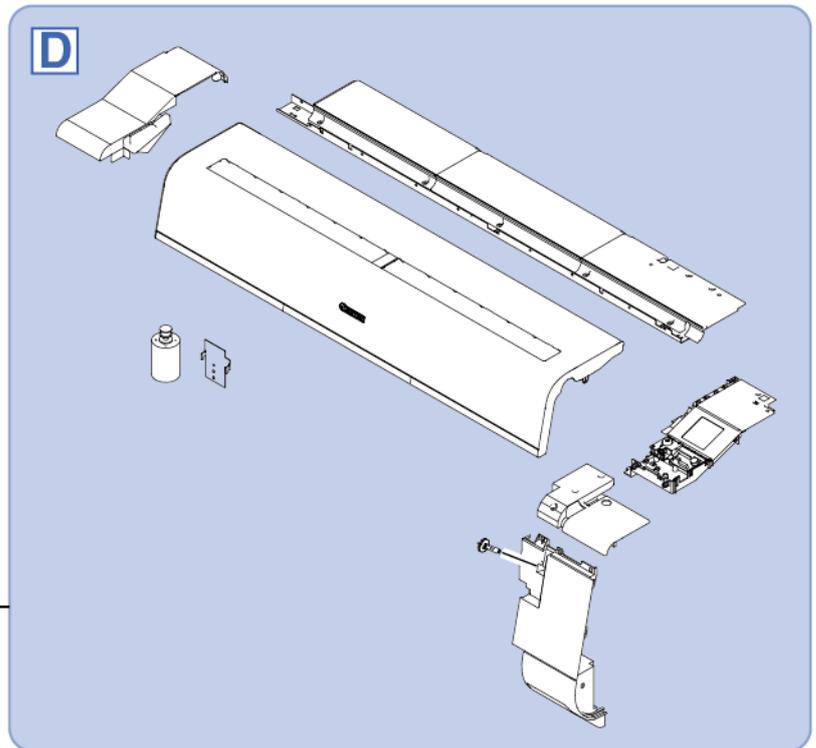
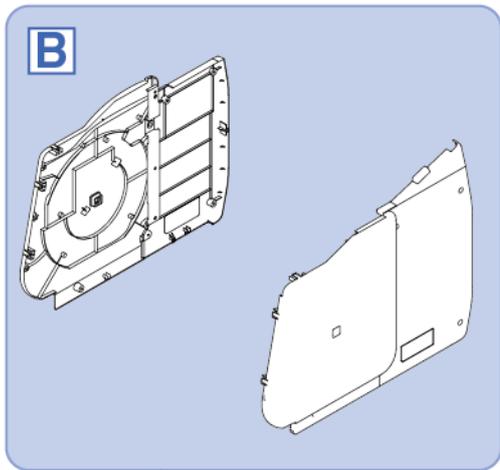


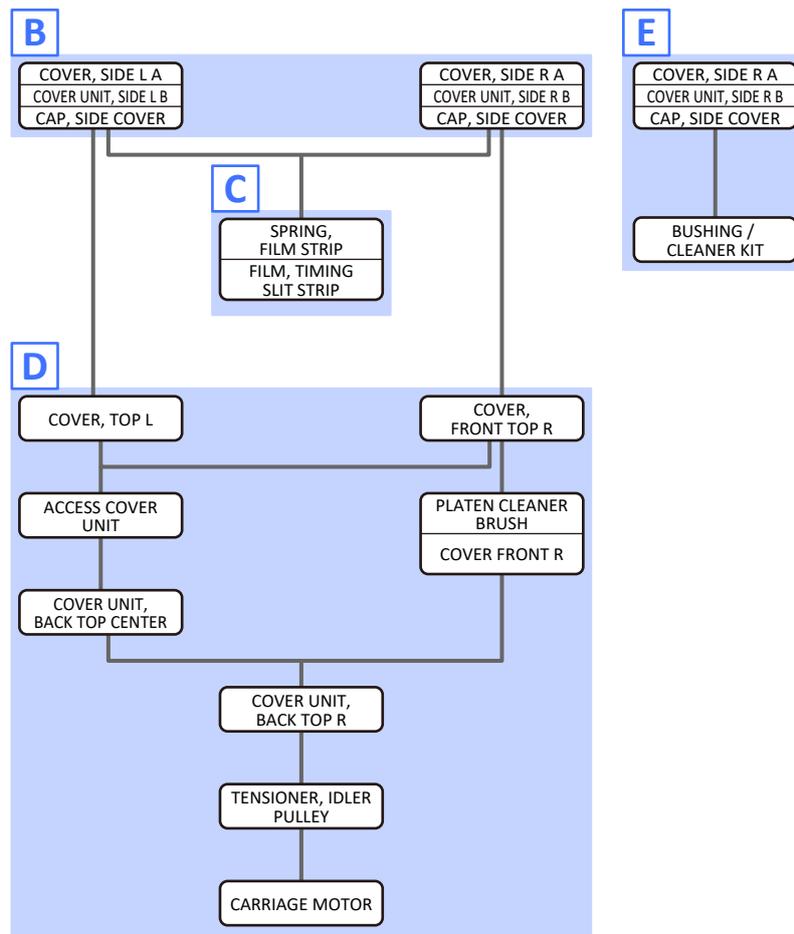
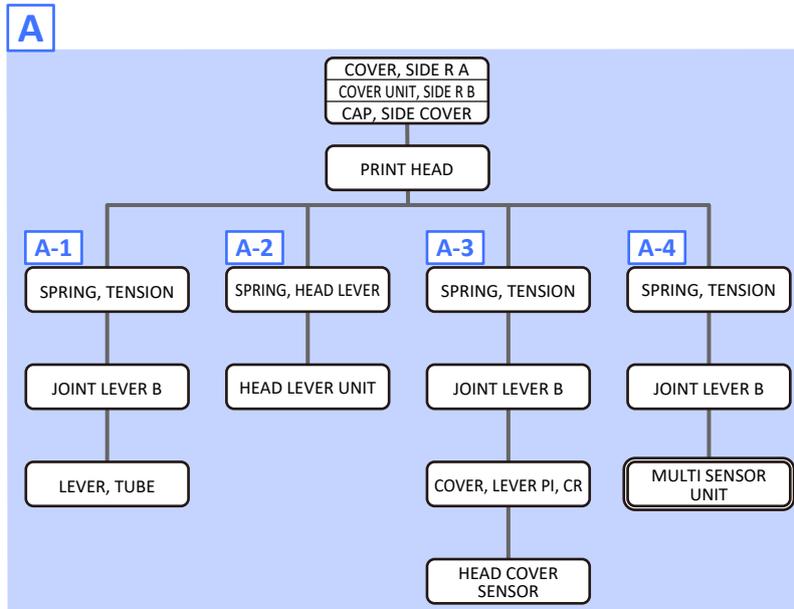
Dispose of ink of the replaced (old) SUB INK TANK UNIT R into a waste ink bottle (or in a bucket) before carrying it.

9. Remove [1] ABSORBER, INK from [2] INK SUPPLY MOUNT UNIT R.



11. Carriage Unit (1)

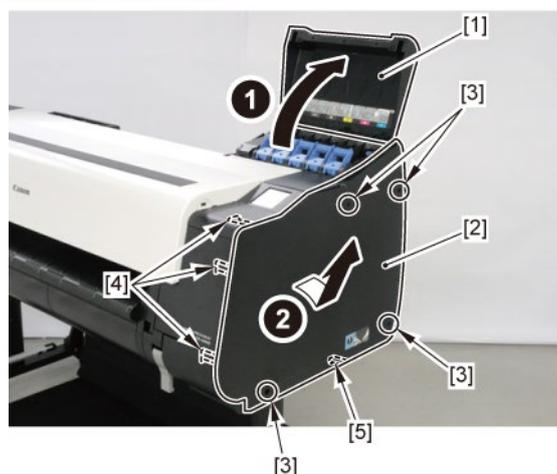




A

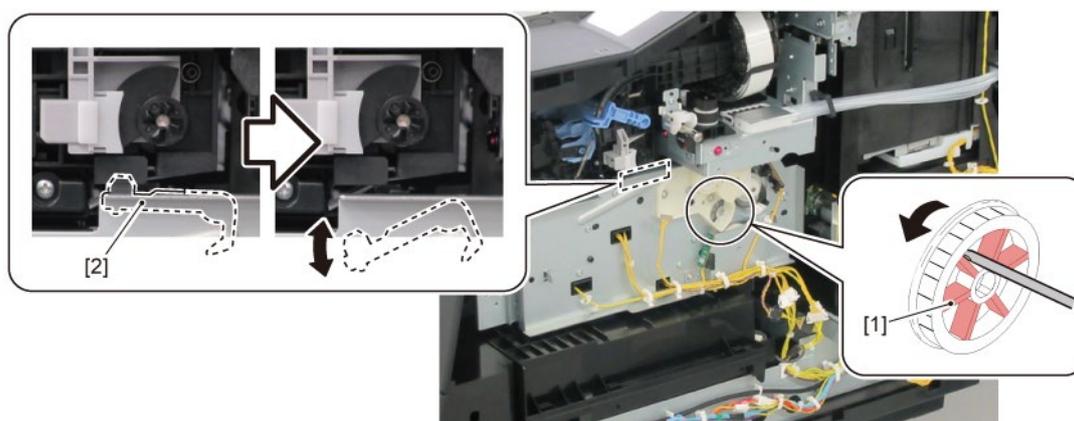
1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc

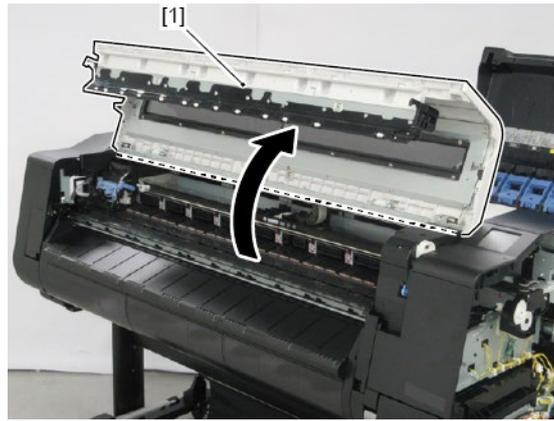


3. Unlock the carriage.

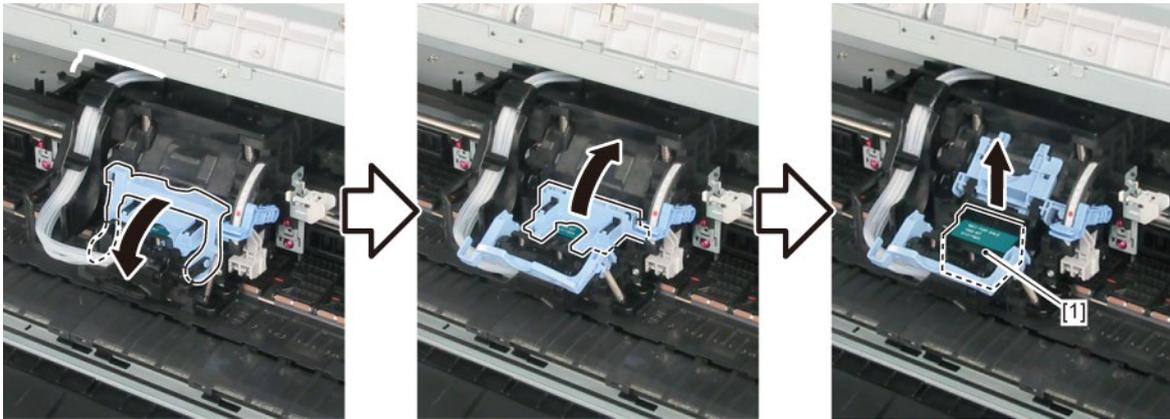
Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



4. Open [1] the access cover.

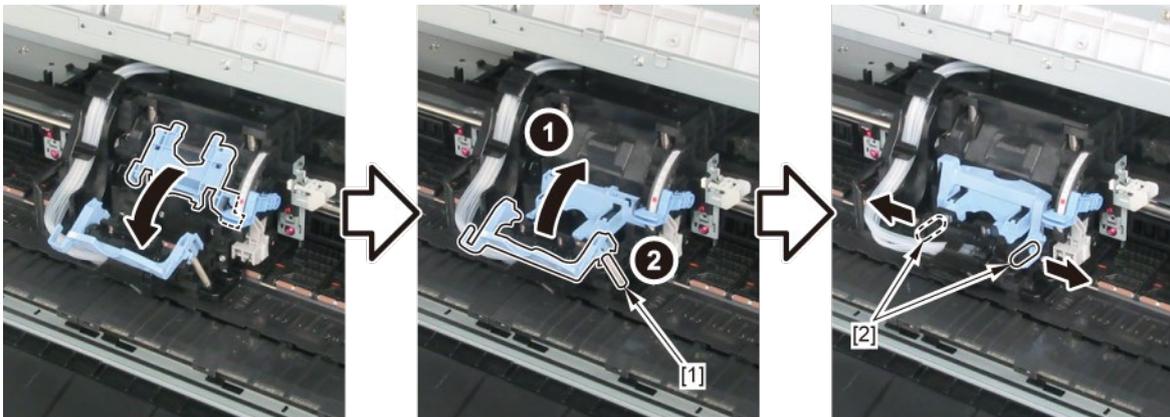


5. Remove [1] PRINT HEAD.



A-1

6. Remove [1] SPRING, TENSION and two pieces of [2] JOINT LEVER B.

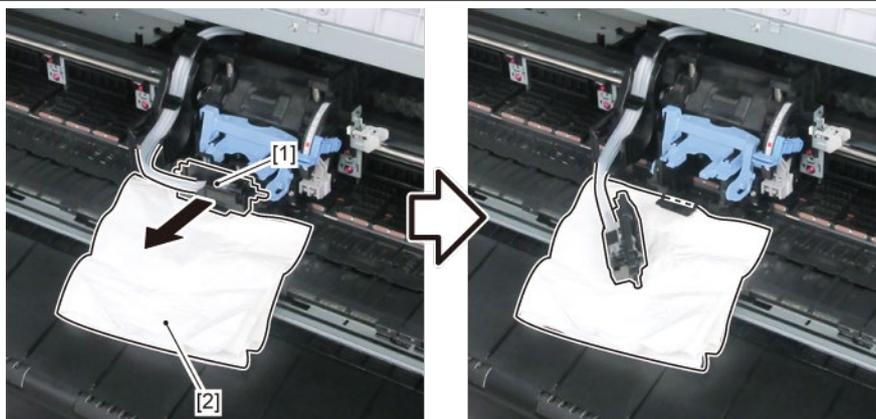


7. Remove [1] the joint base.



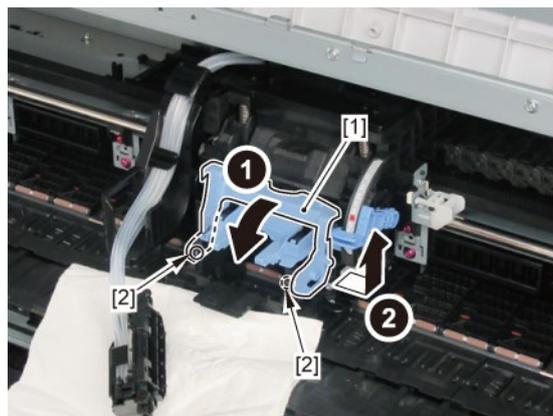
Notes when removing the unit:

Place the unit on [2] a paper towel, etc. as shown below.



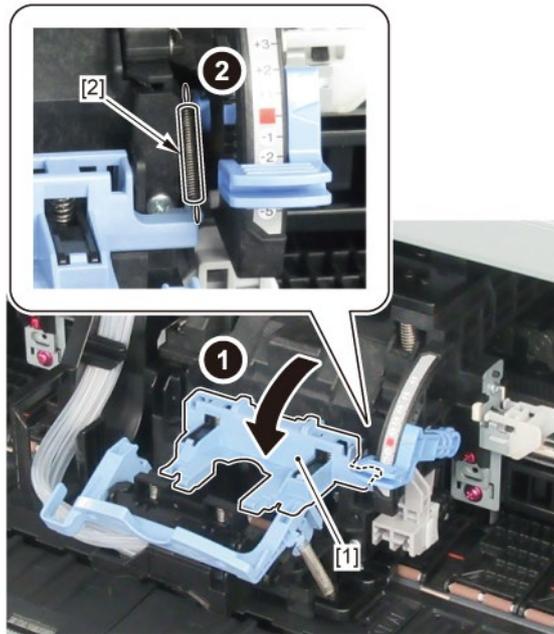
8. Remove [1] LEVER, TUBE.

[2]
2 pcs



A-2

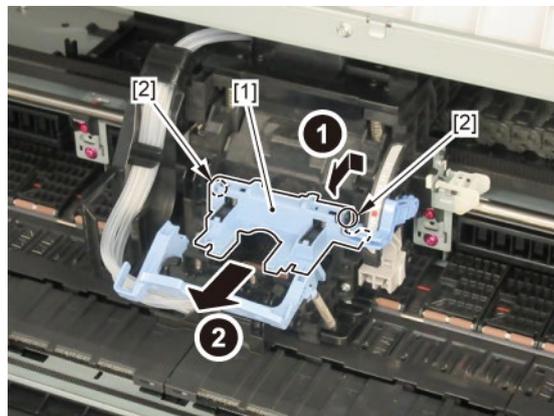
6. Close [1] HEAD LEVER UNIT and remove [2] SPRING, HEAD LEVER.



7. Remove [1] HEAD LEVER UNIT.

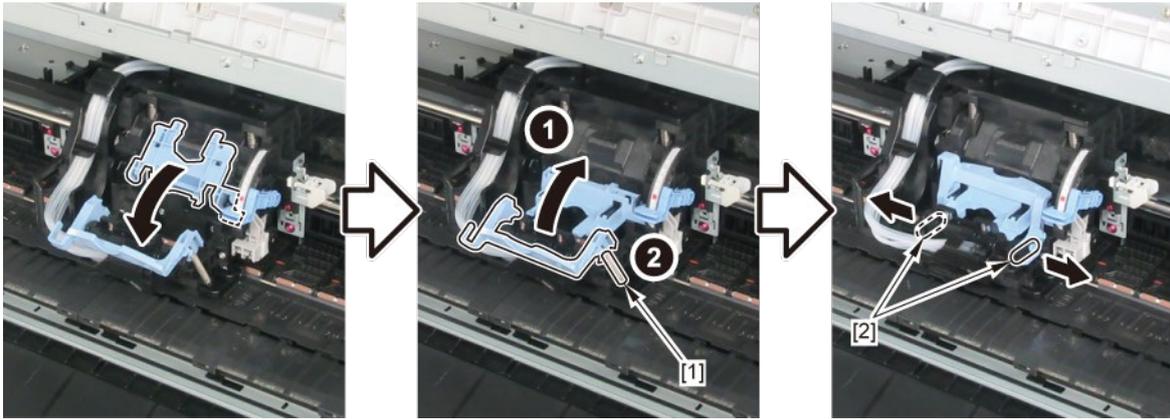
[2]

2 pcs



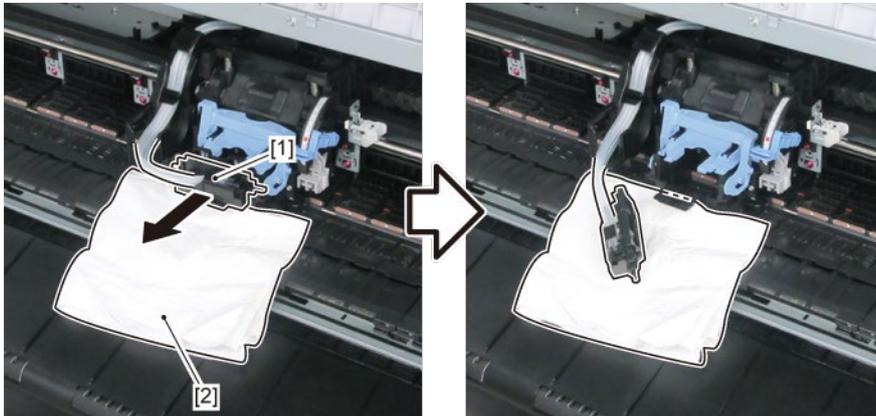
A-3

6. Remove [1] SPRING, TENSION and two pieces of [2] JOINT LEVER B.



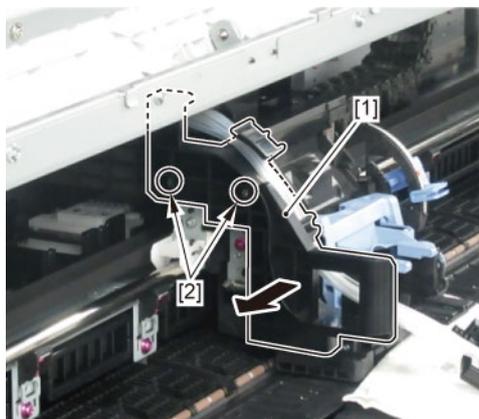
7. Remove [1] the joint base.

Point **Notes when removing the unit:**
Place the unit on [2] a paper towel, etc. as shown below.



8. Remove [1] the tube guide.

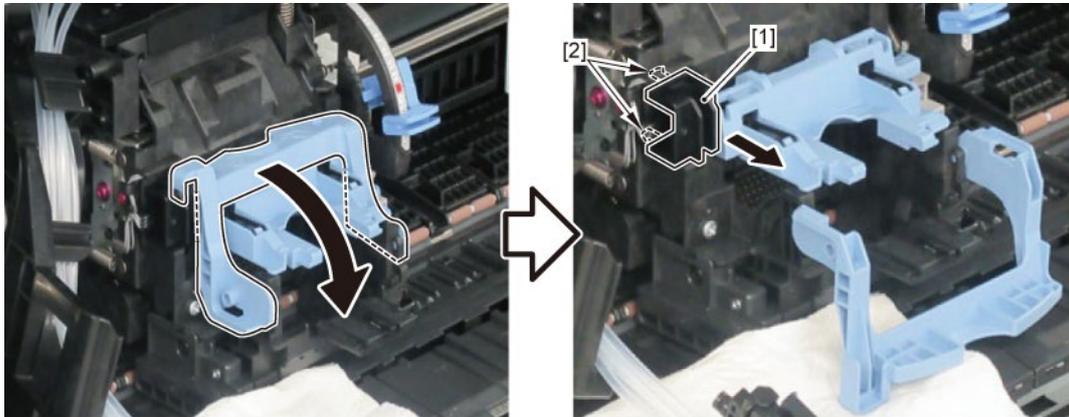
[2]
2 pcs



9. Remove [1] COVER, LEVER PI, CR.

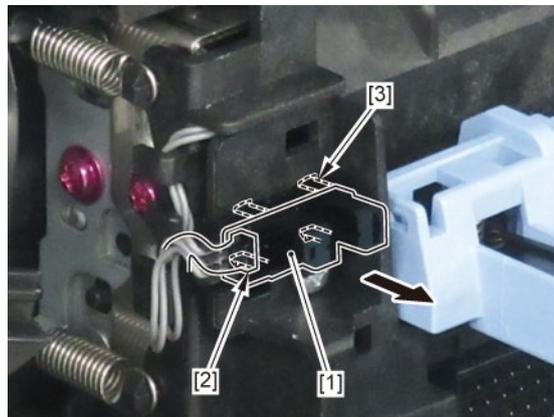
[2]

2 pcs



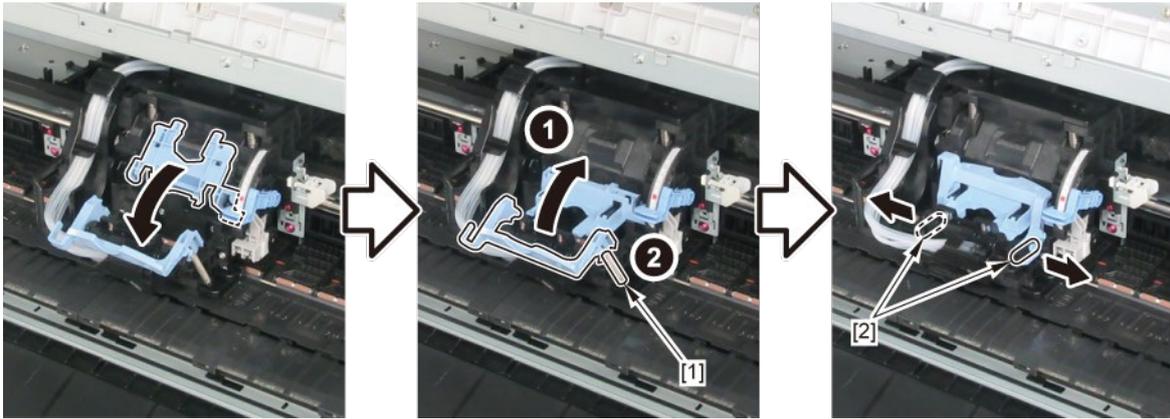
10. Remove [1] HEAD COVER SENSOR.

[2]	[3]
	
1 pc	4 pcs



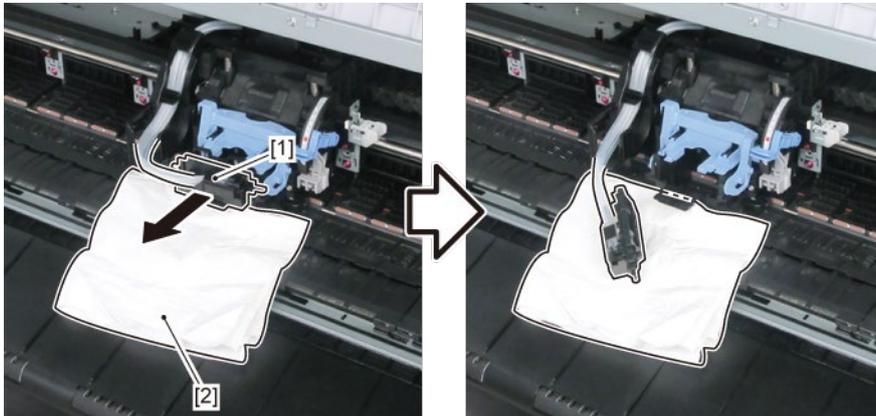
A-4

6. Remove [1] SPRING, TENSION and two pieces of [2] JOINT LEVER B.



7. Remove [1] the joint base.

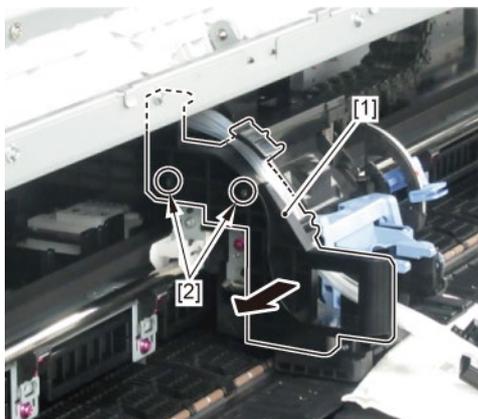
Point **Notes when removing the unit:**
Place the unit on [2] a paper towel, etc. as shown below.



8. Remove [1] the tube guide.

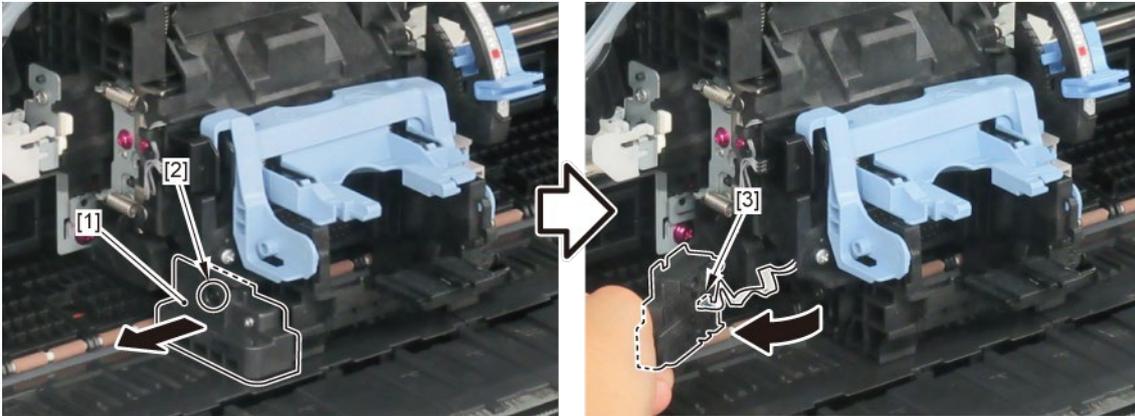
[2]

2 pcs



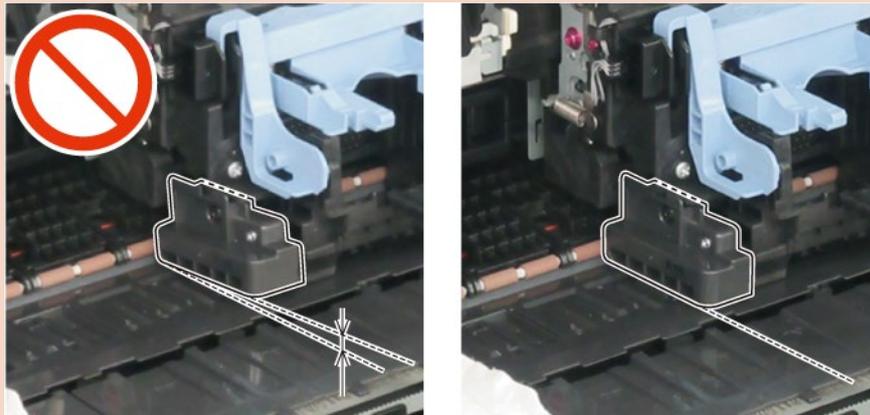
9. Remove [1] MULTI SENSOR UNIT.

[2]	[3]
	
BK	
1 pc	1 pc



Notes when attaching the unit:

The unit must be attached straight. It must not be slanted or tilted.

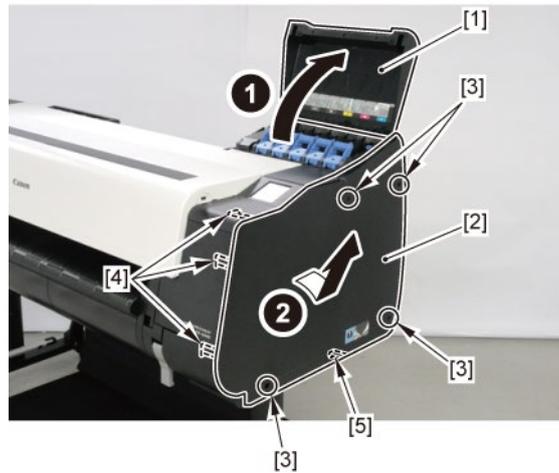


B

1. Open [1] the right ink tank cover.
2. Remove [2] a set of

- COVER, SIDE R A
- COVER UNIT, SIDE R B
- CAP, SIDE COVER.

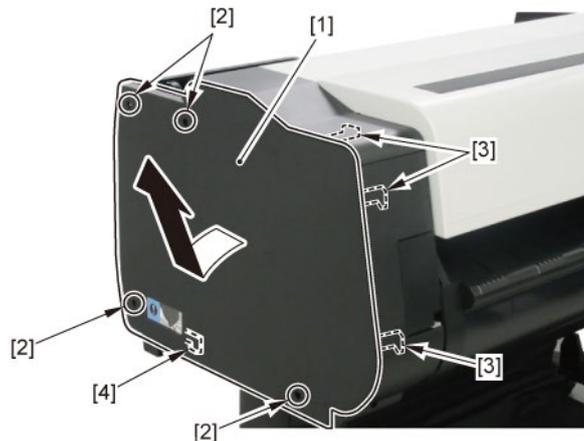
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



3. Remove [1] a set of

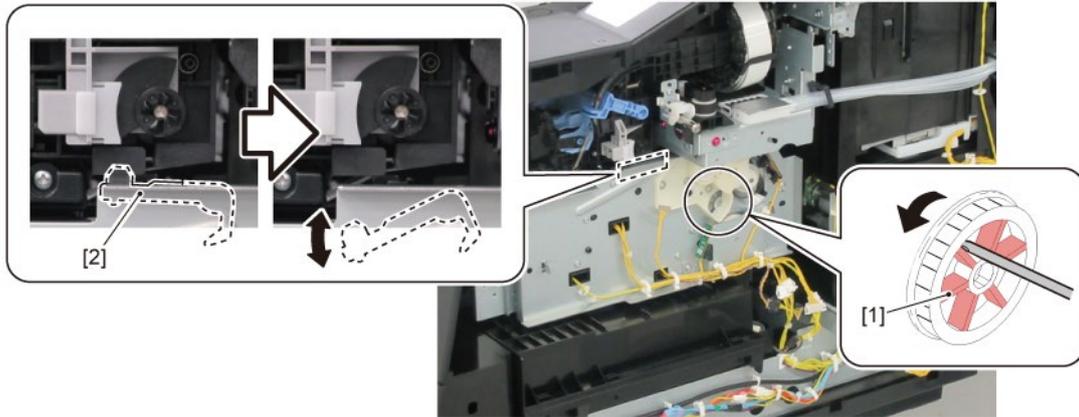
- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc



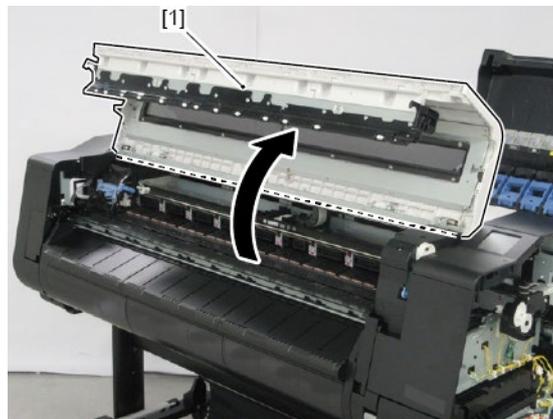
4. Unlock the carriage.

Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



C

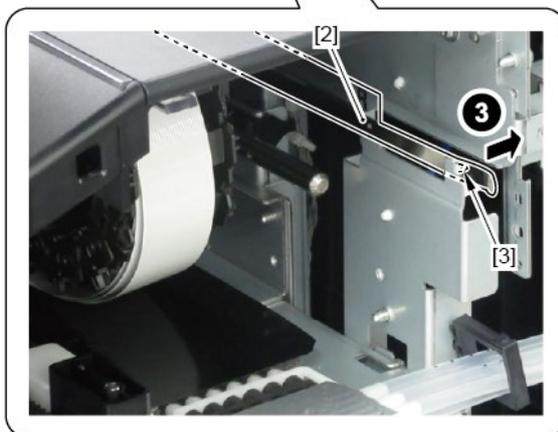
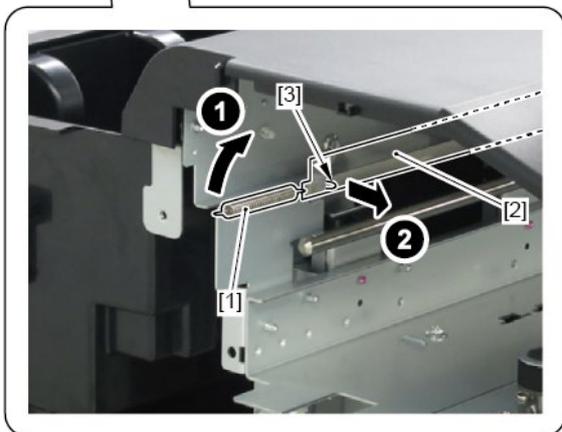
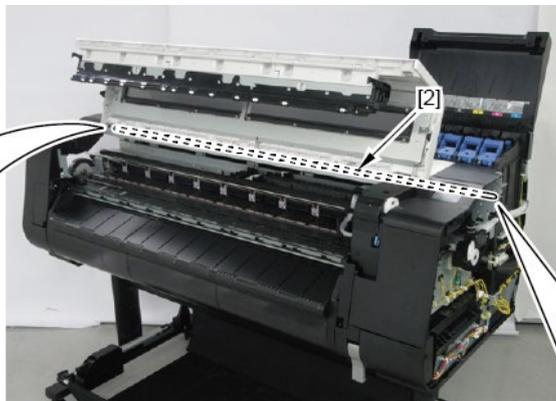
1. Remove all the parts of Group B.
2. Open [1] the access cover.



3. Remove [1] SPRING, FILM STRIP and [2] FILM, TIMING SLIT STRIP.

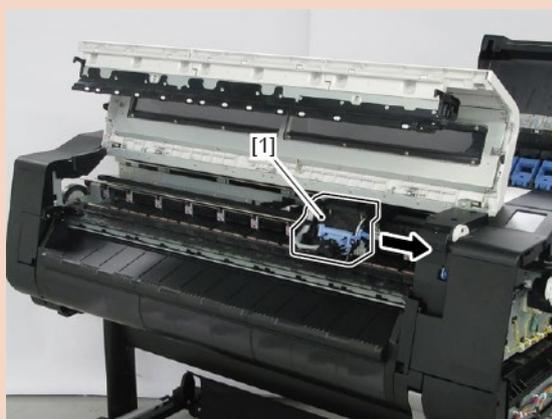
[3]

2 pcs

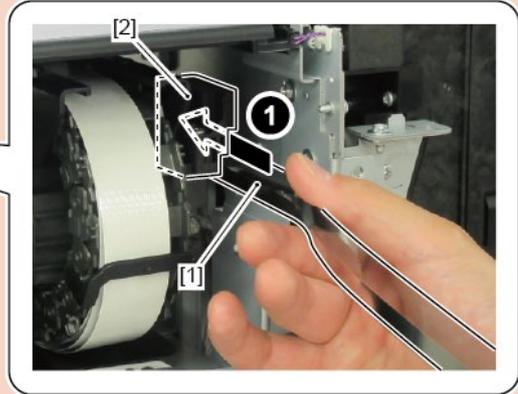
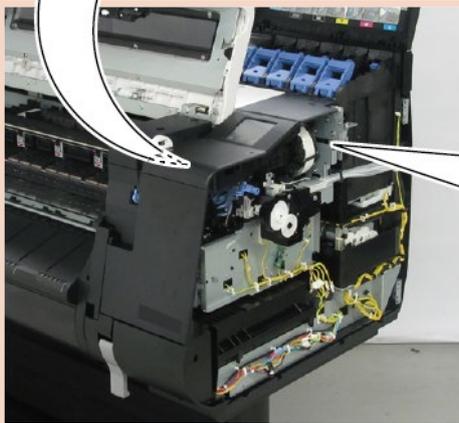
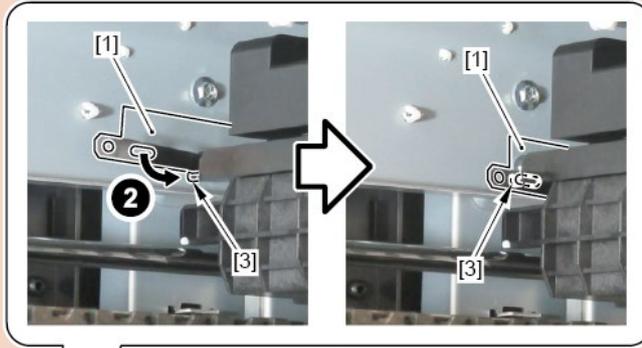


How to assemble the unit:

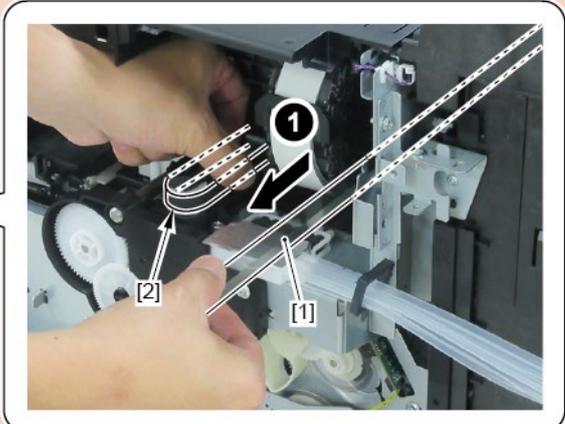
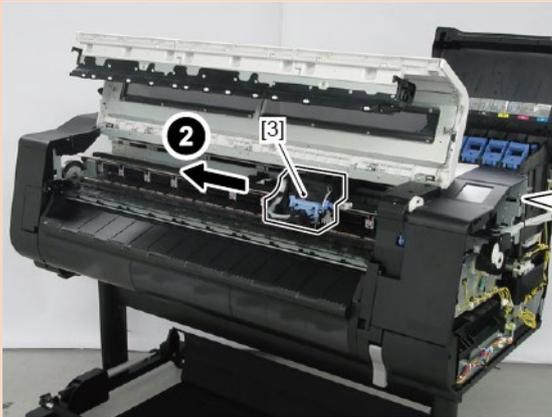
1. Move [1] the carriage unit to the Home Position.



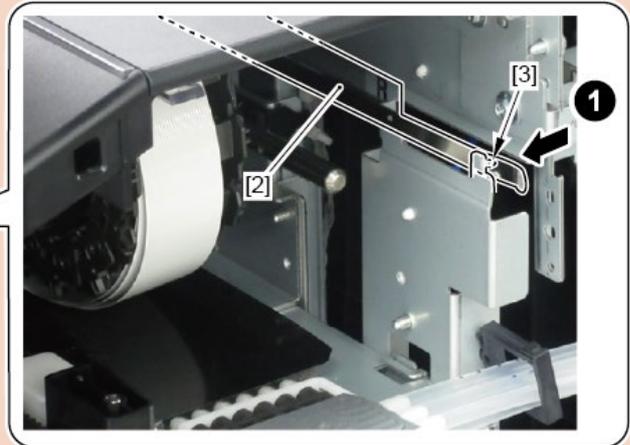
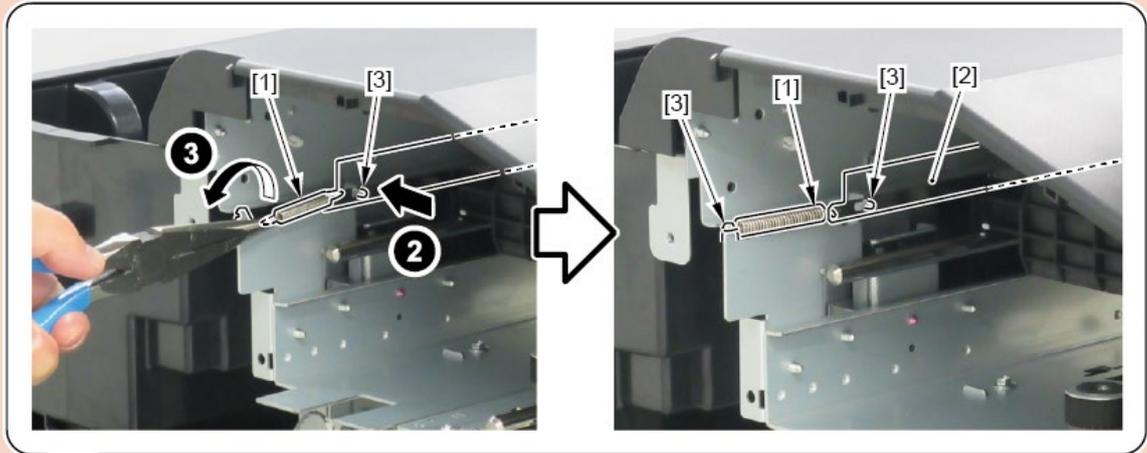
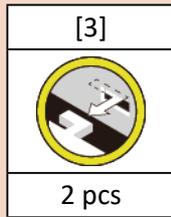
2. Pass [1] FILM, TIMING SLIT STRIP through [2] CARRIAGE ENCODER SENSOR.
3. Hook [1] FILM, TIMING SLIT STRIP to [3] the hook.



4. While keeping [1] FILM, TIMING SLIT STRIP slightly stretched, forward [2] the carriage belt to move the carriage unit to the Back Position.



5. Hook [1] SPRING, FILM STRIP and [2] FILM, TIMING SLIT STRIP.



Notes when replacing the unit:

Keep the FILM, TIMING SLIT STRIP free from any grease.

How to clean the FILM, TIMING SLIT STRIP:

- Clean it with a dry cloth.
- Clean it with pure water.
- Clean it with ethanol.



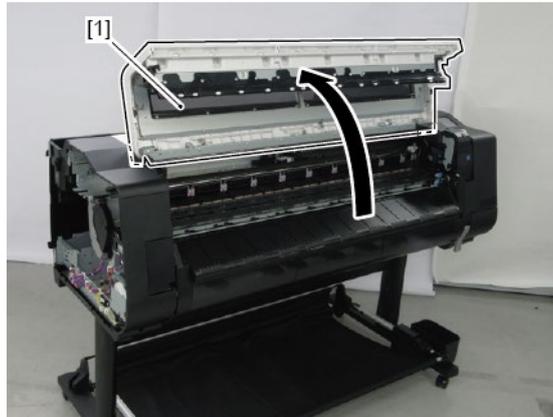
When cleaning the strip in the printer without removing it, avoid applying any excessive power to the film.

Be sure to confirm the following at the end of cleaning:

- The film does not come off from the carriage encoder.
- The film does not come off from the linear scale and it is properly positioned to the plate.

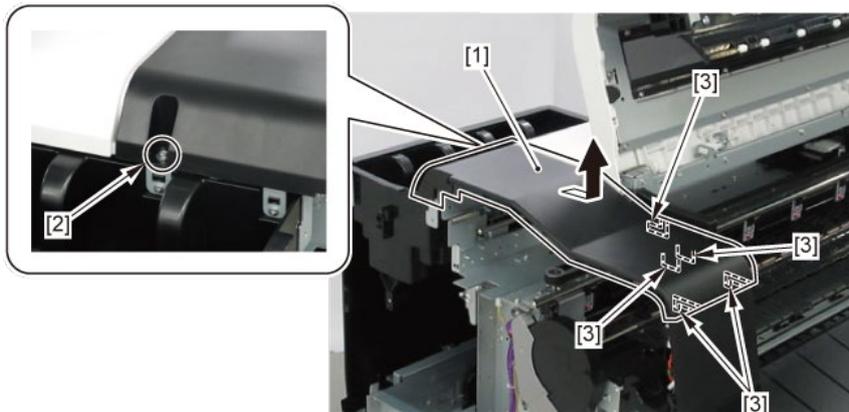
D

1. Remove all the parts of Group B.
2. Open [1] the access cover.



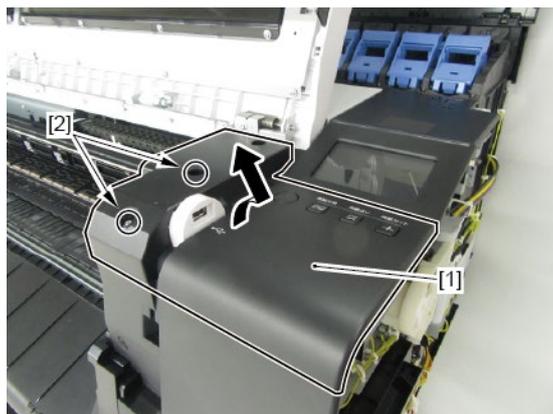
3. Remove [1] COVER, TOP L.

[2]	[3]
1 pc	5 pcs



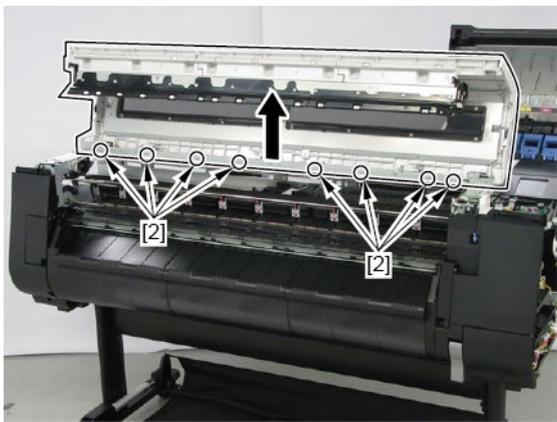
4. Remove [1] COVER, FRONT TOP R.

[2]
2 pcs



5. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
24" model	5 pcs
36" model	7 pcs
44" model	8 pcs

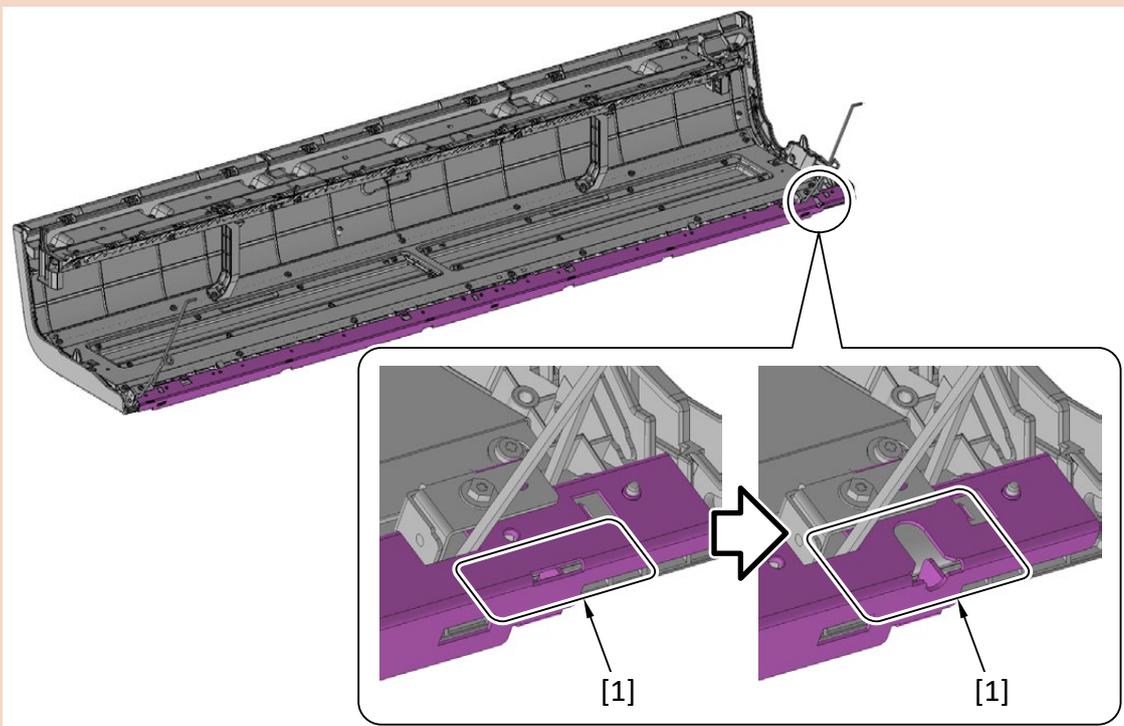


TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

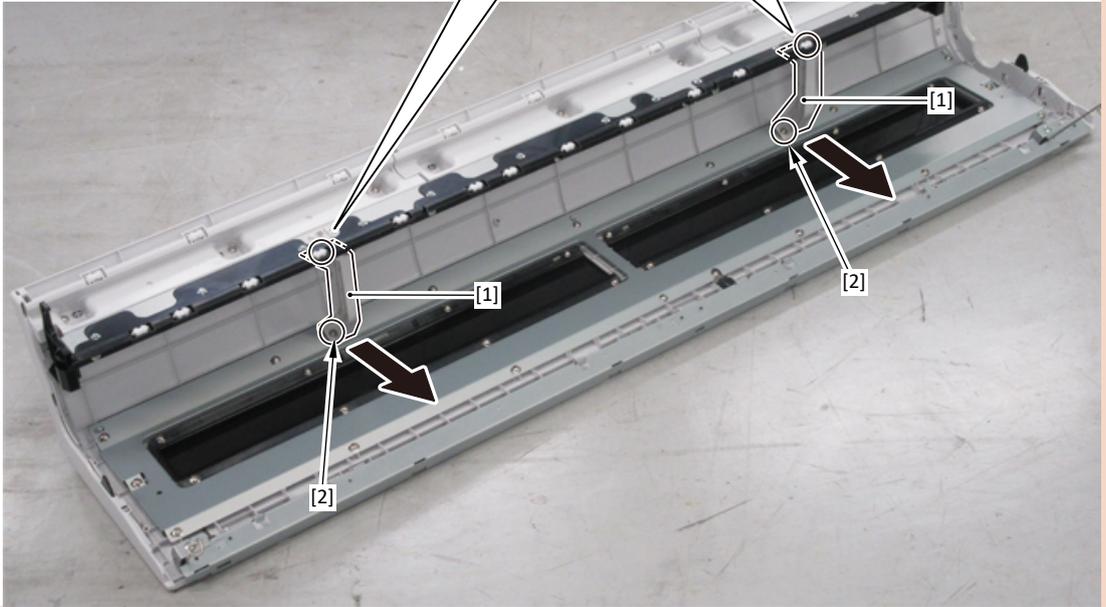
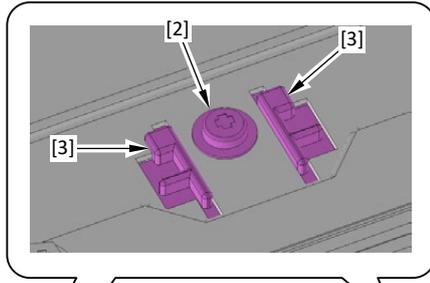
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



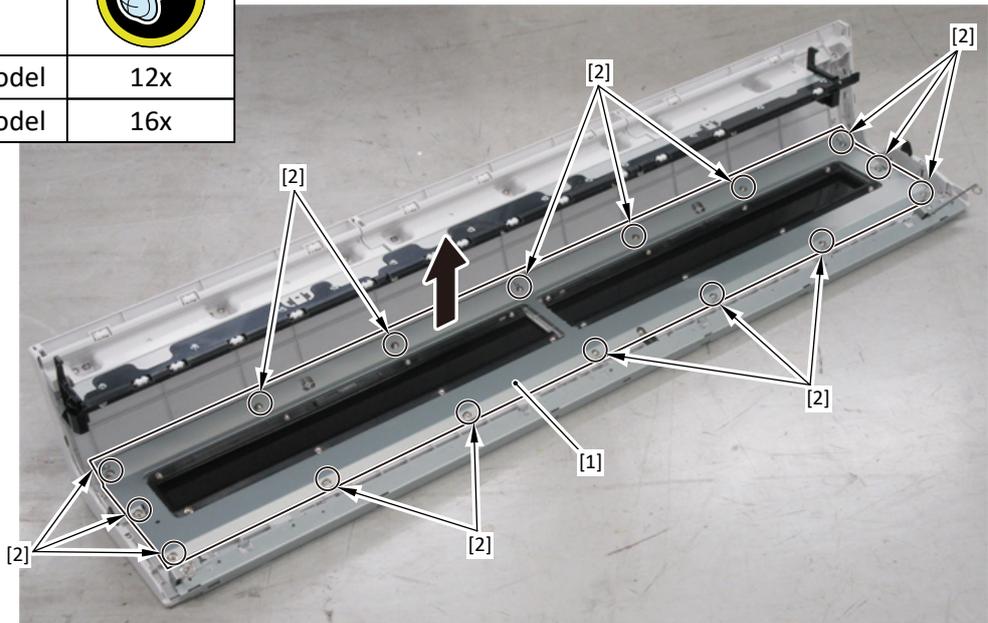
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



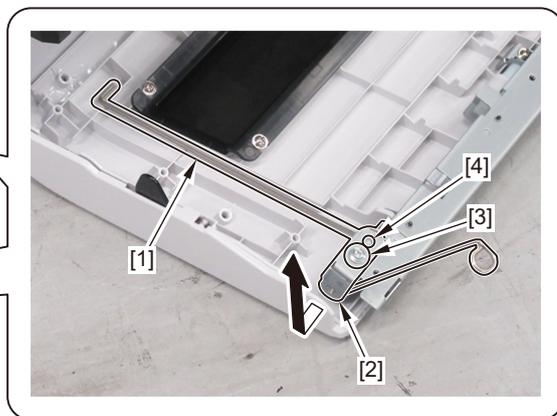
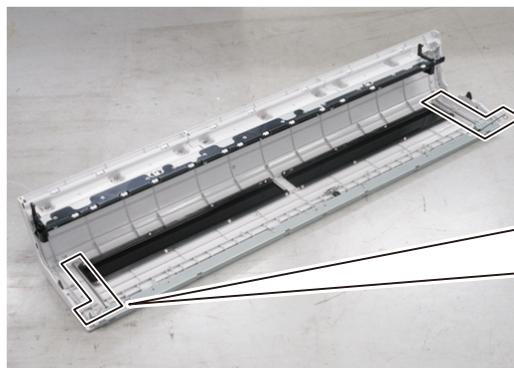
2. Remove [1] the plate.

	[2]
	
24" model	12x
44" model	16x



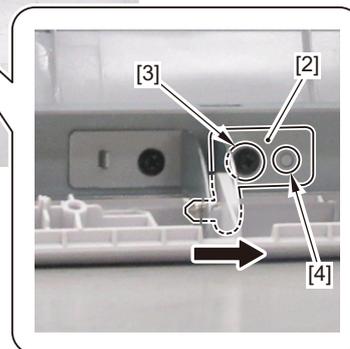
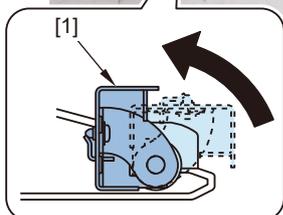
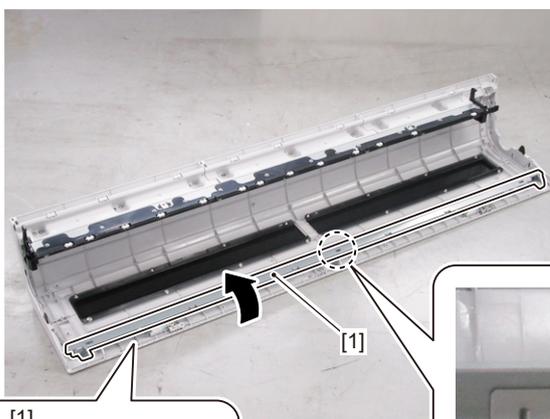
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



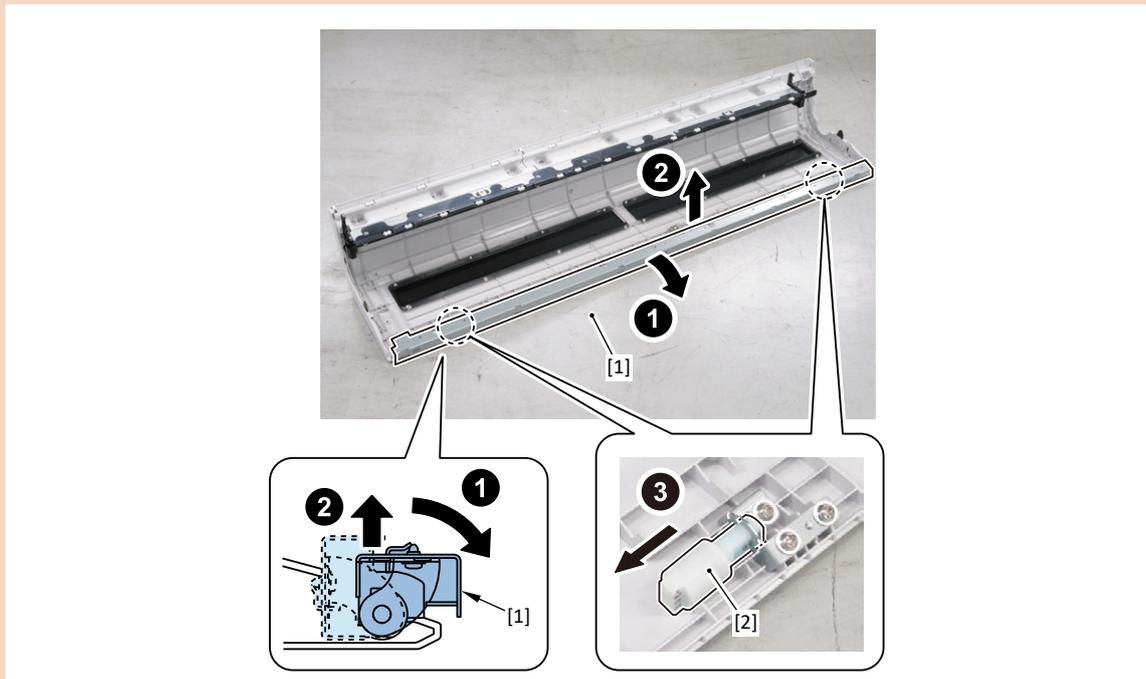
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x



5. Return [1] the plate and remove it.

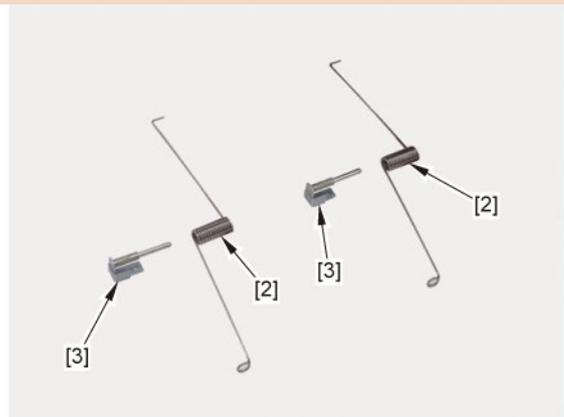
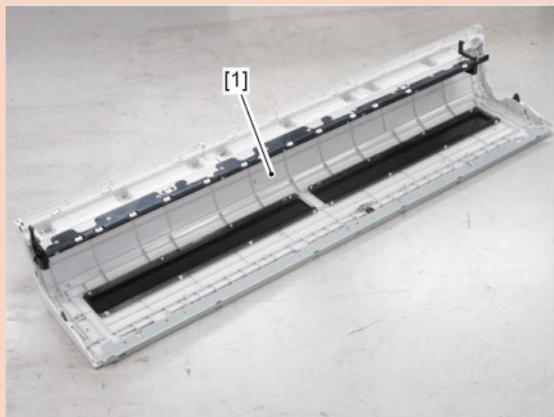
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

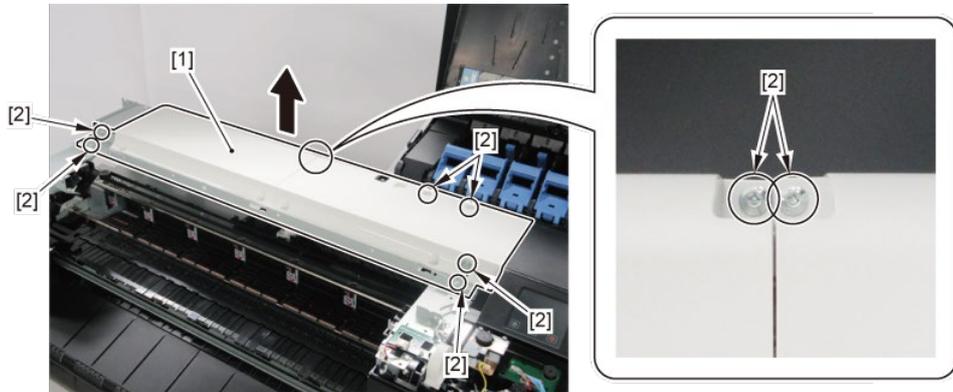
When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.



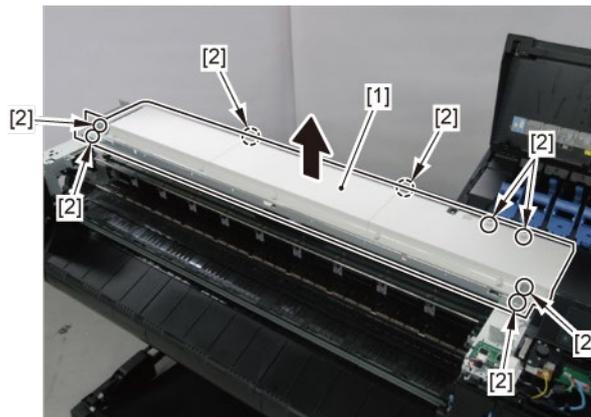
6. Remove [1] COVER UNIT, BACK TOP CENTER.



(24" model)



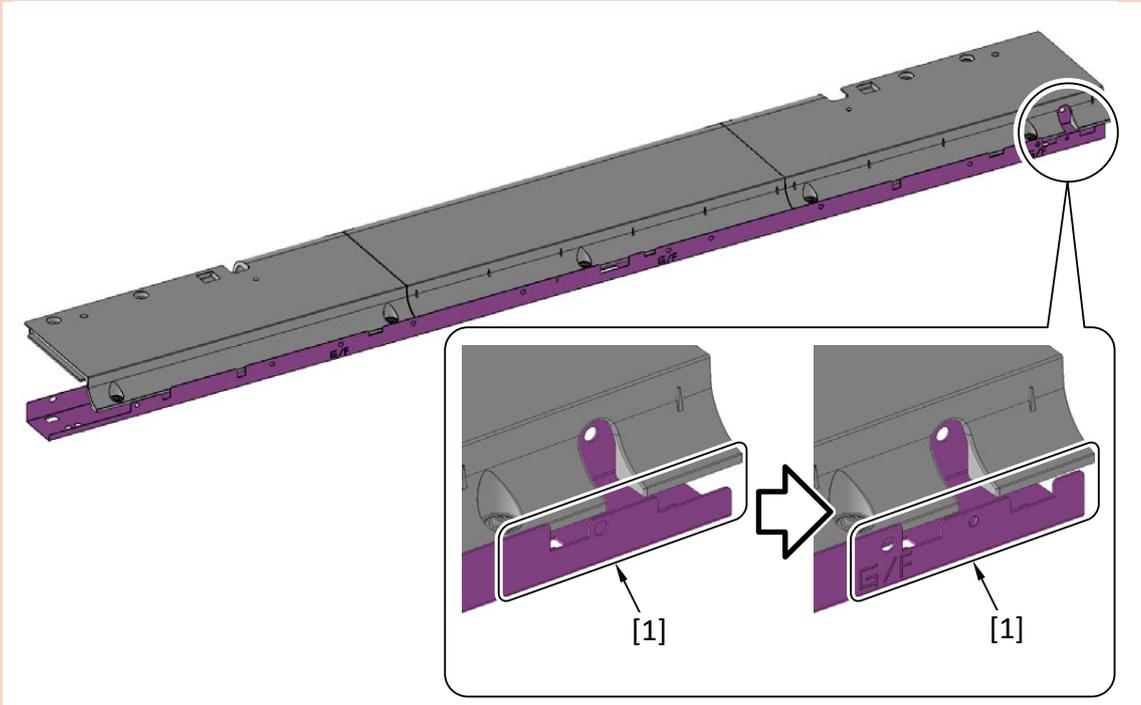
(36" model, 44" model)



TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

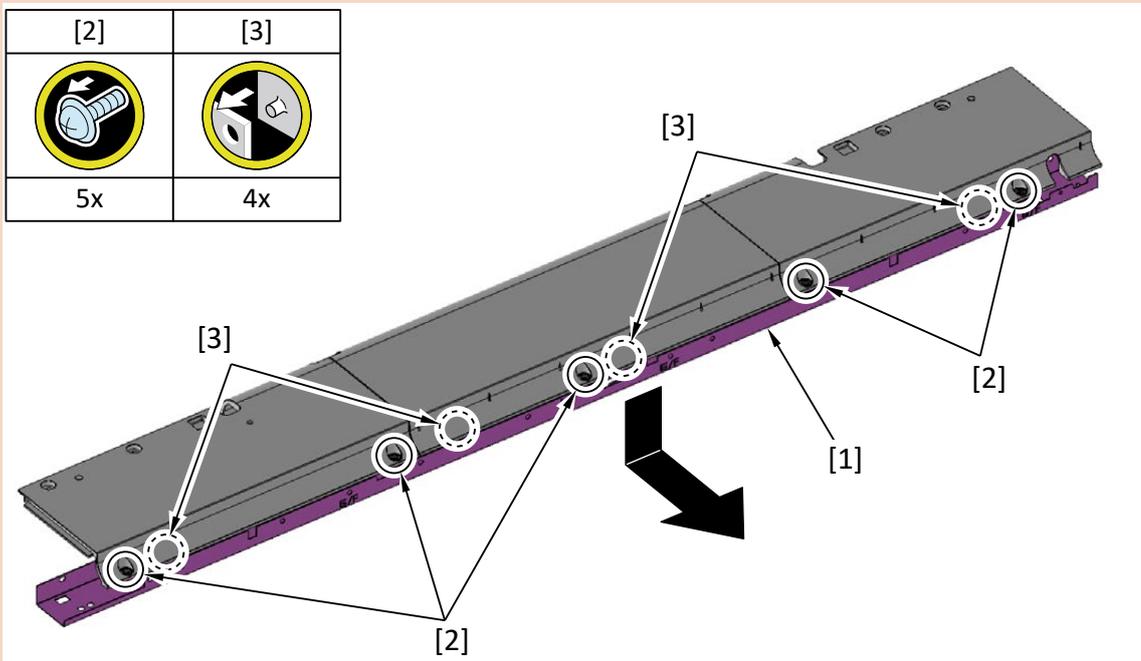
When replacing COVER UNIT, BACK TOP CENTER, check the shape of [1] the plate.

If the plate shape of the service part differs from that of the removed COVER UNIT, BACK TOP CENTER, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.



Point

1. Remove [1] the plates (four in 24" model, five in 44" model).

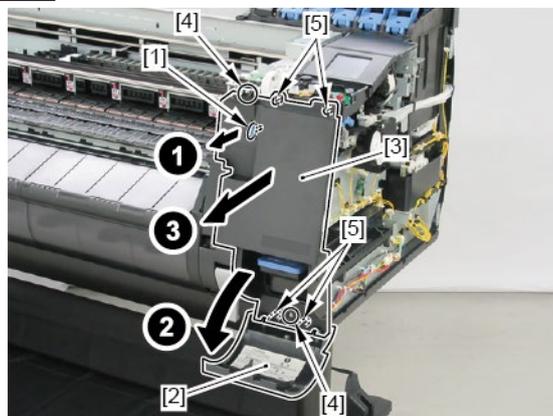


7. Remove [1] PLATEN CLEANER BRUSH.

8. Open [2] COVER UNIT, MTC.

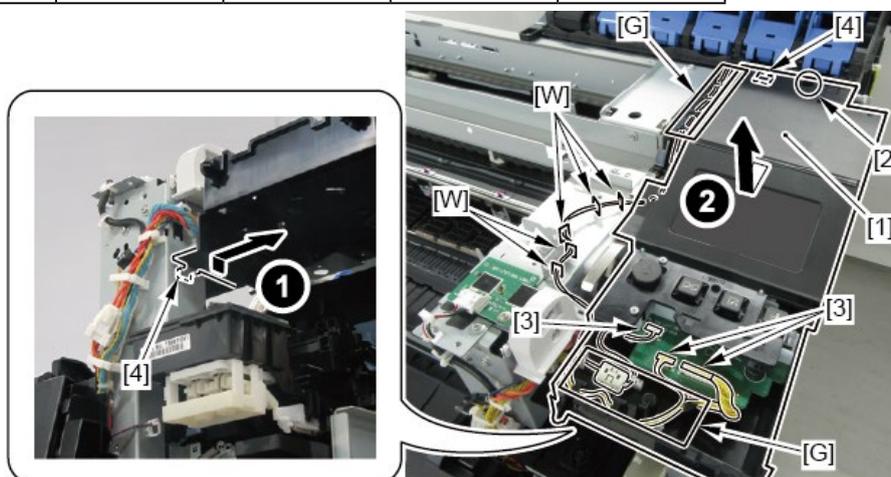
9. Remove [3] COVER, FRONT R.

[4]	[5]
	
2 pcs	4 pcs



10. Remove [1] COVER UNIT, BACK TOP R (with the OPERATION PANEL UNIT).

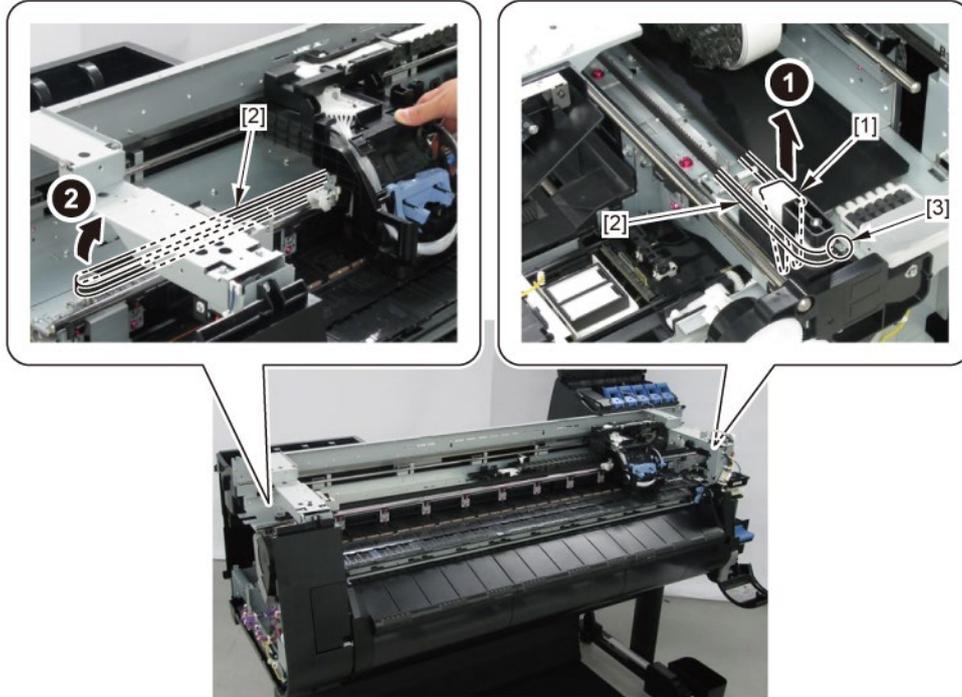
[2]	[3]	[4]	[W]	[G]
				
1 pc	3 pcs	2 pcs	5 pcs	2 pcs



11. Remove [1] the TENSIONER, IDLER PULLEY and loosen [2] BELT, CARRIAGE.

[3]

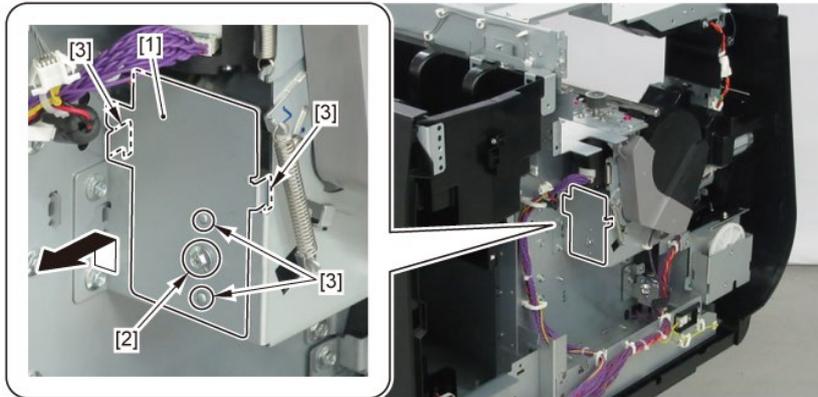
1 pc



12. Remove [1] the plate.

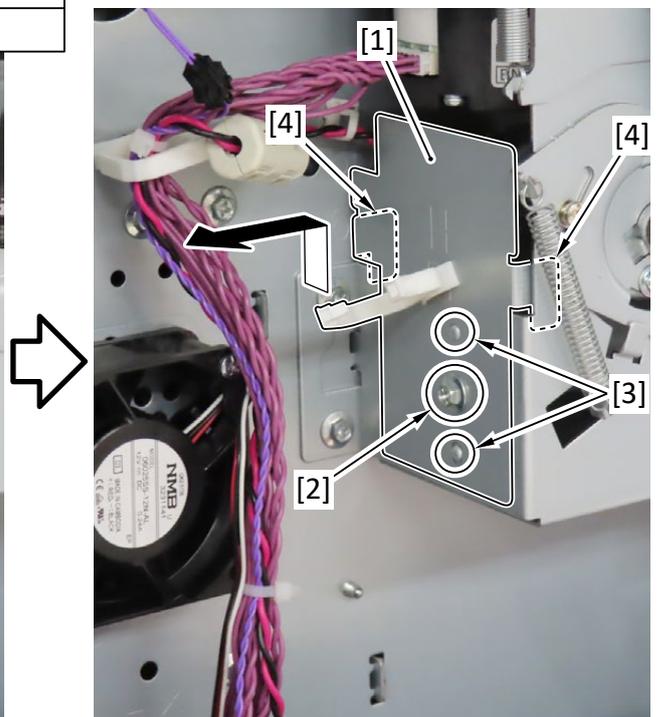
TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

[2]	[3]	[4]
		
1 pc	2 pcs	2 pcs



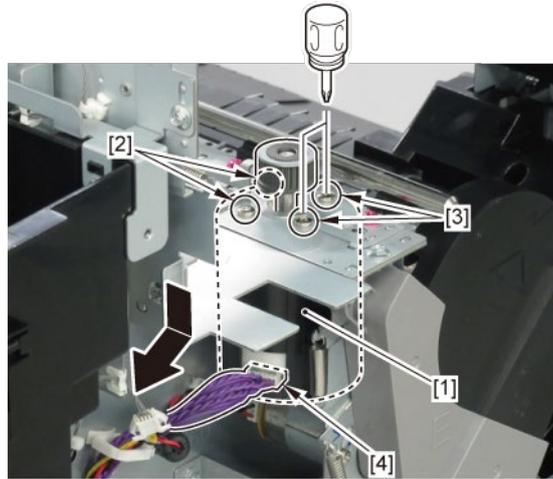
TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

[W]	[2]	[3]	[4]
			
1x	1x	2x	2x



13. Remove [1] MOTOR, CARRIAGE.

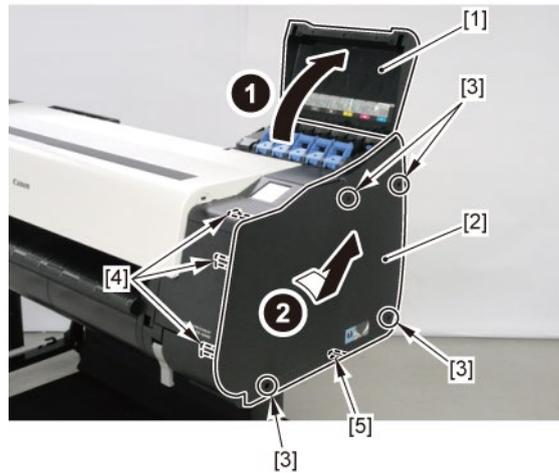
[2]	[3]	[4]
		
2 pcs	2 pcs	1 pc



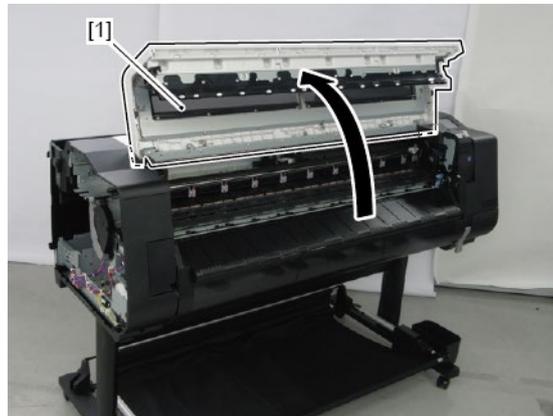
E

1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc

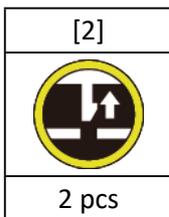


3. Open [1] the access cover.

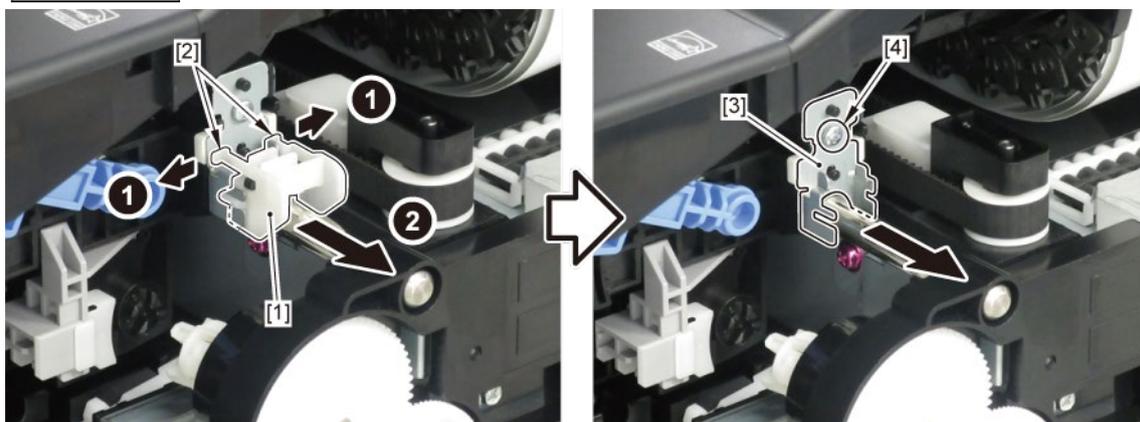
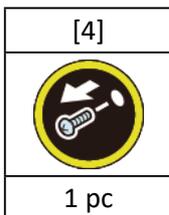


	<p>Notes when removing/attaching the bushing:</p> <p>When removing or attaching, lift the carriage slightly. At this time, be careful with handling the tool* not to hit the carriage shaft.</p> <p>*The needle-nose pliers or tweezers are recommended.</p>
	<p>Notes when replacing the bushing:</p> <ul style="list-style-type: none"> • Be sure to replace the right and left shaft cleaners and the right and left bushings at the same time (using BUSHING / CLEANER KIT). • DO NOT lift up the carriage when it is capped. (Lifting up the capped carriage may damage the purging system.)

4. Remove [1] the RAIL CLEANER UNIT S (from the right side of the carriage).

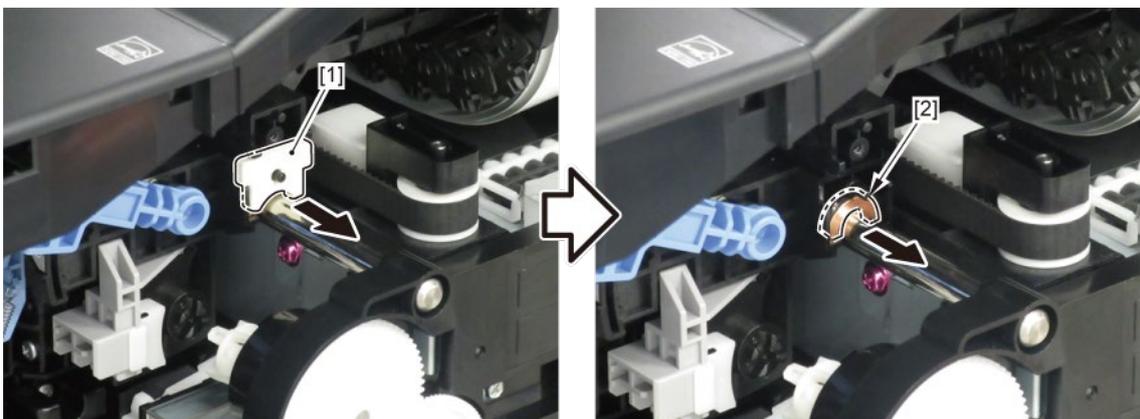


5. Remove [3] the plate (from the right side of the carriage).

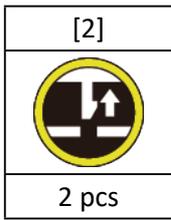


6. Remove [1] the PAD, BUSHING, CR (from the right side of the carriage).

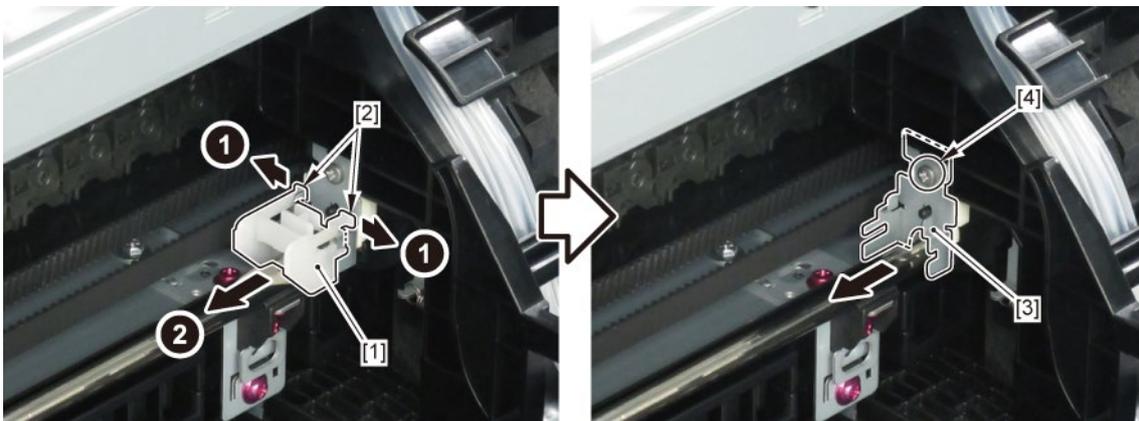
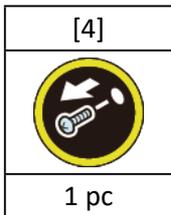
7. Remove [2] the bushing (from the right side of the carriage).



8. Remove [1] the RAIL CLEANER UNIT S (from the left side of the carriage).

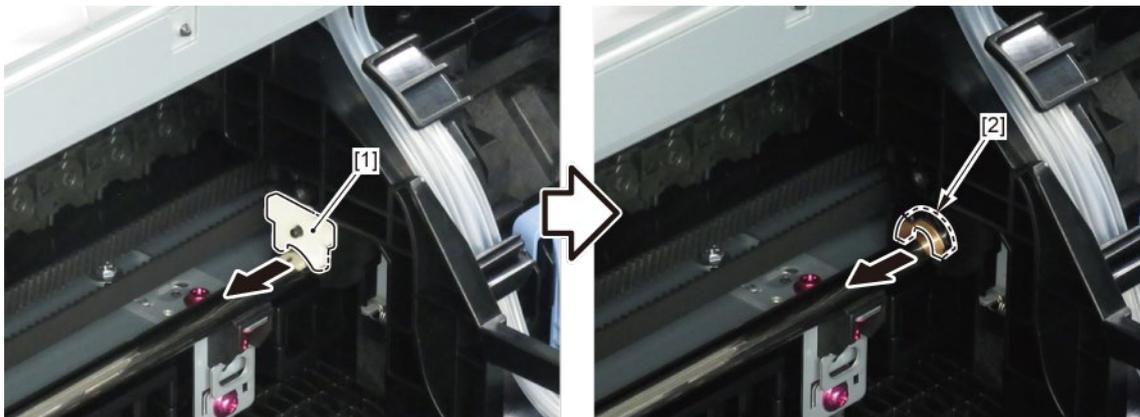


9. Remove [3] the plate (from the left side of the carriage).

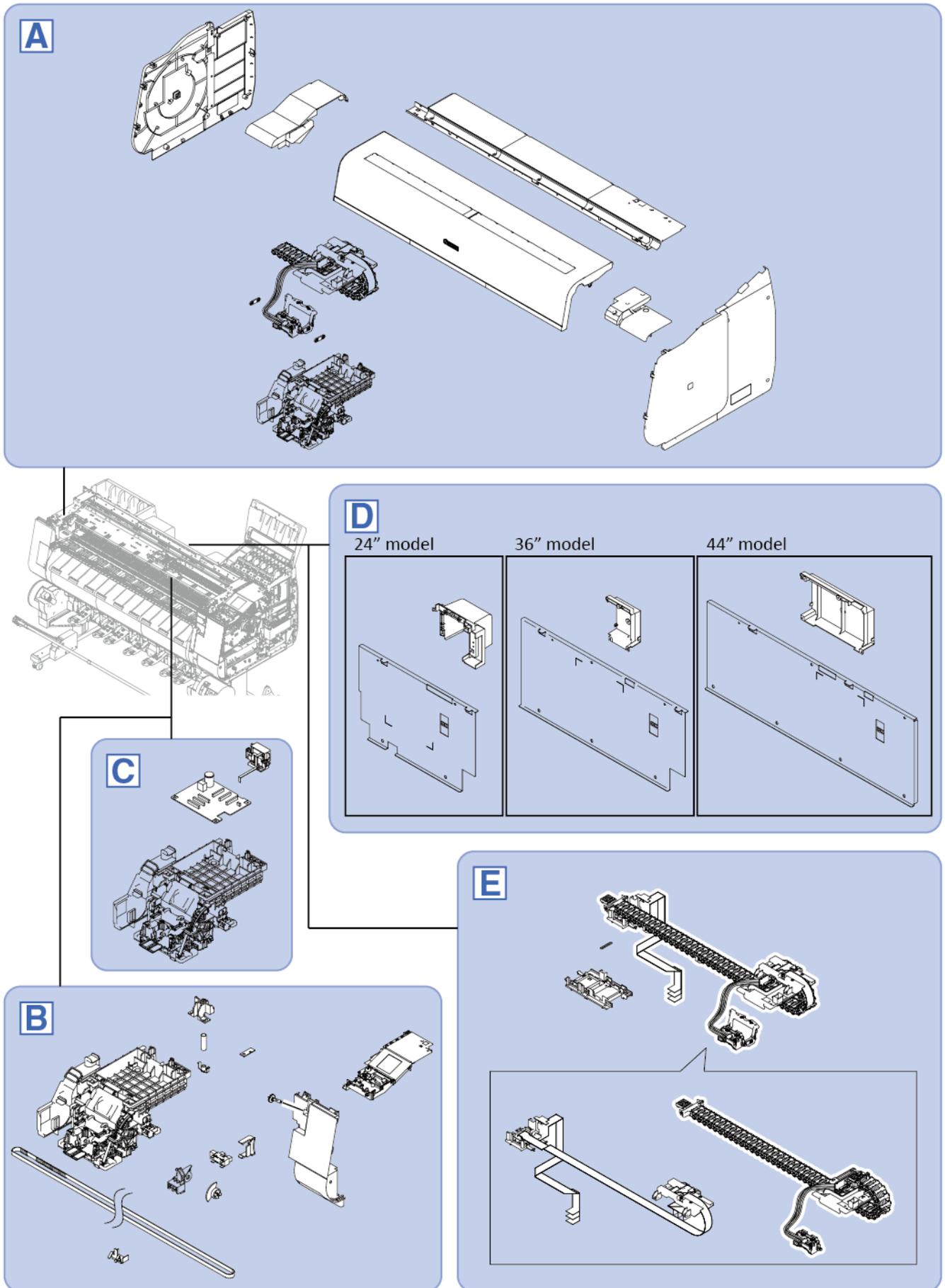


10. Remove [1] the PAD, BUSHING, CR (from the left side of the carriage).

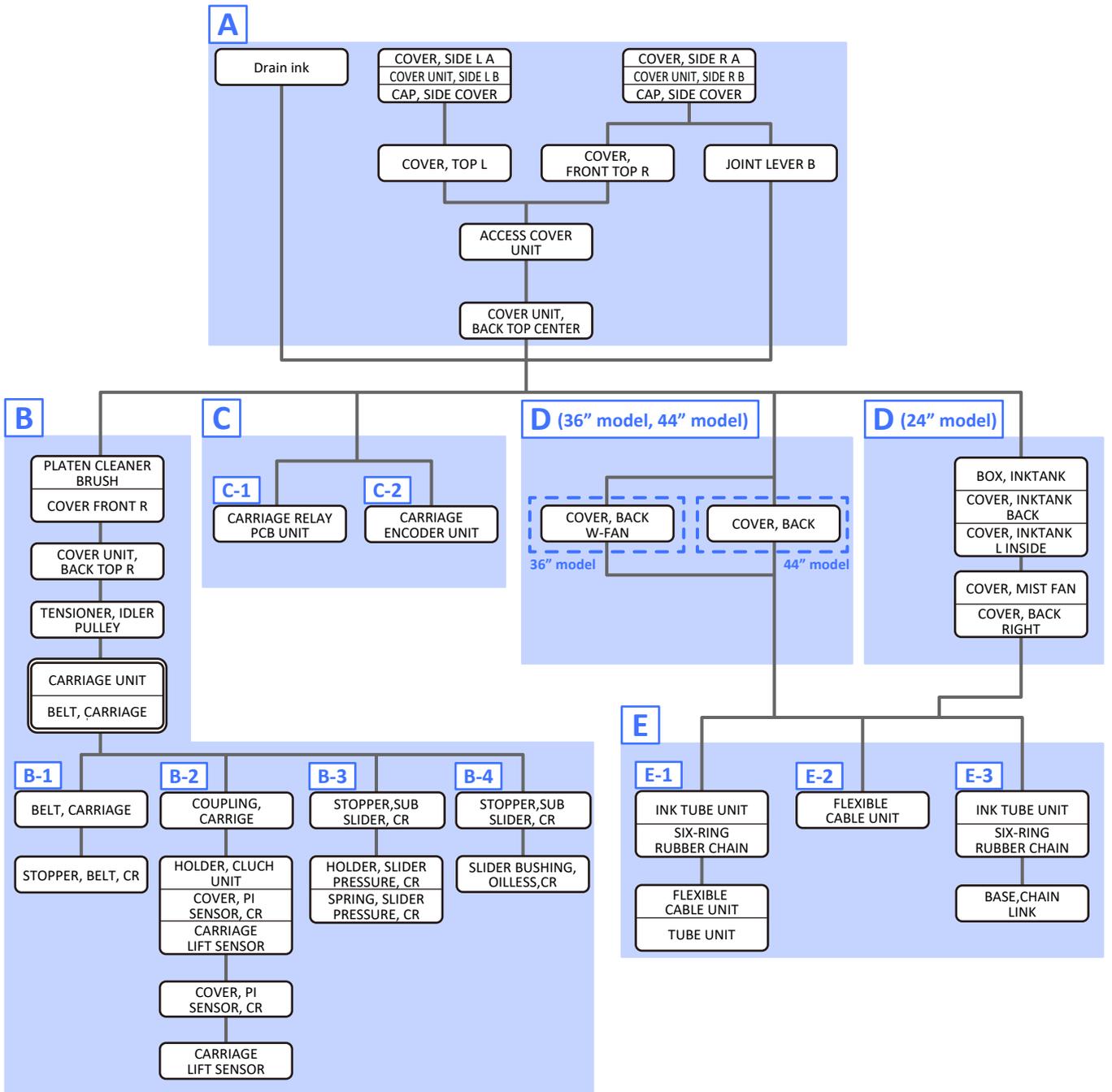
11. Remove [2] the bushing (from the left side of the carriage).



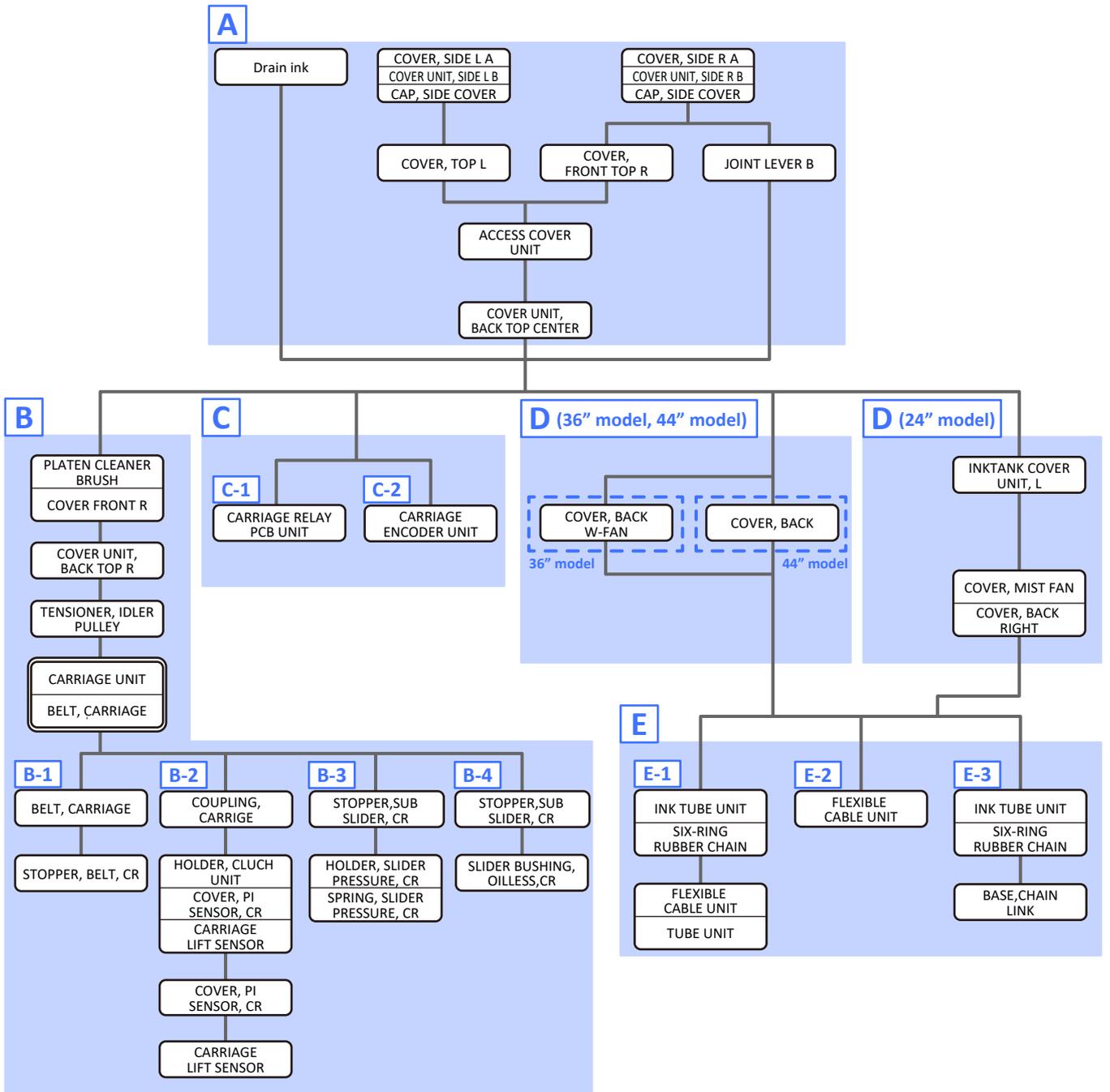
12. Carriage Unit (2)



TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410



TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

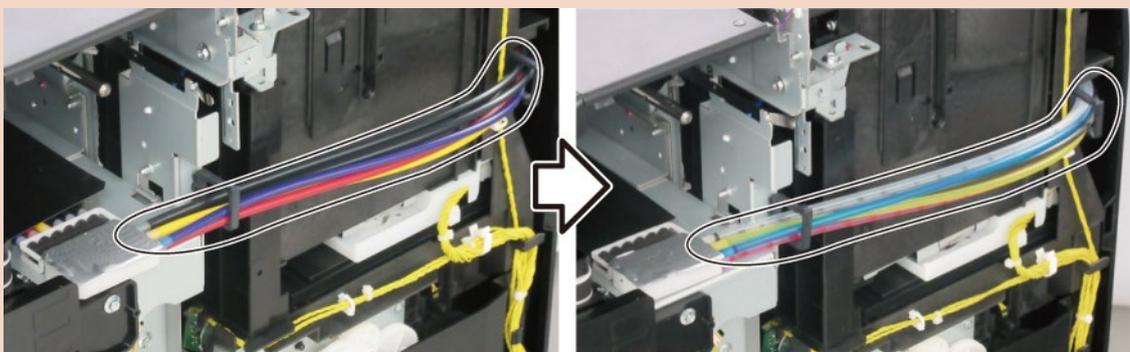


A

1. Drain ink into the sub ink tank.

- **To do it in the Service Mode:**

1. Unlock the carriage by selecting [SERVICE MODE > FUNCTION > CR UNLOCK] in the operation panel, manually move the carriage unit to the position where the print head can be replaced, and remove the print head.
2. On the printer operation panel, select [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN]. The supply valve (choke valve) of SUB INK TANK UNIT will open.
3. Ink will be drained from the CARRIAGE UNIT (or INK TUBE UNIT) into the SUB INK TANK UNIT.
4. Wait for five to ten minutes, then confirm that the ink has been drained from the tubes.



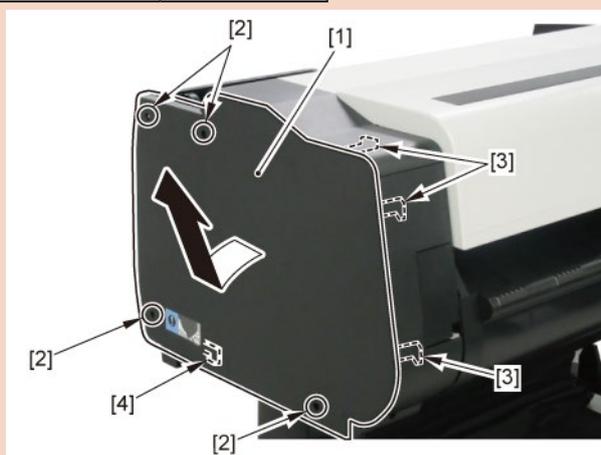
5. Power off the printer and unplug the power cord.



- **To do it manually:**

1. Remove [1] a set of
 - COVER, SIDE L A
 - COVER UNIT, SIDE L B
 - CAP, SIDE COVER.

[2]	[3]	[4]
4 pcs	3 pcs	1 pc

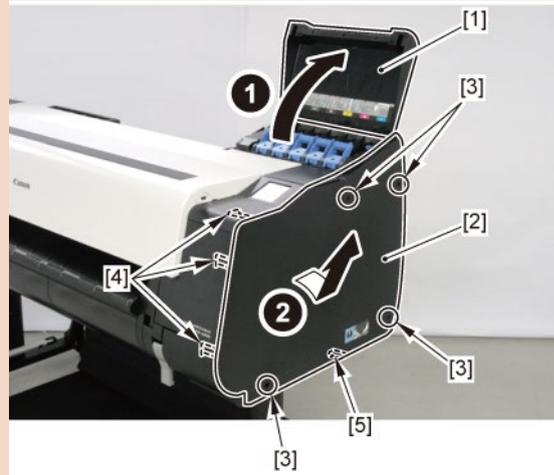


2. Open [1] the right ink tank cover.

3. Remove [2] a set of

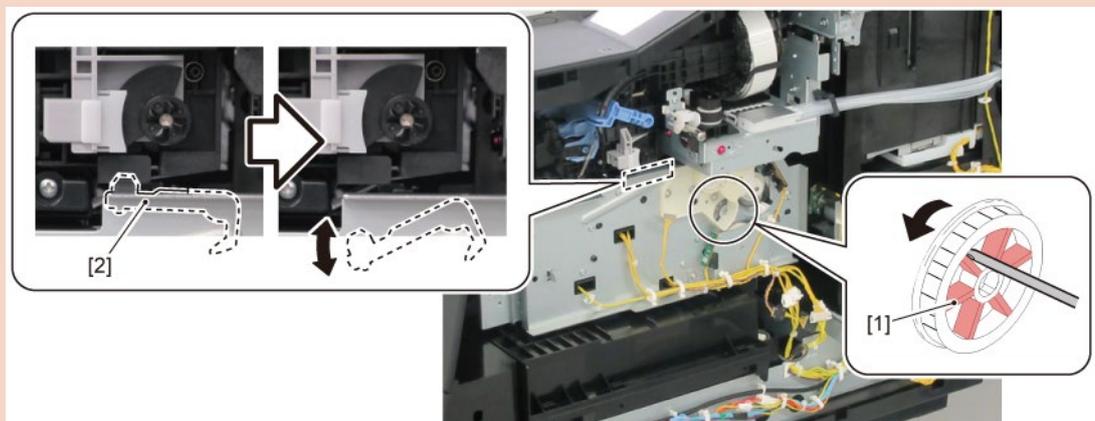
- COVER, SIDE R A
- COVER UNIT, SIDE R B
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



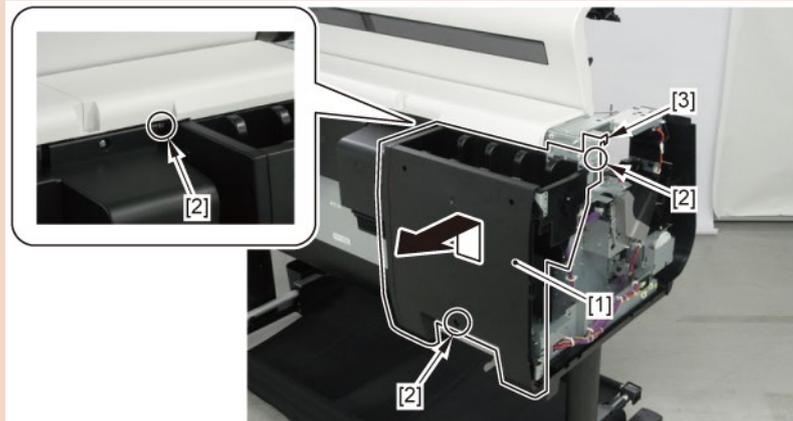
4. Unlock the carriage.

Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.

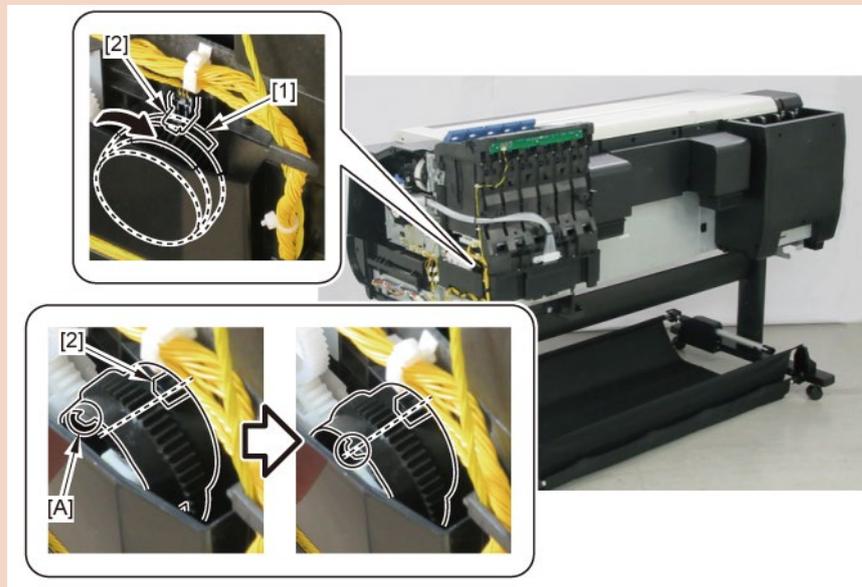


5. Remove [1] a set of
- BOX, INKTANK
 - COVER, INKTANK BACK
 - COVER, INKTANK L INSIDE.

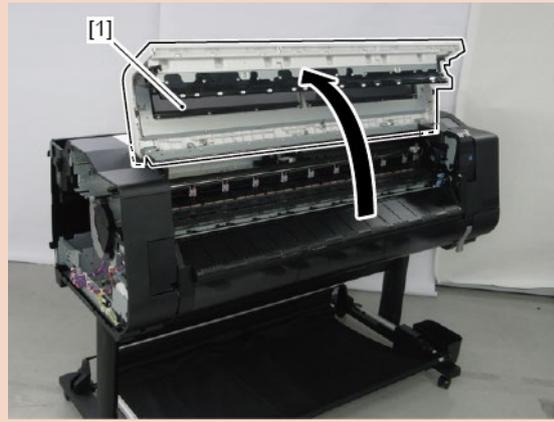
[2]	[3]
	
3 pcs	1 pc



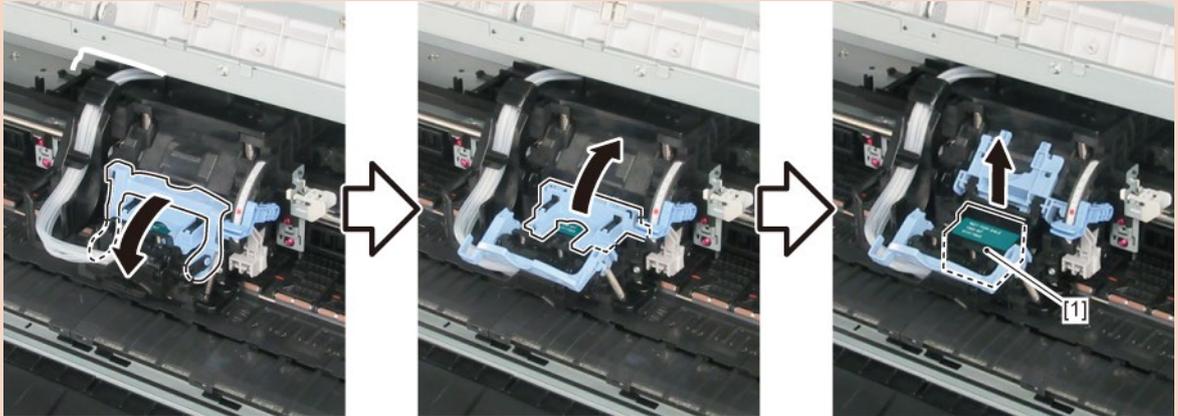
6. Turn the gear in the arrowed direction to open ink tank unit valve.
- When [1] the gear flag comes under [2] the sensor, the valve will open.
- When [A] the tab is at the top center, the valve is fully opened.



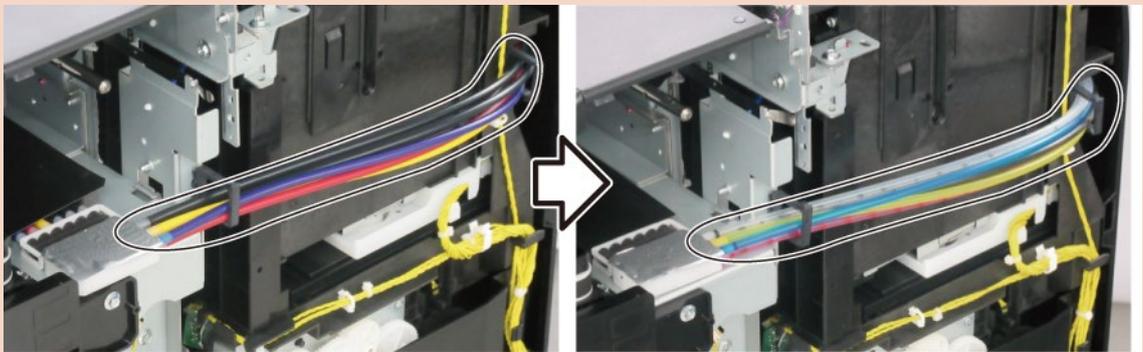
7. Open [1] the access cover.



8. Remove [1] PRINT HEAD.



9. Wait for five to ten minutes, then confirm that the ink has been drained from the tubes.



2. Open [1] the right ink tank cover.

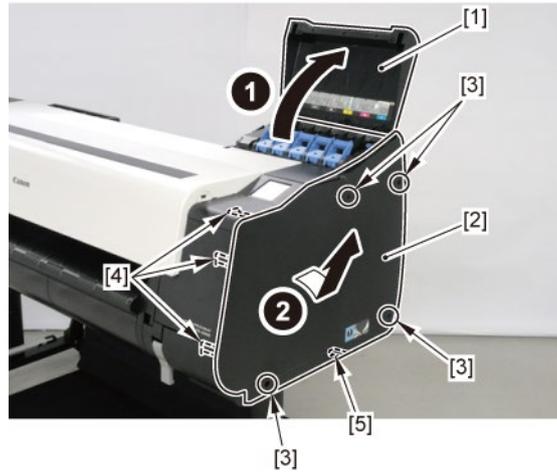
3. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

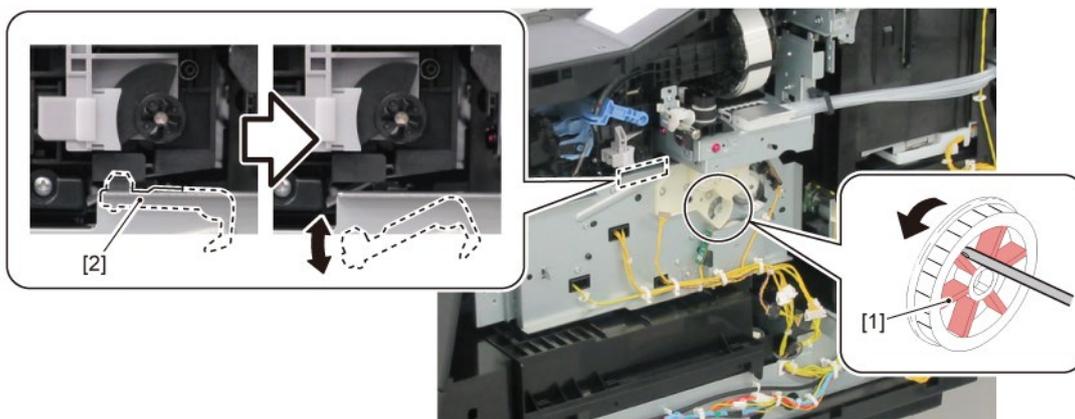
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc

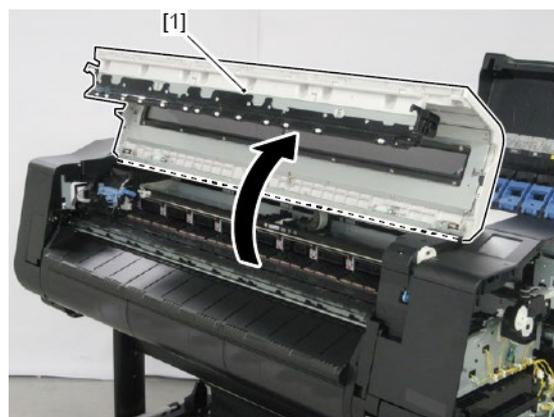


4. Unlock the carriage.

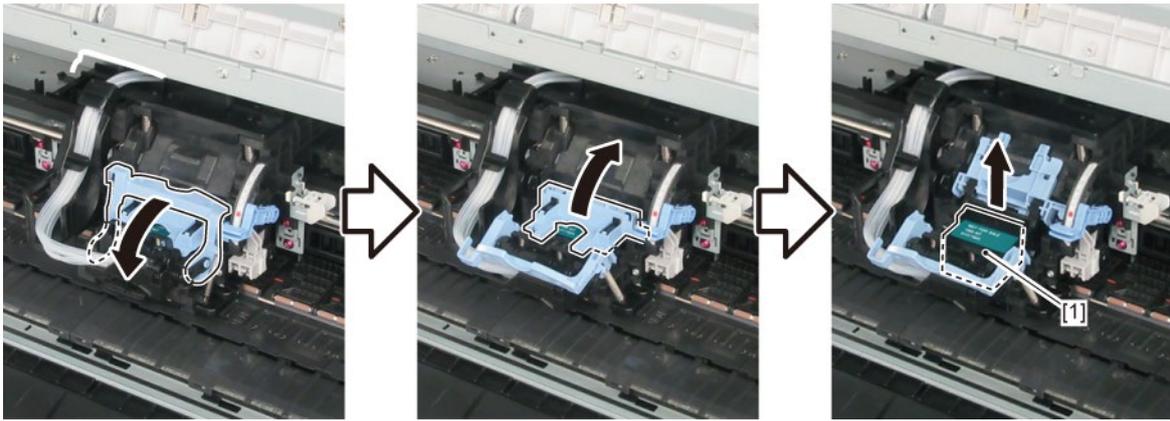
Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



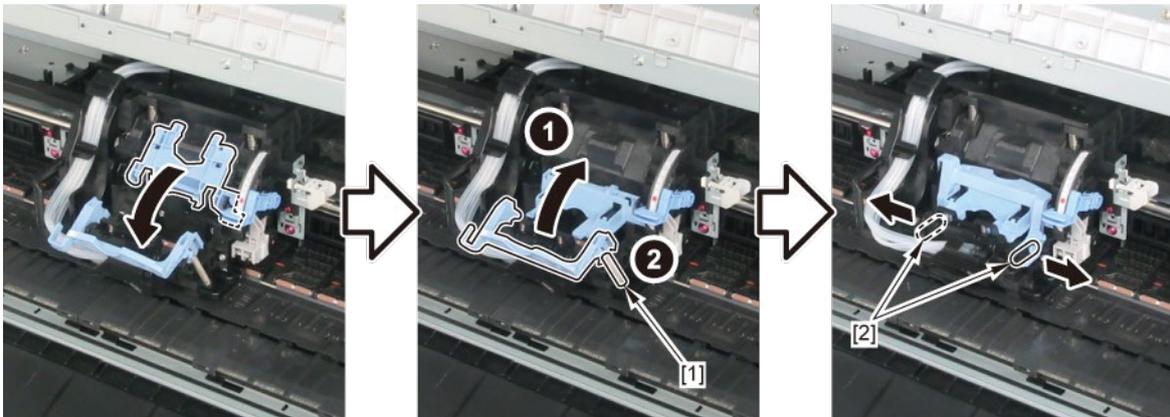
5. Open [1] the access cover.



6. Remove [1] PRINT HEAD.



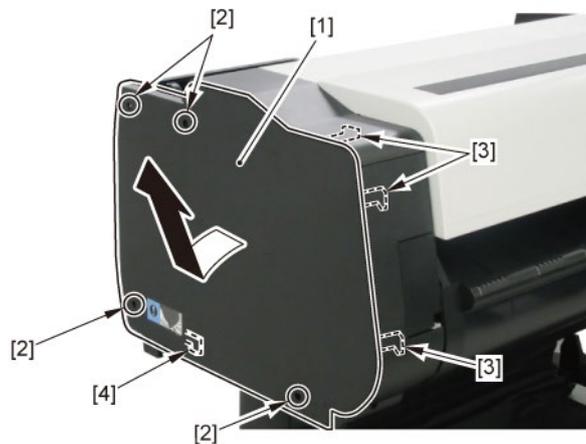
7. Remove [1] SPRING, TENSION and two pieces of [2] JOINT LEVER B.



8. Remove [1] a set of

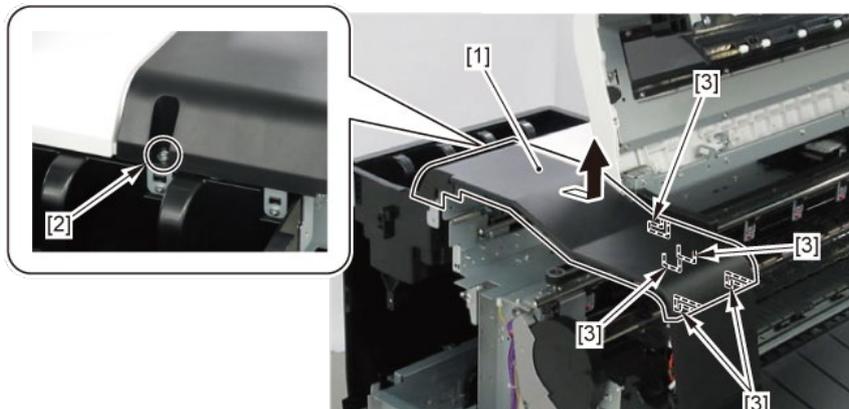
- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc



9. Remove [1] COVER, TOP L.

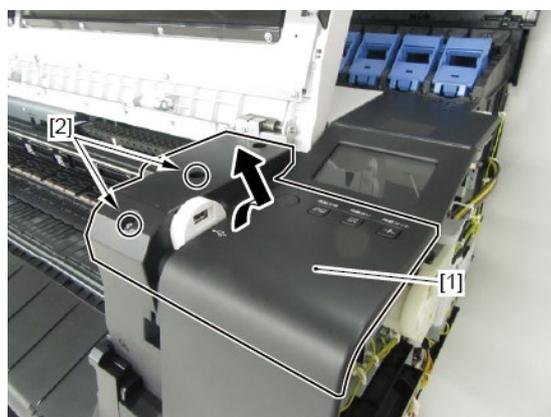
[2]	[3]
	
1 pc	5 pcs



10. Remove [1] COVER, FRONT TOP R.

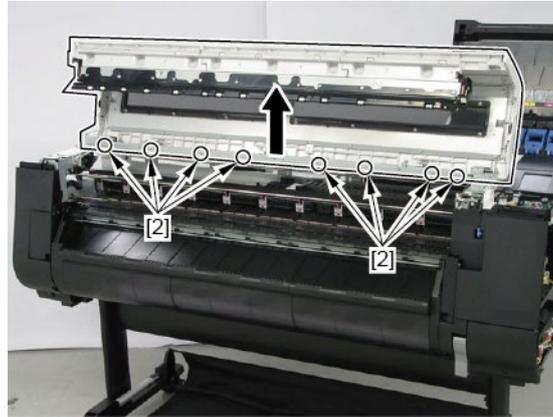
[2]

2 pcs



11. Remove [1] ACCESS COVER UNIT with holding the handles.

	[2]
	
24" model	5 pcs
36" model	7 pcs
44" model	8 pcs

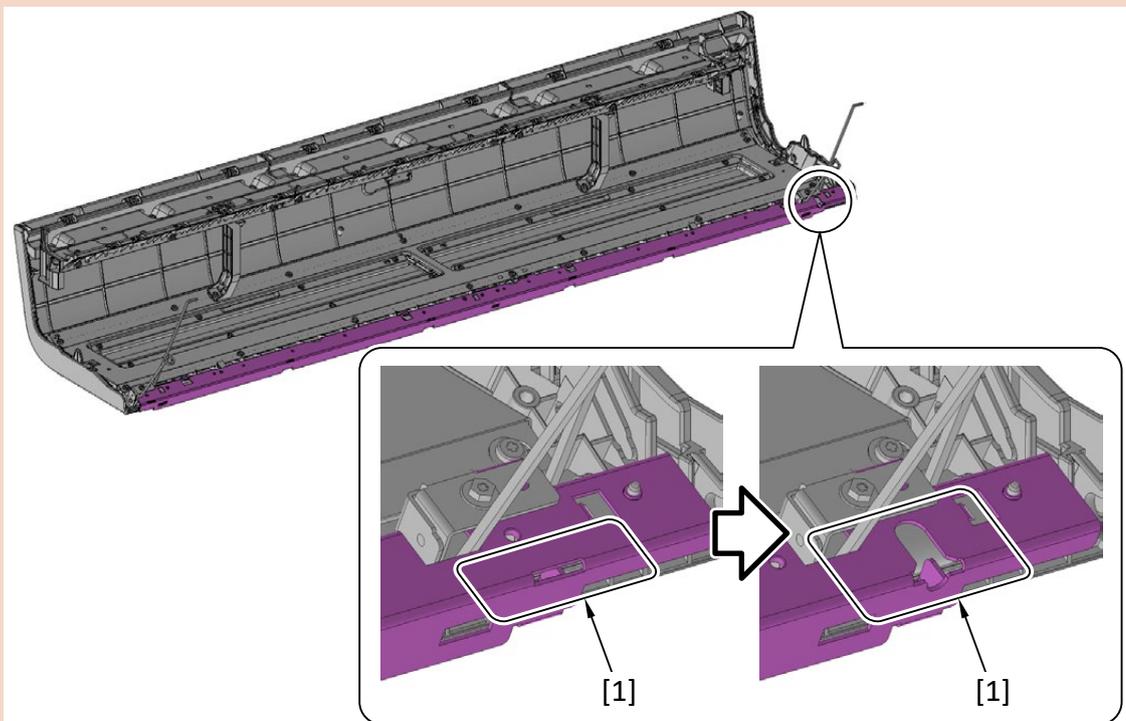


TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

When replacing ACCESS COVER UNIT, check the shape of [1] the plate.

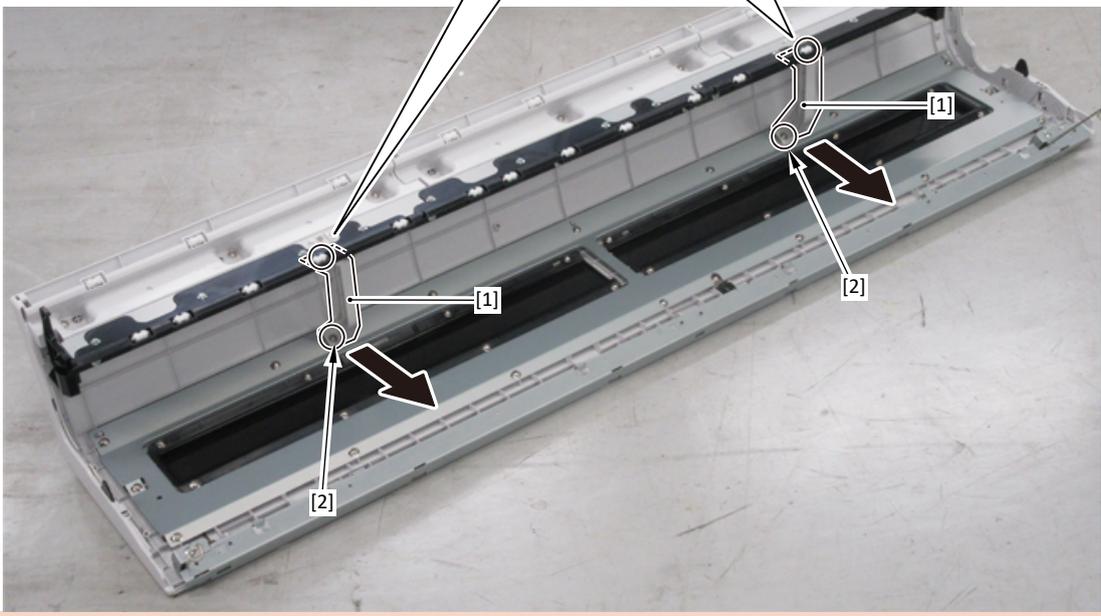
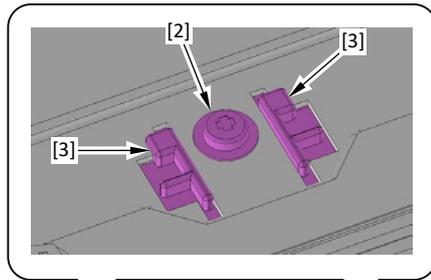
If the plate shape of the service part differs from that of the removed ACCESS COVER UNIT, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.

Point



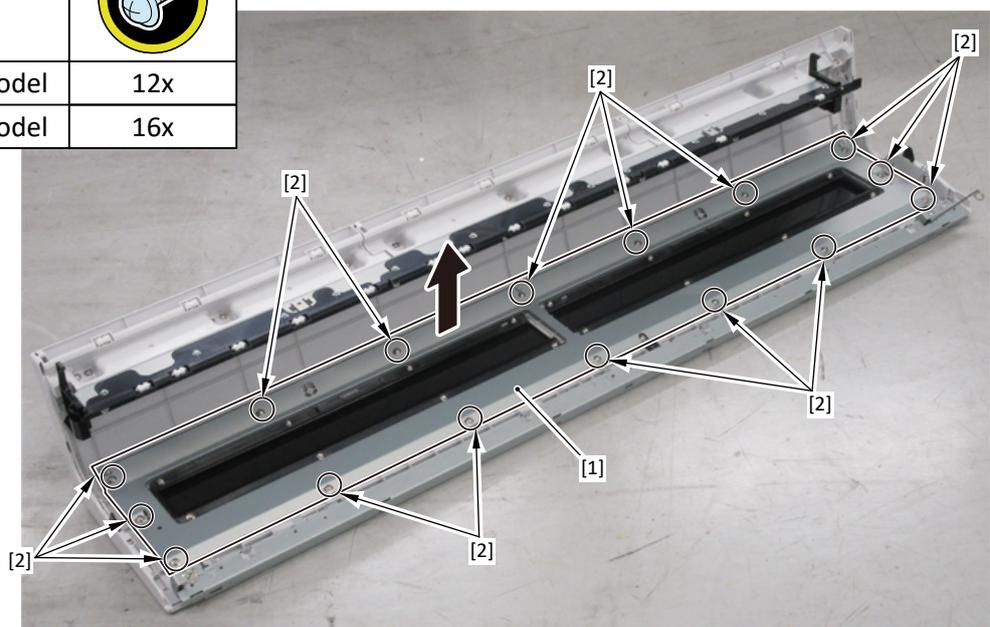
1. Remove [1] two handles.

[2]	[3]
	
2 each	2 each



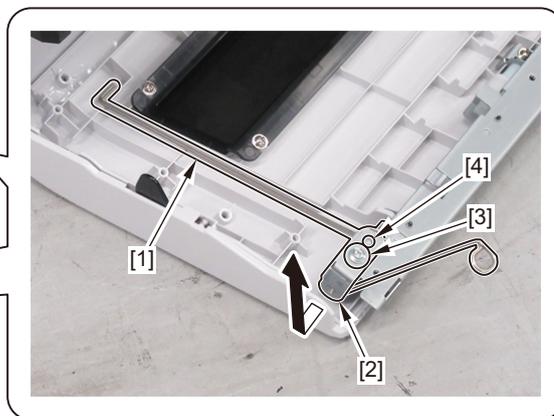
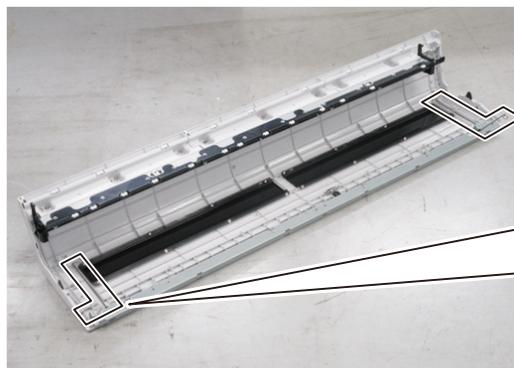
2. Remove [1] the plate.

	[2]
	
24" model	12x
44" model	16x



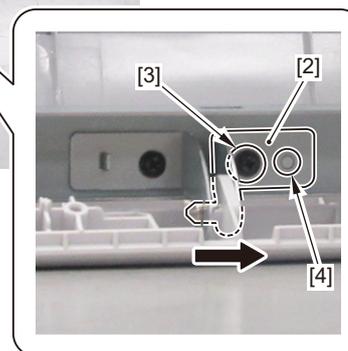
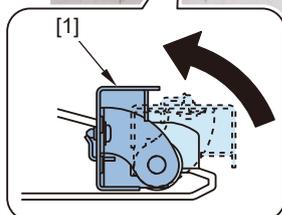
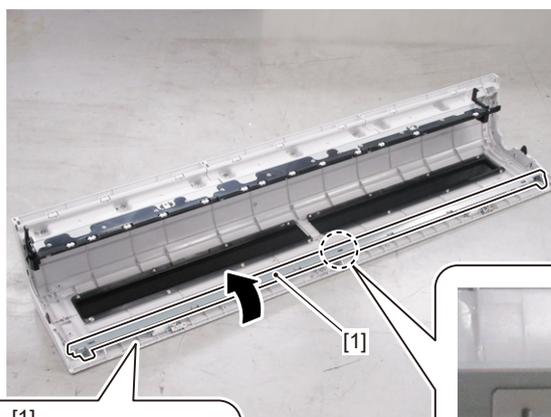
3. Remove two pieces of [1] SPRING, ACCESS COVER, and 2 pieces of [2] HINGE ASS'Y, ACCESS COVER SP.

[3]	[4]
	
1 each	1 each



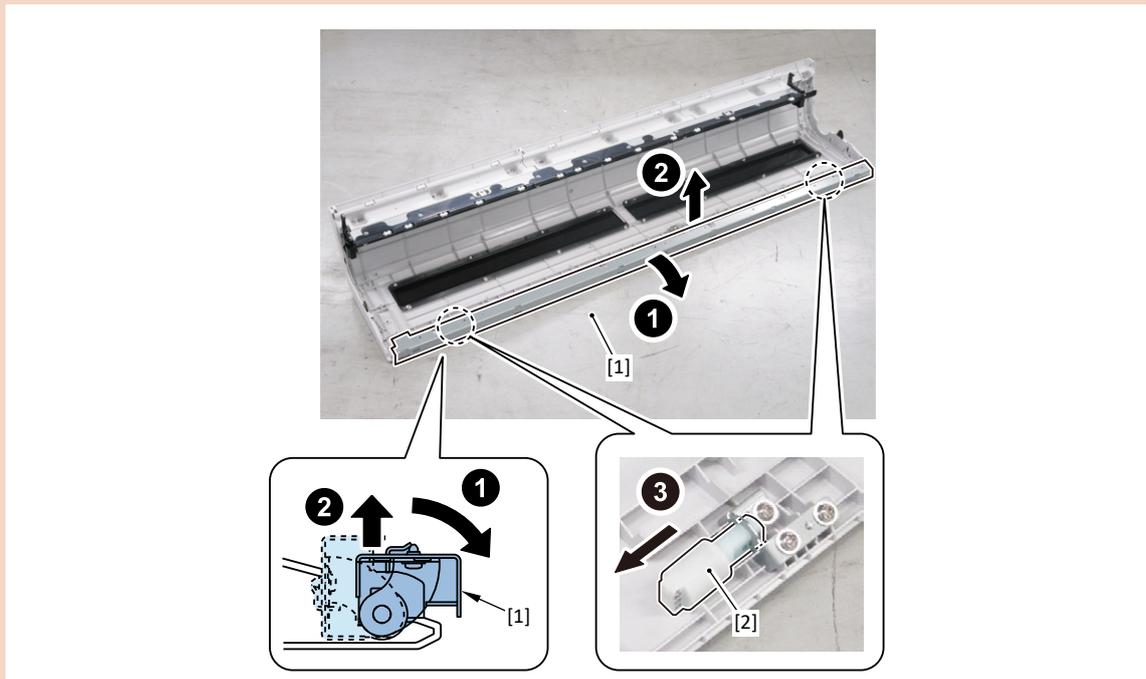
4. Turn [1] the plate in the arrow direction, and remove [2] the shaft.

[3]	[4]
	
BK	
1x	1x



5. Return [1] the plate and remove it.

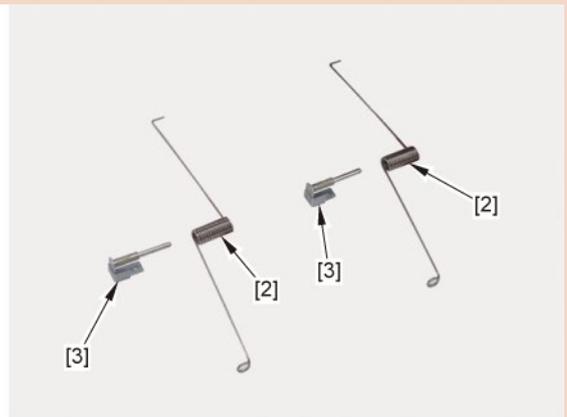
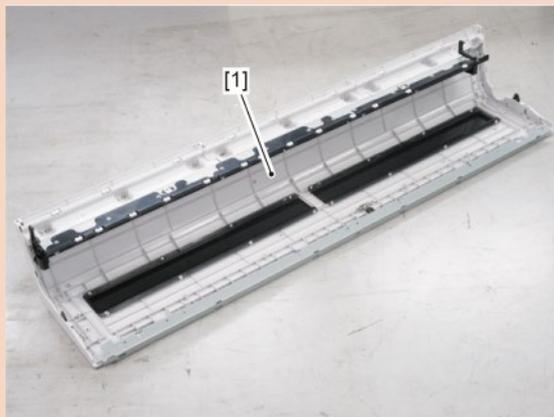
6. Disengage [2] ROTARY DAMPER.



Notes when replacing ACCESS COVER UNIT:

[2] SPRING, ACCESS COVER and [3] HINGE ASS'Y, ACCESS COVER SP are not included in [1] ACCESS COVER UNIT.

When replacing ACCESS COVER UNIT, detach SPRING, ACCESS COVER, and HINGE ASS'Y, ACCESS COVER SP from the removed old ACCESS COVER UNIT. Attach the detached SPRING, ACCESS COVER and HINGE ASS'Y, ACCESS COVER SP to a new ACCESS COVER UNIT.

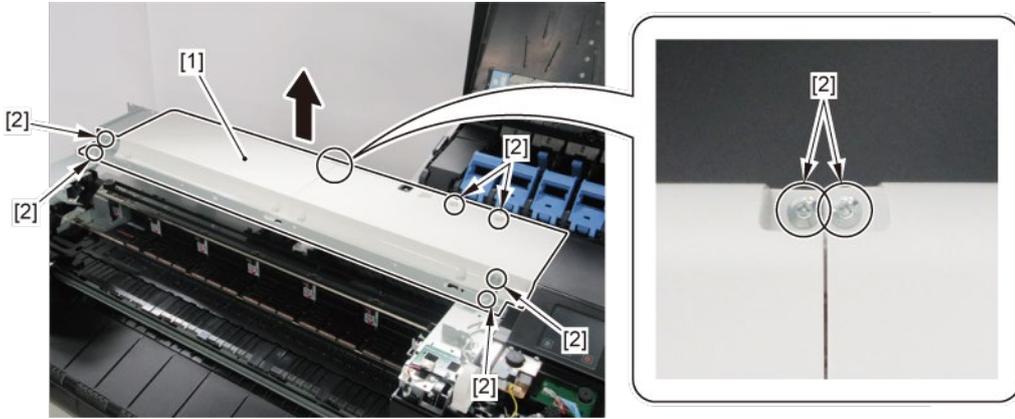


12. Remove [1] COVER UNIT, BACK TOP CENTER.

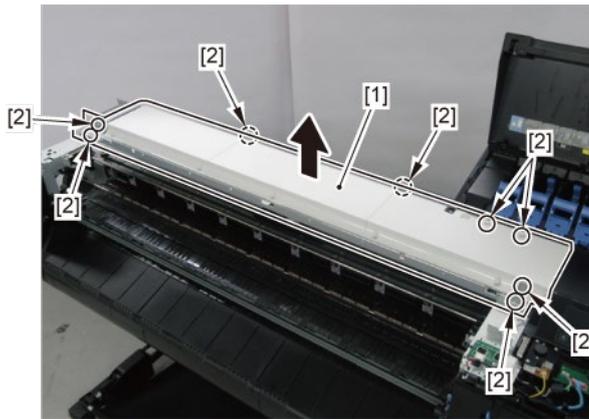
[2]

8 pcs

(24" model)



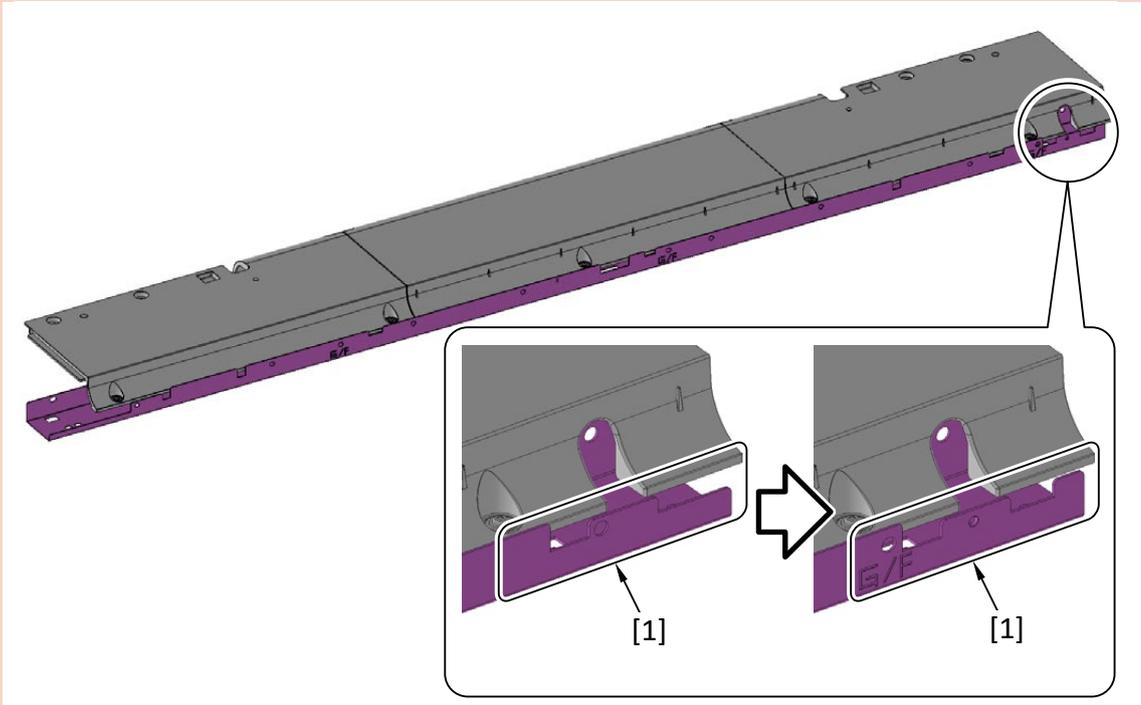
(36" model, 44" model)



TX-2100, TX-4100, TX-5210, TX-5410: Notes when replacing the unit

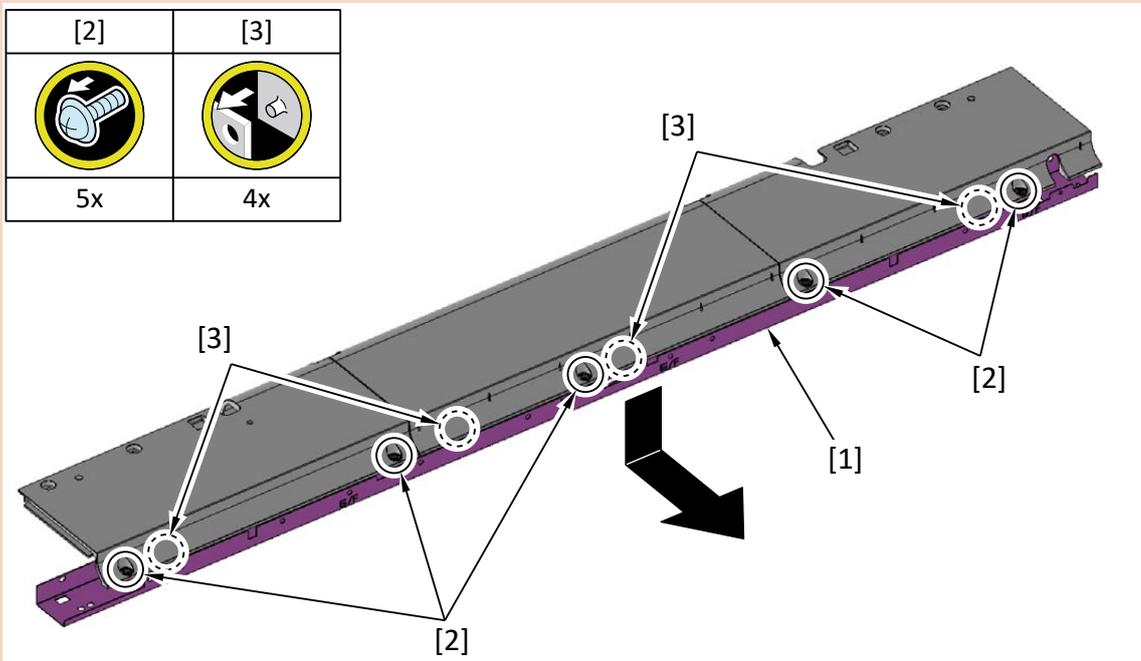
When replacing COVER UNIT, BACK TOP CENTER, check the shape of [1] the plate.

If the plate shape of the service part differs from that of the removed COVER UNIT, BACK TOP CENTER, remove the plate while following the procedures below, and attach the one from the old unit to the new unit.



Point

1. Remove [1] the plates (four in 24" model, five in 44" model).



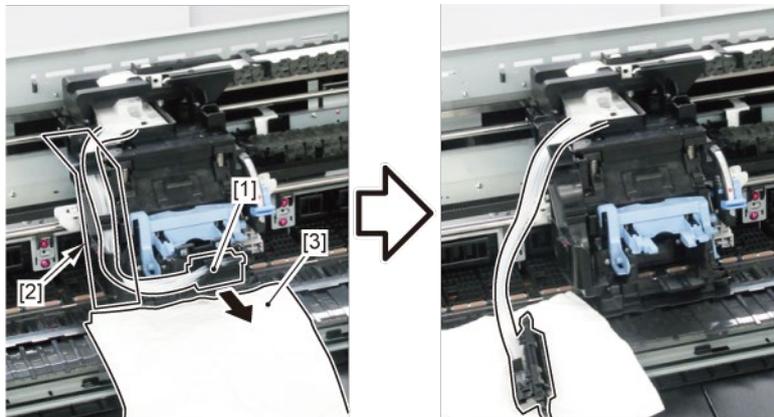
B

1. Remove all the parts of Group A.
2. Release [1] the tubes from [2] the guide.



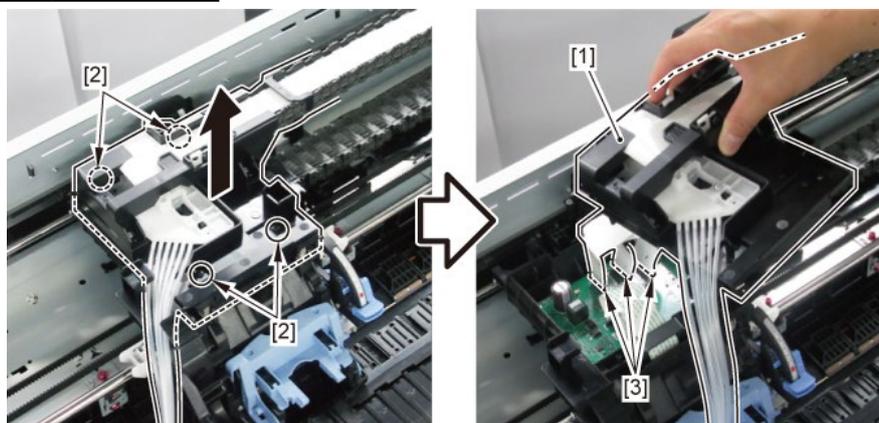
Notes when removing the unit:

Place the unit on [3] a paper towel, etc. as shown below.



3. Remove [1] INK TUBE UNIT from the CARRIAGE UNIT.

[2]	[3]
	
BK	
4 pcs	3 pcs

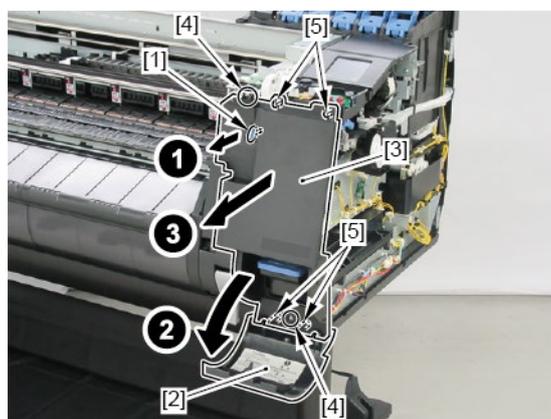


4. Remove [1] PLATEN CLEANER BRUSH.

5. Open [2] COVER UNIT, MTC.

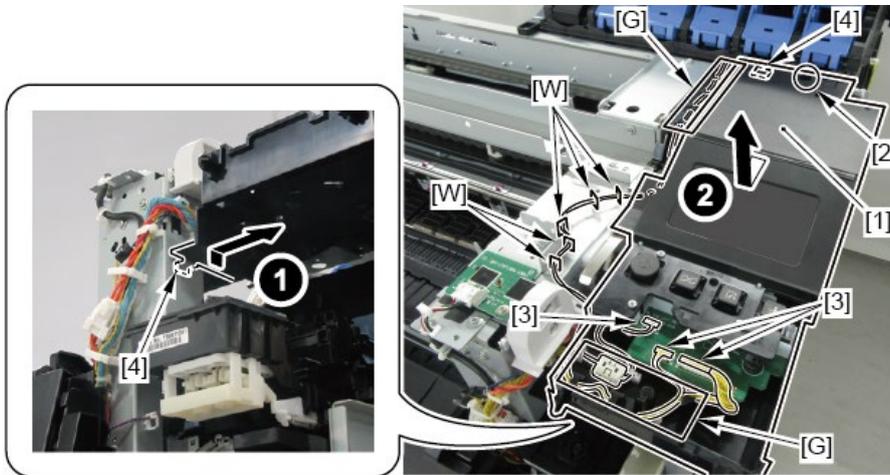
6. Remove [3] COVER, FRONT R.

[4]	[5]
	
2 pcs	4 pcs



7. Remove [1] COVER UNIT, BACK TOP R with the OPERATION PANEL UNIT.

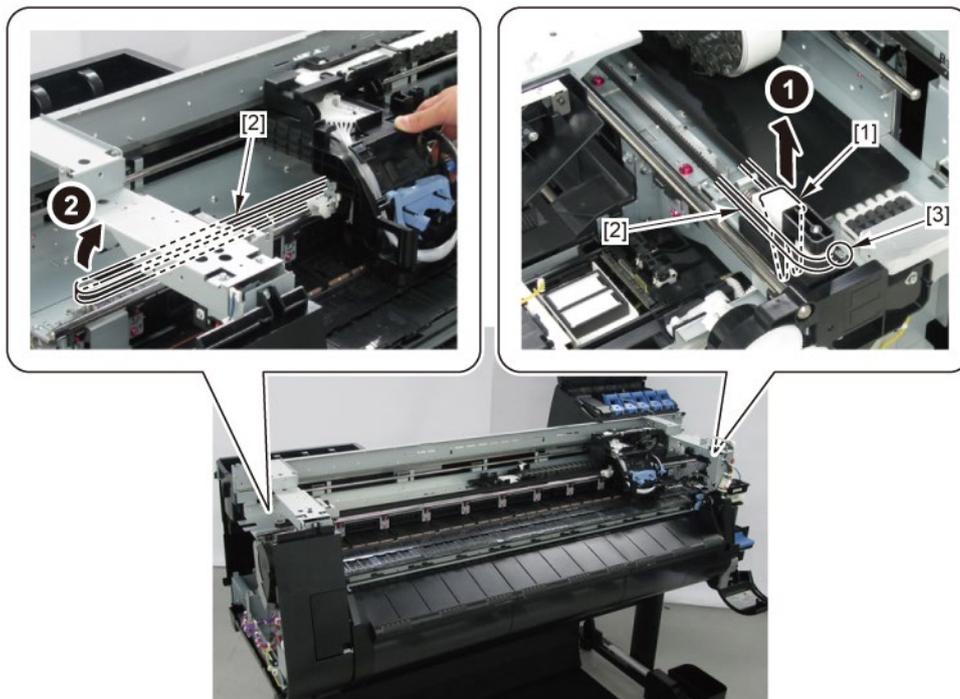
[2]	[3]	[4]	[W]	[G]
				
1 pc	3 pcs	2 pcs	5 pcs	2 pcs



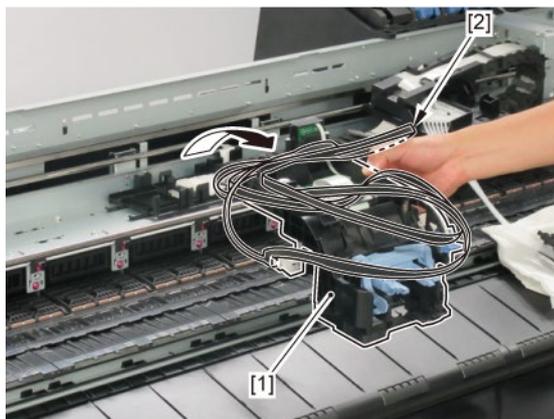
8. Remove [1] the TENSIONER, IDLER PULLEY and loosen [2] BELT, CARRIAGE.

[3]

1 pc



9. Remove [1] CARRIAGE UNIT and [2] BELT, CARRIAGE together.

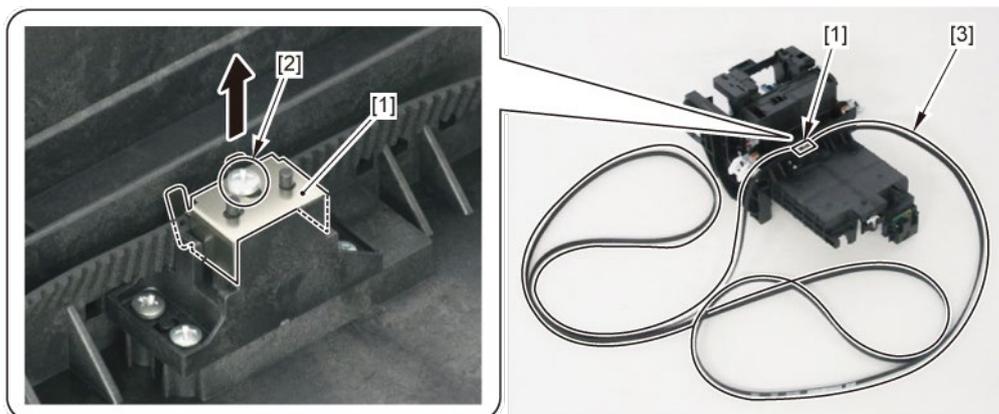


B-1

10. Remove [1] STOPPER, BELT, CR.



11. Remove [3] BELT, CARRIAGE.

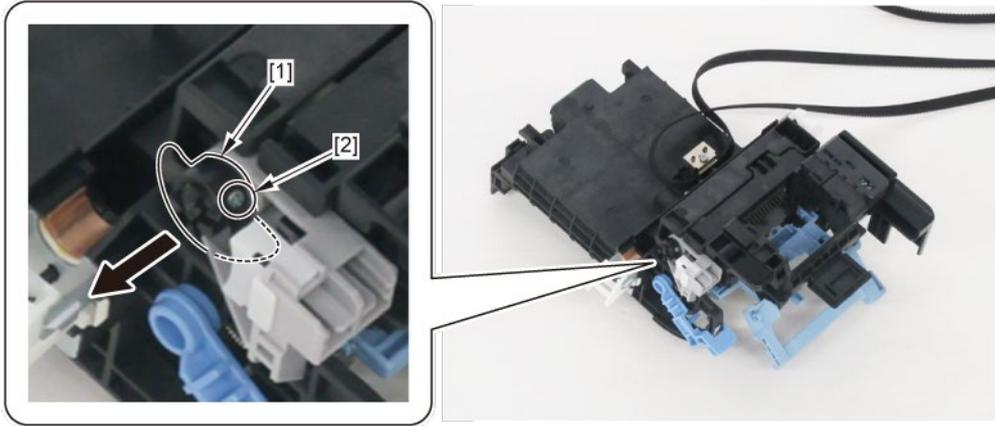


B-2

10. Remove [1] COUPLING, CARRIAGE.

[2]

1 pc

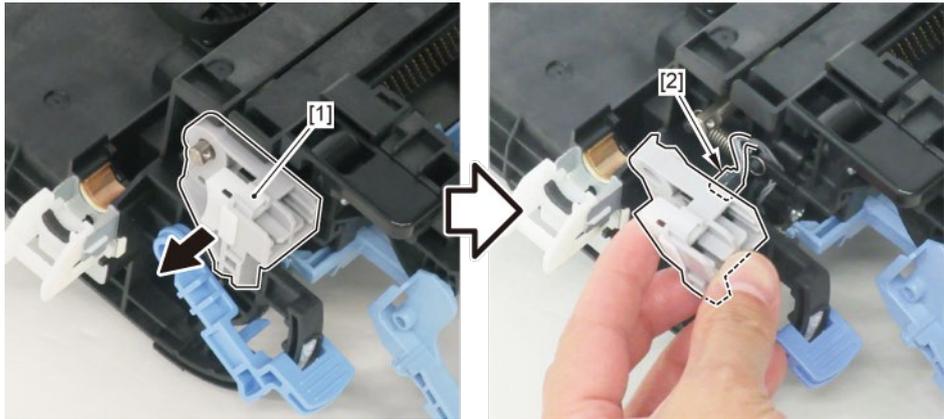


11. Remove [1] a set of

- HOLDER, CLUTCH UNIT
- COVER, PI SENSOR, CR
- CARRIAGE LIFT SENSOR.

[2]

1 pc



12. Remove [1] COVER, PI SENSOR, CR.

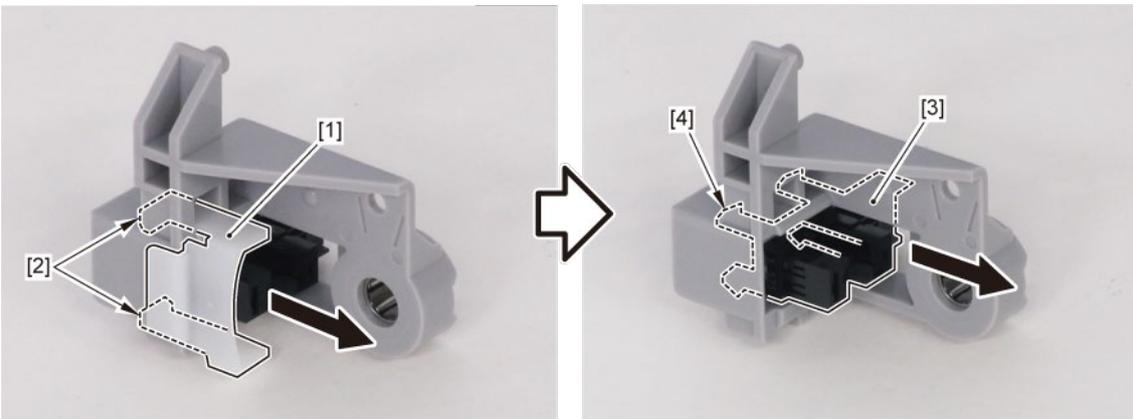
[2]

2 pcs

13. Remove [3] CARRIAGE LIFT SENSOR.

[4]

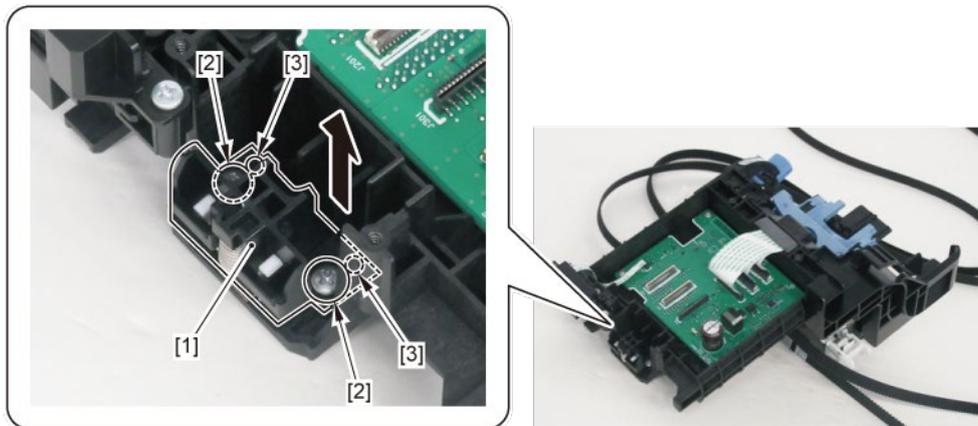
4 pcs



B-3

10. Remove [1] STOPPER, SUB SLIDER, CR.

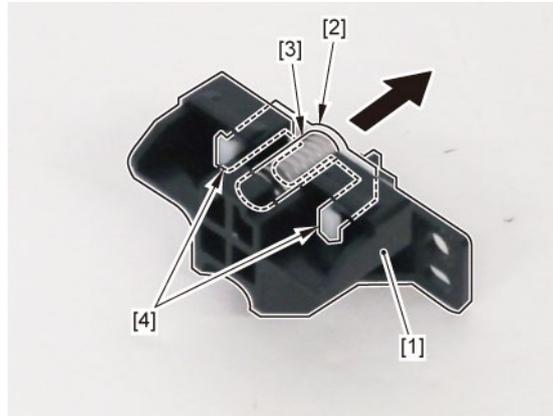
[2]	[3]
	
2 pcs	2 pcs



11. Remove [2] HOLDER, SLIDER PRESSURE, CR and [3] SPRING, SLIDER PRESSURE, CR from [1] STOPPER, SUB SLIDER, CR.

[4]

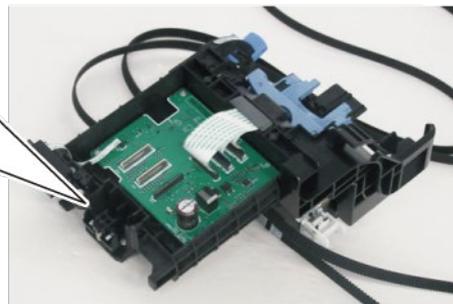
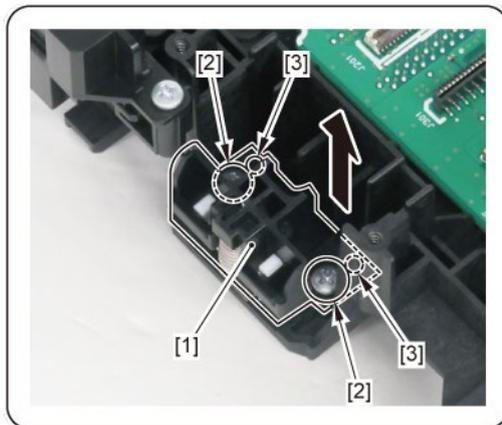
2 pcs



B-4

10. Remove [1] STOPPER, SUB SLIDER, CR.

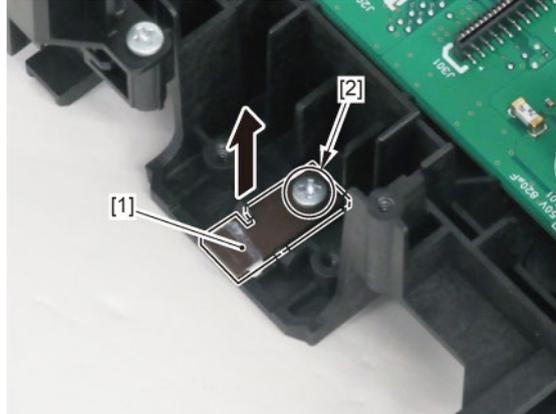
[2]	[3]
	
2 pcs	2 pcs



11. Remove [1] SLIDER BUSHING, OILLESS, CR.

[2]

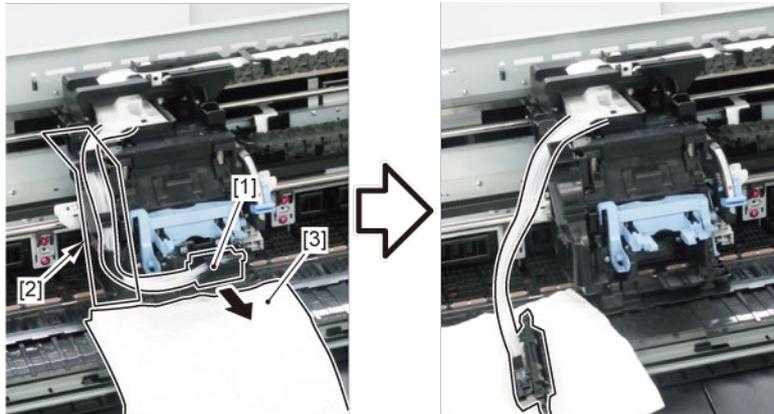
1 pc



C

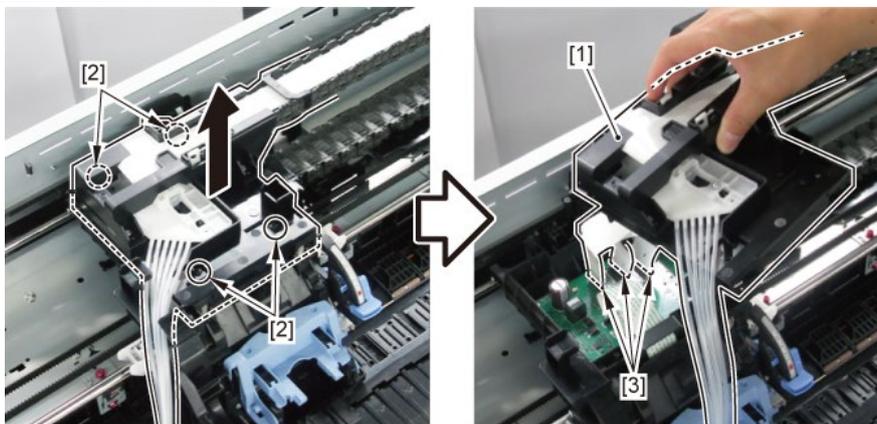
1. Remove all the parts of Group A.
2. Release [1] the tubes from [2] the guide.

	Notes when removing the unit: Place the unit on [3] a paper towel, etc. as shown below.
---	---



3. Remove [1] INK TUBE UNIT from the CARRIAGE UNIT.

[2]	[3]
	
BK	
4 pcs	3 pcs

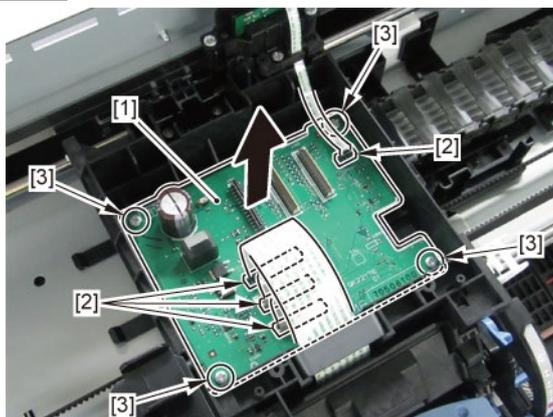


C-1

4. Remove all the parts of Group A.

5. Remove [1] CARRIAGE RELAY PCB UNIT.

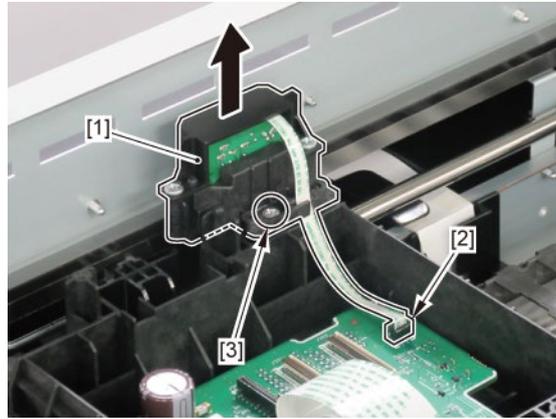
[2]	[3]
	
4 pcs	4 pcs



C-2

4. Remove [1] CARRIAGE ENCODER UNIT.

[2]	[3]
	
1 pc	1 pc



D (24" model)

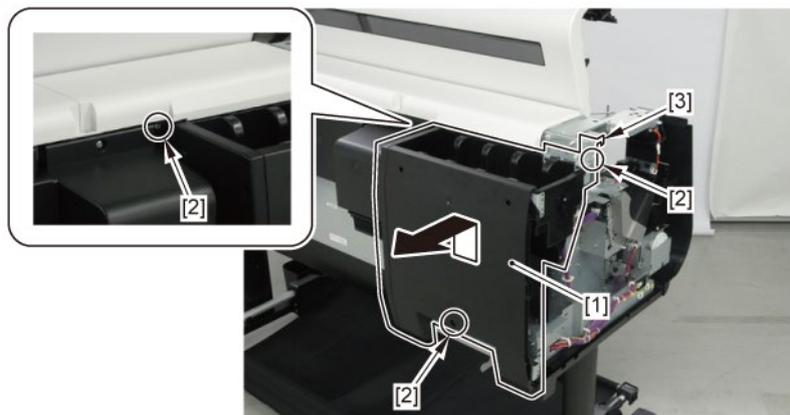
1. Remove all the parts of Group A.
2. Remove [1] a set of
 - BOX, INKTANK
 - COVER, INKTANK BACK
 - COVER, INKTANK L INSIDE.

TX-2100, TX-5210

2. Remove [1] INKTANK COVER UNIT, L.

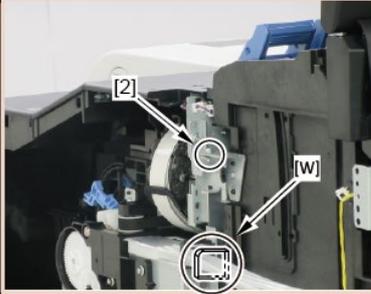
TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc



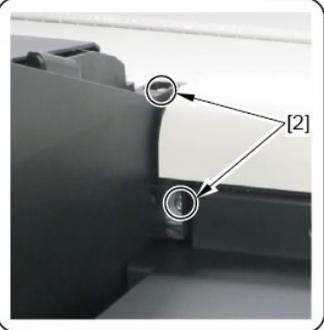
3. Open [1] the right ink unit.

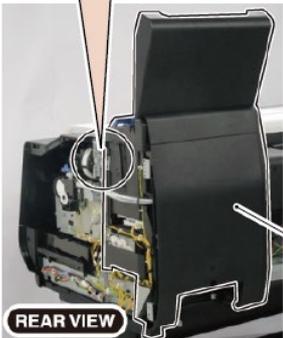
[2]	[W]
	
4 pcs	1 pc



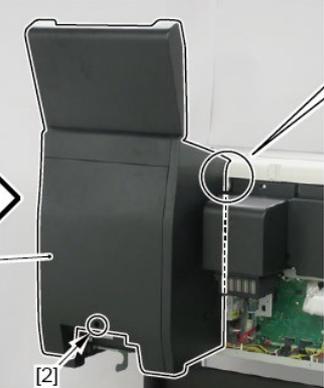
Before opening the unit:

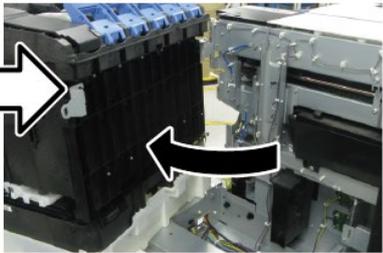
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





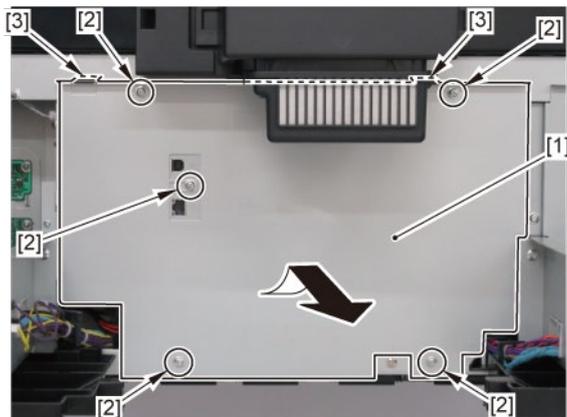
REAR VIEW





4. Remove [1] the plate.

[2]	[3]
	
5 pcs	2 pcs

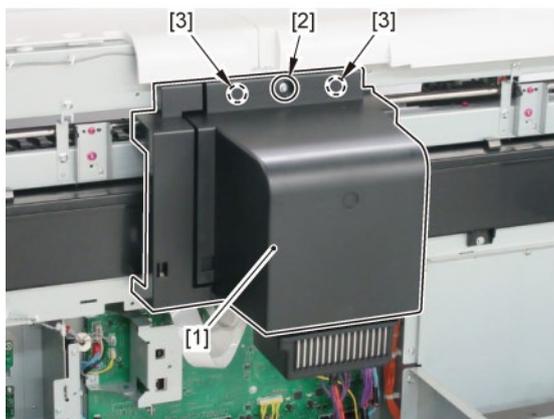


5. Remove [1] a set of

- COVER, MIST FAN

- COVER, BACK RIGHT.

[2]	[3]
	
1 pc	2 pcs



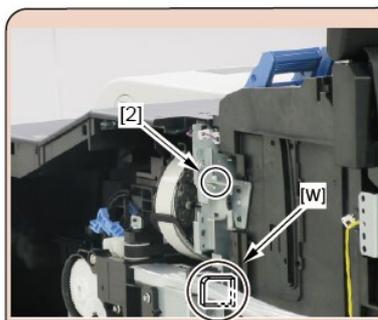
D (36" model, 44" model)

1. Remove all the parts of Group A.

2. (36" model only)

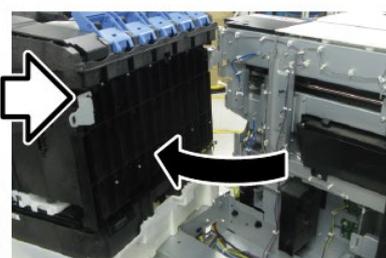
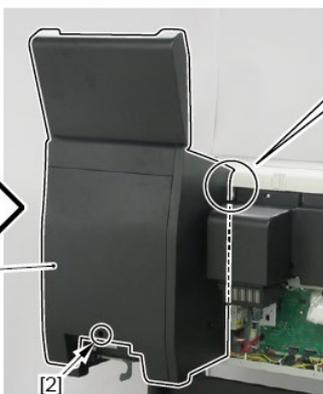
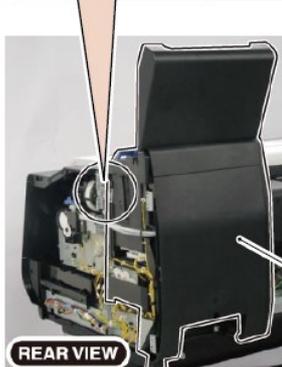
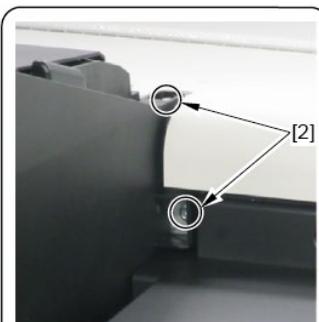
Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc



Before opening the unit:

- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.

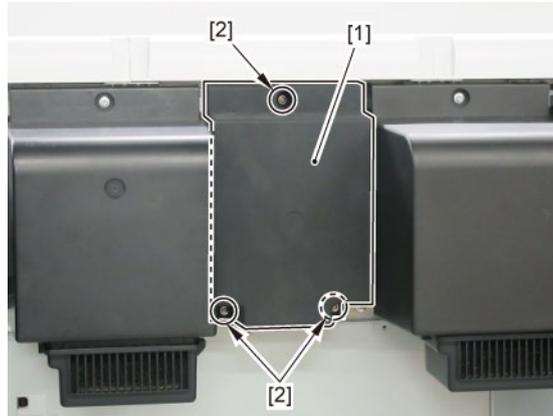


3. Remove [1] COVER, BACK W-FAN.

(36" model)

[2]

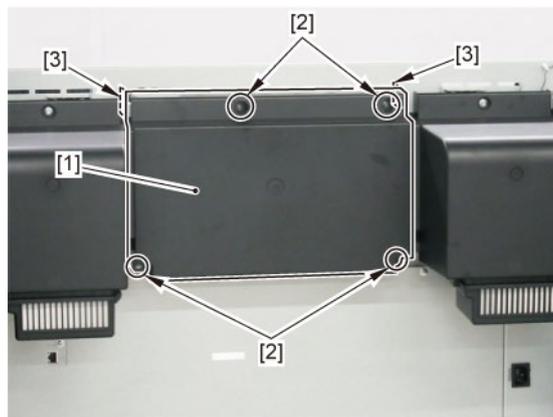
3 pcs



3. Remove [1] COVER, BACK.

(44" model)

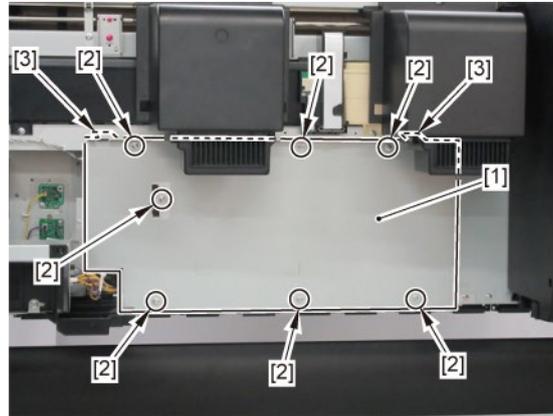
[2]	[3]
	
4 pcs	2 pcs



4. Remove [1] the plate.

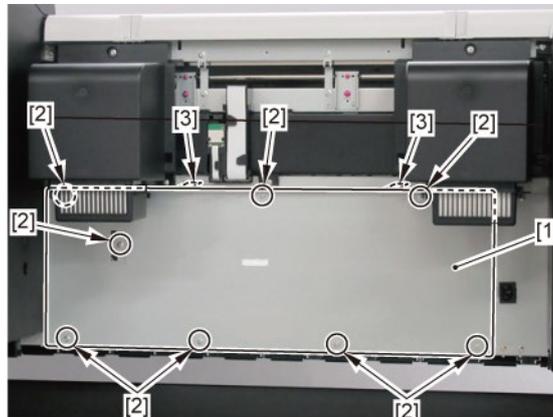
(36" model)

[2]	[3]
	
7 pcs	2 pcs



(44" model)

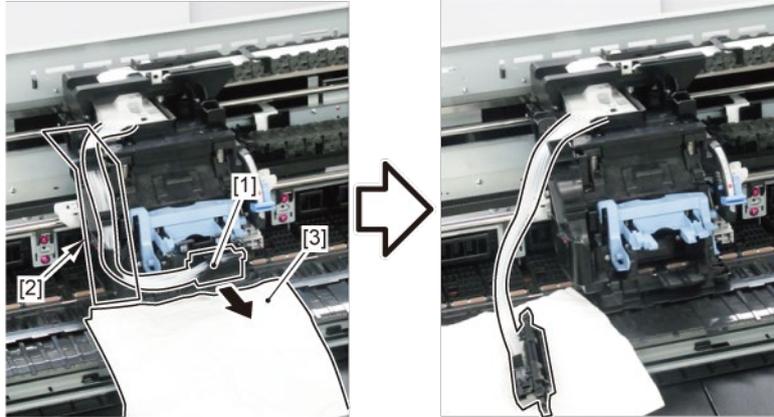
[2]	[3]
	
8 pcs	2 pcs



E

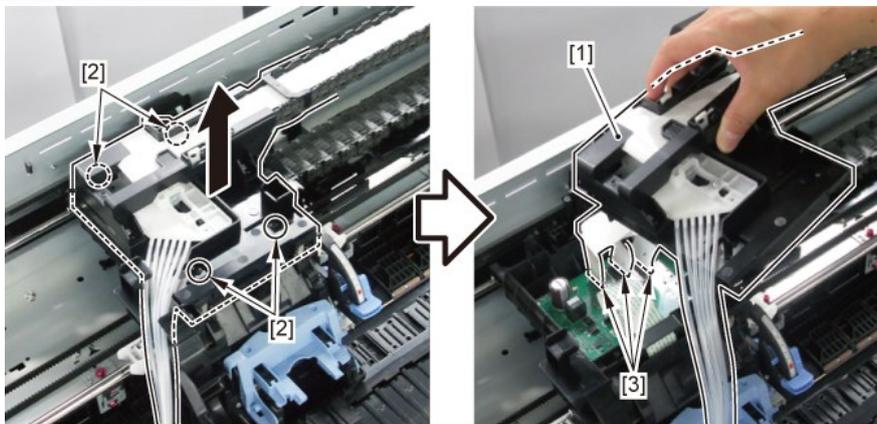
1. Remove all the parts of Groups A and D.
2. Release [1] the tubes from [2] the guide.

Point **Notes when removing the unit:**
Place the unit on [3] a paper towel, etc. as shown below.



3. Remove [1] INK TUBE UNIT from the CARRIAGE UNIT.

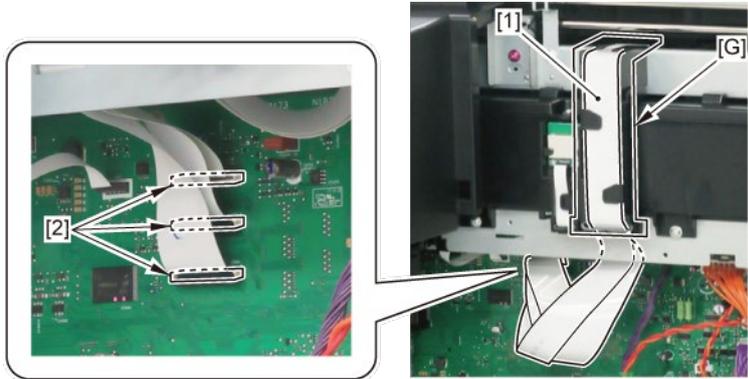
[2]	[3]
	
BK	
4 pcs	3 pcs



E-1

4. Disconnect and release [1] the flexible cables.

[2]	[G]
	
3 pcs	1 pc



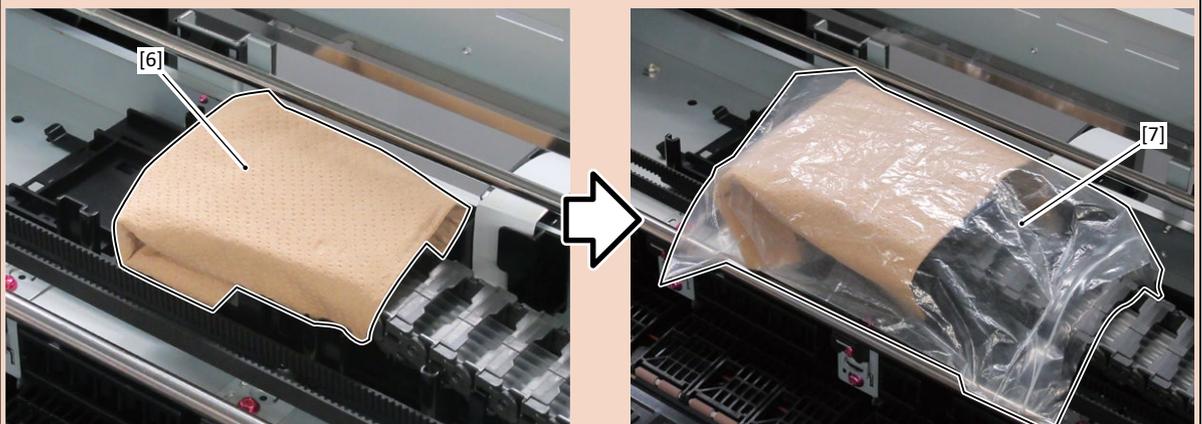
5. Remove [1] INK TUBE UNIT and [2] SIX-RING RUBBER CHAIN.

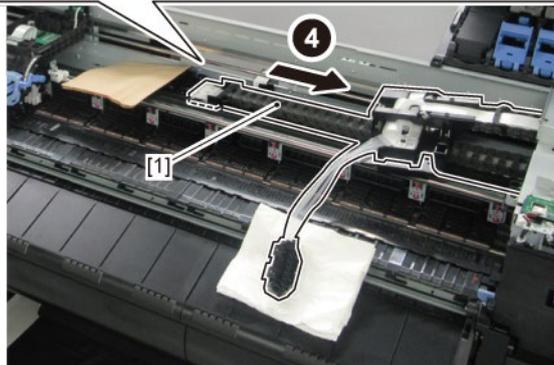
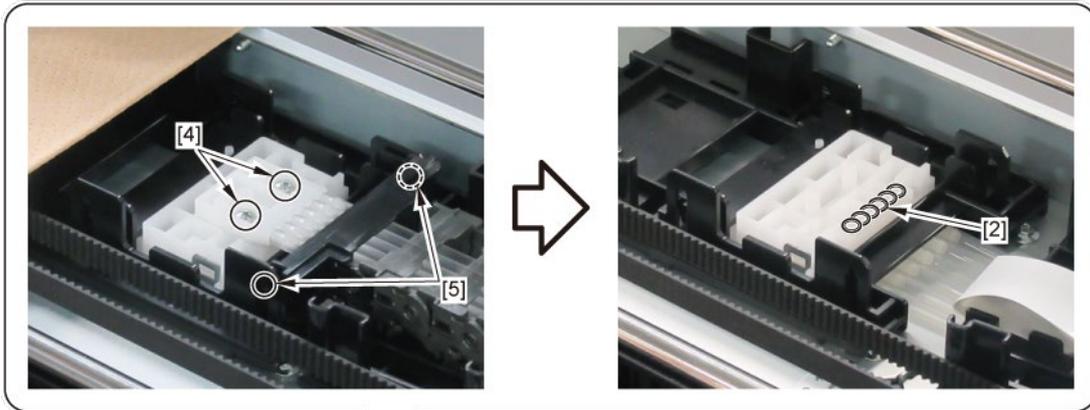
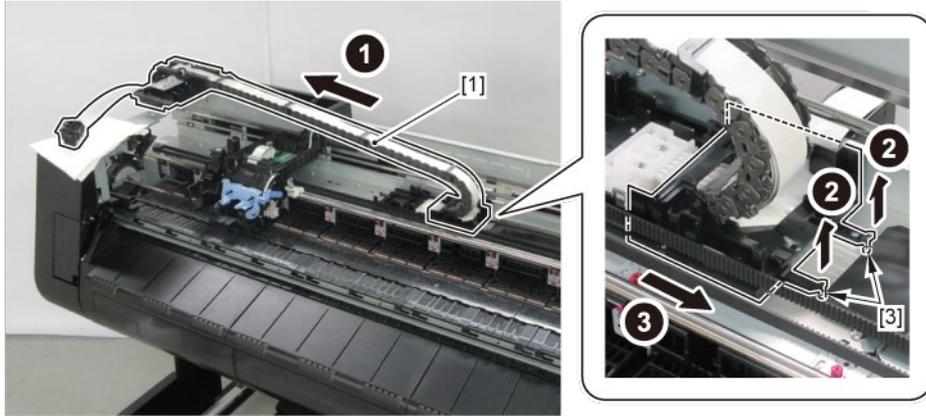
[3]	[4]	[5]
		
	LONG	
2 pcs	2 pcs	2 pcs

Notes when removing the unit:

- To avoid smearing with ink, spread a paper towel, etc.
- To avoid ink leakage, wrap the joint in [6] paper towel, etc., put them in [7] a plastic bag, and close the bag.

Point



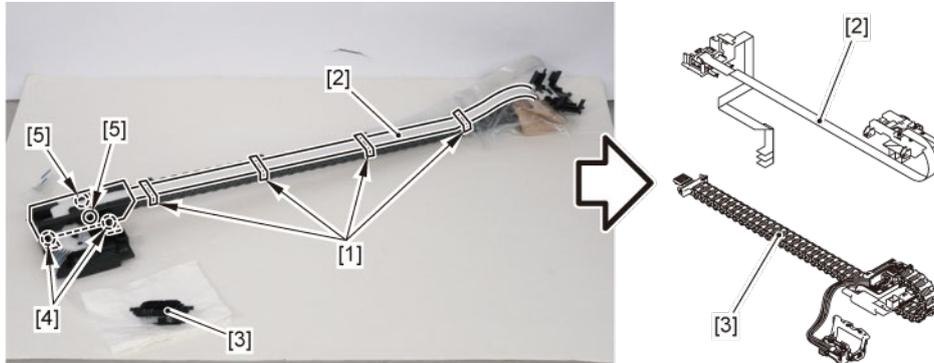


Point

Notes when assembling the unit:
 Make sure that SIX-RING RUBBER CHAIN is attached at the proper position, and fix INK TUBE UNIT to bosses from the top of SIX-RING RUBBER CHAIN.

6. Remove four pieces of [1] cable holders (three pieces in 24" model). Separate the INK TUBE UNIT into two parts, [2] FLEXIBLE CABLE UNIT and [3] TUBE UNIT.

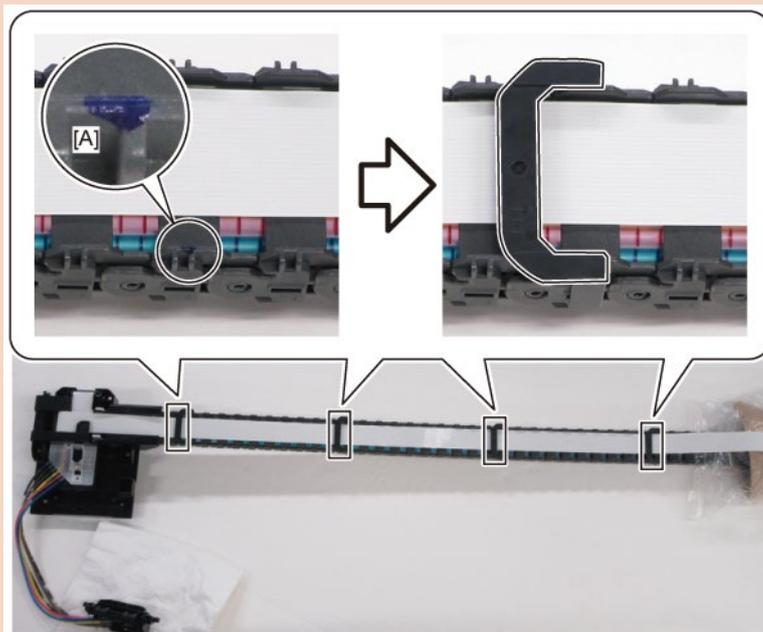
[1]	[4]	[5]
		
4 pcs	2 pcs	2 pcs



Notes when assembling the unit:

Fit the cable holders to the cable guide at marking ([A]).

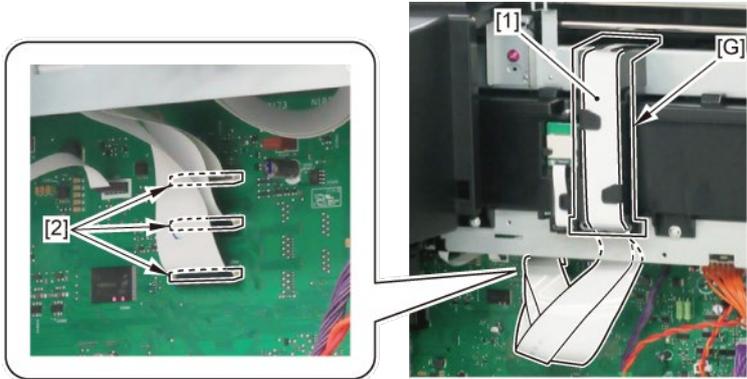
Point



E-2

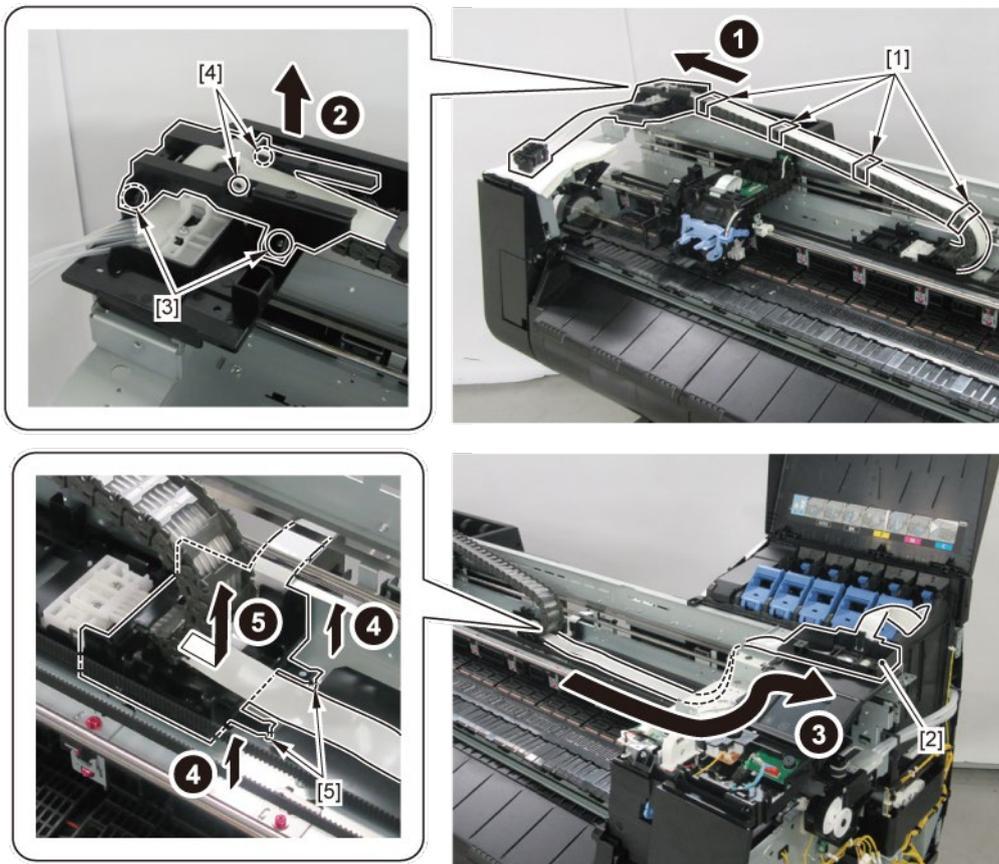
4. Disconnect and release [1] the flexible cables.

[2]	[G]
	
3 pcs	1 pc



5. Remove four pieces of [1] cable holders (three pieces in 24" model) and [2] FLEXIBLE CABLE UNIT.

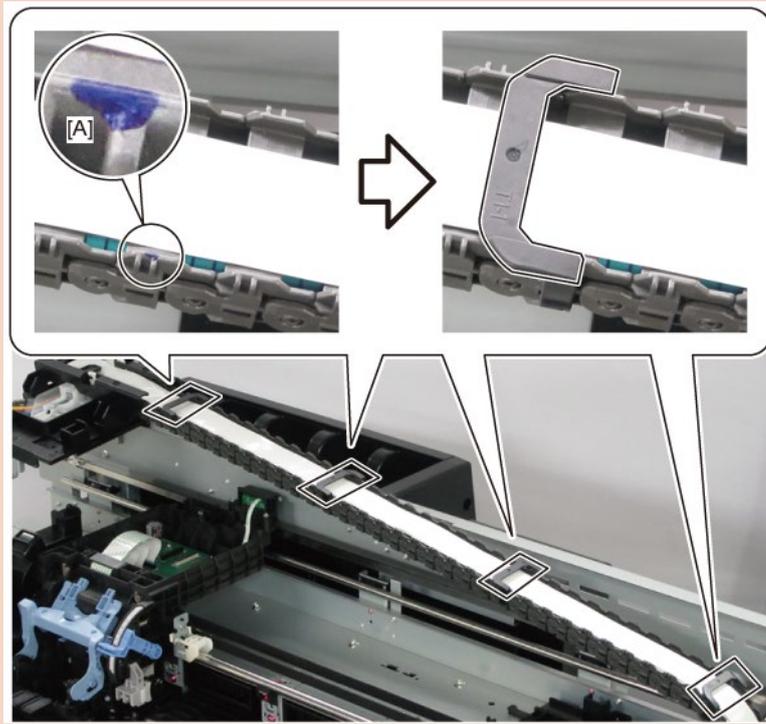
[1]	[3]	[4]	[5]
			
4 pcs	2 pcs	2 pcs	2 pcs



Notes when assembling the unit:

Fit the cable holders to the cable guide at marking ([A]).

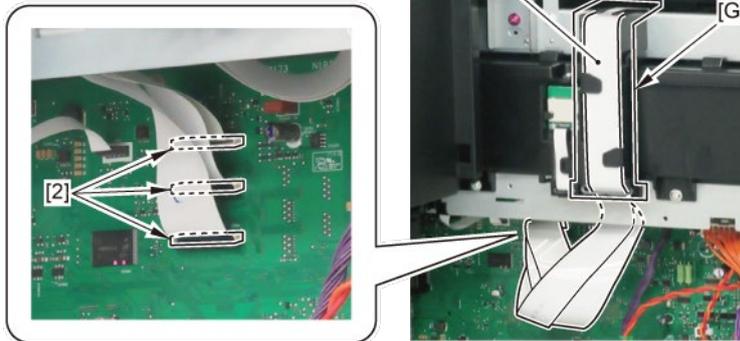
Point



E-3

4. Disconnect and release [1] the flexible cables.

[2]	[G]
3 pcs	1 pc



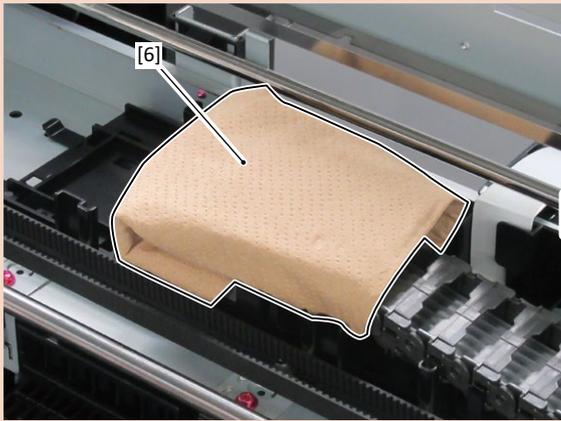
5. Remove [1] INK TUBE UNIT and [2] SIX-RING RUBBER CHAIN.

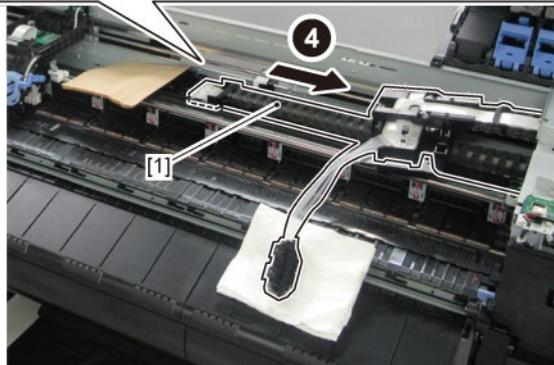
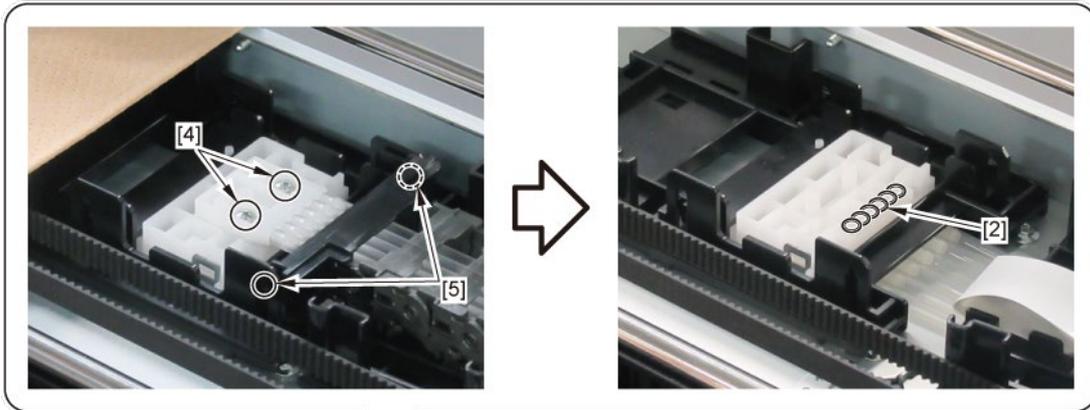
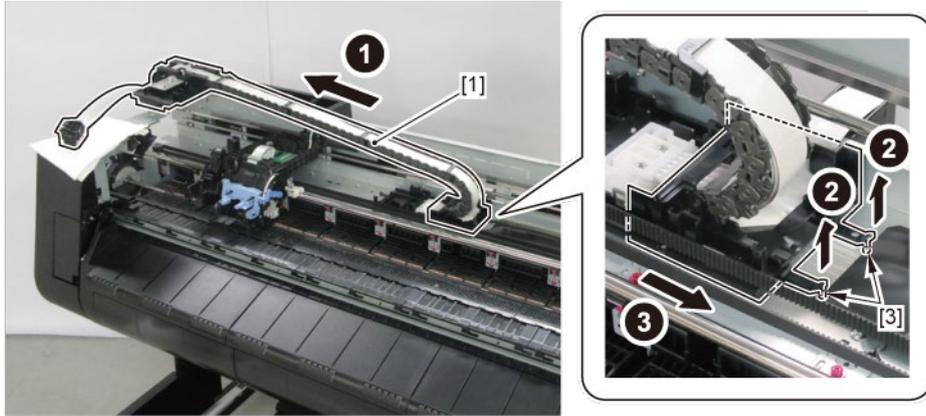
[3]	[4]	[5]
	 LONG	
2 pcs	2 pcs	2 pcs

Notes when removing the unit:

- To avoid smearing with ink, spread a paper towel, etc.
- To avoid ink leakage, wrap the joint in [6] paper towel, etc., put them in [7] a plastic bag, and close the bag.

Point





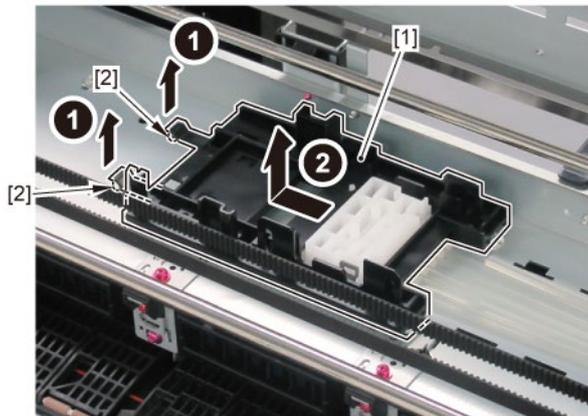
Point

Notes when assembling the unit:
 Make sure that SIX-RING RUBBER CHAIN is attached at the proper position, and fix INK TUBE UNIT to bosses from the top of SIX-RING RUBBER CHAIN.

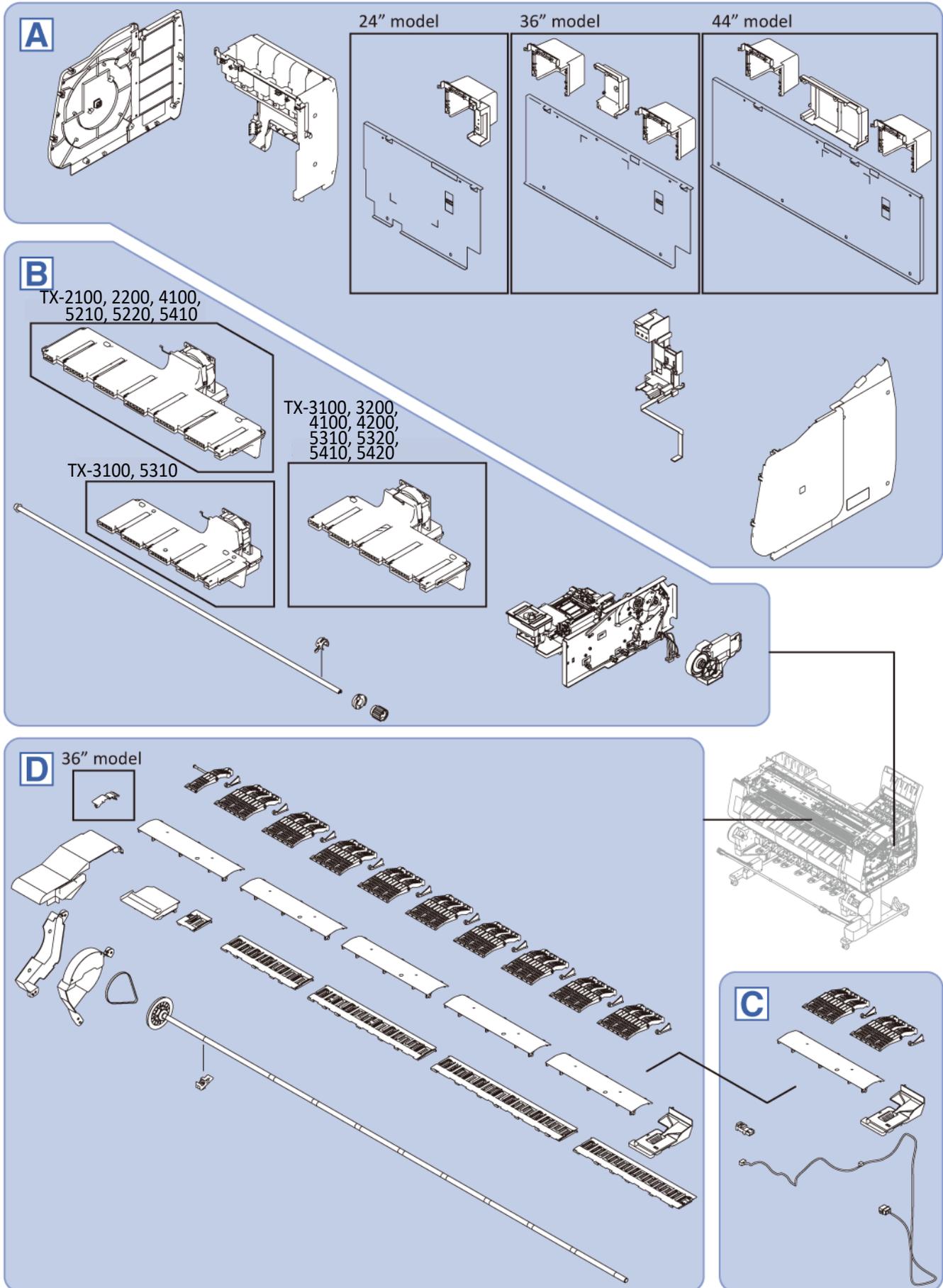
6. Remove [1] BASE, CHAIN LINK.

[2]

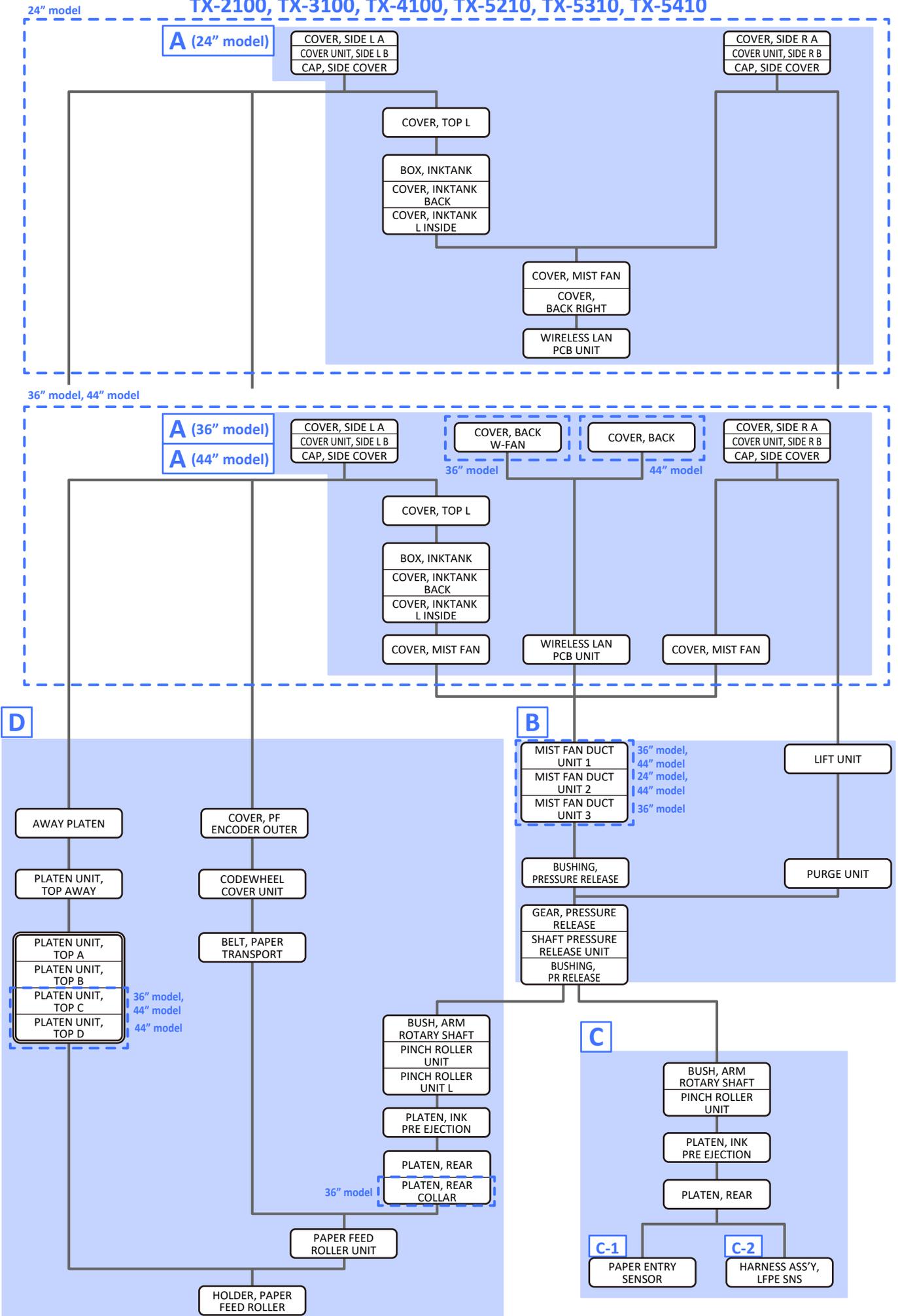
2 pcs



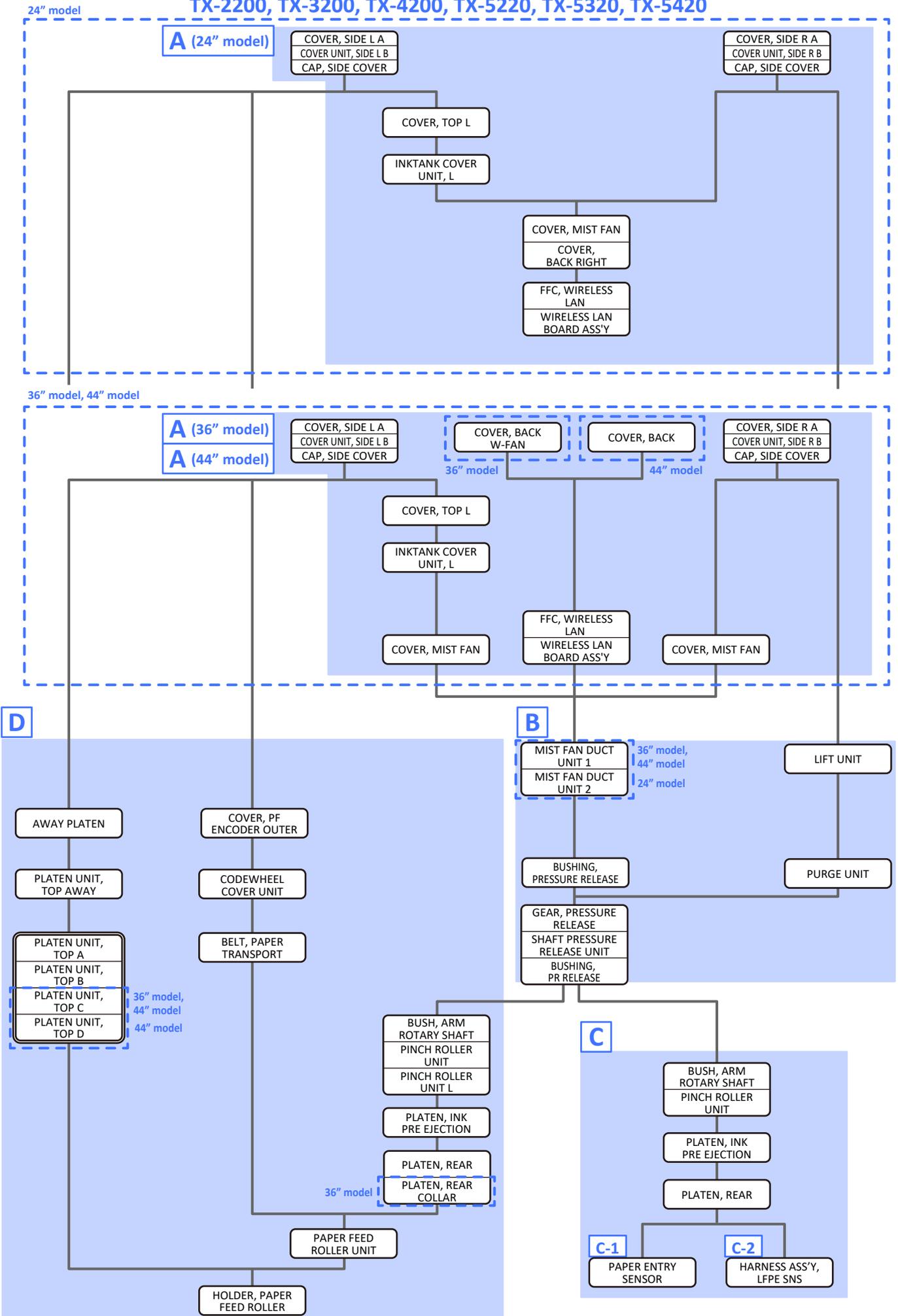
13. Paper Feed Roller Unit (Pinch Roller Unit)



TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410



TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

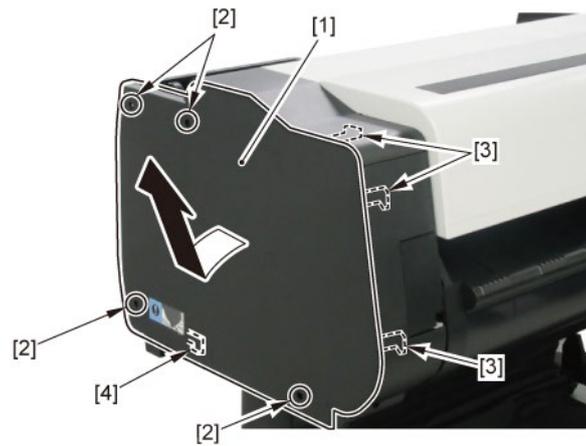


A (24" model)

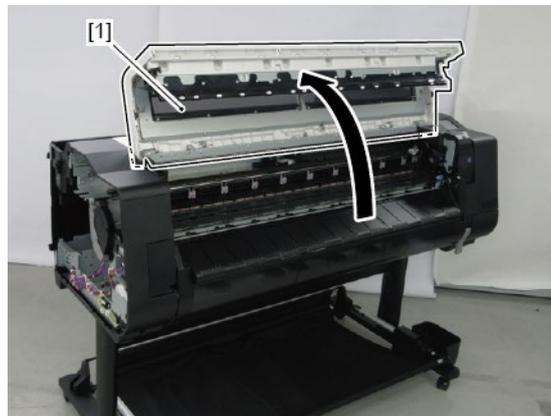
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

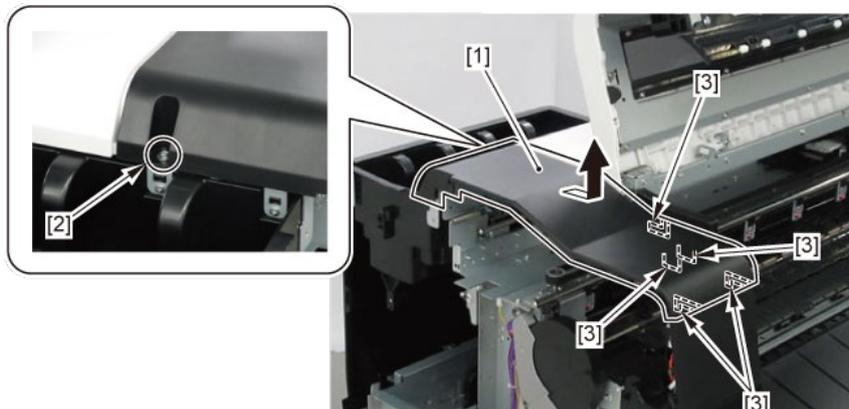


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

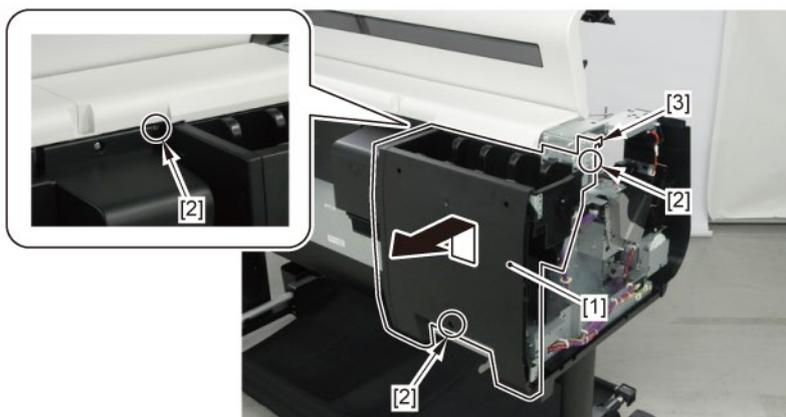
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INKTANK COVER UNIT, L.

TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

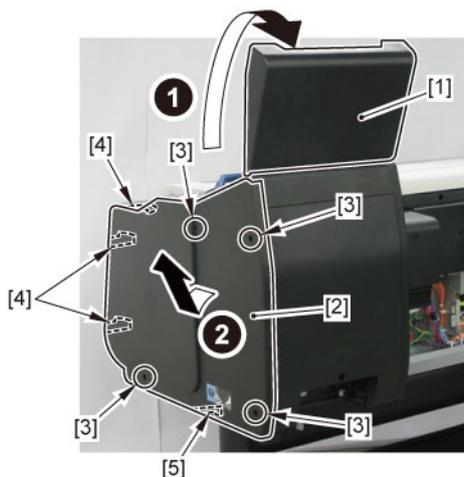
6. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

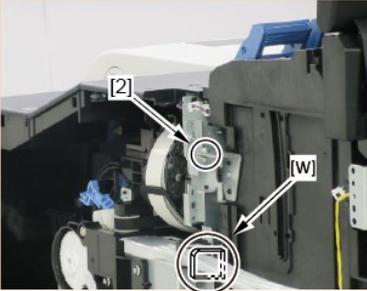
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



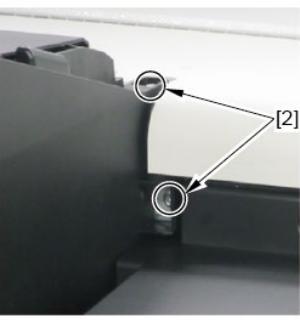
7. Open [1] the right ink unit.

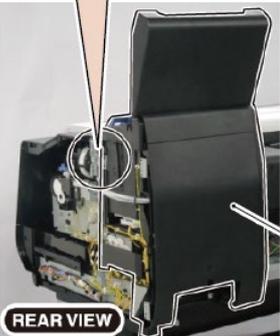
[2]	[W]
	
4 pcs	1 pc



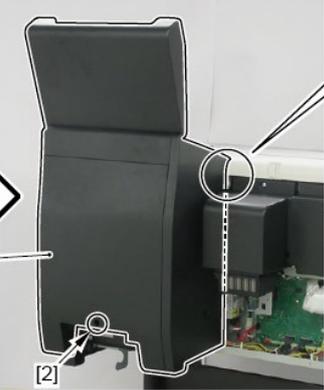
Before opening the unit:

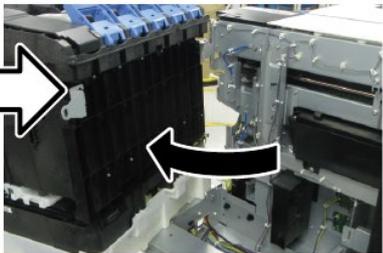
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





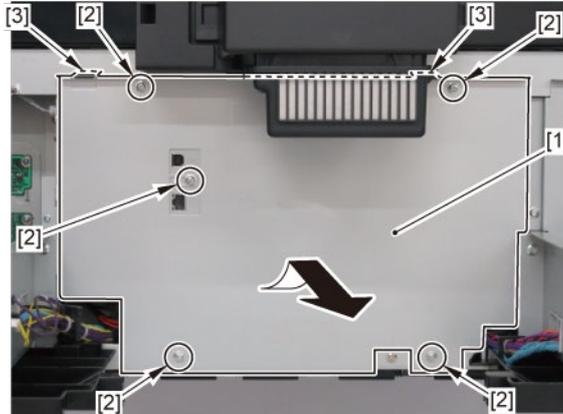
REAR VIEW





8. Remove [1] the plate.

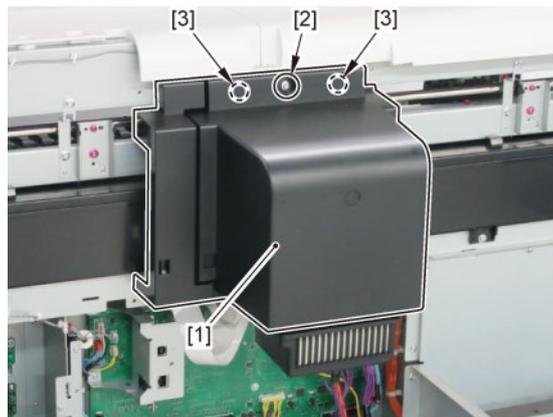
[2]	[3]
	
5 pcs	2 pcs



9. Remove [1] a set of

- COVER, MIST FAN
- COVER, BACK RIGHT.

[2]	[3]
	
1 pc	2 pcs



10. Remove [1] WIRELESS LAN PCB UNIT.

TX-2100, TX-5210

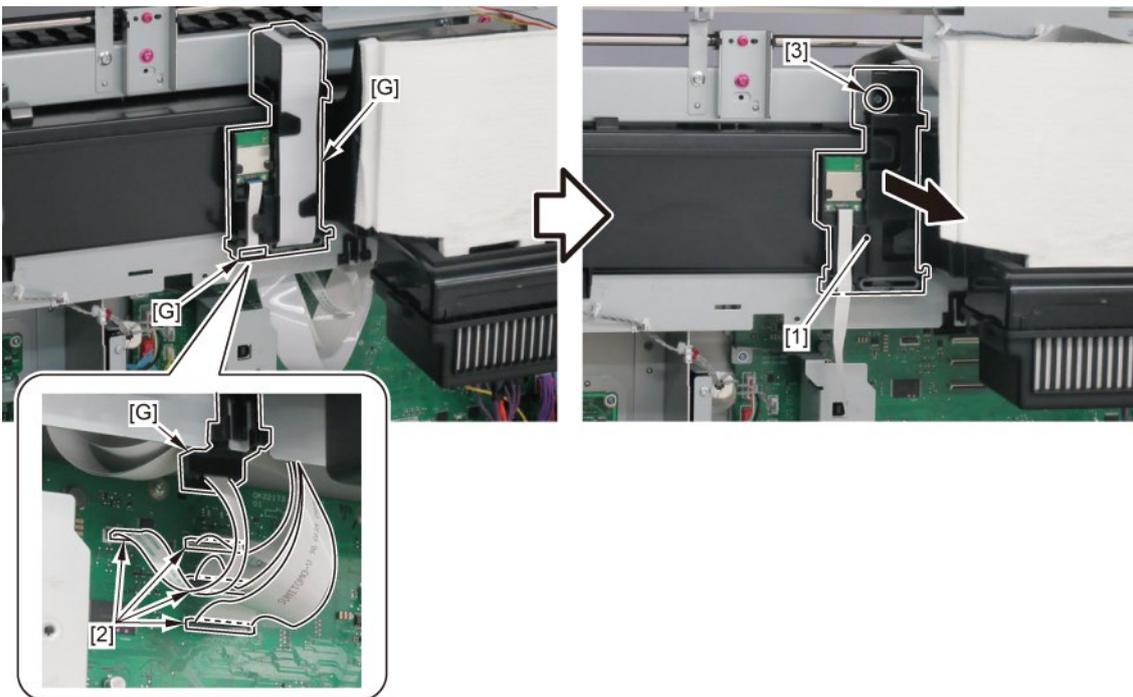
10. Remove [1] a set of

- FFC, WIRELESS LAN

- WIRELESS LAN BOARD ASS'Y

TX-2200, TX-5220

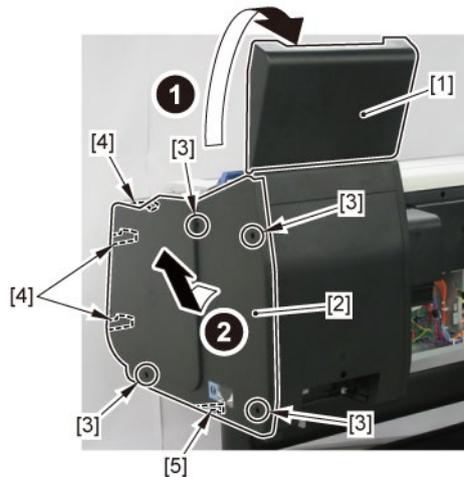
[2]	[3]	[G]
		
4 pcs	1 pc	3 pcs



A (36" model)

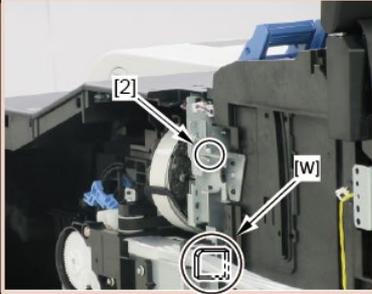
1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



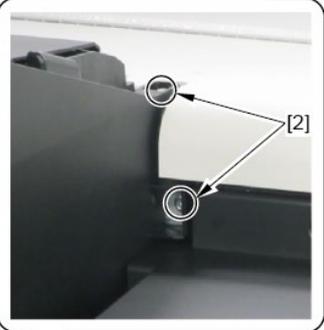
3. Open [1] the right ink unit.

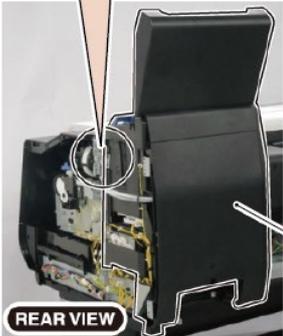
[2]	[W]
	
4 pcs	1 pc



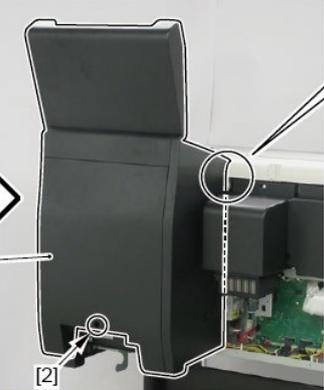
Before opening the unit:

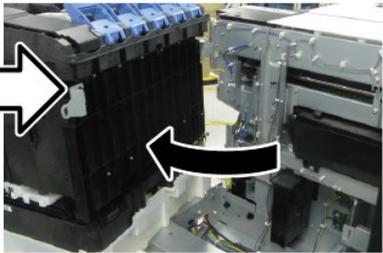
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





REAR VIEW

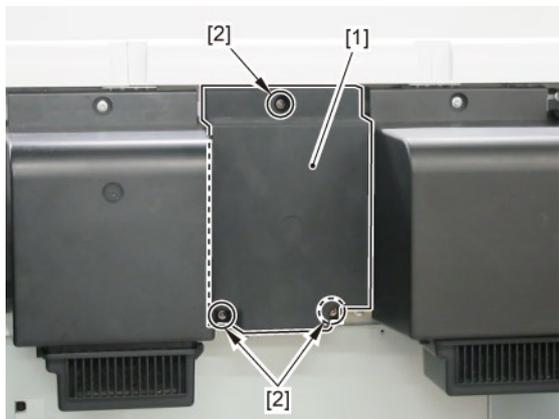




4. Remove [1] COVER, BACK W-FAN.

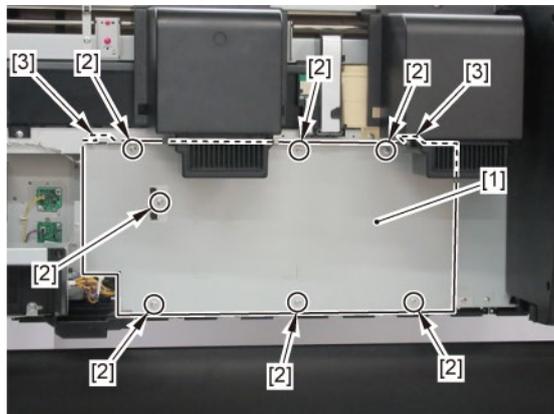
[2]

3 pcs



5. Remove [1] the plate.

[2]	[3]
	
7 pcs	2 pcs



6. Remove [1] WIRELESS LAN PCB UNIT.

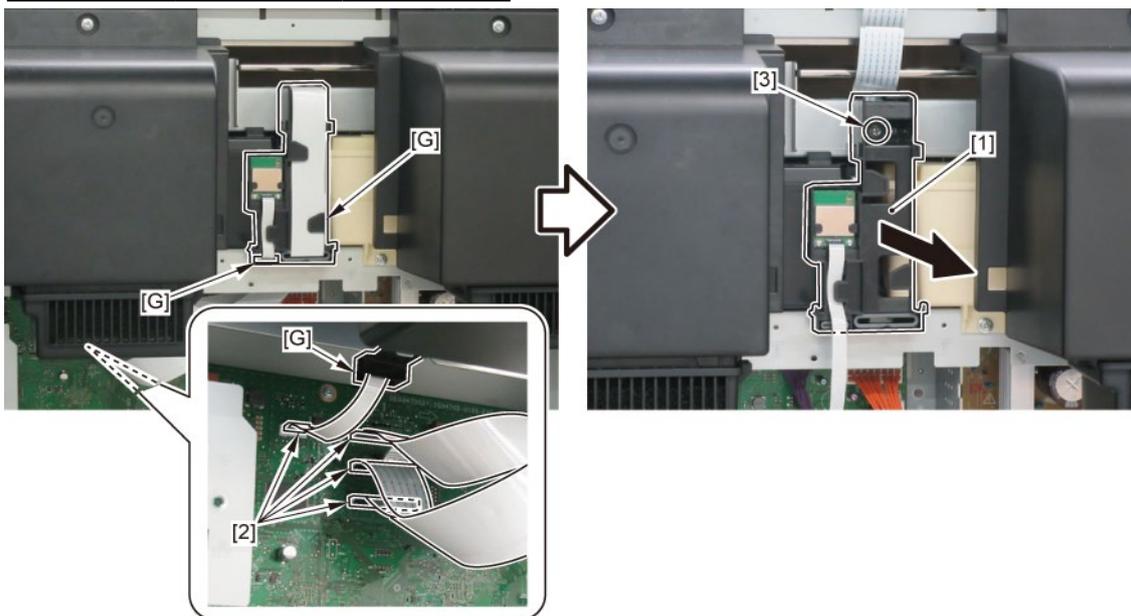
TX-3100, TX-5310

6. Remove [1] a set of

- FFC, WIRELESS LAN
- WIRELESS LAN BOARD ASS'Y).

TX-3200, TX-5320

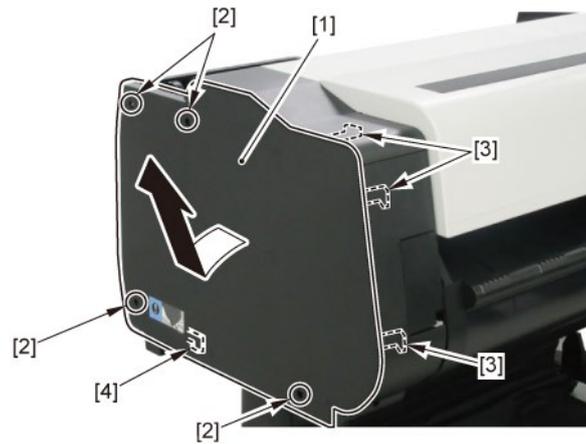
[2]	[3]	[G]
		
4 pcs	1 pc	3 pcs



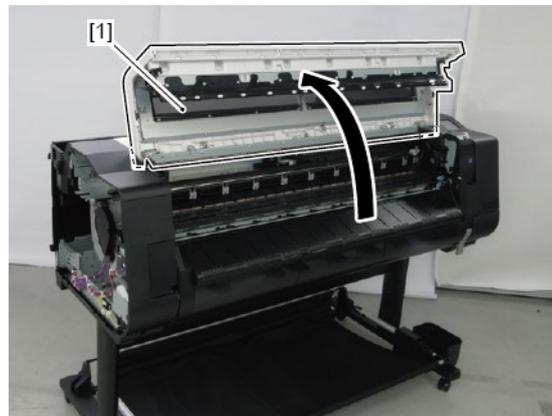
7. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

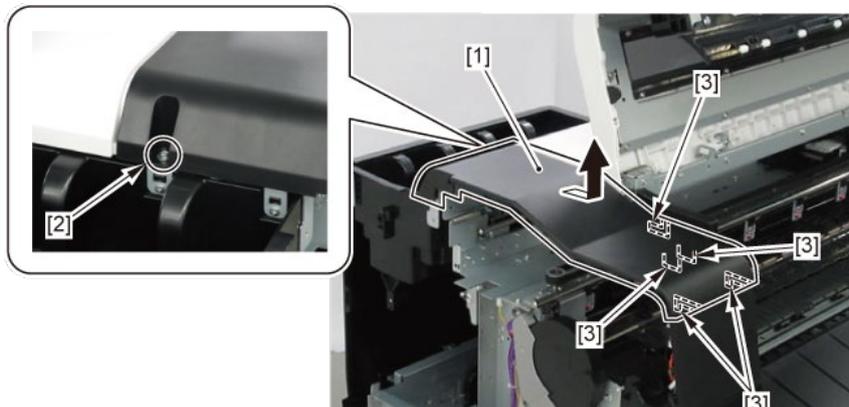


8. Open [1] the access cover.



9. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



10. Remove [1] a set of

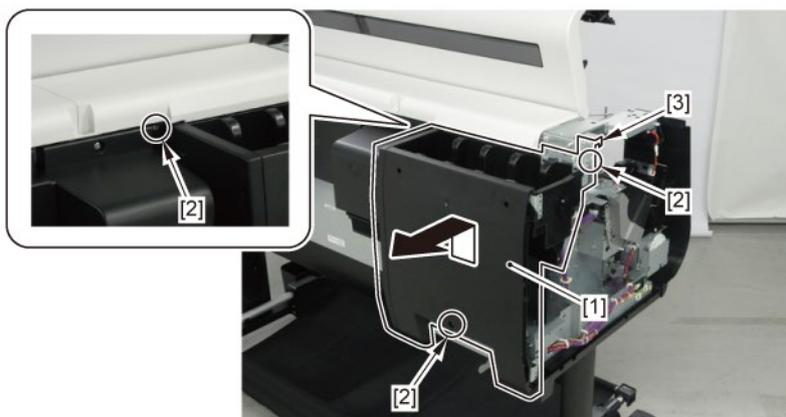
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-3100, TX-5310

10. Remove [1] INKTANK COVER UNIT, L.

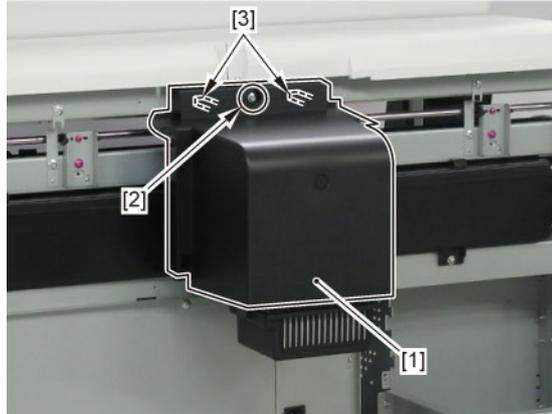
TX-3200, TX-5320

[2]	[3]
	
3 pcs	1 pc



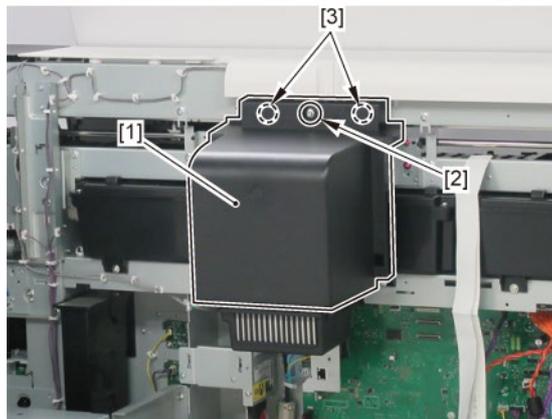
11. Remove [1] COVER, MIST FAN.

[2]	[3]
	
1 pc	2 pcs



12. Remove [1] COVER, MIST FAN.

[2]	[3]
	
1 pc	2 pcs

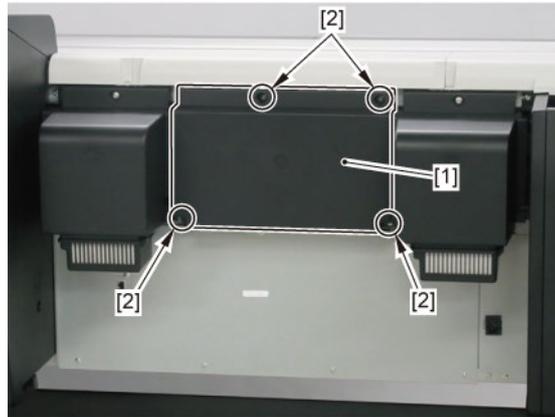


A (44" model)

1. Remove [1] COVER, BACK.

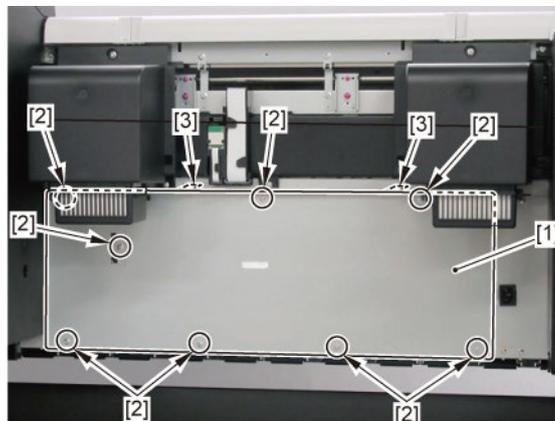
[2]

4 pcs



2. Remove [1] the plate.

[2]	[3]
	
8 pcs	2 pcs



3. Remove [1] WIRELESS LAN PCB UNIT.

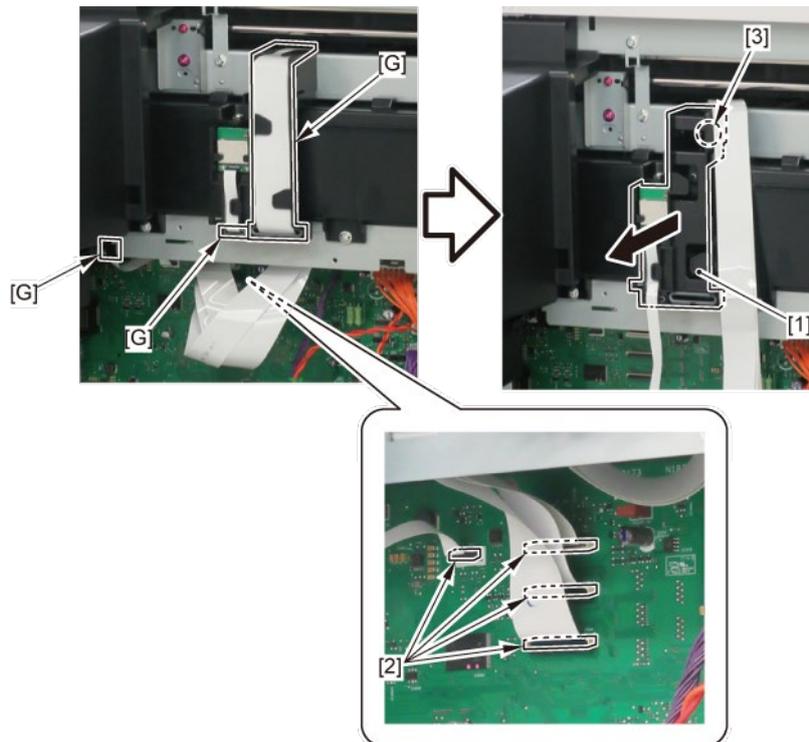
TX-4100, TX-5410

3. Remove [1] a set of

- FFC, WIRELESS LAN
- WIRELESS LAN BOARD ASS'Y).

TX-4200, TX-5420

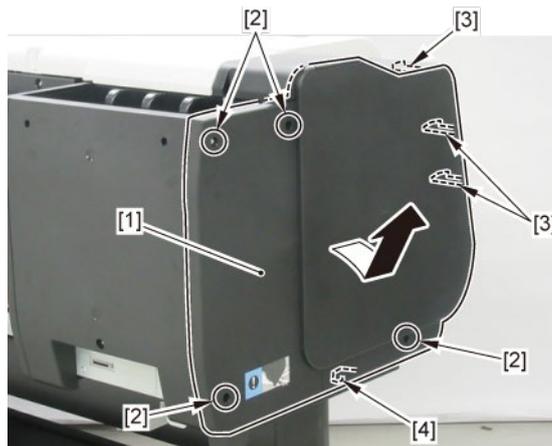
[2]	[3]	[G]
		
4 pcs	1 pc	3 pcs



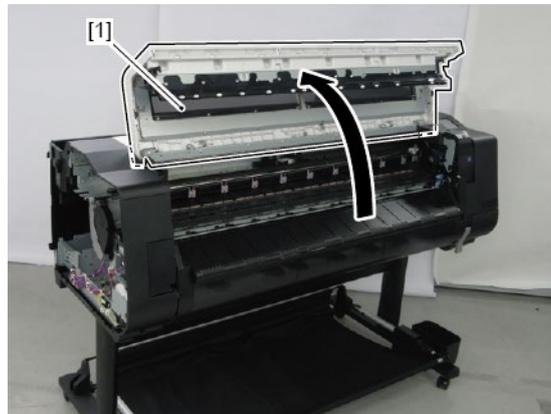
4. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

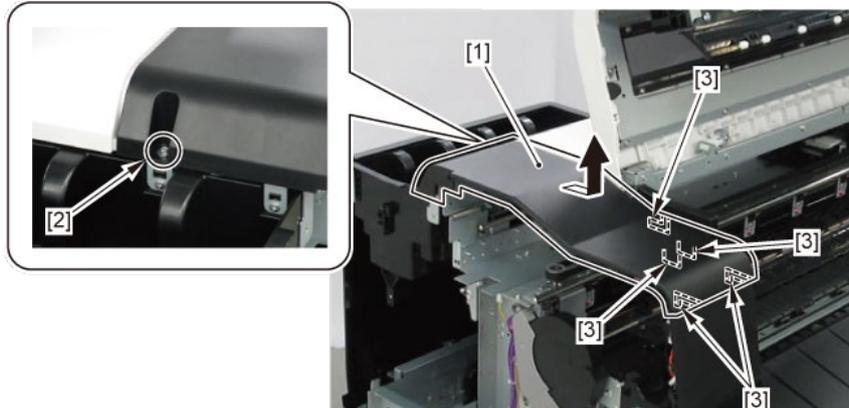


5. Open [1] the access cover.



6. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



7. Remove [1] a set of

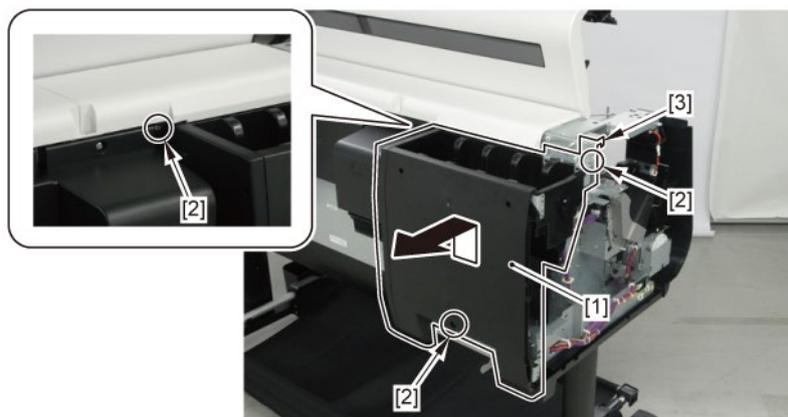
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-4100, TX-5410

7. Remove [1] INKTANK COVER UNIT, L.

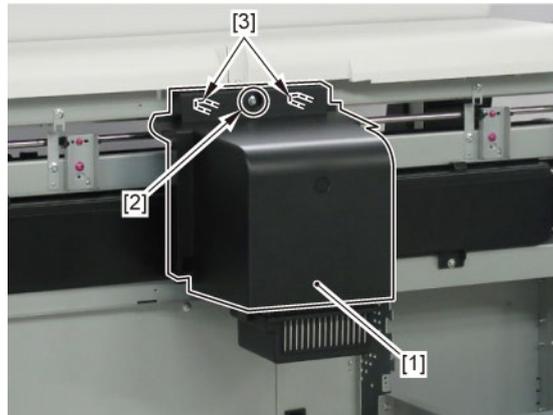
TX-4200, TX-5420

[2]	[3]
	
3 pcs	1 pc



8. Remove [1] COVER, MIST FAN.

[2]	[3]
	
1 pc	2 pcs

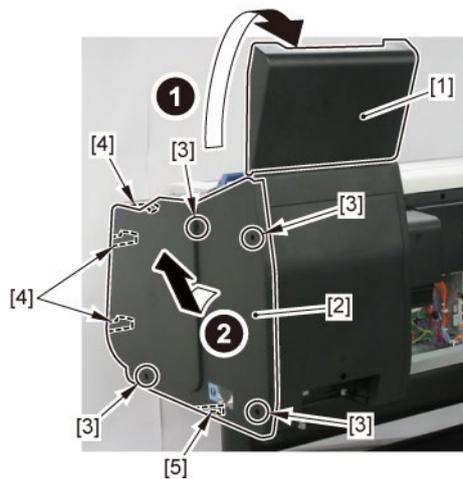


9. Open [1] the right ink tank cover.

10. Remove [2] a set of

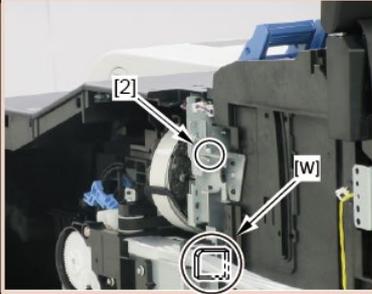
- COVER, SIDE R A
- COVER UNIT, SIDE R B
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



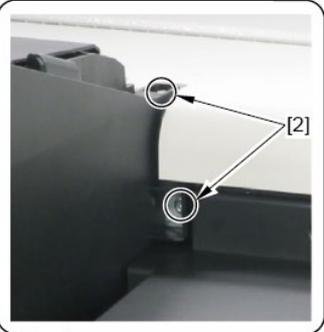
11. Open [1] the right ink unit.

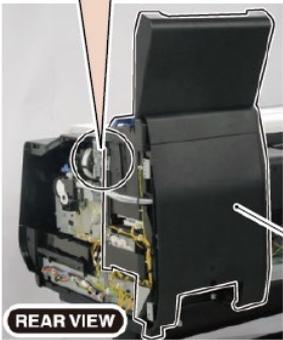
[2]	[W]
	
4 pcs	1 pc



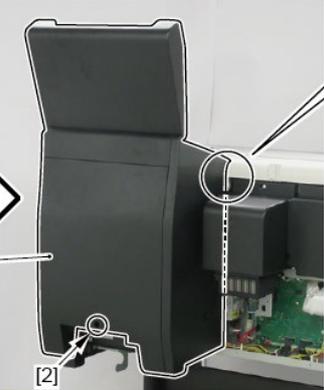
Before opening the unit:

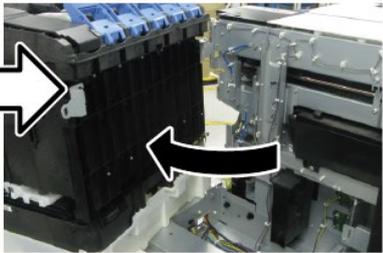
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





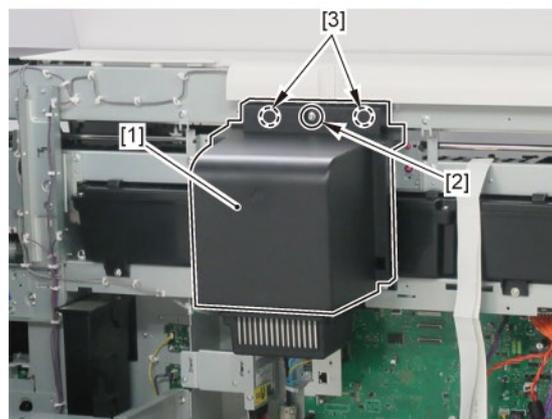
REAR VIEW





12. Remove [1] COVER, MIST FAN.

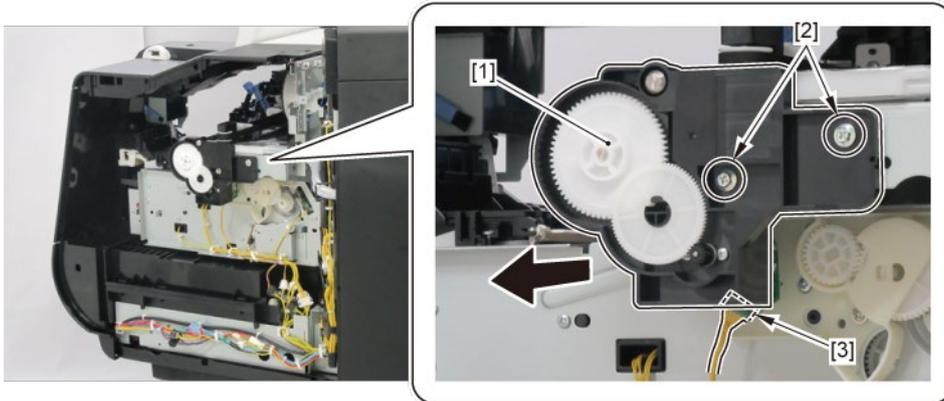
[2]	[3]
	
1 pc	2 pcs



B

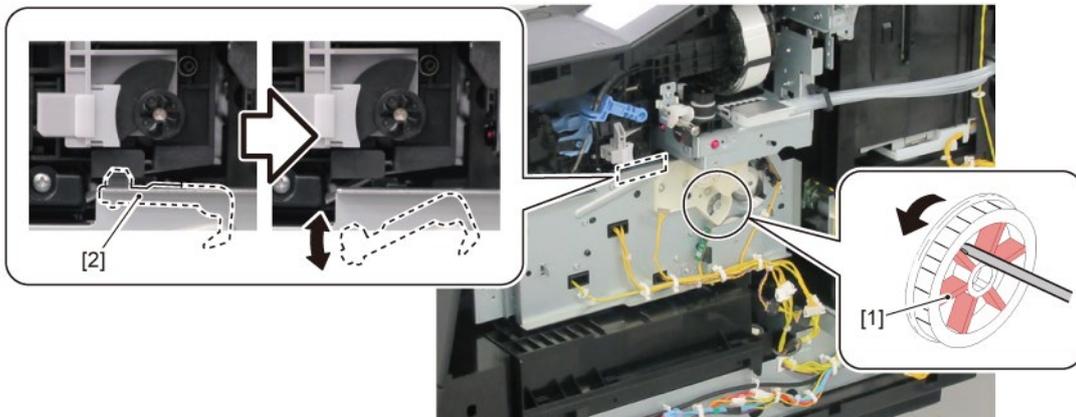
1. Remove all the parts of Group A.
2. Remove [1] LIFT UNIT.

[2]	[3]
	
2 pcs	1 pc



3. Unlock the carriage.

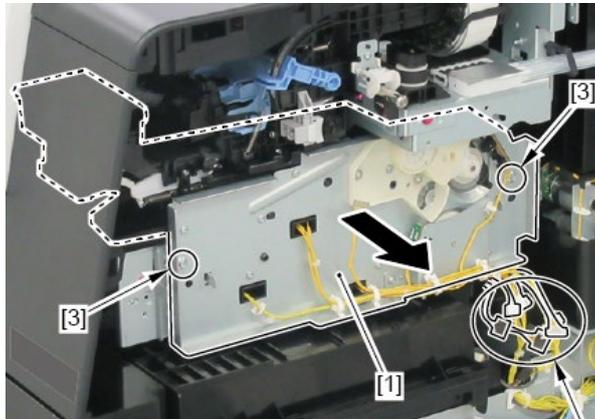
Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



4. Move the carriage unit to the left end (back position side).

5. Remove [1] PURGE UNIT.

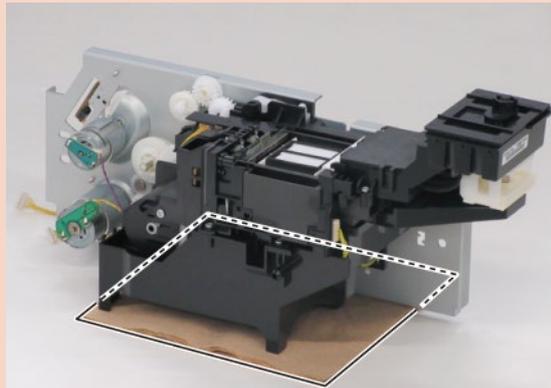
[2]	[3]
	
6 pcs	2 pcs



Notes when removing the unit:

There is an opening on the bottom of the PURGE UNIT. Place the unit on paper towel, etc.

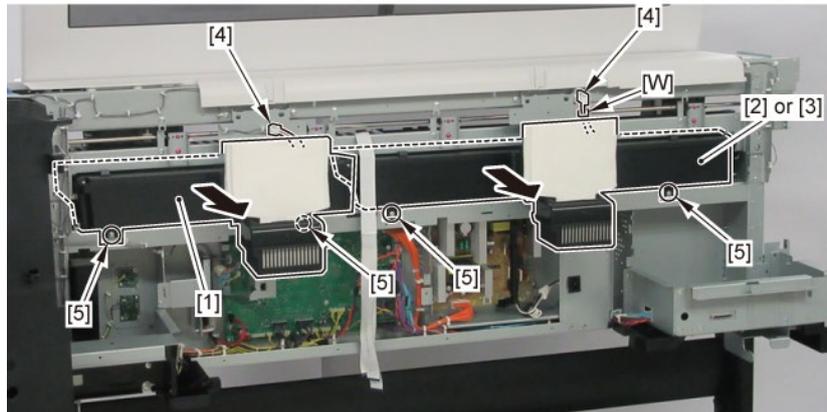
Point



6. Remove the [1] MIST FAN DUCT UNIT.

TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

	[1]	[2]	[3]	[4]	[5]	[W]
	MIST FAN DUCT UNIT 1	MIST FAN DUCT UNIT 2	MIST FAN DUCT UNIT 3			
24" model	-	remove	-	1 pc each	2 pcs each	-
36" model	remove	-	remove	1 pc each	2 pcs each	1 pc each
44" model	remove	remove	-	1 pc each	2 pcs each	1 pc each

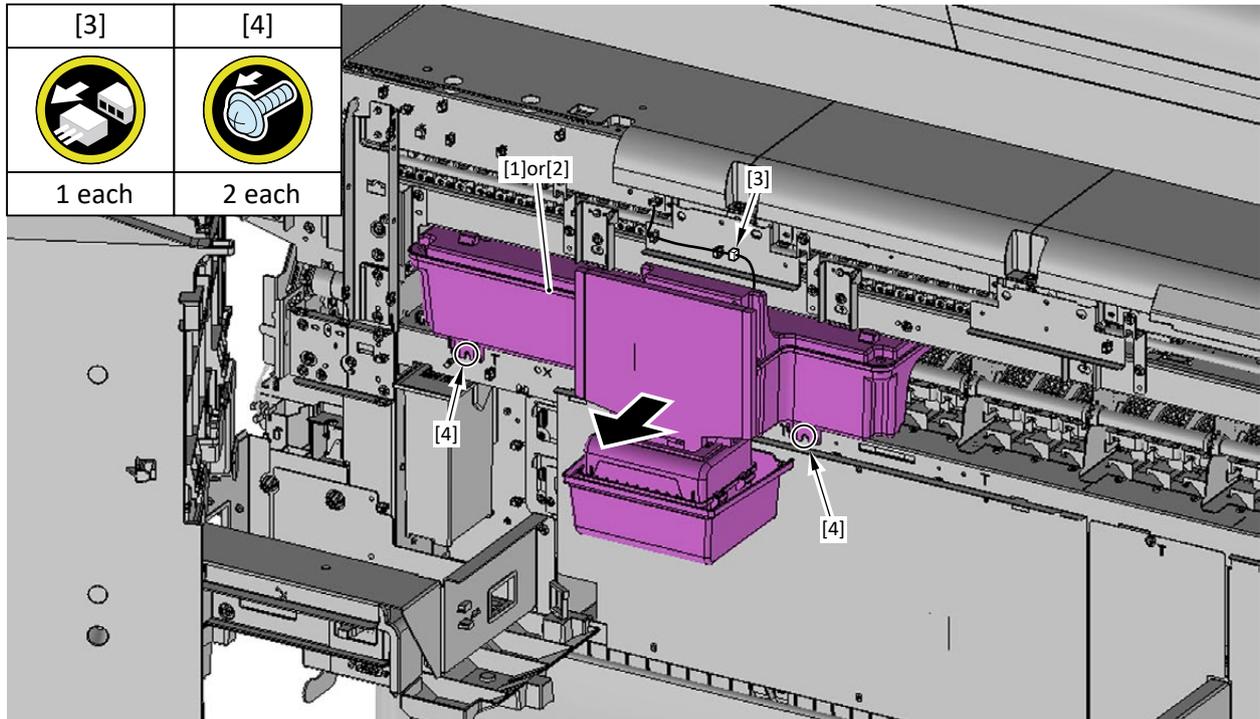


 <p>Point</p>	<p>Notes when replacing the MIST FAN DUCT UNIT:</p> <ul style="list-style-type: none"> • Be sure to replace MIST FAN DUCT UNIT 1, MIST FAN DUCT UNIT 2, and MIST FAN DUCT UNIT 3 at the same time.
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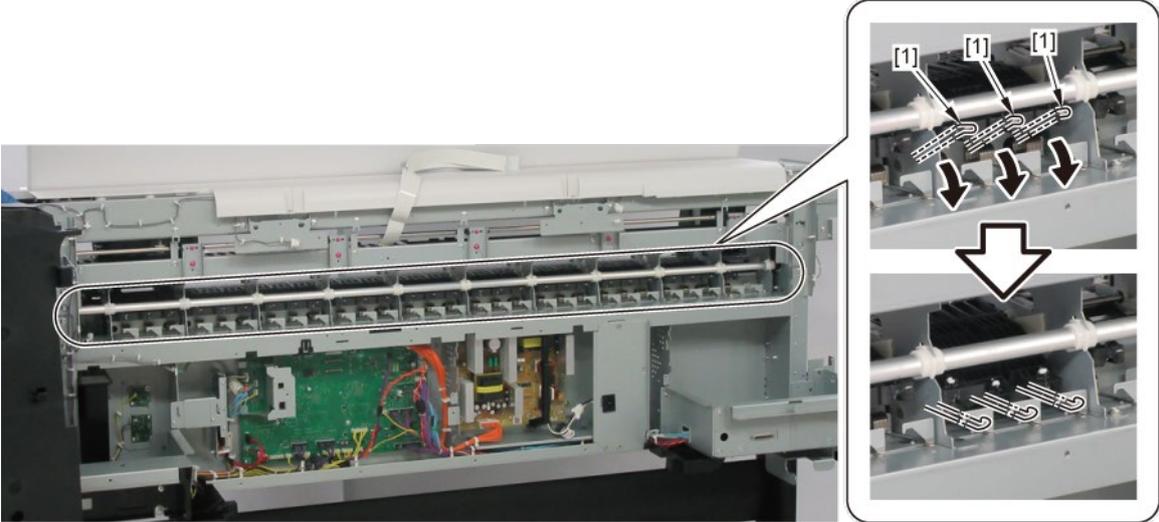
6. Remove the [1] MIST FAN DUCT UNIT.

TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

	[1]	[2]
	MIST FAN DUCT UNIT 1	MIST FAN DUCT UNIT 2
24" model	-	remove
36" model	remove	-
44" model	remove	remove

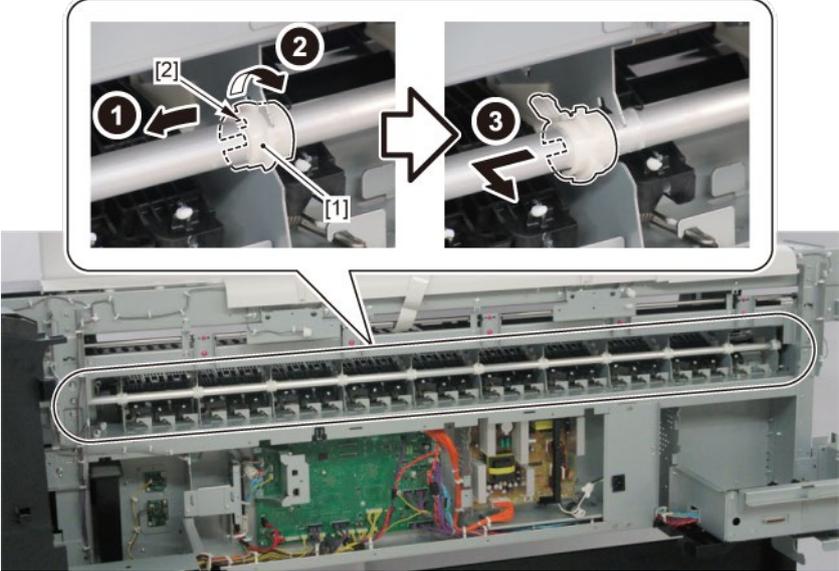


7. Release [1] the pinch roller springs.



8. Remove 11 pieces of [1] BUSHING, PRESSURE RELEASE.
 (seven pieces in 24" model, nine pieces in 36" model)

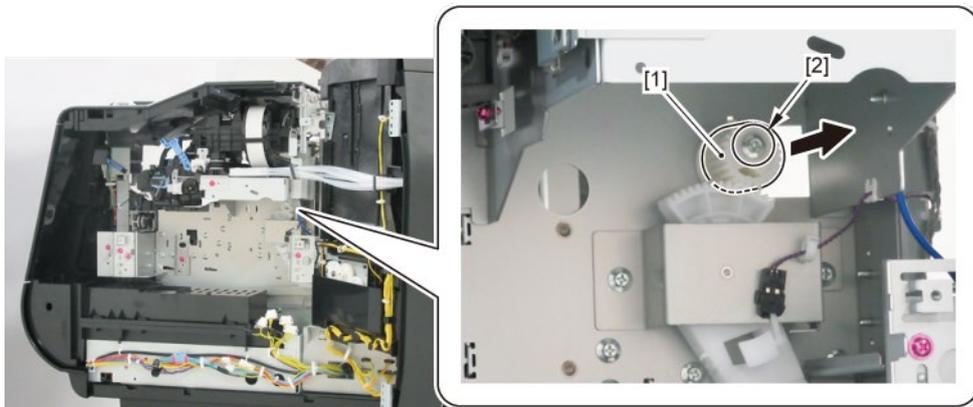
[2]
1 pc



9. Remove [1] GEAR, PRESSURE RELEASE.

[2]

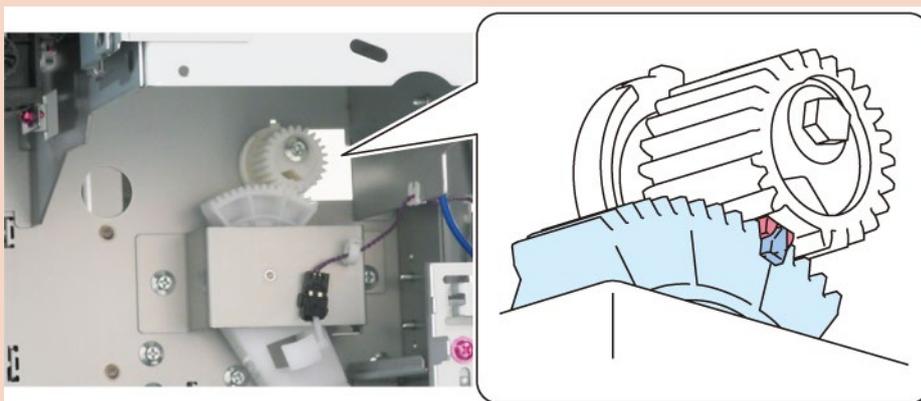
1 pc



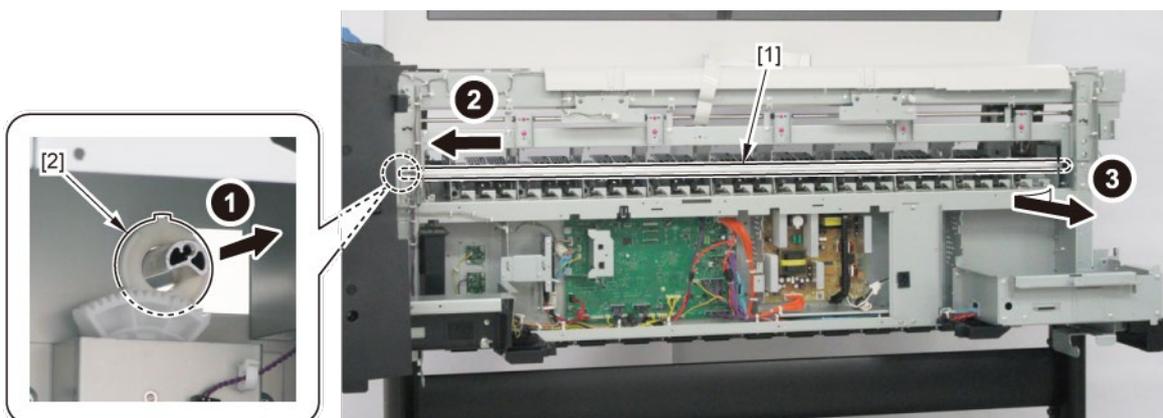
Notes when assembling the unit:

Adjust the phase of gears.

Point



10. Remove [1] SHAFT PRESSURE RELEASE UNIT and [2] BUSHING, PR RELEASE.



Points of disassembly:

Pulling out SHAFT PRESSURE RELEASE UNIT to the right side without removing GEAR, PRESSURE RELEASE is possible when there is enough room at the right side of the printer.

Point

Notes when the SHAFT PRESSURE RELEASE UNIT is replaced:

Apply grease to the portion specified below.

- [1]: FLOIL G-31KB, 18 to 36 mg

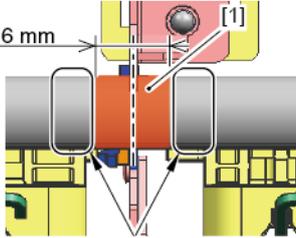
Apply grease to the entire round part of the shaft.

[1]

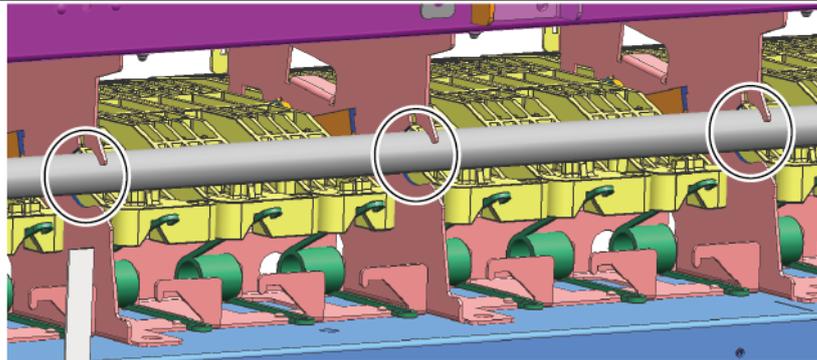


Apply grease to approx. 16 mm-wide area with the PLATE PR SUPPORT edge at the center.

16 mm



Grease can be extended to these areas.

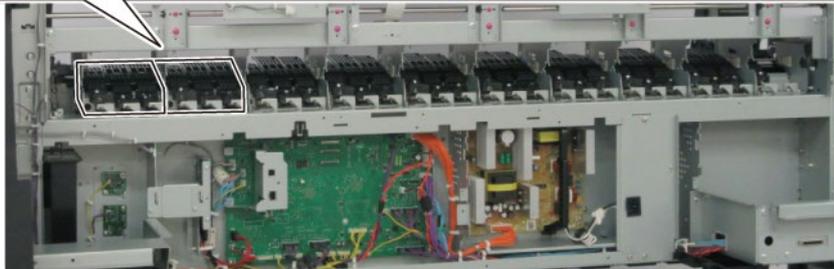
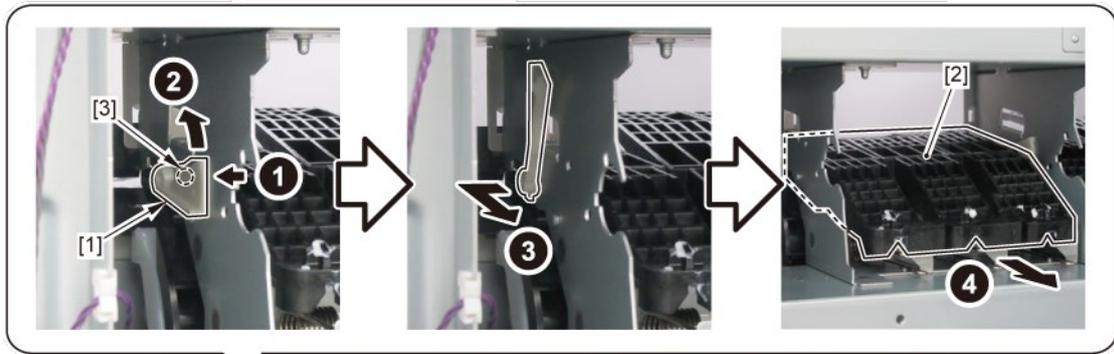
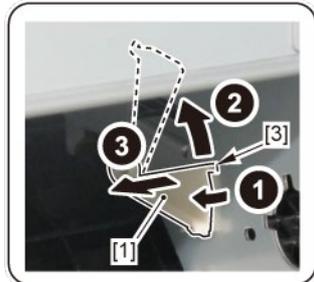


C

1. Remove all the parts of Groups A and B.
2. Remove two pieces each of [1] BUSH, ARM ROTARY SHAFT and [2] PINCH ROLLER UNIT.

[3]

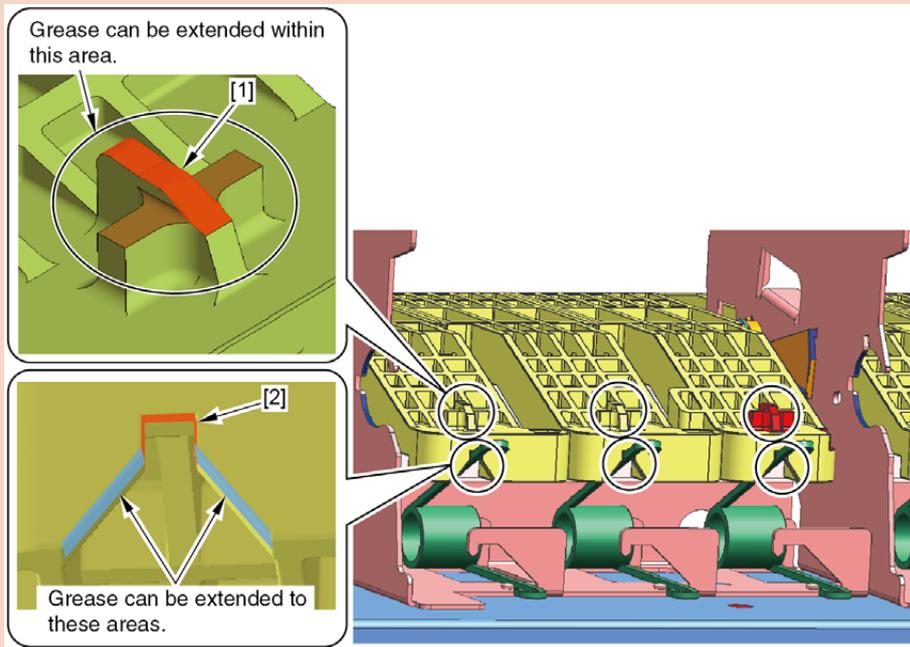
1 pc each



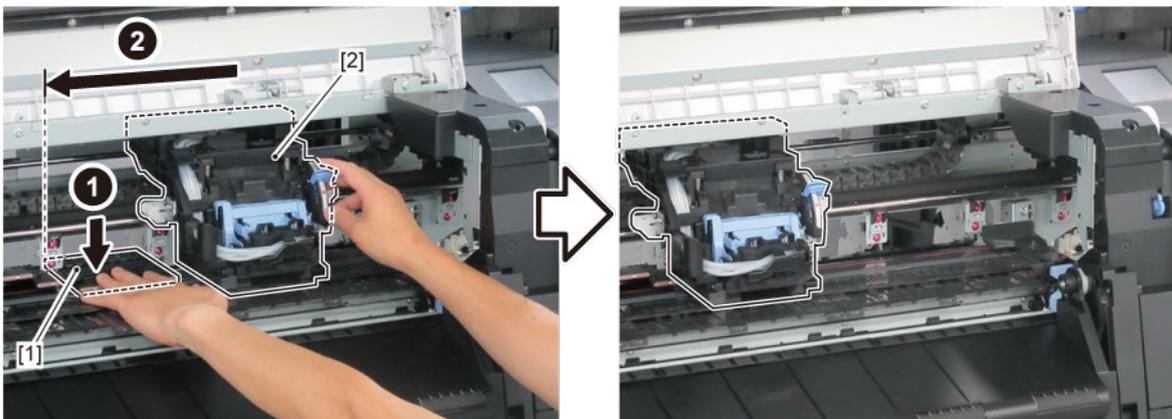
Notes when the PINCH ROLLER UNIT or PINCH ROLLER UNIT L is replaced:

Apply grease to the portions specified below.

- [1]: FLOIL G-31KB, 9 to 18 mg
- [2]: FLOIL G-31KB, 9 to 18 mg

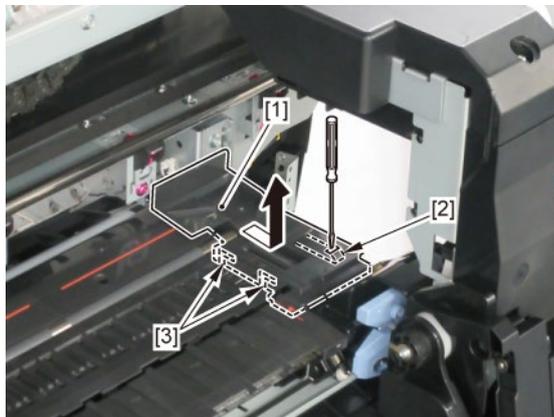


3. With pressing [1] the pinch roller unit, move [2] CARRIAGE UNIT to the arrowed direction.



4. Remove [2] PLATEN, INK PRE EJECTION.

[2]	[3]
	
1 pc	2 pcs



Notes when removing the unit:

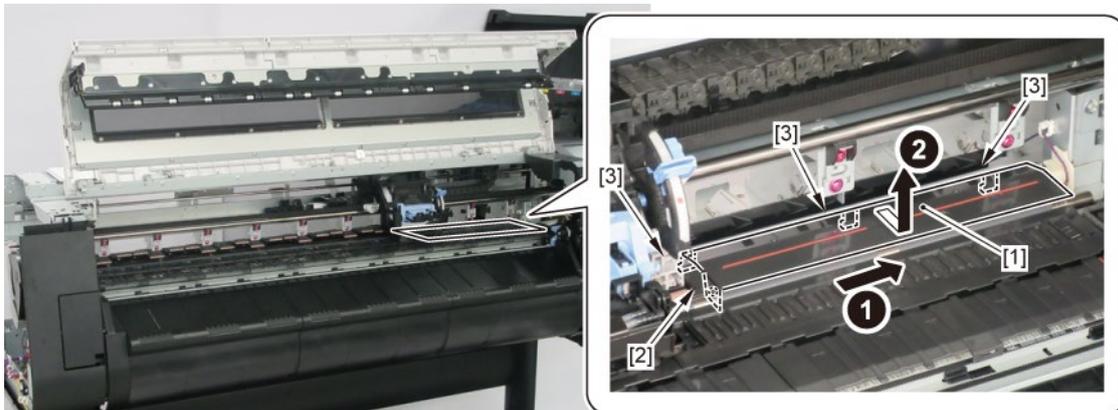
Place the PLATEN, INK PRE EJECTION on paper towel, etc.

Point



5. Remove [1] PLATEN, REAR.

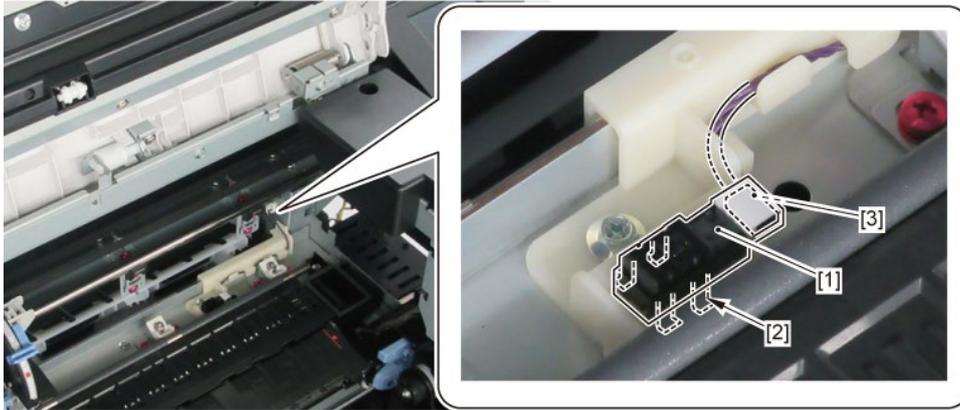
[2]	[3]
	
1 pc	3 pcs



C-1

6. Remove [1] PAPER ENTRY SENSOR.

[2]	[3]
	
4 pcs	1 pc



Notes when removing the unit:

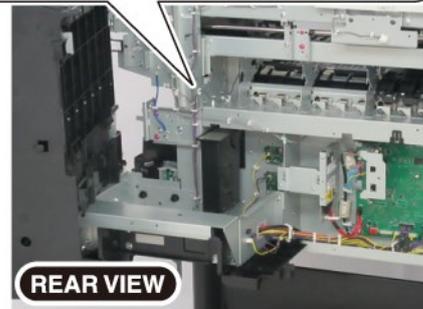
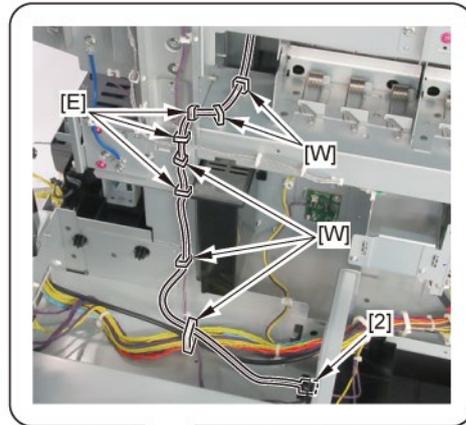
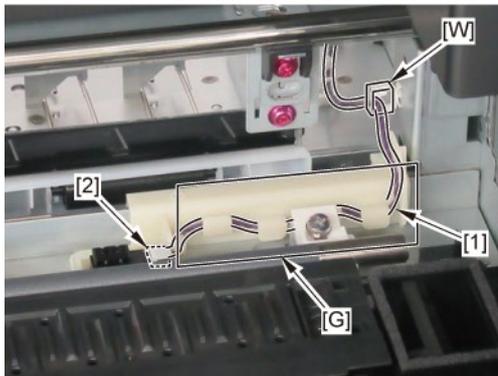


When removing PAPER ENTRY SENSOR as a unit, the screwdriver hits the carriage shaft, and it will be inserted slantwise. Therefore, remove the single SENSOR with your hand without removing screws.

C-2

6. Disconnect [1] HARNESS ASS'Y, LFPE SNS.

[2]	[W]	[E]	[G]
			
2 pcs	6 pcs	3 pcs	1 pc



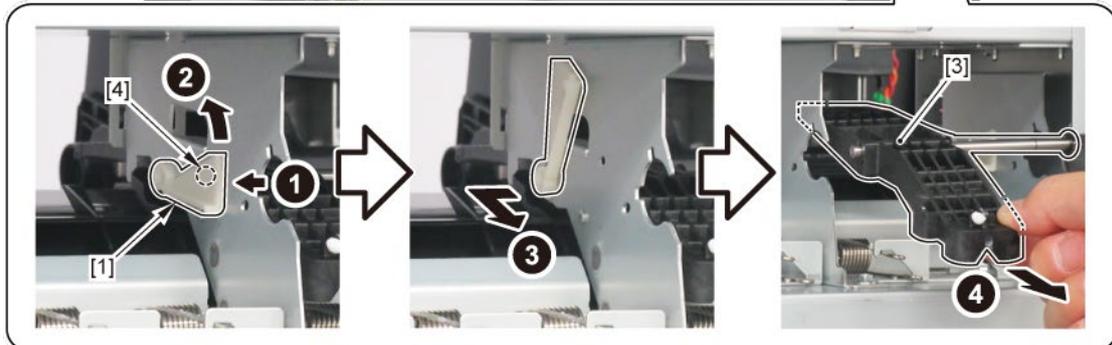
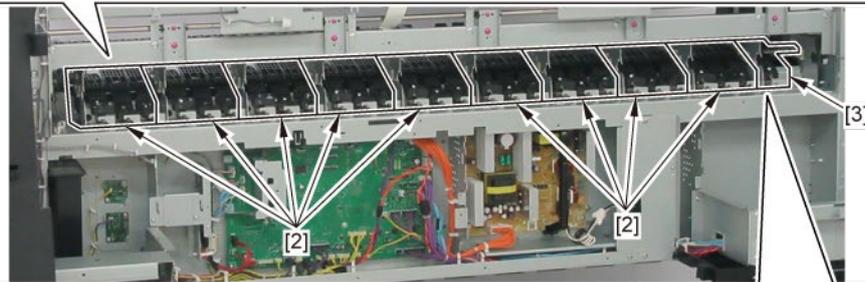
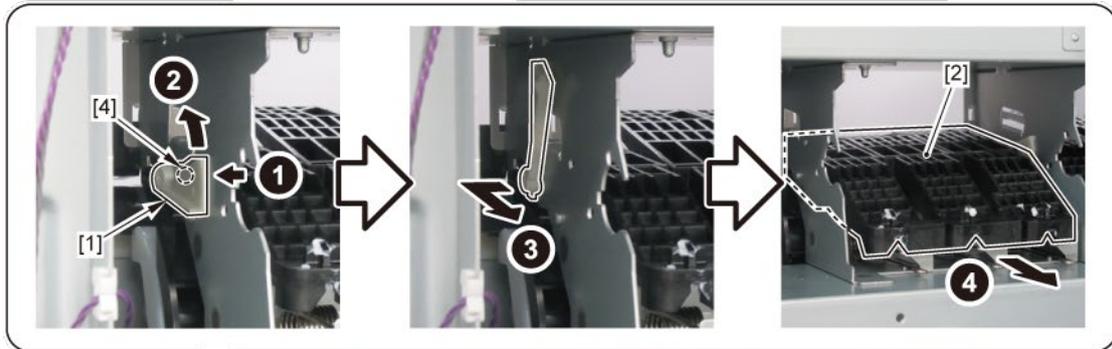
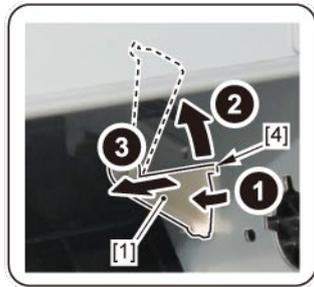
D

1. Remove all the parts of Groups A and B.
2. Remove [1] BUSH, ARM ROTARY SHAFT, [2] PINCH ROLLER UNIT, and [3] PINCH ROLLER UNIT L.

	[1]	[2]	[3]
	BUSH, ARM ROTARY SHAFT	PINCH ROLLER UNIT	PINCH ROLLER UNIT L
24" model	6	5	1
36" model	8	7	1
44" model	10	9	1

[4]

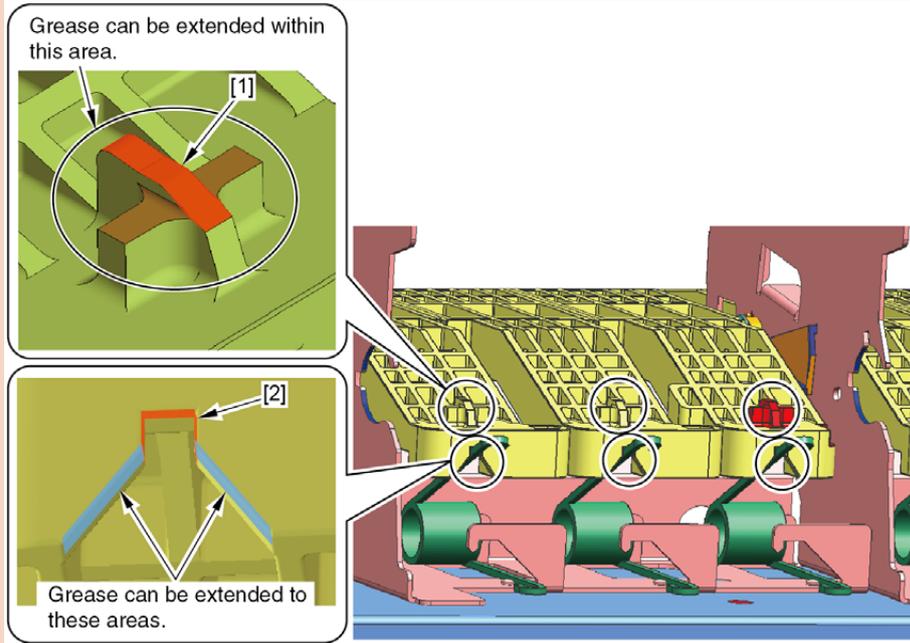
1 pc each



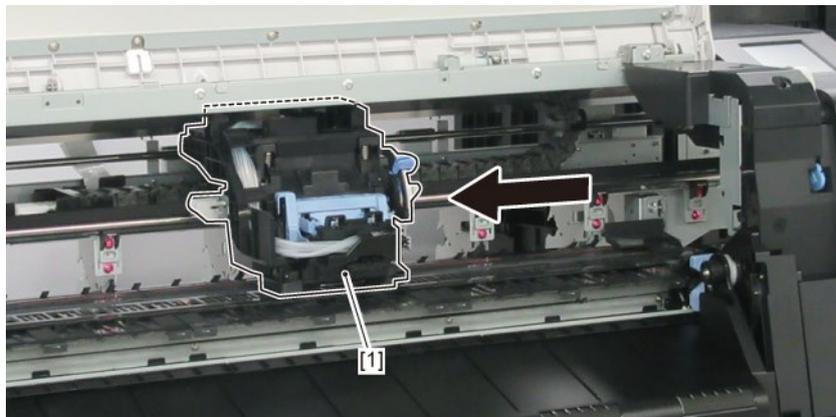
Notes when the PINCH ROLLER UNIT or PINCH ROLLER UNIT L is replaced:

Apply grease to the portions specified below.

- [1]: FLOIL G-31KB, 9 to 18 mg
- [2]: FLOIL G-31KB, 9 to 18 mg

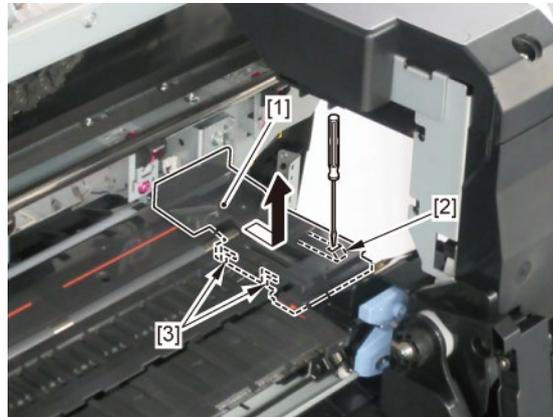


3. Move [1] CARRIAGE UNIT to the arrowed direction.



4. Remove [1] PLATEN, INK PRE EJECTION.

[2]	[3]
	
1 pc	2 pcs



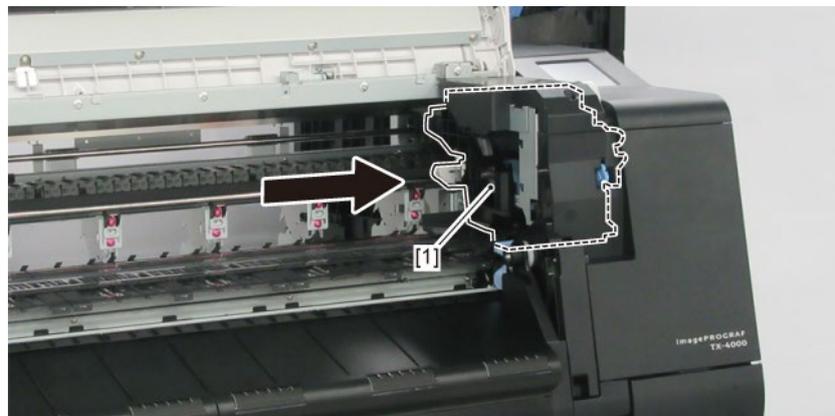
Notes when removing the unit:

Place the PLATEN, INK PRE EJECTION on paper towel, etc.

Point



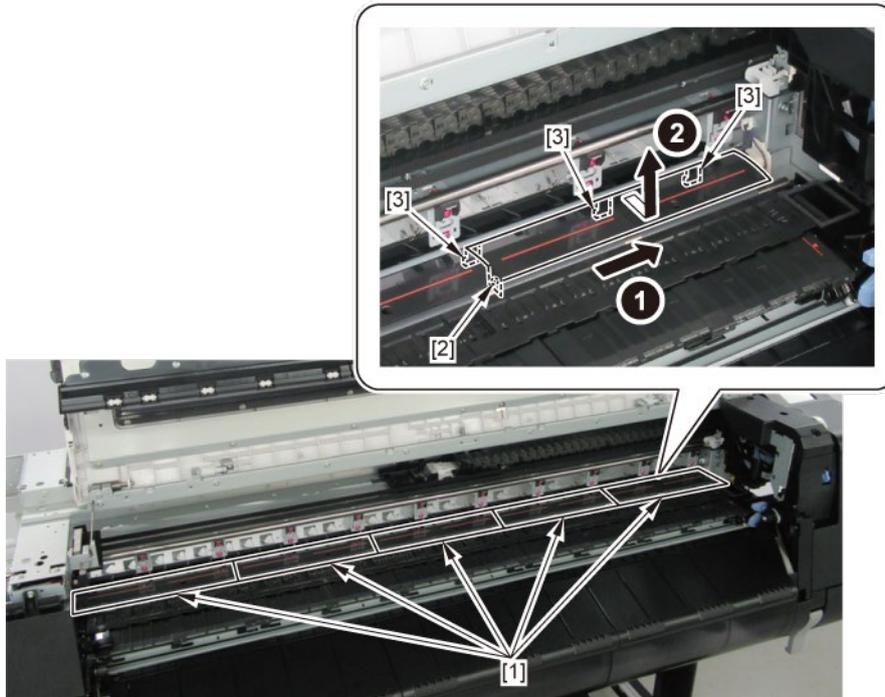
5. Move [1] CARRIAGE UNIT to the Home Position.



6. (24" model, 44" model)

Remove five pieces of [1] PLATEN, REAR. (three pieces in 24" model)

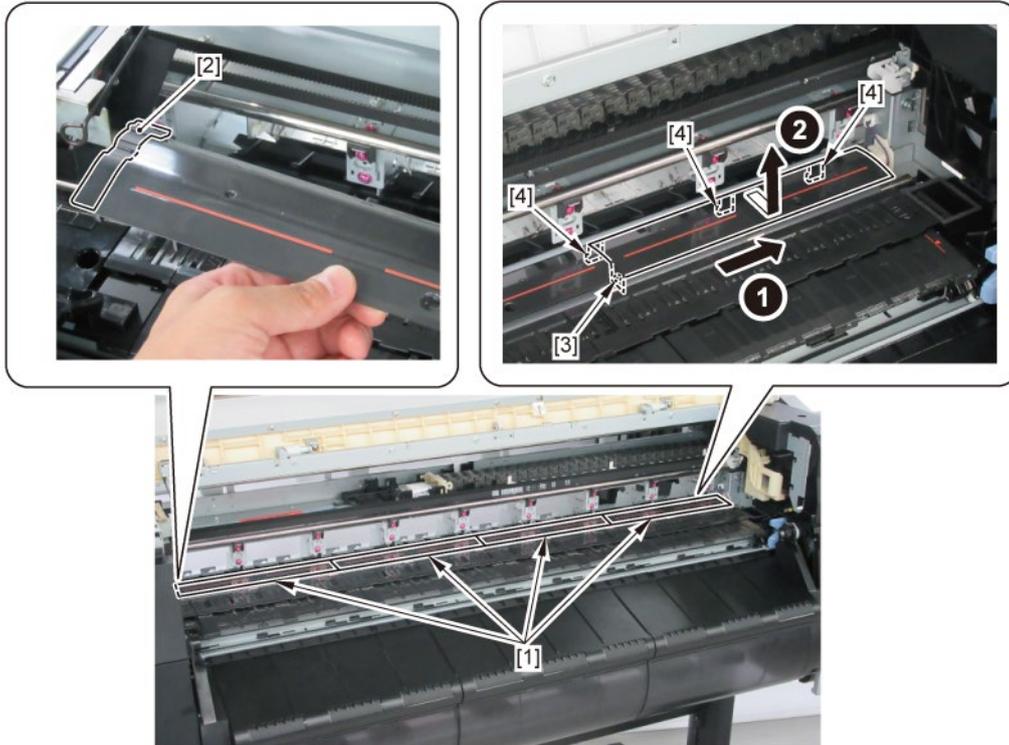
[2]	[3]
	
1 pc each	3 pcs each



7. (36" model)

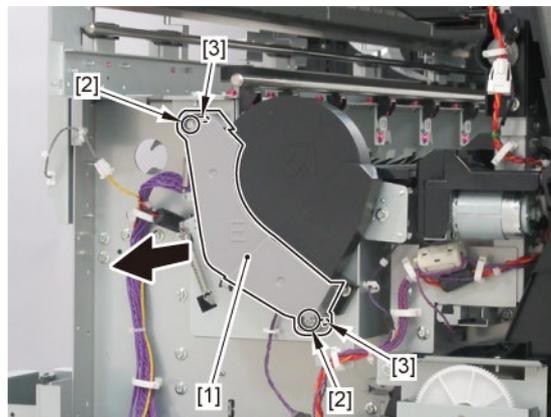
Remove four pieces of [1] PLATEN, REAR and [2] PLATEN, REAR COLLAR.

[3]	[4]
	
1 pc each	3 pcs each



8. Remove [1] COVER, PF ENCODER OUTER.

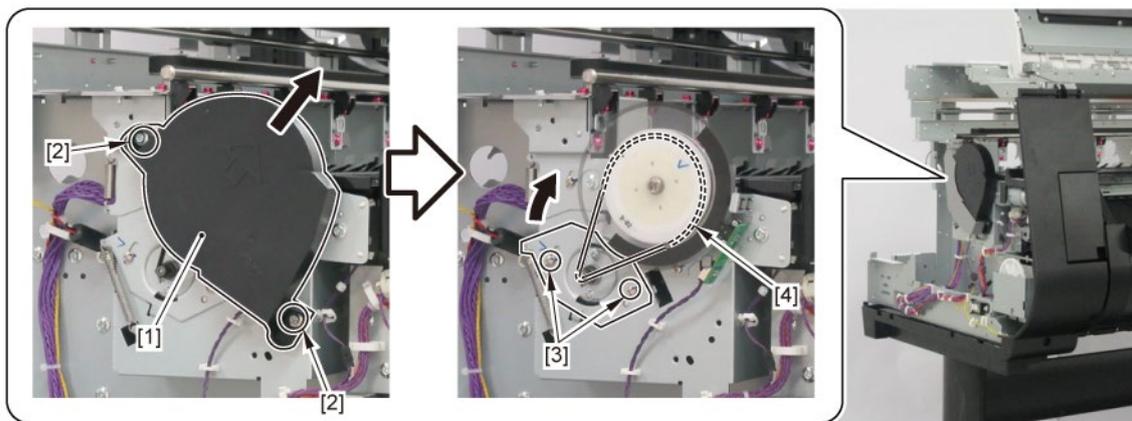
[2]	[3]
	
2 pcs	2 pcs



9. Remove [1] CODE WHEEL COVER UNIT.



10. Remove [4] BELT, PAPER TRANSPORT.

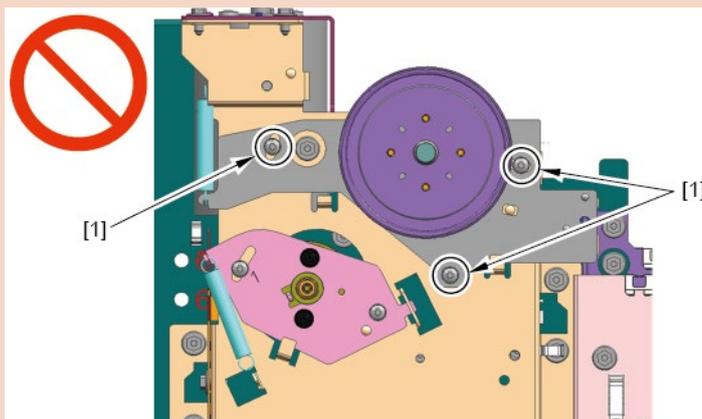


11. Remove [1] PAPER FEED ROLLER UNIT.



Notes when removing the unit:

DO NOT remove [1] these screws.

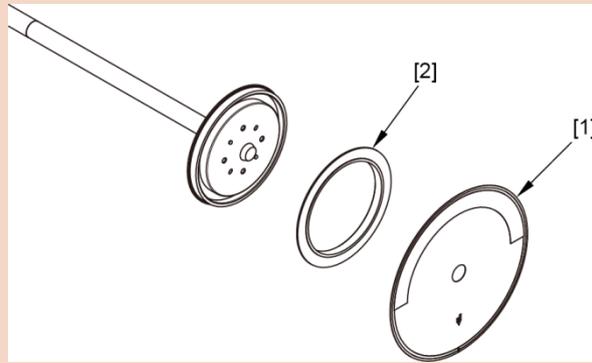


Notes when replacing the PAPER FEED ROLLER UNIT:

From the removed PAPER FEED ROLLER UNIT, separate [1] FILM, TIMING SLIT DISK and [2] FLANGE, PULLEY.

- Replace [1] FILM, TIMING SLIT DISK at the same time when the PAPER FEED ROLLER UNIT is replaced.
- Attach the removed [2] FLANGE, PULLEY to the new PAPER FEED ROLLER UNIT.

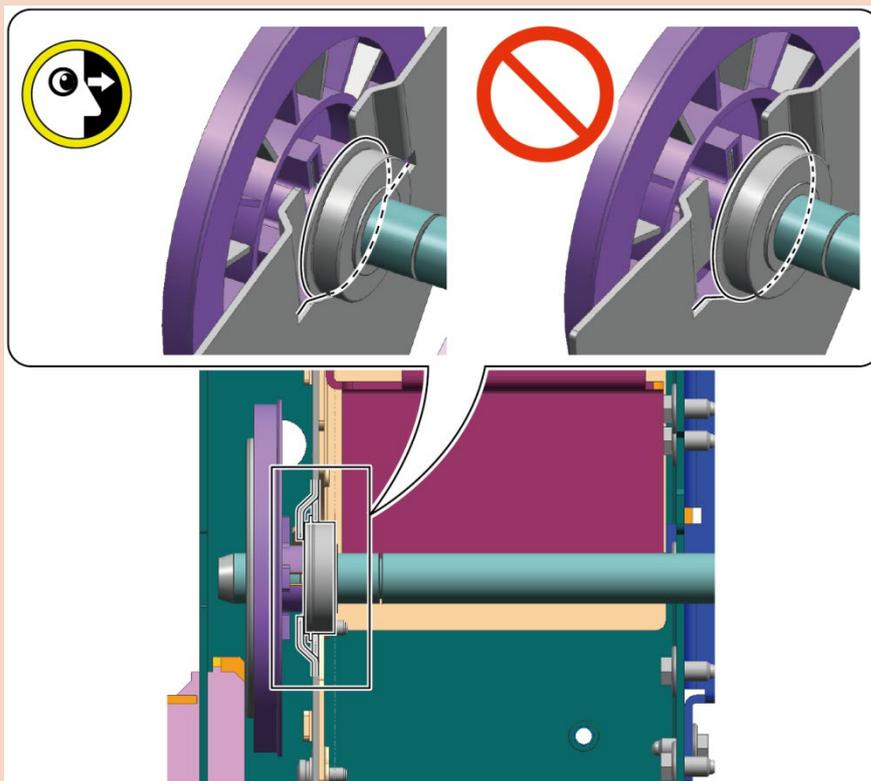
Point



Notes when assembling the unit:

Confirm that the PAPER FEED ROLLER UNIT bearing securely fits in place.

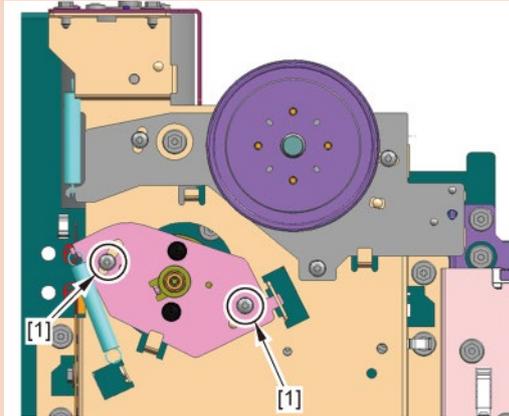
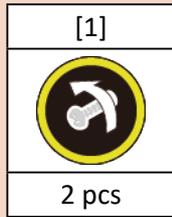
Point



The PAPER FEED ROLLER UNIT needs to be adjusted after it is attached.

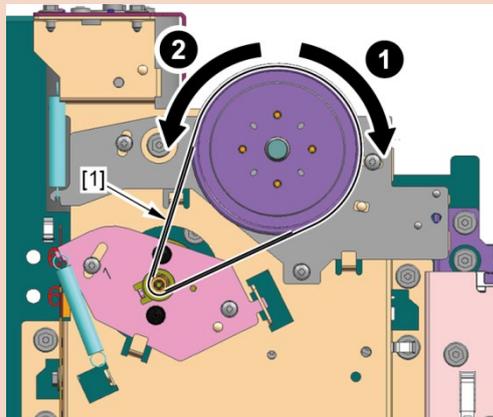
Perform the following when the unit is attached:

1. Confirm that the PINCH ROLLER UNIT applies pressure to the PAPER FEED ROLLER UNIT.



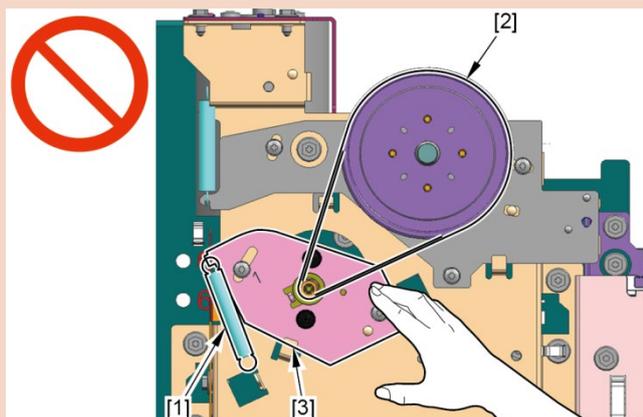
2. Attach [1] BELT, PAPER TRANSPORT.

Turn the pulley clockwise and counterclockwise one time each to confirm that the belt does not come off and it is flat and straight on the pulley.

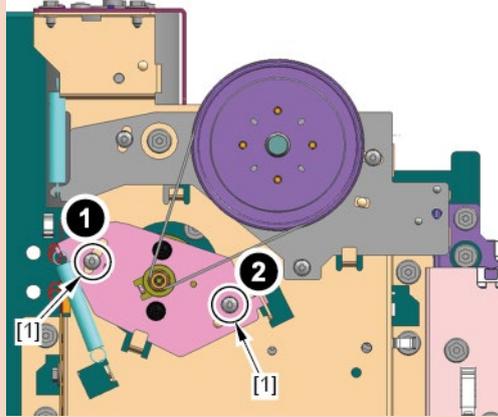


Caution:

DO NOT touch [1] SPRING, TENSION, [2] BELT, PAPER TRANSPORT, and [3] PAPER FEED MOTOR UNIT until after the screws are tightened.



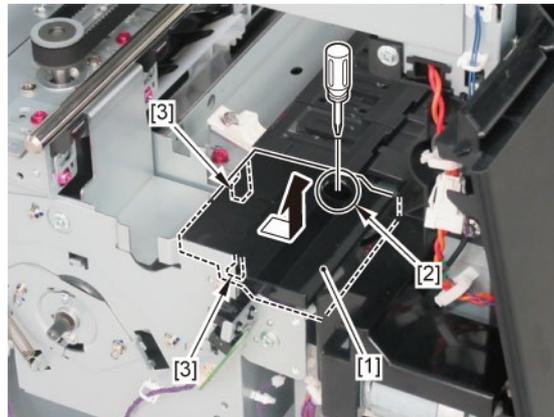
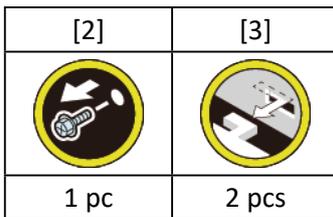
3. Tighten [1] two screws in the order of numbers.



4. Attach the FLANGE, PULLEY.

5. Attach the FILM, TIMING SLIT DISK.

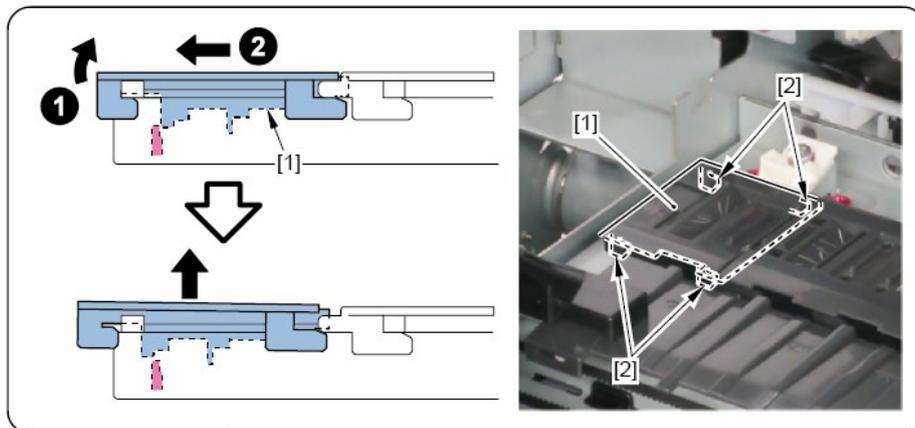
12. Remove [1] AWAY PLATEN.



13. Remove [1] PLATEN UNIT, TOP AWAY.

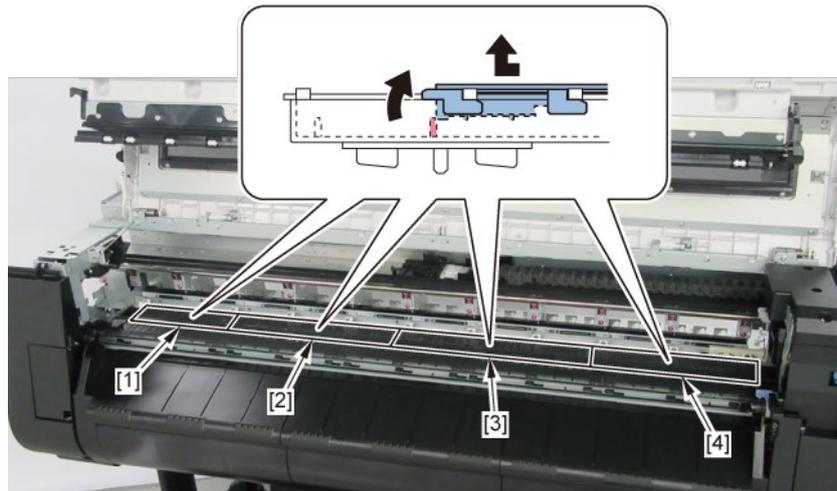
[2]

4 pcs



14. Remove [1] PLATEN UNIT, TOP D, [2] PLATEN UNIT, TOP C, [3] PLATEN UNIT, TOP B, and [4] PLATEN UNIT, TOP A.

	PLATEN UNIT, TOP			
	D [1]	C [2]	B [3]	A [4]
				
12 pcs	16 pcs	14 pcs	12 pcs	
24" model	-	-	release	release
36" model	-	release	release	release
44" model	release	release	release	release

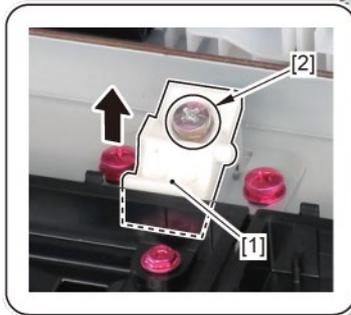


15. Remove ten pieces of [1] HOLDER, PAPER FEED ROLLER.

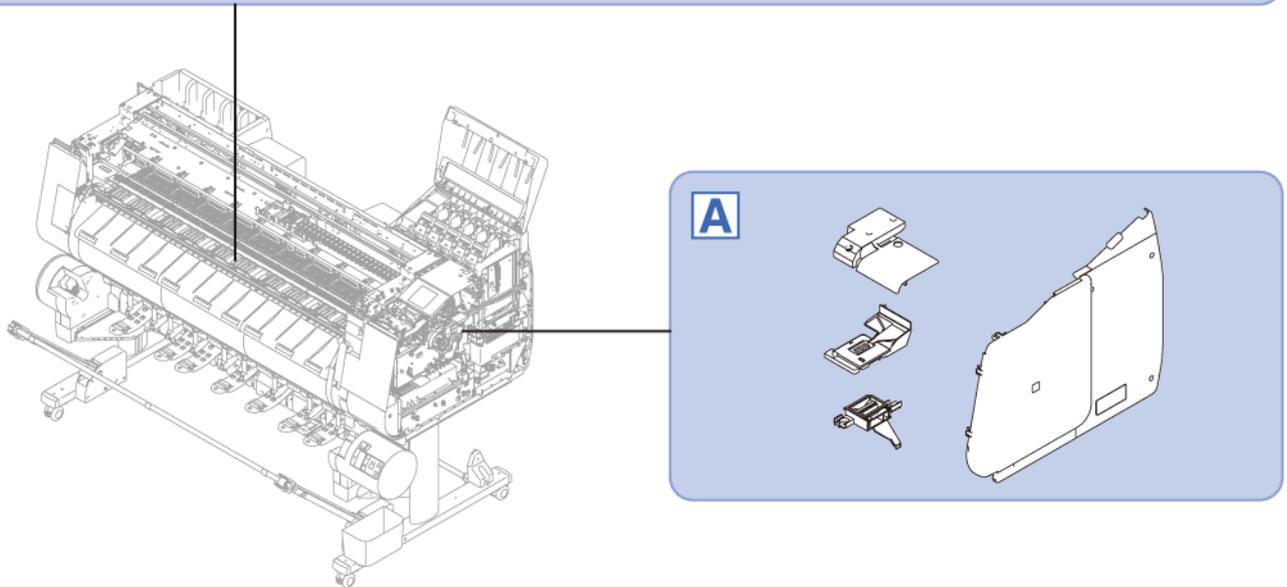
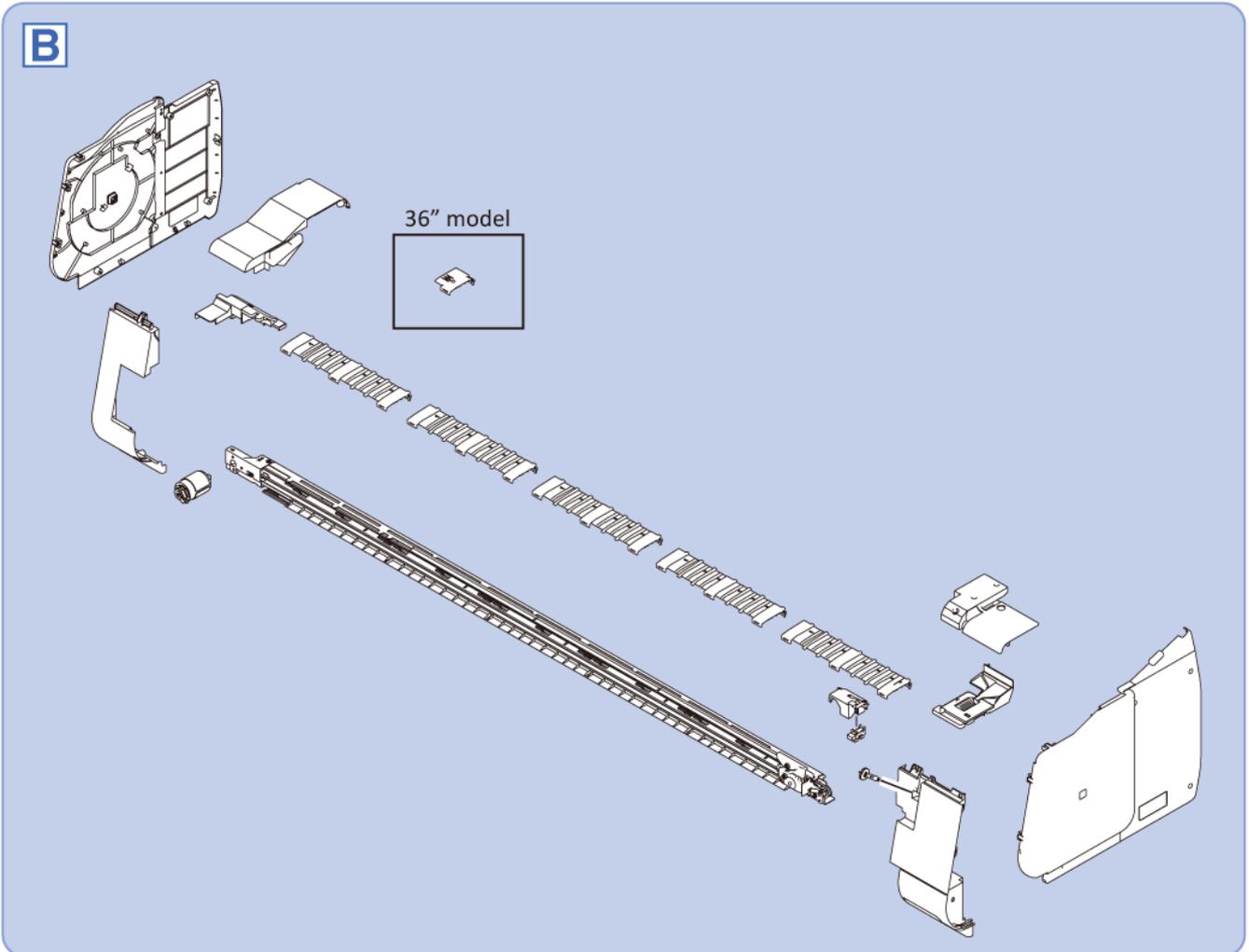
(six pieces in 24" model, nine pieces in 36" model)

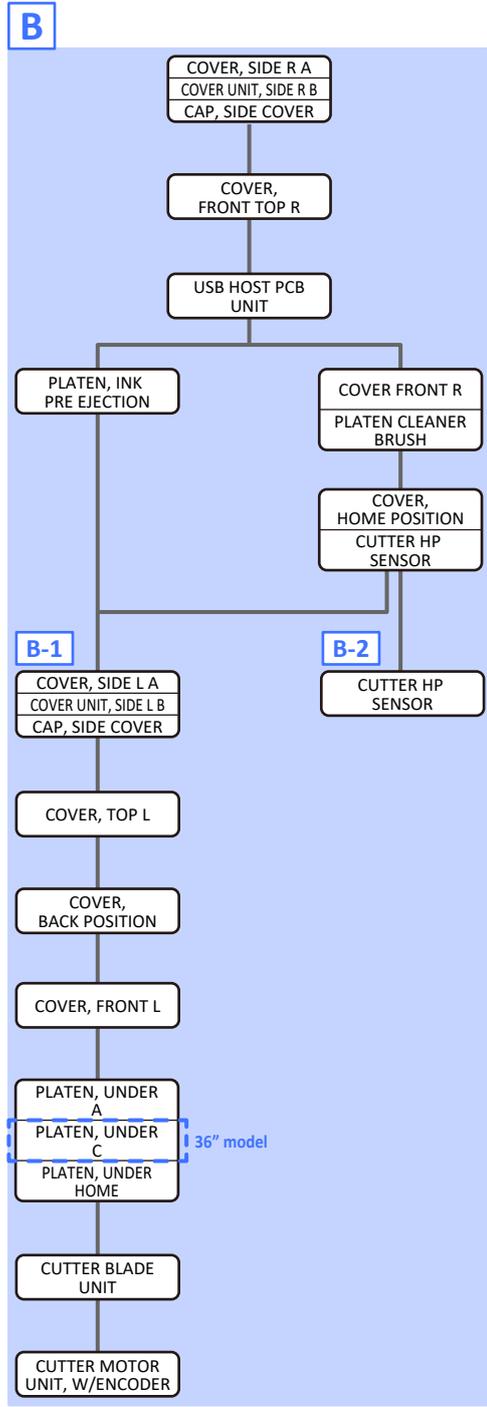
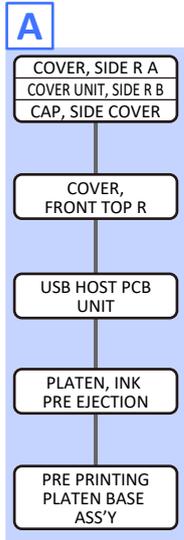
[2]

1 pc each



14. Cutter Blade Unit

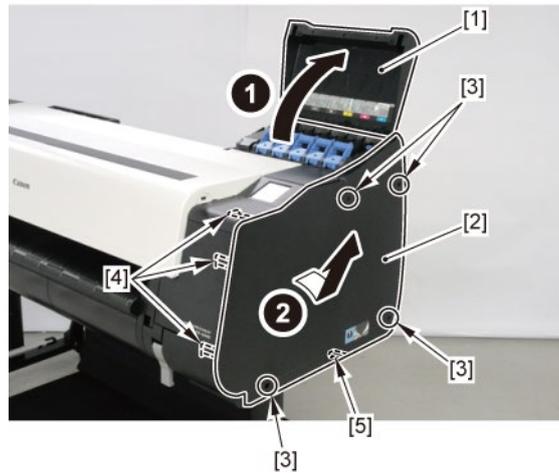




A

1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

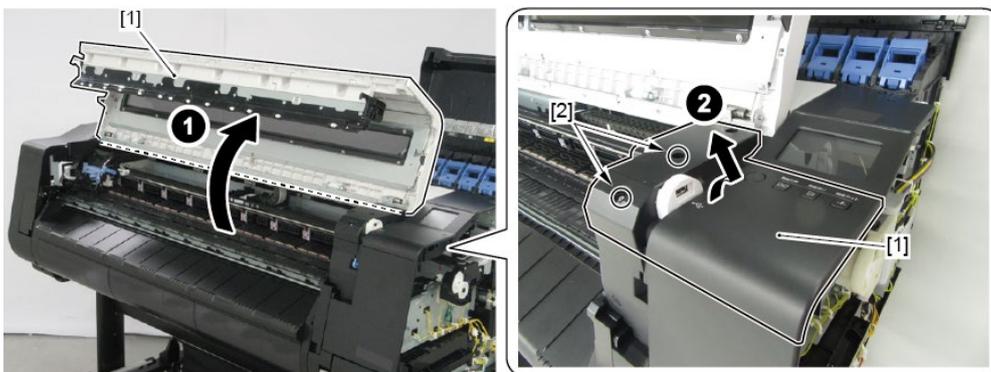
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



3. Open [1] the access cover.
4. Remove [2] COVER, FRONT TOP R.

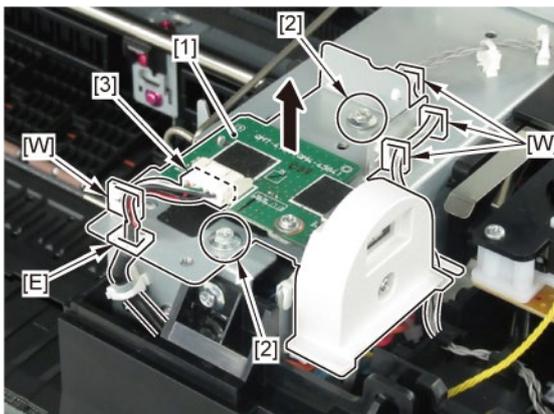
[3]

2 pcs



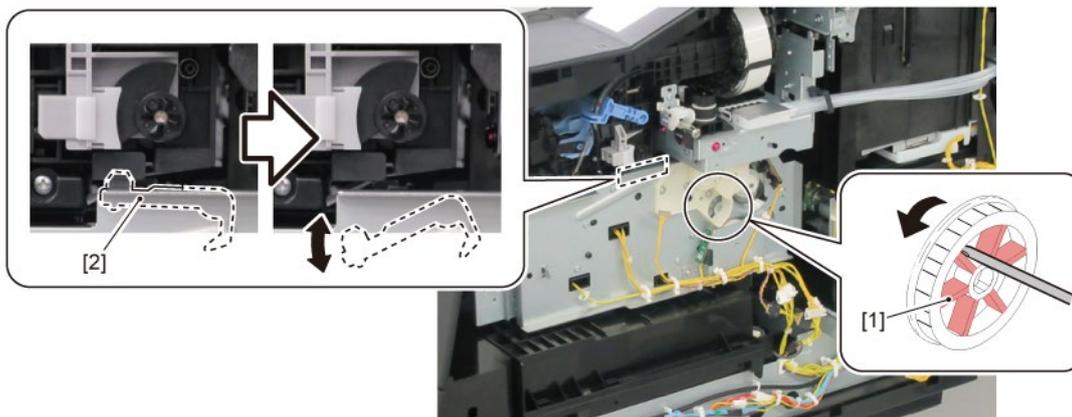
5. Remove [1] the plate (with the USB HOST PCB UNIT).

[2]	[3]	[W]	[E]
2 pcs	1 pc	4 pcs	1 pc



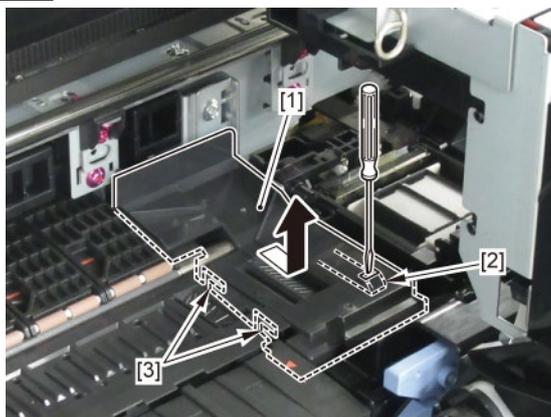
6. Unlock the carriage.

Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



7. Remove [1] PLATEN, INK PRE EJECTION.

[2]	[3]
1 pc	2 pcs



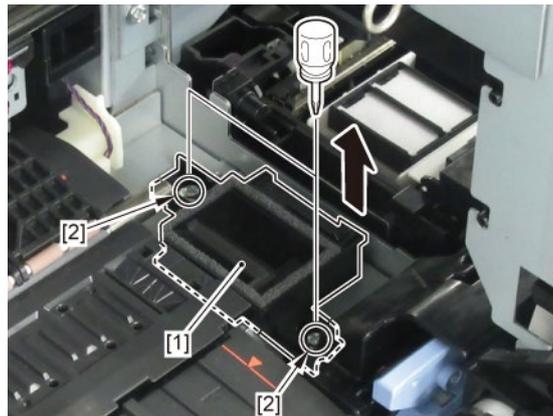
Notes when removing the unit:

Place the PLATEN, INK PRE EJECTION on paper towel, etc.



8. Remove [1] PRE PRINTING PLATEN BASE ASS'Y.

[2]
2 pcs



Notes when removing the unit:

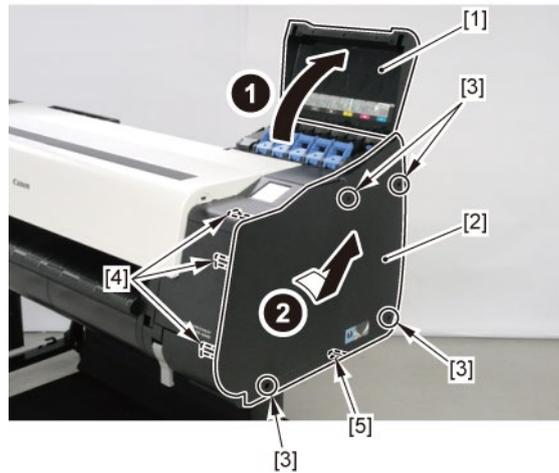
Place the PRE PRINTING PLATEN BASE ASS'Y on paper towel, etc.



B

1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

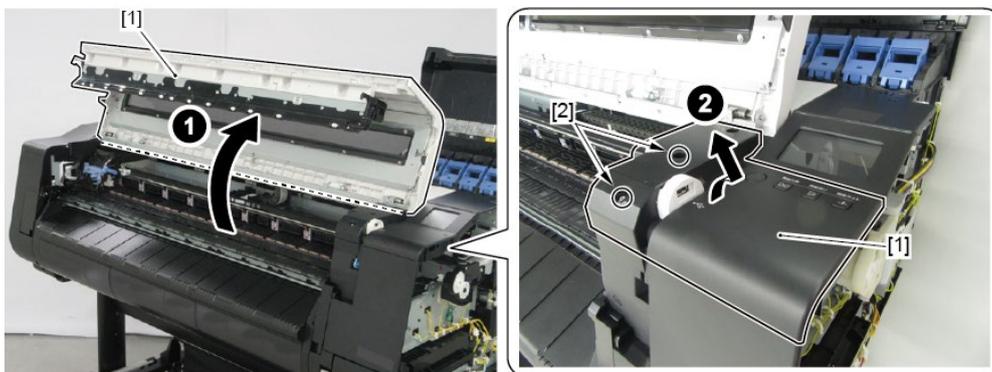
[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



3. Open [1] the access cover.
4. Remove [2] COVER, FRONT TOP R.

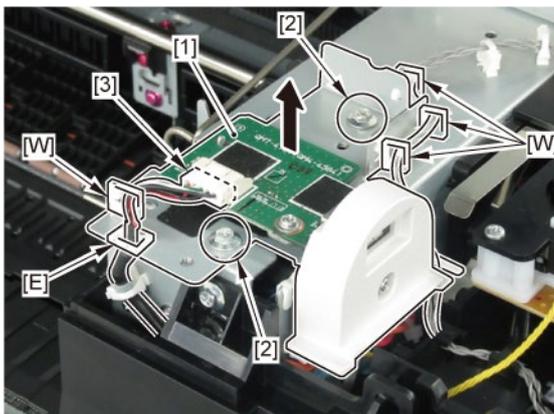
[3]

2 pcs



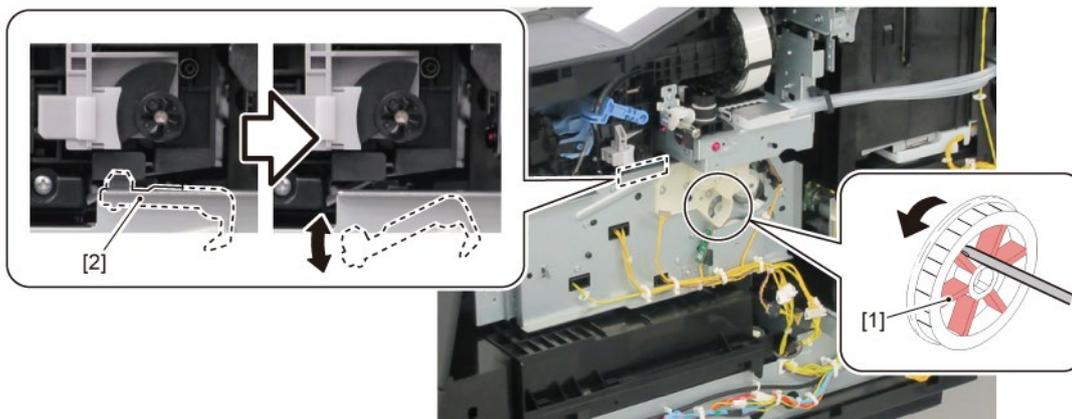
5. Remove [1] the plate (with the USB HOST PCB UNIT).

[2]	[3]	[W]	[E]
			
2 pcs	1 pc	4 pcs	1 pc



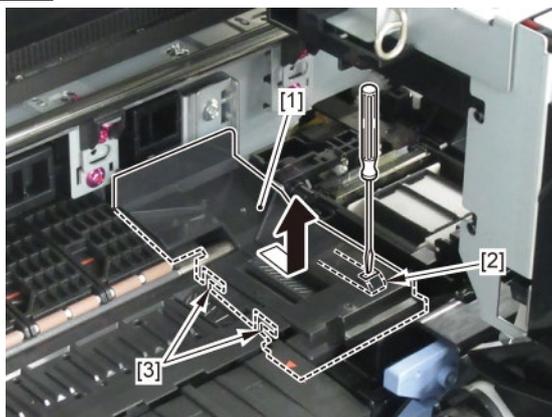
6. Unlock the carriage.

Turning [1] the gear in the arrowed direction will move [2] the lock pin up and down.



7. Remove [1] PLATEN, INK PRE EJECTION.

[2]	[3]
	
1 pc	2 pcs



Notes when removing the unit:

Place the PLATEN, INK PRE EJECTION on paper towel, etc.

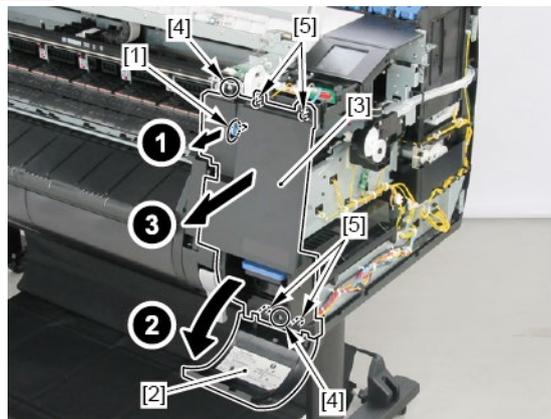


8. Remove [1] PLATEN CLEANER BRUSH.

9. Open [2] COVER UNIT, MTC.

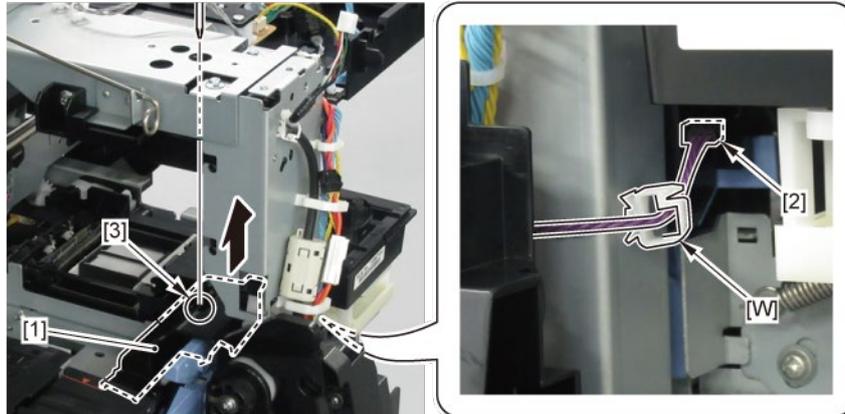
10. Remove [3] COVER, FRONT R.

[4]	[5]
A circular icon with a yellow border containing a black and white illustration of a screwdriver.	A circular icon with a yellow border containing a black and white illustration of a screw.
2 pcs	4 pcs



11. Remove [1] COVER, HOME POSITION.

[2]	[3]	[W]
		
1 pc	1 pc	1 pc

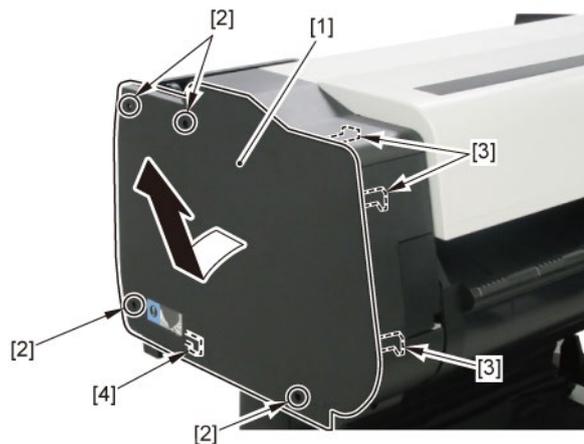


B-1

12. Remove [2] a set of

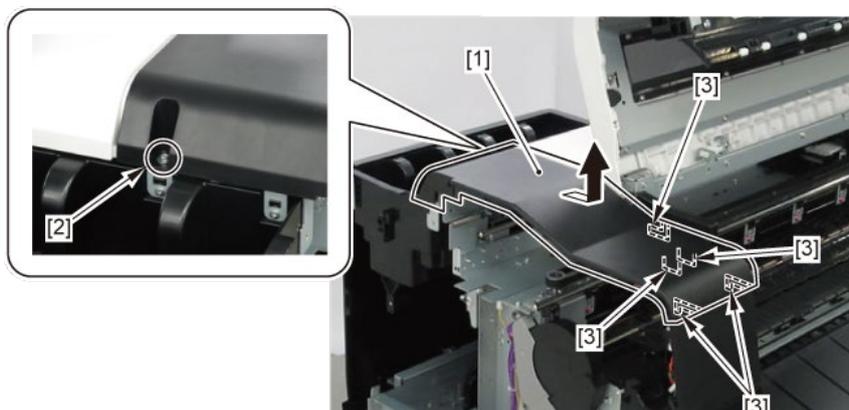
- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc



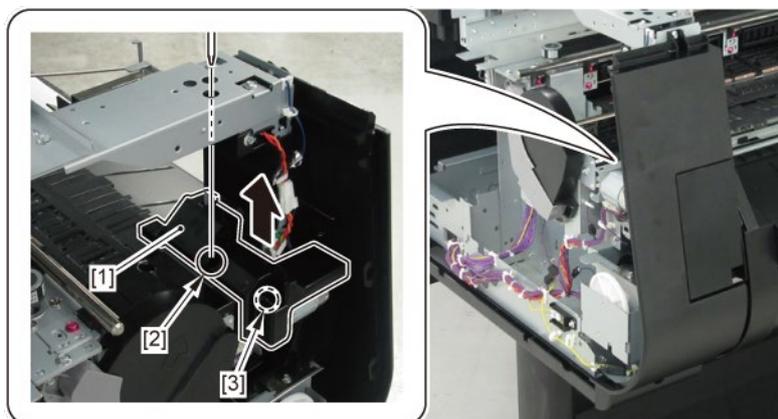
13. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



14. Remove [1] COVER, BACK POSITION.

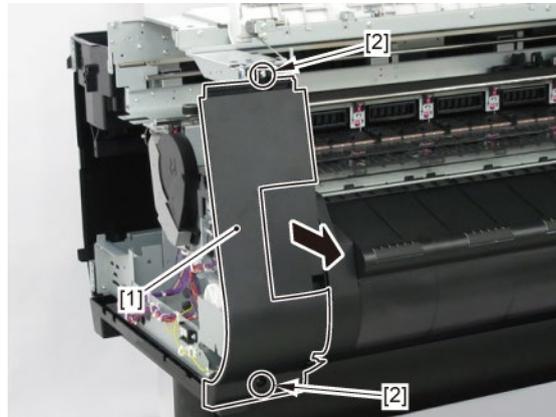
[2]	[3]
	
1 pc	1 pc



15. Remove [1] COVER, FRONT L.

[2]

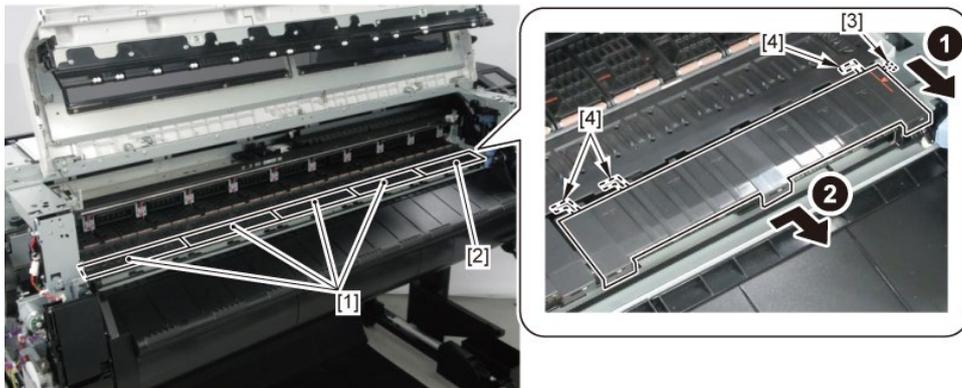
2 pc



(24" model, 44" model)

16. Remove [1] PLATEN, UNDER HOME and [2] four pieces of PLATEN, UNDER A (two pieces in 24" model).

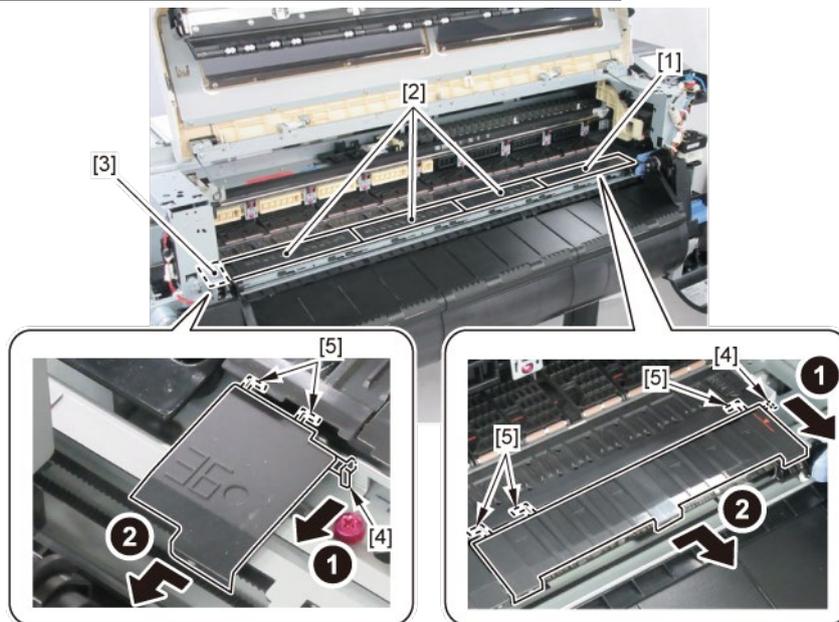
[3]	[4]
	
1 pc each	3 pcs each



(36" model)

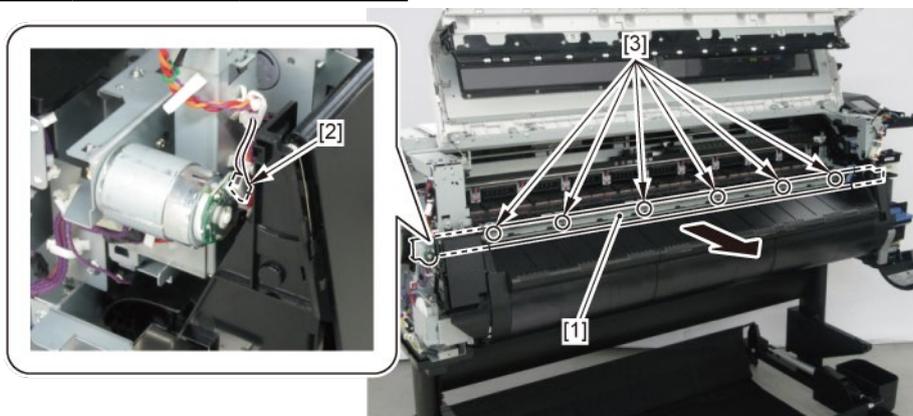
Remove [1] PLATEN, UNDER HOME, three pieces of [2] PLATEN, UNDER A, and [3] PLATEN, UNDER C.

	[4]	[5]
		
PLATEN, UNDER HOME [1]	1 pc	3 pcs
PLATEN, UNDER A [2]	1 pc each	3 pcs each
PLATEN, UNDER C [3]	1 pc	2 pcs



17. Remove [1] CUTTER BLADE UNIT.

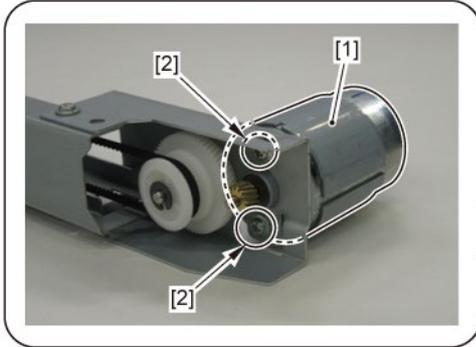
	[2]	[3]
		
24" model	1 pc	4 pcs
36" model	1 pc	5 pcs
44" model	1 pc	6 pcs



18. Remove [1] CUTTER MOTOR UNIT, W/ENCODER.

[2]

2 pcs

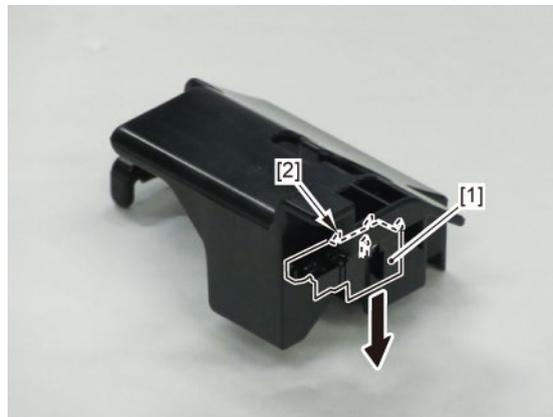


B-2

12. Remove [1] CUTTER HP SENSOR.

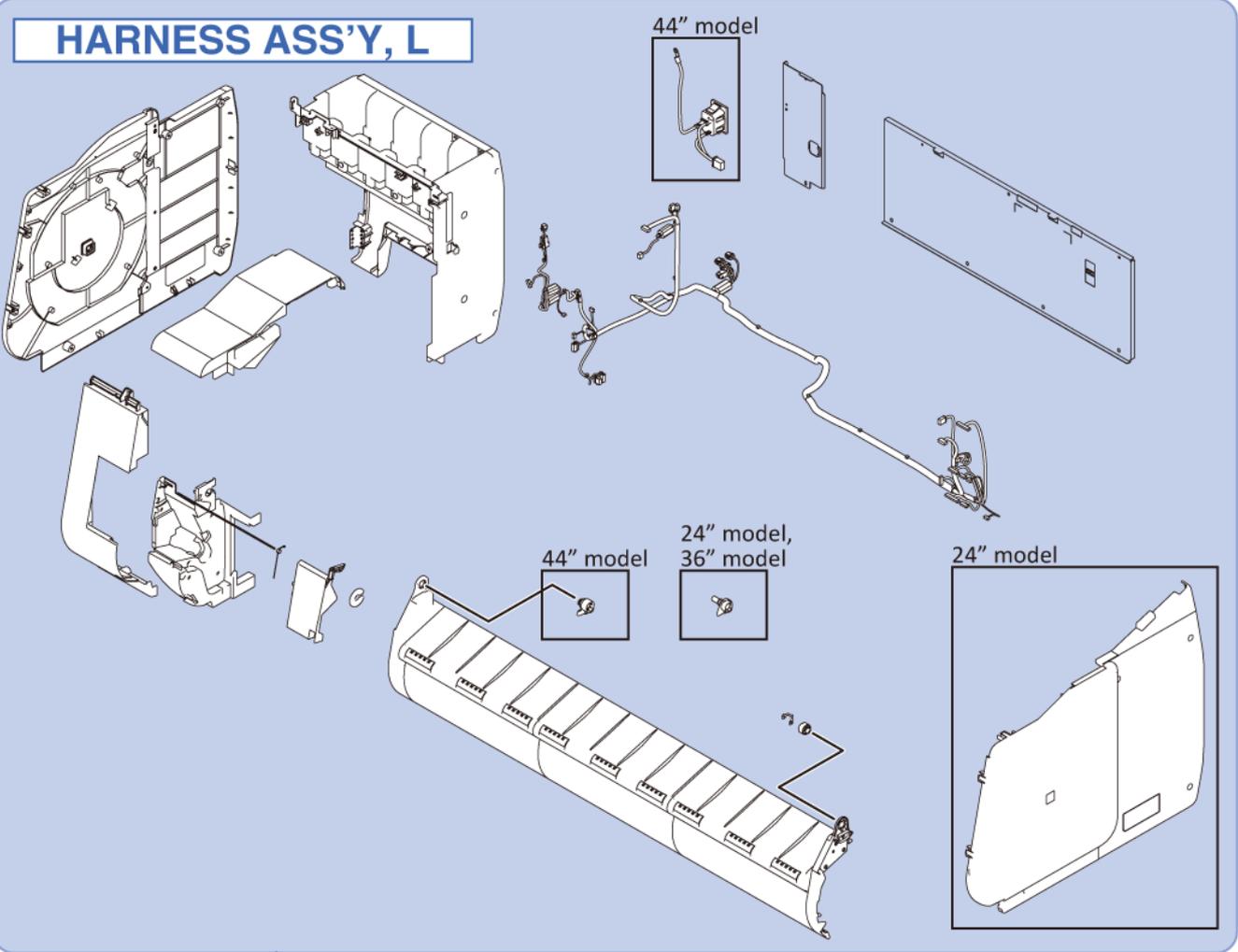
[2]

4 pcs

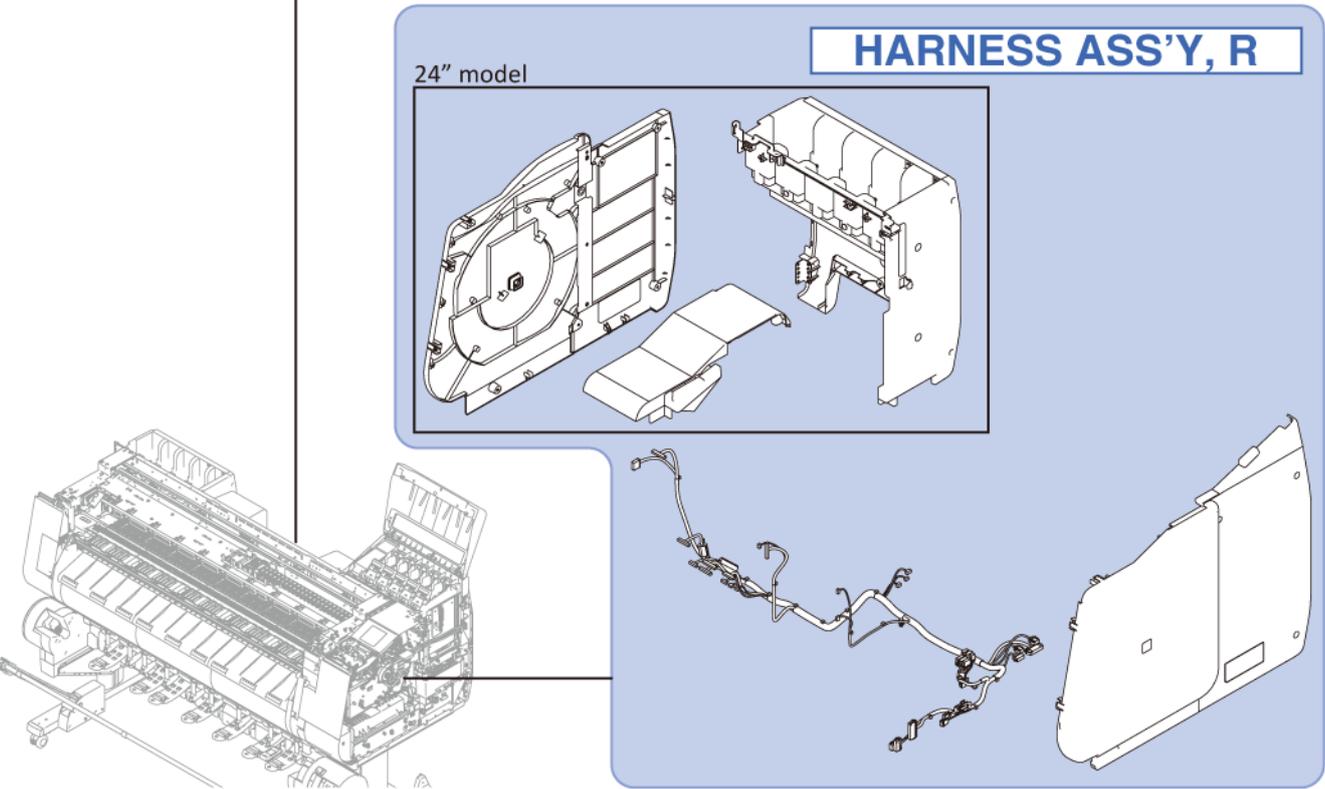


15. Left Harness Ass'y, Right Harness Ass'y

HARNESS ASS'Y, L



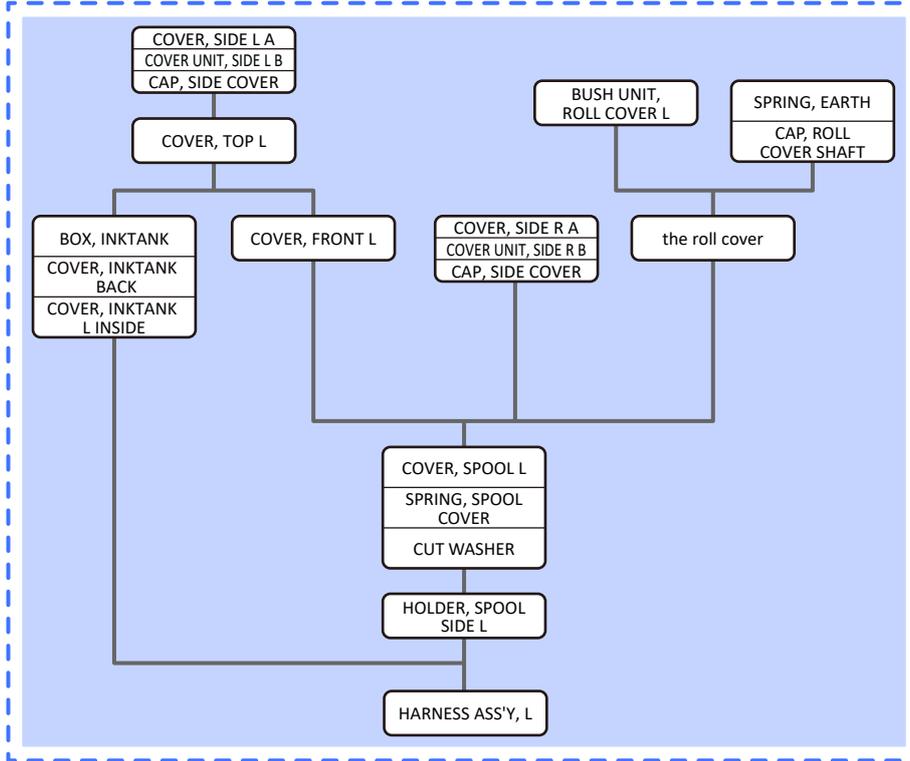
HARNESS ASS'Y, R



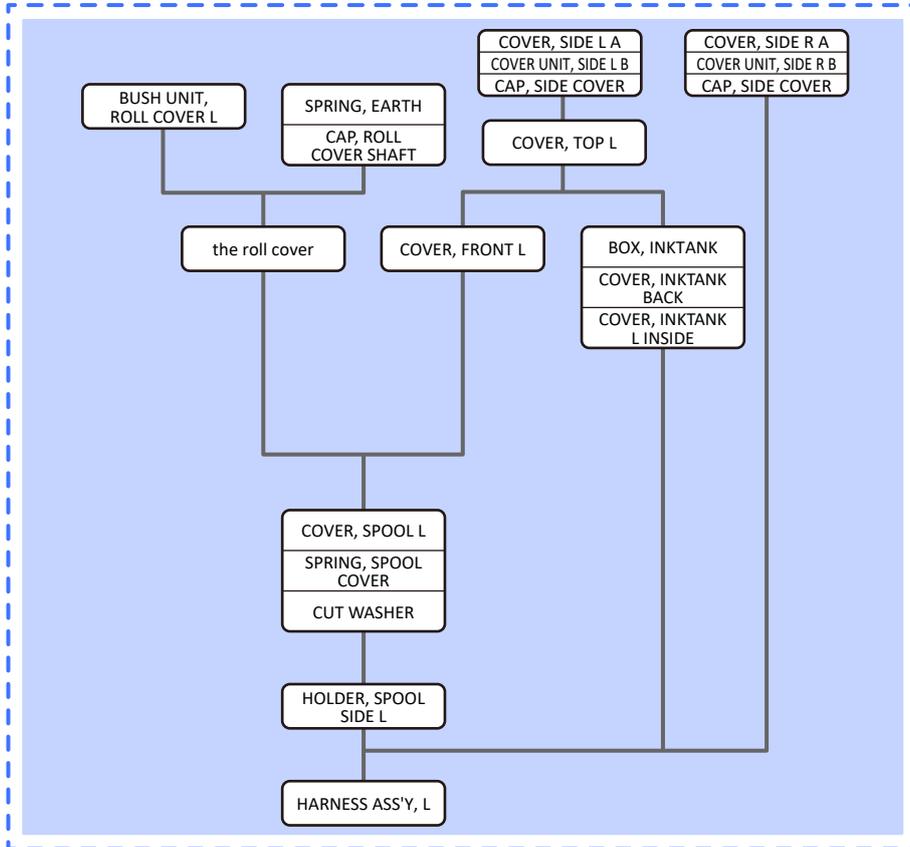
TX-2100, TX-3100, TX-5210, TX-5310

HARNESS ASS'Y, L

24" model



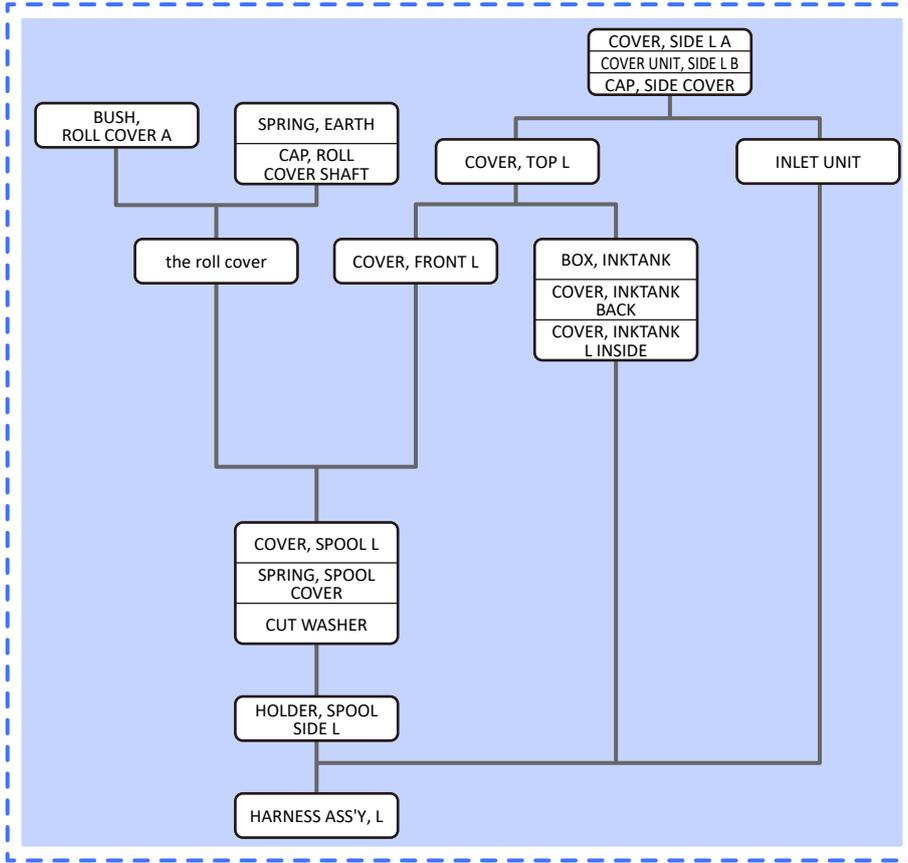
36" model



TX-4100, TX-5410

HARNESS ASS'Y, L

44" model

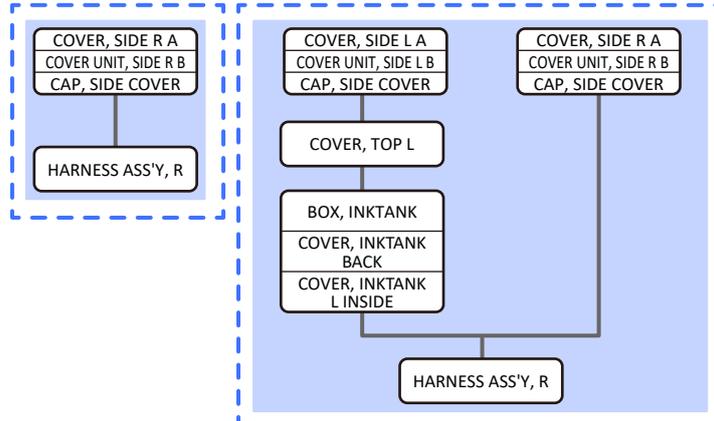


TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, TX-5410

HARNESS ASS'Y, R

36" model, 44" model

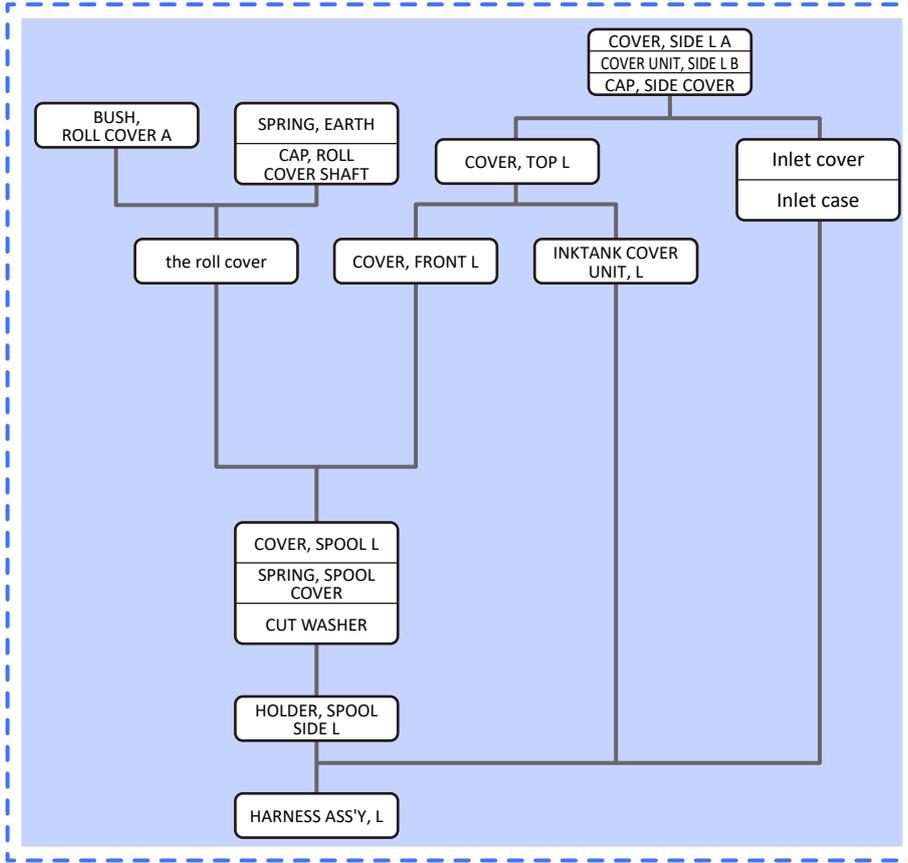
24" model



TX-4200, TX-5420

HARNESS ASS'Y, L

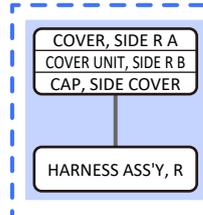
44" model



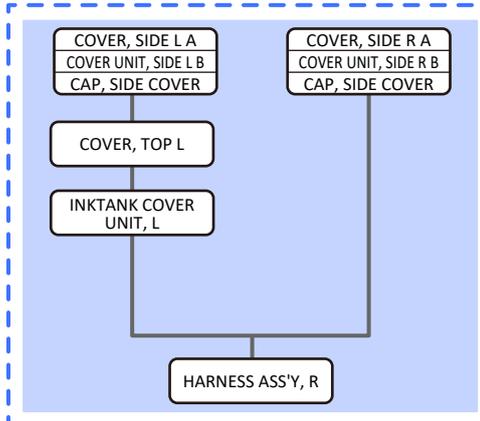
TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, TX-5420

HARNESS ASS'Y, R

36" model, 44" model



24" model

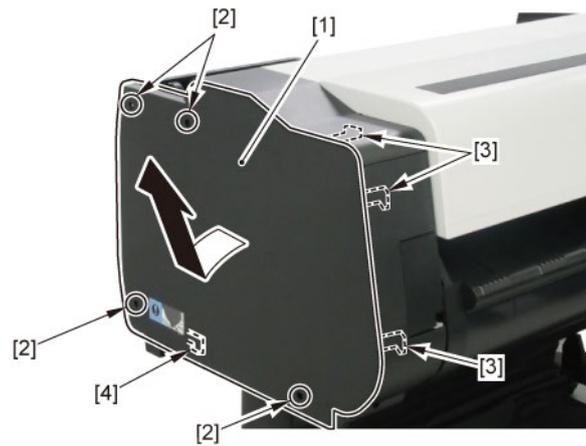


HARNESS ASS'Y, L (24" model)

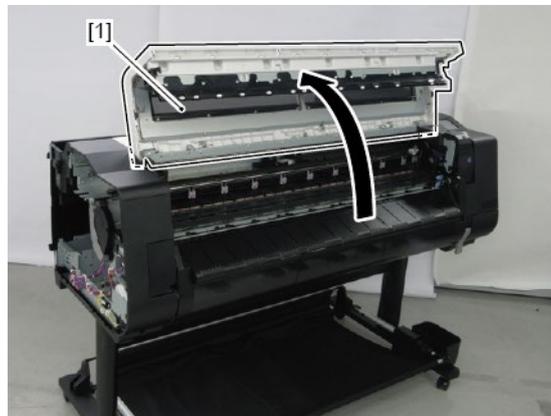
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

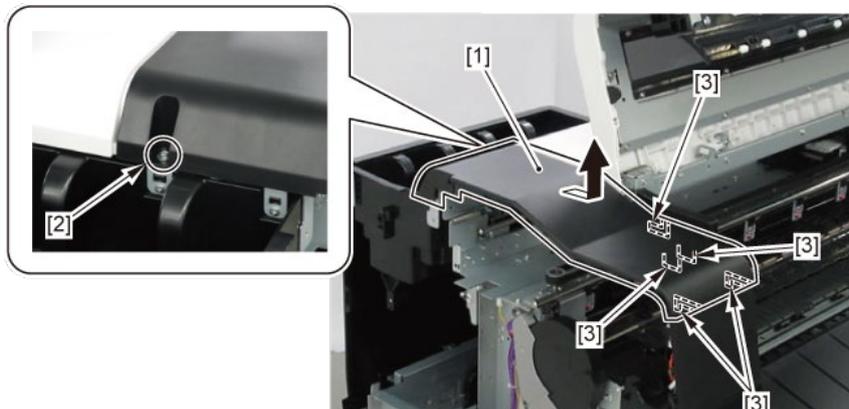


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

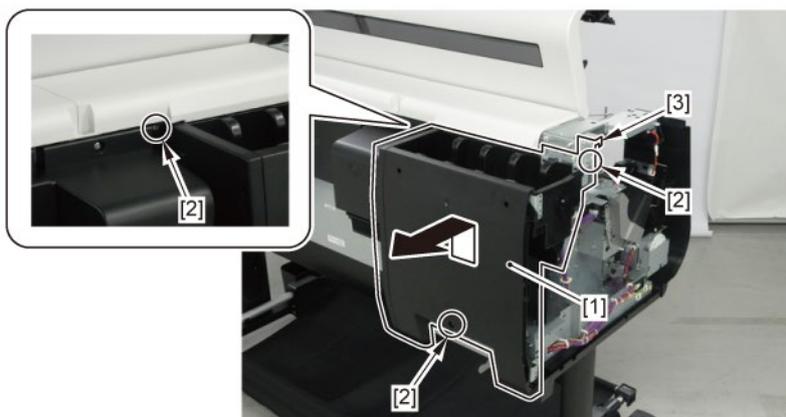
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INKTANK COVER UNIT, L.

TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

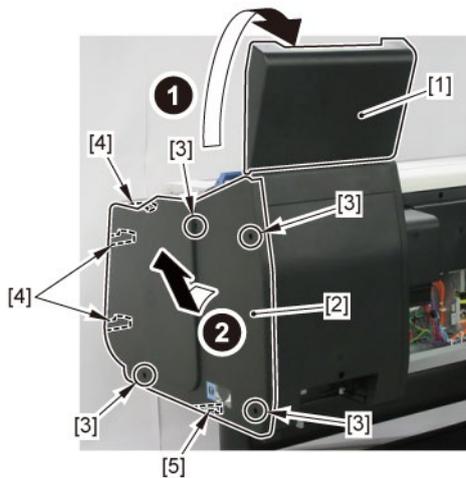
6. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

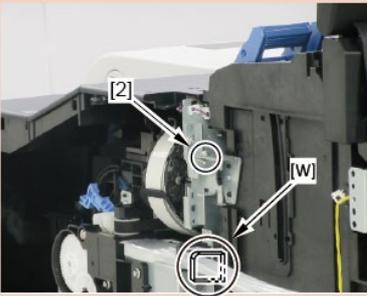
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



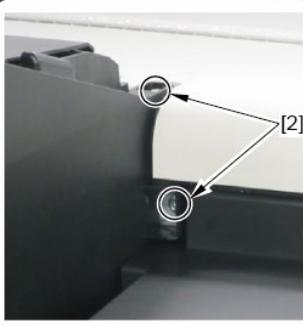
7. Open [1] the right ink unit.

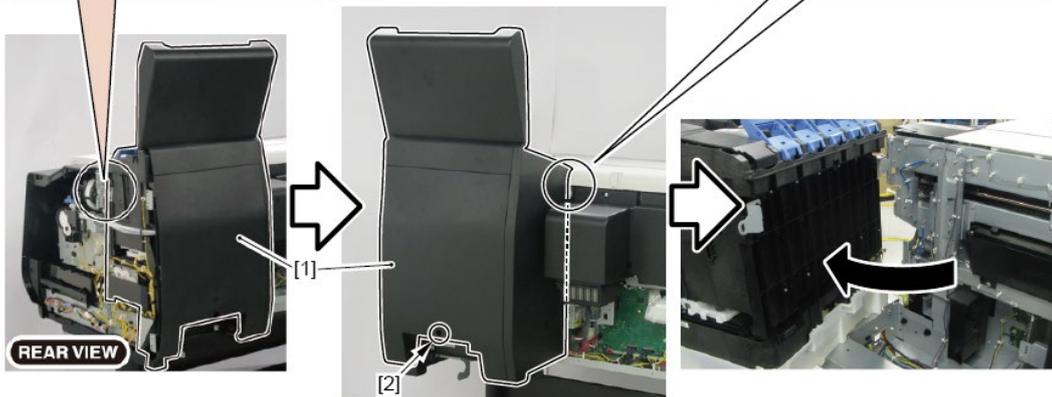
[2]	[W]
	
4 pcs	1 pc



Before opening the unit:

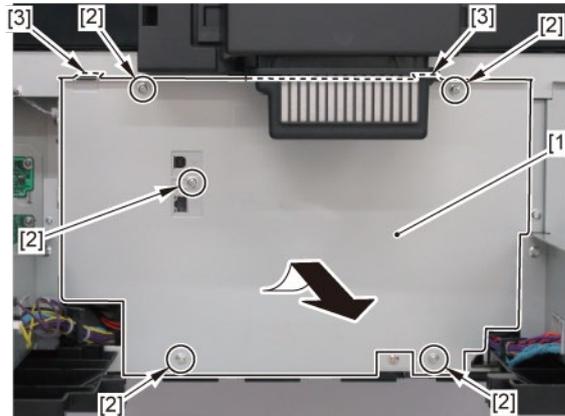
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





8. Remove [1] the plate.

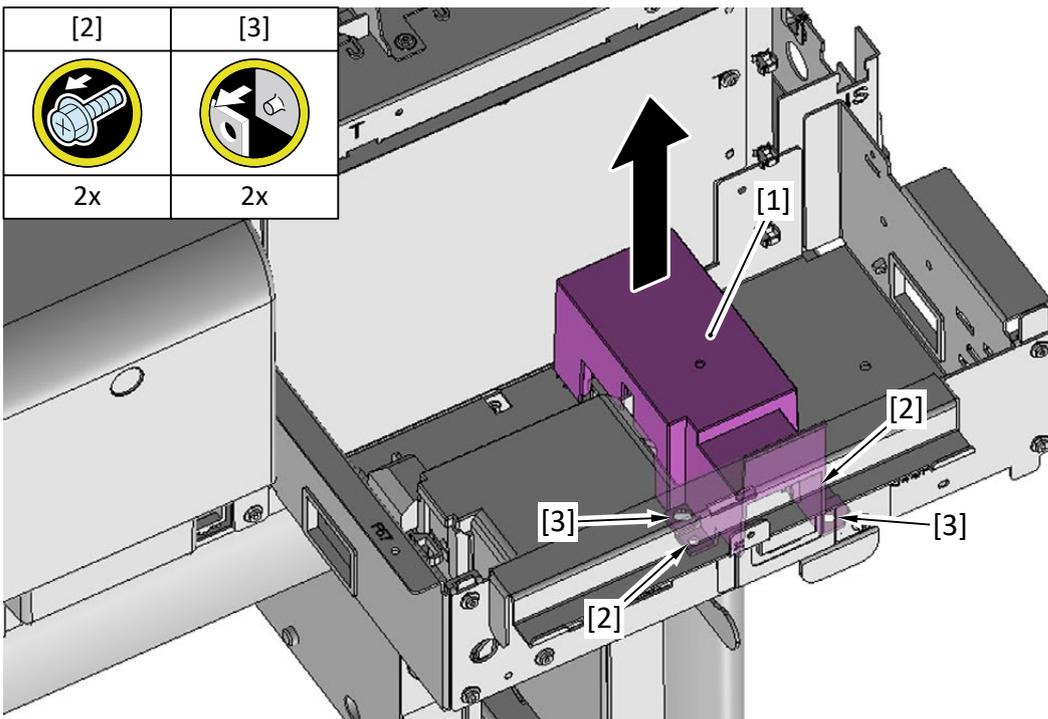
[2]	[3]
	
5 pcs	2 pcs



9. Remove [1] the inlet cover.

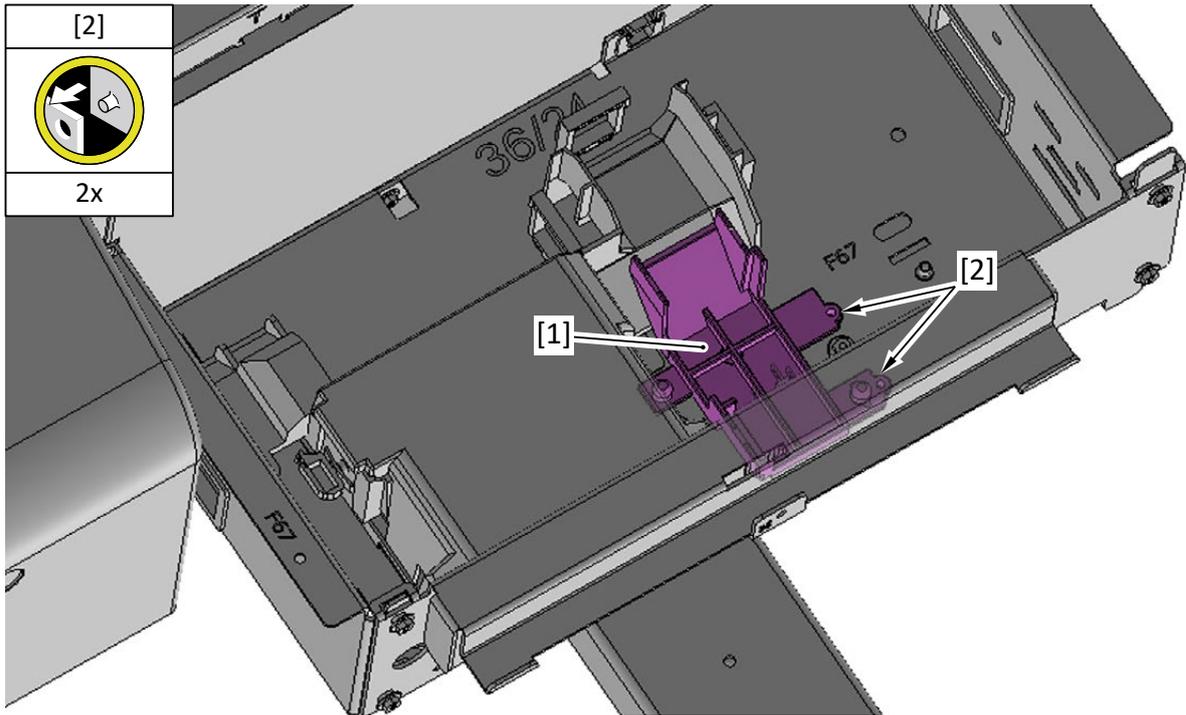
TX-2200, TX-5220

[2]	[3]
	
2x	2x



10. Remove [1] the inlet case.

TX-2200, TX-5220



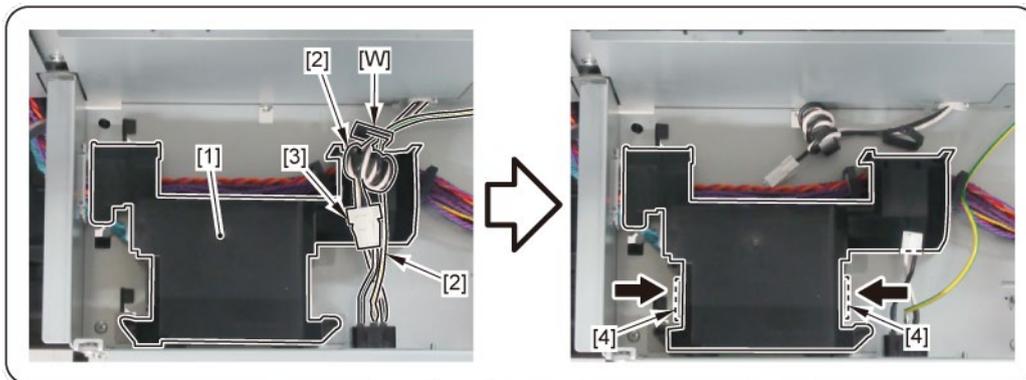
11. Disconnect [2] the cables from [1] the cover of the RELAY PCB.

[3]	[W]
	
1 pc	1 pc

12. Remove [1] the cover of the RELAY PCB.

[4]

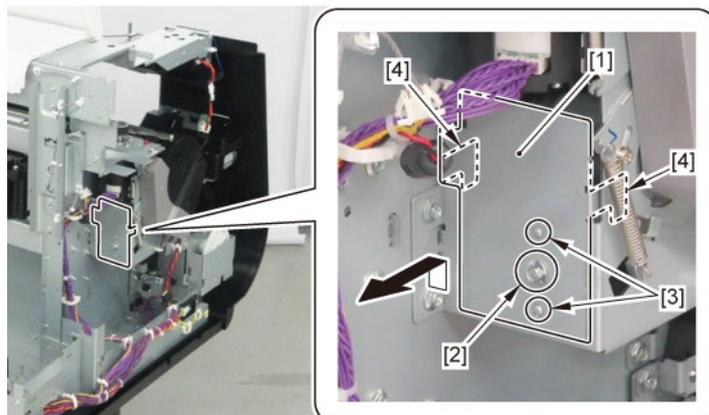
2 pcs



13. Remove [1] the plate.

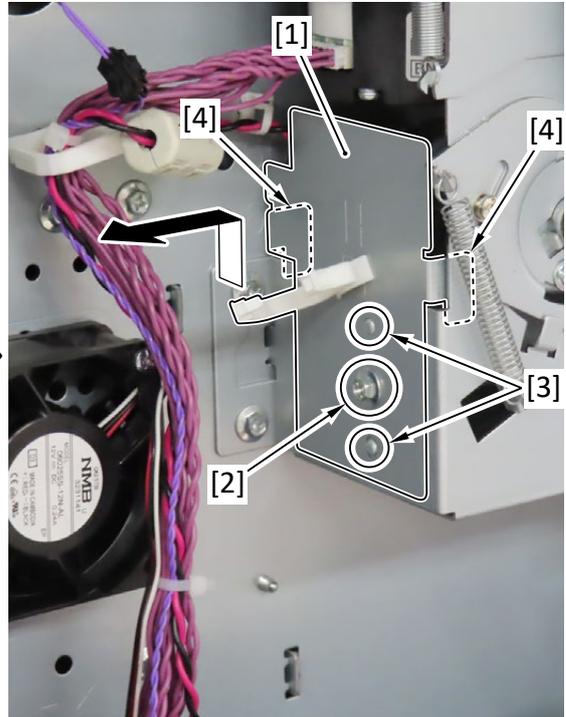
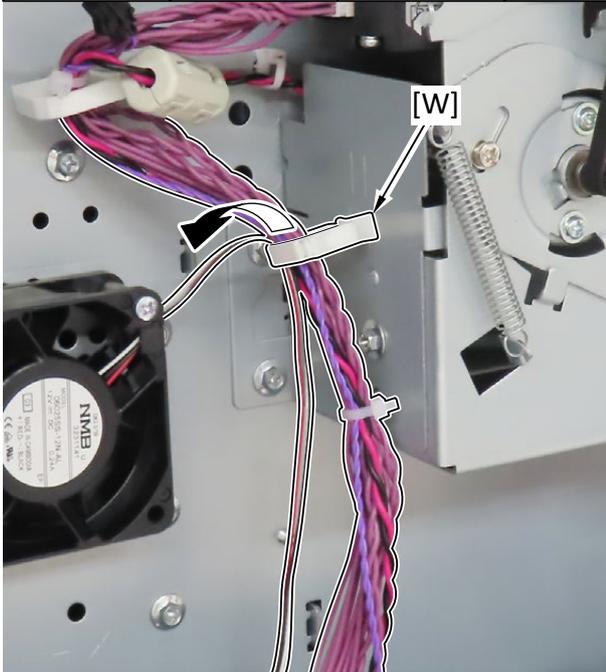
TX-2100, TX-5210

[2]	[3]	[4]
		
1 pc	2 pcs	2 pcs



TX-2200, TX-5220

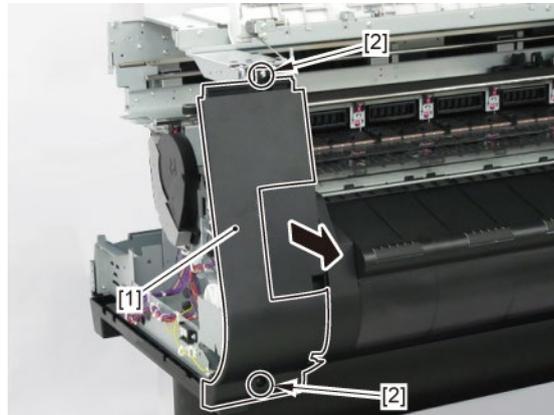
[W]	[2]	[3]	[4]
			
1x	1x	2x	2x



14. Remove [1] COVER, FRONT L.

[2]

2 pcs



15. Remove [1] SPRING, EARTH and [2] CAP, ROLL COVER SHAFT.

[3]

2 pcs

16. Remove [4] BUSH UNIT, ROLL COVER L.

[5]

1 pc

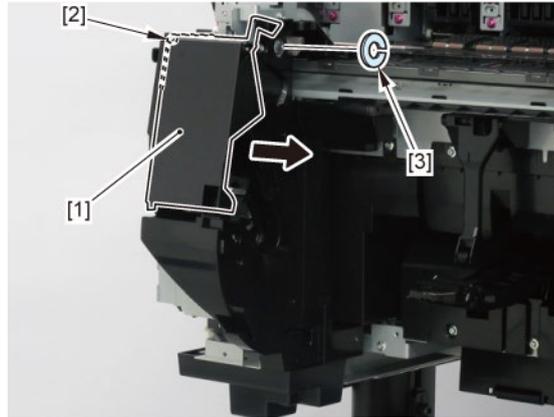
17. Remove [6] the roll cover.



18. Remove [1] COVER, SPOOL L and [2] SPRING, SPOOL COVER.

[3]

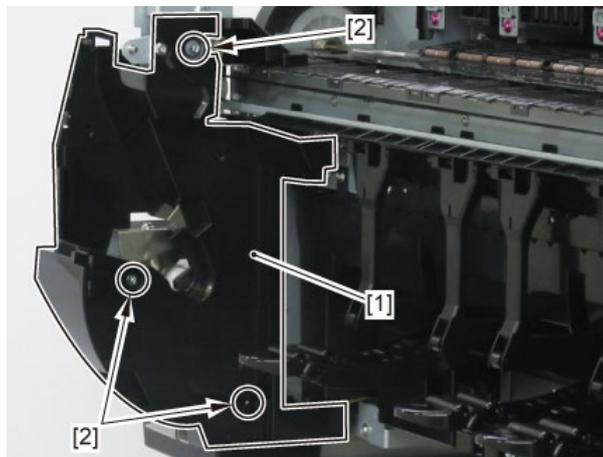
1 pc



19. Remove [1] HOLDER, SPOOL SIDE L.

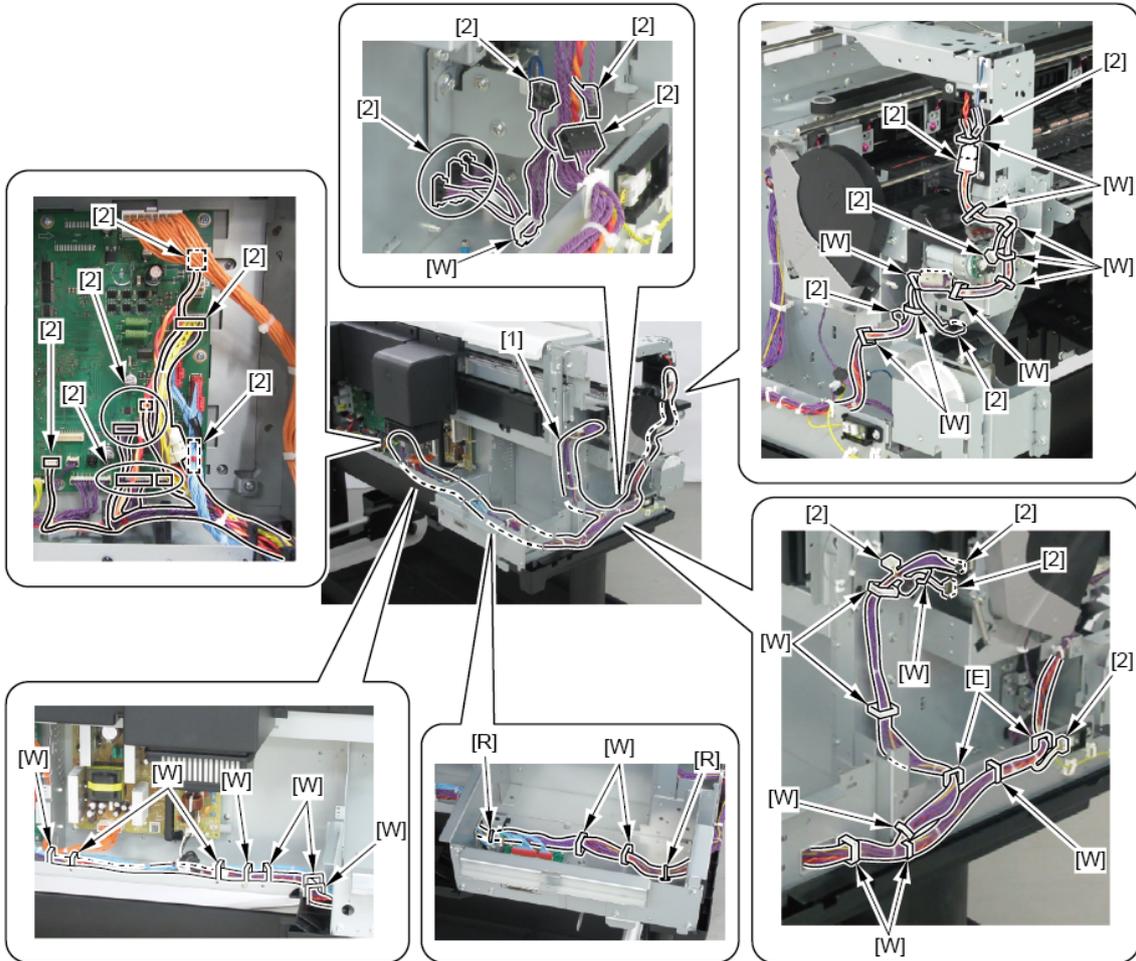
[2]

3 pcs



20. Disconnect [1] HARNESS ASS'Y, L.

[2]	[W]	[E]	[R]
			
22 pcs	21 pcs	2 pcs	2 pcs

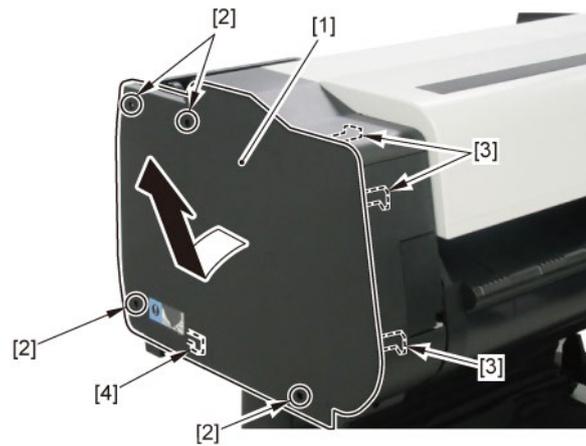


HARNESS ASS'Y, L (36" model)

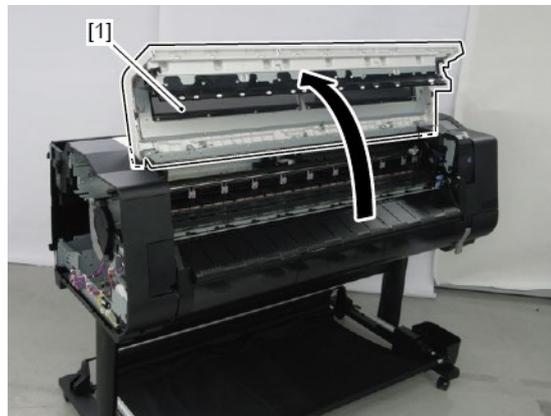
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

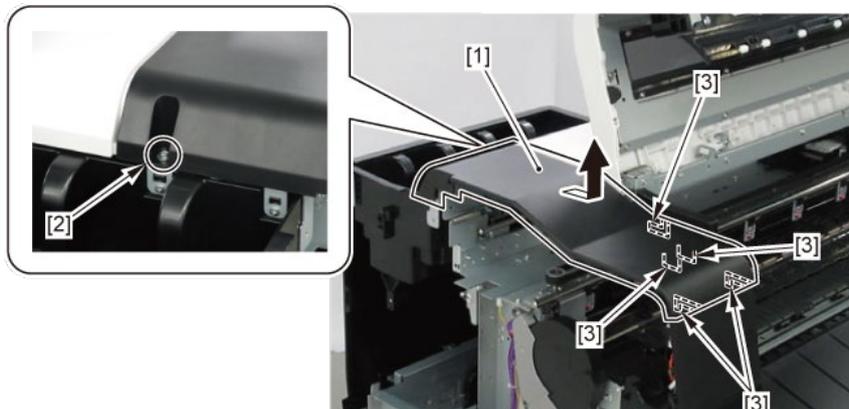


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

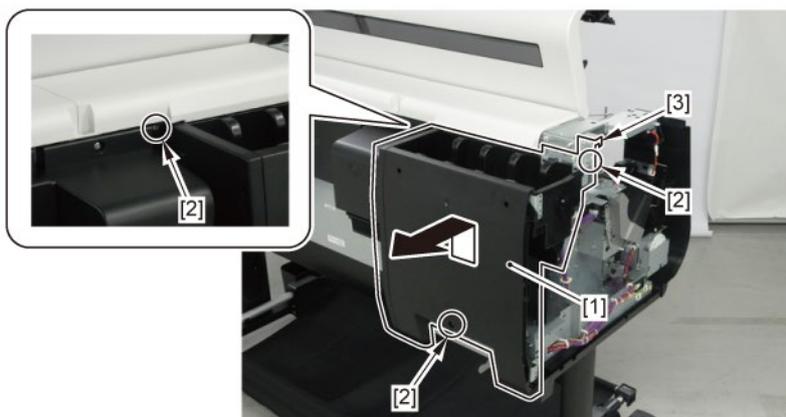
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-3100, TX-5310

4. Remove [1] INKTANK COVER UNIT, L.

TX-3200, TX-5320

[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

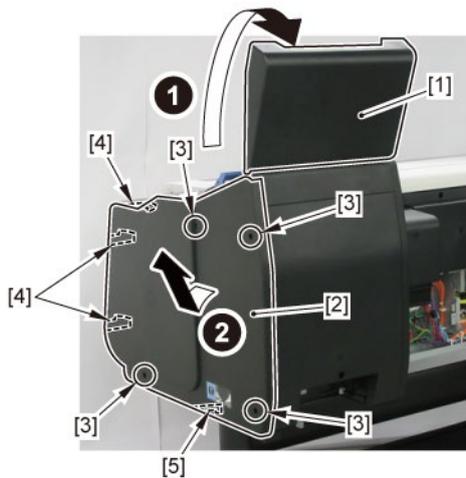
6. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

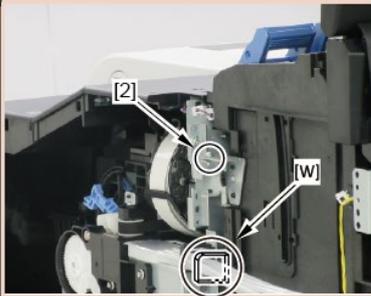
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



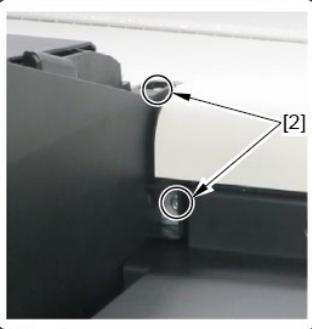
7. Open [1] the right ink unit.

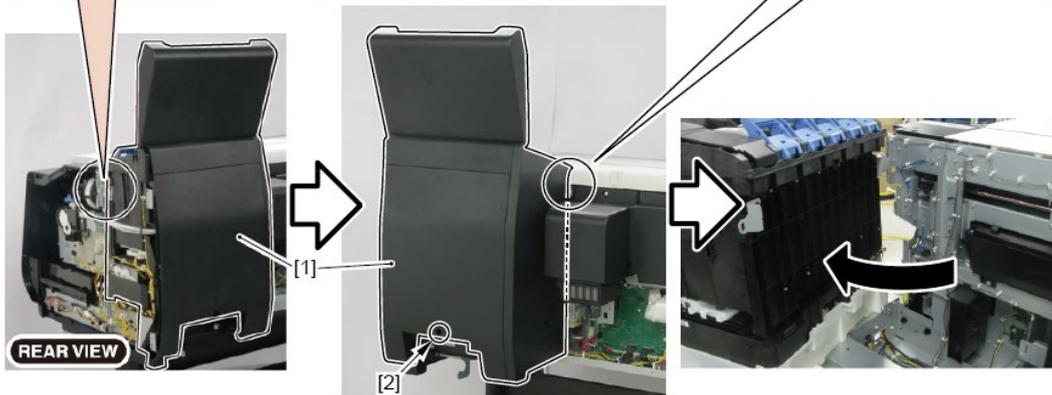
[2]	[W]
	
4 pcs	1 pc



Before opening the unit:

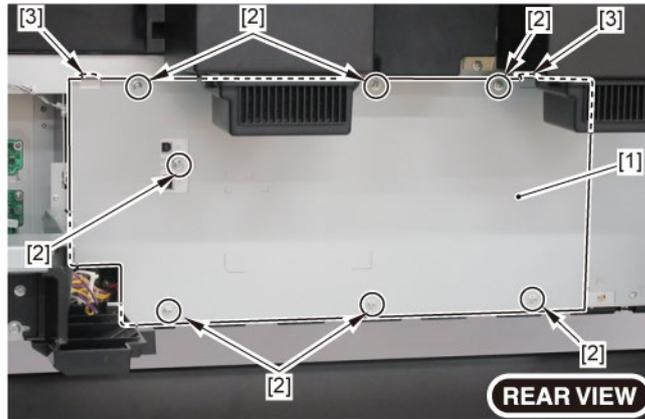
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





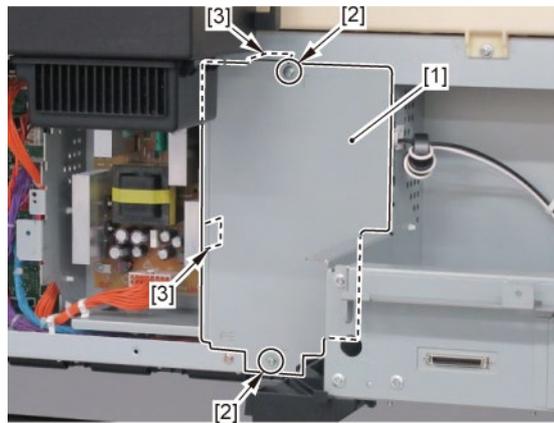
8. Remove [1] the plate.

[2]	[3]
	
7 pcs	2 pcs



9. Remove [1] the plate.

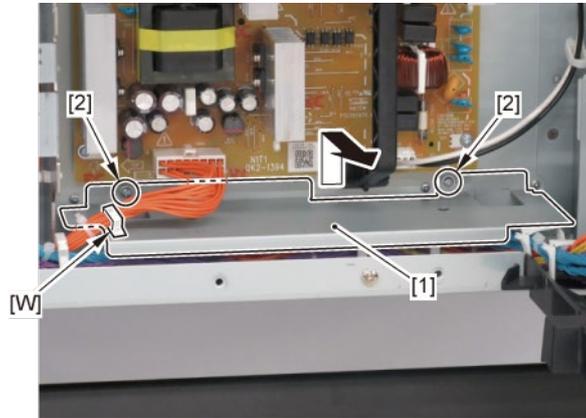
[2]	[3]
	
2 pcs	2 pcs



10. Remove [1] the plate.

TX-3100, TX-5310

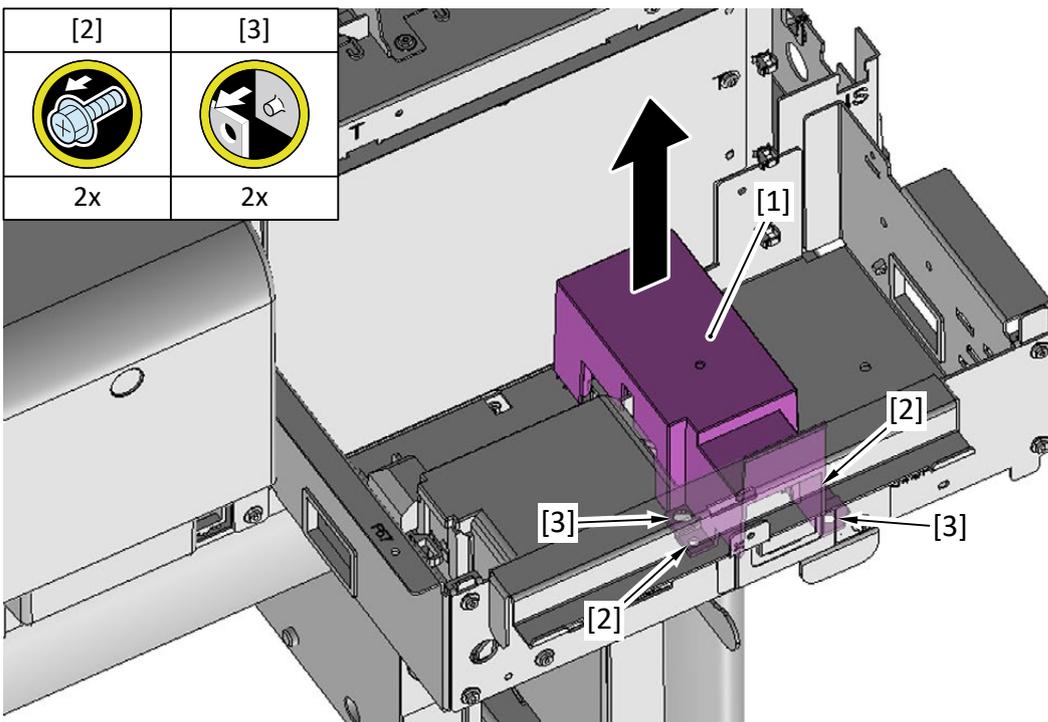
[2]	[W]
	
2 pcs	1 pc



11. Remove [1] the inlet cover.

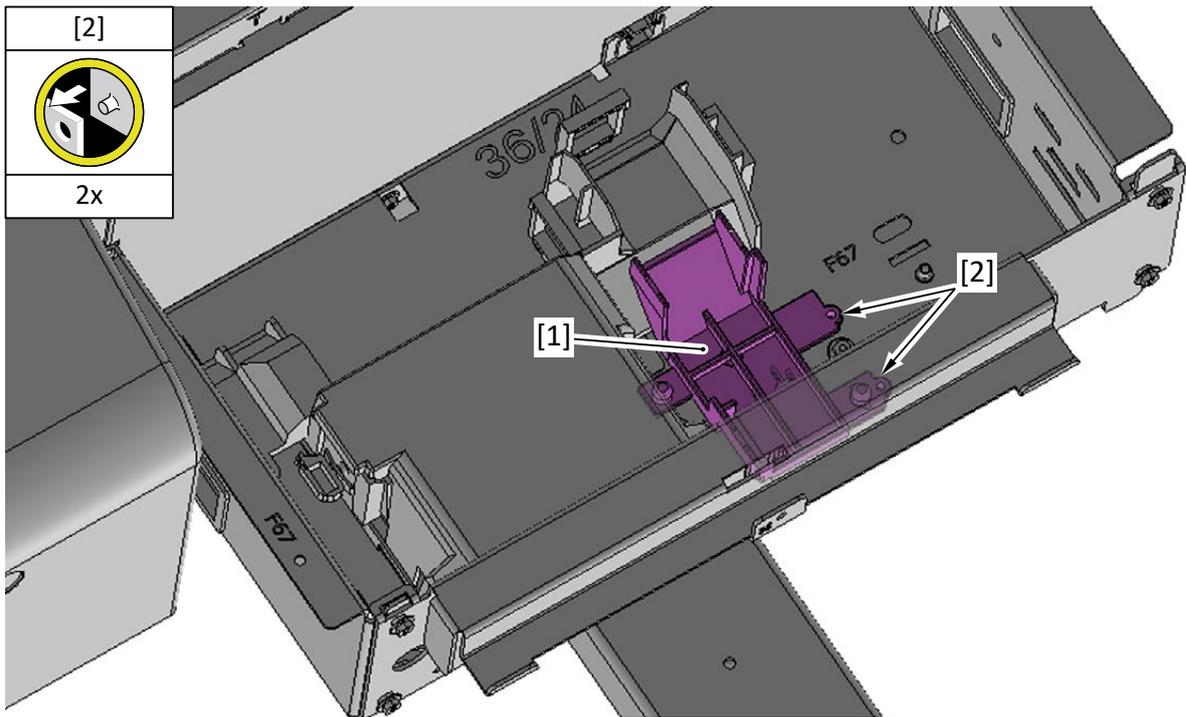
TX-3200, TX-5320

[2]	[3]
	
2x	2x



12. Remove [1] the inlet case.

TX-3200, TX-5320



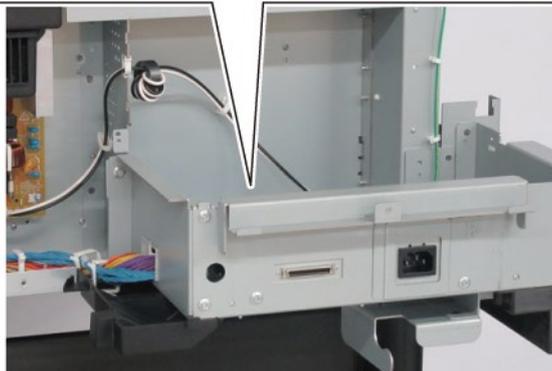
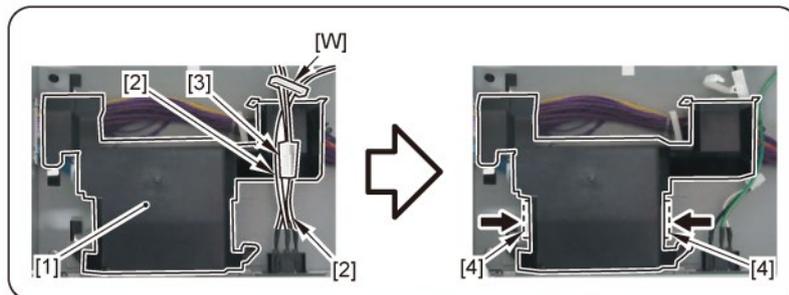
13. Disconnect [2] the cables from [1] the cover of the RELAY PCB.

[3]	[W]
	
1 pc	1 pc

14. Remove [1] the cover of the RELAY PCB.

[4]

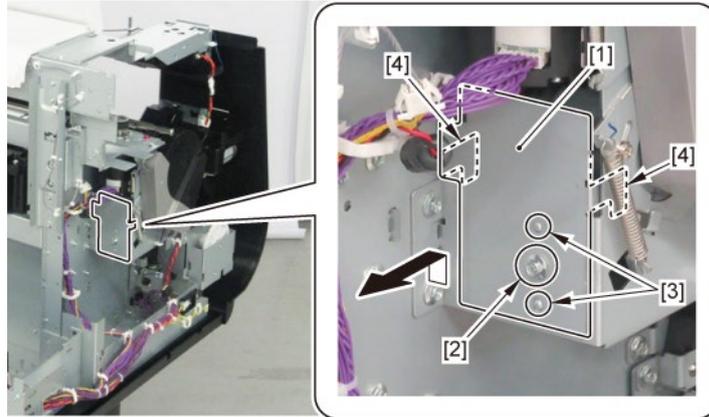
2 pcs



15. Remove [1] the plate.

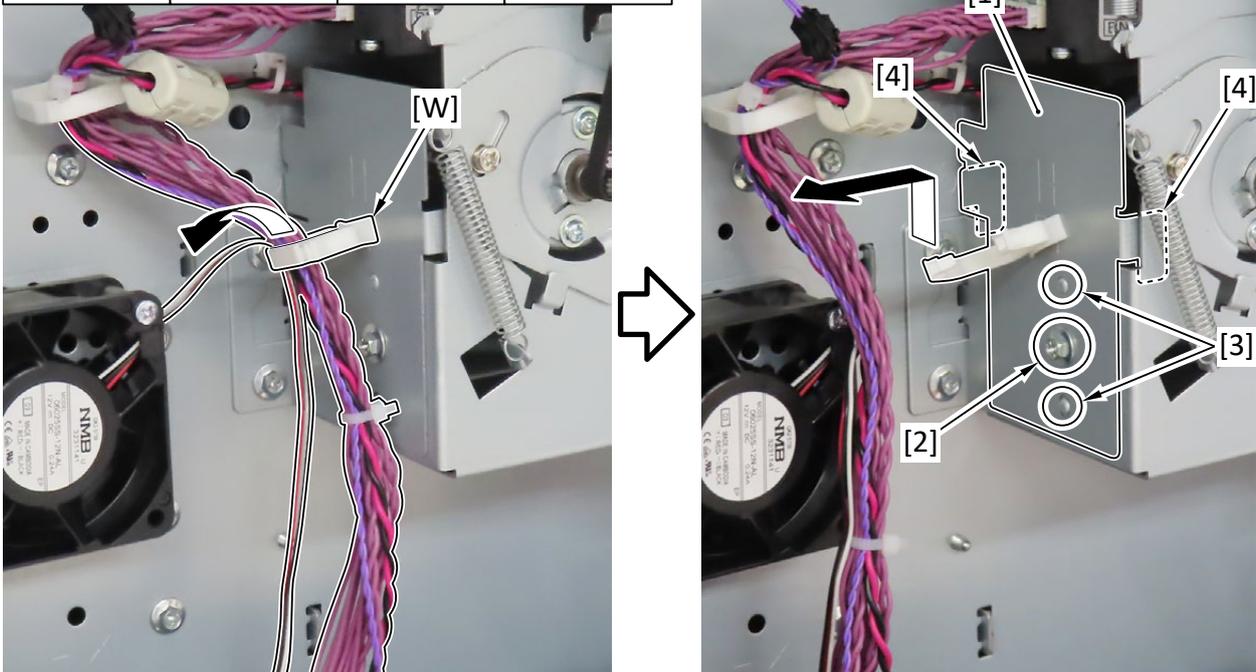
TX-3100, TX-5310

[2]	[3]	[4]
		
1 pc	2 pcs	2 pcs



TX-3200, TX-5320

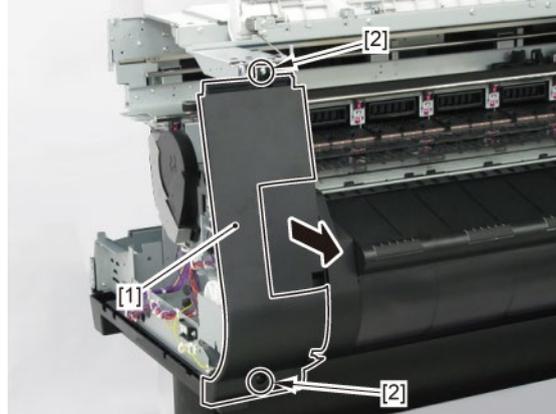
[W]	[2]	[3]	[4]
			
1x	1x	2x	2x



16. Remove [1] COVER FRONT L.

[2]

2 pcs



17. Remove [1] SPRING, EARTH and [2] CAP, ROLL COVER SHAFT.

[3]

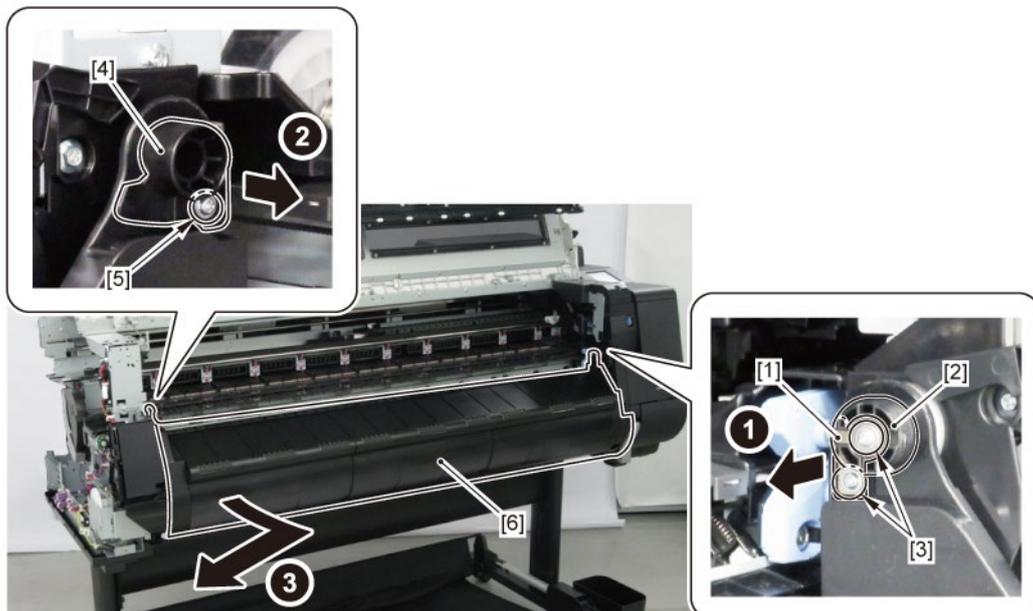
2 pcs

18. Remove [4] BUSH UNIT, ROLL COVER L.

[5]

1 pc

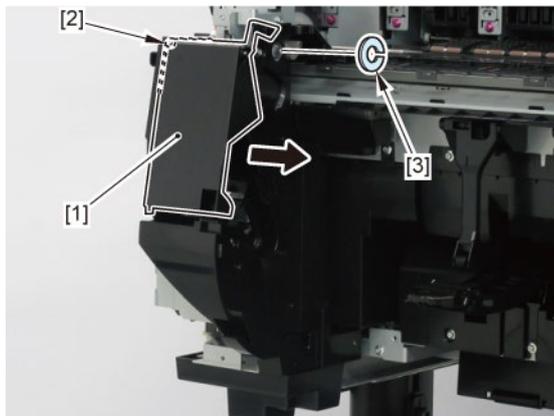
19. Remove [6] the roll cover.



20. Remove [1] COVER, SPOOL L and [2] SPRING, SPOOL COVER.

[3]

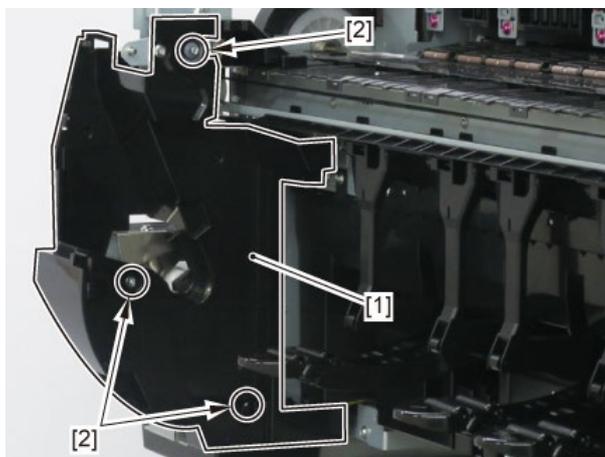
1 pc



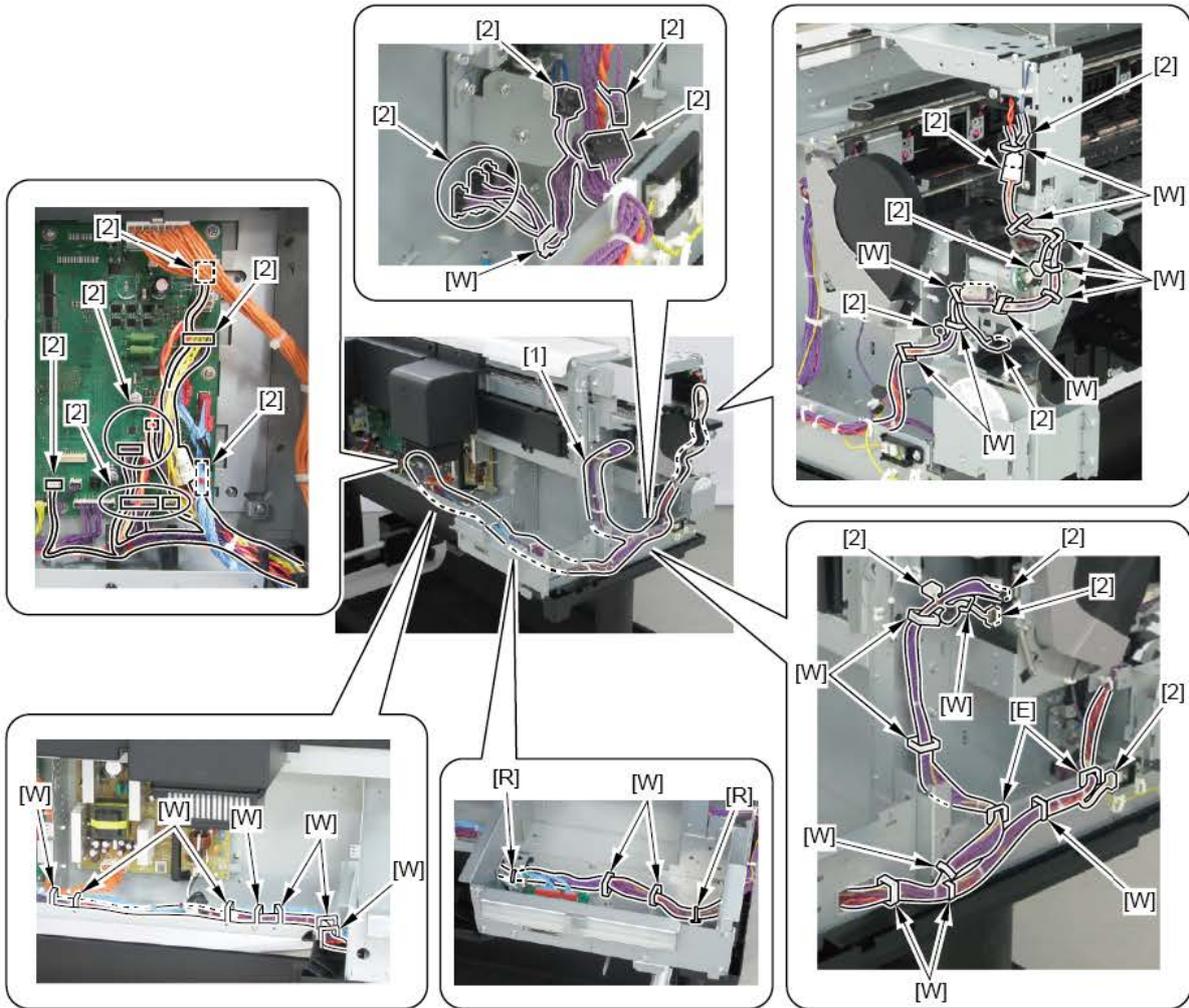
21. Remove [1] HOLDER, SPOOL SIDE L.

[2]

3 pcs



22. Disconnect [1] HARNESS ASS'Y, L.

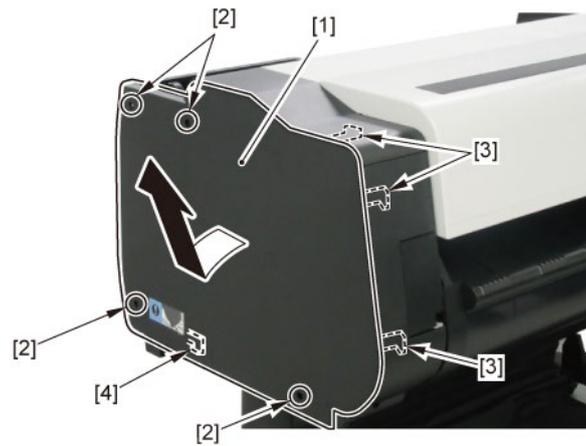


HARNESS ASS'Y, L (44" model)

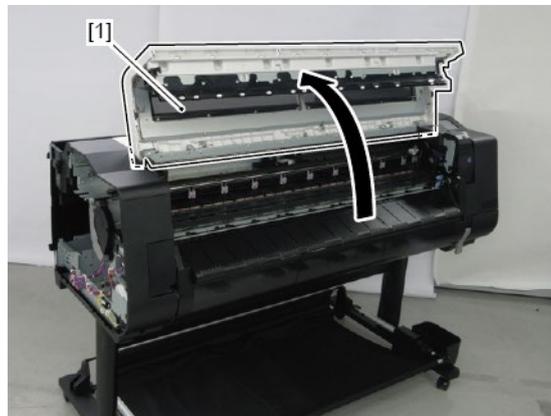
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

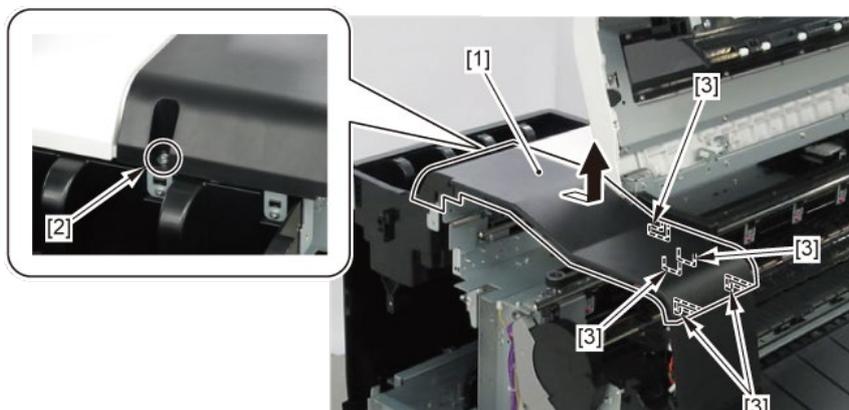


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

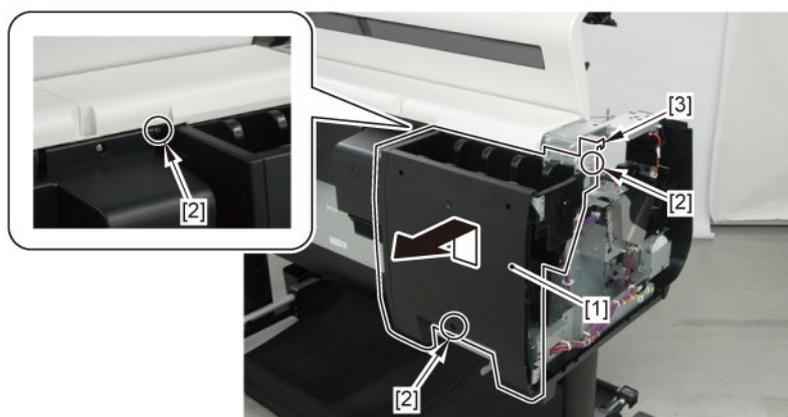
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-4100, TX-5410

4. Remove [1] INKTANK COVER UNIT, L.

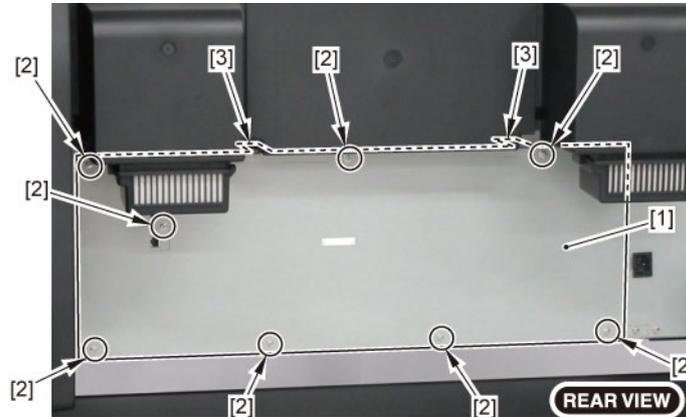
TX-4200, TX-5420

[2]	[3]
	
3 pcs	1 pc



5. Remove [1] the plate.

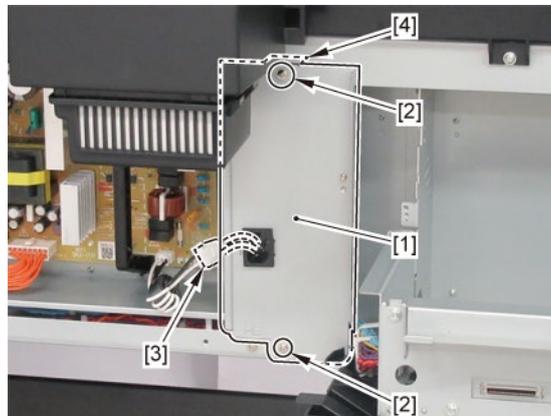
[2]	[3]
	
8 pcs	2 pcs



6. Remove [1] the plate (with the INLET HARNESS UNIT).

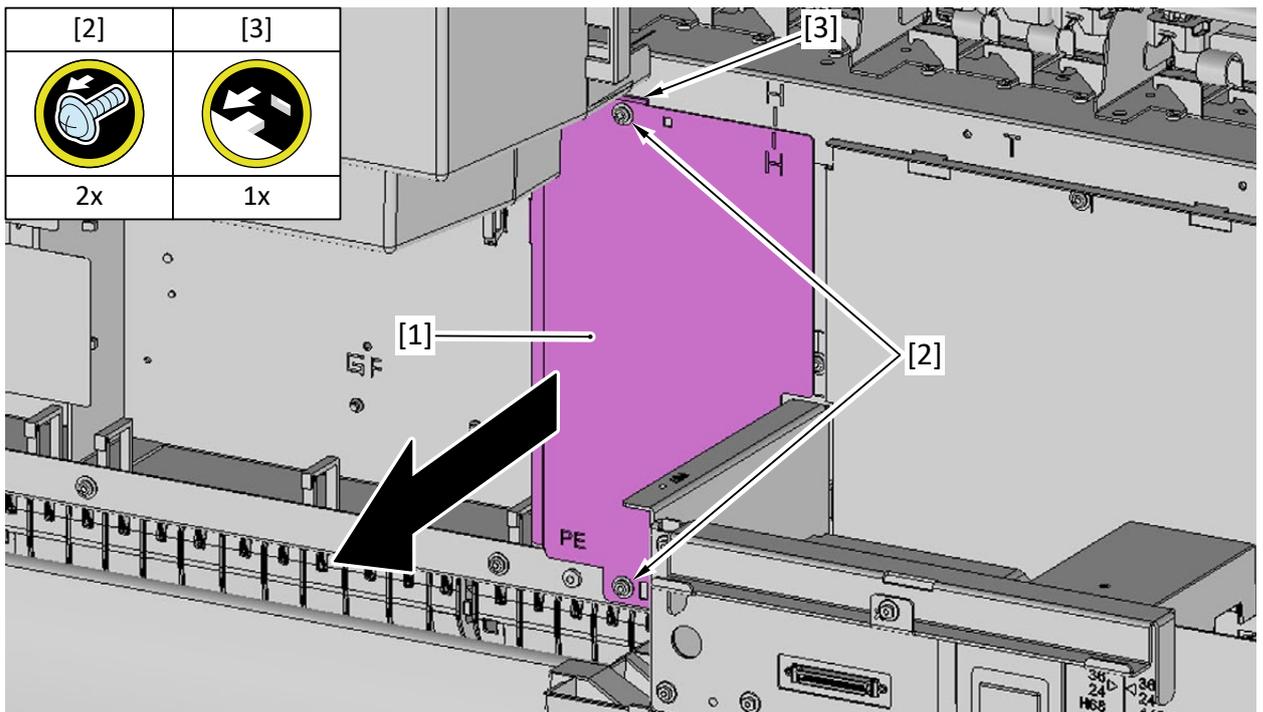
TX-4100, TX-5410

[2]	[3]	[4]
		
2 pcs	1 pc	1 pc



6. Remove [1] the plate.

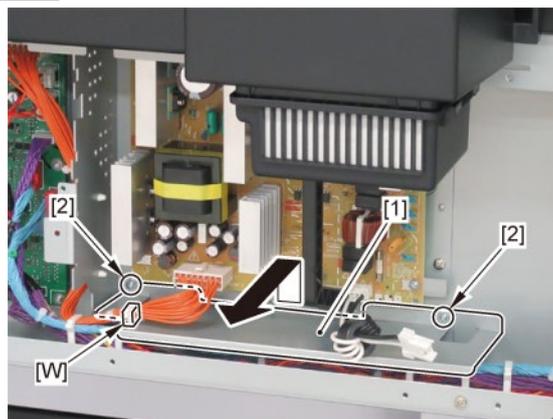
TX-4200, TX-5420



7. Remove [1] the plate.

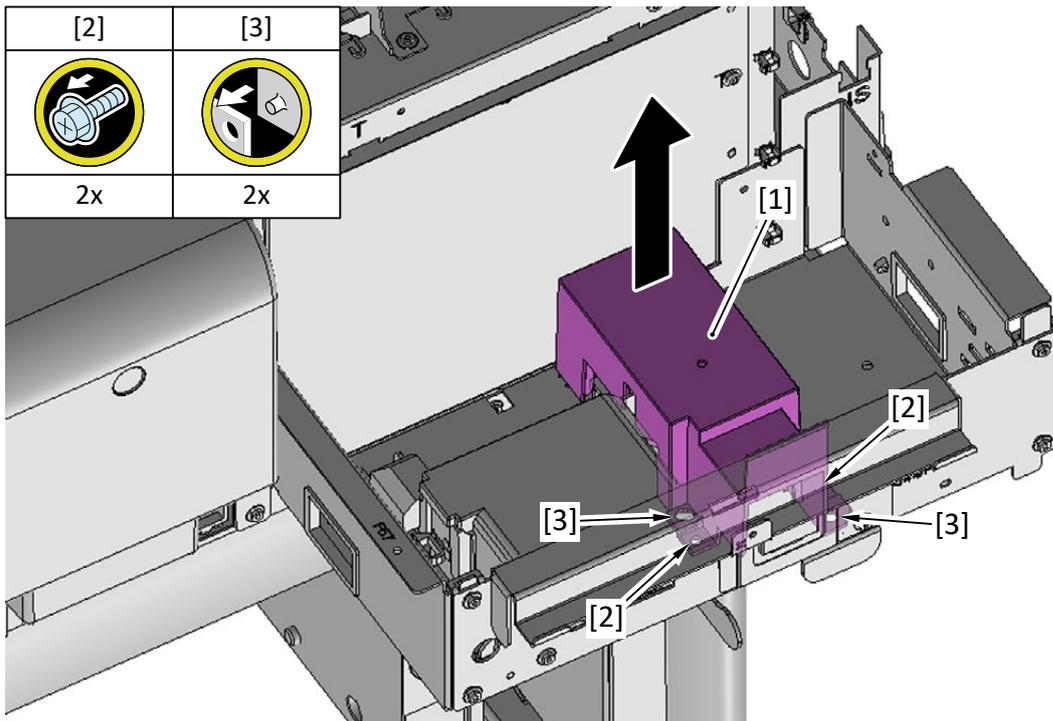
TX-4100, TX-5410

[2]	[W]
	
2 pcs	1 pc



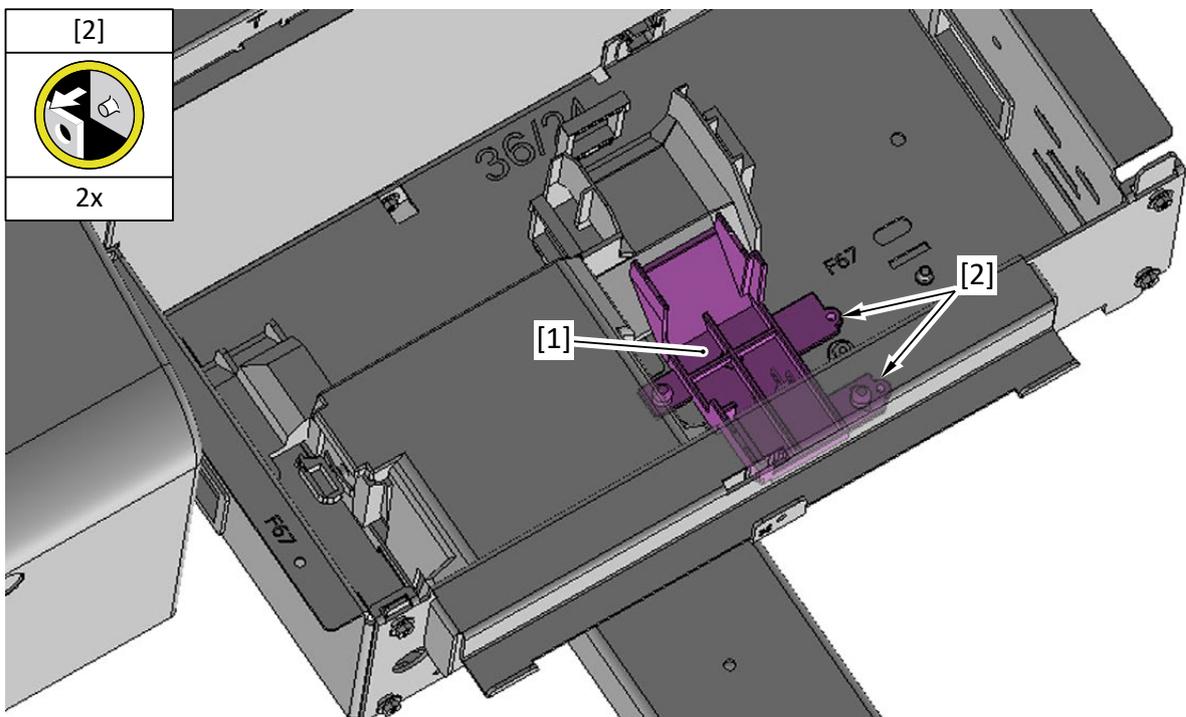
8. Remove [1] the inlet cover.

TX-4200, TX-5420



9. Remove [1] the inlet case.

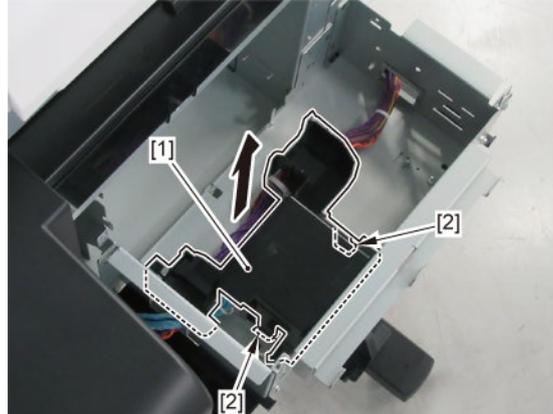
TX-4200, TX-5420



10. Remove [1] the cover of the RELAY PCB.

[2]

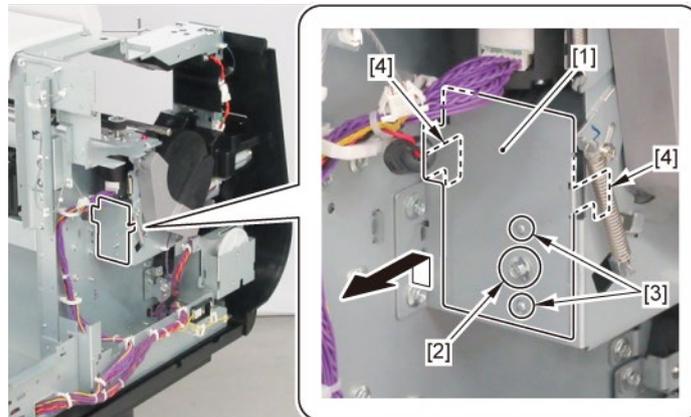
2 pcs



11. Remove [1] the plate.

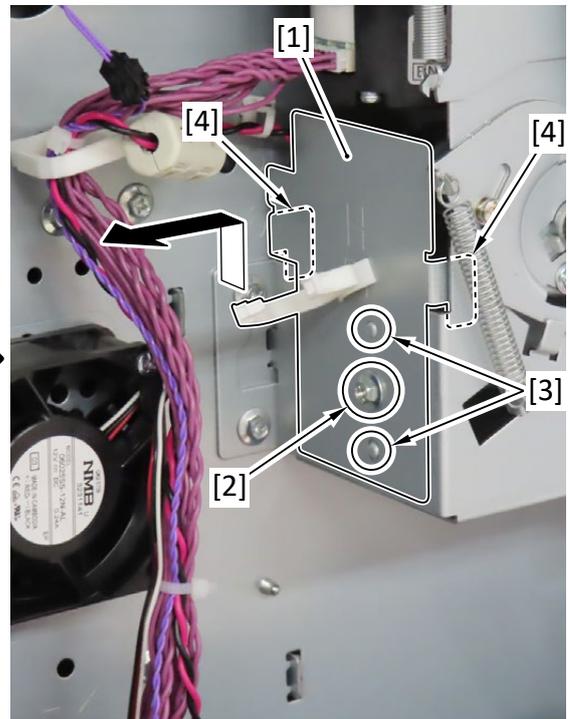
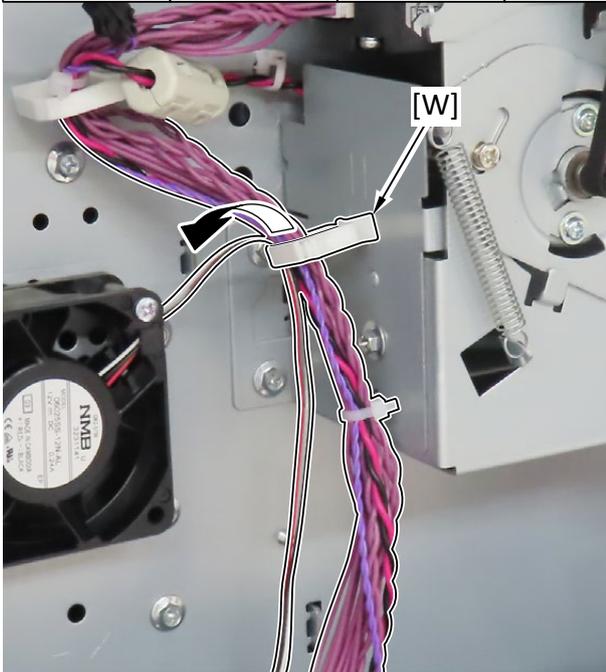
TX-4100, TX-5410

[2]	[3]	[4]
		
1 pc	2 pcs	2 pcs



TX-4200, TX-5420

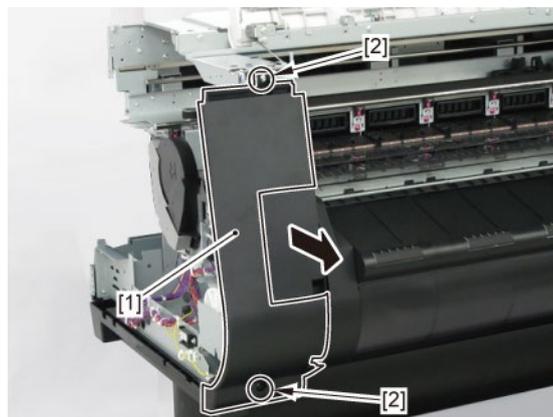
[W]	[2]	[3]	[4]
			
1x	1x	2x	2x



12. Remove [1] COVER FRONT L.

[2]

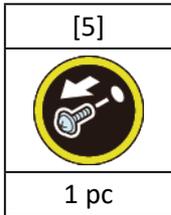
2 pcs



13. Remove [1] SPRING, EARTH and [2] CAP, ROLL COVER SHAFT.



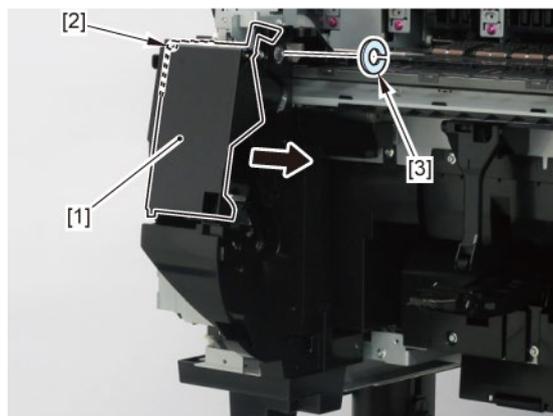
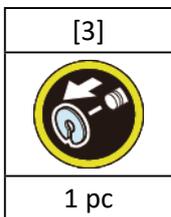
14. Remove [4] BUSH, ROLL COVER A.



15. Remove [6] the roll cover.



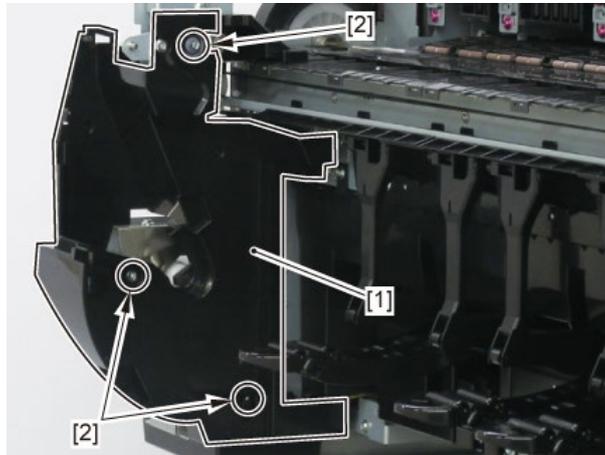
16. Remove [1] COVER, SPOOL L and [2] SPRING, SPOOL COVER.



17. Remove [1] HOLDER, SPOOL SIDE L.

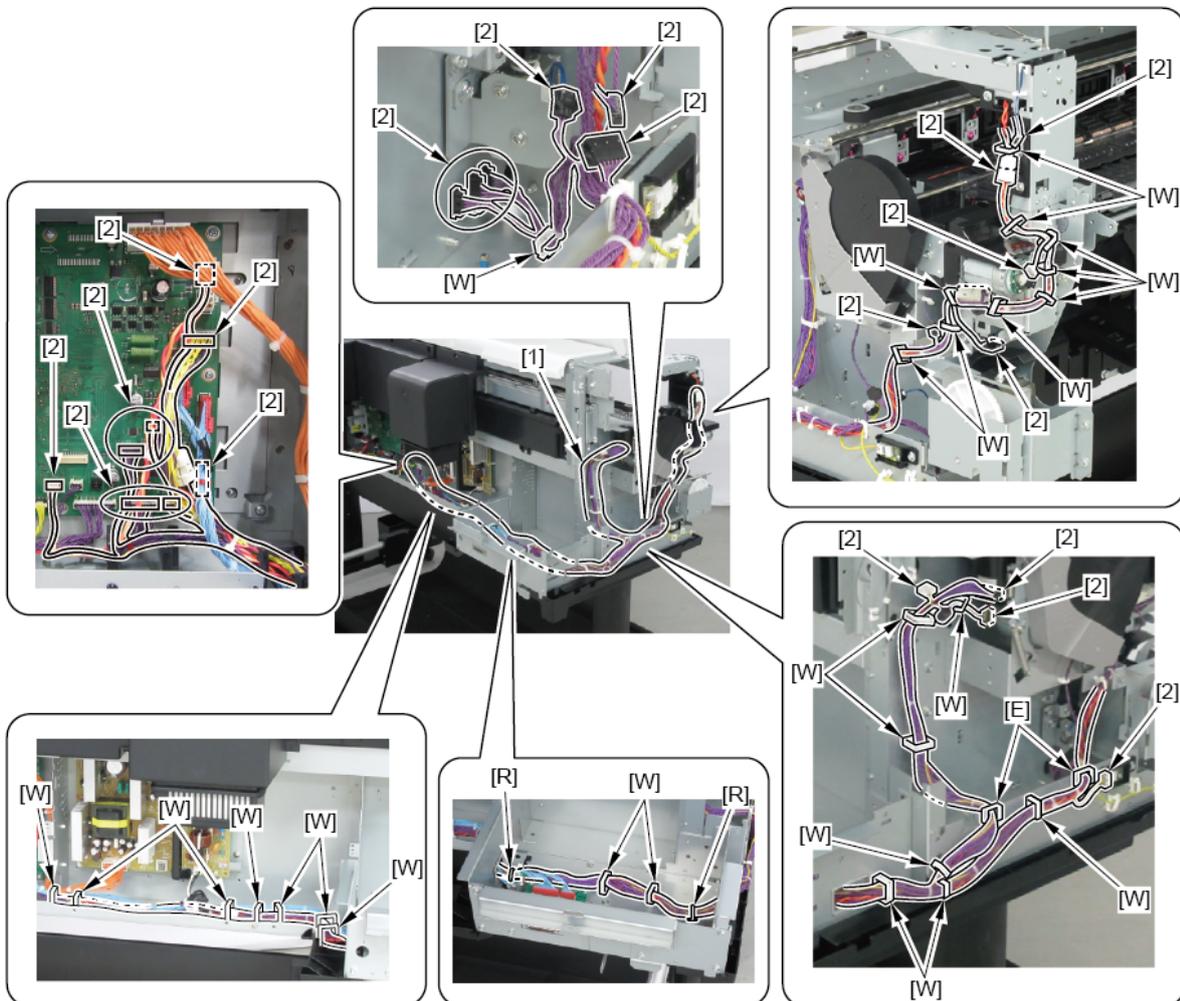
[2]

3 pcs



18. Disconnect [1] HARNESS ASS'Y, L.

[2]	[W]	[E]	[R]
			
24 pcs	26 pcs	2 pcs	2 pcs

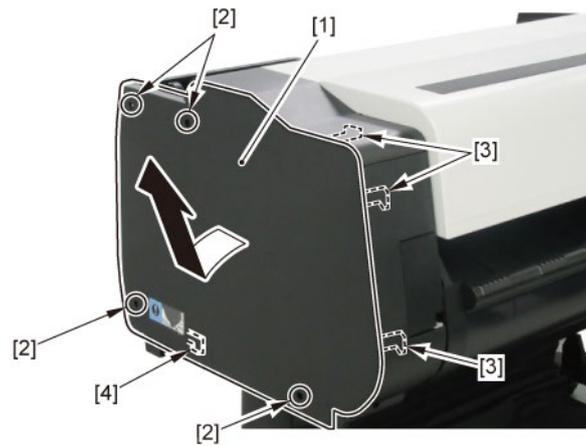


HARNESS ASS'Y, R (24" model)

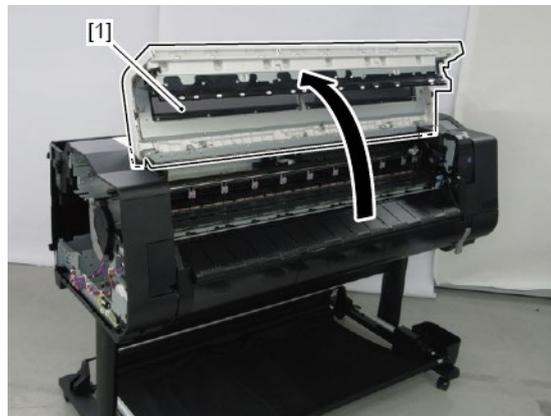
1. Remove [1] a set of

- COVER, SIDE L A
- COVER UNIT, SIDE L B
- CAP, SIDE COVER.

[2]	[3]	[4]
		
4 pcs	3 pcs	1 pc

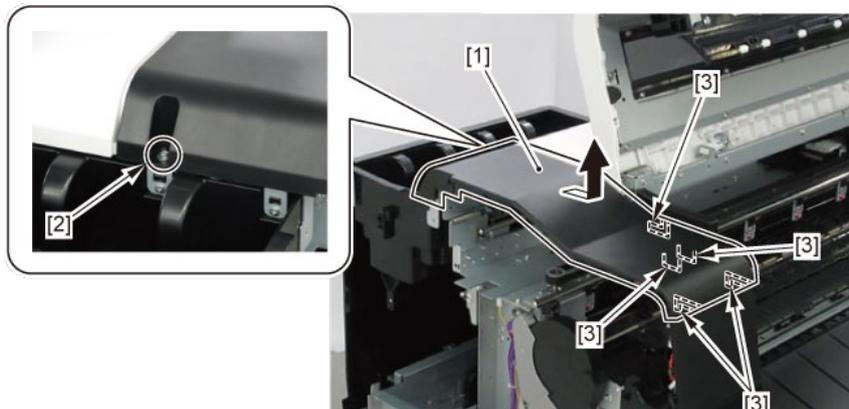


2. Open [1] the access cover.



3. Remove [1] COVER, TOP L.

[2]	[3]
	
1 pc	5 pcs



4. Remove [1] a set of

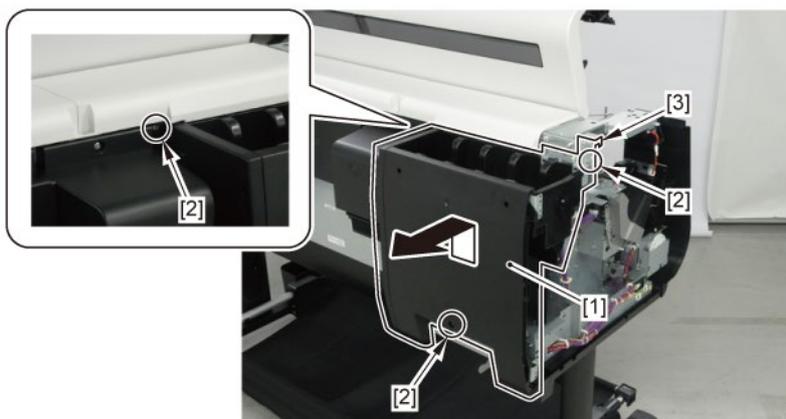
- BOX, INKTANK
- COVER, INKTANK BACK
- COVER, INKTANK L INSIDE.

TX-2100, TX-5210

4. Remove [1] INKTANK COVER UNIT, L.

TX-2200, TX-5220

[2]	[3]
	
3 pcs	1 pc



5. Open [1] the right ink tank cover.

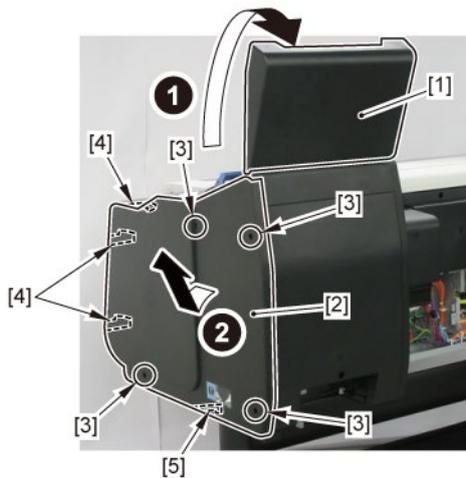
6. Remove [2] a set of

- COVER, SIDE R A

- COVER UNIT, SIDE R B

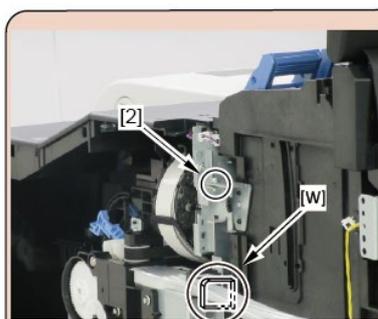
- CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



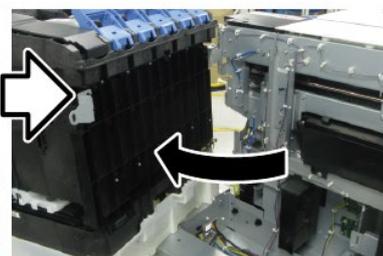
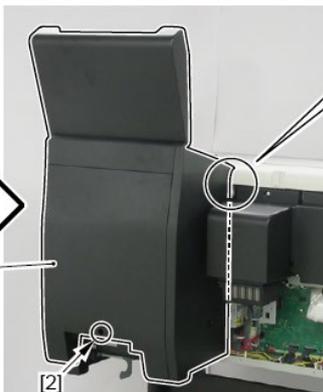
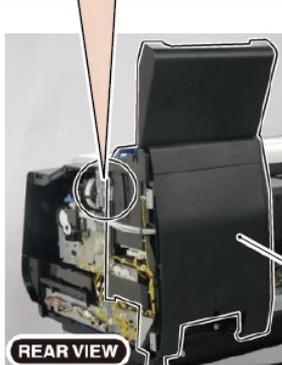
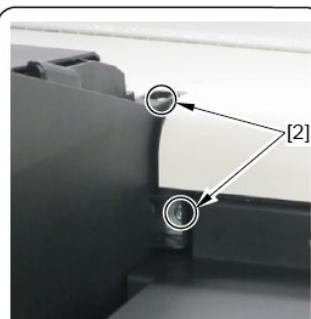
7. Open [1] the right ink unit.

[2]	[W]
	
4 pcs	1 pc



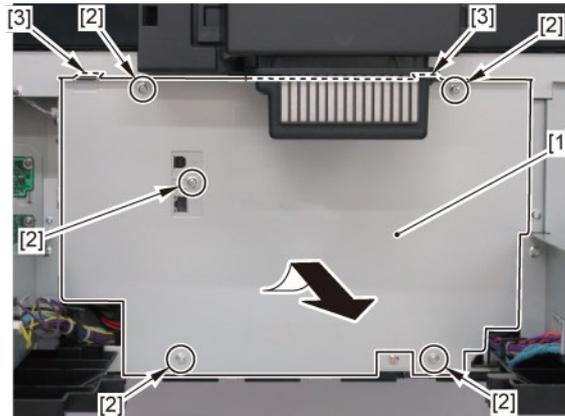
Before opening the unit:

- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.



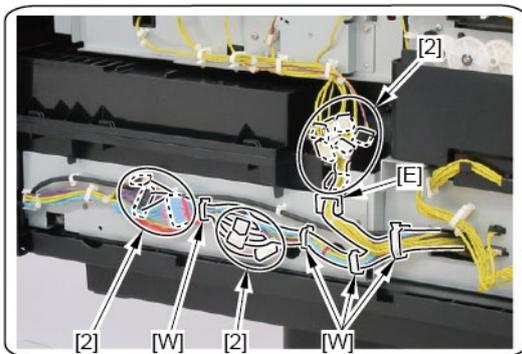
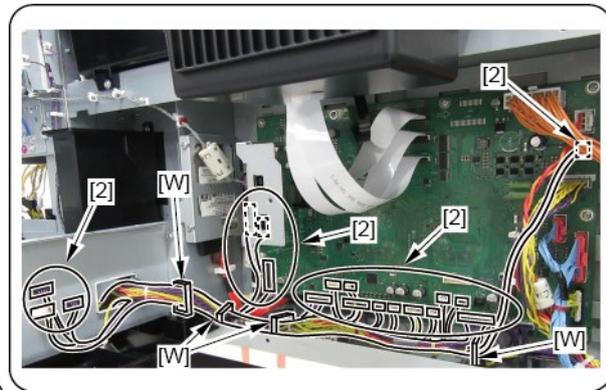
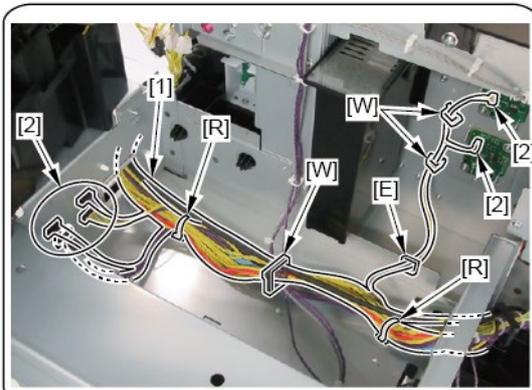
8. Remove [1] the plate.

[2]	[3]
	
5 pcs	2 pcs



9. Disconnect [1] HARNESS ASS'Y, R.

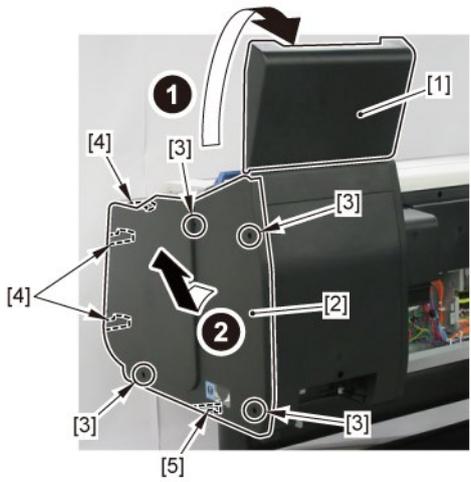
[2]	[W]	[E]	[R]
			
34 pcs	14 pcs	2 pcs	2 pcs



HARNESS ASS'Y, R (36" model, 44" model)

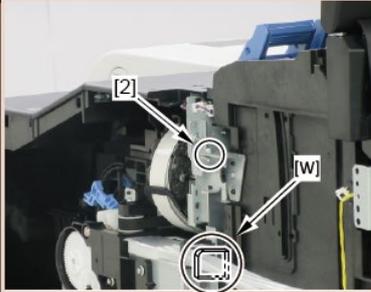
1. Open [1] the right ink tank cover.
2. Remove [2] a set of
 - COVER, SIDE R A
 - COVER UNIT, SIDE R B
 - CAP, SIDE COVER.

[3]	[4]	[5]
		
4 pcs	3 pcs	1 pc



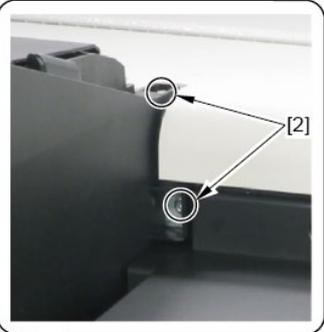
3. Open [1] the right ink unit.

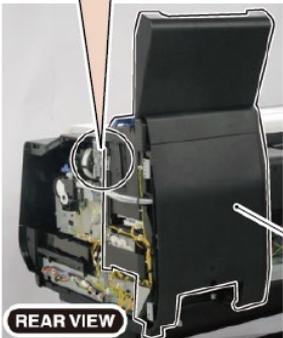
[2]	[W]
	
4 pcs	1 pc



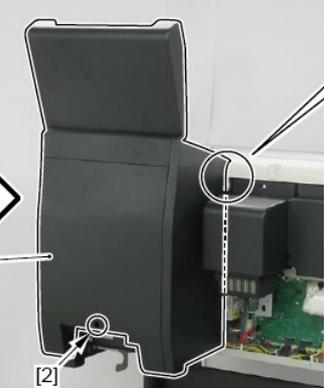
Before opening the unit:

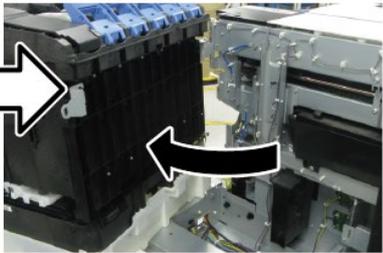
- Loosen [2] the screw.
- Remove [W] the wire saddle to prevent the tubes from buckled.





REAR VIEW

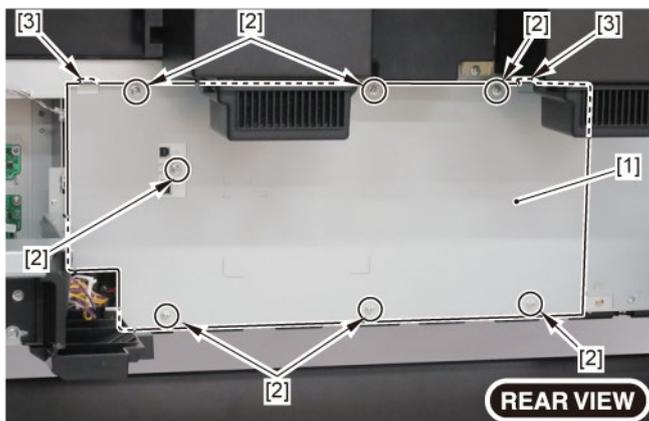




4. Remove [1] the plate.

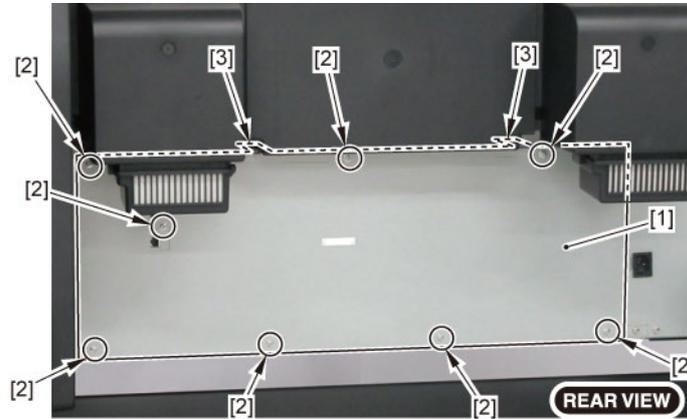
(36" model)

[2]	[3]
	
7 pcs	2 pcs



(44" model)

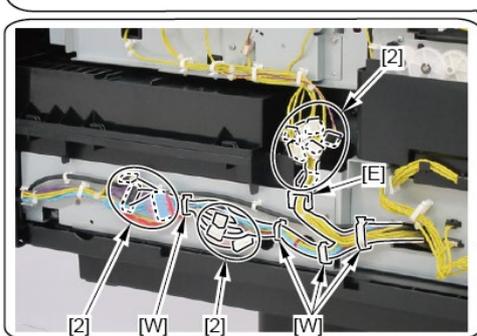
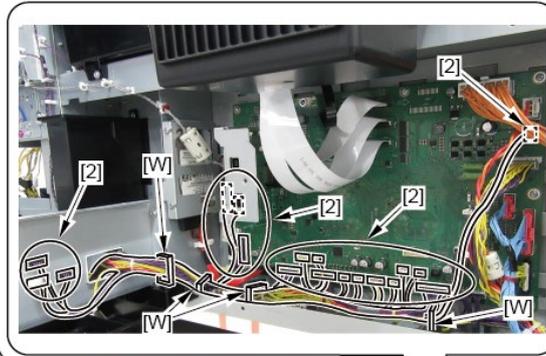
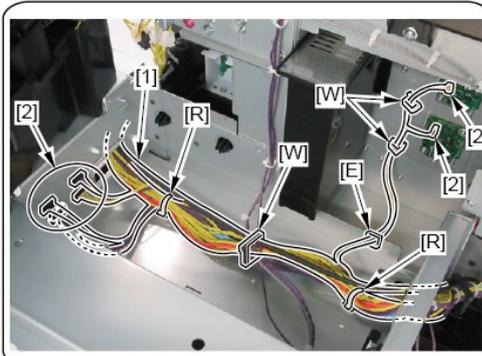
[2]	[3]
	
8 pcs	2 pcs



5. Disconnect [1] HARNESS ASS'Y, R.

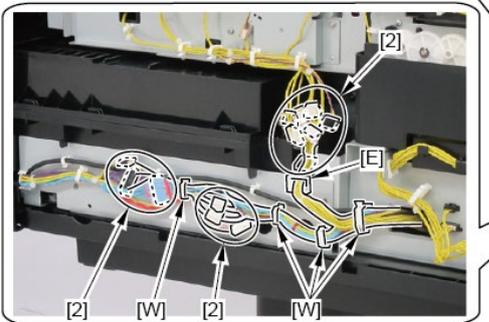
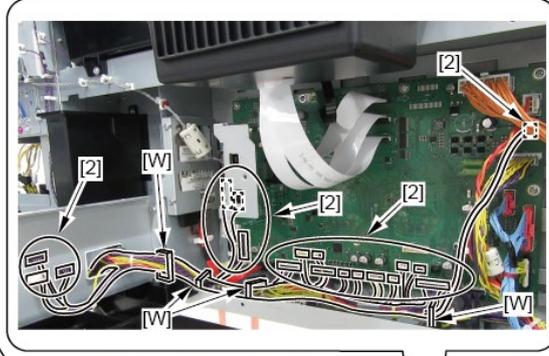
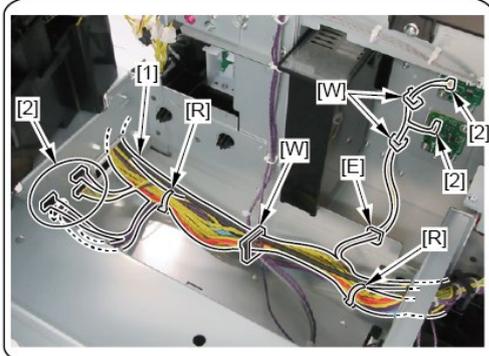
(36" model)

[2]	[W]	[E]	[R]
			
33 pcs	13 pcs	2 pcs	2 pcs



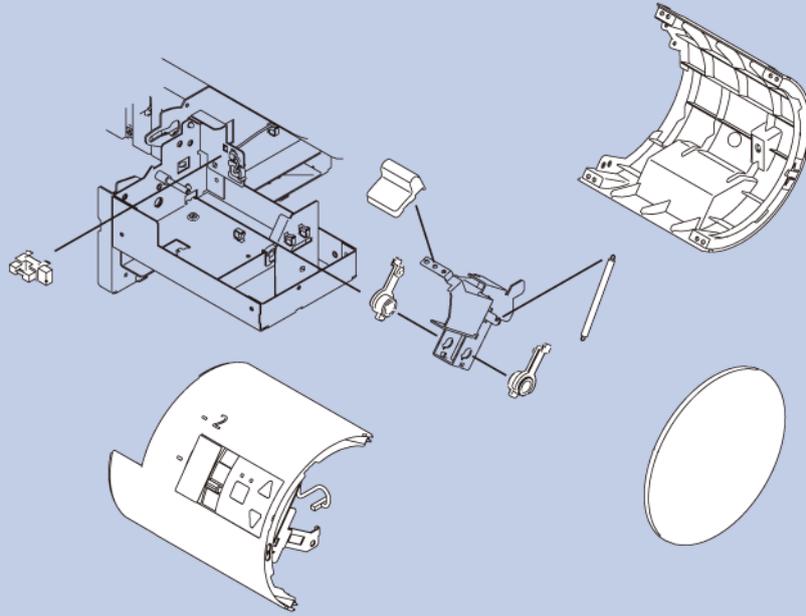
(44" model)

[2]	[W]	[E]	[R]
			
34 pcs	14 pcs	2 pcs	2 pcs

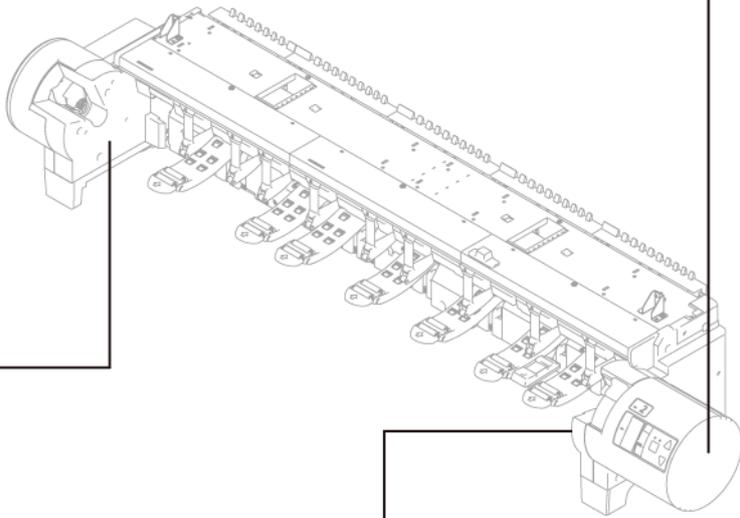
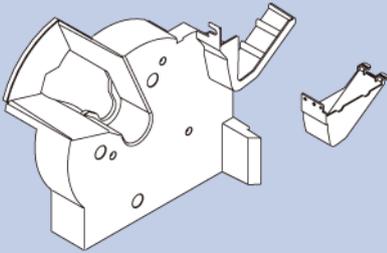


16. Lower Roll Unit (1)

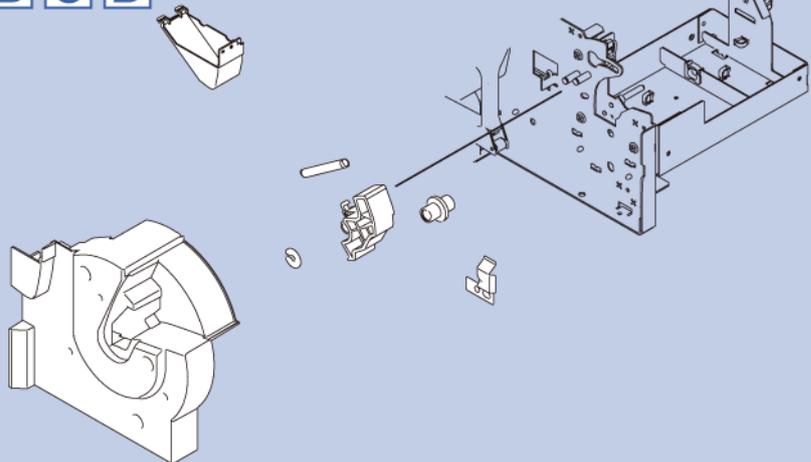
E F G H

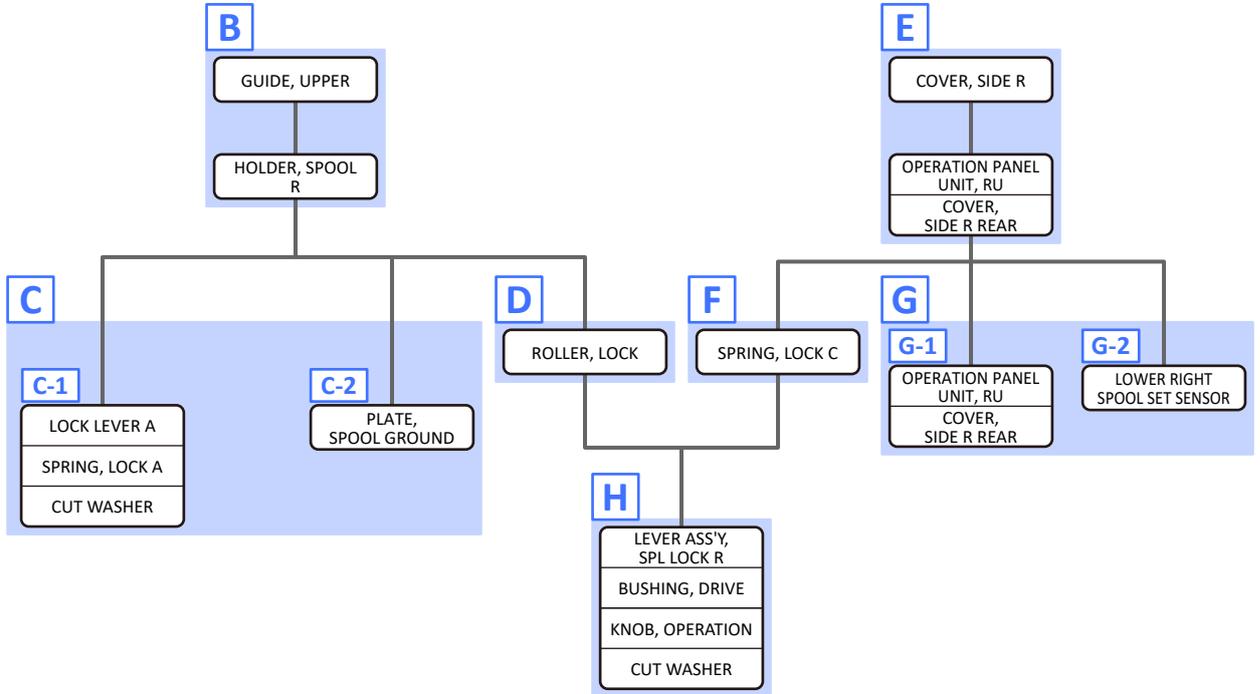
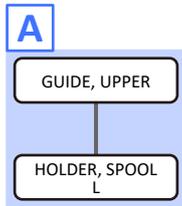


A



B C D

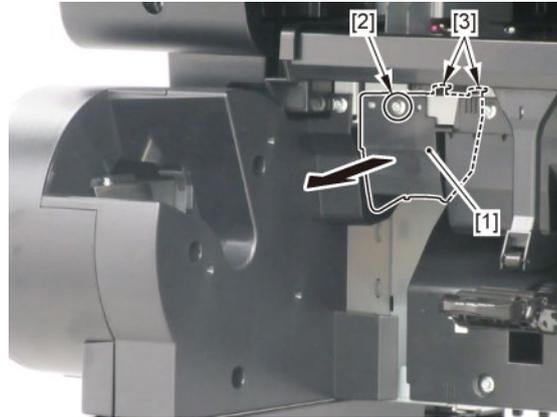




A

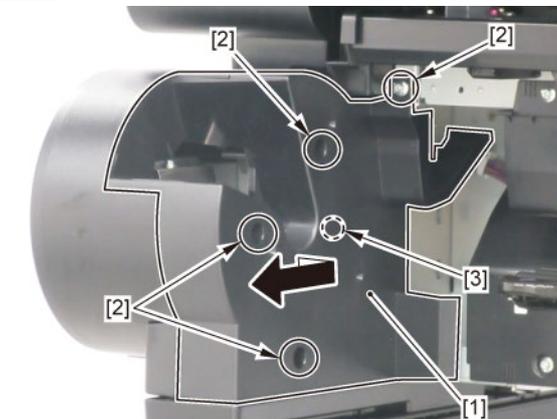
1. From the left side of the printer, remove [1] GUIDE, UPPER.

[2]	[3]
	
1 pc	2 pcs



2. Remove [1] HOLDER, SPOOL L.

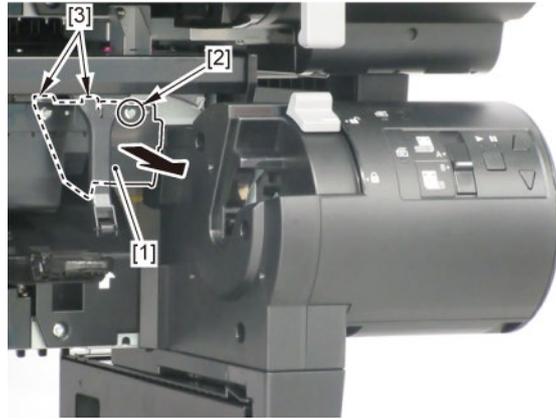
[2]	[3]
	
4 pcs	1 pc



B

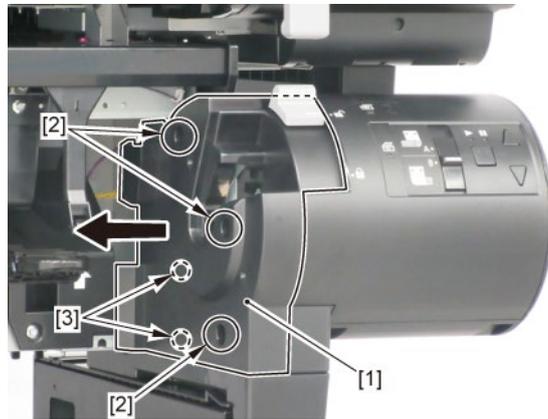
1. From the right side of the printer, remove [1] GUIDE, UPPER.

[2]	[3]
	
1 pc	2 pcs



2. Remove [1] HOLDER, SPOOL R.

[2]	[3]
	
3 pcs	2 pcs



C

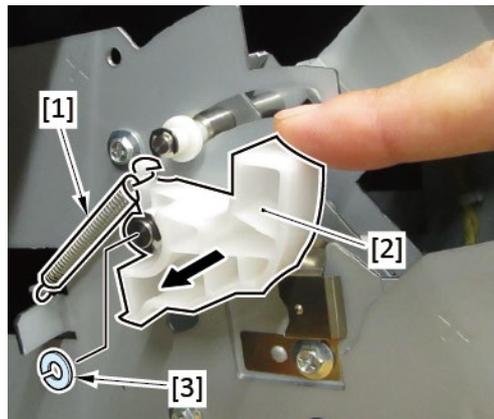
1. Remove all the parts of Group B.

C-1

2. Remove [1] SPRING, LOCK A, then remove [2] LOCK LEVER A.

[3]

1 pc each

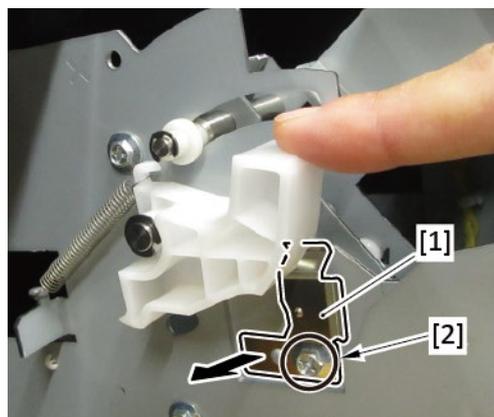


C-2

2. Remove [1] PLATE, SPOOL GROUND.

[2]

1 pc

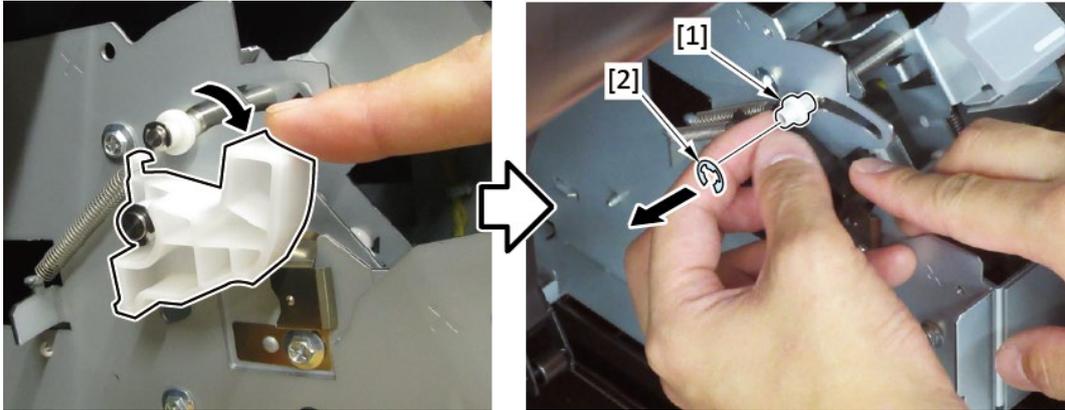


D

1. Remove all the parts of Group B.
2. Remove [1] ROLLER, LOCK.

[2]

1 pc

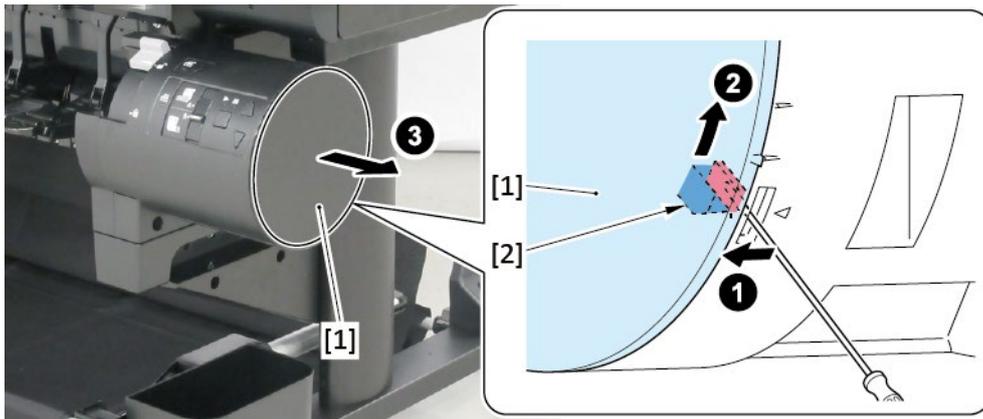


E

1. Remove [1] COVER, SIDE R.

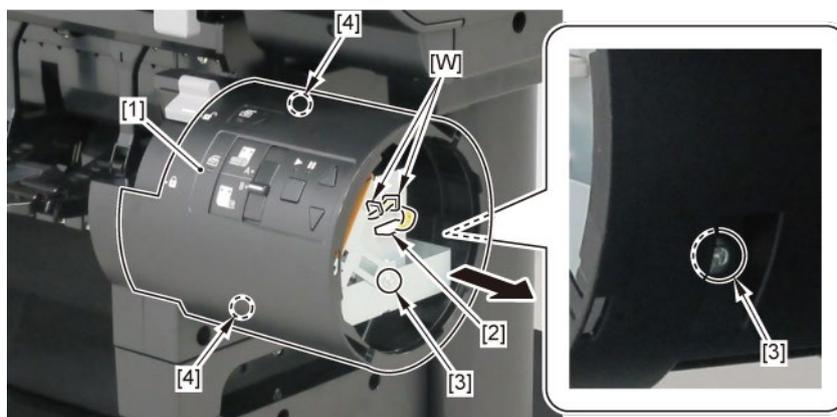
[2]

1 pc



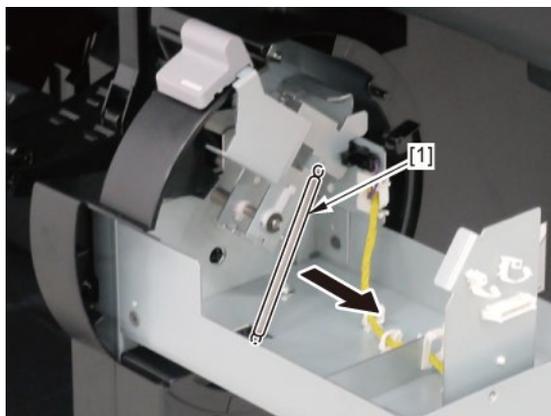
2. Remove [1] a set of
 - OPERATION PANEL UNIT, RU
 - COVER, SIDE R REAR.

[2]	[3]	[4]	[W]
			
1 pc	2 pcs	2 pcs	2 pcs



F

1. Remove all the parts of Group E.
2. Remove [1] SPRING, LOCK C.



G

1. Remove all the parts of Group E.

G-1

2. Remove [1] OPERATION PANEL UNIT, RU from the [2] COVER, SIDE R REAR.

[3]

4 pcs



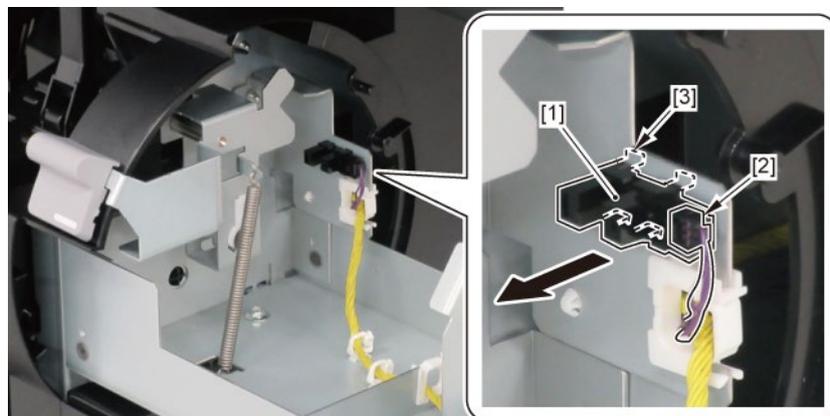
G-2

2. While pressing and holding [1] the spool lock lever downward, lower [2] KNOB, OPERATION.



3. Remove [1] LOWER RIGHT SPOOL SET SENSOR.

[2]	[3]
	
1 pc	4 pcs



H

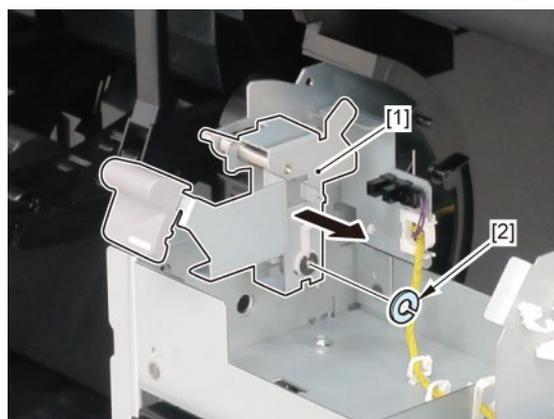
1. Remove all the parts of B, D, E, and F.

2. Remove [1] a set of

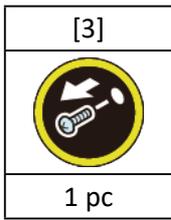
- LEVER ASS'Y, SPL LOCK R
- KNOB, OPERATION
- BUSHING, DRIVE.

[2]

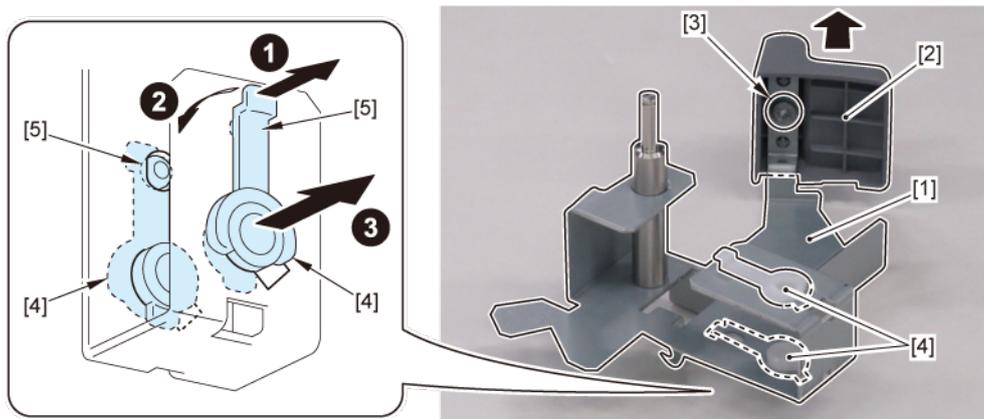
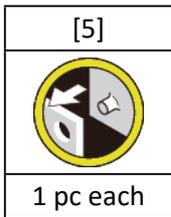
1 pc



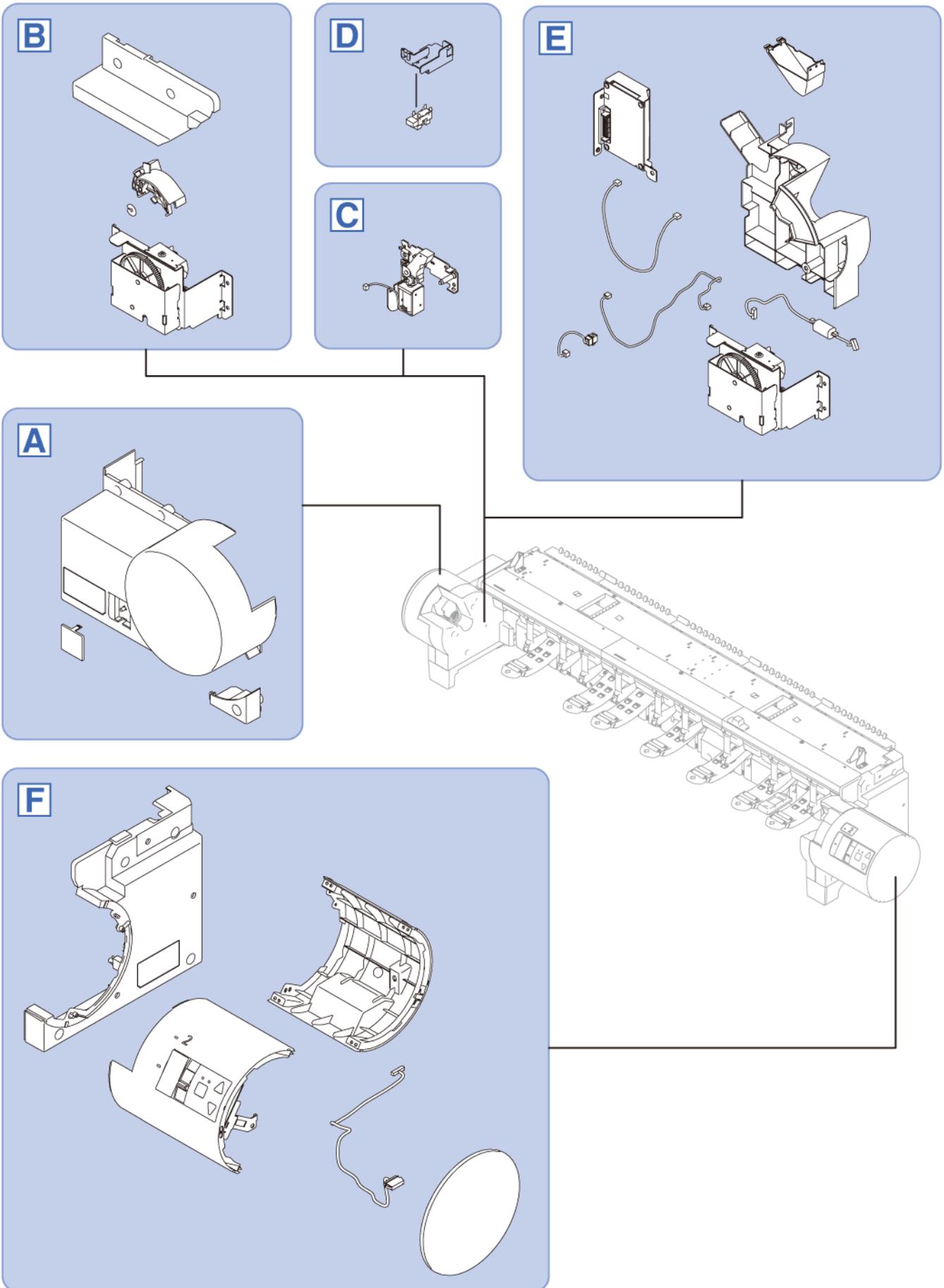
3. Remove [2] KNOB, OPERATION from [1] LEVER ASS'Y, SPL LOCK R.

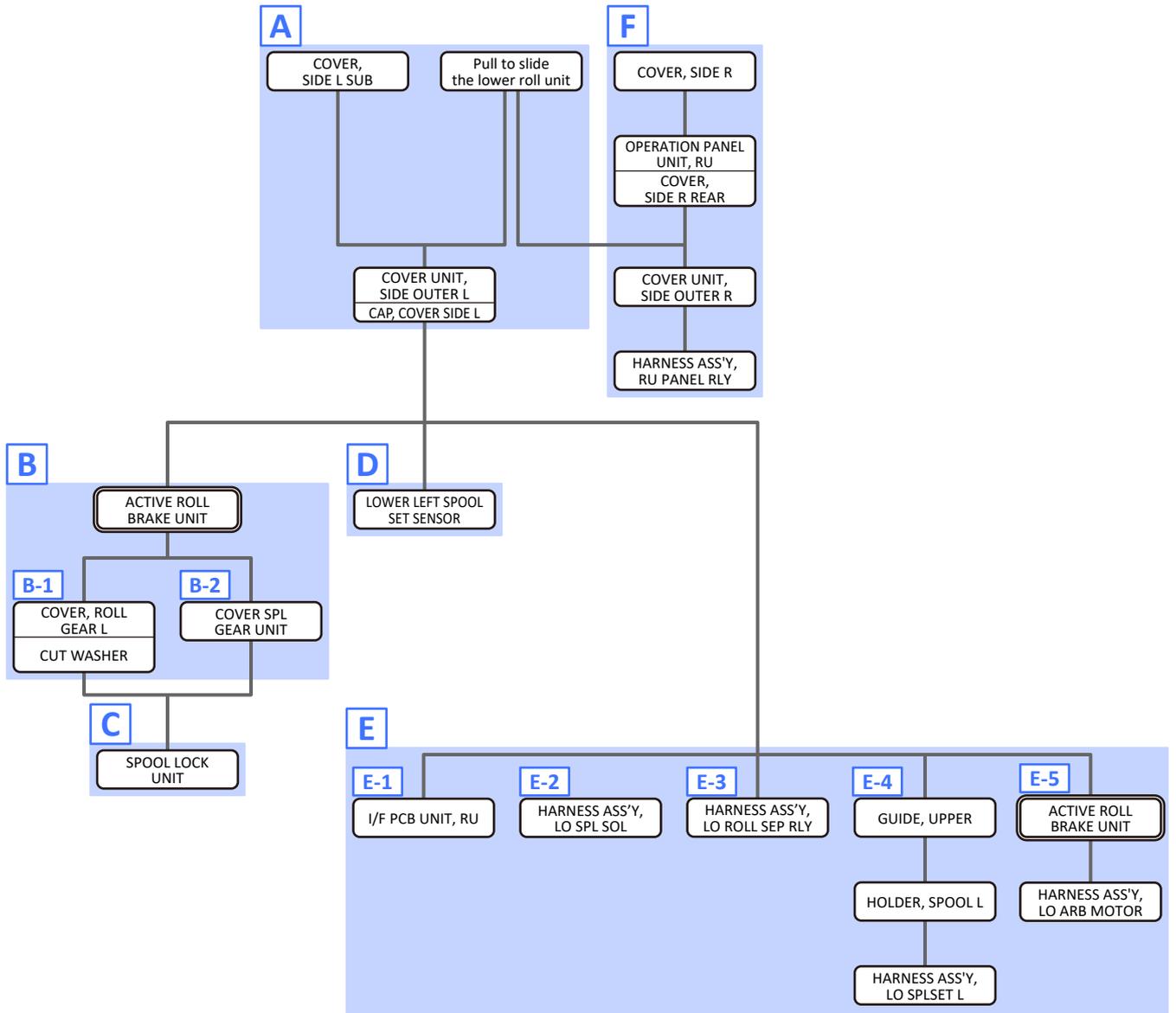


4. Remove [4] BUSHING, DRIVE from [1] LEVER ASS'Y, SPL LOCK R.



17. Lower Roll Unit (2)

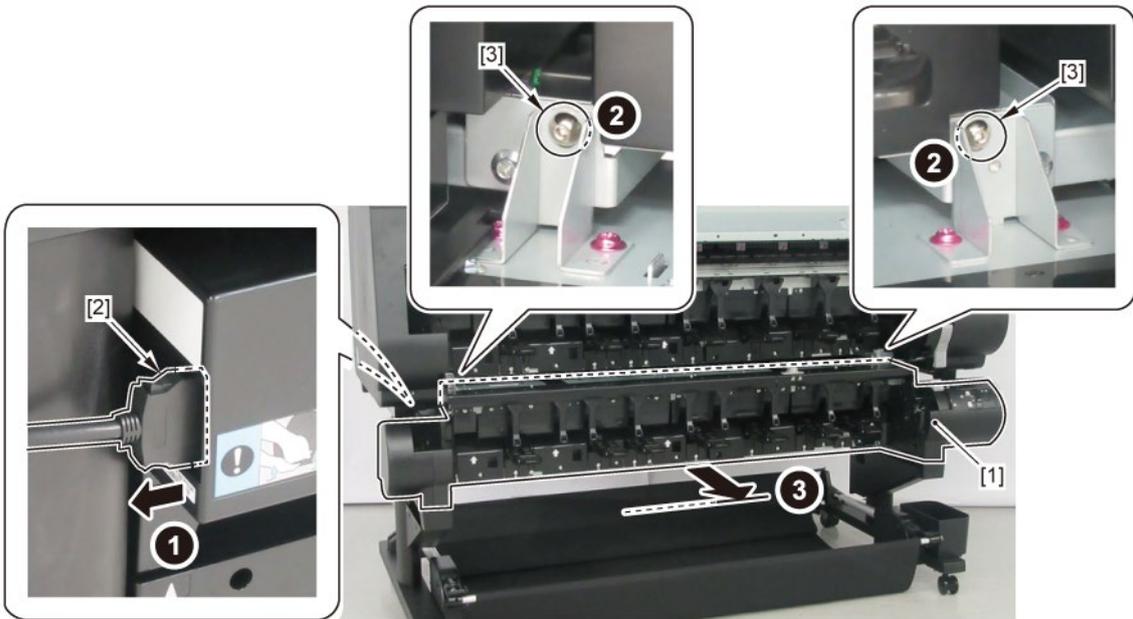




A

1. Pull [1] the lower roll unit toward you.

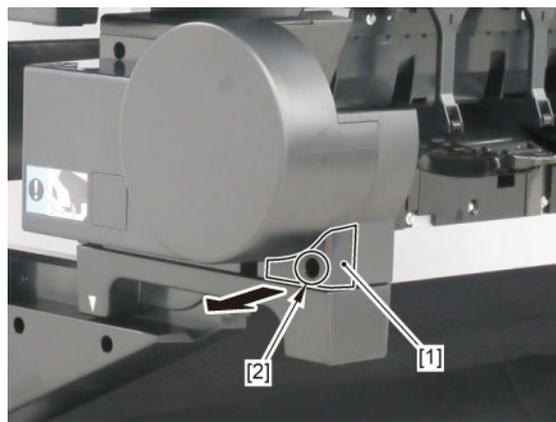
[2]	[3]
	
1 pc	2 pcs



2. Remove [1] COVER, SIDE L SUB.

[2]

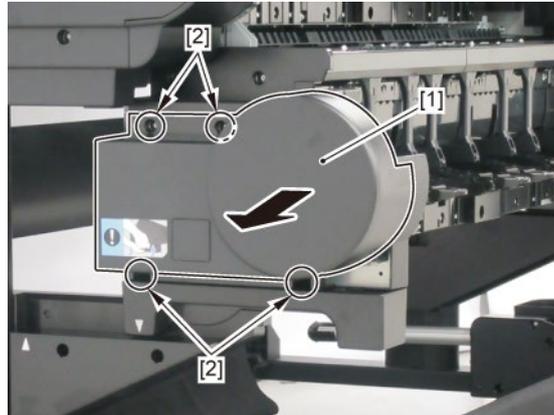
1 pc



3. Remove [1] a set of
 - COVER UNIT, SIDE OUTER L
 - CAP, COVER SIDE L.

[2]

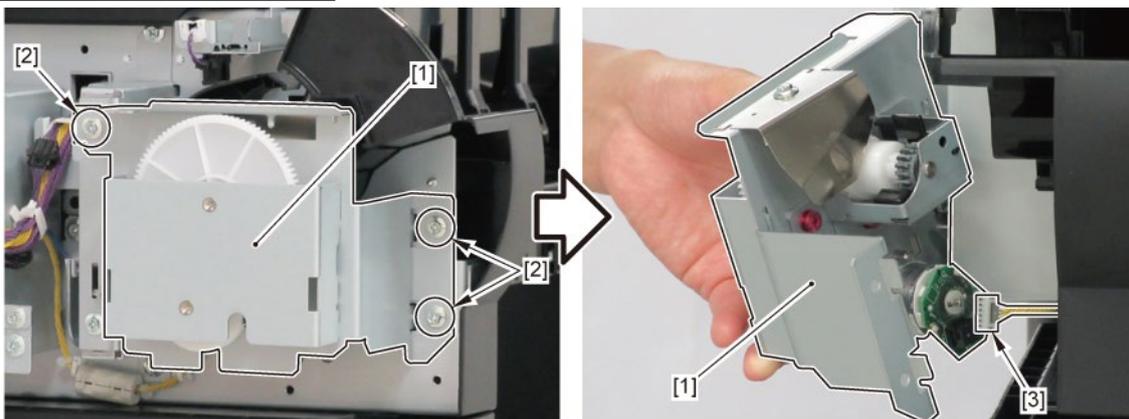
4 pcs



B

1. Remove all the parts of Group A.
2. Remove [1] ACTIVE ROLL BRAKE UNIT.

[2]	[3]
	
3 pcs	1 pc

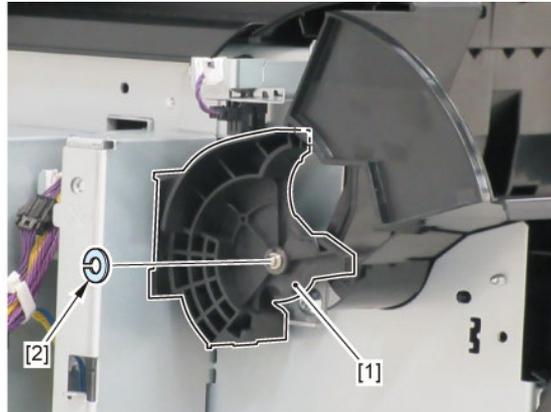


B-1

3. Remove [1] COVER SPL GEAR UNIT.

[2]

1 pc

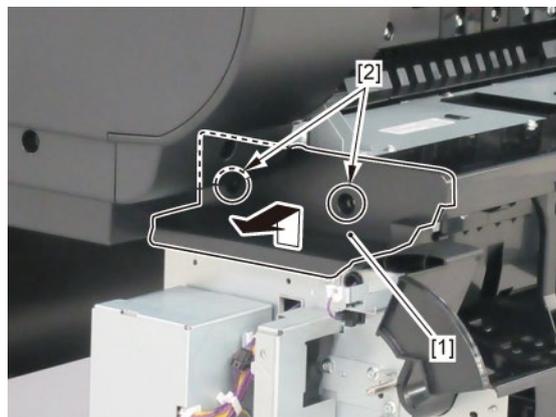


B-2

3. Remove [1] COVER, SIDE TOP L.

[2]

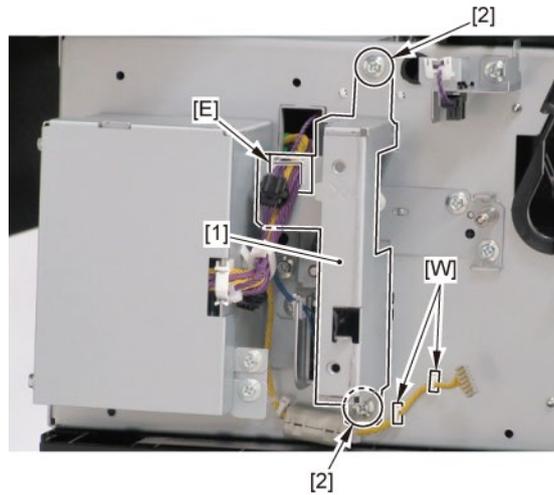
2 pcs



C

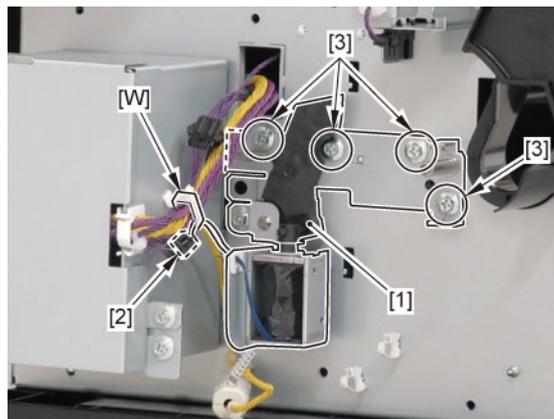
1. Remove all the parts of Groups A and B.
2. Remove [1] the plate.

[2]	[W]	[E]
		
2 pcs	2 pcs	1 pc



3. Remove [1] SPOOL LOCK UNIT.

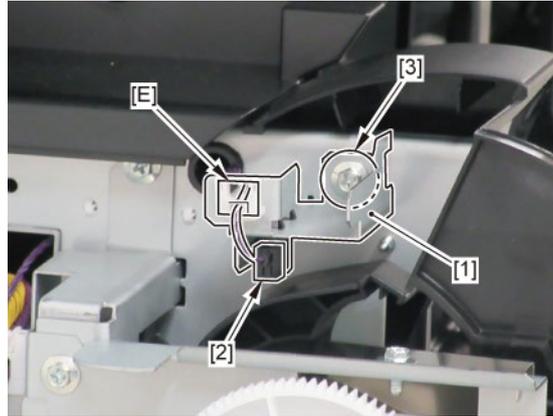
[2]	[3]	[W]
		
1 pc	4 pcs	1 pc



D

1. Remove all the parts of Group A.
2. Remove [1] the plate (with the LOWER LEFT SPOOL SET SENSOR).

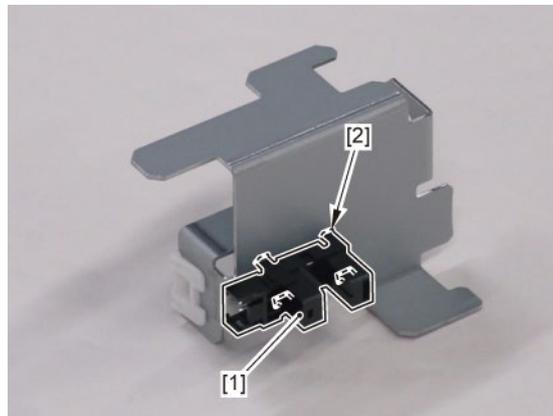
[2]	[3]	[E]
		
1 pc	1 pc	1 pc



3. Remove [1] LOWER LEFT SPOOL SET SENSOR.

[2]

4 pcs

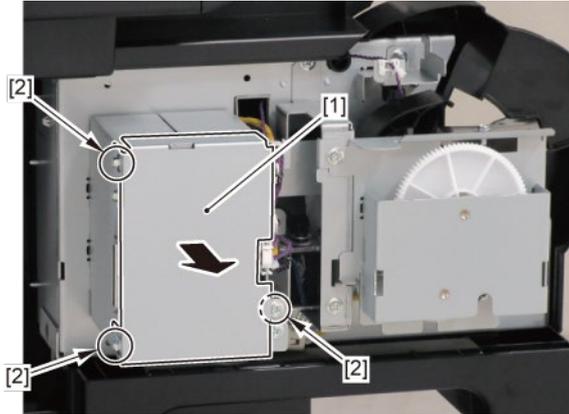


E

1. Remove all the parts of Group A.
2. Remove [1] the plate.

[2]

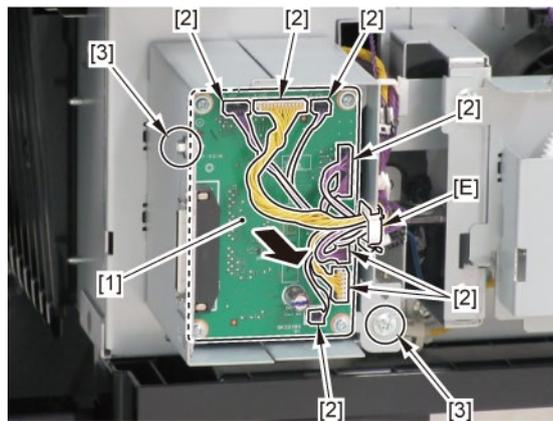
3 pcs



E-1

3. Remove [1] I/F PCB UNIT, RU.

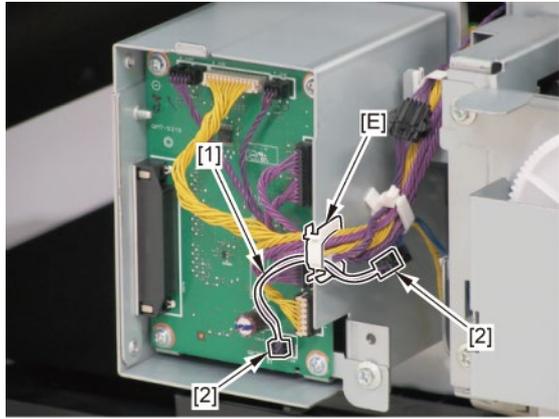
[2]	[3]	[E]
		
7 pcs	2 pcs	1 pc



E-2

3. Disconnect [1] HARNESS ASS'Y, LO SPL SOL.

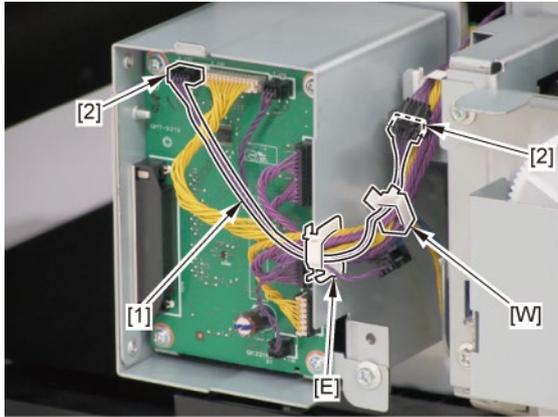
[2]	[E]
	
2 pcs	1 pc



E-3

3. Disconnect [1] HARNESS ASS'Y, LO ROLL SEP RLY.

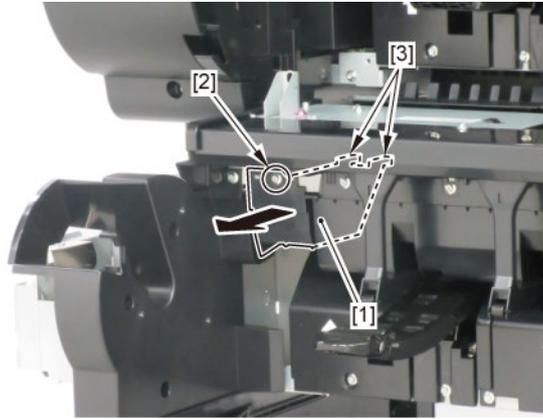
[2]	[W]	[E]
		
2 pcs	1 pc	1 pc



E-4

3. From the left side of the printer, remove [1] GUIDE, UPPER.

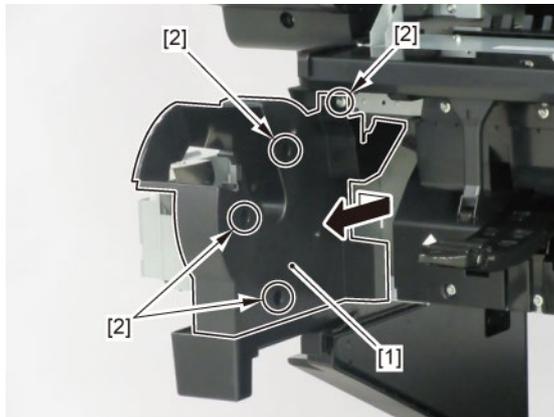
[2]	[3]
	
1 pc	2 pcs



4. Remove [1] HOLDER, SPOOL L.

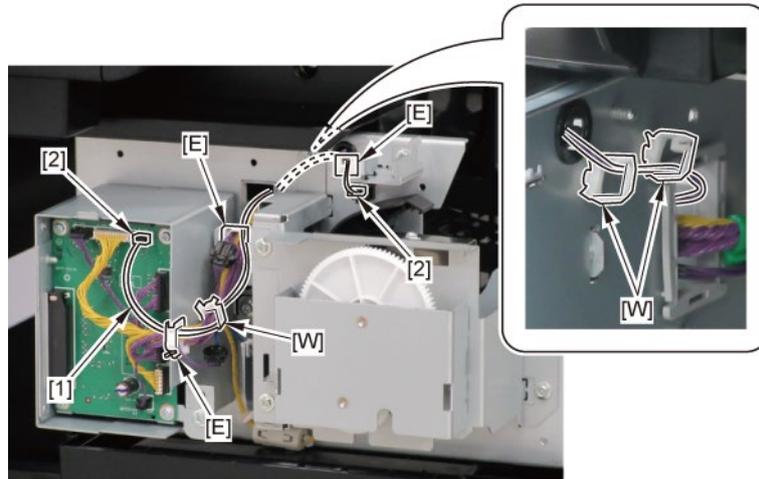
[2]

4 pcs



5. Disconnect [1] HARNESS ASS'Y, LO SPLSET L.

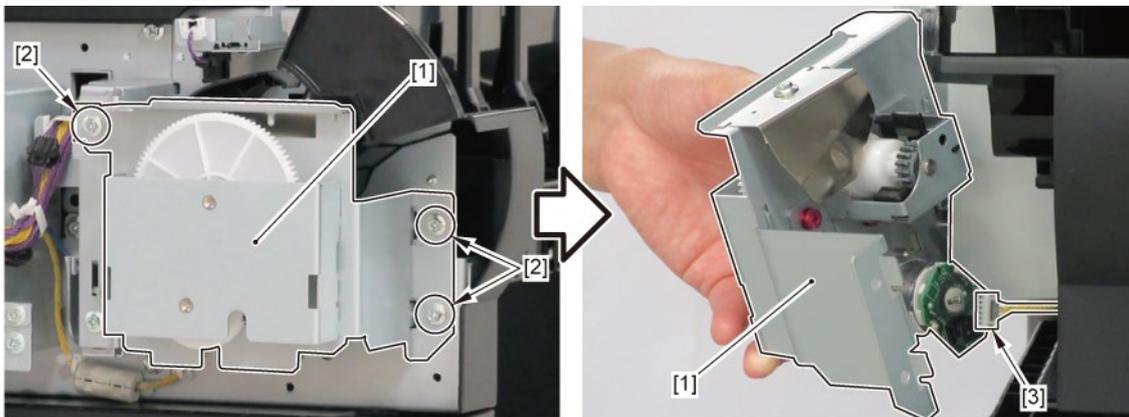
[2]	[W]	[E]
		
2 pcs	3 pcs	3 pcs



E-5

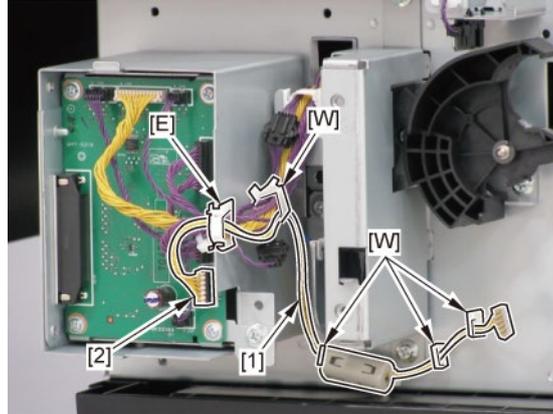
3. Remove [1] ACTIVE ROLL BRAKE UNIT.

[2]	[3]
	
3 pcs	1 pc



4. Disconnect [1] HARNESS ASS'Y, LO ARB MOTOR.

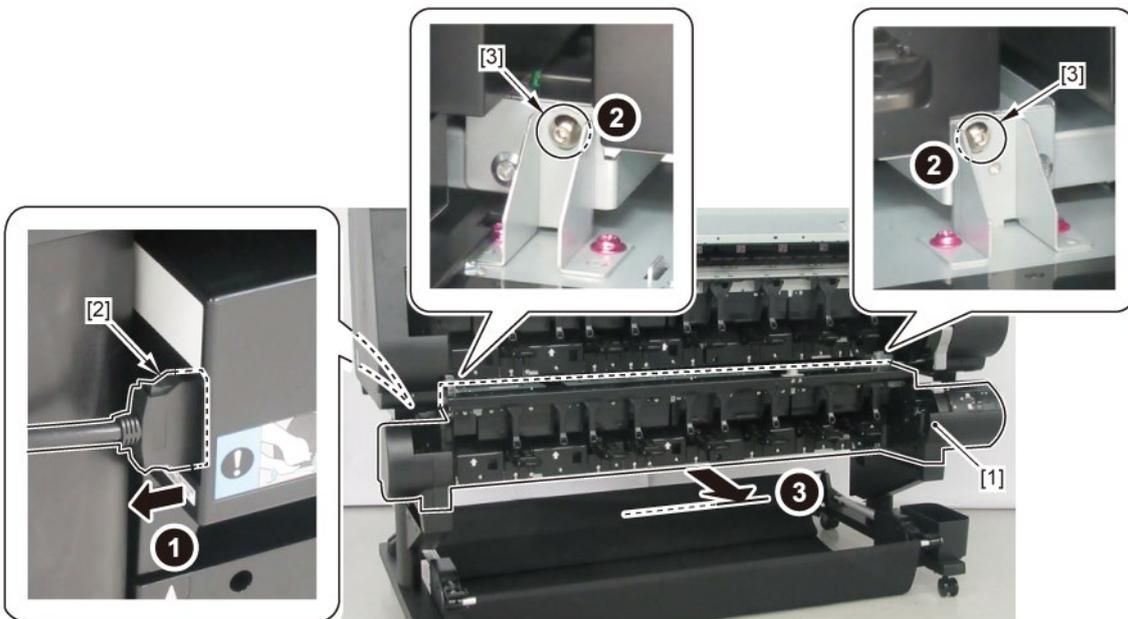
[2]	[W]	[E]
		
1 pc	4 pcs	1 pc



F

1. Pull [1] the lower roll unit toward you.

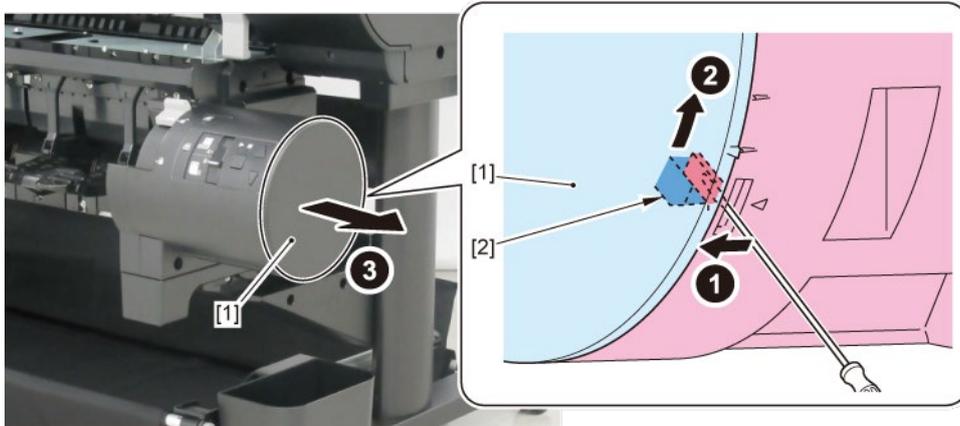
[2]	[3]
	
1 pc	2 pcs



2. Remove [1] COVER, SIDE R.

[2]

1 pc

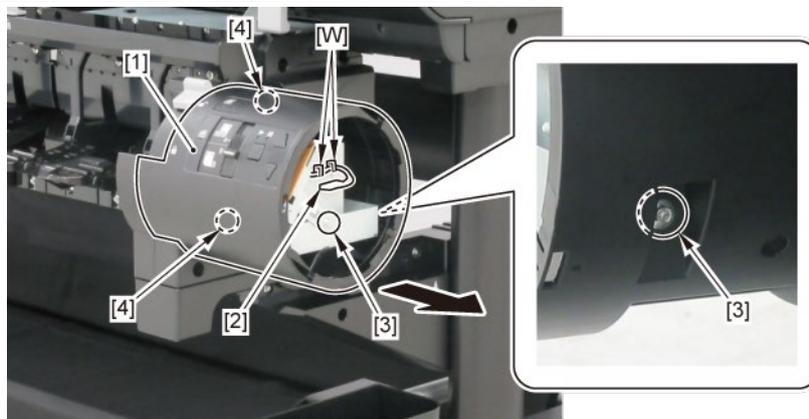


3. Remove [1] a set of

- OPERATION PANEL UNIT, RU

- COVER, SIDE R REAR.

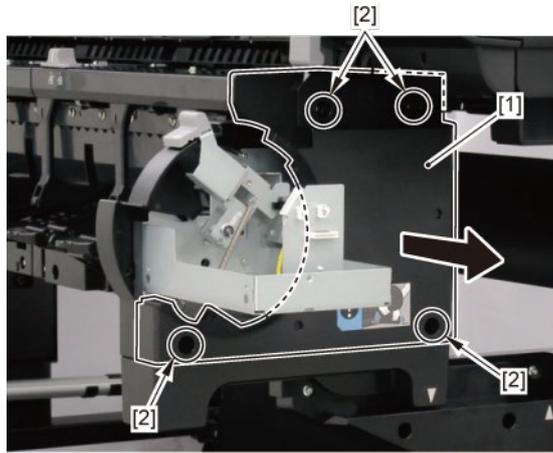
[2]	[3]	[4]	[W]
			
1 pc	2 pcs	2 pcs	2 pcs



4. Remove [1] COVER UNIT, SIDE OUTER R.

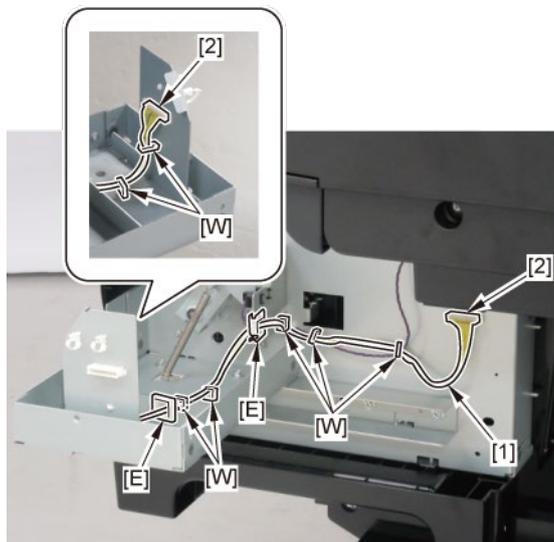
[2]

4 pcs

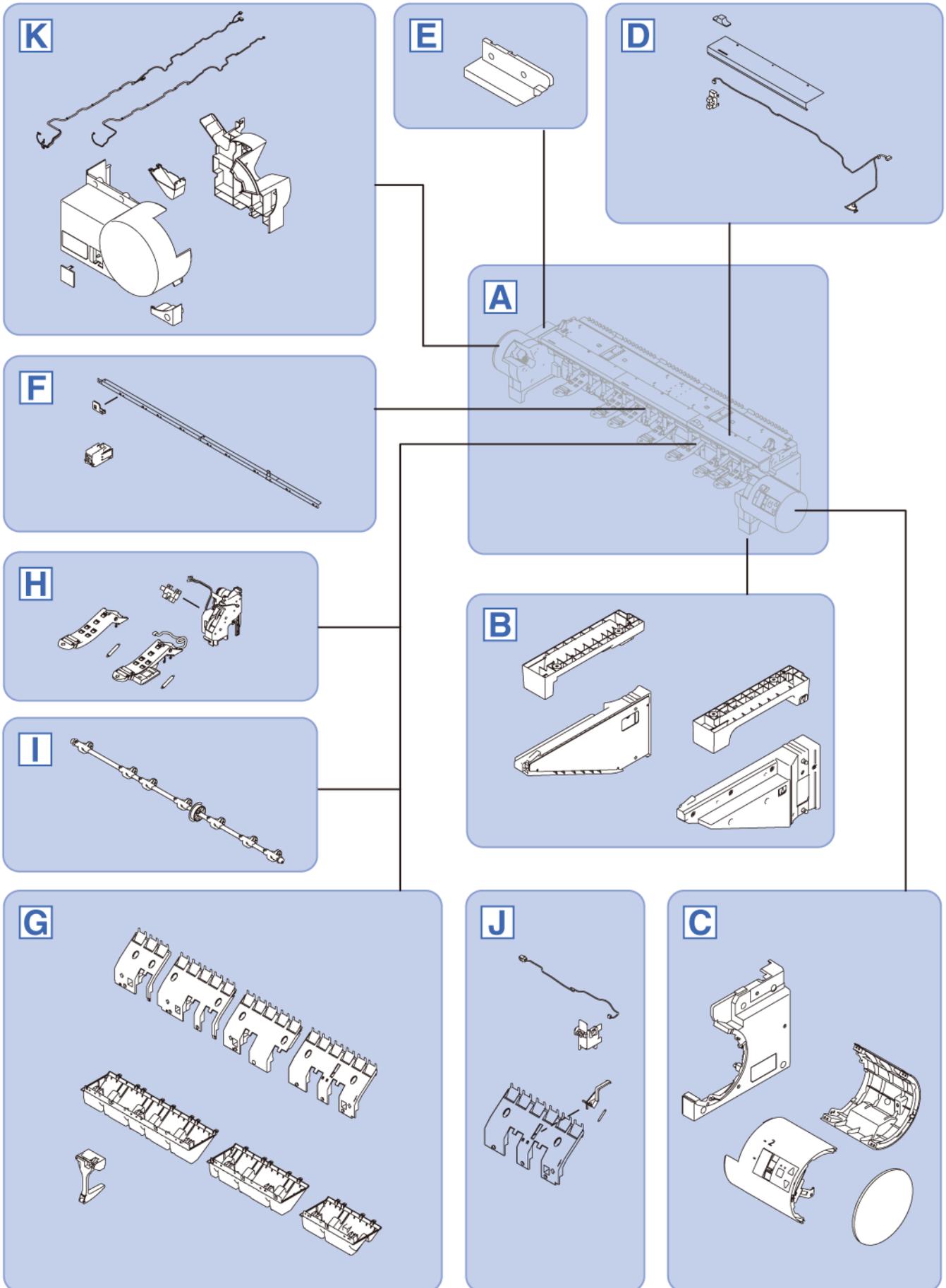


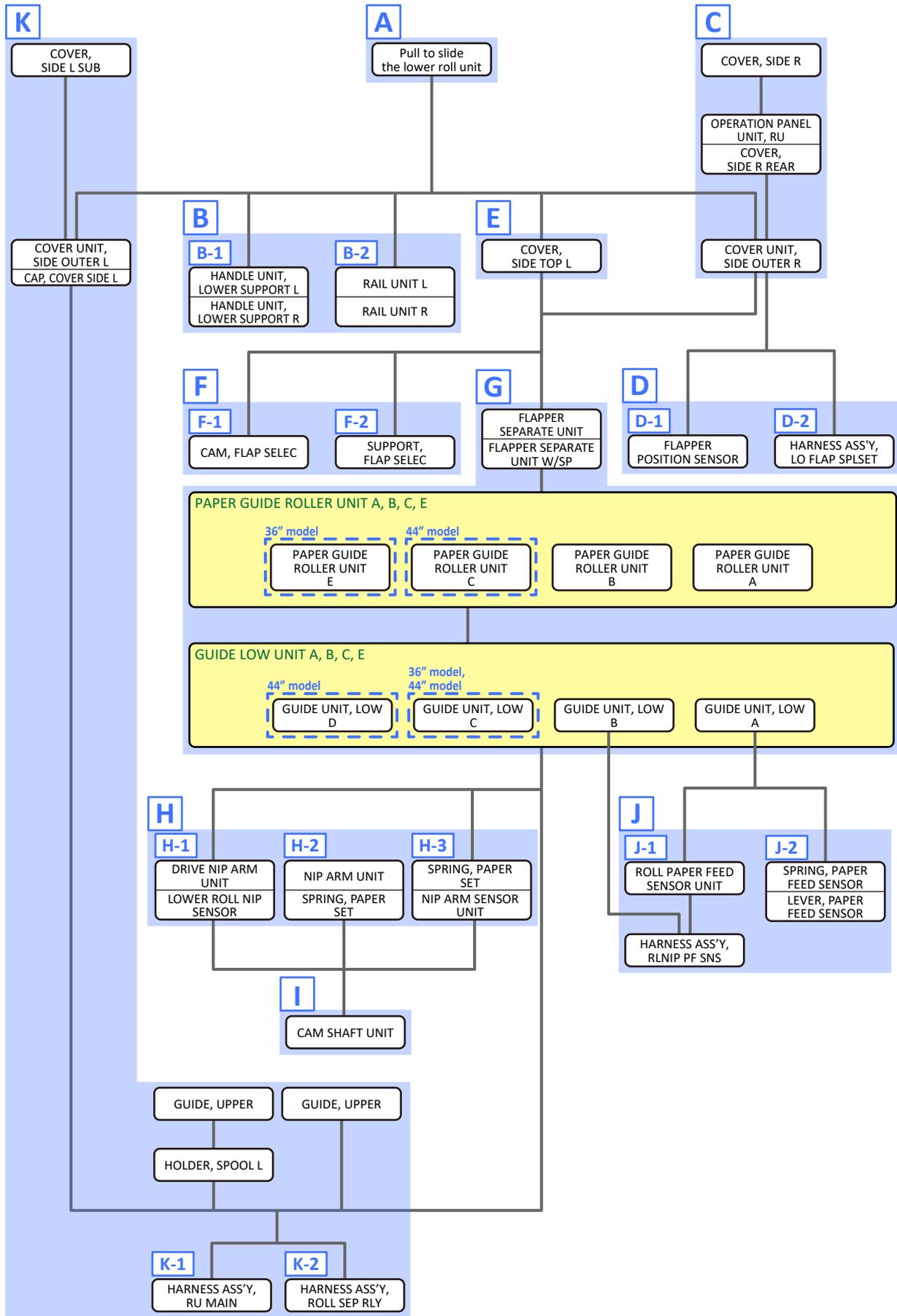
5. Disconnect [1] HARNESS ASS'Y, RU PANEL RLY.

[2]	[W]	[E]
		
2 pcs	7 pcs	2 pcs



18. Lower Roll Unit (3)

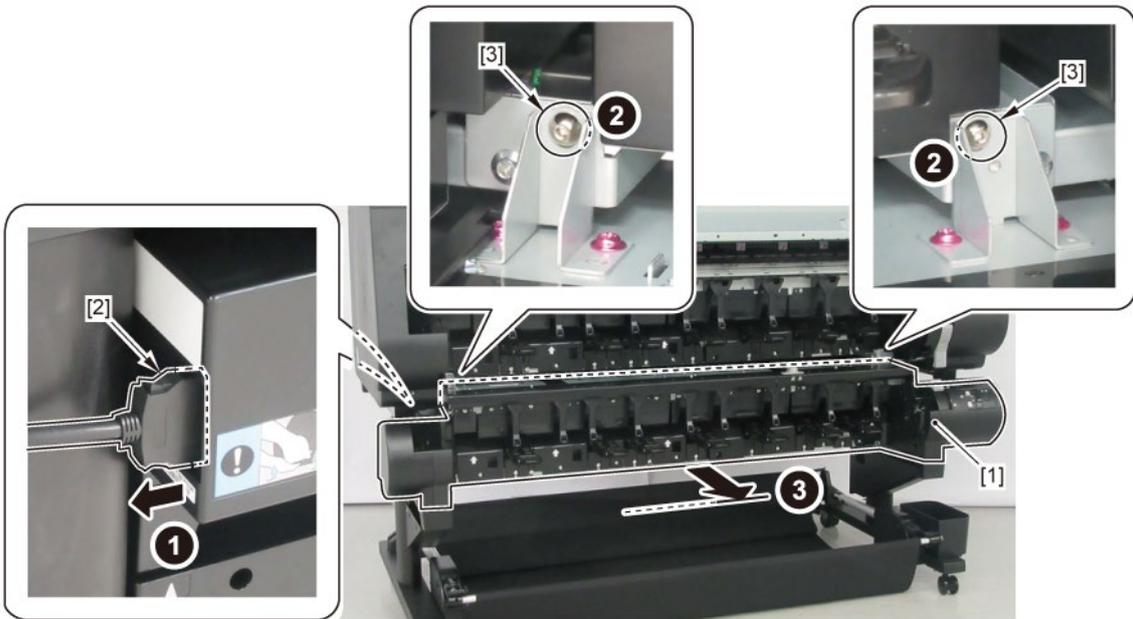




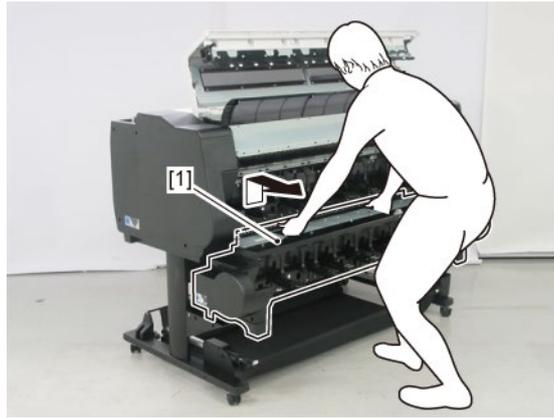
A

1. Pull [1] the lower roll unit toward you.

[2]	[3]
	
1 pc	2 pcs



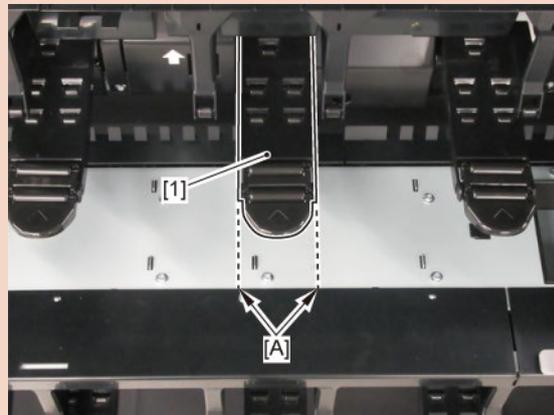
2. Take down [1] the lower roll unit on the floor.



Notes when assembling the unit:

Fit the frame line of the center [1] NIP ARM UNIT to [A] the markings at the upper surface of the lower roll unit as shown below.

Point

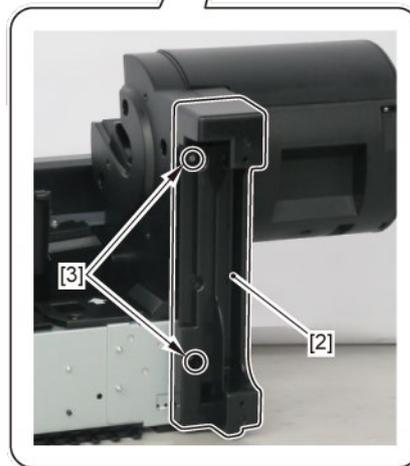
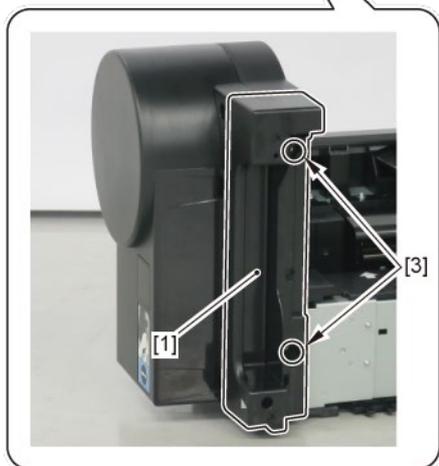
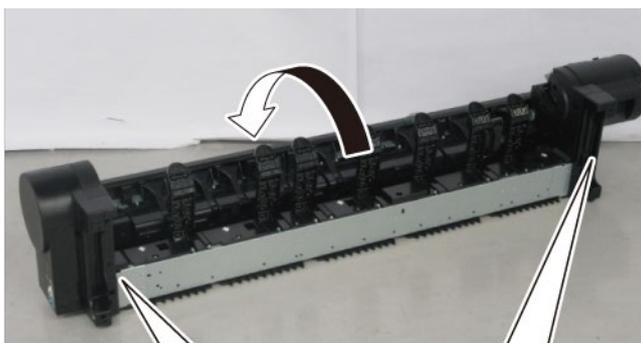
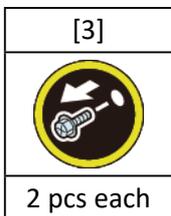


B

1. Remove all the parts of Group A.

B-1

2. Remove [1] HANDLE UNIT, LOWER SUPPORT L and [2] HANDLE UNIT, LOWER SUPPORT R.

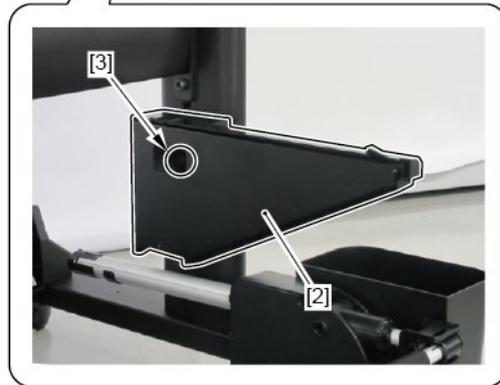
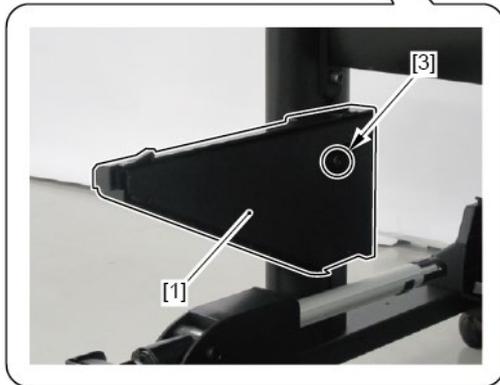


B-2

2. Remove [1] RAIL UNIT L and [2] RAIL UNIT R.

[3]

1 pc each

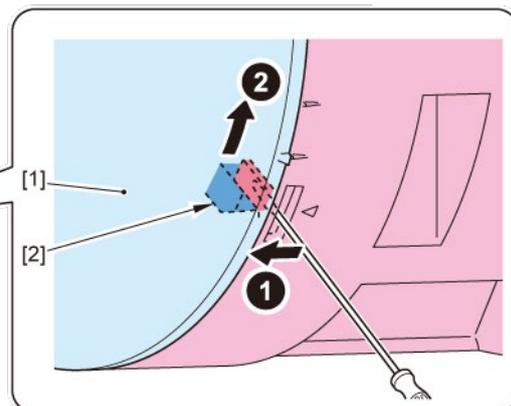
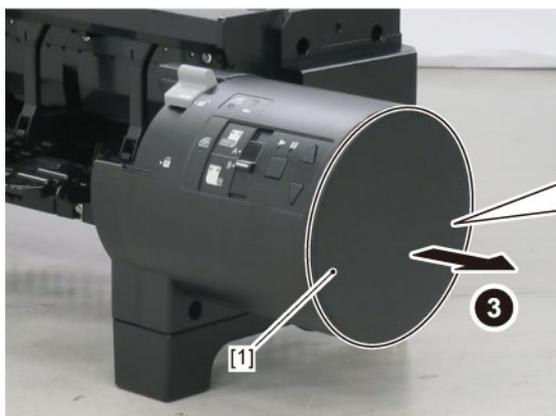


C

1. Remove all the parts of Groups A.
2. Remove [1] COVER, SIDE R.

[2]

1 pc

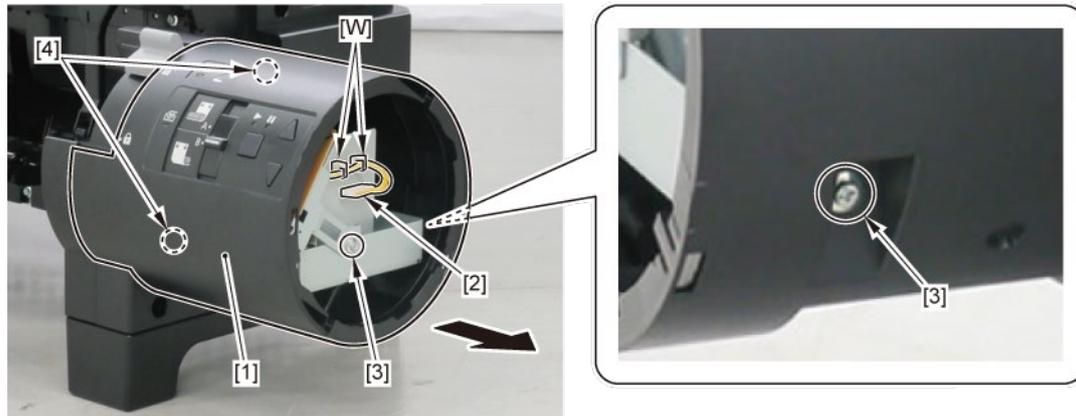


3. Remove [1] a set of

- OPERATION PANEL UNIT, RU

- COVER, SIDE R REAR.

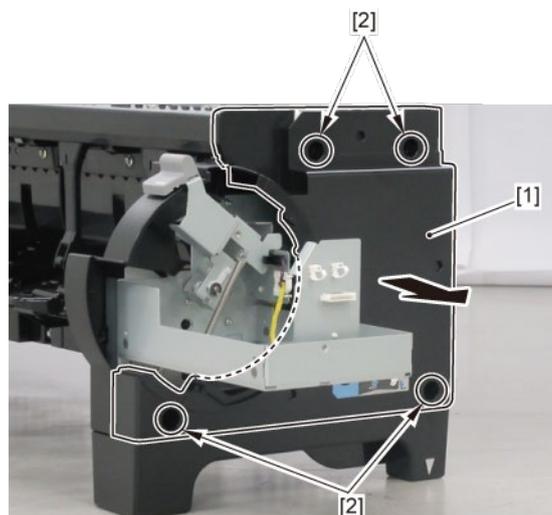
[2]	[3]	[4]	[W]
			
1 pc	2 pcs	2 pcs	2 pcs



4. Remove [1] COVER UNIT, SIDE OUTER R.

[2]

4 pcs

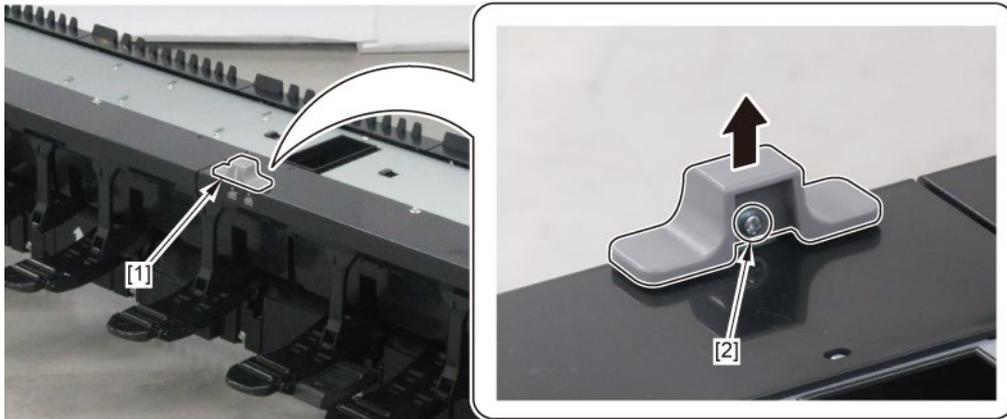


D

1. Remove all the parts of Groups A and C.
2. Remove [1] the cap.

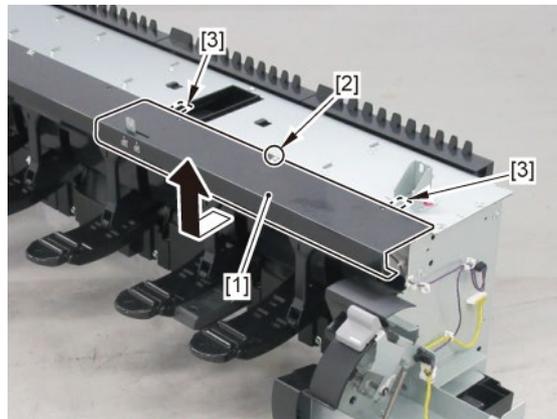
[2]

1 pc



3. Remove [1] the right top cover.

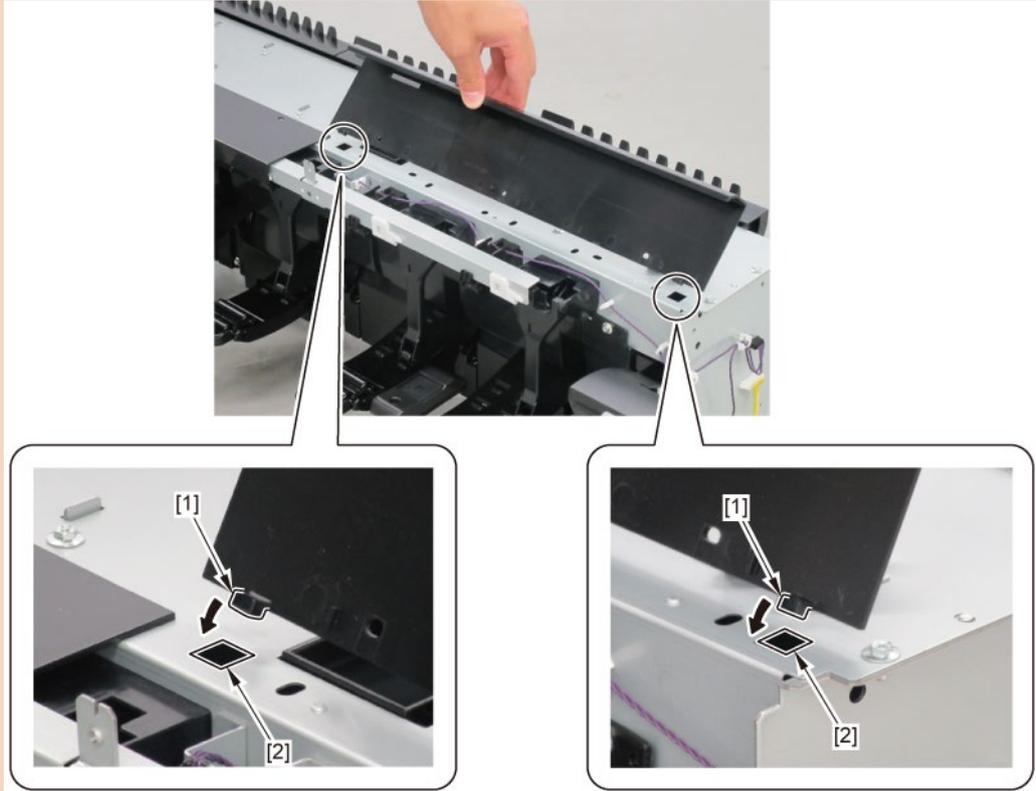
[2]	[3]
	
1 pc	2 pcs



Notes when assembling the unit:

Securely fit [1] the hook into [2] the hole.

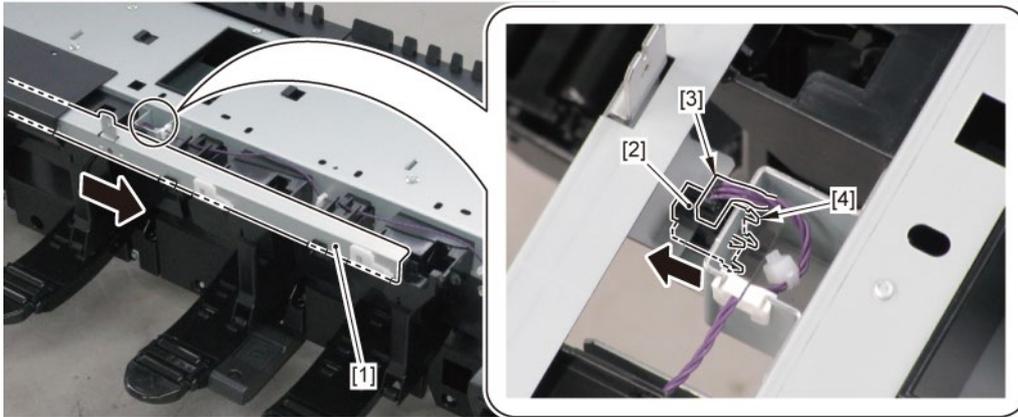
Point



D-1

4. Slide [1] the plate to the right, and remove [2] FLAPPER POSITION SENSOR.

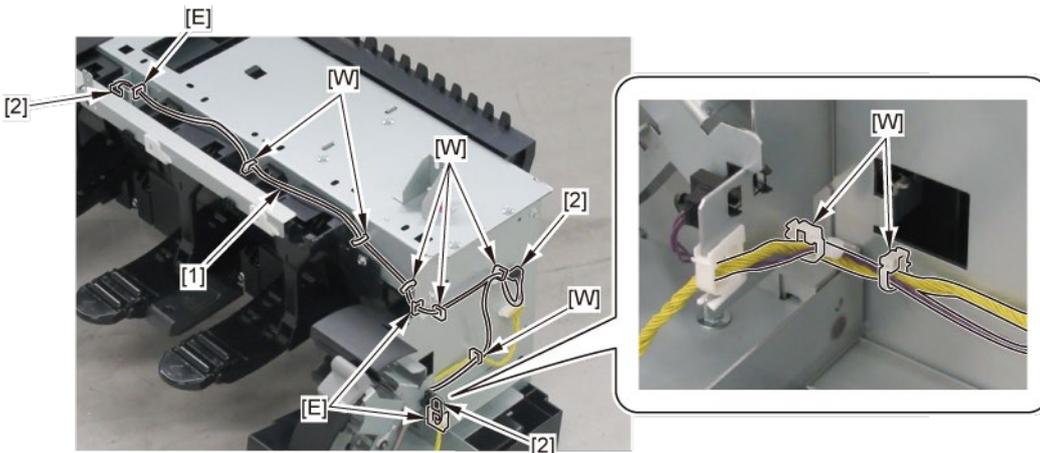
[3]	[4]
	
1 pc	4 pcs



D-2

4. Remove [1] HARNESS ASS'Y, LO FLAP SPLSET.

[2]	[W]	[E]
		
3 pcs	8 pcs	3 pcs

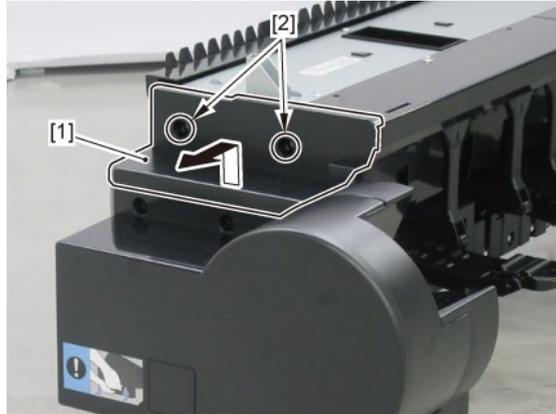


E

1. Remove all the parts of Group A.
2. Remove [1] COVER, SIDE TOP L.

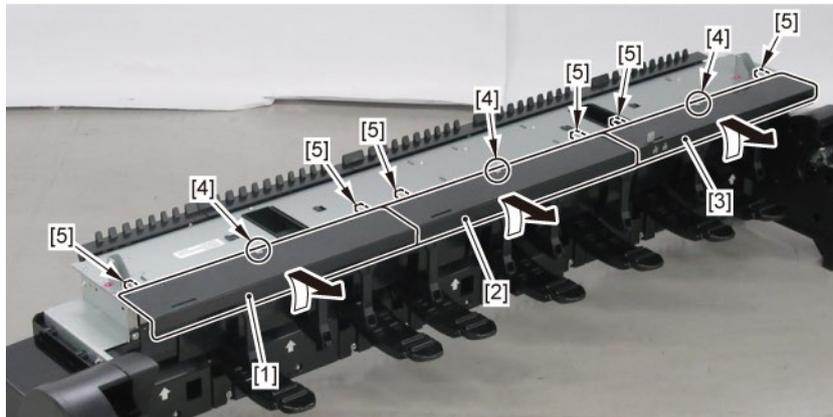
[2]

2 pcs



3. Remove the top covers [1] to [3].

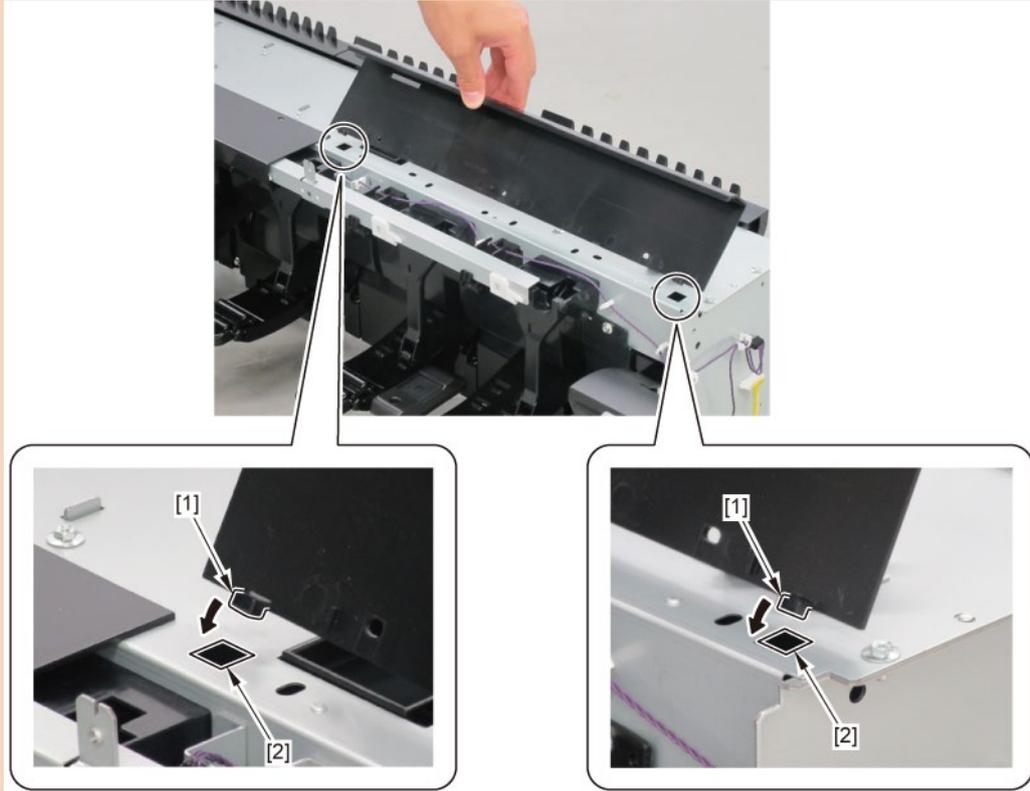
[4]	[5]
	
1 pc each	2 pcs each



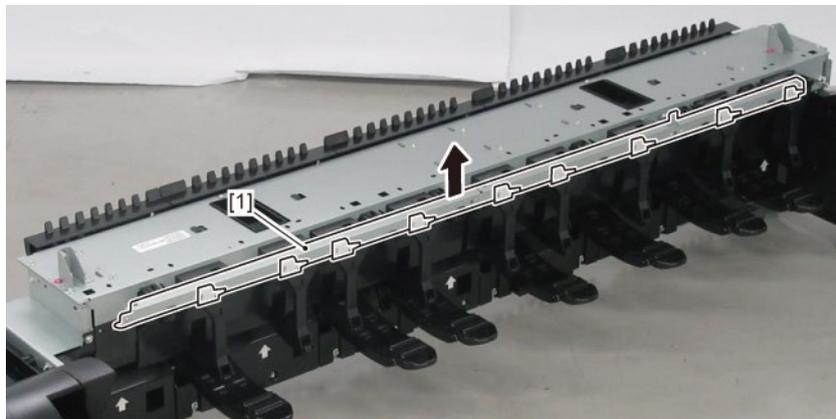
Notes when assembling the unit:

Securely fit [1] the hook into [2] the hole.

Point



4. Remove [1] the plate (with the CAM, FLAP SELEC).

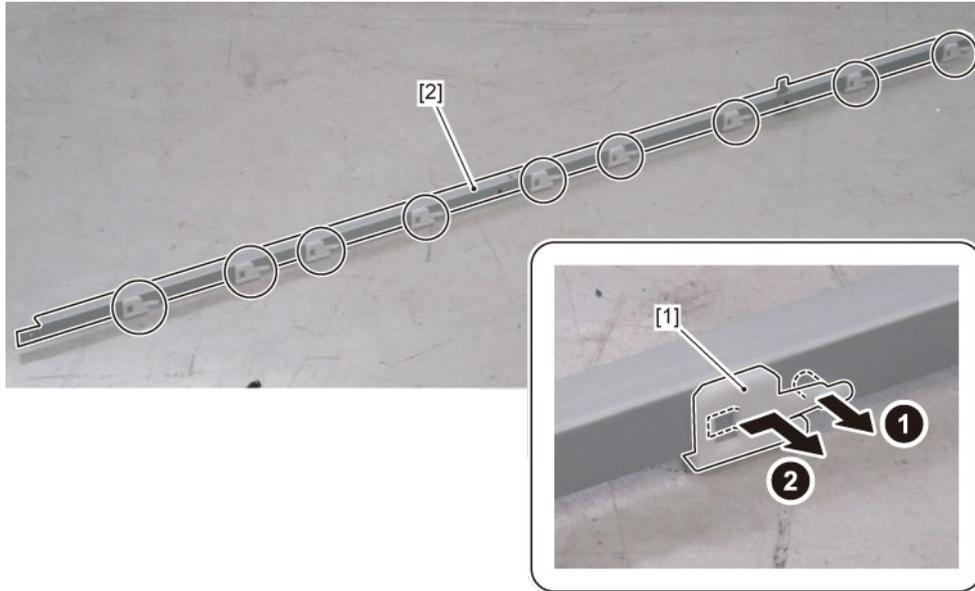


F

1. Remove all the parts of Groups A, C, and E.

F-1

2. Remove nine pieces of [1] CAM, FLAP SELEC from [2] the plate.
(five pieces in 24" model, seven pieces in 36" model)

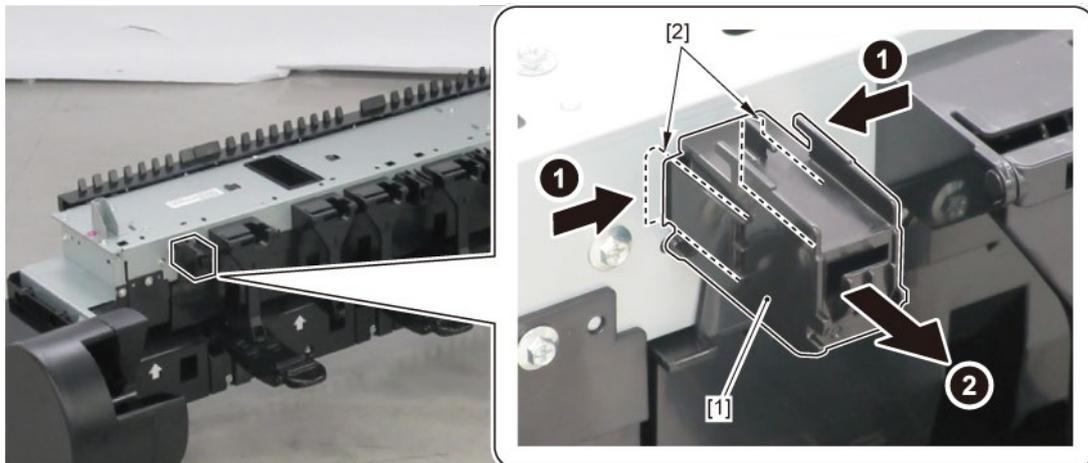


F-2

2. Remove six pieces of [1] SUPPORT, FLAP SELEC.
(three pieces in 24" model, five pieces in 36" model)

[2]

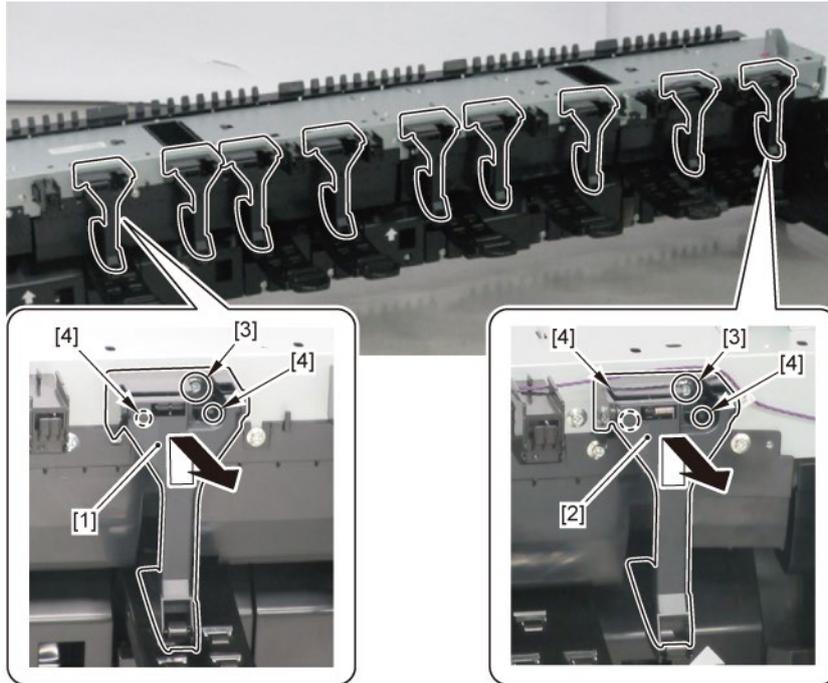
2 pcs



G

1. Remove all the parts of Groups A, C, and E.
2. Remove eight pieces of [1] FLAPPER SEPARATE UNIT (four pieces in 24" model, six pieces in 36" model) and [2] FLAPPER SEPARATE UNIT W/SP.

[3]	[4]
	
1 pc each	2 pcs each



3. Remove [1] PAPER GUIDE ROLLER UNIT, RU A.

[2]

3 pcs

4. Remove [3] PAPER GUIDE ROLLER UNIT, RU B.

[4]

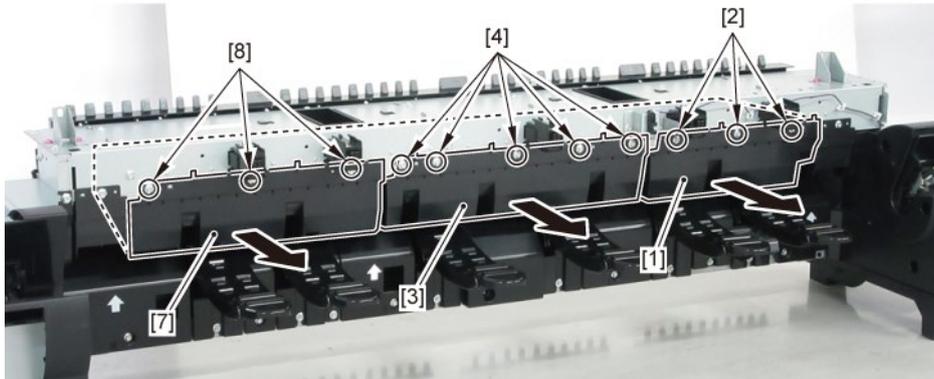
5 pcs

5. (36" model only)

Remove [7] PAPER GUIDE ROLLER UNIT, RU E.

[8]

3 pcs

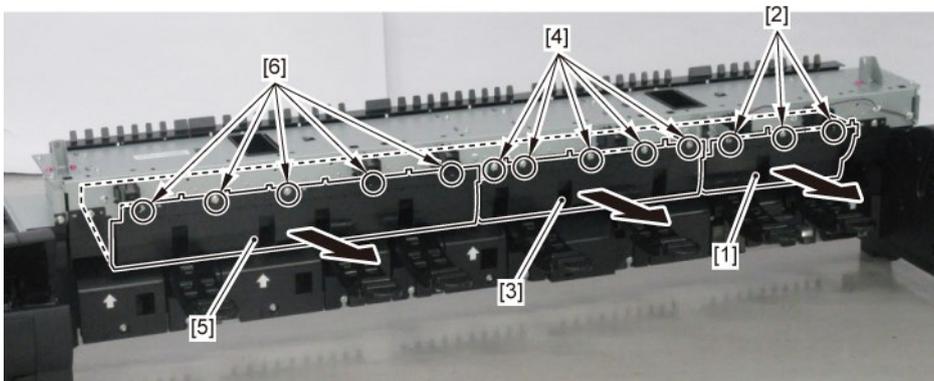


5. (44" model only)

Remove [5] PAPER GUIDE ROLLER UNIT, RU C.

[6]

5 pcs



6. Push down [2] NIP ARM UNIT and remove [1] GUIDE UNIT, LOW A.

[3]

5 pcs

7. Push down [2] NIP ARM UNIT and remove [4] GUIDE UNIT, LOW B.

[5]

4 pcs

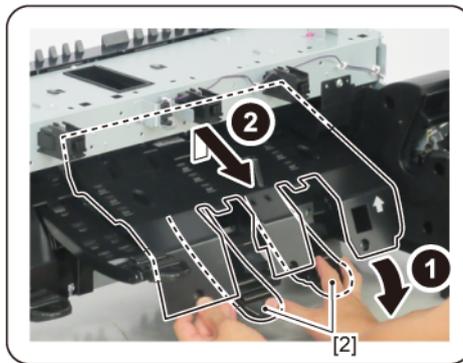
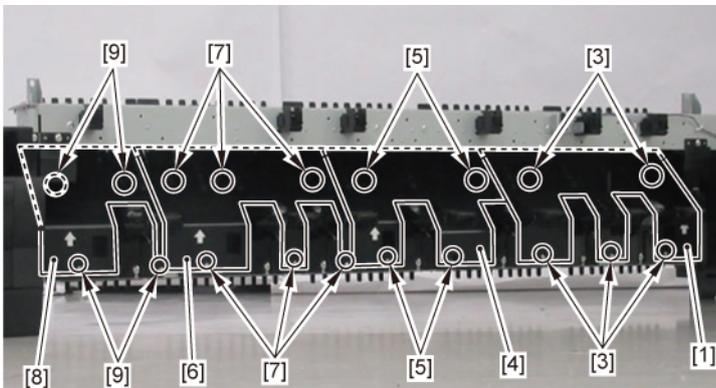
8. (36" model, 44" model only)

Push down [2] NIP ARM UNIT and remove [6] GUIDE UNIT, LOW C.



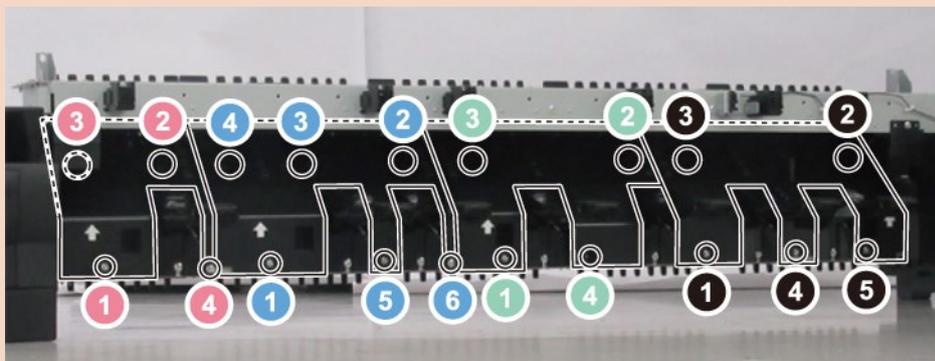
9. (44" model only)

Push down [2] NIP ARM UNIT and remove [8] GUIDE UNIT, LOW D.



Notes when assembling the unit:

Tighten the screws in the order of numbers shown below.



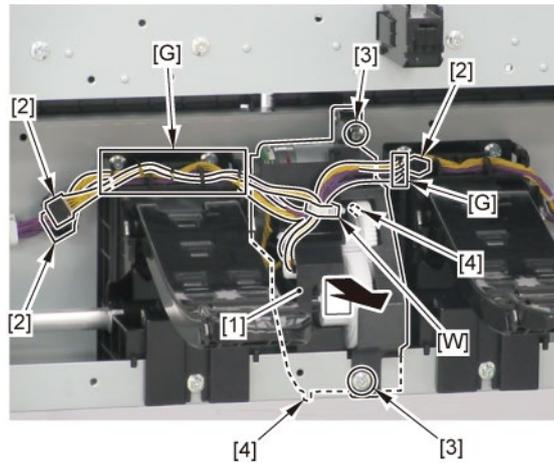
H

1. Remove all the parts of Groups A, C, E, and G.

H-1

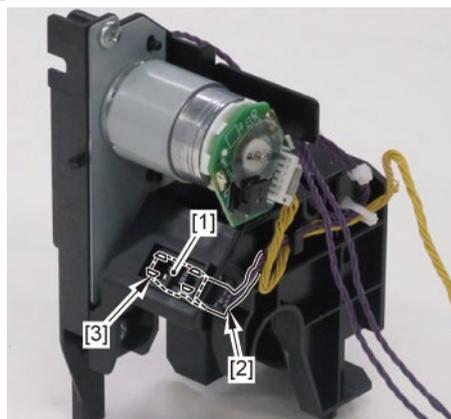
2. Remove [1] DRIVE NIP ARM UNIT.

[2]	[3]	[4]	[W]	[G]
				
3 pcs	2 pcs	2 pcs	1 pc	2 pcs



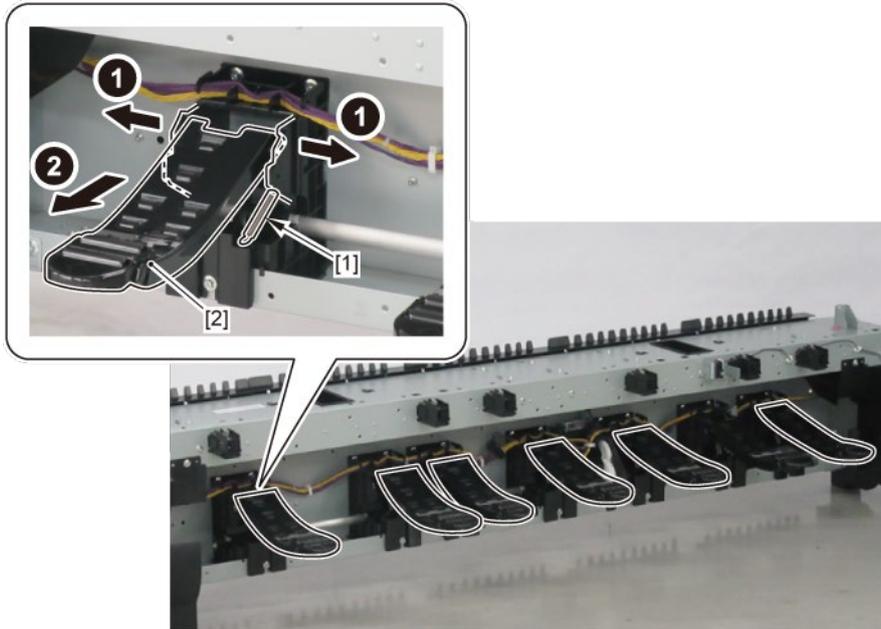
3. Remove [1] LOWER ROLL NIP SENSOR.

[2]	[3]
	
1 pc	4 pcs



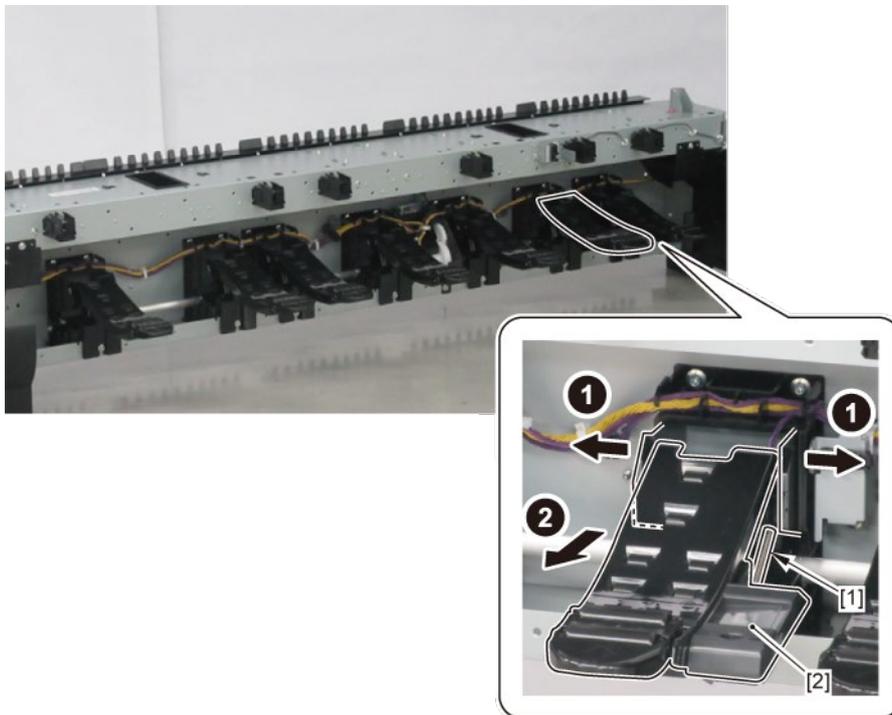
H-2

2. Remove six pieces each of [1] SPRING, PAPER SET and [2] NIP ARM UNIT.
(three pieces each in 24" model, five pieces each in 36" model)



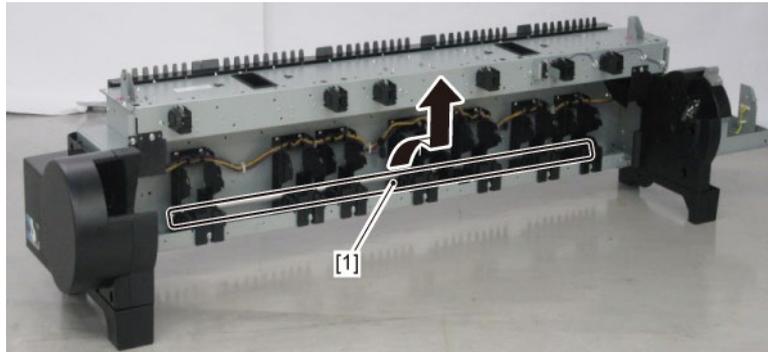
H-3

2. Remove [1] SPRING, PAPER SET and [2] NIP ARM SENSOR UNIT.



I

1. Remove all the parts of Groups A, C, E, G, and H.
2. Remove [1] CAM SHAFT UNIT.



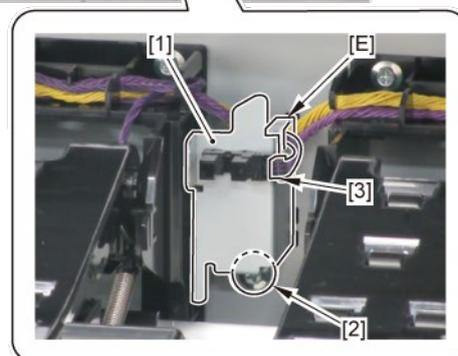
J

1. Remove all the parts of Groups A, C, E, and G.

J-1

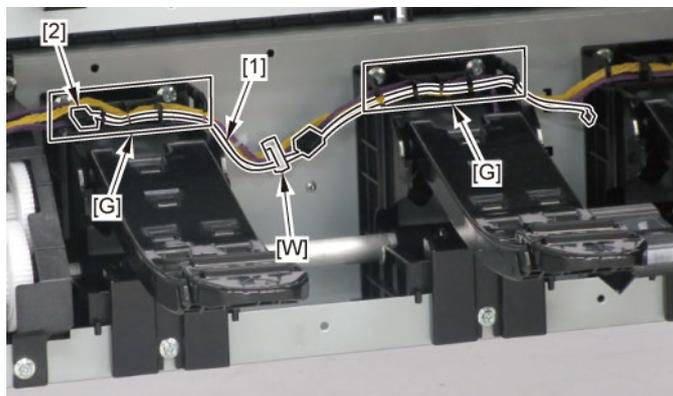
2. Remove [1] ROLL PAPER FEED SENSOR UNIT.

[2]	[3]	[E]
		
1 pc	1 pc	1 pc



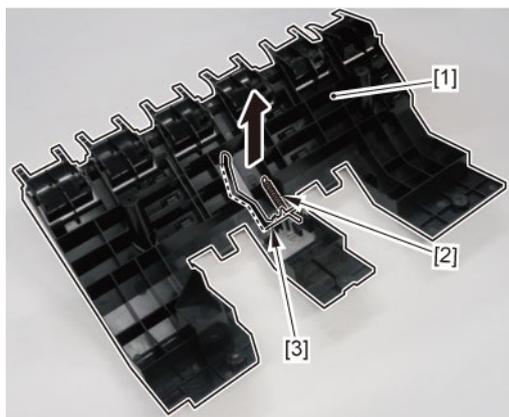
3. Disconnect [1] HARNESS ASS'Y, RLNIP PF SNS.

[2]	[W]	[G]
		
1 pc	1 pc	2 pcs



J-2

2. From [1] GUIDE UNIT, LOW A, remove [2] SPRING, PAPER FEED SENSOR and [3] LEVER, PAPER FEED SENSOR.

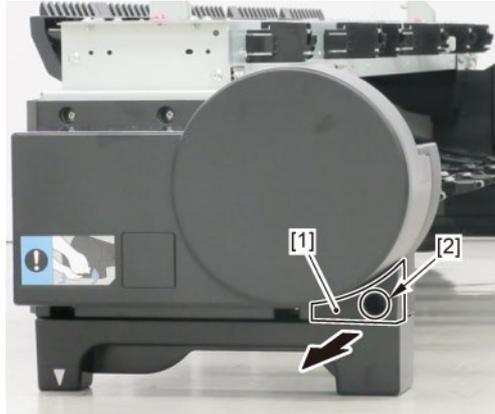


K

1. Remove all the parts of Groups A, C, E, and G.
2. Remove [1] COVER, SIDE L SUB.

[2]

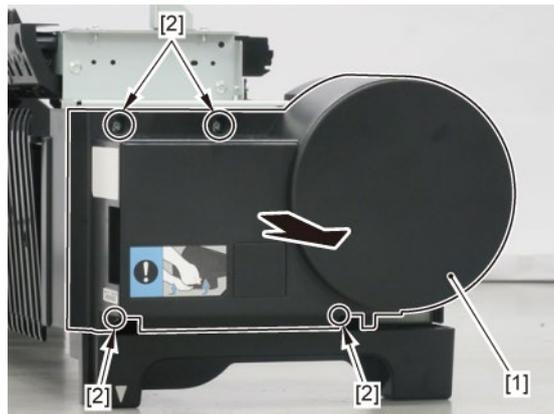
1 pc



3. Remove [1] a set of
 - COVER UNIT, SIDE OUTER L
 - CAP, COVER SIDE L.

[2]

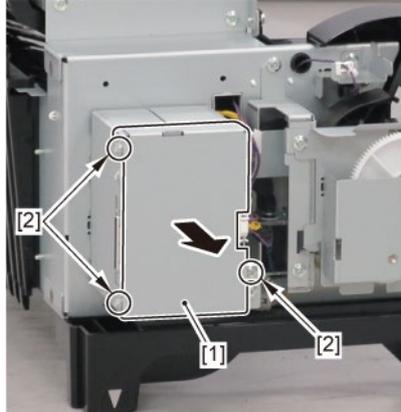
4 pcs



4. Remove [1] the plate.

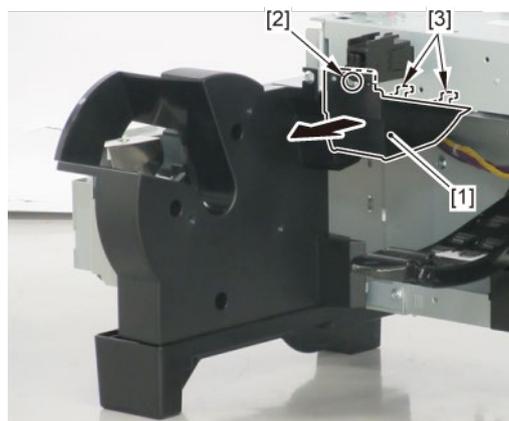
[2]

3 pcs



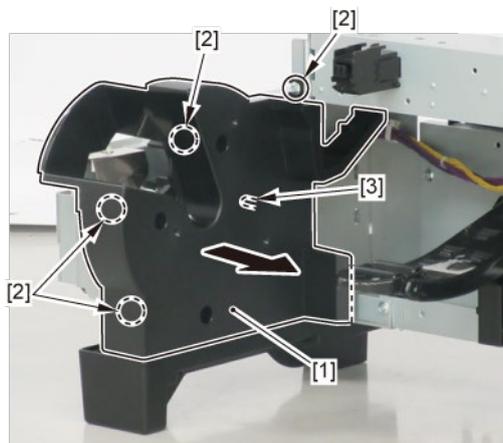
5. From the left side of the printer, remove [1] GUIDE, UPPER.

[2]	[3]
	
1 pc	2 pcs



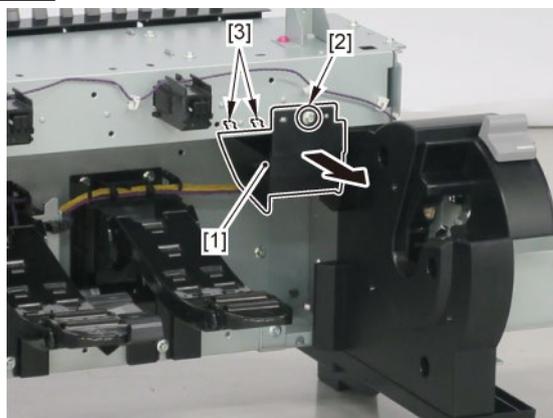
6. Remove [1] HOLDER, SPOOL L.

[2]	[3]
	
4 pcs	1 pc



7. From the right side of the printer, remove [1] GUIDE, UPPER.

[2]	[3]
	
1 pc	2 pcs

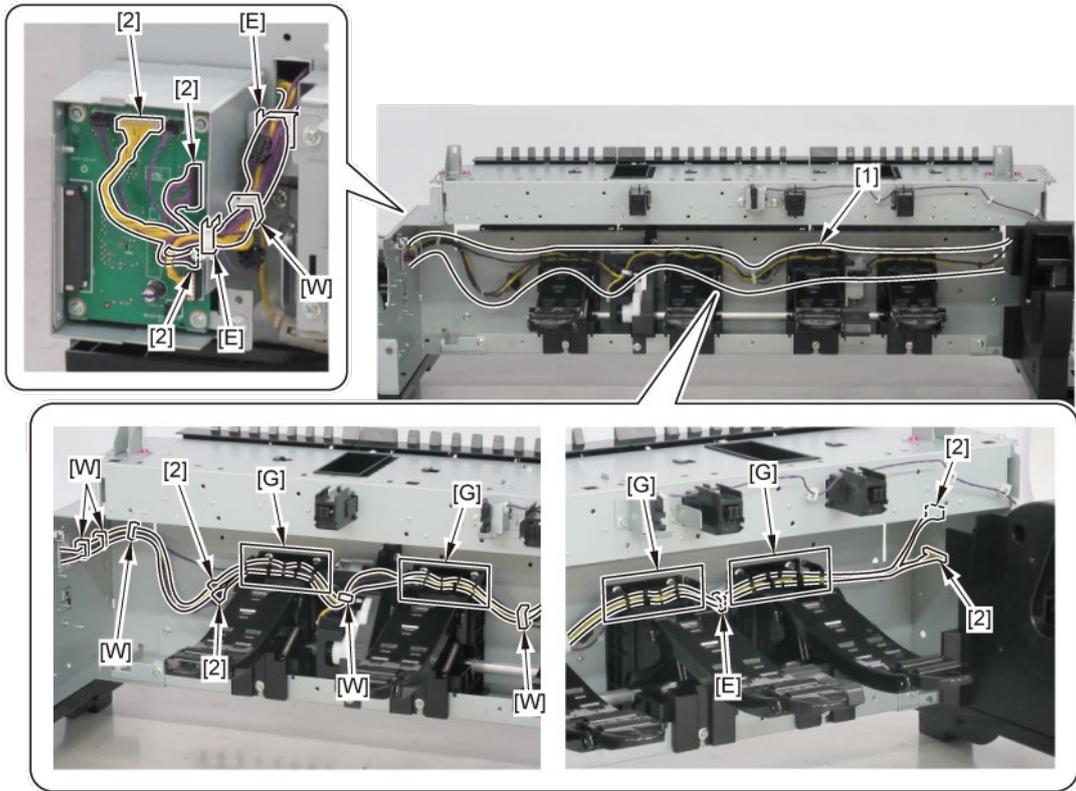


K-1

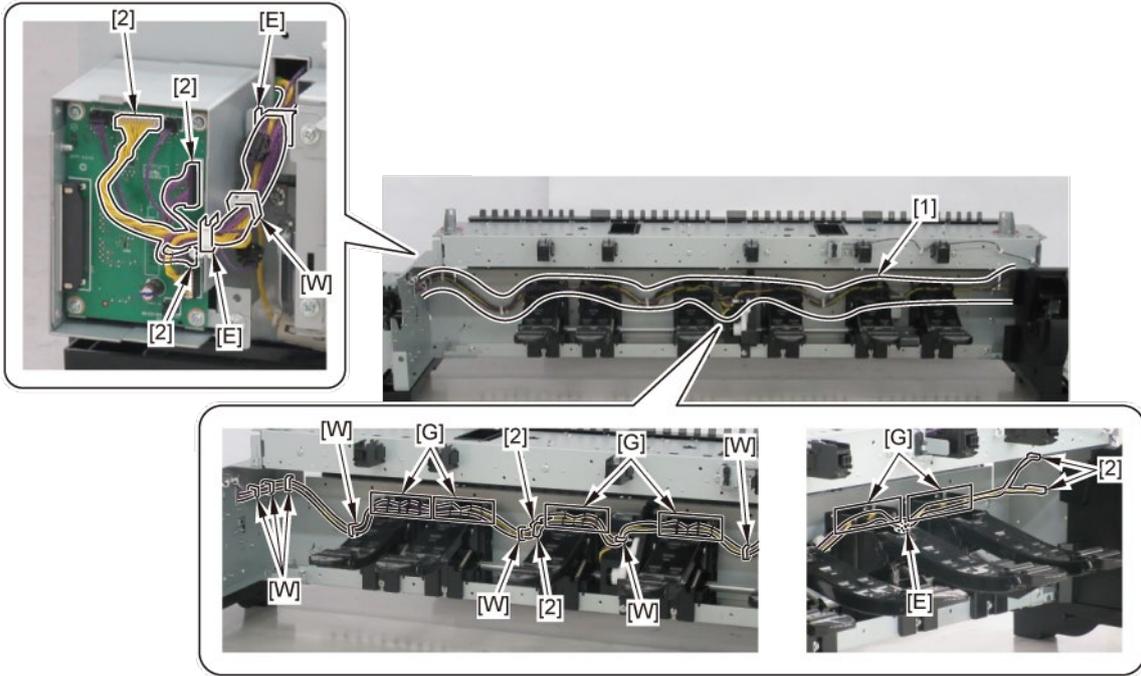
8. Disconnect [1] HARNESS ASS'Y, RU MAIN.

	[2]	[W]	[E]	[G]
				
24" model	7 pcs	6 pcs	3 pcs	4 pcs
36" model	7 pcs	8 pcs	3 pcs	6 pcs
44" model	7 pcs	8 pcs	3 pcs	7 pcs

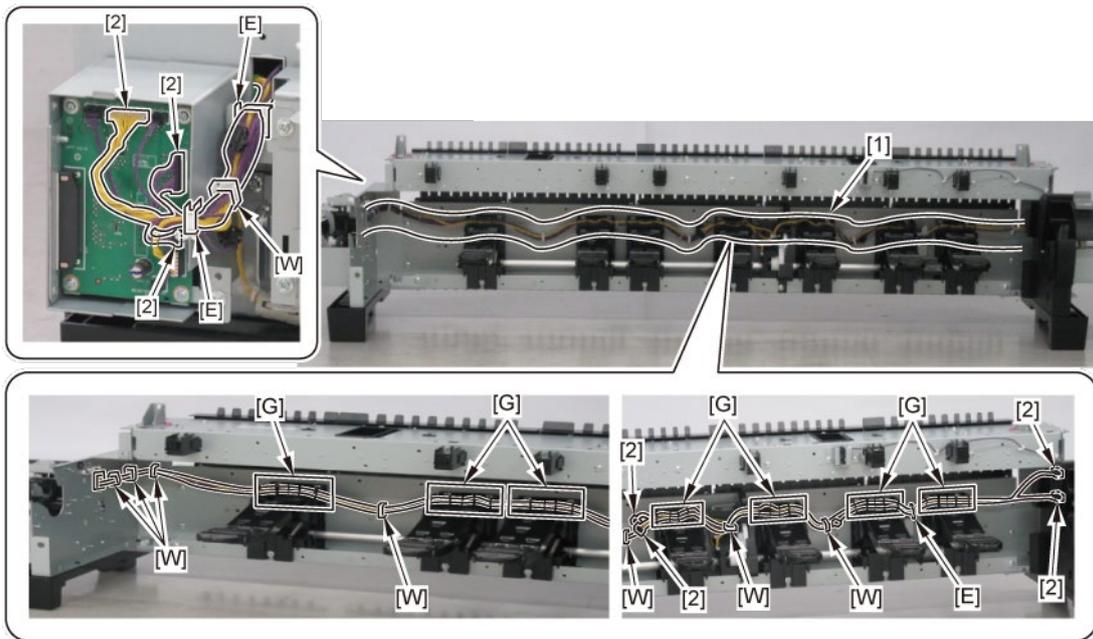
(24" model)



(36" model)



(44" model)

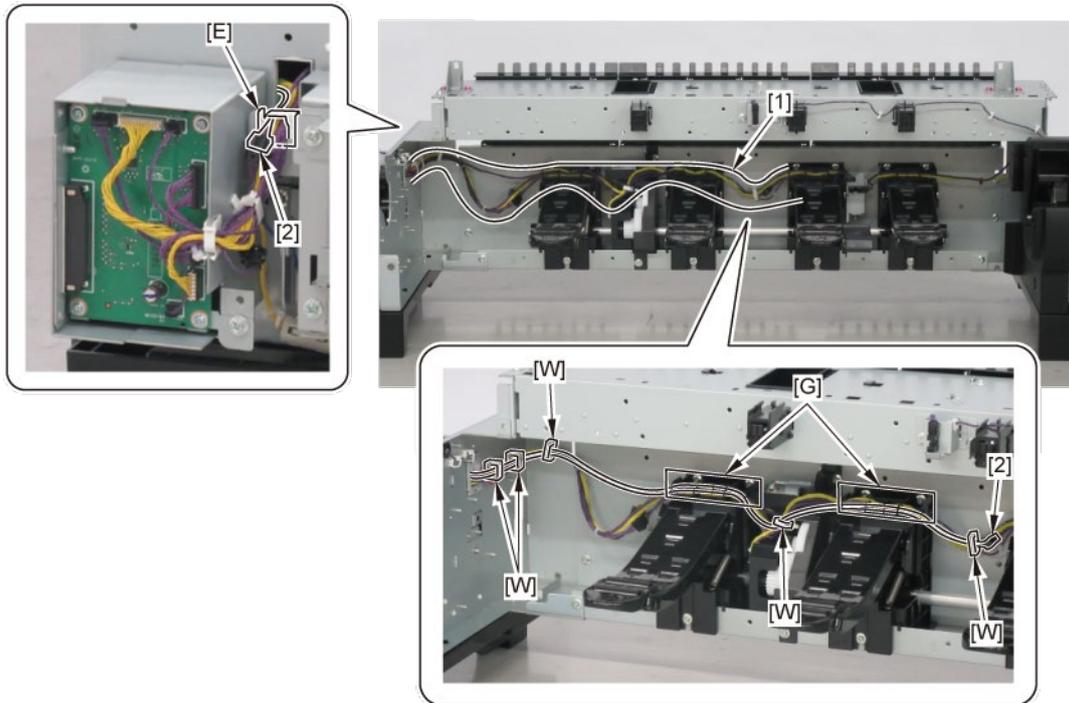


K-2

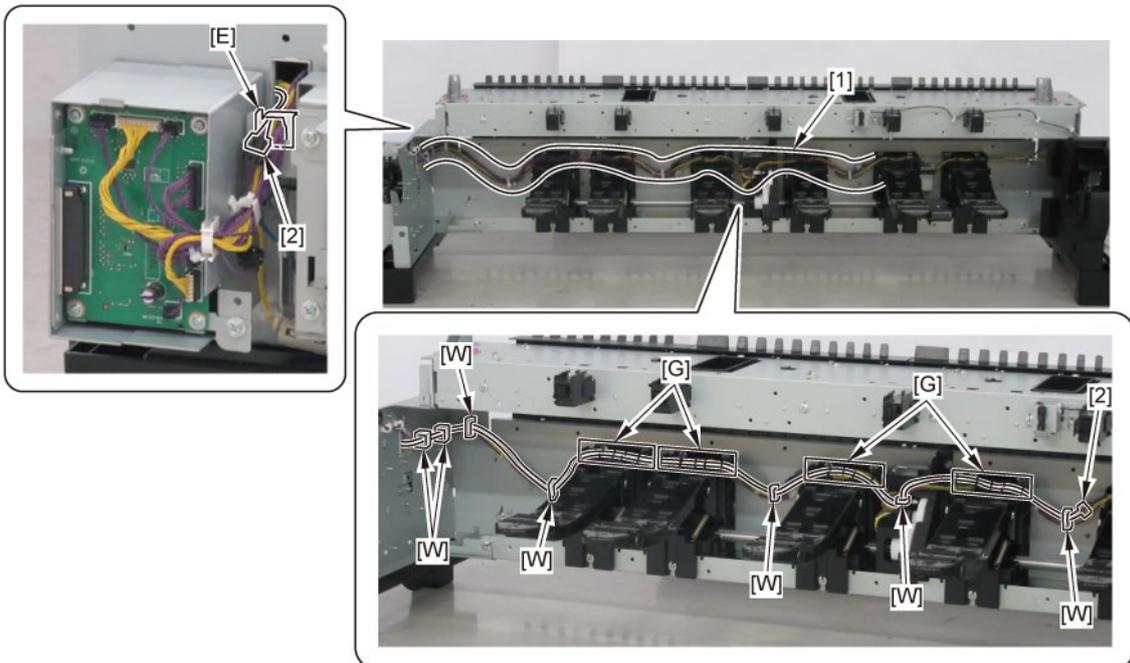
8. Disconnect [1] HARNESS ASS'Y, ROLL SEP RLY.

	[2]	[W]	[E]	[G]
24" model	2 pcs	5 pcs	1 pc	2 pcs
36" model	2 pcs	7 pcs	1 pc	4 pcs
44" model	2 pcs	7 pcs	1 pc	5 pcs

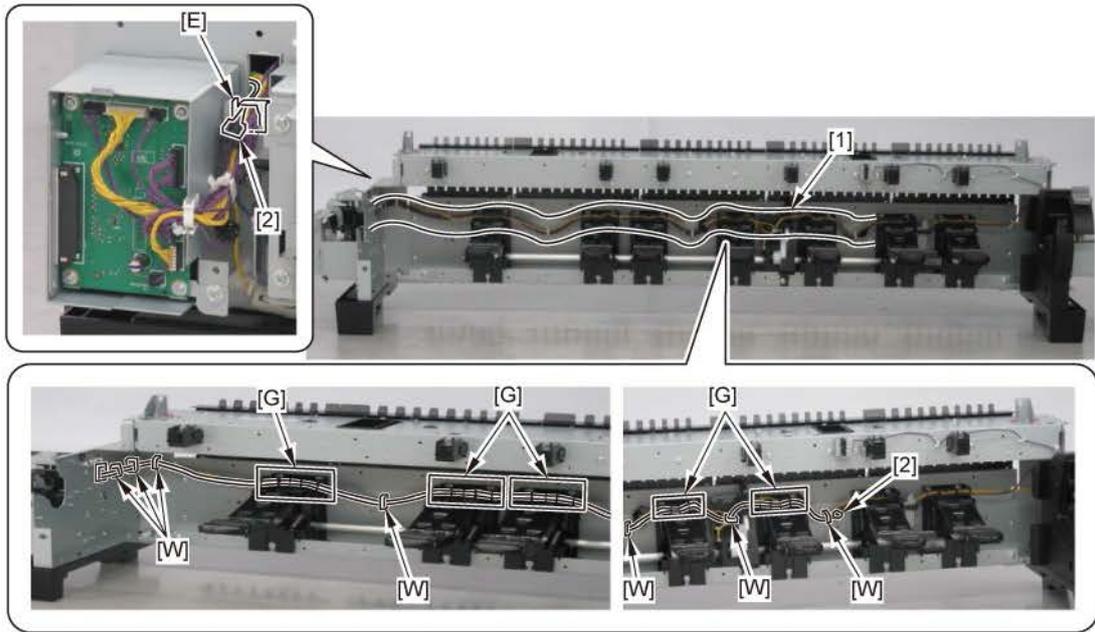
(24" model)



(36" model)



(44" model)



3. SERVICING FUNCTIONS

3-1. Outline	664
3-2. Service Mode	665
3-2-1. How to Start Service Mode	665
3-2-2. Function List	667
3-2-3. Service Mode Menu	668
3-2-4. PCB Replacement Mode	740
3-3. Firmware Update	742
3-3-1. iPF PRO Service Tool	742
3-3-2. Recovery Mode	742
3-4. Log Mode	748

3-1. Outline

This chapter explains the following three functions for servicing:

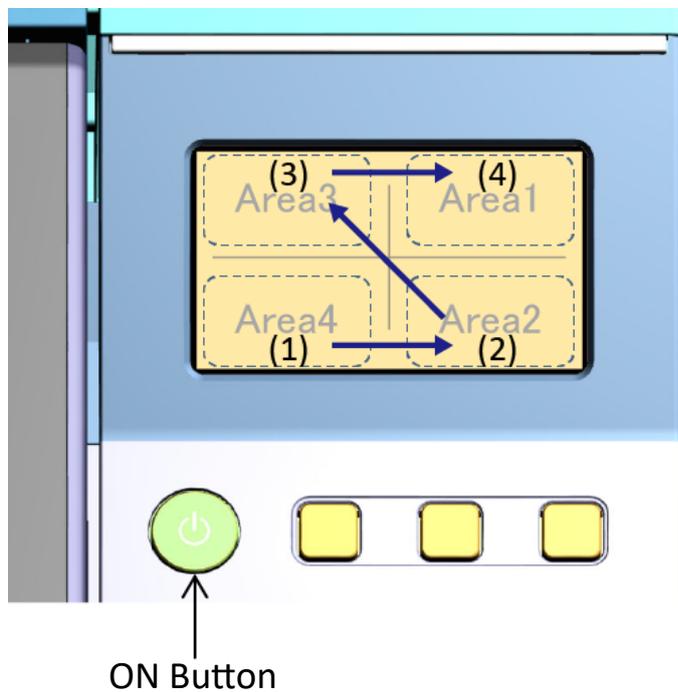
- Service mode
- Firmware update
- Log mode

3-2. Service Mode

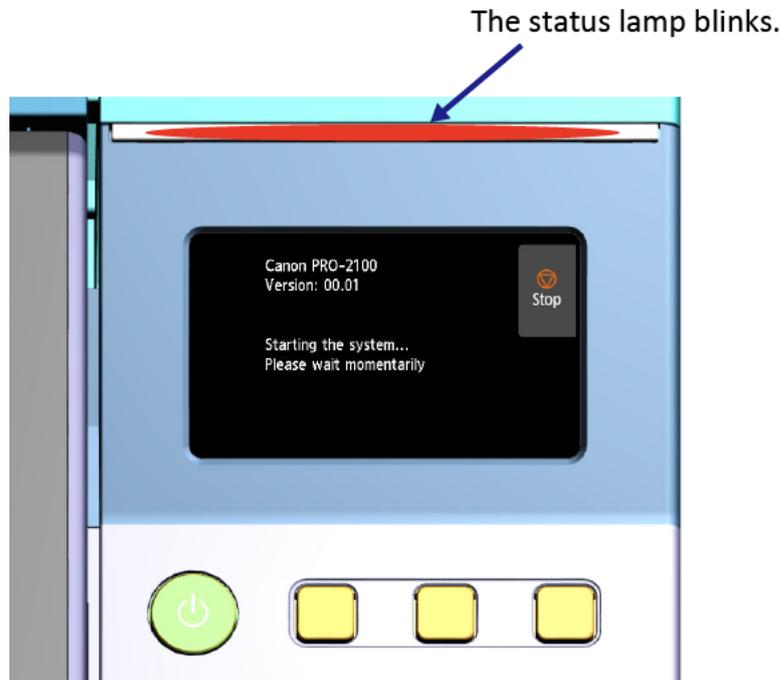
The service mode is to be used when a service technician provides the customer with servicing for this printer such as troubleshooting, repair, diagnosis, servicing adjustment, etc.

3-2-1. How to Start Service Mode

1. Press and hold the ON button. (DO NOT release the ON button).
2. When the Canon logo is displayed on the operation panel, while holding down the ON button, touch the operation panel in order of Area4 (lower left), Area2 (lower right), Area3 (upper left), and Area1 (upper right) of the panel, and finally release the ON button.



- When the service mode is successfully launched, the message "Starting the system... Please wait." is displayed, and the status lamp above the operation panel blinks in orange.



Point:

If the following operations are done when the service mode is launched, the printer will be started in the user mode. After the printer is started in the user mode, start the printer in the service mode again.

- The touch interval is two or more seconds.
- When you release the ON button while touching the operation panel
- When you make a mistake in touching order

Point:

When the service mode is launched while a service call error occurs, the "SERVICE CALL RESET" screen is displayed. In this case, release the service call error first, tap "YES: SERVICE CALL RESET," and then launch the service mode.

The differences from user mode

- The specific error codes are ignored.
- Releasing the error with detail code starting from four or five.
- The user's print jobs cannot be printed.
- Automatic cleaning is not performed.
- Auto Power OFF and sleep timer are not performed.

3-2-2. Function List

Service mode menu		Description
First tier	Second tier	
PRINTER STATUS	SYSTEM INFO	Display of printer information
	ERROR LOG	Display of logs of hardware error, operator error, warning, and jam error
	PARTS COUNTER	Display and resetting of parts counter
	CLEANING LOG	Display of various cleaning execution log
	SERVICE LOG	Display of the latest service adjustment date
	HEAD USAGE LOG	Display of print head information
	INK USAGE LOG	Display of ink information
	OTHER CONSUMABLES USAGE LOG	Display of resetting of maintenance cartridge usage amount and cutter usage log
	USER COMMAND LOG	Display of the print head alignment log and the color calibration log
	CUSTOM SETTING CHECK	Status display whether the function for particular customers is disabled or enabled
DIAGNOSIS	CR SYSTEM CHECK	Carriage drive functional diagnosis
	PURGE CHECK	Purge unit functional diagnosis
	I/O DISPLAY	Functional diagnosis of sensors and switches
	OPT SENS CHECK	Multi sensor functional diagnosis
	NOZZLE CHECK	Print head management sensor functional diagnosis
	HEAD CNT CHECK	Functional diagnosis of print head contact detection
	ANALOG ENCODER CHECK	Paper feed encoder functional diagnosis
FUNCTION	CR LOCK	Carriage lock function
	CR UNLOCK	Carriage unlock function
	HEAD REPLACEMENT	Ink filling and print head alignment due to print head replacement
	INK SUPPLY VALVE OPEN	Ink supply valve opening and closing function
	INK FILLING	Ink filling after the ink supply-related unit replacement
ADJUSTMENT	OPTICAL AXIS	Multi sensor optical axis adjustment
	GAP CALIB	GAP calibration
	LF TUNING	Eccentricity correction
	NOZZLE CHK POS	Adjustment of the optical axis in the print head management sensor
	CR REG	Dynamic print head alignment
	CR MOTOR COG	Cogging torque control
	MANUAL HEAD ADJ	Manual print head alignment
	MARGIN ADJ	Margin adjustment
	LF ENC ADJ	Paper feed encoder adjustment
	UPPER ARB CALIB	Upper active roll brake unit calibration
	LOWER ARB CALIB	Lower active roll brake unit calibration
TEST PRINT	PRINT INF	PRINT INF printing
	SERVICE NOZZLE CHECK	Service nozzle check pattern printing
E-RDS	CA-CERTIFICATE	E-maintenance certificate/CA-certificate information display
	E-RDS SETUP	E-RDS setup
	E-RDS OTHERS	E-RDS data initialization / CA-certificate deletion
OTHERS	RTC SETTING	Greenwich Mean Time (GMT) setting
	PV AUTO JUDGE	Setting of cleaning execution timing
	PRINT HEAD INFO SETTING	Print head warranty information display setting
	HDD BOX PW INIT	HDD BOX password reset
	FIRMWARE UPDATE (USB)	Firmware update using USB flash drive
	GET PRINT INF (USB)	Storing PRINT INF information to USB flash drive
	GET ENCRYPTING LOG(USB)	Storing encrypting log (printer operation log) to USB flash drive
	GET SERVICE LOG(USB)	Storing Status print, Print LAN details and Print setting print to USB flash drive
	DELETE ENCRYPTING LOG	Deletion of encrypting log (printer operation log) stored in HDD
	RESET ADDED MEDIA ID	Reset of added media internal ID number

3-2-3. Service Mode Menu

• PRINTER STATUS

- SYSTEM INFO

Displayed contents

S/N: Printer serial number
TMP [C]: Internal temperature detected by humidity sensor (Celsius)
TMP [F]: Internal temperature detected by humidity sensor (Fahrenheit)
RH [%]: Internal humidity detected by humidity sensor (%)
AFTER INSTLATION [days]: Number of days passed since the initial installation
PV TTL [m2]: Cumulative PV (m2)
PV TTL [sq.f]: Cumulative PV (sq.f)
PV TTL [A4]: Cumulative PV (in A4 equivalent)
ROLL1 TOTAL [m2]: Roll paper 1 (upper) cumulative PV (m2)
ROLL1 TOTAL [sq.f]: Roll paper 1 (upper) cumulative PV (sq.f)
ROLL1 TOTAL [A4]: Roll paper 1 (upper) cumulative PV (in A4 equivalent)
ROLL2 TOTAL [m2]: Roll paper 2 (lower) cumulative PV (m2)
ROLL2 TOTAL [sq.f]: Roll paper 2 (lower) cumulative PV (sq.f)
ROLL2 TOTAL [A4]: Roll paper 2 (lower) cumulative PV (in A4 equivalent)
CUTSHEET TOTAL [m2]: Cut sheet cumulative PV (m2)
CUTSHEET TOTAL [sq.f]: Cut sheet cumulative PV (sq.f)
CUTSHEET TOTAL [A4]: Cut sheet cumulative PV (in A4 equivalent)
PV ENV: PV per environmental temperature (in A4 equivalent)

Additional information (The meaning of the alphabets displayed in PV ENV)

A: Temperature 15°C to 25°C / Humidity 40% to 60%
B: Temperature 25°C to 30°C / Humidity 40% to 60%
C: Temperature 15°C to 30°C / Humidity 10% to 40%
D: Temperature 15°C to 30°C / Humidity 60% to 80%
E: Temperature 15°C to 30°C / Humidity 0% to 10%, or temperature up to 15°C, 30°C or higher / Humidity 0% to 50%
F: Temperature 15°C to 30°C / Humidity 80% to 100%, or temperature up to 15°C, 30°C or higher / Humidity 50% to 100%

- ERROR LOG

HARDWARE ERROR LOG	Hardware error log
Displayed contents MM/DD HH:MM ECxx-xxxx(xxxx) (Date and time of error / error code) DETAILS (in the next screen): Number SheetS [A4], TMP [C], TMP [F], RH [%]	
Additional information <ul style="list-style-type: none">The latest ten cases of errors are displayed. When each log is tapped, the information on PV in A4 equivalent, internal temperature (Celsius), internal temperature (Fahrenheit), and internal humidity when an error occurs is displayed in the next screen.	

ERROR LOG	Operator error log
Displayed contents MM/DD HH:MM xxxx(xxxx) (Date and time of error / error code) DETAILS (in the next screen): Number SheetS [A4], TMP [C], TMP [F], RH [%]	
Additional information <ul style="list-style-type: none">The latest ten cases of errors are displayed. When each log is tapped, the information on PV in A4 equivalent, internal temperature (Celsius), internal temperature (Fahrenheit), and internal humidity when an error occurs is displayed in the next screen.	

JAM LOG	Jam error log
Displayed contents MM/DD HH:MM xxxxxx(xxxx) (Date and time of jam / jam code) DETAILS (in the next screen): 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11	
Additional information <ul style="list-style-type: none">The latest five cases of errors are displayed. When each log is tapped, Jam error detailed information to be mentioned later is displayed in the next screen.	

WARNING LOG	Warning log
Displayed contents MM/DD HH:MM xxxx(xxxx) (Date and time of warning / error code) DETAILS (in the next screen): Number SheetS [A4], TMP [C], TMP [F], RH [%]	
Additional information <ul style="list-style-type: none">The latest ten cases of warning are displayed. When each log is tapped, the information on PV in A4 equivalent, internal temperature (Celsius), internal temperature (Fahrenheit), and internal humidity when a warning occurs is displayed in the next screen.	

- PARTS COUNTER

XXX (Counter name)	Parts counter information
--------------------	---------------------------

Displayed contents

<Wia1 display example>

Wia1 OK 2020/11/25 65% (Counter name, Status, Date of resetting counter, and Usage rate)

DETAILS (in the next screen)

Counter Name

Counter Value

Parts Life (Parts life threshold)

Accumulation (Accumulated counter value)

The amount of light (Light volume)

Area

The No. of reset (Number of times of the counter value reset)

[Reset] button: Select [YES], the counter value will be reset.

Additional information

- In Status, OK, W1 (Warning 1), W2 (Warning 2), or E (Error) is displayed.
- When each counter name is tapped, the detailed information is displayed in the next screen.
- For kinds of parts counters, refer to "5-3. Consumable Parts" in Chapter 5.
- For LFS1 and HMa1 counter threshold values, refer to "Consumption degree of LFS1 and HMa1."
- For CR1 counter threshold value, refer to "Consumption degree of CR1."

- CLEANING LOG

XXX (Cleaning name)	Cleaning log
---------------------	--------------

Displayed contents

<A-A display example>

A-A: 0 (0) (Cleaning name / accumulated number)

DETAILS (in the next screen)

yyyy/mm/dd HH:MM

Additional information

- Accumulated number of automatic and manual cleaning for each cleaning is displayed.
- The number in parentheses indicates accumulated number of manual cleaning.
- When cleaning name is tapped, the cleaning execution dates and their logs (last three cases) are displayed in the next screen.
- For cleaning types, refer to "Types of cleaning" in Chapter 6.
- For layouts of CAP-A and CAP-B, refer to [Purge unit CAP layout](#).
- Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, the execution time of the cleaning is displayed.

- SERVICE LOG

SERVICE ADJUSTMENT LOG	Service adjustment execution
-------------------------------	------------------------------

Displayed contents

<GAP CALIB display example>

GAP CALIB: yyyy/mm/dd HH:MM (Service adjustment name, execution date, and execution time)

Additional information

- The service adjustment name and the last implementation date of service adjustment are displayed.
- For service adjustment types, refer to [ADJUSTMENT](#).
- Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, the execution time of the service adjustment is displayed.

PCB REPLACEMENT LOG	PCB replacement
----------------------------	-----------------

Displayed contents

01: yyyy/mm/dd HH:MM xx (PCB replacement date, execution time, and case number)

02: ----/--/-- -

03: ----/--/-- -

04: ----/--/-- -

05: ----/--/-- -

06: ----/--/-- -

07:- ----/--/-- -

08: ----/--/-- -

09: ----/--/-- -

10: ----/--/-- -

Additional information

- The replacement date of main PCB and backup PCB (the last ten cases) and the case number are displayed.
- For details on case numbers, see below.
 - Case number 0: Backup PCB replacement
The data is written from main PCB to backup PCB.
 - Case number 1: Main PCB replacement
The data is written from backup PCB to main PCB.
 - Case number 2: Replacement of main PCB and backup PCB at the same time.
The product information is written from ID PCB to main PCB and backup PCB.
- Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, the execution time of the PCB replacement is displayed.

- HEAD USAGE LOG

CURRENT HEAD	Currently-installed print head information
Displayed contents	
LOT (Lot number)	
DATE OF INSTALL (Print head installation date)	
DOT COUNT (Total dot count of the currently-installed print head)	
[Details] button	
DETAILS DOT COUNT (Total dot count per color)	
REFILL INKTANK USAGE HISTORY (Refill ink tank usage log (per chip))	
THE NO. OF NON-EJECTION NOZZLES (Number of the non-ejection nozzles (per chip))	
Additional information	
<ul style="list-style-type: none">· When [Details] is tapped, the detailed information is displayed in the next screen.· For the relation between chips and ink colors, refer to Correlation between chip positions and ink colors.	
PREVIOUS HEAD	Previously-installed print head information
Displayed contents	
LOT (Lot number)	
DATE OF INSTALL (Print head installation date)	
DOT COUNT (Total dot count of the previously-installed print head)	
[Details] button	
DETAILS DOT COUNT (Total dot count per color)	
REFILL INKTANK USAGE HISTORY (Refill ink tank usage log (per chip))	
THE NO. OF NON-EJECTION NOZZLES (Number of the non-ejection nozzles (per chip))	
Additional information	
<ul style="list-style-type: none">· When [Details] is tapped, the detailed information is displayed in the next screen.· For the relation between chips and ink colors, refer to Correlation between chip positions and ink colors.	
DOT COUNT ACCUMULATED	Accumulated dot count of the printer
Displayed contents	
TTL (Accumulated dot count of the printer in total)	
[Details] button	
DETAILS DOT COUNT (Total dot count per color)	
Additional information	
<ul style="list-style-type: none">· When [Details] is tapped, the detailed information is displayed in the next screen.· For the relation between chips and ink colors, refer to Correlation between chip positions and ink colors.	

THE NO. OF REPLACEMENT	Number of times of print head replacement
-------------------------------	---

Displayed contents

REPLACEMENT (Number of times of print head replacement)

S (Number of times of execution of HEAD REPLACEMENT in service mode)

Additional information

-

- INK USAGE LOG

ACCUMULATED INK USAGE	Ink usage
------------------------------	-----------

Displayed contents

INK-USE1 INK-TTL [ml] (Accumulated genuine ink usage)
DETAILS COUNT [ml] (Accumulated genuine ink usage per color)

INK-USE1 NINK-TTL [ml] (Accumulated refilled ink usage)
DETAILS COUNT [ml] (Accumulated refilled ink usage per color)

INK-USE2 INK-TTL [ml] (Genuine ink interval usage)
DETAILS COUNT [ml] (Genuine ink (per color) interval usage)

INK-USE2 NINK-TTL [ml] (Refilled ink interval usage)
DETAILS COUNT [ml] (Refilled ink (per color) interval usage)

Additional information

-

THE NO. OF INK-USE2 CLEAR	Ink interval usage clear
----------------------------------	--------------------------

Displayed contents

COUNT (Number of times of clearing the ink interval usage)

[CLEAR] button (Select [YES], clear the ink interval usage.)

Additional information

-

- OTHER CONSUMABLES USAGE LOG

MAINTENANCE CARTRIDGE USAGE	Maintenance cartridge usage log
------------------------------------	---------------------------------

Displayed contents

USAGE (Maintenance cartridge usage (%))

THE NO. OF REPLACEMENT (Number of maintenance cartridge replacement)

THE NO. OF RESET (Number of maintenance cartridge usage reset)

[Reset] button (Select [YES], and the volume of the maintenance cartridge will be reset.)

Additional information

The maintenance cartridge usage will be reset to zero by pushing the [Reset] button. Be careful; the usage cannot be set again once it is reset.

CUTTER USAGE	Cutter usage log
---------------------	------------------

Displayed contents

THE NO. OF REPLACEMENT

TOTAL (Number of times of cutter blade replacement)

THE NO. OF CUTS (CURRENT)

TOTAL (Total number of times of cuts of the current cutter)

1 (Media name and the number of times of cuts for the most common media type)

2 (Media name and the number of times of cuts for the second most common media type)

THE NO. OF CUTS (PRE)

TOTAL (Total number of times of cuts of the previous cutter)

1 (Media name and the number of times of cuts for the most common media type)

2 (Media name and the number of times of cuts for the second most common media type)

Additional information

-

- USER COMMAND LOG

ADJUSTMENT	Print head alignment log
------------	--------------------------

Displayed contents

- 1:YYYY/MM/DD HH:MM xxx (Print head alignment implementation time and date, alignment type)
 - Details (in the next screen)
 - DATE (Alignment implementation time and date)
 - MEDIA TYPE (Media type used in the alignment)
 - HEAD (Head height at the alignment)
 - TMP [C] (Internal temperature at the alignment (Celsius))
 - TMP [F] (Internal temperature at the alignment (Fahrenheit))
 - RH [%] (Internal temperature at the alignment)
- 2:----/--/-- --:-- -----
- 3:----/--/-- --:-- -----
- 4:----/--/-- --:-- -----
- 5:----/--/-- --:-- -----
- D: MM/DD HH:MM auto(d) (Latest auto print head alignment (Detailed) implementation time and date)

Additional information

- Past five cases of print head alignment logs are displayed.
 - Any of the following alignment types is displayed.
 - manual: Manual print head alignment
 - auto(S): Auto print head alignment (Standard)
 - auto(d): Auto print head alignment (Detailed)
 - auto(n): Non-printing print head alignment
 - When print head alignment implementation time and date is tapped, the detailed information is displayed in the next screen.
-

Displayed contents

01: YYYY/MM/DD hh x (Color calibration implementation date, its time, and adjustment type)

Details (in the next screen)

DATE (Implementation time and date)

MEDIA TYPE (Media type used in the calibration)

HEAD (Head height)

TMP [C] (Internal temperature (Celsius))

TMP [F] (Internal temperature (Fahrenheit))

RH [%] (Internal temperature)

02: ----/--/-- --:-- -----

03: ----/--/-- --:-- -----

Additional information

- The latest ten cases of the color calibration records are displayed.
- Any of the following adjustment types from 1 to 11 is displayed:
 - 1: Common calibration (Manual calibration has properly completed.)
 - 2: Calibration for individual media (Manual calibration has properly completed.)
 - 3: Calibration value initialization along with print head replacement
 - 4: Calibration value initialization along with main PCB replacement
 - 5: Calibration value initialization (with operation panel)
 - 6: Common calibration (Manual calibration may have failed.)
 - 7: Calibration for individual media (Manual calibration may have failed.)
 - 8: Common calibration (Automatic calibration has properly completed.)
 - 9: Calibration for individual media (Automatic calibration has properly completed.)
 - 10: Common calibration (Automatic calibration may have failed.)
 - 11: Calibration for individual media (Automatic calibration may have failed.)
- When any of the adjustment type from 3 to 5 is displayed, the details of MEDIA TYPE, HEAD, TMP [C], TMP [F], and RH [%] are not displayed.
- When color calibration implementation time and date is tapped, the detailed information is displayed in the next screen.
- Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

- CUSTOM SETTING CHECK

Displayed contents

xxxxxx.info (Information of function for particular customers)

xxxxxx.func: Valid or Invalid (Whether the function for particular customers is enabled or disabled is displayed.)

Additional information

- When the file for the function for particular customers does not exist, nothing is displayed.
 - When the file for the function for particular customers exists, the following information is displayed:
 - The information of particular customers is displayed in “xxxxxx.info” in the 1st line (the first 26 characters of the function name are displayed).
 - “xxxxxx.func” and the function name are displayed from the second line onwards (the first 26 characters of the function name are displayed).
 - Up to 20 cases of function for particular customers are displayed.
 - The files of the function for particular customers are the firmware for particular customers.
-

Jam error detailed information

No.	Contents	Details
01	Paper width detection	1: ON, 2: OFF
02	Carriage height	0: SL, 1: L, 2: M1, 3: M2, 4: M3, 5: H
03	The position of platen shutter	1: Closed, 2: Half-open, 3: Fully open <1/4>, 4: Fully open <2/4>, 5: Fully open <3/4>, 6: Fully open <4/4>, *: Displayed when this function is not supported by the printer.
04	Cut mode	1: User cut, 2: Eject cut, 3: Automatic cut,
05	Paper feeding environment	0: Temperature 15°C to 25°C/Humidity 40% to 60% 1: Temperature 25°C to 30°C/Humidity 40% to 60% 2: Temperature 15°C to 30°C/Humidity 10% to 40% 3: Temperature 15°C to 30°C/Humidity 60% to 80% 4: Temperature 15°C to 30°C/Humidity 0% to 10% or Temperature up to 15°C, 30°C or higher/Humidity 0% to 50% 5: Temperature 15°C to 30°C/Humidity 80% to 100% or Temperature up to 15°C, 30°C or higher/Humidity 50% to 100%
06	Borderless/bordered	1: Bordered printing, 2: Borderless printing, *: When a jam error is detected after the information on printing completion is acquired (depending on the jam occurrence timing)
07	Spur position	1: Top, 2: Down, *: When this function is not supported by the printer
08	Print mode label No.	Internal information (Not used in servicing)
09	Paper width	The size is displayed. (Unit: mm) (Only when paper width detection is enabled) *: Displayed when paper width detection is disabled.
10	Paper type	Displayed by paper name.
11	Information on estimated paper remaining amount	The paper remaining amount is displayed. (Unit: m) It is rounded off by a decimal point of less. (e.g.) When the paper remaining amount is 200 m, it is displayed as 200. When the paper remaining amount is 1.5 m, it is displayed as 2. 0: When the paper remaining amount is less than 1 m, or in the case of cut sheet *: When this function is not supported by the printer

Consumption degree of LFS1 and HMa1

In consideration of the influence such as dust by the user installation environment and unexpected use, regarding LFS1 and HMa1, the consumption degree is indicated by the count values of ink consumption amount and the output values of sensor light amount. The consumption degree can be confirmed using "Area number " in PRINTER STATUS and PRINT INF.

<How to confirm the consumption degree of LFS1>

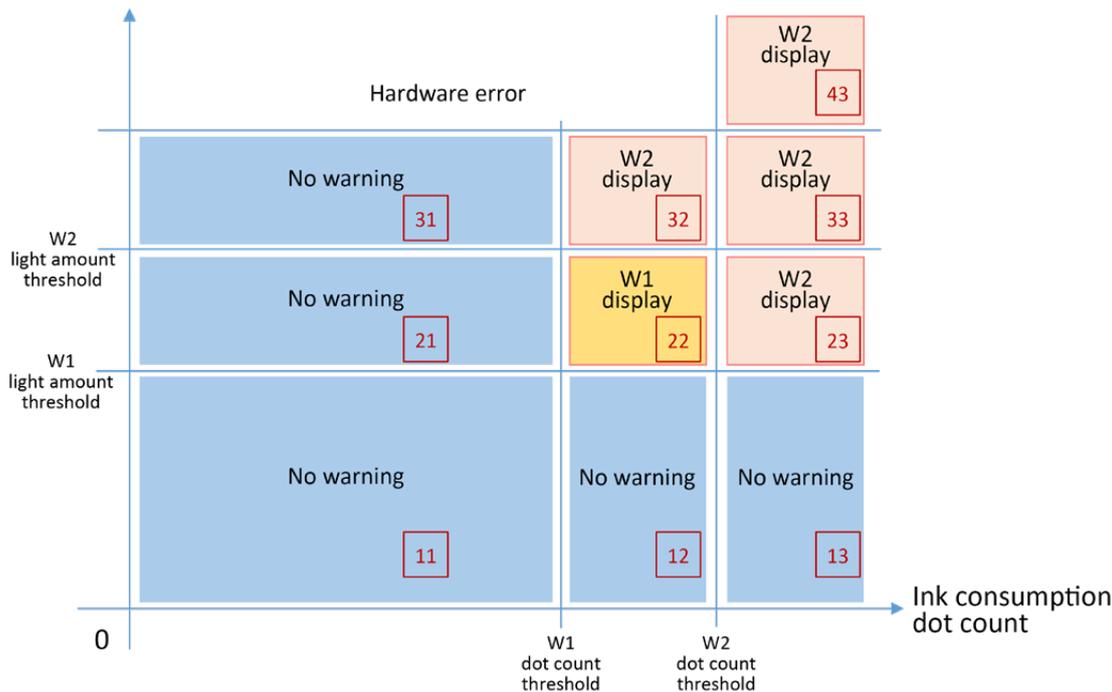
Confirm the area number in PRINTER STATUS or PRINT INF.

- PRINTER STATUS: PRINTER STATUS > PARTS COUNTER > LFS1 > Area
- PRINT INF: LFS1: OK **/**/**** 26 *** *% 26 0 144 11



- When the area number you confirmed is displayed in "W1 display" below, a message "Part replacement needed soon." is displayed.
- When the area number you confirmed is displayed in "W2 display" below, a message "Part replacement needed." is displayed.

Encoder sensor light amount



<How to confirm the consumption degree of HMa1>

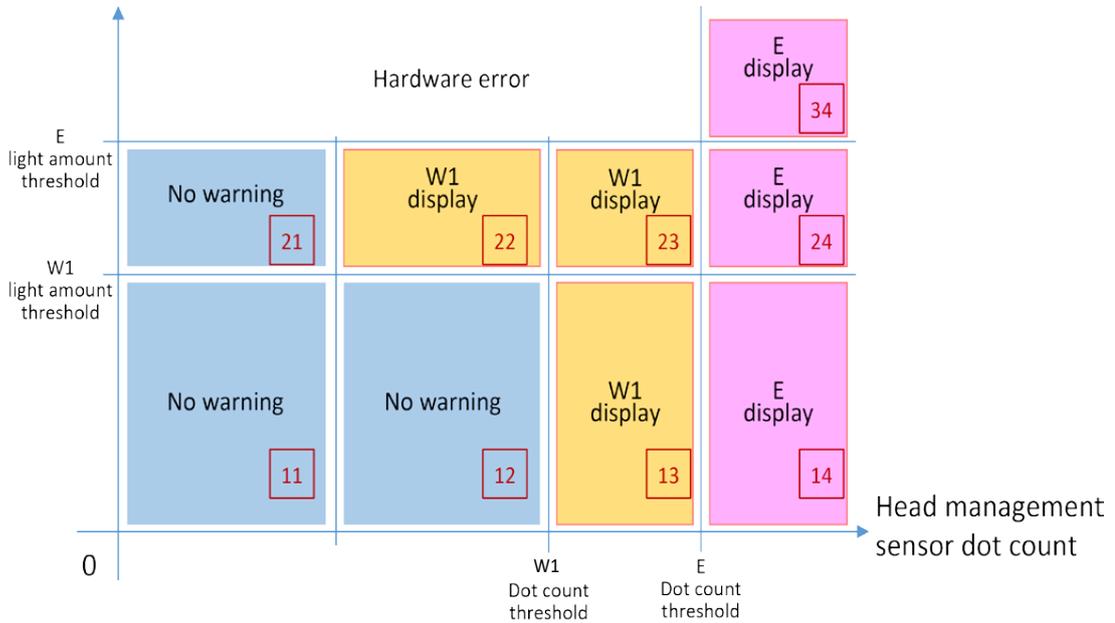
Confirm the area number in PRINTER STATUS or PRINT INF.

- PRINTER STATUS: PRINTER STATUS > PARTS COUNTER > HMa1 > Area
- PRINT INF: HMa1 : OK **/**/**** 40 *** *% 40 0 184 11



- When the area number you confirmed is displayed in "W1 display" below, a message "Part replacement needed soon." is displayed.
- When the area number you confirmed is displayed in "E display" below, a message "Part replacement needed." is displayed.

Head management sensor light amount



Consumption degree of CR1

In consideration of the influence such as dust by the user installation environment and unexpected use, regarding CR1, the consumption degree is indicated by the count values of ink consumption amount and the output values of sensor light amount. The consumption degree can be confirmed using "Area number" in PRINTER STATUS and PRINT INF.

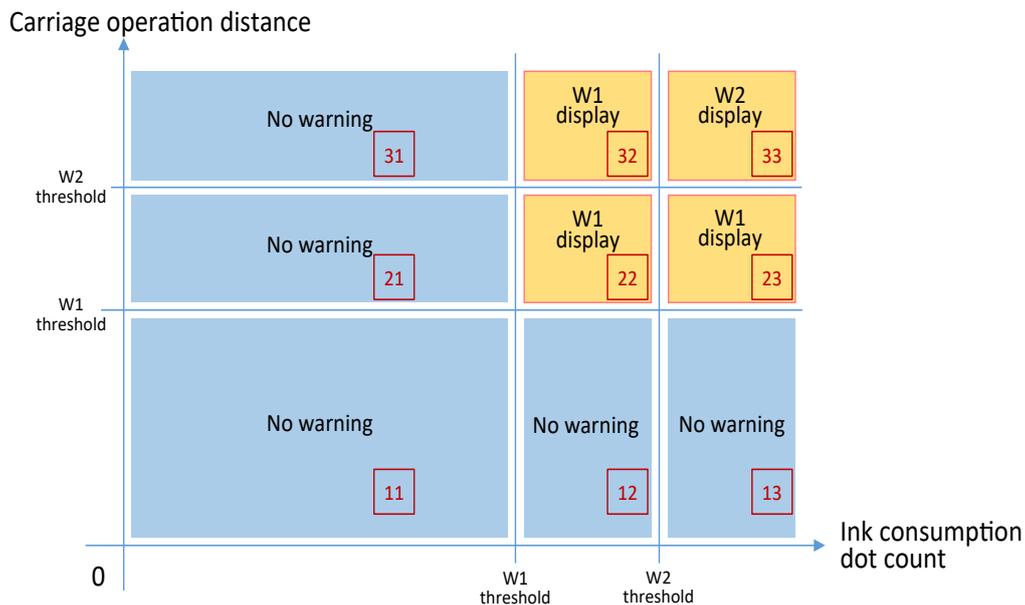
<How to confirm the consumption degree of CR1>

Confirm the area number in PRINTER STATUS or PRINT INF.

- PRINTER STATUS: PRINTER STATUS > PARTS COUNTER > CR1 > Area
- PRINT INF: CR1 : OK **/**/**** 244 *** *% 566 0 124 11



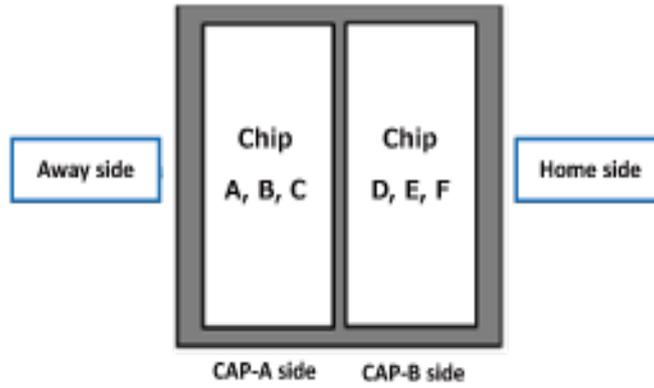
- When the area number you confirmed is displayed in "W1 display" below, a message "Part replacement needed soon." is displayed.
- When the area number you confirmed is displayed in "W2 display" below, a message "Part replacement needed." is displayed.



Correlation between chip positions and ink colors

Chip position	A	B	C	D	E	F
Color	MBK	BK	MBK2	Y	M	C

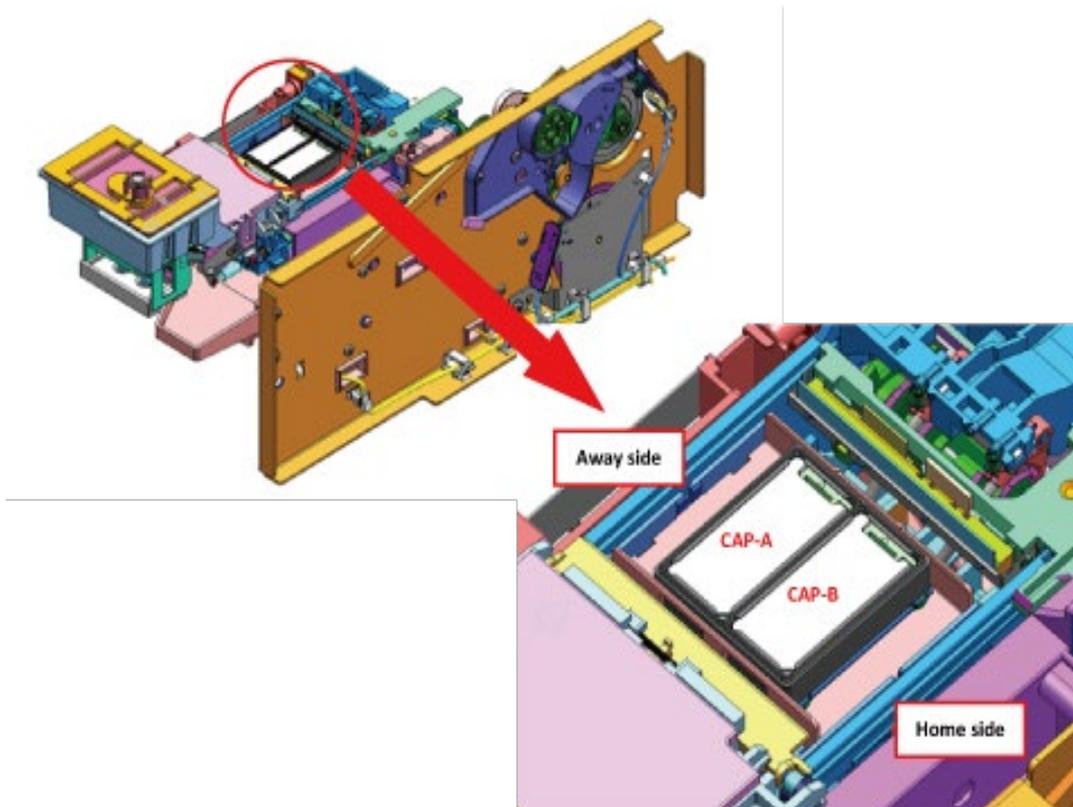
<View from the contact pad side of the print head>



Purge unit CAP layout

There are two CAPs, one CAP per chip, “CAP-A” and “CAP-B in order from the Away side.

Seen from the front of the printer, Away side is on the left side, and Home side is on the right side.



- **DIAGNOSIS**
 - **CR SYSTEM CHECK**

Purpose

Diagnosis of carriage unit and flexible cable unit:

- Diagnosing acceleration sensor
 - Checking flexible cable disconnection and flexible cable inserted at an angle
 - Carriage vibration measurement
-

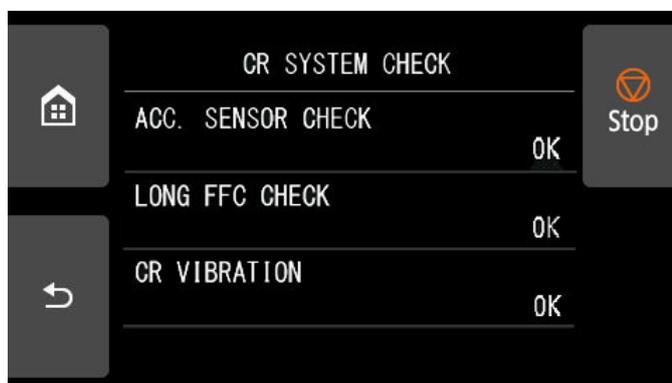
Use case

When isolating the factors of carriage drive-related errors (EC0x)

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The diagnosis result (OK or NG) is displayed in next screen.
- ACC. SENSOR CHECK: The function diagnosis result of the acceleration sensor is displayed.
 - LONG FFC CHECK: The signal transmission diagnosis result of the flexible cables is displayed.
 - CR VIBRATION: The carriage vibration measurement result is displayed.
-

Displayed contents



Setting range

-

Additional information

Main factor of NG cases

- ACC. SENSOR CHECK:
 - Failure of RAIL CLEANER UNIT or CARRIAGE UNIT
 - LONG FFC CHECK:
 - FLEXIBLE CABLE connection failure or FLEXIBLE CABLE UNIT disconnection
 - CR VIBRATION:
 - Failure of RAIL CLEANER UNIT or CARRIAGE UNIT
-

- PG CHECK

INITIALIZE CHECK	Initial operation check
-------------------------	-------------------------

Purpose

Diagnosis of purge unit such as operation check of cap and wiper blade

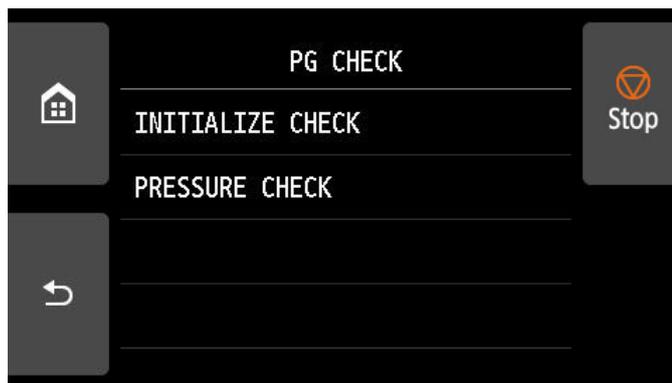
Use case

When isolating the factors of ink supply-related errors (EC3x)

Operation procedures

1. Select [YES] in the screen for confirming function execution.
2. When "initialize check" is completed, the PG CHECK screen is displayed again.

Displayed contents



Setting range

-

Additional information

When "initialize check" is completed, if an error is displayed on the operation panel, see "1-3. By Error Code" in Chapter 1 to handle the error.

PRESSURE CHECK	Purging operation check
-----------------------	-------------------------

See the next page.

Purpose

Diagnosis of purge unit such as purging operation

Use case

When an ink supply-related trouble occurs

Operation procedures

Refer to PRESSURE CHECK operation procedures.

Displayed contents

Refer to PRESSURE CHECK operation procedures.

Setting range

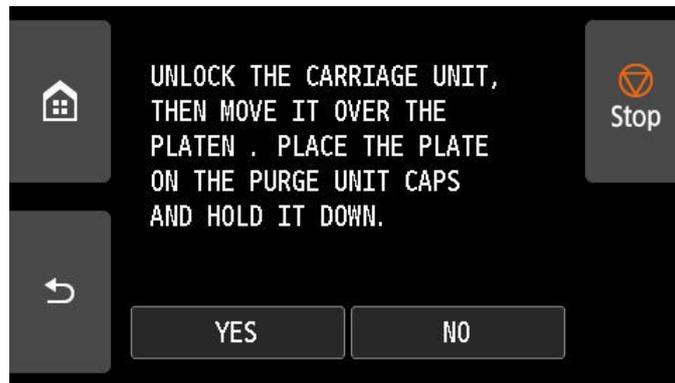
-

Additional information

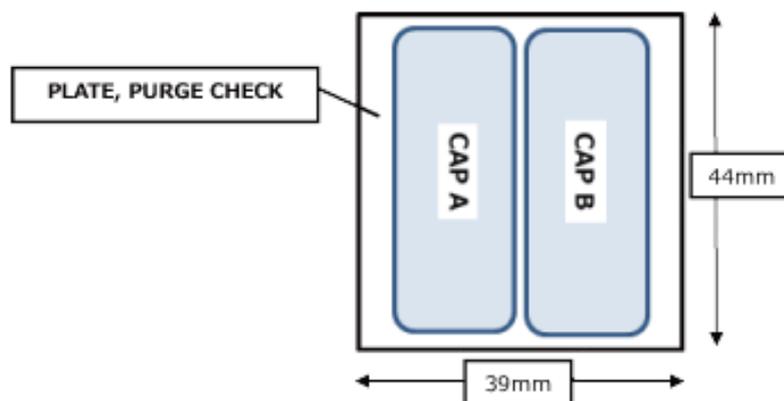
Make sure to check the purging operation per CAP.

PRESSURE CHECK operation procedures

1. Remove COVER, SIDE R A, COVER UNIT, SIDE R B, and CAP, SIDE COVER from the printer. (For how to remove it, refer to "2-3. Disassembly and Reassembly Procedures" in Chapter 2.) Select [SERVICE MODE > FUNCTION > CR UNLOCK] from the operation panel to release the lock of the carriage.
2. From the operation panel, select [SERVICE MODE > DIAGNOSIS > PURGE CHECK > PRESSURE CHECK > YES].
 - When [YES] is selected: Transits to the next screen.
 - When [NO] is selected: Returns to the screen to select [INITIALIZE CHECK] or [PRESSURE CHECK].
3. When the following message is displayed on the operation panel, move CARRIAGE UNIT manually so that the CAP part of PURGE UNIT can be visually checked.

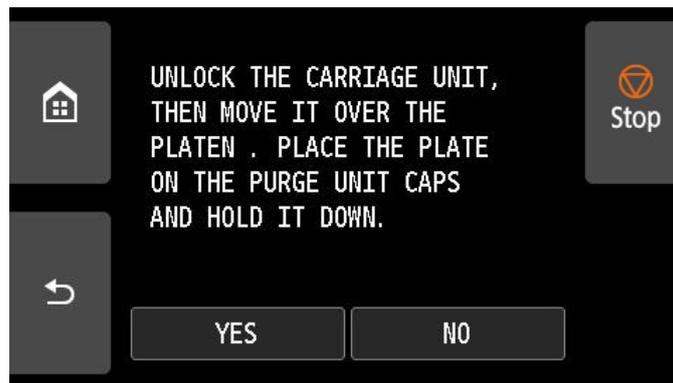


4. Wash the surface of the PLATE, PURGE CHECK, a service jig, with ethanol. Then, put it on the CAP of PURGE UNIT. Be sure to remove a thin vinyl sheet on the surface of a new PLATE, PURGE CHECK.



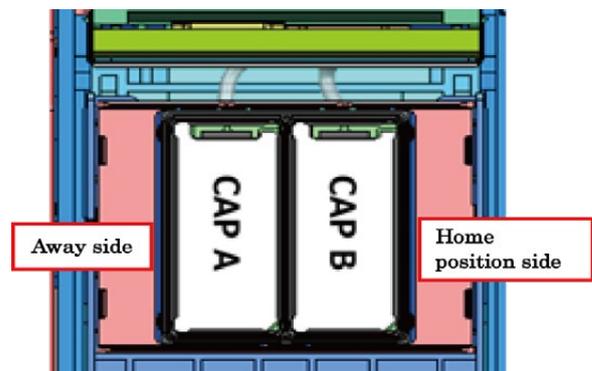
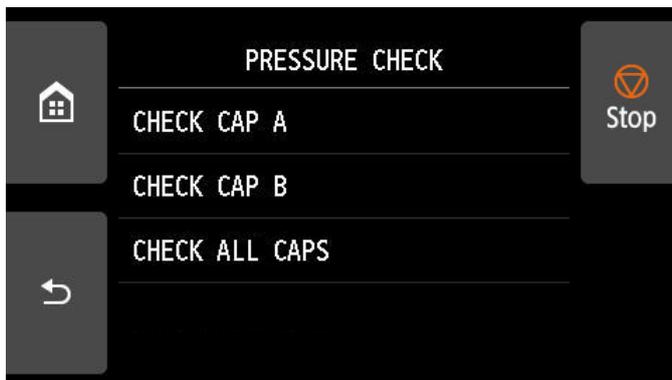
5. Select [YES].

- When [YES] is selected: Transits to the next screen.
- When [NO] is selected: Returns to the screen to select INITIALIZE CHECK or PRESSURE CHECK.

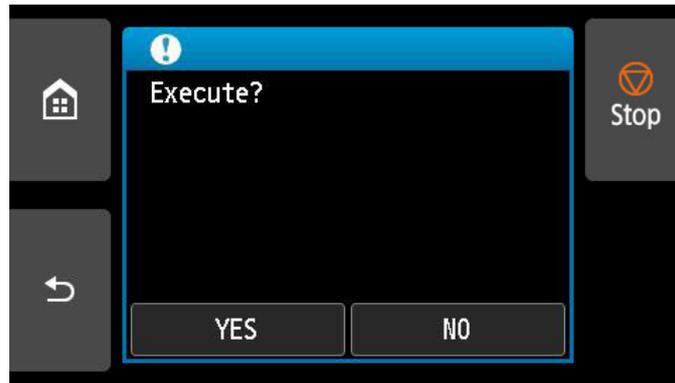


6. Select CAP for checking purging operation. Check the purging operation in the following order from the top (CAP A => CAP B => ALL CAPS) (Execute three times in total).

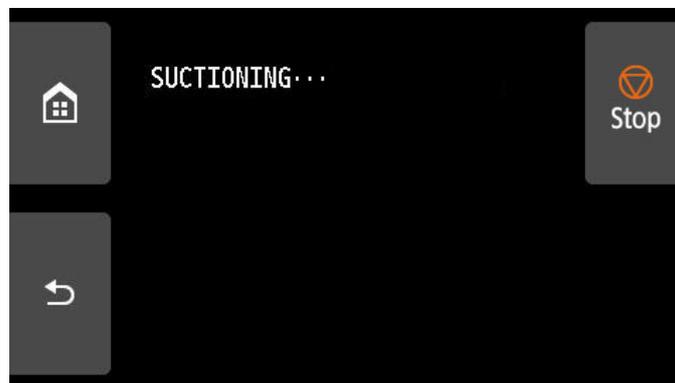
- When [CHECK CAP A] is selected: The purging operation of CAP A is checked.
- When [CHECK CAP B] is selected: The purging operation of CAP B is checked.
- When [CHECK ALL CAPS] is selected: The purging operations of All CAPs are checked at the same time.



7. After selecting CAP A, select [YES].

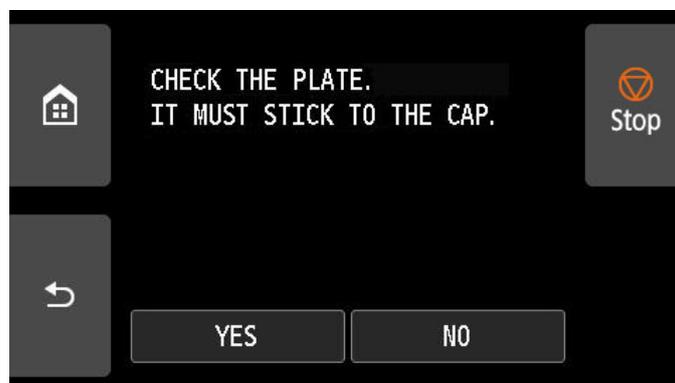


8. Select [YES], and the following message will be displayed and purging operation will be executed. Here, manually apply the slight pressure to PLATE, PURGE CHECK from above.



9. After the purging operation is completed, the following message is displayed on the operation panel. Check the vacuum pressure of CAP.

The PLATE, PURGE CHECK must not be peeled even by slightly pulling with one's hand. If the PLATE, PURGE CHECK is easily peeled, PURGE UNIT may be defective.

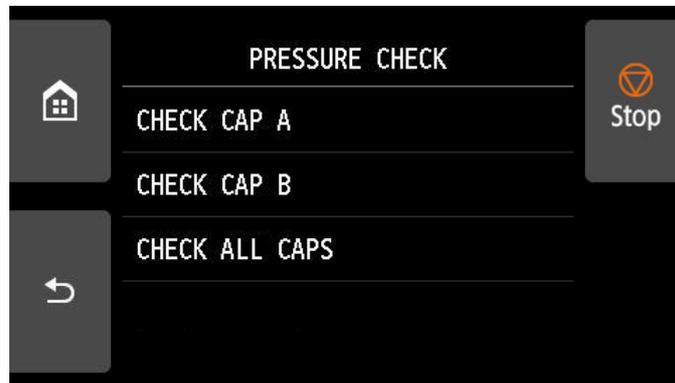


10. Check the vacuum pressure, then select [OK].

11. Select [OK], and the following message will be displayed and the vacuum pressure will be released.



12. After the vacuum pressure is released, the following screen is displayed again.



13. Check the remaining suctioning operation (CAP B => ALL CAPS) in the same procedures.

Make sure to check the suctioning operation per CAP. (When the purging operation is checked by selecting ALL CAPS only, if either of the CAPs is normal, PLATE, PURGE CHECK is not removed.)

- I/O DISPLAY

Purpose

Diagnosis of sensors and switches

Use case

When an error detecting abnormal sensor and switch occurs

Operation procedures

Refer to I/O DISPLAY operation procedures.

Displayed contents

Refer to I/O DISPLAY operation procedures.

Setting range

-

Additional information

- For the positions of sensors and switches, refer to "Sensors" in Chapter 1.
 - When you check the sensor you cannot touch, manually rotate the gear or cam to switch ON and OFF.
 - When the paper entry sensor (0:1) is shielded, the roller is rotated, and paper feed home position sensor (0:2) is switched ON and OFF.
-

I/O DISPLAY operation procedures

1. Select [SERVICE MODE > DIAGNOSIS > I/O DISPLAY] from the operation panel. The following screen is displayed in the operation panel:



2. Switch the sensor or the switch to be diagnosed manually, and check its switching information by the display on the operation panel (0 or 1) or the beeping sounds when they are switched ON and OFF.

I/O check list of the sensors and switches displayed on the operation panel

Display		Sensor and switch names
0	0	Purge main cam sensor
	1	Paper entry sensor
	2	Paper feed home position sensor
	3	Pump roller sensor
	4	Carriage lift sensor
	5	Wiper position sensor
	6	Cutter home position sensor
	7	Right choke valve position sensor
	8	-
	9	Right agitation valve position sensor
	A	-
	B	Right tank cover switch
	C	-
	D	Paper wind direction sensor
	E	Paper wind switch
	F	Paper unwind switch
1	0	Release lever switch
	1	Top cover switch
	2	-
	3	Lower paper entry sensor
	4	Upper paper entry sensor
	5	Upper roll nip sensor
	6	Lower roll nip sensor
	7	Flapper position sensor
	8	Head cover sensor
	9	Paper wind on/off switch
	A	Upper left spool set sensor
	B	Upper right spool set sensor
	C	Lower left spool set sensor
	D	Lower right spool set sensor
	E	Upper roll cover sensor
	F	-
2	0	-
	1	-
	2	-
	3	-
	4	-
	5	-
	6	-
	7	-
	8	-
	9	-
	A	-
	B	-
	C	-
	D	-
	E	-
	F	-

- OPT SENS CHECK

Purpose

Functional diagnosis of multi sensor

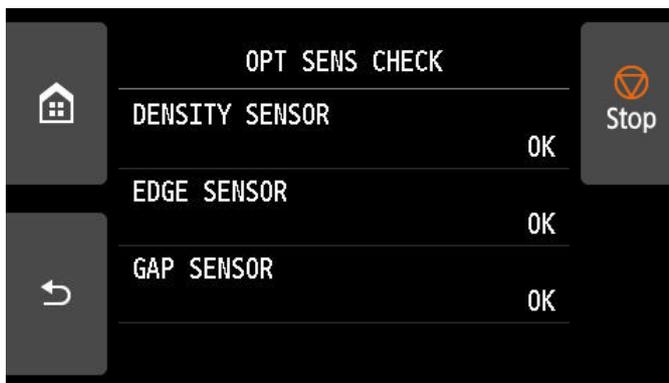
Use case

When a multi sensor-related error (EC23) occurs

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The diagnosis result (OK or NG) is displayed in the next screen.
 - DENSITY SENSOR: The function diagnosis result of the density sensor is displayed.
 - EDGE SENSOR: The function diagnosis result of the paper edge sensor is displayed.
 - GAP SENSOR: The function diagnosis result of the GAP sensor is displayed.
-

Displayed contents



Setting range

-

Additional information

Main factor of Not Good cases

- Multi sensor optical axis adjustment deficiency (Readjustment in [SERVICE MODE > ADJUSTMENT > OPTICAL AXIS])
 - Multi sensor GAP adjustment deficiency (Readjustment in [SERVICE MODE > ADJUSTMENT > GAP CALIB])
 - MULTI SENSOR UNIT failure
-

- NOZZLE CHECK

RUN	Function diagnosis execution
RESULT	Display of diagnosis result

Purpose

Function diagnosis of print head management sensor

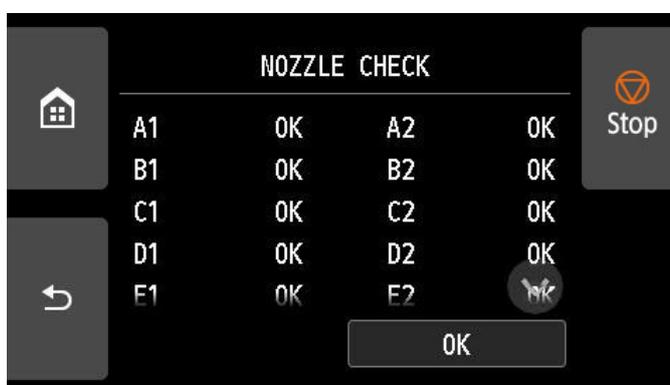
Use case

When a print head management sensor-related error (EC22) occurs

Operation procedures

1. Select [RUN] in the NOZZLE CHECK screen.
2. Select [YES] in the screen for confirming function execution.
3. When the screen goes back to the NOZZLE CHECK screen, select [RESULT].
4. The diagnosis result (OK or NG) is displayed in the next screen.

Displayed contents



The correlation between chip positions and colors

Chip position	Color						
A1	MBK	A2	MBK	B1	BK	B2	BK
C1	MBK2	C2	MBK2	D1	Y	D2	Y
E1	M	E2	M	F1	C	F2	C

Setting range

-

Additional information

Main factor of Not Good cases

- Print head management sensor adjustment deficiency (Readjustment in [SERVICE MODE > ADJUSTMENT > NOZZLE CHK POS])
- HEAD MANAGEMENT SENSOR UNIT failure

- HEAD CNT CHECK

Purpose

Function diagnosis of print head contact detection

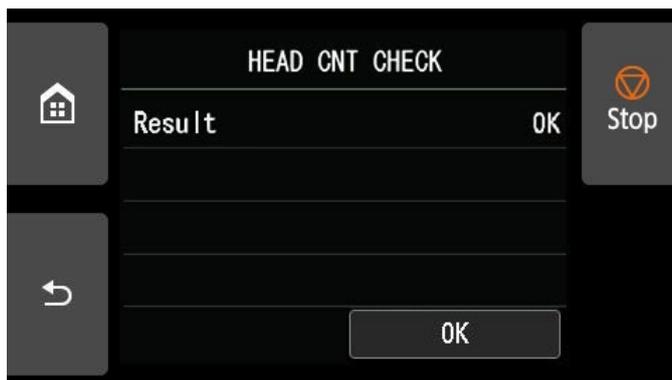
Use case

When a print head-related error (EC21) occurs

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The diagnosis result (OK or NG) is displayed in the next screen.
-

Displayed contents



Setting range

-

Additional information

Main factor of Not Good cases

- Incomplete PRINT HEAD installation
 - PRINT HEAD failure
 - CARRIAGE UNIT failure
-

- ANALOG ENCODER CHECK

Purpose

Function diagnosis of analog encoder sensor

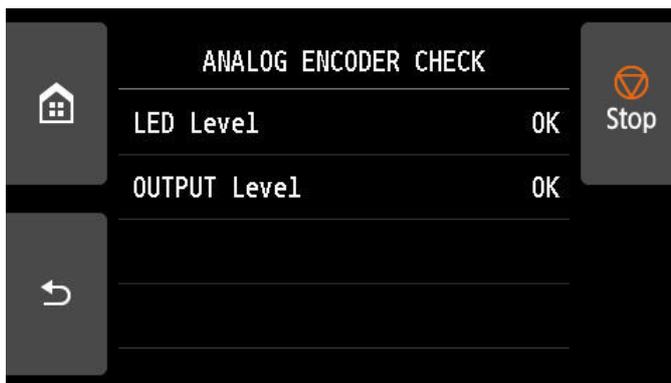
Use case

When an analog encoder sensor-related error (EC11or EC12) occurs

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The diagnosis result (OK or NG) is displayed in the next screen.
 - LED level: Diagnosis result of LED light volume adjustment
 - OUTPUT level: Output results
-

Displayed contents



Setting range

-

Additional information

Main factors of Not Good cases

- Paper jam inside the printer
 - FILM, TIMING SLIT DISK (PAPER FEED part) is not clean or is deformed.
 - PAPER FEED ENCODER UNIT failure
 - PAPER FEED MOTOR UNIT failure
-

• FUNCTION

- CR LOCK

Purpose

Returning a carriage to the home position

Use case

- When checking the condition of the print head contact
 - At the PRESSURE CHECK of PURGE UNIT (purging operation check)
 - When manually confirming the movement of CARRIAGE UNIT
 - When checking the condition of CARRIAGE UNIT visually
-

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. When the carriage returns to the home position, the carriage is locked.
-

Displayed contents

-

Setting range

-

Additional information

Do not replace the print head using this function.

- CR UNLOCK

Purpose

Releasing the lock of the carriage

Use case

- When checking the condition of the print head contact
 - At the PRESSURE CHECK of PURGE UNIT (purging operation check)
 - When manually confirming the movement of CARRIAGE UNIT
 - When checking the condition of CARRIAGE UNIT visually
 - When draining the ink
-

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. Close the ink supply valve, and the lock of the carriage will be released. (The carriage can be moved manually.)
-

Displayed contents

-

Setting range

-

Additional information

Do not replace the print head using this function.

- HEAD REPLACEMENT

Purpose

To replace the print head. Ink filling and print head alignment (Auto / Standard) is automatically performed after the print head is installed.

Use case

When replacing the print head

Operation procedures

1. Load sheets of paper for paper feeding. (for printing the print head alignment pattern).
 2. Select [YES] in the screen for confirming function execution.
 3. Follow the instructions on the operation panel to replace the print head.
 4. After the print head is installed, the carriage returns to the home position and ink filling starts.
 5. After ink filling is completed, print head alignment is performed.
-

Displayed contents

-

Setting range

-

Additional information

The print head can be replaced without draining ink inside the print head in the service mode.

- INK SUPPLY VALVE OPEN

OPEN	Opening ink supply valve
CLOSE	Closing ink supply valve

Purpose

Opening and closing ink supply valve

Use case

- When draining ink before CARRIAGE UNIT or INK TUBE UNIT is replaced
- When draining the ink from the tube before SUB INK TANK UNIT is replaced

Operation procedures

1. Select [OPEN] in the screen for confirming function execution.
2. Open the ink supply valve of SUB INK TANK UNIT.

Displayed contents

-

Setting range

-

Additional information

Case (1): Ink draining when replacing CARRIAGE UNIT or INK TUBE UNIT

- 1) Unlock the carriage from [SERVICE MODE > FUNCTION > CR UNLOCK] in the operation panel, or manually move the carriage unit.
- 2) Select [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] from the operation panel, and open the ink supply valves of SUB INK TANK UNIT.
- 3) The ink is drained into SUB INK TANK UNIT from the tube.
- 4) After the ink has drained, the CARRIAGE UNIT (or INK TUBE UNIT) can be removed.

Case (2): Ink draining when replacing SUB INK TANK UNIT

- 1) Remove all the ink cartridges.
- 2) Unlock the carriage from [SERVICE MODE > FUNCTION > CR UNLOCK] in the operation panel, or manually move the carriage unit.
- 3) Select [SERVICE MODE > FUNCTION > INK SUPPLY VALVE OPEN > OPEN] from the operation panel, and open the ink supply valves of SUB INK TANK UNIT.
- 4) The ink is drained into SUB INK TANK UNIT from the tube.
- 5) After the ink has drained, the SUB INK TANK UNIT can be removed.

- INK FILLING

Purpose

Ink filling

Use case

- When replacing CARRIAGE UNIT
 - When replacing INK TUBE UNIT
 - When replacing ink supply-related unit
-

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. Ink filling starts.
-

Displayed contents

-

Setting range

-

Additional information

Depending on consumed ink amount of maintenance cartridge, a maintenance cartridge full error may occur while INK FILLING is executed, therefore, prepare a new maintenance cartridge.

• ADJUSTMENT

- OPTICAL AXIS

Purpose

Multi sensor optical axis adjustment

Multi sensor installed in the carriage unit varies among printers due to component tolerance.

This adjustment corrects the variation among printers.

Use case

- When replacing MULTI SENSOR UNIT
 - When replacing CARRIAGE UNIT
-

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The pattern for adjustment is printed, and the optical axis is adjusted.
 3. After the adjustment, the screen returns to the HOME screen.
-

Displayed contents

-

Setting range

-

Additional information

- Use Canon Glossy Photo Paper HG 170 that the size is A4 or larger in width.
 - Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, when Canon Glossy Photo Paper HG 170 is not available, use Canon Glossy Photo Paper HG 255 or Canon Photo Semi-Gloss Paper.
-

- GAP CALIB

Purpose

GAP calibration

The multi sensor installed in the carriage unit detects the head-to-paper distance, and adjusts the carriage position optimally depending on that distance.

Use case

- When replacing MULTI SENSOR UNIT
 - When replacing CARRIAGE UNIT
-

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The adjustment is executed.
 3. After the adjustment, the fed paper is taken up, and the screen returns to the HOME screen.
-

Displayed contents

-

Setting range

-

Additional information

- Use Canon Glossy Photo Paper HG 170 that the size is A4 or larger in width.
 - Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, when Canon Glossy Photo Paper HG 170 is not available, use Canon Glossy Photo Paper HG 255 or Canon Photo Semi-Gloss Paper.
-

- LF TUNING

Purpose

Eccentricity correction
The horizontal line feed amount is corrected to reduce band uneven printing.

Use case

When horizontal uneven printing occurs

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The pattern for adjustment is printed, and the adjustment is executed.
 3. After the adjustment, the screen returns to the HOME screen.
-

Displayed contents

-

Setting range

-

Additional information

- Use the paper whose maximum size can be used with the printer. If not, the message “Please set the specified size of paper.” is displayed and the subsequent adjustment is not performed.
 - Use Canon Glossy Photo Paper HG 170.
 - Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, when Canon Glossy Photo Paper HG 170 is not available, use Canon Glossy Photo Paper HG 255 or Canon Photo Semi-Gloss Paper.
-

- NOZZLE CHK POS

Purpose

Adjustment of the optical axis in the print head management sensor
The optimal position of the print head management sensor is determined so as to execute non-ejection detection for all the nozzles.

Use case

When replacing HEAD MANAGEMENT SENSOR UNIT

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. After the adjustment, the screen returns to the ADJUSTMENT screen.
-

Displayed contents

-

Setting range

-

Additional information

-

- CR REG

RUN	Dynamic head alignment execution
Purpose	
Dynamic head alignment The ink dot misplacement due to the carriage position (scanning direction) is corrected.	
Use case	
<ul style="list-style-type: none">· When replacing CARRIAGE UNIT· When replacing PLATEN UNIT, TOP A to F· When replacing PLATEN UNIT, TOP AWAY	
Operation procedures	
<ol style="list-style-type: none">1. Select [RUN] in the CR REG screen.2. Select [YES] in the screen for confirming function execution.3. The pattern for adjustment is printed, and the adjustment is executed.4. After the adjustment, the screen returns to the HOME screen.	
Displayed contents	
-	
Setting range	
-	
Additional information	
<ul style="list-style-type: none">· Use Canon Glossy Photo Paper HG 170 whose maximum size can be used with the printer.· Only in TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, when Canon Glossy Photo Paper HG 170 is not available, use Canon Glossy Photo Paper HG 255 or Canon Photo Semi-Gloss Paper.	

Reset	Dynamic head alignment reset
Purpose	
Resetting the dynamic head alignment value to zero. Not normally used.	
Additional information	
This function is used only for product investigation by CINC.	

- CR MOTOR COG

Purpose

Cogging torque control

Carriage vibration due to motor cogging torque is controlled.

Use case

- When replacing CARRIAGE UNIT
 - When replacing BELT, CARRIAGE
 - When replacing MOTOR, DC
 - When replacing CARRIAGE ENCODER PCB UNIT
-

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. After the adjustment, the screen returns to the ADJUSTMENT screen.
-

Displayed contents

-

Setting range

-

Additional information

- MANUAL HEAD ADJ

PRINT DETAIL ADJ	Printing the print head alignment pattern (all adjustment items)
PRINT BASIC ADJ	Printing the print head alignment pattern (two-way djustment)

Purpose

Manual print head alignment

To print the print head alignment pattern and to register the setting value.

Use case

When the printed vertical line is distorted or when color displacement occurs

Operation procedures

1. In the MANUAL HEAD ADJ screen, select [PRINT DETAIL ADJ] or [PRINT BASIC ADJ].
2. Select [YES] in the screen for confirming function execution.
3. The pattern for adjustment is printed.
4. After the pattern for adjustment is printed, the screen for inputting setting value appears.
5. Check the pattern for adjustment visually, select the setting value, and tap [OK].
6. Tap [REGISTER] to register the alignment value.

Displayed contents

-

Setting range

PRINT DETAIL ADJ (all adjustment items)

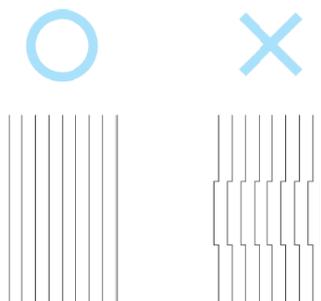
- a) A01-A** : Even-odd print head alignment value (printing direction: From HOME side to away side, select setting value from 0 to 20)
- b) B01-B** : Even-odd print head alignment value (printing direction: From away side to HOME side, select setting value from 0 to 20)
- c) C01-C** : Color separation print head alignment value (select setting value from 0 to 20)
- d) D01-D** : Two-way print head alignment value (select setting value from 0 to 20)
- e) E01-E** : Vertical print head alignment value (select setting value from 0 to 4)
- f) F01 : Slanted print head alignment value (select setting value from 0 to 12)

PRINT BASIC ADJ (Two-way djustment)

- a) D01-D** : Two-way print head alignment value (select setting value from 0 to 20)

Additional information

- The adjustment result depends on paper type. Therefore, use the paper type to be used in actual printing for the adjustment.
- The samples below are the good pattern with straight lines and the bad one with misaligned lines.



INPUT ADJ	Registration of print head alignment value
------------------	--

Purpose

To register the setting value for adjustment item.

Use case

When the setting value is registered later without registering the value in the screen for inputting the setting value after the print head alignment pattern is printed

Operation procedures

1. In the MANUAL HEAD ADJ screen, select [INPUT ADJ].
2. Check the pattern for adjustment visually, select the setting value, and tap [OK].
3. Tap [REGISTER] and register the alignment value.

Displayed contents

-

Setting range

Refer to the setting range in the previous page.

Additional information

-

RESET SETTINGS	Print head alignment value reset
-----------------------	----------------------------------

Purpose

To reset the print head alignment value.

Use case

When the specified alignment value is required to be restored to the initial value

Operation procedures

1. In the MANUAL HEAD ADJ screen, select [RESET SETTINGS].
2. Select [YES] in the screen for confirming function execution.

Displayed contents

-

Setting range

-

Additional information

-

- MARGIN ADJ

INPUT TOP MARGIN	Margin adjustment in leading edge of paper
-------------------------	--

Purpose

To register the margin correction value in leading edge of paper.

Use case

When margin misalignment occurs due to margins shift during paper feeding

Operation procedures

1. Execute [SERVICE MODE > ADJUSTMENT > MARGIN ADJ > PATTERN PRINT] to print the pattern for margin adjustment.
2. Measure the distance between the paper end face of the pattern for margin adjustment and the line for checking the margin in leading edge of paper, and select any correction value.
3. Print the pattern for margin adjustment again.
4. Measure the distance between the paper end face of the pattern for margin adjustment and the line for checking the margin in leading edge of paper, and confirm that the selected correction value is reflected.

Displayed contents

-

Setting range

From - 5.0 to + 5.0 (mm) (Default setting: + 1.0)

Additional information

For the items to be printed on the pattern for margin adjustment, see the next page.

INPUT BOTTOM MARGIN	Margin adjustment in bottom edge of paper
----------------------------	---

Purpose

To register the margin correction value in bottom edge of paper.

Use case

When margin misalignment occurs due to margins shift during paper feeding

Operation procedures

1. Execute [SERVICE MODE > ADJUSTMENT > MARGIN ADJ > PATTERN PRINT] to print the pattern for margin adjustment.
2. Measure the distance between the paper end face of the pattern for margin adjustment and the line for checking the margin in bottom edge of paper, and select any correction value.
3. Print the pattern for margin adjustment again.
4. Measure the distance between the paper end face of the pattern for margin adjustment and the line for checking the margin in bottom edge of paper, and confirm that the selected correction value is reflected.

Displayed contents

-

Setting range

From - 5.0 to + 5.0 (mm) (Default setting: - 1.0)

Additional information

For the items to be printed on the pattern for margin adjustment, see the next page.

PRINT PATTERN	Printing of the pattern for margin adjustment
Purpose	
To print the pattern for margin adjustment.	
Use case	
When adjusting margin misalignment	
Operation procedures	
<ol style="list-style-type: none"> 1. Select [YES] in the screen for confirming function execution. 2. The pattern for margin adjustment is printed. 	
Displayed contents	
-	
Setting range	
-	
Additional information	
<ul style="list-style-type: none"> · Horizontal line width: 1 dot, vertical line width: 32 dots · Line for checking margins (thin horizontal line printed at the top and bottom parts of paper) · Printing length: 100 mm · Ink color: BK 	

- LF ENC ADJ

Purpose	
Paper feed encoder adjustment	
To calculate the paper feeding position and paper feeding speed of the paper feed roller, and to perform adjustment for moving the paper feed roller properly.	
Use case	
<ul style="list-style-type: none"> · When replacing PAPER FEED ENCODER UNIT · When replacing MAIN PCB UNIT 	
Operation procedures	
<ol style="list-style-type: none"> 1. When the paper is set to the printer, take up the paper. 2. Select [YES] in the screen for confirming function execution. 3. The paper feed roller rotates and the adjustment is executed. 4. After the adjustment, the screen returns to the ADJUSTMENT menu screen. 	
Displayed contents	
-	
Setting range	
-	
Additional information	
Even if the adjustment is executed while the paper is set to the printer, the paper feed encoder can be adjusted properly. (Note that the paper is ejected by 10 cm as the paper feed roller rotates at the adjustment.)	

- UPPER ARB CALIB

Purpose

Upper active roll brake motor calibration

To adjust the paper feed unit optimally by correcting load changes due to the individual variation in paper feed unit such as load changes by active roll brake motor individual variation and by gear driving.

Use case

- When replacing upper ACTIVE ROLL BRAKE UNIT
 - When replacing MAIN PCB UNIT
-

Operation procedures

1. When this function is tapped, the message "Take the roll holder off" is displayed. Take off the roll holder and select [YES].
 2. Select [YES] in the next screen, and the adjustment will start.
 3. After the adjustment is executed, the screen returns to the HOME screen.
-

Displayed contents

-

Setting range

-

Additional information

Even if the roll paper is not set to the roll holder, be sure to take off the roll holder to perform the adjustment.

- LOWER ARB CALIB

Purpose

Lower active roll brake motor calibration

To adjust the paper feed unit optimally by correcting load changes due to the individual variation in paper feed unit such as load changes by active roll brake motor individual variation and by gear driving.

Use case

- When replacing lower ACTIVE ROLL BRAKE UNIT
 - When replacing MAIN PCB UNIT
-

Operation procedures

1. When this function is tapped, the message "Take the roll holder off" is displayed. Take off the roll holder and select [YES].
 2. Select [YES] in the next screen, and the adjustment will start.
 3. After the adjustment is executed, the screen returns to the HOME screen.
-

Displayed contents

-

Setting range

-

Additional information

Even if the roll paper is not set to the roll holder, be sure to take off the roll holder to perform the adjustment.

When it is detected that the lower roll unit is not connected to the printer, the LOWER ARB CALIB menu is not displayed.

• TEST PRINT

- SERVICE NOZZLE CHECK

Purpose

To check the service nozzle check pattern if ink is properly ejected from the print head nozzles.

Note that the nozzle check pattern varies between user mode and service mode.

- User mode: Non-ejection of ink is interpolated when the nozzle check pattern is printed.

- Service mode: Non-ejection of ink is not interpolated when the nozzle check pattern is printed.

Use case

Printing-related troubleshooting in servicing

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The service nozzle check pattern is printed.
 3. After the pattern is printed, the screen returns to the HOME screen.
-

Displayed contents

See the print sample of the service nozzle check pattern on the next page.

Setting range

-

Additional information

The following information is printed in service nozzle check pattern:

- Printer name
 - Print date
 - Printer serial number
 - Print head LOT number
 - Date of print head installation
 - Refill ink tank usage log (NINK)
 - Nozzle check pattern (Non-ejection of ink is not interpolated)
 - Last implementation date of cleaning
 - Cleaning: A-12 (CAP-A and CAP-B), A-1 (CAP-A) and A-2 (CAP-B)
 - Deep cleaning: R-12 (CAP-A and CAP-B), R-1 (CAP-A) and R-2 (CAP-B)
 - System cleaning: S-12 (CAP-A and CAP-B), S-1 (CAP-A) and S-2 (CAP-B)
-

Service nozzle check pattern print sample (TX-2100)

Canon **TX-2100** Service Nozzle Check Pattern

2017/04/20

Printer S/N **XXXXXXXXXX**

HEAD LOT NUMBER 000 00 0a

Date of Print Head installation 2017/02/28

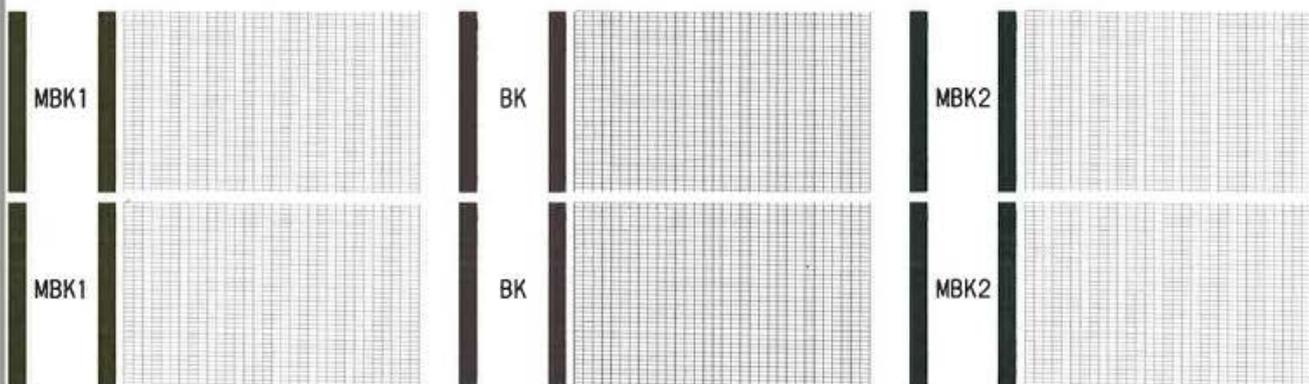
NINK 0

A-12 2017/04/20 S-12 2017/04/19 R-12 2017/04/14

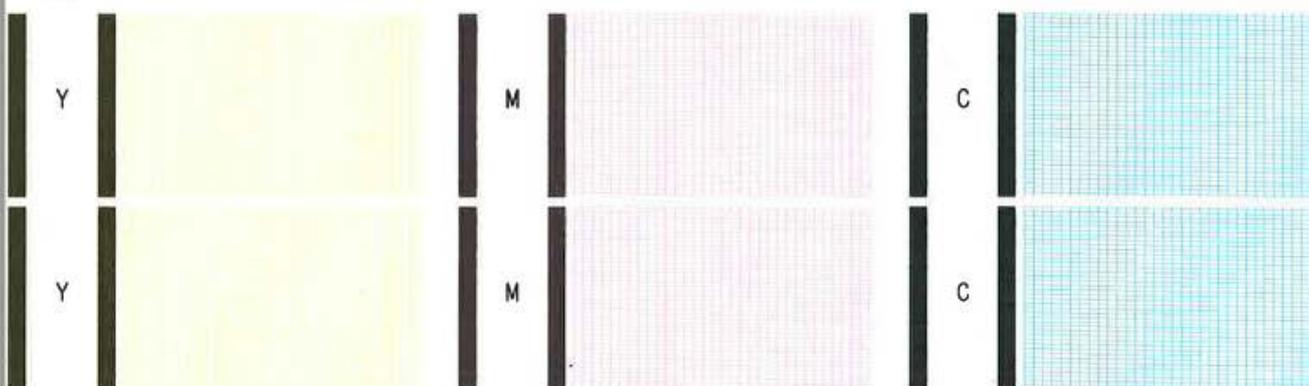
A-1 2017/04/12 S-1 2017/04/07 R-1 2017/04/19

A-2 2017/04/12 S-2 2017/04/14 R-2 2017/04/12

1



2



- PRINT INF

Purpose

To obtain the information necessary for servicing such as print head replacement log, cleaning log, ink usage, repair log, adjustment log, diagnosis log, parts counter value, and etc.

Use case

In servicing such as troubleshooting and periodical maintenance and when making a request to CINC for printer trouble analysis.

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. PRINT INF is printed.
 3. After it is printed, the screen returns to the HOME screen.
-

Displayed contents

See the print sample of PRINT INF on the next page.

Setting range

-

Additional information

- PRINT INF can be obtained by using service mode, log mode (text file), or iPF PRO Service Tool.
 - The contents recorded in PRINT INF are almost the same as the ones displayed in each menu of [SERVICE MODE > PRINTER STATUS]. Therefore, see PRINTER STATUS for details of each item of PRINT INF.
 - For the items recorded in PRINT INF only, see service log print samples from the page onwards.
-

PRINT INF print sample

This section explains using the PRINT INF print sample of TX-2100.

The printed information in PRINT INF is equivalent to PRINTER STATUS in the service mode menu. See SYSTEM INFO, ERROR LOG, PARTS COUNTER, CLEANING LOG, SERVICE LOG, HEAD USAGE LOG, INK USAGE LOG, OTHER CONSUMABLES USAGE LOG, and USER COMMAND LOG in [PRINTER STATUS](#).

The information with "See Appendix x." in the print sample below are not included in PRINTER STATUS in the service mode. Refer to the appendix described after the print samples.

Printer name / printer serial number / firmware version / boot code / service log print date

Canon PRINT INF S/N: Firm:00.36RC2 Boot:00.16 Date:2016/01/28

SYSTEM INFO TMP:24 RH:39 AFTER INST:0 DB Format Version:03
 PV TOTAL 61.6 m2 / 663.2 sq.f / 988(A4)
 ROLL1 TOTAL 46.9 m2 / 505.5 sq.f / 753(A4)
 ROLL2 TOTAL 13.8 m2 / 149.0 sq.f / 222(A4)
 CUTSHEET TOTAL 0.6 m2 / 6.7 sq.f / 10(A4)
 ENV. A:691 B:278 C:18 D:0 E:0 F:0

See "SYSTEM INFO."

HARDWARE ERROR LOG

01:02/21 11:33 EC17-203A(1039) 00000893 24 40 02:02/20 17:15 EC17-203B(1040) 00000893 26 40
 03:02/15 17:35 EC17-202F(100f) 00000534 25 38 04:02/15 17:20 EC17-202F(100f) 00000534 24 38
 05:02/14 10:37 EC58-2F12(4801) 00000376 -1 -1 06:02/14 10:13 EC51-404D(6820) 00000376 23 50
 07:02/14 10:10 EC51-404D(6820) 00000376 23 50 08:02/14 10:09 EC51-404D(6820) 00000376 23 50
 09:02/14 10:07 EC51-404C(6820) 00000376 23 50 10:02/14 10:07 EC51-404D(6820) 00000376 23 50

ERROR LOG

01:02/25 10:13 2E33(100a) 00000985 22 37 02:02/25 09:44 2818(1721) 00000985 22 37
 03:02/25 09:40 281B(1720) 00000985 22 37 04:02/25 09:37 2818(1721) 00000985 22 37
 05:02/22 16:38 2019(4920) 00000982 25 37 06:02/22 16:38 2E31(1022) 00000982 25 37
 07:02/22 16:36 2010(1317) 00000982 25 37 08:02/22 16:34 2017(1322) 00000982 25 37
 09:02/22 16:31 2E33(100a) 00000982 25 37 10:02/22 16:31 2E33(100a) 00000982 25 37

WARNING LOG

01:01/28 01:42 2D03(3000) 00000985 24 39 02:01/28 01:39 2D03(3000) 00000985 24 39
 03:01/28 01:35 2D03(3000) 00000985 23 39 04:01/27 23:11 1403(1570) 00000985 28 50
 05:01/27 23:11 1003(1500) 00000985 28 50 06:01/27 23:11 140A(1570) 00000985 28 50
 07:01/27 23:11 100A(1500) 00000985 28 50 08:01/27 23:11 1404(1570) 00000985 28 50
 09:01/27 23:11 1004(1500) 00000985 28 50 10:01/27 23:11 1402(1570) 00000985 28 50

See "ERROR LOG."

JAM LOG

01:02/22 16:38 004040-2019(4920) 01:1 02:2 03:* 04:3 05:1 06:1 07:* 08:10081
 09:152.8 10:Plain Paper 11:0
 02:02/22 16:36 002121-2010(1317) 01:1 02:2 03:* 04:* 05:1 06:* 07:* 08:*
 09:* 10:Plain Paper 11:0
 03:02/22 16:34 002221-2017(1322) 01:1 02:2 03:* 04:* 05:1 06:* 07:* 08:*
 09:* 10:Plain Paper 11:0
 04:02/22 14:58 004040-2019(4920) 01:1 02:2 03:* 04:* 05:1 06:* 07:* 08:*
 09:* 10:Plain Paper 11:0
 05:02/22 10:35 001112-2E3D(1300) 01:1 02:2 03:* 04:* 05:0 06:* 07:* 08:*
 09:* 10:Plain Paper 11:0

PARTS COUNTER LOG

Wia1:	OK	2019/02/01	0.0	705.7	0%	0.0	2	**	**
Wia2:	OK	****/**/**	1.3	997.1	0%	1.3	0	**	**
Wia6:	OK	****/**/**	2.3	921.9	0%	2.3	0	**	**
Wia7:	OK	****/**/**	0.1	200.0	0%	0.1	0	**	**
WP1:	OK	****/**/**	1.9	2.0	97%	1.9	0	**	**
WF1:	OK	****/**/**	0.0	104.7	0%	0.0	0	**	**
CR1:	OK	****/**/**	68451	30952380	0%	68451	0	**	**
CR2:	OK	****/**/**	198770	75000000	0%	198770	0	**	**
CR3:	OK	****/**/**	3242	180000	1%	3242	0	**	**
CR4:	OK	****/**/**	20044	7360000	0%	20044	0	**	**
CR5:	OK	****/**/**	198770	75000000	0%	198770	0	**	**
PG1:	OK	****/**/**	1856	156000	1%	1856	0	**	**
PG2:	OK	****/**/**	51918	995000	5%	51918	0	**	**
PG3:	OK	****/**/**	604	28000	2%	604	0	**	**
HMa1:	OK	****/**/**	0.6	3.8	16%	0.6	0	**	**
MT1:	OK	****/**/**	9	3400	0%	9	0	**	**
LFS1:	OK	****/**/**	198770	27840000	0%	198770	0	423	11
PL1:	OK	****/**/**	3	30000	0%	3	0	**	**
Mi1:	OK	****/**/**	0.3	978.0	0%	0.3	0	**	**
Mi2:	OK	****/**/**	-----	-----	1%	-----	0	**	**

See "PARTS COUNTER."

CLEANING LOG

A-AB	3(1)	2017/05/31,	2017/05/29,	2017/05/24	EX	3	2017/05/29	H	0	****/**/**
A-A	0(0)	****/**/**,	****/**/**,	****/**/**	T1	0	****/**/**	T2	0	****/**/**
A-B	0(0)	****/**/**,	****/**/**,	****/**/**	C	3	2017/05/25	FI-AB		
S-AB	0(0)	****/**/**,	****/**/**,	****/**/**	FI-A	0	****/**/**	FI-B		
S-A	0(0)	****/**/**,	****/**/**,	****/**/**	IR-AB	1	2017/05/29	IR-A		
S-B	1(0)	2017/05/30,	****/**/**,	****/**/**	IR-B	0	****/**/**			
R-AB	0(0)	****/**/**,	****/**/**,	****/**/**						
R-A	0(0)	****/**/**,	****/**/**,	****/**/**						
R-B	0(0)	****/**/**,	****/**/**,	****/**/**						

See "CLEANING LOG."

SERVICE ADJUSTMENT LOG

GAP_CALIB	2019/01/11	OPTICAL_AXIS	2018/09/03	CR_MOTOR_COG	2019/02/06	CGC_REC	****/**/**
LF_TUNING	2018/09/03	CR_REG	2018/09/03	NOZZLE_CHECK_POS	2016/01/27		
TOUCH_PANEL_CALIBRATION	****/**/**	UPPER_ARB_CALIB	2018/09/03	LOWER_ARB_CALIB	2		
LF_ENC_ADJ	2018/09/03						

See "SERVICE LOG."

PCB REPLACEMENT LOG

01:	2019/02/12	0	02:	****/**/**	0	03:	****/**/**	0	04:	****/**/**	0	05:	****/**/**	U
06:	****/**/**	0	07:	****/**/**	0	08:	****/**/**	0	09:	****/**/**	0	10:	****/**/**	0

PV AUTO JUDGE : ON(LOW) , 1

PV AUTO JUDGE (ON/OFF): Ink reduction mode setting information
 ON: Normal mode (cleaning is executed at the specified timing regardless of PV)
 OFF:AUTO mode (the number of cleaning is reduced depending on PV)
 Number of times: The number of mode switching from normal mode to AUTO mode

CONSUMABLES USAGE INFO

HEAD INF.1 LOT:000 00 0a DATE OF PRINT HEAD INSTALLATION: 2017/04/04
DOT COUNT TTL:40430
MBK:9138 BK:2947 MBK2:9127 Y:9221 M:5110 C:4384
THE NUMBER OF N INK INSTALLED THE NUMBER OF NON-EJECTION NOZZLES
A:000 B:000 C:000 D:000 A1: 0 A2: 0 B1: 1 B2: 1
E:000 F:001 C1: 0 C2: 0 D1: 0 D2: 0
E1: 0 E2: 0 F1: 0 F2: 0

HEAD INF.2 LOT:000 00 0a DATE OF PRINT HEAD INSTALLATION: 2017/04/04
DOT COUNT TTL:*****
MBK:***** BK:***** MBK2:***** Y:***** M:***** C:*****
THE NUMBER OF N INK INSTALLED THE NUMBER OF NON-EJECTION NOZZLES
A:000 B:000 C:000 D:000 A1: 0 A2: 0 B1: 1 B2: 4
E:000 F:000 C1: 0 C2: 0 D1: 1 D2: 0
E1: 0 E2: 0 F1: 1 F2: 1

THE NUMBER OF HEAD REPLACEMENT: 6 S: 2
THE ACCUMULATION OF DOT COUNT TTL:143666
MBK:19031 BK:4528 MBK2:19003
Y:35363 M:33506 C:32232

INK INFO
INK-USE1 INK-TTL: 927.5ml NINK-TTL: 0.0ml
INK MBK: 188.0ml BK: 91.9ml Y: 215.8ml M: 223.0ml C: 208.8ml
NINK MBK: 0.0ml BK: 0.0ml Y: 0.0ml M: 0.0ml C: 0.0ml
INK-USE2 INK-TTL: 9.4ml NINK-TTL: 0.0ml
INK MBK: 0.9ml BK: 0.3ml Y: 5.4ml M: 0.3ml C: 2.5ml
NINK MBK: 0.0ml BK: 0.0ml Y: 0.0ml M: 0.0ml C: 0.0ml
THE NUMBER OF INK-USE2 CLEAR:0

MAINTENANCE CARTRIDGE INFO
USAGE:0% THE NUMBER OF REPLACEMENT:13 THE NUMBER OF RESET: 5

CUTTER INFO THE NUMBER OF REPLACEMENT:0
THE NUMBER OF CUTS
CURRENT TOTAL:1966 1:Plain Paper :1824 2:Coated Paper :138
PREV.1 TOTAL:0 1:*****:0 2:*****:0

See "HEAD USAGE LOG."

See "INK USAGE LOG."

See "OTHER CONSUMABLES USAGE LOG."

DIAGNOSIS INFO

```
CR SYSTEM CHECK      ****/**/** ACC.SENSOR ** FFC ** CR Vib. **
PURGE CHECK          ****/**/** **
NOZZLE CHECK         ****/**/** **
HEAD CNT CHECK       ****/**/** **
OPT SENS CHECK       2016/01/28 DENSITY OK EDGE OK GAP OK
ANALOG ENCODER CHECK 2018/09/03 LED LEVEL OK OUTPUT LEVEL OK
```

The DIAGNOSIS information

USER COMMAND LOG

```
ADJUSTMENT
No:ADJ.TYPE HEAD TEMP&HUM MEDIA TYPE DATE TIME GAP1 GAP2
1:auto(d) H(3,4) 24C 75F 39% Plain Paper 2019/02/13 14:24 171, 211
2:auto(s) H(3,-) 23C 73F 41% Plain Paper 2019/02/01 14:49 167, ----
3:auto(d) H(3,4) 23C 73F 40% Plain Paper 2016/02/05 15:36 170, 210
4:----- (-,-) ---C---F---% ----- :-----
5:----- (-,-) ---C---F---% ----- :-----
D:auto(d) H(3,4) 24C 75F 39% Plain Paper 2019/02/13 14:24 171, 211
```

Indicates carriage height. (Unit: 1/100mm)

See "USER COMMAND LOG."

COLOR CALIBRATION HISTORY (LAST 10 TIMES)

DATE	ACTION	MEDIA	TEMP/HUMID	R_C_R
1: 2016/02/05 15 3				
2: 2016/02/05 12 3				
3: 2016/02/04 18 3				
4: 2016/02/01 16 3				
5: 2016/02/01 14 3				
6: 2016/02/01 11 3				
7: 2016/01/31 17 3				
8: 2016/01/31 16 3				
9: 2016/01/31 12 3				
10: 2016/01/31 11 3				

JOB LOG

```
N:M HEAD TEMP&HUM MEDIA TYPE DATE TIME GAP JOB NAME
1:A3 A(-) 25C 77F 37% Plain Paper 2019/02/22 16:25 120 *****
*****
2:A3 A(-) 25C 77F 37% Plain Paper 2019/02/22 16:23 120 *****
*****
3:A3 A(-) 23C 73F 39% Plain Paper 2019/02/22 10:55 120 *****
*****
4:A3 A(-) 23C 73F 39% Plain Paper 2019/02/22 10:45 120 *****
*****
5:--- (-) ---C---F---% ----- :-----
```

JOB LOG: The latest five print job logs are displayed.

- N: The smaller figure shows the newer log (1 to 5)
- M: Print mode
- HEAD: Head height (Automatic or fixed, height)
- TEMP&HUM: Temperature and humidity
- MEDIA TYPE: Type of media
- DATE: Date of printing
- TIME: Time of printing
- GAP: Carriage height (Unit: 1/100 mm)
- JOB NAME: Not displayed for personal information (Indicated by 128 asterisks)

COLOR CALIBRATION HISTORY:

- TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420 support calibration, and accordingly the color calibration history (COLOR CALIBRATION HISTORY) is printed.
- The calibration history information printed to only PRINT INF such as "R_C_R," "H_S/N," and "M_S/N" are the reference information required for the analysis of the printer troubles escalated to CINC.

Canon TR 3500 PRINT INF S/N:***** Firm: [REDACTED] Boot:00.** Date:2018/05/31

HEAD

```

HEAD INF.1 LOT:000 00 0a
1:****/**/** ****/**/** 2017/05/29 2:****/**/** ****/**/** ****/**/**
3:NEPB45214 000000000 000000000
4: 2 5:***** 6:***** 7:NA 8:***** 9:***** 10:***** 11:NA 12:***** 13:*****
14: 1 15:NA 16:*** 17:*** 18:*** 19:*** 20:NA 21:*** 22:*** 23:***
24:*** 25: 1 26:*** 27:*** 28:*** 29:787
31:01:2017/05/31 27EB(1551) 02:2017/05/30 27EB(1551)
03:2017/05/30 27EB(1551) 04:2017/05/30 27EB(1551)
05:2017/05/30 27EB(1551) 06:2017/05/30 27EB(1551)
33:00.44 2017/05/31 00.43 2017/05/29 00.43 2017/05/29
34:A:63 B:66 C:65 D:62 E:72 F:62 35:NA

```

```

HEAD INF.2 LOT:000 00 0a
1:****/**/** ****/**/** 2017/05/25 2:2017/05/29 ****/**/** ****/**/**
3:NEPB45214 000000000 000000000
4:***** 5:***** 6:***** 7:NA 8:***** 9:***** 10:***** 11:NA 12:*****
14:***** 15:NA 16:*** 17:*** 18:*** 19:*** 20:NA 21:*** 22:***
24:*** 25:*** 26:*** 27:*** 28:*** 29:136
31:01:2017/05/26 27EB(1551) 02:2017/05/26 27EB(1551)
03:2017/05/26 27EB(1551) 04:2017/05/26 27EB(1551)
05:2017/05/26 27EB(1551) 06:2017/05/26 27EB(1551)
33:00.43 2017/05/25 00.42 2017/05/25 00.42 2017/05/25
34:A:57 B:66 C:57 D:61 E:71 F:62 35:NA

```

See Appendix 1.

INK

```

THE NUMBER OF REPLACEMENT INK-TTL:125 NINK-TTL:9
INK MBK:37 BK:14 Y:15 M:32 C:27
NINK MBK:2 BK:0 Y:0 M:0 C:7

DAYS AFTER INK CARTRIDGE INSTALLATION
CURRENT MBK:1 BK:1 Y:1 M:0 C:1

```

PRINTER LOG

```

POWER-ON: 43: 2 SLEEP-ON: 10:30
CARRIAGE PRINT: 4:24 DRIVE: 3:19 CR-COUNT: 8788
CR-DIST.: 30321 CAPPING-COUNT: 361 WIPE: 148
HEAD POS OFFSET: 0 CGC-FLG:0 CR_LIFT: 493 BORDERLESS PRINT:N/A
IIF 1: 0 2: 0 3: 25 4: 36 5: 1216 6: 25 51
MV_LV1 1: 0 2: 0 3: 0 4: 0 5: 0 6: 0 0
MV_LV2 1: 0 2: 0 3: 0 4: 0 5: 0 6: 0 0
MV_LV3 1: 0 2: 0 3: 0 4: 0 5: 0 6: 0 0

```

See Appendix 2.

NOTE: The above logs are reference information required for the analysis of the printer troubles escalated to CINC.

Canon PRINT INF S/N: Firm:00.36RC2 Boot:00.16 Date:2016/01/28

AENC 1:01dd 2:01d9 3:0326 4:031a 5: 01a0 01a7 2cec
HDD_SMART HDD S/N: 684BMOVKT

ID	Current	Worst	Threshold	Data
01	100	100	050	000000000000
02	100	100	050	000000000000
03	100	100	001	000000000541
04	100	100	000	00000000052c
05	100	100	050	000000000000
07	100	100	050	000000000000
08	100	100	050	000000000000
09	100	100	000	0000000000fe
0a	126	100	030	000000000000
0c	100	100	000	0000000001c3
bf	100	100	000	000000000000
c0	100	100	000	000000000000
c1	100	100	000	0000000000ce
c2	100	100	000	00240010001b
c4	100	100	000	000000000000
c5	100	100	000	000000000000
c6	100	100	000	000000000000
c7	200	253	000	000000000000
dc	100	100	000	000000000000
de	100	100	000	00000000000e
df	100	100	000	000000000000
e0	100	100	000	000000000000
e2	100	100	000	0000000000b2
f0	100	100	001	000000000000
00	000	000	000	000000000000
00	000	000	000	000000000000
00	000	000	000	000000000000
00	000	000	000	000000000000
00	000	000	000	000000000000
00	000	000	000	000000000000

See Appendix 3.

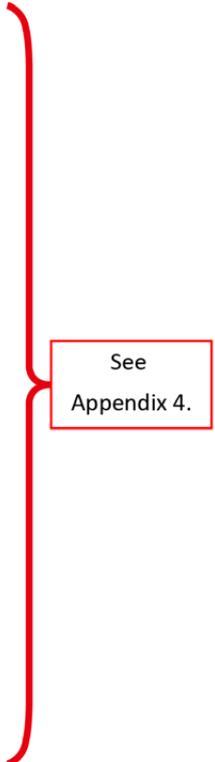
See Appendix 2.

MULTI SENSOR		00	55	20	18	06	05	01	03	29	29	53	22	2d	0d	32	00	32	00	CURRENT	
DETAILS		MEADIA		LED OFF		PLATEN		GAIN		CURRENT											
		SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL	SPEC	ACTUAL
DENSITY	RED	OK	0-1023	769	0-1023	68	0-1023	148	6-224	18	1-61	9									
	GREEN	OK	0-1023	774	0-1023	68	0-1023	152	6-224	13	1-61	9									
	BLUE	OK	0-1023	772	0-1023	69	0-1023	138	6-224	18	1-61	9									
EDGE	S	OK	0-1023	795	0-1023	86	0-1023	122	6-224	51	1-61	9									
	D	OK	0-1023	778	0-1023	73	0-1023	215	6-224	15	1-61	9									
GAP	FAR	OK	0-1023	422	0-1023	73	0-1023	92	6-224	13	1-61	8									
	NEAR	OK	0-1023	575	0-1023	75	0-1023	92	6-224	14	1-61	8									

NOTE: The above logs are reference information required for the analysis of the printer troubles escalated to CINC.

PV INFO DETAILS

<p>MEDIA 1 NAME : Plain Paper TTL : 60.0 m2 646.5 sq.f ROLL1 : 45.6 m2 491.4 sq.f ROLL2 : 13.7 m2 148.3 sq.f CUTSHEET : 0.6 m2 6.7 sq.f</p>				<p>MEDIA 2 NAME : GlossyPhotoHG170 TTL : 0.9 m2 10.7 sq.f ROLL1 : 0.9 m2 10.7 sq.f ROLL2 : 0.0 m2 0.0 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>			
<p>MEDIA 3 NAME : Coated Paper TTL : 0.2 m2 2.6 sq.f ROLL1 : 0.2 m2 2.6 sq.f ROLL2 : 0.0 m2 0.0 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>				<p>MEDIA 4 NAME : PremPlainPpr 80 TTL : 0.0 m2 0.6 sq.f ROLL1 : 0.0 m2 0.0 sq.f ROLL2 : 0.0 m2 0.6 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>			
<p>MEDIA 5 NAME : TTL : 0.0 m2 0.0 sq.f ROLL1 : 0.0 m2 0.0 sq.f ROLL2 : 0.0 m2 0.0 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>				<p>MEDIA 6 NAME : TTL : 0.0 m2 0.0 sq.f ROLL1 : 0.0 m2 0.0 sq.f ROLL2 : 0.0 m2 0.0 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>			
<p>MEDIA 7 NAME : TTL : 0.0 m2 0.0 sq.f ROLL1 : 0.0 m2 0.0 sq.f ROLL2 : 0.0 m2 0.0 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>				<p>MEDIA OTHER NAME : OTHER TTL : 0.0 m2 0.6 sq.f ROLL1 : 0.0 m2 0.6 sq.f ROLL2 : 0.0 m2 0.0 sq.f CUTSHEET : 0.0 m2 0.0 sq.f</p>			
<p>MEDIA SIZE1 ROLL P-SQ/P-CNT</p>							
0-17:	7.8 m2	84.5 sq.f	126	17-24:	8.6 m2	93.3 sq.f	139
24-36:	44.2 m2	476.6 sq.f	710	36-44:	0.0 m2	0.0 sq.f	0
44-50:	0.0 m2	0.0 sq.f	0	50-60:	0.0 m2	0.0 sq.f	0
60- :	0.0 m2	0.0 sq.f	0				
<p>MEDIA SIZE1 CUT P-SQ/P-CNT</p>							
0-17:	0.6 m2	6.7 sq.f	10	17-24:	0.0 m2	0.0 sq.f	0
24-36:	0.0 m2	0.0 sq.f	0	36-44:	0.0 m2	0.0 sq.f	0
44-50:	0.0 m2	0.0 sq.f	0	50-60:	0.0 m2	0.0 sq.f	0
60- :	0.0 m2	0.0 sq.f	0				



NOTE: The above logs are reference information required for the analysis of the printer troubles escalated to CINC.

```

CARRIAGE PWM DUTY AT POWER ON FOR THE LAST 10 TIMES
1 FORWARD BACK 2 FORWARD BACK 3 FORWARD BACK
  Max: 58% Max: 59% Max: 58% Max: 59% Max: 58% Max: 59%
  Min: 18% Min: 24% Min: 19% Min: 25% Min: 16% Min: 24%
  Avg: 51% Avg: 51% Avg: 51% Avg: 51% Avg: 51% Avg: 51%
4 FORWARD BACK 5 FORWARD BACK 6 FORWARD BACK
  Max: 59% Max: 59% Max: 59% Max: 59% Max: 59% Max: 59%
  Min: 19% Min: 24% Min: 16% Min: 24% Min: 17% Min: 24%
  Avg: 52% Avg: 52% Avg: 51% Avg: 51% Avg: 52% Avg: 51%
7 FORWARD BACK 8 FORWARD BACK 9 FORWARD BACK
  Max: 59% Max: 59% Max: 59% Max: 58% Max: 61% Max: 59%
  Min: 19% Min: 24% Min: 17% Min: 24% Min: 17% Min: 24%
  Avg: 51% Avg: 51% Avg: 52% Avg: 50% Avg: 53% Avg: 52%
10 FORWARD BACK
  Max: 60% Max: 59%
  Min: 16% Min: 24%
  Avg: 52% Avg: 52%
    
```

```

CARRIAGE PWM DUTY AT FIRST POWER ON AFTER INITIAL SETUP
1 FORWARD BACK
  Max: 59% Max: 58%
  Min: 17% Min: 24%
  Avg: 51% Avg: 51%
    
```

```

AVERAGE CARRIAGE PWM DUTY AT POWER ON FOR THE LAST 10 TIMES
1 FORWARD BACK 2 FORWARD BACK 3 FORWARD BACK
  Max: 0% Max: 0% Max: 0% Max: 0% Max: 0% Max: 0%
  Min: 0% Min: 0% Min: 0% Min: 0% Min: 0% Min: 0%
  Avg: 0% Avg: 0% Avg: 0% Avg: 0% Avg: 0% Avg: 0%
4 FORWARD BACK 5 FORWARD BACK 6 FORWARD BACK
  Max: 0% Max: 0% Max: 0% Max: 0% Max: 0% Max: 0%
  Min: 0% Min: 0% Min: 0% Min: 0% Min: 0% Min: 0%
  Avg: 0% Avg: 0% Avg: 0% Avg: 0% Avg: 0% Avg: 0%
7 FORWARD BACK 8 FORWARD BACK 9 FORWARD BACK
  Max: 0% Max: 0% Max: 0% Max: 0% Max: 0% Max: 0%
  Min: 0% Min: 0% Min: 0% Min: 0% Min: 0% Min: 0%
  Avg: 0% Avg: 0% Avg: 0% Avg: 0% Avg: 0% Avg: 0%
10 FORWARD BACK
  Max: 0% Max: 0%
  Min: 0% Min: 0%
  Avg: 0% Avg: 0%
    
```

See Appendix 5.

NOTE: The above logs are reference information required for the analysis of the printer troubles escalated to CINC.

```

PAPER FEED ADJUSTMENT
No: ADJ. TYPE TEMP&HUM MEDIA TYPE SIZE SRC DATE TIME RP
1:Feed length 24C 75F 38% Plain Paper 6 ROLL1 2019/02/13 14:29 132
2:Print quality(a) 24C 75F 38% Plain Paper 6 ROLL1 2019/02/13 14:27 133
3:***** **C**F**% ***** * ***** ***/**/* **:* **
4:***** **C**F**% ***** * ***** ***/**/* **:* **
5:***** **C**F**% ***** * ***** ***/**/* **:* **
6:***** **C**F**% ***** * ***** ***/**/* **:* **
7:***** **C**F**% ***** * ***** ***/**/* **:* **
8:***** **C**F**% ***** * ***** ***/**/* **:* **
9:***** **C**F**% ***** * ***** ***/**/* **:* **
10:***** **C**F**% ***** * ***** ***/**/* **:* **
    
```

See Appendix 6.

NOTE: The above logs are reference information required for the analysis of the printer troubles escalated to CINC.

Appendix 1: Detailed information of HEAD and INK (reference information)

Items		Print number or print name	Print contents	
HEAD	HEAD INF.1 LOT:***** ** Currently-installed print head	1	Print head installation date and time (Last three cases)	
		2	Print head removal date and time Last three cases)	
		3	Serial number of the printer with the applicable print head (Last three cases)	
		4	Number of cleaning A-I (AB cap)	
		5	Number of cleaning A-II (A cap)	
		6	Number of cleaning A-III (B cap)	
		7	-	
		8	Number of cleaning R-I (AB cap)	
		9	Number of cleaning R-II (A cap)	
		10	Number of cleaning R-III (B cap)	
		11	-	
		12	Number of cleaning S-I (AB cap)	
		13	Number of cleaning S-II (A cap)	
		14	Number of cleaning S-III (B cap)	
		15	-	
		16	Number of cleaning EX-I (Ink removal at the head replacement)	
		17	Number of cleaning H-I (Ink filling at the head replacement)	
	18	Number of cleaning T1-I (Transport outdoors)		
	19	Number of cleaning T2-I (Move indoors to a different floor, Move indoors on the same floor)		
	20	-		
	21	Number of cleaning C-I (on arrival)		
	22	Number of cleaning FI-I(ink filling at the installation after printer transportation)		
	23	Internal information (Not used in servicing)		
	24	Internal information (Not used in servicing)		
	25	Internal information (Not used in servicing)		
	26	Internal information (Not used in servicing)		
	27	Internal information (Not used in servicing)		
	28	Internal information (Not used in servicing)		
	29	Number of sheets printed (in A4 equivalent)		
	31	Error log NOTE: Error log recorded in head EEPROM (Last six cases)		
	33	History of firmware version and updated date (last three cases)		
	34	Head highest temperature (per chip A: *** B: ***)		
	35	-		
	INK	THE NUMBER OF REPLACEMENT	INK-TTL	Accumulated number of genuine ink tank replacement (in total) NOTE: Also counted up when the same ink tank is reinstalled.
			NINK-TTL	Accumulated number of refill ink tank replacement (in total) NOTE: Also counted up when the same ink tank is reinstalled.
INK			Accumulated number of genuine ink tank replacement (per color)	
NINK			Accumulated number of refill ink tank replacement (per color)	
DAYS AFTER INK CARTRIDGE INSTALLATION		CURRENT	Days after the installation of the currently-installed ink tank (per color)	

Appendix 2: Detailed information of PRINTER LOG (reference information)

Items		Print number or print name	Print contents
PRINTER LOG	POWER	POWER-ON	Cumulative power-on time
	SLEEP	SLEEP-ON	Cumulative sleep-on time
	CARRIAGE	PRINT	Cumulative printing time
		DRIVE	Cumulative carriage moving time
		CR-COUNT	Cumulative carriage scan count
		CR-DIST.	Accumulated carriage scan length
		CAPPING-COUNT	Accumulated number of capping
		WIPE	Number of wiping
		HEAD POS	Head Position shift offset value
		OFFSET	NOTE: Number of criterial-height offset pulse
		CGC-FLG	Setting flag NOTE: To check whether adjustment is executed or not.
		CR LIFT	Number of CR lift
		BORDERLESS	Count value of platen fan duct
		PRINT	(Not applicable to this printer.)
		IIF	1
	2		Initial ink filling flag information
	3		The time until the detection of remaining amount of the initially-filled ink is ON
	4		Number of filling the tube with ink
	5		Initial ink filling time
	6		Temperature and humidity at initial setting (at power-on)
	7		Flag split and display at initial ink filling
	MV LV1	1	[[Transportation log moving indoors (carrying)]] Number of recovery purging
		2	Initial ink filling flag information
		3	The time until the detection of remaining amount of the initially-filled ink is ON
		4	Number of filling the tube with ink
		5	Initial ink filling time
		6	Temperature and humidity at initial setting (at power-on)
		7	Flag split and display at initial ink filling
	MV LV2	1	[[Transportation log moving indoors (steps/elevator)]] Number of recovery purging
		2	Initial ink filling flag information
		3	The time until the detection of remaining amount of the initially-filled ink is ON
		4	Number of filling the tube with ink
		5	Initial ink filling time
		6	Temperature and humidity at initial setting (at power-on)
		7	Flag split and display at initial ink filling
	MV LV3	1	[[Transportation log Transporting outdoors]] Number of recovery purging
		2	Initial ink filling flag information
		3	The time until the detection of remaining amount of the initially-filled ink is ON
		4	Number of filling the tube with ink
		5	Initial ink filling time
		6	Temperature and humidity at initial setting (at power-on)
		7	Flag split and display at initial ink filling

Items		Print number or print name	Print contents
	A ENC	1	LF analog encoder central voltage (ADJUST OFFSET A)
		2	LF analog encoder central voltage (ADJUST OFFSET B)
		3	LF analog encoder amplitude magnification (ADJUST ODDS A)
		4	LF analog encoder amplitude magnification (ADJUST ODDS B)
		5	LF analog encoder current value (CURRENT)
	HDD SMART	HDD S/N	Hard disk drive model number
		ID	ID
		Current	Current value
		Worst	Worst value
		Threshold	Threshold
		Data	Data
	MULTI SENSOR		Address dump value and PT SENS CHECK detailed information of multi sensor EEPROM is displayed. <OPT SENS CHECK detailed information> (1) Selected media (SELECTED MEDIA) (2) LED output value per color (Red, green, and blue) (3) Output value of regular reflection and diffuse reflection at media edge (4) Output value in GAP detection The output value indicates the following information (results of the last light quantity adjustment): - Media output (MEADIA) - Outside light output (LEDOFF) - Platen output (PLATEN) - Gain (GAIN) - Current value (CURRENT)

Appendix 3: Information of HDD_SMART (reference information)

HDD_SMART is SMART information of general hard disk drive. Only the items helping your troubleshooting are included in the table below.

Estimated causes when the value of any one of the following IDs is larger than a threshold value or zero

1) ID: 01, 05, C3, C4, C5, or C6

It is highly possible that only hard disk drive is defective. If the value of any one of the above IDs is zero, it is highly likely that not hard disk drive cable or main board is defective.

2) ID: D2, D3, D4, DC, DD, or E4

Check the printer installation environment as the printer may be vibrated or shocked, or instantaneous power failure may occur.

ID	Item name	Details
01	Raw Read Error Rate	Indicates the rate of errors occurring when reading the raw data from hard disk. If the value is below a threshold value, a magnetic disk or magnetic head in the hard disk are abnormal.
05	Reallocated Sectors Count	Number of defective sectors that the alternative action (the data is reallocated to the backup area) is taken.
C3	Hardware ECC recovered	Number of errors detected by ECC (Error Correction Cord)
C4	Reallocation Event Count	Number of alternative action for sectors
C5	Current Pending Sector Count	Number of sectors that is currently abnormal and waits for alternative action.
C6	Off-Line Scan Uncorrectable Sector Count	Total number of uncorrectable sectors discovered in off-line scan. If this value increases, there is a clear problem with a magnetic disk surface.
D2	Vibration During Write	Indicates large vibration during writing the data.
D3	Vibration During Read	Indicates large vibration during reading the data.
D4	Shock During Write	Indicates large shocks during writing the data.
DC	Disk Shift	Disk (platter) shift distances shifted from the original fixed position due to shocks
DD	G-Sense Error Rate	The rate of errors occurring due to shocks on hard disk. The shocks are detected by the sensor in the hard disk.
E4	Power-Off Retract Count	Number of urgent magnetic head retraction by hard disk compulsory stoppage due to power-off

Appendix 4: Detailed information of PV INFO DETAILS (reference information)

Items		Print number or print name	Print contents
PV INFO DETAILS	MEDIA 1 to 7	NAME	Name of seven types of media with large cumulative print area
		TTL	Total print area of seven types of media with large cumulative print area
		ROLL	Roll paper print area of seven types of media with large cumulative print area
		ROLL2	"Roll paper print area of seven types of media with large cumulative print area NOTE: For the printer supporting top and bottom paper rolls only."
		CUTSHEET	Cut sheet print area of seven types of media with large cumulative print area
	MEDIA OTHER	NAME	OTHER
		TTL	Total print area of media other than seven types of media with large cumulative print area
		ROLL	Total roll paper print area of media other than seven types of media with large cumulative print area
		ROLL2	"Roll paper print area of seven types of media with large cumulative print area NOTE: For the printer supporting top and bottom paper rolls only."
		CUTSHEET	Total cut sheet print area of media other than seven types of media with large cumulative print area
	MEDIA SIZE1 ROLL	60-	Print area of roll paper equal to or larger than 60 inches (by physical size)
		50-60	Print area of roll paper (50 or larger inches, less than 60 inches) (by physical size)
		44-50	Print area of roll paper (44 or larger inches, less than 50 inches) (by physical size)
		36-44	Print area of roll paper (36 or larger inches, less than 44 inches) (by physical size)
		24-36	Print area of roll paper (24 or larger inches, less than 36 inches) (by physical size)
		17-24	Print area of roll paper (17 or larger inches, less than 24 inches) (by physical size)
		0-17	Print area of roll media less than 17 inches (by physical size)
	MEDIA SIZE1 CUT	60-	Print area of cut sheet equal to or larger than 60 inches (physical size)
		50-60	Print area of cut sheet (50 or larger inches, less than 60 inches) (by physical size)
		44-50	Print area of cut sheet (44 or larger inches, less than 50 inches) (by physical size)
		36-44	Print area of cut sheet (36 or larger inches, less than 44 inches) (by physical size)
		24-36	Print area of cut sheet (24 or larger inches, less than 36 inches) (by physical size)
		17-24	Print area of cut sheet (17 or larger inches, less than 24 inches) (by physical size)
0-17		Print area of cut sheet less than 17 inches (by physical size)	

**Unit: m² and sq.f are used.

Appendix 5: Data on the overload when the carriage travels back and forth (reference information)

This log information is the data on the overload when the carriage travels back and forth. This is used in order to grasp the durability and the deterioration degree of the consumables (CR1) due to the differences in installation environment and use conditions. This data obtains the PWM control data only when the carriage travels back and forth properly (Duty ratio: %)

Items	Details
CARRIAGE PWM DUTY AT POWER ON FOR THE LAST 10 TIMES	<ul style="list-style-type: none"> - Latest value: 10 most recent data - Acquisition timing: During the carriage initial operation after the machine is turned ON. - Display order: From No.1 (new) to No.10 (old)
CARRIAGE PWM DUTY AT FIRST POWER ON AFTER INITIAL SETUP	<ul style="list-style-type: none"> - Initial value: Reference data at the initial setup (Average values of 10 times of power-on of the machine after the initial setup)
AVERAGE CARRIAGE PWM DUTY AT POWER ON FOR THE LAST 10 TIMES	<ul style="list-style-type: none"> - History value: Average data of 10 latest values - Acquisition timing: The parts counter "CR4" acquires the data every time the carriage scans 21,500 times. - Display order: From No.1 (new) to No.10 (old)
FORWARD	- Data in going direction operation
BACK	- Data in returning direction operation
Max	- PWM data at the time of maximum acceleration of carriage motor
Min	- PWM data at the start of driving of carriage motor
Avg	- Average PWM data in the constant speed zone of carriage motor

Appendix 6: Paper feed adjustment log (reference information)

This log information displays the paper feed adjustment (PAPER FEED ADJUSTMENT) log and its detailed information.

Items	Details
No	10 most recent history No. (As the history number is smaller, the history is newer.)
ADJ.TYPE	Adjustment executed at the paper feed adjustment <ul style="list-style-type: none"> · BandDownFeed(a): Image quality adjustment (Automatic) · BandDownFeed(m): Image quality adjustment (Manual) · LengthDownFeed: Length adjustment
TEMP&HUM	Temperature (C, F) and humidity (%) at the paper feed adjustment
MEDIA TYPE	Media type used for the paper feed adjustment
SIZE	Paper width size used for the paper feed adjustment <ul style="list-style-type: none"> - 7: 617 mm or more - 6: 444 mm to 616 mm - 5: 268 mm to 443 mm - 4: 200 mm to 267 mm - 3: Less than 200 mm
SRC	Paper source used for the paper feed adjustment <ul style="list-style-type: none"> - ROLL1: Upper roll - ROLL2: Lower roll - CUT SHEET: Cut sheet
DATE	Date at the paper feed adjustment (yyyy/mm/dd)
TIME	Time at the paper feed adjustment (H/mm)
RP	Roll paper remaining amount at the paper feed adjustment <ul style="list-style-type: none"> - The paper remaining amount is displayed. (Unit: m) It is rounded off by a decimal point of less. - In the case of cut sheet, 0 is displayed.

• E-RDS

- CA-CERTIFICATE

Purpose

To display CA-certificate information for E-RDS

Use case

When checking the CA-certificate validated date
When UGW communication error occurs

Operation procedures

1. Select [CA-CERTIFICATE] in the E-RDS screen.
 - VALIDITY & yyy/mm/dd: The CA-certificate is valid (The validated date is displayed.)
 - NOT INSTALLED: The certificate is deleted.
-

Displayed contents

-

Setting range

-

Additional information

-

- E-RDS SETUP

See the next page.

Purpose

Display of CA-certificate information for E-RDS

Use case

When providing the remote service using UGW

Operation procedures

1. Select [E-RDS SETUP] in the E-RDS screen.
 2. Refer to the E-RDS SETUP menu on the next page.
-

Displayed contents

-

Setting range

-

Additional information

For the remote service connection settings, refer to "Connection to Remote Service" in Chapter 4.

E-RDS SETUP menu

The following table indicates [E-RDS] menu tiers.

Second level	Third level	Fourth level	Fifth level	Sixth level	Details	
E-RDS SETUP	E-RDS SWITCH	ON			Whether E-RDS is used or not is set. ON: E-RDS is used. OFF: E-RDS is not used.	
		OFF (default)				
	UGW ADDRESS	http://xxx			UGW address is displayed.	
	UGW PORT	xxx			The number of the port communicating with UG is displayed.	
	COM-TEST (*1)	YES			The communication test with UGW is executed. YES: COM-TEST is executed. NO: Returns to the previous screen.	
		NO				
	COM-LOG (*2)	No.01 xxx yyyy/mm/dd hh:mm	xxxxxx		The information on the communication error with UGW is displayed.	
		No.02 xxx yyy/mm/dd hh:mm	xxxxxx			
	DISPLAY SETTING	TTL PRINT AREA	ON (default)		Display setting (The setting of display/non-display of total print area)	
			OFF			
		INK CONSUMED	ON		Display setting (The setting of display/non-display of amount of consumed ink)	
			OFF (default)			
		DISPLAY DECIMAL	TTL PRINT AREA		ON (default)	Setting of decimal point display (total print area)
					OFF	
			INK CONSUMED		ON (default)	Setting of decimal point display (amount of consumed ink)
					OFF	
		DUTY CNT			ON (default)	Setting of decimal point display (DUTY counter)
					OFF	
		UNIT	TTL PRINT AREA		LENGTH UNIT (default)	Unit setting (total print area)
					A4	
	LETTER					
DUTY CNT	DUTY CNT		LENGTH UNIT (default for US)	Unit setting (DUTY counter)		
			A4 (default)			
			LETTER			
DUTY CNT			ON (default)	Display setting (The setting of display/non-display of DUTY counter)		
			OFF			
DUTY CNT CALC METHOD (*3)	PHYSICAL AREA			Calculation logic setting of duty counter - Physical area-based (default for US)		
	PRINT JOB DATA AREA			Calculation logic setting of duty counter - Logical area-based (default for other than US)		

*1: COM-TEST behavior

- While COM-TEST is executed, "CHECK NOW..." is displayed.
- COM-TEST cannot be cancelled halfway (no operations are accepted until the test results are obtained).
- After COM-TEST finishes, the following message is displayed:
 - If the communication test succeeds: CHECK RESULT: OK
 - If the communication test fails: CHECK RESULT: NG
- If no test results are obtained even though 60 seconds have passed after COM-TEST started, the communication test is views as a failure, and the message to that effect is displayed.

*2: COM-LOG communication specifications

- 30 cases of the communication logs are displayed. (The log number "1" is the latest one).
- COM-LOG communication error information is displayed up to 128 characters per case.
- When there is no detailed COM-LOG information, "NO ERROR DETAILS" is displayed.

*3: Duty counter calculation logic

- The calculation logic change by this command is applied from the duty counter value added after the setting change.
- Not applied to the duty counter accumulated value added before the setting change.
- The duty counter value calculated by the calculation logic after the setting change is added to the duty counter accumulated value before the setting change.

- E-RDS OTHERS

DELETE CA-KEYS	CA-certificate deletion
Purpose	
To delete CA-certificate information for E-RDS.	
Use case	
When it is necessary to delete CA-certificate (when refurbishing the printer, or when restoring the leased printer to the condition when purchasing a printer, etc.)	
Operation procedures	
<ol style="list-style-type: none">1. Select [YES] in the screen for confirming function execution.2. CA-certificate is deleted.	
Displayed contents	
-	
Setting range	
-	
Additional information	
-	

RESET E-RDS DAT	E-RDS data initialization
Purpose	
To initialize the E-RDS data.	
Use case	
When it is necessary to initialize the E-RDS data (when refurbishing the printer, or when restoring the leased printer to the condition when purchasing a printer, etc.)	
Operation procedures	
<ol style="list-style-type: none">1. Select [YES] in the screen for confirming function execution.2. The E-RDS data is initialized.	
Displayed contents	
-	
Setting range	
-	
Additional information	
-	

• OTHERS

- RTC SETTING

Purpose

To perform Greenwich Mean Time (GMT) setting.

Use case

- When replacing I/F PCB UNIT
 - When replacing button battery, or when attaching and detaching it
 - When an RTC-related error occurs
-

Operation procedures

1. Tap [Date setting (GMT TIME)], and input yy (last two-digit year) / mm (month) / dd (day).
 2. Tap the [OK] button.
 3. Tap [Time setting (GMT TIME)], and input "hh (hour): mm (minute)."
 4. Tap the [OK] button.
-

Displayed contents

-

Setting range

-

Additional information

Be sure to set the GMT time and date as the time stamp of each log information recorded in PRINT INF is different from the actual time if the time and date are not set.

- PV AUTO JUDGE

Purpose

To set the cleaning execution timing depending on the print volume.

Use case

When Low print volume users encounter printing failure due to air bubbles created by ink left in the tubes

Operation procedures

Tap ON or OFF (Default: OFF).

Displayed contents

-

Setting range

- ON: Cleaning is performed at normal timing regardless of user's usage condition.
 - OFF: The cleaning execution timing is automatically adjusted depending on user's usage condition.
-

Additional information

Low print volume users select [PV AUTO JUDGE] to resolve printing failure due to air bubbles created by ink left in the tubes.

- PRINT HEAD INFO SETTING

Purpose

To set the display/non-display of [Print head information] in [Operation panel > Printer information].

Use case

When it is necessary to hide the print head warranty information

Operation procedures

Tap ON or OFF (Default: OFF).

Displayed contents

-

Setting range

- ON: [Print head information] is displayed.
 - OFF: [Print head information] is not displayed.
-

Additional information

-

HDD BOX PW INIT

Purpose

To reset a password for the box in the hard disk.

Use case

When you receive a request from a user who has forgotten a password set by the user, etc.

Operation procedures

1. Select the box whose password is to be reset.
 2. Select [YES] in the screen for confirming function execution.
 3. The password of the box selected is reset.
-

Displayed contents

-

Setting range

-

Additional information

When "ALL BOX" is selected, the passwords for all the boxes from BOX1 to BOX29 are reset.

FIRMWARE UPDATE (USB)

Purpose

To update the printer firmware using USB flash drive.

Use case

When updating the firmware

Operation procedures

1. Tap "FIRMWARE UPDATE (USB)."
 2. Mount a USB flash drive storing the firmware to be updated.
 3. Select the firmware to be updated. (File format: *****.fdl).
 4. Select [YES] in the screen for confirming function execution.
 5. Update the firmware.
 6. When the update is completed, the printer restarts automatically.
-

Displayed contents

-

Setting range

-

Additional information

- When a warning message such as "The maintenance cartridge is full. Replace the maintenance cartridge." is displayed on the operation panel, release the warning first, then perform the firmware update.
 - It takes approx. 20 minutes to update the firmware. If the printer is turned off during updating the firmware, the firmware is not updated normally. Accordingly, the printer will start in the recovery mode at the next power-on. Therefore, be careful not to turn the printer off during the update of firmware. For details on the recovery mode, refer to [Recovery Mode](#).
 - If the file format of the file you select is not "*****.fdl," or if the firmware of the product different from the one you want to update is selected, "File format is invalid." is displayed, and the screen transits to the OTHERS screen.
 - If an error occurs during updating, the message "Firmware update error." is displayed and the screen returns to the [OTHERS] menu screen.
 - Prepare the USB flash drive with the following conditions satisfied:
 - a) FAT16 or FAT32-formatted (NTFS-format USB flash drive cannot be used.)
 - b) Can be recognized by the printer (If the USB flash drive cannot be recognized, the display of the operation panel does not switch to the next screen.)
-

GET PRINT INF (USB)

Purpose

To save Print INF such as such as print head replacement log, cleaning log, ink usage, repair log, adjustment log, diagnosis log, parts counter value, and etc. in a text file format.

Use case

In servicing such as troubleshooting and periodical maintenance and when making a request to CINC for printer trouble analysis

Operation procedures

1. Tap "GET EPRINT INF (USB)."
 2. Mount USB flash drive on the printer.
 3. Select [YES] in the screen for confirming function execution.
 4. Print INF will be saved.
-

Displayed contents

-

Setting range

-

Additional information

- If USB memory capacity is insufficient, or if the encrypting log data cannot be written for some reason in spite of sufficient USB memory capacity, an access error is displayed after the function is executed.
 - Prepare the USB flash drive with the following conditions satisfied:
 - a) FAT16 or FAT32-formatted (NTFS-format USB flash drive cannot be used.)
 - b) Can be recognized by the printer (If the USB flash drive cannot be recognized, the display of the operation panel does not switch to the next screen.)
-

GET ENCRYPTING LOG (USB)

Purpose

To acquire encrypting log (printer operation log).

Use case

When making a request to CINC for printer trouble analysis in servicing for troubleshooting

Operation procedures

1. Tap "GET ENCRYPTING LOG(USB)."
 2. Mount USB flash drive on the printer.
 3. Select [YES] in the screen for confirming function execution.
 4. The encrypting log (printer operation log) will be stored.
-

Displayed contents

-

Setting range

-

Additional information

- As the encrypting log (printer operation log) file is encrypted, it cannot be confirmed at the sales companies' side.
 - If USB memory capacity is insufficient, or if the encrypting log data cannot be written for some reason in spite of sufficient USB memory capacity, an access error is displayed after the function is executed.
 - Prepare the USB flash drive with the following conditions satisfied:
 - a) FAT16 or FAT32-formatted (NTFS-format USB flash drive cannot be used.)
 - b) With the free capacity of 4 GB or larger
 - c) Can be recognized by the printer (If the USB flash drive cannot be recognized, the display of the operation panel does not switch to the next screen.)
-

GET SERVICE LOG (USB)

Purpose

To store some information such as Status print, Print LAN details and Print setting print in the user mode menu "Test print" in a text file format.

Use case

When making a request to CINC for printer trouble analysis in servicing for troubleshooting

Operation procedures

1. Tap "GET SERVICE LOG(USB)."
 2. Mount USB flash drive on the printer.
 3. Select [YES] in the screen for confirming function execution.
 4. The information in "Test print" will be stored.
-

Displayed contents

-

Setting range

-

Additional information

- If USB memory capacity is insufficient, or if the encrypting log data cannot be written for some reason in spite of sufficient USB memory capacity, an access error is displayed after the function is executed.
- Prepare the USB flash drive with the following conditions satisfied:
 - a) FAT16 or FAT32-formatted (NTFS-format USB flash drive cannot be used.)
 - b) Can be recognized by the printer (If the USB flash drive cannot be recognized, the display of the operation panel does not switch to the next screen.)

Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

DELETE ENCRYPTING LOG

Purpose

To delete the encrypting log (printer operation log) information stored in HDD.

Use case

After the encrypting log (printer operation log) is saved in USB flash drive

Operation procedures

1. Select [YES] in the screen for confirming function execution.
 2. The encrypting log (printer operation log) will be deleted.
-

Displayed contents

-

Setting range

-

Additional information

-

RESET ADDED MEDIA ID

Purpose

To reset the media internal ID number of the printer.

Use case

When a different media type is added to the same media internal ID of each printer in the facilities using a plurality of these printers

Operation procedures

1. Start the printer in the user mode to delete all the custom media using the application software "Media Configuration Tool."
 2. Start the printer in the service mode.
 3. Select [YES] in the screen for confirming function execution of "RESET ADDED MEDIA ID."
 4. The media internal ID number will be reset.
-

Displayed contents

-

Setting range

-

Additional information

The media internal ID number cannot be reset even if this function is executed with the custom media registered to the printer. Therefore, be sure to delete all the custom media using the application software "Media Configuration Tool."

3-2-4. PCB Replacement Mode

The PCB replacement mode is to be used in order to take over adjustment value or setting value to the new PCB when the main PCB or the backup PCB is replaced.

When the procedure for starting service mode is performed after the main PCB or the backup PCB is replaced, the printer automatically enters the PCB replacement mode.

Procedures for taking over the data

After the printer enters the PCB replacement mode, follow the instructions on the screen.

Point:

Take over the data according to the following instructions:

- Do not replace main PCB and backup PCB at the same timing. In case of replacing both main PCB and backup PCB, replace one PCB and take over its data, then replace the other one and take over its data.
Please notice that the adjustment value and setting value if both main PCB and backup PCB are replaced at the same timing and the PCB replacement mode is executed.
- Do not connect a network cable with the printer in order to start the PCB replacement mode.
- After the data is taken over, use the ON button to turn off the printer. Do not plug off the power cord to turn off the printer.

Point:

Note that the following information is not restored even the PCB replacement mode is executed after the main PCB is replaced:

- Printer media information (When Advanced paper settings is selected, custom media information will be displayed.)
Regarding the custom media information, it is required to advise the customer to reset and re-register custom media information using MCT.
- Color calibration value
If the customer uses color calibration, it is required to advise the customer to perform color calibration again after repairing.
- Remote service transmission schedule information
Based on the agreement on remote service (NETEYE/e-Maintenance), if the E-RDS function is enabled, it is necessary to execute a communication test after replacing the main PCB.
If not executed, the subsequent transmission schedule information will not be acquired again, and will not be transmitted to UGW.

Items required to be readjusted

After the main PCB is replaced, some adjustments require resetting as those adjustments include the driver IC characteristic of the main PCB. The following items require readjustment:

- LF encoder adjustment
[Operation panel > SERVICE MODE > ADJUSTMENT > LF ENC ADJ]
- Upper active roll brake unit calibration
[Operation panel > SERVICE MODE > ADJUSTMENT > UPPER ARB CALIB]
- Lower active roll brake unit calibration
[Operation panel > SERVICE MODE > ADJUSTMENT > LOWER ARB CALIB]

3-3. Firmware Update

3-3-1. iPF PRO Service Tool

iPF PRO Service Tool is one of the tools for updating the firmware of the printer.

For how to use iPF PRO Service Tool, see the document attached to the software.

Point:

- When the Service Mode is launched, the version of printer firmware cannot be updated. Start the printer in the user mode to use iPF PRO Service Tool.
- Use ASCII to input characters in [User Information] in the “Input User Information” dialog. If language-specific characters are input, garbled characters may be generated in the texts of the obtained printer information.

3-3-2. Recovery Mode

If the printer is disconnected from the power source during updating the firmware, the firmware written in main board may be corrupted. Here, the printer will newly have recovery mode as a recovery means.

Items necessary for recovery

- Computer where the printer driver has been installed
- Printer Update Utility (Save to the computer.)
- USB cable

Point:

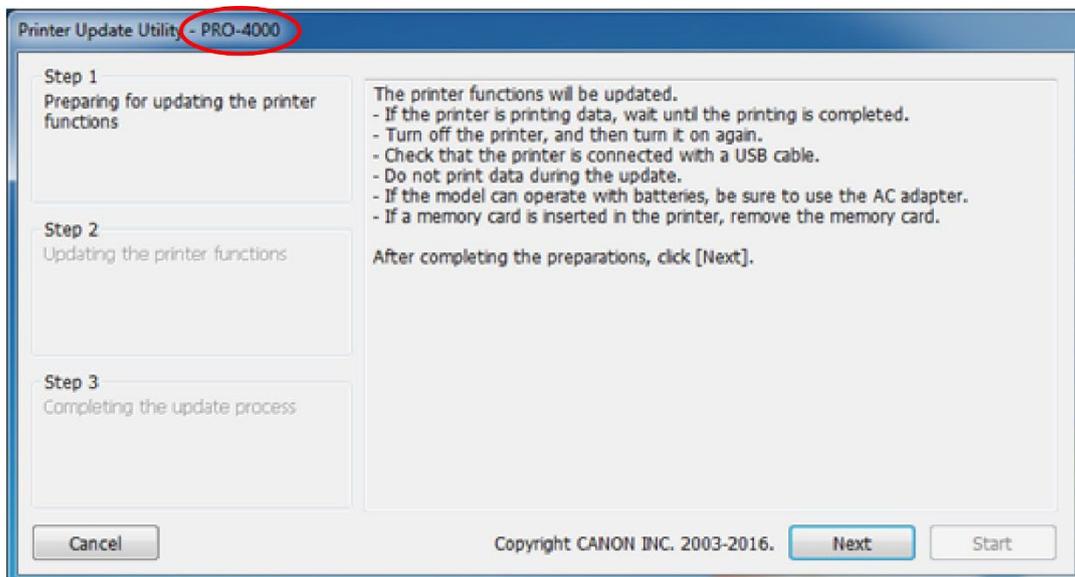
Printer Update Utility is different by model. Use Printer Update Utility for the product with the recovery mode installed.

Printer Update Utility

Printer Update Utility is the software to rewrite the firmware of the printer launching in the recovery mode. The version of the firmware to be rewritten at this time is the version at initial shipping from a factory. After the firmware is rewritten, update to the latest version of the firmware if necessary.

Printer Update Utility is different by model. To differentiate from one another, check the file name or the part indicating the product name at the top of the window of the tool as shown below.

- Check the file name: “Printer Update*****Vxxxx.exe.” (for Windows OS)
mfuu-mac-*****-2_4_7+xxxx-ea7.dmg (for Mac)
(* shows a product name. xxxx indicates version information.)
- Check the product name in the red circle at the top of the window of the tool below (e.g.: For Windows OS, For PRO-4000)

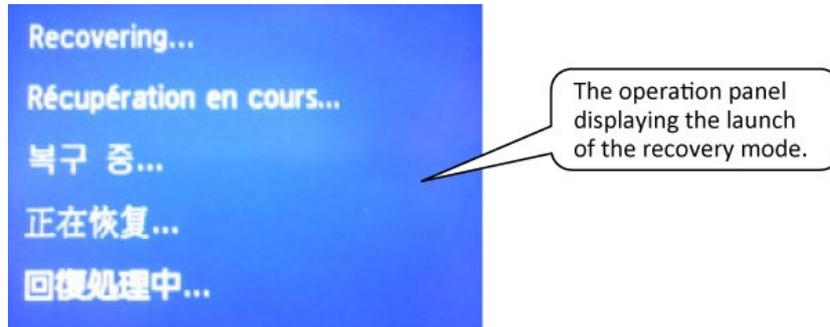


Printer Update Utility operation environment

Supported OS: Equivalent to the supported OS of this printer.

How to start a recovery mode

If the printer is disconnected from the power source, the recovery mode automatically starts by turning on the printer again.

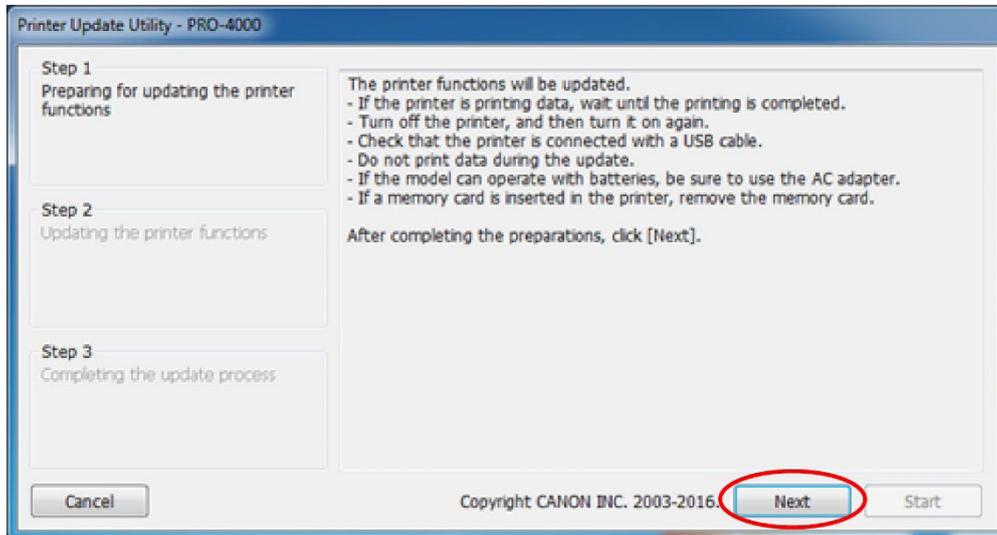


Point:

- This printer has a recovery mode. Accordingly, even if the printer is disconnected from the power source during updating the firmware by any of Firm update tool, iPF PRO Service Tool, etc., the recovery mode is launched.
- In the processing of firmware update, the data is received first, then rewriting data starts after receiving the data is completed. The recovery mode is launched only when the power is disconnected during rewriting the data. If the printer is disconnected from the power source during receiving the data, the printer can be launched properly without entering a recovery mode.

Procedures for recovery

1. Connect the printer with the printer with a USB cable, and start the printer in the recovery mode.
2. Double-click Printer Update****Vxxx.exe. Confirm the messages in [Step 1] displayed on the Printer Update Utility, then click [Next].



Point:

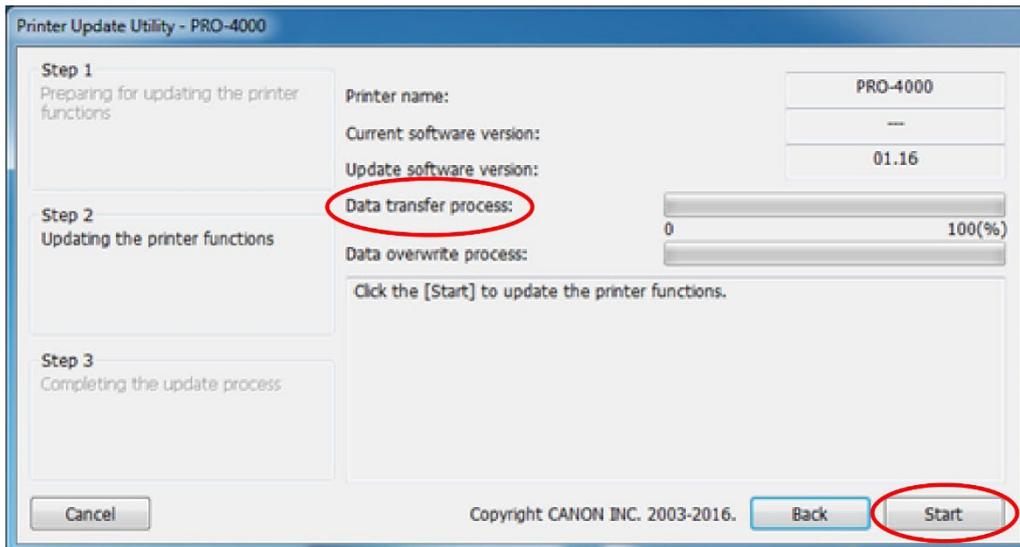
In order to communicate between the printer and Printer Update Utility, the printer driver is required to be installed in the computer you want to use. And confirm that [Enable bi-directional support] is selected in the [Port] tab of the Properties window of the printer driver.

If the communication is unsuccessful, click [Next], and the dialog "The printer could not be detected." will be displayed.

Confirm the following:

- The printer must be connected with the computer with a USB cable.
- The printer must be launched in the recovery mode.
- The printer driver for the product with the recovery mode installed must be installed in the computer you want to use.

3. Click [Start] on Printer Update Utility.
Data transfer processing, then data rewriting will start.

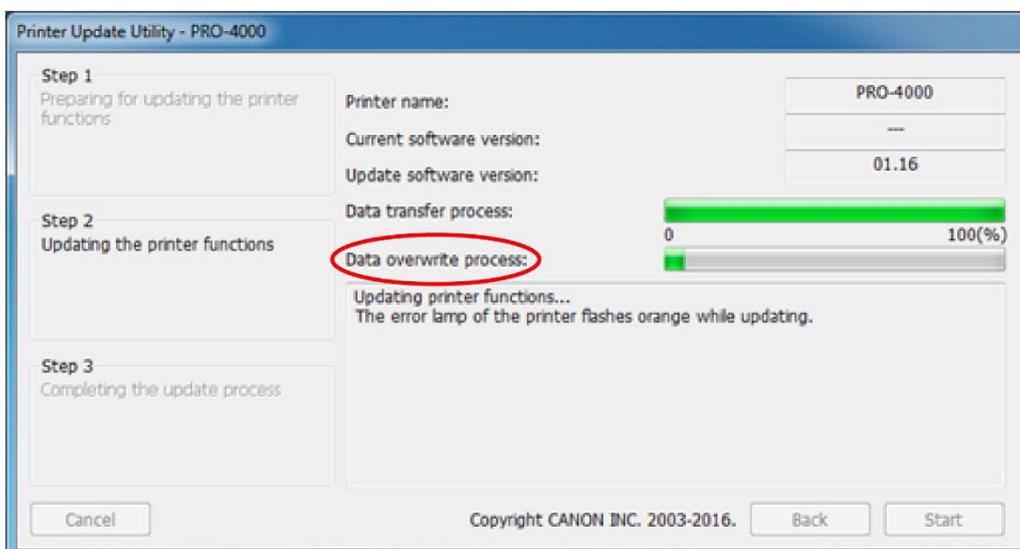


[Printer name]: The name of the printer connected to the computer

[Current software version]: The firmware version of the printer connected to the computer
(This function is unavailable. "--" is displayed on the window.)

[Update software version]: The version of the firmware to be overwritten this time

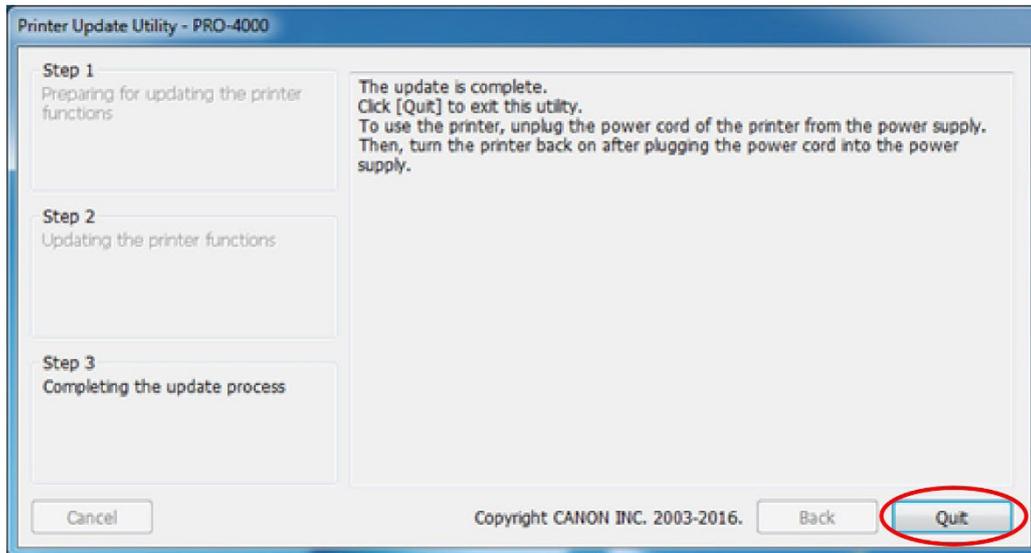
4. When the data transfer process is finished, the data rewriting process is started.



Point:

Do not turn off the printer or disconnect the USB cable until the firmware rewrite process is finished.

- When the data rewriting process is finished, the printer is automatically disconnected from the power source. When the messages for [Step 3] is displayed on Printer Update Utility, confirm those messages and click [Quit].



- Before using the printer, disconnect the plug of the printer from an outlet. Then, plug the printer into the outlet to turn on the printer.
- If the firmware is rewritten using Printer Update Utility, recovery process is performed using the firmware of the version at initial shipping from a factory. Confirm the version of the latest firmware, and perform the firmware update usually (using such as Firm update tool, iPF PRO Service Tool, etc.) if necessary.

3-4. Log Mode

Log mode is a function for saving the following information to USB flash drive even when a printer error occurs:

- PRINT INF
- Encrypting log (printer operation log)
- Information on Status print, Print LAN details and Print setting print*¹

*¹: Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

If the information has been obtained in the log mode, the information below differs from the data obtained when the log mode is launched normally.

- The latest print head information (The backup information of the print head saved in the previous launch is displayed in PRINT INF.)
- Address damp values of multi-sensor EEPROM (Displayed with asterisk in PRINT INF)

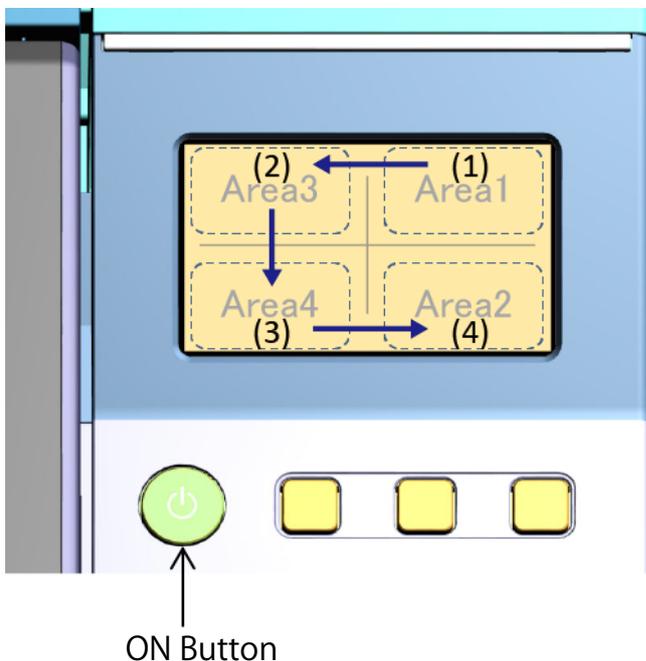
Point:

If the hardware error below occurs, the log mode cannot be started:

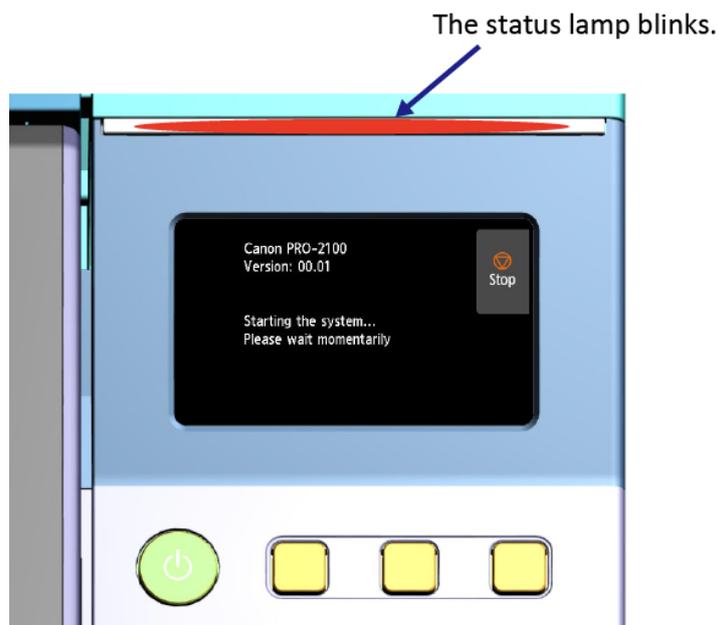
- EC51-3301: Sub-chip connection error
- EC54-290A: Hard disk unconnected
- EC54-290C: SED hard disk not initialized
- EC54-2910: Hard disk reading / writing error
- EC54-2911: Hard disk capacity mismatch
- EC54-2912: Hard disk model mismatch
- EC54-2913: Non-supported hard disk connected
- EC54-2914: Hard disk SED function-related communication error

How to start log mode

1. Press and hold the ON button. (DO NOT release the ON button).
2. When the Canon logo is displayed on the operation panel, while holding down the ON button, touch the operation panel in order of Area1 (upper right), Area3 (upper left), Area4 (lower left), and Area2 (lower right) of the panel, and finally release the ON button.



When the log mode is successfully launched, the message “Starting the system... Please wait.” is displayed, and the status lamp above the operation panel blinks in orange.



Point:

If the following operations are done when the log mode is launched, the printer will be started in the user mode. After the printer is started in the user mode, start the printer in the service mode again.

- The touch interval is two or more seconds.
- When you release the ON button while touching the operation panel
- When you make a mistake in touching order

Procedures for the log

1. Prepare the USB flash drive with the following conditions satisfied:
 - FAT16 or FAT32-formatted (NTFS-format USB flash drive cannot be used.)
 - With the free capacity of 4 GB or larger
 - Can be recognized by the printer
2. When the following screen is shown, insert the USB flash drive into the printer, then select the menu to be obtained below.
 - GET PRINT INF(USB)
 - GET ENCRYPTING LOG(USB)
 - GET SERVICE LOG(USB)*¹

Point:

When the menu in the log mode is executed, the same screen transition as the menus below provided in "OTHERS" is displayed.

- SERVICE MODE > OTHERS > GET PRINT INF(USB)
- SERVICE MODE > OTHERS > GET ENCRYPTING LOG(USB)
- SERVICE MODE > OTHERS > GET SERVICE LOG(USB)*¹

*¹: Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

Point:

If USB memory capacity is insufficient, or if the encrypting log data cannot be written for some reason in spite of sufficient USB memory capacity, an access error is displayed after Execute is executed.

4. PRINTER INSTALLATION, TRANSPORTATION, DISPOSAL

4-1. Printer Installation, Transportation, Reinstallation	754
Printer Installation	754
Option: IC Card Reader Attachment RA-01	754
Transportation	759
Reinstallation	762
4-2. Connection Settings for Remote Service	763

4-1. Printer Installation, Transportation, Reinstallation

Printer Installation

Set up the printer by following Setup Guide supplied with the printer.

Option: IC Card Reader Attachment RA-01

Attach the IC Card Reader Attachment according to the procedures below.

1. Before the attachment:

Regarding TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410, select [Printer information > System information] in the home screen of the operation panel, and confirm that the display of 1.11 or later is displayed as the current version.

When the version before 1.11 is displayed, update the firmware.

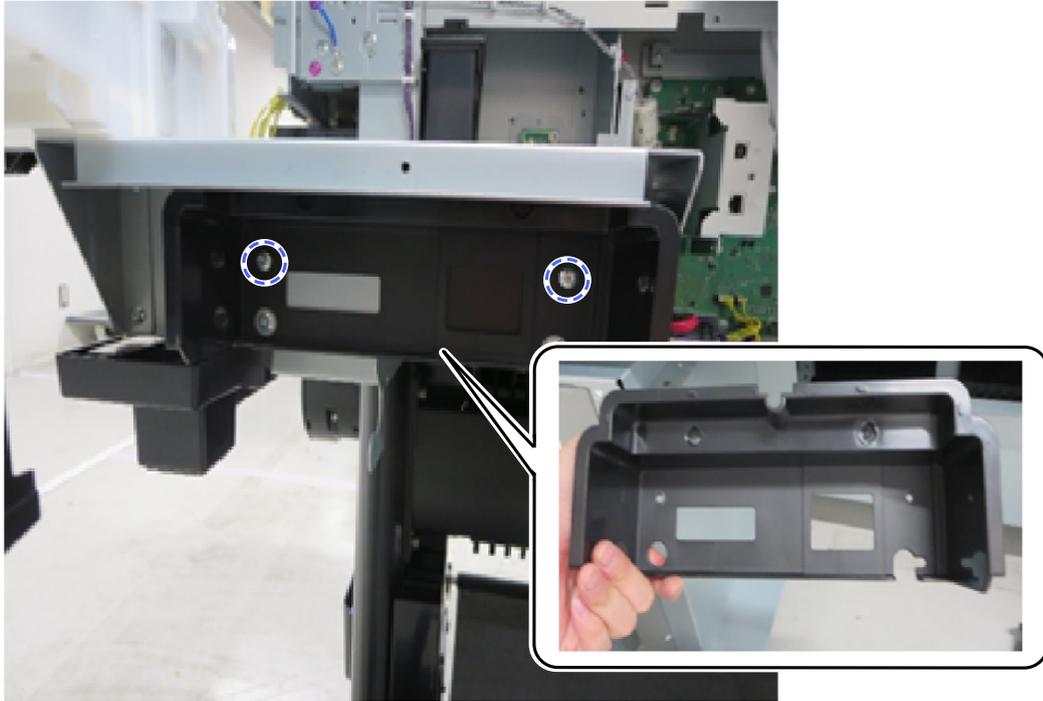
2. Procedures for the attachment:

2-1. Disassemble the printer.

- 1) Refer to [DISASSEMBLY AND REASSEMBLY > 2-3. Disassembly and Reassembly > 7. MAIN PCB UNIT / POWER SUPPLY UNIT / HARD DISK DRIVE] to access the wiring path leading to MAIN PCB UNIT.
- 2) Refer to [DISASSEMBLY AND REASSEMBLY > 2-5. Disassembly and Reassembly > 10. INK TANK UNIT (R)] to open INK TANK UNIT.
- 3) Open [1] the cable hook.

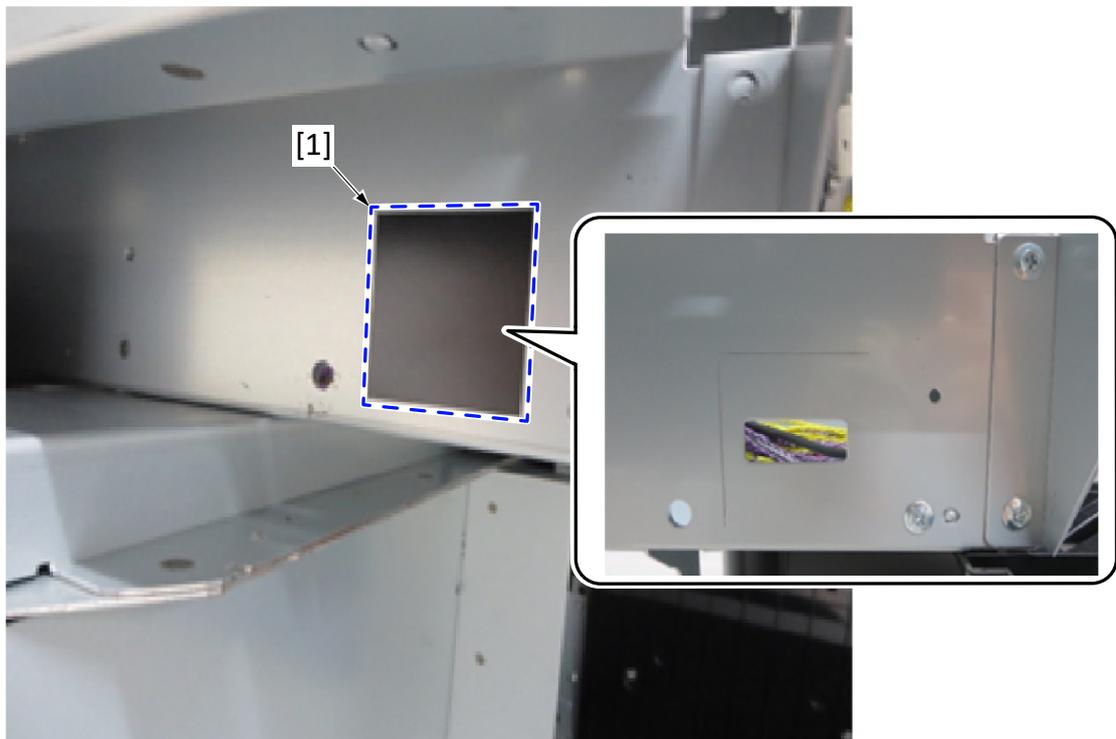


- 4) Remove the two screws to remove the cover.



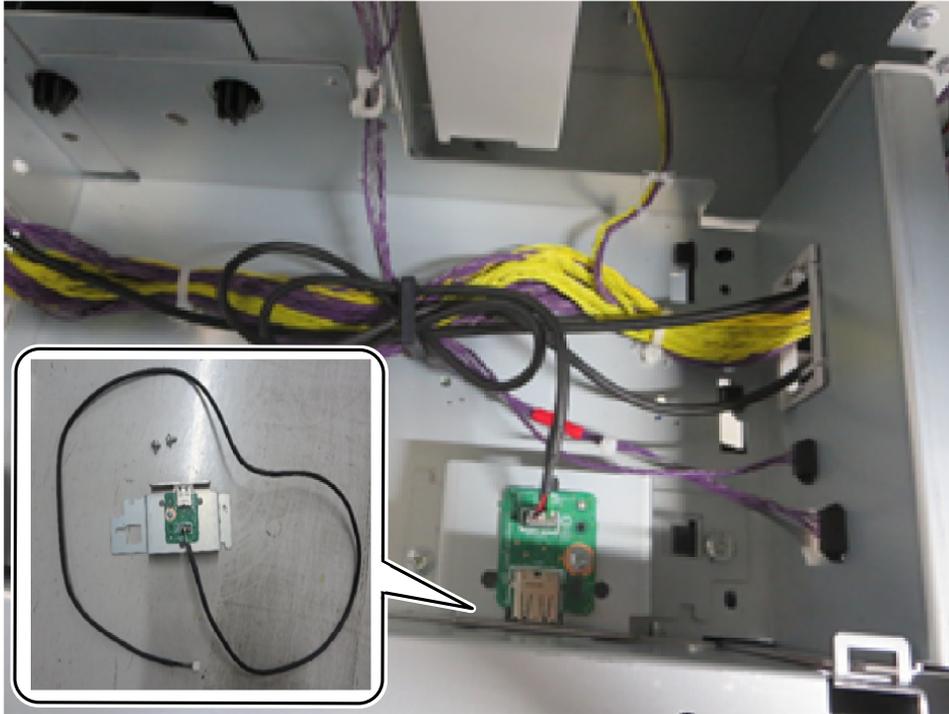
- 5) Peel off [1] the blindfold seal.

It will not be used once the IC Card Reader Attachment is attached.

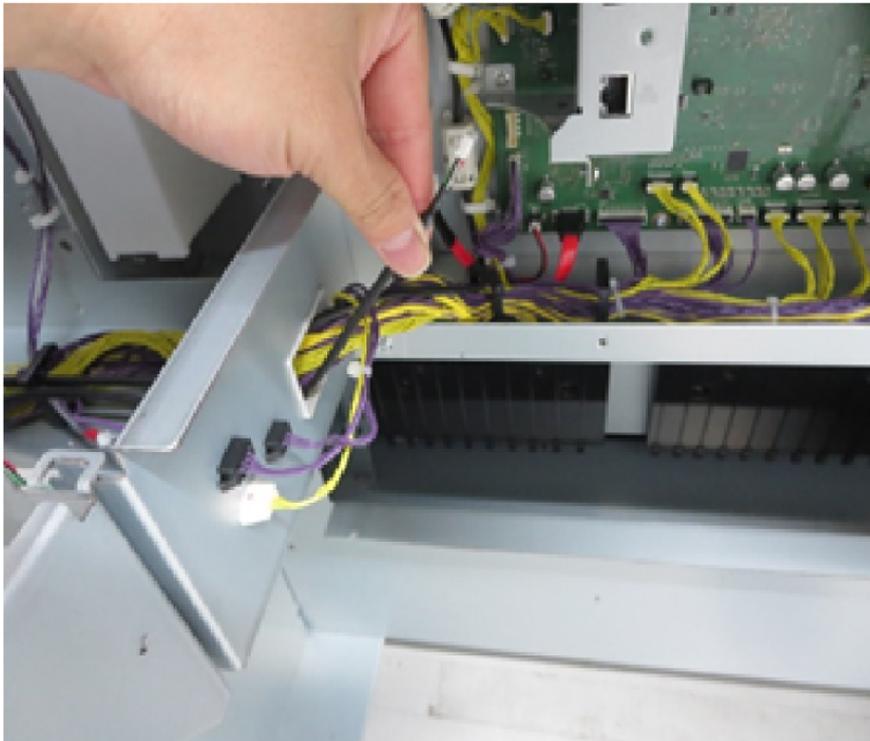


2-2. Attach IC Card Reader Attachment RA-01.

- 1) Attach IC Card Reader Attachment RA-01.



- 2) Wire the cable.



3) Connect the connector to MAIN PCB UNIT.



2-3. Reassemble the printer.

Reassemble the parts disassembled in the step 2-1 above from 1) to 4).

3. Attach the card reader:

POINT

- DO NOT connect to the port other than the USB port of the IC Card Reader Attachment.

Example of the attached card reader



Transportation

Preparation

Prepare to transport the printer while referring to "Preparing to Transfer the Printer" in User Manual.

	<ul style="list-style-type: none">· See "Details of transportation modes" below and run the appropriate transportation mode.· Replace the applicable parts listed in "Replacing consumable parts for transportation" if the message, "Replacement of a consumable part is required", is displayed on the operation panel when you start [Prepare to move].· The maintenance cartridge may need to be replaced when you perform [Prepare to move]. Prepare the maintenance cartridge in advance while referring to "Details of transportation modes.".
---	--

If [Prepare to move] cannot be run in trouble on the printer, drain the ink manually.

< How to drain ink manually >

See [2-3. Disassembly and Reassembly > 10. INK TANK UNIT (R) > Point "To do it manually:..]

Transportation

Transport the printer by following "Transportation condition" in "Transportation mode details."

Details of transportation modes

Moving the printer indoors on the same floor

Item		Description
Menu		[Maintenance > Prepare to move > Move indoors on the same floor]
Transportation condition	Allowed tilting angle	30° or less omnidirectionally*
	Transportation and storage in low temperature environment (0 °C or lower)	Not allowed
Separation of the stand from the main unit		Not necessary
Number of maintenance cartridges to be used		Max. 2 cartridges
Consumable parts to be replaced		If "Replacement of a consumable part is required." is displayed on the operation panel, replace the applicable part(s). For which parts to be replaced, see "Replacing consumable parts for transportation" below.

* Ink might leak out of the printer if it is tilted at more than the allowable angle.

Moving the printer while tilting it at stairs

Item		Description
Menu		[Maintenance > Prepare to move > Move indoors to a different floor]
Transportation condition	Allowed tilting angle	90° or less omnidirectionally
	Transportation and storage in low temperature environment (0 °C or lower)	Not allowed
Separation of the stand from the main unit		Necessary
Number of maintenance cartridges to be used		Max. 2 cartridges
Consumable parts to be replaced		Be sure to replace all the parts listed under "Replacing consumable parts for transportation", and reset the applicable counters.

Moving the printer outdoors

Item		Description
Menu		[Maintenance > Prepare to move > Transport outdoors]
Transportation condition	Allowed tilting angle	90° or less omnidirectionally
	Transportation and storage in low temperature environment (0 °C or lower)	Allowed
Separation of the stand from the main unit		Necessary
Number of maintenance cartridges to be used		2 cartridges
Consumable parts to be replaced		Be sure to replace all the parts listed under "Replacing consumable parts for transportation", and reset the applicable counters.

Replacing consumable parts for transportation

24-inch models:

Part counter name	Part name	Part number	[Move indoors on the same floor] Threshold value of the counter (ml)*
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	80
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242	150
Wia6	WASTE INK ABSORBER UNIT	QM4-5751	200
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	60
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-0913 ^{*1} QM5-4101 ^{*2}	4.9
Mi1	MIST FAN DUCT UNIT 2	QM4-4227	91.7

*1: Applicable models: TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410

*2: Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

36-inch models:

Part counter name	Part name	Part number	[Move indoors on the same floor] Threshold value of the counter (ml)*
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	80
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242	150
Wia3	WASTE INK ABSORBER UNIT E	QM4-5354	150
Wia6	WASTE INK ABSORBER UNIT	QM4-5751	200
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	60
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-0913 ^{*1} QM5-4101 ^{*2}	4.9
Mi1	MIST FAN DUCT UNIT 1	QM4-4228	69.2
Mi2	MIST FAN DUCT UNIT 3	QM4-5738	69.2

*1: Applicable models: TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410

*2: Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

44-inch models:

Part counter name	Part name	Part number	[Move indoors on the same floor] Threshold value of the counter (ml)*
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	80
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242	150
Wia3	WASTE INK ABSORBER UNIT C	QM4-4243	150
Wia6	WASTE INK ABSORBER UNIT	QM4-5751	200
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	60
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-0913 ^{*1} QM5-4101 ^{*2}	4.9
Mi1	MIST FAN DUCT UNIT 2	QM4-4227 ^{*1} QM4-4228 ^{*2}	91.6 69.2
Mi2	MIST FAN DUCT UNIT 1	QM4-4228	69.2

*1: Applicable models: TX-2100, TX-3100, TX-4100, TX-5210, TX-5310, and TX-5410

*2: Applicable models: TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420

Points:

- When replacing consumable parts, be careful about ink leakage.
 - After replacement of the consumable parts, reset the applicable parts counter by selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > RESET] on the operation panel.
- * During execution of [Move indoors on the same floor], if any of the part counter values exceeds the specified threshold, the message is displayed on the operation panel saying "Replacement of a consumable part is required."

Reinstallation

Reinstall the printer while referring to "Reinstalling the Printer" in User Manual.

4-2. Connection Settings for Remote Service

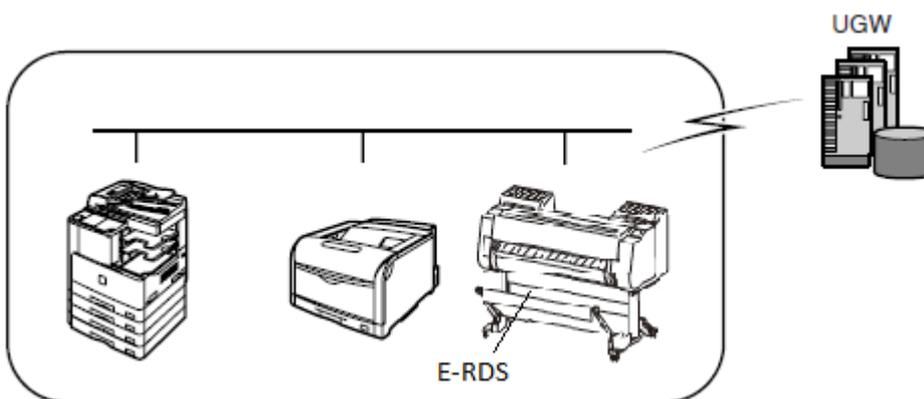
1) Outline

Remote service (NETEYE, e-Maintenance, imageWARE Remote) is the service to monitor the printer remotely via the Internet, and it is based on the agreement with the customer.

The service becomes available by making the agreement, registering the printer information to the UGW, and activating the printer E-RDS setting. Status change of the printer, counter information, problem information, etc. are transmitted to UGW via the Internet.

Based on the agreement, make settings while following the procedures below.

	<p>Memo:</p> <ul style="list-style-type: none">· E-RDS (EMBEDDED-RDS): Monitoring program operating in the printer· UGW (Universal Gateway Server): Remote service administrative server· HTTPS/SOAP protocol is used for communication between UGW and the printer.
---	--



2) Setting procedures

< Preparation >

1. Before using this function, confirm the following items and perform the setting:
 - (1) Confirm with the UGW administrator that the printer for setting E-RDS is registered to UGW.
 - (2) Confirm the items below. If the settings necessary for internet connection are not made, do those settings.
 - IP address setting
 - DNS server setting
 - Proxy server setting (If authentication is required, also perform the setting of authentication information.)

	<p>Memo</p> <ul style="list-style-type: none">· Obtain the network environment information of the installation location from the system administrator of the user's network environment.· The network-related setting is assumed to be performed by the user in advance. If necessary settings are not performed, advise the user to perform the setting or do the settings with his/her agreement.
---	--

< E-RDS setting procedures >

The setting (E-RDS SWITCH ON/OFF, Communication test) to enable E-RDS functions can be performed both in the service mode and in the user mode.

To display the record of use (total print area, ink consumed, duty counter), make the setting in the service mode.

For details, see "Details of E-RDS" in Chapter 3.

< E-RDS setting procedures (service mode) >

1. Launch the service mode.
2. Enable the E-RDS function in the service mode, and then execute the communication test.
 - (1) Enable E-RDS function by selecting [SERVICE MODE > E-RDS > E-RDS SETUP > E-RDS SWITCH > ON].

	<p>Memo:</p> <ul style="list-style-type: none">· When the E-RDS function is enabled, the function to communicate with UGW is enabled.· The values of UGW URL (UGW ADDRESS) and port number (UGW PORT) must not be changed unless otherwise indicated. If changed, a UGW communication error occurs.· If they are mistakenly changed, reset E-RDS from [E-RDS OTHERS > RESET E-RDS DAT], then perform the E-RDS setting again.
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- (2) Perform [SERVICE MODE > E-RDS > E-RDS SETUP > COM-TEST].

When the communication test is successful, the connection setting to remote service is completed.

Go to (3).

When the communication test fails, go to [SERVICE MODE > E-RDS > E-RDS SETUP > COM-LOG] and check the failure information, then confirm the network settings necessary for internet connection.

After confirmation, follow < E-RDS setting procedures (service mode) > again.

	<p>Memo:</p> <ul style="list-style-type: none">· The communication test cannot be cancelled during the test execution (no other operation is accepted until the test results are obtained).· E-RDS obtains schedule information and starts monitoring by executing the communication test with UGW.· For the error information in [Communication log], see 5) Error information displayed in communication log [COM-LOG].· When the E-RDS setting is enabled, the status change of the printer, counter information, problem information, etc. are transmitted to UGW via the Internet even if the printer information is not registered to UGW. In order to have the applicable printer monitored by the remote service such as NETEYE, e-Maintenance, and imageWARE Remote, it is required to register the printer information to UGW.
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- (3) Go to [SERVICE MODE > E-RDS > E-RDS SETUP > DISPLAY SETTING], and select [ON] or [OFF] for the records of use (total print area, ink consumed, duty counter) in the user mode. Those settings are reflected in [Printer information > Usage totals] in the user mode.

[E-RDS SETUP > DISPLAY SETTING] menu configuration:

Fourth level	Fifth level	Sixth level	Contents
TTL PRINT AREA	<u>ON</u>		Display setting ([Total print area] ON/OFF setting)
	OFF		
INK CONSUMED	<u>ON</u>		Display setting ([Ink consumed] ON/OFF setting)
	OFF		
DUTY CNT	<u>ON</u>		Display setting ([Duty counter] ON/OFF setting)
	OFF		
DISPLAY DECIMAL	TTL PRINT AREA	<u>ON</u>	Decimal point display setting ([Total print area] decimal point ON/OFF setting)
		OFF	
	INK CONSUMED	<u>ON</u>	Decimal point display setting ([Ink consumed] decimal point ON/OFF setting)
		OFF	
	DUTY CNT	<u>ON</u>	Decimal point display setting ([Duty counter] decimal point ON/OFF setting)
		OFF	
UNIT	TTL PRINT AREA	<u>LENGTH UNIT</u>	Unit setting ([Total print area] unit/value setting)
		A4	
		LETTER	
	DUTY CNT	<u>LENGTH UNIT</u>	Unit setting ([Duty counter] unit/value setting)
		<u>A4</u>	
		LETTER	

* Underlined values for each setting (ON/OFF, LENGTH UNIT, A4, LETTER) are defaults.

< E-RDS setting procedures (user mode) >

1. Launch the user mode.
2. Enable E-RDS function in the user mode, and then execute the communication test.
 - (1) Go to [Device settings > Monitoring service settings].
 - (2) Enable the E-RDS function by selecting [Device settings > Monitoring service settings > Enable/disable monitoring service > Enable].

	<p>Memo: When the E-RDS function is enabled, the function to communicate with UGW is enabled.</p>
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- (3) Select [Device settings > Monitoring service settings > Communication test], and select [Yes] to “Do you want to perform a communication test with the remote maintenance server?”

When the communication test is successful, the connection setting to remote service is completed. When the communication test fails, go to [Device settings > Monitoring service settings > Communication log] and check the failure information, then confirm the network settings necessary for internet connection. After confirmation, follow < E-RDS settings procedures (user mode) > again.

	<p>Memo:</p> <ul style="list-style-type: none"> · The communication test cannot be cancelled during the test execution (no other operation is accepted until the test results are obtained). · E-RDS obtains schedule information and starts monitoring by executing the communication test with UGW. · For the error information in [Communication log], see 5) Error information displayed in communication log [COM-LOG]. · When the E-RDS setting is enabled, the status change of the printer, counter information, problem information, etc. are transmitted to UGW via the Internet even if the printer information is not registered to UGW. In order to have the applicable printer monitored by the remote service such as NETEYE, e-Maintenance, and imageWARE Remote, it is required to register the printer information to UGW.
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3) Notes on servicing

- When MAIN PCB UNIT is replaced, the remote service transmission schedule information is lost. If the E-RDS function is enabled based on the agreement on the remote service (NETEYE, e-Maintenance, imageWARE Remote), it is necessary to execute the communication test after replacement of MAIN PCB UNIT. If the test is not executed, the subsequent transmission schedule information is not reacquired and it will not be transmitted to UGW, which will affect remote service offering to the customer. See "3-2-4. PCB Replacement Mode" in Chapter 3 for details.
- If the agreement of the remote service (NETEYE, e-Maintenance, imageWARE Remote) of a printer becomes invalid, perform either of the following on that printer:
Set [SERVICE MODE > E-RDS > E-RDS SWITCH > OFF] in the service mode, or
Set [Device settings > Monitoring service settings > Enable/disable monitoring service > Disable] in the user mode.

4) FAQ

No.	Questions	Answers
1	Fails in communication test [COM-TEST].	If communication test [COM-TEST] fails, the following factors are possible: 1. The network cable is disconnected or broken. 2. Name resolution fails (the host name is incorrect or the DNS server has been halted). 3. The network setting (IP address, DNS server, proxy server (authentication)) is incorrect. 4. The setting of UGW-ADDRESS or UGW-PORT has been changed. -> Check communication log [COM-LOG], and solve the error while seeing "5. Error information displayed in communication log [COM-LOG]" below.
2	In UGW, the printer registration information (E-RDS) was once deleted, then is registered again. However, the counter information of that printer (E-RDS) is not reflected in UGW.	When registration of a printer (E-RDS) is deleted from UGW, the records of that printer (E-RDS) are also deleted from the database. Therefore, it is necessary to perform the communication test [COM-TEST] of the applicable printer within seven days from re-registration. The registration becomes invalid, if seven days have elapsed without the communication test since re-registration.
3	Can the printer be turned off during remote servicing?	While remote service is operated, the printer and the networking equipment such as HUB must be always powered ON. Do not leave the printer and the networking equipment off for a long period of time.
4	Timing of transmitting data from the printer (E-RDS) to UGW and its data size	The start time and the data transmission timing are specified on the UGW side. - Transmission every 12 hours, 16 hours, or 7 days - To be transmitted when a printer status changes. - Each data size is approx. 150K byte at the maximum.

5) Error information displayed in communication log [COM-LOG]

Error Code	Description	
0500 0003	Error	Communication test is not performed.
	Detection Description	E-RDS has restarted (printer reboot) with ERDS SWITCH = ON but the communication test had not been performed yet.
	Handling	Perform the communication test [SERVICE MODE > E-RDS > COM-TEST].
8600 0002	Error	Event Registration is Failed.
8600 0003	Detection Description	Processing inside the printer (even registration) is failed.
8600 0101		
8600 0201	Handling	Turn on and off the printer.
8600 0305		If this error recurs even after turning OFF and ON, check the necessity of rewriting the printer firmware (version upgrade).
8600 0306		
8600 0401		
8600 0403		
8600 0414		
8600 0415		
8xxx 2001	Error	URL Scheme error (not https)
	Detection Description	The header of the URL of the registered UGW is not in https format. A "https://" input error.
	Handling	Check UGW-ADDRESS setting (https://b01.***)* ¹ .
	8xxx 200A	Error
	Detection Description	UGW connection error. Displayed in the event of a TCP/IP communication fault.
	Handling	Check the network-related settings.
	8xxx 200B	Error
	Detection Description	UGW address resolution error
	Handling	Check UGW-ADDRESS setting (https://b01.***)* ¹ . Confirm if the usage environment allows internet connection.
	8xxx 2002	Error
	Detection Description	UGW-specified URL error URL address setting error
	Handling	Check UGW-ADDRESS setting (https://b01.***)* ¹ .
	8xxx 2014	Error
	Detection Description	Proxy connection error Cannot connect to proxy server.
	Handling	Check proxy server address.
	8xxx 201E	Error
	Detection Description	Proxy authentication error The proxy authentication fails.
	Handling	Confirm user name and password required for logging into proxy server.
	8xxx 2028	Error
	Detection Description	Server certificate error The printer's route certificate is unavailable.
	Handling	Check the necessity of rewriting the printer firmware (version upgrade).
	8xxx 2046	Error
	Detection Description	Server certificate is expired. The route certificate registered with the printer has expired.
	Handling	Set the printer time and date correctly. If the printer time and date are correct, check the necessity of rewriting the printer firmware (version upgrade).
	8xxx 2058	Error
	Detection Description	Other communication error
	Handling	Perform communication test [SERVICE MODE > E-RDS > COM-TEST] again after an interval. Then, if the same error occurs, check the UGW status with UGW administrator.

Error Code	Description	
8xxx 2063	Error	SOAP Fault
	Detection Description	SOAP communication error
	Handling	Confirm that the value of UGW-PORT is 443.
8xxx 0101	Error	Server response error (NULL)
	Detection Description	UGW response error (UGW error code processing has failed) HTTPS communication error
	Handling	Perform communication test [SERVICE MODE > E-RDS > COM-TEST] again after an interval. Then, if the same error reoccurs, check the UGW status with UGW administrator.
8xxx 2004	Error	Server response error (hex number) Hex number: Error detailed in the UGW
	Detection Description	UGW response error Communication with UGW has been successful, but UGW responds error due to some sort of error.
	Handling	Perform communication test [SERVICE MODE > E-RDS > COM-TEST] again after an interval. Confirm the error code (hex number) from UGW displayed after the message appears.
xxxx xxxx	Error	Device internal error
	Detection Description	Printer internal error An error due to the device side
	Handling	Turn on and off the printer. Or check the necessity of rewriting the printer firmware (version upgrade).
8xxx 0201	Error	Server schedule is invalid
8xxx 0202	Detection Description	During the communication test, there has been some kind of error in the schedule values passed from UGW.
8xxx 0203		
8xxx 0204	Handling	Report detailed information to support department when error occurs. After any action is taken on the UGW side, perform communication test [SERVICE MODE > E-RDS > COM-TEST] again.
8xxx 0206		
8xxx 2047	Error	Server response time out
	Detection Description	UGW response time out Late response due to network congestion
	Handling	When the error occurs during communication test, perform communication test [SERVICE MODE > E-RDS > COM-TEST] again after an interval.
8xxx 2048	Error	Server not found
	Detection Description	Server is not found (URL path is incorrect).
	Handling	Check UGW-ADDRESS setting (https://b01.**) ^{*1} .
84xx 0003	Error	E-RDS switch is set OFF
	Detection Description	E-RDS is disabled.
	Handling	Perform the communication test [SERVICE MODE > E-RDS > COM-TEST] with E-RDS SWITCH=ON.
0xxx 0003	Error	Server schedule is not exist
	Detection Description	Server schedule does not exist. Blank schedule data has been received from UGW.
	Handling	Check the printer settings status with the UGW administrator.
8xxx 2003	Error	Network is not ready, try later.
	Detection Description	Network-related settings have not been made for the printer.
	Handling	Perform the network-related settings of the printer properly.

*1: Not included in this manual for security purpose.

5. PERIODIC SERVICE

5-1. Outline	770
5-2. Periodic Replacement Parts	771
5-3. Consumable Parts	772
5-4. Periodic Maintenance	784

5-1. Outline

This chapter explains the maintenance conducted by a service person.

5-2. Periodic Replacement Parts

Level	Periodic replacement parts
User	None
Service	None

5-3. Consumable Parts

The consumable parts for this printer are as shown below (by each model).
To replace them, refer to "2-3. Disassembly and Reassembly."

TX-2100 and TX-5210

Counter name ^{*1}	Part name	Part number	Life sheets/ A1 ^{*2}	Warning level threshold			Panel message ^{*3}		Items to be counted
				Level 1	Level 2	Unit	Level 1	Level 2	
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	46,000	718.77	741.00	ml	W1	EC43-4001	Ink amount
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242		1015.59	1047.00	ml	W1	EC44-4001	Ink amount
Wia6	WASTE INK ABSORBER UNIT	QM4-5751		938.96	968.00	ml	W1	EC47-4001	Ink amount
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	399,000	203.70	210.00	ml	W1	EC41-4001	Ink amount
WP1	PLATEN UNIT, TOP B	QM4-5349	9,000 ^{*4}	9.7	10.00	ml	W1	EC4A-4001	Ink amount
WF1	WASTE INK TANK UNIT	QM4-4226	-	106.70	110.00	ml	W1	EC48-4001	Ink amount
CR1	CARRIAGE UNIT ^{*7}	QM5-0915	82,000	27857142	30952380	(× 210) mm	W1	W2	CR scan length
CR2	CARRIAGE UNIT ^{*7} FILM, TIMING SLIT STRIP	QM5-0915 QD1-2177	131,000	67500000	75000000	(× 1000000) dot	W1	W2	Total ejected ink amount
CR3	CARRIAGE UNIT ^{*7}	QM5-0915	85,000	162000	180000	Times	W1	W2	Rotation number of carriage height changing cam
CR4	INK TUBE UNIT	QM4-5365	54,000	6624000	7360000	Times	W1	EC32-4001	Number of CR scanning
CR5	MULTI SENSOR UNIT	QM4-5328	131,000	67500000	75000000	(× 1000000) dot	W1	W2	Total ejected ink amount
CR6	FLEXIBLE CABLE UNIT	QM4-5855	54,000	6624000	7360000	Times	W1	EC32-4001	Number of CR scanning
PG1	PURGE UNIT ^{*6}	QM5-5310	25,000	140400	156000	Times	W1	EC31-4001	Number of capping
PG2				895500	995000	Times	W1	EC31-4001	Number of pump rotation
PG3				25200	28000	Times	W1	EC31-4001	Number of wiping
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-0913	121,000	6.6	6.8	ml	W1	EC22-4001	Number of dots in Head Management Sensor Unit
MT1	MOTOR, DC, 47.8W (CARRIAGE)	QK2-2200	75,000	3060	3400	h	W1	W2	CR driving time
LFS1	PAPER FEED ENCODER UNIT FILM, TIMING SLIT DISK	QM4-4288 QD1-2702	33,000	16510000	18340000	(× 1000000) dot	W1	W2	Relativeness between total ejected ink amount and the light amount ^{*5}
PL1	ACTIVE ROLL BRAKE UNIT	QM4-8678	4,122,000	27000	30000	h	W1	W2	Paper feeding time
Mi1	MIST FAN DUCT UNIT 2	QM4-4227	26,000	996.19	1027.00	ml	W1	EC25-4001	Number of dots in mist collecting box

*1: The counter name displayed when selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > COUNTER XX-X] in the operation panel.

*2: The timing of replacing consumables varies depending on print mode usage conditions.

Printing conditions: Canon Heavyweight Coated Paper HG, Image, Standard mode / 12.5% × 4 color = 50% duty

*3: If the threshold value of counter with an error code exceeds 100%, an error code is displayed and the printer stops. If not, predetermined message is displayed and the printer does not stop.

*4: WP1 is the counter to add the number of pages only when printing using 20-inch-wide paper. The indication of replacement is calculated based on the number of sheets of paper measuring 20-inch by 24-inch for photo printing.

*5: The parts replacement timing of LFS1 is determined based on the relativeness between the count value of the ink consumption amount and the light-amount value of each sensor. For details, refer to "The consumption degree of LFS1 and HMa1" in 3. SERVICING FUNCTIONS.

*6: HEAD MANAGEMENT SENSOR UNIT is included in the PURGE UNIT for this printer. Accordingly, it is necessary to reset the "HMa1" counter after the PURGE UNIT is replaced.

*7: MULTI SENSOR UNIT is included in CARRIAGE UNIT of this printer. Accordingly, CR5 counter is required to be also reset if CARRIAGE UNIT is replaced.

NOTE:

After the consumable part is replaced, select [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Select the counter name > RESET] to reset its counter. In the case of counter where the multiple applicable parts exist, reset it only when all those parts are replaced simultaneously.

TX-3100 and TX-5310

Counter name ^{*1}	Part name	Part number	Life sheets / A0 ^{*2}	Warning level threshold			Panel message ^{*3}		Items to be counted
				Level 1	Level 2	Unit	Level 1	Level 2	
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	29,000	718.77	741.00	ml	W1	EC43-4001	Ink amount
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242		1015.59	1047.00	ml	W1	EC44-4001	Ink amount
Wia5	WASTE INK ABSORBER UNIT E	QM4-5354		855.54	882.00	ml	W1	EC49-4001	Ink amount
Wia6	WASTE INK ABSORBER UNIT	QM4-5751		938.96	968.00	ml	W1	EC47-4001	Ink amount
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	284,000	203.70	210.00	ml	W1	EC41-4001	Ink amount
WP1	PLATEN UNIT, TOP B	QM4-5349	9,000 ^{*4}	9.7	10.00	ml	W1	EC4A-4001	Ink amount
WF1	WASTE INK TANK UNIT	QM4-4226	-	106.70	110.00	ml	W1	EC48-4001	Ink amount
CR1	CARRIAGE UNIT ^{*7}	QM5-0916	41,000	27857142	30952380	(× 210)mm	W1	W2	CR scan length
CR2	CARRIAGE UNIT ^{*7} FILM, TIMING SLIT STRIP	QM5-0916 QC5-6283	66,000	67500000	75000000	(× 1000000) dot	W1	W2	Total ejected ink amount
CR3	CARRIAGE UNIT ^{*7}	QM5-0916	85,000	162000	180000	Times	W1	W2	Rotation number of carriage height changing cam
CR4	INK TUBE UNIT	QM4-5365	39,000	6624000	7360000	Times	W1	EC32-4001	Number of CR scanning
CR5	MULTI SENSOR UNIT	QM4-5328	66,000	67500000	75000000	(× 1000000) dot	W1	W2	Total ejected ink amount
CR6	FLEXIBLE CABLE UNIT	QM4-5856	39,000	6624000	7360000	Times	W1	EC32-4001	Number of CR scanning
PG1	PURGE UNIT ^{*6}	QM4-5310	25,000	140400	156000	Times	W1	EC31-4001	Number of capping
PG2				895500	995000	Times	W1	EC31-4001	Number of pump rotation
PG3				25200	28000	Times	W1	EC31-4001	Number of wiping
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-0913	63,000	6.6	6.8	ml	W1	EC22-4001	Number of dots in Head Management Sensor Unit
MT1	MOTOR, DC, 47.8W (CARRIAGE)	QK2-2200	75,000	3060	3400	h	W1	W2	CR driving time
LFS1	PAPER FEED ENCODER UNIT FILM, TIMING SLIT DISK	QM4-4288 QD1-2702	49,000	50820000	56460000	(× 1000000) dot	W1	W2	Relativeness between total ejected ink amount and the light amount ^{*5}
PL1	ACTIVE ROLL BRAKE UNIT	QM4-8678	1,970,000	27000	30000	h	W1	W2	Paper feeding time
Mi1	MIST FAN DUCT UNIT 1	QM4-4228	32,000	751.75	775.00	ml	W1	EC25-4001	Number of dots in mist collecting box
Mi2	MIST FAN DUCT UNIT 3	QM4-5738	32,000	751.75	775.00	ml	W1	EC25-4001	Number of dots in mist collecting box

*1: The counter name displayed when selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > COUNTER XX-X] in the operation panel.

*2: The timing of replacing consumables varies depending on print mode usage conditions.

Printing conditions: Canon Heavyweight Coated Paper HG, Image, Standard mode / 12.5% × 4 color = 50% duty

*3: If the threshold value of counter with an error code exceeds 100%, an error code is displayed and the printer stops. If not, predetermined message is displayed and the printer does not stop.

*4: WP1 is the counter to add the number of pages only when printing using 20-inch-wide paper. The indication of replacement is calculated based on the number of sheets of paper measuring 20-inch by 24-inch for photo printing.

*5: The parts replacement timing of LFS1 is determined based on the relativeness between the count value of the ink consumption amount and the light-amount value of each sensor. For details, refer to “The consumption degree of LFS1 and HMa1” in 3. SERVICING FUNCTIONS.

*6: HEAD MANAGEMENT SENSOR UNIT is included in the PURGE UNIT for this printer. Accordingly, it is necessary to reset the “HMa1” counter after the PURGE UNIT is replaced.

*7: MULTI SENSOR UNIT is included in CARRIAGE UNIT of this printer. Accordingly, CR5 counter is required to be also reset if CARRIAGE UNIT is replaced.

NOTE:

After the consumable part is replaced, select [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Select the counter name > RESET] to reset its counter. In the case of counter where the multiple applicable parts exist, reset it only when all those parts are replaced simultaneously.

TX-4100 and TX-5410

Counter name ^{*1}	Part name	Part number	Life sheets / A0 ^{*2}	Warning level threshold			Panel message ^{*3}		Items to be counted
				Level 1	Level 2	Unit	Level 1	Level 2	
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	51,000	718.77	741.00	ml	W1	EC43-4001	Ink amount
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242		1015.59	1047.00	ml	W1	EC44-4001	Ink amount
Wia3	WASTE INK ABSORBER UNIT C	QM4-4243		1489.92	1536.00	ml	W1	EC45-4001	Ink amount
Wia6	WASTE INK ABSORBER UNIT	QM4-5751		938.96	968.00	ml	W1	EC47-4001	Ink amount
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	284,000	203.70	210.00	ml	W1	EC41-4001	Ink amount
WP1	PLATEN UNIT, TOP B	QM4-5349	9,000 ^{*4}	9.7	10.00		W1	EC4A-4001	Ink amount
WF1	WASTE INK TANK UNIT	QM4-4226	-	106.70	110.00	ml	W1	EC48-4001	Ink amount
CR1	CARRIAGE UNIT ^{*7}	QM5-0915	41,000	27857142	30952380	(× 210)mm	W1	W2	CR scan length
CR2	CARRIAGE UNIT ^{*7} FILM, TIMING SLIT STRIP	QM5-0915 QD1-2177	66,000	67500000	75000000	(× 1000000) dot	W1	W2	Total ejected ink amount
CR3	CARRIAGE UNIT ^{*7}	QM5-0915	85,000	162000	180000	Times	W1	W2	Rotation number of carriage height changing cam
CR4	INK TUBE UNIT	QM4-5365	39,000	6624000	7360000	Times	W1	EC32-4001	Number of CR scanning
CR5	MULTI SENSOR UNIT	QM4-5328	66,000	67500000	75000000	(× 1000000) dot	W1	W2	Total ejected ink amount
CR6	FLEXIBLE CABLE UNIT	QM4-5857	39,000	6624000	7360000	Times	W1	EC32-4001	Number of CR scanning
PG1	PURGE UNIT ^{*6}	QM4-5310	25,000	140400	156000	Times	W1	EC31-4001	Number of capping
PG2				895500	995000	Times	W1	EC31-4001	Number of pump rotation
PG3				25200	28000	Times	W1	EC31-4001	Number of wiping
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-0913	63,000	6.6	6.8	ml	W1	EC22-4001	Number of dots in Head Management Sensor Unit
MT1	MOTOR, DC, 47.8W (CARRIAGE)	QK2-2200	75,000	3060	3400	h	W1	W2	CR driving time
LFS1	PAPER FEED ENCODER UNIT FILM, TIMING SLIT DISK	QM4-4288 QD1-2702	49,000	50820000	56460000	(× 1000000) dot	W1	W2	Relativeness between total ejected ink amount and the light amount ^{*5}
PL1	ACTIVE ROLL BRAKE UNIT	QM4-8678	1970000	27000	30000	h	W1	W2	Paper feeding time
Mi1	MIST FAN DUCT UNIT 2	QM4-4227	33000	996.19	1027.00	ml	W1	EC25-4001	Number of dots in mist collecting box
Mi2	MIST FAN DUCT UNIT 1	QM4-4228	25000	751.75	775.00	ml	W1	EC25-4001	Number of dots in mist collecting box

*1: The counter name displayed when selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > COUNTER XX-X] in the operation panel.

*2: The timing of replacing consumables varies depending on print mode usage conditions.

Printing conditions: Canon Heavyweight Coated Paper HG, Image, Standard mode / 12.5% × 4 color = 50% duty

*3: If the threshold value of counter with an error code exceeds 100%, an error code is displayed and the printer stops. If not, predetermined message is displayed and the printer does not stop.

*4: WP1 is the counter to add the number of pages only when printing using 20-inch-wide paper. The indication of replacement is calculated based on the number of sheets of paper measuring 20-inch by 24-inch for photo printing.

*5: The parts replacement timing of LFS1 is determined based on the relativeness between the count value of the ink consumption amount and the light-amount value of each sensor. For details, refer to “The consumption degree of LFS1 and HMa1” in 3. SERVICING FUNCTIONS.

*6: HEAD MANAGEMENT SENSOR UNIT is included in the PURGE UNIT for this printer. Accordingly, it is necessary to reset the “HMa1” counter after the PURGE UNIT is replaced.

*7: MULTI SENSOR UNIT is included in CARRIAGE UNIT of this printer. Accordingly, CR5 counter is required to be also reset if CARRIAGE UNIT is replaced.

NOTE:

After the consumable part is replaced, select [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Select the counter name > RESET] to reset its counter. In the case of counter where the multiple applicable parts exist, reset it only when all those parts are replaced simultaneously.

TX-2200 and TX-5220

Counter name*1	Part name	Part number	Life sheets / A1*2	Warning level threshold			Panel message*3		Items to be counted
				Level 1	Level 2	Unit	Level 1	Level 2	
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	46,000	718.77	741.00	ml	W1	EC43-4001	Ink amount
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242		1,015.59	1,047.00	ml	W1	EC44-4001	Ink amount
Wia6	WASTE INK ABSORBER UNIT	QM4-5751		938.96	968.00	ml	W1	EC47-4001	Ink amount
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	399,000	203.70	210.00	ml	W1	EC41-4001	Ink amount
WP1	PLATEN UNIT, TOP B	QM4-5349	9,000*4	9.7	10.00	ml	W1	EC4A-4001	Ink amount
WF1	WASTE INK TANK UNIT	QM4-4226	-	106.70	110.00	ml	W1	EC48-4001	Ink amount
CR1	CARRIAGE UNIT S *7	QM5-5231	82,000	27,857,142	30,952,380	(x210) mm	W1	W2	CR scan length*5
CR2	CARRIAGE ENCODER UNIT	QM4-5850	131,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
CR3	CARRIAGE UNIT S *7	QM5-5231	85,000	162,000	180,000	Times	W1	W2	Rotation number of carriage height changing cam
CR4	INK TUBE UNIT	QM4-5365	54,000	6,624,000	7,360,000	Times	W1	EC32-4001	Number of CR scanning
CR5	MULTI SENSOR UNIT	QM5-1293	131,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
CR6	FLEXIBLE CABLE UNIT	QM4-5855	54,000	6,624,000	7,360,000	Times	W1	EC32-4001	Number of CR scanning
CR7	FILM, TIMING SLIT STRIP	QD1-2177	131,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
PG1	PURGE UNIT *6	QM5-4410	41,000	157,500	175,000	Times	W1	EC31-4001	Number of capping
PG2			42,000	1,260,000	1,400,000	Times	W1	EC31-4001	Number of pump rotation
PG3			25,000	25,200	28,000	Times	W1	EC31-4001	Number of wiping
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-4101	121,000	6.6	6.8	ml	W1	EC22-4001	Number of dots in Head Management Sensor Unit*5
MT1	MOTOR, DC, 47.8W (CARRIAGE)	QK2-2200	75,000	3,060	3,400	h	W1	W2	CR driving time
LFS1	PAPER FEED ENCODER UNIT FILM, TIMING SLIT DISK	QM4-4288 QD1-2702	33,000	16,510,000	18,340,000	(x1,000,000) dot	W1	W2	Relativeness between total ejected ink amount and the light amount*5
PL1	ACTIVE ROLL BRAKE UNIT	QM4-8678	4,122,000	27,000	30,000	h	W1	W2	Paper feeding time
Mi1	MIST FAN DUCT UNIT 2	QM4-4227	26,000	996.19	1,027.00	ml	W1	EC25-4001	Number of dots in mist collecting box
MS1	MULTI SENSOR UNIT	QM5-1293	-	-	100	%	-	W2	The degree of ejected ink amount deviation by color*8

*1 The counter name displayed when selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > XX-X] in the operation panel.

*2 The timing of replacing consumables varies depending on print mode and usage conditions.
 Printing conditions: Canon Heavyweight Coated Paper HG, Image, Standard mode,
 12.5% × 4 colors =50% Duty

*3 If the threshold value of counter with an error code exceeds 100%, an error code is displayed and the printer stops. If not, predetermined message is displayed and the printer does not stop.

*4 WP1 is a counter to add the number of pages only when printing is performed using 20-inch-wide paper. The indication of replacement is calculated based on the number of sheets of paper measuring 20-inch by 24-inch.

*5 The parts replacement timing of LFS1 and HMa1 is determined based on the relativeness between the count value of the ink consumption amount and the light-amount value of each sensor. The parts replacement timing of CR1 is determined based on the relativeness between the count value of the ink consumption amount at the carriage reciprocating operation and the carriage motor PWM control data output value.

For details, refer to the “Consumption degree of LFS1 and HMa1” and “Consumption degree of CR1” in 3. SERVICING FUNCTIONS.

*6 HEAD MANAGEMENT SENSOR UNIT is included in the PURGE UNIT for this printer. Accordingly, it is

necessary to reset the “HMa1” counter after the PURGE UNIT is replaced.

- *7 MULTI SENSOR UNIT is included in CARRIAGE UNIT S of this printer. Accordingly, CR5 counter is required to be also reset if CARRIAGE UNIT S is replaced.
- *8 The large deviation degree affects color calibration. No life guideline (because this is not depending on the ejected ink amount but the deviation degree of ejected ink amount).

NOTE:

After the consumable part is replaced, select [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Select the counter name > RESET] to reset its counter. In the case of counter where the multiple applicable parts exist, reset it only when all those parts are replaced simultaneously.

TX-3200 and TX-5320

Counter name ^{*1}	Part name	Part number	Life sheets / AO ^{*2}	Warning level threshold			Panel message ^{*3}		Items to be counted
				Level 1	Level 2	Unit	Level 1	Level 2	
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	29,000	718.77	741.00	ml	W1	EC43-4001	Ink amount
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242		1,015.59	1,047.00	ml	W1	EC44-4001	Ink amount
Wia5	WASTE INK ABSORBER UNIT E	QM4-5354		855.54	882.00	ml	W1	EC49-4001	Ink amount
Wia6	WASTE INK ABSORBER UNIT	QM4-5751		938.96	968.00	ml	W1	EC47-4001	Ink amount
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	284,000	203.70	210.00	ml	W1	EC41-4001	Ink amount
WP1	PLATEN UNIT, TOP B	QM4-5349	9,000 ^{*4}	9.7	10.00	ml	W1	EC4A-4001	Ink amount
WF1	WASTE INK TANK UNIT	QM4-4226	-	106.70	110.00	ml	W1	EC48-4001	Ink amount
CR1	CARRIAGE UNIT S ^{*7}	QM5-5232	41,000	27,857,142	30,952,380	(x210) mm	W1	W2	CR scan length ^{*5}
CR2	CARRIAGE ENCODER UNIT	QM4-5850	66,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
CR3	CARRIAGE UNIT S ^{*7}	QM5-5232	85,000	162,000	180,000	Times	W1	W2	Rotation number of carriage height changing cam
CR4	INK TUBE UNIT	QM4-5859	39,000	6,624,000	7,360,000	Times	W1	EC32-4001	Number of CR scanning
CR5	MULTI SENSOR UNIT	QM5-1293	66,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
CR6	FLEXIBLE CABLE UNIT	QM4-5856	39,000	6,624,000	7,360,000	Times	W1	EC32-4001	Number of CR scanning
CR7	FILM, TIMING SLIT STRIP	QC5-6283	66,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
PG1	PURGE UNIT ^{*6}	QM5-4410	41,000	157,500	175,000	Times	W1	EC31-4001	Number of capping
PG2			42,000	1,260,000	1,400,000	Times	W1	EC31-4001	Number of pump rotation
PG3			25,000	25,200	28,000	Times	W1	EC31-4001	Number of wiping
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-4101	63,000	6.6	6.8	ml	W1	EC22-4001	Number of dots in Head Management Sensor Unit ^{*5}
MT1	MOTOR, DC, 47.8W (CARRIAGE)	QK2-2200	75,000	3,060	3,400	h	W1	W2	CR driving time
LFS1	PAPER FEED ENCODER UNIT FILM, TIMING SLIT DISK	QM4-4288 QD1-2702	49,000	30,000,000	56,460,000	(x1,000,000) dot	W1	W2	Relativeness between total ejected ink amount and the light amount ^{*5}
PL1	ACTIVE ROLL BRAKE UNIT	QM4-8678	1,970,000	27,000	30,000	h	W1	W2	Paper feeding time
Mi1	MIST FAN DUCT UNIT 1	QM4-4228	32,000	751.75	775.00	ml	W1	EC25-4001	Number of dots in mist collecting box
MS1	MULTI SENSOR UNIT	QM5-1293	-	-	100	%	-	W2	The degree of ejected ink amount deviation by color ^{*8}

*1 The counter name displayed when selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > XX-X] in the operation panel.

*2 The timing of replacing consumables varies depending on print mode and usage conditions.

Printing conditions: Canon Heavyweight Coated Paper HG, Image, Standard mode,

12.5% × 4 colors =50% Duty

*3 If the threshold value of counter with an error code exceeds 100%, an error code is displayed and the printer stops. If not, predetermined message is displayed and the printer does not stop.

*4 WP1 is a counter to add the number of pages only when printing is performed using 20-inch-wide paper. The indication of replacement is calculated based on the number of sheets of paper measuring 20-inch by 24-inch.

*5 The parts replacement timing of LFS1 and HMa1 is determined based on the relativeness between the count value of the ink consumption amount and the light-amount value of each sensor. The parts replacement timing of CR1 is determined based on the relativeness between the count value of the ink consumption amount at the carriage reciprocating operation and the carriage motor PWM control data output value.

For details, refer to the “Consumption degree of LFS1 and HMa1” and “Consumption degree of CR1” in 3.

SERVICING FUNCTIONS.

- *6 HEAD MANAGEMENT SENSOR UNIT is included in the PURGE UNIT for this printer. Accordingly, it is necessary to reset the “HMa1” counter after the PURGE UNIT is replaced.
- *7 MULTI SENSOR UNIT is included in CARRIAGE UNIT S of this printer. Accordingly, CR5 counter is required to be also reset if CARRIAGE UNIT S is replaced.
- *8 The large deviation degree affects color calibration. No life guideline (because this is not depending on the ejected ink amount but the deviation degree of ejected ink amount).

NOTE:

After the consumable part is replaced, select [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Select the counter name > RESET] to reset its counter. In the case of counter where the multiple applicable parts exist, reset it only when all those parts are replaced simultaneously.

TX-4200 and TX-5420

Counter name ^{*1}	Part name	Part number	Life sheets / A0 ^{*2}	Warning level threshold			Panel message ^{*3}		Items to be counted
				Level 1	Level 2	Unit	Level 1	Level 2	
Wia1	WASTE INK ABSORBER UNIT A	QM4-4241	51,000	718.77	741.00	ml	W1	EC43-4001	Ink amount
Wia2	WASTE INK ABSORBER UNIT B	QM4-4242		1,015.59	1,047.00	ml	W1	EC44-4001	Ink amount
Wia3	WASTE INK ABSORBER UNIT C	QM4-4243		1,489.92	1,536.00	ml	W1	EC45-4001	Ink amount
Wia6	WASTE INK ABSORBER UNIT	QM4-5751		938.96	968.00	ml	W1	EC47-4001	Ink amount
Wia7	SUCTION FAN UNIT SUCTION FAN DUCT UNIT	QM4-5861 QM5-1372	284,000	203.70	210.00	ml	W1	EC41-4001	Ink amount
WP1	PLATEN UNIT, TOP B	QM4-5349	9,000 ^{*4}	9.7	10.00	ml	W1	EC4A-4001	Ink amount
WF1	WASTE INK TANK UNIT	QM4-4226	-	106.70	110.00	ml	W1	EC48-4001	Ink amount
CR1	CARRIAGE UNIT S ^{*7}	QM5-5233	41,000	27,857,142	30,952,380	(x210) mm	W1	W2	CR scan length ^{*5}
CR2	CARRIAGE ENCODER UNIT	QM4-5850	66,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
CR3	CARRIAGE UNIT S ^{*7}	QM5-5233	85,000	162,000	180,000	Times	W1	W2	Rotation number of carriage height changing cam
CR4	INK TUBE UNIT	QM4-5366	39,000	6,624,000	7,360,000	Times	W1	EC32-4001	Number of CR scanning
CR5	MULTI SENSOR UNIT	QM5-1293	66,000	67,500,000	75,000,000	(x1,000,000)dot	W1	W2	Total ejected ink amount
CR6	FLEXIBLE CABLE UNIT	QM4-5857	39,000	6,624,000	7,360,000	Times	W1	EC32-4001	Number of CR scanning
CR7	FILM, TIMING SLIT STRIP	QD1-2178	66,000	67,500,000	75,000,000	(x1,000,000) dot	W1	W2	Total ejected ink amount
PG1	PURGE UNIT ^{*6}	QM5-4410	41,000	157,500	175,000	Times	W1	EC31-4001	Number of capping
PG2			42,000	1,260,000	1,400,000	Times	W1	EC31-4001	Number of pump rotation
PG3			25,000	25,200	28,000	Times	W1	EC31-4001	Number of wiping
HMa1	HEAD MANAGEMENT SENSOR UNIT	QM5-4101	63,000	6.6	6.8	ml	W1	EC22-4001	Number of dots in Head Management Sensor Unit ^{*5}
MT1	MOTOR, DC, 47.8W (CARRIAGE)	QK2-2200	75,000	3,060	3,400	h	W1	W2	CR driving time
LFS1	PAPER FEED ENCODER UNIT FILM, TIMING SLIT DISK	QM4-4288 QD1-2702	49,000	30,000,000	56,460,000	(x1,000,000) dot	W1	W2	Relativeness between total ejected ink amount and the light amount ^{*5}
PL1	ACTIVE ROLL BRAKE UNIT	QM4-8678	1,970,000	27,000	30,000	h	W1	W2	Paper feeding time
Mi1	MIST FAN DUCT UNIT 1	QM4-4228	25,000	751.75	775.00	ml	W1	EC25-4001	Number of dots in mist collecting box
MS1	MULTI SENSOR UNIT	QM5-1293	-	-	100	%	-	W2	The degree of ejected ink amount deviation by color ^{*8}

- *1 The counter name displayed when selecting [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > XX-X] in the operation panel.
- *2 The timing of replacing consumables varies depending on print mode and usage conditions.
Printing conditions: Canon Heavyweight Coated Paper HG, Image, Standard mode,
12.5% × 4 colors =50% Duty
- *3 If the threshold value of counter with an error code exceeds 100%, an error code is displayed and the printer stops. If not, predetermined message is displayed and the printer does not stop.
- *4 WP1 is a counter to add the number of pages only when printing is performed using 20-inch-wide paper. The indication of replacement is calculated based on the number of sheets of paper measuring 20-inch by 24-inch.
- *5 The parts replacement timing of LFS1 and HMa1 is determined based on the relativeness between the count value of the ink consumption amount and the light-amount value of each sensor. The parts replacement timing of CR1 is determined based on the relativeness between the count value of the ink consumption amount at the carriage reciprocating operation and the carriage motor PWM control data output value.
For details, refer to the “Consumption degree of LFS1 and HMa1” and “Consumption degree of CR1” in 3. SERVICING FUNCTIONS.

- *6 HEAD MANAGEMENT SENSOR UNIT is included in the PURGE UNIT for this printer. Accordingly, it is necessary to reset the “HMa1” counter after the PURGE UNIT is replaced.
- *7 MULTI SENSOR UNIT is included in CARRIAGE UNIT S of this printer. Accordingly, CR5 counter is required to be also reset if CARRIAGE UNIT S is replaced.
- *8 The large deviation degree affects color calibration. No life guideline (because this is not depending on the ejected ink amount but the deviation degree of ejected ink amount).

NOTE:

After the consumable part is replaced, select [SERVICE MODE > PRINTER STATUS > PARTS COUNTER > Select the counter name > RESET] to reset its counter. In the case of counter where the multiple applicable parts exist, reset it only when all those parts are replaced simultaneously.

5-4. Periodic Maintenance

Level	Periodic maintenance
User	Printer cleaning (once a month)
Service	None

In order to maintain print quality or prevent troubles, recommend users to clean the printer periodically. For how to perform cleaning, refer to “Maintenance and Consumables” in User’s Guide.

Recommend the users to confirm that the firmware is the latest version. If it is not the latest one, recommend to upgrade the firmware.

6. MECHANISM

6-1. Main Unit Configuration	786
6-1-1. Main Unit Configuration	786
6-2. Operation Principle	790
6-2-1. Paper Feed Mechanism	790
6-2-2. Purge Unit	802
6-2-3. Ink Supply Unit	814
6-2-4. Carriage Unit	827
6-2-5. Print Head Management Sensor Unit	836
6-2-6. Function of Platen	840
6-3. Initial Flowchart	842
6-3-1. Initial Flowchart	842

6-1. Main Unit Configuration

6-1-1. Main Unit Configuration

Paper feed mechanism:

It is the mechanism of loading, feeding, and ejecting roll paper or cut sheet (manual feed).

The feature of this printer is as follows:

- **Paper feed**

Paper is fed from the roll unit (the upper roll unit or the optional lower roll unit).

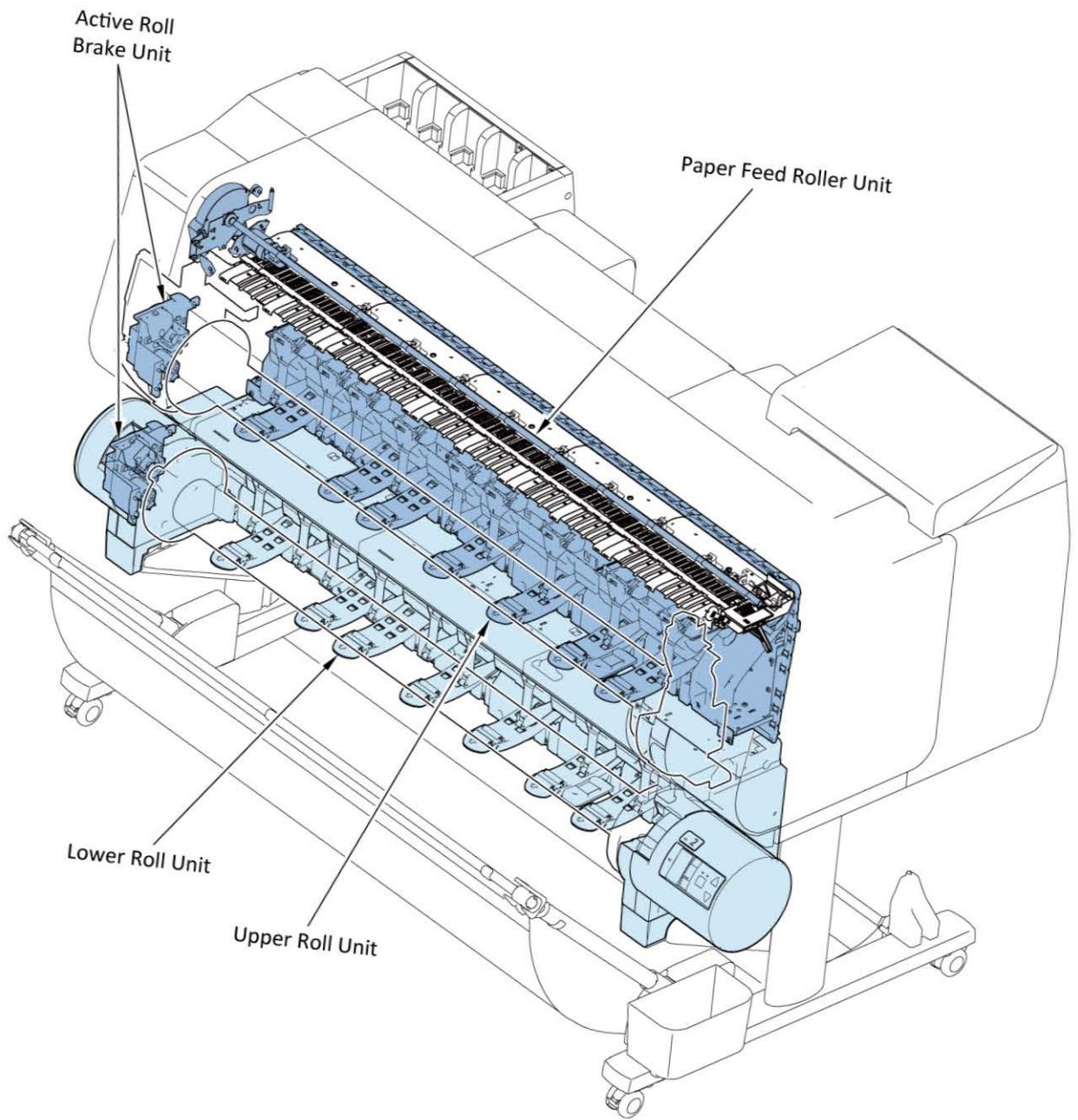
The paper source is switched automatically by utilizing the paper entry sensor in the paper feed roller part, the roll paper entry sensor in the upper and lower roll units, and the active roll brake unit.

In addition, to improve accuracy in feeding the roll paper, the torque is controlled by the active roll brake unit.

- **Paper ejection**

In addition to ejecting paper to the basket, paper ejection while taking it up to the lower roll unit is adopted. In the take-up paper ejection, the outward and inward take-up is available. By utilizing the active roll brake unit, the weight is no longer needed.

	<p>Active roll brake unit: Function of the active roll brake unit is as follows:</p> <ul style="list-style-type: none">- To improve roll paper feed accuracy Torque change caused by the roll paper diameter, weight, and slack (caused by the back tension change), etc. is controlled, and accuracy in paper feeding during printing is improved.- To feed roll paper When the roll paper is installed, roll paper pickup and paper source switching is automatically performed.- To take up roll paper By monitoring the torque change and rolling up the paper in an appropriate timing, the weight is no longer needed.
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Ink supply mechanism:

Ink is supplied from the ink tank through the sub ink tank and ink supply tube to the print head.

Ink is supplied to the print head by utilizing the water-head-difference, or by the negative pressure generated from the pump roller drive. When the ink amount inside the sub ink tank is sufficient, you can replace the ink tank with a new one without interrupting printing. In the previous models, the initial ink filling check is executed only by the non-ejection detection unit after the end of ink filling; however, in this printer, two kinds of the remaining ink detection pins (detecting ink-full and no-ink in the sub ink tank) are adopted, thus a mechanical problem during the initial ink filling can be detected in the early stage without wasting ink.

Purge unit:

To maintain the high quality print, maintenance of the print head (cleaning, capping, wiping) is performed. The purge motor (to drive the purge main cam and pump roller) and wiper blade motor (to drive the wiper blade) are installed.

Carriage unit:

It fixes the print head and ink supply tube, and moves side to side.

To reduce uneven printing, an acceleration sensor is adopted to this printer.

In addition, the vibration information from the acceleration sensor is utilized to strengthen the function which identifies each error (paper jam error, overload error, and encoder error).

Print head management sensor unit:

The nozzle check to detect the non-ejection nozzle in the print head is adopted.

The information of the detected non-ejection nozzle is utilized for non-ejection complementary and for recovery.

In TX-2200, TX-3200, TX-4200, TX-5220, TX-5320, and TX-5420, the function to automatically detect conditions of ink ejection from the print head is added. According to the detected print head conditions, the print head position is automatically adjusted or the message to perform Print Head Alignment is displayed.

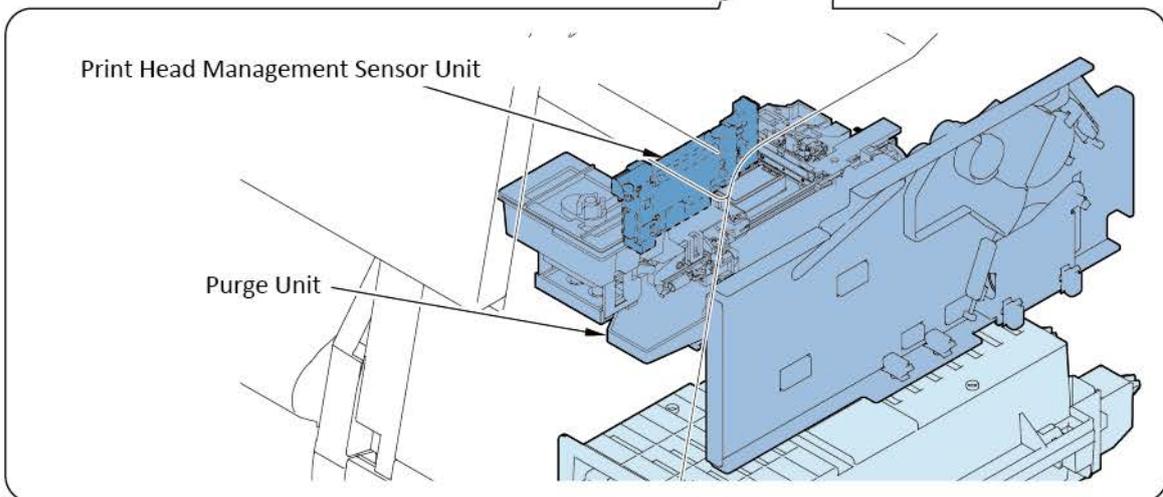
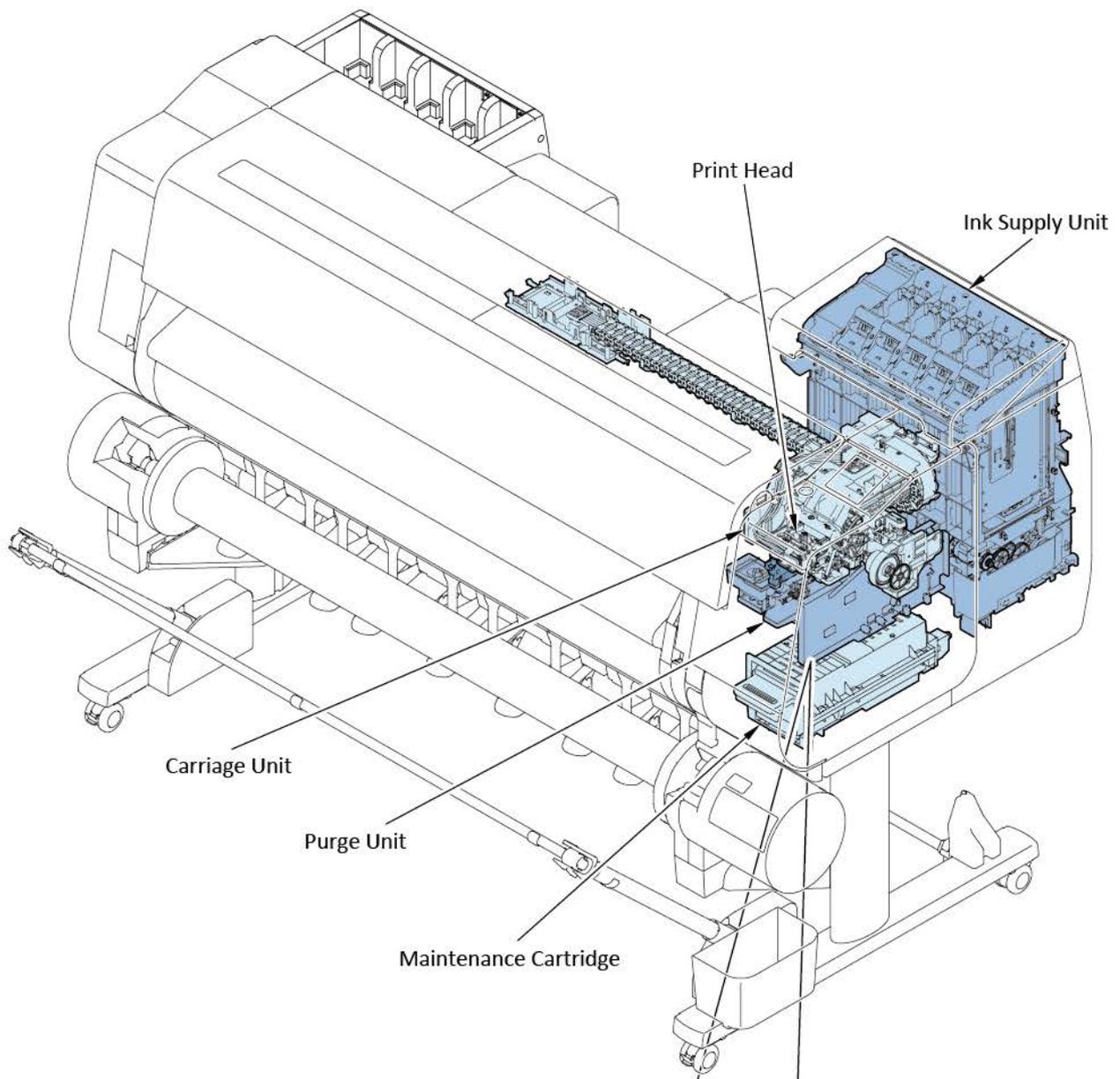
Print head:

It receives the print signal from the main PCB and ejects ink from the ink supply unit.

Maintenance cartridge:

It collects ink ejected from purging and pre-printing ink ejection over the caps of the purge unit.

If the amount of collected ink that is recorded to the memory of the maintenance cartridge exceeds the specified value, an error is indicated and operation is stopped.



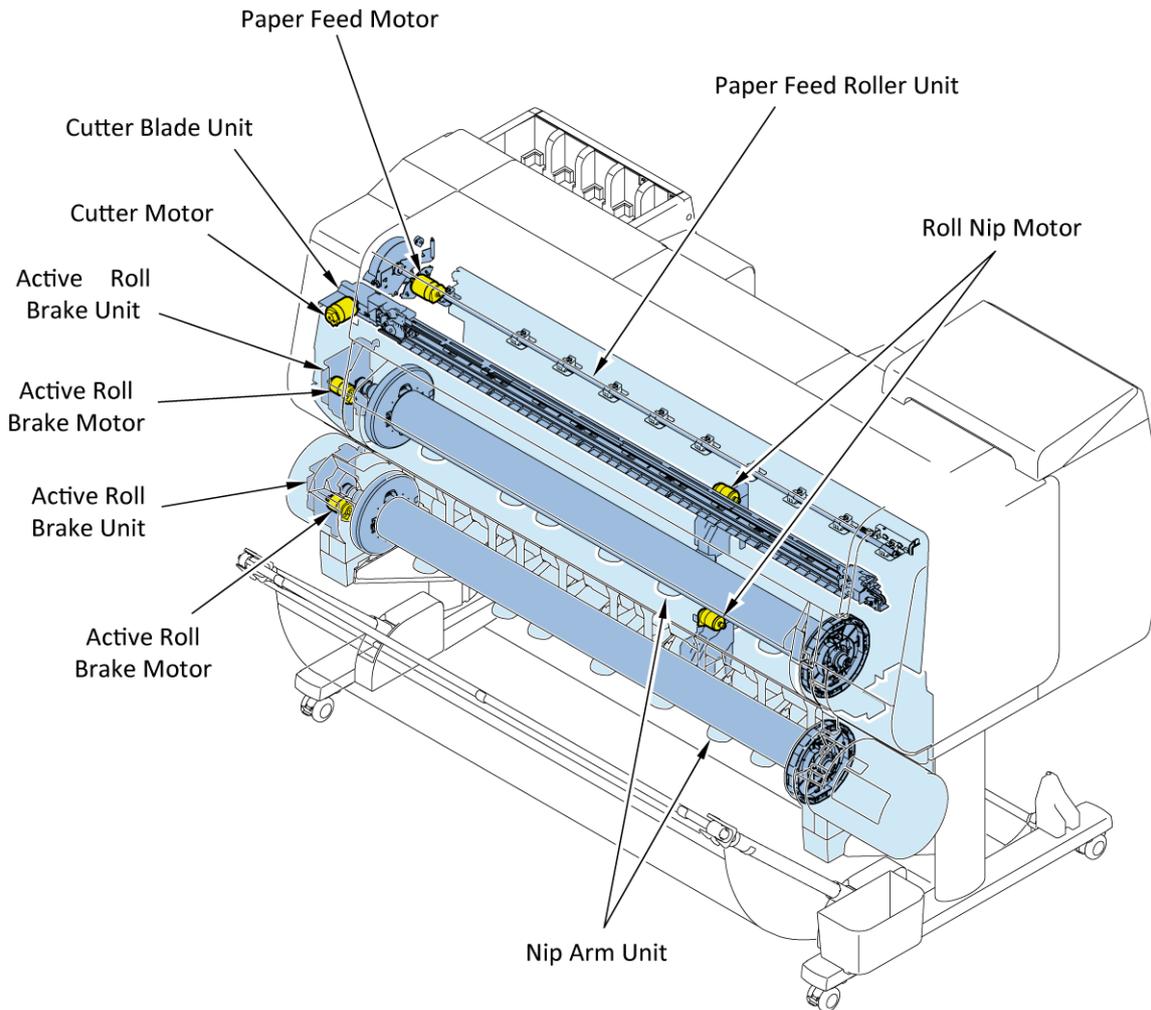
6-2. Operation Principle

6-2-1. Paper Feed Mechanism

1. Configuration

The paper feed mechanism consists of the upper roll paper feed part, the lower roll paper feed part (option), the feed roller part, the paper ejection part, and the sensors to detect operation of each part and paper condition.

Power of the paper feed mechanism:

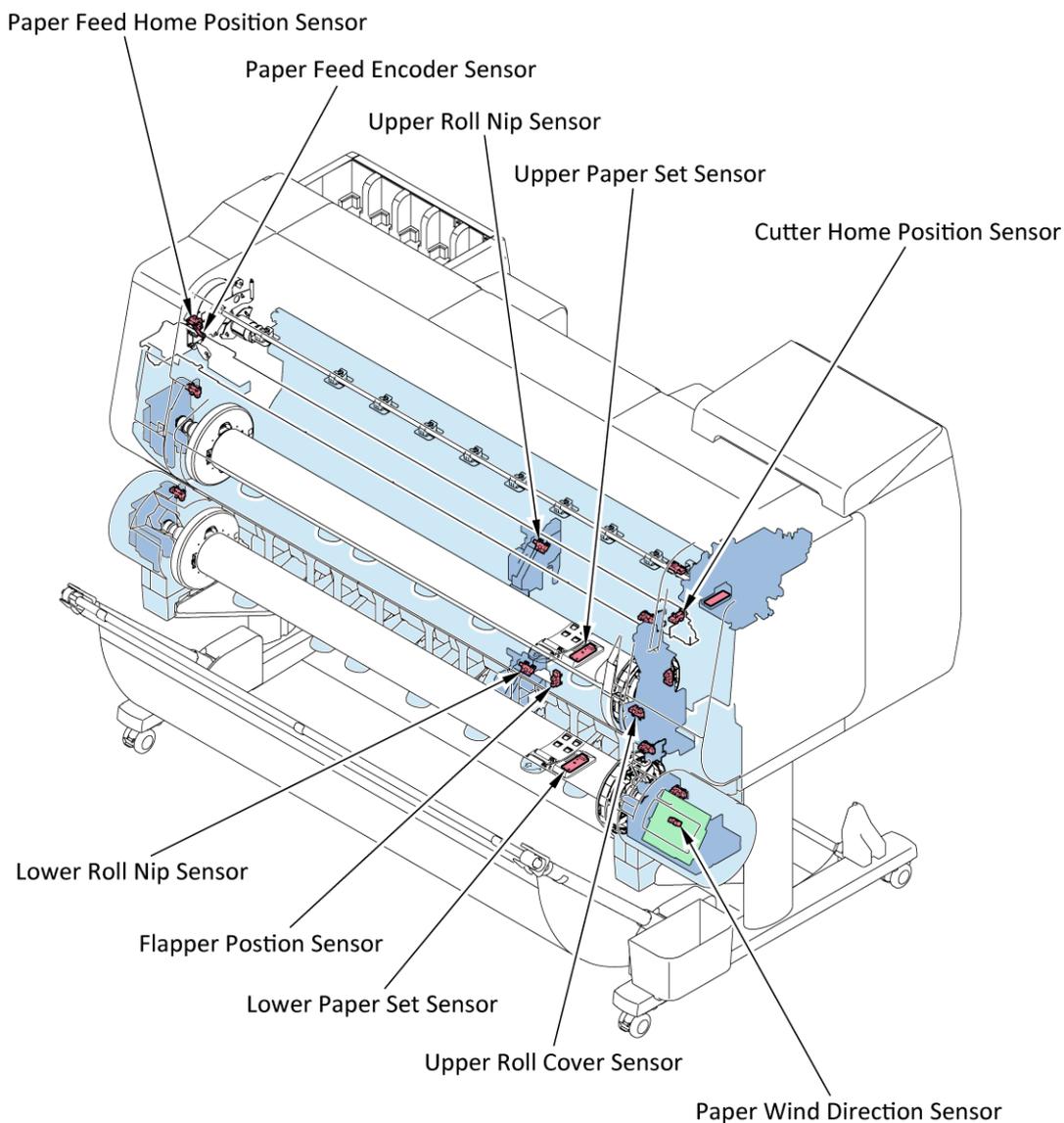


Units to be driven	Power supply source
Active roll brake unit	Active roll brake motor
Nip arm unit	Roll nip motor
Paper feed roller unit	Paper feed motor
Cutter blade unit	Cutter motor

Sensor:

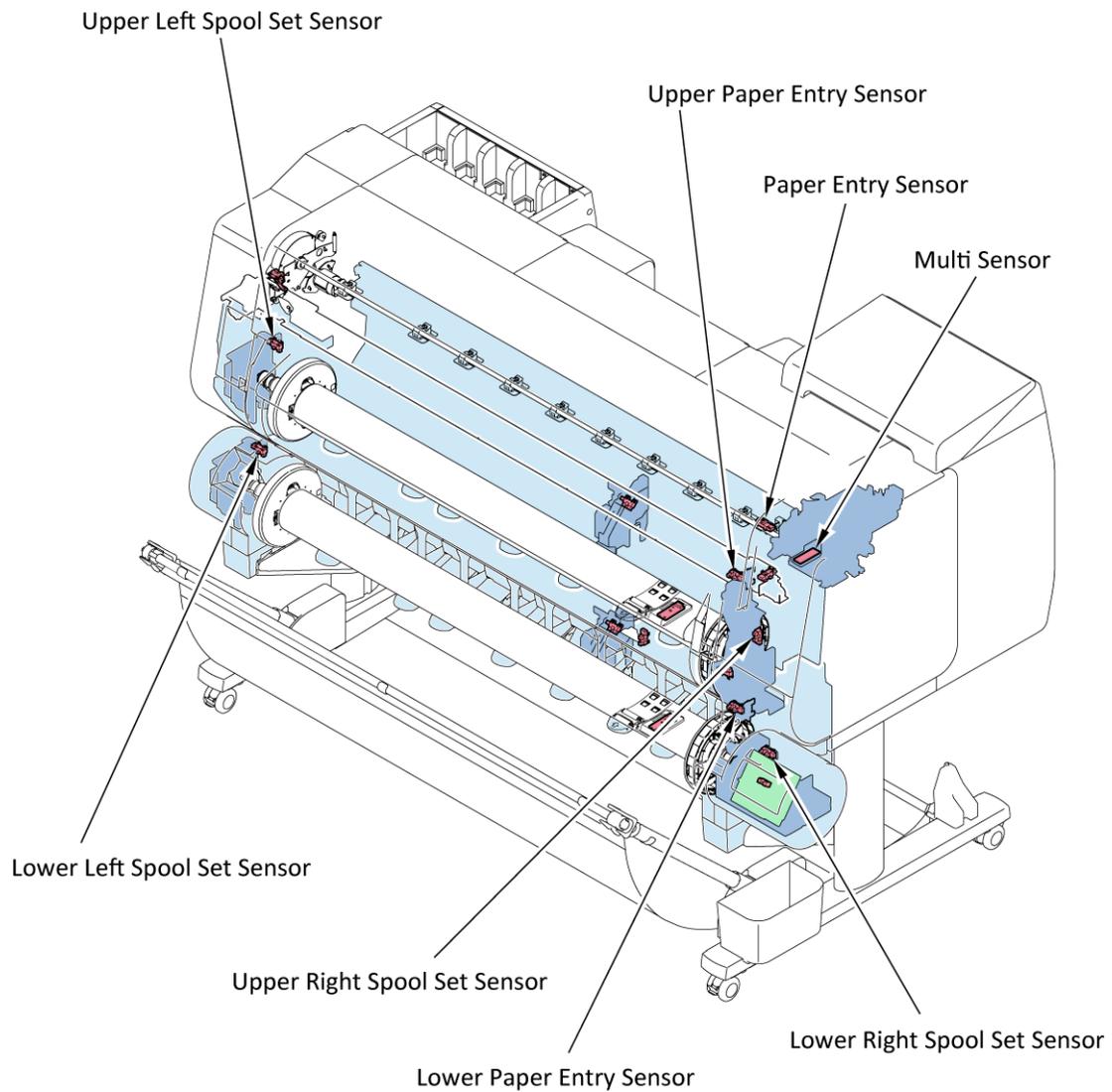
For the paper feed mechanism, two kinds of sensors, one to detect the mechanical movement and the other to detect the paper position, are installed.

- Sensors to detect the mechanical movement



Sensor name	Detection
Paper feed encoder sensor	Detects the rotation amount of the paper feed roller.
Paper feed home position sensor	Detects the home position of the paper feed roller.
Upper roll nip sensor	Detects the roll nip arm status of the upper roll unit.
Lower roll nip sensor	Detects the roll nip arm status of the lower roll unit.
Cutter home position sensor	Detects the position of the cutter unit.
Upper roll cover sensor	Detects the cover opening and closing in the upper roll unit.
Flapper position sensor	Detects status of the separation flapper in the lower roll unit.
Paper wind direction sensor	Detects that either the inward winding or the outward winding is selected in the lower roll unit.
Upper paper set sensor	Detects the leading edge of the upper roll paper.
Lower paper set sensor	Detects the leading edge of the lower roll paper.

- Sensors to detect the paper



Sensor name	Detection
Multi sensor	Installed in the carriage unit, and detects the leading edge of paper and paper width.
Paper entry sensor	Detects paper presence before the paper feed roller.
Upper paper entry sensor	Detects paper presence in the upper roll paper feed part.
Lower paper entry sensor	Detects paper presence in the lower roll paper feed part.
Upper right spool set sensor	Detects spool unit presence on the right side of the upper roll paper feed part.
Upper left spool set sensor	Detects spool unit presence on the left side of the upper roll paper feed part.
Lower right spool set sensor	Detects spool unit presence on the right side of the lower roll paper feed part.
Lower left spool set sensor	Detects spool unit presence on the left side of the lower roll paper feed part.

2. Paper feed mechanism

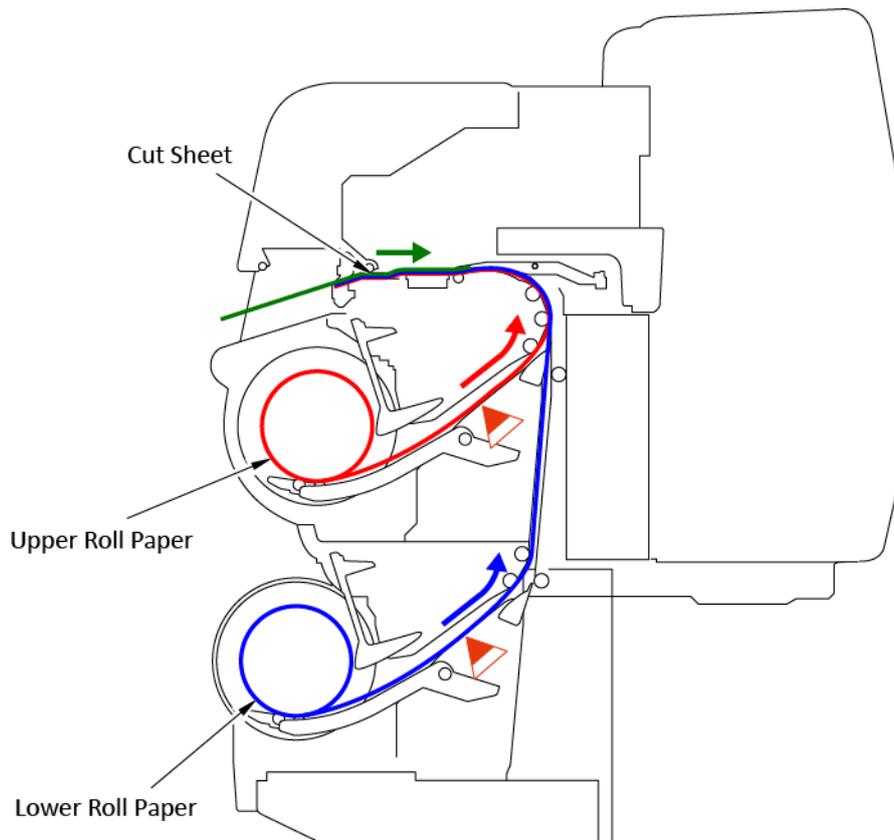
Paper feed:

In this printer, there are three ways to feed the paper as follows:

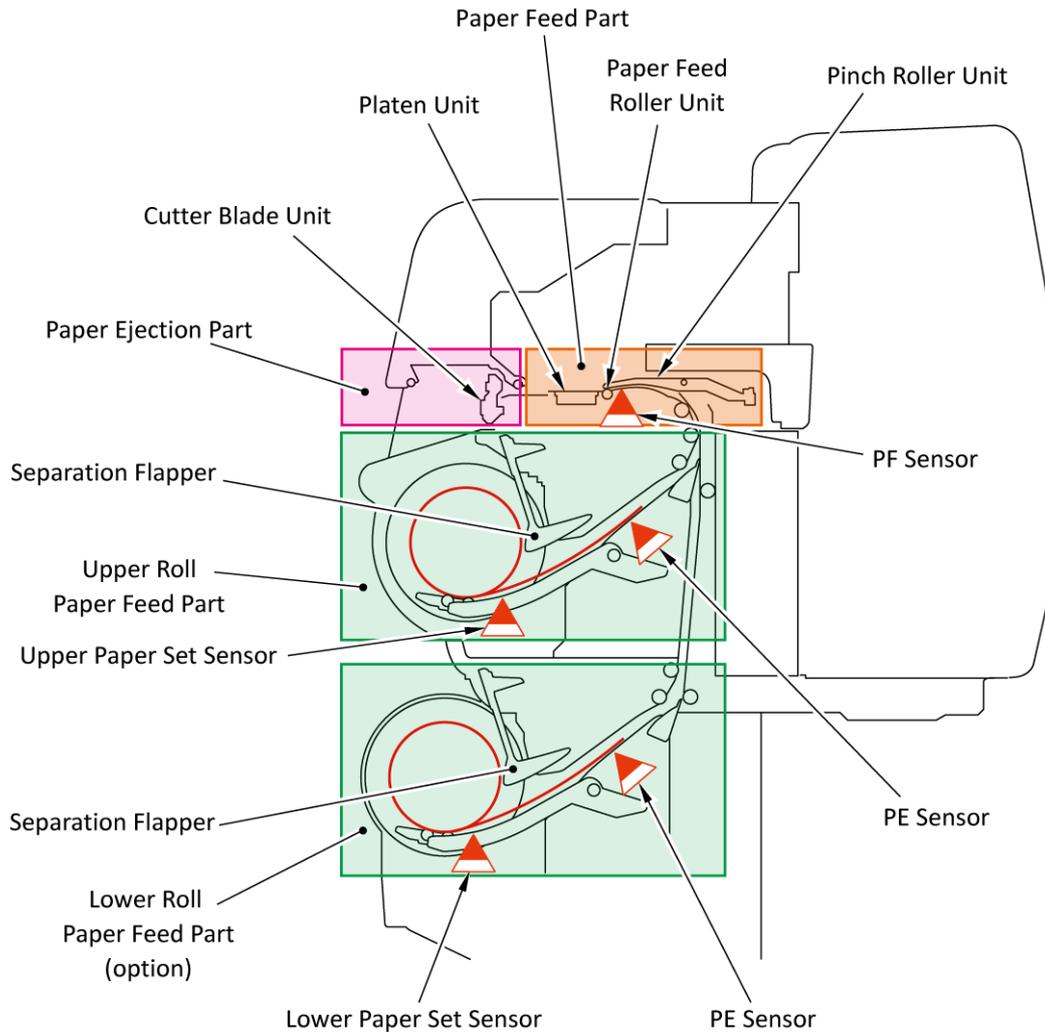
- Feeds from the upper roll unit.
- Feeds from the lower roll unit. (The lower roll unit is an option.)
- Feeds the cut sheet manually.

Note:

When the paper type, size, and the rest are the same for the upper and lower roll paper, the paper in the upper roll unit will be fed first.



Roll paper feeding:



- Paper separation and paper pickup

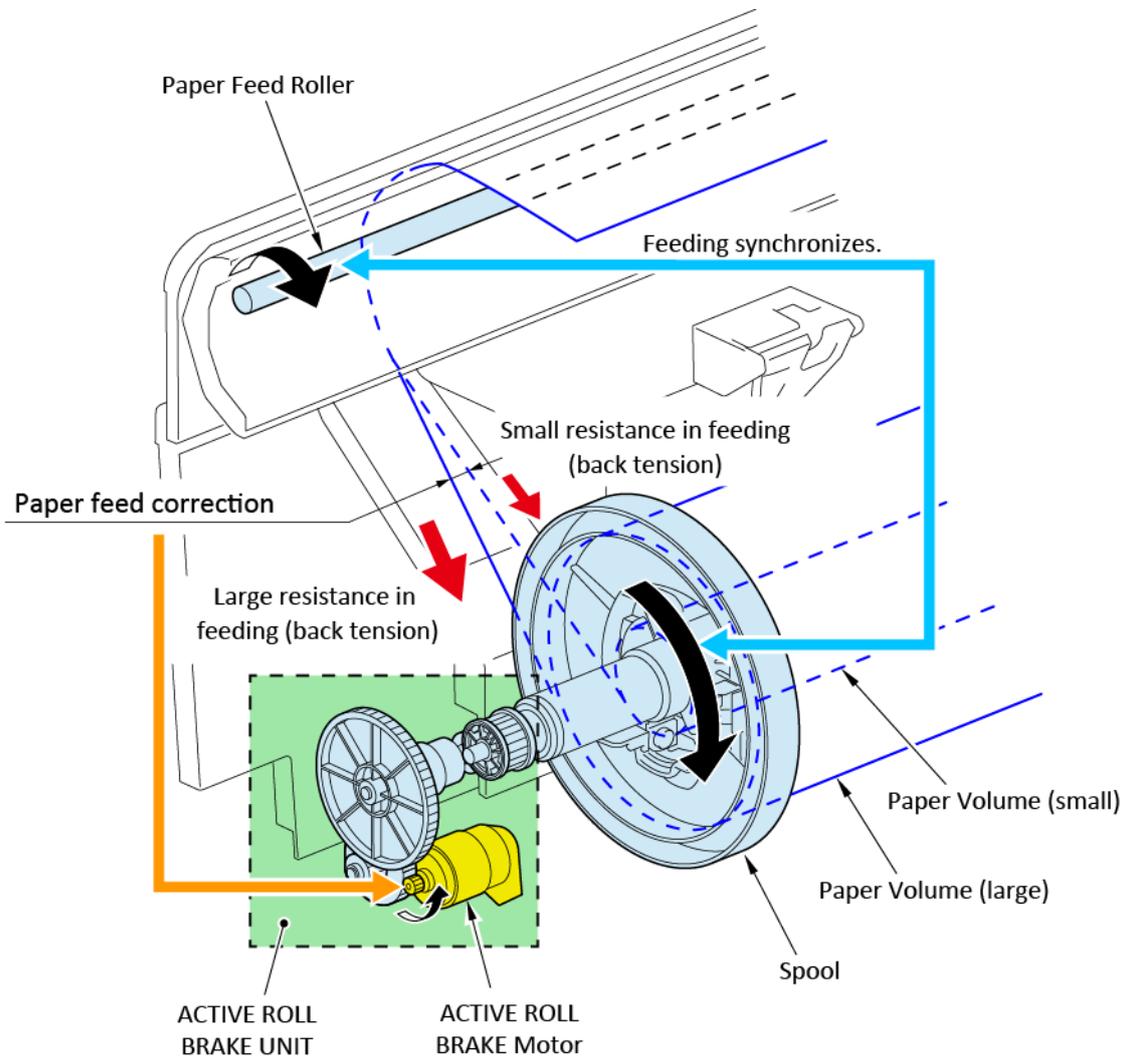
The active roll brake motor rotates the paper that is set in the printer and the separation flapper separates the leading edge of paper (while the paper set sensor detects paper separation). To pick up the roll paper, the spool unit rotates while the nip roller pinches the paper. A friction force generated by the nip roller pressure on the roll paper is used to feed the paper.

- Paper feeding

In feeding the roll paper, the multi sensor detects paper width and paper skew. In case that the paper skew or paper width needs to be corrected, the active roll brake unit feeds the paper forward and backward repeatedly until slack or skew of the roll paper is corrected. In feeding paper and printing, the platen unit performs air suction to prevent paper floating. In addition, to reduce uneven printing in feeding direction, the following is performed for control and correction:

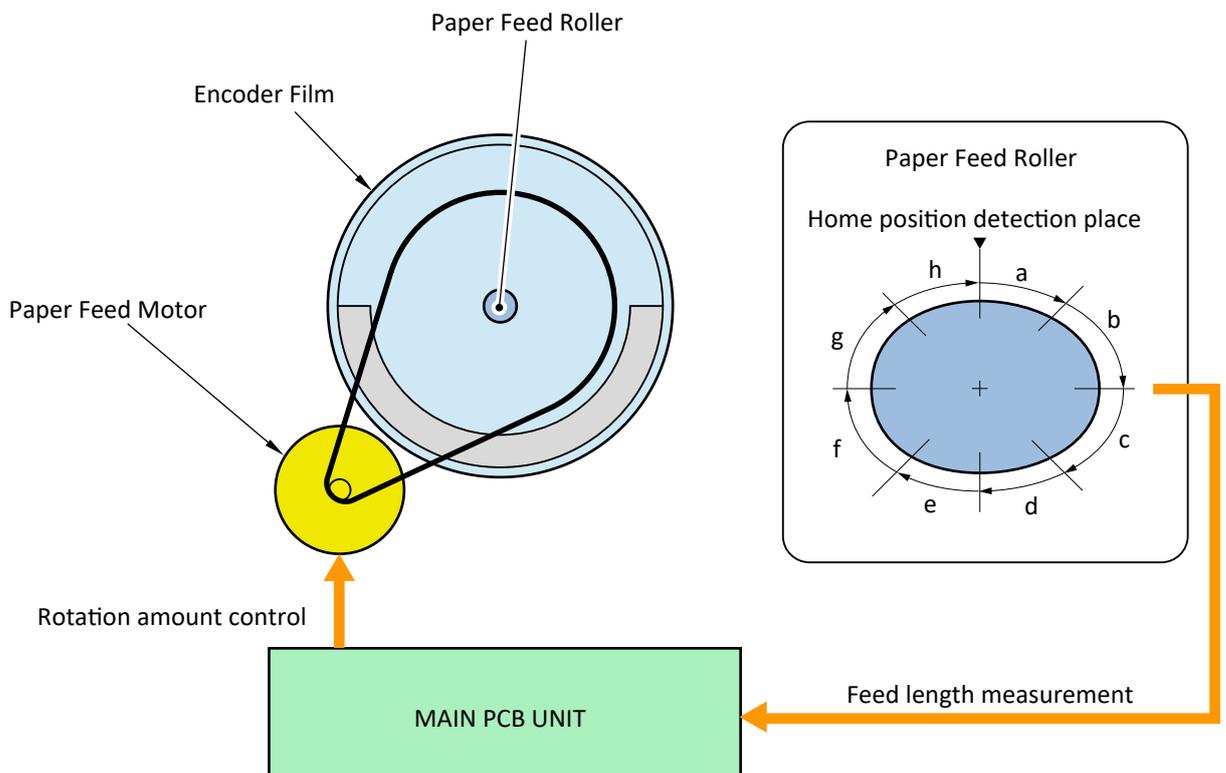
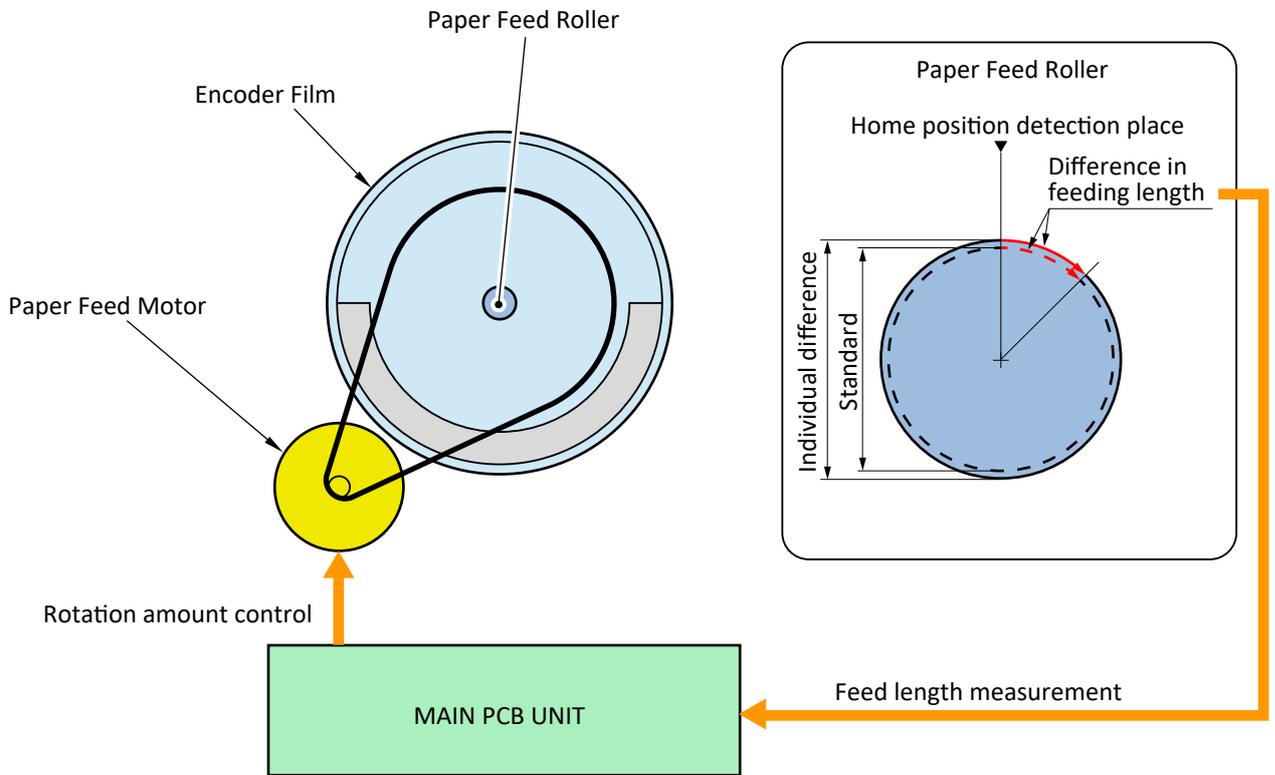
1) Torque control in feeding paper

An inertial force acts on the roll paper in feeding in the resistance direction or in the slacking direction. Since the force varies according to the amount of remaining paper, the active roll brake unit detects it and controls the torque to maintain the feed amount constant.



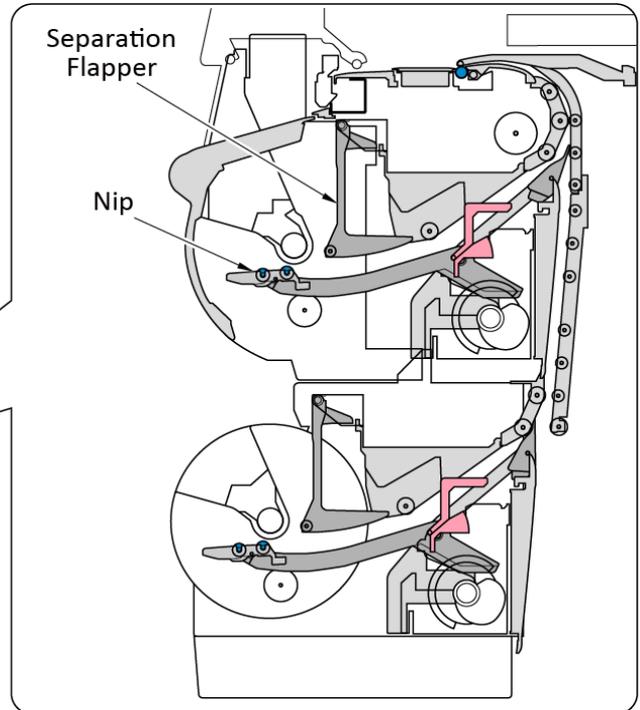
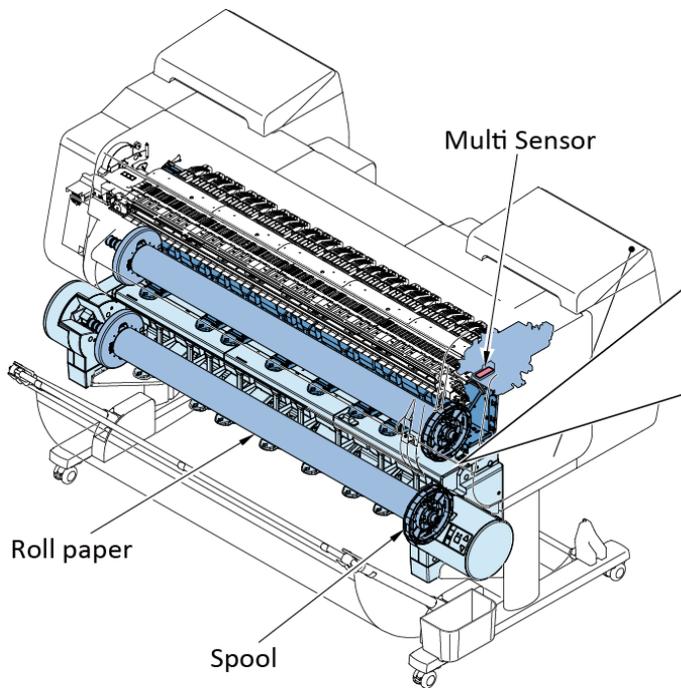
2) Paper feed correction (eccentric correction)

Individual difference in diameter or askewness of the paper feed roller will make a difference in the paper feed amount although the amount of rotation is the same. Therefore, to have the paper feed amount constant, the amount of paper feed roller rotation is controlled.



- Switching the upper and lower roll paper feed

In case that the roll paper already reaches over the platen when another roll paper is specified to feed, the spool and paper feed roller rotate in reverse direction to rewind the roll paper from over the platen to the standby position. Then, the other roll paper is fed.



- Paper cut

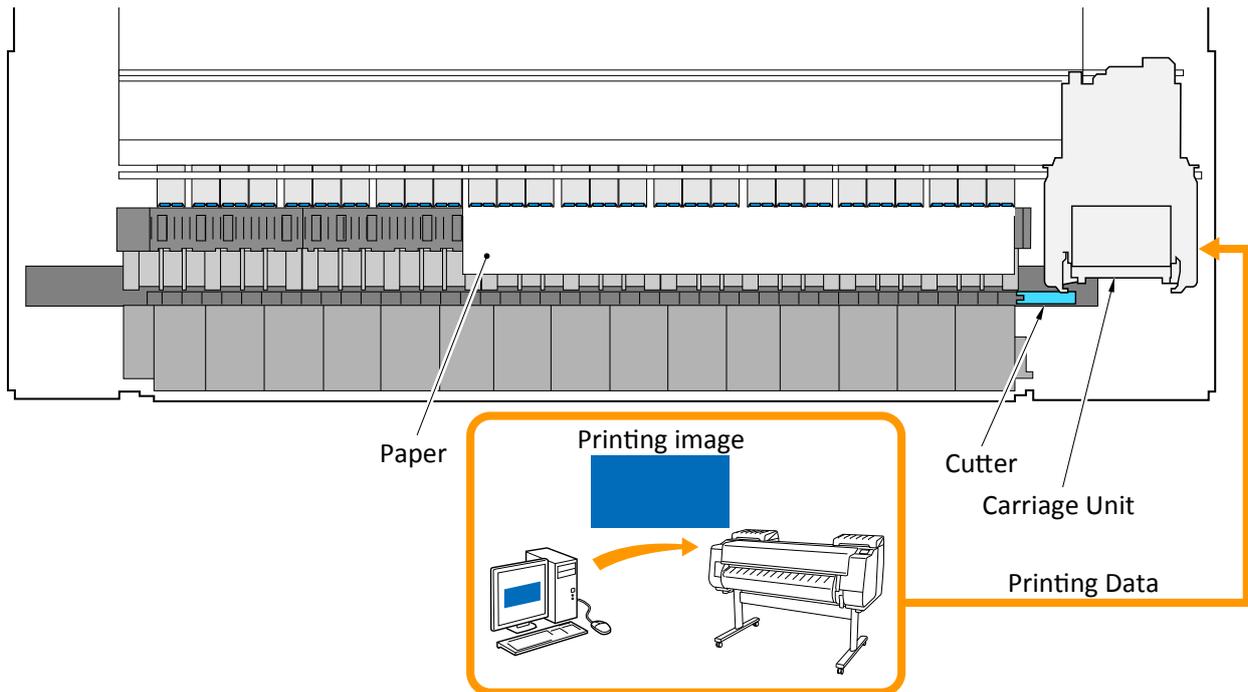
If “automatic cutting” is selected as the cut mode, the roll paper is automatically cut after printed.

In addition, the pre-cut is performed in advance in the following cases:

- When the leading edge of the roll paper is not straight in feeding
- The leading and trailing edges of the roll paper in borderless printing

In pre-cutting, the amount of the minimum cut is specified for each paper type to cut the paper straight.

(For more details, see the user manual.)



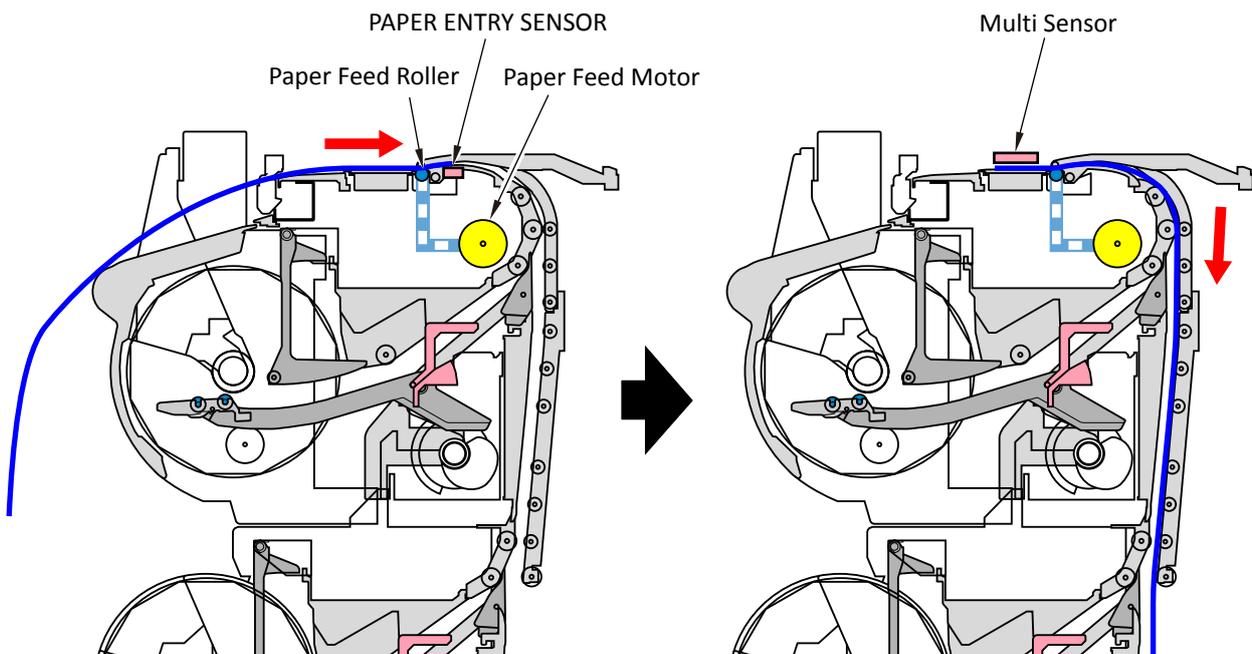
Cut sheet feeding:

The cut sheet is usable when fed manually.

Flow of feeding the cut sheet is as follows:

1. Lift the release lever up to release the paper feed roller and pinch roller.
2. Insert the cut sheet manually between the paper feed roller and pinch roller.
3. Lower the release lever to nip the paper between the paper feed roller and pinch roller.
4. The paper feed roller rotates in normal direction, and the paper entry sensor detects the trailing edge of paper.
5. After detection, the paper feed roller rotates in reverse direction and carries the sheet into the printer.
6. The multi sensor detects the leading edge of paper (the starting edge when printing).
7. The printer becomes the standby mode.

When the cut sheet is fed manually, paper skew is not corrected.



3. Take-up paper ejection

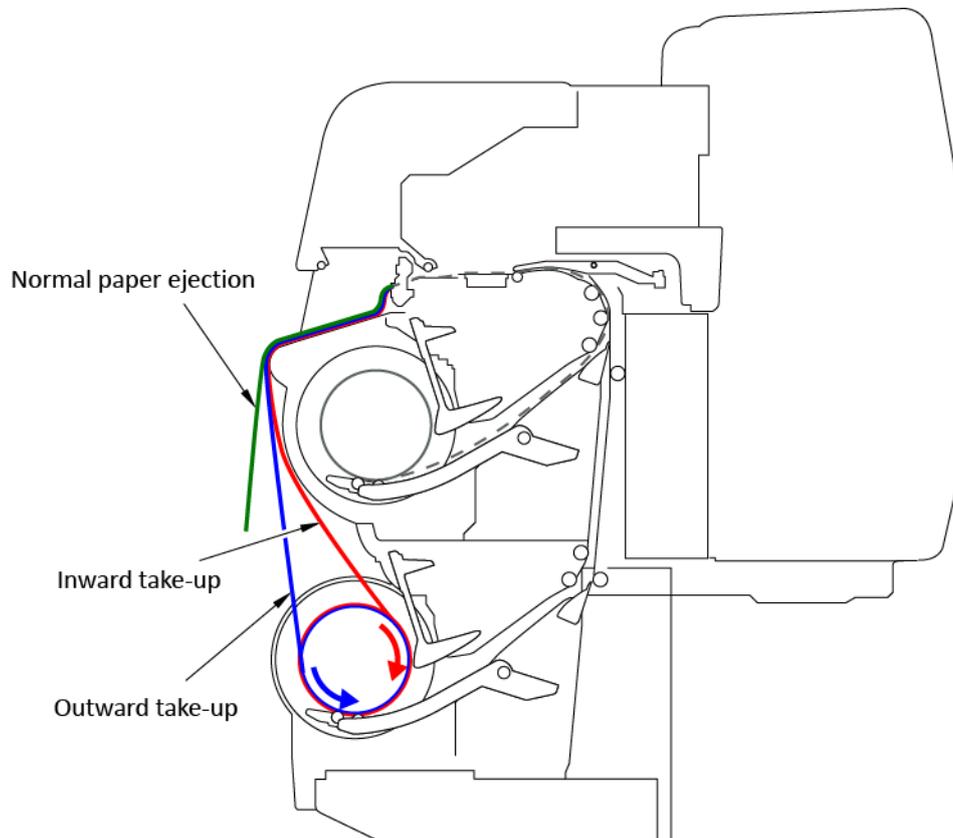
In this printer, there are three ways to eject the paper as follows:

- Normal ejection (ejection to the basket)
- Outward take-up by the lower roll unit
- Inward take-up by the lower roll unit

The take-up paper ejection can be performed only when the lower roll unit is installed and is set in the take-up mode.

Taking-up inward or outward:

In addition to the outward take-up in the iPF series models, the inward take-up is adopted in this printer. In the inward take-up, the printed side comes inside. Scratches and smears on the printed surface can be prevented by winding the paper inward when storing, transporting, and cutting.



Taking-up:

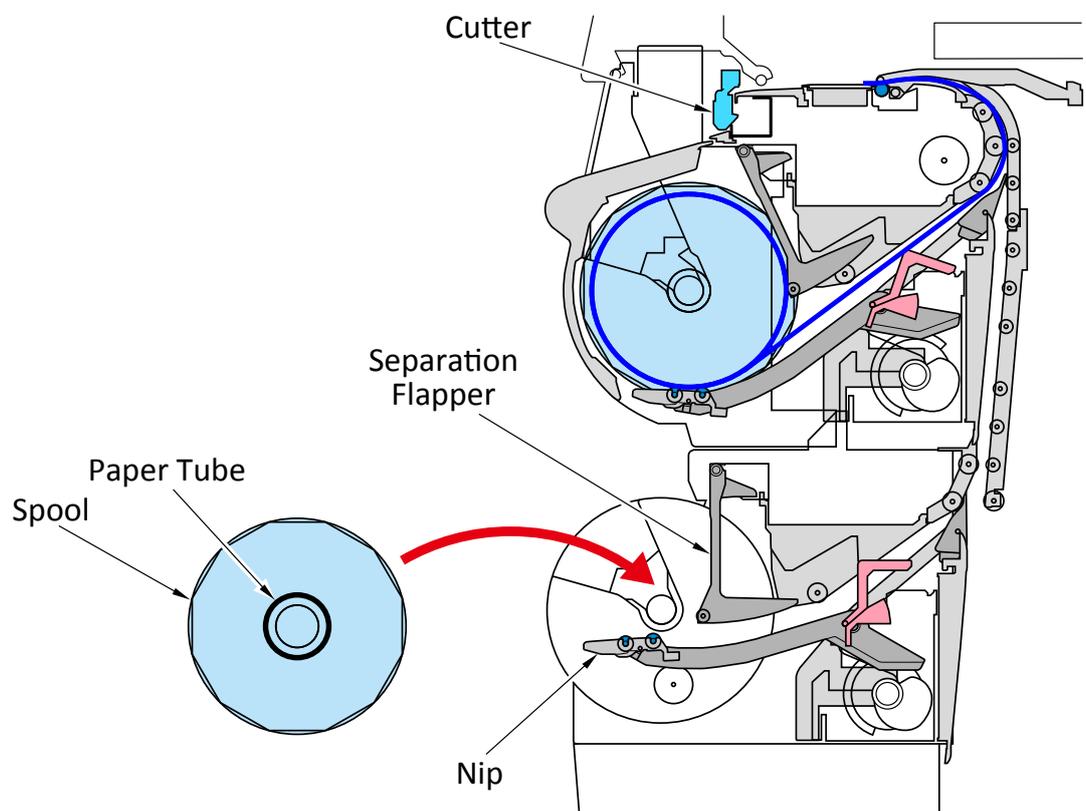
The size of the installed roll core and the torque is identified and the torque is controlled, then the tension in taking up is optimized automatically. The weight which has been used in the iPF series printers is no longer needed.



Tension is optimized by the active roll brake unit.

Taking-up the paper end:

The nip pressure is controlled, and the paper end is rolled up automatically.

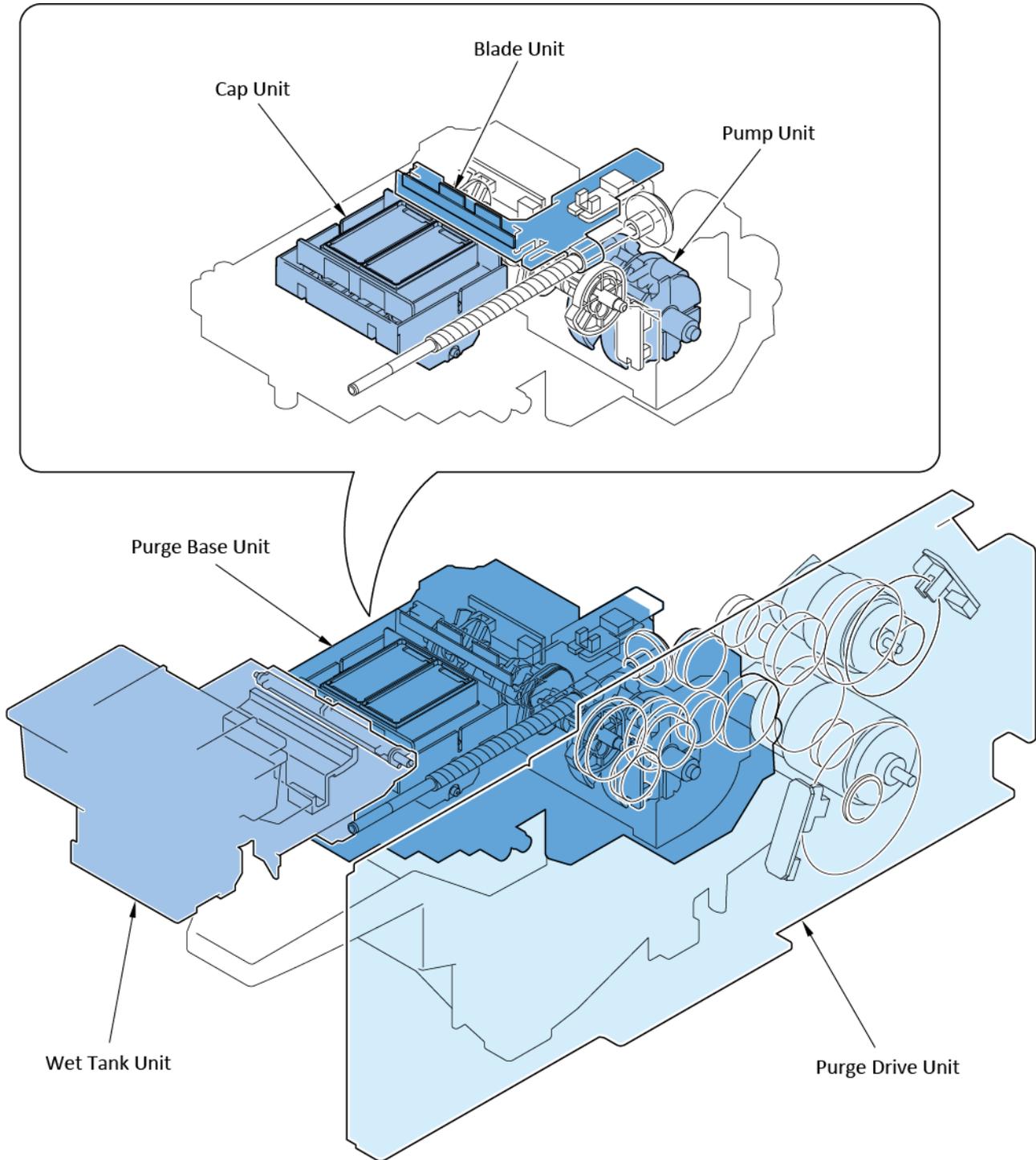


6-2-2. Purge Unit

1. Configuration

The purge unit consists of the purge base unit, the purge drive unit, and the wet tank unit.

The purge base unit consists of the cap unit, the blade unit, and the pump unit.



2. Function of purge unit

The function of the purge unit is to perform maintenance for the print head nozzles (for ejecting ink) and to prevent non-ejection of ink. To be more precise, the following three types of maintenance are performed:

Capping:

If the nozzles are exposed to the air, moisture of ink will get dried and ink becomes hard. To prevent this, the print head should always be capped except when printing is performed.

Cleaning:

By vacuuming ink from the nozzles, the ink flow path in the print head will be filled with new ink, and dusts and bubbles are eliminated from the ink flow path.

Wiping:

The rubber wiper wipes the print head surface, removing dust and ink droplet.

In the pigment-based ink model, to improve wiping, the wiper blade is moistened with the wet liquid.

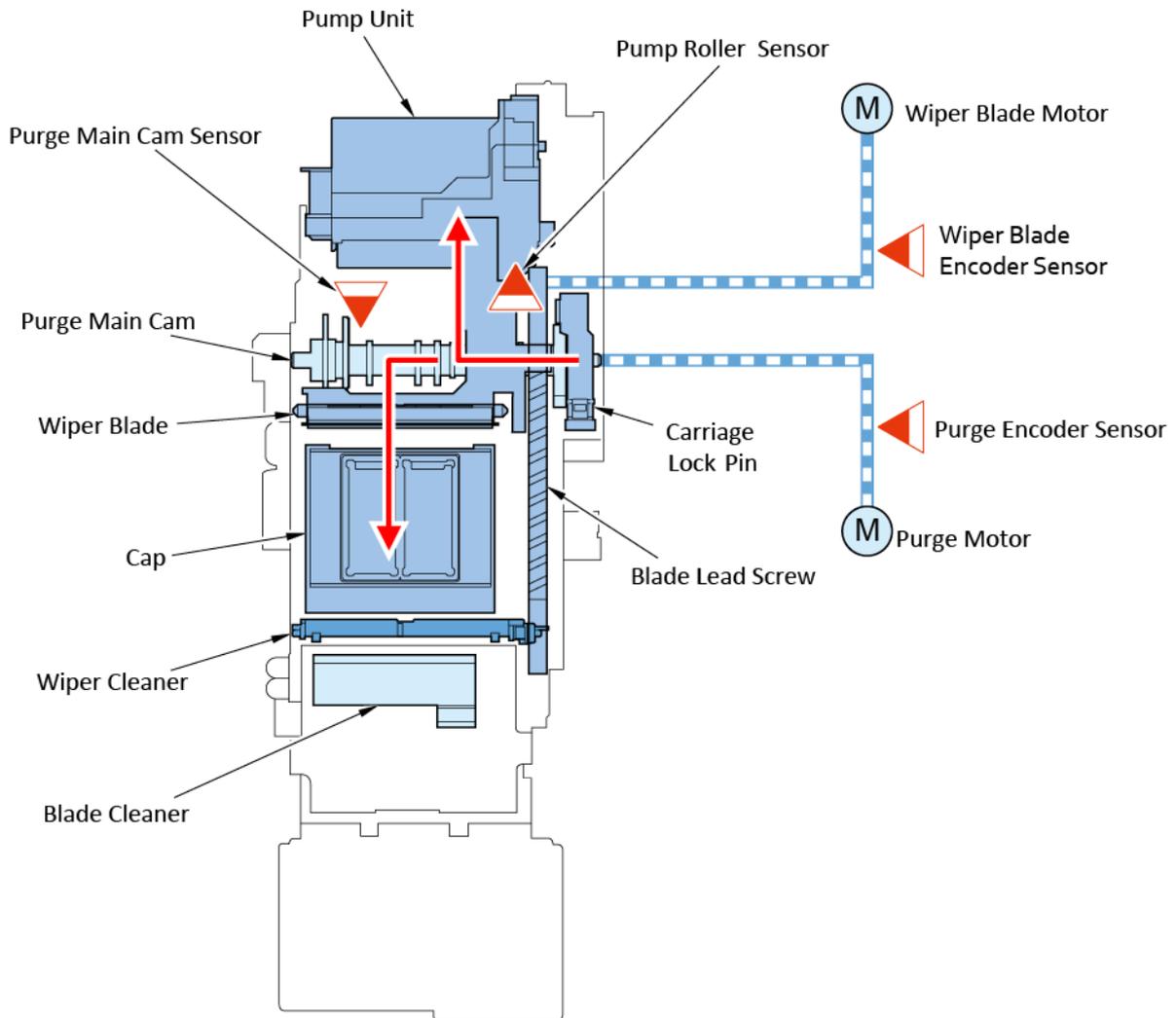
For details of purpose and operation in each maintenance, see "[4. Capping](#)", "[5. Cleaning](#)" and "[6. Wiping.](#)"

3. Drive power transmission and problem detection

Transmission of the drive power to the purge unit:

The drive for the purge unit is supplied from the purge motor and wiper motor.

The direction of the motor rotation and performance is as follows:

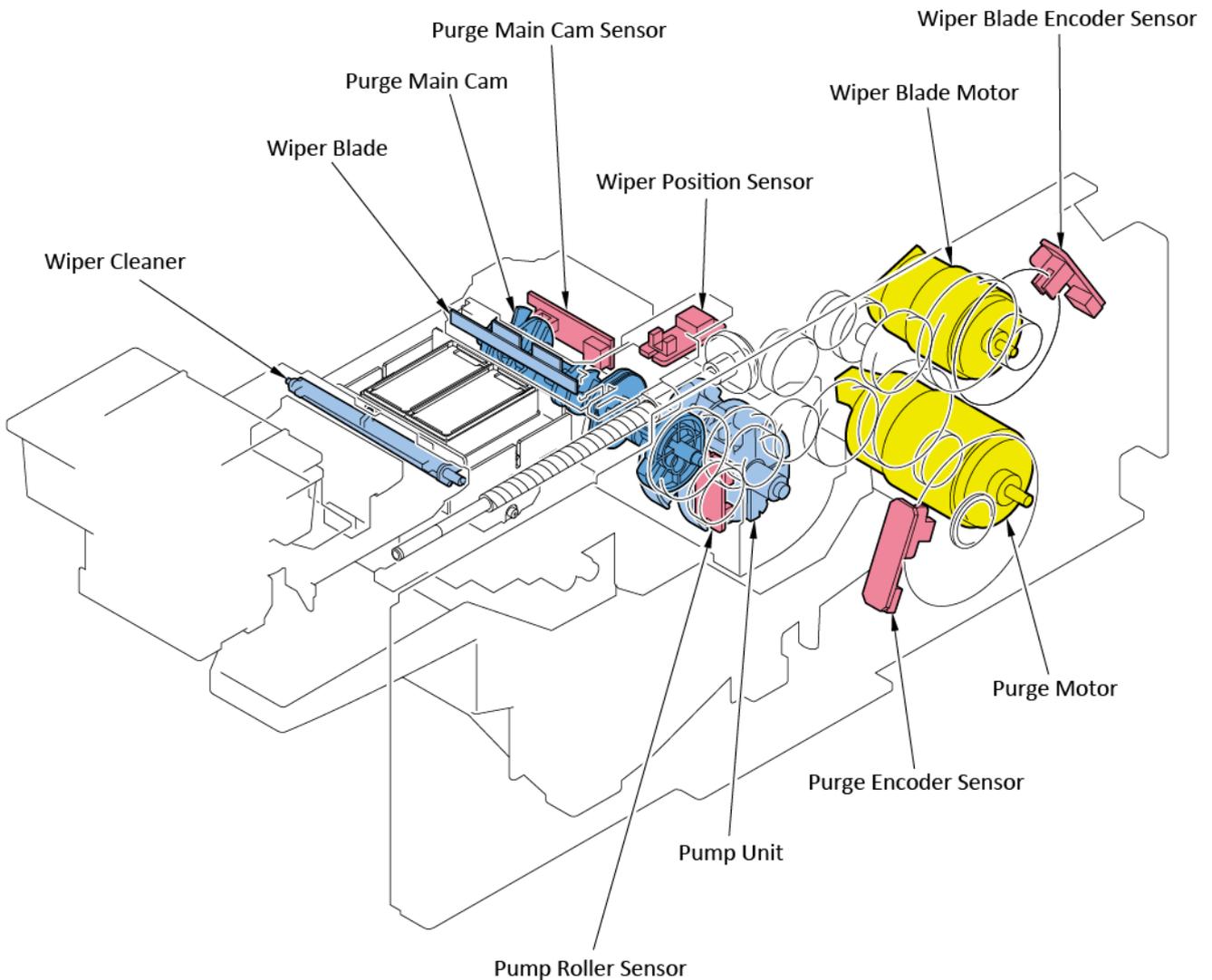


Drive motor	Rotation direction	Destination of power transmission	Performance
Purge motor	Normal direction	Purge main cam	Moves the caps up and down. Opens and closes the air valve. Locks and unlocks the carriage.
	Reverse direction	Pump unit	Performs purging.
Wiper blade motor	Normal direction	Blade lead screw	Wipes the print head surface.
	Reverse direction	Blade lead screw	Returns the wiper blade.

Detection of problem:

Abnormal movement in the purge unit is detected by the purge main cam sensor, the pump roller sensor, the wiper position sensor, the purge encoder sensor, and the blade encoder sensor.

The function of each sensor is as follows:



Sensor name	Function
Purge main cam sensor	By detecting rotation of the purge main cam, detects abnormal movement of the valve in opening and closing while capping and cleaning.
Pump roller sensor	By detecting rotation of the pump unit, detects abnormal cleaning behavior.
Wiper position sensor	By detecting movement of wiping direction for the wiper blade, detects abnormal wiping behavior.
Purge encoder sensor	By reading the disk film slit, detects the movement amount and speed of the purge motor.
Wiper blade encoder sensor	By reading the disk film slit, detects the movement amount and speed of the wiper blade motor.

4. Capping

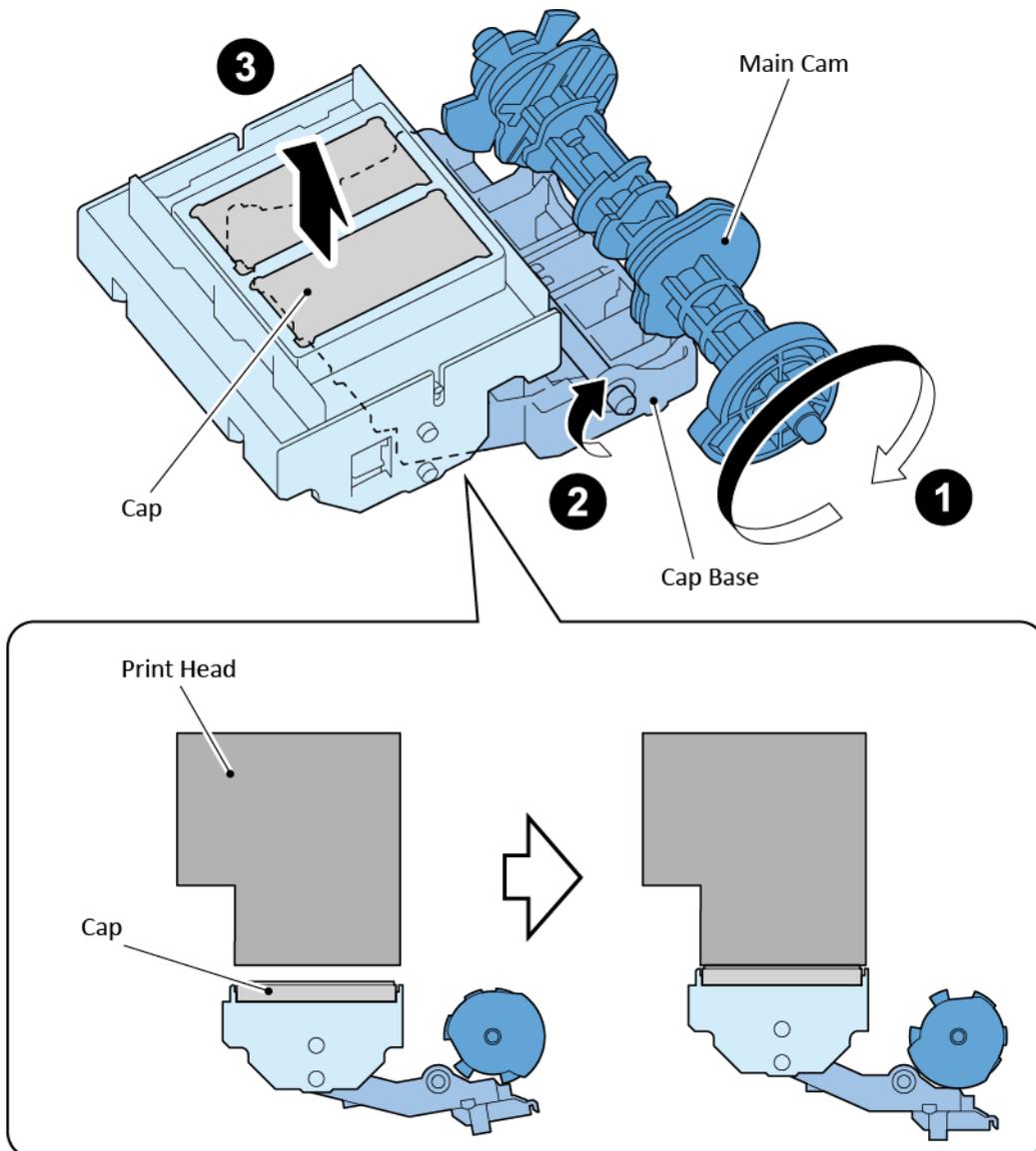
Purpose:

To prevent print failure due to dried ink clogging around ink ejection slots (nozzles) or dusts on the print head surface, the purge unit caps are tightly fitted to the print head surface.

Capping procedures:

Capping is performed in the following procedures:

- 1) The main cam rotates by the drive from the purge motor. ("No. 1" in the diagram below)
- 2) The main cam pushes up the cap base. ("No. 2" in the diagram below)
- 3) The cap moves up to fit to the print head surface. ("No. 3" in the diagram below)

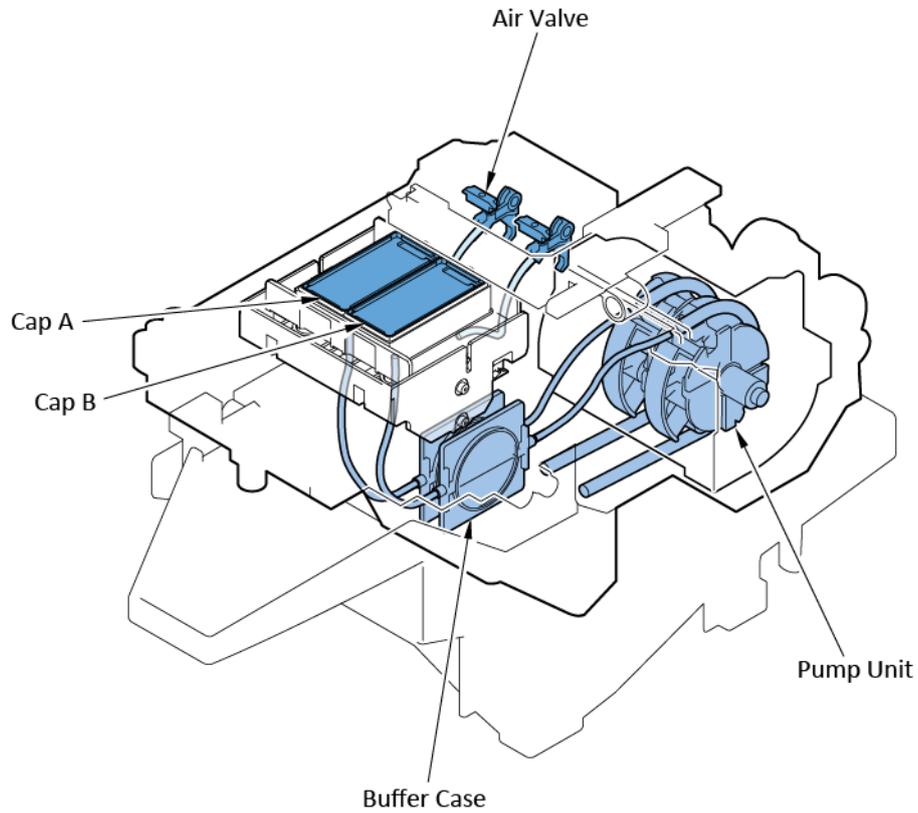


5. Cleaning

Purpose:

By drawing ink from the nozzles, the ink flow passage in the print head is filled with new ink, and dusts and bubbles are eliminated from the passage.

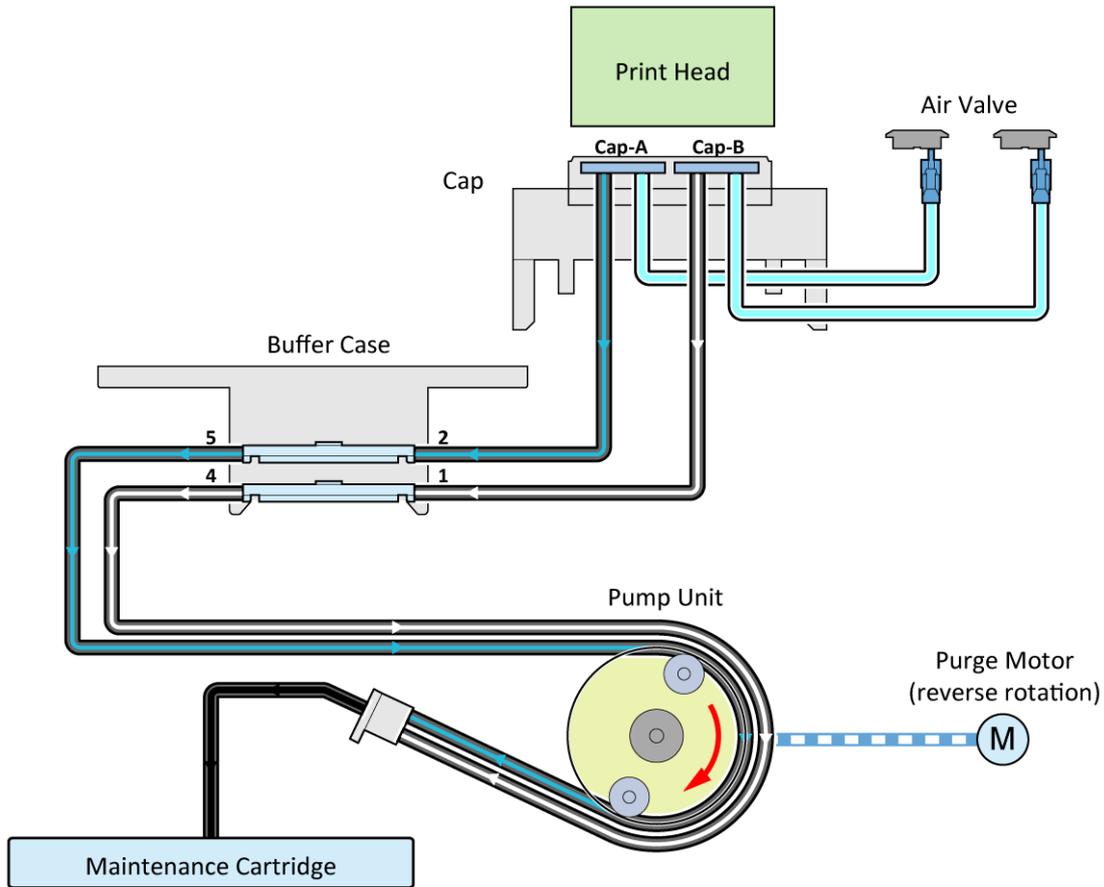
Configuration:



Cleaning procedures:

- 1) Capping is performed to fit the caps to the print head surface tightly.
- 2) The air valve is closed.
- 3) The pump unit rotates in normal direction and generates the negative pressure inside the ink tube.
- 4) The pump unit rotates in reverse direction and release the negative pressure from the ink tube.

Conceptual diagram of cleaning:



Other mechanism:

To maintain good performance in ink ejection, the pre-print ink ejection and the air intake are adopted besides the cleaning.

- Pre-print ink ejection

It is a function to eject ink to the purge unit cap before printing or eject ink to the platen ink absorber and cap while printing. By performing the pre-print ink ejection, ink droplets and dusts adhering to the surface of the print head are removed.

- Air intake

It is a function to take the ink that is ejected in purging and the one that is accumulated on the cap in pre-print ink ejection. If the amount of ejected ink exceeds the specified value, the air intake is performed to prevent ink leakage from the caps.

Cleaning types:

Domain (Indication in PRINT INF)	Cleaning operation	Description
A-AB	Cleaning (All Cap)	Removes dried ink from nozzles, thick ink accumulated on the print head face surface, and paper particles.
A-A	Cleaning (Cap-A)	
A-B	Cleaning (Cap-B)	
R-AB	Deep Cleaning (All Cap)	Performs stronger cleaning than the standard one to unclog nozzles.
R-A	Deep Cleaning (Cap-A)	
R-B	Deep Cleaning (Cap-B)	
S-AB	System Cleaning (All Cap)	Adjusts the ink filling amount in the print head, and performs stronger cleaning than the standard one to unclog nozzles.
S-A	System Cleaning (Cap-A)	
S-B	System Cleaning (Cap-B)	
EX	Ink removal at print head replacement	Drains ink to replace the print head (Drains the ink only from the print head.)
H	Ink filling at print head replacement	Performs ink filling after replacing the print head.
T1	Transporting outdoors	Removes ink from the print head and tube to transport the printer.
T2	Moving indoors to a different floor	
T3	Moving indoors on the same floor	
FI	Ink filling at installation after printer transportation	Performs ink filling that is done when the tubes are empty at installation after printer transportation, then performs normal cleaning.
C	On-arrival ink filling	Performs ink filling that is done when the tubes are empty at initial setup, then performs normal cleaning.

Cleaning timing and the amount of ink consumed:

24" model

Printer status	Description		Domain	Ink consumption amount
Initial Installation	At initial installation	MBK	C	Approx. 180 g per color*
		C, M, Y, BK		Approx. 140 g per color*
Standby	70 days or more elapsed since the last System Cleaning or print head replacement. 15 days elapsed since the on-arrival cleaning at initial installation.		S-A S-B	Approx. 6 g per color
Power-on	The print head is capped.	Same as standby	S-A S-B	Approx. 6 g per color
	The print head is NOT capped.	Less than 72 hours from abnormal termination.	A-AB	Approx. 1 g per color
		72 hours or more after abnormal termination.	R-AB	Approx. 3 g per color
Before printing	Same as standby.		S-A S-B	Approx. 6 g per color
After printing	When one of the chips (colors) ejects approx. 200 ml ink after the last System Cleaning or print head replacement after the on-arrival cleaning at initial installation.		S-A S-B	Approx. 6 g per color
When executing [Print Head Cleaning]	When [Cleaning] is selected.		A-A A-B	Approx. 1 g per color
	When [Deep Cleaning] is selected.		R-A R-B	Approx. 3 g per color
	When [System Cleaning] is selected.		S-A S-B	Approx. 6 g per color
When executing [Head Replacement]	After replacement of the print head.		EX + H	Approx. 15 g per color
When executing [Prepare to move]	When [Transport outdoors] is selected.		T1	Approx. 850 g in total of all colors
	When [Move indoors to a different floor] is selected.		T2	Approx. 350 g in total of all colors
	When [Move indoors on the same floor] is selected.		T3	Approx. 350 g in total of all colors
	At reinstallation.	MBK	FI	Approx. 220 g per color
C, M, Y, BK		Approx. 150 g per color		

* Including the amount of ink to fill the ink tubes and print head with.

36" model

Printer status	Description		Domain	Ink consumption amount
Initial Installation	At initial installation	MBK	C	Approx. 180 g per color*
		C, M, Y, BK		Approx. 140 g per color*
Standby	70 days or more elapsed since the last System Cleaning or print head replacement. 15 days elapsed since the on-arrival cleaning at initial installation.		S-A S-B	Approx. 6 g per color
Power-on	The print head is capped.	Same as standby	S-A S-B	Approx. 6 g per color
	The print head is NOT capped.	Less than 72 hours from abnormal termination.	A-AB	Approx. 1 g per color
		72 hours or more after abnormal termination.	R-AB	Approx. 3 g per color
Before printing	Same as standby.		S-A S-B	Approx. 6 g per color
After printing	When one of the chips (colors) ejects approx. 200 ml ink after the last System Cleaning or print head replacement after the on-arrival cleaning at initial installation.		S-A S-B	Approx. 6 g per color
When executing [Print Head Cleaning]	When [Cleaning] is selected.		A-A A-B	Approx. 1 g per color
	When [Deep Cleaning] is selected.		R-A R-B	Approx. 3 g per color
	When [System Cleaning] is selected.		S-A S-B	Approx. 6 g per color
When executing [Head Replacement]	After replacement of the print head.		EX + H	Approx. 15 g per color
When executing [Prepare to move]	When [Transport outdoors] is selected.		T1	Approx. 900 g in total of all colors
	When [Move indoors to a different floor] is selected.		T2	Approx. 350 g in total of all colors
	When [Move indoors on the same floor] is selected.		T3	Approx. 350 g in total of all colors
	At reinstallation.	MBK	FI	Approx. 240 g per color
C, M, Y, BK		Approx. 160 g per color		

* Including the amount of ink to fill the ink tubes and print head with.

44" model

Printer status	Description		Domain	Ink consumption amount
Initial Installation	At initial installation	MBK	C	Approx. 180 g per color*
		C, M, Y, BK		Approx. 140 g per color*
Standby	70 days or more elapsed since the last System Cleaning or print head replacement. 15 days elapsed since the on-arrival cleaning at initial installation.		S-A S-B	Approx. 6 g per color
Power-on	The print head is capped.	Same as standby	S-A S-B	Approx. 6 g per color
	The print head is NOT capped.	Less than 72 hours from abnormal termination.	A-AB	Approx. 1 g per color
		72 hours or more after abnormal termination.	R-AB	Approx. 3 g per color
Before printing	Same as standby.		S-A S-B	Approx. 6 g per color
After printing	When one of the chips (colors) ejects approx. 200 ml ink after the last System Cleaning or print head replacement after the on-arrival cleaning at initial installation.		S-A S-B	Approx. 6 g per color
When executing [Print Head Cleaning]	When [Cleaning] is selected.		A-A A-B	Approx. 1 g per color
	When [Deep Cleaning] is selected.		R-A R-B	Approx. 3 g per color
	When [System Cleaning] is selected.		S-A S-B	Approx. 6 g per color
When executing [Head Replacement]	After replacement of the print head.		EX + H	Approx. 15 g per color
When executing [Prepare to move]	When [Transport outdoors] is selected.		T1	Approx. 900 g in total of all colors
	When [Move indoors to a different floor] is selected.		T2	Approx. 350 g in total of all colors
	When [Move indoors on the same floor] is selected.		T3	Approx. 350 g in total of all colors
	At reinstallation.	MBK	FI	Approx. 240 g per color
C, M, Y, BK		Approx. 160 g per color		

* Including the amount of ink to fill the ink tubes and print head with.

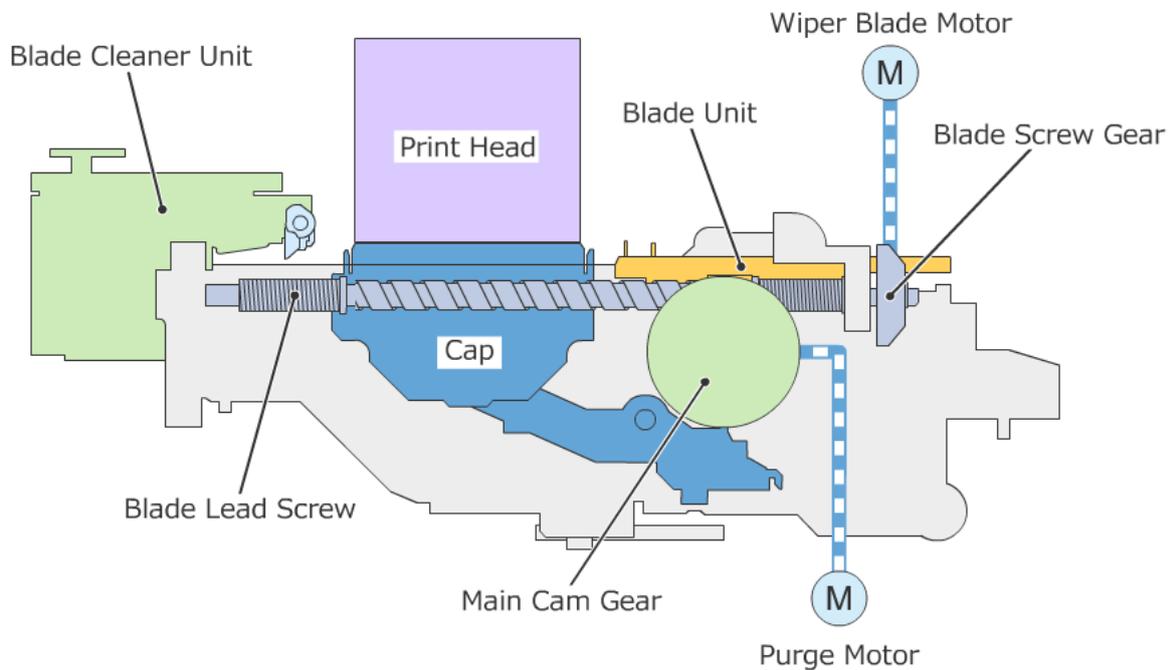
6. Wiping

Purpose:

To wipe off ink droplets and dust adhering to the surface of the print head with the wiper blade and to prevent the print head nozzles from clogging.

Wiping procedures:

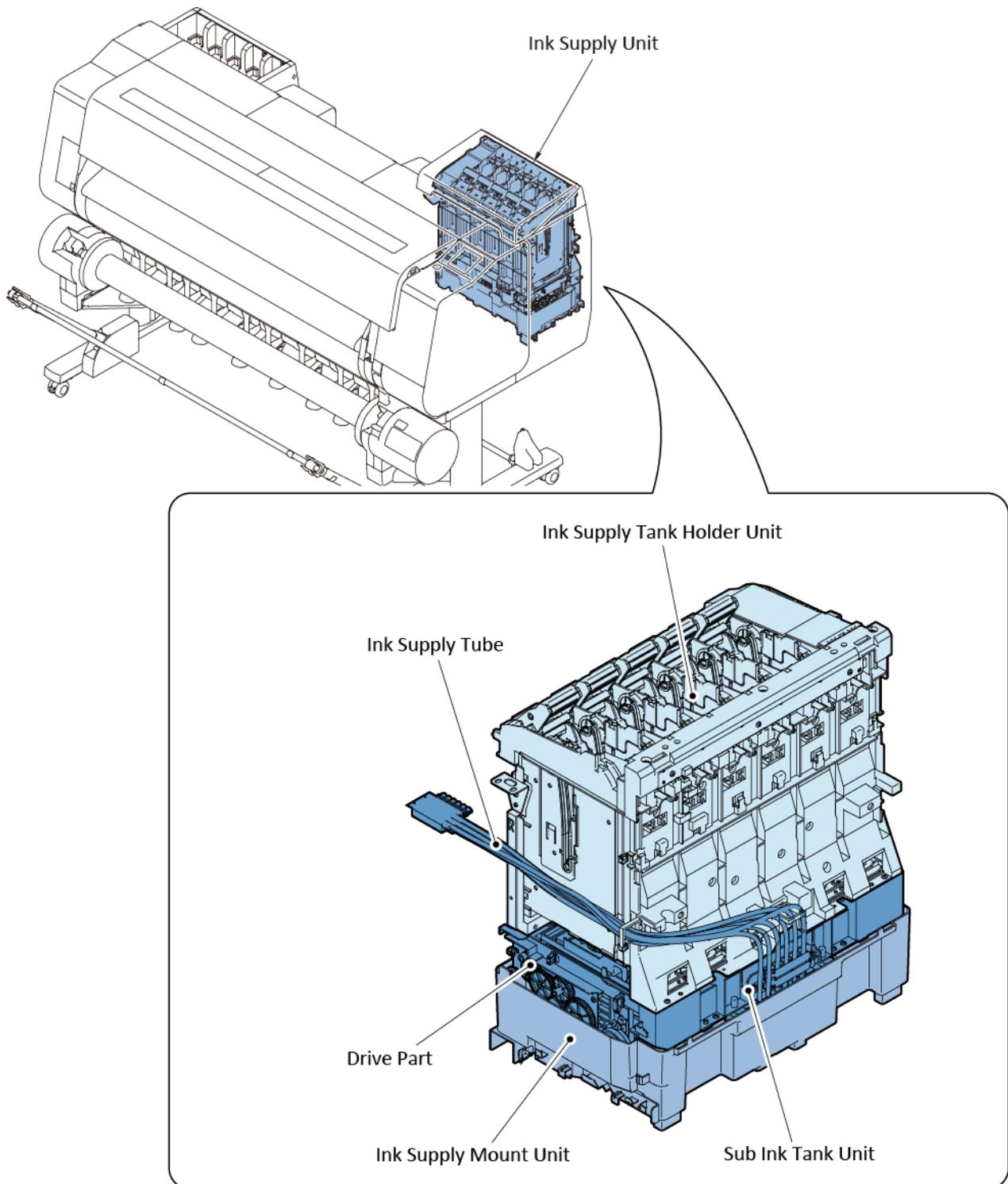
- 1) The purge motor rotates (in normal direction) to drive the main cam, and the cap is lowered.
- 2) The wiper blade motor rotates (in normal direction) to drive the lead screw.
- 3) The wiper blade moves and wipes off the print head surface.
- 4) The wiper cleaner removes dust and ink droplets from the wiper blade.
- 5) The wet liquid is applied to the wiper blade.
- 6) The wiper blade motor rotates (in reverse direction) to return the blade unit.



6-2-3. Ink Supply Unit

1. Configuration

The ink supply unit consists of the ink supply tank holder unit, the sub ink tank unit, and the ink supply mount unit.



2. Function of ink supply unit

Ink supply:

Ink inside the ink tank is supplied to the print head.

For details of ink supply, see [“3. Ink supply, Agitation > Ink supply.”](#)

Agitation:

The pigment-based ink may settle to the bottom when left for a long period. To resolve this problem, agitation is performed.

For details of agitation, see [“3. Ink supply, Agitation > Agitation.”](#)

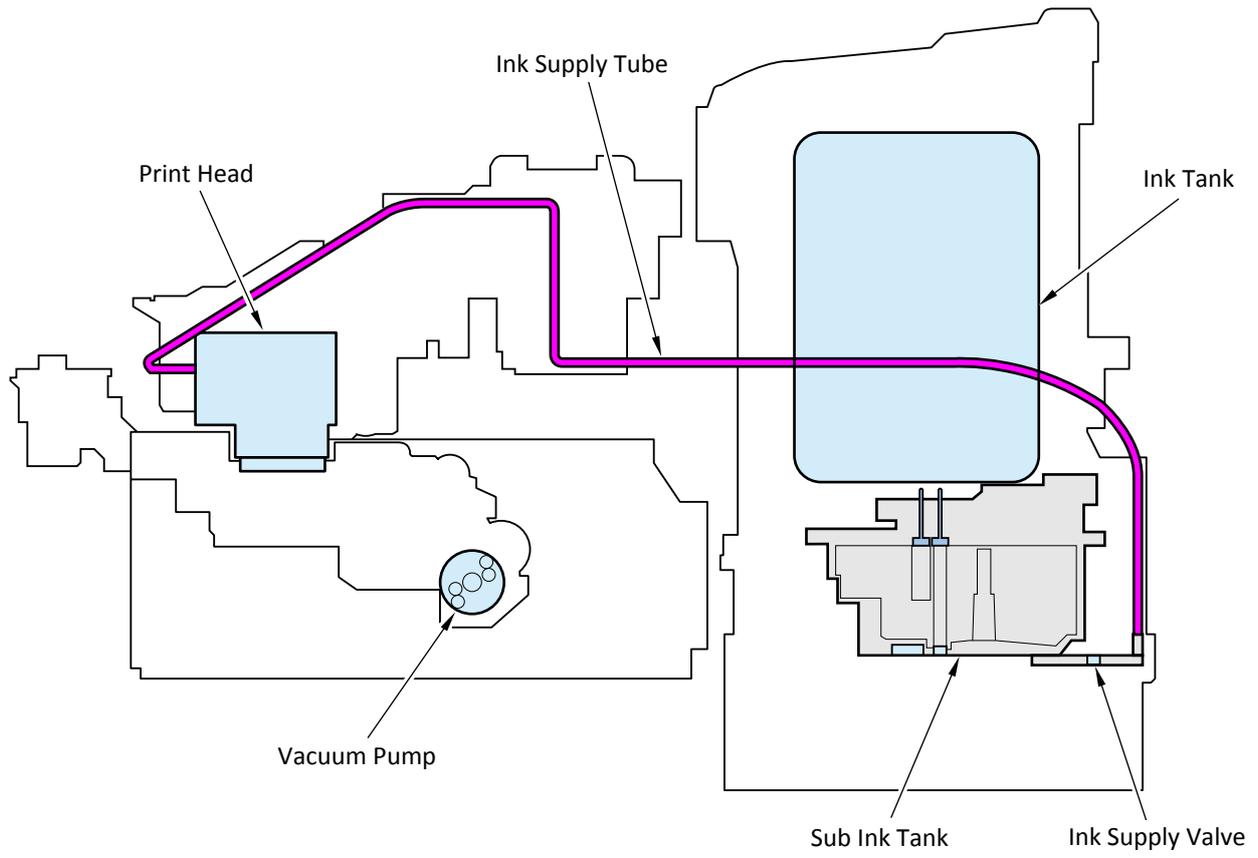
Remaining ink management:

To detect the remaining ink amount, the dot count and remaining ink detection pins are utilized in this printer.

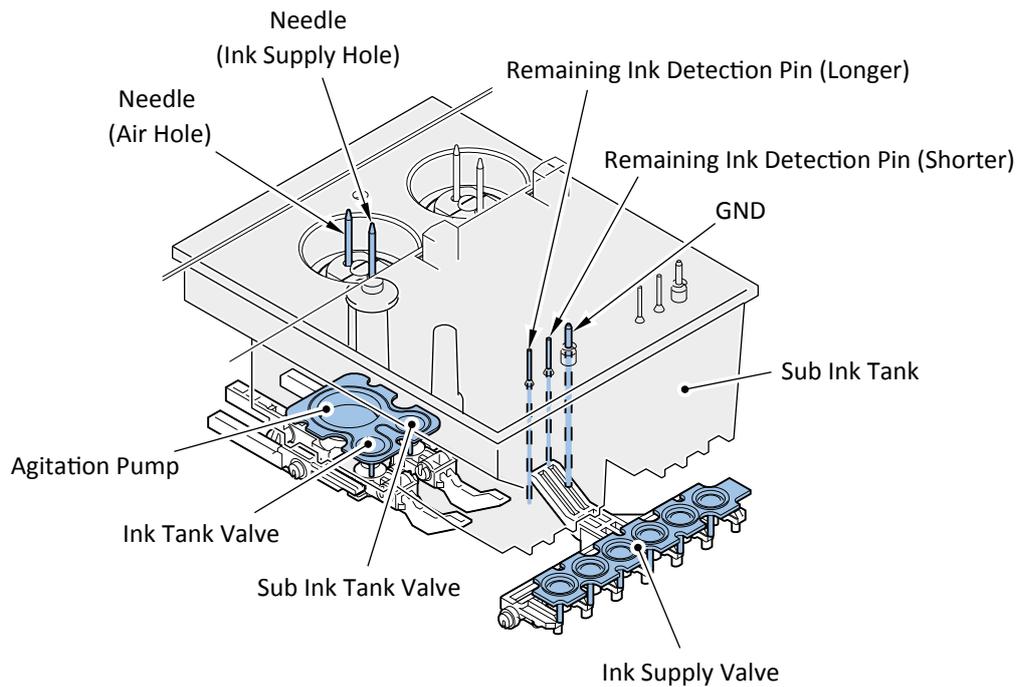
For details of remaining ink amount management, see [“4. Drive power transmission and problem detection > Remaining ink detection.”](#)

3. Ink supply, Agitation

Conceptual diagram of ink supply flow:



· Details of sub ink tank



Ink supply:

1. Process of ink supply

1) Ink supply from the ink tank to the choke valve

When an ink tank is installed, it is pierced by two needles (for supplying ink and air) of the sub ink tank. When the ink tank and sub ink tank valves are open, ink flows from the ink tank through the needle (ink supply hole) and sub ink tank to the choke valve.

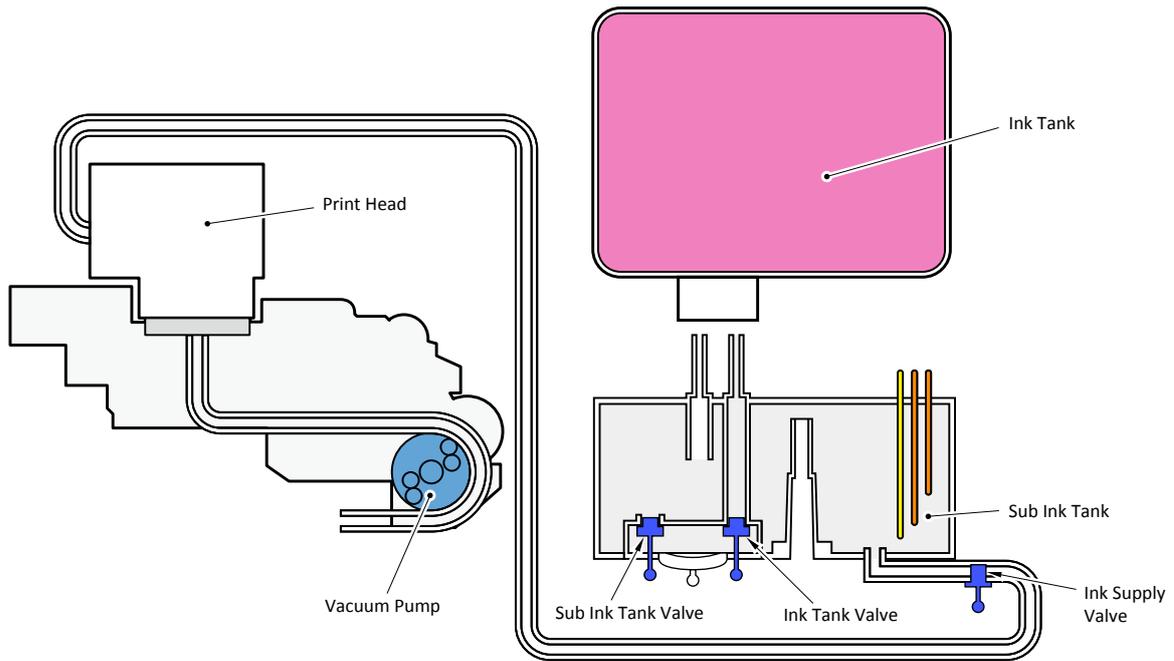
2) Ink supply from the choke valve to the print head

Ink flows into the print head when the print head is capped, the vacuum pump is driven, and the choke valve is opened.

3) Ink supply while printing

The choke valve is open while printing. As ink in the print head is consumed, it is supplied from the ink tank. The sub ink tank is provided to this printer. When ink remains in the sub ink tank, you can replace an ink tank with a new one without interruption during printing.

Mechanism of ink supply:



Mechanism of ink supply:

	Outline of performance	Ink tank valve	Sub ink tank valve	Choke valve
1.	An ink tank is installed.	Opened	Opened	Opened
2.	Ink flows from the ink tank into the sub ink tank.	Opened	Opened	Opened
3.	The choke valve is closed and the vacuum pump rotates. (The purge motor rotates in reverse direction to drive the vacuum pump.)	Closed	Closed	Closed
4.	The choke valve is opened. (Ink flows from the sub ink tank via the choke vale into the print head.)	Closed	Closed	Opened
5.	The choke valve is closed and the vacuum pump rotates. (The purge motor rotates in reverse direction to drive the vacuum pump.)	Opened	Opened	Closed
6.	The choke valve is opened. (The choke valve of the sub ink tank is opened, and ink flows into the print head.)	Opened	Opened	Opened
7.	Print head ink filling is completed.	Opened	Opened	Opened
8.	Printing is performed. (Ink is consumed.)	Opened	Opened	Opened
9.	Printing is continued while a used-up ink tank is replaced.	Opened	Opened	Opened

2. Process of the initial ink filling check

The remaining ink detection pins installed in the sub ink tank enable detailed check of initial ink filling.

1) Print head installation check

If installation of the print head is not detected, check of the print head installation status is prompted.

2) Sub ink tank ink filling check

During filling the sub ink tank with ink, the remaining ink detection pin (the longer one) checks whether ink in the sub ink tank is increasing and detects that the sub ink tank is filled with ink from the ink tank properly. During initial ink filling to the sub ink tank, if the remaining ink detection pin does not turn on although the ink amount in the ink tank exceeds the threshold level, an error, "sub-ink tank ink filling failure (231x)," is indicated.

3) Choke valve check

After ink filling for the sub ink tank, the remaining ink detection pin (the shorter one) detects the ink level in the sub ink tank while the choke valve and ink tank valve are closed. If the ink level is not decreasing, it is considered that the choke valve is closed properly. If the remaining ink detection pin detects failure in ink filling for the sub ink tank, an error, "choke valve leak at initial ink filling (EC33-402x)," is indicated.

4) Print head ink filling check

With the ink tank valve closed and the choke valve opened, the vacuum pump in the purge unit is driven to see if the ink level in the sub ink tank becomes low. Detecting that the ink level in the sub ink tank becomes low confirms the following:

- a) The choke valve is opened properly.
- b) The cap and pump in the purge unit operate properly.

After ink filling for the sub ink tank, if ink filling for the tube and print head fails, an error, "Ink vacuum error at initial ink filling (EC3F-412x)," is indicated.

5) Nozzle ejection check

The head management sensor detects non-ejection nozzles.

Agitation:

It is to circulate ink for the purpose of preventing ink from settling when left for a long period of time. Ink agitation is performed for the predetermined period of time according to the elapsed time since the previous agitation. Agitation is performed for about 20 minutes at a maximum. After agitation, the standing time is reset and counting is restarted.

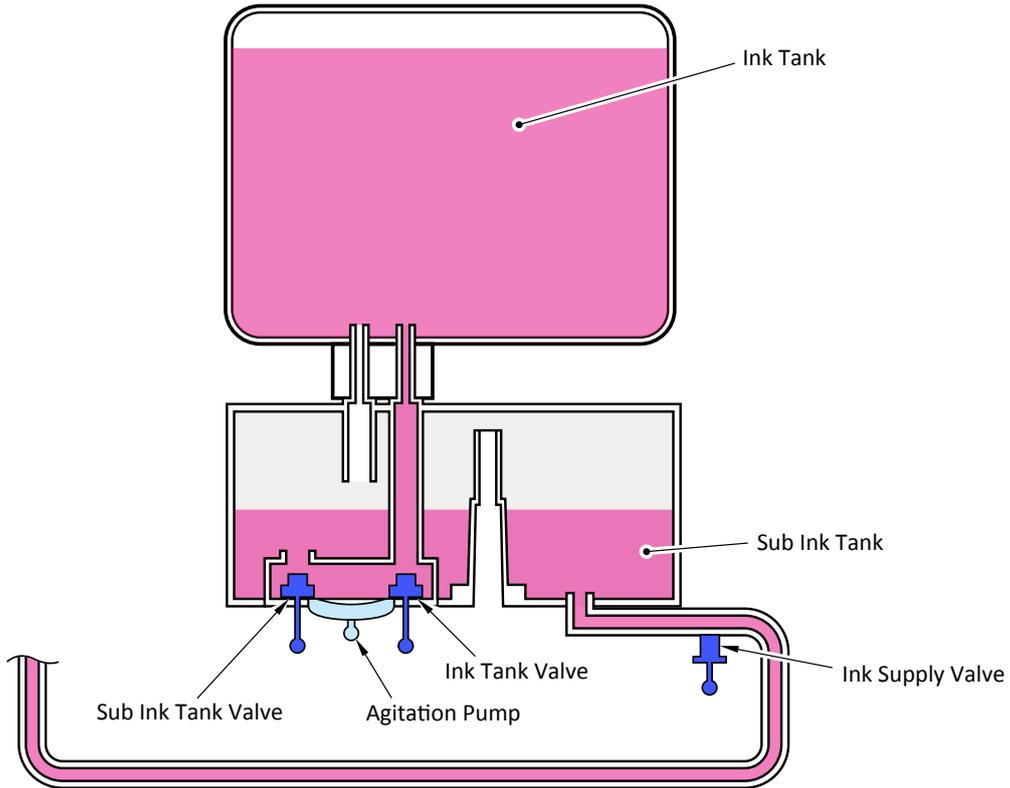
1) When to perform agitation

- When the power is turned on (or before feeding the first page of a print job after automatic power-on)
- At recovery from sleep
- At start of printing
- Before Cleaning

2) Cases when agitation is interrupted

Cases	Performance of agitation after stopped
When a print job is received.	After the print job is finished, agitation is performed for the specified time.
When the tank cover is opened.	After the tank cover is closed, agitation is restarted.
When Cleaning is executed.	After agitating for the minimum time, Cleaning is executed, and then, when Cleaning is completed, the rest of agitation is performed.
When the printer power is turned off.	When the power is turned on again, agitation is executed from the beginning, adding the period of time elapsed from the previous power-off to that from the previous agitation.

Mechanism of agitation:

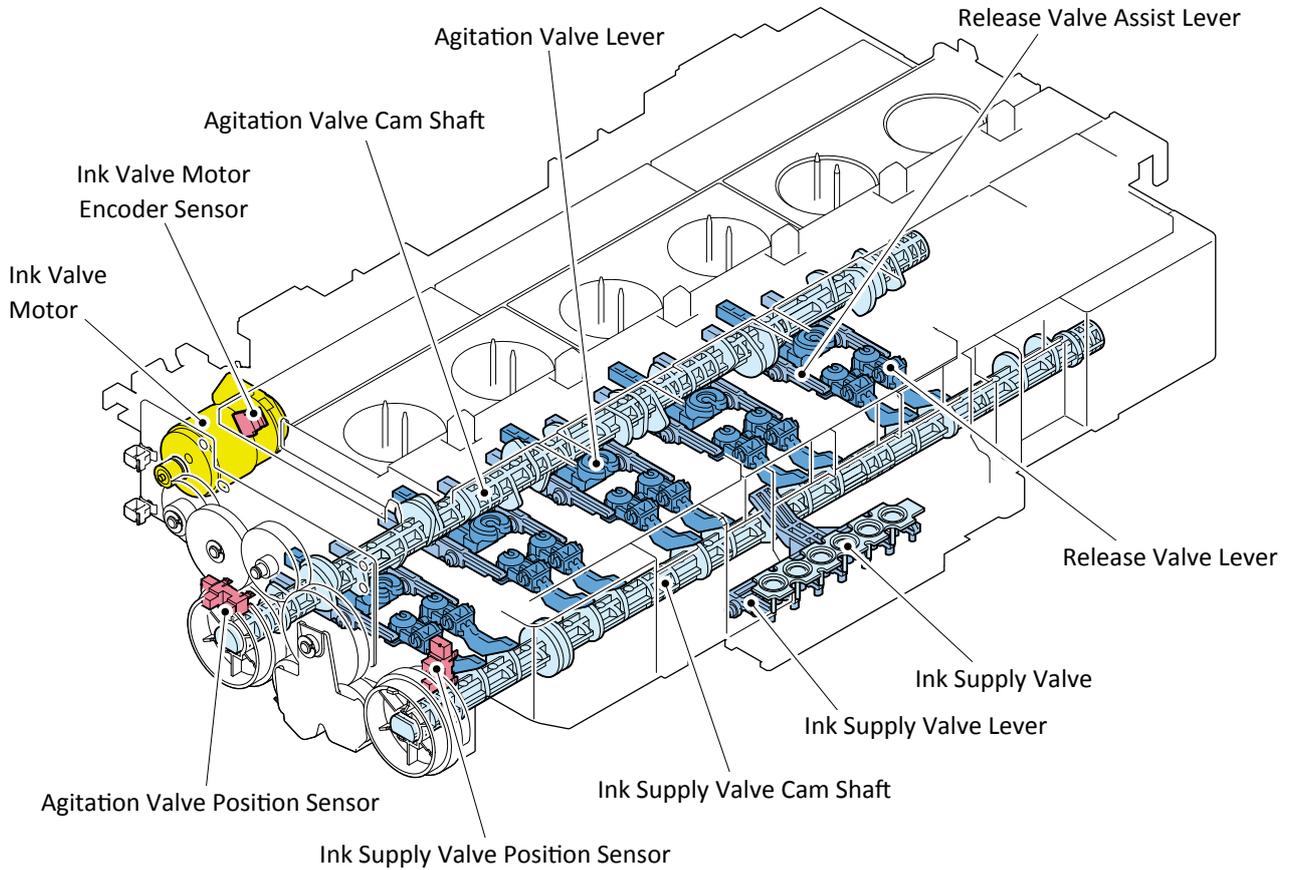


Mechanism of agitation:

No	Outline of performance	Ink tank valve	Sub ink tank valve	Choke valve
1	Circulation and agitation			
1-1	The choke valve is opened.			Opened
1-2	The agitation pump operates, and ink in the ink tank and sub ink tank is circulated.	Opened/ Closed	Opened/ Closed	Opened
2	Agitation of ink in the sub ink tank			
2-1	The choke valve is opened.			Opened
2-2	The agitation pump operates, and ink in the sub ink tank is circulated.	Opened	Opened	Opened

4. Drive power transmission and problem detection

Ink supply mechanism of drive parts:



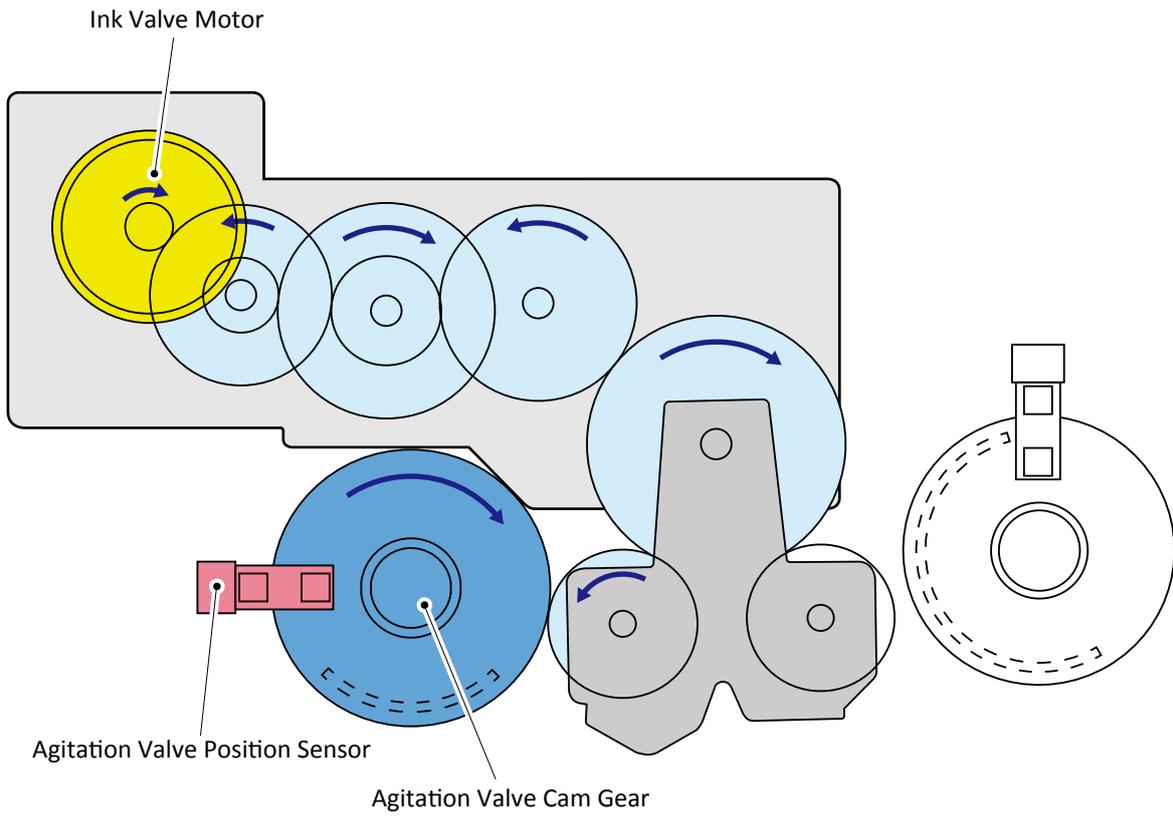
Drive power transmission:

The drive power for the ink supply unit comes from the ink valve motor in the sub ink tank unit.

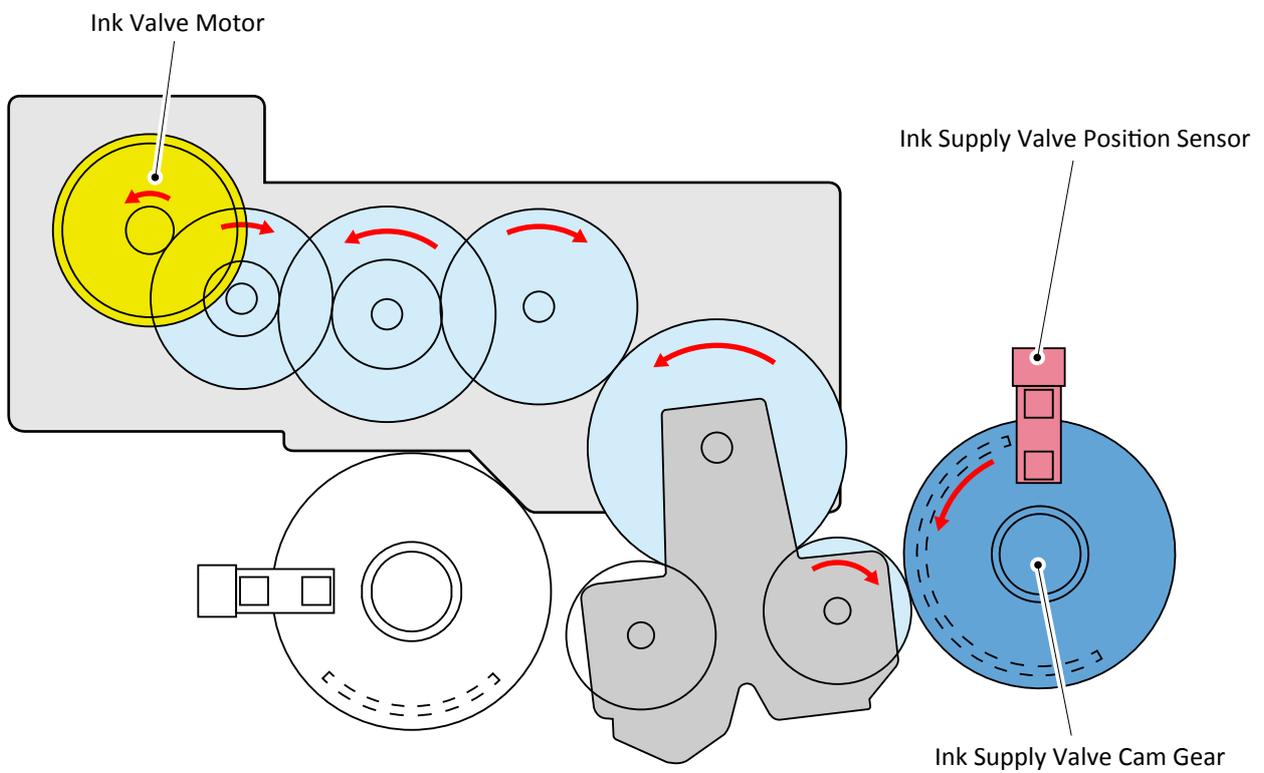
The destination of drive power transmission and performance is as follows:

Direction of rotation	Destination of drive power transmission	Performance
Rotates in normal direction	Agitation valve cam shaft	Opens and closes the ink tank valve and sub ink tank valve. Drives the agitation pump.
Rotates in reverse direction	Choke valve cam shaft	Opens and closes the choke valve.

- Rotation in normal direction



- Rotation in reverse direction



Problem detection:

Sensor name	Detection	Detectable error
Agitation valve position sensor	Detects behavior of the cam shaft by detecting status of the light whether it passes through the slit of the agitation valve cam gear or is blocked by the agitation valve cam gear.	· Right agitation valve drive timeout (EC34-2605)
Choke valve position sensor	Detects behavior of the cam shaft by detecting status of the light whether it passes through the slit of the choke valve cam gear or is blocked by the choke valve cam gear.	· Right choke valve drive timeout (EC34-2602)
Ink valve motor encoder	Detects the movement amount and speed of the ink valve motor by reading the slit of the disk film.	· Right ink valve motor error (EC33-2F3B)

Remaining ink detection:

- How to detect the remaining amount of ink

To detect the remaining amount of ink, the following two methods are adopted to this printer:

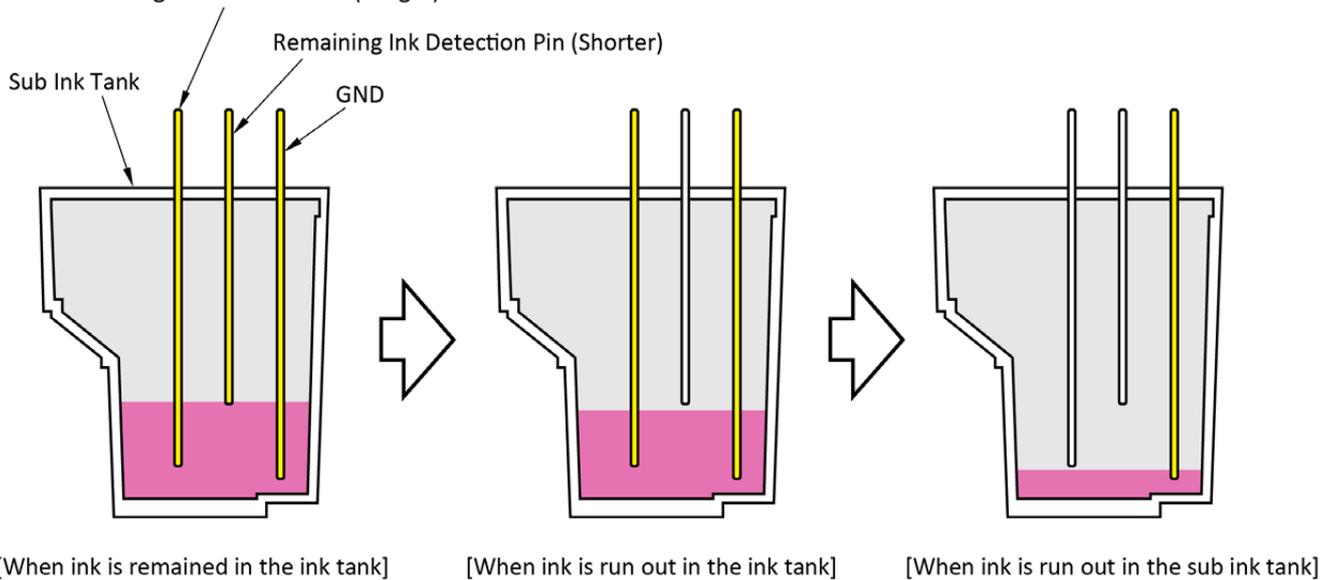
- Detection by dot count
- Electrical detection by the remaining ink detection pins installed in the sub ink tank

- How to detect by the remaining ink detection pins in the sub ink tank

Remaining ink detection pin	Detection
Remaining ink detection pin (Shorter)	Detects that the sub-ink tank is full with ink. If ink level gets lower than the remaining ink detection panel (Shorter), "no-ink in the ink tank" is displayed on the printer operation panel.
Remaining ink detection pin (Longer)	Detects "no ink" during printing.

- Transition status of ink level in the sub ink tank

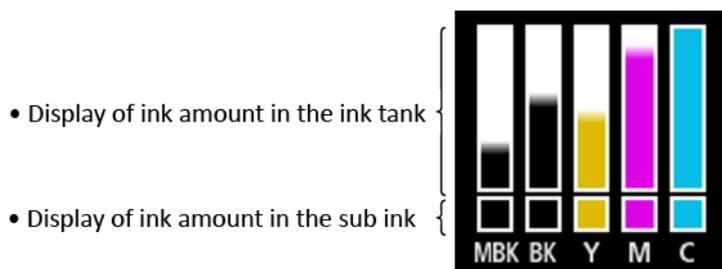
Remaining Ink Detection Pin (Longer)



Ink amount display:

The remaining amount of ink for each color in the ink tank and sub ink tank is displayed on the LCD.

- How to check the ink amount displayed on the operation panel



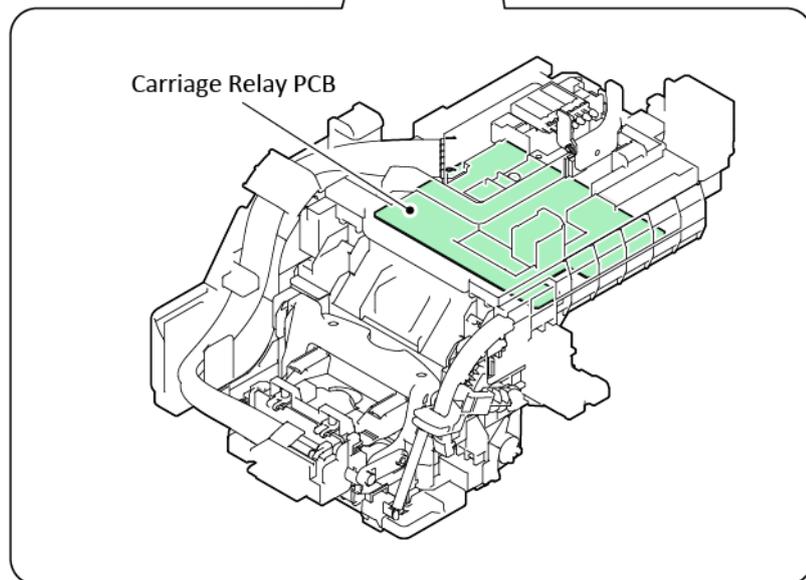
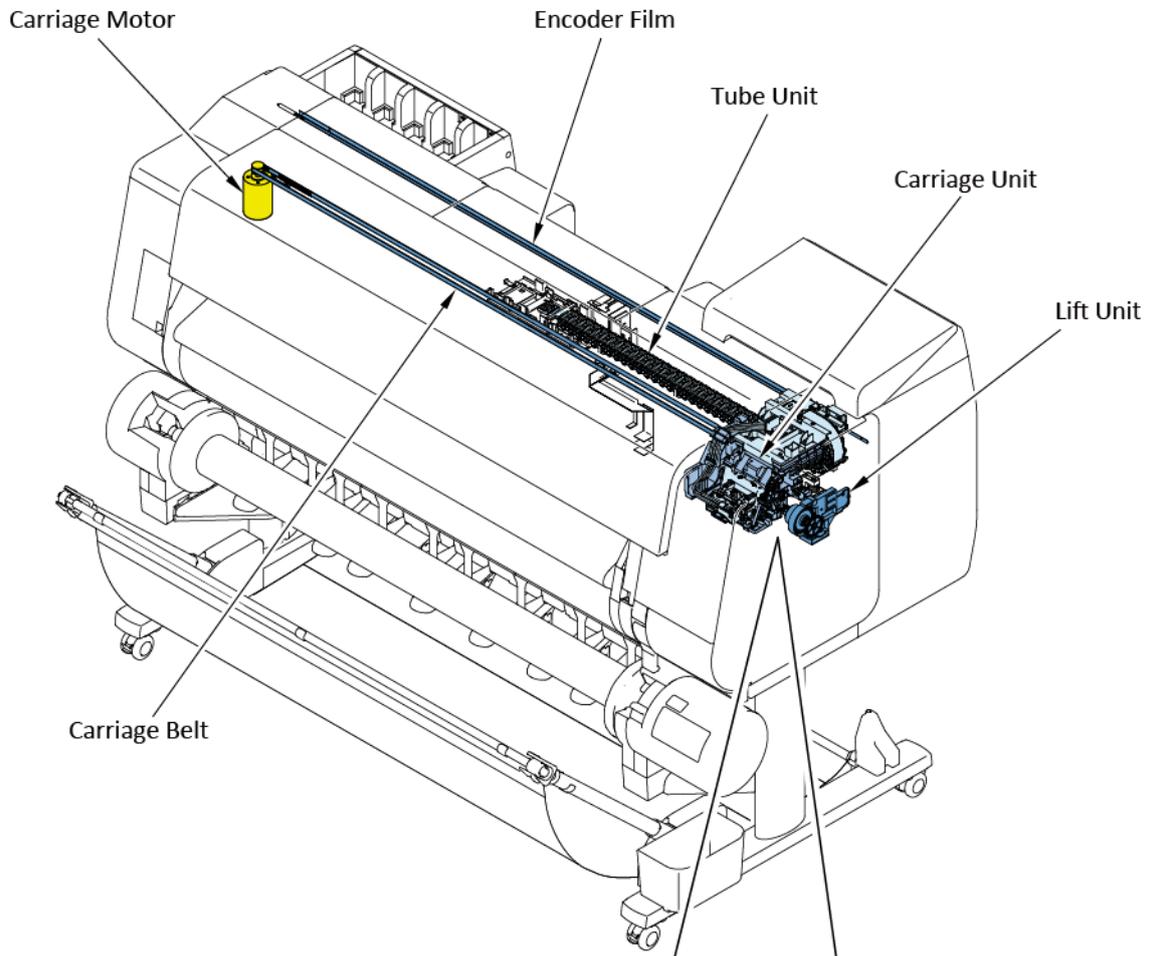
· Display of the ink amount and status of ink

Ink level	Ink status	How to detect
	Ink remains in the ink tank.	It is detected by dot count of the ink tank.
	Remaining ink is small.	It is detected by dot count of the ink tank.
	Ink in the ink tank runs out.	When the ink level gets lower than the remaining ink detection pin (the shorter one) in the sub ink tank, "no-ink in the ink tank" is displayed on the printer operation panel. After that, dot count of the sub ink tank starts. Printing can be performed until it is detected by dot count that ink in the sub ink tank runs out.
	Ink in the sub ink tank runs out.	If dot count of a sub ink tank reaches the specified value and running out of ink is detected before printing, no printing can be performed. If the ink level becomes lower than the remaining ink detection pin (the longer one) during printing, the print job will be interrupted.
	Remaining ink amount is unknown.	It is detected that the ink consumption (the dot count value for the ink tank) exceeds the specified value.
	Remaining ink amount is unconfirmed.	After an ink tank is re-installed, it is displayed until the remaining ink level in the sub ink tank and ink tank is confirmed.

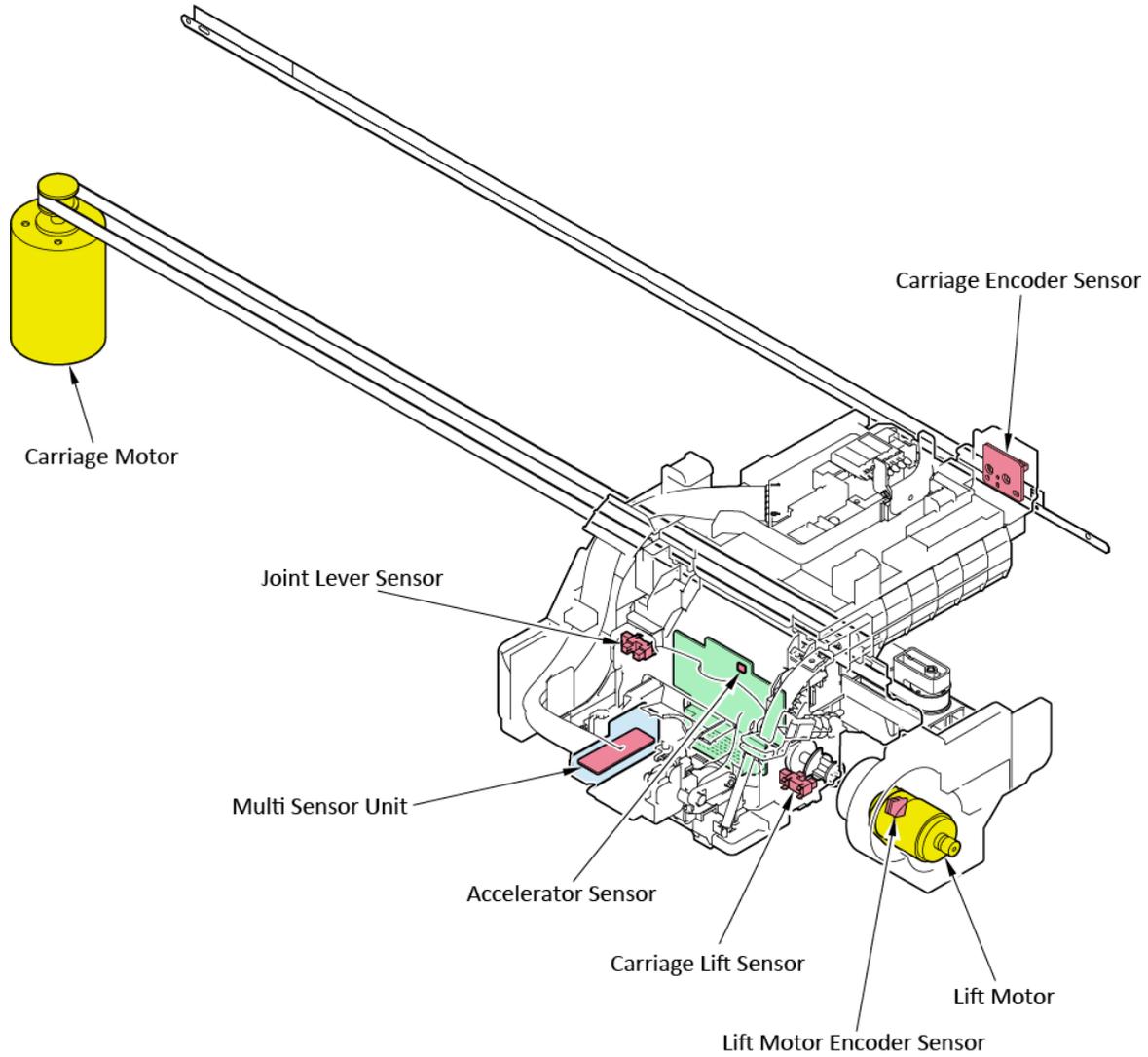
6-2-4. Carriage Unit

1. Configuration

1) Layout of units



2) Layout of sensors and motors



Sensor function:

Sensor name	Detection performance
Carriage encoder sensor	Reads the slit of the encoder film and detects the amount of right and left movement and moving speed of the carriage unit.
Multi sensor unit	The photo sensor receives the reflected light of LED from the paper (or the print pattern in color calibration) and detects the following: <ul style="list-style-type: none"> - Paper edge and paper type - Head-to-paper distance - Print density (which is used in color calibration and print head alignment).
Acceleration sensor	Detects the carriage unit vibration and shock direction. The vibration information is used to reduce uneven printing. The information of the shock direction is used to identify the error.
Joint lever sensor	Detects that the joint lever is opened or closed.
Carriage lift sensor	Detects flag switching of the carriage lift cam that is rotated by the lift motor power.
Lift motor encoder sensor	By detecting the amount of motor movement (after detecting the flag of the carriage lift cam switched), detects that the carriage height is set to the desired position.

Motor function:

Motor name	Performance
Carriage motor	Source of power to move the carriage unit side to side.
Lift motor	Source of power to switch the carriage height.

2. Function of carriage unit

The carriage unit is to receive a print command (an electrical signal), to move the print head right and left, and to eject ink to the accurate place from the nozzles. To achieve them, the following functions are installed to this printer:

- Reduces unevenness in printing by controlling the constant carriage speed.
- Corrects ink dot placement both in the accelerating zone and decelerating zone by ejecting ink at individual timing.
- Corrects misplaced printing position caused by accidental mechanical error.
- Improves accuracy of the ink dot placement by optimizing the carriage height.
- Adjusts and detects variously by the multi sensor.

1) Reducing uneven printing by equalizing the carriage speed (carriage cogging correction)

a) Equalizing the carriage speed by motor torque correction

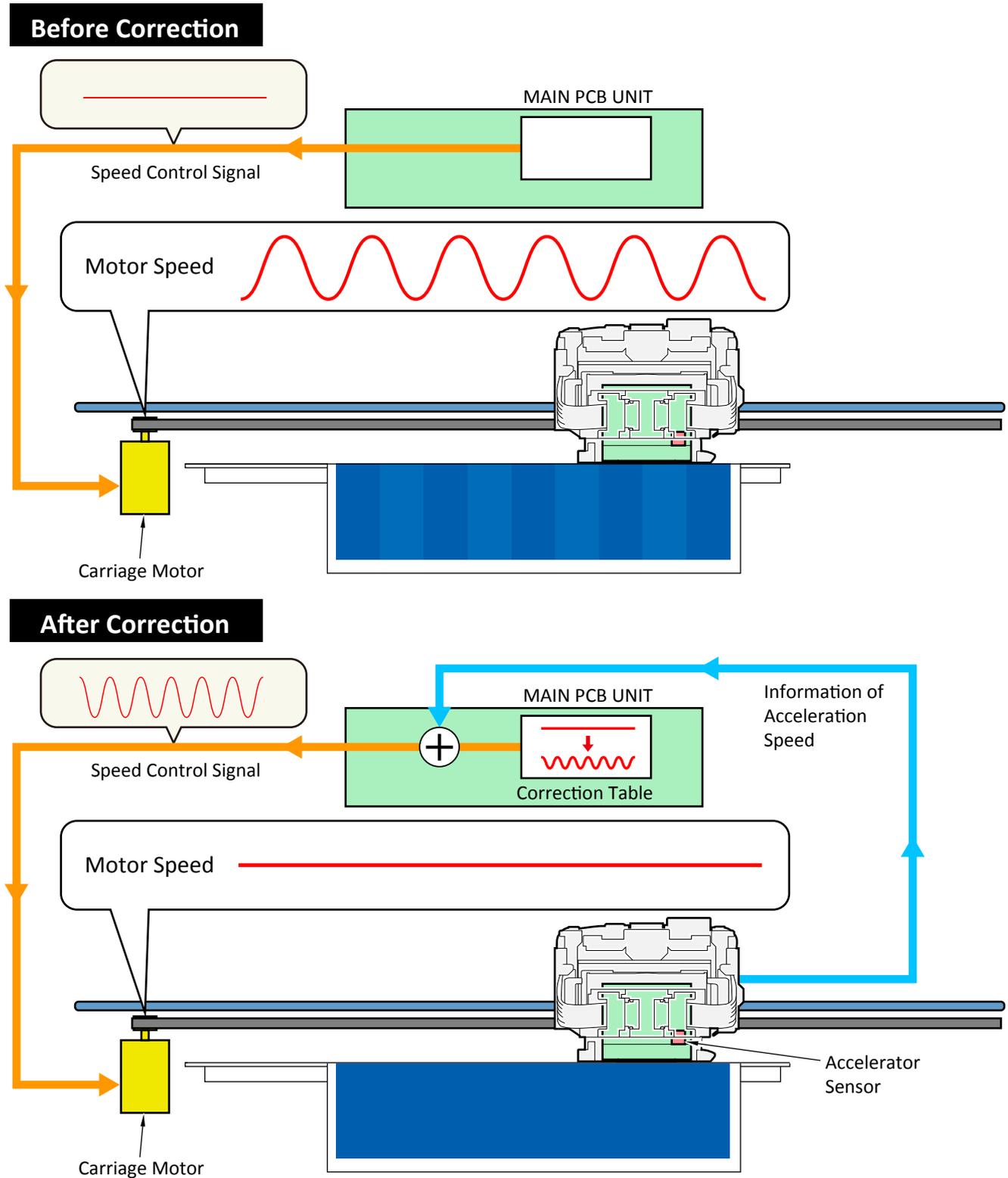
The printer has the correction table (the antiphase signals of the motor torque) to correct uneven carriage speed caused by the carriage motor torque. By controlling the motor speed, uneven printing caused by inconstant speed, which is a motor torque characteristic, is reduced.

This correction has also been implemented in the iPF series printers.

b) Equalizing the carriage speed by acceleration correction signal

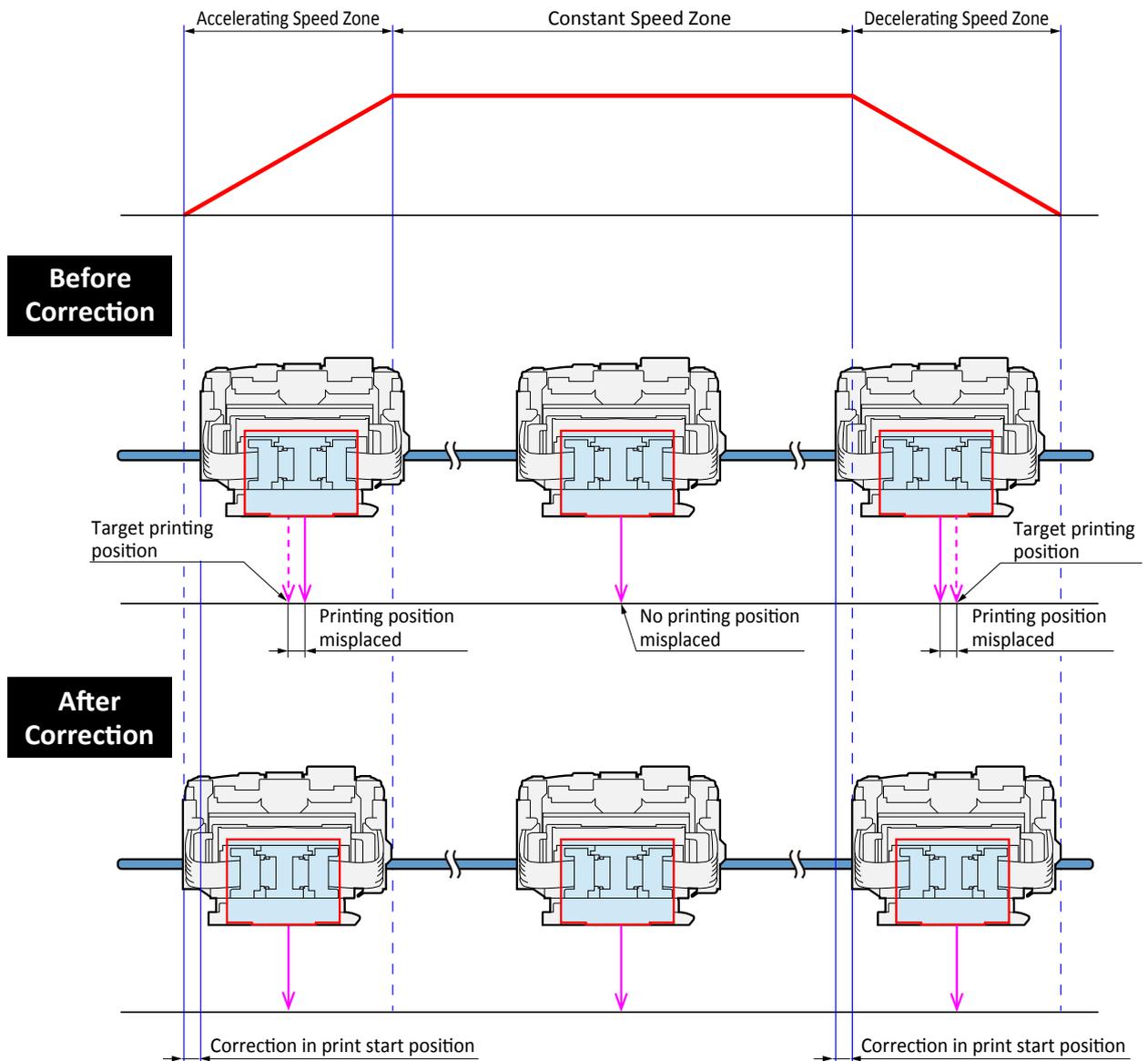
In addition to the correction table, the acceleration sensor is adopted to further ensure the constant carriage speed. The acceleration information that is read by the acceleration sensor during carriage movement is fed back to the motor torque correction table, and the carriage speed is controlled in real time.

Image of the carriage speed correction:



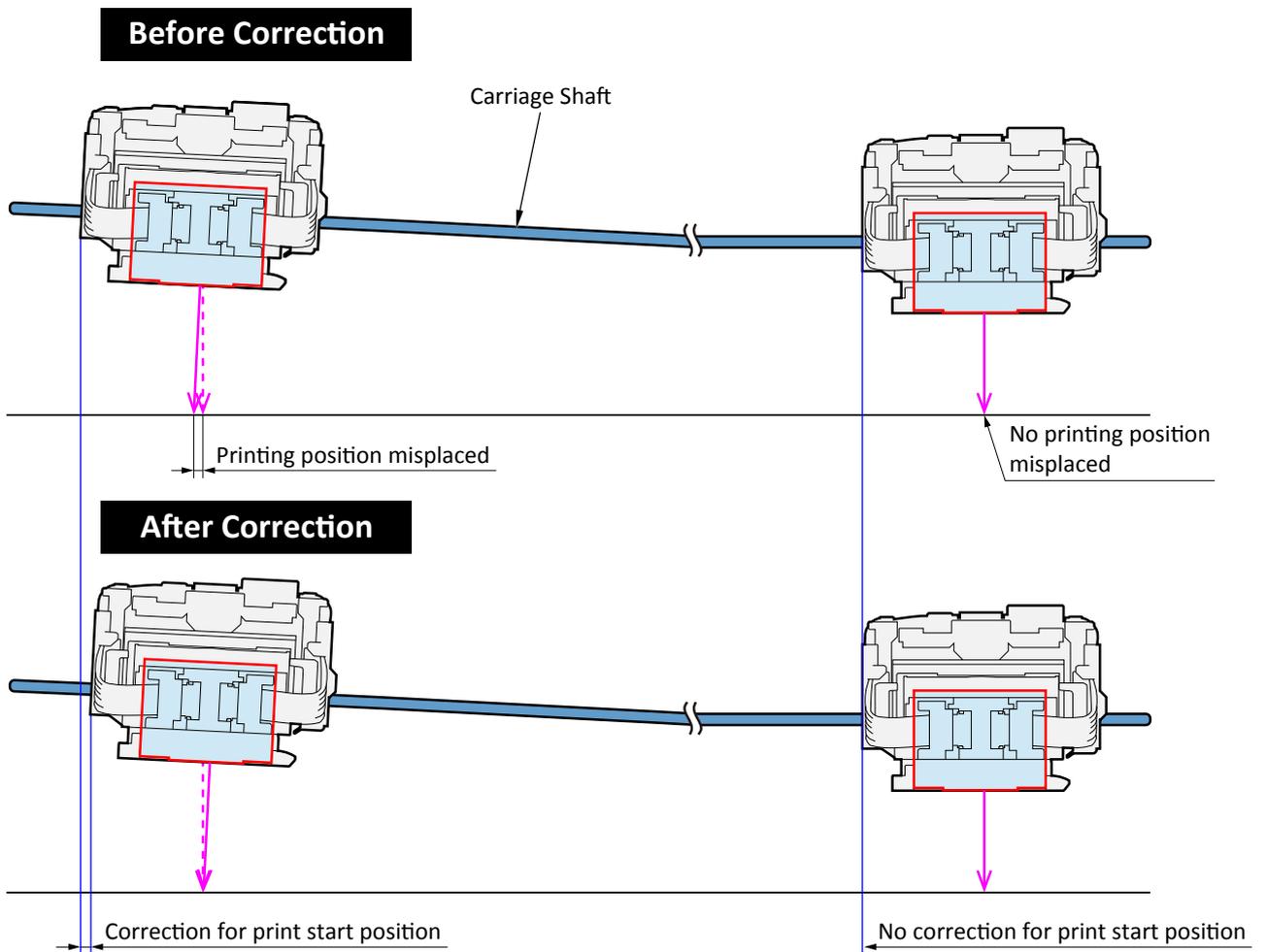
2) Correcting ink dot placement in the accelerating and decelerating speed zones

To avoid ink dot misplacement caused by carriage speed in the acceleration and deceleration zones, the ink ejection timing is controlled. If the carriage speed is constant at all times, ink dot can be landed to a desired print position as long as the speed from ink ejection to ink dot landing is considered. In this printer, for higher print speed, printing is performed while the carriage is accelerated and decelerated within the print area. If timing of ink ejection is fixed without considering the difference in speed among the accelerating, decelerating, and constant speed zones, print position will shift from the desired one, as shown in “Before Correction” below. By controlling the print start timing while considering the difference in speed among the speed zones, misplacement of print position is avoided.



3) Correcting misplacement of print position caused by mechanical error

This correction is performed to prevent misplacement of the print position in the scanning direction, which cannot be corrected by Print Head Alignment in the user mode. For each direction from right to left and from left to right, the respective correction table is provided. Applying that correction table according to the print start position, the printer prevents misplacement of print position.



4) Improving ink dot placement accuracy by optimizing the carriage height

As the carriage gets farther from the paper, more ink mist is generated from when the print head ejects ink to when the ejected ink reaches the paper. When the carriage gets closer to the paper, the print head is more likely to contact the paper.

To print with the appropriate head-to-paper distance, the print head is adjusted to the optimum height automatically according to the paper type and environment (temperature / moisture) before printing.

There are eight positions of carriage height as follows:

Position	Distance from the print head nozzle to the platen	Main usage
-4	1.0 mm	
-3	1.2 mm	
-2	1.4 mm	Carriage lock, Wiping
-1	1.6 mm	
0	1.8 mm	
+1	2.0 mm	
+2	2.2 mm	
+3	2.6 mm	

Procedures for changing the carriage height:

1) Connects to the coupling

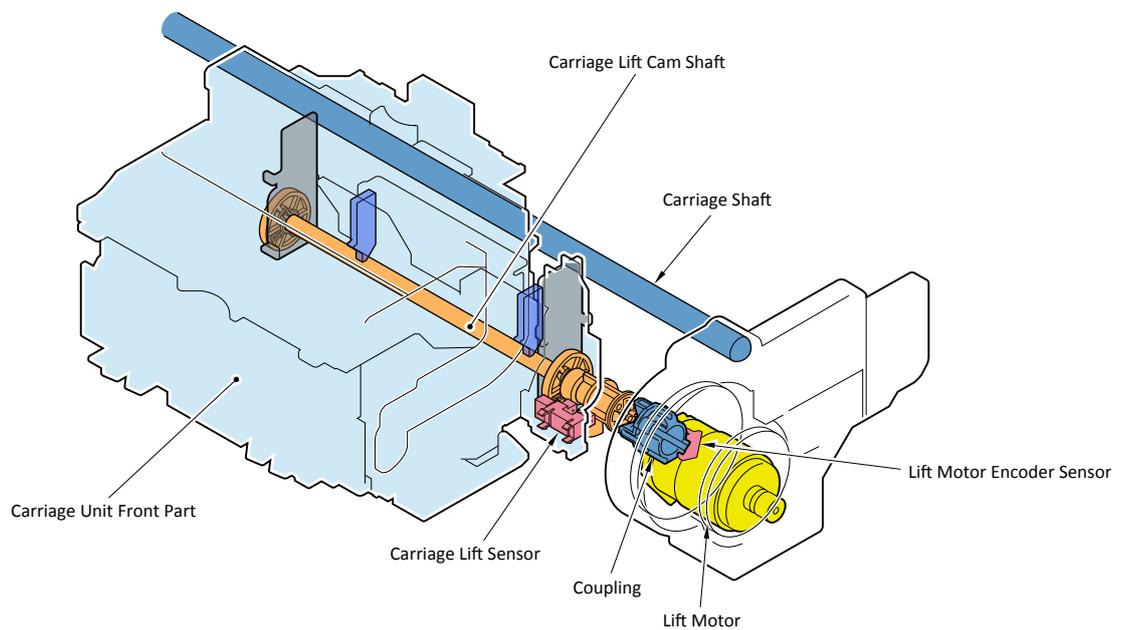
By power from the carriage motor, the carriage unit moves to the position to change the carriage height, and connects to the coupling.

2) Changes the carriage height

Power from the lift motor is transmitted to the carriage cam shaft, and the carriage lift cam rotates. With the cam rotating, the carriage front part moves up and down to adjust the carriage height to the optimum one.

3) Stops the lift motor.

As the carriage unit moves to the desired height, the lift motor stops, and the carriage height change is completed.



Process to change the carriage height:

Process	Performance
1	The carriage unit moves to the carriage height changing position, and connects to the lift unit coupling.
2	Power from the lift motor is transmitted to the carriage cam shaft, and the carriage cam rotates. The lift cam sensor detects switching of the flag, and the lift cam encoder sensor detects the amount of moving.
3	The carriage unit front part moves to adjust the carriage to the target height.
4	The lift motor stops.

5) Various adjustment and detection by the multi sensor

To improve accuracy of print position as well as to prevent printing to outside the paper, the multi sensor measures the paper width and paper position automatically. It is also used for gap detection, print head alignment, paper feed adjustment, and color calibration.

Configuration

The multi sensor consists of the paper edge detection part, the gap detection part, and the density detection part. The light-emitting part (LED) and the light-receiving part (photo sensor) are installed in each part.

A) Paper edge detection

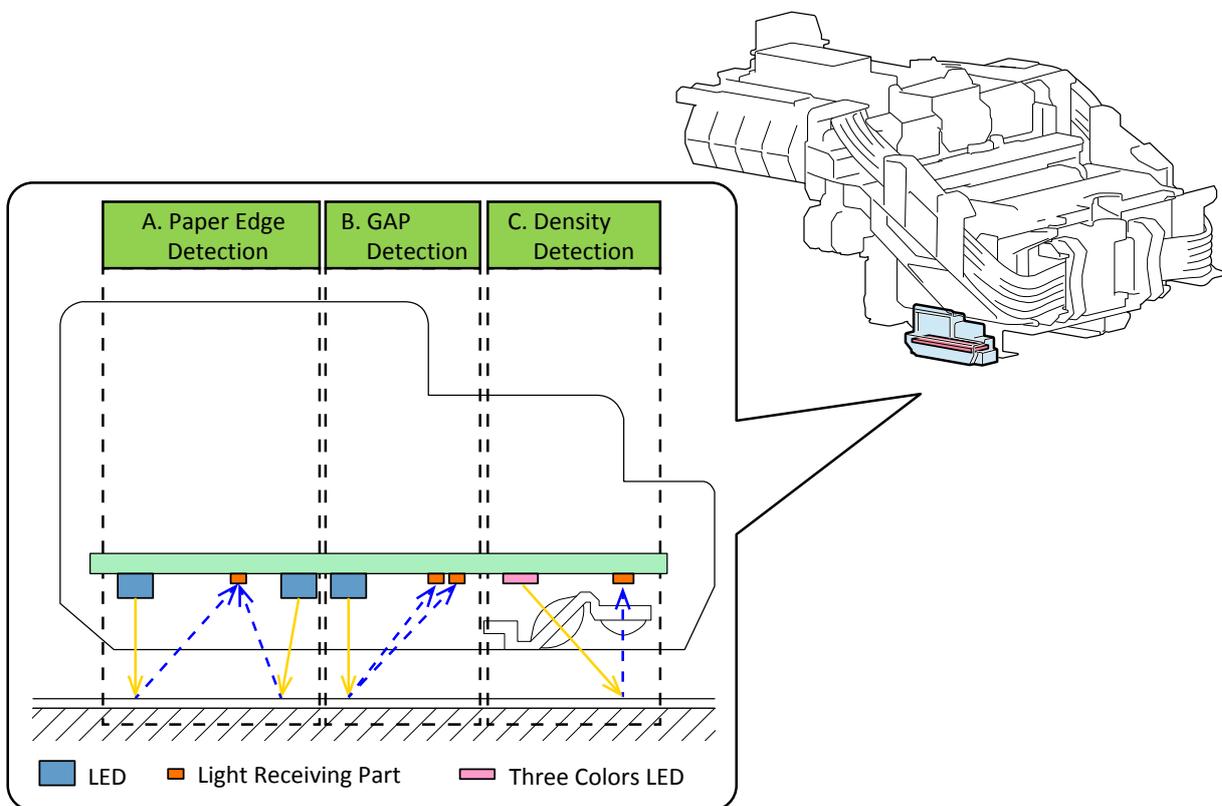
The LED ("A" in the diagram below) lights the paper. The photo sensor receives the reflected light from the paper, then, detects the paper edge, width, and skew.

B) Gap detection

The LED ("B" in the diagram below) lights the paper and two photo sensors receive the reflected light from the paper. According to the received light, the distance between the print head and the paper is calculated and adjusted.

C) Density detection

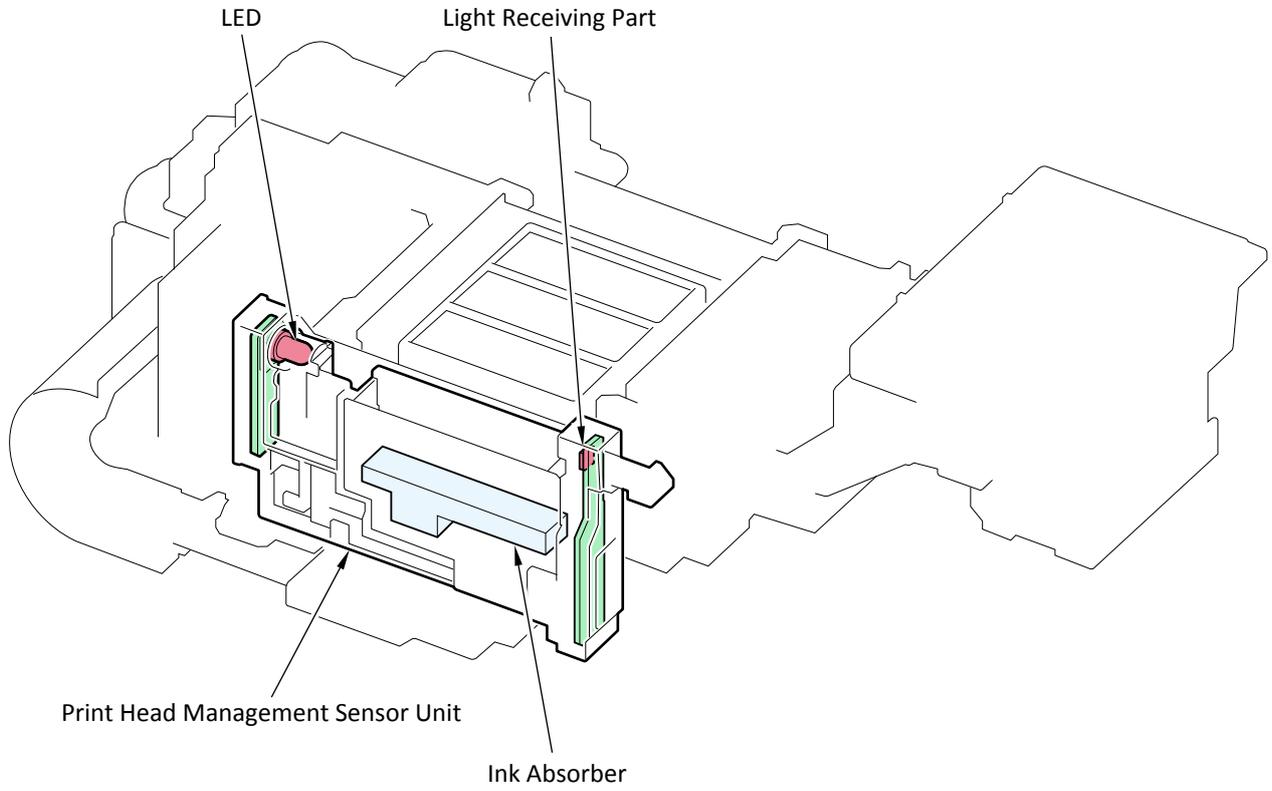
The three-color LED ("C" in the diagram below) lights the printed pattern and the photo sensor receives the reflected light from the pattern. Based on the received light values, color calibration is performed.



6-2-5. Print Head Management Sensor Unit

1. Configuration

The print head management sensor consists of the LED, the light receiving part, and the ink absorber.



2. Operation outline

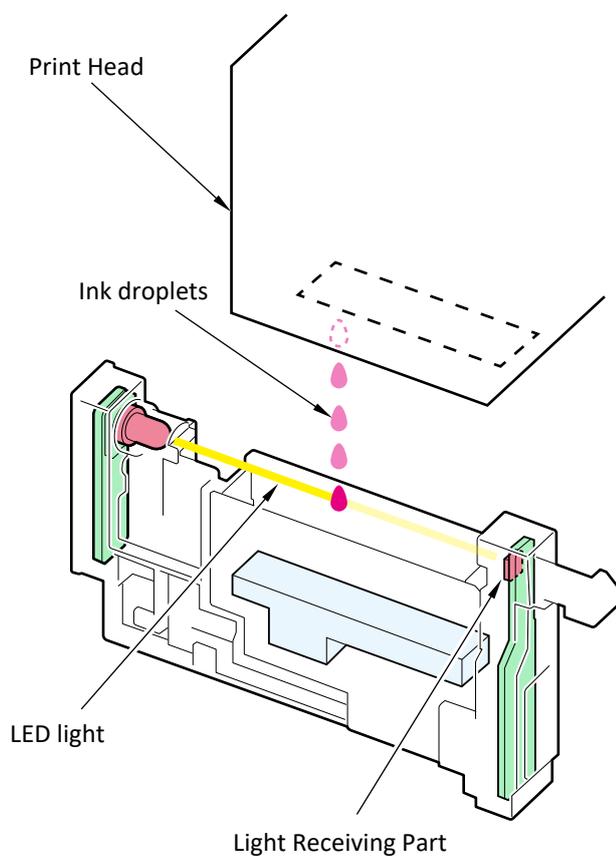
The sensor receives the LED light while non-ejection detection is performing.

The LED light is blocked by ink that is ejected from the print head; as a result, the amount of light received by the sensor changes. When the LED light is not blocked, the amount of received light does not change.

If there is a nozzle whose amount of light remains unchanged, it is judged as a non-ejection nozzle.

The result of non-ejection detection is saved to the RAM area at the end of non-ejection detection. It is used for recovery by cleaning or by non-ejection complementary. This way, deterioration of the print quality due to non-ejection of ink is prevented.

During setup or at print head replacement, the timing from when ink is ejected to when the amount of light changes is monitored to calculate the ink ejection speed. Based on the calculated ink ejection speed, the print head position is adjusted without performing printing.



3. Non-ejection detection process flow

Non-ejection nozzle detection is performed in the following procedures:

1) Optical axis adjustment

Outline:

To implement non-ejection detection, an appropriate position to check ink ejection status is determined for every nozzle respectively.

When to implement:

- At initial setting

After initial ink filling during initial setup, "Optical axis adjustment" -> "Detecting non-ejection" is performed automatically.

- After removing or re-installing the print head
- After ink filling after transportation
- If there are more than 100 nozzles that do not match the previous result of non-ejection detection, the optical axis adjustment is performed after recovery cleaning.

2) Non-ejection detection

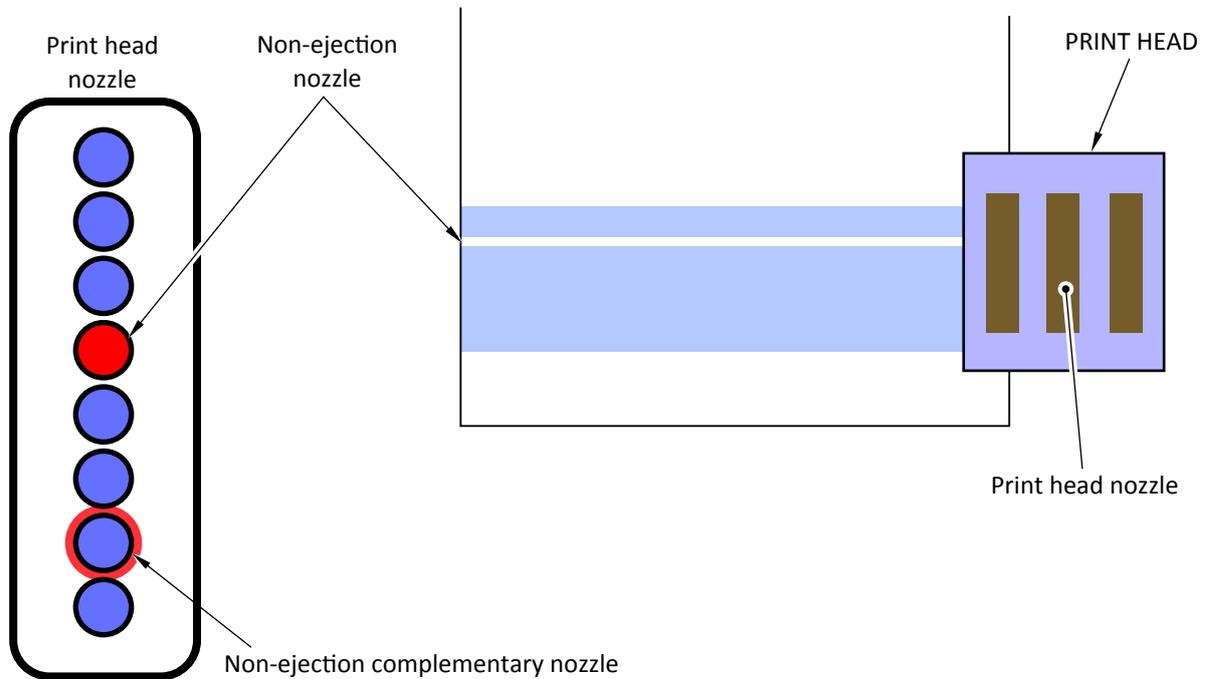
When to implement:

- During ink filling at setup
- After various types of cleaning
- After the specified amount of ink (by dot count) is ejected since the previous non-ejection detection performance.
- After the number of sheets specified by the customer are printed since the previous non-ejection detection performance (It is performed between pages even while a print job is being executed.)
- After print head replacement
- After ink filling after transportation
- After 168 hours have been elapsed since the previous ink ejection.

3) Recovery operation after detecting the non-ejection

The following operation is performed after nozzle clogging is detected:

- Cleaning is performed to recover the nozzles.
- Ejection from the clogging nozzle is stopped. Non-ejection is complemented by ejection from other nozzles.



6-2-6. Function of Platen

Function of the platen is as follows:

- Preventing paper float during printing
- Preventing ink smearing on the back side of paper during printing
- Preventing non-ejection of ink during printing

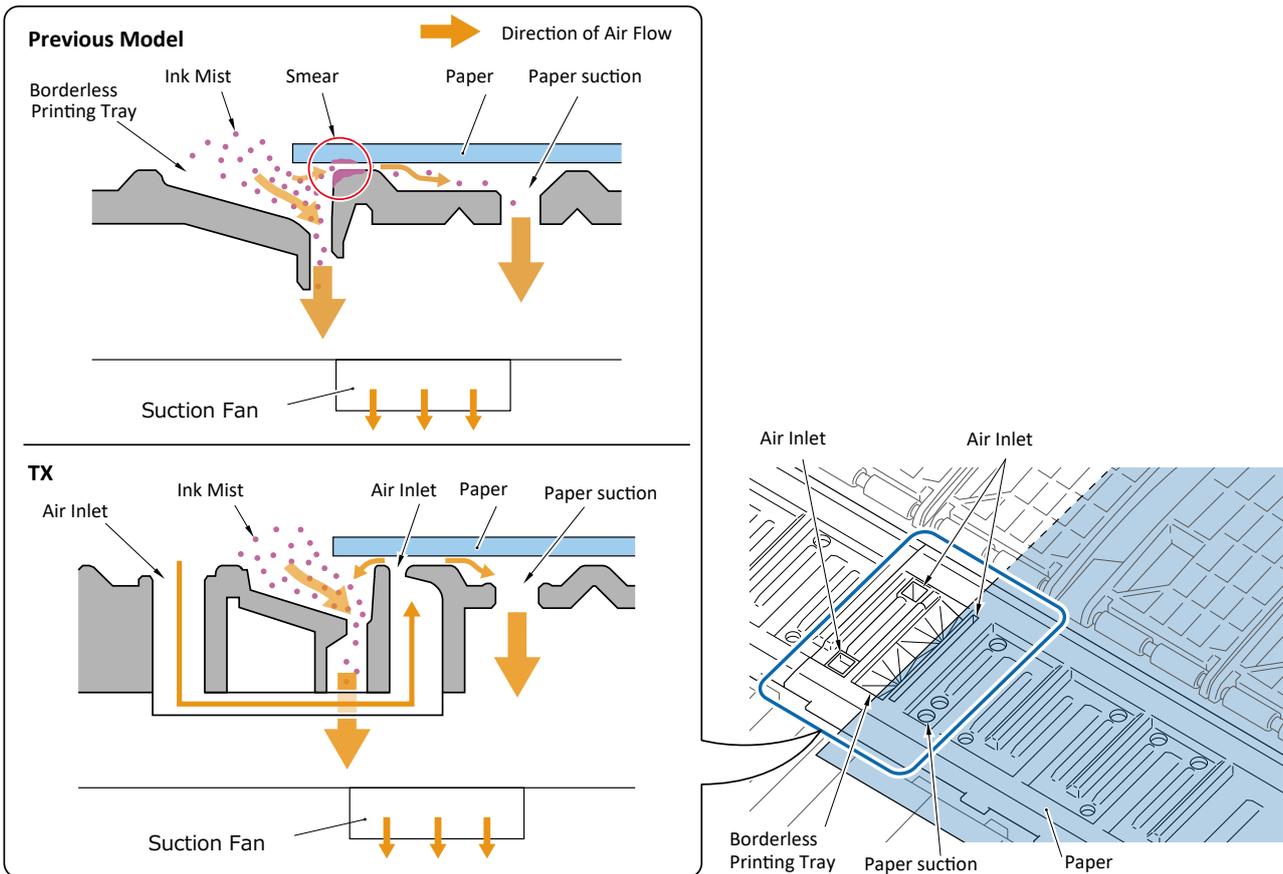
1. Preventing paper floating during printing

The suction fan draws air to prevent paper from floating during printing.

2. Preventing ink smear on the back side of paper during printing

In the iPF series models, when the suction fan vacuums air and draws paper, it also draws ink mist during printing and the back side of paper is smeared in some cases.

In the TX series, the air inlet is provided between the paper suction opening and the borderless printing tray so as to make the air under the paper flow in the reverse direction to that of the iPF series, preventing ink mist from entering under the paper and smearing the back side of paper.



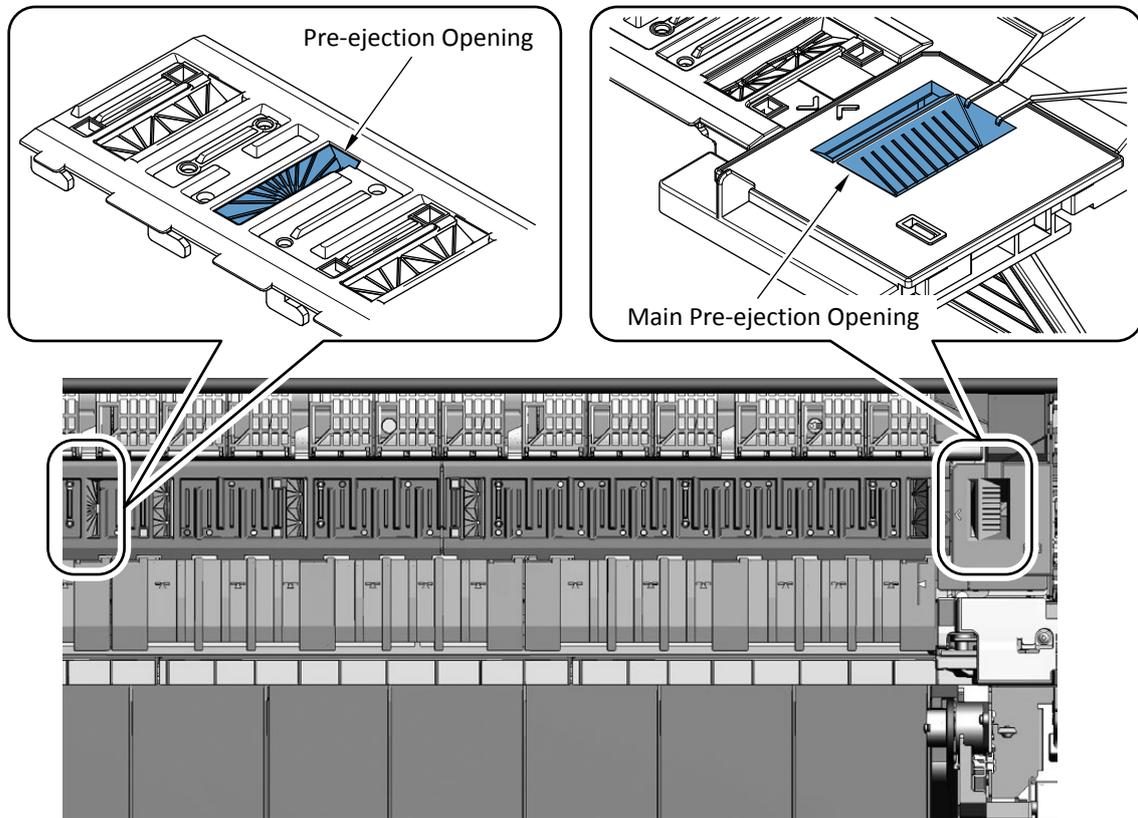
In TX series, in case of smearing on the back side of paper, increase “the vacuum power of the paper feeding part.”

Note: In iPF series, the vacuum power is “decreased” in order to reduce the ink mist going in under the paper when the back side of paper is smeared with ink.

3. Preventing non-ejection of ink during printing

To achieve high quality print, pre-ejection of ink is performed while printing.

By doing so, the old ink, air bubble, and mixed color ink are eliminated from inside the nozzles as well as dust is removed. Where to perform pre-ejection is determined based on the paper detection result.



6-3. Initial Flowchart

6-3-1. Initial Flowchart

The flowchart below shows the initial printer operation from power-on till the printer gets ready for printing.

